



Circuit Protection

Product Catalog

➤ Unique Electronics You Need



About us



Unictron Technologies Corporation: Circuit Protection Solutions

Unictron started our business as an electronic component distributor. We have been serving the local electronic industry for more than 25 years and are still active in this business sector. Over-voltage or over-current circuit protection components and solutions are the expertise of this selling team. Complete over-voltage/over-current testing and evaluation laboratory has been established to provide the best services and circuit protection solutions to our customers. We provide a whole series of circuit protection components, such as: Spark Gap, Gas Tube, Thyristor, TVS (Transient Voltage Suppressor), ZnO Varistor, PPTC Resettable Fuse and other Fuses. With our advanced testing facilities and on-site experienced application engineers, your product design processes can be expedited easily. Unictron's circuit protection solutions will help you to accelerate your time to market, decrease your product cost and increase your company's competitiveness.

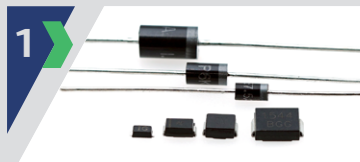
www.unictron.com



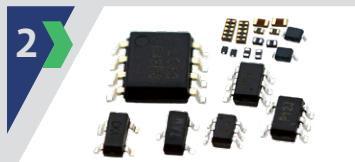
No. 83, Kewang Rd., Longtan Dist.,
Taoyuan City 325, Taiwan
Phone: +886-3-4072728
E-mail: p-sales@unictron.com

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1
Transient Voltage Suppressors (TVS)



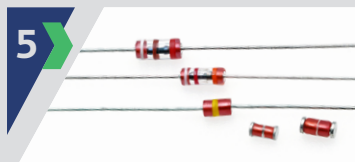
2
Electrostatic Discharge Protection Devices (ESD)



3
Metal Oxide Varistors (MOV)



4
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5
Spark Gap Protectors



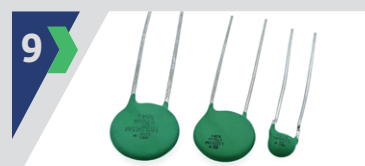
6
Thyristor Surge Suppressors (TSS)



7
Polymer Positive Temperature Coefficient (PPTC)



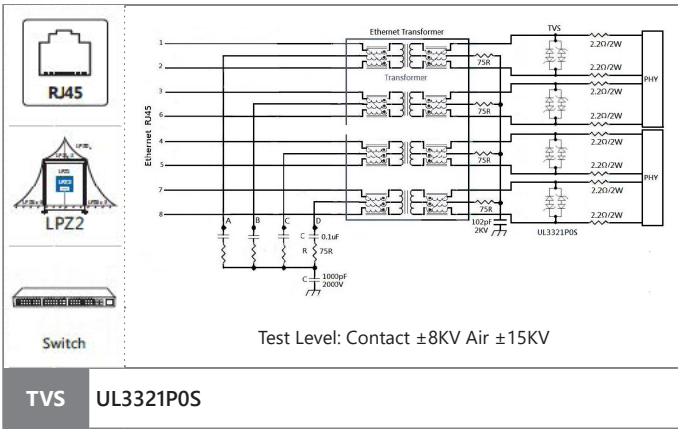
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Chip fuse



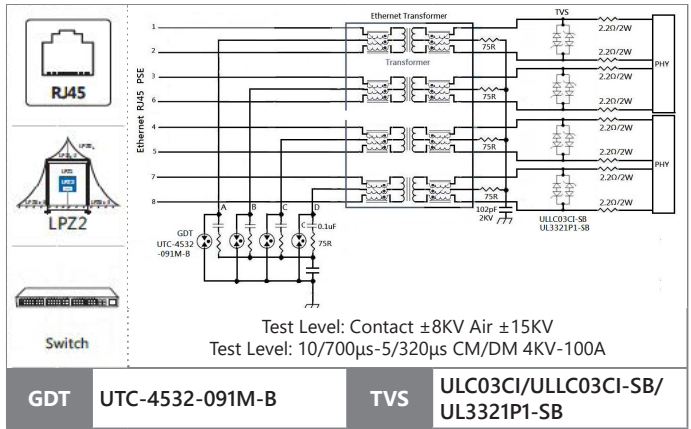
9
Negative Power Thermistor (NTC)

Suggested Route

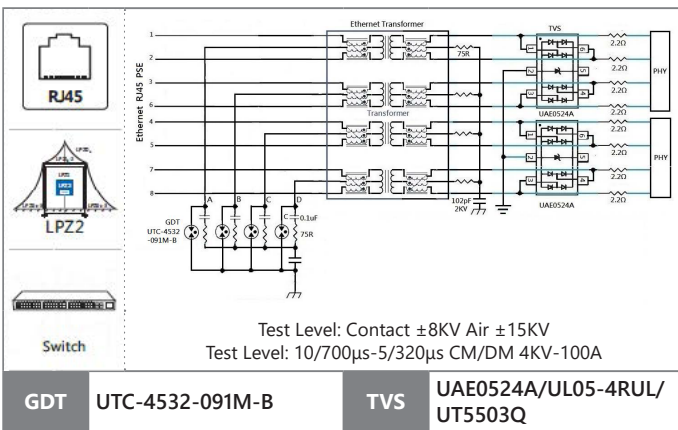
RJ45 10G



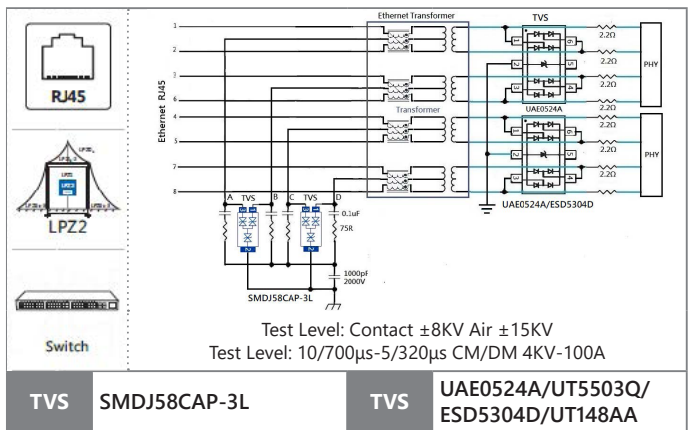
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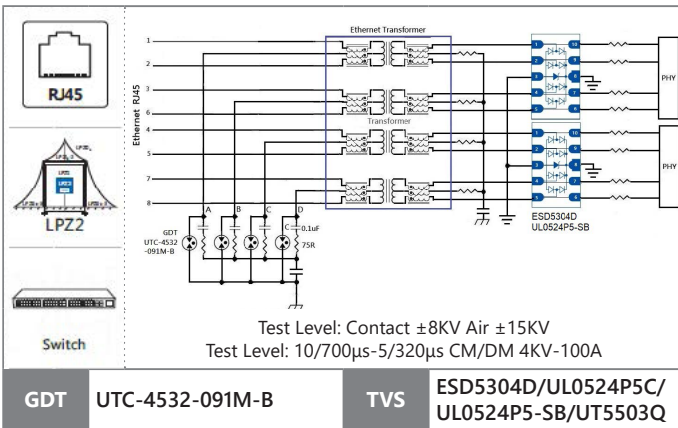
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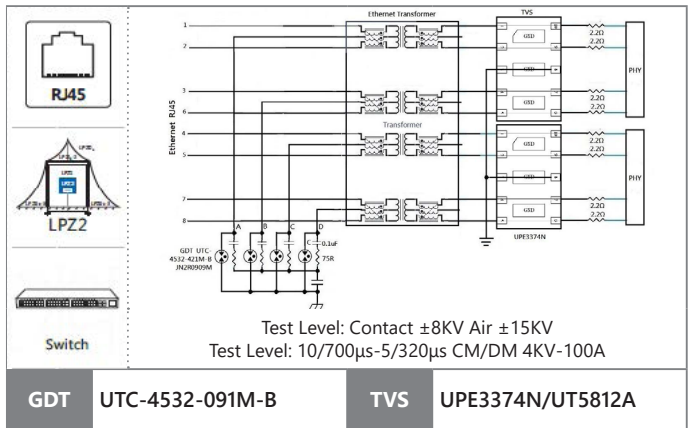
RJ45



RJ45



RJ45



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Suggested Route

RJ45

Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: 10/700 μs -5/320 μs CM/DM 6KV-150A

TSS	P0640SC/P420SC	TVS	UPE3374N/UT5812A
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RJ45 POE

Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: 10/700 μs -5/320 μs CM/DM 4KV-100A

TVS	SMDJ58CAP-3L	TVS	ULL03CI-SB/ ULC3321P1-SB
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RJ45 POE

Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: 10/700 μs -5/320 μs CM/DM 6KV-150A

TVS	SMDJ58CAP-3L	TVS	ULL03CI-SB/ ULC3321P1-SB
TVS	SMDJ58CA		

RJ45 POE

Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: 10/700 μs -5/320 μs CM/DM 6KV-150A

GDT	UTC-4532-421M-B	MOV	10D820K
TVS	SMDJ58CAP-3L	TVS	ULL03CI-SB/ ULC3321P1-SB

RJ45 POE

Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: 10/700 μs -5/320 μs CM/DM 6KV-150A

GDT	UTC-4532-421M-B	MOV	10D820K
TVS	SMDJ58CAP-3L	TVS	UAE0524A/ESD5304D

RJ11 SLIC

Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: 10/700 μs -5/320 μs CM/DM 4KV-100A

PPTV	FRH120-250F/FRH145-250F	SLIC	UPG1096B/UPG1089H
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Suggested Route

RJ11 SLIC

TSS	P3100SC/P4200SC	PPTV	FRH120-250F/ FRH145-250F
SLIC	UPG1096B/UPG1089H		

RJ11 SLIC

GDT	JN2R420M/JN2R600M	GDT	JN3R420M/JN3R600M
PPTV	FRH120-250F/ FRH145-250F	SLIC	UPG1096B/UPG1089H

RJ11 xDSL

GDT	JN2R420M/JN2R600M	GDT	JN3R420M/JN3R600M
TVS	SMAJ16A/SMAJ16A	TVS	USD130DT4-1

RJ11 G.Fast

GDT	JN2R420M/JN2R600M	GDT	JN3R420M/JN3R600M
TSS	UP0524G		

USB 2.0

TVS	UAE1025Q/ULSR05	PPTC	FSMD200-1206R
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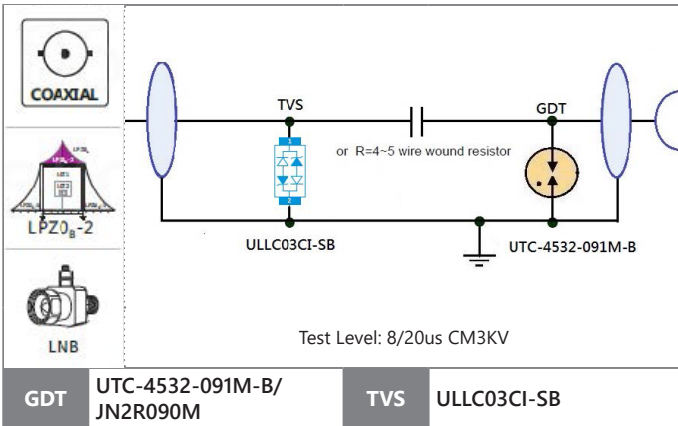
USB 2.0

TVS	UAE0524A/US05-4RUL	TVS	UT5503Q
PPTC	FSMD200-1206R		

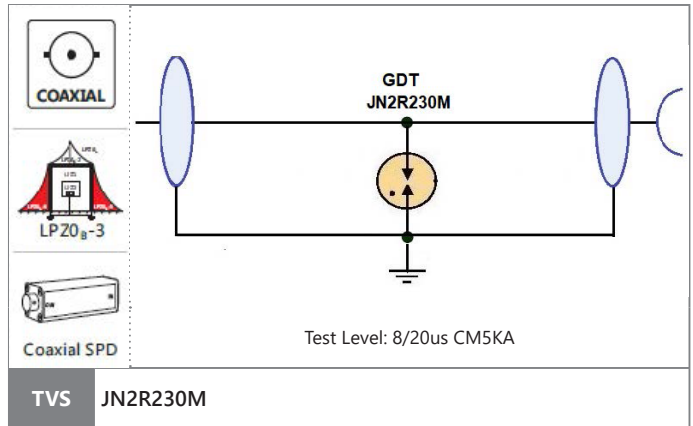
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Suggested Route

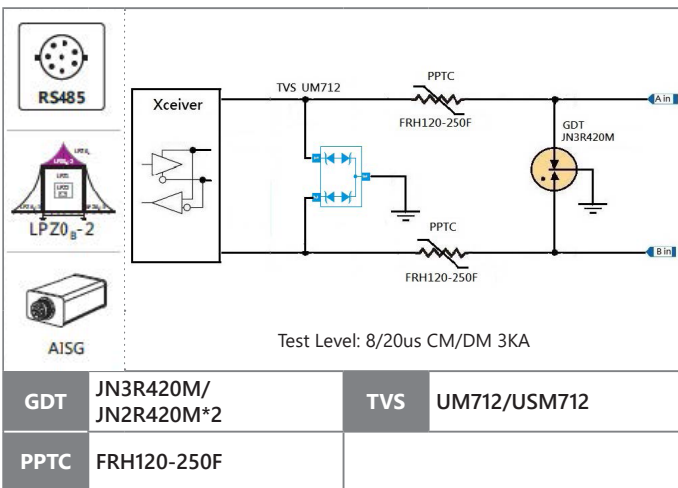
Coaxial



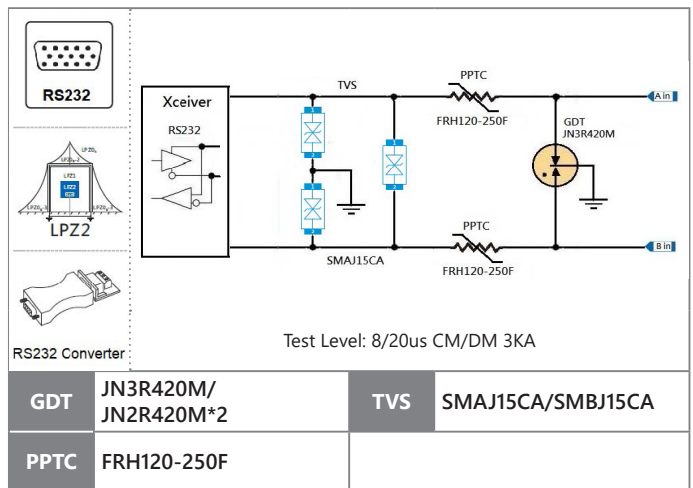
SPD Coaxial



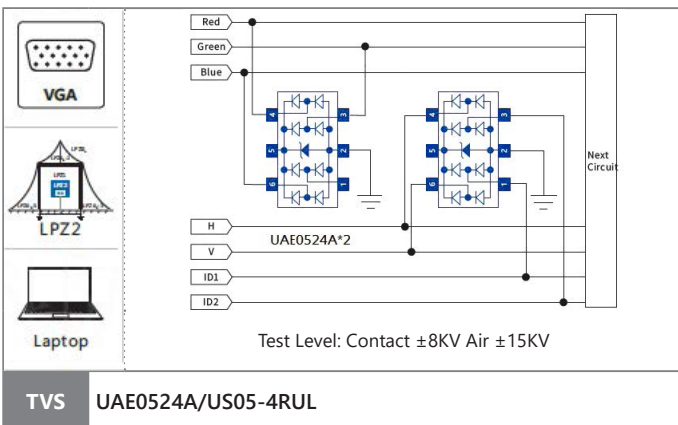
RS485



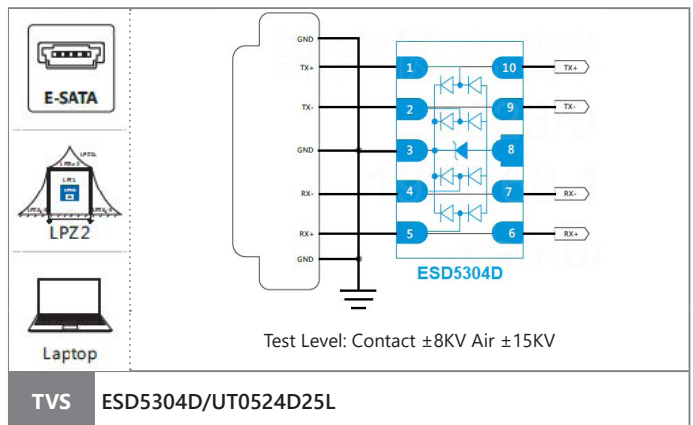
RS232



VGA



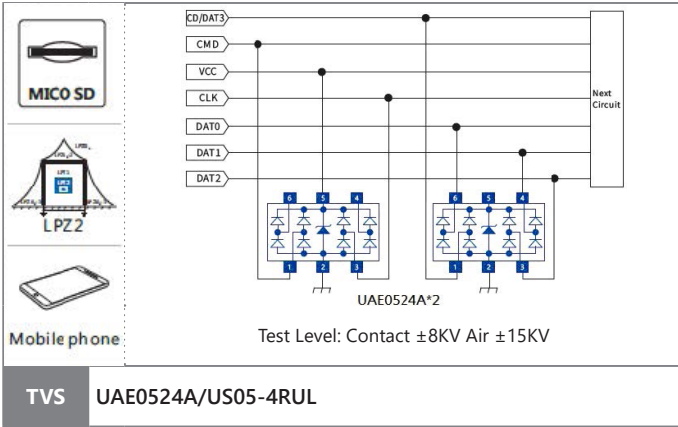
E-SATA



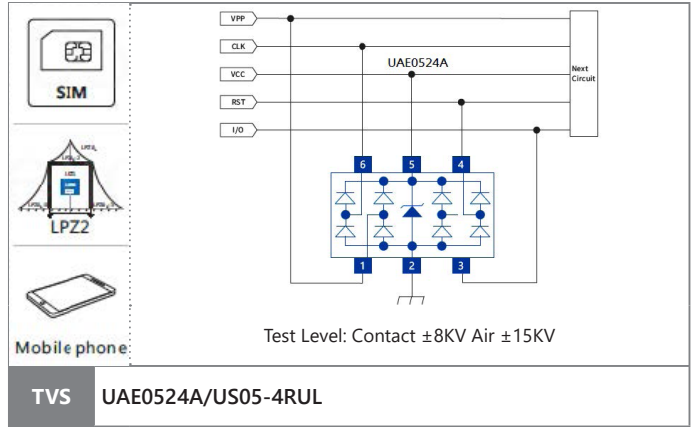
This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

Suggested Route

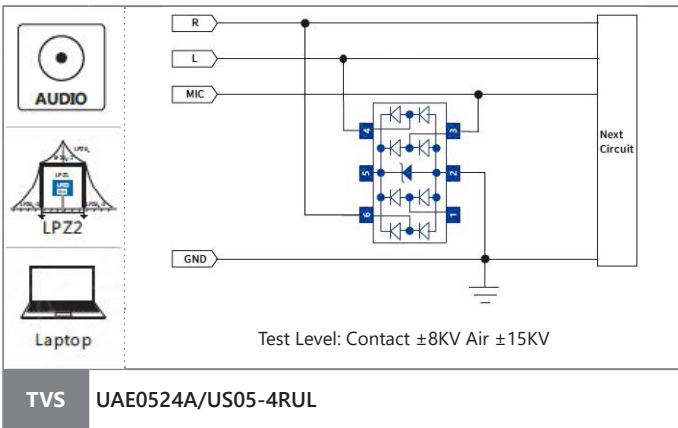
SD Card



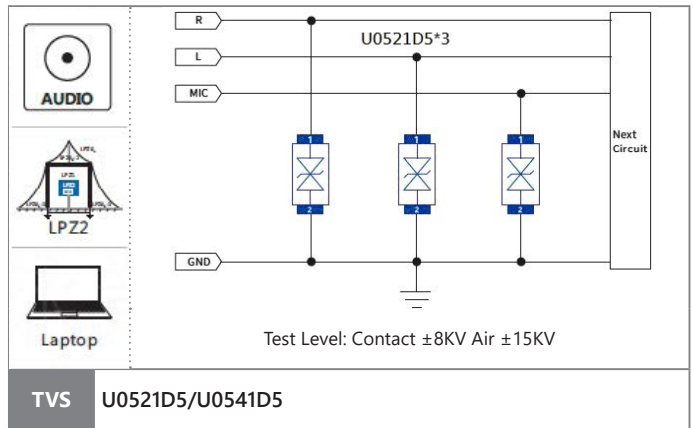
SIM Card



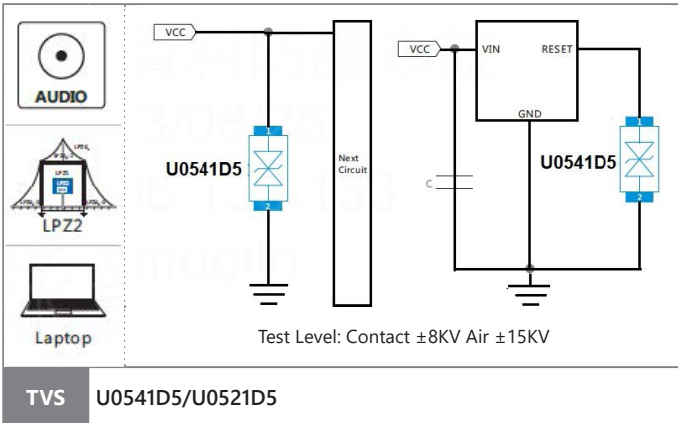
Audio



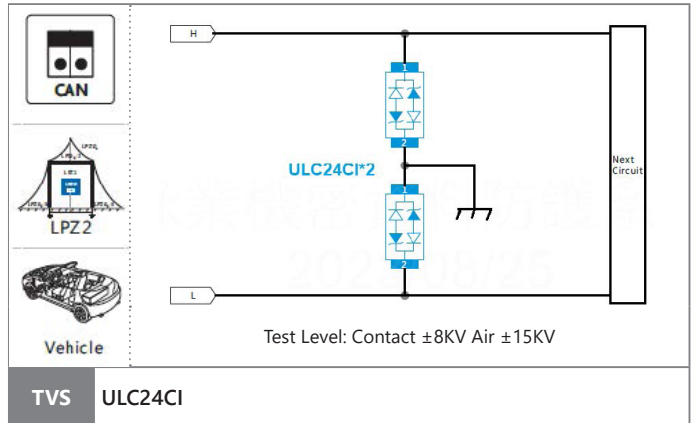
Audio



Speaker Headphone and Reset



CAN BUS



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Suggested Route

IO

TSS P0300SC*2
 Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: $10/700\mu\text{s}-5/320\mu\text{s}$ CM/DM 6KV-150A

ALARM

GDT JN3R230M/
JN2R230M*2
TVS SMB15J15CA
 Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$
 Test Level: $10/700\mu\text{s}-5/320\mu\text{s}$ CM/DM 6KV-150A

Touch Screen

TVS ESD5304D/UT0524D25L
TVS U0521PZ
 Test Level: Contact $\pm 8\text{KV}$ Air $\pm 15\text{KV}$

DC3.3V/5V/24V

TVS 3.3V: ULC03CI
TVS 5V: ULC05CI
TVS 24V: U2405CI
 Test Level: $1.2/50\mu\text{s}-8/20\mu\text{s}$ CM/DM 300V-140A

DC5V

TVS U0571P6/UT0591D6
 Test Level: $1.2/50\mu\text{s}-8/20\mu\text{s}$ CM/DM 300V-140A

DC 9V

TVS SMAJ15CA
 Test Level: $1.2/50\mu\text{s}-8/20\mu\text{s}$ CM/DM 500V-41A

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Suggested Route

DC12V

DC POWER

LPZ1

Camera

12V DC IN

TVS **SMBJ15CA**

Next Circuit

Test Level: 1.2/50 μ s-8/20 μ s CM/DM 1KV-0.5KA

TVS	SMBJ15CA
-----	----------

DC12V

DC POWER

LPZ0_B-3

Camera

12V DC IN

MOV

TVS **SMBJ15CA**

20D220K

0V

Next Circuit

Test Level: 1.2/50 μ s-8/20 μ s CM/DM 4KV-2KA

MOV	20D220K	TVS	SMBJ15CA
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DC48V

DC POWER

LPZ1

BEU

48V DC IN

TVS **SMDJ58CAP-3L**

0V

Next Circuit

Test Level: 1.2/50 μ s-8/20 μ s CM/DM 2KV-1KA

MOV	SMDJ58CAP-3L	GDT	ULL03CI-SB/ ULC3321P1-SB
TVS	SMDJ58CA		

DC48V

DC POWER

LPZ0_B-3

BBU

48V DC IN

MOV

20D820K

TVS **SMDJ58CA**

GDT **JN2R090M**

0V

Next Circuit

Test Level: 1.2/50 μ s-8/20 μ s CM/DM 6KV-3KA

MOV	20D820K	GDT	JN2R090M
TVS	SMBJ15CA		

DC12V/24V IN CAR

DC POWER

LPZ2

Vehicle

CAR 12V/24V DC IN

TVS

12V : **SM8S22A-28A**
24V : **SM8S30A-40A**

Next Circuit

Test Level: 12V: P5A 87V 1.5 Ω 400ms
Test Level: 24V: P5A 174V 4 Ω 350ms

TVS	12V: SM8S22A-28A	TVS	24V: SM8S30A-40A
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AC 90V-264V

AC POWER

LPZ0_B-3

Adapter

AC-Lin

FUSE

MOV 20D471K

GDT1 **JN2R600A5L**

MOV 20D471K

MOV: 470V-620V

MF-301M-7A

Common choke

GDT2 **JN2R600A5L**

GDT: 600V 3KV-3.6KV (Hi-pot)

PE 保護接地

被保護電路

Next Circuit

Test Level: 1.2/50 μ s-8/20 μ s CM/DM 6KV-3KA

MOV	20D471K-621K	GDT	JN2R600A5L
SPG	MF-301M-7A	Hi-pot GDT	2RM3000A6L2/ 1RM3600A6L

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TVS-SMD

SMF Series (200W) SOD-123FL PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMF5.0A	SMF5.0CA	AE	FE	5	6.4	7	10	9.2	21.7	800
SMF6.0A	SMF6.0CA	AG	FG	6	6.67	7.37	10	10.3	19.4	800
SMF6.5A	SMF6.5CA	AK	FK	6.5	7.22	7.98	10	11.2	17.9	500
SMF7.0A	SMF7.0CA	AM	FM	7	7.78	8.6	10	12	16.7	200
SMF7.5A	SMF7.5CA	AP	FP	7.5	8.33	9.21	1	12.9	15.5	100
SMF8.0A	SMF8.0CA	AR	FR	8	8.89	9.83	1	13.6	14.7	50
SMF8.5A	SMF8.5CA	AT	FT	8.5	9.44	10.4	1	14.4	13.9	20
SMF9.0A	SMF9.0CA	AV	FV	9	10	11.1	1	15.4	13	10
SMF10A	SMF10CA	AX	FX	10	11.1	12.3	1	17	11.8	5
SMF11A	SMF11CA	AZ	FZ	11	12.2	13.5	1	18.2	11	1
SMF12A	SMF12CA	BE	GE	12	13.3	14.7	1	19.9	10.1	1
SMF13A	SMF13CA	BG	GG	13	14.4	15.9	1	21.5	9.3	1
SMF14A	SMF14CA	BK	GK	14	15.6	17.2	1	23.2	8.6	1
SMF15A	SMF15CA	BM	GM	15	16.7	18.5	1	24.4	8.2	1
SMF16A	SMF16CA	BP	GP	16	17.8	19.7	1	26	7.7	1
SMF17A	SMF17CA	BR	GR	17	18.9	20.9	1	27.6	7.2	1
SMF18A	SMF18CA	BT	GT	18	20	22.1	1	29.2	6.8	1
SMF20A	SMF20CA	BV	GV	20	22.2	24.5	1	32.4	6.2	1
SMF22A	SMF22CA	BX	GX	22	24.4	26.9	1	35.5	5.6	1
SMF24A	SMF24CA	BZ	GZ	24	26.7	29.5	1	38.9	5.1	1
SMF26A	SMF26CA	CE	HE	26	28.9	31.9	1	42.1	4.8	1
SMF28A	SMF28CA	CG	HG	28	31.1	34.4	1	45.4	4.4	1
SMF30A	SMF30CA	CK	HK	30	33.3	36.8	1	48.4	4.1	1
SMF33A	SMF33CA	CM	HM	33	36.7	40.6	1	53.3	3.8	1
SMF36A	SMF36CA	CP	HP	36	40	44.2	1	58.1	3.4	1
SMF40A	SMF40CA	CR	HR	40	44.4	49.1	1	64.5	3.1	1
SMF43A	SMF43CA	CT	HT	43	47.8	52.8	1	69.4	2.9	1
SMF45A	SMF45CA	CV	HV	45	50	55.3	1	72.7	2.8	1
SMF48A	SMF48CA	CX	HX	48	53.3	58.9	1	77.4	2.6	1
SMF51A	SMF51CA	CZ	HZ	51	56.7	62.7	1	82.4	2.4	1
SMF54A	SMF54CA	DE	IE	54	60	66.3	1	87.1	2.3	1
SMF58A	SMF58CA	DG	IG	58	64.4	71.2	1	93.6	2.1	1
SMF60A	SMF60CA	DK	IK	60	66.7	73.7	1	96.8	1.8	1
SMF64A	SMF64CA	DM	IM	64	71.1	78.6	1	103	1.7	1
SMF70A	SMF70CA	DP	IP	70	77.8	86	1	113	1.5	1
SMF75A	SMF75CA	DR	IR	75	83.3	92.1	1	121	1.4	1
SMF78A	SMF78CA	DT	IT	78	86.7	95.8	1	126	1.4	1
SMF85A	SMF85CA	DV	IV	85	94.4	104	1	137	1.3	1
SMF90A	SMF90CA	DX	IX	90	100	111	1	146	1.2	1
SMF100A	SMF100CA	EZ	JZ	100	111	123	1	162	1.1	1

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TVS-SMD

SMF Series (200W) SOD-123FL PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMF110A	SMF110CA	EE	JE	110	122	135	1	177	1	1
SMF120A	SMF120CA	EG	JG	120	133	147	1	193	0.9	1
SMF130A	SMF130CA	EK	JK	130	144	159	1	209	0.8	1
SMF150A	SMF150CA	EM	JM	150	167	185	1	243	0.7	1
SMF160A	SMF160CA	EP	JP	160	178	197	1	259	0.7	1
SMF170A	SMF170CA	ER	JR	170	189	209	1	275	0.6	1

SMAJ Series (400W) DO-214AC PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMAJ5.0A	SMAJ5.0CA	AE	WE	5	6.4	7	10	9.2	43.5	800
SMAJ6.0A	SMAJ6.0CA	AG	WG	6	6.67	7.37	10	10.3	38.8	800
SMAJ6.5A	SMAJ6.5CA	AK	WK	6.5	7.22	7.98	10	11.2	35.7	500
SMAJ7.0A	SMAJ7.0CA	AM	WM	7	7.78	8.6	10	12	33.3	200
SMAJ7.5A	SMAJ7.5CA	AP	WP	7.5	8.33	9.21	1	12.9	31	100
SMAJ8.0A	SMAJ8.0CA	AR	WR	8	8.89	9.83	1	13.6	29.4	50
SMAJ8.5A	SMAJ8.5CA	AT	WT	8.5	9.44	10.4	1	14.4	27.8	20
SMAJ9.0A	SMAJ9.0CA	AV	WV	9	10	11.1	1	15.4	26	10
SMAJ10A	SMAJ10CA	AX	WX	10	11.1	12.3	1	17	23.5	5
SMAJ11A	SMAJ11CA	AZ	WZ	11	12.2	13.5	1	18.2	22	1
SMAJ12A	SMAJ12CA	BE	XE	12	13.3	14.7	1	19.9	20.1	1
SMAJ13A	SMAJ13CA	BG	XG	13	14.4	15.9	1	21.5	18.6	1
SMAJ14A	SMAJ14CA	BK	XK	14	15.6	17.2	1	23.2	17.2	1
SMAJ15A	SMAJ15CA	BM	XM	15	16.7	18.5	1	24.4	16.4	1
SMAJ16A	SMAJ16CA	BP	XP	16	17.8	19.7	1	26	15.4	1
SMAJ17A	SMAJ17CA	BR	XR	17	18.9	20.9	1	27.6	14.5	1
SMAJ18A	SMAJ18CA	BT	XT	18	20	22.1	1	29.2	13.7	1
SMAJ20A	SMAJ20CA	BV	XV	20	22.2	24.5	1	32.4	12.3	1
SMAJ22A	SMAJ22CA	BX	XX	22	24.4	26.9	1	35.5	11.3	1
SMAJ24A	SMAJ24CA	BZ	XZ	24	26.7	29.5	1	38.9	10.3	1
SMAJ26A	SMAJ26CA	CE	YE	26	28.9	31.9	1	42.1	9.5	1
SMAJ28A	SMAJ28CA	CG	YG	28	31.1	34.4	1	45.4	8.8	1
SMAJ30A	SMAJ30CA	CK	YK	30	33.3	36.8	1	48.4	8.3	1
SMAJ33A	SMAJ33CA	CM	YM	33	36.7	40.6	1	53.3	7.5	1
SMAJ36A	SMAJ36CA	CP	YP	36	40	44.2	1	58.1	6.9	1
SMAJ40A	SMAJ40CA	CR	YR	40	44.4	49.1	1	64.5	6.2	1
SMAJ43A	SMAJ43CA	C T	YT	43	47.8	52.8	1	69.4	5.8	1

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TVS-SMD

SMAJ Series (400W) DO-214AC PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMAJ45A	SMAJ45CA	CV	YV	45	50	55.3	1	72.7	5.5	1
SMAJ48A	SMAJ48CA	CX	YX	48	53.3	58.9	1	77.4	5.2	1
SMAJ51A	SMAJ51CA	CZ	YZ	51	56.7	62.7	1	82.4	4.9	1
SMAJ54A	SMAJ54CA	RE	ZE	54	60	66.3	1	87.1	4.6	1
SMAJ58A	SMAJ58CA	RG	ZG	58	64.4	71.2	1	93.6	4.3	1
SMAJ60A	SMAJ60CA	RK	ZK	60	66.7	73.7	1	96.8	4.1	1
SMAJ64A	SMAJ64CA	RM	ZM	64	71.1	78.6	1	103	3.9	1
SMAJ70A	SMAJ70CA	RP	ZP	70	77.8	86	1	113	3.5	1
SMAJ75A	SMAJ75CA	RR	ZR	75	83.3	92.1	1	121	3.3	1
SMAJ78A	SMAJ78CA	RT	ZT	78	86.7	95.8	1	126	3.2	1
SMAJ85A	SMAJ85CA	RV	ZV	85	94.4	104	1	137	2.9	1
SMAJ90A	SMAJ90CA	RX	ZX	90	100	111	1	146	2.7	1
SMAJ100A	SMAJ100CA	RZ	ZZ	100	111	123	1	162	2.5	1
SMA J110A	SMAJ110CA	SE	VE	110	122	135	1	177	2.3	1
SMAJ120A	SMAJ120CA	SG	VG	120	133	147	1	193	2.1	1
SMAJ130A	SMAJ130CA	SK	VK	130	144	159	1	209	1.9	1
SMAJ150A	SMAJ150CA	SM	VM	150	167	185	1	243	1.6	1
SMAJ160A	SMAJ160CA	SP	VP	160	178	197	1	259	1.5	1
SMAJ170A	SMAJ170CA	SR	VR	170	189	209	1	275	1.5	1
SMAJ180A	SMAJ180CA	ST	VT	180	201	222	1	292	1.4	1
SMAJ200A	SMAJ200CA	SV	V V	200	224	247	1	324	1.2	1
SMAJ220A	SMAJ220CA	SX	VX	220	246	272	1	356	1.1	1
SMAJ250A	SMAJ250CA	SZ	VZ	250	279	309	1	405	1	1
SMAJ300A	SMAJ300CA	TE	UE	300	335	371	1	486	0.8	1
SMAJ350A	SMAJ350CA	TG	UG	350	391	432	1	567	0.7	1
SMAJ400A	SMAJ400CA	TK	UK	400	447	494	1	648	0.6	1
SMAJ440A	SMAJ440CA	TM	UM	440	492	543	1	713	0.6	1

SMBJ Series (600W) DO-214AA PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMBJ5.0A	SMBJ5.0CA	KE	AE	5	6.4	7	10	9.2	65.3	800
SMBJ6.0A	SMBJ6.0CA	KG	AG	6	6.67	7.37	10	10.3	58.3	800
SMBJ6.5A	SMBJ6.5CA	KK	AK	6.5	7.22	7.98	10	11.2	53.6	500
SMBJ7.0A	SMBJ7.0CA	KM	AM	7	7.78	8.6	10	12	50	200
SMBJ7.5A	SMBJ7.5CA	KP	AP	7.5	8.33	9.21	1	12.9	46.6	100
SMBJ8.0A	SMBJ8.0CA	KR	AR	8	8.89	9.83	1	13.6	44.2	50

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TVS-SMD

SMBJ Series (600W) DO-214AA PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMBJ8.5A	SMBJ8.5CA	KT	AT	8.5	9.44	10.4	1	14.4	41.7	20
SMBJ9.0A	SMBJ9.0CA	KV	AV	9	10	11.1	1	15.4	39	10
SMBJ10A	SMBJ10CA	KX	AX	10	11.1	12.3	1	17	35.3	5
SMBJ11A	SMBJ11CA	KZ	AZ	11	12.2	13.5	1	18.2	33	1
SMBJ12A	SMBJ12CA	LE	BE	12	13.3	14.7	1	19.9	30.2	1
SMBJ13A	SMBJ13CA	LG	BG	13	14.4	15.9	1	21.5	28	1
SMBJ14A	SMBJ14CA	LK	BK	14	15.6	17.2	1	23.2	25.9	1
SMBJ15A	SMBJ15CA	LM	BM	15	16.7	18.5	1	24.4	24.6	1
SMBJ16A	SMBJ16CA	LP	BP	16	17.8	19.7	1	26	23.1	1
SMBJ17A	SMBJ17CA	LR	BR	17	18.9	20.9	1	27.6	21.8	1
SMBJ18A	SMBJ18CA	LT	BT	18	20	22.1	1	29.2	20.6	1
SMBJ20A	SMBJ20CA	LV	BV	20	22.2	24.5	1	32.4	18.6	1
SMBJ22A	SMBJ22CA	LX	BX	22	24.4	26.9	1	35.5	16.9	1
SMBJ24A	SMBJ24CA	LZ	BZ	24	26.7	29.5	1	38.9	15.5	1
SMBJ26A	SMBJ26CA	ME	CE	26	28.9	31.9	1	42.1	14.3	1
SMBJ28A	SMBJ28CA	MG	CG	28	31.1	34.4	1	45.4	13.3	1
SMBJ30A	SMBJ30CA	MK	CK	30	33.3	36.8	1	48.4	12.4	1
SMBJ33A	SMBJ33CA	MM	CM	33	36.7	40.6	1	53.3	11.3	1
SMBJ36A	SMBJ36CA	MP	CP	36	40	44.2	1	58.1	10.4	1
SMBJ40A	SMBJ40CA	MR	CR	40	44.4	49.1	1	64.5	9.3	1
SMBJ43A	SMBJ43CA	MT	C T	43	47.8	52.8	1	69.4	8.7	1
SMBJ45A	SMBJ45CA	MV	CV	45	50	55.3	1	72.7	8.3	1
SMBJ48A	SMBJ48CA	MX	CX	48	53.3	58.9	1	77.4	7.8	1
SMBJ51A	SMBJ51CA	MZ	CZ	51	56.7	62.7	1	82.4	7.3	1
SMBJ54A	SMBJ54CA	NE	DE	54	60	66.3	1	87.1	6.9	1
SMBJ58A	SMBJ58CA	NG	DG	58	64.4	71.2	1	93.6	6.5	1
SMBJ60A	SMBJ60CA	NK	DK	60	66.7	73.7	1	96.8	6.2	1
SMBJ64A	SMBJ64CA	NM	DM	64	71.1	78.6	1	103	5.9	1
SMBJ70A	SMBJ70CA	NP	DP	70	77.8	86	1	113	5.3	1
SMBJ75A	SMBJ75CA	NR	DR	75	83.3	92.1	1	121	5	1
SMBJ78A	SMBJ78CA	NT	DT	78	86.7	95.8	1	126	4.8	1
SMBJ85A	SMBJ85CA	NV	DV	85	94.4	104	1	137	4.4	1
SMBJ90A	SMBJ90CA	NX	DX	90	100	111	1	146	4.1	1
SMBJ100A	SMBJ100CA	NZ	DZ	100	111	123	1	162	3.7	1
SMBJ110A	SMBJ110CA	PE	EE	110	122	135	1	177	3.4	1
SMBJ120A	SMBJ120CA	PG	EG	120	133	147	1	193	3.1	1
SMBJ130A	SMBJ130CA	PK	EK	130	144	159	1	209	2.9	1
SMBJ150A	SMBJ150CA	PM	EM	150	167	185	1	243	2.5	1
SMBJ160A	SMBJ160CA	PP	EP	160	178	197	1	259	2.3	1
SMBJ170A	SMBJ170CA	PR	ER	170	189	209	1	275	2.2	1

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TVS-SMD

SMBJ Series (600W) DO-214AA PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMBJ180A	SMBJ180CA	PT	ET	180	201	222	1	292	2.1	1
SMBJ200A	SMBJ200CA	PV	EV	200	224	247	1	324	1.9	1
SMBJ220A	SMBJ220CA	PX	EX	220	246	272	1	356	1.7	1
SMBJ250A	SMBJ250CA	PZ	EZ	250	279	309	1	405	1.5	1
SMBJ300A	SMBJ300CA	QE	FE	300	335	371	1	486	1.3	1
SMBJ350A	SMBJ350CA	QG	FG	350	391	432	1	567	1.1	1
SMBJ400A	SMBJ400CA	QK	FK	400	447	494	1	648	0.9	1
SMBJ440A	SMBJ440CA	QM	FM	440	492	543	1	713	0.9	1

SMCJ Series (1500W) DO-214AB PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMC J5.0A	SMC J5.0CA	GDE	BDE	5	6.4	7	10	9.2	163	800
SMC J6.0A	SMC J6.0CA	GDG	BDG	6	6.67	7.37	10	10.3	145.7	800
SMC J6.5A	SMC J6.5CA	GDK	BDK	6.5	7.22	7.98	10	11.2	134	500
SMC J7.0A	SMC J7.0CA	GDM	BDM	7	7.78	8.6	10	12	125	200
SMC J7.5A	SMC J7.5CA	GDP	BDP	7.5	8.33	9.21	1	12.9	116.3	100
SMC J8.0A	SMC J8.0CA	GDR	BDR	8	8.89	9.83	1	13.6	110.3	50
SMC J8.5A	SMC J8.5CA	GDT	BDT	8.5	9.44	10.4	1	14.4	104.2	20
SMC J9.0A	SMC J9.0CA	GDV	BDV	9	10	11.1	1	15.4	97.4	10
SMC J10A	SMC J10CA	GDY	BDY	10	11.1	12.3	1	17	88.3	5
SMC J11A	SMC J11CA	GDZ	BDZ	11	12.2	13.5	1	18.2	82.5	1
SMC J12A	SMC J12CA	GEE	BEE	12	13.3	14.7	1	19.9	75.4	1
SMC J13A	SMC J13CA	GEG	BEG	13	14.4	15.9	1	21.5	69.8	1
SMC J14A	SMC J14CA	GEK	BEK	14	15.6	17.2	1	23.2	64.7	1
SMC J15A	SMC J15CA	GEM	BEM	15	16.7	18.5	1	24.4	61.5	1
SMC J16A	SMC J16CA	GEP	BEP	16	17.8	19.7	1	26	57.7	1
SMC J17A	SMC J17CA	GER	BER	17	18.9	20.9	1	27.6	54.4	1
SMC J18A	SMC J18CA	GET	BET	18	20	22.1	1	29.2	51.4	1
SMC J20A	SMC J20CA	GEV	BEV	20	22.2	24.5	1	32.4	46.3	1
SMC J22A	SMC J22CA	GEX	BEX	22	24.4	26.9	1	35.5	42.3	1
SMC J24A	SMC J24CA	GEZ	BEZ	24	26.7	29.5	1	38.9	38.6	1
SMC J26A	SMC J26CA	GFE	BFE	26	28.9	31.9	1	42.1	35.7	1
SMC J28A	SMC J28CA	GFG	BFG	28	31.1	34.4	1	45.4	33.1	1
SMC J30A	SMC J30CA	GFK	BFK	30	33.3	36.8	1	48.4	31	1
SMC J33A	SMC J33CA	GFM	BFM	33	36.7	40.6	1	53.3	28.2	1
SMC J36A	SMC J36CA	GFP	BFP	36	40	44.2	1	58.1	25.9	1

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TVS-SMD

SMCJ Series (1500W) DO-214AB PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMC J40A	SMC J40CA	GFR	BFR	40	44.4	49.1	1	64.5	23.3	1
SMC J43A	SMC J43CA	GFT	BFT	43	47.8	52.8	1	69.4	21.7	1
SMC J45A	SMC J45CA	GFV	BFV	45	50	55.3	1	72.7	20.6	1
SMC J48A	SMC J48CA	GFX	BFX	48	53.3	58.9	1	77.4	19.4	1
SMC J51A	SMC J51CA	GFZ	BFZ	51	56.7	62.7	1	82.4	18.2	1
SMC J54A	SMC J54CA	GGE	BGE	54	60	66.3	1	87.1	17.3	1
SMC J58A	SMC J58CA	GGG	BGG	58	64.4	71.2	1	93.6	16.1	1
SMC J60A	SMC J60CA	GGK	BGK	60	66.7	73.7	1	96.8	15.5	1
SMC J64A	SMC J64CA	GGM	BGM	64	71.1	78.6	1	103	14.6	1
SMC J70A	SMC J70CA	GGP	BGP	70	77.8	86	1	113	13.3	1
SMC J75A	SMC J75CA	GGR	BGR	75	83.3	92.1	1	121	12.4	1
SMC J78A	SMC J78CA	GGT	BGT	78	86.7	95.8	1	126	11.9	1
SMC J85A	SMC J85CA	GGV	BGV	85	94.4	104	1	137	11	1
SMC J90A	SMC J90CA	GGX	BGX	90	100	111	1	146	10.3	1
SMC J100A	SMC J100CA	GGZ	BGZ	100	111	123	1	162	9.3	1
SMC J110A	SMC J110CA	GHE	BHE	110	122	135	1	177	8.5	1
SMC J120A	SMC J120CA	GHG	BHG	120	133	147	1	193	7.8	1
SMC J130A	SMC J130CA	GHK	BHK	130	144	159	1	209	7.2	1
SMC J150A	SMC J150CA	GHM	BHM	150	167	185	1	243	6.2	1
SMC J160A	SMC J160CA	GHP	BHP	160	178	197	1	259	5.8	1
SMC J170A	SMC J170CA	GHR	BHR	170	189	209	1	275	5.5	1
SMC J180A	SMC J180CA	GHT	BHT	180	201	222	1	292	5.1	1
SMC J200A	SMC J200CA	GHV	BHV	200	224	247	1	324	4.6	1
SMC J220A	SMC J220CA	GHX	BHX	220	246	272	1	356	4.2	1
SMC J250A	SMC J250CA	GHZ	BHZ	250	279	309	1	405	3.7	1
SMC J300A	SMC J300CA	GJE	BJE	300	335	371	1	486	3.1	1
SMC J350A	SMC J350CA	GJG	BJG	350	391	432	1	567	2.6	1
SMC J400A	SMC J400CA	GJK	BJK	400	447	494	1	648	2.3	1
SMC J440A	SMC J440CA	GJM	BJM	440	492	543	1	713	2.1	1

SMDJ Series (3000W) DO-214AB PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMDJ5.0A	SMDJ5.0CA	RDE	DDE	5	6.4	7	10	9.2	326.1	800
SMDJ6.0A	SMDJ6.0CA	RDG	DDG	6	6.67	7.37	10	10.3	291.3	800
SMDJ6.5A	SMDJ6.5CA	RDK	DDK	6.5	7.22	7.98	10	11.2	267.9	500
SMDJ7.0A	SMDJ7.0CA	PDM	DDM	7	7.78	8.6	10	12	250	200

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TVS-SMD

SMDJ Series (3000W) DO-214AB PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMDJ7.5A	SMDJ7.5CA	PDP	DDP	7.5	8.33	9.21	1	12.9	232.6	100
SMDJ8.0A	SMDJ8.0CA	PDR	DDR	8	8.89	9.83	1	13.6	220.6	50
SMDJ8.5A	SMDJ8.5CA	PDT	DDT	8.5	9.44	10.4	1	14.4	208.3	20
SMDJ9.0A	SMDJ9.0CA	PDV	DDV	9	10	11.1	1	15.4	194.8	10
SMDJ10A	SMDJ10CA	PDX	DDX	10	11.1	12.3	1	17	176.5	5
SMDJ11A	SMDJ11CA	PDZ	DDZ	11	12.2	13.5	1	18.2	164.8	2
SMDJ12A	SMDJ12CA	PEE	DEE	12	13.3	14.7	1	19.9	150.8	2
SMDJ13A	SMDJ13CA	PEG	DEG	13	14.4	15.9	1	21.5	139.5	2
SMDJ14A	SMDJ14CA	PEK	DEK	14	15.6	17.2	1	23.2	129.3	2
SMDJ15A	SMDJ15CA	PEM	DEM	15	16.7	18.5	1	24.4	123	2
SMDJ16A	SMDJ16CA	PEP	DEP	16	17.8	19.7	1	26	115.4	2
SMDJ17A	SMDJ17CA	PER	DER	17	18.9	20.9	1	27.6	108.7	2
SMDJ18A	SMDJ18CA	PET	DET	18	20	22.1	1	29.2	102.7	2
SMDJ20A	SMDJ20CA	PEV	DEV	20	22.2	24.5	1	32.4	92.6	2
SMDJ22A	SMDJ22CA	PEX	DEX	22	24.4	26.9	1	35.5	84.5	2
SMDJ24A	SMDJ24CA	PEZ	DEZ	24	26.7	29.5	1	38.9	77.1	2
SMDJ26A	SMDJ26CA	PFE	DFE	26	28.9	31.9	1	42.1	71.3	2
SMDJ28A	SMDJ28CA	PFG	DFG	28	31.1	34.4	1	45.4	66.1	2
SMDJ30A	SMDJ30CA	PFK	DFK	30	33.3	36.8	1	48.4	62	2
SMDJ33A	SMDJ33CA	PFM	DFM	33	36.7	40.6	1	53.3	56.3	2
SMDJ36A	SMDJ36CA	PFP	DFP	36	40	44.2	1	58.1	51.6	2
SMDJ40A	SMDJ40CA	PFR	DFR	40	44.4	49.1	1	64.5	46.5	2
SMDJ43A	SMDJ43CA	PFT	DFT	43	47.8	52.8	1	69.4	43.2	2
SMDJ45A	SMDJ45CA	PFV	DFV	45	50	55.3	1	72.7	41.3	2
SMDJ48A	SMDJ48CA	PFX	DFX	48	53.3	58.9	1	77.4	38.8	2
SMDJ51A	SMDJ51CA	PFZ	DFZ	51	56.7	62.7	1	82.4	36.4	2
SMDJ54A	SMDJ54CA	RGE	DGE	54	60	66.3	1	87.1	34.4	2
SMDJ58A	SMDJ58CA	PGG	DGG	58	64.4	71.2	1	93.6	32.1	2
SMDJ60A	SMDJ60CA	PGK	DGK	60	66.7	73.7	1	96.8	31	2
SMDJ64A	SMDJ64CA	PGM	DGM	64	71.1	78.6	1	103	29.1	2
SMDJ70A	SMDJ70CA	PGP	DGP	70	77.8	86	1	113	26.5	2
SMDJ75A	SMDJ75CA	PGR	DGR	75	83.3	92.1	1	121	24.8	2
SMDJ78A	SMDJ78CA	PGT	DGT	78	86.7	95.8	1	126	23.8	2
SMDJ85A	SMDJ85CA	PGV	DGV	85	94.4	104	1	137	21.9	2
SMDJ90A	SMDJ90CA	PGX	DGX	90	100	111	1	146	20.5	2
SMDJ100A	SMDJ100CA	PGZ	DGZ	100	111	123	1	162	18.5	2
SMDJ110A	SMDJ110CA	PHE	DHE	110	122	135	1	177	16.9	2
SMDJ120A	SMDJ120CA	PHG	DHG	120	133	147	1	193	15.5	2
SMDJ130A	SMDJ130CA	PHK	DHK	130	144	159	1	209	14.4	2
SMDJ150A	SMDJ150CA	PHM	DHM	150	167	185	1	243	12.3	2

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TVS-SMD

SMDJ Series (3000W) DO-214AB PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMDJ160A	SMDJ160CA	PHP	DHP	160	178	197	1	259	11.6	2
SMDJ170A	SMDJ170CA	PHR	DHR	170	189	209	1	275	10.9	2
SMDJ180A	SMDJ180CA	PHT	DHT	180	201	222	1	292	10.3	2
SMDJ190A	SMDJ190CA	PHU	DHU	190	209	243	1	308	9.7	2
SMDJ200A	SMDJ200CA	PHV	DHV	200	224	247	1	324	9.3	2
SMDJ210A	SMDJ210CA	PHW	DHW	210	231	269	1	340	8.8	2
SMDJ220A	SMDJ220CA	PKE	DKE	220	246	272	1	356	8.4	2

SMDJ Series (5000W) DO-214AB PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
5.0SMDJ11A	5.0SMDJ11CA	5PEN	5BEN	11	12.2	13.5	10	18.2	275	800
5.0SMDJ12A	5.0SMDJ12CA	5PEP	5BEP	12	13.3	14.7	10	19.9	252	800
5.0SMDJ13A	5.0SMDJ13CA	5PEQ	5BEQ	13	14.4	15.9	10	21.5	233	500
5.0SMDJ14A	5.0SMDJ14CA	5PER	5BER	14	15.6	17.2	10	23.2	216	200
5.0SMDJ15A	5.0SMDJ15CA	5PES	5BES	15	16.7	18.5	1	24.4	205	100
5.0SMDJ16A	5.0SMDJ16CA	5PET	5BET	16	17.8	19.7	1	26	193	50
5.0SMDJ17A	5.0SMDJ17CA	5PEU	5BEU	17	18.9	20.9	1	27.6	181	20
5.0SMDJ18A	5.0SMDJ18CA	5PEV	5BEV	18	20	22.1	1	29.2	172	10
5.0SMDJ20A	5.0SMDJ20CA	5PEW	5BEW	20	22.2	24.5	1	32.4	155	5
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22	24.4	26.9	1	35.5	141	5
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24	26.7	29.5	1	38.9	129	5
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26	28.9	31.9	1	42.1	119	5
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28	31.1	34.4	1	45.4	110	5
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30	33.3	36.8	1	48.4	103	5
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33	36.7	40.6	1	53.3	93.9	5
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36	40	44.2	1	58.1	86.1	5
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40	44.4	49.1	1	64.5	77.6	5
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43	47.8	52.8	1	69.4	72.1	5
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	45	50	55.3	1	72.7	68.8	5
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48	53.3	58.9	1	77.4	64.7	5
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51	56.7	62.7	1	82.4	60.7	5
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54	60	66.3	1	87.1	57.5	5
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58	64.4	71.2	1	93.6	53.5	5
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60	66.7	73.7	1	96.8	51.7	5
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64	71.1	78.6	1	103	48.6	5
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70	77.8	86	1	113	44.3	5

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TVS-SMD

SMDJ Series (5000W) DO-214AB PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75	83.3	92.1	1	121	41.4	5
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78	86.7	95.8	1	126	39.7	5
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85	94.4	104	1	137	36.5	5
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90	100	111	1	146	34.3	5
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100	111	123	1	162	30.9	5
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	110	122	135	1	177	28.3	5
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	120	133	147	1	193	26	5
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	130	144	159	1	209	24	5
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	150	167	185	1	243	20.6	5
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHB	160	178	197	1	259	19.3	5
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	170	189	209	1	275	18.2	5

Small SMF4L Series (400W) SOD-123FL PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMF 4L5.0A	SMF4 L5.0CA	KE	WE	5	6.4	7	10	9.2	43.5	800
SMF 4L6.0A	SMF4 L6.0CA	KG	WG	6	6.67	7.37	10	10.3	38.8	800
SMF 4L6.5A	SMF4 L6.5CA	KK	WK	6.5	7.22	7.98	10	11.2	35.7	500
SMF 4L7.0A	SMF4 L7.0CA	KM	WM	7	7.78	8.6	10	12	33.3	200
SMF 4L7.5A	SMF4 L7.5CA	KP	WP	7.5	8.33	9.21	1	12.9	31	100
SMF 4L8.0A	SMF4 L8.0CA	KR	WR	8	8.89	9.83	1	13.6	29.4	50
SMF 4L8.5A	SMF4 L8.5CA	KT	WT	8.5	9.44	10.4	1	14.4	27.8	20
SMF 4L9.0A	SMF4 L9.0CA	KV	WV	9	10	11.1	1	15.4	26	10
SMF4 L10A	SMF4 L10CA	KX	WX	10	11.1	12.3	1	17	23.5	5
SMF4 L11A	SMF4 L11CA	KZ	WZ	11	12.2	13.5	1	18.2	22	1
SMF4 L12A	SMF4 L12CA	LE	XE	12	13.3	14.7	1	19.9	20.1	1
SMF4 L13A	SMF4 L13CA	LG	XG	13	14.4	15.9	1	21.5	18.6	1
SMF4 L14A	SMF4 L14CA	LK	XK	14	15.6	17.2	1	23.2	17.2	1
SMF4 L15A	SMF4 L15CA	LM	XM	15	16.7	18.5	1	24.4	16.4	1
SMF4 L16A	SMF4 L16CA	LP	XP	16	17.8	19.7	1	26	15.4	1
SMF4 L17A	SMF4 L17CA	LR	XR	17	18.9	20.9	1	27.6	14.5	1
SMF4 L18A	SMF4 L18CA	LT	XT	18	20	22.1	1	29.2	13.7	1
SMF4 L20A	SMF4 L20CA	LV	XV	20	22.2	24.5	1	32.4	12.3	1
SMF4 L22A	SMF4 L22CA	LX	XX	22	24.4	26.9	1	35.5	11.3	1
SMF4 L24A	SMF4 L24CA	LZ	XZ	24	26.7	29.5	1	38.9	10.3	1
SMF4 L26A	SMF4 L26CA	ME	YE	26	28.9	31.9	1	42.1	9.5	1
SMF4 L28A	SMF4 L28CA	MG	YG	28	31.1	34.4	1	45.4	8.8	1

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TVS-SMD

Small SMF4L Series (400W) SOD-123FL PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMF4 L30A	SMF4 L30CA	MK	YK	30	33.3	36.8	1	48.4	8.3	1
SMF4 L33A	SMF4 L33CA	MM	YM	33	36.7	40.6	1	53.3	7.5	1
SMF4 L36A	SMF4 L36CA	MP	YP	36	40	44.2	1	58.1	6.9	1
SMF4 L40A	SMF4 L40CA	MR	YR	40	44.4	49.1	1	64.5	6.2	1
SMF4 L43A	SMF4 L43CA	MT	Y T	43	47.8	52.8	1	69.4	5.8	1
SMF4 L45A	SMF4 L45CA	MV	YV	45	50	55.3	1	72.7	5.5	1
SMF4 L48A	SMF4 L48CA	MX	YX	48	53.3	58.9	1	77.4	5.2	1
SMF4 L51A	SMF4 L51CA	MZ	YZ	51	56.7	62.7	1	82.4	4.9	1
SMF4 L54A	SMF 4L54CA	NE	ZE	54	60	66.3	1	87.1	4.6	1
SMF4 L58A	SMF4 L58CA	NG	ZG	58	64.4	71.2	1	93.6	4.3	1
SMF4 L60A	SMF4 L60CA	NK	ZK	60	66.7	73.7	1	96.8	4.1	1
SMF4 L64A	SMF4 L64CA	NM	ZM	64	71.1	78.6	1	103	3.9	1
SMF4 L70A	SMF4 L70CA	NP	ZP	70	77.8	86	1	113	3.5	1
SMF4 L75A	SMF4 L75CA	NR	ZR	75	83.3	92.1	1	121	3.3	1
SMF4 L78A	SMF4 L78CA	NT	ZT	78	86.7	95.8	1	126	3.2	1
SMF4 L85A	SMF4 L85CA	NV	ZV	85	94.4	104	1	137	2.9	1
SMF4 L90A	SMF4 L90CA	NX	ZX	90	100	111	1	146	2.7	1
SMF 4L100A	SMF4 L100CA	NZ	ZZ	100	111	123	1	162	2.5	1
SMF 4L110A	SMF4 L110CA	PE	VE	110	122	135	1	177	2.3	1
SMF 4L120A	SMF4 L120CA	PG	VG	120	133	147	1	193	2.1	1
SMF 4L130A	SMF4 L130CA	PK	VK	130	144	159	1	209	1.9	1
SMF 4L150A	SMF4 L150CA	PM	VM	150	167	185	1	243	1.6	1
SMF 4L160A	SMF4 L160CA	PP	VP	160	178	197	1	259	1.5	1
SMF 4L170A	SMF4 L170CA	PR	VR	170	189	209	1	275	1.5	1

Small SMA6J Series (600W) DO-214AC PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMA6J5.0A	SMA6J5.0CA	6KE	6AE	5	6.4	7	10	9.2	65.3	800
SMA6J6.0A	SMA6J6.0CA	6KG	6AG	6	6.67	7.37	10	10.3	58.3	800
SMA6J6.5A	SMA6J6.5CA	6KK	6AK	6.5	7.22	7.98	10	11.2	53.6	500
SMA6J7.0A	SMA6J7.0CA	6KM	6AM	7	7.78	8.6	10	12	50	200
SMA6J7.5A	SMA6J7.5CA	6KP	6AP	7.5	8.33	9.21	1	12.9	46.6	100
SMA6J8.0A	SMA6J8.0CA	6KR	6AR	8	8.89	9.83	1	13.6	44.2	50
SMA6J8.5A	SMA6J8.5CA	6KT	6AT	8.5	9.44	10.4	1	14.4	41.7	20
SMA6J9.0A	SMA6J9.0CA	6KV	6AV	9	10	11.1	1	15.4	39	10
SMA6J10A	SMA6J10CA	6KX	6AX	10	11.1	12.3	1	17	35.3	5

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TVS-SMD

Small SMA6J Series (600W) DO-214AC PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)
SMA6J11A	SMA6J11CA	6KZ	6AZ	11	12.2	13.5	1	18.2	33	1
SMA6J12A	SMA6J12CA	6LE	6BE	12	13.3	14.7	1	19.9	30.2	1
SMA6J13A	SMA6J13CA	6LG	6BG	13	14.4	15.9	1	21.5	28	1
SMA6J14A	SMA6J14CA	6LK	6BK	14	15.6	17.2	1	23.2	25.9	1
SMA6J15A	SMA6J15CA	6LM	6BM	15	16.7	18.5	1	24.4	24.6	1
SMA6J16A	SMA6J16CA	6LP	6BP	16	17.8	19.7	1	26	23.1	1
SMA6J17A	SMA6J17CA	6LR	6BR	17	18.9	20.9	1	27.6	21.8	1
SMA6J18A	SMA6J18CA	6LT	6BT	18	20	22.1	1	29.2	20.6	1
SMA6J20A	SMA6J20CA	6LV	6BV	20	22.2	24.5	1	32.4	18.6	1
SMA6J22A	SMA6J22CA	6LX	6BX	22	24.4	26.9	1	35.5	16.9	1
SMA6J24A	SMA6J24CA	6LZ	6BZ	24	26.7	29.5	1	38.9	15.5	1
SMA6J26A	SMA6J26CA	6ME	6CE	26	28.9	31.9	1	42.1	14.3	1
SMA6J28A	SMA6J28CA	6MG	6CG	28	31.1	34.4	1	45.4	13.3	1
SMA6J30A	SMA6J30CA	6MK	6CK	30	33.3	36.8	1	48.4	12.4	1
SMA6J33A	SMA6J33CA	6MM	6CM	33	36.7	40.6	1	53.3	11.3	1
SMA6J36A	SMA6J36CA	6MP	6CP	36	40	44.2	1	58.1	10.4	1
SMA6J40A	SMA6J40CA	6MR	6CR	40	44.4	49.1	1	64.5	9.3	1
SMA6J43A	SMA6J43CA	6MT	6CT	43	47.8	52.8	1	69.4	8.7	1
SMA6J45A	SMA6J45CA	6MV	6CV	45	50	55.3	1	72.7	8.3	1
SMA6J48A	SMA6J48CA	6MX	6CX	48	53.3	58.9	1	77.4	7.8	1
SMA6J51A	SMA6J51CA	6MZ	6CZ	51	56.7	62.7	1	82.4	7.3	1
SMA6J54A	SMA6J54CA	6NE	6DE	54	60	66.3	1	87.1	6.9	1
SMA6J58A	SMA6J58CA	6NG	6DG	58	64.4	71.2	1	93.6	6.5	1
SMA6J60A	SMA6J60CA	6NK	6DK	60	66.7	73.7	1	96.8	6.2	1
SMA6J64A	SMA6J64CA	6NM	6DM	64	71.1	78.6	1	103	5.9	1
SMA6J70A	SMA6J70CA	6NP	6DP	70	77.8	86	1	113	5.3	1
SMA6J75A	SMA6J75CA	6NR	6DR	75	83.3	92.1	1	121	5	1
SMA6J78A	SMA6J78CA	6NT	6DT	78	86.7	95.8	1	126	4.8	1
SMA6J85A	SMA6J85CA	6NV	6DV	85	94.4	104	1	137	4.4	1
SMA6J90A	SMA6J90CA	6NX	6DX	90	100	111	1	146	4.1	1
SMA6J100A	SMA6J100CA	6NZ	6DZ	100	111	123	1	162	3.7	1
SMA6J110A	SMA6J110CA	6PE	6EE	110	122	135	1	177	3.4	1
SMA6J120A	SMA6J120CA	6PG	6EG	120	133	147	1	193	3.1	1
SMA6J130A	SMA6J130CA	6PK	6EK	130	144	159	1	209	2.9	1
SMA6J150A	SMA6J150CA	6PM	6EM	150	167	185	1	243	2.5	1

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TVS-SMD

Small SMB15J Series (1500W) DO-214AA PACKAGE

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNI	BI	UNI	BI	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)
SMB15J11A	SMB15J11CA	GDZ	BDZ	11	12.2	13.5	10	18.2	82.4	800
SMB15J12A	SMB15J12CA	GEE	BEE	12	13.3	14.7	10	19.9	75.4	800
SMB15J13A	SMB15J13CA	GEG	BEG	13	14.4	15.9	10	21.5	69.8	500
SMB15J14A	SMB15J14CA	GEK	BEK	14	15.6	17.2	10	23.2	64.7	200
SMB15J15A	SMB15J15CA	GEM	BEM	15	16.7	18.5	1	24.4	61.5	100
SMB15J16A	SMB15J16CA	GEP	BEP	16	17.8	19.7	1	26	57.7	50
SMB15J17A	SMB15J17CA	GER	BER	17	18.9	20.9	1	27.6	54.3	20
SMB15J18A	SMB15J18CA	GET	BET	18	20	22.1	1	29.2	51.4	10
SMB15J20A	SMB15J20CA	GEV	BEV	20	22.2	24.5	1	32.4	46.3	5
SMB15J22A	SMB15J22CA	GEX	BEX	22	24.4	26.9	1	35.5	42.3	1
SMB15J24A	SMB15J24CA	GEZ	BEZ	24	26.7	29.5	1	38.9	38.6	1
SMB15J26A	SMB15J26CA	GFE	BFE	26	28.9	31.9	1	42.1	35.6	1
SMB15J28A	SMB15J28CA	GFG	BFG	28	31.1	34.4	1	45.4	33	1
SMB15J30A	SMB15J30CA	GFK	BFK	30	33.3	36.8	1	48.4	31	1
SMB15J33A	SMB15J33CA	GFM	BFM	33	36.7	40.6	1	53.3	28.1	1
SMB15J36A	SMB15J36CA	GFP	BFP	36	40	44.2	1	58.1	25.8	1
SMB15J40A	SMB15J40CA	GFR	BFR	40	44.4	49.1	1	64.5	23.3	1
SMB15J43A	SMB15J43CA	GFT	BFT	43	47.8	52.8	1	69.4	21.6	1
SMB15J45A	SMB15J45CA	GFV	BFV	45	50	55.3	1	72.7	20.6	1
SMB15J48A	SMB15J48CA	GFX	BFX	48	53.3	58.9	1	77.4	19.4	1
SMB15J51A	SMB15J51CA	GFZ	BFZ	51	56.7	62.7	1	82.4	18.2	1
SMB15J54A	SMB15J54CA	GGE	BGE	54	60	66.3	1	87.1	17.2	1
SMB15J58A	SMB15J58CA	GGG	BGG	58	64.4	71.2	1	93.6	16	1
SMB15J60A	SMB15J60CA	GGK	BGK	60	66.7	73.7	1	96.8	15.5	1
SMB15J64A	SMB15J64CA	GGM	BGM	64	71.1	78.6	1	103	14.6	1
SMB15J70A	SMB15J70CA	GGP	BGP	70	77.8	86	1	113	13.3	1
SMB15J75A	SMB15J75CA	GGR	BGR	75	83.3	92.1	1	121	12.4	1
SMB15J78A	SMB15J78CA	GGT	BGT	78	86.7	95.8	1	126	11.9	1
SMB15J85A	SMB15J85CA	GGV	BGV	85	94.4	104	1	137	10.9	1
SMB15J90A	SMB15J90CA	GGX	BGX	90	100	111	1	146	10.3	1
SMB15J100A	SMB15J100CA	GGZ	BGZ	100	111	123	1	162	9.3	1
SMB15J110A	SMB15J110CA	GHE	BHE	110	122	135	1	177	8.5	1
SMB15J120A	SMB15J120CA	GHG	BHG	120	133	147	1	193	7.8	1
SMB15J130A	SMB15J130CA	GHK	BHK	130	144	159	1	209	7.2	1
SMB15J150A	SMB15J150CA	GHM	BHM	150	167	185	1	243	6.2	1
SMB15J160A	SMB15J160CA	GHP	BHP	160	178	197	1	259	5.8	1
SMB15J170A	SMB15J170CA	GHR	BHR	170	189	209	1	275	5.5	1

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TVS-DIP

P4KE Series (400W) DO-41 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P4KE6.8A	P4 KE6.8CA	5.8	6.45	7.14	10	10.5	39	1000
P4KE7.5A	P4 KE7.5CA	6.4	7.13	7.88	10	11.3	36.3	500
P4KE8.2A	P4 KE8.2CA	7.02	7.79	8.61	10	12.1	33.9	200
P4KE9.1A	P4 KE9.1CA	7.78	8.65	9.55	1	13.4	30.6	50
P4 KE10A	P4KE10CA	8.55	9.5	10.5	1	14.5	28.3	10
P4 KE11A	P4KE11CA	9.4	10.5	11.6	1	15.6	26.3	5
P4 KE12A	P4KE12CA	10.2	11.4	12.6	1	16.7	24.6	5
P4 KE13A	P4KE13CA	11.1	12.4	13.7	1	18.2	22.5	1
P4 KE15A	P4KE15CA	12.8	14.3	15.8	1	21.2	19.3	1
P4 KE16A	P4KE16CA	13.6	15.2	16.8	1	22.5	18.2	1
P4 KE18A	P4KE18CA	15.3	17.1	18.9	1	25.5	16.1	1
P4 KE20A	P4KE20CA	17.1	19	21	1	27.7	14.8	1
P4 KE22A	P4KE22CA	18.8	20.9	23.1	1	30.6	13.4	1
P4 KE24A	P4KE24CA	20.5	22.8	25.2	1	33.2	12.3	1
P4 KE27A	P4KE27CA	23.1	25.7	28.4	1	37.5	10.9	1
P4 KE30A	P4KE30CA	25.6	28.5	31.5	1	41.4	9.9	1
P4 KE33A	P4KE33CA	28.2	31.4	34.7	1	45.7	9	1
P4 KE36A	P4KE36CA	30.8	34.2	37.8	1	49.9	8.2	1
P4 KE39A	P4KE39CA	33.3	37.1	41	1	53.9	7.6	1
P4 KE43A	P4KE43CA	36.8	40.9	45.2	1	59.3	6.9	1
P4 KE47A	P4KE47CA	40.2	44.7	49.4	1	64.8	6.3	1
P4 KE51A	P4KE51CA	43.6	48.5	53.6	1	70.1	5.8	1
P4 KE56A	P4KE56CA	47.8	53.2	58.8	1	77	5.3	1
P4 KE62A	P4KE62CA	53	58.9	65.1	1	85	4.8	1
P4 KE68A	P4KE68CA	58.1	64.6	71.4	1	92	4.5	1
P4 KE75A	P4KE75CA	64.1	71.3	78.8	1	103	4	1
P4 KE82A	P4KE82CA	70.1	77.9	86.1	1	113	3.6	1
P4 KE91A	P4KE91CA	77.8	86.5	95.5	1	125	3.3	1
P4KE100 A	P4KE100CA	85.5	95	105	1	137	3	1
P4KE110 A	P4KE110CA	94	105	116	1	152	2.7	1
P4KE120 A	P4KE120CA	102	114	126	1	165	2.5	1
P4KE130 A	P4KE130CA	111	124	137	1	179	2.3	1
P4KE150 A	P4KE150CA	128	143	158	1	207	2	1
P4KE160 A	P4KE160CA	136	152	168	1	219	1.9	1
P4KE170 A	P4KE170CA	145	162	179	1	234	1.8	1
P4KE180 A	P4KE180CA	154	171	189	1	246	1.7	1
P4KE200 A	P4KE200CA	171	190	210	1	274	1.5	1
P4KE220 A	P4KE220CA	185	209	231	1	328	1.3	1
P4KE250 A	P4KE250CA	214	237	263	1	344	1.2	1
P4KE300 A	P4KE300CA	256	285	315	1	414	1	1

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TVS-DIP

P4KE Series (400W) DO-41 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P4KE350 A	P4KE350CA	300	332	368	1	482	0.85	1
P4KE400 A	P4KE400CA	342	380	420	1	548	0.75	1
P4KE440 A	P4KE440CA	376	418	462	1	602	0.68	1
P4KE480 A	P4KE480CA	408	456	504	1	658	0.61	1
P4KE510 A	P4KE510CA	434	485	535	1	698	0.57	1
P4KE530 A	P4KE530CA	477	503.5	556.5	1	725	0.55	1
P4KE540 A	P4KE540CA	459	513	567	1	740	0.54	1
P4KE550 A	P4KE550CA	495	522.5	577.5	1	760	0.52	1

P6KE Series (600W) DO-15 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P6KE6.8A	P6KE6.8CA	5.8	6.45	7.14	10	10.5	58.1	1000
P6KE7.5A	P6KE7.5CA	6.4	7.13	7.88	10	11.3	54	500
P6KE8.2A	P6KE8.2CA	7.02	7.79	8.61	10	12.1	50.4	200
P6KE9.1A	P6KE9.1CA	7.78	8.65	9.55	1	13.4	45.5	50
P6KE10A	P6KE10CA	8.55	9.5	10.5	1	14.5	42.1	10
P6KE11A	P6KE11CA	9.4	10.5	11.6	1	15.6	39.1	5
P6KE12A	P6KE12CA	10.2	11.4	12.6	1	16.7	36.5	5
P6KE13A	P6KE13CA	11.1	12.4	13.7	1	18.2	33.5	1
P6KE15A	P6KE15CA	12.8	14.3	15.8	1	21.2	28.8	1
P6KE16A	P6KE16CA	13.6	15.2	16.8	1	22.5	27.1	1
P6KE18A	P6KE18CA	15.3	17.1	18.9	1	25.5	24.2	1
P6KE20A	P6KE20CA	17.1	19	21	1	27.7	22	1
P6KE22A	P6KE22CA	18.8	20.9	23.1	1	30.6	19.9	1
P6KE24A	P6KE24CA	20.5	22.8	25.2	1	33.2	18.4	1
P6KE27A	P6KE27CA	23.1	25.7	28.4	1	37.5	16.3	1
P6KE30A	P6KE30CA	25.6	28.5	31.5	1	41.4	14.7	1
P6KE33A	P6KE33CA	28.2	31.4	34.7	1	45.7	13.3	1
P6KE36A	P6KE36CA	30.8	34.2	37.8	1	49.9	12.2	1
P6KE39A	P6KE39CA	33.3	37.1	41	1	53.9	11.3	1
P6KE43A	P6KE43CA	36.8	40.9	45.2	1	59.3	10.3	1
P6KE47A	P6KE47CA	40.2	44.7	49.4	1	64.8	9.4	1
P6KE51A	P6KE51CA	43.6	48.5	53.6	1	70.1	8.7	1
P6KE56A	P6KE56CA	47.8	53.2	58.8	1	77	7.9	1
P6KE62A	P6KE62CA	53	58.9	65.1	1	85	7.2	1
P6KE68A	P6KE68CA	58.1	64.6	71.4	1	92	6.6	1

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P6KE Series (600W) DO-15 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
P6KE75A	P6KE75CA	64.1	71.3	78.8	1	103	5.9	1
P6KE82A	P6KE82CA	70.1	77.9	86.1	1	113	5.4	1
P6KE91A	P6KE91CA	77.8	86.5	95.5	1	125	4.9	1
P6KE100A	P6KE100CA	85.5	95	105	1	137	4.5	1
P6KE110A	P6KE110CA	94	105	116	1	152	4	1
P6KE120A	P6KE120CA	102	114	126	1	165	3.7	1
P6KE130A	P6KE130CA	111	124	137	1	179	3.4	1
P6KE150A	P6KE150CA	128	143	158	1	207	2.9	1
P6KE160A	P6KE160CA	136	152	168	1	219	2.8	1
P6KE170A	P6KE170CA	145	162	179	1	234	2.6	1
P6KE180A	P6KE180CA	154	171	189	1	246	2.5	1
P6KE200A	P6KE200CA	171	190	210	1	274	2.2	1
P6KE220A	P6KE220CA	185	209	231	1	328	1.9	1
P6KE250A	P6KE250CA	214	237	263	1	344	1.8	1
P6KE300A	P6KE300CA	256	285	315	1	414	1.5	1
P6KE350A	P6KE350CA	300	332	368	1	482	1.3	1
P6KE400A	P6KE400CA	342	380	420	1	548	1.1	1
P6KE440A	P6KE440CA	376	418	462	1	602	1	1
P6KE480A	P6KE480CA	408	456	504	1	658	0.9	1
P6KE510A	P6KE510CA	434	485	535	1	698	0.9	1
P6KE530A	P6KE530CA	451	503.5	557	1	725	0.8	1
P6KE540A	P6KE540CA	459	513	567	1	740	0.8	1
P6KE550A	P6KE550CA	467	522.5	578	1	760	0.8	1
P6KE600A	P6KE600CA	510	570	630	1	828	0.75	1

1.5KE Series (1500W) DO-27/DO-201 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
1.5 KE6.8A	1.5KE6.8CA	5.8	6.45	7.14	10	10.5	145	1000
1.5 KE7.5A	1.5KE7.5CA	6.4	7.13	7.88	10	11.3	135	500
1.5KE8.2A	1.5KE8.2CA	7.02	7.79	8.61	10	12.1	126	200
1.5KE9.1A	1.5KE9.1CA	7.78	8.65	9.5	1	13.4	113	50
1.5KE10A	1.5KE10 CA	8.55	9.5	10.5	1	14.5	105	10
1.5KE11A	1.5 KE11 CA	9.4	10.5	11.6	1	15.6	97.4	5
1.5KE12A	1.5 KE12 CA	10.2	11.4	12.6	1	16.7	91	5
1.5KE13A	1.5 KE13 CA	11.1	12.4	13.7	1	18.2	83.5	1
1.5KE15A	1.5 KE15 CA	12.8	14.3	15.8	1	21.2	71.7	1

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1.5KE Series (1500W) DO-27/DO-201 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
1.5KE16A	1.5 KE16 CA	13.6	15.2	16.8	1	22.5	67.6	1
1.5KE18A	1.5 KE18 CA	15.3	17.1	18.9	1	25.2	60.3	1
1.5KE20A	1.5 KE20 CA	17.1	19	21	1	27.7	54.9	1
1.5KE22A	1.5 KE22 CA	18.8	20.9	23.1	1	30.6	49.7	1
1.5KE24A	1.5 KE24 CA	20.5	22.8	25.2	1	33.2	45.8	1
1.5KE27A	1.5 KE27 CA	23.1	25.7	28.4	1	37.5	40.5	1
1.5KE30A	1.5 KE30 CA	25.6	28.5	31.5	1	41.4	36.7	1
1.5KE33A	1.5 KE33 CA	28.2	31.4	34.7	1	45.7	33.3	1
1.5KE36A	1.5 KE36 CA	30.8	34.2	37.8	1	49.9	30.5	1
1.5KE39A	1.5 KE39 CA	33.3	37.1	41	1	53.9	28.2	1
1.5KE43A	1.5 KE43 CA	36.8	40.9	45.2	1	59.3	25.6	1
1.5KE47A	1.5 KE47 CA	40.2	44.7	49.4	1	64.8	23.5	1
1.5KE51A	1.5 KE51 CA	43.6	48.5	53.6	1	70.1	21.7	1
1.5KE56A	1.5 KE56 CA	47.8	53.2	58.8	1	77	19.7	1
1.5KE62A	1.5 KE62 CA	53	58.9	65.1	1	85	17.9	1
1.5KE68A	1.5 KE68 CA	58.1	64.6	71.4	1	92	16.5	1
1.5KE75A	1.5 KE75 CA	64.1	71.3	78.8	1	103	14.8	1
1.5KE82A	1.5 KE82 CA	70.1	77.9	86.1	1	113	13.5	1
1.5KE91A	1.5 KE91 CA	77.8	86.5	95.5	1	125	12.2	1
1.5KE100A	1.5 KE100CA	85.5	95	105	1	137	11.1	1
1.5KE110A	1.5 KE110CA	94	105	116	1	152	10	1
1.5KE120A	1.5 KE120CA	102	114	126	1	165	9.2	1
1.5KE130A	1.5 KE130CA	111	124	137	1	179	8.5	1
1.5KE150A	1.5 KE150CA	128	143	158	1	207	7.3	1
1.5KE160A	1.5 KE160CA	136	152	168	1	219	6.9	1
1.5KE170A	1.5 KE170CA	145	162	179	1	234	6.5	1
1.5KE180A	1.5 KE180CA	154	171	189	1	246	6.2	1
1.5KE200A	1.5 KE200CA	171	190	210	1	274	5.5	1
1.5KE220A	1.5 KE220CA	185	209	231	1	328	4.6	1
1.5KE250A	1.5 KE250CA	214	237	263	1	344	4.4	1
1.5KE300A	1.5 KE300CA	256	285	315	1	414	3.7	1
1.5KE350A	1.5 KE350CA	300	332	368	1	482	3.2	1
1.5KE400A	1.5 KE400CA	342	380	420	1	548	2.8	1
1.5KE440A	1.5 KE440CA	376	418	462	1	602	2.5	1
1.5KE480A	1.5 KE480CA	408	456	504	1	658	2.3	1
1.5KE510A	1.5 KE510CA	434	485	535	1	698	2.1	1
1.5KE 530A	1.5KE530C A	451	503	557	1	725	2.1	1
1.5KE540A	1.5 KE540CA	459	513	567	1	740	2	1
1.5KE 550A	1.5KE550C A	467	522	578	1	760	2	1
1.5KE 600A	1.5KE 600C A	510	570	630	1	828	1.8	1

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TVS-DIP

5KP Series (5000W) R-6/P-600 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
5KP5.0A	5KP5.0CA	5	6.4	7	50	9.2	544	5000
5KP6.0A	5KP6.0CA	6	6.67	7.37	50	10.3	486	5000
5KP6.5A	5KP6.5CA	6.5	7.22	7.98	50	11.2	448	2000
5KP7.0A	5KP7.0CA	7	7.78	8.6	50	12	417	1000
5KP7.5A	5KP7.5CA	7.5	8.33	9.21	5	12.9	388	250
5KP8.0A	5KP8.0CA	8	8.89	9.83	5	13.6	367	150
5KP8.5A	5KP8.5CA	8.5	9.44	10.4	5	14.4	347	50
5KP9.0A	5KP9.0CA	9	10	11.1	5	15.4	325	20
5KP10A	5KP10CA	10	11.1	12.3	5	17	294	15
5KP11A	5KP11CA	11	12.2	13.5	5	18.2	275	5
5KP12A	5KP12CA	12	13.3	14.7	5	19.9	252	2
5KP13A	5KP13CA	13	14.4	15.9	5	21.5	233	2
5KP14A	5KP14CA	14	15.6	17.2	5	23.2	216	1
5KP15A	5KP15CA	15	16.7	18.5	5	24.4	205	1
5KP16A	5KP16CA	16	17.8	19.7	5	26	193	1
5KP17A	5KP17CA	17	18.9	20.9	5	27.6	181	1
5KP18A	5KP18CA	18	20	22.1	5	29.2	172	1
5KP20A	5KP20CA	20	22.2	24.5	5	32.4	155	1
5KP22A	5KP22CA	22	24.4	26.9	5	35.5	141	1
5KP24A	5KP24CA	24	26.7	29.5	5	38.9	129	1
5KP26A	5KP26CA	26	28.9	31.9	5	42.1	119	1
5KP28A	5KP28CA	28	31.1	34.4	5	45.4	110	1
5KP30A	5KP30CA	30	33.3	36.8	5	48.4	103	1
5KP33A	5KP33CA	33	36.7	40.6	5	53.3	93.9	1
5KP36A	5KP36CA	36	40	44.2	5	58.1	86.1	1
5KP40A	5KP40CA	40	44.4	49.1	5	64.5	77.6	1
5KP43A	5KP43CA	43	47.8	52.8	5	69.4	72.1	1
5KP45A	5KP45CA	45	50	55.3	5	72.7	68.8	1
5KP48A	5KP48CA	48	53.3	58.9	5	77.4	64.7	1
5KP51A	5KP51CA	51	56.7	62.7	5	82.4	60.7	1
5KP54A	5KP54CA	54	60	66.3	5	87.1	57.5	1
5KP58A	5KP58CA	58	64.4	71.2	5	93.6	53.5	1
5KP60A	5KP60CA	60	66.7	73.7	5	96.8	51.7	1
5KP64A	5KP64CA	64	71.1	78.6	5	103	48.6	1
5KP70A	5KP70CA	70	77.8	86	5	113	44.3	1
5KP75A	5KP75CA	75	83.3	92.1	5	121	41.4	1

Surge waveform:10/1000μs

VR: Stand-off voltage -- Maximum voltage that can be applied VBR: Breakdown voltage

VC: Clamping voltage -- Peak voltage measured across the suppressor at a specified IPP

IR: Reverse leakage current

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TVS-DIP

5KP Series (5000W) R-6/P-600 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
5KP78A	5KP78CA	78	86.7	95.8	5	126	39.7	1
5KP85A	5KP85CA	85	94.4	104	5	137	36.5	1
5KP90A	5KP90CA	90	100	111	5	146	34.3	1
5KP100A	5KP100CA	100	111	123	5	162	30.9	1
5KP110A	5KP110CA	110	122	135	5	177	28.3	1
5KP120A	5KP120CA	120	133	147	5	193	26	1
5KP130A	5KP130CA	130	144	159	5	209	24	1
5KP150A	5KP150CA	150	167	185	5	243	20.6	1
5KP160A	5KP160CA	160	178	197	5	259	19.3	1
5KP170A	5KP170CA	170	189	209	5	275	18.2	1
5KP180A	5KP180CA	180	201	222	5	292	17.5	1
5KP190A	5KP190CA	190	211	233	5	310	16.5	1
5KP200A	5KP200CA	200	224	247	5	329.2	15.5	1
5KP210A	5KP210CA	210	237	263	5	349.5	14.6	1
5KP220A	5KP220CA	220	246	272	5	371.1	13.7	1
5KP250A	5KP250CA	250	277	306	5	425	12	1

Surge waveform:10/1000μs

VR: Stand-off voltage -- Maximum voltage that can be applied VBR: Breakdown voltage

VC: Clamping voltage -- Peak voltage measured across the suppressor at a specified IPP

IR: Reverse leakage current

TVS-DIP

15KP Series (15000W) R-6/P-600 PACKAGE

Part Number		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
UNT-POLAR	BI-POLAR	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
15KP17A	15KP17CA	17	18.9	20.9	50	29.3	515.4	5000
15KP18A	15KP18CA	18	20	22.1	50	30.9	488.7	5000
15KP20A	15KP20CA	20	22.2	24.5	20	34.3	440.2	1500
15KP22A	15KP22CA	22	24.4	26.9	10	37.1	407	500
15KP24A	15KP24CA	24	26.7	29.5	5	40.7	371	150
15KP26A	15KP26CA	26	28.9	31.9	5	44	343.2	50
15KP28A	15KP28CA	28	31.1	34.4	5	47.5	317.9	25
15KP30A	15KP30CA	30	33.3	36.8	5	50.7	297.8	15
15KP33A	15KP33CA	33	36.7	40.6	5	54.7	276.1	2
15KP36A	15KP36CA	36	40	44.2	5	59.8	252.5	2
15KP40A	15KP40CA	40	44.4	49.1	5	65.8	229.5	2
15KP43A	15KP43CA	43	47.8	52.8	5	69.8	216.3	2
15KP45A	15KP45CA	45	50	55.3	5	72.8	207.4	2
15KP48A	15KP48CA	48	53.3	58.9	5	77.7	194.3	2
15KP51A	15KP51CA	51	56.7	62.7	5	82.9	182.1	2
15KP54A	15KP54CA	54	60	66.3	5	87.7	172.2	2
15KP58A	15KP58CA	58	64.4	71.2	5	93.8	161	2
15KP60A	15KP60CA	60	66.7	73.7	5	97.4	155	2
15KP64A	15KP64CA	64	71.1	78.6	5	104.2	144.9	2
15KP70A	15KP70CA	70	77.8	86	5	113.6	132.9	2
15KP75A	15KP75CA	75	83.3	92.1	5	122	123.8	2
15KP78A	15KP78CA	78	86.7	95.8	5	126.1	119.7	2
15KP85A	15KP85CA	85	94.4	104	5	137.6	109.7	2
15KP90A	15KP90CA	90	100	111	5	145.6	103.7	2
15KP100A	15KP100CA	100	111	123	5	161.3	93.6	2
15KP110A	15KP110CA	110	122	135	5	178.6	84.5	2
15KP120A	15KP120CA	120	133	147	5	192.3	78.5	2
15KP130A	15KP130CA	130	144	159	5	208.3	72.5	2
15KP150A	15KP150CA	150	167	185	5	241.9	62.4	2
15KP160A	15KP160CA	160	178	197	5	258.6	58.4	2

Surge waveform:10/1000μs

VR: Stand-off voltage -- Maximum voltage that can be applied VBR: Breakdown voltage

VC: Clamping voltage -- Peak voltage measuracross the suppressor at a specified IPP

IR: Reverse leakage current

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TVS Array (ESD)

DFN0603/0201

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UL3321P0S	DFN0603-2	BI	3.3	3.5	0.2	10	4.5	0.6	±30	±30
UL0521P0L	DFN0603-2	BI	5	6	0.1	4.5	27	0.22	±15	±15
UL1821P0	DFN0603-2	BI	18	19.5	0.2	2	40	0.3	±25	±15
UL2421P0	DFN0603-2	BI	24	26.5	0.5	1.5	53	0.3	±15	±8
UT0381D2	DFN0603-2	BI	3.3	4	0.5	21	8	35	±30	±30
U321SL	DFN0603-2	BI	3.3	3.8	0.2	10	4.6	0.5	±30	±30
UT317ZB	DFN0603-2	BI	5	6	1	4	4.7TLP	0.18	±15	±12
PESD0201MS05	DFN0603-2	BI	5	450	0.01			0.05	±15	±8
UE030603D	DFN0603-2	UNI	3.3	4	0.5	5	15	0.6	±25	±20

DFN1006/0402/SOD923

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UL3321P1S	DFN1006-2	BI	3.3	3.5	0.2	12	6	0.6	±30	±30
UL3321P1-SB	DFN1006-2	BI	3.3	3.5	0.2	25	7	1.2	±30	±30
UT0321D4H	DFN1006-2	BI	3.3	8.5	0.2	6	5.8	0.2	±20	±15
UE05DRF-B	DFN1006-2	BI	5	6	0.2	4	20	0.3	±18	±12
UE12DRF-B	DFN1006-2	BI	12	13.3	0.2	4	35	0.6	±15	±10
UE031006LCBD	DFN1006-2	BI	3.3	6.5	0.2	4	25	0.3	±25	±22
UL0521P1	DFN1006-2	BI	5	6.5	0.2	4	25	0.3	±25	±22
UL2421P1	DFN1006-2	BI	24	26.5	0.5	1.5	53	0.3	±15	±8
U3321P1	DFN1006-2	BI	3.3	3.8	0.05	8	10	12.5	±30	±30
U0521P1	DFN1006-2	BI	5	6	0.2	8	13	18	±30	±30
U1221P1	DFN1006-2	BI	12	13.3	0.2	8	22.5	30	±30	±30
U1521P1	DFN1006-2	BI	15	16.2	0.2	6	25	8	±30	±30
U2421P1	DFN1006-2	BI	24	27	0.2	3	60	10	±25	±20
UE121006BD	DFN1006-2	BI	12	13.3	0.2	5	20	7.5	±30	±30
U0562P1	DFN1006-3	BI	5	6	0.2	2	12.5	2.5	±15	±8
UL0501P1	DFN1006-2	UNI	5	6	0.5	5	16	0.8	±25	±20
UL0502P1	DFN1006-2	UNI	5.5	6	0.5	5	16	0.8	±25	±20
UE5510065AD	DFN1006-2	UNI	5.5	6	0.5	5	16	0.8	±25	±20
UE031006D	DFN1006-2	UNI	3.3	5	0.5	6	16	0.5	±25	±20
U0571P1	DFN1006-2	UNI	5	6	1	32	14	200	±30	±30
UT0651D4	DFN1006-2	UNI	6.3	6.5	1	40	6	270	±30	±30
UE05DF	DFN1006-2	UNI	5	6	0.5	15	17	105	±30	±30
UE12DF	DFN1006-2	UNI	12	13.3	1	7	25	34	±30	±30
U0502P1	DFN1006-3	UNI	5	6	0.5	5	15	0.3	±25	±20
PE0402MS05	DFN1006-2	BI	5	450	0.01		40	0.05	±15	±8
PE0402MS12	DFN1006-2	BI	12	450	0.01		40	0.05	±15	±8
PE0402MS24	DFN1006-2	BI	24	450	0.01		40	0.05	±15	±8
P0402UC15VB	DFN1006-2	BI	15	300	0.1		35	0.05	±25	±15
UE300402LCBC	DFN1006-2	BI	30	300	0.1		35	0.04	±15	±15

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TVS Array (ESD)

DFN1006/0402/SOD923

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UPDFB033250	SOD-923	BI	3.3	5	1	11.2	14.1	25	±15	±8
UPDFB050150	SOD-923	BI	5	5.6	1	9.4	18.6	15	±15	±8
U3321D9	SOD-923	BI	3.3	4	0.2	10	10	20	±30	±30
U0521D9	SOD-923	BI	5	6	1	8	10	20	±30	±30
UE05923C	SOD-923	UNI	5	6	1	7.5	12.3	40	±30	±30
UE129233.5AD	SOD-923	UNI	12	13.5	0.5	3.5	23	18	±30	±30

DFN1610/0603/SOD523

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UE05523LCBD	SOD-523	BI	5	6.5	0.2	4	25	0.3	±25	±22
UE05523LCBW	SOD-523	BI	5	6	1	1	9.8	0.3	±15	±8
U0521D5	SOD-523	BI	5	6	0.2	8	10	20	±30	±30
U0541D5	SOD-523	BI	5	6	0.2	15	14	30	±30	±30
U1221D5	SOD-523	BI	12	13.3	0.2	8	19	9	±30	±30
U1521D5	SOD-523	BI	15	16.2	0.2	6	25	5	±30	±30
UL2421P6	DFN1610-2	BI	24	26.5	0.5	1.5	53	0.3	±15	±8
UT0341S5	SOD-523	BI	3.3	3.5	0.2	5	12	2	±25	±25
UT0581S5H	SOD-523	BI	5	6	0.2	35	15	140	±30	±30
UT0561S5	SOD-523	BI	5	6	0.2	8	10	15	±30	±30
U0581P6	DFN1610-2	BI	5	6	1	120	13.5	300	±30	±30
PE0603MS05	DFN1608-2	BI	5	450	0.01		40	0.05	±15	±8
PE0603MS12	DFN1608-2	BI	12	430	0.01		40	0.05	±15	±8
PE0603MS18	DFN1608-2	BI	18	442	0.01		40	0.05	±15	±8
PE0603MS24	DFN1608-2	BI	24	450	0.01		40	0.05	±15	±8
U3301D5	SOD-523	UNI	3.3	3.5	0.2	15	10	20	±30	±30
U0531D5	SOD-523	UNI	5	6	0.2	17	15	103	±30	±30
U1231D5	SOD-523	UNI	12	13.3	0.2	8	25	60	±30	±30
U2401D5	SOD-523	UNI	24	27	0.2	5	45	40	±30	±30
UT0571S5	SOD-523	UNI	5	6	1	22	14	160	±30	±30
UT0591D6	DFN1610-2	UNI	5	6	0.2	160	15	500	±30	±30
UT0771D6	DFN1610-2	UNI	7	8	0.5	160	12	420	±30	±30
UT1271D6	DFN1610-2	UNI	12	13.5	0.1	80	25	500	±30	±30
UT2471D6	DFN1610-2	UNI	24	27	0.5	120	43	500	±30	±30
U1271P6-LV	DFN1610-2	UNI	12	12.7	0.2	75	25	400	±30	±30
US181610D	DFN1610-2	UNI	18	19.6	0.1	50	37.5	350	±30	±30
U2071P6	DFN1610-2	UNI	20	21	1	30	33	200	±30	±30
US05-2R2P	DFN1610-6	UNI	5	5.6	0.5	5	15	0.25	±25	±20
UL0522P6-SB	DFN1610-6	UNI	5	6.5	0.1	11	7	0.15	±30	±30

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TVS Array (ESD)

SOD323/0805										
Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UAE3362	SOD-323	BI	3.3	3.6	1	5	12	2	±25	±22
UAE0562	SOD-323	BI	5	6	0.5	4	15	2	±15	±8
UESD03C	SOD-323	BI	3.3	4	200	25	16	350	±30	±30
UESD05C	SOD-323	BI	5	6	10	24	17	260	±30	±30
UESD08C	SOD-323	BI	8	8.5	1	20	18	120	±30	±30
UESD12C	SOD-323	BI	12	13.3	1	25	13	110	±30	±30
UESD15C	SOD-323	BI	15	16.7	1	6	30	100	±30	±30
UESD24C	SOD-323	BI	24	26.7	1	6	52	75	±30	±30
UESD36C	SOD-323	BI	26	40	1	4	75	35	±30	±30
U1821D3	SOD-323	BI	1.8	2.9	0.2	12	8.5	30	±30	±30
USD03C-L	SOD-323	BI	3.3	3.8	0.2	8	10	12.5	±30	±30
UL0521D3	SOD-323	BI	5	6.5	0.2	4	25	0.3	±25	±22
US05D-BH	SOD-323	BI	6	6	0.2	26	10	80	±30	±30
USD12C-L	SOD-323	BI	12	13.3	0.2	6	20	7.5	±25	±20
USD15C	SOD-323	BI	15	16.7	0.5	15	25	30	±30	±30
UT2461S3	SOD-323	BI	24	26.7	0.5	7	52	57	±30	±30
UT3661S3	SOD-323	BI	36	40	0.5	5	80	35	±30	±30
UESD03	SOD-323	UNI	3.3	4	40	30	10.9	500	±30	±30
UESD05	SOD-323	UNI	5	6	10	24	13.5	350	±30	±30
UESD08	SOD-323	UNI	8	8.5	1	21	18	150	±30	±30
UESD12	SOD-323	UNI	12	13.3	1	25.9	15	120	±30	±30
UESD15	SOD-323	UNI	15	16.7	1	6	30	100	±30	±30
UESD24	SOD-323	UNI	24	26.7	1	6	52	75	±30	±30
UESD36	SOD-323	UNI	26	40	1	4	75	35	±30	±30
US4.5D3HP	SOD-323	UNI	4.5	5	0.5	100	15	700	±30	±30
UESD05H	SOD-323	UNI	5	6	1	35	15	200	±30	±30
US12D3HP	SOD-323	UNI	12	13	0.2	50	30	265	±30	±30
USD15C	SOD-323	UNI	15	16.7	0.5	15	25	30	±30	±30
ULLC03CI-SB	SOD-323	BI	3.3	3.5	0.5	25	8	1.5	±30	±30
ULC03CI	SOD-323	BI	3.3	3.5	0.1	21	16	1	±30	±30
ULC05CI	SOD-323	BI	5	6	0.1	18	20	1	±30	±30
ULC08CI	SOD-323	BI	8	8.5	0.1	12	26	1	±30	±30
ULC12CI	SOD-323	BI	12	13.3	0.1	12	26	1	±30	±30
ULC15CI	SOD-323	BI	15	16.7	0.1	10	35	1	±30	±30
ULC18CI	SOD-323	BI	18	20	1	5	20	1	±30	±30
ULC24CI	SOD-323	BI	24	26.7	1	6	45	1	±30	±30
ULC36CI	SOD-323	BI	36	40	1	2	75	1	±30	±30

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TVS Array (ESD)

SOT-143/SOT23

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UAE1025Q	SOT-143	UNI	5	6	1	6.5	16	0.6	±15	±10
ULSR05	SOT-143	UNI	5	6	0.5	30	19	1.8	±30	±30
UT0522S-23	SOT-23	UNI	5	6	1	3.5	11	0.4	±25	±25
USD130DT4-1	SOT-143	UNI	70	85	1	24	8	0.45	±30	±30
UESR70	SOT-143	UNI	70	85	0.5	21	16	1	±15	±8

SOT23-6/SOT-363/SOT-563/SOT23

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UAE0524A	SOT23-6	UNI	5	6	5	4	15	0.5	±15	±10
UL5325ES2	SOT23-6	UNI	5	6	0.5	6	11.5	0.5	±30	±30
USRV05-4	SOT23-6	UNI	5	6	1	18	25	1.8	±25	±25
US05-4RUL	SOT23-6	UNI	5	6	1	24	20	3	±30	±30
US03236D	SOT23-6	UNI	3.3	3.5	0.2	5	20	0.3	±15	±8
ULFSP05S2	SOT23-6	UNI	5	6	1	20	13	1.5	±30	±30
UT0304S2	SOT23-6	UNI	3.3	3.5	0.2	5	20	0.3	±25	±20
US03-4R2S	SOT23-6	UNI	3.3	3.7	0.5	13	17	0.7	±30	±30
UT0354S2	SOT23-6	UNI	3.3	3.5	0.5	22	14	1.5	±30	±30
UT5503Q	SOT23-6	UNI	3.3	5	1	18	8	2.2	±30	±30
UL0504S2A	SOT23-6	UNI	5	6	0.5	5	10	0.3	±25	±20
U5465ES2	SOT23-6	UNI	5	7	0.1	15	16	0.9	±30	±30
USMS05D	SOT23-6	UNI	5	6	1	1	9.8	150	±15	±8
USMS12D	SOT23-6	UNI	12	13.3	1	1	19	80	±15	±8
USMS15D	SOT23-6	UNI	15	16.7	1	1	24	50	±15	±8
USMS24D	SOT23-6	UNI	24	26.7	1	6	45	40	±15	±8
U2405S2	SOT23-6	UNI	24	26	0.2	6	47	33	±30	±30
USMF05C	SOT-363	UNI	5	6	0.2	8	12	60	±30	±30
UT0505S6	SOT-563	UNI	5	6	0.2	8	12	55	±30	±30
UL0552S6	SOT-563	UNI	5	6	0.2	5	15	0.3	±25	±20
UL0552S2	SOT23-6	UNI	5	6	0.5	5	20	0.3	±30	±25
UP5024G	SOT23-6	BI	24	30	0.1	35		1.1	±15	±8
USM03C	SOT-23	BI	3.3	4	0.5	32	10	100	±30	±30
USM05C	SOT-23	BI	5	6	0.5	26	11	100	±30	±30
USM08C	SOT-23	BI	8	8.5	0.5	20	15	100	±30	±30
USM12C	SOT-23	BI	12	13.3	0.5	15	24	100	±30	±30

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TVS Array (ESD)

SOT23-6/SOT-363/SOT-563/SOT23

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
USM15C	SOT-23	BI	15	16.7	0.5	12	30	100	±30	±30
USM24C	SOT-23	BI	24	26.7	0.5	6	45	35	±30	±30
USM36C	SOT-23	BI	36	40	0.5	4	60	20	±30	±30
UT0512S-23	SOT-23	UNI	5	6	0.5	5	16	0.3	±25	±20
USM05	SOT-23	UNI	5	6	0.5	22	14	160	±30	±30
USM12	SOT-23	UNI	12	13.3	0.2	13	27	40	±30	±30
USM15H	SOT-23	UNI	15	16.7	0.2	20	35	43	±30	±30
USM24	SOT-23	UNI	24	27	0.2	6	45	20	±30	±30
USM712	SOT-23	UNI	7	7.5	0.5	13	16	30	±30	±30
			12	13.3	0.5	13	25	20		

DFN2510/DFN-3210/DFN4120

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UT0324D25	DFN-2510-10	UNI	3.3	3.5	0.5	5	10	0.3	±25	±20
UT148AA	DFN-2510-10	UNI	3.3	5	1	5	2.5	0.05	±15	±15
UL0524P5C	DFN-2510-10	UNI	5	6	0.5	2.5	16	0.3	±15	±15
ESD5304D	DFN-2510-10	UNI	5	6	0.5	5.5	15	0.3	±25	±25
UL0524P5-SB	DFN-2510-10	UNI	5	6	0.5	5.5	6	0.35	±20	±20
UE2510AQ12	DFN-2510-10	UNI	12	450	0.01		40	0.05	±15	±8
US052510D	DFN-2510-10	UNI	5	6	0.2	2	12.5	10	±15	±12
UL2504P9	DFN-3020-10	UNI	2.5	2.7	0.2	40	25	1.7	±30	±30
UPE3374N	DFN-3020-10	UNI	3.3	3.5	0.5	40	25	1.7	±30	±30
UT5812A	DFN-3020-10	UNI	3.3	6.5	1	40	6.4	1	±30	±30
UWPE0566PB-E	DFN-4120-10	UNI	5	6	0.5	4	15	0.3	±25	±20

SOP-8

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UL2508P8	SOP-8	UNI	2.5	3	0.1	40	25	3	±30	±30
ULC03-3.3	SOP-8	BI	3.3	3.5	0.5	100	18	8	±30	±30
US06-2PLC	SOP-8	BI	6	6.7	5	100	20	7	±15	±8
UI2.8-8SB	SOP-8	BI	2.8	3	1	40	7.5	1.2	±30	±30
USLVU2.8-4	SOP-8	BI	2.8	3	1	30	20	2	±30	±30
UTVU2.8-8	SOP-8	BI	2.8	3	1	30	20	1	±30	±30

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MOV-D

MOV 05D Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-05D180K	05D180K	11	14	18	16	20	40	1	0.4	100	0.01	1600	0.1	○
CNR-05D220K	05D220K	14	18	22	20	24	48	1	0.5	100	0.01	1500		○
CNR-05D270K	05D270K	17	22	27	24	30	60	1	0.6	100	0.01	1450		○
CNR-05D330K	05D330K	20	26	33	30	36	73	1	0.8	100	0.01	1400		○
CNR-05D390K	05D390K	25	31	39	35	43	86	1	0.9	100	0.01	700		○
CNR-05D470K	05D470K	30	38	47	42	52	104	1	1.1	100	0.01	650		○
CNR-05D560K	05D560K	35	45	56	50	62	123	1	1.3	100	0.01	600		○
CNR-05D680K	05D680K	40	56	68	61	75	150	1	1.6	100	0.01	580		○
CNR-05D820K	05D820K	50	65	82	74	90	145	5	2.5	400	0.1	310	□	
CNR-05D101K	05D101K	60	85	100	90	110	175	5	3	400	0.1	290	□	
CNR-05D121K	05D121K	75	100	120	108	132	210	5	4	400	0.1	270	□	
CNR-05D151K	05D151K	95	125	150	135	165	260	5	4.8	400	0.1	240	□	
CNR-05D181K	05D181K	115	150	180	162	198	315	5	5.9	400	0.1	140	□	
CNR-05D201K	05D201K	130	170	200	180	220	355	5	6.5	400	0.1	120	◇	
CNR-05D221K	05D221K	140	180	220	198	242	380	5	7	400	0.1	110	◇	
CNR-05D241K	05D241K	150	200	240	216	264	415	5	8	400	0.1	110	◇	
CNR-05D271K	05D271K	175	225	270	243	297	475	5	8.5	400	0.1	100	◇	
CNR-05D301K	05D301K	195	250	300	270	330	505	5	9	400	0.1	100	◇	
CNR-05D331K	05D331K	215	275	330	297	363	585	5	10	400	0.1	90	◇	
CNR-05D361K	05D361K	230	300	360	324	396	620	5	10	400	0.1	80	◇	
CNR-05D391K	05D391K	250	320	390	351	429	675	5	12	400	0.1	80	◇	
CNR-05D431K	05D431K	275	350	430	387	473	745	5	13	400	0.1	70	◇	
CNR-05D471K	05D471K	300	385	470	423	517	810	5	15	400	0.1	70	◇	
CNR-05D511K	05D511K	320	410	510	459	561	878	5	16	400	0.1	65	◇	
CNR-05D561K	05D561K	350	460	560	504	616	940	5	18	400	0.1	65	◇	
CNR-05D621K	05D621K	395	510	620	558	682	1050	5	18	400	0.1	65	◇	
CNR-05D681K	05D681K	420	560	680	612	748	1120	5	18	400	0.1	60	◇	
CNR-05D751K	05D751K	460	615	750	675	825	1240	5	18	400	0.1	60	◇	

MOV-D

Related Standards

Symbols	○	□	◇					
Approval								

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MOV-D

MOV 10D Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-10D180K	10D180K	11	14	18	16	20	36	5	2.1	500	0.05	16000	0.5	○
CNR-10D220K	10D220K	14	18	22	20	24	43	5	2.5	500	0.05	11000		○
CNR-10D270K	10D270K	17	22	27	24	30	53	5	3	500	0.05	8000		○
CNR-10D330K	10D330K	20	26	33	30	36	65	5	4	500	0.05	6300		○
CNR-10D390K	10D390K	25	31	39	35	43	77	5	4.6	500	0.05	5200		○
CNR-10D470K	10D470K	30	38	47	42	52	93	5	5.5	500	0.05	4600		○
CNR-10D560K	10D560K	35	45	56	50	62	110	5	7	500	0.05	3750		○
CNR-10D680K	10D680K	40	56	68	61	75	135	5	8.2	500	0.05	2800		○
CNR-10D820K	10D820K	50	65	82	74	90	135	25	12	2500	0.4	1920		□
CNR-10D101K	10D101K	60	85	100	90	110	165	25	15	2500	0.4	1800		□
CNR-10D121K	10D121K	75	100	120	108	132	200	25	18	2500	0.4	1500		□
CNR-10D151K	10D151K	95	125	150	135	165	250	25	22	2500	0.4	1200		□
CNR-10D181K	10D181K	115	150	180	162	198	300	25	27	2500	0.4	620		□
CNR-10D201K	10D201K	130	170	200	180	220	340	25	30	2500	0.4	570		◇
CNR-10D221K	10D221K	140	180	220	198	242	360	25	32	2500	0.4	560	◇	
CNR-10D241K	10D241K	150	200	240	216	264	395	25	35	2500	0.4	550	◇	
CNR-10D271K	10D271K	175	225	270	243	297	455	25	40	2500	0.4	530	◇	
CNR-10D301K	10D301K	195	250	300	270	330	500	25	42	2500	0.4	500	◇	
CNR-10D331K	10D331K	215	275	330	297	363	550	25	47	2500	0.4	450	◇	
CNR-10D361K	10D361K	230	300	360	324	396	595	25	47	2500	0.4	450	◇	
CNR-10D391K	10D391K	250	320	390	351	429	650	25	60	2500	0.4	430	◇	
CNR-10D431K	10D431K	275	350	430	387	473	710	25	65	2500	0.4	400	◇	
CNR-10D471K	10D471K	300	385	470	423	517	775	25	70	2500	0.4	300	◇	
CNR-10D511K	10D511K	320	410	510	459	561	845	25	70	2500	0.4	260	◇	
CNR-10D561K	10D561K	350	460	560	504	616	915	25	70	2500	0.4	200	◇	
CNR-10D621K	10D621K	395	510	620	558	682	1020	25	70	2500	0.4	170	◇	
CNR-10D681K	10D681K	420	560	680	612	748	1120	25	70	2500	0.4	160	◇	
CNR-10D751K	10D751K	465	615	750	675	825	1235	25	75	2500	0.4	150	◇	
CNR-10D781K	10D781K	485	640	780	702	858	1290	25	80	2500	0.4	150	◇	
CNR-10D821K	10D821K	510	670	820	738	902	1355	25	85	2500	0.4	150	◇	
CNR-10D911K	10D911K	550	745	910	819	1001	1500	25	93	2500	0.4	140	◇	
CNR-10D102K	10D102K	625	825	1000	900	1100	1650	25	102	2500	0.4	140	◇	
CNR-10D112K	10D112K	680	895	1100	990	1210	1815	25	115	2500	0.4	130	◇	
CNR-10D182K	10D182K	1000	1465	1800	1620	1980	2950	25	185	2500	0.4	75	1	○

MOV-D

Related Standards

Symbols	○	□	◇					
Approval								

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MOV-D

MOV 14D Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-14D180K	14D180K	11	14	18	16	20	36	10	4	1000	0.1	25000	1	○
CNR-14D220K	14D220K	14	18	22	20	24	43	10	5	1000	0.1	20000		○
CNR-14D270K	14D270K	17	22	27	24	30	53	10	6	1000	0.1	16000		○
CNR-14D330K	14D330K	20	26	33	30	36	65	10	7.5	1000	0.1	12200		○
CNR-14D390K	14D390K	25	31	39	35	43	77	10	8.6	1000	0.1	7000		○
CNR-14D470K	14D470K	30	38	47	42	52	93	10	10	1000	0.1	6750		○
CNR-14D560K	14D560K	35	45	56	50	62	110	10	11	1000	0.1	6500		○
CNR-14D680K	14D680K	40	56	68	61	75	135	10	14	1000	0.1	5500		○
CNR-14D820K	14D820K	50	65	82	74	90	135	50	22	4500	0.6	4300		□
CNR-14D101K	14D101K	60	85	100	90	110	165	50	28	4500	0.6	3500		□
CNR-14D121K	14D121K	75	100	120	108	132	200	50	32	4500	0.6	2500		□
CNR-14D151K	14D151K	95	125	150	135	165	250	50	40	4500	0.6	2100		□
CNR-14D181K	14D181K	115	150	180	162	198	300	50	52	4500	0.6	1250		□
CNR-14D201K	14D201K	130	170	200	180	220	340	50	57	4500	0.6	1150		◇
CNR-14D221K	14D221K	140	180	220	198	242	360	50	60	4500	0.6	1100	◇	
CNR-14D241K	14D241K	150	200	240	216	264	395	50	63	4500	0.6	1050	◇	
CNR-14D271K	14D271K	175	225	270	243	297	455	50	70	4500	0.6	1000	◇	
CNR-14D301K	14D301K	195	250	300	270	330	500	50	78	4500	0.6	900	◇	
CNR-14D331K	14D331K	215	275	330	297	363	550	50	93	4500	0.6	850	◇	
CNR-14D361K	14D361K	230	300	360	324	396	595	50	93	4500	0.6	800	◇	
CNR-14D391K	14D391K	250	320	390	351	429	650	50	100	4500	0.6	800	◇	
CNR-14D431K	14D431K	275	350	430	387	473	710	50	115	4500	0.6	650	◇	
CNR-14D471K	14D471K	300	385	470	423	517	775	50	125	4500	0.6	550	◇	
CNR-14D511K	14D511K	320	410	510	459	561	845	50	125	4500	0.6	450	◇	
CNR-14D561K	14D561K	350	460	560	504	616	915	50	125	4500	0.6	400	◇	
CNR-14D621K	14D621K	395	510	620	558	682	1020	50	125	4500	0.6	350	◇	
CNR-14D681K	14D681K	420	560	680	612	748	1120	50	130	4500	0.6	350	◇	
CNR-14D751K	14D751K	465	615	750	675	825	1235	50	143	4500	0.6	330	◇	
CNR-14D781K	14D781K	485	640	780	702	858	1290	50	148	4500	0.6	330	◇	
CNR-14D821K	14D821K	510	670	820	738	902	1355	50	157	4500	0.6	330	◇	
CNR-14D911K	14D911K	550	745	910	819	1001	1500	50	175	4500	0.6	300	◇	
CNR-14D102K	14D102K	625	825	1000	900	1100	1650	50	190	4500	0.6	300	◇	
CNR-14D112K	14D112K	680	895	1100	990	1210	1815	50	213	4500	0.6	200	◇	
CNR-14D182K	14D182K	1000	1465	1800	1620	1980	2950	50	354	4500	0.6	150	2	○

Related Standards

Symbols	○	□	◇					
Approval								

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MOV-D

MOV-D

MOV 20D Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-20D180K	20D180K	11	14	18	16	20	36	20	11	2000	0.2	40000	2	○
CNR-20D220K	20D220K	14	18	22	20	24	43	20	14	2000	0.2	30000		○
CNR-20D270K	20D270K	17	22	27	24	30	53	20	18	2000	0.2	24500		○
CNR-20D330K	20D330K	20	26	33	30	36	65	20	23	2000	0.2	20000		○
CNR-20D390K	20D390K	25	31	39	35	43	77	20	26	2000	0.2	13800		○
CNR-20D470K	20D470K	30	38	47	42	52	93	20	33	2000	0.2	13500		○
CNR-20D560K	20D560K	35	45	56	50	62	110	20	41	2000	0.2	12200		○
CNR-20D680K	20D680K	40	56	68	61	75	135	20	46	2000	0.2	11500		○
CNR-20D820K	20D820K	50	65	82	74	90	135	100	48	6500	1	8200		□
CNR-20D101K	20D101K	60	85	100	90	110	165	100	51	6500	1	8000		□
CNR-20D121K	20D121K	75	100	120	108	132	200	100	55	6500	1	5500		□
CNR-20D151K	20D151K	95	125	150	135	165	250	100	70	6500	1	4200		□
CNR-20D181K	20D181K	115	150	180	162	198	300	100	85	6500	1	2500		□
CNR-20D201K	20D201K	130	170	200	180	220	340	100	95	6500	1	2300		◇
CNR-20D221K	20D221K	140	180	220	198	242	360	100	100	6500	1	2200	◇	
CNR-20D241K	20D241K	150	200	240	216	264	395	100	108	6500	1	2200	◇	
CNR-20D271K	20D271K	175	225	270	243	297	455	100	127	6500	1	2100	◇	
CNR-20D301K	20D301K	195	250	300	270	330	500	100	150	6500	1	1800	◇	
CNR-20D331K	20D331K	215	275	330	297	363	550	100	163	6500	1	1750	◇	
CNR-20D361K	20D361K	230	300	360	324	396	595	100	163	6500	1	1700	◇	
CNR-20D391K	20D391K	250	320	390	351	429	650	100	180	6500	1	1400	◇	
CNR-20D431K	20D431K	275	350	430	387	473	710	100	190	6500	1	1350	◇	
CNR-20D471K	20D471K	300	385	470	423	517	775	100	220	6500	1	1200	◇	
CNR-20D511K	20D511K	320	410	510	459	561	845	100	220	6500	1	1050	◇	
CNR-20D561K	20D561K	350	460	560	504	616	915	100	220	6500	1	850	◇	
CNR-20D621K	20D621K	395	510	620	558	682	1020	100	220	6500	1	570	◇	
CNR-20D681K	20D681K	420	560	680	612	748	1120	100	230	6500	1	550	◇	
CNR-20D751K	20D751K	465	615	750	675	825	1235	100	255	6500	1	530	◇	
CNR-20D781K	20D781K	485	640	780	702	858	1290	100	265	6500	1	500	◇	
CNR-20D821K	20D821K	510	670	820	738	902	1355	100	282	6500	1	500	◇	
CNR-20D911K	20D911K	550	745	910	819	1001	1500	100	310	6500	1	480	◇	
CNR-20D102K	20D102K	625	825	1000	900	1100	1650	100	342	6500	1	460	◇	
CNR-20D112K	20D112K	680	895	1100	990	1210	1815	100	383	6500	1	400	◇	
CNR-20D182K	20D182K	1000	1465	1800	1620	1980	2950	100	620	6500	1	300	3	○

MOV-D

Related Standards

Symbols	○	□	◇					
Approval								

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MOV-D

MOV-D Product Dimensions (Unit:mm)

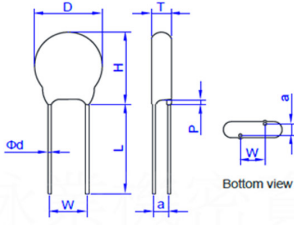


Fig 1. Straight Lead

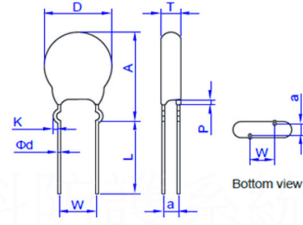


Fig 2. Outside Kink Lead

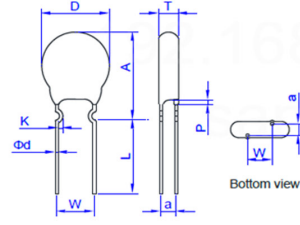


Fig 3. Inside Kink Lead

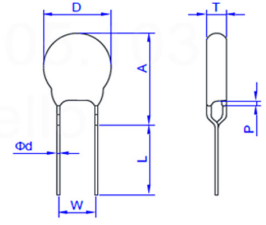


Fig 4. In Line Kink Lead

Symbol	Model	05D		07D		10D		14D		18D		20D	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
D		5.5	7.5	7.5	9.0	10.5	14.0	13.5	17.5	18.5	23.0	19.5	25.0
H		-	10.0	-	12.0	-	17.0	-	20.5	-	26.0	-	28.0
W		4.0	6.0	4.0	6.0	6.5	8.5	6.5	8.5	6.5	8.5	9.0	11.0
ød		0.55	0.65	0.55	0.65	0.75	0.85	0.75	0.85	0.75	0.85	0.95	1.05
P(max.)		3.0											
L(min.)		25.0											
K(Kink Lead)		0.8	1.6	0.8	1.6	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8
A(max.)	180K-271K	-	13.0	-	15.0	-	19.5	-	22.5	-	26.5	-	30.0
	>271K	-	13.0	-	15.0	-	20.5	-	23.5	-	27.0	-	31.0
T		See Tmax table											

* Short Cut Lead type TTX the lead length (L) can 3.0~15mm (except 20D dia <10mm), see Ordering Note.

** a value see T max. table

MOV-V

MOV 05V Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-05V201K	05V201K	130	170	200	180	220	355	5	17.5	800	0.25	70	0.25	◇
CNR-05V221K	05V221K	140	180	220	198	242	380	5	19	800	0.25	60		◇
CNR-05V241K	05V241K	150	200	240	216	264	415	5	21	800	0.25	60		◇
CNR-05V271K	05V271K	175	225	270	243	297	475	5	24	800	0.25	50		◇
CNR-05V301K	05V301K	195	250	300	270	330	505	5	26	800	0.25	50		◇
CNR-05V331K	05V331K	215	275	330	297	363	585	5	28	800	0.25	45		◇
CNR-05V361K	05V361K	230	300	360	324	396	620	5	32	800	0.25	40		◇
CNR-05V391K	05V391K	250	320	390	351	429	675	5	35	800	0.25	40		◇
CNR-05V431K	05V431K	275	350	430	387	473	745	5	40	800	0.25	35		◇
CNR-05V471K	05V471K	300	385	470	423	517	810	5	42	800	0.25	30		◇
CNR-05V511K	05V511K	320	410	510	459	561	878	5	45	800	0.25	30		◇
CNR-05V561K	05V561K	350	460	560	504	616	940	5	45	800	0.25	30		□
CNR-05V621K	05V621K	395	510	620	558	682	1050	5	45	800	0.25	26		□
CNR-05V681K	05V681K	420	560	680	612	748	1120	5	48	800	0.25	20		□
CNR-05V751K	05V751K	465	615	750	675	825	1240	5	48	800	0.25	20		□

MOV 07V Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-07V201K	07V201K	130	170	200	180	220	340	10	17.5	1800	0.25	200	0.5	◇
CNR-07V221K	07V221K	140	180	220	198	242	360	10	19	1800	0.25	190		◇
CNR-07V241K	07V241K	150	200	240	216	264	395	10	21	1800	0.25	170		◇
CNR-07V271K	07V271K	175	225	270	243	297	455	10	24	1800	0.25	150		◇
CNR-07V301K	07V301K	195	250	300	270	330	500	10	26	1800	0.25	140		◇
CNR-07V331K	07V331K	215	275	330	297	363	550	10	28	1800	0.25	130		◇
CNR-07V361K	07V361K	230	300	360	324	396	595	10	32	1800	0.25	130		◇
CNR-07V391K	07V391K	250	320	390	351	429	650	10	35	1800	0.25	130		◇
CNR-07V431K	07V431K	275	350	430	387	473	710	10	40	1800	0.25	120		◇
CNR-07V471K	07V471K	300	385	470	423	517	775	10	42	1800	0.25	100		◇
CNR-07V511K	07V511K	320	410	510	459	561	845	10	45	1800	0.25	90		◇
CNR-07V561K	07V561K	350	460	560	504	616	915	10	45	1800	0.25	90		□
CNR-07V621K	07V621K	395	510	620	558	682	1020	10	45	1800	0.25	90		□
CNR-07V681K	07V681K	420	560	680	612	748	1120	10	48	1800	0.25	80		□
CNR-07V751K	07V751K	465	615	750	675	825	1235	10	48	1800	0.25	80		□
CNR-07V781K	07V781K	485	640	780	702	858	1290	10	50	1800	0.25	80	□	
CNR-07V821K	07V821K	510	670	820	738	902	1355	10	50	1800	0.25	70	□	

Related Standards

Symbols	○	□	◇					
Approval								

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

MOV-V

MOV-V

MOV 10V Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-10V201K	10V201K	130	170	200	180	220	340	25	35	3500	0.4	430	2	◇
CNR-10V221K	10V221K	140	180	220	198	242	360	25	39	3500	0.4	410		◇
CNR-10V241K	10V241K	150	200	240	216	264	395	25	42	3500	0.4	380		◇
CNR-10V271K	10V271K	175	225	270	243	297	455	25	49	3500	0.4	350		◇
CNR-10V301K	10V301K	195	250	300	270	330	500	25	55	3500	0.4	330		◇
CNR-10V331K	10V331K	215	275	330	297	363	550	25	58	3500	0.4	300		◇
CNR-10V361K	10V361K	230	300	360	324	396	595	25	65	3500	0.4	300		◇
CNR-10V391K	10V391K	250	320	390	351	429	650	25	70	3500	0.4	300		◇
CNR-10V431K	10V431K	275	350	430	387	473	710	25	80	3500	0.4	270		◇
CNR-10V471K	10V471K	300	385	470	423	517	775	25	85	3500	0.4	230		◇
CNR-10V511K	10V511K	320	410	510	459	561	845	25	92	3500	0.4	210		◇
CNR-10V561K	10V561K	350	460	560	504	616	915	25	92	3500	0.4	200		□
CNR-10V621K	10V621K	395	510	620	558	682	1020	25	95	3500	0.4	180		□
CNR-10V681K	10V681K	420	560	680	612	748	1120	25	98	3500	0.4	150		□
CNR-10V751K	10V751K	465	615	750	675	825	1235	25	100	3500	0.4	140		□
CNR-10V781K	10V781K	485	540	780	702	858	1290	25	100	3500	0.4	140		□
CNR-10V821K	10V821K	510	670	820	738	902	1355	25	110	3500	0.4	140		□
CNR-10V911K	10V911K	550	745	910	819	1001	1500	25	130	3500	0.4	130		□
CNR-10V102K	10V102K	625	825	1000	900	1100	1650	25	140	3500	0.4	130	□	
CNR-10V112K	10V112K	680	895	1100	990	1210	1815	25	155	3500	0.4	120	□	

Related Standards

Symbols	○	□	◇
Approval			

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MOV-V

MOV-V

MOV-V Product Dimensions (Unit:mm)

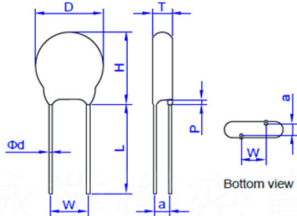


Fig 1. Straight Lead

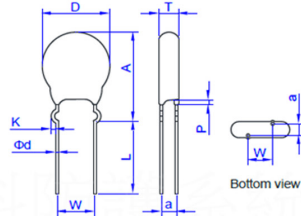


Fig 2. Outside Kink Lead

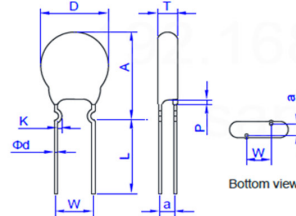


Fig 3. Inside Kink Lead

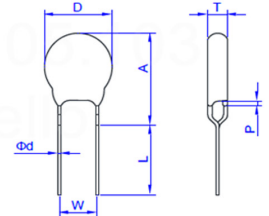


Fig 4. In Line Kink Lead

Symbol	Model	05V		07V		10V		14V		18V		20V	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
D		5.5	7.5	7.5	9.0	10.5	14.0	13.5	17.5	18.5	23.0	19.5	25.0
H		-	10.0	-	12.0	-	17.0	-	20.5	-	26.0	-	28.0
W		4.0	6.0	4.0	6.0	6.5	8.5	6.5	8.5	6.5	8.5	9.0	11.0
ød		0.55	0.65	0.55	0.65	0.75	0.85	0.75	0.85	0.75	0.85	0.95	1.05
P(max.)		3.0											
L(min.)		25.0											
K(Kink Lead)		0.8	1.6	0.8	1.6	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8
A(max.)	180K-271K	-	13.0	-	15.0	-	19.5	-	22.5	-	26.5	-	30.0
	>271K	-	13.0	-	15.0	-	20.5	-	23.5	-	27.0	-	31.0
T		See Tmax table											

* Short Cut Lead type TTX the lead length (L) can 3.0~15mm (except 20V dia <10mm), see Ordering Note.

** a value see T max. table

MOV-P

MOV 10P Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-10P180K	10P180K	11	14	18	16	20	36	5	4	1500	0.08	8000	1	⊙
CNR-10P220K	10P220K	14	18	22	20	24	43	5	5	1500	0.08	7000		⊙
CNR-10P270K	10P270K	17	22	27	24	30	53	5	6	1500	0.08	5500		⊙
CNR-10P330K	10P330K	20	26	33	30	36	65	5	7.5	1500	0.08	4100		⊙
CNR-10P390K	10P390K	25	31	39	35	43	77	5	8.6	1500	0.08	3900		⊙
CNR-10P470K	10P470K	30	38	47	42	52	93	5	10	1500	0.08	3300		⊙
CNR-10P560K	10P560K	35	45	56	50	62	110	5	11	1500	0.08	2800		⊙
CNR-10P680K	10P680K	40	56	68	61	75	135	5	14	1500	0.08	2300		⊙
CNR-10P201K	10P201K	130	170	200	180	220	340	25	52	4000	0.4	625	2	△
CNR-10P221K	10P221K	140	180	220	198	242	360	25	58	4000	0.4	570		△
CNR-10P241K	10P241K	150	200	240	216	264	395	25	64	4000	0.4	525		△
CNR-10P271K	10P271K	175	225	270	243	297	455	25	67	4000	0.4	470		△
CNR-10P301K	10P301K	195	250	300	270	330	500	25	70	4000	0.4	415		△
CNR-10P331K	10P331K	215	275	330	297	363	550	25	72	4000	0.4	350		△
CNR-10P361K	10P361K	230	300	360	324	396	595	25	76	4000	0.4	350		△
CNR-10P391K	10P391K	250	320	390	351	429	650	25	82	4000	0.4	325		△
CNR-10P431K	10P431K	275	350	430	387	473	710	25	93	4000	0.4	290		△
CNR-10P471K	10P471K	300	385	470	423	517	775	25	99	4000	0.4	260		△
CNR-10P511K	10P511K	320	410	510	459	561	845	25	107	4000	0.4	240		△
CNR-10P561K	10P561K	350	460	560	504	616	915	25	113	4000	0.4	220		△
CNR-10P621K	10P621K	395	510	620	558	682	1020	25	125	4000	0.4	200		△
CNR-10P681K	10P681K	420	560	680	612	748	1120	25	128	4000	0.4	190		△
CNR-10P751K	10P751K	465	615	750	675	825	1235	25	134	4000	0.4	175		△
CNR-10P781K	10P781K	485	640	780	702	858	1290	25	140	4000	0.4	170		△
CNR-10P821K	10P821K	510	670	820	738	902	1355	25	146	4000	0.4	160		△
CNR-10P911K	10P911K	550	745	910	819	1001	1500	25	152	4000	0.4	140		△
CNR-10P102K	10P102K	625	825	1000	900	1100	1650	25	170	4000	0.4	132	△	
CNR-10P112K	10P112K	680	895	1100	990	1210	1815	25	180	4000	0.4	120	△	

Related Standards

Note : VDE & CQC under processing

Symbols	⊙		△		
Approval					

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

MOV-P

MOV-P

MOV 14P Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-14P180K	14P180K	11	14	18	16	20	36	10	11	3000	0.15	18500	2	⊙
CNR-14P220K	14P220K	14	18	22	20	24	43	10	14	3000	0.15	16400		⊙
CNR-14P270K	14P270K	17	22	27	24	30	53	10	18	3000	0.15	13000		⊙
CNR-14P330K	14P330K	20	26	33	30	36	65	10	23	3000	0.15	9500		⊙
CNR-14P390K	14P390K	25	31	39	35	43	77	10	26	3000	0.15	8800		⊙
CNR-14P470K	14P470K	30	38	47	42	52	93	10	33	3000	0.15	7700		⊙
CNR-14P560K	14P560K	35	45	56	50	62	110	10	41	3000	0.15	6400		⊙
CNR-14P680K	14P680K	40	56	68	61	75	135	10	46	3000	0.15	5600		⊙
CNR-14P201K	14P201K	130	170	200	180	220	340	50	96	8000	0.6	770	3	△
CNR-14P221K	14P221K	140	180	220	198	242	360	50	104	8000	0.6	740		△
CNR-14P241K	14P241K	150	200	240	216	264	395	50	112	8000	0.6	700		△
CNR-14P271K	14P271K	175	225	270	243	297	455	50	120	8000	0.6	640		△
CNR-14P301K	14P301K	195	250	300	270	330	500	50	136	8000	0.6	600		△
CNR-14P331K	14P331K	215	275	330	297	363	550	50	152	8000	0.6	580		△
CNR-14P361K	14P361K	230	300	360	324	396	595	50	164	8000	0.6	540		△
CNR-14P391K	14P391K	250	320	390	351	429	650	50	176	8000	0.6	500		△
CNR-14P431K	14P431K	275	350	430	387	473	710	50	200	8000	0.6	450		△
CNR-14P471K	14P471K	300	385	470	423	517	775	50	220	8000	0.6	400		△
CNR-14P511K	14P511K	320	410	510	459	561	845	50	240	8000	0.6	350		△
CNR-14P561K	14P561K	350	460	560	504	616	915	50	240	8000	0.6	350		△
CNR-14P621K	14P621K	395	510	620	558	682	1020	50	250	8000	0.6	330		△
CNR-14P681K	14P681K	420	560	680	612	748	1120	50	260	8000	0.6	320		△
CNR-14P751K	14P751K	465	615	750	675	825	1235	50	270	8000	0.6	300		△
CNR-14P781K	14P781K	485	640	780	702	858	1290	50	275	8000	0.6	300		△
CNR-14P821K	14P821K	510	670	820	738	902	1355	50	280	8000	0.6	270		△
CNR-14P911K	14P911K	550	745	910	819	1001	1500	50	295	8000	0.6	260		△
CNR-14P102K	14P102K	625	825	1000	900	1100	1650	50	335	8000	0.6	250		△
CNR-14P112K	14P112K	680	895	1100	990	1210	1815	50	360	8000	0.6	240		△

Related Standards

Note : VDE & CQC under processing

Symbols	⊙		△		
Approval					

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MOV-P

MOV-P

MOV 20P Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-20P180K	20P180K	11	14	18	16	20	36	20	20	6000	0.3	42000	3	⊙
CNR-20P220K	20P220K	14	18	22	20	24	43	20	26	6000	0.3	37000		⊙
CNR-20P270K	20P270K	17	22	27	24	30	53	20	31	6000	0.3	29200		⊙
CNR-20P330K	20P330K	20	26	33	30	36	65	20	39	6000	0.3	21400		⊙
CNR-20P390K	20P390K	25	31	39	35	43	77	20	44	6000	0.3	19800		⊙
CNR-20P470K	20P470K	30	38	47	42	52	93	20	52	6000	0.3	17300		⊙
CNR-20P560K	20P560K	35	45	56	50	62	110	20	57	6000	0.3	14400		⊙
CNR-20P680K	20P680K	40	56	68	61	75	135	20	72	6000	0.3	12600		⊙
CNR-20P201K	20P201K	130	170	200	180	220	340	100	175	15000	1	1700	5	△
CNR-20P221K	20P221K	140	180	220	198	242	360	100	185	15000	1	1600		△
CNR-20P241K	20P241K	150	200	240	216	264	395	100	198	15000	1	1500		△
CNR-20P271K	20P271K	175	225	270	243	297	455	100	220	15000	1	1300		△
CNR-20P301K	20P301K	195	250	300	270	330	500	100	245	15000	1	1200		△
CNR-20P331K	20P331K	215	275	330	297	363	550	100	268	15000	1	1100		△
CNR-20P361K	20P361K	230	300	360	324	396	595	100	315	15000	1	1100		△
CNR-20P391K	20P391K	250	320	390	351	429	650	100	350	15000	1	1100		△
CNR-20P431K	20P431K	275	350	430	387	473	710	100	380	15000	1	1000		△
CNR-20P471K	20P471K	300	385	470	423	517	775	100	405	15000	1	900		△
CNR-20P511K	20P511K	320	410	510	459	561	845	100	445	15000	1	800		△
CNR-20P561K	20P561K	350	460	560	504	616	915	100	475	15000	1	750		△
CNR-20P621K	20P621K	395	510	620	558	682	1020	100	490	15000	1	570		△
CNR-20P681K	20P681K	420	560	680	612	748	1120	100	500	15000	1	550		△
CNR-20P751K	20P751K	465	615	750	675	825	1235	100	525	15000	1	530		△
CNR-20P781K	20P781K	485	640	780	702	858	1290	100	535	15000	1	500		△
CNR-20P821K	20P821K	510	670	820	738	902	1355	100	545	15000	1	500		△
CNR-20P911K	20P911K	550	745	910	819	1001	1500	100	595	15000	1	480		△
CNR-20P102K	20P102K	625	825	1000	900	1100	1650	100	650	15000	1	460	△	
CNR-20P112K	20P112K	680	895	1100	990	1210	1815	100	720	15000	1	400	△	

Related Standards

Note : VDE & CQC under processing

Symbols	⊙		△		
Approval					

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

MOV-P

MOV-P

MOV-P Product Dimensions (Unit:mm)

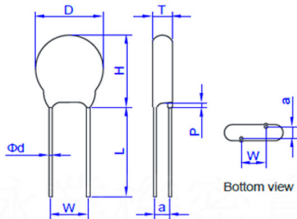


Fig 1. Straight Lead

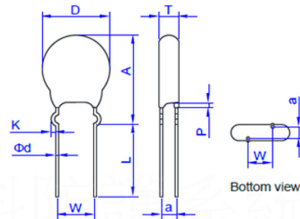


Fig 2. Outside Kink Lead

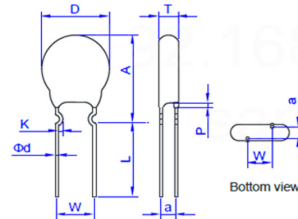


Fig 3. Inside Kink Lead

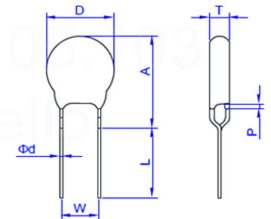


Fig 4. In Line Kink Lead

Symbol	Model	10P		14P		18P		20P	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
D		10.5	14.0	13.5	17.5	18.5	23.0	19.5	25.0
H		-	17.0	-	20.5	-	26.0	-	28.0
W		6.5	8.5	6.5	8.5	6.5	8.5	9.0	11.0
ød		0.75	0.85	0.75	0.85	0.75	0.85	0.95	1.05
P(max.)		3.0							
L(min.)		25.0							
K(Kink Lead)		1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8
A(max.)	180K-271K	-	19.5	-	22.5	-	26.5	-	30.0
	>271K	-	20.5	-	23.5	-	27.0	-	31.0
T		See Tmax table							

* Short Cut Lead type TTXX the lead length (L) can 3.0~15mm (except 20P dia < 10mm), see Ordering Note.

** a value see T max. table

MOV-N

MOV 05N Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-05N180K	05N180K	11	14	18	16	20	36	1	0.9	350	0.02	1480	0.15	⊙
CNR-05N220K	05N220K	14	18	22	20	24	43	1	1.1	350	0.02	1320		⊙
CNR-05N270K	05N270K	17	22	27	24	30	53	1	1.4	350	0.02	1030		⊙
CNR-05N330K	05N330K	20	26	33	30	36	65	1	1.7	350	0.02	760		⊙
CNR-05N390K	05N390K	25	31	39	35	43	77	1	2.1	350	0.02	720		⊙
CNR-05N470K	05N470K	30	38	47	42	52	93	1	2.5	350	0.02	620		⊙
CNR-05N560K	05N560K	35	45	56	50	62	110	1	3.1	350	0.02	515		⊙
CNR-05N680K	05N680K	40	56	68	61	75	135	1	3.6	350	0.02	450		⊙
CNR-05N201K	05N201K	130	170	200	180	220	340	10	13	1200	0.05	100	0.25	□
CNR-05N221K	05N221K	140	180	220	198	242	360	10	14	1200	0.25	100		□
CNR-05N241K	05N241K	150	200	240	216	264	395	10	15	1200	0.25	95		□
CNR-05N271K	05N271K	175	225	270	243	297	455	10	18	1200	0.25	95		□
CNR-05N301K	05N301K	195	250	300	270	330	500	10	19	1200	0.25	90		□
CNR-05N331K	05N331K	215	275	330	297	363	550	10	21	1200	0.25	90		□
CNR-05N361K	05N361K	230	300	360	324	396	595	10	23	1200	0.25	85		□
CNR-05N391K	05N391K	250	320	390	351	429	650	10	25	1200	0.25	80		□
CNR-05N431K	05N431K	275	350	430	387	473	710	10	28	1200	0.25	75		□
CNR-05N471K	05N471K	300	385	470	423	517	775	10	30	1200	0.25	70		□
CNR-05N511K	05N511K	320	420	510	459	561	845	10	30	1200	0.25	65		□
CNR-05N561K	05N561K	350	460	560	504	616	915	10	30	1200	0.25	60		□
CNR-05N621K	05N621K	395	510	620	558	682	1020	10	30	1200	0.25	55	□	
CNR-05N681K	05N681K	420	560	680	612	748	1120	10	30	1200	0.25	50	□	
CNR-05N751K	05N751K	465	615	750	675	825	1235	10	33	1200	0.25	40	□	

Related Standards

Note : VDE & CQC Certification are under approving

Symbols	⊙		□		
Approval					

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

MOV-N

MOV-N

MOV 07N Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-07N180K	07N180K	11	14	18	16	20	36	2.5	2.1	750	0.05	3600	0.5	⊙
CNR-07N220K	07N220K	14	18	22	20	24	43	2.5	2.5	750	0.05	3200		⊙
CNR-07N270K	07N270K	17	22	27	24	30	53	2.5	3	750	0.05	2500		⊙
CNR-07N330K	07N330K	20	26	33	30	36	65	2.5	4	750	0.05	1850		⊙
CNR-07N390K	07N390K	25	31	39	35	43	77	2.5	4.6	750	0.05	1750		⊙
CNR-07N470K	07N470K	30	38	47	42	52	93	2.5	5.5	750	0.05	1500		⊙
CNR-07N560K	07N560K	35	45	56	50	62	110	2.5	7	750	0.05	1250		⊙
CNR-07N680K	07N680K	40	56	68	61	75	135	2.5	8.2	750	0.05	1100		⊙
CNR-07N201K	07N201K	130	170	200	180	220	340	25	26	2500	0.3	220	0.5	□
CNR-07N221K	07N221K	140	180	220	198	242	360	25	30	2500	0.3	210		□
CNR-07N241K	07N241K	150	200	240	216	264	395	25	33	2500	0.3	190		□
CNR-07N271K	07N271K	175	225	270	243	297	455	25	39	2500	0.3	165		□
CNR-07N301K	07N301K	195	250	300	270	330	500	25	42	2500	0.3	155		□
CNR-07N331K	07N331K	215	275	330	297	363	550	25	44	2500	0.3	145		□
CNR-07N361K	07N361K	230	300	360	324	396	595	25	50	2500	0.3	145		□
CNR-07N391K	07N391K	250	320	390	351	429	650	25	53	2500	0.3	145		□
CNR-07N431K	07N431K	275	350	430	387	473	710	25	60	2500	0.3	130		□
CNR-07N471K	07N471K	300	385	470	423	517	775	25	65	2500	0.3	110		□
CNR-07N511K	07N511K	320	420	510	459	561	845	25	70	2500	0.3	100		□
CNR-07N561K	07N561K	350	460	560	504	616	915	25	75	2500	0.3	100		□
CNR-07N621K	07N621K	395	510	620	558	682	1020	25	80	2500	0.3	100	□	
CNR-07N681K	07N681K	420	560	680	612	748	1120	25	85	2500	0.3	90	□	
CNR-07N751K	07N751K	465	615	750	675	825	1235	25	92	2500	0.3	90	□	

Related Standards

Note : VDE & CQC Certification are under approving

Symbols	⊙		□		
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MOV-N

MOV-N

MOV 10N Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-10N180K	10N180K	11	14	18	16	20	36	5	4	1500	0.08	8000	1	⊙
CNR-10N220K	10N220K	14	18	22	20	24	43	5	5	1500	0.08	7000		⊙
CNR-10N270K	10N270K	17	22	27	24	30	53	5	6	1500	0.08	5500		⊙
CNR-10N330K	10N330K	20	26	33	30	36	65	5	7.5	1500	0.08	4100		⊙
CNR-10N390K	10N390K	25	31	39	35	43	77	5	8.6	1500	0.08	3900		⊙
CNR-10N470K	10N470K	30	38	47	42	52	93	5	10	1500	0.08	3300		⊙
CNR-10N560K	10N560K	35	45	56	50	62	110	5	11	1500	0.08	2800		⊙
CNR-10N680K	10N680K	40	56	68	61	75	135	5	14	1500	0.08	2300		⊙
CNR-10N201K	10N201K	130	170	200	180	220	340	50	52	4500	0.5	420	2	□
CNR-10N221K	10N221K	140	180	220	198	242	360	50	58	4500	0.5	390		□
CNR-10N241K	10N241K	150	200	240	216	264	395	50	64	4500	0.5	360		□
CNR-10N271K	10N271K	175	225	270	243	297	455	50	67	4500	0.5	330		□
CNR-10N301K	10N301K	195	250	300	270	330	500	50	70	4500	0.5	300		□
CNR-10N331K	10N331K	215	275	330	297	363	550	50	78	4500	0.5	270		□
CNR-10N361K	10N361K	230	300	360	324	396	595	50	84	4500	0.5	250		□
CNR-10N391K	10N391K	250	320	390	351	429	650	50	91	4500	0.5	230		□
CNR-10N431K	10N431K	275	350	430	387	473	710	50	99	4500	0.5	220		□
CNR-10N471K	10N471K	300	385	470	423	517	775	50	107	4500	0.5	200		□
CNR-10N511K	10N511K	320	420	510	459	561	845	50	117	4500	0.5	190		□
CNR-10N561K	10N561K	350	460	560	504	616	915	50	125	4500	0.5	180		□
CNR-10N621K	10N621K	395	510	620	558	682	1020	50	128	4500	0.5	160	□	
CNR-10N681K	10N681K	420	560	680	612	748	1120	50	134	4500	0.5	140	□	
CNR-10N751K	10N751K	465	615	750	675	825	1235	50	146	4500	0.5	130	□	

Related Standards

Note : VDE & CQC Certification are under approving

Symbols	⊙		□		
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MOV-N

MOV-N

MOV 14N Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-14N180K	14N180K	11	14	18	16	20	36	10	11	3000	0.15	18500	2	⊙
CNR-14N220K	14N220K	14	18	22	20	24	43	10	14	3000	0.15	16400		⊙
CNR-14N270K	14N270K	17	22	27	24	30	53	10	18	3000	0.15	13000		⊙
CNR-14N330K	14N330K	20	26	33	30	36	65	10	23	3000	0.15	9500		⊙
CNR-14N390K	14N390K	25	31	39	35	43	77	10	26	3000	0.15	8800		⊙
CNR-14N470K	14N470K	30	38	47	42	52	93	10	33	3000	0.15	7700		⊙
CNR-14N560K	14N560K	35	45	56	50	62	110	10	41	3000	0.15	6400		⊙
CNR-14N680K	14N680K	40	56	68	61	75	135	10	46	3000	0.15	5600		⊙
CNR-14N201K	14N201K	130	170	200	180	220	340	100	140	10000	1	860	3	□
CNR-14N221K	14N221K	140	180	220	198	242	360	100	155	10000	1	810		□
CNR-14N241K	14N241K	150	200	240	216	264	395	100	168	10000	1	860		□
CNR-14N271K	14N271K	175	225	270	243	297	455	100	190	10000	1	700		□
CNR-14N301K	14N301K	195	250	300	270	330	500	100	209	10000	1	640		□
CNR-14N331K	14N331K	215	275	330	297	363	550	100	228	10000	1	580		□
CNR-14N361K	14N361K	230	300	360	324	396	595	100	255	10000	1	530		□
CNR-14N391K	14N391K	250	320	390	351	429	650	100	275	10000	1	480		□
CNR-14N431K	14N431K	275	350	430	387	473	710	100	303	10000	1	430		□
CNR-14N471K	14N471K	300	385	470	423	517	775	100	350	10000	1	380		□
CNR-14N511K	14N511K	320	410	510	459	561	845	100	382	10000	1	350		□
CNR-14N561K	14N561K	350	460	560	504	616	915	100	382	10000	1	320		□
CNR-14N621K	14N621K	395	510	620	558	682	1020	100	382	7500	1	300	□	
CNR-14N681K	14N681K	420	560	680	612	748	1120	100	382	7500	1	270	□	
CNR-14N751K	14N751K	465	615	750	675	825	1235	100	420	7500	1	250	□	

Related Standards

Note : VDE & CQC Certification are under appovaling

Symbols	⊙		□		
Approval					

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

MOV-N

MOV-N

MOV 20N Series

Part No.	Device Marking	Maximum Allowable Voltage		Varistor Voltage (@1mA)			Clamping Voltage @ Test Current (@8/20µs)		Maximum Energy (@10/1000µs) (J)	Maximum Peak Current (@8/20µs) (A)	Rated Power (W)	Typical Capacitance (@1KHz) (pF)	UL 1449 4th ,In @8/20us (KA)	Related Standards Symbol
		ACrms(V)	DC(V)	Vn(Vdc)	Min.	Max.	Vc(V)	Ip(A)						
CNR-20N180K	20N180K	11	14	18	16	20	36	20	28	6000	0.3	42000	3	⊙
CNR-20N220K	20N220K	14	18	22	20	24	43	20	36	6000	0.3	37000		⊙
CNR-20N270K	20N270K	17	22	27	24	30	53	20	46	6000	0.3	29200		⊙
CNR-20N330K	20N330K	20	26	33	30	36	65	20	59	6000	0.3	21400		⊙
CNR-20N390K	20N390K	25	31	39	35	43	77	20	67	6000	0.3	19800		⊙
CNR-20N470K	20N470K	30	38	47	42	52	93	20	85	6000	0.3	17300		⊙
CNR-20N560K	20N560K	35	45	56	50	62	110	20	106	6000	0.3	14400		⊙
CNR-20N680K	20N680K	40	56	68	61	75	135	20	119	6000	0.3	12600		⊙
CNR-20N201K	20N201K	130	170	200	180	220	340	200	200	20000	1	2125	5	□
CNR-20N221K	20N221K	140	180	220	198	242	360	200	215	20000	1	2000		□
CNR-20N241K	20N241K	150	200	240	216	264	395	200	235	20000	1	1875		□
CNR-20N271K	20N271K	175	225	270	243	297	455	200	275	20000	1	1625		□
CNR-20N301K	20N301K	195	250	300	270	330	500	200	295	20000	1	1500		□
CNR-20N331K	20N331K	215	275	330	297	363	550	200	320	20000	1	1375		□
CNR-20N361K	20N361K	230	300	360	324	396	595	200	350	20000	1	1375		□
CNR-20N391K	20N391K	250	320	390	351	429	650	200	385	20000	1	1375		□
CNR-20N431K	20N431K	275	350	430	387	473	710	200	425	20000	1	1250		□
CNR-20N471K	20N471K	300	385	470	423	517	775	200	450	20000	1	1125		□
CNR-20N511K	20N511K	320	410	510	459	561	845	200	500	20000	1	1000		□
CNR-20N561K	20N561K	350	460	560	504	616	915	200	520	20000	1	938		□
CNR-20N621K	20N621K	395	510	620	558	682	1020	200	590	15000	1	713	□	
CNR-20N681K	20N681K	420	560	680	612	748	1120	200	650	15000	1	688	□	
CNR-20N751K	20N751K	465	615	750	675	825	1235	200	725	15000	1	663	□	

Related Standards

Note : VDE & CQC Certification are under approving

Symbols	⊙		□		
Approval					

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MOV-N

MOV-N Product Dimensions (Unit:mm)

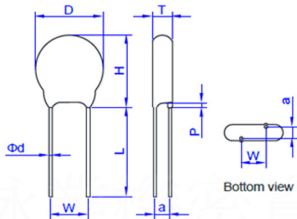


Fig 1. Straight Lead

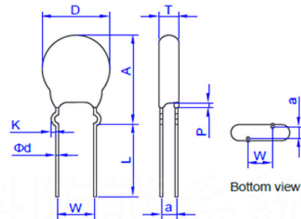


Fig 2. Outside Kink Lead

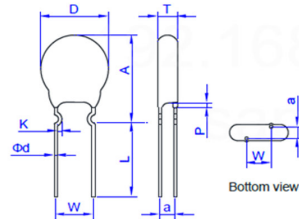


Fig 3. Inside Kink Lead

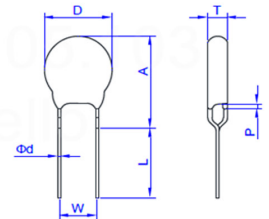


Fig 4. In Line Kink Lead

Symbol	Model	05N		07N		10N		14N		18N		20N	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
D		5.5	7.5	7.5	9.0	10.5	14.0	13.5	17.5	18.5	23.0	19.5	25.0
H		-	10.0	-	12.0	-	17.0	-	20.5	-	26.0	-	28.0
W		4.0	6.0	4.0	6.0	6.5	8.5	6.5	8.5	6.5	8.5	9.0	11.0
ød		0.55	0.65	0.55	0.65	0.75	0.85	0.75	0.85	0.75	0.85	0.95	1.05
P(max.)		3.0											
L(min.)		25.0											
K(Kink Lead)		0.8	1.6	0.8	1.6	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8
A(max.)	180K-271K	-	13.0	-	15.0	-	19.5	-	22.5	-	26.5	-	30.0
	>271K	-	13.0	-	15.0	-	20.5	-	23.5	-	27.0	-	31.0
T		See Tmax table											

* Short Cut Lead type TTX the lead length (L) can 3.0~15mm (except 20N dia <10mm), see Ordering Note.

** a value see T max. table

GDT

UTC 3216 3.2x1.6x1.6 Series

Part Number (UTC)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	50A	Test Voltage DC(V)	(GΩ)	
	V	V	KA	Times			
3216-091N	90±30%	600	0.5	100	50	1	0.5
3216-151N	150±30%	600		100	100	1	0.5
3216-201N	200±30%	700		100	100	1	0.5
3216-301N	300±30%	800		100	100	1	0.5
3216-401N	400±30%	950		100	100	1	0.5
3216-421N	420±30%	950		100	100	1	0.5
3216-501N	500±30%	1000		100	100	1	0.5
3216-601N	600±30%	1200		100	100	1	0.5

UTC 4532 4.5x3.2x2.7 Series

Part Number (UTC)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	100A	Test Voltage DC(V)	(GΩ)	
	V	V	KA	Times			
4532-075N-B	75±30%	650	A : 1000 B : 2000 C : 3000	100	50	1	0.5
4532-091M-B	90±20%	700		100	50	1	0.5
4532-151M-B	150±20%	750		100	100	1	0.5
4532-201M-B	200±20%	750		100	100	1	0.5
4532-231M-B	230±20%	750		100	100	1	0.5
4532-301M-B	300±20%	800		100	100	1	0.5
4532-401M-B	400±20%	950		100	100	1	0.5
4532-471M-B	470±20%	1000		100	100	1	0.5
4532-601M-B	600±20%	1200		100	100	1	0.5

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

GDT

2RxxxM 5.4x5.4x5 Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	100A	Test Voltage DC(V)	(GΩ)	
	V	V	KA	Times			
2R075M	±30	550	5	100	50	1	1
2R090M	±20	550	5	100	50	1	1
2R150M	±20	600	5	100	100	1	1
2R230M	±20	600	5	100	100	1	1
2R300M	±20	700	5	100	100	1	1
2R350M	±20	750	5	100	100	1	1
2R420M	±20	800	5	100	100	1	1
2R470M	±20	800	5	100	100	1	1
2R600M	±20	1000	5	100	100	1	1

2RxxxM 5.4x5.4x4 Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	100A	Test Voltage DC(V)	(GΩ)	
	V	V	KA	Times			
2R075N	75±30%	600	2.5	100	50	1	1
2R090M	90±20%	600	2.5	100	50	1	1
2R150M	150±20%	600	2.5	100	100	1	1
2R230M	230±20%	600	2.5	100	100	1	1
2R350M	350±20%	600	2.5	100	100	1	1
2R420M	420±20%	650	2.5	100	100	1	1
2R470M	470±20%	750	2.5	100	100	1	1
2R600M	600±20%	900	2.5	100	100	1	1

Total impulse discharge current 5KA@ 8/20μs by IEC 61000-4-5, 1 shots

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GDT

2RxxxK 4.2x4.2x4 Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	100A	Test Voltage DC(V)	(GΩ)	
	V	V	KA	Times			
2R075K	75 ±30	≤600	3	100	50	≥1	≤1
2R090K	90 ±30	≤600	3	100	50	≥1	≤1
2R150K	150±20	≤600	3	100	100	≥1	≤1
2R230K	230±20	≤800	3	100	100	≥1	≤1
2R300K	300 ±20	≤850	3	100	100	≥1	≤1
2R350K	350 ±20	≤950	3	100	100	≥1	≤1
2R400K	400 ±20	≤1000	3	100	100	≥1	≤1
2R470K	470 ±20	≤1100	3	100	100	≥1	≤1
2R600K	600±20	≤1200	3	100	100	≥1	≤1
2R800K	800±20	≤1500	3	100	100	≥1	≤1
2R102K	1000±20	≤1600	2.5	300	100	≥1	≤1
2R122K	1200±20	≤1800	2.5	300	100	≥1	≤1
2R152K	1500±20	≤2200	2.5	300	100	≥1	≤1
2R202K	2000±20	≤3000	2.5	300	100	≥1	≤1

2RxxxK 6.2x6.2x4.2 Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	100A	Test Voltage DC(V)	(GΩ)	
	V	V	KA	Times			
2R075K	75 ±30	≤600	5	100	50	≥1	≤1
2R090K	90 ±20	≤600	5	100	50	≥1	≤1
2R150K	150±20	≤600	5	100	100	≥1	≤1
2R230K	230±20	≤600	5	100	100	≥1	≤1
2R350K	350 ±20	≤750	5	100	100	≥1	≤1
2R420K	420 ±20	≤900	5	100	100	≥1	≤1
2R470K	470 ±20	≤1100	5	100	100	≥1	≤1
2R600K	600±20	≤1200	5	100	100	≥1	≤1
2R800K	800±20	≤1400	5	100	100	≥1	≤1
2R102K	1000±20	≤1600	5	100	100	≥1	≤1

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GDT

3RxxxM 5x5x7.6 Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	100A	Test Voltage DC(V)	(GΩ)	(pF)
	V	V	KA	Times			
3R075M	±20	600	10	100	100	1	1
3R090M	±20	600	10	100	100	1	1
3R150M	±20	700	10	100	100	1	1
3R230M	±20	700	10	100	100	1	1
3R350M	±20	800	10	100	100	1	1
3R420M	±20	900	10	100	100	1	1
3R470M	±20	900	10	100	100	1	1
3R600M	±20	1000	10	100	100	1	1
3R1000M	±20	1500	10	100	100	1	1

2RxxxA2L φ5.5x.6 long Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	DC Holdver Voltage	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	<150ms	Test Voltage DC(V)	(GΩ)	(pF)
	V	V	KA	V			
2R075A2L	75±20%	600	5	/	50	1	1
2R090A2L	90±20%	600	5	/	50	1	1
2R150A2L	150±20%	700	5	80	100	1	1
2R230A2L	230±20%	800	5	100	100	1	1
2R350A2L	350±20%	800	5	100	100	1	1
2R470A2L	470±20%	900	5	100	100	1	1
2R600A2L	600±20%	1300	5	100	100	1	1

2RxxxA5L φ8x.6 long Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	DC Holdver Voltage	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	<150ms	Test Voltage DC(V)	(GΩ)	(pF)
	V	V	KA	V			
2R075A5L	75±20%	600	10	/	50	1	1.5
2R090A5L	90±20%	600	10	/	50	1	1.5
2R150A5L	150±20%	700	10	80	100	1	1
2R230A5L	230±20%	800	10	135	100	1	1
2R350A5L	350±20%	800	10	135	100	1	1
2R400A5L	400±20%	900	10	135	100	1	1
2R420A5L	420±20%	900	10	135	100	1	1
2R470A5L	470±20%	1000	10	135	100	1	1
2R600A5L	600±20%	1100	10	135	100	1	1

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GDT

2RxxxA6L φ8x.8 long Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	DC Holdver Voltage	Minimum Insulation Resistance		Max. Capacitance 1MHz (pF)
	100V/S	1KV/us	10 times	<150ms	Test Voltage DC(V)	(GΩ)	
	V	V	KA	V			
2R075A6L	75±20%	600	10	/	50	1	1.5
2R090A6L	90±20%	600	10	/	50	1	1.5
2R150A6L	150±20%	700	10	80	100	1	1
2R230A6L	230±20%	800	10	135	100	1	1
2R350A6L	350±20%	800	10	135	100	1	1
2R400A6L	400±20%	900	10	135	100	1	1
2R420A6L	420±20%	900	10	135	100	1	1
2R470A6L	470±20%	1000	10	135	100	1	1
2R600A6L	600±20%	1100	10	135	100	1	1

3RxxxAL1 φ6x.8 long Series

Part Number (JN)	DC Breakdown Voltage	Max. Impulse Breakdown Voltage	Discharge Current (8/20us)	DC Holdver Voltage	Minimum Insulation Resistance		Max. Capacitance 1MHz (pF)
	100V/S	1KV/us	10 times	<150ms	Test Voltage DC(V)	(GΩ)	
	V	V	KA	V			
3R075AL1	75±20%	600	10	/	50	1	1.5
3R090AL1	90±20%	600	10	/	50	1	1.5
3R150AL1	150±20%	700	10	80	100	1	1
3R230AL1	230±20%	800	10	135	100	1	1
3R350AL1	350±20%	800	10	135	100	1	1
3R420AL1	420±20%	900	10	135	100	1	1
3R470AL1	470±20%	1000	10	135	100	1	1
3R600AL1	600±20%	1100	10	135	100	1	1

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

Spark Gap

MF-xxxx-7A Series $\phi 2.6 \times 6.7$ long

Part Number	DC Spark-Over Voltage Vs(V)	Insulation Resistance IR(OHM)/DCV	Electrostatic Capacitance 1KHz-6Vmax C(pF)	Surge current capacity 8/20us	Surge Life Test
MF-141N-7A	140 (98~182)	> 100M/50V	< 1.0	500A	Common mode test L-G 8/20us 4000V 12ohm 333A 60s ± 5 times
MF-201M-7A	200 (160-240)	> 100M/100V			
MF-251M-7A	250 (200-300)				
MF-301M-7A	300 (240-360)				
MF-401M-7A	400 (320-480)	> 100M/250V			Differential mode test L-N 8/20us 1000V 2ohm 500A 60s ± 5 times
MF-501M-7A	500 (400~600)				
MF-601M-7A	600 (480-720)				
MF-102M-7A	1000 (800-1200)	> 100M/500V			
MF-122M-7A	1200 (960-1440)				
MF-152M-7A	1500 (1200-1800)				

MF-xxxx-3A Series $\phi 3.1 \times 6.7$ long

Part Number	DC Spark-Over Voltage Vs(V)	Insulation Resistance IR(OHM)/DCV	Electrostatic Capacitance 1KHz-6Vmax C(pF)	Surge current capacity 8/20us	Surge Life Test
MF-141N-3A	140 (126~182)	> 100M/50V	< 1.0	1000A	8/20 μ s 100A 100time
MF-201M-3A	200 (160-240)	> 100M/100V			
MF-251M-3A	250 (200-300)				
MF-301M-3A	300 (240-360)				
MF-401M-3A	400 (320-480)	> 100M/250V			
MF-501M-3A	500 (400~600)				
MF-601M-3A	600 (480-720)				
MF-701M-3A	700 (560-840)				
MF-801M-3A	800 (640-960)	> 100M/500V			
MF-102M-3A	1000 (800-1200)				
MF-122M-3A	1200 (960-1440)				
MF-302M-3A	3000 (2400-3600)				
MF-362M-3A	3600 (2880-4320)				1500AC / 1 min
					1800AC / 3 Sec

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

Spark Gap

MF-xxxx-3A5 Series $\varnothing 3.1 \times 5.3$ long

Part Number	DC Spark-Over Voltage Vs(V)	Insulation Resistance IR(OHM)/DCV	Electrostatic Capacitance 1KHz-6Vmax C(pF)	Surge current capacity 8/20us	Surge Life Test
MF-152M-3A5	1500(1200-1800)	> 100M/500V	< 1.0	1500A	8x20us 100A 200 time
MF-202M-3A5	2000(1600-2400)				
MF-242M-3A5	2400(1920-2880)				
MF-272M-3A5	2700(2160-3240)				
MF-302M-3A5	3000(2400-3600)				1500AC / 1 min

MF-xxxx-7A5 Series $\varnothing 2.6 \times 5.0$ long

Part Number	DC Spark-Over Voltage Vs(V)	Insulation Resistance IR(OHM)/DCV	Electrostatic Capacitance 1KHz-6Vmax C(pF)	Surge current capacity 8/20us	Surge Life Test
MF-141N-7A5	140 (98~182)	> 100M /50V	< 1.0	500A	8/20 μ s100A 100time
MF-181N-7A5	180(126-234)	> 100M /100V			
MF-201M-7A5	200(160-240)				
MF-301M-7A5	300(240-360)				
MF-401M-7A5	400(320-480)	> 100M /250V			
MF-501M-7A5	500(400-600)				
MF-601M-7A5	600(480-720)				
MF-801M-7A5	800(640-960)				
MF-102M-7A5	1000(800-1200)	> 100M /500V			

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

TSS

Thyristor SA Series SMB(DO-214AA PACKAGE)

Part Number	VDWN	IDRM	VS	IS	VT	IT	IH	Co
	Min.(V)	Max.(uA)	Max.(V)	(mA)	Max.(V)	Max.(A)	Min.(mA)	Typ.(pF)
P0080SA	6	5	15	800	4	2.2	40	105
P0150SA	15	5	25	800	4	2.2	40	105
P0300SA	25	5	40	800	4	2.2	40	105
P0640SA	58	5	77	800	4	2.2	120	95
P0720SA	65	5	88	800	4	2.2	120	95
P0900SA	75	5	98	800	4	2.2	120	85
P1100SA	90	5	130	800	4	2.2	120	85
P1300SA	120	5	160	800	4	2.2	120	85
P1500SA	140	5	180	800	4	2.2	120	80
P1800SA	170	5	220	800	4	2.2	120	80
P2300SA	190	5	260	800	4	2.2	120	75
P2600SA	220	5	300	800	4	2.2	120	75
P3100SA	275	5	350	800	4	2.2	120	65
P3500SA	320	5	400	800	4	2.2	120	65
P4200SA	400	5	520	800	4	2.2	≤ 50	65

1. Vs is measured at 100KV/S
2. Off-state capacitance is measured in VDC=2V,VRMS=1V,F=1MHz
3. All measurements are made at an ambient temperature of 25°C

Part Number	IPP 2x10us	IPP 8x20us	IPP 10x560us	IPP 10x1000us	VPP 10x700us	ITSM 60HZ	di/dt
	(A)	(A)	(A)	(A)	(V)	(A)	(A/us)
P0080SA Thru P4200SA	150	150	50	50	2000	20	500

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

TSS

Thyristor SB Series SMB(DO-214AA PACKAGE)

Part Number	VDWN	IDRM	VS	IS	VT	IT	IH	Co
	Min.(V)	Max.(uA)	Max.(V)	(mA)	Max.(V)	Max.(A)	Min.(mA)	Typ.(pF)
P0060SB	6	5	15	800	4	2.2	40	80
P0080SB	6	5	25	800	4	2.2	40	80
P0150SB	15	5	25	800	4	2.2	40	80
P0300SB	25	5	40	800	4	2.2	40	80
P0640SB	58	5	77	800	4	2.2	120	60
P0720SB	65	5	88	800	4	2.2	120	60
P0900SB	75	5	98	800	4	2.2	120	55
P1100SB	90	5	130	800	4	2.2	120	55
P1300SB	120	5	160	800	4	2.2	120	55
P1500SB	140	5	180	800	4	2.2	120	60
P1800SB	170	5	220	800	4	2.2	120	60
P2300SB	190	5	260	800	4	2.2	120	55
P2600SB	220	5	300	800	4	2.2	120	50
P3100SB	275	5	350	800	4	2.2	120	45
P3500SB	320	5	400	800	4	2.2	120	40
P4200SB	400	5	520	800	4	2.2	≤ 50	40

1. Vs is measured at 100KV/S
2. Off-state capacitance is measured in VDC=2V,VRMS=1V,F=1MHz
3. All measurements are made at an ambient temperature of 25°C

Part Number	IPP 2x10us	IPP 8x20us	IPP 10x560us	IPP 10x1000us	VPP 10x700us	ITSM 60HZ	di/dt
	(A)	(A)	(A)	(A)	(V)	(A)	(A/us)
P0060SB Thru P4200SB	250	250	100	80	4000	25	500

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

TSS

Thyristor SC Series SMB(DO-214AA PACKAGE)

Part Number	VDWN	IDRM	VS	IS	VT	IT	IH	Co
	Min.(V)	Max.(uA)	Max.(V)	(mA)	Max.(V)	Max.(A)	Min.(mA)	Typ.(pF)
P0060SC	6	5	15	800	4	2.2	50	80
P0080SC	6	5	25	800	4	2.2	50	80
P0150SC	15	5	25	800	4	2.2	50	80
P0300SC	25	5	40	800	4	2.2	50	80
P0640SC	58	5	77	800	4	2.2	120	80
P0720SC	65	5	88	800	4	2.2	120	80
P0900SC	75	5	98	800	4	2.2	120	80
P1100SC	90	5	130	800	4	2.2	120	80
P1300SC	120	5	160	800	4	2.2	120	80
P1500SC	140	5	180	800	4	2.2	120	80
P1800SC	170	5	220	800	4	2.2	120	80
P2300SC	190	5	260	800	4	2.2	120	80
P2600SC	220	5	300	800	4	2.2	120	80
P3100SC	275	5	350	800	4	2.2	120	40
P3500SC	320	5	400	800	4	2.2	120	40
P4200SC	400	5	520	800	4	2.2	≤ 50	70

1. Vs is measured at 100KV/S
2. Off-state capacitance is measured in VDC=2V,VRMS=1V,F=1MHz
3. All measurements are made at an ambient temperature of 25°C

Part Number	IPP 2x10us	IPP 8x20us	IPP 10x560us	IPP 10x1000us	VPP 10x700us	ITSM 60HZ	di/dt
	(A)	(A)	(A)	(A)	(V)	(A)	(A/us)
P0060SC Thru P4200SC	500	400	150	100	6000	30	500

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

TSS

Thyristor SD Series SMB(DO-214AA PACKAGE)

Part Number	VDWN	IDRM	VS	IS	VT	IT	IH	Co
	Min.(V)	Max.(uA)	Max.(V)	(mA)	Max.(V)	Max.(A)	Min.(mA)	Typ.(pF)
P0080SD	6	1	15	800	4	2.2	50	150
P0640SD	58	1	77	800	4	2.2	50	150
P0720SD	65	1	87	800	4	2.2	50	150
P0900SD	75	1	98	800	4	2.2	50	140
P1100SD	90	1	130	800	4	2.2	50	110
P1300SD	120	1	160	800	4	2.2	50	100
P1500SD	140	1	180	800	4	2.2	50	90
P1800SD	170	1	220	800	4	2.2	50	90
P2300SD	190	1	260	800	4	2.2	50	80
P2600SD	220	1	300	800	4	2.2	50	70
P3100SD	275	1	350	800	4	2.2	50	60
P3500SD	320	1	400	800	4	2.2	50	60
P3800SD	340	1	450	800	4	2.2	50	60

1. Vs is measured at 100KV/S
2. Off-state capacitance is measured in VDC=2V,VRMS=1V,F=1MHz

Part Number	IPP 2x10us	IPP 8x20us	IPP 10x700us	IPP 10x1000us
	(A)	(A)	(A)	(A)
P0080SD Thru P3800SD	800	700	200	200

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

TSS

Thyristor RA Series SMA(DO-214AC PACKAGE)

Part Number	VDWN	IDRM	VS	IS	VT	IT	IH	Co
	Min.(V)	Max.(uA)	Max.(V)	(mA)	Max.(V)	Max.(A)	Min.(mA)	Typ.(pF)
P0060RA	6	15	4	5	800	2.2	40	50
P0080RA	6	25	4	5	800	2.2	40	50
P0150RA	15	25	4	5	800	2.2	40	50
P0300RA	25	40	4	5	800	2.2	40	70
P0640RA	58	77	4	5	800	2.2	120	50
P0720RA	65	88	4	5	800	2.2	120	50
P0900RA	75	98	4	5	800	2.2	120	45
P1100RA	90	130	4	5	800	2.2	120	45
P1300RA	120	160	4	5	800	2.2	120	45
P1500RA	140	180	4	5	800	2.2	120	40
P1800RA	170	220	4	5	800	2.2	120	40
P2300RA	190	260	4	5	800	2.2	120	35
P2600RA	220	300	4	5	800	2.2	120	35
P3100RA	275	350	4	5	800	2.2	120	30
P3500RA	320	400	4	5	800	2.2	120	30
P4200RA	400	520	4	5	800	2.2	≤ 50	30

1. Vs is measured at 100KV/S
2. Off-state capacitance is measured in VDC=2V,VRMS=1V,F=1MHz
3. All measurements are made at an ambient temperature of 25°C

Part Number	IPP 2x10us	IPP 8x20us	IPP 10x560us	IPP 10x1000us	VPP 10x700us	ITSM 60HZ	di/dt
	(A)	(A)	(A)	(A)	(V)	(A)	(A/us)
P0060RA Thru P4200RA	150	150	50	45	3000	20	500

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

TSS

Thyristor LB Series DO-15 PACKAGE

Part Number	VDWN	IDRM	VS	IS	VT	IT	IH	Co
	Min.(V)	Max.(uA)	Max.(V)	(mA)	Max.(V)	Max.(A)	Min.(mA)	Typ.(pF)
P0080LB	6	5	25	800	4	2.2	≥ 50	80
P0300LB	25	5	40	800	4	2.2	≥ 50	70
P0640LB	58	5	77	800	4	2.2	≥ 150	80
P1800LB	170	5	220	800	4	2.2	≥ 150	80
P2300LB	190	5	260	800	4	2.2	≥ 150	75
P2600LB	220	5	300	800	4	2.2	≥ 150	75
P3100LB	275	5	350	800	4	2.2	≥ 150	80
P3500LB	320	5	400	800	4	2.2	≥ 150	80
P4200LB	390	5	500	800	4	2.2	≤ 50	70

1. Vs is measured at 100KV/S
2. Off-state capacitance is measured in VDC=2V,VRMS=1V,F=1MHz
3. All measurements are made at an ambient temperature of 25°C

Part Number	IPP 2x10us	IPP 8x20us	IPP 10x560us	IPP 10x1000us	VPP 10x700us	ITSM 60HZ	di/dt
	(A)	(A)	(A)	(A)	(V)	(A)	(A/us)
P0080LB Thru P4200LB	300	300	100	80	4000	32	500

TSS-SLIC

Thyristor SLIC Series SOP-8 PACKAGE

Symbol	Parameter	Unit	UP1069B	UP61089Q	UP61089H	
VPP/IPP	Peak pulse voltage/current	10/700μs	V	2000	2000	6000
		5/310μs	A	50	40	150
ITSM	Non repetitive peak pulse current(f=50Hz)	tp=10ms	A	8	8	8
		tp=1s	A	3.5	3.5	2.6
IGSM	Maximum gate current(half sinusoid tp=10ms)	A	2	2	5/900S	
VMLG	Line-ground maximum voltage	V	-170	-170	-170	
VMGL	Gate-ground maximum voltage	V	-167	-170	-167	
TSTG	Storage temperature range	°C	-55 to +150	-55 to +150	-55 to +150	
TJ	Maximum junction temperature	°C	150	150	150	
TL	Maximum sustainable temperature of solder in 10 seconds	°C	260	260	260	

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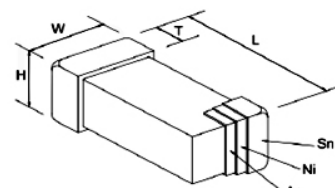
Chip Fuse

Chip fuse 1206 fast action type Size 1206(3.26x1.68mm)

Unictron P/N	Model name	Amp. rating	Amp. code	Interrupting Ratings	Nominal Cold DCR(mΩ)1	Nominal Melting I2t (A2Sec)2
H2SFF121006100	1206UCF100A063V	1	H	50A 63VDC 50A 63VAC	450	0.04
H2SFF121256100	1206UCF125A063V	1.25	I		290	0.07
H2SFF121506100	1206UCF150A063V	1.5	K		220	0.1
H2SFF121756100	1206UCF175A063V	1.75	L		170	0.15
H2SFF122006100	1206UCF200A063V	2	N		150	0.2
H2SFF122503100	1206UCF250A032V	2.5	O		120	0.5
H2SFF123003100	1206UCF300A032V	3	P	50A 32VDC 50A 32VAC	83	0.9
H2SFF123503100	1206UCF350A032V	3.5	R		48	1.4
H2SFF124003100	1206UCF400A032V	4	S		38	2
H2SFF124503100	1206UCF450A032V	4.5	V		26	3
H2SFF125003100	1206UCF500A032V	5	T		23	3.5
H2SFF126003100	1206UCF600A032V	6	U		16	4
H2SFF127003100	1206UCF700A032V	7	W		14.5	7
H2SFF128003100	1206UCF800A032V	8	X		12	9

Product Dimension (mm)

Size Inch(mm)	L (mm)	W (mm)	H (mm)	T (mm)
1206(3216)	3.2±0.20	1.6±0.20	1.50 max.	0.2 min.

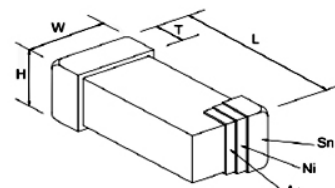


Chip fuse 1206 slow blow type Size 1206(3.2x1.6mm)

Unictron P/N	Model name	Amp. rating	Amp. code	Interrupting Ratings	Nominal Cold DCR(mΩ)1	Nominal Melting I2t (A2Sec)2
H2SFS121006100	1206UCS100A063V	1	H	50A 63VDC 50A 63VAC	420	0.07
H2SFS121256100	1206UCS125A063V	1.25	I		260	0.1
H2SFS121506100	1206UCS150A063V	1.5	K		170	0.2
H2SFS121756100	1206UCS175A063V	1.75	L		140	0.3
H2SFS122006100	1206UCS200A063V	2	N		115	0.5
H2SFS122503100	1206UCS250A032V	2.5	O		75	0.9
H2SFS123003100	1206UCS300A032V	3	P	50A 32VDC 50A 32VAC	42	1.4
H2SFS123503100	1206UCS350A032V	3.5	R		37	2.3
H2SFS124003100	1206UCS400A032V	4	S		26	3.2
H2SFS124503100	1206UCS450A032V	4.5	V		22	4
H2SFS125003100	1206UCS500A032V	5	T		18	5.5
H2SFS126003100	1206UCS600A032V	6	U		13	9
H2SFS127003100	1206UCS700A032V	7	W		12	11
H2SFS128003100	1206UCS800A032V	8	X		10	13

Product Dimension (mm)

Size Inch(mm)	L (mm)	W (mm)	H (mm)	T (mm)
1206(3216)	3.2±0.20	1.6±0.20	1.50 max.	0.2 min.



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Chip Fuse

Chip fuse 0603 fast action type Size 0603(1.6x0.8mm)

Unictron P/N	Model name	Amp. rating	Amp. code	Interrupting Ratings	Nominal Cold DCR(mΩ)1	Nominal Melting I2t (A2Sec)2
H2SFF061003100	0603UCF100A032V	1	H	60A 32VDC	310	0.035
H2SFF061253100	0603UCF125A032V	1.25	I		250	0.067
H2SFF061503100	0603UCF150A032V	1.5	K		165	0.1
H2SFF061753100	0603UCF175A032V	1.75	L		130	0.2
H2SFF062003100	0603UCF200A032V	2	N		93	0.22
H2SFF062503100	0603UCF250A032V	2.5	O		72	0.35
H2SFF063003100	0603UCF300A032V	3	P		48	0.48
H2SFF063503100	0603UCF350A032V	3.5	R		34	0.68
H2SFF064003100	0603UCF400A032V	4	S		26	1.2
H2SFF064503100	0603UCF450A032V	4.5	V		20	1.6
H2SFF065003100	0603UCF500A032V	5	T		16	2.5
H2SFF066003100	0603UCF600A032V	6	U		14	3.4
H2SFF067003100	0603UCF700A032V	7	W		9.5	4.5
H2SFF068003100	0603UCF800A032V	8	X		9	6.4
Product Dimension (mm)						
Size Inch(mm)	L (mm)	W (mm)	H (mm)	T (mm)		
0603(1608)	1.6±0.15	0.8±0.15	0.8±0.20	0.2 min.		

Chip fuse 0603 slow blow type Size 0603(1.6x0.8mm)

Unictron P/N	Model name	Amp. rating	Amp. code	Interrupting Ratings	Nominal Cold DCR(mΩ)1	Nominal Melting I2t (A2Sec)2
H2SFS061003100	0603UCS100A032V	1	H	60A 32VDC	250	0.05
H2SFS061253100	0603UCS125A032V	1.25	I		173	0.07
H2SFS061503100	0603UCS150A032V	1.5	K		130	0.13
H2SFS061753100	0603UCS175A032V	1.75	L		95	0.3
H2SFS062003100	0603UCS200A032V	2	N		72	0.4
H2SFS062503100	0603UCS250A032V	2.5	O		54	0.63
H2SFS063003100	0603UCS300A032V	3	P		35	1.2
H2SFS063503100	0603UCS350A032V	3.5	R		28	1.8
H2SFS064003100	0603UCS400A032V	4	S		22	2.2
H2SFS064503100	0603UCS450A032V	4.5	V		18	3.5
H2SFS065003100	0603UCS500A032V	5	T		15	4
H2SFS066003100	0603UCS600A032V	6	U		10	5.1
H2SFS067003100	0603UCS700A032V	7	W		9.5	5.5
H2SFS068003100	0603UCS800A032V	8	X		8	7.7
Product Dimension (mm)						
Size Inch(mm)	L (mm)	W (mm)	H (mm)	T (mm)		
0603(1608)	1.6±0.15	0.8±0.15	0.8±0.20	0.2 min.		

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PPTC-SMD

FSMD0603 Series Size 0603(1.6x0.8mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	A	Sec	Ohms	Ohms
FSMD001-0603-R	0.01	0.03	60	40	0.5	0.2	1	15	100
FSMD002-0603-R	0.02	0.06	60	40	0.5	0.2	1	12	70
FSMD003-0603-R	0.03	0.09	30	40	0.5	0.2	1	6	50
FSMD004-0603-R	0.04	0.12	24	40	0.5	0.2	1	4	40
FSMD005-0603-R	0.05	0.15	15	40	0.5	0.5	0.1	3.8	30
FSMD010-0603-R	0.1	0.25	15	40	0.5	0.7	0.1	0.9	8
FSMD012-0603-R	0.12	0.3	9	40	0.5	0.8	0.1	1.1	5.8
FSMD016-0603-R	0.16	0.4	9	40	0.5	1	0.1	1	4.2
FSMD020-0603-R	0.2	0.45	9	40	0.5	2	0.1	0.55	3.5

FSMD0805 Series Size 0805(2.0x1.2mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	A	Sec	Ohms	Ohms
FSMD010-0805-R	0.1	0.3	15	100	0.5	0.5	1.5	0.7	6
FSMD010-24-0805-R	0.1	0.3	24	100	0.5	0.5	1.5	0.7	6
FSMD020-0805-R	0.2	0.5	9	100	0.5	8	0.02	0.4	3.5
FSMD035-0805-R	0.35	0.75	6	100	0.5	8	0.1	0.25	1.2
FSMD050-0805R	0.5	1	6	100	0.5	8	0.1	0.15	0.85
FSMD050-9-0805R	0.5	1	9	100	0.5	8	0.1	0.15	0.85
FSMD075-0805R	0.75	1.5	6	100	0.6	8	0.2	0.09	0.35
FSMD100-0805R	1	1.95	6	100	0.6	8	0.3	0.06	0.21
FSMD110-0805R	1.1	2.2	6	100	0.6	8	0.2	0.05	0.2

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PPTC-SMD

FSMD1206 Series Size 1206(3.2x1.6mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	A	Sec	Ohms	Ohms
FSMD005-1206-R	0.05	0.15	60	100	0.4	0.25	1.5	3.6	50
FSMD010-1206-R	0.1	0.25	60	100	0.4	0.5	1	1.6	15
FSMD012-1206-R	0.12	0.39	48	100	0.5	1	0.2	1.4	6.5
FSMD016-1206-R	0.16	0.45	48	100	0.5	1	0.3	1.1	5
FSMD020-1206-R	0.2	0.4	30	100	0.4	8	0.1	0.6	2.5
FSMD025-1206-R	0.25	0.5	16	100	0.6	8	0.08	0.55	2.3
FSMD025-24-1206-R	0.25	0.5	24	100	0.6	8	0.08	0.55	2.3
FSMD035-1206-R	0.35	0.75	16	100	0.4	8	0.1	0.3	1.2
FSMD035-30-1206R	0.35	0.75	30	100	0.6	8	0.1	0.3	1.2
FSMD050-1206-R	0.5	1	8	100	0.4	8	0.1	0.15	0.7
FSMD050-24-1206R	0.5	1	24	100	0.6	8	0.1	0.15	0.75
FSMD075-1206R	0.75	1.5	8	100	0.6	8	0.2	0.09	0.29
FSMD075-16-1206R	0.75	1.5	16	100	0.6	8	0.2	0.09	0.29
FSMD100-1206R	1	1.8	6	100	0.6	8	0.3	0.055	0.21
FSMD110-1206R	1.1	2.2	8	100	0.8	8	0.3	0.04	0.18
FSMD110-16-1206R	1.1	2.2	16	100	0.8	8	0.3	0.04	0.18
FSMD150-1206R	1.5	3	8	100	0.8	8	1	0.04	0.12
FSMD200-1206R	2	3.5	6	100	0.8	8	1.5	0.018	0.08

FSMD1210 Series Size 1210(3.2x2.5mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	A	Sec	Ohms	Ohms
FSMD005-1210-R	0.05	0.15	60	100	0.6	0.25	1.5	3.6	50
FSMD010-1210-R	0.1	0.25	60	100	0.6	0.5	1.5	1.6	15
FSMD020-1210-R	0.2	0.4	30	100	0.6	8	0.02	0.8	5
FSMD035-1210-R	0.35	0.7	16	100	0.6	8	0.2	0.32	1.3
FSMD050-1210-R	0.5	1	16	100	0.6	8	0.1	0.25	0.9
FSMD075-1210-R	0.75	1.5	8	100	0.6	8	0.1	0.13	0.4
FSMD075-24-1210R	0.75	1.5	24	100	0.6	8	0.1	0.13	0.4
FSMD110-1210R	1.1	2.2	8	100	0.8	8	0.3	0.06	0.21
FSMD110-16-1210R	1.1	2.2	16	100	0.8	8	0.3	0.06	0.21
FSMD150-1210R	1.5	3	6	100	0.8	8	0.5	0.04	0.11
FSMD175-1210R	1.75	3.5	6	100	0.8	8	0.6	0.02	0.08
FSMD200-1210R	2	4	6	100	0.8	8	1	0.015	0.07

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PPTC-SMD

FSMD1812 Series Size 1812(4.5x3.2mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	A	Sec	Ohms	Ohms
FSMD010-R	0.1	0.3	60	100	0.8	8	0.02	1.6	15
FSMD014-R	0.14	0.3	60	100	0.8	8	0.008	1.2	6.5
FSMD020-R	0.2	0.4	30	100	0.8	8	0.02	0.8	5
FSMD020-60-R	0.2	0.4	60	100	0.8	8	0.02	0.8	5
FSMD030-R	0.3	0.6	30	100	0.8	8	0.1	0.2	1.75
FSMD035-R	0.35	0.7	16	100	0.8	8	0.1	0.32	1.5
FSMD035-30-R	0.35	0.7	30	100	0.8	8	0.1	0.32	1.5
FSMD050-R	0.5	1	16	100	0.8	8	0.15	0.15	1
FSMD050-30-R	0.5	1	30	100	0.8	8	0.15	0.15	1
FSMD075-R	0.75	1.5	16	100	0.8	8	0.2	0.11	0.45
FSMD075-24R	0.75	1.5	24	100	1	8	0.2	0.11	0.29
FSMD075-33R	0.75	1.5	33	100	1	8	0.2	0.11	0.4
FSMD110-R	1.1	2.2	8	100	0.8	8	0.3	0.04	0.21
FSMD110-16-R	1.1	2.2	16	100	0.8	8	0.5	0.06	0.18
FSMD110-24R	1.1	2.2	24	100	1	8	0.5	0.06	0.2
FSMD110-33R	1.1	2.2	33	100	0.8	8	0.5	0.06	0.2
FSMD125-R	1.25	2.5	6	100	0.8	8	0.4	0.05	0.14
FSMD125-16R	1.25	2.5	16	100	0.8	8	0.4	0.05	0.14
FSMD150-R	1.5	3	8	100	0.8	8	0.5	0.04	0.11
FSMD150-12R	1.5	3	12	100	1	8	0.5	0.04	0.11
FSMD150-24R	1.5	3	24	100	1	8	1.5	0.04	0.12
FSMD160-R	1.6	3.2	8	100	0.8	8	0.5	0.03	0.1
FSMD160-12R	1.6	3.2	12	100	1	8	1	0.03	0.1
FSMD160-16R	1.6	3.2	16	100	1	8	1	0.03	0.1
FSMD160-24R	1.6	3.2	24	100	1	8	1	0.03	0.1
FSMD200R	2	3.5	8	100	1	8	2	0.02	0.07
FSMD200-16R	2	3.5	16	100	1	8	5	0.02	0.085
FSMD260R	2.6	5	8	100	1	8	2.5	0.015	0.047
FSMD260-13R	2.6	5	13.2	100	1.3	8	5	0.015	0.05
FSMD260-16R	2.6	5	16	100	1.3	8	5	0.015	0.05
FSMD300R	3	5	6	100	1	8	4	0.012	0.04

FSMD2016 Series Size 2016(5.0x3.2mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	A	Sec	Ohms	Ohms
FSMD030-2016-R	0.3	0.6	60	100	1.4	1.5	3	0.4	2.3
FSMD050-2016R	0.55	1.1	60	100	1.4	2.5	5	0.2	1
FSMD075-2016R	0.75	1.5	60	100	1.4	8	0.5	0.13	0.9
FSMD100-2016-R	1.1	2.2	15	100	1.4	8	0.5	0.07	0.4
FSMD100-33-2016-R	1.1	2.2	33	100	1.4	8	0.5	0.07	0.4
FSMD150-2016-R	1.5	3	15	100	1.4	8	0.8	0.05	0.18
FSMD200-2016-R	2	4.2	6	100	1.4	8	3	0.03	0.1

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

PPTC-SMD

FSMD2920 Series Size 2920(7.3x5.0mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
						A	Sec	Ohms	Ohms
FSMD030-2920-R	0.3	0.6	60	100	1.5	1.5	3	1	4.8
FSMD050-2920-R	0.5	1	60	100	1.5	2.5	4	0.3	1.4
FSMD075-2920-R	0.75	1.5	33	100	1.5	8	0.3	0.18	1
FSMD075-60-2920-R	0.75	1.5	60	100	1.5	8	0.3	0.18	1
FSMD100-2920-R	1.1	2.2	33	100	1.5	8	0.5	0.09	0.41
FSMD110-60-2920R	1.1	2.2	60	100	1.5	8	0.5	0.09	0.41
FSMD125-2920-R	1.25	2.5	33	100	1.5	8	2	0.05	0.25
FSMD150-2920-R	1.5	3	33	100	1.5	8	2	0.05	0.23
FSMD185-2920-R	1.85	3.7	33	100	1.5	8	2.5	0.04	0.15
FSMD200-2920-R	2	4	16	100	1.5	8	5	0.035	0.12
FSMD200-24-2920-R	2	4	24	100	1.5	8	5	0.035	0.12
FSMD250-2920-R	2.5	5	16	100	1.5	8	16	0.025	0.085
FSMD260-2920-R	2.6	5.2	6	100	1.5	8	20	0.02	0.075
FSMD260-24-2920R	2.6	5.2	24	100	1.5	8	20	0.02	0.075
FSMD300-2920-R	3	5.2	6	100	1.5	8	25	0.01	0.048
FSMD300-15-2920R	3	5.2	15	100	1.5	8	20	0.01	0.048
FSMD300-24-2920R	3	5.2	24	100	1.5	8	20	0.01	0.048
FSMD330-2920R	3.3	5.5	24	100	1.5	8	20	0.01	0.048
FSMD400-16-2920R	4	8	16	100	1.5	20	4	0.01	0.04
FSMD500-16-2920R	5	10	16	100	1.5	20	5	0.005	0.025
FSMD600-12-2920R	6	12	12	100	2	30	2	0.004	0.02
FSMD700-12-2920R	7	14	12	100	2	35	2	0.003	0.018

FSMD0402RZ Series Size 0402(1.0x0.5mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
						A	Sec	Ohms	Ohms
FSMD010-0402RZ	0.1	0.3	6	100	0.5	0.5	1	0.15	2
FSMD020-0402RZ	0.2	0.5	6	100	0.5	1	1	0.1	1.25
FSMD035-0402RZ	0.35	0.7	6	100	0.5	8	0.1	0.05	0.7
FSMD050-0402RZ	0.5	1	6	100	0.5	8	0.1	0.04	0.4

FSMD0603RZ Series Size 0603(1.6x0.8mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
						A	Sec	Ohms	Ohms
FSMD025-0603RZ	0.25	0.55	9	100	0.5	8	0.08	0.5	3
FSMD035-0603RZ	0.35	0.75	6	100	0.5	8	0.1	0.2	1
FSMD050-0603RZ	0.5	1	6	100	0.6	8	0.1	0.07	0.35
FSMD075-0603RZ	0.75	1.5	6	100	0.6	8	0.2	0.05	0.25

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PPTC-SMD

FSMD0805RZ Series Size 0805(2.0x1.2mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
						A	Sec	Ohms	Ohms
FSMD075-0805RZ	0.75	1.5	6	100	0.6	8	0.2	0.04	0.16
FSMD110-0805RZ	1.1	1.8	6	100	0.6	8	0.3	0.03	0.13
FSMD125-0805RZ	1.25	2.5	6	100	0.6	8	0.3	0.025	0.11
FSMD150-0805RZ	1.5	3	6	100	0.6	8	0.3	0.015	0.065

FSMD1206RZ Series Size 1206(3.2x1.6mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
						A	Sec	Ohms	Ohms
FSMD050-1206RZ	0.5	1.5	6	100	0.8	8	0.2	0.025	0.2
FSMD075-1206RZ	0.75	1.8	6	100	0.8	8	0.3	0.018	0.18
FSMD110-1206RZ	1.1	2.2	6	100	0.8	8	0.3	0.015	0.1
FSMD150-1206RZ	1.5	3	6	100	0.8	8	0.3	0.01	0.065
FSMD175-1206RZ	1.75	3.5	6	100	0.8	8	0.4	0.005	0.03
FSMD200-1206RZ	2	4	6	100	0.8	8	0.5	0.005	0.025
FSMD260-1206RZ	2.6	5.2	6	100	0.8	8	4	0.003	0.025
FSMD300-1206RZ	3	6	6	100	0.8	8	4	0.003	0.02
FSMD350-1206RZ	3.5	7	6	100	0.8	8	5	0.003	0.018
FSMD380-1206RZ	3.8	8	6	100	0.8	8	5	0.002	0.014
FSMD400-1206RZ	4	8	6	100	0.8	8	5	0.002	0.014
FSMD450-1206RZ	4.5	9	6	100	0.8	22.5	2	0.001	0.014
FSMD500-1206RZ	5	10	6	100	0.8	25	5	0.001	0.012
FSMD600-1206RZ	6	12	6	100	1	30	2	0.001	0.01
FSMD700-1206RZ	7	14	6	100	1	35	2	0.001	0.008

FSMD1210RZ Series Size 1210(3.2x2.5mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
						A	Sec	Ohms	Ohms
FSMD175-1210RZ	1.75	3.5	6	100	1	8	2.5	0.006	0.04
FSMD200-1210RZ	2	4.9	6	100	1	8	3	0.005	0.024
FSMD300-1210RZ	3	6	6	100	0.8	15	2	0.003	0.02

FSMD1812RZ Series Size 1812(4.5x3.2mm)

Part Number	Hold Current	Trip Current	Rated Voltage	Max. Current	Typ. Power	Max. Time to trip		Resistance	
	IH, A	IT, A	VMAX, VDC	IMAX, A	Pd, W	Current	Time	RMIN	R1MAX
						A	Sec	Ohms	Ohms
FSMD140RZ	1.4	3.6	6	100	1	8	3	0.01	0.035
FSMD190RZ	1.9	4.9	6	100	1	8	5	0.003	0.025
FSMD270RZ	2.7	6.2	6	100	1	13.5	3	0.003	0.023
FSMD300RZ	3	7	6	100	1	15	2	0.003	0.022
FSMD370RZ	3.7	9.1	6	100	1	18.5	2	0.003	0.018

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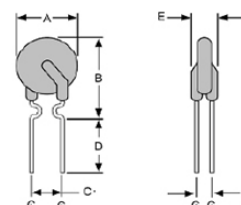
PPTC-DIP

FRX Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
	IH, A	IT, A	at 5xIH, s	IMAX, A	VMAX, VDC	Pd, W	RMIN	R1MAX
	Ohms	Ohms						
FRX005-60F	0.05	0.1	5	40	60	0.26	7.3	20
FRX010-60F	0.1	0.2	4	40	60	0.38	2.5	7.5
FRX017-60F	0.17	0.34	3	40	60	0.48	2	8
FRX020-60F	0.2	0.4	2.2	40	60	0.41	1.83	4.4
FRX025-60F	0.25	0.5	2.5	40	60	0.45	1.25	3
FRX030-60F	0.3	0.6	3	40	60	0.49	0.88	2.1
FRX040-60F	0.4	0.8	3.8	40	60	0.56	0.55	1.29
FRX050-60F	0.5	1	4	40	60	0.77	0.5	1.17
FRX065-60F	0.65	1.3	5.3	40	60	0.88	0.31	0.72
FRX075-60F	0.75	1.5	6.3	40	60	0.92	0.25	0.6
FRX090-60F	0.9	1.8	7.2	40	60	0.99	0.2	0.47
FRX110-60F	1.1	2.2	8.2	40	60	1.5	0.15	0.38
FRX135-60F	1.35	2.7	9.6	40	60	1.7	0.12	0.3
FRX160-60F	1.6	3.2	11.4	40	60	1.9	0.09	0.22
FRX185-60F	1.85	3.7	12.6	40	60	2.1	0.08	0.19
FRX250-60F	2.5	5	15.6	40	60	2.5	0.05	0.13
FRX300-60F	3	6	19.8	40	60	2.8	0.04	0.1
FRX375-60F	3.75	7.5	24	40	60	3.2	0.03	0.08

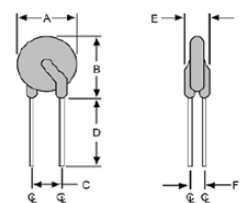
FRX Product Dimension (mm)

Part Number	A	B	C	D	E	F
	Max.	Max.	Typ.	Min.	Max.	Typ.
FRX005-60F	7.4	12.7	5.1	7.6	3.1	1.1
FRX010-60F	7.4	12.7	5.1	7.6	3.1	1.1
FRX017-60F	7.4	12.7	5.1	7.6	3.1	1.1
FRX020-60F	7.4	12.7	5.1	7.6	3.1	1.1
FRX025-60F	7.4	12.7	5.1	7.6	3.1	1.1
FRX030-60F	7.4	13.0	5.1	7.6	3.1	1.1
FRX040-60F	7.6	13.5	5.1	7.6	3.1	1.1
FRX050-60F	7.9	13.7	5.1	7.6	3.1	1.1
FRX065-60F	9.7	14.5	5.1	7.6	3.1	1.1
FRX075-60F	10.4	15.2	5.1	7.6	3.1	1.1
FRX090-60F	11.7	15.8	5.1	7.6	3.1	1.1
FRX110-60F	13.0	18.0	5.1	7.6	3.1	1.4
FRX135-60F	14.5	19.6	5.1	7.6	3.1	1.4
FRX160-60F	16.3	21.3	5.1	7.6	3.1	1.4
FRX185-60F	17.8	22.9	5.1	7.6	3.1	1.4
FRX250-60F	21.3	26.4	10.2	7.6	3.1	1.4
FRX300-60F	24.9	30.0	10.2	7.6	3.1	1.4
FRX375-60F	28.5	33.5	10.2	7.6	3.1	1.4



FRX 005-60F ~ FRX 090-60F

Lead Size : 24AWG
 \varnothing 0.51 mm Diameter



FRX 110-60F ~ FRX 375-60F

Lead Size : 20AWG
 \varnothing 0.81 mm Diameter

PPTC-DIP

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

PPTC-DIP

FRX90V Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
	IH, A	IT, A	at 5xIH, s	IMAX, A	VMAX, VDC	Pd, W	RMIN Ohms	R1MAX Ohms
FRX010-90F	0.1	0.2	4	40	72/90	0.38	2.5	7.5
FRX015-90F	0.15	0.35	10	40	72/90	0.7	2.4	7
FRX017-90F	0.17	0.34	3	40	72/90	0.48	2	8
FRX020-90F	0.2	0.4	2.2	40	72/90	0.41	1.83	4.4
FRX025-90F	0.25	0.5	2.5	40	72/90	0.45	1.25	3
FRX030-90F	0.3	0.6	3	40	72/90	0.49	0.88	2.1
FRX035-90F	0.35	0.75	10	40	72/90	1.3	0.7	2.5
FRX040-90F	0.4	0.8	3.8	40	72/90	0.56	0.55	1.29
FRX050-90F	0.5	1	4	40	72/90	0.77	0.5	1.17
FRX055-90F	0.55	1.2	10	40	72/90	1.5	0.4	1.5
FRX065-90F	0.65	1.3	5.3	40	72/90	0.88	0.31	0.72
FRX075-90F	0.75	1.5	6.3	40	72/90	0.92	0.25	0.6
FRX090-90F	0.9	1.8	7.2	40	72/90	0.99	0.2	0.47
FRX110-90F	1.1	2.2	8.2	40	72/90	1.5	0.15	0.38
FRX135-90F	1.35	2.7	9.6	40	72/90	1.7	0.12	0.3
FRX160-90F	1.6	3.2	11.4	40	72/90	1.9	0.09	0.22
FRX185-90F	1.85	3.7	12.6	40	72/90	2.1	0.08	0.19
FRX250-90F	2.5	5	15.6	40	72/90	2.5	0.05	0.13
FRX300-90F	3	6	19.8	40	72/90	2.8	0.04	0.1
FRX375-90F	3.75	7.5	24	40	72/90	3.2	0.03	0.08

FRX90V Product Dimension (mm)

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRX010-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX015-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX017-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX020-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX025-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX030-90F	1	7.4	13.0	5.1	7.6	3.1	1.1
FRX035-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX040-90F	1	7.6	13.5	5.1	7.6	3.1	1.1
FRX050-90F	1	7.9	13.7	5.1	7.6	3.1	1.1
FRX055-90F	1	9.7	14.0	5.1	7.6	3.1	1.1
FRX065-90F	1	9.7	14.5	5.1	7.6	3.1	1.1
FRX075-90F	1	10.4	15.2	5.1	7.6	3.1	1.1
FRX090-90F	1	11.7	15.8	5.1	7.6	3.1	1.1
FRX110-90F	2	13.0	18.0	5.1	7.6	3.1	1.4
FRX135-90F	2	14.5	19.6	5.1	7.6	3.1	1.4
FRX160-90F	2	16.3	21.3	5.1	7.6	3.1	1.4
FRX185-90F	2	17.8	22.9	5.1	7.6	3.1	1.4
FRX250-90F	2	21.3	26.4	10.2	7.6	3.1	1.4
FRX300-90F	2	24.9	30.0	10.2	7.6	3.1	1.4
FRX375-90F	2	28.5	33.5	10.2	7.6	3.1	1.4

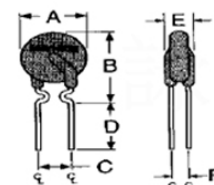


Fig. 1
Lead Size : 24AWG
ø 0.51 mm Diameter

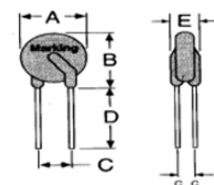


Fig. 2
Lead Size : 20AWG
ø 0.81 mm Diameter

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PPTC-DIP

FRG Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
	IH, A	IT, A	at 5xIH, s	IMAX, A	VMAX, VDC	Pd, W	RMIN Ohms	R1MAX Ohms
FRG250-16F	2.5	4.7	5	100	16	1	0.022	0.053
FRG300-16F	3	5.1	2	100	16	2.3	0.034	0.105
FRG400-16F	4	6.8	3.5	100	16	2.4	0.02	0.063
FRG500-16F	5	8.5	3.6	100	16	2.6	0.014	0.044
FRG600-16F	6	10.2	5.8	100	16	2.8	0.009	0.033
FRG700-16F	7	11.9	8	100	16	3	0.006	0.021
FRG800-16F	8	13.6	9	100	16	3	0.005	0.018
FRG900-16F	9	15.3	12	100	16	3.3	0.004	0.015
FRG1000-16F	10	17	12.5	100	16	3.3	0.003	0.012
FRG1100-16F	11	18.7	13.5	100	16	3.7	0.003	0.01
FRG1200-16F	12	20.4	16	100	16	4.2	0.002	0.009
FRG1400-16F	14	23.8	20	100	16	4.6	0.002	0.008

FRG Product Dimension (mm)

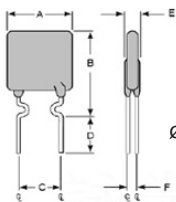


Fig. 1
Lead Size : 24AWG
ø 0.51 mm Diameter

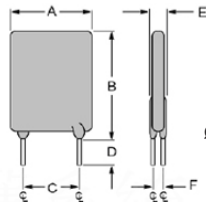


Fig. 2
Lead Size : 20AWG
ø 0.81 mm Diameter

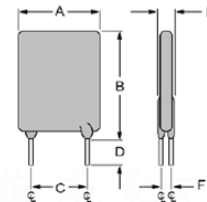


Fig. 3
Lead Size : 18AWG
ø 1.0 mm Diameter

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRG250-16F	1	8.9	12.8	5.1	7.6	3.0	1.2
FRG300-16F	2	7.1	11.0	5.1	7.6	3.0	1.2
FRG400-16F	2	8.9	12.8	5.1	7.6	3.0	1.2
FRG500-16F	2	10.4	14.3	5.1	7.6	3.0	1.2
FRG600-16F	2	10.7	17.1	5.1	7.6	3.0	1.2
FRG700-16F	2	11.2	19.7	5.1	7.6	3.0	1.2
FRG800-16F	2	12.7	20.9	5.1	7.6	3.0	1.2
FRG900-16F	2	14.0	21.7	5.1	7.6	3.0	1.2
FRG1000-16F	2	16.5	24.1	5.1	7.6	3.0	1.2
FRG1100-16F	2	17.5	26.0	5.1	7.6	3.0	1.2
FRG1200-16F	3	17.5	28.0	10.2	7.6	3.6	1.4
FRG1400-16F	3	27.9	27.9	10.2	7.6	3.6	1.4

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PPTC-DIP

FHT Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
	IH, A	IT, A	at 5xIH, s	IMAX, A	VMAX, VDC	Pd, W	RMIN	R1MAX
							Ohms	Ohms
FHT050-30F	0.5	0.9	2.5	40	30	0.9	0.48	1.1
FHT070-30F	0.7	1.4	3.2	40	30	1.4	0.3	0.8
FHT100-30F	1	1.8	5.2	40	30	1.4	0.18	0.43
FHT200-16F	2	3.8	3	100	16	1.4	0.045	0.11
FHT300-16F	3	6	5	100	16	3	0.033	0.079
FHT400-16F	4	7	5	100	16	3.3	0.024	0.06
FHT450-16F	4.5	7.8	3	100	16	3.6	0.022	0.054
FHT550-16F	5.5	10	6	100	16	3.5	0.015	0.037
FHT600-16F	6	10.8	5	100	16	4.1	0.013	0.032
FHT650-16F	6.5	12	5.5	100	16	4.3	0.011	0.026
FHT700-16F	7	13	7	100	16	4	0.01	0.025
FHT750-16F	7.5	13.1	7	100	16	4.5	0.0094	0.022
FHT800-16F	8	15	8	100	16	4.2	0.008	0.02
FHT900-16F	9	16.5	10	100	16	5	0.0074	0.017
FHT1000-16F	10	18.5	9	100	16	5.3	0.0062	0.015
FHT1100-16F	11	20	11	100	16	5.5	0.0055	0.013
FHT1300-16F	13	24	13	100	16	6.9	0.0041	0.01
FHT1400-16F	14	27	13	100	16	6.9	0.003	0.009
FHT1500-16F	15	28	20	100	16	7	0.0032	0.0092

FHT Product Dimension (mm)

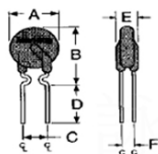


Fig. 1

Lead Size : 24AWG
ø 0.51 mm Diameter

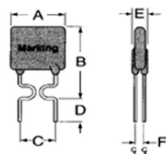


Fig. 2

Lead Size : 24AWG
ø 0.51 mm Diameter

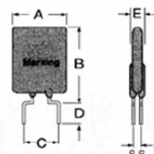


Fig. 3

Lead Size : 20AWG
ø 0.81 mm Diameter

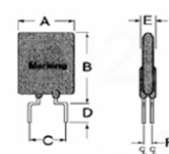


Fig. 4

Lead Size : 18AWG
ø 1.0 mm Diameter

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FHT050-30F	1	7.4	12.7	5.1	7.6	3.0	1.2
FHT070-30F	2	6.9	10.8	5.1	7.6	3.0	1.2
FHT100-30F	1	9.7	13.6	5.1	7.6	3.0	1.2
FHT200-16F	1	9.4	14.4	5.1	7.6	3.0	1.2
FHT300-16F	3	8.8	13.8	5.1	7.6	3.0	1.2
FHT400-16F	3	10.0	15.0	5.1	7.6	3.0	1.2
FHT450-16F	3	10.4	15.6	5.1	7.6	3.0	1.2
FHT550-16F	3	11.2	18.9	5.1	7.6	3.0	1.2
FHT600-16F	3	11.2	21.0	5.1	7.6	3.0	1.2
FHT650-16F	3	12.7	22.2	5.1	7.6	3.0	1.2
FHT700-16F	3	14.0	21.9	5.1	7.6	3.0	1.2
FHT750-16F	3	14.0	23.5	5.1	7.6	3.0	1.2
FHT800-16F	3	16.5	22.5	5.1	7.6	3.0	1.2
FHT900-16F	3	16.5	25.7	5.1	7.6	3.0	1.2
FHT1000-16F	3	17.5	26.5	10.2	7.6	3.0	1.2
FHT1100-16F	3	21.0	26.1	10.2	7.6	3.0	1.2
FHT1300-16F	4	23.5	28.7	10.2	7.6	3.6	1.4
FHT1400-16F	4	23.5	28.7	10.2	7.6	3.6	1.4
FHT1500-16F	4	23.5	28.7	10.2	7.6	3.6	1.4

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

PPTC-DIP

FHE Series

Part Number	Hold Current IH, A	Trip Current IT, A	Max. Time to trip at 5xIH, s	Max. Current IMAX, A	Rated Voltage VMAX, VDC	Typ. Power Pd, W	Resistance	
							RMIN Ohms	R1MAX Ohms
FHE050-32F	0.5	1	3	100	32	0.9	0.35	1.1
FHE070-32F	0.7	1.4	3.2	100	32	1.4	0.23	0.8
FHE100-32F	1	1.9	6.2	100	32	1.4	0.15	0.43
FHE200-32F	2	4	5.5	100	32	2.2	0.065	0.25
FHE300-32F	3	6	5	100	32	3.2	0.035	0.11
FHE500-32F	5	10	9	100	32	5.3	0.015	0.04
FHE750-32F	7.5	15	13	100	32	6.5	0.0074	0.023
FHE1000-32F	10	20	15	100	32	7	0.006	0.016

FHE Product Dimension (mm)

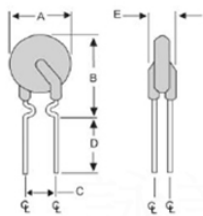


Fig. 1

Lead Size : 24AWG
ø 0.51 mm Diameter

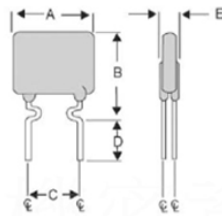


Fig. 2

Lead Size : 24AWG
ø 0.51 mm Diameter

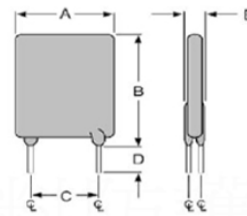


Fig. 3

Lead Size : 20AWG
ø 0.81 mm Diameter

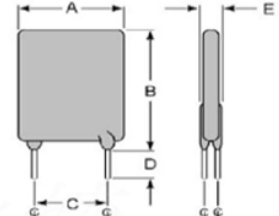


Fig. 4

Lead Size : 18AWG
ø 1.0 mm Diameter

Part Number	Fig	A	B	C	D	E
		Max.	Max.	Typ.	Min.	Max.
FHE050-32F	1	7.4	12.7	5.1	7.6	3.3
FHE070-32F	2	6.9	10.8	5.1	7.6	3.0
FHE100-32F	1	9.7	13.6	5.1	7.6	3.0
FHE200-32F	3	9.5	13.5	5.1	7.6	3.0
FHE300-32F	3	10.2	15.5	5.1	7.6	3.8
FHE500-32F	3	14.0	24.1	5.1	7.6	3.8
FHE750-32F	3	21.1	24.9	10.2	7.6	3.8
FHE1000-32F	4	23.5	27.9	10.2	7.6	4.0

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PPTC-DIP

FRT Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
	I _H , A	I _T , A	at 5xI _H , s	I _{MAX} , A	V _{MAX} , VDC	P _d , W	R _{MIN} Ohms	R _{1MAX} Ohms
FRT050-33F	0.5	1	5	40	36	0.67	0.14	0.448
FRT075-33F	0.75	1.5	4	40	36	0.71	0.115	0.368
FRT090-33F	0.9	1.8	3.5	40	36	0.74	0.09	0.288
FRT120-33F	1.2	2.3	3.5	40	36	0.78	0.074	0.18
FRT135-33F	1.35	2.5	4.5	40	36	0.84	0.059	0.143
FRT160-33F	1.6	2.75	4.5	40	36	0.86	0.041	0.131
FRT190-33F	1.9	3	3.5	40	36	0.9	0.045	0.092
FRT220-33F	2.2	3.5	6.5	40	36	0.95	0.025	0.08
FRT250-33F	2.5	4	8	40	36	0.99	0.02	0.064

FRT Product Dimension (mm)

Part Number	A	B	C	D	E	F
	Max.	Max.	Typ.	Min.	Max.	Typ.
FRT050-33F	7.4	12.2	5.1	7.6	3.0	1.1
FRT075-33F	7.4	12.2	5.1	7.6	3.0	1.1
FRT090-33F	7.4	12.2	5.1	7.6	3.0	1.1
FRT120-33F	7.4	12.2	5.1	7.6	3.0	1.1
FRT135-33F	7.4	14.2	5.1	7.6	3.0	1.1
FRT160-33F	7.4	14.0	5.1	7.6	3.0	1.1
FRT190-33F	9.0	13.5	5.1	7.6	3.0	1.1
FRT220-33F	10.0	17.0	5.1	7.6	3.0	1.1
FRT250-33F	10.0	19.5	5.1	7.6	3.0	1.1

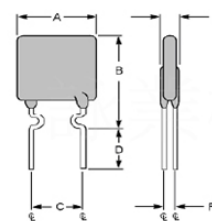


Fig. 1
Lead Size : 24AWG
ø 0.51 mm Diameter

PPTC-DIP

FRU Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
	IH, A	IT, A	at 5xIH, s	IMAX, A	VMAX, VDC	Pd, W	RMIN	R1MAX
	Ohms	Ohms						
FRU090-30F	0.9	1.8	5.9	100	30	0.6	0.07	0.22
FRU110-30F	1.1	2.2	6.6	100	30	0.7	0.05	0.17
FRU135-30F	1.35	2.7	7.3	100	30	0.8	0.04	0.13
FRU160-30F	1.6	3.2	8	100	30	0.9	0.03	0.11
FRU185-30F	1.85	3.7	8.7	100	30	1	0.03	0.09
FRU250-30F	2.5	5	10.3	100	30	1.2	0.02	0.07
FRU300-30F	3	6	10.8	100	30	2	0.02	0.08
FRU400-30F	4	8	12.7	100	30	2.5	0.01	0.05
FRU500-30F	5	10	14.5	100	30	3	0.01	0.05
FRU600-30F	6	12	16	100	30	3.5	0.005	0.04
FRU700-30F	7	14	17.5	100	30	3.8	0.005	0.03
FRU800-30F	8	16	18.8	100	30	4	0.005	0.02
FRU900-30F	9	18	20	100	30	4.2	0.005	0.02

FRU Product Dimension (mm)

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRU090-30F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRU110-30F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRU135-30F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRU160-30F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRU185-30F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRU250-30F	1	7.4	13.0	5.1	7.6	3.1	1.1
FRU300-30F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRU400-30F	1	7.6	13.5	5.1	7.6	3.1	1.1
FRU500-30F	1	7.9	13.7	5.1	7.6	3.1	1.1
FRU600-30F	1	9.7	14.0	5.1	7.6	3.1	1.1
FRU700-30F	1	9.7	14.5	5.1	7.6	3.1	1.1
FRU800-30F	1	10.4	15.2	5.1	7.6	3.1	1.1
FRU900-30F	1	11.7	15.8	5.1	7.6	3.1	1.1

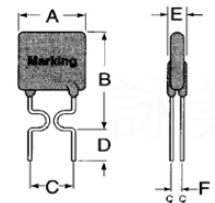


Fig. 1
Lead Size : 24AWG
ø 0.51 mm Diameter

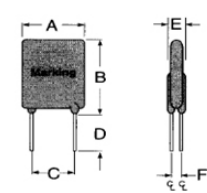


Fig. 2
Lead Size : 20AWG
ø 0.81 mm Diameter

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PPTC-DIP

FRV Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Max. Int. Voltage	Typ. Power	Resistance	
	IH, A	IT, A	at 5xIH, S	IMAX, A	VMAX, VAC/DC	VI-MAX, VAC/DC	Pd, W	RMIN	R1MAX
								Ohms	Ohms
FRV005-240F	0.05	0.12	15	1	240	265	0.7	18.5	65
FRV008-240F	0.08	0.19	15	1.2	240	265	0.8	7.4	26
FRV012-240F	0.12	0.3	15	1.2	240	265	1	3	12
FRV016-240F	0.16	0.37	15	2	240	265	1.4	2.5	7.8
FRV025-240F	0.25	0.56	18.5	3.5	240	265	1.5	1.3	3.8
FRV033-240F	0.33	0.74	21	4.5	240	265	1.7	0.83	2.6
FRV040-240F	0.4	0.9	24	5.5	240	265	2	0.6	1.9
FRV055-240F	0.55	1.25	26	7	240	265	3.4	0.45	1.45
FRV075-240F	0.75	1.5	18	7.5	240	265	2.6	0.32	0.84
FRV100-240F	1	2	21	10	240	265	2.9	0.22	0.58
FRV125-240F	1.25	2.5	23	12.5	240	265	3.3	0.17	0.44
FRV150-240F	1.5	3	23	15	240	265	3.7	0.12	0.32
FRV200-240F	2	4	28	20	240	265	4.5	0.09	0.22

FHV Product Dimension (mm)

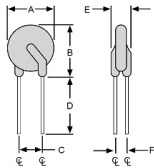


Fig. 1
Lead Size : 24AWG
ø 0.51 mm Diameter

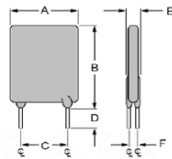


Fig. 2
Lead Size : 22AWG
ø 0.65 mm Diameter

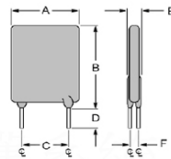


Fig. 3
Lead Size : 20AWG
ø 0.81 mm Diameter

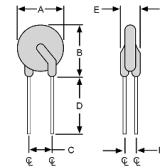


Fig. 4
Lead Size : 20AWG
ø 0.81 mm Diameter

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRV005-240F	1	8.3	10.7	5.1	7.6	3.8	1.6
FRV008-240F	1	8.3	10.7	5.1	7.6	3.8	1.6
FRV012-240F	1	8.3	10.7	5.1	7.6	3.8	1.6
FRV016-240F	1	9.9	12.5	5.1	7.6	3.8	1.6
FRV025-240F	2	9.6	17.4	5.1	7.6	3.8	1.8
FRV033-240F	2	11.4	16.5	5.1	7.6	3.8	1.8
FRV040-240F	2	11.5	19.5	5.1	7.6	3.8	1.8
FRV055-240F	3	14.0	21.7	5.1	7.6	4.1	1.9
FRV075-240F	3	11.5	23.4	5.1	7.6	4.8	1.9
FRV100-240F	4	18.7	24.4	5.1	7.6	5.1	1.9
FRV125-240F	4	21.2	27.4	10.2	7.6	5.3	1.9
FRV150-240F	4	23.4	30.9	10.2	7.6	5.3	1.9
FRV200-240F	3	24.9	33.8	10.2	7.6	6.1	1.9

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PPTC-DIP

FRVL Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Max. Int. Voltage	Typ. Power	Resistance	
	IH, A	IT, A	at 5xIH, S	IMAX, A	VMAX, VAC/DC	VI-MAX, VAC/DC	Pd, W	RMIN	R1MAX
								Ohms	Ohms
FRVL010-120F	0.1	0.2	10	2	120	135	0.84	3	7.5
FRVL017-120F	0.17	0.34	10	2	120	135	0.84	2	7
FRVL020-120F	0.2	0.4	9	2	120	135	1.08	1.83	4.4
FRVL025-120F	0.25	0.5	7.5	3	120	135	1.08	1.25	3
FRVL030-120F	0.3	0.6	8.5	3	120	135	1.44	0.88	2.1
FRVL040-120F	0.4	0.8	6.5	3	120	135	1.44	0.55	1.29
FRVL050-120F	0.5	1	6	3	120	135	1.56	0.5	1.17
FRVL065-120F	0.65	1.3	5.7	5	120	135	1.68	0.31	0.72
FRVL070-120F	0.75	1.5	6.3	5	120	135	1.8	0.25	0.6
FRVL075-120F	0.75	1.5	15	7.5	120	135	2.64	0.25	0.69
FRVL090-120F	0.9	1.8	7.2	5	120	135	1.8	0.2	0.47
FRVL100-120F	1	2	15	10	120	135	2.64	0.18	0.47
FRVL110-120F	1.1	2.2	8.2	8	120	135	2.28	0.15	0.38
FRVL125-120F	1.25	2.5	20	12.5	120	135	2.88	0.11	0.33
FRVL130-120F	1.35	2.7	9.6	10	120	135	2.64	0.12	0.3
FRVL135-120F	1.35	2.7	20	13.5	120	135	3.12	0.11	0.3
FRVL160-120F	1.6	3.2	11.4	12	120	135	3.12	0.09	0.22
FRVL185-120F	1.85	3.7	12.6	12	120	135	3.36	0.08	0.19
FRVL200-120F	2	4.2	36	20	120	135	4.32	0.08	0.21
FRVL250-120F	2.5	5	15.6	15	120	135	4.44	0.05	0.13
FRVL300-120F	3	6	19.8	17	120	135	4.56	0.04	0.1
FRVL375-120F	3.75	7.5	24	20	120	135	4.8	0.03	0.08

FRVL Product Dimension (mm)

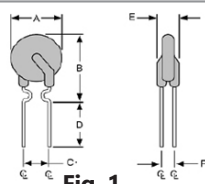


Fig. 1

Lead Size : 24AWG
ø 0.51 mm Diameter

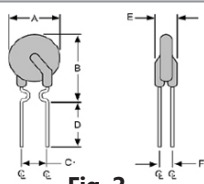


Fig. 2

Lead Size : 22AWG
ø 0.65 mm Diameter

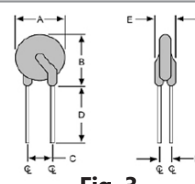


Fig. 3

Lead Size : 20AWG
ø 0.81 mm Diameter

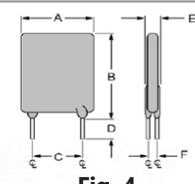


Fig. 4

Lead Size : 20AWG
ø 0.81 mm Diameter

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRVL010-120F	1	7.9	13.0	5.1	7.6	3.8	2.2
FRVL017-120F	1	7.9	13.0	5.1	7.6	3.8	2.2
FRVL020-120F	2	7.9	13.0	5.1	7.6	3.8	2.2
FRVL025-120F	2	7.9	13.0	5.1	7.6	3.8	2.2
FRVL030-120F	2	7.9	13.0	5.1	7.6	3.8	2.2
FRVL040-120F	2	8.2	14.2	5.1	7.6	3.8	2.2
FRVL050-120F	2	9.2	14.9	5.1	7.6	3.8	2.2
FRVL065-120F	2	9.7	14.9	5.1	7.6	3.8	2.2
FRVL070-120F	2	10.6	15.5	5.1	7.6	3.8	2.2

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PPTC-DIP

FRVL Series

FRVL Product Dimension (mm)

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRVL075-120F	4	10.9	17.0	5.1	7.6	4.1	2.2
FRVL090-120F	2	11.9	15.9	5.1	7.6	3.8	2.2
FRVL100-120F	4	11.5	20.1	5.1	7.6	4.1	2.2
FRVL110-120F	3	13.3	18.3	5.1	7.6	4.1	2.2
FRVL125-120F	4	14.0	21.7	5.1	7.6	4.1	2.2
FRVL130-120F	3	15.5	20.6	5.1	7.6	4.1	2.2
FRVL135-120F	4	16.3	21.7	5.1	7.6	4.1	2.2
FRVL160-120F	3	17.5	22.5	5.1	7.6	4.1	2.2
FRVL185-120F	3	19.9	24.9	5.1	7.6	4.1	2.2
FRVL200-120F	4	23.5	27.9	10.2	7.6	4.1	2.2
FRVL250-120F	3	22.5	27.5	10.2	7.6	4.1	2.2
FRVL300-120F	3	25.5	30.0	10.2	7.6	4.1	2.2
FRVL375-120F	3	29.5	34.0	10.2	7.6	4.1	2.2

FUSB Series

Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Max. Int. Voltage	Typ. Power	Resistance	
								RMIN	R1MAX
								IH, A	IT, A
FUSB075F	0.75	1.3	8	0.4	40	16	0.3	0.08	0.23
FUSB090F	0.9	1.8	8	1.2	40	16/30	0.6	0.07	0.18
FUSB110F	1.1	2.2	8	2.3	40	16/30	0.7	0.05	0.14
FUSB120F	1.2	2	8	0.7	40	16	0.6	0.04	0.14
FUSB135F	1.35	2.7	8	4.5	40	16/30	0.8	0.04	0.12
FUSB155F	1.55	2.7	7.8	2.2	40	16	0.7	0.03	0.12
FUSB160F	1.6	3.2	8	9	40	16/30	0.9	0.03	0.11
FUSB185F	1.85	3.7	8	10	40	16/30	1	0.03	0.09
FUSB250F	2.5	5	8	40	40	16/30	1.2	0.02	0.07

FUSB Product Dimension (mm)

Part Number	Fig	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FUSB075F	2	6.9	11.4	5.1	7.6	3.0	0.8
FUSB090F	1	7.4	12.2	5.1	7.6	3.0	0.8
FUSB110F	1	7.4	14.2	5.1	7.6	3.0	0.8
FUSB120F	2	6.9	11.7	5.1	7.6	3.0	0.8
FUSB135F	1	8.9	13.5	5.1	7.6	3.0	0.8
FUSB155F	2	6.9	11.7	5.1	7.6	3.0	0.8
FUSB160F	1	8.9	15.2	5.1	7.6	3.0	0.8
FUSB185F	1	10.2	15.7	5.1	7.6	3.0	0.8
FUSB250F	1	11.4	18.3	5.1	7.6	3.0	0.8

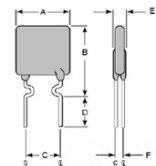


Fig. 1
Lead Size :
24AWG
ø 0.51 mm
Diameter

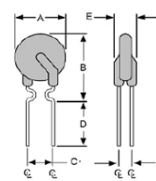


Fig. 2
Lead Size :
24AWG
ø 0.51 mm
Diameter

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Automotive TVS

SM8S Series (6600W) DO-218AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SM8S16A	SM8S16CA	SM8S16A	SM8S16CA	16	10	17.8	19.7	5	26	254
SM8S17A	SM8S17CA	SM8S17A	SM8S17CA	17	10	18.9	20.9	5	27.6	239
SM8S18A	SM8S18CA	SM8S18A	SM8S18CA	18	10	20	22.1	5	29.2	226
SM8S20A	SM8S20CA	SM8S20A	SM8S20CA	20	10	22.2	24.5	5	32.4	204
SM8S22A	SM8S22CA	SM8S22A	SM8S22CA	22	10	24.4	26.9	5	35.5	186
SM8S24A	SM8S24CA	SM8S24A	SM8S24CA	24	10	26.7	29.5	5	38.9	170
SM8S26A	SM8S26CA	SM8S26A	SM8S26CA	26	10	28.9	31.9	5	42.1	157
SM8S28A	SM8S28CA	SM8S28A	SM8S28CA	28	10	31.1	34.4	5	45.4	145
SM8S30A	SM8S30CA	SM8S30A	SM8S30CA	30	10	33.3	36.8	5	48.4	136
SM8S33A	SM8S33CA	SM8S33A	SM8S33CA	33	10	36.7	40.6	5	53.3	124
SM8S36A	SM8S36CA	SM8S36A	SM8S36CA	36	10	40	44.2	5	58.1	114
SM8S40A	SM8S40CA	SM8S40A	SM8S40CA	40	10	44.4	49.1	5	64.5	102
SM8S43A	SM8S43CA	SM8S43A	SM8S43CA	43	10	47.8	52.8	5	69.4	95
SM8S60A	SM8S60CA	SM8S60A	SM8S60CA	60	10	66.7	73.7	5	96.8	68.1
SM8S85A	SM8S85CA	SM8S85A	SM8S85CA	85	10	87	93	5	137	48

SMF Series (200W) DO-218AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMF5.0A-AT	SMF5.0CA-AT	5.0AAT	5.0CAAT	5	400	6.4	7	10	9.2	21.74
SMF6.0A-AT	SMF6.0CA-AT	6.0AAT	6.0CAAT	6	400	6.67	7.37	10	10.3	19.42
SMF6.5A-AT	SMF6.5CA-AT	6.5AAT	6.5CAAT	6.5	250	7.22	7.98	10	11.2	17.86
SMF7.0A-AT	SMF7.0CA-AT	7.0AAT	7.0CAAT	7	100	7.78	8.6	10	12	16.67
SMF7.5A-AT	SMF7.5CA-AT	7.5AAT	7.5CAAT	7.5	50	8.33	9.21	1	12.9	15.51
SMF8.0A-AT	SMF8.0CA-AT	8.0AAT	8.0CAAT	8	25	8.89	9.83	1	13.6	14.71
SMF8.5A-AT	SMF8.5CA-AT	8.5AAT	8.5CAAT	8.5	10	9.44	10.4	1	14.4	13.89
SMF9.0A-AT	SMF9.0CA-AT	9.0AAT	9.0CAAT	9	5	10	11.1	1	15.4	12.99
SMF10A-AT	SMF10CA-AT	10AAT	10CAAT	10	2.5	11.1	12.3	1	17	11.77
SMF11A-AT	SMF11CA-AT	11AAT	11CAAT	11	2.5	12.2	13.5	1	18.2	10.99
SMF12A-AT	SMF12CA-AT	12AAT	12CAAT	12	2.5	13.3	14.7	1	19.9	10.06
SMF13A-AT	SMF13CA-AT	13AAT	13CAAT	13	1	14.4	15.9	1	21.5	9.31
SMF14A-AT	SMF14CA-AT	14AAT	14CAAT	14	1	15.6	17.2	1	23.2	8.63
SMF15A-AT	SMF15CA-AT	15AAT	15CAAT	15	1	16.7	18.5	1	24.4	8.2
SMF16A-AT	SMF16CA-AT	16AAT	16CAAT	16	1	17.8	19.7	1	26	7.7
SMF17A-AT	SMF17CA-AT	17AAT	17CAAT	17	1	18.9	20.9	1	27.6	7.25
SMF18A-AT	SMF18CA-AT	18AAT	18CAAT	18	1	20	22.1	1	29.2	6.85
SMF20A-AT	SMF20CA-AT	20AAT	20CAAT	20	1	22.2	24.5	1	32.4	6.18
SMF22A-AT	SMF22CA-AT	22AAT	22CAAT	22	1	24.4	26.9	1	35.5	5.64
SMF24A-AT	SMF24CA-AT	24AAT	24CAAT	24	1	26.7	29.5	1	38.9	5.15
SMF26A-AT	SMF26CA-AT	26AAT	26CAAT	26	1	28.9	31.9	1	42.1	4.76
SMF28A-AT	SMF28CA-AT	28AAT	28CAAT	28	1	31.1	34.4	1	45.4	4.41

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Automotive TVS

SMF Series (200W) DO-218AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMF30A-AT	SMF30CA-AT	30AAT	30CAAT	30	1	33.3	36.8	1	48.4	4.14
SMF33A-AT	SMF33CA-AT	33AAT	33CAAT	33	1	36.7	40.6	1	53.3	3.76
SMF36A-AT	SMF36CA-AT	36AAT	36CAAT	36	1	40	44.2	1	58.1	3.45
SMF40A-AT	SMF40CA-AT	40AAT	40CAAT	40	1	44.4	49.1	1	64.5	3.11
SMF43A-AT	SMF43CA-AT	43AAT	43CAAT	43	1	47.8	52.8	1	69.4	2.89
SMF45A-AT	SMF45CA-AT	45AAT	45CAAT	45	1	50	55.3	1	72.7	2.76
SMF48A-AT	SMF48CA-AT	48AAT	48CAAT	48	1	53.3	58.9	1	77.4	2.59
SMF51A-AT	SMF51CA-AT	51AAT	51CAAT	51	1	56.7	62.7	1	82.4	2.43
SMF54A-AT	SMF54CA-AT	54AAT	54CAAT	54	1	60	66.3	1	87.1	2.3
SMF58A-AT	SMF58CA-AT	58AAT	58CAAT	58	1	64.4	71.2	1	93.6	2.14
SMF60A-AT	SMF60CA-AT	60AAT	60CAAT	60	1	66.7	73.7	1	96.8	2.07
SMF64A-AT	SMF64CA-AT	64AAT	64CAAT	64	1	71.1	78.6	1	103	1.95
SMF70A-AT	SMF70CA-AT	70AAT	70CAAT	70	1	77.8	86	1	113	1.77
SMF75A-AT	SMF75CA-AT	75AAT	75CAAT	75	1	83.3	92.1	1	121	1.66
SMF78A-AT	SMF78CA-AT	78AAT	78CAAT	78	1	86.7	95.8	1	126	1.59
SMF85A-AT	SMF85CA-AT	85AAT	85CAAT	85	1	94.4	104	1	137	1.46
SMF90A-AT	SMF90CA-AT	90AAT	90CAAT	90	1	100	111	1	146	1.37
SMF100A-AT	SMF100CA-AT	100AAT	100CAAT	100	1	111	123	1	162	1.24
SMF110A-AT	SMF110CA-AT	110AAT	110CAAT	110	1	122	135	1	177	1.13
SMF120A-AT	SMF120CA-AT	120AAT	120CAAT	120	1	133	147	1	193	1.04
SMF130A-AT	SMF130CA-AT	130AAT	130CAAT	130	1	144	159	1	209	0.96
SMF150A-AT	SMF150CA-AT	150AAT	150CAAT	150	1	167	185	1	243	0.83
SMF160A-AT	SMF160CA-AT	160AAT	160CAAT	160	1	178	197	1	259	0.78
SMF170A-AT	SMF170CA-AT	170AAT	170CAAT	170	1	189	209	1	275	0.73
SMF180A-AT	SMF180CA-AT	180AAT	180CAAT	180	1	201.1	222	1	292	0.69
SMF190A-AT	SMF190CA-AT	190AAT	180CAAT	190	1	211	243	1	308	0.65

SMAJ-TA Series (400W) DO-214AC PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMAJ5.0A-AT	SMAJ5.0CA-AT	SMAJ5.0A-AT	SMAJ5.0CA-AT	5	800	6.4	7	10	9.2	43.48
SMAJ6.0A-AT	SMAJ6.0CA-AT	SMAJ6.0A-AT	SMAJ6.0CA-AT	6	800	6.67	7.37	10	10.3	38.84
SMAJ6.5A-AT	SMAJ6.5CA-AT	SMAJ6.5A-AT	SMAJ6.5CA-AT	6.5	500	7.22	7.98	10	11.2	35.72
SMAJ7.0A-AT	SMAJ7.0CA-AT	SMAJ7.0A-AT	SMAJ7.0CA-AT	7	200	7.78	8.6	10	12	33.34
SMAJ7.5A-AT	SMAJ7.5CA-AT	SMAJ7.5A-AT	SMAJ7.5CA-AT	7.5	100	8.33	9.21	1	12.9	31.01
SMAJ8.0A-AT	SMAJ8.0CA-AT	SMAJ8.0A-AT	SMAJ8.0CA-AT	8	50	8.89	9.83	1	13.6	29.42
SMAJ8.5A-AT	SMAJ8.5CA-AT	SMAJ8.5A-AT	SMAJ8.5CA-AT	8.5	20	9.44	10.4	1	14.4	27.78
SMAJ9.0A-AT	SMAJ9.0CA-AT	SMAJ9.0A-AT	SMAJ9.0CA-AT	9	10	10	11.1	1	15.4	25.98
SMAJ10A-AT	SMAJ10CA-AT	SMAJ10A-AT	SMAJ10CA-AT	10	5	11.1	12.3	1	17	23.53
SMAJ11A-AT	SMAJ11CA-AT	SMAJ11A-AT	SMAJ11CA-AT	11	1	12.2	13.5	1	18.2	21.98
SMAJ12A-AT	SMAJ12CA-AT	SMAJ12A-AT	SMAJ12CA-AT	12	1	13.3	14.7	1	19.9	20.11

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Automotive TVS

SMAJ-TA Series (400W) DO-214AC PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMAJ13A-AT	SMAJ13CA-AT	SMAJ13A-AT	SMAJ13CA-AT	13	1	14.4	15.9	1	21.5	18.61
SMAJ14A-AT	SMAJ14CA-AT	SMAJ14A-AT	SMAJ14CA-AT	14	1	15.6	17.2	1	23.2	17.25
SMAJ15A-AT	SMAJ15CA-AT	SMAJ15A-AT	SMAJ15CA-AT	15	1	16.7	18.5	1	24.4	16.4
SMAJ16A-AT	SMAJ16CA-AT	SMAJ16A-AT	SMAJ16CA-AT	16	1	17.8	19.7	1	26	15.39
SMAJ17A-AT	SMAJ17CA-AT	SMAJ17A-AT	SMAJ17CA-AT	17	1	18.9	20.9	1	27.6	14.5
SMAJ18A-AT	SMAJ18CA-AT	SMAJ18A-AT	SMAJ18CA-AT	18	1	20	22.1	1	29.2	13.7
SMAJ20A-AT	SMAJ20CA-AT	SMAJ20A-AT	SMAJ20CA-AT	20	1	22.2	24.5	1	32.4	12.35
SMAJ22A-AT	SMAJ22CA-AT	SMAJ22A-AT	SMAJ22CA-AT	22	1	24.4	26.9	1	35.5	11.27
SMAJ24A-AT	SMAJ24CA-AT	SMAJ24A-AT	SMAJ24CA-AT	24	1	26.7	29.5	1	38.9	10.29
SMAJ26A-AT	SMAJ26CA-AT	SMAJ26A-AT	SMAJ26CA-AT	26	1	28.9	31.9	1	42.1	9.51
SMAJ28A-AT	SMAJ28CA-AT	SMAJ28A-AT	SMAJ28CA-AT	28	1	31.1	34.4	1	45.4	8.82
SMAJ30A-AT	SMAJ30CA-AT	SMAJ30A-AT	SMAJ30CA-AT	30	1	33.3	36.8	1	48.4	8.27
SMAJ33A-AT	SMAJ33CA-AT	SMAJ33A-AT	SMAJ33CA-AT	33	1	36.7	40.6	1	53.3	7.51
SMAJ36A-AT	SMAJ36CA-AT	SMAJ36A-AT	SMAJ36CA-AT	36	1	40	44.2	1	58.1	6.89
SMAJ40A-AT	SMAJ40CA-AT	SMAJ40A-AT	SMAJ40CA-AT	40	1	44.4	49.1	1	64.5	6.21
SMAJ43A-AT	SMAJ43CA-AT	SMAJ43A-AT	SMAJ43CA-AT	43	1	47.8	52.8	1	69.4	5.77
SMAJ45A-AT	SMAJ45CA-AT	SMAJ45A-AT	SMAJ45CA-AT	45	1	50	55.3	1	72.7	5.51
SMAJ48A-AT	SMAJ48CA-AT	SMAJ48A-AT	SMAJ48CA-AT	48	1	53.3	58.9	1	77.4	5.17
SMAJ51A-AT	SMAJ51CA-AT	SMAJ51A-AT	SMAJ51CA-AT	51	1	56.7	62.7	1	82.4	4.86
SMAJ54A-AT	SMAJ54CA-AT	SMAJ54A-AT	SMAJ54CA-AT	54	1	60	66.3	1	87.1	4.6
SMAJ58A-AT	SMAJ58CA-AT	SMAJ58A-AT	SMAJ58CA-AT	58	1	64.4	71.2	1	93.6	4.28
SMAJ60A-AT	SMAJ60CA-AT	SMAJ60A-AT	SMAJ60CA-AT	60	1	66.7	73.7	1	96.8	4.14
SMAJ64A-AT	SMAJ64CA-AT	SMAJ64A-AT	SMAJ64CA-AT	64	1	71.1	78.6	1	103	3.89
SMAJ70A-AT	SMAJ70CA-AT	SMAJ70A-AT	SMAJ70CA-AT	70	1	77.8	86	1	113	3.54
SMAJ75A-AT	SMAJ75CA-AT	SMAJ75A-AT	SMAJ75CA-AT	75	1	83.3	92.1	1	121	3.31
SMAJ78A-AT	SMAJ78CA-AT	SMAJ78A-AT	SMAJ78CA-AT	78	1	86.7	95.8	1	126	3.18
SMAJ85A-AT	SMAJ85CA-AT	SMAJ85A-AT	SMAJ85CA-AT	85	1	94.4	104	1	137	2.92
SMAJ90A-AT	SMAJ90CA-AT	SMAJ90A-AT	SMAJ90CA-AT	90	1	100	111	1	146	2.74
SMAJ100A-AT	SMAJ100CA-AT	SMAJ100A-AT	SMAJ100CA-AT	100	1	111	123	1	162	2.47
SMAJ110A-AT	SMAJ110CA-AT	SMAJ110A-AT	SMAJ110CA-AT	110	1	122	135	1	177	2.26
SMAJ120A-AT	SMAJ120CA-AT	SMAJ120A-AT	SMAJ120CA-AT	120	1	133	147	1	193	2.08
SMAJ130A-AT	SMAJ130CA-AT	SMAJ130A-AT	SMAJ130CA-AT	130	1	144	159	1	209	1.92
SMAJ150A-AT	SMAJ150CA-AT	SMAJ150A-AT	SMAJ150CA-AT	150	1	167	185	1	243	1.65
SMAJ160A-AT	SMAJ160CA-AT	SMAJ160A-AT	SMAJ160CA-AT	160	1	178	197	1	259	1.55
SMAJ170A-AT	SMAJ170CA-AT	SMAJ170A-AT	SMAJ170CA-AT	170	1	189	209	1	275	1.46
SMAJ180A-AT	SMAJ180CA-AT	SMAJ180A-AT	SMAJ180CA-AT	180	1	201	222	1	292	1.37
SMAJ190A-AT	SMAJ190CA-AT	SMAJ190A-AT	SMAJ190CA-AT	190	1	209	233	1	308	1.3
SMAJ200A-AT	SMAJ200CA-AT	SMAJ200A-AT	SMAJ200CA-AT	200	1	224	247	1	324	1.24
SMAJ210A-AT	SMAJ210CA-AT	SMAJ210A-AT	SMAJ210CA-AT	210	1	237	263	1	340	1.18
SMAJ220A-AT	SMAJ220CA-AT	SMAJ220A-AT	SMAJ220CA-AT	220	1	246	272	1	356	1.13
SMAJ250A-AT	SMAJ250CA-AT	SMAJ250A-AT	SMAJ250CA-AT	250	1	279	309	1	405	0.99
SMAJ300A-AT	SMAJ300CA-AT	SMAJ300A-AT	SMAJ300CA-AT	300	1	335	371	1	486	0.83

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Automotive TVS

SMAJ-TA Series (400W) DO-214AC PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMAJ350A-AT	SMAJ350CA-AT	SMAJ350A-AT	SMAJ350CA-AT	350	1	391	432	1	567	0.71
SMAJ400A-AT	SMAJ400CA-AT	SMAJ400A-AT	SMAJ400CA-AT	400	1	447	494	1	648	0.62
SMAJ440A-AT	SMAJ440CA-AT	SMAJ440A-AT	SMAJ440CA-AT	440	1	492	543	1	713	0.57

SMBJ-TA Series (600W) DO-214AA PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMBJ3.3A	/	SMBJ3.3A	/	3.3	600	5.2	6	10	8	75
SMBJ5.0A-AT	SMBJ5.0CA-AT	SMBJ5.0A-AT	SMBJ5.0CA-AT	5	800	6.4	7	10	9.2	65.22
SMBJ6.0A-AT	SMBJ6.0CA-AT	SMBJ6.0A-AT	SMBJ6.0CA-AT	6	800	6.67	7.37	10	10.3	58.26
SMBJ6.5A-AT	SMBJ6.5CA-AT	SMBJ6.5A-AT	SMBJ6.5CA-AT	6.5	500	7.22	7.98	10	11.2	53.58
SMBJ7.0A-AT	SMBJ7.0CA-AT	SMBJ7.0A-AT	SMBJ7.0CA-AT	7	200	7.78	8.6	10	12	50
SMBJ7.5A-AT	SMBJ7.5CA-AT	SMBJ7.5A-AT	SMBJ7.5CA-AT	7.5	100	8.33	9.21	1	12.9	46.52
SMBJ8.0A-AT	SMBJ8.0CA-AT	SMBJ8.0A-AT	SMBJ8.0CA-AT	8	50	8.89	9.83	1	13.6	44.12
SMBJ8.5A-AT	SMBJ8.5CA-AT	SMBJ8.5A-AT	SMBJ8.5CA-AT	8.5	20	9.44	10.4	1	14.4	41.67
SMBJ9.0A-AT	SMBJ9.0CA-AT	SMBJ9.0A-AT	SMBJ9.0CA-AT	9	10	10	11.1	1	15.4	38.97
SMBJ10A-AT	SMBJ10CA-AT	SMBJ10A-AT	SMBJ10CA-AT	10	5	11.1	12.3	1	17	35.3
SMBJ11A-AT	SMBJ11CA-AT	SMBJ11A-AT	SMBJ11CA-AT	11	1	12.2	13.5	1	18.2	32.97
SMBJ12A-AT	SMBJ12CA-AT	SMBJ12A-AT	SMBJ12CA-AT	12	1	13.3	14.7	1	19.9	30.16
SMBJ13A-AT	SMBJ13CA-AT	SMBJ13A-AT	SMBJ13CA-AT	13	1	14.4	15.9	1	21.5	27.91
SMBJ14A-AT	SMBJ14CA-AT	SMBJ14A-AT	SMBJ14CA-AT	14	1	15.6	17.2	1	23.2	25.87
SMBJ15A-AT	SMBJ15CA-AT	SMBJ15A-AT	SMBJ15CA-AT	15	1	16.7	18.5	1	24.4	24.6
SMBJ16A-AT	SMBJ16CA-AT	SMBJ16A-AT	SMBJ16CA-AT	16	1	17.8	19.7	1	26	23.08
SMBJ17A-AT	SMBJ17CA-AT	SMBJ17A-AT	SMBJ17CA-AT	17	1	18.9	20.9	1	27.6	21.74
SMBJ18A-AT	SMBJ18CA-AT	SMBJ18A-AT	SMBJ18CA-AT	18	1	20	22.1	1	29.2	20.55
SMBJ20A-AT	SMBJ20CA-AT	SMBJ20A-AT	SMBJ20CA-AT	20	1	22.2	24.5	1	32.4	18.52
SMBJ22A-AT	SMBJ22CA-AT	SMBJ22A-AT	SMBJ22CA-AT	22	1	24.4	26.9	1	35.5	16.91
SMBJ24A-AT	SMBJ24CA-AT	SMBJ24A-AT	SMBJ24CA-AT	24	1	26.7	29.5	1	38.9	15.43
SMBJ26A-AT	SMBJ26CA-AT	SMBJ26A-AT	SMBJ26CA-AT	26	1	28.9	31.9	1	42.1	14.26
SMBJ28A-AT	SMBJ28CA-AT	SMBJ28A-AT	SMBJ28CA-AT	28	1	31.1	34.4	1	45.4	13.22
SMBJ30A-AT	SMBJ30CA-AT	SMBJ30A-AT	SMBJ30CA-AT	30	1	33.3	36.8	1	48.4	12.4
SMBJ33A-AT	SMBJ33CA-AT	SMBJ33A-AT	SMBJ33CA-AT	33	1	36.7	40.6	1	53.3	11.26
SMBJ36A-AT	SMBJ36CA-AT	SMBJ36A-AT	SMBJ36CA-AT	36	1	40	44.2	1	58.1	10.33
SMBJ40A-AT	SMBJ40CA-AT	SMBJ40A-AT	SMBJ40CA-AT	40	1	44.4	49.1	1	64.5	9.31
SMBJ43A-AT	SMBJ43CA-AT	SMBJ43A-AT	SMBJ43CA-AT	43	1	47.8	52.8	1	69.4	8.65
SMBJ45A-AT	SMBJ45CA-AT	SMBJ45A-AT	SMBJ45CA-AT	45	1	50	55.3	1	72.7	8.26
SMBJ48A-AT	SMBJ48CA-AT	SMBJ48A-AT	SMBJ48CA-AT	48	1	53.3	58.9	1	77.4	7.76
SMBJ51A-AT	SMBJ51CA-AT	SMBJ51A-AT	SMBJ51CA-AT	51	1	56.7	62.7	1	82.4	7.29
SMBJ54A-AT	SMBJ54CA-AT	SMBJ54A-AT	SMBJ54CA-AT	54	1	60	66.3	1	87.1	6.89
SMBJ58A-AT	SMBJ58CA-AT	SMBJ58A-AT	SMBJ58CA-AT	58	1	64.4	71.2	1	93.6	6.42
SMBJ60A-AT	SMBJ60CA-AT	SMBJ60A-AT	SMBJ60CA-AT	60	1	66.7	73.7	1	96.8	6.2

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

Automotive TVS

SMBJ-TA Series (600W) DO-214AA PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMBJ64A-AT	SMBJ64CA-AT	SMBJ64A-AT	SMBJ64CA-AT	64	1	71.1	78.6	1	103	5.83
SMBJ70A-AT	SMBJ70CA-AT	SMBJ70A-AT	SMBJ70CA-AT	70	1	77.8	86	1	113	5.31
SMBJ75A-AT	SMBJ75CA-AT	SMBJ75A-AT	SMBJ75CA-AT	75	1	83.3	92.1	1	121	4.96
SMBJ78A-AT	SMBJ78CA-AT	SMBJ78A-AT	SMBJ78CA-AT	78	1	86.7	95.8	1	126	4.77
SMBJ85A-AT	SMBJ85CA-AT	SMBJ85A-AT	SMBJ85CA-AT	85	1	94.4	104	1	137	4.38
SMBJ90A-AT	SMBJ90CA-AT	SMBJ90A-AT	SMBJ90CA-AT	90	1	100	111	1	146	4.11
SMBJ100A-AT	SMBJ100CA-AT	SMBJ100A-AT	SMBJ100CA-AT	100	1	111	123	1	162	3.71
SMBJ110A-AT	SMBJ110CA-AT	SMBJ110A-AT	SMBJ110CA-AT	110	1	122	135	1	177	3.39
SMBJ120A-AT	SMBJ120CA-AT	SMBJ120A-AT	SMBJ120CA-AT	120	1	133	147	1	193	3.11
SMBJ130A-AT	SMBJ130CA-AT	SMBJ130A-AT	SMBJ130CA-AT	130	1	144	159	1	209	2.88
SMBJ150A-AT	SMBJ150CA-AT	SMBJ150A-AT	SMBJ150CA-AT	150	1	167	185	1	243	2.47
SMBJ160A-AT	SMBJ160CA-AT	SMBJ160A-AT	SMBJ160CA-AT	160	1	178	197	1	259	2.32
SMBJ170A-AT	SMBJ170CA-AT	SMBJ170A-AT	SMBJ170CA-AT	170	1	189	209	1	275	2.19
SMBJ180A-AT	SMBJ180CA-AT	SMBJ180A-AT	SMBJ180CA-AT	180	1	201	222	1	292	2.06
SMBJ190A-AT	SMBJ190CA-AT	SMBJ190A-AT	SMBJ190CA-AT	190	1	209	233	1	308	1.96
SMBJ200A-AT	SMBJ200CA-AT	SMBJ200A-AT	SMBJ200CA-AT	200	1	224	247	1	324	1.86
SMBJ210A-AT	SMBJ210CA-AT	SMBJ210A-AT	SMBJ210CA-AT	210	1	237	263	1	340	1.79
SMBJ220A-AT	SMBJ220CA-AT	SMBJ220A-AT	SMBJ220CA-AT	220	1	246	272	1	356	1.69
SMBJ250A-AT	SMBJ250CA-AT	SMBJ250A-AT	SMBJ250CA-AT	250	1	279	309	1	405	1.49
SMBJ300A-AT	SMBJ300CA-AT	SMBJ300A-AT	SMBJ300CA-AT	300	1	335	371	1	486	1.24
SMBJ350A-AT	SMBJ350CA-AT	SMBJ350A-AT	SMBJ350CA-AT	350	1	391	432	1	567	1.06
SMBJ400A-AT	SMBJ400CA-AT	SMBJ400A-AT	SMBJ400CA-AT	400	1	447	494	1	648	0.93
SMBJ440A-AT	SMBJ440CA-AT	SMBJ440A-AT	SMBJ440CA-AT	440	1	492	543	1	713	0.85

SMCJ-TA Series (1500W) DO-214AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMCJ5.0A-AT	SMCJ5.0CA-AT	SMCJ5.0A-AT	SMCJ5.0CA-AT	5	800	6.4	7	10	9.2	163.05
SMCJ6.0A-AT	SMCJ6.0CA-AT	SMCJ6.0A-AT	SMCJ6.0CA-AT	6	800	6.67	7.37	10	10.3	145.64
SMCJ6.5A-AT	SMCJ6.5CA-AT	SMCJ6.5A-AT	SMCJ6.5CA-AT	6.5	500	7.22	7.98	10	11.2	133.93
SMCJ7.0A-AT	SMCJ7.0CA-AT	SMCJ7.0A-AT	SMCJ7.0CA-AT	7	200	7.78	8.6	10	12	125
SMCJ7.5A-AT	SMCJ7.5CA-AT	SMCJ7.5A-AT	SMCJ7.5CA-AT	7.5	100	8.33	9.21	1	12.9	116.28
SMCJ8.0A-AT	SMCJ8.0CA-AT	SMCJ8.0A-AT	SMCJ8.0CA-AT	8	50	8.89	9.83	1	13.6	110.3
SMCJ8.5A-AT	SMCJ8.5CA-AT	SMCJ8.5A-AT	SMCJ8.5CA-AT	8.5	20	9.44	10.4	1	14.4	104.17
SMCJ9.0A-AT	SMCJ9.0CA-AT	SMCJ9.0A-AT	SMCJ9.0CA-AT	9	5	10	11.1	1	15.4	97.41
SMCJ10A-AT	SMCJ10CA-AT	SMCJ10A-AT	SMCJ10CA-AT	10	1	11.1	12.3	1	17	88.24
SMCJ11A-AT	SMCJ11CA-AT	SMCJ11A-AT	SMCJ11CA-AT	11	1	12.2	13.5	1	18.2	82.42
SMCJ12A-AT	SMCJ12CA-AT	SMCJ12A-AT	SMCJ12CA-AT	12	1	13.3	14.7	1	19.9	75.38
SMCJ13A-AT	SMCJ13CA-AT	SMCJ13A-AT	SMCJ13CA-AT	13	1	14.4	15.9	1	21.5	69.77
SMCJ14A-AT	SMCJ14CA-AT	SMCJ14A-AT	SMCJ14CA-AT	14	1	15.6	17.2	1	23.2	64.66
SMCJ15A-AT	SMCJ15CA-AT	SMCJ15A-AT	SMCJ15CA-AT	15	1	16.7	18.5	1	24.4	61.48

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Automotive TVS

SMCJ-TA Series (1500W) DO-214AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMCJ16A-AT	SMCJ16CA-AT	SMCJ16A-AT	SMCJ16CA-AT	16	1	17.8	19.7	1	26	57.7
SMCJ17A-AT	SMCJ17CA-AT	SMCJ17A-AT	SMCJ17CA-AT	17	1	18.9	20.9	1	27.6	54.35
SMCJ18A-AT	SMCJ18CA-AT	SMCJ18A-AT	SMCJ18CA-AT	18	1	20	22.1	1	29.2	51.37
SMCJ20A-AT	SMCJ20CA-AT	SMCJ20A-AT	SMCJ20CA-AT	20	1	22.2	24.5	1	32.4	46.3
SMCJ22A-AT	SMCJ22CA-AT	SMCJ22A-AT	SMCJ22CA-AT	22	1	24.4	26.9	1	35.5	42.26
SMCJ24A-AT	SMCJ24CA-AT	SMCJ24A-AT	SMCJ24CA-AT	24	1	26.7	29.5	1	38.9	38.57
SMCJ26A-AT	SMCJ26CA-AT	SMCJ26A-AT	SMCJ26CA-AT	26	1	28.9	31.9	1	42.1	35.63
SMCJ28A-AT	SMCJ28CA-AT	SMCJ28A-AT	SMCJ28CA-AT	28	1	31.1	34.4	1	45.4	33.04
SMCJ30A-AT	SMCJ30CA-AT	SMCJ30A-AT	SMCJ30CA-AT	30	1	33.3	36.8	1	48.4	31
SMCJ33A-AT	SMCJ33CA-AT	SMCJ33A-AT	SMCJ33CA-AT	33	1	36.7	40.6	1	53.3	28.15
SMCJ36A-AT	SMCJ36CA-AT	SMCJ36A-AT	SMCJ36CA-AT	36	1	40	44.2	1	58.1	25.82
SMCJ40A-AT	SMCJ40CA-AT	SMCJ40A-AT	SMCJ40CA-AT	40	1	44.4	49.1	1	64.5	23.26
SMCJ43A-AT	SMCJ43CA-AT	SMCJ43A-AT	SMCJ43CA-AT	43	1	47.8	52.8	1	69.4	21.62
SMCJ45A-AT	SMCJ45CA-AT	SMCJ45A-AT	SMCJ45CA-AT	45	1	50	55.3	1	72.7	20.64
SMCJ48A-AT	SMCJ48CA-AT	SMCJ48A-AT	SMCJ48CA-AT	48	1	53.3	58.9	1	77.4	19.38
SMCJ51A-AT	SMCJ51CA-AT	SMCJ51A-AT	SMCJ51CA-AT	51	1	56.7	62.7	1	82.4	18.21
SMCJ54A-AT	SMCJ54CA-AT	SMCJ54A-AT	SMCJ54CA-AT	54	1	60	66.3	1	87.1	17.23
SMCJ58A-AT	SMCJ58CA-AT	SMCJ58A-AT	SMCJ58CA-AT	58	1	64.4	71.2	1	93.6	16.03
SMCJ60A-AT	SMCJ60CA-AT	SMCJ60A-AT	SMCJ60CA-AT	60	1	66.7	73.7	1	96.8	15.5
SMCJ64A-AT	SMCJ64CA-AT	SMCJ64A-AT	SMCJ64CA-AT	64	1	71.1	78.6	1	103	14.57
SMCJ70A-AT	SMCJ70CA-AT	SMCJ70A-AT	SMCJ70CA-AT	70	1	77.8	86	1	113	13.28
SMCJ75A-AT	SMCJ75CA-AT	SMCJ75A-AT	SMCJ75CA-AT	75	1	83.3	92.1	1	121	12.4
SMCJ78A-AT	SMCJ78CA-AT	SMCJ78A-AT	SMCJ78CA-AT	78	1	86.7	95.8	1	126	11.91
SMCJ85A-AT	SMCJ85CA-AT	SMCJ85A-AT	SMCJ85CA-AT	85	1	94.4	104	1	137	10.95
SMCJ90A-AT	SMCJ90CA-AT	SMCJ90A-AT	SMCJ90CA-AT	90	1	100	111	1	146	10.28
SMCJ100A-AT	SMCJ100CA-AT	SMCJ100A-AT	SMCJ100CA-AT	100	1	111	123	1	162	9.26
SMCJ110A-AT	SMCJ110CA-AT	SMCJ110A-AT	SMCJ110CA-AT	110	1	122	135	1	177	8.48
SMCJ120A-AT	SMCJ120CA-AT	SMCJ120A-AT	SMCJ120CA-AT	120	1	133	147	1	193	7.78
SMCJ130A-AT	SMCJ130CA-AT	SMCJ130A-AT	SMCJ130CA-AT	130	1	144	159	1	209	7.18
SMCJ150A-AT	SMCJ150CA-AT	SMCJ150A-AT	SMCJ150CA-AT	150	1	167	185	1	243	6.18
SMCJ160A-AT	SMCJ160CA-AT	SMCJ160A-AT	SMCJ160CA-AT	160	1	178	197	1	259	5.8
SMCJ170A-AT	SMCJ170CA-AT	SMCJ170A-AT	SMCJ170CA-AT	170	1	189	209	1	275	5.46
SMCJ180A-AT	SMCJ180CA-AT	SMCJ180A-AT	SMCJ180CA-AT	180	1	201	222	1	292	5.14
SMCJ190A-AT	SMCJ190CA-AT	SMCJ190A-AT	SMCJ190CA-AT	190	1	209	233	1	308	4.88
SMCJ200A-AT	SMCJ200CA-AT	SMCJ200A-AT	SMCJ200CA-AT	200	1	224	247	1	324	4.63
SMCJ210A-AT	SMCJ210CA-AT	SMCJ210A-AT	SMCJ210CA-AT	210	1	237	263	1	340	4.42
SMCJ220A-AT	SMCJ220CA-AT	SMCJ220A-AT	SMCJ220CA-AT	220	1	246	272	1	356	4.22
SMCJ250A-AT	SMCJ250CA-AT	SMCJ250A-AT	SMCJ250CA-AT	250	1	279	309	1	405	3.71
SMCJ300A-AT	SMCJ300CA-AT	SMCJ300A-AT	SMCJ300CA-AT	300	1	335	371	1	486	3.09
SMCJ350A-AT	SMCJ350CA-AT	SMCJ350A-AT	SMCJ350CA-AT	350	1	391	432	1	567	2.65
SMCJ400A-AT	SMCJ400CA-AT	SMCJ400A-AT	SMCJ400CA-AT	400	1	447	494	1	648	2.32
SMCJ440A-AT	SMCJ440CA-AT	SMCJ440A-AT	SMCJ440CA-AT	440	1	492	543	1	713	2.11

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Automotive TVS

SMDJ-TA Series (3000W) DO-214AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMDJ5.0A-AT	SMDJ5.0CA-AT	SMDJ5.0A-AT	SMDJ5.0CA-AT	5	800	6.4	7	10	9.2	326.1
SMDJ6.0A-AT	SMDJ6.0CA-AT	SMDJ6.0A-AT	SMDJ6.0CA-AT	6	800	6.67	7.37	10	10.3	291.3
SMDJ6.5A-AT	SMDJ6.5CA-AT	SMDJ6.5A-AT	SMDJ6.5CA-AT	6.5	500	7.22	7.98	10	11.2	267.9
SMDJ7.0A-AT	SMDJ7.0CA-AT	SMDJ7.0A-AT	SMDJ7.0CA-AT	7	200	7.78	8.6	10	12	250
SMDJ7.5A-AT	SMDJ7.5CA-AT	SMDJ7.5A-AT	SMDJ7.5CA-AT	7.5	100	8.33	9.21	1	12.9	232.6
SMDJ8.0A-AT	SMDJ8.0CA-AT	SMDJ8.0A-AT	SMDJ8.0CA-AT	8	50	8.89	9.83	1	13.6	220.6
SMDJ8.5A-AT	SMDJ8.5CA-AT	SMDJ8.5A-AT	SMDJ8.5CA-AT	8.5	20	9.44	10.4	1	14.4	208.4
SMDJ9.0A-AT	SMDJ9.0CA-AT	SMDJ9.0A-AT	SMDJ9.0CA-AT	9	10	10	11.1	1	15.4	194.9
SMDJ10A-AT	SMDJ10CA-AT	SMDJ10A-AT	SMDJ10CA-AT	10	5	11.1	12.3	1	17	176.5
SMDJ11A-AT	SMDJ11CA-AT	SMDJ11A-AT	SMDJ11CA-AT	11	1	12.2	13.5	1	18.2	164.9
SMDJ12A-AT	SMDJ12CA-AT	SMDJ12A-AT	SMDJ12CA-AT	12	1	13.3	14.7	1	19.9	150.8
SMDJ13A-AT	SMDJ13CA-AT	SMDJ13A-AT	SMDJ13CA-AT	13	1	14.4	15.9	1	21.5	139.6
SMDJ14A-AT	SMDJ14CA-AT	SMDJ14A-AT	SMDJ14CA-AT	14	1	15.6	17.2	1	23.2	129.4
SMDJ15A-AT	SMDJ15CA-AT	SMDJ15A-AT	SMDJ15CA-AT	15	1	16.7	18.5	1	24.4	123
SMDJ16A-AT	SMDJ16CA-AT	SMDJ16A-AT	SMDJ16CA-AT	16	1	17.8	19.7	1	26	115.4
SMDJ17A-AT	SMDJ17CA-AT	SMDJ17A-AT	SMDJ17CA-AT	17	1	18.9	20.9	1	27.6	108.7
SMDJ18A-AT	SMDJ18CA-AT	SMDJ18A-AT	SMDJ18CA-AT	18	1	20	22.1	1	29.2	102.8
SMDJ20A-AT	SMDJ20CA-AT	SMDJ20A-AT	SMDJ20CA-AT	20	1	22.2	24.5	1	32.4	92.6
SMDJ22A-AT	SMDJ22CA-AT	SMDJ22A-AT	SMDJ22CA-AT	22	1	24.4	26.9	1	35.5	84.51
SMDJ24A-AT	SMDJ24CA-AT	SMDJ24A-AT	SMDJ24CA-AT	24	1	26.7	29.5	1	38.9	77.13
SMDJ26A-AT	SMDJ26CA-AT	SMDJ26A-AT	SMDJ26CA-AT	26	1	28.9	31.9	1	42.1	71.26
SMDJ28A-AT	SMDJ28CA-AT	SMDJ28A-AT	SMDJ28CA-AT	28	1	31.1	34.4	1	45.4	66.08
SMDJ30A-AT	SMDJ30CA-AT	SMDJ30A-AT	SMDJ30CA-AT	30	1	33.3	36.8	1	48.4	61.99
SMDJ33A-AT	SMDJ33CA-AT	SMDJ33A-AT	SMDJ33CA-AT	33	1	36.7	40.6	1	53.3	56.29
SMDJ36A-AT	SMDJ36CA-AT	SMDJ36A-AT	SMDJ36CA-AT	36	1	40	44.2	1	58.1	51.64
SMDJ40A-AT	SMDJ40CA-AT	SMDJ40A-AT	SMDJ40CA-AT	40	1	44.4	49.1	1	64.5	46.52
SMDJ43A-AT	SMDJ43CA-AT	SMDJ43A-AT	SMDJ43CA-AT	43	1	47.8	52.8	1	69.4	43.23
SMDJ45A-AT	SMDJ45CA-AT	SMDJ45A-AT	SMDJ45CA-AT	45	1	50	55.3	1	72.7	41.27
SMDJ48A-AT	SMDJ48CA-AT	SMDJ48A-AT	SMDJ48CA-AT	48	1	53.3	58.9	1	77.4	38.76
SMDJ51A-AT	SMDJ51CA-AT	SMDJ51A-AT	SMDJ51CA-AT	51	1	56.7	62.7	1	82.4	36.41
SMDJ54A-AT	SMDJ54CA-AT	SMDJ54A-AT	SMDJ54CA-AT	54	1	60	66.3	1	87.1	34.45
SMDJ58A-AT	SMDJ58CA-AT	SMDJ58A-AT	SMDJ58CA-AT	58	1	64.4	71.2	1	93.6	32.06
SMDJ60A-AT	SMDJ60CA-AT	SMDJ60A-AT	SMDJ60CA-AT	60	1	66.7	73.7	1	96.8	31
SMDJ64A-AT	SMDJ64CA-AT	SMDJ64A-AT	SMDJ64CA-AT	64	1	71.1	78.6	1	103	29.13
SMDJ70A-AT	SMDJ70CA-AT	SMDJ70A-AT	SMDJ70CA-AT	70	1	77.8	86	1	113	26.55
SMDJ75A-AT	SMDJ75CA-AT	SMDJ75A-AT	SMDJ75CA-AT	75	1	83.3	92.1	1	121	24.8
SMDJ78A-AT	SMDJ78CA-AT	SMDJ78A-AT	SMDJ78CA-AT	78	1	86.7	95.8	1	126	23.81
SMDJ85A-AT	SMDJ85CA-AT	SMDJ85A-AT	SMDJ85CA-AT	85	1	94.4	104	1	137	21.9
SMDJ90A-AT	SMDJ90CA-AT	SMDJ90A-AT	SMDJ90CA-AT	90	1	100	111	1	146	20.55
SMDJ100A-AT	SMDJ100CA-AT	SMDJ100A-AT	SMDJ100CA-AT	100	1	111	123	1	162	18.52
SMDJ110A-AT	SMDJ110CA-AT	SMDJ110A-AT	SMDJ110CA-AT	110	1	122	135	1	177	16.95
SMDJ120A-AT	SMDJ120CA-AT	SMDJ120A-AT	SMDJ120CA-AT	120	1	133	147	1	193	15.55

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

Automotive TVS

SMDJ-TA Series (3000W) DO-214AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
SMDJ130A-AT	SMDJ130CA-AT	SMDJ130A-AT	SMDJ130CA-AT	130	1	144	159	1	209	14.36
SMDJ150A-AT	SMDJ150CA-AT	SMDJ150A-AT	SMDJ150CA-AT	150	1	167	185	1	243	12.35
SMDJ160A-AT	SMDJ160CA-AT	SMDJ160A-AT	SMDJ160CA-AT	160	1	178	197	1	259	11.59
SMDJ170A-AT	SMDJ170CA-AT	SMDJ170A-AT	SMDJ170CA-AT	170	1	189	209	1	275	10.91
SMDJ180A-AT	SMDJ180CA-AT	SMDJ180A-AT	SMDJ180CA-AT	180	1	201	222	1	292	10.28
SMDJ190A-AT	SMDJ190CA-AT	SMDJ190A-AT	SMDJ190CA-AT	190	1	209	233	1	308	9.75
SMDJ200A-AT	SMDJ200CA-AT	SMDJ200A-AT	SMDJ200CA-AT	200	1	224	247	1	324	9.26
SMDJ210A-AT	SMDJ210CA-AT	SMDJ210A-AT	SMDJ210CA-AT	210	1	237	263	1	340	8.83
SMDJ220A-AT	SMDJ220CA-AT	SMDJ220A-AT	SMDJ220CA-AT	220	1	246	272	1	356	8.43
SMDJ250A-AT	SMDJ250CA-AT	SMDJ250A-AT	SMDJ250CA-AT	250	1	279	309	1	405	7.41
SMDJ300A-AT	SMDJ300CA-AT	SMDJ300A-AT	SMDJ300CA-AT	300	1	335	371	1	486	6.18
SMDJ350A-AT	SMDJ350CA-AT	SMDJ350A-AT	SMDJ350CA-AT	350	1	391	432	1	567	5.3
SMDJ400A-AT	SMDJ400CA-AT	SMDJ400A-AT	SMDJ400CA-AT	400	1	447	494	1	648	4.63
SMDJ440A-AT	SMDJ440CA-AT	SMDJ440A-AT	SMDJ440CA-AT	440	1	492	543	1	713	4.21

5.0SMDJ-TA Series (5000W) DO-214AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
5.0SMDJ12A-AT	5.0SMDJ12CA-AT	5.0SMDJ12A-AT	5.0SMDJ12CA-AT	12	1	13.3	14.7	1	19.9	251.3
5.0SMDJ13A-AT	5.0SMDJ13CA-AT	5.0SMDJ13A-AT	5.0SMDJ13CA-AT	13	1	14.4	15.9	1	21.5	232.6
5.0SMDJ14A-AT	5.0SMDJ14CA-AT	5.0SMDJ14A-AT	5.0SMDJ14CA-AT	14	1	15.6	17.2	1	23.2	215.6
5.0SMDJ15A-AT	5.0SMDJ15CA-AT	5.0SMDJ15A-AT	5.0SMDJ15CA-AT	15	1	16.7	18.5	1	24.4	205
5.0SMDJ16A-AT	5.0SMDJ16CA-AT	5.0SMDJ16A-AT	5.0SMDJ16CA-AT	16	1	17.8	19.7	1	26	192.4
5.0SMDJ17A-AT	5.0SMDJ17CA-AT	5.0SMDJ17A-AT	5.0SMDJ17CA-AT	17	1	18.9	20.9	1	27.6	181.2
5.0SMDJ18A-AT	5.0SMDJ18CA-AT	5.0SMDJ18A-AT	5.0SMDJ18CA-AT	18	1	20	22.1	1	29.2	171.3
5.0SMDJ20A-AT	5.0SMDJ20CA-AT	5.0SMDJ20A-AT	5.0SMDJ20CA-AT	20	1	22.2	24.5	1	32.4	154.4
5.0SMDJ22A-AT	5.0SMDJ22CA-AT	5.0SMDJ22A-AT	5.0SMDJ22CA-AT	22	1	24.4	26.9	1	35.5	140.9
5.0SMDJ24A-AT	5.0SMDJ24CA-AT	5.0SMDJ24A-AT	5.0SMDJ24CA-AT	24	1	26.7	29.5	1	38.9	128.6
5.0SMDJ26A-AT	5.0SMDJ26CA-AT	5.0SMDJ26A-AT	5.0SMDJ26CA-AT	26	1	28.9	31.9	1	42.1	118.8
5.0SMDJ28A-AT	5.0SMDJ28CA-AT	5.0SMDJ28A-AT	5.0SMDJ28CA-AT	28	1	31.1	34.4	1	45.4	110.2
5.0SMDJ30A-AT	5.0SMDJ30CA-AT	5.0SMDJ30A-AT	5.0SMDJ30CA-AT	30	1	33.3	36.8	1	48.4	103.4
5.0SMDJ33A-AT	5.0SMDJ33CA-AT	5.0SMDJ33A-AT	5.0SMDJ33CA-AT	33	1	36.7	40.6	1	53.3	93.81
5.0SMDJ36A-AT	5.0SMDJ36CA-AT	5.0SMDJ36A-AT	5.0SMDJ36CA-AT	36	1	40	44.2	1	58.1	86.06
5.0SMDJ40A-AT	5.0SMDJ40CA-AT	5.0SMDJ40A-AT	5.0SMDJ40CA-AT	40	1	44.4	49.1	1	64.5	77.52
5.0SMDJ43A-AT	5.0SMDJ43CA-AT	5.0SMDJ43A-AT	5.0SMDJ43CA-AT	43	1	47.8	52.8	1	69.4	72.05
5.0SMDJ45A-AT	5.0SMDJ45CA-AT	5.0SMDJ45A-AT	5.0SMDJ45CA-AT	45	1	50	55.3	1	72.7	68.78
5.0SMDJ48A-AT	5.0SMDJ48CA-AT	5.0SMDJ48A-AT	5.0SMDJ48CA-AT	48	1	53.3	58.9	1	77.4	64.6
5.0SMDJ51A-AT	5.0SMDJ51CA-AT	5.0SMDJ51A-AT	5.0SMDJ51CA-AT	51	1	56.7	62.7	1	82.4	60.68
5.0SMDJ54A-AT	5.0SMDJ54CA-AT	5.0SMDJ54A-AT	5.0SMDJ54CA-AT	54	1	60	66.3	1	87.1	57.41
5.0SMDJ58A-AT	5.0SMDJ58CA-AT	5.0SMDJ58A-AT	5.0SMDJ58CA-AT	58	1	64.4	71.2	1	93.6	53.42
5.0SMDJ60A-AT	5.0SMDJ60CA-AT	5.0SMDJ60A-AT	5.0SMDJ60CA-AT	60	1	66.7	73.7	1	96.8	51.66

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

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5.0SMDJ-TA Series (5000W) DO-214AB PACKAGE

Part Number		Marking		V _R	I _R @V _R	V _{BR} @I _T		I _T	V _C @I _{PP}	I _{PP} Ⓢ
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
5.0SMDJ64A-AT	5.0SMDJ64CA-AT	5.0SMDJ64A-AT	5.0SMDJ64CA-AT	64	1	71.1	78.6	1	103	48.55
5.0SMDJ70A-AT	5.0SMDJ70CA-AT	5.0SMDJ70A-AT	5.0SMDJ70CA-AT	70	1	77.8	86	1	113	44.25
5.0SMDJ75A-AT	5.0SMDJ75CA-AT	5.0SMDJ75A-AT	5.0SMDJ75CA-AT	75	1	83.3	92.1	1	121	12.4
5.0SMDJ78A-AT	5.0SMDJ78CA-AT	5.0SMDJ78A-AT	5.0SMDJ78CA-AT	78	1	86.7	95.8	1	126	11.91
5.0SMDJ85A-AT	5.0SMDJ85CA-AT	5.0SMDJ85A-AT	5.0SMDJ85CA-AT	85	1	94.4	104	1	137	10.95
5.0SMDJ90A-AT	5.0SMDJ90CA-AT	5.0SMDJ90A-AT	5.0SMDJ90CA-AT	90	1	100	111	1	146	10.28
5.0SMDJ100A-AT	5.0SMDJ100CA-AT	5.0SMDJ100A-AT	5.0SMDJ100CA-AT	100	1	111	123	1	162	9.26
5.0SMDJ110A-AT	5.0SMDJ110CA-AT	5.0SMDJ110A-AT	5.0SMDJ110CA-AT	110	1	122	135	1	177	8.48
5.0SMDJ120A-AT	5.0SMDJ120CA-AT	5.0SMDJ120A-AT	5.0SMDJ120CA-AT	120	1	133	147	1	193	7.78
5.0SMDJ130A-AT	5.0SMDJ130CA-AT	5.0SMDJ130A-AT	5.0SMDJ130CA-AT	130	1	144	159	1	209	7.18
5.0SMDJ150A-AT	5.0SMDJ150CA-AT	5.0SMDJ150A-AT	5.0SMDJ150CA-AT	150	1	167	185	1	243	6.18
5.0SMDJ160A-AT	5.0SMDJ160CA-AT	5.0SMDJ160A-AT	5.0SMDJ160CA-AT	160	1	178	197	1	259	5.8
5.0SMDJ170A-AT	5.0SMDJ170CA-AT	5.0SMDJ170A-AT	5.0SMDJ170CA-AT	170	1	189	209	1	275	5.46
5.0SMDJ180A-AT	5.0SMDJ180CA-AT	5.0SMDJ180A-AT	5.0SMDJ180CA-AT	180	1	201	222	1	292	5.14
5.0SMDJ190A-AT	5.0SMDJ190CA-AT	5.0SMDJ190A-AT	5.0SMDJ190CA-AT	190	1	209	233	1	308	4.88

6.6SMDJ-TA Series (6600W) DO-214AB PACKAGE

Part Number		Marking		V _R	I _R @V _R	V _{BR} @I _T		I _T	V _C @I _{PP}	I _{PP} Ⓢ
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
6.6SMDJ12A-AT	6.6SMDJ12CA-AT	6.6SMDJ12A-AT	6.6SMDJ12CA-AT	12	1	13.3	14.7	1	19.9	331.7
6.6SMDJ13A-AT	6.6SMDJ13CA-AT	6.6SMDJ13A-AT	6.6SMDJ13CA-AT	13	1	14.4	15.9	1	21.5	307
6.6SMDJ14A-AT	6.6SMDJ14CA-AT	6.6SMDJ14A-AT	6.6SMDJ14CA-AT	14	1	15.6	17.2	1	23.2	284.5
6.6SMDJ15A-AT	6.6SMDJ15CA-AT	6.6SMDJ15A-AT	6.6SMDJ15CA-AT	15	1	16.7	18.5	1	24.4	270.5
6.6SMDJ16A-AT	6.6SMDJ16CA-AT	6.6SMDJ16A-AT	6.6SMDJ16CA-AT	16	1	17.8	19.7	1	26	253.9
6.6SMDJ17A-AT	6.6SMDJ17CA-AT	6.6SMDJ17A-AT	6.6SMDJ17CA-AT	17	1	18.9	20.9	1	27.6	239.2
6.6SMDJ18A-AT	6.6SMDJ18CA-AT	6.6SMDJ18A-AT	6.6SMDJ18CA-AT	18	1	20	22.1	1	29.2	226.1
6.6SMDJ20A-AT	6.6SMDJ20CA-AT	6.6SMDJ20A-AT	6.6SMDJ20CA-AT	20	1	22.2	24.5	1	32.4	203.8
6.6SMDJ22A-AT	6.6SMDJ22CA-AT	6.6SMDJ22A-AT	6.6SMDJ22CA-AT	22	1	24.4	26.9	1	35.5	186
6.6SMDJ24A-AT	6.6SMDJ24CA-AT	6.6SMDJ24A-AT	6.6SMDJ24CA-AT	24	1	26.7	29.5	1	38.9	169.7
6.6SMDJ26A-AT	6.6SMDJ26CA-AT	6.6SMDJ26A-AT	6.6SMDJ26CA-AT	26	1	28.9	31.9	1	42.1	156.8
6.6SMDJ28A-AT	6.6SMDJ28CA-AT	6.6SMDJ28A-AT	6.6SMDJ28CA-AT	28	1	31.1	34.4	1	45.4	145.4
6.6SMDJ30A-AT	6.6SMDJ30CA-AT	6.6SMDJ30A-AT	6.6SMDJ30CA-AT	30	1	33.3	36.8	1	48.4	136.4
6.6SMDJ33A-AT	6.6SMDJ33CA-AT	6.6SMDJ33A-AT	6.6SMDJ33CA-AT	33	1	36.7	40.6	1	53.3	123.9
6.6SMDJ36A-AT	6.6SMDJ36CA-AT	6.6SMDJ36A-AT	6.6SMDJ36CA-AT	36	1	40	44.2	1	58.1	113.6
6.6SMDJ40A-AT	6.6SMDJ40CA-AT	6.6SMDJ40A-AT	6.6SMDJ40CA-AT	40	1	44.4	49.1	1	64.5	102.4
6.6SMDJ43A-AT	6.6SMDJ43CA-AT	6.6SMDJ43A-AT	6.6SMDJ43CA-AT	43	1	47.8	52.8	1	69.4	95.11
6.6SMDJ45A-AT	6.6SMDJ45CA-AT	6.6SMDJ45A-AT	6.6SMDJ45CA-AT	45	1	50	55.3	1	72.7	90.79
6.6SMDJ48A-AT	6.6SMDJ48CA-AT	6.6SMDJ48A-AT	6.6SMDJ48CA-AT	48	1	53.3	58.9	1	77.4	85.28
6.6SMDJ51A-AT	6.6SMDJ51CA-AT	6.6SMDJ51A-AT	6.6SMDJ51CA-AT	51	1	56.7	62.7	1	82.4	80.1
6.6SMDJ54A-AT	6.6SMDJ54CA-AT	6.6SMDJ54A-AT	6.6SMDJ54CA-AT	54	1	60	66.3	1	87.1	75.78
6.6SMDJ58A-AT	6.6SMDJ58CA-AT	6.6SMDJ58A-AT	6.6SMDJ58CA-AT	58	1	64.4	71.2	1	93.6	70.52

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

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6.6SMDJ-TA Series (6600W) DO-214AB PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
6.6SMDJ60A-AT	6.6SMDJ60CA-AT	6.6SMDJ60A-AT	6.6SMDJ60CA-AT	60	1	66.7	73.7	1	96.8	68.19
6.6SMDJ64A-AT	6.6SMDJ64CA-AT	6.6SMDJ64A-AT	6.6SMDJ64CA-AT	64	1	71.1	78.6	1	103	64.08
6.6SMDJ70A-AT	6.6SMDJ70CA-AT	6.6SMDJ70A-AT	6.6SMDJ70CA-AT	70	1	77.8	86	1	113	58.41
6.6SMDJ75A-AT	6.6SMDJ75CA-AT	6.6SMDJ75A-AT	6.6SMDJ75CA-AT	75	1	83.3	92.1	1	121	54.55
6.6SMDJ78A-AT	6.6SMDJ78CA-AT	6.6SMDJ78A-AT	6.6SMDJ78CA-AT	78	1	86.7	95.8	1	126	52.39
6.6SMDJ85A-AT	6.6SMDJ85CA-AT	6.6SMDJ85A-AT	6.6SMDJ85CA-AT	85	1	94.4	104	1	137	48.18
6.6SMDJ90A-AT	6.6SMDJ90CA-AT	6.6SMDJ90A-AT	6.6SMDJ90CA-AT	90	1	100	111	1	146	45.21
6.6SMDJ100A-AT	6.6SMDJ100CA-AT	6.6SMDJ100A-AT	6.6SMDJ100CA-AT	100	1	111	123	1	162	40.75

Small P4SMFT-AT Series (400W) SOD-123FL PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
P4SMFT5.0A-AT	P4SMFT5.0CA-AT	EHET	ETET	5	400	6.4	7	10	9.2	43.48
P4SMFT6.0A-AT	P4SMFT6.0CA-AT	EHGT	ETGT	6	400	6.67	7.37	10	10.3	38.84
P4SMFT6.5A-AT	P4SMFT6.5CA-AT	EHKT	ETKT	6.5	250	7.22	7.98	10	11.2	35.72
P4SMFT7.0A-AT	P4SMFT7.0CA-AT	EHMT	ETMT	7	100	7.78	8.6	10	12	33.34
P4SMFT7.5A-AT	P4SMFT7.5CA-AT	EHPT	ETPT	7.5	50	8.33	9.21	1	12.9	31.01
P4SMFT8.0A-AT	P4SMFT8.0CA-AT	HERT	ETRT	8	25	8.89	9.83	1	13.6	29.42
P4SMFT8.5A-AT	P4SMFT8.5CA-AT	EHTT	ETTT	8.5	10	9.44	10.4	1	14.4	27.78
P4SMFT9.0A-AT	P4SMFT9.0CA-AT	EHVT	ETVT	9	5	10	11.1	1	15.4	25.98
P4SMFT10A-AT	P4SMFT10CA-AT	EHXT	ETXT	10	2.5	11.1	12.3	1	17	23.53
P4SMFT11A-AT	P4SMFT11CA-AT	EHZT	ETZT	11	2.5	12.2	13.5	1	18.2	21.98
P4SMFT12A-AT	P4SMFT12CA-AT	EIET	EUET	12	2.5	13.3	14.7	1	19.9	20.11
P4SMFT13A-AT	P4SMFT13CA-AT	EIGT	EUGT	13	1	14.4	15.9	1	21.5	18.61
P4SMFT14A-AT	P4SMFT14CA-AT	EIKT	EUKT	14	1	15.6	17.2	1	23.2	17.25
P4SMFT15A-AT	P4SMFT15CA-AT	EIMT	EUMT	15	1	16.7	18.5	1	24.4	16.4
P4SMFT16A-AT	P4SMFT16CA-AT	EIPT	EUPT	16	1	17.8	19.7	1	26	15.39
P4SMFT17A-AT	P4SMFT17CA-AT	EIRT	EURT	17	1	18.9	20.9	1	27.6	14.5
P4SMFT18A-AT	P4SMFT18CA-AT	EITT	EUTT	18	1	20	22.1	1	29.2	13.7
P4SMFT20A-AT	P4SMFT20CA-AT	EIVT	EUVT	20	1	22.2	24.5	1	32.4	12.35
P4SMFT22A-AT	P4SMFT22CA-AT	EIXT	EUXT	22	1	24.4	26.9	1	35.5	11.27
P4SMFT24A-AT	P4SMFT24CA-AT	EIZT	EUZT	24	1	26.7	29.5	1	38.9	10.29
P4SMFT26A-AT	P4SMFT26CA-AT	EJET	EVET	26	1	28.9	31.9	1	42.1	9.51
P4SMFT28A-AT	P4SMFT28CA-AT	EJGT	EVGT	28	1	31.1	34.4	1	45.4	8.82
P4SMFT30A-AT	P4SMFT30CA-AT	EJKT	EVKT	30	1	33.3	36.8	1	48.4	8.27
P4SMFT33A-AT	P4SMFT33CA-AT	EJMT	EVMT	33	1	36.7	40.6	1	53.3	7.51
P4SMFT36A-AT	P4SMFT36CA-AT	EJPT	EVPT	36	1	40	44.2	1	58.1	6.89
P4SMFT40A-AT	P4SMFT40CA-AT	EJRT	EVRT	40	1	44.4	49.1	1	64.5	6.21
P4SMFT43A-AT	P4SMFT43CA-AT	EJTT	EVTT	43	1	47.8	52.8	1	69.4	5.77
P4SMFT45A-AT	P4SMFT45CA-AT	EJVT	EVVT	45	1	50	55.3	1	72.7	5.51
P4SMFT48A-AT	P4SMFT48CA-AT	EJXT	EVXT	48	1	53.3	58.9	1	77.4	5.17

This catalog contains typical product specifications. When you consider using our products, please check our product specification sheets. (Characteristic diagram, reliability information, application notes... etc.)

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Small P4SMFT-AT Series (400W) SOD-123FL PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
P4SMFT51A-AT	P4SMFT51CA-AT	EJZT	EVZT	51	1	56.7	62.7	1	82.4	4.86
P4SMFT54A-AT	P4SMFT54CA-AT	ERET	EWET	54	1	60	66.3	1	87.1	4.6
P4SMFT58A-AT	P4SMFT58CA-AT	ERGT	EWGT	58	1	64.4	71.2	1	93.6	4.28
P4SMFT60A-AT	P4SMFT60CA-AT	ERKT	EWKT	60	1	66.7	73.7	1	96.8	4.14
P4SMFT64A-AT	P4SMFT64CA-AT	ERMT	EWMT	64	1	71.1	78.6	1	103	3.89
P4SMFT70A-AT	P4SMFT70CA-AT	ERPT	EWPT	70	1	77.8	86	1	113	3.54
P4SMFT75A-AT	P4SMFT75CA-AT	ERRT	EWRT	75	1	83.3	92.1	1	121	3.31
P4SMFT43A-AT	P4SMFT43CA-AT	EJTT	EVTT	43	1	47.8	52.8	1	69.4	5.77
P4SMFT45A-AT	P4SMFT45CA-AT	EJVT	EVVT	45	1	50	55.3	1	72.7	5.51
P4SMFT48A-AT	P4SMFT48CA-AT	EJXT	EVXT	48	1	53.3	58.9	1	77.4	5.17
P4SMFT51A-AT	P4SMFT51CA-AT	EJZT	EVZT	51	1	56.7	62.7	1	82.4	4.86
P4SMFT54A-AT	P4SMFT54CA-AT	ERET	EWET	54	1	60	66.3	1	87.1	4.6
P4SMFT58A-AT	P4SMFT58CA-AT	ERGT	EWGT	58	1	64.4	71.2	1	93.6	4.28
P4SMFT60A-AT	P4SMFT60CA-AT	ERKT	EWKT	60	1	66.7	73.7	1	96.8	4.14
P4SMFT64A-AT	P4SMFT64CA-AT	ERMT	EWMT	64	1	71.1	78.6	1	103	3.89
P4SMFT70A-AT	P4SMFT70CA-AT	ERPT	EWPT	70	1	77.8	86	1	113	3.54
P4SMFT75A-AT	P4SMFT75CA-AT	ERRT	EWRT	75	1	83.3	92.1	1	121	3.31

Small 6SMAJ-AT Series (600W) DO-214AC PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	$I_{PP}①$
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
6SMAJ5.0A-AT	6SMAJ5.0CA-AT	6SMAJ5.0A-AT	6SMAJ5.0CA-AT	5	800	6.4	7	10	9.2	65.22
6SMAJ6.0A-AT	6SMAJ6.0CA-AT	6SMAJ6.0A-AT	6SMAJ6.0CA-AT	6	800	6.67	7.37	10	10.3	58.26
6SMAJ6.5A-AT	6SMAJ6.5CA-AT	6SMAJ6.5A-AT	6SMAJ6.5CA-AT	6.5	500	7.22	7.98	10	11.2	53.58
6SMAJ7.0A-AT	6SMAJ7.0CA-AT	6SMAJ7.0A-AT	6SMAJ7.0CA-AT	7	200	7.78	8.6	10	12	50
6SMAJ7.5A-AT	6SMAJ7.5CA-AT	6SMAJ7.5A-AT	6SMAJ7.5CA-AT	7.5	100	8.33	9.21	1	12.9	46.52
6SMAJ8.0A-AT	6SMAJ8.0CA-AT	6SMAJ8.0A-AT	6SMAJ8.0CA-AT	8	50	8.89	9.83	1	13.6	44.12
6SMAJ8.5A-AT	6SMAJ8.5CA-AT	6SMAJ8.5A-AT	6SMAJ8.5CA-AT	8.5	20	9.44	10.4	1	14.4	41.7
6SMAJ9.0A-AT	6SMAJ9.0CA-AT	6SMAJ9.0A-AT	6SMAJ9.0CA-AT	9	10	10	11.1	1	15.4	38.98
6SMAJ10A-AT	6SMAJ10CA-AT	6SMAJ10A-AT	6SMAJ10CA-AT	10	5	11.1	12.3	1	17	35.3
6SMAJ11A-AT	6SMAJ11CA-AT	6SMAJ11A-AT	6SMAJ11CA-AT	11	1	12.2	13.5	1	18.2	32.97
6SMAJ12A-AT	6SMAJ12CA-AT	6SMAJ12A-AT	6SMAJ12CA-AT	12	1	13.3	14.7	1	19.9	30.2
6SMAJ13A-AT	6SMAJ13CA-AT	6SMAJ13A-AT	6SMAJ13CA-AT	13	1	14.4	15.9	1	21.5	27.91
6SMAJ14A-AT	6SMAJ14CA-AT	6SMAJ14A-AT	6SMAJ14CA-AT	14	1	15.6	17.2	1	23.2	25.87
6SMAJ15A-AT	6SMAJ15CA-AT	6SMAJ15A-AT	6SMAJ15CA-AT	15	1	16.7	18.5	1	24.4	24.6
6SMAJ16A-AT	6SMAJ16CA-AT	6SMAJ16A-AT	6SMAJ16CA-AT	16	1	17.8	19.7	1	26	23.08
6SMAJ17A-AT	6SMAJ17CA-AT	6SMAJ17A-AT	6SMAJ17CA-AT	17	1	18.9	20.9	1	27.6	21.74
6SMAJ18A-AT	6SMAJ18CA-AT	6SMAJ18A-AT	6SMAJ18CA-AT	18	1	20	22.1	1	29.2	20.55
6SMAJ20A-AT	6SMAJ20CA-AT	6SMAJ20A-AT	6SMAJ20CA-AT	20	1	22.2	24.5	1	32.4	18.52
6SMAJ22A-AT	6SMAJ22CA-AT	6SMAJ22A-AT	6SMAJ22CA-AT	22	1	24.4	26.9	1	35.5	16.91
6SMAJ24A-AT	6SMAJ24CA-AT	6SMAJ24A-AT	6SMAJ24CA-AT	24	1	26.7	29.5	1	38.9	15.43

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Automotive TVS

Small 6SMAJ-AT Series (600W) DO-214AC PACKAGE

Part Number		Marking		V_R	$I_R@V_R$	$V_{BR}@I_T$		I_T	$V_C@I_{PP}$	I_{PP} ①
Uni-Polar	Bi-Polar	Uni	Bi	V	μA	min(V)	max(V)	mA	max(V)	A
6SMAJ26A-AT	6SMAJ26CA-AT	6SMAJ26A-AT	6SMAJ26CA-AT	26	1	28.9	31.9	1	42.1	14.26
6SMAJ28A-AT	6SMAJ28CA-AT	6SMAJ28A-AT	6SMAJ28CA-AT	28	1	31.1	34.4	1	45.4	13.22
6SMAJ30A-AT	6SMAJ30CA-AT	6SMAJ30A-AT	6SMAJ30CA-AT	30	1	33.3	36.8	1	48.4	12.4
6SMAJ33A-AT	6SMAJ33CA-AT	6SMAJ33A-AT	6SMAJ33CA-AT	33	1	36.7	40.6	1	53.3	11.26
6SMAJ36A-AT	6SMAJ36CA-AT	6SMAJ36A-AT	6SMAJ36CA-AT	36	1	40	44.2	1	58.1	10.33
6SMAJ40A-AT	6SMAJ40CA-AT	6SMAJ40A-AT	6SMAJ40CA-AT	40	1	44.4	49.1	1	64.5	9.31
6SMAJ43A-AT	6SMAJ43CA-AT	6SMAJ43A-AT	6SMAJ43CA-AT	43	1	47.8	52.8	1	69.4	8.65
6SMAJ45A-AT	6SMAJ45CA-AT	6SMAJ45A-AT	6SMAJ45CA-AT	45	1	50	55.3	1	72.7	8.26
6SMAJ48A-AT	6SMAJ48CA-AT	6SMAJ48A-AT	6SMAJ48CA-AT	48	1	53.3	58.9	1	77.4	7.78
6SMAJ51A-AT	6SMAJ51CA-AT	6SMAJ51A-AT	6SMAJ51CA-AT	51	1	56.7	62.7	1	82.4	7.29
6SMAJ54A-AT	6SMAJ54CA-AT	6SMAJ54A-AT	6SMAJ54CA-AT	54	1	60	66.3	1	87.1	6.89
6SMAJ58A-AT	6SMAJ58CA-AT	6SMAJ58A-AT	6SMAJ58CA-AT	58	1	64.4	71.2	1	93.6	6.42
6SMAJ60A-AT	6SMAJ60CA-AT	6SMAJ60A-AT	6SMAJ60CA-AT	60	1	66.7	73.7	1	96.8	6.2
6SMAJ64A-AT	6SMAJ64CA-AT	6SMAJ64A-AT	6SMAJ64CA-AT	64	1	71.1	78.6	1	103	5.83
6SMAJ70A-AT	6SMAJ70CA-AT	6SMAJ70A-AT	6SMAJ70CA-AT	70	1	77.8	86	1	113	5.31
6SMAJ75A-AT	6SMAJ75CA-AT	6SMAJ75A-AT	6SMAJ75CA-AT	75	1	83.3	92.1	1	121	4.96

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Automotive MOV

MOV C Series

Part No.	Max. Operating Voltage(Vdc)	Varistor Voltage@1mA DC(V)	Clamping Voltage @ Test Current (@8/20μs)		Peak Current @8/20 (A) (A)	Vjump (5min) (V)	Energy Load dump (J)	Related Standards Symbol
			Vc(V)	Ip(A)				
For 12Vdc System								
CNR-07C180K	14	18±10%	36	2.5	750	20	12	○
CNR-10C180K	14	18±10%	36	5	1500	20	25	○
CNR-14C180K	14	18±10%	36	10	3000	20	50	○
CNR-20C180K	14	18±10%	36	20	6000	20	100	○
CNR-07C220K	18	22±10%	43	2.5	750	25	12	○
CNR-10C220K	18	22±10%	43	5	1500	25	25	○
CNR-14C220K	18	22±10%	43	10	3000	25	50	○
CNR-20C220K	18	22±10%	43	20	6000	25	100	○
CNR-07C270K	22	27±10%	53	2.5	750	30	12	○
CNR-10C270K	22	27±10%	53	5	1500	30	25	○
CNR-14C270K	22	27±10%	53	10	3000	30	50	○
CNR-20C270K	22	27±10%	53	20	6000	30	100	○
For 24Vdc System								
CNR-07C330K	26	33±10%	65	2.5	750	37	12	○
CNR-10C330K	26	33±10%	65	5	1500	37	25	○
CNR-14C330K	26	33±10%	65	10	3000	37	50	○
CNR-20C330K	26	33±10%	65	20	6000	37	100	○
CNR-07C390K	31	39±10%	77	2.5	750	42	12	○
CNR-10C390K	31	39±10%	77	5	1500	42	25	○
CNR-14C390K	31	39±10%	77	10	3000	42	50	○
CNR-20C390K	31	39±10%	77	20	6000	42	100	○
CNR-07C470K	38	47±10%	93	2.5	750	50	12	○
CNR-10C470K	38	47±10%	93	5	1500	50	25	○
CNR-14C470K	38	47±10%	93	10	3000	50	50	○
CNR-20C470K	38	47±10%	93	20	6000	50	100	○
For 42Vdc System								
CNR-07C680K	56	68±10%	135	2.5	750	65	12	○
CNR-10C680K	56	68±10%	135	5	1500	65	25	○
CNR-14C680K	56	68±10%	135	10	3000	65	50	○
CNR-20C680K	56	68±10%	135	20	6000	65	100	○

Related Standards

Symbols	○
Approval	

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Automotive MOV

MOV C Series Product Dimensions (Unit:mm)

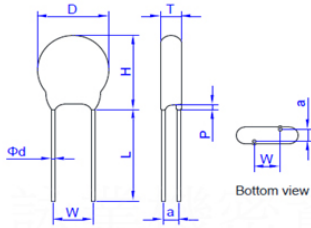


Fig 1. Straight Lead

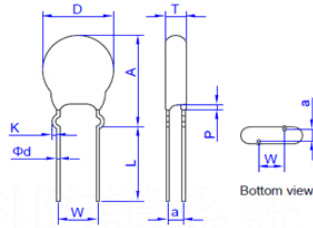


Fig 2. Outside Kink Lead

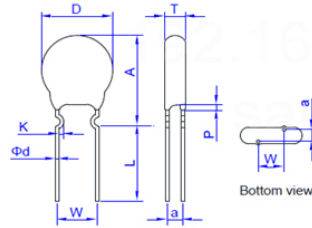


Fig 3. Inside Kink Lead

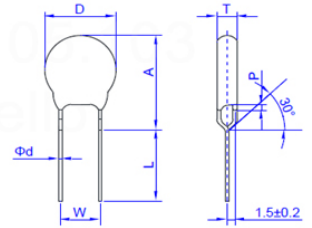


Fig 4. In Line Kink Lead

Model	07C		10C		14C		20C		
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
D	7.5	9.0	7.5	14.0	13.5	17.5	19.5	25.0	
H	-	12.0	-	17.0	-	20.5	-	28.0	
W	4.0	6.0	4.0	8.5	6.5	8.5	9.0	11.0	
ød	0.58	0.62	0.55	0.82	0.78	0.82	0.98	1.02	
P(max.)	3.0								
L(min.)	25.0								
K(Kink Lead)	0.8	1.6	0.8	1.8	1.0	1.8	1.0	1.8	
A(max.)	180K-271K	-	15.0	-	19.5	-	22.5	-	30.0
	>271K	-	15.5	-	20.5	-	23.5	-	31.0
T	See Tmax table								

* Short Cut Lead type TTXX the lead length (L) can 3.0~15mm (except 20C dia <10mm), see Ordering Note.

** a value see T max. table

Automotive MOV

MOV N Series

Part No.	Max. Operating Voltage(Vdc)	Varistor Voltage@1mA DC(V)	Clamping Voltage @ Test Current (@8/20μs)		Peak Current @8/20 (A) (A)	Vjump (5min) (V)	Energy Load dump (J)	Related Standards Symbol
			Vc(V)	Ip(A)				
CNR-07N220K	18	22±10%	43	2.5	2.5	750	3200	⊙
CNR-07N270K	22	27±10%	53	2.5	3	750	2500	⊙
CNR-07N330K	26	33±10%	65	2.5	4	750	1850	⊙
CNR-07N390K	31	39±10%	77	2.5	4.6	750	1750	⊙
CNR-07N470K	38	47±10%	93	2.5	5.5	750	1500	⊙
CNR-10N220K	18	22±10%	43	5	5	1500	7000	⊙
CNR-10N270K	22	27±10%	53	5	6	1500	5500	⊙
CNR-10N330K	26	33±10%	65	5	7.5	1500	4100	⊙
CNR-10N390K	31	39±10%	77	5	8.6	1500	3900	⊙
CNR-10N470K	38	47±10%	93	5	10	1500	3300	⊙
CNR-14N220K	18	22±10%	43	10	14	3000	16400	⊙
CNR-14N270K	22	27±10%	53	10	18	3000	13000	⊙
CNR-14N330K	26	33±10%	65	10	23	3000	9500	⊙
CNR-14N390K	31	39±10%	77	10	26	3000	8800	⊙
CNR-14N470K	38	47±10%	93	10	33	3000	7700	⊙

Related Standards

Note : VDE & CQC Certification are under approving

Symbols	⊙		□		
Approval					

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Automotive MOV

MOV N Series Product Dimensions (Unit:mm)

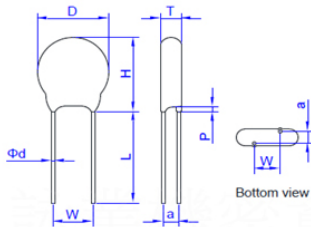


Fig 1. Straight Lead

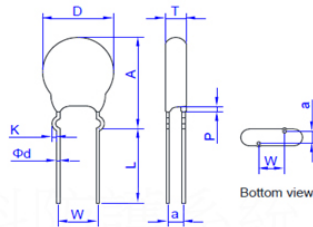


Fig 2. Outside Kink Lead

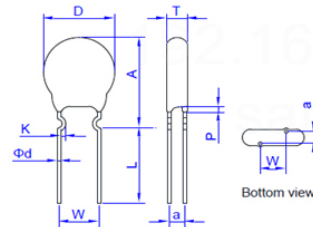


Fig 3. Inside Kink Lead

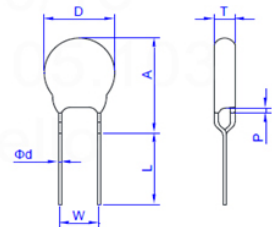


Fig 4. In Line Kink Lead

Model	05N		07N		10N		14N		18N		20N		
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
D	5.5	7.5	7.5	9.0	10.5	14.0	13.5	17.5	18.5	23.0	19.5	25.0	
H	-	10.0	-	12.0	-	17.0	-	20.5	-	26.0	-	28.0	
W	4.0	6.0	4.0	6.0	6.5	8.5	6.5	8.5	6.5	8.5	9.0	11.0	
ød	0.55	0.65	0.55	0.65	0.75	0.85	0.75	0.85	0.75	0.85	0.95	1.05	
P(max.)	3.0												
L(min.)	25.0												
K(Kink Lead)	0.8	1.6	0.8	1.6	1.0	1.8	1.0	1.8	1.0	1.8	1.0	1.8	
A(max.)	180K-271K	-	13.0	-	15.0	-	19.5	-	22.5	-	26.5	-	30.0
	>271K	-	13.0	-	15.0	-	20.5	-	23.5	-	27.0	-	31.0
T	See Tmax table												

* Short Cut Lead type TTX the lead length (L) can 3.0~15mm (expect 20N dia <10mm), see Ordering Note.

** a value see T max. table

Load Dump P5A suggestion MOV Models are as follows:

Power Systems	Surge	MOV suggestion 1(12J)	MOV suggestion 2 (25J)	MOV suggestion 3 (50J)
12V	Pulse 5a: 87V/400ms, 0.5-4Ω	125°C: CNR-07N220K Ipp=750A(8/20us)	125°C: CNR-10N220K Ipp=1500A(8/20us)	125°C: CNR-14N220K Ipp=3000A(8/20US)
24V	Pulse 5a: 174V/350ms, 1-8Ω	125°C: CNR-07N470K Ipp=750A(8/20us)	125°C: CNR-10N470K Ipp=1500A(8/20us)	125°C: CNR-14N470K Ipp=3000A(8/20us)

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Automotive ESD TVS Array

Automotive ESD TVS Array

Part number	Packing	Polarity	VWRM	VBR	IR	Ipp	Vc@Ipp	Cj	Air	Contact
			V	V(mim)	uA(max)	A	V	pF(Typ)	KV	KV
UCTA0541SA	DFN0603-2	BI	5	7	0.1	4.5	15	0.2	±25	±22
UCTA0541SA	DFN0603-2	BI	5	6	0.1	7	7	0.2	±25	±15
UCTA0511TB	DFN1006-2	UNI	5	6	1	1	10	0.5	±25	±20
UCTA0501MD	SOD-523	BI	5	5.5	0.1	5	15.5	7.5	±30	±30
UCSA0511LD	SOD-523	UNI	5	6	0.1	24	16	150	±30	±30
UCSA0811LD	SOD-523	UNI	8	9.2	0.1	15	20	100	±30	±30
UCSA1211LD	SOD-523	UNI	12	13.3	0.1	10	25	90	±30	±30
UCSA1511LD	SOD-523	UNI	15	16.7	0.1	7	30	50	±30	±30
UCSA1811LD	SOD-523	UNI	18	20.4	0.1	6	35	30	±30	±30
UCSA2411LD	SOD-523	UNI	24	26.7	0.1	5	48	30	±30	±30
UCSA0501LE	SOD-323	BI	5	6	0.1	19	24	80	±30	±30
UCSA0801LE	SOD-323	BI	8	9.2	0.1	15	28	70	±30	±30
UCSA1201LE	SOD-323	BI	12	13.3	0.1	13	32	60	±30	±30
UCSA1501LE	SOD-323	BI	15	16.7	0.1	10	36	50	±30	±30
UCSA1801LE	SOD-323	BI	18	20.4	0.1	8	45	40	±30	±30
UCSA2401LE	SOD-323	BI	24	26.7	0.1	7	50	30	±30	±30
UCSA3001LE	SOD-323	BI	36	40	0.1	6	68	20	±30	±30
UCSA0314TP	DFN2510-10L	UNI	3.3	5.5	0.1	18	16	0.4	±30	±30
UCTA0334TP	DFN2510-10L	UNI	3.3	4	0.1	6	7	0.4	±20	±12

Qualified to AEC-Q101

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