

DESCRIPTION

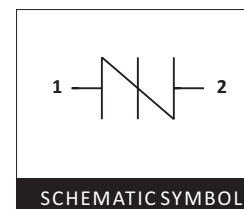
DO-214AA/SMB Thyristor solid state protection thyristor protect telecommunications equipment such as modems, line cards, fax machines and other CPE, This Series devices are used to enable equipment to meet various regulatory requirements including GR1089, ITUK.20, K.21 and K.45, IEC 60950, and TIA 968 (formerly known as FCC Part 68).

FEATURES

- > Excellent capability of absorbing transient surge
- > Quick response to surge voltage
- > Eliminates overvoltage caused by fast rising transients
- > Solid-state silicon technology, non degenerative

APPLICATIONS

- > Audio/Video line
- > Network and telecom
- > Data lines and security systems
- > Serial ports



PART NUMBER AND ELECTRICAL PARAMETER @ T=25°C RH = 45%-75%

PART NUMBER	V _{DRM} V Min.	I _{DRM} µA Max.	V _s V Max.	I _s mA	V _T V Max.	I _T A	I _H mA Min.	C _o pF Typ.
P0080SC	6	5	15	800	4	2.2	40	105
P0150SC	15	5	25	800	4	2.2	40	105
P0300SC	25	5	40	800	4	2.2	40	105
P0640SC	58	5	77	800	4	2.2	120	95
P0720SC	65	5	88	800	4	2.2	120	95
P0900SC	75	5	98	800	4	2.2	120	85
P1100SC	90	5	130	800	4	2.2	120	85
P1300SC	120	5	160	800	4	2.2	120	85
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	75
P2600SC	220	5	300	800	4	2.2	120	75
P3100SC	275	5	350	800	4	2.2	120	65
P3500SC	320	5	400	800	4	2.2	120	65
P4200SC	400	5	520	800	4	2.2	≤50	65

- 1、V_s is measured at 100KV/S
- 2、Off-state capacitance is measured in V_{DC}=2V, V_{RMS}=1V, F=1MHz
- 3、All measurements are made at an ambient temperature of 25°C

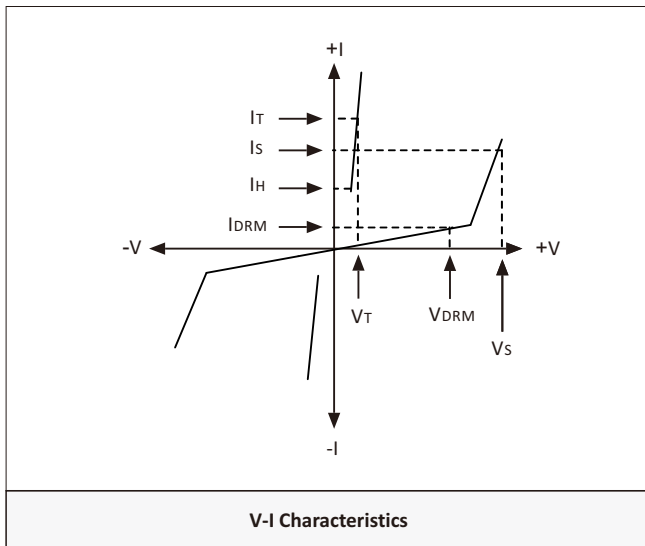
SURGE RATINGS

Series	IPP 2x10us (A)	IPP 8x20us (A)	IPP 10x560us (A)	IPP 10x1000us (A)	VPP 10x700us (V)	ITSM 50/60Hz (A)	di/dt (A/us)
P0080SC Thru P4200SC	500	400	150	100	6000	30	500

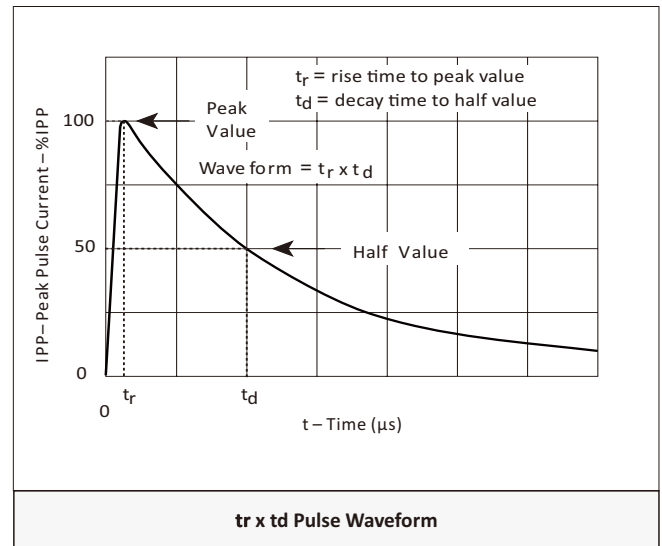
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
T _J	Operating Junction Temperature	-55 to +150	°C
T _s	Storage Temperature Range	-55 to +150	°C
R _{θJA}	Junction to Ambient on printed circuit	90	°C/W

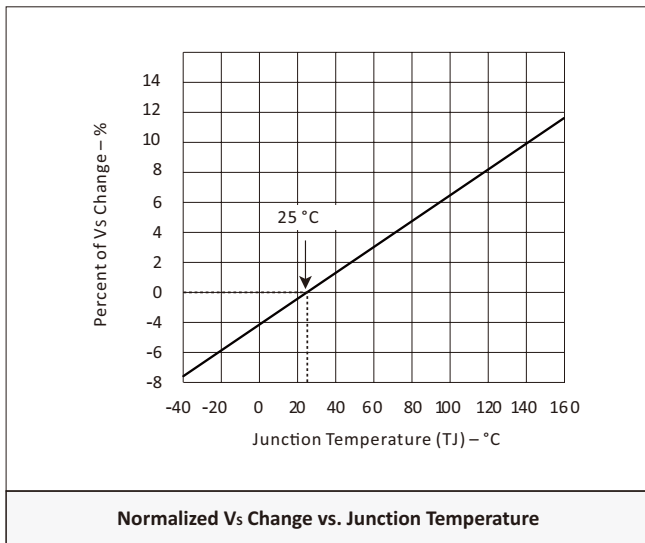
TYPICAL DEVICE CHARACTERISTICS



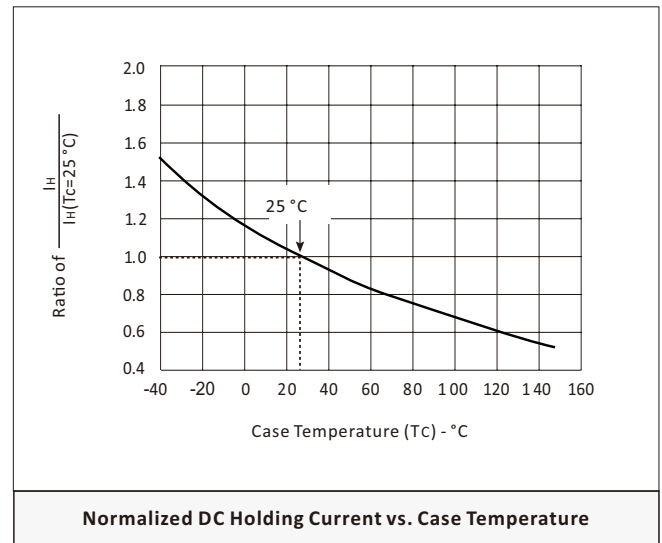
V-I Characteristics



$t_r \times t_d$ Pulse Waveform



Normalized V_s Change vs. Junction Temperature



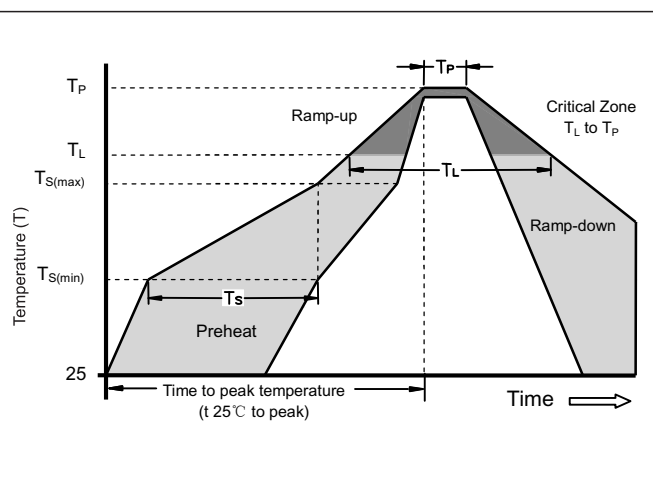
Normalized DC Holding Current vs. Case Temperature

ENVIRONMENTAL CHARACTERISTICS

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature:150±3°C,Bias=80%V _{DRM} ;Time:168H
High Temperature Life Test	Temperature:150°C;Time:168H
High-Low Temperature Cycle Test	Temperature:From -40°C to 150°C;Dwell Time:30min,10-100 Cycles
High Temperature&High Humidity Test	Temperature:85°C.Humidity:85%; Time:168H
Pressure Cooker Test	Temperature:121°C,2 atm.Humidity:100%; Time:24H to 168H
Resistance Of Soldering Heat	Temperature:260±5°C;Time Of Dip Soldering:10s,3 Times

SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max))	200°C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (TL) to peak)		3°C/second max
Ts(max) to TL - Ramp-up Rate		3°C/second max
Reflow	Temperature (TL) (Liquidus)	217°C
	Time (min to max) (ts)	60 – 150 seconds
Peak Temperature (TP)		260°C
Time within 5°C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (TP)		8 minutes Max.
Do not exceed		260°C



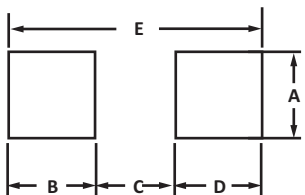
SMB PACKAGE DIMENSIONS

DIM	SMB PACKAGE DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.96	2.20	0.077	0.087
B	4.35	4.85	0.171	0.191
C	3.30	3.94	0.130	0.155
D	2.20	2.50	0.087	0.098
E	0.76	1.52	0.030	0.060
F	0.02	0.20	0.001	0.008
G	5.08	5.59	0.200	0.220
H	0.15	0.30	0.006	0.012

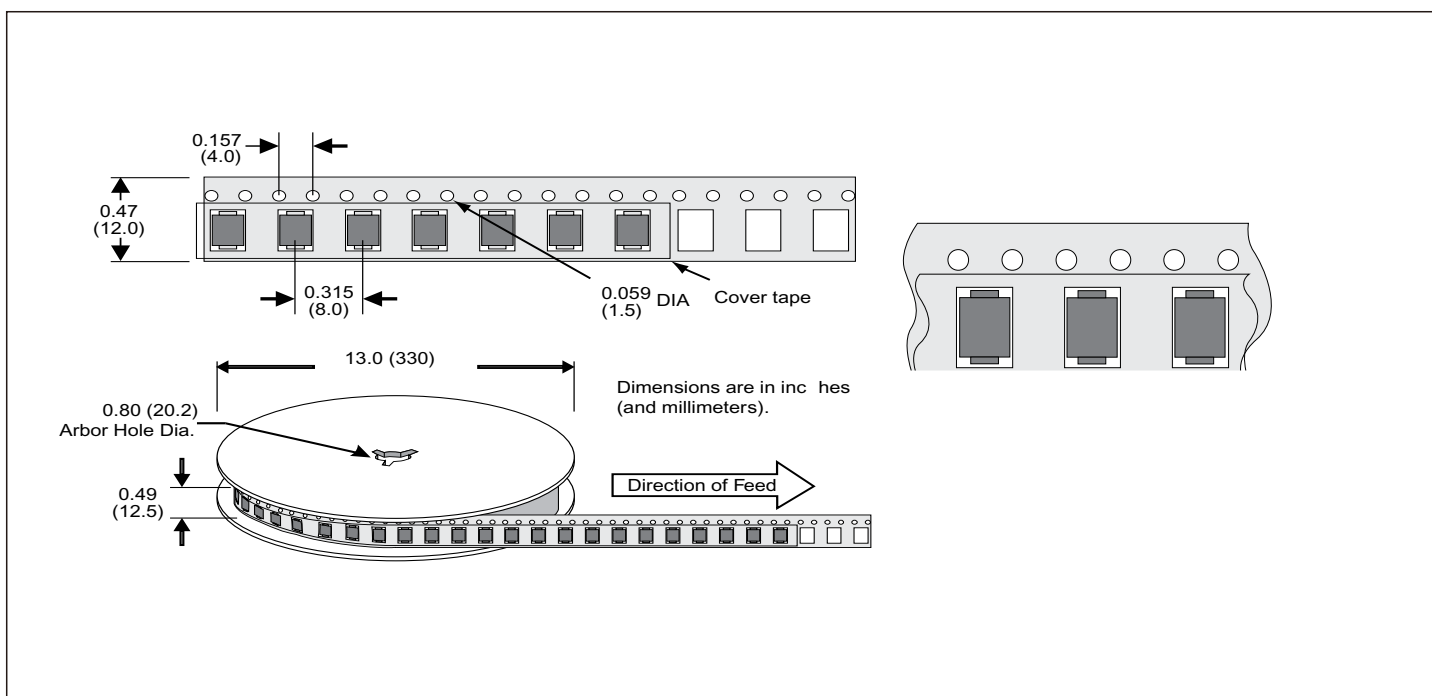
NOTES:
1. Dimensions are exclusive of mold flash and metal burrs

RECOMMENDED PAD LAYOUT DIMENSIONS

DIM	RECOMMENDED PAD LAYOUT DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.20	-	0.087	-
B	1.45	-	0.057	-
C	-	2.55	-	0.100
D	1.45	-	0.057	-
E	5.60 REF		0.220 REF	



TAPE AND REEL SPECIFICATION



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
PxxxxSC	DO-214AA	2500PCS	13"