Unictron Technologies Corp.

Surge arrester

2-Electrode arrester **JN2RxxxK Series**

Features	Applications
● Extremely small size ● Extremely fast response time	● Splitter
● Eexcllent SMD handing	● PCI Cards
● Stable performance over life	● Morden
● Very low capacitance	● Line cards
● High insulation resistance	
● Storage and operating temperature -40…+125°C	
● RoHS-compatible	
● UL No:E199538	

Electrical specifications

Part Number	DC Breakdown Voltage	Max. Impulse spark-over Voltage	Discharge Current (8/20us)	AC discharge Current	Impulse Life (10/1000us)	Minimum Insulation Resistance		Max. Capacitance 1MHz
	100V/S	1KV/us	10 times	50Hz,1S	100A			
	%	V	KA	A	Times	Test Voltage DC(V)	(GΩ)	(pF)
JN2R075K	75±30	≤600	3	3	100	50	≥1	≤ 1
JN2R090K	90±30	≤600	3	3	100	50	≥1	≤ 1
JN2R150K	150±20	≤600	3	3	100	100	≥1	≤ 1
JN2R230K	230±20	≤800	3	3	100	100	≥1	≤1
JN2R300K	300±20	≤850	3	3	100	100	≥1	≤1
JN2R350K	350±20	≤950	3	3	100	100	≥1	≤1
JN2R400K	400±20	≤1000	3	3	100	100	≥1	≤1
JN2R470K	470±20	≤1100	3	3	100	100	≥1	≤1
JN2R600K	600±20	≤1200	3	3	100	100	≥1	≤1
JN2R800K	800±20	≤1500	3	3	100	100	≥1	≤1
JN2R102K	1000±20	≤1000	3	3	100	100	≥1	≤1
JN2R122K	1200±20	≤1100	3	3	100	100	≥1	≤1
JN2R152K	1500±20	≤1200	3	3	100	100	≥1	≤1
JN2R202K	2000±20	≤1500	3	3	100	100	≥1	≤1

-Weight: 0.26 gram(approx.).

Part Number Code

JN	2R	xxx	K
(1)	(2)	(3)	(4)

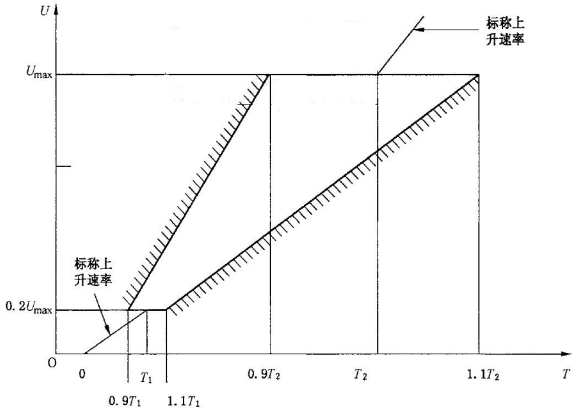
(1) JN: Brand Name;

(2) 2R: 2 Elements.

(3) xxx: DC breakdown Voltage;e.g.,090=90V

(4) K: Series

DC breakdown voltage



8/20us, Test wave

T1=1.25T=8us±20%

T2=20us±20%

10/700us,Test Wave

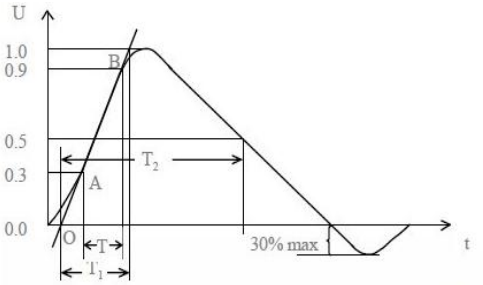
T1=1.67T=10us±20%

T2=700us±20%

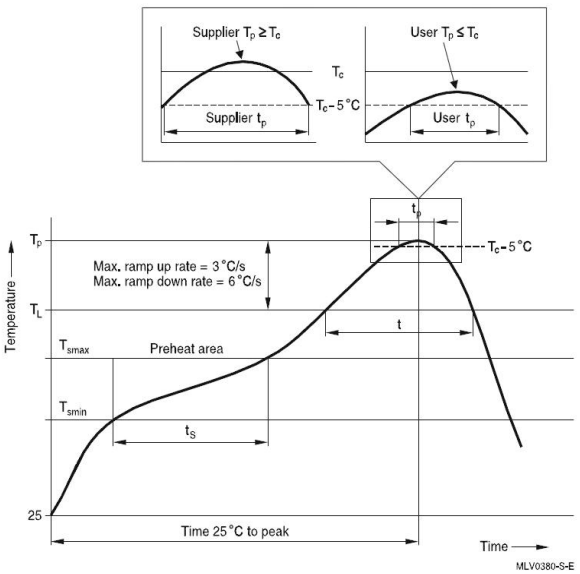
10/1000us,Test Wave

T1=1.67T=10us±20%

T2=1000us±20%



Recommended wave slodering profile



Reflow profile features		Sn- Pb eutectic assembly	Pb-free assembly
Preheat and soak - Temperature min - Temperature max - Time	 T_{smin} T_{smax} t_{smin} to t_{smax}	 100 °C 150 °C 60 ... 120 s	 150 °C 200 °C 60 ... 180 s
Average ramp-up rate	T_{smax} to T_p	max. 3 °C/ s	max. 3 °C/ s
Liquidous temperature Time at liquidous	T_L t_L	183 °C 60 ... 150 s	217 °C 60 ... 150 s
Peak package body temperature *, Classification temperature **	T_p, T_C	220 ... 235 °C **	245 ... 260 °C **
Time (t_p) ** within 5 °C of the specified classification temperature (T_C)		20 s ***	30 s ***
Average ramp-down rate	T_p to T_{smax}	max. 6 °C/ s	max. 6 °C/ s
Time 25 °C to peak temperature		max. 6 min	max. 8 min

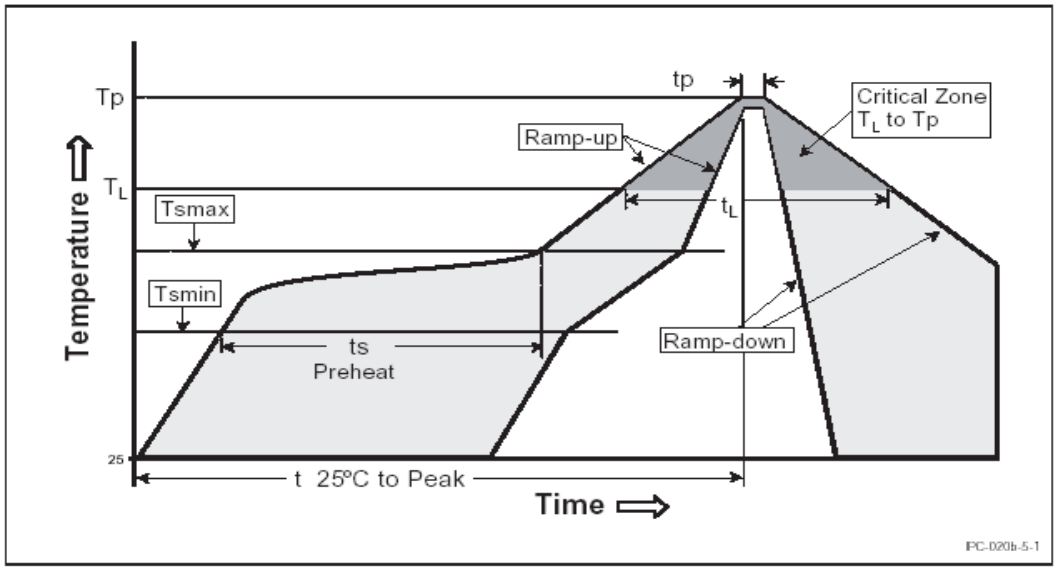
* = Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.
** = For details please refer to JEDEC J-STD-020D.
*** = Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

Recommended Soldering(Reflow soldering)

Soldering Method：

- Wave soldering：260℃, 10 Sec. max
- Reflow soldering：260℃, 30 Sec. max
- Hand soldering：350℃, 3 Sec. max

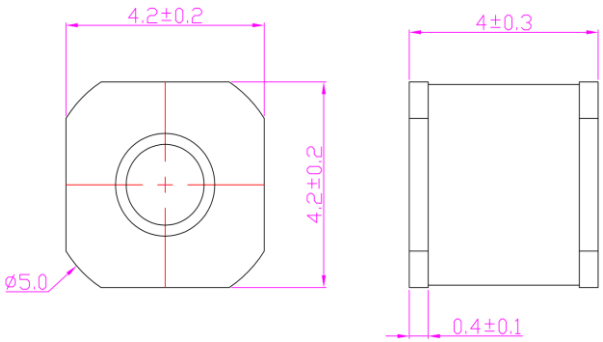
Recommended Reflow Soldering Curve



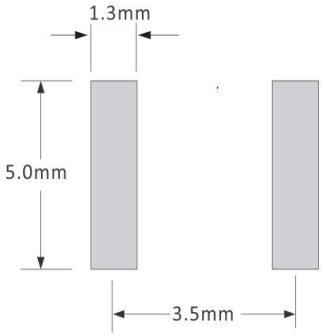
Reflow Condition		Pb-free assembly
Pre Heat	Temperature Min ($T_{s\ (min)}$)	150℃
	Temperature Max ($T_{s\ (max)}$)	200℃
	Time (Min to Max) (t_s)	60-180 seconds
Average Ramp-up Rate (Liquidus Temp (T_L) to peak)		3℃/second max
$T_{S\ (max)}$ to T_L-Ramp-up Rate		5℃/second max
Reflow	Temperature (T_L) (Liquidus)	217℃
	Time (t_L)	60-150 seconds
Peak Temperature (Tp)		$260^{+0/-5℃}$
Time within 5℃ of actual peak Temperature (t_p)		10~30 seconds
Ramp-down Rate		6℃/second max
Time 25℃ to peak Temperature (t 25℃ to peak)		8 minutes max
Do not exceed		260℃

2-Electrode arrester JN2RxxxK Series

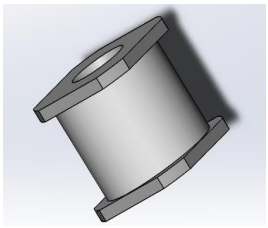
1) Sampling size in accordance to AQL(C=0)
2) DC spark-over voltage ±30% after load
3) Tests according to ITU-T Rec. K. 12 and IEC61643-1



Tin-plated

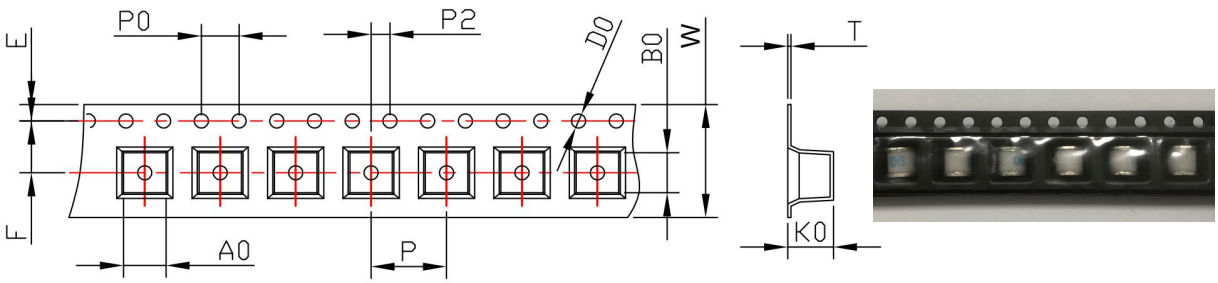


Recommended pad outline

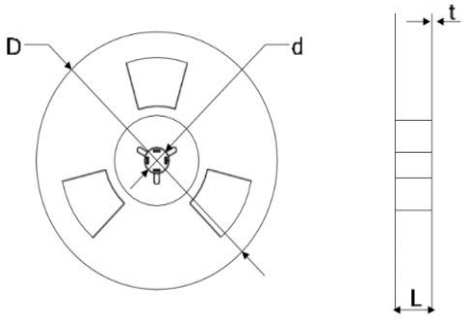


Packaging

One reel with 1000pcs



12.00 +0.30 -0.10	4.50 +0.10 -0.10	4.25 +0.10 -0.10	4.50 +0.10 -0.05	0.00 +0.00 -0.00	1.75 +0.10 -0.10	5.50 +0.10 -0.10	8.00 +0.10 -0.10	4.00 +0.10 -0.10	2.00 +0.10 -0.10	1.50 +0.10 -0.00	1.50 +0.10 -0.00	0.35 +0.05 -0.05
W	A_0	B_0	K_0	K_1	E	F	P	P_0	P_2	D_0	D_1	T



t	0.50	±0.10
D	330.00	±1.00
d	13.00	±0.50
L	20.00	±0.50
t	2.00	±0.20

Cautions and warnings

- Surge arresters must not be operated directly in power supply networks
- Surge arresters may become hot in case of longer periods of current stress (danger of burning).
- If the contacts of the surge arrester are defective, current stress can lead to the formation of sparks and loud noises.
- Surge arresters may be used only within their specified values. In case of overload, the head contacts may fail or the component may be destroyed.
- Damaged surge arresters must not be re-used.