Gas Discharge Tube

2R075~2R800SA-6 Series

GDTs (Gas Discharge Tubes) are placed in front of, and in parallel with, sensitive telecom equipment such as power lines, communication lines, signal lines and data transmission lines to help protect them from damage caused by transient surge voltages that may result from lightning strikes and equipment switching operations.These devices do not influence the signal in normal operation. However, in the event of an overvoltage surge, such as a lightning strike, the GDT switches to a low impedance state and diverts the energy away from the sensitive equipment.

GDTs offer a high level of surge protection, a broad voltage range, low capacitance, and many form factors including new surface mount devices, which makes them suitable for applications such as MDF (Main Distribution Frame) modules, high data-rate telecom applications (e.g. ADSL, VDSL), and surge protection on power lines. Their low capacitance also results in less signal distortion. When used in a coordinated circuit protection solution with PTC devices, TSS thyristor surge protection devices, and MOV (Metal Oxide Varistor) devices, they can help equipment manufacturers meet

ROHS

Benefits:

- Compact, small form factor suitable for efficient assembly
- Helps provide overvoltage fault protection against high energy surges
- Suitable for high-frequency applications

Features:

- 4.2*6.2mm devices
- Broad voltage range from 75V-800V
- Various form factors: surface mount, axial leads, no leads
- Low capacitance and insertion loss
- RoHS compliant
- Devices tested per ITU K.12 recommendations
- Non-radioactive materials

Applications:

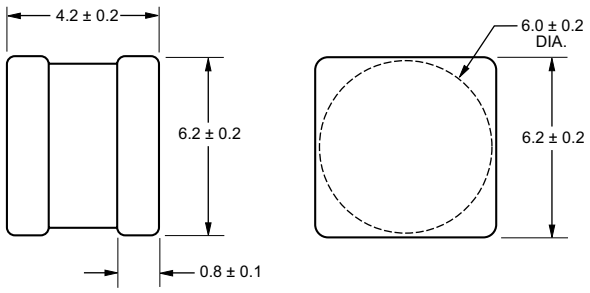
•Telecommunications
- MDF modules, xDSL equipment, RF system protection, antenna, base station

• Industrial and consumer electronics, such as
- Surge protectors
- Alarm system

Electriacl Characteristics

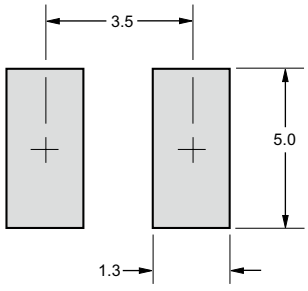
Type Number	Impulse Spark-over Voltage	Maximum Impulse Discharge Voltage	Maximum Surge Discharge Current	AC Discharge Current	Impulse Life	Maximum Insulation Resistance		Maximum Electrode Capacitance
	100v/s±20% Tolerance	1kv/μs	8/20μs,10times	50se,1sec	10/1000μs,100A	TestVoltage	(GΩ)	1MHZ
	(V)	(V)	(KA)	(A)	(Times)	DC(V)		(PF)
2R075SA-6	75	700	5	5	500	25	1	1.0
2R090SA-6	90	700	5	5	500	25	1	1.0
2R140SA-6	140	700	5	5	500	50	1	1.0
2R150SA-6	150	700	5	5	500	50	1	1.0
2R200SA-6	200	550	5	5	500	50	1	1.0
2R230SA-6	230	550	5	5	500	50	1	1.0
2R250SA-6	250	600	5	5	500	50	1	1.0
2R260SA-6	260	600	5	5	500	50	1	1.0
2R300SA-6	500	600	5	5	500	100	1	1.0
2R350SA-6	350	700	5	5	500	100	1	1.0
2R400SA-6	400	700	5	5	500	100	1	1.0
2R420SA-6	420	700	5	5	500	100	1	1.0
2R470SA-6	470	800	5	5	500	100	1	1.0
2R500SA-6	500	800	5	5	500	100	1	1.0
2R550SA-6	550	800	5	5	500	100	1	1.0
2R600SA-6	600	900	5	5	500	250	1	1.0
2R800SA-6	800	1000	5	5	500	250	1	1.0

Product Dimensions



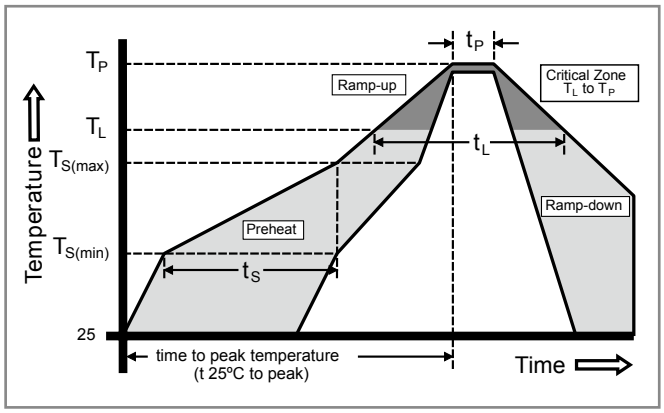
DIMENSIONS: MILLIMETERS

Recommended Pad Layout

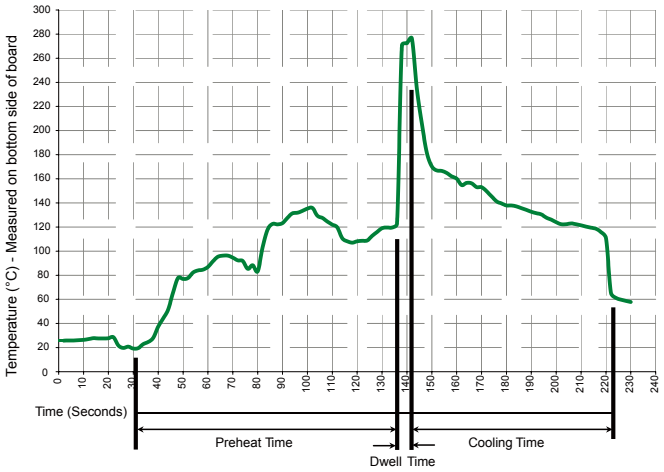


Soldering Parameters - Reflow Soldering (Surface Mount Devices)

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



Soldering Parameters - Wave Soldering (Thru-Hole Devices)



Recommended Process Parameters:

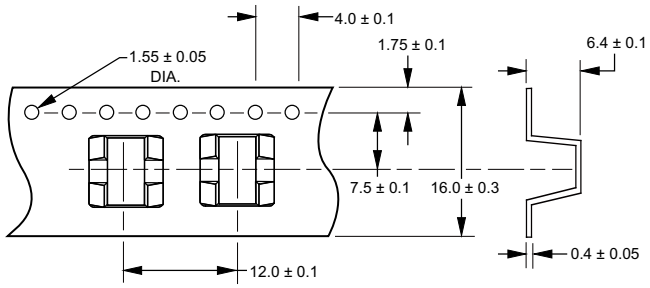
Wave Parameter	Lead-Free Recommendation
Preheat: (Depends on Flux Activation Temperature)	(Typical Industry Recommendation)
Temperature Minimum:	100° C
Temperature Maximum:	150° C
Preheat Time:	60-180 seconds
Solder Pot Temperature:	280° C Maximum
Solder Dwell Time:	2-5 seconds

Soldering Parameters - Hand Soldering

Solder Iron Temperature: 350° C +/- 5°C
Heating Time: 5 seconds max.

Packaging Specifi cations

The Model 2055-xx-SM ships standard reelpack (-RP), 800 pieces per reel, 2,400 pieces per box. Reel is 330 mm in diameter and 16 mm wide.



Part Number Code

2	R	3	5	0	S	A	-	6

Series	DC Line Voltage	Lead Type	Electrical Characteristics	Dimensions
		S=SMD	A=5000A	

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