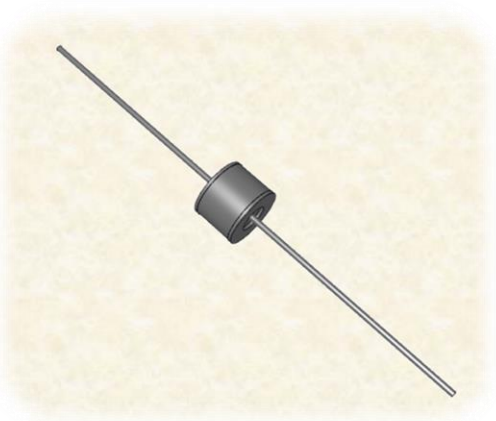
ALPINESEMI®

beyond boundaries...

ALP2R075(T,S)B/D-8 Through ALP2R800(T,S)B/D-8

GAS DISCHARGE TUBE

DESCRIPTION:



The ALP2R075(T,S)B/D-8 through ALP2R800(T,S)B/D-8 Series is 8mm diameter 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.

ALP2R075(T,S)B/D-8 through ALP2R800(T,S)B/D-8 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.

FEATURES:

- RoHS compliant and Lead- free
- GHz working frequency
- Excellent stability on multiple pulse duty cycle
- Excellent response to fast rising transients
- Ultra Low Insertion Loss
- 5KA/10KA surge capability tested with 8/20µS pulse as defined by IEC6100-4-5
- Ultra small devices offered in a variety of mounting lead forms
- Non-Radioactive
- Low Capacitance (<1.5pF)
- Voltage Ranges 75V to 800V
- UL Recognized
- Conforms to ITU-T K12, IEC6100-4-5

APPLICATIONS:

- Communication Equipment
- CATV Equipment
- Test Equipment
- Data Lines
- Power Supplies
- Telecom SLIC Protection
- Broadband equipment
- ADSL equipment including ADSL2+
- XDSL equipment
- Satellite and CATV equipment
- General Telecom equipment

ORDERING PART NUMBER

PART NUMBER	ORDERING PART NUMBER
ALP2R075(T,S)B/D-8 ~ ALP2R800(T,S)B/D-8	**ALP2R075(T,S)B/D-8-LT ~ ALP2R800(T,S)B/D-8-LT**

TYPICAL DEVICE CHARACTERISTICS

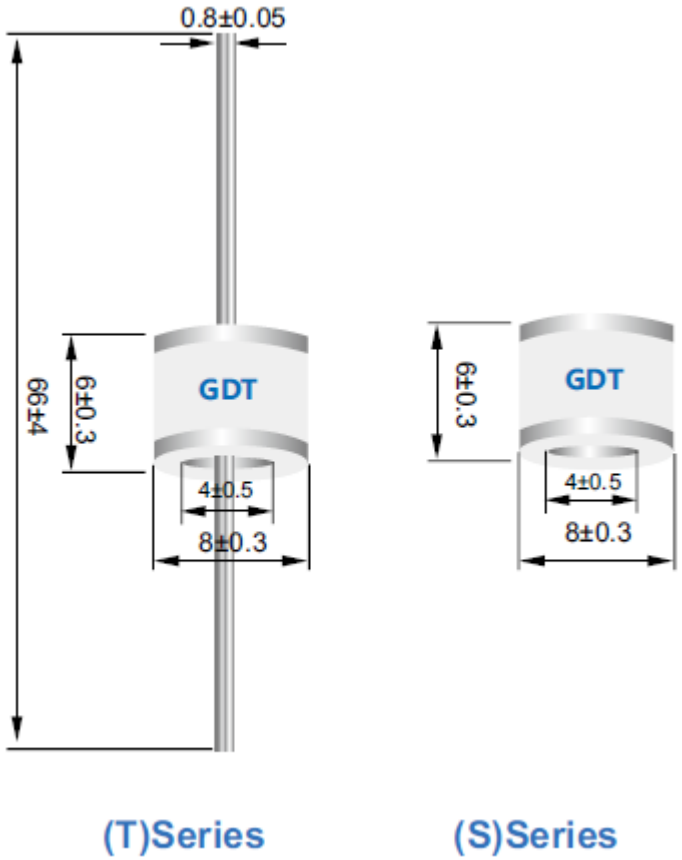
ELECTRICAL CHARACTERISTICS							
PART NUMBER	DC Sparkover voltage	Maximum Impulse sparkover voltage	Impulse life	Minimum Insulation resistance	Maximum Capacitance	Maximum surge Discharge Current	Alternation Discharge Current
	100v/s	1kv/µS	10/1000µS, 100A	Test Voltage GΩ	1MHz	@8/20µS, 10 times	50Hz 1S
	Volts	Volts	Times	DC (V)	pF	KA	A
ALP2R075(T,S)B-8	75±20%	600	500	DC 25V > 1	1.5	10	10
ALP2R090(T,S)B-8	90±20%	600	500	DC 50V > 1	1.5	10	10
ALP2R150(T,S)B-8	150±20%	700	500		1.5	10	10
ALP2R230(T,S)B-8	230±20%	800	500	DC 100V >1	1.5	10	10
ALP2R300(T,S)B-8	300±20%	900	500		1.5	10	10
ALP2R350(T,S)B-8	350±20%	1000	500		1.5	10	10
ALP2R400(T,S)B-8	400±20%	1000	500		1.5	10	10
ALP2R420(T,S)B-8	420±20%	1200	500	DC 250V >1	1.5	10	10
ALP2R470(T,S)B-8	470±20%	1200	500		1.5	10	10
ALP2R600(T,S)B-8	600±20%	1300	500		1.5	10	10
ALP2R800(T,S)B-8	800±20%	1500	500	-	1.5	-	-
ALP2R075(T,S)D-8	75±20%	600	500	DC 25V > 1	1.5	20	20
ALP2R090(T,S)D-8	90±20%	600	500	DC 50V >1	1.5	20	20
ALP2R150(T,S)D-8	150±20%	700	500		1.5	20	20
ALP2R230(T,S)D-8	230±20%	700	500	DC 100V >1	1.5	20	20
ALP2R300(T,S)D-8	300±20%	800	500		1.5	20	20
ALP2R350(T,S)D-8	350±20%	1000	500		1.5	20	20
ALP2R400(T,S)D-8	400±20%	1000	500		1.5	20	20
ALP2R420(T,S)D-8	420±20%	1200	500	DC 250V >1	1.5	20	20
ALP2R470(T,S)D-8	470±20%	1200	500		1.5	20	20
ALP2R600(T,S)D-8	600±20%	1300	500		1.5	20	20
ALP2R800(T,S)D-8	800±20%	1500	500		1.5	20	20

Notes:

1. Insulation resistance measure at:
   DC50V for the ALP2R075, ALP2R090, and ALP2R150
   DC200V for others.
2. Terms in accordance with ITU-T K.12 and GB/T 9043-2008
3. At delivery AQL 0.65 level 2 DIN ISO2859

PACKAGE INFORMATION

DIMENSION: Millimetre (mm)



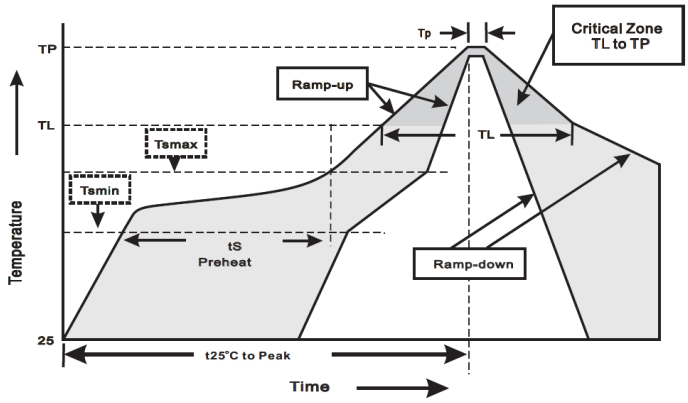
(T)Series (S)Series

SOLDERING PARAMETERS

SUGGESTED THERMAL PROFILES FOR SOLDERING PROCESSES

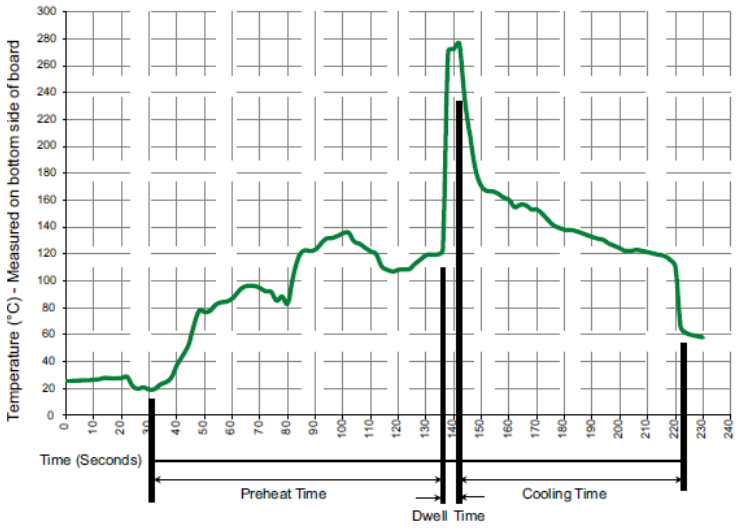
1. Storage environment: Temperature=5 °C~40 °C Humidity=55% ±25%

2. Reflow soldering of surface-mount devices



PROFILE FEATURE	PB – FREE ASSEMBLY
Average ramp-up rate (T_L to T_P)	<3 °C/sec
Preheat - Temperature Min (T_{smin}) - Temperature Max (T_{smax}) - Time (min to max) (t_s)	 150 °C 200 °C 60 ~ 180 sec
T_{smax} to T_L - Ramp-upRate	 <5 °C/sec
Time maintained above: - Temperature (T_L) - Time(tL)	 217 °C 60 ~ 150 sec
Peak Temperature (T_P)	260 °C-0/+5 °C
Time within 5 °C of actual Peak Temperature(tP)	10 ~ 30 sec
Ramp-down Rate	<6 °C/sec
Time 25 °C to Peak Temperature	<8 minutes
Do not exceed	260 °C

3. 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	110 °C
Temperature Maximum	150 °C
Preheat Time:	60 ~ 180 sec
Solder Pot Temperature:	280 °C Max
Solder Dwell Time:	2-5 Seconds

4. Soldering Parameters - Hand Soldering

Solder Iron Temperature: 350° C +/- 5°C

Heating Time: 5 seconds max.

CUSTOMER NOTE:

DISCLAIMER

The product information and the selection guide facilitates the selection of the ALPINESEMI™'s Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review the Data sheet(s) so as to confirm that the Device(s) meets functionality parameters for your application. The information furnished on the Data Sheet and the ALPINESEMI™'s Web Site is believed to be accurate and reliable at the time of preparation of this document. ALPINESEMI™ however, does not assume any inaccuracies that may arise when the components are mounted and removed. Furthermore, ALPINESEMI™ does not assume liability whatsoever, arising out of the application or the use of any of ALPINESEMI™'s product(s). Neither, does it convey any license under its patent rights nor the rights of others. These products are not guaranteed for use in life saving/support appliances or systems. ALPINESEMI™'s customers using these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and ALPINESEMI™ will not be responsible in any way(s) for any damage(s) resulting from such use.

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Component Disposal Instructions

1. ALPINESEMI™ Semiconductor Devices are RoHS compliant and hence customers are requested to dispose as per the prevailing Environmental Legislation put forth in their specific country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

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