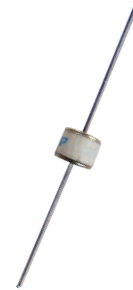


Gas Discharge Tube

GSP***E Series

Features

- Electronic stability
- Small volume, easy to placement machine operation
- Large flow capacity, impact resistant ability
- Static electricity capacity, good insulation
- Reaction speed is 50 ns - 150 ns
- Storage and operating temperature -40~125°C
- High energy discharge



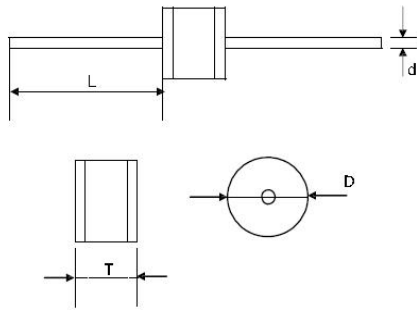
Applications

- ADSL MODEM、FAX、TELEPHONE
- RS485、RS232、CAN level of protection
- CATV
- Power supply prevents thunder common-mode protection
- Line cards

Electrical Characteristics

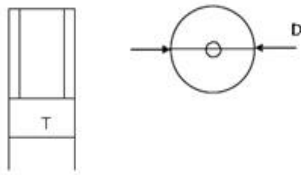
Part Number	DC Spark-over Voltage (@100V/s) (V)	Impulse Spark-over Voltage (@1KV/μs) (V)	Discharge Current 10hits (@8/20μs) (KA)	AC Discharge Current (@50Hz) (A)	Min. Insulation Resistance (@DC)		Max. Capacitance (@1MHz) (pF)
					(GΩ)	Test Voltage (V)	
GSP075E	75±30%	600	10	10	1	50	1
GSP090E	90±30%	600	10	10	1	50	1
GSP150E	150±20%	600	10	10	1	100	1
GSP350E	350±20%	950	10	10	1	100	1
GSP400E	400±20%	1000	10	10	1	100	1
GSP470E	470±20%	1100	10	10	1	100	1
GSP600E	600±20%	1200	10	10	1	100	1
GSP800E	800±20%	1500	10	10	1	100	1

Dimensions



Unit:mm

item	dimensions	
	spec.	Tolerance
D	8	±0.2
T	6	±0.2
L	25	Min
d	0.8	±0.1

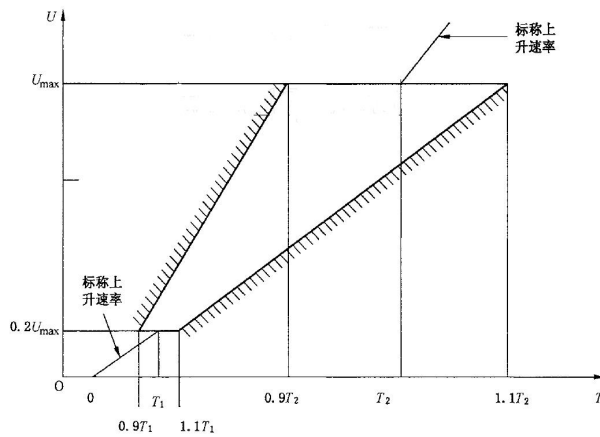


Unit:mm

item	dimensions	
	spec.	Tolerance
D	8	±0.2
T	6	±0.2

Surge arrester

DC breakdown voltage



8/20us, Test wave

$T1=1.25T=8\mu s \pm 20\%$

$T2=20\mu s \pm 20\%$

10/700us, Test Wave

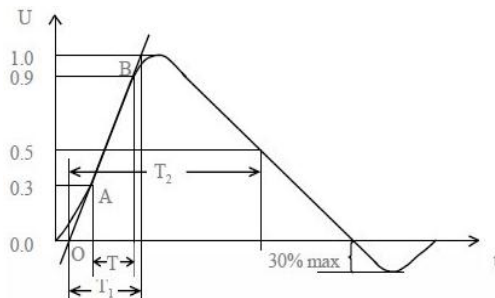
$T1=1.67T=10\mu s \pm 20\%$

$T2=700\mu s \pm 20\%$

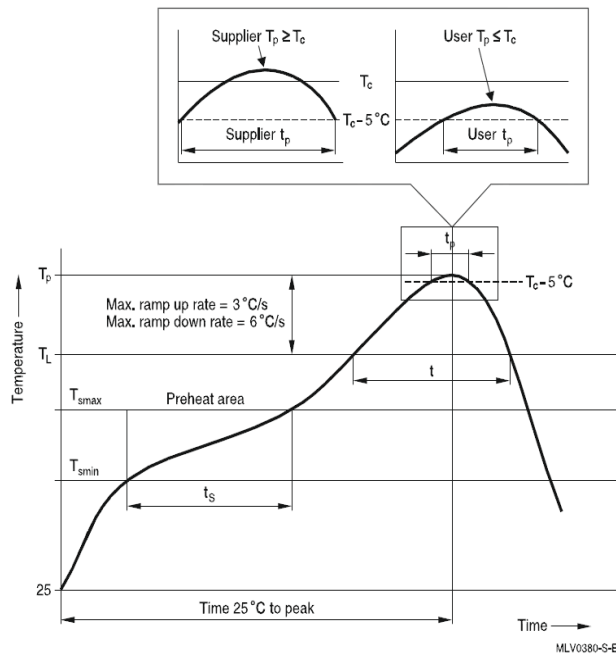
10/1000us, Test Wave

$T1=1.67T=10\mu s \pm 20\%$

$T2=1000\mu s \pm 20\%$



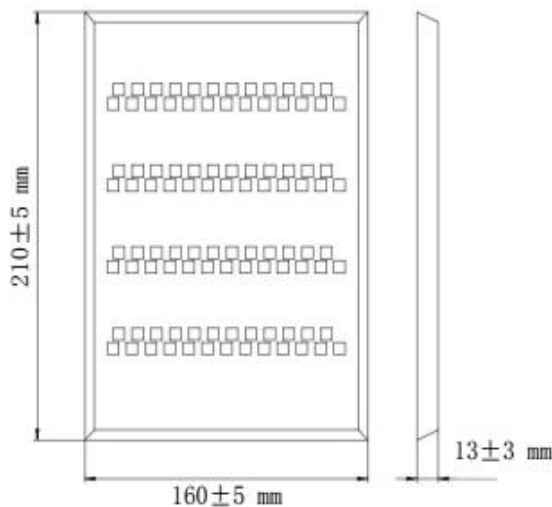
Recommended wave soldering profile



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.

Packaging 100pcs/reel



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.