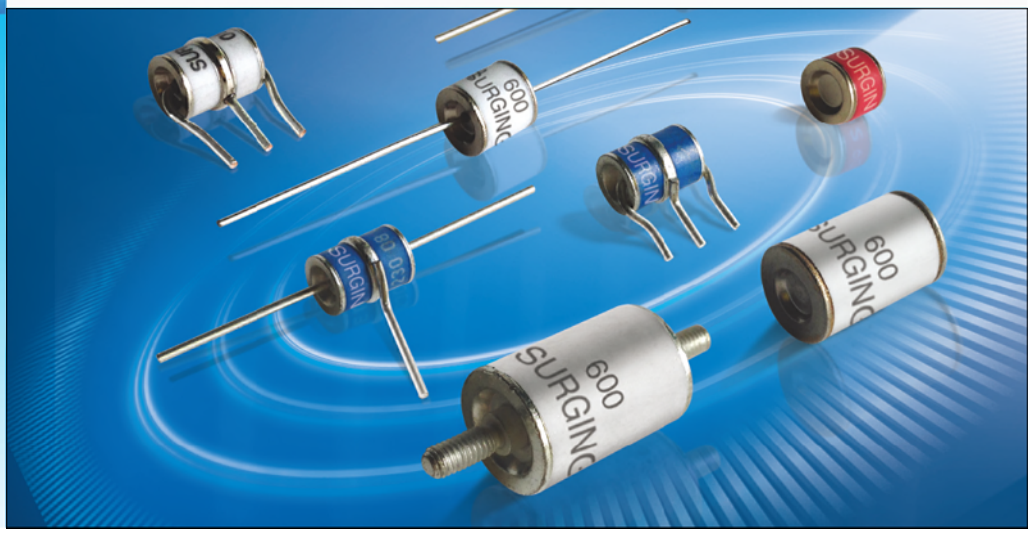
SURGiNG
紹 鑫 實 業



SurgeArresters

陶瓷气体放电管

SX6 Series

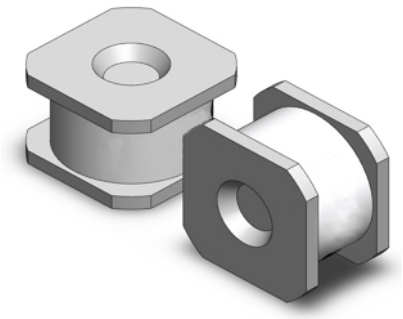
Gas Discharge Tubes - SX6 Series

Description

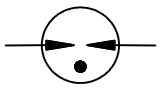
Gas discharge tubes (GDT) use noble gasses enclosed in ceramic tubes to provide an alternate circuit path for voltage spikes. The ceramic envelope and with nickel connectors allow for high loads. SX6 Gas Discharge Tubes (GDT) series has a surge rating of 5kA, 8/20μs.Offered in a Squared Surface Mount package, which helps to make pick and place on PCB process easier.

This GDT series is perfectly suited for broadband equipment applications. The GDT's low off-state capacitance is compatible with high bandwidth applications and this capacitance loading value does not vary if the voltage across the GDT changes.

SX6 Gas Discharge Tube (GDT) series are specifically designed for protection of electrical, multimedia, and communication equipment against over voltage transients in surface mount assembly applications.



Electrical symbol



Features

- Excellent response to fast rising transients
- Stable breakdown voltage
- GHz working frequency
- 8/20μs Impulse current capability:5KA
- Surface Mount package
- Non-Radioactive
- Ultra Low capacitance (<1.0pF)
- Lead-free compliant
- RoHS and REACH compliant
- UL Recognized
- Size: 4.2mm*6.2mm*6.2mm
- Storage and operational temperature: -40~+90°C

Applications

- CATV equipment
- Antennas
- RS 485
- Telecom Base Station
- Power Supply AC Main
- EV power Charging
- Inverter/Variable Frequency Drivers (VFDs)
- IEEE 802.3 compliant Ethernet interfaces
- Broad Band equipment
- xDSL, ADSL, ADSL2, VDSL, and VDSL2
- Medical Electronics
- Test Equipment
- General Telecom Equipment
- Renewable Energy

Part Number Code

SX60 - 230X SMDT

Series:
SX6系列：φ6.2*4
SX5系列：φ5.5*6

LeadType:
0=SMD
1=Thrust

DCLineVoltage:
90X=90V
102X=1000V

Package:
SMD=Cylinder No Lead
SMDT=2-SMD Cylinder Square End

Gas Discharge Tubes - SX6 Series

Electrical Characteristics

Part Number	DC Spark-over Voltage [1) 2)] @100V/S	Impulse Spark-over Voltage		Insulation Resistance [3)]	Capacitance @1MHz	Life Ratings			
		100V/μS	1KV/μS			Impulse Discharge Current @8/20μS		AC Discharge Current @50Hz 1S	Impulse Life @10/1000μS 100A
		Max	Max	Min	Max	Nominal ±5 times	Max 1 time	Nominal 5 times	Min
	V	V	V	GΩ	pF	KA	KA	A	Times
SX60-75XSMDT	75±20%	500	600	1	1.0	5	10	5	300
SX60-90XSMDT	90±20%	500	600	1	1.0	5	10	5	300
SX60-150XSMDT	150±20%	500	600	1	1.0	5	10	5	300
SX60-230XSMDT	230±20%	600	700	1	1.0	5	10	5	300
SX60-250XSMDT	250±20%	600	700	1	1.0	5	10	5	300
SX60-300XSMDT	300±20%	700	800	1	1.0	5	10	5	300
SX60-350XSMDT	350±20%	750	850	1	1.0	5	10	5	300
SX60-400XSMDT	400±20%	800	900	1	1.0	5	10	5	300
SX60-470XSMDT	470±20%	800	900	1	1.0	5	10	5	300
SX60-600XSMDT	600±20%	900	1000	1	1.0	5	10	5	300
SX60-800XSMDT	800±20%	1300	1400	1	1.0	5	10	5	300

Glow Voltage at 10mA.....	~60V
Arc Voltage at 1A.....	~10V
Glow to Arc transition Current.....	~0.3A
Weight.....	~0.62g
Operation and storage temperature.....	-40~+90°C
Climatic category (IEC 60068-1).....	40/90/21
Surface treatment.....	Matte-tin plated

[1)] At delivery AQL 0.65 level II, DIN ISO 2859

[2)] In ionized mode

[3)] Insulation Resistance Measuring Voltage:

75V at DC 25V

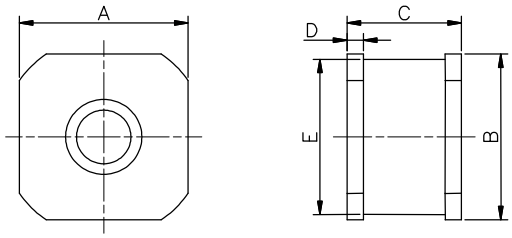
90V~150V at DC 50V

Other at DC 100V

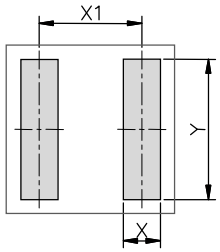
Terms in accordance with ITU-T Rec. K.12, IEC 61643-311, GB/T 9043.

Gas Discharge Tubes - SX6 Series

Dimensions

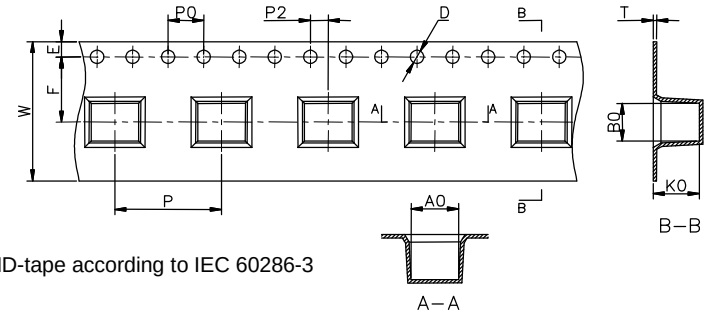


Symbol	Millimeters	Inches
A	6.2±0.2	0.244±0.008
B	6.2±0.2	0.244±0.008
C	4.2±0.3	0.165±0.012
D	0.6±0.1	0.024±0.004
E	Φ6±0.1	Φ0.236±0.004
X	1.3	0.051
X1	3.5	0.138
Y	7.0	0.276

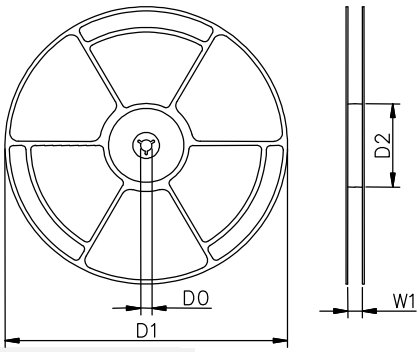


Recommended Soldering Pad Layout

Taping and Reel Specifications



SMD-tape according to IEC 60286-3



Symbol	Millimeters	Inches
W	16±0.3	0.630±0.012
A0	4.6±0.1	0.181±0.004
B0	6.5±0.1	0.256±0.004
K0	6.7±0.1	0.264±0.004
P	12±0.1	0.472±0.004
F	7.5±0.1	0.295±0.004
E	1.75±0.1	0.069±0.004
D	1.5+0.1/-0.0	0.059+0.004/-0.0
P0	4±0.1	0.157±0.004
P2	2±0.1	0.079±0.004
T	0.5±0.1	0.020±0.004
D0	13.3±0.15	0.524±0.006
D1	330±2	12.992±0.079
D2	100+1/-2	3.937+0.039/-0.079
W1	16.5±0.4	0.65±0.016

Packaging Quantity:

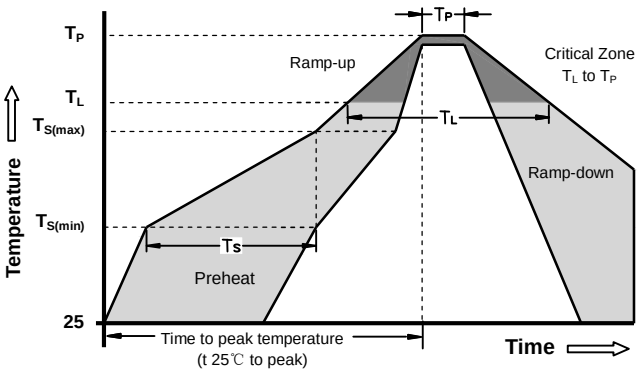
800 PCS per reel (13”)

3 reels per inner box

2400 PCS per inner box

Gas Discharge Tubes - SX6 Series

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 Seconds
Average ramp up rate (Liquids Temp T_L) to peak		3°C/second max
$T_{S(max)}$ to TL - Ramp-up Rate		5°C/second max
Reflow	**- Temperature (T_L) (Liquids)**	217°C
	- Time (min to max) (t_s)	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

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SURGING:

MF52E103F3950 SX51-362X X5-470XSMDT MF52A153J3950 NSMD200 SX60-800XSMDT X5-300XSMDT T2A300V 14D821K P0300SC SMD0805-100 SX51-152X X5-600XSMDT 14D471K SMB400XM SX51-150X SXH81-122X 10D471K SXH81-162X MF52A203J3950 SE83-350X SME800XM SXH80-470X SXH81-252X SXH81-500X 5D-13 MF52B103F3435L100 SX51-800X SXH81-400X BS0060M