

SURGiNG

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Surge Arresters

陶瓷气体放电管

SXH8 Series

Gas Discharge Tubes - SXH8 Series

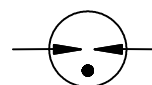
Description

SXH8 Gas Discharge Tubes (GDT) series provides high levels of protection against fast rising transients caused by lightning disturbances. Offered in a miniature surface mount package, it has a surge rating of 10KA/5KA 8/20 μ s.

SXH8 GDTs are high voltage (1000-5000V) components designed for surge protection and high isolation applications. It is also suitable for applications for which bias voltage or signal levels of several hundred volts are normally present. SXH8 GDTs can be used in conjunction with MOVs (Metal Oxide Varistors) to provide superior protection performance for AC applications.



Electrical symbol



Features

- I Voltage Ranges 1000V to 3600V
- I Excellent response to fast rising transients
- I 8/20 μ s Impulse current capability: 10KA/5KA
- I Non-Radioactive
- I Ultra Low capacitance (<1.5pF)
- I Lead-free compliant
- I RoHS and REACH compliant
- I Size: 8.3mm*6mm
- I Storage and operational temperature: -40~+125°C

Applications

Automotive:

- I On-board chargers
- I Vehicle charging stations

Others:

- I LED lighting
- I Power supply
- I Photovoltaic
- I Air conditioning

Part Number Code

SXH8 0 - 600 X SMDT

Series:

SX5系列: ϕ 5.5*6
SXH8系列: ϕ 8*6

Lead Type:

0=SMD
1=Thrust

DC Line Voltage:

90X=90V
600X=600V
102X=1000V

Package:

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

Gas Discharge Tubes - SXH8 Series

Electrical Characteristics

Part Number	DC Spark-over Voltage ^{1) 2)} @100V/S	Impulse Spark-over Voltage		Insulation Resistance ³⁾	Capacitance @1MHz	Glow Voltage @10mA	Arc Voltage @1A	AC withstand voltage @5mA 1Min	Life Ratings				
		100V/μS	1KV/μS						Impulse Discharge Current @8/20μS		AC Discharge Current @50Hz 1S		
		Max	Max						Min	Max	Nominal ±5 times	Max 1 time	Nominal 5 times
		V	V						V	GΩ	pF	V	V
SXH80-102XSMD	1000±20%	1600	1800	1	1.5	160	15	500	10	15	10		
SXH80-122XSMD	1200±20%	1800	2000	1	1.5	160	15	600	10	15	10		
SXH80-142XSMD	1400±20%	2200	2400	1	1.5	160	15	700	10	15	10		
SXH80-152XSMD	1500±20%	2300	2500	1	1.5	160	15	750	10	15	10		
SXH80-162XSMD	1600±20%	2400	2600	1	1.5	160	15	800	10	15	10		
SXH80-182XSMD	1800±20%	2600	2800	1	1.5	160	15	900	5	10	5		
SXH80-202XSMD	2000±20%	2800	3000	1	1.5	260	30	1000	5	10	5		
SXH80-242XSMD	2400±20%	3200	3400	1	1.5	260	30	1200	5	10	5		
SXH80-252XSMD	2500±20%	3300	3500	1	1.5	260	30	1300	5	10	5		
SXH80-272XSMD	2700±20%	3500	3700	1	1.5	260	30	1400	5	10	5		
SXH80-302XSMD	3000±20%	3700	3900	1	1.5	260	30	1600	5	10	5		
SXH80-352XSMD	3500±20%	4300	4500	1	1.5	260	30	1800	5	10	5		
SXH80-362XSMD	3600±20%	4400	4600	1	1.5	260	30	1900	5	10	5		
SXH80-402XSMD	4000±20%	5000	5500	1	1.5	280	35	2100	5	10	5		
SXH80-452XSMD	4500±20%	5500	6000	1	1.5	280	35	2300	5	10	5		
SXH80-502XSMD	5000±20%	6000	6500	1	1.5	280	35	2600	5	10	5		
Glow to Arc transition Current.....					~0.5A								
Weight.....					~1.35g								
Operation and storage temperature.....					-40~+125°C								
Climatic category (IEC 60068-1).....					40/125/21								
Surface treatment.....					Matte-tin plated								

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

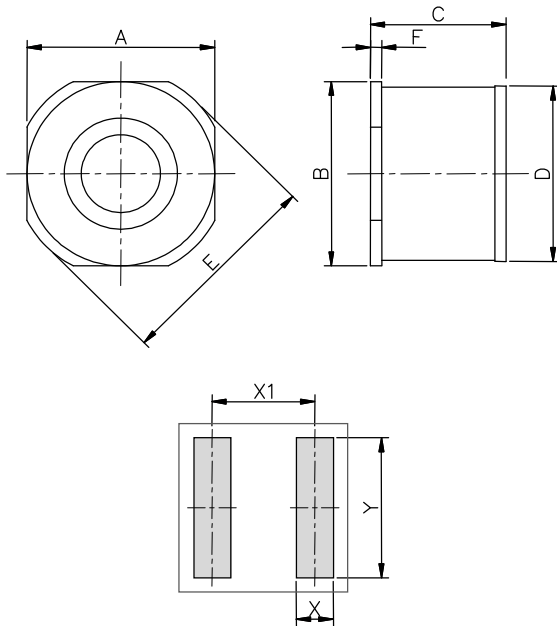
²⁾ In ionized mode.

³⁾ Insulation Resistance Measuring Voltage at DC 100V.

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

Gas Discharge Tubes - SXH8 Series

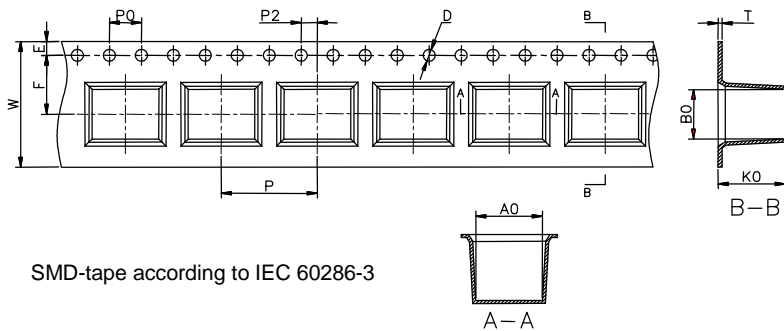
Dimensions



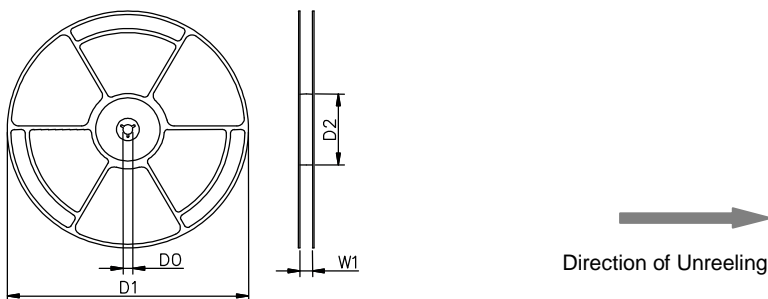
Recommended Soldering Pad Layout

Symbol	Millimeters	Inches
A	8.3±0.2	0.327±0.008
B	8.3±0.2	0.327±0.008
C	6±0.3	0.236±0.012
D	Φ8±0.2	Φ0.315±0.008
E	Φ9.3±0.2	Φ0.366±0.008
F	0.5±0.1	0.020±0.004
X	1.2	0.047
X1	5.8	0.228
Y	9.0	0.354

Taping and Reel Specifications



SMD-tape according to IEC 60286-3



Symbol	Millimeters	Inches
W	16±0.3	0.630±0.012
A0	8.3±0.1	0.327±0.004
B0	6.3±0.1	0.248±0.004
K0	8.4±0.1	0.331±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:

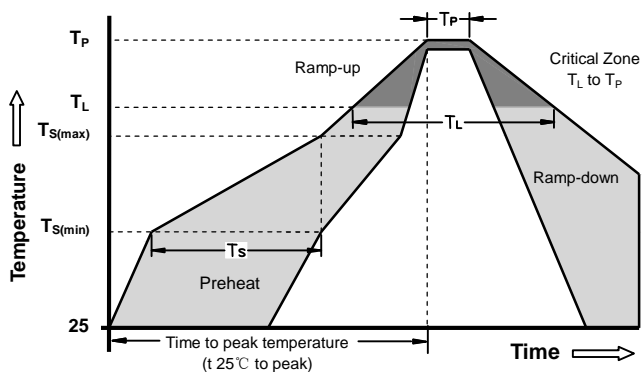
500 PCS per reel (13")

3 reels per inner box

1500 PCS per inner box

Gas Discharge Tubes - SXH8 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 T_L - 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