

Gas Discharge Tube (GDT) Datasheet

Features

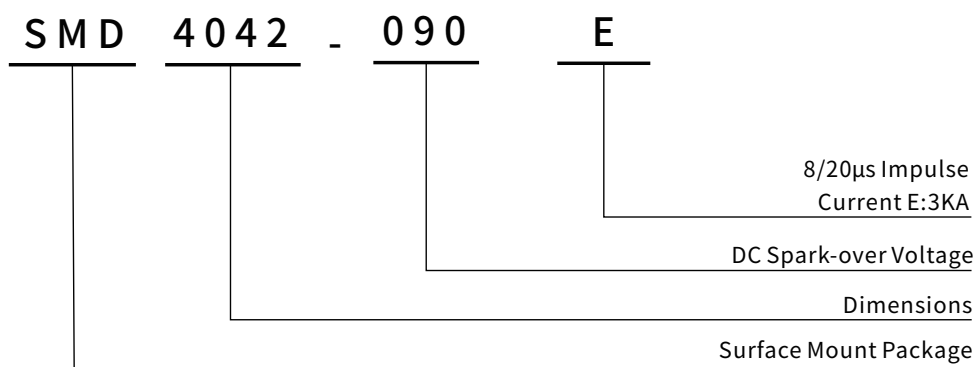
- Excellent response to fast rising transients
- Stable breakdown voltage
- Low capacitance and Insertion Loss
- High insulation resistance
- Dimensions 4.0*4.2*4.2 mm
- Storage and operating temperature: -40°C ~ +85°C
- Reliable to Protect Electrostatic Surge
- High Current Handling Capability @8/20μs;
- Moisture sensitivity level :Level 1

DC Spark-over Voltage
90V to 1000V

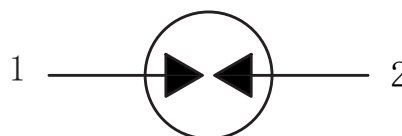
Applications

- Test equipment
- AC Power
- Power supplies
- Telephone Interface, Line cards
- General Telecommunications equipment

Part Number Code



SMD4042



SMD4042 SERIES

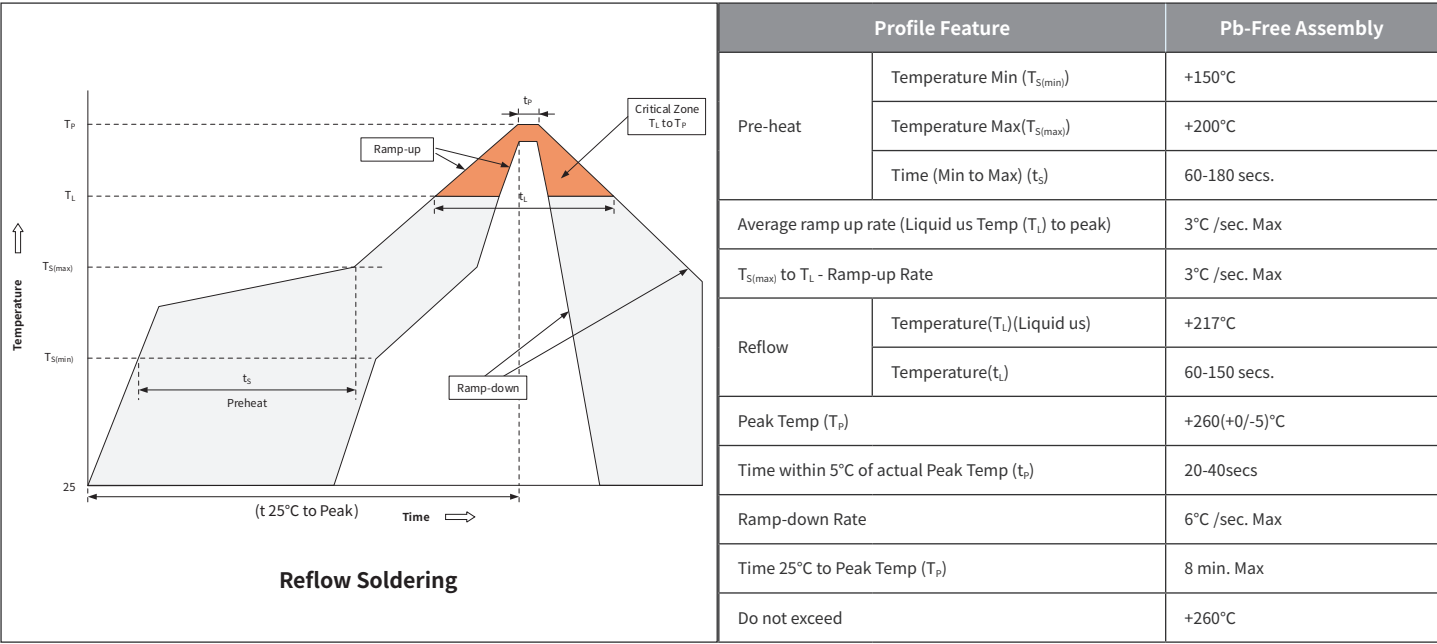
Surface Mount Gas Discharge Tube

● **Electrical Characteristics** (Ta=25°C Unless otherwise specified)

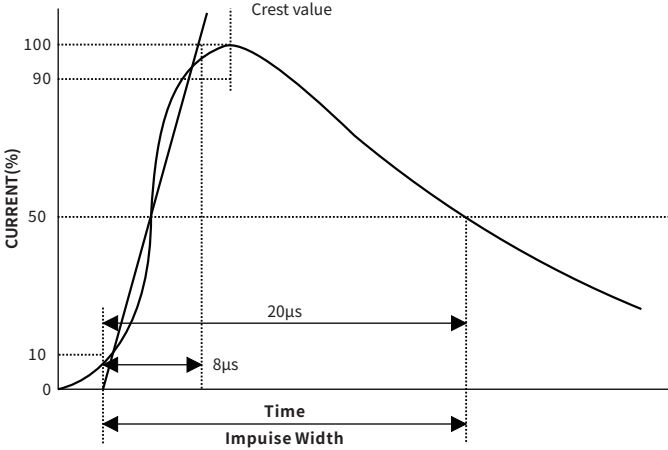
Part Number	DC Spark-over Voltage	Maximum Impulse Spark-over Voltage	Typical Glow Voltage	Typical Arc Voltage	Nominal Impulse Discharge Current @8/20μs	Alternating Discharge Current @8/20μs	Impulse Life@ 10/1000μs	Minimum Insulation Resistance		Maximum Capacitance
	100V/S	1000V/μs	10mA	1A	±5times	50Hz,1sec 10 times	100A	Test Voltage	GΩ	1MHz
	(V)	(V)	(V)	(V)	(KA)	(A)	(times)	DC(V)		(pF)
SMD4042-090E	90±20%	600	60	10	3	3	300	50	1	0.8
SMD4042-150E	150±20%	600	60	10	3	3	300	50	1	0.8
SMD4042-200E	200±20%	700	60	10	3	3	300	100	1	0.8
SMD4042-230E	230±20%	700	60	10	3	3	300	100	1	0.8
SMD4042-300E	300±20%	800	60	10	3	3	300	100	1	0.8
SMD4042-350E	350±20%	850	60	10	3	3	300	100	1	0.8
SMD4042-400E	400±20%	900	135	15	3	3	300	100	1	0.8
SMD4042-470E	470±20%	950	135	15	3	3	300	100	1	0.8
SMD4042-600E	600±20%	1000	135	15	3	3	300	100	1	0.8
SMD4042-800E	800±20%	1400	135	15	3	3	300	100	1	0.8
SMD4042-1000E	1000±20%	1600	135	15	3	3	300	100	1	0.8

Note: SMD4042 Series without Marking.

● **Recommended Soldering Conditions**

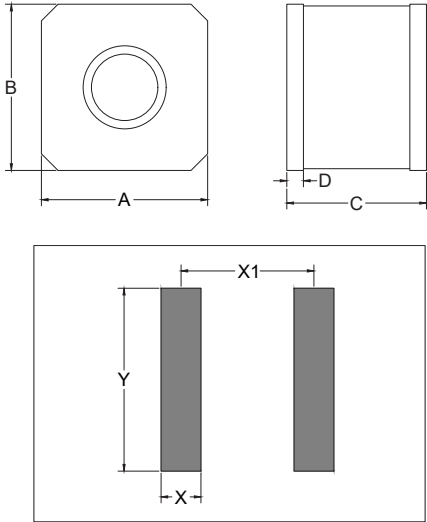


Electrical Ratings

Items	Test Condition/Description	Requirement
DC Spark-over Voltage	The voltage is measured with voltage ramp $dv/dt=100V/s$	To meet the specified value
Maximum Impulse Spark-over Voltage	The maximum impulse spark-over voltage is measured with voltage ramp $dv/dt=1000V/\mu s$.	
Impulse Discharge Current	Maximum $8/20\mu s$ surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time.	
		
Alternating Discharge Current	Rated RMS value of AC current at 50Hz, 1 sec. for 10 times with interval time 3 min.	
Insulation Resistance	The resistance of gas tube shall be measured between two electrodes.	
Capacitance	The capacitance of gas tube shall be measured between two electrodes. Test frequency: 1MHz	

Physical Dimensions & Recommended Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.0	4.4	0.157	0.173
B	4.0	4.4	0.157	0.173
C	3.8	4.2	0.149	0.165
D	0.4	0.6	0.016	0.024
X	1.2	1.4	0.047	0.055
X1	3.5	3.7	0.138	0.146
Y	4.9	5.1	0.193	0.201



SMD4042 SERIES

Surface Mount Gas Discharge Tube

● Ordering Information

SERIES	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
SMD4042	4.0×4.2×4.2	13"REEL	1000

● Packaging Information

Symbol	Dimensions(mm)	
	Millimeters	Inches
W	16±0.3	0.630±0.012
A0	4.5±0.1	0.177±0.004
B0	4.3±0.1	0.17±0.004
K0	4.4±0.1	0.173±0.004
P	12.0±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	0.059±0.004
P0	4.0±0.1	0.157±0.004
P2	2.0±0.1	0.079±0.004
T	0.4±0.1	0.016±0.004

Technical drawing of the SMD4042 package showing top, side, and cross-sectional views with dimension labels.

Top view labels: P0, P2, D, B, W, F, A, P, B.

Side view labels: T, B0, K0.

Cross-section A-A label: A0.

Cross-section B-B label: SECTION B-B.