

OM SENI

SMD4532 SERIES

Surface Mount Gas Discharge Tube

Gas Discharge Tube (GDT) Datasheet

Features

- Excellent response to fast rising transients
- Stable breakdown voltage
- Low capacitance and Insertion Loss
- High insulation resistance
- Dimensions 4.5*3.2*2.7 mm
- Storage and operating temperature: -40°C ~ +85°C
- Reliable to Protect Electrostatic Surge
- High Current Handling Capability @8/20us;
- Moisture sensitivity level :Level 1

DC Spark-over Voltage
75V to 1500V

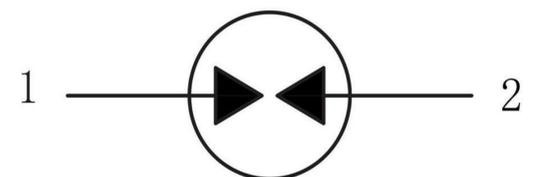
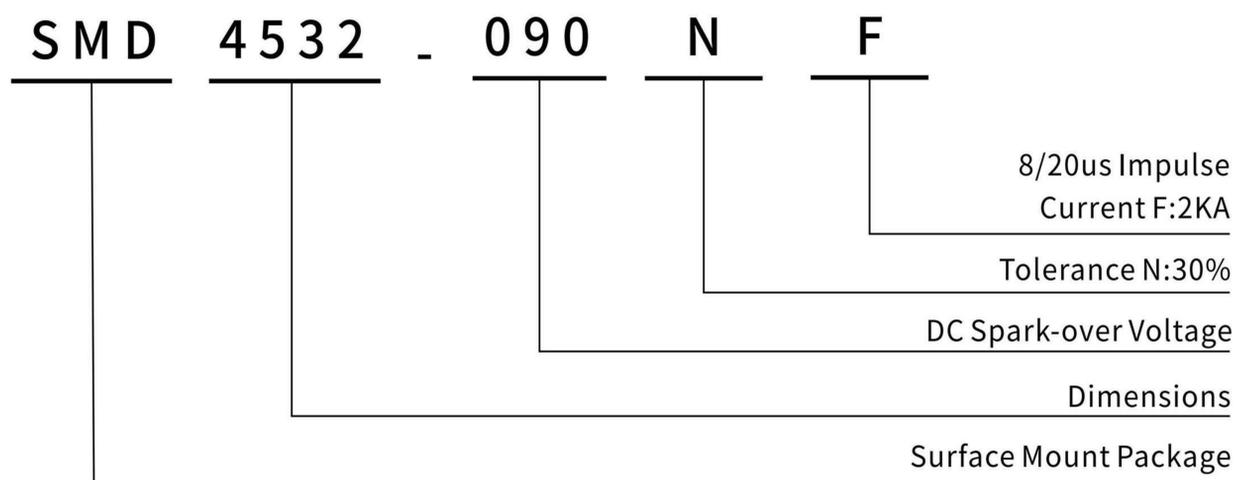
Applications

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

SMD4532



Part Number Code



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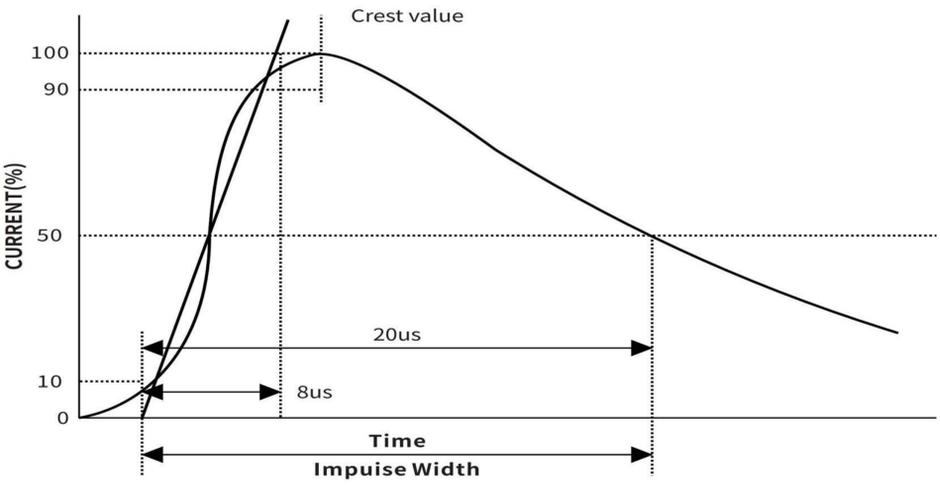
Surface Mount Gas Discharge Tube

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	Impulse Withstanding Voltage Capacity @10/700μs 40Ω	Alternating Discharge Current	Minimum Insulation Resistance		Maximum Capacitance
	100V/S	1000V/μs	10mA	1A	±5times	±5times	50Hz, 1sec 10 times	Test Voltage	GΩ	1MHz
	(V)	(V)	(V)	(V)	(KA)	(KV)	(A)	DC(V)		(pF)
SMD4532-075NF	75±30%	600	60	10	2	6	2	50	1	0.5
SMD4532-090NF	90±30%	600	60	10	2	6	2	50	1	0.5
SMD4532-120NF	120±30%	600	60	10	2	6	2	50	1	0.5
SMD4532-150NF	150±30%	600	60	10	2	6	2	50	1	0.5
SMD4532-200NF	200±30%	700	60	10	2	6	1	100	1	0.5
SMD4532-230NF	230±30%	700	60	10	2	6	1	100	1	0.5
SMD4532-300NF	300±30%	800	60	10	2	6	1	100	1	0.5
SMD4532-350NF	350±30%	800	60	10	2	6	1	100	1	0.5
SMD4532-400NF	400±30%	850	135	15	2	6	1	100	1	0.5
SMD4532-420NF	420±30%	850	135	15	2	6	1	100	1	0.5
SMD4532-470NF	470±30%	900	135	15	2	6	1	100	1	0.5
SMD4532-500NF	500±30%	950	135	15	2	6	1	100	1	0.5
SMD4532-600NF	600±30%	1000	135	15	2	6	1	100	1	0.5
SMD4532-800NF	800±30%	1400	135	15	2	6	1	100	1	0.5
SMD4532-1000	1000±20%	1600	135	15	2	6	1	100	1	0.5
SMD4532-1500	1500±20%	2000	135	15	2	6	1	100	1	0.5

Note: SMD4532 Series without Marking.

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 8/20μs surge current that can be applied between two electrodes, 5 positive and 5 negative surges, with 3 minutes interval time.	
	 <p>The graph shows the impulse discharge current waveform. The y-axis is labeled 'CURRENT (%)' with values 0, 10, 50, 90, and 100. The x-axis is labeled 'Time' with 'Impulse Width' indicated. The curve starts at 0, rises to a peak labeled 'Crest value' at 100% at 8μs, and then decays. A horizontal dashed line at 50% current intersects the curve, and a vertical dashed line drops from this point to the x-axis, marking a 20μs interval from the start of the impulse.</p>	
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	

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Recommended Soldering Conditions

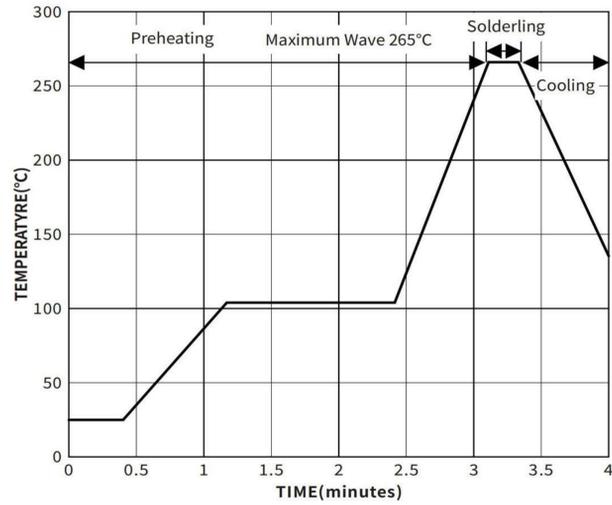


Fig.1 Wave Soldering

Item	Conditions
Peak Temperature	265°C
Soldering	1 time
Dipping Time	10 secs.

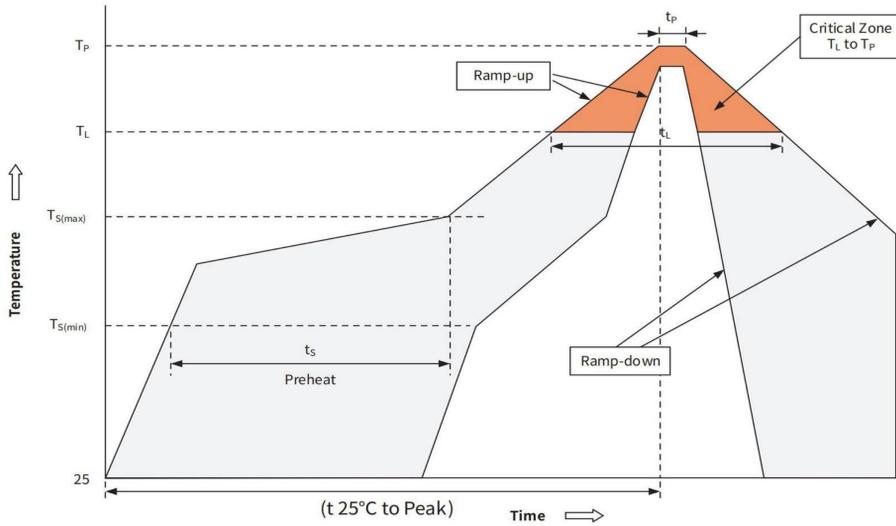
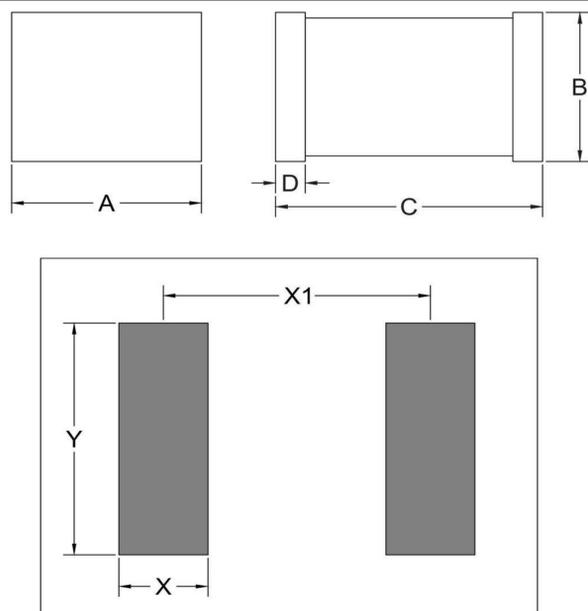


Fig.2 Reflow Soldering

Profile Feature		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 secs.
Average ramp up rate (Liquid us Temp (T _L) to peak)		3°C /sec. Max
T _{S(max)} to T _L - Ramp-up Rate		3°C /sec. Max
Reflow	Temperature(T _L)(Liquid us)	+217°C
	Temperature(t _L)	60-150 secs.
Peak Temp (T _P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t _p)		20-40secs
Ramp-down Rate		6°C /sec. Max
Time 25°C to Peak Temp (T _P)		8 min. Max
Do not exceed		+260°C

Physical Dimensions & Recommended Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.0	3.4	0.118	0.134
B	2.5	2.9	0.098	0.114
C	4.2	4.8	0.165	0.189
D	0.4	0.6	0.016	0.024
X	1.4	1.6	0.055	0.063
X1	4.4	4.6	0.173	0.181
Y	4.1	4.3	0.161	0.169

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Ordering Information

PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
SMD4532	4.5×3.2×2.7	13" REEL	2,500

Packaging Information

Symbol	Dimensions(mm)	
	Millimeters	Inches
W	12±0.3	0.472±0.012
A0	3.5±0.1	0.138±0.004
B0	5.3±0.1	0.209±0.004
K0	2.9±0.1	0.114±0.004
P	8.0±0.1	0.315±0.004
F	5.5±0.1	0.217±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	0.35±0.1	0.014±0.002

