Gas Discharge Tubes(GDT)

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.
SMD4532 Gas Discharge Tubes (GDT) series has a surge rating of 2kA, 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.

SMD4532 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

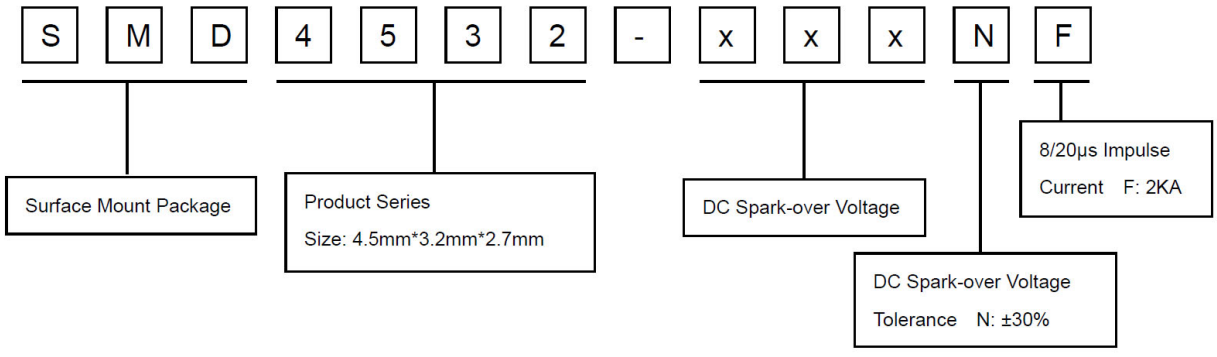
Features

- Excellent response to fast rising transients
- Stable breakdown voltage
- GHz working frequency
- 8/20μs Impulse current capability: 2KA
- Surface Mount package
- Non-Radioactive
- Ultra Low capacitance(<0.5pF) and insertion loss
- Lead-free and RoHS compliant
- Very Small Size(EIA 1816)
- Storage and operational temperature: -40~+90˚C

Applications

- Communication equipment
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Telecom SLIC protection
- Medical Electronics
- ADSL equipment, including ADSL2+
- XDSL equipment
- Satellite and CATV equipment

Part Number Code



Electrical Characteristics

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

Part Number	DC Spark-over Voltage [1) 2)] @100V/S	Impulse Spark-over Voltage		Insulation Resistance [3)]	Capacitance @1 MHz	Life Ratings		
		100V/μS	1KV/μS			Impulse Discharge Current @8/20μS		Impulse Withstanding Voltage Capacity @10/700μS, 40Ω ±5 times
		Max	Max	Min	Max	Nominal ±5 times	Max 1 time	
	V	V	V	GΩ	pF	KA	KA	KV
SMD4532-070NF	70±30%	500	600	1	0.5	2	3	6
SMD4532-075NF	75±30%	500	600	1	0.5	2	3	6
SMD4532-090NF	90±30%	500	600	1	0.5	2	3	6
SMD4532-120NF	120±30%	500	600	1	0.5	2	3	6
SMD4532-150NF	150±30%	500	600	1	0.5	2	3	6
SMD4532-200NF	200±30%	600	700	1	0.5	2	3	6
SMD4532-230NF	230±30%	600	700	1	0.5	2	3	6
SMD4532-300NF	300±30%	700	800	1	0.5	2	3	6
SMD4532-350NF	350±30%	800	900	1	0.5	2	3	6
SMD4532-400NF	400±30%	850	950	1	0.5	2	3	6
SMD4532-420NF	420±30%	850	950	1	0.5	2	3	6
SMD4532-470NF	470±30%	900	1000	1	0.5	2	3	6
SMD4532-500NF	500±30%	1000	1100	1	0.5	2	3	6
SMD4532-600NF	600±30%	1100	1200	1	0.5	2	3	6
SMD4532-800NF	800±30%	1400	1600	1	0.5	2	3	6

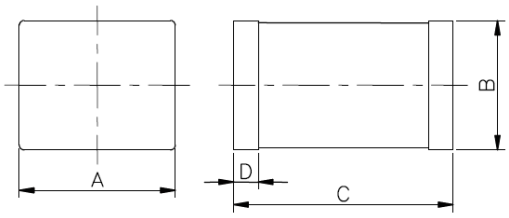
Glow Voltage at 10mA..... ~60V
Arc Voltage at 1A..... ~10V
Glow to Arc transition Current..... ~0.3A
Impulse Life.....10/1000μS,10A..... 100 Times (Min.)
Operation and storage temperature..... -40~+90˚C
Climatic category (IEC 60068-1)..... 40/90/21
Marking..... Without

Notes :

1) At delivery AQL 0.65 level II, DIN ISO 2859
2) In ionized mode
3) Insulation Resistance Measuring Voltage :
70V and 75V at DC 25V
90V~150V at DC 50V
Other at DC 100V

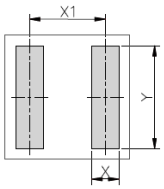
Dimensions

Symbol	Millimeters	Inches
A	3.2±0.2	0.126±0.008
B	2.7±0.2	0.106±0.008
C	4.5±0.3	0.177±0.012
D	0.5±0.1	0.020±0.004

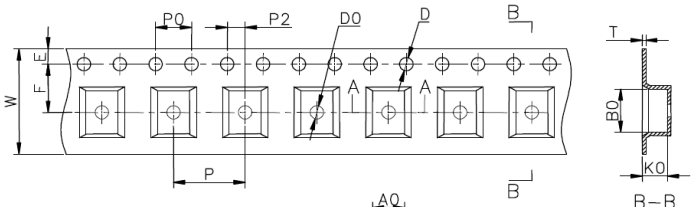


Recommended Pad Layout

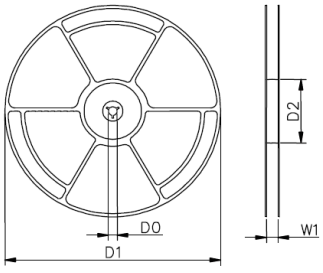
Symbol	Millimeters	Inches
X	1.5	0.059
X1	4.5	0.177
Y	4.2	0.165

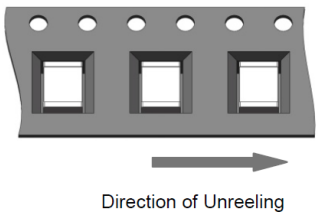


Taping and Reel Specifications



SMD-tape according to IEC 60286-3





Direction of Unreeling

Symbol	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/-0.0	0.059+0.004/-0.0
P0	4±0.1	0.157±0.004
P2	2±0.1	0.079±0.004
T	0.35±0.05	0.014±0.002
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	12.5±0.4	0.492±0.016

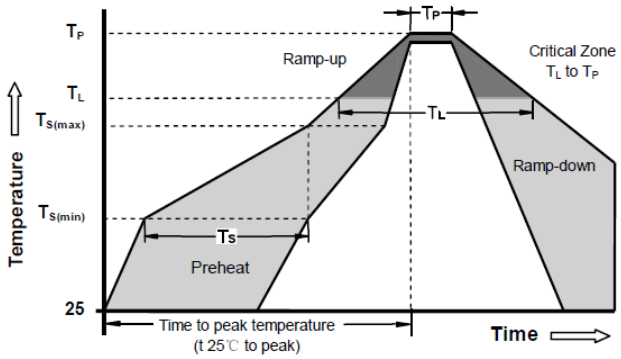
Packaging Quantity

2,500 PCS per reel (13”)

4 reels per inner box

10,000 PCS per inner box

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