Gas Discharge Tube (GDT) Datasheet

Features

- Excellent response to fast rising transients
- Stable breakdown voltage
- Low capacitance and Insertion Loss
- High insulation resistance
- Dimensions 3.2*1.6*1.6 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

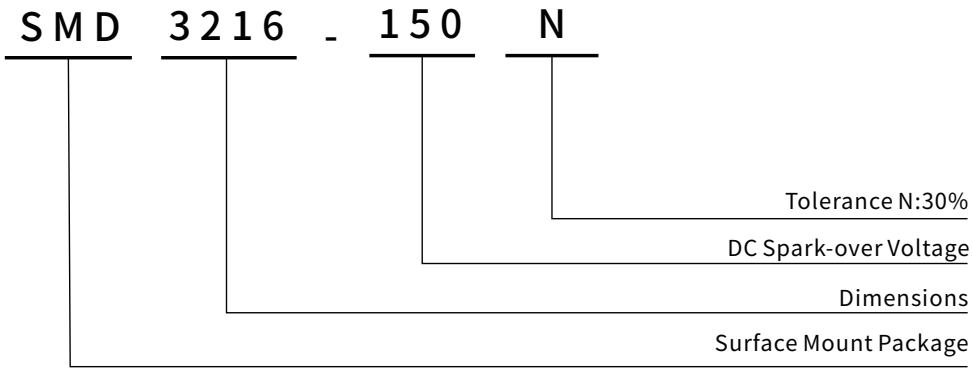
DC Spark-over Voltage
90V to 600V

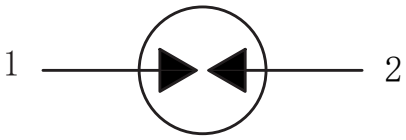
Applications

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

SMD3216

Part Number Code



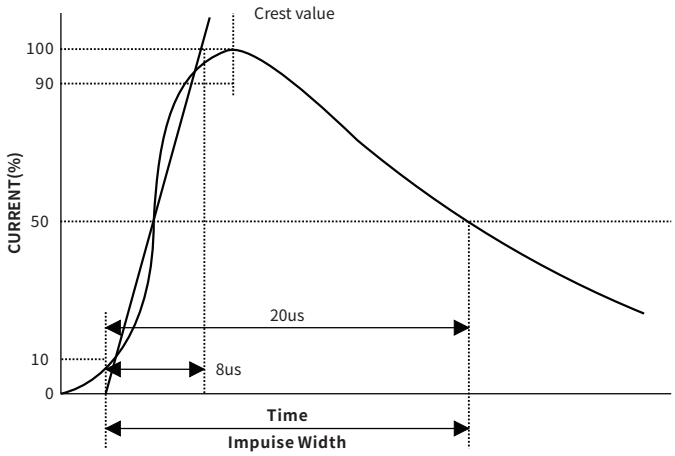


Electrical Characteristics (Ta=25°C Unless otherwise specified)

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	Minimum Insulation Resistance		Maximum Capacitance
	100V/S	1000V/μs	10mA	1A	±5times	±5times	Test Voltage	GΩ	1MHz
	(V)	(V)	(V)	(V)	(KA)	(KV)	DC(V)		(pF)
SMD3216-090N	90±30%	600	60	10	0.5	6	50	1	0.5
SMD3216-150N	150±30%	700	60	10	0.5	6	50	1	0.5
SMD3216-200N	200±30%	750	60	10	0.5	6	100	1	0.5
SMD3216-230N	230±30%	750	60	10	0.5	6	100	1	0.5
SMD3216-300N	300±30%	800	60	10	0.5	6	100	1	0.5
SMD3216-350N	350±30%	850	60	10	0.5	6	100	1	0.5
SMD3216-400N	400±30%	900	60	10	0.5	6	100	1	0.5
SMD3216-420N	420±30%	950	60	10	0.5	6	100	1	0.5
SMD3216-470N	470±30%	1100	60	10	0.5	6	100	1	0.5
SMD3216-600N	600±30%	1200	60	10	0.5	6	100	1	0.5

Note: SMD3216 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/μs.	
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.	
		
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	

Recommended Soldering Conditions

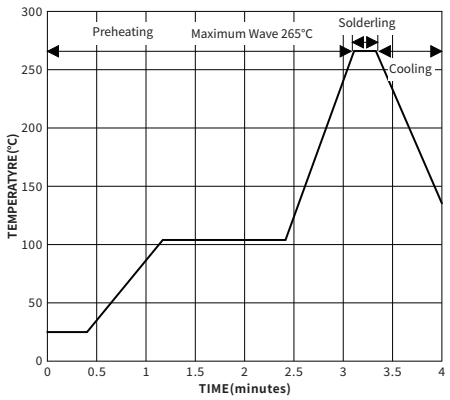


Fig.1 Wave Soldering

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

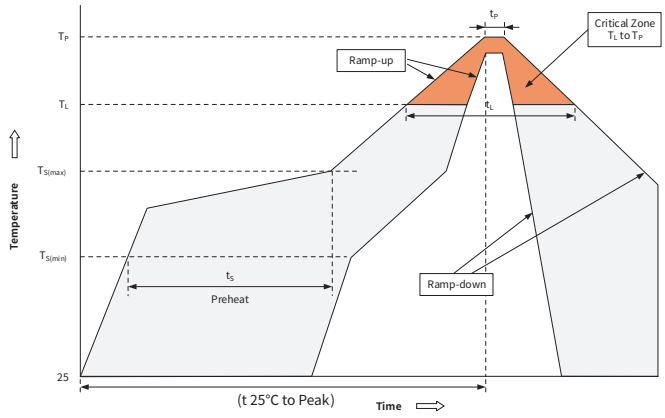
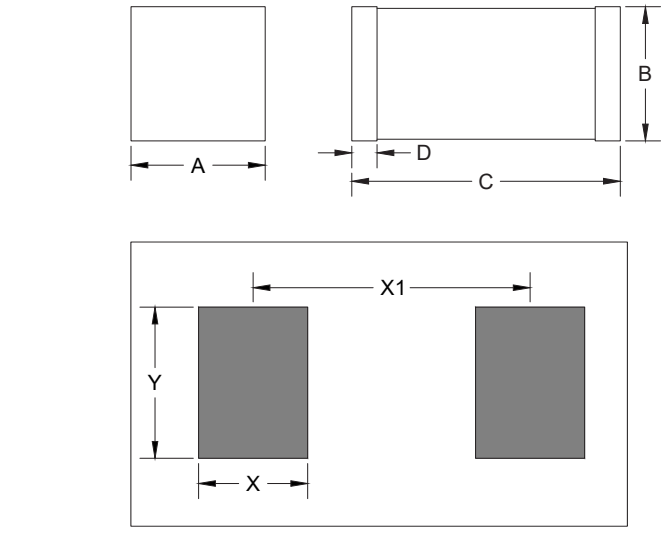


Fig.2 Reflow Soldering

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

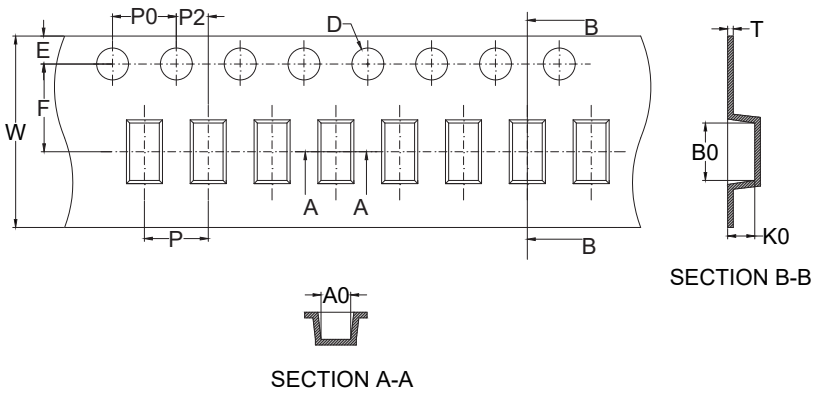


Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.4	1.8	0.055	0.071
B	1.4	1.8	0.055	0.071
C	2.9	3.5	0.114	0.138
D	0.2	0.4	0.008	0.016
X	1.2	1.4	0.047	0.055
X1	3.2	3.4	0.126	0.134
Y	1.7	1.9	0.067	0.075

Ordering Information

PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
SMD3216	3.2×1.6×1.6	7''REEL	2,000

Packaging Information



SECTION A-A

SECTION B-B

Symbol	Dimensions(mm)	
	Millimeters	Inches
W	12±0.3	0.472±0.012
A0	1.86±0.1	0.073±0.004
B0	3.6±0.1	0.142±0.004
K0	1.7±0.1	0.067±0.004
P	4.0±0.1	0.157±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±0.05	0.014±0.002