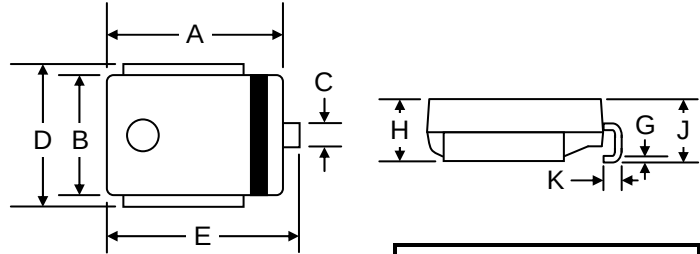


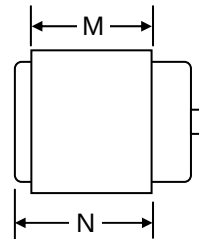
Features

- **AEC-Q101 Qualified**
- **Ideally Suited for Load Dump Protection**
- Glass Passivated Die Construction
- Low Leakage Current
- Low Forward Voltage Drop
- High Surge Capability
- Meets ISO7637-2 and ISO16750-2 Surge Specification
- Plastic Material – UL Flammability 94V-0



Mechanical Data

- Case: DO-218, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Anode to Heatsink
- Weight: 2.73 grams (approx.)
- Marking: Device Code
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**



DO-218		
Dim	Min	Max
A	13.20	13.80
B	8.20	8.80
C	2.30	3.00
D	9.50	10.00
E	15.00	16.00
G	0.45	0.90
H	4.70	5.25
J	4.70	5.70
K	1.50	2.50
M	8.70	9.30
N	9.70	10.30
All Dimensions in mm		

Maximum Ratings @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation (Note 1)	P _{PPM}	4600	W
		3600	
Peak Pulse Current (Note 1)	I _{PPM}	See Table 1	A
Non-Repetitive Peak Reverse Surge Current on 10/10000μS Waveform	I _{RSM}	90	A
Peak Forward Surge Current (Note 2)	I _{FSM}	600	A
Maximum Instantaneous Forward Voltage at I _F = 100A (Note 3)	V _F	1.8	V
Power Dissipation on Infinite Heatsink at T _C = 25°C	P _D	6.0	W
Typical Thermal Resistance, Junction to Case	R _{θJC}	1.0	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +175	°C

Note: 1. Pulse waveform definition per Figure 5 and derated above T_C = 25°C per Figure 1.
 2. Measured on 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.
 3. Measured on a 300μS square pulse width.

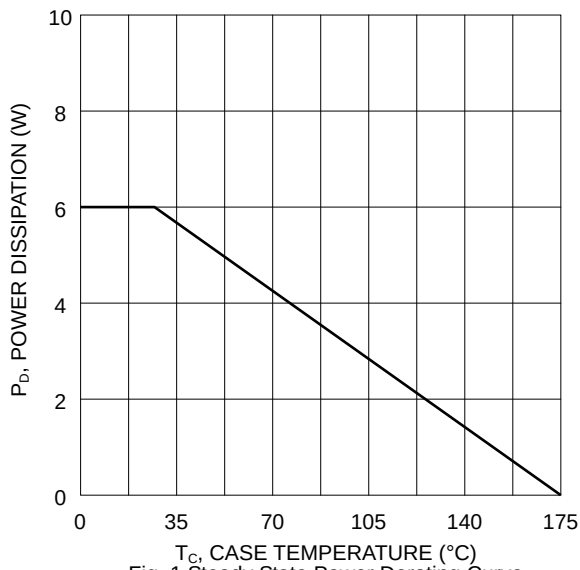


Fig. 1 Steady State Power Derating Curve

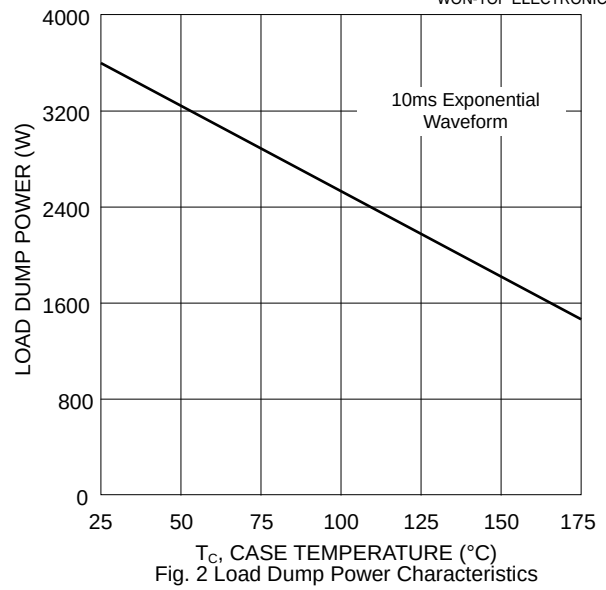


Fig. 2 Load Dump Power Characteristics

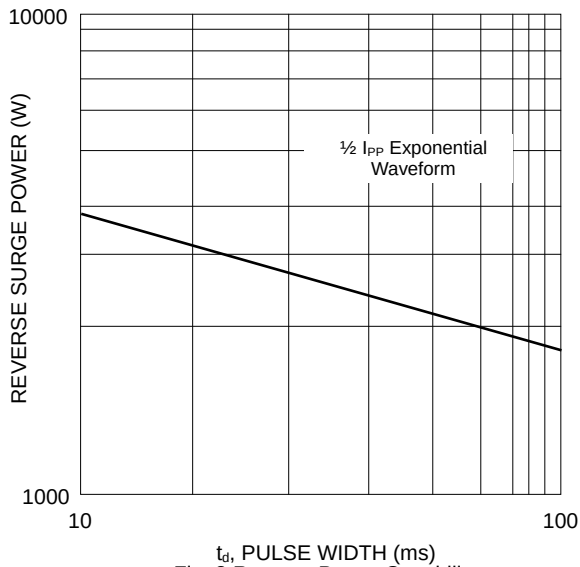


Fig. 3 Reverse Power Capability

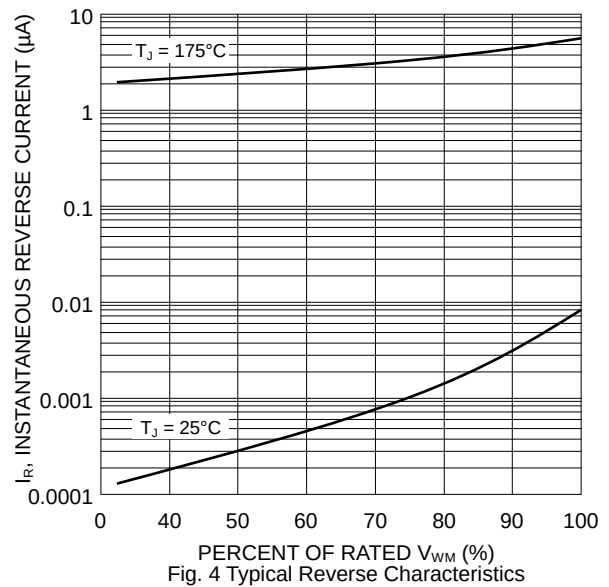


Fig. 4 Typical Reverse Characteristics

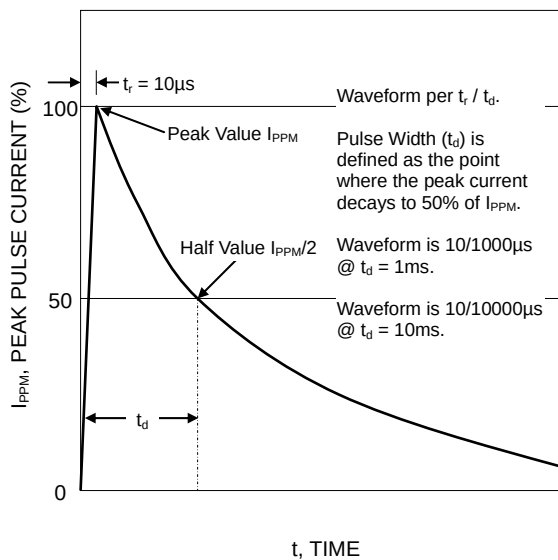


Fig. 5 Pulse Waveform Definition

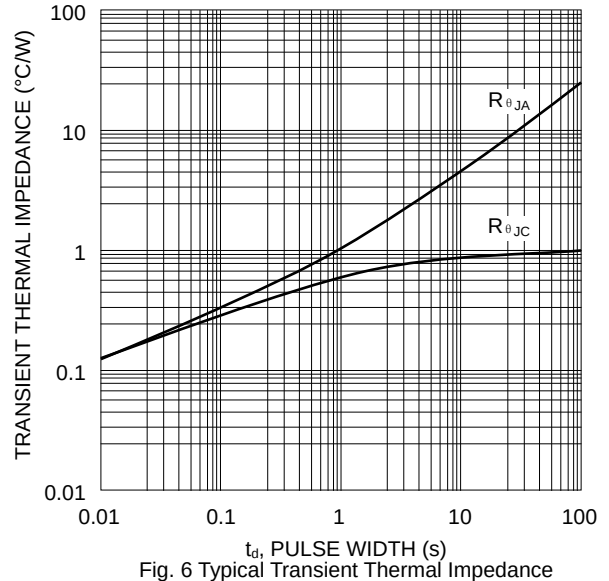


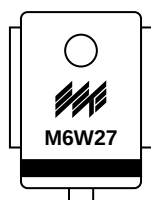
Fig. 6 Typical Transient Thermal Impedance

Electrical Characteristics (@T_A=25°C unless otherwise specified) Table 1

Part Number	Device Marking Code	Breakdown Voltage V _{BR} (V) @ I _T		Test Current I _T (mA)	Reverse Stand-Off Voltage V _{WM} (V)	Max. Reverse Leakage @ V _{WM} T _J = 25°C I _R (μA)	Max. Reverse Leakage @ V _{WM} T _J = 175°C I _R (μA)	Peak Pulse Current ⁽¹⁾ I _{PPM} (A)	Max. Clamping Voltage @ I _{PPM} V _C (V)
		Min.	Max.						
SM6A27	M6W27	24	30	10	22	0.5	20	65	40

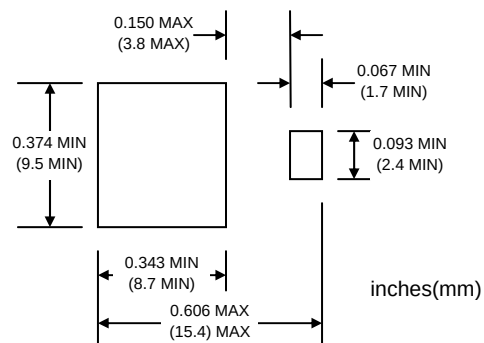
Note: 1. Measured at 10/10000μS surge pulse waveform.

MARKING INFORMATION



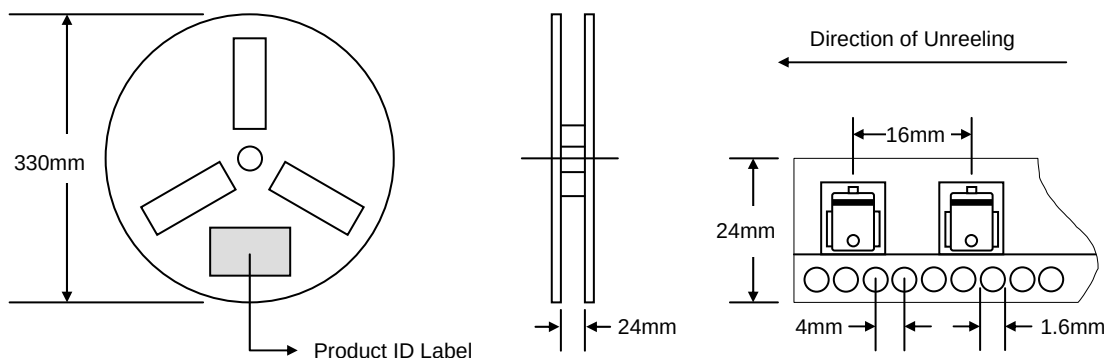
Cathode = Polarity Band
M6W27 = Device Code

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	500	360 x 340 x 52	500	382 x 360 x 470	4,000	18.5

Note: 1. Anti-static plastic reel, blue color.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SM6A27-T3	DO-218	500/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SM6A27-T3-LF.**

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