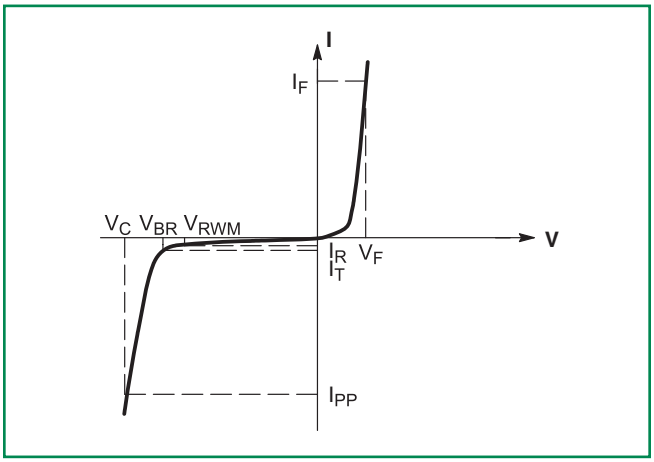
I-V Curve Characteristics (T_A = 25°C unless otherwise noted)



Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F

Ratings and Characteristic Curves

Figure 1. Pulse Rating Curve

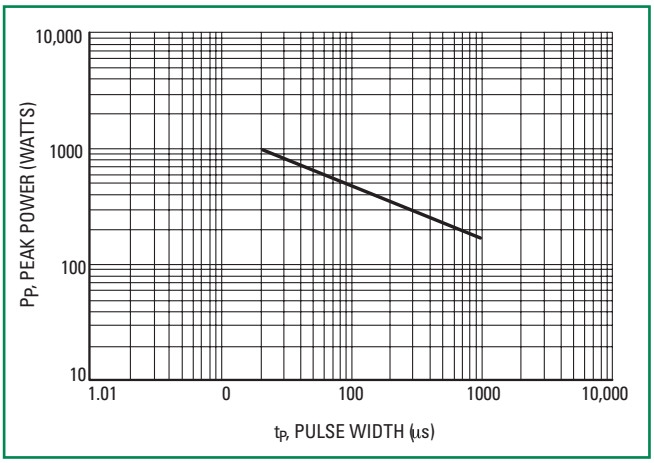


Figure 2. 10 X 1000 µs Pulse Waveform

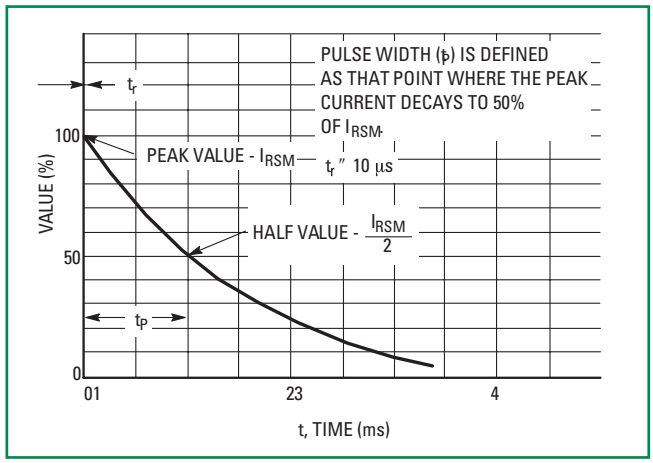


Figure 3. 8 X 20 µs Pulse Waveform

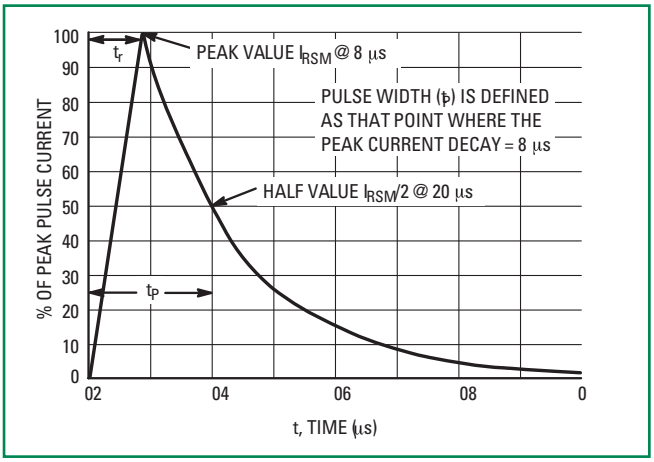


Figure 4. Pulse Derating Curve

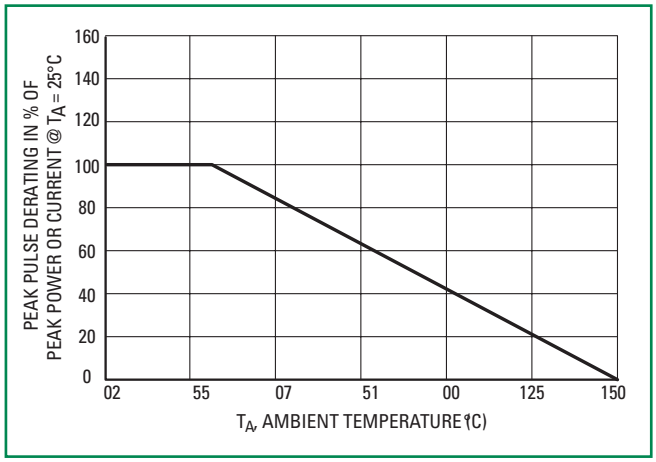


Figure 5. Typical Derating Factor for Duty Cycle

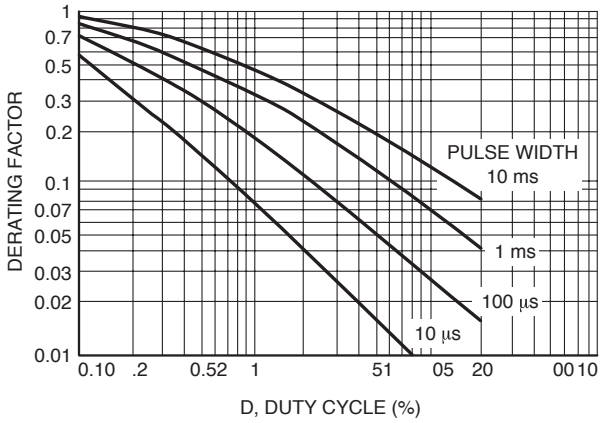


Figure 6. Steady State Power Derating

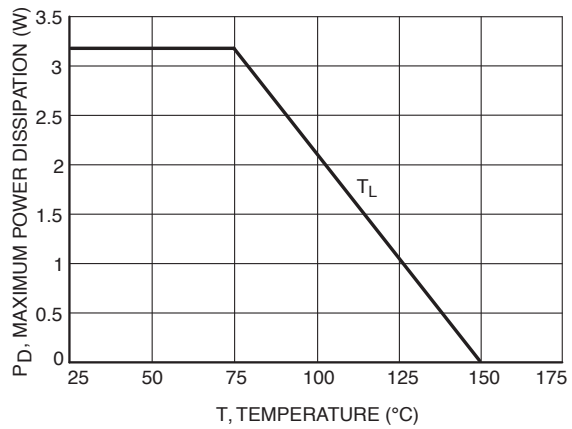


Figure 7. Forward Voltage

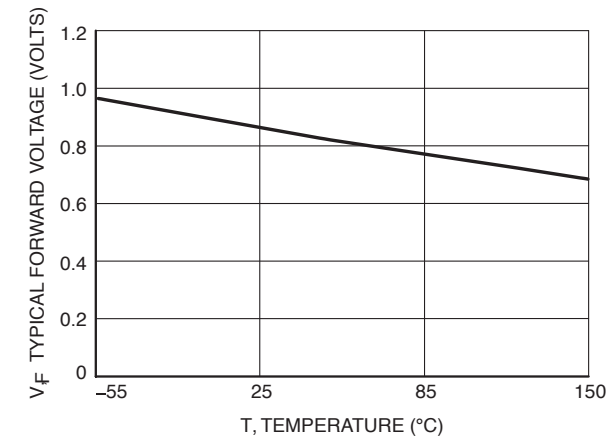
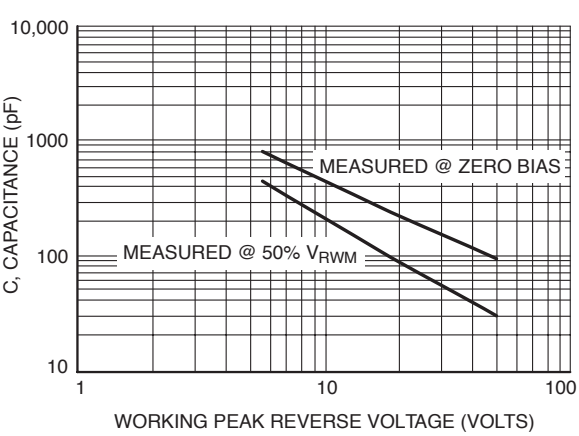
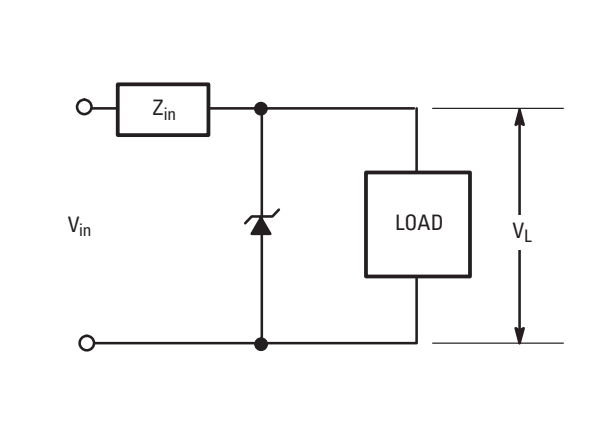


Figure 8. Capacitance vs. Working Peak Reverse Voltage



Typical Protection Circuit



Electrical Characteristics (TL = 30 C unless otherwise noted, VF = 1.25 Volts @ 200 mA)

Device*	Device Marking	V_{RWM} (Note 5)	V_{BR} @ I_T (V) (Note 6)			I_T	I_R @ V_{RWM}	V_C @ I_{PP}	I_{PP} (A) (Note 7)
			MIN	NOM	MAX	(mA)	(µA)	(V)	
1PMT5.0AT1G, T3G	MKE	5.0	6.4	6.7	7.0	10	50	9.2	21.7
1PMT7.0AT1G, T3G	MKM	7.0	7.78	8.2	8.6	10	30	12	16.7
1PMT12AT1G, T3G	MLE	12	13.3	14.0	14.7	1.0	1.0	19.9	10.1
1PMT16AT1G, T3G	MLP	16	17.8	18.75	19.7	1.0	1.0	26	7.7
1PMT18AT1G, T3G	MLT	18	20.0	21.0	22.1	1.0	1.0	29.2	6.8
1PMT22AT1G, T3G	MLX	22	24.4	25.6	26.9	1.0	1.0	35.5	5.6
1PMT24AT1G, T3G	MLZ	24	26.7	28.1	29.5	1.0	1.0	38.9	5.1
1PMT26AT1G, T3G	MME	26	28.9	30.4	31.9	1.0	1.0	42.1	4.8
1PMT28AT1G, T3G	MMG	28	31.1	32.8	34.4	1.0	1.0	45.4	4.4
1PMT30AT1G, T3G	MMK	30	33.3	35.1	36.8	1.0	1.0	48.4	4.1
1PMT33AT1G, T3G	MMM	33	36.7	38.7	40.6	1.0	1.0	53.3	3.8
1PMT36AT1G, T3G	MMP	36	40.0	42.1	44.2	1.0	1.0	58.1	3.4
1PMT40AT1G, T3G	MMR	40	44.4	46.8	49.1	1.0	1.0	64.5	2.7
1PMT48AT1G, T3G	MMX	48	53.3	56.1	58.9	1.0	1.0	77.4	2.3
1PMT51AT1G, T3G	MMZ	51	56.7	59.7	62.7	1.0	1.0	82.4	2.1
1PMT58AT1G, T3G	MNG	58	64.4	67.8	71.2	1.0	1.0	93.6	1.9

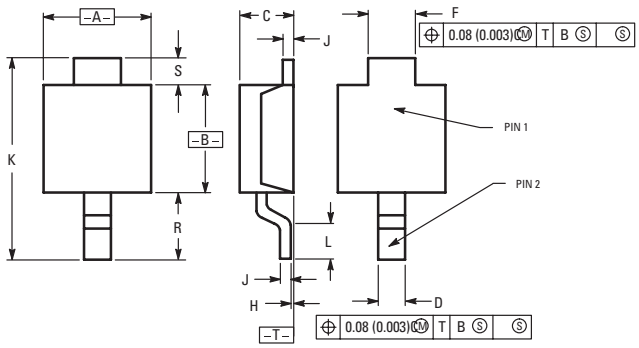
4. 1/2 sine wave (or equivalent square wave), PW = 8.3 ms, duty cycle = 4 pulses per minute maximum.
5. A transient suppressor is normally selected according to the Working Peak Reverse Voltage (VRWM) which should be equal to or greater than the DC or continuous peak operating voltage level.
6. VBR measured at pulse test current IT at ambient temperature of 25°C.
7. Surge current waveform per Figure 2 and derate per Figure 4.

*The "G" suffix indicates Pb–Free package.

TVS Diodes

Surface Mount > 200W > 1PMT5.0AT1G/T3G Series

Dimensions

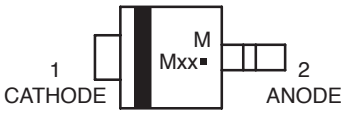


Dim	Inches		Millimeters	
	Min	Max	Min	Max
A	0.069	0.081	1.75	2.05
B	0.069	0.086	1.75	2.18
C	0.033	0.045	0.85	1.15
D	0.016	0.027	0.40	0.69
F	0.028	0.039	0.70	1.00
H	-0.002	+0.004	-0.05	+0.10
J	0.004	0.010	0.10	0.25
K	0.142	0.154	3.60	3.90
L	0.020	0.031	0.50	0.80
R	0.047	0.059	1.20	1.50
S	0.50 REF		0.50 REF	

NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS. MOLD FLASH, PROTRUSIONS OR GATE BURRS

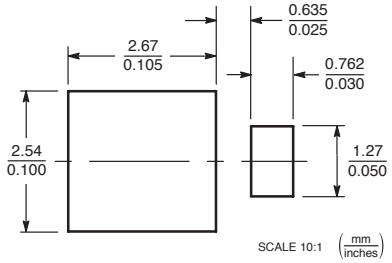
Part Marking System

MARKING DIAGRAM



M= Date Code
Mxx= Specific Device Code
(See Table on Page 3)
▪ =P b–Free Package

Soldering Footprint



ORDERING INFORMATION

Device	Package	Shipping†
1PMTxxAT1G	POWERMITE (Pb–Free	3,000 / Tape & Reel
1PMTxxAT3G	POWERMITE (Pb–Free)	12,000 / Tape & Reel

Flow/Wave Soldering (Solder Dipping)

Peak Temperature :	260°C
Dipping Time :	10 seconds

Physical Specifications

Case	Void-free, transfer-molded, thermosetting plastic
Leads	Modified L–Bend providing more contact area to bond pads
Finish	All external surfaces are corrosion resistant and leads are readily solderable
Mounting Position	Any