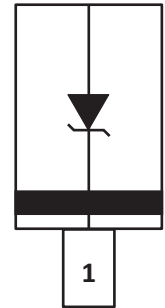


## HIGH POWER TVS ARRAY



### APPLICATIONS

- Digital Audio Tuner for Automotive
- Automotive Entertainment Systems
- Automotive Navigation Systems



UNIDIRECTIONAL

### FEATURES

- **AEC-Q101 Qualified**
- $T_j = 175^\circ\text{C}$  Capability Suitable for High Reliability and Automotive Requirements
- Unidirectional Configuration
- Low Forward Voltage Drop
- High Surge Capability
- 4600 Watts Peak Pulse Power per Line ( $t_p = 10/1000\mu\text{s}$ )
- 3600 Watts Peak Pulse Power per Line ( $t_p = 10/10000\mu\text{s}$ )
- Meets ISO 16750-2 Surge Specification (Varied by Test Condition)
- LF Maximum Peak of  $260^\circ\text{C}$
- Available in Multiple Voltages
- RoHS Compliant

### MECHANICAL CHARACTERISTICS

- Case: DO-218AB Package
- Terminals: Matte Tin Plated Leads, Solderable Per J-STD-002 and JESD 22-B102
- Approximate Weight: 2.9 grams
- Solder Reflow Temperature -  $260^\circ\text{C}$  for 20-40 seconds at terminals
- 24mm Tape and Reel
- Flammability Rating UL 94V-0
- Polarity: Heatsink is Anode

#### MAXIMUM RATINGS @ $25^\circ\text{C}$ Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Operating Junction Temperature	$T_j$	-55 to 175	$^\circ\text{C}$
Storage Temperature	$T_{\text{STG}}$	-55 to 175	$^\circ\text{C}$
Peak Pulse Power Dissipation ( $t_p = 10/1000\mu\text{s}$ )	$P_{\text{PPM}}$	4600	Watts
Peak Pulse Power Dissipation ( $t_p = 10/10000\mu\text{s}$ )	$P_{\text{PPM}}$	3600	Watts
Peak Forward Surge Current, 8.3ms single half sinewave	$I_{\text{FSM}}$	600	Amps
Power Dissipation on Infinite Heatsink, $T_c = 25^\circ\text{C}$ (Figure 2)	$P_D$	6.0	Watts
Typical Thermal Resistance, Junction to Case	$R_{\theta\text{JC}}$	0.95	$^\circ\text{C}/\text{W}$

## TYPICAL DEVICE CHARACTERISTICS

## ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

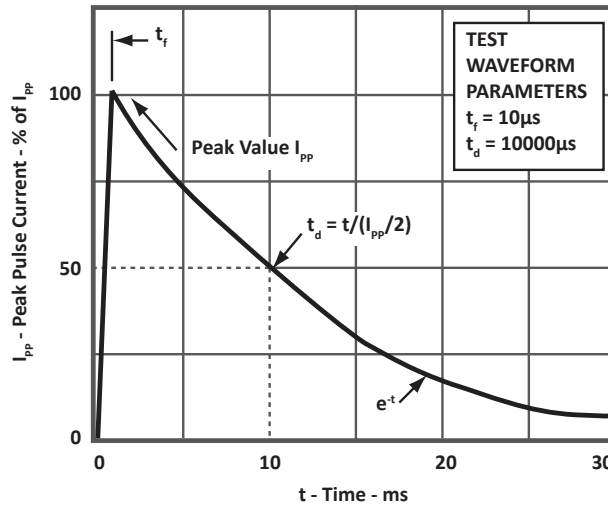
PART NUMBER (Note 1)	MARKING CODE	REVERSE STAND-OFF VOLTAGE  $V_{RWM}$ VOLTS	BREAKDOWN VOLTAGE  $V_{(BR)} @ I_T$ VOLTS		TEST CURRENT  @ $I_T$ mA	MAXIMUM CLAMPING VOLTAGE (Fig. 1) @ $I_P$ $V_C$ VOLTS	MAXIMUM REVERSE SURGE CURRENT  @ $I_{PP}$ AMPS	MAXIMUM REVERSE LEAKAGE CURRENT @ $V_{RWM}$ $I_R$ $\mu A$	MAXIMUM REVERSE LEAKAGE CURRENT @ $V_{RWM}$ 175°C $I_R$ $\mu A$
			MIN	MAX					
PAM6S14A	SM6S14A	14.0	15.6	17.2	5.0	23.2	198	10	150
PAM6S15A	SM6S15A	15.0	16.7	18.5	5.0	24.4	189	10	150
PAM6S16A	SM6S16A	16.0	17.8	19.7	5.0	26.0	177	10	150
PAM6S17A	SM6S17A	17.0	18.9	20.9	5.0	27.6	167	10	150
PAM6S18A	SM6S18A	18.0	20.0	22.1	5.0	29.2	158	10	150
PAM6S20A	SM6S20A	20.0	22.2	24.5	5.0	32.4	142	10	150
PAM6S22A	SM6S22A	22.0	24.4	26.9	5.0	35.5	130	10	150
PAM6S24A	SM6S24A	24.0	26.7	29.5	5.0	38.9	118	10	150
PAM6S26A	SM6S26A	26.0	28.9	31.9	5.0	42.1	109	10	150
PAM6S28A	SM6S28A	28.0	31.1	34.4	5.0	45.4	101	10	150
PAM6S30A	SM6S30A	30.0	33.3	36.8	5.0	48.4	95	10	150
PAM6S33A	SM6S33A	33.0	36.7	40.6	5.0	53.3	86	10	150
PAM6S36A	SM6S36A	36.0	40.0	44.2	5.0	58.1	79	10	150

## NOTES

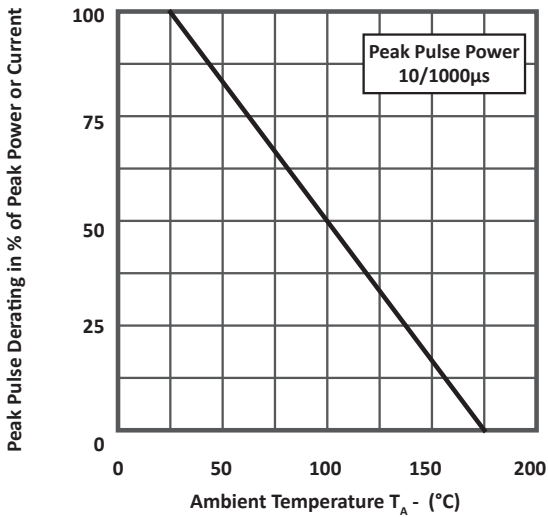
1. For all types, maximum VF = 1.9V at IF 100A, measured on 8.3ms single half-sine wave or equivalent square wave. Maximum duty cycle = 4 pulses per minute.

**TYPICAL DEVICE CHARACTERISTICS**

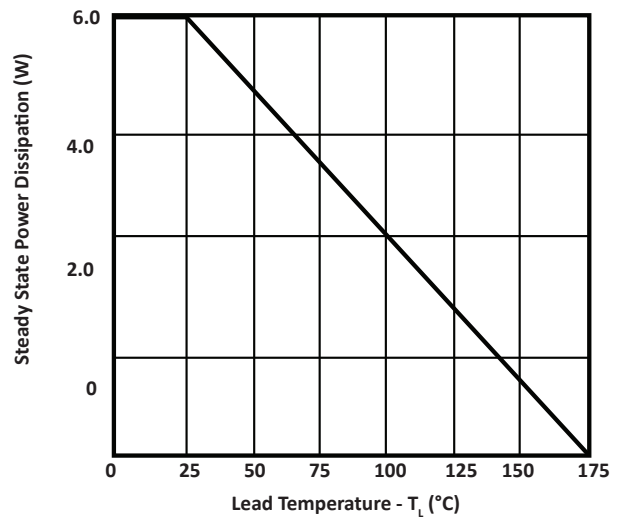
**FIGURE 1  
PULSE WAVEFORM**



**FIGURE 2  
PULSE DERATING CURVE**

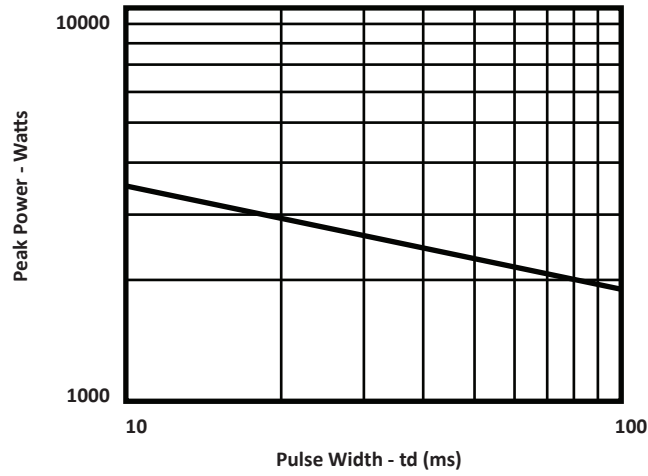


**FIGURE 3  
STEADY STATE POWER DERATING CURVE**

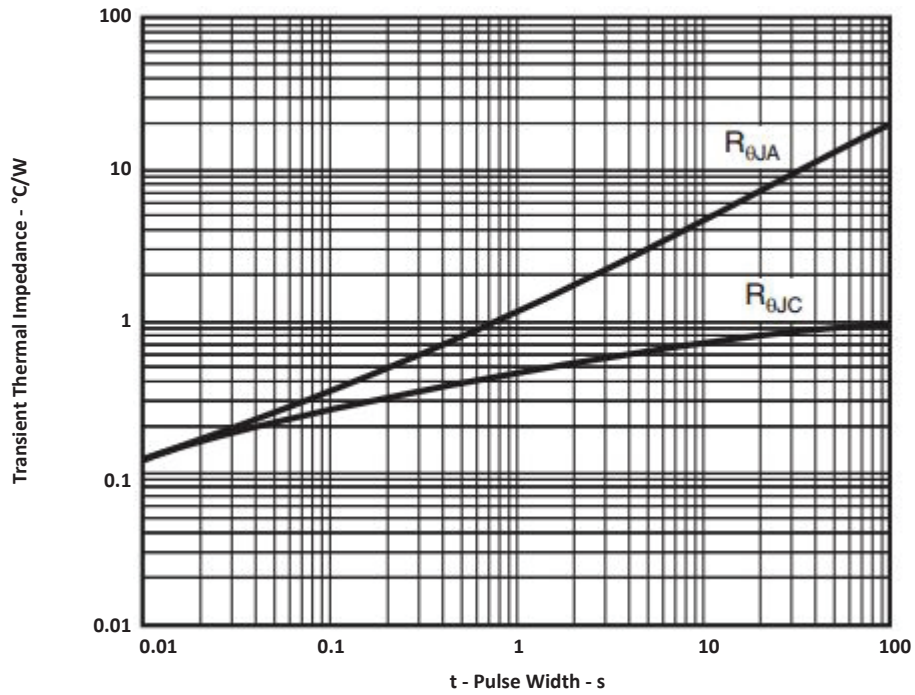


**TYPICAL DEVICE CHARACTERISTICS**

**FIGURE 4**  
**PEAK PULSE POWER RATING CURVE**



**FIGURE 5**  
**TYPICAL TRANSIENT THERMAL IMPEDANCE**



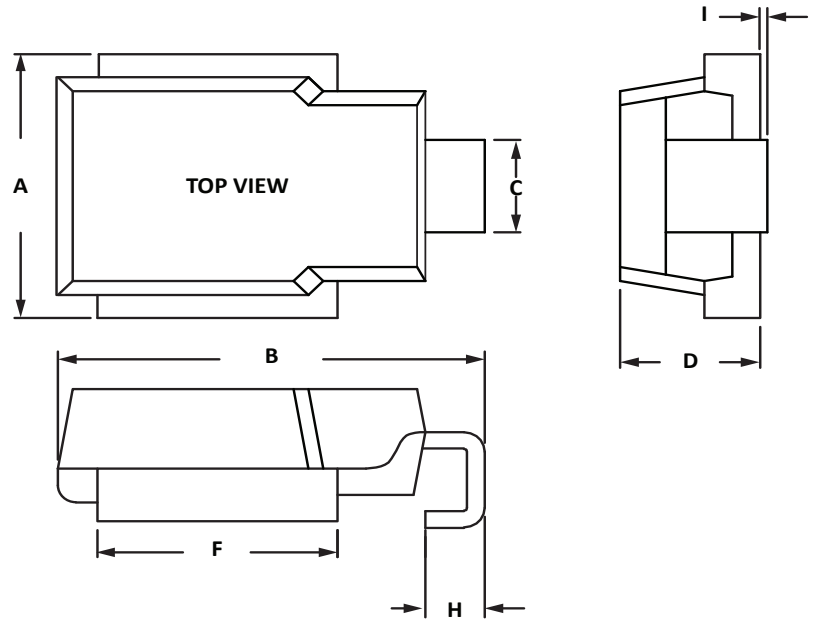
## PACKAGE INFORMATION

## ALTERNATE PACKAGE

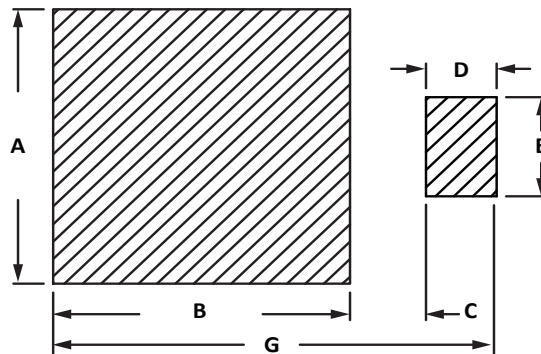
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.50	10.50	0.374	0.413
B	15.00	16.00	0.592	0.628
C	2.30	3.00	0.095	0.110
D	4.70	5.20	0.185	0.205
F	8.50	9.30	0.335	0.366
H	1.50	2.70	0.059	0.106
I	-	0.20	-	0.008

**NOTES**

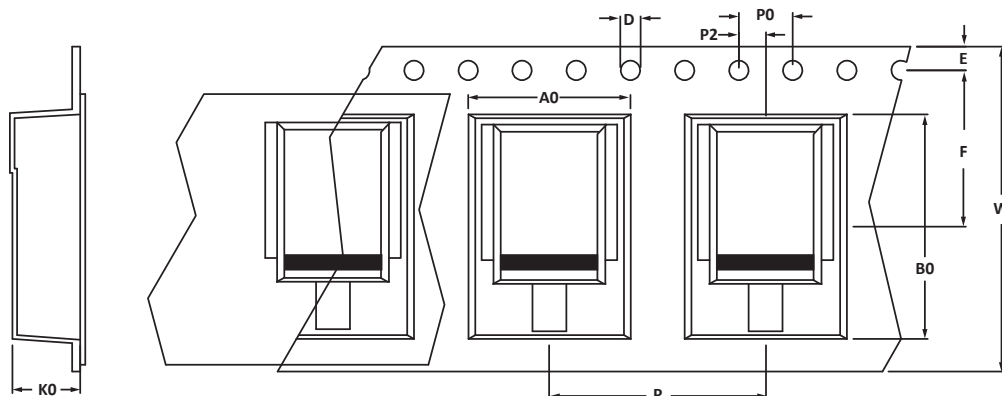
- Dimensions are exclusive of mold flash and metal burrs.
- Controlling dimensions in millimeters.



PAD LAYOUT		
DIM	MILLIMETERS	INCHES
	NOM	NOM
A	11.00	0.433
B	9.50	0.374
C	3.65	0.144
D	2.65	0.104
E	3.50	0.138
G	15.80	0.622



## TAPE AND REEL



## SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P
330mm (13")	24mm	10.8 ± 0.30	16.13 ± 0.30	5.75 ± 0.20	1.55 ± 0.20	1.75 ± 0.20	11.50 ± 0.20	24.00 ± 0.30	4.00 ± 0.20	2.00 ± 0.20	16.00 ± 0.20

## NOTES

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Marking on Part - marking code, date code, logo and polarity band.

## ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PAM6Sxx	N/A	-T750	750	13"	N/A

This device is only available in a Lead-Free configuration.

## COMPANY INFORMATION

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### COMPANY PROFILE

In business more than 30 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection that include Transient Voltage Suppressor (TVS) Arrays, Steering Diode Array Hybrids, High-power Components and Modules, as well as Steering Diodes, EMI Filter/TVS Arrays and Thyristor Surge Suppressors. These components deliver circuit protection in electronic systems from numerous overvoltage events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices is an ISO 9001 certified company.

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