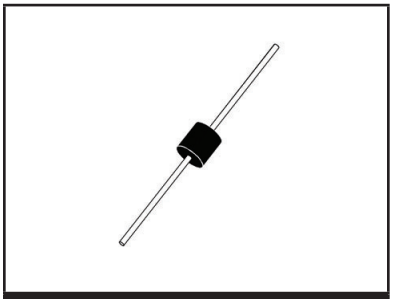
15kW POWER TVS COMPONENT



AXIAL LEAD PACKAGE

DESCRIPTION

The PAM16AL30A is a discrete 15,000 Watt, silicon transient voltage suppressors(TVS) designed for use in automotive applications where large voltage transients can permanently damage voltage sensitive components and equipment.

The PAM16AL30A is available in 30 Volts with 5 percent and 10 percent tolerances. Both tolerances are referenced to the power supply output or operating voltage level. This device is compatiable with IEC 61000-4-5 (Surge) requirements.

FEATURES

- Compatible with IEC 61000-4-5 (Surge): 48A, 8/20µs - L3(Line-Ground), L4(Line-Line) & L1 (Power)
- 15,000 Watts Peak Pulse Power per Line (tp = 10/1000µs)
- Unidirectional Configuration
- Easy Mounting to Printed Circuit Board
- tClamping (0V to V_{BR} Min.) < 1 x 10^{-12} seconds theoretical (Unidirectional)
- RoHS Complaint (Exemption #7)

APPLICATIONS

- Automotive Applications

MECHANICAL CHARACTERISTICS

- Molded Case
- Approximate Weight: 5 grams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:
  Pure-Tin - Sn, 100: 260-270°C
- Flammability Rating UL 94V-0

CIRCUIT DIAGRAM



TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	**SYMBOL**	**VALUE**	**UNITS**
Peak Pulse Power (tp = 10/1000µs) - See Figure 1	P_{PP}	15,000	Watts
Forward Surge Rating - 1/120 seconds - See Note 2	I_F	200	Amps
Steady State Power Dissipation	P_P	8.0	Watts
Storage Temperature	T_{STG}	-55 to 150	°C
Operating Temperature	T_L	-55 to 150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified						
PART NUMBER (Note 1)	**RATED STAND-OFF VOLTAGE**	**BREAKDOWN VOLTAGE**		**MAXIMUM LEAKAGE CURRENT**	**MAXIMUM CLAMPING VOLTAGE (Fig. 2)**	**TEMPERATURE COEFFICIENT OF $V_{(BR)}$**
		MIN				
	V_{WM} VOLTS	**$V_{(BR)}$ VOLTS**	**@I_T mA**	**@V_{WM} I_D µA**	**@ 10/1000µS V_C @ I_{PP}**	**$qV_{(BR)}$ mV/°C**
PAM16AL30A	30.0	33.3	5	15	50.7V @ 296.0A	34

NOTES
1. V_F = 7.5 Volts @ 200A, 8.3ms(1/2 Sine Wave).

TYPICAL DEVICE CHARACTERISTICS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

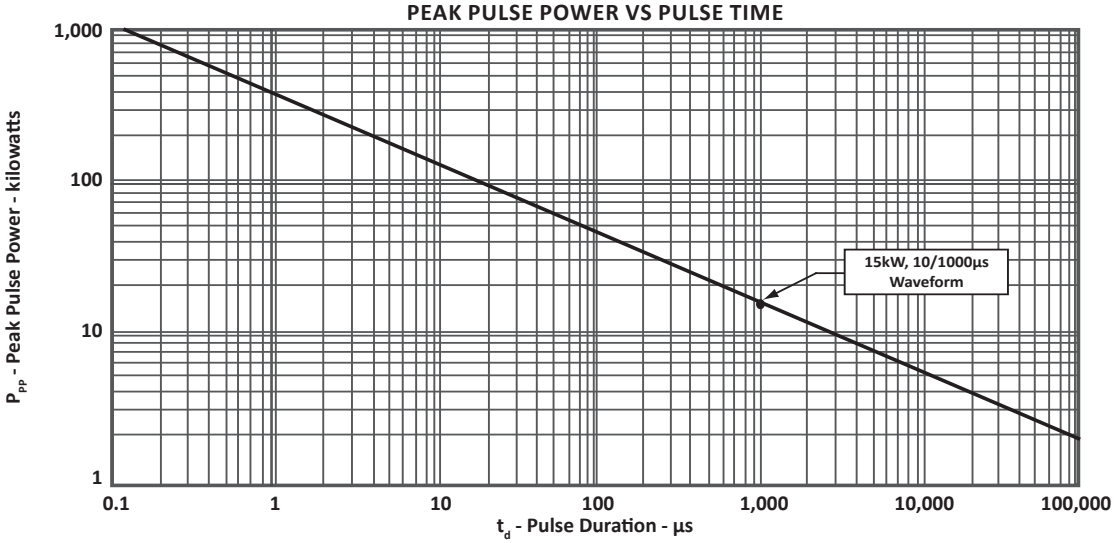


FIGURE 2
PULSE WAVEFORM

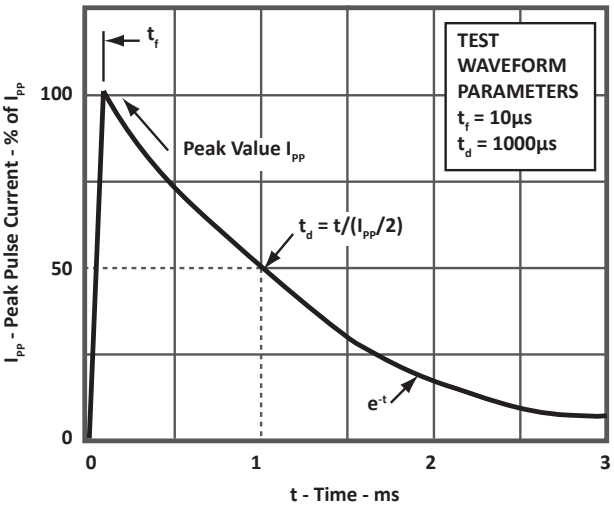
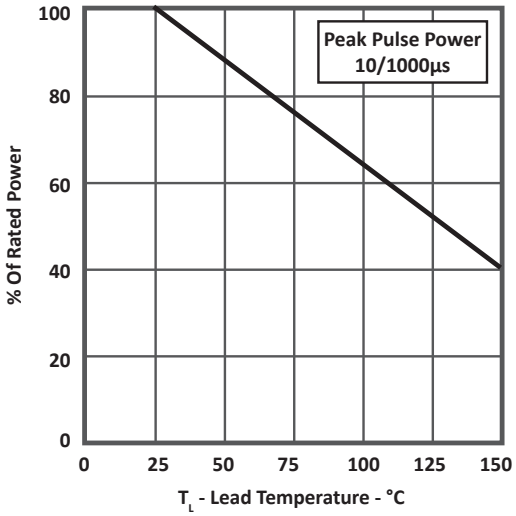


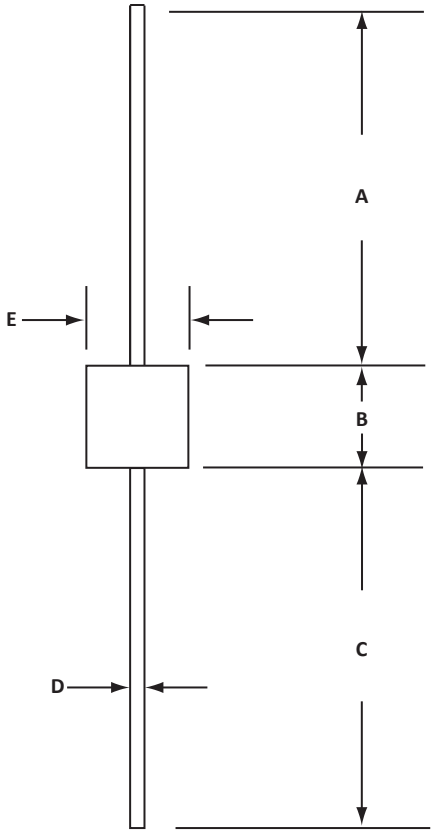
FIGURE 3
POWER DERATING CURVE



AXIAL LEAD PACKAGE INFORMATION

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	24.5	-	1.00	-
B	8.60	9.10	0.34	0.36
C	24.5	-	1.00	-
D	1.20 DIA.	1.30 DIA.	0.048 DIA.	0.052 DIA.
E	8.60	9.10	0.34	0.36

NOTES
1. Dimensions are exclusive of mold flash and metal burrs.



ORDERING INFORMATION					
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PAM16AL30A	n/a	n/a	n/a	n/a	n/a

NOTES
1. Marking on Part - logo, part number and date.

MARKING DIAGRAM



Package outline per document number 06028.R2 9/09.

COMPANY INFORMATION

COMPANY PROFILE

ProTek Devices, based in Tempe, Arizona USA, is a manufacturer of Transient Voltage Suppression (TVS) products designed specifically for the protection of electronic systems from the effects of lightning, Electrostatic Discharge (ESD), Nuclear Electromagnetic Pulse (NEMP), inductive switching and EMI/RFI. With over 25 years of engineering and manufacturing experience, ProTek designs TVS devices that provide application specific protection solutions for all electronic equipment/systems.

ProTek Devices Analog Products Division, also manufactures analog interface, control, RF and power management products.

CONTACT US

Corporate Headquarters
2929 South Fair Lane
Tempe, Arizona 85282
USA

By Telephone
General: 602-431-8101
Sales: 602-414-5109
Customer Service: 602-414-5114

By Fax
General: 602-431-2288

By E-mail:
Sales: sales@protekdevices.com
Customer Service: service@protekdevices.com
Technical Support: support@protekdevices.com

Web
www.protekdevices.com
www.protekanalog.com

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