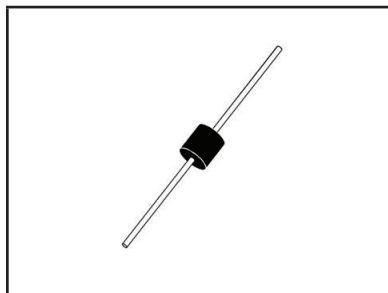


15kW POWER TVS COMPONENT



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 compatible with IEC 61000-4-5 (Surge) requirements.

FEATURES

- Compatible with IEC 61000-4-5 (Surge): 48A, 8/20 μ s - L3(Line-Ground), L4(Line-Line) & L1 (Power)
- 15,000 Watts Peak Pulse Power per Line (tp = 10/1000 μ s)
- 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

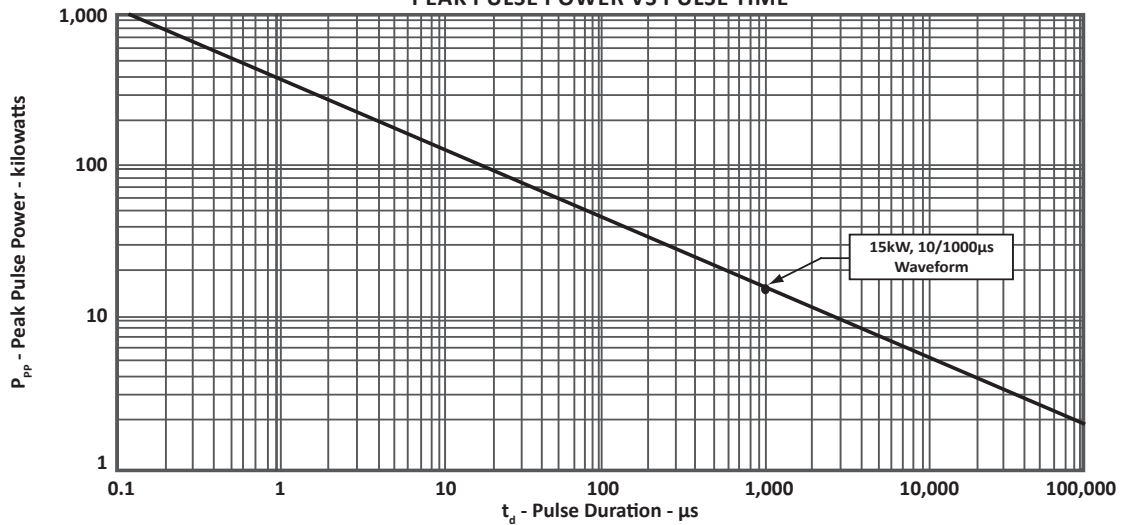
PART NUMBER (Note 1)	MARKING CODE	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	BREAKDOWN VOLTAGE		MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D µA	MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ 10/1000µS $V_C @ I_{PP}$	TEMPERATURE COEFFICIENT OF $V_{(BR)}$ qV _(BR) mV/°C
			MIN $V_{(BR)}$ VOLTS	@ I_T mA			
PAM16AL30A	16AL30A	30.0	33.3	5	15	50.7V @ 296.0A	34

NOTES

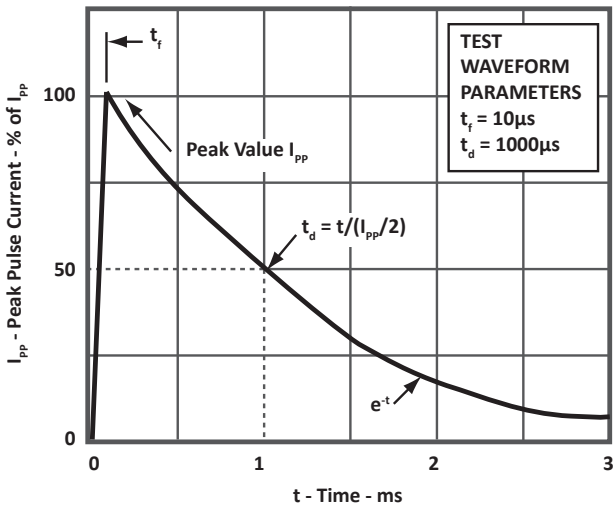
- $V_s = 7.5$ Volts @ 200A, 8.3ms(1/2 Sine Wave).

TYPICAL DEVICE CHARACTERISTICS

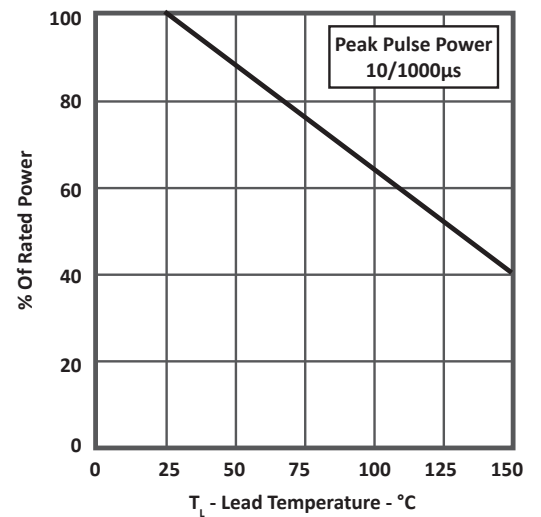
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVEFORM**



**FIGURE 3
POWER DERATING CURVE**



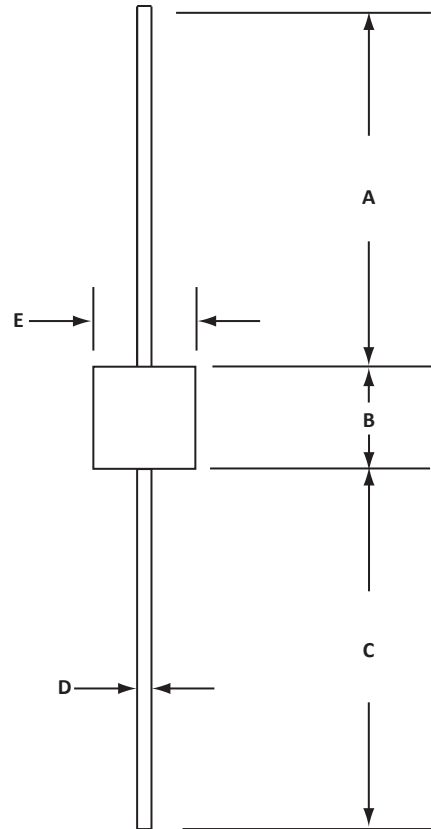
AXIAL LEAD PACKAGE INFORMATION

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

- 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-NQ	n/a	n/a	n/a	n/a	n/a

NOTES

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

MARKING DIAGRAM



Suffix -NQ = This is a commercial grade device and is not qualified to the AEC-Q101 standard. Please contact customer service for more information.

COMPANY INFORMATION

COMPANY PROFILE

In business more than 20 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers high performance interface and linear products. They include analog switches; multiplexers; LED drivers; LED wafer die for ESD protection; audio control ICs; RF and related high frequency products.

CONTACT US

Corporate Headquarters

2929 South Fair Lane
Tempe, Arizona 85282
USA

By Telephone

General: 602-431-8101
Sales: & Marketing: 602-414-5109
Customer Service: 602-414-5114
Product Technical Support: 602-414-5107

By Fax

General: 602-431-2288

By E-mail:

Sales: sales@protekdevices.com
Customer Service: service@protekdevices.com
Technical Support: support@protekdevices.com

ProTek Devices (Asia Pacific) Pte. Ltd.

8 Ubi Road 2, #06-19
Zervex
Singapore - 408538
Tel: +65-67488312
Fax: +65-67488313

Web

www.protekdevices.com

COPYRIGHT © ProTek Devices 2011 - This literature is subject to all applicable copyright laws and is not for resale in any manner.

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice.

DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance. ProTek assumes no responsibility with respect to the selection or specifications of such products. ProTek makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ProTek assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability without limitation special, consequential or incidental damages.

LIFE SUPPORT POLICY: ProTek Devices products are not authorized for use in life support systems without written consent from the factory.