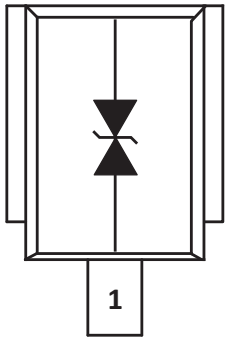
HIGH POWER TVS FOR AUTOMOTIVE LOAD DUMP APPLICATIONS

DO-218AB

APPLICATIONS

- Automotive ECU Protection



BIDIRECTIONAL

FEATURES

- AEC-Q101 Qualified
- Junction Passivation Optimized Design Passivated Anisotropic Rectifier Technology
- T_J = 175°C Capability Suitable for High Reliability and Automotive Requirements
- Bidirectional Configuration
- Lower Clamping Voltage Compared to Existing Solutions
- High Surge Capability
- 11,000 Watts Peak Pulse Power per Line (tp = 10/1000µs)
- Meets ISO 16750-2 Surge Specification (Varied by Test Condition)
- Meets MSL Level 1, Per J-STD-020, LF Maximum Peak of 245°C
- RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Case: DO-218AB Package
- Terminals: Matte Tin Plated Leads, Solderable Per J-STD-002 and JESD 22-B102
- Approximate Weight: 2.985 grams
- Solder Reflow Temperature - 260°C for 10 seconds at terminals
- 24mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0
- Polarity: Heatsink is Anode

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

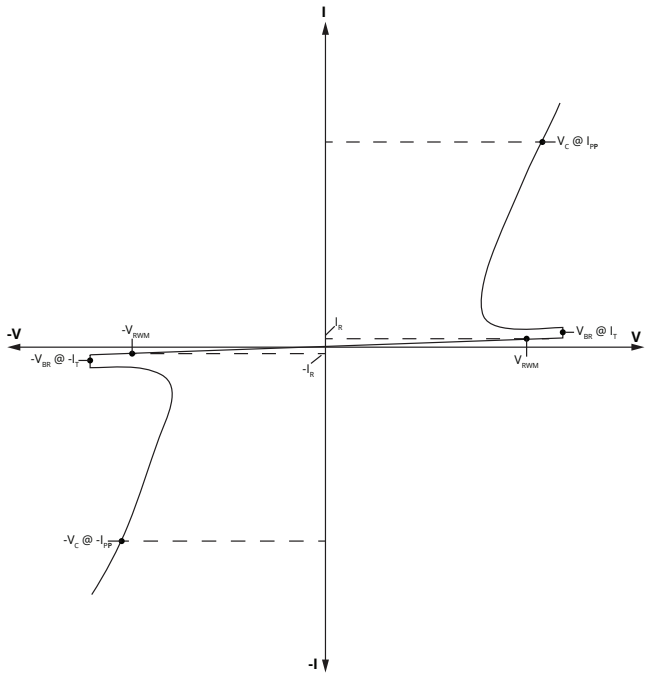
PARAMETER	SYMBOL	VALUE	UNITS
Operating Junction Temperature	T_J	-55 to 175	°C
Storage Temperature	T_{STG}	-55 to 175	°C
Peak Pulse Power Dissipation (tp =10/1000µs)	P_{PPM}	11000	Watts
Power Dissipation on Infinite Heaksink, T_C = 25°C (Figure 2)	P_D	8.0	Watts
Typical Thermal Resistance, Junction to Case	$R_{\Theta JC}$	0.90	°C/W

TYPICAL DEVICE CHARACTERISTICS

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified									
PART NUMBER	MARKING CODE	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE $V_{(BR)}$ @ I_T VOLTS		TEST CURRENT	MAXIMUM CLAMPING VOLTAGE (Note 1)	MAXIMUM REVERSE SURGE CURRENT (Note 1)	MAXIMUM REVERSE LEAKAGE CURRENT	MAXIMUM REVERSE LEAKAGE CURRENT (Note 2)
		V_{RWM} VOLTS	MIN	MAX	@ I_T mA	@ I_P V_C VOLTS	@ I_{PP} AMPS	@V_{RWM} I_R µA	@V_{RWM} 175°C I_R µA
PAM11KLD8S24CAP	LD824C	24.0	26.7	29.5	5.0	26.0	300	10	150

NOTES
1. Surge current waveform is defined as 10/1000µs waveform.
2. Guaranteed by design.

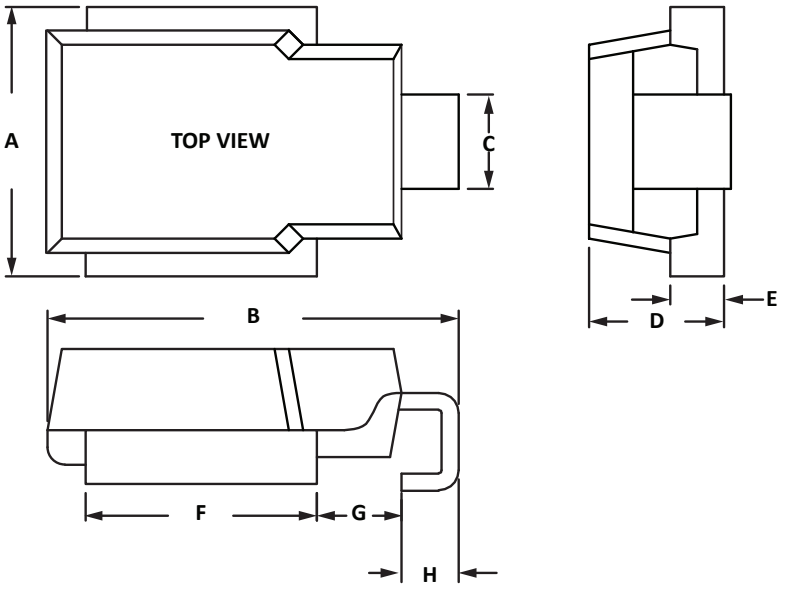
FIGURE 1
VOLTAGE AND CURRENT CHARACTERISTICS



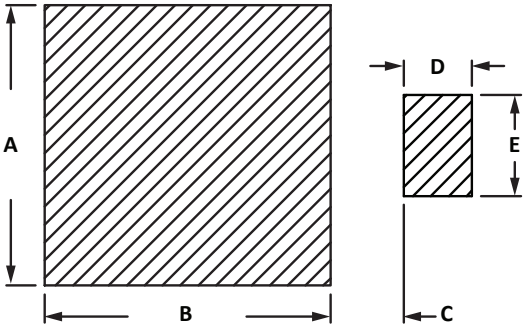
PACKAGE INFORMATION

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	2.40	3.00	0.094	0.118
D	4.70	5.10	0.185	0.201
E	1.90	2.10	0.075	0.083
F	8.50	9.10	0.335	0.358
G	3.50	4.10	0.138	0.161
H	1.60	2.20	0.063	0.086

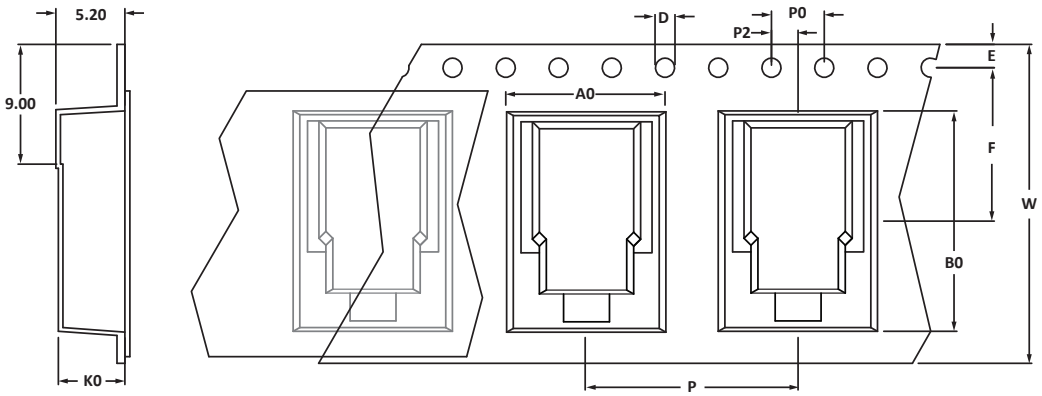
NOTES
1. Dimensions are exclusive of mold flash and metal burrs.



PAD LAYOUT				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	10.49	10.65	0.413	0.419
B	10.69	10.85	0.421	0.427
C	2.69	2.85	0.106	0.112
D	2.49	2.65	0.098	0.104
E	3.73	3.88	0.147	0.153



TAPE AND REEL



SPECIFICATIONS											
REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P
330mm (13")	24mm	10.80 ± 0.30	16.13 ± 0.30	5.00 ± 0.10	1.55 ± 0.2	1.75 ± 0.20	11.50 ± 0.2	24.00 ± 0.20	4.00 ± 0.2	2.00 ± 0.2	16.00 ± 0.2

NOTES
1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Marking on Part - part number, date code and logo.

ORDERING INFORMATION					
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PAM11KLD8S24CAP	N/A	-T750	750	13"	N/A
This device is only available in a Lead-Free configuration.					

COMPANY INFORMATION

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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