

5000 WATT TVS COMPONENT**DESCRIPTION**

The PAM25DF25K33 is a high-powered surface mount transient voltage suppression component designed to protect automotive systems from the damaging effects of high voltage spikes. The DFN-2-5KW surface mount package configuration provides a lower profile at a reduced cost. The device provides 5,000 Watts of peak pulse power dissipation for an 10/1000 μ s waveform.

FEATURES

- **AEC-Q101 Qualified**
- IEC Compatibility 61000-4-5 (Surge): 48A, 8/20 μ s - L3(Line-Ground), L4(Line-Line) & L1 (Power)
- 5,000 Watts Peak Pulse Power per Line (tp = 10/1000 μ s)
- Unidirectional Configuration
- Easy Mounting to Printed Circuit Board
- RoHS Compliant
- REACH Compliant

MECHANICAL CHARACTERISTICS

- Molded DFN-2-5KW
- Approximate Weight: 2.5 grams
- Lead-Free Silver Plating
- Solder Reflow Temperature: 260-270°C
- Flammability Rating UL 94V-0

APPLICATIONS

- Automotive Applications

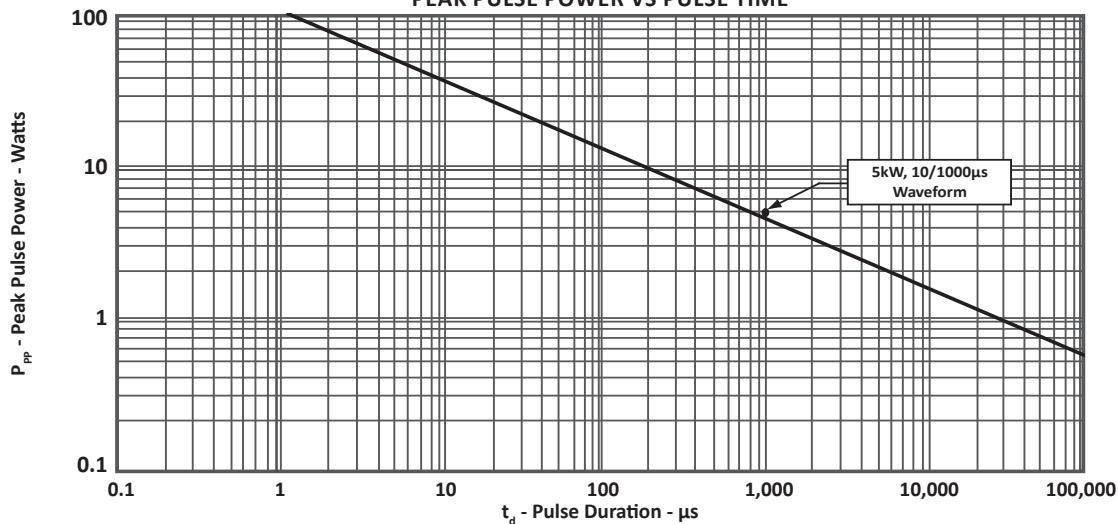
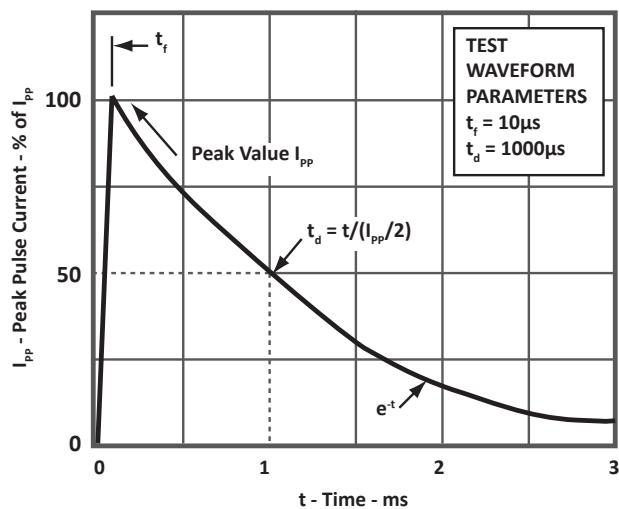
APPLICATION

TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p = 10/1000\mu s$) - See Figure 1	P_{PP}	5,000	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	MARKING CODE	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE		MAXIMUM LEAKAGE CURRENT $@ V_{WM}$ I_D μA	MAXIMUM CLAMPING VOLTAGE (Fig. 2) $@ 10/1000\mu s$ $V_c @ I_{PP}$
			MIN $V_{(BR)}$ VOLTS	@ I_T mA		
PAM25DF25K33	5U33	33	36.8	5	8	53.3V @ 94.0A

TYPICAL DEVICE CHARACTERISTICS

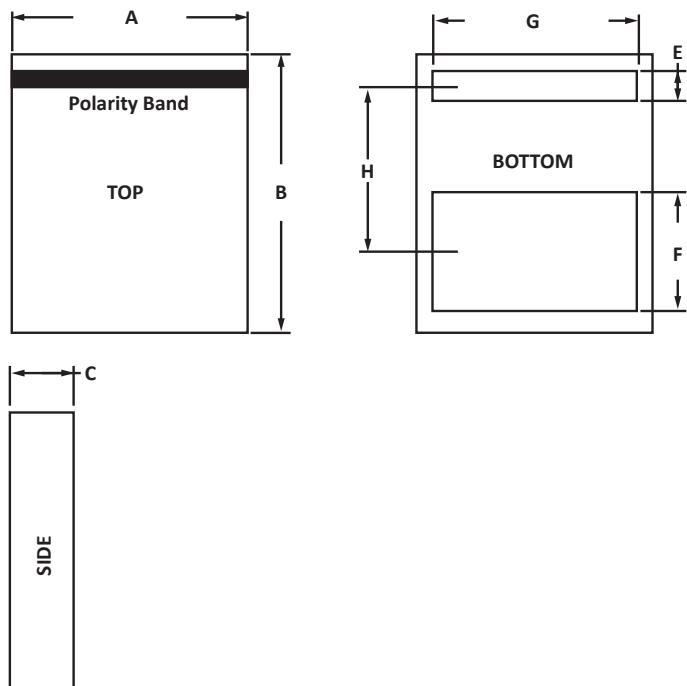
FIGURE 1
PEAK PULSE POWER VS PULSE TIME

FIGURE 2
PULSE WAVEFORM


DFN-2-5KW PACKAGE INFORMATION

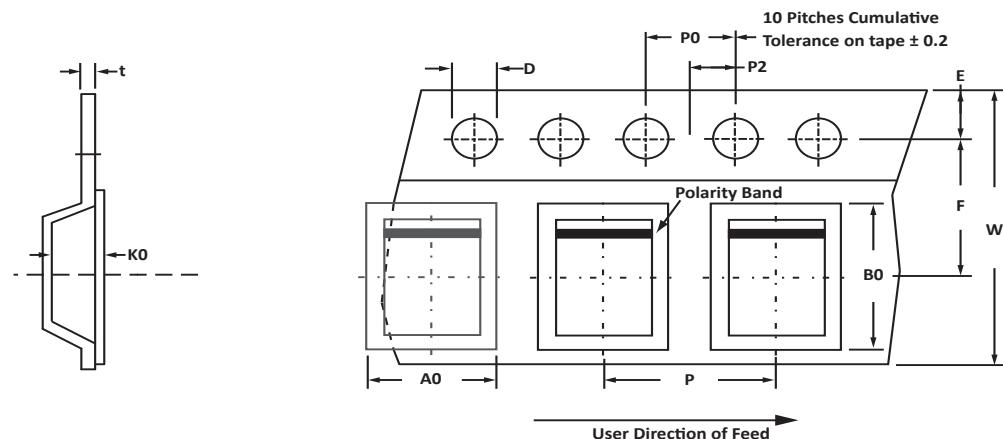
DIM	OUTLINE DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.53	6.68	0.257	0.263
B	7.54	7.70	0.297	0.303
C	1.22	1.33	0.048	0.052
E	0.69	0.84	0.027	0.033
F	3.05	3.30	0.120	0.130
G	5.08	5.33	0.200	0.210
H	4.70	4.88	0.185	0.192

NOTES

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling dimension: millimeters.
3. Dimensions are exclusive of mold flash and metal burrs.



TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A_0	B_0	K_0	D	E	F	W	P_0	P_2	P	t_{max}
330mm (13")	16mm	6.98 ± 0.10	8.00 ± 0.10	1.66 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	16.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	8.00 ± 0.10	0.25

NOTES

1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix -T13 = 13" Reel - 2,500 pieces per 16mm tape.
4. Marking on Part - marking code (see page 2), date code, logo and polarity band.

Package outline per document number 06098.R0 10/11.

ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PAM25DF25K33-NQ	n/a	-T13	2,500	13"	n/a

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

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.

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