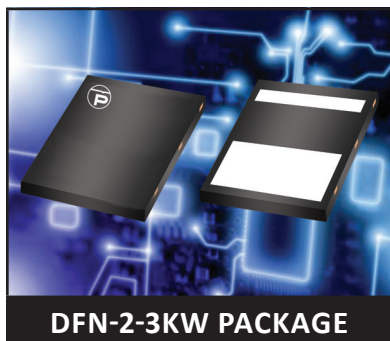


## 3000 WATT TVS COMPONENT



### DESCRIPTION

The SM3KW24A is high-powered surface mount transient voltage suppression component designed to protect equipment and systems from the damaging effects of high voltage spikes. The DFN-2-3KW surface mount package configuration provides a lower profile at a reduce cost.

These devices provide 3,000 Watts of peak pulse power dissipation for an 10/1000 $\mu$ s waveform. Applications include relay drive protection module and secondary lightning protection.

### FEATURES

- IEC Compatibility 61000-4-5 (Surge): 48A, 8/20 $\mu$ s - L3(Line-Ground), L4(Line-Line) & L1 (Power)
- 3,000 Watts Peak Pulse Power per Line (tp = 10/1000 $\mu$ s)
- Unidirectional Configuration
- Easy Mounting to Printed Circuit Board
- RoHS Compliant
- REACH Compliant

### APPLICATIONS

- Relay Drives
- Motor (Start/Stop) Back EMF Protection
- Module Lightning Protection
- Secondary Lightning Protection

### MECHANICAL CHARACTERISTICS

- Molded DFN2-3KW
- Approximate Weight: 2.5 grams
- Lead-Free Silver Plating
- Solder Reflow Temperature: 260-270°C
- 12mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

## CIRCUIT DIAGRAM



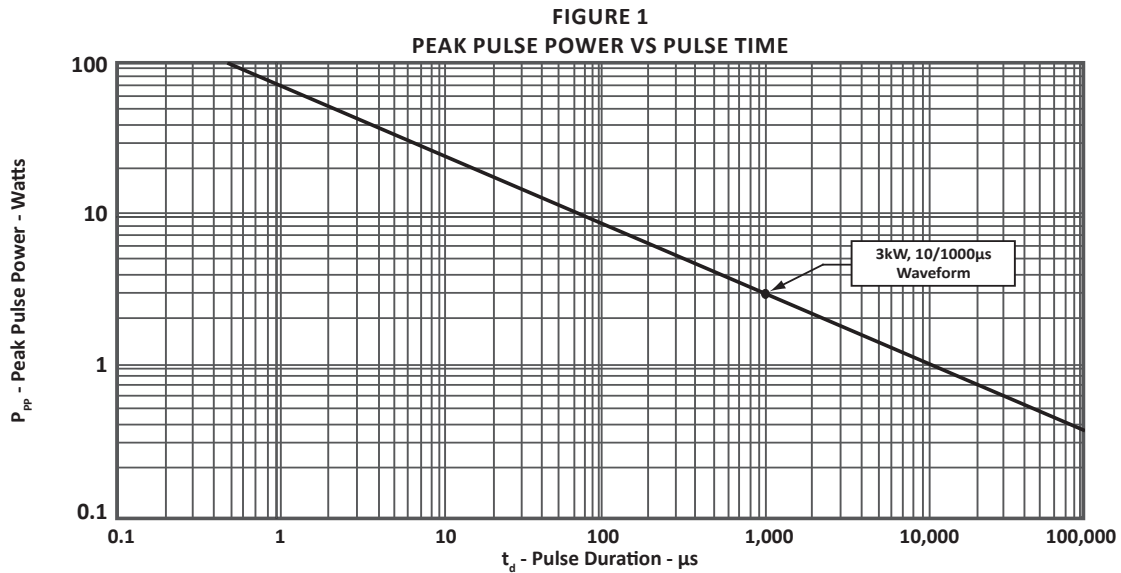
**TYPICAL DEVICE CHARACTERISTICS**
**MAXIMUM RATINGS @ 25°C Unless Otherwise Specified**

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 10/1000μs) - See Figure 1	$P_{PP}$	3,000	Watts
Storage Temperature	$T_{STG}$	-55 to 150	°C
Operating Temperature	$T_L$	-55 to 150	°C

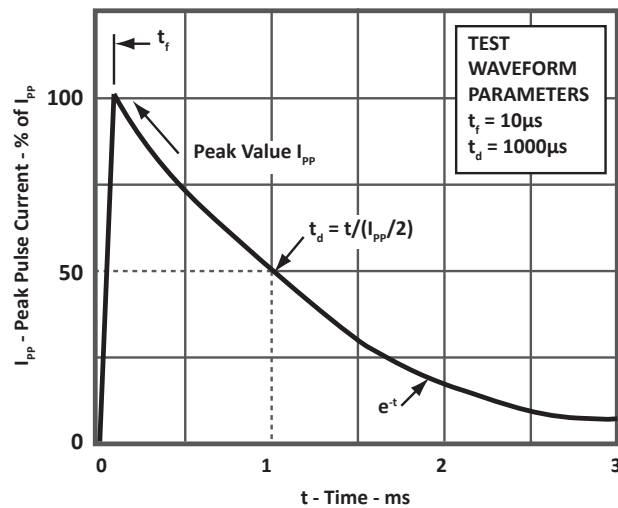
**ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified**

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		
SM3KW24A	3U24	24	26.7	1	3	43.0V @ 69.8A

## TYPICAL DEVICE CHARACTERISTICS



**FIGURE 2**  
**PULSE WAVEFORM**



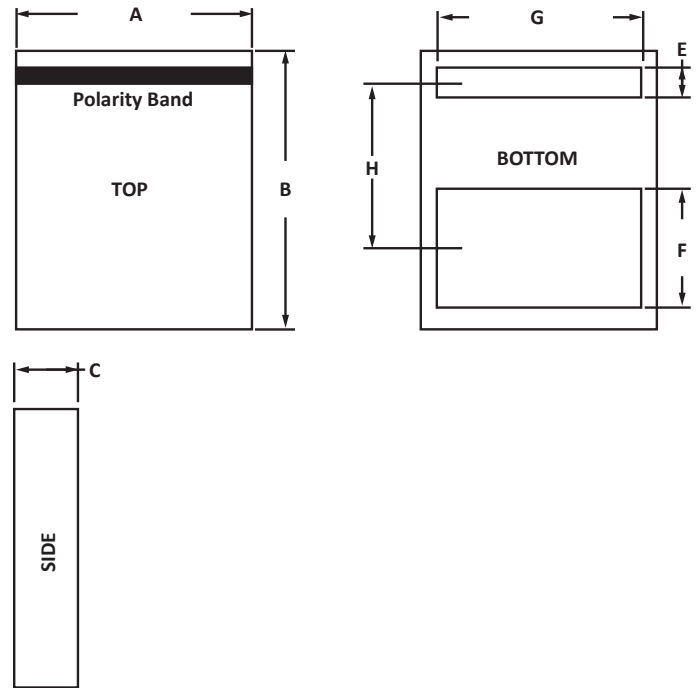
## DFN-2-3KW PACKAGE INFORMATION

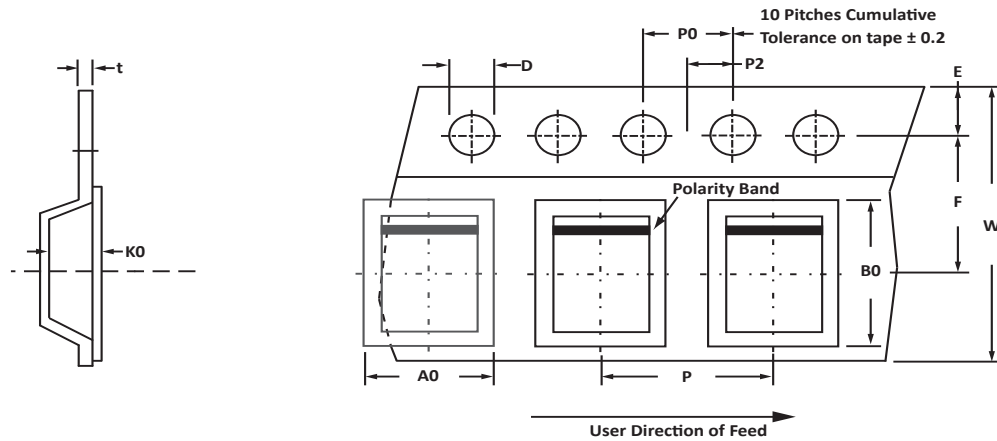
## OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.44	5.64	0.214	0.222
B	6.45	6.65	0.248	0.262
C	1.16	1.32	0.046	0.052
E	0.66	0.86	0.026	0.034
F	1.93	2.13	0.076	0.084
G	3.91	4.11	0.154	0.162
H	4.27	4.37	0.168	0.172

## NOTES

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



**TAPE AND REEL**

**SPECIFICATIONS**

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
330mm (13")	12mm	5.92 ± 0.10	6.93 ± 0.05	1.65 ± 0.05	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	12.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	8.00 ± 0.10	0.25

**NOTES**

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix - T13 = 13" Reel - 2,500 pieces per 12mm tape.
- Marking on Part - marking code (see page 2).

Package outline per document number 06096.R0 10/11.

**ORDERING INFORMATION**

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
SM3KW24A	n/a	-T13	2,500	13"	n/a

## COMPANY INFORMATION

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### 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.

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