



DFN-2-3KW PACKAGE

DESCRIPTION

The SM3KWxxA/C Series are high-powered surface mount transient voltage suppression components 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 μ s waveform. Applications include relay drive protection module and secondary lightning protection.

FEATURES

- RTCA DO-160G COMPLIANT PRODUCT
- Compatible with IEC 61000-4-2 (ESD): Air ± 15 kV, Contact ± 8 kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 18kW, 8/20 μ s
- 3,000 Watts Peak Pulse Power per Line ($t_p = 10/1000\mu$ s)
- Unidirectional & Bidirectional Configurations
- 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 DIAGRAMS

Unidirectional



Bidirectional



TYPICAL DEVICE CHARACTERISTICS

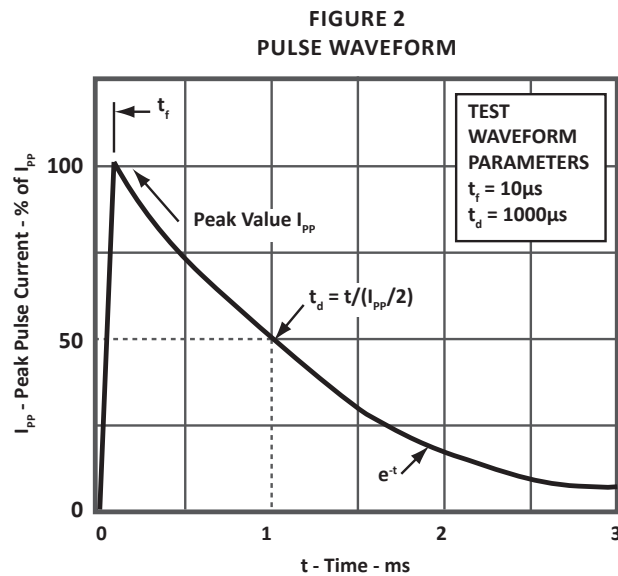
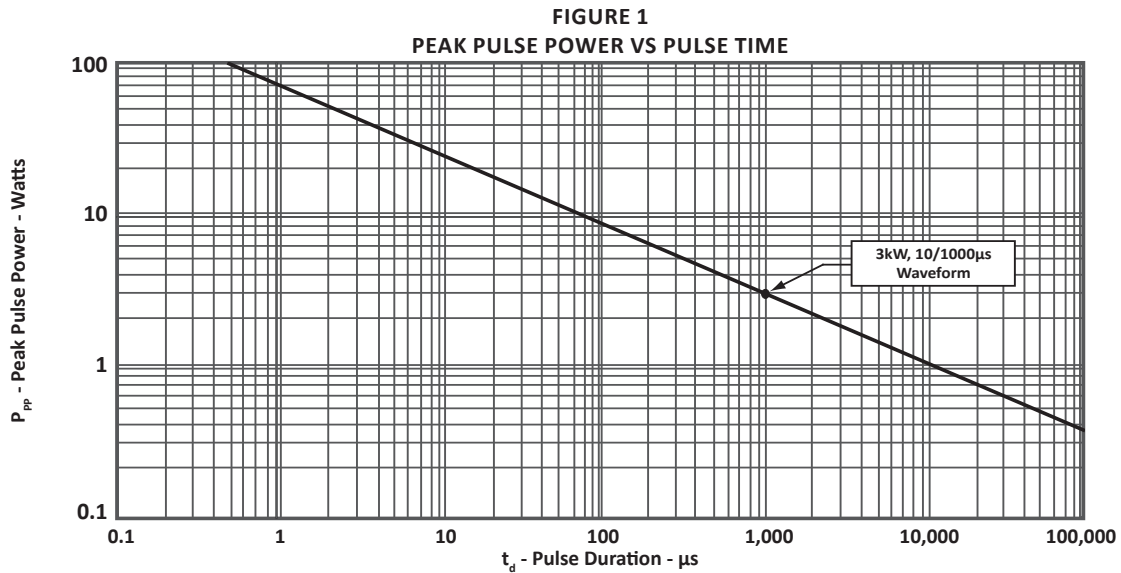
RTCA DO-160G COMPLIANT PRODUCT

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) @ 10/1000μs V _C @ I _{PP}
			MIN V _(BR) VOLTS	@I _T mA		
SM3KW08A	3U08	8	8.8	1	50	13.6V @ 220A
SM3KW24A	3U24	24	26.7	1	3	43.0V @ 69.8A
SM3KW33A	3U33	33	36.7	1	3	56.3V @ 53.3A
SM3KW08CA	3B08	8	8.8	1	50	13.6V @ 220A
SM3KW24CA	3B24	24	26.7	1	3	43.0V @ 69.8A
SM3KW33CA	3B33	33	36.7	1	3	56.3V @ 53.3A



DFN-2-3KW PACKAGE INFORMATION

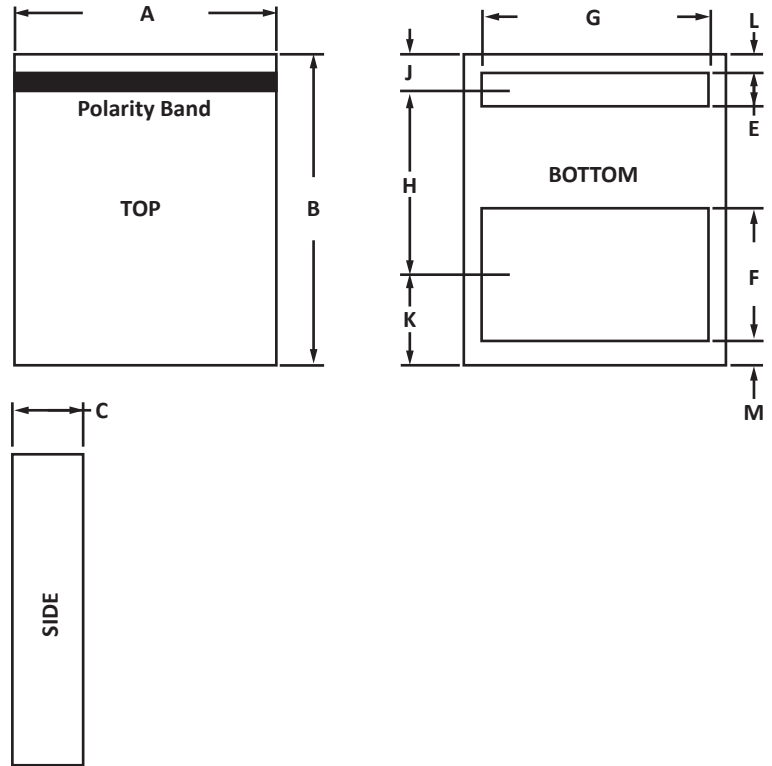
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OUTLINE DIMENSIONS

DIM	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	1.32	1.48	0.052	0.058
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
J	0.72	0.80	0.028	0.032
K	2.00	2.10	0.079	0.083
L	0.33	0.43	0.013	0.017
M	0.45	0.55	0.018	0.022

NOTES

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

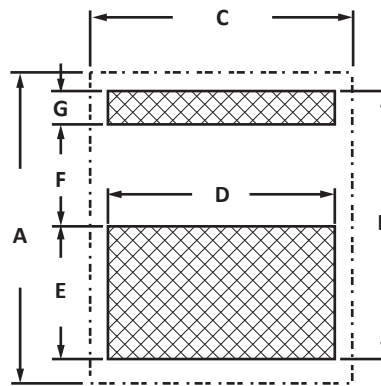


PAD LAYOUT

DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
A	7.62	0.300
B	6.99	0.275
C	6.60	0.260
D	5.33	0.210
E	3.35	0.132
F	2.62	0.103
G	1.02	0.040

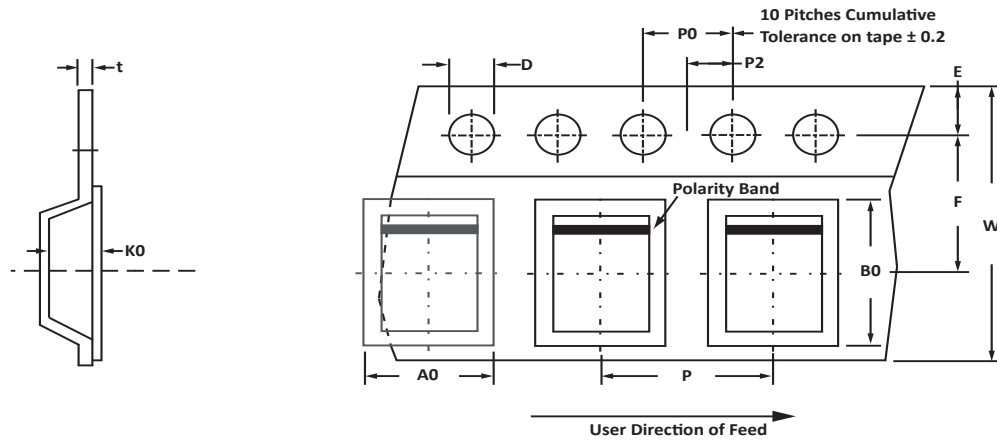
NOTES

1. Controlling dimension: millimeters.



TAPE AND REEL

RTCA DO-160G COMPLIANT PRODUCT



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
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

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

ORDERING INFORMATION

BASE PART NUMBER (XX=VOLTAGE)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
SM3KWxxA/CA	n/a	-T13	2,500	13"	n/a

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

COMPANY INFORMATION**RTCA DO-160G COMPLIANT PRODUCT****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 LED wafer die for ESD protection and related high frequency products.

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