

HIGH POWER TVS COMPONENT**DESCRIPTION**

The PSM1KxxCC series are transient voltage suppressors designed for DC power supply equipment that are exposed to outdoor environments. These devices are in compliance with IEC 61000-4-5, 1kA peak pulse current, 2kV with 2 Ohm resistor.

FEATURES

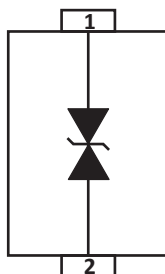
- Compatible with IEC 61000-4-2 (ESD): Level 4 - Air 15kV, Contact 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 8/20μs Waveform
- Excellent Clamping Capability
- Low Profile Package For Optimized Board Space
- Low Inductance
- High Peak Pulse Power Capability at 1.2/50μs - 8/20μs @2 Ohm Waveform
- Fast Response Time: Typically less than 1ps from 0V to V_{BR} Min
- RoHS Compliant

APPLICATIONS

- Power Supply
- DC Applications

MECHANICAL CHARACTERISTICS

- Molded JEDEC DO-214AB Package
- Approximate Weight: 0.294 grams
- Meets MSL Level 1, Per J-STD-020, LF Maximum Peak of 260°C
- Terminal: Solder Plated, Solderable Per J-STD-002
- Solder Reflow Temperature: 260°C
- 16mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

PIN CONFIGURATION

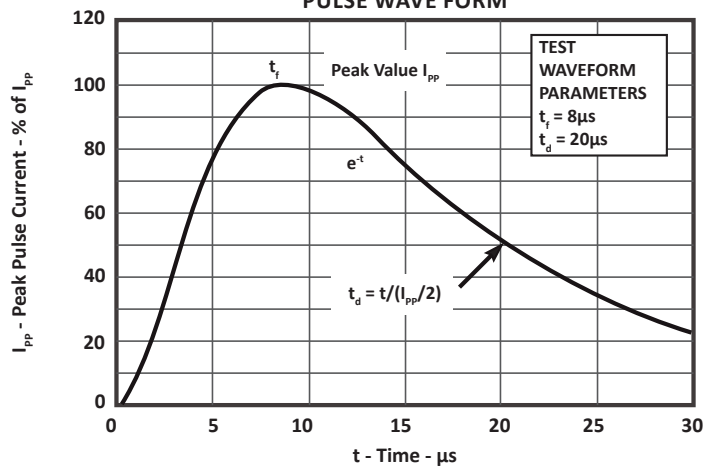
TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

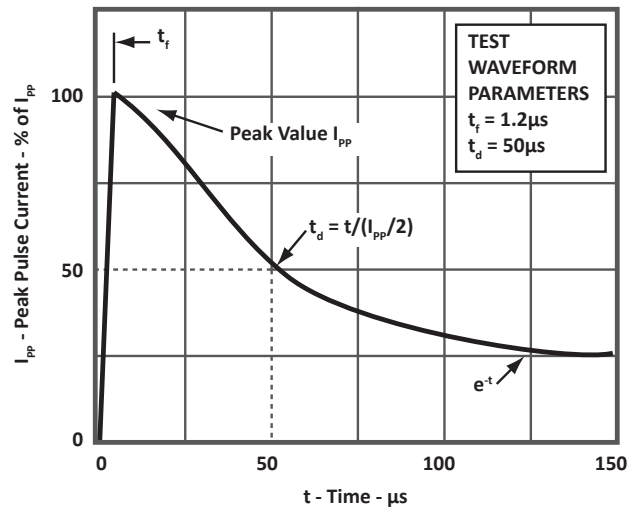
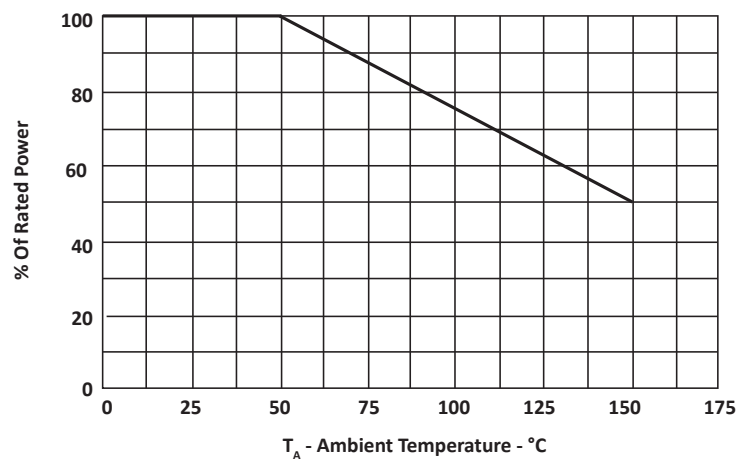
PARAMETER	SYMBOL	VALUE	UNITS
Operating Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Steady State Power Dissipation at $T_L = 75^\circ\text{C}$	$P_{M(AV)}$	5.0	Watts
Peak Pulse Voltage at 1.2/50 μs - 8/20 μs @20 Ω Waveform	V_{PP}	2000	Volts
Peak Pulse Current - 8/20 μs	I_{PP}	1	kA

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (Note 1)	DEVICE MARKING	REVERSE STAND-OFF VOLTAGE V_R VOLTS	BREAKDOWN VOLTAGE $V_{(BR)} @ I_T$ VOLTS		TEST CURRENT @ I_T mA	MAXIMUM CLAMPING VOLTAGE (Note 1) $V_C @ V_{PP} = 2\text{kV}$ VOLTS	MAXIMUM REVERSE LEAKAGE CURRENT @ V_R I_R μA
			MIN	MAX			
PSM1K30CC	1K30C	30.0	32.0	37.0	1	65.0	1
PSM1K33CC	1K33C	33.0	36.0	41.0	1	70.0	1
PSM1K36CC	1K36C	36.0	40.0	44.5	1	72.0	1
PSM1K43CC	1K43C	43.0	47.5	53.0	1	80.0	1
PSM1K58CC	1K58C	58.0	60.0	72.0	1	100.0	1
PSM1K64CC	1K64C	64.0	71.0	79.0	1	135.0	1
PSM1K76CC	1K76C	76.0	85.0	95.0	1	140.0	1

Note 1: Surge waveform at 1.2/50 μs - 8/20 μs @20 Ω .FIGURE 1
PULSE WAVE FORM

TYPICAL DEVICE CHARACTERISTICS

 FIGURE 2
 PULSE WAVEFORM

 FIGURE 3
 POWER DERATING CURVE


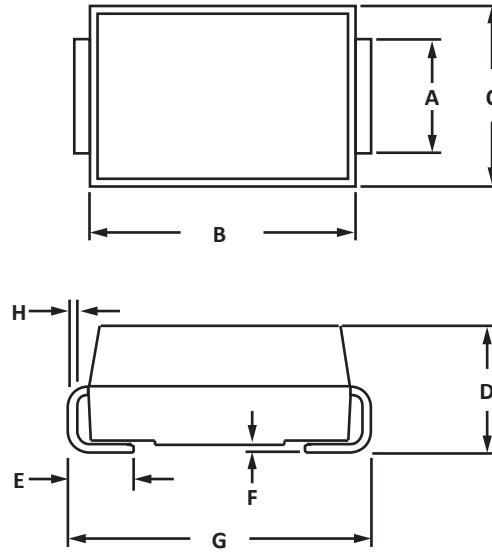
DO-214AB PACKAGE INFORMATION

OUTLINE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.75	3.25	0.108	0.128
B	6.90	7.40	0.272	0.291
C	5.75	6.25	0.226	0.246
D	2.15	2.62	0.085	0.103
E	0.95	1.52	0.037	0.060
F	0.051	0.203	0.002	0.008
G	7.70	8.20	0.303	0.323
H	0.15	0.31	0.006	0.012

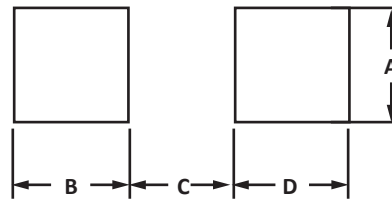
NOTES

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

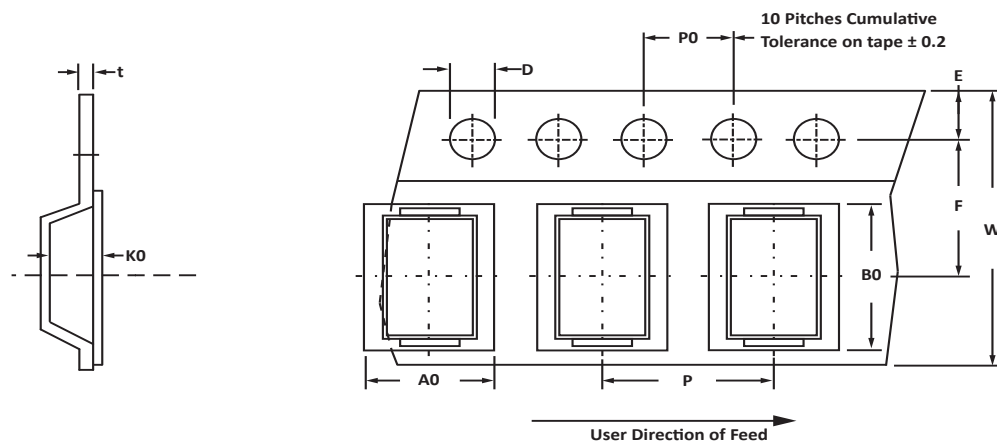


PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.30	-	0.130	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-



TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P	tmax
330mm (13")	16mm	6.05 ± 0.30	8.31 ± 0.30	2.54 ± 0.10	1.55 ± 0.1	1.75 ± 0.20	7.5 ± 0.20	16.00 ± 0.20	4.00 ± 0.20	8.00 ± 0.20	0.4

NOTES

1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Marking on Part - marking code (see page 2), date code and logo.

ORDERING INFORMATION

BASE PART NUMBER (Voltage = x)	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PSM1KxxCC	N/A	-T13	3,000	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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