

APPLICATIONS

- ✓ RS-232, RS-422 & RS-423 Data Lines
- ✓ Digital Sensor I/O Ports
- ✓ Controller & Monitoring Systems
- ✓ Portable Electronics
- ✓ Industrial Controls
- ✓ 12 & 33 Volt DC Protection

IEC COMPATIBILITY (EN61000-4)

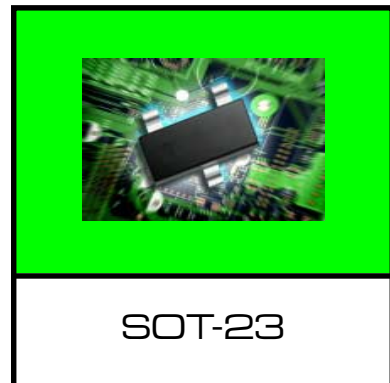
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20 μ s - Level 1(Line-Gnd) & Level 2(Line-Line)

FEATURES

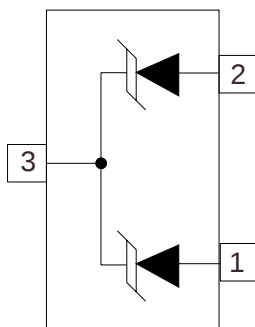
- ✓ 300 Watt Peak Pulse Power per Line ($t_p = 8/20\mu$ s)
- ✓ 200 watt Peak Pulse Power per Line ($t_p = 1.2/50\mu$ s)
- ✓ 40 Watt Peak Pulse Power per Line ($t_p = 10/1000\mu$ s)
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-23
- ✓ Weight 0.6 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481
- ✓ Device Marking Code



CIRCUIT DIAGRAM



PSOT15KCA and PSOT36KCA

DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P _{PP}	300 @ 8/20μs 200 @ 1.2/50μs 40 @ 10/1000μs	Watts
Operating Temperature	T _J	-55 °C to 150 °C	°C
Storage Temperature	T _{STG}	-55 °C to 150 °C	°C

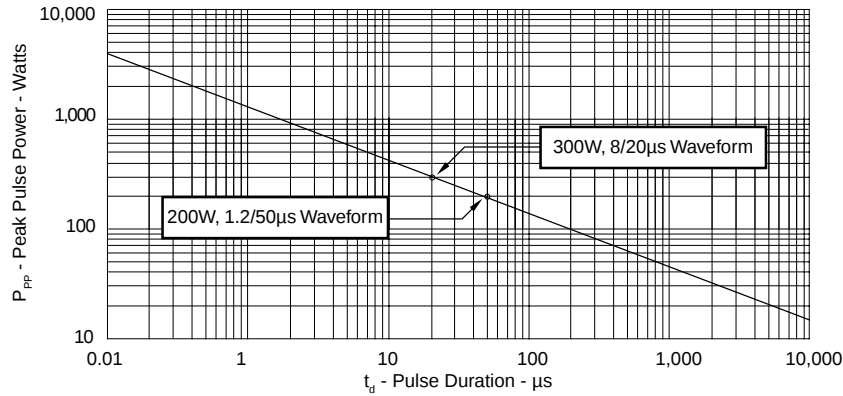
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE V _{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA V _(BR) VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ I _p = 1.9A V _C VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20μs V _C @ I _{PP}	MAXIMUM LEAKAGE CURRENT @ V _{WM} I _d μA	TYPICAL CAPACITANCE 0V @ 1 MHz C pF
PSOT15KCA PSOT36KCA	PKA PKB	12.8 33.0	14.3 36.0	21.2 45.0	33V @ 9A 66V @ 6A	0.1 0.1	120 45

Note 1: For Unidirectional test only pins 1-3 and 2-3.

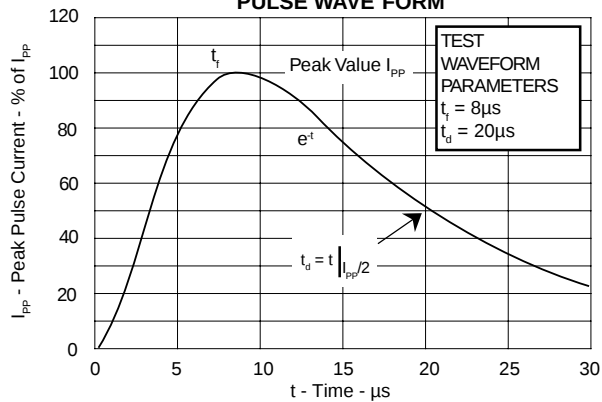
PSOT15KCA and PSOT36KCA

GRAPHS

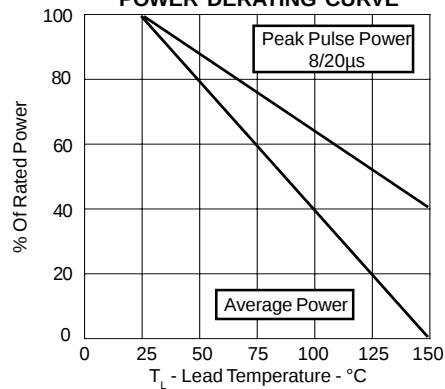
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVE FORM**

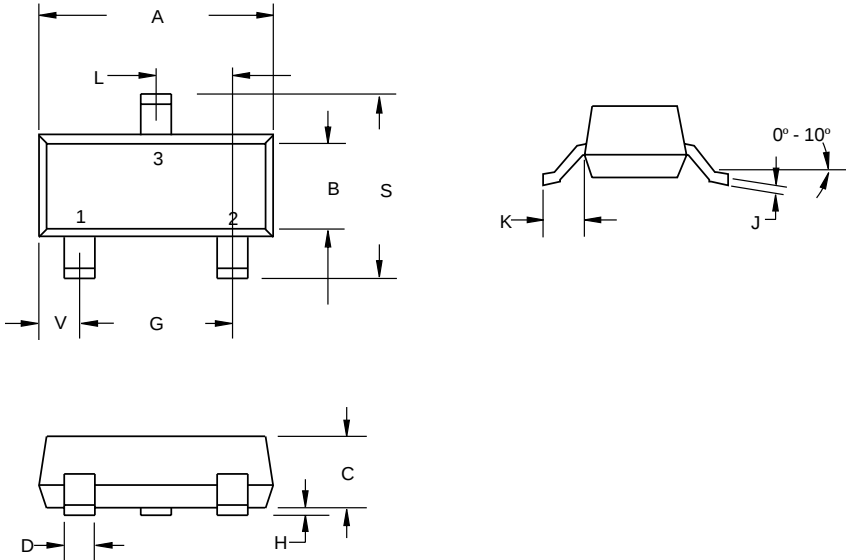


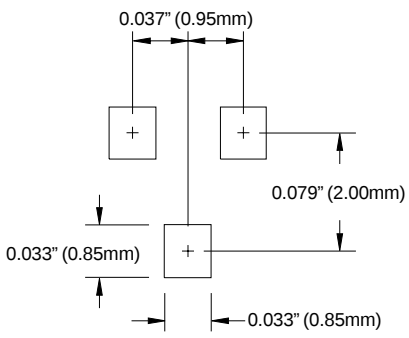
**FIGURE 3
POWER DERATING CURVE**



PSOT15KCA and PSOT36KCA

PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE	SOT-23				
					
	PACKAGED DIMENSIONS				
	DIM	MILLIMETERS		INCHES	
		MIN	MAX	MIN	MAX
	A	2.80	3.04	0.1102	0.1197
	B	1.20	1.40	0.0472	0.0551
	C	0.89	1.11	0.0350	0.0440
	D	0.37	0.50	0.0150	0.0200
	G	1.78	2.04	0.0701	0.0807
	H	0.013	0.100	0.0005	0.0040
	J	0.085	0.177	0.0034	0.0070
	K	0.45	0.60	0.0180	0.0236
	L	0.89	1.02	0.0350	0.0401
	S	2.10	2.50	0.0830	0.0984
	V	0.45	0.60	0.0177	0.0236

MOUNTING PAD	
	

NOTES:

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.

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PART NUMBER SUFFIXES USED FOR TAPE & REEL/BULK ORDERING:

Surface mount product is taped and reeled in accordance with EIA-481.

Suffix-T7 = 7 Inch Reel - 3,000 pieces per reel i.e.: PSOT15KCA-T7

Suffix-T13 = 13 Inch Reel - 10,000 pieces per reel i.e.: PSOT15KCA-T13

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