

STANDARD SUBMINATURE TVS ARRAYS

APPLICATIONS

- ✓ RS-232, RS-422 & RS-423
- ✓ Cellular Phones
- ✓ Control & Monitoring Systems
- ✓ Portable Electronics
- ✓ Wireless Bus Protection

IEC COMPATIBILITY (EN61000-4)

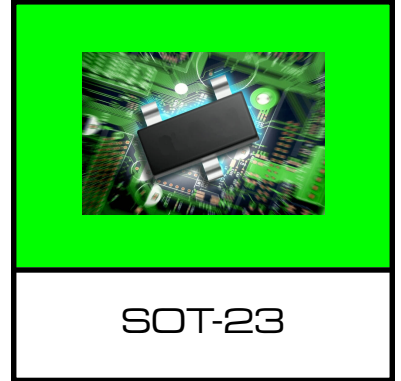
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 12A, 8/20 μ s - Level 1(Line-Gnd) & Level 2(Line-Line)

FEATURES

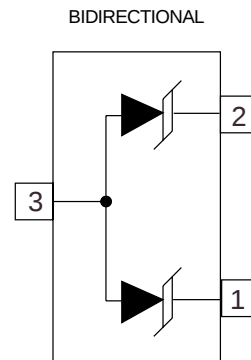
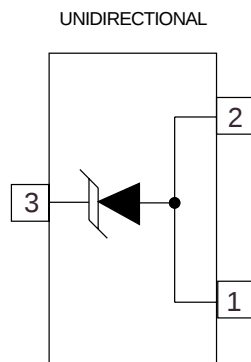
- ✓ ESD Protection > 40 kilovolts
- ✓ 500 Watts Peak Pulse Power per Line (td=8/20 μ s)
- ✓ Low Clamping Voltage
- ✓ Available in Multiple Voltage Types Ranging from 3V to 36V

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOT-23
- ✓ Weight 0.6 grams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481-1-A
- ✓ Device Marking Code & Logo
- ✓ Pin One Defined By DOT on Top of Package



CIRCUIT DIAGRAMS



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	500	Watts
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C
Forward Voltage @ 100mA, 300μs - Square Wave (Note 1)	V_F	1.5	Volts

Note 1: Applies to unidirectional devices only.

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER (See Note 1)	DEVICE MARKING	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_P = 1A$ 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
PSOT03	03	3.3	4.0	6.5	10.9V @ 43.0A	125	500
PSOT03C	03C	3.3	4.5	7.0	10.9V @ 43.0A	125	300
PSOT05	05	5.0	6.0	9.8	13.5V @ 42.0A	20	350
PSOT05C	05C	5.0	6.0	9.8	13.5V @ 42.0A	20	210
PSOT08	08	8.0	8.5	13.4	16.9V @ 34.0A	10	250
PSOT08C	08C	8.0	8.5	13.4	16.9V @ 34.0A	10	150
PSOT12	12	12.0	13.3	19.0	25.9V @ 21.0A	2	150
PSOT12C	12C	12.0	13.3	19.0	25.9V @ 21.0A	2	90
PSOT15	15	15.0	16.7	24.0	30.0V @ 17.0A	1	100
PSOT15C	15C	15.0	16.7	24.0	30.0V @ 17.0A	1	60
PSOT24	24	24.0	26.7	43.0	49.0V @ 12.0A	1	88
PSOT24C	24C	24.0	26.7	43.0	49.0V @ 12.0A	1	63
PSOT36	36	36.0	40.0	51.0	76.8V @ 9.0A	1	80
PSOT36C	36C	36.0	40.0	51.0	76.8V @ 9.0A	1	60

Note 1: Part numbers with an additional "C" suffix are bidirectional devices, i.e., PSOT05C.

GRAPHS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

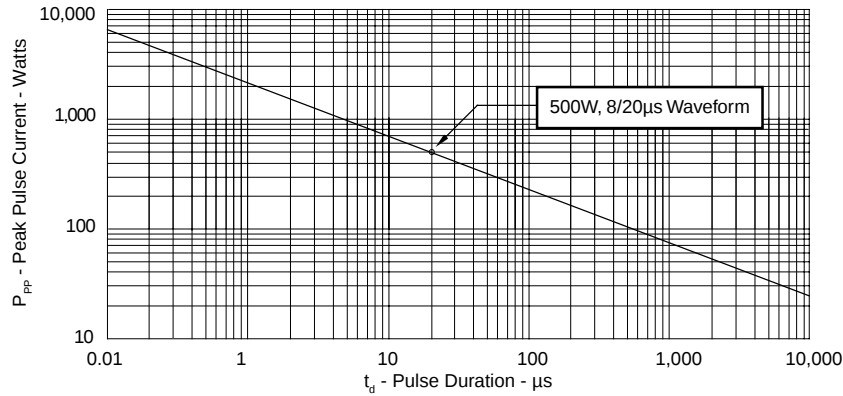


FIGURE 2
PULSE WAVE FORM

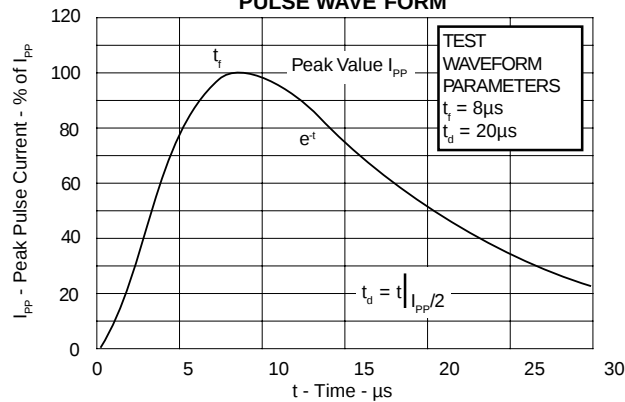
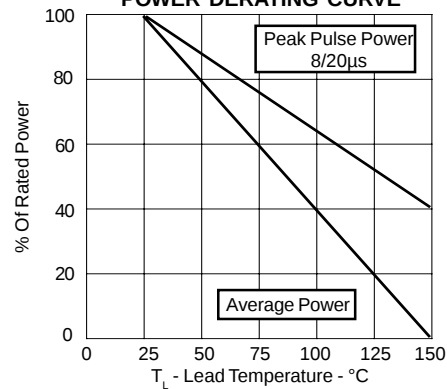
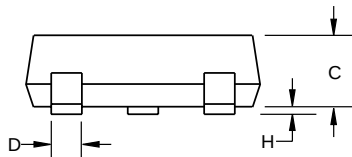
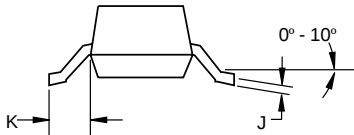
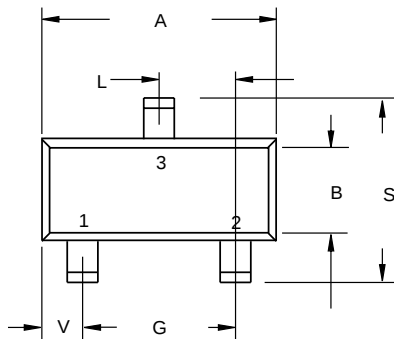
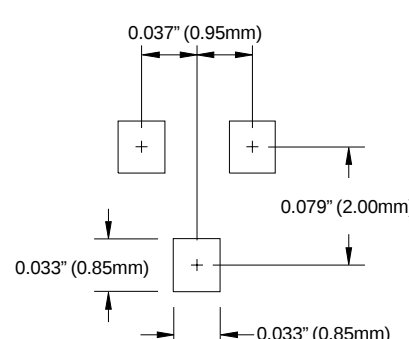


FIGURE 3
POWER DERATING CURVE



PSOT03 thru PSOT36C

PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE 	SOT-23  <table><tr><th colspan="5">PACKAGE DIMENSIONS</th></tr><tr><th rowspan="2">DIM</th><th colspan="2">MILLIMETERS</th><th colspan="2">INCHES</th></tr><tr><th>MIN</th><th>MAX</th><th>MIN</th><th>MAX</th></tr><tr><td>A</td><td>2.80</td><td>3.04</td><td>0.1102</td><td>0.1197</td></tr><tr><td>B</td><td>1.20</td><td>1.40</td><td>0.0472</td><td>0.0551</td></tr><tr><td>C</td><td>0.89</td><td>1.11</td><td>0.0350</td><td>0.0440</td></tr><tr><td>D</td><td>0.37</td><td>0.50</td><td>0.0150</td><td>0.0200</td></tr><tr><td>G</td><td>1.78</td><td>2.04</td><td>0.0701</td><td>0.0807</td></tr><tr><td>H</td><td>0.013</td><td>0.100</td><td>0.0005</td><td>0.0040</td></tr><tr><td>J</td><td>0.085</td><td>0.177</td><td>0.0034</td><td>0.0070</td></tr><tr><td>K</td><td>0.45</td><td>0.60</td><td>0.0180</td><td>0.0236</td></tr><tr><td>L</td><td>0.89</td><td>1.02</td><td>0.0350</td><td>0.0401</td></tr><tr><td>S</td><td>2.10</td><td>2.50</td><td>0.0830</td><td>0.0984</td></tr><tr><td>V</td><td>0.45</td><td>0.60</td><td>0.0177</td><td>0.0236</td></tr></table>	PACKAGE 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
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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. 06012 Rev 1 - 11/01																																																																					

TAPE & REEL PACKAGING:

Surface mount product is taped and reeled in accordance with EIA-481, reel quantities and sizes are as follows:

7 Inch Reel - 3,000 pieces per reel; 13 Inch Reel - Not Available

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