



PSD03
thru
PSD24C

STANDARD TVS COMPONENTS

APPLICATIONS

- ✓ Laptop Computers
- ✓ Cellular Phones
- ✓ Digital Cameras
- ✓ Personal Digital Assistants (PDAs)

IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20µs - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

- ✓ 500 Watts Peak Pulse Power per Line(td= 8/20µs)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Replacement for MLV (0805)
- ✓ Protects One Power or I/O Port
- ✓ Available in Multiple Voltages Ranging From 3.0V to 24.0V
- ✓ ESD Protection > 40 kilovolts
- ✓ Low Clamping Voltage

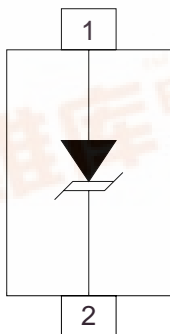
MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SOD-323
- ✓ Weight 10 milligrams (Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 8mm Tape and Reel Per EIA Standard 481-1-A
- ✓ Device Marking: Marking Code & Polarity Band (*Unidirectional Only*)

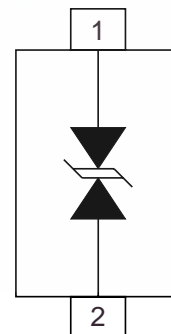


CIRCUIT DIAGRAMS

UNIDIRECTIONAL



BIDIRECTIONAL



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (td = 8/20µs) - 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

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER (See Notes 1-2)	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
		V _{WM} VOLTS	@ 1mA V _(BR) VOLTS	@ I _p = 1A V _C VOLTS	@ 8/20µs V _C @ I _{PP}	@ V _{WM} I _D µA	0V @ 1 MHz C pF
PSD03	A	3.3	4.0	6.5	10.9V @ 43.0A	125	500
PSD03C	G	3.3	4.0	7.0	10.9V @ 39.0A	125	200
PSD05	B	5.0	6.0	9.8	13.5V @ 42.0A	10	350
PSD05C	H	5.0	6.0	9.8	14.5V @ 28.0A	10	175
PSD08	C	8.0	8.5	13.4	16.9V @ 34.0A	10	250
PSD08C	J	8.0	8.5	13.4	18.5V @ 17.0A	10	150
PSD12	D	12.0	13.3	19.0	25.9V @ 21.0A	1	150
PSD12C	K	12.0	13.3	19.0	29.5V @ 14.0A	1	50
PSD15	E	15.0	16.7	24.0	30.0V @ 17.0A	1	100
PSD15C	L	15.0	16.7	24.0	33.0V @ 12.0A	1	40
PSD24	F	24.0	26.7	43.0	49.0V @ 12.0A	1	88
PSD24C	M	24.0	26.7	43.0	46.2V @ 9.0A	1	40

Note 1: Part numbers with an additional "C" suffix are bidirectional devices, i.e., PSD05C.

Note 2: For Bidirectional Devices Only: Electrical characteristics apply in both directions.

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

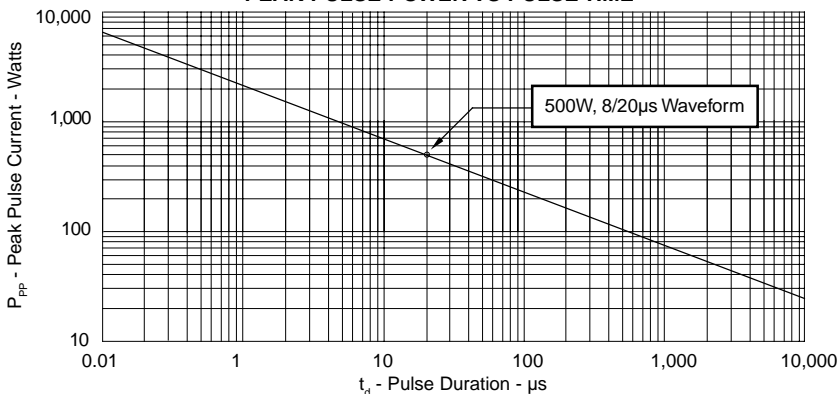
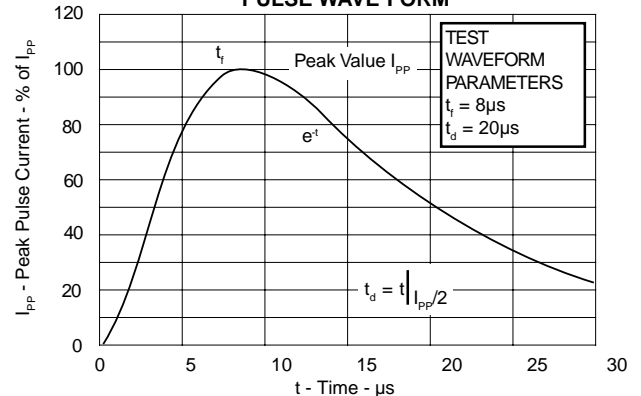
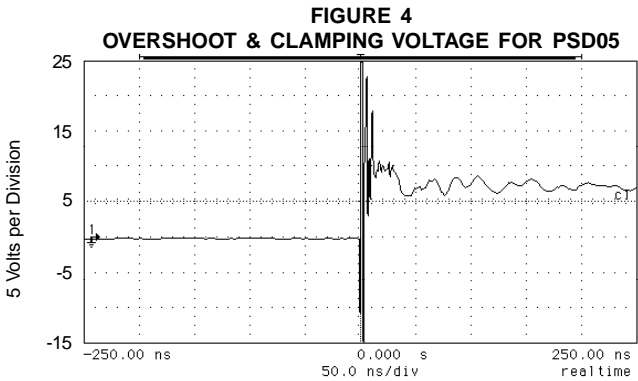
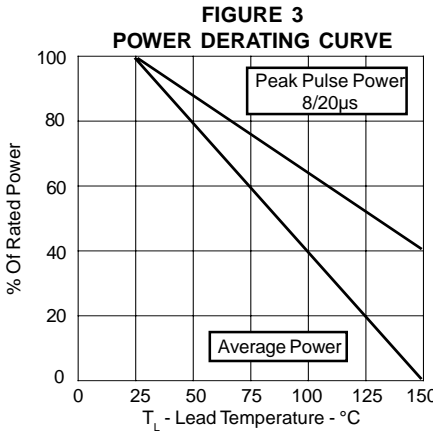


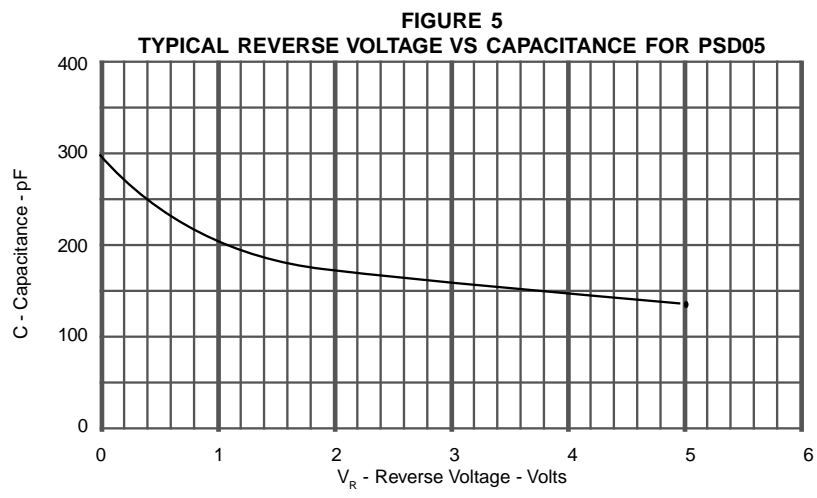
FIGURE 2
PULSE WAVE FORM



GRAPHS



ESD Test Pulse: 5 kilovolt, 1/30ns (waveform)



PSD03 thru PSD24C

PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE		SOD-323 PACKAGE			
		PACKAGE DIMENSIONS			
DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
A	1.60	1.90	0.063	0.075	
B	1.15	1.45	0.045	0.057	
C	2.39	2.70	0.094	0.106	
D	0.92	1.10	0.036	0.043	
E	0.25	0.40	0.010	0.016	
F	0.10	0.20	0.004	0.008	
H	-	0.10	-	0.004	

MOUNTING PAD	

NOTES:	
1. Controlling Dimensions in Millimeters.	
2. Dimensions are exclusive of mold flash and metal burrs.	

06010 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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