

## STANDARD CAPACITANCE TVS ARRAY

### APPLICATIONS

- ✓ RS-232, RS-422 & RS-423 Data Lines
- ✓ Cellular Phones
- ✓ Audio/Video Inputs
- ✓ Portable Electronics
- ✓ Wireless Network Systems
- ✓ Sensor Lines

### IEC COMPATIBILITY (EN61000-4)

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

### FEATURES

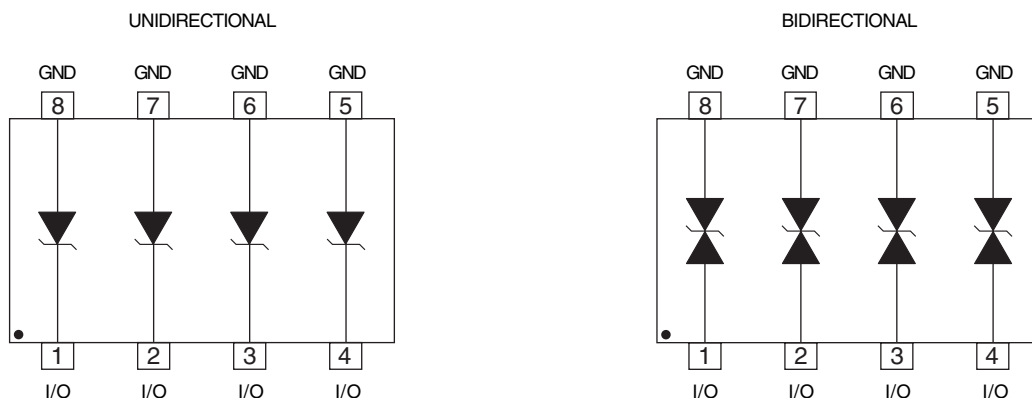
- ✓ 800 Watts Peak Pulse Power per Line ( $t_p=8/20\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Available in Voltage Types Ranging From: 5V to 24V
- ✓ Protects Up to Four (4) Lines
- ✓ ESD Protection > 40 kilovolts
- ✓ RoHS Compliant on Lead-Free Versions

### MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-8 Package
- ✓ Weight 70 milligrams (Approximate)
- ✓ Available in Tin-Lead or Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
  - Tin-Lead - Sn/Pb, 85/15: 240-245°C
  - Pure-Tin - Sn, 100: 260-270°C
- ✓ Flammability rating UL 94V-0
- ✓ 12mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Logo, Marking Code, Date Code & Pin One Defined By Dot on Top of Package



### PIN CONFIGURATIONS



**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	$P_{PP}$	800	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

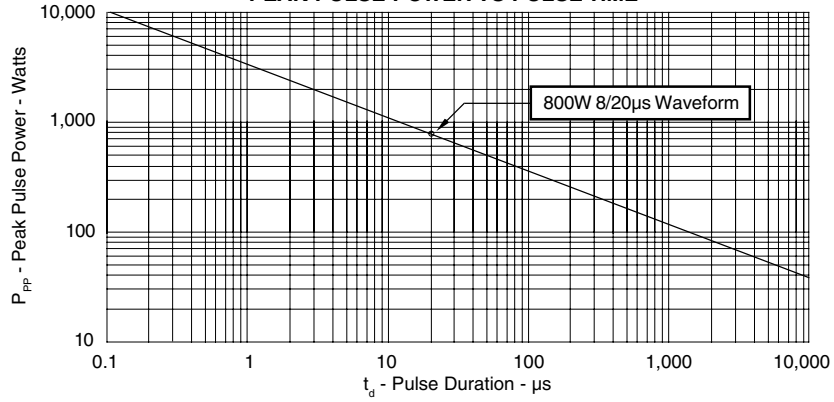
**Note 1:** Only applies to unidirectional devices.

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER (See Note 1)	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_p = 1A$ $V_C$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20μs $V_C @ I_{PP}$	MAXIMUM LEAKAGE CURRENT @ $V_{WM}$ $I_d$ μA	MAXIMUM CAPACITANCE PER LINE @ 0V, 1 MHz C pF
SMDB05	PDA	5.0	6.0	9.8	24.6V @ 45.0A	200	880
SMDB05C	PDB	5.0	6.0	9.8	24.6V @ 45.0A	200	493
SMDB08	PDJ	8.0	8.5	13.4	25.5V @ 40.0A	10	800
SMDB08C	PDK	8.0	8.5	13.4	25.5V @ 40.0A	10	450
SMDB12	PDC	12.0	13.3	19.0	32.9V @ 34.0A	2	440
SMDB12C	PDD	12.0	13.3	19.0	32.9V @ 34.0A	2	248
SMDB15	PDE	15.0	16.7	24.0	38.5V @ 27.0A	2	400
SMDB15C	PDF	15.0	16.7	24.0	38.5V @ 27.0A	2	225
SMDB24	PDG	24.0	26.7	40.0	48.5V @ 20.0A	2	275
SMDB24C	PDH	24.0	26.7	40.0	48.5V @ 20.0A	2	155

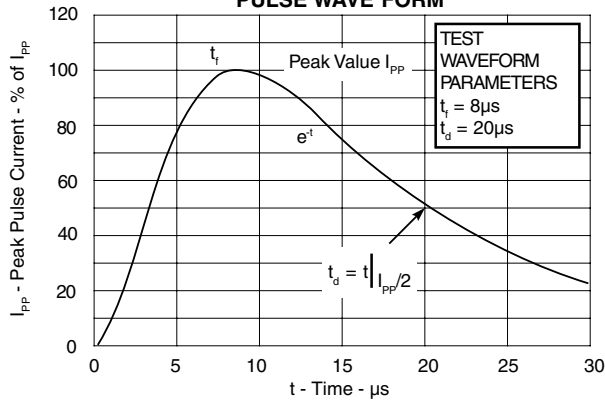
**Note 1:** Part numbers with a "C" suffix are bidirectional devices, i.e., SMDB05C.

GRAPHS

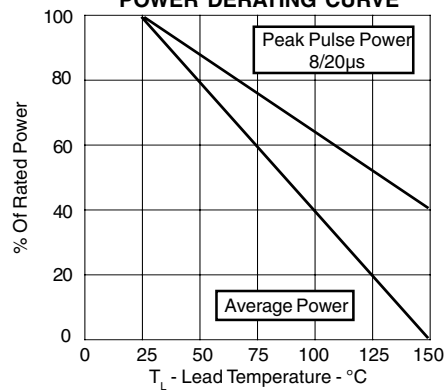
**FIGURE 1**  
**PEAK PULSE POWER VS PULSE TIME**



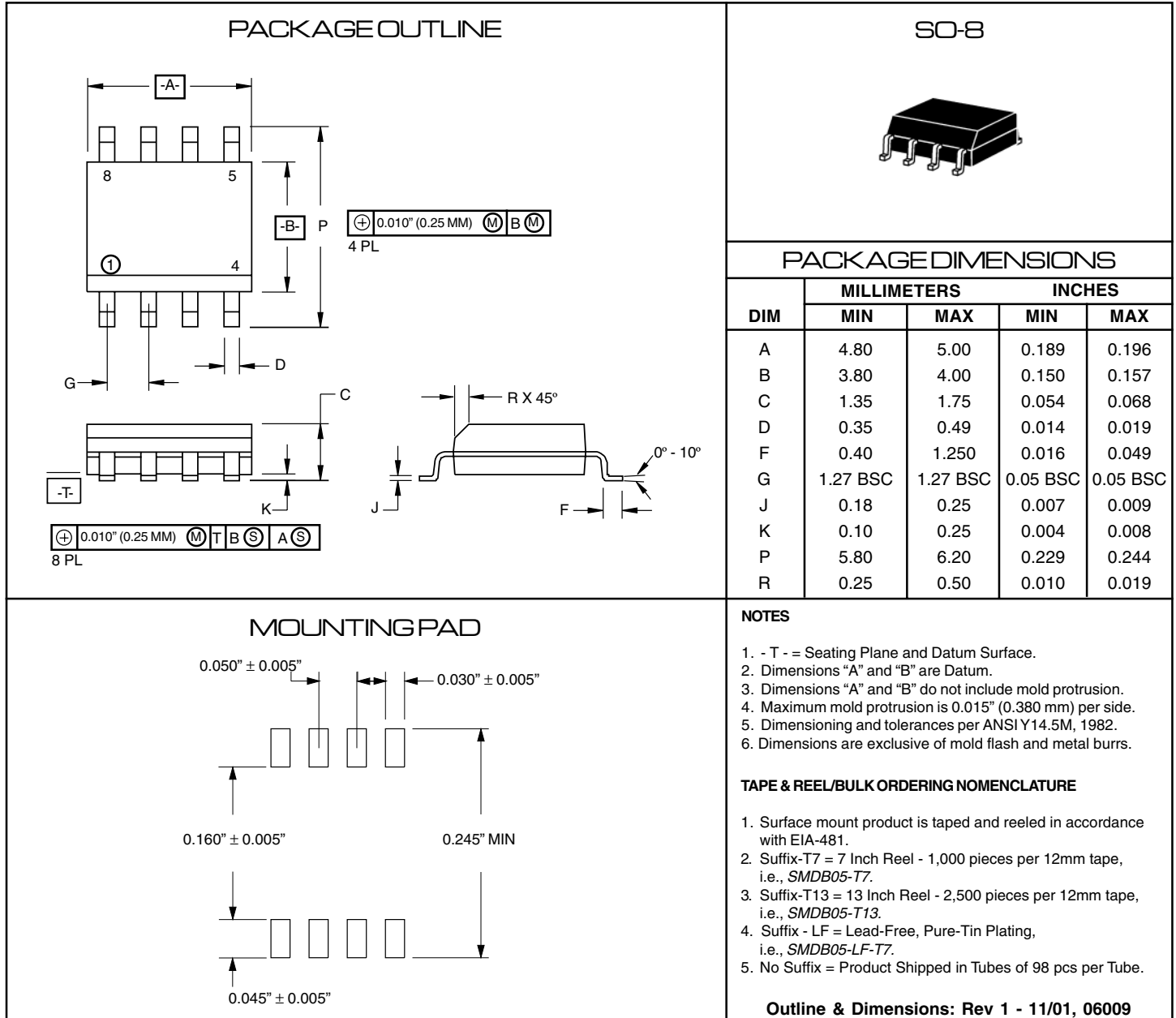
**FIGURE 2**  
**PULSE WAVE FORM**



**FIGURE 3**  
**POWER DERATING CURVE**



## PACKAGE OUTLINE & DIMENSIONS



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