

APPLICATIONS

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

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 μ s - Level 2(Line-Gnd) & Level 3(Line-Line)

FEATURES

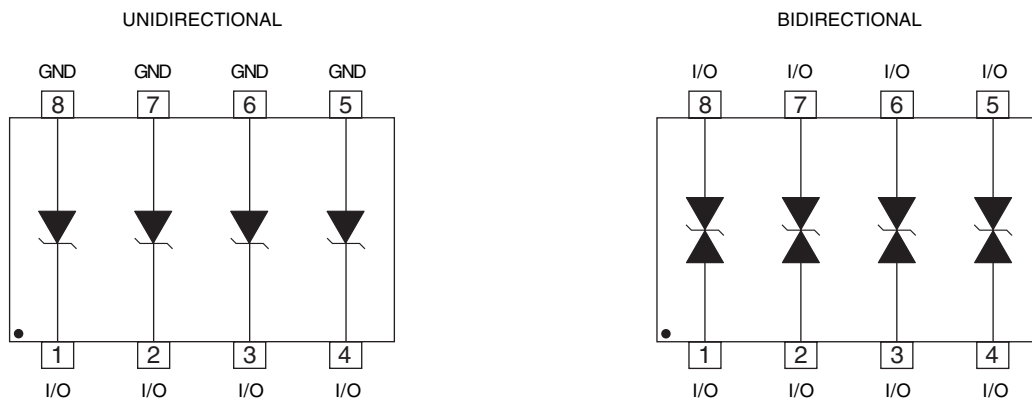
- ✓ 800 Watts Peak Pulse Power per Line ($t_p=8/20\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Available in Multiple Voltage Types Ranging From 5V to 24V
- ✓ Protects Up to Four (4) Lines
- ✓ ESD Protection > 40 kilovolts
- ✓ RoHS Compliant

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-8
- ✓ Weight 70 milligrams (Approximate)
- ✓ Available in Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- ✓ Consult Factory for Leaded Device Availability
- ✓ Flammability Rating UL 94V-0
- ✓ 12mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code, Logo, Date Code & Pin One Defined By Dot on Top of Package


SO-8

PIN CONFIGURATIONS



SMDB05 thru SMDB24C

DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p = 8/20\mu\text{s}$) - See Figure 1	P_{PP}	800	Watts
Operating Temperature	T_L	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Forward Voltage @ 100mA, 300 μs - Square Wave (See Note 1)	V_F	1.5	Volts

Note 1: Only applies to unidirectional devices.

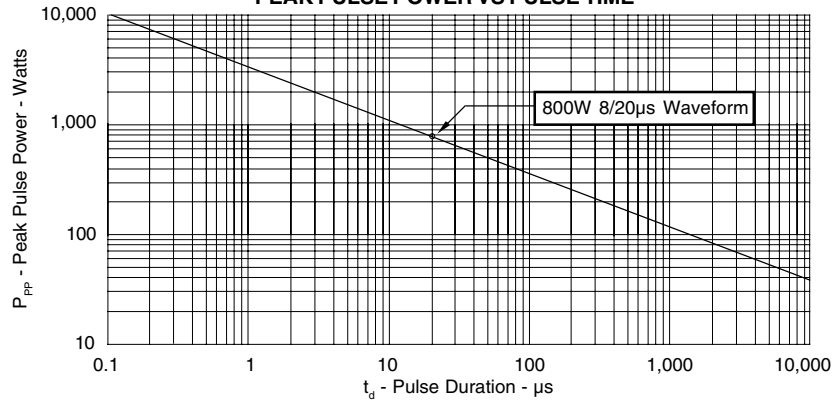
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (See Notes 1)	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	MAXIMUM CAPACITANCE (See Note 2)
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ $I_P = 1A$ V_C VOLTS	@ 8/20 μs $V_C @ I_{PP}$	@ V_{WM} I_b μA	@ 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

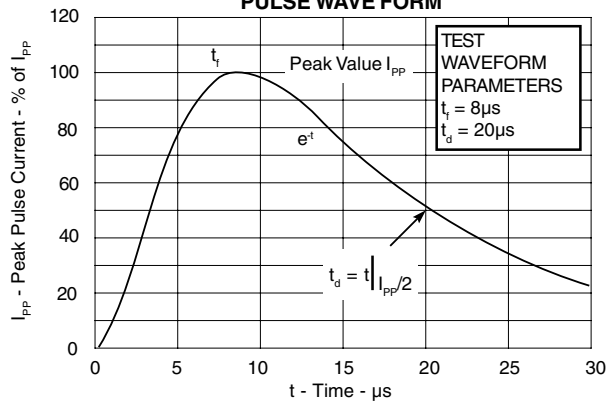
Note 1: Part numbers with a "C" suffix are bidirectional devices, i.e., SMDB05C.

GRAPHS

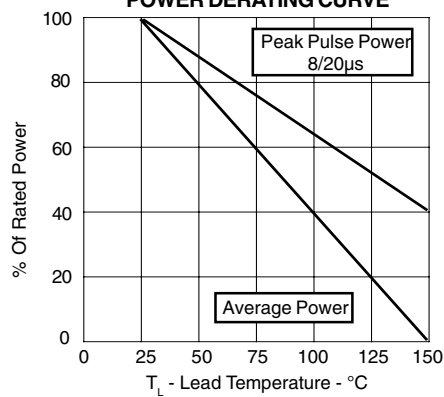
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVE FORM**

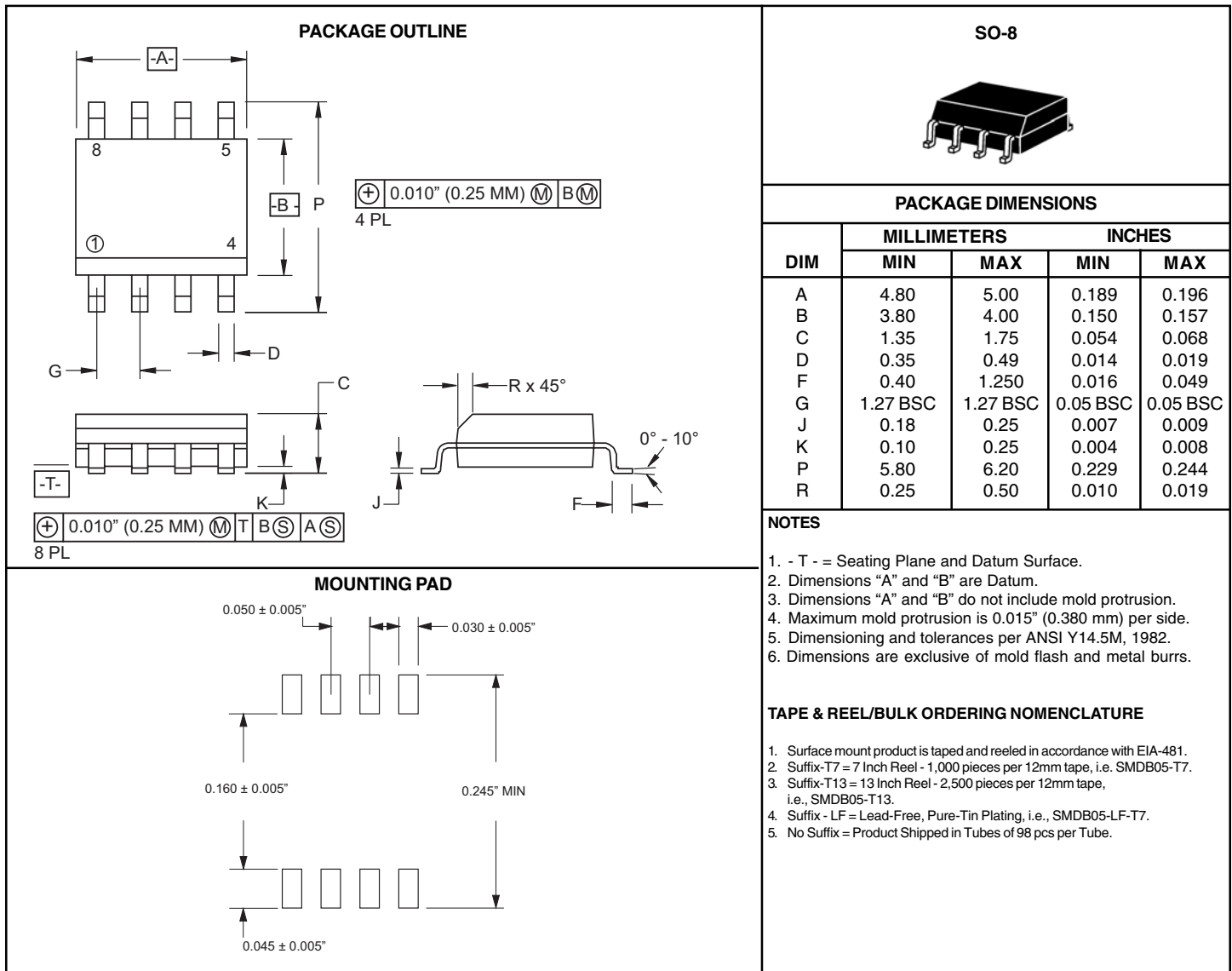


**FIGURE 3
POWER DERATING CURVE**



SMDB05 thru SMDB24C

SO-8 PACKAGE OUTLINE & DIMENSIONS



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ProTek Devices
 2929 South Fair Lane, Tempe, AZ 85282
 Tel: 602-431-8101 Fax: 602-431-2288
 E-Mail: sales@protekdevices.com
 Web Site: www.protekdevices.com