

## 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): 12A, 8/20 $\mu$ s - Level 1(Line-Gnd) & Level 2(Line-Line)

## FEATURES

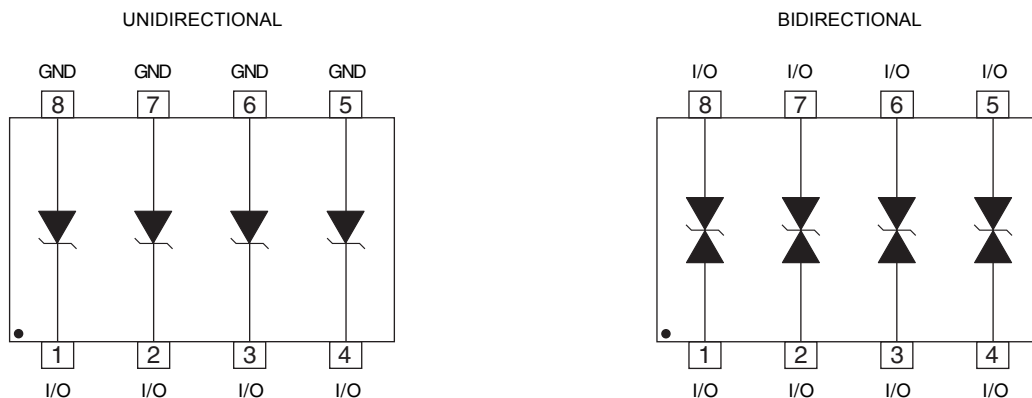
- ✓ 500 Watts Peak Pulse Power per Line ( $t_p=8/20\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ Available in Multiple Voltage Types Ranging From 3V to 36V
- ✓ Protects Up to Four (4) Lines
- ✓ ESD Protection > 40 kilovolts
- ✓ RoHS Compliant

## 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
- ✓ 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



# SMDA03 thru SMDA36C

## 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	$P_{PP}$	500	Watts
Operating Temperature	$T_L$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Forward Voltage @ 100mA, 300 $\mu\text{s}$ - 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  $V_{WM}$ 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)  @ $I_P = 5A$ $V_C$ VOLTS	MAXIMUM CURRENT  PP @ 8/20 $\mu\text{s}$ A AMPS	MAXIMUM LEAKAGE CURRENT  @ $V_{WM}$ $I_b$ $\mu\text{A}$	MAXIMUM CAPACITANCE (See Note 2)  @ 0V, 1 MHz C pF
SMDA03	SDL	3.3	4.0	6.5	7.0	43.0	125	800
SMDA03C	SDM	3.3	4.5	7.0	9.0	43.0	125	450
SMDA05	SDA	5.0	6.0	9.8	10.0	40.0	20	550
SMDA05C	SDB	5.0	6.0	9.8	10.0	40.0	20	308
SMDA08	SDJ	8.0	8.5	13.4	14.0	27.0	10	500
SMDA08C	SDK	8.0	8.5	13.4	14.0	27.0	10	300
SMDA12	SDC	12.0	13.3	19.0	22.0	20.0	1	185
SMDA12C	SDD	12.0	13.3	19.0	22.0	20.0	1	105
SMDA15	SDE	15.0	16.7	24.0	27.0	15.0	1	140
SMDA15C	SDF	15.0	16.7	24.0	27.0	15.0	1	80
SMDA24	SDG	24.0	26.7	43.0	45.0	12.0	1	88
SMDA24C	SDH	24.0	26.7	43.0	45.0	12.0	1	50
SMDA36	SDN	36.0	40.0	51.0	65.0	8.0	1	80
SMDA36C	SDP	36.0	40.0	51.0	65.0	8.0	1	45

**Note 1:** Part numbers with a "C" suffix are bidirectional devices, i.e., SMDA03C.

GRAPHS

FIGURE 1  
 PEAK PULSE POWER VS PULSE TIME

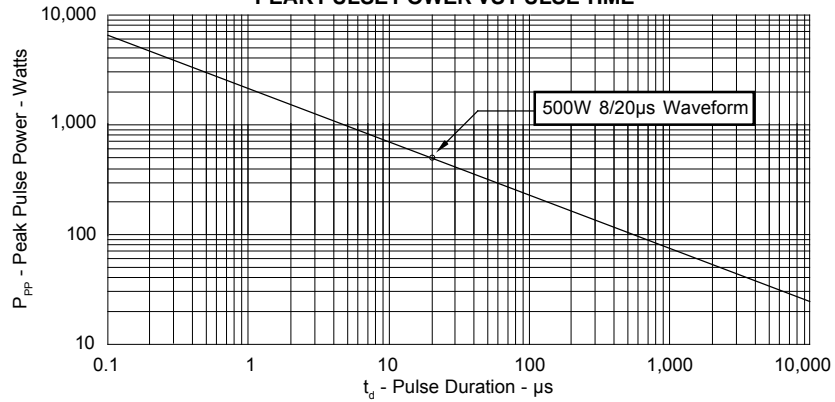


FIGURE 2  
 PULSE WAVE FORM

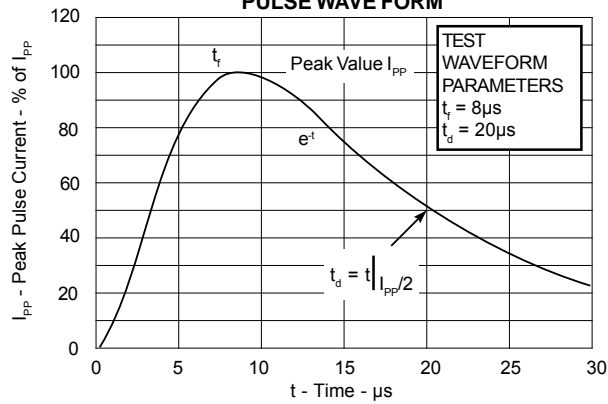
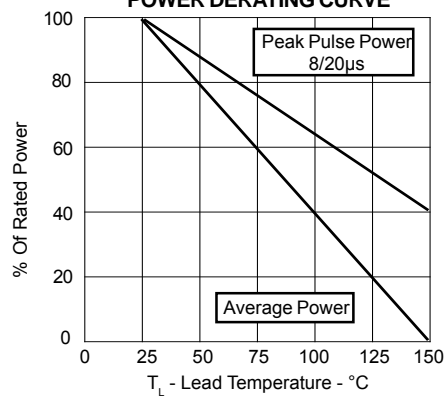
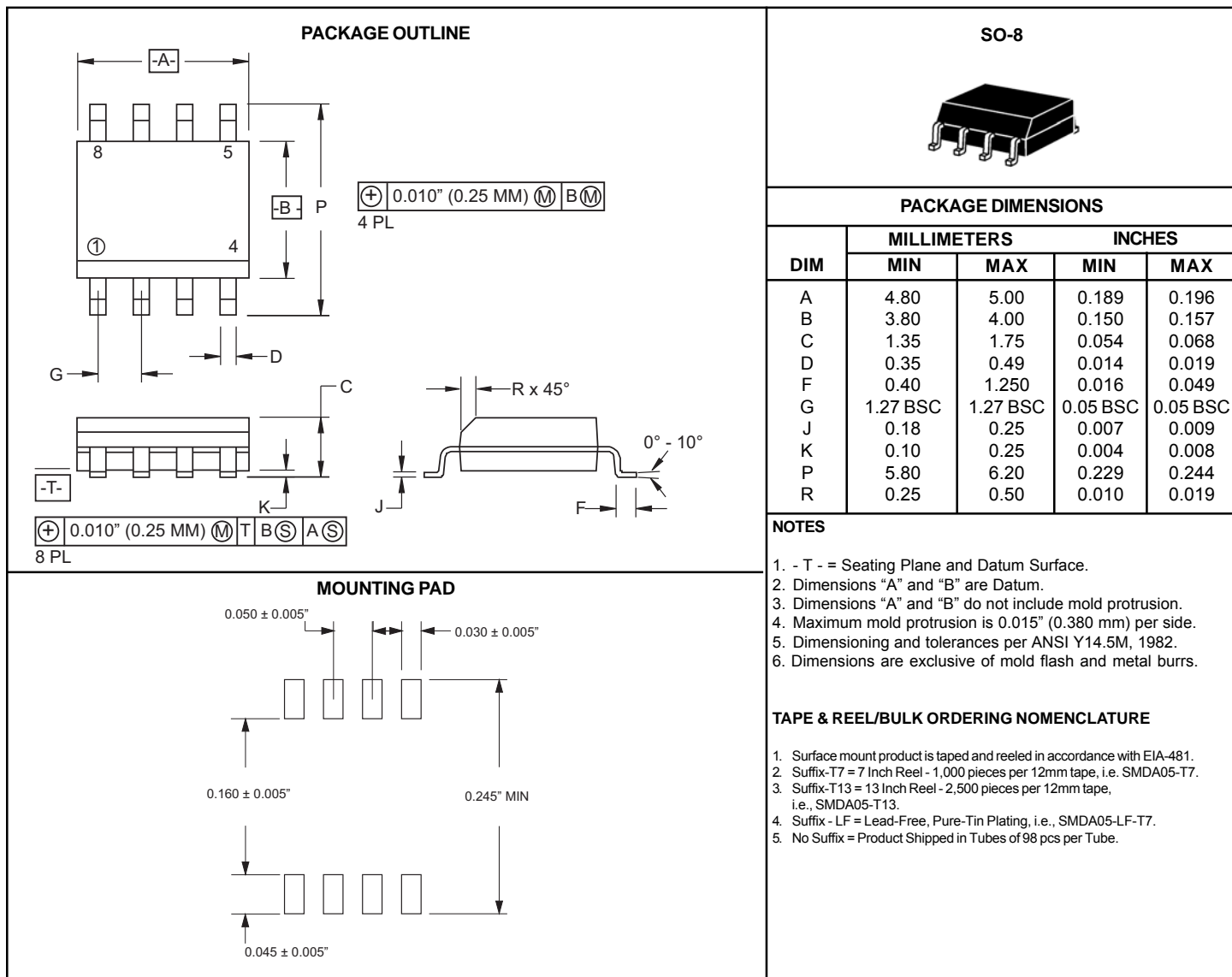


FIGURE 3  
 POWER DERATING CURVE



# SMDA03 thru SMDA36C

## SO-8 PACKAGE OUTLINE & DIMENSIONS



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