

**APPLICATIONS**

- ✓ T1/E1
- ✓ Customer Premise Equipment (CPE)
- ✓ Telecommunication Equipment: Base Stations, WAN, Routers, Multiplexers
- ✓ Wireless LANs

**IEC COMPATIBILITY (EN61000-4)**

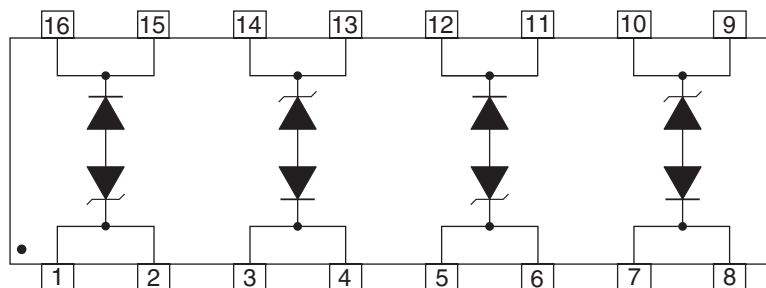
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 8/20 $\mu$ s - 100A

**FEATURES**

- ✓ 3,600 Watts Peak Pulse Power per Line ( $t_p=8/20\mu$ s)
- ✓ 600 Watts Peak Pulse Power per Line ( $t_p=10/1000\mu$ s)
- ✓ 100A (2/10 $\mu$ s) per Bellcore GR-1089 (Intra-Building)
- ✓ ITKU.20  $I_{pp}$  @ 100A (5/310 $\mu$ s)
- ✓ Bidirectional Configuration
- ✓ High Surge Capability
- ✓ Available in Multiple Voltages
- ✓ Protects Two (2) Bidirectional Lines
- ✓ Low Capacitance: < 30pF per Line Pair
- ✓ RoHS Compliant

**MECHANICAL CHARACTERISTICS**

- ✓ Molded JEDEC SO-16 Package
- ✓ Weight 0.15 grams (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
- ✓ 16mm Tape and Reel per EIA Standard 481
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package


**PIN CONFIGURATION**


# SMP6LC05-2P thru SMP6LC24-2P

## DEVICE CHARACTERISTICS

### MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	$P_{PP}$	3600	Watts
Peak Pulse Power ( $t_p = 10/1000\mu\text{s}$ ) - See Figure 1	$P_{PP}$	600	Watts
Operating Temperature	$T_L$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ ) - See Figure 1	$I_{PP}$	100	Amps

### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (See Note 1)	RATED STAND-OFF VOLTAGE  $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE  @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM LEAKAGE CURRENT  @ $V_{WM}$ $I_D$ $\mu\text{A}$	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_{PP} = 10\text{A}$ $V_C$ VOLTS	TYPICAL CAPACITANCE  @ 0V, 1MHz C pF
SMP6LC05-2P	5.0	6.0	300	9.6	15
SMP6LC6.5-2P	6.5	7.2	300	12.4	15
SMP6LC08-2P	8.0	8.5	25	13.6	15
SMP6LC12-2P	12.0	13.3	2	19.9	15
SMP6LC15-2P	15.0	16.7	2	24.4	15
SMP6LC24-2P	24.0	26.7	2	38.9	15

**Note 1:** Do no surge from pins 15/16 to 1/2, 3/4 to 13/14, 11/12 to 5/6 and 7/8 to 9/10. PIV typically greater than 100 Volts for each rectifier diode.

GRAPHS

FIGURE 1  
 PEAK PULSE POWER VS PULSE TIME

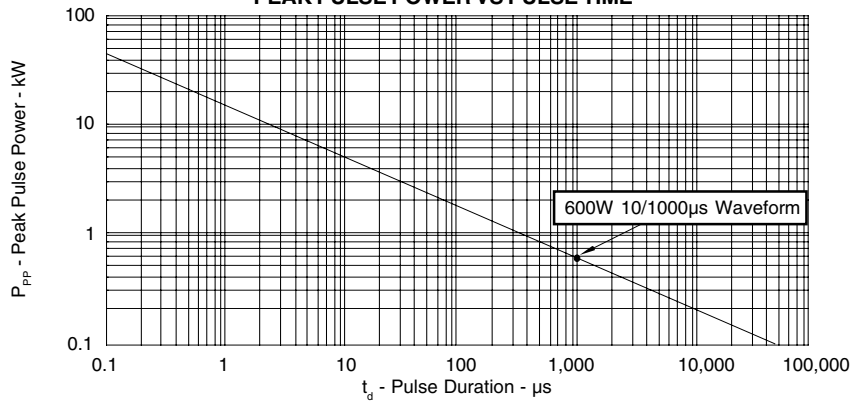


FIGURE 2  
 PULSE WAVE FORM

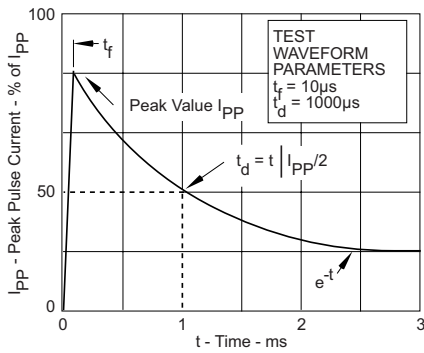
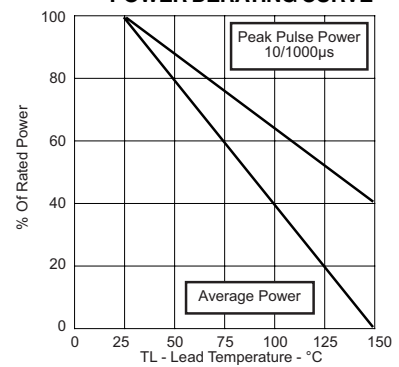
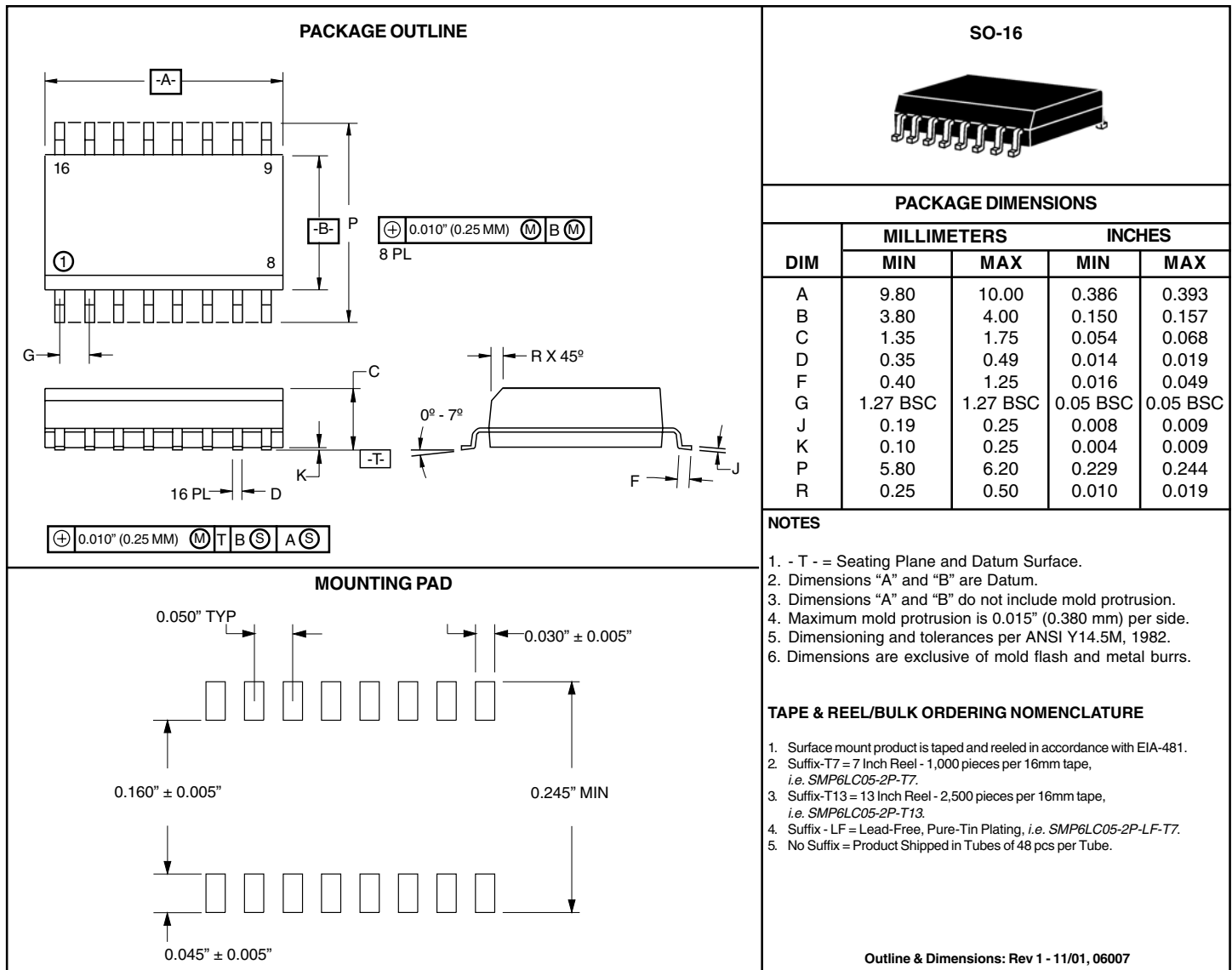


FIGURE 3  
 POWER DERATING CURVE



# SMP6LC05-2P thru SMP6LC24-2P

## SO-16 PACKAGE OUTLINE & DIMENSIONS



**COPYRIGHT © ProTek Devices 2007**

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice (except JEDEC).

DESIGN CHANGES: ProTek reserves the right to discontinue product lines without notice, and that the final judgement concerning selection and specifications is the buyer's and that in furnishing engineering and technical assistance, ProTek assumes no responsibility with respect to the selection or specifications of such products.

**ProTek Devices**  
 2929 South Fair Lane, Tempe, AZ 85282  
 Tel: 602-431-8101 Fax: 602-431-2288  
 E-Mail: [sales@protekdevices.com](mailto:sales@protekdevices.com)  
 Web Site: [www.protekdevices.com](http://www.protekdevices.com)