

## APPLICATIONS

- ✓ Low Frequency I/O Ports
- ✓ RS-232 & RS-423 Data Lines
- ✓ Power Bus Lines
- ✓ Monitoring & Industrial Signal and Data Ports
- ✓ Microprocessor Based Equipment

## IEC COMPATIBILITY (EN61000-4)

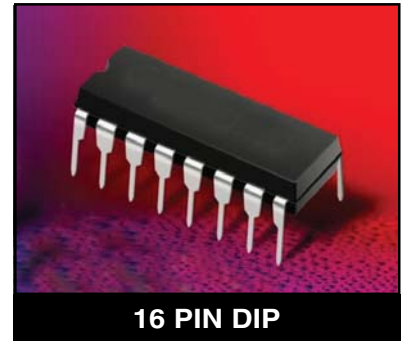
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 $\mu$ s Level 2 (Line-Ground) & Level 3 (Line-Line)

## FEATURES

- ✓ 800 Watts Peak Pulse Power per Line (tp=8/20 $\mu$ s)
- ✓ Unidirectional & Bidirectional Configuration
- ✓ ESD Protection > 40 kilovolts
- ✓ Available in 5V, 12V, 15V & 24V
- ✓ Standard Dual-In-Line Package
- ✓ Protects 8 to 12 Lines
- ✓ RoHS Compliant

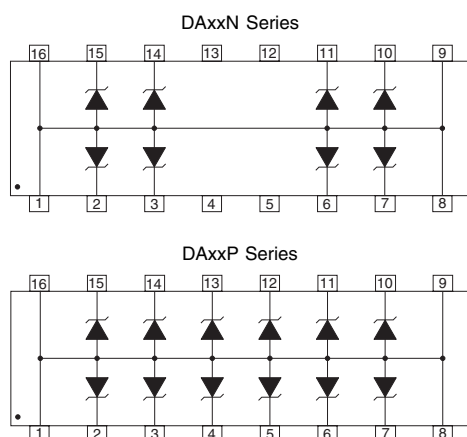
## MECHANICAL CHARACTERISTICS

- ✓ Molded 16 Pin Dual-In-Line (DIP) Package
- ✓ Weight 1.2 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
- ✓ Packaging: 50 Pieces Per Tube
- ✓ Marking: Logo, Part Number, Date Code & Pin One Defined By Dot on Top of Package

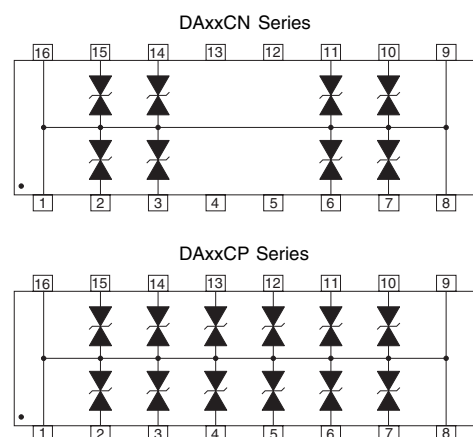


## PIN CONFIGURATIONS

### UNIDIRECTIONAL



### BIDIRECTIONAL



# DA05N thru DA24CP

## 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	$T_L$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Forward Surge Rating	$I_F$	10	Amps

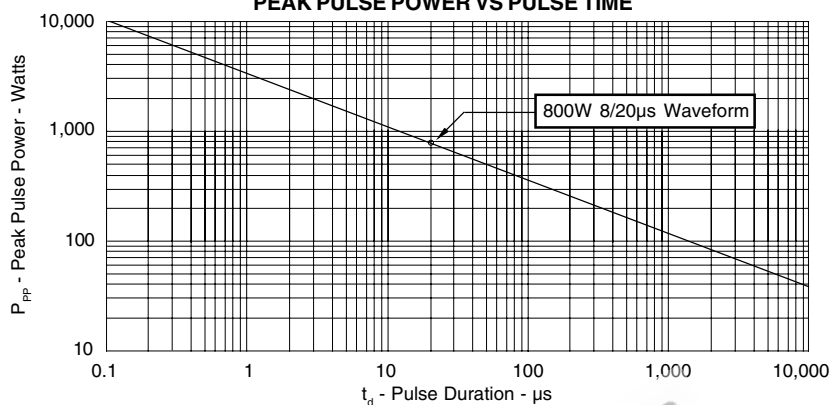
### ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (See Note 1)	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	MAXIMUM CAPACITANCE
	$V_{WM}$ VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ $I_p = 10A$ $V_c$ VOLTS	@ 8/20 $\mu s$ $V_c @ I_{PP}$	@ $V_{WM}$ $I_b$ $\mu A$	0V @ 1 MHz C pF
DA05N	5.0	6.0	12.5	24.6V @ 45A	200	880
DA12N	12.0	13.3	26.0	32.9V @ 34A	2	440
DA15N	15.0	16.7	33.0	37.7V @ 27A	2	400
DA24N	24.0	26.7	52.1	53.0V @ 20A	2	275
DA05P	5.0	6.0	12.5	24.6V @ 45A	200	880
DA12P	12.0	13.3	26.0	32.9V @ 34A	2	440
DA15P	15.0	16.7	33.0	37.7V @ 27A	2	400
DA24P	24.0	26.7	52.1	53.0V @ 20A	2	275
DA05CN	5.0	6.0	12.5	24.6V @ 45A	200	500
DA12CN	12.0	13.3	26.0	32.9V @ 34A	2	385
DA15CN	15.0	16.7	33.0	37.7V @ 27A	2	300
DA24CN	24.0	26.7	52.1	53.0V @ 20A	2	200
DA05CP	5.0	6.0	12.5	24.6V @ 45A	200	500
DA12CP	12.0	13.3	26.0	32.9V @ 34A	2	385
DA15CP	15.0	16.7	33.0	37.7V @ 27A	2	300
DA24CP	24.0	26.7	52.1	53.0V @ 20A	2	200

**Note 1:** The "C" suffix specifies a bidirectional device, such as DA05CN or DA12CP.

GRAPHS

FIGURE 1  
PEAK PULSE POWER VS PULSE TIME



EEPW.com.cn 电子產品世界

FIGURE 2  
PULSE WAVE FORM

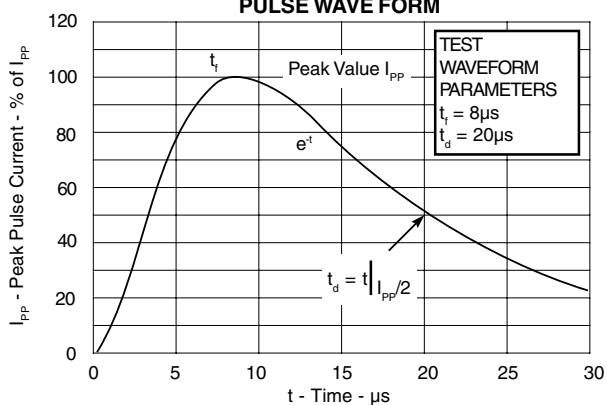
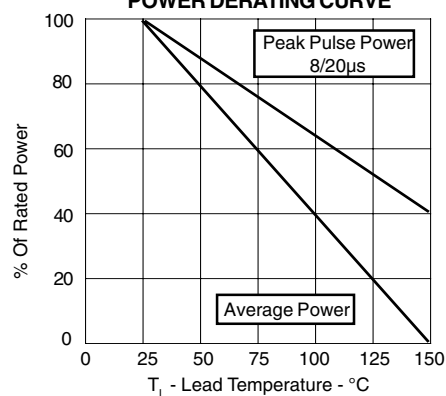
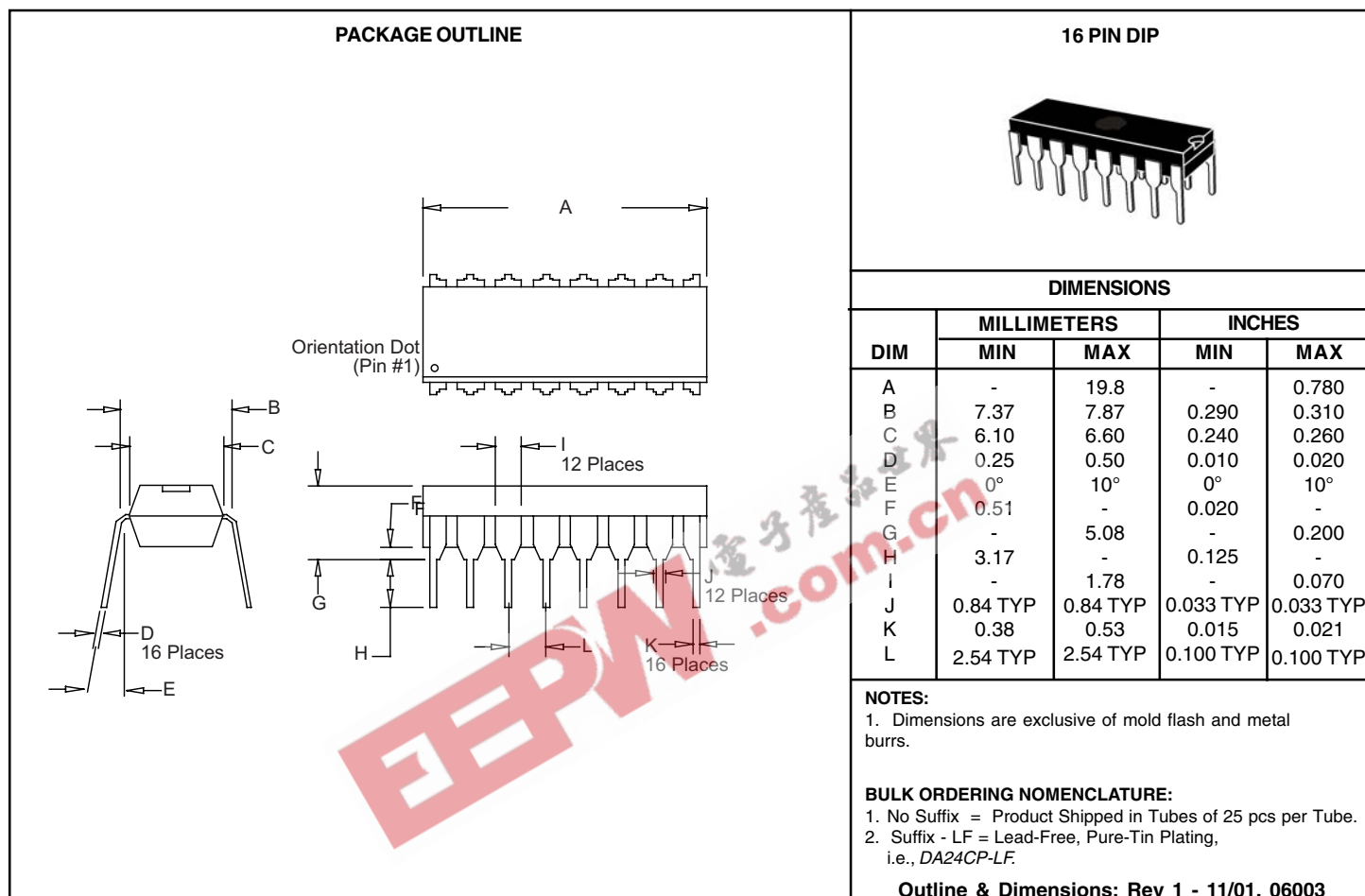


FIGURE 3  
POWER DERATING CURVE



# DA05N thru DA24CP

## 16 PIN DIP 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)