

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)

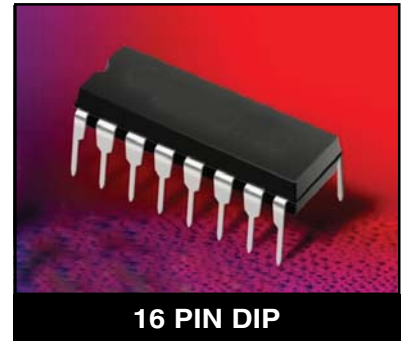
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 μ s Level 2 (Line-Ground) & Level 3 (Line-Line)

FEATURES

- ✓ 800 Watts Peak Pulse Power per Line (tp=8/20 μ 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

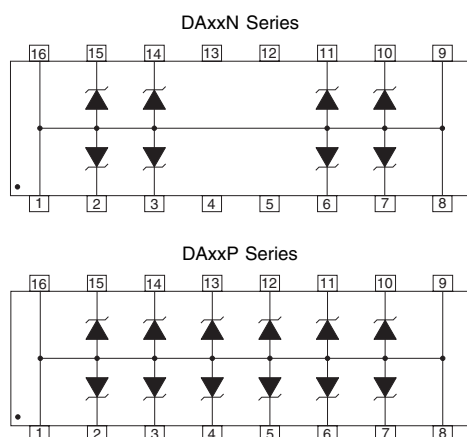
MECHANICAL CHARACTERISTICS

- ✓ 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

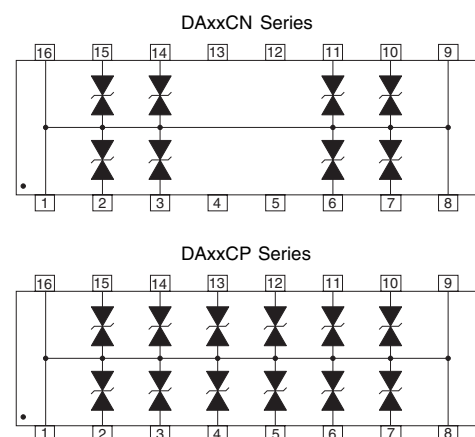


PIN CONFIGURATIONS

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 |

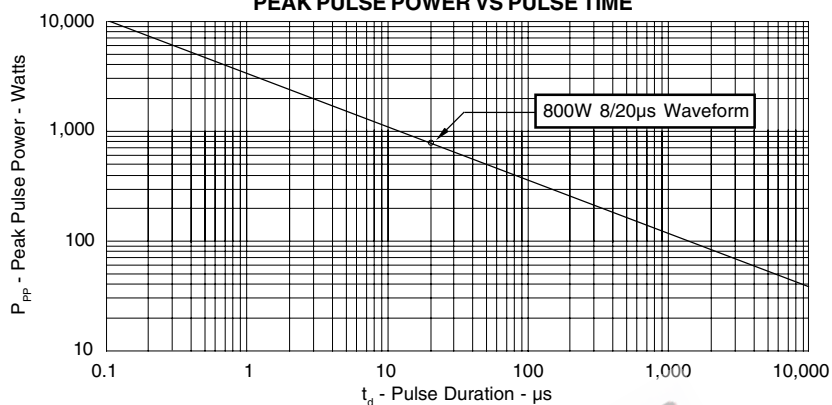
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

| 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 μs $V_c @ I_{PP}$ | @ V_{WM} I_b μA | 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



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FIGURE 2
PULSE WAVE FORM

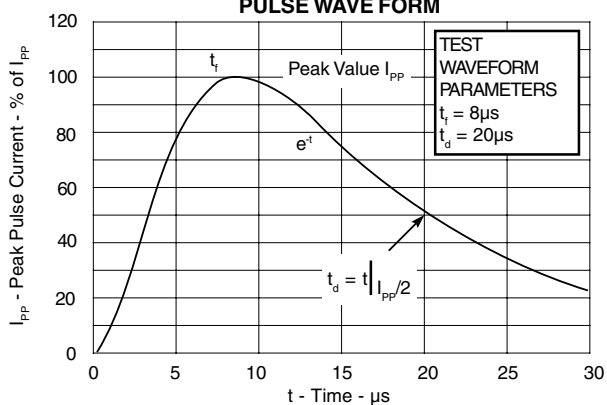
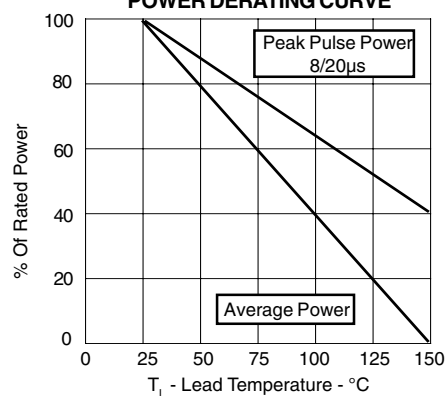
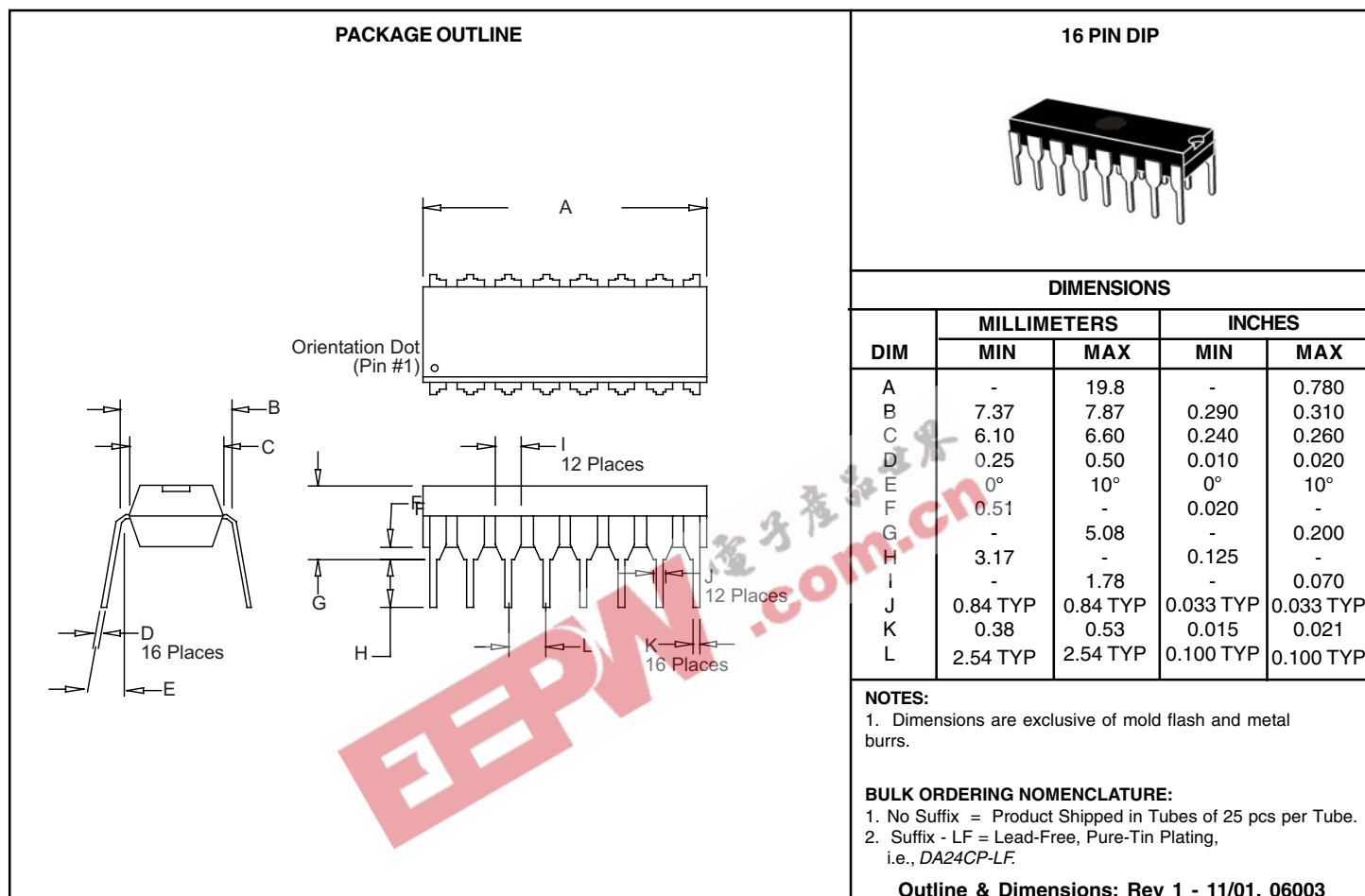


FIGURE 3
POWER DERATING CURVE



DA05N thru DA24CP

16 PIN DIP 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