

STANDARD TVS ARRAYS

APPLICATIONS

- ✓ Military & Aerospace Data Line Protection
- ✓ RS-232 & RS-423
- ✓ Microprocessor Based Equipment
- ✓ Multiple Data & Power Bus Line Protection

IEC COMPATIBILITY (EN61000-4)

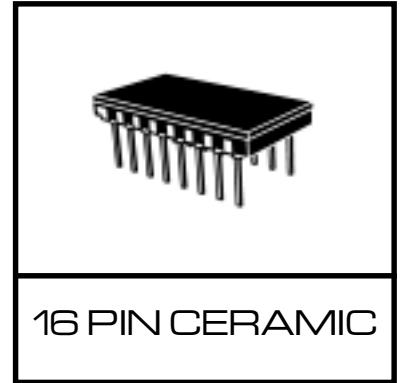
- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 24A, 8/20 μ s - Level 2 (Line-Gnd) & Level 3 (Line-Line)

FEATURES

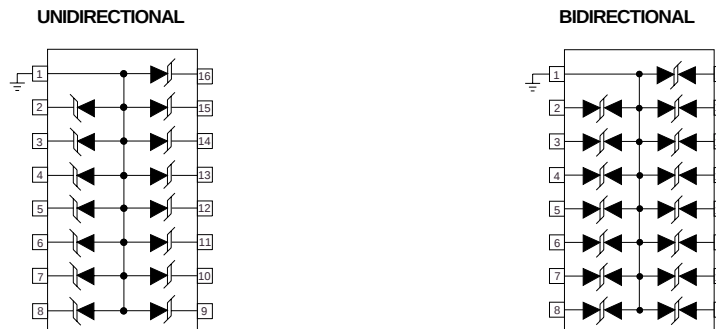
- ✓ MIL-STD-461 Compatible
- ✓ 1300 Watts Peak Pulse Power per Line ($t_p=8/20\mu$ s)
- ✓ Unidirectional & Bidirectional Configurations
- ✓ ESD Protection > 40 kilovolts
- ✓ Internal Common Ground
- ✓ Available in Multiple Voltage Types: 5.0V to 30.0V
- ✓ **PROTECTS UP TO 15 LINES**

MECHANICAL CHARACTERISTICS

- ✓ Ceramic 16 Pin Hermetically Sealed Package
- ✓ Weight 3.2 grams (Approximate)
- ✓ Flammability rating UL 94V-0
- ✓ Marking: Date Code, Logo, Part Number & Pin One Defined By Flag on Lead
- ✓ Screened for Military Requirements in Accordance with MIL-PRF-19500
 - Standard screening consists of 100% JANTX equivalent level testing per MIL-PRF-19500
 - For ordering these options, use the following suffix:
 - H1 - 100% JANTX level screening
 - H2 - 100% JANTX level screening with Group B testing
- ✓ Screened to DESC Drawing #94029 (Bidirectional) & #94030 (Unidirectional)



CIRCUIT DIAGRAMS



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}	1300	Watts
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C
Forward Surge Rating (1/20 seconds) - Unidirectional Only	I_F	10	Amps

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER (Note 1)	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ $I_p = 1 A$ V_C VOLTS	MAXIMUM CLAMPING VOLTAGE (See Fig. 2) @ 8/20 μs V_C @ I_{PP}	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D μA	MAXIMUM CAPACITANCE @ 0V, 1 MHz C pF	TEMPERATURE COEFFICIENT OF $V_{(BR)}$ $qV_{(BR)}$ mV/°C
DLZ-5	5.0	6.0	10.2	18.1V @ 70A	200	880	5
DLZ-5A	5.0	6.0	9.5	19.2V @ 66A	200	880	5
DLZ-12	12.0	13.3	21.1	28.0V @ 48A	2	440	18
DLZ-12A	12.0	13.3	19.1	33.0V @ 41A	2	440	18
DLZ-17	17.0	19.2	30.4	37.4V @ 35A	2	330	20
DLZ-17A	17.0	19.2	27.5	40.0V @ 33A	2	330	20
DLZ-24	24.0	26.7	42.3	50.5V @ 26A	2	275	31
DLZ-24A	24.0	26.7	38.3	62.4V @ 21A	2	275	31
DLZ-30	30.0	33.3	52.8	62.9V @ 21A	2	220	39
DLZ-30A	30.0	33.3	47.8	60.0V @ 24A	2	220	39
DLZ-8C	8.0	8.5	13.4	29.0V @ 45A	10	440	9
DLZ-13C	13.0	14.4	22.8	31.0V @ 43A	4	385	18
DLZ-13CA	13.0	14.4	20.6	34.0V @ 39A	4	385	18
DLZ-19C	19.0	21.6	34.2	40.5V @ 33A	4	275	24
DLZ-19CA	19.0	21.6	31.0	47.6V @ 28A	4	275	24
DLZ-30C	30.0	33.3	52.8	68.7V @ 19A	4	165	39
DLZ-30CA	30.0	33.3	47.8	62.5V @ 21A	4	165	39

Note 1: Part numbers with a "C" suffix are bidirectional devices, i.e., DLZ-8C.

GRAPHS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

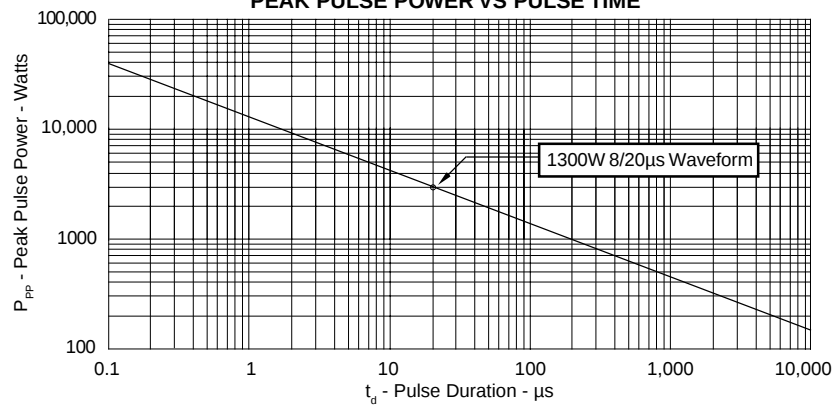


FIGURE 2
PULSE WAVE FORM

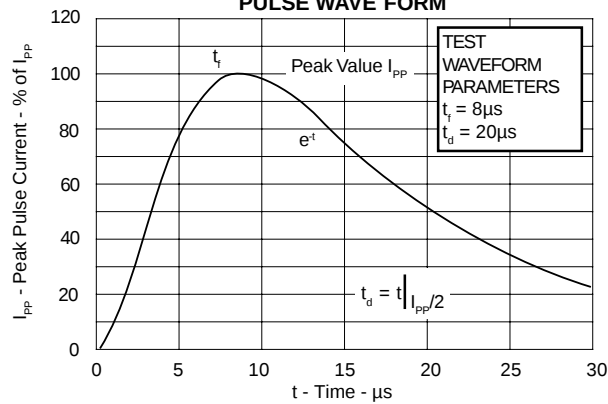
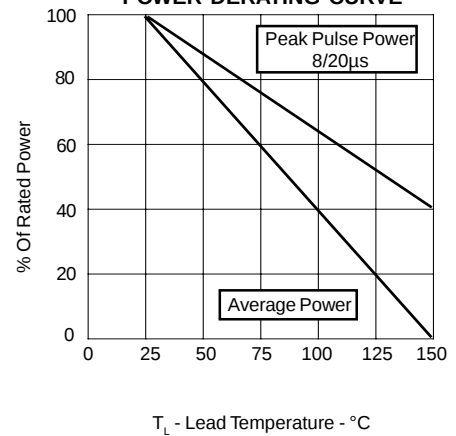
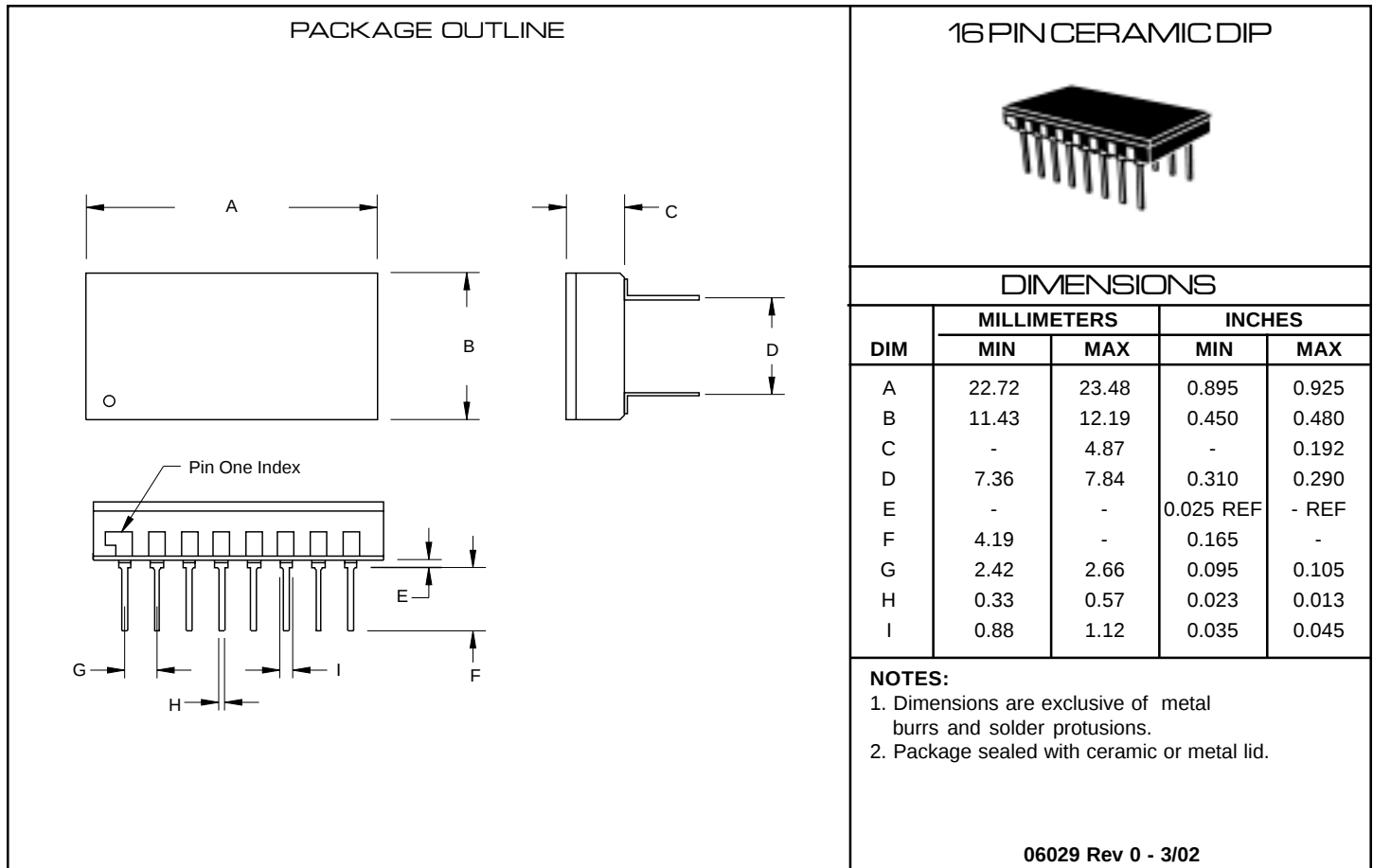


FIGURE 3
POWER DERATING CURVE



DLZ-5 thru DLZ-30CA

PACKAGE OUTLINE & DIMENSIONS



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

COPYRIGHT © ProTek Devices 2001

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.