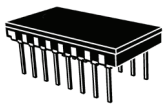
PROTEK DEVICES
Only One Name Means ProTek'Tion™

DLZ-5 - DLZ-30CA

HIGH POWERED MULTI-LINE TVS ARRAY

RTCA DO-160G COMPLIANT PRODUCT



16 PIN CDIP PACKAGE

DESCRIPTION

The DLZ Series of silicon transient voltage suppressors (TVS) are available in a ceramic, hermetically sealed dual-in-line package. This series is designed to protect aerospace, standard TTL and MOS bus lines in applications where NEMP, ESD and other induced voltage surges can damage or upset voltage sensitive circuitry.

The DLZ Series has a peak pulse power rating of 1,300 Watts for an 8/20µs waveshape. This devices meets the IEC 61000-4-2, IEC 61000-4-4 and IEC 61000-4-5 requirements.

FEATURES

- **RTCA DO-160G COMPLIANT PRODUCT**
- Compatible with IEC 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A - 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 24A, 8/20µs - Level 2(Line-Gnd) & Level 3(Line-Line)
- MIL-STD-461 Compatible
- Satisfies Military NEMP Requirements
- 1,300 Watts Peak Pulse Power per Line (tp = 8/20µs)
- Unidirectional & Bidirectional Configurations
- ESD Protection > 25 kilovolts
- Internal Common Ground
- Available in Multiple Voltages
- Protects up to 15 Lines
- RoHS Compliant
- REACH Compliant

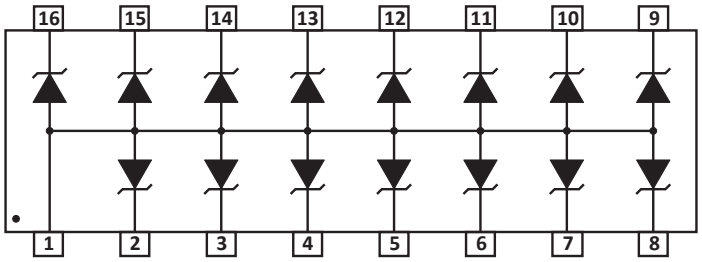
APPLICATIONS

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

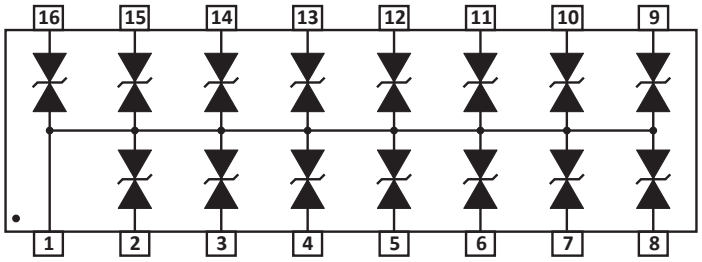
MECHANICAL CHARACTERISTICS

- Hermetically Sealed Ceramic 16 Pin Dual-In-Line (DIP) Package
- Approximate Weight: 3.2 grams
- Flammability Rating UL 94V-0
- Screening Per MIL-PRF-19500 Available Upon Request:
  H1 - 100 % Screening (Test Plans 05227 & 05229)
  H2 - 100% Screening (05228 & 05230)
- Screening to DESC Drawing 94029 (Bidirectional) and 94030 (Unidirectional)

PIN CONFIGURATIONS



UNIDIRECTIONAL



BIDIRECTIONAL

TYPICAL DEVICE CHARACTERISTICS

RTCA DO-160G COMPLIANT PRODUCT

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20µs) - See Figure 1	P_{PP}	1,300	Watts
Operating Temperature	T_L	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Forward Surge Rating (1/120 seconds) Unidirectional	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 (Fig. 2) @ IP = 1A V_C VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ IP = 10A V_C VOLTS	MAXIMUM LEAKAGE CURRENT @V_{WM} I_D µA	MAXIMUM CAPACITANCE @0V, 1MHz C pF	TEMPERATURE COEFFICIENT OF $V_{(BR)}$ $qV_{(BR)}$ mV/°C
DLZ-5	5.0	6.0	10.2	12.5	200	880	5
DLZ-5A	5.0	6.0	9.5	10.6	200	880	5
DLZ-12	12.0	13.3	21.1	26.0	2	440	18
DLZ-12A	12.0	13.3	19.1	23.5	2	440	18
DLZ-17	17.0	19.2	30.4	37.4	2	330	20
DLZ-17A	17.0	19.2	27.5	33.9	2	330	20
DLZ-24	24.0	26.7	42.3	52.1	2	275	31
DLZ-24A	24.0	26.7	38.3	47.2	2	275	31
DLZ-30	30.0	33.3	52.8	65.0	2	220	39
DLZ-30A	30.0	33.3	47.8	58.8	2	220	39
DLZ-8C	8.0	8.5	13.4	16.6	10	440	9
DLZ-8CA	8.0	8.5	12.2	15.0	10	440	9
DLZ-13C	13.0	14.4	22.8	28.1	4	385	18
DLZ-13CA	13.0	14.4	20.6	25.4	4	385	18
DLZ-19C	19.0	21.6	34.2	42.1	4	275	24
DLZ-19CA	19.0	21.6	31.0	38.1	4	275	24
DLZ-30C	30.0	33.3	52.8	65.0	4	165	39
DLZ-30CA	30.0	33.3	47.8	58.8	4	165	39

NOTES

1. $t_{clamping}$ (0V to V_{BR} min): Less than $1x10^{-12}$ seconds ($10x10^{-9}$ seconds bidirectional).

TYPICAL DEVICE CHARACTERISTICS

RTCA DO-160G COMPLIANT PRODUCT

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

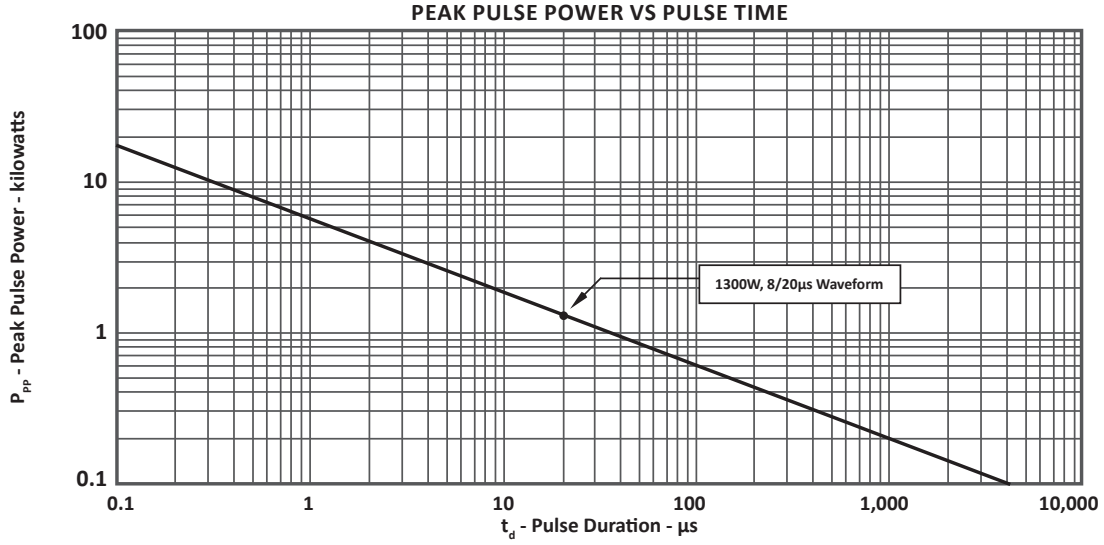


FIGURE 2
PULSE WAVE FORM

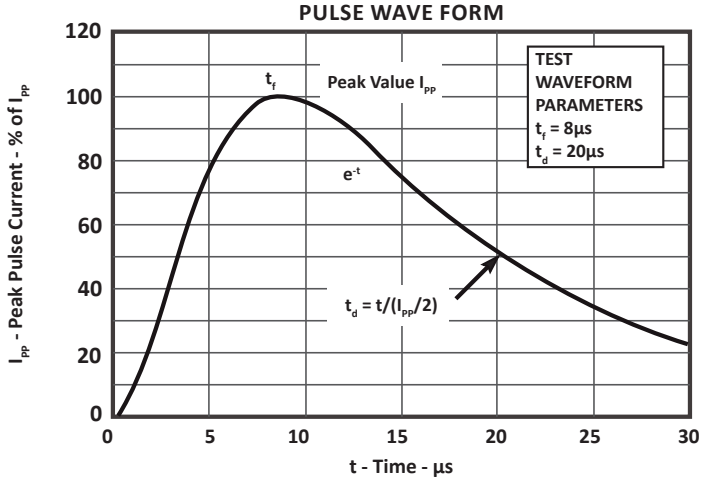
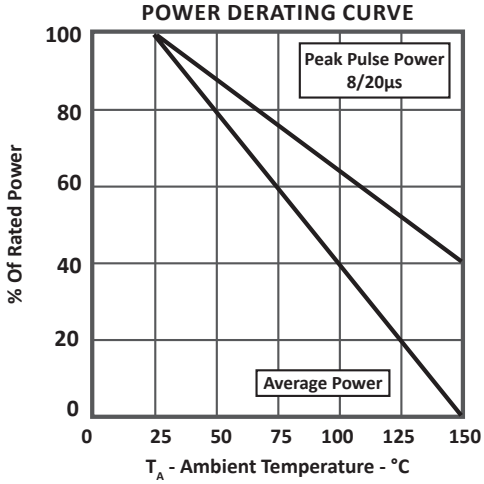


FIGURE 3
POWER DERATING CURVE

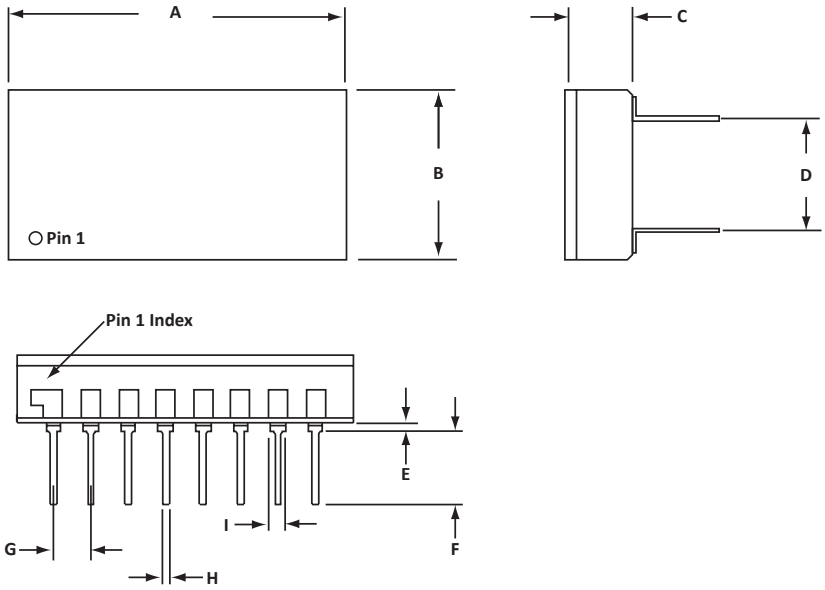


16 PIN CDIP PACKAGE INFORMATION

RTCA DO-160G COMPLIANT PRODUCT

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	22.72	23.48	0.895	0.925
B	11.43	12.19	0.450	0.480
C	-	4.87	-	0.192
D	7.36	7.84	0.290	0.310
E	-	0.635	-	0.025
F	4.19	5.21	0.165	0.205
G	2.42	2.66	0.095	0.105
H	0.33	0.57	0.023	0.013
I	0.88	1.12	0.035	0.045

NOTES
1. Dimensions are exclusive of mold flash and metal burrs.
2. Controlling dimensions in inches.
3. Package sealed with ceramic or metal lid.



ORDERING INFORMATION		
BASE PART NUMBER (xx = Voltage)	SCREENED	SCREENED & GROUP B
DLZ-xxxx	H1	H2

NOTES
1. Marking on Part - logo, part number, date code and pin one defined by flag on lead.

COMPANY INFORMATION

RTCA DO-160G COMPLIANT PRODUCT

COMPANY PROFILE

In business more than 25 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers LED wafer die for ESD protection and related high frequency products. ProTek Devices is ISO 9001:2015 certified.

CONTACT US

Corporate Headquarters
2929 South Fair Lane
Tempe, Arizona 85282
USA

By Telephone
General: 602-431-8101
Sales: & Marketing: 602-414-5109
Customer Service: 602-414-5114
Product Technical Support: 602-414-5107

By Fax
General: 602-431-2288

By E-mail:
Asia Sales: asiasales@protekdevices.com
Europe Sales: europesales@protekdevices.com
U.S. Sales: ussales@protekdevices.com
Distributor Sales: distysales@protekdevices.com
Customer Service: service@protekdevices.com
Technical Support: support@protekdevices.com

ProTek Devices (Asia Pacific) Pte. Ltd.
8 Ubi Road 2, #06-19
Zervex
Singapore - 408538
Tel: +65-67488312
Fax: +65-67488313

Web
www.protekdevices.com