

HIGH ENERGY - EXTENDED PULSE TVS

RTCA DO-160G COMPLIANT PRODUCT



DESCRIPTION

The GPZ1275 is a high power transient voltage suppressor (TVS) designed to provide protection against long duration switching transient threats. This heavy duty device is constructed using hermetically sealed TVS subassemblies and is suited for DC applications that include heavy duty motors, generators, or where DC power is being switched on and off at frequent intervals.

FEATURES

- RTCA DO-160G COMPLIANT PRODUCT
- Compatible with IEC 61000-4-5 (Surge): 95A, 8/20 μ s Level 3(Line-Gnd) & Level 4(Line-Line)
- MIL-STD-1275 Compliant
- 30,000 Watts Peak Pulse Power per Line (tp = 1ms)
- High Average (DC) Power Dissipation
- Superior Heat Dissipation Capability
- Each Device 100% Tested

APPLICATIONS

- Remote DC Power Supply, Base Station & Microwave Protection
- MIL-STD-1275 Power Bus Protection
- Electric Drive Motors & Controls
- Mobile Electronics Operating in Harsh Environments

MECHANICAL CHARACTERISTICS

- Hermetically Sealed Sub-Assemblies
- Approximate Weight: 65 grams
- Flammability Rating UL 94V-0

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 1ms) - See Figure 1	P_{PP}	30	kilowatts
Operating Temperature	T_L	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Steady State Power Dissipation (derate 2.33W/°C)	T_A	350	Watts

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (Note 1)	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE		MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ I_{PPM} V_C VOLTS	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D μ A	MAXIMUM PEAK PULSE CURRENT (Fig. 2) I_{PPM} AMPS
		$V_{(BR)}$ VOLTS	@ I_T mA			
GPZ1275	28	32	30	55	60	500

NOTE

1. Maximum VF = 3.5V @ 100A, 8.3ms (sine wave).

TYPICAL DEVICE CHARACTERISTICS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

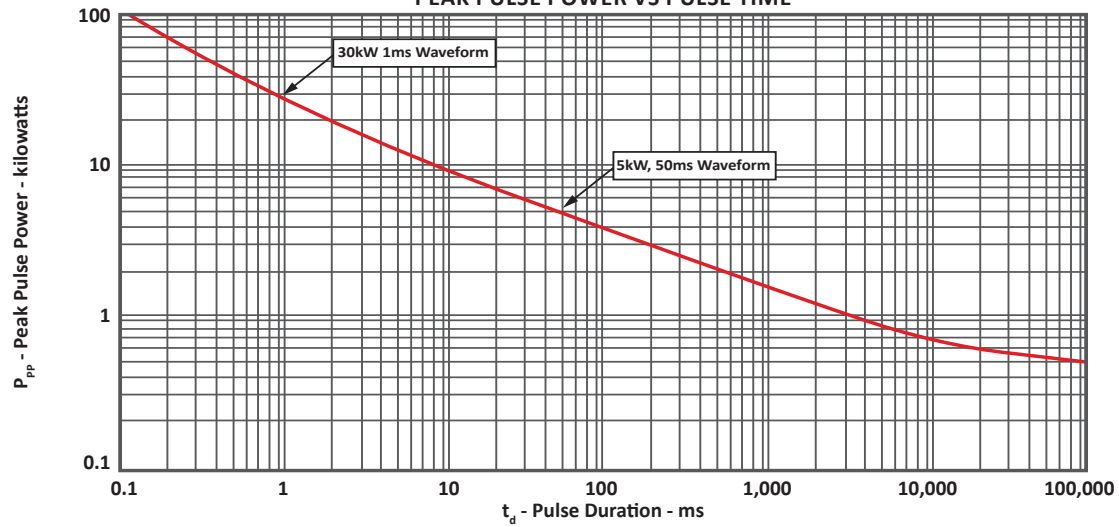


FIGURE 2
PULSE WAVEFORM

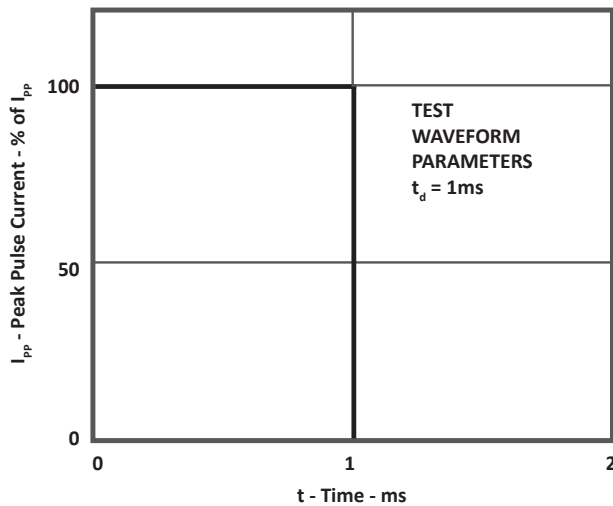
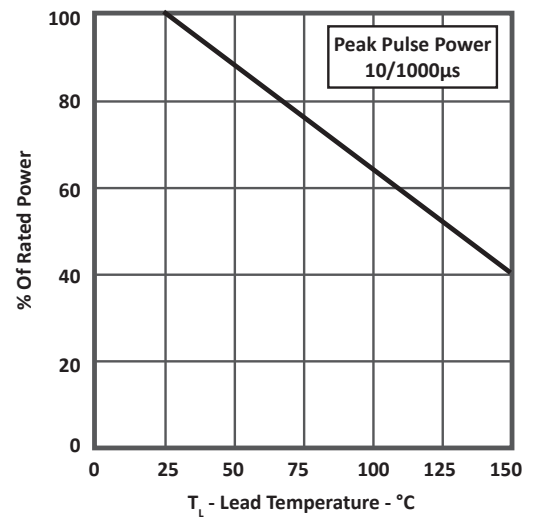
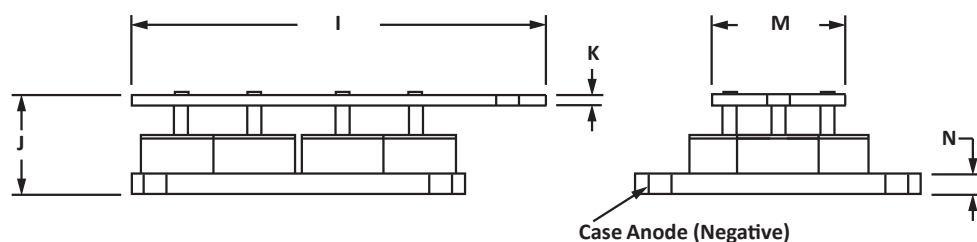
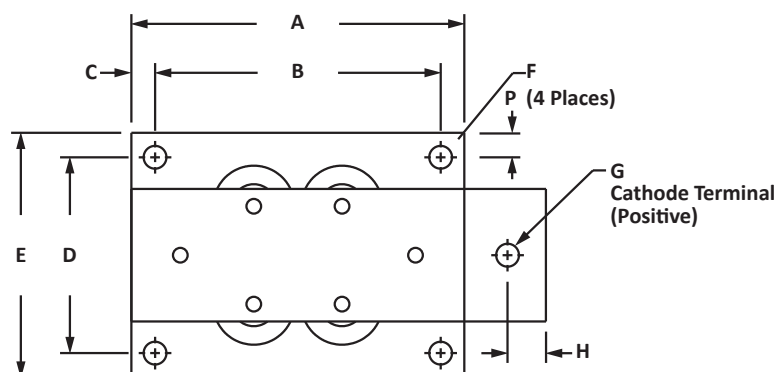


FIGURE 3
POWER DERATING CURVE



PACKAGE INFORMATION

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	51.56	52.07	2.03	2.05
B	44.12	44.70	1.74	1.76
C	3.55	3.81	0.14	0.15
D	30.23	30.73	1.19	1.21
E	37.84	38.35	1.49	1.51
F	3.30 DIA	3.81 DIA	0.13 DIA	0.15 DIA
G	5.84 DIA	6.10 DIA	0.230 DIA	0.240 DIA
H	5.84	6.10	0.23	0.24
I	64.26	64.77	2.53	2.55
J	-	17.01	-	0.67
K	1.40	1.78	0.055	0.070
M	20.37	20.88	0.802	0.822
N	3.05	3.30	0.120	0.130
P	3.68	3.94	0.145	0.155



ORDERING INFORMATION

BASE PART NUMBER	MARKING
GPZ1275	Logo, Date Code, and Part Number

COMPANY INFORMATION

COMPANY PROFILE

In business more than 30 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection that include Transient Voltage Suppressor (TVS) Arrays, Steering Diode Array Hybrids, High-power Components and Modules, as well as Steering Diodes, EMI Filter/TVS Arrays and Thyristor Surge Suppressors. These components deliver circuit protection in electronic systems from numerous overvoltage events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices is an ISO 9001 certified company.

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