



MODULE

DESCRIPTION

The PNH704270A and PNH704270CA series is a high power transient voltage suppressors(TVS) module designed to provide protection against long duration switching transient threats. This heavy duty device is specifically suited for 270VDC aircraft applications that include heavy duty motors, generators, or where DC power is being switched on and off at frequent intervals.

FEATURES

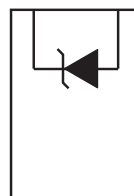
- RTCA DO-160G COMPLIANT PRODUCT
- MIL-STD-704F SEC 5.3.3.2 COMPLIANT PRODUCT
- 40,000 Watts Peak Pulse Power per Line (tp = 1ms)
- Unidirectional and Bidirectional Configurations
- Superior Heat Dissipation Capability
- Each Device 100% Tested
- Capable of Handling 50A Single Rectangular Pulse Current for 50ms

MECHANICAL CHARACTERISTICS

- Approximate Weight: 65 grams

APPLICATIONS

- On Board and External 270VDC Power Systems
- Power Bus Protection
- Electric Drive Motors & Controls
- Mobile Electronics Operating in Harsh Environments



UNIDIRECTIONAL



BIDIRECTIONAL

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 1ms) - See Figure 1 & 2	P_{pp}	40	kilowatts
Operating Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Steady State Power Dissipation (derate 2.33W/°C)	P_d	50	Watts

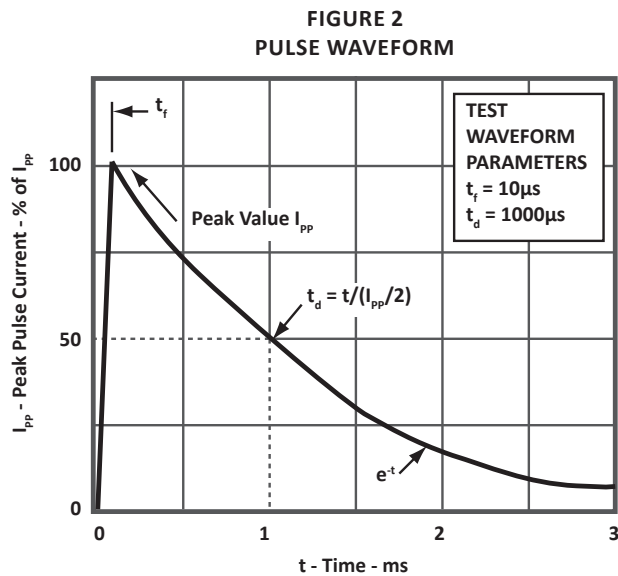
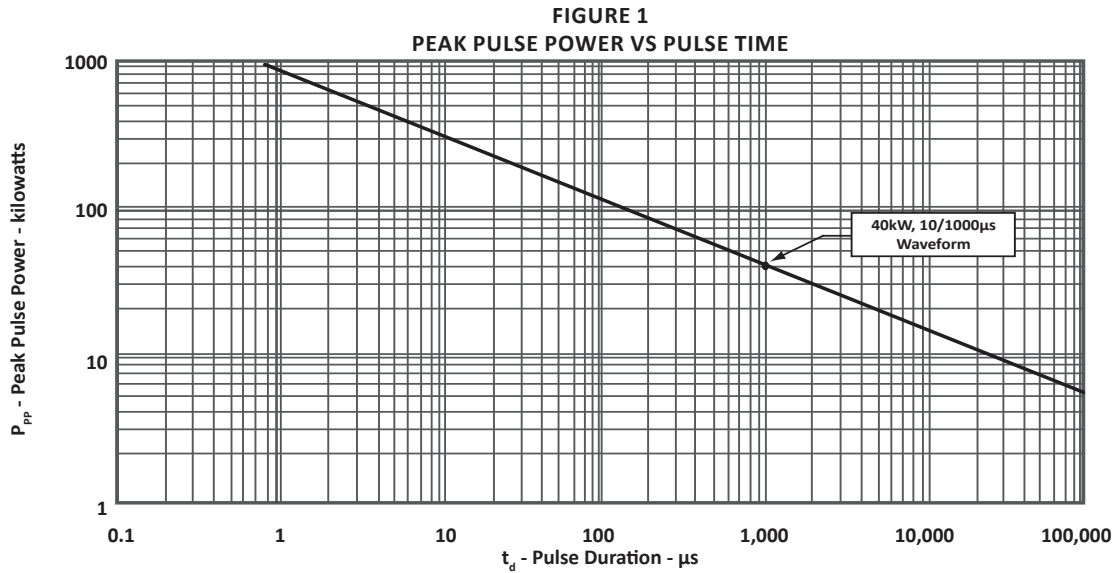
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER (Note 1)	RATED STAND-OFF VOLTAGE V_{RWM} VOLTS	MINIMUM BREAKDOWN VOLTAGE		MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ 95.1A 10/1000µs V_C VOLTS	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D µA	MAXIMUM PEAK PULSE CURRENT (Fig. 2) I_{PPM} AMPS	MAXIMUM OPERATING CURRENT (Fig. 3) I_{PPM} AMPS
		$V_{(BR)}$ VOLTS	@ I_T mA				
PNH704270A	270	287	5	416.4	10	95.1	100
PNH704270CA	270	287	5	416.4	10	95.1	100

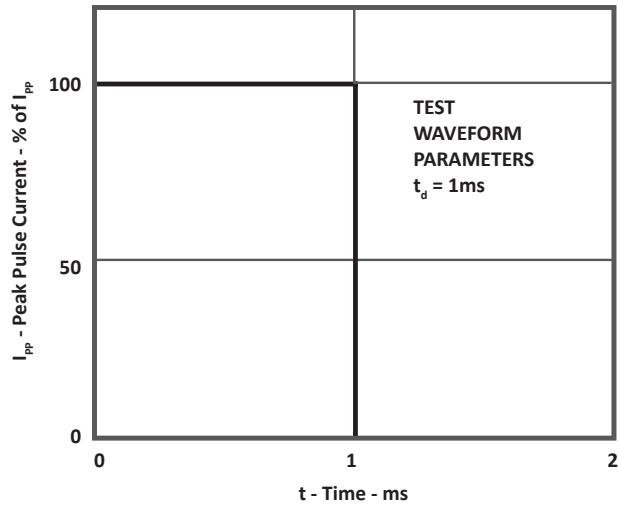
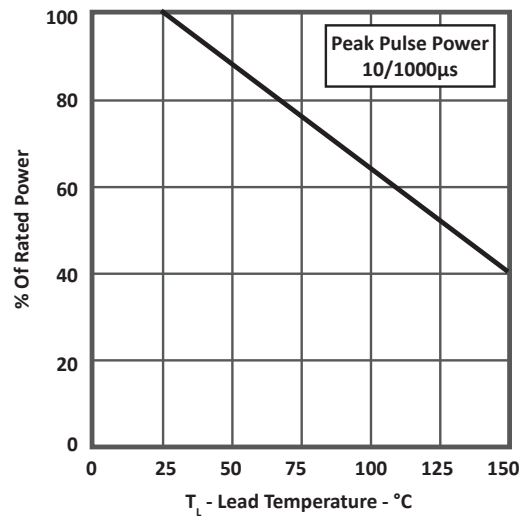
NOTE

1. Maximum VF = 11V @ 100A, 8.3ms (sine wave).

HIGH ENERGY - EXTENDED PULSE TVS



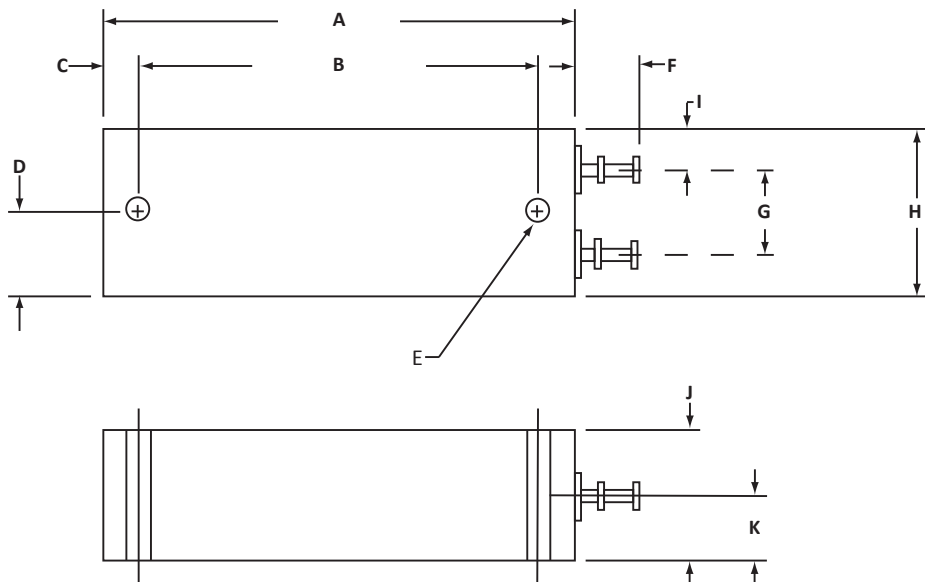
TYPICAL DEVICE CHARACTERISTICS

FIGURE 3
PULSE WAVEFORMFIGURE 4
POWER DERATING CURVE

PACKAGE INFORMATION

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	62.74	64.26	2.47	2.53
B	53.34	54.48	2.10	2.145
C	4.32	5.33	0.17	0.21
D	10.54	12.07	0.415	0.475
E	3.18 DIA		0.125 DIA	
F	8.26	9.27	0.325	0.365
G	11.43		0.45	
H	21.84	23.37	0.86	0.92
I	5.59		0.22	
J	16.51	17.53	0.65	0.69
K	8.51		0.335	

NOTES
1. Dimensions "E", "G", "I" and "K" are nominal.



ORDERING INFORMATION

BASE PART NUMBER	MARKING
PNH704270A/CA	Logo, Date Code, Part Number and Polarity Dot (Unidirectional Only)

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.

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

COPYRIGHT © ProTek Devices 2023 - This literature is subject to all applicable copyright laws and is not for resale in any manner.

SPECIFICATIONS: ProTek reserves the right to change the electrical and or mechanical characteristics described herein without notice.

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 makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ProTek assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability without limitation special, consequential or incidental damages.

LIFE SUPPORT POLICY: ProTek Devices products are not authorized for use in life support systems without written consent from the factory.