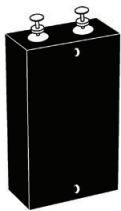
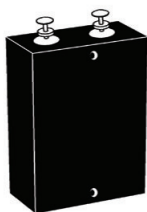


**SHIPBOARD/AC POWER BUS VOLTAGE SUPPRESSOR****60KS PACKAGE****90KS PACKAGE****DESCRIPTION**

The 60 & 90KS Series of devices are designed in accordance with DOD-STD-1399, section 300 interface standard and MIL-STD704A for shipboard systems, electrical power and alternating current. When large voltage transients endanger voltage sensitive components, this series provides reliable protection against power interruptions and shore power switch-over.

This series can be screened upon request for military requirements in accordance with MIL-PRF-19500 (applicable tests).

**FEATURES**

- DOD-STD-1399 & MIL-STD-704A Compliant
- 60 & 90 kilowatts Peak Pulse Power per Line (tp = 1.2/50μs)
- Each Device 100% Tested
- 200 Volts Bidirectional

**APPLICATIONS**

- AC Power Protection
- Shipboard (Line-Line) Protection
- Differential AC Power Bus
- Aircraft AC Power Bus

**MECHANICAL CHARACTERISTICS**

- Hermetically Sealed Glass to Metal Sub-Assemblies
- Approximate Weight: 50 grams
- Flammability Rating UL 94V-0
- Screening Available Upon Request:
  - H1 - Submodule Screening (Test Plans 05231 & 05232)
  - H2 - Submodule & Module Screening (Test Plan 05233)
  - H3 - Submodule & Module Screening with Group B & C Lot Testing (Test Plans 05234 & 05235)

**TYPICAL DEVICE CHARACTERISTICS**
**MAXIMUM RATINGS @ 25°C Unless Otherwise Specified**

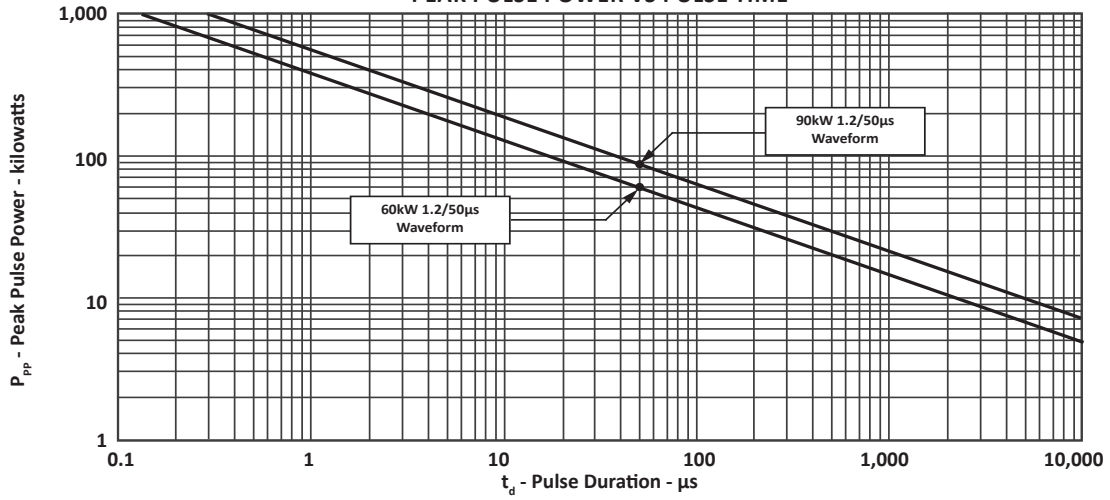
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 1.2/50μs) - See Figure 1	$P_{PP}$	60 & 90	kilowatts
Operating Temperature	$T_L$	-55 to 150	°C
Storage Temperature	$T_{STG}$	-55 to 150	°C
Steady State Power Dissipation	-	10.0	Watts

**ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified**

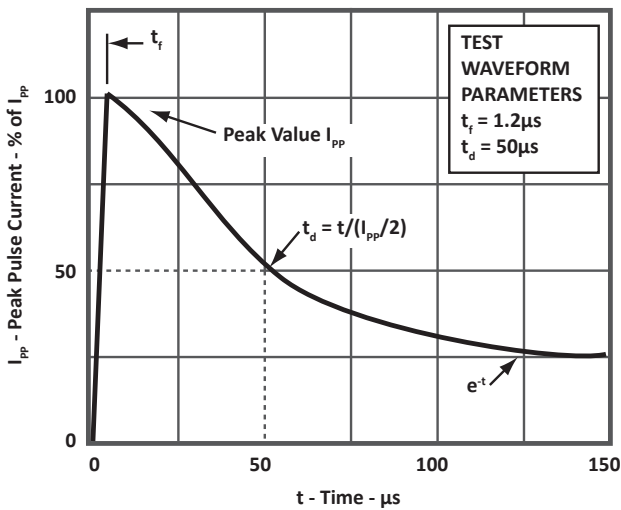
PART NUMBER	RATED STAND-OFF VOLTAGE  $V_{WM}$ VOLTS	MINIMUM BREAKDOWN VOLTAGE  @1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2)  @ $I_{PP}$ $V_C$ VOLTS	MAXIMUM LEAKAGE CURRENT  @ $V_{WM}$ $I_D$ μA	MAXIMUM PEAK PULSE CURRENT  $I_{PPM}$ AMPS
60KS200C	180	200	335	10	180
90KS200C	180	200	280	0.5	180

TYPICAL DEVICE CHARACTERISTICS

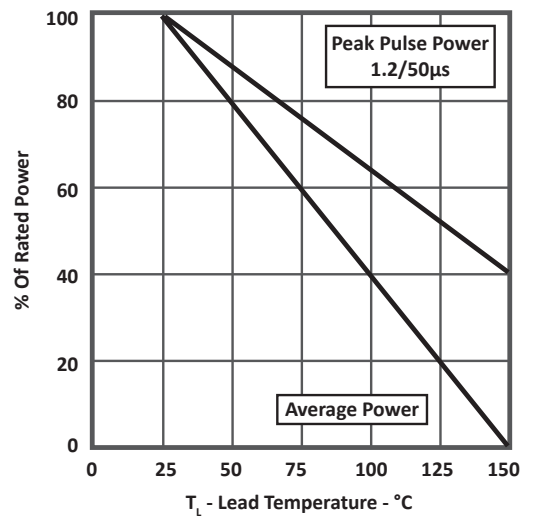
**FIGURE 1**  
PEAK PULSE POWER VS PULSE TIME



**FIGURE 2**  
PULSE WAVEFORM

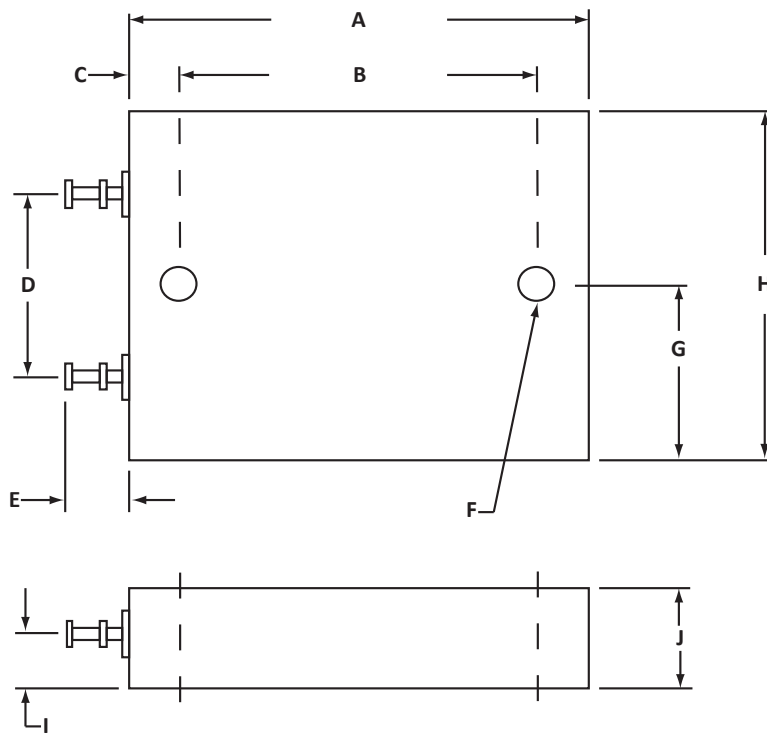


**FIGURE 3**  
POWER DERATING CURVE



**PACKAGE INFORMATION**
**90KS OUTLINE DIMENSIONS**

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	-	63.50	-	2.50
B	47.75	48.77	1.88	1.92
C	6.10	6.60	0.24	0.26
D	24.89	25.91	0.98	1.02
E	-	10.16	-	0.40
F	4.90 DIA.	5.21 DIA.	0.193 DIA.	0.205 DIA.
G	22.66	23.06	0.892	0.908
H	45.34	46.10	1.785	1.815
I	6.48	7.49	0.255	0.295
J	-	13.97	-	0.55

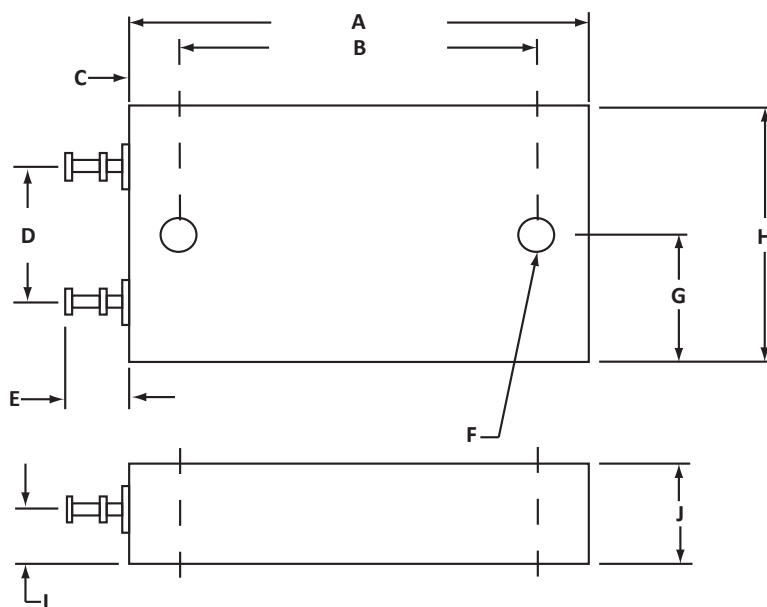


**PACKAGE INFORMATION**
**60KS OUTLINE DIMENSIONS**

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	56.38	57.91	2.22	2.28
B	49.02	50.03	1.93	1.97
C	3.43	4.17	0.135	0.165
D	20.32		0.800	
E	8.26	9.27	0.325	0.365
F	3.18 DIA.		0.125 DIA.	
G	16.76	18.29	0.660	0.720
H	34.16	35.69	1.345	1.405
I	6.35		0.250	
J	11.94	13.46	0.47	0.53

**NOTES**

1. Dimensions "D", "F" and "I" are nominal.


**ORDERING INFORMATION**

BASE PART NUMBER	SUBMODULE SCREENING	SUBMODULE & MODULE SCREENING	SUBMODULE & MODULE SCREENING, GROUP B & C LOT TESTING
60KS200C	H1	H2	H3
90KS200C	H1	H2	H2

**NOTES**

1. Marking on Part - logo, date code and part number.

Package outline per document number 06033.R1 9/09

## COMPANY INFORMATION

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### COMPANY PROFILE

ProTek Devices, based in Tempe, Arizona USA, is a manufacturer of Transient Voltage Suppression (TVS) products designed specifically for the protection of electronic systems from the effects of lightning, Electrostatic Discharge (ESD), Nuclear Electromagnetic Pulse (NEMP), inductive switching and EMI/RFI. With over 25 years of engineering and manufacturing experience, ProTek designs TVS devices that provide application specific protection solutions for all electronic equipment/systems.

ProTek Devices Analog Products Division, also manufactures analog interface, control, RF and power management products.

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