

## 3 POLE LED DRIVER & BALLAST PROTECTION MODULE

### DESCRIPTION

The PBSP-20K Series are designed to be used in conjunction with LED drivers, electric fluorescent and HID ballasts to provide an additional level of protection against power line disturbances in industrial and commercial applications.

### FEATURES

- Meets ANSI C136.2 / IEEE C62.41.2 Location Category C High Exposure
- IP66 Waterproof and Dustproof
- Compliance to UL1449 Type 4 Component Assembly
- Compliance to IEC 61643-11 Class II / EN61643-11 Type 2
- Compliance to CE Class I & II Installation
- Compact Form Factor With Mounting Tabs
- UL Approved: E475235
- Protects Line to Neutral, Line to Ground and Neutral to Ground in Accordance with IEEE/ANSI C62.41.2 Guidelines
- Surge Current 20,000 Amps @ 8/20 $\mu$ s Waveform
- High Temperature Flameproof Plastic Enclosure
- Maximum Temperature Rating of 85°C
- Pulse Rating @ 8/20 $\mu$ s (No. of Strikes @ I):
  - 1 @ 20,000A
  - 2 @ 13,000A
  - 10 @ 6,000A
  - 1000 @ 3,000A

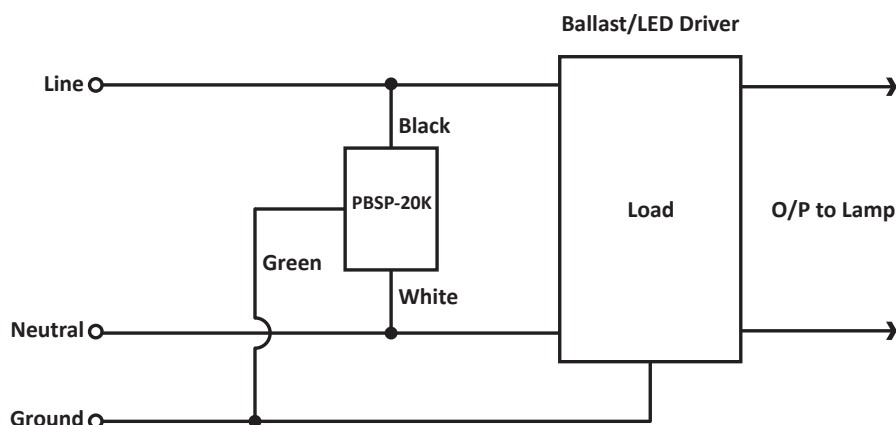
### APPLICATIONS

- LED Drivers
- Universal Voltage Ballast

### MECHANICAL CHARACTERISTICS

- High Temperature Flameproof Plastic Enclosure
- Maximum Temperature Raing of 85°C (Surface)
- Approximate Weight: 116 grams
- Flammability Rating UL 94V-0
- Marking: Logo, Part Number, Device Information

### APPLICATION



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

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Current (tp = 8/20μs)	$I_{PP}$	20,000	Amps
Operating Temperature	$T_L$	-40 to 85	°C
Storage Temperature	$T_{STG}$	-40 to 85	°C

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

PART NUMBER	RATED STAND-OFF VOLTAGE  $V_{WM}$ VOLTS AC	ENERGY @2ms  $W_V$ 1 X PULSE JOULES	MAXIMUM PEAK PULSE CURRENT (8/20μs)  $I_{PP}$ AMPS	MAXIMUM CLAMPING VOLTAGE (Fig. 1)  @ $I_p = 100A$ $V_C$ VOLTS	TYPICAL CAPACITANCE  @0V, 1MHz C pF
PBSP-120-20K	120	550	20000	650	3000
PBSP-220-20K	220	880	20000	1350	1500
PBSP-240-20K	240	920	20000	1355	1480
PBSP-277-20K	277	1100	20000	1500	1400

## TYPICAL DEVICE CHARACTERISTICS

FIGURE 1  
PULSE WAVE FORM

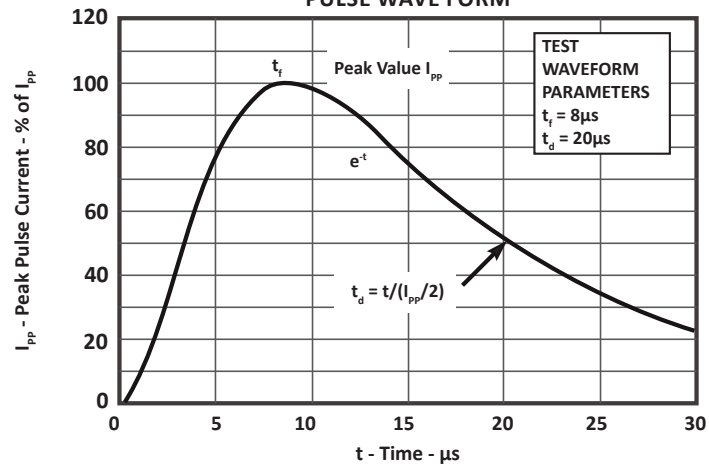
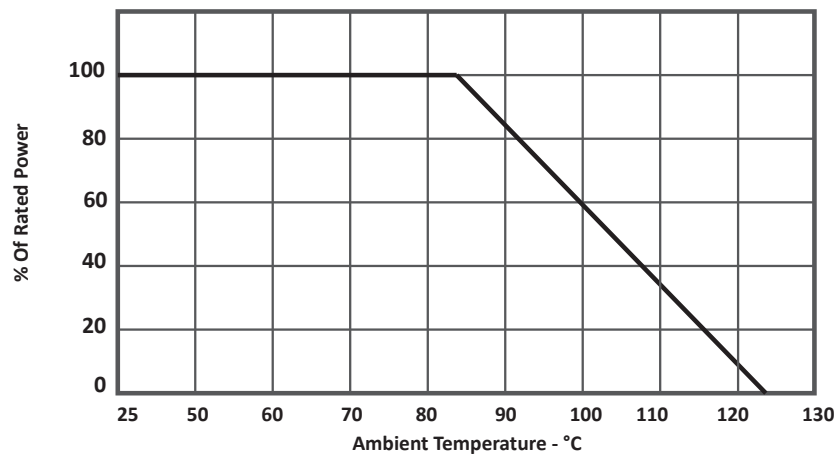
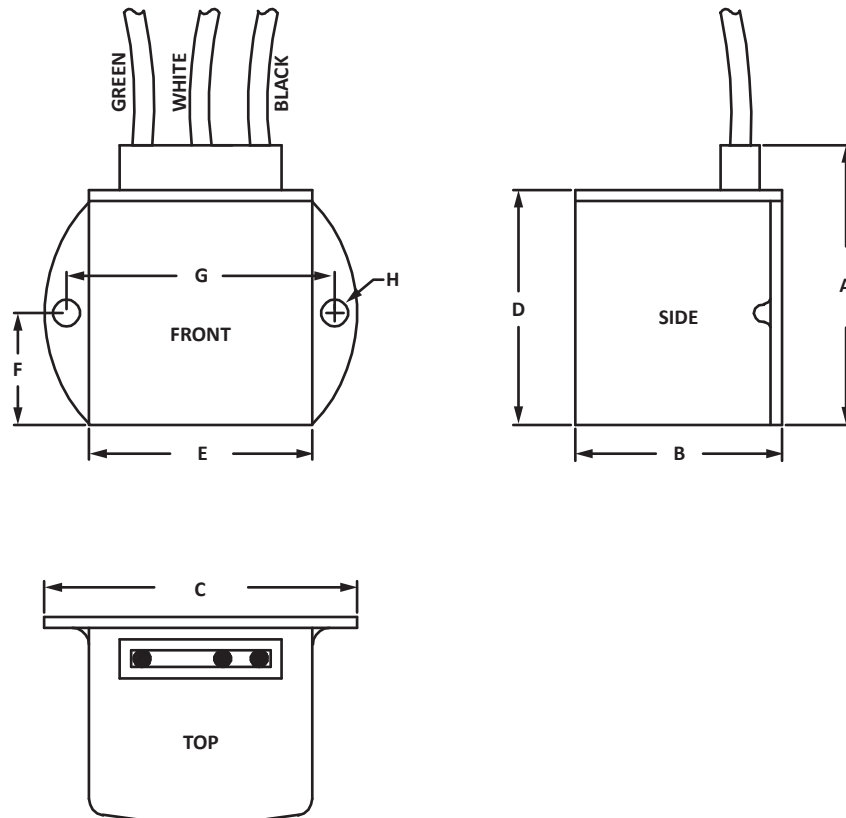


FIGURE 2  
POWER DERATING CURVE



**PACKAGE INFORMATION**
**SOLDER PAD OUTLINE DIMENSIONS**

DIM	INCHES		MILIMETERS	
	MIN	MAX	MIN	MAX
A	1.95	1.99	49.5	50.5
B	1.44	1.48	36.5	37.5
C	2.18	2.22	55.5	56.5
D	1.63	1.67	41.5	42.5
E	1.55	1.59	39.5	40.5
F	0.77	0.81	19.5	20.5
G	1.87	1.91	47.5	48.5
H	0.19	0.21	4.8	5.2



## COMPANY INFORMATION

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### COMPANY PROFILE

In business more than 20 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 high performance interface and linear products. They include analog switches; multiplexers; LED drivers; LED wafer die for ESD protection; audio control ICs; RF and related high frequency products.

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