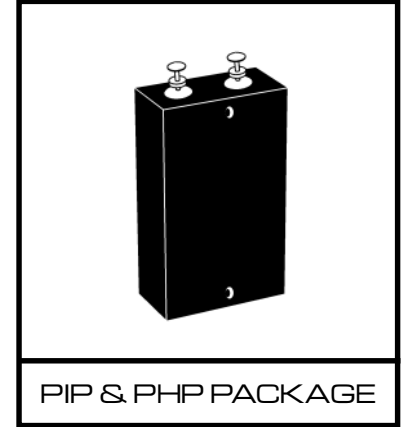


**AC POWER BUS VOLTAGE SUPPRESSOR**
**APPLICATIONS**

- ✓ Secondary AC Power Supply
- ✓ Aircraft & Shipboard AC Power Bus
- ✓ Heavy Duty AC Switching Power

**FEATURES**

- ✓ *Meets the Following Military Specifications:*
  - DOD-STD-1389
  - MIL-STD-2036
  - MIL-STD-704
  - MIL-PRF-STD-19500/507
- ✓ 7,500 & 15,000 Watts Peak Pulse Power per Line (tp=10/1000µs)
- ✓ Each Device 100% Tested
- ✓ Available in Multiple Voltages Ranging From: 8.4V to 500V


**MECHANICAL CHARACTERISTICS**

- ✓ Hermetically Sealed Glass to Metal Sub-Assemblies (PHP)
- ✓ Sub-Assemblies are Packaged in Molded Epoxy Case (PIP)
- ✓ Weight 46 grams (Approximate)
- ✓ Flammability rating UL 94V-0
- ✓ Device Marking: Logo & Part Number
- ✓ Screening Available Upon Request - The PHP & PIP series can be screened upon request for military requirements in accordance with MIL-PRF-19500 (applicable test). Standard screening is available based on the following options:
  - H1 - Submodule Screening per test plans 05231 & 05232
  - H2 - Submodule & Module Screening per test plan 05233
  - H3 - Submodule & Module Screening, Module Group B & C Lot Testing per test plans 05234 & 05235

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 10/1000µs) - See Figure 1	P <sub>PP</sub>	7.5 & 15	kilowatts
Operating Temperature	T <sub>J</sub>	-55°C to 150°C	°C
Storage Temperature	T <sub>STG</sub>	-55°C to 150°C	°C
Steady State Power Dissipation @ 50°C	T <sub>A</sub>	7.5	Watts

# PHP8.4-PHP500 thru PIP8.4-PIP500

## DEVICE CHARACTERISTICS

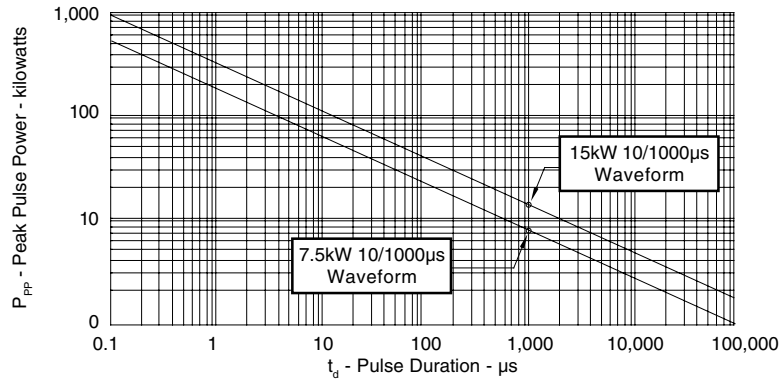
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER (See Notes 1-2)	AVERAGE RMS VOLTAGE	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE (See Note 1)	MAXIMUM CLAMPING VOLTAGE (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	MAXIMUM PEAK PULSE CURRENT	MAXIMUM PEAK PULSE POWER
	$V_{RMS}$ VOLTS	$V_{WM}$ VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ $I_{PPM}$ $V_C$ VOLTS	@ $V_{WM}$ $I_D$ $\mu A$	$I_{PPM}$ AMPS	@ 1ms $P_{PP}$ KILOWATTS
PHP8.4	8.4	12.0	14	22	250	341	7.5
PHP24	24.0	34.0	40	67	250	112	7.5
PHP30	30.0	42.5	50	84	250	90	7.5
PHP60	60.0	85.0	100	167	250	90	15.0
PHP120*	120.0	170.0	200	319	250	47	15.0
PHP208	208.0	295.0	347	536	250	28	15.0
PHP250*	250.0	354.0	418	652	250	23	15.0
PHP440	440.0	623.0	735	1138	250	13.2	15.0
PHP500*	500.0	708.0	835	1292	250	11.6	15.0
PIP8.4	8.4	12.0	14	22	250	341	7.5
PIP24	24.0	34.0	40	67	250	112	7.5
PIP30	30.0	42.5	50	84	250	90	7.5
PIP60	60.0	85.0	100	167	250	90	15.0
PIP120*	120.0	170.0	200	319	250	47	15.0
PIP208	208.0	295.0	347	536	250	28	15.0
PIP250*	250.0	354.0	418	652	250	23	15.0
PIP440	440.0	623.0	735	1138	250	13.2	15.0
PIP500*	500.0	708.0	835	1292	250	11.6	15.0

**Note 1:** An \* indicates that this series is recommended for marine applications. For military and aerospace applications, use the PHP Series. For industrial applications use the PIP Series

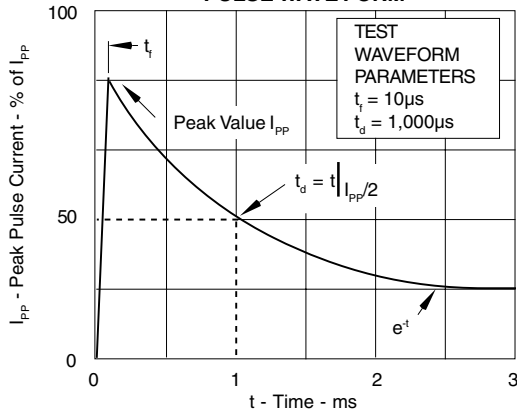
**Note 2:** The following devices have a peak pulse power rating of 7,500W for a 10/1000 $\mu s$  waveform (see Figure 1): 8.4V, 24V and 30V.

GRAPHS

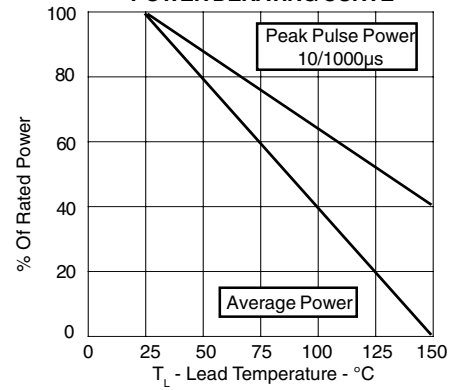
**FIGURE 1**  
**PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2**  
**PULSE WAVE FORM**

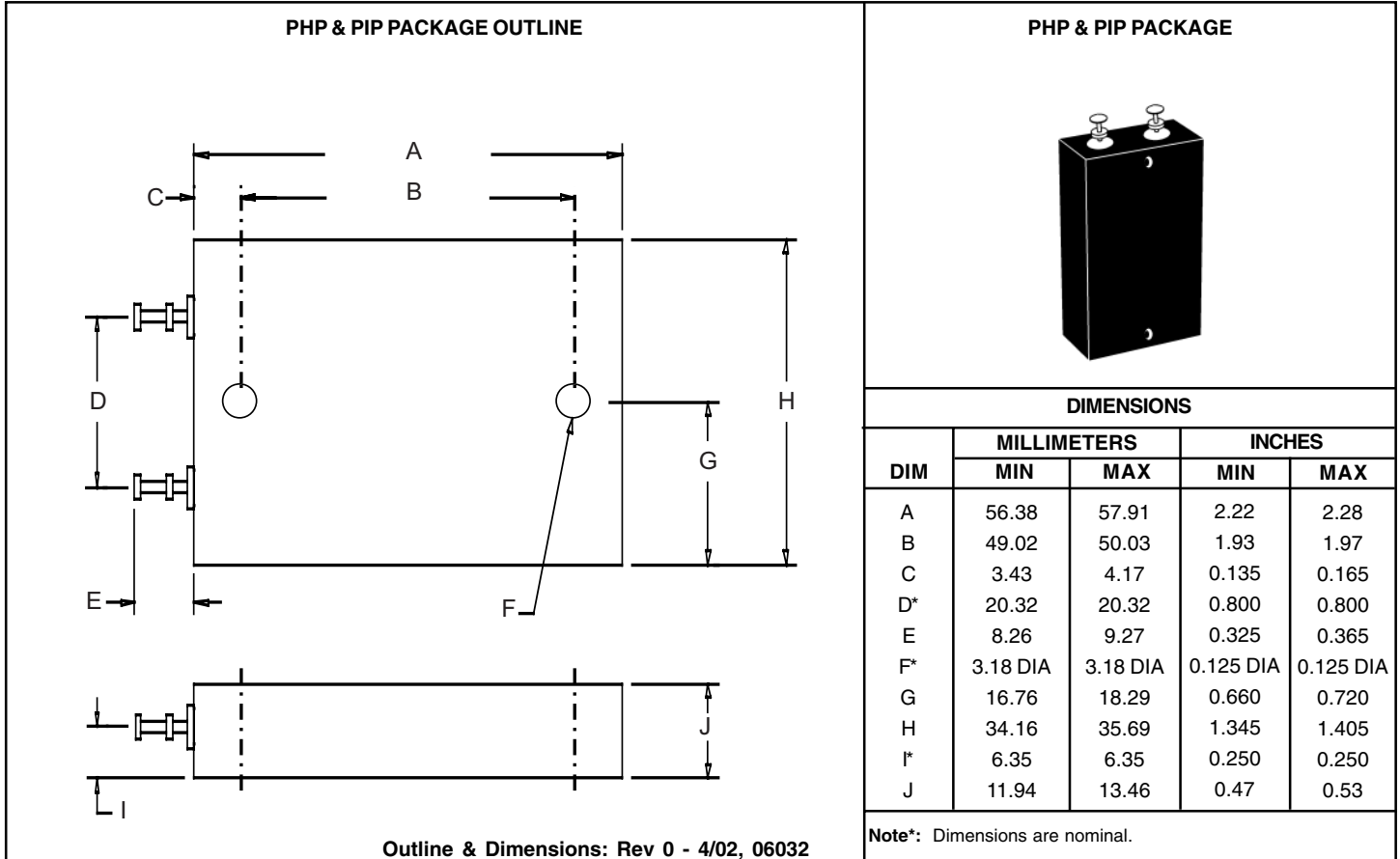


**FIGURE 3**  
**POWER DERATING CURVE**



# PHP8.4-PHP500 thru PIP8.4-PIP500

## PACKAGE OUTLINE & DIMENSIONS



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