

TECHNICAL DATA  
PART NUMBER: SCP-5282-10, Rev A

## High Power Bipolar TVS Module (90KW) for Load Dump & Lightning Strike Protection

### Application:

- Lightning strike protection
- 28V system bus protection
- 100% tested to MIL-STD-1275 Pulse
- 100% tested to 50/500  $\mu$ s, Qualified to 1600A Pulse
- High power dissipation and bi-directional capability
- Surface mount and thru hole packages
- MTBF (MIL STD 217F amended to reflect ANSI Vita S1.0-2008 (2013): 134,142,756 hours at 50°C Full Load Ground Mobile (GM)



SCP-5282-10A



SCP-5282-10B

### Electrical Characteristics:

$T_j = 25^\circ\text{C}$  unless otherwise specified

PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT
Peak Pulse Power	50/500 $\mu$ s waveform	$P_{PPM}$	-	90	-	KW
Peak Pulse Current	50/500 $\mu$ s waveform	$I_{PPM}$	1600	-	-	A
Clamp Voltage @ $I_{PPM}$	50/500 $\mu$ s waveform	$V_{CL}^1$	-	56	59	V
Peak Pulse Power	MIL-STD-1275 waveform	$P_{PPM}$	-	4.6	-	KW
Peak Pulse Current	MIL-STD-1275 waveform	$I_{PPM}$	82	-	-	A
Clamp Voltage @ $I_{PPM}$	MIL-STD-1275 waveform	$V_{CL}$	-	52	55	V
Reverse Standoff Voltage @ $I_R$		$V_{RWM}$	34	-	-	V
Reverse Leakage Current @ $V_{RWM}$		$I_R$	-	-	30	$\mu$ A
Breakdown Voltage @ $I_T = 5\text{mA}$		$V_{BR}$	40	43	-	V

**Note 1: Clamp Voltage production test is limited to 1400A, due to equipment limitation.**

# **SENSITRON**

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## **SEMICONDUCTOR**

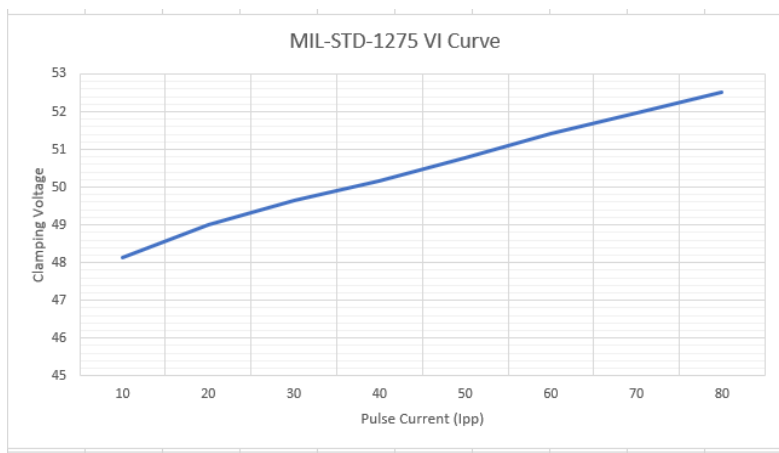
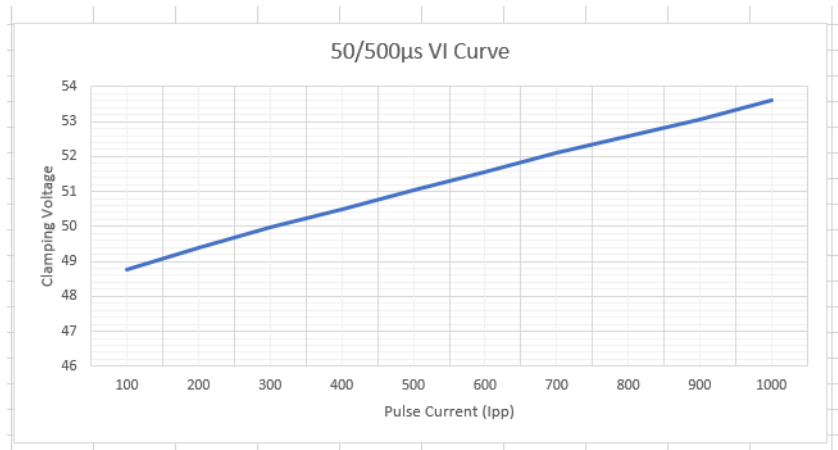
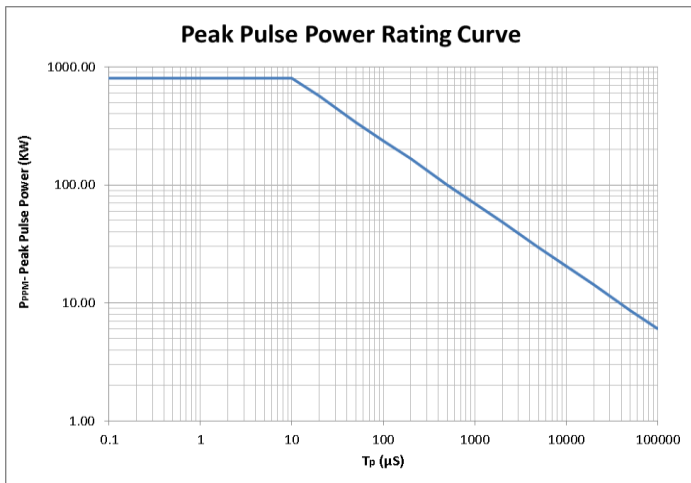
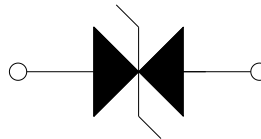
**SCP-5282-10A**  
**SCP-5282-10B**

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**Package Characteristics**

Recommended Operating Temperature Range	T <sub>OP</sub>	- 40	-	85	°C
Junction Temperature Range	T <sub>J</sub>	- 40	-	150	°C
Storage Temperature Range <sup>2</sup>	T <sub>S</sub>	- 40	-	125	°C
Module Weight	M	-	20	-	gms

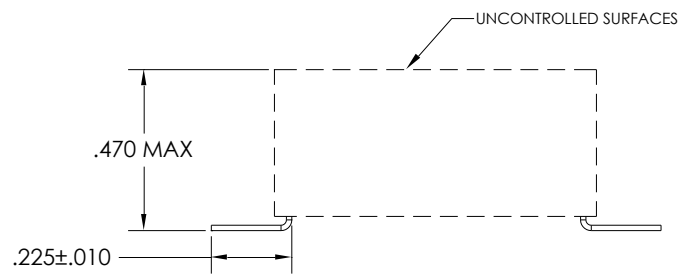
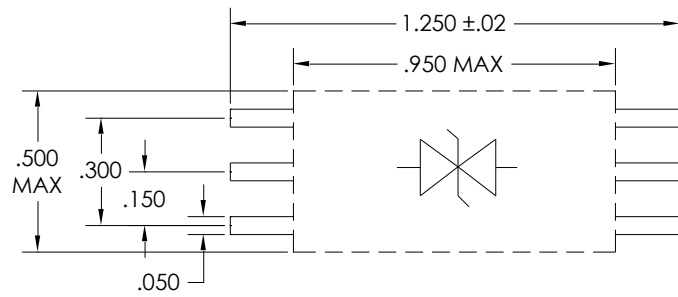
**Note 2: Screened in accordance with MIL-STD-883, method 1010.**

**Electrical Schematic**

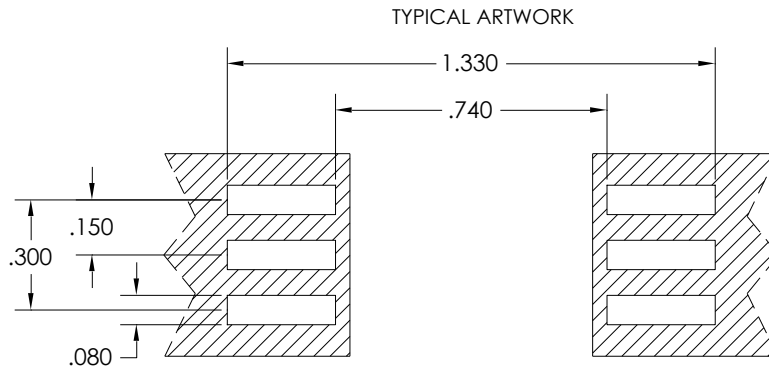


**Mechanical Drawing SCP-5282-10A**

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TOLERANCE = .005 UNLESS OTHERWISE NOTED



**Soldering note:**

Part has high heat capacity. Solder reflow profile may require longer soak times and/or higher temperatures to achieve proper reflow.

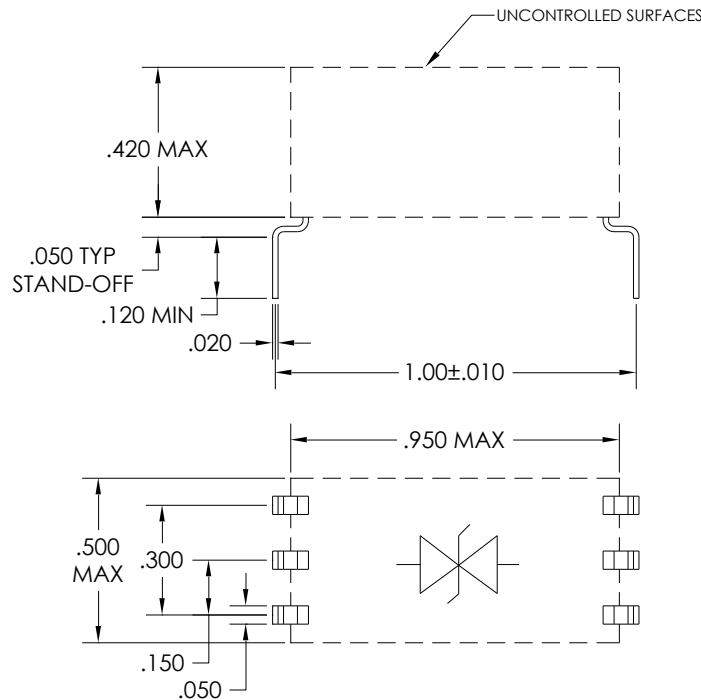
# **SENSITRON**

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## **SEMICONDUCTOR**

SCP-5282-10A  
SCP-5282-10B

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### **Soldering note:**

Part has high heat capacity and may need to be pre-warmed prior to solder iron or wave solder reflow to achieve proper reflow.

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