

TECHNICAL DATA
PART NUMBER: SCP-5282-6A/B, Rev. C.2

High Power Bipolar TVS Module (137KW) 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 μ s, 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-5282-6A



SCP-5282-6B

Electrical Characteristics:

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

PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT
Peak Pulse Power	50/500 μ s waveform	P_{PPM}	-	137	-	KW
Peak Pulse Current	50/500 μ s waveform	I_{PPM}	1600	-	-	A
Clamp Voltage @ I_{PPM}	50/500 μ s waveform	V_{CL}^1	-	86	90	V
Peak Pulse Power	MIL-STD-1275 waveform	P_{PPM}	-	4	-	KW
Peak Pulse Current	MIL-STD-1275 waveform	I_{PPM}	54	-	-	A
Clamp Voltage @ I_{PPM}	MIL-STD-1275 waveform	V_{CL}	-	73	77	V
Reverse Standoff Voltage		V_{RWM}	52	-	-	V
Reverse Leakage Current @ V_{RWM}		I_R	-	-	30	μ A
Breakdown Voltage @ $I_T = 5\text{mA}$		V_{BR}	60	64	-	V

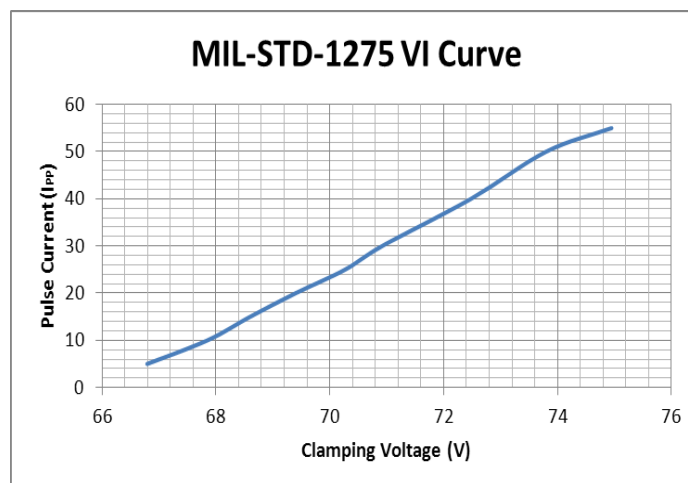
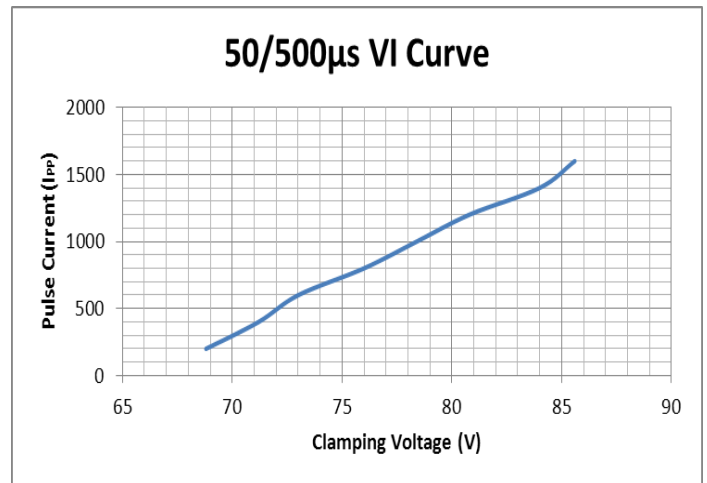
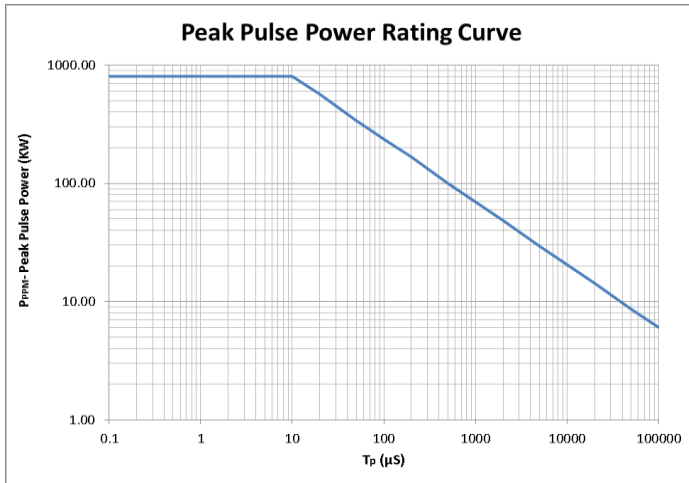
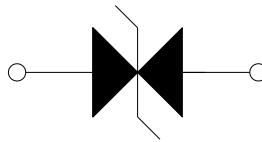
Note 1: Clamp Voltage production test is limited to 1400A, due to equipment limitation.

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Package Characteristics

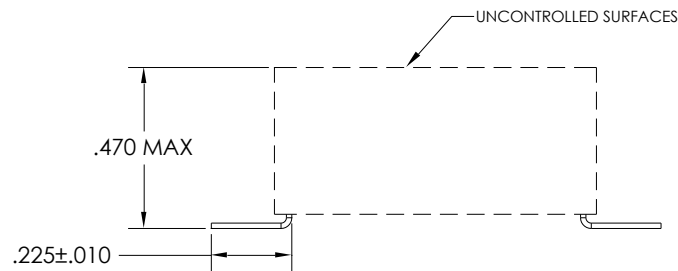
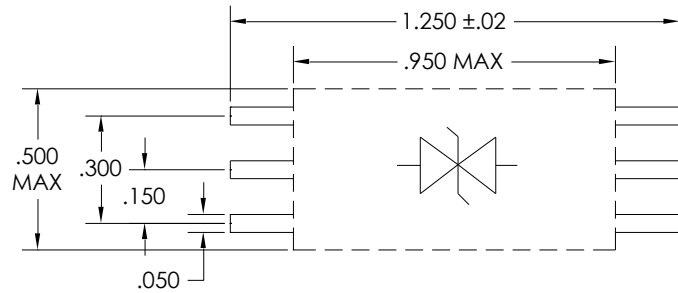
Recommended Operating Temperature Range	T _{OP}	- 40	-	85	°C
Junction Temperature Range	T _J	-40	-	150	°C
Storage Temperature Range	T _S	- 55	-	150	°C
Module Weight	M	-	20	-	gms

Electrical Schematic

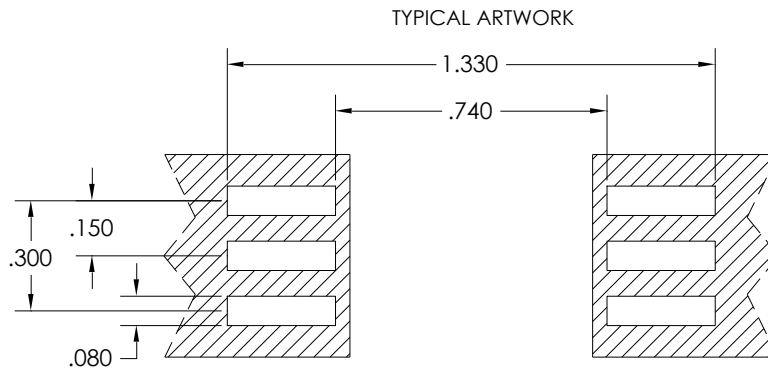


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Mechanical Drawing SCP-5282-6A



TOLERANCE = .005 UNLESS OTHERWISE NOTED

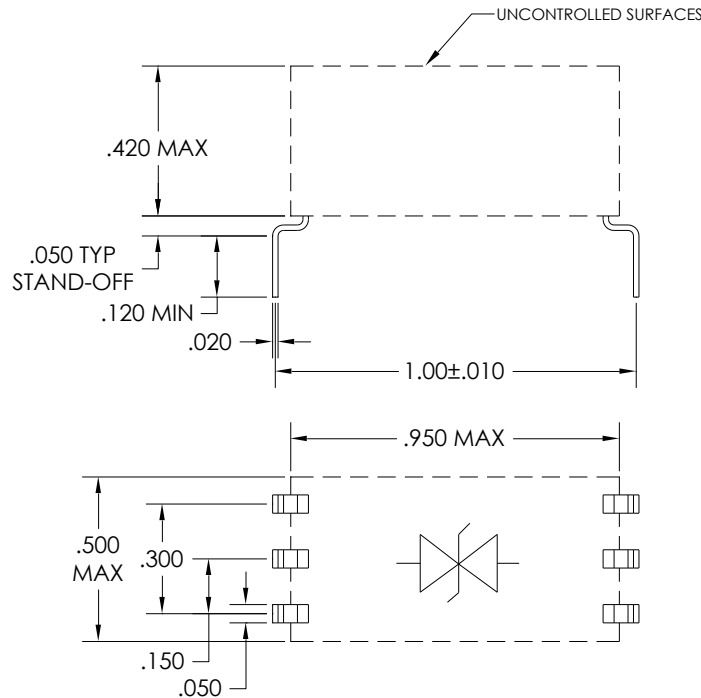


Soldering note:

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

TECHNICAL DATA
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Mechanical Drawing SCP-5282-6B



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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