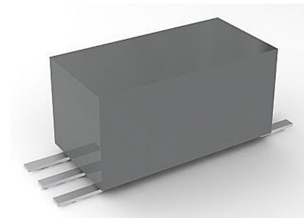
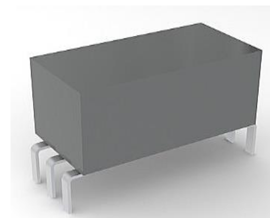
High Power Bipolar TVS Module (137KW/ 1600A) for Lightning Strike Protection

Application:

- Lightning strike protection
- 28V system bus protection
- 100% tested to 50/500 µs, 1600A Pulse
- 100% tested to MIL-STD-1275 Pulse
- High power dissipation and bi-directional capability
- Load dump protection
- Through Hole Version – LSP52A-1600-60
- Surface Mount Version – LSP52B-1600-60



actual part appearance may vary



actual part appearance may vary

Protection Level:
DO-160 Section 22 Level 5 Waveform 5B Compliant

Electrical Characteristics:

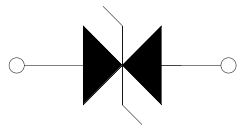
$T_j = 25^0C$ unless otherwise specified

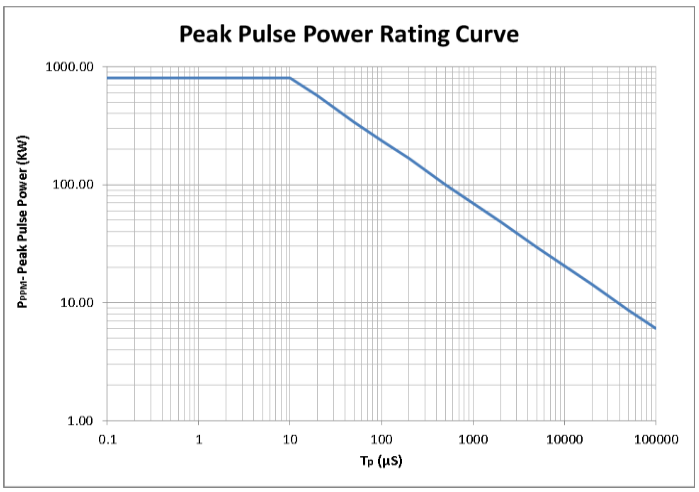
PARAMETER		SYMBOL	MIN	TYP	MAX	UNIT
Peak Pulse Power	50/500 µs waveform	P_{PPM}	-	137	-	KW
Peak Pulse Current	50/500 µs waveform	I_{PPM}	1600	-	-	A
Clamp Voltage @ I_{PPM}	50/500 µs waveform	V_{CL}	-	86	90	V
Reverse Standoff Voltage		V_{RWM}	52	-	-	V
Peak Pulse Power	MIL-STD-1275 waveform	P_{PPM}	-	4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

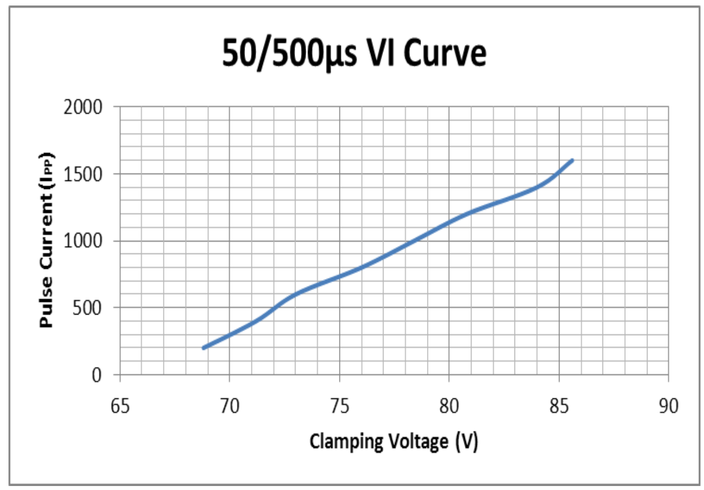
Package Characteristics

Recommended Operating Temperature Range	T_{OP}	- 40	-	85	^OC
Junction Temperature Range	T_J	-40	-	150	^OC
Storage Temperature Range	T_S	- 55	-	150	^OC
Module Weight	M	-	20	-	gms

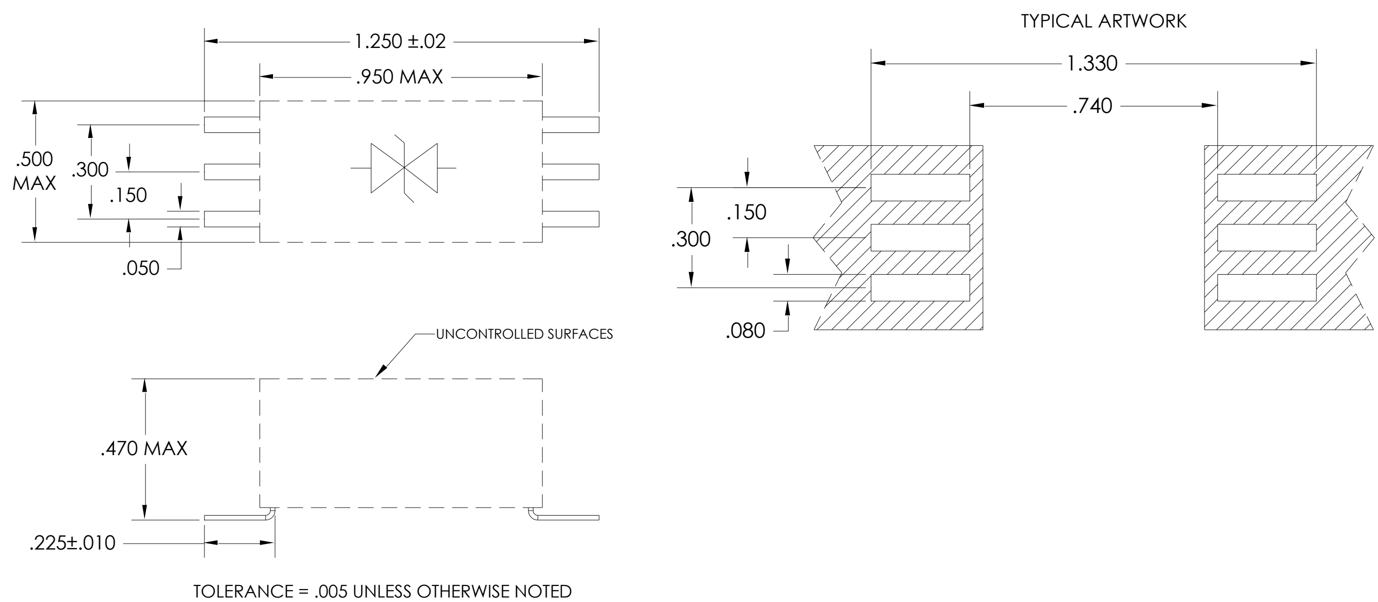
Electrical Schematic





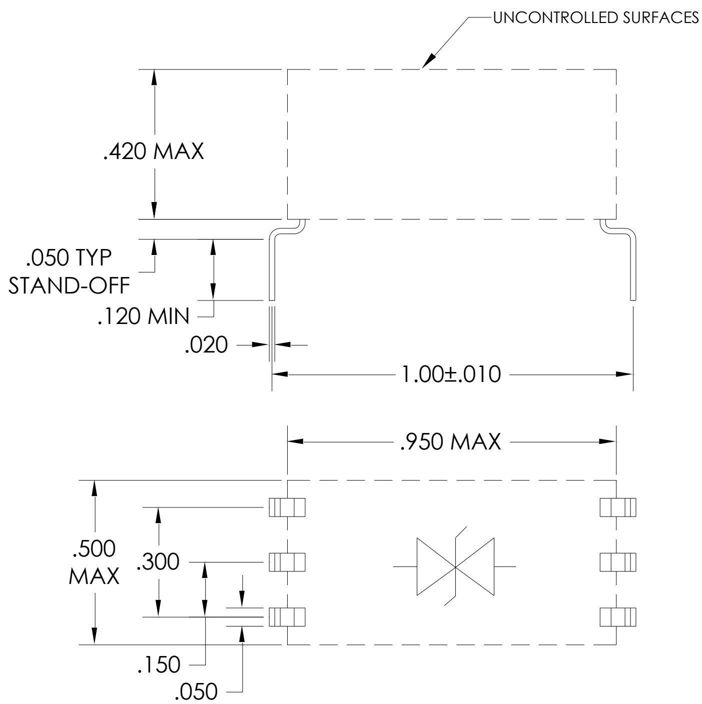


Mechanical Drawing: SCP-5282-6A



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

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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