

TECHNICAL DATA
PART NUMBER: SCP-5282-5, REV.F

High Pulse Power Mil-STD-1275 Transorb - Clamp below 43V/ 44V

Key Features:

- Clamping below 43V DC/ 44V DC for both 100V and 250V pulse
- High Pulse Power Capability
- Meets Vibration requirements of:
 - MIL-STD-810G, Method 514.6, Category 8
 - RTCA DO-160, Section 8, Figure 8-3
- MTBF (MIL STD 217F amended to reflect ANSI Vita S1.0-2008 (2013): 22,357,272 hours at 50°C Full Load Ground Mobile (GM)



Application:

- +28V DC systems
- Unidirectional Clamp with reverse polarity protection, Part number SCP-5282-5
- Unidirectional Clamp, Part number SCP-5282-5A

Protection Level:

- MIL-STD-1275 Compliant; 100V Surge withstanding with 0.5-ohm source impedance
 - ✓ 100% tested
- 100% tested for 100-msec single pulse up to 120A
- When mounted to a heat sink, capable of 5 pulses (1 minute interval) of 120A, 50 msec square and decay to zero at 250msec at 1-minute intervals
- Designed to meet: SAE J1113-11 under following conditions:
 - ✓ 174V, 2-ohm upto 150msec
 - ✓ 174V, 5-ohm upto 350msec

Part Ordering Information:

- SCP-5282-5 or SCP-5282-5A

SENSITRON **SEMICONDUCTOR**

SCP-5282-5
SCP-5282-5A

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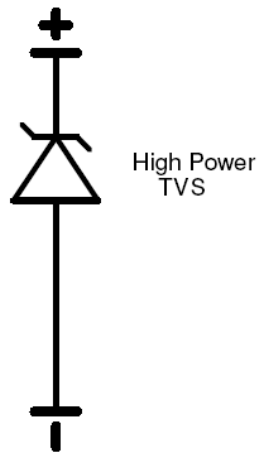
(All parameters are at Tc = 25°C unless otherwise specified)

Rating	Condition	Symbol	Min	Max	Units
Peak Pulse Power Dissipation	1ms	P _{pk}	-	50	KW
Steady State Power Dissipation	-	P	-	250	Watts
Reverse Stand-Off Voltage	-	V _{WM}	-	30	Volts
Forward Stand-Off Voltage from - to + (SCP-5282-5 only)	-	V _{WM (Forw)}	-	33	Volts
Reverse Stand-Off Leakage from + to -	@ 30V	I _D	-	250	uA
Reverse Stand-Off Leakage from + to -	@ 34V	I _D	-	8	mA
Reverse Clamping Voltage, from + to - SCP-5282-5A SCP-5282-5	@ I _{PP1}	V _c	-	43.5 44.5	Volts
Forward Clamping Voltage, from - to + SCP-5282-5A SCP-5282-5	@ 10A 10msec max	V _c	- 36	1.2 46	Volts
Peak Pulse Current (single 100-msec square pulse)	-	I _{PP1}		120	Amps
Peak Pulse Current (5 pulses of 50-msec at 1 sec intervals)	-	I _{PP2}		120	Amps
Operating & Storage Temp.	-	Top & Tstg	-55	+ 125	°C

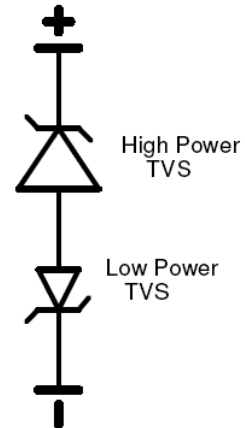
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Unidirectional Clamp
Part number SCP-5282-5A



Unidirectional Clamp with reverse polarity protection
Part number SCP-5282-5.

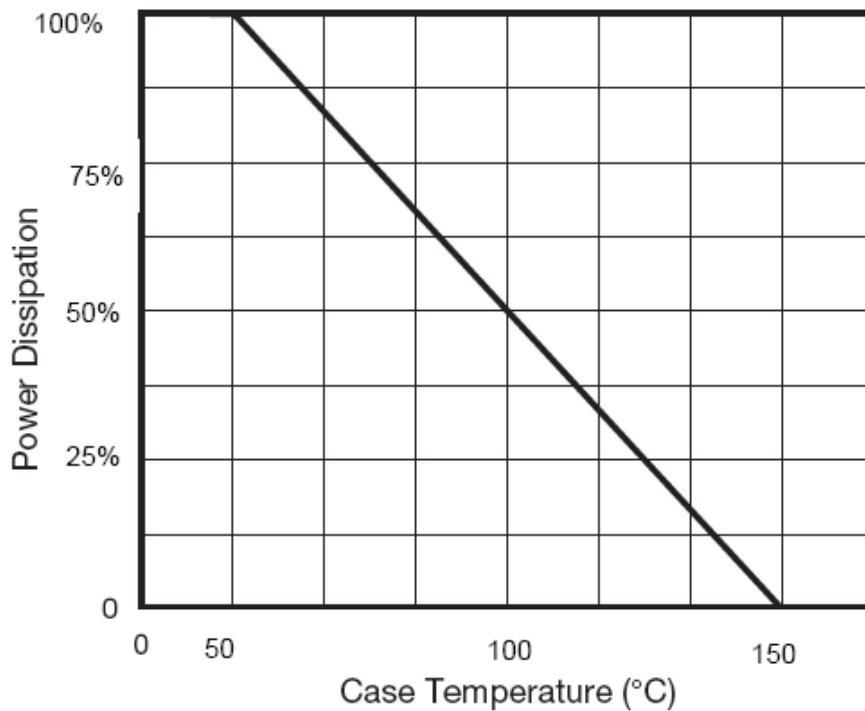
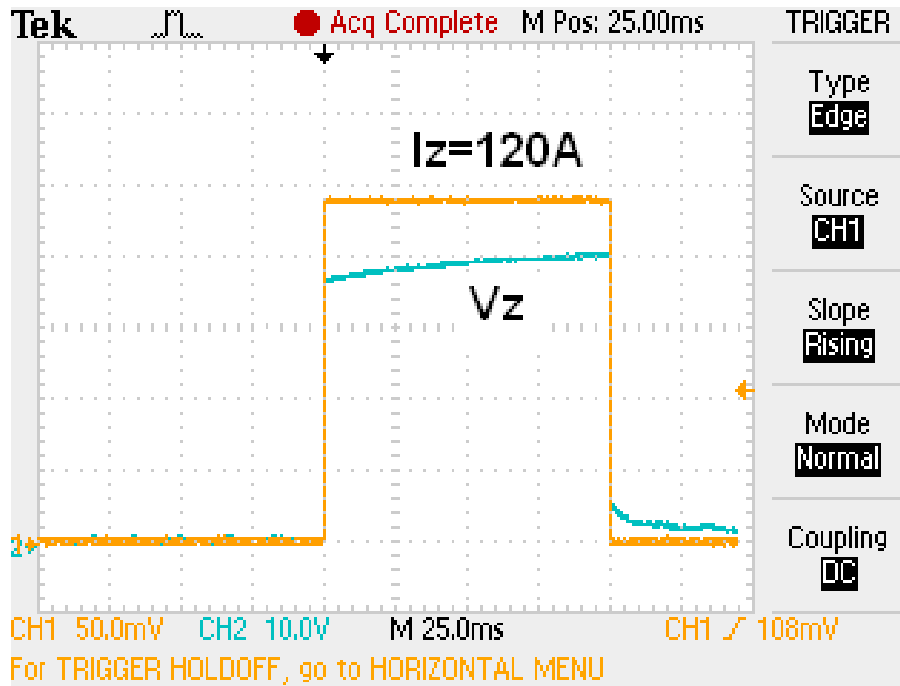


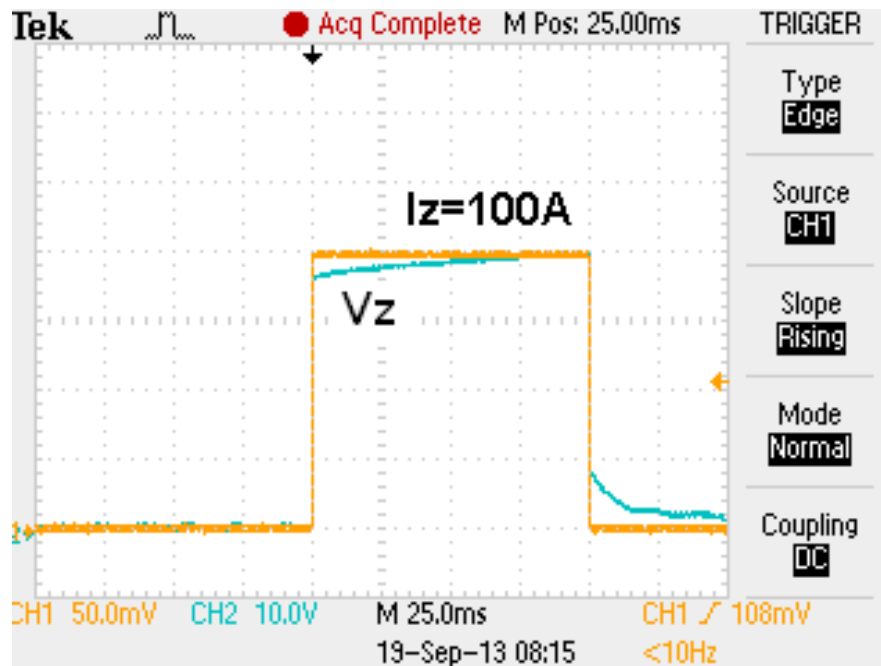
Fig. 1 - Power Derating Curve

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Test Data:



Clamping Current and Voltage Waveforms, Vz max=40.7V, for SCP-5282-5A



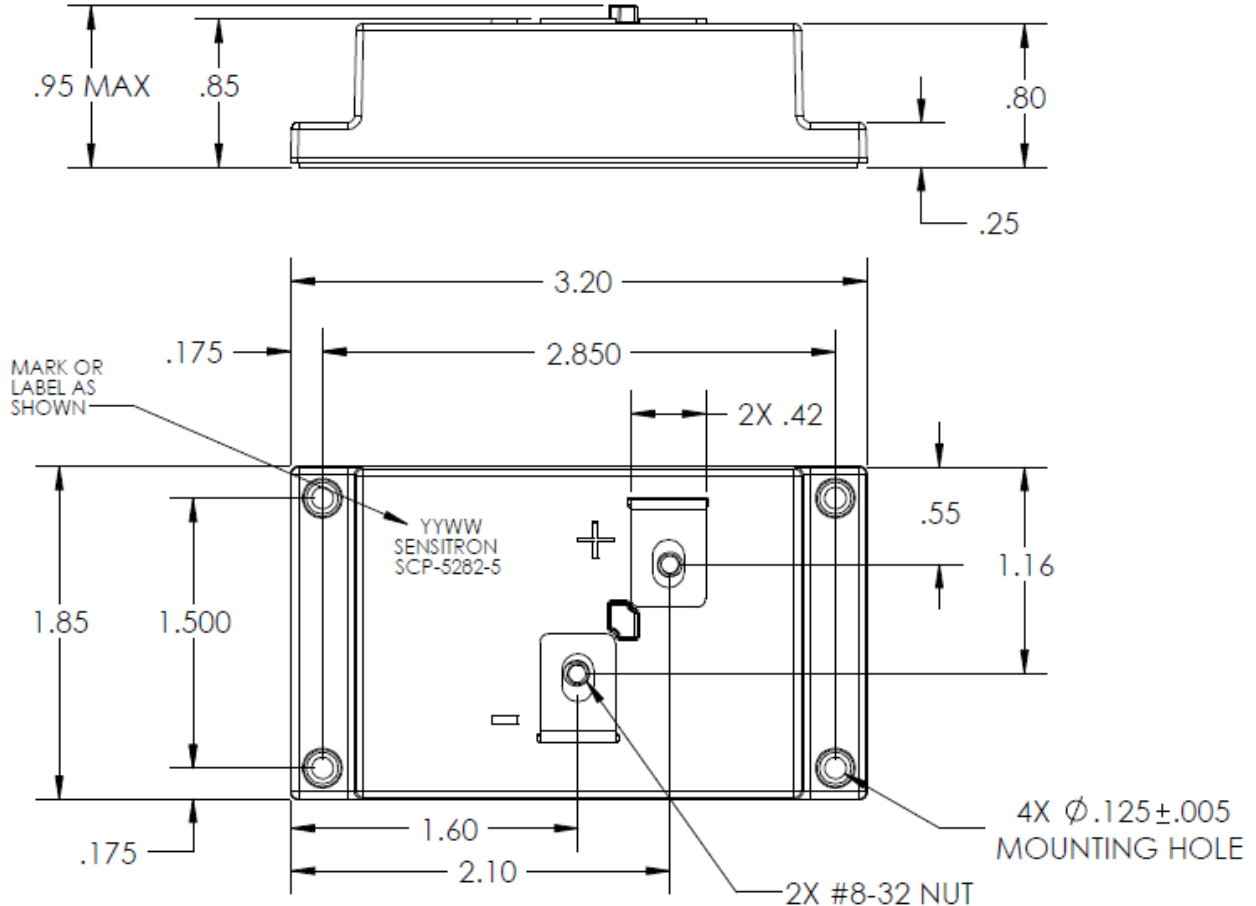
Clamping Current and Voltage Waveforms, Vz max=40.1V, for SCP-5282-5A

SENSITRON SEMICONDUCTOR

SCP-5282-5
SCP-5282-5A

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MECHANICAL OUTLINE



TOLERANCE

.XX = .02

.XXX = .010

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