

TECHNICAL DATA

PART NUMBER: SCP-5282-9, REV C.1

High Pulse Power Mil-STD-1275 SuperClamp, < 34V at 120A

Key Features:

- Clamping below 34V DC for 40V, 100V, and 250V pulses
- High Pulse Power Capability
- Unidirectional
- Designed for safe paralleling
- Precision Clamping



Applications:

- +28V DC systems
- Enables compliance with MIL-STD-1275 requirements for Injected Surges and Spikes

Protection Level:

- MIL-STD-1275 Compliant; 100V Surge withstanding for 100 msec with 0.5-ohm source impedance, clamping below 34V.
- MIL-STD-1275 Compliant; 40V Surge withstanding for 50 msec with 0.02-ohm source impedance.
- Two devices should be connected in parallel, clamping below 34V
- 100% tested for 10-msec single pulse from 1A up to 120A followed by 50-msec, 5 pulses, at 1 sec intervals at 100A
- Capable of Clamping 30A for 500 msec square and decay to zero at 550msec at 2 second intervals when attached to a heat sink
- Two or more devices may be connected in parallel for clamping currents above 120A
- Designed to meet: SAE J1113-11 under following conditions:
 - ✓ 174V, 2-ohm upto 150msec
 - ✓ 174V, 5-ohm upto 350msec

Part Ordering Information:

- SCP-5282-9

SENSITRON

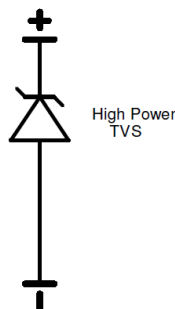
SEMICONDUCTOR

SCP-5282-9

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

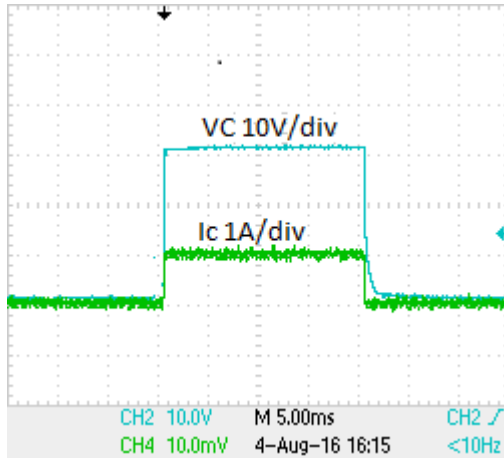
Rating	Condition	Symbol	Min	Typ	Max	Units
Peak Pulse Power Dissipation	1ms	P _{pk}	-		10	KW
Steady State Power Dissipation	-	P	-		150	Watts
Reverse Stand-Off Voltage	-	V _{WM}	-	28	30	Volts
Reverse Leakage. from + to -	@ 28V	I _D	4.0	5.2	10	mA
Reverse Clamping Voltage, from + to -	@ 1A	V _{clamp}	30.20	30.38	30.50	Volts
	@ 10A		30.30	30.58	30.70	
	@ 50A		31.30	31.46	31.70	
	@ 100A		32.20	32.57	32.80	
	@ 120A		32.50	33.00	33.50	
Peak Pulse Current (single 100-msec square pulse)	-	I _{PP}			120	Amps
Typical V _{clamp} vs. Current	@ 0 to 150A		30.35 + 0.0221 * I _{clamp}			V
Forward Clamping Voltage, from - to +	@ 10A	V _C	1	1.8	2.8	V
Operating & Storage Temp.	-	T _{op} & T _{stg}	-55		+ 150	°C



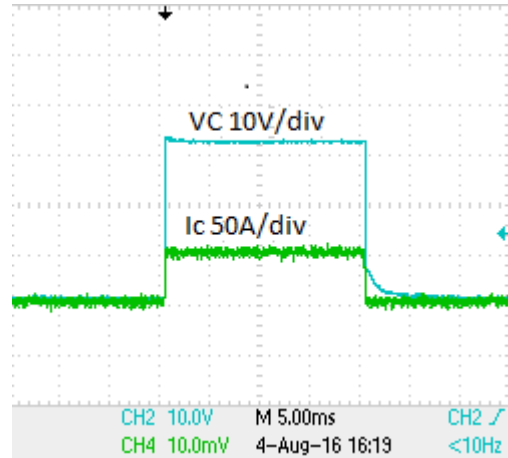
Unidirectional Clamp Part number SCP-5282-9.

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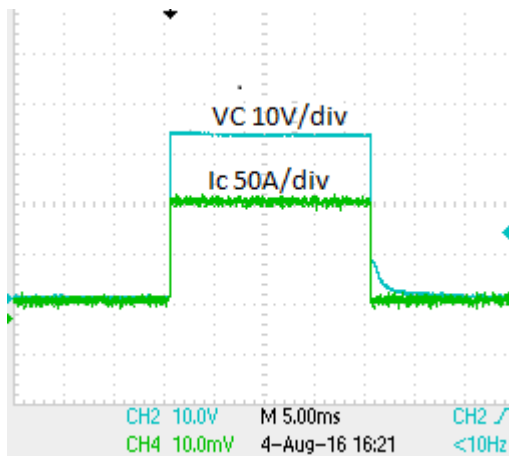
Clamping Performance, Typical



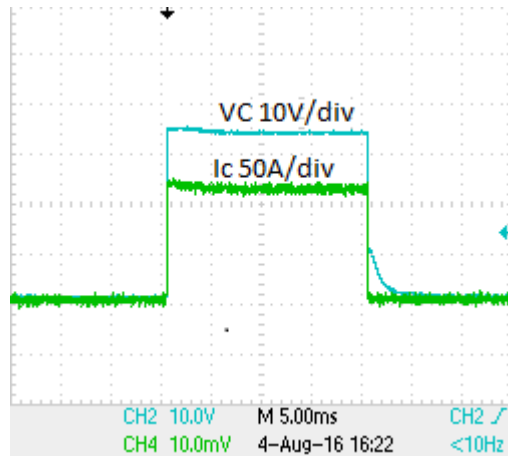
Clamping Current and Voltage Waveforms,
at $I_c=1A$



Clamping Current and Voltage Waveforms,
at $I_c=50A$



Clamping Current and Voltage Waveforms,
at $I_c=100A$



Clamping Current and Voltage Waveforms,
at $I_c=120A$

SENSITRON

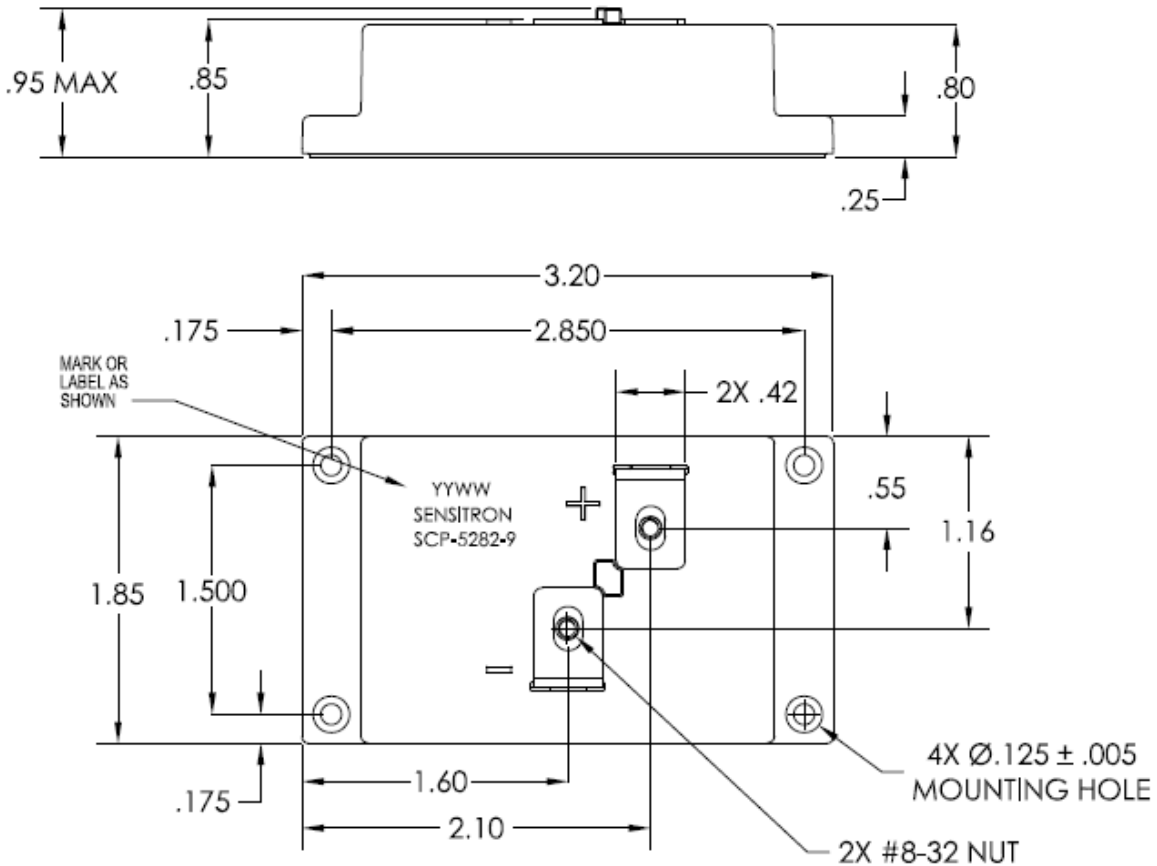
SEMICONDUCTOR

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MECHANICAL OUTLINE



TOLERANCE

.XX = ±.020

.XXX = ±.010

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