

TECHNICAL DATA  
PART NUMBER SAE-5282-12, REV. A

**High Pulse Power SAE Compliant Transorb**



**Application:**

- +12V DC systems
- Uni-Directional, with reverse polarity protection

**Protection Level:**

- SAE J1113-11 compliant; 100V Surge withstanding with 0.5-ohm source impedance, 400 msec pulse as shown in Fig 1.
- 100% tested at 142A peak current, single 400-msec, Load Dump Pulse.

**Key Features:**

- Terminals for easy installation to wires or busbar
- Isolated base plate for mounting to chassis
- Clamping below 32V DC for 100V pulse with 142A Peak current.
- Allows the use of 40V high efficiency FET
- Increase system reliability through eliminating avalanche FET operation
- High Pulse Power Capability

Rating	Condition	Symbol	Min	Max	Units
Peak Pulse Power Dissipation Refer to Fig. 1	@ 25 <sup>0</sup> C, 400ms	P <sub>pk</sub>	-	4.2	KW
Steady State Power Dissipation	@ 25 <sup>0</sup> C	P	-	60	Watts
Reverse Stand-Off Voltage	-	V <sub>WM</sub>	-	18	Volts
Reverse Leakage	@ V <sub>WM</sub>	I <sub>D</sub>	-	250	μA
Breakdown Voltage	@ 50 mA	V <sub>(BR)</sub>	25.1	-	Volts
Clamping Voltage	@ I <sub>PP</sub>	V <sub>C</sub>	-	32	Volts
Peak Pulse Current	-	I <sub>PP</sub>	-	142	Amps
Operating Temperature	-	Top	-55	+ 85	<sup>0</sup> C
Storage Temperature	-	Tstg	-55	+ 150	<sup>0</sup> C

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**SAE J1113-11 Test Pulse Load Dump Waveform and Parameters:**

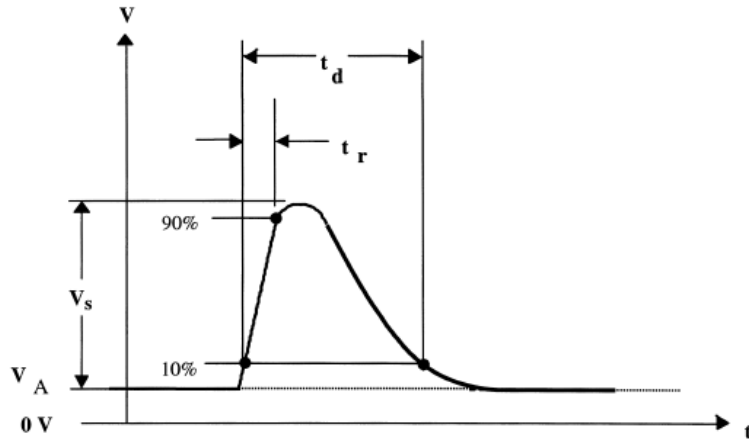
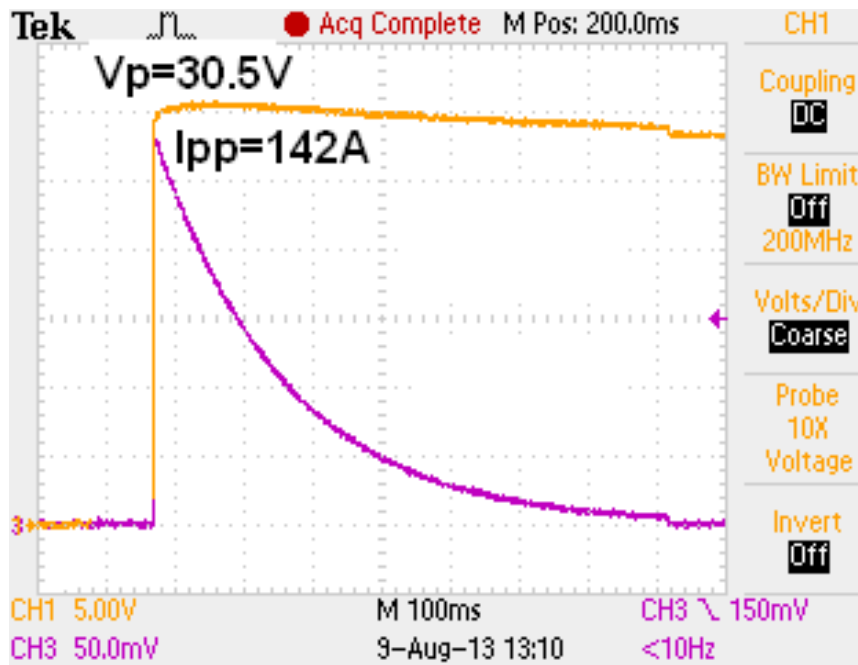


FIGURE 8—TEST PULSE 5A  
LOAD DUMP, SINGLE PULSE

**TABLE 9—TEST PULSE 5A**

Parameters	12 V System
$V_s$	22 V to 87 V
$R_l$	0.5 $\Omega$ to 4 $\Omega$
$t_d$	40 ms to 400 ms
$t_r$	10 ms +0/-5 ms



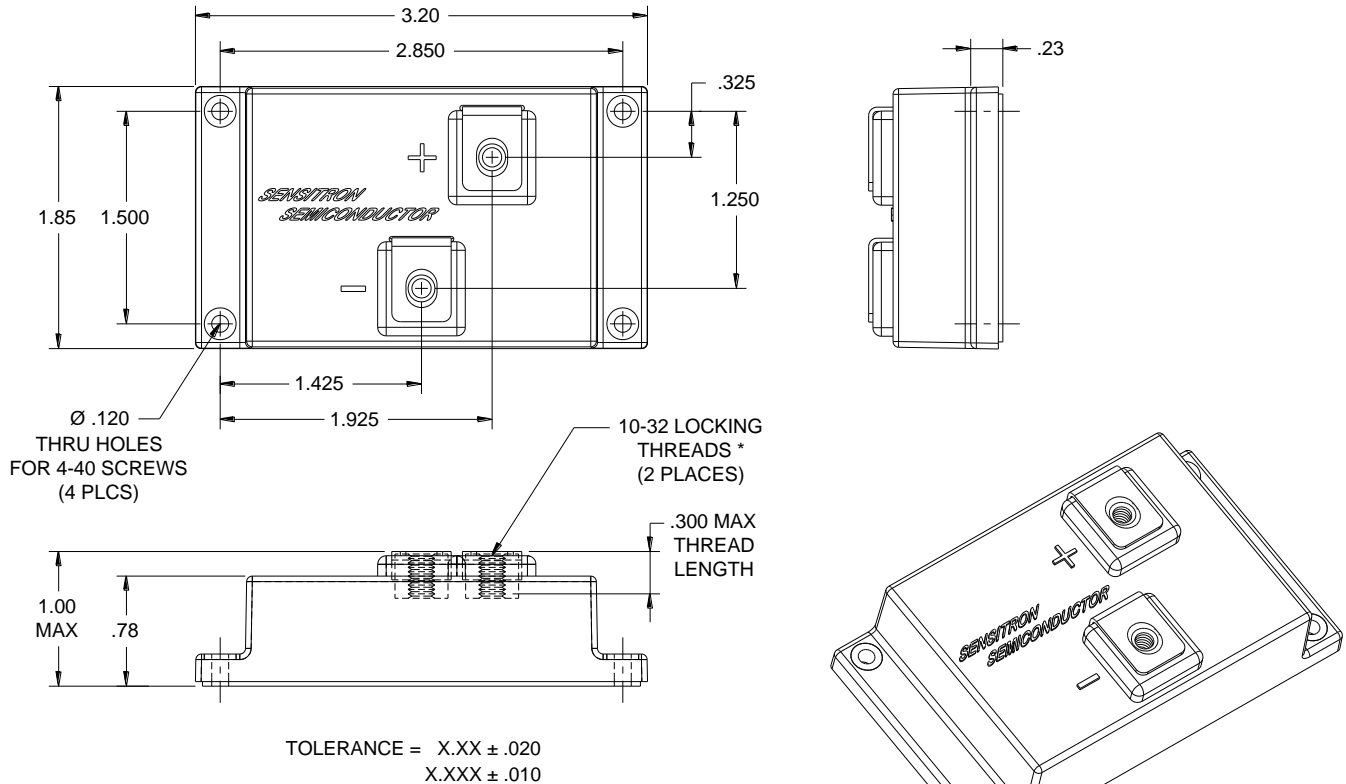
**Fig 1: Actual test waveform, Current and Clamping Voltage.**  
(Current scale is 25A/div)

# SENSITRON SEMICONDUCTOR

SAE-5282-12

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## MECHANICAL OUTLINE



\* NOTE : MAXIMUM LOCKING TORQUE  
OF LOCKING HELICOIL INSERT IS 13 LB-IN

CUSTOMER MUST CONSIDER THIS TO THEIR OVERALL TORQUE  
WHEN SPECIFYING THEIR END APPLICATION TORQUE  
WHICH IS DEPENDENT UPON THEIR BOLT MATERIAL.  
CONTACT SENSITRON SEMICONDUCTOR FOR ANY QUESTIONS.

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