

**TECHNICAL DATA**

PART NUMBER: SCP-5115, REV. -

**Hermetic Half Bridge -- IGBT Module**  
**600V, 800A****Features:**

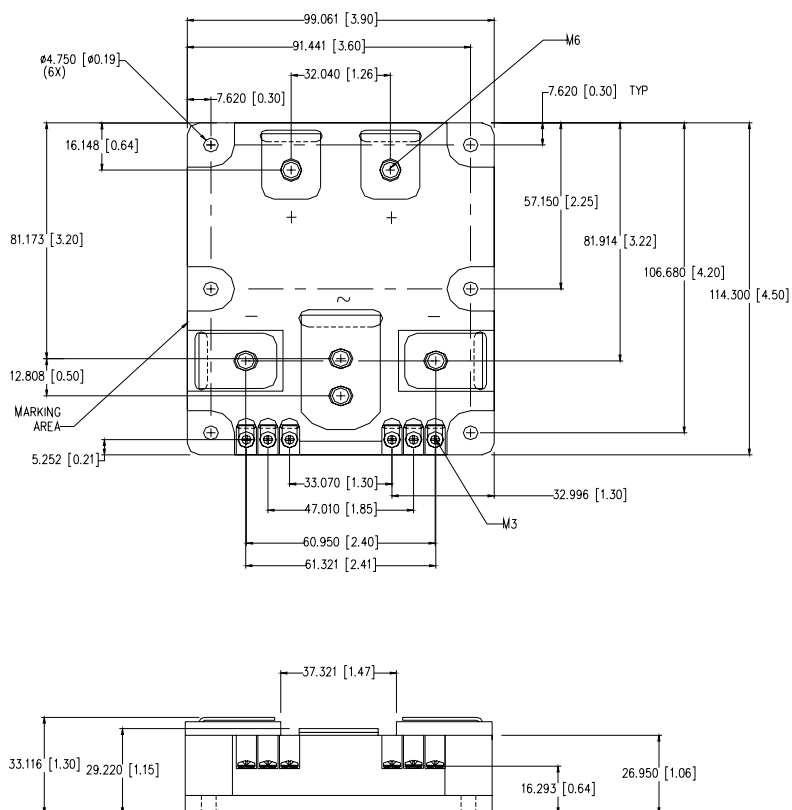
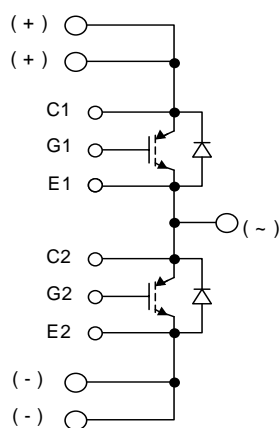
- Hermetic Core Construction
- Increased Creepage and Clearance Distances for High Altitude operation
- Built-in RTD for accurate Temperature sense
- High Frequency Switching
- Operation at Temperature Extremes
- Internal Layout with Minimized Stray Inductances

**Maximum Ratings**All ratings are at  $T_A = 25^\circ\text{C}$  unless otherwise specified.

Symbol	Test Conditions	Value	Units
$V_{ces}$	$V_{ge} = 0V$	600	V
$I_c$	$T_c = 25^\circ\text{C} / 70^\circ\text{C}$	800 / 500	A
$I_{cpulse}$	$T_j = 25^\circ\text{C} / 125^\circ\text{C}$ , 10kHz, D=.05	1400 / 800	A
$V_{GE}$		+ / - 20	V
Hipot	1500Vrms, 50Hz / 60Hz, 1 min.		
$T_j$		-55 to 150	$^\circ\text{C}$
<b>Diode</b>			
$I_F$	$T_c = 25^\circ\text{C} / 70^\circ\text{C}$	800 / 500	A
$I_{FM}$	$T_j = 25^\circ\text{C} / 125^\circ\text{C}$ , 10kHz, D=.05	1400 / 800	A

**Electrical Characteristics**All ratings are at  $T_A = 25^\circ\text{C}$  unless otherwise specified.

Symbol	Test Conditions	Min.	Typ.	Max.	Units
$V_{CE(sat)}$	$V_{ge} = 15V$ , pulsed $t_{on} = 100\mu s$ , $f = 10\text{Hz}$ $I_c = 450A$ $T_c = 25^\circ\text{C}$	-	1.9	2.3	V
$V_{GE(th)}$	$I_c = 4mA$ , $V_{ge} = V_{ce}$	4.5	-	6.0	V
$I_{CES}$	$V_{ce} = 600V$ , $V_{ge} = 0V$	-	-	3.0	mA
$I_{GES}$	$V_{ce} = 0V$ , $V_{ge} = 20V$ $V_{ce} = 0V$ , $V_{ge} = 20V$ , $T_c = 125^\circ\text{C}$	-	-	600 20	nA mA
Ets	Total Switching Energy $V_{ge} = 15V$ $V_{cc} = 300V$ , $I_c = 450A$ ,	-	30	-	mJ
$C_{iss}$	$V_{ce} = 25V$	-	42	-	nF
$C_{oss}$	$V_{ge} = 0V$	-	8.2	-	nF
$C_{rss}$	$f = 1\text{MHz}$	-	7	-	nF
$t_{d(on)}$	$V_{ce} = 300V$	-	120	180	ns
$t_r$	$I_c = 450A$	-	100	220	ns
$t_{d(off)}$	$V_{ge} = + / - 15V$	-	375	750	ns
$t_f$	$R_g = 1.0 \text{ Ohm}$	-	150	320	ns
<b>Diode</b>					
$V_F$	$I_F = 450A$	-	1.4	1.7	V
$t_{RR}$	$I_F = 450A$ ; $V_R = 300V$ , $di/dt = 1000A/\mu s$	-	-	150	ns

**SENSITRON****TECHNICAL DATA****PART NUMBER: SCP-5115, REV. -****MECHANICAL DIMENSIONS: in inches / mm****SCHEMATIC**

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