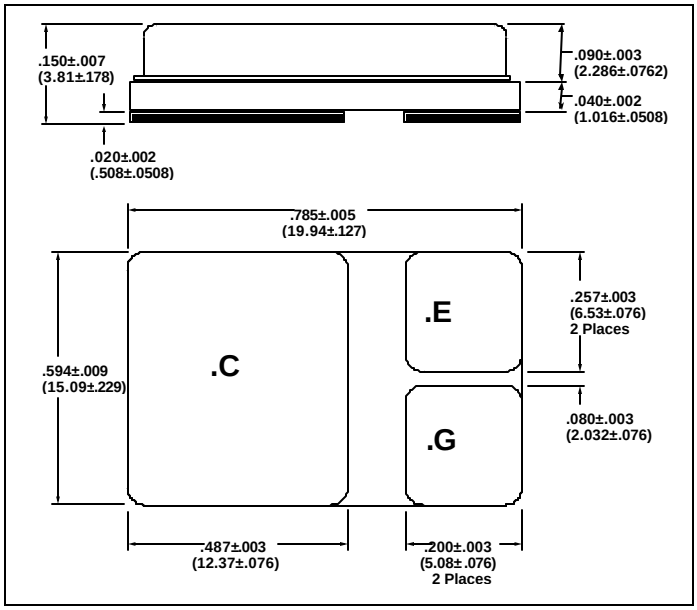
TECHNICAL DATA
DATA SHEET 2049, REV. -
Formerly part number –SHSMG1010

1000 VOLT, 50 AMP IGBT DEVICE
HIGH SPEED, LOW V_{CE} IGBT

ELECTRICAL CHARACTERISTICS ($Tj=25^0C$ UNLESS OTHERWISE SPECIFIED)

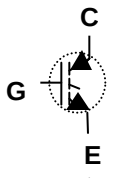
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
IGBT SPECIFICATIONS					
Collector to Emitter Breakdown Voltage I_C = 3 mA, V_{GE} = 0V	BV_{CES}	1000	-	-	V
Continuous Collector Current $T_C = 25\ ^OC$ $T_C = 90\ ^OC$	I_C	-	-	50 25	A
Pulsed Collector Current, 1mS	I_{CM}	-	-	100	A
RBSOA V_{GE} = 15V, V_{CE} = 800V, $T_j = 125\ ^OC$ L = 100 uH, Clamped Inductive Load	I_{CM}	-	-	50	A
Gate to Emitter Voltage	V_{GE}	-	-	+/-20	V
Gate-Emitter Leakage Current, V_{GE} = +/-20V	I_{GES}	-	-	+/- 100	nA
Gate Threshold Voltage, I_C= 0.25 mA, $V_{CE} = V_{GE}$	$V_{GE(TH)}$	2.5	-	5.0	V
Zero Gate Voltage Collector Current V_{CE} = 800 V, V_{GE}=0V T_j=25°C V_{CE} = 800 V, V_{GE}=0V T_j=125°C	I_{CES}	- -	- -	0.25 1.0	mA mA
Collector to Emitter Saturation Voltage, $T_C = 25\ ^OC$ I_C = 25A, V_{GE} = 15V, $T_C = 125\ ^OC$	$V_{CE(SAT)}$	-	3.5 3.8	4.0 4.5	V
Input Capacitance Output Capacitance Reverse Transfer Cap. V_{CE} = 25 V, V_{GE} = 0 V, f = 1 MHz	C_{ies} C_{oes} C_{res}	-	2750 200 50	-	pF
Turn On Delay Time Rise Time Turn Off Delay Time Fall Time Turn off Energy Loss $T_j = 125\ ^OC$, I_C = 25A, V_{GE} = 15V, inductive load, V_{CE} = 800 V, R_G = 33 Ω	$t_{d(on)}$ t_r $t_{d(off)}$ t_f E_{off} E_{on}	- - - - -	100 250 720 800 8.0 3.5	- - - - - -	nsec mJ mJ
Maximum Thermal Resistance	$R_{\theta JC}$	-	-	0.60	°C/W

Mechanical Dimensions: In Inches / mm



SHD-6

Schematic Diagram



TECHNICAL DATA

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