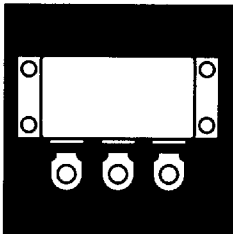


IGBTs IN HERMETIC ISOLATED POWER BLOCK PACKAGES



High Current, High Voltage 600V And 1200V,
Up To 75 Amp IGBTs With FRED Diodes

FEATURES

- Includes Internal FRED Diode
- Rugged Package Design
- Solder Terminals
- Very Low Saturation Voltage
- Fast Switching, Low Drive Current
- Available Screened To MIL-S-19500, TX, TXV And S Levels
- Ceramic Feedthroughs

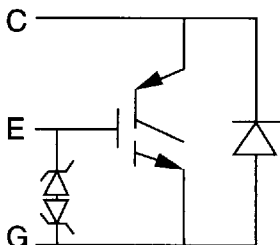
DESCRIPTION

This series of hermetically packaged products feature the latest advanced IGBT technology combined with a package designed specifically for high efficiency, high current applications. They are ideally suited for Hi-Rel requirements where small size, high performance and high reliability are required, and in applications such as switching power supplies, motor controls, inverters, choppers, audio amplifiers and high energy pulse circuits.

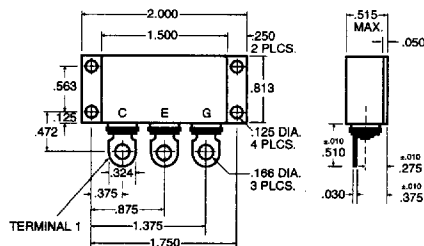
GENERAL CHARACTERISTICS @ 25°C

Part Number	V _{CE} (V)	I _C (A)	V _{CE(sat)}	Type
OM60L60SB	600	75	1.8 Volts	Lo Sat.
OM45L120SB	1200	70	3 Volts	Lo Sat.
OM50F60SB	600	75	2.7 Volts	Hi Speed
OM35F120SB	1200	70	4 Volts	Hi Speed

SCHEMATIC



MECHANICAL OUTLINE



ABSOLUTE MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameters		60L60SB	45L120SB	50F60SB	35F120SB	Units
V_{CES}	Drain Source Voltage	600	1200	600	1200	V
V_{CGR}	Drain Gate Voltage ($R_{GS} = 1.0\text{ M}\Omega$)	600	1200	600	1200	V
$I_C @ T_C = 25^\circ\text{C}$	Continuous Drain Current	75	70	75	70	A
$I_C @ T_C = 90^\circ\text{C}$	Continuous Drain Current	60	45	50	35	A
I_C Pulsed	Pulsed Drain Current ¹	200	180	200	140	A
$P_D @ T_C = 25^\circ\text{C}$	Max. Power Dissipation	250	250	250	250	W
$P_D @ T_C = 100^\circ\text{C}$	Max. Power Dissipation	100	100	100	100	W
Junction-To-Case	Linear Derating Factor	2	2	2	2	W/ $^\circ\text{C}$
Junction-To-Ambient	Linear Derating Factor	.033	.033	.033	.033	W/ $^\circ\text{C}$
T_J, T_{stg}	Operating And Storage Temperature Range	-55 to +150	-55 to +150	-55 to +150	-55 to +150	$^\circ\text{C}$
Lead Temperature (1/16" from case for 10 sec.)		230	230	230	230	$^\circ\text{C}$
R_{thJC}	Thermal Resistance (Junction-To-Case)	0.5	0.5	0.5	0.5	$^\circ\text{C/W}$
R_{thJA}	Thermal Resistance (Junction-To-Ambient)	30	30	30	30	$^\circ\text{C/W}$

Note: 1. Pulse Test: Pulse Width $\leq 300\text{ }\mu\text{sec}$, Duty Cycle $\leq 2\%$.

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Test Condition	Symbol	Part No.	Min.	Max.	Units
Gate Threshold Voltage	$V_{CE} = V_{GE}, I_D = 250\mu\text{A}$	$V_{GE(th)}$	All	2.5	5.0	V
Gate-Emitter Leakage Current	$V_{GE} = \pm 20\text{ V}_{DC}$	I_{GES}	All		± 100	nA
Off State	$V_{CE} = V_{DSS} \times 0.8$	$T_C = 25^\circ\text{C}$	I_{CES}	All	200	μA
Collector-Emitter Leakage	$V_{GS} = 0\text{V}$	$T_C = 125^\circ\text{C}$	I_{CES}	All	1	mA
Collector-Emitter Breakdown Voltage	$V_{GE} = 0\text{V}, I_C = 250\text{ }\mu\text{A}$	V_{CES}	60L60SB	600		V
			45L120SB	1200		
			50F60SB	600		
			35F120SB	1200		
Static Collector-Emitter Voltage	$V_{GE} = 15\text{V}, I_C = I_{C(100)} \times 0.5$	$V_{CE(sat)}$	60L60SB		1.8	
			45L120SB		3.0	
			50F60SB		2.7	
			35F120SB		4.0	

The above data is preliminary.

Please contact factory for additional data and the dynamic and switching characteristics.