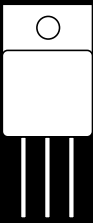


INSULATED GATE BIPOLAR TRANSISTOR
(IGBT) IN A HERMETIC TO-254AA PACKAGE



1000 Volt, 8 Amp, N-Channel IGBT
In A Hermetic Metal Package

FEATURES

- Isolated Hermetic Metal Package
- High Input Impedance
- Low On-Voltage
- High Current Capability
- Fast Turn-Off
- Available Screened To MIL-S-19500, TX, TXV And S Levels
- Low Conductive Losses
- Ceramic Feedthroughs Available

DESCRIPTION

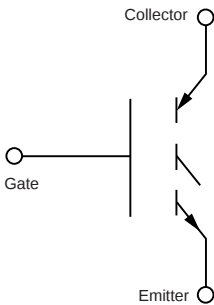
The IGBT power transistor features a high impedance insulated gate and a low on-resistance characteristic of bipolar transistors. These devices are ideally suited for motor drives, UPS converters, power supplies and resonant power converters.

MAXIMUM RATINGS @ 25°C Unless Specified Otherwise

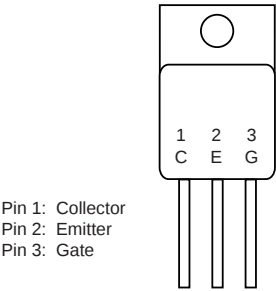
PART NUMBER	I _C (Cont.) @ 90°C, A	V _{(BR)CES} V	V _{CE (sat)} (Typ.) V	T _r (Typ.) ns	q _{JC} °C/W	P _D W	T _J °C
OM6507SA	8	1000	2.8	220	1.70	75	150

3.1

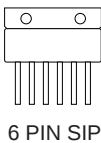
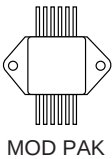
SCHEMATIC



PIN CONNECTION



PACKAGE OPTIONS

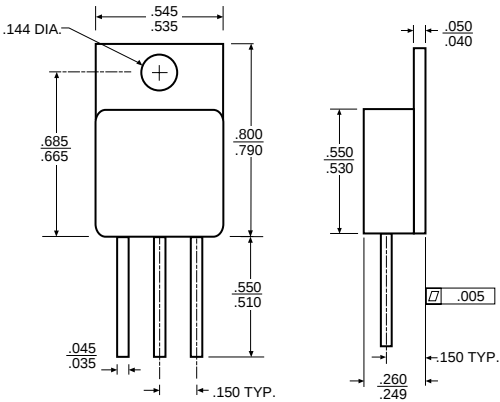


NOTE: IGBTs are also available in Z-Tab, dual and quad pak styles. Please call the factory for more information.

IGBT CHARACTERISTICS

Parameter - OFF		Min.	Typ.	Max.	Units	Test Conditions
$V_{(BR)CES}$	Collector Emitter Breakdown Voltage	1000			V	$V_{CE} = 0$ $I_C = 2\text{ mA}$
I_{CES}	Zero Gate Voltage Drain Current			0.25	mA	$V_{CE} = \text{Max. Rat.}, V_{GE} = 0$
				1.0	mA	$V_{CE} = 0.8\text{ Max. Rat.}, V_{GE} = 0$ $T_C = 125^\circ\text{C}$
I_{GES}	Gate Emitter Leakage Current			± 100	nA	$V_{GE} = \pm 20\text{ V}$ $V_{CE} = 0\text{ V}$
Parameter - ON						
$V_{GE(th)}$	Gate Threshold Voltage	2.0		4.0	V	$V_{CE} = V_{GE}, I_C = 2\text{ mA}$
$V_{CE(sat)}$	Collector Emitter Saturation Voltage		3.4		V	$V_{GE} = 15\text{ V}, I_C = 8\text{ A}$ $T_C = 25^\circ\text{C}$
$V_{CE(sat)}$	Collector Emitter Saturation Voltage		2.8	3.0	V	$V_{GE} = 15\text{ V}, I_C = 8\text{ A}$ $T_C = 100^\circ\text{C}$
Dynamic						
g_{fs}	Forward Transductance	3.0			S	$V_{CE} = 25\text{ V}, I_C = 8\text{ A}$
C_{ies}	Input Capacitance			1500	pF	$V_{GE} = 0$
C_{oes}	Output Capacitance			150	pF	$V_{CE} = 25\text{ V}$
C_{res}	Reverse Transfer Capacitance			50	pF	$f = 1\text{ mHz}$
Switching-Resistive Load						
$T_{d(on)}$	Turn-On Time		60		nS	$V_{CC} = 800\text{ V}, I_C = 8\text{ A}$
t_r	Rise Time		220		nS	$V_{GE} = 15\text{ V}, R_g = 47$
Switching-Inductive Load						
$t_{r(Volt)}$	Off Voltage Rise Time		.8		μS	$V_{CEdamp} = 800\text{ V}, I_C = 8\text{ A}$
t_f	Fall Time		.9		μS	$V_{GE} = 15\text{ V}, R_g = 47$
t_{cross}	Cross-Over Time		2.2		μS	$L = 0.1\text{ mH}, T_J = 100^\circ\text{C}$
E_{off}	Turn-Off Losses		6.0		mJ	

MECHANICAL OUTLINE



TO-254AA