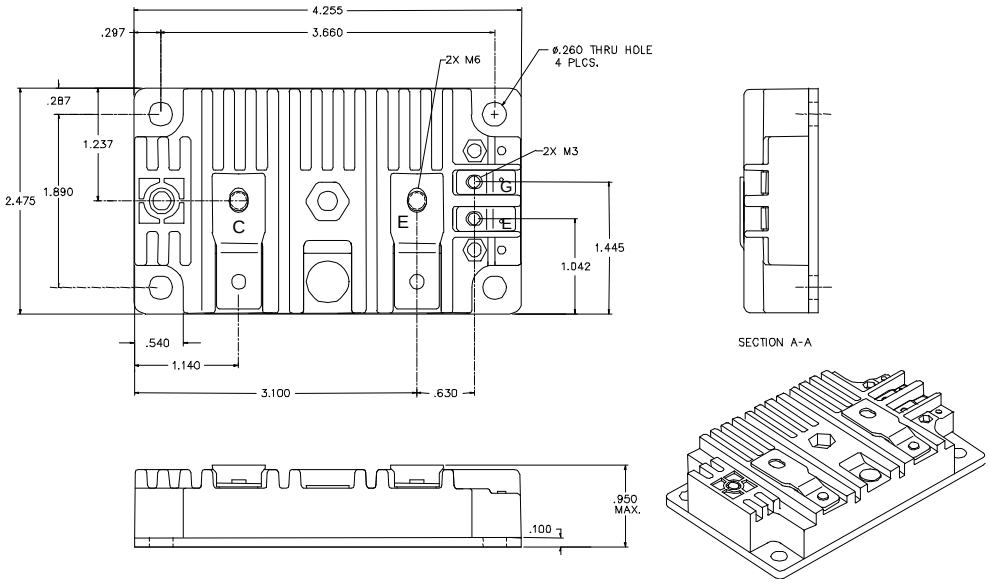
Omnirel 205 Crawford St. Leominster, MA 01453 (978)534-5776 Fax(978)537-4246, www.omnirel.com

ELECTRICAL CHARACTERISTICS: OM300F120CMS (Tc= 25°C unless otherwise specified)

Characteristic		Symbol	Min.	Typ.	Max	Unit
OFF CHARACTERISTICS						
Collector Emitter Breakdown Voltage, V_{CE}=0V		V_{CES}	1200			V
Zero Gate Voltage Drain Current, V_{GE}=0, V_{CE} =1200V		I_{CES}		25		µA
Gate Emitter Leakage Current, V_{GE}=+/-15V, V_{CE}=0V		I_{GES}			2	µA
ON CHARACTERISTICS						
Gate Threshold Voltage, V_{CE}=V_{GE}, I_C=6mA		$V_{GE(TH)}$	4.5		6.5	V
Collector Emitter Saturation Voltage, V_{GE}=15V, IC=300A		$V_{CE(SAT)}$		2.5	3.0	V
DYNAMIC CHARACTERISTICS						
Fwd. Transconductance	V_{CE}=5V, I_C=300A	gfs		70		S
Input Capacitance	V_{GE}=0	Cies		30		nF
Output Capacitance	V_{CE}=25V	Coes		10		nF
Rev. Transfer Capacitance	f=1.0MHz	Cres		5		nF
SWITCHING INDUCTIVE LOAD CHARACTERISTICS						
Turn-On Delay Time	V_{CC}= 600V, I_C=300A	t(on)		200		nS
Rise Time		tr		200		nS
Turn-on Losses		Eon				mJ
	V_{GE}=+15/-10V, R_G=4.7Ω					
Turn-off Delay Time	L=100µH,Tj=125°C	td(off)		720		nS
Fall Time		tf		160		nS
Turn-off Losses		Eoff				mJ
DIODE CHARACTERISTICS						
Maximum Forward Voltage	I_F=300A, Tj=25°C	V_F		2.0	2.8	V
	Tj=125°C					
Reverse Recovery Characteristics	V_R=600V, Tj=25°C	Qrr		15		µC
	I_F=300A, Tj=125°C			28		
	dI/dt=-1500A/µS Tj=25°C	Irr		40		A
	Tj=125°C			70		
	Tj=25°C	trr		180		nS
	Tj=125°C			220		
THERMAL AND MECHANICAL CHARACTERISTICS						
Thermal Resistance, Junction to Case (Per IGBT)		R_{thJC}			0.055	°C/W
Thermal Resistance, Junction to Case (Per Diode)		R_{thJC}			0.11	°C/W
Maximum Junction Temperature		T_{jMAX}			150	°C
Isolation Voltage		Vis_{RMS}			2500	V
Screw Torque	Mounting	-		15	20	in-lb
Screw Torque (M6)	Terminals	-		10	15	in-lb
Screw Torque (M3)	Terminals	-		6	8	in-lb
Module Weight		-		350		Grams

OM300F120CMS

MECHANICAL OUTLINE



EQUIVALENT CIRCUIT