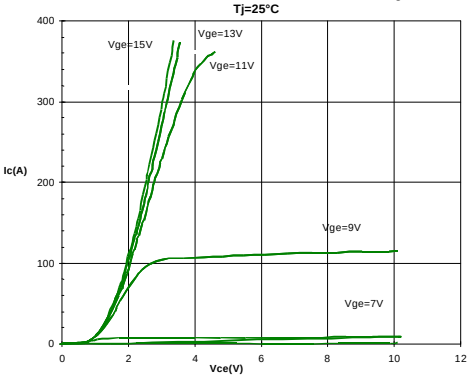
Omnirel 205 Crawford St. Leominster, MA 01453 (978)534-5776 Fax(978)537-4246,www.omnirel.com

ELECTRICAL CHARACTERISTICS: OM200F120CMC (Tc= 25°C unless otherwise specified)

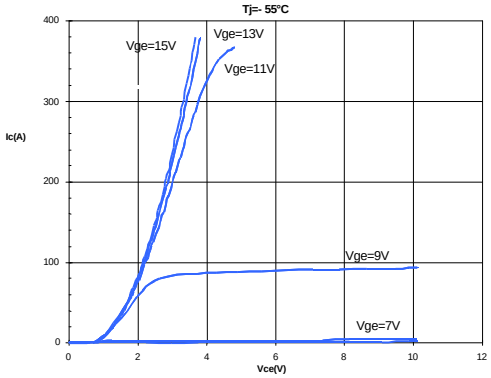
Characteristic		Symbol	Min.	Typ.	Max	Unit
OFF CHARACTERISTICS						
Collector Emitter Breakdown Voltage, V_{CE}=0V		V_{CES}	1200			V
Zero Gate Voltage Drain Current, V_{GE}=0, V_{CE} =1200V		I_{CES}		10		μA
Gate Emitter Leakage Current, V_{GE}=+/-15V, V_{CE}=0V		I_{GES}		100		μA
ON CHARACTERISTICS						
Gate Threshold Voltage, V_{CE}=V_{GE}, I_C=6mA		$V_{GE(TH)}$	4.5	5.5	6.5	V
Collector Emitter Saturation Voltage, V_{GE}=15V, Ic=200A		$V_{CE(SAT)}$		2.5	3.0	V
DYNAMIC CHARACTERISTICS						
Fwd. Transconductance	V_{CE}=5V, I_C=200A	gfs	50	69		S
Input Capacitance	V_{GE}=0	Cies		17		nF
Output Capacitance	V_{CE}=25V	Coes		5		nF
Rev. Transfer Capacitance	f=1.0MHz	Cres		2		nF
SWITCHING INDUCTIVE LOAD CHARACTERISTICS						
Turn-On Delay Time	V_{CC}= 600V, I_C=200A	t(on)		175	400	nS
Rise Time		tr		140		nS
Turn-on Losses		Eon		21		mJ
	V_{GE}=+15/-10V, R_G=5.1Ω					
Turn-off Delay Time	L=100μH	td(off)		720	850	nS
Fall Time		tf		120		nS
Turn-off Losses		Eoff		14		mJ
DIODE CHARACTERISTICS						
Maximum Forward Voltage	I_F=200A, Tj=25°C	V_F		2.0	2.8	V
	Tj=125°C			1.8		
Reverse Recovery Characteristics	V_R=600V, Tj=25°C	Qrr		10		μC
	I_F=200A, Tj=125°C			15		
	dI/dt=-1500A/μS Tj=25°C	Irr		75		A
	Tj=125°C			95		
	Tj=25°C	trr		100		nS
	Tj=125°C			150		
THERMAL AND MECHANICAL CHARACTERISTICS						
Thermal Resistance, Junction to Case (Per IGBT)		R_{thJC}			0.07	°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	12	in-lb
Screw Torque (M3)	Terminals	-		6	8	in-lb
Module Weight		-		320		Grams

OM200F120CMC

IGBT Collector Current vs. Collector-emitter Voltage
Tj=25°C

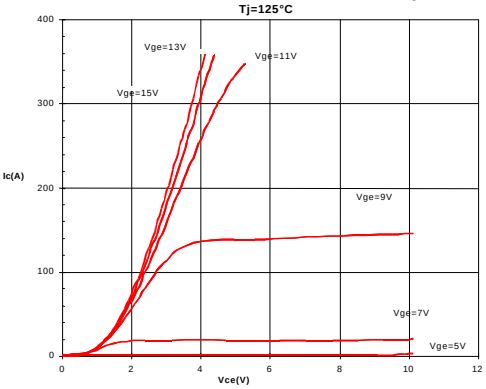


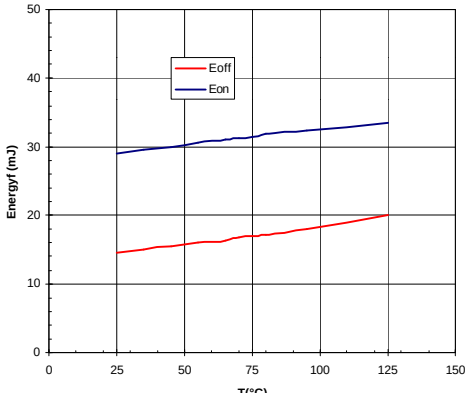
IGBT Collector Current vs. Collector-emitter Voltage
Tj=- 55°C



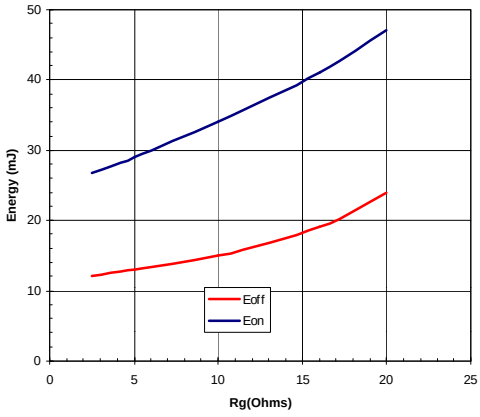
Switching energy vs Temperature
Vce =600V,Ic=200A

IGBT Collector Current vs. Collector-emitter Voltage
Tj=125°C

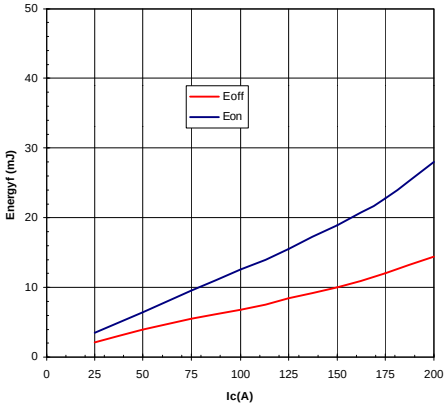




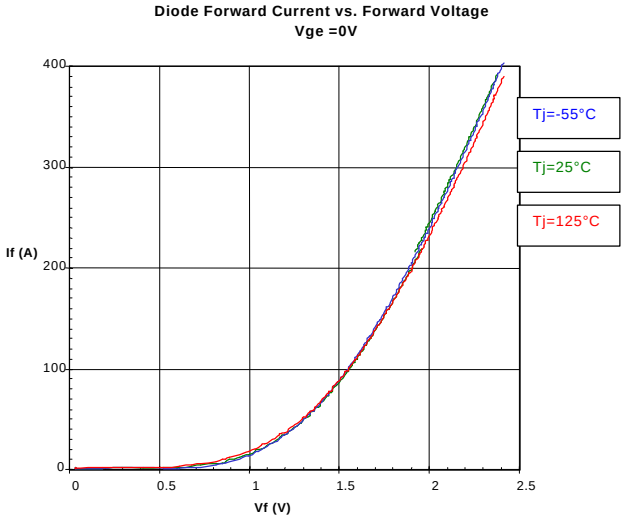
Switching energy vs Gate Resistor(Rg)
Vce =600V,Ic=200A, Tj=125°C



Switching energy vs Collector current (Ic)
Vce =600V,Tj=25°C

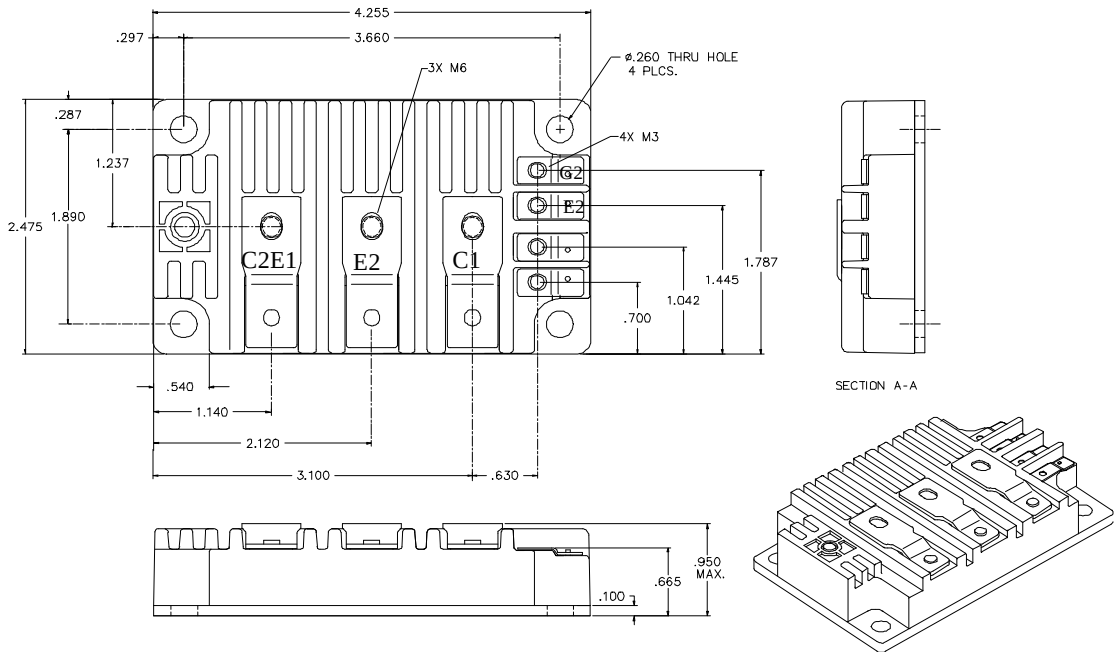


OM200F120CMC



OM200F120CMC

MECHANICAL OUTLINE



EQUIVALENT CIRCUIT