

**ELECTRICAL CHARACTERISTICS: OM200F120CMD (Tc= 25°C unless otherwise specified)**

Characteristic	Symbol	Min.	Typ.	Max	Unit
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**OFF CHARACTERISTICS**

Collector Emitter Breakdown Voltage, VCE=0V	V <sub>CES</sub>	1200			V
Zero Gate Voltage Drain Current, V <sub>GE</sub> =0, V <sub>CE</sub> =1200V	I <sub>CES</sub>		10		μA
Gate Emitter Leakage Current, V <sub>GE</sub> =+/-15V, V <sub>CE</sub> =0V	I <sub>GES</sub>		100		μA

**ON CHARACTERISTICS**

Gate Threshold Voltage, V <sub>CE</sub> =V <sub>GE</sub> , I <sub>C</sub> =6mA	V <sub>GE(TH)</sub>	4.5	5.5	6.5	V
Collector Emitter Saturation Voltage, V <sub>GE</sub> =15V, I <sub>C</sub> =200A	V <sub>CE(SAT)</sub>		2.5	3.0	V

**DYNAMIC CHARACTERISTICS**

Fwd. Transconductance	V <sub>CE</sub> =5V, I <sub>C</sub> =200A	g <sub>fs</sub>	50	69		S
Input Capacitance	V <sub>GE</sub> =0	C <sub>ies</sub>		17		nF
Output Capacitance	V <sub>CE</sub> =25V	C <sub>oes</sub>		5		nF
Rev. Transfer Capacitance	f=1.0MHz	C <sub>res</sub>		2		nF

**SWITCHING INDUCTIVE LOAD CHARACTERISTICS**

Turn-On Delay Time	V <sub>CC</sub> = 600V, I <sub>C</sub> =200A  V <sub>GE</sub> =+15/-10V, R <sub>G</sub> =5.1Ω L=100μH	t(on)		175	400	nS
Rise Time		t <sub>r</sub>		140		nS
Turn-on Losses		E <sub>on</sub>		28		mJ
Turn-off Delay Time		t <sub>d(off)</sub>		720	850	nS
Fall Time		t <sub>f</sub>		120		nS
Turn-off Losses		E <sub>off</sub>		15		mJ

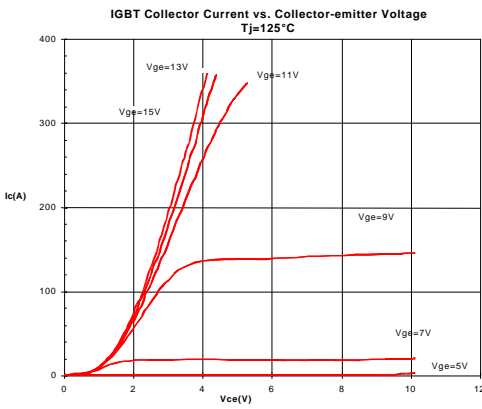
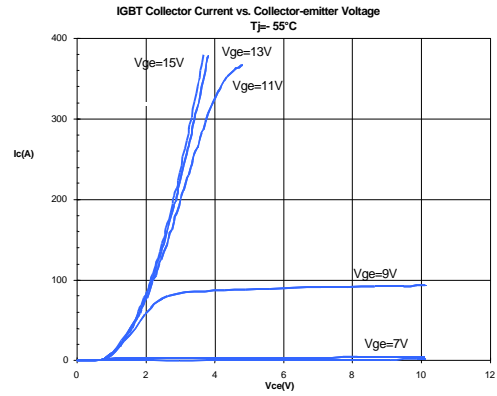
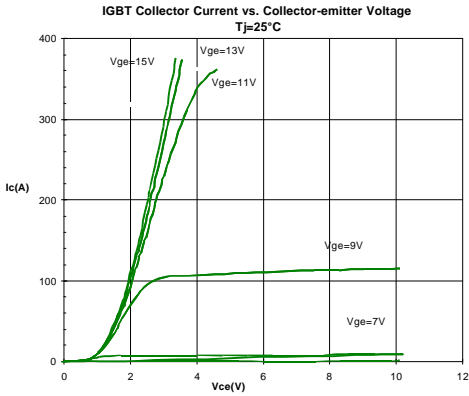
**DIODE CHARACTERISTICS**

Maximum Forward Voltage	I <sub>F</sub> =200A, T <sub>j</sub> =25°C T <sub>j</sub> =125°C	V <sub>F</sub>		2.0	2.8	V
Reverse Recovery Characteristics	V <sub>R</sub> =600V, T <sub>j</sub> =25°C I <sub>F</sub> =200A, T <sub>j</sub> =125°C di/dt=-1500A/μS T <sub>j</sub> =25°C T <sub>j</sub> =125°C T <sub>j</sub> =25°C T <sub>j</sub> =125°C	Q <sub>rr</sub>		10		μC
				15		
		I <sub>rr</sub>		75		A
				95		
		t <sub>rr</sub>		100		nS
			150			

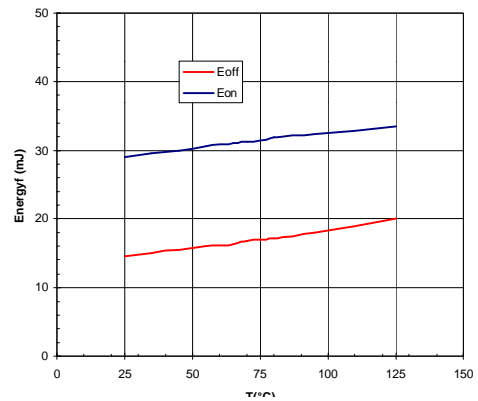
**THERMAL AND MECHANICAL CHARACTERISTICS**

Thermal Resistance, Junction to Case (Per IGBT)	R <sub>thJC</sub>			0.07	°C/W	
Thermal Resistance, Junction to Case (Per Diode)	R <sub>thJC</sub>			0.12	°C/W	
Maximum Junction Temperature	T <sub>jMAX</sub>			150	°C	
Isolation Voltage	V <sub>iSRMS</sub>			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

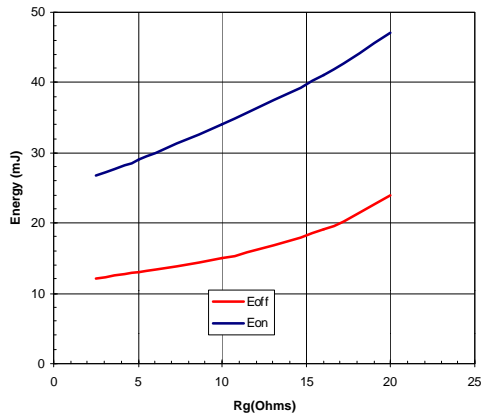
### OM200F120CMD



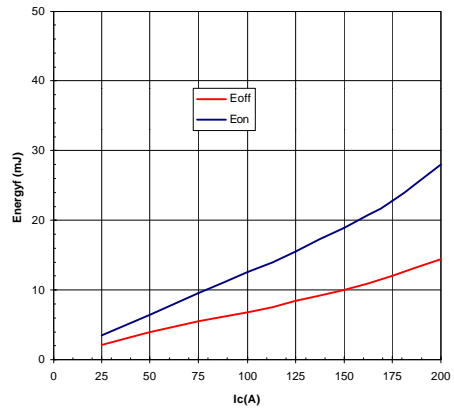
**Switching energy vs Temperature**  
V<sub>ce</sub> =600V, I<sub>c</sub>=200A



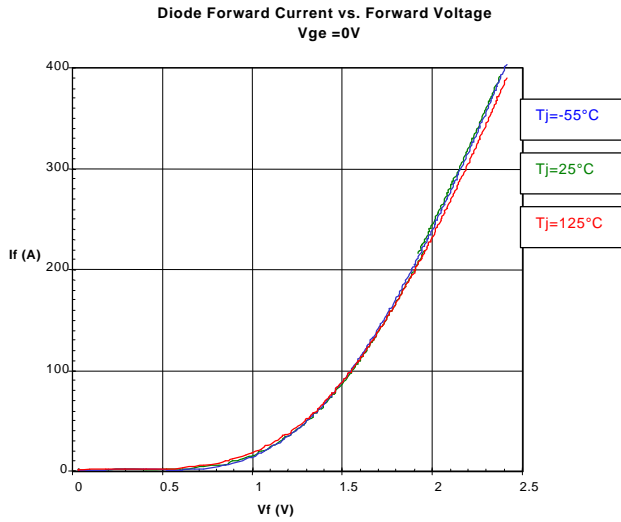
**Switching energy vs Gate Resistor(R<sub>g</sub>)**  
V<sub>ce</sub> =600V, I<sub>c</sub>=200A, T<sub>j</sub>=125°C



**Switching energy vs Collector current (I<sub>c</sub>)**  
V<sub>ce</sub> =600V, T<sub>j</sub>=25°C

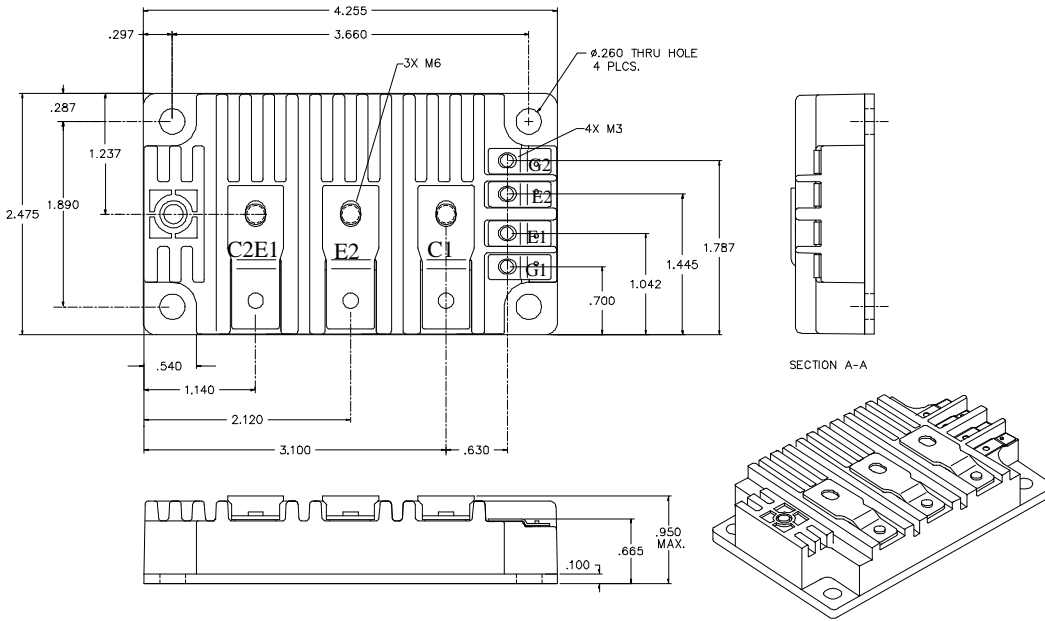


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**MECHANICAL OUTLINE**



**EQUIVALENT CIRCUIT**

