



**ELECTRICAL CHARACTERISTICS: OM300L120CMS (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>		25		μA
Gate Emitter Leakage Current, V <sub>GE</sub> =+/-15V, V <sub>CE</sub> =0V	I <sub>GES</sub>			2	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		6.5	V
Collector Emitter Saturation Voltage, V <sub>GE</sub> =15V, I <sub>C</sub> =300A	V <sub>CE(SAT)</sub>			2.6	V

**DYNAMIC CHARACTERISTICS**

Fwd. Transconductance	V <sub>CE</sub> =5V, I <sub>C</sub> =300A	g <sub>fs</sub>		70	S
Input Capacitance	V <sub>GE</sub> =0	C <sub>ies</sub>		30	nF
Output Capacitance	V <sub>CE</sub> =25V	C <sub>oes</sub>		10	nF
Rev. Transfer Capacitance	f=1.0MHz	C <sub>res</sub>		6	nF

**SWITCHING INDUCTIVE LOAD CHARACTERISTICS**

Turn-On Delay Time	V <sub>CC</sub> = 600V, I <sub>C</sub> =300A  V <sub>GE</sub> =+15/-10V, R <sub>G</sub> =4.7Ω L=100μH, T <sub>j</sub> =125°C	t(on)		500	nS
Rise Time		t <sub>r</sub>		400	nS
Turn-on Losses		E <sub>on</sub>			mJ
Turn-off Delay Time		t <sub>d(off)</sub>		750	nS
Fall Time		t <sub>f</sub>		350	nS
Turn-off Losses		E <sub>off</sub>			mJ

**DIODE CHARACTERISTICS**

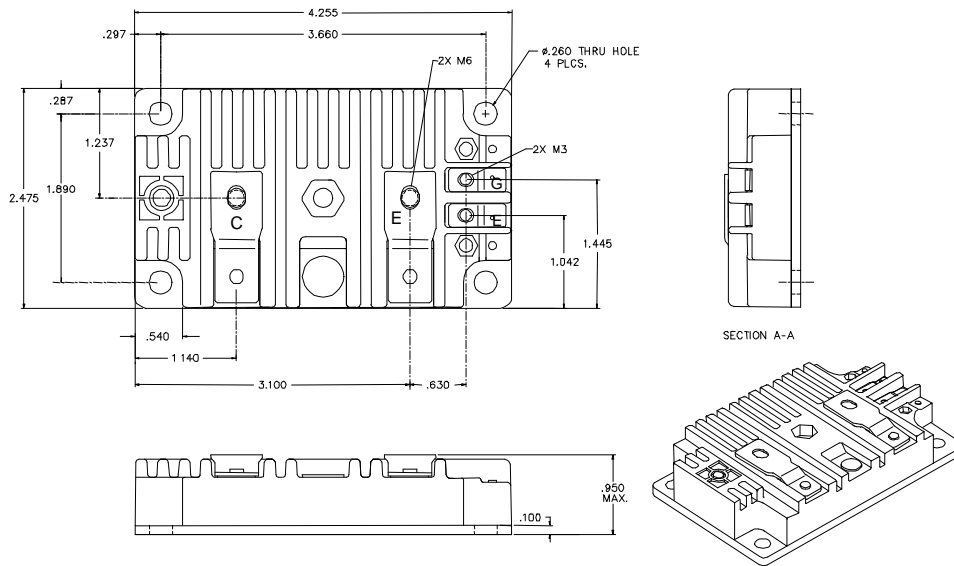
Maximum Forward Voltage	I <sub>F</sub> =300A, T <sub>j</sub> =25°C T <sub>j</sub> =125°C	V <sub>F</sub>		2.0	2.8	V	
Reverse Recovery Characteristics	V <sub>R</sub> =600V, T <sub>j</sub> =25°C I <sub>F</sub> =300A, T <sub>j</sub> =125°C di/dt=-1500A/μS T <sub>j</sub> =25°C T <sub>j</sub> =125°C T <sub>j</sub> =25°C T <sub>j</sub> =125°C	Q <sub>rr</sub>		15		μC	
		I <sub>rr</sub>		50		A	
		t <sub>rr</sub>		70			
				180			nS
				220			

**THERMAL AND MECHANICAL CHARACTERISTICS**

Thermal Resistance, Junction to Case (Per IGBT)	R <sub>thJC</sub>			0.055	°C/W	
Thermal Resistance, Junction to Case (Per Diode)	R <sub>thJC</sub>			0.11	°C/W	
Maximum Junction Temperature	T <sub>jMAX</sub>			150	°C	
Isolation Voltage	V <sub>IS_RMS</sub>			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

**OM300L120CMS**

**MECHANICAL OUTLINE**



**EQUIVALENT CIRCUIT**

