Technical Data ***Green Products***
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161CMQ…SERIES SCHOTTKY RECTIFIER

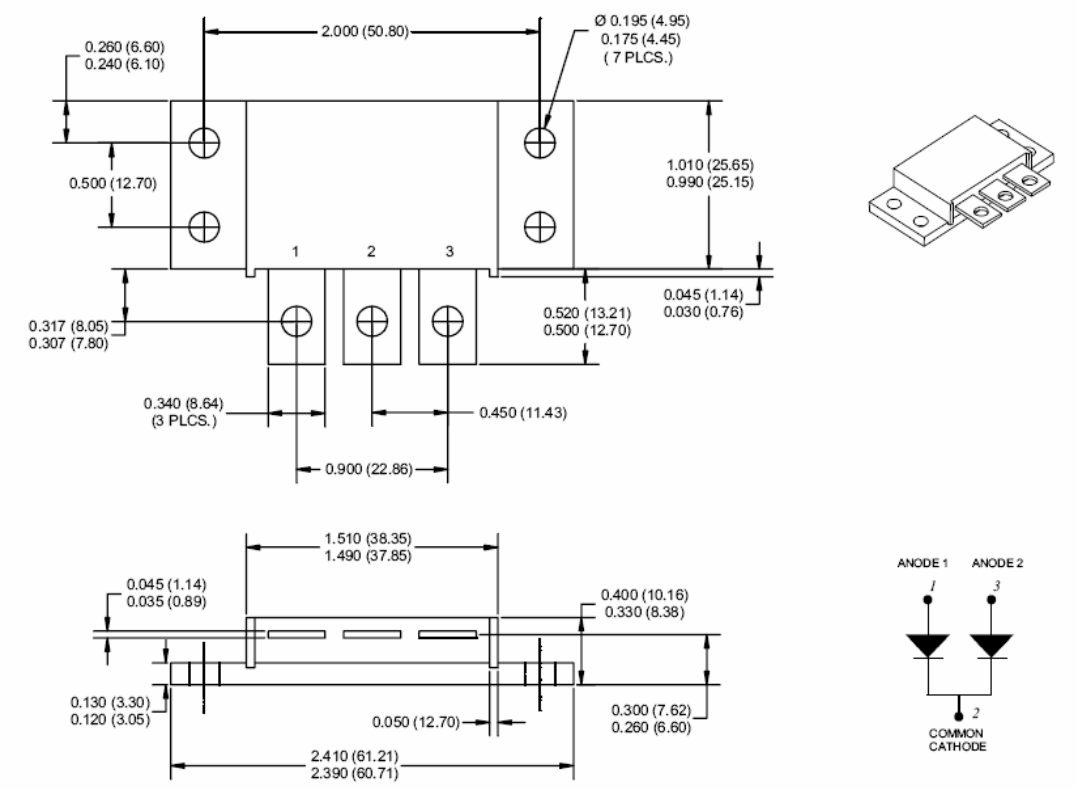
Applications:

• Switching power supply • Converters • Free-Wheeling diodes • Reverse battery protection

Features:

- **150 °C T_J operation**
- **Isolated heatsink**
- **Low profile, high current package**
- **Center tap module**
- **Low forward voltage drop**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**
- **This is a Pb − Free Device**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**

Mechanical Dimensions: In Inches/mm



TO-249AA

MARKING, MOLDING RESIN
Marking for 161CMQ035/040/045, 1st row SS YYWWL, 2nd row 161CMQ035/040/045, 3rd row 1 2 3 (Pin)
Where YY is the manufacture year
WW is the manufacture week code
L is the wafer's Lot Number
Molding resin
Epoxy resin UL:94V-0

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.		Units
Peak Inverse Voltage	V_{RWM}	-	35	161CMQ035	V
			40	161CMQ040	
			45	161CMQ045	
Max. Average Forward*	$I_{F(AV)}$	50% duty cycle @T_C = 101°C, rectangular wave form	160		A
Max. Peak One Cycle Non-Repetitive Surge Current (peg leg)	I_{FSM}	8.3 ms, half Sine pulse	1080		A
Non-Repetitive Avalanche Energy(peg leg)	E_{AS}	T_J=25℃,I_{AS}=16A,L=0.84mH	108		mJ
Repetitive Avalanche Current(peg leg)	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. V_A=1.5×V_R typical	16		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 80A, Pulse, T_J = 25 °C @ 160A, Pulse, T_J = 25 °C	0.71 0.88	V
	V_{F2}	@ 80A, Pulse, T_J = 125 °C @ 160A, Pulse, T_J = 125 °C	0.63 0.79	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	5	mA
	I_{R2}	@V_R = rated V_R ,T_J = 125 °C	45	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	2600	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +175	°C
Max. Storage Temperature	T_{stg}	-	-55 to +175	°C
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	1.0	°C/W
Maximum Thermal Resistance Junction to Case (per package)	$R_{\theta JC}$	DC operation	0.50	°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.10	°C/W
Mounting Torque	T_M	-	40(min) 58(max)	Kg-cm
Approximate Weight	wt	-	58	g
Case Style	TO-249AA			

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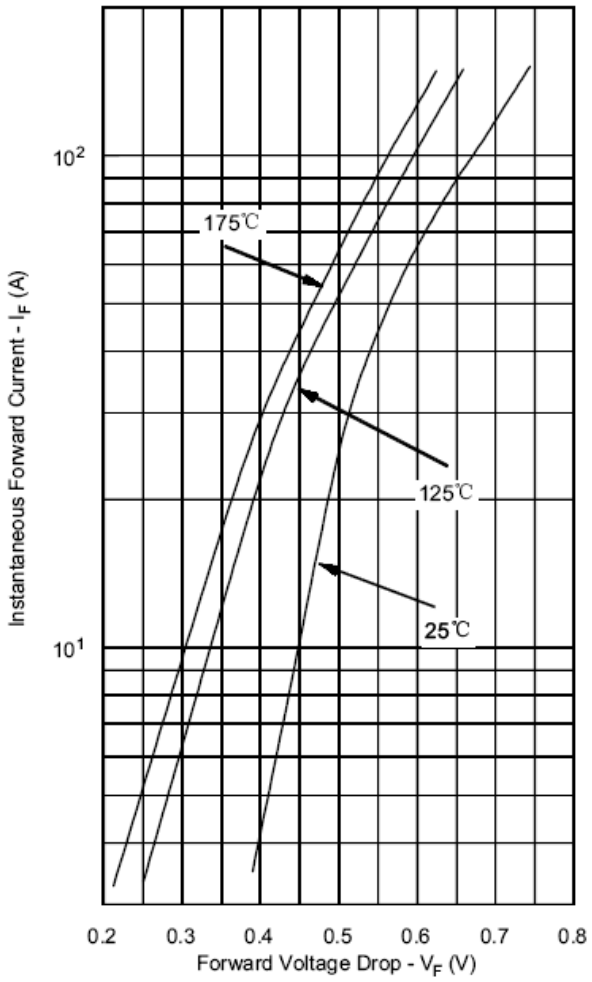
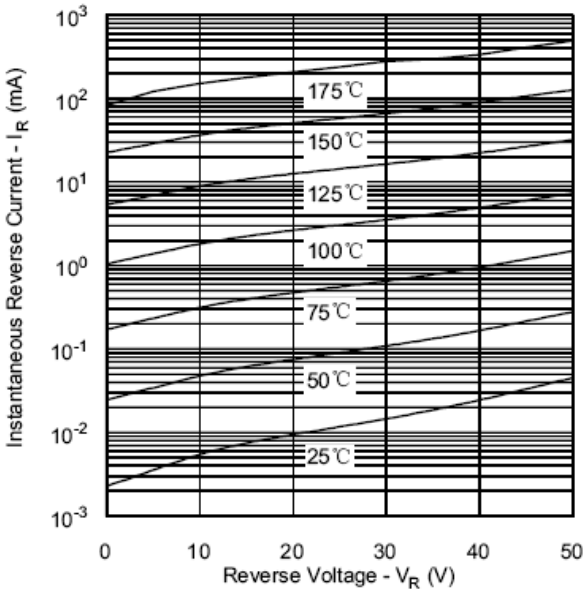
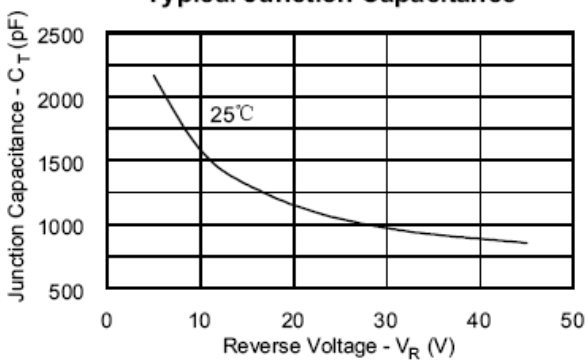
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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