Technical Data ***Green Products***
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153CMQ…SERIES-G SCHOTTKY RECTIFIER

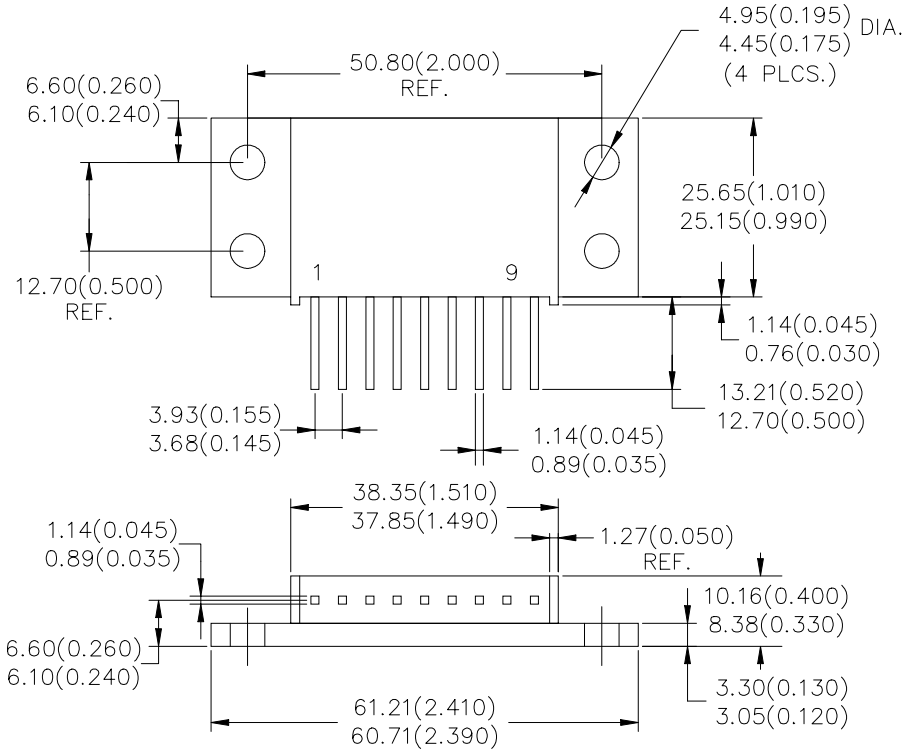
Applications:

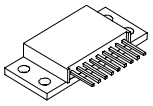
• Switching power supply • Free-Wheeling diodes • Reverse battery protection • Converters

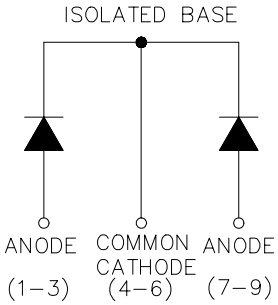
Features:

- **175°C T_J operation**
- **Isolated heatsink**
- **Multiple leads per terminal for high frequency, high current PC board mounting**
- **Low profile, high current package**
- **Center tap module**
- **High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance**
- **Low forward voltage drop**
- **High frequency operation**
- **Guard ring for enhanced ruggedness and long term reliability**
- **Green Products in Compliance with the RoHS Directive**

Mechanical Dimensions: In Inches / mm







TO-249(9 pin)

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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	80 153CMQ080-G 100 153CMQ100-G	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @T_C = 90 °C, rectangular wave form	150	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	860	A
Non-Repetitive Avalanche Energy (per leg)	E_{AS}	T_J = 25 °C, I_{AS} = 1 A, L = 30 mH	15	mJ
Repetitive Avalanche Current (per leg)	I_{AR}	Current decaying linearly to zero in 1 µsec Frequency limited by T_J max. V_A = 1.5 x V_R typical	1	A

Electrical Characteristics:

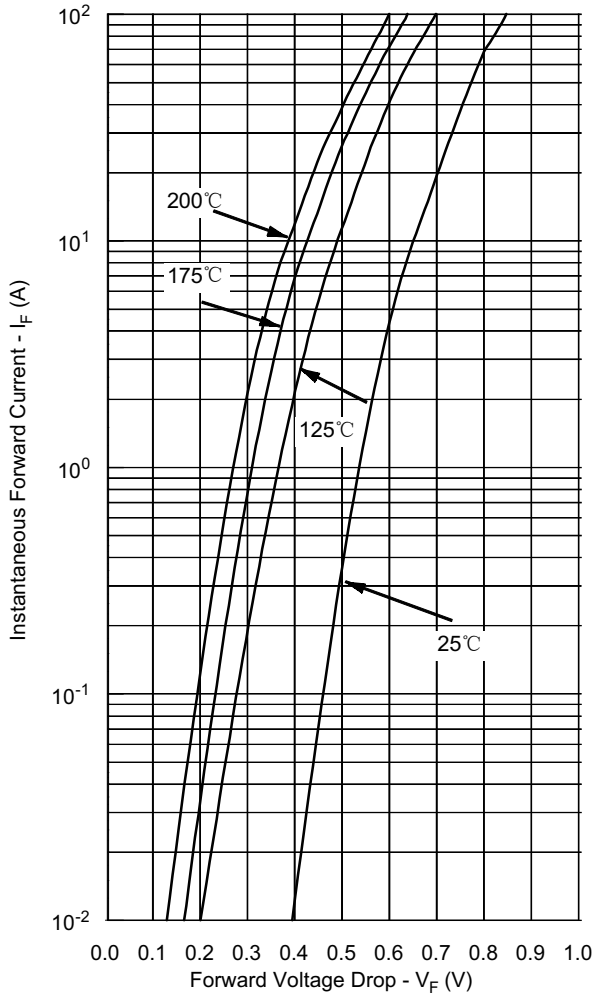
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 75 A, Pulse, T_J = 25 °C @ 150 A, Pulse, T_J = 25 °C	0.96 1.19	V
	V_{F2}	@ 75 A, Pulse, T_J = 125 °C @ 150 A, Pulse, T_J = 125 °C	0.80 0.99	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	1.5	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	20	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5 V, T_C = 25 °C f_{SIG} = 1MHz	1400	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	9.2	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/µs

* Pulse Width < 300µs, Duty Cycle <2%

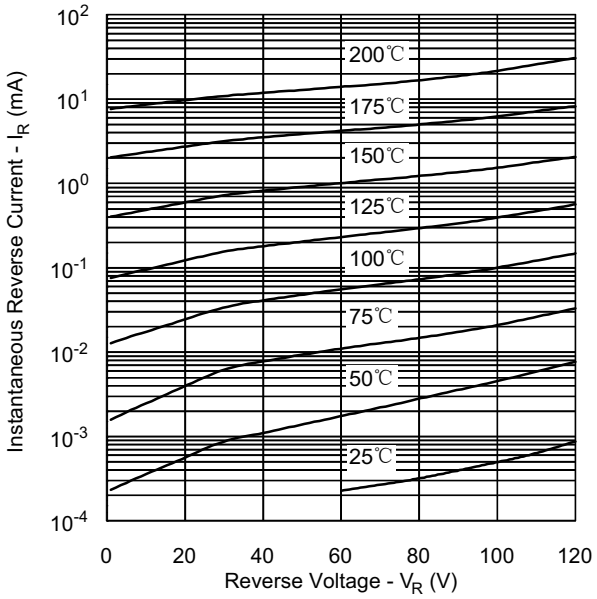
Thermal-Mechanical Specifications:

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 device)	$R_{\theta JC}$	DC operation	0.50	°C/W
Maximum Thermal Resistance, Case to Heat Sink	$R_{\theta CS}$	Mounting surface, smooth and greased	0.10	°C/W
Approximate Weight	wt	-	56	g
Mounting Torque	T_M	-	40 (min) 58 (max)	Kg-cm
Case Style	TO-249(9 pin)			

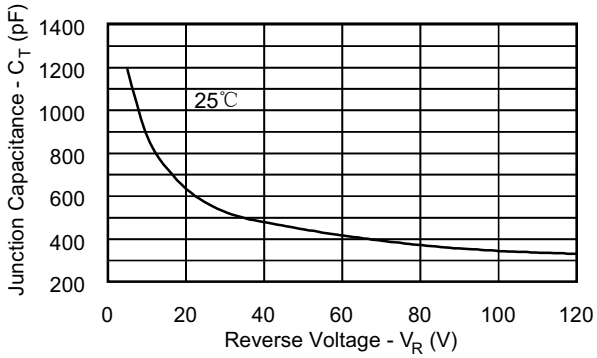
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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