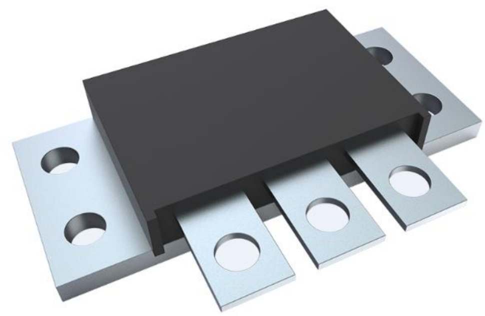
166CMQ200

Technical Data
Data Sheet N1238 Rev. A

RoHS Pb

166CMQ200 SCHOTTKY RECTIFIER

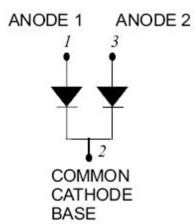


TO-249AA

Features

- 175°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
- Baseplate: Nickel plated; Terminals: Nickel plated
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Schematic & Pin Configuration



Applications

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

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	200	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @T_C =87°C, rectangular wave form	80(Per Leg) 160(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	960	A

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Data Sheet N1238 Rev. A

RoHS Pb

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Peg Leg)*	V_{F1}	@ 80A, Pulse, T_J = 25 °C	0.90	1.10	V
	V_{F2}	@ 80A, Pulse, T_J = 75 °C	-	0.90	V
Reverse Current(Peg Leg)*	I_{R1}	@V_R = rated V_R, T_J = 25 °C	0.0002	1.5	mA
	I_{R2}	@V_R = rated V_R ,T_J = 125 °C	0.3	21	mA
Junction Capacitance(Peg Leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	750	900	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/µs

* Pulse width < 300 µs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	°C
Storage Temperature	T_{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case (Per Leg)	$R_{\theta JC}$	DC operation	1	°C/W
Typical Thermal Resistance Junction to Case (Per Package)	$R_{\theta JC}$	DC operation	0.5	°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-249(9 pin)			

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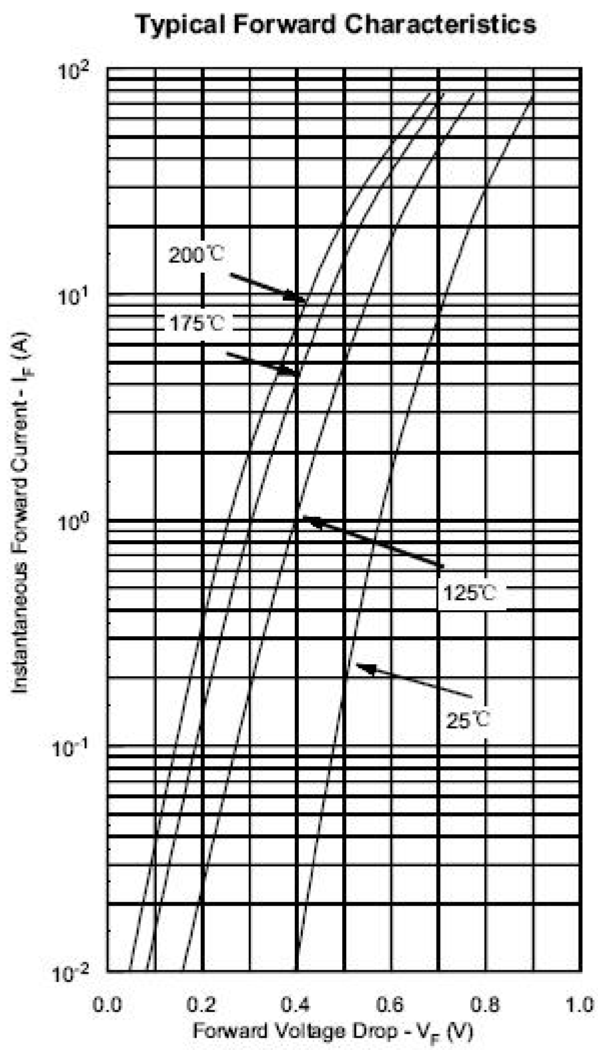
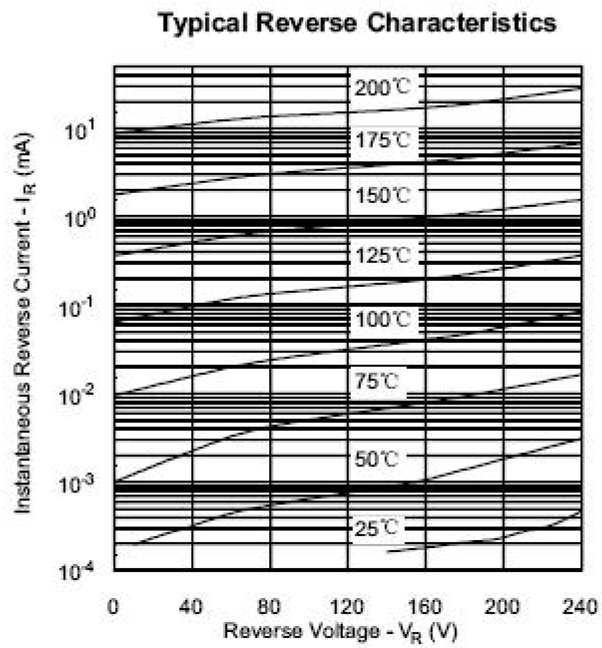
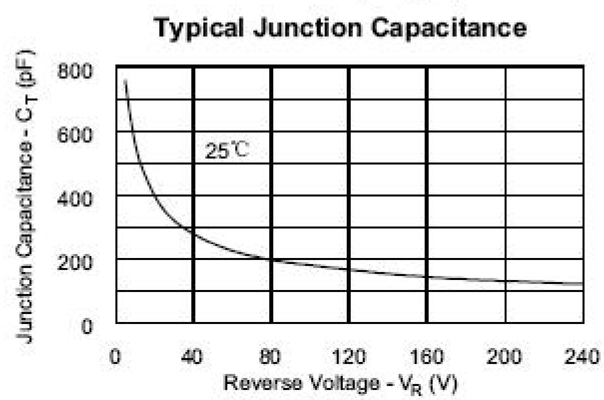
Ratings and Characteristics Curves







Ordering Information

Device	Package	Shipping
166CMQ200	TO-249AA(Pb-Free)	24pcs/ box

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

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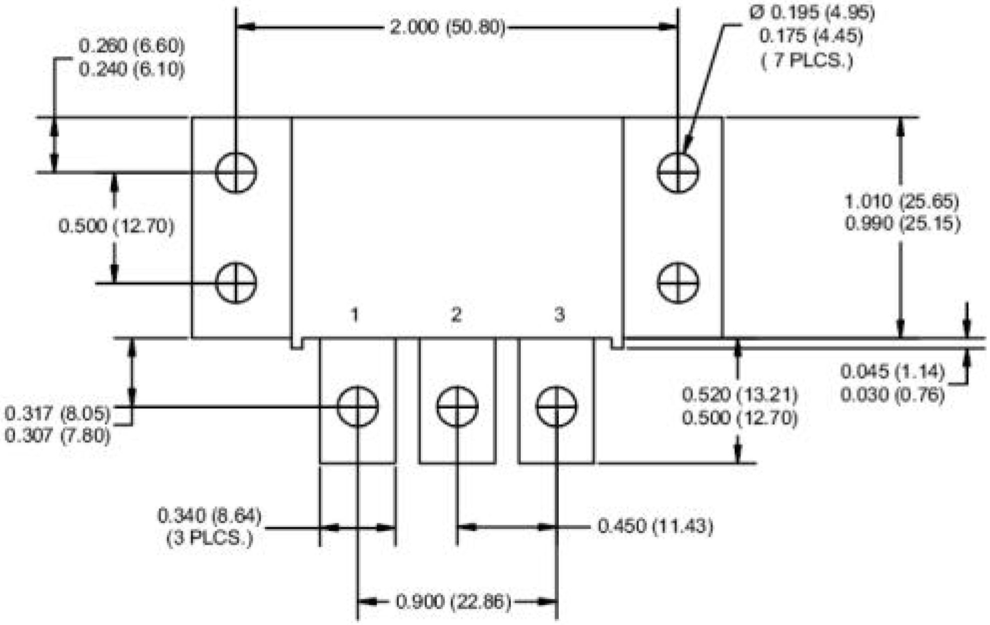
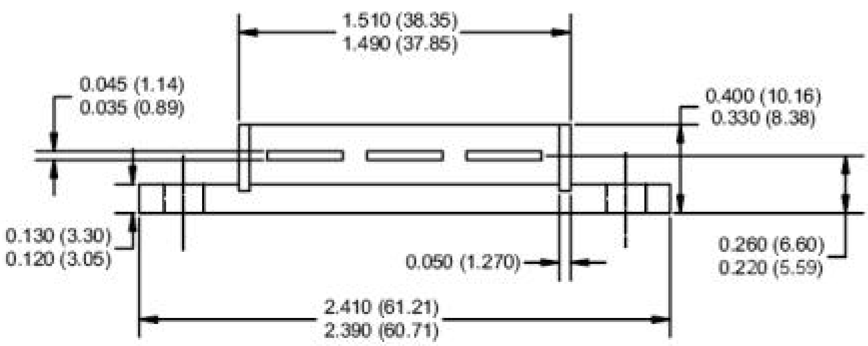
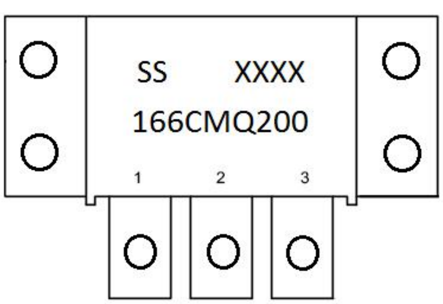
Mechanical Dimensions TO-249AA (Inches/Millimeters)





Marking Diagram



Where XXXX is YYWW

1st row SS YYWW
2nd row 166CMQ200
3rd row 1 2 3 (pin)
SS = SS
YY = Year
WW = Week

Cautions: Molding resin
Epoxy resin UL:94V-0

RoHS Pb

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