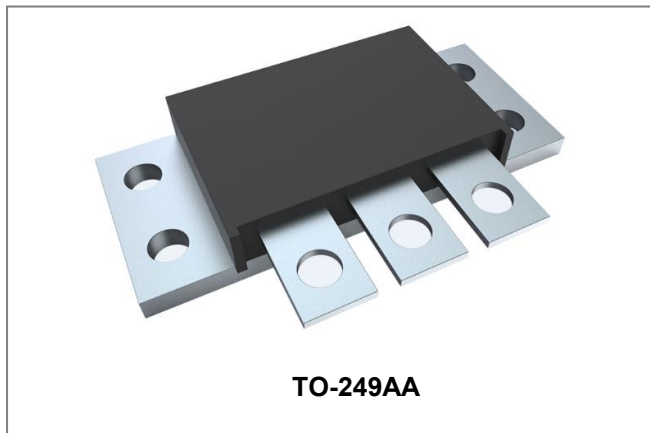


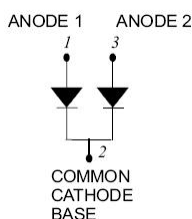
163CMQ...SERIES SCHOTTKY RECTIFIER



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
- 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	V _{RRM}	-	80	163CMQ080	V
Working Peak Reverse Voltage	V _{RWM}		100	163CMQ100	
DC Blocking Voltage	V _R				
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
Non-Repetitive Avalanche Energy (Peg Leg)	E _{AS}	T _J =25°C, I _{AS} =1A, L=30mH	15		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	1		A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Peg Leg)*	V _{F1}	@ 80A, Pulse, T _J = 25 °C @ 160A, Pulse, T _J = 25 °C	0.81 -	0.98 1.17	V
	V _{F2}	@ 80A, Pulse, T _J = 125 °C @ 160A, Pulse, T _J = 125 °C	0.69 -	0.80 0.96	V
Reverse Current(Peg Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.0005	1.5	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	2	20	mA
Junction Capacitance(Peg Leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	1200	1400	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

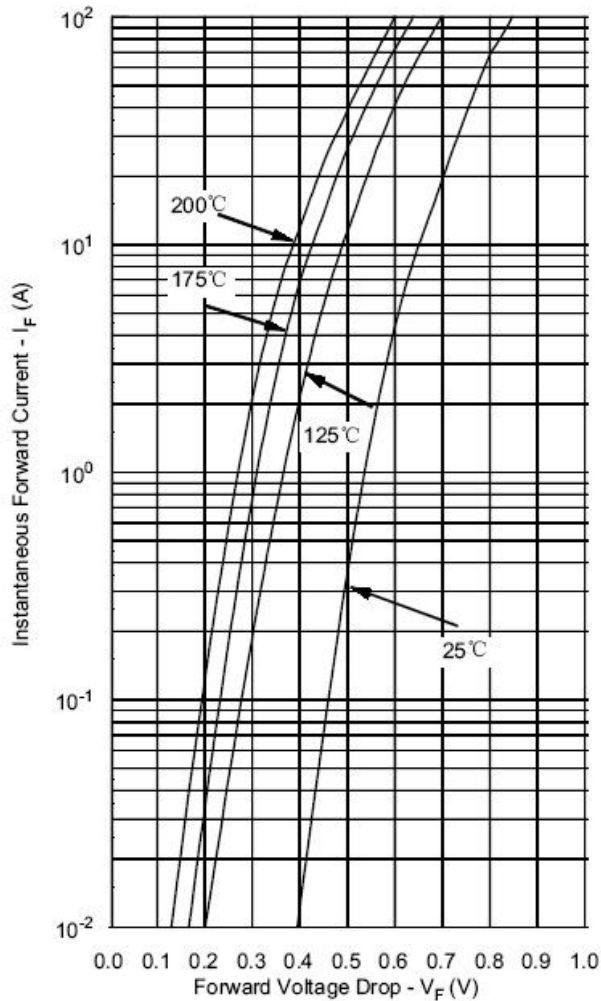
* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

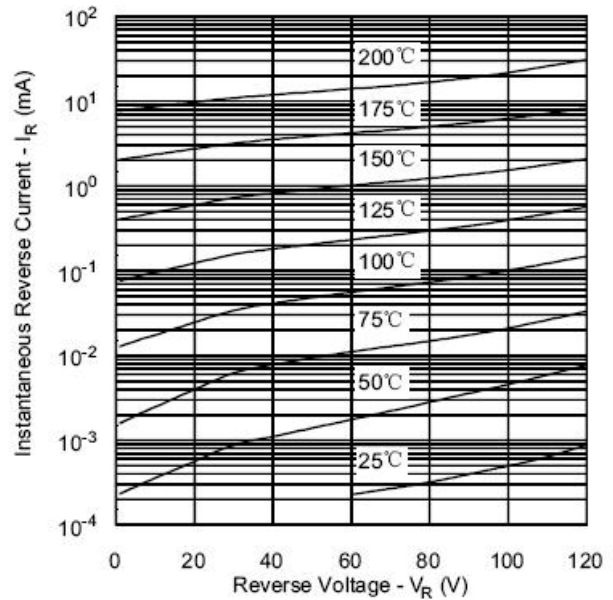
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +175	°C
Storage Temperature	T _{stg}	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case (Per Leg)	R _{θJC}	DC operation	1.0	°C/W
Typical Thermal Resistance Junction to Case (Per Package)	R _{θJC}	DC operation	0.50	°C/W
Typical Thermal Resistance, case to Heat Sink	R _{θcs}	Mounting surface, smooth and greased	0.10	°C/W
Mounting Torque	T _M	-	40(min)	Kg-cm
			58(max)	
Approximate Weight	wt	-	58	g

Ratings and Characteristics Curves

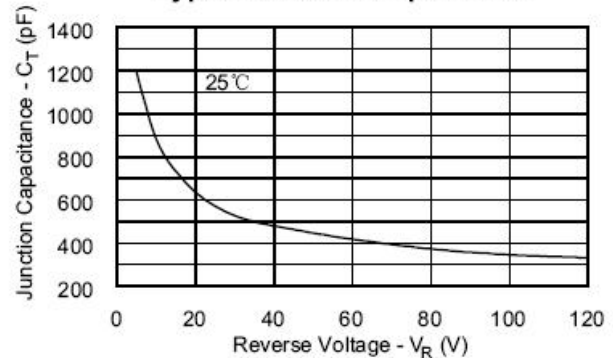
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance

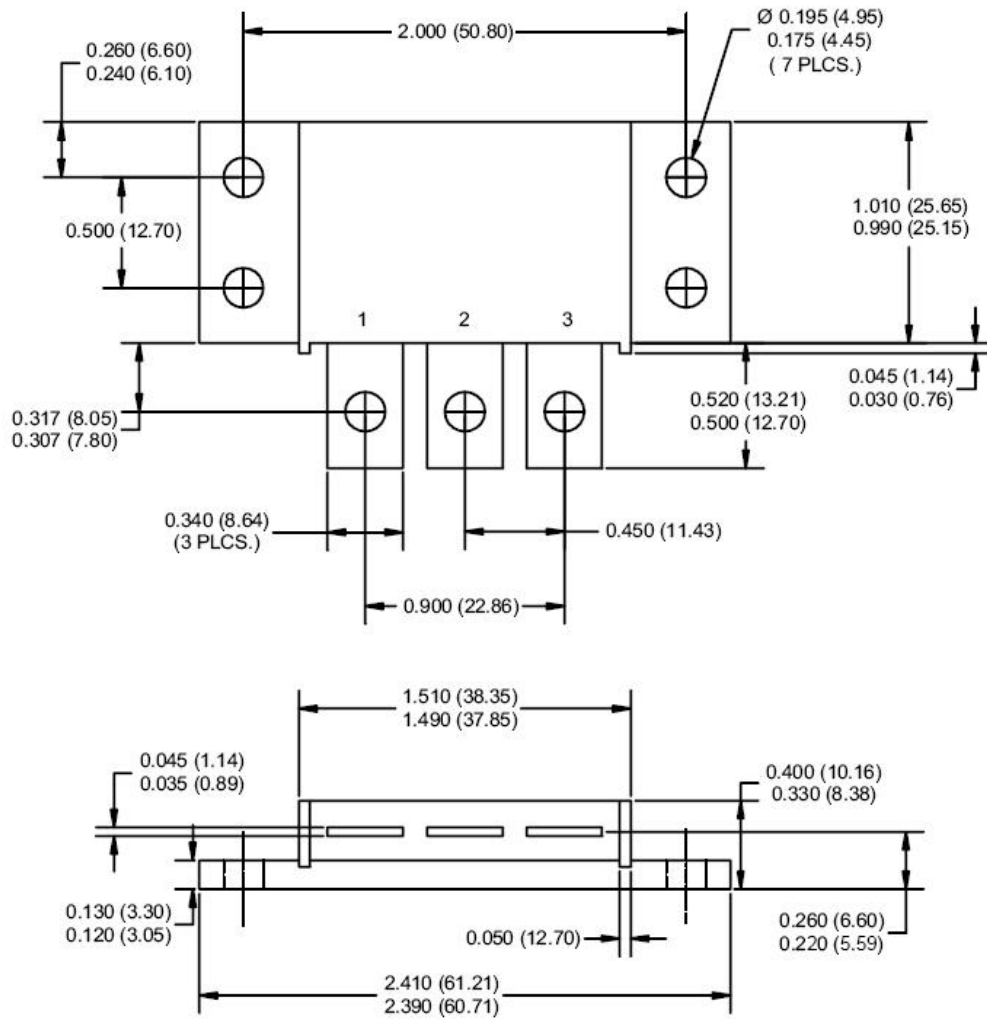


Ordering Information

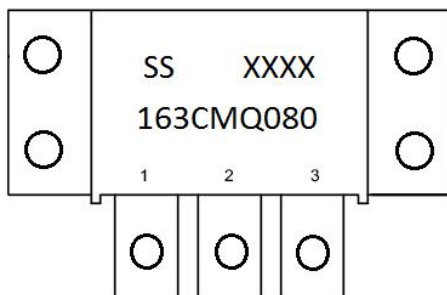
Device	Package	Shipping
163CMQ SERIES	TO-249AA(Pb-Free)	24pcs/ box

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

Mechanical Dimensions TO-249AA (Inches/Millimeters)



Marking Diagram



Where XXXX is YYWW

1st row SS YYWW
2nd row 163CMQ080
3rd row 1 2 3 (pin)
SS = SS
YY = Year
WW = Week

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

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