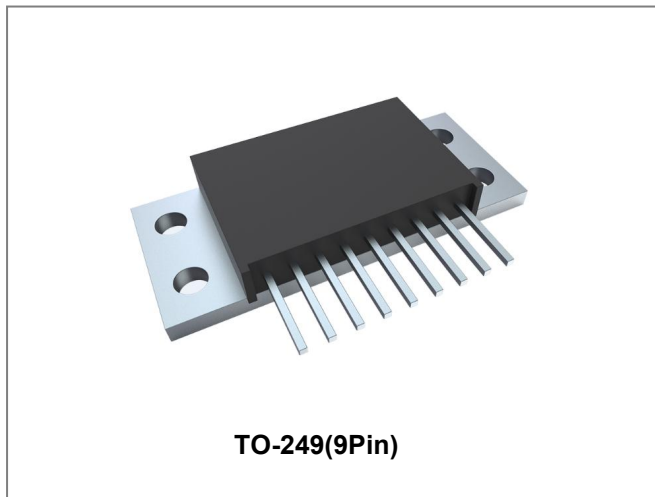


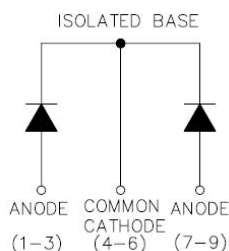
150CMQ...SERIES SCHOTTKY RECTIFIER



Features

- 150 °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
- 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 | V _{RRM} | - | 35 | 150CMQ035 | V |
| Working Peak Reverse Voltage | V _{RWM} | | 40 | 150CMQ040 | |
| DC Blocking Voltage | V _R | | 45 | 150CMQ045 | |
| Average Rectified Forward Current | I _{F(AV)} | 50% duty cycle @T _C =71°C, rectangular wave form | 75(Per Leg) 150(Per Device) | | A |
| Peak One Cycle Non-Repetitive Surge Current | I _{FSM} | 8.3 ms, half Sine pulse | 860 | | A |
| Non-Repetitive Avalanche Energy (Peg Leg) | E _{AS} | T _J =25°C, I _{AS} =15A, L=0.9mH | 101 | | 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 | 15 | | A |

Electrical Characteristics:

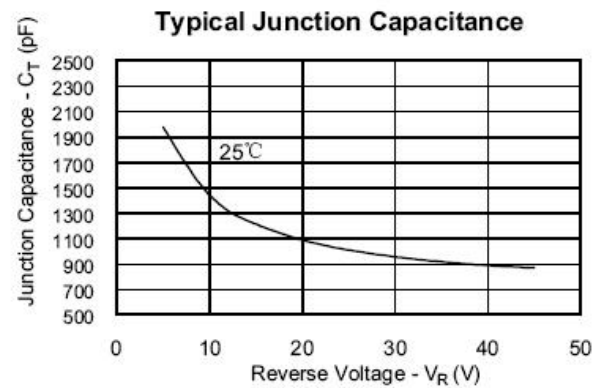
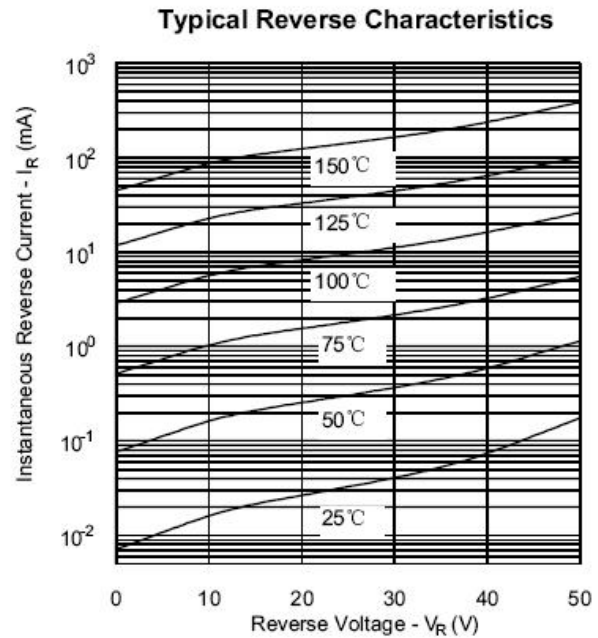
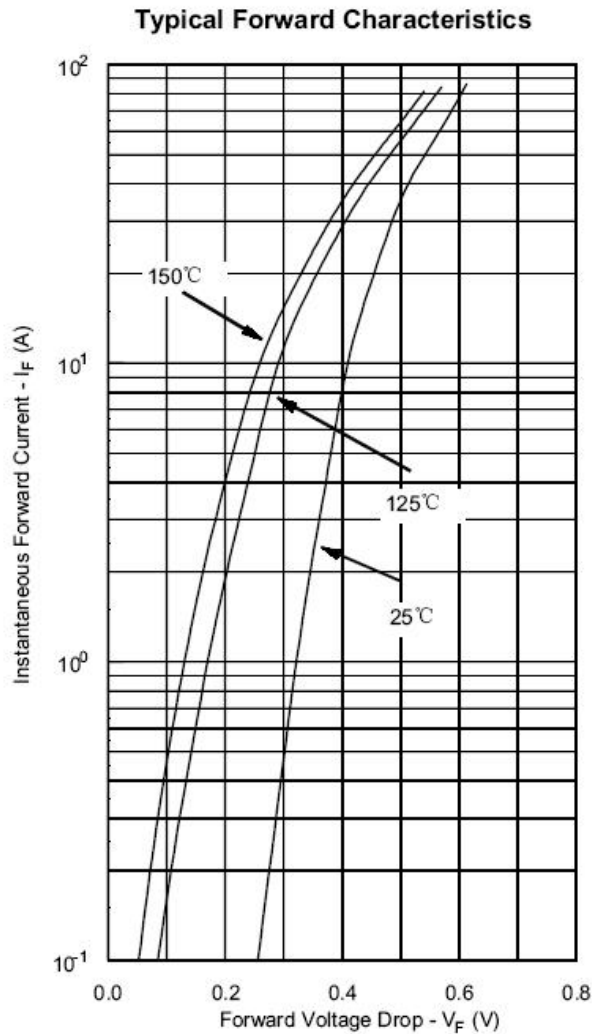
| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|--------------------------------|----------|---|-----------|--------------|------------------|
| Forward Voltage Drop(Peg Leg)* | V_{F1} | @ 75A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ @ 150A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.60 - | 0.67 0.87 | V |
| | V_{F2} | @ 75A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ @ 150A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.53 - | 0.60 0.79 | V |
| Reverse Current(Peg Leg)* | I_{R1} | @ $V_R = \text{rated } V_R, T_J = 25\text{ }^\circ\text{C}$ | 0.2 | 5 | mA |
| | I_{R2} | @ $V_R = \text{rated } V_R, T_J = 125\text{ }^\circ\text{C}$ | 100 | 200 | mA |
| Junction Capacitance(Peg Leg) | C_T | @ $V_R = 5\text{V}, T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 2000 | 2600 | 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 +150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |
| Typical Thermal Resistance Junction to Case (Per Leg) | $R_{\theta JC}$ | DC operation | 1.0 | $^\circ\text{C/W}$ |
| Typical Thermal Resistance Junction to Case (Per Package) | $R_{\theta JC}$ | DC operation | 0.50 | $^\circ\text{C/W}$ |
| Typical Thermal Resistance, case to Heat Sink | $R_{\theta cs}$ | Mounting surface, smooth and greased | 0.10 | $^\circ\text{C/W}$ |
| Mounting Torque | T_M | - | 40(min) 58(max) | Kg-cm |
| Approximate Weight | wt | - | 56 | g |
| Case Style | TO-249(9 pin) | | | |

Ratings and Characteristics Curves

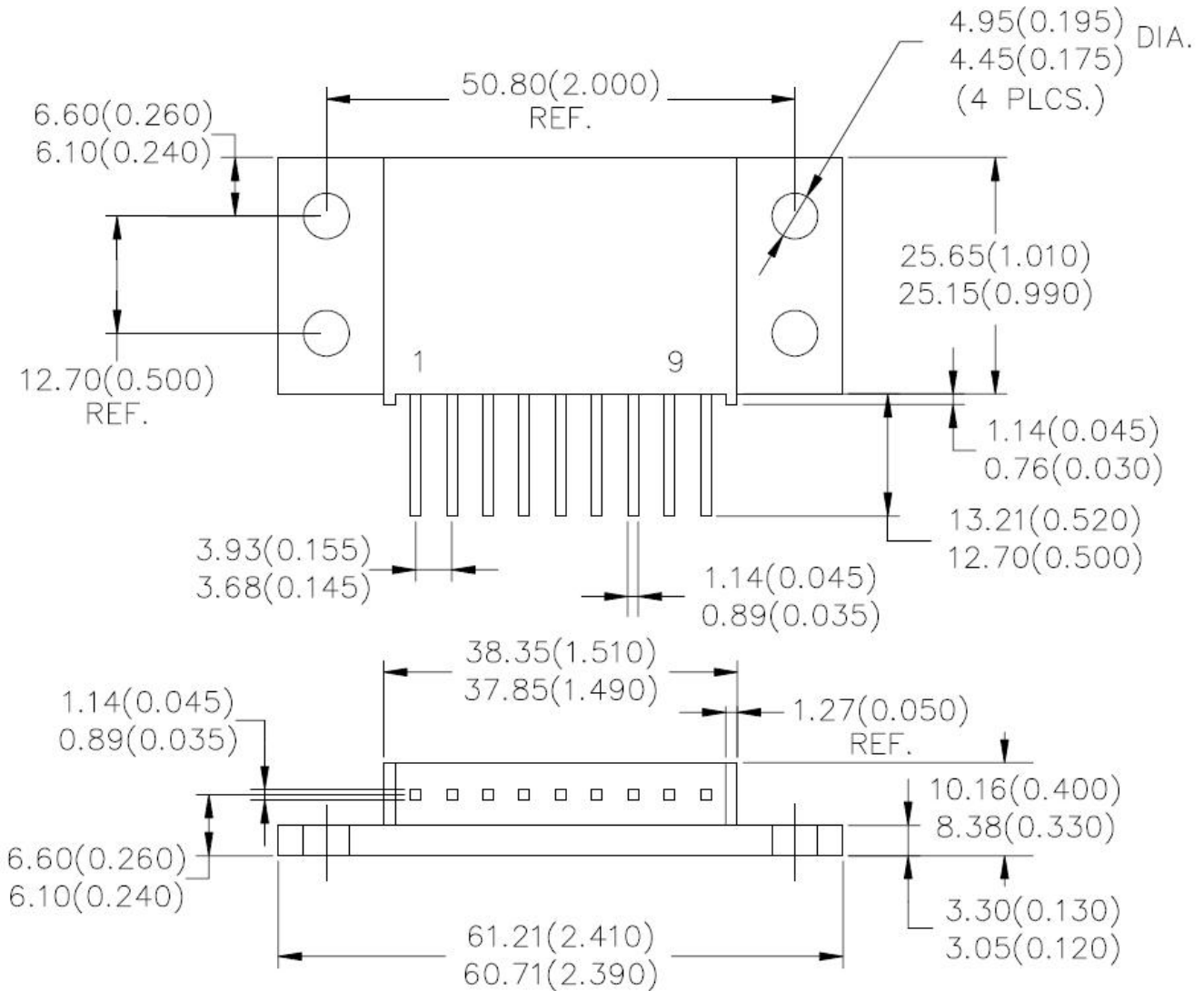


Ordering Information

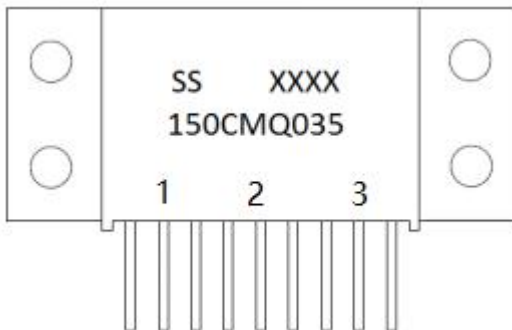
| Device | Package | Shipping |
|---------------|-----------------|------------|
| 150CMQ SERIES | TO-249(Pb-Free) | 24pcs/ box |

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-249(9pin) (Inches/Millimeters)



Marking Diagram



Where XXXX is YYWW

1st row SS YYWW
2nd row 150CMQ035
3rd row 1 2 3 (pin)
SS = SS
YY = Year
WW = Week

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

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