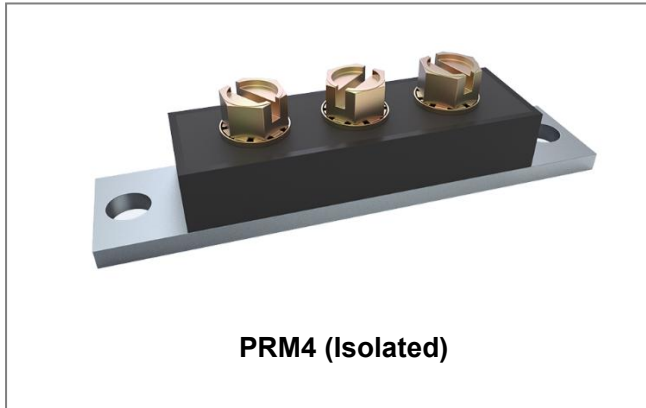


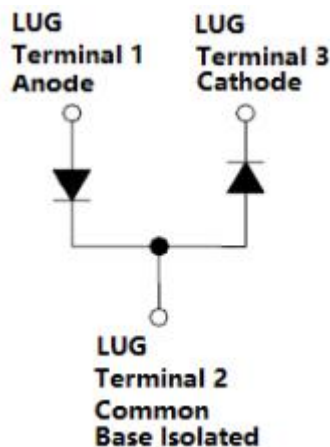
403DMQ600 ULTRAFAST RECTIFIER



Features

- 175 °C T_J operation
- 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
- 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

Circuit Diagram



Applications

- High current switching power supply
- Plating power supply
- Free-Wheeling diodes
- Reverse battery protection
- Converters
- UPS System
- Welding

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|--|--------------------|--|-----------------|-------|
| Peak Repetitive Reverse Voltage | V _{RRM} | - | 600 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | |
| DC Blocking Voltage | V _R | | | |
| Average Rectified Forward Current | I _{F(AV)} | 50% duty cycle @T _C =117°C, rectangular wave form | 200(Per leg) | A |
| | | | 400(Per device) | |
| Peak One Cycle Non-Repetitive Surge Current(Per leg) | I _{FSM} | 8.3 ms, half Sine pulse | 1600 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|---------------------------------|----------|--|-------|------|---------------|
| Forward Voltage Drop(Per leg)* | V_{F1} | @ 200A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 1.68 | 1.85 | V |
| Reverse Current (Per leg)* | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$ | 0.175 | 100 | μA |
| Reverse Recovery Time (Per leg) | t_{rr} | $I_F=500\text{mA}$, $I_R=1\text{A}$, and $I_{rm}=250\text{mA}$ | - | 90 | ns |

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

Thermal-Mechanical Specifications:

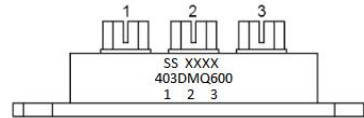
| Characteristics | Symbol | Condition | Specification | | Units |
|---|-----------------|--------------------------------------|-----------------|----------------------|--------------------|
| Junction Temperature | T_J | - | -55 to +175 | | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | - | -55 to +175 | | $^\circ\text{C}$ |
| Typical Thermal Resistance Junction to Case (per leg) | $R_{\theta JC}$ | DC operation | 0.50 | | $^\circ\text{C/W}$ |
| Typical Thermal Resistance Junction to Case (per package) | $R_{\theta JC}$ | DC operation | 0.25 | | $^\circ\text{C/W}$ |
| Typical Thermal Resistance, Case to Heat Sink | $R_{\theta CS}$ | Mounting surface, smooth and greased | 0.10 | | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 79 | | g |
| Mounting Torque | T_M | Non-lubricated threads | Mounting Torque | 24 (min) 35 (max) | Kg-cm |
| | | | Terminal Torque | 35(min) 46 (max) | |
| Case Style | PRM4 Isolated | | | | |

Ordering Information

| Device | Package | Shipping |
|-----------|------------------------------|-----------|
| 403DMQ600 | PRM4 (Isolated) (Pb-Free) | 9pcs/ box |

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

Marking Diagram

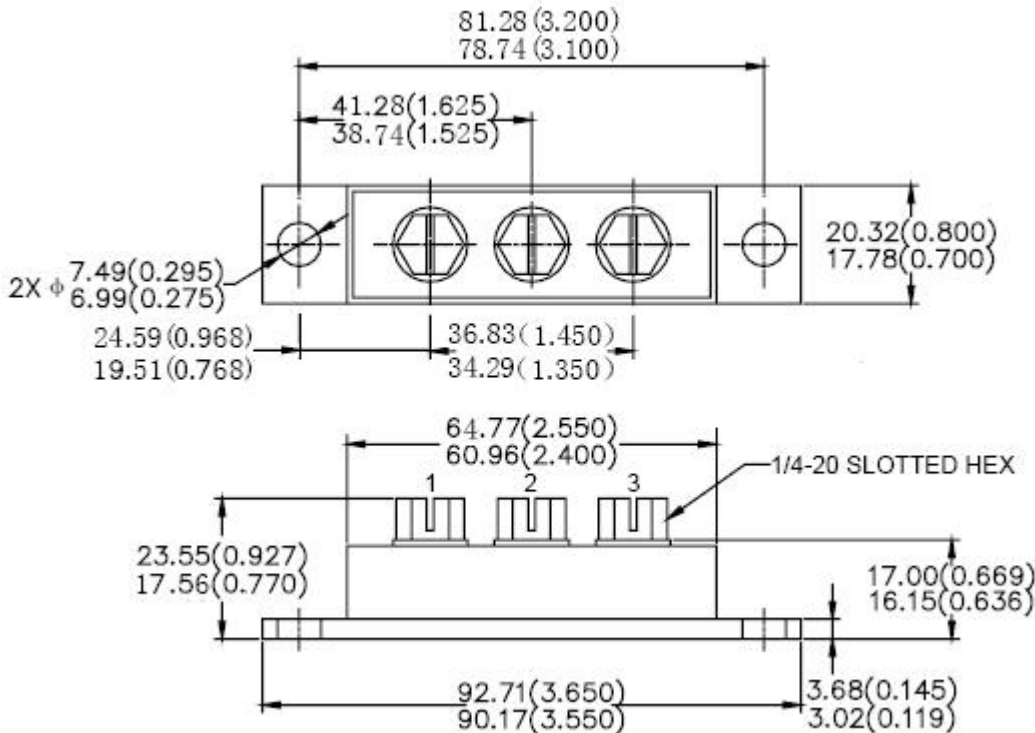


Where XXXX is YYWW

1st row SS YYWW
2nd row 403DMQ600
SS = SS
YY = Year
WW = Week

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

Mechanical Dimensions PRM4 (Isolated) (Inches/Millimeters)



Please Note: Suffix "R" Denotes For Reversed Polarity

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