

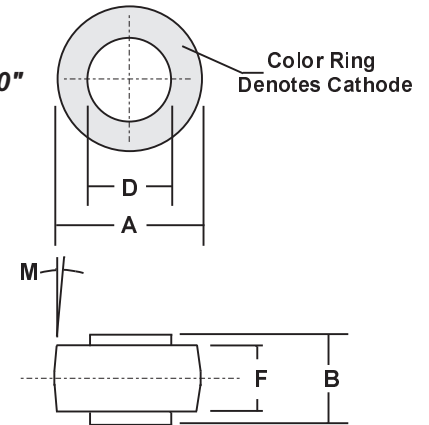
50 AMP BUTTON DIODES

Features

- Void Free Vacuum Die Soldering For Maximum Mechanical Strength and Heat Dissipation (Solder Voids: Typical $\leq 2\%$, Max. $\leq 10\%$ of Die Area)
- Biggest Effective Die Area for the 50 Amp Class of Button Diodes
- High Temperature Solder (Solidus 287°C , Liquidus 296°C) to Allow Higher Operating And Assembly Temperatures
- Copper Headers Are Silver Plated For Easy Soldering And Superior Solder Joints

Mechanical Specification

Die Size:
 0.180" x 0.180"
 Square



Mechanical Data

- Case: Molded Epoxy (UL Flammability Rating 94V-0)
- Finish: All Metal Surfaces Are Silver Plated
- Soldering Temperature: 250°C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

RoHS COMPLIANT

| Dim | Millimeters | | Inches | |
|-----|-------------|------|--------|-------|
| | Min | Max | Min | Max |
| A | 8.43 | 8.69 | 0.332 | 0.342 |
| B | 5.94 | 6.25 | 0.234 | 0.246 |
| D | 5.46 | 5.71 | 0.215 | 0.225 |
| F | 4.19 | 4.45 | 0.165 | 0.175 |
| M | 5° NOM | | 5° NOM | |

Maximum Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter (Test Conditions) | Symbol | Ratings | | | | | | | Units |
|---|---------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------------|
| | | BAR 5000S | BAR 5001S | BAR 5002S | BAR 5004S | BAR 5006S | BAR 5008S | BAR 5010S | |
| Series Number | | | | | | | | | |
| Maximum DC Blocking Voltage | VRRM | | | | | | | | Volts |
| Maximum RMS Voltage | VRWM | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | |
| Maximum Peak Recurrent Reverse Voltage | VDC | | | | | | | | |
| Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak) | VRSM | 60 | 120 | 240 | 480 | 720 | 960 | 1200 | |
| Average Forward Rectified Current @ $T_c=125^{\circ}\text{C}$ | IO | 50 | | | | | | | Amps |
| Peak Forward Surge Current (8.3ms single half sine wave superimposed on rated load) | IFSM | 600 | | | | | | | |
| Maximum Forward Voltage Drop at 50 Amp DC | VFM | 1.1 (Typical 1.05) | | | | | 1.15 | | Volts |
| Maximum Average DC Reverse Current @ $T_A = 25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^{\circ}\text{C}$ | IRM | 1 50 | | | | | | | μA |
| Maximum Thermal Resistance, Junction to Case (Note 1) | R θ JC | 0.8 | | | | | | | $^{\circ}\text{C/W}$ |
| Junction Operating and Storage Temperature Range | TJ, TSTG | -65 to +175 | | | | | | | $^{\circ}\text{C}$ |

Notes: 1) Single Side Cooled