

## 75 AMP BUTTON DIODES

### FEATURES

- PROPRIETARY **SOFT GLASS®** JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical  $\leq 2\%$ , Max.  $\leq 10\%$  of Die Area)
- Compact molded design
- High surge current, 800 A @  $T_J = 175^\circ\text{C}$
- Low cost
- Peak performance at elevated temperatures: 75 A @  $T_J = 150^\circ\text{C}$

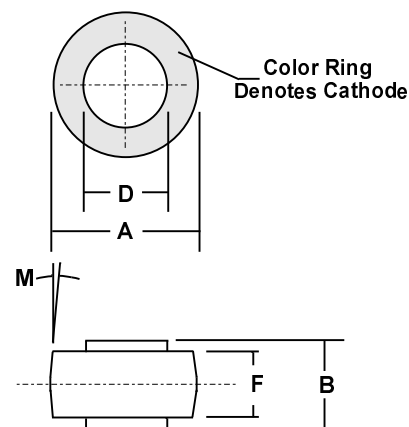
### MECHANICAL DATA

- Case: Molded Epoxy (UL Flammability Rating 94V-0)
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature:  $250^\circ\text{C}$  maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

**RoHS COMPLIANT**

### MECHANICAL SPECIFICATION

Die Size:  
0.250" Diameter  
Round



| 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  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

| PARAMETER (TEST CONDITIONS)                                                                                           | SYMBOL                            | RATINGS            |           |           |           |           |           |           | UNITS |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| Series Number                                                                                                         |                                   | BAR 7500S          | BAR 7501S | BAR 7502S | BAR 7504S | BAR 7506S | BAR 7508S | BAR 7510S |       |
| Maximum DC Blocking Voltage                                                                                           | V <sub>RRM</sub>                  | 50                 | 100       | 200       | 400       | 600       | 800       | 1000      | VOLTS |
| Maximum RMS Voltage                                                                                                   | V <sub>RWM</sub>                  |                    |           |           |           |           |           |           |       |
| Maximum Peak Recurrent Reverse Voltage                                                                                | V <sub>DC</sub>                   |                    |           |           |           |           |           |           |       |
| Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)                                             | V <sub>RSM</sub>                  | 60                 | 120       | 240       | 480       | 720       | 960       | 1200      |       |
| Average Forward Rectified Current @ T <sub>C</sub> =150 °C                                                            | I <sub>O</sub>                    | 75                 |           |           |           |           |           |           | AMPS  |
| Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)                                   | I <sub>FSM</sub>                  | 800                |           |           |           |           |           |           |       |
| Maximum Forward Voltage Drop at 75 Amp DC                                                                             | V <sub>FM</sub>                   | 1.1 (Typical 1.05) |           |           |           |           | 1.15      |           | VOLTS |
| Maximum Average DC Reverse Current @ T <sub>A</sub> = 25 °C<br>At Rated DC Blocking Voltage @ T <sub>A</sub> = 100 °C | I <sub>RM</sub>                   | 1<br>50            |           |           |           |           |           |           | μA    |
| Maximum Thermal Resistance, Junction to Case (Note 1)                                                                 | R <sub>θJC</sub>                  | 0.8                |           |           |           |           |           |           | °C/W  |
| Junction Operating and Storage Temperature Range                                                                      | T <sub>J</sub> , T <sub>STG</sub> | -65 to +175        |           |           |           |           |           |           | °C    |

Notes: 1) Single Side Cooled

BAR75S