

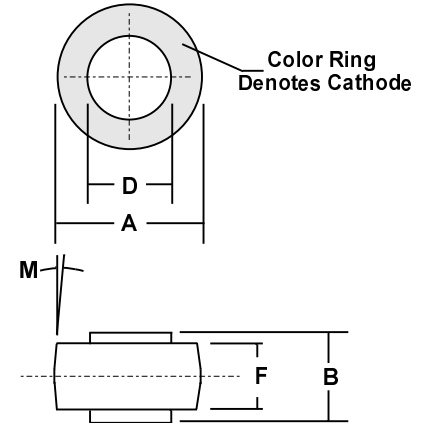
## 50 AMP BUTTON DIODES

### FEATURES

- PROPRIETARY **SOFT GLASS<sup>®</sup>** 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, 720 A @  $T_J = 175^\circ\text{C}$
- Low cost
- Peak performance at elevated temperatures: 50 A @  $T_J = 175^\circ\text{C}$

### MECHANICAL SPECIFICATION

Die Size:  
 0.180" x 0.180"  
 Square



### 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 °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	9.78	10.29	0.385	0.405
B	6.05	6.20	0.238	0.244
D	5.54	6.60	0.218	0.220
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 5000	BAR 5001	BAR 5002	BAR 5004	BAR 5006	BAR 5008	BAR 5010	
Series Number									
Maximum DC Blocking Voltage	$V_{RRM}$								VOLTS
Maximum RMS Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	
Maximum Peak Recurrent Reverse Voltage	$V_{DC}$								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	$V_{RSM}$	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ $T_c=125^\circ\text{C}$	$I_O$	50							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	$I_{FSM}$	600							
Maximum Forward Voltage Drop at 50 Amp DC	$V_{FM}$	1.1 (Typical 1.05)					1.15		VOLTS
Maximum Average DC Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_{RM}$	1 50							$\mu\text{A}$
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							$^\circ\text{C/W}$
Junction Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$

Notes: 1) Single Side Cooled