

50 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 < 2%, Max. < 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 @ $T_J = 175^\circ\text{C}$

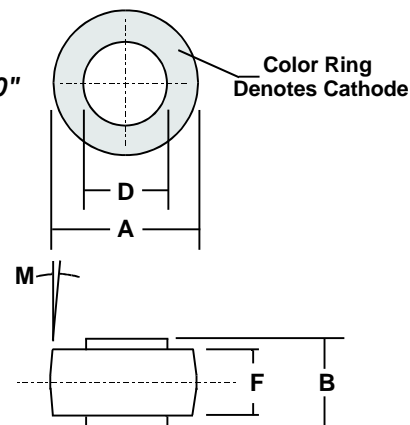
MECHANICAL DATA

- Case: Transfer molded plastic
- 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)

**SOFT GLASS®
DIODE**

MECHANICAL SPECIFICATION

Die Size:
0.180" x 0.180"
Square



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
Series Number		BAR 5000S	BAR 5001S	BAR 5002S	BAR 5004S	BAR 5006S	BAR 5008S	BAR 5010S		
Maximum DC Blocking Voltage	VRRM	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS Voltage	VRWM									
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 @ Tc=125 °C	Io	50								AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	IFSM	600								
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	IRSM	120								
Maximum Forward Voltage Drop at 50 Amp DC	VFM	1.1 (Typical 1.05)						1.15		VOLTS
Maximum Average DC Reverse Current @ TA = 25 °C At Rated DC Blocking Voltage @ TA = 100 °C	IRM	1 50								μA
Maximum Thermal Resistance, Junction to Case (Note 1)	RθJC	0.8								°C/W
Junction Operating and Storage Temperature Range	TJ ,TSTG	-65 to +175								°C

Notes: 1) Single Side Cooled