

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 $\leq 2\%$, 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 @ $T_J = 175^\circ\text{C}$

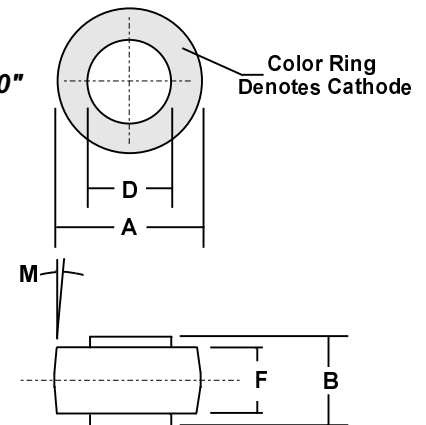
MECHANICAL DATA

- 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

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	V _{RRM}	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS Voltage	V _{RWM}									
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 °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 °C At Rated DC Blocking Voltage @ T _A = 100 °C	I _{RM}	1 50								μA
Maximum Thermal Resistance, Junction to Case (Note 1)	R _{θJC}	0.8								°C/W
Junction Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175								°C

Notes: 1) Single Side Cooled

BAR505