

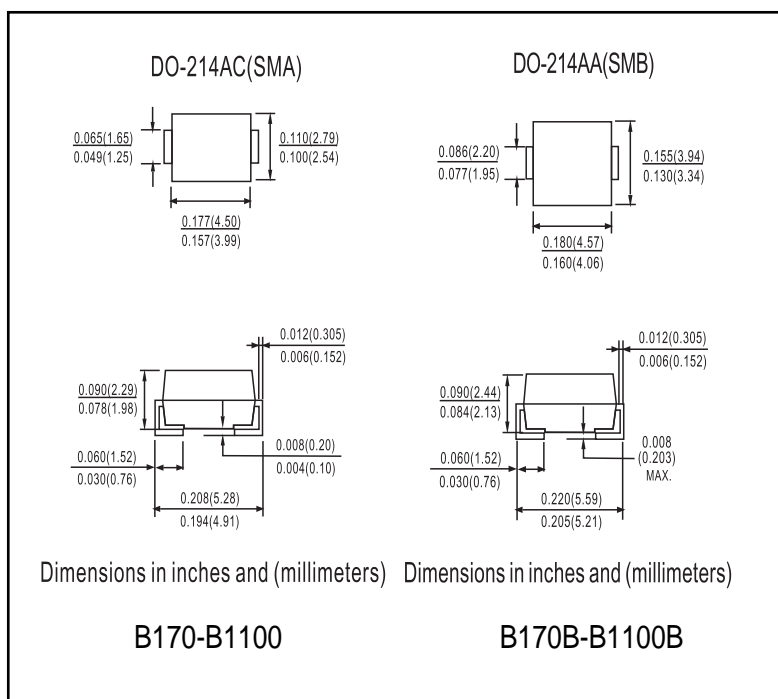


FEATURES

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 30A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- High Temperature Soldering: 260°C/10 Second at Terminal
- Lead Free Finish/RoHS Compliant (Note 1)
- Green Molding Compound (No Halogen and Antimony)

MECHANICAL DATA

- Case: SMA / SMB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Weight: SMA 0.064 grams (approximate)
SMB 0.093 grams (approximate)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

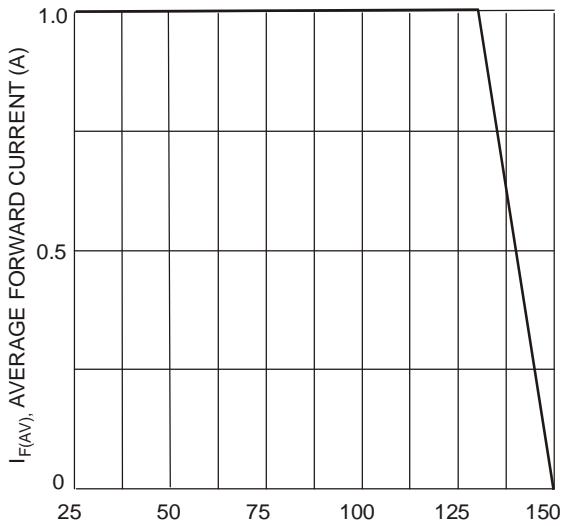
Characteristic	Symbol	B170/B	B180/B	B190/B	B1100/B	Unit
Peak Repetitive Reverse Voltage	V_{RRM}					
Working Peak Reverse Voltage	V_{RWM}	70	80	90	100	V
DC Blocking Voltage	V_R					
RMS Reverse Voltage	$V_{R(RMS)}$	49	56	63	70	V
Average Rectified Output Current @ $T_T = 125^{\circ}\text{C}$	I_O	1.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30				A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	@ $T_A = 25^{\circ}\text{C}$		0.79		V
		@ $T_A = 100^{\circ}\text{C}$		0.69		
Peak Reverse Current at Rated DC Blocking Voltage	I_{RM}	@ $T_A = 25^{\circ}\text{C}$		0.5		mA
		@ $T_A = 100^{\circ}\text{C}$		5.0		
Typical Junction Capacitance (Note 2)	C_j	80				pF
Typical Thermal Resistance Junction to Terminal (Note 1)	$R_{\theta JT}$	25				K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150				$^{\circ}\text{C}$

Notes: 1. Valid provided that terminals are kept at ambient temperature.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

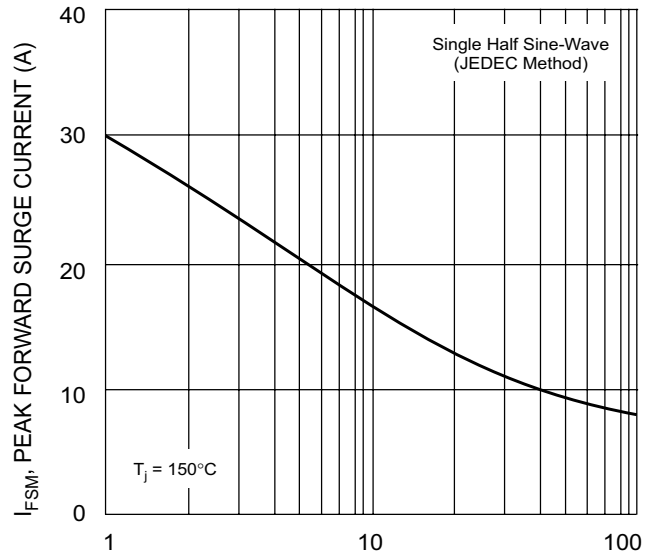


RATINGS AND CHARACTERISTIC CURVES

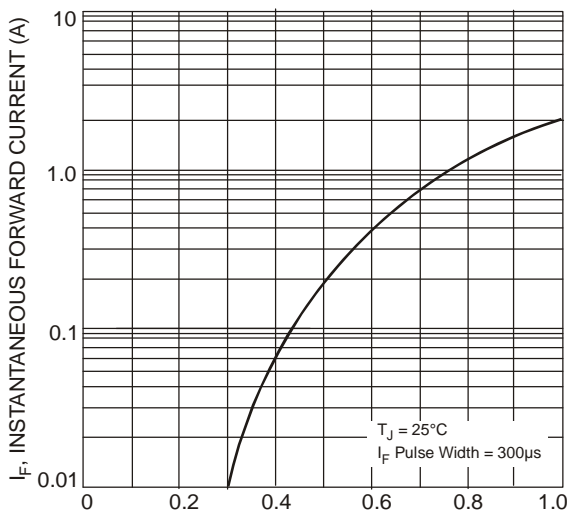
B170/B THRU B1100/B



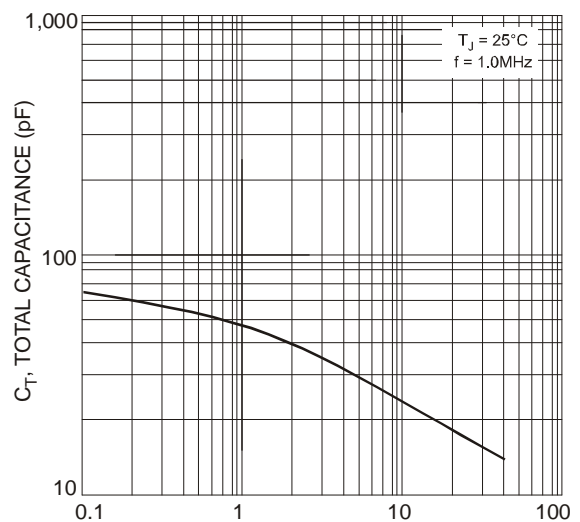
T_T , TERMINAL TEMPERATURE (°C)
Fig. 1 Forward Current Derating Curve



NUMBER OF CYCLES AT 60 Hz
Fig.2 Max Non-Repetitive Peak Fwd Surge Current



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 3 Typical Forward Characteristics



V_R , DC REVERSE VOLTAGE (V)
Fig. 4 Total Capacitance vs. Reverse Voltage