

**TAYCHIPST****Surface Mount Schottky Power Rectifier****MBR2H100**

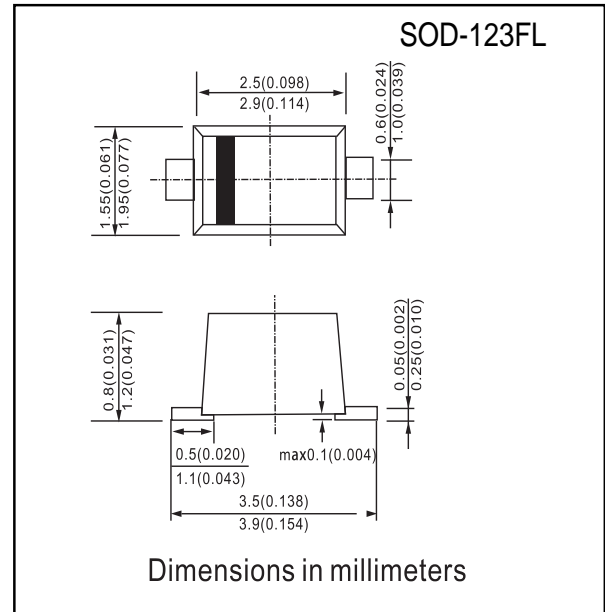
100V 2.0A

FEATURES

- Guardring for Stress Protection
- Low Forward Voltage
- 175°C Operating Junction Temperature
- Epoxy Meets UL 94 V-0
- Package Designed for Optimal Automated Board Assembly
- ESD Ratings: Machine Model, C
Human Body Model, 3B
- This is a Pb-Free Device

MECHANICAL DATA

- Reel Options: MBR2H100SFT3G = 10,000 per 13 in reel/8 mm tape
- Device Marking: L2H
- Polarity Designator: Cathode Band
- Weight: 11.7 mg (approximately)
- Case: Epoxy, Molded
- Lead Finish: 100% Matte Sn (Tin)
- Lead and Mounting Surface Temperature for Soldering Purposes:
260°C Max. for 10 Seconds
- Device Meets MSL 1 Requirements

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS****MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Forward Current ($T_L = 146^\circ\text{C}$)	I_O	2.0	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	50	A
Storage and Operating Junction Temperature Range (Note 1)	T_{stg}, T_J	-65 to +175	$^\circ\text{C}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dP_D/dT_J < 1/R_{\theta JA}$.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction-to-Lead (Note 2)	Ψ_{JCL}	23	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Ambient (Note 2)	$R_{\theta JA}$	85	$^\circ\text{C/W}$
Thermal Resistance, Junction-to-Ambient (Note 3)	$R_{\theta JA}$	330	$^\circ\text{C/W}$

2. Mounted with 700 mm² copper pad size (Approximately 1 in²) 1 oz FR4 Board.
3. Mounted with pad size approximately 20 mm² copper, 1 oz FR4 Board.
4. Pulse Test: Pulse Width $\leq 380 \mu\text{s}$, Duty Cycle $\leq 2.0\%$.



RATINGS AND CHARACTERISTIC CURVES MBR2H100

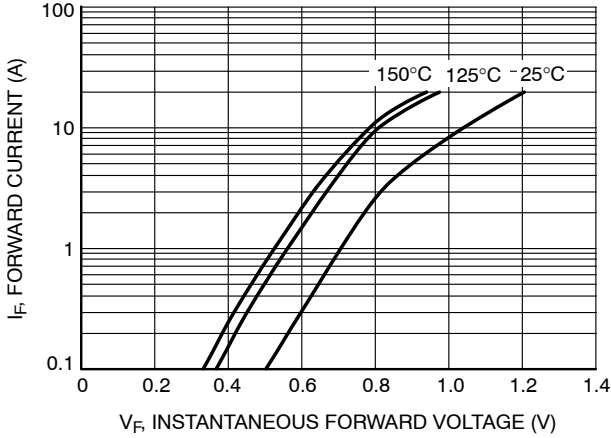


Figure 1. Typical Forward Voltage

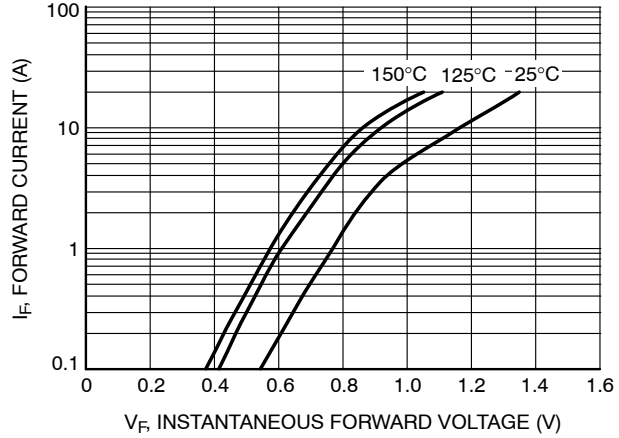


Figure 2. Maximum Forward Voltage

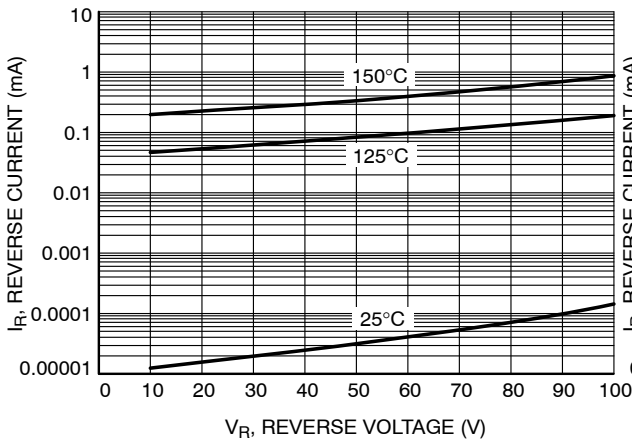


Figure 3. Typical Reverse Current

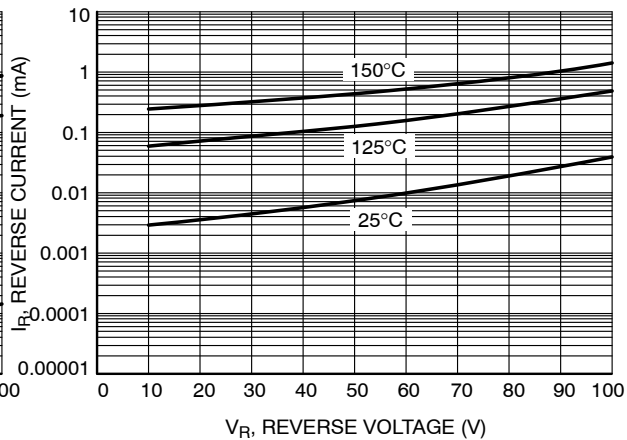


Figure 4. Maximum Reverse Current

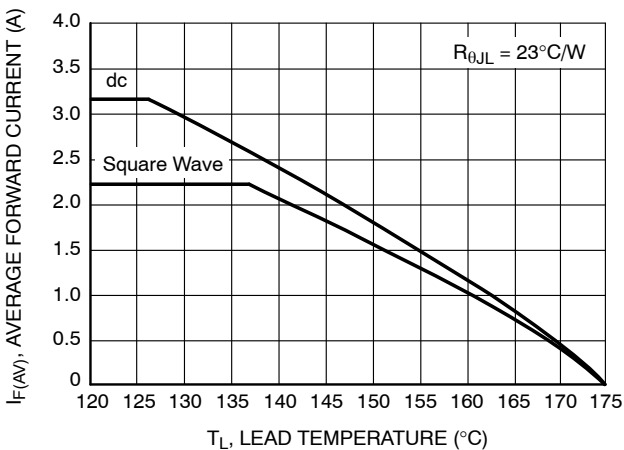


Figure 5. Current Derating

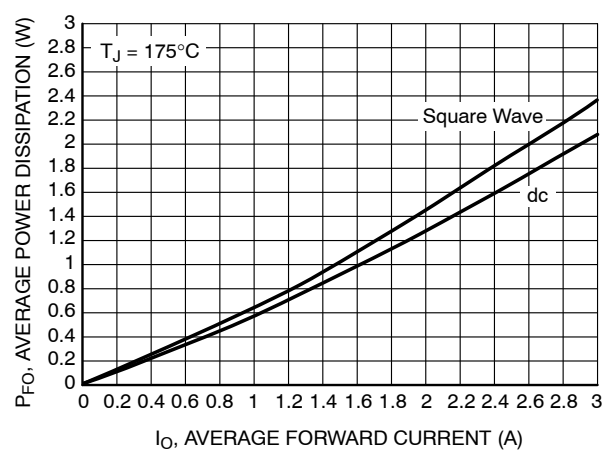


Figure 6. Forward Power Dissipation



RATINGS AND CHARACTERISTIC CURVES MBR2H100

TYPICAL CHARACTERISTICS

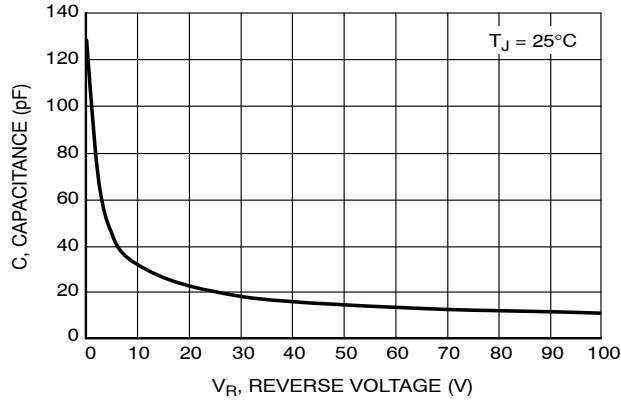


Figure 7. Capacitance

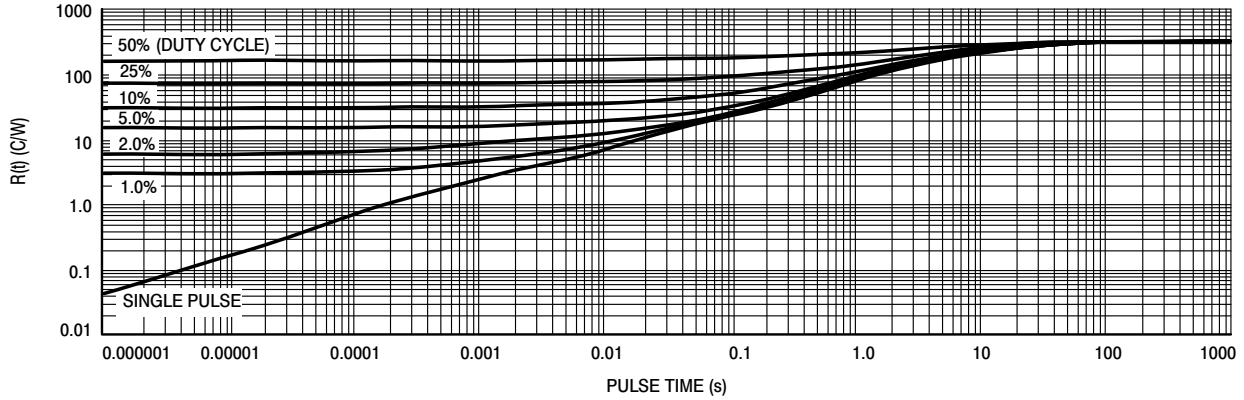


Figure 8. Thermal Response, Junction-to-Ambient (20 mm² pad)

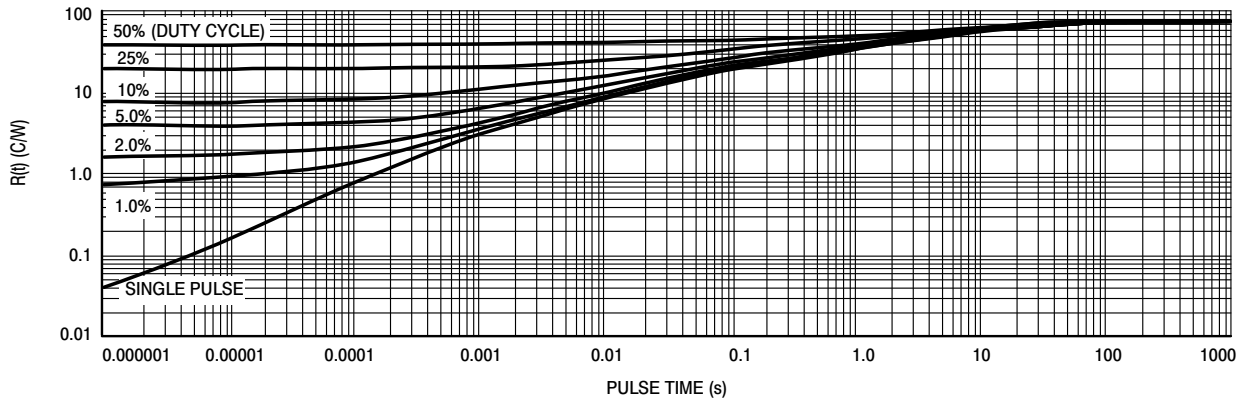


Figure 9. Thermal Response, Junction-to-Ambient (1 in² pad)