

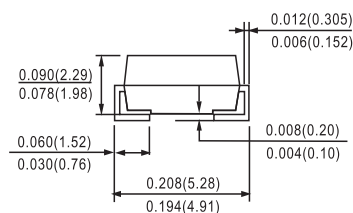
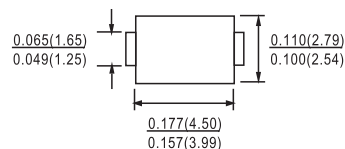
**TAYCHIPST****Surface Mount Schottky Power Rectifier****MBRA210ET3****10V 2.0A****FEATURES**

- Low I_R , Extends Battery Life
- 1st in the Market Place with a 10 V_R Schottky Rectifier
- Compact Package with J-Bend Leads Ideal for Automated Handling
- Highly Stable Oxide Passivated Junction
- Guardring for Over-Voltage Protection
- Optimized for Low Leakage Current
- Pb-Free Package is Available

MECHANICAL DATA

- Case: Molded Epoxy
- Epoxy Meets UL 94 V-0 @ 0.125 in
- Weight: 70 mg (Approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Polarity: Polarity Band Indicates Cathode Lead

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	10	V
Average Rectified Forward Current (At Rated V_R , $T_C = 125^\circ\text{C}$)	I_O	2.0	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	100	A
Storage/Operating Case Temperature	T_{stg} , T_C	-65 to +150	$^\circ\text{C}$
Operating Junction Temperature	T_J	-65 to +150	$^\circ\text{C}$
Voltage Rate of Change (Rated V_R , $T_J = 25^\circ\text{C}$)	dv/dt	10,000	V/ μs

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Min Pad	1 Inch Pad	Unit
Thermal Resistance, Junction-to-Lead (Note 1)	$R_{\theta JL}$	22	15	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction-to-Ambient (Note 1)	$R_{\theta JA}$	150	81	

ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (Note 2) ($I_F = 0.1 \text{ A}$) ($I_F = 1.0 \text{ A}$) ($I_F = 2.0 \text{ A}$)	V_F	$T_J = 25^\circ\text{C}$	$T_J = 100^\circ\text{C}$	V
		0.405	0.275	
		0.480	0.355	
Maximum Instantaneous Reverse Current ($V_R = 5.0 \text{ V}$) ($V_R = 10 \text{ V}$)	I_R	$T_J = 25^\circ\text{C}$	$T_J = 100^\circ\text{C}$	μA
		15	200	
		50	500	

1. Mounted on a 3" square FR4 PC Board with min. pads or 1" square copper heat spreader.
2. Pulse Test: Pulse Width $\leq 250 \mu\text{s}$, Duty Cycle $\leq 2\%$.



TAYCHIPST

Surface Mount Schottky Power Rectifier

MBRA210ET3

10V 2.0A

RATINGS AND CHARACTERISTIC CURVES MBRA210ET3

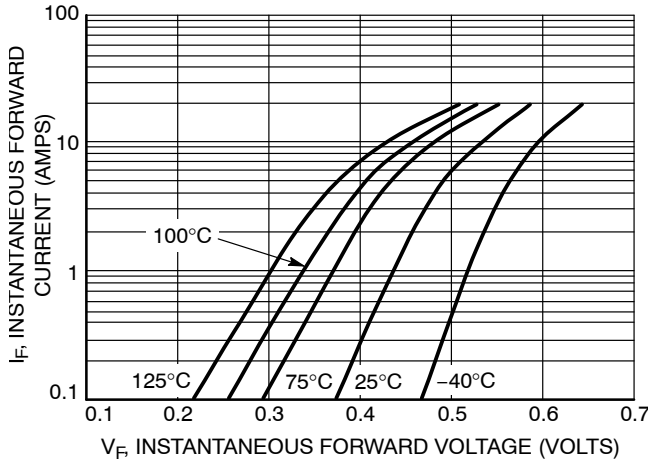


Figure 1. Typical Forward Voltage

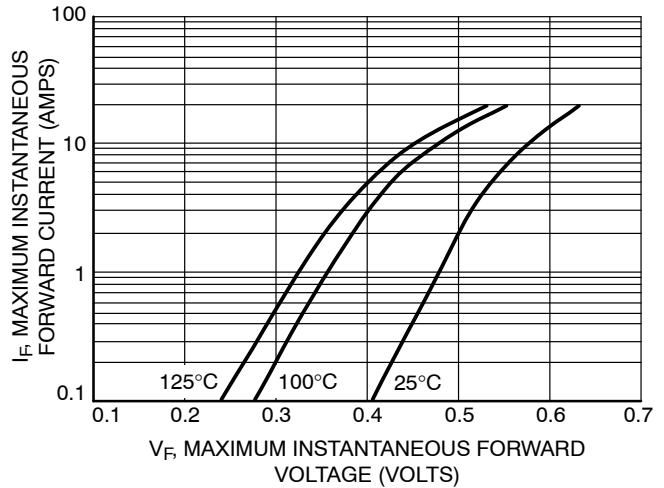


Figure 2. Maximum Forward Voltage

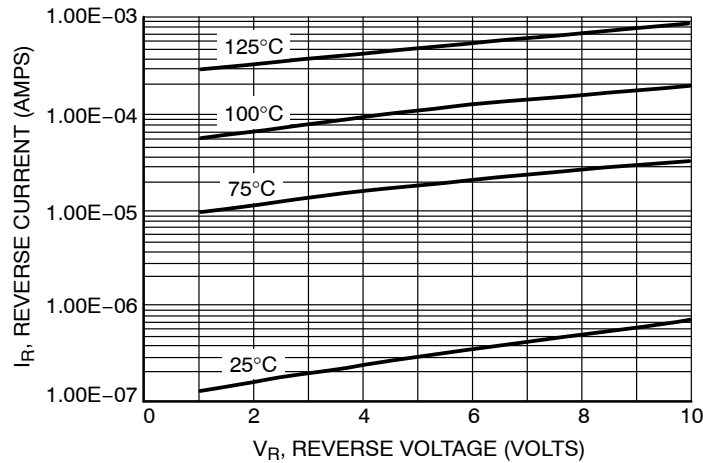


Figure 3. Typical Reverse Current

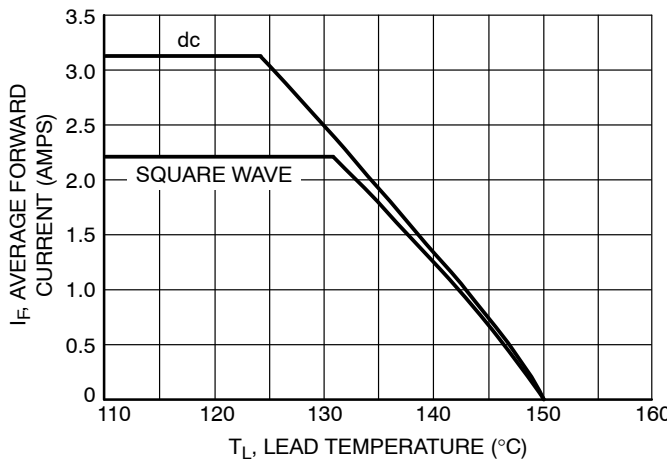


Figure 4. Current Derating - Junction to Lead

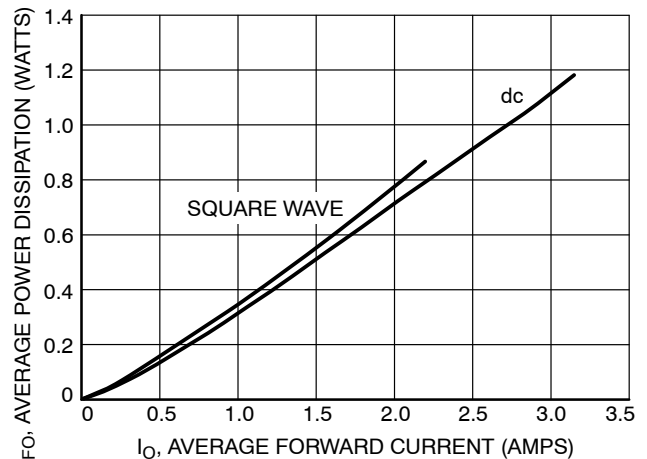


Figure 5. Forward Power Dissipation

RATINGS AND CHARACTERISTIC CURVES MBRA210ET3

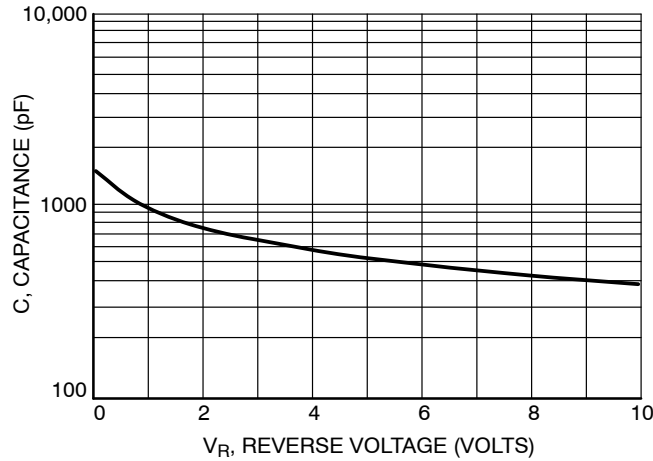


Figure 6. Typical Capacitance

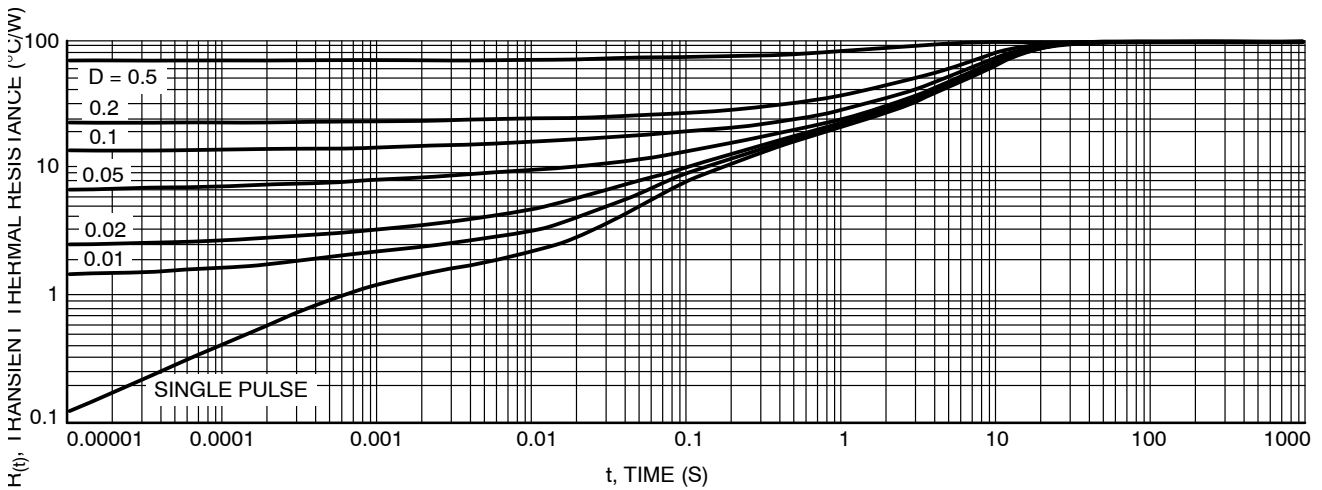


Figure 7. Thermal Response, Junction to Ambient (min pad)

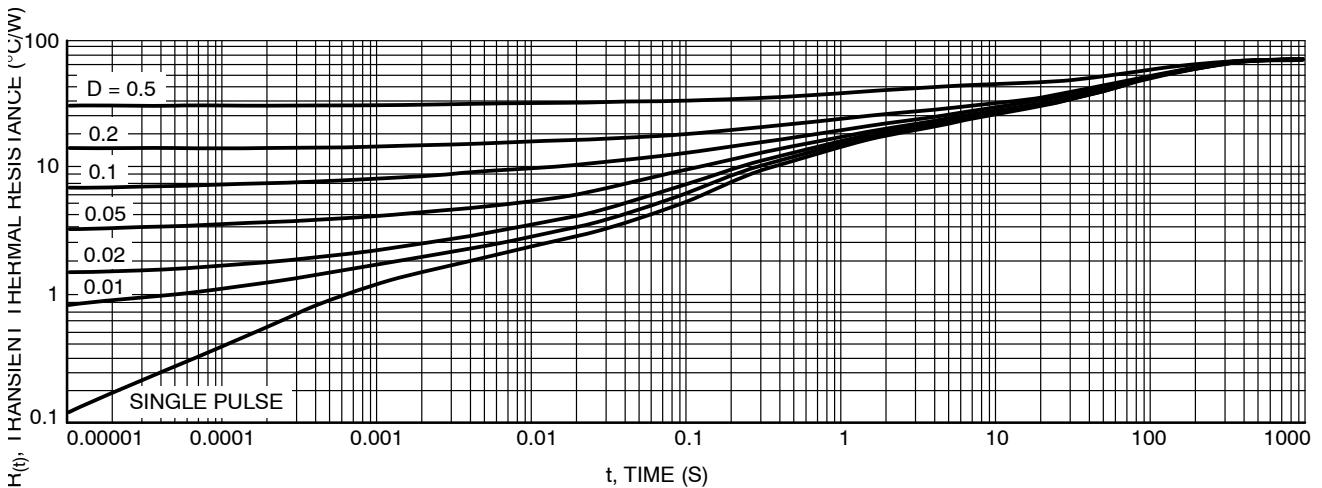


Figure 8. Thermal Response, Junction to Ambient (1 inch pad)