

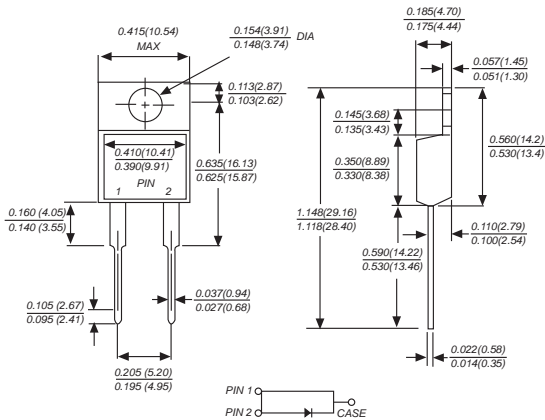


MBR820 THRU MBR8100

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 8.0 Amperes

TO-220AC



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C, 0.25" (6.35mm) from case for 10 seconds

MECHANICAL DATA

Case: TO-220AC molded plastic body
Terminals: Leads solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.064 ounce, 1.81 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

MDD Catalog Number	SYMBOLS	MBR 820	MBR 830	MBR 840	MBR 845	MBR 850	MBR 860	MBR 870	MBR 880	MBR 890	MBR 8100	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	50	60	70	80	90	100	VOLTS	
Maximum RMS voltage	V_{RMS}	14	21	28	32	35	42	49	56	63	70	VOLTS	
Maximum DC blocking voltage	V_{DC}	20	30	40	45	50	60	70	80	90	100	VOLTS	
Maximum average forward rectified current (see fig.1)	I_{AV}	8.0										Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0										Amps	
Maximum instantaneous forward voltage at 8.0A	V_F	0.65		0.75		0.85						Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	1.0		15.0		50.0						mA	
Typical junction capacitance (NOTE 1)	C_J	300		250								pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	3.0										°C/W	
Operating junction temperature range	T_J	-50 to +125				-50 to +150							°C
Storage temperature range	T_{STG}	-50 to +150										°C	

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to case

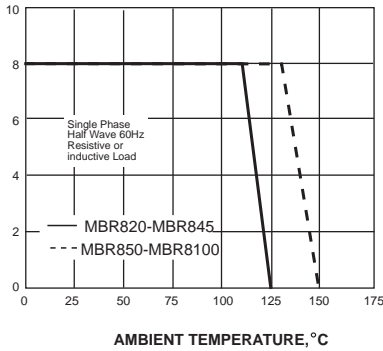


www.microdiode.com

RATINGS AND CHARACTERISTIC CURVES MBR820 THRU MBR8100

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

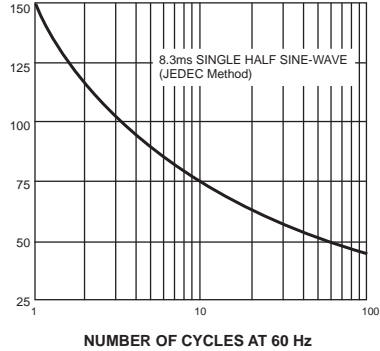
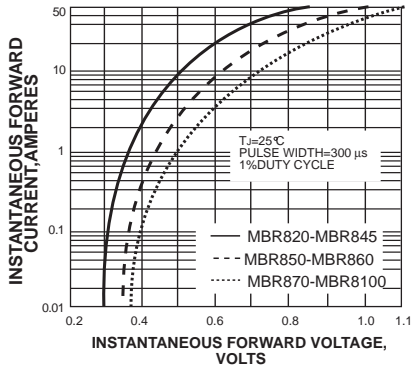
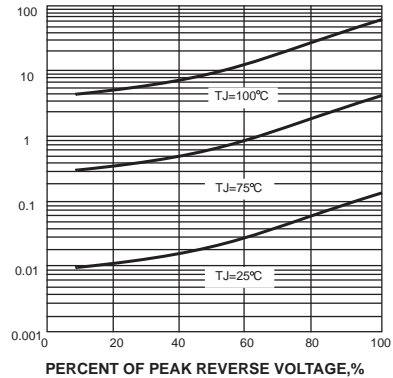


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



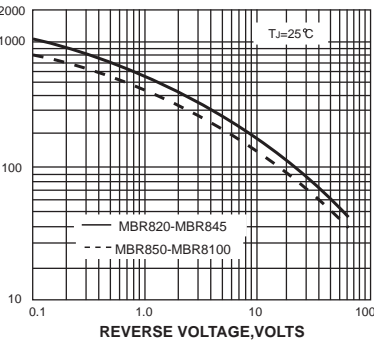
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



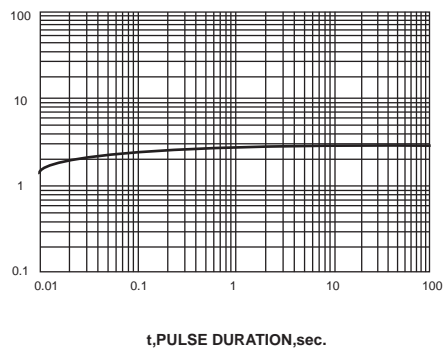
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve graph is for reference only, can't be the basis for judgment(曲线图仅供参考!)

