MBR1635 THRU MBR16200

SCHOTTKY BARRIER RECTIFIER

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HORNBY ELECTRONIC

REVERSE VOLTAGE: **35 to 200 VOLTS**

FORWARD CURRENT: **16.0 AMPERE**

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- For use in low voltage,high frequency inverters,free whelling,and polarity protection applications
- High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

Case: Molded plastic, TO-220A

Epoxy: UL 94V-O rate flame retardant

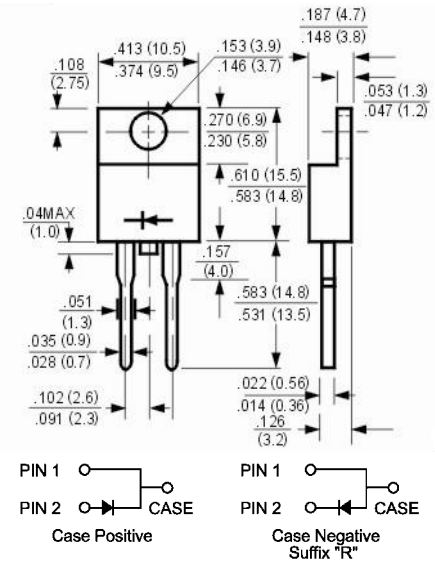
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram

TO-220A



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60H_Z, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	*MBR1635*	*MBR1645*	*MBR1650*	*MBR1660*	*MBR1680*	*MBR16100*	*MBR16150*	*MBR16200*	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	45	50	60	80	100	150	200	**Volts**
Maximum RMS Voltage	V_{RMS}	24	31	35	42	56	70	105	140	**Volts**
Maximum DC Blocking Voltage	V_{DC}	35	45	50	60	80	100	150	200	**Volts**
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	16.0								**Amp**
Peak repetitive forward current at T_C = 125°C (rated VR, sq. wave, 20 KHz)	I_{FRM}	32.0								**Amp**
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150								**Amp**
Peak repetitive reverse current at tp = 2.0μs, 1KHz	I_{RRM}	1.0		0.5						**Amp**
Maximum Forward Voltage (Note 1) at I_F = 16A, T_C = 25°C at I_F = 16A, T_C = 125°C	V_F	0.63 0.57		0.75 0.65		0.85 0.75		0.95 0.92		**Volts**
Maximum Reverse Current at Rated DC Blocking Voltage at T_C=25℃ T_C=125℃	I_R	0.2 30		1.0 45				0.2 30		**mAmp**
Typical Thermal Resistance	$R_{\theta JC}$	3.0								℃/W
Operating Temperature Range	T_J	-55 to +150								℃
Storage Temperature Range	Tstg	-55 to +150								℃

NOTES:

1- Pulse test: 300μs pulse width, 1% duty cycle

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RATINGS AND CHARACTERISTIC CURVES

FIG.1- FORWARD CURRENT DERATING CURVE

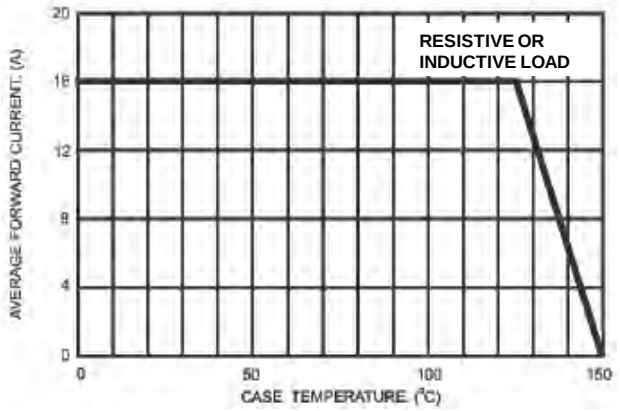

FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

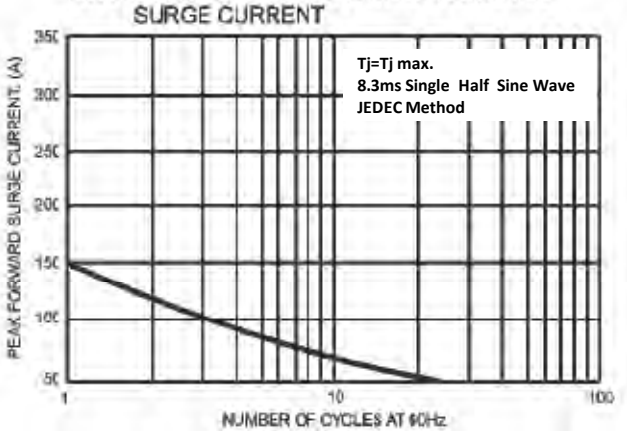

FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

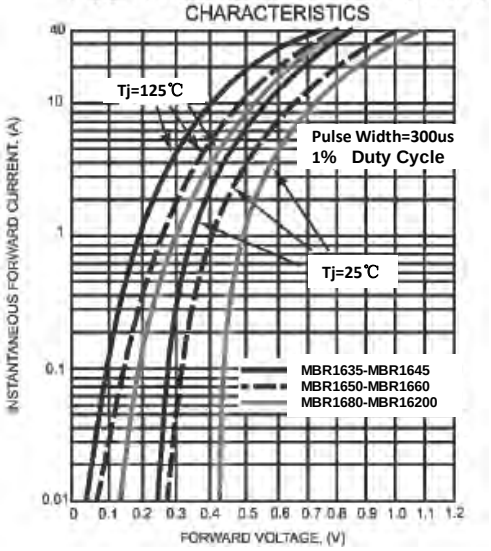

FIG.4- TYPICAL REVERSE CHARACTERISTICS

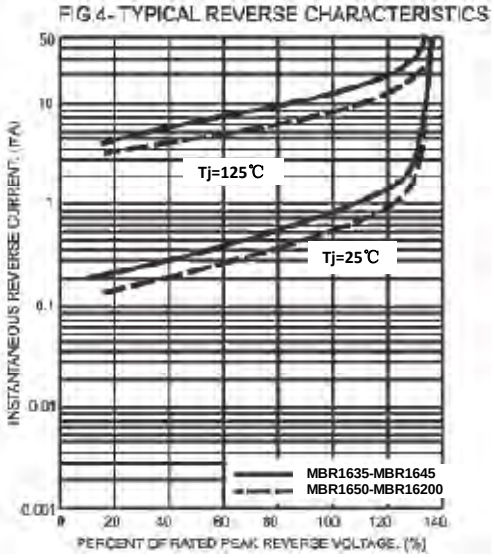

FIG.5- TYPICAL JUNCTION CAPACITANCE

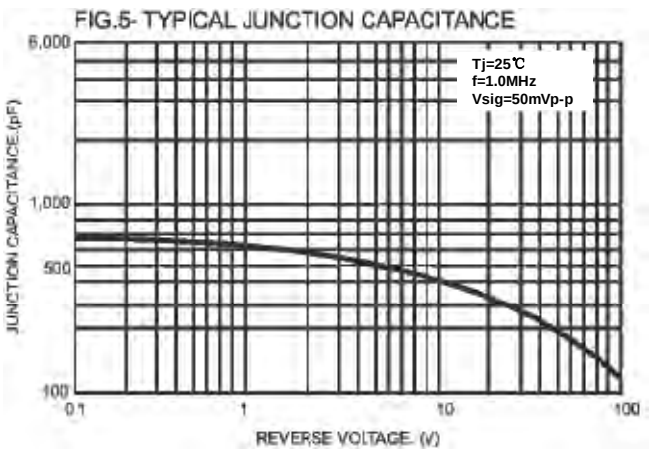

FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS