MBRS1635 THRU MBRS1660

SCHOTTKY BARRIER RECTIFIER

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HORNBY ELECTRONIC

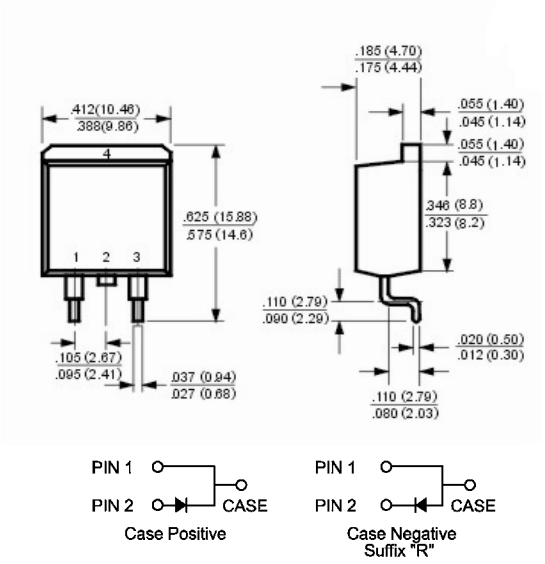
REVERSE VOLTAGE: **35 to 60 VOLTS**

FORWARD CURRENT: **16.0 AMPERE**

FEATURES

· For surface mounted application
· 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

D^2PAK



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Molded plastic, D^2PAK
Epoxy: UL 94V-O rate flame retardant
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
Polarity: As marked
Mounting position: Any
Weight: 0.06ounce, 1.70gram

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	*MBRS1635*	*MBRS1645*	*MBRS1650*	*MBRS1660*	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	45	50	60	**Volts**
Maximum RMS Voltage	V_{RMS}	24	31	35	42	**Volts**
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	**Volts**
Maximum Average Forward Rectified Current at T_C = 125°C	$I_{(AV)}$	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		**Volts**
Maximum Reverse Current at Rated DC Blocking Voltage at T_C=25℃ T_C=125℃	I_R	0.2 40		1.0 50		**mAmp**
Voltage rate of change (rated V_R)	dv/dt	10,000				**V/μs**
Typical Thermal Resistance	$R_{\theta JC}$	1.5				**℃/W**
Operating Temperature Range	T_J	-55 to +150				**℃**
Storage Temperature Range	Tstg	-55 to +175				**℃**

NOTES:

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

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Forward Current Derating Curve

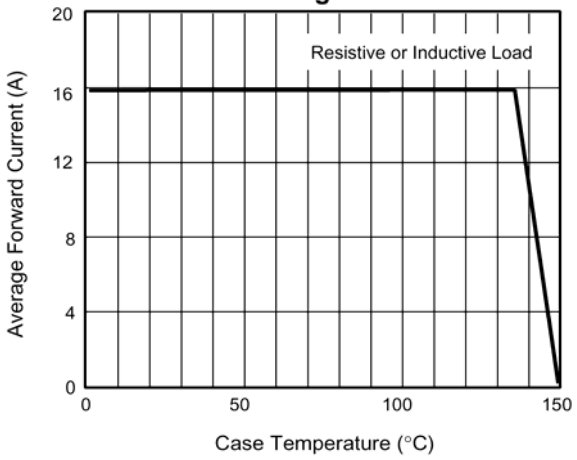

Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

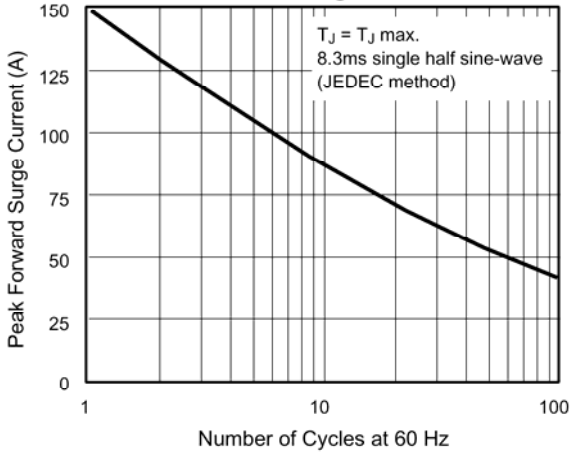

Fig. 3 - Typical Instantaneous Forward Characteristics

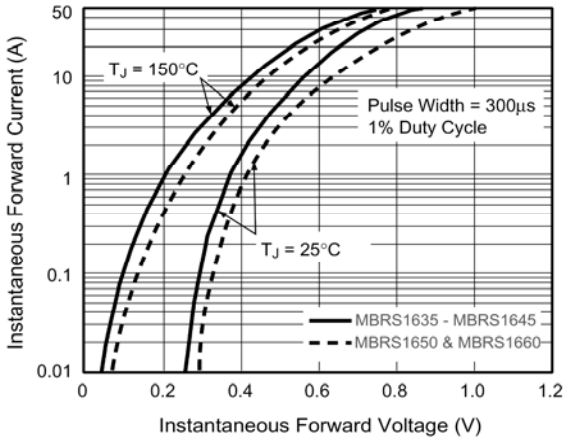

Fig. 4 - Typical Reverse Characteristics

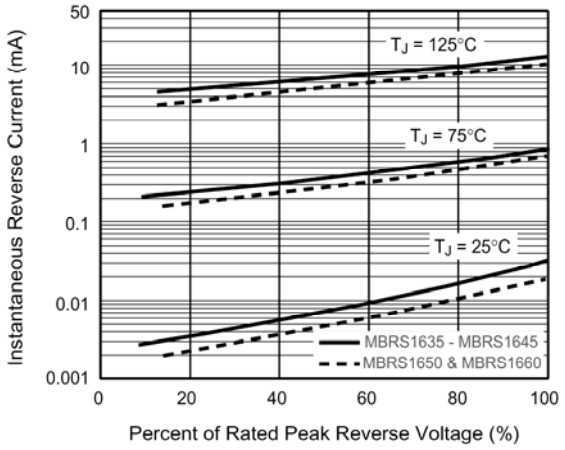

Fig. 5 - Typical Junction Capacitance

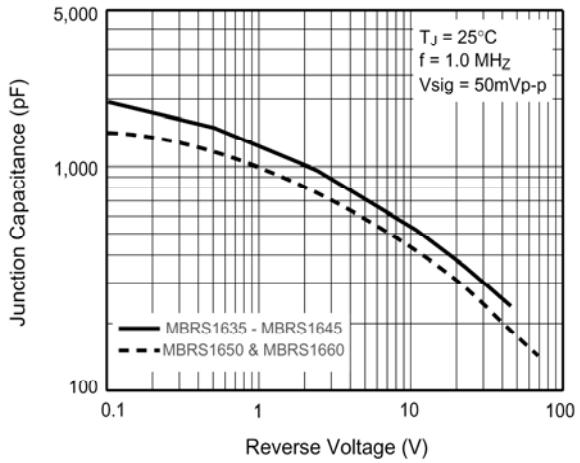

Fig. 6 - Typical Transient Thermal Impedance