MBRS1035 THRU MBRS1060

SCHOTTKY BARRIER RECTIFIER

康 比 電 子
HORNBY ELECTRONIC

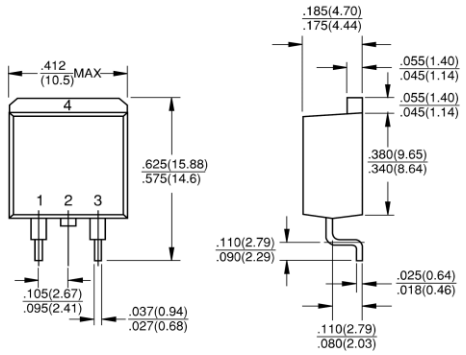
REVERSE VOLTAGE: **35 to 60 VOLTS**

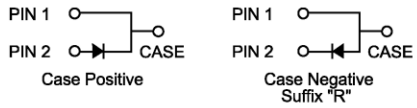
FORWARD CURRENT: **10.0 AMPERE**

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: 260°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	*MBRS1035*	*MBRS1045*	*MBRS1050*	*MBRS1060*	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 See Fig. 1	$I_{(AV)}$	10.0				**Amp**
Peak repetitive forward current (sq. wave, 20 KHz) at T_C = 135°C	I_{FRM}	20				**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 = 10A, T_C = 25°C	V_F	-		0.80		**Volts**
at I_F = 10A, T_C = 125°C		0.57		0.70		
at I_F = 20A, T_C = 25°C		0.84		0.95		
at I_F = 20A, T_C = 125°C		0.72		0.85		
Maximum Reverse Current at Rated DC Blocking Voltage at T_C=25℃	I_R	0.1				**mAmp**
T_C=125℃		15				
Voltage rate of change (rated V_R)	dv/dt	10,000				**V/μs**
Typical Thermal Resistance	$R_{\theta JC}$	2.0				**℃/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

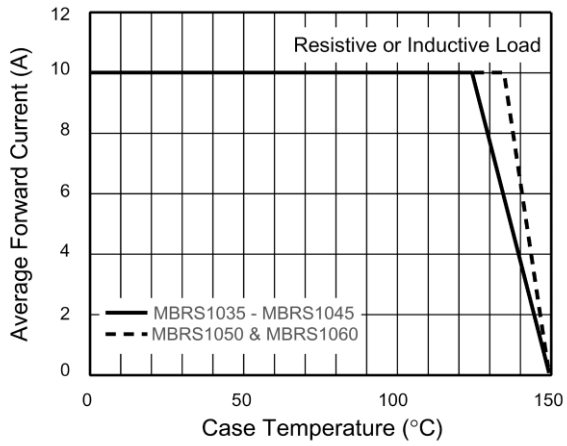

Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

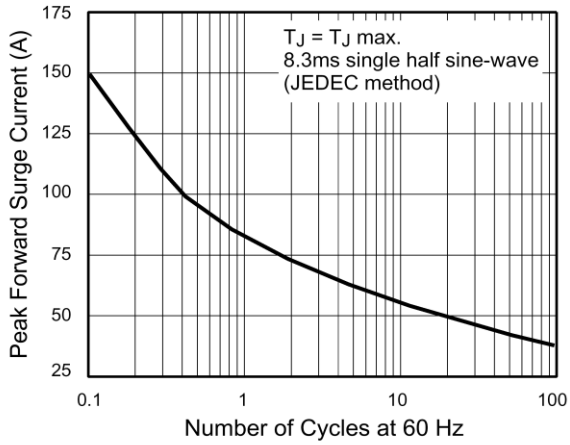

Fig. 3 - Typical Instantaneous Forward Characteristics

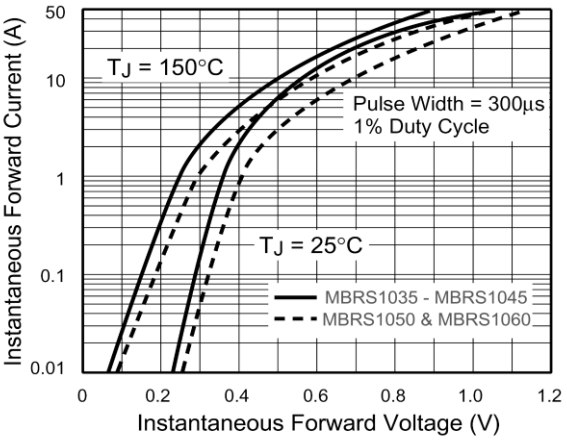

Fig. 4 - Typical Reverse Characteristics

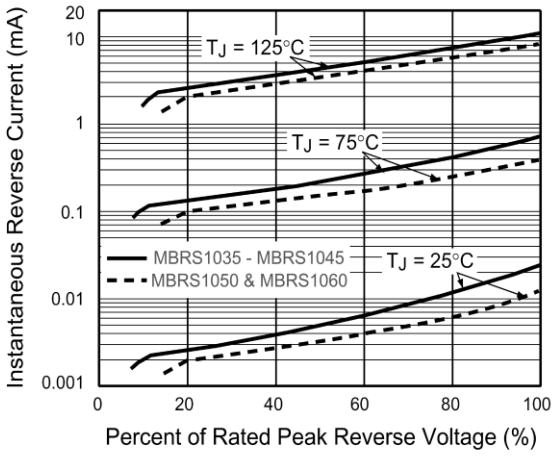

Fig. 5 - Typical Junction Capacitance

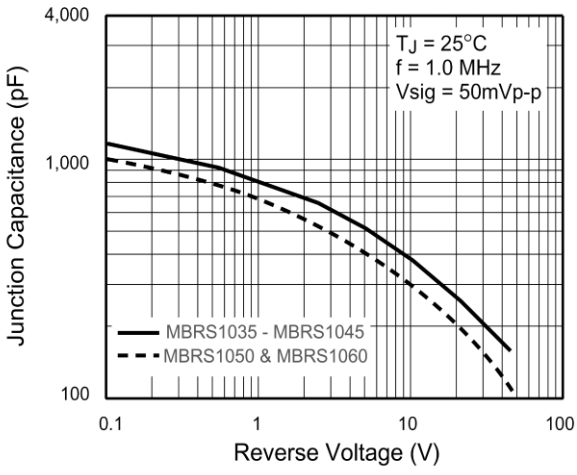

Fig. 6 - Typical Transient Thermal Impedance