

MBRS16XX SERIES

SCHOTTKY BARRIER RECTIFIER

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MBRS1635 THRU MBRS1660

SCHOTTKY BARRIER RECTIFIER



康比電子
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 wheeling, and polarity protection applications
- High temperature soldering guaranteed:
250°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

Case: Molded plastic, D²PAK

Epoxy: UL 94V-O rate flame retardant

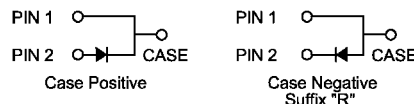
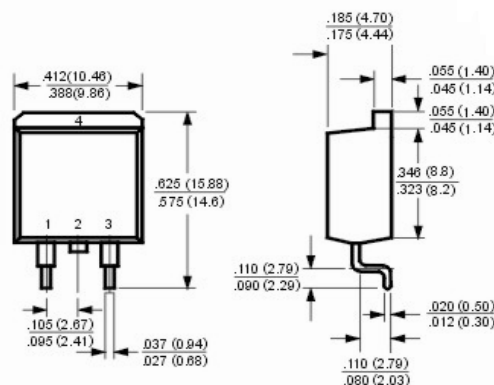
Terminals: Leads solderable per MIL-STD-202
method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.06ounce, 1.70gram

D²PAK



Dimensions in inches and (millimeters)

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, 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	V _F	0.63		0.75		Volts
Maximum Forward Voltage (Note 1) at I _F = 16A, T _C = 125°C	V _F	0.57		0.65		Volts
Maximum Reverse Current at T _C =25°C	I _R	0.2		1.0		mAmp
at Rated DC Blocking Voltage T _C =125°C	I _R	40		50		mAmp
Voltage rate of change (rated V _R)	dv/dt	10,000				V/μs
Typical Thermal Resistance	R _{θJC}	1.5				°C/W
Operating Temperature Range	T _J	-55 to +150				°C
Storage Temperature Range	T _{stg}	-55 to +175				°C

NOTES:

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

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Forward Current Derating Curve

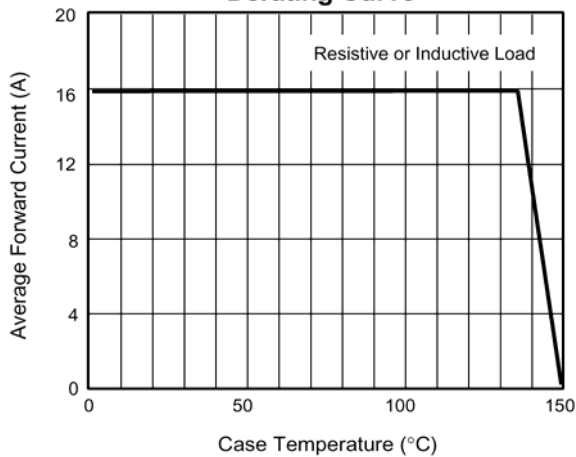


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

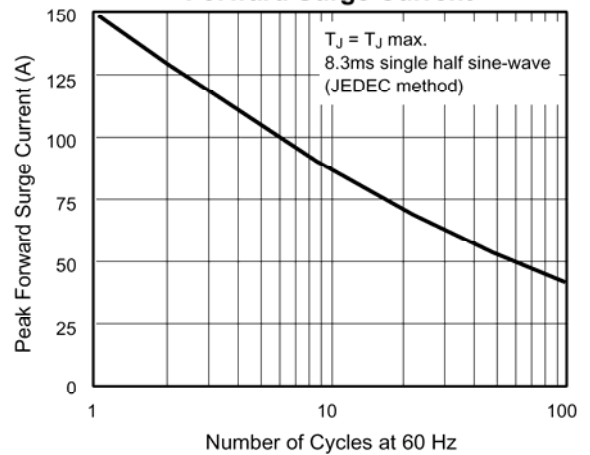


Fig. 3 - Typical Instantaneous Forward Characteristics

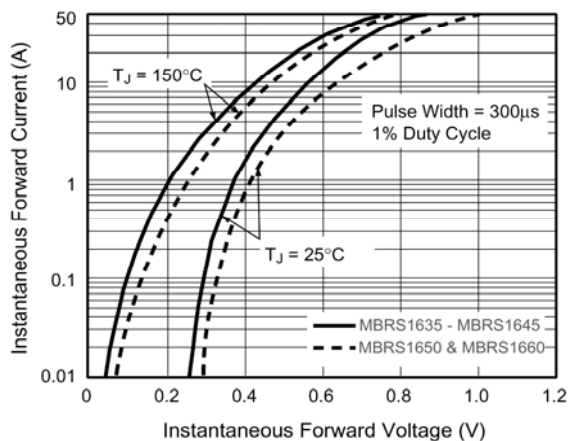


Fig. 4 - Typical Reverse Characteristics

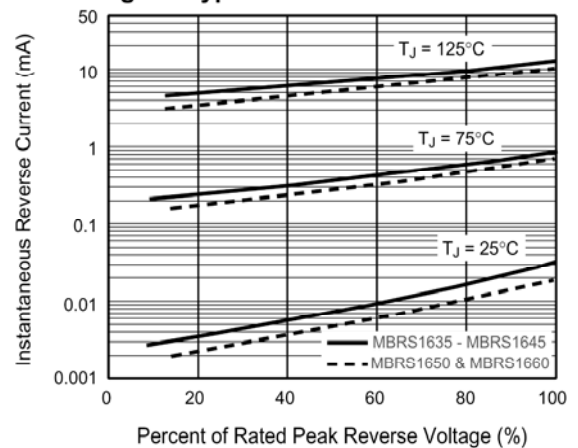


Fig. 5 - Typical Junction Capacitance

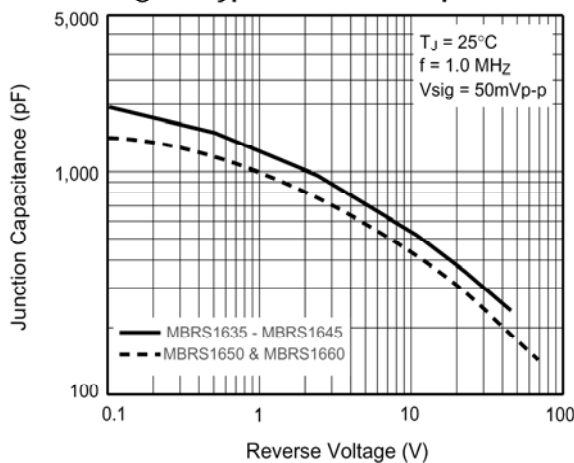


Fig. 6 - Typical Transient Thermal Impedance

