

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 whelling, and polarity protection applications
- High temperature soldering guaranteed:
260°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

Case: Molded plastic, D²PAK

Epoxy: UL 94V-O rate flame retardant

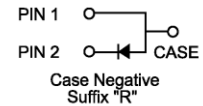
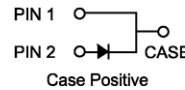
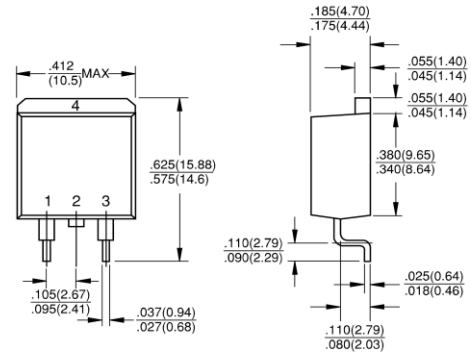
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

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

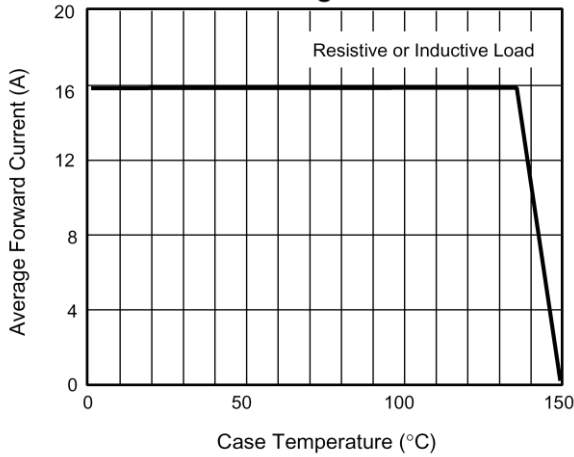


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

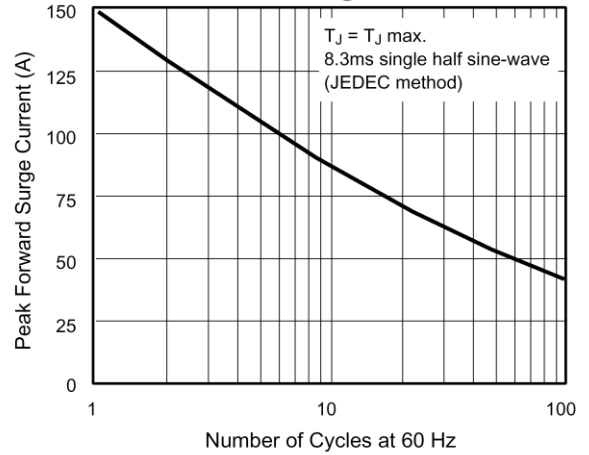


Fig. 3 - Typical Instantaneous Forward Characteristics

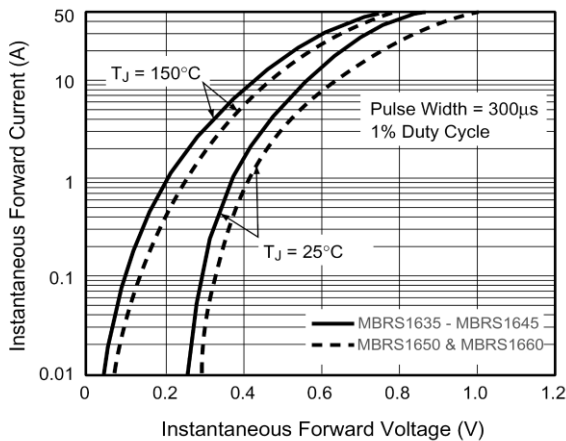


Fig. 4 - Typical Reverse Characteristics

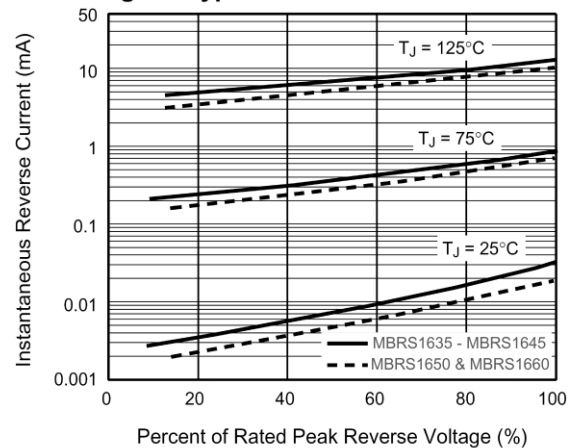


Fig. 5 - Typical Junction Capacitance

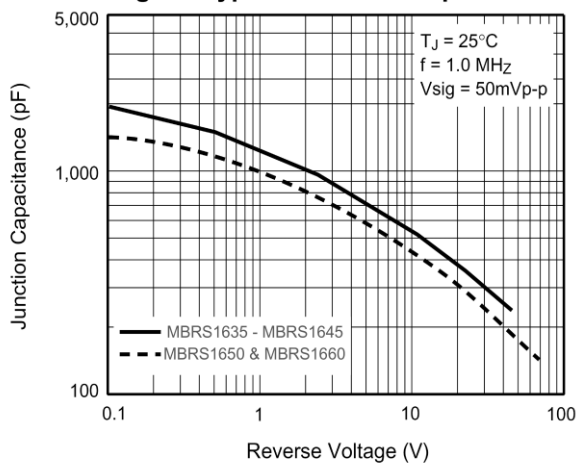


Fig. 6 - Typical Transient Thermal Impedance

