SWITCHMODE™ Power Rectifiers

... using the Schottky Barrier principle with a platinum barrier metal. These state-of-the-art devices have the following features:

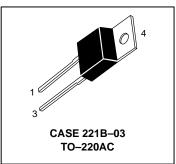
- Guardring for Stress Protection
- Low Forward Voltage
- 150°C Operating Junction Temperature
- Guaranteed Reverse Avalanche
- Mechanical Characteristics:
- Case: Epoxy, Molded
- Weight: 1.9 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped 50 units per plastic tube
- Marking: B1635, B1645





MBR1635

SCHOTTKY BARRIER RECTIFIERS 16 AMPERES 35 and 45 VOLTS



MOTOROLA

MAXIMUM RATINGS

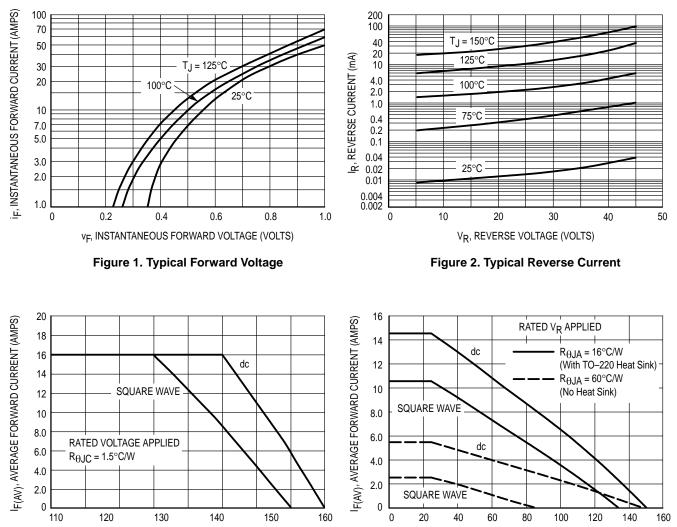
Rating	Symbol	MBR1635	MBR1645	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	35	45	Volts
Average Rectified Forward Current (Rated V_R) T _C = 125°C	lF(AV)	16	16	Amps
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20 kHz) T _C = 125°C	IFRM	32	32	Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	IFSM	150	150	Amps
Peak Repetitive Reverse Surge Current (2.0 μs, 1.0 kHz)	IRRM	1.0	1.0	Amp
Operating Junction Temperature	Тј	-65 to +150	-65 to +150	°C
Storage Temperature	T _{stg}	-65 to +175	-65 to +175	°C
Voltage Rate of Change (Rated V _R)	dv/dt	1000	10000	V/μs
THERMAL CHARACTERISTICS				
Maximum Thermal Resistance, Junction to Case	R _{θJC}	1.5	1.5	°C/W
ELECTRICAL CHARACTERISTICS		•	•	
Maximum Instantaneous Forward Voltage (1) (iF = 16 Amps, T _C = 125°C) (iF = 16 Amps, T _C = 25°C)	۷F	0.57 0.63	0.57 0.63	Volts
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, $T_C = 125^{\circ}C$) (Rated dc Voltage, $T_C = 25^{\circ}C$)	İR	40 0.2	40 0.2	mA

(1) Pulse Test: Pulse Width = 300 μ s, Duty Cycle \leq 2.0%.

SWITCHMODE is a trademark of Motorola, Inc.

Preferred devices are Motorola recommended choices for future use and best overall value.

MBR1635 MBR1645



T_C, CASE TEMPERATURE (°C) Figure 3. Current Derating, Case

T_A, AMBIENT TEMPERATURE (°C) Figure 4. Current Derating, Ambient

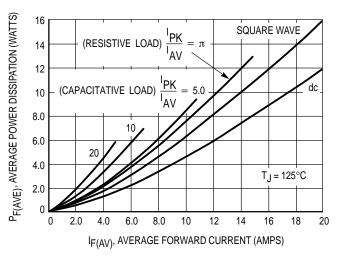
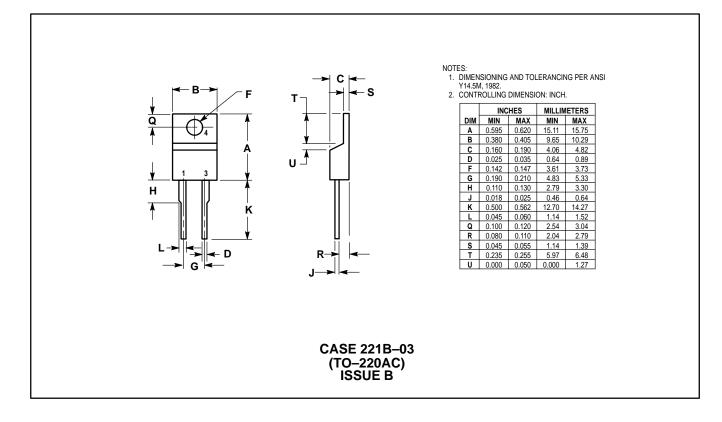


Figure 5. Forward Power Dissipation

PACKAGE DIMENSIONS



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