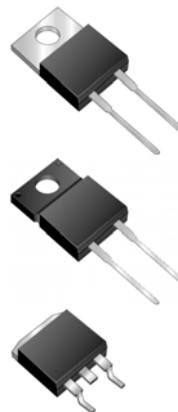




Schottky Barrier Rectifiers

Reverse Voltage 35 to 60 Volts Forward Current 16.0 Amperes

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Guardring for overvoltage protection
- ◆ 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



- ◆ Case: JEDEC TO-220AC, ITO-220AC & TO-263AB molded plastic body
- ◆ Terminals: Plated leads, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: As marked
- ◆ Mounting Position: Any
- ◆ Mounting Torque: 10 in-lbs maximum
- ◆ Weight: 0.08 ounce, 2.24 grams

Technical drawing of a 10-pin D-subminiature connector. The drawing shows a top view and a side view. The top view includes dimensions for the overall width (0.415 MAX), pin spacing (0.370), and individual pin widths (0.154, 0.113, 0.103). The side view shows the height of the connector body (0.185, 0.175, 0.055, 0.045) and the pin length (0.148, 0.118). A legend indicates that PIN 1 is the top pin and PIN 2 is the bottom pin. The drawing is labeled "DIA." for diameter.

Technical drawing of a 2-pin connector, showing front and side views with dimensions in inches and millimeters.

Front View Dimensions:

- Top width: 0.405 (10.27) / 0.363 (9.72)
- Left side height: 0.600 (15.5) / 0.580 (14.5)
- Right side height: 0.676 (17.2) / 0.646 (16.4)
- Pin 1 diameter: 0.197 (4.85) / 0.177 (4.35)
- Pin 2 diameter: 0.060 (1.52)
- Pin 1 to Pin 2 distance: 0.037 (0.94) / 0.027 (0.69)
- Bottom height: 0.205 (5.20) / 0.195 (4.92)

Side View Dimensions:

- Top width: 0.188 (4.77) / 0.172 (4.36)
- Second section width: 0.110 (2.80) / 0.100 (2.54)
- Third section width: 0.131 (3.39) / 0.122 (3.08)
- Fourth section width: 0.350 (8.89) / 0.330 (8.38)
- Bottom height: 0.110 (2.80) / 0.100 (2.54)
- Bottom pin diameter: 0.022 (0.55) / 0.014 (0.36)

Legend:

- PIN 1:
- PIN 2:

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Maximum Ratings and Electrical Characteristics

($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	MBR1635	MBR1645	MBR1650	MBR1660	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	35	45	50	60	Volts
Working peak reverse voltage	V _{RWM}	35	45	50	60	Volts
Maximum DC blocking voltage	V _{DC}	35	45	50	60	Volts
Maximum average forward rectified current at T _C =125°C	I _{F(AV)}	16				Amps
Peak repetitive forward current (rated V _R , sq. wave, 20KHz) at T _C =125°C	I _{FRM}	32				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150				Amps
Peak repetitive reverse current at t _p = 2.0us, 1KHz	I _{RRM}	1.0		0.5		Amps
Voltage rate of change (rated V _R)	dv/dt	10,000		1,000		V/us
Maximum instantaneous forward voltage (Note 4) 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		Volt
Maximum instantaneous reverse current at rated DC blocking voltage (Note 4) T _C =25°C T _C =125°C	I _R	0.2 40		1.0 50		mA
Typical thermal resistance from junction to case	R _{θJC}	MBR 1.5 / MBRF 3.0 / MBRB 1.5				°C/W
RMS Isolation voltage (MBRF type only) from terminals to heatsink with t = 1.0 second, RH ≤ 30%	V _{ISOL}	4500 (Note 1) 3500 (Note 2) 1500 (Note 3)				Volts
Operating junction temperature range	T _J	-55 to +150				°C
Storage temperature range	T _{STG}	-55 to +150				°C

- Notes:**
1. Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset
 2. Clip mounting (on case), where leads do overlap heatsink
 3. Screw mounting with 4-40 screw, where washer diameter is < 4.9 mm (0.19")
 4. Pulse test: 300 μs pulse width, 1% duty cycle

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

