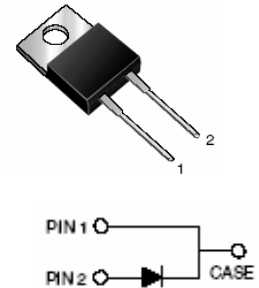


10A Schottky Barrier Rectifier

Features

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guarding for over voltage 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



TO-220AC

Mechanical Data

Case:	JEDEC TO-220AC, 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

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	MBR1035	MBR1045	MBR1050	MBR1060	Unit	Conditions
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	35	45	50	60	V	
V_{DC}	Maximum DC Blocking Voltage	35	45	50	60	V	
I_{F(AV)}	Maximum Average Forward Rectified Current	10				A	See Fig.1
I_{FSM}	Peak Forward Surge Current per leg	150				A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
T_J	Operating Junction Temperature Range	-65 to +150				° C	
T_{STG}	Storage Temperature Range	-65 to +150				° C	

10A Schottky Barrier Rectifier

MBR1035 - MBR1060

Electrical Characteristics ($T_{\text{Ambient}}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	MBR1035	MBR1045	MBR1050	MBR1060	Unit	Conditions
V _F	Maximum Instantaneous Forward Voltage per leg (Note 1)	-		0.80		V	IF=10A Tc=25 °C
		0.57		0.70			IF=10A Tc=125 °C
I _R	Maximum Instantaneous Reverse Current at rated DC Blocking Voltage	0.10				mA	Tc=25 °C
		15					Tc=125°C
R _{θ-JC}	Maximum Thermal Resistance from Junction to Case	2.0				° C/W	

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

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

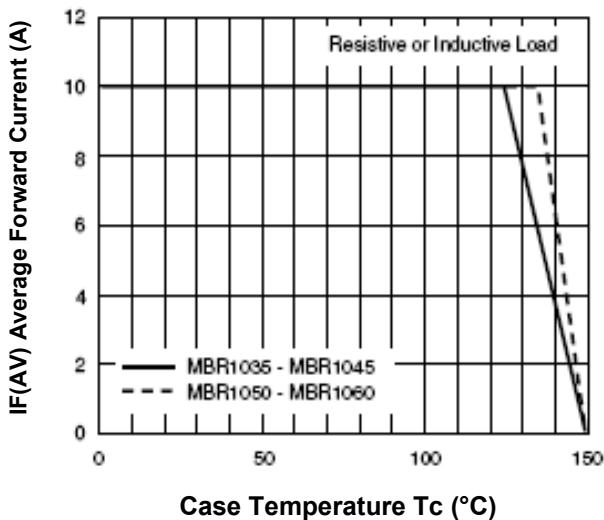


Fig.2- Max. Non-Repetitive Peak Forward Surge Current

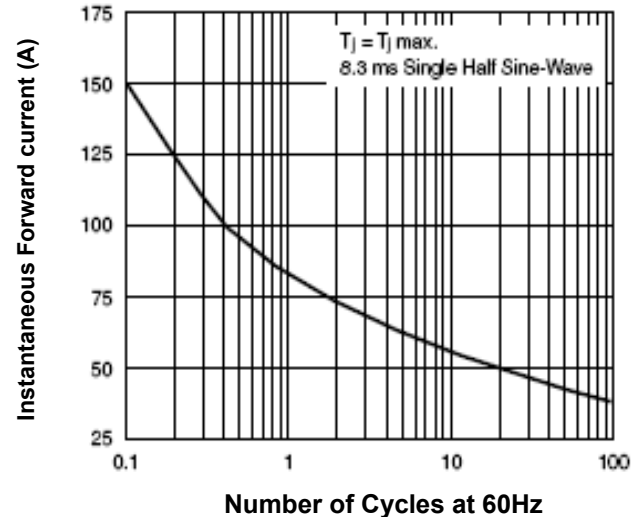


Fig.3- Typical Forward Characteristics

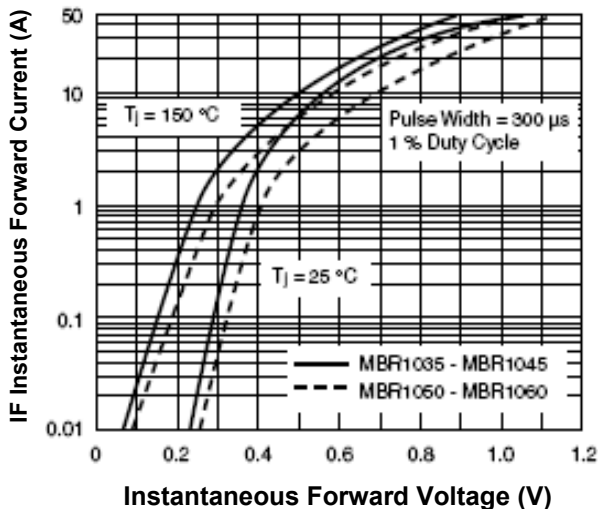
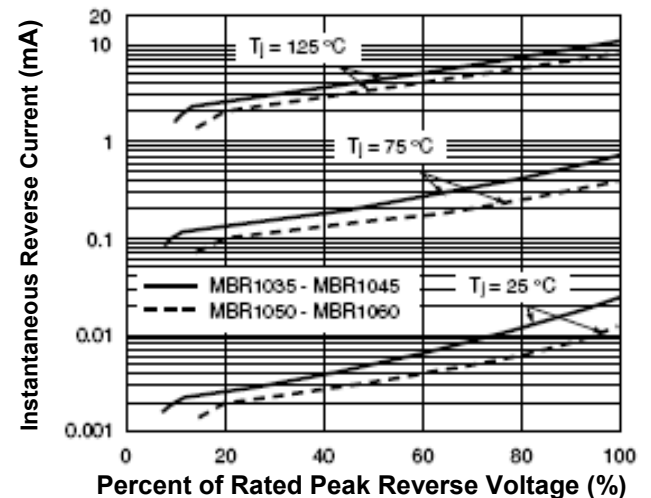


Fig.4- Typical Reverse Characteristics



MBR1035 - MBR1060

Graph showing Junction Capacitance (pF) versus Reverse Voltage (V) for MBR1035 - MBR1045 (solid line) and MBR1050 - MBR1060 (dashed line) diodes. The graph is plotted on a log-log scale. The Y-axis ranges from 100 to 4000 pF, and the X-axis ranges from 0.1 to 100 V. The test conditions are $T_J = 25^\circ\text{C}$, $f = 1.0\text{ MHz}$, and $V_{sig} = 50\text{ mVp-p}$.

Reverse Voltage (V)	Junction Capacitance (pF) - MBR1035 - MBR1045	Junction Capacitance (pF) - MBR1050 - MBR1060
0.1	~1200	~1000
1	~800	~700
10	~400	~300
40	~200	~150

Technical drawing of a mechanical part showing two views: a front view (left) and a side view (right). The front view shows a rectangular block with a central circular hole and a rectangular cutout at the bottom. Dimensions are given in inches and millimeters. The side view shows the profile of the part, including the circular hole and the rectangular cutout. Dimensions are also given in inches and millimeters.

Front View Dimensions:

- Overall width: 0.415 (10.54) MAX.
- Distance from left edge to center of hole: 0.370 (9.40)
- Distance from right edge to center of hole: 0.154 (3.91) DIA.
- Distance from top edge to center of hole: 0.148 (3.74)
- Distance from center of hole to top edge of cutout: 0.113 (2.87)
- Distance from center of hole to bottom edge of cutout: 0.103 (2.62)
- Distance from left edge to left edge of cutout: 0.635 (16.13)
- Distance from right edge to right edge of cutout: 0.625 (15.87)
- Distance from bottom edge of cutout to bottom edge of part: 0.160 (4.06)
- Distance from bottom edge of cutout to bottom edge of part (left side): 0.140 (3.56)
- Distance from bottom edge of cutout to bottom edge of part (right side): 0.057 (1.45)
- Distance from bottom edge of cutout to bottom edge of part (left side): 0.045 (1.14)
- Distance from bottom edge of cutout to bottom edge of part (right side): 0.105 (2.67)
- Distance from bottom edge of cutout to bottom edge of part (left side): 0.095 (2.41)
- Distance from bottom edge of cutout to bottom edge of part (right side): 0.037 (0.94)
- Distance from bottom edge of cutout to bottom edge of part (left side): 0.027 (0.68)
- Distance from bottom edge of cutout to bottom edge of part (right side): 0.205 (5.20)
- Distance from bottom edge of cutout to bottom edge of part (left side): 0.135 (3.43)

Side View Dimensions:

- Overall height: 0.185 (4.70)
- Distance from top edge to top edge of cutout: 0.175 (4.44)
- Distance from top edge to top edge of cutout: 0.055 (1.39)
- Distance from top edge to top edge of cutout: 0.045 (1.14)
- Distance from top edge to top edge of cutout: 0.145 (3.68)
- Distance from top edge to top edge of cutout: 0.135 (3.43)
- Distance from top edge to top edge of cutout: 0.350 (8.89)
- Distance from top edge to top edge of cutout: 0.330 (8.38)
- Distance from top edge to top edge of cutout: 0.603 (15.32)
- Distance from top edge to top edge of cutout: 0.573 (14.55)
- Distance from top edge to top edge of cutout: 1.148 (29.16)
- Distance from top edge to top edge of cutout: 1.118 (28.40)
- Distance from top edge to top edge of cutout: 0.110 (2.79)
- Distance from top edge to top edge of cutout: 0.100 (2.54)
- Distance from top edge to top edge of cutout: 0.560 (14.22)
- Distance from top edge to top edge of cutout: 0.530 (13.46)
- Distance from top edge to top edge of cutout: 0.022 (0.56)
- Distance from top edge to top edge of cutout: 0.014 (0.36)

TAITRON
components incorporated

Page 3 of 4

How to contact us:

US HEADQUARTERS

28040 WEST HARRISON PARKWAY, VALENCIA, CA 91355-4162

Tel: (800) TAITRON (800) 247-2232 (661) 257-6060

Fax: (800) TAITFAX (800) 824-8329 (661) 257-6415

Email: taitron@taitroncomponents.com

Http://www.taitroncomponents.com

TAITRON COMPONENTS MEXICO, S.A .DE C.V.

BOULEVARD CENTRAL 5000 INTERIOR 5 PARQUE INDUSTRIAL ATITALAQUIA, HIDALGO C.P.
42970 MEXICO

Tel: +52-55-5560-1519

Fax: +52-55-5560-2190

TAITRON COMPONENTS INCORPORATED REPRESENTAÇÕES DO BRASIL LTDA

RUA DOMINGOS DE MORAIS, 2777, 2.ANDAR, SALA 24 SAÚDE - SÃO PAULO-SP 04035-001 BRAZIL

Tel: +55-11-5574-7949

Fax: +55-11-5572-0052

TAITRON COMPONENTS INCORPORATED, SHANGHAI REPRESENTATIVE OFFICE

CROSS REGION PLAZA, 899 LINGLING ROAD, SUITE 18C, SHANGHAI, 200030, CHINA

Tel: +86-21-5424-9942

Fax: +86-21-5424-9931