

Schottky Barrier Rectifier Reverse Voltage 40 to 200 Volts Forward Current 40 Amperes

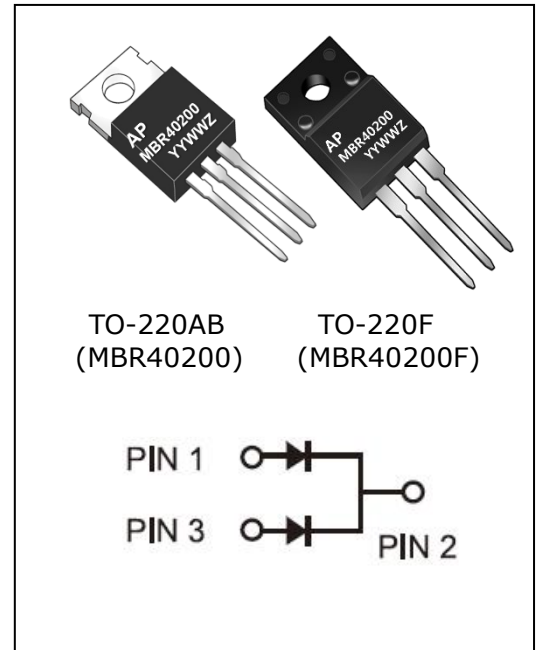
Features

- Metal silicon junction majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:
260°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory
Flammability Classification 94V-0
- For use in low voltage, high frequency inverters,
free-wheeling, and polarity protection application

Technical Data

Case : JEDEC TO-220 molded plastic body

Terminals : Plated axial leads, solderable
per MIL-STD-750, method 2026



Maximum Ratings Characteristics

TA = 25°C unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter		Symbol	MBR 4040	MBR 4045	MBR 4060	MBR 4080	MBR 40100	MBR 40120	MBR 40150	MBR 40200	Unit
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	40	50	60	80	100	120	150	200	V
Maximum RMS voltage		V _{RMS}	28	31.5	42	56	70	84	105	140	V
Maximum DC Blocking Voltage		V _{DC}	40	45	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current 0.375" (9.5mm) lead length		I _{F(AV)}	40.0								A
Peak forward surge current, 8.3mS single half sine-wave superimposed on rated load		I _{FSM}	200.0								A
Maximum instantaneous forward voltage at 1/2I _{F(AV)}		V _F	0.55		0.75		0.85		0.90	0.95	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _a = 25°C	I _R	0.5			0.1					mA
	T _a = 100°C		50			10					
Typical Junction Capacitance ⁽¹⁾		C _j	300								pF
Typical Thermal Resistance ⁽²⁾		R _{θJC}	4								°C/W
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150								°C

Note

- (1) Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.
- (2) PCB mounted with 0.2X0.2"(5.0X5.0 mm) copper pad areas.



Characteristics Curves

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

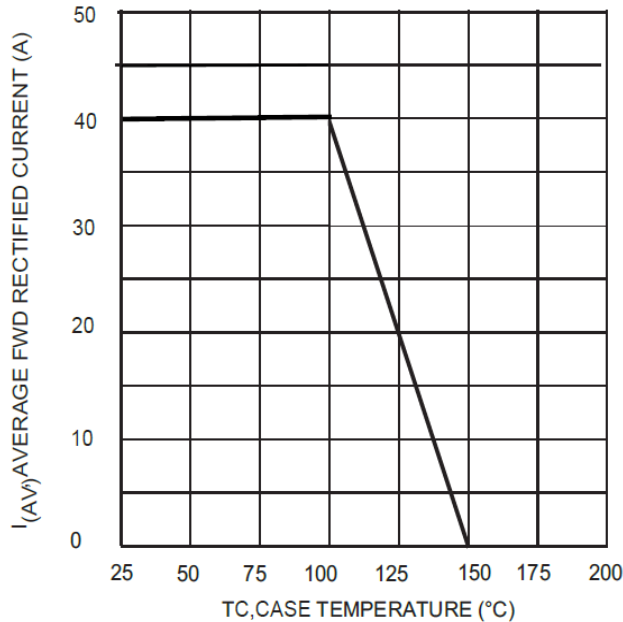


Fig. 1 Forward Derating Curve

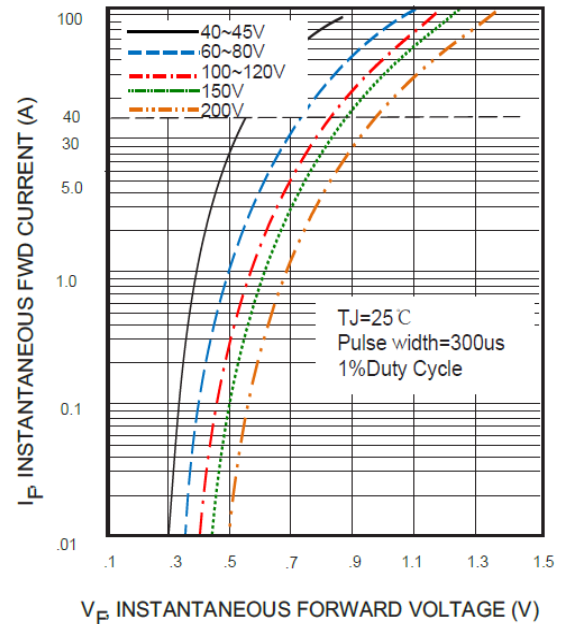


Fig. 2 Typical Forward Characteristics

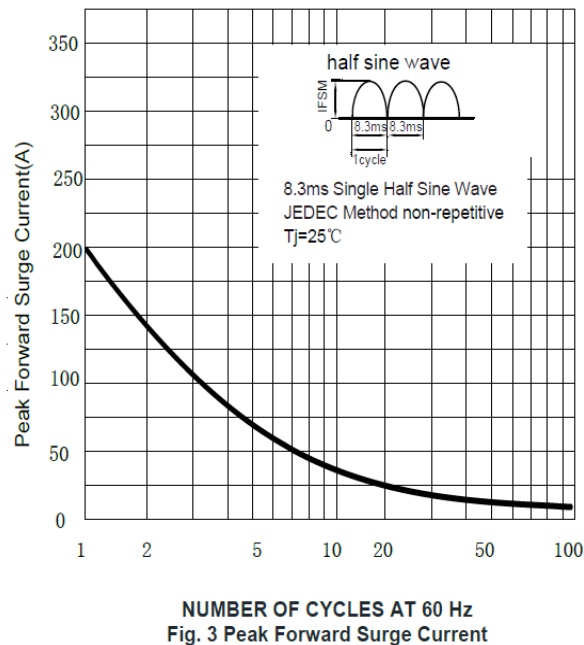


Fig. 3 Peak Forward Surge Current

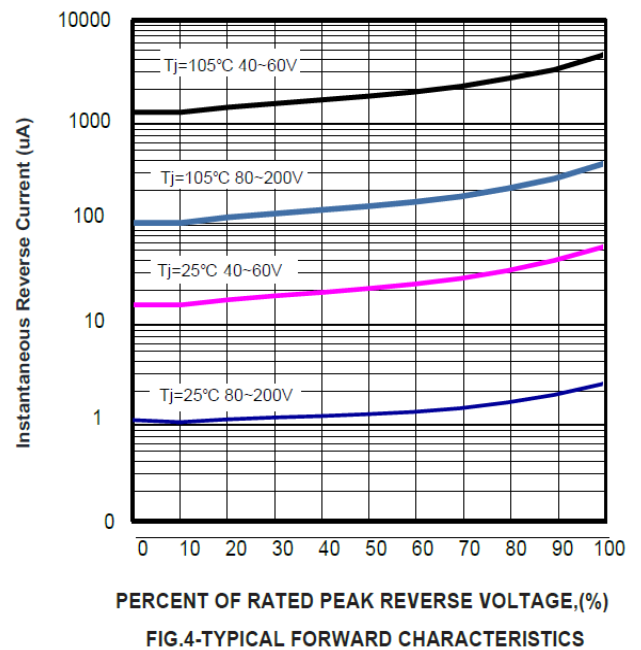


FIG.4-TYPICAL FORWARD CHARACTERISTICS



Revision History

No	Date	Contents
0	2017-06-08	Initial Brief Datasheet Release

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Contact. **Tel** 82.70.4693.2299 **FAX** 82.70.4000.4009

E-mail: sales@apsemi.com

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