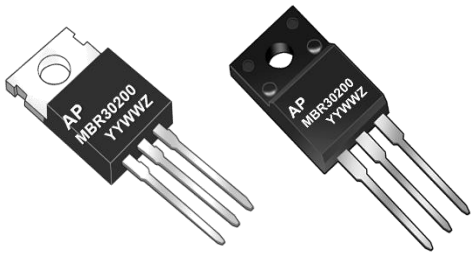
Semi
Advanced Power Semiconductor

MBR3040 THRU MBR30200

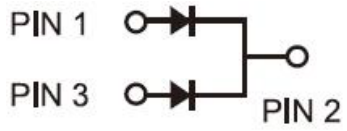
Schottky Barrier Rectifier
Reverse Voltage 40 to 200 Volts
Forward Current 30 Amperes

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℃/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



TO-220AB (MBR30200)　　TO-220F (MBR30200F)



Technical Data

Case : JEDEC ITO-220AB molded plastic body

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

Maximum Ratings Characteristics

TA = 25℃ unless otherwise specified.

Parameter		Symbol	MBR 3040	MBR 3045	MBR 3060	MBR 3080	MBR 30100	MBR 30120	MBR 30150	MBR 30200	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		$I_{F(AV)}$	30.0								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℃	I_R	0.5				0.1				mA
	T_a = 100℃		50				10				
Typical Junction Capacitance(1)		C_j	260								pF
Typical Thermal Resistance(2)		$R_{\theta JC}$	4								℃/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150								℃

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

(TA = 25℃ unless otherwise specified)

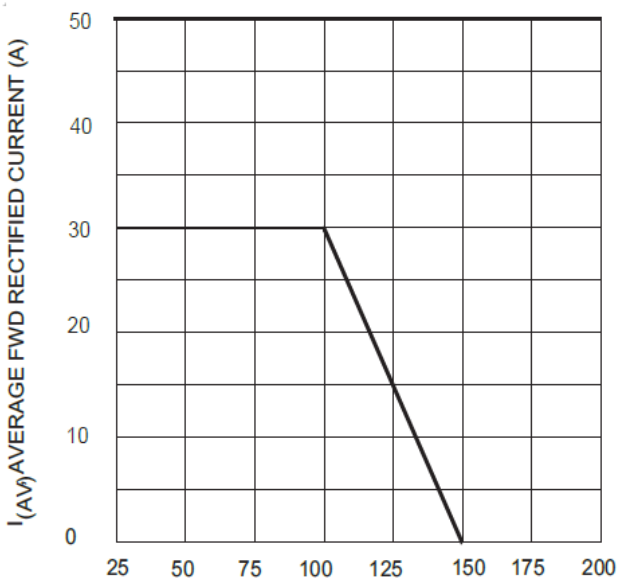


Fig. 1 Forward Derating Curve

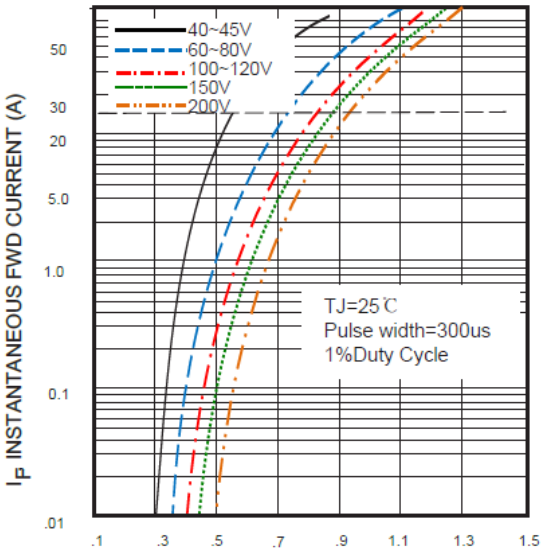


Fig. 2 Typical Forward Characteristics

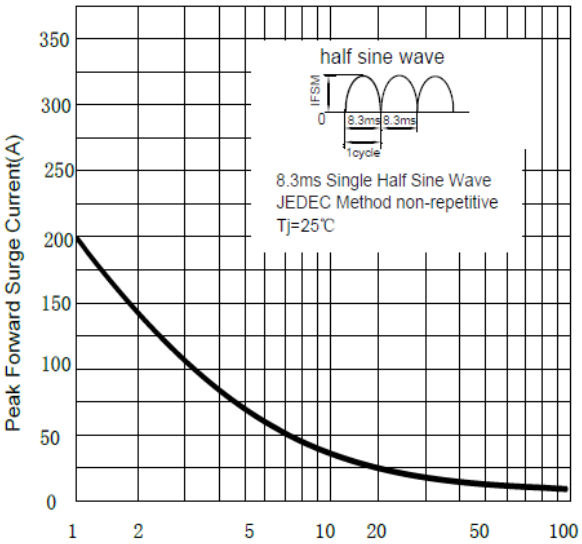


Fig. 3 Peak Forward Surge Current

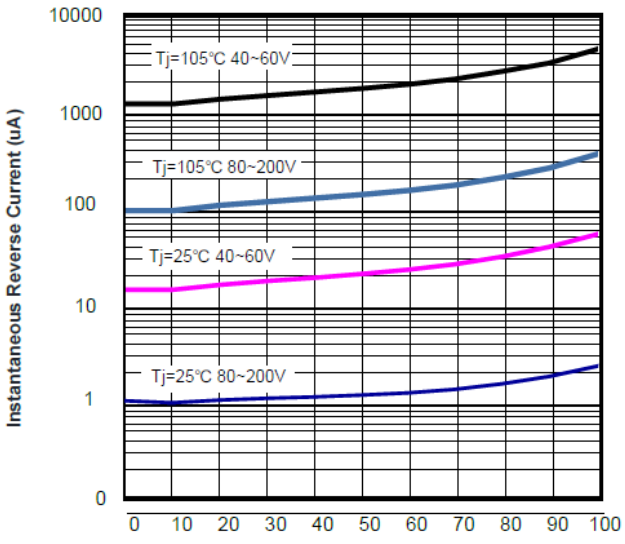


FIG.4-TYPICAL FORWARD CHARACTERISTICS

Revision History

No	Date	Contents
0	2018-06-08	Initial Brief Datasheet Release

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AP Semiconductor Co., Ltd

Contact. Tel 82.70.4693.2299 FAX 82.70.4000.4009

E-mail: sales@apsemi.com