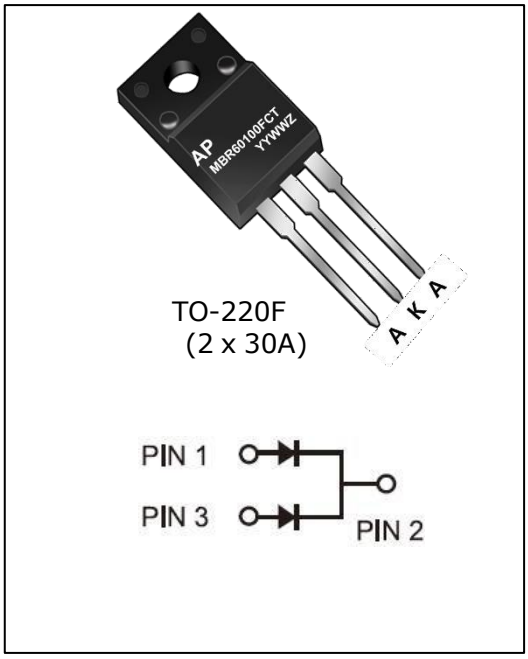
Semi
Advanced Power Semiconductor

MBR6040FCT THRU MBR60200FCT

Schottky Barrier Rectifier
Reverse Voltage 40 to 200 Volts
Forward Current 60 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



Technical Data

Case : JEDEC ITO-220 molded plastic body
Terminals : Plated axial leads, solderable per MIL-STD-750, method 2026

Maximum Ratings Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter		Symbol	MBR 6040	MBR 6045	MBR 6060	MBR 6080	MBR 60100	MBR 60120	MBR 60150	MBR 60200	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	40	45	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		$I_{F(AV)}$	60.0								A
Peak forward surge current, 8.3mS single half sine-wave superimposed on rated load		I_{FSM}	350								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 Thermal Resistance(2)		$R_{\theta JC}$	4								℃/W
Junction Temperature Range		T_J, T_{STG}	-65 to +150								℃
Storage Temperature Range		T_J, T_{STG}	-65 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)

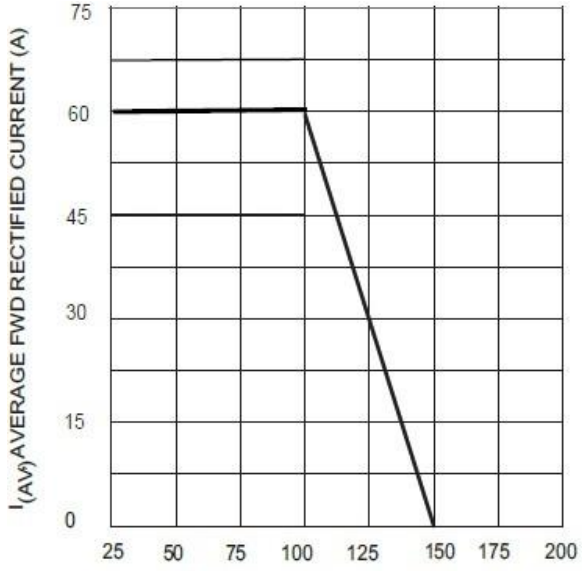


Fig. 1 Forward Derating Curve

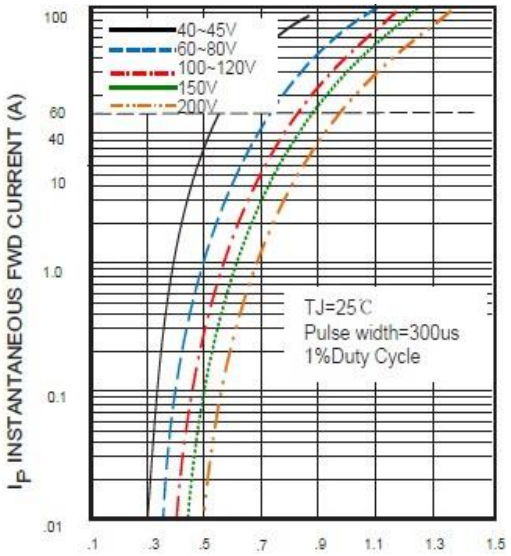


Fig. 2 Typical Forward Characteristics

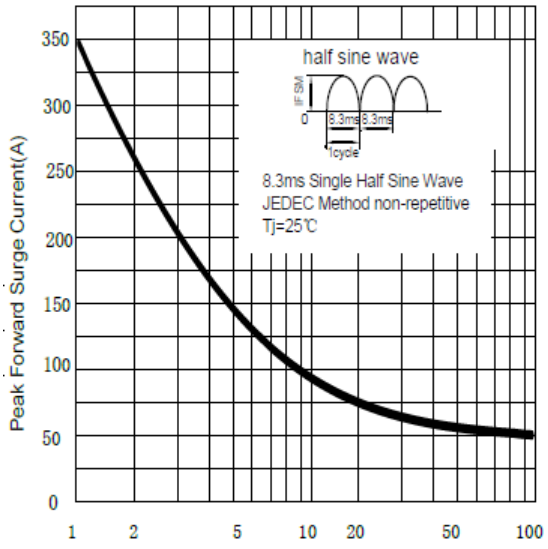


Fig. 3 Peak Forward Surge Current

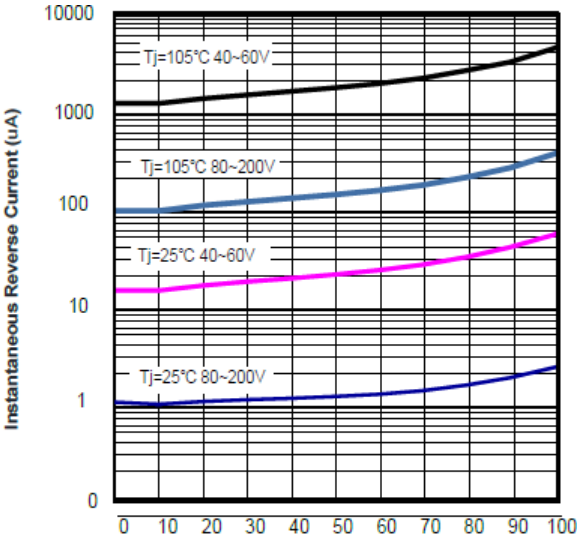
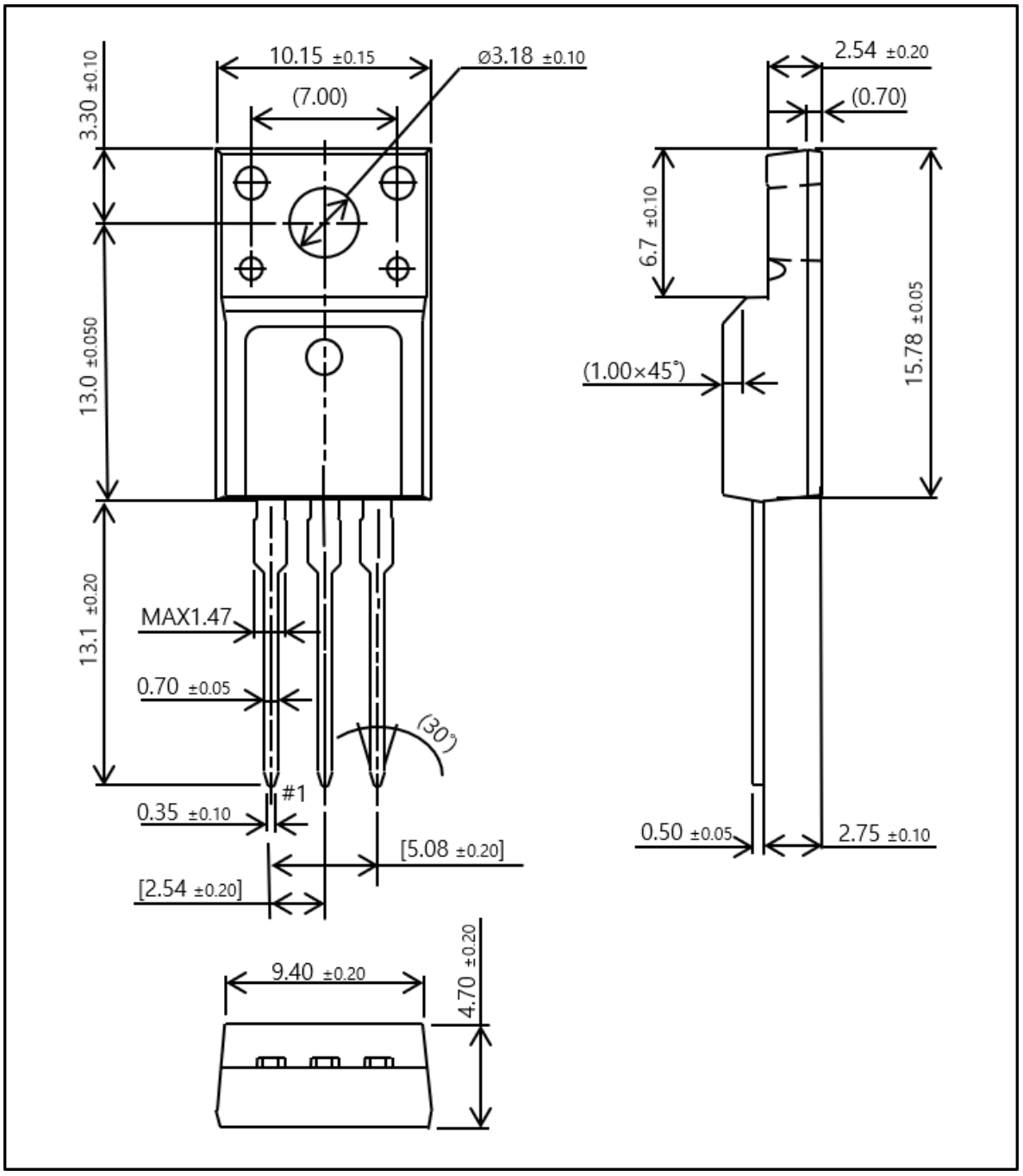


FIG.4-TYPICAL FORWARD CHARACTERISTICS

Package Dimensions

Unit : mm



Revision History

No	Date	Contents
0	2024-09-10	Initial Brief Datasheet Release

http://www.apsemi.com

IMPORTANT NOTICE

AP Semiconductor co, Ltd reserves the right to make changes without further notice to any products or specifications herein. AP Semiconductor co, Ltd does not assume any responsibility for use of any its products for any particular purpose, nor does AP Semiconductor co, Ltd assume any liability arising out of the application or use of any its products or circuits. AP Semiconductor co, Ltd does not convey any license under its patent rights or other rights nor the rights of others.

AP Semiconductor Co., Ltd

Contact. Tel 82.70.4693.2299 FAX 82.70.4000.4009

E-mail: sales@apsemi.com