

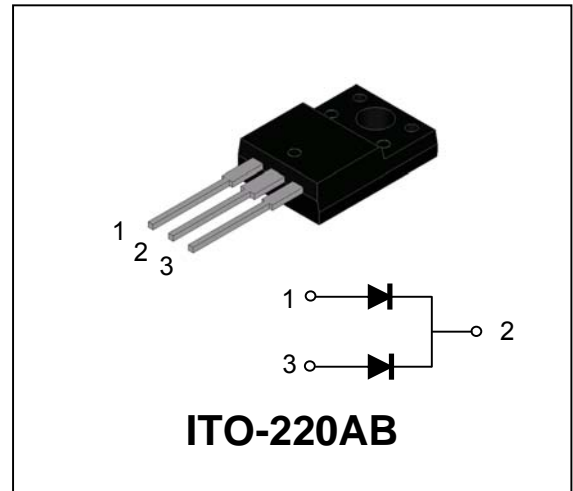


# Microsemi MBR3040FCT to MBR30200FCT

## Isolated Schottky Barrier Rectifiers

### Main product characteristics

$I_{F(AV)}$	30A (2 x 15A)
$V_{RRM}$	40V to 200V
$T_{j(MAX)}$	175°C



### Features and benefits

- Plastic package with UL 94V-0 flammability classification
- Flame retardant epoxy molding component
- Guardring for overvoltage protection
- Low power loss, high efficiency
- RoHS compliant (2002/95/EC)

### Description and applications

Double Schottky configuration for use in low voltage, high frequency inverters, free wheeling and polarity protection applications. The Metal silicon junction means the devices are majority carrier conduction leading to low power loss and high efficiency.

### Electrical characteristics<sup>(1)</sup>

Symbol	Parameter	MBR3040FCT	MBR3045FCT	MBR3050FCT	MBR3060FCT	MBR3080FCT	MBR3090FCT	MBR30100FCT	MBR30150FCT	MBR30200FCT	Unit
$V_{RRM}$	Max Peak Repetitive Reverse Voltage	40	45	50	60	80	90	100	150	200	V
$V_{R(RMS)}$	Max RMS Reverse Voltage	28	31.5	35	42	56	63	70	105	140	V
$V_R$	Max DC Blocking Voltage	40	45	50	60	80	90	100	150	200	V
$I_{F(AV)}$	Max average forward current (see fig.1)	30									A
$I_{FSM}$	Non repetitive peak forward surge current (8.3ms single half sine wave)	275									A
$V_F$	Max forward voltage @ 15A (per leg)	0.70	0.75	0.80				0.90		V	
$I_R^{(2)}$	Maximum instantaneous reverse current at rated $V_R$ $T_J = 25^\circ\text{C}$	0.05									mA
	reverse current at rated $V_R$ $T_J = 125^\circ\text{C}$	20									
$T_{STG}, T_J$	Storage and Junction temperature	-55 to +150			-65 to +175					°C	

<sup>(1)</sup> All ratings at 25°C unless specified otherwise

<sup>(2)</sup> Measured with a test pulse of 380µs to minimize self-heating effect



# Microsemi MBR3040FCT to MBR30200FCT

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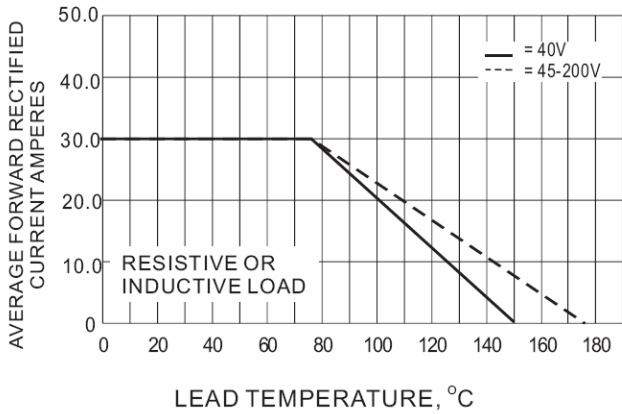


Fig.1 Forward current derating curve. For resistive or inductive load, the average forward rectified current (amperes) is constant at 30.0A up to 80°C. Above 80°C, the current derates linearly. For 40V (solid line), it reaches 0A at 150°C. For 45-200V (dashed line), it reaches 0A at 180°C.

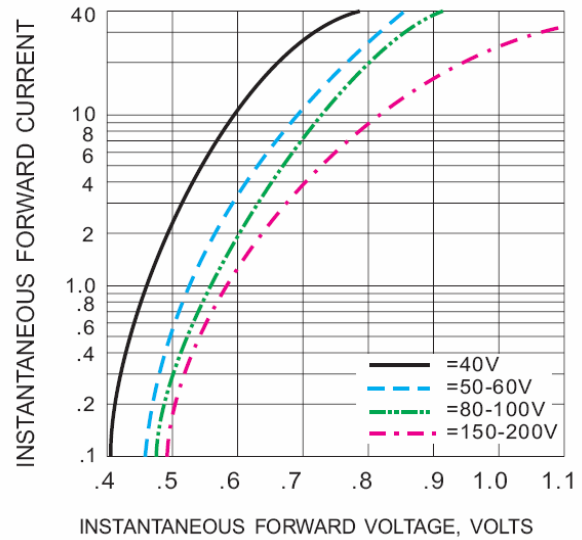


Fig.2 Typical instantaneous forward characteristics

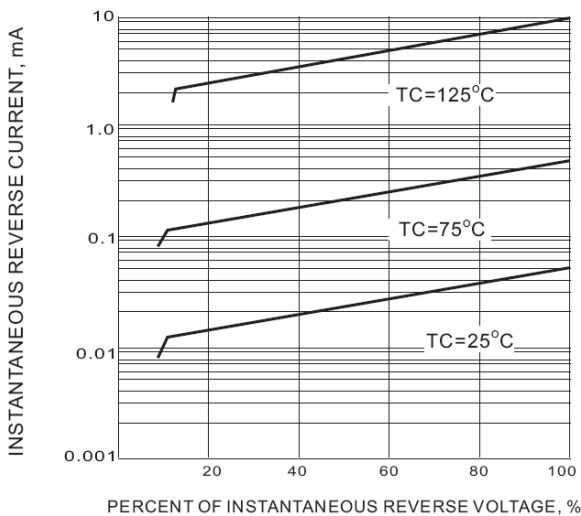


Fig.3 Typical reverse characteristics

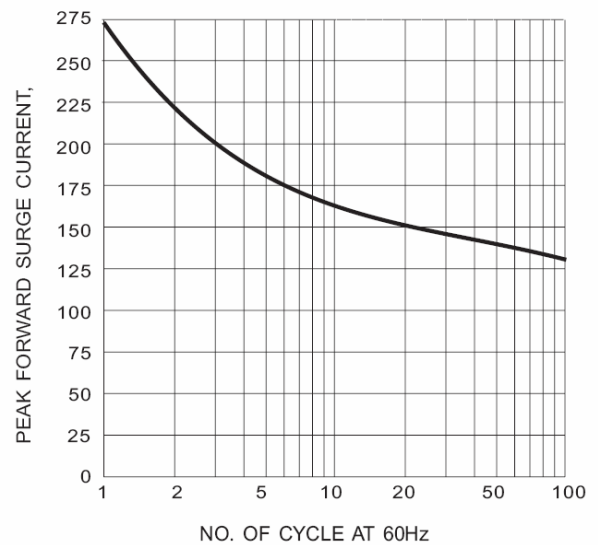


Fig.4 Maximum non repetitive surge current

### Thermal Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JC}$	Junction to case	1.4	°C/W

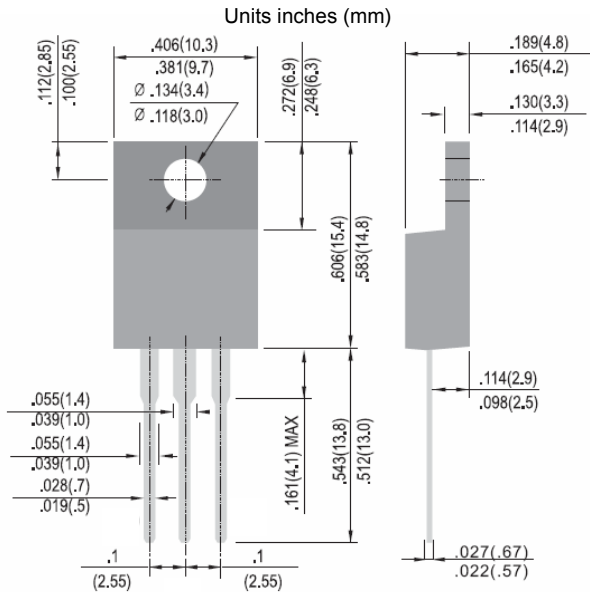


# Microsemi MBR3040FCT to MBR30200FCT

## Isolated Schottky Barrier Rectifiers

### Mechanical Characteristics

#### Physical dimensions



### Ordering information

Product order code	Marking	Package	Weight	Base qty	Delivery mode
MBR30xxxFCTe3/TU	MSC yyww MBR30xxxFCT →   ←	ITO-220AB	1.561 g	2000	Tube

Commercial Business Unit  
Microsemi Corporation

Microsemi Commercial Offshore de Macau Limitada  
Avenida Doutor Mario Soares  
Bank of China Building, 18/F, Unit D  
Macau SAR

Please refer to [www.microsemi.com](http://www.microsemi.com) for the terms and conditions of purchase