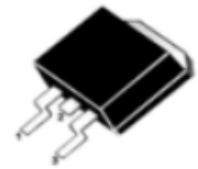
Schottky barrier rectifiers

Features

- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds
- Component in accordance RoHS 2011/65/EU



TO-263

Mechanical Date

Case:TO-263
Molding compound meets
UL 94 V-0 flammability rating

- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** As marked
- **Mounting Position:** Any

Major Ratings and Characteristics

$I_{F(AV)}$	**30A**
V_{RRM}	**20 V to 200 V**
I_{FSM}	**200A**
V_F	**0.55V,0.60V,0.70V,0.85V,0.95V**
$T_j$max.	**125°C,150°C**

Maximum Ratings & Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Items		Symbol	MBR 3020	MBR 3040	MBR 3045	MBR 3060	MBR 30100	MBR 30150	MBR 30200	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	20	40	45	60	100	150	200	V
Maximum RMS voltage		V_{RMS}	14	28	31.5	42	70	105	140	V
Maximum DC blocking voltage		V_{DC}	20	40	45	60	100	150	200	V
Average forward rectified current (See Fig.1)		$I_{F(AV)}$	30.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load		I_{FSM}	200.0							A
Thermal resistance from junction to case		$R_{\theta Jc}$	2.0							℃/W
Operating junction and storage temperature range		T_J ,T_{STG}	-55 to +125				-55 to +150			℃
Maximum instantaneous forward voltage at 15.0A		V_F	0.55	0.60		0.70	0.85	0.95		V
Typical junction capacitance(1)		C_J	800				350			pF
Maximum DC reverse current at rated DC blocking voltage	T_A=25℃	I_R	0.15				0.1			mA
	T_A=100℃		40.0				20.0			

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Characteristics Curves

Fig.1 Foward Current Derating Curve

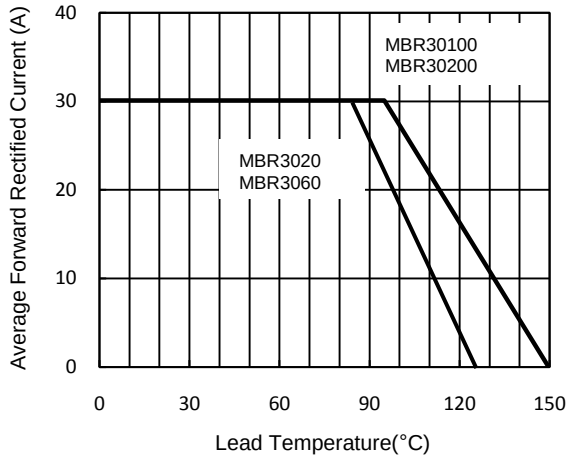


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

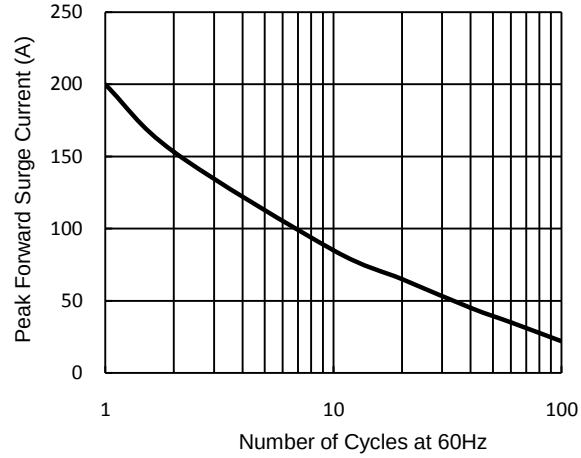


Fig.3 Typical Forward Current Characteristics

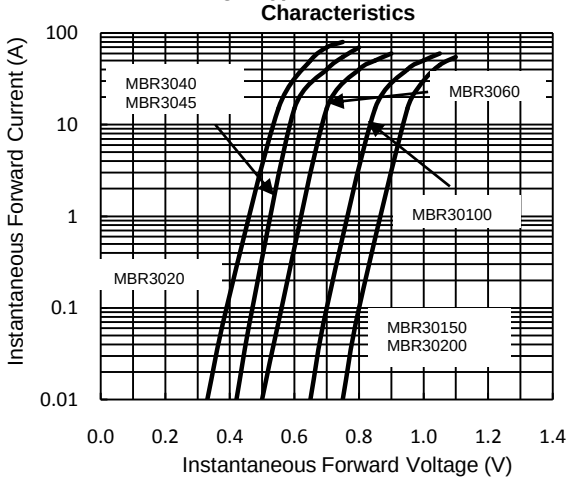


Fig.4 Typical Reverse Characteristics

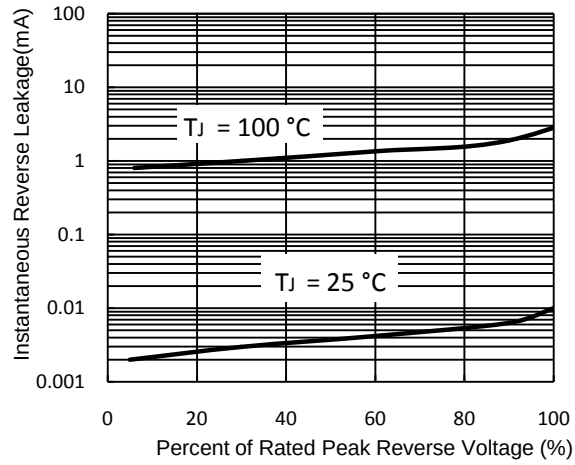


Fig.5 Junction Capacitance

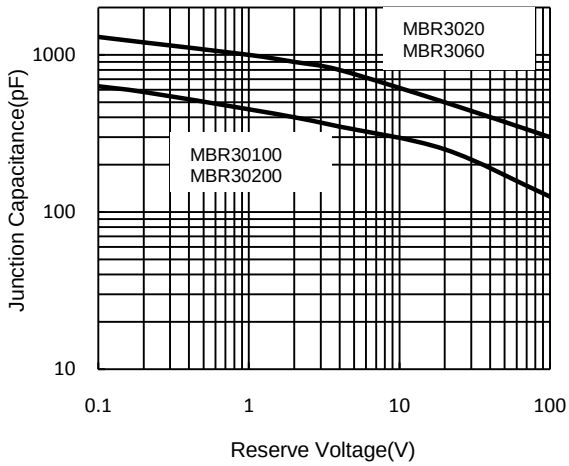


Fig.6 Typical Transient Thermal Impedance