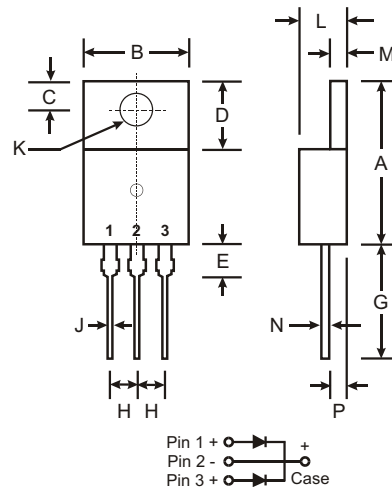


Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Marking: Type Number
- Weight: 2.24 grams (approx)
- Mounting Position: Any



TO-220AB		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
H	2.29	2.79
J	0.51	1.14
K	3.53 $\varnothing$	4.09 $\varnothing$
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR 2030CT	MBR 2035CT	MBR 2040CT	MBR 2045CT	MBR 2050CT	MBR 2060CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	24.5	28	31.5	35	42	V
Average Rectified Output Current @ $T_C = 125^{\circ}\text{C}$ (Note 1)	I_O	20						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150						A
Forward Voltage Drop (Note 3) @ $I_F = 20\text{A}$, $T_C = 25^{\circ}\text{C}$ @ $I_F = 20\text{A}$, $T_C = 125^{\circ}\text{C}$ @ $I_F = 10\text{A}$, $T_C = 125^{\circ}\text{C}$	V_{FM}	0.84 0.72 0.57				0.95 0.85 0.70		V
Peak Reverse Current @ $T_C = 25^{\circ}\text{C}$ at Rated DC Blocking Voltage @ $T_C = 125^{\circ}\text{C}$	I_{RM}	0.1 15				mA		
Typical Junction Capacitance (Note 2)	C_j	650						pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta Jc}$	2.0						$^{\circ}\text{C/W}$
Voltage Rate of Change (Rated V_R)	dV/dt	1000				10,000		$\text{V}/\mu\text{s}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150						$^{\circ}\text{C}$

Notes: 1. Thermal resistance junction to case mounted on heatsink.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Pulse width $\leq 300 \mu\text{s}$, duty cycle $\leq 2\%$.

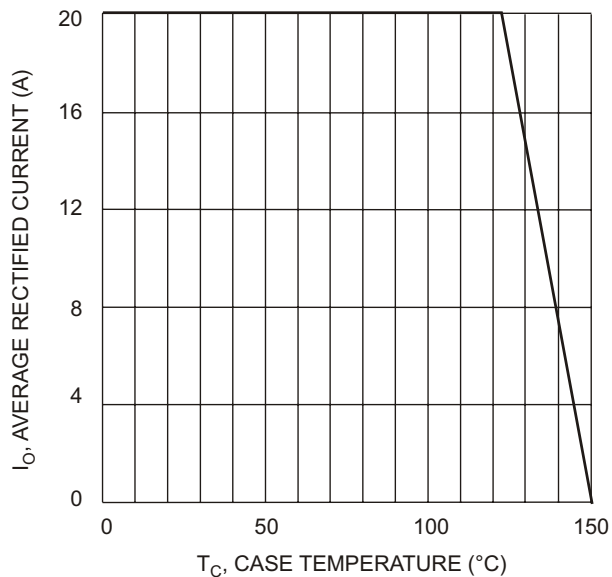


Fig. 1 Forward Current Derating Curve

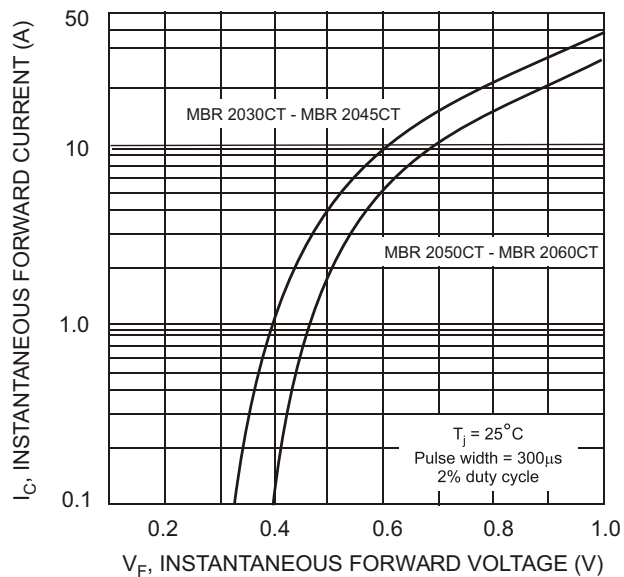


Fig. 2 Typical Forward Characteristics

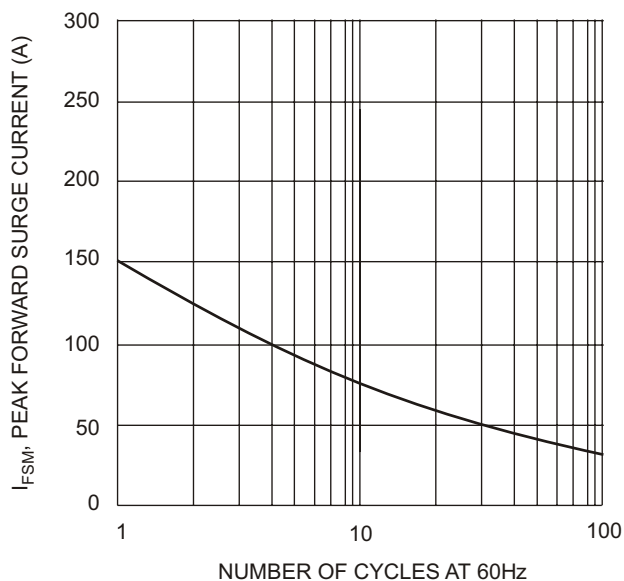


Fig. 3 Max Non-Repetitive Surge Current

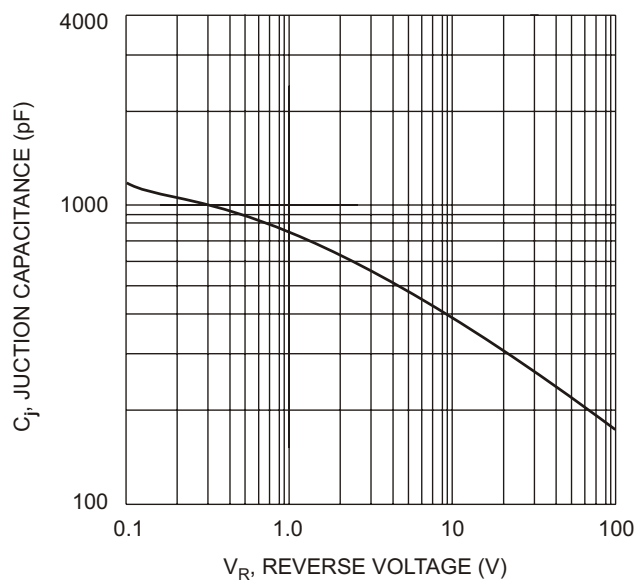


Fig. 4 Typical Junction Capacitance

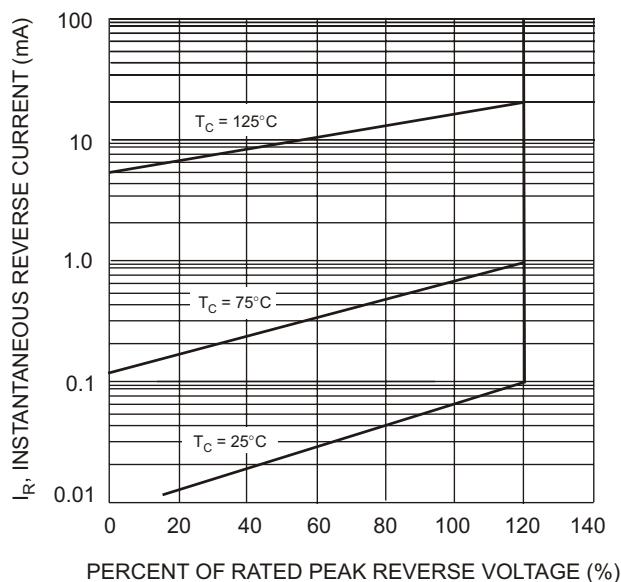


Fig. 5 Typical Reverse Characteristics