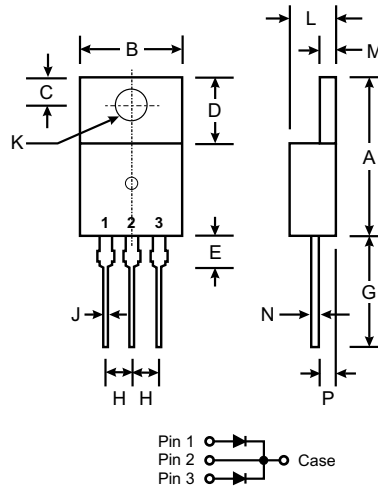


### Features

- 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
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



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<sub>A</sub> = 25°C unless otherwise specified

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

Characteristic	Symbol	MBR 1030CT	MBR 1035CT	MBR 1040CT	MBR 1045CT	MBR 1050CT	MBR 1060CT	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	30	35	40	45	50	60	V
Working Peak Reverse Voltage	V <sub>RWM</sub>							
DC Blocking Voltage	V <sub>R</sub>							
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	24.5	28	31.5	35	42	V
Average Rectified Output Current (Note 1)	I <sub>O</sub>	10						A
		@ T <sub>C</sub> = 105°C						
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	125						A
Repetitive Peak Reverse Surge Current	I <sub>RSM</sub>	1.0						A
		@ t ≤ 2.0μs						
Forward Voltage Drop	V <sub>FM</sub>		0.57			0.70		V
		@ I <sub>F</sub> = 5.0A, T <sub>C</sub> = 125°C				@ I <sub>F</sub> = 5.0A, T <sub>C</sub> = 25°C		
		@ I <sub>F</sub> = 5.0A, T <sub>C</sub> = 25°C		0.70		0.80		
		@ I <sub>F</sub> = 10A, T <sub>C</sub> = 25°C		0.84		0.95		
Peak Reverse Current at Rated DC Blocking Voltage	I <sub>RM</sub>				0.1			mA
					15			
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	150						pF
Typical Thermal Resistance Junction to Case (Note 1)	R <sub>θJC</sub>	30						K/W
Voltage Rate of Change (Rated V <sub>R</sub> )	dV/dt	1000						V/μs
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150						°C

- Notes: 1. Thermal resistance junction to case mounted on heatsink.  
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

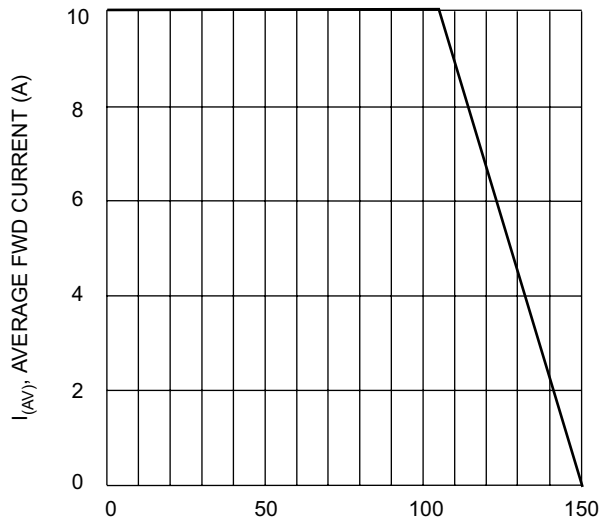


Fig. 1 Forward Current Derating Curve

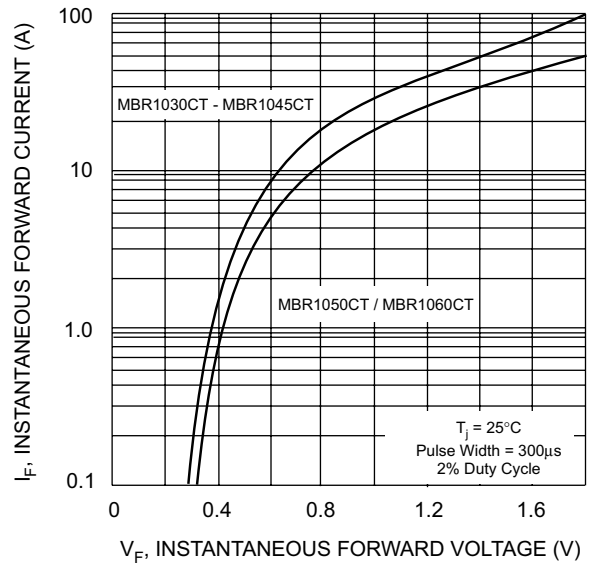


Fig. 2 Typical Forward Characteristics

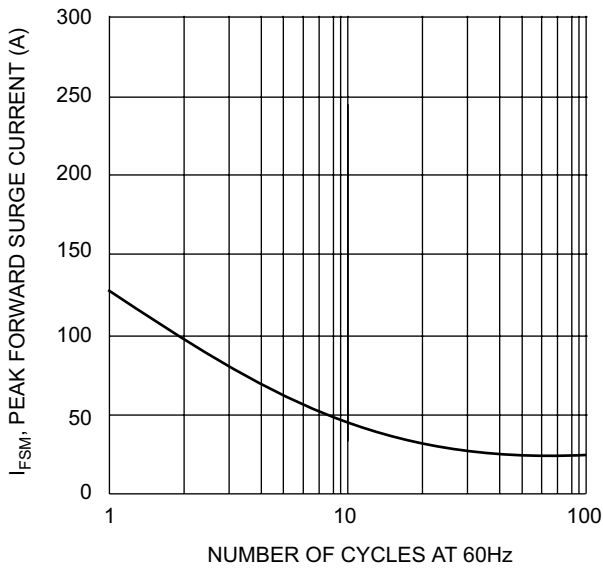


Fig. 3 Max Non-Repetitive Surge Current

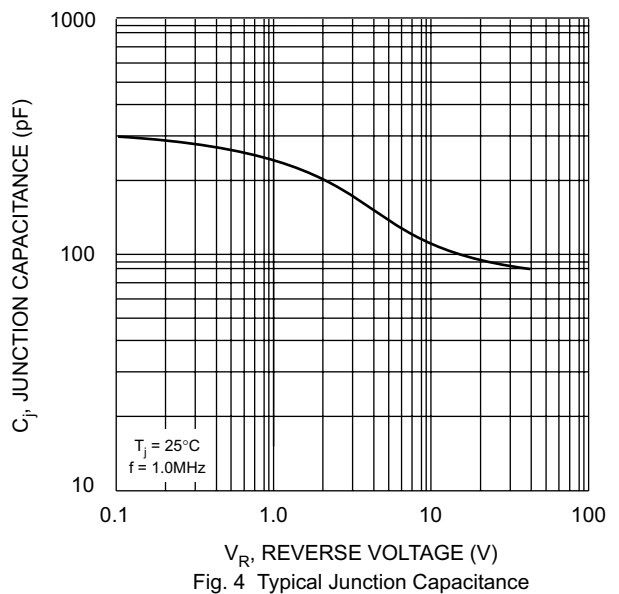


Fig. 4 Typical Junction Capacitance