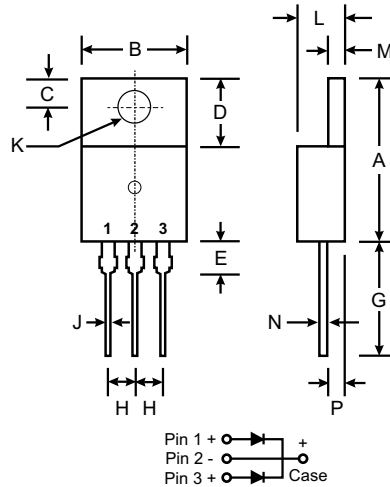


### Features

- 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	MBR2535CT	MBR2545CT	MBR2550CT	MBR2560CT	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	35	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>	25	32	35	42	V
Average Rectified Output Current @ T <sub>C</sub> = 130°C	I <sub>O</sub>	30				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150				A
Peak Repetitive Reverse Surge Current (Note 3)	I <sub>RRM</sub>	1.0		0.5		A
Forward Voltage Drop @ I <sub>F</sub> = 15.0A, T <sub>C</sub> = 25°C	V <sub>FM</sub>	—		0.75		V
@ I <sub>F</sub> = 15.0A, T <sub>C</sub> = 125°C		—		0.65		
@ I <sub>F</sub> = 30.0A, T <sub>C</sub> = 25°C		0.82		—		
@ I <sub>F</sub> = 30.0A, T <sub>C</sub> = 125°C		0.73		—		
Peak Reverse Current at Rated DC Blocking Voltage @ T <sub>C</sub> = 25°C	I <sub>RM</sub>	0.2		1.0		mA
@ T <sub>C</sub> = 125°C		40		50		
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	750		500		pF
Typical Thermal Resistance Junction to Case (Note 1)	R <sub>θJC</sub>	1.5				°C/W
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.
  3. 2.0 $\mu$ s pulse width, f = 1.0KHz.

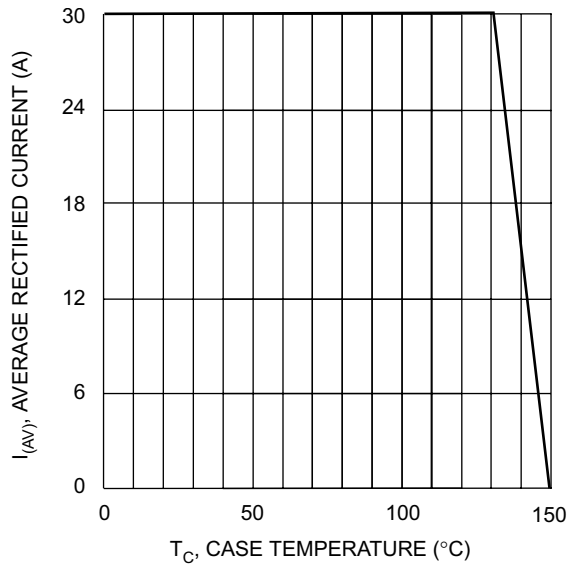


Fig. 1 Forward Derating Curve

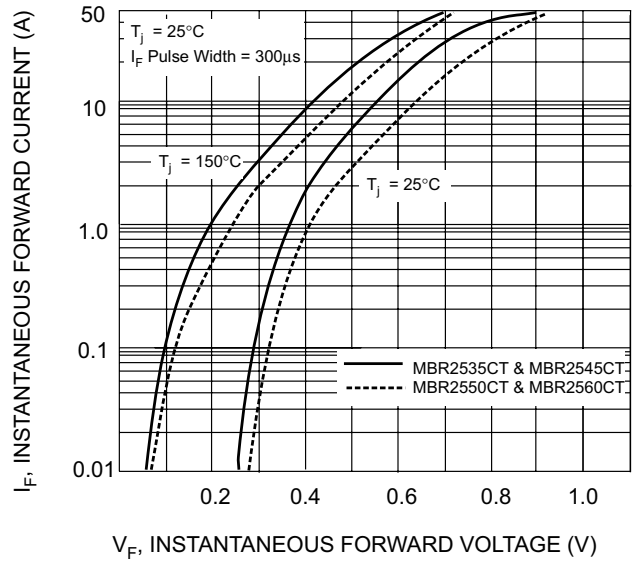


Fig. 2 Typical Forward Characteristics

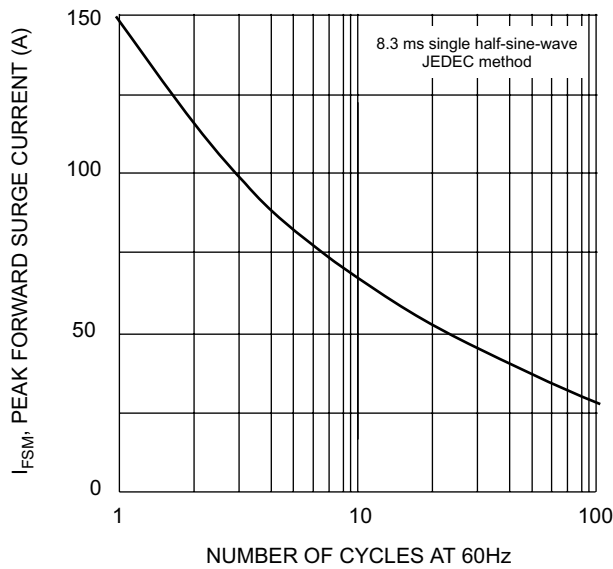


Fig. 3 Maximum Non-Repetitive Surge Current

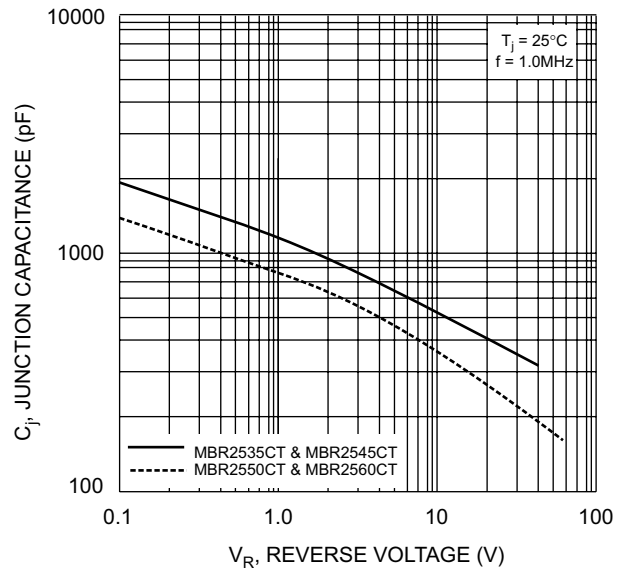


Fig. 4 Typical Junction Capacitance