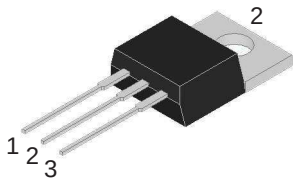
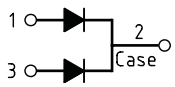
25.0 Amp. Schottky Barrier Rectifier

TO-220AB





Common Cathode
Suffix "C"

Voltage	Current
45 to 150 V	25.0 A

- Plastic material used carries Underwriters Laboratory Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency.
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 260°C/10 seconds, 6.35mm from case

Mechanical Data

- Cases: JEDEC TO-220AB molded plastic
- Terminals: Pure tin plated, lead free, solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting position: Any
- Mounting torque: 5 in. - lbs. max
- Weight: 2.24 grams

Absolute Maximum Ratings, according to IEC publication No. 134

		MBR 2545CT	MBR 2560CT	MBR 25100CT	MBR 25150CT
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	45	60	100	150
V_{RMS}	Maximum RMS Voltage (V)	31	42	70	105
V_{DC}	Maximum DC blocking voltage (V)	45	60	100	150
$I_{F\ (AV)}$	Maximum Average Forward Rectified Current at T_C = 130 °C	25 A			
I_{FSM}	Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	200 A			
I_{RRM}	Peak Repetitive Reverse Surge Current (Note 1)	1.0 A	0.5 A		
C_j	Typical Junction Capacitance	600 pF	460 pF		
T_j	Operating Junction Temperature Range	– 65 to + 150 °C			
T_{stg}	Storage Temperature Range	– 65 to + 175 °C			

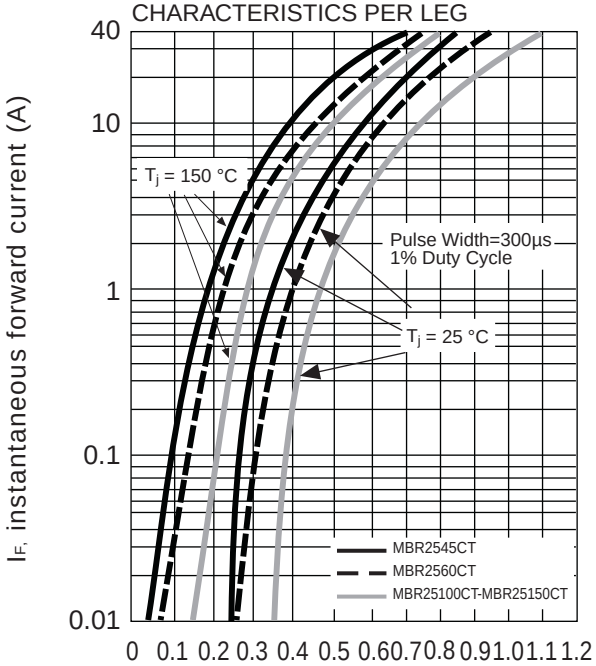
Electrical Characteristics

		MBR 2545CT	MBR 2560CT	MBR 25100CT	MBR 25150CT
V_F	Maximum Instantaneous Forward Voltage at (Note 2) I_F = 12.5 A, Tc = 25 °C	-	0.75 V	0.85 V	0.95 V
	I_F = 12.5 A, Tc = 125 °C	-	0.65 V	0.75 V	0.92 V
	I_F = 25 A, Tc = 25 °C	0.82 V	0.82 V	0.92 V	1.02 V
	I_F = 25 A, Tc = 125 °C	0.73 V	0.78 V	0.88 V	0.98 V
I_R	Max. Instantaneous Reverse Current @ T_C=25°C	0.2 mA	0.2 mA	0.1 mA	0.1 mA
	at Rated DC Blocking Voltage Per Leg @ T_C=125°C (Note 2)	15 mA	10 mA	7.5 mA	5 mA
R_{thj-c}	Maximum Thermal Resistance Per Leg (Note 3)	1.0 °C/W			

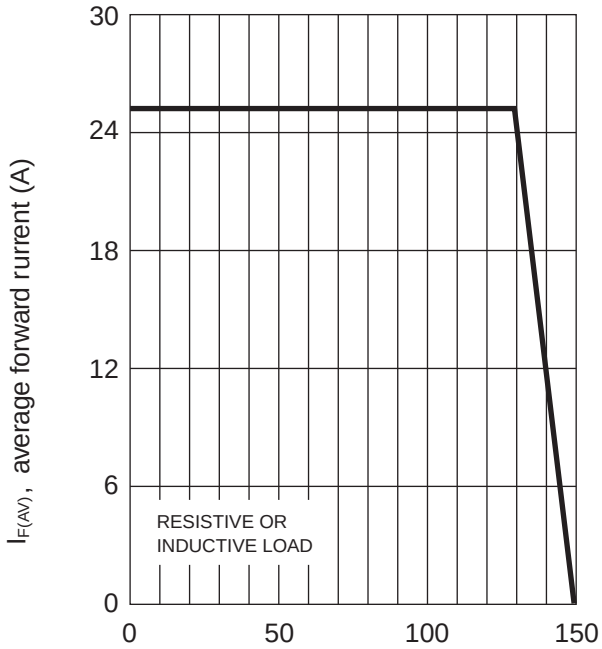
Notes: 1. 2.0µs Pulse Width, f=1.0 KHz
2. Pulse Test: 300µs Pulse Width, 1% Duty Cycle
3. Thermal Resistance from Junction to Case Per Leg, with Heatsink Size (101.6 mm x 152.4 mm x 6.35 mm) Al-Plate.

Rating And Characteristic Curves

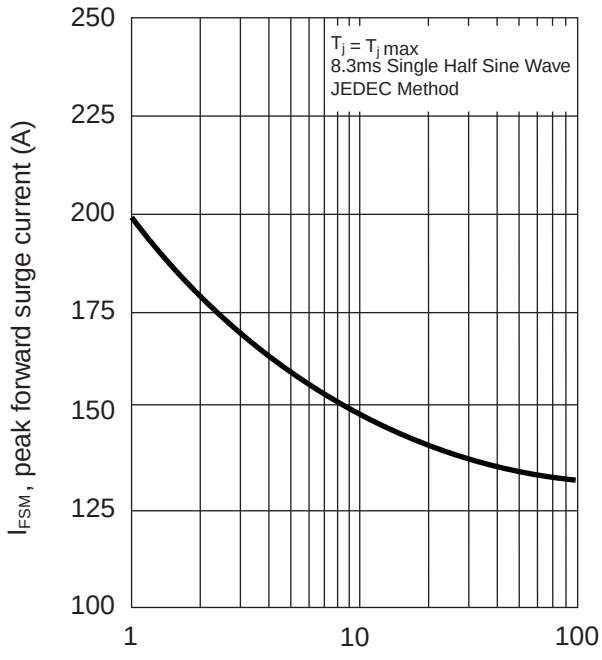
TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG



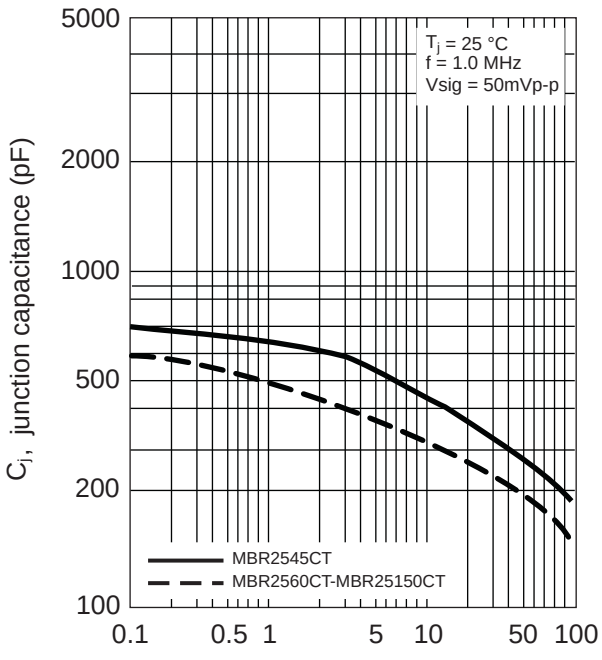
FORWARD CURRENT DERATING CURVE



MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

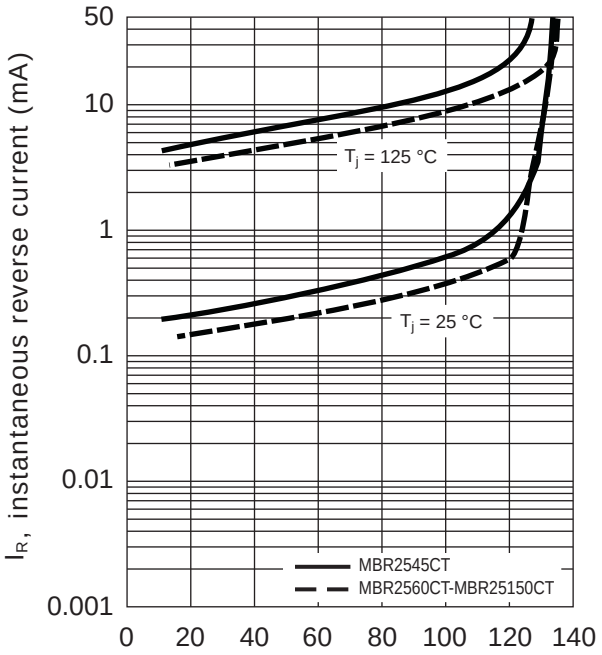


TYPICAL JUNCTION CAPACITANCE PER LEG

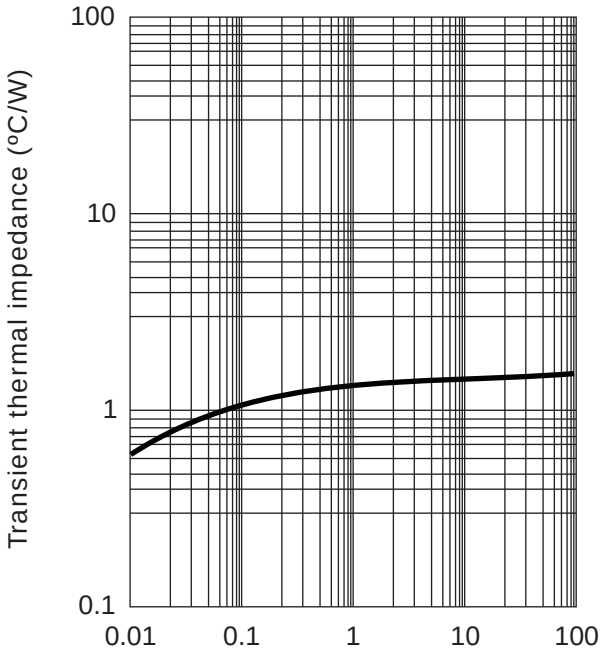


Rating And Characteristic Curves

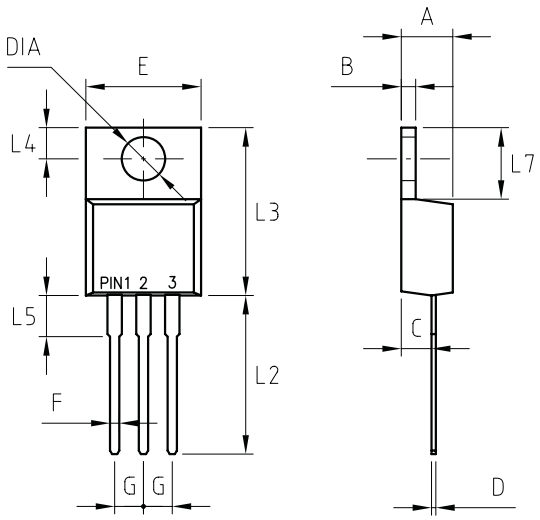
TYPICAL REVERSE CHARACTERISTICS PER LEG



TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



PACKAGE MECHANICAL DATA TO-220AB



REF.	DIMENSIONS Milimeters	
	Min.	Max.
A	4.44	4.70
B	1.14	1.40
C	2.54	2.79
D	0.35	0.64
E	--	10.5
F	0.68	0.94
G	2.41	2.67
L2	13.46	14.22
L3	14.90	15.10
L4	2.62	2.87
L5	3.56	4.06
L7	5.84	6.86
DIA	3.91	3.74