



MBR2535CT - MBR25150CT

20.0 AMPS. Schottky Barrier Rectifiers

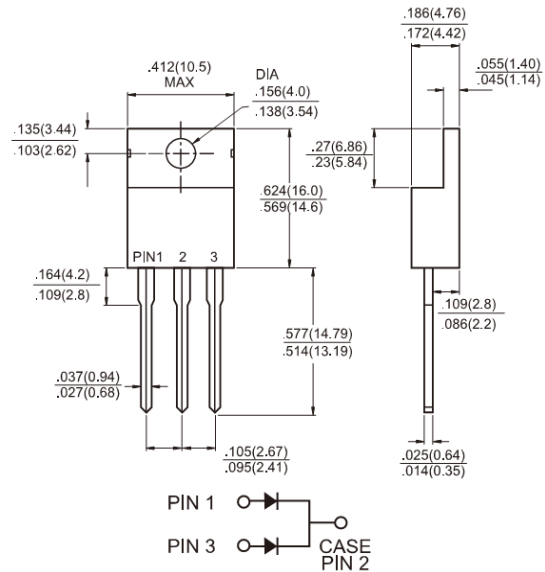
TO-220AB

Features

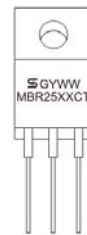
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ Guard-ring for overvoltage protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, 0.25"(6.35mm) from case
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

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: 1.90 grams



Dimensions in inches and (millimeters)



Marking Diagram

- MBR25XXCT = Specific Device Code
G = Green Compound
Y = Year
WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	MBR 2535 CT	MBR 2545 CT	MBR 2550 CT	MBR 2560 CT	MBR 2590 CT	MBR 25100 CT	MBR 25150 CT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	150	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	105	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	150	V
Maximum Average Forward Rectified Current	I _{F(AV)}	25							A
Peak Repetitive Forward Current (Rated VR, Square Wave, 20KHz)	I _{FRM}	25							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	200							A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1.0		0.5				A	
Maximum Instantaneous Forward Voltage at (Note 2) IF=12.5A, T _A =25°C IF=12.5A, T _A =125°C IF=25A, T _A =25°C IF=25A, T _A =125°C	V _F	-		0.75		0.85		0.95	V
		-		0.65		0.75		0.92	
		0.82		-		0.92		1.02	
		0.73		-		0.88		0.98	
Maximum Instantaneous Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage Per Leg @ T _A =125 °C	I _R	0.2		0.2		0.1		0.1	mA
		15		10		7.5		5	mA
Voltage Rate of Change (Rated V _R)	dV/dt	10,000							V/us
Typical Junction Capacitance	C _j	600		460					pF
Maximum Thermal Resistance Per Leg	R _{θJC}	1.0							°C/W
Operating Junction Temperature Range	T _J	- 65 to + 150							°C
Storage Temperature Range	T _{STG}	- 65 to + 175							°C

Note 1: 2.0uS Pulse Width, f=1.0KHz

Note 2: Pulse Test : 300us Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (MBR2535CT THRU MBR25150CT)

FIG. 1- FORWARD CURRENT DERATING CURVE

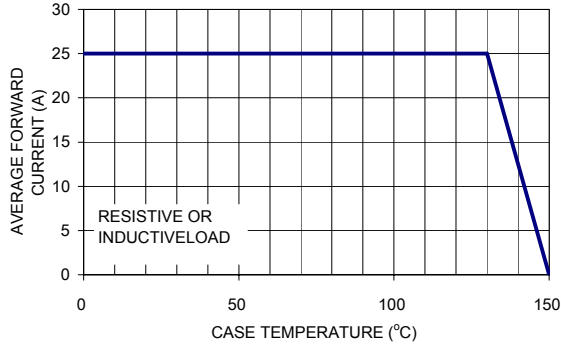


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

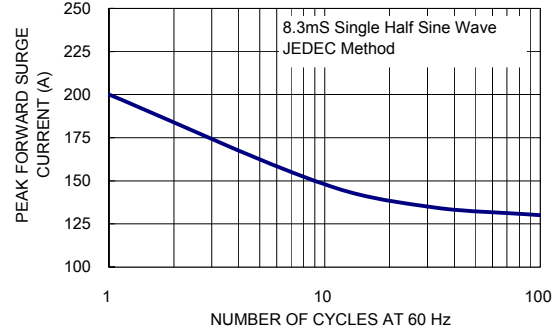


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

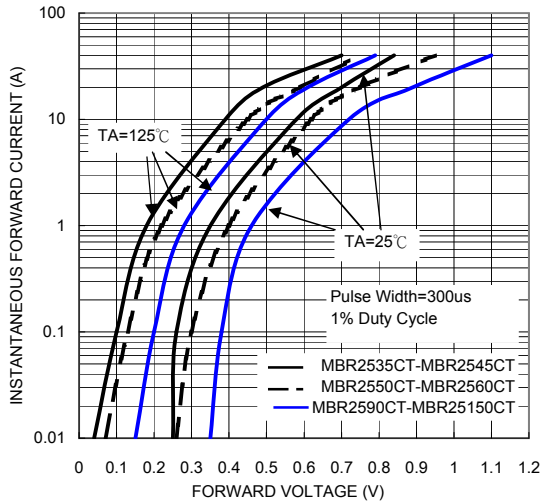


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

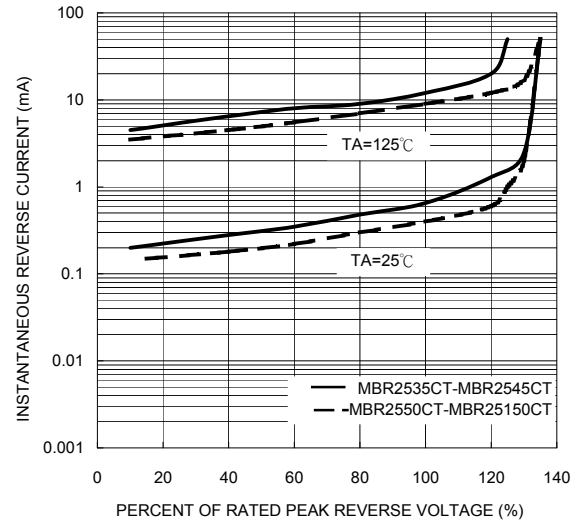


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

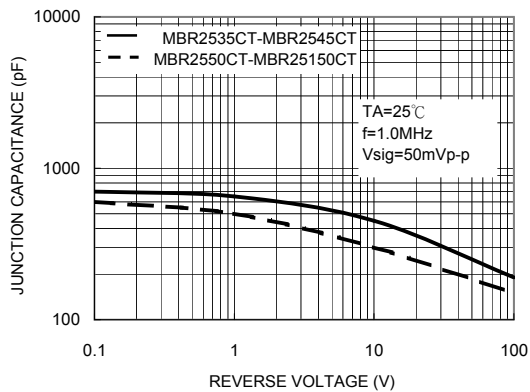


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

