



MBR25100CT

25 AMPS. Schottky Barrier Rectifiers



Voltage Range
100 Volts
Current
25.0 Amperes

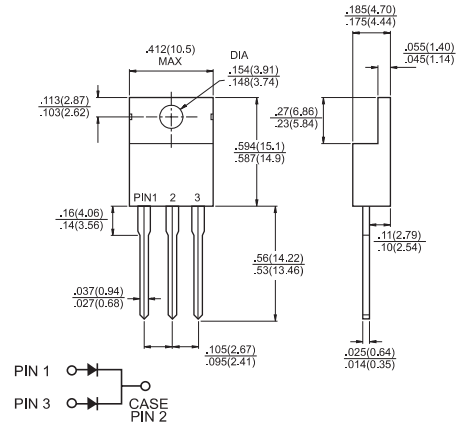
Features

- ✦ 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, 0.25"(6.35mm) from case

Mechanical Data

- ✦ Cases: JEDEC TO-220 molded plastic
- ✦ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ✦ Polarity: As marked
- ✦ Mounting position: Any
- ✦ Mounting torque: 5 in. - lbs. max
- ✦ Weight: 0.08 ounce, 2.24 grams

TO-220



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	MBR25100CT	Units
Maximum Recurrent Peak Reverse Voltage	100	V
Maximum RMS Voltage	70	V
Maximum DC Blocking Voltage	100	V
Maximum Average Forward Rectified Current at T _C =130°C	25	A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz) at T _C =130°C	25	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	250	A
Peak Repetitive Reverse Surge Current (Note 1)	0.5	A
Maximum Instantaneous Forward Voltage at (Note 2) I _F =12.5A, T _C =25°C I _F =12.5A, T _C =125°C I _F =25A, T _C =25°C I _F =25A, T _C =125°C	0.85 0.75 - -	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage @T _C =25°C (Note 2)	0.2	mA
Voltage Rate of Change, (Rated V _R)	1,000	V/uS
Maximum Thermal Resistance Per Leg (Note 3) R _{θJC}	1.5	°C/W
Operating Junction Temperature Range T _J	-65 to +150	°C
Storage Temperature Range T _{STG}	-65 to +175	°C

Notes: 1. 2.0us Pulse Width, f=1.0 KHz

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

3. Thermal Resistance from Junction to Case Per Leg.



RATINGS AND CHARACTERISTIC CURVES (MBR25100CT)

FIG.1- FORWARD CURRENT DERATING CURVE

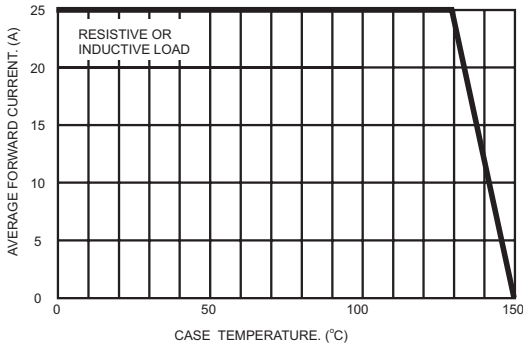


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

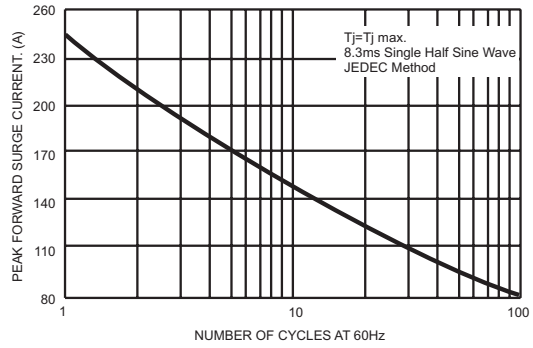


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

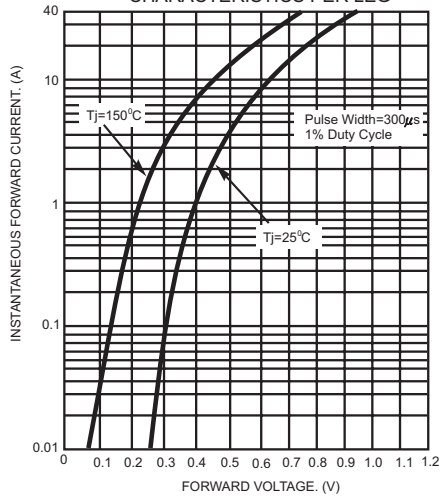


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

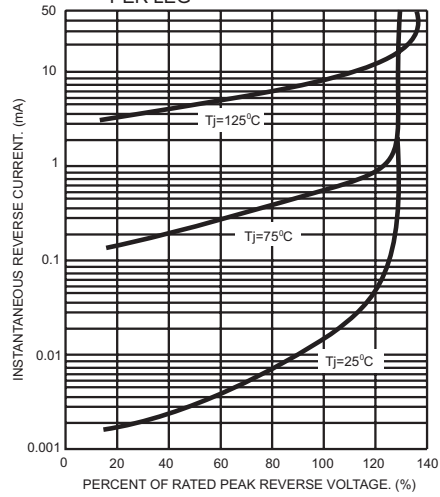


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

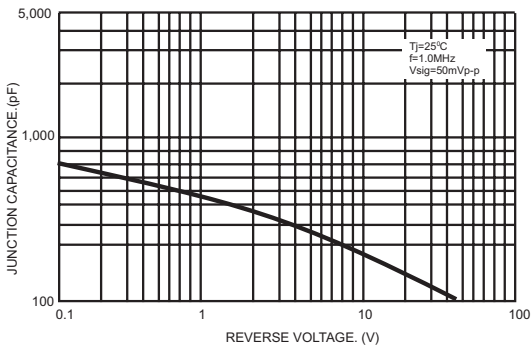


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

