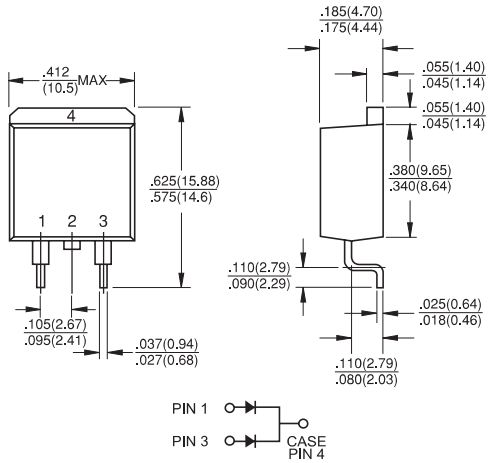
MBRS2035CT THRU MBRS20100CT

20.0 AMPS. Schottky Barrier Rectifiers



Voltage Range
35 to 100 Volts
Current
20.0 Amperes

D^2PAK



Dimensions in inches and (millimeters)

Features

- ✧ For surface mounted application
- ✧ 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 at terminals

Mechanical Data

- ✧ Cases: JEDEC D^2PAK molded plastic
- ✧ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs. max
- ✧ Weight: 0.06 ounce, 1.70 grams

Maximum Ratings and Electrical Characteristics

Rating at 25℃ 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	MBRS 2035CT	MBRS 2045CT	MBRS 2050CT	MBRS 2060CT	MBRS 20100CT	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	45	50	60	100	V
Maximum RMS Voltage	V_{RMS}	24	31	35	42	70	V
Maximum DC Blocking Voltage	V_{DC}	35	45	50	60	100	V
Maximum Average Forward Rectified Current at T_C=135°C	$I_{(AV)}$	20					A
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20KHz) at Tc=135°C	I_{FRM}	20.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150					A
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}	1.0		0.5			A
Maximum Instantaneous Forward Voltage at (Note 2) I_F=10A, Tc=25°C I_F=10A, Tc=125°C I_F=20A, Tc=25°C I_F=20A, Tc=125°C	V_F	- 0.57 0.84 0.72		0.80 0.70 0.95 0.85		0.85 0.75 0.95 0.85	V
Maximum Instantaneous Reverse Current @ Tc=25℃ at Rated DC Blocking Voltage @ Tc=125℃	I_R	0.1 15.0		0.15 150.0			mA mA
Voltage Rate of Change, (Rated V_R)	dV/dt	10,000					V/uS
Typical Thermal Resistance Per Leg (Note 3)	$R\theta_{JC}$	1.5				2.0	℃/W
Operating Junction Temperature Range	T_J	-65 to +150					℃
Storage Temperature Range	T_{STG}	-65 to +175					℃

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 (MBRS2035CT THRU MBRS20100CT)

FIG.1- FORWARD CURRENT DERATING CURVE

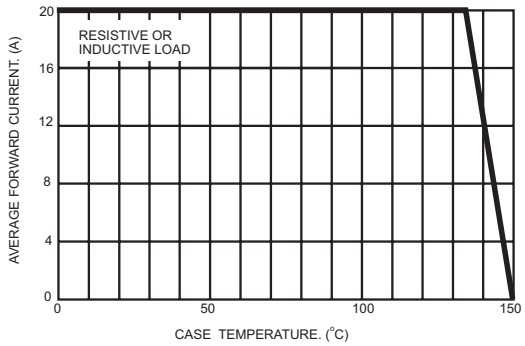


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

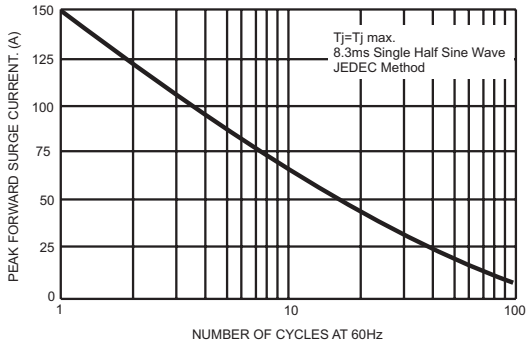


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

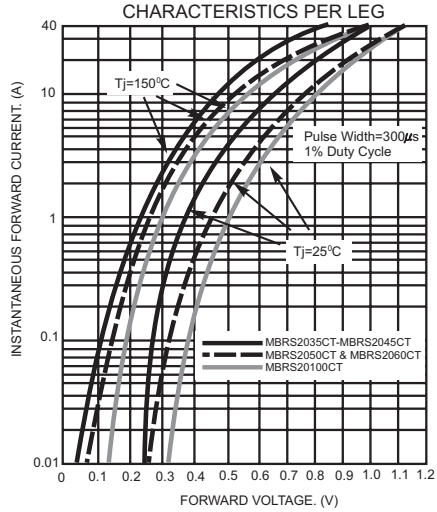


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

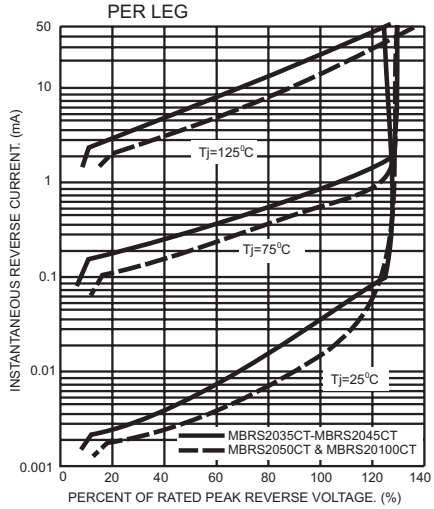


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

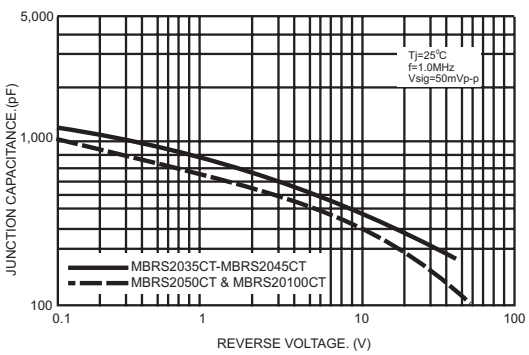


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

