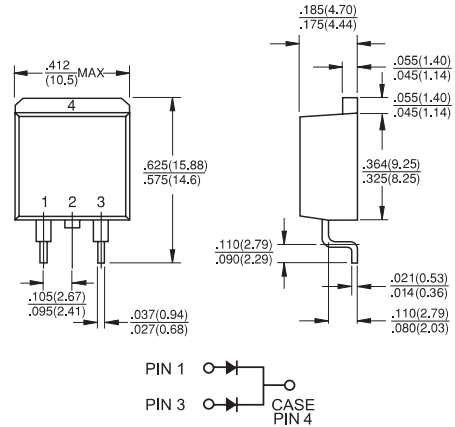


MBRS1035CT - MBR10150CT

10.0 AMPS. Surface Mount Schottky Barrier Rectifiers

D²PAK



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 D²PAK molded plastic body
- ✦ 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: 0.08 ounce, 2.24 grams

Dimensions in inches and (millimeters)

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	MBRS 1035 CT	MBRS 1045 CT	MBRS 1050 CT	MBRS 1060 CT	MBRS 1090 CT	MBRS 10100 CT	MBRS 10150 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 See Fig. 1	I <sub(av)< sub=""></sub(av)<>	10							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	120							A
Peak Repetitive Reverse Surge Current (Note 1)	I _{RRM}	1.0							A
Maximum Instantaneous Forward Voltage at (Note 2) I _F =5.0A, T _C =25°C I _F =5.0A, T _C =125°C I _F =10A, T _C =25°C I _F =10A, T _C =125°C	V _F	0.70 0.57 0.80 0.67		0.80 0.65 0.90 0.75		0.85 0.75 0.95 0.85		0.88 0.78 0.98 0.88	V
Maximum Instantaneous Reverse Current @ T _C =25°C At Rated DC Blocking voltage (Note 2) @ T _C =125°C	I _R		15		10		5.0		mA mA
Maximum Thermal Resistance, Junction to Case	R _{θJC}	2.0							°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 (MBRS1035CT THRU MBRS10150CT)

FIG.1- FORWARD CURRENT DERATING CURVE

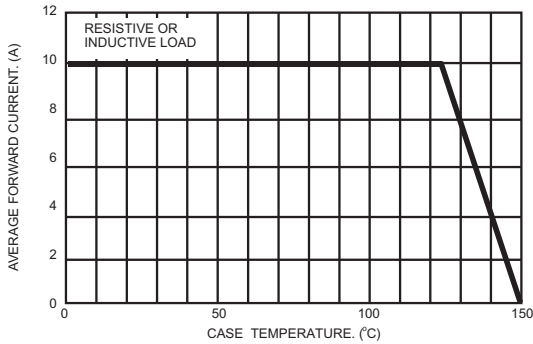


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

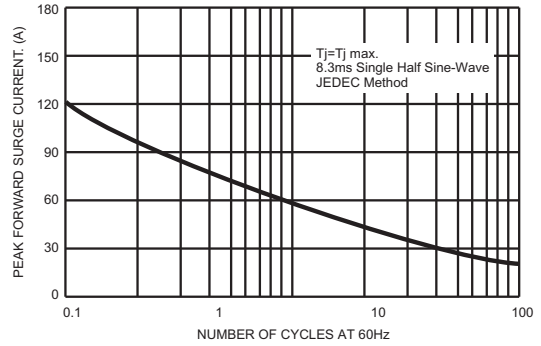


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

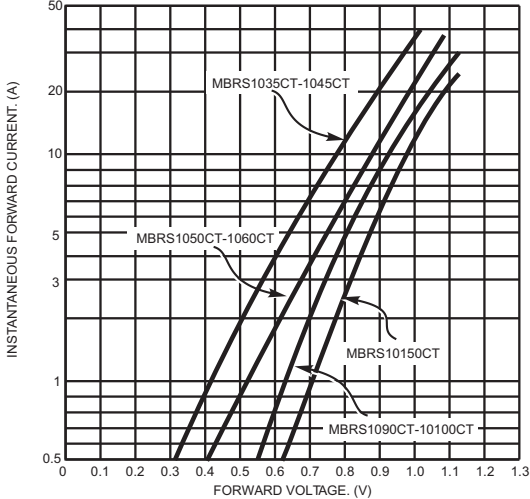


FIG.4- TYPICAL REVERSE CHARACTERISTICS

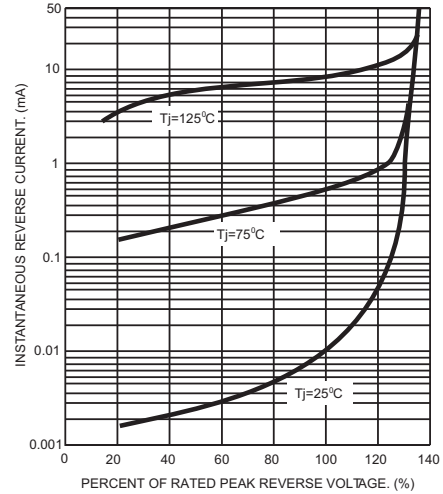


FIG.5- TYPICAL JUNCTION CAPACITANCE

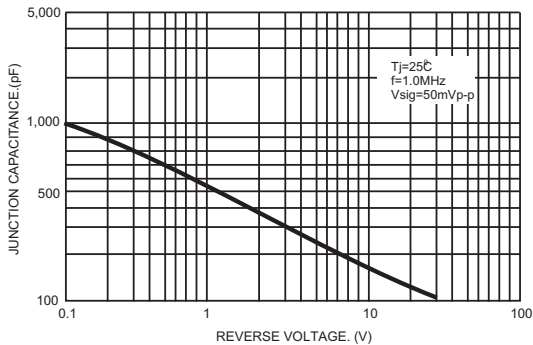


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

