



MBRS1535CT THRU MBRS15100CT

15.0 AMPS. Schottky Barrier Rectifiers



Voltage Range
35 to 100 Volts
Current
15.0 Amperes

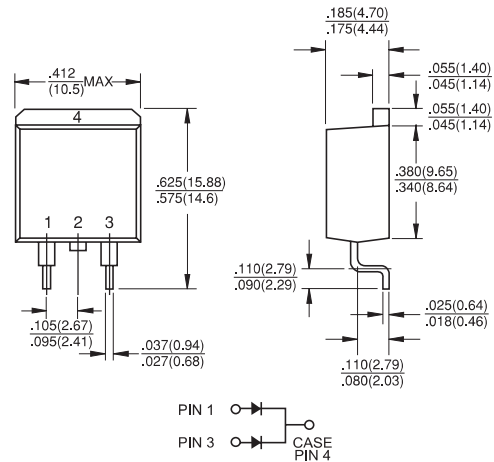
Features

- ✧ 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 transient protection
- ✧ High temperature soldering guaranteed: 260°C/10 seconds, at terminals

Mechanical Data

- ✧ Cases: JEDEC D²PAK molded plastic body
- ✧ 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

D²PAK



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 1535CT	MBRS 1545CT	MBRS 1550CT	MBRS 1560CT	MBRS 1590CT	MBRS 15100CT	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	35	45	50	60	90	100	V
Maximum RMS Voltage	V _{RMS}	24	31	35	42	63	70	V
Maximum DC Blocking Voltage	V _{DC}	35	45	50	60	90	100	V
Maximum Average Forward Rectified Current at T _C =105°C	I _(AV)	15						A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz) at T _C =105°C	I _{FRM}	15.0						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 _R RM	1.0		0.5				A
Maximum Instantaneous Forward Voltage at (Note 2) I _F =7.5A, T _C =25°C I _F =7.5A, T _C =125°C I _F =15A, T _C =25°C I _F =15A, T _C =125°C	V _F	- 0.57 0.84 0.72	0.75 0.65 - -		0.92 0.82 - -		V	
Maximum Instantaneous Reverse Current @ T _C =25°C at Rated DC Blocking Voltage (Note 2) @ T _C =125°C	I _R	0.1 15.0	1.0 50.0		0.1 -		mA mA	
Voltage Rate of Change (Rated V _R)	dV/dt	1,000						V/uS
Maximum Thermal Resistance Per Leg (Note 3)	Rθ _{JA} Rθ _{JC}	50.0 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, $f=1.0\text{ KHz}$

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

3. Thermal Resistance from Junction to Case and Junction to Ambient

RATINGS AND CHARACTERISTIC CURVES (MBRS1535CT THRU MBRS15100CT)

FIG.1- FORWARD CURRENT DERATING CURVE

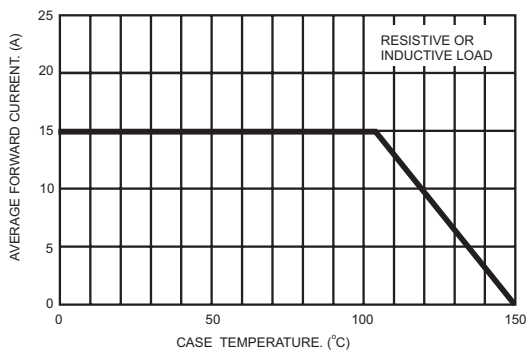


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

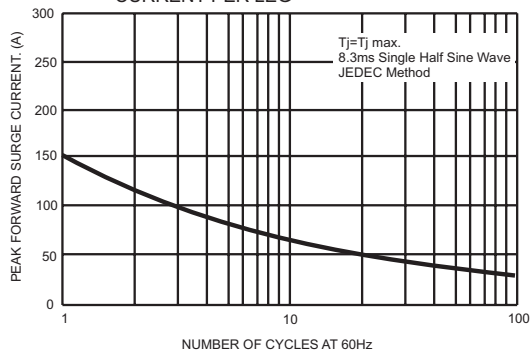


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

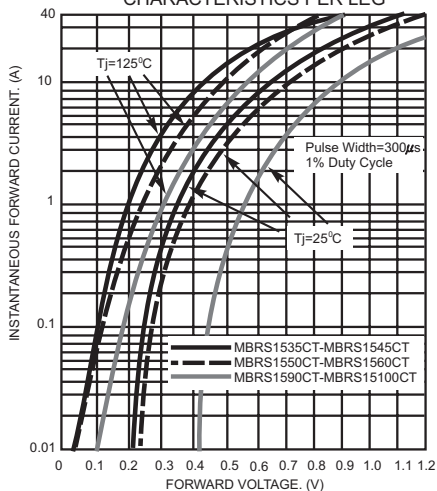


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

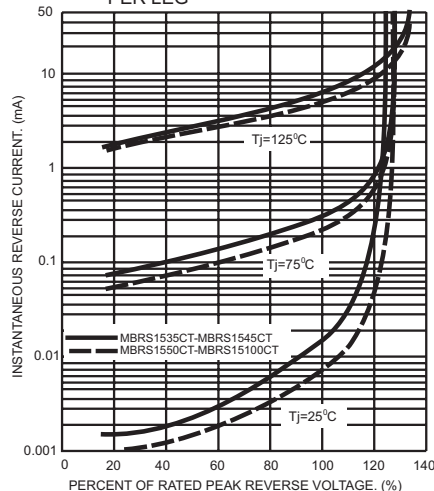


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

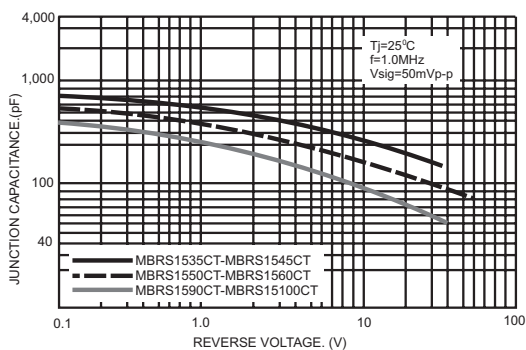
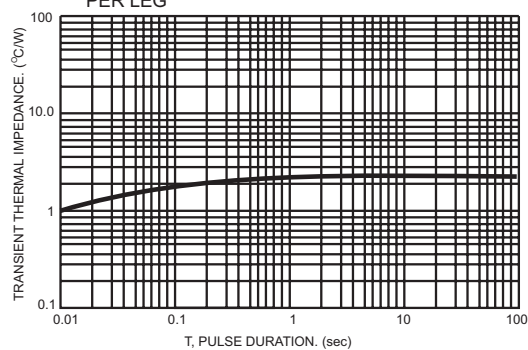


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG



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