



MBRS2535CT - MBR25150CT

25 AMPS. Surface Mount Schottky Barrier Rectifiers

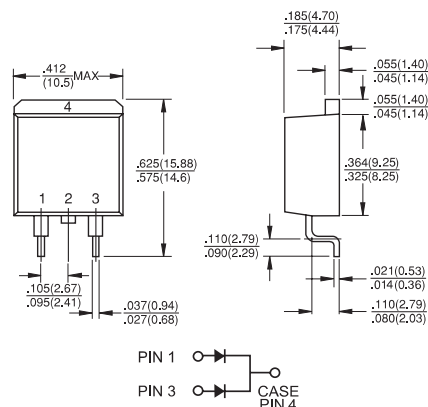
D²PAK

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
- Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- Cases: JEDEC D²PAK 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: 1.41 grams



Dimensions in inches and (millimeters)

Marking Diagram



MBRS25XXCT = 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	MBRS 2535 CT	MBRS 2545 CT	MBRS 2550 CT	MBRS 2560 CT	MBRS 2590 CT	MBRS 25100 CT	MBRS 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 at T _C =130°C	I(AV)	25							A
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20KHz) at T _C =130°C	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) 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	V _F	0.82 0.73 — —	0.75 0.65 — —		0.85 0.75 0.92 0.88		0.95 0.92 1.02 0.98		V
Maximum Instantaneous Reverse Current @ T _C =25 °C at Rated DC Blocking Voltage Per Leg @ T _C =125 °C (Note 2)	I _R	0.2 15	0.2 10		0.1 7.5		0.1 5		mA mA
Voltage Rate of Change, (Rated V _R)	dV/dt	10,000							V/μs
Maximum Thermal Resistance (Note 3)	RθJC	1.0							°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

RATINGS AND CHARACTERISTIC CURVES (MBRS2535CT THRU MBRS25150CT)

FIG.1- FORWARD CURRENT DERATING CURVE

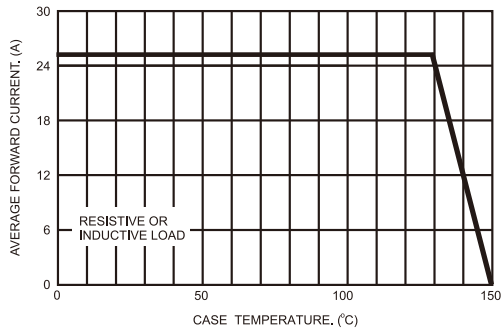


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

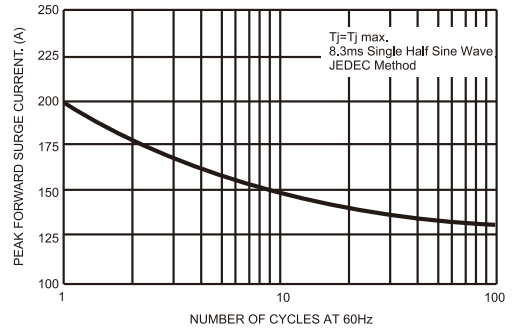


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

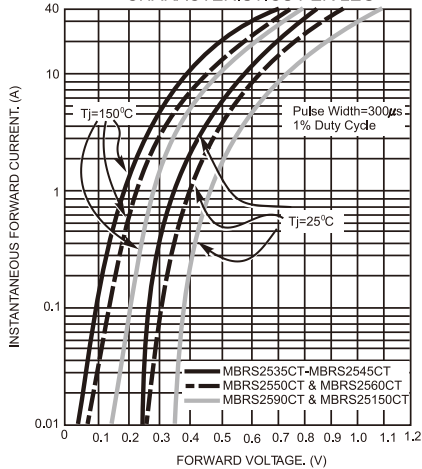


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

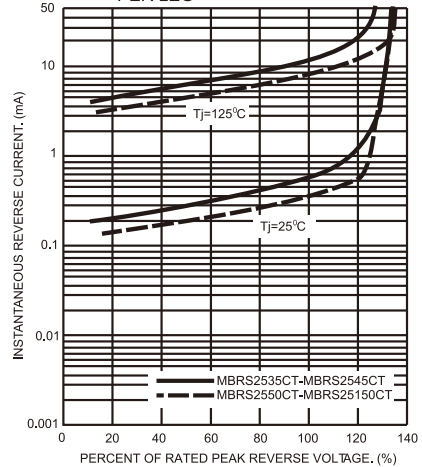


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

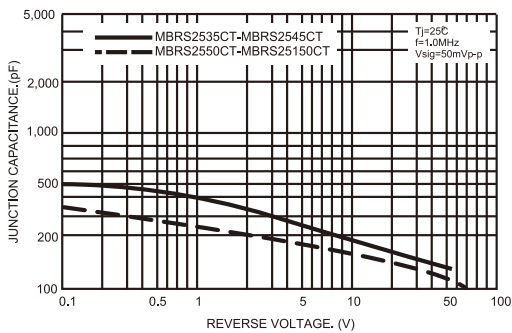


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

