

MBRS1535CT - MBR15150CT

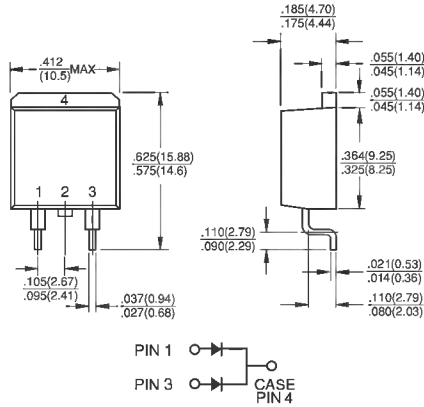
15.0 AMPS. Surface Mount Schottky Barrier Rectifiers

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 transient protection
- High temperature soldering guaranteed: 260°C/10 seconds, at terminals
- Green compound with suffix "G" on packing code & prefix "G" on datecode.



Dimensions in inches and (millimeters)
Marking Diagram

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: 1.41 grams



MBRS15XXCT = 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 1535 CT	MBRS 1545 CT	MBRS 1550 CT	MBRS 1560 CT	MBRS 1590 CT	MBRS 15100 CT	MBRS 15150 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 =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 _{RRM}	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	—		0.75 0.65	0.92 0.82		0.95 0.92		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		0.1 10		0.1 5.0		mA mA	
Voltage Rate of Change (Rated V _R)	dV/dt	1,000							V/μS
Maximum Thermal Resistance Per Leg (Note 3)	R _{θJA} R _{θJC}	50 2.0							°C/W
Operating Junction Temperature Range	T _J	-65 to +150							°C
Storage Temperature Range	T _{STG}	-65 to +175							°C

- Notes:
- 2.0us Pulse Width, f=1.0 KHz
 - Pulse Test: 300us Pulse Width, 1% Duty Cycle
 - Mounted on Heatsink Size of 2 in x 3 in x 0.25 in Al-Plate.t

RATINGS AND CHARACTERISTIC CURVES (MBRS1535CT THRU MBRS15150CT)

FIG.1- FORWARD CURRENT DERATING CURVE

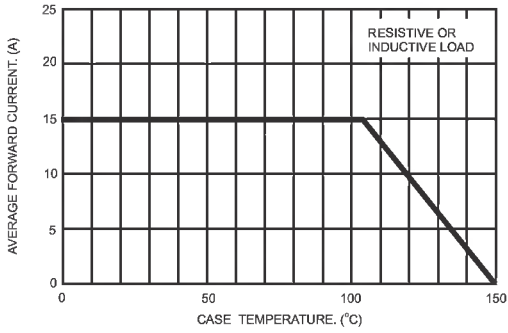


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

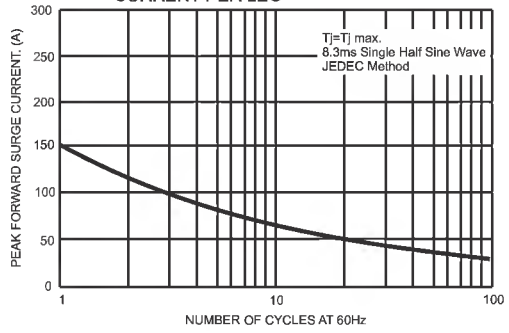


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

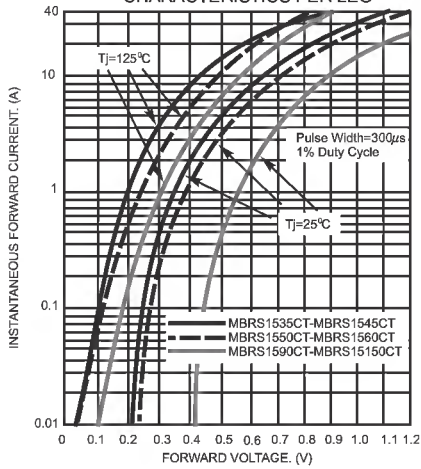


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

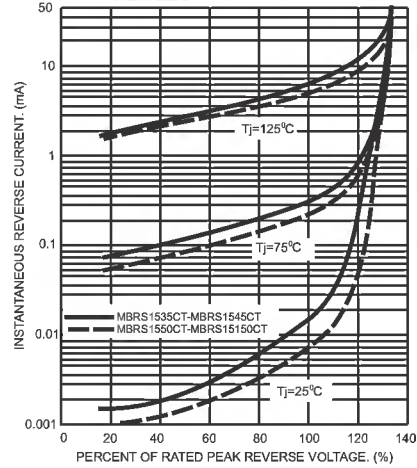


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

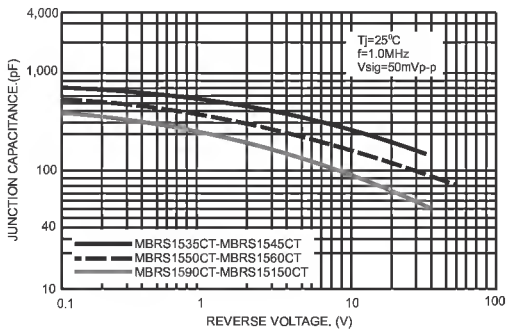


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS PER LEG

