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Switch-mode Power Rectifier 150 V, 10 A

MBRF10H150CTG

Features and Benefits

- Low Forward Voltage
- Low Power Loss/High Efficiency
- High Surge Capability
- 10 A Total (5 A Per Diode Leg)
- Guard-Ring for Stress Protection
- This is a Pb–Free Device

Applications

- Power Supply Output Rectification
- Power Management
- Instrumentation

Mechanical Characteristics:

- Case: Epoxy, Molded
- Epoxy Meets UL 94 V-0 @ 0.125 in
- Weight (Approximately): 1.9 Grams
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds

MAXIMUM RATINGS

Please See the Table on the Following Page



SCHOTTKY BARRIER

RECTIFIER

ORDERING INFORMATION

See detailed ordering and shipping information in the package dimensions section on page 2 of this data sheet.

MBRF10H150CTG

MAXIMUM RATINGS (Per Diode Leg)

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	150	V
	I _{F(AV)}	5 10	A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I _{FSM}	150	A
Operating Junction Temperature (Note 1)	Т _Ј	-20 to +150	°C
Storage Temperature	T _{stg}	-65 to +150	°C
Voltage Rate of Change (Rated V _R)	dv/dt	10000	V/µs
ESD Ratings: Machine Model = C Human Body Model = 3B		> 400 > 8000	V

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dP_D/dT_J < 1/R_{\theta JA}$.

THERMAL CHARACTERISTICS

Rating	Symbol	Value	Unit
Maximum Thermal Resistance – Junction-to-Case	$R_{\theta JC}$	2.5	°C/W

ELECTRICAL CHARACTERISTICS (Per Diode Leg)

Rating	Symbol	Тур	Max	Unit
Maximum Instantaneous Forward Voltage (Note 2) ($I_F = 5 A$, $T_C = 25^{\circ}C$) ($I_F = 5 A$, $T_C = 125^{\circ}C$)	VF	0.85 0.63	0.69	V
Maximum Instantaneous Reverse Current (Note 2) (Rated DC Voltage, $T_C = 25^{\circ}C$) (Rated DC Voltage, $T_C = 125^{\circ}C$)	İR		45 20	μA mA

2. Pulse Test: Pulse Width = 300 $\mu s,$ Duty Cycle \leq 2.0%.

DEVICE ORDERING INFORMATION

Device Order Number	Package Type	Shipping [†]
MBRF10H150CTG	TO-220FP (Pb-Free)	50 Units / Rail

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

MBRF10H150CTG





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Figure 8. Thermal Response Junction-to-Case for MBRF10H150CTG

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 DESCRIPTION:
 TO-220 FULLPAK
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