

# MBRF10150CT\_MBRF10200CT

## Dual Common-Cathode High-Voltage Schottky Rectifier

### Description

The MBRF10150CT\_MBRF10200CT is a N-channel enhancement-mode MOSFET , providing the designer with the best combination of fast switching, ruggedized device design, low on-resistance and cost effectiveness. The TO-220F package is universally preferred for all commercial-industrial applications

### Features

- Guard ring for overvoltage protection
- Lower power losses, high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High frequency operation
- Solder Dip 260 °C, 40 s
- RoHS compliant package

### Application

For use in high frequency rectifier of switching mode power supplies, freewheeling diodes, dc-to-dc converters or polarity protection application.

### Mechanical Data

Case: ITO-220AB

Molding compound meets UL 94 V-0 flammability rating

Terminals: Matte tin plated leads, solderable per meets JESD 201

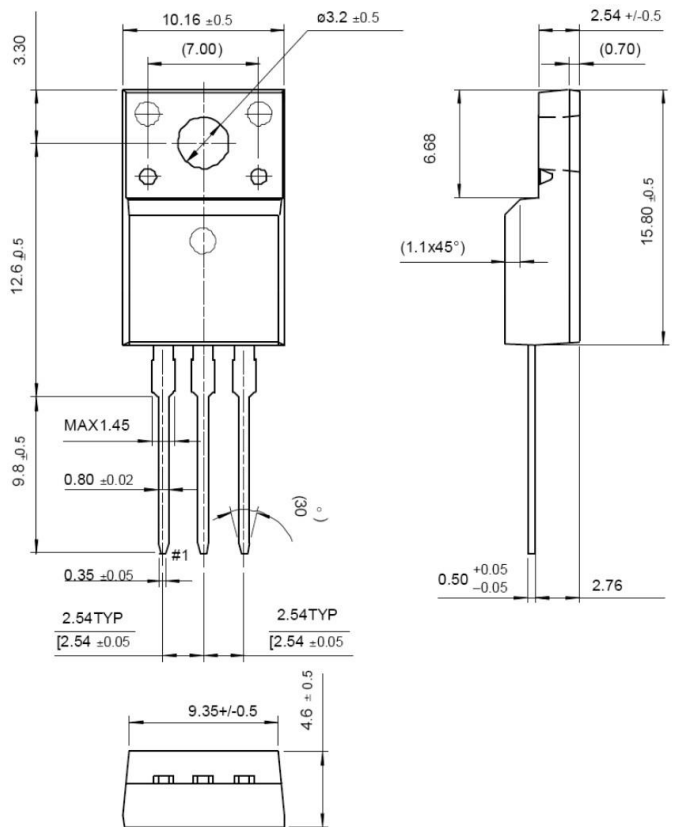
Polarity: As marked

Weight: 2.3 grams

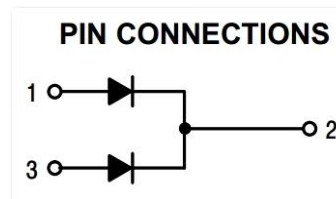
Mounting Torque: 10 in-lbs maximum

### Packing & Order Information

50/Tube ; 1,000/Box



### Graphic symbol



**RoHS  
COMPLIANT**

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### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

#### Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	MBRF10150CT	MBRF10200CT	Unit
Maximum repetitive peak reverse voltage	VRRM	150	200	V
Working peak reverse voltage	VRWM	105	140	V
Maximum DC blocking voltage	VDC	150	200	V
Maximum average forward rectified current	IF(AV)	10		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	120		A
Non-repetitive avalanche energy at 25 °C IAS = 2 A per diode	EAS	12		m'J
Operating junction temperature range	TJ	-55 to +175		°C
Storage temperature range	TSTG	-55 to +175		°C

#### Electrical characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage at IF=5A, Tj=25°C at IF=5A, Tj=125°C	VF	0.88 0.75	0.90 0.80	V
Maximum reverse current per leg Tj=25°C	IR	100		u'A
at working peak reverse voltage Tj=125°C		1		m'A

#### Notes:

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

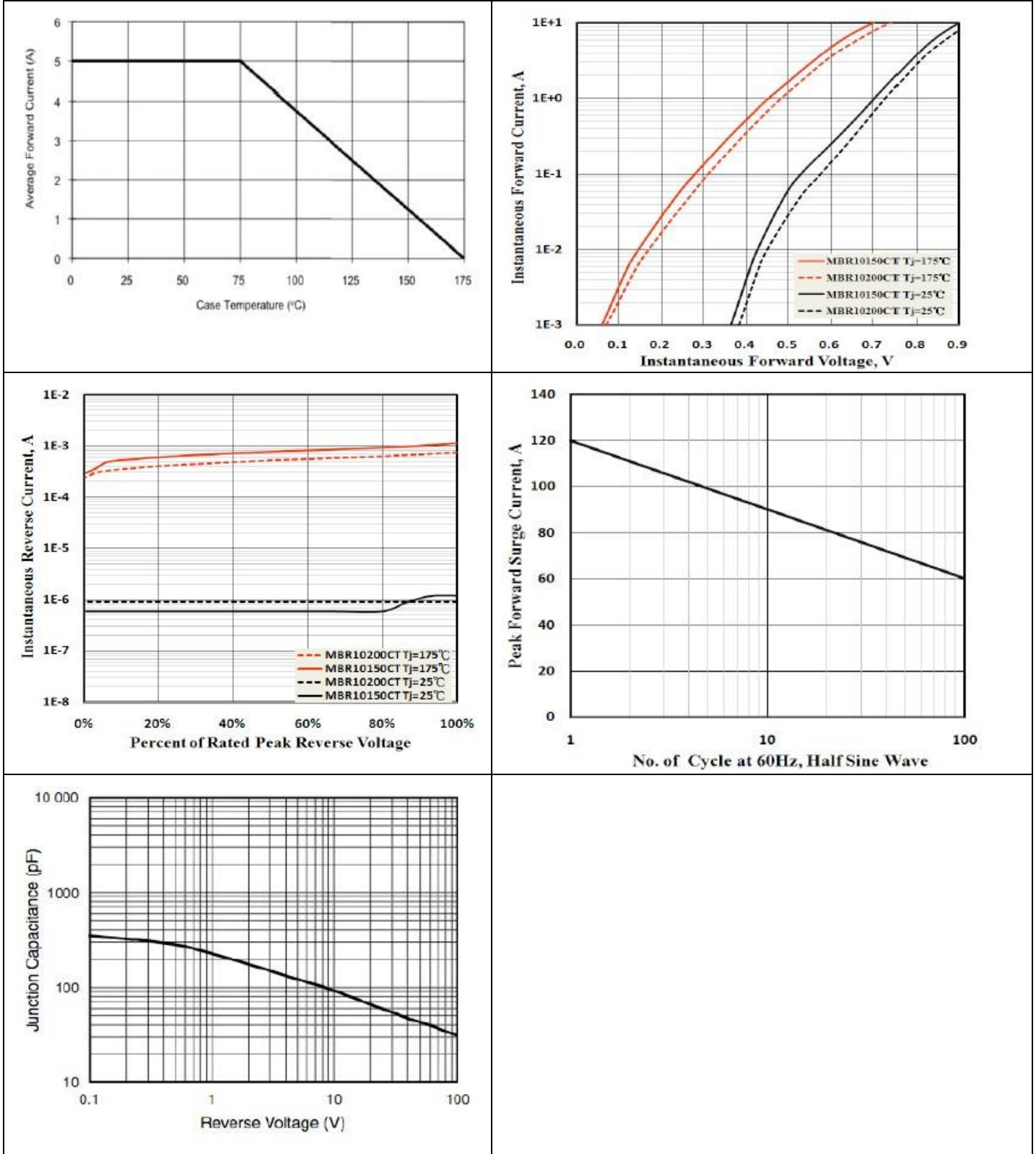
#### Thermal characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Typical thermal resistance	Symbol		°C/W
	RθJA	60	
	Rthjc	4.5	

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■ TYPICAL CHARACTERISTICS @ Ta=25 °C unless otherwise specified



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