MBRF30200CT

Product profile

Dual Common-Cathode Ultra Low VF Schottky Rectifier

General description

Rectifiers 30 Amp 200V

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
- Component in accordance to ROHS 2002/95/EC

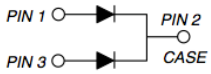
and WEEE 2002/96/EC

Typical applications

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

ITO-220AB





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

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

Parameter	Symbol	MBRF30200CT	Unit
Maximum repetitive peak reverse voltage	VRRM	200	V
RMS Voltage (Max.)	VRMS	140	V
Working peak reverse voltage	VRWM	200	V
Maximum average forward rectified current Total Device	IF(AV)	30	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	160	A
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Unit
Typical thermal resistance	RθJC	4.5	°C/W

Notes: (1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

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

OFF CHARACTERISTICS

Parameter	Symbol	Value		Unit
		Typical	Max	
Instantaneous forward voltage	VF			V
at IF=5A, Tj=25°C		0.79	0.87	
at IF=15A, Tj=25°C		0.92	1.05	
at IF=5A, Tj=125°C		0.65	0.72	
at IF=15A, Tj=125°C		0.80	0.88	
Maximum reverse current Tj=25°C	IR	10		u'A
at working peak reverse voltage Tj=125°C		2		m'A

DEVICE MARK

MBRF30200CT

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■ Characteristic Curves

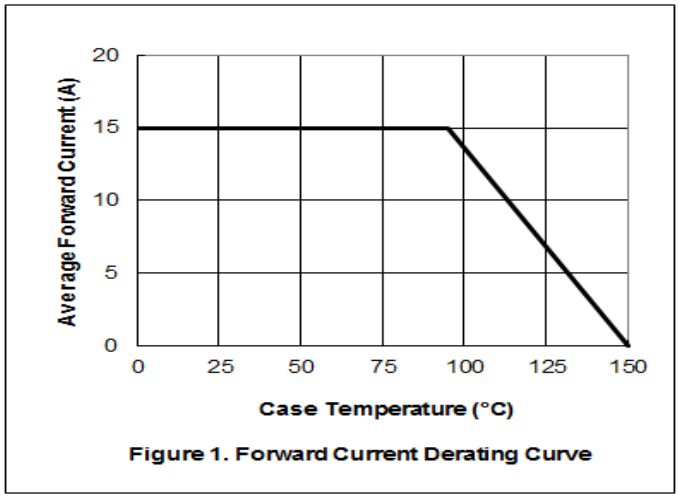


Figure 1. Forward Current Derating Curve

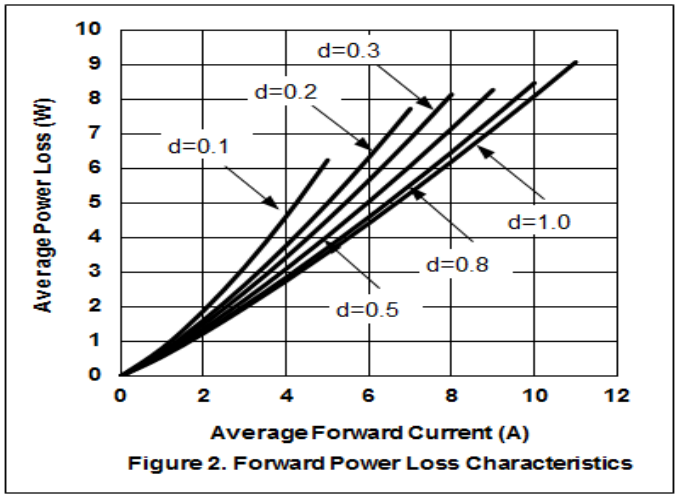


Figure 2. Forward Power Loss Characteristics

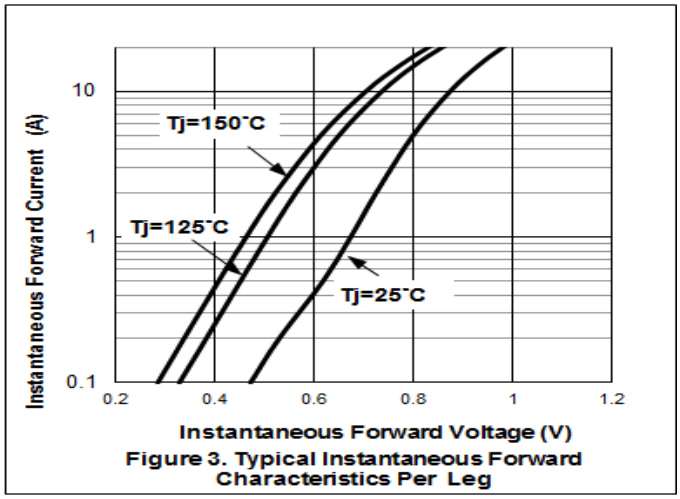


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

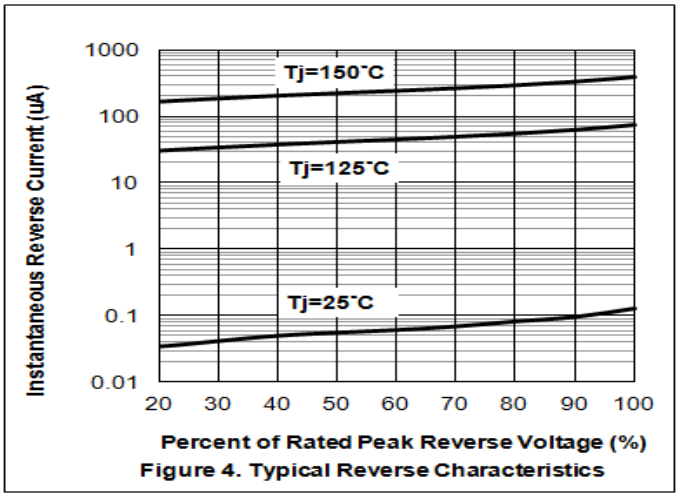


Figure 4. Typical Reverse Characteristics

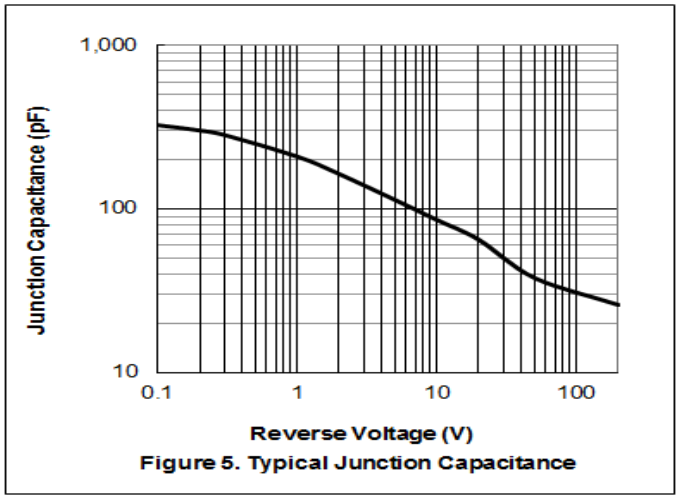


Figure 5. Typical Junction Capacitance

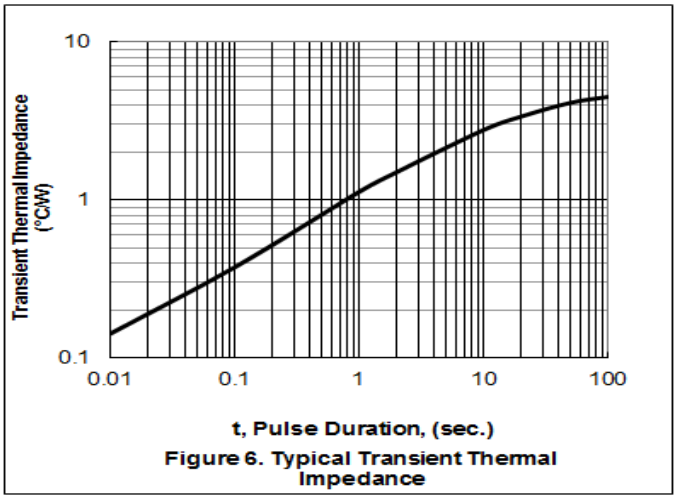


Figure 6. Typical Transient Thermal Impedance

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