TMBR30120CT

Dual Common-Cathode
Ultra Low VF Schottky Rectifier

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

Applications

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

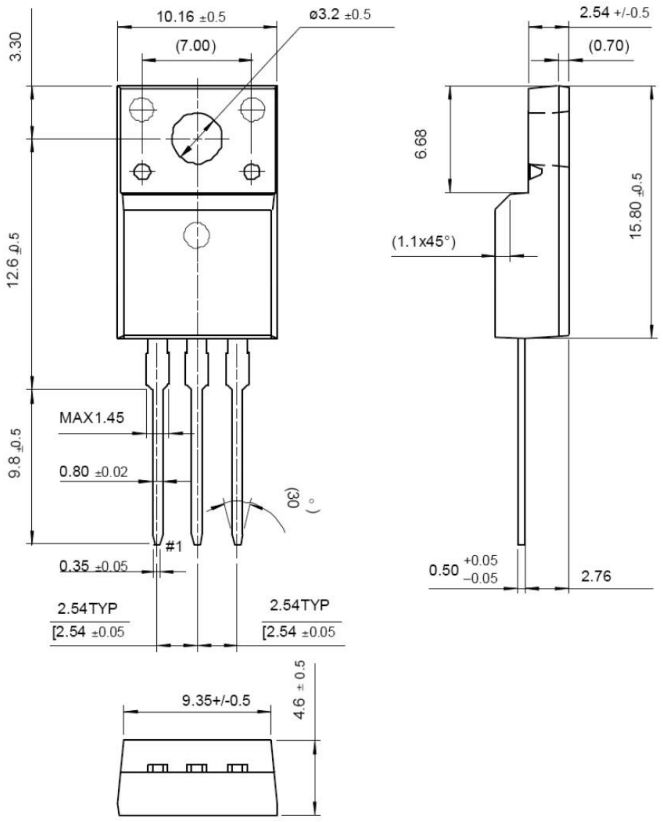
Mechanical Data

- Case: TO-220AB
- Molding compound meets UL 94 V-0 flammability
- Terminals: Matte tin plated leads
- Polarity: As marked
- Weight: 2.24 grams
- Mounting Torque: 10 in-lbs maximum

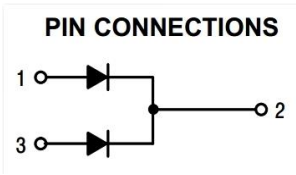
Packing & Order Information

50/Tube ; 1,000/Box

RoHS COMPLIANT



Graphic symbol



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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)			
Parameter	Symbol	TMBR30120CT	Unit
Maximum repetitive peak reverse voltage	VRRM	120	V
Working peak reverse voltage	VRWM	120	V
Maximum DC blocking voltage	VDC	120	V
Maximum average forward rectified current Total device	IF(AV)	30	A
Average Rectified Forward Current	Io(AV)	15	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	200	A
Operating junction temperature range	TJ	-55 to +150	°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=15A, Tj=25°C at IF=15A, Tj=125°C	VF	0.79 0.66	0.76 0.68	V
Maximum reverse current per leg Tj=25°C	IR	200		u'A
at working peak reverse voltage Tj=125°C		30		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	Rthjc	4	°C/W
	RθJA	60	

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

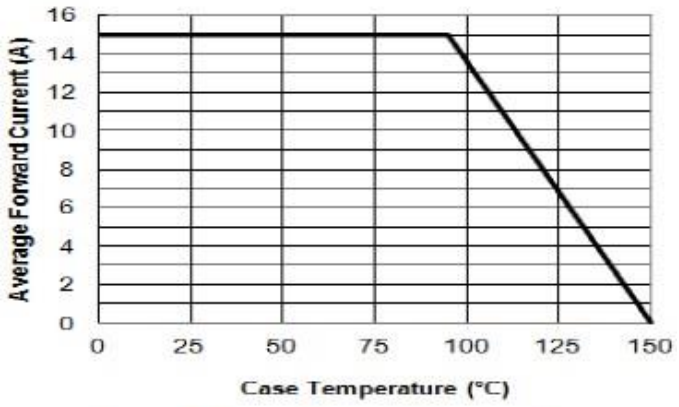

Figure 1. Forward Current Derating Curve

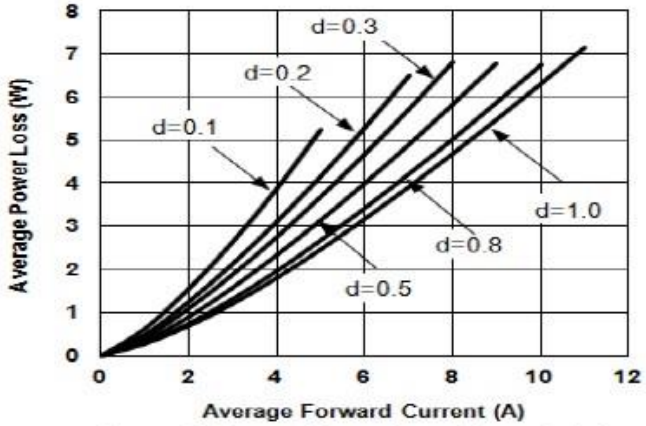

Figure 2. Forward Power Loss Characteristics

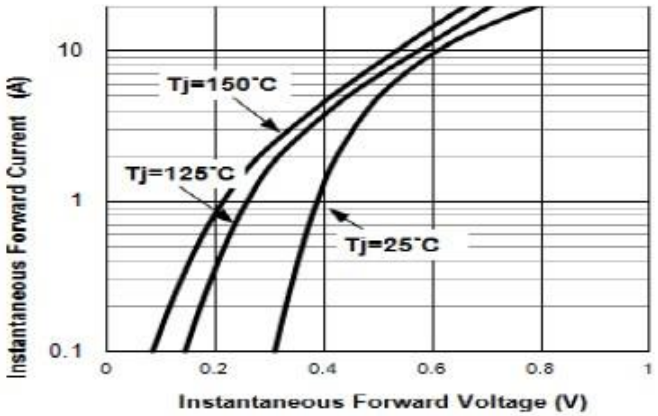

Figure 3. Typical Instantaneous Forward Characteristics Per Leg

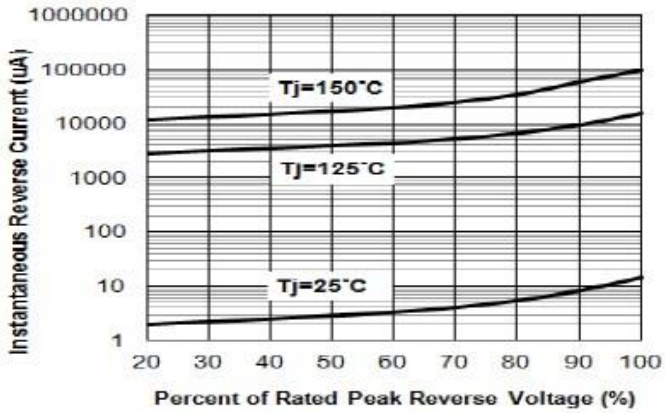

Figure 4. Typical Reverse Characteristics

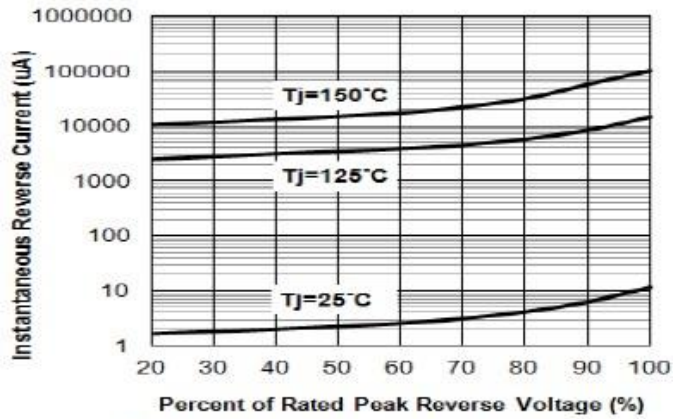

Figure 4. Typical Reverse Characteristics

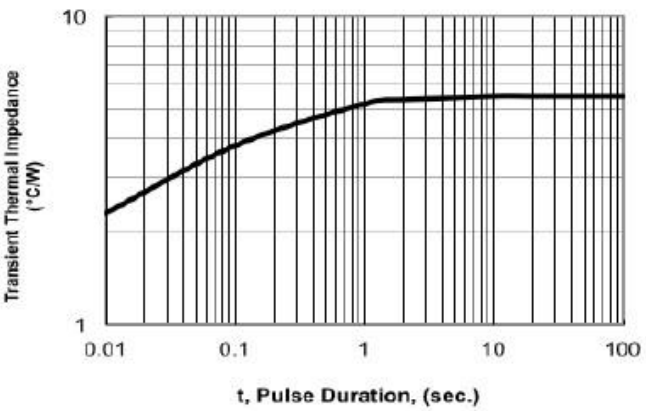

Figure 6. Typical Transient Thermal Impedance

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