MBRD6100CT

Dual Common-Cathode
High-Voltage Schottky Rectifier

Description

The MBRD6100CT 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

- Low Forward Voltage Drop
- Excellent High Temperature Stability
- Super Barrier Design
- Soft, Fast Switching Capability
- RoHS compliant package

Mechanical Data

Case: TO-252 Case Material: Molded Plastic, UL Flammability

Classification Rating 94V-0

Moisture Sensitivity: Level 1 per J-STD-020

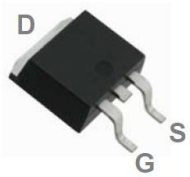
Terminals: Matte Tin Finish annealed over Copper lead frame

Solderable per MIL-STD-202, Method 208

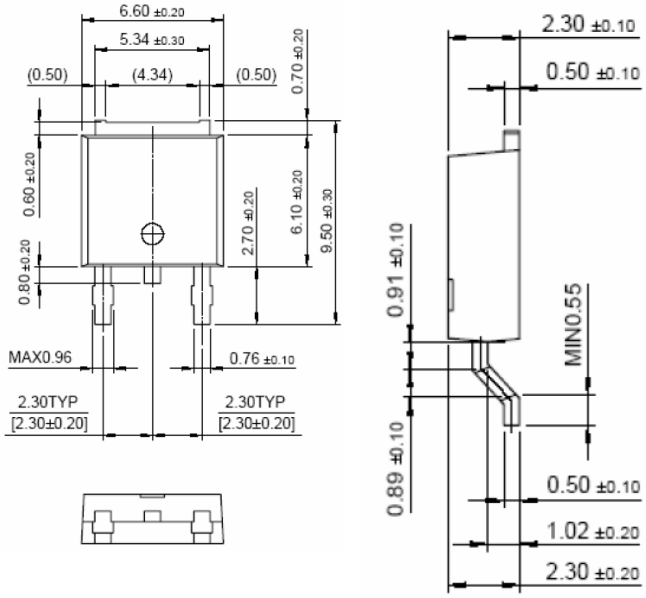
Weight: 0.33 grams (approximate)

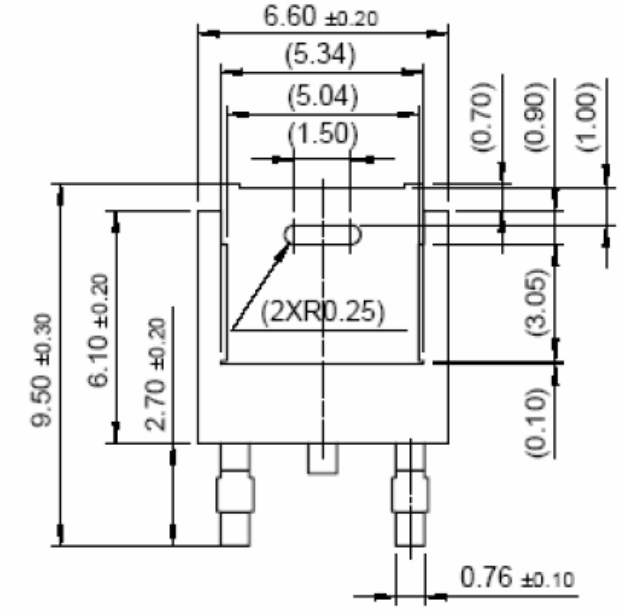
Packing & Order Information

50/Tube ; 1,000/Box

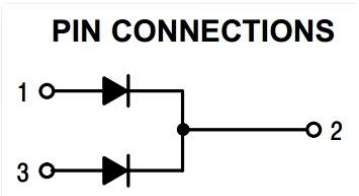


RoHS COMPLIANT





Graphic symbol



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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)			
Parameter	**Symbol**	**MBR3040CT**	**Unit**
Maximum repetitive peak reverse voltage	VRRM	100	V
Working peak reverse voltage	VRWM	100	V
Maximum DC blocking voltage	VDC	100	V
Maximum average forward rectified current	IF(AV)	6	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	80	A
Non-repetitive avalanche energy at 25 °C IAS = 1 A per diode	EAS	6	m'J
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

Note:

(1) Mounted on 30 mm x 30 mm Al P.C.B. with 50 mm x 25 mm x 100 mm fin heat sink

(2) Free air, mounted on recommended copper pad area

Electrical characteristics (Tc=25°C unless otherwise noted)				
Parameter	**Symbol**	**Value**		**Unit**
		Typical	Max	
Instantaneous forward voltage at IF=3A, Tj=25°C at IF=3A, Tj=125°C	VF	0.7 0.65	0.75	V
Maximum reverse current per leg Tj=25°C	IR	150		u'A
at working peak reverse voltage Tj=125°C		20		m'A

Thermal characteristics (Tc=25°C unless otherwise noted)			
Parameter		**Value**	**Unit**
Typical thermal resistance	Symbol	MBRD6100CT	°C/W
	RθJA	80	
	Rthjc	6	

Notes:

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

(2) Pulse test: Pulse width ≤ 40 ms

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