



MBRD20150CT

Schottky Barrier Rectifier

Reverse Voltage 150 Volts Forward Current 20 Amperes

Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection

TO-252 (D-PAK)



Package: TO-252(D-PAK)



Mechanical Data

- Case: Epoxy, Molded
- Weight: 1.4grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube or tape reel packing 800/reel

Maximum Ratings & Electrical Characteristics

($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	MBRD20150CT	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	150	V
Working peak reverse voltage			V_{RWM}	150	V
Maximum DC blocking voltage			V_{DC}	150	V
Maximum average forward rectified current at $T_c=105^{\circ}\text{C}$ total device per diode			$I_F(AV)$	20 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I_{FSM}	150	A
Peak repetitive reverse current per leg at $t_p=2.0\mu\text{s}$, 1KHz			I_{RRM}	1.0	A
Voltage rate of change (rated V_R)			DV/dt	10000	V/ μs
Operating junction temperature range			T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range			T_{STG}	-55 to +150	$^{\circ}\text{C}$
Maximum instantaneous forward voltage per leg	$I_F=10\text{A}$ $I_F=10\text{A}$	$T_C=25^{\circ}\text{C}$ $T_C=125^{\circ}\text{C}$	V_F	0.92 0.82	V
Maximum reverse current per leg at working peak Reverse voltage			I_R	200 15	μA mA
Thermal Characteristics $T_A=25^{\circ}\text{C}$ unless otherwise noted					
Symbol	Parameter	TYP (TO-252)		Unit	
R θ JC	Thermal Resistance, Junction to Case per Leg	2.0		$^{\circ}\text{C}/\text{W}$	
R θ JA	Thermal Resistance, Junction to Ambient per Leg	62.5		$^{\circ}\text{C}/\text{W}$	

Note: Pulse test: 300 μs pulse width, duty cycle=2%



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Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1: Average forward power dissipation versus average forward current (per diode).

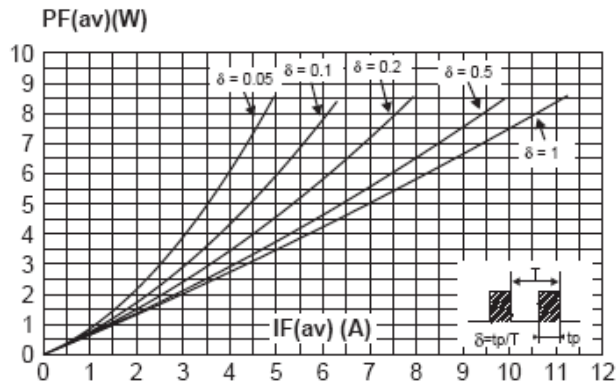


Fig. 2: Average forward current versus ambient temperature ($\delta = 0.5$, per diode).

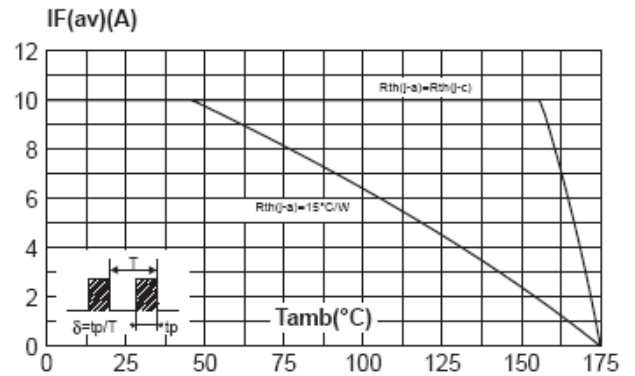


Fig. 3: Non repetitive surge peak forward current versus overload duration (maximum values, per diode).

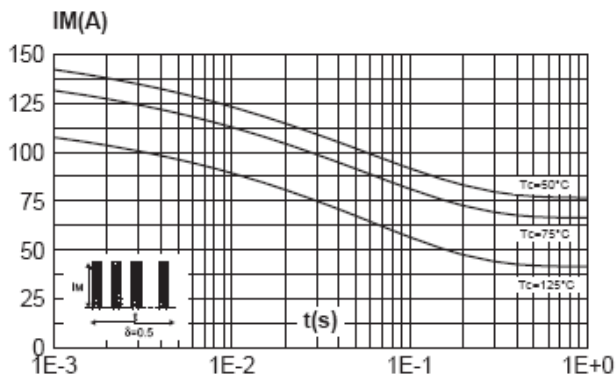


Fig. 4: Relative variation of thermal impedance junction to case versus pulse duration (per diode).

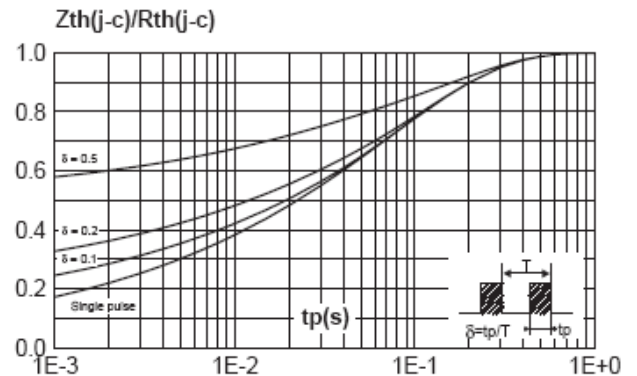


Fig. 5: Reverse leakage current versus reverse voltage applied (typical values, per diode).

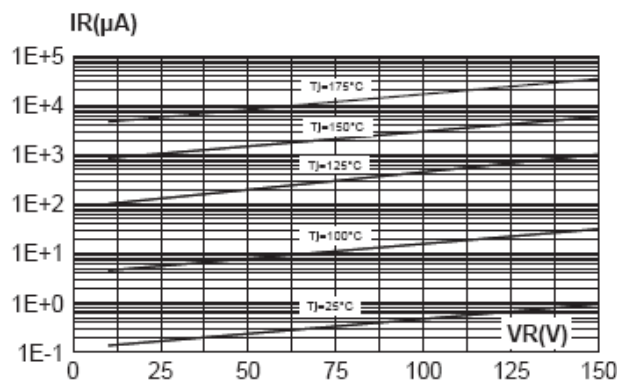
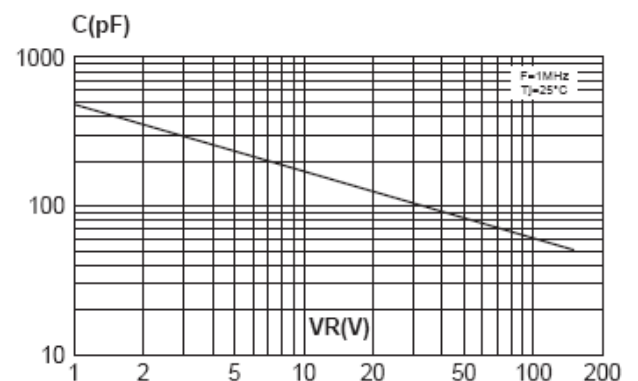


Fig. 6: Junction capacitance versus reverse voltage applied (typical values, per diode).





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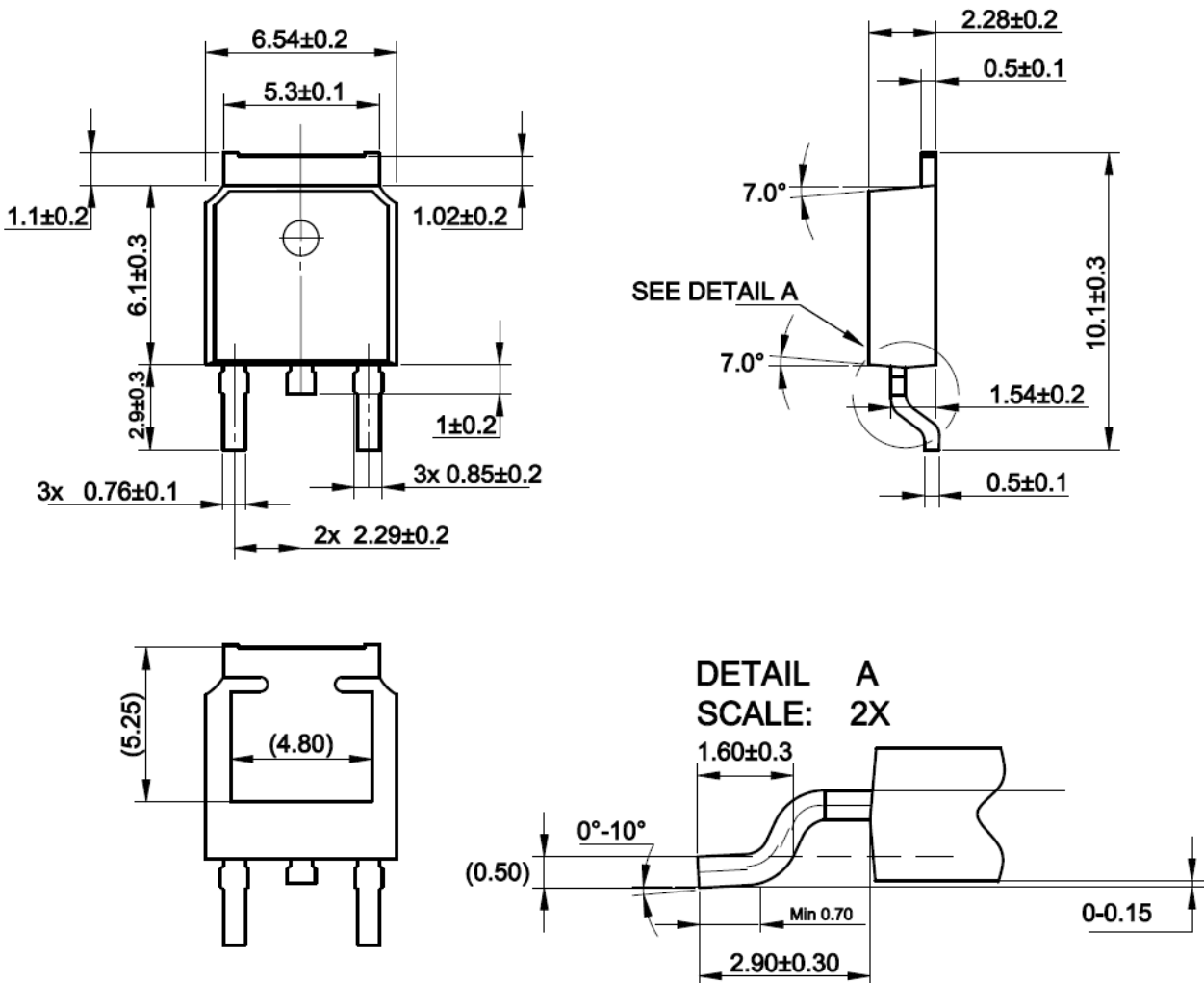
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Package Outline Dimensions

Unit: millimeters

TO-252(D-PAK)



Disclaimers



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