

### MBRB20150CT 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

# **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

(TA=25°C unless otherwise noted)

PARAMETER		TEST		SYMBOL	MBRB20150CT	UNIT
		CONDITIONS				
Maximum repetitive peak reverse voltage				Vrrm	150	V
Working peak reverse voltage				VRWM	150	V
Maximum DC blocking voltage				VDC	150	V
Maximum average forward rectified current at				IF(AV)	20	А
Tc=105°C total device per diode					10	
Peak forward surge current 8.3ms single half sine-wave superimposed				IFSM	150	А
on rated load per diode					150	
Peak repetitive reverse current per leg at $t_p$ =2.0us ,1KHz				Irrm	1.0	А
Voltage rate of change (rated V <sub>R</sub> )				Dv/dt	10000	V/us
Operating junction temperature range				TJ	—55 to+150	°C
Storage temperature range				Тѕтс	—55 to+150	°C
Maximum instantaneous forward voltage per leg		I⊧=10A	Tc <b>=25</b> ℃	VF	0.92	v
		I⊧=10A	Tc <b>=125</b> ℃		0.82	
Maximum reverse current per leg at working peak			<b>T</b> J <b>=25</b> ℃	lR	200	uA
Reverse voltage			TJ=100°C		15	mA
Thermal Characteristics TA=25°C unless otherwise noted						
Symbol	Parameter	TYP (TO-263)			Unit	
RθJC	Thermal Resistance, Junction to Case per Leg	2.0				°C /W
RθJA	Thermal Resistance, Junction to Ambient per Leg	62.5				°C /W

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





PIN 1 O K O PIN 2 O HEATSINK



# **MBRB20150CT**

Schottky Barrier Rectifier

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#### Ratings and Characteristics Curves

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

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

#### PF(av)(W)



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



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



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



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



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





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# Package Outline Dimensions

Unit: millimeters





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