### Schottky Barrier Rectifier

### multicomp PRO





#### **Features**

- · Metal of silicon rectifier, majority carrier conduction
- · Trench schottky technology
- Low power loss, high efficiency
- · High current capability, low VF
- · High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, switching power supplies, DC-DC converter, and polarity protection applications

#### **Mechanical Data**

Case : TO-220AB

Polarity : As marked on the body Weight : 0.08ounces, 2.24 grams

Mounting position : Any

#### **Maximum Ratings And Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

I<sub>F</sub>=10A

I<sub>F</sub>=10A

@T<sub>J</sub>=25°C

@T<sub>J</sub>=25°C

@T<sub>J</sub>=125°C

@TJ=125°C

Characteristic	Symbol	Valı	ues	Unit	
Maximum Ratings (T <sub>A</sub> = 25 °C unless otherwise noted)				•	
Maximum Recurrent Peak Reverse Voltage	Vrrm	15	50		
Maximum RMS Voltage	VRMS	106			
Maximum DC Blocking Voltage	VDC	15	50		
Maximum Average Forward Rectified Current (See Fig.1) Maximum Average Forward Rectified Current (Per Leg)	I(AV)	20 10			
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	IFSM	170		A	
Peak repetitive reverse current at tp = 2µs, 1kHz	Irrm	1			
Operating Temperature Range	TJ	-55 to +150		-0°C	
Storage Temperature Range	Tstg	-55 to +175		7 '	
Electrical Characteristics (TA = 25 °C unless otherwise	noted)				
Parameter / Conditions	Symbol	Тур	Max	Unit	
Breakdown voltage per diode	VBR	150 (minimun)	-		
Forward Voltage (Note1)	VE	0.67 0.54	0.72 0.58	V	

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Maximum DC Reverse Current

at Rated DC Bolcking Voltage



μΑ

mΑ

1

0.68

45

20

 $V_{\mathsf{F}}$ 

lκ

0.9

0.62

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Parameter / Conditions	Symbol	Values	Unit		
Typical Junction Capacitance (Note 2)	CJ	394	pF		
Thermal Characteristics (T <sub>A</sub> = 25 °C unless otherwise noted)					
Parameter	Symbol	Values	Unit		
Thermal Resistance Per Diode (Note3)	Rejc	3	°C/W		

#### Notes:

- 1. 300µs pulse width, 2% duty cycle.
- 2. Measured at 1MHz and applied reverse voltage of 5V DC.
- 3. Thermal resistance junction to case.

#### **Rating and Characteristic Curves**

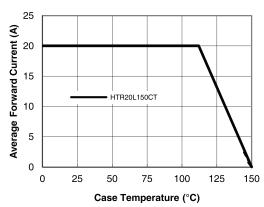


Figure 1. Forward Current Derating Curve

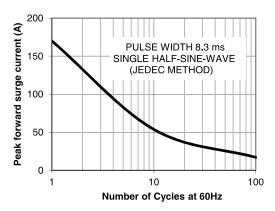
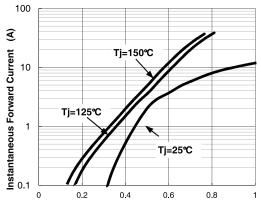


Figure 2. Maximum NON-Repetitive



Instantaneous Forward Voltage (V) Figure 3. Typical Instantaneous Forward Characteristics Per Leg

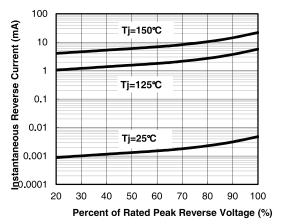


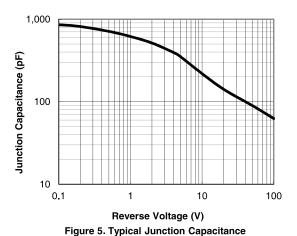
Figure 4. Typical Reverse Characteristics

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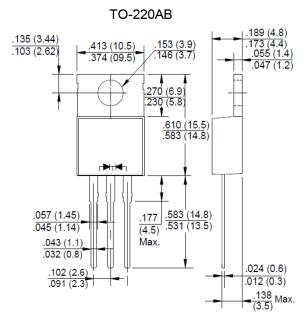


Average Power Loss(W) 2 d=0.8 d=0.5 0 6 8 10 Average Forward Current(A)

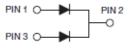
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Figure 6. Forward Power Loss Characteristics

#### **Dimension:**



#### **Pin Configuration**



Dimensions: Inches (Millimetres)

Part	Number	Table

Description	Part Number	
Schottky Barrier Rectifier	HTR20L150CT	

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