Schottky Barrier Rectifier







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%

Characteristic	Symbol	Val	ues	Unit		
Maximum Ratings (T _A = 25 °C unless otherwise noted)						
Maximum Recurrent Peak Reverse Voltage	VRRM	20	00			
Maximum RMS Voltage	VRMS	14	41	V		
Maximum DC Blocking Voltage	VDC	20	00			
Maximum Average Forward Rectified Current (See Fig.1) Maximum Average Forward Rectified Current (Per Leg)	I(AV)		30 15			
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	IFSM	330		A		
Operating Temperature Range	TJ	-55 to +150		°C		
Storage Temperature Range	Tstg	-55 to +175				
Electrical Characteristics (T _A = 25 °C unless otherwise noted)						
Parameter / Conditions	Symbol	Tyn	Max	Unit		

Parameter / Co	onditions	Symbol	Тур	Max	Unit
Breakdown voltage per diode		VBR	205 (minimun)	-	
	7.5A @Tj=25°C 7.55A @Tj=125°C 15A @Tj=25°C 15A @Tj=125°C	VF	0.75 0.56 1.14 0.66	0.81 0.6 1.23 0.7	V
Maximum DC Reverse Current at Rated DC Bolcking Voltage	@T _J =25°C @T _J =125°C	lR	10 5	* *	μA mA

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Parameter / Conditions	Symbol	Values	Unit	
Typical Junction Capacitance (Note 2)	Cı	249		
Thermal Characteristics (T _A = 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 4V DC.
- 3. Thermal resistance junction to case.

Rating and Characteristic Curves

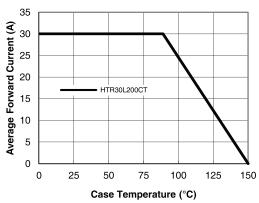


Figure 1. Forward Current Derating Curve

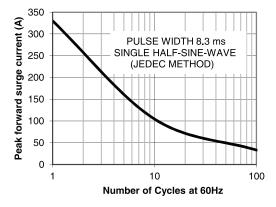
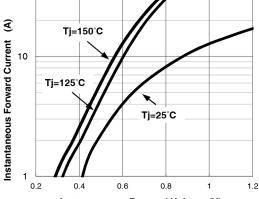


Figure 2. Maximum NON-Repetitive



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

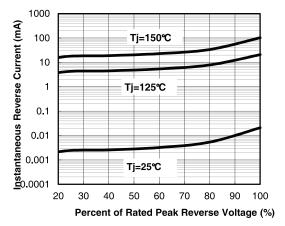


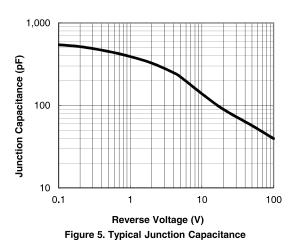
Figure 4. Typical Reverse Characteristics

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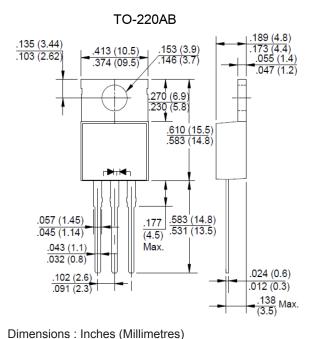




12 10 8 d=0.3 d=0.2 d=0.5 d=0.5 15

Average Forward Current(A)
Figure 6. Forward Power Loss Characteristics

Dimension:



Pin Configuration K O HEATSINK

Part Number Table

Description	Part Number	
Schottky Barrier Rectifier	HTR30L200CT	

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