



HY ELECTRONIC (CAYMAN) LIMITED

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Low  $V_F=0.57V$  at  $I_F=5A$

**HTR20150CT, HTRF20150CT**  
**HTRI20150CT, HTRB20150CT**

SCHOTTKY BARRIER RECTIFIERS	REVERSE VOLTAGE	150	Volts	
	FORWARD CURRENT	20	Amperes	
<b>FEATURES</b> <ul style="list-style-type: none"> <li>●Metal of silicon rectifier , majority carrier conduction</li> <li>●Trench Schottky Technology</li> <li>●Low power loss, high efficiency</li> <li>●High current capability, low <math>V_F</math></li> <li>●High surge capacity</li> <li>●Plastic package has <b>UL</b> flammability classification 94V-0</li> <li>●For use in low voltage,high frequency inverters,free wheeling,<b>switching power supplies, DC-DC converter</b>,and polarity protection applications</li> </ul> <b>MECHANICAL DATA</b> <ul style="list-style-type: none"> <li>●Case: TO-220AB / ITO-220AB / TO-262AA / TO-263AB</li> <li>●Polarity: As marked on the body</li> <li>●Weight: 0.08ounces,2.24 grams</li> <li>●Mounting position :Any</li> </ul>	<b>TO-220AB</b>  HTR20150CT	<b>ITO-220AB</b>  HTRF20150CT	 <b>HALOGEN FREE</b>  <b>RoHS COMPLIANT</b>	
	<b>TO-263AB</b>  HTRB20150CT	<b>TO-262AA</b>  HTRI20150CT		

**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%

**MAXIMUM RATINGS (T<sub>A</sub> = 25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	HTR20150CT, HTRF20150CT, HTRI20150CT, HTRB20150CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	150	V
Maximum RMS Voltage	V <sub>RMS</sub>	106	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	150	V
Maximum Average Forward Rectified Current ( See Fig.1)	I <sub>(AV)</sub>	20	A
Maximum Average Forward Rectified Current ( Per Leg )		10	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	I <sub>FSM</sub>	120	A
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +175	°C

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25 °C unless otherwise noted)**

PARAMETER / CONDITIONS	SYMBOL	Typ		Max	UNIT
		HTR20150CT	HTRF20150CT		
Breakdown voltage per diode	V <sub>BR</sub>	150 (minimum)		-	V
Forward Voltage (Note1)	V <sub>F</sub>	IF=5A @TJ=25°C	0.78	0.84	V
		IF=5A @TJ=125°C	0.57	0.61	
		IF=10A @TJ=25°C	1.12	1.21	
		IF=10A @TJ=125°C	0.65	0.69	
Maximum DC Reverse Current @TJ=25°C	I <sub>R</sub>	32		uA	
at Rated DC Bolcking Voltage @TJ=125°C		16		mA	
Typical Junction Capacitance (Note2)	C <sub>J</sub>	461		pF	

**THERMAL CHARACTERISTICS (T<sub>A</sub> = 25 °C unless otherwise noted)**

PARAMETER	SYMBOL	Typ				UNIT
		HTR20150CT	HTRF20150CT	HTRI20150CT	HTRB20150CT	
Thermal Resistance Per Diode (Note3)	R <sub>θJC</sub>	3.0	5.5	3.5	3.5	°C/W

NOTES:1.300us pulse width,2% duty cycle.  
 2.Measured at 1.0 MHz and applied reverse voltage of 5.0V DC.  
 3.Thermal resistance junction to case.

Preliminary

# RATING AND CHARACTERISTIC CURVES

HTR20150CT, HTRF20150CT  
HTRI20150CT, HTRB20150CT

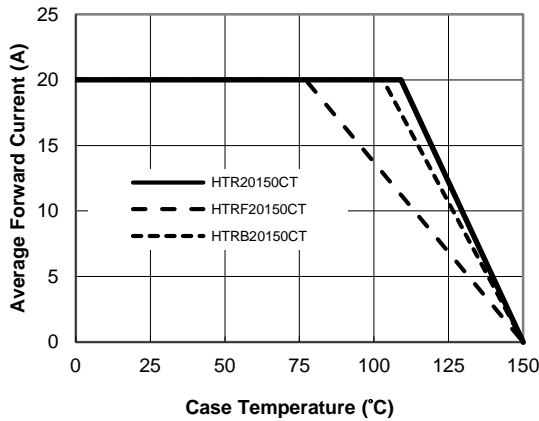


Figure 1. Forward Current Derating Curve

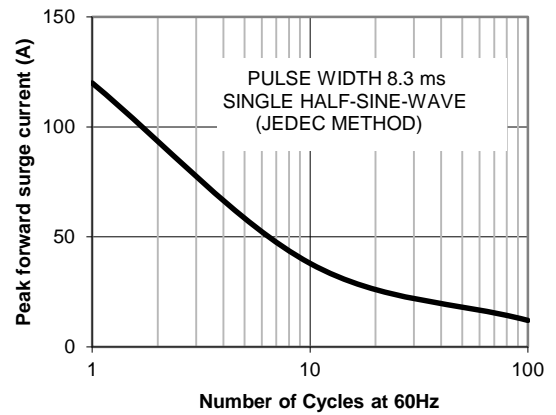


Figure 2. Maximum NON-Repetitive Surge

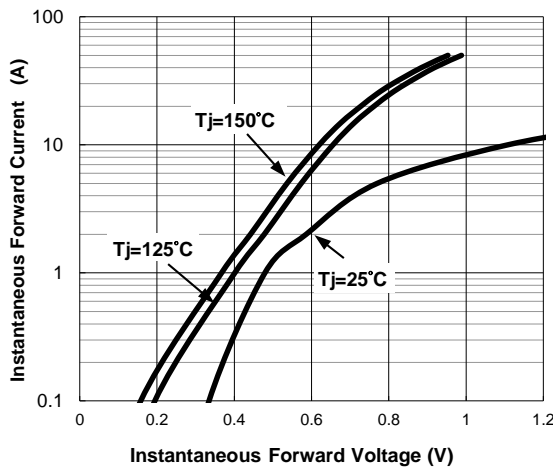


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

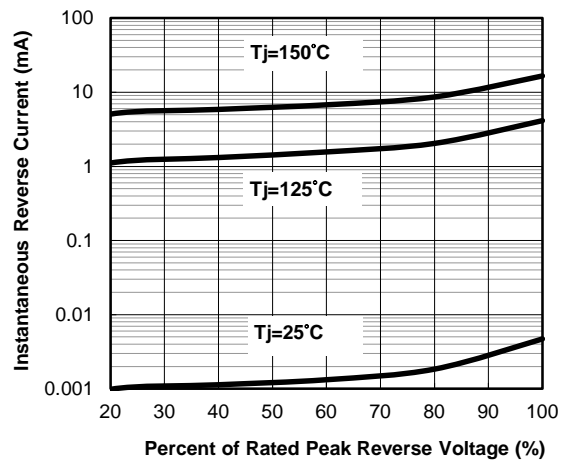


Figure 4. Typical Reverse Characteristics

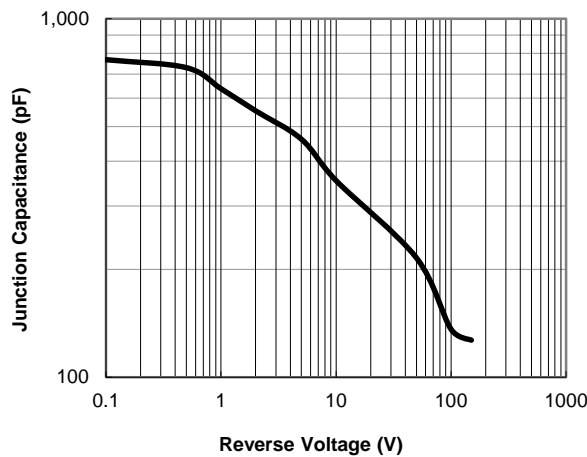


Figure 5. Typical Junction Capacitance

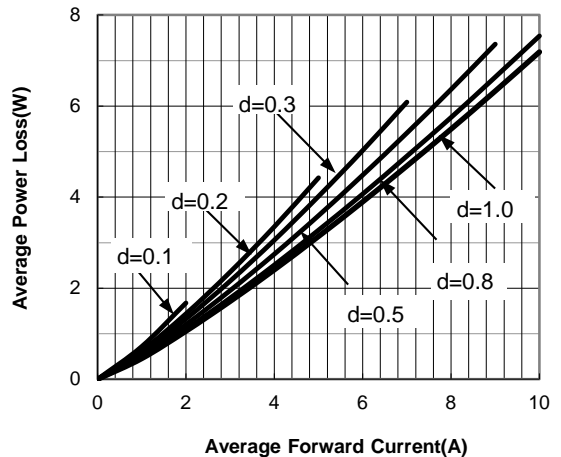


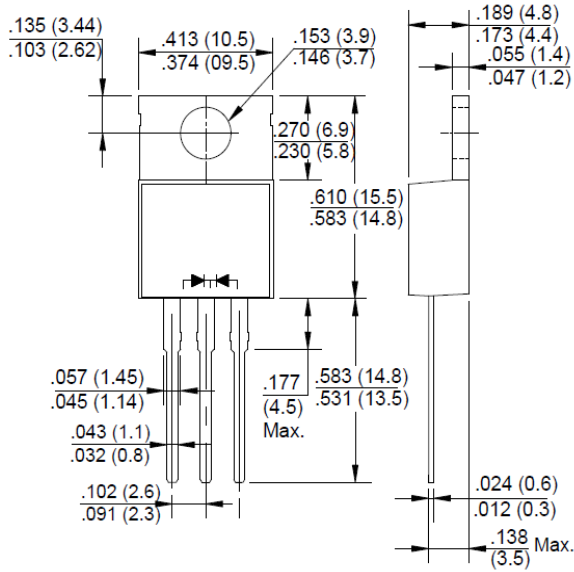
Figure 6. Forward Power Loss Characteristics

**PACKAGE OUTLINE DIMENSIONS** in millimeters

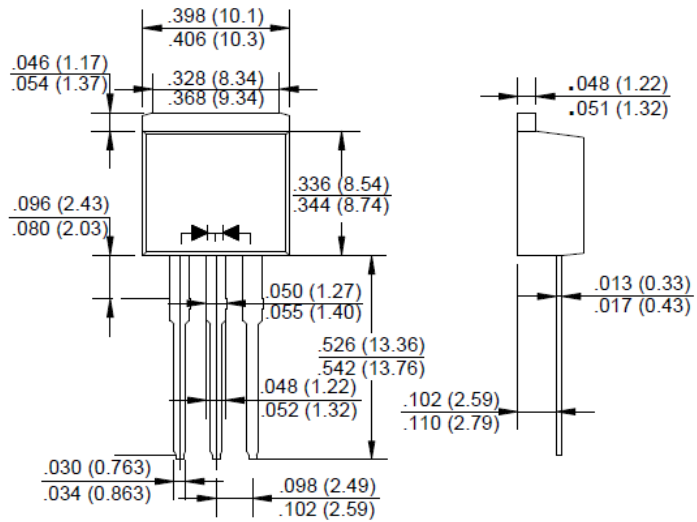
HTR20150CT, HTRF20150CT  
 HTRI20150CT, HTRB20150CT



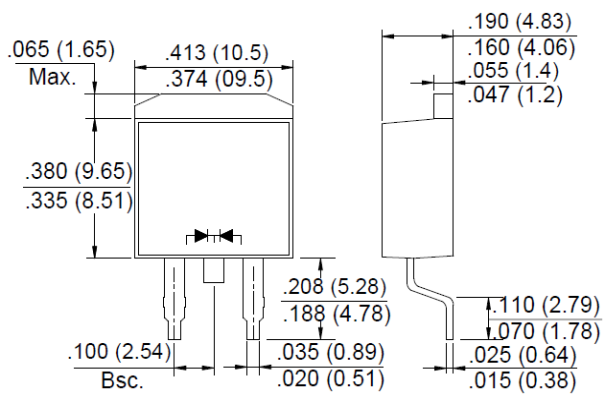
TO-220AB



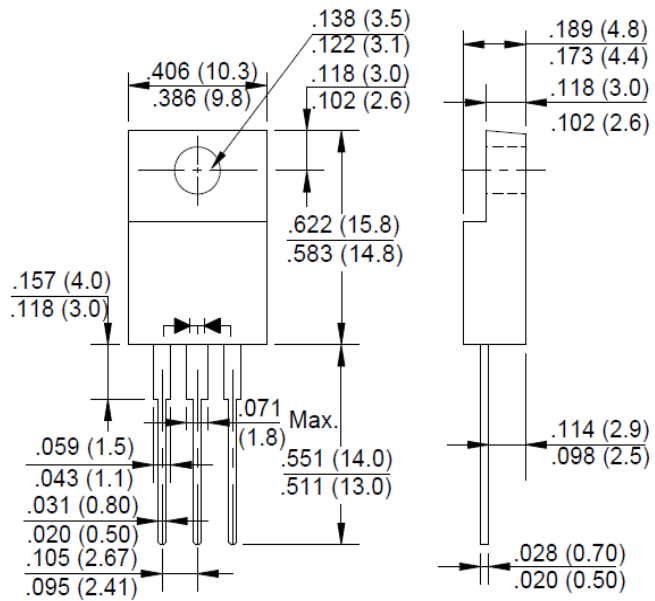
TO-262AA



TO-263AB



ITO-220AB



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