



HY ELECTRONIC (CAYMAN) LIMITED

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Ultra Low VF=0.28V at IF=7.5A

HTR30I45CT, HTRF30I45CT
HTRI30I45CT, HTRB30I45CT

SCHOTTKY BARRIER RECTIFIERS	REVERSE VOLTAGE	45	Volts	
	FORWARD CURRENT	30	Amperes	
FEATURES <ul style="list-style-type: none"> ●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 <ul style="list-style-type: none"> ●Case: TO-220AB / ITO-220AB / TO-262AA / TO-263AB ●Polarity: As marked on the body ●Weight: 0.08ounces,2.24 grams ●Mounting position :Any 	TO-220AB HTR30I45CT	ITO-220AB HTRF30I45CT	 HALOGEN FREE RoHS COMPLIANT	
	TO-263AB HTRB30I45CT	TO-262AA HTRI30I45CT		

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_A = 25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HTR30I45CT, HTRF30I45CT, HTRI30I45CT, HTRB30I45CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	45	V
Maximum RMS Voltage	V _{RMS}	31	V
Maximum DC Blocking Voltage	V _{DC}	45	V
Maximum Average Forward Rectified Current (See Fig.1)	I _(AV)	30	A
Maximum Average Forward Rectified Current (Per Leg)		15	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	I _{FSM}	210	A
Peak repetitive reverse current at tp = 2 μs, 1 kHz	I _{RRM}	1	A
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

PARAMETER / CONDITIONS	SYMBOL	Typ	Max	UNIT
Breakdown voltage per diode	V _{BR}	45(minimun)	-	V
Forward Voltage (Note1)	V _F	IF=7.5A @TJ=25°C	0.37	0.39
		IF=7.5A @TJ=125°C	0.28	0.30
		IF=15A @TJ=25°C	0.43	0.46
		IF=15A @TJ=125°C	0.37	0.39
Maximum DC Reverse Current @TJ=25°C	I _R		600	uA
at Rated DC Bolcking Voltage @TJ=125°C			130	mA
Typical Junction Capacitance (Note2)	C _J		2017	pF

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	Typ				UNIT
		HTR30I45CT	HTRF30I45CT	HTRI30I45CT	HTRB30I45CT	
Thermal Resistance Per Diode (Note3)	R _{θJC}	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.

RATING AND CHARACTERISTIC CURVES

HTR30I45CT, HTRF30I45CT

HTRI30I45CT, HTRB30I45CT

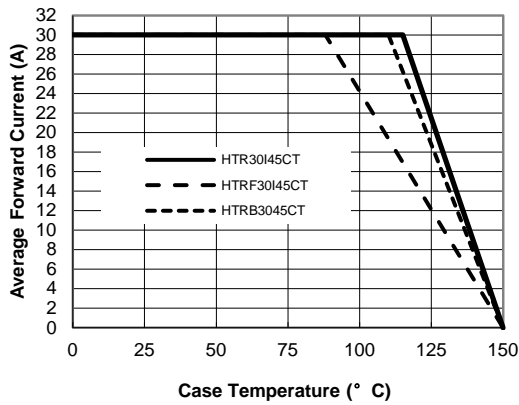


Figure 1. Forward Current Derating Curve

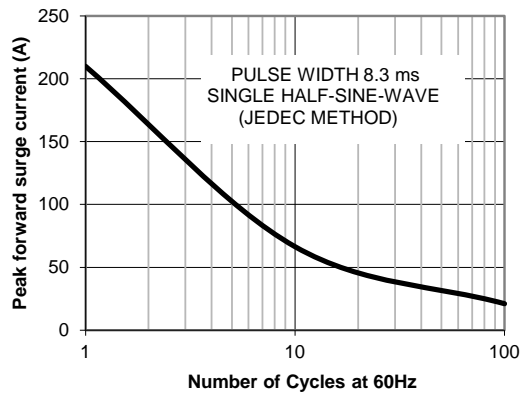


Figure 2. Maximum NON-Repetitive Surge

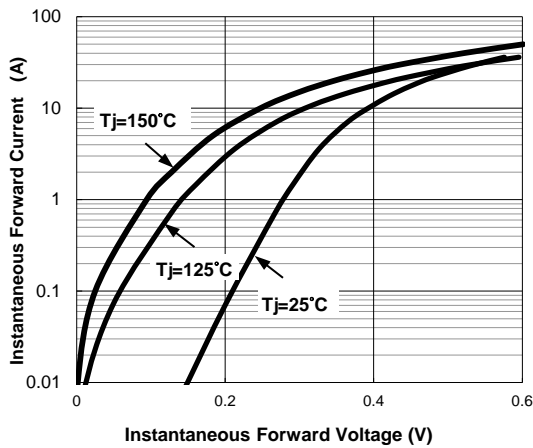


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

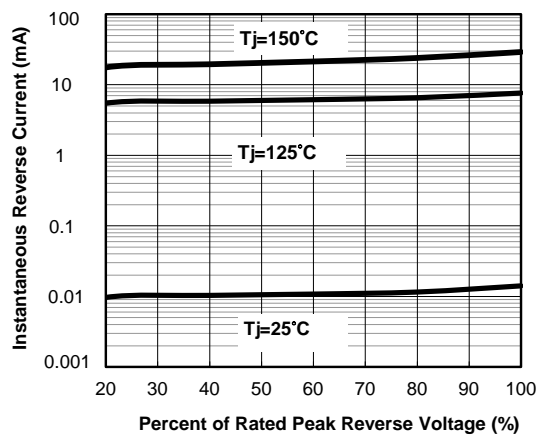


Figure 4. Typical Reverse Characteristics

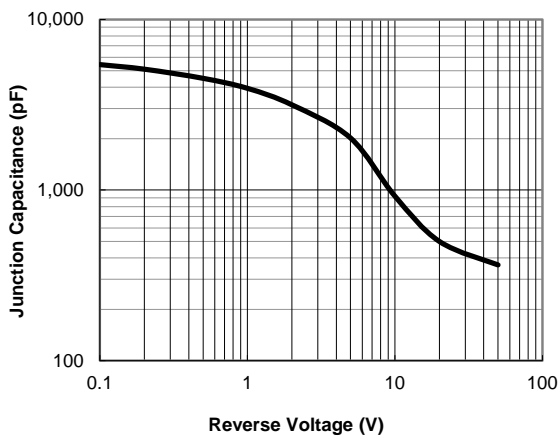


Figure 5. Typical Junction Capacitance

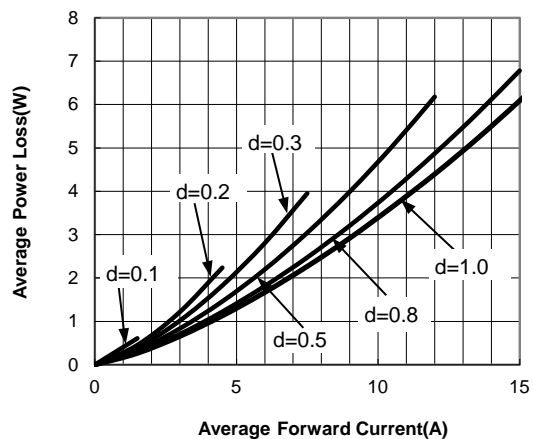


Figure 6. Forward Power Loss Characteristics

PACKAGE OUTLINE DIMENSIONS in millimeters

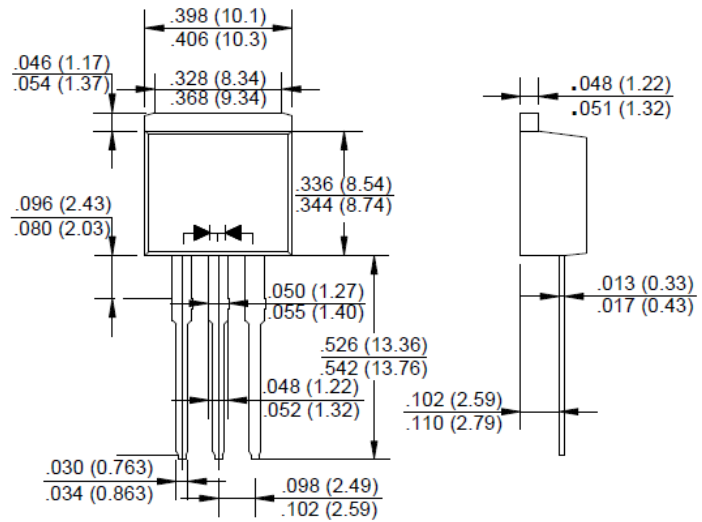
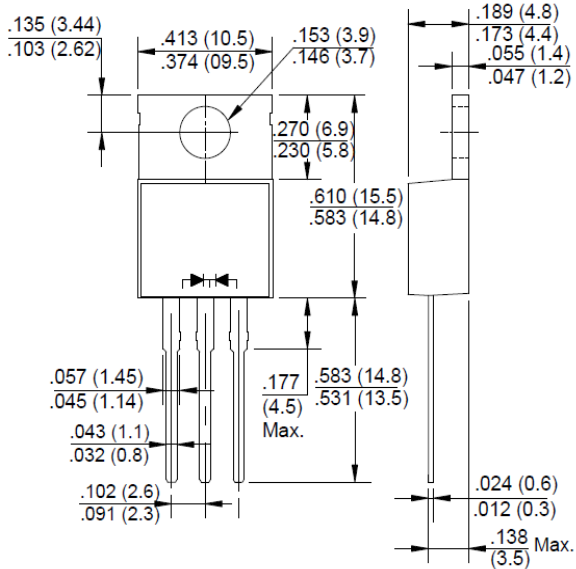
HTR30I45CT, HTRF30I45CT

HTRI30I45CT, HTRB30I45CT



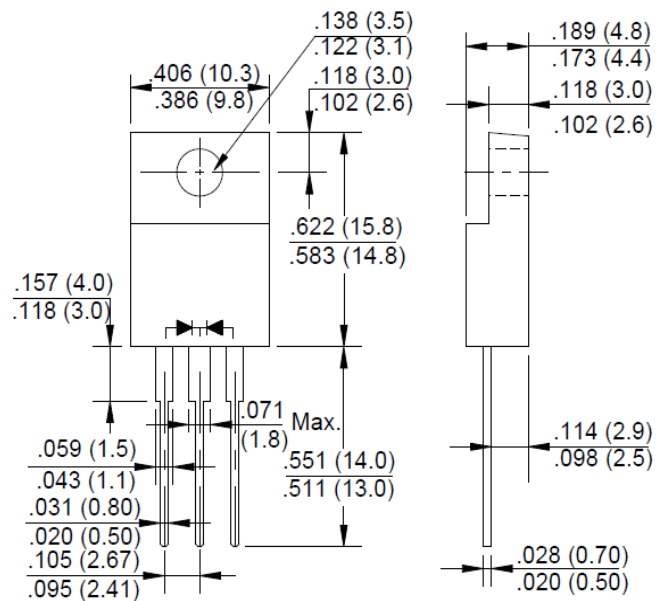
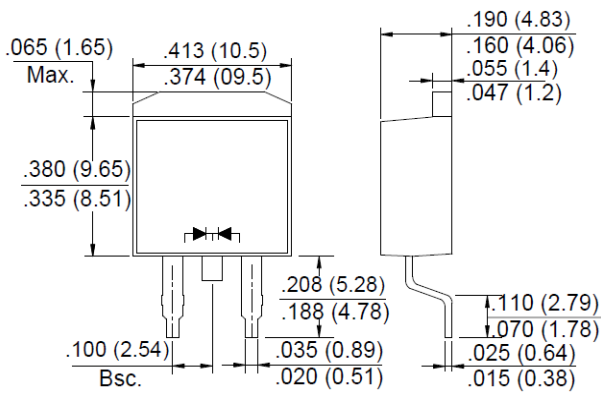
TO-220AB

TO-262AA



TO-263AB

ITO-220AB



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