HTR10U100CT, HTRF10U100CT
HTRI10U100CT, HTRB10U100CT

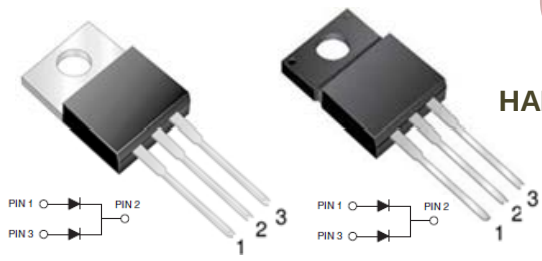
HY ELECTRONIC (CAYMAN) LIMITED www.hygroup.com.tw

Ultra Low VF=0.33V at IF=1A

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE 100 Volts
FORWARD CURRENT 10 Amperes

TO-220AB **ITO-220AB**

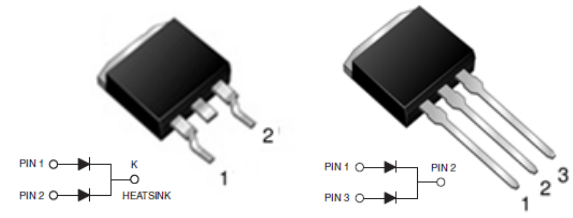


HALOGEN FREE

RoHS COMPLIANT

HTR10U100CT HTRF10U100CT

TO-263AB **TO-262AA**



HTRB10U100CT HTRI10U100CT

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 / ITO-220AB / TO-262AA / TO-263AB
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ 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	HTR10U100CT, HTRF10U100CT, HTRI10U100CT, HTRB10U100CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current (See Fig.1) Maximum Average Forward Rectified Current (Per Leg)	$I_{(AV)}$	10 5	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	I_{FSM}	100	A
Peak repetitive reverse current at tp = 2 μs, 1 kHz	I_{RRM}	1	A
Operating Temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STG}	-55 to +175	℃

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

PARAMETER / CONDITIONS	SYMBOL	Typ	Max	UNIT
Breakdown voltage per diode	V_{BR}	110 (minimun)	-	V
Forward Voltage (Note1) IF=1.0A @TJ=25℃	V_F	0.43	0.46	V
IF=1.0A @TJ=125℃		0.33	0.35	
IF=2.5A @TJ=25℃		0.50	0.53	
IF=2.5A @TJ=125℃		0.44	0.47	
IF=5A @TJ=25℃		0.60	0.64	
IF=5A @TJ=125℃		0.56	0.59	
Maximum DC Reverse Current @TJ=25℃	I_R	70		uA
at Rated DC Bolcking Voltage @TJ=125℃		20		mA
Typical Junction Capacitance (Note2)	C_J	307		pF

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

PARAMETER	SYMBOL	Typ				UNIT
		HTR10U100CT	HTRF10U100CT	HTRI10U100CT	HTRB10U100CT	
Thermal Resistance Per Diode (Note3)	RθJC	3.0	5.5	3.5	3.5	℃/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.

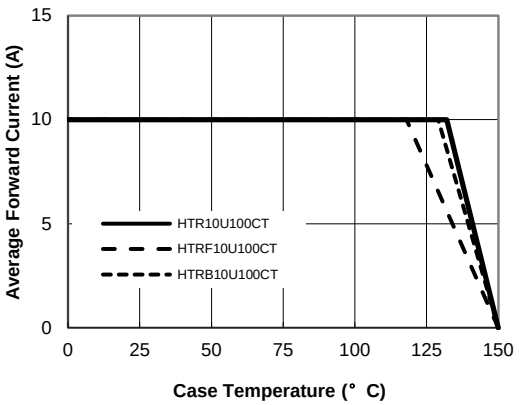


Figure 1. Forward Current Derating Curve

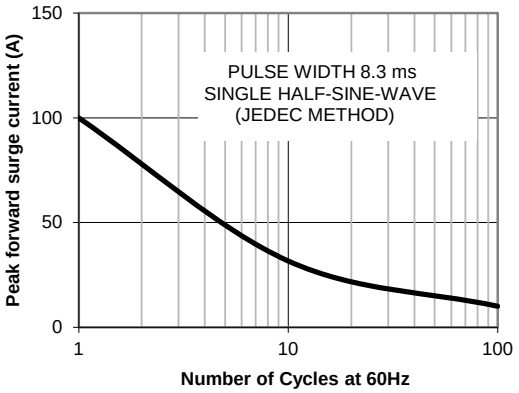


Figure 2. Maximum NON-Repetitive Surge

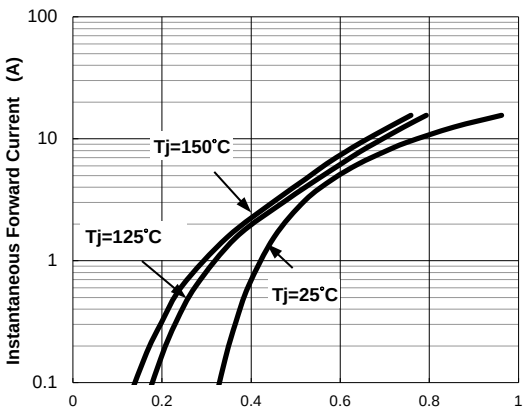


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

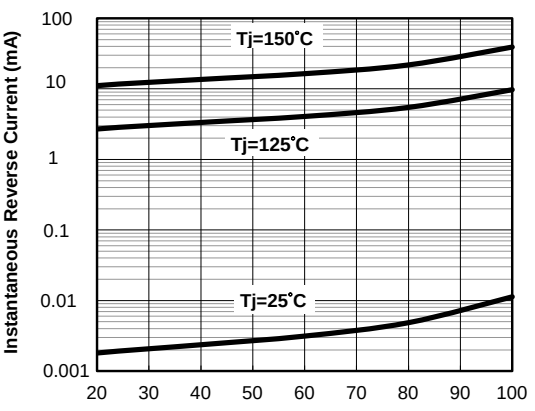


Figure 4. Typical Reverse Characteristics

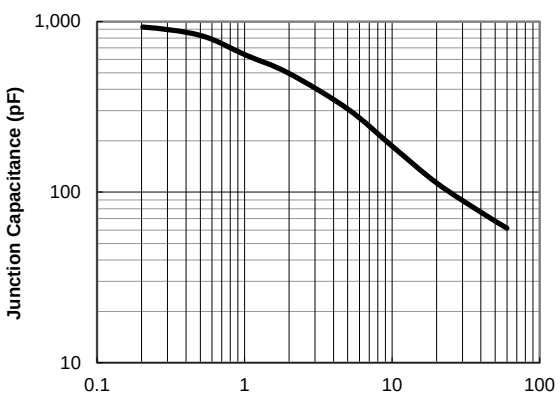


Figure 5. Typical Junction Capacitance

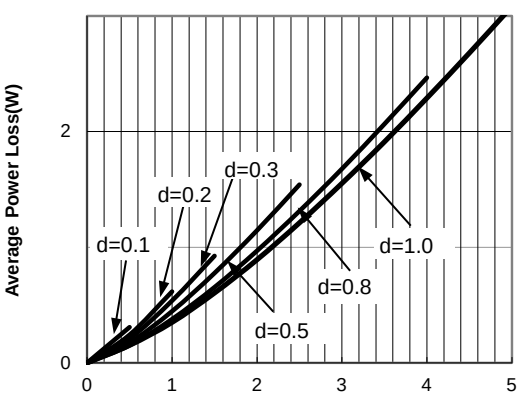


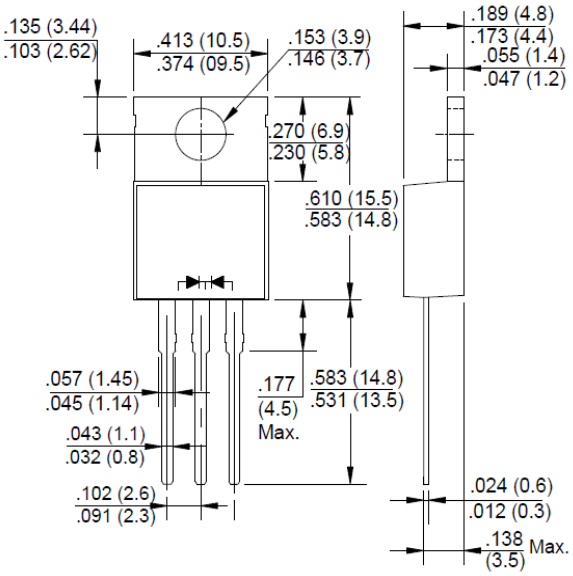
Figure 6. Forward Power Loss Characteristics

PACKAGE OUTLINE DIMENSIONS in millimeters

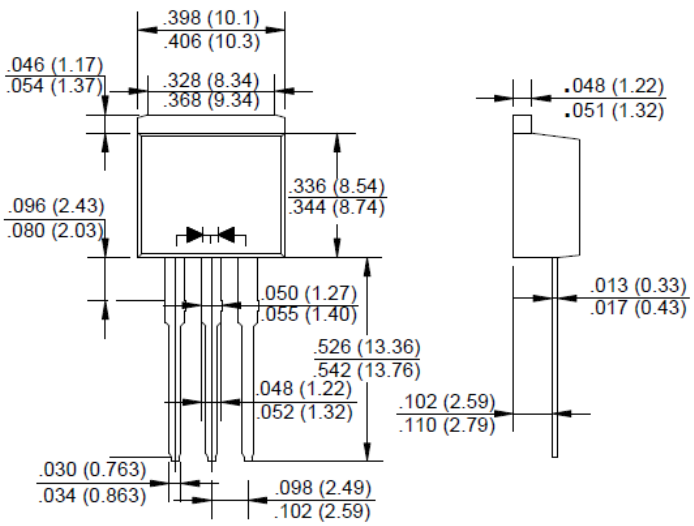
HTR10U100CT, HTRF10U100CT

HTRI10U100CT, HTRB10U100CT

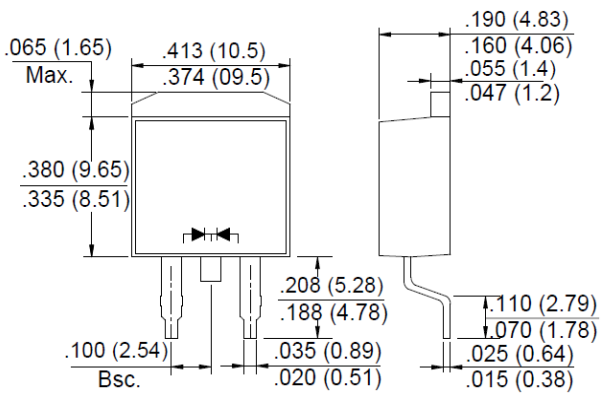
TO-220AB



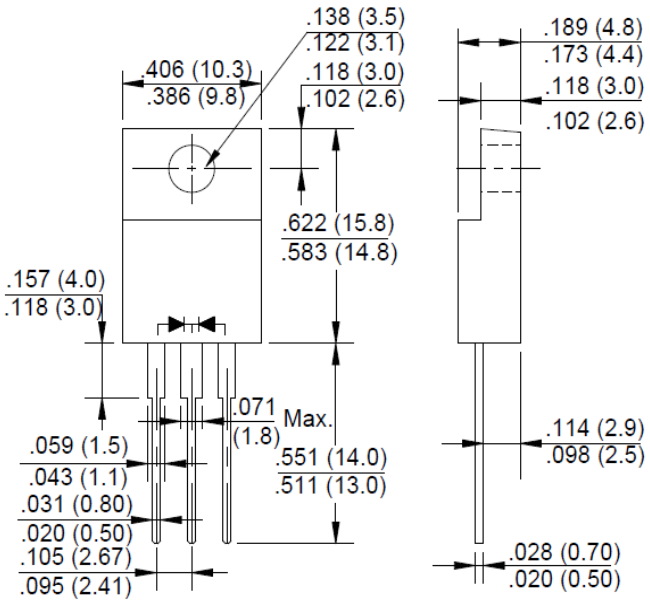
TO-262AA



TO-263AB



ITO-220AB



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