HTR20I60CT, HTRF20I60CT
HTRI20I60CT, HTRB20I60CT

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

Ultra Low VF=0.29V at IF=5A

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE	60	Volts
FORWARD CURRENT	20	Amperes

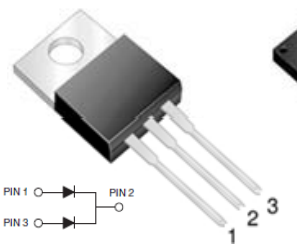
FEATURES

- 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

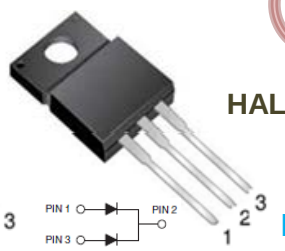
- Case: TO-220AB / ITO-220AB / TO-262AA / TO-263AB
- Polarity: As marked on the body
- Weight: 0.08ounces,2.24 grams
- Mounting position :Any

TO-220AB



HTR20I60CT

ITO-220AB



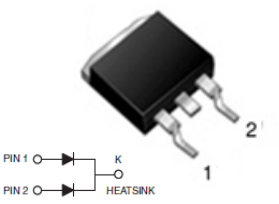
HTRF20I60CT

Pb

HALOGEN FREE

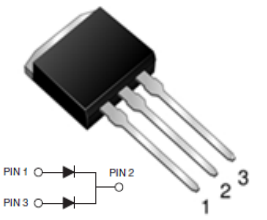
RoHS COMPLIANT

TO-263AB



HTRB20I60CT

TO-262AA



HTRI20I60CT

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	HTR20I60CT, HTRF20I60CT, HTRI20I60CT, HTRB20I60CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	60	V
Maximum RMS Voltage	V_{RMS}	42	V
Maximum DC Blocking Voltage	V_{DC}	60	V
Maximum Average Forward Rectified Current (See Fig.1) Maximum Average Forward Rectified Current (Per Leg)	$I_{(AV)}$	20 10	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	I_{FSM}	150	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}	60(minimun)	-	V
Forward Voltage (Note1) IF=5A @TJ=25℃	V_F	0.38	0.40	V
IF=5A @TJ=125℃		0.29	0.31	
IF=10A @TJ=25℃		0.44	0.46	
IF=10A @TJ=125℃		0.38	0.39	
Maximum DC Reverse Current @TJ=25℃	I_R	350		uA
at Rated DC Bolcking Voltage @TJ=125℃		90		mA
Typical Junction Capacitance (Note2)	C_J	1013		pF

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

PARAMETER	SYMBOL	Typ				UNIT
		HTR20I60CT	HTRF20I60CT	HTRI20I60CT	HTRB20I60CT	
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.

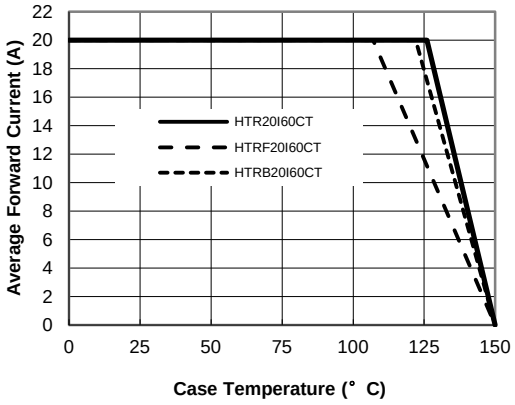


Figure 1. Forward Current Derating Curve

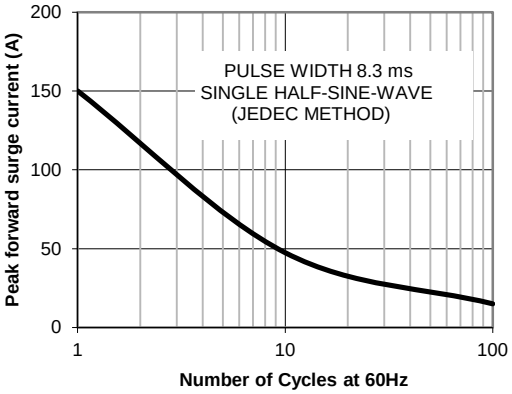


Figure 2. Maximum NON-Repetitive Surge

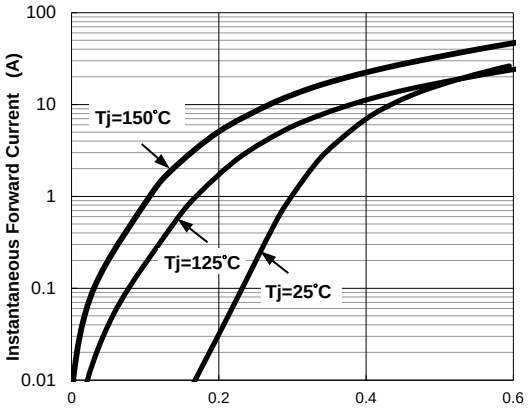


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

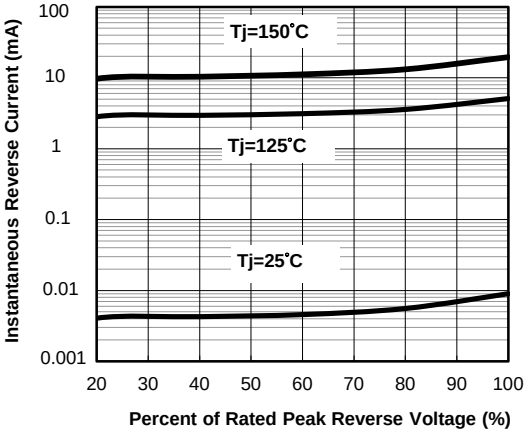


Figure 4. Typical Reverse Characteristics

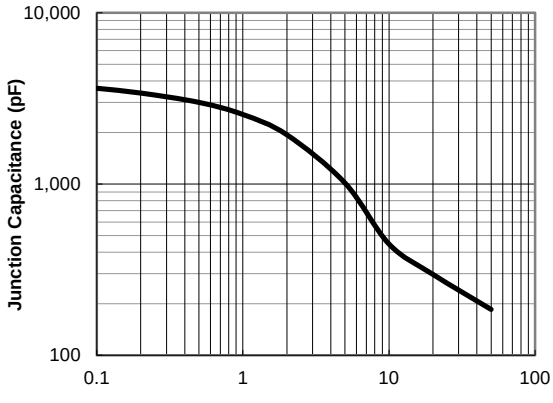


Figure 5. Typical Junction Capacitance

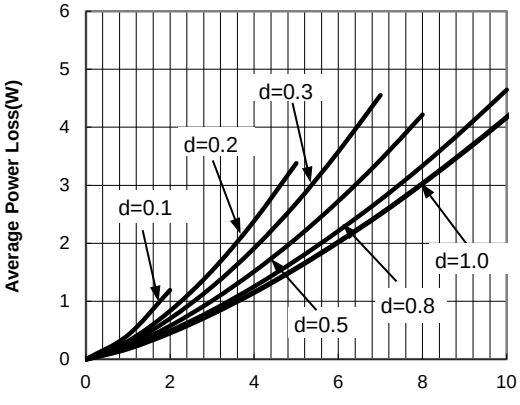
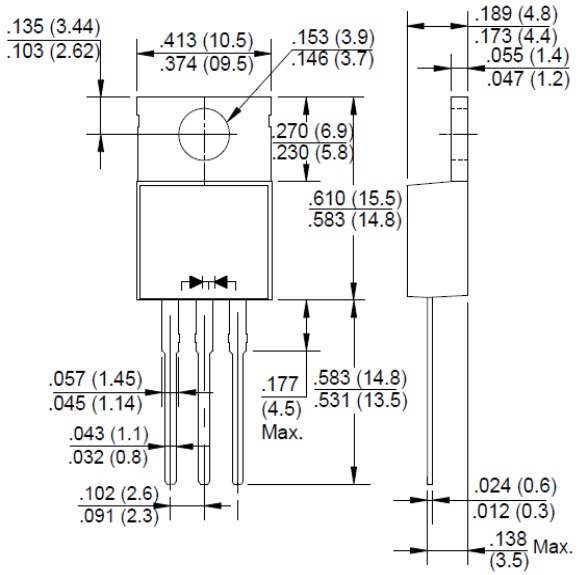
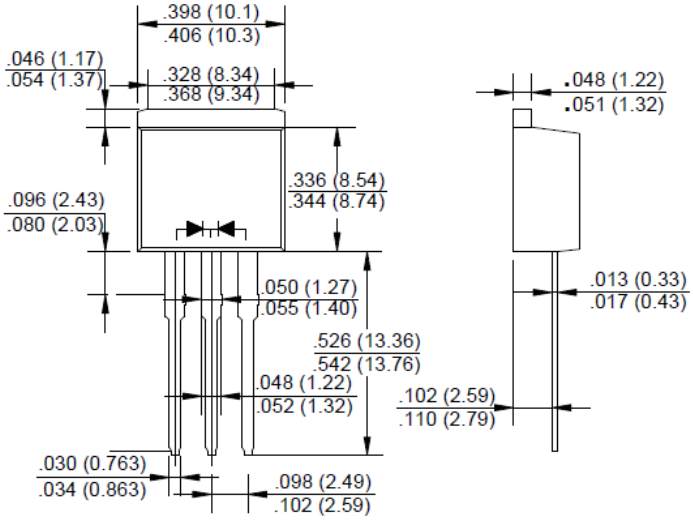


Figure 6. Forward Power Loss Characteristics

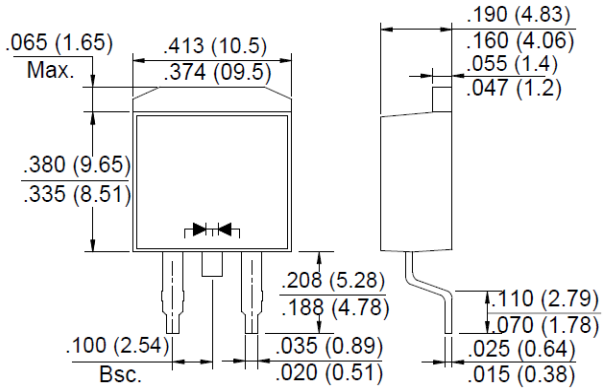
TO-220AB



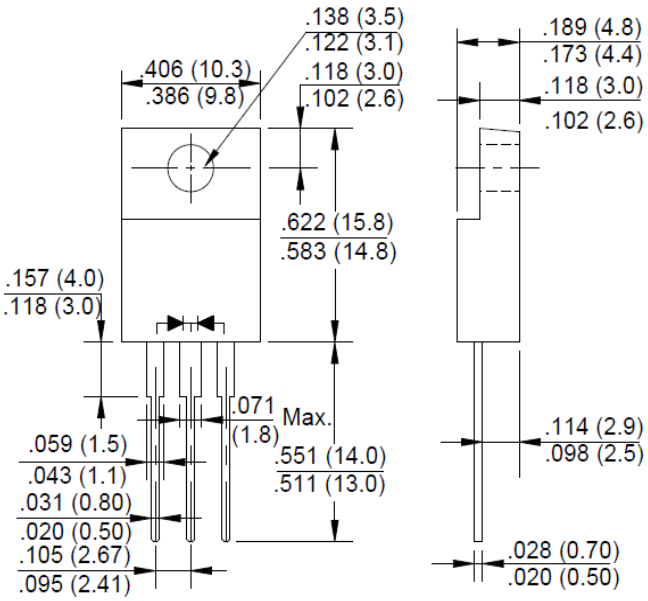
TO-262AA



TO-263AB



ITO-220AB



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