HTE3U100

HY ELECTRONIC (CAYMAN) LIMITED www.hygroup.com.tw **Ultra Low VF=0.44V at IF=1.5A**

SCHOTTKY BARRIER RECTIFIERS	REVERSE VOLTAGE 100 Volts FORWARD CURRENT 3 Amperes

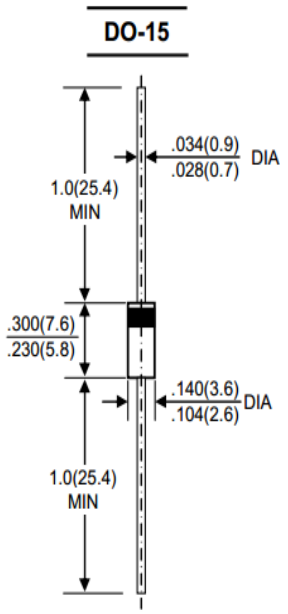
FEATURES

- Metal of silicon rectifier , majority carrier conduction
- Trench Schottky Technology
- Low forward voltage drop, high efficiency
- High current capability
- 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: JEDEC DO-15 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.0125ounces,0.4 grams
- Mounting position :Any

RoHS COMPLIANT



Dimensions in inches and (millimeters)

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	HTE3U100	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)	$I_{(AV)}$	3	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	I_{FSM}	35	A
Peak repetitive reverse current at tp = 2 μs, 1 kHz	I_{RRM}	2	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}	105 (minimun)	-	V
Forward Voltage (Note1)	IF=1.5A @TJ=25℃	V_F	0.50	0.53	V
	IF=1.5A @TJ=125℃		0.43	0.46	
	IF=3A @TJ=25℃		0.59	0.62	
	IF=3A @TJ=125℃		0.55	0.58	
Maximum DC Reverse Current	@TJ=25℃	I_R	50		uA
at Rated DC Bolcking Voltage	@TJ=125℃		20		mA
Typical Junction Capacitance (Note2)		C_J	217		pF

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

PARAMETER	SYMBOL	Typ HTE3U100	UNIT
Thermal Resistance Per Diode (Note3)	RθJL	15	℃/W

NOTES:1.300us pulse width,2% duty cycle.

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to lead.

Preliminary

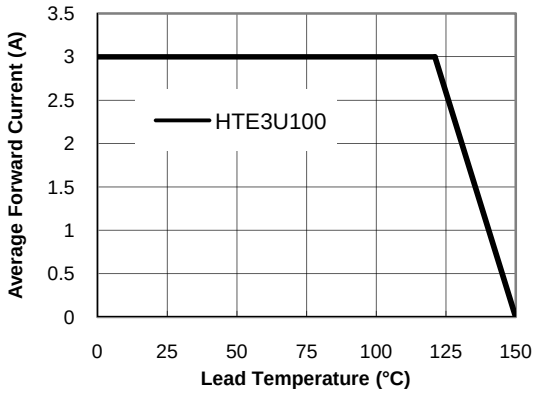


Figure 1. Forward Current Derating Curve

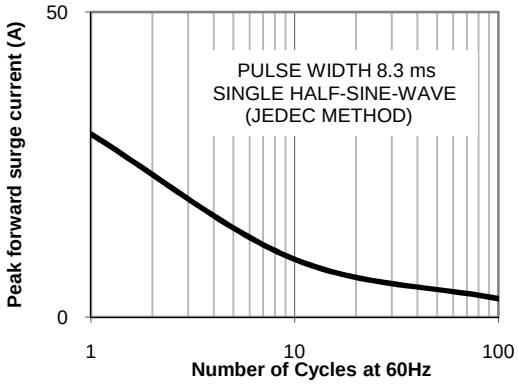


Figure 2. Maximum NON-Repetitive

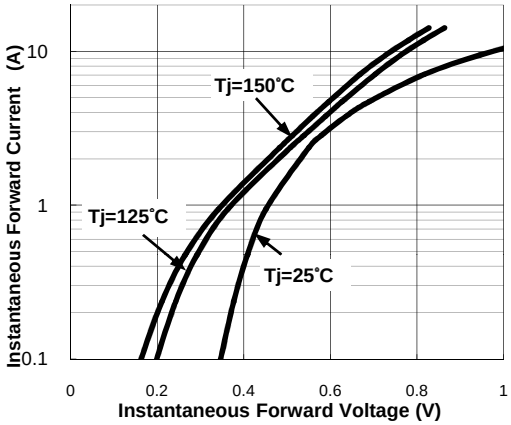


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

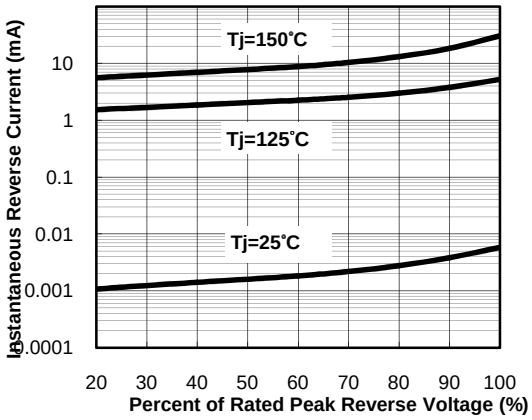


Figure 4. Typical Reverse Characteristics

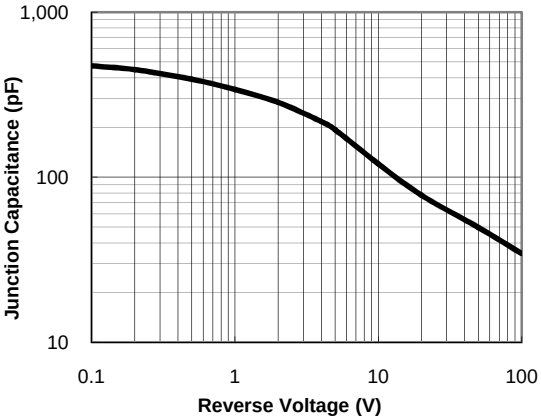


Figure 5. Typical Junction Capacitance

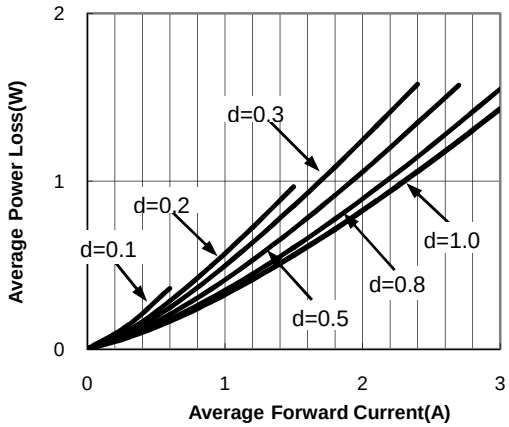


Figure 6. Forward Power Loss Characteristics