HTE5K150

HY ELECTRONIC (CAYMAN) LIMITED www.hygroup.com.tw **Low VF=0.58V at IF=2.5A**

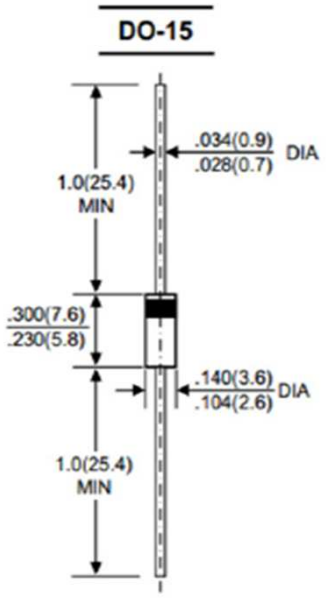
SCHOTTKY BARRIER RECTIFIERS	REVERSE VOLTAGE 150 Volts FORWARD CURRENT 5 Amperes

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



Dimensions in inches and (millimeters)

HALOGEN FREE

RoHS COMPLIANT

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	HTE5K150	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	150	V
Maximum RMS Voltage	V_{RMS}	106	V
Maximum DC Blocking Voltage	V_{DC}	150	V
Maximum Average Forward Rectified Current (See Fig.1)	$I_{(AV)}$	5	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load	I_{FSM}	35	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}	150 (minimun)	-	V
Forward Voltage (Note1) IF=2.5A @TJ=25℃	V_F	0.80	0.87	V
IF=2.5A @TJ=125℃		0.58	0.62	
IF=5A @TJ=25℃		1.16	1.40	
IF=5A @TJ=125℃		0.66	0.70	
Maximum DC Reverse Current @TJ=25℃	I_R	20		uA
at Rated DC Bolcking Voltage @TJ=125℃		10		mA
Typical Junction Capacitance (Note2)	C_J	167		pF

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

PARAMETER	SYMBOL	Typ HTE5K150	UNIT
Thermal Resistance Per Diode (Note3)	RθJL	15.0	℃/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

RATING AND CHARACTERTIC CURVES

HTE5K150

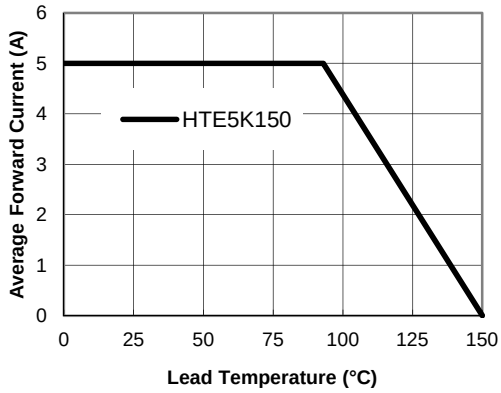


Figure 1. Forward Current Derating Curve

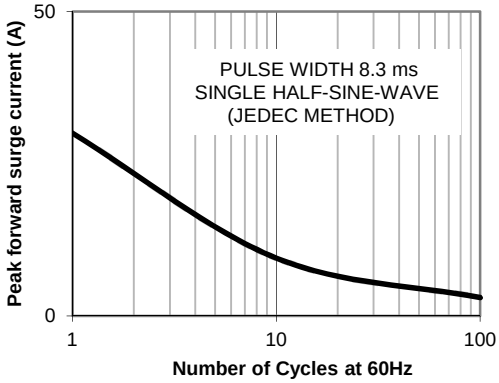


Figure 2. Maximum NON-Repetitive

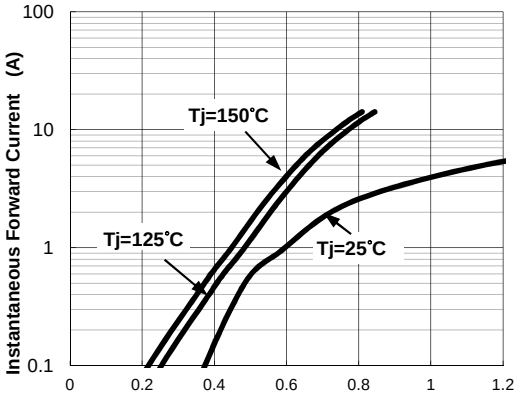


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

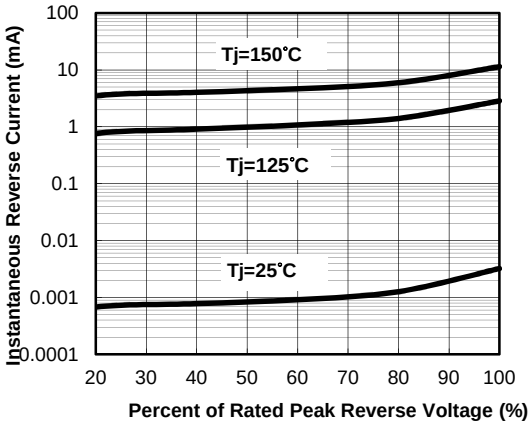


Figure 4. Typical Reverse Characteristics

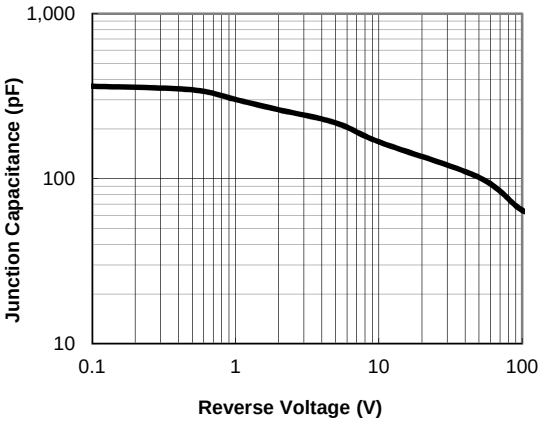


Figure 5. Typical Junction Capacitance

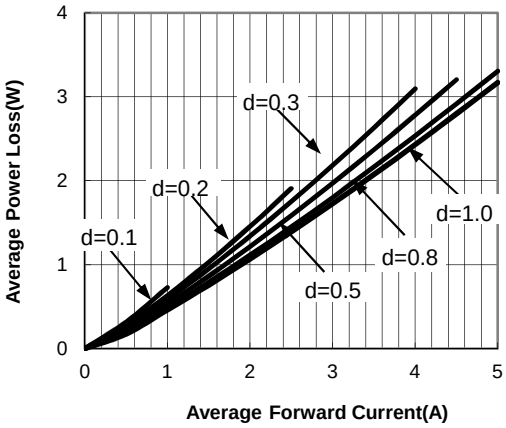


Figure 6. Forward Power Loss Characteristics