

HER510T-HER560T

High Efficiency Rectifiers

VOLTAGE RANGE: 100 --- 600 V

CURRENT: 5.0 A

TO - 220AC

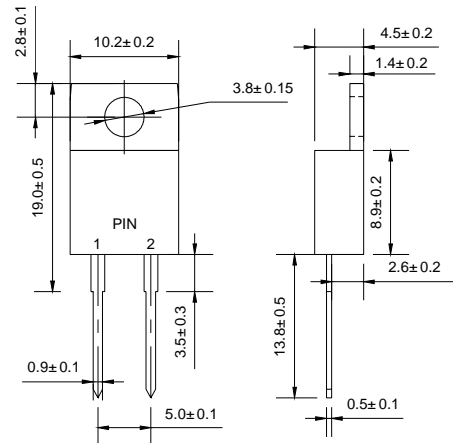


Features

- ◇ Low cost
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

Mechanical Data

- ◇ Case: JEDEC TO-220AC, molded plastic body
- ◇ Polarity: As marked
- ◇ Weight: 0.064 ounces, 1.96 gram
- ◇ Mounting position: Any



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		HER 510T	HER 520T	HER 540T	HER 560T	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	100	200	400	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_C=75^\circ C$	$I_{F(AV)}$	5.0				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	100				A
Maximum instantaneous forward voltage @ 5.0A	V_F	1.0		1.3	1.7	V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	10 150				μA
Maximum reverse recovery time (Note1)	t_{rr}	50			100	ns
Typical junction capacitance (Note2)	C_J	40				pF
Typical thermal resistance (Note3)	$R_{\theta JC}$	20				$^\circ C/W$
Operating junction temperature range	T_J	- 55 ---- + 150				$^\circ C$
Storage temperature range	T_{STG}	- 55 ---- + 150				$^\circ C$

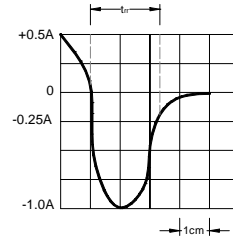
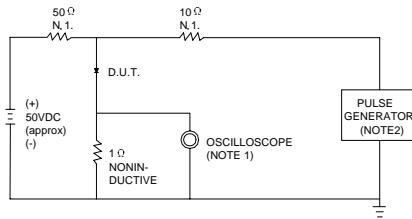
NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

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

3. Thermal resistance junction to ambient.

Ratings AND Characteristic Curves

FIG.1 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ.22pF.
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/45 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

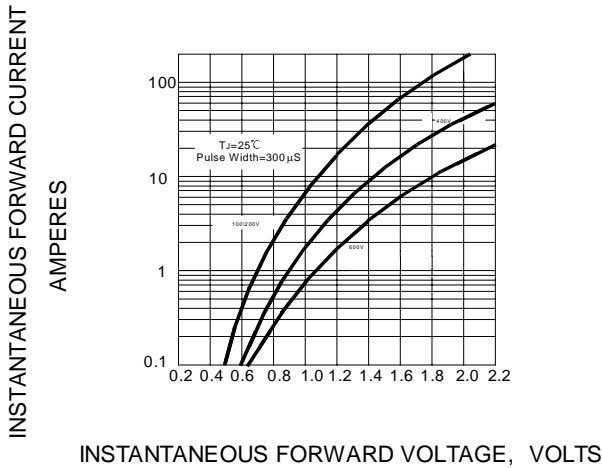


FIG.3 -- FORWARD DERATING CURVE

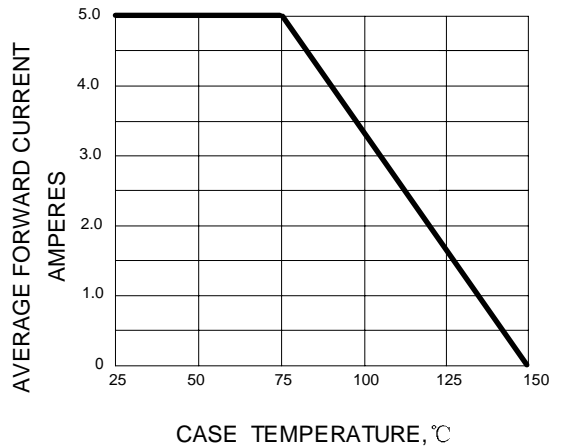


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

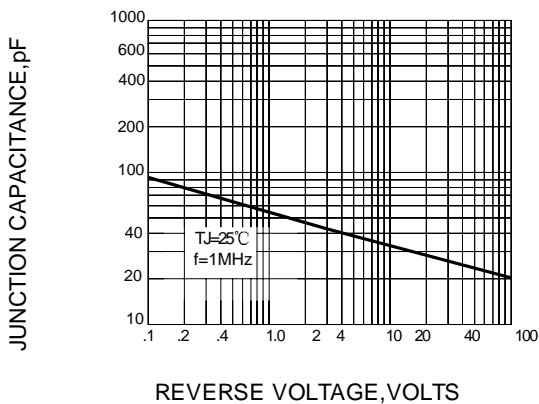


FIG.5 -- PEAK FORWARD SURGE CURRENT

