DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

HER1601 THRU HER1606

TECHNICAL SPECIFICATIONS OF HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts *CURRENT - 16 Amperes*

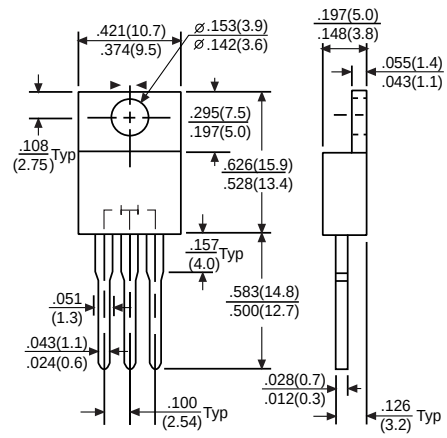
FEATURES

* Low switching noise
* Low forward voltage drop
* High current capability
* High speed switching
* High surge capability
* High reliability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
* Mounting position: Any
* Weight: 2.24 grams

TO-220



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

		SYMBOL	HER1601	HER1602	HER1603	HER1604	HER1605	HER1606	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	300	400	600	Volts
Maximum RMS Voltage		V_{RMS}	35	70	140	210	280	420	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	300	400	600	Volts
Maximum Average Forward Rectified Current at T_A = 75°C		I_O	16						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	150			125			Amps
Maximum Instantaneous Forward Voltage at 16A DC		V_F	1.0			1.3		1.7	Volts
Maximum DC Reverse Current	@T_C = 25°C	I_R	10						µAmps
at Rated DC Blocking Voltage	@T_C = 100°C		500						µAmps
Maximum Reverse Recovery Time (Note 1)		trr	50			75		100	nSec
Typical Junction Capacitance (Note 2)		C_J	120			70			pF
Operating and Storage Temperature Range		T_J, T_{STG}	-65 to +150						°C

NOTES: 1. Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A

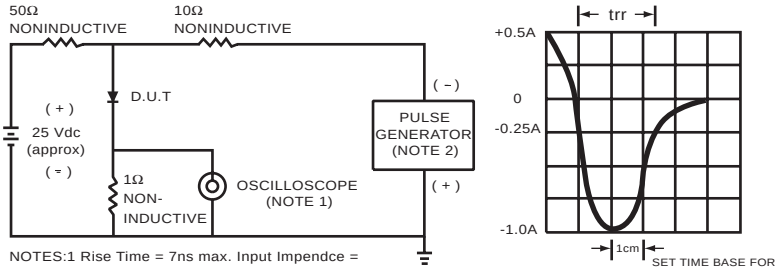
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

3. Suffix "A" = Common Anode.

4. Suffix "F" Stands for "ITO-220" package. (e.g.: HER1601F , HER1606F , ...etc)

RATING AND CHARACTERISTIC CURVES (HER1601 THRU HER1606)

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



NOTES:1 Rise Time = 7ns max. Input Impendce = 1 megohm. 22pF.
2 Rise Time = 10ns max. Souce Impendce = 50 ohms.

FIG.2- TYPICAL FORWARD CURRENT DERATING CURVE

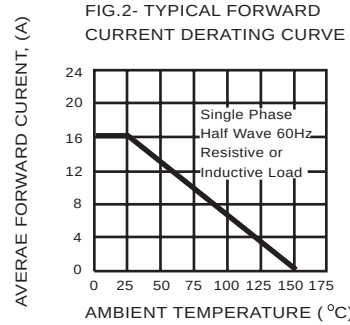


FIG.3- TYPICAL REVERSE CHARACTERISTICS

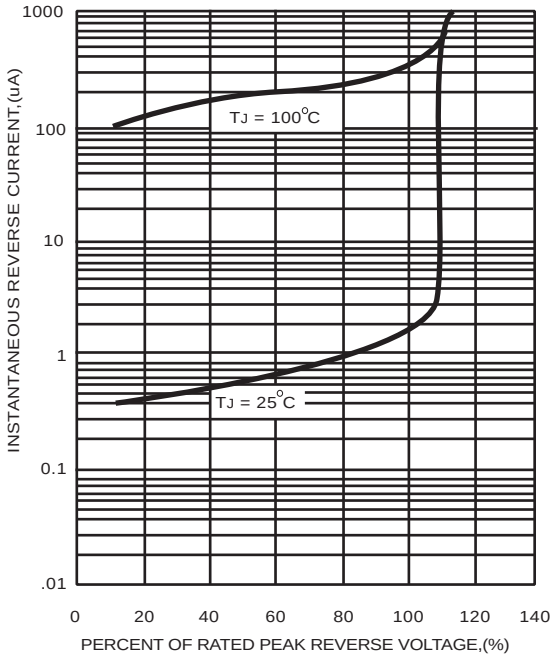


FIG.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

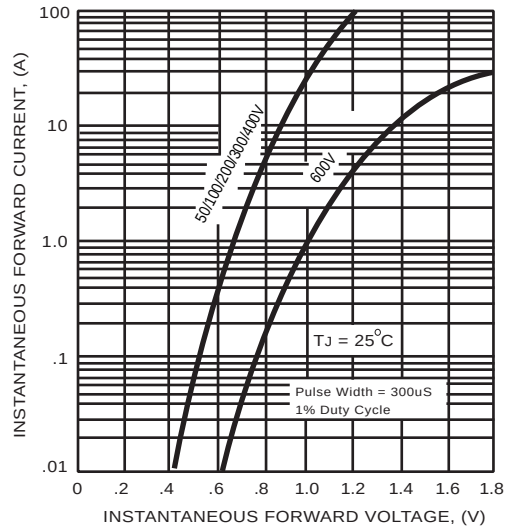


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

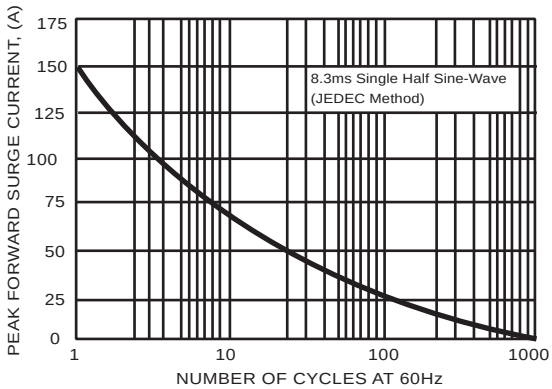


FIG.6- TYPICAL JUNCTION CAPACITANCE