RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

HER605

HIGH EFFICIENCY RECTIFIER
VOLTAGE 400 Volts CURRENT 6.0 Amperes

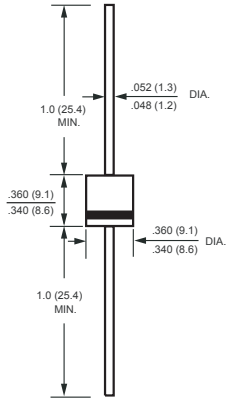
FEATURES
* Low power loss,high efficiency
* Low leakage
* Low forward voltage drop
* High current capability
* High speed switching
* High reliability
* High current surge

MECHANICAL DATA
* Epoxy: Device has UL flammability classification 94V-O
* Case: Molded plastic
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 1.20 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25 °C ambient temperature unless otherwise specified.
resistive or inductive load.



R-6



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	HER605	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	400	Volts
Maximum RMS Voltage	V_{RMS}	280	Volts
Maximum DC Blocking Voltage	V_{DC}	400	Volts
Maximum Average Forward Rectified Current at T_A = 50°C	I_O	5.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200	Amps
Current Squarad Time	I^2t	165.9	A^2S
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	8	°C/W
	$R_{\theta JA}$	17	
Typical Junction Capacitance (Note 2)	C_J	70	pF
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	HER605	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	V_F	1.3	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage @T_A = 25°C	I_R	10	μA
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at T_L=55°C		150	
Maximum Reverse Recovery Time (Note 4)	trr	50	nSec

NOTES : 1. Thermal Resistance : At 9.5mm lead length, PCB mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
4. Test Conditions: I_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.

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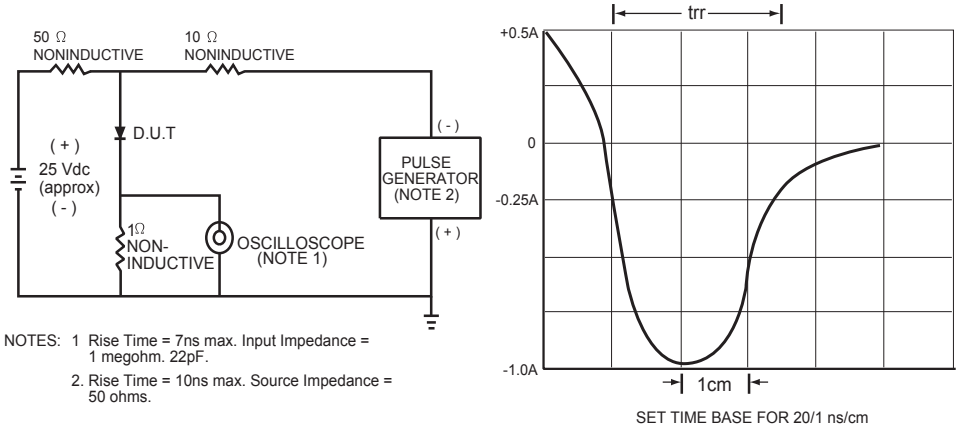
RATING AND CHARACTERISTICS CURVES (HER605)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.

SET TIME BASE FOR 20/1 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

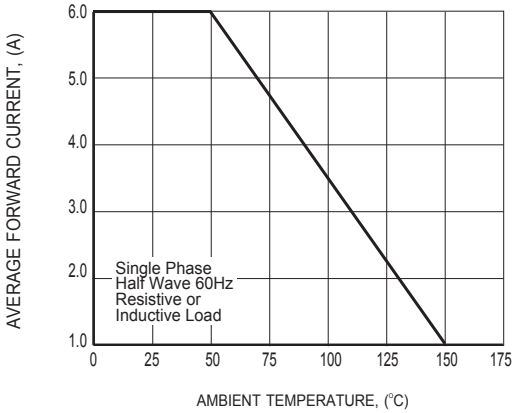


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

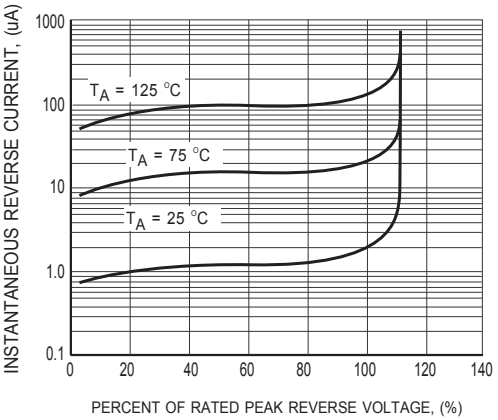


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (HER605)

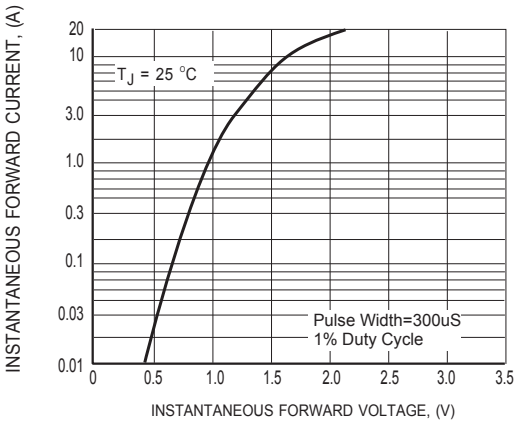


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

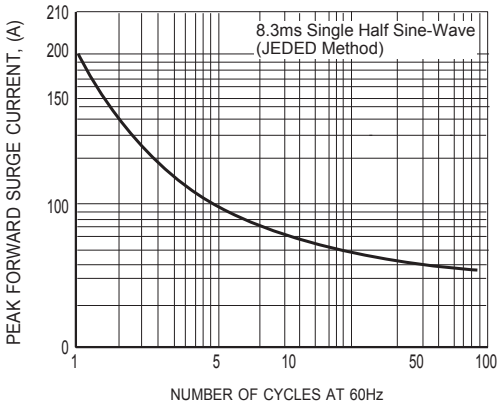


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

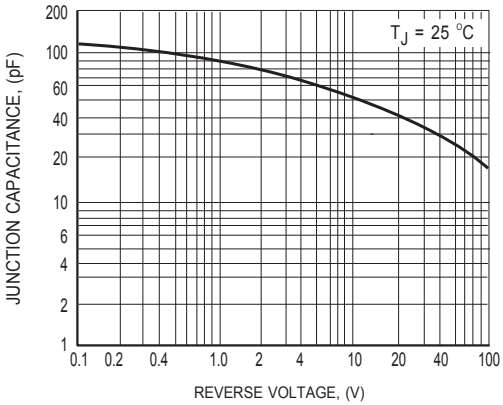
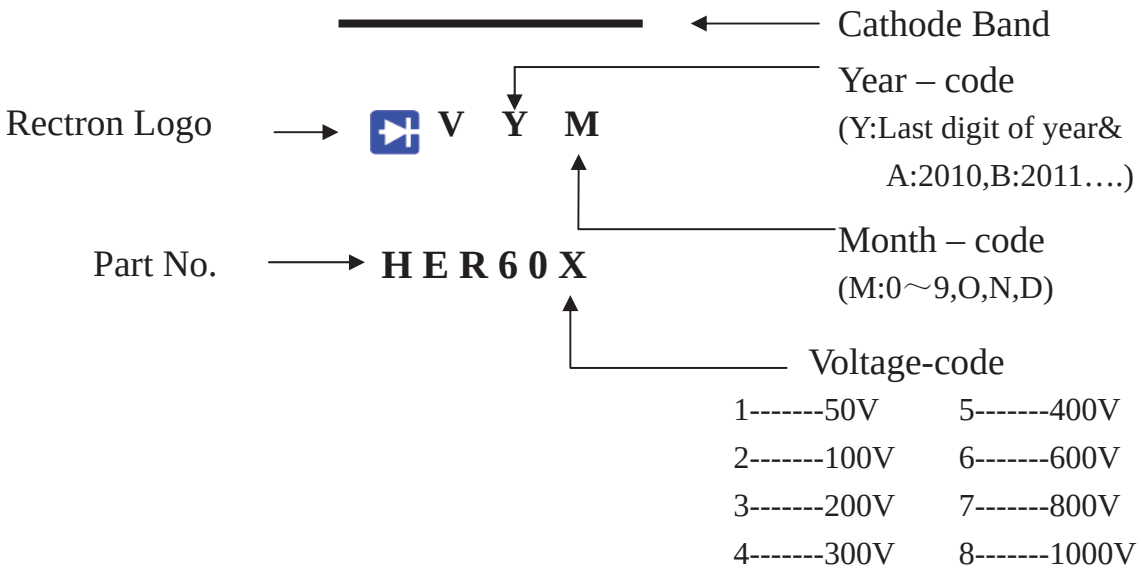


FIG.6 TYPICAL JUNCTION CAPACITANCE

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
R-6	-B	200	300*73*40	347*320*271	4,800	12.93

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
R-6	-T	500	9.5	52	330	355*350*335	2,000	7.5

AMMO PACK

PACKAGE	PACKING CODE	REEL (EA)	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON (EA)	GROSS WEIGHT (Kg)
R-6	-F	300	9.5	52	255*73*100	400*268*225	3,000	8.5

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