THE DATASHEET OF

HER305-T

RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

HER301 THRU HER308

HIGH EFFICIENCY SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Amperes

FEATURES

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

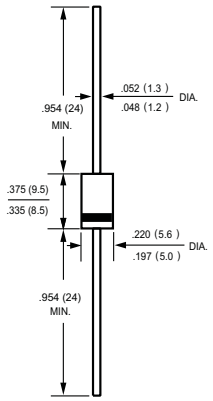
MECHANICAL DATA

* 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.

DO-201AD



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	HER301	HER302	HER303	HER304	HER305	HER306	HER307	HER308	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A = 50°C	I_O	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200					150			Amps
Typical Current Squared Time	I^2T	165.9					93.3			A^2S
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	8.5								°C/W
	$R_{\theta JA}$	20								
Typical Junction Capacitance (Note 2)	C_J	70					50			pF
Operating Temperature Range	T_J	-55 to + 150								°C
Storage Temperature Range	T_{STG}	-55 to + 150								°C

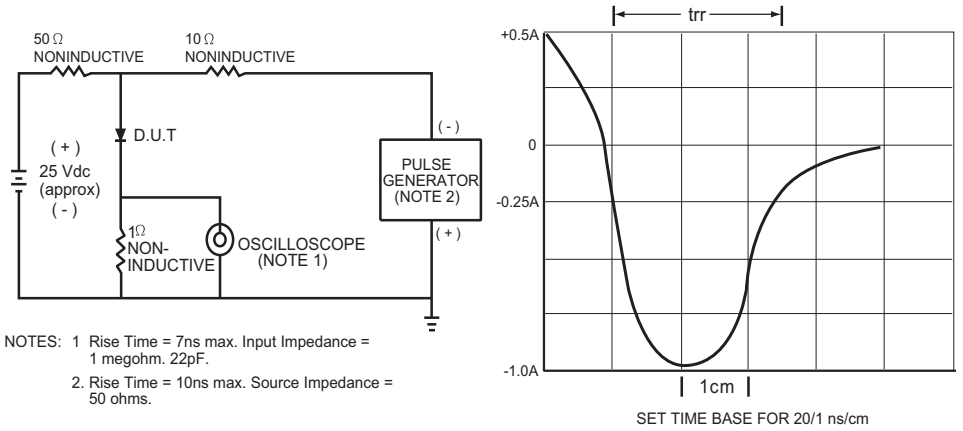
ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	HER301	HER302	HER303	HER304	HER305	HER306	HER307	HER308	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC		V_F	1.0			1.3		1.7			Volts
Maximum Average Reverse Current	@T_A = 25°C	I_R	5.0								µA
at Rated DC Blocking Voltage	@T_A = 150°C		20								mA
Maximum Reverse Recovery Time (Note 4)		trr	50					75			nSec

NOTES : 1. Thermal Resistance : Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. "ROHS compliant"
4. Test Conditions: I_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.

2020-04
REV:B

RATING AND CHARACTERISTICS CURVES (HER301 THRU HER308)



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

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

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

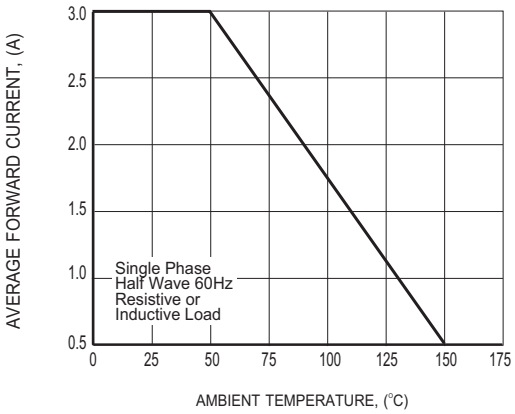


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

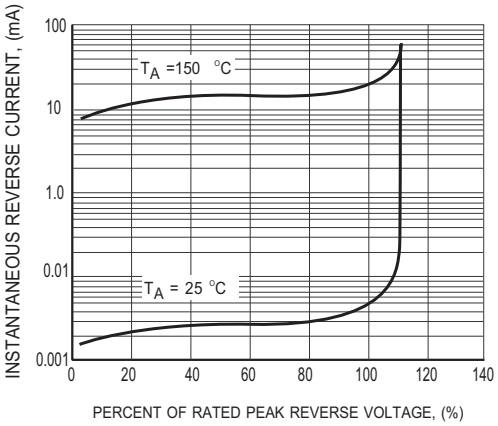


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (HER301 THRU HER308)

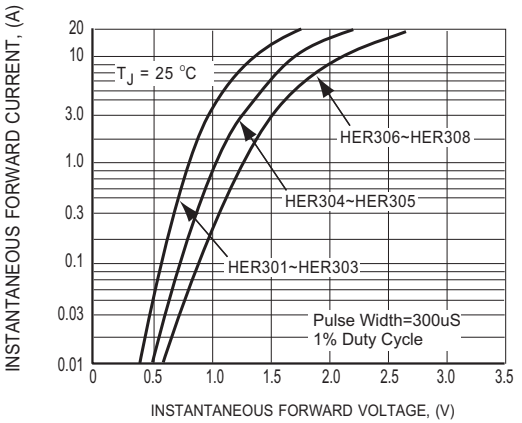


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

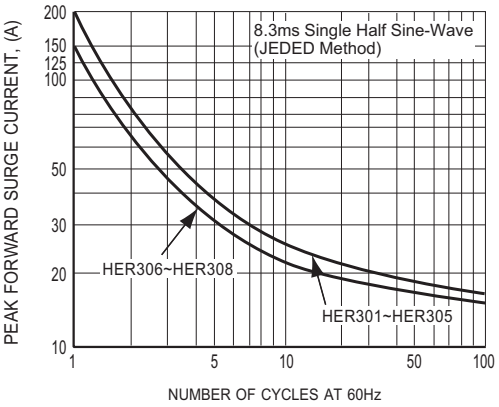


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

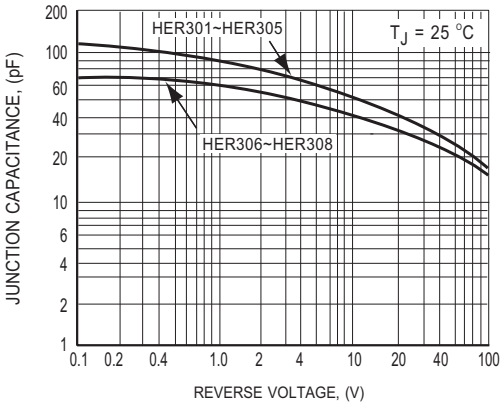
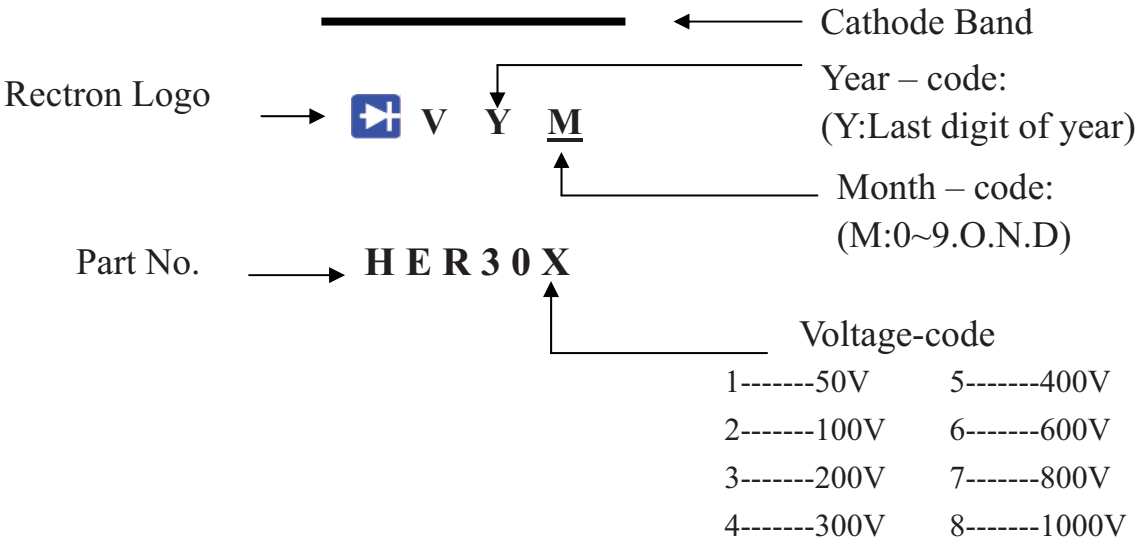


FIG.6 TYPICAL JUNCTION CAPACITANCE

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)
DO-201	-B	500	300*73*40	347*320*271	12,000	15.9

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-201	-T	1,200	1,200	5.0	52	330	355*350*335	4,800	9.10

AMMO PACK

PACKAGE	PACKING CODE	REEL (EA)	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON (EA)	GROSS WEIGHT (Kg)
DO-201	-F	600	9.5	52	255*73*100	400*268*225	6,000	9.9

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