

**HIGH EFFICIENCY SILICON RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Amperes

**FEATURES**

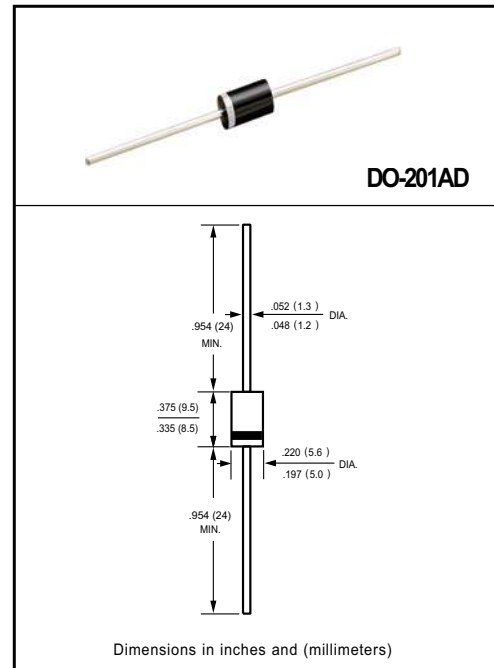
- \* Low power loss,high efficiency
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High speed switching
- \* High reliability
- \* High current surge

**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.



**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 <sub>RRM</sub>	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 50°C	I <sub>O</sub>	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	200			150					Amps
Typical Current Squared Time	I <sup>2</sup> T	165.9			93.3					A <sup>2</sup> S
Typical Thermal Resistance (Note 1)	R <sub>θJL</sub>	8.5								°C/W
	R <sub>θJA</sub>	20								
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	70			50					pF
Operating Temperature Range	T <sub>J</sub>	-55 to + 150								°C
Storage Temperature Range	T <sub>STG</sub>	-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 <sub>F</sub>	1.0		1.3		1.7				Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	@T <sub>A</sub> = 25°C				5.0				μA
		@T <sub>A</sub> = 150°C				20				mA
Maximum Reverse Recovery Time (Note 4)	t <sub>rr</sub>	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<sub>F</sub>= 0.5A, I<sub>R</sub>= -1.0A, I<sub>RR</sub>= -0.25A.

## RATING AND CHARACTERISTICS CURVES ( HER301 THRU HER308 )

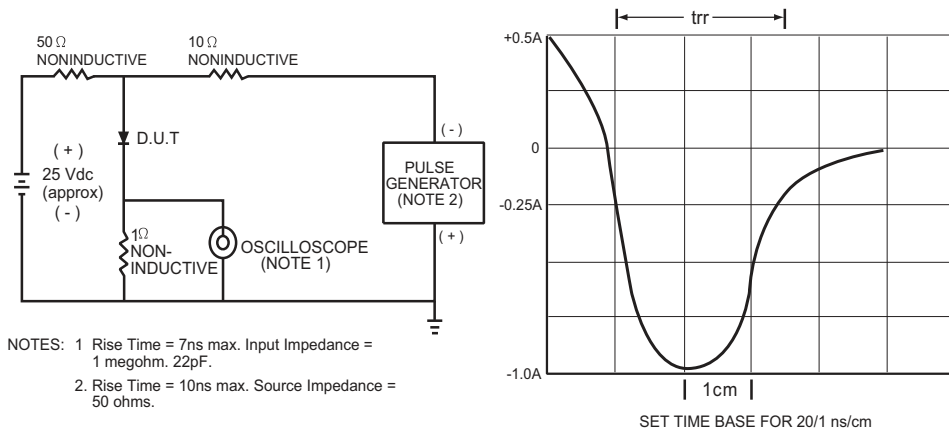


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

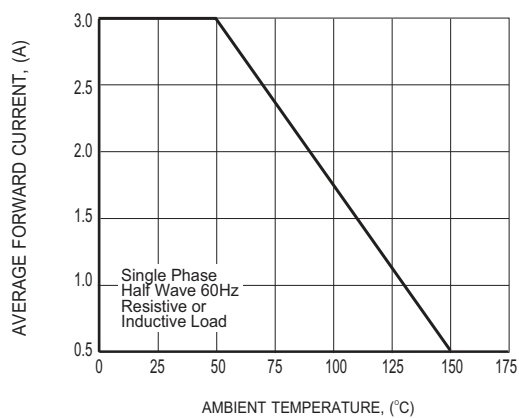


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

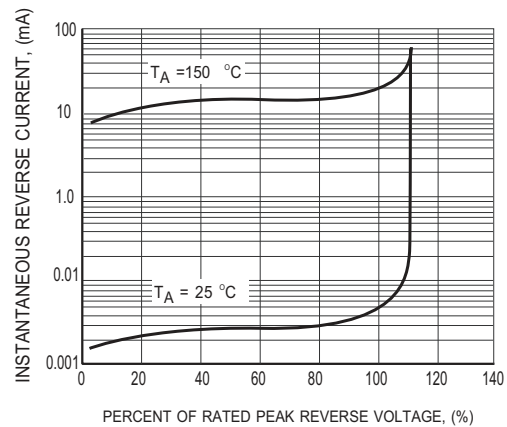


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

## RATING AND CHARACTERISTICS CURVES ( HER301 THRU HER308 )

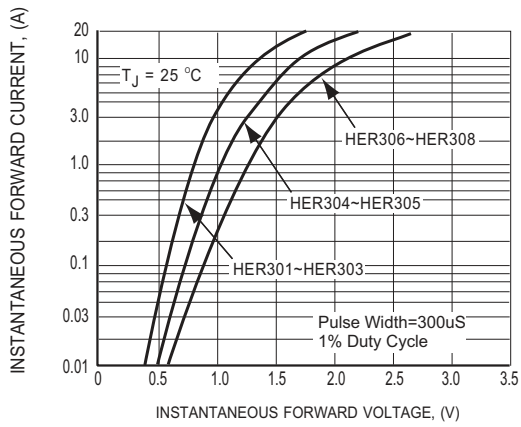


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

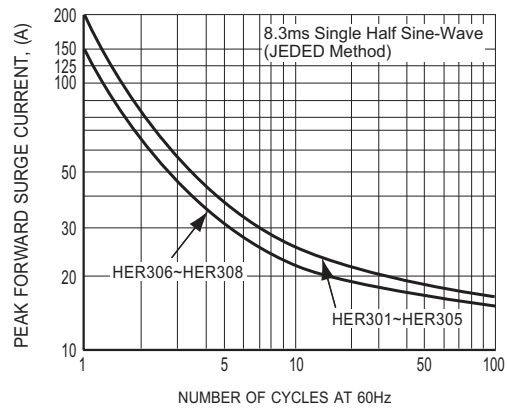


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

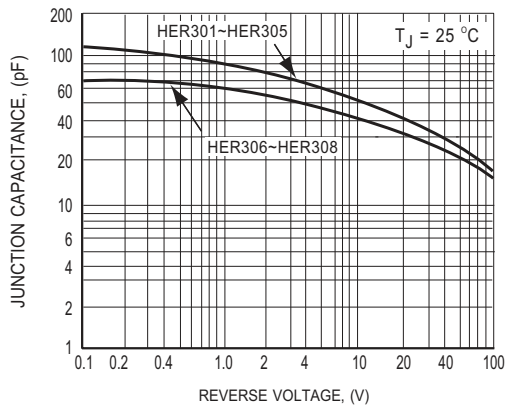
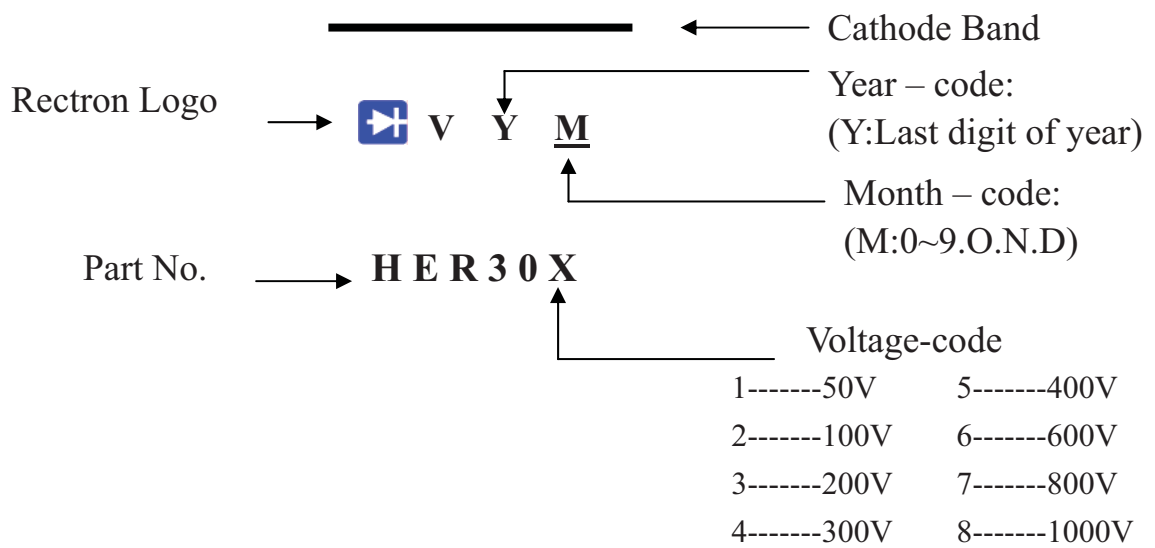


FIG.6 TYPICAL JUNCTION CAPACITANCE

## 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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