

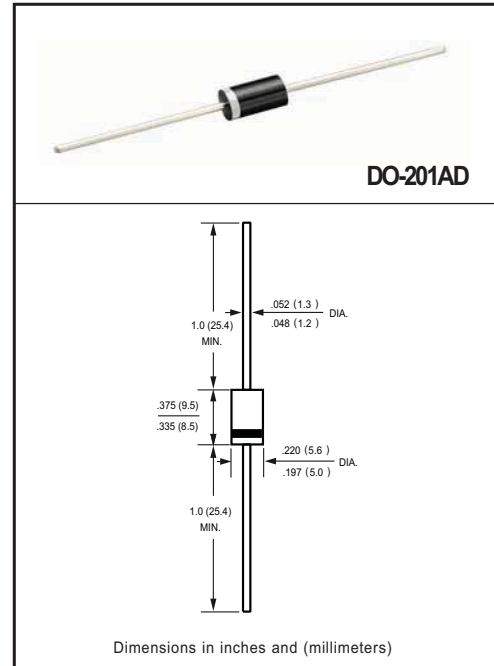
HIGH EFFICIENCY SILICON RECTIFIER
VOLTAGE 600 Volts CURRENT 3.0 Amperes

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)

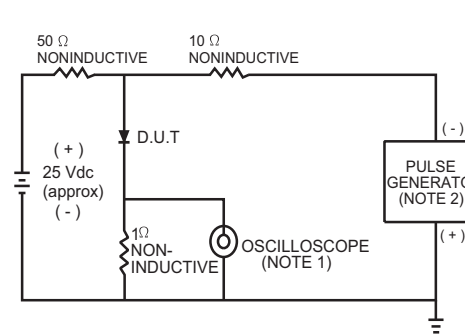
RATINGS	SYMBOL	HER306-M23	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600	Volts
Maximum RMS Voltage	V_{RMS}	420	Volts
Maximum DC Blocking Voltage	V_{DC}	600	Volts
Maximum Average Forward Rectified Current at $T_A = 50^\circ\text{C}$	I_O	3.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150	Amps
Typical Current Squared Time	I^2T	93.3	A^2S
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	8.5	$^\circ\text{C}/\text{W}$
	$R_{\theta JA}$	20	$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 2)	C_J	50	pF
Operating Temperature Range	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150	$^\circ\text{C}$

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

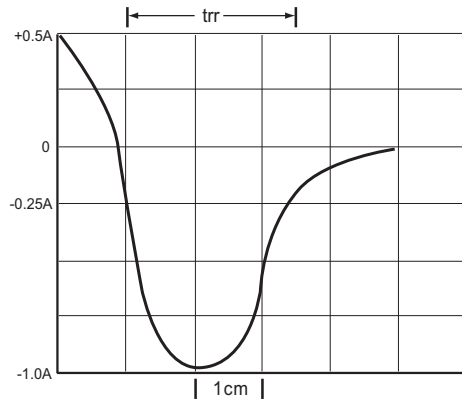
CHARACTERISTICS	SYMBOL	HER306-M23	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	V_F	1.7	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	I_R	@ $T_A = 25^\circ\text{C}$	5
		@ $T_A = 125^\circ\text{C}$	150
Maximum Reverse Recovery Time (Note 4)	t_{rr}	75	nSec

- NOTES : 1. Thermal Resistance : Mounted on PCB.
 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: $I_F = 0.5\text{A}$, $I_R = -1.0\text{A}$, $I_{RR} = -0.25\text{A}$.
 5. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

RATING AND CHARACTERISTICS CURVES (HER306-M23)



- NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
 2. Rise Time = 10ns max. Source Impedance = 50 ohms.



SET TIME BASE FOR 30/1 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

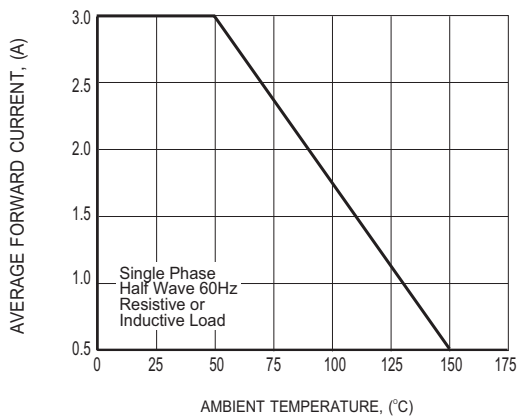


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

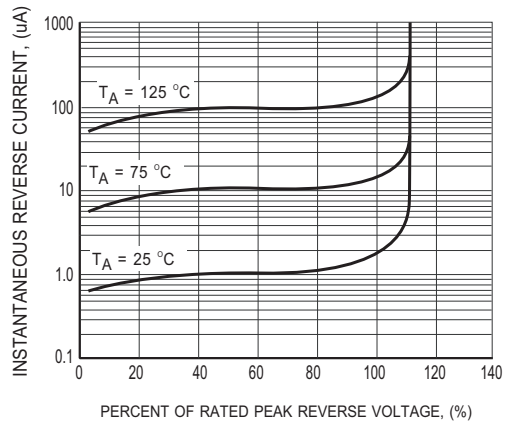


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (HER306-M23)

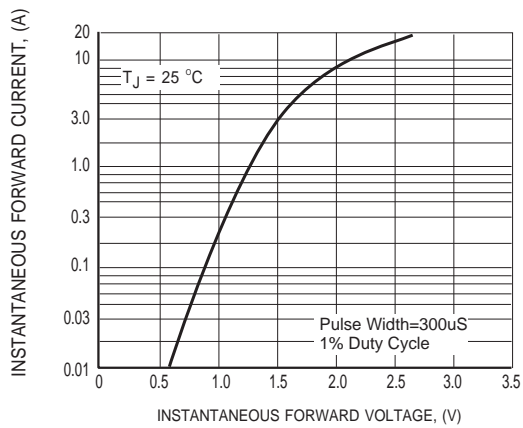


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

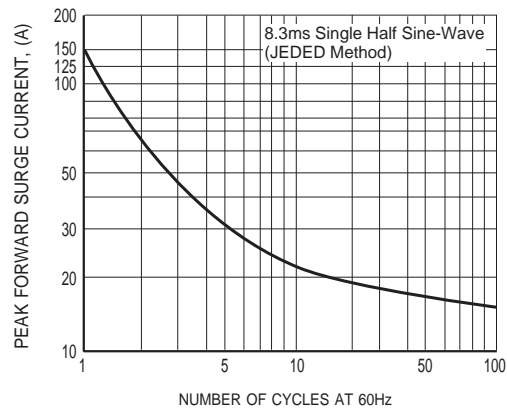


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

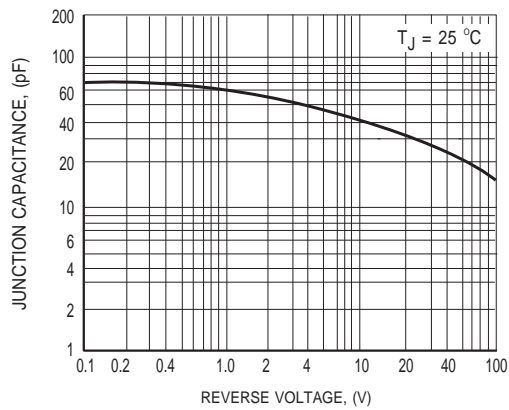
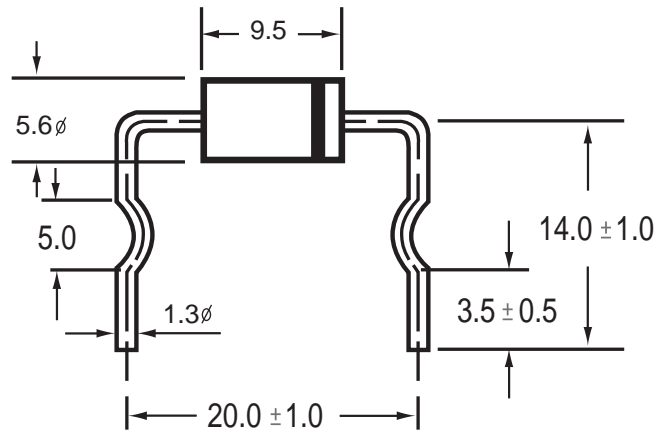


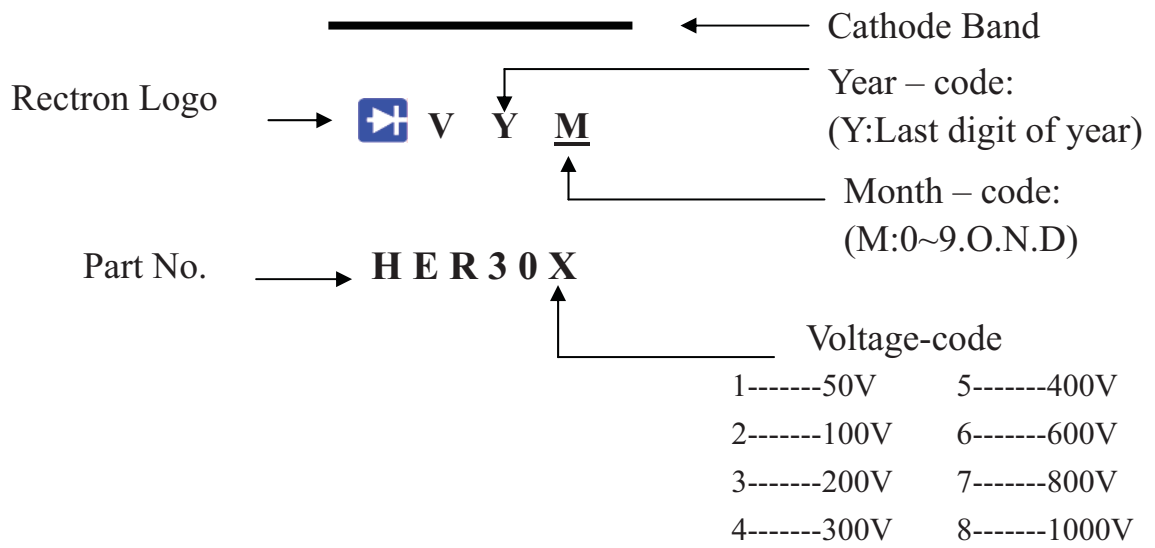
FIG.6 TYPICAL JUNCTION CAPACITANCE

HER306-M23

Unit: mm



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	15.90

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)
DO-201	-T	1,200	9.5	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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