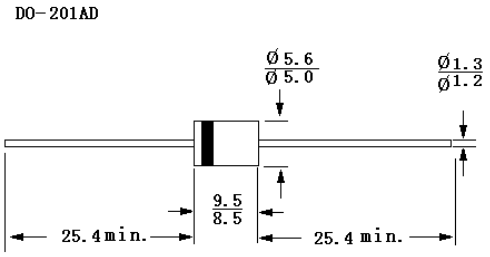
HER301 THRU HER308

HIGH EFFICIENCY RECTIFIERS
Reverse Voltage – 50 to 1000 Volts
Forward Current – 3.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Void-free Plastic in DO-201AD package.
- 3.0 amperes operation at Ta = 55 °C with no thermal runaway
- Ultra Fast switching for high efficiency.



Dimensions in mm

Mechanical Data

- **Case:** Molded plastic, DO-201AD
- **Polarity:** Band denotes cathode
- **Lead:** Axial leads, solderable per MIL-STD-202 method 208 guaranteed
- **Mounting Position:** Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

	Symbols	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	Units
Maximum repetitive 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 = 55°C	I_O	3.0								Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150								Amps
Maximum instantaneous forward voltage at 3.0A DC	V_F	1.0			1.3		1.7			Volts
Maximum reverse current T_J = 25°C	I_R	10								µAmps
at rated reverse voltage T_J = 100°C		500								
Maximum reverse recovery time (Note 1)	T_{rr}	50					75			nSec
Typical junction capacitance (Note 2)	C_J	75					50			pF
Typical junction resistance (Note 3)	$R_{\theta JA}$	60								°C/W
Operating and storage temperature range	T_J ,T_{Stg}	-55 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. Thermal resistance from junction to ambient and from junction to lead length 0.375”(9.5mm) P.C.B. mounted.

Dated : 12/04/2003

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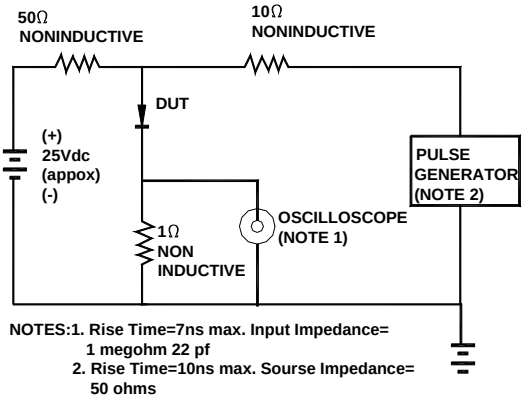
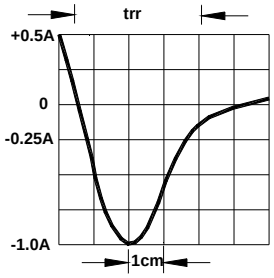
REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

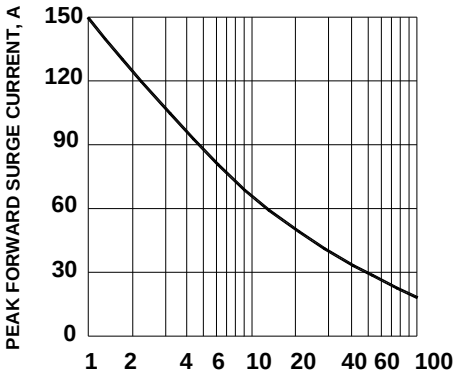


NOTES:1. Rise Time=7ns max. Input Impedance= 1 megohm 22 pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms

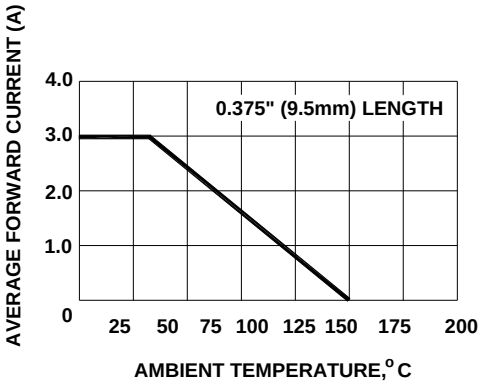


SET TIME BASE FOR
50ns/cm

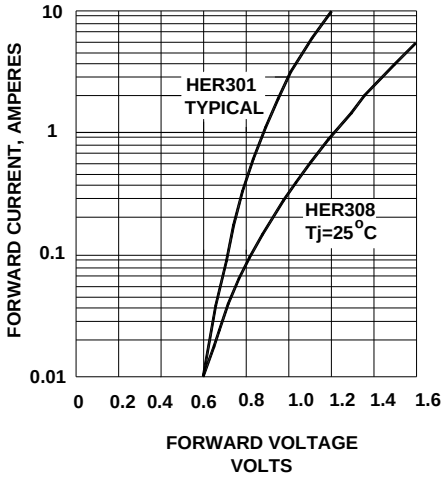
PEAK FORWARD SURGE CURRENT



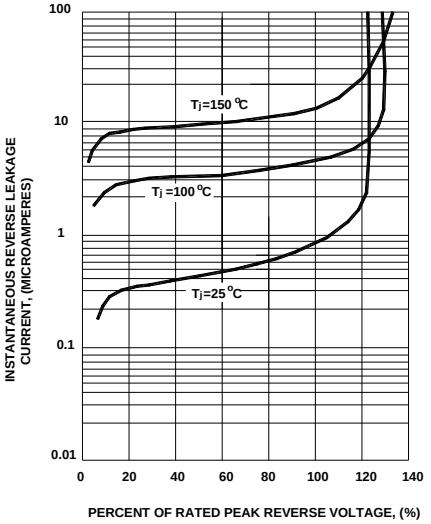
TYPICAL FORWARD CURRENT DERATING



FORWARD CHARACTERISTICS



TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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