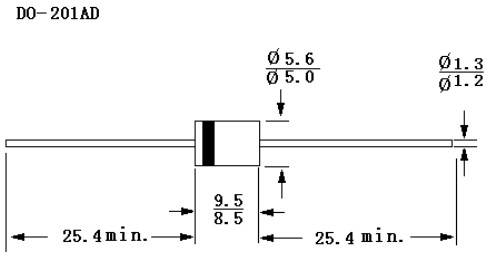
HER501~HER508-HAF

HIGH EFFICIENCY RECTIFIERS
Voltage Range - 50 to 1000 Volts
Current - 5.0 Ampere



Dimensions in mm

Features

- Low power loss, high efficiency
- Low leakage
- Low forward voltage drop
- High current capability
- High speed switching
- High reliability
- High current surge
- Halogen and Antimony Free(HAF), RoHS compliant

Mechanical Data

- **Case:** DO-201AD, moulded plastic
- **Terminals:** MIL-STD-202E, method 208C guaranteed
- **Polarity:** Colored band denotes cathode end
- **Mounting position:** Any

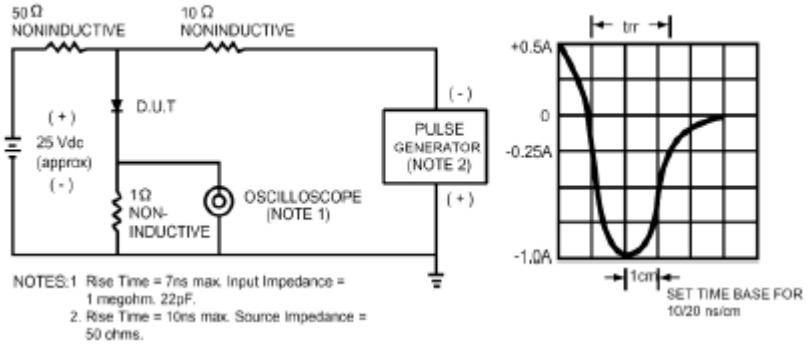
Absolute Maximum Ratings and Characteristics

Rating at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load, for capacitive load, derate current by 20%.

Parameter	Symbols	HER 501	HER 502	HER 503	HER 504	HER 505	HER 506	HER 507	HER 508	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_A = 50℃	$I_{(AV)}$	5.0								A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150								A
Maximum Instantaneous Forward Voltage at 5.0A	V_F	1.0			1.3		1.7			V
Maximum Reverse Current at T_J = 25℃ at Rated DC Blocking Voltage T_J = 100℃	I_R	10 750								μA
Maximum Reverse Recovery Time (note1)	T_{rr}	50					75			nS
Typical Junction Capacitance (note2)	C_J	70					50			pF
Typical Thermall Resistance (note3)	$R_{\theta JA}$	20								℃/W
Operating Junction Temperature Range	T_j	-55 to +150								℃
Storage Temperature Range	T_{stg}	-55 to +150								℃

Notes: 1.Reverse recovery test conditions: I_F = 0.5 A, I_R = -1.0 A, Irr = -0.25 A
2.Measured at 1.0MHz and applied reverse voltage of 4.0 V
3.Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length P.C.B. mounted.

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

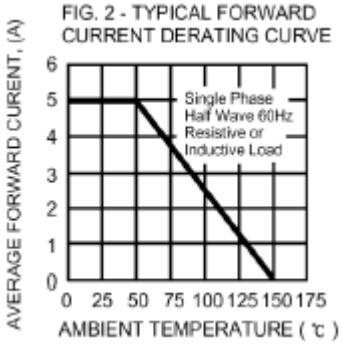


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

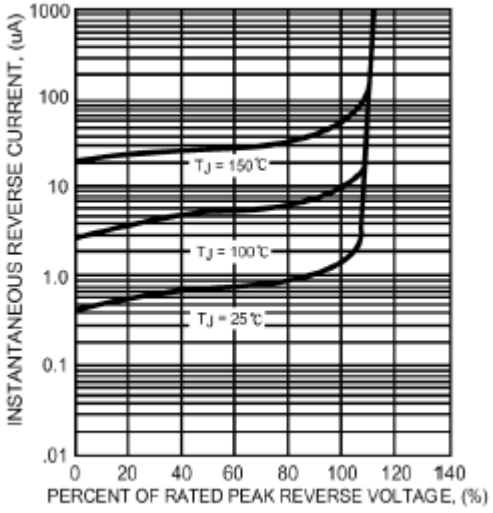


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

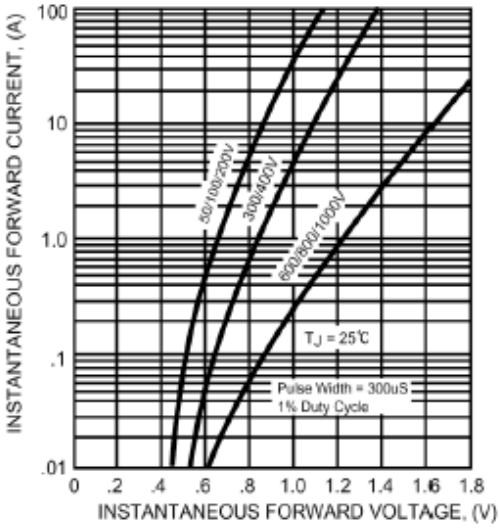


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

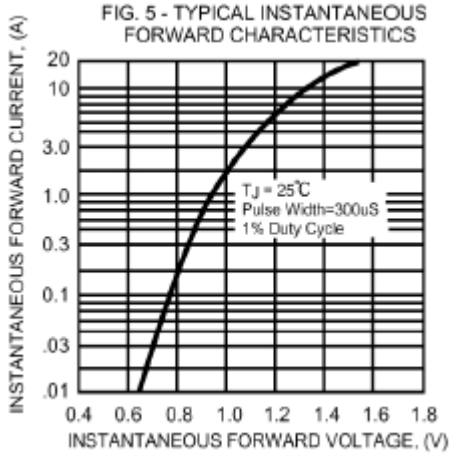


FIG. 6 - TYPICAL JUNCTION CAPACITANCE