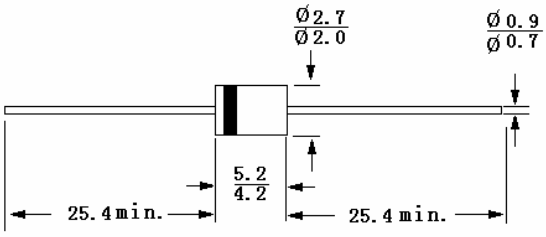
HER101 THRU HER108

HIGH EFFICIENCY RECTIFIERS
Reverse Voltage – 50 to 1000 Volts
Forward Current – 1.0 Ampere

DO-41



Dimensions in mm

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Void-free Plastic in DO-41 package
- 1.0 amperes operation at Ta = 55 ^{o}C with no thermal runaway
- Ultra Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228

Mechanical Data

- **Case:** Molded plastic, DO-41
- **Lead:** MIL-STD-202 method 208 guaranteed
- **Polarity:** Band denotes cathode
- **Mounting Position:** Any

Absolute Maximum Ratings and Characteristics

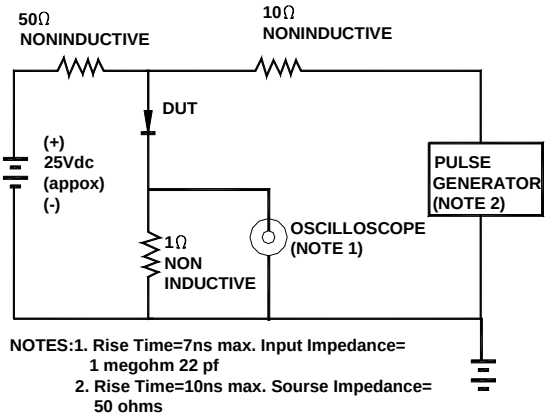
Ratings at 25^{o}C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

	Symbols	HER 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	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^{o}C	I_O	1.0								Amp
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30								Amps
Maximum instantaneous forward voltage at 1A DC	V_F	1.0			1.3		1.7			Volts
Maximum reverse current T_J = 25^{o}C at rated reverse voltage T_J = 100^{o}C	I_R	10 500								µAmps
Maximum reverse recovery time (Note 1)	t_{rr}	50					75			nSec
Typical junction capacitance (Note 2)	C_J	17								pF
Typical junction resistance (Note 3)	$R_{\theta JA}$	60								^{o}C/W
Operating and storage temperature range	T_J ,T_S	-55 to +150								^{o}C

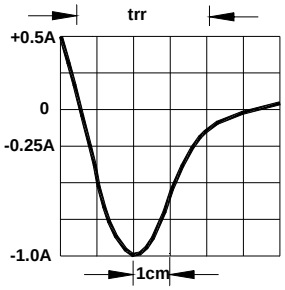
Notes:

1. Test Conditions: I_F = 0.5A, I_R = -1A, I_{RR} = -0.25A.
2. Measured at 1MHz and applied reverse voltage of 4 volts DC.
3. Thermal resistance from junction to ambient and from junction to lead length 0.375”(9.5mm) P.C.B. mounted.

REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

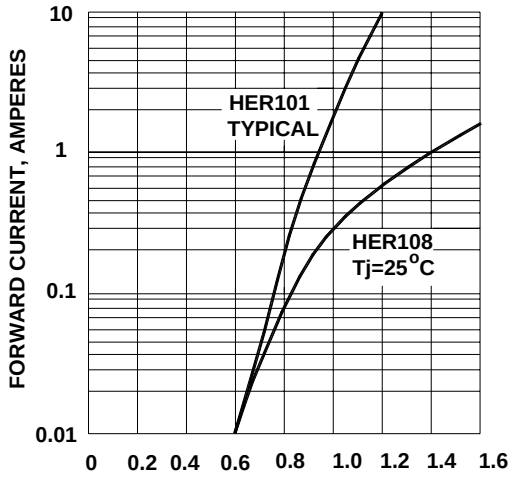


NOTES:1. Rise Time=7ns max. Input Impedance= 1 megohm 22 pf
2. Rise Time=10ns max. Sourse Impedance= 50 ohms

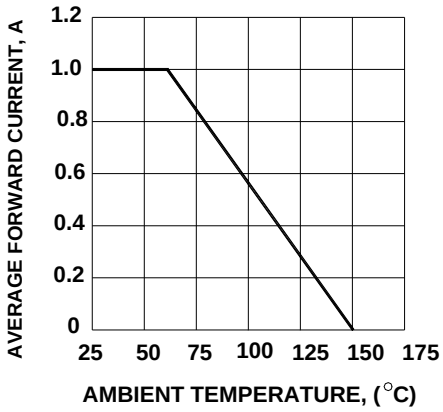


SET TIME BASE FOR
50ns/cm

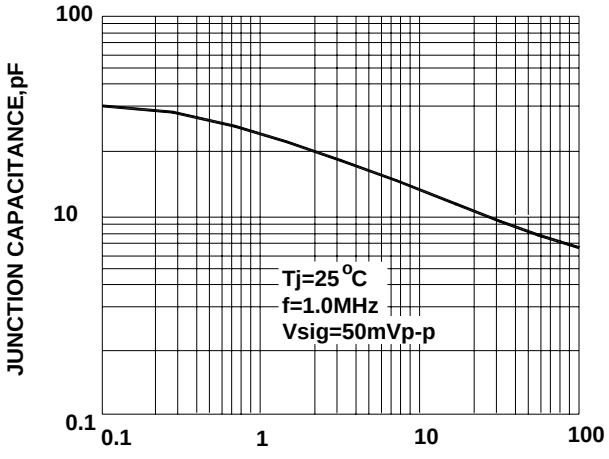
FORWARD CHARACTERISTICS



FORWARD CURRENT DERATING CURVE



TYPICAL JUNCTION CAPACITANCE



PEAK FORWARD SURGE CURRENT