

III. Fast / Ultra Fast / Super Fast Recovery Rectifier

1.0A Ultra Fast Recovery Rectifier HER101~HER108

(Package: DO-41)

<p>FEATURES</p> <ul style="list-style-type: none"> • Plastic package carries Underwriters Laboratory Flammability Classification 94V-0 • High speed switching for high efficiency • Low reverse leakage • High forward surge current capability • High temperature soldering guaranteed; 250 /10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3 kg) tension <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : JEDEC DO-41, Molded plastic body • Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denoted cathode end • Mounting Position : Any • Weight : 0.012 ounce, 0.34 grams 	<p>Case: DO-41 Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	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 0.375" (9.5mm) lead length at $T_a = 50$	I_o	1.0								Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0								Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.0		1.3		1.7				Volts
Maximum DC reverse current $T_a = 25$ at rated DC blocking voltage $T_a = 100$	I_R	5.0 100.0								μA
Maximum reverse recovery time (Note 1)	T_{rr}	50				75				ns
Typical junction capacitance (Note 2)	C_j	15.0				12.0				PF
Typical thermal resistance (Note 3)	R_{th-JA}	50.0								/ W
Operating junction and storage temperature range	T_j, T_{stg}	-65 to +150								

Note :

1. Reverse recovery 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 DC

3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length P.C.B. mounted

Ratings and Characteristic Curves of HER101~HER108

FIG. 1- FORWARD CURRENT DERATING CURVE

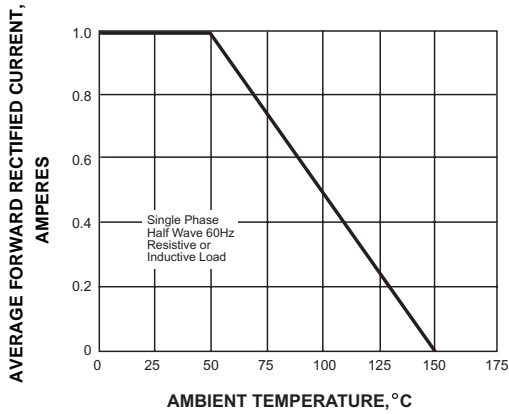


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

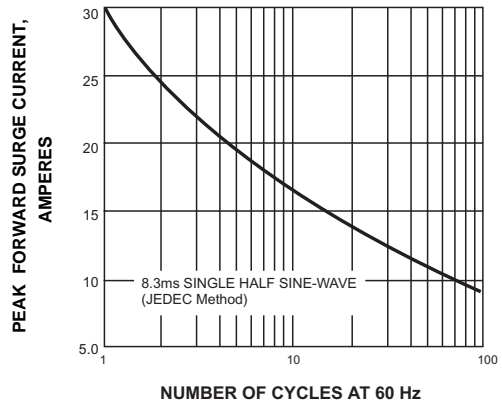


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

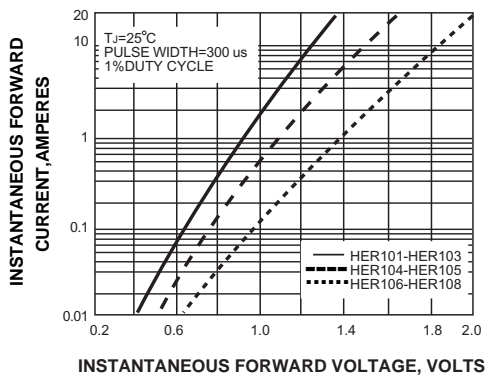


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

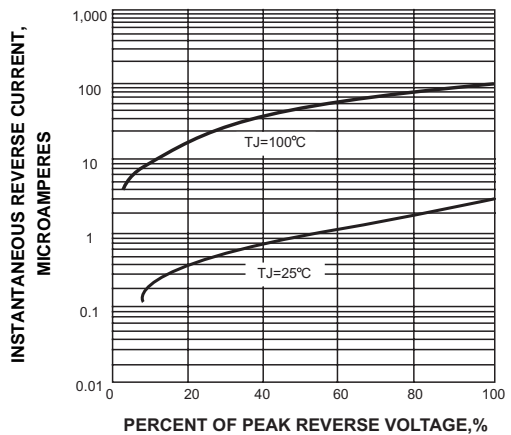


FIG. 5-TYPICAL JUNCTION CAPACITANCE

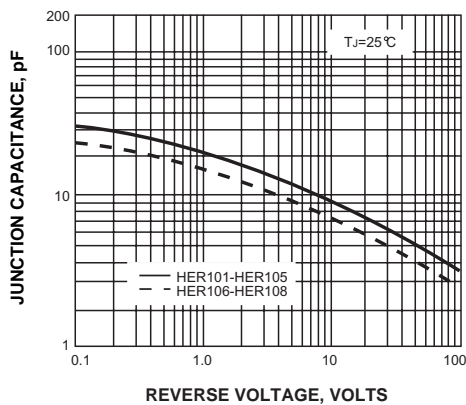


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

