III. Fast / Ultra Fast / Super Fast Recovery Rectifier

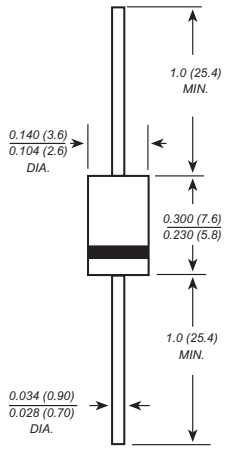
2.0A Ultra Fast Recovery Rectifier
HER201~HER208 (Package: DO-15)

FEATURES

- 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

MECHANICAL DATA

- Case : JEDEC DO-15, Molded plastic body
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denoted cathode end
- Mounting Position : Any
- Weight : 0.014 ounce, 0.40 grams



Case: DO-15
Dimensions in inches and (millimeters)

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 201	HER 202	HER 203	HER 204	HER 205	HER 206	HER 207	HER 208	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 Ta = 50℃	Io	2.0								Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50								Amps
Maximum instantaneous forward voltage at 2.0A	V_F	1.0			1.3		1.7			Volts
Maximum DC reverse current Ta = 25℃ at rated DC blocking voltage Ta = 100℃	I_R	5.0 100								μA
Maximum reverse recovery time (Note 1)	Trr	50					75			ns
Typical junction capacitance (Note 2)	Cj	30.0					20.0			PF
Typical thermal resistance (Note 3)	R_{th}-JA	50.0								℃ / W
Operating junction and storage temperature range	Tj ,Tstg	-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 HER201~HER208

FIG. 1- FORWARD CURRENT DERATING CURVE

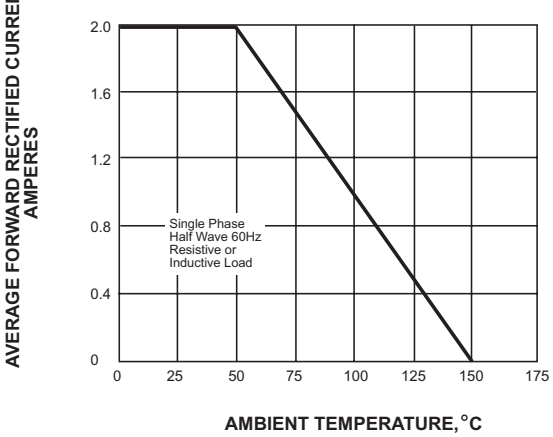


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

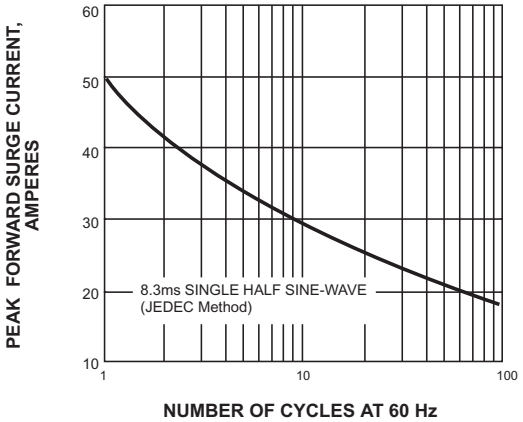


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

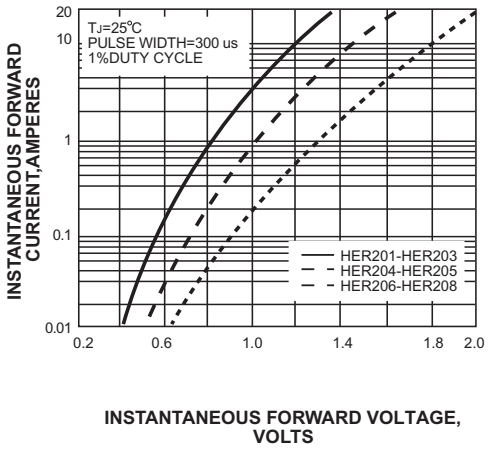


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

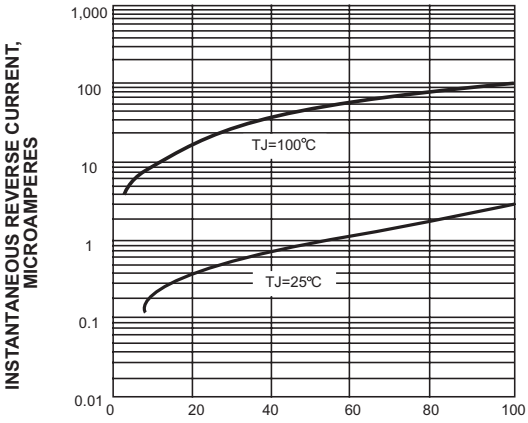


FIG. 5-TYPICAL JUNCTION CAPACITANCE

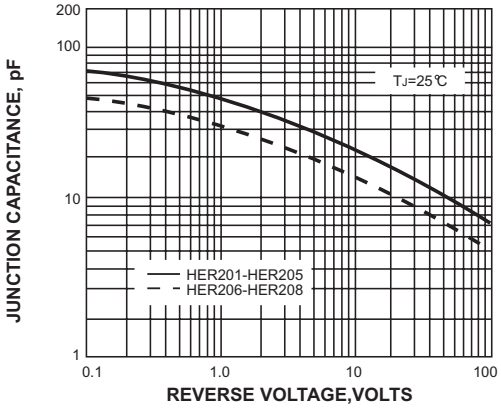


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE