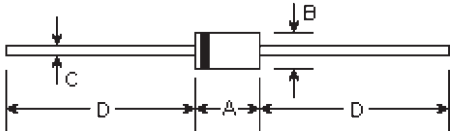
HER3001 THRU HER3007

HIGH EFFICIENCY RECTIFIER
Reverse Voltage - 50 to 1000 Volts
Forward Current - 3.0 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low cost
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Low leakage
- High surge capability
- High temperature soldering guaranteed: 250℃, 0.375" (9.5mm) lead length for 10 seconds, 5 lbs. (2.3Kg) tension

DO-201AD



Mechanical Data

- **Case:** DO-201AD, molded plastic body over passivated chip
- **Terminals:** Plated axial leads solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.042 ounce, 1.19 grams

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.283	0.374	7.20	9.50	
B	0.189	0.208	4.80	5.30	ϕ
C	0.048	0.051	1.20	1.30	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

	Symbols	HER 3001	HER 3002	HER 3003	HER 3004	HER 3005	HER 3006	HER 3007	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=55℃	$I_{(AV)}$	3.0							Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) at T_A=55℃	I_{FSM}	150.0							Amps
Maximum instantaneous forward voltage at 3.0A	V_F	1.0				1.7			Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25℃ / T_A=125℃	I_R	10.0 / 50.0							μ A
Maximum reverse recovery time (Note 1) T_J=25℃	T_{rr}	50.0				100.0			nS
Typical junction capacitance (Note 2)	C_J	45.0							ρ F
Typical thermal resistance (Note 3)	$R_{\theta JA}$ / $R_{\theta JL}$	20.0 / 8.5							℃/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							℃

Notes:

(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(3) Thermal resistance from junction to lead and from junction to ambient with 0.375" (9.5mm) lead length, both leads attached to heatsink

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

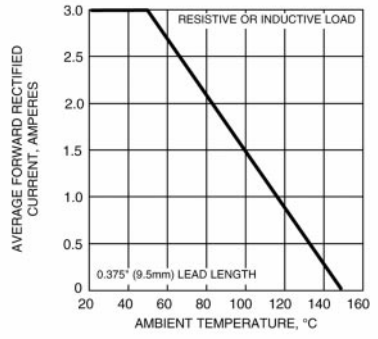


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

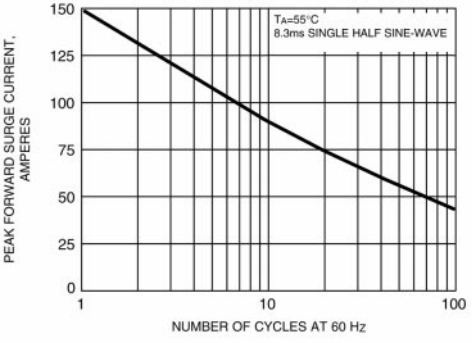


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

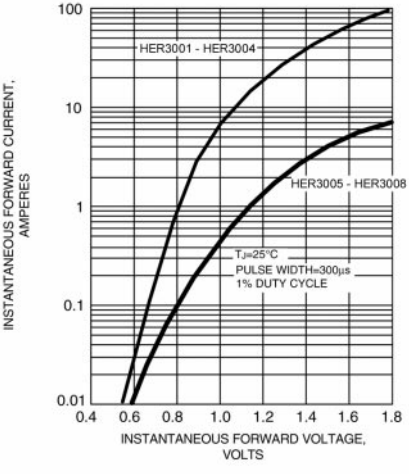


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

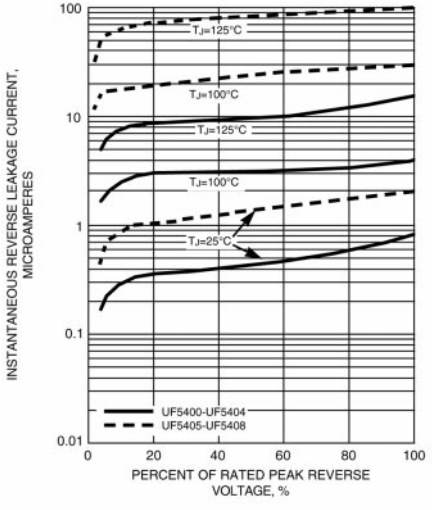


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

