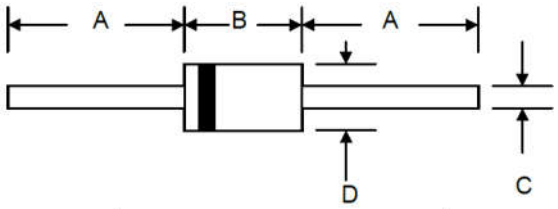
Hottech® Semiconductor

HER301 THRU HER308

3.0A ULTRA FAST PLASTIC RECTIFIER

FEATURES

- Low leakage
- Low forward voltage drop
- High surge current capability
- Ultra fast switching for high efficiency



DO-201AD(DO-27)		
Dim	Min	Max
A	25.4	—
B	8.50	9.50
C	1.20	1.30
D	5.0	5.60
All Dimensions in mm		

MECHANICAL DATA

- Case: DO-201AD(DO-27)
- Case material: Molded plastic. UL flammability
- Classification rating: 94V-0
- Weight: 1.2 grams (approximate)

MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	Unit
Peak repetitive reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
RMS reverse voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
DC blocking voltage	V_{DC}	35	100	200	300	400	600	800	1000	V
Average forward rectified current @T_A = 55°C	$I_{F(av)}$	3.0								A
Non-repetitive peak forward surge current@rated current & temp	I_{FSM}	150								A
Operating temperature range	T_J	-50~ 125								°C
Storage temperature range	T_{STG}	-50 ~ 150								°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	Unit	Conditions
Maximum forward voltage	V_F	1.0				1.3	1.7			V	I_F=3.0A
Maximum DC reverse current	I_R	5.0								μA	T_J= 25°C V=V_{DC}
		100								μA	T_J=100°C, V=V_{DC}
Maximum reverse recovery time	t_{RR}	50					75			ns	Note 1
Typical junction capacitance	C_J	50					30			pF	Note 2
Typical thermal resistance	$R_{\theta JC}$	20								°C/W	Note 3

Note:

1.Measured with I_F=0.5A,I_R=1A,I_{RR}=0.25A;
2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC;
3.Thermal resistance junction to ambient;
4.Single phase, half wave ,60Hz, resistive or inductive load;
5.For capacitive load, derate current by 20%.

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TYPICAL CHARACTERISTICS

FIG. 1 – FORWARD CURRENT DERATING CURVE

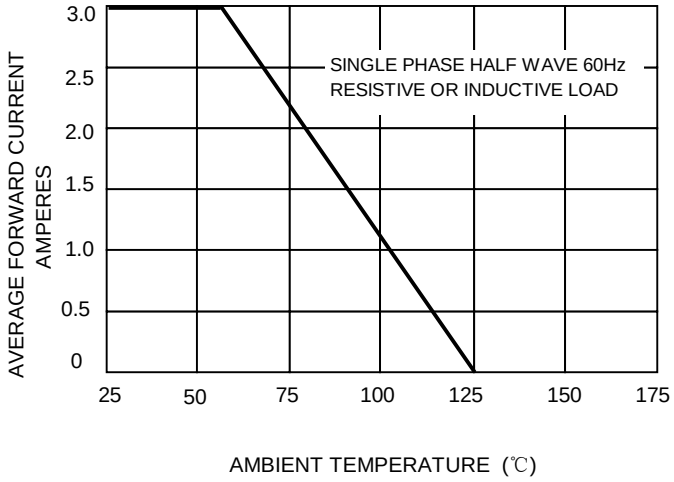

FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

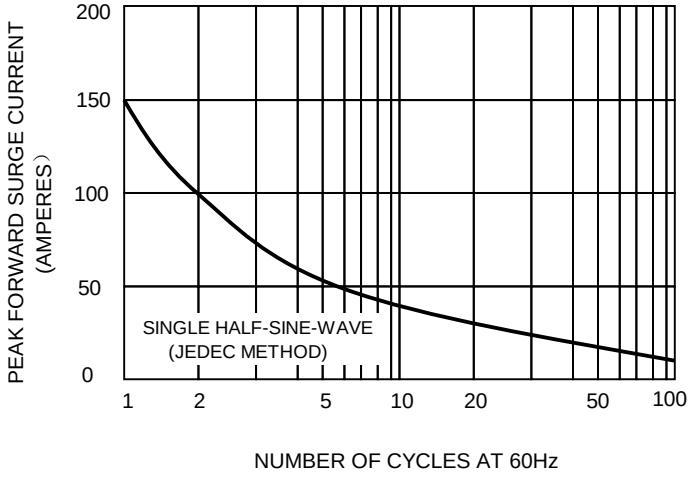

FIG.3 – TYPICAL JUNCTION CAPACITANCE

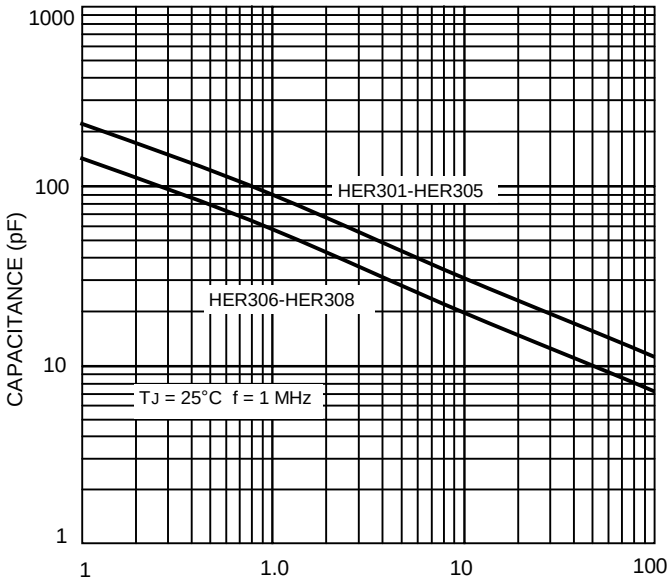

FIG.4-TYPICAL FORWARD CHARACTERISTICS