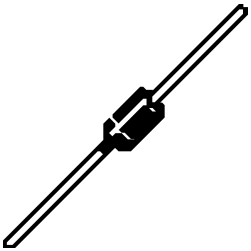
Semiconductor *Data Sheet*

3.0 Amp SUPER FAST PLASTIC RECTIFIERS

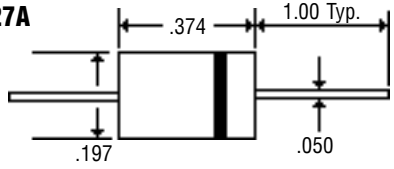
HER301 . . . 308 Series

Description



Mechanical Dimensions

D027A

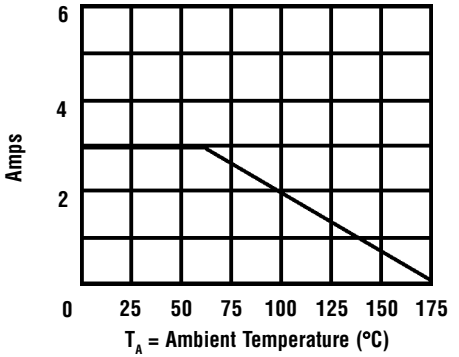


Features

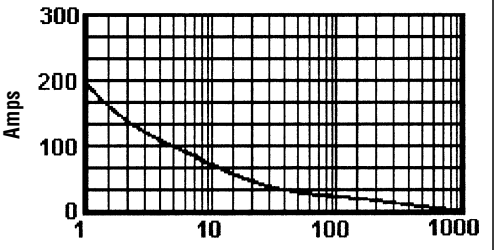
- **LOW COST**
- **LOW LEAKAGE**
- **HIGH SURGE CAPABILITY**
- **MEETS UL SPECIFICATION 94V-0**

Electrical Characteristics @ 25°C.	***HER301 . . . 308 Series***								**Units**
Maximum Ratings	**301**	**302**	**303**	**304**	**305**	**306**	**307**	**308**	
Peak Repetitive Reverse Voltage...V_{RRM}	50	100	200	300	400	600	800	1000	Volts
RMS Reverse Voltage...$V_{R(rms)}$	35	70	140	210	280	420	560	700	Volts
DC Blocking Voltage...V_{DC}	50	100	200	300	400	600	800	1000	Volts
Average Forward Rectified Current...$I_{F(av)}$ T_A = 55°C	3.0								Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} @ Rated Current & Temp	150								Amps
Forward Voltage @ 3.0A...V_F	< 1.0 >				1.3	< 1.7 >			Volts
DC Reverse Current...I_R T_A = 25°C	10								µAmps
@ Rated DC Blocking Voltage T_A = 100°C	200								µAmps
Typical Junction Capacitance...C_J	80								pF
Typical Thermal Resistance...$R_{\theta JC}$ *(Note 1)*	1.0								°C / W
Typical Reverse Recovery Time...t_{RR} *(Note 2)*	< 50 >					< 75 >			nS
Operating & Storage Temperature Range...T_J, T_{STRG}	-65 to 150								°C

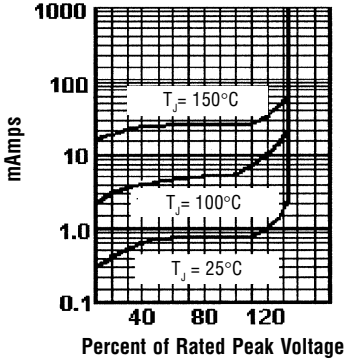
Forward Current Derating Curve



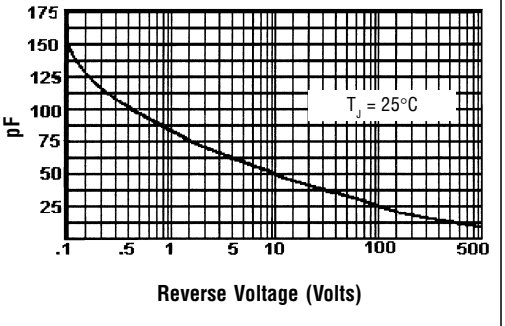
Non-Repetitive Peak Forward Surge Current



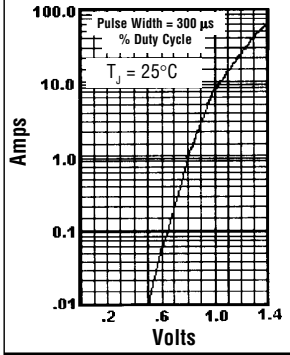
Typical Reverse Characteristics

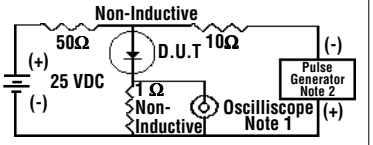


Typical Junction Capacitance



Typical Instantaneous Forward Characteristics

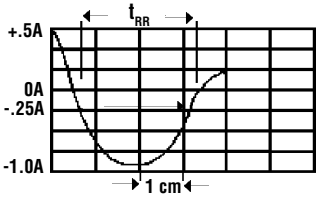




Notes:

1. Rise Time = 7 nS Max. Impedance = 1 megohm, 22 pF
2. Rise Time = 10 nS Max. Source Impedance = 50 Ohms

Reverse Recovery Characteristics



Time Base Set @ 50/100nS/cm

Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 HZ Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

NOTES: 1. Measured @ 1 MHZ and applied reverse voltage of 4.0V.
2. Conditions: I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A.