HER501G THRU HER508G

Silicon Rectifier

5.0A Leaded Type Fast Recovery Effciency Rectifiers-50V-1000V

Features

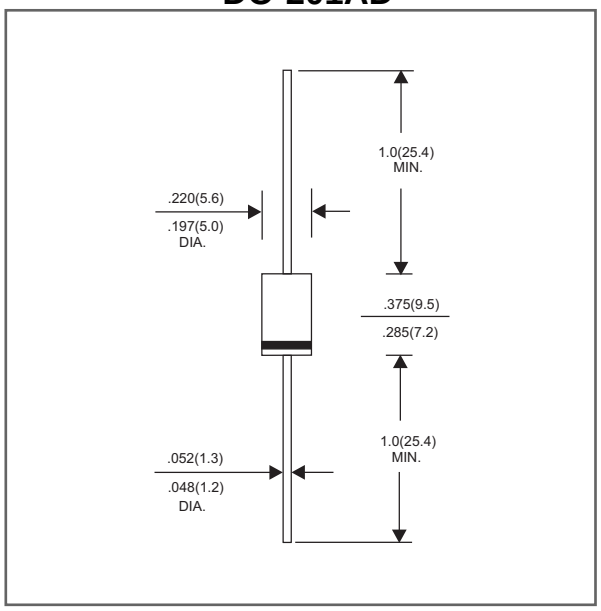
- Axial lead type devices for through hole design.
- 5.0A operating at TA=55°C without thermal run away
- High current capability.
- Ultrafast recovery time for high efficiency.
- High surge capability.
- Glass passivated chip junction.
- Lead-free parts meet RoHS requirments.
- Suffix "-H" indicates Halogen free parts, ex. HER501G-H.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any
- Weight : Approximated 1.10 gram

Package outline

DO-201AD



Dimensions in inches and (millimeters)

Maximum ratings (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	Ambient temperature = 50°C	I_O			5.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			200	A
Reverse current	V_R = V_{RRM} T_J = 25°C	I_R			5.0	μA
	V_R = V_{RRM} T_J = 125°C				100	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		75		pF
Storage temperature		T_{STG}	-65		+175	°C

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	T_{RR} *5 (nS)	Operating temperature T_J, (°C)
HER501G	50	35	50	1.00	50	-55 to +150
HER502G	100	70	100			
HER503G	200	140	200			
HER504G	300	210	300	1.30		
HER505G	400	280	400			
HER506G	600	420	600	1.85	75	
HER507G	800	560	800			
HER508G	1000	700	1000			

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@I_F=5.0A

*5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, IF=0.5A, IR=1.0A, IRR=0.25A

Rating and characteristic curves

Fig.1 - Forward Current Derating Curve

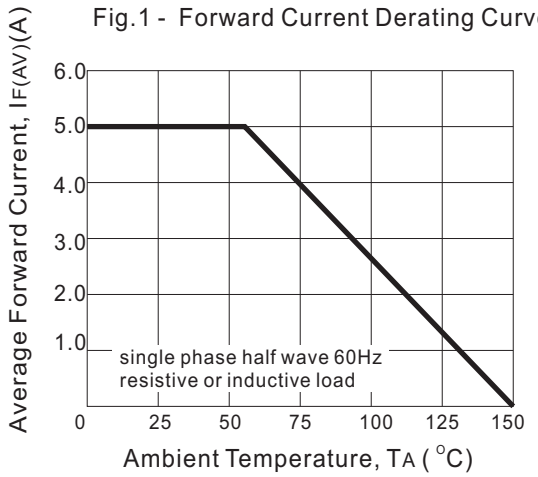


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

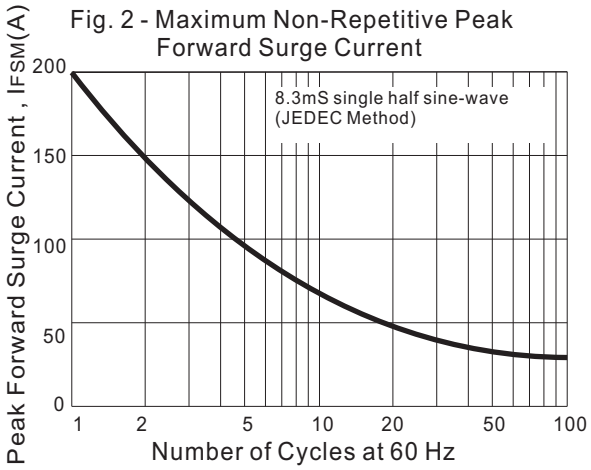


Fig. 3 - Typical Instantaneour Forward Characteristics

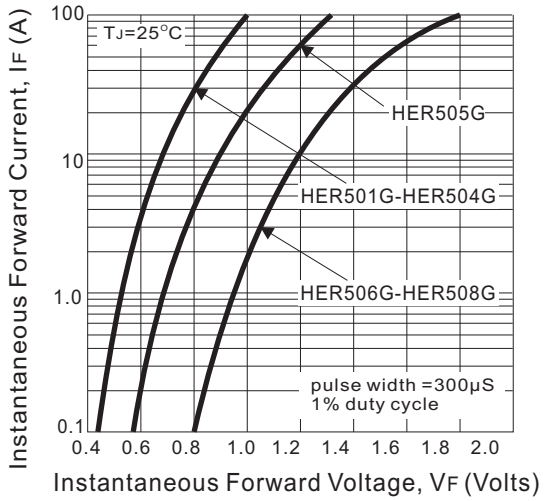


Fig. 4 - Typical Reverse Characteristics

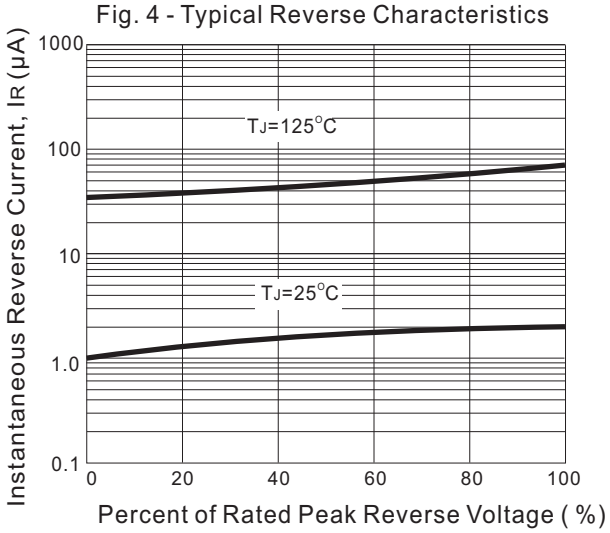


Fig. 5 - Typical Junction Capacitance

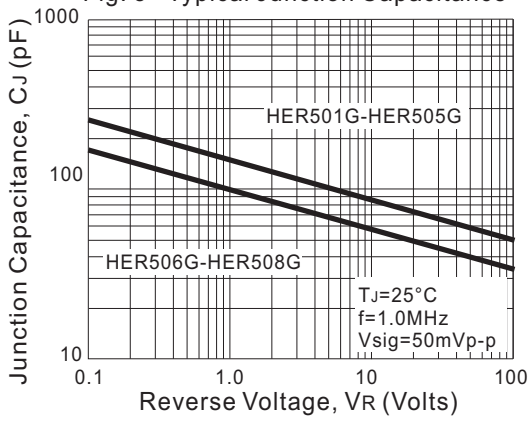
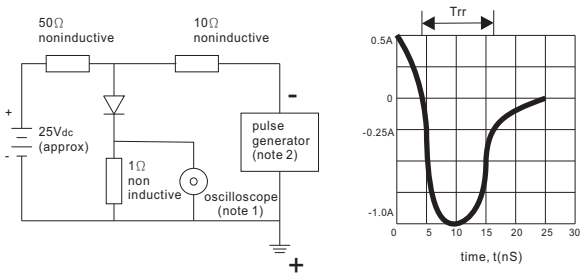


Fig. 6 - Test Circuit Diagram and Reverse Recovery Time Characteristic



Note: 1. rise time=7nS Max. input impedance=1MΩ, 22pF
2. rise time=10nS Max. source impedance=80Ω