HER501 THRU HER508

Crownpo Technology

FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE 50V TO 1000V
FORWARD CURRENT 5 Amperes

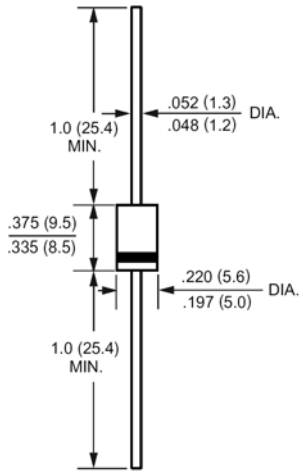
FEATURES

- Plastic package has Underwriters Laboratory Flammabiliy Classification 94V-O ctilizing Flame Retardant Epoxy Molding Compound.
- Void-free Plastic in a DO-201AD package.
- 5.0 ampere operation at T_A=50℃ With no thermal runaway.
- Ultra Fast switching for high efficiency.
- Exceeds environmental standards of MIL-S-19500/228

MECHANICAL DATA

Case : Molded plastic, DO-201AD
Terminals : Axial leads, solderable per MIL-STD-202, method 208 guaranteed
Polarity : Band denotes cathode
Mounting position : Any
Weight : 0.04ounce, 1.1gram

DO-201AD



Dimensions in inchs and (milimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60H_Z, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbols	*HER501*	*HER502*	*HER503*	*HER504*	*HER505*	*HER506*	*HER507*	*HER508*	Units
Maximum Recerrent 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 .375"(9.5mm) Lead Length at T_A=50℃	$I_{(AV)}$	5.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150.0								Amp
Maximum Forward Voltage at 5.0A and T_A=25℃	V_F	1.0			1.3		1.7			Volts
Maximum Reverse Current at T_J=25℃ / at Rated DC Blocking Voltage T_J=100℃	I_R	10.0 / 150								uAmp
Typical Junction Capacitance (Note 1)	C_J	70					50			pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}	50					75			nS
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	20.0								℃/W
Operating and Storage Temperature Range	T_J, Tstg	-65 to +150								℃

NOTES:

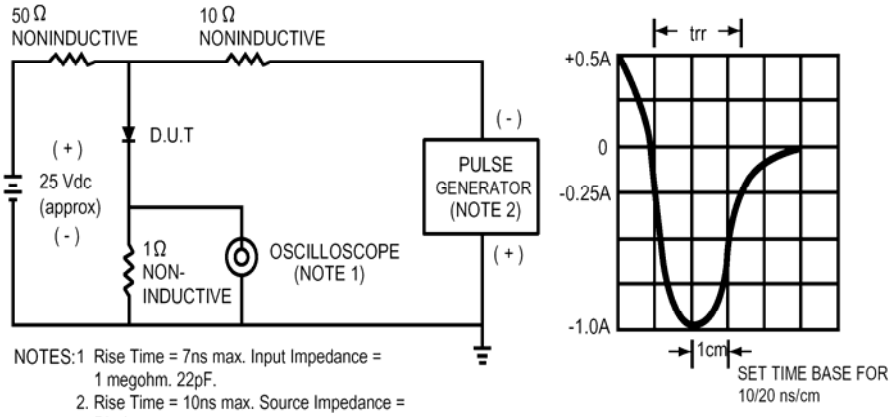
1- Measured at 1 MH_Z and applied reverse voltage of 4.0 VDC.

2- Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I_{RR}=.25A.

3- Thermal Resistance form junction to Ambient at 0.375"(9.5mm) lead length P.C.B. Mounted.

RATING AND CHARACTERTIC CURVES

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

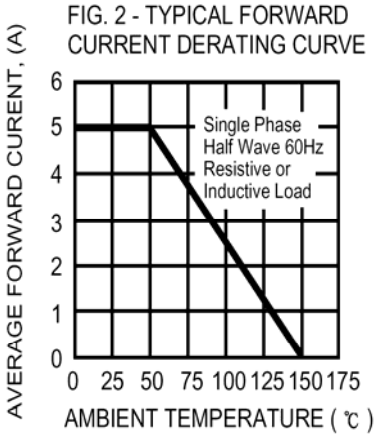


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

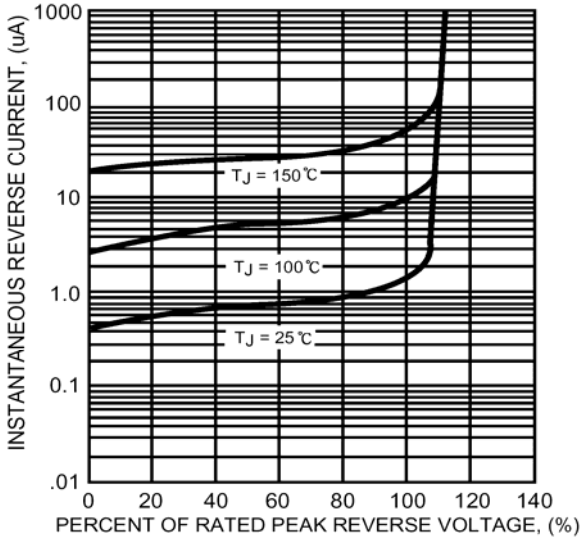
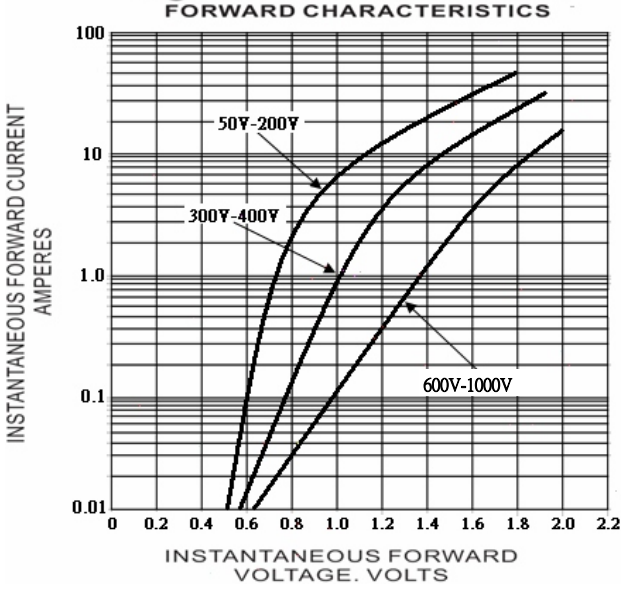


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



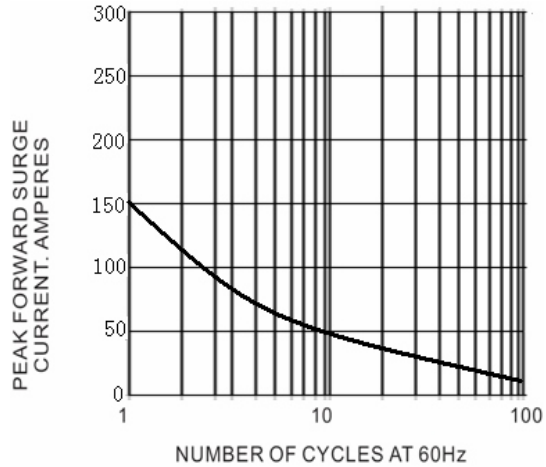


Fig.5- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

FIG. 6 - TYPICAL JUNCTION CAPACITANCE