



HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

HER501G THRU HER508G

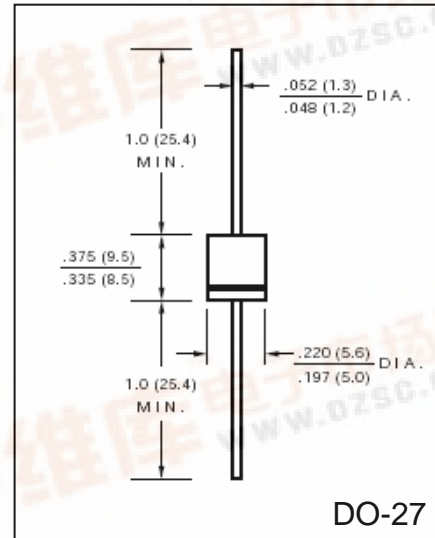
VOLTAGE RANGE
CURRENT
50 to 1000 Volts
5.0 Ampere

FEATURES

- Glass passivated chip junction
- Low power loss, high efficiency
- Low Leakage
- High speed switching
- High Surge Capacity
- High Temperature soldering guaranteed:
260 °C / 10 second, 0.375" (9.5mm) lead length

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V – 0 rate flame retardant
- Polarity: Color Band denotes cathode end
- Lead: Plated axial lead, solderable per MIL – STD-202E Method 208C
- Mounting Position: Any
- Weight: 0.042 ounce, 1.19 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	HER 501G	HER 502G	HER 503G	HER 504G	HER 505G	HER 506G	HER 507G	HER 508G	UNIT
Maximum Repetitive 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, 0.375" (9.5mm) lead length at T _A = 50°C	I _(AV)	5.0								Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I _{FSM}	200					150			Amps
Maximum Instantaneous Forward Voltage @ 5.0A	V _F	1.0			1.3		1.5	1.7		Volts
Maximum DC Reverse Current at Rated T _A = 25 °C	I _R	10								μA
DC Blocking Voltage per element T _A = 125 °C		500								
Maximum Full Load Reverse Current, Full Cycle average 0.375" (9.5mm) lead length at T _L = 55°C	I _{R(AV)}	150								μA
Maximum Reverse Recovery Time Test conditions I _F = 0.5A, I _R = 1.0A, I _{RR} = 0.25A	t _{rr}	50					70			nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C _J	70					50			pF
Typical Thermal Resistance (Note 1)	R _{θJA}	20								°C/W
Operating Junction Temperature	T _J	(-55 to +150)								°C
Storage Temperature Rang	T _{STG}	(-55 to +150)								°C

Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted





RATINGS AND CHARACTERISTIC CURVES HER501G THRU HER508G

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

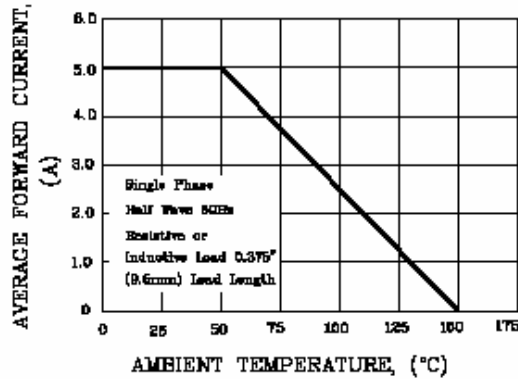


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

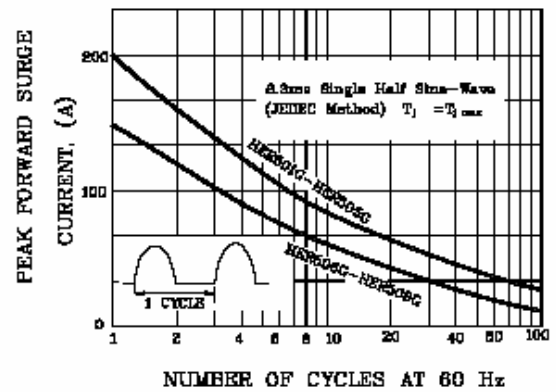


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

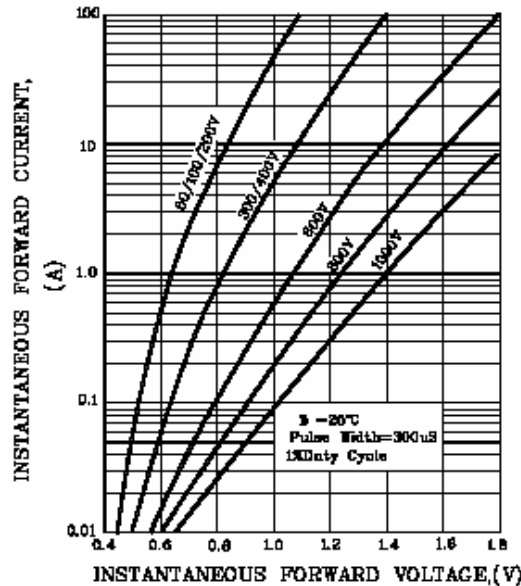


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

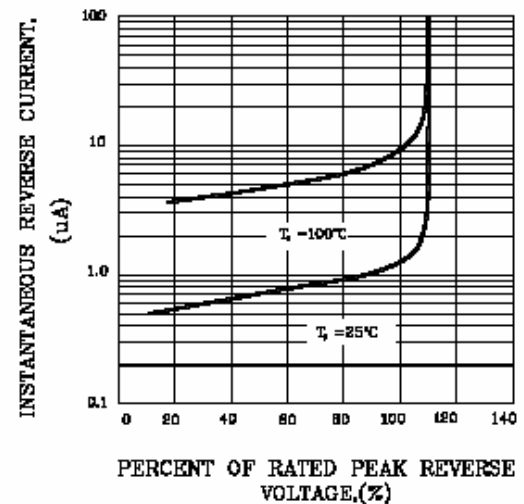


FIG.5-TYPICAL JUNCTION CAPACITANCE

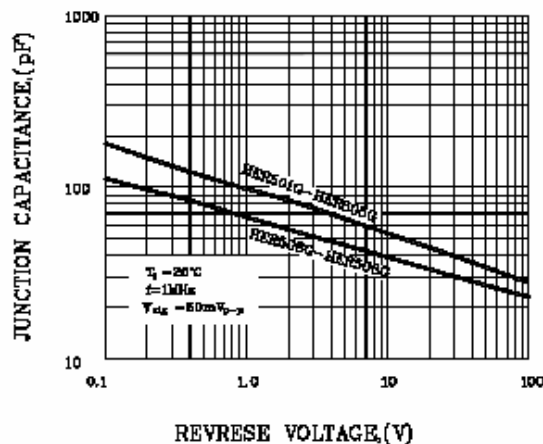
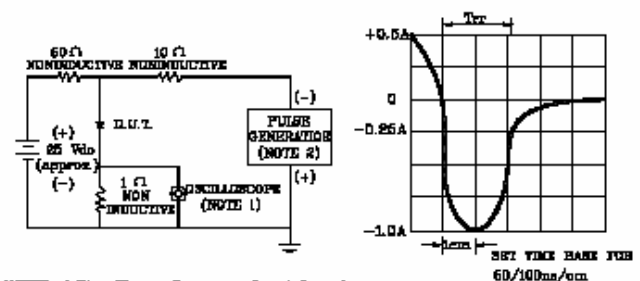


FIG.6-TEST CIRCUIT DIAGRAM AND
REVERSE RECOVERY TIME CHARACTERISTIC



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