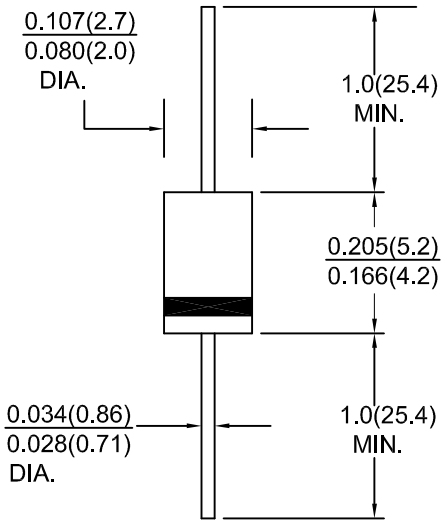
HER101 THRU HER108

HIGH EFFICIENCY RECTIFIERS

FEATURES:

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- High speed switching

DO-41



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case : Molded plastic
Epoxy: UL 94V-0 rate flame retardant
Lead : Axial leads, solderable per MIL-STD-202,
Method 208 guaranteed
Polarity : Color band on body denotes cathode end
Mounting Position : Any
Weight : 0.34 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.
Single phase, half sine wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20 %.

Characteristic	Symbol	HER 101	HER 102	HER 103	HER 104	HER 105	HER 106	HER 107	HER 108	Units
Maximum recurrent 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 Ta=50 ° C	$I_{(AV)}$	1.0								Amps
Peak forward surge current ,8.3ms single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	30								Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	1.0			1.30		1.7			Volts
Maximum DC reverse current Ta=25 ° C at rated DC blocking voltage Ta=100 ° C	I_R	5.0 150								μ A
Maximum reverse recovery time (note 1)	trr	50					75			nS
Typical junction capacitance (note 2)	C_j	20								pF
Operating and storage temperature range	T_j, T_{stg}	-65 to +150								° C

Notes : 1. Reverse recovery test condition : I_F=0.5A ; I_R=1.0A ; I_{RR}=0.25A
2. Measured 1MHz and applied reverse voltage of 4.0V DC

FIG.1-TYPICAL FORWARD CHARACTERISTICS

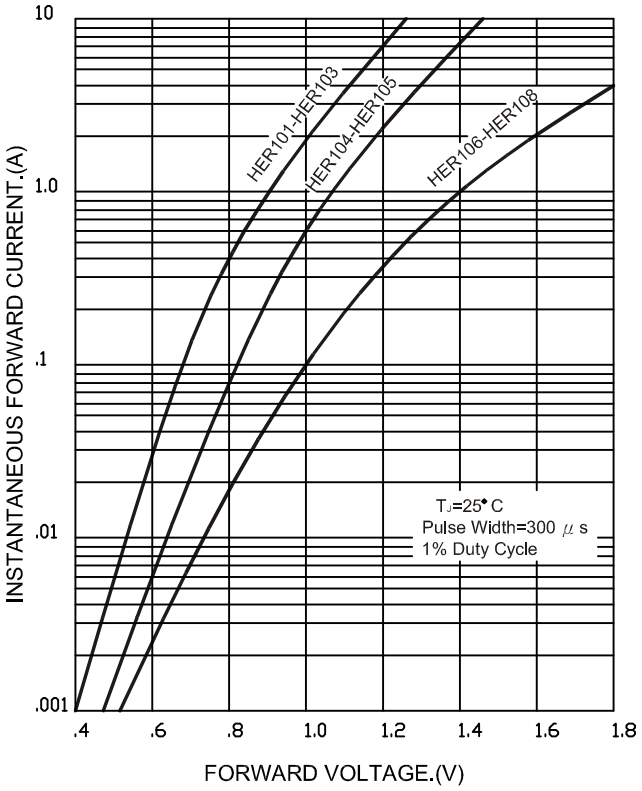


FIG.2 - TYPICAL FORWARD CURRENT DERATING CURVE

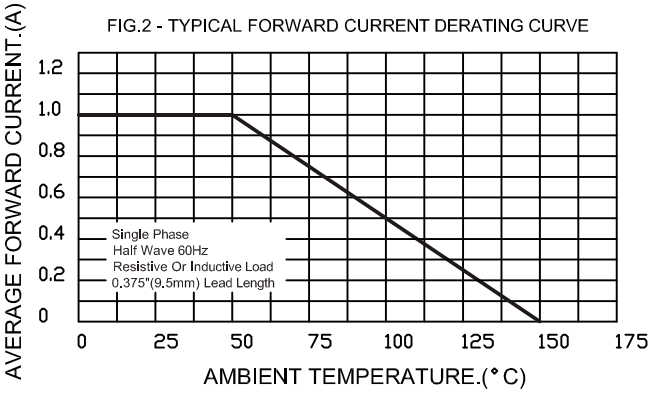


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

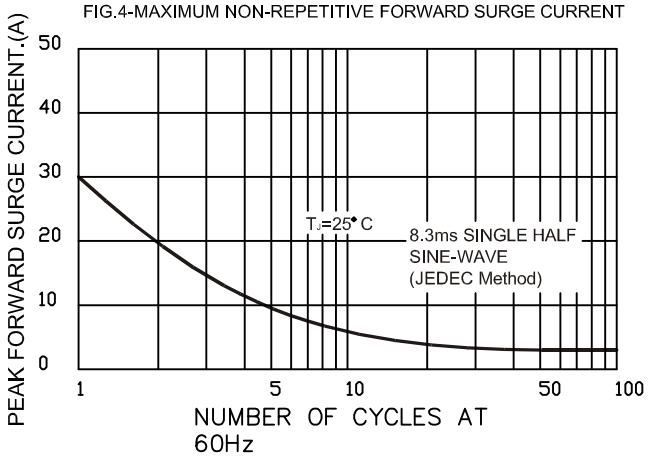
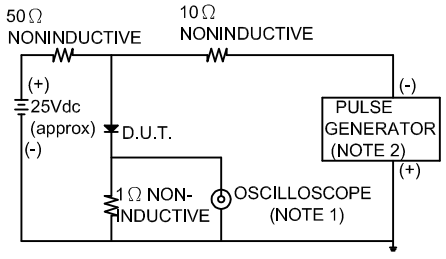
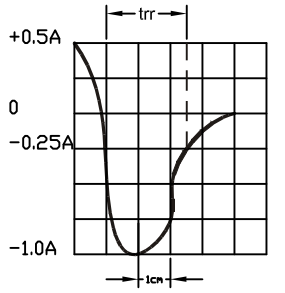


FIG.3-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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



SET TIME BASE FOR
50/10ns/cm

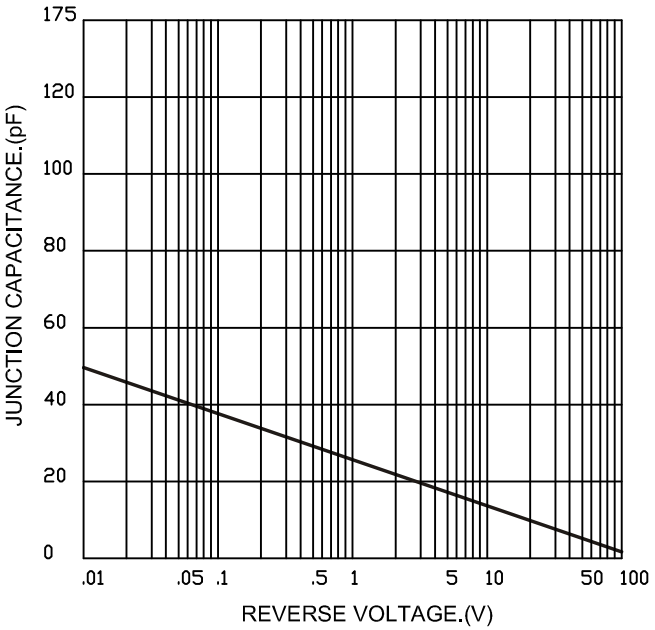



FIG.5-TYPICAL JUNCTION CAPACITANCE