



## HIGH EFFICIENCY GLASS PASSIVATED RECTIFIER

### HER1601C THRU HER1608C

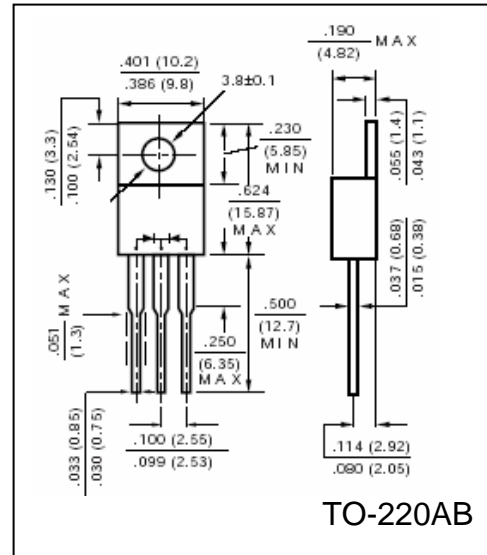
**VOLTAGE RANGE** 50 to 1000 Volts  
**CURRENT** 16.0 Ampere

#### FEATURES

- High speed switching
- Glass passivated chip junction
- Low power loss for high efficiency
- Low leakage
- High surge capacity
- High temperature Soldering guaranteed:  
250 °C/10 seconds, 0.16" (4.06mm) lead length
- Also available with common Anode, add an "A" suffix,  
i.e. HER1601CA, and as a doubler, add a "D" suffix,  
i.e. HER1601CD
- Also available in an isolated package, HERF1601C
- Also available in the single chip version, HER1601

#### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202E  
Method 208C
- Polarity: as marked
- Mounting Position: Any, 5 in-lbs Torque Max
- Weight: 0.08 ounce, 2.24 gram



TO-220AB

#### 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 1601C	HER 1602C	HER 1603C	HER 1604C	HER 1605C	HER 1606C	HER 1607C	HER 1608C	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, At $T_C = 100^\circ C$	$I_{(AV)}$	16								Amps	
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150								Amps	
Maximum Instantaneous Forward Voltage per leg @ 8.0A	$V_F$	1.0		1.30		1.50	1.70			Volts	
Maximum DC Reverse Current at Rated $T_A = 25^\circ C$	$I_R$	10.0								$\mu A$	
DC Blocking Voltage per element $T_A = 125^\circ C$		500									
Maximum Reverse Recovery Time Test conditions $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$	$t_{tr}$	50					75				nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	40								pF	
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	2.5								$^\circ C/W$	
Operating Junction Temperature	$T_J$	(-55 to +150)								$^\circ C$	
Storage Temperature Rang	$T_{STG}$	(-55 to +150)								$^\circ C$	

#### Notes:

1. Unit mounted on heatsink



RATINGS AND CHARACTERISTIC CURVES HER1601C THRU HER1608C

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

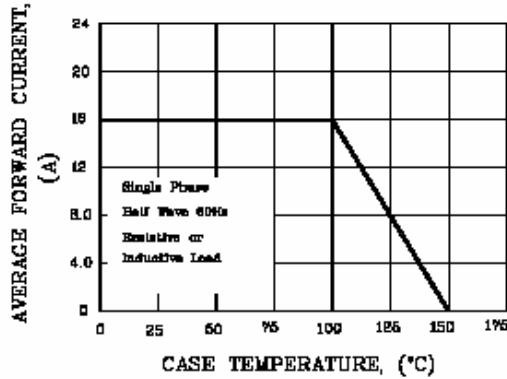


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

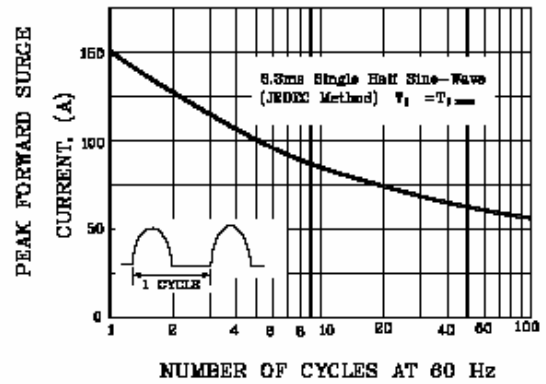


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

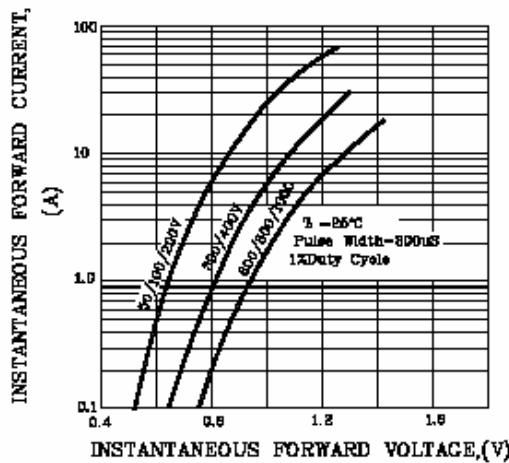


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER LEG

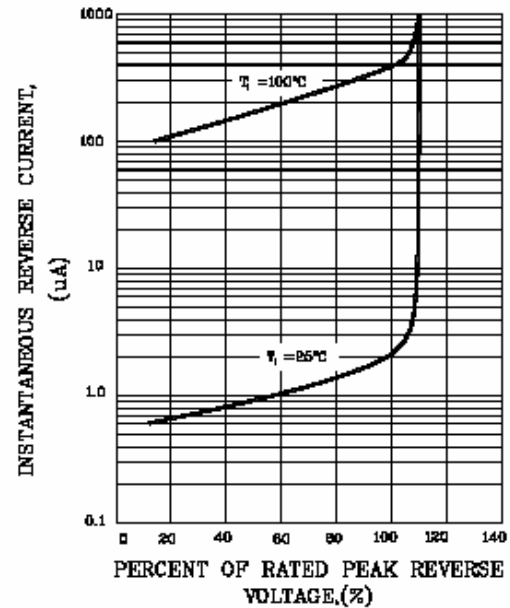


FIG.5-TYPICAL JUNCTION CAPACITANCE PER LEG

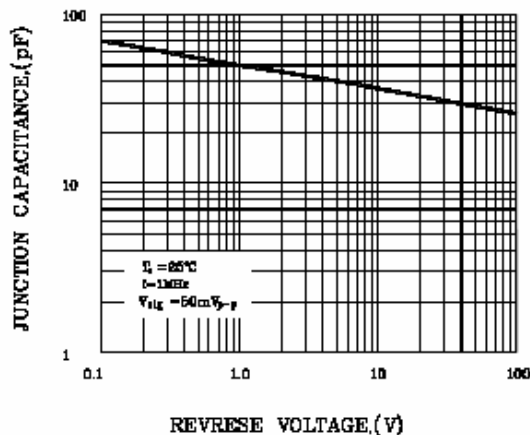
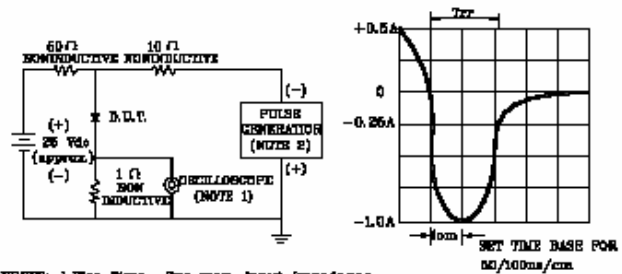


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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