



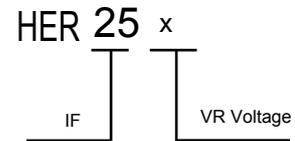
FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

VOLTAGE RANGE
50 to 1000 Volts
CURRENT
2.5 Ampere



LOGO GK

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unieess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| TYPE NUMBER | HER251 | HER252 | HER253 | HER254 | HER255 | HER256 | HER257 | HER258 | UNITS |
|--|-----------|--------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current | 2.5 | | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 70 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 2.5A | 1.0 | | 1.3 | | 1.85 | | | | V |
| Maximum DC Reverse Current Ta=25°C | 5.0 | | | | | | | | μA |
| at Rated DC Blocking Voltage Ta=100°C | 150 | | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | 50 | | | | 70 | | | | nS |
| Typical Junction Capacitance (Note 2) | 35 | | | | | | | | pF |
| Operating and Storage Temperature Range Tj, Tstg | -65— +150 | | | | | | | | °C |

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

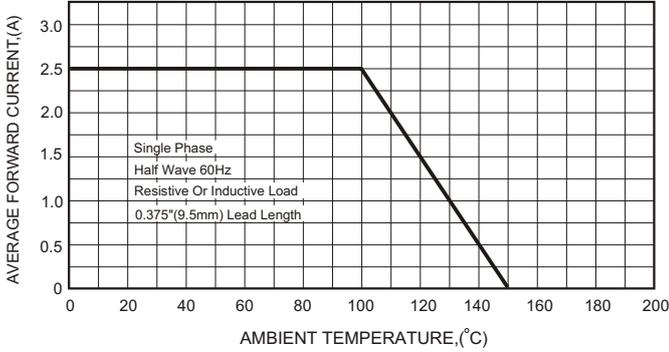


FIG.2-TYPICAL FORWARD CHARACTERISTICS

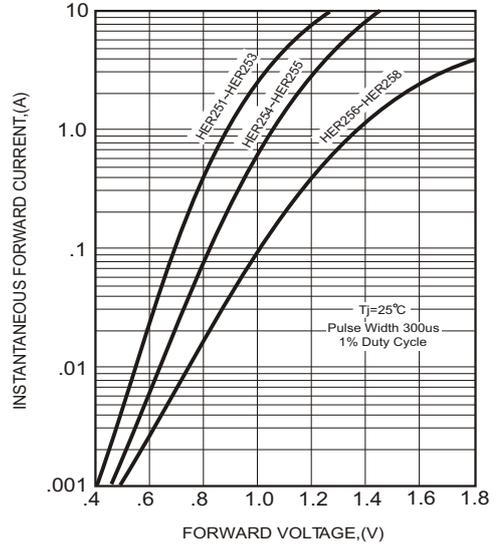
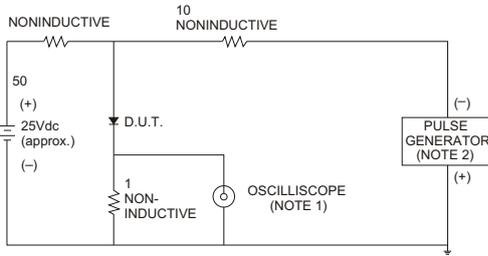


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

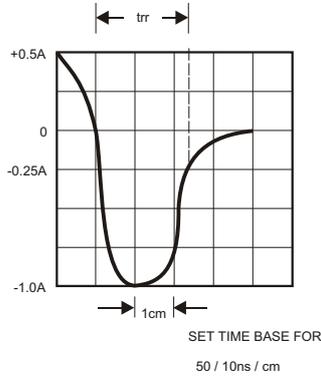


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

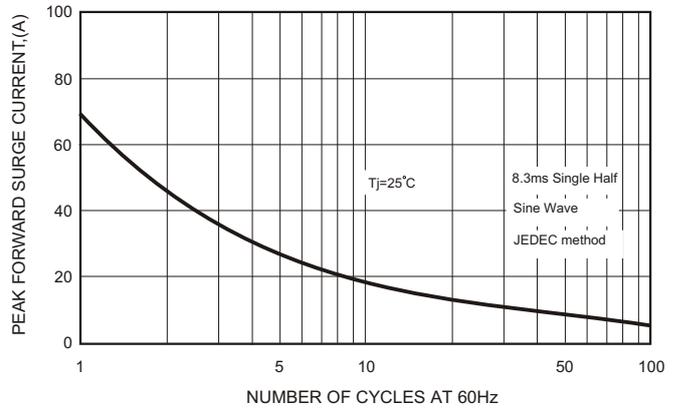


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

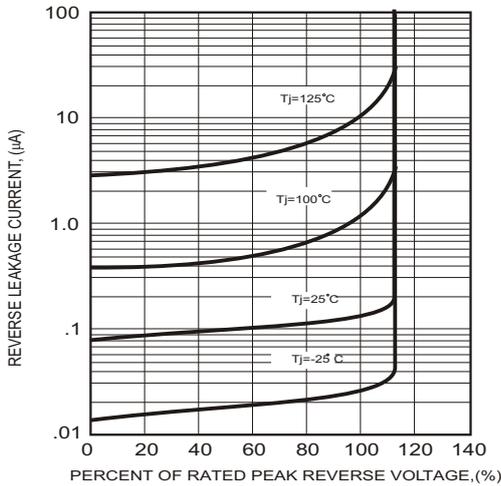
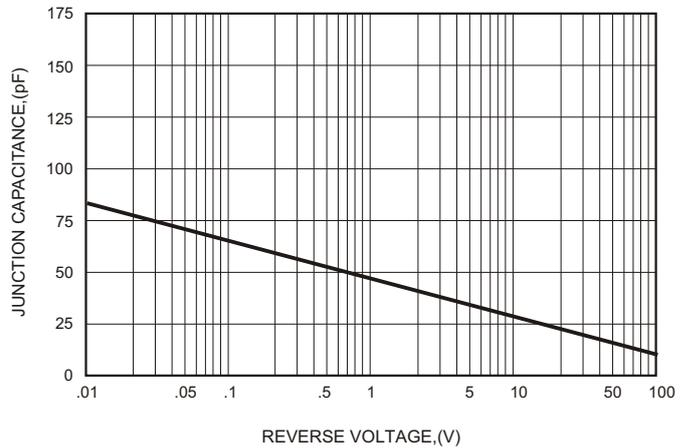


FIG.6-TYPICAL JUNCTION CAPACITANCE



Soldering parameters

| Reflow Condition | | Pb-Free assembly (see as below) |
|---|-----------------------------------|------------------------------------|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150 °C |
| | -Temperature Max($T_{s(max)}$) | +200 °C |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp (T_L) to peak) | | 3 °C/sec. Max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3 °C/sec. Max |
| Reflow | -Temperature(T_L)(Liquid us) | +217 °C |
| | -Temperature(t_L) | 60-150 secs. |
| Peak Temp (T_P) | | +260(+0/-5) °C |
| Time within 5 °C of actual Peak Temp (t_p) | | 30 secs. Max |
| Ramp-down Rate | | 6 °C/sec. Max |
| Time 25 °C to Peak Temp (T_P) | | 8 min. Max |
| Do not exceed | | +260 °C |



Package Dimensions & Suggested Pad Layout

