



High Efficiency Rectifier

Features

- Low power loss, high efficiency
- Low leakage
- High Surge Capacity
- High switching speed
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance



Mechanical Data

| | |
|---------------------------|--|
| Case: | Transfer molded plastic |
| Polarity: | Color band denots cathode end |
| Epoxy: | UL94V-0 rate flame retardant |
| Lead: | Plated axial lead, solderable per MIL-STD-202E Method 208C |
| Mounting Position: | Any |
| Weight: | 0.07 ounce, 2.20 gram |

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol | Description | HER 601 | HER 602 | HER 603 | HER 604 | HER 605 | HER 606 | HER 607 | HER 608 | Unit | Conditions |
|----------------|---|--------------------------|---------|---------|---------|---------|---------|---------|---------|------|--------------|
| VRRM | Max Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V | |
| VRMS | Max RMS Voltage | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V | |
| VDC | Max DC Blocking Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V | |
| I(AV) | Max Average Forward Rectified Current 0.375" (9mm) lead length | 6.0 | | | | | | | | A | TA=50°C |
| IFSM | Peak Forward Surge Current | 200 | | | | 150 | | | | A | JEDEC method |
| TJ,TSTG | Operating and Storage Temperature Range | -55 to +150, -55 to +150 | | | | | | | | °C | |
| Rθ-JA | Typical Thermal Resistance | 20 | | | | | | | | °C/W | Note 2 |

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol | Description | HER 601 | HER 602 | HER 603 | HER 604 | HER 605 | HER 606 | HER 607 | HER 608 | Unit | Conditions | | |
|---------------|---|---------|---------|---------|---------|---------|---------|---------|---------|------|------------|----|--|
| VF | Max Instantaneous Forward Voltage | 1.0 | | 1.3 | | 1.5 | | 1.7 | | V | 5.0A | | |
| IR(AV) | Maximum Full Load Reverse Current, Full Cycle average | 150 | | | | | | | | | | µA | 0.375" (9.5mm) lead length at TL= 55°C |
| IR | Max DC Reverse Current at Rated DC Blocking Voltage | 10 | | | | | | | | | | µA | TA=25°C |
| | | 500 | | | | | | | | | | | TA=125°C |
| TRR | Maximum reverse recovery time | 50 | | | | 70 | | | | nS | Note 1 | | |
| CJ | Typical Junction capacitance | 110 | | | | | | | | | | pF | Measured at 1.0MHz / 4.0V |

Note:

1. Reverse recovery test conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
2. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted

HER601 ~ HER608

RATINGS AND CHARACTERISTIC CURVES HER601 THRU HER608

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

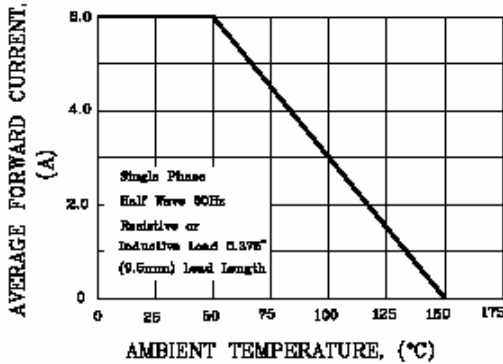


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

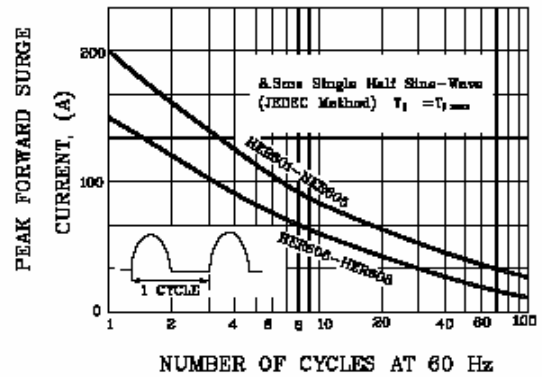


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

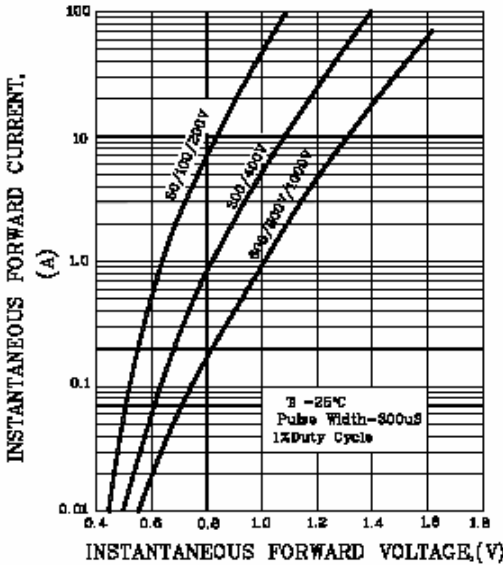


FIG.4-TYPICAL REVERSE CHARACTERISTICS

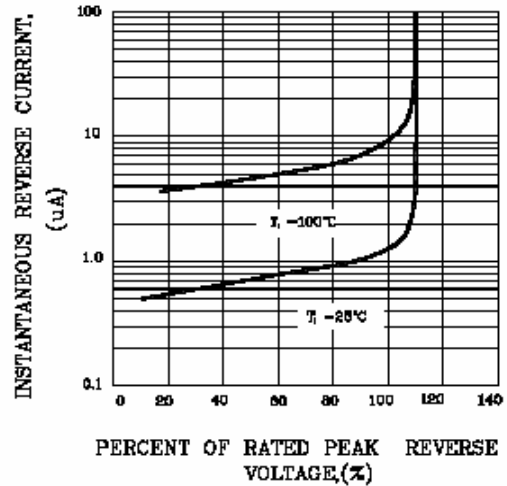


FIG.5-TYPICAL JUNCTION CAPACITANCE

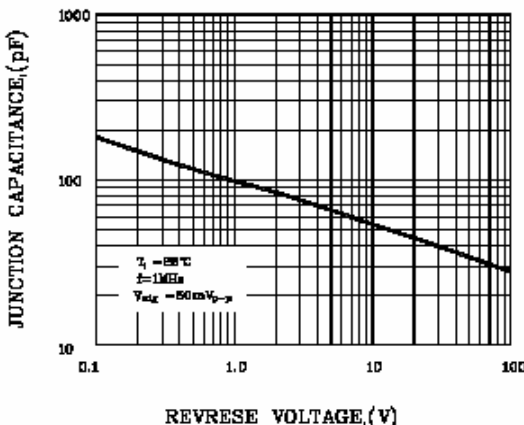
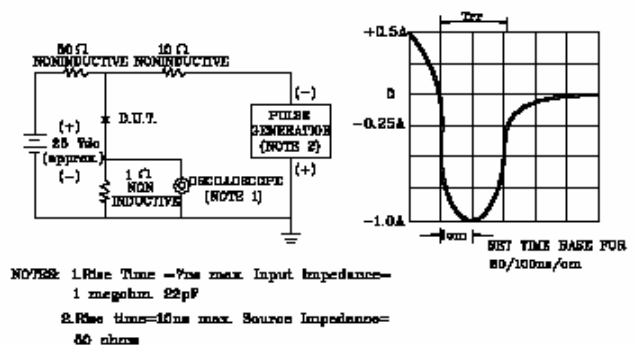
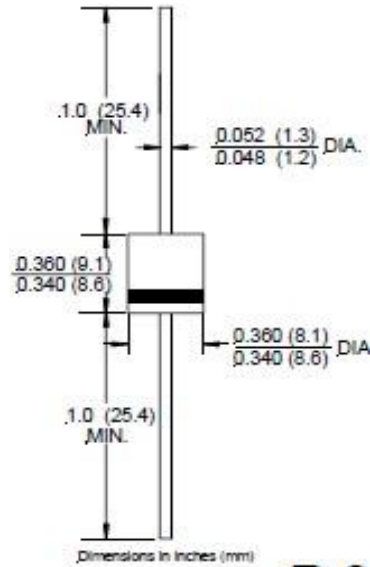


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



Dimensions in inches (mm)



R-6

Contact us:

US HEADQUARTERS

MEI SEMI INC.

2902 Corvin Drive, Santa Clara, CA95051, USA

Tel: 1-408-733-0808 Fax: 1-408-733-2828