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1.5A ULTRA FAST RECOVERY RECTIFIER

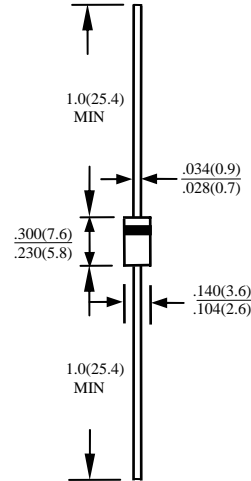
HER151-LFR THRU HER158-LFR

FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- ULTRA FAST RECOVERY TIMES FOR HIGH EFFICIENCY
- LOW FORWARD VOLTAGE, HIGH CURRENT CAPABILITY
- LOW LEAKAGE
- HIGH SURGE CAPABILITY
- HIGH TEMPERATURE SOLDERING GUARANTEED:
260°C 0.375"(9.5mm) LEAD LENGTHS FOR 10 SECONDS AT 5 LBS.(2.3KG) TENSION
- ROHS

MECHANICAL DATA

- CASE: MOLDED PLASTIC, DO15, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: AXIAL LEADS SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE END
- MOUNTING POSITION: ANY
- WEIGHT: 0.4 GRAMS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

| RATINGS | SYMBOL | HER151 | HER152 | HER153 | HER154 | HER155 | HER156 | HER157 | HER158 | UNITS |
|---|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|---------------------------|
| | | -LFR | -LFR | -LFR | -LFR | -LFR | -LFR | -LFR | -LFR | |
| MAXIMUM RECURRENT PEAK REVERSE VOLTAGE | V_{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| MAXIMUM RMS VOLTAGE | V_{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| MAXIMUM DC BLOCKING VOLTAGE | V_{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375" (9.5mm) LEAD LENGTH AT $T_A = -50^\circ\text{C}$ | I_o | 1.5 | | | | | | | | A |
| PEAK FORWARD SURGE CURRENT 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD | I_{FSM} | 50 | | | | | | | | A |
| TYPICAL JUNCTION CAPACITANCE (NOTE 1) | C_j | 30 | | | | 20 | | | | PF |
| TYPICAL THERMAL RESISTANCE (NOTE 2) | $R_{\theta ja}$ | 40 | | | | | | | | $^\circ\text{C}/\text{W}$ |
| STORAGE TEMPERATURE RANGE | T_{STG} | -55 TO + 150 | | | | | | | | $^\circ\text{C}$ |
| OPERATING TEMPERATURE RANGE | T_{OP} | -55 TO + 125 | | | | | | | | $^\circ\text{C}$ |

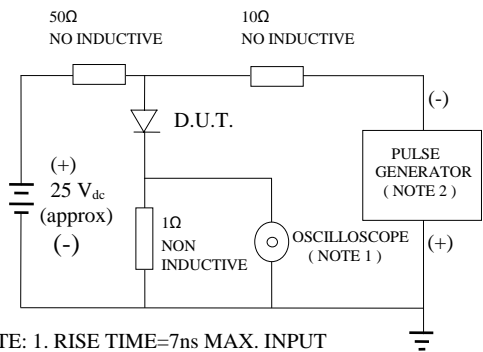
ELECTRICAL CHARACTERISTICS (AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

| CHARACTERISTICS | SYMBOL | HER151 | HER152 | HER153 | HER154 | HER155 | HER156 | HER157 | HER158 | UNITS |
|--|----------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|
| | | -LFR | -LFR | -LFR | -LFR | -LFR | -LFR | -LFR | -LFR | |
| MAXIMUM FORWARD VOLTAGE AT I_o DC | V_F | 1.3 | | | | 1.85 | | | | V |
| MAXIMUM REVERSE CURRENT AT $T_A = 25^\circ$ | I_R | 10 | | | | | | | | μA |
| MAXIMUM REVERSE CURRENT AT $T_A = 100^\circ$ | I_R | 100 | | | | | | | | μA |
| MAXIMUM REVERSE RECOVERY TIME (NOTE 2) | T_{RR} | 50 | | | | 75 | | | | nS |

- NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. BOTH LEADS ATTACHED TO HEAT SINK 20x20x11(mm) COPPER PLATE AT LEAD LENGTH 5mm
 3. REVERSE RECOVERY TEST CONDITIONS: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVE HER151-LFR THRU HER158-LFR

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF
 2. RISE TIME =10ns MAX. SOURCE IMPEDANCE=50 OHMS

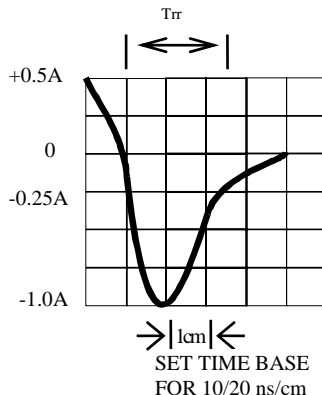


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

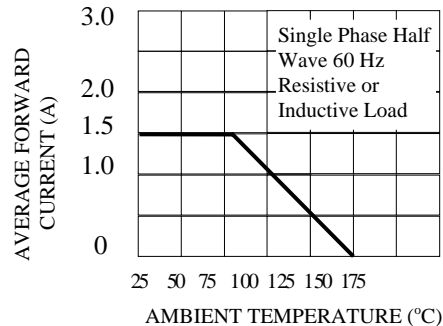


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

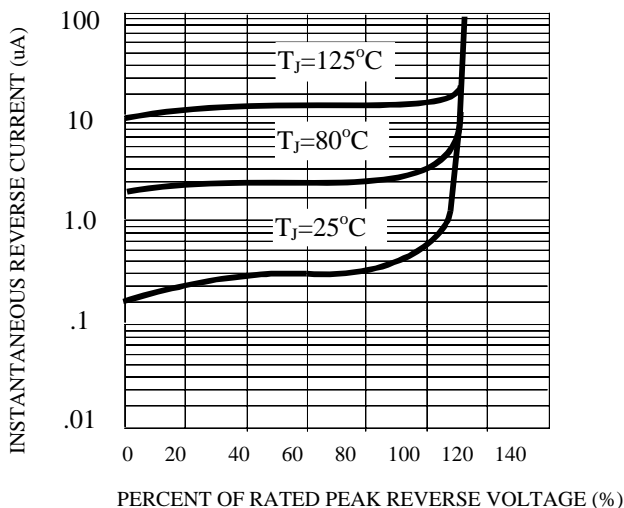


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

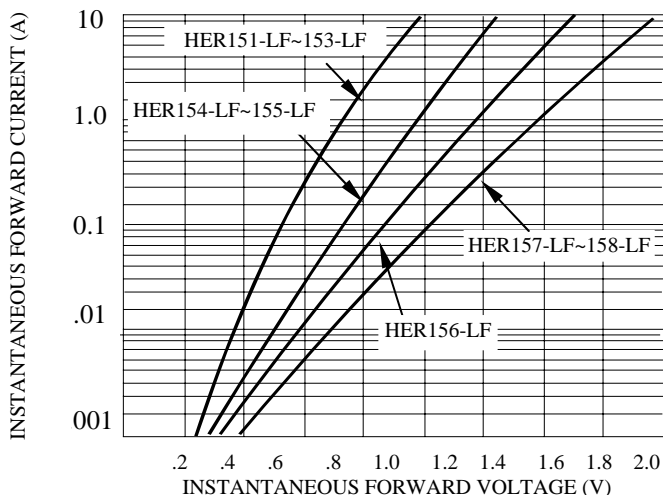


FIG. 5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

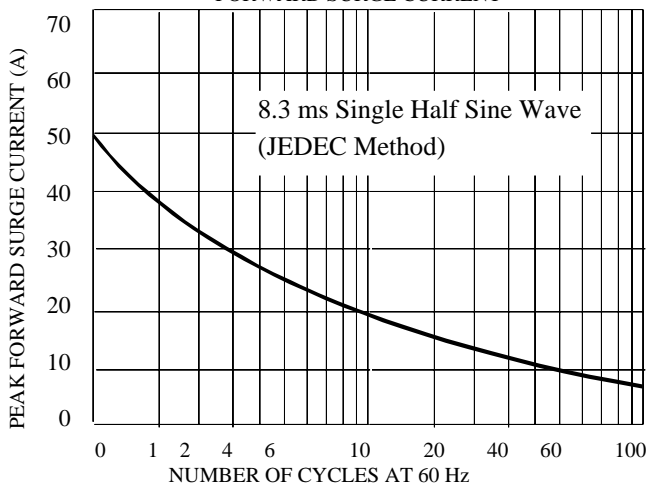


FIG. 6-TYPICAL JUNCTION CAPACITANCE

