



1H1G THRU 1H8G

GLASS PASSIVATED HIGH EFFICIENCY RECTIFIERS

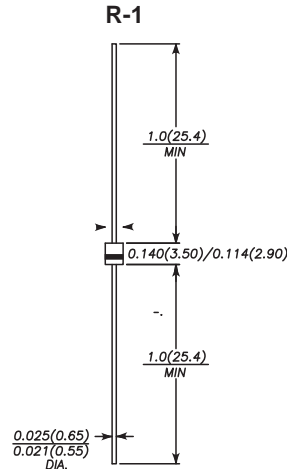
Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

FEATURES

The plastic package carries Underwriters Laboratory
 Flammability Classification 94V-0
 High speed switching for high efficiency
 Low reverse leakage
 High forward surge current capability
 High temperature soldering guaranteed:
 260°C/10 seconds, 0.375" (9.5mm) lead length,
 5 lbs. (2.3kg) tension
 Glass passivated junction

MECHANICAL DATA

Case: R-1 molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750,
 Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.007 ounce, 0.20 grams



Dimensions in inches and (millimeters)

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 current derate by 20%.

| | SYMBOLS | 1H1G | 1H2G | 1H3G | 1H4G | 1H5G | 1H6G | 1H7G | 1H8G | UNITS |
|---|-----------------|--------------|------|------|------|------|------|------|------|--------------------|
| Maximum repetitive 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 $T_A=25^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 30.0 | | | | | | | | A |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.0 | | 1.3 | | 1.70 | | | V | |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$ | I_R | 5.0 100.0 | | | | | | | | μA |
| Maximum reverse recovery time (NOTE 1) | t_{rr} | 50 | | | | | 75 | | | ns |
| Typical junction capacitance (NOTE 2) | C_J | 15.0 | | | | | 12.0 | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 50.0 | | | | | | | | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | | $^\circ\text{C}$ |

Note: 1. Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

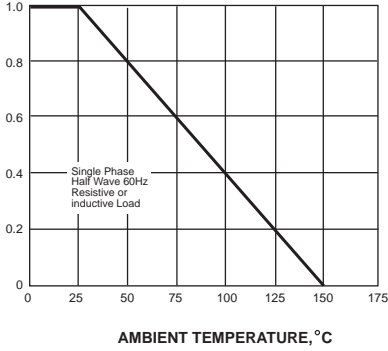


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RATINGS AND CHARACTERISTIC CURVES 1H1G THRU 1H8G

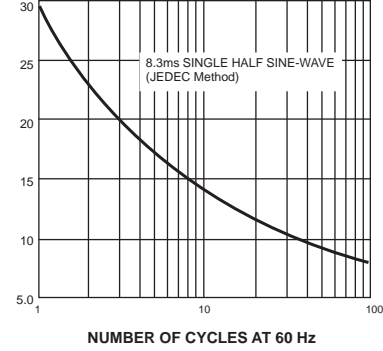
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



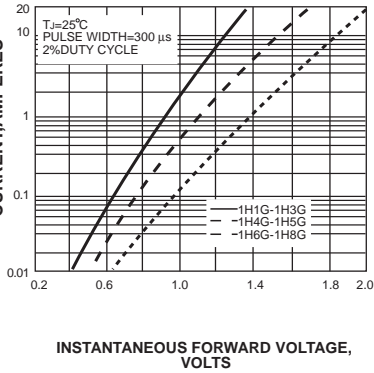
PEAK FORWARD SURGE CURRENT,
AMPERES

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



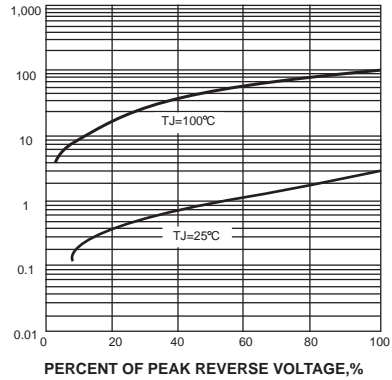
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



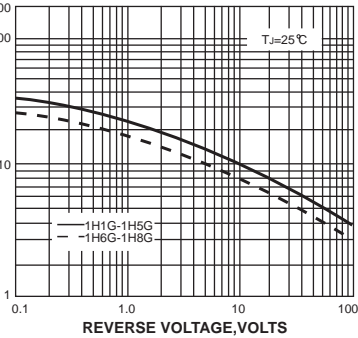
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



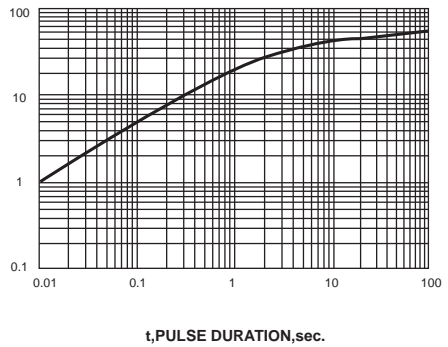
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t,PULSE DURATION,sec.