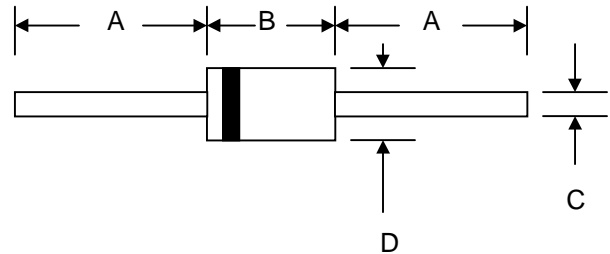


Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

Mechanical Data

- Case: R-1, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.181 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



| R-1 | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 20.0 | — |
| B | 2.90 | 3.50 |
| C | 0.53 | 0.64 |
| D | 2.20 | 2.60 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

| Characteristic | Symbol | 1H1 | 1H2 | 1H3 | 1H4 | 1H5 | 1H6 | 1H7 | 1H8 | Unit | |
|--|--------------|-----------------------------|-----|-----|-----|-----|-----|-----|------|------------------|----|
| Peak Repetitive Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V | |
| Working Peak Reverse Voltage | V_{RWM} | | | | | | | | | | |
| DC Blocking Voltage | V_R | | | | | | | | | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V | |
| Average Rectified Output Current (Note 1) | I_O | 1.0 | | | | | | | | A | |
| | | @ $T_A = 55^\circ\text{C}$ | | | | | | | | | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 30 | | | | | | | | A | |
| Forward Voltage | V_{FM} | 1.0 | | | 1.3 | | 1.7 | | | V | |
| | | @ $I_F = 1.0\text{A}$ | | | | | | | | | |
| Peak Reverse Current | I_{RM} | 5.0 | | | | | | | | μA | |
| At Rated DC Blocking Voltage | | 100 | | | | | | | | | |
| | | @ $T_A = 25^\circ\text{C}$ | | | | | | | | | |
| | | @ $T_A = 100^\circ\text{C}$ | | | | | | | | | |
| Reverse Recovery Time (Note 2) | t_{rr} | 50 | | | | | 75 | | | | nS |
| Typical Junction Capacitance (Note 3) | C_j | 20 | | | | | 15 | | | | pF |
| Operating Temperature Range | T_j | -65 to +125 | | | | | | | | $^\circ\text{C}$ | |
| Storage Temperature Range | T_{STG} | -65 to +150 | | | | | | | | $^\circ\text{C}$ | |

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
 2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$. See figure 5.
 3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

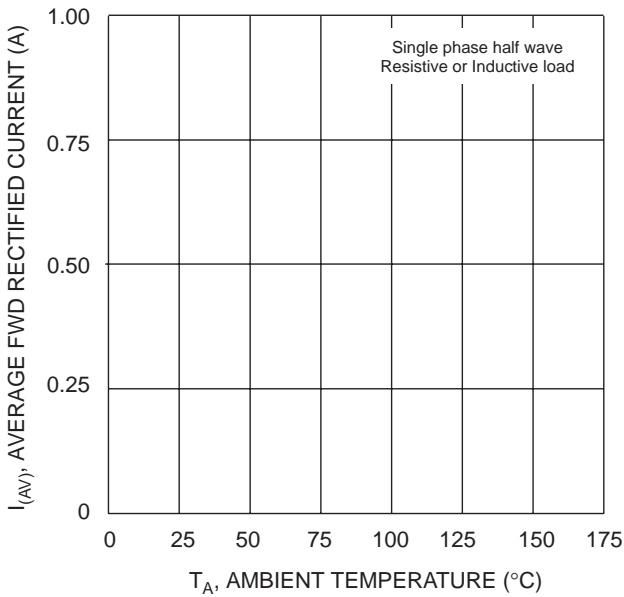


Fig. 1 Forward Current Derating Curve

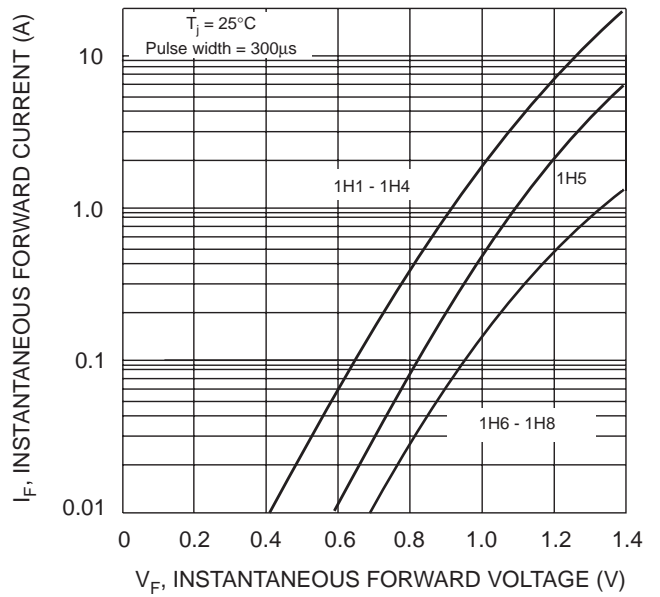


Fig. 2 Typical Forward Characteristics

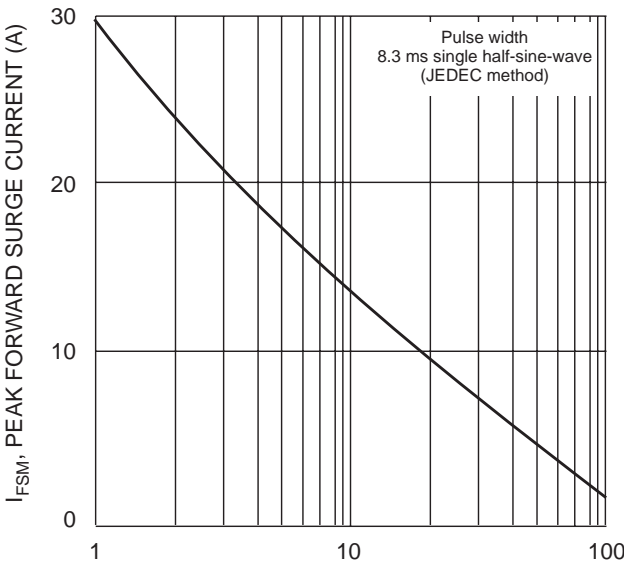


Fig. 3 Peak Forward Surge Current

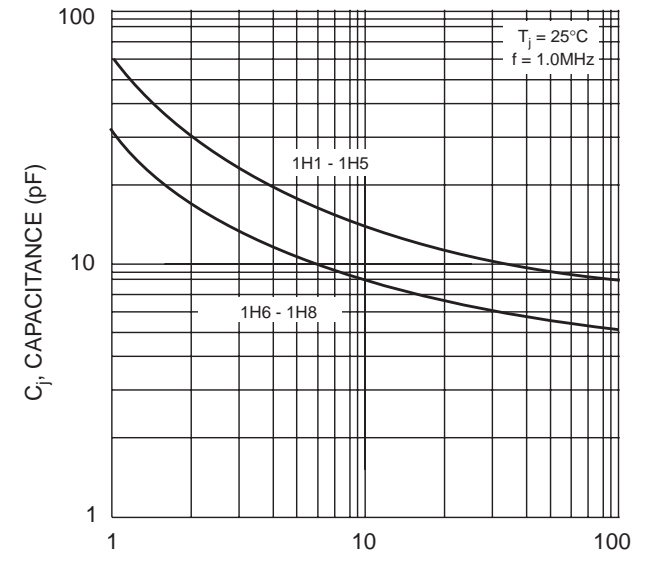
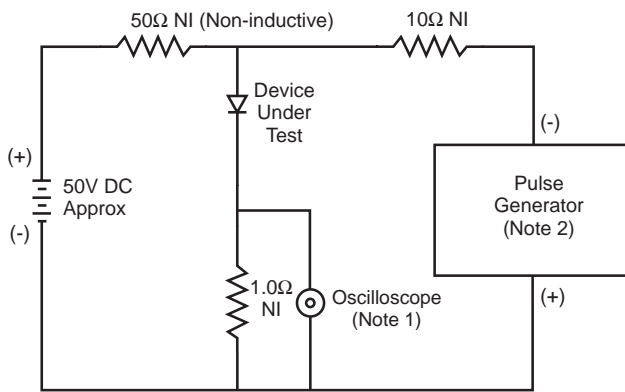
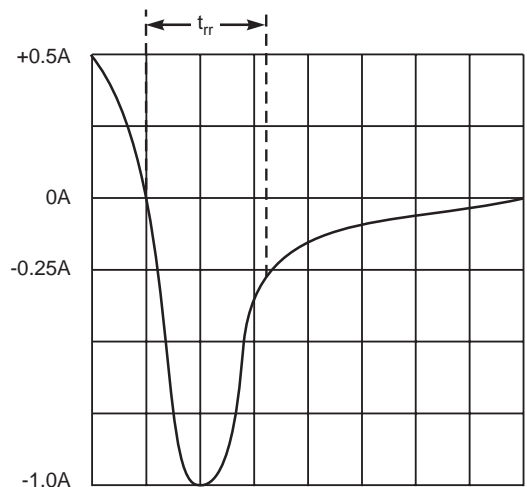


Fig. 4 Typical Junction Capacitance



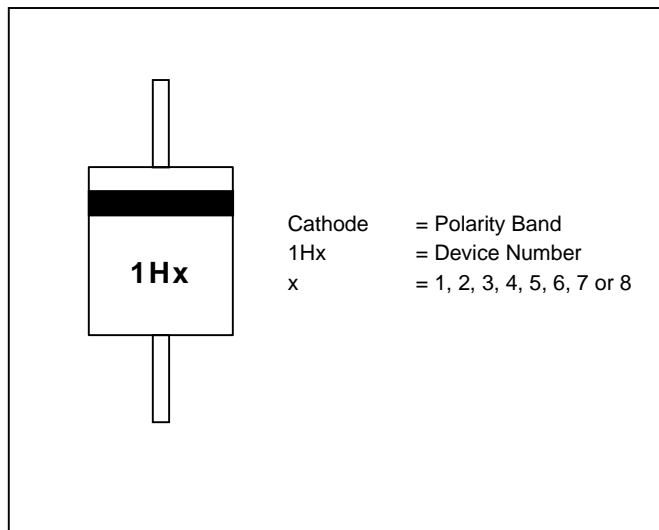
- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



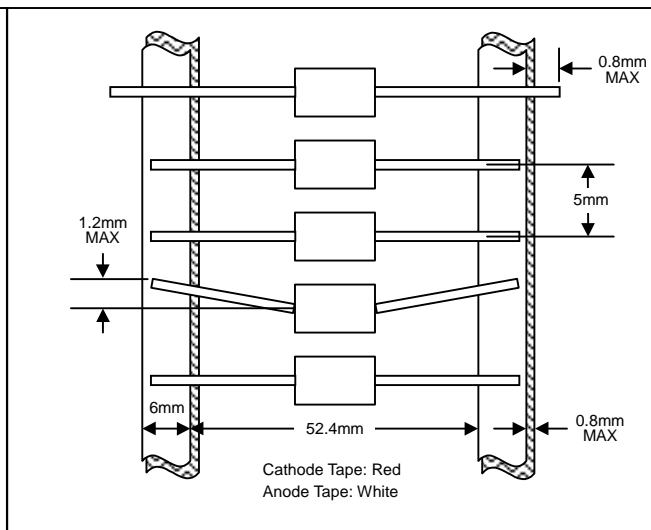
Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

MARKING INFORMATION



TAPING SPECIFICATIONS



PACKAGING INFORMATION

TAPE & REEL

330mm
 Product ID Label
 80±5mm

TAPE & BOX

150mm
 Product ID Label
 Inspection Hole (both ends)
 255mm
 75mm

BULK

20mm
 198mm
 84mm

| Packaging | Reel Diameter / Box Size (mm) | Quantity (PCS) | Carton Size (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|------------------------|-------------------------------|----------------|------------------|----------------|---------------------------|
| TAPE & REEL | 330 | 5,000 | 370 x 370 x 420 | 25,000 | 9.0 |
| TAPE & BOX | 255 x 75 x 150 | 5,000 | 400 x 273 x 415 | 50,000 | 20.0 |
| BULK | 198 x 84 x 20 | 1,000 | 459 x 214 x 256 | 50,000 | 18.5 |

Note: 1. Paper reel, white or gray color. Core material: plastic or metal.
 2. Components are packed in accordance with EIA standard RS-296-E.

ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|---------------|--------------|-------------------|
| 1H1-T3 | R-1 | 5000/Tape & Reel |
| 1H1-TB | R-1 | 5000/Tape & Box |
| 1H1 | R-1 | 1000 Units/Box |
| 1H2-T3 | R-1 | 5000/Tape & Reel |
| 1H2-TB | R-1 | 5000/Tape & Box |
| 1H2 | R-1 | 1000 Units/Box |
| 1H3-T3 | R-1 | 5000/Tape & Reel |
| 1H3-TB | R-1 | 5000/Tape & Box |
| 1H3 | R-1 | 1000 Units/Box |
| 1H4-T3 | R-1 | 5000/Tape & Reel |
| 1H4-TB | R-1 | 5000/Tape & Box |
| 1H4 | R-1 | 1000 Units/Box |
| 1H5-T3 | R-1 | 5000/Tape & Reel |
| 1H5-TB | R-1 | 5000/Tape & Box |
| 1H5 | R-1 | 1000 Units/Box |
| 1H6-T3 | R-1 | 5000/Tape & Reel |
| 1H6-TB | R-1 | 5000/Tape & Box |
| 1H6 | R-1 | 1000 Units/Box |
| 1H7-T3 | R-1 | 5000/Tape & Reel |
| 1H7-TB | R-1 | 5000/Tape & Box |
| 1H7 | R-1 | 1000 Units/Box |
| 1H8-T3 | R-1 | 5000/Tape & Reel |
| 1H8-TB | R-1 | 5000/Tape & Box |
| 1H8 | R-1 | 1000 Units/Box |

1. Products listed in **bold** are WTE **Preferred** devices.
2. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
3. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, 1H1-TB-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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