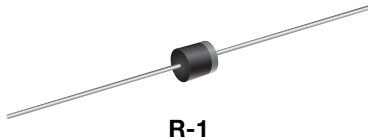


## Photoflash Fast Plastic Rectifier



### FEATURES

- Fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

For use in high voltage rectification of photoflash application.

### MECHANICAL DATA

**Case:** R-1

Molding compound meets UL 94 V-0 flammability rating  
Base P/N-E3 - RoHS-compliant, commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** Color band denotes cathode end

| PRIMARY CHARACTERISTICS |            |
|-------------------------|------------|
| $I_{F(AV)}$             | 0.5 A      |
| $V_{RRM}$               | 1600 V     |
| $I_{FSM}$               | 20 A       |
| $V_F$                   | 1.5 V      |
| $t_{rr}$                | 300 ns     |
| $T_J$ max.              | 175 °C     |
| Package                 | R-1        |
| Diode variation         | Single die |

| MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)  |                |               |         |
|--|----------------|---------------|---------|
| PARAMETER  | SYMBOL         | VALUE         | UNIT    |
| Maximum repetitive peak reverse voltage  | $V_{RRM}$      | 1600          | V       |
| Maximum RMS voltage  | $V_{RMS}$      | 1120          | V       |
| Maximum DC blocking voltage  | $V_{DC}$       | 1600          | V       |
| Maximum average forward rectified current<br>0.375" (9.5 mm) lead length at $T_A = 55$ °C              | $I_{F(AV)}$    | 0.5           | A       |
| Peak forward surge current 8.3 ms single half sine-wave<br>superimposed on rated load                  | $I_{FSM}$      | 20            | A       |
| Maximum full load reverse current, full cycle average,<br>0.375" (9.5 mm) lead length at $T_L = 55$ °C | $I_{R(AV)}$    | 100           | $\mu$ A |
| Operating junction and storage temperature range   | $T_J, T_{STG}$ | - 65 to + 175 | °C      |

| ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted) |  |          |       |         |
|--|--|----------|-------|---------|
| PARAMETER  | TEST CONDITIONS                                    | SYMBOL   | VALUE | UNIT    |
| Maximum instantaneous forward voltage drop                         | 0.5 A  | $V_F$    | 1.5   | V       |
| Maximum DC reverse current at rated DC blocking voltage            | $T_A = 25$ °C                                      | $I_R$    | 5.0   | $\mu$ A |
| Maximum reverse recovery time                                      | $I_F = 0.5$ A, $I_R = 1.0$ A,<br>$I_{rr} = 0.25$ A | $t_{rr}$ | 300   | ns      |
| Typical junction capacitance                                       | 4.0 V, 1 MHz                                       | $C_J$    | 10    | pF      |



| ORDERING INFORMATION (Example) |                 |                        |               |                                  |
|--------------------------------|-----------------|------------------------|---------------|----------------------------------|
| PREFERRED P/N                  | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE                    |
| GHR16-E3/54                    | 0.2             | 54                     | 5500          | 13" diameter paper tape and reel |
| GHR16-E3/73                    | 0.2             | 73                     | 3000          | Ammo pack packaging              |

**RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)

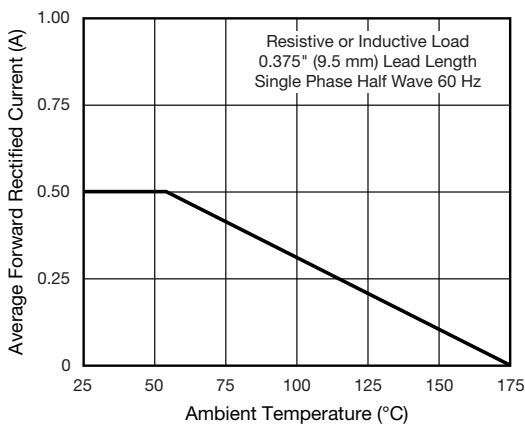


Fig. 1 - Maximum Forward Current Derating Curve

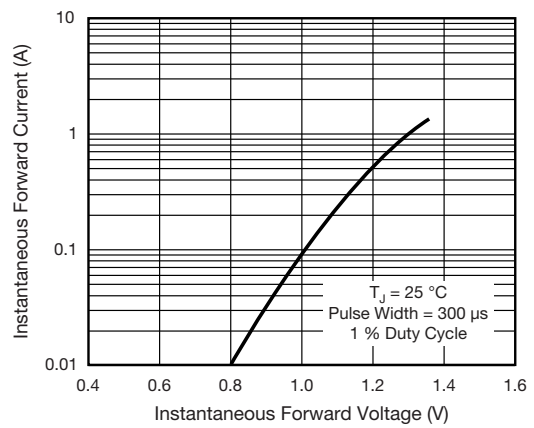


Fig. 3 - Typical Instantaneous Forward Characteristics

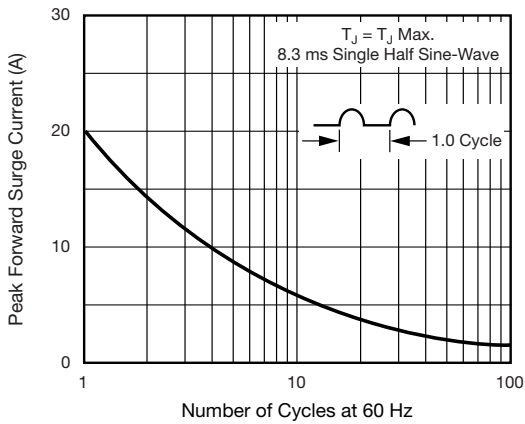


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

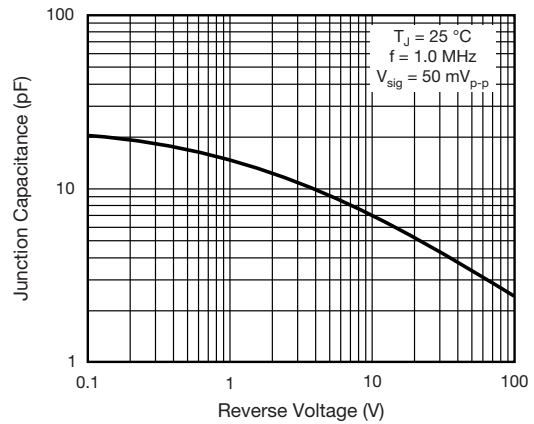
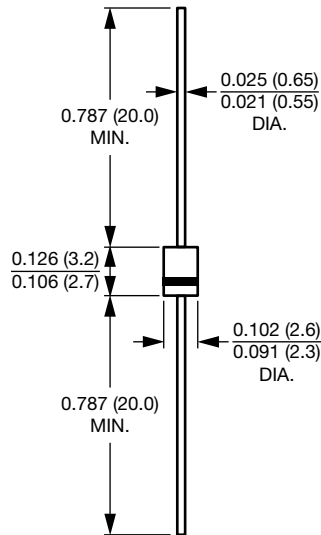


Fig. 4 - Typical Junction Capacitance



**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**Case Style R-1**





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