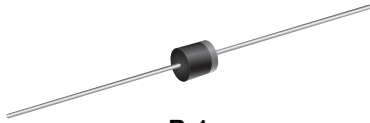


## Photoflash Fast Plastic Rectifier


**R-1**

### 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 ( $T_A = 25\text{ °C}$ 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 0.375" (9.5 mm) lead length at $T_A = 55\text{ °C}$	$I_{F(AV)}$	0.5	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	20	A
Maximum full load reverse current, full cycle average, 0.375" (9.5 mm) lead length at $T_L = 55\text{ °C}$	$I_{R(AV)}$	100	$\mu\text{A}$
Operating junction and storage temperature range	$T_J, T_{STG}$	- 65 to + 175	°C

ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ °C}$ 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	$T_A = 25\text{ °C}$	$I_R$	5.0	$\mu\text{A}$
Maximum reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$	$t_{rr}$	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**

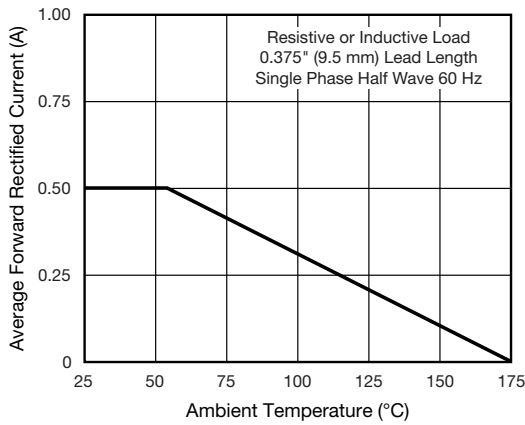
 (T<sub>A</sub> = 25 °C unless otherwise noted)


Fig. 1 - Maximum Forward Current Derating Curve

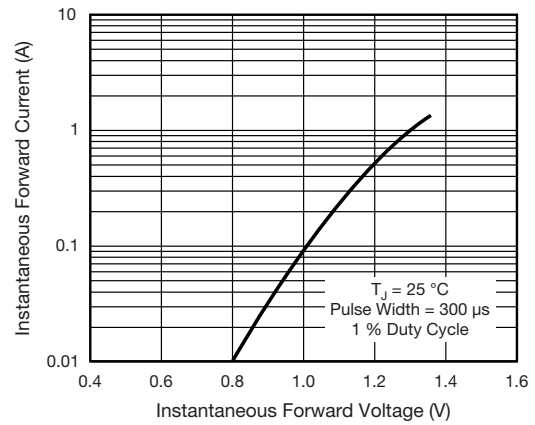


Fig. 3 - Typical Instantaneous Forward Characteristics

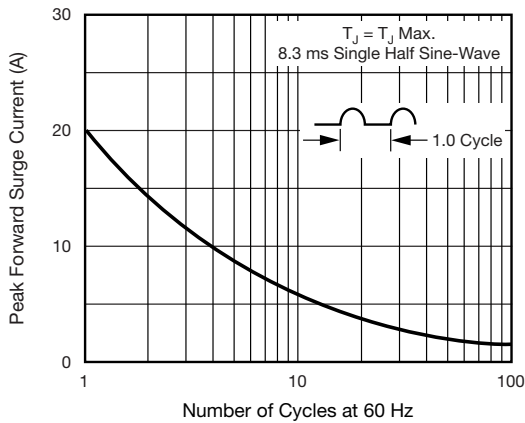


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

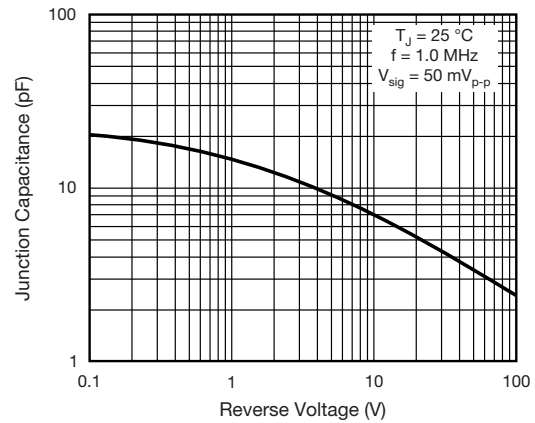
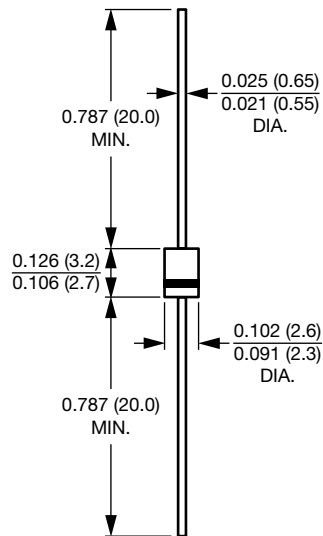


Fig. 4 - Typical Junction Capacitance



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

**Case Style R-1**





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