

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?999912


RoHS
COMPLIANT

TYPICAL APPLICATIONS

For use in high voltage rectification of photoflash application.

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

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

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 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 superimposed on rated load	I_{FSM}	20	A
Maximum full load reverse current, full cycle average, 0.375" (9.5 mm) lead length at $T_L = 55$ °C	$I_{R(AV)}$	100	μA
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	μA
Maximum reverse recovery time	$I_F = 0.5$ A, $I_R = 1.0$ A, $I_{rr} = 0.25$ 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

($T_A = 25^\circ\text{C}$ unless otherwise noted)

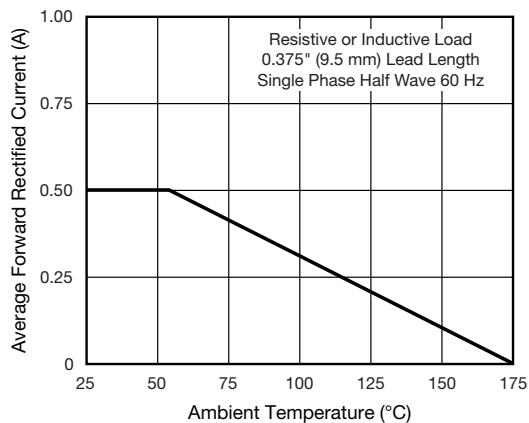


Fig. 1 - Maximum Forward Current Derating Curve

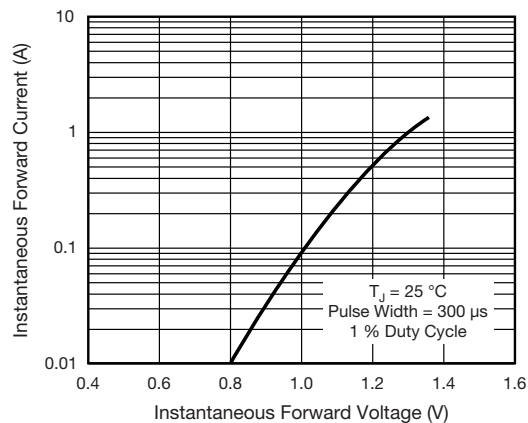


Fig. 3 - Typical Instantaneous Forward Characteristics

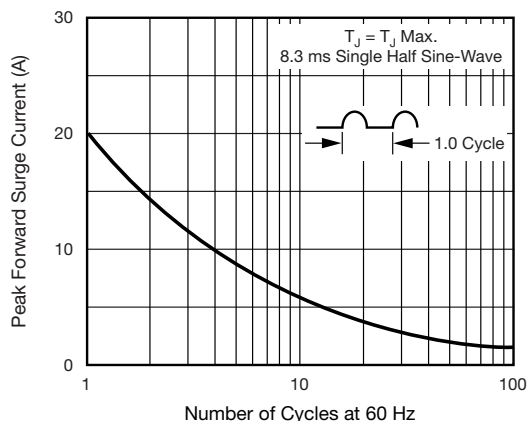


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

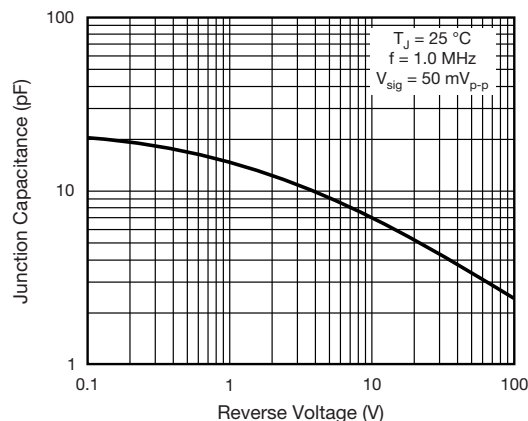
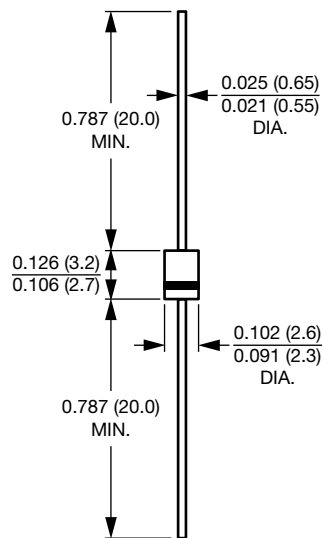


Fig. 4 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style R-1




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