Vishay General Semiconductor

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 RoHS
- Material categorization: For definitions of COMPLIANT compliance please see www.vishay.com/doc?99912

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

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 $T_L = 55 \ ^\circ C$	I _{R(AV)} 100 H		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	μΑ	
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		CJ	10	pF	



PRIMARY CHARACTERISTICS					
I _{F(AV)}	0.5 A				
V _{RRM}	IRM 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				

Revision: 24-Jul-13

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1







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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 °C unless otherwise noted)

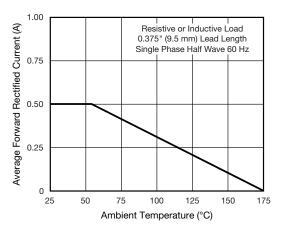


Fig. 1 - Maximum Forward Current Derating Curve

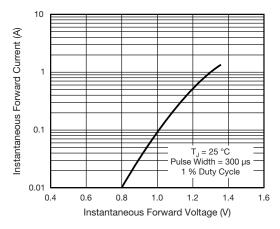


Fig. 3 - Typical Instantaneous Forward Characteristics

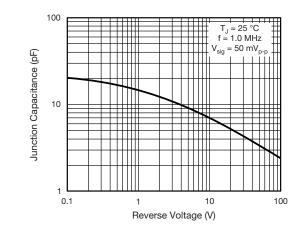


Fig. 4 - Typical Junction Capacitance

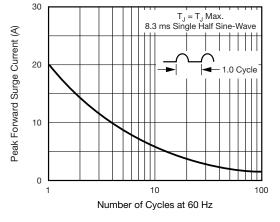


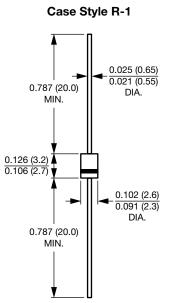
Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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