

# **Glass Passivated Super Fast Rectifiers**

### **FEATURES**

- Glass passivated chip junction
- High efficiency, Low VF
- High current capability
- High surge current capability
- Low power loss
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



Case: DO-204AC (DO-15)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - green compound (halogen-free)

Base P/N with prefix "H" on packing code - AEC-Q101 qualified **Terminal:** Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

with prefix "H" on packing code meet JESD 201 class 2 whisker test

Weight: 0.4g (approximately)



DO-204AC	(DO-15)
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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)										
PARAMETER	SYMBOL	SF	SF	SF	SF	SF	SF	SF	SF	UNIT
PARAIVIETER	STIVIBOL	21G	22G	23G	24G	25G	26G	27G	28G	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	2 A					Α			
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50 A					А			
Maximum instantaneous forward voltage (Note 1) @ 2 A	V <sub>F</sub>	0.95 1.3 1.7				.7	V			
Maximum reverse current @ rated VR $T_J$ =25 $^{\circ}$ C $T_J$ =125 $^{\circ}$ C	I <sub>R</sub>	5 100					μΑ			
Maximum reverse recovery time (Note 2)	Trr	35 n:					ns			
Typical junction capacitance (Note 3)	Cj	40 20				pF				
Typical thermal resistance	$R_{ heta JC}$	16							°C/W	
Typical thefinal resistance	$R_{ hetaJA}$	65								
Operating junction temperature range	T <sub>J</sub>	- 55 to +150 °C					οС			
Storage temperature range	T <sub>STG</sub>	- 55 to +150 °C				оС				

Note 1: Pulse test with PW=300 µs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

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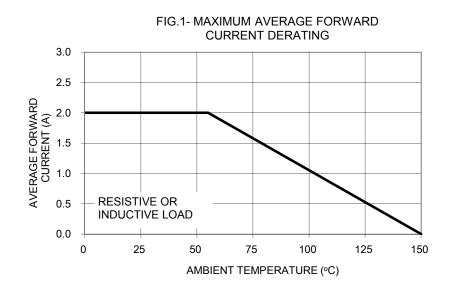
ORDERING INFORMATION							
PART NO.	AEC-Q101	PACKING CODE	GREEN COMPOUND PACKAGE		PACKING		
	QUALIFIED		CODE				
0500		A0		DO-15	1,500 / Ammo box		
SF2xG (Note 1)	Prefix "H"	R0	Suffix "G"	DO-15	3,500 / 13" Paper reel		
(Note 1)		В0	]	DO-15	1,000 / Bulk packing		

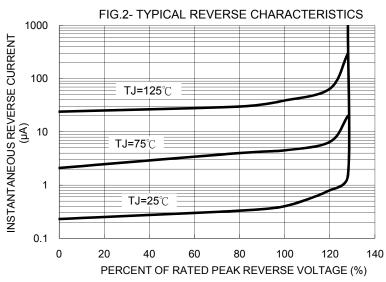
Note 1: "x" defines voltage from 50V (SF21G) to 600V (SF28G)

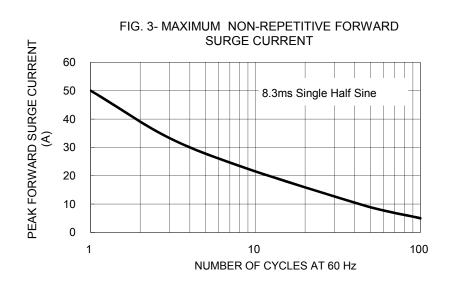
EXAMPLE								
PREFERRED P/N	PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION			
SF21G A0	SF21G		A0					
SF21G A0G	SF21G		A0	G	Green compound			
SF21GHA0	SF21G	Н	A0		AEC-Q101 qualified			

#### **RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)







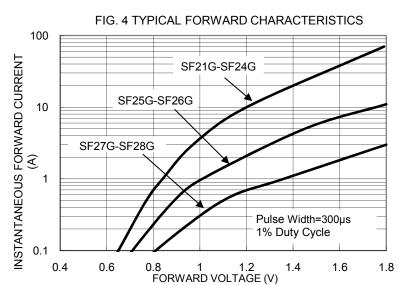
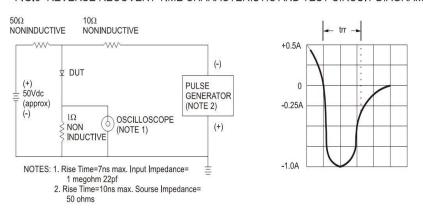


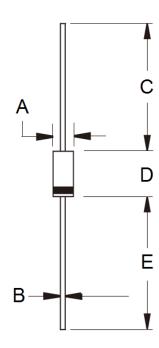


FIG. 4- TYPICAL JUNCTION CAPACITANCE 150 JUNCTION CAPACITANCE (pF) f=1.0MHz Vsig=50mVp-p 125 100 75 SF21G-SF24G 50 25 SF25G-SF28G 0 100 1000 0.1 10 REVERSE VOLTAGE (V)

### FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



### **PACKAGE OUTLINE DIMENSIONS**



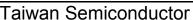
DIM.	Unit	(mm)	Unit (inch)			
DIIVI.	Min	Max	Min	Max		
Α	2.60	3.60	0.102	0.142		
В	0.70	0.90	0.028	0.035		
С	25.40	-	1.000	-		
D	5.80	7.60	0.228	0.299		
Е	25.40	-	1.000	1		

## **MARKING DIAGRAM**



P/N = Specific Device Code G = Green Compound YWW = Date Code

F = Factory Code





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