

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



MECHANICAL DATA

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)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)										
PARAMETER	SYMBOL	SF 21G	SF 22G	SF 23G	SF 24G	SF 25G	SF 26G	SF 27G	SF 28G	UNIT
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 _{F(AV)}	2								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	50								A
Maximum instantaneous forward voltage (Note 1) @ 2 A	V _F	0.95				1.3		1.7		V
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	5 100								μA
Maximum reverse recovery time (Note 2)	T _{rr}	35								ns
Typical junction capacitance (Note 3)	C _j	40				20				pF
Typical thermal resistance	R _{θJC} R _{θJA}	16 65								°C/W
Operating junction temperature range	T _J	- 55 to +150								°C
Storage temperature range	T _{STG}	- 55 to +150								°C

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

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

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

ORDERING INFORMATION					
PART NO.	AEC-Q101 QUALIFIED	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
SF2xG (Note 1)	Prefix "H"	A0	Suffix "G"	DO-15	1,500 / Ammo box
		R0		DO-15	3,500 / 13" Paper reel
		B0		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	H	A0		AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

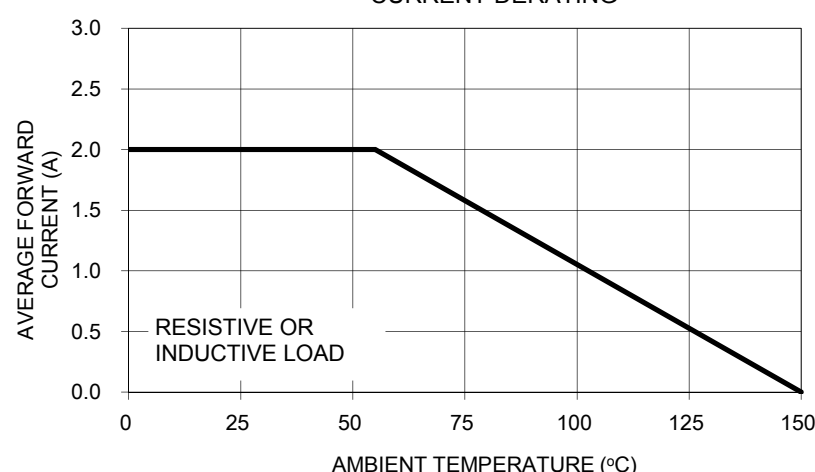


FIG.2- TYPICAL REVERSE CHARACTERISTICS

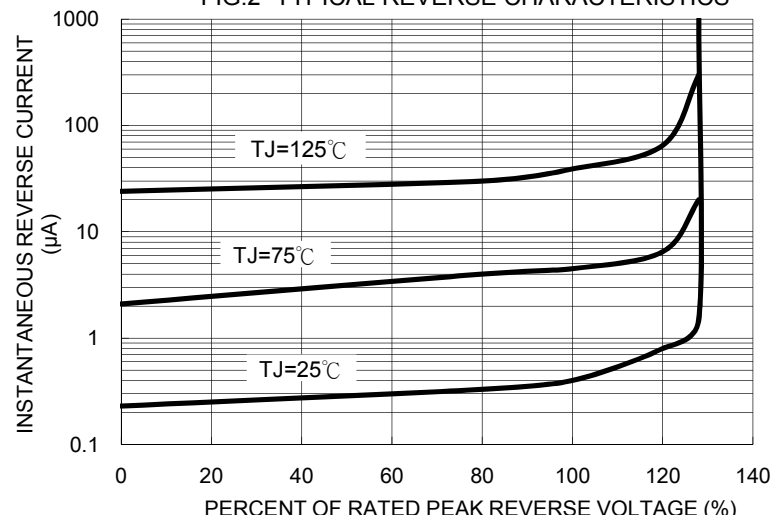


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

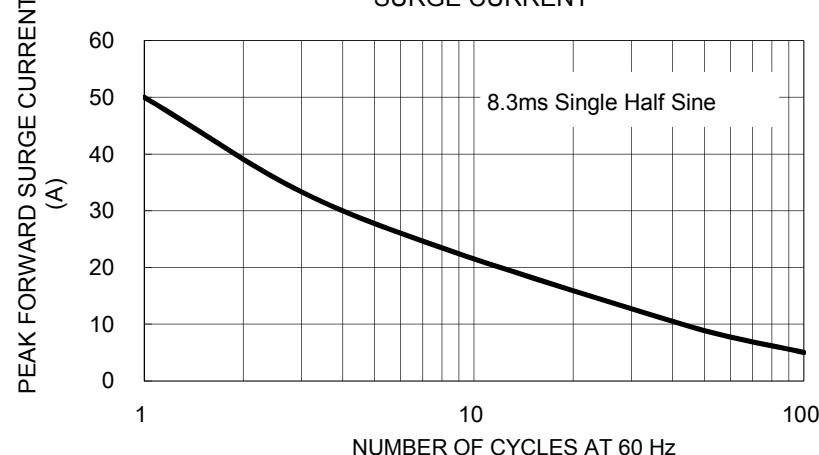


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

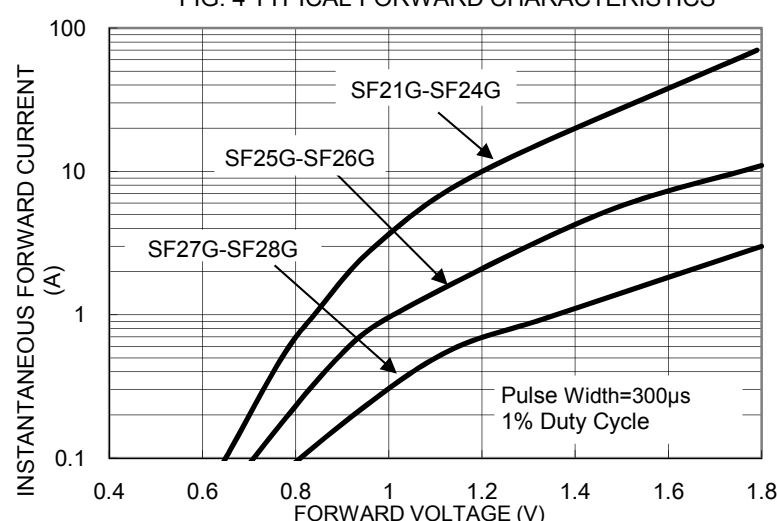


FIG. 4- TYPICAL JUNCTION CAPACITANCE

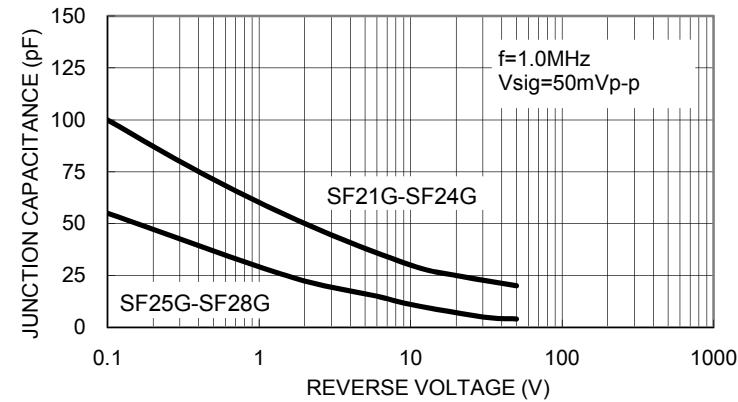
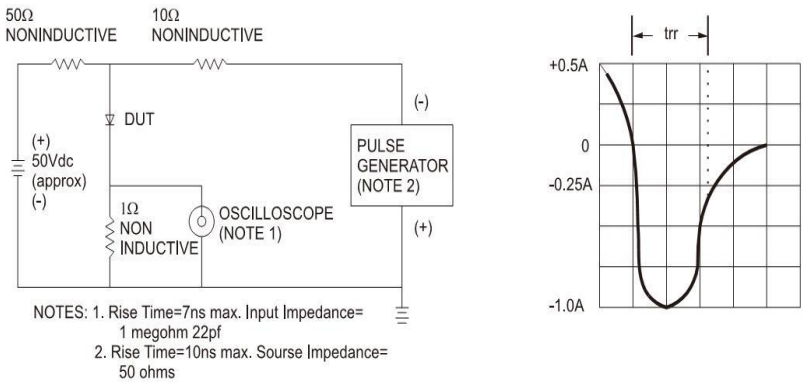
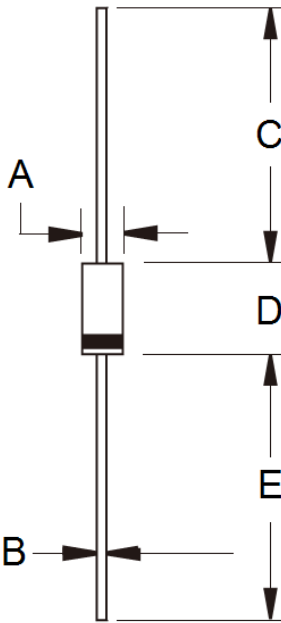


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.60	3.60	0.102	0.142
B	0.70	0.90	0.028	0.035
C	25.40	-	1.000	-
D	5.80	7.60	0.228	0.299
E	25.40	-	1.000	-

MARKING DIAGRAM



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

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