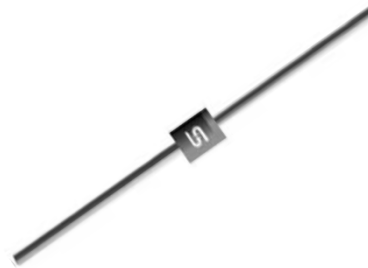


Super Fast Rectifiers

FEATURES

- High efficiency, low VF
- High current capability
- High reliability
- 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: A-405

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Weight: 0.2g (approximately)

A-405

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)										
PARAMETER	SYMBOL	SF 11S	SF 12S	SF 13S	SF 14S	SF 15S	SF 16S	SF 17S	SF 18S	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)}	1								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30								A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V _F	0.95				1.3		1.7		V
Maximum reverse current @ rated VR T _J =25 °C T _J =100 °C	I _R	5 100								μA
Maximum reverse recovery time (Note 2)	T _{rr}	35								ns
Typical junction capacitance (Note 3)	C _j	30				15				pF
Typical thermal resistance	R _{θJA}	100								°C/W
Operating junction temperature range	T _J	- 55 to +125								°C
Storage temperature range	T _{STG}	- 55 to +150								°C

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

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

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

ORDERING INFORMATION				
PART NO.	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING
SF1xS (Note 1)	P0	Suffix "G"	A-405	2K / AMMO box
	P1		A-405	2K / AMMO box
	A1		A-405	3K / AMMO box
	A0		A-405	3K / AMMO box
	R0		A-405	5K / 13" Reel
	B0		A-405	1K / Bulk packing

Note 1: "x" defines voltage from 50V (SF11S) to 600V (SF18S)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
SF16S A0	SF16S	A0		
SF16S A0G	SF16S	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

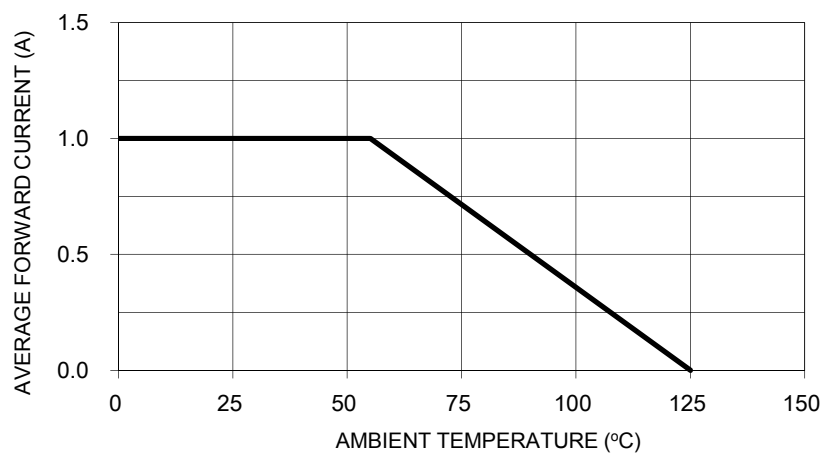


FIG.2- TYPICAL REVERSE CHARACTERISTICS

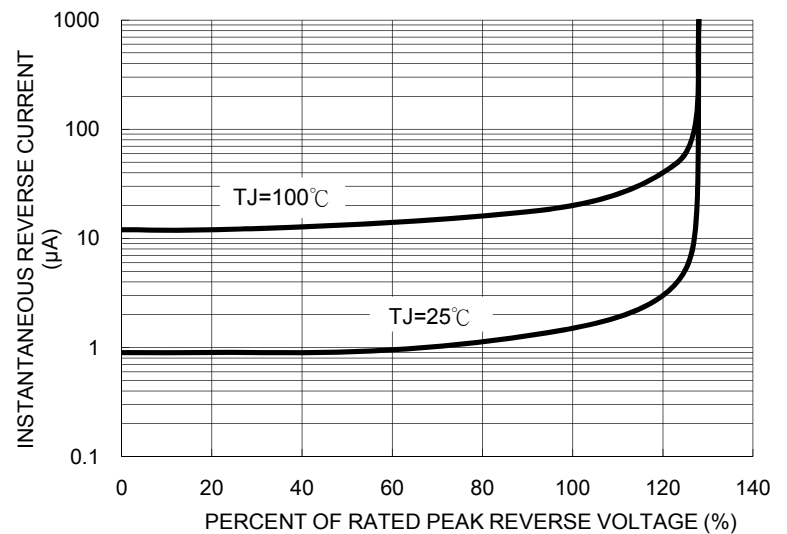


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

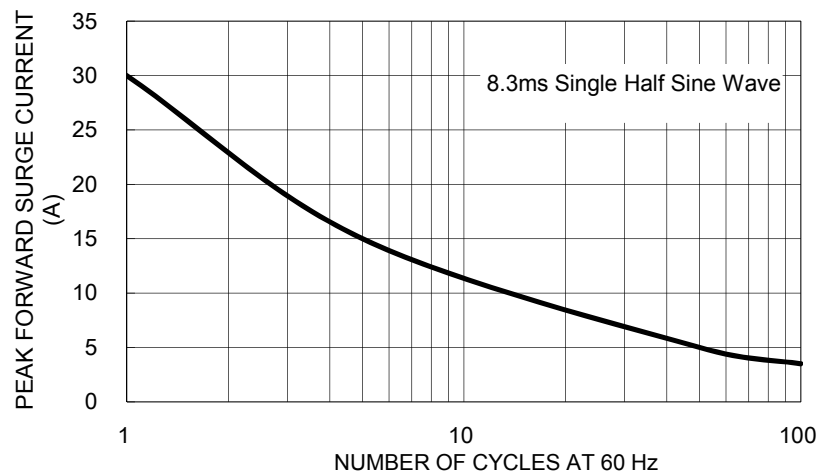


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

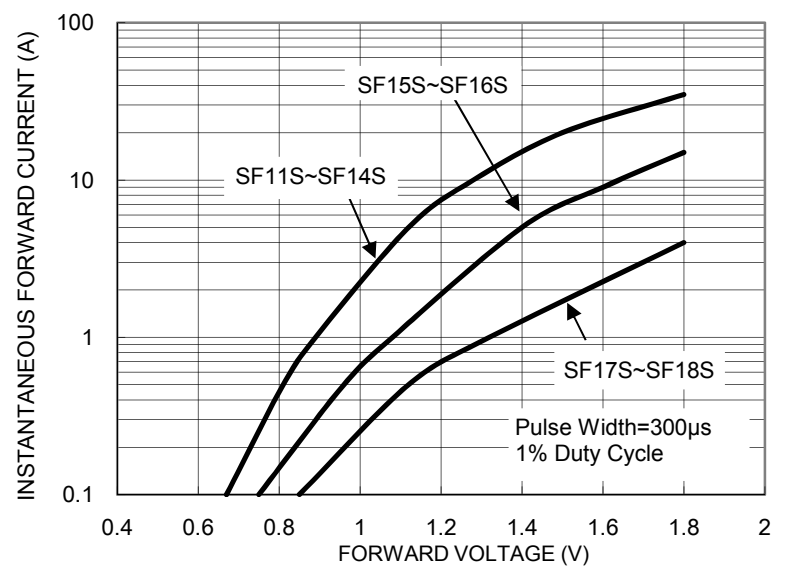


FIG. 5- TYPICAL JUNCTION CAPACITANCE

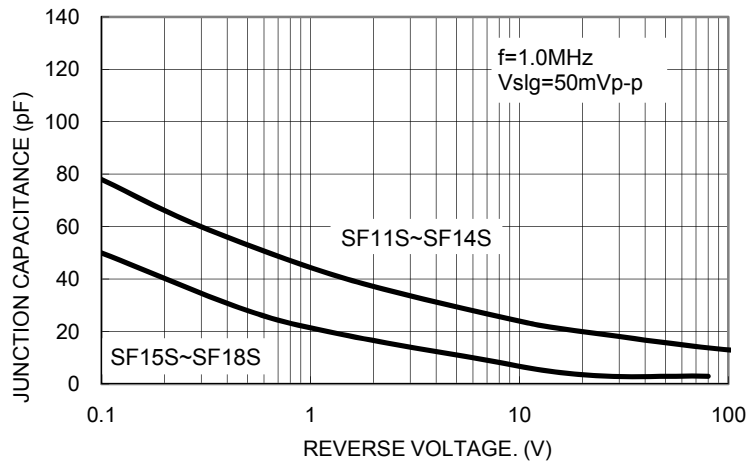
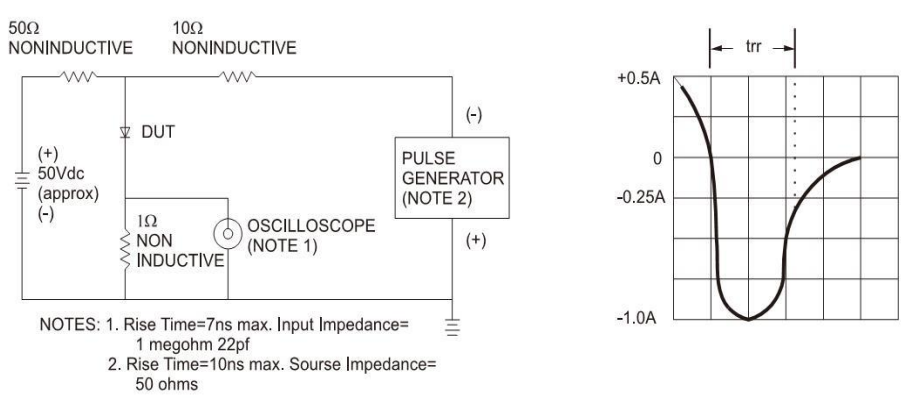
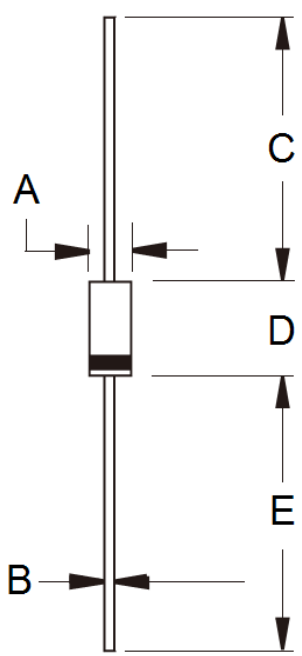


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.00	2.70	0.079	0.106
B	0.53	0.64	0.021	0.025
C	25.40	-	1.000	-
D	4.20	5.20	0.165	0.205
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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