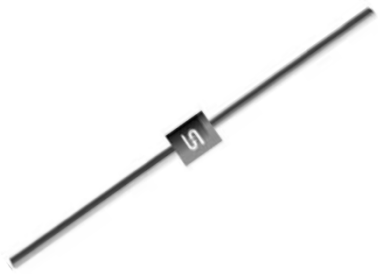
Super Fast Rectifiers

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



DO-204AC (DO-15)

Pb-Free

RoHS COMPLIANT

MECHANICAL DATA

Case: DO-204AC (DO-15)
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: 0.4 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)										
PARAMETER	SYMBOL	SF 21	SF 22	SF 23	SF 24	SF 25	SF 26	SF 27	SF 28	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 ℃ T_J=100℃	I_R	5 100								μA
Maximum reverse recovery time (Note 2)	Trr	35								ns
Typical junction capacitance (Note 3)	Cj	40				30				pF
Typical thermal resistance	$R_{\theta JA}$	65								^{O}C/W
Operating junction temperature range	T_J	- 55 to +125								^{O}C
Storage temperature range	T_{STG}	- 55 to +150								^{O}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
SF2x (Note 1)	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: "xx" defines voltage from 50V (SF21) to 600V (SF28)

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
SF28 A0	SF28	A0		
SF28 A0G	SF28	A0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

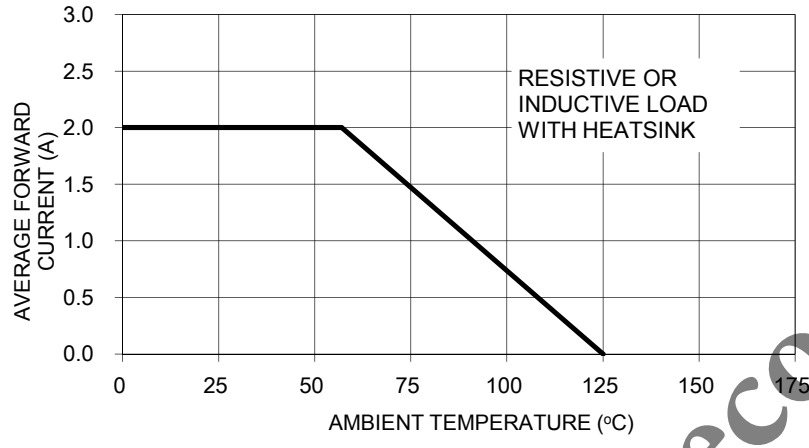


FIG.2- TYPICAL REVERSE CHARACTERISTICS

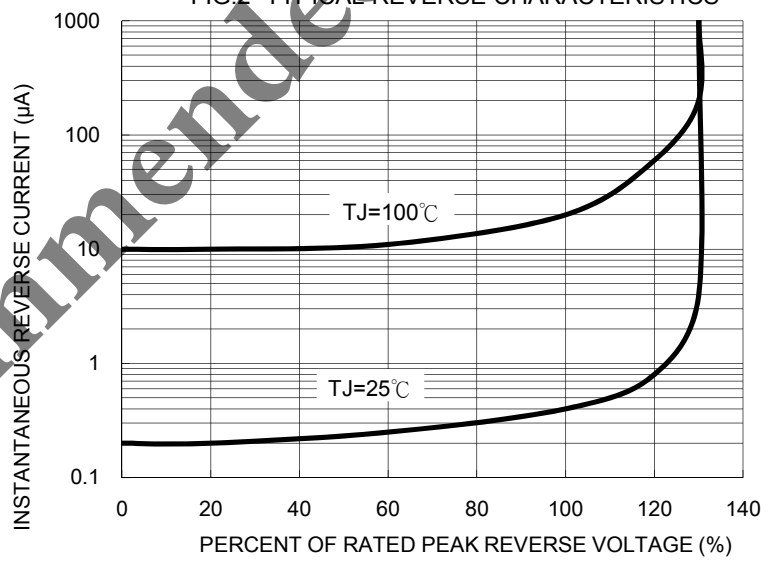


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

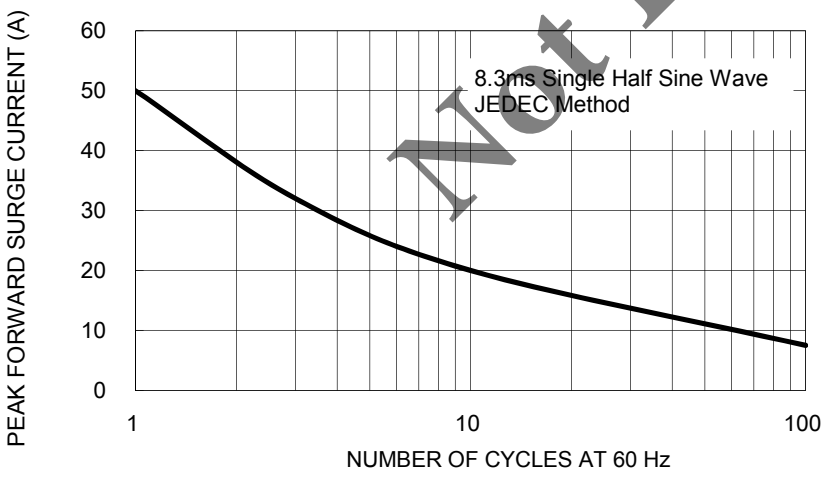


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

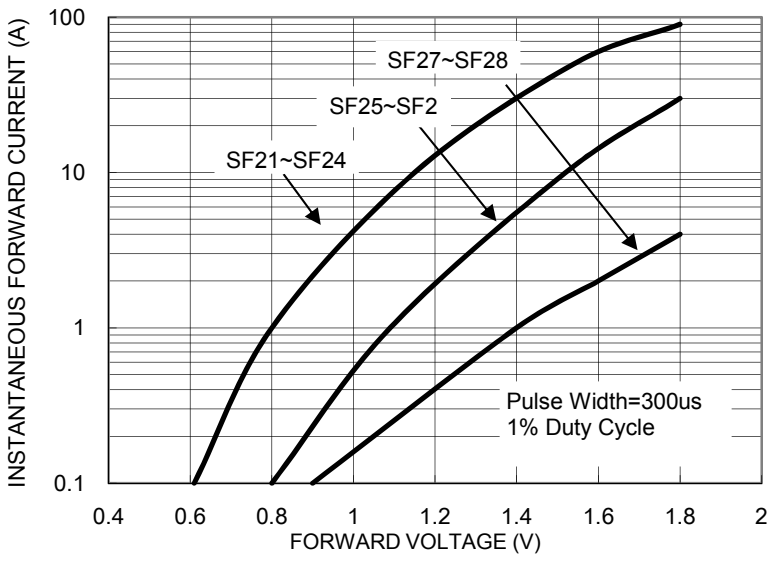


FIG. 5- TYPICAL JUNCTION CAPACITANCE

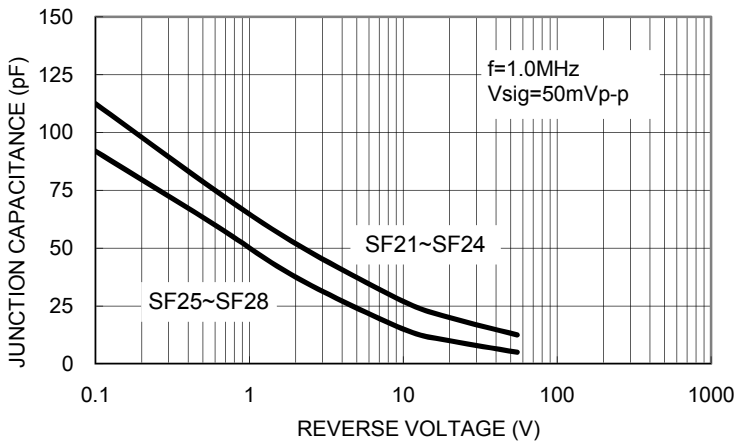
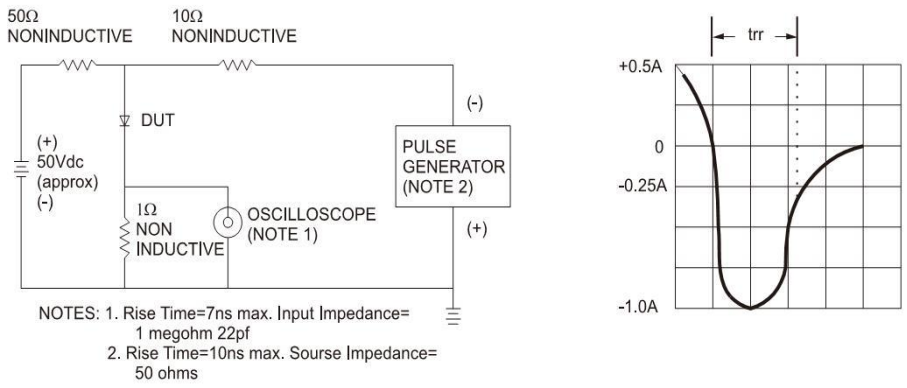
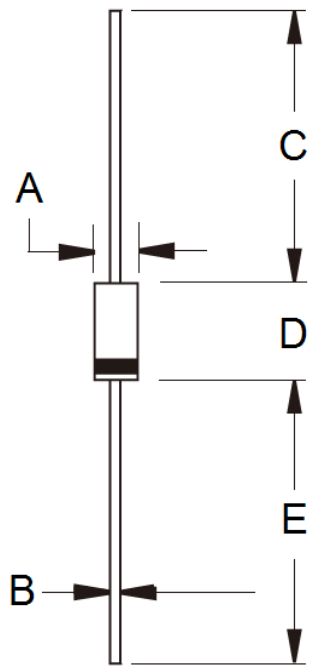


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.60	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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