SF1G1 THRU SF1G7

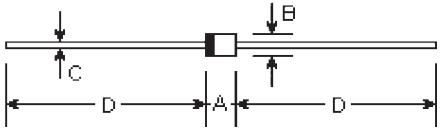
GLASS PASSIVATED SUPER FAST RECTIFIER

Reverse Voltage - 50 to 1000 Volts
Forward Current - 1.0 Ampere

Features

- Superfast recovery times
- Low forward voltage, high current capability
- Hermetically sealed
- Low leakage
- High surge capability
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound

R-1



Mechanical Data

- **Case:** Molded plastic, R-1
- **Terminals:** Axial leads, solderable to MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.007 ounce, 0.205 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.114	0.138	2.9	3.5	
B	0.095	0.099	2.42	2.51	ϕ
C	0.020	0.024	0.5	0.6	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Resistive or inductive load, 60Hz.

	Symbols	SF 1G1	SF 1G2	SF 1G3	SF 1G4	SF 1G5	SF 1G6	SF 1G7	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward current 0.375" (9.5mm) lead length at T_A=55℃	$I_{(AV)}$	1.0							Amp
Peak forward surge current, I_{FM} (surge): 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	30.0							Amps
Maximum forward voltage at 1.0 ADC	V_F	0.95			1.27	1.75			Volts
Maximum DC reverse current at rated DC blocking voltage	I_R	5.0							μ A
Maximum DC reverse current at rated DC blocking voltage T_A=125℃	I_R	400.0							μ A
Maximum reverse recovery time (Note 1)	T_{rr}	35.0							nS
Typical junction capacitance (Note 2)	C_J	63.0							ρ F
Operating and storage temperature range	T_J, T_{STG}	-55 to +150							℃

Notes:

(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC

RATINGS AND CHARACTERISTIC CURVES

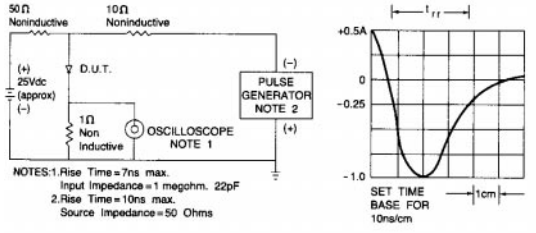


Fig. 1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

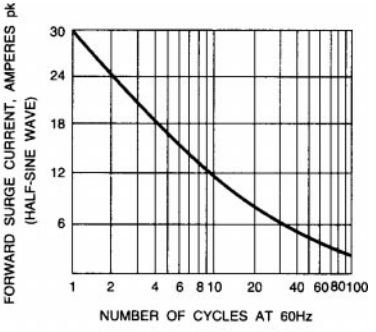


Fig. 2 – MAXIMUM NON-REPEITIVE SURGE CURRENT

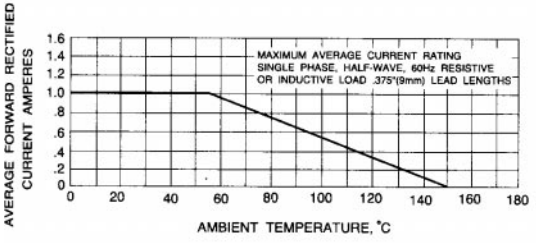


Fig. 3 – MAXIMUM AVERAGE FORWARD CURRENT RATING

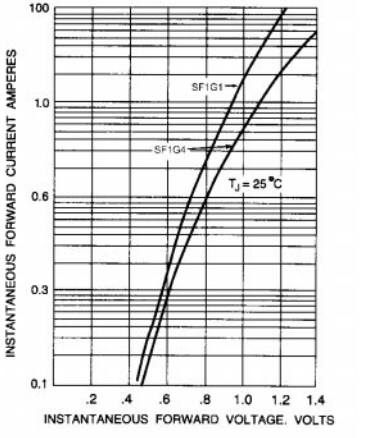


Fig. 4 – TYPICAL JUNCTION CAPACITANCE

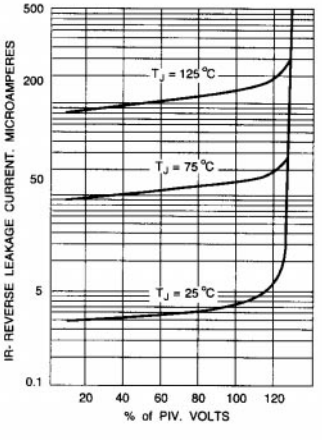


Fig. 5 – TYPICAL REVERSE CHARACTERISTICS

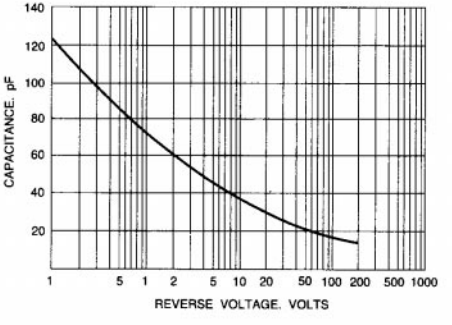


Fig. 6 – TYPICAL JUNCTION CAPACITANCE