SF11 THRU SF16

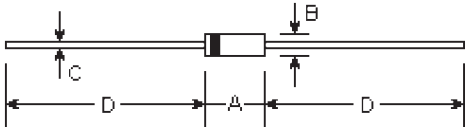
GLASS PASSIVATED SUPER FAST RECTIFIER

Reverse Voltage - 50 to 600 Volts
Forward Current - 1.0 Ampere

Features

- High reliability
- Low leakage
- Low forward voltage
- High current capability
- Super fast switching speed
- High surge capability
- Good for switching mode circuit
- Glass passivated junction

DO-41



Mechanical Data

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD-202E method 208C guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any
- **Weight:** 0.012 ounce, 0.335 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	ϕ
C	0.028	0.034	0.71	0.86	ϕ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	SF11	SF12	SF13	SF14	SF15	SF16	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	300	400	600	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 1.0A DC	V_F	0.95				1.27	1.75	Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25℃ / T_A=150℃	I_R	5.0 / 50.0						μ A
Maximum reverse recovery time (Note 1)	T_{rr}	35.0						nS
Typical junction capacitance (Note 2)	C_J	15				10		ρ F
Operating and storage temperature range	T_J, T_{STG}	-65 to +150						℃

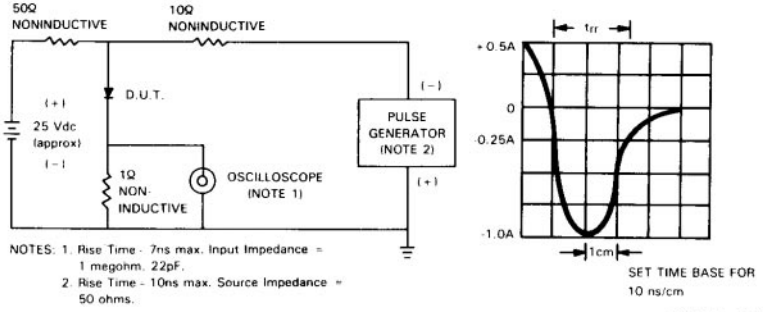
Notes:

(1) 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 volts

RATINGS AND CHARACTERISTIC CURVES

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



NOTES: 1. Rise Time - 7ns max. Input Impedance = 1 megohm. 22pF.
2. Rise Time - 10ns max. Source Impedance = 50 ohms.

FIG. 2 – TYPICAL FORWARD CURRENT DERATING CURVE

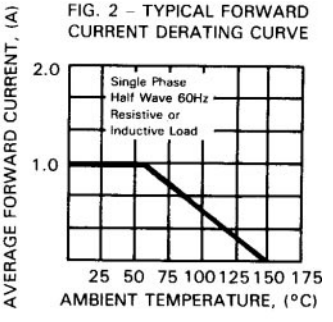


FIG. 3 – TYPICAL REVERSE CHARACTERISTICS

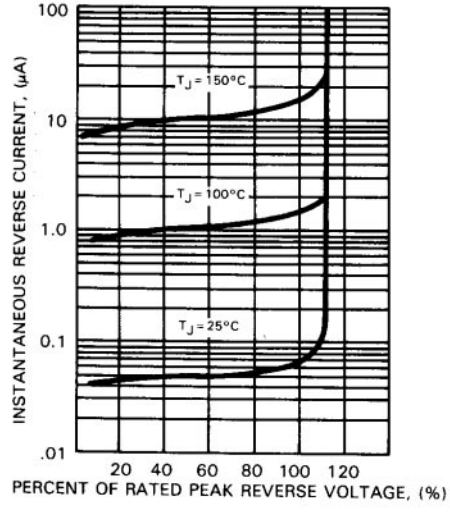


FIG. 4 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

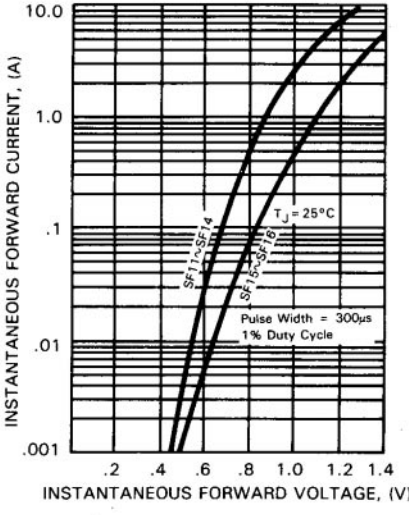


FIG. 5 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

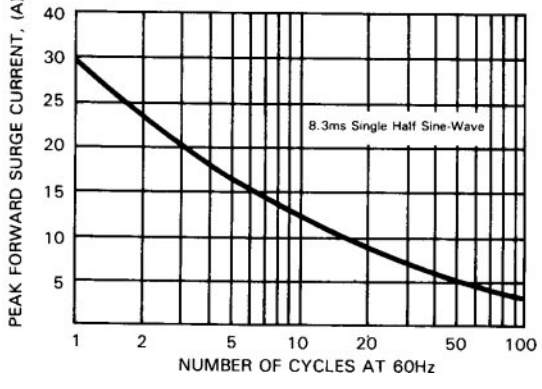


FIG. 6 – TYPICAL JUNCTION CAPACITANCE