



WILLAS



**SF11G
THRU
SF18G**

1.0 Amp Glass Passivated Super Fast Rectifiers - 50~600Volts

DO-41 Package

Features

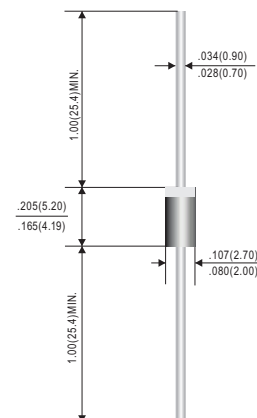
- Glass Passivated Chip
- Low Forward Voltage
- High Current Capability
- High reliability
- Super Fast Switching Speed
- High Surge Current Capability
- Moisture Sensitivity Level 1
- RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"

Mechanical Data

- Case: Molded Plastic, DO-41
- Epoxy: UL 94V-0 Rate Flame Retardant
- Lead: Solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.013 ounce, 0.33 gram (Approximate)



DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

RATINGS		SYMBOLS	SF11G	SF12G	SF13G	SF14G	SF15G	SF16G	SF18G	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage		V _{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward rectifier Current 0.375" (9.5mm) Lead length at Ta = 55°C		I _{F(AV)}	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC		V _F	0.95				1.25		1.75	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ Ta=25°C	I _R	5.0							μA
	@ Ta=100°C		100							
Maximum Reverse Recovery Time (Note 1)		T _{RR}	35							ns
Typical Thermal Resistance (Note 3)		R _{θJA}	50							°C/W
		R _{θJL}	20							
Typical Junction Capacitance(Note 2)		C _J	40				25			pF
Operating and Storage Temperature Range		T _J ,T _{STG}	-55 ~ 150							°C

Notes:

1. Test Conditions: $I_F = 0.5A$, $I_R = -1.0A$, $I_{RR} = -0.25A$
2. Measured at 1MHz and applied reverse voltage of 4.0VDC.
3. Typical Thermal Resistance: At 9.5mm lead lengths, PCB mounted.



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RATING AND CHARACTERISTICS CURVES

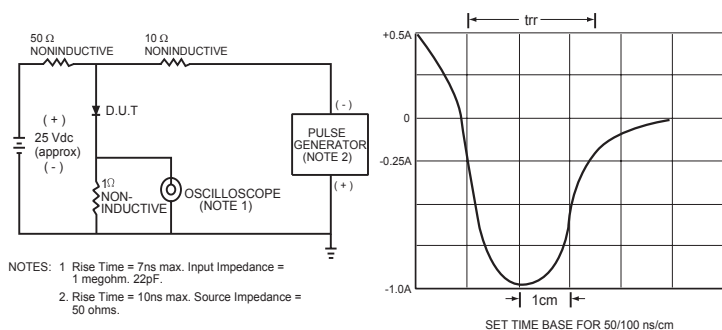


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

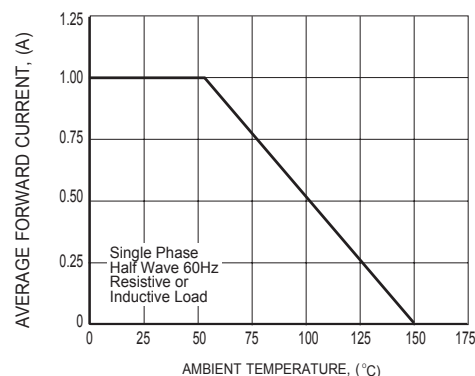


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

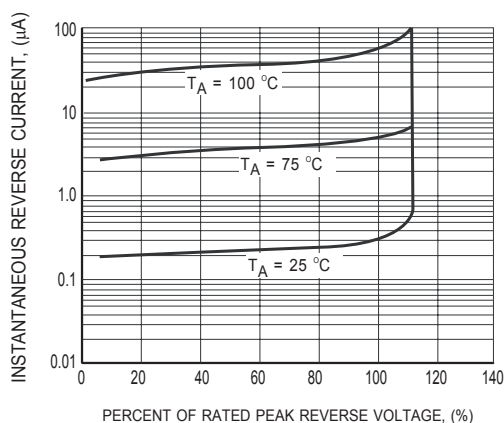


FIG.3 TYPICAL REVERSE CHARACTERISTICS

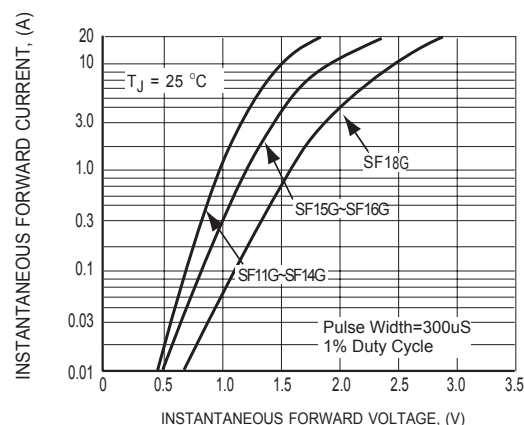


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

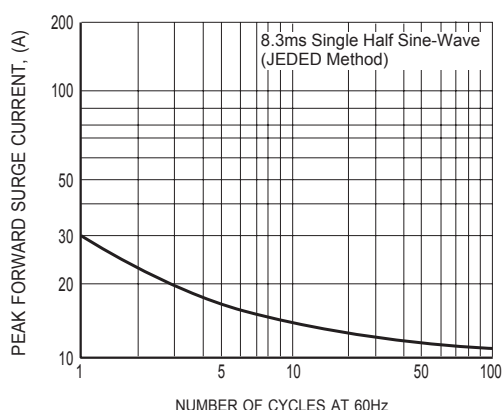


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

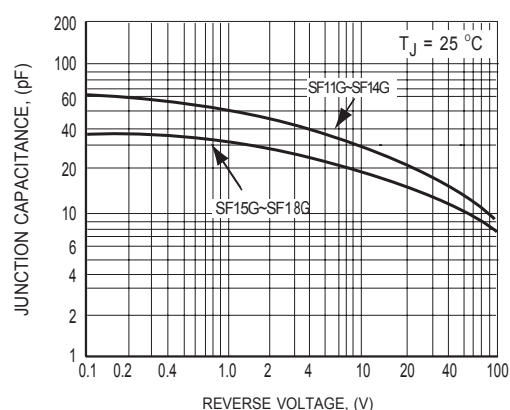


FIG.6 TYPICAL JUNCTION CAPACITANCE