Elektronische Bauelemente

# SF21G ~ SF25G

**Voltage 50 ~ 600 V**

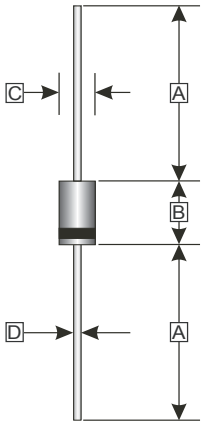
**2 A, Glass Passivated Super Fast Rectifiers**

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability

**DO-15**




| REF. | Millimeter | |
|---|---|---|
| | Min. | Max. |
| A | 25.4 (TYP) | |
| B | 5.80 | 7.62 |
| C | 2.60 | 3.60 |
| D | - | 0.90 |

## PACKAGING INFORMATION

- Glass Passivated
- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.4300 grams (approximately)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.

| PARAMETERS | | Symbol | Part Number | | | | | Unit |
|---|---|---|---|---|---|---|---|---|
| | | | SF21G | SF22G | SF23G | SF24G | SF25G | |
| Maximum Recurrent Reverse Voltage | | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | V |
| Maximum RMS Voltage | | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | V |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | V |
| Maximum Instantaneous Forward Voltage @ $I_F$=2A | | $V_F$ | 0.95 | | | 1.3 | 1.7 | V |
| Maximum Average Forward Rectified Current @ 0.375" (9.5mm) lead length $T_A$=55°C | | $I_O$ | 2.0 | | | | | A |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | | $I_{FSM}$ | 50 | | | | | A |
| Maximum DC Reverse Current | $T_A$=25°C | $I_R$ | 5.0 | | | | | μA |
| | $T_A$=100°C | | 50 | | | | | |
| Maximum Reverse Recovery Time [1] | | $T_{RR}$ | 35 | | | | | nS |
| Junction Capacitance (Typ.) [2] | | $C_J$ | 60 | | | | | pF |
| Storage Temperature Range | | $T_{STG}$ | -65 ~ 150 | | | | | °C |

Note:
1. $I_F$=0.5A, $I_R$=1.0A, $I_{RR}$=0.25A
2. f=1MHz and applied 4V DC reverse voltage

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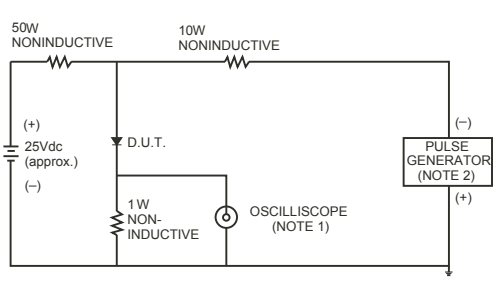
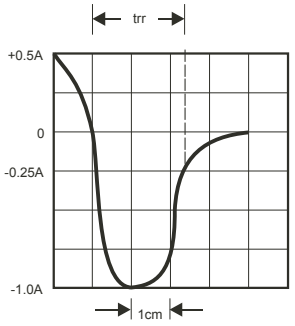
## RATINGS AND CHARACTERISTIC CURVES (SF21G THRU SF25G)

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.




SET TIME BASE FOR

50 / 10ns / cm

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

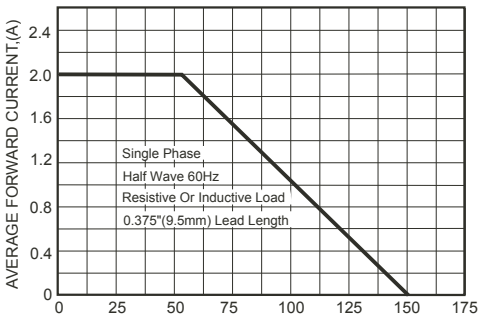



FIG.3-TYPICAL FORWARD CHARACTERISTICS

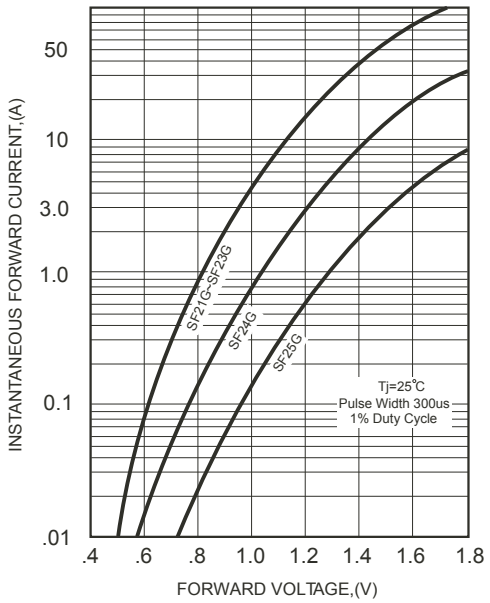



FIG.4-TYPICAL REVERSE CHARACTERISTICS

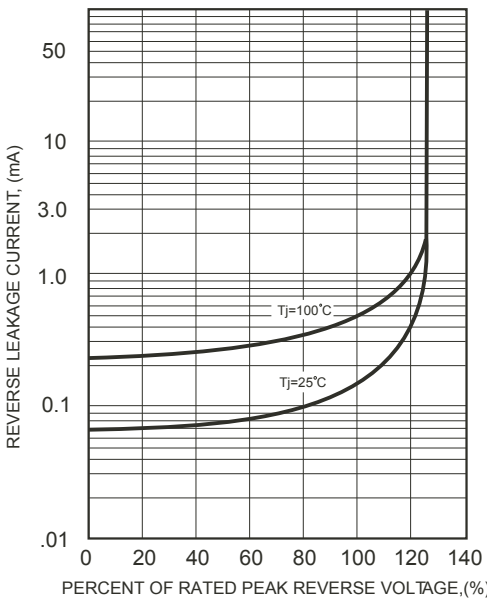



FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

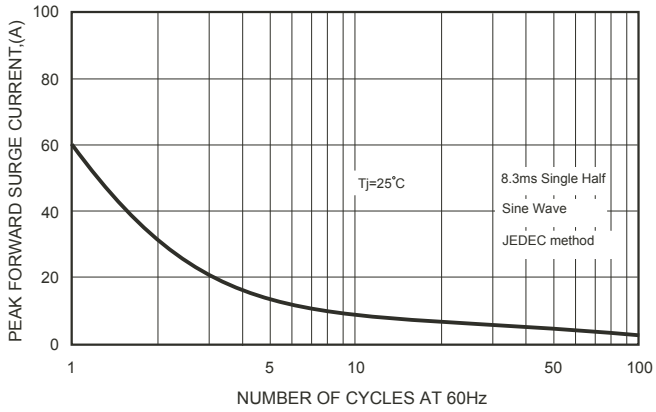



FIG.6-TYPICAL JUNCTION CAPACITANCE