

# SF20DG-SF20JG(LS)

**SUPER FAST  
GLASS PASSIVATED RECTIFIER**

**REVERSE VOLTAGE – 200 to 600 Volts  
FORWARD CURRENT – 2.0 Amperes**

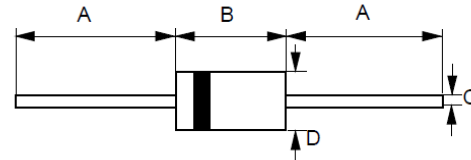
**FEATURES**

- Glass passivated chip
- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

**MECHANICAL DATA**

- Package : JEDEC DO-15 molded plastic
- Polarity : Color band denotes cathode
- Lead Free Finish, RoHS Compliant
- Weight : 0.015 ounces, 0.4 grams
- Mounting position : Any

**DO-15**



| DO-15                        |             |             |
|------------------------------|-------------|-------------|
| Dim                          | Min.        | Max.        |
| A                            | 25.4        | -           |
| B                            | 5.80        | 7.60        |
| C                            | 0.71 $\phi$ | 0.86 $\phi$ |
| D                            | 2.60 $\phi$ | 3.60 $\phi$ |
| All Dimensions in millimeter |             |             |

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER   | SYMBOL                   | SF20DG      | SF20JG | UNIT           |
|---|--------------------------|-------------|--------|----------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                | 200         | 600    | V              |
| Maximum RMS Voltage   | $V_{RMS}$                | 140         | 420    | V              |
| Maximum DC Blocking Voltage   | $V_{DC}$                 | 200         | 600    | V              |
| Maximum Average Forward Rectified Current   | $I_{(AV)}$               | 2.0         |        | A              |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD) | $I_{FSM}$                | 60          |        | A              |
| Maximum forward Voltage at 2.0A DC  | $V_F$                    | 0.95        | 1.3    | V              |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | $I_R$                    | 5<br>100    |        | $\mu$ A        |
| Typical Junction Capacitance (Note 4)   | $C_T$                    | 40          | 30     | pF             |
| Typical Thermal Resistance (Note 5)   | $R_{thJA}$<br>$R_{thJC}$ | 35<br>16    |        | $^{\circ}$ C/W |
| Maximum Reverse Recovery Time (Note 6)  | $t_{rr}$                 | 35          | 50     | ns             |
| Operating Temperature Range   | $T_J$                    | -55 to +150 |        | $^{\circ}$ C   |
| Storage Temperature Range   | $T_{STG}$                | -55 to +150 |        | $^{\circ}$ C   |

**Note :**

REV-10, Oct-2021, KGD01

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
5. Thermal Resistance Junction to Ambient.
6. Measured with  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$ .

**RATING AND CHARACTERISTIC CURVES**  
**SF20DG-SF20JG**

FIG.1 - FORWARD CURRENT DERATING CURVE

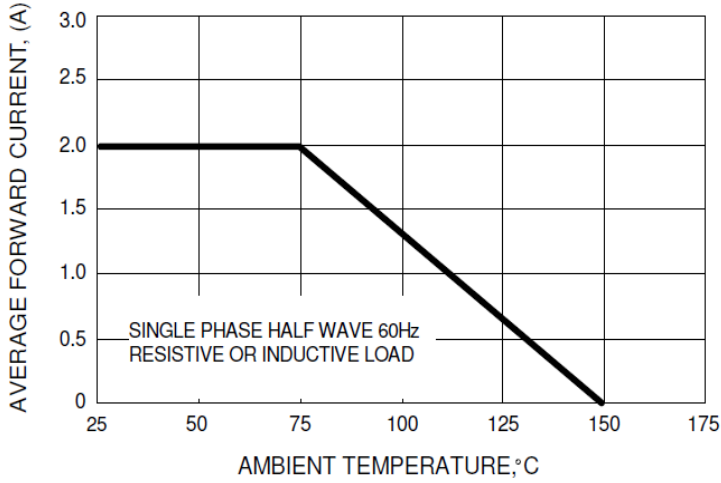


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

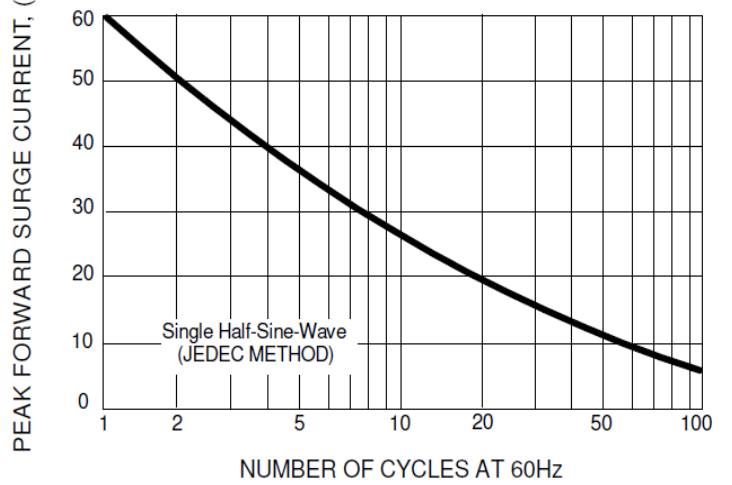


FIG.3 - TYPICAL JUNCTION CAPACITANCE

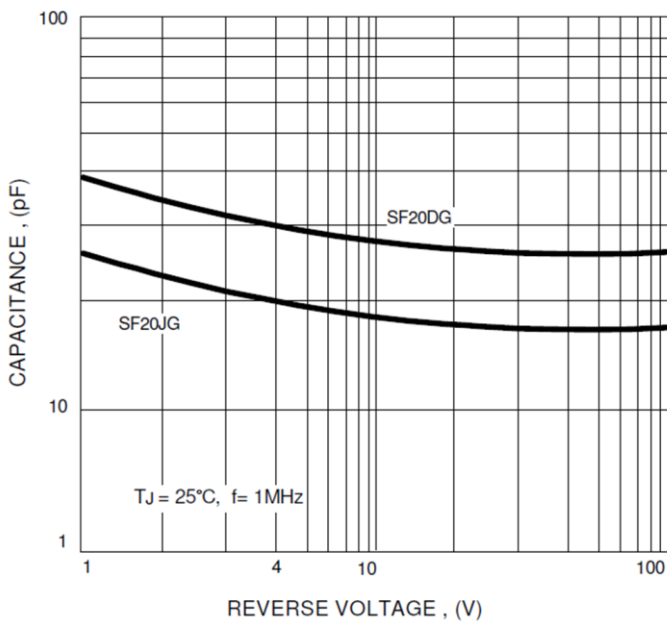
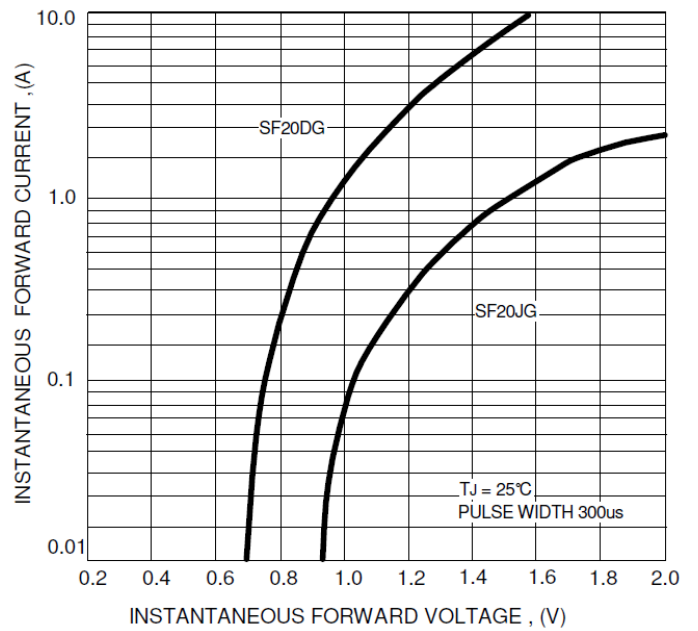


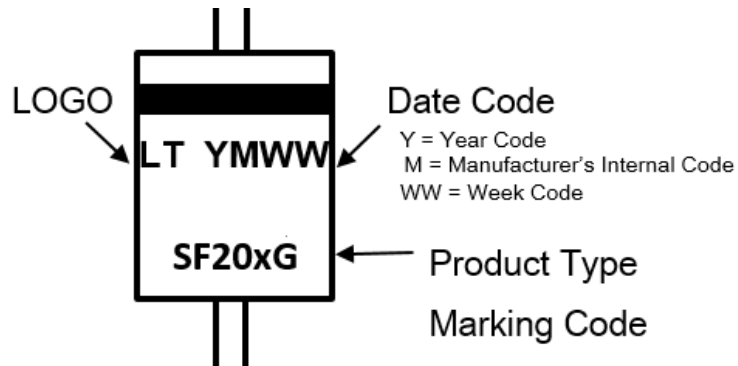
FIG.4 - TYPICAL FORWARD CHARACTERISTICS



### Ordering Information :

| Part Number   | Package | Packing |             |
|---------------|---------|---------|-------------|
|               |         | Qty.    | Carrier     |
| SF20DG_HF     | DO-15   | 4000pcs | Tape & Reel |
| SF20DG_HF-A52 | DO-15   | 2000pcs | Ammo 52     |
| SF20JG_HF     | DO-15   | 4000pcs | Tape & Reel |
| SF20JG_HF-A26 | DO-15   | 2000pcs | Ammo 26     |
| SF20JG_HF-A52 | DO-15   | 2000pcs | Ammo 52     |

### Marking Information :



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