

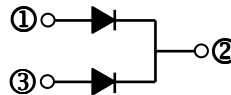
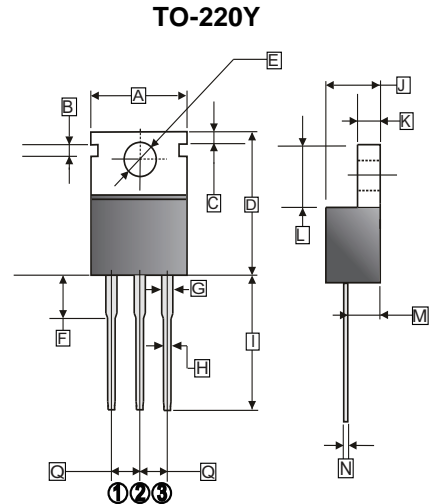
RoHS Compliant Product  
A suffix of "-C" specifies and halogen free

## FEATURES

- Fast switching for high efficiency
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

## MECHANICAL DATA

- Case : Molded plastic ITO-220Y
- Epoxy : UL 94V-0 rate flame retardant
- Terminals : Solderable per MIL-STD-202 method 208
- Polarity : Color band denotes cathode
- Mounting position : Any
- Weight : 2.07 grams



| REF. | Millimeter |      | REF. | Millimeter |       |
|------|------------|------|------|------------|-------|
|      | Min.       | Max. |      | Min.       | Max.  |
| A    | -          | 10.5 | I    | 12.90      | 13.35 |
| B    | 1.58       | 1.82 | J    | 4.44       | 4.70  |
| C    | 1.33       | 1.45 | K    | 1.14       | 1.40  |
| D    | 15.3       | 16.2 | L    | 5.84       | 6.86  |
| E    | 3.50       | 3.91 | M    | 2.25       | 2.60  |
| F    | 2.90       | 3.25 | N    | 0.35       | 0.64  |
| G    | 1.22       | 1.43 | Q    | 2.41       | 2.67  |
| H    | 0.68       | 0.94 |      |            |       |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.)

| Parameters  | Symbol                  | Part Number |            |            |            | Unit             |
|---|-------------------------|-------------|------------|------------|------------|------------------|
|   |                         | SFG20ED100  | SFG20ED200 | SFG20ED400 | SFG20ED600 |                  |
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$               | 100         | 200        | 400        | 600        | V                |
| Maximum RMS Voltage   | $V_{RMS}$               | 70          | 140        | 280        | 420        | V                |
| Maximum DC Blocking Voltage   | $V_{DC}$                | 100         | 200        | 400        | 600        | V                |
| Maximum Average Forward Rectified Current $T_C=125^\circ\text{C}$                                 | $I_{F(AV)}$             | 20          |            |            |            | A                |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$               | 200         |            | 175        |            | A                |
| Maximum Instantaneous Forward Voltage @ 10.0A   | $V_F$                   | 0.95        |            | 1.25       | 1.7        | V                |
| Maximum DC Reverse Current At Rated DC Blocking Voltage   | $T_J=25^\circ\text{C}$  | 10          |            |            |            | $\mu\text{A}$    |
|   | $T_J=150^\circ\text{C}$ | 500         |            |            |            |                  |
| Maximum Reverse Recovery Time <sup>1</sup>  | $T_{RR}$                | 25          |            |            | 35         | nS               |
| Typical Junction Capacitance <sup>2</sup>   | $C_J$                   | 120         |            | 70         |            | pF               |
| Operating Junction and Storage Temperature Range  | $T_J, T_{STG}$          | -55~150     |            |            |            | $^\circ\text{C}$ |

Notes :

1. Reverse recovery test conditions  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

**RATINGS AND CHARACTERISTICS CURVE**

FIG. 1 - FORWARD CURRENT DERATING CURVE

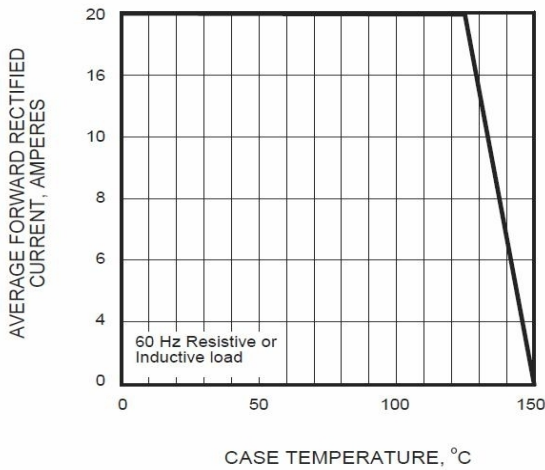


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

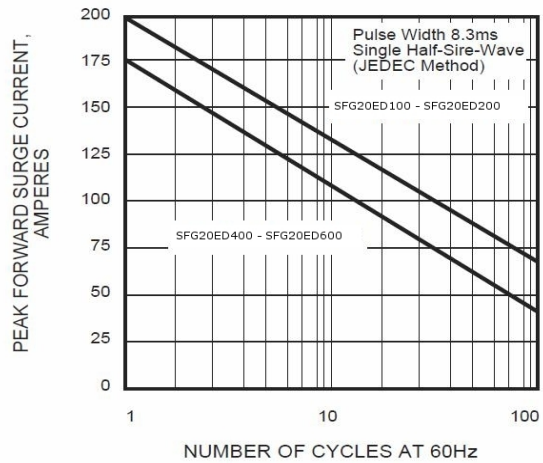


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

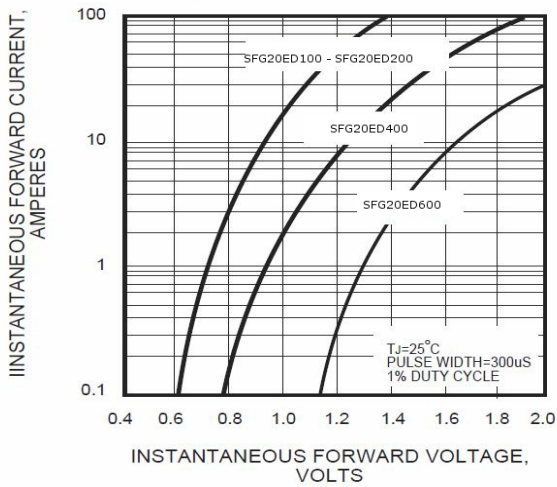


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

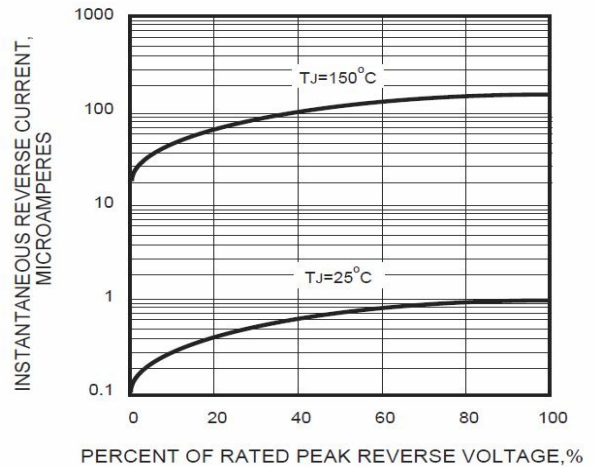


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

