

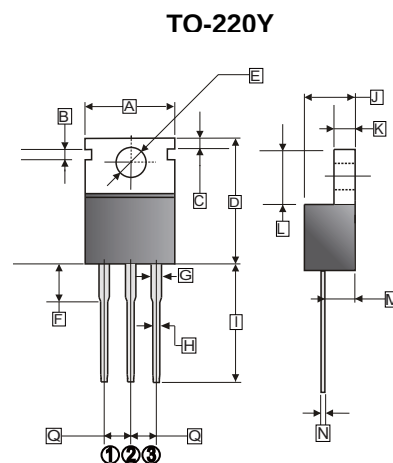
RoHS Compliant Product  
A suffix of "-C" specifies halogen free

## FEATURES

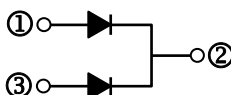
- Fast switching for high efficiency
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

## MECHANICAL DATA

- Case : Molded plastic TO-220Y
- Epoxy : UL 94V-0 rate flame retardant
- Terminals : Solderable per MIL-STD-202 method 208 guaranteed
- Mounting position : Any
- Weight : 2.07 gram



Dimensions in millimeters



| 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                        |
|------------------------------------------------------------------------------------------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-----------------------------|
|                                                                                                            |                 | SFG 10ED50  | SFG 10ED100 | SFG 10ED200 | SFG 10ED400 | SFG 10ED600 |                             |
| Maximum Recurrent Peak 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 Average Forward Rectified Current $T_L=100^\circ\text{C}$                                          | $I_{F(AV)}$     | 10.0        |             |             |             |             | A                           |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)          | $I_{FSM}$       | 100         |             |             |             |             | A                           |
| Max. Instantaneous Forward Voltage @ 5.0A                                                                  | $V_F$           | 0.95        |             |             | 1.25        | 1.85        | V                           |
| Max. DC Reverse Current @ $T_J=25^\circ\text{C}$<br>At Rated DC Blocking Voltage @ $T_J=125^\circ\text{C}$ | $I_R$           | 10<br>250   |             |             |             |             | $\mu\text{A}$               |
| Max. Reverse Recovery Time (Note 1)                                                                        | $T_{RR}$        | 25          |             |             |             |             | nS                          |
| Typical Junction Capacitance (Note 2)                                                                      | $C_J$           | 65          |             |             |             |             | pF                          |
| Typical Thermal Resistance (Note 3)                                                                        | $R_{\theta JC}$ | 2.2         |             |             |             |             | $^\circ\text{C} / \text{W}$ |
| 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.

(3)Thermal Resistance junction to Lead.

## RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

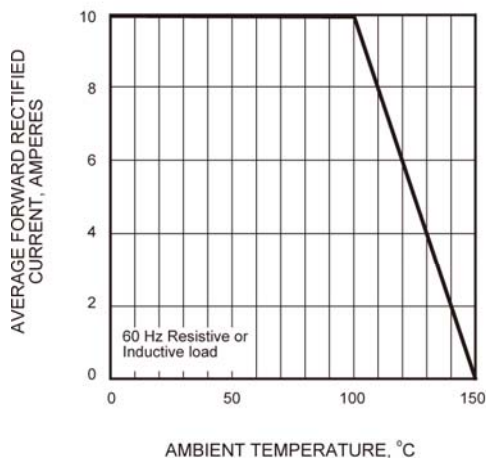


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

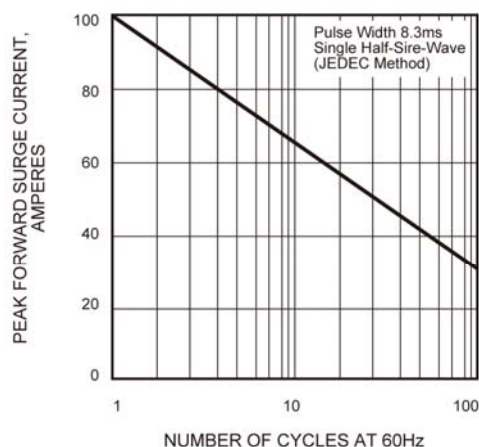


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

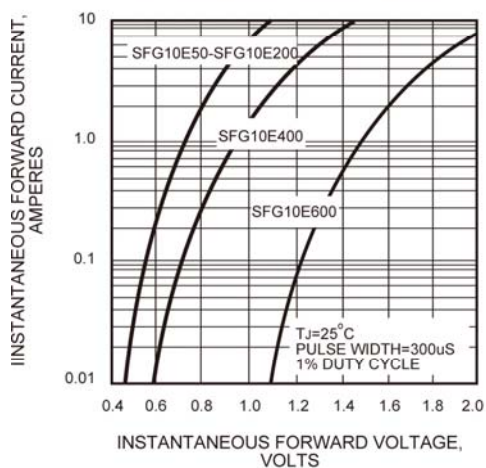


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

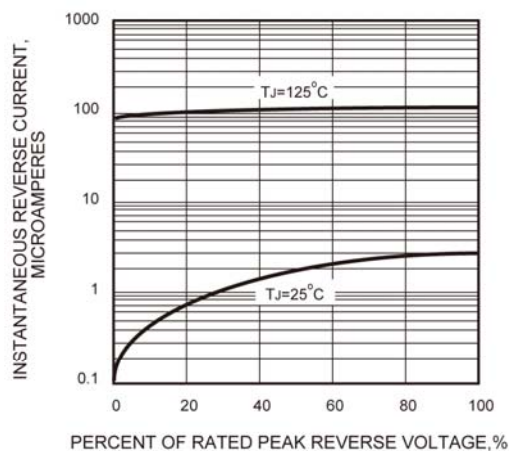


FIG.5 - TYPICAL JUNCTION CAPACITANCE

