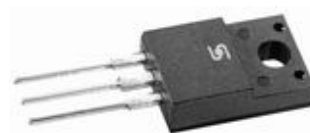


### Features

- ◇ UL Recognized File #E-326243
- ◇ For surface mounted application
- ◇ Low power loss, high efficiency
- ◇ High current capability, Low VF
- ◇ High reliability
- ◇ Epitaxial construction
- ◇ Guard-ring for transient protection
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode



### Mechanical Data

- ◇ Case: ITO-220AB molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ Terminals: Pure tin plated, lead solderable per MIL-STD-750, Method 2026 guaranteed
- ◇ Polarity: As marked
- ◇ High temperature soldering guaranteed: 260°C/10s .25"(6.35mm) from case
- ◇ Weight: 1.75 grams
- ◇ Mounting torque: 5 in - 1lbs. Max.

### Ordering Information (example)

| Part No. | Package   | Packing   | Packing code | Green Compound Packing code |
|----------|-----------|-----------|--------------|-----------------------------|
| SRF1620  | ITO-220AB | 50 / TUBE | D0           | D0G                         |

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

| Type Number  | Symbol          | SRF 1620      | SRF 1630 | SRF 1640 | SRF 1650 | SRF 1660      | SRF 1690 | SRF 1610 | SRF 16150 | Unit |    |
|--|-----------------|---------------|----------|----------|----------|---------------|----------|----------|-----------|------|----|
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 20            | 30       | 40       | 50       | 60            | 90       | 100      | 150       | V    |    |
| Maximum RMS Voltage  | $V_{RMS}$       | 14            | 21       | 28       | 35       | 42            | 63       | 70       | 105       | V    |    |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 20            | 30       | 40       | 50       | 60            | 90       | 100      | 150       | V    |    |
| Maximum Average Forward Rectified Current  | $I_{F(AV)}$     | 16            |          |          |          |               |          |          |           | A    |    |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)                 | $I_{FSM}$       | 200           |          |          |          |               |          |          |           | A    |    |
| Maximum Instantaneous Forward Voltage (Note 1) @ 8A  | $V_F$           | 0.55          |          | 0.70     |          | 0.90          |          | 1.00     |           | V    |    |
| Maximum Reverse Current @ Rated VR<br>$T_A=25^\circ\text{C}$<br>$T_A=100^\circ\text{C}$<br>$T_A=125^\circ\text{C}$ | $I_R$           | 0.5           |          |          |          | 0.1           |          |          |           | mA   |    |
|  |                 | 15            |          | 10       |          | -             |          |          |           |      |    |
|  |                 | -             |          |          |          | 5             |          |          |           |      |    |
| Typical Junction Capacitance (Note 2)  | $C_j$           | 480           |          | 300      |          | 112           |          |          |           | pF   |    |
| Typical Thermal Resistance   | $R_{\theta JC}$ | 2.5           |          |          |          | 4             |          |          |           | °C/W |    |
| Operating Temperature Range  | $T_J$           | - 65 to + 125 |          |          |          | - 65 to + 150 |          |          |           | °C   |    |
| Storage Temperature Range  | $T_{STG}$       | - 65 to + 150 |          |          |          |               |          |          |           |      | °C |

Note1: Pulse Test with PW=300u sec, 1% Duty cycle

Note2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SRF1620 THRU SRF16150)

FIG.1 FORWARD CURRENT DERATING CURVE

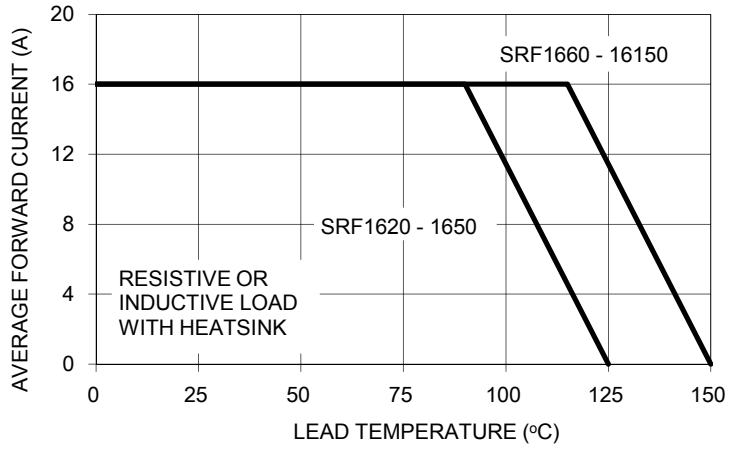


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

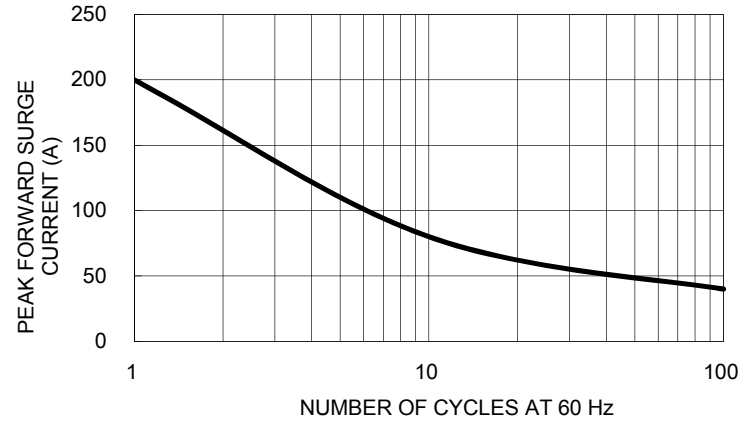


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

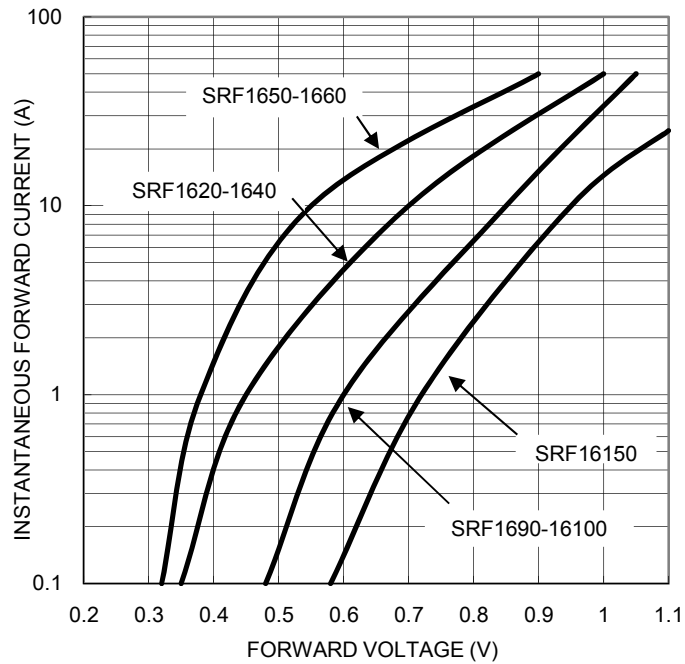


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

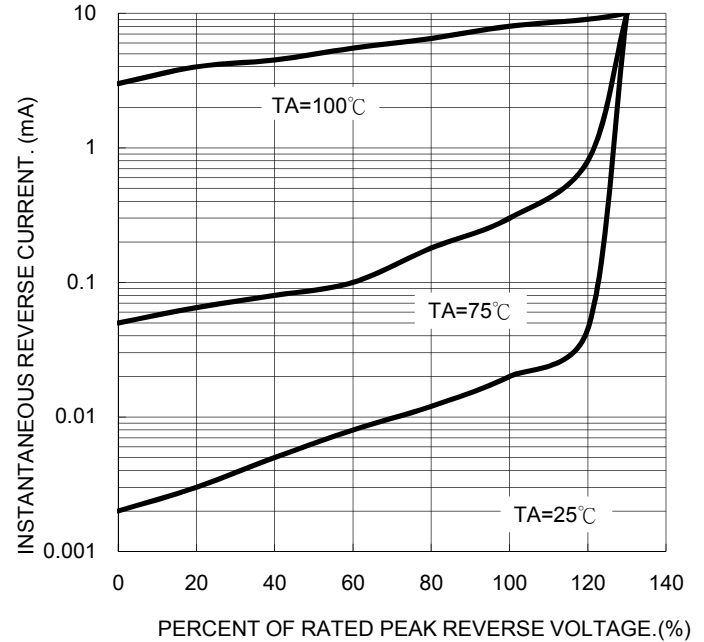


FIG. 5 TYPICAL JUNCTION CAPACITANCE

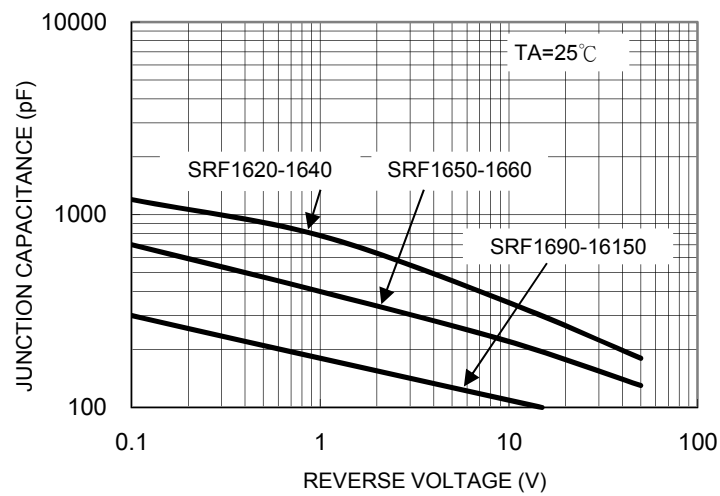
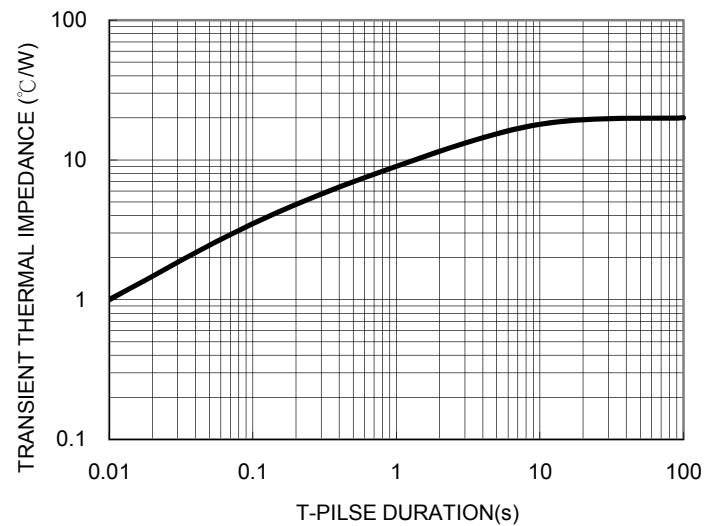


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

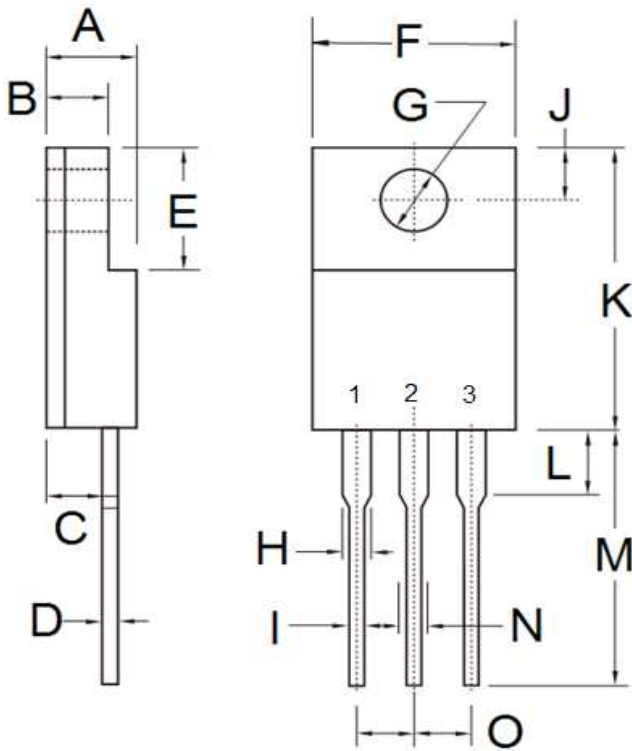


### Ordering information

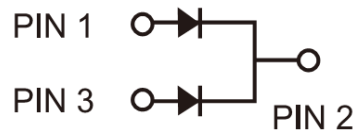
| Part No. | Package   | BULK Packing | Packing code | Green Compound Packing code |
|----------|-----------|--------------|--------------|-----------------------------|
| SRF16xx  | ITO-220AB | 50 / TUBE    | C0           | C0G                         |
|          | ITO-220AB | 50 / TUBE    | D0           | D0G                         |

Note: "xx" is Device Code from "20" thru "150".

### Dimensions



| DIM. | Unit(mm) |       | Unit(inch) |       |
|------|----------|-------|------------|-------|
|      | Min      | Max   | Min        | Max   |
| A    | 4.30     | 4.70  | 0.169      | 0.185 |
| B    | 2.50     | 3.16  | 0.098      | 0.124 |
| C    | 2.30     | 2.96  | 0.091      | 0.117 |
| D    | 0.46     | 0.76  | 0.018      | 0.030 |
| E    | 6.30     | 6.90  | 0.248      | 0.272 |
| F    | 9.60     | 10.30 | 0.378      | 0.406 |
| G    | 3.00     | 3.40  | 0.118      | 0.134 |
| H    | 0.95     | 1.45  | 0.037      | 0.057 |
| I    | 0.50     | 0.90  | 0.020      | 0.035 |
| J    | 2.40     | 3.20  | 0.094      | 0.126 |
| K    | 14.80    | 15.50 | 0.583      | 0.610 |
| L    | -        | 4.10  | -          | 0.161 |
| M    | 12.60    | 13.80 | 0.496      | 0.543 |
| N    | -        | 1.80  | -          | 0.071 |
| O    | 2.41     | 2.67  | 0.095      | 0.105 |



### Marking Diagram



P/N = Specific Device Code  
G = Green Compound  
YWW = Date Code