

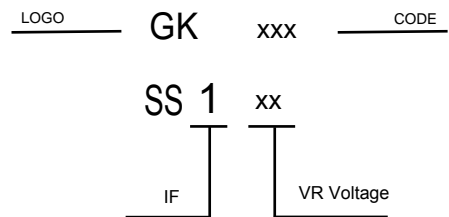
VOLTAGE RANGE  
20 to 100 Volts  
CURRENT  
1.0 Ampere

## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-202F method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.063 gram



## 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, derate current by 20%.

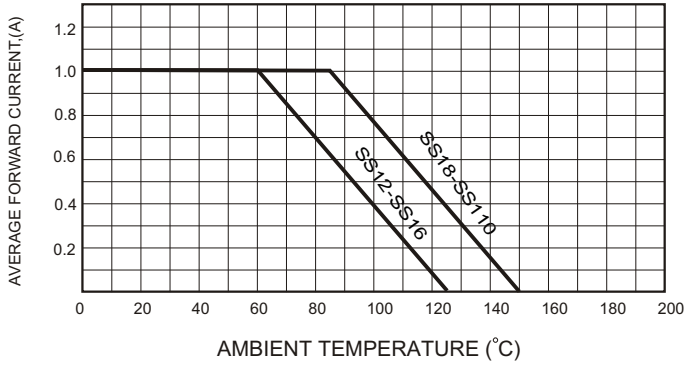
| TYPE NUMBER  | SS12       | SS13 | SS14 | SS15 | SS16       | SS18 | SS19 | SS110 | UNITS |
|--|------------|------|------|------|------------|------|------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage   | 20         | 30   | 40   | 50   | 60         | 80   | 90   | 100   | V     |
| Maximum RMS Voltage  | 14         | 21   | 28   | 35   | 42         | 56   | 63   | 70    | V     |
| Maximum DC Blocking Voltage  | 20         | 30   | 40   | 50   | 60         | 80   | 90   | 100   | V     |
| Maximum Average Forward Rectified Current  | 1.0        |      |      |      |            |      |      |       | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 30         |      |      |      |            |      |      |       | A     |
| Maximum Instantaneous Forward Voltage at 1.0A  | 0.55       |      | 0.70 |      | 0.85       |      |      |       | V     |
| Maximum DC Reverse Current Ta=25°C   | 0.2        |      |      |      |            |      |      |       | mA    |
| at Rated DC Blocking Voltage Ta=100°C  | 10         |      |      |      |            |      |      |       | mA    |
| Typical Junction Capacitance (Note1)   | 110        |      |      |      |            |      |      |       | pF    |
| Typical Thermal Resistance R JA (Note 2)   | 50         |      |      |      |            |      |      |       | °C/W  |
| Operating Temperature Range Tj   | -65 — +125 |      |      |      | -65 — +150 |      |      |       | °C    |
| Storage Temperature Range Tstg   | -65 — +150 |      |      |      |            |      |      |       | °C    |

### NOTES:

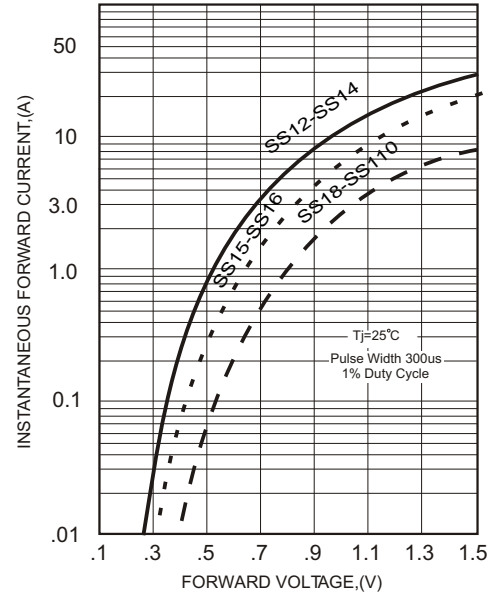
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

**RATING AND CHARACTERISTIC CURVES**

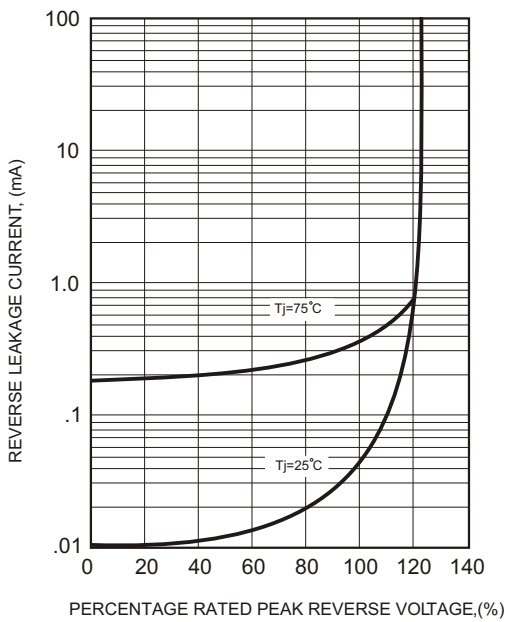
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



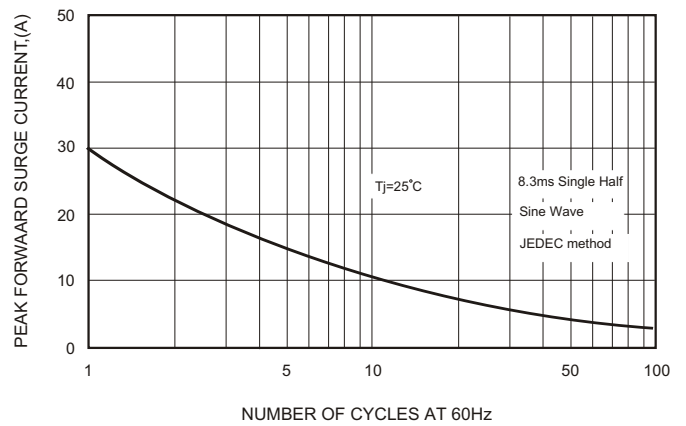
**FIG.2-TYPICAL FORWARD CHARACTERISTICS**



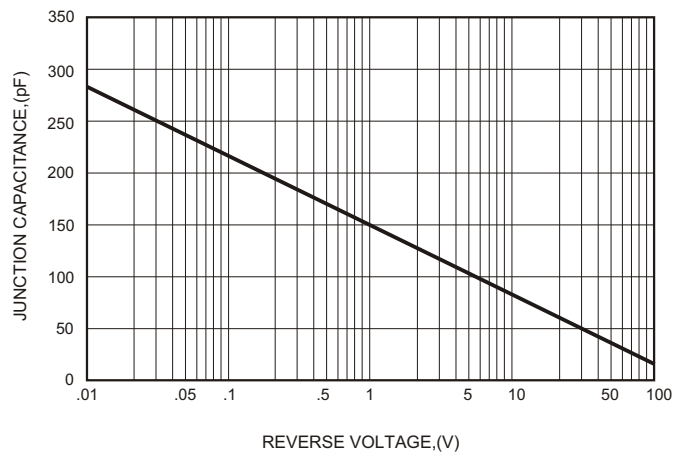
**FIG.3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



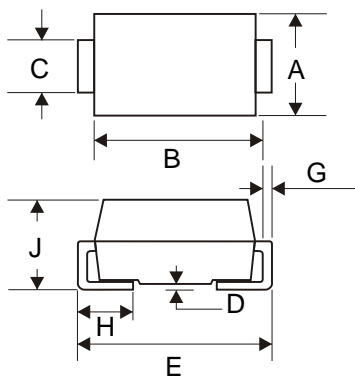
Soldering parameters

| Reflow Condition  |                                   | Pb-Free assembly<br>(see as below) |
|---|-----------------------------------|------------------------------------|
| Pre Heat  | -Temperature Min ( $T_{s(min)}$ ) | +150°C                             |
|   | -Temperature Max( $T_{s(max)}$ )  | +200°C                             |
|   | -Time (Min to Max) (ts)           | 60-180 secs.                       |
| Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak) |                                   | 3°C/sec. Max                       |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate                    |                                   | 3°C/sec. Max                       |
| Reflow  | -Temperature( $T_L$ )(Liquid us)  | +217°C                             |
|   | -Temperature( $t_L$ )             | 60-150 secs.                       |
| Peak Temp ( $T_P$ )                                     |                                   | +260(+0/-5)°C                      |
| Time within 5°C of actual Peak Temp ( $t_p$ )           |                                   | 30 secs. Max                       |
| Ramp-down Rate  |                                   | 6°C/sec. Max                       |
| Time 25°C to Peak Temp ( $T_P$ )                        |                                   | 8 min. Max                         |
| Do not exceed   |                                   | +260°C                             |

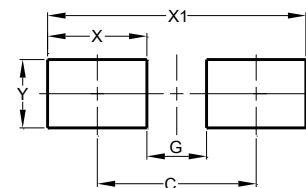


Package Dimensions & Suggested Pad Layout

SMA



| SMA                  |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.40 | 2.79 |
| B                    | 3.99 | 4.50 |
| C                    | 1.32 | 1.47 |
| D                    | -    | 0.20 |
| E                    | 4.93 | 5.28 |
| G                    | 0.15 | 0.31 |
| H                    | 0.76 | 1.52 |
| J                    | 1.98 | 2.29 |
| All Dimensions in mm |      |      |



| Dimensions | Value (in mm) |
|------------|---------------|
| C          | 4.20          |
| G          | 1.90          |
| X          | 2.30          |
| X1         | 6.50          |
| Y          | 2.00          |

Tape & reel specification

| Tape |  | Symbol            | Dimension (mm) |
|------|--|-------------------|----------------|
|      |  | P0                | 4.00±0.20      |
|      |  | P1                | 4.00±0.20      |
|      |  | P2                | 2.00±0.20      |
|      |  | D0                | 1.60±0.20      |
|      |  | D1                | 1.60±0.20      |
|      |  | E                 | 1.75±0.20      |
|      |  | F                 | 5.50±0.15      |
|      |  | W                 | 12.00±0.25     |
|      |  | A0                | 2.75±0.20      |
|      |  | B0                | 5.25±0.20      |
|      |  | K0                | 2.45±0.25      |
|      |  | T                 | 0.20±0.10      |
|      |  | 7" Reel           |                |
|      |  | D3                | 55.0Min.       |
|      |  | D4                | 14.0±2.5       |
|      |  | W1                | 14.0±2.5       |
|      |  | Quantity: 2000PCS |                |
|      |  | 13" Reel          |                |
|      |  | D6                | 73.0Min.       |
|      |  | D7                | 14.0±2.5       |
|      |  | W2                | 14.0±2.5       |
|      |  | Quantity: 5000PCS |                |