



RoHS
COMPLIANCE

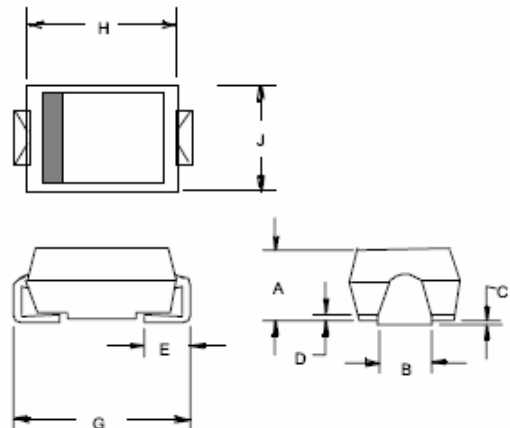


Features

- ✧ For surface mounted application
- ✧ Easy pick and place
- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed:
260°C / 10 seconds at terminals
- ✧ Plastic material used carriers Underwriters
Laboratory Classification 94V-0
- ✧ Green compound with suffix "G" on packing code &
prefix "G" on datecode.

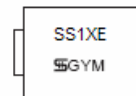
Mechanical Data

- ✧ Cases: SMAE Molded plastic
- ✧ Terminals: Lead free Finish
- ✧ Polarity: Indicated by cathode band.
- ✧ Weight: 0.072 grams



| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .079 | .096 | 2.01 | 2.44 | |
| B | .050 | .075 | 1.27 | 1.90 | |
| C | .002 | .008 | .05 | .20 | |
| D | -- | .02 | -- | .51 | |
| E | .030 | .060 | .76 | 1.52 | |
| G | .189 | .208 | 4.80 | 5.30 | |
| H | .157 | .180 | 4.00 | 4.57 | |
| J | .090 | .115 | 2.29 | 2.92 | |

Marking Diagram



SS1XE = Specific Device Code
G = Green Compound
Y = Year
M = Work Month

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 | SS 12E | SS 13E | SS 14E | SS 15E | SS 16E | SS 19E | SS 110E | SS 115E | Units |
|---|--|-------------|--------|--------|--------|--------|--------|---------|---------|--------------|
| Maximum Recurrent 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 @ T_L (See Fig. 1) | $I_{(AV)}$ | 1.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 30 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage (Note 1) $I_F = 1.0A @ T_a = 25^\circ C$ | V_F | 0.60 | | 0.70 | | 0.85 | | | V | |
| Maximum DC Reverse Current @ $T_a = 25^\circ C$ @ $T_a = 100^\circ C$ | I_R | 0.5 | | | | | 20 | | | mA |
| Typical Junction Capacitance(Note 3) | C_j | 110 | | | | | 30 | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta_{JA}}$ $R_{\theta_{JL}}$ | 84 | | | | | 28 | | | $^\circ C/W$ |
| Operating Temperature Range | T_J | -55 to +125 | | | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | | | $^\circ C$ |

Notes: 1. Pulse Test with PW=300u sec, 1% Duty Cycle.

2. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

3. Measured at f=1.0MHz, VR= 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SS12E - SS115E)

FIG.1 Maximum Forward Current Derating Curve

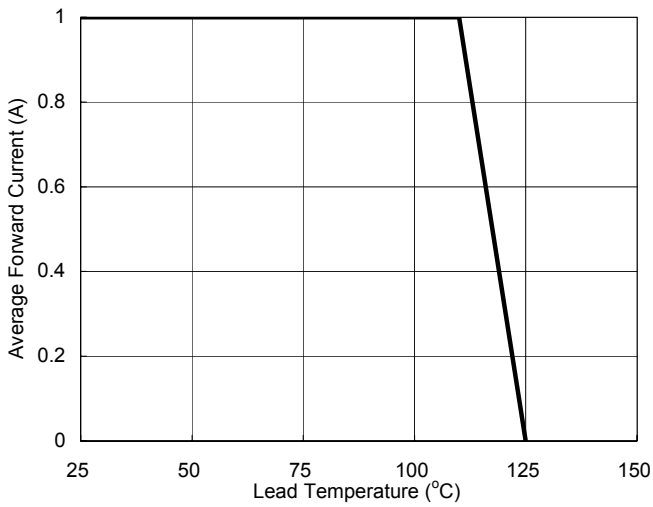


FIG 2 Maximum Forward Surge Current

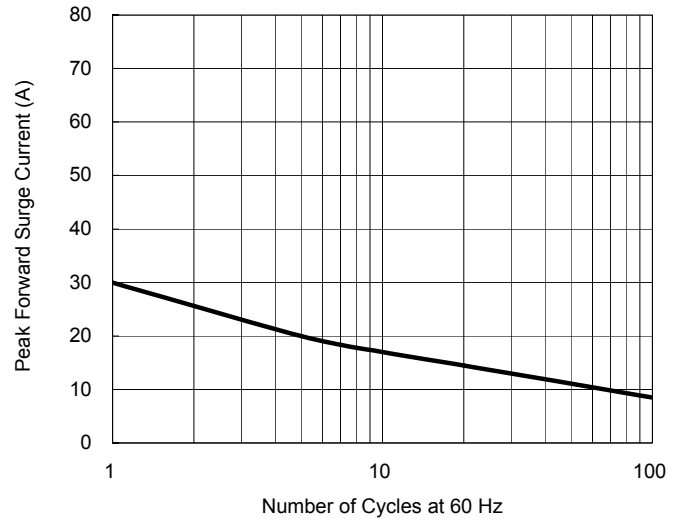


FIG 3 TYPICAL FORWARD CHARACTERISTICS

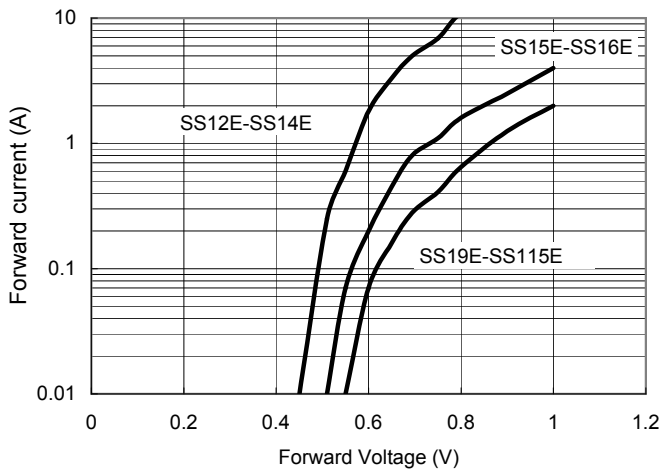


FIG 4 TYPICAL REVERSE LEAKAGE CHARACTERISTICS

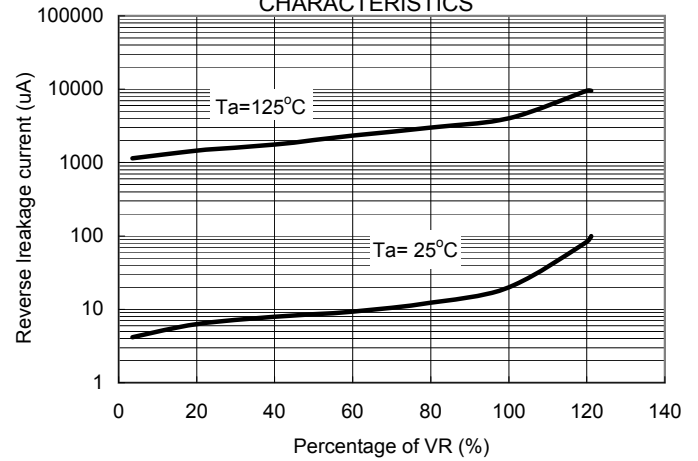
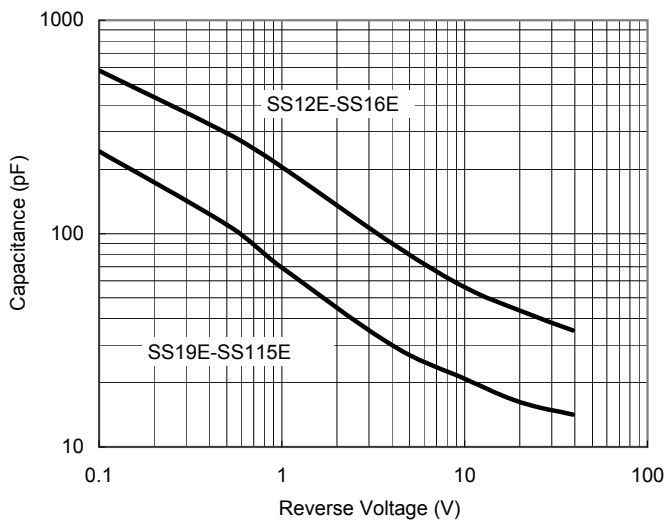


FIG 5 Typical Junction Capacitance



臺灣半導體股份有限公司

Taiwan Semiconductor Co. LTD

DATA Sheet History 變更記錄表

Part No : SS12E – SS115E

| 日期 Date | 版本 Version | 變更內容 Revised description | 變更原因 Revised Reason |
|------------|---------------|-----------------------------|------------------------|
| Jul. 24/09 | A | Initial Issue | |
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