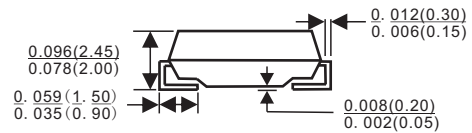
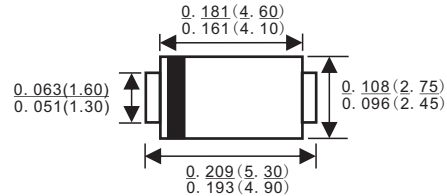




### Features

- ✧ For surface mounted application
- ✧ Easy pick and place
- ✧ Metal to silicon rectifier, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High surge current capability
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering: 260°C / 10 seconds at terminals

### SMA/DO-214AC



Dimensions in inches and (millimeters)

### Mechanical Data

- ✧ Case: JEDEC SMA/DO-214AC Molded plastic
- ✧ Terminals: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape
- ✧ Weight: 0.064 gram

### 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%

| Parameter  | Symbol          | SS          | SS       | SS       | SS       | SS       | SS          | SS        | SS        | SS        | SS   | Units |
|--|-----------------|-------------|----------|----------|----------|----------|-------------|-----------|-----------|-----------|------|-------|
|  |                 | 12A         | 13A      | 14A      | 15A      | 16A      | 18A         | 110A      | 115A      | 120A      |      |       |
| Marking code   |                 | SS<br>12    | SS<br>13 | SS<br>14 | SS<br>15 | SS<br>16 | SS<br>18    | SS<br>110 | SS<br>115 | SS<br>120 |      |       |
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$       | 20          | 30       | 40       | 50       | 60       | 90          | 100       | 150       | 200       |      | V     |
| Maximum RMS Voltage  | $V_{RMS}$       | 14          | 21       | 28       | 35       | 42       | 56          | 70        | 105       | 150       |      | V     |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 20          | 30       | 40       | 50       | 60       | 80          | 100       | 150       | 200       |      | V     |
| Maximum Average Forward Rectified Current at $T_L$ (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) $I_F=1.0A$ @ 25°C                                   | $V_F$           | 0.55        |          | 0.70     |          |          | 0.85        |           |           |           | V    |       |
| Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$     | $I_R$           | 0.4         |          |          | 0.1      |          |             |           |           |           | mA   |       |
|  |                 | 10          |          |          | 5.0      |          |             | 2.0       |           |           | mA   |       |
| Maximum DC Reverse Current at $V_R=33V$ & $T_A=50^\circ C$   | $HT_{IR}$       | -           |          |          | 5.0      |          |             |           |           |           | uA   |       |
| Typical Junction Capacitance (Note 3)  | $C_j$           | 50          |          |          |          |          |             |           |           |           | pF   |       |
| Typical Thermal Resistance ( Note 2 )  | $R_{\theta JL}$ | 28          |          |          |          |          |             |           |           |           | °C/W |       |
|  | $R_{\theta JA}$ | 88          |          |          |          |          |             |           |           |           |      |       |
| Operating Temperature Range  | $T_J$           | -55 to +150 |          |          |          |          | -55 to +175 |           |           |           |      | °C    |
| Storage Temperature Range  | $T_{STG}$       | -55 to +150 |          |          |          |          | -55 to +175 |           |           |           |      | °C    |

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



### RATINGS AND CHARACTERISTIC CURVES (SS12 THRU SS120)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

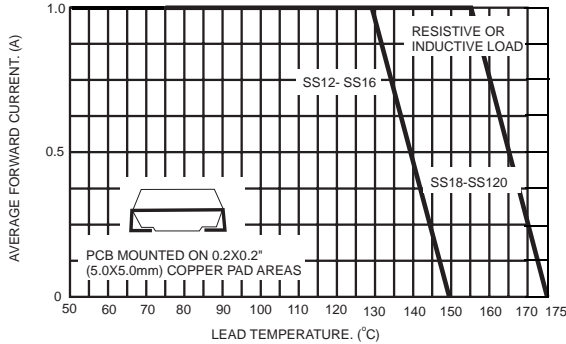


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

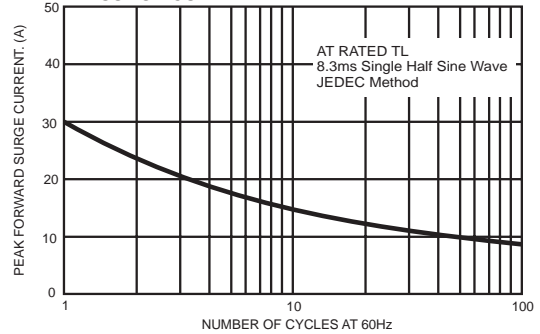


FIG.3- TYPICAL FORWARD CHARACTERISTICS

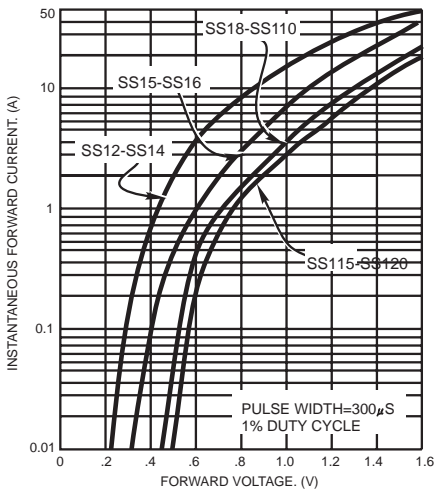


FIG.4- TYPICAL REVERSE CHARACTERISTICS

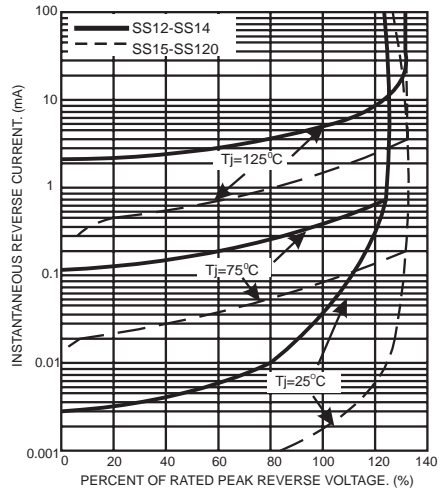


FIG.5- TYPICAL JUNCTION CAPACITANCE

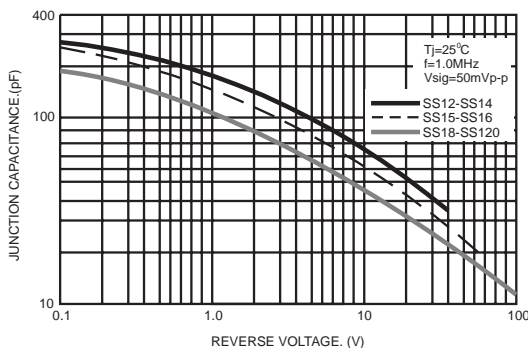
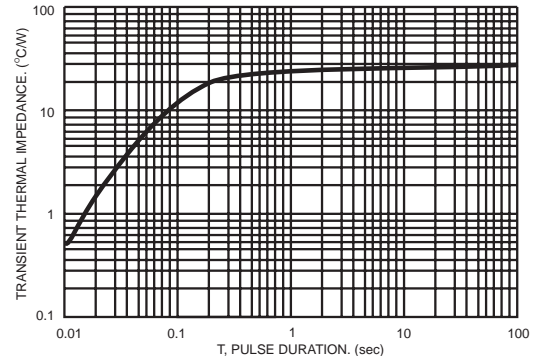


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



| PACKAGE | SPQ/PCS   | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| SMA     | 5000/REEL | 80000          | 36X30.6X31     | 12.00        | 11.00        |