


**RoHS**  
COMPLIANCE


## SK22A - SK215A

### 2.0AMPS. Surface Mount Schottky Barrier Rectifier

#### SMA/DO-214AC

### Features

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

### Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminal: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 8mm tape per EIA STD RS-481
- ✧ Weight: 0.067 grams

### Maximum Ratings and Electrical Chara

Rating at 25 °C ambient temperature unless otherwise specified.

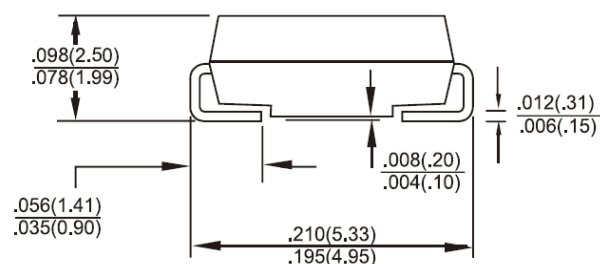
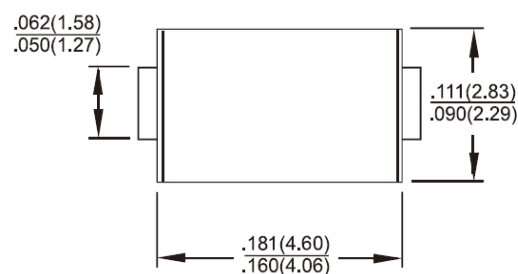
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number                                                                                                                             | Symbol             | SK 22A        | SK 23A | SK 24A | SK 25A | SK 26A        | SK 29A | SK 210A | SK 215A | Unit |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------|--------|--------|--------|---------------|--------|---------|---------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                                                  | V <sub>RRM</sub>   | 20            | 30     | 40     | 50     | 60            | 90     | 100     | 150     | V    |
| Maximum RMS Voltage                                                                                                                     | V <sub>RMS</sub>   | 14            | 21     | 28     | 35     | 42            | 63     | 70      | 105     | V    |
| Maximum DC Blocking Voltage                                                                                                             | V <sub>DC</sub>    | 20            | 30     | 40     | 50     | 60            | 90     | 100     | 150     | V    |
| Maximum Average Forward Rectified Current at T <sub>L</sub> (See Fig. 1)                                                                | I <sub>F(AV)</sub> | 2             |        |        |        |               |        |         |         | A    |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load                                                     | I <sub>FSM</sub>   | 50            |        |        |        |               |        |         |         | A    |
| Maximum Instantaneous Forward Voltage (Note 1) @ 2 A                                                                                    | V <sub>F</sub>     | 0.50          |        |        | 0.70   |               | 0.85   |         | 0.95    | V    |
| Maximum DC Reverse Current @ T <sub>A</sub> =25 °C<br>at Rated DC Blocking Voltage @ T <sub>A</sub> =100 °C<br>@ T <sub>A</sub> =125 °C | I <sub>R</sub>     | 0.5           |        |        |        | 0.1           |        |         |         | mA   |
|                                                                                                                                         |                    | 10            |        | 5      |        | -             |        |         |         | mA   |
|                                                                                                                                         |                    | -             |        |        |        | 2.0           |        |         |         | mA   |
| Non-repetitive Peak Revwese Avalanche Energy L=40mH Ta=25°C max prior to surge, Inductive load switch off                               | E <sub>RSM</sub>   | 20            |        |        |        |               |        |         |         | mJ   |
| Typical Junction Capecitance                                                                                                            | C <sub>j</sub>     | 130           |        |        |        |               | 50     |         |         | pF   |
| Typical Thermal Resistance (Note 2)                                                                                                     | R <sub>θJA</sub>   | 88            |        |        |        |               |        |         |         | °C/W |
| Operating Temperature Range                                                                                                             | T <sub>J</sub>     | - 65 to + 125 |        |        |        | - 65 to + 150 |        |         |         | °C   |
| Storage Temperature Range                                                                                                               | T <sub>STG</sub>   | - 65 to + 150 |        |        |        |               |        |         |         | °C   |

Note 1: Pulse Test with  $PW=300\mu\text{sec}$ , 1% Duty Cycle

Note 2: Measured on P.C.Board with  $0.2" \times 0.2"$  (5.0mm x 5.0mm) Copper Pad Areas.



### Dimensions in inches and (millimeters)

#### Marking Diagram



SK2XA = Specific Device Code

G = Green Compound

Y = Year

M = Work Month

## RATINGS AND CHARACTERISTIC CURVES (SK22A THRU SK215A)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

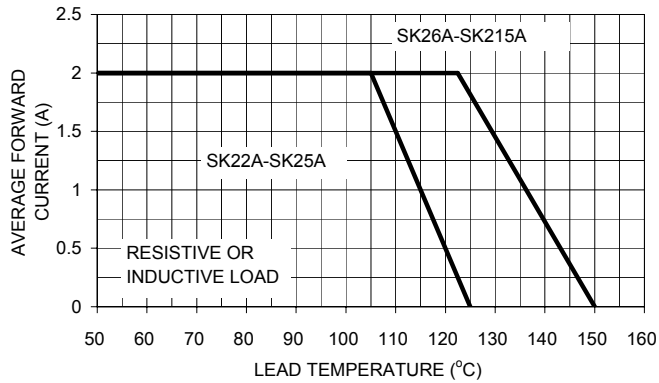


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

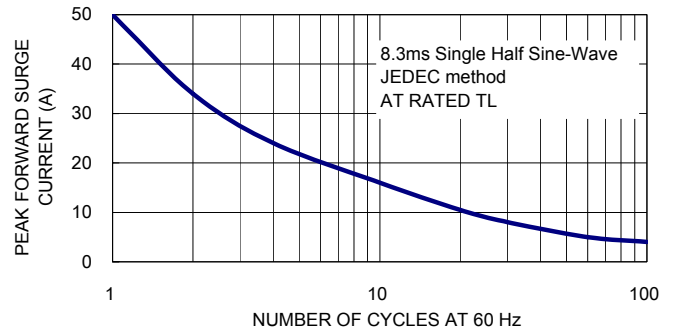


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

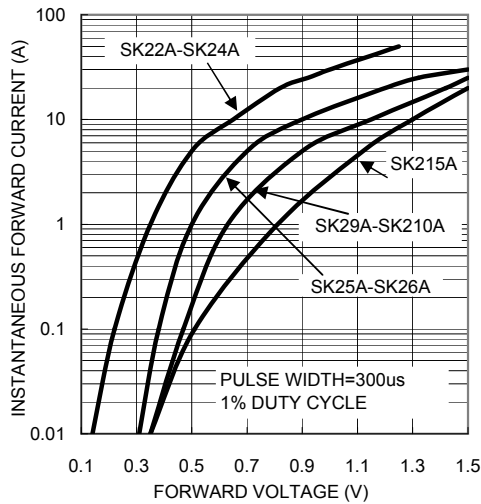


Fig. 4- TYPICAL REVERSE CHARACTERISTICS

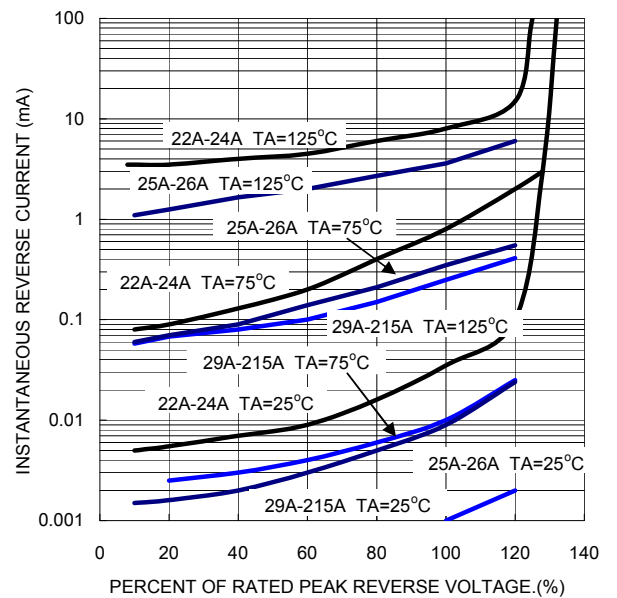


FIG. 5- TYPICAL JUNCTION CAPACITANCE

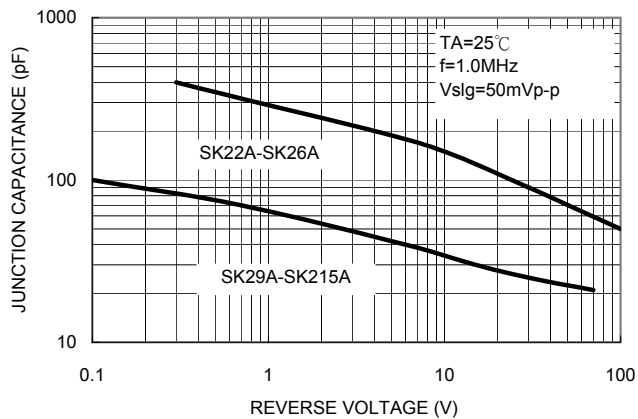


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

