

### ■ Features

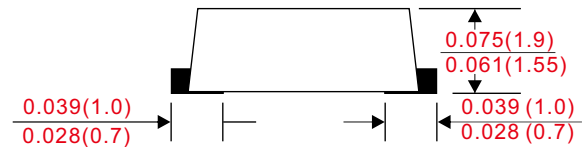
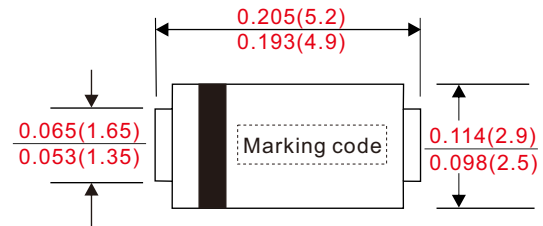
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Suffix "G" indicates Halogen-free part, ex. SKL22ASG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### ■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AC / SMAS
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.002 ounce, 0.055 gram

### ■ Outline

SMAS(DO-214AC)



Dimensions in inches and (millimeters)

### ■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter                  | Conditions                                                           | Symbol          | MIN. | TYP. | MAX. | UNIT |
|----------------------------|----------------------------------------------------------------------|-----------------|------|------|------|------|
| Forward rectified current  | See Fig.1                                                            | $I_O$           |      |      | 2.0  | A    |
| Forward surge current      | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$       |      |      | 70   | A    |
| Reverse current            | $V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$                             | $I_R$           |      |      | 0.5  | mA   |
|                            | $V_R = V_{RRM}$ $T_A = 100^\circ\text{C}$                            |                 |      |      | 20   |      |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage                             | $C_J$           |      | 30   |      | pF   |
| Thermal resistance         | Junction to ambient                                                  | $R_{\theta JA}$ |      | 50   |      | °C/W |
| Storage temperature        |                                                                      | $T_{STG}$       | -55  |      | +150 | °C   |

| Symbol   | Marking code | Max. repetitive peak reverse voltage $V_{RRM}$ (V) | Max. RMS voltage $V_{RMS}$ (V) | Max. DC blocking voltage $V_R$ (V) | Max. forward voltage @2A, $T_A = 25^\circ\text{C}$ $V_F$ (V) | Operating Junction temperature $T_J$ (°C) |
|----------|--------------|----------------------------------------------------|--------------------------------|------------------------------------|--------------------------------------------------------------|-------------------------------------------|
| SKL22AS  | KL22         | 20                                                 | 14                             | 20                                 | 0.40                                                         | -55 ~ +150                                |
| SKL24AS  | KL24         | 40                                                 | 28                             | 40                                 | 0.45                                                         |                                           |
| SKL26AS  | KL26         | 60                                                 | 42                             | 60                                 | 0.55                                                         |                                           |
| SKL210AS | KL210        | 100                                                | 70                             | 100                                | 0.75                                                         |                                           |
| SKL215AS | KL215        | 150                                                | 105                            | 150                                | 0.82                                                         | -55 ~ +175                                |
| SKL220AS | KL220        | 200                                                | 140                            | 200                                | 0.85                                                         |                                           |

### ■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

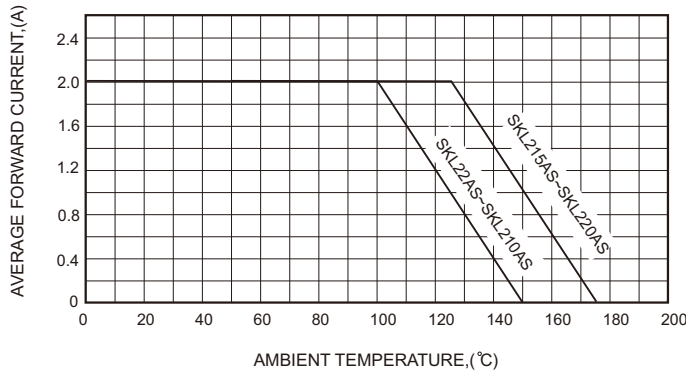


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

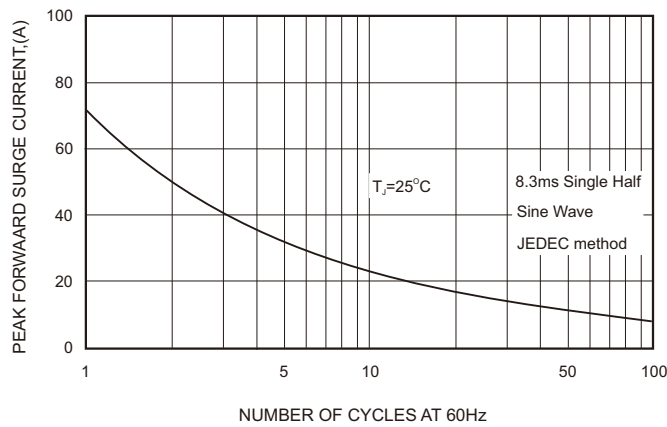


FIG.4-TYPICAL JUNCTION CAPACITANCE

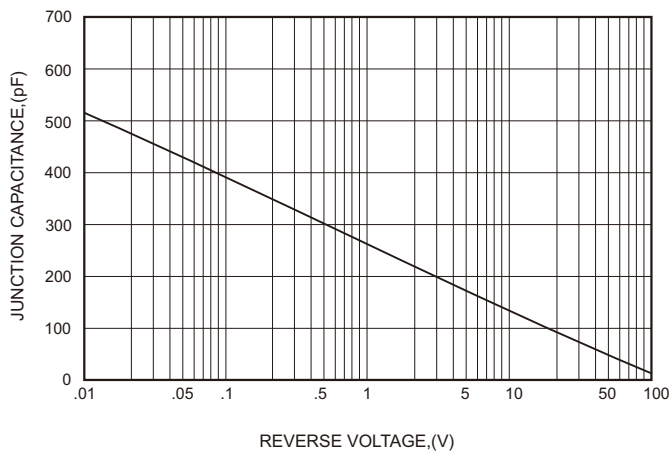


FIG.2-TYPICAL FORWARD CHARACTERISTICS

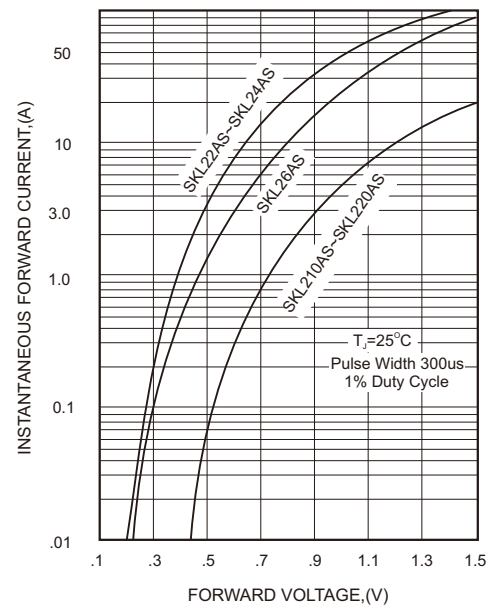
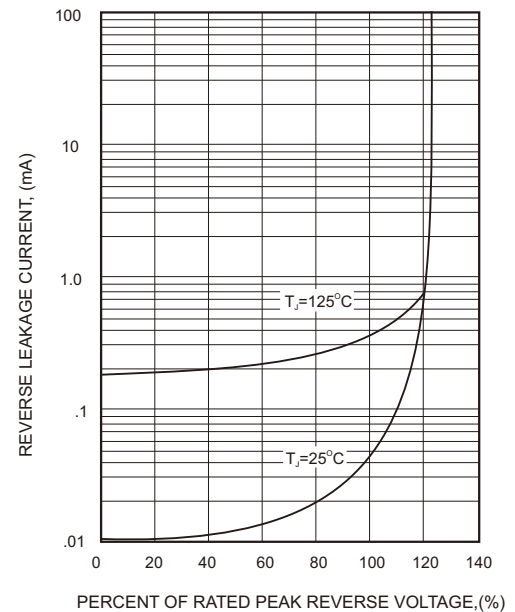
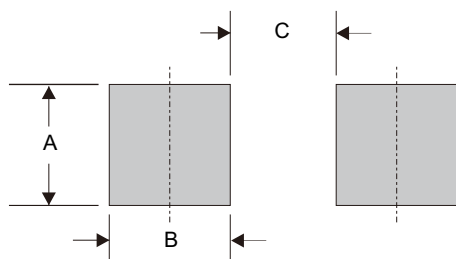


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



### ■ SMAS foot print



| A            | B            | C            |
|--------------|--------------|--------------|
| 0.063 (1.60) | 0.059 (1.50) | 0.110 (2.80) |

Dimensions in inches and (millimeters)

- CITC reserves the right to make changes to this document and its products and specifications at any time without notice.
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- CITC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does CITC assume any liability for application assistance or customer product design.
- CITC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
- No license is granted by implication or otherwise under any intellectual property rights of CITC.
- CITC products are not authorized for use as critical components in life support devices or systems without express written approval of CITC.