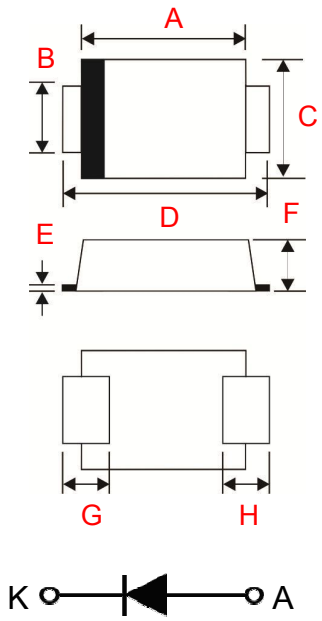
# *Surface Mount Schottky Barrier Rectifier*

## Package Outline Dimensions ( millimeters )




| SMA-S | | |
|---|---|---|
| Dim. | Min. | Max. |
| A | 3.40 | 3.90 |
| B | 1.35 | 1.65 |
| C | 2.45 | 2.75 |
| D | 4.45 | 4.75 |
| E | 0.10 | 0.20 |
| F | 0.90 | 1.10 |
| G | 0.75 | 2.05 |
| H | 0.75 | 2.05 |
| All Dimensions in millimeter | | |

## Features

- High Current Capability
- Low Switching Noise
- High Surge Capability
- Low Power Loss & High Efficiency
- Guard Ring Protection
- Pd-free lead plating & Halogen-free part

## Mechanical

- Molded Plastic Low profile SMA-S
- Plastic materials used carries underwriters laboratory flammability classification 94V-0
- Lead Temperature for Soldering Purposes : 265℃ Max. for 10 Seconds
- Device Weight : 0.002 ounces (0.064 grams)

## Maximum Ratings & Electrical Characteristics ( $T_A$ = 25℃ unless otherwise specified )

| Parameter | Symbol | SK110A-S | SK115A-S | SK120A-S | Units |
|---|---|---|---|---|---|
| Marking Code | | SK110 | SK115 | SK120 | |
| DC Blocking Voltage | $V_{RM}$ | 100 | 150 | 200 | Volts |
| Working Peak Reverse Voltage | $V_{RWM}$ | 70 | 105 | 140 | |
| Peak Repetitive Reverse Voltage | $V_{RRM}$ | 100 | 150 | 200 | |
| Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle | $I_{F(AV)}$ | 1 | | | Amps |
| Non-Repetitive Peak Forward Surge Current (Surge applied at rated load conditions half wave, single phase, 60Hz) | $I_{FSM}$ | 30 | | | Amps |
| Instantaneous Forward Voltage $I_F$ = 1A , $T_A$ = 25℃ | $V_F$ | 0.85 | 0.87 | 0.9 | Volts |
| Instantaneous Reverse Current $V_R = V_{RRM}$ , $T_A$ = 25℃ | $I_R$ | 0.5 | | | mA |
| $V_R = V_{RRM}$ , $T_A$ = 100℃ | | 20.0 | | | |
| Total Capacitance $V_R$ = 4V , f = 1MHz | $C_T$ | 260 | | | pF |

NOTE : 1.FR-4 PCB, 2 oz Copper. Minimum recommended pad layout

2.Polymide PCB, 2 oz Copper. Cathode pad dimensions 18.8x14.4mm , Anode pad dimensions 5.6x14.4mm

## Thermal Characteristics ( $T_A$ = 25℃ unless otherwise specified )

| Parameter | Symbol | Value | Units |
|---|---|---|---|
| Maximum Thermal Resistance Junction to Terminal | $R\theta_{JT}$ | 25 | ℃ / W |
| Operating & Storage Junction Temperature | $T_J$ | 150 | ℃ |
| | $T_{STG}$ | - 65 to +150 | |

## Ratings and Characteristics Curves ( $T_A$ = 25℃ unless otherwise specified )

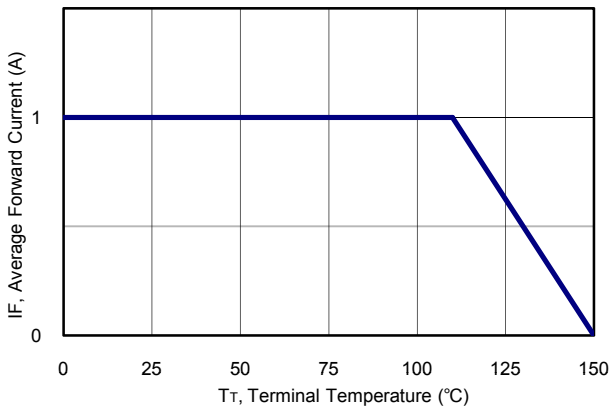



Figure 1: Current Derating Curves

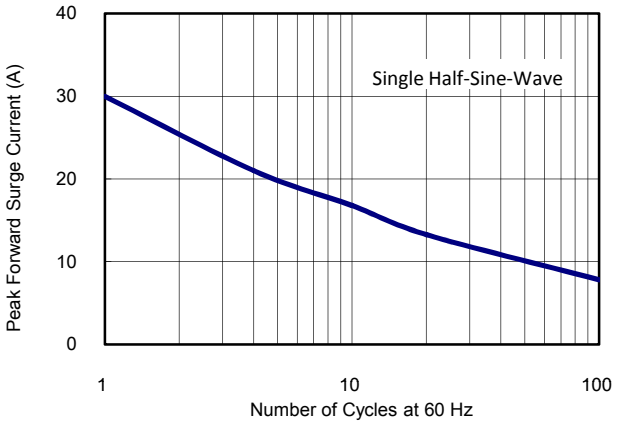



Figure 2: Peak Forward Surge Current

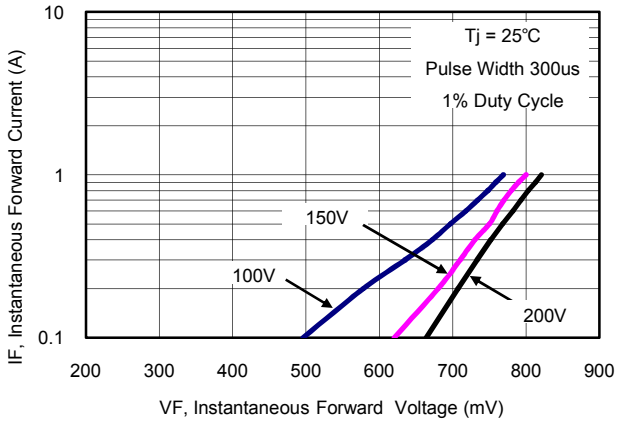



Figure 3: Typical Forward Characteristics

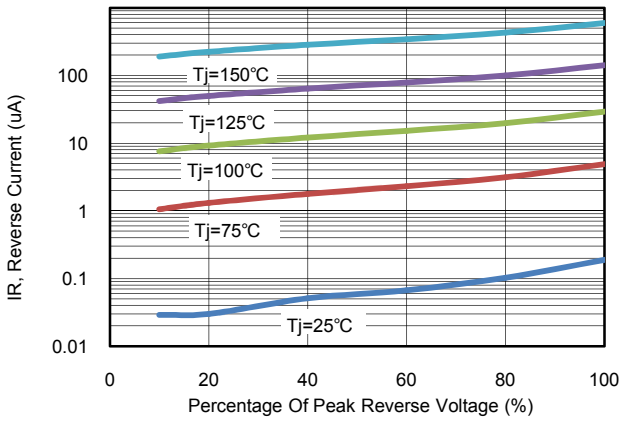
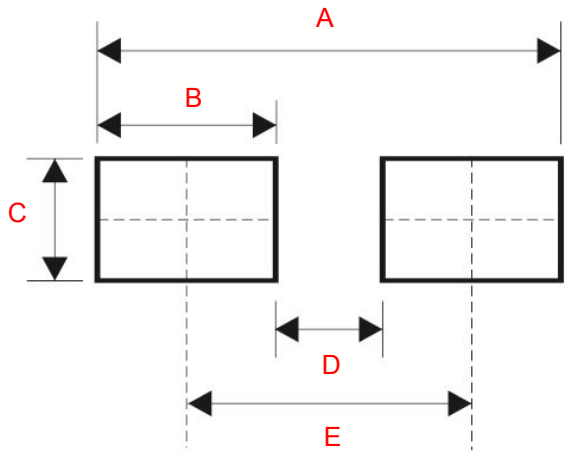



Figure 4: Typical Reverse Characteristics

## Suggested Pad Layout



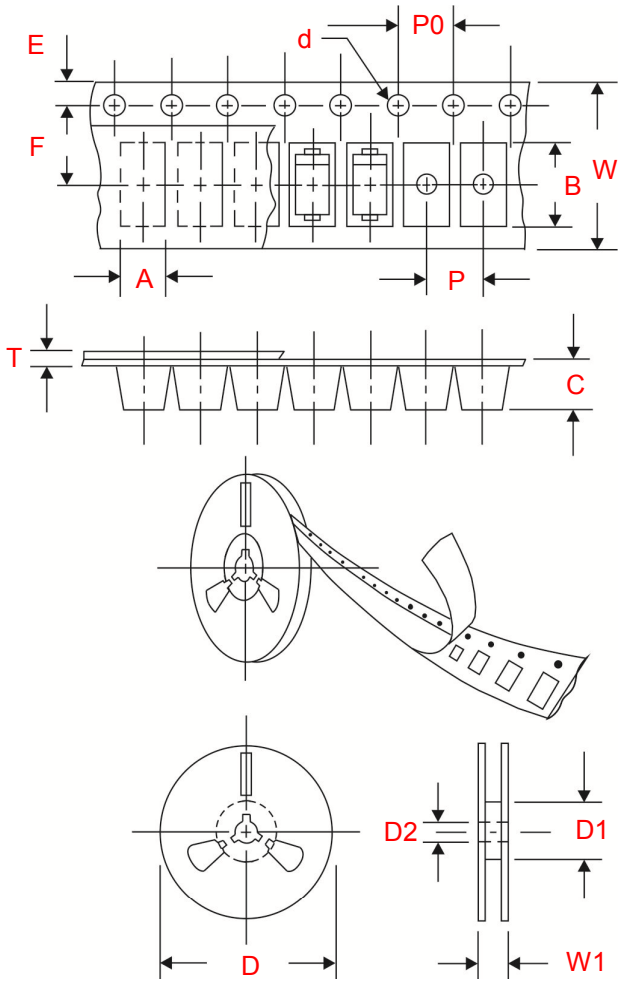

| SMA-S | |
|---|---|
| Symbol | Dimensions |
| A | 6.50 |
| B | 2.50 |
| C | 1.70 |
| D | 1.50 |
| E | 4.00 |
| All Dimensions in millimeter | |

## Ordering information

| Part Number | Package | Delivery mode |
|---|---|---|
| SK110A-S THRU SK120A-S | SMA-S | 3,000 pieces / 7" Reel |

## Tape and Reel Dimensions ( millimeters )

Surface Mount Device are packed in accordance with EIA standard RS-481-D and specification.




| Item | Symbol | Dimensions (mm) |
|---|---|---|
| | | SMA-S |
| Carrier width | A | 2.65 ± 0.1 |
| Carrier length | B | 5.25 ± 0.1 |
| Carrier depth | C | 1.35 ± 0.1 |
| Sprocket hole | d | 1.5 ± 0.1 |
| Reel outside diameter | D | 178.0 ± 1.0 |
| Reel inner diameter | D1 | 60.0 ± 1.0 |
| Feed hole diameter | D2 | 13.0 ± 1.0 |
| Stocket hole position | E | 1.75 ± 0.1 |
| Punch hole position | F | 5.5 ± 0.05 |
| Punch hole pitch | P | 4.0 ± 0.1 |
| Sprocket hole pitch | P0 | 4.0 ± 0.1 |
| Totall tape thickness | T | 0.23 ± 0.1 |
| Tape width | W | 12 ± 0.10 |
| Reel width | W1 | 12.0 ± 1.5 |

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