# SS12 THRU SS1200

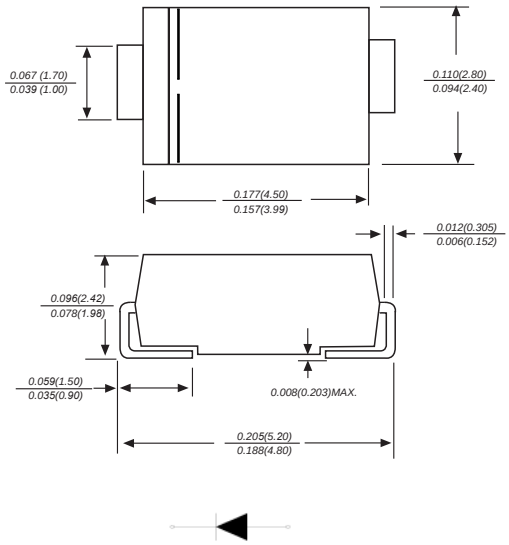
**Reverse Voltage - 20 to 200 Volts  Forward Current - 1.0 Ampere**

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

## Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Metal silicon junction,majority carrier conduction
- Low power loss,high efficiency
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250 °C/10 seconds at terminals

**DO-214AC/SMA**




Dimensions in inches and (millimeters)

## Mechanical Data

Case : JEDEC DO-214AC/SMA molded plastic body
Terminals : Solderable per MIL-STD-750,Method 2026
Polarity : Color band denotes cathode end Mounting
Position : Any
Weight : 0.002 ounce, 0.07 grams

## Maximum Ratings And Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Parameter / Marking Code | SYMBOLS | MDD SS12 | MDD SS13 | MDD SS14 | MDD SS15 | MDD SS16 | MDD SS18 | MDD SS110 | MDD SS1150 | MDD SS1200 | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum RMS voltage | $V_{RMS}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum average forward rectified current | $I_{(AV)}$ | 1.0 | | | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method) | $I_{FSM}$ | 25 | | | | | | | | | A |
| Maximum instantaneous forward voltage at 1.0A | $V_F$ | 0.55 | | | 0.70 | | 0.85 | | 0.9 | | V |
| Maximum DC reverse current $T_A$=25℃ / at rated DC blocking voltage $T_A$=100℃ | $I_R$ | 0.3 / 10.0 | | | | | 0.2 / 5.0 | | 0.1 / 2.0 | | mA |
| Typical junction capacitance (NOTE 1) | $C_J$ | 110 | | | 80 | | | | | | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 90.0 | | | | | | | | | ℃/W |
| Operating junction temperature range | $T_J$ | -55 to +150 | | | | | | | | | ℃ |
| Storage temperature range | $T_{STG}$ | -55 to +150 | | | | | | | | | ℃ |

**Note:**1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.P.C.B. mounted with 2.0"x2.0"(5.0x5.0cm) copper pad areas

## Typical Characterisitics

**Fig.1 Forward Current Derating Curve**

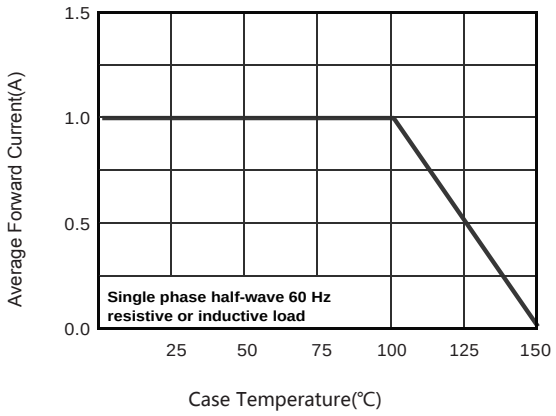



**Fig.2 Typical Reverse Characteristics**

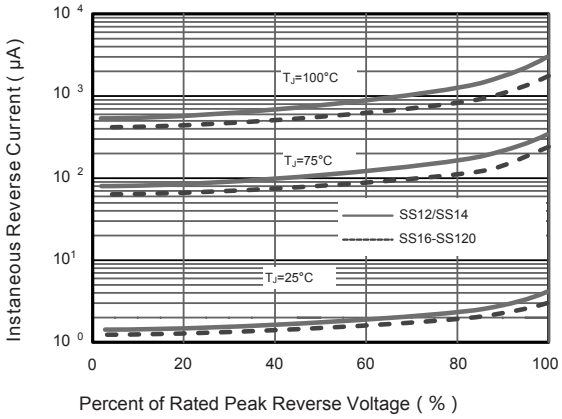



**Fig.3 Typical Forward Characteristic**

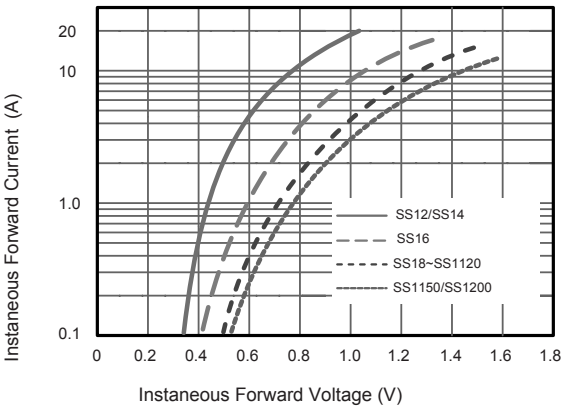



**Fig.4 Typical Junction Capacitance**

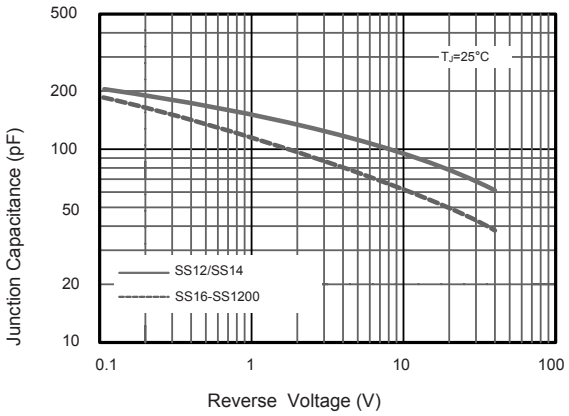



**Fig.5 Maximum Non-Repetitive Peak Forward Surage Current**

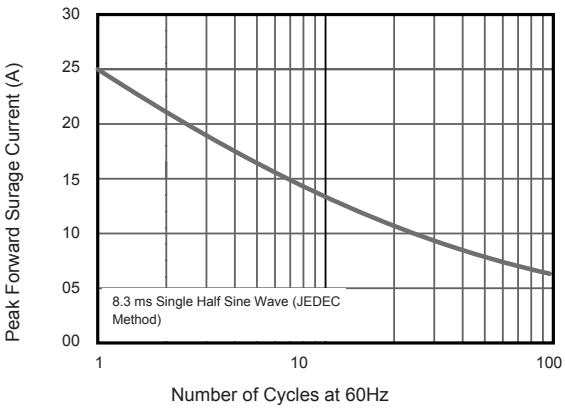
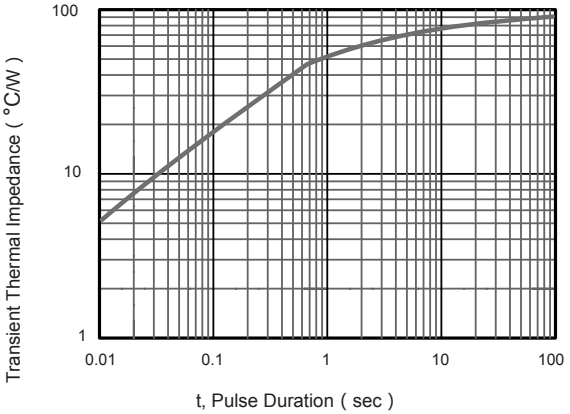
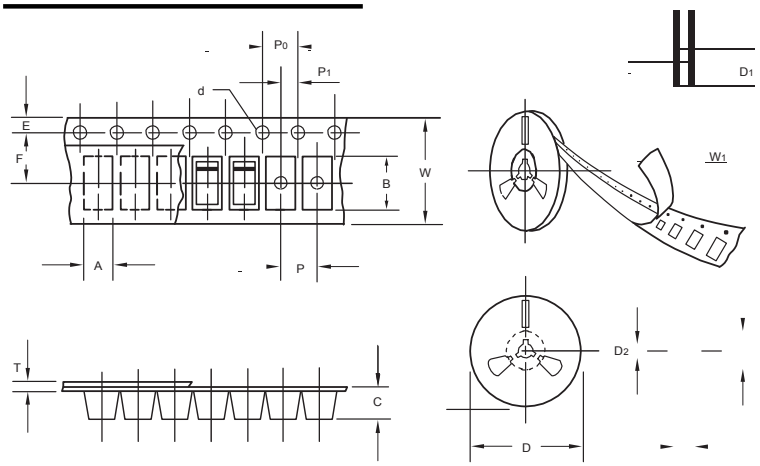



**Fig.6- Typical Transient Thermal Impedance**




The curve above is for reference only.

## Packing information




unit:mm

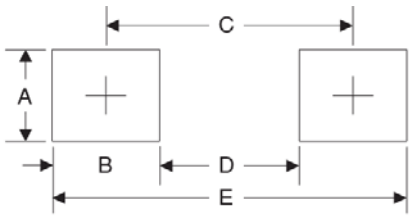
| Item | Symbol | Tolerance | SMA |
|---|---|---|---|
| Carrier width | A | 0.1 | 2.80 |
| Carrier length | B | 0.1 | 5.33 |
| Carrier depth | C | 0.1 | 2.36 |
| Sprocket hole | d | 0.05 | 1.50 |
| 13" Reel outside diameter | D | 2.0 | 330.00 |
| 13" Reel inner diameter | $D_1$ | min | 50.00 |
| 7" Reel outside diameter | D | 2.0 | 178.00 |
| 7" Reel inner diameter | $D_1$ | min | 62.00 |
| Feed hole diameter | $D_2$ | 0.5 | 13.00 |
| Sprocket hole position | E | 0.1 | 1.75 |
| Punch hole position | F | 0.1 | 5.50 |
| Punch hole pitch | P | 0.1 | 4.00 |
| Sprocket hole pitch | $P_0$ | 0.1 | 4.00 |
| Embossment center | $P_1$ | 0.1 | 2.00 |
| Overall tape thickness | T | 0.1 | 0.28 |
| Tape width | W | 0.3 | 12.00 |
| Reel width | $W_1$ | 1.0 | 18.00 |

**Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.**

## Reel packing

| PACKAGE | REEL SIZE | REEL (pcs) | COMPONENT SPACING (m/m) | BOX (pcs) | INNER BOX (m/m) | REEL DIA, (m/m) | CARTON SIZE (m/m) | CARTON (pcs) | APPROX. GROSS WEIGHT (kg) |
|---|---|---|---|---|---|---|---|---|---|
| SMA | 7" | 2,000 | 4.0 | 4,000 | 183*155*183 | 178 | 382*356*392 | 80,000 | 16.0 |
| SMA | 11" | 5,000 | 4.0 | 10,000 | 290*290*38 | 330 | 310*310*360 | 80,000 | 11.0 |
| SMA | 13" | 7,500 | 4.0 | 15,000 | 335*335*38 | 330 | 350*330*360 | 120,000 | 14.5 |

## Suggested Pad Layout




| Symbol | Unit (mm) | Unit (inch) |
|---|---|---|
| A | 1.68 | 0.066 |
| B | 1.52 | 0.060 |
| C | 3.90 | 0.154 |
| D | 2.41 | 0.095 |
| E | 5.45 | 0.215 |