

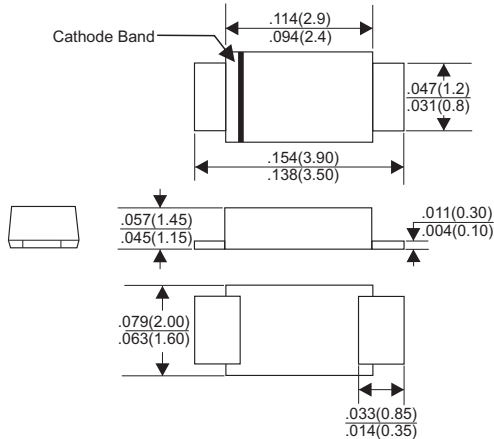


# DSS12 THRU DSS120

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

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

### SOD-123FL



Dimensions in inches and (millimeters)

## 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 0.375"(9.5mm) lead length,  
5 lbs.(2.3kg) tension

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Terminals :leads solderable per MIL-STD-750, Method 2026
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER  | DSS 12     | DSS 13 | DSS 14 | DSS 15 | DSS 16     | DSS 18 | DSS 100 | DSS 115 | DSS 120 | UNITS      |      |
|--|------------|--------|--------|--------|------------|--------|---------|---------|---------|------------|------|
| Maximum Recurrent Peak Reverse Voltage   | 20         | 30     | 40     | 50     | 60         | 80     | 100     | 150     | 200     | V          |      |
| Maximum RMS Voltage  | 14         | 21     | 28     | 35     | 42         | 56     | 70      | 105     | 140     | V          |      |
| Maximum DC Blocking Voltage  | 20         | 30     | 40     | 50     | 60         | 80     | 100     | 150     | 200     | V          |      |
| Maximum Average Forward Rectified Current  |            |        |        |        |            |        |         |         |         |            |      |
| See Fig. 1   |            |        |        |        |            |        |         |         |         | 1.0        | A    |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) |            |        |        |        |            |        |         |         |         | 25         | A    |
| Maximum Instantaneous Forward Voltage at 1.0A  | 0.55       |        | 0.70   |        | 0.85       |        | 0.92    |         |         | V          |      |
| Maximum DC Reverse Current Ta=25°C   |            |        |        |        |            |        |         |         |         | 0.05       | mA   |
| at Rated DC Blocking Voltage Ta=100°C  |            |        |        |        |            |        |         |         |         | 10         | mA   |
| Typical Junction Capacitance (Note1)   | 110        |        |        |        | 90         |        |         |         |         | pF         |      |
| Typical Thermal Resistance RθJA (Note 2)   |            |        |        |        |            |        |         |         |         | 80         | °C/W |
| Operating Temperature Range Tj   | -65 — +125 |        |        |        | -65 — +150 |        |         |         |         |            | °C   |
| Storage Temperature Range Tstg   |            |        |        |        |            |        |         |         |         | -65 — +150 | °C   |
| Marking code   | D12        | D13    | D14    | D15    | D16        | D18    | D110    | D115    | D120    |            |      |

### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

# RATING AND CHARACTERISTIC CURVES (DSS12 THRU DSS120)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

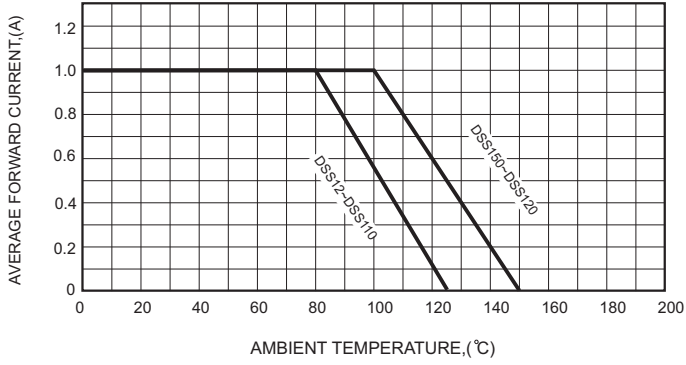


FIG.2-TYPICAL FORWARD CHARACTERISTICS

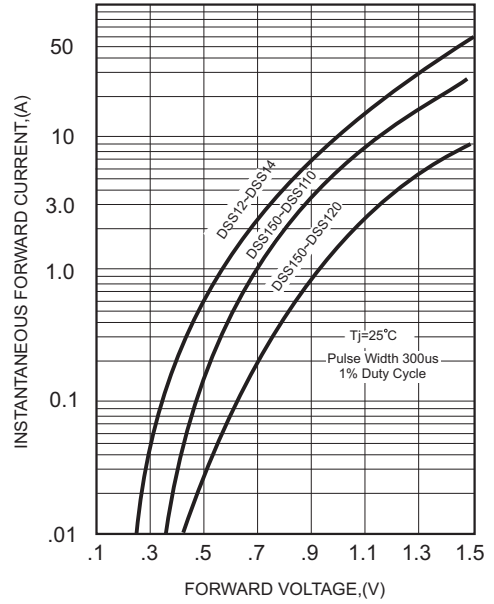


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

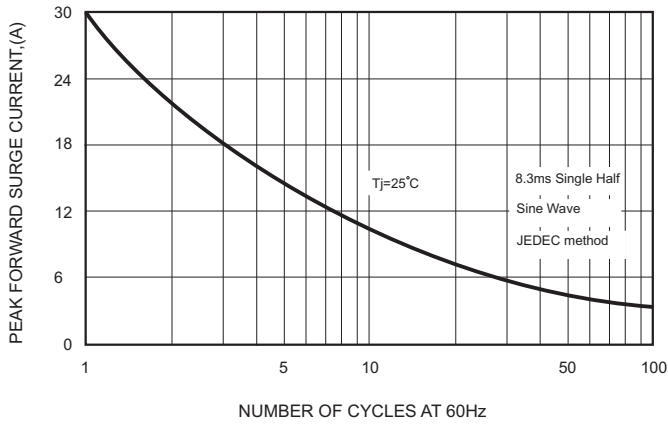


FIG.4-TYPICAL JUNCTION CAPACITANCE

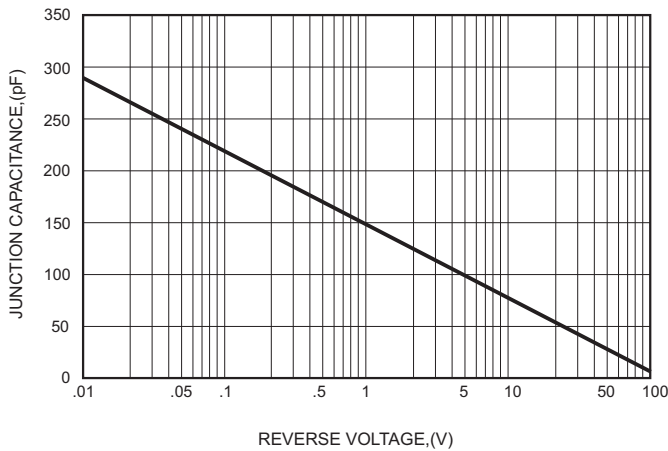


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

