

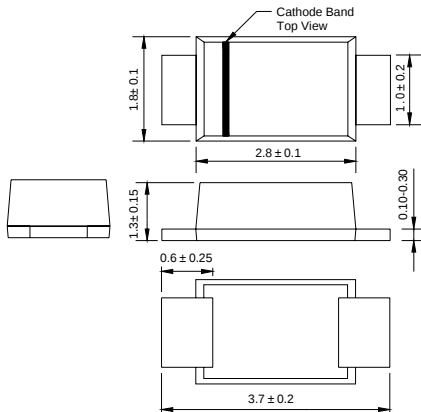


# DSS12 THRU DSS120

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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

### SOD-123FL



Dimensions in millimeters

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ 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:** JEDEC SOD-123FL molded plastic body

**Terminals:** Solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.0007 ounce, 0.02 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| MDD Catalog Number                                                                                          | SYMBOLS           | DSS12<br>D12 | DSS13<br>D13 | DSS14<br>D14 | DSS15<br>D15 | DSS16<br>D16 | DSS17<br>D17 | DSS18<br>D18 | DSS19<br>D19 | DSS110<br>D110 | DSS115<br>D115 | DSS120<br>D120 | UNITS |    |
|-------------------------------------------------------------------------------------------------------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|----------------|-------|----|
| Maximum repetitive peak reverse voltage                                                                     | V <sub>RRM</sub>  | 20           | 30           | 40           | 50           | 60           | 70           | 80           | 90           | 100            | 150            | 200            | VOLTS |    |
| Maximum RMS voltage                                                                                         | V <sub>RMS</sub>  | 14           | 21           | 28           | 35           | 42           | 49           | 56           | 63           | 70             | 105            | 140            | VOLTS |    |
| Maximum DC blocking voltage                                                                                 | V <sub>DC</sub>   | 20           | 30           | 40           | 50           | 60           | 70           | 80           | 90           | 100            | 150            | 200            | VOLTS |    |
| Maximum average forward rectified current                                                                   | I <sub>(AV)</sub> | 1.0          |              |              |              |              |              |              |              |                |                |                | Amp   |    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)      | I <sub>FSM</sub>  | 25.0         |              |              |              |              |              |              |              |                |                |                | Amps  |    |
| Maximum instantaneous forward voltage at 1.0A                                                               | V <sub>F</sub>    | 0.55         |              |              | 0.70         |              |              | 0.85         |              |                |                | 0.95           | Volts |    |
| Maximum DC reverse current    T <sub>A</sub> =25°C<br>at rated DC blocking voltage    T <sub>A</sub> =100°C | I <sub>R</sub>    | 0.5          |              |              |              |              |              |              |              | 0.2            |                | mA             |       |    |
|                                                                                                             |                   | 10.0         |              |              |              |              | 5.0          |              |              | 2.0            |                |                |       |    |
| Typical junction capacitance (NOTE 1)                                                                       | C <sub>J</sub>    | 110          |              |              |              | 80           |              |              |              |                |                |                |       | pF |
| Operating junction temperature range                                                                        | T <sub>J</sub>    | -65 to +125  |              |              |              |              |              | -65 to +150  |              |                |                |                |       | °C |
| Storage temperature range                                                                                   | T <sub>STG</sub>  | -65 to +150  |              |              |              |              |              |              |              |                |                |                | °C    |    |

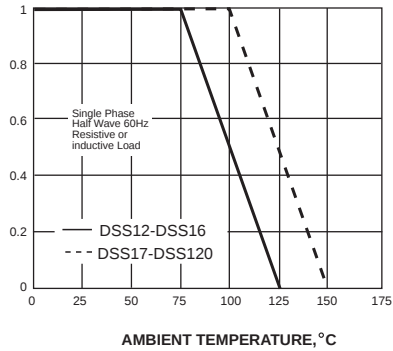
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

MDD ELECTRONIC

# RATINGS AND CHARACTERISTIC CURVES DSS12 THRU DSS120

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

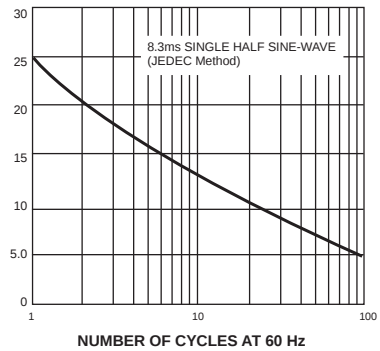
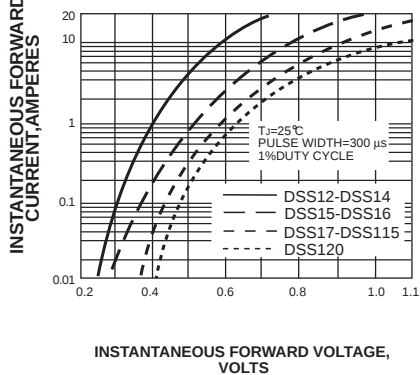


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

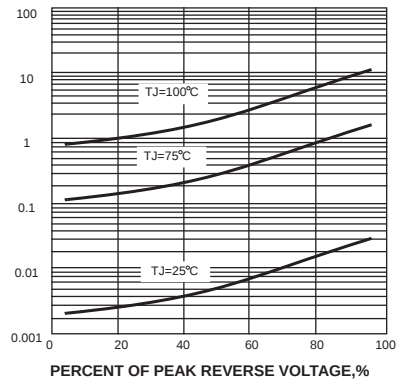


FIG. 5-TYPICAL JUNCTION CAPACITANCE

