



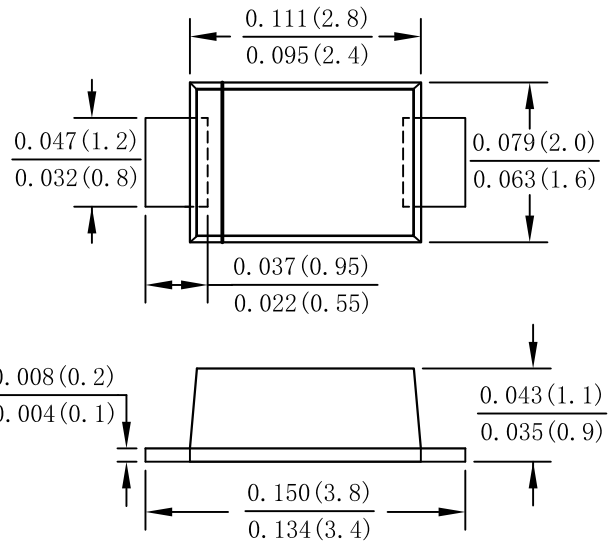
DSS12U THRU DSS120U

Single Phase 1.0AMP Surface Mount Schottky Barrier Rectifier

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High temperature soldering guaranteed:
260 °C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Case: SOD-123FL



Dimensions in inches and (millimeters)

Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any

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%.

| TYPE NUMBER | SYMBOL | DSS12U | DSS13U | DSS14U | DSS15U | DSS16U | DSS18U | DSS110U | DSS115U | DSS120U | UNITS |
|--|--------------------------------------|-----------|--------|--------|--------|--------|--------|---------|---------|---------|------------------|
| | Code | D12U | D13U | D14U | D15U | D16U | D18U | D110U | D115U | D120U | |
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | | | |
| Working Peak Reverse Voltage | V _{RWM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V |
| DC Blocking Voltage | V _{DC} | | | | | | | | | | |
| RMS Reverse Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | V |
| Average Rectified Output Current @T _L =90℃ | I _{F(AV)} | 1.0 | | | | | | | | | A |
| Non-Repetitive Peak Forward Surge @T _j =25 ℃ Current 8.3ms Single half sine-wave@T _j =125 ℃ Superimposed On Rated Load (JEDEC Method) | I _{FSM} | 30 24 | | | | | | | | | A |
| Non-Repetitive Peak Forward Surge @T _j =25 ℃ Current 1.0ms Single half sine-wave @T _j =125 ℃ Superimposed On Rated Load (JEDEC Method) | I _{FSM} | 60 48 | | | | | | | | | A |
| 10000 times of the wave surge current (time width 1ms, time interval 3s) | I _{FSM} | 22.5 | | | | | | | | | A |
| I ² t Rating for Fusing (t < 8.3ms) | I ² t | 3.735 | | | | | | | | | A ² s |
| Forward Voltage per element @IF=1.0A | V _{FM} | 0.50 | | | 0.67 | | 0.82 | | 0.90 | | |
| | T _{yp} | 0.48 | | | 0.55 | | 0.78 | | 0.83 | | V |
| Peak Reverse Current @T _A =25℃ At Rated DC Blocking Voltage @T _A =100℃ | I _R | 0.1 | | | | | 0.05 | | | | |
| | | 10 | | | | | 5 | | | | mA |
| Typical Junction Capacitance (Note 1) | C _J | 50 | | | | | 35 | | | | pF |
| Typical Thermal Resistance | R _{θJA} R _{θJL} | 115 18 | | | | | | | | | ℃/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55to+150 | | | | | | | | | ℃ |

Note: 1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C



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Fig. 1 Typical Forward Current Derating Curve

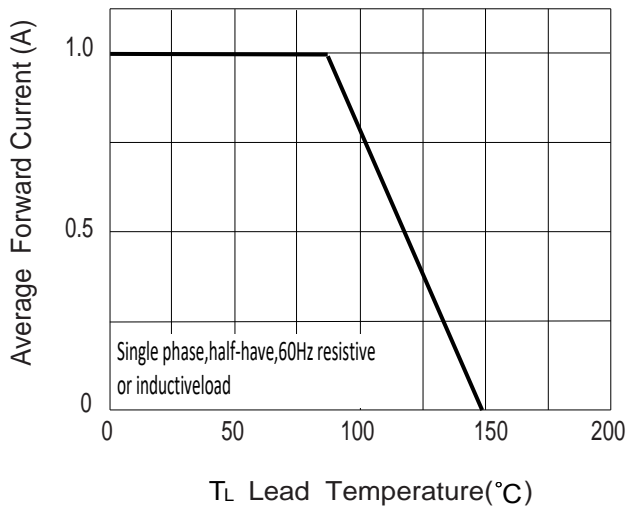


Fig. 2 Typical Instantaneous Forward Characteristics

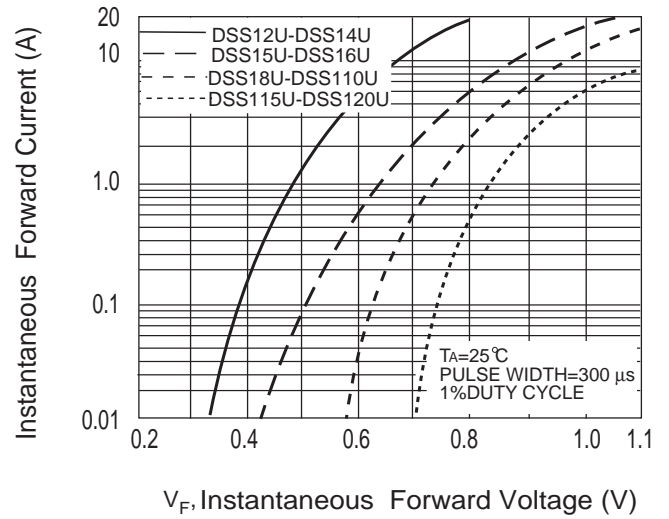


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

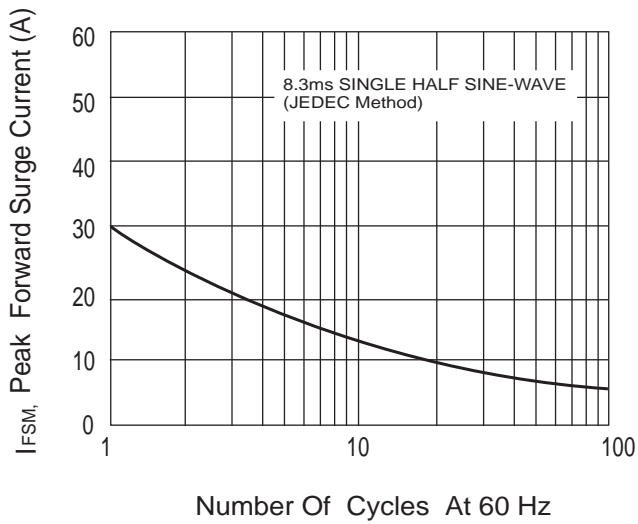


Fig.4 Typical Reverse Characteristics

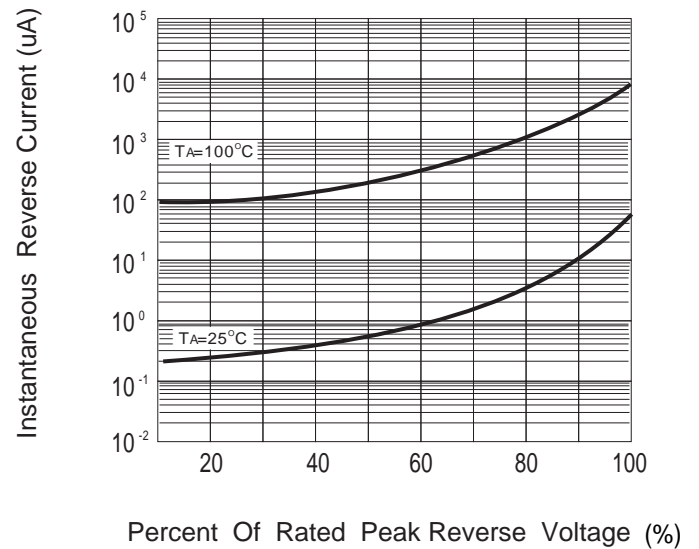
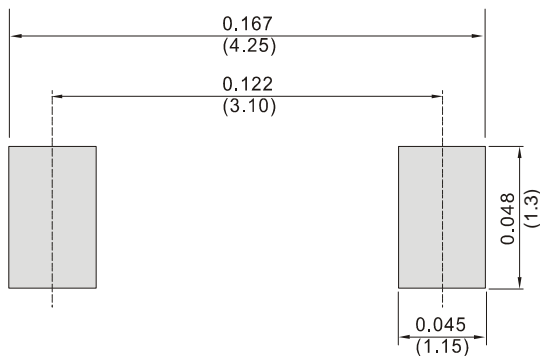


Fig.5 Typical Capacitance





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