# DSS32 THRU DSS320

## Surface Mount Schottky Barrier Rectifier

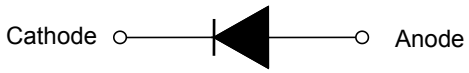
### FEATURES:

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### Marking

| Type number | Marking code |
|---|---|
| DSS32 | K32 |
| DSS34 | K34 |
| DSS36 | K36 |
| DSS38 | K38 |
| DSS310 | K310 |
| DSS312 | K312 |
| DSS315 | K315 |
| DSS320 | K320 |

### Circuit Diagram & Pin Configuration:




**SOD-123FL**

**Absolute 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, derate by 20 %

| Parameter | Symbols | DSS32 | DSS34 | DSS36 | DSS38 | DSS310 | DSS312 | DSS315 | DSS320 | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum RMS voltage | $V_{RMS}$ | 14 | 28 | 42 | 56 | 70 | 84 | 105 | 140 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 3.0 | | | | | | | | A |
| Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$ | 80 | | | | | | | | A |
| Max Instantaneous Forward Voltage at 3 A | $V_F$ | 0.55 | | 0.70 | | 0.85 | | 0.95 | | V |
| Maximum DC Reverse Current $T_a$ = 25°C<br>at Rated DC Reverse Voltage $T_a$ =100°C | $I_R$ | 0.5<br>10 | | 0.3<br>5 | | | | | | mA |
| Typical Junction Capacitance (1) | $C_j$ | 250 | | 160 | | | | | | pF |
| Typical Thermal Resistance (2) | $R_{\theta JA}$ | 80 | | | | | | | | °C/W |
| Operating Junction Temperature Range | $T_j$ | -55 ~ +150 | | | | | | | | °C |
| Storage Temperature Range | $T_{stg}$ | -55 ~ +150 | | | | | | | | °C |

( 1 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

**Fig.1 Forward Current Derating Curve**

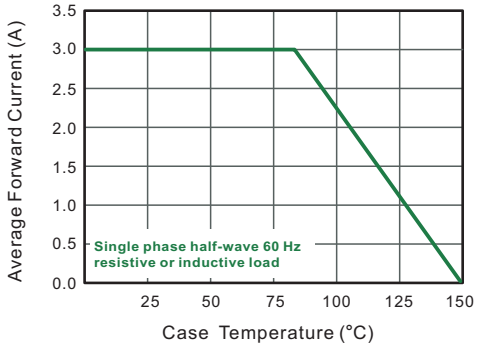



**Fig.2 Typical Reverse Characteristics**

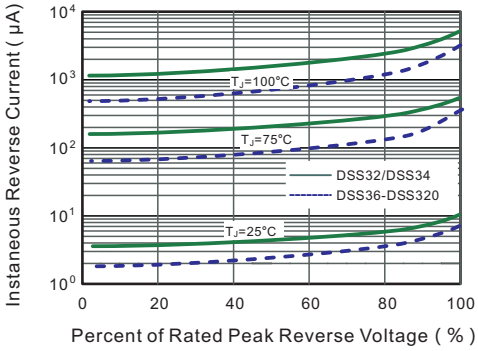



**Fig.3 Typical Forward Characteristic**

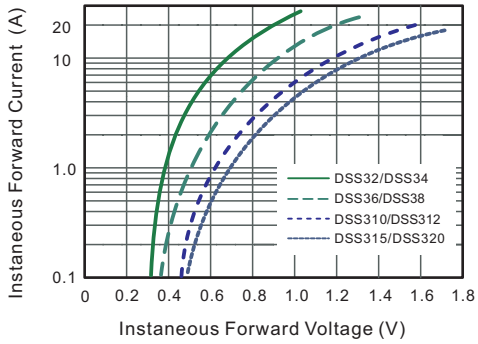



**Fig.4 Typical Junction Capacitance**

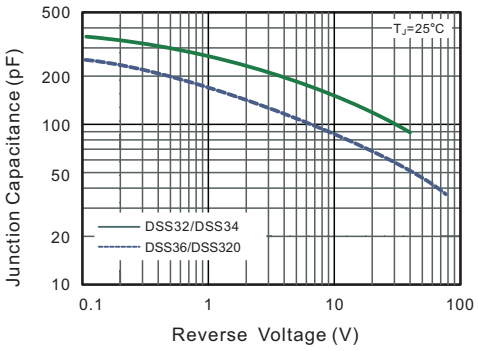



**Fig.5 Maximum Non-Repetitive Peak Forward Surage Current**

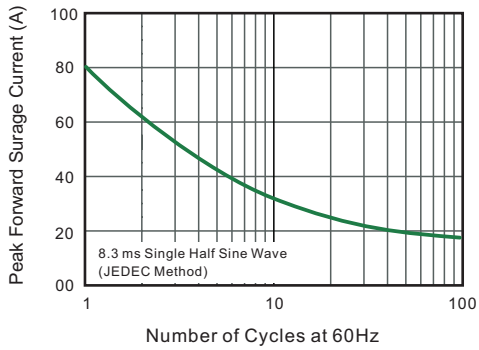
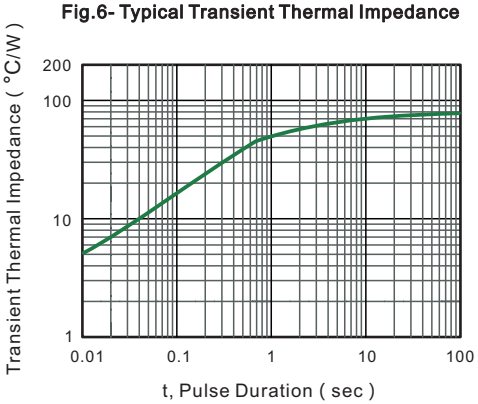
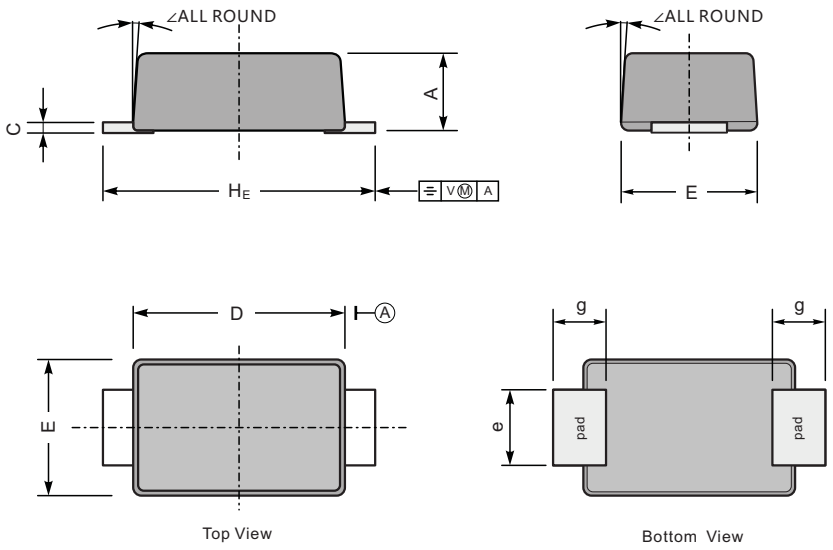



**Fig.6- Typical Transient Thermal Impedance**



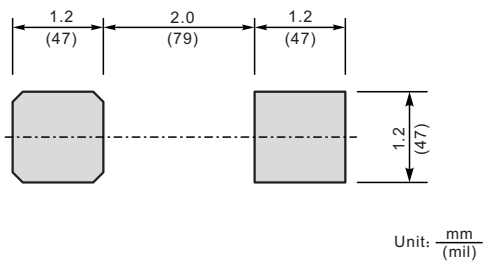
## PACKAGE OUTLINE

**Plastic surface mounted package; 2 leads** **SOD-123FL**




| UNIT | | A | C | D | E | e | g | $H_E$ | ∠ |
|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.1 | 0.20 | 2.9 | 1.9 | 1.1 | 0.9 | 3.8 | 7° |
| | min | 0.9 | 0.12 | 2.6 | 1.7 | 0.8 | 0.7 | 3.5 | |
| mil | max | 43 | 7.9 | 114 | 75 | 43 | 35 | 150 | |
| | min | 35 | 4.7 | 102 | 67 | 31 | 28 | 138 | |

**The recommended mounting pad size**



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