



DSK12 THRU DSK120

Surface Mount Schottky Rectifiers

Reverse Voltage - 20 to 200 V
Forward Current - 1.0 A

FEATURES

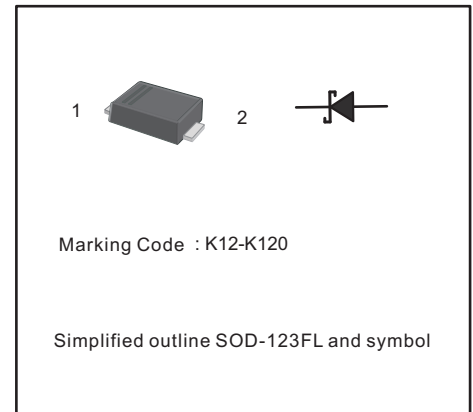
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00048oz

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

| Parameter | Symbols | DSK12 | DSK14 | DSK16 | DSK18 | DSK110 | DSK112 | DSK115 | DSK120 | 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 | $I_{F(AV)}$ | 1.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 40 | | | | 30 | | | | A |
| Max Instantaneous Forward Voltage at 1 A | V_F | 0.55 | | 0.70 | | 0.85 | | 0.95 | | V |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$ | I_R | 0.3 10 | | | | 0.2 5 | | 0.1 2 | | mA |
| Typical Junction Capacitance ¹⁾ | C_j | 110 | | | 80 | | | | pF | |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ | 115 | | | | | | | | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_j | -55 ~ +125 | | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | | | | | $^\circ\text{C}$ |

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

2) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.



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Characteristic Curves (T = 25 °C unless otherwise noted)

Fig.1 Forward Current Derating Curve

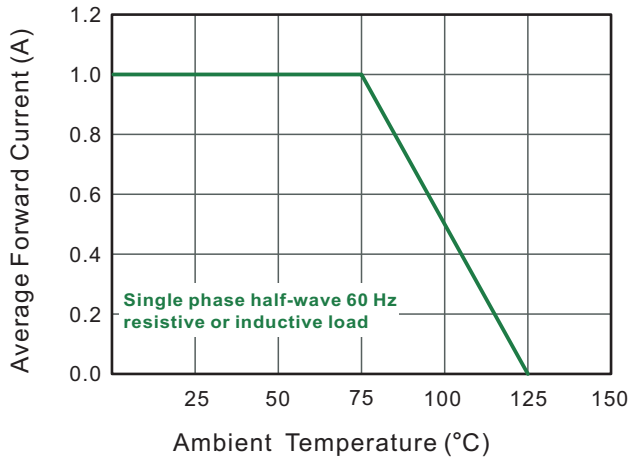


Fig.2 Typical Reverse Characteristics

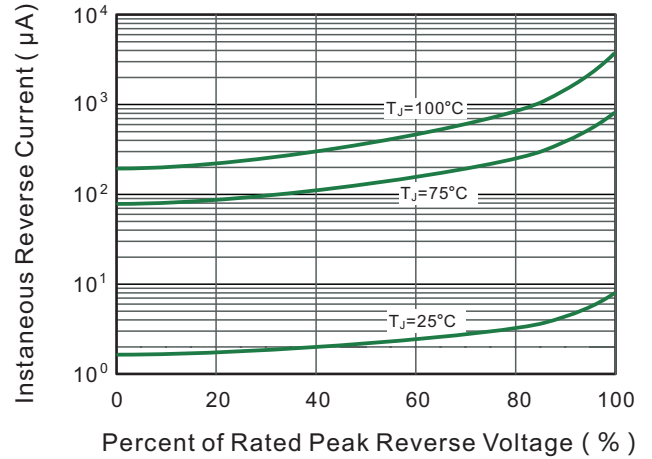


Fig.3 Typical Forward Characteristic

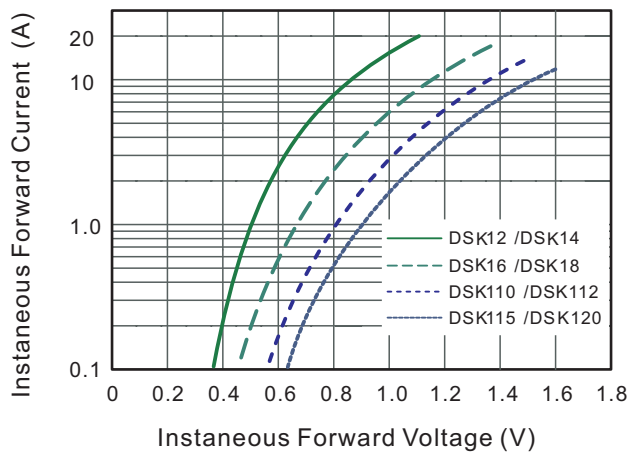


Fig.4 Typical Junction Capacitance

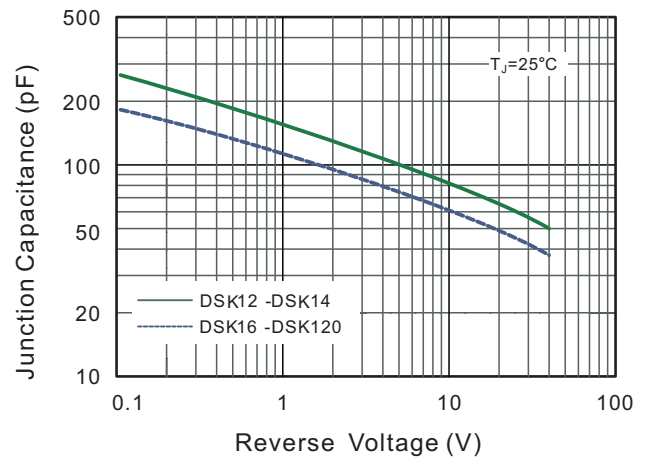


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

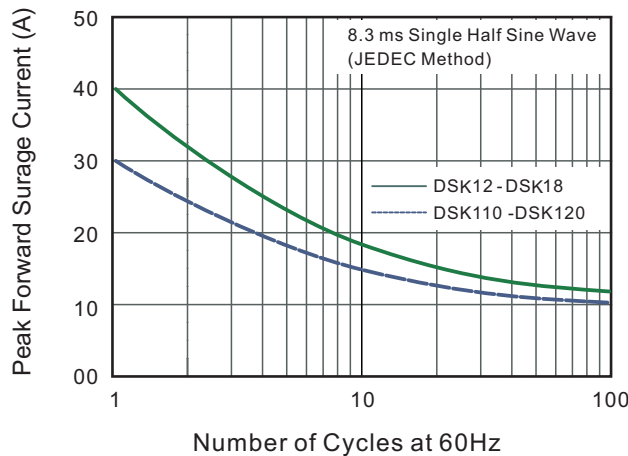
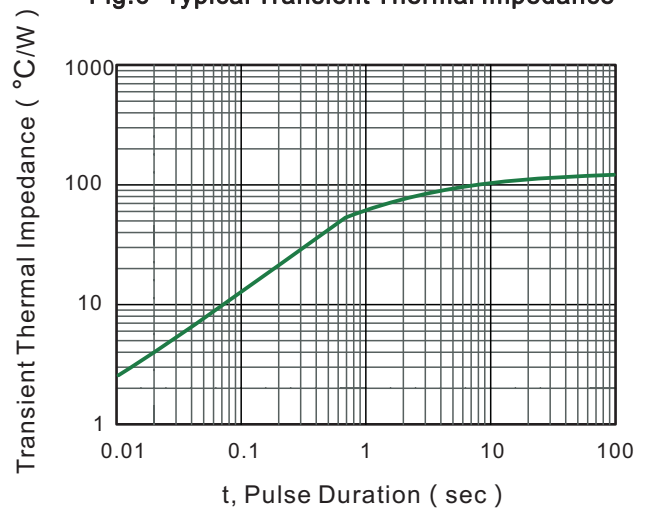


Fig.6- Typical Transient Thermal Impedance





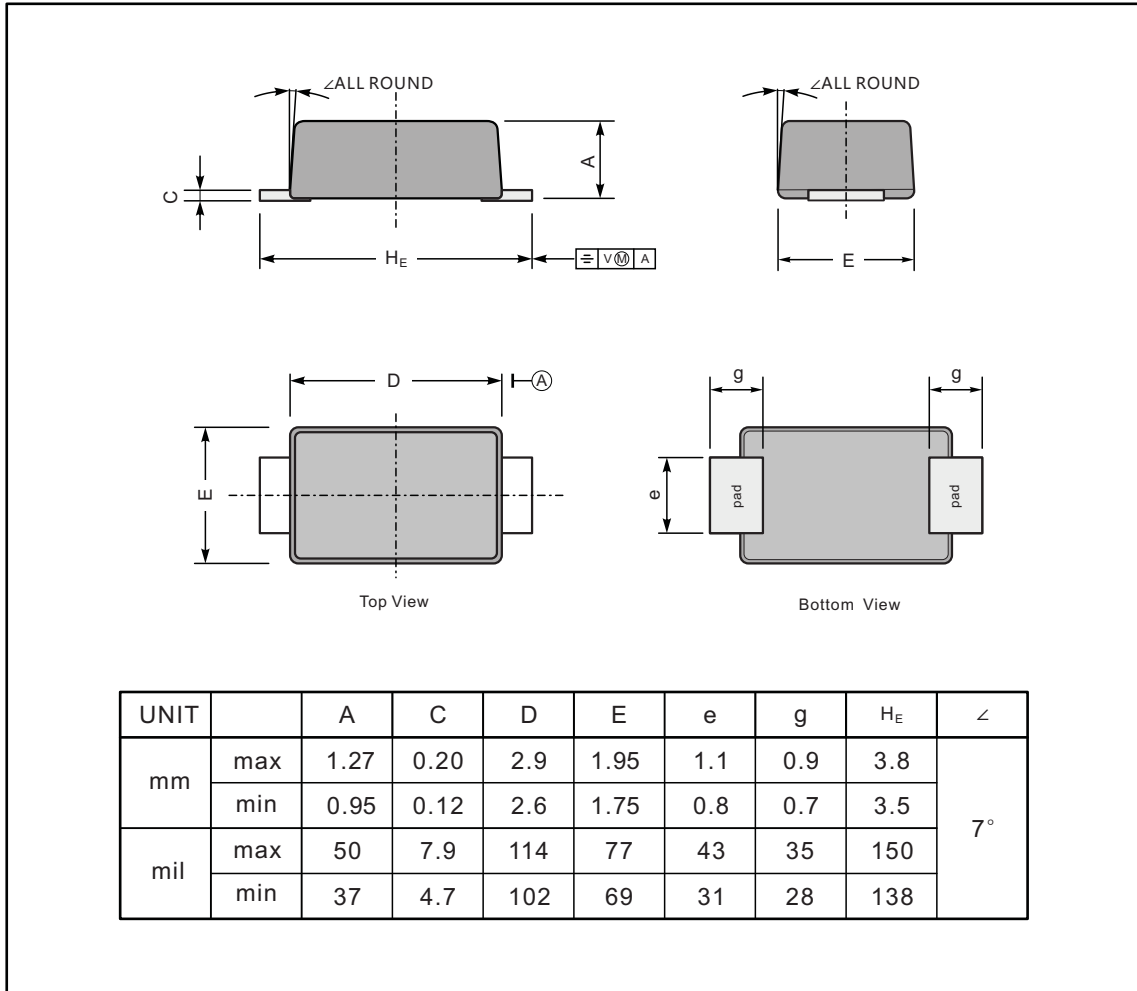
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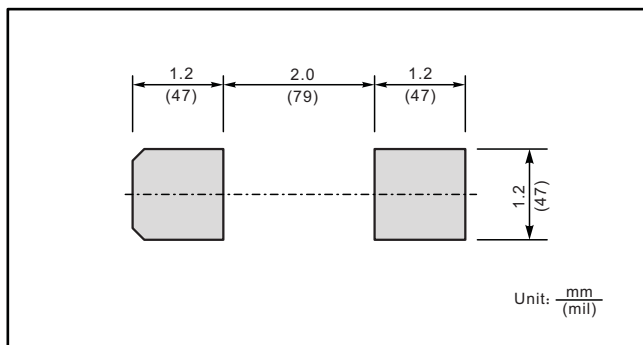
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| DSK12 | K12 |
| DSK14 | K14 |
| DSK16 | K16 |
| DSK18 | K18 |
| DSK110 | K110 |
| DSK112 | K112 |
| DSK115 | K115 |
| DSK120 | K120 |