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PLED

Product data sheet



SOD-123FL

FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Low forward voltage drop

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * 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%.

| | P/N | DS12W-MS | DS13W-MS | DS14W-MS | DS15W-MS | DS16W-MS | DS18W-MS | DS19W-MS | DS110W-MS | |
|--|-------------------|------------|----------|----------|----------|----------|------------|----------|-----------|-------|
| | MARK | K12 | K13 | K14 | K15 | K16 | K18 | K19 | K110 | UNITS |
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 63 | 70 | V |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| Maximum Average Forward Rectified Current (See Fig. 1) | I _(AV) | 1.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 30 | | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 1.0A | V _F | 0.55 | | 0.70 | | 0.85 | | | V | |
| Maximum DC Reverse Current Ta=25°C | I _R | 0.2 | | | | | | | | mA |
| at Rated DC Blocking Voltage Ta=100°C | | 10 | | | | | | | | mA |
| Typical Junction Capacitance (Note1) | C _J | 110 | | | | | | | | pF |
| Operating Temperature Range T _J | T _J | -65 — +125 | | | | | -65 — +150 | | | °C |
| Storage Temperature Range T _{STG} | T _{STG} | -65 — +150 | | | | | | | | °C |

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES (K12 THRU K110)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

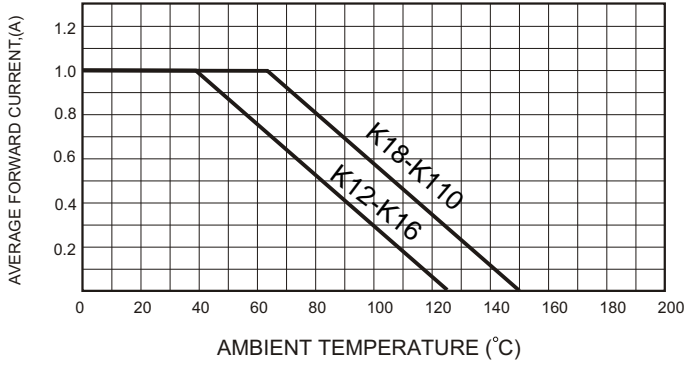


FIG.2-TYPICAL FORWARD CHARACTERISTICS

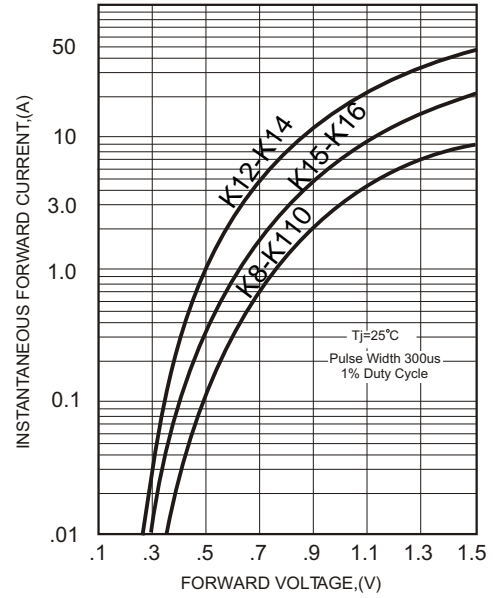


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

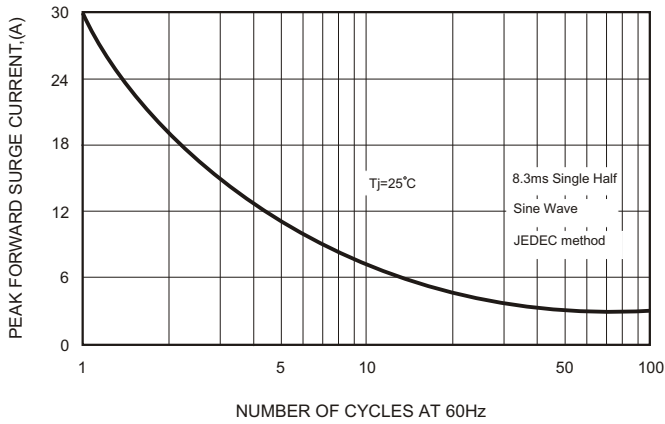


FIG.4-TYPICAL JUNCTION CAPACITANCE

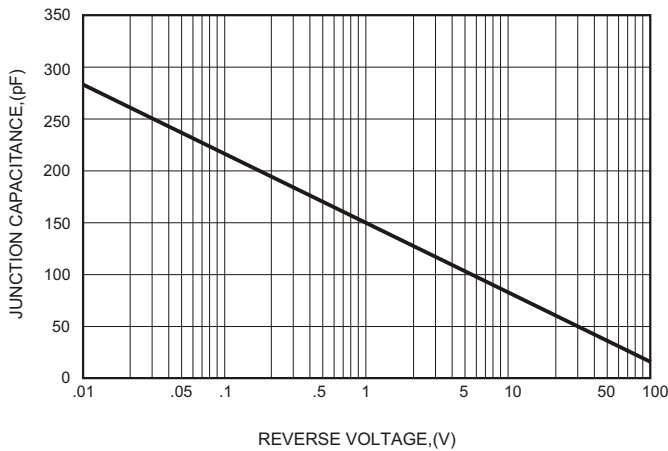
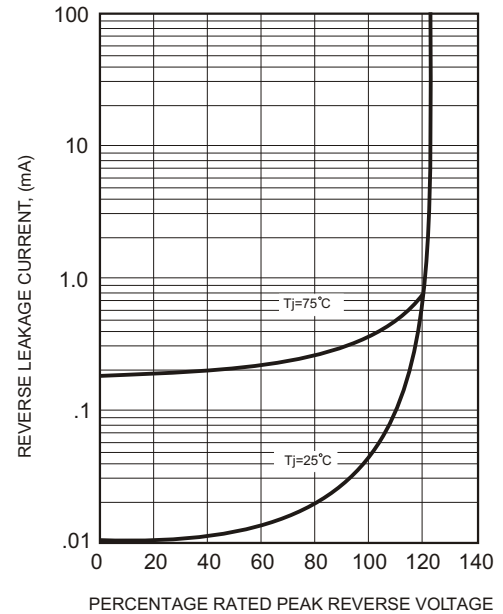
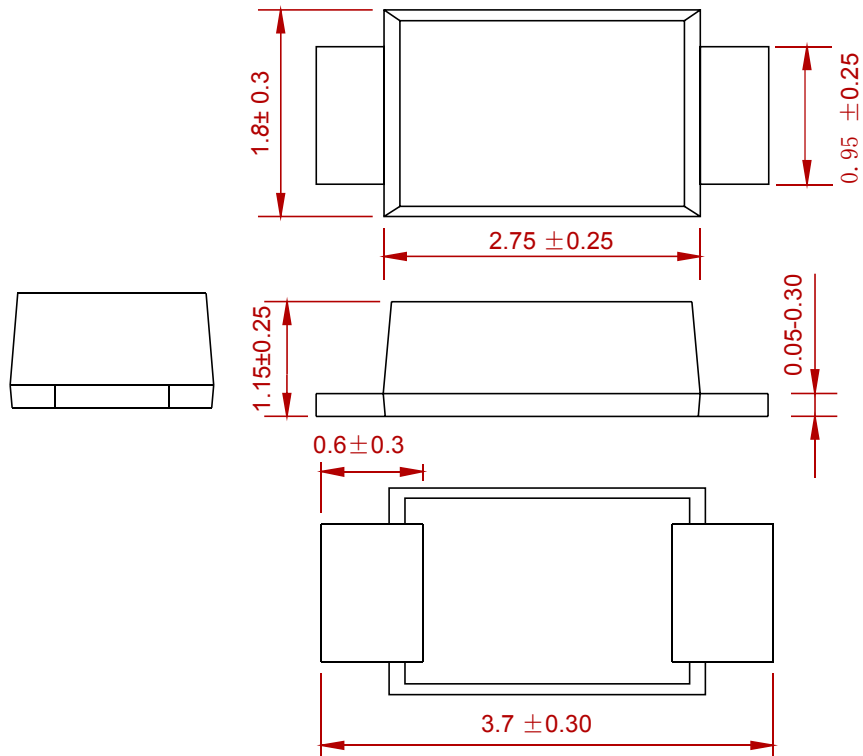


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

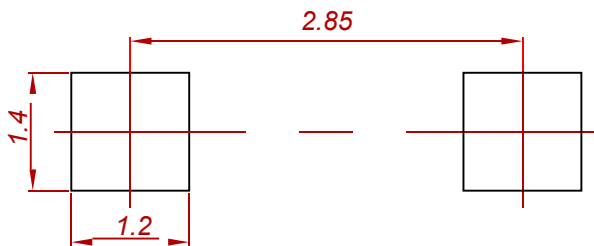


PACKAGE MECHANICAL DATA



Dimensions in millimeters

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

| P/N | PKG | QTY |
|-------------------------|-----------|------|
| DS12W-MS THRU DS110W-MS | SOD-123FL | 3000 |

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