

Surface Mount Super Fast Rectifiers

1.0 Amp 600V

SUF160L

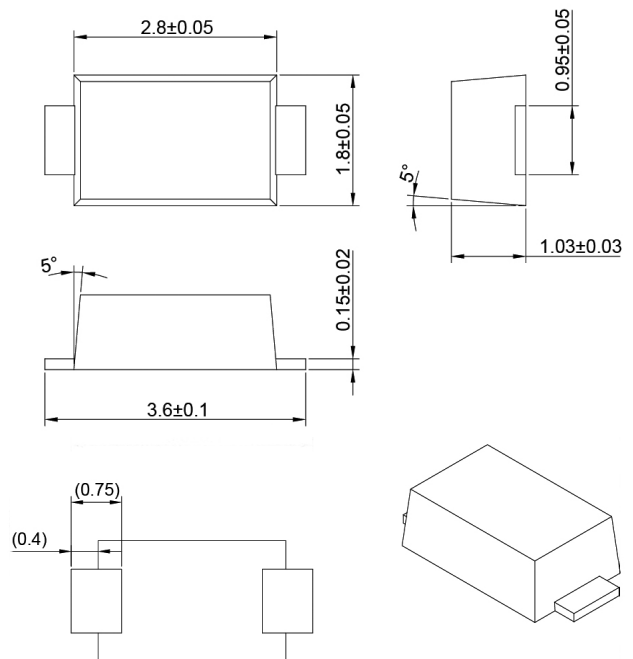
SOD123-L

FEATURES

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Small plastic SMD package.
- High surge and high current capability.
- Superfast recovery time for switching mode application.
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MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.0110 g (approximately)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

| Parameter | Symbol | SUF160L | Unit |
|--|--------|-------------|------|
| Maximum repetitive peak reverse voltage | VRRM | 600 | V |
| RMS Voltage (Max.) | VRMS | 420 | V |
| Working peak reverse voltage | VRWM | 600 | V |
| Maximum average forward rectified current | IF(AV) | 1.0 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 25 | A |
| Operating junction temperature range | TJ | -55 to +150 | °C |
| Storage temperature range | TSTG | -55 to +150 | °C |

Electrical characteristics (Tc=25°C unless otherwise noted)

| Parameter | Symbol | Value | | Unit |
|---|--------|---------|-----|------|
| | | Typical | Max | |
| Instantaneous forward voltage at IF=1A, Tj=25°C | VF | 1.5 | 1.7 | V |
| Maximum reverse current per leg Tj=25°C | IR | 1 | | u'A |
| at working peak reverse voltage Tj=100°C | | 100 | | u'A |
| Reverse Recovery Time | TRR | 35 | | ns |

Thermal characteristics (Tc=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|----------------------------|--------|-------|------|
| Typical thermal resistance | RθJA | 42 | °C/W |

Notes:

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

RATINGS AND CHARACTERISTIC CURVES

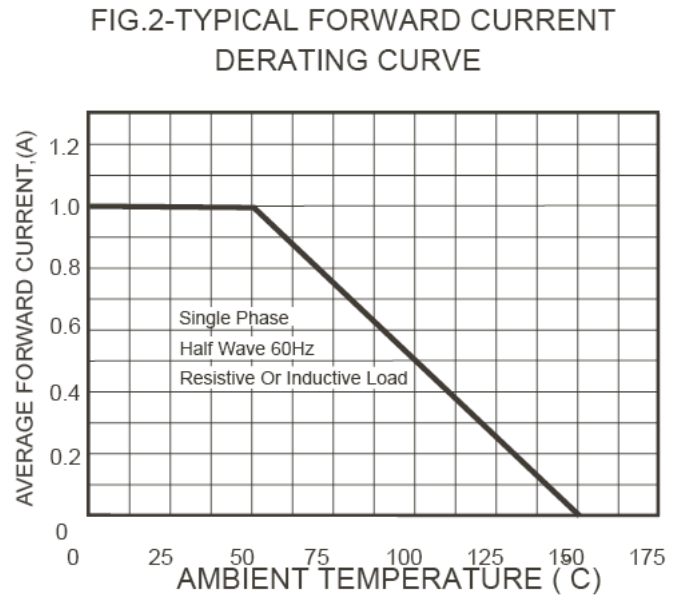
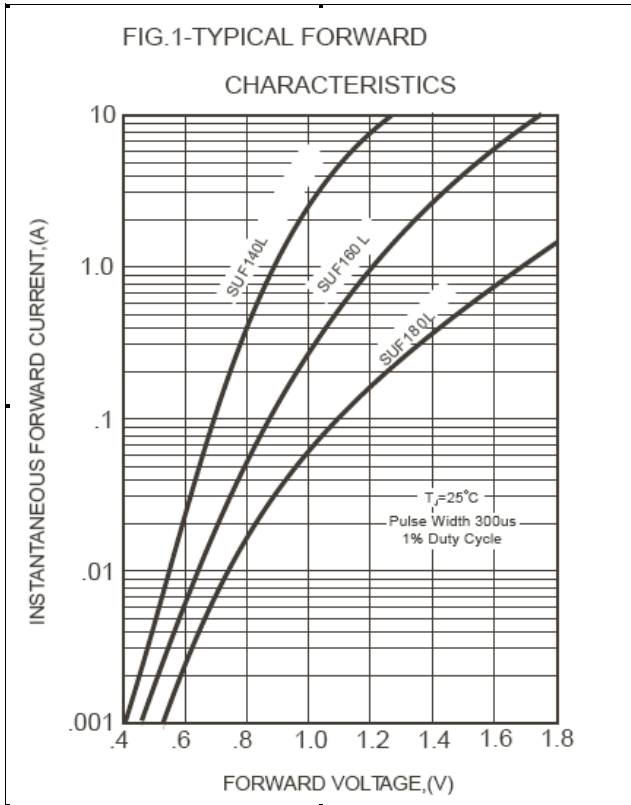


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

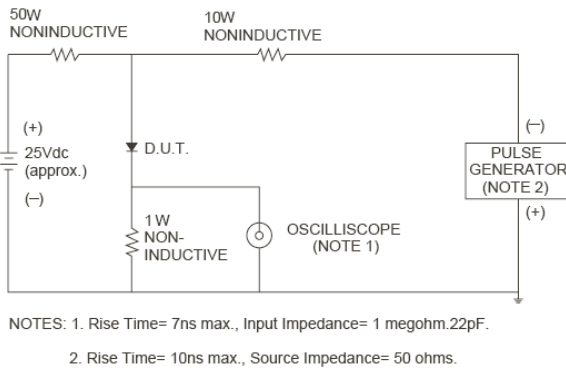


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

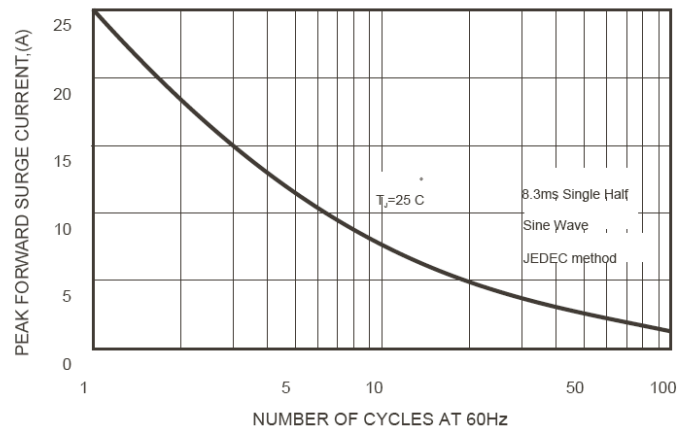


FIG.5-TYPICAL JUNCTION CAPACITANCE

