

SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIER
VOLTAGE RANGE 20 to 40 Volts CURRENT 0.5 Ampere

FEATURES

- * Low power loss, high efficiency
- * Low leakage
- * Low forward voltage
- * High current capability
- * High speed switching
- * High surge capability
- * High reliability

MECHANICAL DATA

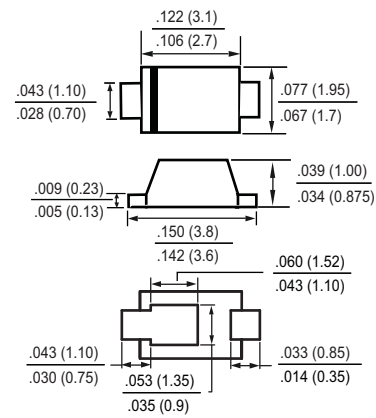
- * Epoxy: Device has UL flammability classification 94V-0
- * Mounting position: Any
- * Weight: 0.015 gram

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, derate current by 20%.



SOD-123FL



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@ T_A=25 °C unless otherwise noted)

| RATINGS | SYMBOL | 05SSL20L | 05SSL30L | 05SSL40L | UNITS |
|--|------------------|--------------|----------|----------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | Volts |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 40 | 40 | Volts |
| Maximum Average Forward Rectified Current .375" (9.5mm) lead length at T _A =100°C | I _O | 0.5 | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 60 | | | Amps |
| Typical Current Squared Time | I ² T | 14.9 | | | A ² S |
| Typical Junction Capacitance (Note1) | C _J | 110 | | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJA} | 110 | | | °C/W |
| | R _{θJL} | 30 | | | |
| Operating Temperature Range | T _J | -55 to + 150 | | | °C |
| Storage Temperature Range | T _{STG} | -55 to + 150 | | | °C |

ELECTRICAL CHARACTERISTICS(@T_A=25 °C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | 05SSL20L | 05SSL30L | 05SSL40L | UNITS |
|--|----------------|----------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 0.5A DC | V _F | 0.30 | | | Volts |
| Maximum Average Reverse Current | I _R | 0.1 | | | mAmps |
| at Rated DC Blocking Voltage | | 10 | | | mAmps |

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. "ROHS compliant".
3. Thermal resistance: Mounted on PCB.
4. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2022-10
REV: B

RATING AND CHARACTERISTICS CURVES (05SSL20L THRU 05SSL40L)

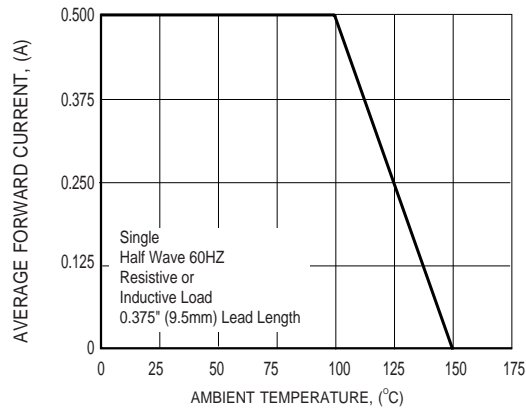


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

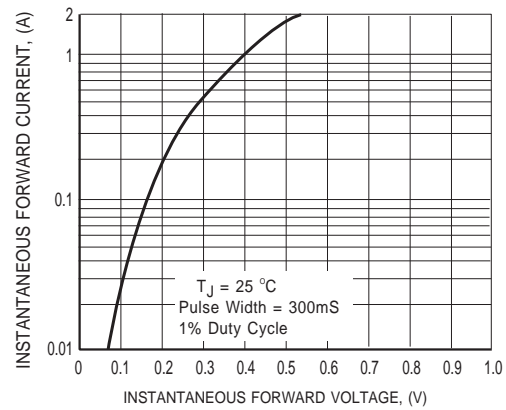


FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

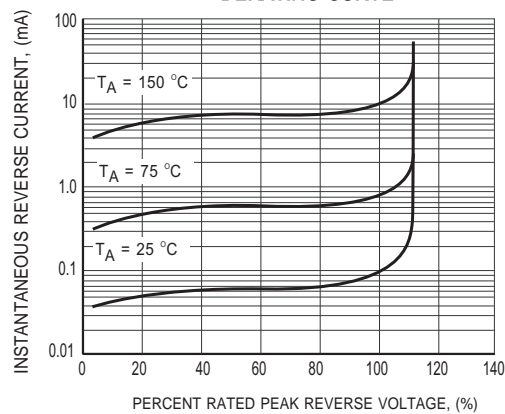


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

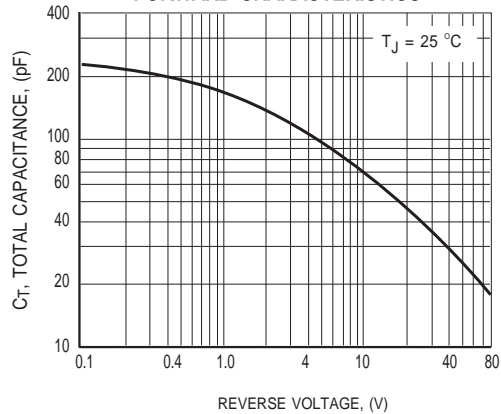


FIG.4 TYPICAL JUNCTION CAPACITANCE

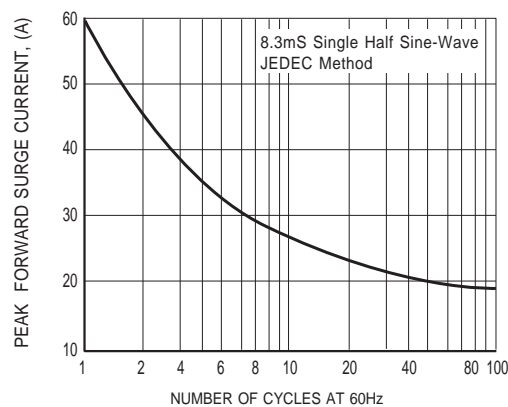
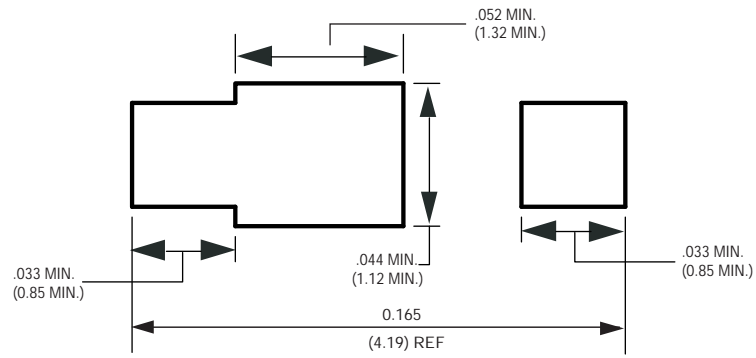


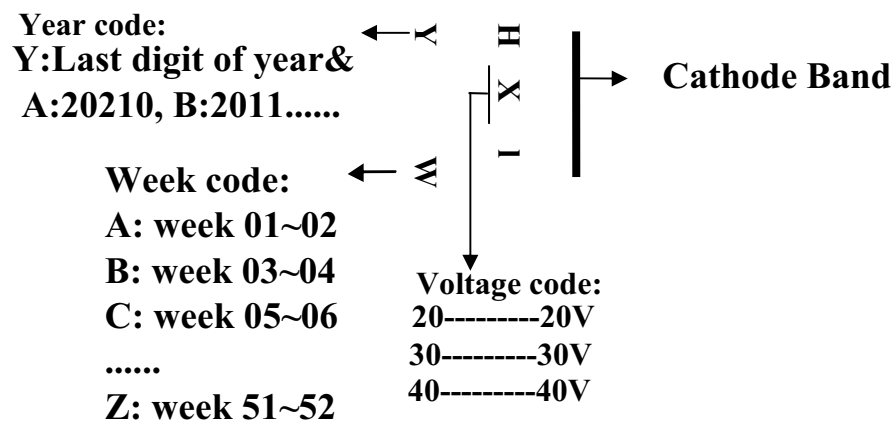
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

| PACKAGE | PACKING CODE | EA PER REEL | EA PER INNER BOX | COMPONENT SPACE (mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|------------------------|--------------|-------------|------------------|----------------------|-----------------|---------------|------------------|---------------|------------------|
| SOD-123F/ SOD-123FL | -W | 3,000 | 15,000 | --- | --- | 178 | 390*205*31 | 120,000 | 6.964 |

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