

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

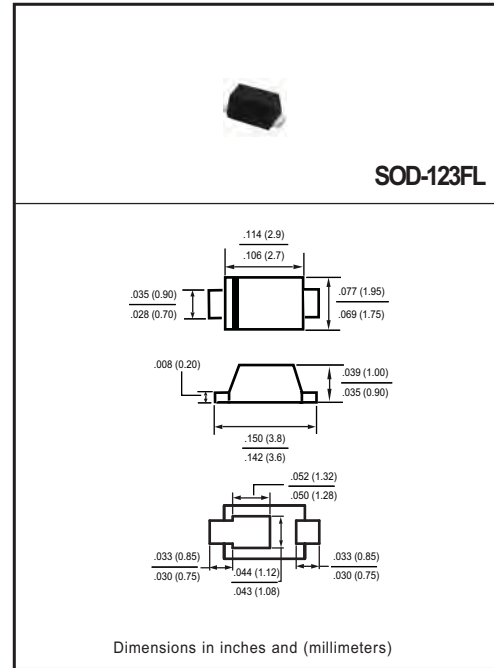
VOLTAGE RANGE 20 to 60 Volts CURRENT 0.5 Ampere

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: 0.016 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Resistive or inductive load.

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

| RATINGS | SYMBOL | 05S2L | 05S3L | 05S4L | 05S5L | 05S6L | UNITS |
|------------------------------------------------------------------------------------------------------|------------------|--------------|-------|-------|-------|-------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum Average Forward Rectified Current .375" (9.5mm) lead length at T _A =55°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} | 15 | | | | | Amps |
| Typical Current Square Time | I ² T | 0.9 | | | | | A ² S |
| Typical Junction Capacitance (Note 1) | C _J | 110 | | | | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJA} | 110 | | | | | °C/W |
| | R _{θJL} | 30 | | | | | °C/W |
| Operating Temperature Range | T _J | 150 | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to + 150 | | | | | °C |

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

| CHARACTERISTICS | SYMBOL | 05S2L | 05S3L | 05S4L | 05S5L | 05S6L | UNITS |
|-----------------------------------------------------------------|----------------|--------------------------|-------|-------|-------|-------|-------|
| Maximum Instantaneous Forward Voltage at 0.5A DC | V _F | .55 | | | .70 | | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | I _R | @ T _A = 25°C | | | 0.2 | | mAmps |
| | | @ T _A = 100°C | | | 2 | | mAmps |

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
3. Thermal Resistance: Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (05S2L THRU 05S6L)

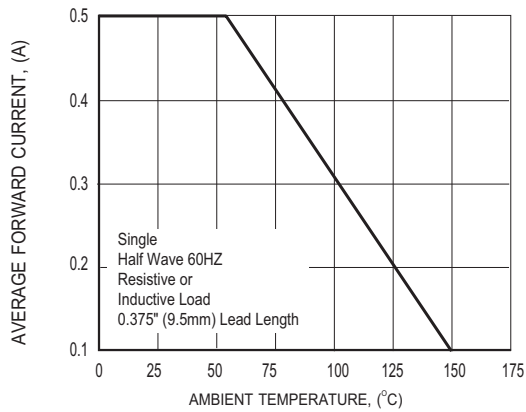


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

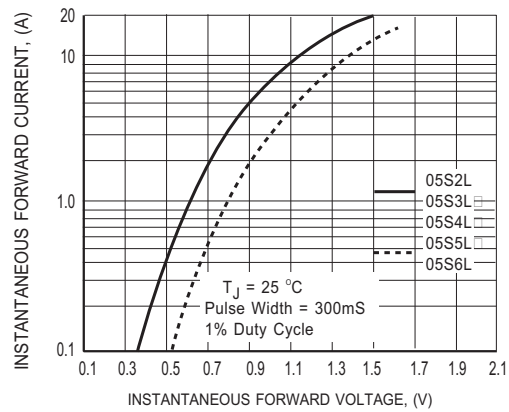


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

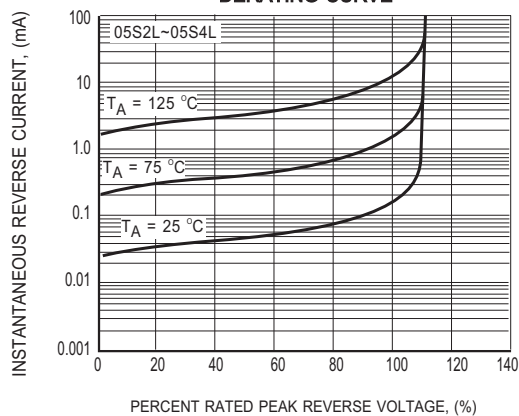


FIG.3 TYPICAL REVERSE CHARACTERISTICS

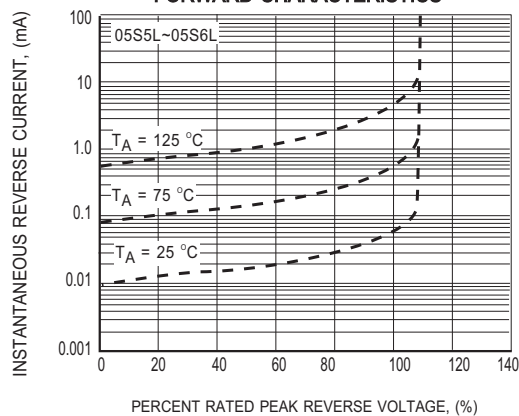


FIG.3 TYPICAL REVERSE CHARACTERISTICS

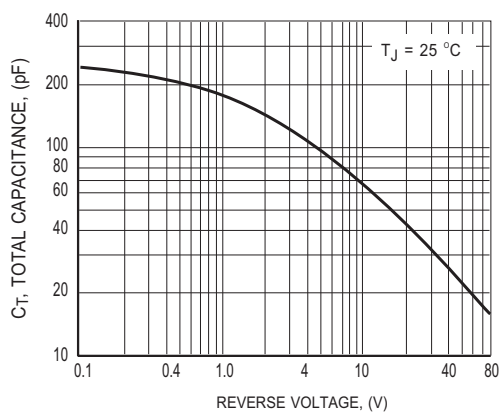


FIG.4 TYPICAL JUNCTION CAPACITANCE

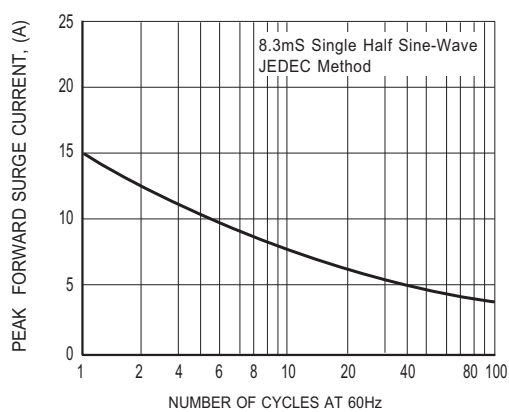
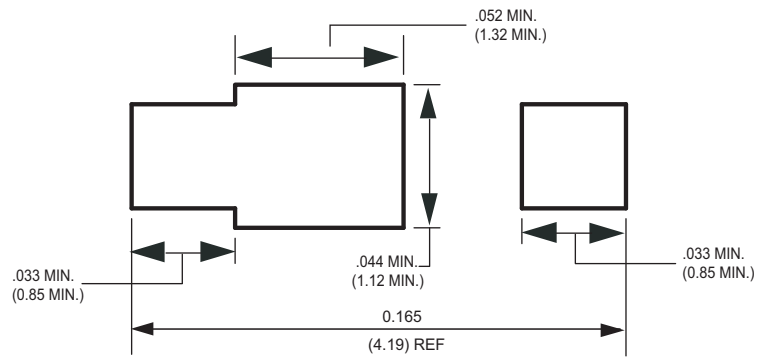


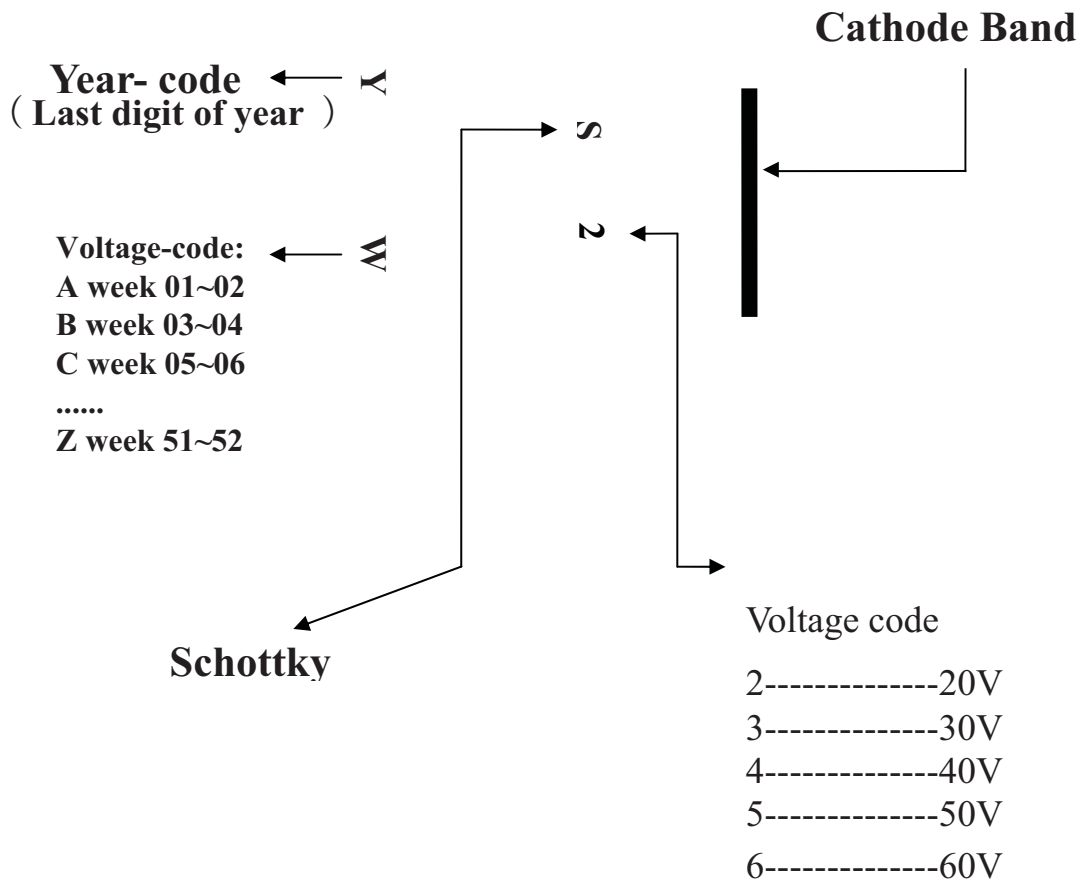
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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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