



# CHENMKO ENTERPRISE CO.,LTD

## SURFACE MOUNT

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 - 40 Volts CURRENT 1.0 Ampere

SSM12LPT

THRU

SSM14LPT

Lead free devices

#### FEATURES

- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* For surface mounted applications
- \* Low profile package
- \* Built-in strain relief
- \* Metal silicon junction, majority carrier conduction
- \* Low power loss, high efficiency
- \* High current capability, low forward voltage drop
- \* High surge capability
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

#### MECHANICAL DATA

**Case:** JEDEC SMA molded plastic

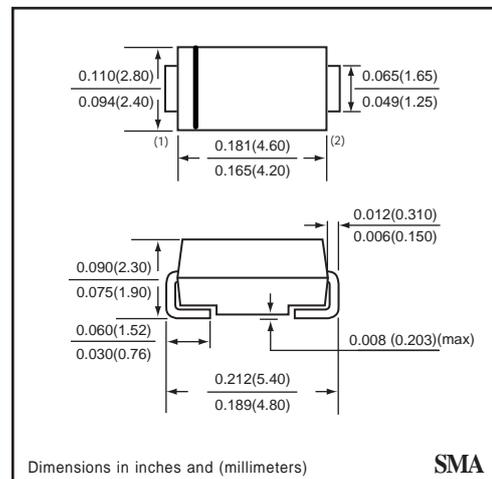
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.002 ounce 0.064 gram



SMA



SMA

#### 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%.

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

| RATINGS   | SYMBOL                           | SSM12LPT    | SSM13LPT | SSM14LPT | UNITS  |
|---|----------------------------------|-------------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>                 | 20          | 30       | 40       | Volts  |
| Maximum RMS Voltage   | V <sub>RMS</sub>                 | 14          | 21       | 28       | Volts  |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>                  | 20          | 30       | 40       | Volts  |
| Maximum Average Forward Rectified Current   | I <sub>O</sub>                   | 1.0         |          |          | Amps   |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                 | 50          |          |          | Amps   |
| Typical Junction Capacitance (Note 2)   | C <sub>J</sub>                   | 110         |          |          | pF     |
| Typical Thermal Resistance (Note 1)   | R <sub>θJL</sub>                 | 25          |          |          | °C / W |
| Operating and Storage Temperature Range   | T <sub>J</sub> ,T <sub>STG</sub> | -65 to +125 |          |          | °C     |

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

| CHARACTERISTICS   | SYMBOL         | SSM12LPT | SSM13LPT | SSM14LPT | UNITS |
|---|----------------|----------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 1.0 A DC               | V <sub>F</sub> | 0.38     |          |          | Volts |
| Maximum Average Reverse Current<br>at Rated DC Blocking Voltage | @ TA = 25°C    | 1.0      |          |          | mAmps |
|   | @ TA = 100°C   | 40       |          |          | mAmps |

NOTES : 1. Thermal Resistance ( Junction to Lead ) : PC Board Mounted on 0.2 X 0.2" ( 5 X 5mm ) copper pad area.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.

2002-3

# RATING CHARACTERISTIC CURVES ( SSM12LPT THRU SSM14LPT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

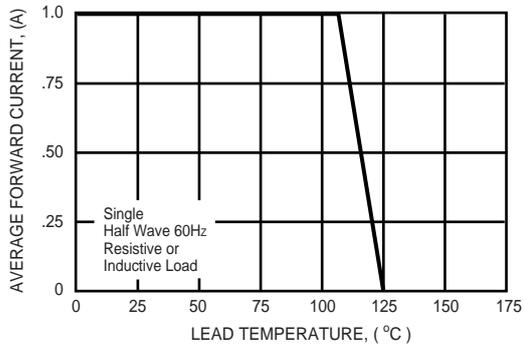


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

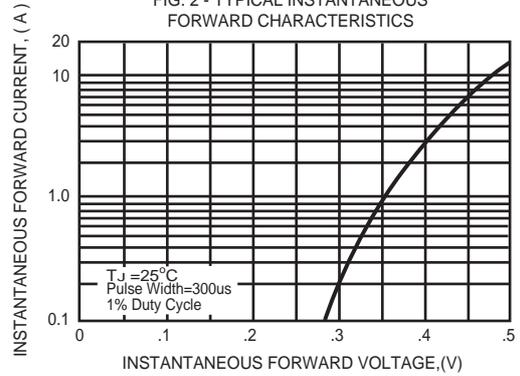


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

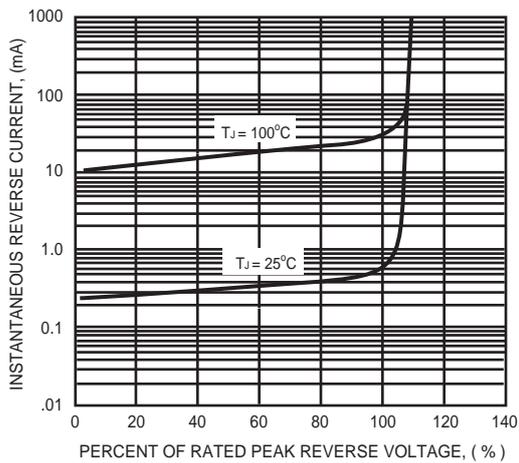


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

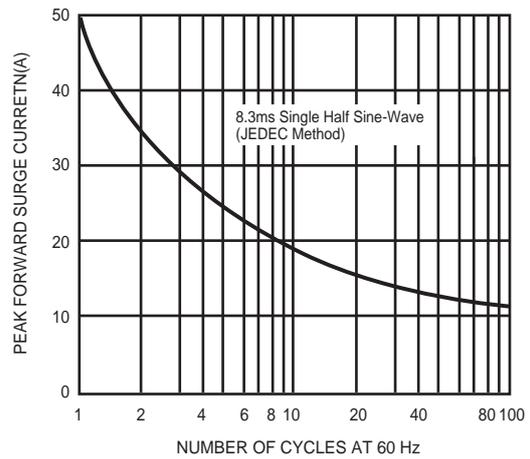


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

