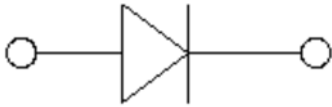


## Small Signal Schottky Diode



### Features

- Moisture sensitivity level 1
- Reverse voltage: 30V
- Average forward current : 0.5A

### Application

- High frequency and low voltage rectifier

### Mechanical data

- **Package:** SOD-123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| Parameter  | Symbol           | Unit | Value       |
|--|------------------|------|-------------|
| Device marking code  |                  |      | SE          |
| Repetitive peak reverse voltage                                    | V <sub>RRM</sub> | V    | 30          |
| Forward current  | I <sub>F</sub>   | A    | 0.5         |
| Non-repetitive surge peak forward current @ t=8.3ms half-sine wave | I <sub>FSM</sub> | A    | 5.5         |
| Non-repetitive surge peak forward current @ t=1ms square wave      |                  | A    | 8.5         |
| Power dissipation  | P <sub>D</sub>   | mW   | 410         |
| Junction temperature   | T <sub>J</sub>   | °C   | -55 to +125 |
| Storage temperature  | T <sub>STG</sub> | °C   | -55 to +150 |



# MBR0530L

RoHS  
COMPLIANT

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| Parameter               | Symbol         | Unit | Conditions                  | Min | Typ | Max   |
|-------------------------|----------------|------|-----------------------------|-----|-----|-------|
| Reverse voltage         | V <sub>R</sub> | V    | I <sub>R</sub> =1mA         | 30  |     |       |
| Forward voltage         | V <sub>F</sub> | V    | I <sub>F</sub> =0.1A        |     |     | 0.375 |
|                         |                |      | I <sub>F</sub> =0.5A        |     |     | 0.43  |
| Maximum reverse current | I <sub>R</sub> | uA   | V <sub>R</sub> =15V         |     |     | 20    |
|                         |                | uA   | V <sub>R</sub> =30V         |     |     | 130   |
| Junction capacitance    | C <sub>j</sub> | pF   | V <sub>R</sub> =0V, f =1MHZ |     | 250 |       |

## ■ Thermal Characteristics

| Parameter                               | Symbol                           | Unit | Value |
|---|----------------------------------|------|-------|
| Thermal resistance, junction-to-ambient | R <sub>θJ-A</sub> <sup>(1)</sup> | °C/W | 244   |
| Thermal resistance, junction-to-case    | R <sub>θJ-C</sub> <sup>(1)</sup> | °C/W | 195   |

### Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 8mm\*9mm copper pad areas



■ Characteristics

Fig 1: PD-Ta Curve

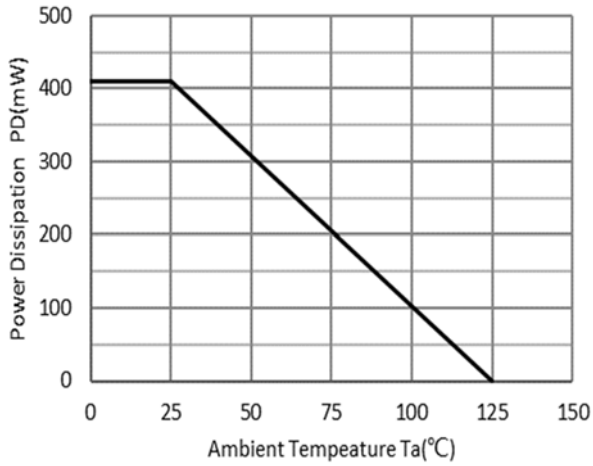


Fig 2: Capacitance Capability

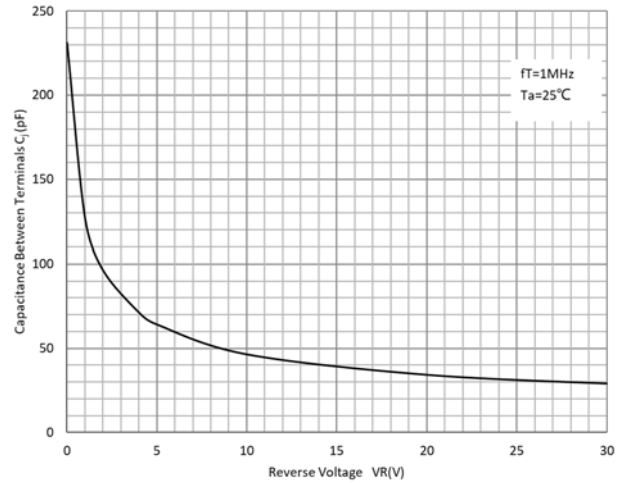


Fig 3: Typical Forward Characteristics

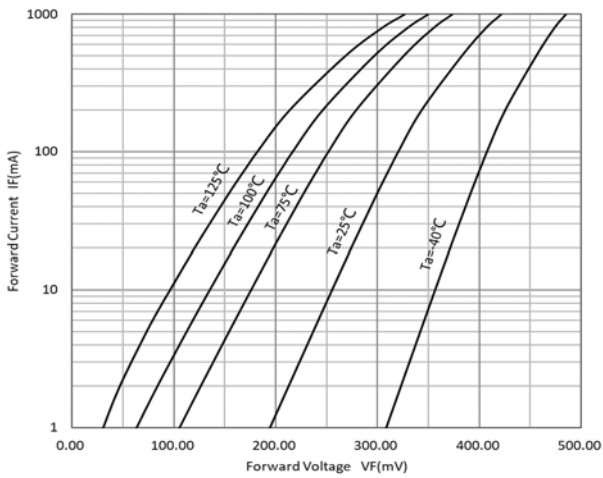
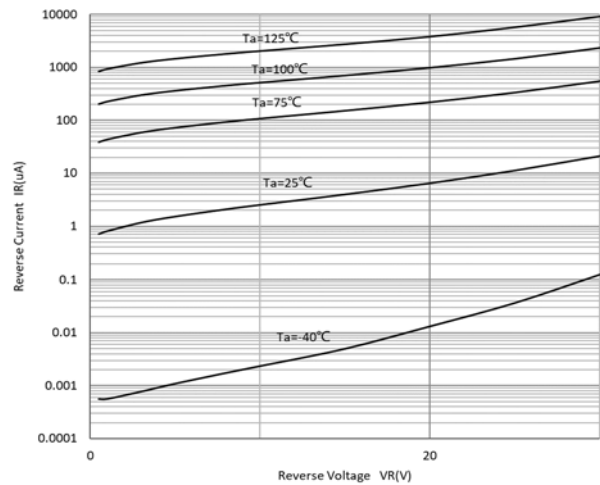


Fig 4: Typical Reverse Characteristics

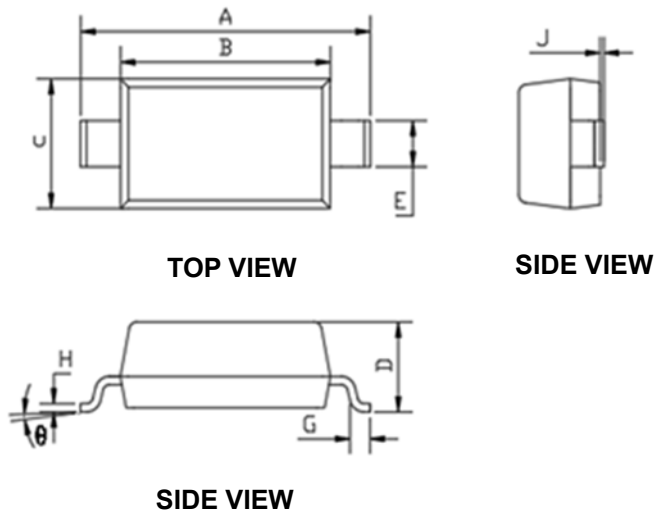




## ■ Ordering Information

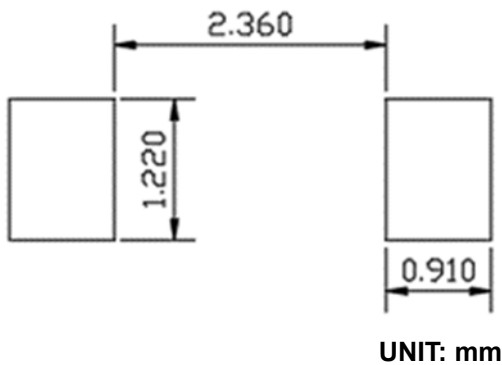
| Preferred P/N | Packing code | Unit weight(g)    | Minimum package(pcs) | Inner box quantity(pcs) | Outer carton quantity(pcs) | Delivery mode |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| MBR0530L      | F2           | Approximate 0.011 | 3000                 | 30000                   | 120000                     | 7" reel       |
| MBR0530L      | F3           | Approximate 0.011 | 10000                | /                       | 210000                     | 13" reel      |

## ■ Outline Dimensions



| DIMENSIONS |        |       |       |       |
|------------|--------|-------|-------|-------|
| DIM        | INCHES |       | MM    |       |
|            | MIN    | MAX   | MIN   | MAX   |
| A          | 0.140  | 0.152 | 3.550 | 3.850 |
| B          | 0.100  | 0.112 | 2.550 | 2.850 |
| C          | 0.055  | 0.071 | 1.400 | 1.800 |
| D          | 0.037  | 0.053 | 0.950 | 1.350 |
| E          | 0.020  | 0.028 | 0.510 | 0.710 |
| G          | 0.006  | 0.018 | 0.150 | 0.450 |
| H          | 0.003  | 0.010 | 0.080 | 0.250 |
| J          | 0.000  | 0.006 | 0.000 | 0.150 |
| $\theta$   | 0      | 8°    | 0     | 8°    |

## ■ Suggested Pad Layout





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