



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## SB007-03Q — Schottky Barrier Diode 30V, 70mA Rectifier

### Applications

- High frequency rectification (switching regulators, converters, choppers)

### Features

- Low forward voltage ( $V_F \text{ max}=0.55\text{V}$ )
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Small-sized package permitting SB007-03Q applied sets to be compact and slim
- Fast reverse recovery time ( $t_{RR} \text{ max}=10\text{ns}$ )

### Specifications

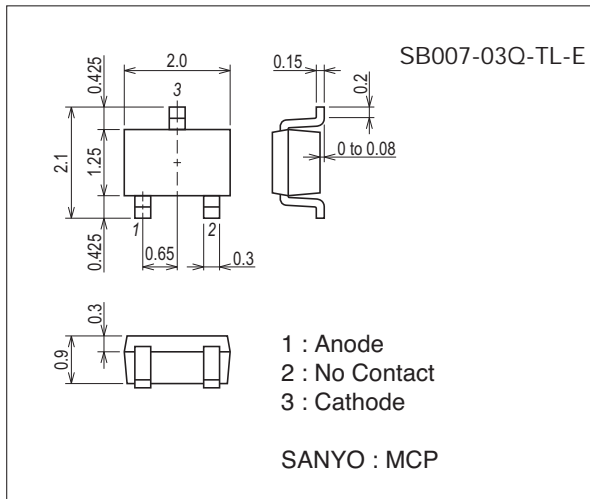
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

| Parameter                                | Symbol    | Conditions              | Ratings     | Unit             |
|--|-----------|-------------------------|-------------|------------------|
| Repetitive Peak Reverse Voltage          | $V_{RRM}$ |                         | 30          | V                |
| Nonrepetitive Peak Reverse Surge Voltage | $V_{RSM}$ |                         | 35          | V                |
| Average Output Current                   | $I_O$     |                         | 70          | mA               |
| Surge Forward Current                    | $I_{FSM}$ | 50Hz sine wave, 1 cycle | 2           | A                |
| Junction Temperature                     | $T_j$     |                         | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature                      | $T_{stg}$ |                         | -55 to +125 | $^\circ\text{C}$ |

### Package Dimensions

unit : mm (typ)

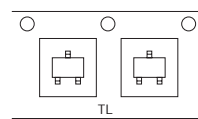
7023A-005



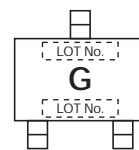
### Product & Package Information

- Package : MCP
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

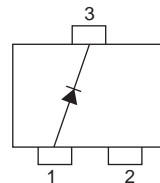
### Packing Type: TL



### Marking



### Electrical Connection

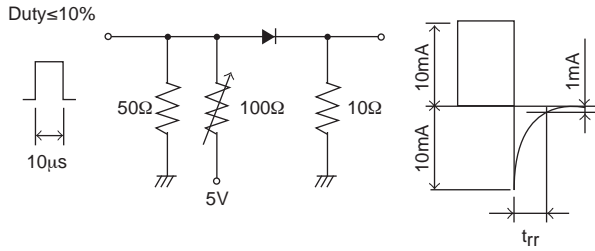


# SB007-03Q

## Electrical Characteristics at Ta=25°C

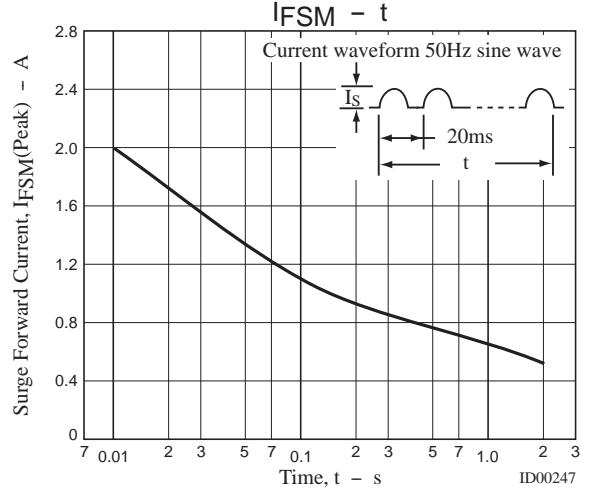
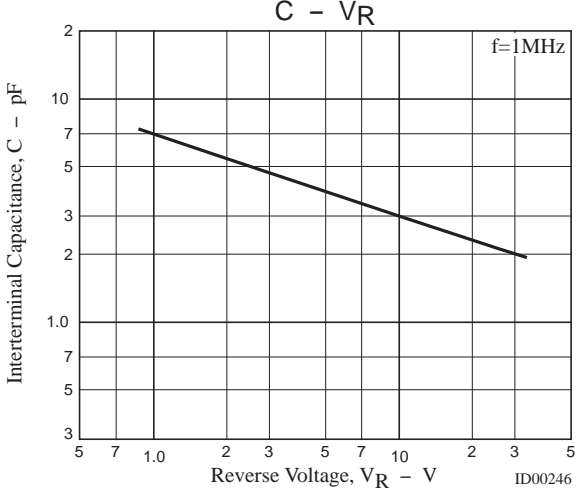
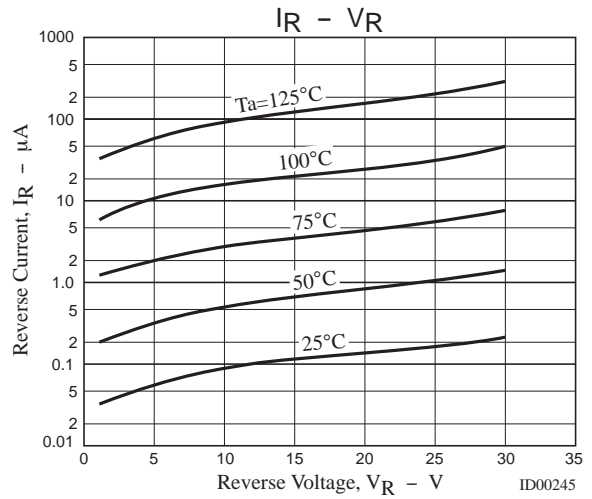
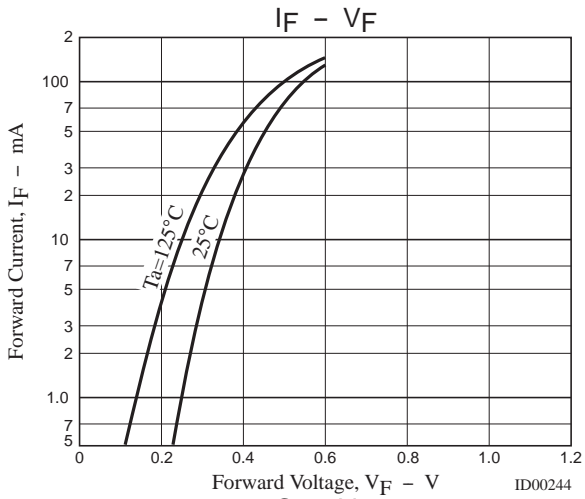
| Parameter                 | Symbol   | Conditions                                   | Ratings |     |      | Unit    |
|---------------------------|----------|--|---------|-----|------|---------|
|                           |          |  | min     | typ | max  |         |
| Reverse Voltage           | $V_R$    | $I_R=20\mu A$                                | 30      |     |      | V       |
| Forward Voltage           | $V_F$    | $I_F=70mA$                                   |         |     | 0.55 | V       |
| Reverse Current           | $I_R$    | $V_R=15V$                                    |         |     | 5    | $\mu A$ |
| Interterminal Capacitance | C        | $V_R=10V, f=1MHz$                            |         | 3.0 |      | pF      |
| Reverse Recovery Time     | $t_{rr}$ | $I_F=I_R=10mA$ , See specified Test Circuit. |         |     | 10   | ns      |

### $t_{rr}$ Test Circuit



### Ordering Information

| Device         | Package | Shipping       | memo    |
|----------------|---------|----------------|---------|
| SB007-03Q-TL-E | MCP     | 3,000pcs./reel | Pb Free |



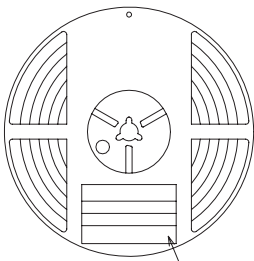
Embossed Taping Specification

SB007-03Q-TL-E

1. Packing Format

| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) |           |           | Packing format  |  |
|--------------|-------------------|---|-----------|-----------|---|--|
|              |                   | Reel                                      | Inner box | Outer box | Inner BOX (C-1)   | Outer BOX (A-7)  |
| MCP          | MCP               | 3,000                                     | 15,000    | 90,000    | 5 reels contained<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

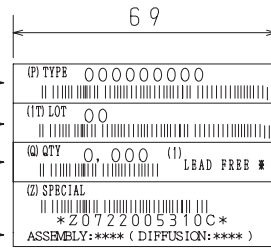
Packing method



Reel label

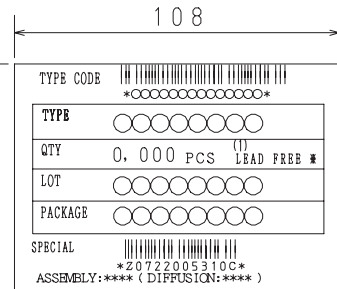
Type No.  
LOT No.  
Quantity  
Origin

Reel label, Inner box label (unit:mm)



Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.



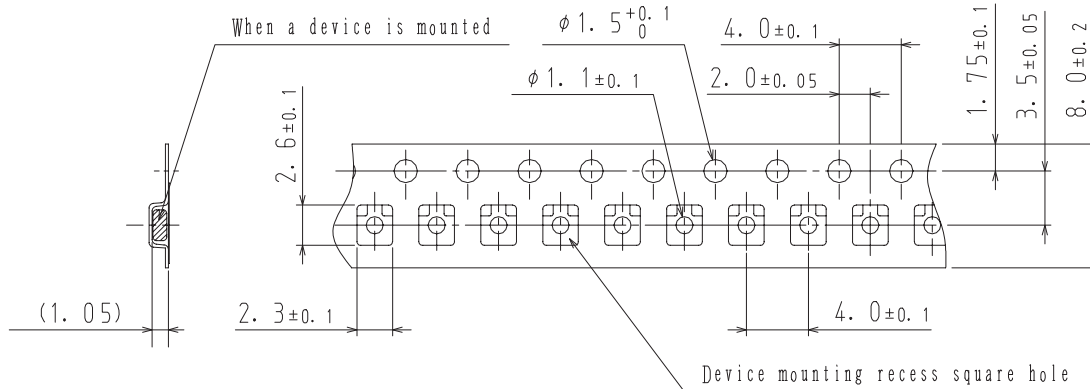
NOTE (1)

The LEAD FREE \* description shows that the surface treatment of the terminal is lead free.

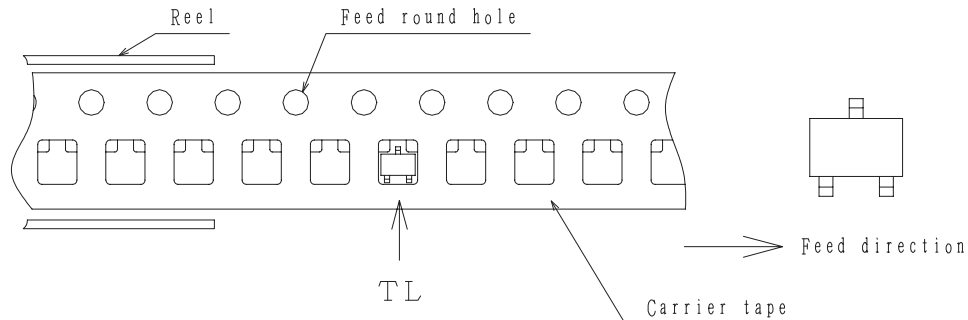
| Label       | JEITA Phase    |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3  |

2. Taping configuration

2-1. Carrier tape size (unit:mm)

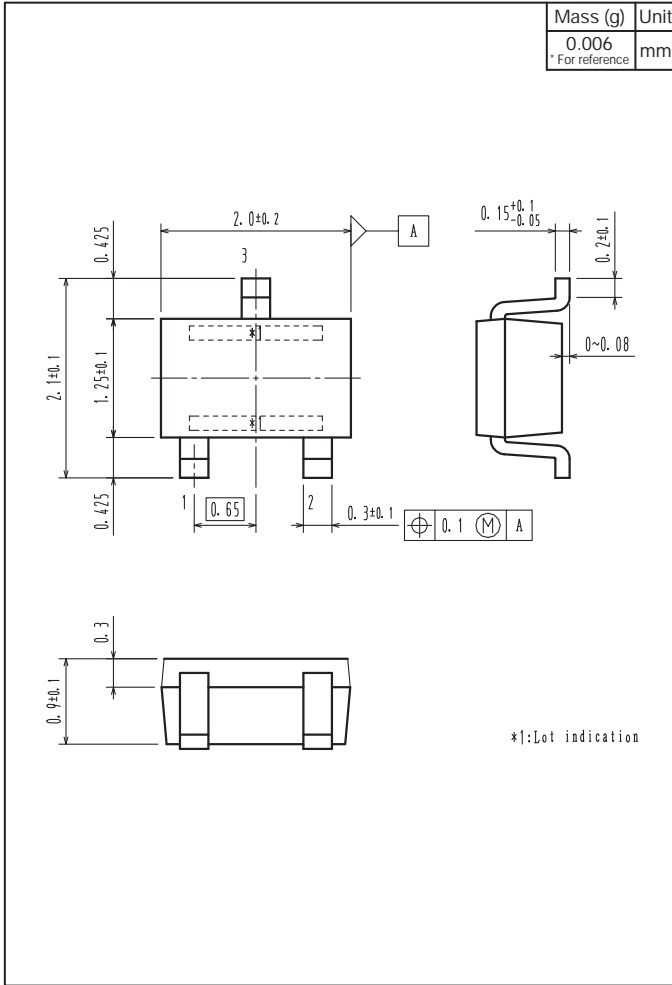


2-2. Device placement direction

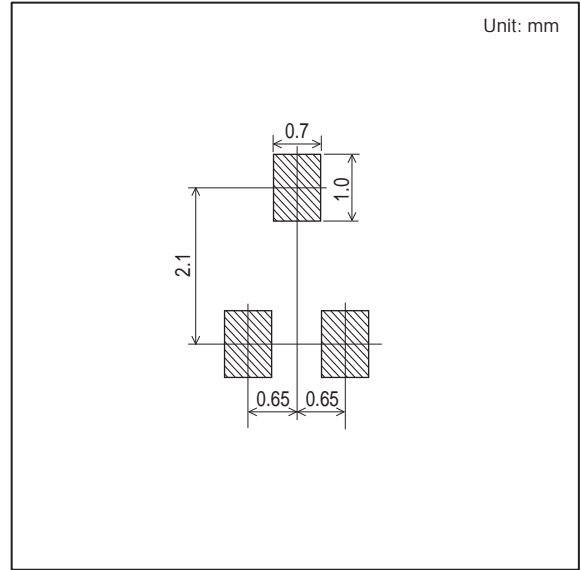


Those with oen electrode terminal on the feed hole side.....TL

Outline Drawing  
SB007-03Q-TL-E



Land Pattern Example



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