



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

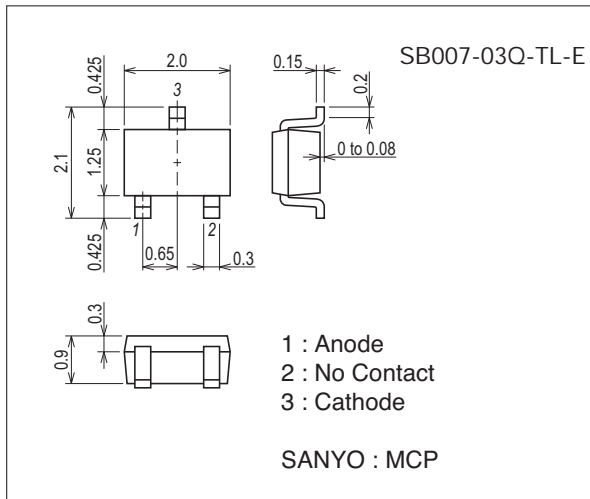
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

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)

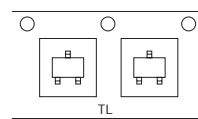
7023A-005



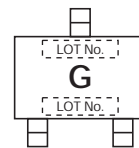
### Product & Package Information

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

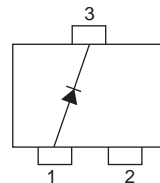
### Packing Type: TL



### Marking



### Electrical Connection

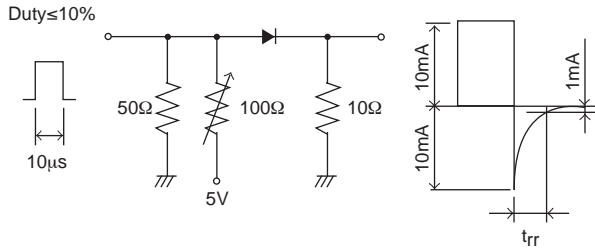


# SB007-03Q

## Electrical Characteristics at Ta=25°C

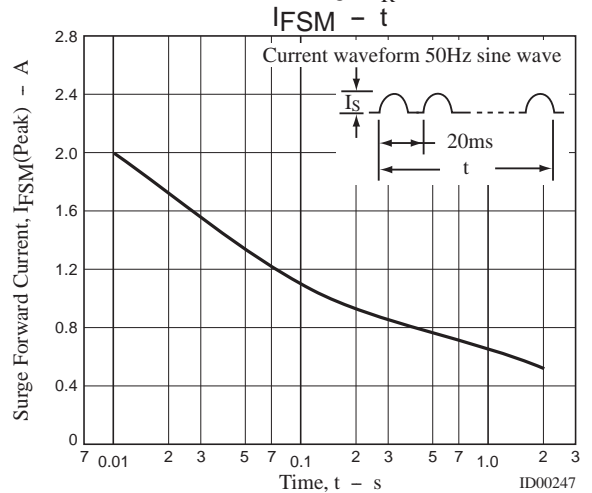
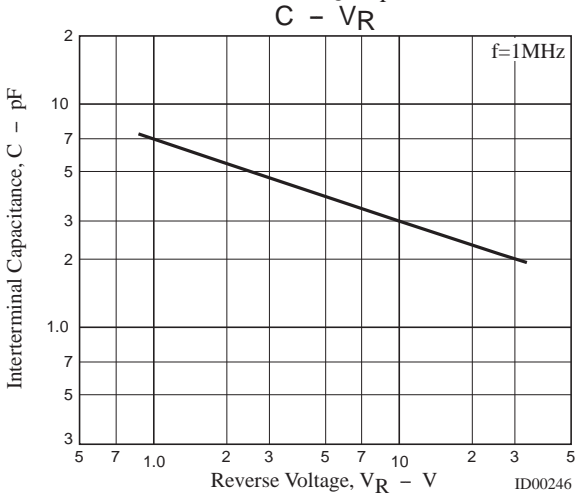
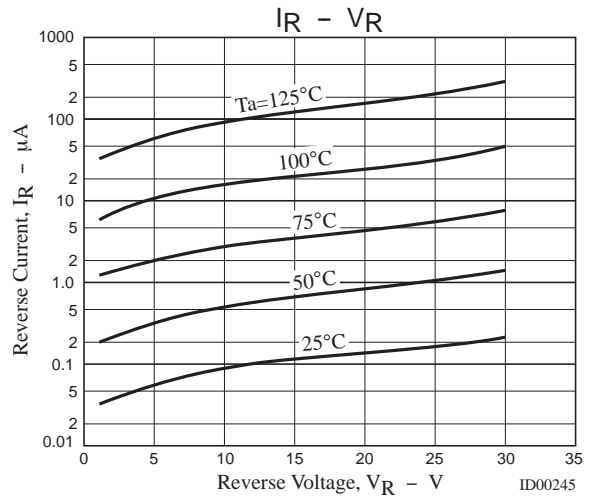
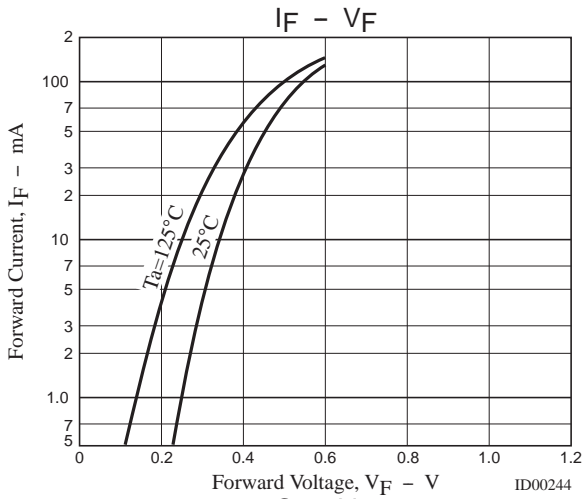
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=20\mu A$	30			V
Forward Voltage	$V_F$	$I_F=70mA$			0.55	V
Reverse Current	$I_R$	$V_R=15V$			5	$\mu A$
Interterminal Capacitance	C	$V_R=10V, f=1MHz$		3.0		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10mA$ , See specified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

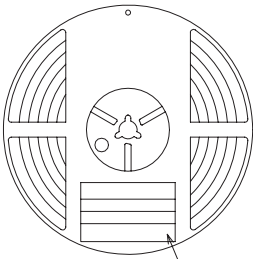
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
MCP	MCP	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method

Reel label, Inner box label  
(unit:mm)

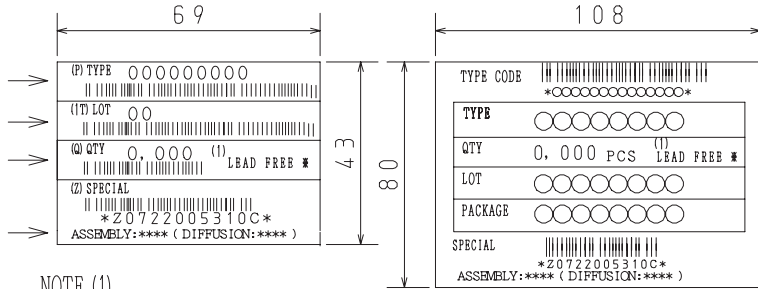
Outer box label

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



Reel label

Type No.  
LOT No.  
Quantity  
Origin



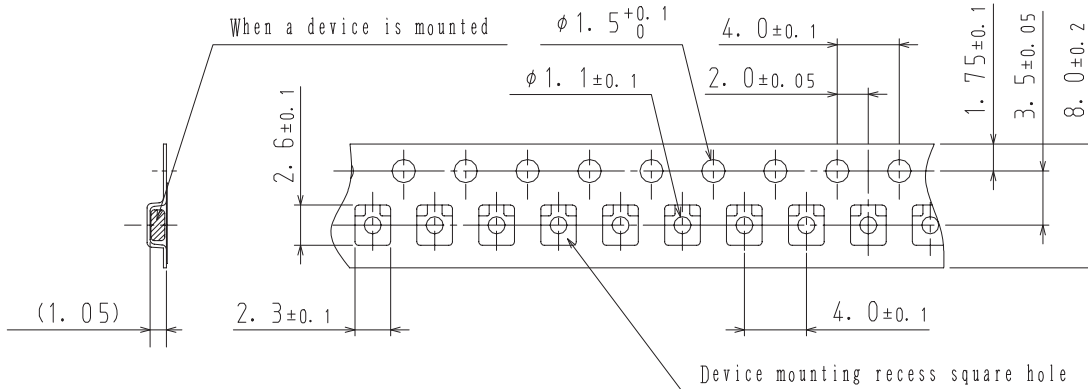
NOTE (1)

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

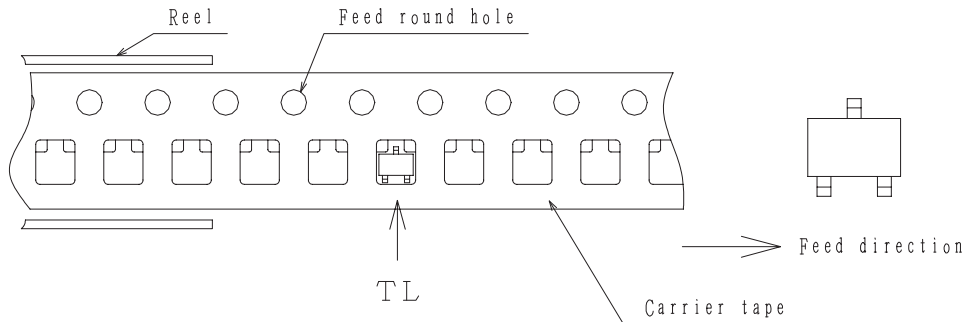
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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

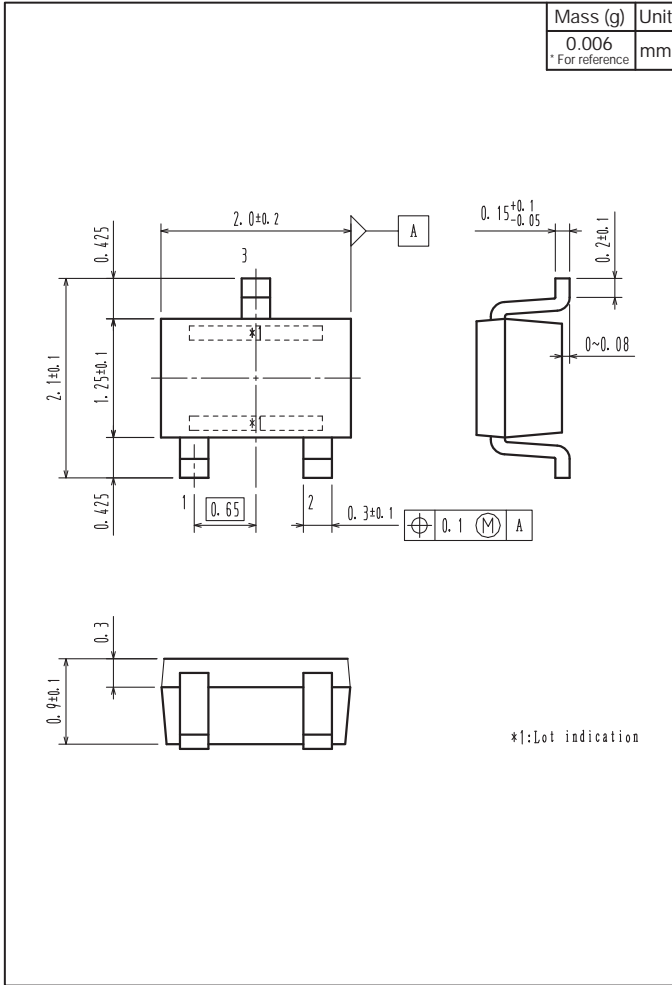


2-2. Device placement direction

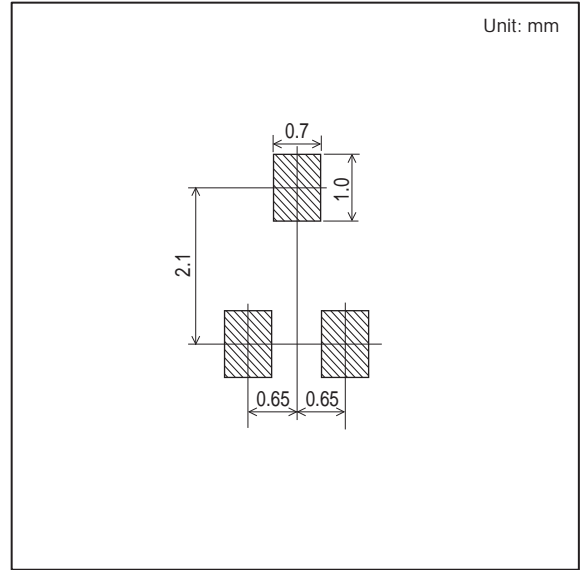


Those with oen electrode terminal on the feed hole side.....TL

Outline Drawing  
SB007-03Q-TL-E



Land Pattern Example



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