



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SB05-03Q

Schottky Barrier Diode
30V, 500mA Rectifier

Applications

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

Features

- Low forward voltage (VF max=0.55V)
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Small-sized package, permitting SB05-03Q-applied sets to be compact and slim
- Fast reverse recovery time (trr max=10ns)

Specifications

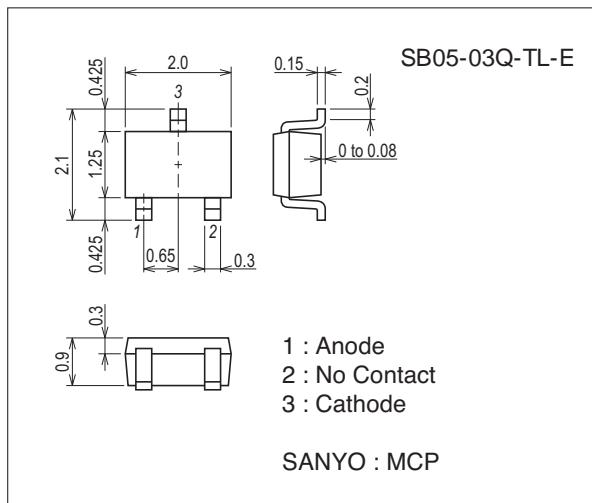
Absolute Maximum Ratings at Ta=25°C

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		500	mA
Surge Forward Current	I _{FSM}	50Hz sine wave, 1 cycle	3	A
Junction Temperature	T _j		-55 to +125	°C
Storage Temperature	T _{stg}		-55 to +125	°C

Package Dimensions

unit : mm (typ)

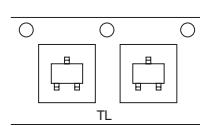
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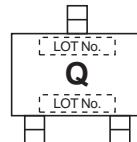
Product & Package Information

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

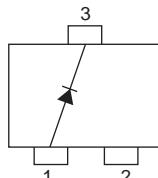
Packing Type: TL



Marking

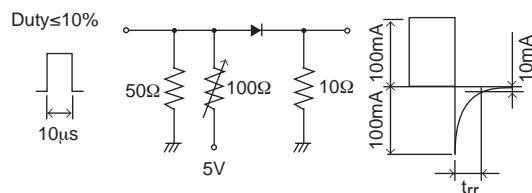


Electrical Connection



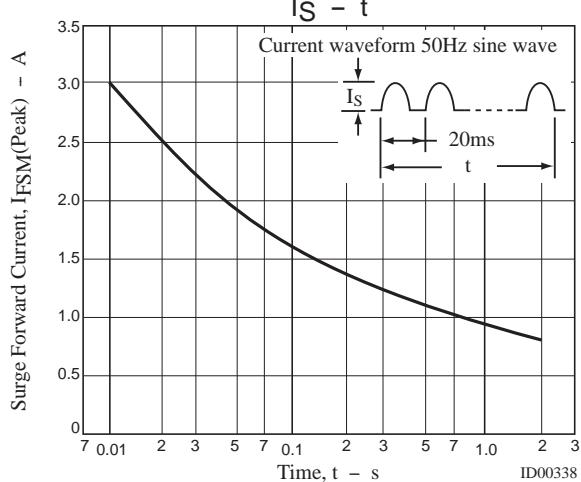
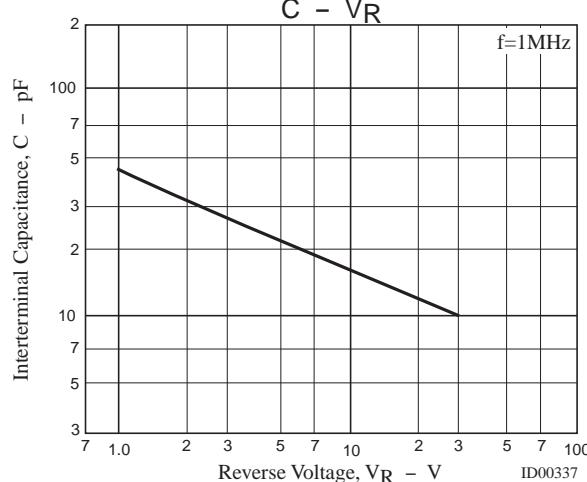
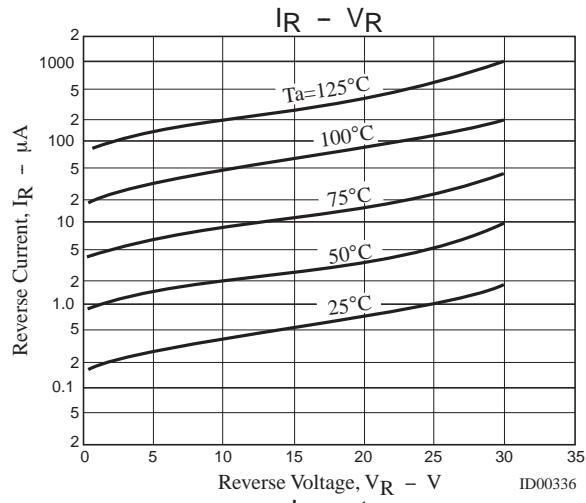
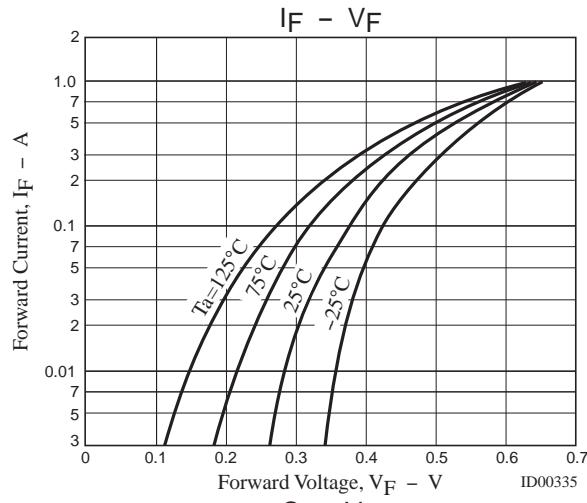
Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=150\mu\text{A}$	30			V
Forward Voltage	V_F	$I_F=500\text{mA}$			0.55	V
Reverse Current	I_R	$V_R=15\text{V}$			30	μA
Interterminal Capacitance	C	$V_R=10\text{V}, f=1\text{MHz}$		16		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=100\text{mA}$, See specified Test Circuit.			10	ns
Thermal Resistance	$R_{th(j-a)}$			600		$^\circ\text{C} / \text{W}$

 t_{rr} Test Circuit

Ordering Information

Device	Package	Shipping	memo
SB05-03Q-TL-E	MCP	3,000pcs./reel	Pb Free

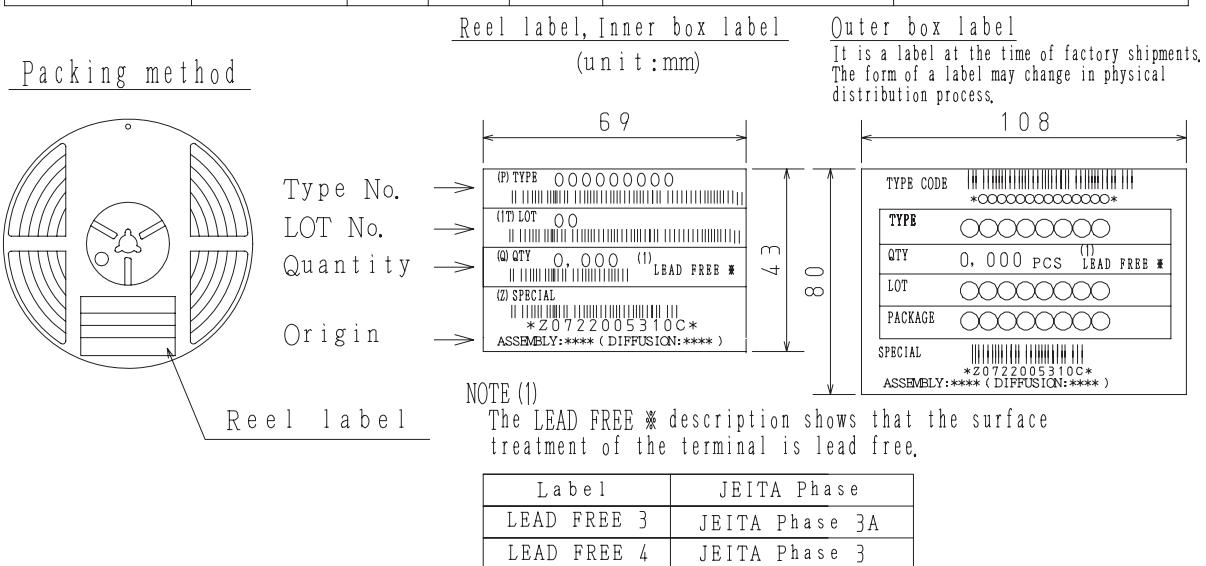


Embossed Taping Specification

SB05-03Q-TL-E

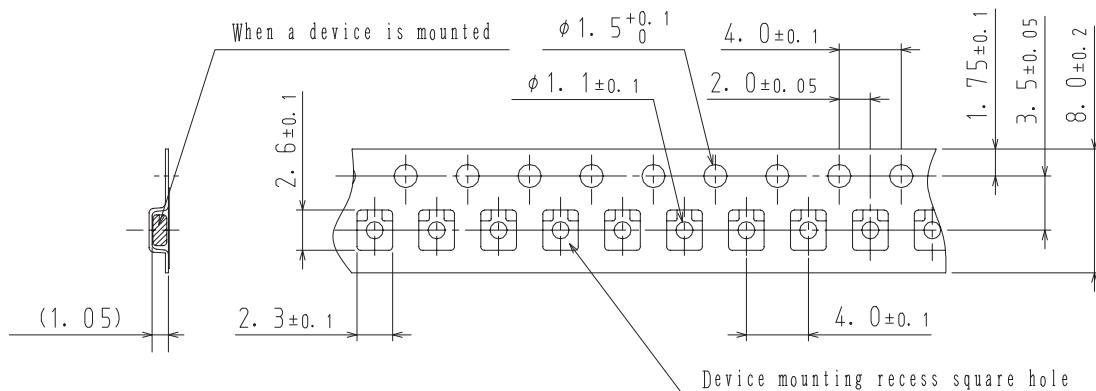
1. Packing Format

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

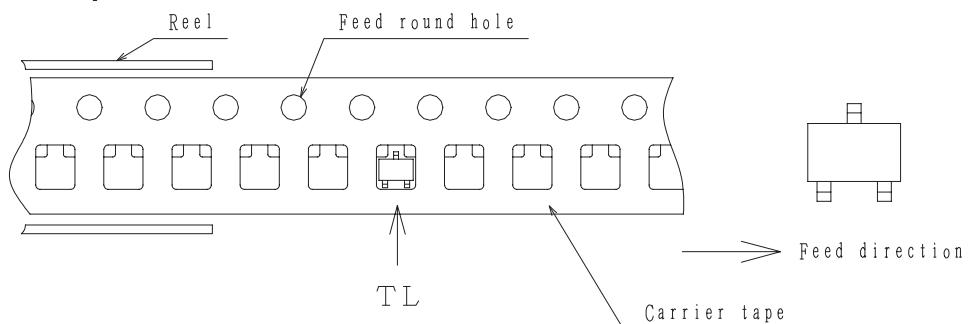


2. Taping configuration

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



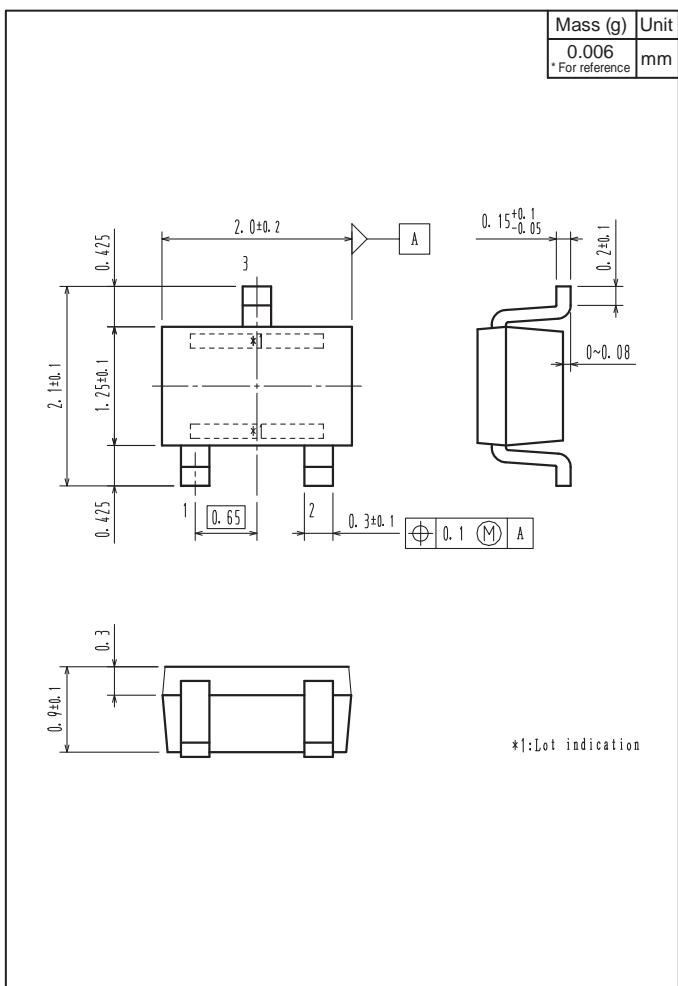
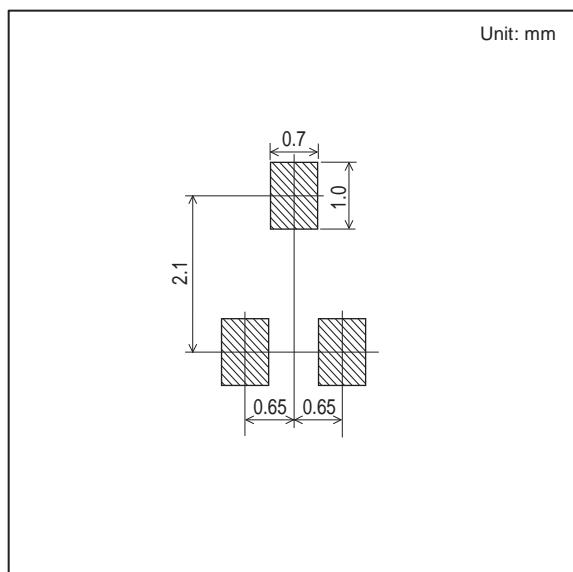
2-2. Device placement direction



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

Outline Drawing

SB05-03Q-TL-E

**Land Pattern Example**

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