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Ordering number : EN2932B

SB01-05Q

Schottky Barrier Diode
50V, 0.1A, Low I_R, Single MCP

ON Semiconductor®
http://onsemi.com

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

Features
- Low forward voltage (V_F max=0.55V)
- Fast reverse recovery time (t_{rr} max=10ns)
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Small-sized package, permitting SB01-05Q-applied sets to be compact and slim

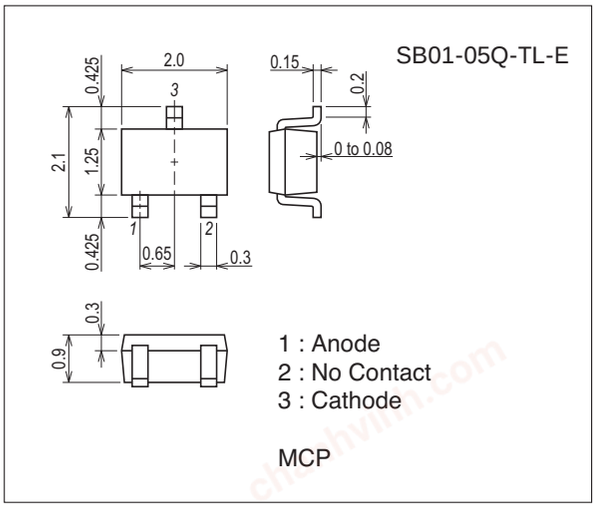
Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		50	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		55	V
Average Output Current	I_O		100	mA
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	2	A
Junction Temperature	Tj		−55 to +125	°C
Storage Temperature	Tstg		−55 to +125	°C

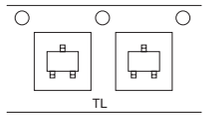
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions
unit : mm (typ)
7023A-005

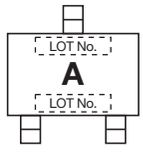


Product & Package Information
- Package : MCP
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

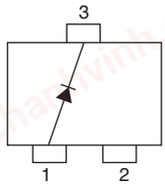
Packing Type: TL



Marking



Electrical Connection

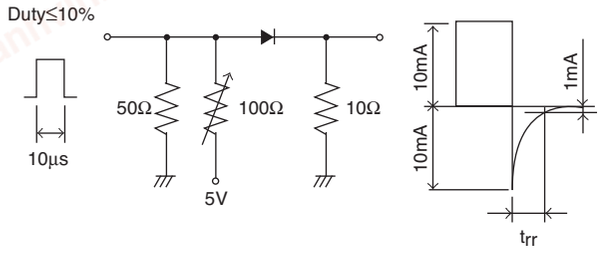


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Electrical Characteristics at Ta=25°C

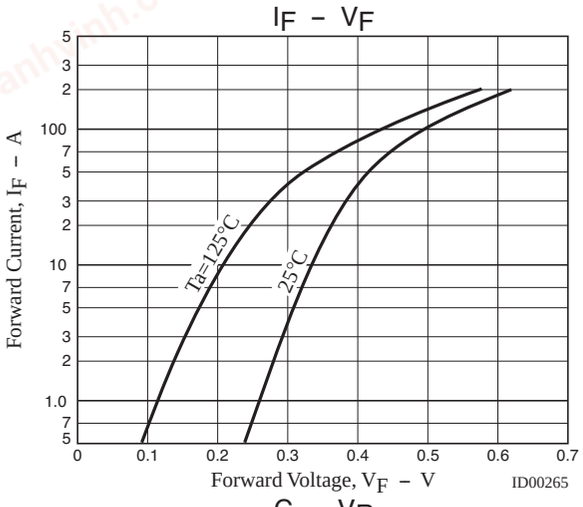
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=50μA	50			V
Forward Voltage	V_F	I_F=100mA			0.55	V
Reverse Current	I_R	V_R=25V			15	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		4.4		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA, See specified Test Circuit.			10	ns

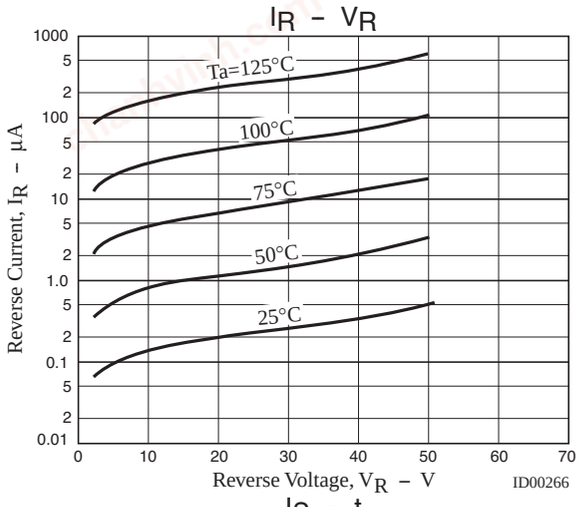
t_{rr} Test Circuit

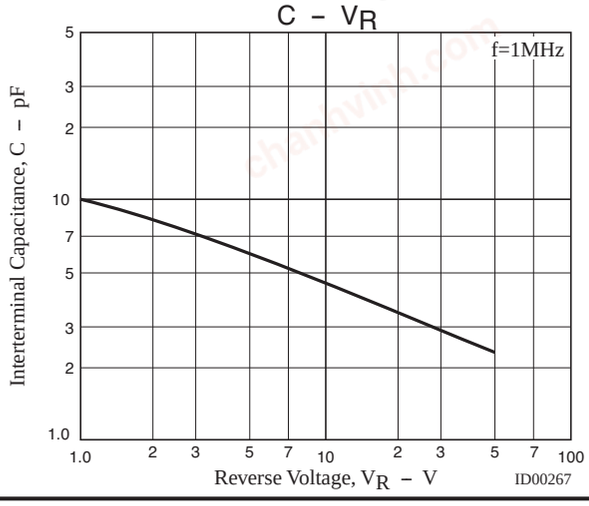


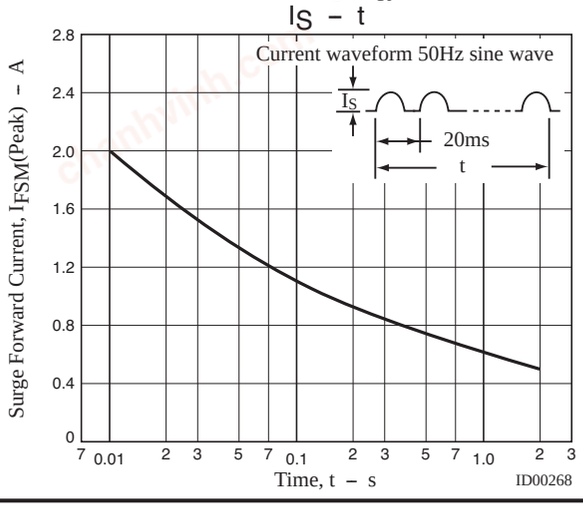
Ordering Information

Device	Package	Shipping	memo
SB01-05Q-TL-E	MCP	3,000pcs./reel	Pb Free









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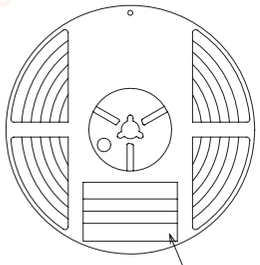
Embossed Taping Specification

SB01-05Q-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

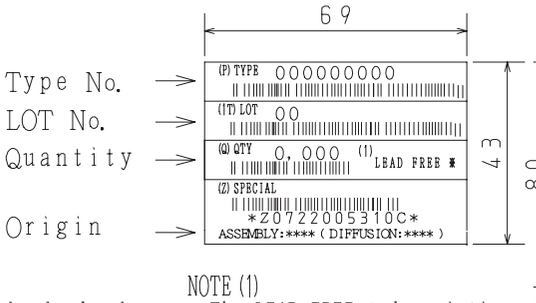
Packing method



Reel label

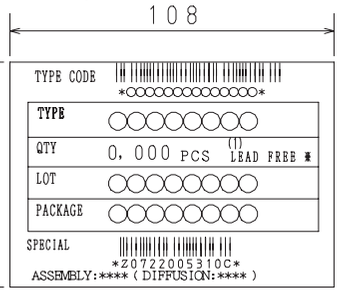
Reel label, Inner box label

(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.



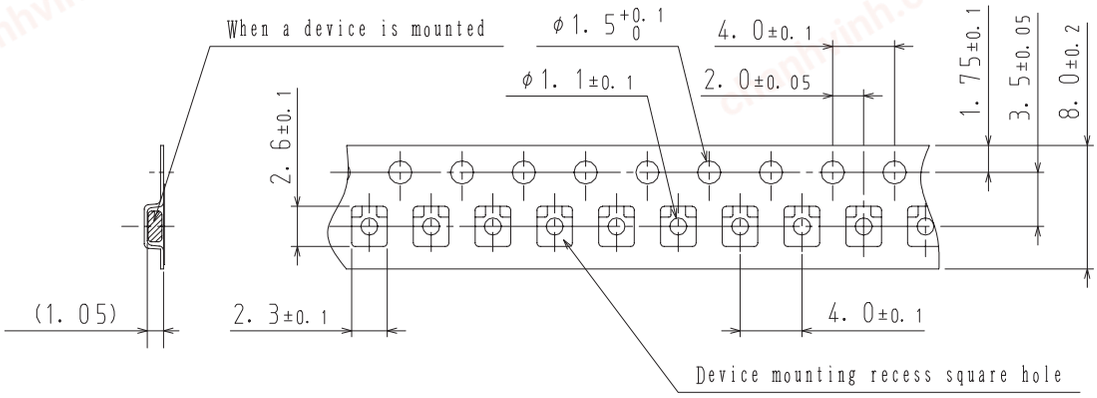
NOTE (1)

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

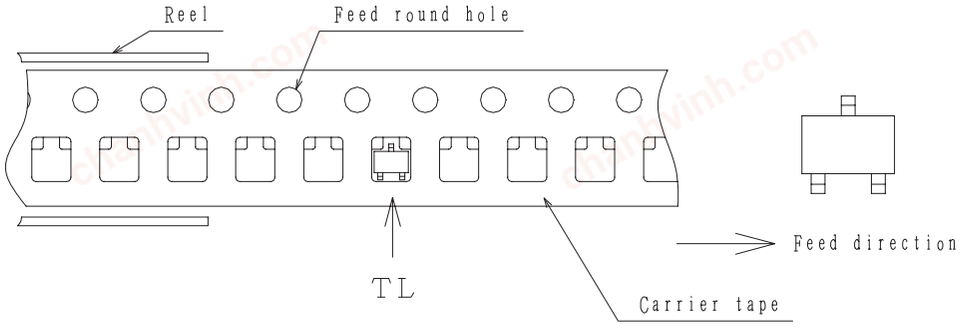
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction



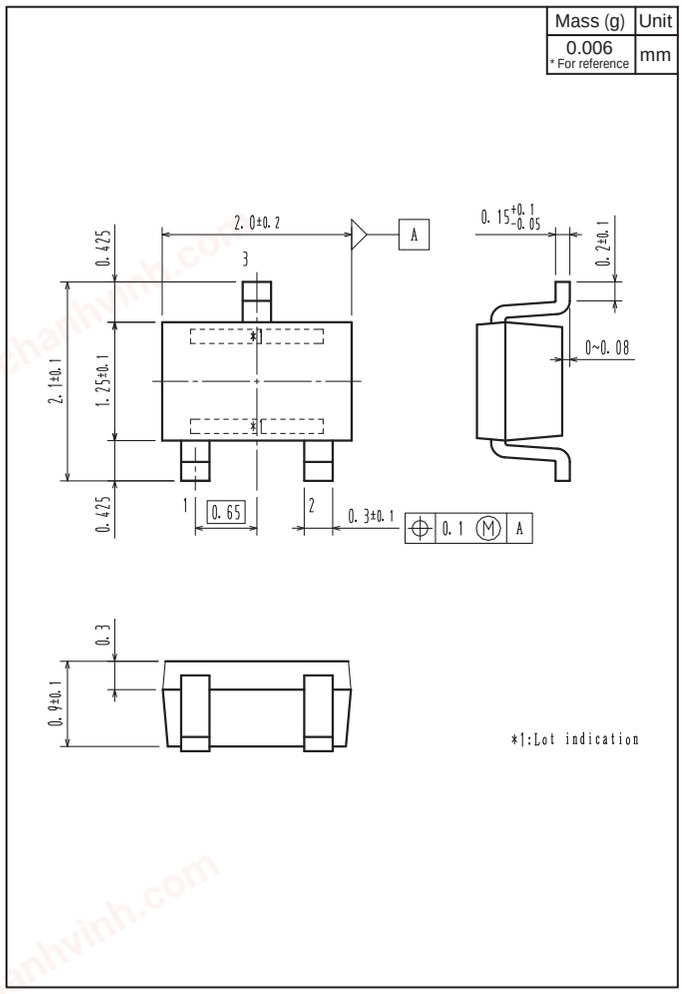
Those with oen electrode terminal on the feed hole side·····TL

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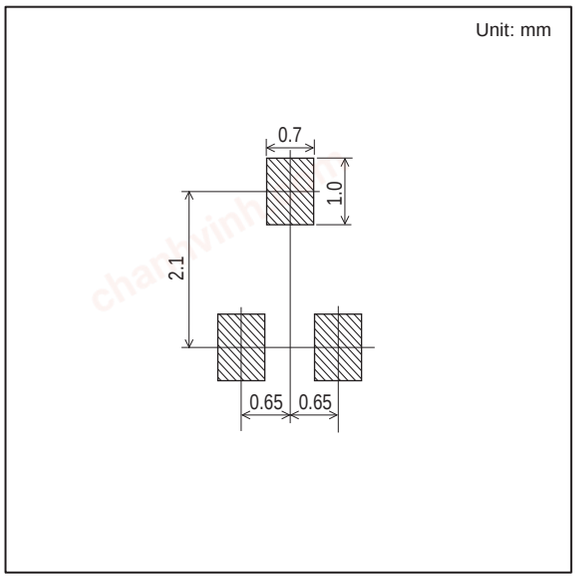
SB01-05Q

Outline Drawing

SB01-05Q-TL-E



Land Pattern Example



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