SB05-03Q

ON Semiconductor®

Schottky Barrier Diode 30V, 0.5A, Low IR, Single MCP

http://onsemi.com

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

Specifications

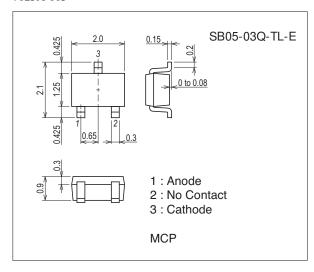
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		30	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		35	V
Average Output Current	IO		500	mA
Surge Forward Current	IFSM	50Hz sine wave, 1 cycle	3	Α
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



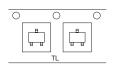
Product & Package Information

• Package : MCP

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

• Fast reverse recovery time (trr max=10ns)

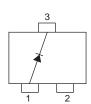
Packing Type: TL





Marking

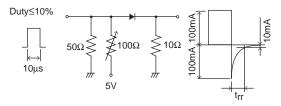
Electrical Connection



Electrical Characteristics at Ta=25°C

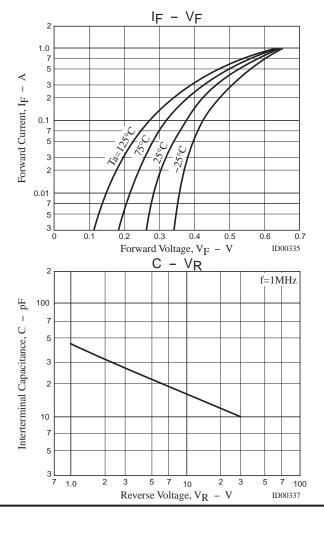
Parameter	Symbol	Conditions	Ratings			Unit
		Conditions	min	typ	max	J JIII
Reverse Voltage	VR	I _R =150μA	30			V
Forward Voltage	VF	IF=500mA			0.55	V
Reverse Current	IR	V _R =15V			30	μΑ
Interterminal Capacitance	С	V _R =10V, f=1MHz		16		pF
Reverse Recovery Time	t _{rr}	IF=IR=100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)			600		°C / W

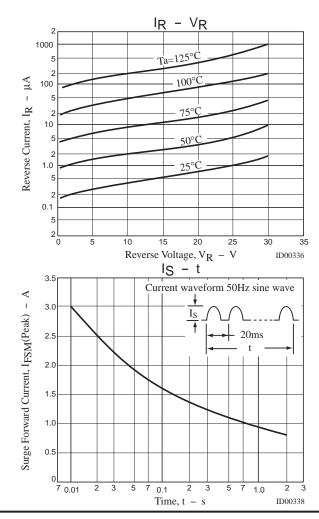
trr Test Circuit



Ordering Information

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



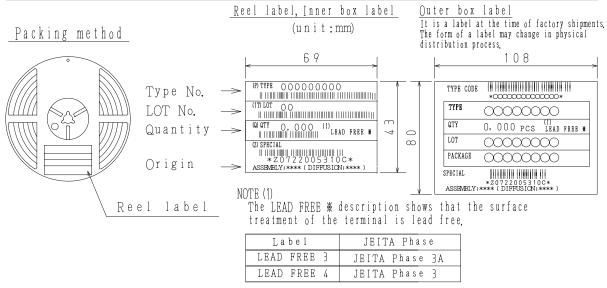


Embossed Taping Specification

SB05-03Q-TL-E

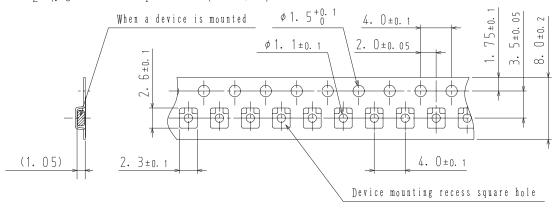
1. Packing Format

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

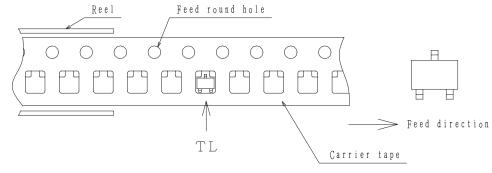


2. Taping configuration

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



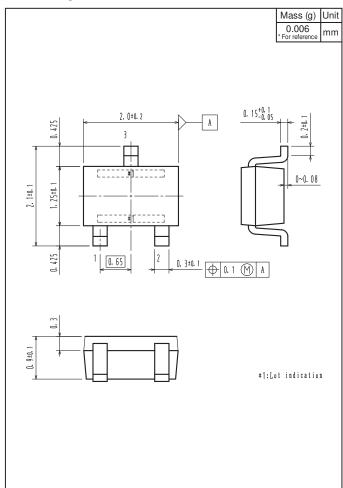
2-2. Device placement direction



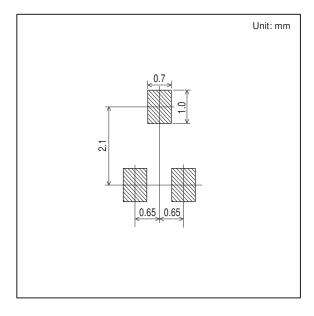
Those with oen electrode terminal on the feed hole side·····TL

Outline Drawing

SB05-03Q-TL-E



Land Pattern Example



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