



SB007-03Q

Schottky Barrier Diode 30V, 70mA, Low IR, Single MCP

ON Semiconductor®

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Applications

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

Features

- Low forward voltage (V_F max=0.55V)
- 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} max=10ns)

Specifications

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

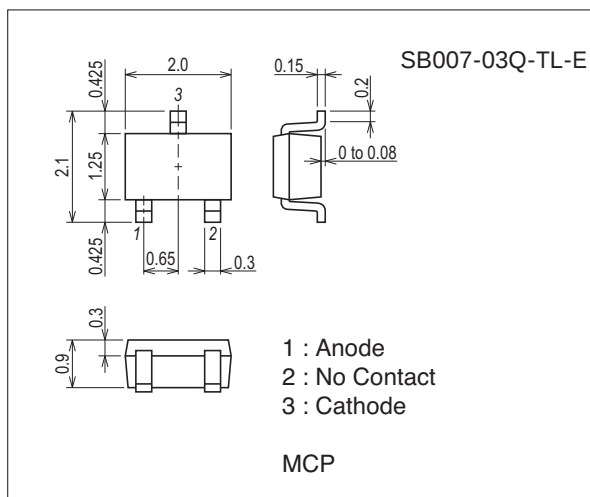
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		30	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		35	V
Average Output Current	I_O		70	mA
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	2	A
Junction Temperature	T_j		-55 to +125	$^\circ\text{C}$
Storage Temperature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

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)

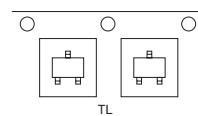
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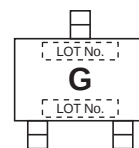
Product & Package Information

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

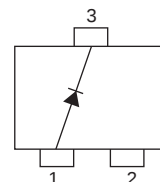
Packing Type: TL



Marking



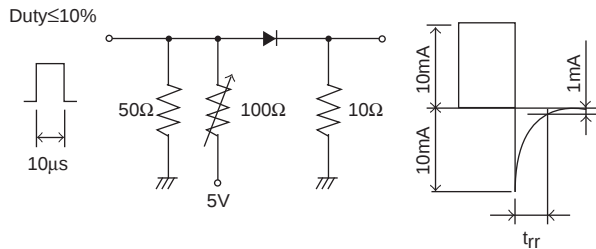
Electrical Connection



Electrical Characteristics at Ta=25°C

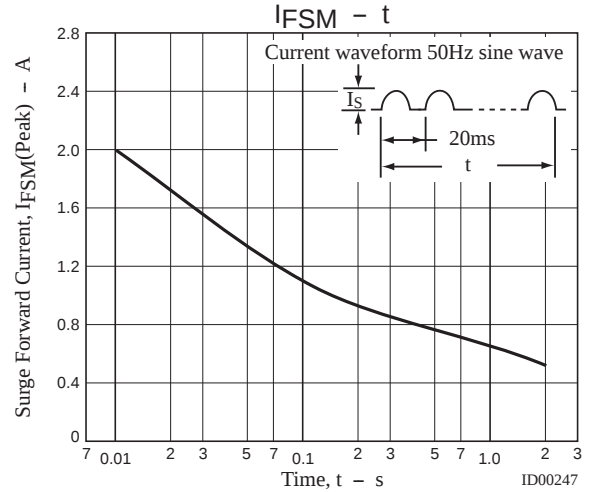
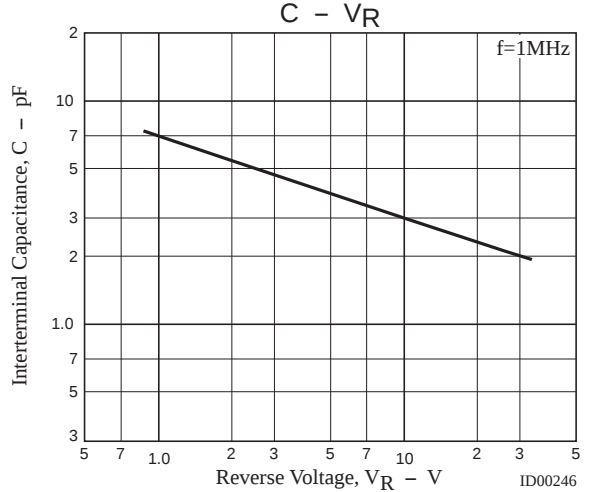
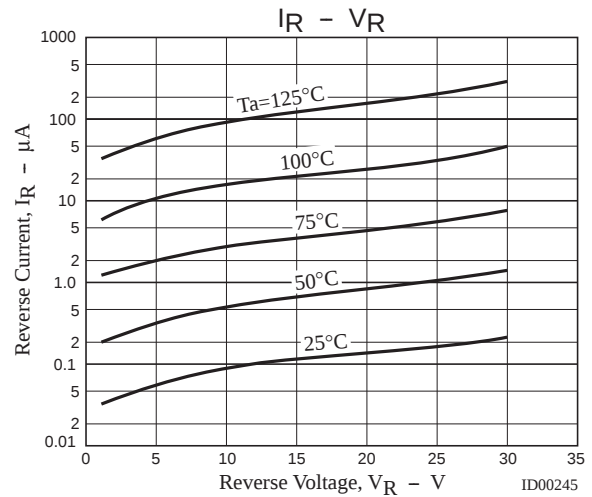
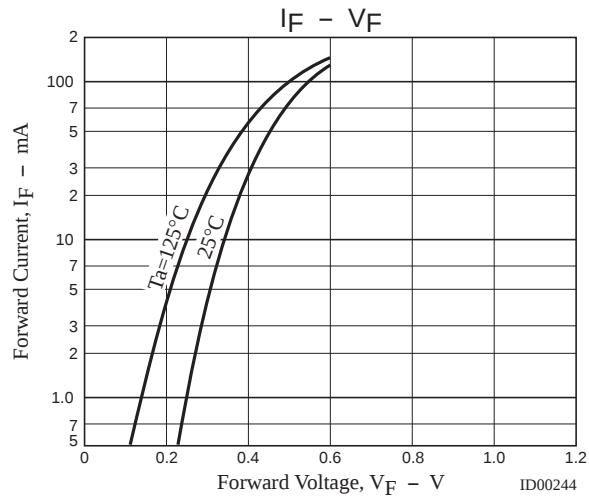
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=20\mu A$	30			V
Forward Voltage	V_F	$I_F=70mA$			0.55	V
Reverse Current	I_R	$V_R=15V$			5	μA
Interterminal Capacitance	C	$V_R=10V, f=1MHz$		3.0		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10mA$, See specified Test Circuit.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

t_{rr} Test Circuit



Ordering Information

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

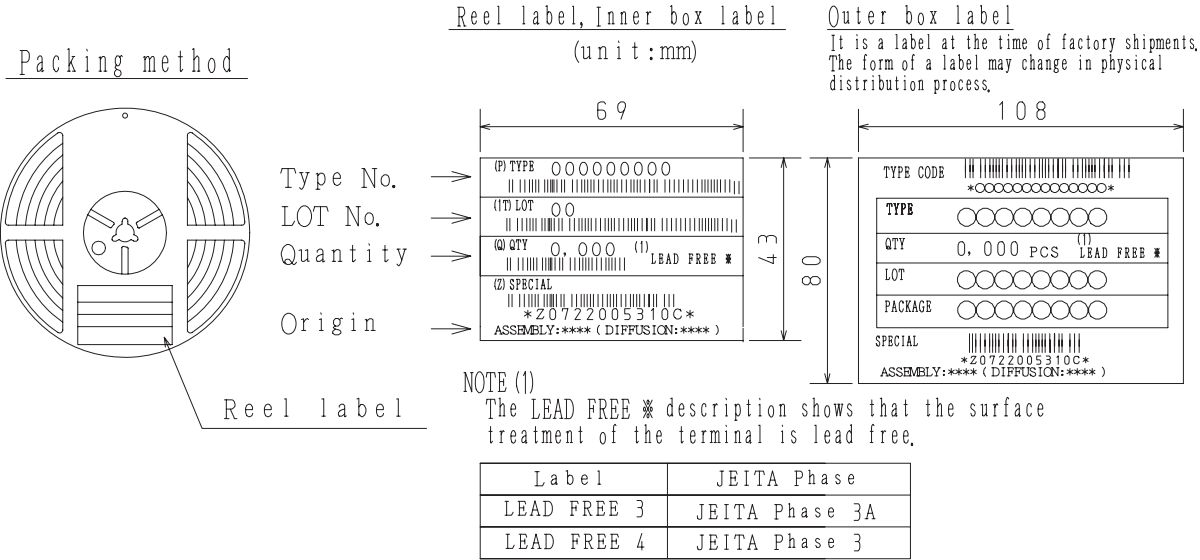


Embossed Taping Specification

SB007-03Q-TL-E

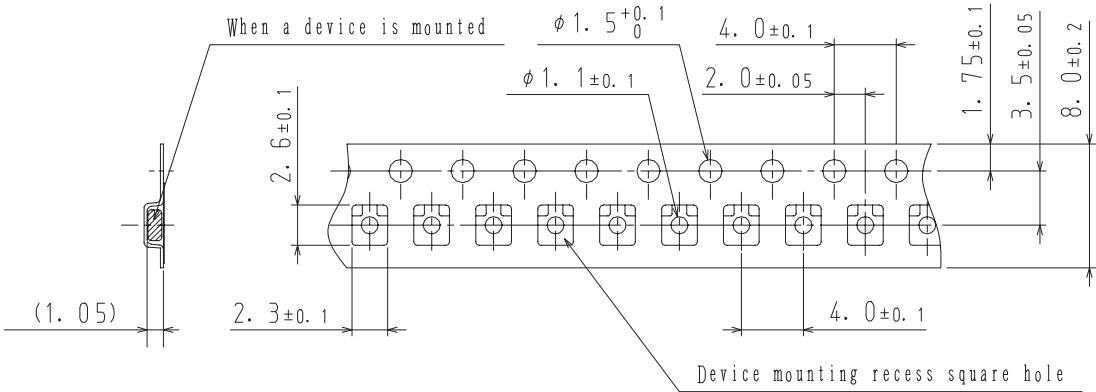
1. Packing Format

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

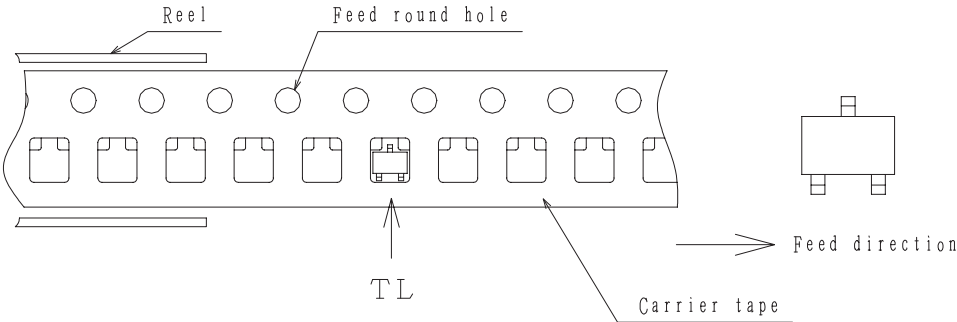


2. Taping configuration

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

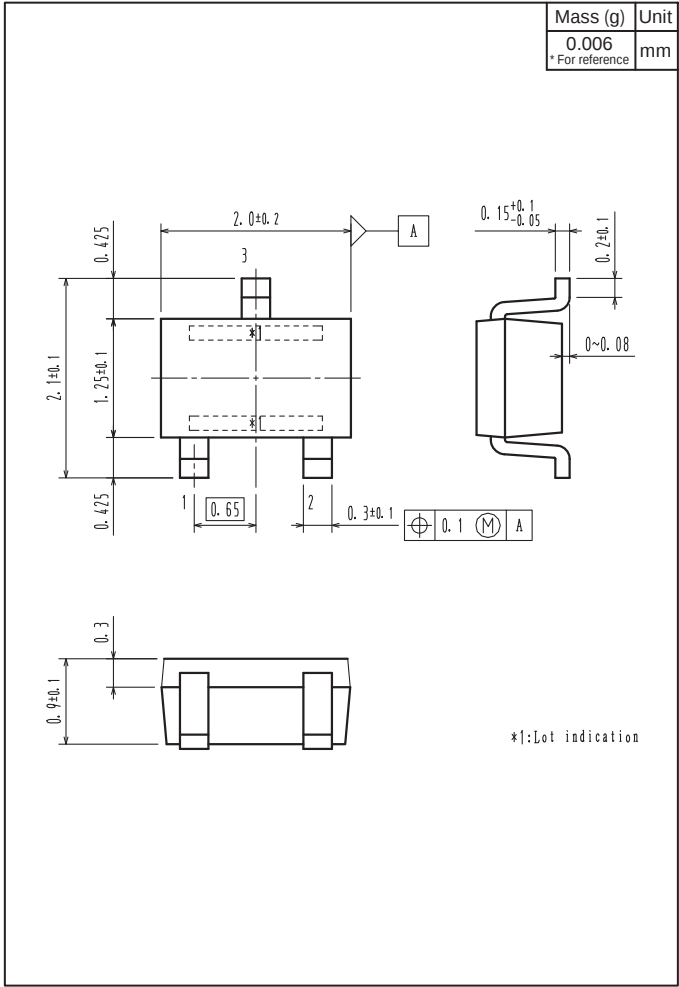


2-2. Device placement direction

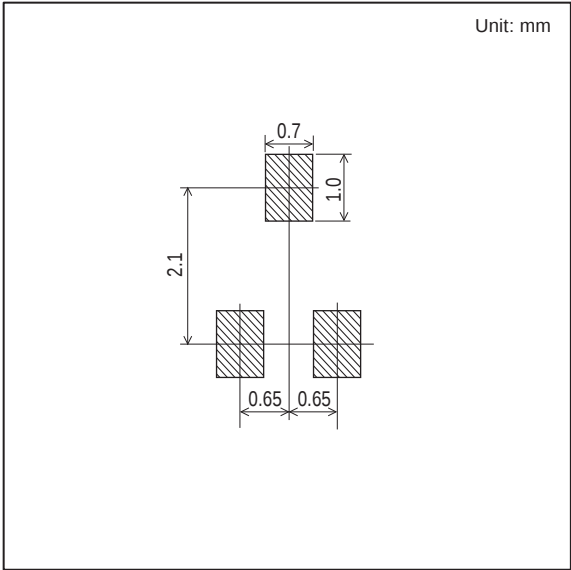


Outline Drawing

SB007-03Q-TL-E



Land Pattern Example



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