### **SB007-03Q**

# ON Semiconductor®

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

#### **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 SB007-03Q applied sets to be compact and slim

#### **Specifications**

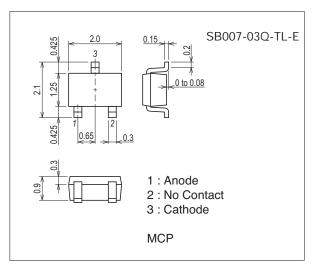
#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		30	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		35	V
Average Output Current	I <sub>O</sub>		70	mA
Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, 1 cycle	2	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



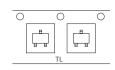
#### **Product & Package Information**

• Package : MCP

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

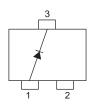
• Fast reverse recovery time (trr max=10ns)

#### Packing Type: TL Marking





#### **Electrical Connection**

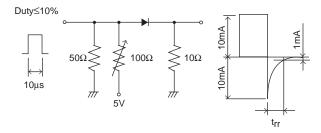


September, 2013

#### Electrical Characteristics at Ta=25°C

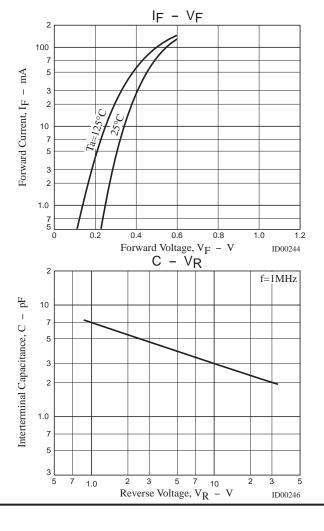
Parameter	Symbol	Conditions	Ratings			Unit
		Conditions	min	typ	max	Unit
Reverse Voltage	VR	I <sub>R</sub> =20μA	30			V
Forward Voltage	VF	I <sub>F</sub> =70mA			0.55	V
Reverse Current	IR	V <sub>R</sub> =15V			5	μΑ
Interterminal Capacitance	С	V <sub>R</sub> =10V, f=1MHz		3.0		pF
Reverse Recovery Time	t <sub>rr</sub>	IF=IR=10mA, See specified Test Circuit.			10	ns

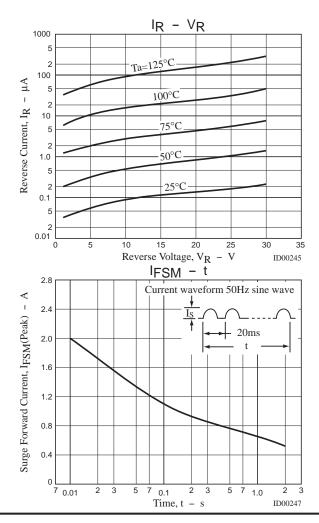
#### trr Test Circuit



#### **Ordering Information**

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



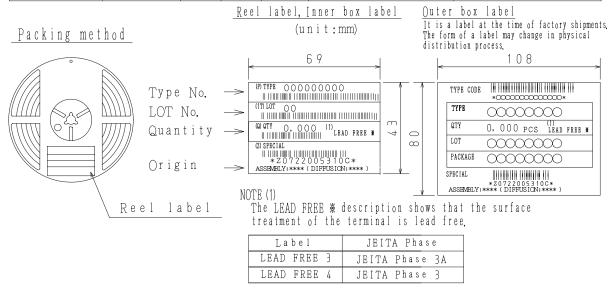


#### **Embossed Taping Specification**

#### SB007-03Q-TL-E

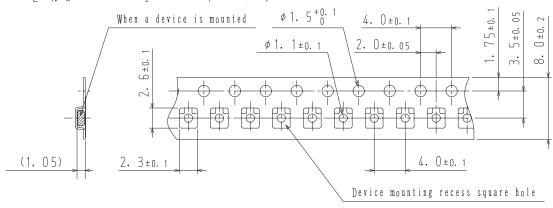
#### 1. Packing Format

Package Name	Carrier Tape	Maximum Number of devices contained (pcs)			Packing	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

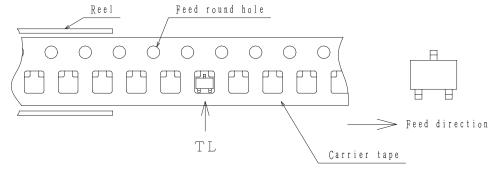


#### 2. Taping configuration

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



2-2. Device placement direction



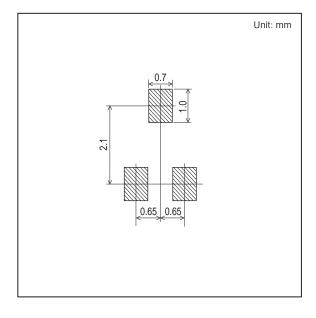
Those with oen electrode terminal on the feed hole side·····TL

#### **Outline Drawing**

SB007-03Q-TL-E

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#### Land Pattern Example



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