Ordering number : EN2981C

SB07-03P

Schottky Barrier Diode
30V, 0.7A, Low I_R, Single PCP

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

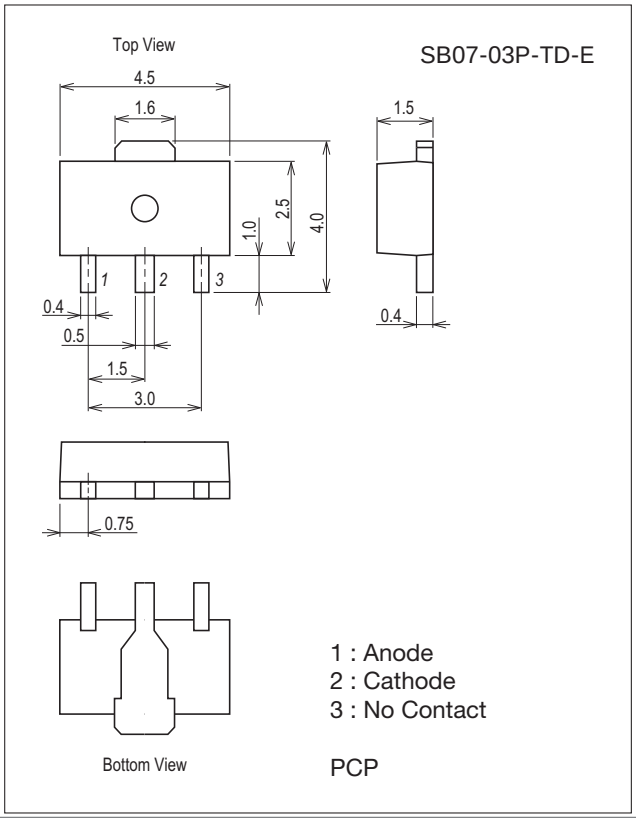
Specifications

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		700	mA
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	5	A
Junction Temperature	Tj		−55 to +125	°C
Storage Temperature	Tstg		−55 to +125	°C

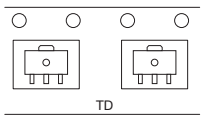
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Package Dimensions
unit : mm (typ)
7007B-001

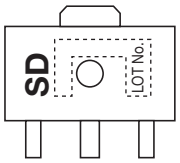


Product & Package Information
- Package : PCP
- JEITA, JEDEC : SC-62, SOT-89, TO-243
- Minimum Packing Quantity : 1,000 pcs./reel

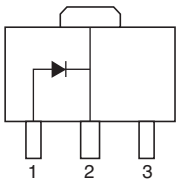
Packing Type: TD



Marking



Electrical Connection

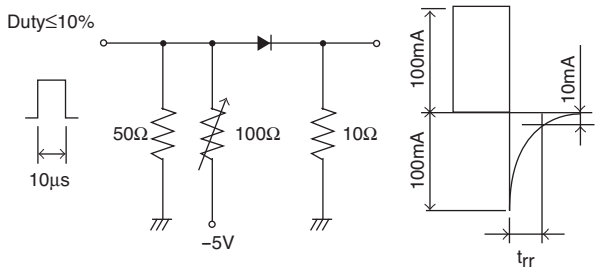


Semiconductor Components Industries, LLC, 2013

Electrical Characteristics at Ta=25°C

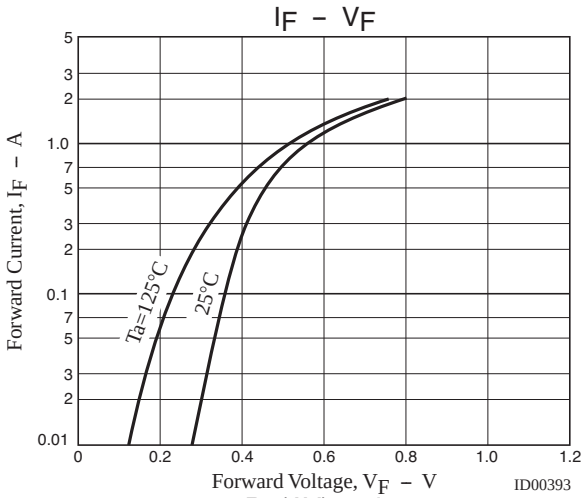
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=300μA	30			V
Forward Voltage	V_F	I_F=700mA			0.55	V
Reverse Current	I_R	V_R=15V			80	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		26		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)1			310		°C / W
	Rth(j-a)2	When mounted on ceramic substrate (250mm²×0.8mm)		120		°C / W

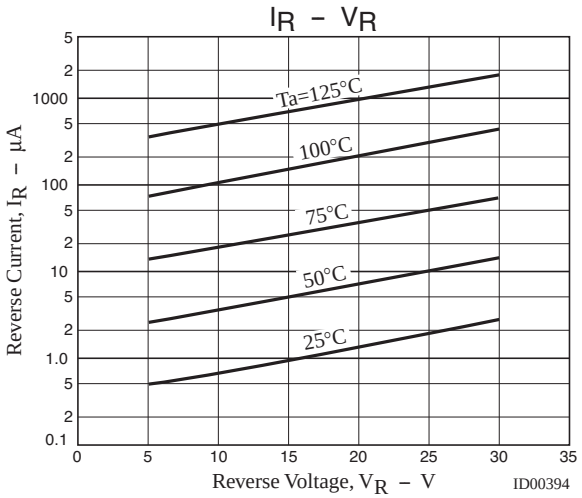
t_{rr} Test Circuit

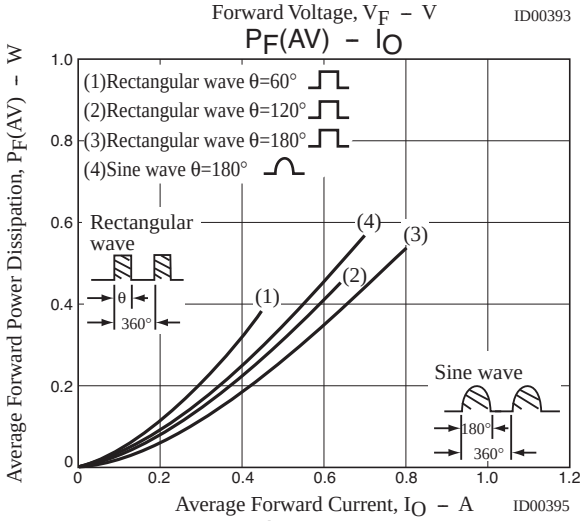


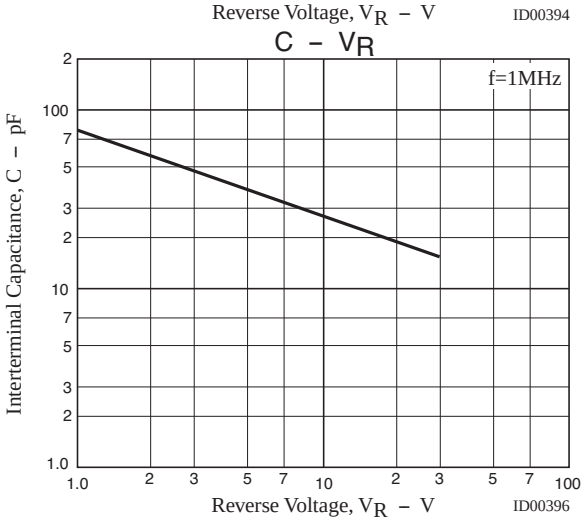
Ordering Information

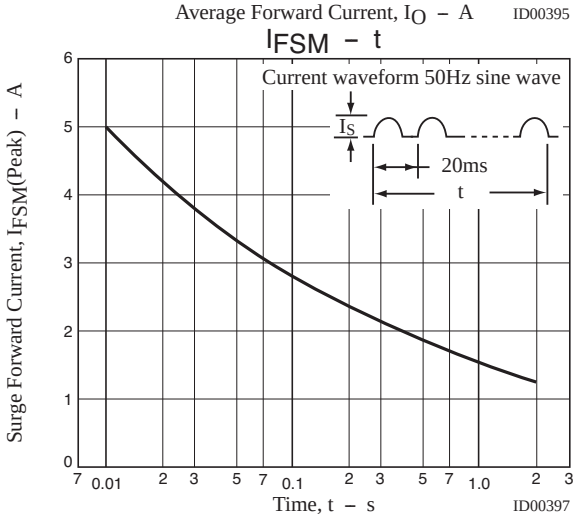
Device	Package	Shipping	memo
SB07-03P-TD-E	PCP	1,000pcs./reel	Pb Free


IF – VF
Forward Current, IF – A
Forward Voltage, VF – V
Ta=125°C
25°C
ID00393


IR – VR
Reverse Current, IR – µA
Reverse Voltage, VR – V
Ta=125°C
100°C
75°C
50°C
25°C
ID00394


PF(AV) – IO
Average Forward Power Dissipation, PF(AV) – W
Average Forward Current, IO – A
(1)Rectangular wave θ=60°
(2)Rectangular wave θ=120°
(3)Rectangular wave θ=180°
(4)Sine wave θ=180°
Rectangular wave
θ
360°
Sine wave
180°
360°
ID00395


C – VR
Interterminal Capacitance, C – pF
Reverse Voltage, VR – V
f=1MHz
ID00396


IFSM – t
Surge Forward Current, IFSM(Peak) – A
Time, t – s
Current waveform 50Hz sine wave
IS
20ms
t
ID00397

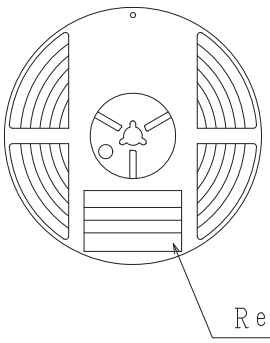
Embossed Taping Specification

SB07-03P-TD-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)
PCP	PCP	1,000	4,000	24,000	4 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

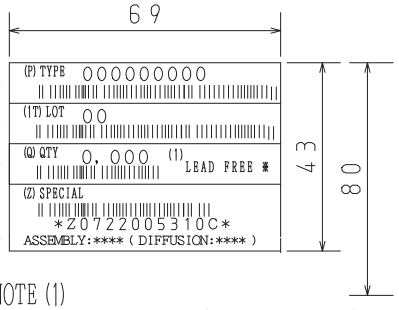
Packing method



Reel label

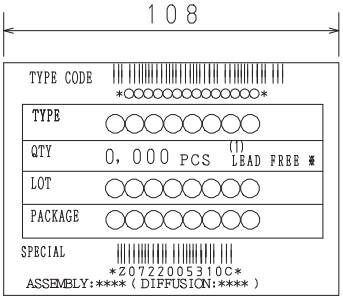
Reel label, Inner box label

(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.

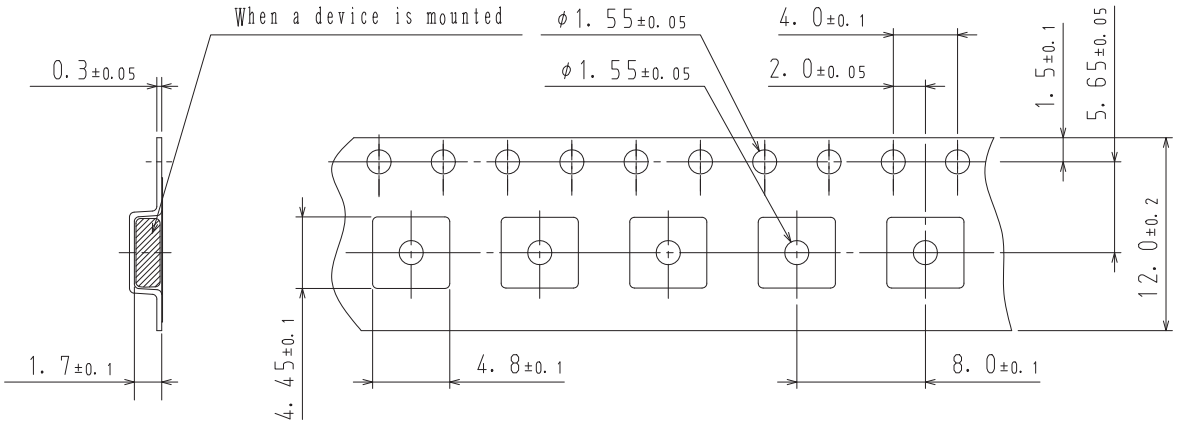


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

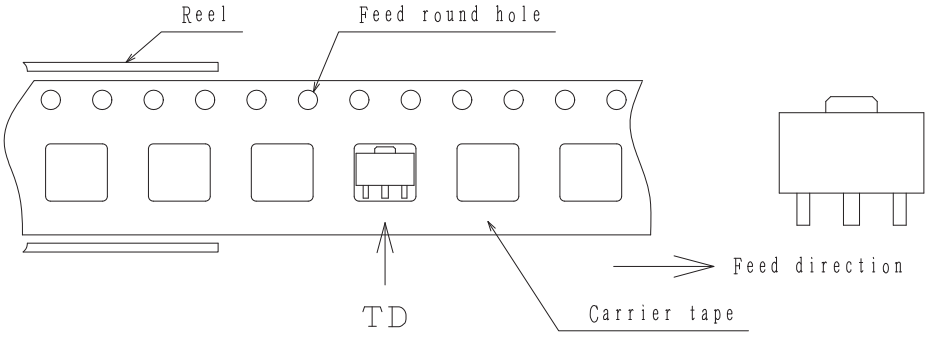
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



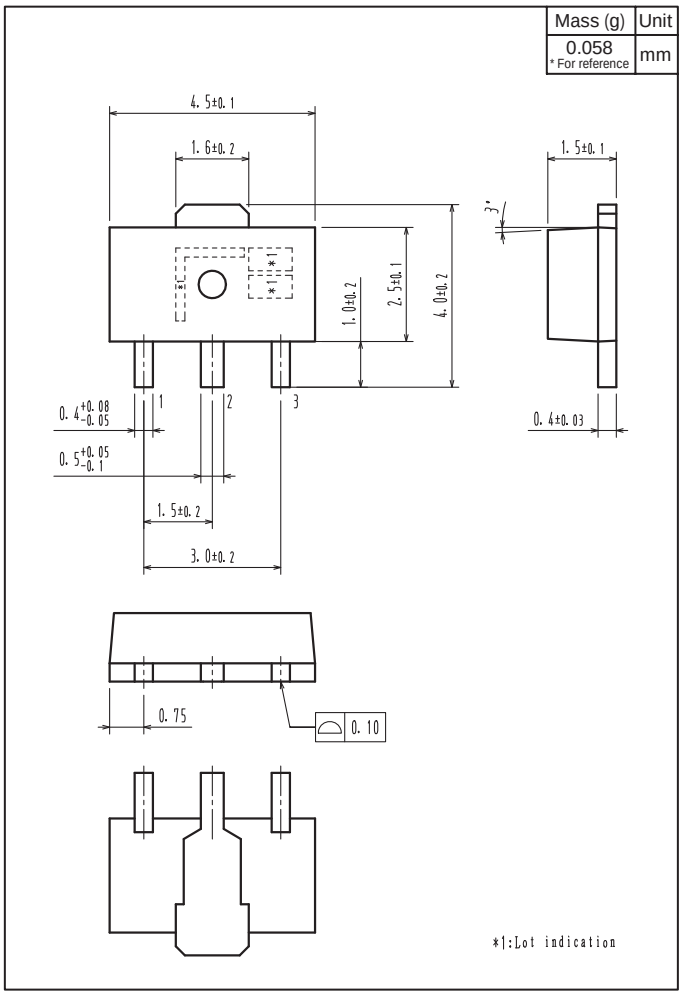
2-2. Device placement direction



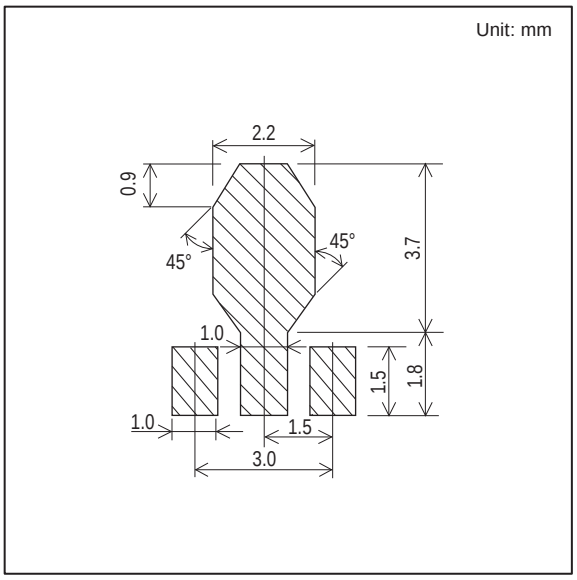
Those with pin 1 index on the feed hole side……TD

Outline Drawing

SB07-03P-TD-E



Land Pattern Example



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