Ordering number : EN3088C

1SV233

PIN Diode
Single PIN Diode for VHF, UHF and AGC
50V, 50mA, r_S=typ 5Ω, CP

ON Semiconductor®

http://onsemi.com

Features

- Very small-sized package facilitates high-density mounting and permits 1SV233-applied equipment to be made smaller
- Small interterminal capacitance (C=0.23pF typ)
- Small forward series resistance (rs=5Ω typ)

Specifications

Absolute Maximum Ratings at Ta=25°C

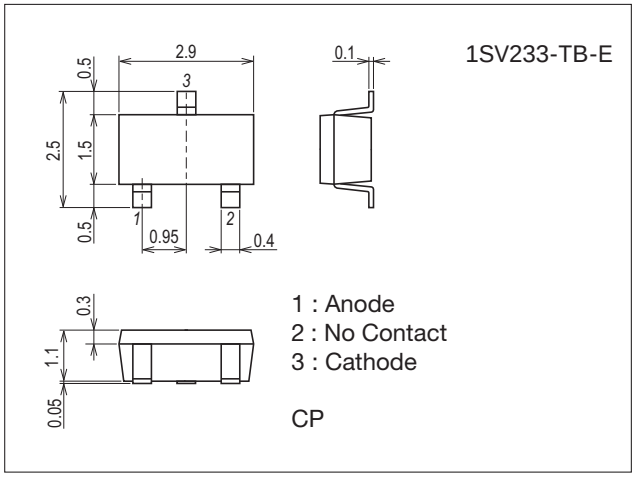
Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		50	V
Forward Current	I_F		50	mA
Allowable Power Dissipation	P		150	mW
Junction Temperature	Tj		125	°C
Storage Temperature	Tstg		−55 to +125	°C

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)

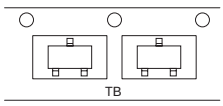
7013A-004



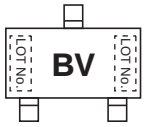
Product & Package Information

- Package : CP
- JEITA, JEDEC : SC-59, TO-236, SOT-23, TO-236AB
- Minimum Packing Quantity : 3,000 pcs./reel

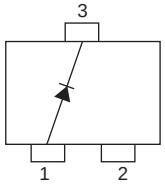
Packing Type: TB



Marking



Electrical Connection

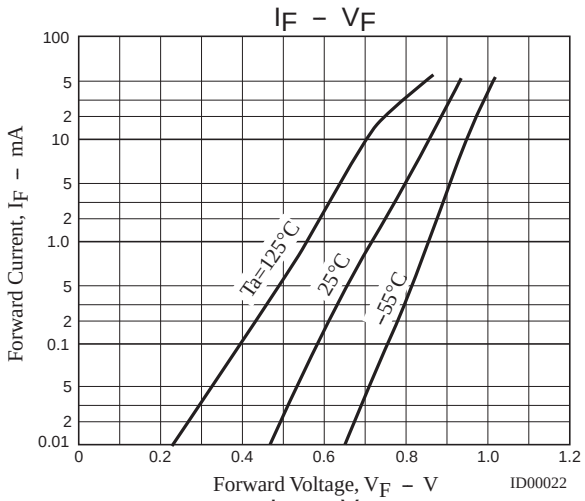


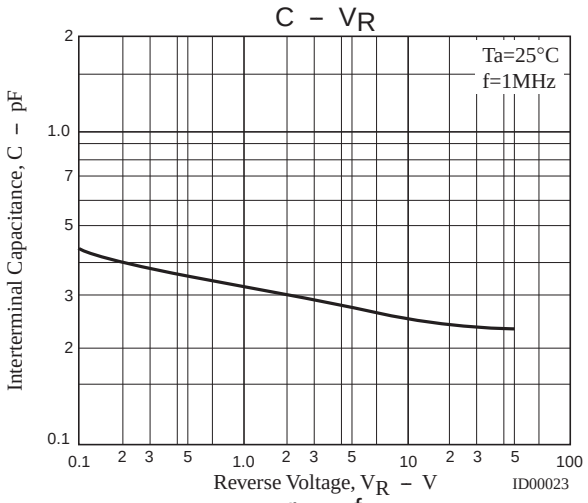
Electrical Characteristics at Ta=25°C

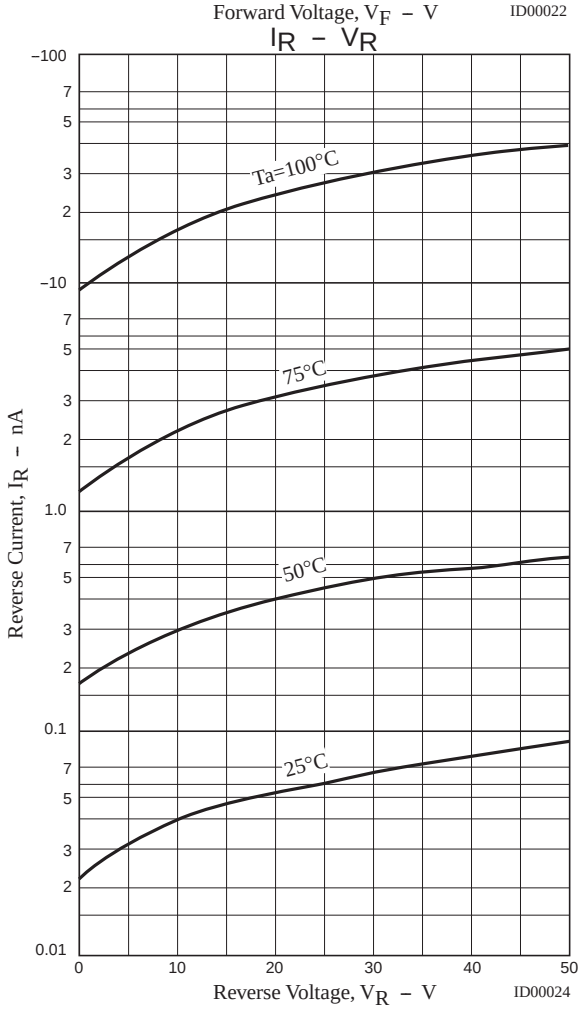
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=10μA	50			V
Reverse Current	I_R	V_R=50V			0.1	μA
Forward Voltage	V_F	I_F=50mA		0.95		V
Interterminal Capacitance	C	V_R=50V, f=1MHz		0.23		pF
Series Resistance	rs	I_F=10mA, f=100MHz		5		Ω

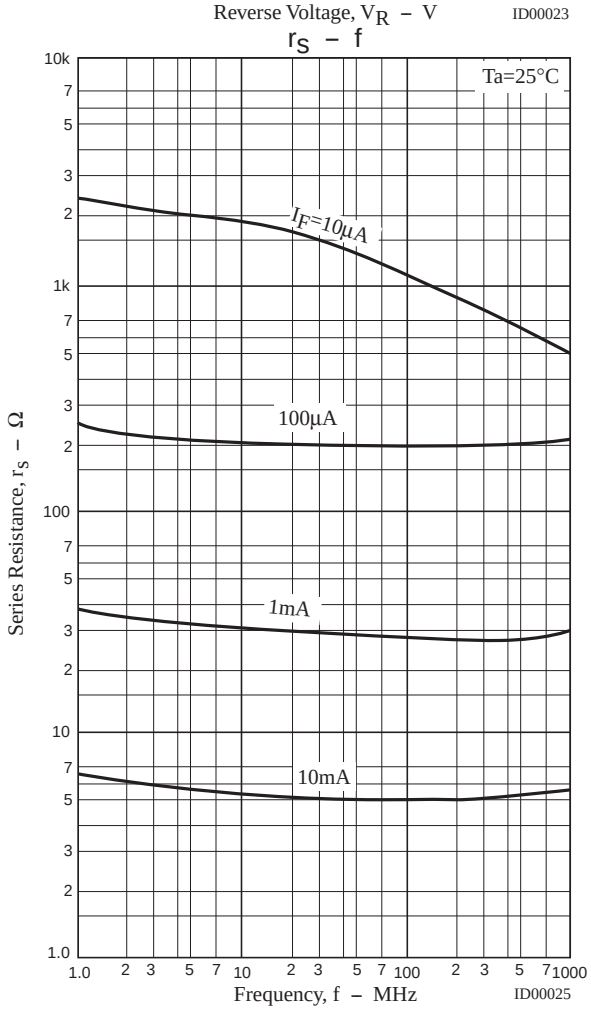
Ordering Information

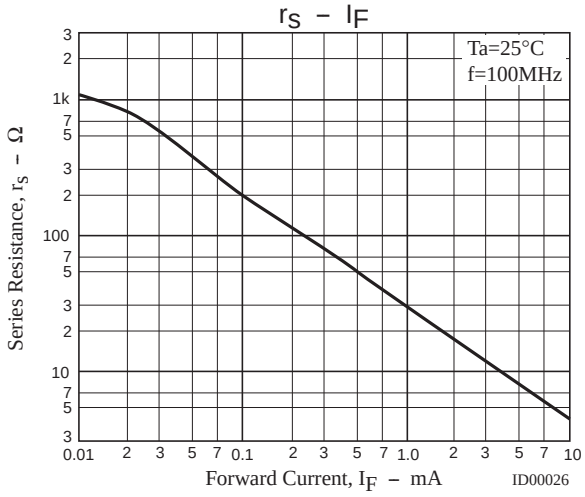
Device	Package	Shipping	memo
1SV233-TB-E	CP	3,000pcs./reel	Pb Free


IF – VF
Forward Current, IF – mA
Forward Voltage, VF – V
Ta=125°C
25°C
–55°C
ID00022


C – VR
Interterminal Capacitance, C – pF
Reverse Voltage, VR – V
Ta=25°C
f=1MHz
ID00023


IR – VR
Reverse Current, IR – nA
Reverse Voltage, VR – V
Ta=100°C
75°C
50°C
25°C
ID00024


rS – f
Series Resistance, rS – Ω
Frequency, f – MHz
Ta=25°C
IF=10μA
100μA
1mA
10mA
ID00025


rS – IF
Series Resistance, rS – Ω
Forward Current, IF – mA
Ta=25°C
f=100MHz
ID00026

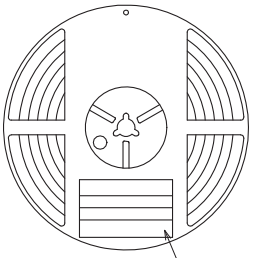
Embossed Taping Specification

1SV233-TB-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)
CP	CP	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

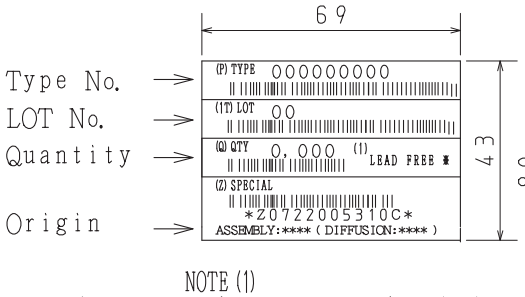
Packing method



Reel label

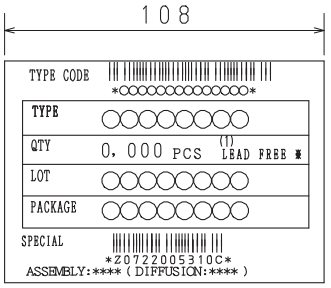
Reel label, Inner box label

(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.

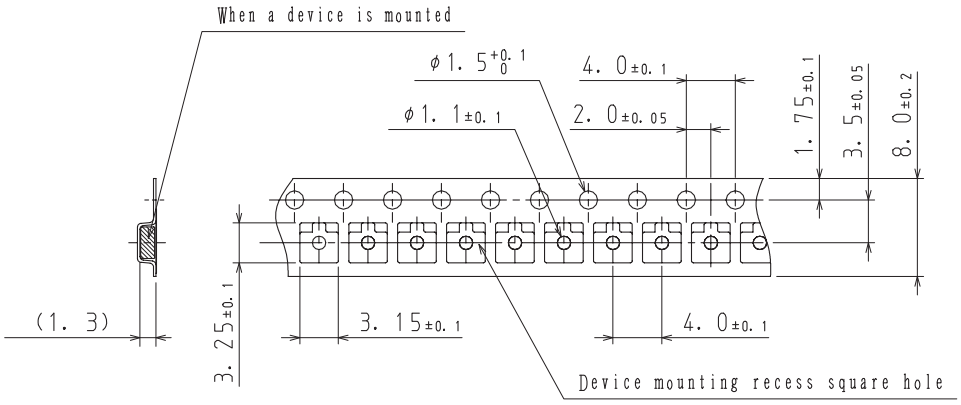


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

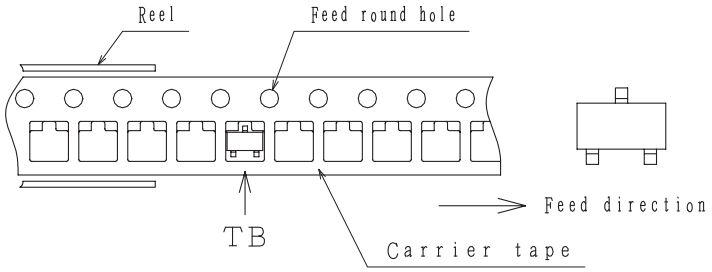
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



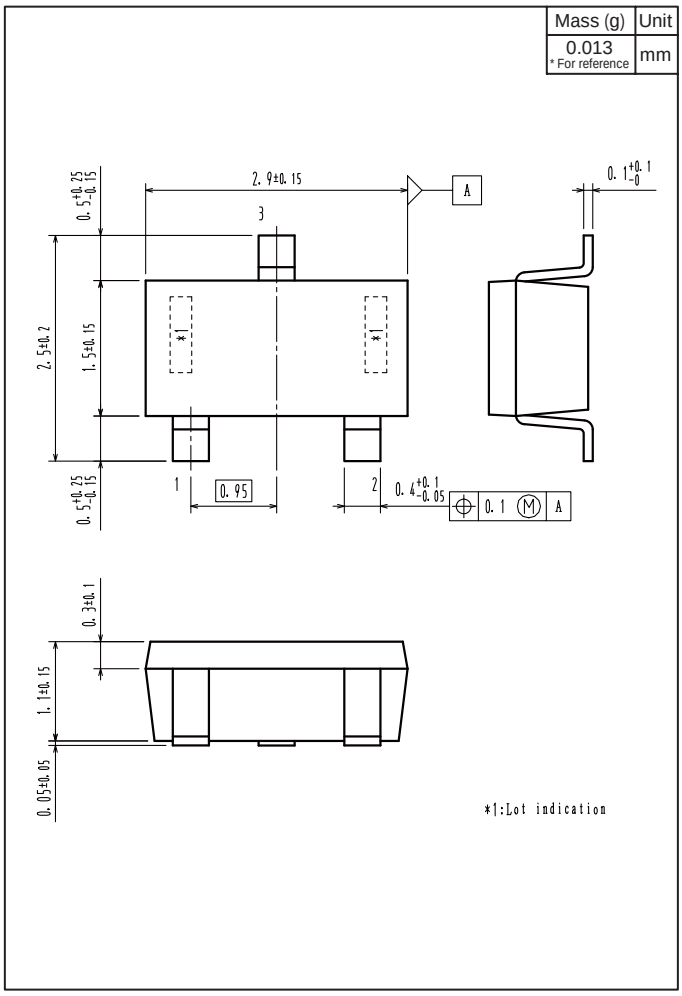
2-2. Device placement direction



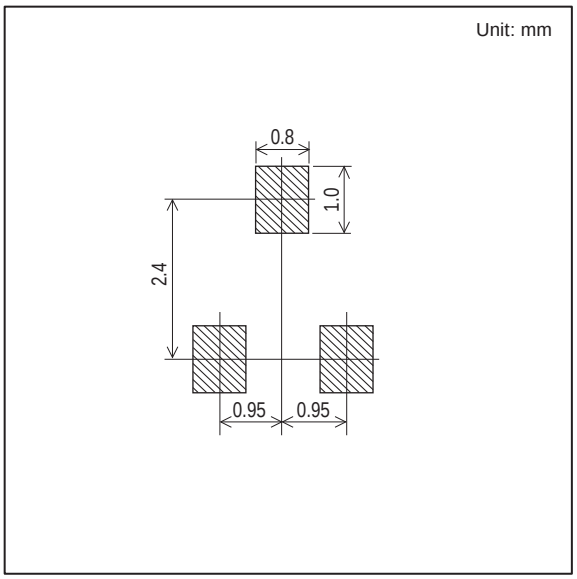
Those with one electrode terminal on the feed hole side·····TB

Outline Drawing

1SV233-TB-E



Land Pattern Example



ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.