Ordering number : EN6800A

SVC236

Varactor Diode

Monolithic dual Varactor Diode for FM Tuning
16V, 50nA, C_R=5.0, Q=70, CP

ON Semiconductor®

http://onsemi.com

Features

- Low voltage (6.5V)
- Twin type varactor diode with good large-signal characteristics for FM receiver electronic tuning use
- Very small package permits SVC236-applied sets to be compact and slim
- Can be also provieded in tape reel package and automatic insertion is supported
- High capacitance ratio (V_R=1.0 to 6.5V)

Specifications

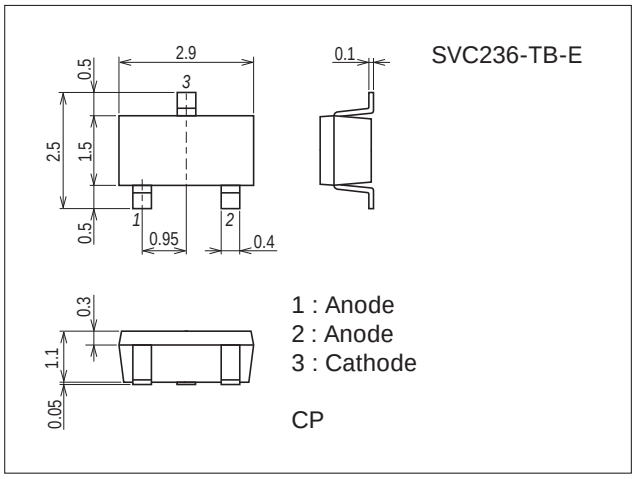
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		16	V
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

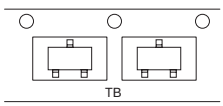
unit : mm (typ)
7013A-006



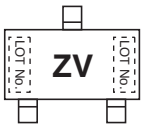
Product & Package Information

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

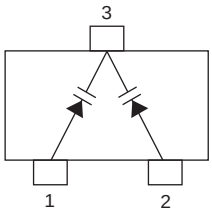
Packing Type: TB



Marking



Electrical Connection



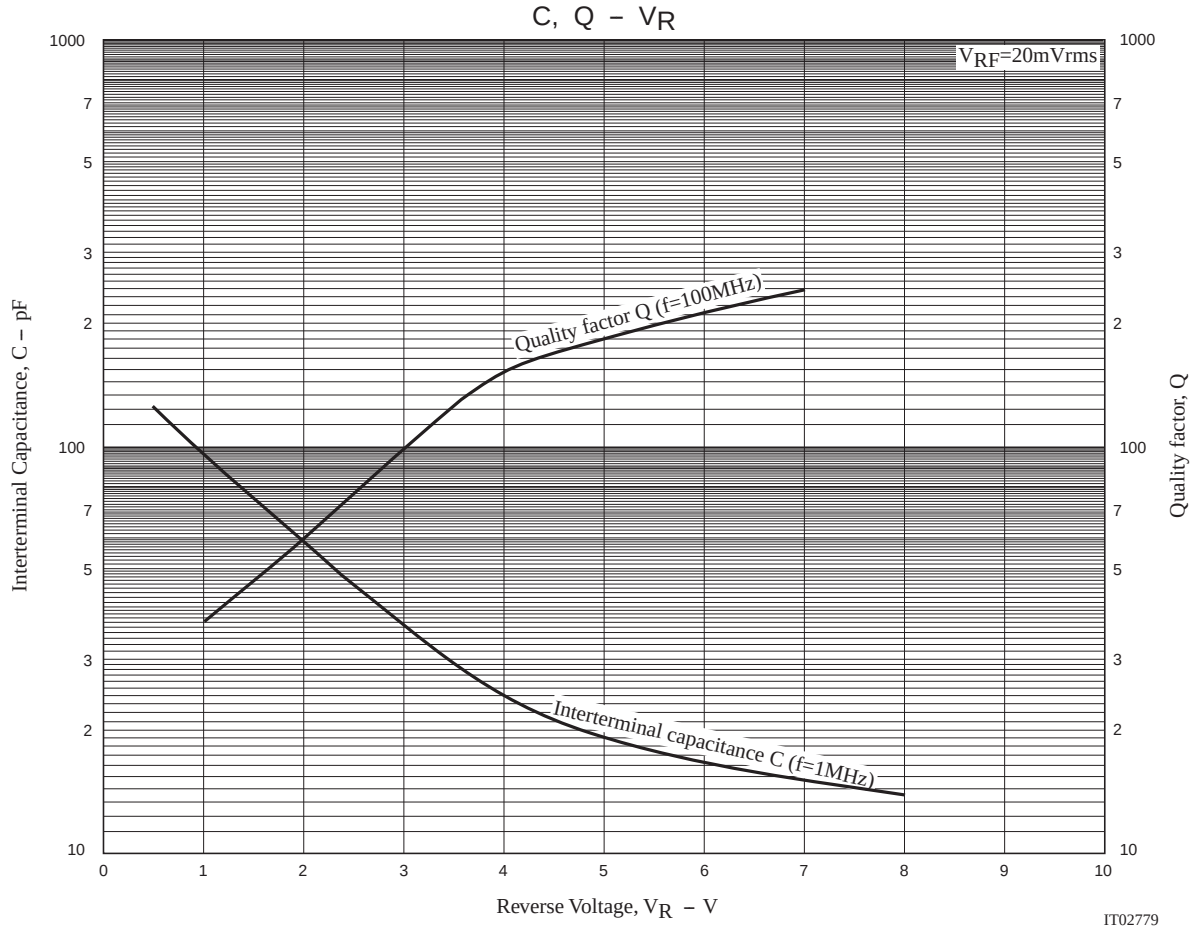
Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	I_R=10μA	16			V
Reverse Current	I_R	V_R=10V			50	nA
Interterminal Capacitance *	C1V	V_R=1.0V, f=1MHz ★	92.07		102.12	pF
	C3.0V	V_R=3.0V, f=1MHz	35.14		41.98	pF
	C6.5V	V_R=6.5V, f=1MHz	14.44		16.84	pF
Quality Factor	Q	V_R=3.0V, f=100MHz	70			
Capacitance Ratio	C_R	C1.0V / C6.5V	5.0			
Matching Tolerance	ΔC_m	V_R=1.0V, 3.0, 6.5, f=1MHz, (Cmax×Cmin) / Cmin×100			3.0	%

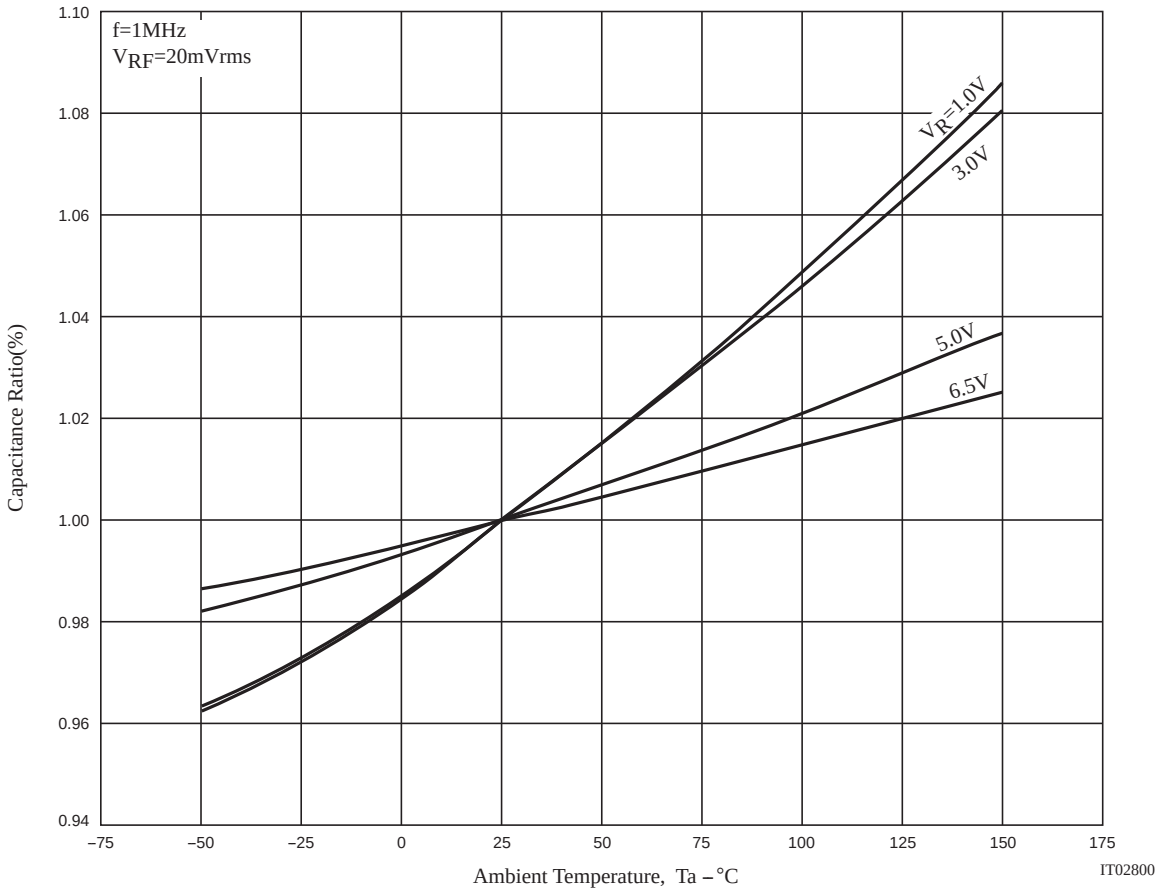
Note) * : Capacitance value per each diode. ★ : 1MHz signal : 20mVnms

Ordering Information

Device	Package	Shipping	memo
SVC236-TB-E	CP	3,000pcs./reel	Pb Free



C – Ta


f=1MHz
V_{RF}=20mVrms
V_R=1.0V
3.0V
5.0V
6.5V
Capacitance Ratio(%)
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
−75
−50
−25
0
25
50
75
100
125
150
175
Ambient Temperature, Ta – °C
IT02800

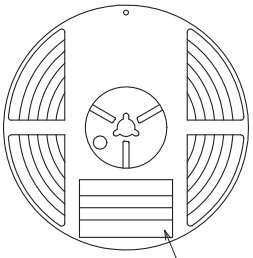
Taping Specification

SVC236-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

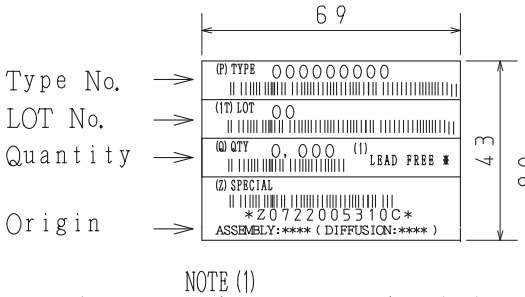
Packing method



Reel label

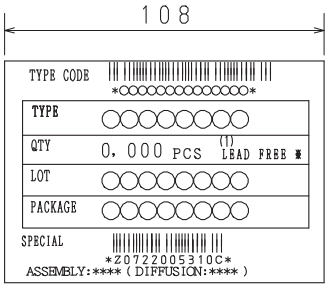
Reel label, Inner box label

(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.

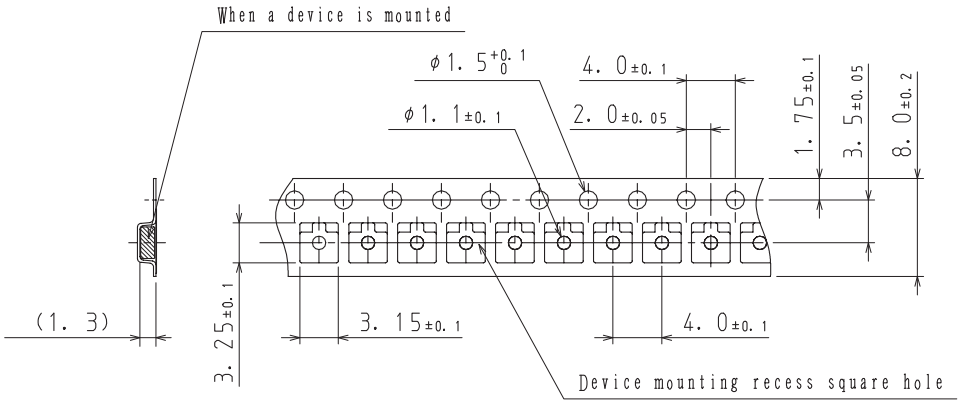


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

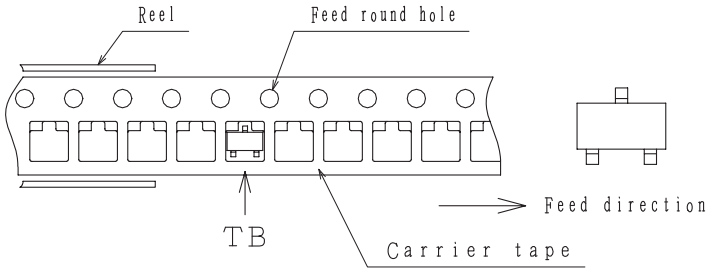
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



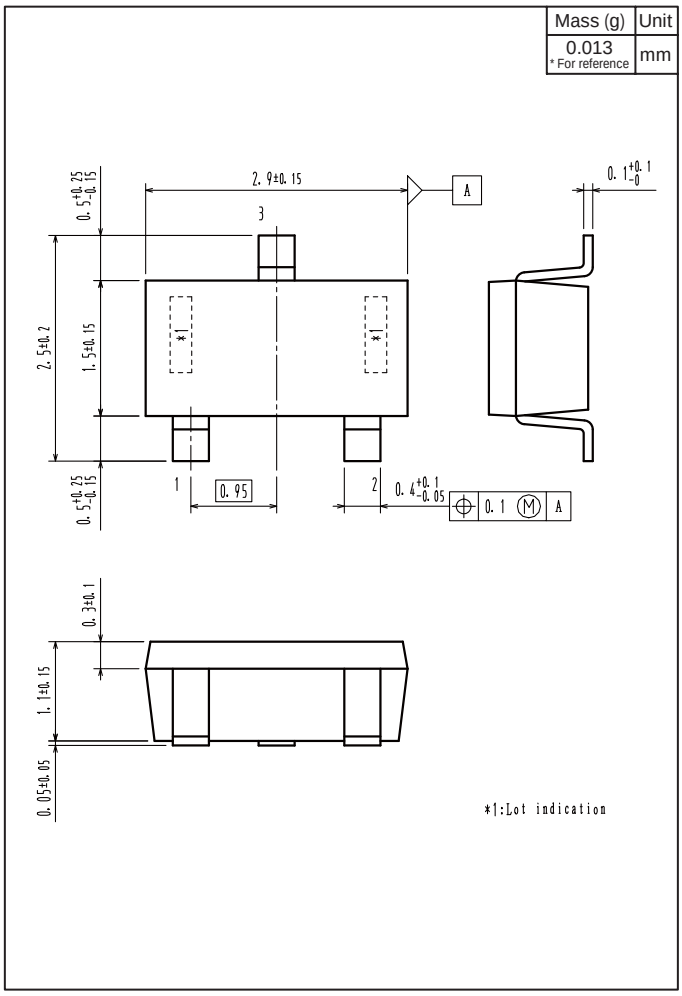
2-2. Device placement direction



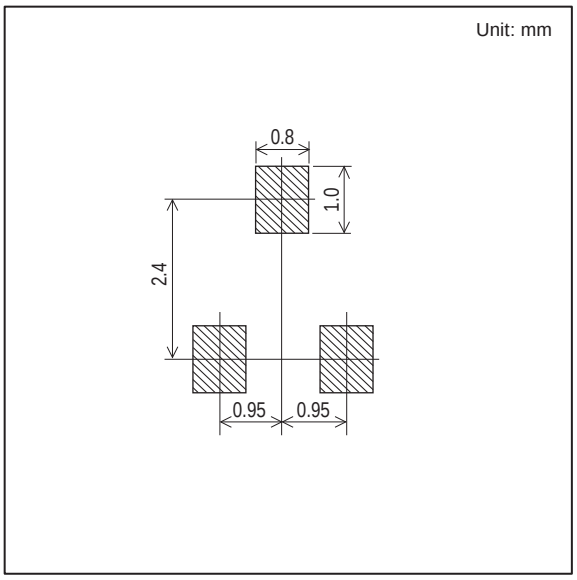
Those with one electrode terminal on the feed hole side……TB

Outline Drawing

SVC236-TB-E



Land Pattern Example



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