



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

Diffused Junction Type Silicon Diode

SVC203C — Varactor Diode for FM Low-Voltage Electronic Tuning Use

Features

- Dual type with a good linearity of C-V characteristic. Excels in large input characteristics
- Small-sized package (CP) usable in ultrasmall-sized sets (surface mount type)
- Applicable to FM wide band due to high capacitance ratio (VR=1.5 to 9V)

Specifications

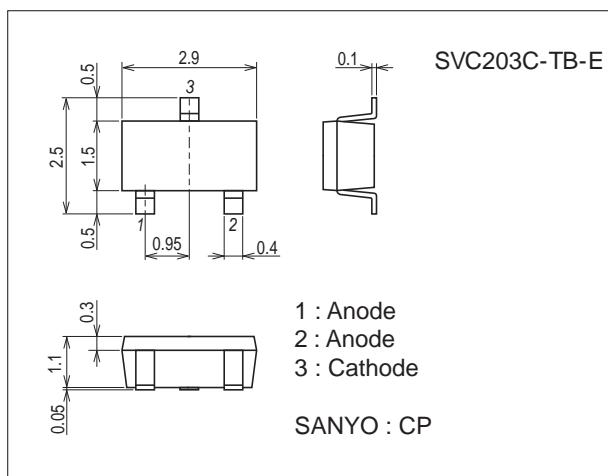
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	VR		16	V
Junction Temperature	T _j		125	°C
Storage Temperature	T _{stg}		-55 to +125	°C

Package Dimensions

unit : mm (typ)

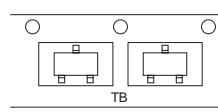
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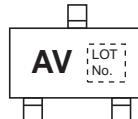
Product & Package Information

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

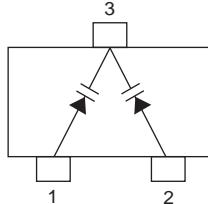
Packing Type: TB



Marking



Electrical Connection



Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	V(BR)R	IR=1μA	16			V
Reverse Current	IR	VR=10V			50	nA
Interterminal Capacitance*	C1.0V	VR=1.0V, f=1MHz	58.80		65.98	pF
	C6.0V	VR=6.0V, f=1MHz	18.72		25.11	pF
	C9.0V	VR=9.0V, f=1MHz	10.84		13.40	pF
Quality Factor	Q	VR=3.0V, f=100MHz	60			
Capacitance Ratio	CR	C1.0V / C9.0V	4.6			
Matching Tolerance	ΔCm	VR=1.0V	$\frac{(C_{max} - C_{min})}{C_{min}} \times 100$			6.5 %
		VR=6.0V				5.5 %
		VR=9.0V				11.8 %

* Capacitance value of one diode

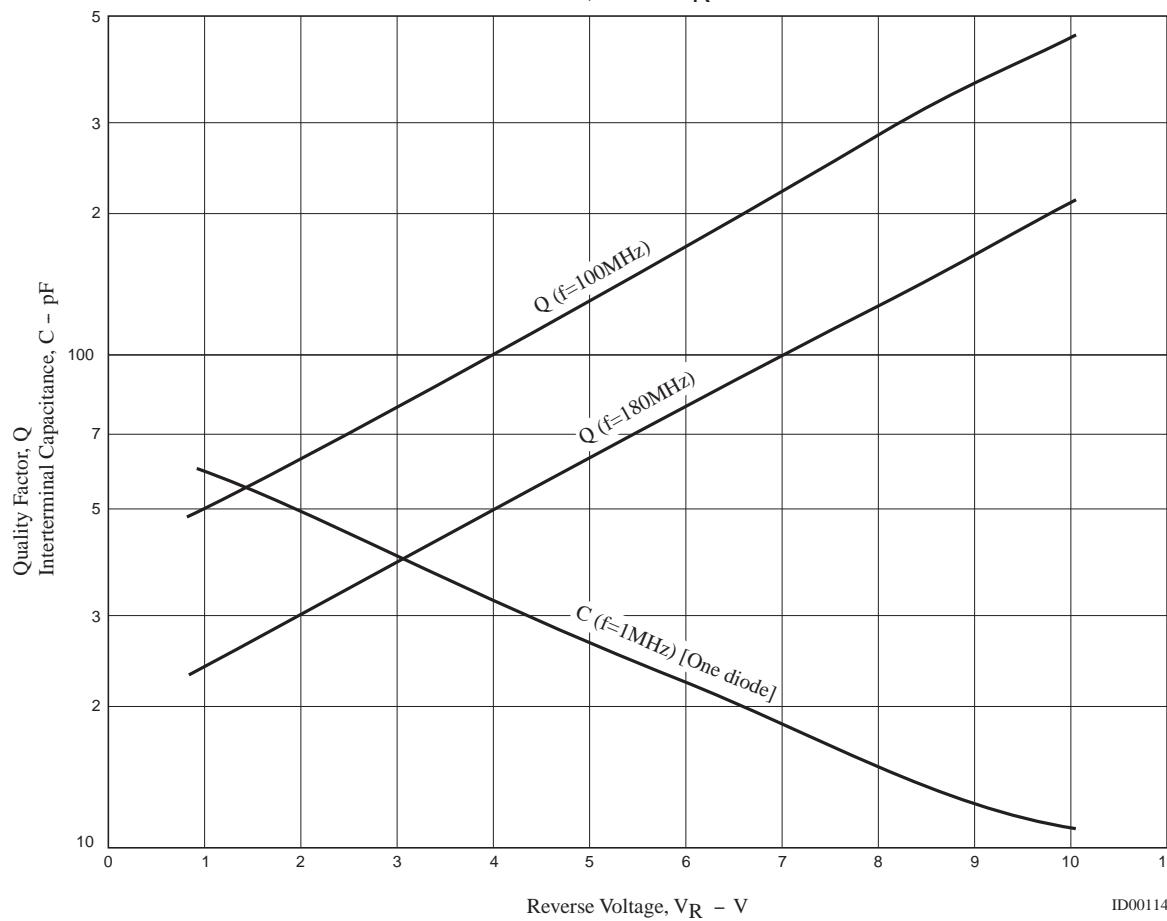
Address and Capacitance Value (Reference Value)

C1.0V		C6.0V		C9.0V	
Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
11	59.10	61	18.91	91	10.89
	62.92		19.95		12.17
12	61.97	62	19.76	92	11.93
	65.65		20.85		13.33
		63	20.64 21.79		
		64	21.57 22.77		
		65	22.55 23.80		
		66	23.56 24.87		

Ordering Information

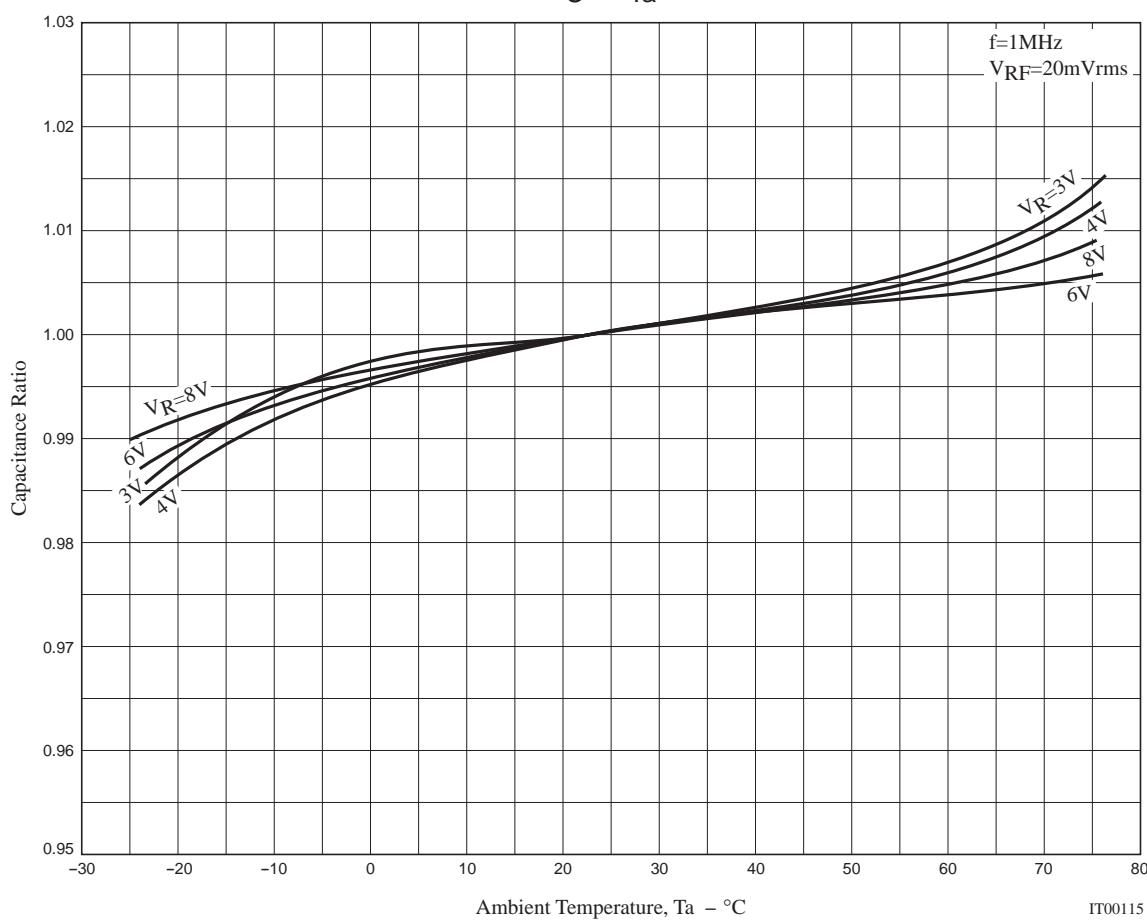
Device	Package	Shipping	memo
SVC203C-TB-E	CP	3,000pcs./reel	Pb Free

C, Q - VR



ID00114

C - Ta



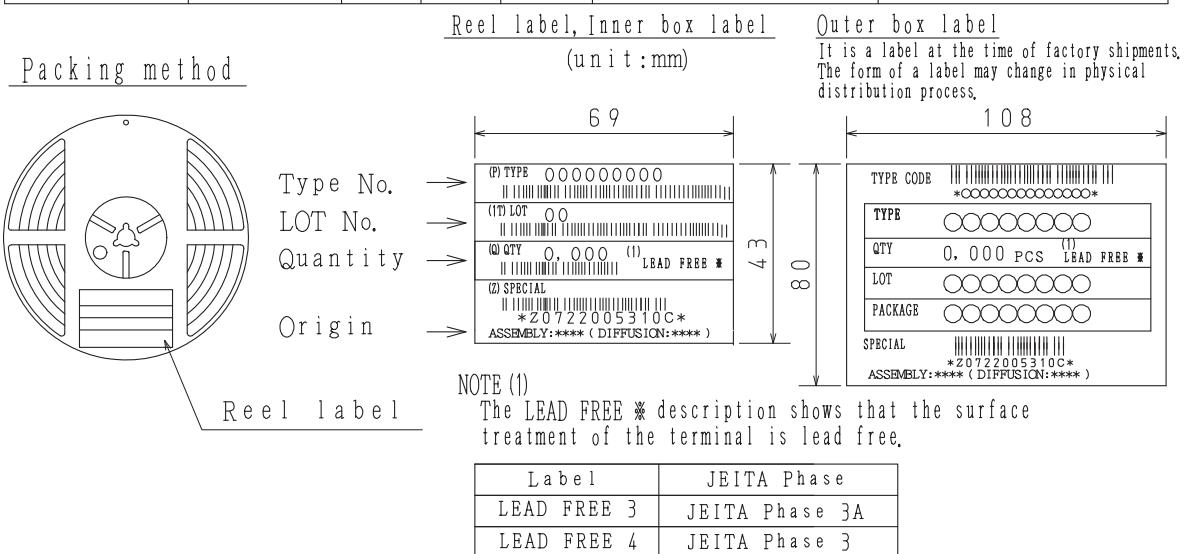
IT00115

Taping Specification

SVC203C-TB-E

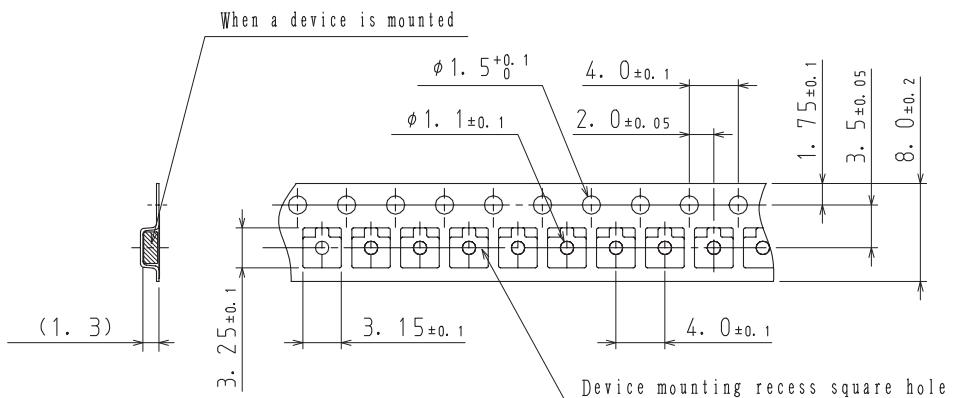
1. Packing Format

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

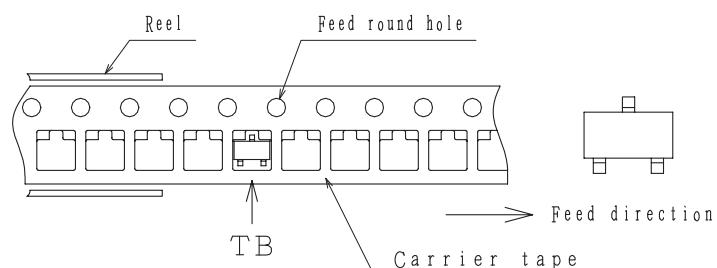


2. Taping configuration

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

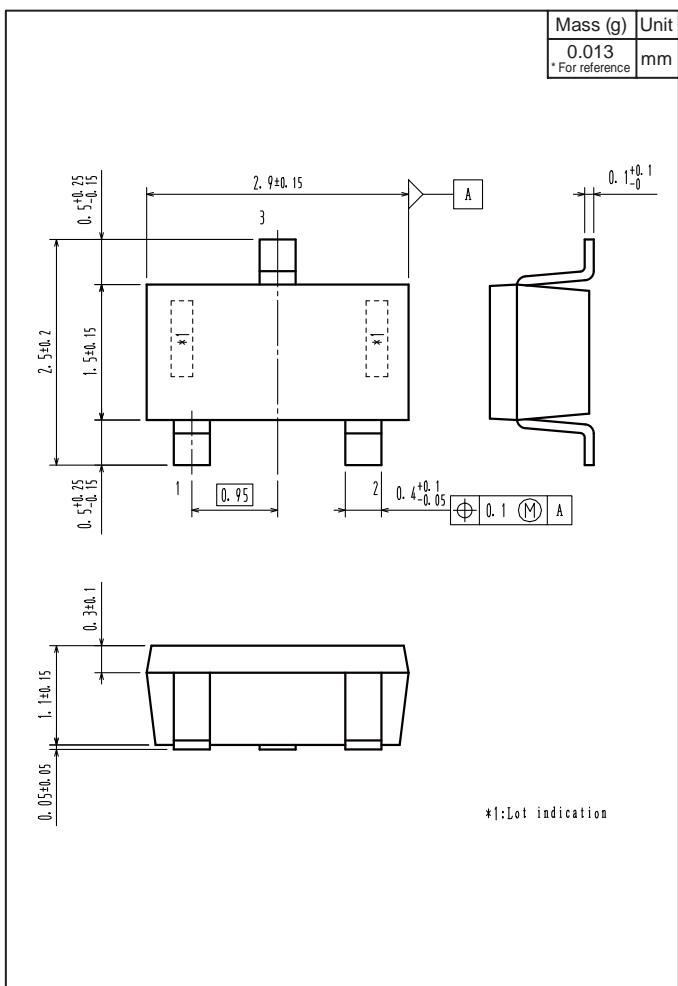
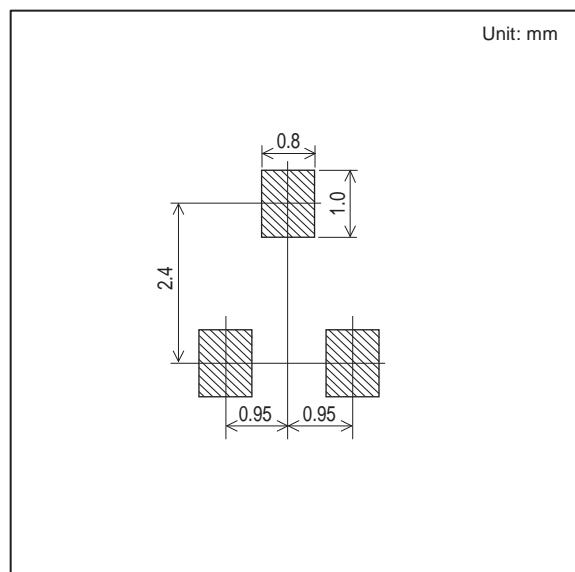


2-2. Device placement direction



Outline Drawing

SVC203C-TB-E

**Land Pattern Example**

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