



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 ($V_R=1.5$ to $9V$)

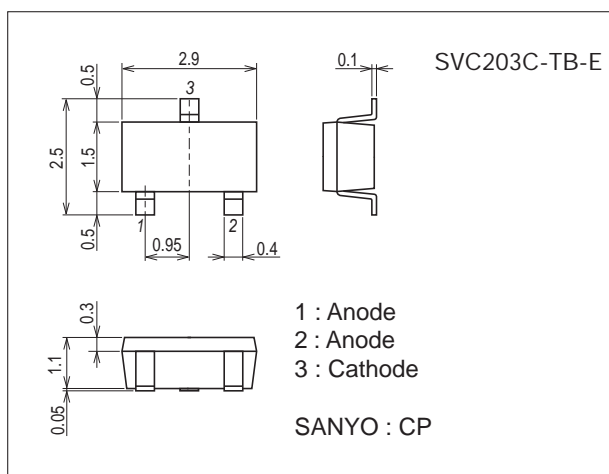
Specifications

Absolute Maximum Ratings at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		16	V
Junction Temperature	T_j		125	$^\circ C$
Storage Temperature	T_{stg}		-55 to +125	$^\circ C$

Package Dimensions

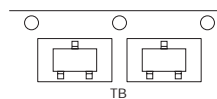
unit : mm (typ)
7013A-006



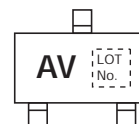
Product & Package Information

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

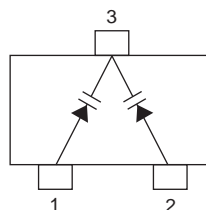
Packing Type: TB



Marking



Electrical Connection



SVC203C

Electrical Characteristics at Ta=25°C

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

* Capacitance value of one diode

Address and Capacitance Value (Reference Value)

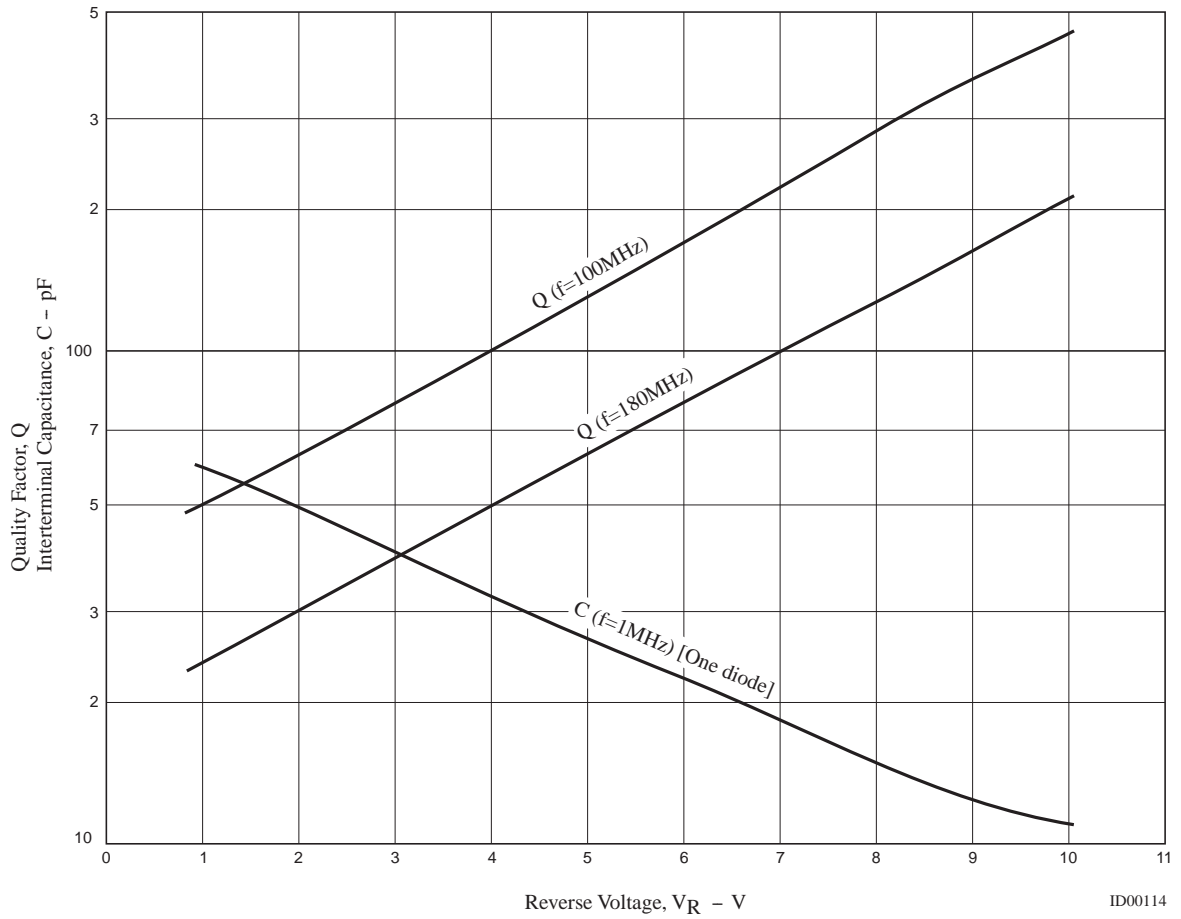
C1.0V		C6.0V		C9.0V	
Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
11	59.10	61	18.91	91	10.89
	62.92		19.95		12.17
12	61.97	62	19.76	92	11.93
	65.65		20.85		13.33
		63	20.64		
			21.79		
		64	21.57		
			22.77		
		65	22.55		
			23.80		
		66	23.56		
			24.87		

Ordering Information

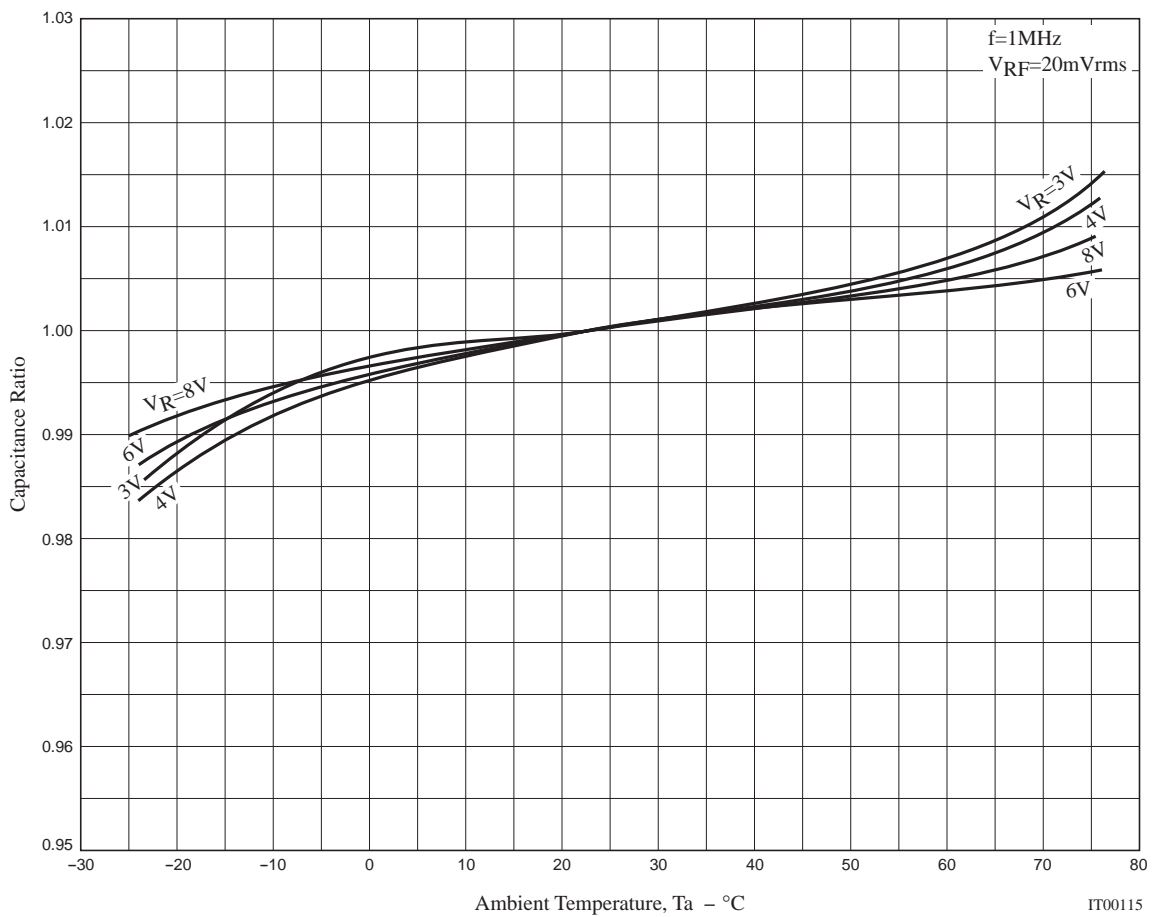
Device	Package	Shipping	memo
SVC203C-TB-E	CP	3,000pcs./reel	Pb Free

SVC203C

C, Q - V_R



C - T_a



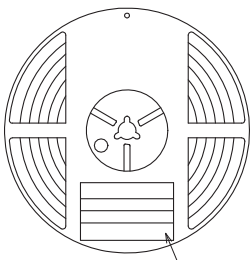
Taping Specification

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

Packing method



Reel label



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)



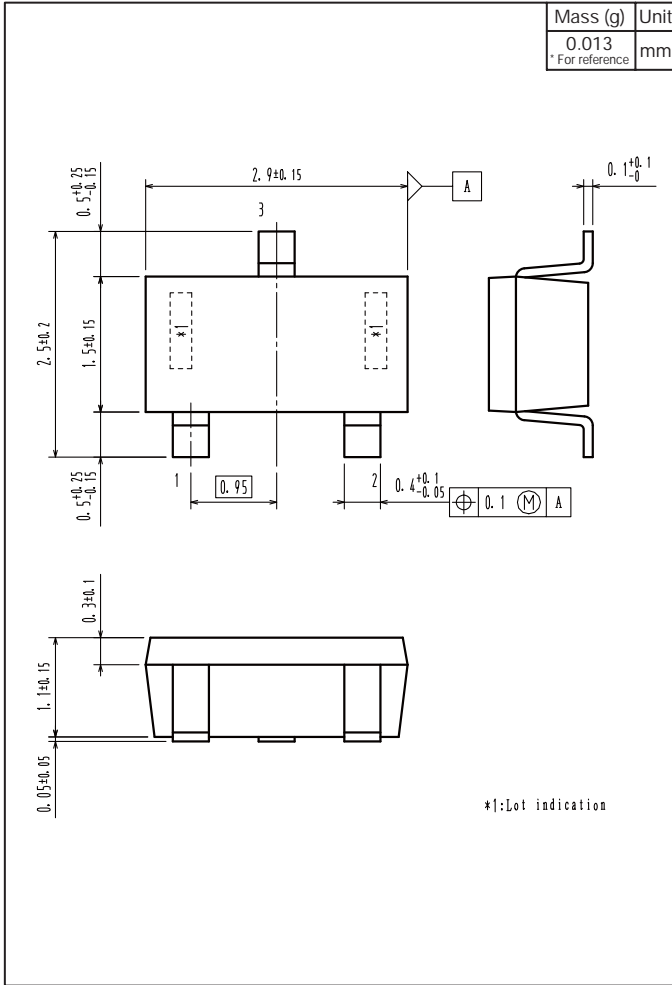
2-2. Device placement direction



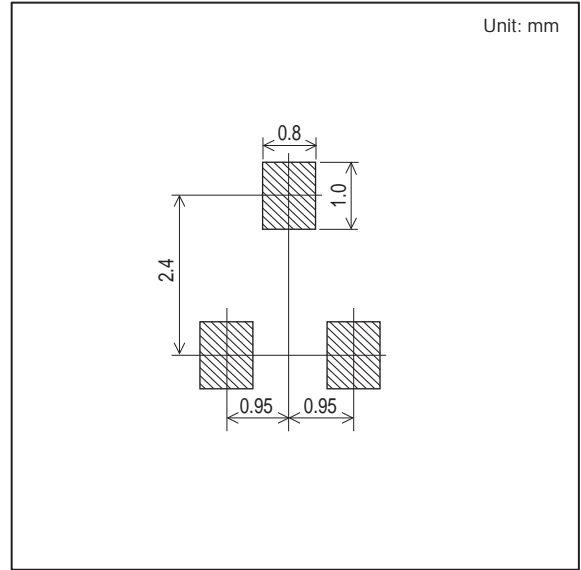
Those with one electrode terminal on the feed hole side.....TB

SVC203C

Outline Drawing SVC203C-TB-E



Land Pattern Example



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