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Ordering number : ENN2195G

SANYO Semiconductors
DATA SHEET

SVC203CP — Varactor Diode for FM Low-Voltage Electronic Tuning Use

Diffused Junction Type Silicon Diode

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 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

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 *	$C_{1.0V}$	V_R=1.0V, f=1MHz	58.80		65.98	pF
	$C_{6.0V}$	V_R=6.0V, f=1MHz	18.72		25.11	pF
	$C_{9.0V}$	V_R=9.0V, f=1MHz	10.84		13.40	pF
Quality Factor	Q	V_R=3.0V, f=100MHz	60			
Capacitance Ratio	CR	C1.0V / C9.0V	4.6			
Matching Tolerance	ΔCm	V_R=1.0V, $\frac{(Cmax - Cmin)}{Cmin} \times 100$			6.5	%
		V_R=6.0V			5.5	%
		V_R=9.0V			11.8	%

* Capacitance value of one diode

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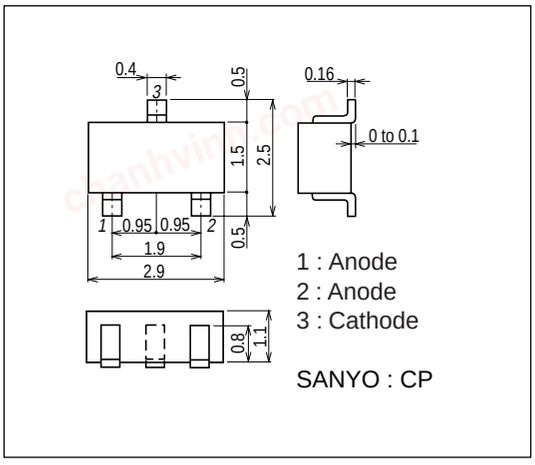
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SVC203CP

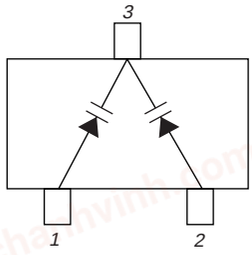
Package Dimensions

unit : mm

1169A



Electrical Connection



1 : Anode
2 : Anode
3 : Cathode

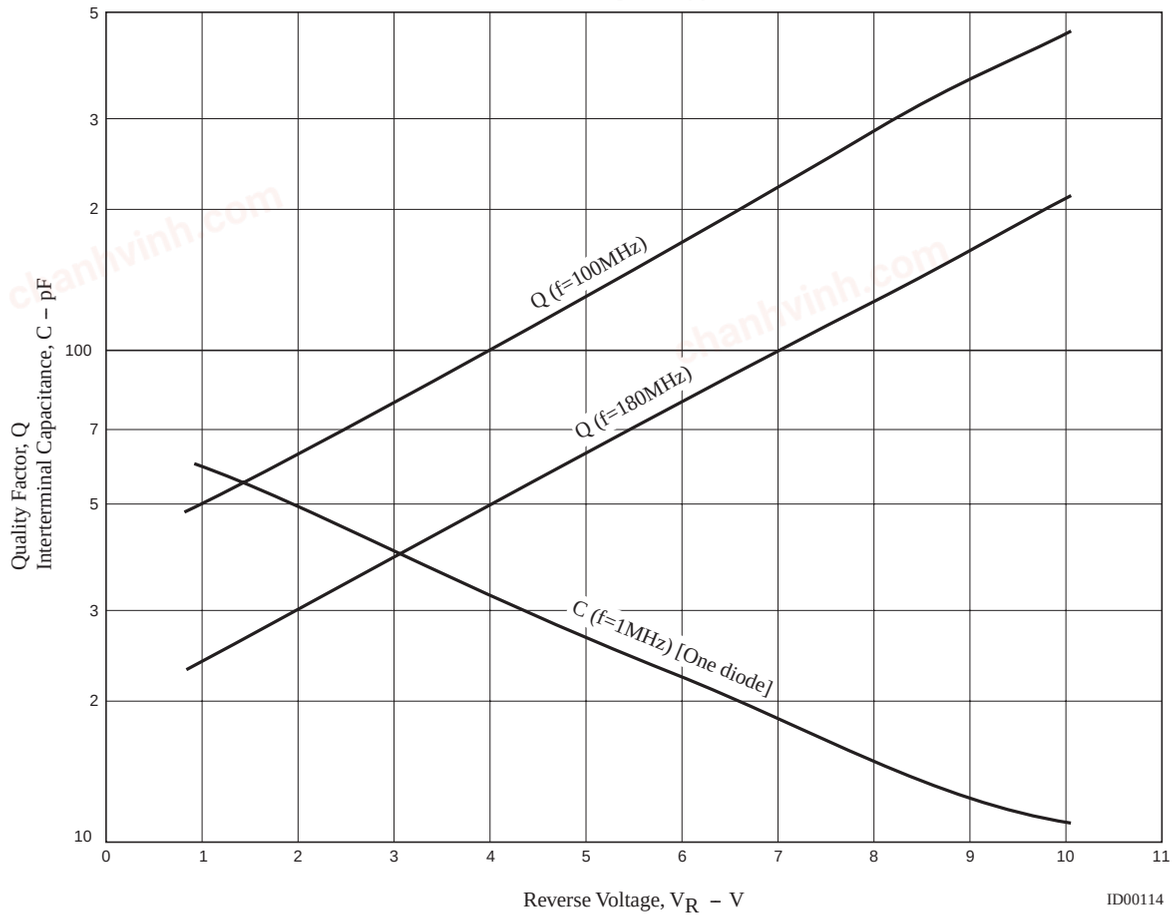
Top view

Address and Capacitance Value (Reference Value)

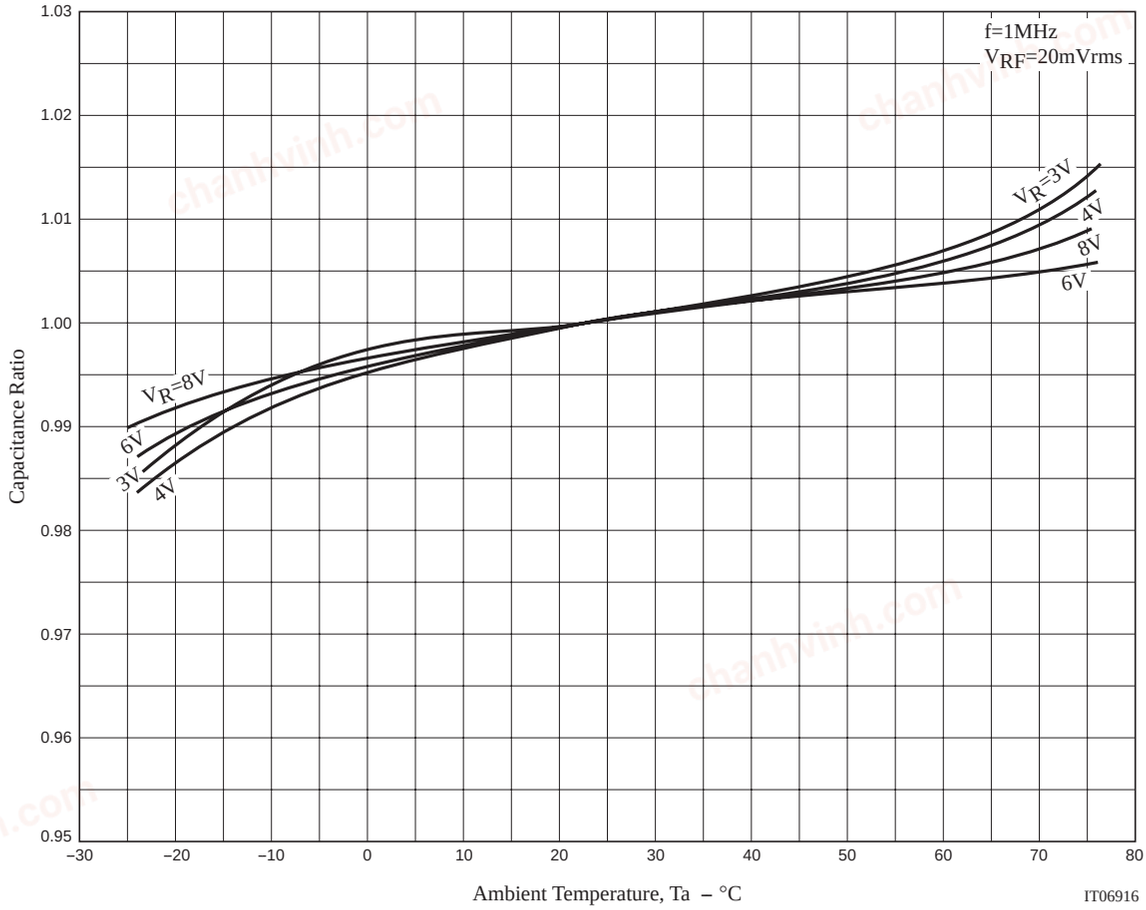
C1.0V		C6.0V		C9.0V	
Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
11	59.10 62.92	61	18.91 19.95	91	10.89 12.17
12	61.97 65.65	62	19.76 20.85	92	11.93 13.33
		63	20.64 21.79		
		64	21.57 22.77		
		65	22.55 23.80		
		66	23.56 24.87		

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C, Q – V_R



C – Ta



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