



# SVC203SPA

Diffused Junction Type Silicon Diode  
**Varactor Diode (IOCAP)**  
 for FM Receiver Electronic Tuning

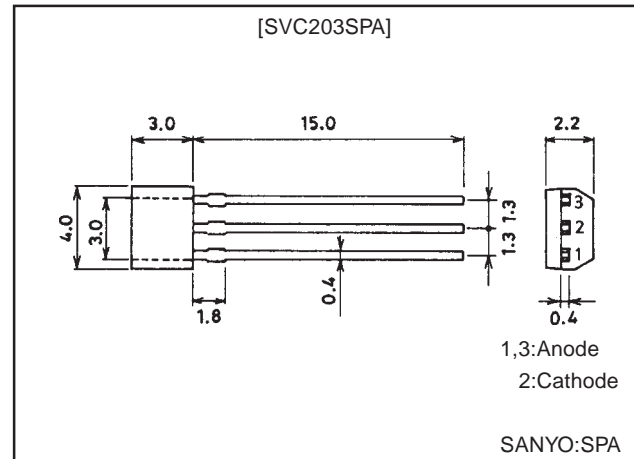
## Features

- The SVC203SPA is a varactor diode of dual type with a good linearity of C-V characteristic. It excels in temperature characteristic, large input characteristics and suitable for use in FM electronic tuning applications (low voltage).

## Package Dimensions

unit:mm

1129A



## Specifications

### Absolute Maximum Ratings at Ta = 25°C

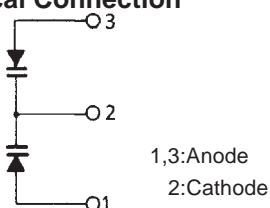
Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	$V_R$		16	V
Forward Current	$I_F$		100	mA
Allowable Power Dissipation	$P_D$		100	mW
Junction Temperature	$T_j$		125	°C
Storage Temperature	$T_{stg}$		-55 to +125	°C

### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	$I_R=10\mu A$	16			V
Reverse Current	$I_R$	$V_R=10\mu A$			50	nA
Interterminal Capacitance*	$C_{3.0V}$	$V_R=3.0V$	36.92		43.03	pF
	$C_{4.5V}$	$V_R=4.5V$	26.13		34.45	pF
	$C_{6.0V}$	$V_R=6.0V$	18.04		25.61	pF
	$C_{8.0V}$	$V_R=8.0V$	12.64		16.84	pF
Quality Factor	Q	$V_R=3.0V, f=100MHz$	60			
Capacitance Ratio	CR	$C_{3.0V}/C_{8.0V}$	2.50		3.00	
Matching Tolerance	$\Delta C_m$	$(C_{max}-C_{min})/C_{min}, V_R=2.0V$ to 8.0V			0.03	

Note)\*:Capacitance value of one diode

### Electrical Connection



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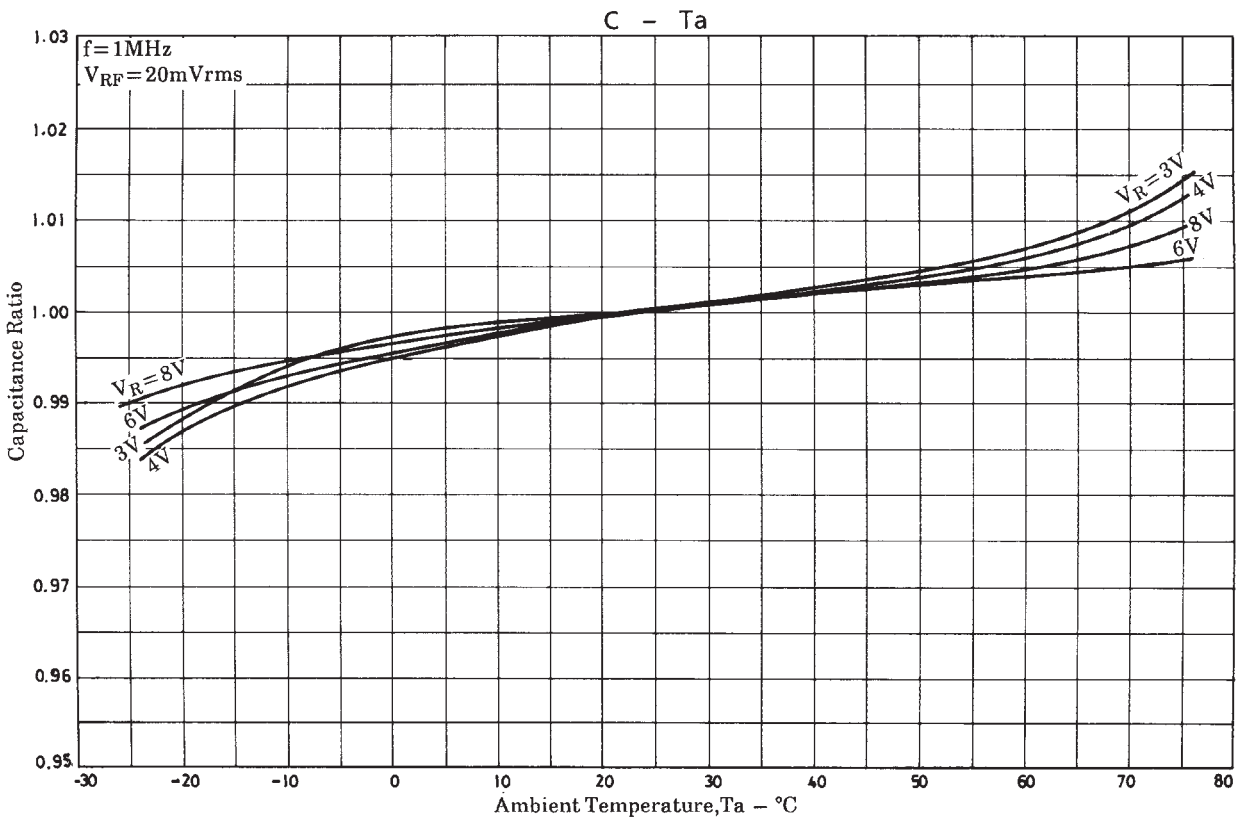
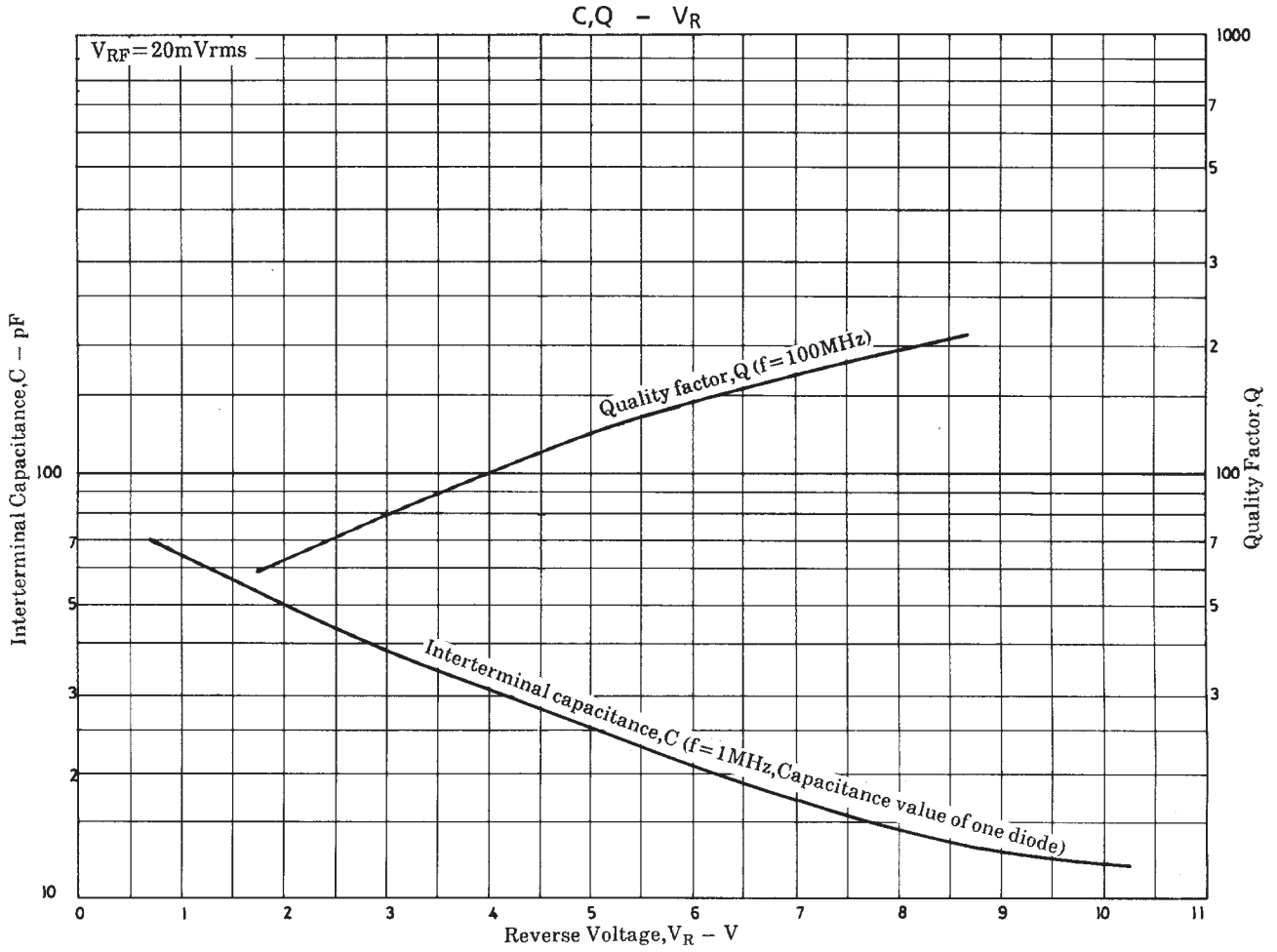
### Address and Capacitance Value

V <sub>R</sub> =3.0V		V <sub>R</sub> =4.5V		V <sub>R</sub> =6.0V		V <sub>R</sub> =8.0V	
Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
63	36.92~38.02	49	26.13~26.92	34	18.04~18.59	19	12.46~12.83
64	37.85~38.98	50	26.78~27.59	35	18.49~19.05	20	12.77~13.15
65	38.79~39.96	51	27.45~28.27	36	18.95~19.52	21	13.09~13.48
66	39.76~40.95	52	28.14~28.98	37	19.43~20.01	22	13.42~13.82
67	40.76~41.98	53	28.85~29.71	38	19.91~20.51	23	13.76~14.17
68	41.78~43.03	54	29.57~30.45	39	20.41~21.02	24	14.09~14.52
		55	30.30~31.21	40	20.93~21.56	25	14.44~14.88
		56	31.06~31.99	41	21.45~22.09	26	14.81~15.26
		57	31.84~32.80	42	21.98~22.64	27	15.18~15.64
		58	32.63~33.61	43	22.53~23.21	28	15.56~16.03
		59	33.45~34.45	44	23.09~23.78	29	15.95~16.43
				45	23.67~24.38	30	16.35~16.84
				46	24.27~25.00		
				47	24.87~25.61		

### Rank Width

	C <sub>8.0V</sub>	19	20	21	22	23	24	25	26	27	28	29	30
C <sub>3.0V</sub>													
63													
64													
65													
66													
67													
68													

# SVC203SPA



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