



# SVC321SPA

## Diffused Junction Type Silicon Diode Varactor Diode (IOCAP) for AM Receiver Electronic Tuning

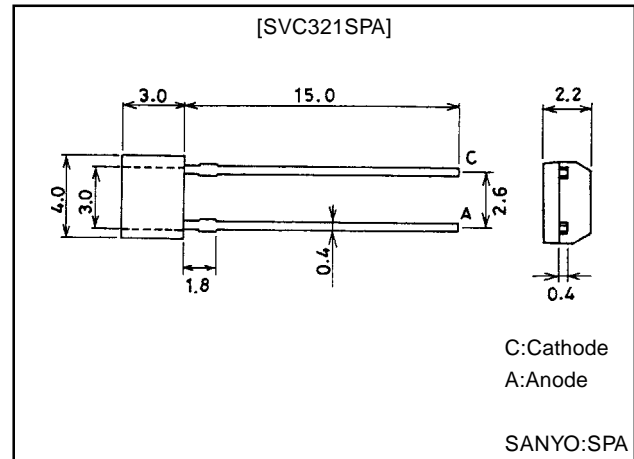
### Features

- The SVC321SPA is a varactor diode with a good linearity and high capacitance ratio that is capable of being operated from a low voltage and is intended for use in AM receiver electronic tuning applications.

### Package Dimensions

unit:mm

1184



### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	$V_R$		16	V
Junction Temperature	$T_J$		100	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +100	$^\circ\text{C}$

#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	$I_R=10\mu\text{A}$	16			V
Reverse Current	$I_R$	$V_R=9\text{V}$			100	nA
Interterminal Capacitance*	$C_{1.2\text{V}}$	$V_R=1.2\text{V}, f=1\text{MHz}$	388.1		459.1	pF
	$C_{3.5\text{V}}$	$V_R=3.5\text{V}, f=1\text{MHz}$	144.2		192.1	pF
	$C_{6.0\text{V}}$	$V_R=6.0\text{V}, f=1\text{MHz}$	45.71		60.91	pF
	$C_{8.0\text{V}}$	$V_R=8.0\text{V}, f=1\text{MHz}$	20.30		27.05	pF
Quality Factor	Q	$V_R=1.0\text{V}, f=1\text{MHz}$	200			
Capacitance Ratio	$C_R$	$C_{1.2\text{V}}/C_{8.0\text{V}}, f=1\text{MHz}$	15.5			
Matching Tolerance	$\Delta C_m$	$(C_{\text{max}}-C_{\text{min}})/C_{\text{min}}$			0.03	

Note)\*:The SVC321SPA is classified by  $C_{1.2\text{V}}$  and  $C_{8.0\text{V}}$  as follows:

Rank	$C_{1.2\text{V}}$ (pF)	$C_{8.0\text{V}}$ (pF)
A	388.1 to 424.1	20.30 to 23.54
B	388.1 to 424.1	23.31 to 27.05
C	420.0 to 459.1	20.30 to 23.54
D	420.0 to 459.1	23.31 to 27.05

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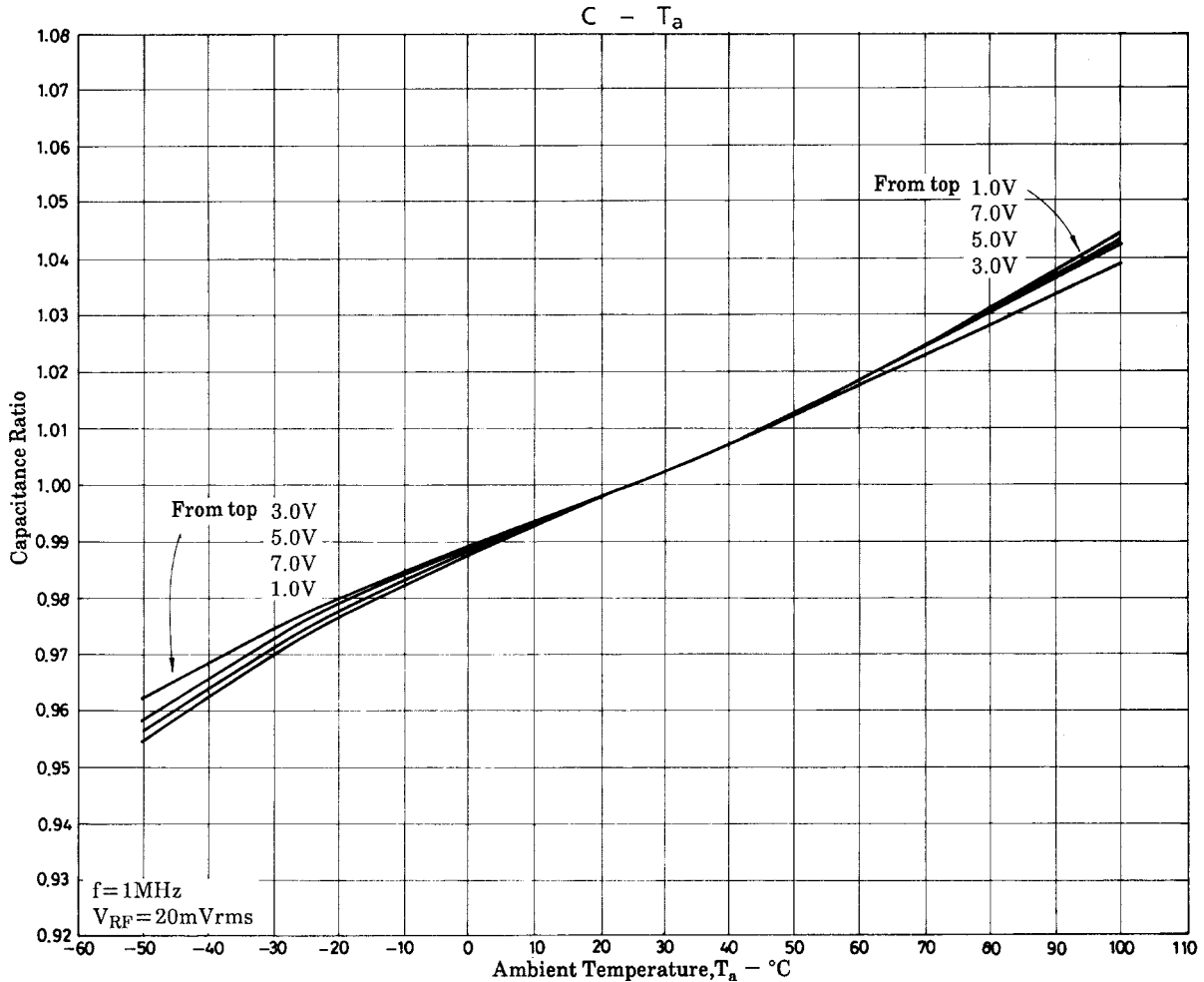
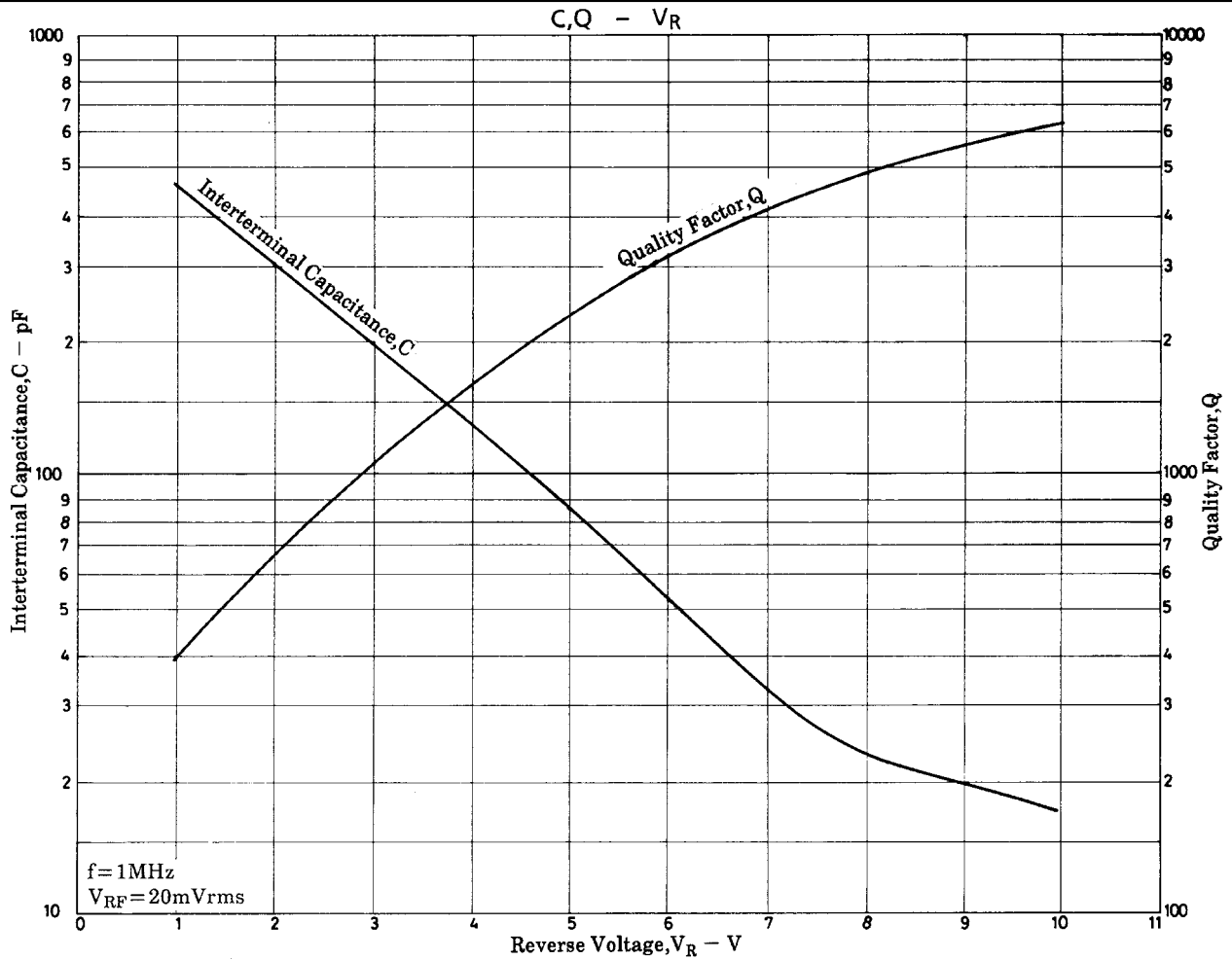
## Address and Capacitance Value

TEST POINT	C <sub>1.2V</sub>		C <sub>3.5V</sub>		C <sub>6.0V</sub>		C <sub>8.0V</sub>	
	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
CAPACITANCE VALUE	202	(459.1 445.8)	158	(192. 186.5)	100	(60.91 59.13)	59	(27.05 26.26)
	201	(450.1 437.0)	157	(188.3 182.8)	99	(59.72 57.98)	58	(26.51 25.74)
	200	(441.3 428.4)	156	(184.6 179.2)	98	(58.54 56.83)	57	(25.99 25.23)
	199	(432.6 420.0)	155	(181.0 175.7)	97	(57.39 55.72)	56	(25.49 24.75)
	198	(424.1 411.7)	154	(177.5 172.3)	96	(56.27 54.64)	55	(24.99 24.26)
	197	(415.8 403.7)	153	(174.0 169.0)	95	(55.17 53.56)	54	(24.49 23.78)
	196	(407.7 395.8)	152	(170.5 165.6)	94	(54.08 52.51)	53	(24.01 23.31)
	195	(399.7 388.1)	151	(167.3 162.4)	93	(53.03 51.48)	52	(23.54 22.86)
			150	(164.0 159.2)	92	(51.98 50.47)	51	(23.08 22.41)
			149	(160.7 156.0)	91	(50.97 49.48)	50	(22.63 21.97)
			148	(157.6 153.0)	90	(49.96 48.51)	49	(22.19 21.54)
			147	(154.4 149.9)	89	(48.99 47.56)	48	(21.75 21.11)
			146	(151.5 147.1)	88	(48.02 46.63)	47	(21.33 20.71)
			145	(148.5 144.2)	87	(47.08 45.71)	46	(20.91 20.30)

## Rnak and Address Table

c <sub>8.0V</sub> \ c <sub>1.2V</sub>	46	47	48	49	50	51	52	53	54	55	56	57	58	59
195														
196														
197			A								B			
198														
199														
200			C								D			
201														
202														

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