



# SVC321SPA

Diffused Junction Type Silicon Diode  
Varactor Diode (IOCAP)

for AM Receiver Electronic Tuning

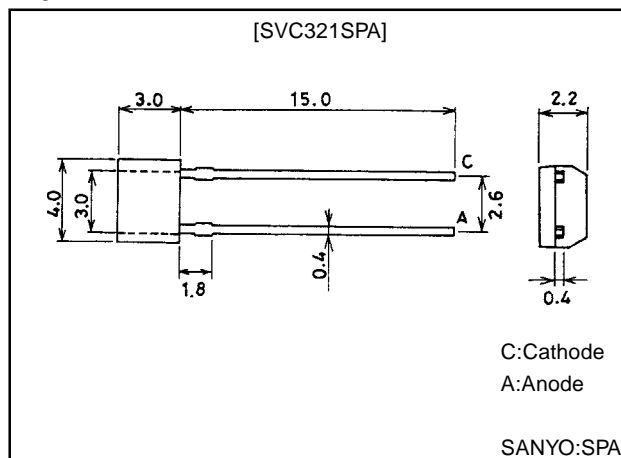
## Features

- 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

**SANYO Electric Co.,Ltd. Semiconductor Business Headquarters**

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

22898HA (KT)/D1096GI (KOTO) /3029MO/4088TA/4043KI, TS No.699-1/4

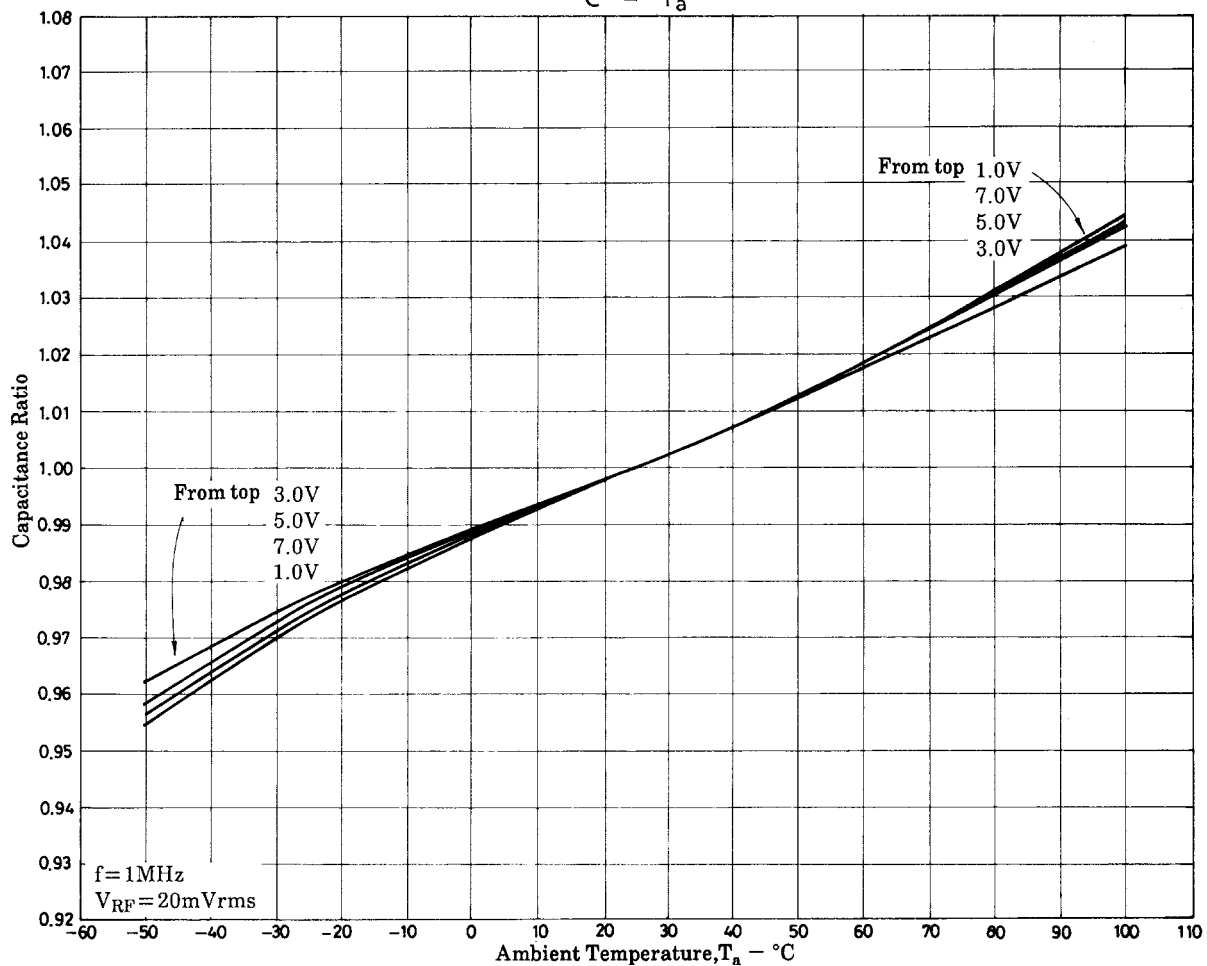
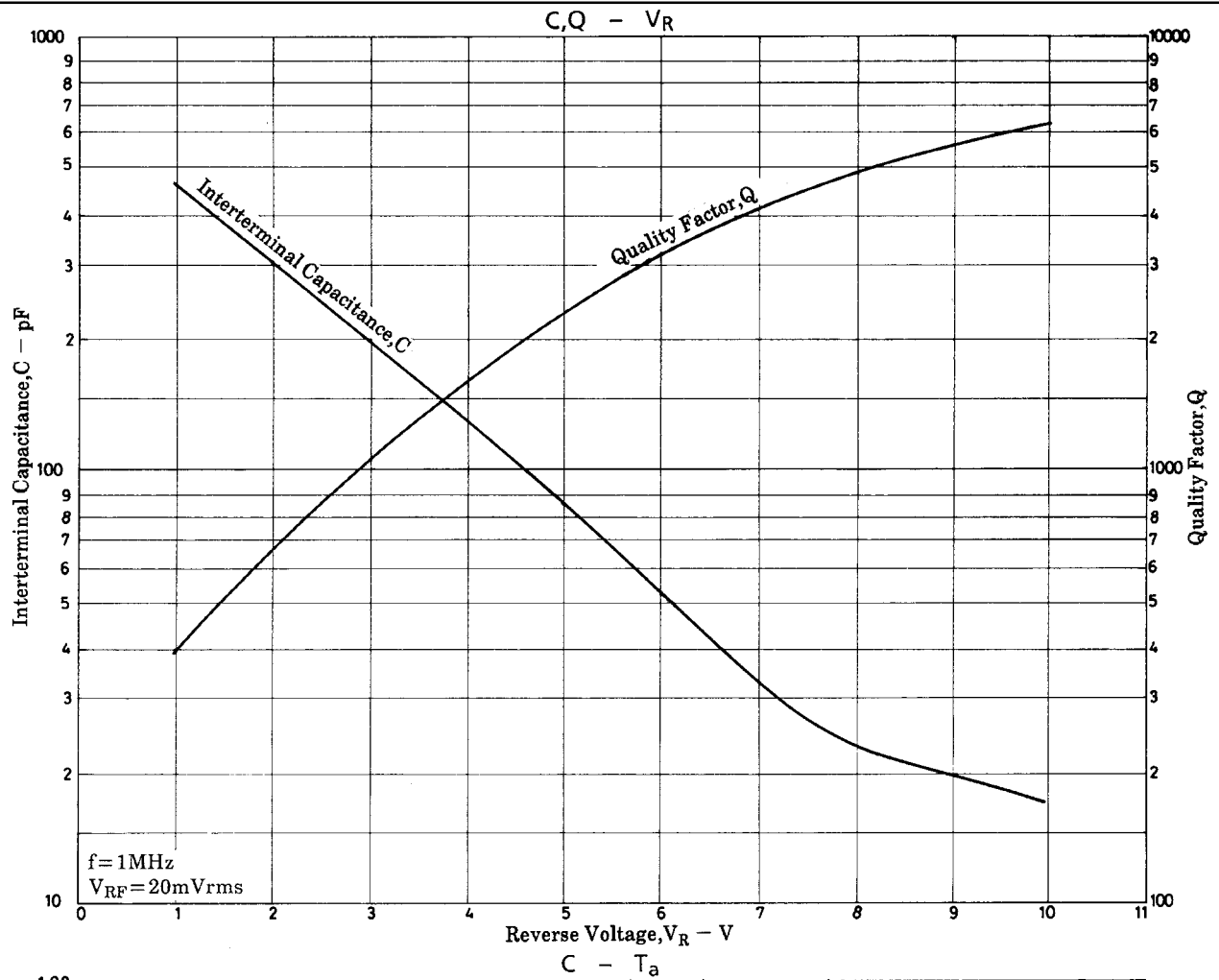
## Address and Capacitance Value

TEST POINT	C <sub>1.2V</sub>		C <sub>3.5V</sub>		C <sub>6.0V</sub>		C <sub>8.0V</sub>	
	(pF)		(pF)		(pF)		(pF)	
	Address	Capacitance	Address	Capacitance	Address	Capacitance	Address	Capacitance
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														
198														
199														
200														
201														
202														

# SVC321SPA



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of February, 1998. Specifications and information herein are subject to change without notice.