



SVC321SPA

Diffused Junction Type Silicon Diode
Varactor Diode (IOCAP)

for AM Receiver Electronic Tuning

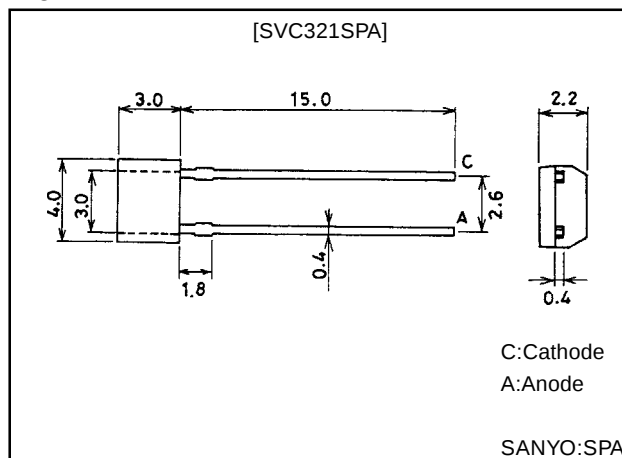
Features

- 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	ΔC_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	$C_{1.2\text{V}}(\text{pF})$	$C_{8.0\text{V}}(\text{pF})$
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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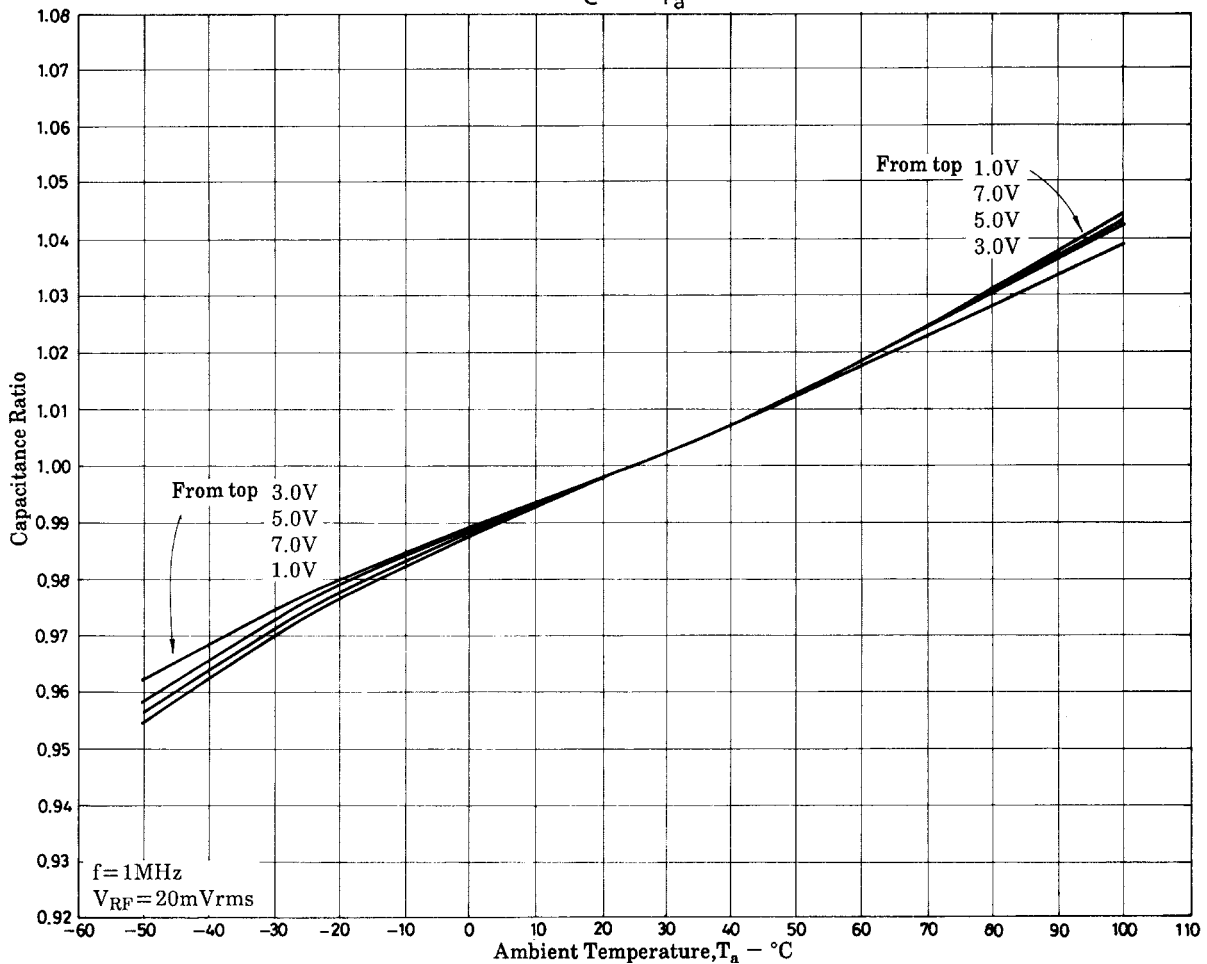
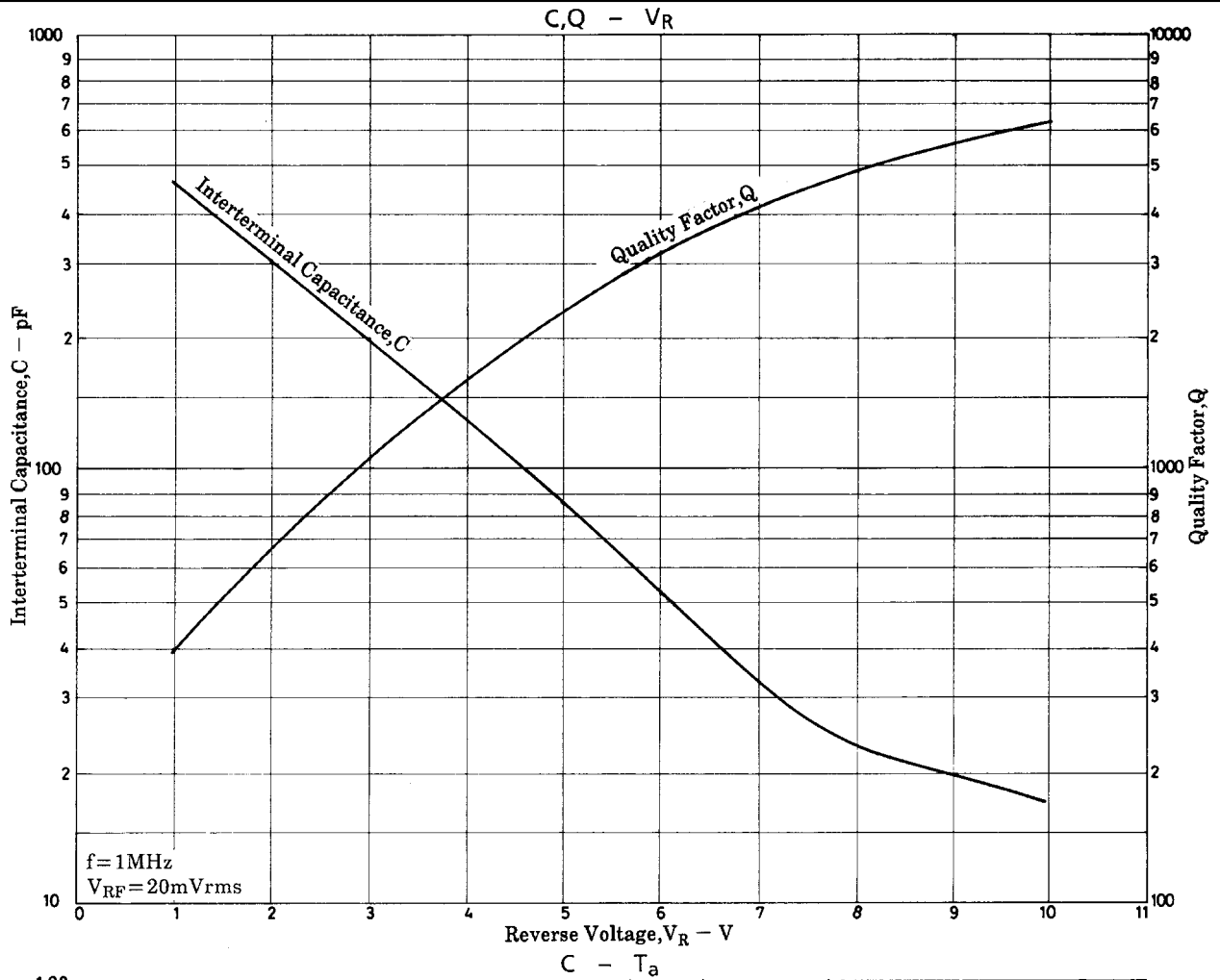
Address and Capacitance Value

TEST POINT	C _{1.2V}		C _{3.5V}		C _{6.0V}		C _{8.0V}	
	(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 _{8.0V} / c _{1.2V}	46	47	48	49	50	51	52	53	54	55	56	57	58	59
195														
196														
197														
198														
199														
200														
201														
202														

SVC321SPA



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