Ordering number : 6 9 9 G

SANYO Semiconductors

DATA SHEET

Diffused Junction Type Silicon Diode

SVC321 — Varactor Diode (IOCAP) for AM Receiver Electronic Tuning

Features

- The SVC321, 321SPA are varactor diodes 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.

Absolute Maximum Ratings at Ta = 25°C

			unit
Reverse Voltage	V_R	−16	V
Junction Temperature	Tj	100	°C
Storage Temperature	Tstg	−55 to +100	°C

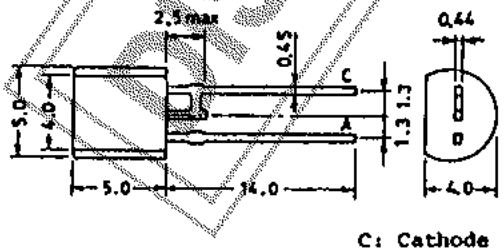
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Breakdown Voltage	$V_{(BR)R}$	$I_R = -10\mu A$	−16			V
Rerverse Current	I_R	$V_R = -9V$			−100	nA
Interterminal Capacitance	$C_{1.2V}$	$V_R = -1.2V, f = 1MHz$	388.1		459.1	pF
	$C_{3.5V}$	$V_R = -3.5V, f = 1MHz$	144.2		192.1	pF
	$C_{6.0V}$	$V_R = -6.0V, f = 1MHz$	45.71		60.91	pF
	$C_{8.0V}$	$V_R = -8.0V, f = 1MHz$	20.30		27.05	pF
Quality Factor	Q	$V_R = -1.0V, f = 1MHz$	200			
Capacitance Ratio	CR	$C_{1.2V}/C_{8.0V}, f = 1MHz$	15.5			
Matching Tolerance	ΔC_m	$(C_{max} - C_{min})/C_{min}$			0.03	

* : The SVC321,321SPA are classified by $C_{1.2V}$ and $C_{8.0V}$ as follows :

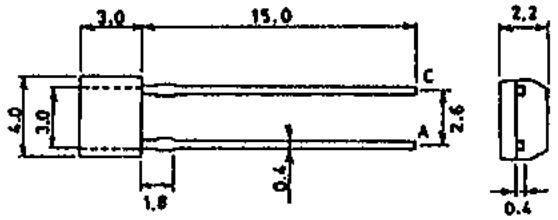
Rank	$C_{1.2V}$ (pF)	$C_{8.0V}$ (pF)
A	388.1~424.1	20.30~23.54
B	388.1~424.1	23.31~27.05
C	420.0~459.1	20.30~23.54
D	420.0~459.1	23.31~27.05

Case Outline 1010A [SVC321]
(unit : mm)



C : Cathode
A : Anode

Case Outline 1184 [SVC321SPA]
(unit : mm)



SANYO : SPA

C : Cathode
A : Anode

Specifications and information herein are subject to change without notice.

SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

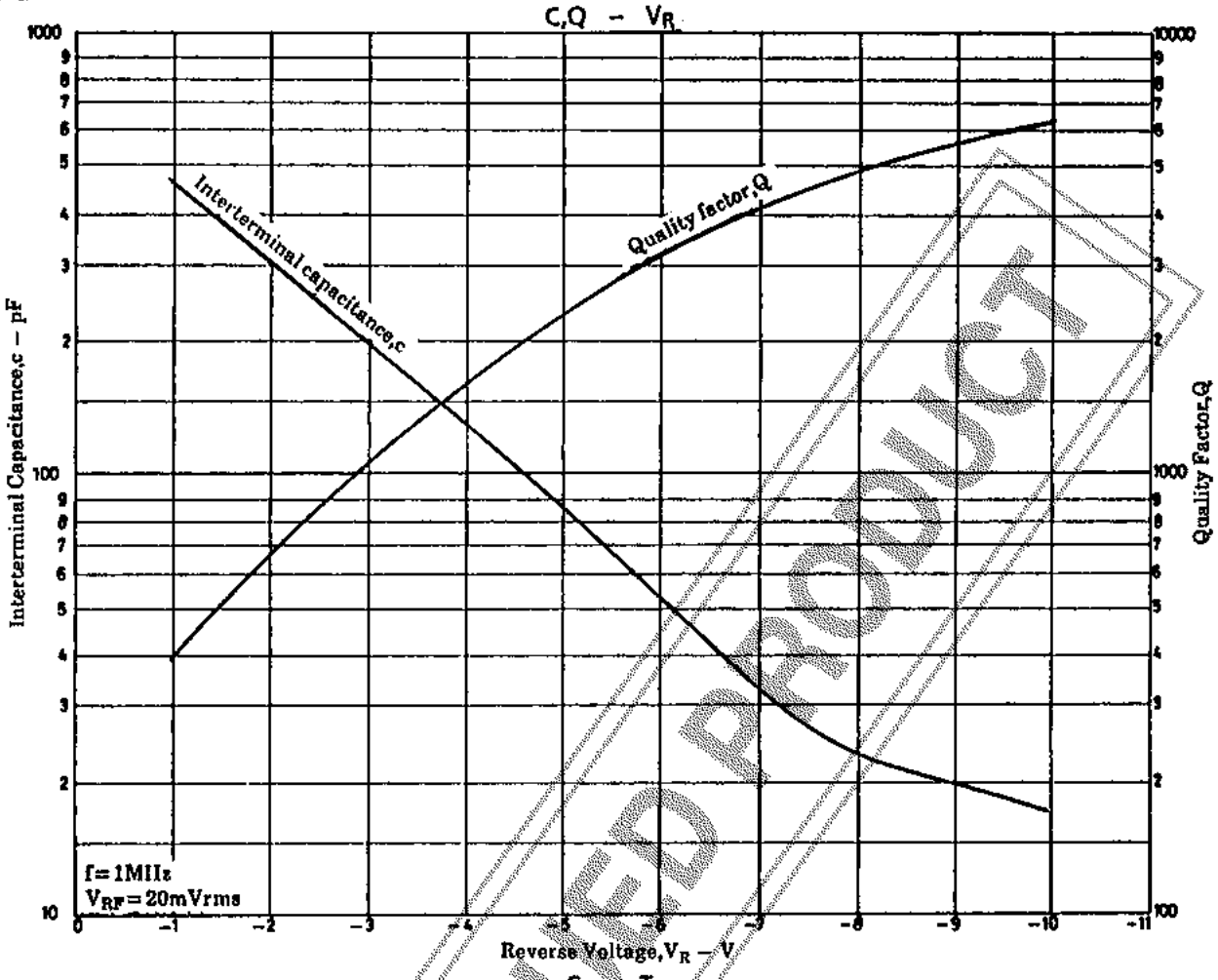
Address and Capacitance Value

TEST POINT	$C_{1.2V}$		$C_{3.5V}$		$C_{6.0V}$		$C_{8.0V}$	
	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
CAPACITANCE VALUE	202	(459.1 445.8	158	(192.1 186.5	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

Rank 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				A							B			⊠
197														
198														
199														
200				C							D			
201														
202														

C,Q – V_R



C – T_a