Ordering number :EN699H

SVC321SPA

Diffused Junction Type Sillicon Diode

Varactor Diode (IOCAP)
for AM Receiver Electronic Tuning

Features

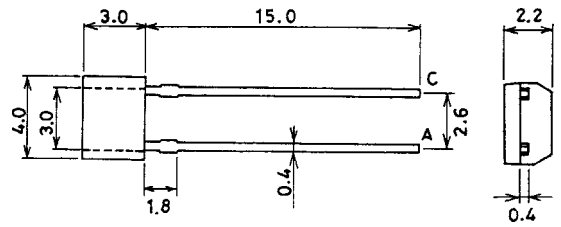
· The SVC321SPA is a varactor diode with a good linearity and high capacitance raito that is capable of being operated from a low voltage and is intended for use in AM receiver electronic tuning applications.

Package Dimensions

unit:mm

1184

[SVC321SPA]



C:Cathode
A:Anode

SANYO:SPA

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)\ R}$	I_R=10μA	16			V
Reverse 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	C_R	$C_{1.2V}/C_{8.0V}$, f=1MHz	15.5			
Matching Tolerance	ΔC_m	$(C_{max}–C_{min})/C_{min}$			0.03	

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

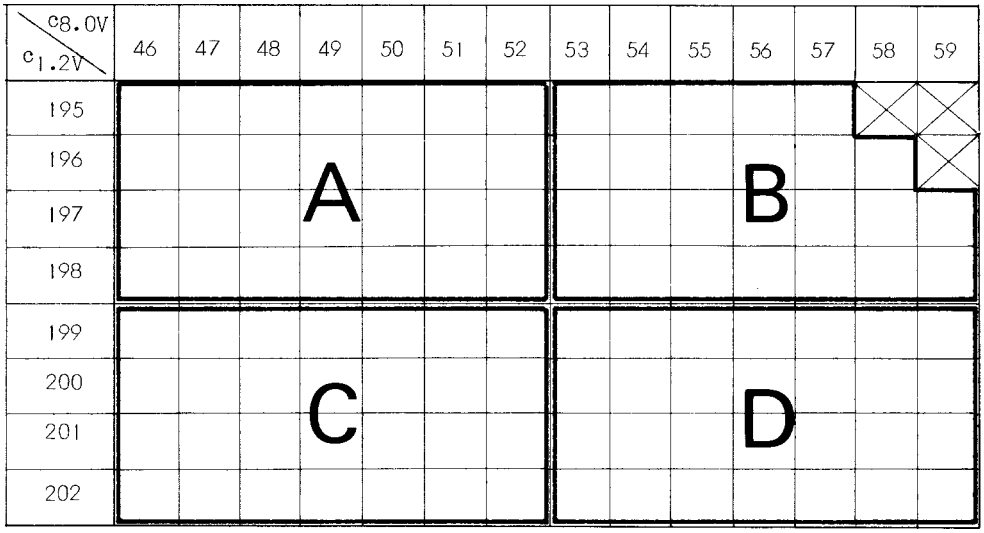
Rank	$C_{1.2V}$(pF)	$C_{8.0V}$(pF)
A	388.1 to 424.1	20.30 to 23.54
B	388.1 to 424.1	23.31 to 27.05
C	420.0 to 459.1	20.30 to 23.54
D	420.0 to 459.1	23.31 to 27.05

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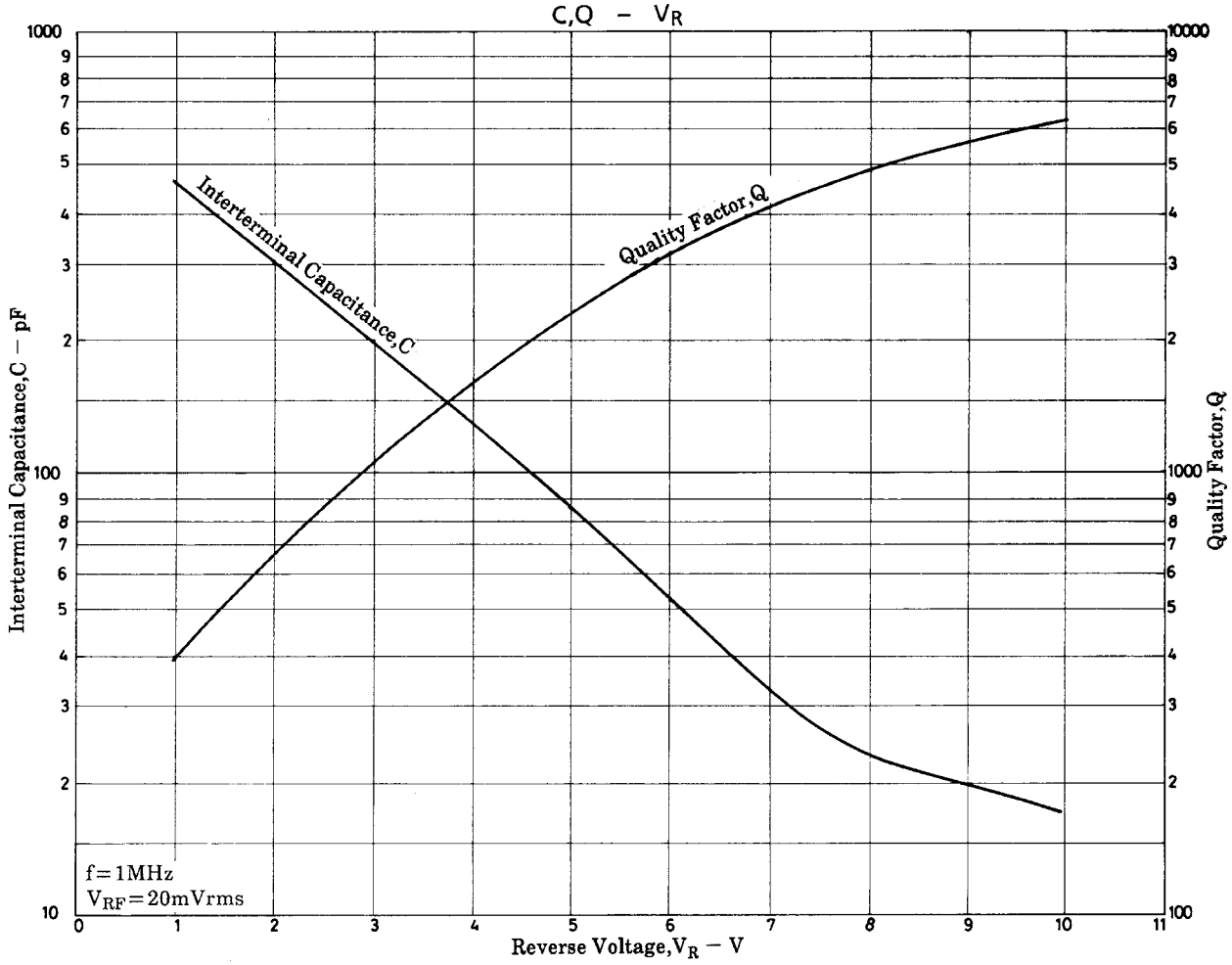
Address and Capacitance Value

TEST POINT	$C_{1.2V}$		$C_{3.5V}$		$C_{6.0V}$		$C_{8.0V}$	
	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

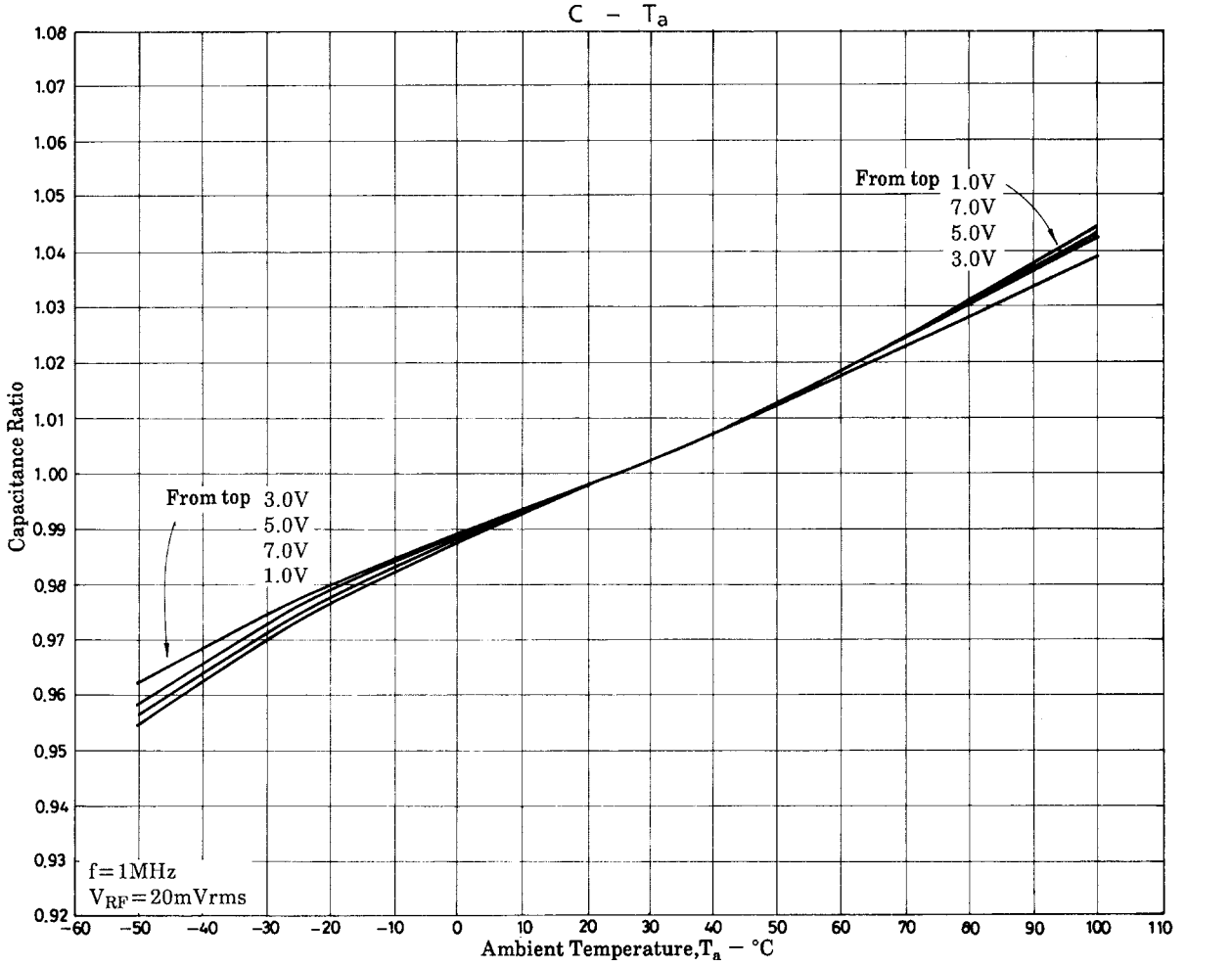
Rnak and Address Table



C,Q – V_R


Interterminal Capacitance, C
Quality Factor, Q
f=1MHz
V_{RF}=20mVrms
Interterminal Capacitance, C – pF
Quality Factor, Q
Reverse Voltage, V_R – V

C – T_a


From top 1.0V
7.0V
5.0V
3.0V
From top 3.0V
5.0V
7.0V
1.0V
f=1MHz
V_{RF}=20mVrms
Capacitance Ratio
Ambient Temperature, T_a – °C

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