Ordering number :EN4622A

SVC208

Sillicon Diffused Junction Type

Varactor Diode (IOCAP)
for FM Low-Voltage Electronic Tuning

Features

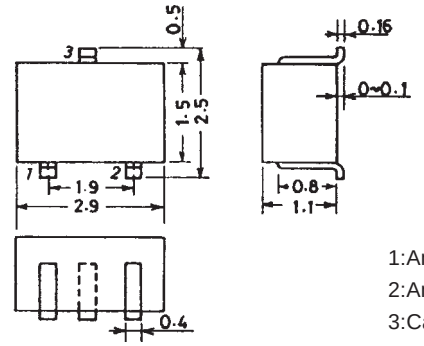
- Dual type with a good linearity of C-V characteristic.Excels in large input characteristic.
- Small-sized package (CP) available for very small-sized sets (surface mount type).
- Appilicable to FM wide band due to high capacitance ratio (V_R=1.5 to 9V).

Package Dimensions

unit:mm

1169A

[SVC208]



1:Anode
2:Anode
3:Cathode

SANYO:CP

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		16	V
Junction Temperature	Tj		125	˚C
Storage Temperature	Tstg		–55 to +125	˚C

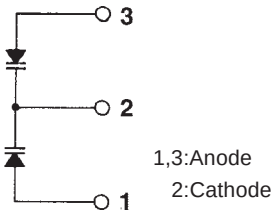
Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	I_R=10μA	16			V
Reverse Current	I_R	V_R=10V			50	nA
Interterminal Capacitance*	$C_{3.0V}$	V_R=3.0V, f=1MHz	36.92		43.03	pF
	$C_{4.5V}$	V_R=4.5V, f=1MHz	27.45		32.80	pF
	$C_{6.0V}$	V_R=6.0V, f=1MHz	19.91		25.61	pF
	$C_{8.0V}$	V_R=8.0V, f=1MHz	12.77		16.84	pF
Quality Factor	Q	V_R=3.0V, f=100MHz	60			
Capacitance Ratio	CR	$C_{3.0V}/C_{8.0V}$	2.50		3.00	
Matching Tolerance	ΔC_m	$(C_{max}-C_{min})/C_{min}$, V_R=2.0V to 8.0V			0.03	

Note)*:Capacitance value of one diode

- Marking:AV

Electrical Connection



1,3:Anode
2:Cathode

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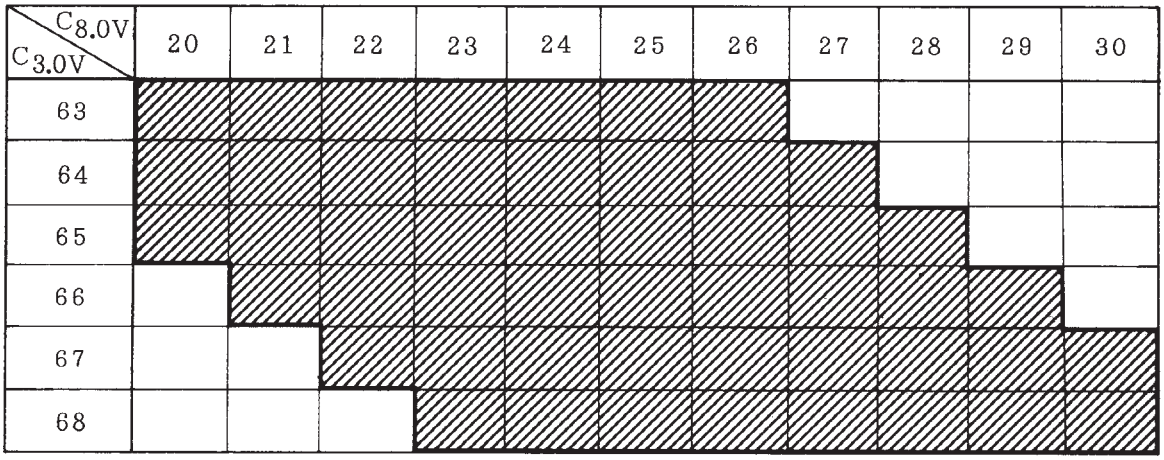
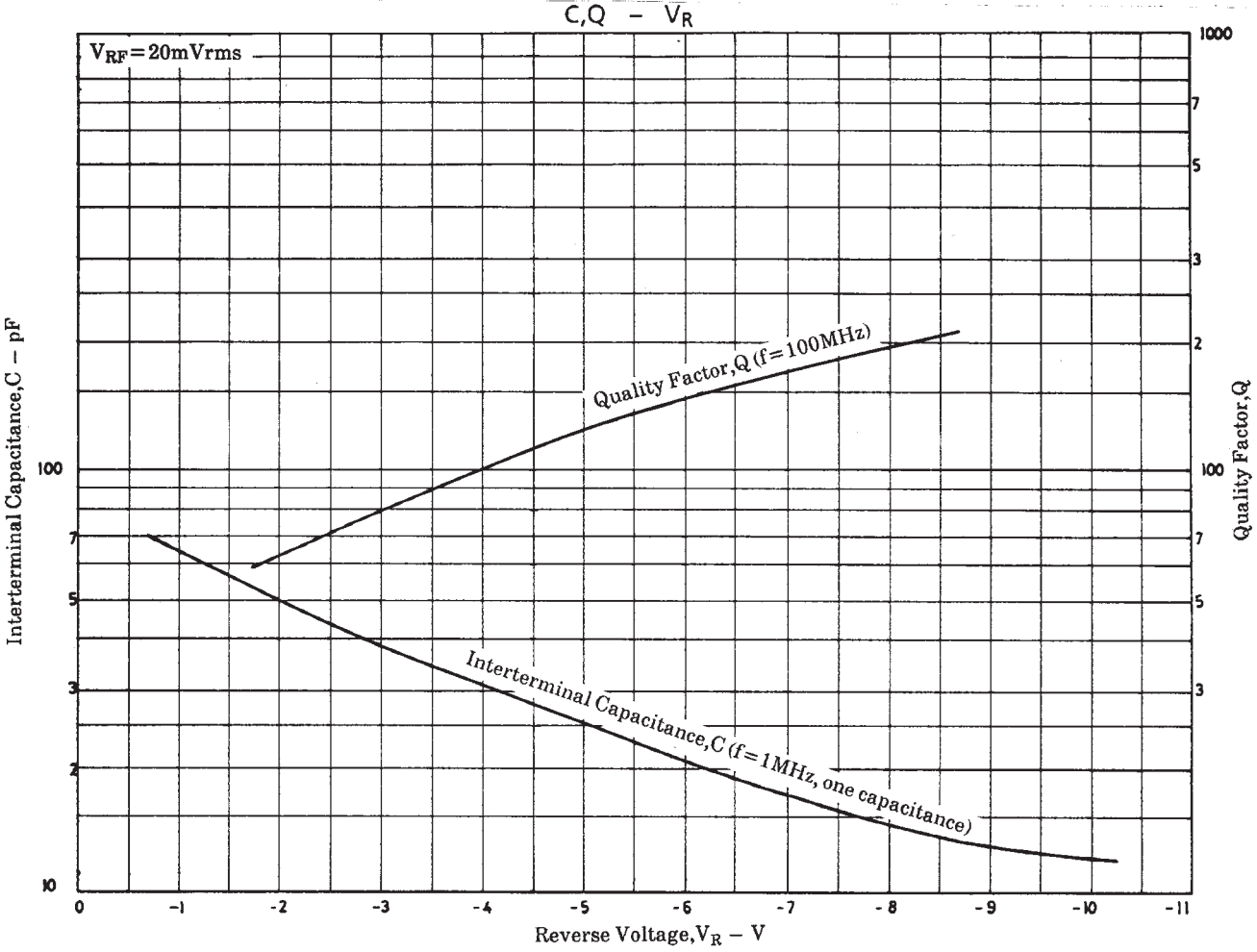
Address and Capacitance Value

V_R=3.0V		V_R=4.5V		V_R=6.0V		V_R=8.0V	
Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
63	36.92~38.02	51	27.45~28.27	38	19.91~20.51	20	12.77~13.15
64	37.85~38.98	52	28.14~28.98	39	20.41~21.02	21	13.09~13.48
65	38.79~39.96	53	28.85~29.71	40	20.93~21.56	22	13.42~13.82
66	39.76~40.95	54	29.57~30.45	41	21.45~22.09	23	13.76~14.17
67	40.76~41.98	55	30.30~31.21	42	21.98~22.64	24	14.09~14.52
68	41.78~43.03	56	31.06~31.99	43	22.53~23.21	25	14.44~14.88
		57	31.84~32.80	44	23.09~23.78	26	14.81~15.26
				45	23.67~24.38	27	15.18~15.64
				46	24.27~25.00	28	15.56~16.03
				47	24.87~25.61	29	15.95~16.43
						30	16.35~16.84

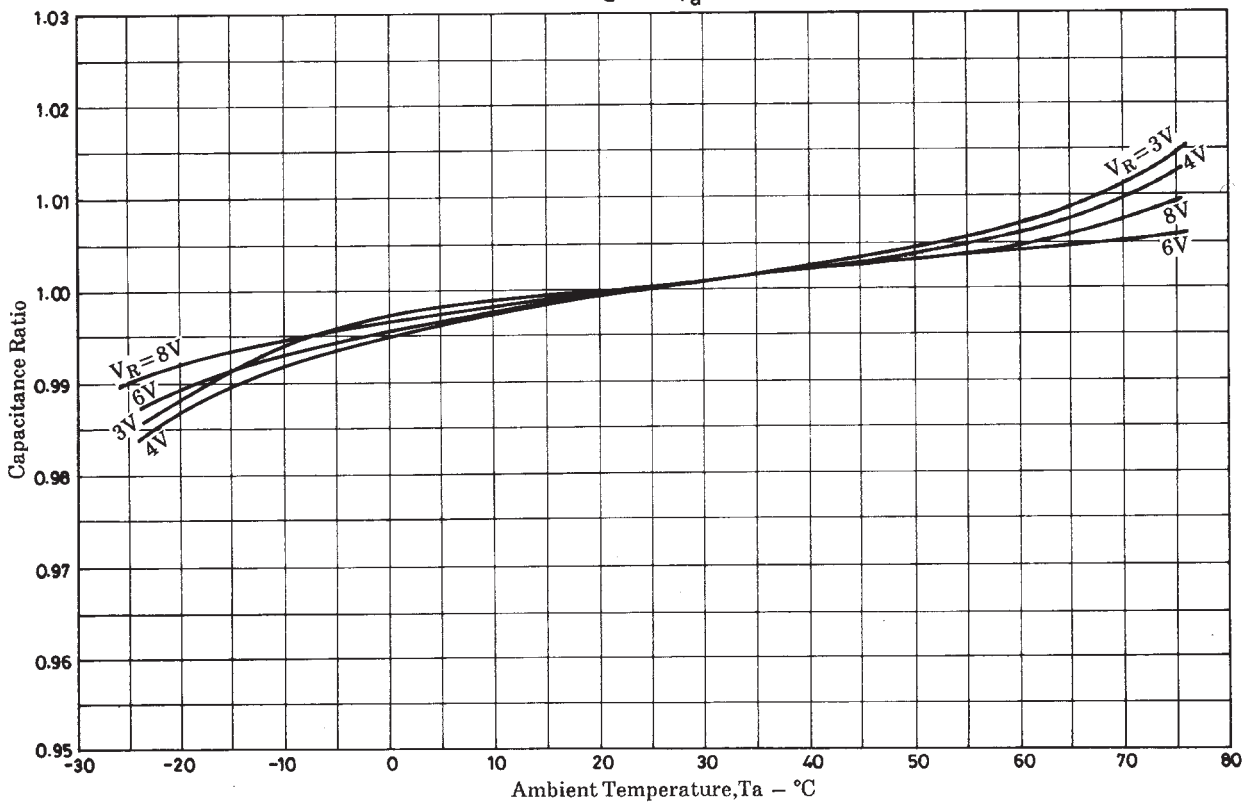
Rank Width



C,Q – V_R


V_{RF}=20mVrms
Quality Factor,Q (f=100MHz)
Interterminal Capacitance,C (f=1MHz, one capacitance)
Interterminal Capacitance,C – pF
Quality Factor,Q
Reverse Voltage,V_R – V
1000
7
5
3
2
100
7
5
3
2
10
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11

C – T_a


V_R=3V
4V
8V
6V
V_R=8V
6V
3V
4V
Capacitance Ratio
Ambient Temperature,Ta – °C
1.03
1.02
1.01
1.00
0.99
0.98
0.97
0.96
0.95
-30
-20
-10
0
10
20
30
40
50
60
70
80