Ordering number :EN698C

SVC202, 202SPA

Duffused Junction Type Sillicon Diode

Varactor Diode (IOCAP)

for FM Receiver Electronic Tuning

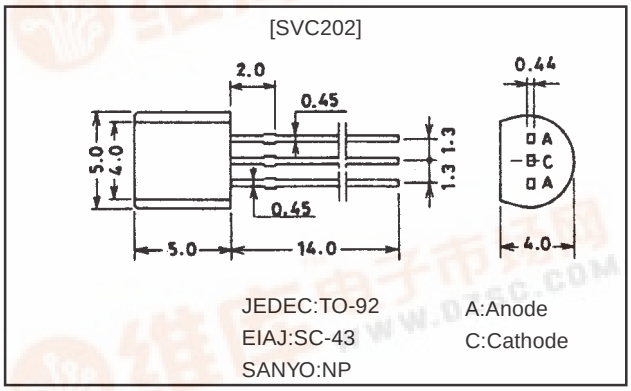
Features

· Twin type FM electronic tuning-use varactor diode which excels in large input characteristics.

Package Dimensions

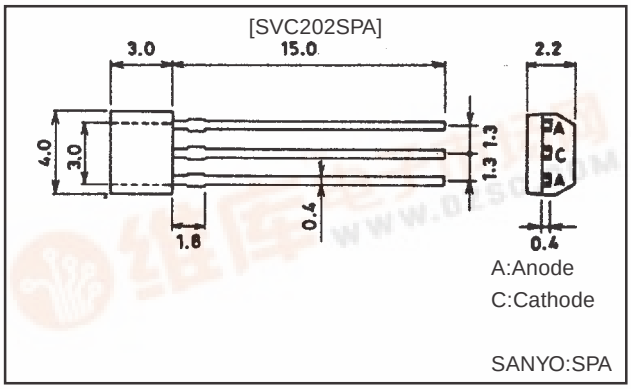
unit:mm

1074A

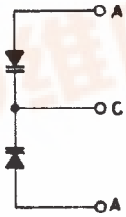


unit:mm

1129



Electical Connection



A:Anode
C:Cathode

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive 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			–50	nA
Interterminal Capacitance*	$C_{1.6V}$	V_R=–1.6V, f=1MHz	28.19		37.45	pF
	$C_{3.5V}$	V_R=–3.5V, f=1MHz	19.04		24.33	pF
	$C_{5.0V}$	V_R=–5.0V, f=1MHz	14.48		18.49	pF
	$C_{7.5V}$	V_R=–7.5V, f=1MHz	10.17		12.99	pF
Capacitance Ratio	CR	$C_{1.6V}/C_{7.5V}$, f=1MHz	2.2		3.7	
Series Resistance	r_s	f=50MHz, V_R=–1V			0.6	Ω
Matching Tolerance	ΔC_m	$(C_{max}–C_{min})/C_{min}$			0.05	

Note *: Capacitance value of one diode

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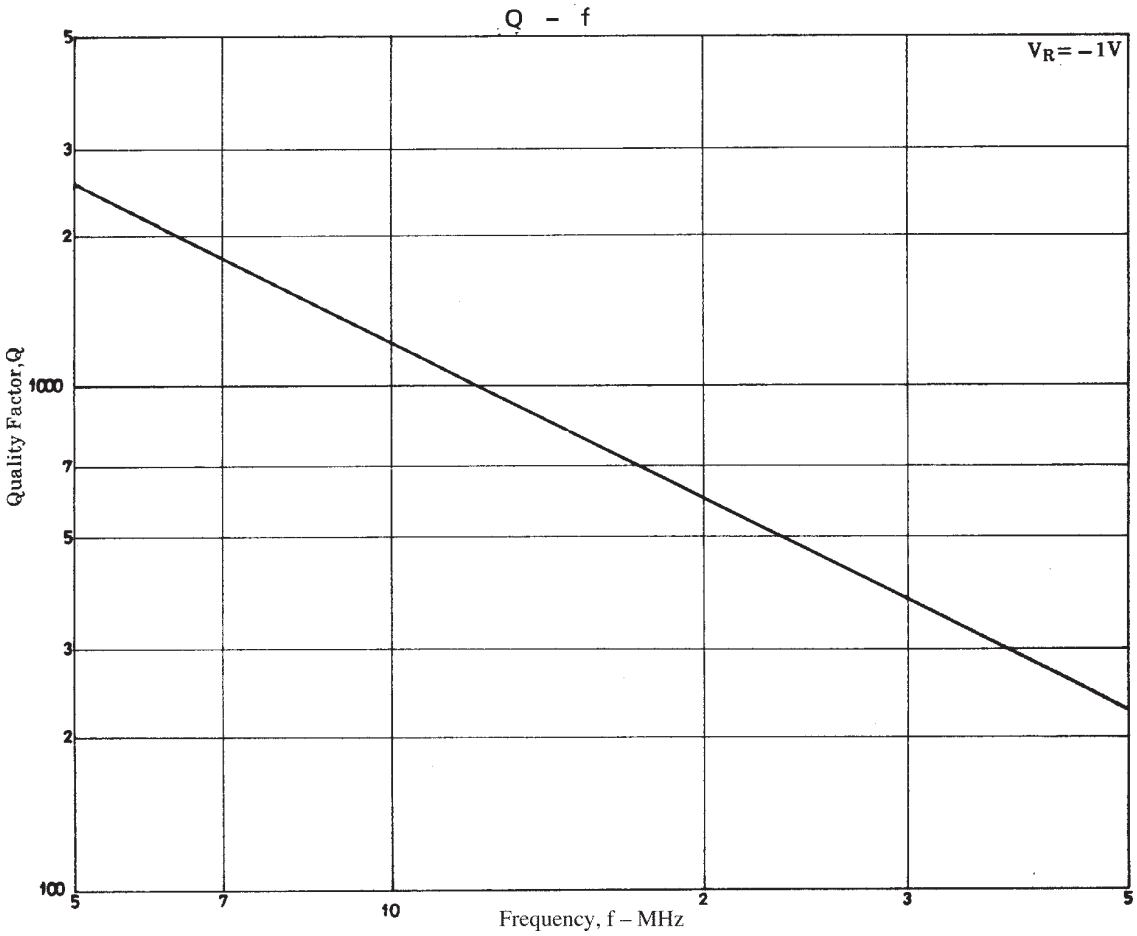
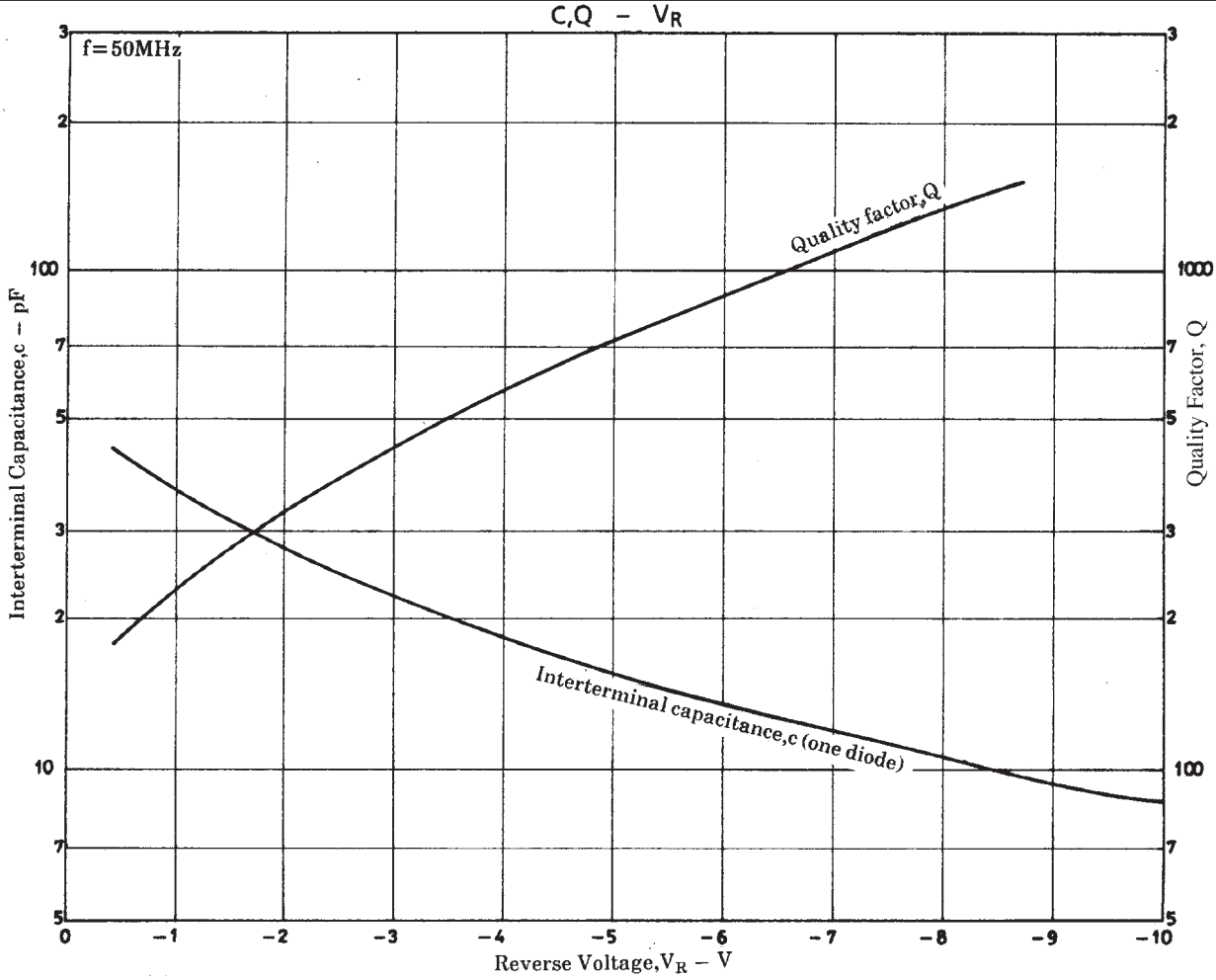
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Address and Capacitance Value (one diode)

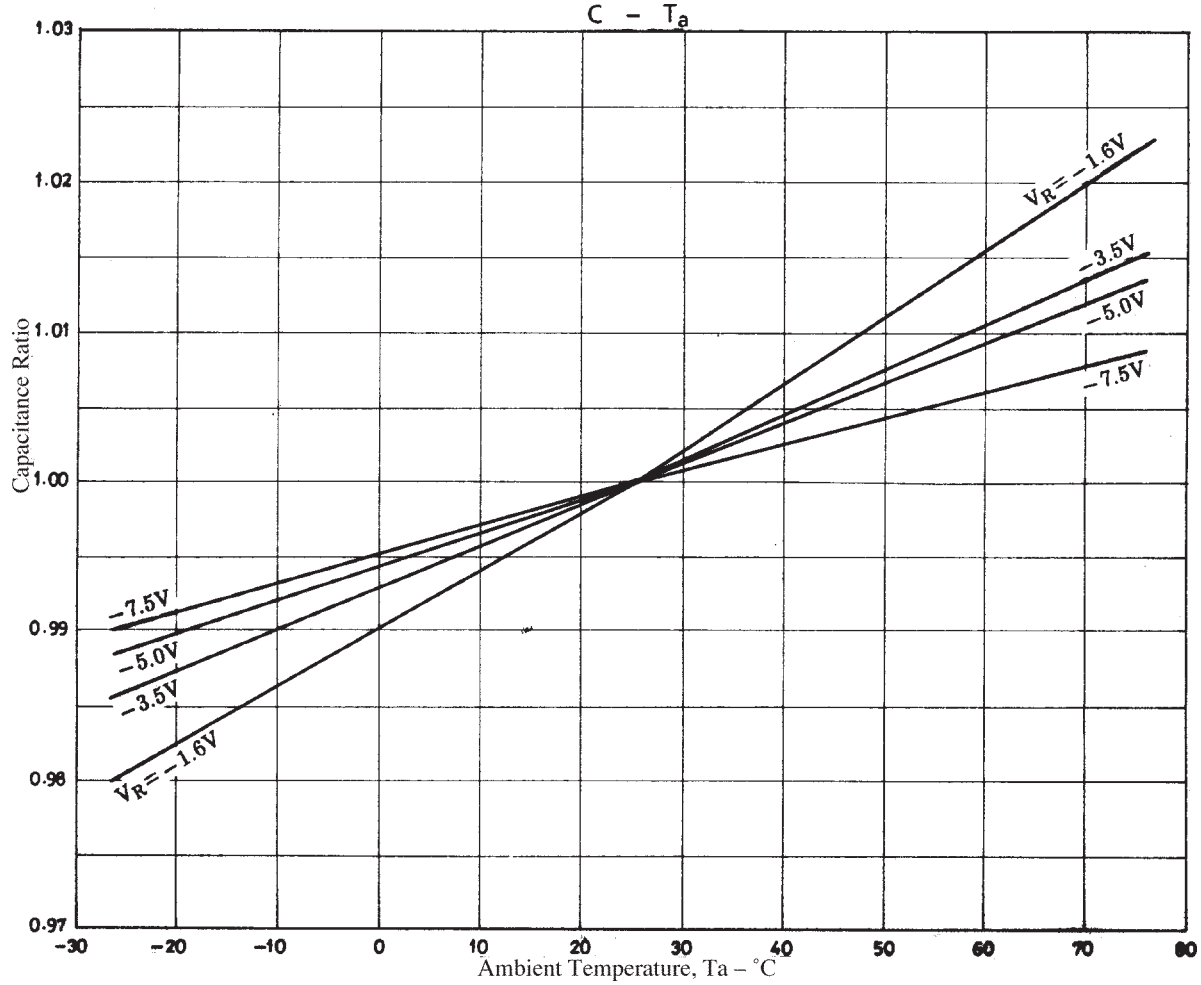
TEST POINT	C 1.6V	C 3.5V	C 5.0V	C 7.5V
CAPACITANCE VALUE	Address Capacitance (pF)	Address Capacitance (pF)	Address Capacitance (pF)	Address Capacitance (pF)
	38 [37.45 35.67	27 [24.33 23.17	20 [18.49 17.61	11 [12.99 12.37
	37 [36.01 34.30	26 [23.39 22.28	19 [17.78 16.93	10 [12.50 11.90
	36 [34.63 32.98	25 [22.49 21.42	18 [17.09 16.28	9 [12.01 11.44
	35 [33.30 31.71	24 [21.63 20.60	17 [16.43 15.65	8 [11.54 10.99
	34 [32.02 30.50	23 [20.80 19.81	16 [15.81 15.05	7 [11.11 10.58
	33 [30.79 29.32	22 [20.00 19.04	15 [15.20 14.48	6 [10.68 10.17
	32 [29.60 28.19			



C,Q – V_R


f=50MHz
Quality factor, Q
Interterminal capacitance, c (one diode)
Interterminal Capacitance, c – pF
Quality Factor, Q
Reverse Voltage, V_R – V
3
2
100
7
5
3
2
10
7
5
1000
7
5
3
2
100
7
5
0
−1
−2
−3
−4
−5
−6
−7
−8
−9
−10

C – T_a


V_R = −1.6V
−3.5V
−5.0V
−7.5V
Capacitance Ratio
Ambient Temperature, Ta – °C
1.03
1.02
1.01
1.00
0.99
0.98
0.97
−30
−20
−10
0
10
20
30
40
50
60
70
80