Ordering number :EN3905A

SVC323

Silicon Diffused Junction Type

Varactor Diode

for AM Low-Voltage Electronic Tuning

Features

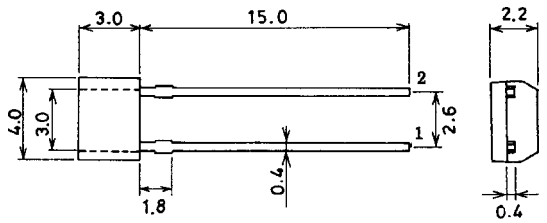
- High capacitance ratio and high quality factor.
- AM 1710kHz max. supported.

Package Dimensions

unit:mm

1184A

[SVC323]



1:Anode
2:Cathode

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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=9V			100	nA
Interterminal Capacitance	C_{1V}	V_R=1V, f=1MHz*1	462.8		536.7	pF
	C_{6V}	V_R=6V, f=1MHz	45.72		59.72	pF
	C_{8V}	V_R=8V, f=1MHz	21.12		27.05	pF
Quality Factor	Q	V_R=1V, f=100MHz	200			
Capacitance Ratio	CR	$C_{1.0V}/C_{8.0V}$, f=1MHz	17.5		24.5	
Matching Tolerance	ΔC_m	$(C_{max}–C_{min})/C_{min}\times 100$			3.0	%

Note)*1:1MHz signal:20m Vrms

Note)*:The SVC323 is classified by $C_{1.0V}$ as follows:

Rank	$C_{1.0V}$
R	462.8 to 486.2pF
S	481.5 to 515.9pF
T	551.0 to 536.7pF

(Specify two ranks or more in principle.)

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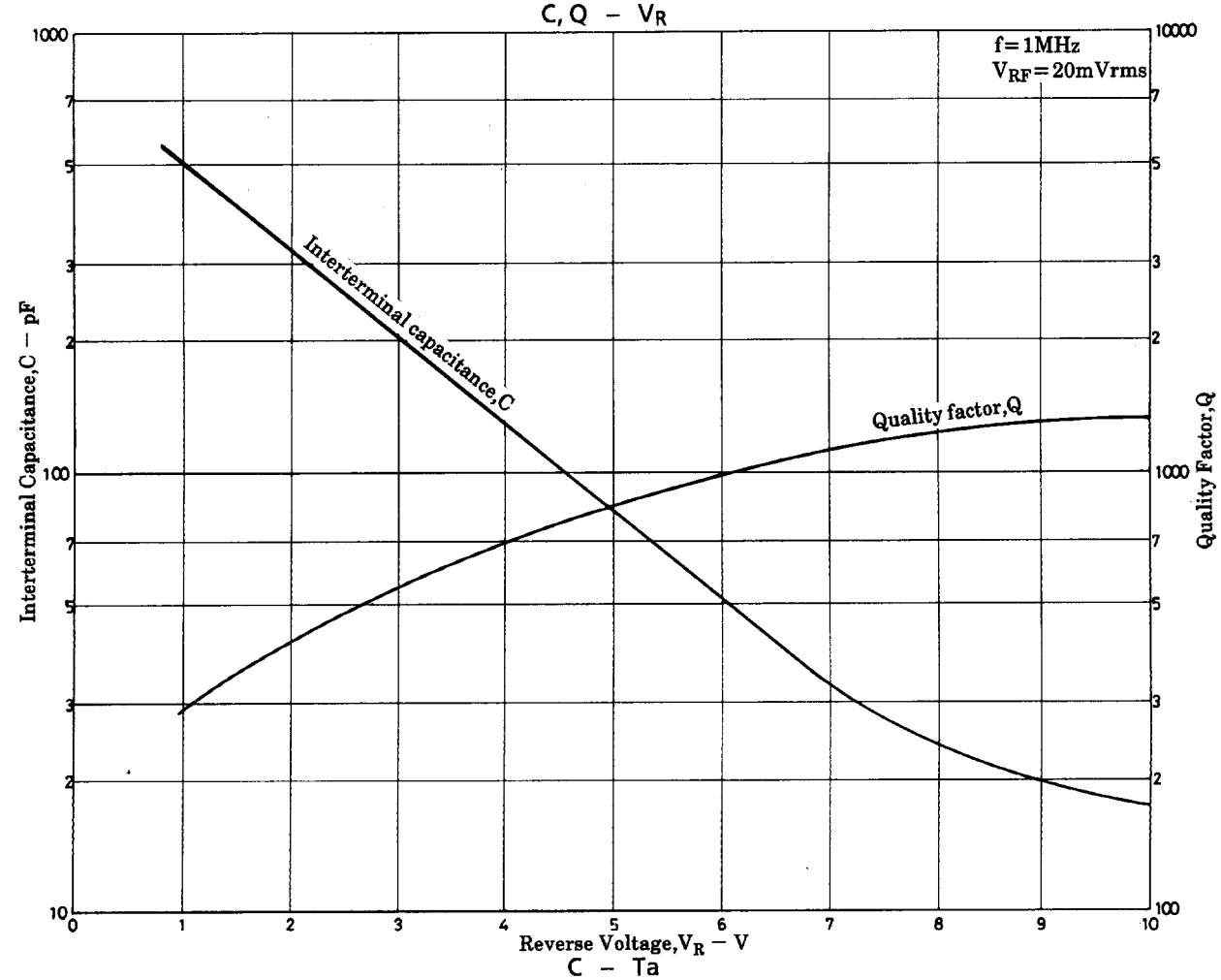
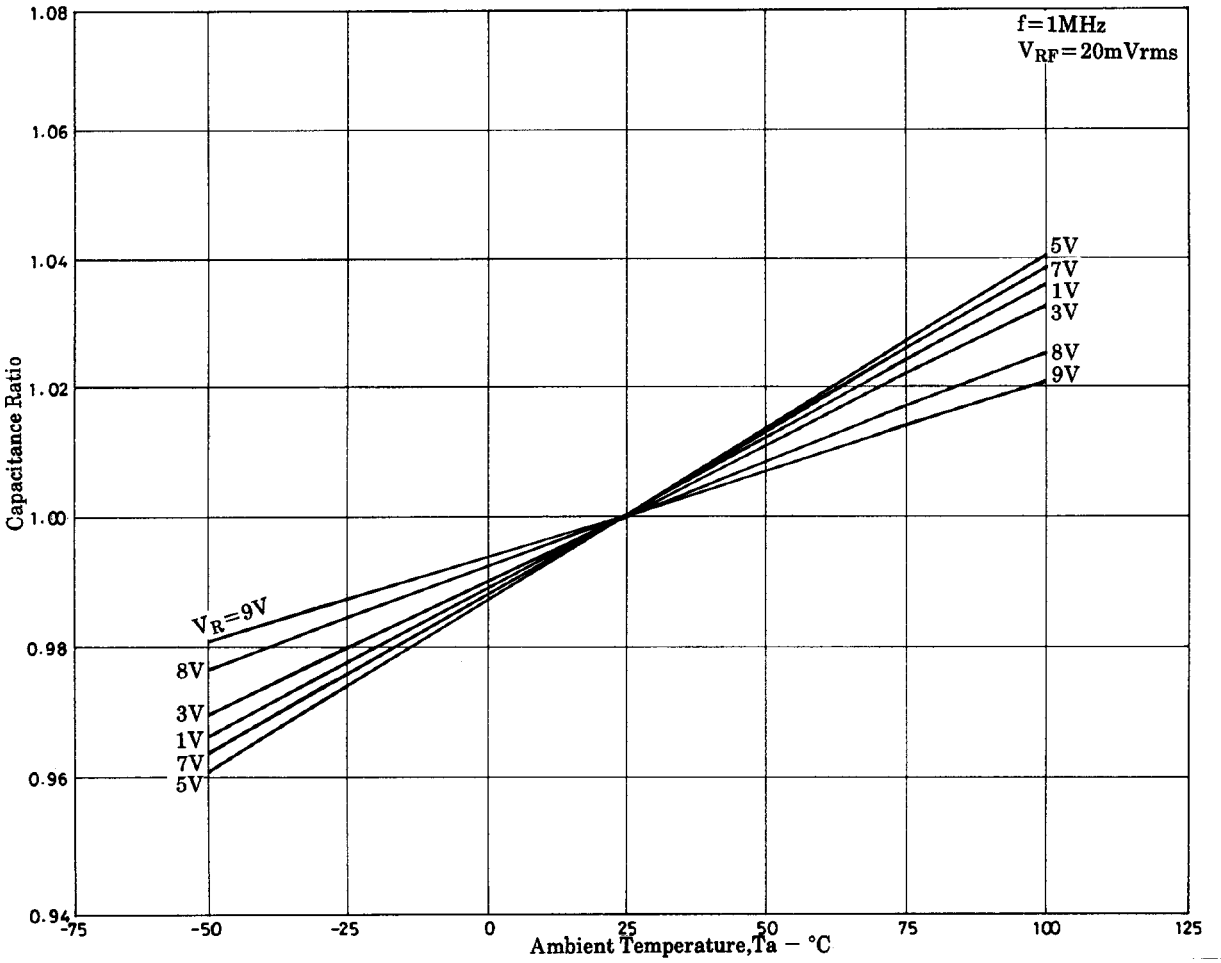
Address and Capacitance Value

Test Point	$C_{1.0V}$		$C_{6.0V}$		$C_{8.0V}$	
	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
Capacitance Value	204	462.8 (476.6	87	45.72 (47.09	48	21.12 (21.75
	205	472.1 (486.2	88	46.63 (48.03	49	21.54 (22.19
	206	481.5 (495.9	89	47.57 (48.99	50	21.97 (22.63
	207	491.1 (505.8	90	48.52 (49.97	51	22.41 (23.08
	208	500.9 (515.9	91	49.49 (50.97	52	22.86 (23.55
	209	511.0 (526.3	92	50.48 (51.99	53	23.32 (24.02
	210	521.1 (536.7	93	51.49 (53.03	54	23.78 (24.50
			94	52.52 (54.09	55	24.26 (24.99
			95	53.57 (55.17	56	24.74 (25.49
			96	54.64 (56.28	57	25.24 (26.00
			97	55.73 (57.40	58	25.74 (26.52
			98	56.84 (58.55	59	26.26 (27.05
			99	57.98 (59.72		

C, Q – V_R


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

C – Ta


f=1MHz
V_{RF}=20mVrms
5V
7V
1V
3V
8V
9V
V_R=9V
8V
3V
1V
7V
5V
Capacitance Ratio
Ambient Temperature,Ta – °C