Ordering number :EN5345

SVC344

Silicon Diffused Junction Type

Varactor Diode for AM Low-Voltage Electronic Tuning

Features

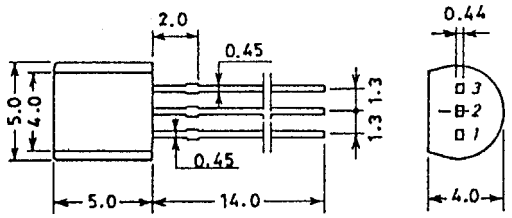
- Twin type varactor diode for low-voltage AM electronic tuning applivations.
- Low operating voltage (≤4.5V).
- High Q.

Package Dimensions

unit:mm

1271

[SVC344]



JEDEC:TO-92	1:Anode
EIAJ:SC-43	2:Cathode
SANYO:NP	3:Anode

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		30	V
Junction Temperature	Tj		125	˚C
Storage Temperature	Tstg		–55 to +125	˚C

Electrical Characteristics at Ta = 25˚C

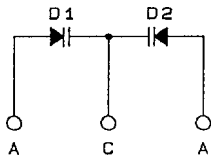
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	I_R=10μA	30			V
Reverse Current	I_R	V_R=20V			100	nA
Interterminal Capacitance*1	$C_{1.0V}$	V_R=1.0V, f=1MHz*2	410.0	430.0	445.0	pF
	$C_{3.0V}$	V_R=3.0V, f=1MHz	70.0	95.0	120.0	pF
	$C_{4.5V}$	V_R=4.5V, f=1MHz	210.0	23.5	26.0	pF
Quality Factor	Q	V_R=1.0V, f=1MHz	200			
Capacitance Ratio	CR	$C_{1.0V}/C_{4.5V}$	15.0			
Matching Tolerance*3	ΔC_m1	V_R=1.0V, f=1MHz			2.0	%
	ΔC_m2	V_R=3.0V, f=1MHz			3.0	%
	ΔC_m3	V_R=4.5V, f=1MHz			3.0	%

Note)*1:The value of interterminal capacitance represent the average of mesurements for tow elements.

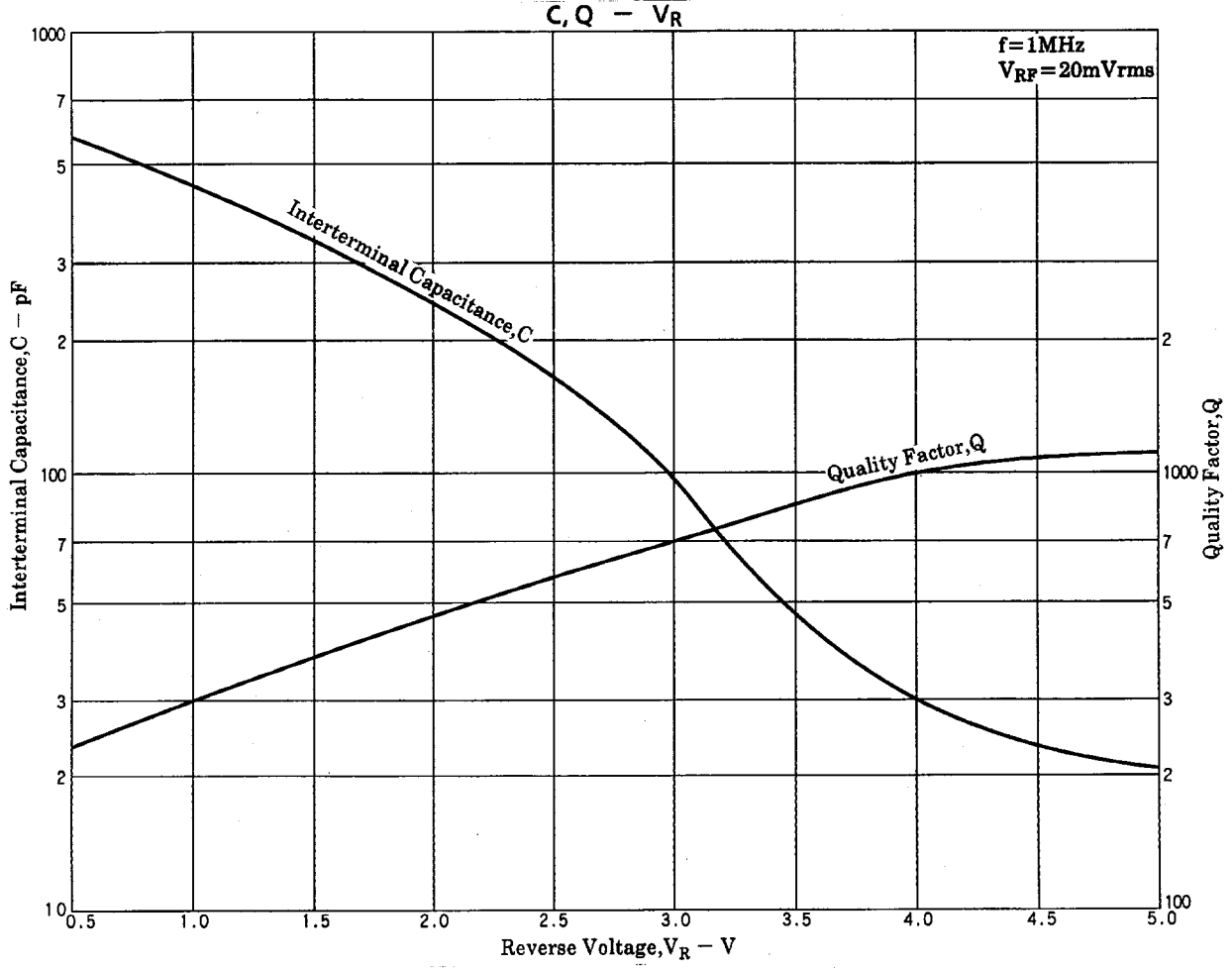
Note)*2:1MHz signal:20mVrms

Note)*3:$\Delta C_m=(C_{max}-C_{min})/C_{min}\times 100$ Between D1 and D2

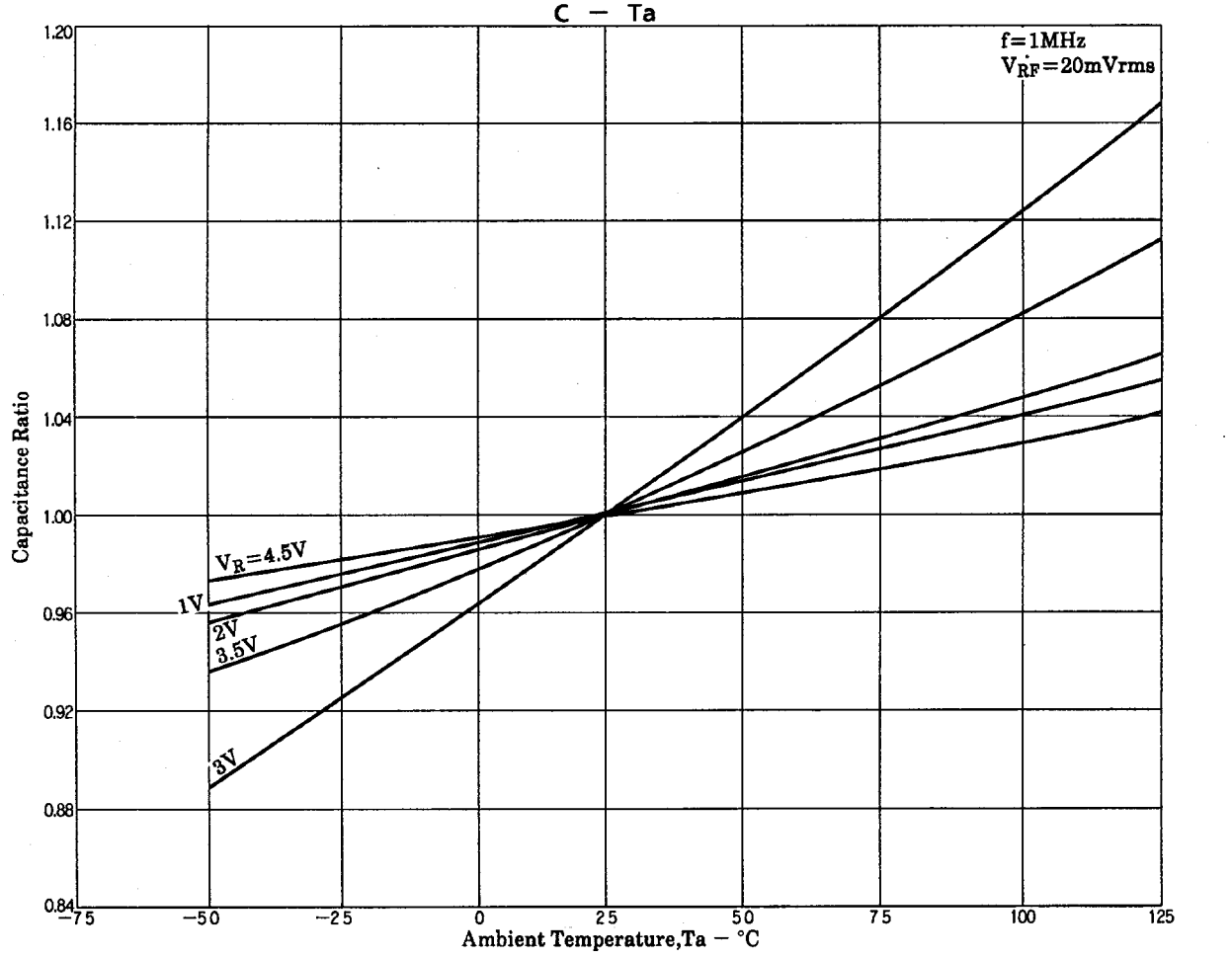
Electrical Connection



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
1000
7
5
3
2
100
7
5
3
2
10
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
2
1000
7
5
3
2
100

C — Ta


f=1MHz
V_{RF}=20mVrms
V_R=4.5V
1V
2V
3.5V
3V
Capacitance Ratio
Ambient Temperature,Ta — °C
1.20
1.16
1.12
1.08
1.04
1.00
0.96
0.92
0.88
0.84
−75
−50
−25
0
25
50
75
100
125