Ordering number :EN5816B

Sillicon Diffused Junction Type

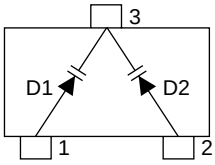
SVC347

Varactor Diode (IOCAP) for AM Reciver Electronic Tuning

Features

- Twin type varactor diode for AM electronic tuning use.
- Miniaturization and high-integration of tuner sets can be easily achieved due to the small package.
- High capacitance ratio and high quality factor.
- Provided in a tape reel packaging.
- Surface mount type.

Electrical Connection



(top view)

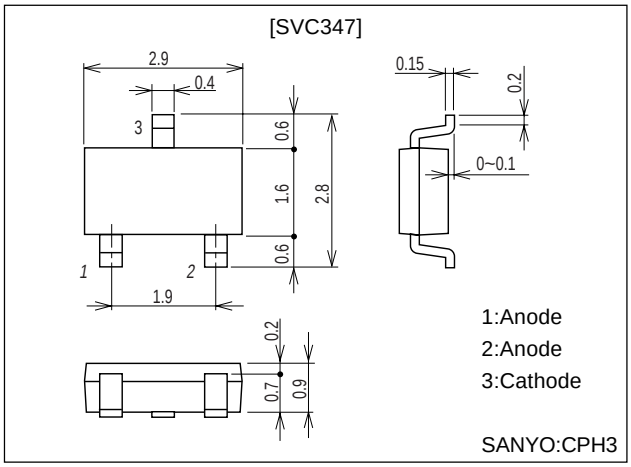
1:Anode
2:Anode
3:Cathode

A09978

Package Dimensions

unit:mm

1291



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max	Quiescent time	4.5	V
Allowable power dissipation	Pd max		300	mW
Operating temperature	Topr		– 20 to +75	˚C
Storage temperature	Tstg		– 40 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 (One diode)	I_R	V_R=9V			100	nA
Interterminal Capacitance (Capacitance value of one diode)	C_{1V}	V_R=1V, f=1MHz*1	470*		525*	pF
	C_{6V}	V_R=6V, f=1MHz		55		pF
	C_{8V}	V_R=8V, f=1MHz	20		26	pF
Quality Factor	Q	V_R=1V, f=1MHz	200			
Capacitance Ratio	CR	$C_{1.0V}/C_{8.0V}$, f=1MHz	18.5			
Matching Tolerance*2	ΔC_m	$(C_{max}-C_{min})/C_{min}\times 100$, V_R=1V, f=1MHz			1.5	%
		V_R=6V, f=1MHz			2.0	%
		V_R=8V, f=1MHz			2.0	%

Note)*1:1MHz signal:20mVrms

Note)*2:Matching tolerance between D1 and D2

Note)*:The SVC347 is classified by C_{1V} capacitance as shown in the table below:

Rank	C_{1V}(pF)
S	470 to 505
T	485 to 525

Note:Marking:V1

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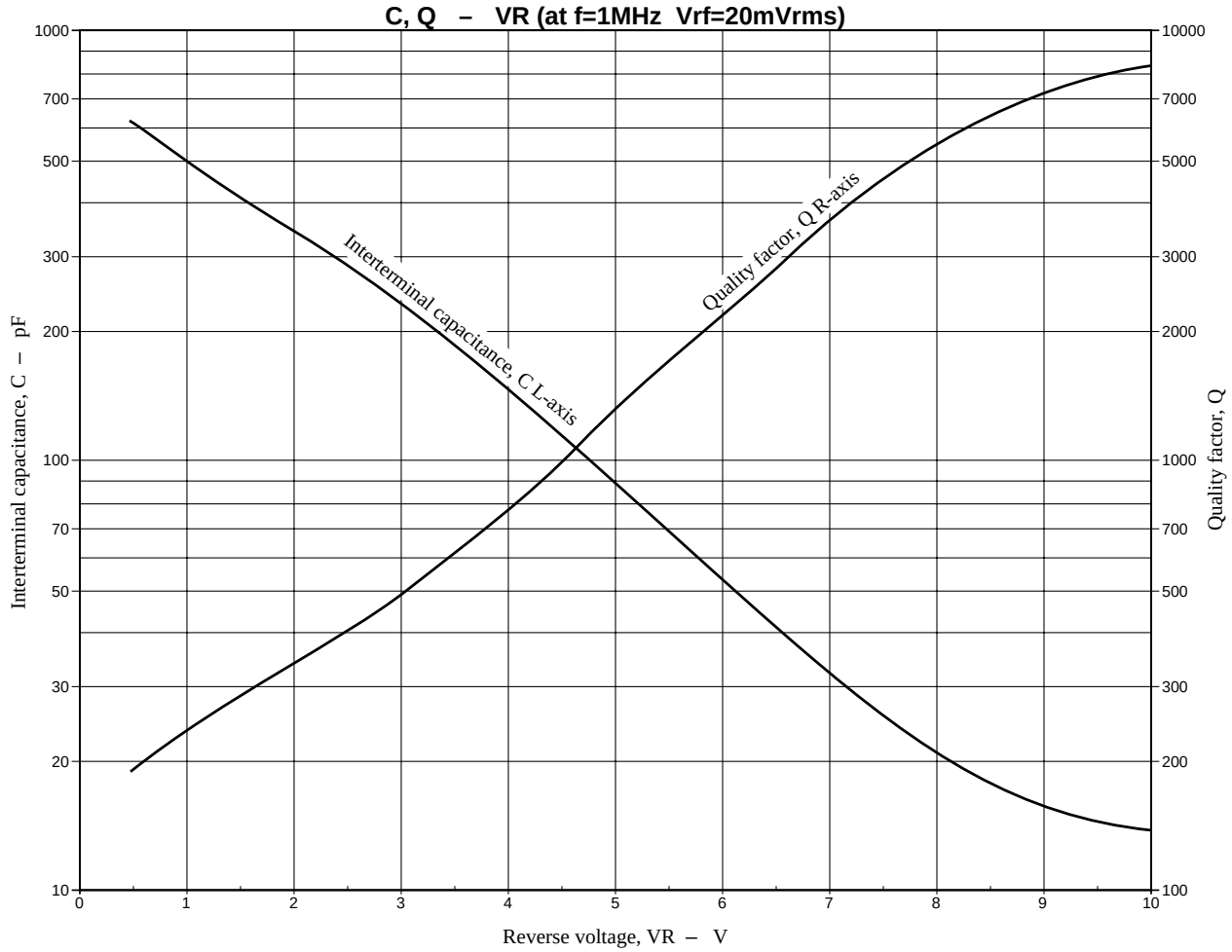
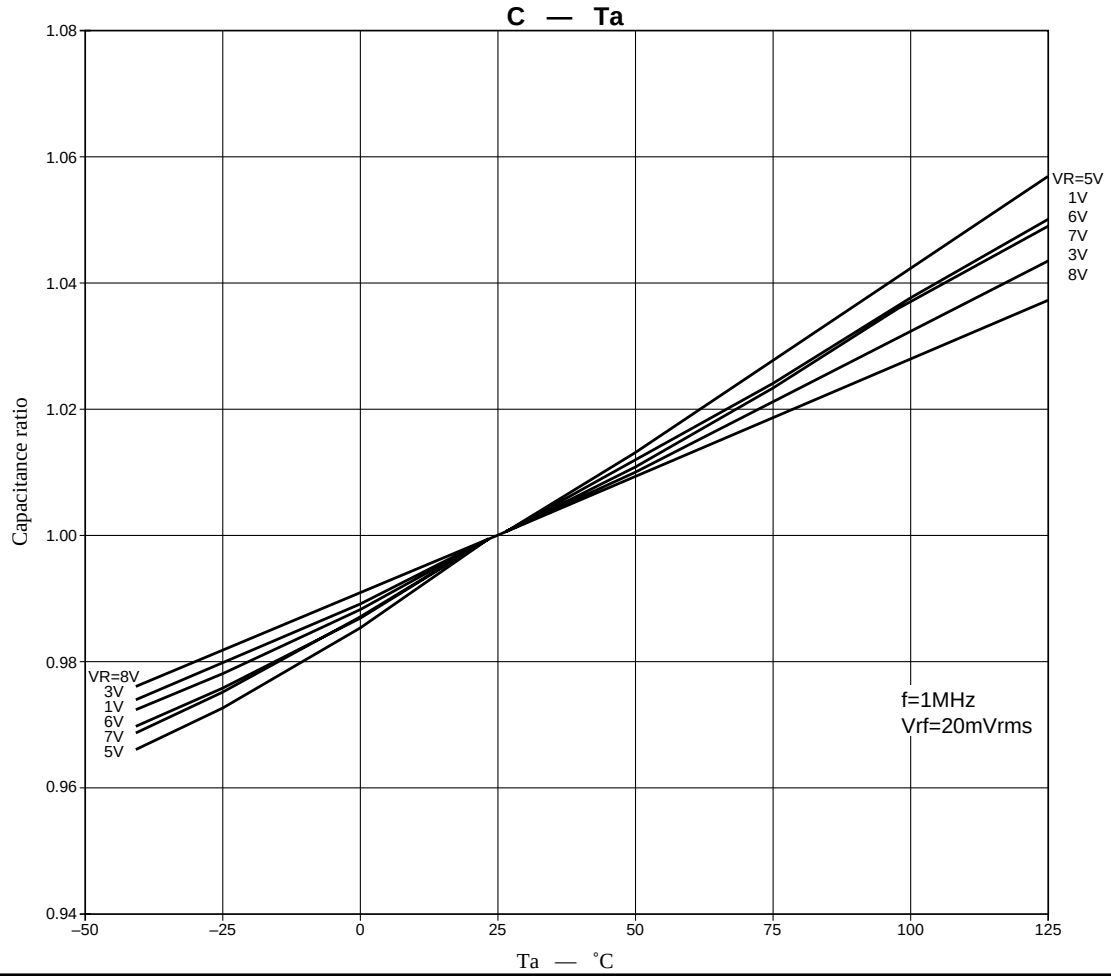

C, Q – VR (at f=1MHz Vrf=20mVrms)
Interterminal capacitance, C – pF
Quality factor, Q
Interterminal capacitance, C L-axis
Quality factor, Q R-axis
Reverse voltage, VR – V
1000
700
500
300
200
100
70
50
30
20
10
10000
7000
5000
3000
2000
1000
700
500
300
200
100
0
1
2
3
4
5
6
7
8
9
10


C — Ta
Capacitance ratio
Ta — °C
VR=5V
1V
6V
7V
3V
8V
VR=8V
3V
1V
6V
7V
5V
f=1MHz
Vrf=20mVrms
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
–50
–25
0
25
50
75
100
125