



# SVC345

Silicon Diffused Junction Type  
Varactor Diode

for AM Low-Voltage Electronic Tuning

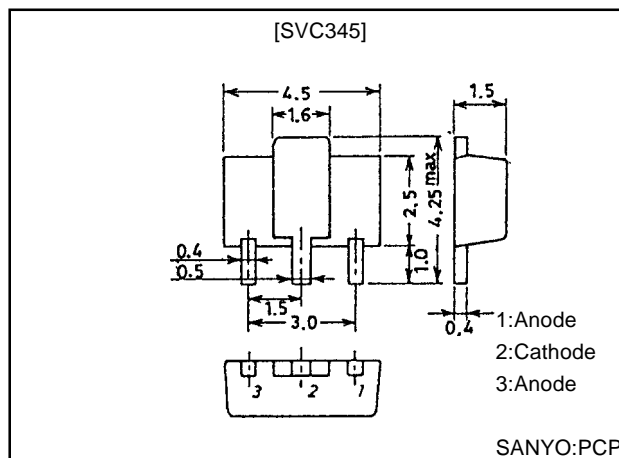
## Features

- Twin type varactor diode for low-voltage AM electronic tuning applications.
- Low operating voltage ( $\leq 6.5\text{V}$ ).
- High Q.
- Possible to offer the SVC345 devices in a tape reel packaging.
- Surface mount type.

## Package Dimensions

unit:mm

1222A



## Specifications

### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	$V_R$		33	V
Junction Temperature	$T_J$		125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	$I_R=10\mu\text{A}$	33			V
Reverse Current	$I_R$	$V_R=20\text{V}$			100	nA
Interterminal Capacitance*1	$C_{1.0\text{V}}$	$V_R=1.0\text{V}$ , $f=1\text{MHz} \times 2$	460.0*		540.0*	pF
	$C_{4.5\text{V}}$	$V_R=4.5\text{V}$ , $f=1\text{MHz}$		64.0		pF
	$C_{6.5\text{V}}$	$V_R=6.5\text{V}$ , $f=1\text{MHz}$	21.0		27.0	pF
Quality Factor	Q	$V_R=1.0\text{V}$ , $f=1\text{MHz}$	200			
Capacitance Ratio	CR	$C_{1.0\text{V}}/C_{6.5\text{V}}$	17.5		24.5	
Matching Tolerance	$\Delta C_m$	$(C_{\text{max}} - C_{\text{min}})/C_{\text{min}} \times 100$ (Between D1 to D2) $V_R=1\text{V}$ to $6.5\text{V}$			2.0	%

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

Note)\*2: 1MHz signal: 20mVrms.

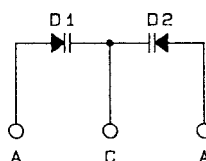
Note)\*: The SVC345 are classified by  $C_{1.0\text{V}}$  as follows:

Rank	$C_{1.0\text{V}}$ (pF)
R	460.0 to 491.0
S	482.0 to 515.0
T	505.0 to 540.0

· Marking: VB

Capacitance Rank: R, S, T

## Electrical Connection



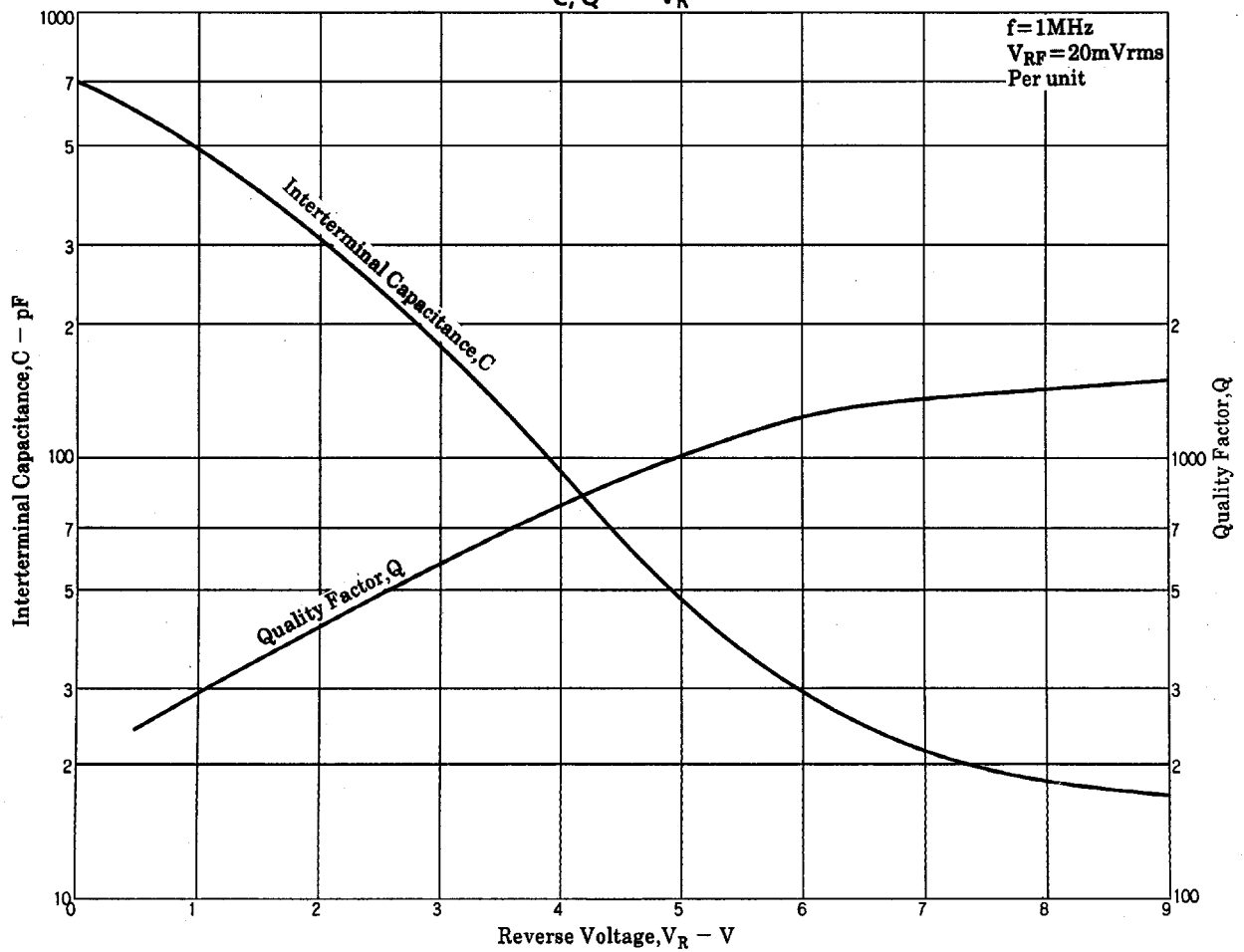
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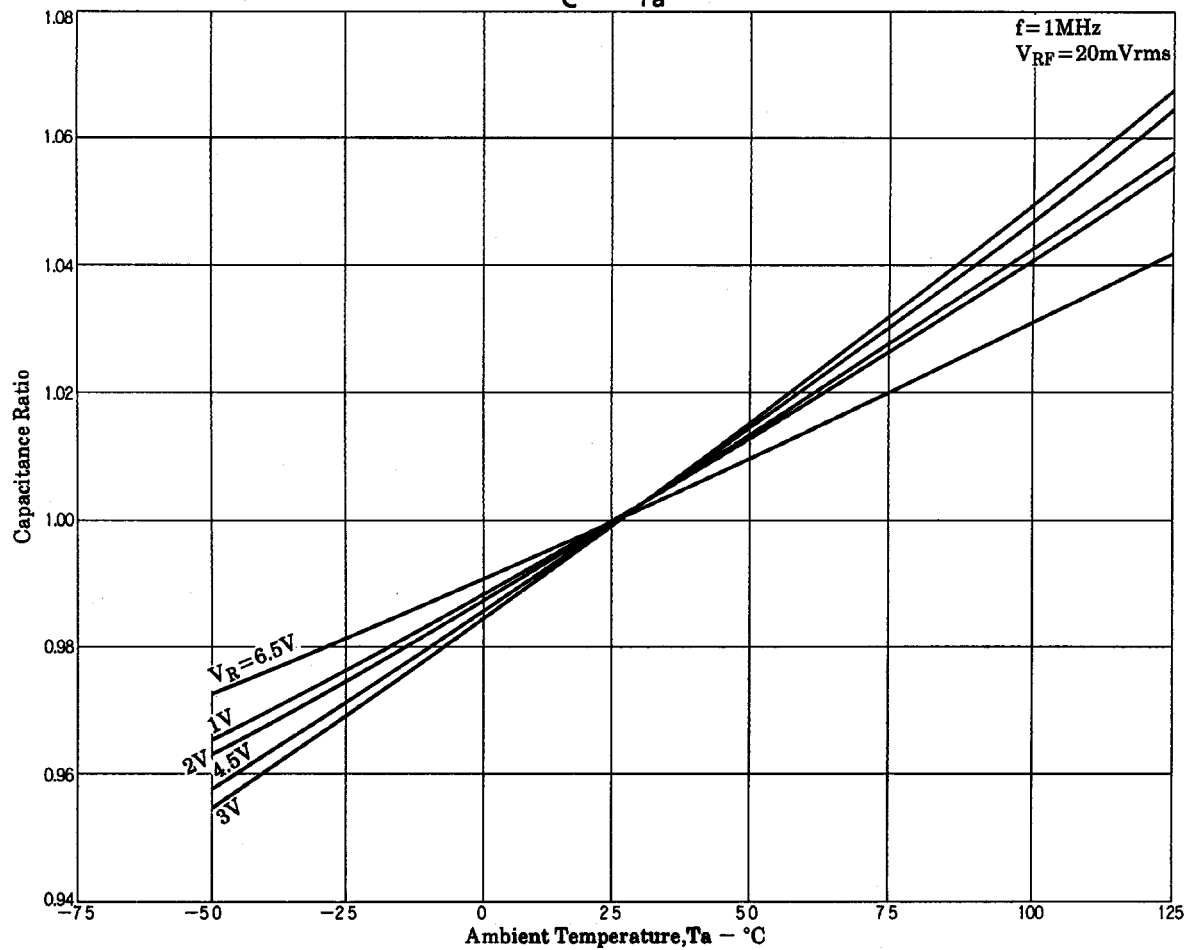
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C, Q -  $V_R$



C -  $T_a$



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