

<b>SANYO</b>	No.935B	<b>SVC333</b>
		Diffused Junction Type Silicon Diode <b>Varactor Diode (IOCAP)</b> for AM Receiver Electronic Tuning

### Features

The SVC333 is a small sized variable capacitance diode designed for AM electronic tuning. This diode works at high tuning voltage and has the high Q and the sufficiently high capacitance ratio and approximately linear change of log C with  $V_R$ .

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

			unit
Reverse Voltage	$V_R$	-32	V
Forward Current	$I_F$	100	mA
Allowable Power Dissipation	$P_D$	100	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

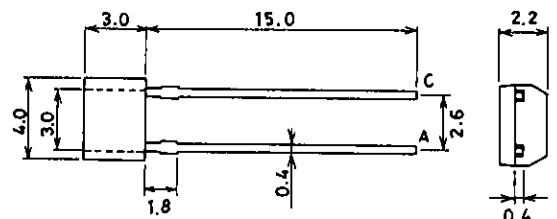
### Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Breakdown Voltage	$V_{(BR)R}$	$I_R = -10\mu\text{A}$	-32			V
Reverse Current	$I_R$	$V_R = -30\text{V}$			-100	nA
Interterminal Capacitance	$C_{3.0\text{V}}$	$V_R = -3.0\text{V}, f = 1\text{MHz}, v_i = 20\text{Vrms}$	345.0		408.4	pF
	$C_{10\text{V}}$	$V_R = -10\text{V}, \quad \text{"/}$	85.12		127.9	pF
	$C_{18\text{V}}$	$V_R = -18\text{V}, \quad \text{"/}$	35.36		53.91	pF
	$C_{25\text{V}}$	$V_R = -25\text{V}, \quad \text{"/}$	18.92		25.61	pF
Quality Factor	Q	$V_R = -3.0\text{V}, f = 1\text{MHz}$	300			
Capacitance Ratio	CR	$C_{3.0\text{V}}/C_{25\text{V}}$	15.00		19.00	
Matching Tolerance	$\Delta C_m$	$(C_{\text{max}} - C_{\text{min}})/C_{\text{min}}$ $V_R = -2.0 \text{ to } -25\text{V}$			0.02	

※ : The SVC333 is classified by  $C_{3.0\text{V}}$ ,  $C_{25\text{V}}$  as follows :

Rank	$C_{3.0\text{V}}$ (pF)	$C_{25\text{V}}$ (pF)
A	345.0~379.1	18.92~25.23
B	371.7~408.4	19.20~25.61

### Package Dimensions 1184 (unit: mm)



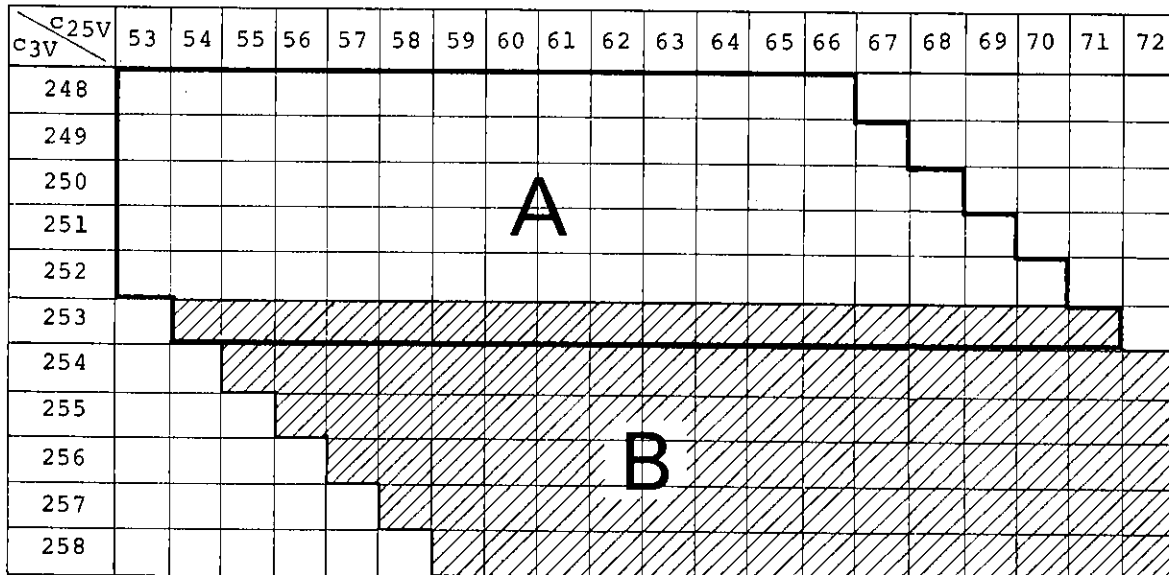
SANYO: SPA

C: Cathode  
A: Anode

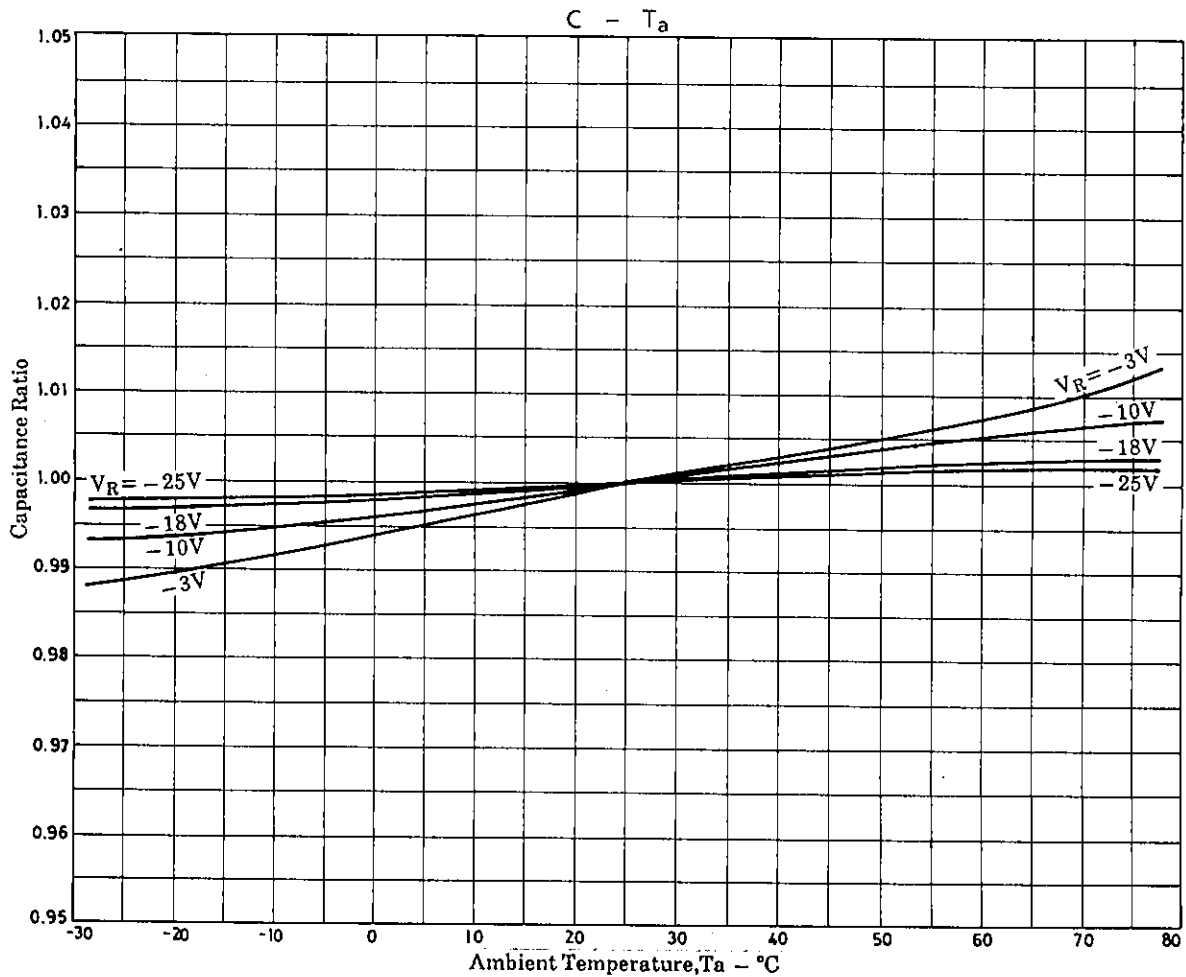
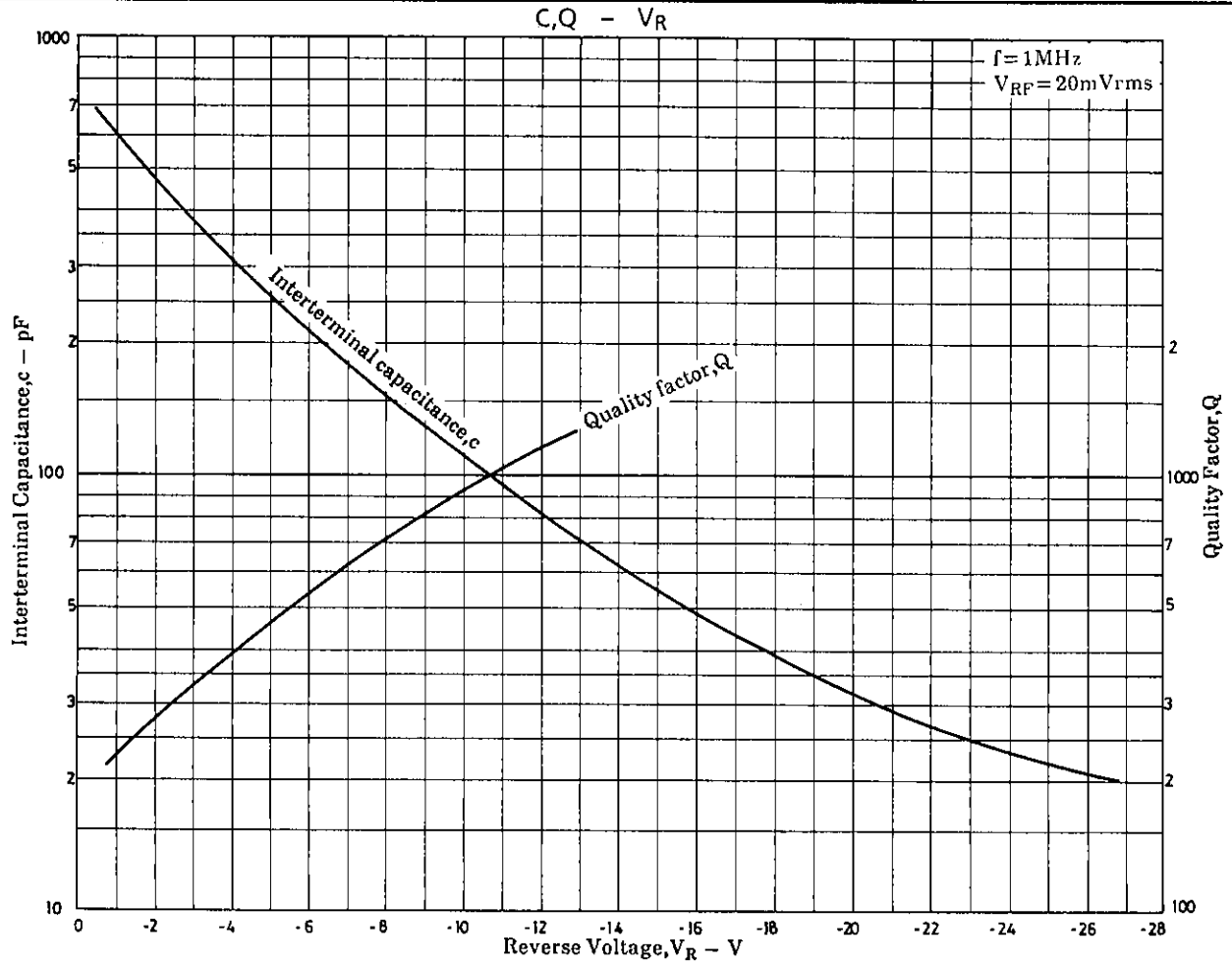
Address and Capacitance Value

VR=-3.0V		VR=-10V		VR=-18V		VR=-25V	
Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)	Address	Capacitance (pF)
248	345.0~351.9	154	85.12~86.82	95	35.36~36.07	53	18.92~19.30
249	350.2~357.2	155	86.39~88.12	96	35.89~36.61	54	19.20~19.59
250	355.4~362.5	156	87.69~89.44	97	36.43~37.16	55	19.49~19.88
251	360.8~368.0	157	89.01~90.79	98	36.98~37.72	56	19.79~20.19
252	366.2~373.5	158	90.34~92.15	99	37.54~38.29	57	20.08~20.48
253	371.7~379.1	159	91.70~93.53	100	38.09~38.86	58	20.38~20.79
254	377.3~384.8	160	93.08~94.94	101	38.66~39.44	59	20.69~21.10
255	382.9~390.6	161	94.46~96.35	102	39.24~40.03	60	21.00~21.42
256	388.6~396.4	162	95.89~97.81	103	39.83~40.63	61	21.32~21.74
257	394.5~402.4	163	97.33~99.27	104	40.43~41.24	62	21.64~22.07
258	400.4~408.4	164	98.78 100.8	105	41.04~41.86	63	21.95~22.39
		165	100.2~102.3	106	41.66~42.49	64	22.28~22.73
		166	101.7~103.8	107	42.27~43.12	65	22.62~23.08
		167	103.3~105.4	108	42.91~43.77	66	22.96~23.42
		168	104.8~106.9	109	43.56~44.43	67	23.30~23.77
		169	106.4~108.6	110	44.21~45.09	68	23.66~24.13
		170	108.0~110.2	111	44.88~45.78	69	24.01~24.49
		171	109.6~111.8	112	45.55~46.46	70	24.37~24.86
		172	111.3~113.5	113	46.22~47.15	71	24.74~25.23
		173	112.9~115.2	114	46.92~47.86	72	25.11~25.61
		174	114.6~116.9	115	47.63~48.58		
		175	116.4~118.7	116	48.34~49.31		
		176	118.1~120.5	117	49.07~50.05		
		177	119.9~122.3	118	49.81~50.80		
		178	121.7~124.1	119	50.55~51.56		
		179	123.5~126.0	120	51.31~52.34		
		180	125.4~127.9	121	52.08~53.12		
				122	52.86~53.91		

Rank Width



SVC333



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