



SANYO Semiconductors

DATA SHEET

SVC208 — Varactor Diode (IOCAP)

Silicon Diffused Junction Type
for FM Low-Voltage Electronic Tuning

Features

- Dual type with a good linearity of C-V characteristic. Excels in large input characteristic.
- Small-sized package (CP) available for ultrasmall-sized sets (surface mount type).
- Applicable to FM wide band due to high capacitance ratio ($V_R=1.5$ to $9V$).

Specifications

Absolute Maximum Ratings at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		16	V
Junction Temperature	T_J		125	$^\circ C$
Storage Temperature	T_{stg}		-55 to +125	$^\circ C$

Electrical Characteristics at $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Breakdown Voltage	$V_{(BR)R}$	$I_R=10\mu A$	16			V
Reverse Current	I_R	$V_R=10V$			50	nA
Interterminal Capacitance*	C3.0V	$V_R=3.0V, f=1MHz$	36.92		43.03	pF
	C4.5V	$V_R=4.5V, f=1MHz$	27.45		32.80	pF
	C6.0V	$V_R=6.0V, f=1MHz$	19.91		25.61	pF
	C8.0V	$V_R=8.0V, f=1MHz$	12.77		16.84	pF
Quality Factor	Q	$V_R=3.0V, f=100MHz$	60			
Capacitance Ratio	CR	C3.0V / C8.0V	2.50		3.00	
Matching Tolerance	ΔC_m	$(C_{max} - C_{min})/C_{min}, V_R=2.0V$ to $V_R=8.0V$			0.03	

Note)* : Capacitance value of one diode

Marking : AV

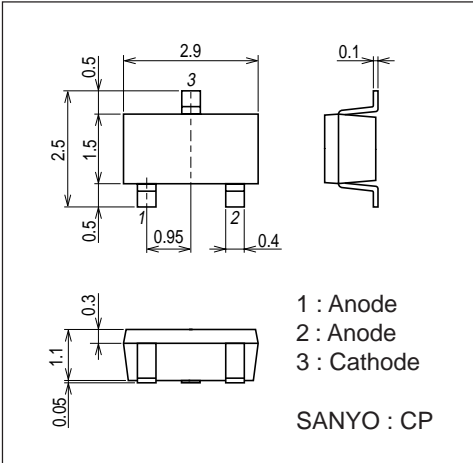
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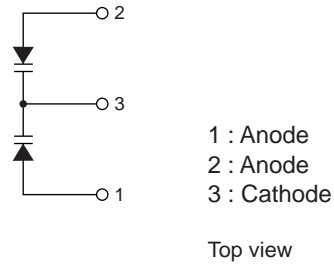
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Package Dimensions

unit : mm (typ)
7013A-006



Electrical Connection



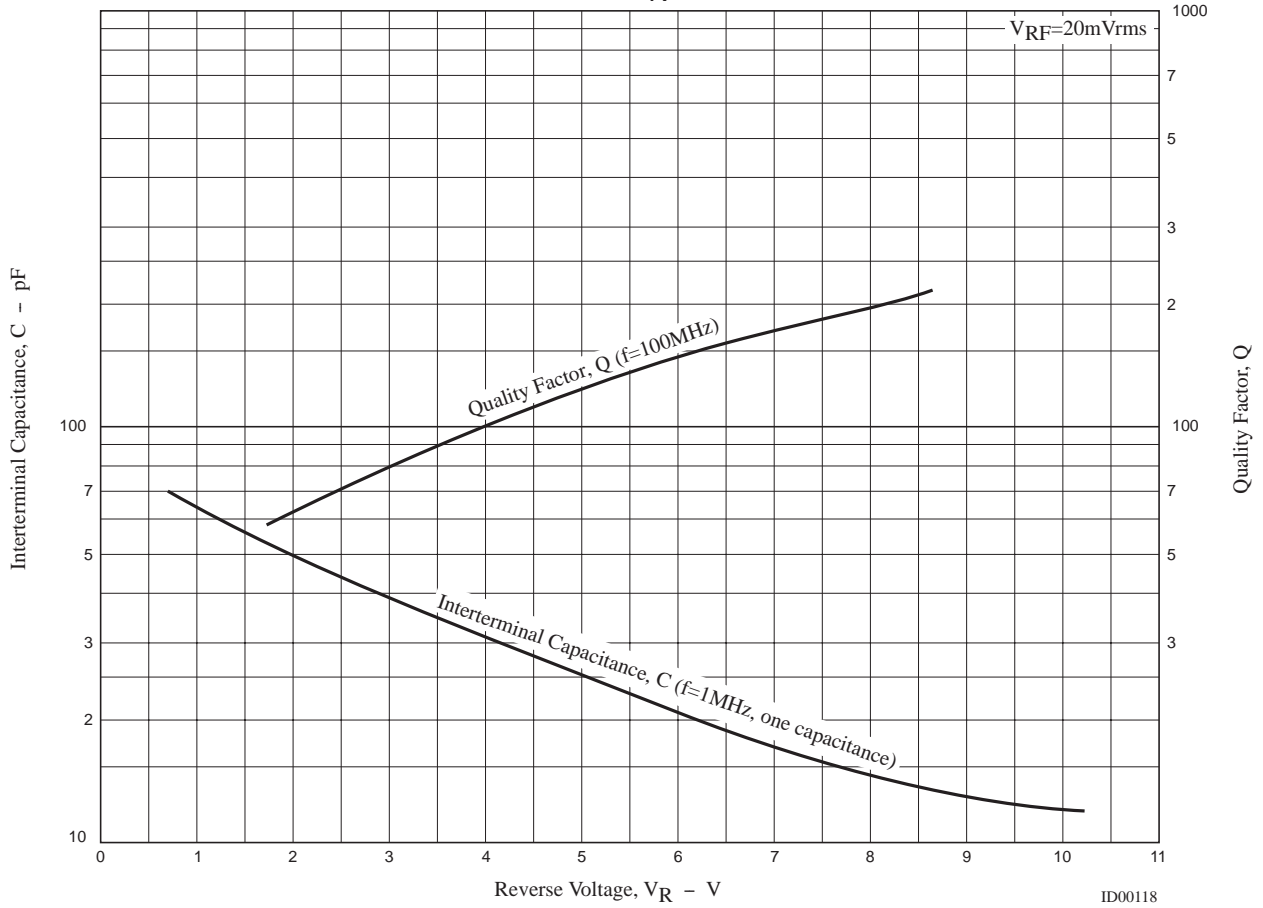
Address and Capacitance Value

VR=3.0V		VR=4.5V		VR=6.0V		VR=8.0V	
Address	Capacitance(pF)	Address	Capacitance(pF)	Address	Capacitance(pF)	Address	Capacitance(pF)
63	36.92 to 38.02	51	27.45 to 28.27	38	19.91 to 20.51	20	12.77 to 13.15
64	37.85 to 38.98	52	28.14 to 28.98	39	20.41 to 21.02	21	13.09 to 13.48
65	38.79 to 39.96	53	28.85 to 29.71	40	20.93 to 21.56	22	13.42 to 13.82
66	39.76 to 40.95	54	29.57 to 30.45	41	21.45 to 22.09	23	13.76 to 14.17
67	40.76 to 41.98	55	30.30 to 31.21	42	21.98 to 22.64	24	14.09 to 14.52
68	41.78 to 43.03	56	31.06 to 31.99	43	22.53 to 23.21	25	14.44 to 14.88
		57	31.84 to 32.80	44	23.09 to 23.78	26	14.81 to 15.26
				45	23.67 to 24.38	27	15.18 to 15.64
				46	24.27 to 25.00	28	15.56 to 16.03
				47	24.87 to 25.61	29	15.95 to 16.43
						30	16.35 to 16.84

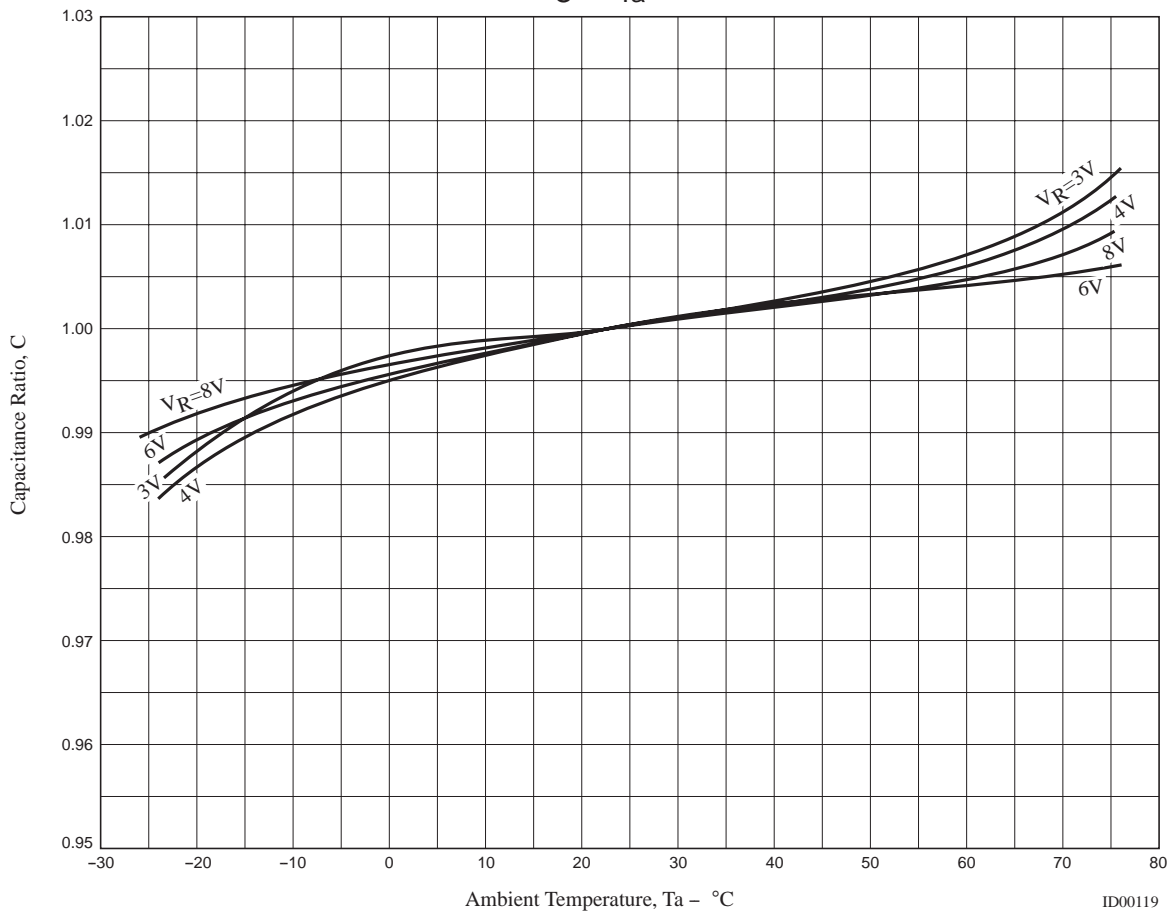
Rank Width

	20	21	22	23	24	25	26	27	28	29	30
C8.0V											
C3.0V											
63											
64											
65											
66											
67											
68											

C, Q - V_R



C - T_a



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