



SVC201SPA

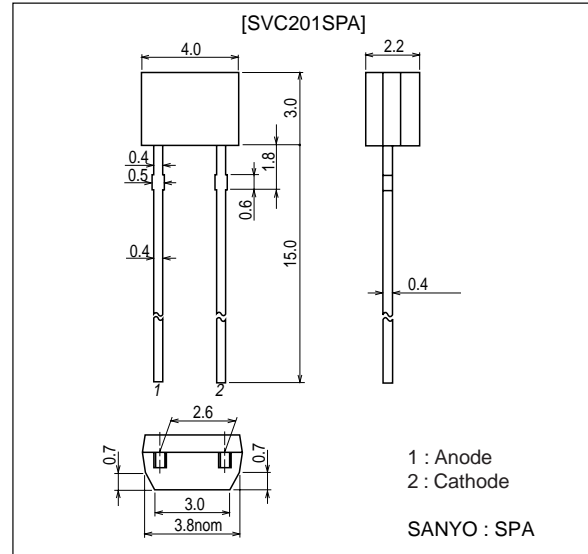
Varactor Diode (IOCAP) for FM Receiver Electronic Tuning

Features

- The SVC201SPA, 201Y are varactor diodes of hyper abrupt junction structure fabricated with ion implantation technology. It is intended for use in FM receiver electronic tuning applications.
- Capable of being operated from a low voltage (Voltage range : 1 to 9V).
- High Q.
- High Capacitance ratio.
- Uniform capacitance-voltage characteristic provided diode to be used in combination.

Package Dimensions

unit : mm
1184



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Reverse Voltage	V_R		16	V
Junction Temperature	T_j		100	°C
Storage Temperature	T_{stg}		-55 to +100	°C

Electrical Characteristics at Ta=25°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	$V_R=9V$			50	nA
Interterminal Capacitance	C1.6V	$V_R=1.6V, f=1MHz$	28.19		37.45	pF
	C3.5V	$V_R=3.5V, f=1MHz$	19.04		24.33	pF
	C5.0V	$V_R=5.0V, f=1MHz$	14.48		18.49	pF
	C7.5V	$V_R=7.5V, f=1MHz$	10.17		12.99	pF
Capacitance Ratio	C_R	C1.6V / C7.5V	2.2		3.7	
Series Resistance	r_s	$f=50MHz, V_R=1V$			0.6	Ω
Matching Tolerance	ΔC_m	$(C_{max} - C_{min}) / C_{min}$			0.05	

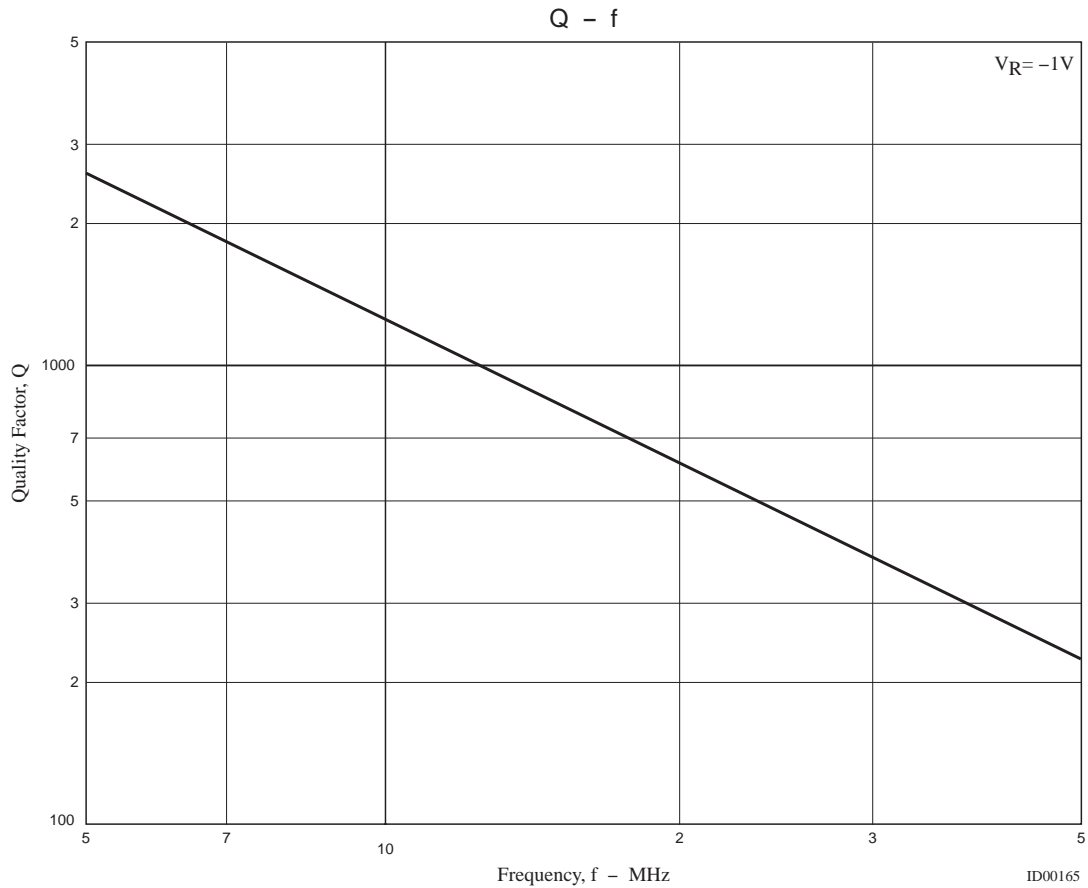
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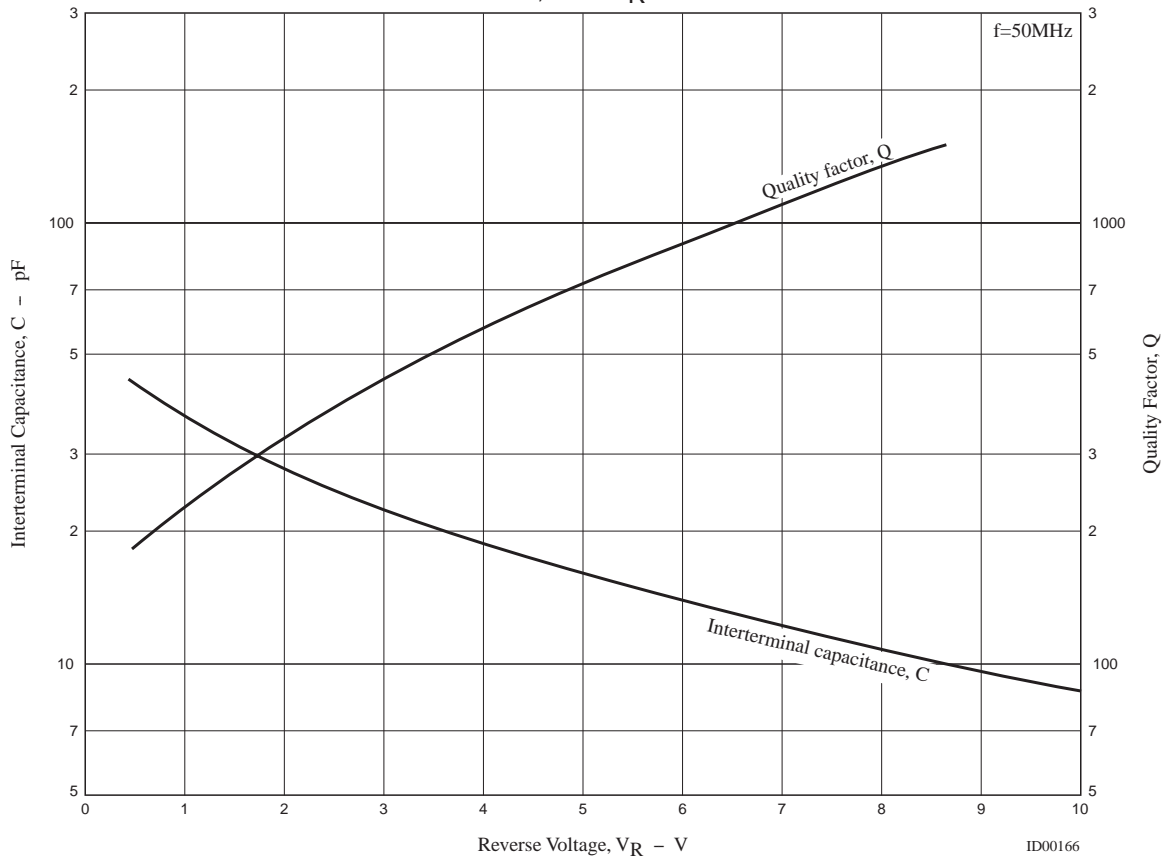
Address and Capacitance Value

TEST POINT	C=1.6V		C=3.5V		C=5.0V		C=7.5V	
	Address	Capacitance(pF)	Address	Capacitance(pF)	Address	Capacitance(pF)	Address	Capacitance(pF)
CAPACITANCE VALUE	38	37.45 35.67	27	24.33 23.17	20	18.49 17.61	11	12.99 12.37
	37	36.01 34.30	26	23.39 22.28	19	17.78 16.93	10	12.50 11.90
	36	34.63 32.98	25	22.49 21.42	18	17.09 16.28	9	12.01 11.44
	35	33.30 31.71	24	21.63 20.60	17	16.43 15.65	8	11.54 10.99
	34	32.02 30.50	23	20.80 19.81	16	15.81 15.05	7	11.11 10.58
	33	30.79 29.32	22	20.00 19.04	15	15.20 14.48	6	10.68 10.17
	32	29.60 28.19						

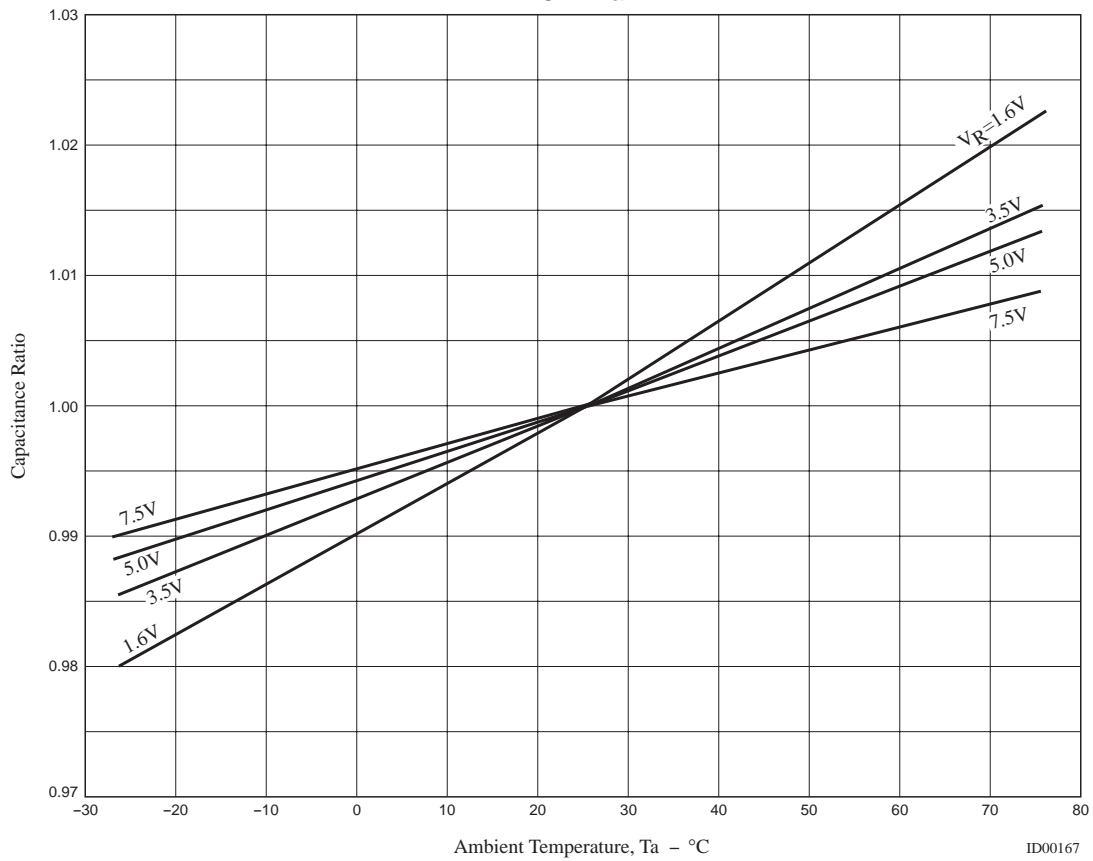


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C, Q - V_R



C - T_a



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