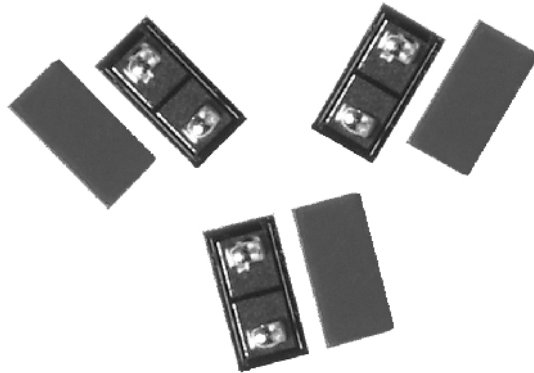


High Performance, High Precision Surface Mount 0201 Capacitor


PATENTED
ELECTRICAL SPECIFICATIONS

Operating Temperature: - 55 °C to + 125 °C
Temperature Coefficient of Capacitance (TCC): 0 ± 30 ppm/°C
Insulation Resistance: 10¹¹ Ω min
Voltage: 2.5 x rated voltage for 5 seconds
Ageing: none

ENVIRONMENTAL SPECIFICATIONS

Life Test: 1000 hours, + 125 °C at
2 x rated voltage
Thermal Shock: 100 Cycles, - 55 °C/+ 125 °C
Moisture Resistance: 240 hours, 85 % RH, + 85 °C

FEATURES

- New technology surface mount capacitor based on a special semiconductor process
- Construction reduces the parasitic inductance and brings the SRF values to ultra-high frequencies
- Capacitance is extremely stable in a wide range of frequencies from 1MHz to several GHz.
- High Q and low ESR
- Tight tolerance to ± 1 % or 0.05 pF
- Ultra high SRF
- Low parasitic inductance (~ 0.035 nH)
- Capacitance range: 0.4 pF to 39 pF (consult factory for 0.1pF - 0.3 pF)
- Lead (Pb)-free solder available

APPLICATIONS

- Wireless communications
- Mobile phones
- Cordless phones
- GPS
- VCO
- Filter Networks
- Matching Networks

CAPACITANCE TOLERANCE CODE

FOR LESS THAN 10 pF			FOR 10 pF AND HIGHER		
A	B	C	F	G	J
± 0.05 pF	± 0.10 pF	± 0.25 pF	± 1 %	± 2 %	± 5 %

ORDERING INFORMATION

HPC	0201	A	100	G	X	X	I
MODEL	SIZE	TYPE	CAPACITANCE VALUE	CAPACITANCE TOLERANCE	TERMINATION	VOLTAGE	PACKAGING
			The first two digits are significant, the third is a multiplier. An "R" indicates a decimal point. Examples: 101 = 100 pF 4R7 = 4.7 pF	see chart above	X = Tin/Lead termination	1 = 6 V Z = 10 V Y = 16 V X = 25 V	T = 10000 pcs T5 = 5000 pcs T1 = 1000 pcs tape and reel

For Lead (Pb)-free solder please contact factory.



DIMENSIONS			
	DIMENSION	INCHES	MILLIMETERS
	L	0.024 ± 0.002	0.61 ± 0.05
	W	0.012 ± 0.002	0.30 ± 0.05
	T	0.009 ± 0.002	0.23 ± 0.05
	A	0.004 ± 0.002	0.10 ± 0.05
	B	0.014 ± 0.002	0.36 ± 0.05
	C	0.006 ± 0.002	0.15 ± 0.05

CAPACITANCE RANGE AND VOLTAGE					
CAPACITANCE (pF)	CAPACITANCE CODE	VOLTAGE (V)			
		6	10	16	25
0.4	0R4				
0.5	0R5				
0.6	0R6				
0.7	0R7				
0.8	0R8				
0.9	0R9				
1.0	1R0				
1.2	1R2				
1.5	1R5				
1.8	1R8				
2.2	2R2				
2.7	2R7				
3.3	3R3				
3.9	3R9				
4.7	4R7				
5.6	5R6				
6.8	6R8				
8.2	8R2				
10	100				
12	120				
15	150				
18	180				
22	220				
27	270				
33	330				
39	390				



High Performance, High Precision
Surface Mount 0201 Capacitor

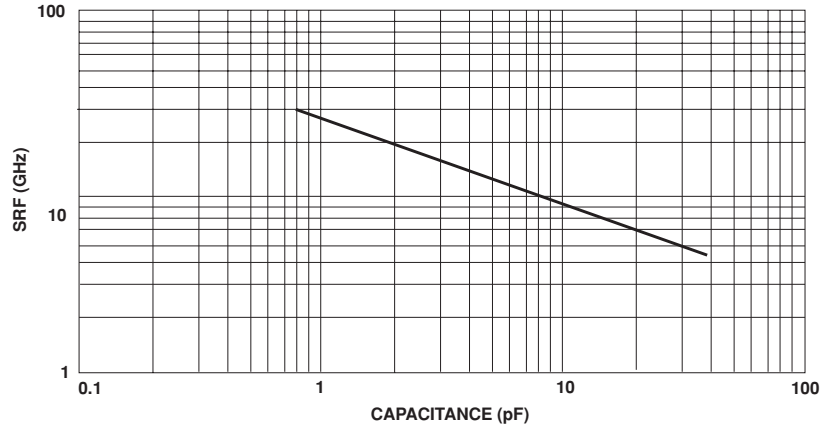
ELECTRICAL SPECIFICATIONS*												
CAPACITANCE (pF) AT 1 MHz	TOLERANCE CODE**	SRF (GHz) TYP.	Ceff TYP.	Q	Ceff TYP.	Q	Ceff TYP.	Q	Ceff TYP.	Q	Ceff TYP.	Q
			200 MHz		500 MHz		1000 MHz		2000 MHz		2500 MHz	
0.4	A,B	N/A										
0.5	A,B	N/A										
0.6	A,B	N/A										
0.7	A,B	N/A										
0.8	A,B	30.5	0.80	16297	0.80	5127	0.80	1890	0.80	618	0.81	421
0.9	A,B	28.8	0.90	14486	0.90	4557	0.90	1679	0.90	549	0.91	374
1	A,B,C	27.3	1.00	13037	1.00	4101	1.00	1511	1.01	494	1.01	336
1.1	A,B,C	26.0	1.10	11852	1.10	3728	1.10	1374	1.11	449	1.11	305
1.2	A,B,C	24.9	1.20	10864	1.20	3418	1.20	1259	1.21	411	1.21	279
1.3	A,B,C	23.9	1.30	10029	1.30	3155	1.30	1162	1.31	379	1.31	258
1.5	A,B,C	22.3	1.50	8691	1.50	2734	1.50	1007	1.51	328	1.52	223
1.6	A,B,C	21.6	1.60	8148	1.60	2563	1.60	944	1.61	308	1.62	209
1.8	A,B,C	20.3	1.80	7243	1.80	2278	1.80	839	1.82	273	1.83	185
2	A,B,C	19.3	2.00	6518	2.00	2050	2.01	755	2.02	245	2.03	167
2.2	A,B,C	18.4	2.20	5926	2.20	1863	2.21	686	2.23	223	2.24	151
2.4	A,B,C	17.6	2.40	5432	2.40	1708	2.41	629	2.43	204	2.45	138
2.7	A,B,C	16.6	2.70	4828	2.70	1518	2.71	558	2.74	181	2.76	123
3	A,B,C	15.8	3.00	4345	3.00	1366	3.01	502	3.05	163	3.08	110
3.3	A,B,C	15.0	3.30	3950	3.30	1242	3.31	457	3.36	148	3.39	100
3.6	A,B,C	14.4	3.60	3621	3.60	1138	3.62	418	3.67	135	3.71	91
3.9	A,B,C	13.8	3.90	3342	3.91	1051	3.92	386	3.98	125	4.03	84
4.3	A,B,C	13.2	4.30	3031	4.31	953	4.32	350	4.40	113	4.46	76
4.7	A,B,C	12.6	4.70	2773	4.71	872	4.73	320	4.82	103	4.89	69
5.1	A,B,C	12.1	5.10	2556	5.11	803	5.14	295	5.24	95	5.33	64
5.6	A,B,C	11.5	5.60	2328	5.61	731	5.64	268	5.77	86	5.88	58
6.2	B,C	11.0	6.20	2102	6.21	660	6.25	242	6.41	77	6.54	52
6.8	B,C	10.5	6.80	1917	6.82	602	6.86	221	7.06	70	7.21	47
7.5	B,C	10.0	7.50	1738	7.52	546	7.58	200	7.81	64	8.00	42
8.2	B,C	9.5	8.20	1589	8.22	499	8.29	183	8.58	58	8.81	38
9.1	B,C	9.0	9.10	1432	9.13	449	9.21	164	9.57	52	9.85	34
10	F,G,J	8.6	10.0	1303	10.0	409	10.1	149	10.6	47	10.9	31
11	F,G,J	8.2	11.0	1185	11.0	372	11.2	136	11.7	42	12.1	28
12	F,G,J	7.9	12.0	1086	12.0	341	12.2	124	12.8	39	13.3	25
13	F,G,J	7.6	13.0	1002	13.1	314	13.2	114	14.0	36	14.6	23
15	F,G,J	7.0	15.0	869	15.1	272	15.3	99	16.3	30	17.2	20
16	F,G,J	6.8	16.0	814	16.1	255	16.4	93	17.5	28	18.5	18
18	F,G,J	6.4	18.0	724	18.1	227	18.4	82	19.9	25	21.2	16
20	F,G,J	6.1	20.0	651	20.1	204	20.6	74	22.4	22	24.0	14
22	F,G,J	5.8	22.0	592	22.2	185	22.7	67	24.9	20	27.0	13
24	F,G,J	5.6	24.0	543	24.2	170	24.8	61	27.6	18	30.1	11
27	F,G,J	5.3	27.0	482	27.2	151	28.0	54	31.6	16	34.9	10
30	F,G,J	5.0	30.0	434	30.3	135	31.3	48	35.8	14	40.1	8
33	F,G,J	4.8	33.1	394	33.4	123	34.5	44	40.1	12	45.6	7
36	F,G,J	4.5	36.1	361	36.4	113	37.8	40	44.6	11	51.6	7
39	F,G,J	4.4	39.1	334	39.5	104	41.2	37	49.3	10	58.0	6

*Additional non-standard values available on request

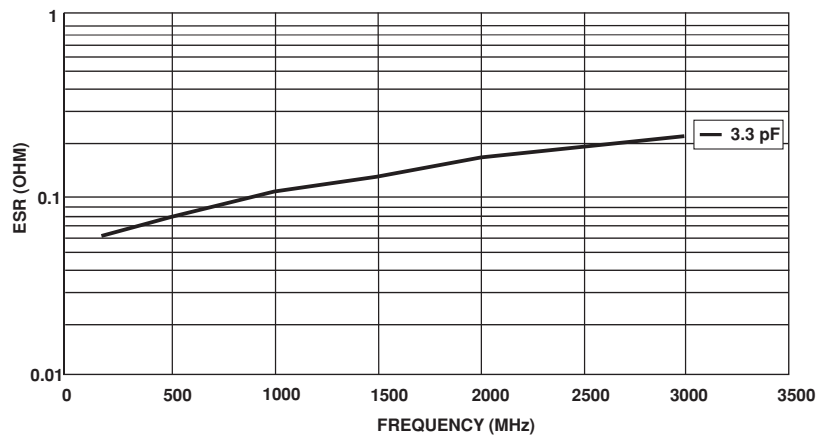
**A = ± 0.05; B = ± 0.10; C = ± 0.25; F = ± 1 %; G = ± 2 %; J = ± 5 %



SRF VS. CAPACITANCE (TYPICAL)



ESR VS. FREQUENCY (TYPICAL)



Q VS. FREQUENCY (TYPICAL)

