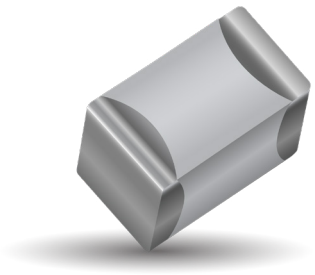
RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

UQ Series High Q Ultra Low ESR MLC



FEATURES

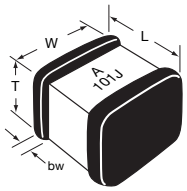
- Ultra Low ESR
- High Q
- High Self Resonance
- Capacitance Range 0.1 pF to 1000 pF

APPLICATIONS

- RF Power Amplifiers
- Low Noise Amplifiers
- Filter Networks
- MRI Systems

HOW TO ORDER

UQ	CB	7	A	100	J	A	T	ME
AVX Style	**Case Size** CA = 0605 CB = 1210 CR = 0709 CL = 0402 CS = 0603 CF = 0805 See mechanical dimensions below	**Voltage Code** 5 = 50V 1 = 100V E = 150V 2 = 200V V = 250V 9 = 300V 7 = 500V	**Temperature Coefficient Code** A = 0±30ppm/°C	**Capacitance** EIA Capacitance Code in pF. First two digits = significant figures or "R" for decimal place. Third digit = number of zeros or after "R" significant figures.	**Capacitance Tolerance Code** A = ±.05 pF B = ±.1 pF C = ±.25 pF D = ±.5 pF F = ±1% G = ±2% J = ±5% K = ±10% M = ±20%	**Failure Rate Code** A = Not Applicable	**Termination Style Code** J=Nickel Barrier Sn/Pb (60/40) **T=100% Tin **C=Non-Magnetic Barrier/Tin **RoHS compliant	**Packaging Code** ME = 7" Reel Marked (0605, 1210 & 0709 only) 2A = 7" Unmarked (0402, 0603, & 0805 only) * Vertical T&R available



MECHANICAL DIMENSIONS: inches (millimeters)

Case	Length (L)	Width (W)	Thickness (T)	Band Width (bw)
UQCA	.055 + .015 - .010 (1.40+ .381 - .254)	.055±.015 (1.40±.381)	.057 (1.45) max.	.010 + .010 -.005 (.254 +.254 -.127)
UQCB	.110 + .020 - .010 (2.79 +.508 -.254)	.110±.015 (2.79±.381)	.102 (2.59) max.	.015±.010 (.381±.254)
UQCR	.070 ± .015 (1.78 ± .381)	.090±.010 (2.29±.254)	.115 (2.92) max.	.010 + .010 -.005 (.254 +.254 -.127)
UQCL	.040 ± .004 (1.02 ± .100)	.020±.004 (0.51±.100)	.024 (.600) max.	.010 ± .006 (0.25 ± 0.15)
UQCS	.063 ± .006 (1.60 ± 0.15)	.032±.006 (0.81±0.15)	.035 (.890) max.	.014 ± .006 (0.36 ± 0.15)
UQCF	.079 ± .008 (2.01 ± 0.20)	.049±.008 (1.24±0.20)	.051 (1.30) max.	.020 ± 0.01 (0.51 ± 0.25)

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

For RoHS compliant products, please select correct termination style.

Also available in:

Not RoHS Compliant

TAPE & REEL: All tape and reel specifications are in compliance with EIA RS481 (equivalent to IEC 286 part 3).

—8mm carrier

—7" reel: UQCA = 500 or 4000 pc T&R
UQCB = 500 or 1000 pc T&R
UQCR = 500 or 1000 pc T&R
UQCL = 500, 4000 or 10,000 pc T&R
UQCS = 500 or 4000 pc T&R
UQCF = 500 or 4000 pc T&R

ELECTRICAL SPECIFICATIONS

	Temperature Characteristic Code A
Temperature Coefficient (TCC)	(A) 0 ± 30 PPM/°C
Capacitance Range	(A) 0.1 pF to 1000 pF
Operating Temperature	0.1 pF to 1000 pF: from -55°C to +125°C
Quality Factor (Q)	Greater than 2,000 at 1 MHz
Insulation Resistance (IR)	0.1 pF to 1000 pF 10^5 Megohms min. @ 25°C at rated WVDC 10^4 Megohms min. @ 125°C at rated WVDC
Working Voltage (WVDC)	See Capacitance Values table
Dielectric Withstanding Voltage (DWV)	250% of rated WVDC for 5 secs
Aging Effects	None
Piezoelectric Effects	None
Capacitance Drift	± (0.02% or 0.02 pF), whichever is greater

ENVIRONMENTAL CHARACTERISTICS

AVX UQ will meet and exceed the requirements of EIA-198, MIL-PRF-55681 and MIL-PRF-123

Thermal Shock	Mil-STD-202, Method 107, Condition A
Moisture Resistance	Mil-STD-202, Method 106
Low Voltage Humidity	Mil-STD-202, Method 103, condition A, with 1.5 VDC applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours
Life Test	Mil-STD-202, Method 108, for 2000 hours at 125°C 200% WVDC
Shock	Mil-STD-202, Method 213, Condition J
Vibration	Mil-STD-202, Method 204, Condition B
Immersion	Mil-STD-202, Method 104, Condition B
Salt Spray	Mil-STD-202, Method 101, Condition B
Solderability	Mil-STD-202, Method 208
Terminal Strength	Mil-STD-202, Method 211
Temperature Cycling	Mil-STD-202, Method 102, Condition C
Barometric Pressure	Mil-STD-202, Method 105, Condition B
Resistance to Solder Heat	Mil-STD-202, Method 210, Condition C

Case Size A

TABLE I: TC: A (0±30PPM/°C)

Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC
0.1	B	250	1.7	B, C, D	250	6.8	B, C, J, K	250	33	F, G, J, K, M	250
0.2	B	250	1.8	B, C, D	250	7.5	B, C, J, K	250	36	F, G, J, K, M	250
0.3	B,C	250	1.9	B, C, D	250	8.2	B, C, J, K	250	39	F, G, J, K, M	250
0.4	B,C	250	2.0	B, C, D	250	9.1	B, C, J, K	250	43	F, G, J, K, M	250
0.5	B, C, D	250	2.2	B, C, D	250	10	F, G, J, K, M	250	47	F, G, J, K, M	250
0.6	B, C, D	250	2.4	B, C, D	250	11	F, G, J, K, M	250	51	F, G, J, K, M	250
0.7	B, C, D	250	2.7	B, C, D	250	12	F, G, J, K, M	250	56	F, G, J, K, M	250
0.8	B, C, D	250	3.0	B, C, D	250	13	F, G, J, K, M	250	62	F, G, J, K, M	250
0.9	B, C, D	250	3.3	B, C, D	250	15	F, G, J, K, M	250	68	F, G, J, K, M	250
1.0	B, C, D	250	3.6	B, C, D	250	16	F, G, J, K, M	250	75	F, G, J, K, M	250
1.1	B, C, D	250	3.9	B, C, D	250	18	F, G, J, K, M	250	82	F, G, J, K, M	250
1.2	B, C, D	250	4.3	B, C, D	250	20	F, G, J, K, M	250	91	F, G, J, K, M	250
1.3	B, C, D	250	4.7	B, C, D	250	22	F, G, J, K, M	250	100	F, G, J, K, M	250
1.4	B, C, D	250	5.1	B, C, D	250	24	F, G, J, K, M	250			
1.5	B, C, D	250	5.6	B, C, D	250	27	F, G, J, K, M	250			
1.6	B, C, D	250	6.2	B, C, D	250	30	F, G, J, K, M	250			

Case Size B

TABLE II: TC: A (0±30PPM/°C)

Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC
0.1	B	500	2.4	B, C, D	500	18	F, G, J, K, M	500	160	F, G, J, K, M	300
0.2	B	500	2.7	B, C, D	500	20	F, G, J, K, M	500	180	F, G, J, K, M	300
0.3	B,C	500	3.0	B, C, D	500	22	F, G, J, K, M	500	200	F, G, J, K, M	300
0.4	B,C	500	3.3	B, C, D	500	24	F, G, J, K, M	500	220	F, G, J, K, M	200
0.5	B, C, D	500	3.6	B, C, D	500	27	F, G, J, K, M	500	240	F, G, J, K, M	200
0.6	B, C, D	500	3.9	B, C, D	500	30	F, G, J, K, M	500	270	F, G, J, K, M	200
0.7	B, C, D	500	4.3	B, C, D	500	33	F, G, J, K, M	500	300	F, G, J, K, M	200
0.8	B, C, D	500	4.7	B, C, D	500	36	F, G, J, K, M	500	330	F, G, J, K, M	200
0.9	B, C, D	500	5.1	B, C, D	500	39	F, G, J, K, M	500	360	F, G, J, K, M	200
1.0	B, C, D	500	5.6	B, C, D	500	43	F, G, J, K, M	500	390	F, G, J, K, M	200
1.1	B, C, D	500	6.2	B, C, D	500	47	F, G, J, K, M	500	430	F, G, J, K, M	200
1.2	B, C, D	500	6.8	B, C, J, K	500	51	F, G, J, K, M	500	470	F, G, J, K, M	200
1.3	B, C, D	500	7.5	B, C, J, K	500	56	F, G, J, K, M	500	510	F, G, J, K, M	100
1.4	B, C, D	500	8.2	B, C, J, K	500	62	F, G, J, K, M	500	560	F, G, J, K, M	100
1.5	B, C, D	500	9.1	B, C, J, K	500	68	F, G, J, K, M	500	620	F, G, J, K, M	100
1.6	B, C, D	500	10	F, G, J, K, M	500	75	F, G, J, K, M	500	680	F, G, J, K, M	50
1.7	B, C, D	500	11	F, G, J, K, M	500	82	F, G, J, K, M	500	750	F, G, J, K, M	50
1.8	B, C, D	500	12	F, G, J, K, M	500	91	F, G, J, K, M	500	820	F, G, J, K, M	50
1.9	B, C, D	500	13	F, G, J, K, M	500	100	F, G, J, K, M	500	910	F, G, J, K, M	50
2.0	B, C, D	500	15	F, G, J, K, M	500	110	F, G, J, K, M	300	1000	F, G, J, K, M	50
2.2	B, C, D	500	16	F, G, J, K, M	500	120	F, G, J, K, M	300			
						130	F, G, J, K, M	300			
						150	F, G, J, K, M	300			

Case Size R

TABLE III: TC: A (0±30PPM/°C)

Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC
1.0	B, C, D	500	3.0	B, C, D	500	12	G, J, K, M	500	51	G, J, K, M	500
1.1	B, C, D	500	3.3	B, C, D	500	13	G, J, K, M	500	56	G, J, K, M	500
1.2	B, C, D	500	3.6	B, C, D	500	15	G, J, K, M	500	62	G, J, K, M	500
1.3	B, C, D	500	3.9	B, C, D	500	16	G, J, K, M	500	68	G, J, K, M	500
1.4	B, C, D	500	4.3	B, C, D	500	18	G, J, K, M	500	75	G, J, K, M	500
1.5	B, C, D	500	4.7	B, C, D	500	20	G, J, K, M	500	82	G, J, K, M	500
1.6	B, C, D	500	5.1	B, C, D	500	22	G, J, K, M	500	91	G, J, K, M	500
1.7	B, C, D	500	5.6	G, J, K, M	500	24	G, J, K, M	500	100	G, J, K, M	500
1.8	B, C, D	500	6.2	G, J, K, M	500	27	G, J, K, M	500			
1.9	B, C, D	500	6.8	G, J, K, M	500	30	G, J, K, M	500			
2.0	B, C, D	500	7.5	G, J, K, M	500	33	G, J, K, M	500			
2.1	B, C, D	500	8.2	G, J, K, M	500	36	G, J, K, M	500			
2.2	B, C, D	500	9.1	G, J, K, M	500	39	G, J, K, M	500			
2.4	B, C, D	500	10	G, J, K, M	500	43	G, J, K, M	500			
2.7	B, C, D	500	11	G, J, K, M	500	47	G, J, K, M	500			

Case Size L

TABLE IV: TC: A (0±30PPM/°C)

Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC
0.1	A, B	200	1.6	A, B, C, D	200	6.2	A, B, C, D	200
0.2	A, B	200	1.8	A, B, C, D	200	6.8	B, C, J, K	200
0.3	A, B, C	200	2.0	A, B, C, D	200	7.5	B, C, J, K	200
0.4	A, B, C	200	2.2	A, B, C, D	200	8.2	B, C, J, K	200
0.5	A, B, C	200	2.4	A, B, C, D	200	9.1	B, C, J, K	200
0.6	A, B, C	200	2.7	A, B, C, D	200	10	F, G, J, K, M	200
0.7	A, B, C	200	3.0	A, B, C, D	200	11	F, G, J, K, M	200
0.8	A, B, C	200	3.3	A, B, C, D	200	12	F, G, J, K, M	200
0.9	A, B, C	200	3.6	A, B, C, D	200	15	F, G, J, K, M	200
1.0	A, B, C, D	200	3.9	A, B, C, D	200	18	F, G, J, K, M	200
1.1	A, B, C, D	200	4.3	A, B, C, D	200	20	F, G, J, K, M	200
1.2	A, B, C, D	200	4.7	A, B, C, D	200	22	F, G, J, K, M	200
1.3	A, B, C, D	200	5.1	A, B, C, D	200	24	F, G, J, K, M	200
1.5	A, B, C, D	200	5.6	A, B, C, D	200	27	F, G, J, K, M	200

Case Size S

TABLE V:

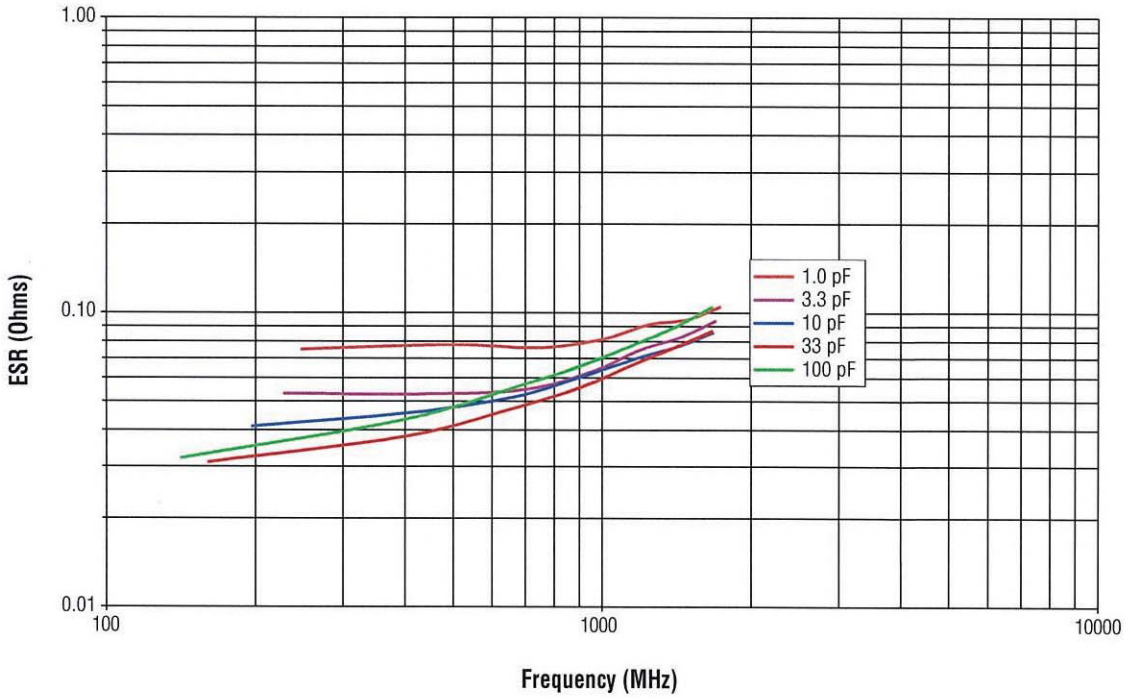
Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC
0.1	A, B	250	2.7	A, B, C, D	250	20	F, G, J, K, M	250
0.2	A, B	250	3.0	A, B, C, D	250	22	F, G, J, K, M	250
0.3	A, B, C	250	3.3	A, B, C, D	250	24	F, G, J, K, M	250
0.4	A, B, C	250	3.6	A, B, C, D	250	27	F, G, J, K, M	250
0.5	A, B, C	250	3.9	A, B, C, D	250	30	F, G, J, K, M	250
0.6	A, B, C	250	4.3	A, B, C, D	250	33	F, G, J, K, M	250
0.7	A, B, C	250	4.7	A, B, C, D	250	36	F, G, J, K, M	250
0.8	A, B, C	250	5.1	A, B, C, D	250	39	F, G, J, K, M	250
0.9	A, B, C	250	5.6	A, B, C, D	250	43	F, G, J, K, M	250
1.0	A, B, C, D	250	6.2	A, B, C, D	250	47	F, G, J, K, M	250
1.1	A, B, C, D	250	6.8	B, C, J, K	250	51	F, G, J, K, M	250
1.2	A, B, C, D	250	7.5	B, C, J, K	250	56	F, G, J, K, M	250
1.3	A, B, C, D	250	8.2	B, C, J, K	250	62	F, G, J, K, M	250
1.5	A, B, C, D	250	9.1	B, C, J, K	250	68	F, G, J, K, M	250
1.6	A, B, C, D	250	10	F, G, J, K, M	250	75	F, G, J, K, M	250
1.8	A, B, C, D	250	11	F, G, J, K, M	250	82	F, G, J, K, M	250
2.0	A, B, C, D	250	12	F, G, J, K, M	250	91	F, G, J, K, M	250
2.2	A, B, C, D	250	15	F, G, J, K, M	250	100	F, G, J, K, M	250
2.4	A, B, C, D	250	18	F, G, J, K, M	250			

Case Size F

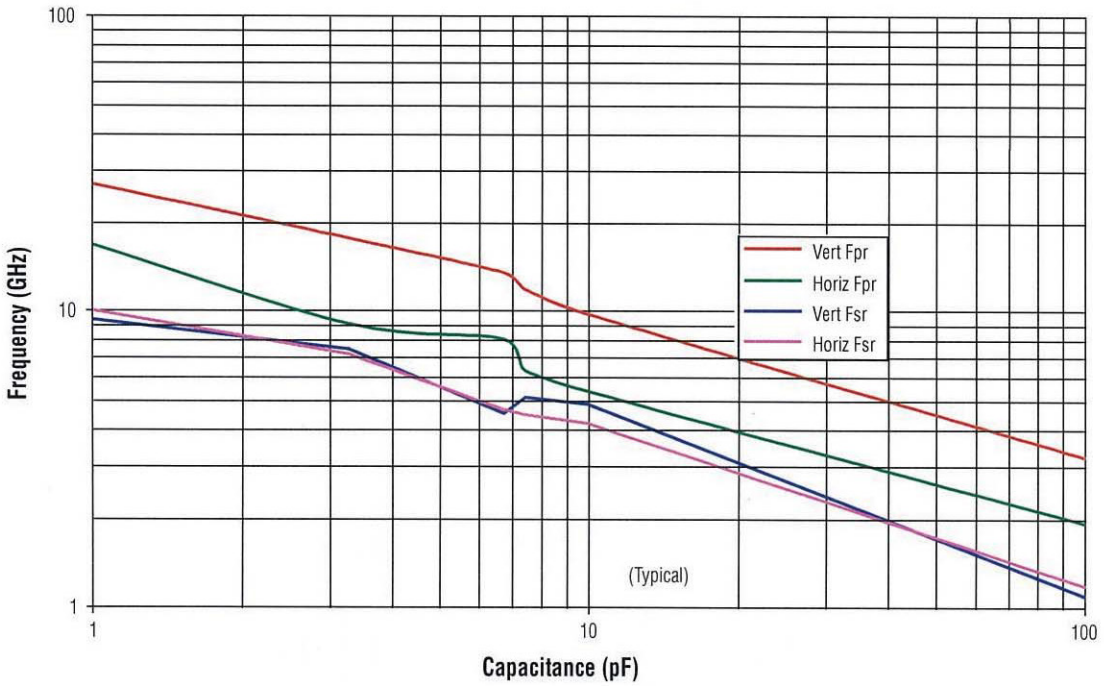
TABLE VI:

Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC	Cap. pF	Cap. Tol.	WVDC
0.1	A, B	250	3.3	A, B, C, D	250	30	F, G, J, K, M	250
0.2	A, B	250	3.6	A, B, C, D	250	33	F, G, J, K, M	250
0.3	A, B, C	250	3.9	A, B, C, D	250	36	F, G, J, K, M	250
0.4	A, B, C	250	4.3	A, B, C, D	250	39	F, G, J, K, M	250
0.5	A, B, C	250	4.7	A, B, C, D	250	43	F, G, J, K, M	250
0.6	A, B, C	250	5.1	A, B, C, D	250	47	F, G, J, K, M	250
0.7	A, B, C	250	5.6	A, B, C, D	250	51	F, G, J, K, M	250
0.8	A, B, C	250	6.2	A, B, C, D	250	56	F, G, J, K, M	250
0.9	A, B, C	250	6.8	B, C, J, K	250	62	F, G, J, K, M	250
1.0	A, B, C, D	250	7.5	B, C, J, K	250	68	F, G, J, K, M	250
1.1	A, B, C, D	250	8.2	B, C, J, K	250	75	F, G, J, K, M	250
1.2	A, B, C, D	250	9.1	B, C, J, K	250	82	F, G, J, K, M	250
1.3	A, B, C, D	250	10	F, G, J, K, M	250	91	F, G, J, K, M	250
1.5	A, B, C, D	250	11	F, G, J, K, M	250	100	F, G, J, K, M	250
1.6	A, B, C, D	250	12	F, G, J, K, M	250	110	F, G, J, K, M	250
1.8	A, B, C, D	250	15	F, G, J, K, M	250	120	F, G, J, K, M	250
2.0	A, B, C, D	250	18	F, G, J, K, M	250	150	F, G, J, K, M	250
2.2	A, B, C, D	250	20	F, G, J, K, M	250	180	F, G, J, K, M	250
2.4	A, B, C, D	250	22	F, G, J, K, M	250	200	F, G, J, K, M	250
2.7	A, B, C, D	250	24	F, G, J, K, M	250	220	F, G, J, K, M	250
3.0	A, B, C, D	250	27	F, G, J, K, M	250	240	F, G, J, K, M	250

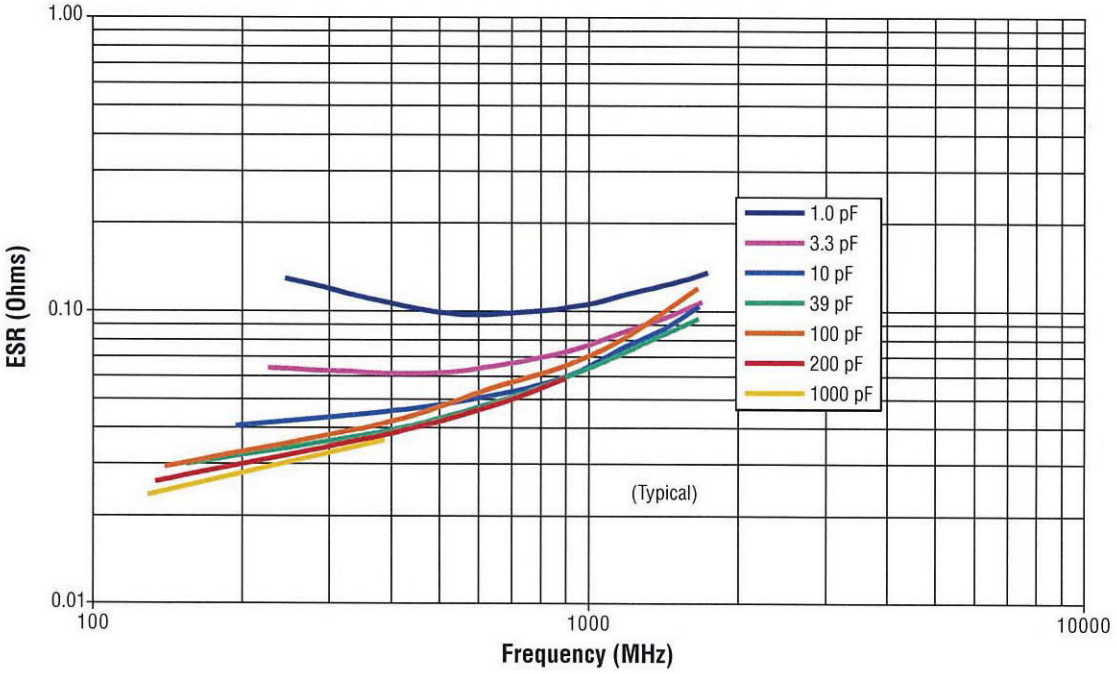
UQ CA ESR vs. Frequency



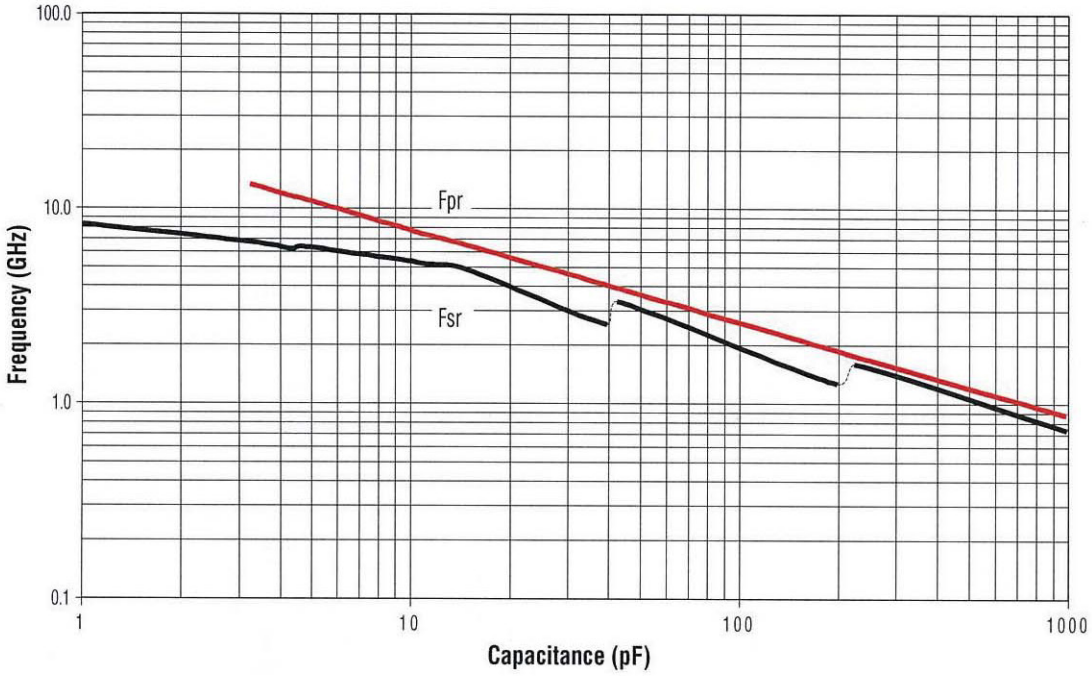
UQ CA FSR & FPR vs. Capacitance



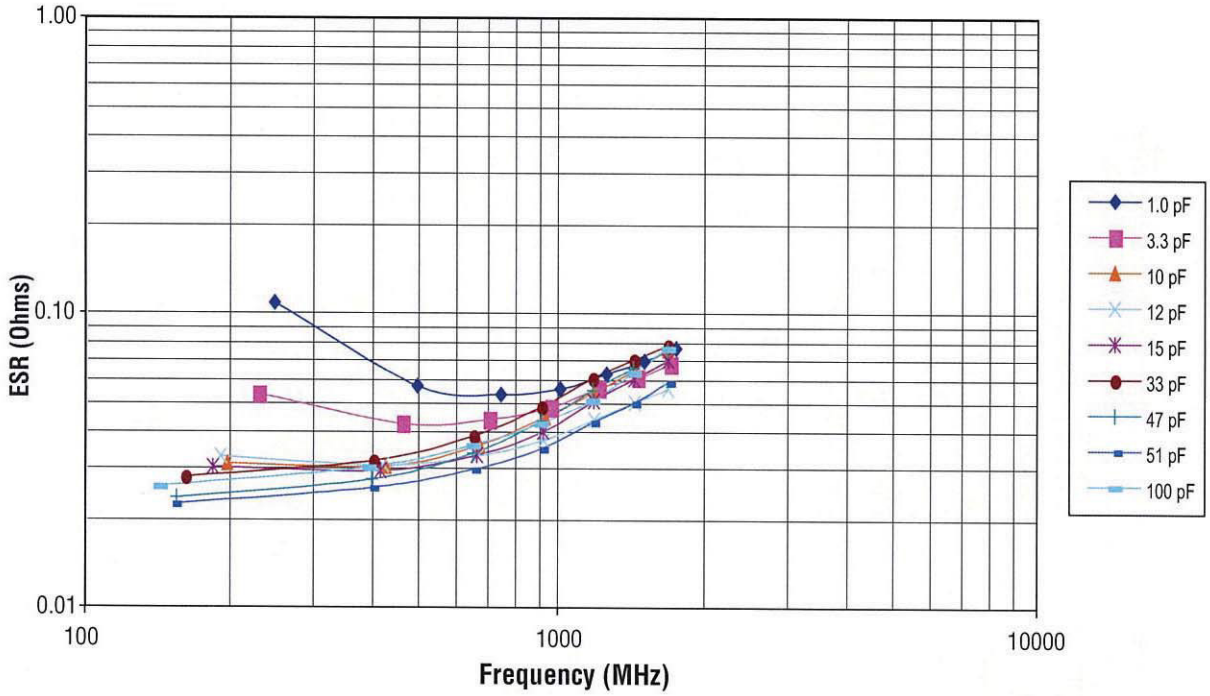
UQ CB ESR vs. Frequency



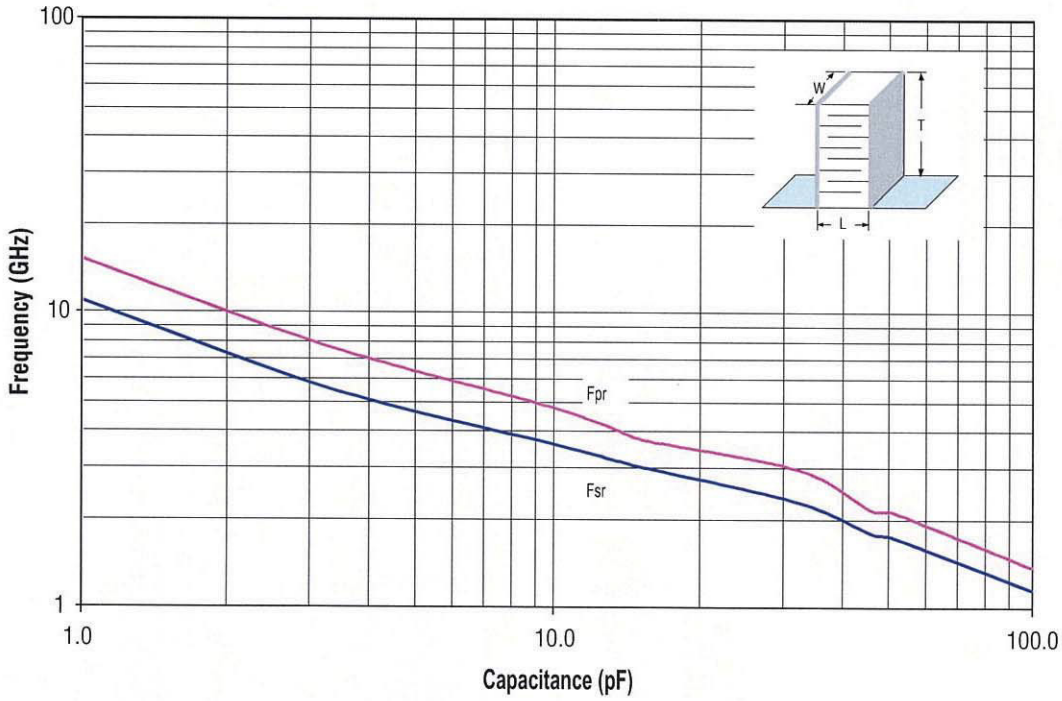
UQ CB FSR & FPR vs. Capacitance



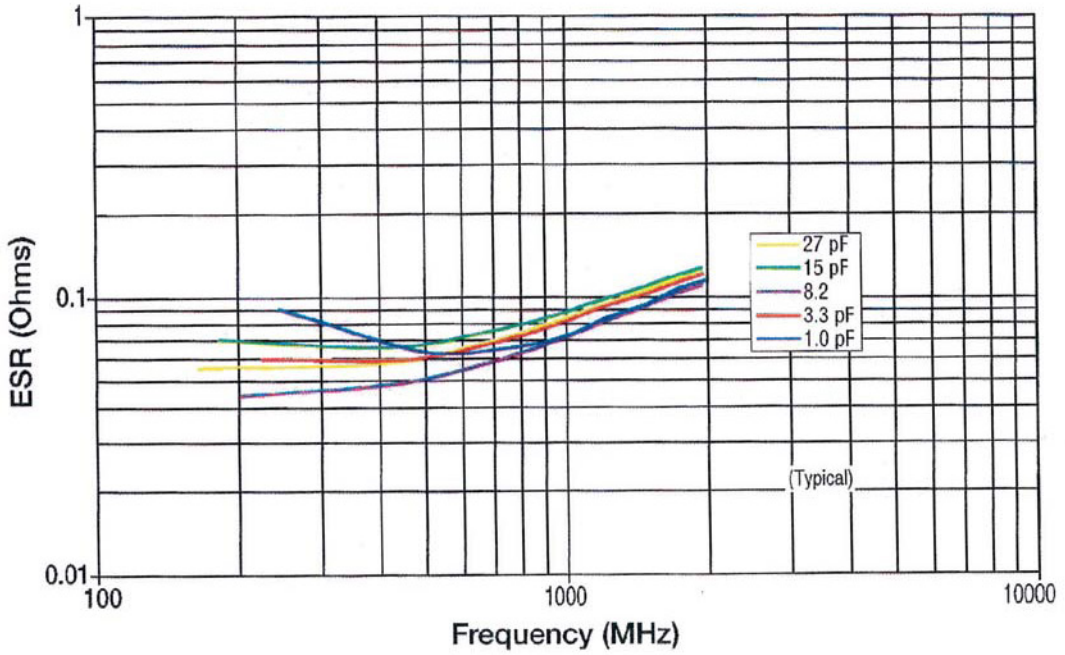
UQ CR ESR vs. Frequency



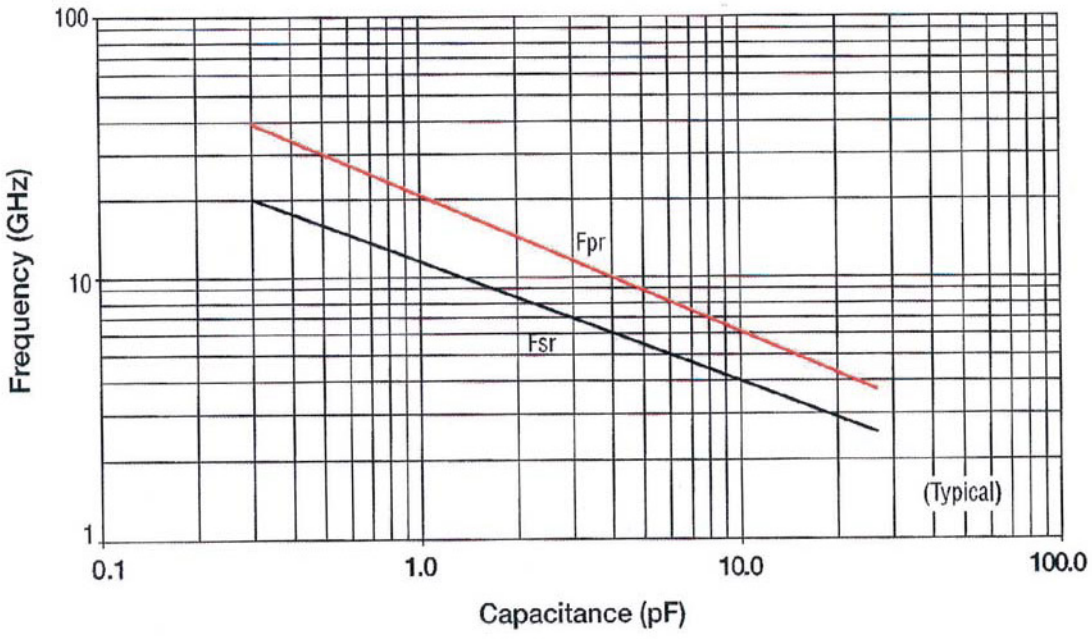
UQ CR Resonance Horizontal Orientation



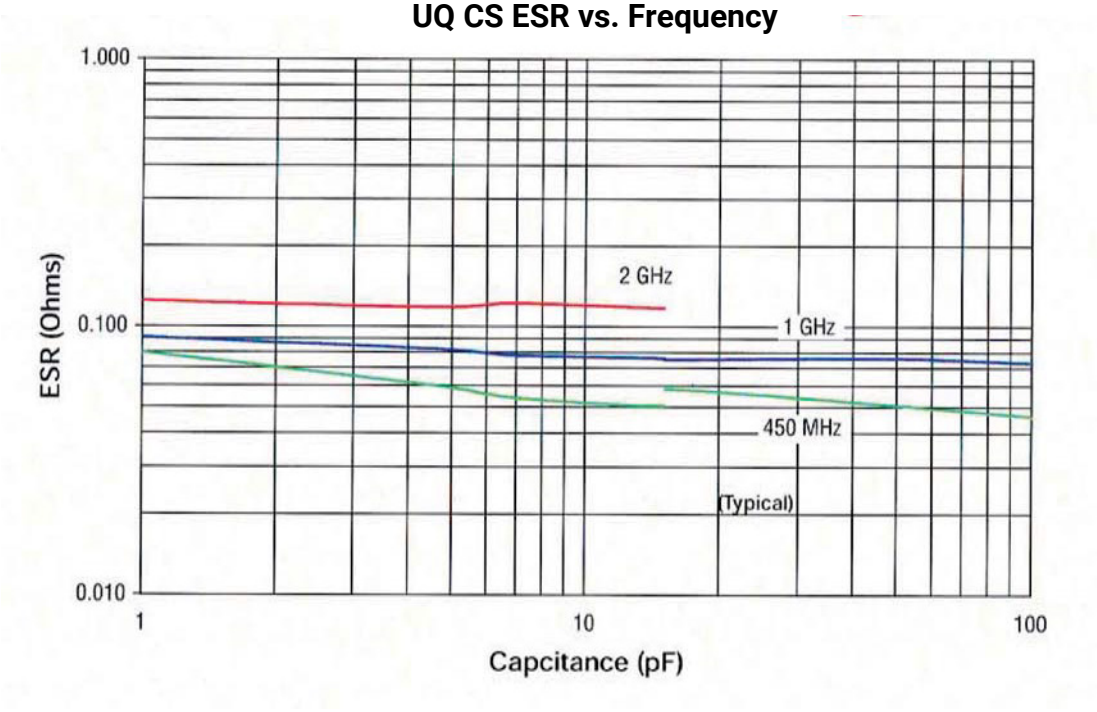
UQ CL ESR vs. Frequency



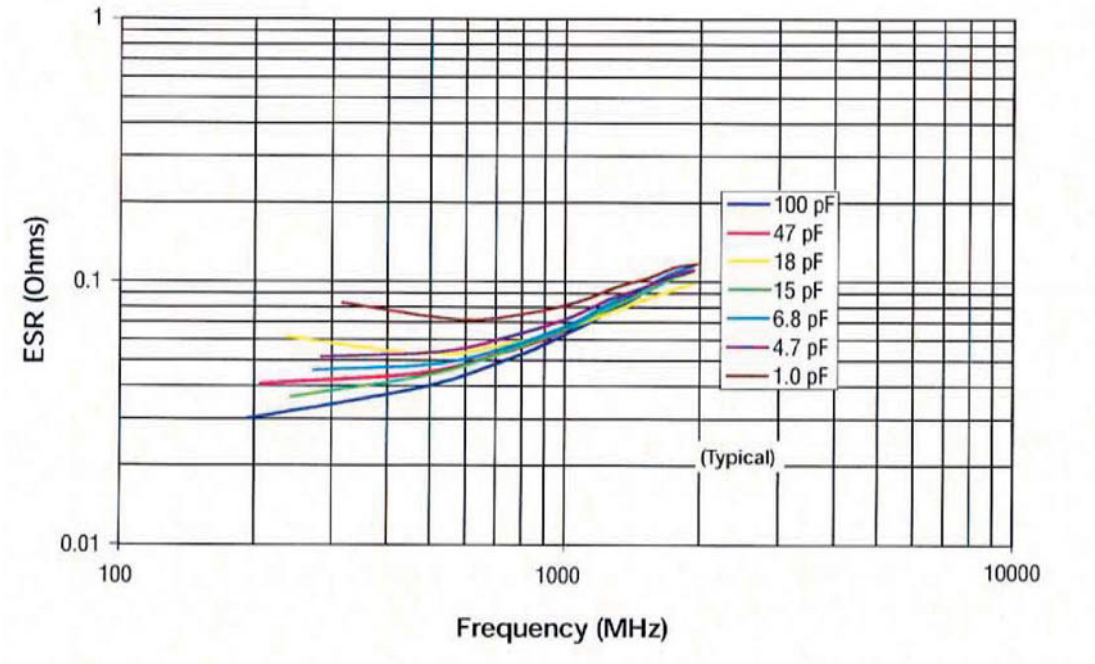
UQ CL Resonance Frequency



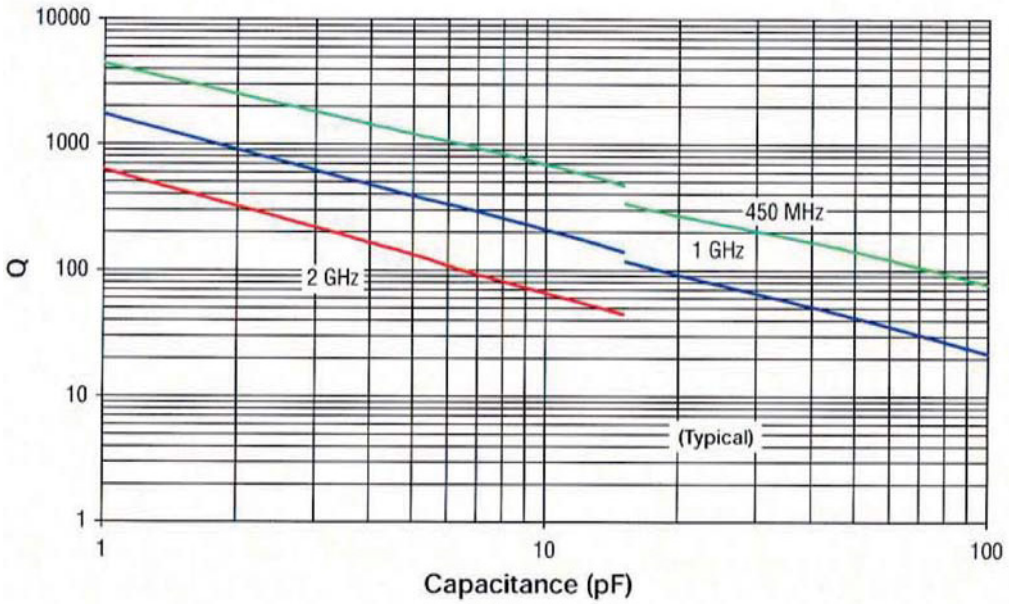
UQ CS ESR vs. Frequency



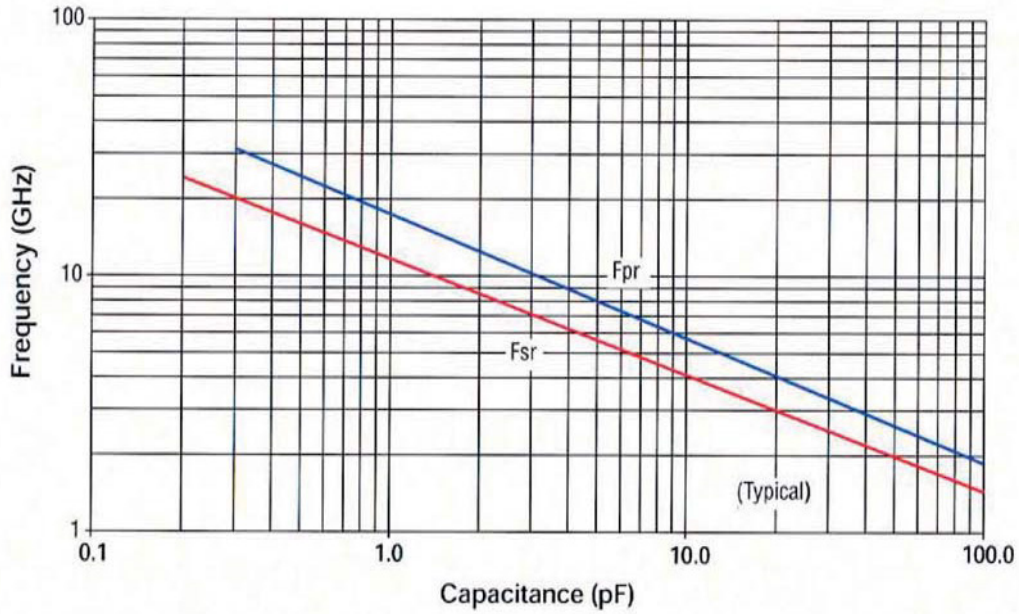
UQ CS ESR vs. Frequency



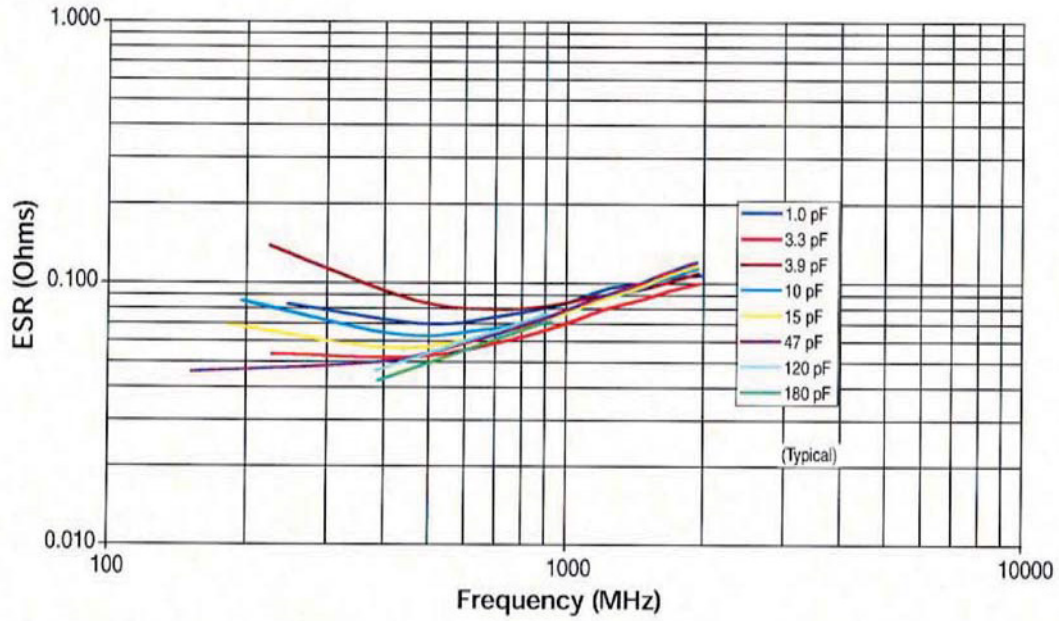
UQ CS Q vs. Capacitance



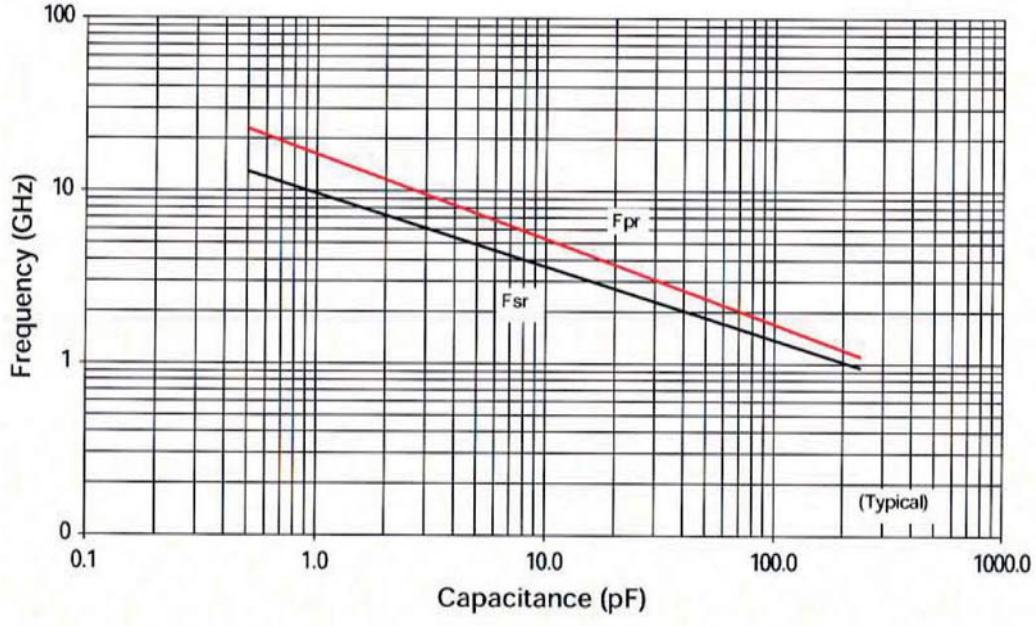
UQ CL Resonance Frequency

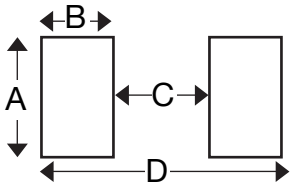


UQ CF ESR vs. Frequency



UQ CF Resonant Frequency





MOUNTING PAD DIMENSIONS CASE CA:

inches (millimeters)

	Pad Size	A min	B min	C min	D min
Vertical Mount	Normal	0.070 (1.778)	0.050 (1.270)	0.030 (0.762)	0.130 (3.302)
	High Density	0.050 (1.270)	0.030 (0.762)	0.030 (0.762)	0.090 (2.286)
Horizontal Mount	Normal	0.080 (2.032)	0.050 (1.270)	0.030 (0.762)	0.130 (3.302)
	High Density	0.060 (1.524)	0.030 (0.762)	0.030 (0.762)	0.090 (2.286)

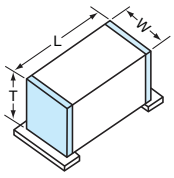
MOUNTING PAD DIMENSIONS CASE CB:

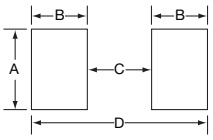
inches (millimeters)

	Cap Value	Pad Size	A min	B min	C min	D min
Vertical Mount	0.1 pF	Normal	0.065 (1.651)	0.050 (1.270)	0.075 (1.905)	0.175 (4.445)
		High Density	0.045 (1.143)	0.030 (0.762)	0.075 (1.905)	0.135 (3.429)
	0.2 pF	Normal	0.090 (2.286)	0.050 (1.270)	0.075 (1.905)	0.175 (4.445)
		High Density	0.070 (1.778)	0.030 (0.762)	0.075 (1.905)	0.135 (3.429)
	0.3 to 510 pF	Normal	0.110 (2.794)	0.050 (1.270)	0.075 (1.905)	0.175 (4.445)
		High Density	0.090 (2.286)	0.030 (0.762)	0.075 (1.905)	0.135 (3.429)
	> 510 pF	Normal	0.120 (3.048)	0.050 (1.270)	0.075 (1.905)	0.175 (4.445)
		High Density	0.100 (2.540)	0.030 (0.762)	0.075 (1.905)	0.135 (3.429)
Horizontal Mount	All Values	Normal	0.130 (3.302)	0.050 (1.270)	0.075 (1.905)	0.175 (4.445)
		High Density	0.110 (2.794)	0.030 (0.762)	0.075 (1.905)	0.135 (3.429)

MOUNTING PAD DIMENSIONS CASE CL, CS & CF:

inches (millimeters)





Case	A min.	B min.	C min.	D min.
0402 (1005)	.0275 (0.70)	.0354 (0.90)	.0157 (0.40)	.0866 (2.20)
0603 (1608)	.0393 (1.00)	.0433 (1.10)	.03236 (0.60)	.110 (2.80)
0805 (2012)	.0590 (1.50)	.0512 (1.30)	.0236 (0.60)	.1259 (3.20)

DESIGN KITS

Kit #	Compliance	Description	Cap Value	Cap. Values (pF)	Tol. (pF)
KITUQ800LF		UQCA 0605 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values,15 pcs min. per value	0.1 to 2.0	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.5	±0.1
				1.6, 1.8, 2.0	±0.25
KITUQ810LF		UQCA 0605 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values,15 pcs min. per value	1.0 to 10 pF	1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.4, 2.7, 3.0, 3.3	±0.1
				3.9, 4.7, 5.6, 6.8, 8.0	±0.25
				10	±5%
KITUQ820LF		UQCA 0605 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values,15 pcs min. per value	10 to 100 pF	10, 12, 15, 18, 20, 22, 24, 27, 30, 33, 39, 47, 56, 68, 82, 100	±5%
KITUQ830LF		UQCB 1210 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values,15 pcs min. per value	1.0 to 10 pF	1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.4, 2.7, 3.0, 3.3	±0.1
				3.9, 4.7, 5.6, 6.8, 8.0	±0.25
				10	±5%
KITUQ840LF		UQCB 1210 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values,15 pcs min. per value	10 to 100 pF	10, 12, 15, 18, 20, 22, 24, 27, 30, 33, 39, 47, 56, 68, 82, 100	±5%
KITUQ850LF		UQCB 1210 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values,15 pcs min. per value	100 to 1000 pF	100, 120, 150, 180, 200, 220, 240, 270, 300, 330, 390, 470	±5%
				560, 680, 820, 1000	±10%
KITUQ360LF		UQCL 0402 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	0.1 to 2.0	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.5	±0.1
				1.6, 1.8, 2.0	±0.25
KITUQ370LF		UQCL 0402 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	1.0 to 10	1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.4, 2.7, 3.0, 3.3	±0.1
				3.9, 4.7, 5.6, 6.8, 8.2	±0.25
				10	±5%
KITUQ380LF		UQCL 0402 Series Ultra-Low ESR High Q Microwave Capacitors 8 different values, 15 pcs min. per value	10 to 27	10, 12, 15, 18, 20, 22, 24, 27	±5%
KITUQ250LF		UQCS 0603 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	0.1 to 2.0	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.5	±0.1
				1.6, 1.8, 2.0	±0.25
KITUQ260LF		UQCS 0603 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	1.0 to 10	1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.4, 2.7, 3.0, 3.3	±0.1
				3.9, 4.7, 5.6, 6.8, 8.2	±0.25
				10	±5%
KITUQ270LF		UQCS 0603 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	10 to 100	10, 12, 15, 18, 20, 22, 24, 27, 30, 33, 39, 47, 56, 68, 82, 100	±5%
KITUQ320LF		UQCF 0805 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	0.1 to 2.0	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.5	±0.1
				1.6, 1.8, 2.0	±0.25
KITUQ330LF		UQCF 0805 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	1.0 to 10	1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.4, 2.7, 3.0, 3.3	±0.1
				3.9, 4.7, 5.6, 6.8, 8.2	±0.25
				10	±5%
KITUQ340LF		UQCF 0805 Series Ultra-Low ESR High Q Microwave Capacitors 16 different values, 15 pcs min. per value	10 to 100	10, 12, 15, 18, 20, 22, 24, 27, 30, 33, 39, 47, 56, 68, 82, 100	±5%
KITUQ350LF		UQCF 0805 Series Ultra-Low ESR High Q Microwave Capacitors 7 different values, 15 pcs min. per value	100 to 240	100, 120, 150, 180, 200, 220, 250	±5%