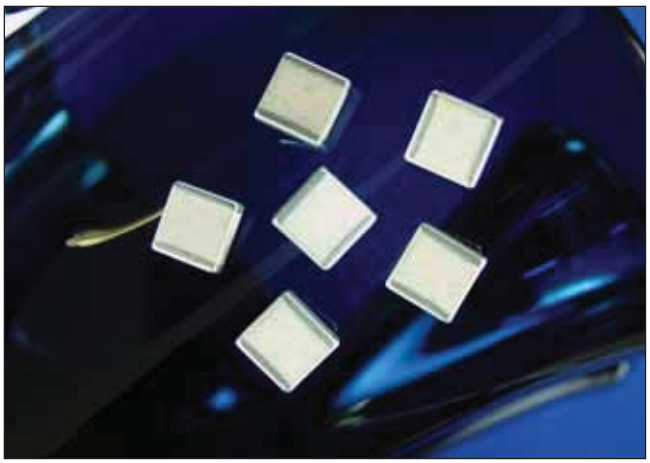
High Q Porcelain Capacitors - CF Series

knowles
DLI•JohansonMFG•Novacap•Syfer•Voltronics



Description

- High Q Porcelain Capacitors • SMD Compatibility
- Ultra Temperature Stable • Low ESR, High Q
- Capacitance range 0.1 - 5100 pF
- Operating Range -55° to +125°C • High Voltage
- High Self-resonance • Low Noise • Established Reliability

Functional Applications

- Impedance Matching • Power Handling • DC Blocking
- Bypass • Coupling • Tuning and Feedback
- Amplifier Matching Networks • VCO Frequency Stabilization
- Filtering, Diplexers and Antenna Matching
- High RF Power Circuits • Oscillators • Timing Circuits
- Filters • RF Power Amplifiers and Delay Lines

Dielectric characteristics

Dielectric Material (Code)		C0G/NP0 (CF)
Temperature Coefficient (ppm/°C)		0 ± 15
Dissipation Factor (% @ 1MHz Maximum)		0.05
Dielectric Withstanding Voltage	Voltage Rating (Volts)	Refer to table
	DWV (Volts)	250% of rated
Insulation Resistance (MΩ Minimum)	@ +25°C	10^6 MΩ min
	@ +125°C	10^5 MΩ min
Ageing		None
Piezoelectric Effects		None
Dielectric Absorption		None

Capacitance and Voltage Table

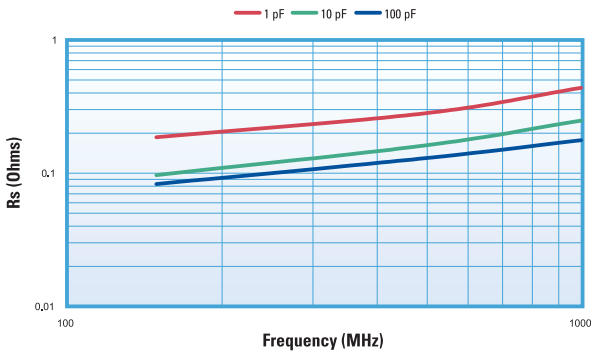
Cap Code	Cap (PF)	Case Size C06 0603	C11 0505	C17 1111	C18 1111	C22 2225	C40 3838
0R1	0.1	250V Code 9	250V Code 9	1KV Code 7	2KV Code G	2.5KV Code B	7.2KV Code 1
0R2	0.2						
0R3	0.3						
0R4	0.4						
0R5	0.5						
0R6	0.6						
0R7	0.7						
0R8	0.8						
0R9	0.9						
1R0	1.0						
1R1	1.1						
1R3	1.3						
1R4	1.4						
1R5	1.5						
1R6	1.6						
1R7	1.7						
1R8	1.8						
1R9	1.9						
2R0	2.0						
2R1	2.1						
2R2	2.2						
2R4	2.4						
2R7	2.7						
3R0	3.0						
3R3	3.3						
3R6	3.6						
3R9	3.9						
4R3	4.3						
4R7	4.7						
5R1	5.1						
5R6	5.6						
6R2	6.2						
6R8	6.8						
7R5	7.5						
8R2	8.2						
9R1	9.1						
100	10						
110	11						
120	12						
130	13						
150	15						
160	16						
180	18						
200	20						
220	22						
240	24						
270	27						
300	30						
330	33						
360	36		200V Code 6				
390	39						
430	43						
470	47						
510	51						
560	56						
620	62						
680	68						
750	75						
820	82						
910	91						
101	100			500V Code 4	1KV Code 7	1.5KV Code A	3.6KV Code D
111	110						
121	120						
131	130						
151	150						
161	160						
181	180						
201	200						
221	220			200V Code 6	200V Code 6		
241	240						
271	270						
301	300						
331	330						
361	360						
391	390						
431	430						
471	470						2.5KV Code B
511	510			100V Code 1	100V Code 1	1KV Code 7	
561	560						
621	620						
681	680						1KV Code 7
751	750			50V Code 5	50V Code 5		
821	820						
911	910						
102	1000					500V Code 4	
122	1200						
152	1500						
182	1800						
222	2200					300V Code 3	
272	2700						500V Code 4
332	3300						
392	3900						
472	4700						
512	5100						
Reel QTY		4000	3500	2350	2350	500	250

Special capacitance values available upon request.

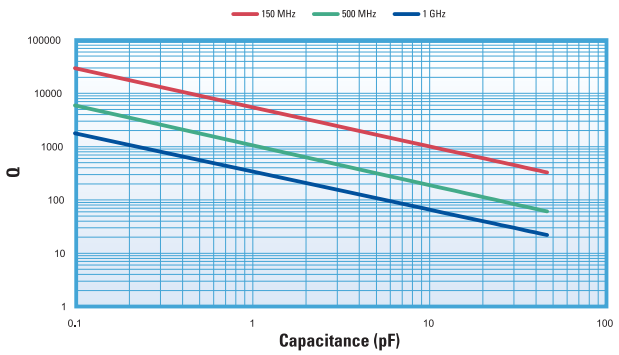
Should be ordered as DLI parts.

High Q Porcelain Capacitors - CF Series

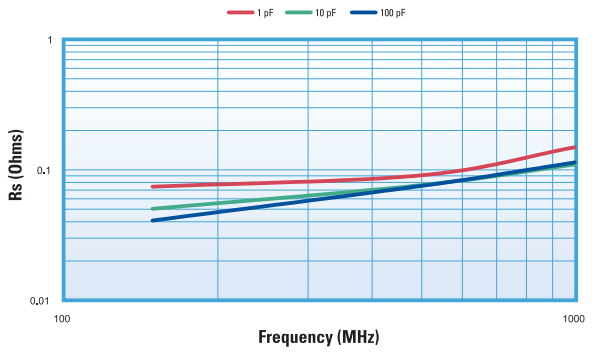
ESR vs Frequency
DLI C06 CF Series



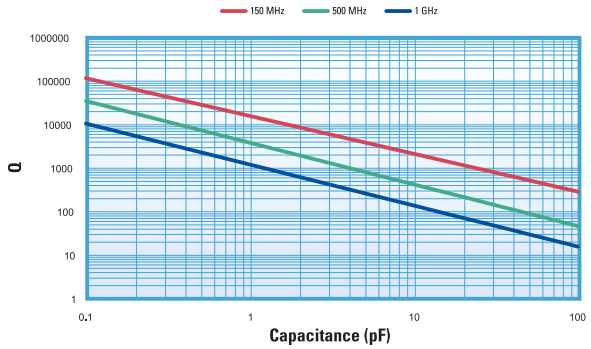
Q vs Capacitance
DLI C06 CF Series



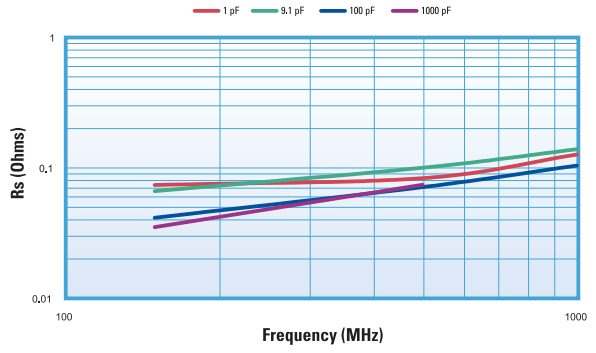
ESR vs Frequency
DLI C11 CF Series



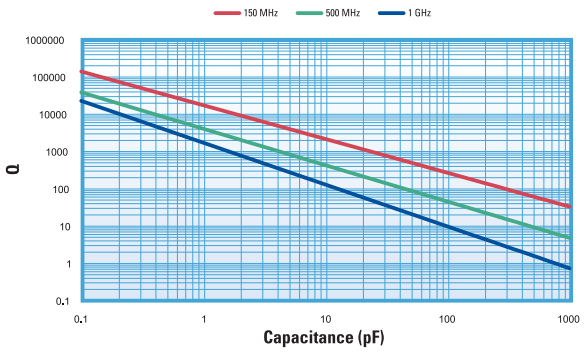
Q vs Capacitance
DLI C11 CF Series



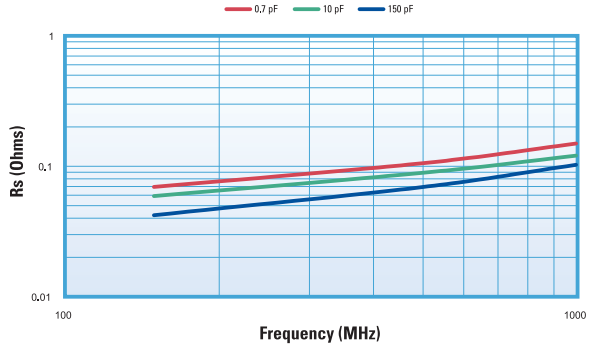
ESR vs Frequency
DLI C17 CF Series



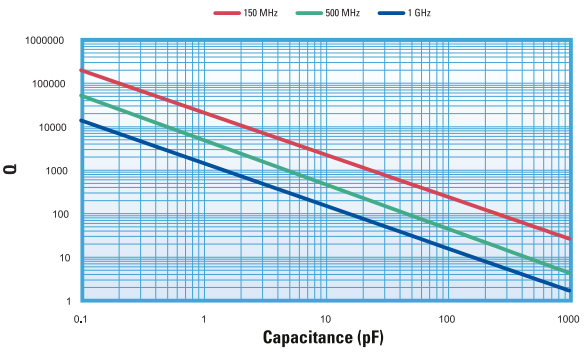
Q vs Capacitance
DLI C17 CF Series



ESR vs Frequency
DLI C18 CF Series



Q vs Capacitance
DLI C18 CF Series



Note: This information represents typical device performance.

Should be ordered as DLI parts

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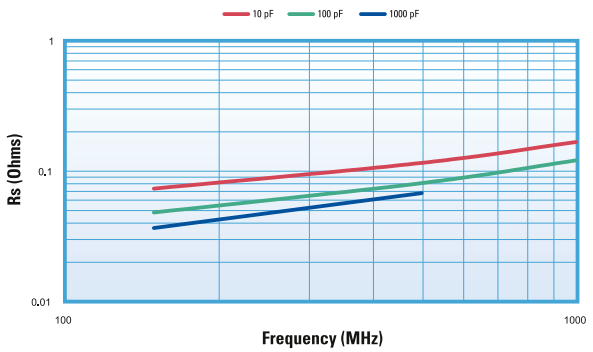
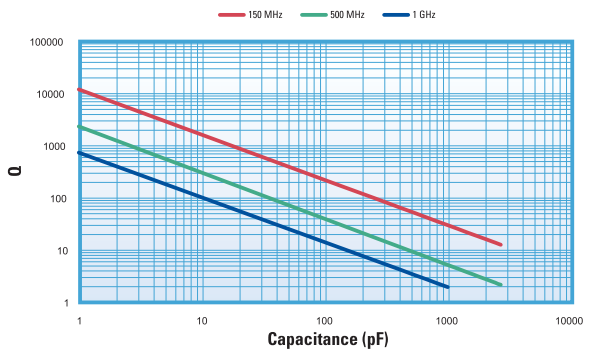
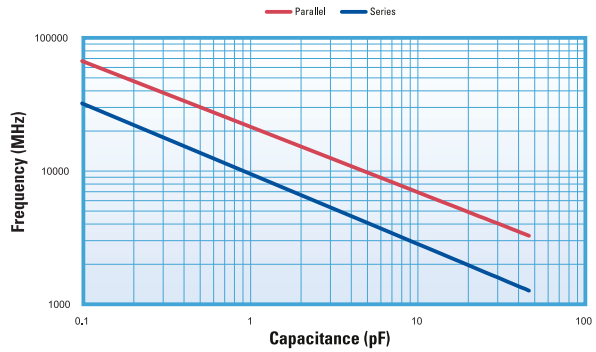
ESR vs Frequency
DLI C22 CF Series



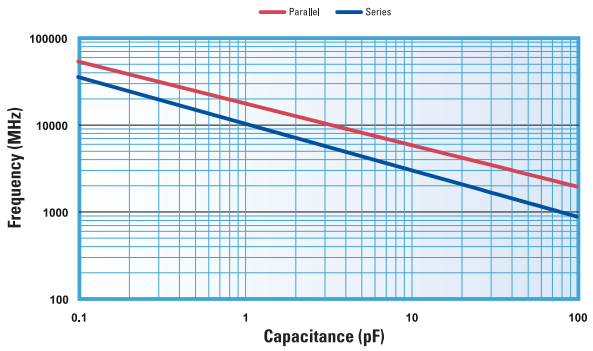
Q vs Capacitance
DLI C22 CF Series



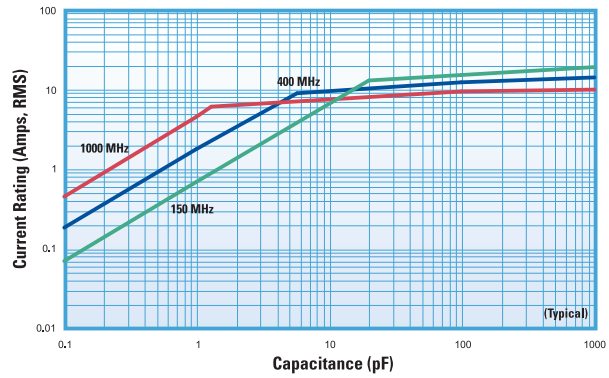
Resonant Frequency vs Capacitance
DLI C06 CF Series



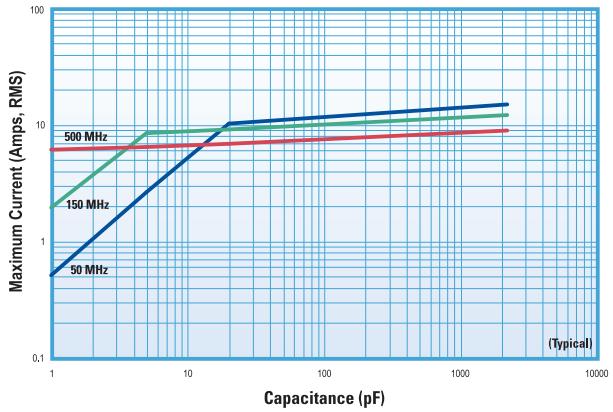
Resonant Frequency vs Capacitance
DLI C11 CF Series



Current Rating vs. Capacitance,
(infinite heat sink, 25°C ambient temperature)
DLI C17CF Series



DLI C22CF Series Current Rating vs. Capacitance,
(infinite heat sink, 25°C ambient temperature)



Note: This information represents typical device performance.

Ordering information - CF Series - See Page 21 for complete part number system.

C17	CF	620	J	-	7	U	N	-	X	0	T
Chip size	Dielectric	Capacitance Code (pF)	Capacitance tolerance		Voltage Code	Termination	Lead Type		Test Level	Marking	Packaging
C06 **C11** **C17** **C18** **C22** **C40**	**CF** = C0G/NP0 High Q	1st two digits are significant figures of capacitance, 3rd digit denotes number of zeros, R = decimal point. Examples: **1R0** = 1.0pF **471** = 471pF	**<10pF** **A** = ±0.05pF **B** = ±0.1pF **C** = ±0.25pF **D** = ±0.5pF **≥10pF** **F** = ±1% **G** = ±2% **J** = ±5% **K** = ±10% **M** = ±20% **X** = GMV **S** = Special		**5** = 50V **1** = 100V **6** = 200V **9** = 250V **4** = 500V **7** = 1kV **A** = 1.5kV **G** = 2kV **B** = 2.5kV **D** = 3.6kV **H** = 7.2kV	**C06** U, S, Z, E, P, Q, Y, W, H, V, R **C11/17** T, U, S, Z, E, P, Q, Y, W, H, V, R **C18** U, Q, Y, V, W, H, Z **C22** U, S, Z, E, P, Q, Y, W, H, V, R **C40** T, U, S, P, Q, Y, W, H, V, R	**A** = Axial ribbon **B** = Radial ribbon **C** = Center ribbon **D** = Special **E** = Axial wire **F** = Radial wire **N** = Chip Note: C06 only available as N (Chip)		**X** = Standard **Y** = Reduced Visual **A** = MIL-PRF-55681 Group A **C** = MIL-PRF-55681 Group C **D** = Customer Specified	**C06** 0, 1, 2, 5 **C11** 0 **C17** 0, 1, 2, 5 **C18/22/40** 0, 1	**C06** T, W, B, S **C11/17/18** T, V, W, B, P, S **C22** T, B, P, S **C40** T, B, P, S, R

Should be ordered as DLI parts.

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