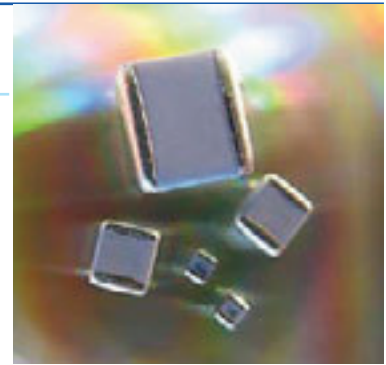


CF Series: Ultrastable Porcelain Capacitors

Description	Functional Applications	Benefits
Porcelain Capacitors Ultra Temperature Stable Low ESR, High Q Capacitance Range 0.1 - 5100 pF High Self-resonance Low Noise Established Reliability	Impedance Matching DC Blocking Bypass Coupling Tuning & Feedback Amplifier Matching Networks VCO Frequency Stabilization Filtering, Diplexers & Antenna Matching High RF Power Circuits	Oscillators Timing Circuits Filters RF Power Amplifiers & Delay Lines Stable TC, -55° to +125°C Operating Range High Q SMD Compatibility Lower ESR Power Handling, High Voltage



Dielectric Characteristics

Dielectric Material Code	Temperature Coefficient (ppm/°C Maximum)	Dissipation Factor (% @ 1MHz Maximum)	Dielectric Withstanding Voltage		Insulation Resistance (MΩ Minimum)		Aging	Piezoelectric Effects	Dielectric Absorption
			Voltage Rating (Volts)	DWV (Volts)	@ +25°C	@ +125°C			
CF	0 ± 15	0.05	Please see chart (pg. 17)	250% of WVDC for 5 sec unless specified in chart (pg. 17)	10 ⁶	10 ⁵	None	None	None

Part Number Breakdown*

*C	17	CF	620	J	-	7	U	N	-	X	0	T
Multi Layer	Case Size	Material System	Capacitance Code	Tolerance Level	Voltage Code	Termination Code	Leading Code	Test Level	Marking Code	Packaging		

Available Termination Types

C06	U, S, Z, E, P, Q, Y, W, H, V, R
C11	T, U, S, Z, E, P, Q, Y, W, H, V, R
C17	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,

Code Termination System

T	Ag Term, Ni Barrier Layer, Heavy SnPb Plated Solder
U	Ag Termination, Ni Barrier Layer, SnPb Plated Solder
S	Ag Termination, Ni Barrier Layer, Gold Flash, RoHS
Z	Ag Termination, Ni Barrier Layer, Sn Plated Solder, RoHS
E	Ag Termination, Enhanced Ni Barrier, Sn Plated Solder, RoHS
P	AgPd Termination, RoHS
Q	Polymer Termination, Ni Barrier Layer, Sn Plated Solder, RoHS
Y	Polymer Termination, Ni Barrier Layer, SnPb Plated Solder,
M	Polymer Termination, Cu Barrier Layer, Sn Plated Solder, RoHS
W	Ag Termination, Cu Barrier Layer, Sn Plated Solder
H	Ag Termination, Enhanced Cu Barrier, Sn Plated Solder, RoHS
V	Ag Termination, Cu Barrier Layer, SnPb Plated Solder
R	Ag Termination, Cu Barrier Layer, Heavy SnPb Plated Solder

Available Lead Types

C06	N/A
C11	A, B, D
C17	A, B, C, D, E, F
C18	A, B, C, D, E, F
C22	A, B, C, D, E, F
C40	A, B, C, D, E, F

Special Leading requirements available.

Code Lead Types

A	Axial Ribbon
B	Radial Ribbon
C	Center Ribbon
D	Customer Specified
E	Axial Wire
F	Radial Wire
N	None

Test Level – All Case Sizes

X	Standard
Y	Reduced Visual
A	MIL-PRF-55681 Group A
C	MIL-PRF-55681 Group C
D	Customer Specified

Available Laser Marking

C06	0, 1
C11	0, 1, 2, 5
C17	0, 1, 2, 3, 4, 5
C18	0, 1, 2, 5
C22	0, 1
C40	0, 1

Code Laser Marking

0	No marking
1	Single-side marked
2	Double-side marked
3	Large single-side marked
4	Large double-side marked
5	Vertical edge marked
9	Customer Specified

Available Packaging

C06	T, W, B, S
C11	T, V, W, B, P, S
C17	T, V, W, B, P, S
C18	T, V, W, B, P, S
C22	T, B, P, S
C40	T, B, P, S, R

Code Packaging

T	Tape & Reel – Horizontal
V	Tape & Reel – Vertical
W	Waffle Pack
B	Bulk
P	Plastic Box
R	Tube (Rail)
S	Customer Specified

*See page 6 for complete part number system.

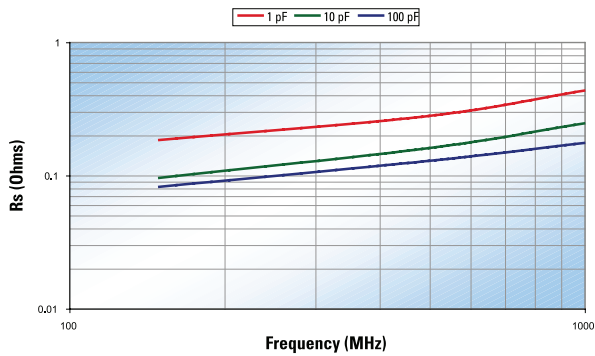
Capacitance and Voltage Table

CAP CODE	CAP (pF)	CASE SIZE C06 0603	CASE SIZE C11 0505	CASE SIZE C17 1111	CASE SIZE C18 1111	CASE SIZE C22 2225	CASE SIZE C40 3838
0R1	0.1	250V Code 9	250V Code 9	1000V Code 7	2000V Code G 1000V Code 7	2500V Code B DWV = 3000V	7200V Code H DWV = 8700V
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						
1R2	1.2						
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						
390	39						
430	43						
470	47						
510	51						
560	56						
620	62						
680	68						
750	75						
820	82						
910	91						
101	100						
111	110						
121	120						
131	130						
151	150						
161	160						
181	180						
201	200						
221	220						
241	240						
271	270						
301	300						
331	330						
361	360						
391	390						
431	430						
471	470						
511	510						
561	560						
621	620						
681	680						
751	750						
821	720						
911	910						
102	1000						
122	1200						
152	1500						
182	1800						
222	2200						
272	2700						
332	3300						
392	3900						
472	4700						
512	5100						
Reel QTY		4000	3500	2350	2350	500	250

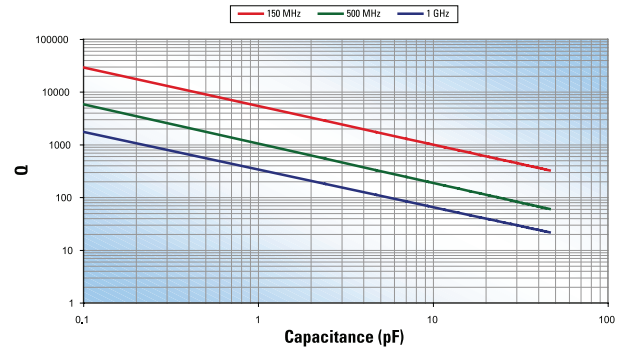
Special capacitance values available upon request.

RF Characteristics

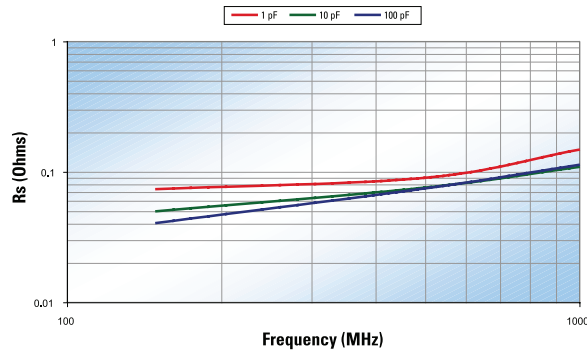
ESR vs Frequency
DLI C06 CF Series



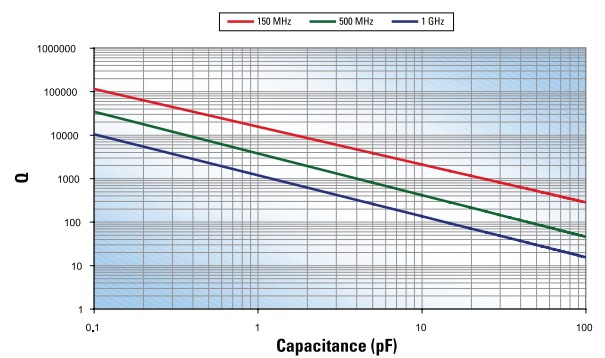
Q vs Capacitance
DLI C06 CF Series



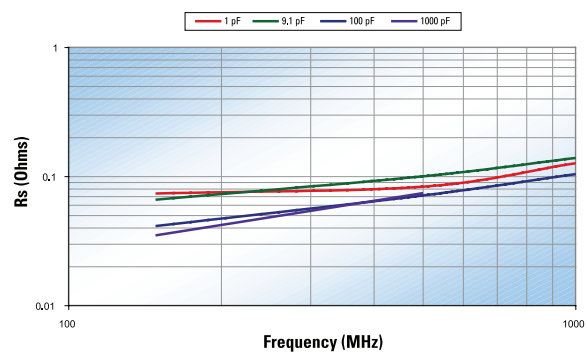
ESR vs Frequency
DLI C11 CF Series



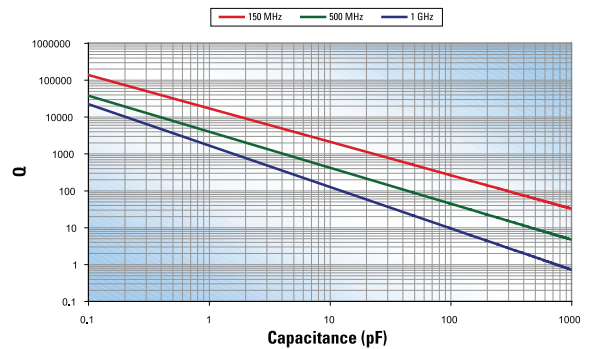
Q vs Capacitance
DLI C11 CF Series



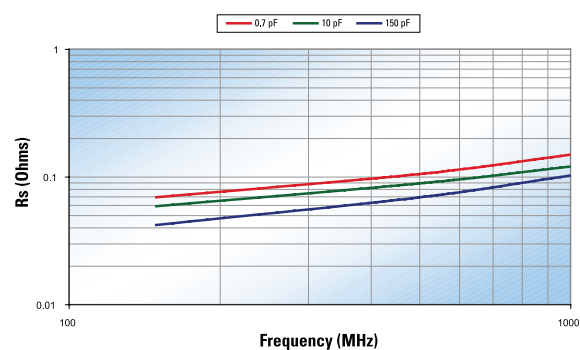
ESR vs Frequency
DLI C17 CF Series



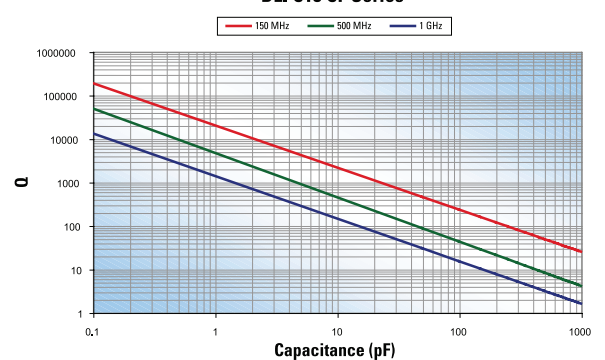
Q vs Capacitance
DLI C17 CF Series



ESR vs Frequency
DLI C18 CF Series



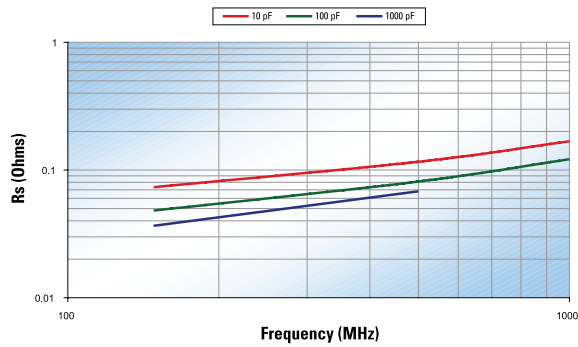
Q vs Capacitance
DLI C18 CF Series



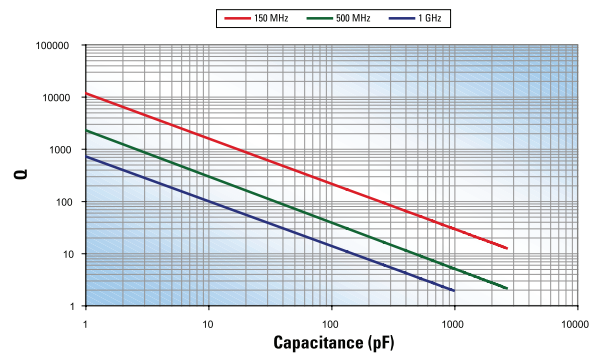
The information above represents typical device performance.

RF Characteristics

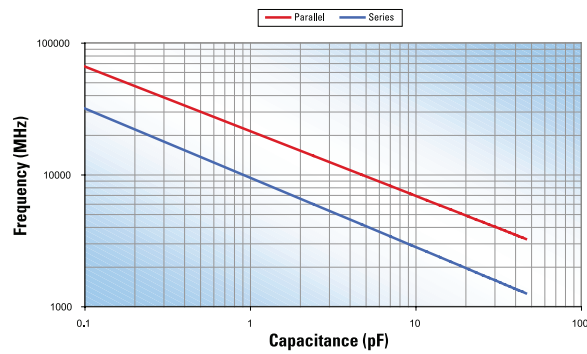
ESR vs Frequency
DLI C22 CF Series



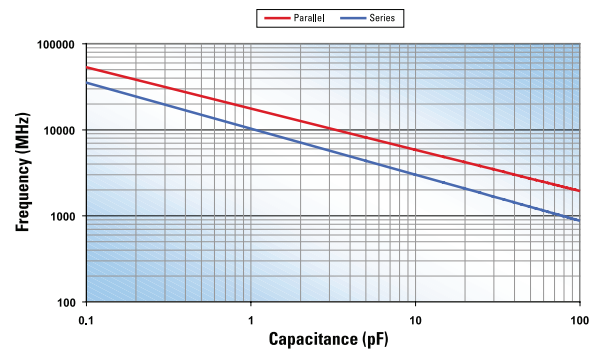
Q vs Capacitance
DLI C22 CF Series



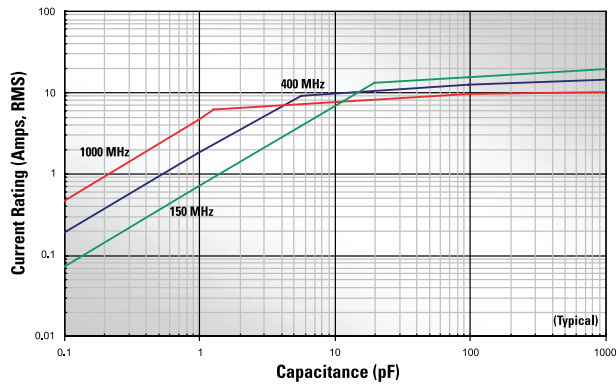
Resonant Frequency vs Capacitance
DLI C06 CF Series



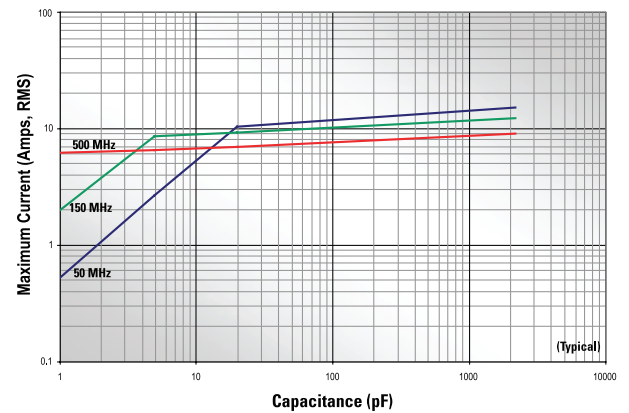
Resonant Frequency vs Capacitance
DLI C11 CF Series



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)



The information above represents typical device performance.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Dielectric Laboratories:

[C17CFENG-Z](#) [C06CFENG-Z](#) [C11CFENG-Z](#) [C06CF1R0A-9SN-X1W](#) [C06CF1R0A-9UN- X1T](#) [C06CF270G-9UN-X0B](#)
[C06CF0R6A-9UN-X1T](#) [C11CF390F-6ZN-X1T](#)