

MLC - AH Series: P90 Porcelain Capacitors



Description

- High Q Porcelain Capacitors • SMD Compatibility
- Positive TC "P90" • 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)	P90 (AH)	
Temperature Coefficient (ppm/°C)	+90 ± 20	
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	

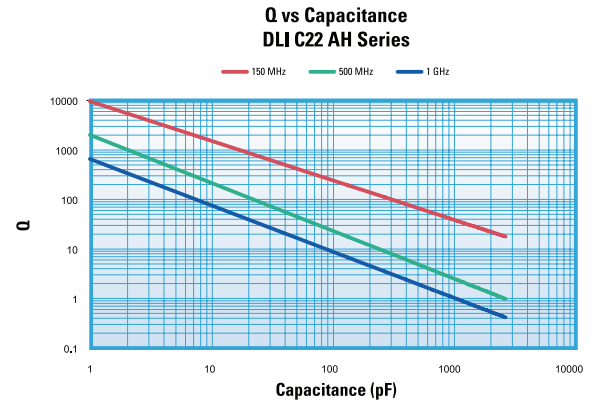
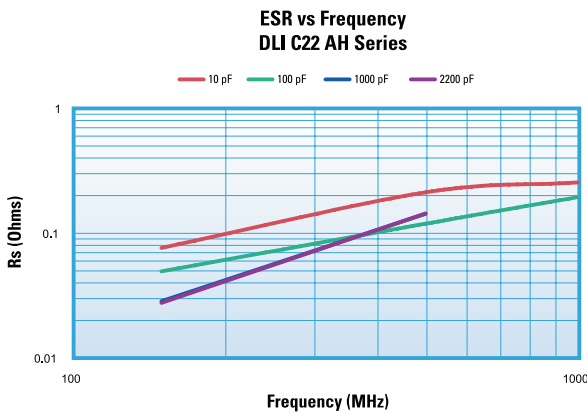
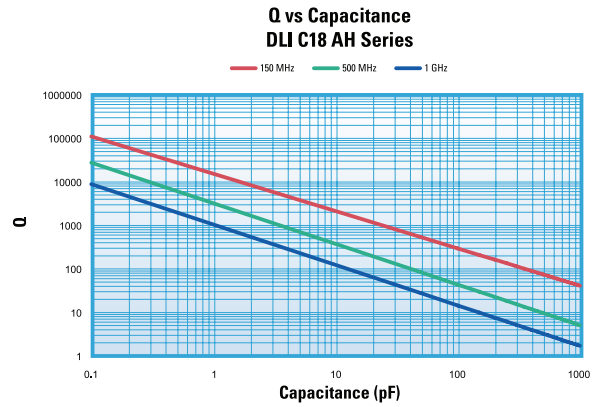
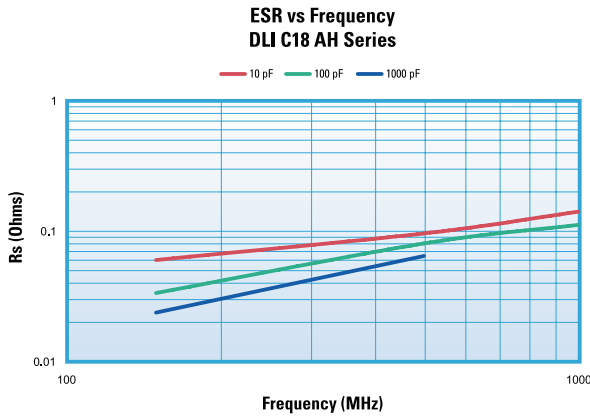
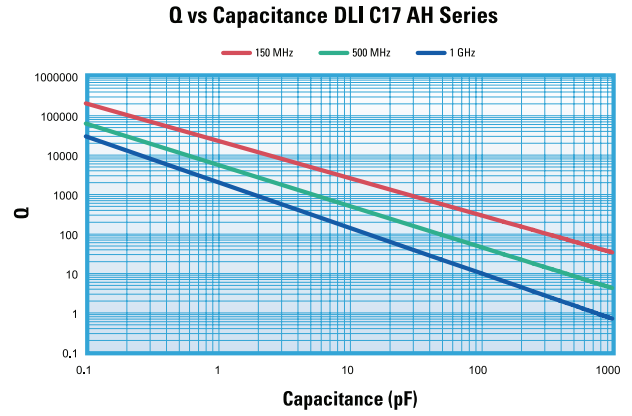
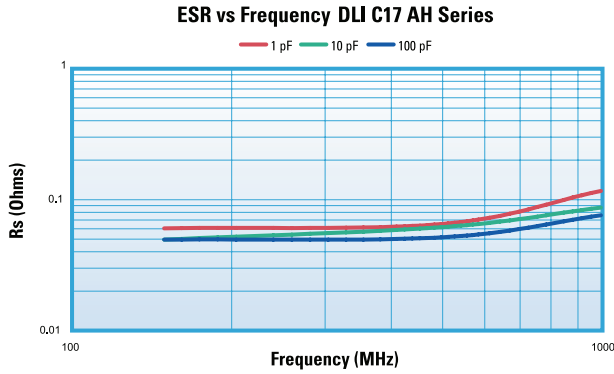
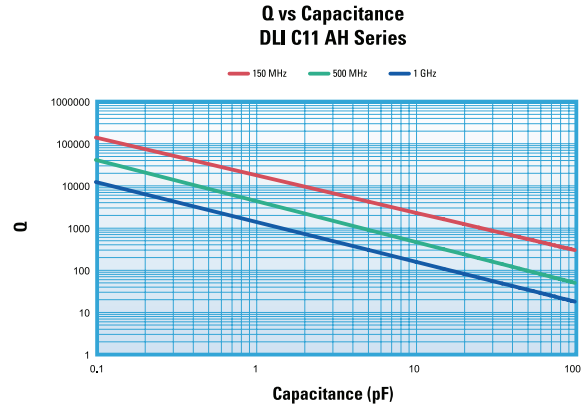
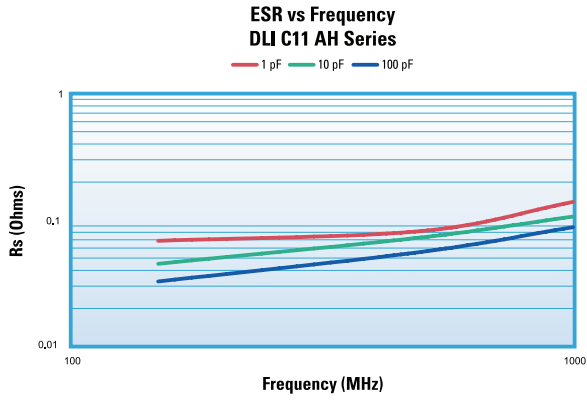
Note: Refer to table on page 28 for ordering information.

Capacitance and Voltage Table

Cap Code	Cap (PF)	C11 0505	C17 1111	Case Size C18 1111	C22 2225	C40 3838
0R1	0.1	250V Code 9	1kV Code 7	2kV Code 6	2.5kV Code 8	7.2kV Code H
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					
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	820					
911	910					
102	1000					
122	1200					
152	1500					
182	1800					
222	2200					
272	2700					
332	3300					
392	3900					
472	4700					
512	5100					
Reel QTY		3500	2350	2350	500	250
Horizontal						

Special capacitance values available upon request.

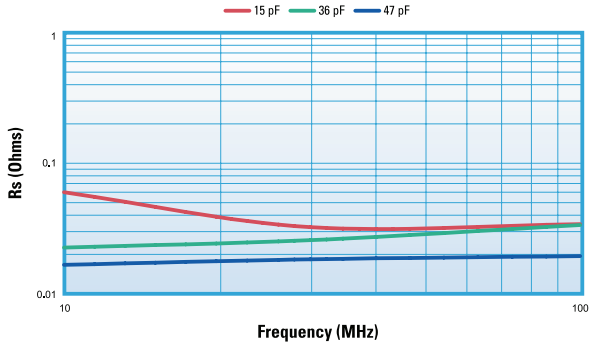
MLC - AH Series: P90 Porcelain Capacitors



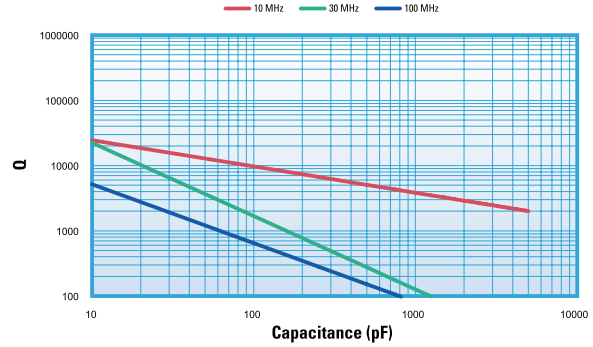
This information represents typical device performance.

MLC - AH Series: P90 Porcelain Capacitors

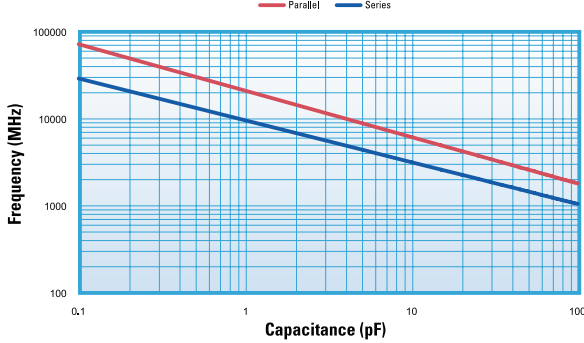
ESR vs Frequency
DLI C40 AH Series



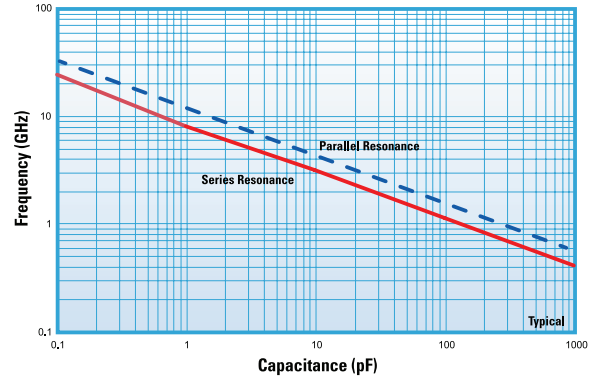
Q vs Capacitance
DLI C40 AH Series



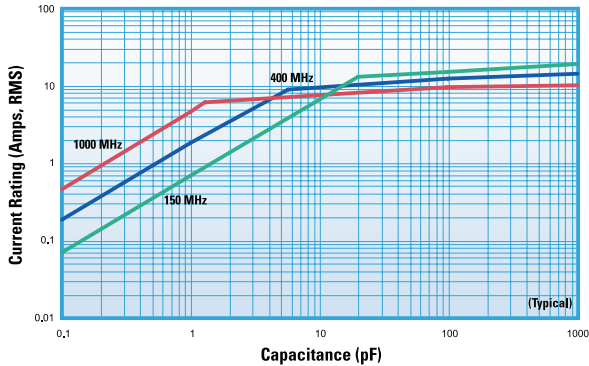
Resonant Frequency vs Capacitance
DLI C11 AH Series



First Resonance Frequency vs Capacitance
DLI C17AH Series



Current Rating vs. Capacitance,
(infinite heat sink, 25°C ambient temperature)
DLI C17AH Series



This information represents typical device performance.

Part Number See Page 28 for complete part number system.

C	17	AH	620	J-	7	U	A-	X	0	T
MLC Capacitor	Case Size	Material System	Capacitance Code	Tolerance Level	Voltage Code	Termination Code	Leading Code	Test Level	Marking Code	Packaging

Terminations	Lead Types*	Test Level - All Case Sizes	Laser Marking	Packaging
C11 T, U, S, Z, E, P, Q, Y, M, W, H, V, R	C11 A, B, D	X Standard	C11 0, 1, 2, 5	C11 T, V, W, B, P, S
C17 T, U, S, Z, E, P, Q, Y, M, W, H, V, R	C17 A, B, C, D, E, F	Y Reduced Visual	C17 0, 1, 2, 3, 4, 5	C17 T, V, W, B, P, S
C18 U, Z, E, Y, W, H	C18 A, B, C, D, E, F	A MIL-PRF-55681 Group A	C18 0, 1, 2, 5	C18 T, V, W, B, P, S
C22 U, S, Z, E, P, Q, Y, M, W, H, V, R	C22 A, B, C, D, E, F	C MIL-PRF-55681 Group C	C22 0, 1	C22 T, B, P, S
C40 T, U, S, Z, E, P, Q, Y, M, W, H, V, R	C40 A, B, C, D, E, F	D Customer Specified	C40 0, 1	C40 T, B, P, S, R

*Special leading requirements available.