HIGH "Q", LOW ESR, LOW ESL - "CLD" SERIES (NPO)

Description

This capacitor is made with a low loss NPO dielectric constant and is built with a special multilayer structure (electrode design) providing the user with the best compromise between dimensions and electrical characteristics.
The fact that its length is shorter than its width provides a lower inductance and a higher resonance frequency than an equivalent square sized capacitor. In addition, the contact surface of the metallization with the air being larger than standard allows a better thermal exchange when capacitor is dissipating heat.
Those parts will be delivered on tape under request.

Applications

Featuring low ESR and low ESL, those parts are mainly intended for applications in HF where low losses are required, meeting all basic requirements that a good capacitor has to display over a wide range of temperature and frequency. Consequently, they will be used in tuning, bypassing, coupling, decoupling, impedance matching, d-c blocking (etc.) applications, everywhere in RF power amplifiers, filters, oscillators etc.

Capacitance range

0.5 to 100 pF
(See table next page)

Tolerance on capacitance

Below 10 pF:	**Above and including 10 pF:**
B= ±0.1 pF	G= ±2 %
C= ±0.25 pF	J= ±5 %
D= ±0.5 pF	K= ±10 %
	M= ±20 %

Rated voltage:

500 Vdc

Proof voltage:

2.5 x Ur for 5seconds

Operating temperature range

-55° C to +175° C

Temperature coefficient of the capacitance

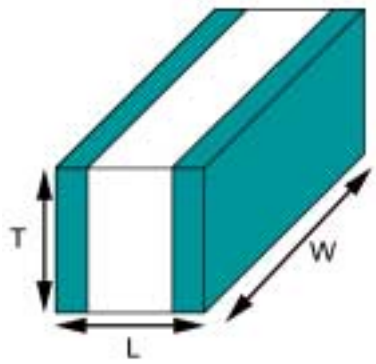
0 ± 60 ppm /°C

Insulation resistance (Ri):

$\geq 10^6$ MΩ @ 25° C & Ur
$\geq 10^5$ MΩ @ 125° C & Ur

All electrical, mechanical and environmental tests will comply and will be carried out in accordance with the European CECC 30000 & CECC32101-007 specifications.

Dimensions (mm)



Length (L)
1.8 ± 0.3 mm
Width (W)
2.65 ± 0.25
Thickness (T)
2.30 max

Terminations

Standard: Tin-plated nickel (V)
Non magnetic: Silver-palladium-Platinum (A)

Resonance Frequency

See curves page 7-20.

Q Factor

See curves page 7-20.

ESR

See curves page 7-20.

Admissible RMS current

Please, consult us.

How to order?

501 CLD xxx (1) (2) (3) (4)

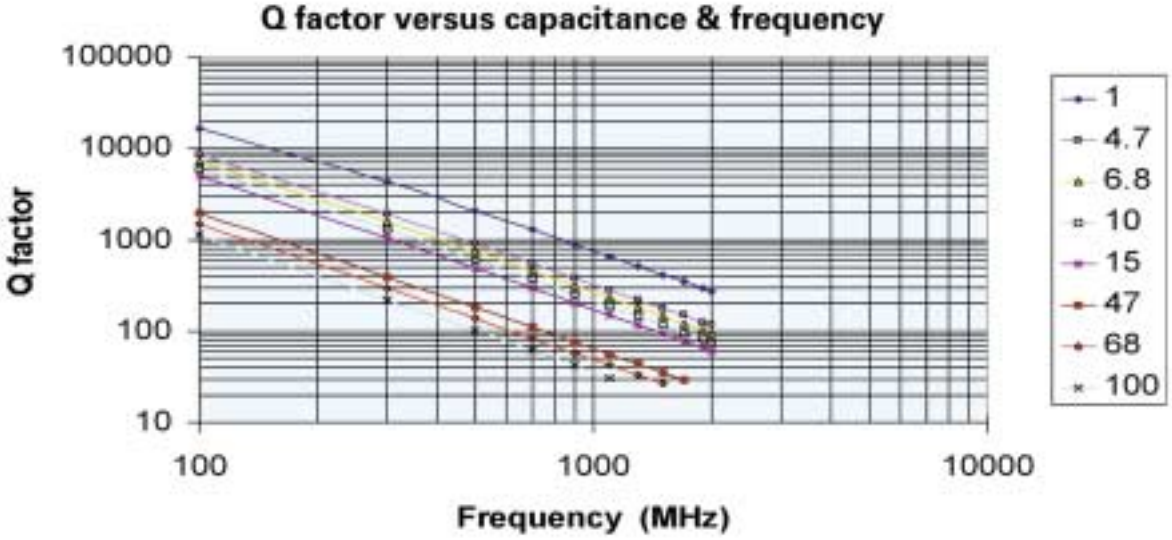
xxx: 3 digits capacitance value (see table)
(1): Tolerance code (see table)
(2): Termination code (V or A)
(3): Marking L= if required
(4): Taping E = if required

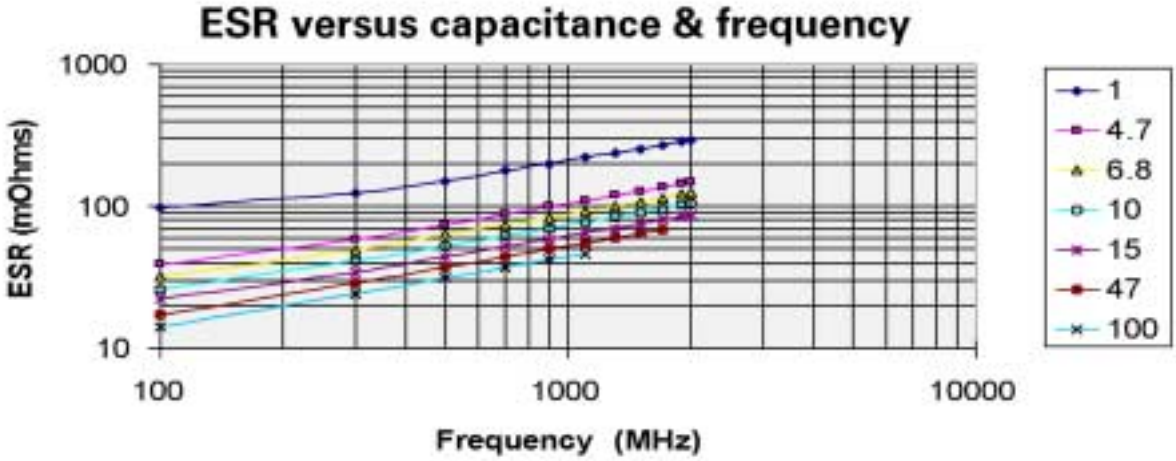
Taping

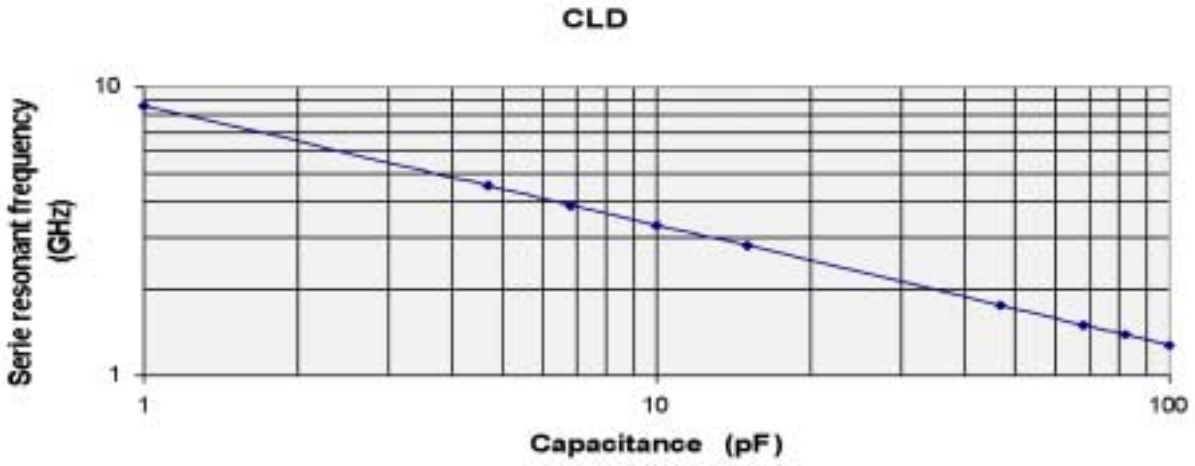
When requested, parts will be delivered taped and reeled as per IEC 286:

- Plastic embossed styrene 8 mm width on reel 180 mm (7").
- Unless otherwise prescribed: 1000 parts per tape.

Cr (pF)	Code	Tol.
0.5	0R5	(B), C, D
0.6	0R6	=
0.7	0R7	=
0.8	0R8	=
0.9	0R9	=
1.0	1R0	=
1.1	1R1	=
1.2	1R2	=
1.3	1R3	=
1.4	1R4	=
1.5	1R5	=
1.6	1R6	=
1.7	1R7	=
1.8	1R8	=
1.9	1R9	=
2.0	2R0	=
2.1	2R1	=
2.2	2R2	=
2.4	2R4	=
2.7	2R7	=
3.0	3R0	=
3.3	3R3	=
3.6	3R6	=
3.9	3R9	=
4.3	4R3	=
4.7	4R7	=
5.1	5R1	=
5.6	5R6	J, K, M
6.2	6R2	=
6.8	6R8	=
7.5	7R5	=
8.2	8R2	=
9.1	9R1	=
10	100	(G), J, K, M
11	110	=
12	120	=
13	130	=
15	150	=
16	160	=
18	180	=
20	200	=
22	220	=
24	240	=
27	270	=
30	300	=
33	330	=
36	360	=
39	390	=
43	430	=
47	470	=
51	510	=
56	560	=
62	620	=
68	680	=
75	750	=
82	820	=
100	101	=


Q factor versus capacitance & frequency
Q factor
100000
10000
1000
100
10
100
1000
10000
Frequency (MHz)
1
4.7
6.8
10
15
47
68
100


ESR versus capacitance & frequency
ESR (mOhms)
1000
100
10
100
1000
10000
Frequency (MHz)
1
4.7
6.8
10
15
47
100


CLD
Serie resonant frequency (GHz)
10
1
1
10
100
Capacitance (pF)