

CP - HIGH POWER, HIGH Q

RF POWER CAPACITORS, RoHS COMPLIANT

Description

Low ESR/ESL
Porcelain Capacitors
Excellent characteristics in current, voltage and power with high Q factor
Highest working voltage in class – 7'000V



Applications

- RF Power Amplifiers
- Industrial (Plasma Chamber)
- Medical (MRI Coils)

Circuit applications

- DC Blocking
- Matching Networks
- Tuning and Coupling

I. Electrical specifications

Parameter	Value
Capacitance	0.5 to 10'000 pF
Tolerances	B, C, D below 10 pF F, G, J, K above 10 pF
Working Voltage (WVDC)	see Capacitance Value chart
Temperature Coefficient	100 +/-30ppm/°C, -55°C to +125°C
Insulation Resistance	10 ⁵ MΩ min @ 25°C at rated WVDC 10 ⁴ MΩ min @ 125°C at rated WVDC
Dielectric Withstanding (test voltage applied for 5 seconds)	2.0 x WVDC for WVDC ≤ 500V 1.5 x WVDC for 500V < WVDC ≤ 2'500V 1.3 x WVDC for WVDC > 2'500V
Aging	none
Piezo Effects	none

II. Mechanical specifications

Parameter	Value	Comment
Case Size	X	2225
	E	4040

For each case size, the recommended terminations are listed below.

NB:

- all the terminations are backward compatible and lead-free.
- the non-magnetic terminations are all Magnetism-free Rated.

MR certified®

ITAR Free®

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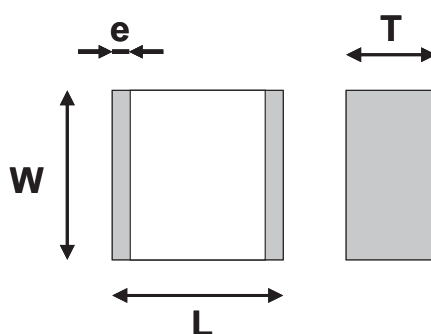
Termination Type	Code	CPX	CPE
Standard (tin-plated nickel)	S	AVAILABLE	AVAILABLE
Non-magnetic (tin-plated copper)	C	AVAILABLE	AVAILABLE

III. Environmental specifications

Parameter	Value
Life Test	2'000 hours, +125°C at 1.5 x WVDC (WVDC≤500V) at 1.3 x WVDC (500V<WVDC<1'250V) at 1.0 x WVDC (1'250V≤WVDC)
Moisture Resistance Test 1	240 hours, 85% relative humidity at +85°C (ESA/SCC n°3009)
Moisture Resistance Test 2	56 days, 93% relative humidity at +40°C 0V, 5V, 500V max.

IV. Outline dimensions

Parameter	X (2225)	E (4040)
Length (L)	6.20 mm + 0.30 / - 0.70 mm	10.50 mm + 0.30 / - 0.70 mm
Width (W)	6.60 ±0.50 mm	9.50 ±0.50 mm
Thickness (T)	3.80 mm (max.)	4.50 mm (max.)
End-Band (e)	0.80 ±0.60mm	0.80 ±0.60mm



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V. How to order

362	CP	X	100	G	C	1		L		ROHS
voltage	dielectric	case size	capacitance	tolerance code	termination code	mechanical code	coating code	marking code	tape and reel	
please refer to Volt Code given in Capacitance Values chart		X E	please refer to Cap Code given in Capacitance Values chart	A=±0.05pF B=±0.1pF C=±0.25pF D=±0.5pF F=±1% G=±2% J=±5% K=±10%	please refer to Mechanical Termination chart	please refer to Mechanical Configuration chart	"H" means coating requested leave blank if no coating requested	"L" means marking requested leave blank if no marking requested	"E" means horizontal orientation "X" means vertical orientation leave blank if no tape and reel requested	the RoHS tag is not part of the reference tag added at the end of P/N for information
201=200V 301=300V 501=500V 102=1KV 122=1.2KV 152=1.5KV 162=1.6KV 252=2.5KV 362=3.6KV 502=5KV 702=7KV										

NB: for capacitance values lower than 10pF, tolerances B, C and D apply. For capacitance values equal to or higher than 10pF, tolerances F, G, J and K apply.

VI. Tape and Reel

The following chart gives the number of components per reel.

	CPX	CPE
Parts per Reel	500	500 or 700

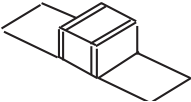
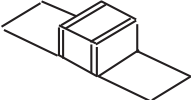
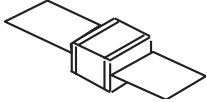
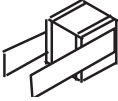
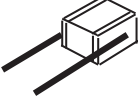
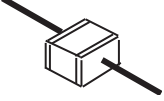
NB: the vertical orientation of product (letter code X) is only available on CPE. In this case, the quantity per reel is 350 pieces.

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VIII. Mechanical Configurations

VIII.1. Lead/Ribbon and Wire Types

Configuration Type	Code	Description
	1	Micro-strip Ribbon
	1S	Short-strip Ribbon
	2	Axial Ribbon
	3	Radial Ribbon
	6	Radial Wire
	7	Axial Wire

NB: when coding ribbons or wires for the description of the part, the termination has to be mentioned for MR_{certified} types to ensure that only non-magnetic materials are used.

Examples : 362 CPE 470 J1L any termination material could be used
 362 CPE 470 JC1L only non-magnetic termination materials could be used

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VIII.2. Lead/Ribbon and Wire Matrix

Termination Type	Code	CPX	CPE
Micro-strip Ribbon	1	AVAILABLE	AVAILABLE
Short Micro-strip Ribbon	1S		AVAILABLE
Axial Ribbon	2		AVAILABLE
Radial Ribbon	3		AVAILABLE
Radial Wire	6	AVAILABLE ⁽¹⁾	AVAILABLE ⁽¹⁾
Axial Wire	7	AVAILABLE ⁽¹⁾	AVAILABLE ⁽¹⁾

(1): these termination types are non ROHS.

VIII.3. Lead/Ribbon and Wire Dimensions

Within each cell, first the length and then the width/diameter of any single ribbon or wire are given.

Termination Type	Code	CPX	CPE
Micro-strip Ribbon	1	12.00 5.40	16.00 8.90
Short Micro-strip Ribbon	1S		8.50 8.90
Axial Ribbon	2		16.00 8.90
Radial Ribbon	3		19.00 8.90
Radial Wire	6	30.00 0.60	30.00 0.90
Axial Wire	7	30.00 0.60	30.00 0.90

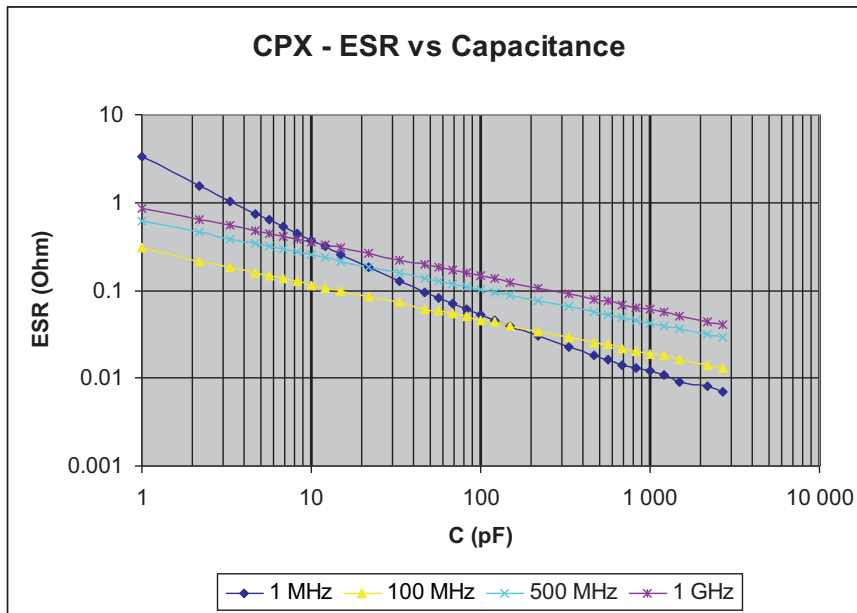
NB: dimensions are in mm.

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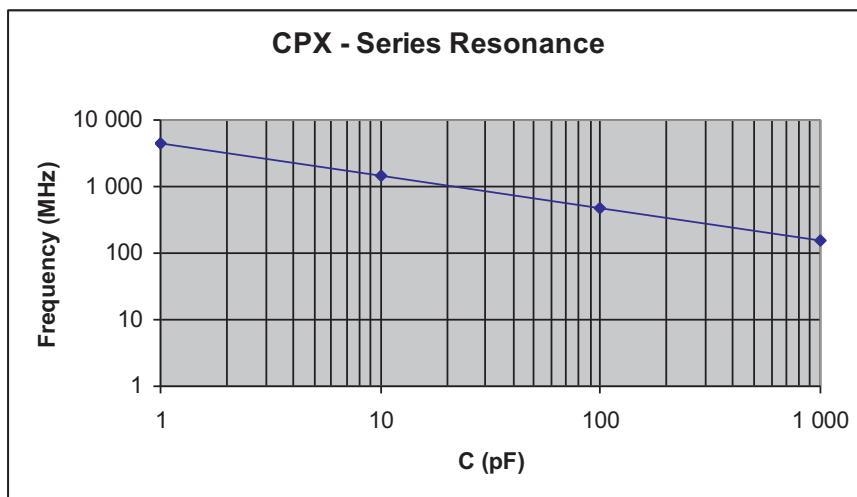
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IX. Performance Data

IX.1. ESR



IX.2. Series Resonance Frequency

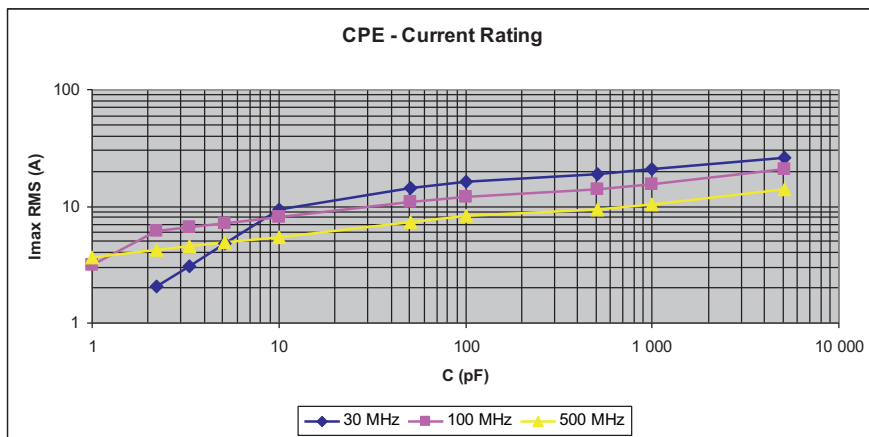
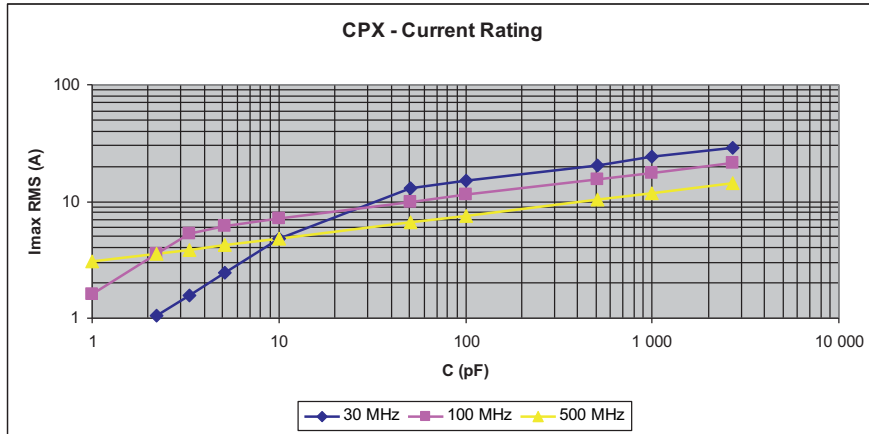


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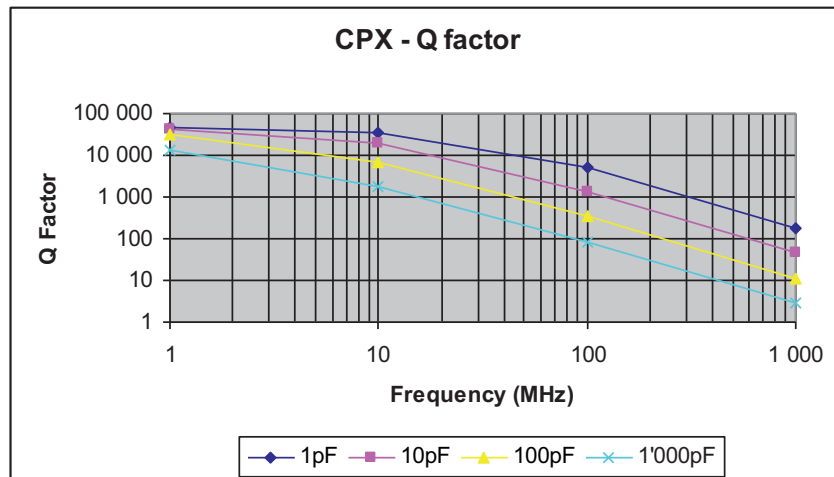
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IX.3. Current Rating



IX.4. Q Factor



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