

CPX Series

RF Power Capacitors

DESCRIPTION

Low ESR/ESL
 Porcelain Capacitors
 Excellent characteristics in current, voltage
 and power with high Q factor



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 2'700 pF
Tolerances	B, C, D below 10 pF F, G, J, K, M 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

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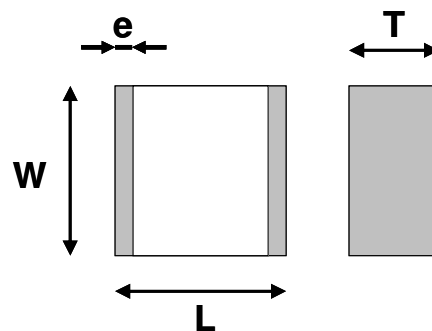
Termination Type	Code	CPX
Standard (tin-plated nickel)	S	AVAILABLE
Non-magnetic (tin-plated copper)	C	AVAILABLE

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)
Length (L)	6.20 ± 0.50 mm
Width (W)	6.60 ± 0.50 mm
Thickness (T)	3.80 mm (max.)
End-Band (e)	0.80 ± 0.60 mm



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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			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 laser marking requested leave blank if no marking requested	"E" means horizontal 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
301=300V 501=500V 122=1.2KV 152=1.5KV 252=2.5KV 362=3.6KV										

NB: for capacitance values lower than 10pF, tolerances A, 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
Parts per Reel	500

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VII. CAPACITANCE VALUES

Value (pF)	Cap. Code	X (2225)		Value (pF)	Cap. Code	X (2225)	
		Standard	Extended			Standard	Extended
1.0	1R0	2500V	3600V	56	560	2500V	3600V
1.1	1R1			62	620		
1.2	1R2			68	680		
1.3	1R3			75	750		
1.4	1R4			82	820		
1.5	1R5			91	910		
1.6	1R6			100	101		
1.7	1R7			110	111		
1.8	1R8			120	121		
1.9	1R9			130	131		
2.0	2R0			150	151		
2.1	2R1			160	161		
2.2	2R2			180	181		
2.4	2R4			200	201		
2.7	2R7			220	221		
3.0	3R0			240	241		
3.3	3R3			270	271		
3.6	3R6			300	301	1500V	
3.9	3R9			330	331		
4.3	4R3			360	361		
4.7	4R7	390	391				
5.1	5R1	430	431				
5.6	5R6	470	471	1200V			
6.2	6R2	510	511				
6.8	6R8	560	561				
7.5	7R5	620	621				
8.2	8R2	680	681				
9.1	9R1	750	751	500V			
10	100	820	821				
11	110	910	911				
12	120	1 000	102				
13	130	1 100	112				
15	150	1 200	122	300V			
16	160	1 500	152				
18	180	1 800	182				
20	200	2 200	222				
22	220	2 700	272				
24	240	3 000	302				
27	270	3 300	332				
30	300	3 900	392				
33	330	4 700	472				
36	360	5 100	512				
39	390	5 600	562				
43	430	6 800	682				
47	470	8 200	822				
51	510	10 000	103				

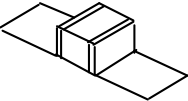
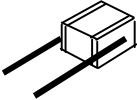
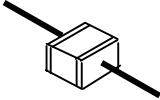
NB: special values, tolerances, higher WVDC and matching available, please consult factory.

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VIII. MECHANICAL CONFIGURATIONS

VIII.1. Lead/Ribbon and Wire Types

Configuration Type	Code	Description
	1	Micro-strip 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 : 252 CPX 470 J1L any termination material could be used
 252 CPX 470 JC1L only non-magnetic termination materials could be used

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VIII.2. Lead/Ribbon and Wire Matrix

<i>Termination Type</i>	<i>Code</i>	<i>CPX</i>
Micro-strip Ribbon	1	AVAILABLE
Radial Wire	6	AVAILABLE
Axial Wire	7	AVAILABLE

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.

<i>Termination Type</i>	<i>Code</i>	<i>CPX</i>
Micro-strip Ribbon	1	12.00 5.40
Radial Wire	6	30.00 0.60
Axial Wire	7	30.00 0.60

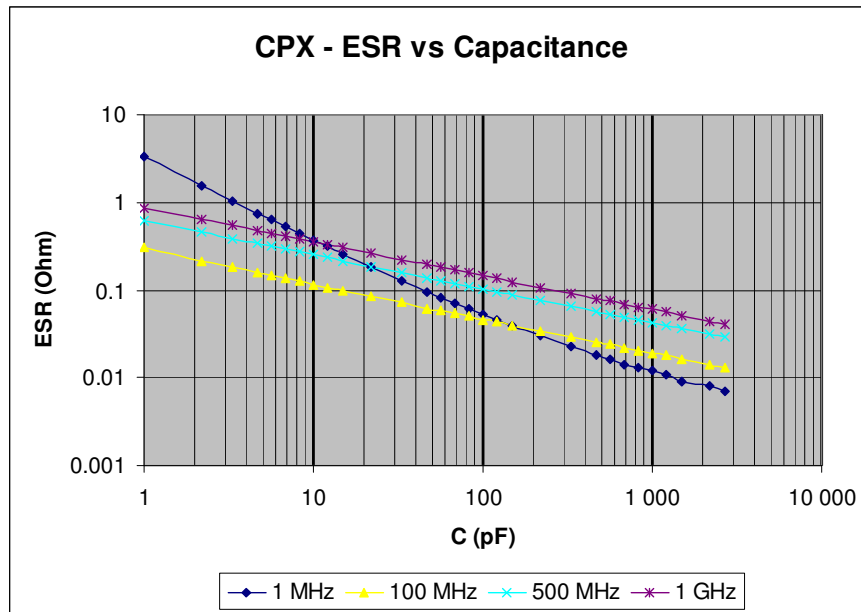
NB: dimensions are in mm.

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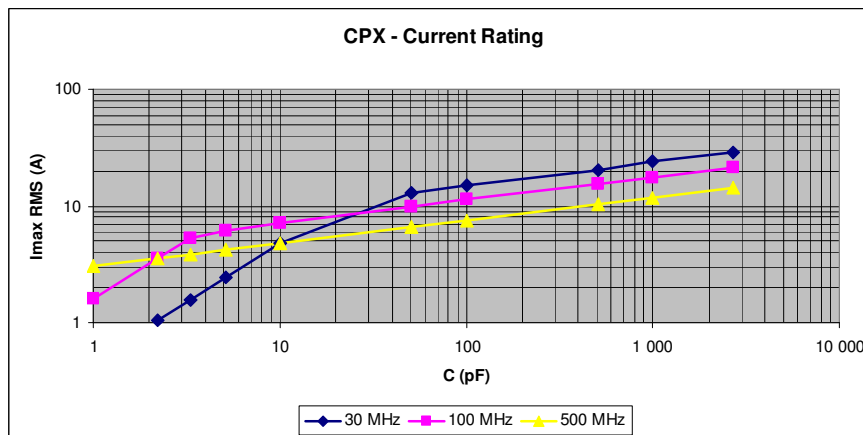
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IX. PERFORMANCE DATA

IX.1. ESR



IX.2. Current Rating

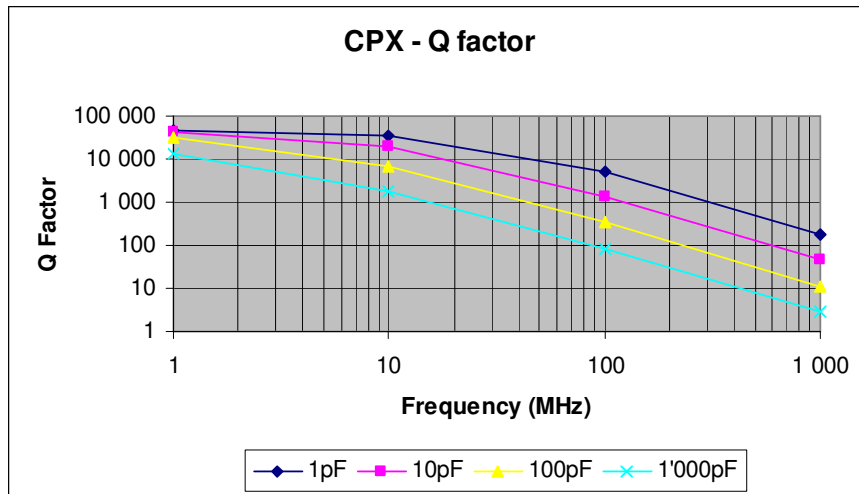


TEMEX CERAMICS reserves the right to modify herein specifications and information at any time when necessary to provide optimum performance and cost.

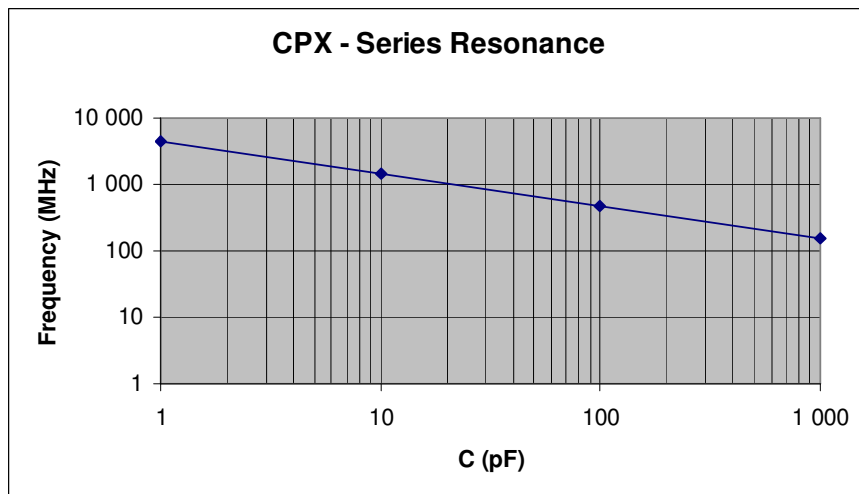
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IX.3. Q Factor



IX.4. Series Resonance Frequency



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