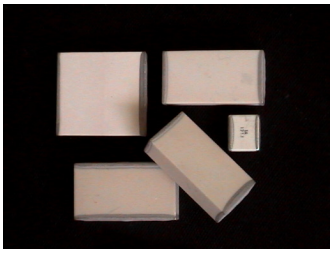
CP - High Power, High Q, RoHS

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 10'000 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	1.5 x WVDC
Aging	none
Piezo Effects	none

II. MECHANICAL SPECIFICATIONS

Parameter	*Value*	*Comment*
Case Size	X E F	2225 4040 7065

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®

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Termination Type	Code	CPX	CPE	CPF
Standard (tin-plated nickel)	S	**AVAILABLE**	**AVAILABLE**	**AVAILABLE**
Non-magnetic (silver-palladium)	A			**AVAILABLE**
Non-magnetic (tin-plated copper)	C	**AVAILABLE**	**AVAILABLE**	

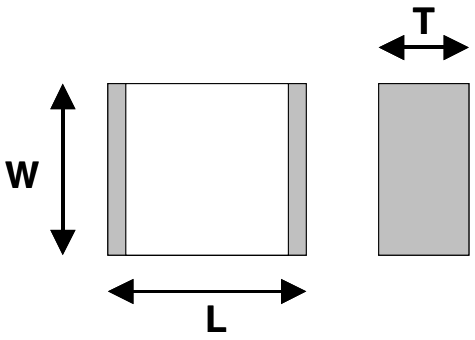
NB: P terminations are still available on request. Please consult us.

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)	F (7065)
Length (L)	6.20 ±0.50 mm	10.50 ±0.50 mm	17.80 ±0.50 mm
Width (W)	6.60 ±0.50 mm	9.50 ±0.50 mm	16.00 ±0.50 mm
Thickness (T)	3.80 mm (max.)	4.50 mm (max.)	4.00 mm (max.)



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V. HOW TO ORDER

252	CP	X	100	G	C	1	L	ROHS
voltage	dielectric	case size	capacitance	tolerance code	termination code	mechanical code	marking code	
please refer to Volt.Code given in Capacitance Values chart		X E F	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 leave blank if no mechanical requested	"L" means laser marking required leave blank if no marking 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 702=7KV								

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.
- the ROHS tag is for information only and does not belong to the reference itself. This tag is added on our stickers so that our customers can ensure that they use RoHS compliant parts on their process line.
- to specify parts with the Extended Voltage Range, TK055 must be added at the end of the designation and this information is fully part of the reference itself (to guarantee this extended voltage, capacitors come with ribbons and coating).

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VI. CAPACITANCE VALUES

Value (pF)	Cap. Code	X (2225)	E (4040)		F (7065)
			Standard	Extended	
0.5	0R5	2500V	3600V	7000V	1000V
1.0	1R0				
1.5	1R5				
1.8	1R8				
2.2	2R2				
2.7	2R7				
3.3	3R3				
3.9	3R9				
4.7	4R7				
5.6	5R6				
6.8	6R8				
10	100				
15	150				
18	180				
22	220				
27	270				
33	330				
39	390				
47	470				
56	560				
68	680				
100	101				
120	121				
150	151				
180	181				
220	221				
270	271				
330	331	1500V			
390	391				
430	431				
470	471		2500V		
560	561	1200V			
680	681				
750	751				
820	821		1600V		
1 000	102				
1 200	122		1000V		
1 500	152	500V			
1 800	182				
2 200	222	300V			
2 700	272		500V		
3 300	332				
3 900	392				
5 100	512				
5 600	562		200V		
8 200	822				
10 000	103				500V

NB: higher voltages might be available with our Extended Voltage Range series. Please consult us. Intermediate values are available within the indicated range.

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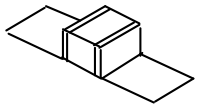
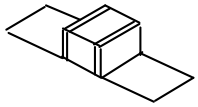
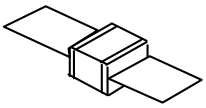
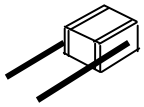
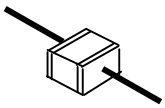
VII. MECHANICAL CONFIGURATIONS

VII.1. Lead/Ribbon and Wire Types

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

NB: when coding ribbons or wires for the description of the part, the termination has to be mentionned for A and C types to ensure that only non-magnetic materials are used.

Examples : 102 CPF 512 JA1L is valid
362 CPE 470 JC1L is valid
362 CPE 470 JS1L is replaced by 362 CPE 470 J1L

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VII.2. Lead/Ribbon and Wire Matrix

Termination Type	Code	CPX	CPE	CPF
Micro-strip Ribbon	1	**AVAILABLE**	**AVAILABLE**	**AVAILABLE**
Short Micro-strip Ribbon	1S		**AVAILABLE**	
Axial Ribbon	2		**AVAILABLE**	
Radial Wire	6	**AVAILABLE**	**AVAILABLE**	**AVAILABLE**
Axial Wire	7	**AVAILABLE**	**AVAILABLE**	

VII.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	CPF
Micro-strip Ribbon	1	8.00 5.40	16.00 8.90	2.50 15.00
Short Micro-strip Ribbon	1S		8.50 8.90	
Axial Ribbon	2		16.00 8.90	
Radial Wire	6	30.00 0.60	30.00 0.90	30.00 0.90
Axial Wire	7	30.00 0.60	30.00 0.90	

NB: dimensions are in mm, length is the minimum value.

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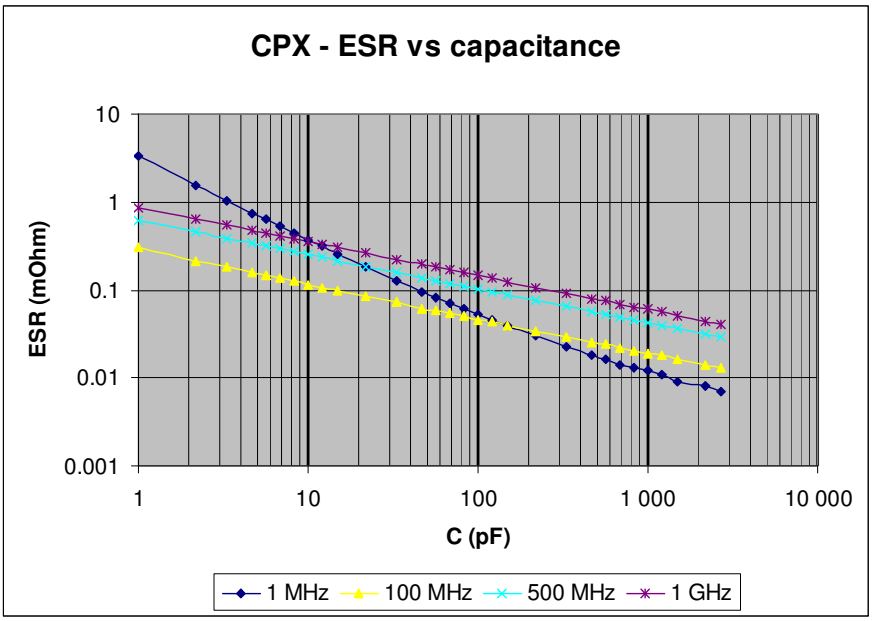
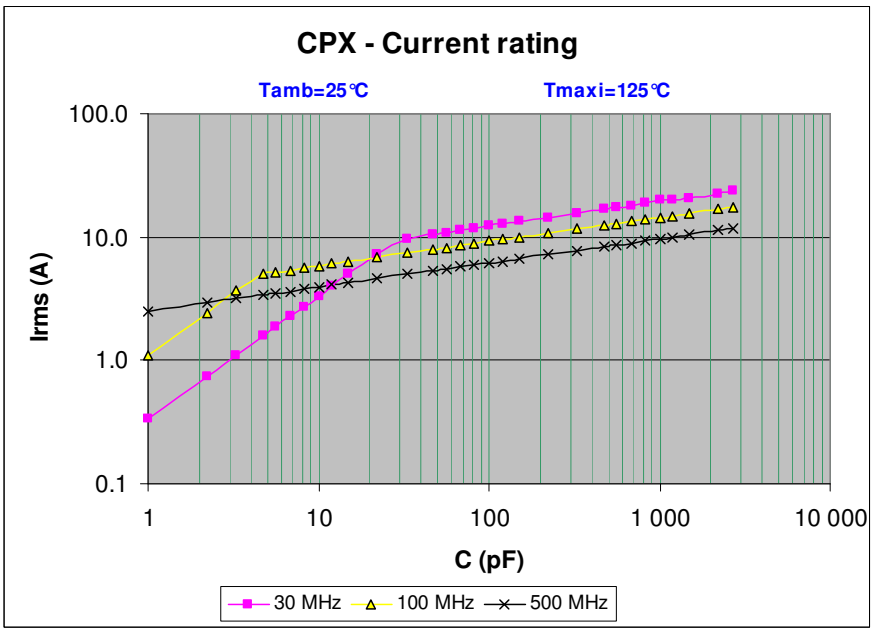
VIII. PERFORMANCE DATA

VIII.1. ESR



VIII.2. Current Rating



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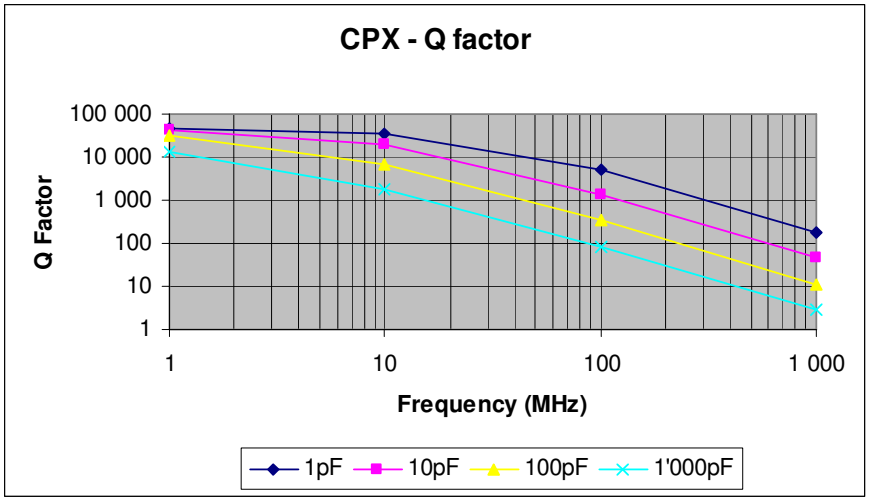
VIII.3. Q Factor



VIII.4. Series Resonance Frequency