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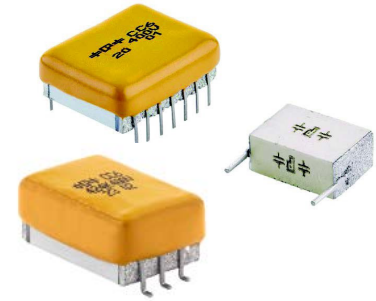
Hi-Rel CLLLC LLC LCC Resonant Capacitor Solution

Revolutionary Dielectric Material and Construction Method
Highest Ripple Current rating per C*V in the Industry

Design Challenge | Leading edge power supply designs utilize faster switching frequencies to meet ever increasing size weight and electrical efficiency constraints. It is a challenge to source buck/boost capacitors that can withstand the increased AC currents and frequency response requirements while still meeting overall size weight and cost constraints of these designs.

Solution | Paktron's CC and RC series utilize a revolutionary dielectric material and manufacturing method to achieve the highest ripple current per C*V ratings in the film capacitor industry. Paktron's CC and RC series provide all of the following characteristics needed to meet this design challenge:

- -55 to +150C operating temperature range
- High density and lightweight; <25% of equivalent MLCC
- High dV/dt, SRF exceeds 2.5MHz
- Ultra low ESR, ESL, DF
- Rugged construction, self-healing properties
- Made in Lynchburg, VA, U.S.A.



RC Angstor | Stacked Metallized Polymer Capacitor radial thru-hole mounting

CC Capstick | Stacked Metallized Polymer Capacitor Lead frame and SMD versions

Quantic Paktron, an innovator in polymer film capacitors for nearly 70 years, has designed this revolutionary Hi-Reliability resonant capacitor solution, using a novel dielectric film which has been recently commercialized, together with its proprietary interleaf technology.

Designed for Power Conversion, High Frequency AC, DC Link, DC Block, Filtering, Snubbing, SWaP Mission-Critical Applications.

Samples Available Now!

Case Study | Comparison of Different Capacitor Types for Resonant Circuits

CAPACITOR TYPE	RATED CAP (uF)	RATED VOLTAGE (VDC)	SELF - HEALING?	MAX OPERATING TEMP (°C)	WEIGHT (g)	VOLUME (CC)	ESR 500KHZ (MOHM)	SRF	CURRENT RATING 500KHZ AND 85C AMBIENT	COST
NEW PAKTRON RC/CC	0.47	400	YES	150	1.25	1.02	18.6	2.5MHZ	MIDDLE	MIDDLE
COG MLCC	0.47	500*	NO	200	5	1.03	13.8	1.1MHZ	HIGHEST	HIGHEST
METALLIZED PP	0.47	400	YES	105	3.45	2.70	14.6	1.9MHZ	LOWEST	LOWEST

- *MLCC typically has higher derating requirements due to failure mode and therefore a higher voltage rating was used in this comparison.
- Color Key is provided as a general visual guideline, designers should consider the magnitude of difference in comparison of values and focus on what considerations are most important to their specific design.

BEST
MEDIUM
LEAST FAVORABLE



> Download our Whitepaper

Selecting a Capacitor for Hi-Rel
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