

Functional Application Quick Guide

What do you need the capacitor to do in the circuit?

Functional application	What the capacitor does	Evans Hybrid Wet Tantalum	Paktron Multilayer Polymer Film	UTC Ceramic	Eulex RF & High-frequency Ceramic
Hold-Up / Ride-Through	Temporary energy support during input interruption, dropout, or load transition.	●	●	●	
Energy Storage	Stores energy for later delivery, backup, or transient support.	●	●	●	
Pulse Power	Delivers a controlled burst of stored energy or supports a high-current pulse.	●	●	●	
Power Conversion	Supports switching stages, DC-link energy, ripple-current handling, and conversion efficiency.	●	●	●	●
EMI/RFI Filtering	Reduces conducted or radiated noise on power and signal paths.		●	●	●
RF Filtering	Selects, rejects, or shapes radio-frequency energy in a signal path.			●	●
RF Tuning / Matching	Optimizes impedance, resonance, bandwidth, and RF power transfer.			●	●
AC/RF Coupling & DC Blocking	Passes AC or RF while preventing unwanted DC from reaching the next circuit stage.		●	●	●
Decoupling / Bypassing	Provides local charge and a low-impedance path for high-frequency noise and transients.	●	●	●	●
Analog / Signal Filtering	Shapes signal bandwidth, removes noise, or stabilizes an analog signal path.		●		●
Timing / Sensing	Supports timing networks, sensing circuits, oscillators, and signal-reference functions.		●	●	●
Surge / Transient Protection	Absorbs, redirects, or limits the effect of fast voltage or current disturbances.	●	●	●	●
Motor Drive / Actuator Control	Supports switching, DC-link ripple, commutation, snubbing, and local control power.	●	●	●	●
High-Temperature Electronics	Maintains capacitance and electrical performance in elevated-temperature environments.	●	●	●	●
Harsh-Environment Electronics	Supports reliability in vibration, shock, pressure, radiation, humidity, or other demanding conditions.	●	●	●	●