

Where Capacitors Impact

Electronic Warfare (EW) Systems

1. RF Sensing & Receiver Front End



CAPACITOR FUNCTIONS

- Detect and intercept RF signals across the spectrum
- High sensitivity and wide dynamic range
- RF bypass & coupling
- Impedance matching
- Wideband filtering
- ADC and receiver decoupling
- DC blocking

BEST FIT TECHNOLOGIES

Evans: Filtering, energy storage and power interruption protection

Paktron: Low-ESR for power-supply filtering and ripple suppression

UTC: Filtering, bypass, and receiver power-supply decoupling

Eulex: RF bypass, coupling, DC blocking, filtering, and impedance matching



2. RF Power Amplifiers



CAPACITOR FUNCTIONS

- Generate high power RF energy to jam, deny, or disrupt threats across frequency bands
- Wideband operation
- High pulse power
- Power amplifier stability
- Thermal and power integrity

BEST FIT TECHNOLOGIES

Evans: Power-dense bulk energy storage and pulse power support

Paktron: Low-loss for point-of-load power-supply filtering, ripple suppression, and stability

UTC: Decoupling, filtering, and power handling

Eulex: Low-loss, high-power for power amplifier impedance matching, coupling



3. Waveform Generation & Excitation



CAPACITOR FUNCTIONS

- Create complex waveforms and excitation signals
- High-speed digital and timing circuits
- Pulse energy for waveform drives
- Fire control power conditioning
- High pulse current handling

BEST FIT TECHNOLOGIES

Evans: Bulk energy storage, pulse delivery, and minimize voltage droop

Paktron: High-dv/dt for pulse support, snubbing, and waveform-drive filtering

UTC: Decoupling, filtering, and timing stability

Eulex: Low-loss RF coupling, DC blocking, filtering, and tuning for oscillator, synthesizer, and exciter paths



5. Power Management & Conditioning



CAPACITOR FUNCTIONS

- Regulate, convert, and protect power to ensure stable operation of all EW subsystems
- Input/output filtering
- POL decoupling
- Bus regulation and conversion
- Hold-up energy and overvoltage protection

BEST FIT TECHNOLOGIES

Evans: Power hold-up and minimize voltage droop

Paktron: High-ripple for converter input/output filtering and DC-bus stabilization

UTC: Point-of-load decoupling and high-frequency converter filtering

Eulex: Low-ESL bypass and high-frequency switching-noise filtering in power-conversion circuits



6. Antenna Control & Positioning



CAPACITOR FUNCTIONS

- Drive and position antennas accurately
- Motor drive decoupling
- Bus filtering
- High ripple and surge handling
- Precision targeting response

BEST FIT TECHNOLOGIES

Paktron: Motor-drive snubbing, DC-link filtering, and bus ripple suppression

UTC: Motor drive decoupling & power handling



For illustrative purposes only. System configurations and applications vary. Subsystem locations shown are representative and may vary by platform configuration. Product placement identifies potential areas of applicability and does not imply that Evans Group supplies, is qualified on, or is installed on every platform or subsystem shown.

Evans GROUP
RF Performance.
Signal Precision.
Mission Ready.

Technology Key

Evans: Hybrid Wet Tantalum

Paktron: Multilayer Polymer Film (stacked)

UTC: High-reliability Ceramic

Eulex: RF & High-frequency Ceramic

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4. Receiver Processing & Digital



CAPACITOR FUNCTIONS

- Process, digitize, and analyze intercepted signals
- High-speed data conversion
- FPGA/CPU power rails
- Low-noise power rails
- EMI filtering and signal integrity

BEST FIT TECHNOLOGIES

Evans: Power hold-up and power-supply stabilization

Paktron: Low-ESR for power-supply filtering and ripple suppression

UTC: Low-ESL for decoupling, filtering, and reference-circuit stability

Eulex: Low-ESL bypass and high-frequency filtering for analog-to-digital converter, clock, and receiver-processing circuits



THE EVANS GROUP ADVANTAGE



Mission Agility
Adapt fast.
Stay ahead.



High Performance
Maximum RF and
power performance



Signal Integrity
Clean power
and precise timing



Extreme Environments
-40°C to +250°C.
Shock, vibration, EMI



Built To Win
Rugged. Reliable.
Mission ready.