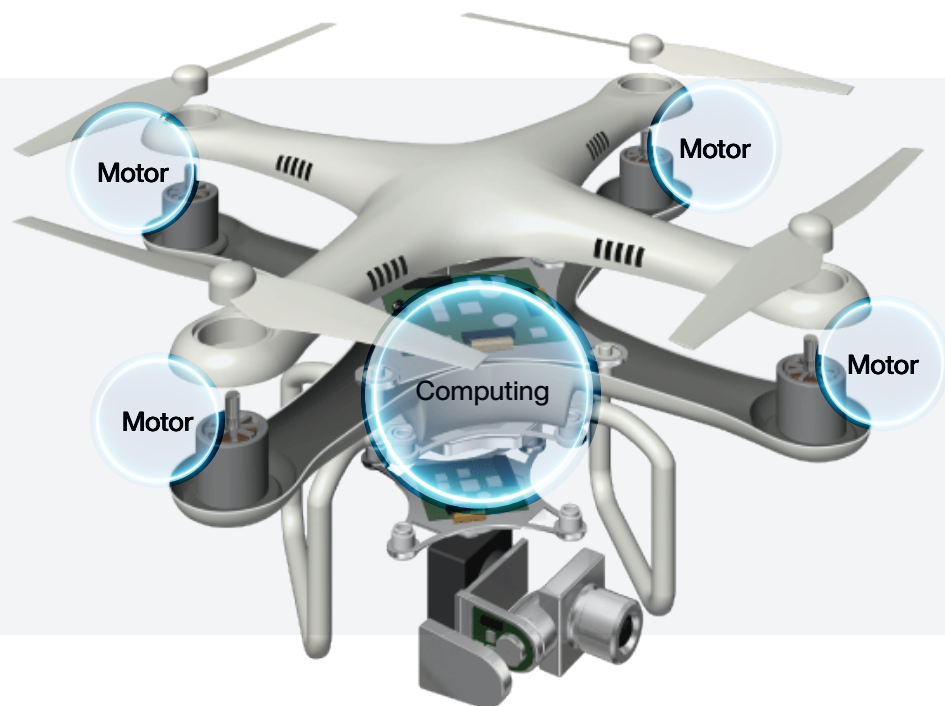


Fly Longer. Fly with Panasonic Components.

Durable, lightweight, high-efficiency solutions for next-generation drone design



Better Efficiency



Lightweight



High Endurance

Panasonic Product Lineups

Hybrid Capacitor (EEH)



- V: 25 to 80V
- C: 10 to 1000 μ F
- I_{ripp} : 0.5 to 6.1Arms
- ESR: 8 to 120m Ω
- $\varnothing$ 5x5.8 to 10x16.8mm

Polymer Aluminum Capacitor (SP-Cap)



- V: 2 to 6.3V
- C: 10 to 820 μ F
- I_{ripp} : 5.1 to 10.2Arms
- ESR: 3 to 15m Ω
- 7.3x4.3x1.0 to 7.3x4.3x2.8mm

Polymer Tantalum Capacitor (POSCAP)



- V: 2 to 35V
- C: 10 to 1500 μ F
- I_{ripp} : 0.75 to 6.1Arms
- ESR: 5 to 200m Ω
- 3.5 x 2.8 x 1.1 to 7.3 x 4.3 x 3.8mm

Polymer Aluminum Capacitor (OS-CON)



- V: 2 to 100V
- C: 3.3 to 2700 μ F
- I_{ripp} : 0.66 to 7.5Arms
- ESR: 6.5 to 260m Ω
- $\varnothing$ 4 x 5.4 to 10 x 13mm

Power Inductor (ETQP)



- L: 0.105 to 100 μ H
- DCR: 0.42m Ω to 348m Ω
- I_{sat} : 2.8 to 103A
- 5.0 x 5.5 x 3.0 to 17.2 x 15.6 x 10.5mm

High Power Resistor (ERJP)



- Size: 0402" to 1210"
- R: 1 Ω to 10M Ω
- P: 0.2 to 0.66W

Current Sensing Resistor (ERJ*BW/CW)



- Size: 0402" to 1206"
- R: down to 5m Ω
- P: 0.2 to 1W
- ΔR : $\pm$ 1%, $\pm$ 5%
- TCR: Down to 75ppm
- Double sided

Thin Film Resistor (ERA)



- Size: 0401" to 1206"
- R: 10 Ω to 1M Ω
- P: 0.05 to 0.25W
- ΔR : $\pm$ 0.05%, $\pm$ 0.1%, $\pm$ 0.25%
- TCR: Down to 10ppm

Panasonic Solutions for Drones: Ensuring Superior Endurance

Polymer Capacitors



- Ultra low ESR (down to 3mΩ):
Low losses
- High ripple current (up to 10.2A_{rms})

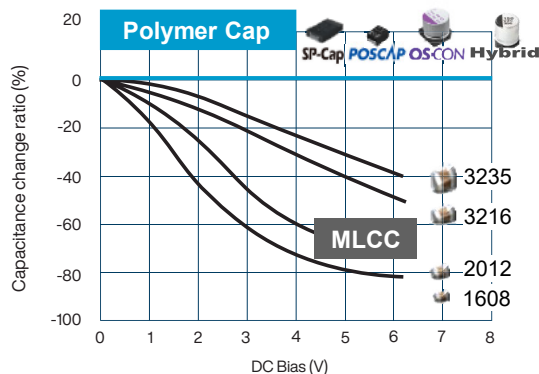


- No DC bias effect over capacitance
- Low profile (down to 1mm):
Downsize the height of the application



- High capacitance (up to 2700μF)
- Long lifetime:
No maintenance

DC Bias Characteristic



MLCC capacitance down due to material property

Metal Composite (MC) Power Inductors



- Low DCR:
Low losses/ temperature rise

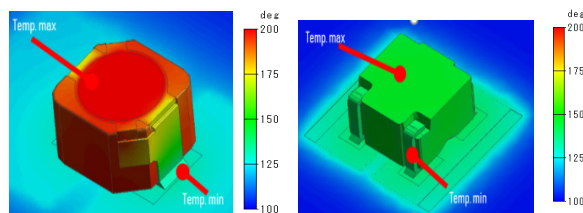


- Smaller package with larger current
- Low profile (down to 3mm):
Downsize the height of the application



- High magnetic permeability:
No hard-saturation characteristics

Heat Dissipation Ferrite vs. MC



Ferrite



MC



MC inductor has better heat dissipation

SMD Resistors



- Accurate, low-loss current sensing:
Low resistance value (down to 5mΩ) & Low TCR (down to 10ppm)

ERJ*BW/CW



- High power in a small case size:
Suitable for compact design

ERJP

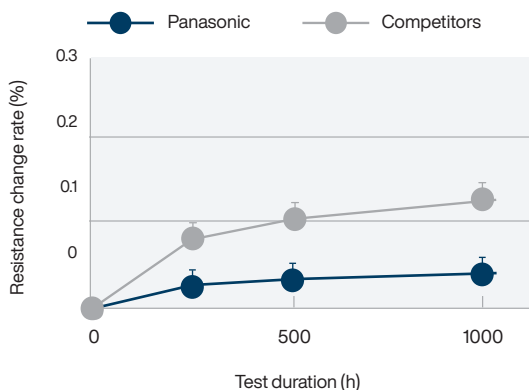


- Low resistance value drift (<±0.1%)
under high temperature and
high humidity conditions

ERA

Thin Film Resistor – ERA series

Humidity resistance test (85°C, 85% RH, rated load)



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