

A BREAKTHROUGH IN FILM TECHNOLOGY HIGHEST CAPACITANCE PER VOLUME



Polypropylene










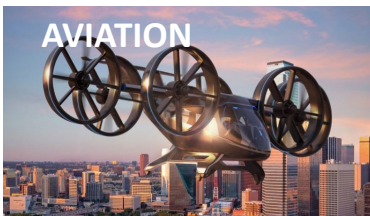
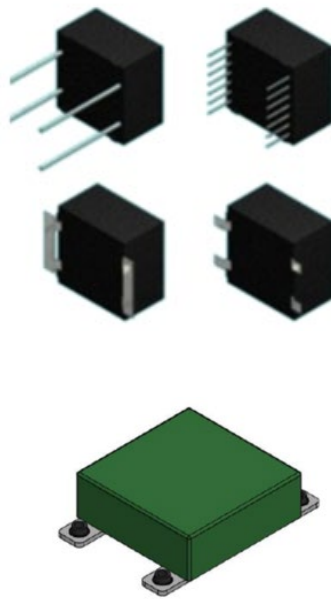
250 μ F / 600V_{DC}



MML™

Miniature Micro-Layer™ Capacitors

-  Up to 5 times lighter
-  Up to 10 times smaller
-  Up to 140°C
-  High-Reliability - 2000h life test
-  Ultra-high energy density
-  Highly customizable
-  Excellent substitute to MLCC

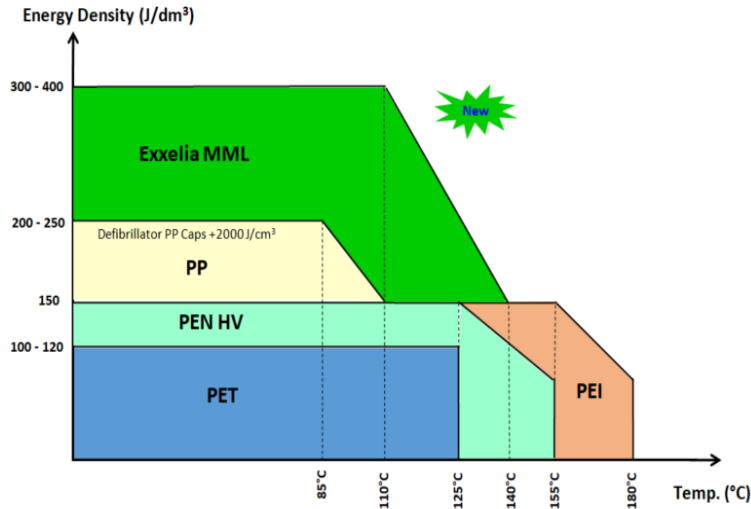


DC Links, Power Converters, Energy Management, Payloads, Flight Controls, Telemetry, SADR, Propulsion Control, Generators, Electric Motors and more

Miniature Micro-Layer™

Film (MML™) is a breakthrough in film capacitor technology with an energy density up to 4 times superior to other film dielectrics.

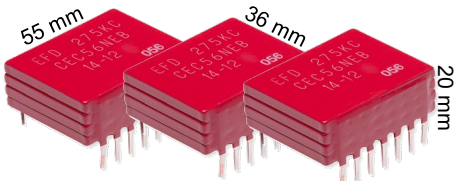
MML™ innovative technology makes **power capacitors smaller, lighter and compatible to higher temperatures.** It is perfect for **DC link, decoupling, charge-discharge** applications.



Parameter	MML™	PP	PET	PEN	PEN HV
Dielectric Constant (K)	3.2	2.2	3.2	3.0	2.9
Dissipation factor @1KHz	0.006	0.0005	0.005	0.004	0.006
Max. operating temp. - (C)	140	105	125	125	155
Self healing property	Excellent	Excellent	Good	Good	Good
Energy density - (J/dm ³)	400	250	120	150	70

Case Study Wide-Body Commercial Aircraft Air System Control Unit

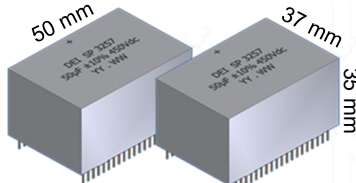
Specification : 100µF @450V in operation



X7R Ceramic

3x 47µF 500V
100µF after drift
-55°C to +125°C

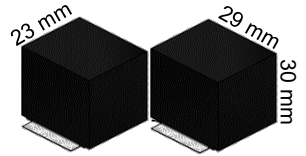
Total Volume 121cm³
Total Weight ~650g



PET

2x 50µF 450V
No drift
-55°C to +125°C

Total Volume 130cm³
Total Weight ~200g



MML™

2x 50µF 450V
No drift
-55°C to +140°C

Total Volume 40cm³
Total Weight ~65g

3 times smaller
 10 times lighter