High Energy Density Pulse Capacitors

PMS/PPS Energy storage and discharge applications

FEATURES

- Custom designs
- Heavy peak current, High over-voltage
- Metal (PMS) / insulated cases (PPS) optional
- Controlled self-healing technology
- Metalized film(MKMJ) / Foil film type(MAM)

APPLICATIONS

- Military, Oceanography
- Power Electronics, Research
- Testing, Defence

PMS/PPS HIGH ENERGY PULSE CAPACITOR

The design and manufacture of CABO energy storage capacitors that are not limited to a catalogue range. Current, voltage, size, mass and terminations are matched to the customer's requirement and application.

High lifetime expectancy and high reliability is achieved by using ultra low defect design, highly standardized process, Metallized polypropylene dielectric film incorporating an extended working temperature range and controlled self-healing capability. Elements are wound on the latest precision edge controlled automatic winding machines. High conductivity copper is used for low resistance internal connections. Capacitors are finished in powder coated corrosion free metal or insulated cases and filled with an environmentally safe oil or dry leak free resin. A very high specific energy level with 100% test specifically to meet the reliability demands.

■ELECTRICAL CHARACTERISTICS

Capacitance Range:	0.01～50,000μF
Operating Temperature:	-40℃~+85℃
Capacitance Tolerance:	±5%(J);±10%(K)
Rated Voltage (U_n):	3,000～100,000V.DC
Test Voltage between Terminal:	1.1~1.5Un 2s
Test Voltage between Terminal/Case:	2Un,1min
Insulation Resistance:	R*C≥7500MΩ·μF
Max.Altitude:	＜2000m
Flame Resistance:	UL94 V-0
Energy:	100-100,000J
Lifetime Expectancy:	$1x10^3$~$1x10^9$ shots
CABO Patents:	ZL202122781146.2 / ZL202220106845.9 ZL202122792110.4 / ZL 202122782160.4 ...

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■COMMON DESIGN

Rated Voltage	Cap (μF)	Energy (kJ)	Peak current (kA)	Inductance (nH)	Reverse Voltage	Design life	Energy density (J/cm^3)	Dimensions (mm)		
								L	W	H
3kV	10,000	45	75	120	10%	≥20,000	1.2	340	260	420
	10,000	45	75	120	10%	≥2,000	2.0	340	165	400
5kV	4,000	50	60	120	10%	≥20,000	1.2	340	260	470
	4,000	50	60	120	10%	≥2,000	2.0	340	165	445
10kV	500	45	35	150	10%	≥3,000	1.8	340	170	430
	500	25	50	155	20%	≥50,000	0.6	340	220	550
	4,000	200	250	140	10%	≥2,000	2.0	320	320	975
15kV	400	45	35	150	10%	≥20,000	1.2	340	260	420
	400	45	35	150	10%	≥2,000	1.8	340	170	430
20kV	30	20	50	45	80%	≥100,000	0.43	613	356	213
	50	10	50	60	10%	≥200,000	0.24	625	356	185
	200	40	40	160	20%	≥50,000	0.6	390	220	775
	400	80	50	160	10%	≥4,000	1.6	320	320	485
25kV	300	94	45	180	10%	≥4,000	1.6	390	170	880
	300	94	80	150	20%	≥50,000	0.6	570	220	1050
40kV	12.5	10	180	40	60%	≥25,000	0.15	686	356	280
	32	25	50	75	10%	≥40,000	0.37	686	356	280
60kV	6.0	10.8	250	40	60%	≥10,000	0.16	686	356	280
100kV	1.2	6.5	150	40	30%	≥35,000	0.1	635	356	280
	3.0	15	260	40	20%	≥10,000	0.24	635	356	280

* Applications and characteristics are for guidance only. Other values and dimensions are available on request.
* The voltage lower than 45KV were tested in lab air at sea level, Over 45kV probably were tested under oil.
* CABO reserves the right to make changes without further notice to any products herein to improve reliability, function or design.

■RELATED CAPACITOR DESIGNS

Square type design

Customization

Axial type design

CABO is a leading brand of high reliability capacitors, providing specifically designed solutions to meet the reliability needs of industrial, military, medical and specialized applications worldwide.

As a well-known brand of China, CABO capacitors are among the world's most reliable component. Focus on High-End global markets and High reliability request fields, providing customization services. With world-class design, testing and manufacturing facilities in China, enable the quick turn-around for fast and mass delivery worldwide.

Our extensive custom design and development capabilities coupled with standardized mass production capacity offerings allow us to be a competitive option for power electronics industry.