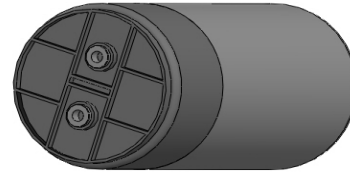


Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Application

DPM

High capacity DC Filter Capacitor consists of metallized polypropylene film, aluminium casing filled with epoxy, screw terminal and plastic deck. This capacitor is suitable for use in DC filter circuits and able to replace electrolytic capacitors.



■ FEATURES

High ripple current.

High capacitance density.

Self-healing property and high reliability.

Long lifetime.

■ APPLICATIONS

DC filtering.

Energy storage.

■ ELECTRICAL CHARACTERISTICS

Rated Voltage:	600Vdc ~ 1300Vdc
Capacitance range:	170 μ F - 2200 μ F
Capacitance Tolerance:	\pm 5%(J), \pm 10%(K)
Dissipation Factor::	\leq 0.002 (0.2%) at 100 Hz at 25°C
Test Voltage Between Terminal:	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminals to Case:	3.0 KVac 50Hz/60Hz for 10s at 25 °C
Life Expectancy:	100,000 hours at Un @ hot-spot temperature T=+70 °C
Damp Heat:	IEC 60068-2-78
Change of Temperature:	IEC 60068-2-14

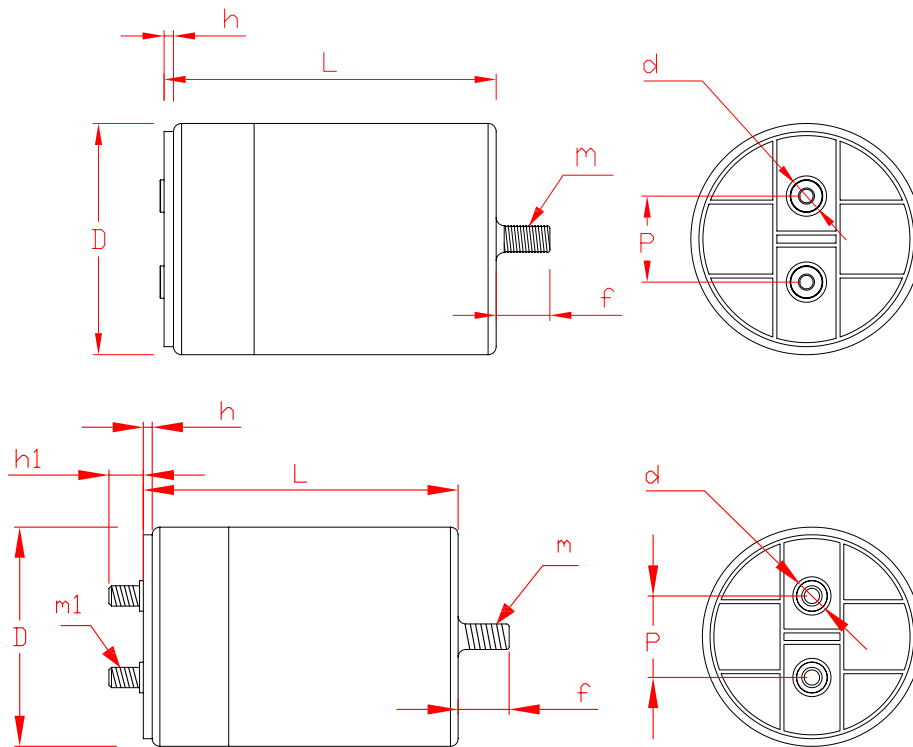
■ GENERAL TECHNICAL DATA

Application:	DC filtering / DC link
Standard:	IEC 61071
Climatic Category:	40/85/21 IEC 60068-1
Temperature Hot-spot max:	+95°C
Temperature Storage max:	+85°C
Lower Temperature T min:	-40°C
Leads	High current M6 or M8 terminals
Installation:	Any position
Protection:	Aluminium case with or without, threaded bolt M12 Plastic deck flame retardant execution UL 94 V-0, Thermosetting resin sealing UL 94 V-0
Packaging:	Packed in cardboard boxes with protection for the terminals
RoHS Compliant:	Compliant with the restricted substance requirements of Directive 2002/95/EC

Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Application

DPM

DIMENSION



D	L	h	P	T	M1	M
				Threaded insert terminations	Threaded post terminations	Mounting Stud
±2	±2	±1	±0.5			
mm	mm	mm	mm			
76	80	5	32	M6 x 10	M8 x 20	M12 x 16
76	105	5	32	M6 x 10	M8 x 20	M12 x 16
86	80	5	32	M6 x 10	M8 x 20	M12 x 16
86	105	5	32	M6 x 10	M8 x 20	M12 x 16
86	126	5	32	M6 x 10	M8 x 20	M12 x 16
86	142.5	5	32	M6 x 10	M8 x 20	M12 x 16
86	151	5	32	M6 x 10	M8 x 20	M12 x 16
86	161	5	32	M6 x 10	M8 x 20	M12 x 16
86	178.5	5	32	M6 x 10	M8 x 20	M12 x 16
86	180	5	32	M6 x 10	M8 x 20	M12 x 16
86	205	5	32	M6 x 10	M8 x 20	M12 x 16
86	225	5	32	M6 x 10	M8 x 20	M12 x 16
116	105	5	50	M6 x 10	M8 x 20	M12 x 16
116	155	5	50	M6 x 10	M8 x 20	M12 x 16
116	161	5	50	M6 x 10	M8 x 20	M12 x 16
116	170	5	50	M6 x 10	M8 x 20	M12 x 16
116	180	5	50	M6 x 10	M8 x 20	M12 x 16
116	185	5	50	M6 x 10	M8 x 20	M12 x 16
116	205	5	50	M6 x 10	M8 x 20	M12 x 16
116	230	5	50	M6 x 10	M8 x 20	M12 x 16
116	235	5	50	M6 x 10	M8 x 20	M12 x 16
116	265	5	50	M6 x 10	M8 x 20	M12 x 16
116	330	5	50	M6 x 10	M8 x 20	M12 x 16
116	340	5	50	M6 x 10	M8 x 20	M12 x 16
136	235	5	50	M6 x 10	M8 x 20	M12 x 16
136	265	5	50	M6 x 10	M8 x 20	M12 x 16
136	340	5	50	M6 x 10	M8 x 20	M12 x 16

Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Application

DPM

DIMENSION (Part Number Reference: Threaded Insert Terminations)

Cap Value	Vdc	Dimensions			Irms	Peak	ESR	ESL	Thermal	dv/dt	Pkg	Part Number
		D	L	P	10KHz 50°C	Current	1KHz		Res		Qty	
		mm	mm	mm	A	A	mΩ		nH		°C/W	
650	600	86	105	32	70	3900	1.2	60	5.0	6.0	8	DPM-657K2RJ32F5
800	600	86	142.5	32	75	6400	1.5	60	3.6	8	8	DPM-807K2RJ32F5
1000	600	86	161	32	60	7500	1.0	65	3.7	7.5	8	DPM-108K2RJ32F5
220	700	76	80	32	50	3080	2.6	40	7.2	14	12	DPM-227K2SJ32F5
300	700	86	80	32	55	4200	2.4	40	6.5	14.0	8	DPM-307K2SJ32F5
420	700	86	105	32	58	2940	2.5	50	4.2	7	8	DPM-427K2SJ32F5
450	700	86	126	32	65	3150	2.3	50	4.6	7	8	DPM-457K2SJ32F5
550	700	86	142.5	32	65	3300	2.5	60	4.1	6	8	DPM-557K2SJ32F5
290	800	76	105	32	50	3045	4	60	4.0	10.5	12	DPM-297K2KJ32F5
300	800	86	105	32	60	2550	2.5	60	3.8	8.5	8	DPM-307K2KJ32F5
390	800	86	105	32	62	3315	2.9	60	3.6	8.5	8	DPM-397K2KJ32F5
450	800	86	142.5	32	65	3600	2.4	60	3.2	8	8	DPM-457K2KJ32F5
460	800	86	151	50	70	3680	2.3	50	3.4	8.0	8	DPM-467K2KJ32F5
850	800	86	205	50	60	4250	1.8	50	3.6	5	8	DPM-857K2KJ32F5
1000	800	116	155	50	65	7000	1.8	60	2.6	7	5	DPM-108K2KJ50F5
1600	800	116	180	50	75	9600	3.0	65	3.4	6	5	DPM-168K2KJ50F5
480	900	86	142.5	32	65	4080	2	50	4.2	8.5	8	DPM-487K2UJ32F5
1000	900	116	155	50	68	7000	1.6	80	3	7	5	DPM-108K2UJ50F5
1500	900	116	185	50	60	12000	2.0	65	4.8	8	5	DPM-158K2UJ50F5
1800	900	116	235	50	100	14400	0.8	60	2.4	8	5	DPM-188K2UJ50F5
900	1000	116	155	50	72	10800	2.9	85	2.6	12.0	5	DPM-907K3AJ50F5
1300	1000	116	230	50	100	9750	1.5	100	2.4	7.5	5	DPM-138K3AJ50F5
1600	1000	116	230	50	100	8000	1.5	75	2.1	5	5	DPM-168K3AJ50F5
170	1100	76	105	32	50	1700	3.2	60	3.8	10	12	DPM-177K3LJ32F5
240	1100	86	105	32	55	3000	1.7	50	3.8	12.5	8	DPM-247K3LJ32F5
300	1100	86	142.5	32	58	2550	2.0	60	2.7	8.5	8	DPM-307K3LJ32F5
330	1100	86	142.5	32	60	2805	3.0	60	3.3	8.5	8	DPM-337K3LJ32F5
400	1100	86	142.5	32	60	3400	2.8	60	3.3	8.5	8	DPM-407K3LJ32F5
420	1100	86	142.5	32	58	3570	2.3	85	3.0	8.5	8	DPM-427K3LJ32F5
420	1100	86	142.5	32	50	2940	3.4	85	3.59	7	8	DPM-427K3LJ32F5*
420	1100	86	161	32	75	5460	1.5	85	3.2	13	8	DPM-427K3LJ32F5
420	1100	86	161	32	65	2520	3.6	85	3.4	6	8	DPM-427K3LJ32F5*
500	1100	86	180	32	72	6000	1.5	80	3	12	8	DPM-507K3LJ32F5
600	1100	86	225	32	65	6300	2.5	60	2	10.5	8	DPM-607K3LJ32F5
720	1100	116	155	50	69	9360	3.2	85	2.6	13	5	DPM-727K3LJ50F5
800	1100	116	170	50	80	8800	1.5	55	2.4	11.0	5	DPM-807K3LJ50F5
1000	1100	116	205	50	85	10000	2.2	50	2.5	10	5	DPM-108K3LJ50F5
1100	1100	116	235	50	90	9900	1.3	60	2.1	9	5	DPM-118K3LJ50F5
1600	1100	116	340	50	100	12000	2.3	100	2.4	7.5	5	DPM-168K3LJ50F5
1700	1100	136	235	50	110	10200	1.5	60	1.7	6.0	2	DPM-178K3LJ50F5
2000	1100	136	265	50	120	12000	1.2	60	1.3	6	2	DPM-208K3LJ50F5
2200	1100	136	340	50	120	13200	1.2	60	1	6	2	DPM-228K3LJ50F5
420	1200	86	178.5	32	60	4200	3.0	70	3.2	10	8	DPM-427K3MJ32F5
540	1200	86	225	32	60	5400	2.5	85	3.3	10.0	8	DPM-547K3MJ32F5
950	1200	116	235	50	90	9500	1.5	75	2.1	10	5	DPM-957K3MJ50F5
1000	1200	116	235	50	90	10000	1.5	75	2.1	10	5	DPM-108K3MJ50F5
1200	1200	116	265	50	70	12000	0.8	50	1.5	10	5	DPM-128K3MJ50F5
250	1300	86	142.5	32	40	2000	4	85	5.4	8.0	8	DPM-257K6AJ32F5
330	1300	86	180	32	55	4950	2.6	80	3.4	15	8	DPM-337K6AJ32F5
420	1300	116	105	32	50	6300	2.3	40	2.1	15	5	DPM-427K6AJ50F5
470	1300	116	161	50	65	5640	1.5	80	7.1	12	5	DPM-477K6AJ50F5
1100	1300	116	330	50	85	9900	2.7	200	2.1	9.0	5	DPM-118K6AJ50F5

Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Application

DPM

DIMENSION (Part Number Reference: Threaded Post Termination)

Cap Value	Vdc	Dimensions			Irms	Peak	ESR	ESL	Thermal	dv/dt	Pkg	Part Number
		D	L	P	10KHz 50°C	Current	1KHz		Res		Qty	
		mm	mm	mm	A	A	mΩ		nH		°C/W	
650	600	86	105	32	70	3900	1.2	60	5.0	6.0	8	DPM-657K2RC32HA
800	600	86	142.5	32	75	6400	1.5	60	3.6	8	8	DPM-807K2RC32HA
1000	600	86	161	32	60	7500	1.0	65	3.7	7.5	8	DPM-108K2RC32HA
220	700	76	80	32	50	3080	2.6	40	7.2	14	12	DPM-227K2SC32HA
300	700	86	80	32	55	4200	2.4	40	6.5	14.0	8	DPM-307K2SC32HA
420	700	86	105	32	58	2940	2.5	50	4.2	7	8	DPM-427K2SC32HA
450	700	86	126	32	65	3150	2.3	50	4.6	7	8	DPM-457K2SC32HA
550	700	86	142.5	32	65	3300	2.5	60	4.1	6	8	DPM-557K2SC32HA
290	800	76	105	32	50	3045	4	60	4.0	10.5	12	DPM-297K2KC32HA
300	800	86	105	32	60	2550	2.5	60	3.8	8.5	8	DPM-307K2KC32HA
390	800	86	105	32	62	3315	2.9	60	3.6	8.5	8	DPM-397K2KC32HA
450	800	86	142.5	32	65	3600	2.4	60	3.2	8	8	DPM-457K2KC32HA
460	800	86	151	50	70	3680	2.3	50	3.4	8.0	8	DPM-467K2KC32HA
850	800	86	205	50	60	4250	1.8	50	3.6	5	8	DPM-857K2KC32HA
1000	800	116	155	50	65	7000	1.8	60	2.6	7	5	DPM-108K2KC50HA
1600	800	116	180	50	75	9600	3.0	65	3.4	6	5	DPM-168K2KC50HA
480	900	86	142.5	32	65	4080	2	50	4.2	8.5	8	DPM-487K2UC32HA
1000	900	116	155	50	68	7000	1.6	80	3	7	5	DPM-108K2UC50HA
1500	900	116	185	50	60	12000	2.0	65	4.8	8	5	DPM-158K2UC50HA
1800	900	116	235	50	100	14400	0.8	60	2.4	8	5	DPM-188K2UC50HA
900	1000	116	155	50	72	10800	2.9	85	2.6	12.0	5	DPM-907K3AC50HA
1300	1000	116	230	50	100	9750	1.5	100	2.4	7.5	5	DPM-138K3AC50HA
1600	1000	116	230	50	100	8000	1.5	75	2.1	5	5	DPM-168K3AC50HA
170	1100	76	105	32	50	1700	3.2	60	3.8	10	12	DPM-177K3LC32HA
240	1100	86	105	32	55	3000	1.7	50	3.8	12.5	8	DPM-247K3LC32HA
300	1100	86	142.5	32	58	2550	2.0	60	2.7	8.5	8	DPM-307K3LC32HA
330	1100	86	142.5	32	60	2805	3.0	60	3.3	8.5	8	DPM-337K3LC32HA
400	1100	86	142.5	32	60	3400	2.8	60	3.3	8.5	8	DPM-407K3LC32HA
420	1100	86	142.5	32	50	3570	2.3	85	3.0	8.5	8	DPM-427K3LC32HA
420	1100	86	142.5	32	50	2940	3.4	85	3.59	7	8	DPM-427K3LC32HA*
420	1100	86	161	32	75	5460	1.5	85	3.2	13	8	DPM-427K3LC32HA
420	1100	86	161	32	65	2520	3.6	85	3.4	6	8	DPM-427K3LC32HA*
500	1100	86	180	32	72	6000	1.5	80	3	12	8	DPM-507K3LC32HA
600	1100	86	225	32	65	6300	2.5	60	2	10.5	8	DPM-607K3LC32HA
720	1100	116	155	50	69	9360	3.2	85	2.6	13	5	DPM-727K3LC50HA
800	1100	116	170	50	80	8800	1.5	55	2.4	11.0	5	DPM-807K3LC50HA
1000	1100	116	205	50	85	10000	2.2	50	2.5	10	5	DPM-108K3LC50HA
1100	1100	116	235	50	90	9900	1.3	60	2.1	9	5	DPM-118K3LC50HA
1600	1100	116	340	50	100	12000	2.3	100	2.4	7.5	5	DPM-168K3LC50HA
1700	1100	136	235	50	110	10200	1.5	60	1.7	6.0	2	DPM-178K3LC50HA
2000	1100	136	265	50	120	12000	1.2	60	1.3	6	2	DPM-208K3LC50HA
2200	1100	136	340	50	120	13200	1.2	60	1	6	2	DPM-228K3LC50HA
420	1200	86	178.5	32	60	4200	3.0	70	3.2	10	8	DPM-427K3MC32HA
540	1200	86	225	32	60	5400	2.5	85	3.3	10.0	8	DPM-547K3MC32HA
950	1200	116	235	50	90	9500	1.5	75	2.1	10	5	DPM-957K3MC50HA
1000	1200	116	235	50	90	10000	1.5	75	2.1	10	5	DPM-108K3MC50HA
1200	1200	116	265	50	70	12000	0.8	50	1.5	10	5	DPM-128K3MC50HA
250	1300	86	142.5	32	40	2000	4	85	5.4	8.0	8	DPM-257K6AC32HA
330	1300	86	180	32	55	4950	2.6	80	3.4	15	8	DPM-337K6AC32HA
420	1300	116	105	32	50	6300	2.3	40	2.1	15	5	DPM-427K6AC50HA
470	1300	116	161	50	65	5640	1.5	80	7.1	12	5	DPM-477K6AC50HA
1100	1300	116	330	50	85	9900	2.7	200	2.1	9.0	5	DPM-118K6AC50HA

Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Application

DPM

PART NUMBERING SYSTEMS

EXPLANATION OF ARTICLE CODE

D P M -	1 6 7	K	3 M	C	4 5	F	5
①	②	③	④	⑤	⑥	⑦	⑧

① Capacitor Type

TYPE	DPM
CODE	DPM-

② Rated Capacitance (EIA Code)

The rated Capacitance value of the product is indicated with three digits. The first two digits indicate the two most significant digits of the capacitance value, and the third digit gives the number of following zeroes. This gives the capacitance value expressed in picofarads.

Examples:

105	=	1,000,000pF	=	1,000nF	=	1uF
106	=	10,000,000pF	=	10,000nF	=	10uF

③ Capacitance Tolerance

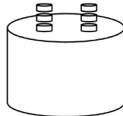
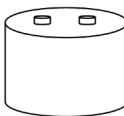
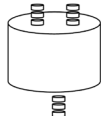
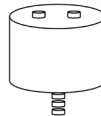
TOLERANCE	±5%	±10%	±20%
CODE	J	K	M

④ Rated Voltage

Code for DC Voltage: (expressed in one digit & one letter code)

VOLTAGE	600V	630V	700V	800V	850V	900V	1000V	1100V	1200V	1300V
CODE	2R	2J	2S	2K	2T	2U	3A	3L	3M	6A

⑤ Terminal Configuration

FORM	THREADED STUD	THREADED INSERT	THREADED STUD + MOUNTING	THREADED INSERT + MOUNTING
CODE	A	B	C	J
FORM STYLE				

⑥ Terminal Pitch (mm)

LEAD SPACE	32	45.0	50.0
CODE	32	45	50

⑦ Terminal

TERMINAL	M4	M5	M6	M8	M10	M12
CODE	CD	E	F	H	J	L

⑧ Terminal Length (mm)

LEAD LENGTH	20.0	15.0	16.0	2.0	4.0	5.0	9.0	28.0	22.0
CODE	A	B	C	2	4	5	9	D	E

Metallized Polypropylene Film Capacitor (Aluminium Can) DC-Link Application

DPM

■ PERFORMANCE NOTES

R_s : Equivalent series resistance - Ohmic resistances (Ohm)

Dielectric Dissipation Factor: $\tan\delta_0$ (Polypropylene: 0.0002)

T_a : Ambient temperature

R_{th} : Thermal resistance °C/W, indicates hot spot temperature rise due to power dissipation losses

P_j : Joule losses $P_j = R_s \cdot I_{rms}^2$

P_d : Dielectric losses

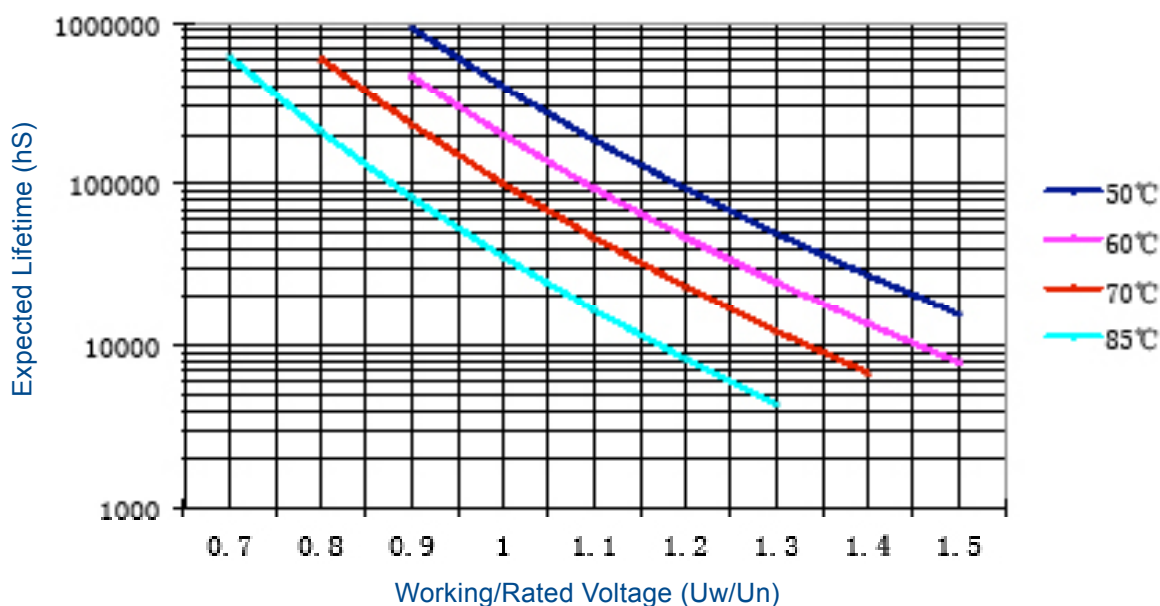
$$P_d = X_c \cdot I_{rms}^2 \cdot \tan\delta = I_{rms}^2 / (2 \cdot \pi \cdot f \cdot C) \cdot \tan\delta$$

T_{hs} : Hot spot temperature within the capacitor

$$T_{hs} = T_a + (P_j + P_d) \cdot R_{th}$$

Design life: 100,000 hours at U_n @ Hot-Spot temperature $\leq +70^\circ\text{C}$

Expected Life Curve



■ CAUTIONS AND WARNING

- In case of dents of more than 1 mm depth or any other mechanical damage, capacitors must not be used at all.
- To ensure the full functionality, a minimum space of 12 mm has to be kept above each capacitor.
- Do not handle the capacitor before it is discharged.
- Check tightness of the connection/terminals periodically.
- It is necessary to verify that maximum hot-spot temperature is not exceeded at extreme condition.
- The threaded bottom stud of the capacitor has to be used for grounding. The maximum tightening torque is 15Nm
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments regular maintenance and cleaning especially of the terminals is required to avoid conductive path between phase / or phase and ground.
- Do not have unlimited service life expectancy, the max service life expectancy may vary depending on the application the capacitor is used in.