DCB - *(Expanded range; new 450Vdc rating - In Progress)*

Metallized polypropylene film capacitor
MKP - DC Link Capacitor - small size
2/4 x terminals execution

Main applications
DC capacitor for medium-low power DC-Link applications in inverters, AC/ DC motor controls and welding equipments. **Not suitable for AC applications: refer to MHBA / MHBS series**

Dielectric
Polypropylene

Electrodes
Vacuum deposited metal layers

Coating
Solvent resistant plastic case with resin sealing (UL 94 V-0). Flame retardant execution

Construction
Extended metallized film (refer to general technical information)

Terminals
Tinned copper wire (lead free). 2 and 4 terminals execution.

Degree of protection
IP00

Installation
Whatever position assuring correct heat dissipation. Arrangement of many components with box walls in contact not admitted; suggested minimum distance between side by side elements ≥ 1/8 of the box thickness (B size)

Reference standard
IEC 61071, IEC 60068, RoHS compliant

Climatic category
40/85/56 (IEC 60068/1), GPE (DIN40040)

Operating temperature range (case)
-40°...+85°C (at +85°C without power applied)

Max. permissible ambient temperature
+70°C (operation at rated power, current, voltage and natural cooling)

Rated capacitance (Cr)
7,5µF to 125µF. Refer to article table

Capacitance tolerance (at 1kHz)
±10% (code=K), ±5% (code=J). Other tolerances upon request

Capacitance temperature coefficient
Refer to graphs in general technical information

Long term stability (at 1 kHz)
Capacitance variation ≤ ±1% after a period of 2 years at standard environmental conditions

Rated voltage (Ur)
450, 700, 900, 1100 Vdc

Non recurrent surge voltage (Upk)
560, 875, 1125, 1375 Vdc

Max. applicable peak to peak ripple voltage (Upp)
0,2 x Urdc (respecting current ratings)

Max. repetitive peak voltage (Upkr)
1,15 x Ur (30 minutes max./ day)

Self inductance
≤ 1nH/mm of capacitor pitch

Maximum pulse rise time
Refer to article table

Maximum peak current (Ipeak)
Refer to article table

Dissipation factor (DF), max.
Tgδ x10^{-4}, measured at 25±5°C, 1kHz

Cr ≤ 20µF	20µF < Cr ≤ 50µF	50µF < Cr ≤ 75µF	Cr > 75µF
20	30	37	45

Insulation resistance (IR)
≥ 3000s when measured between terminals, at 25±°C, after 1 minute of electrification at 100Vdc

Test voltage between terminals (Ut)
1,5xUr (DC) applied for 10s at 25±5°C

Test voltage between terminals and case (Utc)
3kV 50÷60Hz applied for 60s at 25±5°C

Damp heat test (steady state)
Test conditions:
Temperature= +40±2°C
Relative humidity=93±2%
Test duration= 56 days

Performance:
Capacitance change ≤ ±3%
DF change ≤ 0.0010 at 1kHz for Cr≤ 60µF
DF change ≤ 0.0015 at 1kHz for Cr> 60µF
IR≥ 50% of initial limit value

Typical capacitance change versus operating time
-5% after 100'000 hours at Ur

Life expectancy
≥ 100'000 hours (Ur)

Failure quota
300/10^9 component hours

Resistance to soldering heat test
Test conditions:
Solder bath temperature= +260±5°C
Dipping time (with heat screen)= 10±1s

Performance:
Capacitance change ≤ ±1%
DF change ≤ 0.0010 at 1kHz
IR≥ 50% of initial limit value

Warning: this specification must be completed with the data given in the "General technical information" chapter

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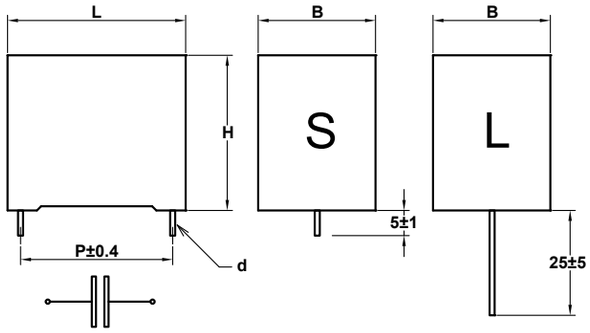
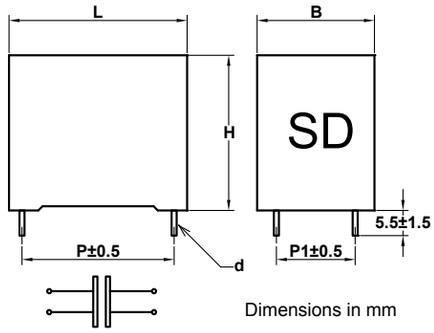
2/4 x terminals execution

2 terminals execution



4 terminals execution



Dimensions in mm

DCB article table (different values available upon request)

Ur	Upk	Upkr	Cap.	Dimension in mm						du/dt	Ipeak	Irms[2]	ESR[3]	ICEL Code[1]
Vdc	Vdc	Vdc	µF	B	H	L	d	P	P1	V/µs	A	A	mΩ	
450	560	515	25	22	33,5	42,5	1,2	37,5	-	10	250	8	9,3	DCB1455250*J#
450	560	515	30	20	40	41,5	1,2	37,5	-	10	300	10	8,3	DCB1455300*J#
450	560	515	40	28	37	42,5	1,2	37,5	-	10	400	11	7,1	DCB1455400*J#
450	560	515	40	28	37	42,5	1,2	37,5	10,2	10	400	12,5	6,4	DCB1455400*JSD
450	560	515	50	30	45	42,5	1,2	37,5	-	10	500	13	6,3	DCB1455500*J#
450	560	515	50	30	45	42,5	1,2	37,5	20,3	10	500	15	5,5	DCB1455500*JSD
450	560	515	70	30	45	57,5	1,2	52,5	-	7	490	14	6,0	DCB1455700*R#
450	560	515	70	30	45	57,5	1,2	52,5	20,3	7	490	15,5	5,3	DCB1455700*RSD
450	560	515	100	35	50	57,5	1,2	52,5	20,3	7	700	19,5	4,2	DCB1456100*RSD
450	560	515	125	38	57,5	57,5	1,2	52,5	20,3	7	875	21,5	3,7	DCB1456125*RSD
700	875	805	12,5	22	30	42,5	1,2	37,5	-	13	162,5	7,5	11	DCB1705125*J#
700	875	805	15	22	33,5	42,5	1,2	37,5	-	13	195	8	9,5	DCB1705150*J#
700	875	805	15	22	33,5	42,5	1,2	37,5	10,2	13	195	9,5	8,7	DCB1705150*JSD
700	875	805	20	28	37	42,5	1,2	37,5	-	13	260	10	7,9	DCB1705200*J#
700	875	805	20	28	37	42,5	1,2	37,5	10,2	13	260	12	7,1	DCB1705200*JSD
700	875	805	22	28	37	42,5	1,2	37,5	-	13	286	10,5	7,5	DCB1705220*J#
700	875	805	22	28	37	42,5	1,2	37,5	10,2	13	286	12,5	6,7	DCB1705220*JSD
700	875	805	30	30	45	42,5	1,2	37,5	-	13	390	13	6,3	DCB1705300*J#
700	875	805	30	30	45	42,5	1,2	37,5	20,3	13	390	15	5,5	DCB1705300*JSD
700	875	805	45	30	45	57,5	1,2	52,5	-	10	450	14	6,5	DCB1705450*R#
700	875	805	45	30	45	57,5	1,2	52,5	20,3	10	450	16	5,7	DCB1705450*RSD
700	875	805	55	35	50	57,5	1,2	52,5	-	10	550	14	5,7	DCB1705550*R#
700	875	805	55	35	50	57,5	1,2	52,5	20,3	10	550	19	4,9	DCB1705550*RSD
700	875	805	60	35	50	57,5	1,2	52,5	-	10	600	14	5,5	DCB1705600*RSD
700	875	805	60	35	50	57,5	1,2	52,5	20,3	10	600	19,5	4,7	DCB1705600*RSD
700	875	805	75	38	57,5	57,5	1,2	52,5	20,3	10	750	20,5	4,3	DCB1705750*RSD
900	1125	1035	10	22	33,5	42,5	1,2	37,5	-	16	160	7,5	11	DCB1905100*J#
900	1125	1035	12	20	40	41,5	1,2	37,5	-	16	192	9	9,7	DCB1905120*J#
900	1125	1035	12	20	40	41,5	1,2	37,5	10,2	16	192	10,5	8,9	DCB1905120*JSD
900	1125	1035	15	28	37	42,5	1,2	37,5	-	16	240	10	8,5	DCB1905150*J#
900	1125	1035	15	28	37	42,5	1,2	37,5	10,2	16	240	11,5	7,7	DCB1905150*JSD
900	1125	1035	16	24	44	41,5	1,2	37,5	-	16	256	11	8,2	DCB1905160*J#
900	1125	1035	16	24	44	41,5	1,2	37,5	10,2	16	256	12,5	7,4	DCB1905160*JSD
900	1125	1035	20	30	45	42,5	1,2	37,5	-	16	320	12	7,2	DCB1905200*J#
900	1125	1035	20	30	45	42,5	1,2	37,5	20,3	16	320	14	6,4	DCB1905200*JSD
900	1125	1035	30	30	45	57,5	1,2	52,5	-	11	330	13	7,0	DCB1905300*R#
900	1125	1035	30	30	45	57,5	1,2	52,5	20,3	11	330	15,5	6,2	DCB1905300*RSD
900	1125	1035	40	35	50	57,5	1,2	52,5	-	11	440	14	6,0	DCB1905400*R#
900	1125	1035	40	35	50	57,5	1,2	52,5	20,3	11	440	19	5,2	DCB1905400*RSD
900	1125	1035	50	38	57,5	57,5	1,2	52,5	20,3	11	550	20,5	4,6	DCB1905500*RSD
1100	1375	1265	7,5	22	33,5	42,5	1,2	37,5	-	20	150	7	12	DCB2114750*J#
1100	1375	1265	10	28	37	42,5	1,2	37,5	-	20	200	9	9,8	DCB2115100*J#
1100	1375	1265	10	28	37	42,5	1,2	37,5	10,2	20	200	10,5	8,9	DCB2115100*JSD
1100	1375	1265	12,5	30	45	42,5	1,2	37,5	-	20	250	11	8,5	DCB2115125*J#
1100	1375	1265	12,5	30	45	42,5	1,2	37,5	20,3	20	250	12,5	7,7	DCB2115125*JSD
1100	1375	1265	20	30	45	57,5	1,2	52,5	-	13	260	12	8,0	DCB2115200*R#
1100	1375	1265	20	30	45	57,5	1,2	52,5	20,3	13	260	14	7,2	DCB2115200*RSD
1100	1375	1265	25	35	50	57,5	1,2	52,5	-	13	325	14	7,1	DCB2115250*R#
1100	1375	1265	25	35	50	57,5	1,2	52,5	20,3	13	325	16	6,3	DCB2115250*RSD
1100	1375	1265	30	38	57,5	57,5	1,2	52,5	20,3	13	390	17,5	5,9	DCB2115300*RSD
1100	1375	1265	35	38	57,5	57,5	1,2	52,5	20,3	13	390	18,5	5,4	DCB2115350*RSD

[1]Change the * symbol with the needed capacitance tolerance code: J=±5%, K=±10% and the # symbol with S for 5,5mm lead length and with L for 25 mm lead length - [2] Maximum values at 10kHz, +70°C, Cap. tol.≤ ±10% (for wider C tolerances, ESR variation must be taken in consideration)- [3] Typical values at 10kHz (for operating frquencies far from the reference, ESR variation and related different power dissipation must be taken in consideration)