

Capacitors for Power Electronics (PEC) - Cylindrical



FEATURES

- High impulse current rating up to 10 kA
- Low self-inductance of < 100 nH
- High reliability and life expectancy
- Withstands heavy duty shock and vibration
- Non-polar dielectric
- Dry, resin filled

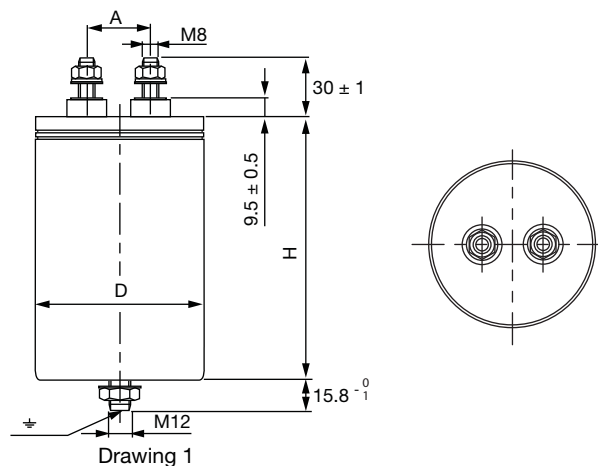
APPLICATIONS

- DC linking and DC filtering in industry and traction converters
- DC linking in low-power drives
- Impulse discharge capacitors for magnetizing and welding
- Replacement of aluminum electrolytic capacitors (lower capacitance, higher currents)

QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Rated DC voltage min.	880 V
Rated DC voltage max.	1000 V
Capacitance min.	30 μ F
Capacitance max.	2235 μ F
Technology	Metallized polypropylene
Dissipation factor ($\tan \delta_0$)	< 2×10^{-4}
Capacitance tolerance	$\pm 5 \%$
Operating temperature (hot spot)	$\theta_{min.} - 40 \text{ }^\circ\text{C}$ $\theta_{max.} + 80 \text{ }^\circ\text{C}$
Inductance	< 100 nH
Lifetime expectancy	200 000 h at U_{NDC} and < 60 $^\circ\text{C}$ hotspot
Reliability	200 FIT
Test voltage	Terminal/terminal = $1.5 \times U_{NDC}$, 10 s Terminal/case = $2 \times U_{NDC} + 1000 V_{AC}$, 60 s
Casing material	Aluminum
Filling	Resin polyurethane, UL 94 V-0
Standards	IEC 61071-1, IEC 61881 and EN 61071-1

DIMENSIONS in millimeters

$D \leq 84.4 \text{ mm}$	$A = 32 \text{ mm}$
$D = 116 \text{ mm}$	$A = 50 \text{ mm}$





Capacitors for Power Electronics
(PEC) - Cylindrical

DCMKP
Vishay ESTA

TYPE DESCRIPTION												
TYPE DCMKP ...-...IBR	C _N [μF]	VOLTAGE V _{DC}	R _S [mΩ]	R _{th} [K/W]	I _{MAX.} [A]	I _P [kA]	İ [kA]	HEIGHT [mm]	D [mm]	WEIGHT [kg]	PACKAGING UNIT	DRAWING NO.
DCMKP 880, U_{NDC} = 880 V, V_{AC} = 220 V_{RMS}												
880-200	200	880	3.4	15.0	34.0	0.75	2.25	105	64	0.4	9	1
880-270	270	880	4.4	11.7	35.0	0.73	2.21	130	64	0.4	9	1
880-370	370	880	2.2	12.8	46.0	1.38	4.15	105	84	0.6	4	1
880-510	510	880	2.8	9.8	48.0	1.39	4.18	130	84	0.7	4	1
DCMKP 1.1, U_{NDC} = 1100 V, V_{AC} = 275 V_{RMS}												
1.1-130	130	1100	3.9	14.9	32.0	0.60	1.82	105	64	0.3	9	1
1.1-175	175	1100	5.2	11.6	32.0	0.60	1.80	130	64	0.4	9	1
1.1-240	240	1100	2.5	12.7	43.0	1.12	3.37	105	84	0.6	4	1
1.1-280	280	1100	7.7	7.7	31.0	0.60	1.80	185	64	0.5	9	1
1.1-330	330	1100	3.2	9.8	44.0	1.12	3.37	130	84	0.7	4	1
1.1-525	525	1100	4.5	6.5	46.0	1.68	5.05	185	84	1.3	4	1
1.1-1000	1000	1100	2.9	5.4	62.0	2.14	6.42	185	116	1.9	4	1
DCMKP 1.3, U_{NDC} = 1300 V, V_{AC} = 325 V_{RMS}												
1.3-90	90	1300	4.6	15.0	29.0	0.50	1.50	105	64	0.3	9	1
1.3-120	120	1300	6.0	11.7	29.0	0.94	2.82	130	64	0.7	9	1
1.3-165	165	1300	2.9	12.8	40.0	1.91	5.75	105	84	2.1	4	1
1.3-195	195	1300	9.0	7.7	30.0	0.50	1.50	185	64	0.6	9	1
1.3-230	230	1300	3.6	9.8	41.0	0.93	2.80	130	84	0.7	4	1
1.3-365	365	1300	5.1	6.5	42.0	2.05	6.16	185	84	1.3	4	1
1.3-710	710	1300	3.2	5.4	59.0	3.83	11.5	185	116	1.9	4	1
DCMKP 1.55, U_{NDC} = 1550 V, V_{AC} = 385 V_{RMS}												
1.55-65	65	1550	5.2	15.1	28.0	0.43	1.29	105	64	0.4	9	1
1.55-90	90	1550	6.8	11.6	28.0	0.43	1.29	130	64	0.6	9	1
1.55-120	120	1550	3.2	12.9	38.0	0.78	2.34	105	84	0.6	4	1
1.55-145	145	1550	10.3	7.7	28.0	0.43	1.29	185	64	0.6	9	1
1.55-165	165	1550	4.1	9.9	39.0	0.79	2.37	130	84	0.7	4	1
1.55-265	265	1550	5.9	6.6	39.0	0.79	2.38	185	84	1.0	4	1
1.55-520	520	1550	3.6	5.4	56.0	1.70	5.12	185	116	1.2	4	1
DCMKP 1.75, U_{NDC} = 1750 V, V_{AC} = 440 V_{RMS}												
1.75-50	50	1750	5.7	15.0	26.0	0.37	0.13	105	64	0.3	9	1
1.75-65	65	1750	7.6	11.6	26.0	0.36	1.09	130	64	0.4	9	1
1.75-90	90	1750	3.5	12.9	36.0	0.69	2.09	105	84	0.6	4	1
1.75-110	110	1750	11.5	7.7	26.0	0.37	1.13	185	64	0.5	9	1
1.75-125	125	1750	4.5	9.9	37.0	0.70	2.10	130	84	0.8	4	1
1.75-200	200	1750	6.6	6.6	37.0	0.69	2.08	185	84	1.0	4	1
1.75-390	390	1750	3.9	5.5	53.0	1.46	4.40	185	116	2.1	4	1
DCMKP 2.0, U_{NDC} = 2000 V, V_{AC} = 500 V_{RMS}												
2.0-35	35	2000	6.4	15.2	25.0	0.30	0.90	105	64	0.4	9	1
2.0-50	50	2000	8.4	11.6	25.0	0.31	0.94	130	64	0.4	9	1
2.0-70	70	2000	3.8	12.8	35.0	0.60	1.82	105	84	0.6	4	1
2.0-85	85	2000	12.9	7.8	25.0	0.33	0.99	185	64	0.5	9	1
2.0-110	110	2000	5.0	9.9	35.0	0.62	1.87	130	84	0.8	4	1
2.0-160	160	2000	7.2	6.6	36.0	0.62	1.87	185	84	1.0	4	1
2.0-310	310	2000	4.3	5.5	51.0	1.18	3.56	185	116	1.9	4	1
DCMKP 2.2, U_{NDC} = 2200 V, V_{AC} = 550 V_{RMS}												
2.2-30	30	2200	7.0	15.1	24.0	0.29	0.87	105	64	0.3	9	1
2.2-40	40	2200	9.2	11.6	24.0	0.27	0.83	130	64	0.4	9	1
2.2-55	55	2200	4.1	12.9	33.0	0.53	1.59	105	84	0.6	4	1
2.2-70	70	2200	14.2	7.8	24.0	0.30	0.91	185	64	0.5	9	1
2.2-80	80	2200	5.4	9.9	34.0	0.56	1.68	130	84	0.8	4	1
2.2-130	130	2200	8.0	6.6	34.0	0.56	1.69	185	84	0.9	4	1
2.2-250	250	2200	4.7	5.5	49.0	1.08	3.25	185	116	2.1	4	1

Note

- Other voltage, current and capacitance values are available on request



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