Power Electronic Capacitors (PEC)



FEATURES

- High impulse current rating
- Low inductance
- High reliability and lifetime expectation
- Resistance to heavy-duty shock vibration
- Non-polar dielectric
- Dry resin filled

APPLICATIONS

- DC linking and harmonic filtering in industrial converters and traction converters and transportation
- DC linking in low-power drives
- Impulse discharge capacitors for magnetizing and welding

ADDITIONAL RESOURCES

3D Models

QUICK REFERENCE DATA	
DESCRIPTION	**VALUE**
Rated DC voltage min.	880 V_{DC}
Rated DC voltage max.	2200 V_{DC}
Capacitance min.	30 µF
Capacitance max.	1000 µF
Capacitance tolerance	± 5 % or ± 10 %
Technology	Metallized polypropylene film, self-healing
Dielectric dissipation factor	< 2 x 10^{-4}
Operating temperature min.	-40 °C
Operating temperature max.	+85 °C (hotspot)
Inductance	< 100 nH
Lifetime expectancy	> 100 000 h at U_{NDC} and < 70 °C hotspot
Reliability	< 200 FIT
Test voltage	U_{tt} = 1.5 x U_{NDC}/10 s; U_{tc} = 2 x U_{NDC} + 1000 V_{AC}/10 s
Casing	Aluminum
Filling	Dry resin (UL 94 V-0)
Standard	IEC 61071, IEC 61881-1

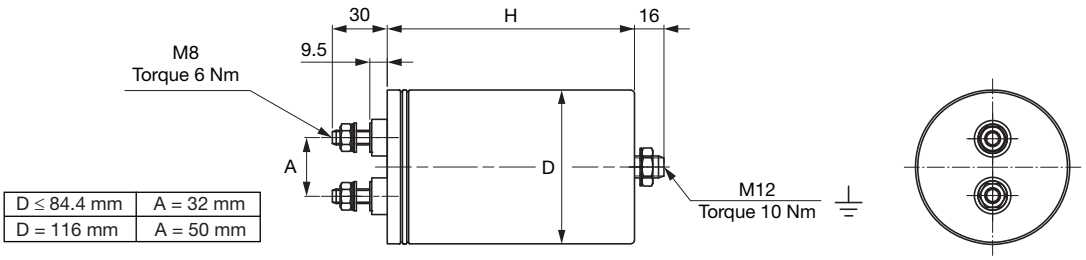
For technical questions, contact: esta@vishay.com
THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

TYPE DESCRIPTION											
TYPE DCMKP...-...IBR	C_N (µF)	U_{NDC} (V_{DC})	R_S (mΩ)	R_{th} (K/W)	$I_{max.}$ (A)	$\hat{I}$ (kA)	$\hat{I}_S$ (kA)	H (mm)	DIA. (mm)	MOQ / PU (pcs)	DRAWING NO.
DCMKP 880, U_{NDC} = 880 V											
880-200	200	880	3.0	10.4	27	0.8	2.3	105	64	9	1
880-270	270	880	4.2	8.3	26	0.7	2.2	130	64	9	1
880-370	370	880	1.8	8.4	38	1.4	4.2	105	84.4	4	1
880-510	510	880	2.4	6.7	38	1.4	4.2	130	84.4	4	1
DCMKP 1.1, U_{NDC} = 1100 V											
1.1-130	130	1100	3.7	10.4	24	0.6	1.8	105	64	9	1
1.1-175	175	1100	5.1	8.3	24	0.6	1.8	130	64	9	1
1.1-240	240	1100	2.1	8.5	35	1.1	3.4	105	84.4	4	1
1.1-280	280	1100	8.0	5.7	22	0.6	1.8	185	64	9	1
1.1-330	330	1100	2.9	6.8	34	1.1	3.4	130	84.4	4	1
1.1-525	525	1100	4.6	4.8	33	1.1	3.4	185	84.4	4	1
1.1-1000	1000	1100	2.6	3.7	50	2.1	6.3	185	116	4	1
DCMKP 1.3, U_{NDC} = 1300 V											
1.3-90	90	1300	4.3	10.4	22	0.5	1.5	105	64	9	1
1.3-120	120	1300	6.1	9.3	20	0.5	1.5	130	64	9	1
1.3-165	165	1300	2.5	8.6	31	0.9	2.8	105	84.4	4	1
1.3-195	195	1300	9.5	5.8	21	0.5	1.5	185	64	9	1
1.3-230	230	1300	3.4	6.9	31	0.9	2.8	130	84.4	4	1
1.3-365	365	1300	5.3	4.8	31	0.9	2.8	185	84.4	4	1
1.3-710	710	1300	3.0	3.8	46	1.7	5.2	185	116	4	1
DCMKP 1.55, U_{NDC} = 1550 V											
1.55-65	65	1550	5.1	10.5	19	0.4	1.3	105	64	9	1
1.55-90	90	1550	6.9	8.4	20	0.4	1.3	130	64	9	1
1.55-120	120	1550	2.9	8.7	28	0.8	2.4	105	84.4	4	1
1.55-145	145	1550	11.0	5.8	19	0.4	1.3	185	64	9	1
1.55-165	165	1550	4.0	7.0	29	0.8	2.4	130	84.4	4	1
1.55-265	265	1550	6.2	4.9	28	0.8	2.4	185	84.4	4	1
1.55-520	520	1550	3.5	3.8	42	1.5	4.5	185	116	4	1
DCMKP 1.75, U_{NDC} = 1750 V											
1.75-50	50	1750	5.5	10.4	19	0.4	1.1	105	64	9	1
1.75-65	65	1750	7.9	8.4	18	0.4	1.1	130	64	9	1
1.75-90	90	1750	3.2	8.7	27	0.7	2.1	105	84.4	4	1
1.75-110	110	1750	12.2	5.8	18	0.4	1.1	185	64	9	1
1.75-125	125	1750	4.3	7.0	27	0.7	2.1	130	84.4	4	1
1.75-200	200	1750	6.9	4.9	26	0.7	2.1	185	84.4	4	1
1.75-390	390	1750	3.9	3.9	40	1.3	3.9	185	116	4	1

For technical questions, contact: esta@vishay.com
THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

TYPE DESCRIPTION											
TYPE DCMKP...-...IBR	C_N (µF)	U_{NDC} (V_{DC})	R_S (mΩ)	R_{th} (K/W)	$I_{max.}$ (A)	$\hat{I}$ (kA)	$\hat{I}_S$ (kA)	H (mm)	DIA. (mm)	MOQ / PU (pcs)	DRAWING NO.
DCMKP 2.0, U_{NDC} = 2000 V											
2.0-35	35	2000	6.8	10.7	16	0.3	0.9	105	64	9	1
2.0-50	50	2000	9.1	8.5	17	0.3	0.9	130	64	9	1
2.0-70	70	2000	3.6	8.8	25	0.6	1.8	105	84.4	4	1
2.0-85	85	2000	13.9	5.6	17	0.3	1.0	185	64	9	1
2.0-110	110	2000	4.8	7	26	0.6	1.9	130	84.4	4	1
2.0-160	160	2000	7.6	5.7	23	0.6	1.9	185	84.4	4	1
2.0-310	310	2000	4.3	3.9	38	1.2	3.5	185	116	4	1
DCMKP 2.2, U_{NDC} = 2200 V											
2.2-30	30	2200	7.1	10.5	16	0.3	0.9	105	64	9	1
2.2-40	40	2200	10.2	8.5	16	0.3	0.9	130	64	9	1
2.2-55	55	2200	4.1	8.9	23	0.5	1.5	105	84.4	4	1
2.2-70	70	2200	15.1	5.8	16	0.3	0.9	185	64	9	1
2.2-80	80	2200	5.3	7	24	0.6	1.8	130	84.4	4	1
2.2-130	130	2200	8.4	4.9	24	0.6	1.7	185	84.4	4	1
2.2-250	250	2200	4.71	3.9	36	1.1	3.1	185	116	4	1

DIMENSIONS in millimeters



Drawing 1

Contact Us

Other voltage, current, and capacitance values are available on request without additional cost and lead time for the individual design.

For technical questions, contact: esta@vishay.com
THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, “Vishay”), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

© 2024 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED