

Capacitors for Power Electronics



FEATURES

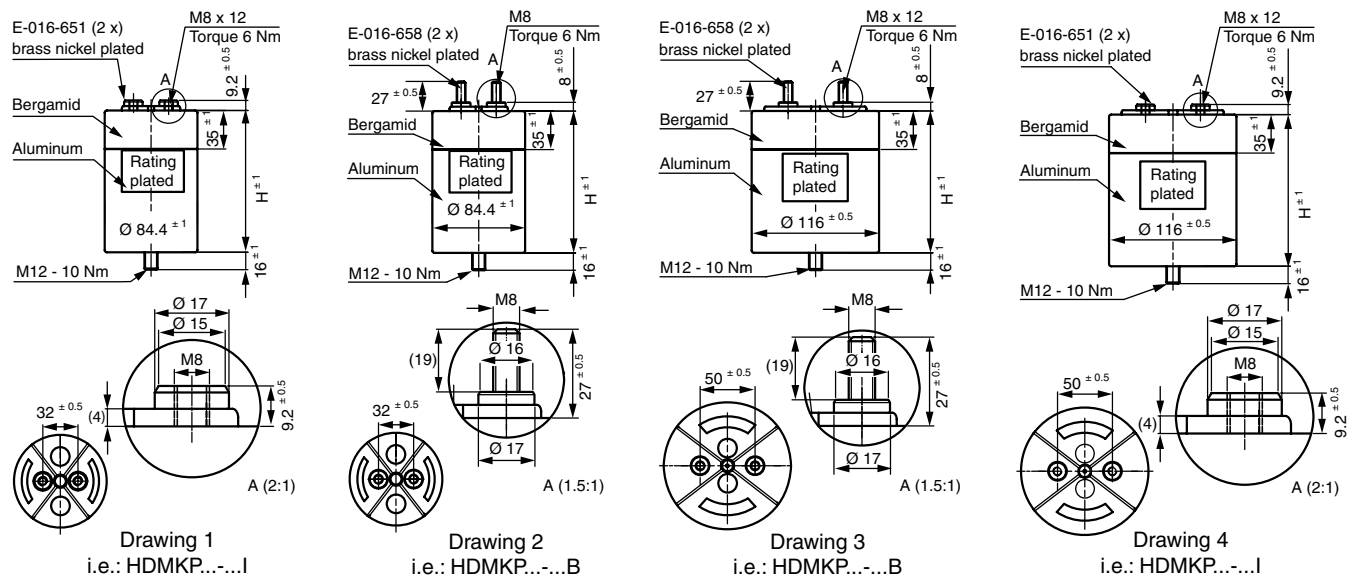
- High RMS current rating: up to 150 A
- High impulse current rating: up to 25 kA
- Low self-inductance of < 70 nH
- High reliability and life expectancy
- Withstands heavy-duty shock and vibration
- Non-polar dielectric

APPLICATIONS

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

QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Dielectric	Metallized polypropylene
Dissipation factor ($\tan \delta_0$)	$< 2 \times 10^{-4}/1 \text{ kHz}$
Capacitance tolerance	$\pm 5 \%$
Operating temperature (hot spot)	$\theta_{\text{min.}} - 40 \text{ }^\circ\text{C}$ $\theta_{\text{max.}} + 80 \text{ }^\circ\text{C}$
Inductance	$< 70 \text{ nH}$
Lifetime expectancy	100 000 h at U_R and $< 70 \text{ }^\circ\text{C}$ hotspot
Reliability	100 FIT
Test voltage	Terminal/terminal = $1.5 \times U_{RDC}$, 10 s terminal/case = $2 \times U_{RDC} + 1000 V_{AC}$, 60 s
Casing material	Aluminum/bergamid 3700 UF
Filling	Resin dry, UL 94 V-0
Standards	IEC 61071-1, IEC 61881 and EN61071-1

DIMENSIONS





HDMKP 900, U_{NDC} = 900 V, U_N = 220 V_{RMS}												
TYPE	C _N [µF]	VOLTAGE V _{DC}	R _s [mΩ]	R _{th} [K/W]	I _{max.} [A]	I _p [A]	Î [A]	HEIGHT [mm]	DIA. [mm]	WEIGHT [kg]	PACKAGING UNIT	DRAWING NO.
900-360	360	900	2.4	6.0	32.0	1309	3928	105	84.4	0.7	4	1 and 3
900-460	460	900	3.2	5.4	29.0	1258	3775	135	84.4	0.9	4	1 and 3
900-720	720	900	1.3	3.2	59.0	1329	3988	185	84.4	1.2	4	1 and 3
900-950	950	900	1.7	2.7	56.0	1300	3899	235	84.4	1.6	4	1 and 3
900-1080	1080	900	0.9	2.2	85.0	1316	3948	260	84.4	1.7	4	1 and 3
900-2050	2050	900	1.3	1.7	75.0	5610	16 830	235	116	3.0	4	2 and 4
900-2235	2235	900	0.6	1.6	120.0	8385	25 155	260	116	3.3	4	2 and 4
HDMKP 1.1, U_{NDC} = 1100 V, U_N = 275 V_{RMS}												
1.1-240	240	1100	2.9	4.1	28.0	1125	3375	105	84.4	0.7	4	1 and 3
1.1-325	325	1100	3.8	4.8	27.0	1112	3335	135	84.4	0.9	4	1 and 3
1.1-480	480	1100	1.6	2.5	50.0	2250	6750	185	84.4	1.2	4	1 and 3
1.1-650	650	1100	0.8	2.7	50.0	2220	6660	235	84.4	1.6	4	1 and 3
1.1-720	720	1100	0.5	2.2	75.0	3375	10 125	260	84.4	1.7	4	1 and 3
1.1-1310	1310	1100	1.5	1.8	72.0	4485	13 455	235	116	3.0	4	2 and 4
1.1-1425	1425	1100	0.6	1.7	114.0	6680	20 045	260	116	3.3	4	2 and 4
HDMKP 1.35, U_{NDC} = 1350 V, U_N = 325 V_{RMS}												
1.35-160	160	1350	3.2	6.7	26.0	900	2699	105	84.4	0.7	4	1 and 3
1.35-200	200	1350	1.2	4.6	51.0	893	2680	135	84.4	0.9	4	1 and 3
1.35-320	320	1350	1.7	3.5	50.0	900	2699	185	84.4	1.2	4	1 and 3
1.35-400	400	1350	2.4	3.1	45.0	820	2460	235	84.4	1.6	4	1 and 3
1.35-480	480	1350	1.2	2.4	72.0	900	2699	260	84.4	1.7	4	1 and 3
1.35-910	910	1350	1.6	1.9	70.0	3735	11 205	235	116	3.0	4	2 and 4
1.35-990	990	1350	0.7	1.8	108.0	5565	16 695	260	116	3.3	4	2 and 4
HDMKP 2.0, U_{NDC} = 2000 V, U_N = 500 V_{RMS}												
2.0-70	70	2000	4.4	7.2	21.0	593	1778	105	84.4	0.7	4	1 and 3
2.0-90	90	2000	5.8	5.9	20.0	585	1755	135	84.4	0.9	4	1 and 3
2.0-140	140	2000	2.3	3.8	41.0	593	1778	185	84.4	1.3	4	1 and 3
2.0-180	180	2000	3.0	3.1	39.0	586	1757	235	84.4	1.6	4	1 and 3
2.0-210	210	2000	1.6	2.7	60.0	593	1780	260	84.4	1.7	4	1 and 3
2.0-390	390	2000	2.0	2.1	60.0	2455	7365	235	116	3.0	4	2 and 4
2.0-420	420	2000	0.9	1.9	90.0	3650	10 955	260	116	3.3	4	2 and 4
HDMKP 2.25, U_{NDC} = 2250 V, U_N = 550 V_{RMS}												
2.25-55	55	2250	4.8	7.4	20.0	530	1590	105	84.4	0.7	4	1 and 3
2.25-75	75	2250	6.4	6.0	19.0	523	1568	135	84.4	0.9	4	1 and 3
2.25-110	110	2250	2.5	3.9	39.0	530	1590	185	84.4	1.2	4	1 and 3
2.25-150	150	2250	3.3	3.2	37.0	523	1568	235	84.4	1.6	4	1 and 3
2.25-165	165	2250	1.7	2.7	56.0	530	1590	260	84.4	1.7	4	1 and 3
2.25-320	320	2250	2.4	2.4	56.0	2235	6705	235	116	3.0	4	2 and 4
2.25-345	345	2250	1.1	2.0	90.0	3330	9990	260	116	3.3	4	2 and 4
HDMKP 2.7, U_{NDC} = 2700 V, U_N = 660 V_{RMS}												
2.7-40	40	2700	5.1	8.4	18.0	464	1391	105	84.4	0.7	4	1 and 3
2.7-50	50	2700	7.4	6.5	17.0	419	1258	135	84.4	0.9	4	1 and 3
2.7-80	80	2700	5.1	6.8	20.0	464	1391	185	84.4	1.2	4	1 and 3
2.7-100	100	2700	7.4	5.3	19.0	419	1258	235	84.4	1.6	4	1 and 3
2.7-120	120	2700	5.2	6.2	21.0	450	1349	260	84.4	1.7	4	1 and 3
2.7-220	220	2700	2.4	2.4	52.0	925	2775	235	116	3.0	4	2 and 4
2.7-240	240	2700	1.1	2.0	84.0	927	2781	260	116	3.3	4	2 and 4

Note

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



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.

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.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.