



# POWER CAPACITORS

HDMKP



## Capacitors for Power Electronics

### KEY BENEFITS

- High RMS current rating: up to 150 A
- High impulse current rating: up to 10 kA
- Low self-inductance of < 50 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
- Impulse discharge capacitors for magnetizing and welding
- Replacement of aluminum electrolytic capacitors (lower capacitance, higher currents)
- AC filters in UPS

Datasheet is available on our web site at [www.vishay.com](http://www.vishay.com)  
for HDMKP - <http://www.vishay.com/doc?13115>

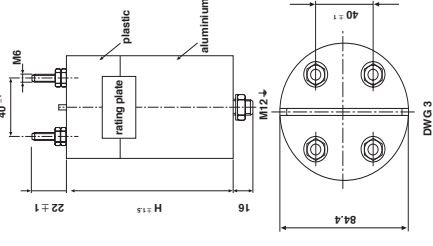
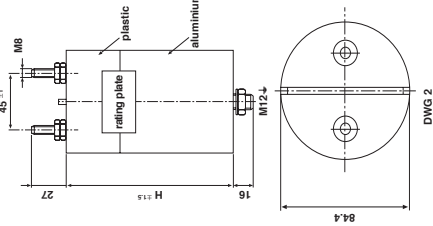
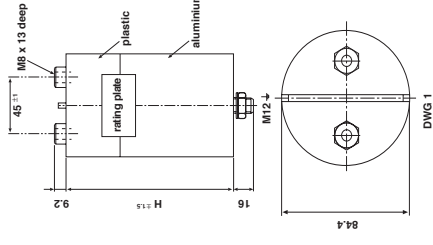
# Capacitors for Power Electronics

**FEATURES**

- Highest RMS current rating, low ESR
- High impulse current rating
- Very low inductance
- Extremely low losses even at high frequencies
- High reliability and life expectancy
- Heavy duty shock and vibration
- Non-polar dielectric
- Dry, resin filled
- Easy mounting by integrated M12 stud on base
- Highest energy content



**DIMENSIONS**



| GENERAL SPECIFICATIONS        |   |
|-------------------------------|---|
| Dielectric                    | Metallized Polypropylene  |
| Temperature coefficient (TCC) | - 2.3% from - 20°C to + 70°C  |
| Dissipation factor (DF)       | < 8 x 10 <sup>-7</sup> /kHz; < 50 x 10 <sup>-7</sup> /kHz                               |
| Series Resistances (Rs)       | < 3mΩ/kHz, 8mΩ/100kHz   |
| Capacitance tolerance         | ± 5%  |
| Operating temperature         | - 40°C to + 70°C at UN<br>- 40°C to + 85°C at 0.7 x UN<br>- 40°C to + 100°C at 0.5 x UN |
| Inductance                    | < 50nH  |
| Lifetime expectancy           | 100,000 hours at UN and 60°C  |
| Reliability                   | 300FIT  |
| Test voltage                  | Terminal/Terminal = 1.5 x UNDC, 10s<br>Terminal/Earth = 2 x UR + 1000VAC, 60s           |
| Casing material               | Aluminum/Lathene; UL 94V0   |
| Filling                       | Resin Dry, UL 94, V0  |
| Standards                     | IEC 61071-1, EN 61071, IEC 68-2 and IEC 61881   |

| TYPE     | RATED VOLTAGE |        | CAPACITANCE (µF) | CURRENT* MAX. (A) | di/dt MAX. (V/µs) | HEIGHT (mm) | WEIGHT (kg) |
|----------|---------------|--------|------------------|-------------------|-------------------|-------------|-------------|
|          | DC (V)        | AC (V) |                  |                   |                   |             |             |
| HDMKP    | 900           | 220    | 360              | 50                | 15                | 105         | 0.71        |
| 900-360  | 900           | 220    | 460              | 100               | 15                | 135         | 0.92        |
| 900-460  | 900           | 220    | 720              | 100               | 15                | 185         | 1.25        |
| 900-720  | 900           | 220    | 950              | 80                | 15                | 235         | 1.6         |
| 900-950  | 900           | 220    | 1080             | 150               | 15                | 260         | 1.75        |
| 1.35-160 | 1350          | 325    | 160              | 50                | 30                | 105         | 0.71        |
| 1.35-200 | 1350          | 325    | 200              | 100               | 30                | 135         | 0.92        |
| 1.35-320 | 1350          | 325    | 320              | 100               | 30                | 185         | 1.25        |
| 1.35-400 | 1350          | 325    | 400              | 80                | 30                | 235         | 1.6         |
| 1.35-480 | 1350          | 325    | 480              | 150               | 30                | 260         | 1.75        |
| 2.0-70   | 2000          | 500    | 70               | 50                | 50                | 105         | 0.71        |
| 2.0-90   | 2000          | 500    | 90               | 100               | 50                | 135         | 0.92        |
| 2.0-140  | 2000          | 500    | 140              | 100               | 50                | 185         | 1.25        |
| 2.0-180  | 2000          | 500    | 180              | 80                | 50                | 235         | 1.6         |
| 2.0-210  | 2000          | 500    | 210              | 150               | 50                | 260         | 1.75        |
| 2.25-55  | 2250          | 550    | 55               | 50                | 60                | 105         | 0.71        |
| 2.25-75  | 2250          | 550    | 75               | 100               | 60                | 135         | 0.92        |
| 2.25-110 | 2250          | 550    | 110              | 100               | 60                | 185         | 1.25        |
| 2.25-150 | 2250          | 550    | 150              | 80                | 60                | 235         | 1.6         |
| 2.25-165 | 2250          | 550    | 165              | 150               | 60                | 260         | 1.75        |
| 2.7-40   | 2700          | 660    | 40               | 50                | 50                | 105         | 0.71        |
| 2.7-50   | 2700          | 660    | 50               | 100               | 50                | 135         | 0.92        |
| 2.7-80   | 2700          | 660    | 80               | 100               | 50                | 185         | 1.25        |
| 2.7-100  | 2700          | 660    | 100              | 80                | 50                | 235         | 1.6         |
| 2.7-120  | 2700          | 660    | 120              | 150               | 50                | 260         | 1.75        |

Note: \* Other voltage and capacitance values are available upon request. Voltage up to 4800VDC  
 † Design current for short-time operation at 50°C

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