

Metallized Polypropylene (PP) - Capacitors for Hybrid Drives. Capacitance 500 µF. Rated Voltage 450 VDC.

Special Features

- Very high volume/capacitance ratio
- Self-healing, internal safety disconnecter
- Safe contact configuration by screwable plates
- Dry construction without electrolyte or oil
- Very low dissipation factor
- Negative capacitance change versus temperature
- Very low dielectric absorption
- According to RoHS 2011/65/EU
- Customer-specific capacitances or voltages on request

Typical Applications

As intermediate circuit capacitor e.g. in hybrid drives

Construction

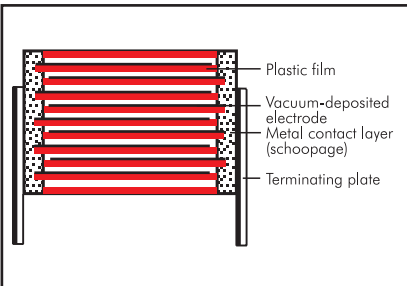
Dielectric:

Polypropylene (PP) film

Capacitor electrodes:

Vacuum-deposited

Internal construction:



Encapsulation:

Solvent-resistant, flame-retardant plastic case with PU seal, UL 94 V-0

Terminations:

Tinned plates

Marking:

Colour: Black. Marking: Gold.

Electrical Data

Capacitance range:

500 µF

Rated voltage:

450 VDC

Capacitance tolerances:

±20%, ±10%, (±5% available subject to special enquiry)

Operating temperature range:

-55° C to +85° C (hot spot ≤ +110° C in combination with a heatsink)

Insulation resistance at +20° C:

≥ 10 000 sec (MΩ × µF)

Measuring voltage: 100 V/1 min.

Dielectric loss factor $\tan \delta_0$: 2×10^{-4}

Test voltage: $1.3 U_r$, 2sec

Dielectric absorption: 0.05 %

Voltage derating:

A voltage derating factor of 1.35 % per K must be applied from +85° C for DC voltage.

Reliability:

Operational life > 100 000 hours at 40° C

Failure rate < 36 fit ($0.75 \times U_r$ and 40° C)

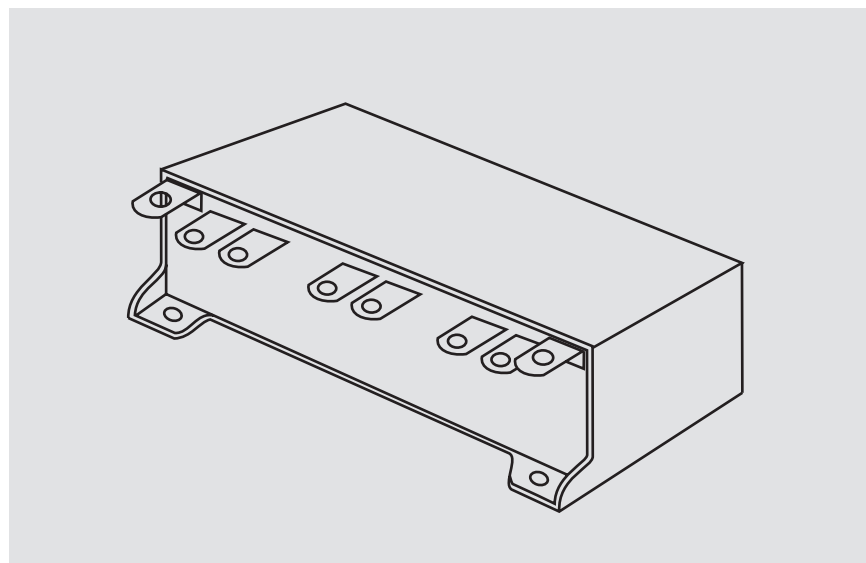
Mounting Recommendation

Excessive mechanical strain, e.g. pressure or shock onto the capacitor body, is to be avoided during mounting and usage of the capacitors. When fixing the capacitor the screw torque is to be limited to max. 5 Nm.

Packing

Transport-safe packing in cardboard boxes.

For further details and graphs please refer to Technical Information.





WIMA Part Number System

A WIMA part number consists of 18 digits and is composed as follows:

- Field 1 - 4: Type description
- Field 5 - 6: Rated voltage
- Field 7 - 10: Capacitance
- Field 11 - 12: Size and PCM
- Field 13 - 14: Version code (e.g. Snubber versions)
- Field 15: Capacitance tolerance
- Field 16: Packing
- Field 17 - 18: Pin length (untaped)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
M	K	S	2	C	0	2	1	0	0	1	A	0	0	M	S	S	D
MKS 2				63 VDC		0.01 μ F			2.5x6.5x7.2		-	20%	bulk	6-2			

<p>Type description:</p> <p>SMD-PET = SMDT</p> <p>SMD-PEN = SMDN</p> <p>SMD-PPS = SMDI</p> <p>FKP 02 = FKPO</p> <p>MKS 02 = MKSO</p> <p>FKS 2 = FKS2</p> <p>FKP 2 = FKP2</p> <p>FKS 3 = FKS3</p> <p>FKP 3 = FKP 3</p> <p>MKS 2 = MKS2</p> <p>MKP 2 = MKP2</p> <p>MKS 4 = MKS4</p> <p>MKP 4C = MKPC</p> <p>MKP 4 = MKP4</p> <p>MKP 10 = MKP1</p> <p>FKP 1 = FKP1</p> <p>MKP-X2 = MKX2</p> <p>MKP-X1 R = MKX1</p> <p>MKP-Y2 = MKY2</p> <p>MP 3-X2 = MPX2</p> <p>MP 3-X1 = MPX1</p> <p>MP 3-Y2 = MPY2</p> <p>MP 3R-Y2 = MPRY</p> <p>MKP 4F = MKPF</p> <p>Snubber MKP = SNMP</p> <p>Snubber FKP = SNFP</p> <p>GTO MKP = GTOM</p> <p>DC-LINK MKP 3 = DCP3</p> <p>DC-LINK MKP 4 = DCP4</p> <p>DC-LINK MKP 4S = DCP5</p> <p>DC-LINK MKP 5 = DCP5</p> <p>DC-LINK MKP 6 = DCP6</p> <p>DC-LINK HC = DCHC</p> <p>DC-LINK HY = DCHY</p>	<p>Rated voltage:</p> <p>50 VDC = B0</p> <p>63 VDC = C0</p> <p>100 VDC = D0</p> <p>250 VDC = F0</p> <p>400 VDC = G0</p> <p>450 VDC = H0</p> <p>520 VDC = H2</p> <p>600 VDC = I0</p> <p>630 VDC = J0</p> <p>700 VDC = K0</p> <p>800 VDC = L0</p> <p>850 VDC = M0</p> <p>900 VDC = N0</p> <p>1000 VDC = O1</p> <p>1100 VDC = P0</p> <p>1200 VDC = Q0</p> <p>1250 VDC = R0</p> <p>1500 VDC = S0</p> <p>1600 VDC = T0</p> <p>2000 VDC = U0</p> <p>2500 VDC = V0</p> <p>3000 VDC = W0</p> <p>4000 VDC = X0</p> <p>6000 VDC = Y0</p> <p>250 VAC = 0W</p> <p>275 VAC = 1W</p> <p>300 VAC = 2W</p> <p>305 VAC = AW</p> <p>350 VAC = BW</p> <p>440 VAC = 4W</p> <p>500 VAC = 5W</p> <p>...</p>	<p>Capacitance:</p> <p>22 pF = 0022</p> <p>47 pF = 0047</p> <p>100 pF = 0100</p> <p>150 pF = 0150</p> <p>220 pF = 0220</p> <p>330 pF = 0330</p> <p>470 pF = 0470</p> <p>680 pF = 0680</p> <p>1000 pF = 1100</p> <p>1500 pF = 1150</p> <p>2200 pF = 1220</p> <p>3300 pF = 1330</p> <p>4700 pF = 1470</p> <p>6800 pF = 1680</p> <p>0.01 μF = 2100</p> <p>0.022 μF = 2220</p> <p>0.047 μF = 2470</p> <p>0.1 μF = 3100</p> <p>0.22 μF = 3220</p> <p>0.47 μF = 3470</p> <p>1 μF = 4100</p> <p>2.2 μF = 4220</p> <p>4.7 μF = 4470</p> <p>10 μF = 5100</p> <p>22 μF = 5220</p> <p>47 μF = 5470</p> <p>100 μF = 6100</p> <p>220 μF = 6220</p> <p>1000 μF = 7100</p> <p>1500 μF = 7150</p> <p>...</p>	<p>Size:</p> <p>4.8x3.3x3 Size 1812 = KA</p> <p>4.8x3.3x4 Size 1812 = KB</p> <p>5.7x5.1x3.5 Size 2220 = QA</p> <p>5.7x5.1x4.5 Size 2220 = QB</p> <p>7.2x6.1x3 Size 2824 = TA</p> <p>7.2x6.1x5 Size 2824 = TB</p> <p>10.2x7.6x5 Size 4030 = VA</p> <p>12.7x10.2x6 Size 5040 = XA</p> <p>15.3x13.7x7 Size 6054 = YA</p> <p>2.5x7x4.6 PCM 2.5 = 0B</p> <p>3x7.5x4.6 PCM 2.5 = 0C</p> <p>2.5x6.5x7.2 PCM 5 = 1A</p> <p>3x7.5x7.2 PCM 5 = 1B</p> <p>2.5x7x10 PCM 7.5 = 2A</p> <p>3x8.5x10 PCM 7.5 = 2B</p> <p>3x9x13 PCM 10 = 3A</p> <p>4x9x13 PCM 10 = 3C</p> <p>5x11x18 PCM 15 = 4B</p> <p>6x12.5x18 PCM 15 = 4C</p> <p>5x14x26.5 PCM 22.5 = 5A</p> <p>6x15x26.5 PCM 22.5 = 5B</p> <p>9x19x31.5 PCM 27.5 = 6A</p> <p>11x21x31.5 PCM 27.5 = 6B</p> <p>9x19x41.5 PCM 37.5 = 7A</p> <p>11x22x41.5 PCM 37.5 = 7B</p> <p>19x31x56 PCM 48.5 = 8D</p> <p>25x45x57 PCM 52.5 = 9D</p> <p>...</p>	<p>Tolerance:</p> <p>\pm20% = M</p> <p>\pm10% = K</p> <p>\pm5% = J</p> <p>\pm2.5% = H</p> <p>\pm1% = E</p> <p>...</p>	<p>Packing:</p> <p>AMMO H16.5 340x340 = A</p> <p>AMMO H16.5 490x370 = B</p> <p>AMMO H18.5 340x340 = C</p> <p>AMMO H18.5 490x370 = D</p> <p>REEL H16.5 360 = F</p> <p>REEL H16.5 500 = H</p> <p>REEL H18.5 360 = I</p> <p>REEL H18.5 500 = J</p> <p>ROLL H16.5 = N</p> <p>ROLL H18.5 = O</p> <p>BLISTER W12 180 = P</p> <p>BLISTER W12 330 = Q</p> <p>BLISTER W16 330 = R</p> <p>BLISTER W24 330 = T</p> <p>Bulk/TPS Standard = S</p> <p>...</p>	<p>Version code:</p> <p>Standard = 00</p> <p>Version A1 = 1A</p> <p>Version A1.1.1 = 1B</p> <p>Version A2 = 2A</p> <p>...</p>	<p>Pin length (untaped)</p> <p>3.5 \pm0.5 = C9</p> <p>6-2 = SD</p> <p>16 \pm1 = P1</p> <p>...</p> <p>Pin length (taped)</p> <p>none = 00</p>
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The data on this page is not complete and serves only to explain the part number system. Part number information is listed on the pages of the respective WIMA range.