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**C O D I C O**®  
THE COMPONENT DISTRIBUTING COMPANY



# FILM CAPACITORS

## AC & DC – PRODUCT OVERVIEW



# HJC – Hua Jung Components

## Headquarter Taiwan

- > Founded in 1983 in Kaohsiung
- > TS16949, ISO9001, ISO14001
- > Safety standards: ENEC, UL, CQC
- > Production in Dongguan, China
- > Production capacity 3Mio pcs/day (excluding pitch 5 MKT)
- > 240 winding machines
- > Flexible in production to keep delivery time low
- > About 1.800 employees (incl. 40 engineers)
- > In-house development with high technical competence



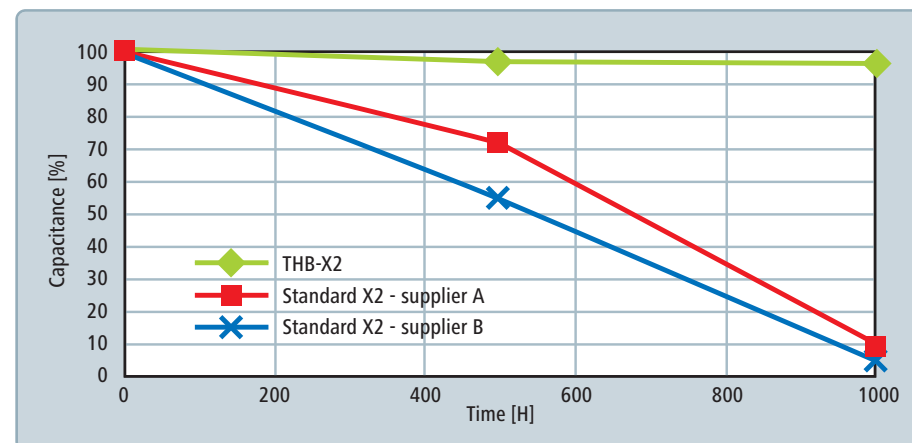
One of the leading manufacturers of MKT & MKP film capacitors!

### HJC – the creator of resistant film capacitors »THB-version«!

The loss of capacitance due to corrosion is caused by what is commonly known as THB (temperature humidity bias).

Standard X2 capacitors are designed for rapid self-healing and safety by having a high proportion of zinc content in the metallization. A higher relative humidity in particular leads to a rapid loss of capacitance, which means that their use in capacitive power supplies or volta-

ge dividers is not advisable. As first manufacturer HJC presented a specially treated X2-capacitor with low capacitance loss. Even under test at full voltage, 85% r.h. and 85°C it provides excellent long-term stability. Further tests have shown that also DC rated capacitors are susceptible to loss of capacitance and increase of dissipation. HJC is able to apply this technology also to DC-link, pulse and other MKP capacitors.



# FILM CAPACITORS SELECTOR GUIDE

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| Type/Series  | Shape      | Temperature range | Rated voltage  | Capacitance range | Pitch (mm)  | Application examples for focus products                               |
|--|------------|-------------------|----------------|-------------------|-------------|---|
| <b>MKT metallized polyester (general purpose)</b>  |            |                   |                |                   |             |   |
| MEB  | Box        | -40 ~ +105degC    | 100VDC         | 100nF ~ 10uF      | 7,5 ~ 22,5  | DC by-passing and blocking  |
|  |            |                   | 250VDC         | 39nF ~ 10uF       | 7,5 ~ 27,5  |   |
|  |            |                   | 400VDC         | 15nF ~ 2,2uF      | 7,5 ~ 27,5  |   |
|  |            |                   | 630VDC         | 10nF ~ 2,2uF      | 10 ~ 27,5   |   |
| MEF  | Dip        | -40 ~ +105degC    | 100 ~ 630VDC   | 10nF ~ 10uF       | 7,5 ~ 42,5  |   |
| MFF  | Dip        | -40 ~ +105degC    | 100 ~ 630VDC   | 10nF ~ 10uF       | 7,5 ~ 27,5  |   |
| MET  | Axial      | -40 ~ +105degC    | 100 ~ 630VDC   | 10nF ~ 10uF       |             |   |
| MEA  | Axial flat | -40 ~ +105degC    | 100 ~ 630VDC   | 10nF ~ 10uF       |             |   |
| <b>MKP single-sided metallized polypropylene (general pulse)</b>   |            |                   |                |                   |             |   |
| MPB  | Box        | -40 ~ +105degC    | 100VDC         | 47nF ~ 3,3uF      | 7,5 ~ 22,5  | DC blocking & coupling, serial capacitor (capacitive voltage divider) |
|  |            |                   | 250VDC         | 22nF ~ 3,3uF      | 7,5 ~ 22,5  |   |
|  |            |                   | 400VDC         | 10nF ~ 1,5uF      | 7,5 ~ 22,5  |   |
|  |            |                   | 630VDC         | 10nF ~ 1,2uF      | 7,5 ~ 27,5  |   |
| MP5  | Box        | ~ +105degC        | 1000VDC        | 10nF ~ 1uF        | 15 ~ 27,5   | Resonant circuit (lighting), high AC-voltage applications             |
|  |            |                   | 300VAC         | 5,6nF ~ 150nF     | 10 ~ 22,5   |   |
|  |            |                   | 400VAC         | 1nF ~ 100nF       | 10 ~ 22,5   |   |
|  |            |                   | 500VAC         | 1nF ~ 82nF        | 15 ~ 22,5   |   |
|  |            |                   | 700VAC         | 1nF ~ 82nF        | 15 ~ 22,5   |   |
| MPP  | Dip        | -40 ~ +105degC    | 100 ~ 630VDC   | 10nF ~ 3,3uF      | 7,5 ~ 27,5  |   |
| MPT  | Axial      | -40 ~ +105degC    | 250 ~ 630VDC   | 10nF ~ 10uF       |             |   |
| MPA  | Axial flat | -40 ~ +105degC    | 250 ~ 630VDC   | 10nF ~ 10uF       |             |   |
| MP4  | Dip        | ~ +105degC        | 300 ~ 900VAC   | 1nF ~ 100nF       | 10 ~ 22,5   |   |
| <b>MMKP double-sided metallized polypropylene (high du/dt)</b>   |            |                   |                |                   |             |   |
| MP3  | Box        | ~ +105degC        | 300VAC         | 10nF ~ 100nF      | 15 ~ 22,5   | Resonant circuit (lighting), high AC-voltage applications             |
|  |            |                   | 400VAC         | 1nF ~ 100nF       | 10 ~ 22,5   |   |
|  |            |                   | 500VAC         | 1nF ~ 27nF        | 15 ~ 22,5   |   |
|  |            |                   | 700VAC         | 1nF ~ 27nF        | 15 ~ 22,5   |   |
|  |            |                   | 900VAC         | 1nF ~ 18nF        | 22,5        |   |
| MP3S   | Box        | ~ +105degC        | 400VDC/250VAC  | 10nF ~ 1,5uF      | 10 ~ 27,5   | Snubber for semiconductor protection, pulse application               |
|  |            |                   | 630VDC/400VAC  | 10nF ~ 1uF        | 10 ~ 27,5   |   |
|  |            |                   | 1000VDC/600VAC | 1nF ~ 470nF       | 10 ~ 27,5   |   |
|  |            |                   | 1600VDC/650VAC | 1nF ~ 330nF       | 15 ~ 27,5   |   |
|  |            |                   | 2000VDC/700VAC | 1nF ~ 180nF       | 15 ~ 27,5   |   |
| MP2  | Dip        | ~ +105degC        | 300 ~ 900VAC   | 1nF ~ 100nF       | 10 ~ 22,5   |   |
| <b>KP aluminum foil &amp; polypropylene (very high du/dt)</b>  |            |                   |                |                   |             |   |
| PPSB   | Box        | -40 ~ +105degC    | 800VDC         | 8,2nF ~ 100nF     | 15 ~ 22,5   | Snubber for semiconductor protection, pulse application               |
|  |            |                   | 1000VDC        | 5,6nF ~ 39nF      | 15 ~ 22,5   |   |
|  |            |                   | 1200VDC        | 2,2nF ~ 22nF      | 15 ~ 22,5   |   |
|  |            |                   | 1600VDC        | 1nF ~ 22nF        | 15 ~ 22,5   |   |
| PPSH   | Dip        | -40 ~ +105degC    | 800 ~ 1200VDC  | 1nF ~ 100nF       | 15 ~ 20     |   |
| <b>MKP X2-class</b>  |            |                   |                |                   |             |   |
| MKP  | Box        | -40 ~ +110degC    | 305VAC         | 4,7nF ~ 10uF      | 7,5 ~ 37,5  | Input filtering / EMI filter  |
| <b>MKP X2-class »THB« (heavy duty) test conditions: 85°C/85%, 240Vac, ΔC &lt;10% for 500hrs or 1000hrs</b> |            |                   |                |                   |             |   |
| MKP-I (500hrs)   | Box        | -40 ~ +110degC    | 305VAC         | 47nF ~ 10uF       | 15 ~ 37,5   | Serial capacitor (capacitive voltage divider)                         |
| MKP-U (1000hrs)  | Box        | -40 ~ +110degC    | 305VAC         | 47nF ~ 10uF       | 15 ~ 37,5   | Serial capacitor (capacitive voltage divider)                         |
| <b>MKP Y2/X1-class</b>   |            |                   |                |                   |             |   |
| Y2X1   | Box        | -40 ~ +110degC    | 300VAC         | 1nF ~ 220nF       | 10 ~ 22,5   | Input filtering / EMI filter  |
| <b>MKT fuse-type/fail safe construction metallized polyester (PFC application)</b>                         |            |                   |                |                   |             |   |
| MFTD   | Dip        | -40 ~ +110degC    | 450, 630VDC    | 47nF ~ 3,3uF      | 10 ~ 22,5   |   |
| MFTB   | Box        | -40 ~ +110degC    | 450VDC         | 100nF ~ 2,2uF     | 10 ~ 22,5   |   |
| <b>MKP metallized polypropylene (PFC application)</b>  |            |                   |                |                   |             |   |
| MPBN   | Box        | -40 ~ +110degC    | 450VDC         | 100nF ~ 2,2uF     | 10 ~ 22,5   | Power Factor Correction   |
| MPN3   | Box        | -40 ~ +110degC    | 450VDC         | 220nF ~ 1,5uF     | 10 ~ 15     | Power Factor Correction   |
| MPPN   | Dip        | -40 ~ +110degC    | 450, 630VDC    | 22nF ~ 2,2uF      | 10 ~ 27,5   |   |
| MPN2   | Dip        | -40 ~ +110degC    | 450VDC         | 220nF ~ 1,5uF     | 10 ~ 15     |   |
| <b>MKP metallized polypropylene (DC-link application)</b>  |            |                   |                |                   |             |   |
| EPB  | Box        | -40 ~ +105degC    | 700VDC         | 1uF ~ 60uF        | 27,5 ~ 52,5 | DC-link, input filtering  |
|  |            |                   | 800VDC         | 1uF ~ 50uF        | 27,5 ~ 52,5 |   |
|  |            |                   | 900VDC         | 1uF ~ 40uF        | 27,5 ~ 52,5 |   |
|  |            |                   | 1100VDC        | 1,5uF ~ 30uF      | 27,5 ~ 52,5 |   |

\* blue colour = focus product

Datasheets: www.hjc.com.tw/products.htm  
Part numbering system: www.hjc.com.tw/cap2/15.pdf