

# COMPONENT SPECIFICATION

**SERIES NAME** Metallized Polypropylene Film Capacitors  
(MPP-Dip Type)  
**SERIES CODE** 04



**GIVEN BY:** DEKI ELECTRONICS LTD

**DEKI ELECTRONICS LTD**

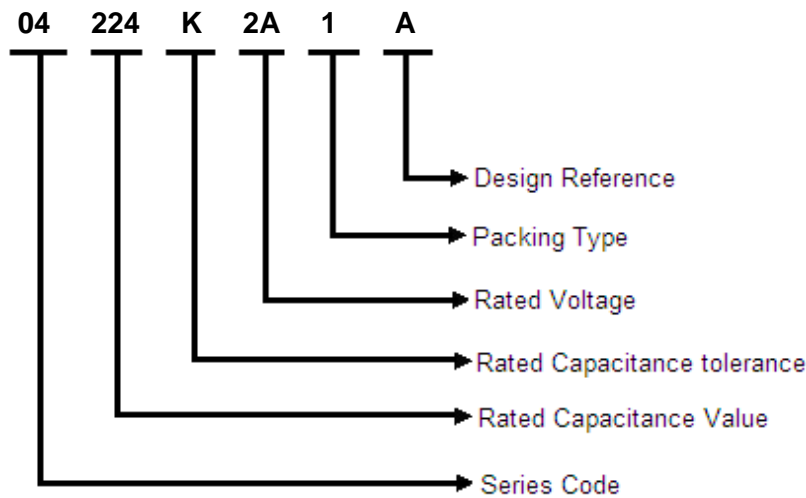
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# Metallized Polypropylene Film Capacitors

Dip Type • Series Code 04

## Part Number Description



## Rated Capacitance

Three-digit (224) indicate rated capacitance in Pico Farad (First two digits indicate value & third digit indicates number of zeroes to be suffixed to first two digits).

For example:

|                            |               |            |           |
|----------------------------|---------------|------------|-----------|
| 103 = 10 × 10 <sup>3</sup> | = 10000 pF    | = 10 nF    | = 0.01 μF |
| 104 = 10 × 10 <sup>4</sup> | = 100000 pF   | = 100 nF   | = 0.1 μF  |
| 105 = 10 × 10 <sup>5</sup> | = 1000000 pF  | = 1000 nF  | = 1 μF    |
| 106 = 10 × 10 <sup>6</sup> | = 10000000 pF | = 10000 nF | = 10 μF   |

## Capacitance Tolerance

In 3<sup>rd</sup> group of the part number-

F = ±1%, G = ±2%, H = ±2.5%, I = ±3.5%, J = ±5%, K = ±10%, L = ±15%, M = ±20%, N = ±40%

## Rated Voltage

In 4th group of the part number, one numeric digit and one letter (Ex.-2A) indicate DC voltage rating while two numeric digits (Ex.03) indicate AC voltage rating.

## Rated Voltage Codification

| For DC Rated Voltage |       |    |       |    |      |    |      |    |      |    |       |    |       |
|----------------------|-------|----|-------|----|------|----|------|----|------|----|-------|----|-------|
| A                    |       | B  |       | C  |      | D  |      | E  |      | F  |       | G  |       |
| 1A                   | 10    | 1B | 12.5  | 1C | 16   | 1D | 20   | 1E | 25   | 1F | 30    | 1G | 40    |
| 2A                   | 100   | 2B | 125   | 2C | 160  | 2D | 200  | 2E | 250  | 2F | 300   | 2G | 400   |
| 3A                   | 1000  | 3B | 1250  | 3C | 1600 | 3D | 2000 | 3E | 2500 | 3F | 3000  | 3G | 4000  |
| H                    |       | I  |       | J  |      | K  |      | L  |      | M  |       | N  |       |
| 1H                   | 50    | 1I | 45    | 1J | 63   | 1K | 70   | 1L | 80   | 1M | 85    | 1N | 90    |
| 2H                   | 500   | 2I | 450   | 2J | 630  | 2K | 700  | 2L | 800  | 2M | 850   | 2N | 900   |
| 3H                   | 5000  | 3I | 4500  | 3J | 6300 | 3K | 7000 | 3L | 8000 | 3M | 8500  | 3N | 9000  |
| O                    |       | P  |       | Q  |      | R  |      | S  |      | T  |       | U  |       |
| 1O                   | 110   | 1P | 120   | 1Q | 57.5 | 1R | 15   | 1S | 17   | 1T | 70    | 1U | 130   |
| 2O                   | 1100  | 2P | 1200  | 2Q | 575  | 2R | 150  | 2S | 170  | 2T | 700   | 2U | 1300  |
| 3O                   | 11000 | 3P | 12000 | 3Q | 5750 | 3R | 1500 | 3S | 1700 | 3T | 70000 | 3U | 13000 |

| For AC Rated Voltage |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 01                   | 02  | 03  | 04  | 05  | 06  | 07  | 08  | 09  | 10  | 11  | 12  | 13  | 14  |
| 190                  | 250 | 275 | 305 | 310 | 440 | 500 | 600 | 700 | 63  | 230 | 330 | 400 | 450 |
| VAC                  | VAC | VAC | VAC | VAC | VAC | VAC | VAC | VAC | VAC | VAC | VAC | VAC | VAC |

# Metallized Polypropylene Film Capacitors

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## Packing Type

- 1: Bulk packing (original pitch)
- 2: Bulk packing (after forming & cutting)
- 3: Ammo packing (after forming & taping)
- 4: Bulk packing (after forming in original pitch without cut)
- 5: Bulk packing (after formed & without cut)
- 6: Ammo packing (Straight lead)
- 7: Bulk packing (Straight lead cut)
- 8: Reel packing (Straight lead)

## Reference Data

|                                                 |                                          |
|-------------------------------------------------|------------------------------------------|
| Capacitance                                     | 0.001 $\mu$ F to 6.8 $\mu$ F             |
| Capacitance Tolerance                           | $\pm$ 5% to $\pm$ 10%                    |
| Rated Voltage                                   | 100 Vdc to 1000 Vdc                      |
| Permissible AC voltage at 50Hz/60Hz             | 63 Vac to 250 Vac                        |
| Climatic testing class according to IEC 60068-1 | 40/100/56                                |
| Maximum application temperature                 | 100°C                                    |
| Rated temperature                               | 85°C                                     |
| Reference standards                             | IEC 60384-16                             |
| Dielectric                                      | Polypropylene                            |
| Electrodes                                      | Metallized                               |
| Construction                                    | Mono                                     |
| Encapsulation                                   | Coated with flame retardant epoxy powder |
| Leads                                           | Tinned wire                              |

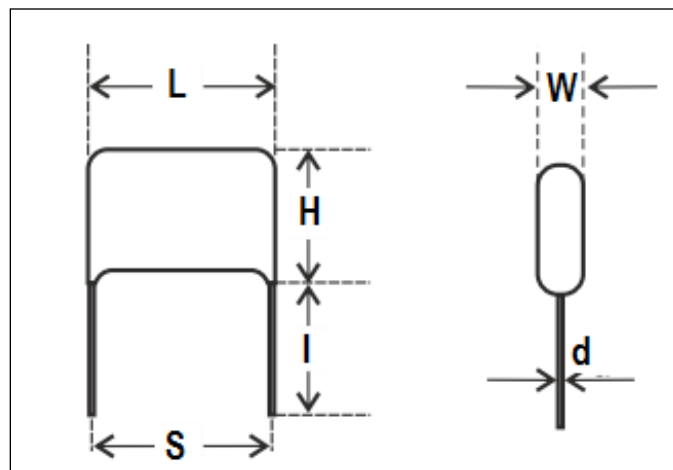
Marking on capacitor body

Type of capacitor, rated capacitance, rated tolerance, rated voltage and traceability code will be available on each and every capacitor. Example- D473K2J 9HMP023, or MPP D105K2J 902231234

Compatibility to RoHS



## Dimensions Description



# Metallized Polypropylene Film Capacitors

## Dip Type • Series Code 04



| Rated Voltage | Rated Capacitance (µF) | Dimensions (mm) |         |          |          |           |          | dV/dt (V/µs)    | Part Number     |
|---------------|------------------------|-----------------|---------|----------|----------|-----------|----------|-----------------|-----------------|
|               |                        | L (Max)         | H (Max) | W (Max)  | S        | d (±0.05) | l        |                 |                 |
| 100Vdc/63Vac  | 0.1                    | 12.5            | 16      | 6        | 10±0.5   | 0.6       | 5±1.0    | 30              | 04 104 J 2A 2 A |
|               | 0.15                   | 12.5            | 12      | 8        | 10±0.75  | 0.6       | 17 Min.  | 30              | 04 154 J 2A 1 A |
|               | 0.15                   | 12.5            | 16      | 8        | 10±0.5   | 0.6       | 5±1.0    | 30              | 04 154 J 2A 2 A |
|               | 0.47                   | 17.5            | 15      | 9        | 15±0.75  | 0.8       | 17 Min.  | 20              | 04 474 J 2A 1 A |
|               | 6.8                    | 31              | 26      | 15.5     | 27.5±1.0 | 0.8       | 17 Min.  | 7               | 04 685 K 2A 1 A |
|               | 6.8                    | 31              | 26      | 15.5     | 27.5±1.0 | 0.8       | 17 Min.  | 7               | 04 685 K 2A 1 U |
| 250Vdc/160Vac | 0.047                  | 12.5            | 10      | 6        | 10±0.75  | 0.6       | 17 Min.  | 70              | 04 473 K 2E 1 A |
|               | 0.047                  | 12.5            | 14      | 6        | 10±0.5   | 0.6       | 4.5±1.0  | 70              | 04 473 K 2E 2 A |
|               | 0.1                    | 12.5            | 12      | 6        | 10±0.75  | 0.6       | 17 Min.  | 70              | 04 104 J 2E 1 A |
|               | 0.1                    | 12.5            | 12      | 6        | 10±0.75  | 0.6       | 17 Min.  | 70              | 04 104 K 2E 1 A |
|               | 0.1                    | 12.5            | 16      | 6        | 10±0.5   | 0.6       | 5±1.0    | 70              | 04 104 I 2E 2 A |
|               | 0.15                   | 17.5            | 16      | 7        | 15±0.5   | 0.8       | 5±1.0    | 60              | 04 154 J 2E 2 A |
|               | 0.18                   | 17.5            | 19      | 8        | 7.5±0.5  | 0.8       | 5±1.0    | 60              | 04 184 J 2E 2 A |
|               | 0.22                   | 17.5            | 12      | 7        | 15±0.75  | 0.8       | 17 Min.  | 60              | 04 224 K 2E 1 A |
|               | 0.22                   | 17.5            | 17      | 7        | 22.5±0.5 | 0.8       | 3.75±1.0 | 60              | 04 224 K 2E 2 B |
|               | 0.22                   | 17.5            | 17      | 7        | 22.5±0.5 | 0.8       | 14 Min.  | 60              | 04 224 K 2E 5 A |
|               | 0.22                   | 17.5            | 17      | 7        | 15±0.5   | 0.8       | 14 Min.  | 60              | 04 224 K 2E 5 B |
|               | 0.27                   | 26              | 12      | 7        | 22.5±0.5 | 0.8       | 5±1.0    | 30              | 04 274 J 2E 7 A |
|               | 0.27                   | 26              | 17      | 7        | 20±0.5   | 0.8       | 5±1.0    | 30              | 04 274 J 2E 2 A |
|               | 0.3                    | 26              | 17      | 7        | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 304 J 2E 1 A |
|               | 0.3                    | 26              | 17      | 7        | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 304 K 2E 1 A |
|               | 0.33                   | 26              | 13      | 8        | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 334 J 2E 1 A |
|               | 0.35                   | 26              | 19      | 8        | 15±0.5   | 0.8       | 5±1.0    | 30              | 04 354 I 2E 2 A |
|               | 0.39                   | 26              | 15      | 8        | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 394 J 2E 1 A |
|               | 0.4                    | 26              | 19      | 8        | 15±0.5   | 0.8       | 5±1.0    | 30              | 04 404 I 2E 2 A |
|               | 0.43                   | 26              | 14      | 7        | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 434 J 2E 1 A |
|               | 0.43                   | 26              | 19      | 7        | 15±0.5   | 0.8       | 5±1.0    | 30              | 04 434 J 2E 2 A |
|               | 0.47                   | 26              | 13      | 8        | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 474 J 2E 1 A |
|               | 0.47                   | 26              | 17      | 10       | 15±0.5   | 0.8       | 5±1.0    | 30              | 04 474 I 2E 2 A |
|               | 0.47                   | 26              | 17      | 10       | 20±0.5   | 0.8       | 5±1.0    | 30              | 04 474 J 2E 2 A |
|               | 0.53                   | 26              | 19      | 7        | 17.5±0.5 | 0.6       | 5±1.0    | 30              | 04 534 I 2E 2 A |
|               | 0.68                   | 26              | 17      | 9.5      | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 684 K 2E 1 A |
|               | 0.68                   | 26              | 18      | 10       | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 684 J 2E 1 B |
|               | 0.68                   | 26              | 18      | 10       | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 684 K 2E 1 B |
|               | 0.7                    | 26              | 25      | 11       | 22.5±0.5 | 0.8       | 14 Min.  | 30              | 04 704 J 2E 4 L |
|               | 0.8                    | 26              | 19      | 11       | 22.5±1.0 | 0.8       | 17 Min.  | 30              | 04 804 J 2E 1 A |
| 1             | 26                     | 15              | 8       | 10±0.75  | 0.8      | 17 Min.   | 30       | 04 105 K 2E 1 C |                 |
| 1             | 26                     | 22              | 10      | 20±0.5   | 0.8      | 5±1.0     | 30       | 04 105 I 2E 2 A |                 |
| 1             | 26                     | 22              | 10      | 10±0.5   | 0.8      | 5±1.0     | 30       | 04 105 I 2E 2 B |                 |
| 2.2           | 31                     | 18              | 10      | 27.5±1.0 | 0.8      | 17 Min.   | 20       | 04 225 K 2E 1 W |                 |
| 2.2           | 31                     | 21              | 12      | 27.5±1.0 | 0.8      | 17 Min.   | 20       | 04 225 K 2E 1 A |                 |

# Metallized Polypropylene Film Capacitors

## Dip Type • Series Code 04

| Rated Voltage | Rated Capacitance (µF) | L (Max) | H (Max) | Dimensions (mm) |          |           | dV/dt (V/µs) | Part Number |                 |
|---------------|------------------------|---------|---------|-----------------|----------|-----------|--------------|-------------|-----------------|
|               |                        |         |         | W (Max)         | S        | d (±0.05) |              |             |                 |
| 400Vdc/200Vac | 0.01                   | 12.5    | 10.5    | 5.5             | 10±0.75  | 0.6       | 17 Min.      | 80          | 04 103 J 2G 1 A |
|               | 0.015                  | 12.5    | 11      | 6               | 10±0.75  | 0.6       | 17 Min.      | 80          | 04 153 J 2G 1 A |
| 400Vdc/200Vac | 0.015                  | 12.5    | 15      | 6               | 10±0.5   | 0.6       | 4.5±1.0      | 80          | 04 153 J 2G 2 A |
|               | 0.022                  | 12.5    | 11      | 6               | 10±0.75  | 0.6       | 17 Min.      | 80          | 04 223 K 2G 1 A |
|               | 0.022                  | 12.5    | 12      | 6               | 10±0.75  | 0.6       | 17 Min.      | 80          | 04 223 J 2G 1 A |
|               | 0.022                  | 12.5    | 13      | 6.5             | 10±0.75  | 0.6       | 17 Min.      | 80          | 04 223 J 2G 1 B |
|               | 0.022                  | 12.5    | 15      | 6               | 10±0.5   | 0.6       | 5±1.0        | 80          | 04 223 J 2G 2 A |
|               | 0.047                  | 12.5    | 13.5    | 8               | 10±0.75  | 0.6       | 17 Min.      | 80          | 04 473 J 2G 1 A |
|               | 0.047                  | 12.5    | 13.5    | 8               | 10±0.75  | 0.6       | 17 Min.      | 80          | 04 473 K 2G 1 A |
|               | 0.047                  | 12.5    | 17      | 6               | 10±0.5   | 0.6       | 5±1.0        | 80          | 04 473 K 2G 2 A |
|               | 0.047                  | 12.5    | 18.5    | 8               | 10±0.5   | 0.6       | 5±1.0        | 80          | 04 473 J 2G 2 A |
|               | 0.1                    | 17.5    | 12      | 7               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 104 J 2G 1 A |
|               | 0.1                    | 17.5    | 12      | 7               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 104 K 2G 1 A |
|               | 0.1                    | 17.5    | 17      | 7               | 15±0.5   | 0.8       | 5±1.0        | 70          | 04 104 I 2G 2 A |
|               | 0.1                    | 17.5    | 17      | 7               | 15±0.5   | 0.8       | 5±1.0        | 70          | 04 104 K 2G 2 A |
|               | 0.15                   | 17.5    | 13      | 8               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 154 J 2G 1 A |
|               | 0.15                   | 17.5    | 13      | 8               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 154 K 2G 1 A |
|               | 0.15                   | 17.5    | 17      | 8               | 15±0.5   | 0.8       | 5±1.0        | 70          | 04 154 J 2G 2 A |
|               | 0.15                   | 17.5    | 17      | 8               | 15±0.5   | 0.8       | 5±1.0        | 70          | 04 154 K 2G 2 A |
|               | 0.16                   | 17.5    | 18.5    | 8               | 15±0.5   | 0.8       | 14 Min.      | 70          | 04 164 J 2G 4 L |
|               | 0.18                   | 17.5    | 15      | 8               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 184 J 2G 1 A |
|               | 0.18                   | 17.5    | 15      | 8               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 184 K 2G 1 A |
|               | 0.18                   | 17.5    | 20      | 8               | 7.5±0.5  | 0.8       | 14 Min.      | 70          | 04 184 J 2G 5 A |
|               | 0.22                   | 17.5    | 16      | 8               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 224 J 2G 1 A |
|               | 0.22                   | 17.5    | 16      | 8               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 224 K 2G 1 A |
|               | 0.22                   | 17.5    | 21      | 8               | 15±0.5   | 0.8       | 5±1.0        | 70          | 04 224 J 2G 2 A |
|               | 0.22                   | 17.5    | 21      | 8               | 15±0.5   | 0.8       | 5±1.0        | 70          | 04 224 K 2G 2 A |
|               | 0.22                   | 17.5    | 22      | 11              | 15±0.5   | 0.8       | 5±1.0        | 70          | 04 224 J 2G 2 B |
|               | 0.22                   | 26      | 13      | 7               | 22.5±1.0 | 0.8       | 17 Min.      | 35          | 04 224 J 2G 1 B |
|               | 0.22                   | 26      | 13      | 7               | 22.5±1.0 | 0.8       | 17 Min.      | 35          | 04 224 K 2G 1 B |
|               | 0.25                   | 26      | 15      | 7               | 22.5±1.0 | 0.8       | 17 Min.      | 35          | 04 254 J 2G 1 A |
|               | 0.27                   | 26      | 19      | 7               | 20±0.5   | 0.8       | 5±1.0        | 35          | 04 274 J 2G 2 A |
|               | 0.3                    | 26      | 18      | 8               | 22.5±1.0 | 0.8       | 17 Min.      | 35          | 04 304 J 2G 1 A |
|               | 0.3                    | 26      | 22      | 10              | 22.5±0.5 | 0.8       | 14 Min.      | 35          | 04 304 J 2G 4 L |
|               | 0.33                   | 17.5    | 17.5    | 10              | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 334 K 2G 1 B |
|               | 0.33                   | 17.5    | 21.5    | 10              | 15±0.5   | 0.8       | 14 Min.      | 70          | 04 334 J 2G 4 G |
|               | 0.33                   | 26      | 15      | 8               | 22.5±1.0 | 0.8       | 17 Min.      | 35          | 04 334 J 2G 1 A |
|               | 0.33                   | 26      | 15      | 8               | 22.5±1.0 | 0.8       | 17 Min.      | 35          | 04 334 K 2G 1 A |
|               | 0.33                   | 26      | 20      | 8               | 22.5±0.5 | 0.8       | 14 Min.      | 35          | 04 334 J 2G 4 L |
|               | 0.39                   | 26      | 15      | 9               | 22.5±1.0 | 0.8       | 17 Min.      | 35          | 04 394 J 2G 1 A |
|               | 0.39                   | 26      | 20      | 9               | 20±0.5   | 0.8       | 5±1.0        | 35          | 04 394 J 2G 2 A |
|               | 0.47                   | 17.5    | 15      | 9               | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 474 K 2G 1 Z |
|               | 0.47                   | 17.5    | 18      | 13              | 15±0.75  | 0.8       | 17 Min.      | 70          | 04 474 K 2G 1 B |

# Metallized Polypropylene Film Capacitors

## Dip Type • Series Code 04

| Rated Voltage | Rated Capacitance (µF) | L (Max) | H (Max) | Dimensions (mm) |          | d       | l       | dV/dt (V/µs) | Part Number     |
|---------------|------------------------|---------|---------|-----------------|----------|---------|---------|--------------|-----------------|
|               |                        |         |         | W (Max)         | S        | (±0.05) |         |              |                 |
|               | 0.47                   | 26      | 21.5    | 9               | 20±0.5   | 0.8     | 5±1.0   | 35           | 04 474 J 2G 2 A |
|               | 1                      | 22      | 14.5    | 7               | 20±1.0   | 0.8     | 17 Min. | 35           | 04 105 K 2G 1 B |
| 400Vdc/200Vac | 1                      | 22      | 14.5    | 7               | 20±1.0   | 0.8     | 17 Min. | 35           | 04 105 K 2G 1 Z |
|               | 1                      | 31      | 18.5    | 7.5             | 27.5±1.0 | 0.8     | 17 Min. | 29           | 04 105 K 2G 1 O |
| 450Vdc/220Vac | 0.047                  | 12.5    | 11      | 6               | 10±0.75  | 0.5     | 17 Min. | 80           | 04 473 K 2I 1 A |
|               | 0.047                  | 12.5    | 11      | 6               | 10±0.5   | 0.5     | 5±1.0   | 80           | 04 473 K 2I 7 A |
| 500Vdc/220Vac | 0.056                  | 17.5    | 13      | 7               | 15±0.5   | 0.6     | 5±1.0   | 90           | 04 563 J 2H 7 B |
| 630Vdc/250Vac | 0.0047                 | 13.0    | 11      | 6               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 472 J 2J 1 A |
|               | 0.01                   | 12.5    | 10      | 5               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 103 J 2J 1 A |
|               | 0.01                   | 12.5    | 10      | 5               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 103 K 2J 1 A |
|               | 0.01                   | 12.5    | 14      | 5               | 7.5±0.5  | 0.6     | 17 Min. | 100          | 04 103 J 2J 8 B |
|               | 0.012                  | 12.5    | 10      | 5.5             | 10±0.75  | 0.6     | 17 Min. | 100          | 04 123 J 2J 1 A |
|               | 0.015                  | 12.5    | 11      | 6               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 153 J 2J 1 A |
|               | 0.022                  | 12.5    | 12      | 7               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 223 J 2J 1 A |
|               | 0.022                  | 12.5    | 12      | 7               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 223 J 2J 1 U |
|               | 0.022                  | 12.5    | 12      | 7               | 10±0.5   | 0.6     | 5±1.0   | 100          | 04 223 J 2J 7 A |
|               | 0.022                  | 12.5    | 12      | 7               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 223 K 2J 1 A |
|               | 0.022                  | 12.5    | 12      | 7               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 223 K 2J 1 V |
|               | 0.022                  | 12.5    | 12      | 7               | 10±0.5   | 0.6     | 5±1.0   | 100          | 04 223 K 2J 7 A |
|               | 0.022                  | 12.5    | 17.5    | 6               | 10±0.5   | 0.6     | 14 Min. | 100          | 04 223 J 2J 4 L |
|               | 0.027                  | 12.5    | 12      | 6               | 10±0.75  | 0.6     | 17 Min. | 100          | 04 273 K 2J 1 A |
|               | 0.027                  | 12.5    | 12.5    | 6.5             | 10±0.75  | 0.6     | 17 Min. | 100          | 04 273 J 2J 1 C |
|               | 0.027                  | 17.5    | 13      | 8               | 15±0.75  | 0.8     | 17 Min. | 90           | 04 273 K 2J 1 B |
|               | 0.033                  | 12.5    | 11.5    | 6.5             | 10±0.75  | 0.6     | 17 Min. | 100          | 04 333 K 2J 1 B |
|               | 0.033                  | 17.5    | 12      | 6.5             | 15±0.75  | 0.8     | 17 Min. | 90           | 04 333 J 2J 1 A |
|               | 0.033                  | 17.5    | 12      | 6.5             | 15±0.75  | 0.8     | 17 Min. | 90           | 04 333 K 2J 1 A |
|               | 0.039                  | 17.5    | 13      | 7.5             | 15±0.75  | 0.8     | 17 Min. | 90           | 04 393 J 2J 1 A |
|               | 0.039                  | 21      | 24      | 7.5             | 7.5±0.5  | 0.8     | 14 Min. | 90           | 04 393 J 2J 4 L |
|               | 0.047                  | 17.5    | 13      | 6.5             | 15±0.75  | 0.8     | 17 Min. | 90           | 04 473 J 2J 1 F |
|               | 0.047                  | 17.5    | 13      | 6.5             | 15±0.5   | 0.8     | 5±1.0   | 90           | 04 473 J 2J 7 F |
|               | 0.047                  | 17.5    | 13      | 7               | 15±0.75  | 0.8     | 17 Min. | 90           | 04 473 J 2J 1 E |
|               | 0.047                  | 17.5    | 13      | 7               | 15±0.75  | 0.8     | 17 Min. | 90           | 04 473 K 2J 1 E |
|               | 0.047                  | 17.5    | 14      | 7.5             | 15±0.75  | 0.8     | 17 Min. | 90           | 04 473 J 2J 1 A |
|               | 0.047                  | 17.5    | 14      | 7.5             | 15±0.5   | 0.8     | 5±1.0   | 90           | 04 473 K 2J 7 A |
|               | 0.047                  | 17.5    | 18      | 7.5             | 15±0.5   | 0.8     | 5±1.0   | 90           | 04 473 K 2J 2 A |
|               | 0.047                  | 17.5    | 18.5    | 9               | 15±0.5   | 0.8     | 14 Min. | 90           | 04 473 J 2J 4 L |
|               | 0.056                  | 17.5    | 13.5    | 8               | 15±0.75  | 0.8     | 17 Min. | 90           | 04 563 J 2J 1 A |
|               | 0.056                  | 17.5    | 13.5    | 8               | 15±0.75  | 0.8     | 17 Min. | 90           | 04 563 K 2J 1 A |
|               | 0.056                  | 17.5    | 18.5    | 9               | 15±0.5   | 0.8     | 14 Min. | 90           | 04 563 J 2J 4 L |
|               | 0.068                  | 17.5    | 14      | 8               | 15±0.75  | 0.8     | 17 Min. | 90           | 04 683 K 2J 1 A |
|               | 0.082                  | 17.5    | 14      | 8               | 15±0.75  | 0.8     | 17 Min. | 90           | 04 823 K 2J 1 A |
|               | 0.1                    | 12.5    | 12.5    | 6.5             | 10±0.75  | 0.6     | 17 Min. | 100          | 04 104 K 2J 1 B |
|               | 0.1                    | 12.5    | 12.5    | 6.5             | 10±0.5   | 0.6     | 5±1.0   | 100          | 04 104 K 2J 7 B |

# Metallized Polypropylene Film Capacitors

## Dip Type • Series Code 04

| Rated Voltage | Rated Capacitance (μF) | Dimensions (mm) |         |         |          |           |         | dV/dt (V/μs) | Part Number     |
|---------------|------------------------|-----------------|---------|---------|----------|-----------|---------|--------------|-----------------|
|               |                        | L (Max)         | H (Max) | W (Max) | S        | d (±0.05) | l       |              |                 |
|               | 0.1                    | 12.5            | 12.5    | 6.5     | 10±0.5   | 0.6       | 4±1.0   | 100          | 04 104 K 2J 7 C |
|               | 0.1                    | 17.5            | 15      | 9       | 15±0.75  | 0.8       | 17 Min. | 90           | 04 104 J 2J 1 A |
|               | 0.1                    | 17.5            | 15      | 9       | 15±0.75  | 0.8       | 17 Min. | 90           | 04 104 K 2J 1 A |
| 630Vdc/250Vac | 0.15                   | 17.5            | 16      | 9.5     | 15±0.75  | 0.8       | 17 Min. | 90           | 04 154 K 2J 1 B |
|               | 0.15                   | 26              | 19.5    | 9       | 22.5±0.5 | 0.8       | 14 Min. | 45           | 04 154 J 2J 4 L |
|               | 0.18                   | 17.5            | 16.5    | 11      | 15±0.75  | 0.8       | 17 Min. | 90           | 04 184 K 2J 1 B |
|               | 0.22                   | 26              | 16.5    | 8.5     | 22.5±1.0 | 0.8       | 17 Min. | 45           | 04 224 K 2J 1 A |
|               | 0.22                   | 26              | 21      | 10      | 15±0.5   | 0.8       | 14 Min. | 45           | 04 224 J 2J 5 A |
|               | 0.47                   | 26              | 22      | 13      | 22.5±1.0 | 0.8       | 17 Min. | 45           | 04 474 J 2J 1 B |
|               | 0.47                   | 26              | 22      | 13      | 22.5±0.3 | 0.8       | 17 Min. | 45           | 04 474 K 2J 1 B |
|               | 0.47                   | 26              | 22      | 13      | 22.5±1.0 | 0.8       | 17 Min. | 45           | 04 474 K 2J 1 V |
|               | 0.47                   | 26              | 22      | 13      | 22.5±0.3 | 0.8       | 5±1.0   | 45           | 04 474 K 2J 7 B |
|               | 0.47                   | 26              | 25.5    | 13.5    | 22.5±1.0 | 0.8       | 17 Min. | 45           | 04 474 K 2J 1 D |
|               | 0.47                   | 26              | 26      | 13      | 17.5±0.5 | 0.8       | 14 Min. | 45           | 04 474 J 2J 5 A |
|               | 0.68                   | 26              | 23.5    | 15      | 22.5±1.0 | 0.8       | 17 Min. | 45           | 04 684 K 2J 1 A |
|               | 1.3                    | 31              | 27.5    | 17.5    | 27.5±1.0 | 0.8       | 17 Min. | 30           | 04 135 J 2J 1 B |
|               | 2.2                    | 31              | 30      | 18      | 27.5±1.0 | 0.8       | 17 Min. | 30           | 04 225 K 2J 1 A |
| 1000Vdc       | 0.1                    | 26              | 17.5    | 9       | 22.5±1.0 | 0.8       | 17 Min. | 30           | 04 104 K 3A 1 A |
|               | 0.22                   | 26              | 17      | 10      | 22.5±1.0 | 0.8       | 17 Min. | 30           | 04 224 K 3A 1 A |
|               | 0.22                   | 26              | 22      | 14      | 22.5±1.0 | 0.8       | 17 Min. | 30           | 04 224 K 3A 1 U |
|               | 0.33                   | 26              | 19      | 12      | 22.5±1.0 | 0.8       | 17 Min. | 30           | 04 334 K 3A 1 A |
|               | 0.47                   | 26              | 21      | 14      | 22.5±1.0 | 0.8       | 17 Min. | 30           | 04 474 K 3A 1 A |
|               | 0.56                   | 31              | 21      | 12      | 27.5±1.0 | 0.8       | 17 Min. | 20           | 04 564 K 3A 1 A |
|               | 0.68                   | 31              | 23      | 13      | 27.5±1.0 | 0.8       | 17 Min. | 20           | 04 684 K 3A 1 A |
|               | 0.82                   | 31              | 23      | 14      | 27.5±1.0 | 0.8       | 17 Min. | 20           | 04 824 K 3A 1 B |
|               | 1                      | 31              | 24.5    | 15.5    | 27.5±1.0 | 0.8       | 17 Min. | 20           | 04 105 K 3A 1 B |

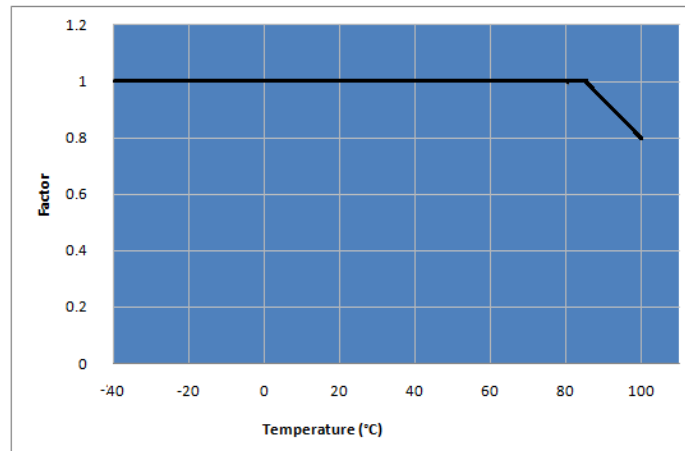
### Specific Data

| Description                                                                      | Value                                          |                      |                                |                 |
|----------------------------------------------------------------------------------|------------------------------------------------|----------------------|--------------------------------|-----------------|
|                                                                                  | Frequency                                      | $C_R \leq 0.1 \mu F$ | $0.1 \mu F < C_R \leq 1 \mu F$ | $C_R > 1 \mu F$ |
| Maximum tangent of loss angle (Tanδ)                                             | 1 kHz                                          | 0.0008               | 0.0008                         | 0.001           |
|                                                                                  | 10 kHz                                         | 0.0015               | 0.0025                         | -               |
|                                                                                  | 100 kHz                                        | 0.0050               | -                              | -               |
| Voltage proof test between leads                                                 | 1.6 times of the rated DC voltage for 2 second |                      |                                |                 |
| Insulation Resistance ( $R_{IS}$ )<br>(or) time constant $T = C_R \times R_{IS}$ | $C_R \leq 0.33 \mu F$                          | $C_R > 0.33 \mu F$   |                                |                 |
|                                                                                  | $\geq 100000 M\Omega$                          | $\geq 30000 s$       |                                |                 |

at 25° C, relative humidity ≤70%

## Temperature Derating Graph

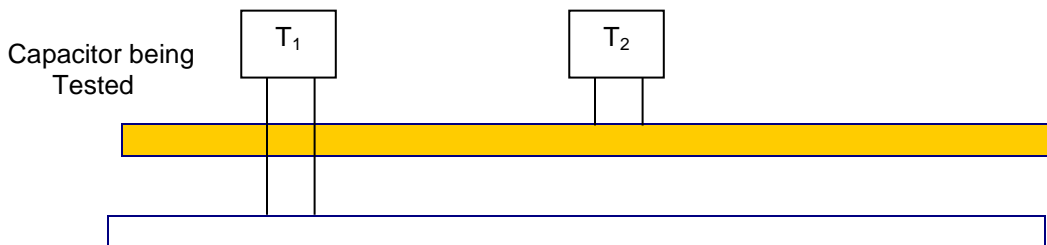
For temperature between 85°C and 100°C a derating factor of 1.25% per °C on the rated voltage  $V_R$  has to be applied.



## Power Dissipation and Maximum Component Temperature Rise

After applying the A.C voltage to the capacitor with certain frequency, we can measure the hot spot temperature of the capacitor. From that we can calculate  $\Delta T$ .

$\Delta T$  = hot spot temperature – ambient temperature



$T_1$  is the capacitor under test (Connected in the circuit)

$T_2$  is capacitor which has no connection

Distance between  $T_1$  and  $T_2$  should be about 50mm and 100mm from other components. To avoid radiation or convection, the capacitor should be tested in a wind-free box. The capacitor under test is separated by polystyrene.

$$\Delta T_{\max} = T_1 - T_2$$

at one frequency level the  $\Delta T_{\max}$  reach 10°C. That is the frequency which we have to start frequency derating.



## Storage Conditions

Avoid storing the capacitors in places where the environmental conditions differ from the following:

Storage time:  $\leq 24$  months from the date marked on the label glued to the package.

- Temperature: -40 to 80°C
- Humidity:
  - Average per year:  $\leq 70\%$
  - For 30 full days randomly distributed throughout the year:  $\leq 85\%$
  - Dew: absent

After a longer period of storage or use, the tolerance can increase; but, according to standard specification, it may never exceed twice the value measured at the time of delivery.

## Disclaimer

All our capacitors are designed, manufactured and tested to specifications. We strictly adhere to standards in procurement of materials, in the laid down manufacturing processes and consistently apply stringent process controls and testing parameters. This ensures that our capacitors always perform to the offered specifications.

Appropriateness of use in a specific circuit and fitness to a particular application however needs to be verified and its reliability through expected lifetime is required to be validated by the customer. Deki's responsibility is limited to ensuring that the capacitor performs as claimed in the specification/ data sheets provided by Deki. Deki specifically disclaims any implied warranties of fitness for any particular purpose. Liability, in any case is limited to the price paid for the capacitors.