

METALLIZED POLYPROPYLENE (OPP), NON-INDUCTIVE, PLASTIC CASE, INTERFERENCE SUPPRESSORS CLASS X2

INTRODUCTION

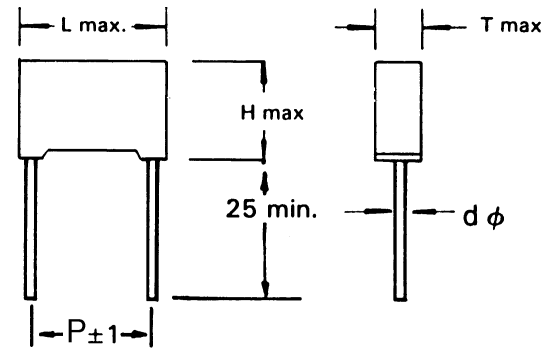
THE TYPE MPX CAPACITORS are constructed with metallized polypropylene film, dielectric, copper clad steel lead and encapsulated in plastic cases sealed with epoxy resin. They provide Interference Suppression with safety recognition of UL, VDE, CSA and others.

APPLICATION

THE TYPE MPX CAPACITORS are ideal for using in Line-By-Pass, Antenna coupling, Across-The-Line and spark killer circuits and available for EMI filter and switching power supply applications.

FEATURES

- Non-inductive construction.
- Self-healing.
- Flame-retardant plastic case and epoxy resin (compliance with UL 94V-0).
- High moisture-resistance.
- Good solderability (plated with 100% Matte Sn).



| Country | Reference Standards | File No. |
|--------------------------|--|-------------------------|
| UL (USA) | UL 1414 **** | E 164458 |
| CSA (CANADA) | C 22.2 | LR 90204 - 3 |
| VDE (GERMANY) | VDE 0565 1 | 1578500-4670-0002/75168 |
| ENEC (EUROPEAN COMUNITY) | NEK EN 132 400 (1994) IEC384 14 11 (1993) / a1(1995) | 40017871 |

**** UL SCOPE UL1414 FOR CAPACITOR UP TO 1.0 MFD
FOR CAPACITANCE >1.0 UF, HAVE NOT BEEN EVALUATED
BY UL



PART NUMBERING

| Part Number Example: MPX-275/104K15F | | | | | | | |
|--------------------------------------|---|------------------------|---|------------------------|----------------|--------------|----------------|
| MPX | - | 275 | / | 104 | K | 15 | F |
| Type | | Rated AC (RMS) Voltage | | Capacitance Code (pF)* | Tolerance Code | Lead Spacing | RoHs Compliant |

* Capacitance Code: First two digits represent significant figures, third digit represents multiplier (number of zeros).

SPECIFICATIONS

| Performance Characteristics | |
|---|--|
| Operating Temperature Range | -40°C ~ +100°C -40°C ~ +85°C (UL + CSA). |
| Voltage Range (50Hz ~ 60Hz) | 275VAC (250VAC for UL & CSA). |
| Withstanding Voltage (between leads) | 1075VDC for 60 seconds or 2000VDC for 1 second. |
| Capacitance Range | 0.0047µF ~ 2.2µF 0.0047µF ~ 1.0µF (UL + CSA). |
| Capacitance Tolerance | ±5% & ±10%. |
| Maximum Dissipation Factor % (20°C, 1KHz) | 0.08. |
| Minimum Insulation Resistance (23°C) (after 1 minute minimum) | IR ≥ 30,000MΩ measured @ 100VDC ±15VDC (C - 0.33µF) IR ≥ 10,000 divided by µF measured @ 100VDC ±15VDC (C > 0.33µF) |

HUMIDITY TEST:

Shall withstand the test of R.H. 90% ~ 95% @ 40°C for 500 hours. After the test, the capacitance drift ≤5%, IR • 50% of specified value.

LIFE TEST:

A test voltage of 440VAC shall be applied for 1008 hours at 85°C. 880VAC, 60Hz for a period of 0.1 seconds to be applied once each hour. After the test, the capacitor must meet the following limits:

- A) Capacitance drift ≤ 10% of the initial value.
- B) Insulation resistance ³ 50% of specified value.

LEAD PULL TEST:

Shall withstand a steady pull of 4kg applied axially for 10 seconds.

LEAD BEND TEST:

The test consists of attaching a load of 1kg to the capacitor 90° from the direction of lead egress, then 180° in opposite direction and back to starting point. The lead shall sustain two cycles without breaking.

MARKING:

Must be legible, correct and consist of capacitance, capacitance tolerance, rated voltage, type designation, climatic category, manufacturer's trade mark, date code and recognition marks.

| Code | Size Cap. (µF) | L Max. | H Max. | T Max. | P ± 1 | dØ |
|------|----------------|--------|--------|--------|--------|-----|
| 472 | 0.0047 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 562 | 0.0056 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 682 | 0.0068 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 822 | 0.0082 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 103 | 0.010 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 123 | 0.012 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 153 | 0.015 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 183 | 0.018 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 223 | 0.022 | 13.0 | 11.0 | 5.0 | 10.0 | 0.6 |
| 273 | 0.027 | 13.0 | 12.0 | 6.0 | 10.0 | 0.6 |
| 333 | 0.033 | 13.0 | 12.0 | 6.0 | 10.0 | 0.6 |
| 333 | 0.033 | 18.0 | 11.0 | 5.0 | 15.0** | 0.8 |
| 393 | 0.039 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 |
| 473 | 0.047 | 18.0 | 11.0 | 5.0 | 15.0 | 0.8 |
| 563 | 0.056 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 |
| 683 | 0.068 | 18.0 | 12.0 | 6.0 | 15.0 | 0.8 |
| 823 | 0.082 | 18.0 | 13.5 | 6.0 | 15.0 | 0.8 |
| 104 | 0.10 | 18.0 | 13.5 | 6.0 | 15.0 | 0.8 |
| 124 | 0.12 | 18.0 | 13.5 | 7.5 | 15.0 | 0.8 |
| 154 | 0.15 | 18.0 | 14.5 | 8.5 | 15.0 | 0.8 |
| 154 | 0.15 | 26.5 | 16.5 | 7.0 | 22.5** | 0.8 |
| 184 | 0.18 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 |
| 184 | 0.18 | 18.0 | 16.0 | 10.0 | 15.0** | 0.8 |
| 224 | 0.22 | 26.5 | 16.5 | 7.0 | 22.5 | 0.8 |
| 224 | 0.22 | 18.0 | 16.0 | 10.0 | 15.0** | 0.8 |
| 274 | 0.27 | 26.5 | 17.0 | 8.5 | 22.5 | 0.8 |
| 334 | 0.33 | 26.5 | 17.0 | 8.5 | 22.5 | 0.8 |
| 394 | 0.39 | 26.5 | 17.0 | 10.0 | 22.5 | 0.8 |
| 474 | 0.47 | 26.5 | 19.0 | 10.0 | 22.5 | 0.8 |
| 474 | 0.47 | 32.0 | 20.0 | 11.0 | 27.5** | 0.8 |
| 564 | 0.56 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 |
| 604 | 0.6 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 |
| 684 | 0.68 | 32.0 | 20.0 | 11.0 | 27.5 | 0.8 |
| 824 | 0.82 | 32.0 | 22.0 | 13.0 | 27.5 | 0.8 |
| 105 | 1.0 | 32.0 | 25.0 | 14.0 | 27.5 | 0.8 |
| 105 | 1.0 | 37.0 | 24.0 | 13.5 | 32.5** | 0.8 |
| 125 | 1.2 | 37.0 | 30.0 | 15.0 | 27.5 | 0.8 |
| 155 | 1.5 | 37.0 | 30.0 | 15.0 | 27.5 | 0.8 |
| 125 | 1.2 | 37.0 | 24.0 | 13.5 | 32.5** | 0.8 |
| 155 | 1.5 | 37.0 | 26.0 | 15.0 | 32.5** | 0.8 |
| 185 | 1.8 | 37.0 | 29.0 | 19.0 | 32.5 | 0.8 |
| 225 | 2.2 | 37.0 | 29.0 | 19.0 | 32.5 | 0.8 |