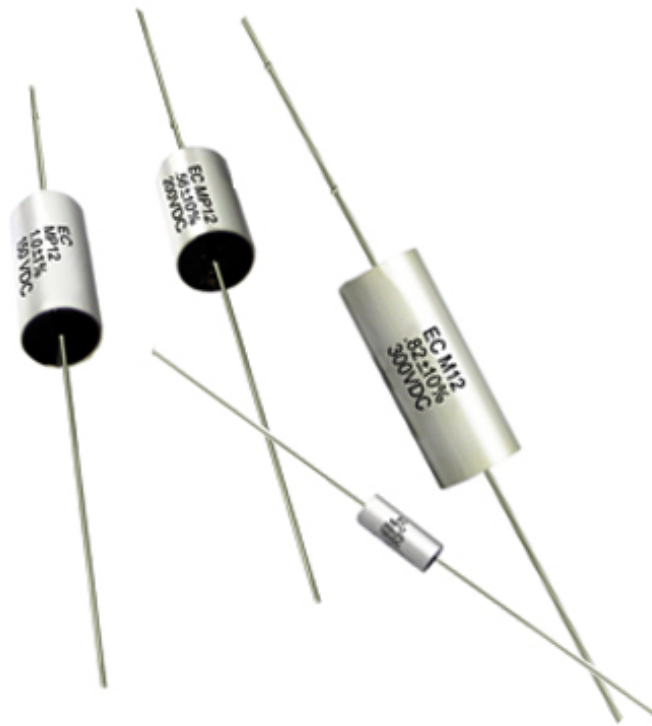


MP12 SERIES

Metallized Polypropylene

Metallized Polypropylene Wrap and Epoxy End Fill

Where high insulation resistance, high Q, extreme stability, close tolerance, low dielectric absorption and dissipation factor are required.



FEATURES

- High Insulation Resistance
- Extreme Stability
- Close Tolerance

STANDARD CONFIGURATION

- Wrap and Epoxy End Fill

Specification Summary

Capacitance Range
0.01 μ F to 10.0 μ F

Capacitance Tolerance
Standard tolerance is $\pm 10\%$. Tolerances of $\pm 20\%$, $\pm 5\%$, $\pm 2\%$, $\pm 1\%$ are available.

Operating Temperature Range
-55 $^{\circ}$ C to +105 $^{\circ}$ C

Enclosure/ Construction
Plastic film case with epoxy end seal.

Voltage Rating
150VDC to 600VDC

Quality Control
Capacitors are tested 100% for:

- o Capacitance
- o Tolerance
- o Dissipation Factor
- o Dielectric withstanding voltage
- o Insulation Resistance
- o Equivalent Series Resistance (ESR)

Process and inspection data are maintained on file and available on special request.

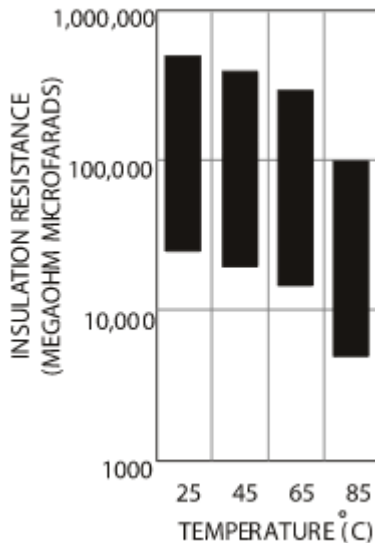
Environmental

Parameter	Method	Condition
Vibration	204	D
Immersion	104	B
Shock	213	I
Humidity	106	-
Thermal Shock	107	A
Life	108	F
Reference MIL-STD-202		

Characteristics

Insulation Resistance

Temperature($^{\circ}$ C)	25	85	105	
Megaohmsx Microfarads	300,000	30,000	3,000	
Insulation Resistance				

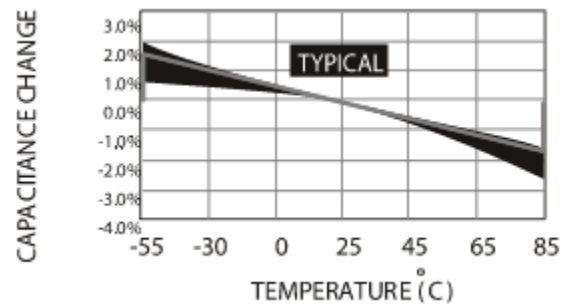


Dielectric Strength

Capacitors shall withstand a DC potential of twice rated voltage for one minute through a limiting resistance of 100 ohms/volt without damage or breakdown.

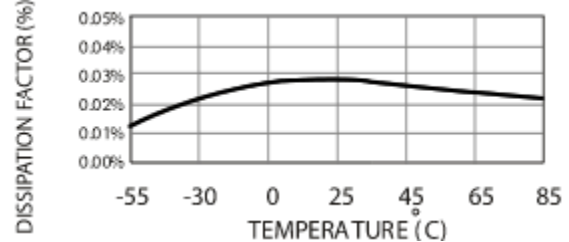
Capacitance Change

Temperature($^{\circ}$ C)	-55	25	105	
PercentageChange (typical)	2	0	-4	
CapacitanceChange				



Dissipation Factor

When measured at the frequency specified for capacitance measurement, the dissipation factor shall not exceed 0.1%.



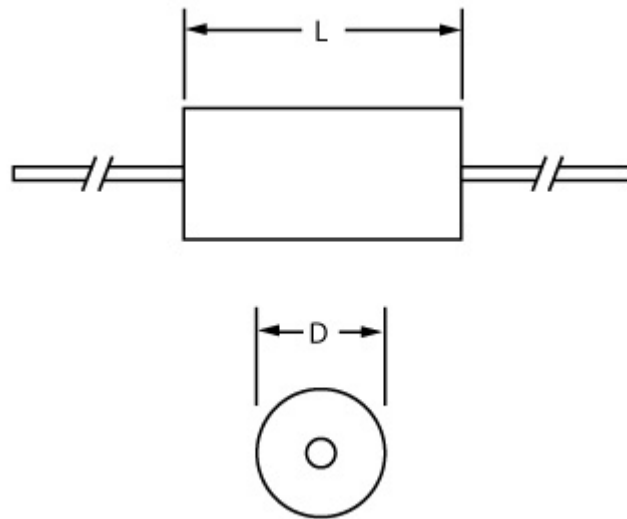
ELECTRICAL DATA

EC PART NUMBER	CAP μ F	150 VDC			200 VDC			300 VDC			400 VDC			600 VDC		
		E			F			H			J			K		
		D	L	AWG	D	L	AWG	D	L	AWG	D	L	AWG	D	L	AWG
MP12_103_	0.010	0.187	0.500	24	0.187	0.500	24	0.187	0.500	24	0.187	0.500	24	0.250	0.625	24
MP12_123_	0.012	0.187	0.500	24	0.187	0.500	24	0.187	0.500	24	0.187	0.500	24	0.265	0.625	22
MP12_153_	0.015	0.187	0.500	24	0.187	0.500	24	0.187	0.500	24	0.203	0.500	24	0.296	0.625	22
MP12_183_	0.018	0.187	0.500	24	0.187	0.500	24	0.203	0.500	24	0.234	0.500	24	0.328	0.625	22
MP12_223_	0.022	0.187	0.500	24	0.187	0.500	24	0.218	0.500	24	0.250	0.500	24	0.312	0.750	22
MP12_273_	0.027	0.187	0.500	24	0.187	0.500	24	0.234	0.500	24	0.281	0.500	22	0.343	0.750	22
MP12_333_	0.033	0.187	0.500	24	0.187	0.500	24	0.265	0.500	22	0.296	0.500	22	0.375	0.750	22
MP12_393_	0.039	0.187	0.500	24	0.203	0.500	24	0.281	0.500	22	0.250	0.625	24	0.406	0.750	22
MP12_473_	0.047	0.187	0.500	24	0.234	0.500	24	0.250	0.625	24	0.281	0.625	22	0.390	0.875	22
MP12_563_	0.056	0.203	0.500	24	0.250	0.500	24	0.265	0.625	22	0.312	0.625	22	0.359	1.062	22
MP12_683_	0.068	0.218	0.500	24	0.265	0.500	22	0.296	0.625	22	0.328	0.625	22	0.375	1.062	22
MP12_823_	0.082	0.234	0.500	24	0.234	0.625	24	0.312	0.625	22	0.296	0.750	22	0.421	1.187	22
MP12_104_	0.100	0.250	0.500	24	0.265	0.625	22	0.281	0.750	22	0.328	0.750	22	0.468	1.187	20
MP12_124_	0.120	0.265	0.500	22	0.375	0.625	22	0.312	0.750	22	0.359	0.750	22	0.500	1.187	20
MP12_154_	0.150	0.250	0.625	22	0.265	0.750	22	0.343	0.750	22	0.390	0.750	22	0.562	1.187	20
MP12_184_	0.180	0.265	0.625	22	0.281	0.750	22	0.359	0.875	22	0.359	1.062	22	0.546	1.437	20
MP12_224_	0.220	0.296	0.625	22	0.312	0.750	22	0.390	0.875	22	0.406	1.062	22	0.593	1.437	20
MP12_274_	0.270	0.312	0.625	22	0.343	0.750	22	0.437	0.875	22	0.437	1.062	22	0.656	1.437	20
MP12_334_	0.330	0.312	0.750	22	0.390	0.750	22	0.500	0.875	20	0.484	1.062	20	0.718	1.437	20
MP12_394_	0.390	0.328	0.750	22	0.375	0.875	22	0.515	0.875	20	0.531	1.062	20	0.781	1.437	20
MP12_474_	0.470	0.359	0.750	22	0.406	0.875	22	0.468	1.187	20	0.531	1.187	20	0.781	1.687	20
MP12_564_	0.560	0.390	0.750	22	0.437	0.875	22	0.515	1.187	20	0.578	1.187	20	0.859	1.687	20
MP12_684_	0.680	0.390	0.875	22	0.406	1.187	22	0.562	1.187	20	0.640	1.187	20	0.937	1.687	20
MP12_824_	0.820	0.375	1.062	22	0.437	1.187	22	0.562	1.437	20	0.625	1.437	20	0.937	1.937	20
MP12_105_	1.000	0.421	1.062	22	0.531	1.187	20	0.609	1.437	20	0.687	1.437	20	1.031	1.937	20
MP12_125_	1.250	0.468	1.062	20	0.562	1.187	20	0.671	1.437	20	0.687	1.687	20	1.093	2.187	20
MP12_155_	1.500	0.500	1.062	20	0.531	1.437	20	0.734	1.437	20	0.750	1.687	20	1.187	2.187	20
MP12_205_	2.000	0.531	1.187	20	0.604	1.437	20	0.950	1.687	20	0.859	1.687	20	1.375	2.187	20
MP12_305_	3.000	0.578	1.437	20	0.718	1.437	20	0.921	1.687	20	0.968	1.937	20	-	-	-
MP12_405_	4.000	0.656	1.437	20	0.765	1.687	20	0.906	2.187	20	1.250	1.937	20	-	-	-
MP12_505_	5.000	0.671	1.687	20	0.843	1.687	20	1.031	2.187	20	1.140	2.187	20	-	-	-
MP12_605_	6.000	0.734	1.687	20	0.859	1.937	20	1.125	2.187	20	1.250	2.187	20	-	-	-
MP12_805_	8.000	0.781	1.937	20	0.953	1.937	20	1.312	2.187	20	-	-	-	-	-	-
MP12_905_	9.000	0.812	1.937	20	1.031	1.937	20	-	-	-	-	-	-	-	-	-
MP12_106_	10.000	0.859	1.937	20	1.109	1.937	20	-	-	-	-	-	-	-	-	-

Note: The fifth character of the part number represents DC voltage rating: (E=150 VDC, F=200 VDC, etc.) Additionally, the tenth character represents the capacitance tolerance: M=±20%, K=±10%, J=±5%, F=±1%.

The lead length is 1.5" minimum. The lead material is copper clad steel, solder coated.

MECHANICAL DATA



Tolerances:

Length:

+3/32", -1/6"

Diameter:

0.249" and under +/-0.032"

0.250" to 0.500" +/-0.046"

0.501" and over +/-0.062"

ADDITIONAL INFORMATION

Among these in type MP12 metallized polypropylene precision capacitors which exhibit unique and outstanding electrical and environmental characteristics. The following are some of the most significant. - Negligible shift in capacitance under long term exposure to humidity, operating life and temperature cycling. - Insulation resistance, dielectric absorption and dissipation factor properties are all equivalent, or superior, to those of polystyrene. Small size and weight savings equivalent to those of metallized polycarbonate capacitors, make type MP12 ideal for precision instruments, communications, and high density circuitry applications.

Polypropylene capacitors are excellent for all critical applications which require high insulation resistance, high Q, extreme stability, close tolerance, low dielectric absorption and dissipation factor. The temperature coefficient makes an excellent choice for high Q tuned circuits, precision filter circuits, pulse networks and RC circuits.

HOW TO ORDER

TYPE Metallized Polypropylene	→	MP
STYLE/TERMINAL/VOLTAGE The first number represents the style. The second number represents Terminals and the third letter represents Voltage.	→	12E
CAPACITANCE IN PICO FARADS Expressed in picofarads, the first two digits are significant figure, The third is the number of zeros. (e.g. 104 equals 100000pF)	→	104
TOLERANCE M=±20%, K=±10%, J=±5%, G=±2%, F=±1%	→	K

Marking and Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type MP12, capacitance, tolerance, rated DC working voltage and date code. The first two digits of the date code represent the year, the second two digits the week, i.e., 0952 is the 52nd week of 2009, 0902 is the second week of 2009.

Quality Assurance

Major emphasis is placed on quality assurance. EC is an ISO 9001-2000 and AS9100:2004 Certified Company. Raw material inspection and the use of SPC manufacturing procedures assure the highest quality standards. Procedures are fully described in the EC Quality Control Manual. Electronic Concepts will continue to advance the state-of-the-art by utilizing leading edge technology, compact capacitor designs and establishing reliability procedures.

Sales Offices

United States

Eastern:

Headquarters

P.O. Box 1278

Eatontown, NJ 07724

Tel: 732-542-7880

Fax: 732-542-0524

Central:

Illinois 630-668-8747

email: sales@ecicaps.com

website: www.ecicaps.com

Europe

Ireland

Electronic Concepts Europe LTD

IDA Estate, Oughterad

Co. Galway, Ireland

tel: +353-91-552385, 552432

fax: +353-91-552387

email: sales@ecicaps.ie

website: www.electronicconcepts.ie

