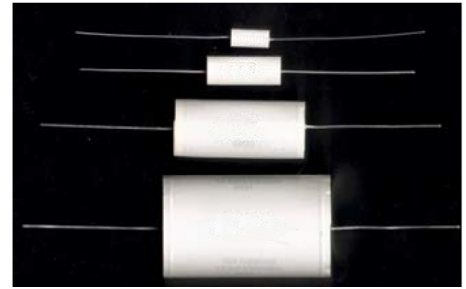


Type 704M

Metallized Polypropylene Film Capacitors

Type 704M Axial Lead Round Profile Metallized Polypropylene Film Capacitors



Specifications

Capacitance Range:

1.0 to 20.0 μF
(additional values available upon request)

Capacitance Tolerance:

$\pm 5\%$ and $\pm 10\%$, standard
(tighter tolerances available upon request)

Voltage Rating:

200 VDC/140 VAC

Operating Temperature

Units may be operated at full rated voltage from -55°C to $+85^{\circ}\text{C}$.

Voltage De-rating above $+85^{\circ}\text{C}$:

Units may be operated up to a maximum of $+105^{\circ}\text{C}$ provided the voltage is de-rated linearly to 50% of the $+85^{\circ}\text{C}$ rating.

Lead Wire (d):

Tinned Copper.
0.032 (0.8) diameter (#20 AWG)

Dissipation Factor:

0.1% Maximum @ 1 KHz, $+25^{\circ}\text{C}$.

Insulation Resistance (measured at 100 VDC):

At $+25^{\circ}\text{C}$: 200,000 $\text{M}\Omega\text{-}\mu\text{F}$

At $+85^{\circ}\text{C}$: 10,000 $\text{M}\Omega\text{-}\mu\text{F}$

(These are minimum ratings, call us if you have a more demanding requirement)

Encapsulation:

Wrapped with flame retardant polyester tape (meets UL510 specifications) and potted with flame retardant epoxy (meets UL94V-0 specifications).

Dielectric/Construction:

Metallized Polypropylene film, single section design. Non-Inductively wound.

High End Audio Applications:

Amplifiers, Preamps, Crossover Networks. Polypropylene's low dissipation factor, ESR and dielectric absorption, along with long term capacitance stability over time make the 704M series ideal for high quality audio applications.

In addition to the information provided here CDE also offers complete design and manufacturing of specific capacitance values, custom form factors, special lead terminations, etc.

Dimensions are in inches, millimeters in parentheses

Type 704M

Metallized Polypropylene Film Capacitors

Ordering/Part Number Information

704M 106 5 2 - XXX

A suffix may be added to denote special construction, packaging, marking, etc.

DC Voltage Rating. 2 = 200 VDC

Capacitance Tolerance. 9 = $\pm 10\%$; 5 = $\pm 5\%$; 3 = $\pm 3\%$; 2 = $\pm 2\%$; 1 = $\pm 1\%$

Capacitance. Expressed in Picofarads. The first two digits are the significant figures, the third is the number of zeros following (i.e. 106 = 10,000,000 pF = 10.0 μ F).

CDE Type Number. Identifies basic capacitor design.

Standard Marking Format

Sample Marking on unit

CDE 704M
106J 200V
0510

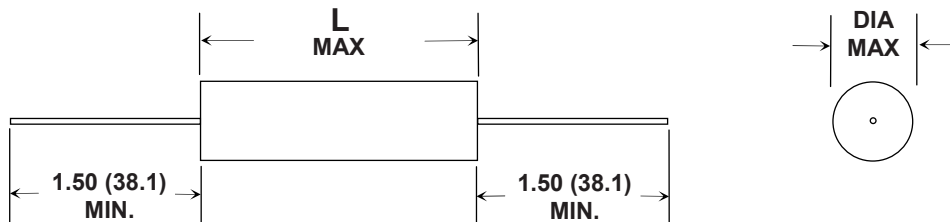
Description

CDE - CDE Identification
704M - Type Number.
200V - DC Voltage Rating
106J - Capacitance and Tolerance Code
0510 - Weekly Date Code
(i.e. 10th week of 2005)

Tolerance codes per EIA standards

F $\pm 1\%$
G $\pm 2\%$
H $\pm 3\%$
J $\pm 5\%$
K $\pm 10\%$

Dimension Outline



Lead Wire Size and Additional Termination Options

Standard lead wire size is 0.032 (0.8) diameter (#20 AWG), Solid tinned copper wire. We can also provide a variety of other wire sizes and material (i.e. heavier gauges, insulated wire, tinned copper-clad steel, smaller gauges, etc.). If the wire size or material doesn't meet your requirements please contact us. We can accommodate your needs.

Dimensions are in inches, millimeters in parentheses
CDE reserves the right to amend design data

Type 704M

Metallized Polypropylene Film Capacitors

Type 704M Sizes and Ratings – 200 VDC/140 VAC

Cap (μ F)	Base Part # ¹	L MAX	DIA MAX	dV/dt^2 V/ μ sec	*ESR-m Ω @100KHz
1.0	704M10552	1.50 (38.1)	0.37 (9.4)	7	30.9
1.2	704M12552	1.50 (38.1)	0.40 (10.2)	8	25.9
1.5	704M15552	1.50 (38.1)	0.44 (11.2)	11	20.9
1.8	704M18552	1.50 (38.1)	0.48 (12.2)	11	17.5
2.0	704M20552	1.50 (38.1)	0.50 (12.7)	11	15.9
2.2	704M22552	1.50 (38.1)	0.52 (13.2)	11	14.5
2.5	704M25552	1.50 (38.1)	0.55 (14.0)	11	12.9
2.7	704M27552	1.50 (38.1)	0.57 (14.5)	11	12.1
3.0	704M30552	1.50 (38.1)	0.60 (15.2)	11	11.0
3.3	704M33552	1.50 (38.1)	0.63 (16.0)	11	10.1
3.6	704M36552	1.50 (38.1)	0.65 (16.5)	11	9.4
3.9	704M39552	1.50 (38.1)	0.68 (17.3)	11	8.8
4.0	704M40552	1.50 (38.1)	0.69 (17.5)	11	8.6
4.7	704M47552	1.50 (38.1)	0.74 (18.8)	11	7.5
5.0	704M50552	1.50 (38.1)	0.76 (19.3)	11	7.2
5.6	704M56552	1.50 (38.1)	0.80 (20.3)	12	6.6
6.0	704M60552	1.50 (38.1)	0.83 (21.1)	12	6.3
6.8	704M68552	1.50 (38.1)	0.88 (22.4)	12	5.7
7.0	704M70552	1.50 (38.1)	0.89 (22.6)	12	5.6
7.5	704M75552	1.50 (38.1)	0.92 (23.4)	12	5.4
8.0	704M80552	1.50 (38.1)	0.95 (24.1)	12	5.2
9.0	704M90552	1.50 (38.1)	1.01 (25.7)	12	4.8
10.0	704M10652	1.50 (38.1)	1.06 (26.9)	12	4.6
11.0	704M11652	1.50 (38.1)	1.11 (28.2)	12	4.4
12.0	704M12652	1.50 (38.1)	1.16 (29.5)	12	4.2
13.0	704M13652	1.50 (38.1)	1.20 (30.5)	12	4.1
14.0	704M14652	1.50 (38.1)	1.24 (31.5)	12	4.0
15.0	704M15652	1.50 (38.1)	1.29 (32.8)	12	3.9
16.0	704M16652	1.50 (38.1)	1.33 (33.8)	12	3.8
17.0	704M17652	1.50 (38.1)	1.37 (34.8)	12	3.8
18.0	704M18652	1.50 (38.1)	1.41 (35.8)	12	3.7
19.0	704M19652	1.50 (38.1)	1.44 (36.6)	12	3.7
20.0	704M20652	1.50 (38.1)	1.48 (37.6)	12	3.7

¹ Please refer to Ordering/Part Number page for specific part numbering details.

² Please contact us for additional details regarding current carrying capability.

* ESR ratings listed are Maximum. Please contact us for additional ESR data.

Dimensions are in inches, millimeters in
parentheses CDE reserves the right to amend design
data

Type 704M

Metallized Polypropylene Film Capacitors

General Specifications

The 704M series is designed and manufactured for use in demanding audio applications where the highest quality, most reliable film capacitor is required. They are non-inductively wound using the most reliable metallized polypropylene film available.

Operating Temperature Range:

Standard operating temperature range is -55°C to $+85^{\circ}\text{C}$. Units may be operated at the full rated voltage within this temperature range.

The 704M series may be operated up to a maximum temperature of $+105^{\circ}\text{C}$, however the voltage must be linearly de-rated to 50% of the full rated voltage at $+105^{\circ}\text{C}$.

Dielectric Withstanding Voltage:

Units shall withstand a DC potential of 200% of rated voltage applied between terminals for not more than 2 minutes.

Lead Bend Test:

After 3 consecutive 180° bends. No damage.

Lead Pull Test:

5 pounds (2.3 Kg) for one minute on lead axis. No damage.

Humidity Testing:

Units subjected to 95% relative humidity for 250 hours with no voltage applied at $+40^{\circ}\text{C}$. After 4 hours of drying, minimum product of insulation resistance and capacitance shall be $40,000\text{ M}\Omega\text{-}\mu\text{F}$, but need not exceed $80,000\text{ M}\Omega$ at $+25^{\circ}\text{C}$.

DC Voltage Life Test:

1000 hours at $+85^{\circ}\text{C}$ at 150% of rated voltage. After test; capacitance shall not have changed by more than $\pm 2\%$ of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have increased to more than 0.1%. In addition, there shall be no open or short circuits, and no sign of visible damage.

AC Voltage Life Test:

Minimum of 1000 hours at $+85^{\circ}\text{C}$ at 60 Hz. AC test voltage applied at 110% of rated AC voltage. After test; capacitance shall not have changed by more than $\pm 5\%$ of initial value, insulation resistance shall not have decreased by more than 50% of initial value and dissipation factor shall not have changed by more than 0.03%. In addition, there shall be no open or short circuits, and no sign of visible damage. All measurements made at 1 KHz.

Dielectric Material/Construction:

The 704M series is manufactured using metallized polypropylene film as the dielectric. The capacitor element is non-inductively wound in a single section design.

Metallized polypropylene film utilizes a base film of polypropylene with a thin layer of aluminum vacuum deposited directly on the film as the electrode.

Metallized film exhibits a characteristic called "self-healing" or "self-clearing", which is the ability to remove a fault or short circuit in the dielectric film by vaporizing (from high current density) the metallization near the defect. The metallization is so thin that negligible film damage occurs during the clearing process. The vaporized metal oxidizes over time, aiding in the isolation of a fault area.

Additional Testing Notes:

Since it is not possible to list every detail of testing we perform we strongly encourage you to contact us with any specific question or requirement you may have. Thank you.

Dimensions are in inches, millimeters in parentheses



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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