

Type 761M

Metallized Polypropylene Film Capacitors

Type 761M Axial Lead Pressed/Oval Profile Metallized Polypropylene Film Capacitors



Specifications

Capacitance Range:

0.012 to 65.0 μ F

Capacitance Tolerance:

\pm 5% and \pm 10%, standard
(tolerances as close as \pm 3% available)

Voltage Rating:

160 to 630 VDC
100 to 250 VAC

Operating Temperature

Units may be operated at full rated voltage from -55°C to +85°C.

Voltage De-rating above +85°C:

Units may be operated up to a maximum of +105°C provided the voltage is de-rated linearly to 50% of the +85°C rating.

***Dissipation Factor:**

Varies with capacitance and frequency, please contact us for specific details.

Insulation Resistance (measured at 100 VDC):

At +25°C: 400,000 M Ω for C \leq 0.5 μ F
200,000 M Ω - μ F for C > 0.5 μ F
At +85°C: 20,000 M Ω for C \leq 0.5 μ F
10,000 M Ω - μ F for C > 0.5 μ 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).

Lead Wire:

Tinned Copper-Clad Steel for wire sizes:
0.020 (0.5) diameter (#24 AWG)

Tinned Copper for wire sizes:
0.025 (0.6) diameter (#22 AWG)
0.032 (0.8) diameter (#20 AWG)
0.040 (1.0) diameter (#18 AWG)

Dielectric/Construction:

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

* Although polypropylene film capacitors have a very low dissipation factor, as noted above it is dependent upon capacitance and operating frequency. Please refer to the application notes on pages 14 and 15 for additional details on thermal management issues. In addition we encourage you to contact us to further discuss your specific application.

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

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The 761M series is designed and manufactured for use in many demanding power applications. They are non-inductively wound using the most reliable metallized polypropylene film available. A wide range of capacitance values, voltage ratings, lead terminations and sizes offer the designer an array of options to best meet the form, fit and function requirements specified.

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 761M 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 0.12%. 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 761M 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.

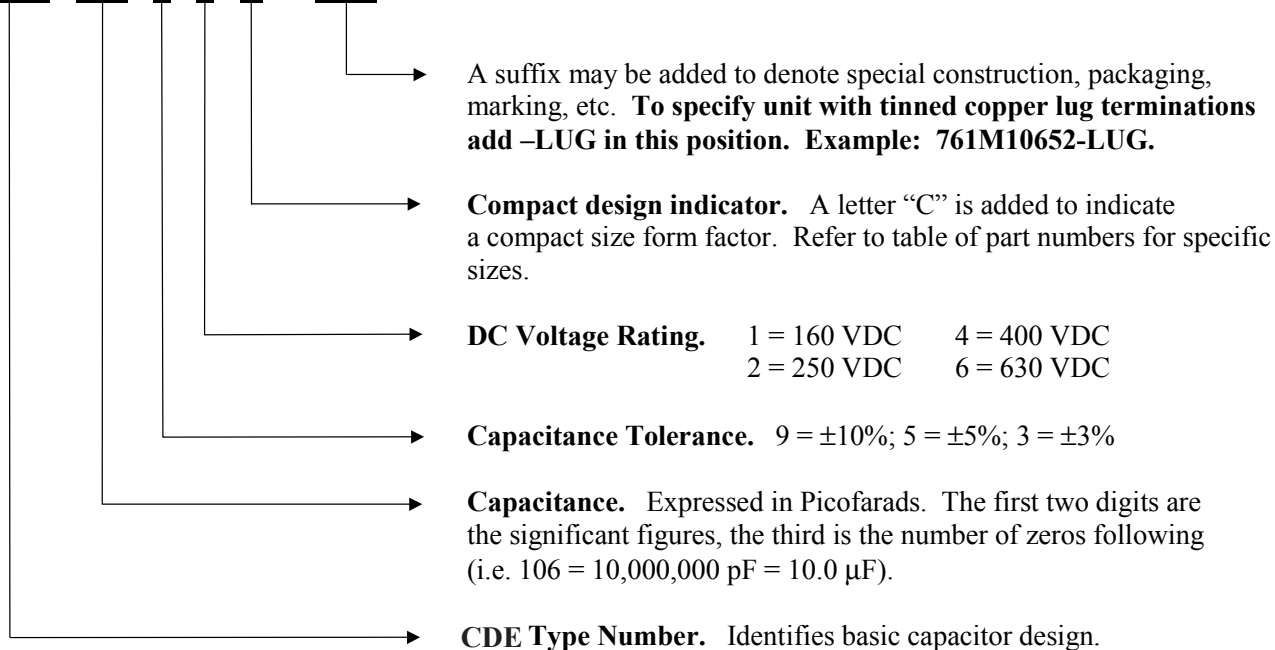
CDE reserves the right to amend design data

Type 761M

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Ordering/Part Number Information

761M **106** **5** **2** **C** - **XXX**



Standard Marking Format

Sample Marking on unit

CDE 761M(C)
106J 250V
0145

Description

CDE - CDE Identification
761M - Type Number. 761MC indicates compact design.
250V - DC Voltage Rating
106J - Capacitance and Tolerance Code
0145 - Weekly Date Code (i.e. 45th week of 2001)

Tolerance codes per EIA standards

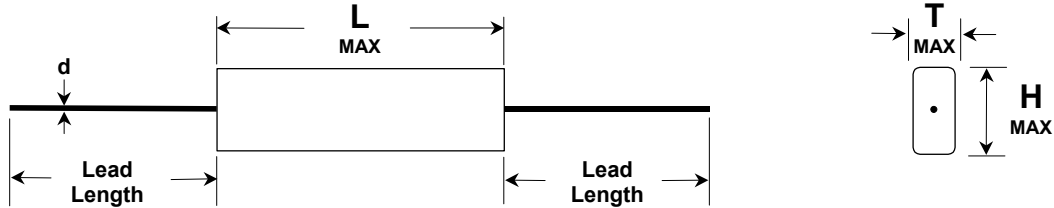
H $\pm 3\%$
J $\pm 5\%$
K $\pm 10\%$

Dimensions are in inches, millimeters in parentheses
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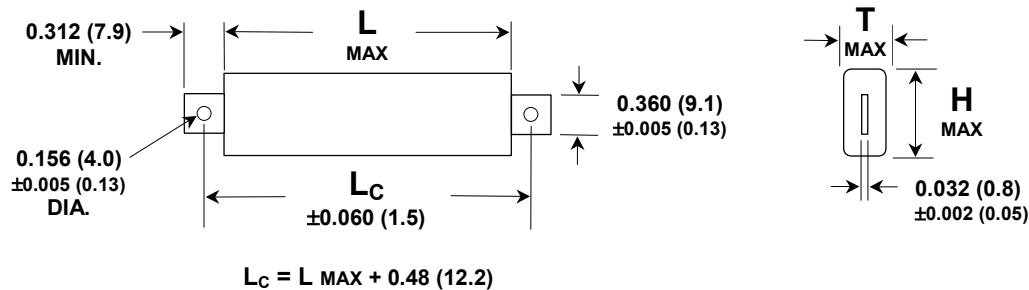
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Dimension Outline



Wire Lead Termination (see lead length table below)



Tinned Solid Copper Lug Termination*

***Please note:** Lug terminations are available on units 0.55 (14.0) or greater in Thickness. Please refer to Sizes and Ratings information for available values. If you have a specific requirement other than what you find shown here please contact us.

Lead Length Table

L MAX dimension	Lead Length (Typical)
0.61 (15.5)	2.00 (50.8)
0.79 (20.1)	1.90 (48.3)
0.99 (25.1)	1.80 (45.7)
1.25 (31.8)	1.65 (41.9)
1.74 (44.2)	1.40 (35.6)
2.21 (56.1)	1.25 (31.8)

In all cases a MINIMUM lead length of 1.25 (31.8) will be met.

Lead Wire Size and Additional Termination Options

Standard lead wire sizes utilized in manufacturing range from 0.020 (0.5) diameter [#24 AWG] to 0.040 (1.0) diameter [#18 AWG]. We can also provide a variety of other wire sizes and material (i.e. heavier gauges, insulated wire, etc.). If the wire size or material listed on our standard items doesn't meet your specific requirements please contact us.

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Type 761M Sizes and Ratings – 250 VDC/175 VAC

Cap (µF)	Base Part #	Standard Dimensions/Ratings ¹				dV/dt ² ESR-mΩ		Compact Dimensions/Ratings ¹				dV/dt ² ESR-mΩ	
		L MAX	T MAX	H MAX	Wire (d)	V/µsec	@100KHz	L MAX	T MAX	H MAX	Wire (d)	V/µsec	@100KHz
0.068	761M68352	0.61 (15.5)	0.17 (4.3)	0.27 (6.9)	0.020 (0.5)	9	31.0						
0.075	761M75352	0.61 (15.5)	0.18 (4.6)	0.27 (6.9)	0.020 (0.5)	9	28.5						
0.082	761M82352	0.61 (15.5)	0.19 (4.8)	0.29 (7.4)	0.020 (0.5)	9	26.5						
0.1	761M10452	0.79 (20.1)	0.16 (4.1)	0.26 (6.6)	0.020 (0.5)	5	48.5	0.61 (15.5)	0.21 (5.3)	0.31 (7.9)	0.020 (0.5)	13	22.5
0.12	761M12452	0.79 (20.1)	0.18 (4.6)	0.28 (7.1)	0.020 (0.5)	5	41.0	0.61 (15.5)	0.24 (6.1)	0.34 (8.6)	0.020 (0.5)	21	19.6
0.15	761M15452	0.79 (20.1)	0.20 (5.1)	0.30 (7.6)	0.025 (0.6)	5	31.1	0.61 (15.5)	0.27 (6.9)	0.37 (9.4)	0.020 (0.5)	29	16.7
0.18	761M18452	0.79 (20.1)	0.21 (5.3)	0.34 (8.6)	0.025 (0.6)	9	26.1	0.61 (15.5)	0.26 (6.6)	0.45 (11.4)	0.020 (0.5)	48	15.5
0.2	761M20452	0.99 (25.1)	0.20 (5.1)	0.30 (7.6)	0.025 (0.6)	4	45.8	0.79 (20.1)	0.23 (5.8)	0.33 (8.4)	0.025 (0.6)	12	23.6
0.22	761M22452	0.99 (25.1)	0.20 (5.1)	0.32 (8.1)	0.025 (0.6)	4	41.8	0.79 (20.1)	0.24 (6.1)	0.36 (9.1)	0.025 (0.6)	14	21.6
0.25	761M25452	0.99 (25.1)	0.21 (5.3)	0.34 (8.6)	0.025 (0.6)	7	36.9	0.79 (20.1)	0.26 (6.6)	0.38 (9.7)	0.032 (0.8)	17	18.8
0.27	761M27452	0.99 (25.1)	0.22 (5.6)	0.35 (8.9)	0.025 (0.6)	8	34.2	0.79 (20.1)	0.27 (6.9)	0.39 (9.9)	0.032 (0.8)	18	17.5
0.3	761M30452	0.99 (25.1)	0.24 (6.1)	0.36 (9.1)	0.025 (0.6)	10	30.9	0.79 (20.1)	0.28 (7.1)	0.41 (10.4)	0.032 (0.8)	20	15.8
0.33	761M33452	0.99 (25.1)	0.25 (6.4)	0.37 (9.4)	0.025 (0.6)	11	28.2	0.79 (20.1)	0.30 (7.6)	0.42 (10.7)	0.032 (0.8)	21	14.4
0.39	761M39452	0.99 (25.1)	0.26 (6.6)	0.41 (10.4)	0.032 (0.8)	13	23.7	0.79 (20.1)	0.31 (7.9)	0.47 (11.9)	0.032 (0.8)	30	12.4
0.43	761M43452	0.99 (25.1)	0.27 (6.9)	0.43 (10.9)	0.032 (0.8)	20	21.6	0.79 (20.1)	0.33 (8.4)	0.49 (12.4)	0.032 (0.8)	30	11.3
0.47	761M47452	0.99 (25.1)	0.29 (7.4)	0.44 (11.2)	0.032 (0.8)	20	19.8	0.79 (20.1)	0.35 (8.9)	0.50 (12.7)	0.032 (0.8)	31	10.4
0.5	761M50452	1.25 (31.8)	0.27 (6.9)	0.39 (9.9)	0.032 (0.8)	9	32.1	0.99 (25.1)	0.30 (7.6)	0.45 (11.4)	0.032 (0.8)	20	18.7
0.56	761M56452	1.25 (31.8)	0.27 (6.9)	0.42 (10.7)	0.032 (0.8)	10	28.8	0.99 (25.1)	0.32 (8.1)	0.47 (11.9)	0.032 (0.8)	21	16.8
0.6	761M60452	1.25 (31.8)	0.28 (7.1)	0.43 (10.9)	0.032 (0.8)	15	26.9	0.99 (25.1)	0.33 (8.4)	0.49 (12.4)	0.032 (0.8)	21	15.7
0.68	761M68452	1.25 (31.8)	0.29 (7.4)	0.47 (11.9)	0.032 (0.8)	15	23.9	0.99 (25.1)	0.34 (8.6)	0.53 (13.5)	0.032 (0.8)	21	14.0
0.75	761M75452	1.25 (31.8)	0.30 (7.6)	0.49 (12.4)	0.032 (0.8)	15	21.7	0.99 (25.1)	0.36 (9.1)	0.55 (14.0)	0.032 (0.8)	21	12.8
0.82	761M82452	1.25 (31.8)	0.32 (8.1)	0.51 (13.0)	0.032 (0.8)	16	20.0	0.99 (25.1)	0.38 (9.7)	0.57 (14.5)	0.032 (0.8)	22	11.8
0.9	761M90452	1.25 (31.8)	0.34 (8.6)	0.52 (13.2)	0.032 (0.8)	16	18.3	0.99 (25.1)	0.40 (10.2)	0.59 (15.0)	0.032 (0.8)	22	10.9
1.0	761M10552	1.25 (31.8)	0.33 (8.4)	0.58 (14.7)	0.032 (0.8)	16	16.6	0.99 (25.1)	0.43 (10.9)	0.61 (15.5)	0.032 (0.8)	22	9.9
1.2	761M12552	1.74 (44.2)	0.28 (7.1)	0.53 (13.5)	0.032 (0.8)	10	31.8	1.25 (31.8)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	16	14.0
1.5	761M15552	1.74 (44.2)	0.33 (8.4)	0.57 (14.5)	0.032 (0.8)	10	25.6	1.25 (31.8)	0.42 (10.7)	0.67 (17.0)	0.032 (0.8)	17	11.5
1.8	761M18552	1.74 (44.2)	0.36 (9.1)	0.61 (15.5)	0.032 (0.8)	10	21.6	1.25 (31.8)	0.47 (11.9)	0.72 (18.3)	0.032 (0.8)	17	9.8
2.0	761M20552	1.74 (44.2)	0.39 (9.9)	0.63 (16.0)	0.032 (0.8)	11	19.5	1.25 (31.8)	0.50 (12.7)	0.75 (19.1)	0.032 (0.8)	17	9.0
2.2	761M22552	2.21 (56.1)	0.34 (8.6)	0.59 (15.0)	0.032 (0.8)	8	31.7	1.74 (44.2)	0.36 (9.1)	0.73 (18.5)	0.032 (0.8)	11	18.0
2.5	761M25552	2.21 (56.1)	0.37 (9.4)	0.62 (15.7)	0.032 (0.8)	8	28.0	1.74 (44.2)	0.39 (9.9)	0.76 (19.3)	0.032 (0.8)	11	16.0
2.7	761M27552	2.21 (56.1)	0.39 (9.9)	0.63 (16.0)	0.032 (0.8)	8	26.0	1.74 (44.2)	0.41 (10.4)	0.78 (19.8)	0.032 (0.8)	11	14.9
3.0	761M30552	2.21 (56.1)	0.38 (9.7)	0.69 (17.5)	0.032 (0.8)	8	23.6	1.74 (44.2)	0.44 (11.2)	0.81 (20.6)	0.032 (0.8)	11	13.6
3.3	761M33552	2.21 (56.1)	0.41 (10.4)	0.72 (18.3)	0.032 (0.8)	8	21.6	1.74 (44.2)	0.47 (11.9)	0.84 (21.3)	0.032 (0.8)	11	12.5
3.6	761M36552	2.21 (56.1)	0.43 (10.9)	0.74 (18.8)	0.032 (0.8)	8	19.9	1.74 (44.2)	0.49 (12.4)	0.86 (21.8)	0.032 (0.8)	11	11.6
3.9	761M39552	2.21 (56.1)	0.45 (11.4)	0.76 (19.3)	0.032 (0.8)	8	18.5	1.74 (44.2)	0.52 (13.2)	0.89 (22.6)	0.032 (0.8)	11	10.8
4.7	761M47552	2.21 (56.1)	0.51 (13.0)	0.82 (20.8)	0.040 (1.0)	8	15.2	1.74 (44.2)	0.58 (14.7)	0.95 (24.1)	0.040 (1.0)	11	8.8
5.0	761M50552	2.21 (56.1)	0.53 (13.5)	0.84 (21.3)	0.040 (1.0)	8	14.3	1.74 (44.2)	0.60 (15.2)	0.97 (24.6)	0.040 (1.0)	11	8.3
5.6	761M56552	2.21 (56.1)	0.56 (14.2)	0.87 (22.1)	0.040 (1.0)	8	12.9	1.74 (44.2)	0.65 (16.5)	1.02 (25.9)	0.040 (1.0)	11	7.6
6.0	761M60552	2.21 (56.1)	0.59 (15.0)	0.90 (22.9)	0.040 (1.0)	8	12.1	1.74 (44.2)	0.67 (17.0)	1.04 (26.4)	0.040 (1.0)	11	7.1
6.8	761M68552	2.21 (56.1)	0.60 (15.2)	0.97 (24.6)	0.040 (1.0)	8	10.8	1.74 (44.2)	0.73 (18.5)	1.10 (27.9)	0.040 (1.0)	11	6.5
7.0	761M70552	2.21 (56.1)	0.61 (15.5)	0.99 (25.1)	0.040 (1.0)	8	10.6	1.74 (44.2)	0.74 (18.8)	1.11 (28.2)	0.040 (1.0)	11	6.3
7.5	761M75552	2.21 (56.1)	0.64 (16.3)	1.01 (25.7)	0.040 (1.0)	8	10.0	1.74 (44.2)	0.71 (18.0)	1.21 (30.7)	0.040 (1.0)	11	6.0
8.0	761M80552	2.21 (56.1)	0.67 (17.0)	1.04 (26.4)	0.040 (1.0)	8	9.4	1.74 (44.2)	0.74 (18.8)	1.24 (31.5)	0.040 (1.0)	11	5.8
9.0	761M90552	2.21 (56.1)	0.72 (18.3)	1.09 (27.7)	0.040 (1.0)	8	8.5	1.74 (44.2)	0.80 (20.3)	1.29 (32.8)	0.040 (1.0)	11	5.3
10.0	761M10652	2.21 (56.1)	0.76 (19.3)	1.13 (28.7)	0.040 (1.0)	8	7.8	1.74 (44.2)	0.85 (21.6)	1.35 (34.3)	0.040 (1.0)	11	4.9
12.0	761M12652	2.21 (56.1)	0.85 (21.6)	1.22 (31.0)	0.040 (1.0)	8	6.7	1.74 (44.2)	0.95 (24.1)	1.45 (36.8)	0.040 (1.0)	11	4.4
15.0	761M15652	2.21 (56.1)	0.97 (24.6)	1.34 (34.0)	0.040 (1.0)	8	5.7	1.74 (44.2)	1.09 (27.7)	1.59 (40.4)	0.040 (1.0)	11	3.9
18.0	761M18652	2.21 (56.1)	1.08 (27.4)	1.45 (36.8)	0.040 (1.0)	8	5.1	1.74 (44.2)	1.22 (31.0)	1.71 (43.4)	0.040 (1.0)	11	3.6
20.0	761M20652	2.21 (56.1)	1.14 (29.0)	1.52 (38.6)	0.040 (1.0)	8	4.8	1.74 (44.2)	1.30 (33.0)	1.79 (45.5)	0.040 (1.0)	11	3.5
22.0	761M22652	2.21 (56.1)	1.21 (30.7)	1.58 (40.1)	0.040 (1.0)	8	4.5						
25.0	761M25652	2.21 (56.1)	1.30 (33.0)	1.67 (42.4)	0.040 (1.0)	8	4.2						

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

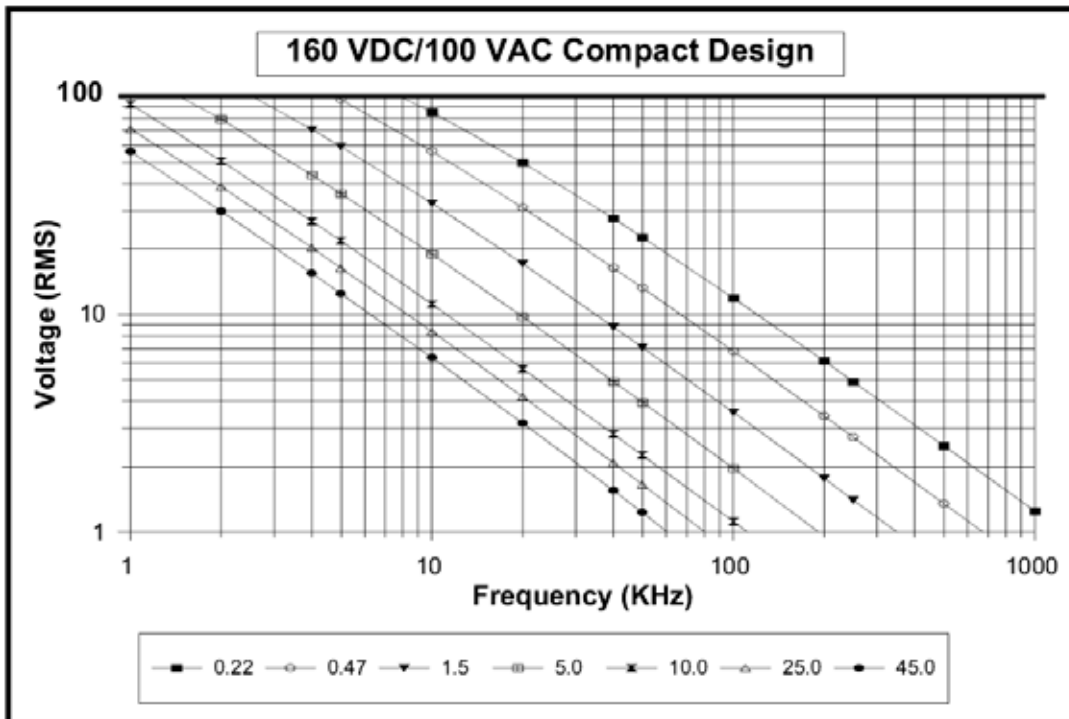
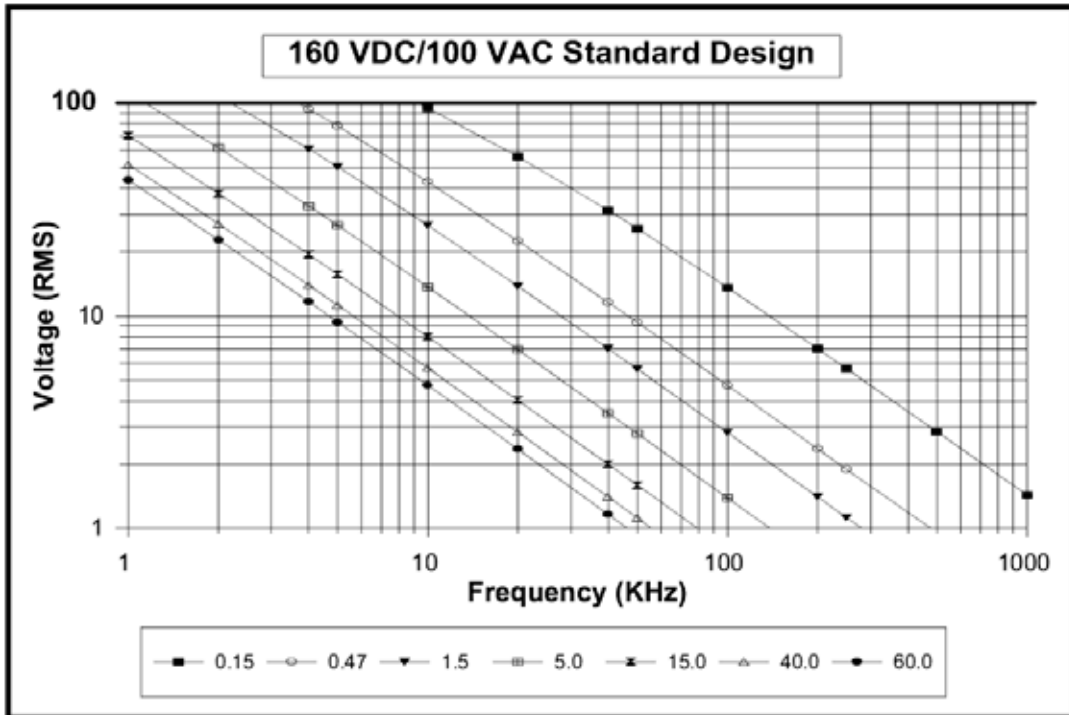
² ESR ratings listed are Maximum. Please contact us for additional ESR data.

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RMS Voltage vs. Frequency @ +85°C, in still air*



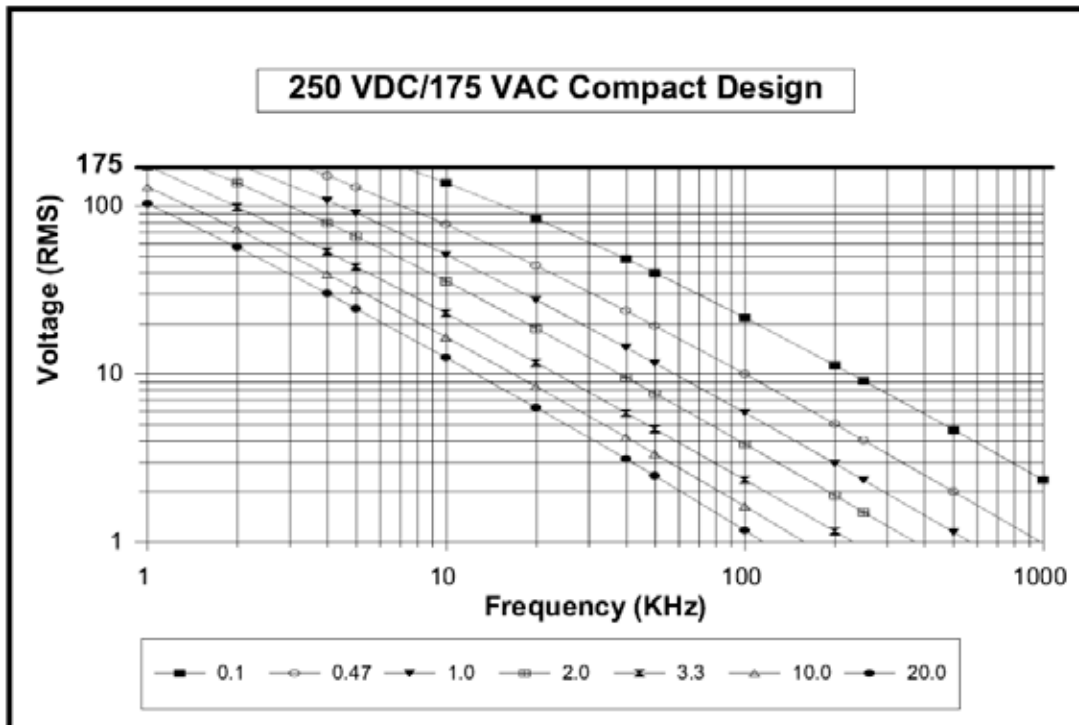
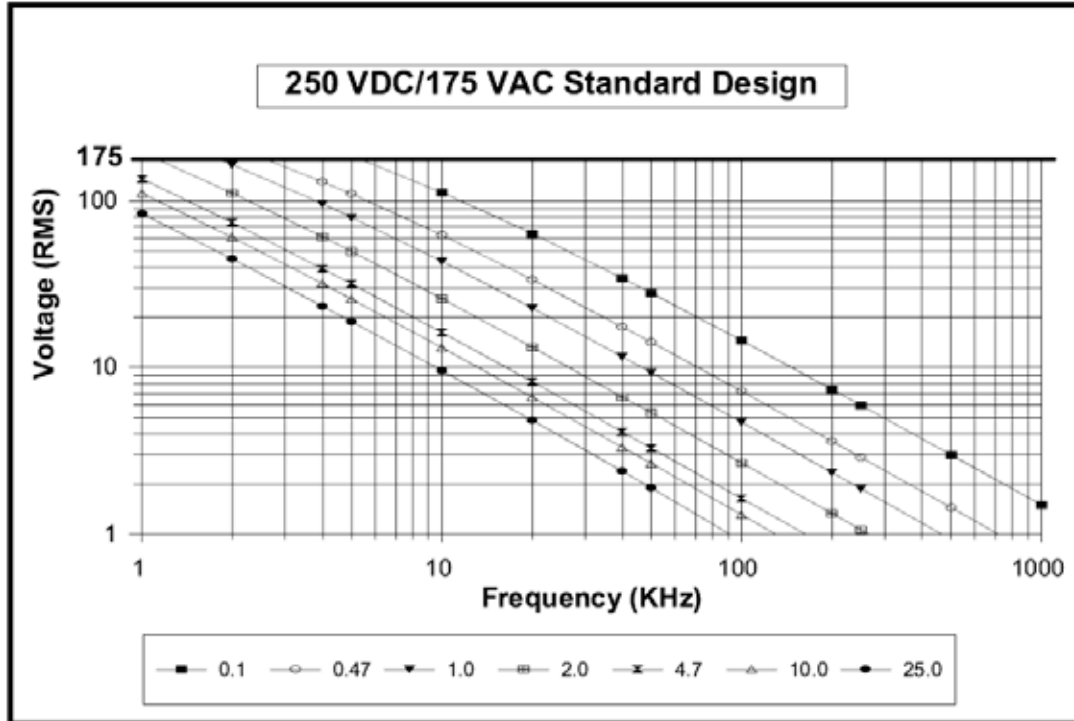
* For additional information regarding these performance curves and their interpretation please refer to our Thermal Management application note.

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RMS Voltage vs. Frequency @ +85°C, in still air*



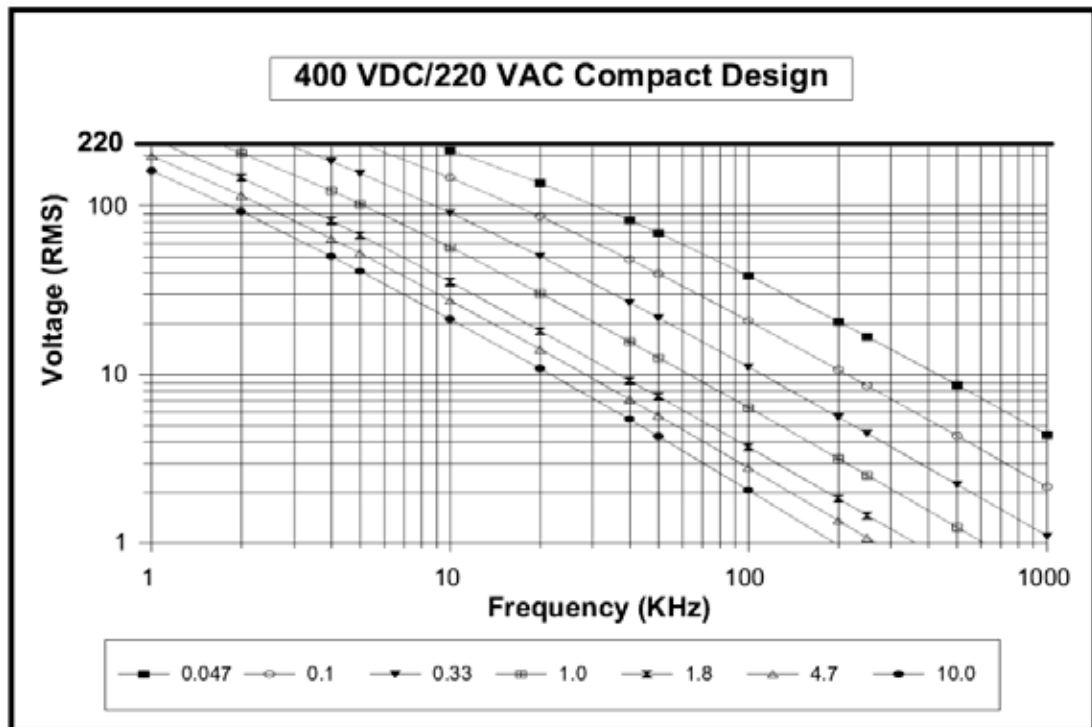
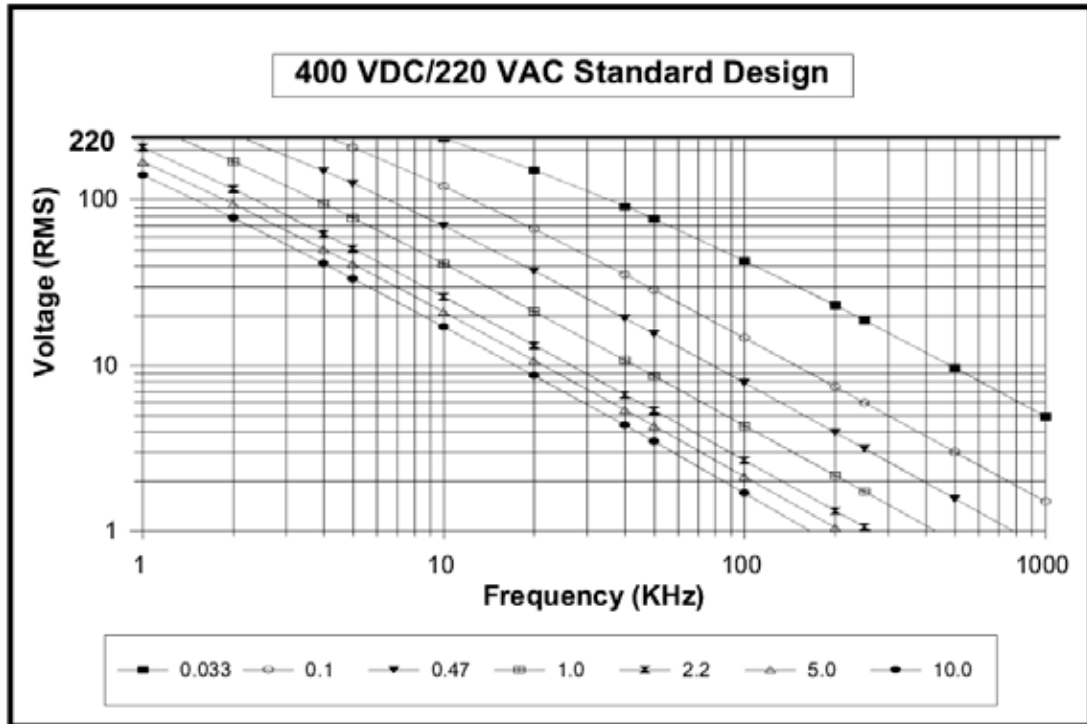
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RMS Voltage vs. Frequency @ +85°C, in still air*



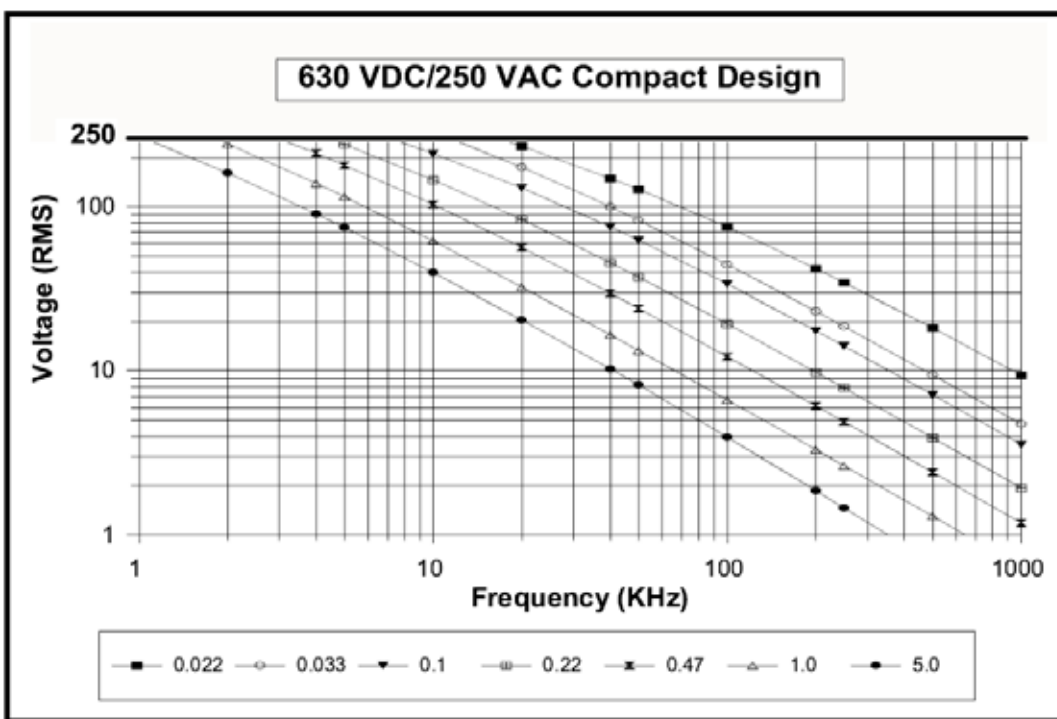
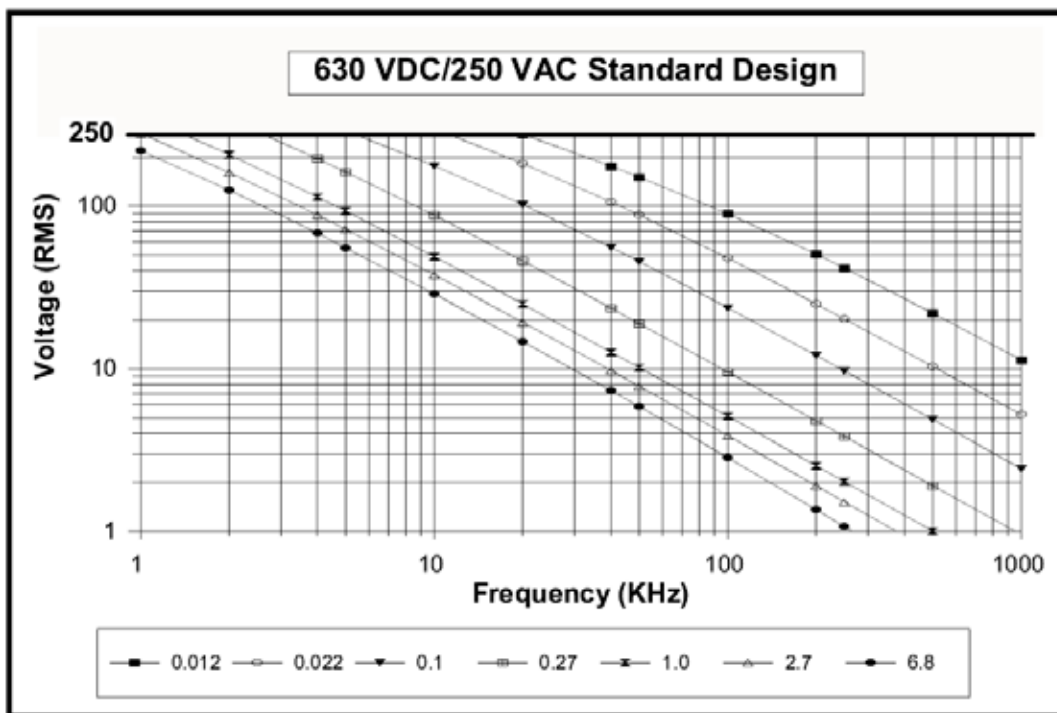
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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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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