PHE840E

RoHS Compliant

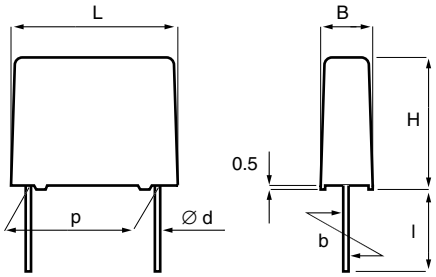
- **EMI suppressor, class X2, metallized polypropylene**
- **0.01 – 10 µF, 300 VAC, +105°C**
- **New improved design: small dimensions including low profile capacitors**

TYPICAL APPLICATIONS

For worldwide use as electromagnetic interference suppressor in all X2 and across-the-line applications.
Not for use in series with the mains.
See www.kemet.com for more information.

CONSTRUCTION

Metallized polypropylene winding, encapsulated in self-extinguishing material meeting the requirements of UL 94 V–0.



P	d	std l	max l	b
10.0 ± 0.4	0.6	17	30	±0.4
15.0 ± 0.4	0.8	17	30	±0.4
22.5 ± 0.4	0.8	6	30	±0.4
27.5 ± 0.4	0.8	6	30	±0.4
37.5 ± 0.5	1.0	6	30	±0.7

Tolerance in lead length
< 30 mm $^{+0}_{-1}$ mm

30 mm $^{+5}_{-0}$ mm

TECHNICAL DATA

Rated voltage 300 VAC 50/60 Hz

Capacitance range 0.01 – 10 µF

Capacitance tolerance ± 20% standard, ± 10% option

Temperature range –55 to +105°C

Climatic category 55/105/56/B

Approvals ENEC, UL, cUL

Dissipation factor tanδ Maximum values at +23°C

	C ≤ 0.1 µF	0.1µF < C ≤ 1 µF	C > 1 µF
1 kHz	0.1%	0.1%	0.1%
10 kHz	0.2%	0.4%	0.8%
100 kHz	0.6%	–	–

Test voltage between terminals The 100% screening factory test is carried out at 2200 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test.

Resonance frequency Tabulated self-resonance frequencies f_0 refer to 5 mm lead length.

Insulation resistance C ≤ 0.33 µF: ≥ 30 000 MΩ
C > 0.33 µF: ≥ 10 000 s

In DC applications Recommended voltage ≤ 760 VDC

ENVIRONMENTAL TEST DATA

Endurance	EN/IEC 60384-14:2005	1.25 x U_R VAC 50 Hz, once every hour increased to 1000 VAC for 0.1 s, 1000 h at upper rated temperature	
Vibration	IEC 60068–2–6 Test Fc	3 directions at 2 hours each, 10–55 Hz at 0.75 mm or 98 m/s²	No visible damage No open or short circuit
Bump	IEC 60068–2–29 Test Eb	1000 bumps at 390 m/s²	No visible damage No open or short circuit
Change of temperature	IEC 60068–2–14 Test Na	Upper and lower rated temperature 5 cycles	No visible damage
Active flammability	EN/IEC 60384-14:2005		
Passive flammability	EN/IEC 60384-14:2005	Enclosure material of UL94V–0 flammability class	
Humidity	IEC 60068-2-3 Test Ca	+40°C and 90 – 95% R.H.	56 days

ARTICLE TABLE

Capacitance µF	Box code	Max dimensions in mm B	H	L	f_o MHz	Max dU/dt V/µs	Article code
LEAD SPACING 10 MM							
0.010	A01	4.0	9.0	13.0	11	100	PHE840EA5100MA01R17
0.012	A01	4.0	9.0	13.0	10	100	PHE840EA5120MA01R17
0.015	A01	4.0	9.0	13.0	9.4	100	PHE840EA5150MA01R17
0.018	A01	4.0	9.0	13.0	8.9	100	PHE840EA5180MA01R17
0.022	A01	4.0	9.0	13.0	8.6	100	PHE840EA5220MA01R17
0.027	A02	4.5	10.5	13.0	8.1	100	PHE840EA5270MA02R17
0.033	A02	4.5	10.5	13.0	7.6	100	PHE840EA5330MA02R17
0.039	A03	5.0	11.0	13.0	6.6	100	PHE840EA5390MA03R17
0.047	A03	5.0	11.0	13.0	6.1	100	PHE840EA5470MA03R17
0.056	A04	6.0	12.0	13.0	5.6	100	PHE840EA5560MA04R17
0.068	A04	6.0	12.0	13.0	5.0	100	PHE840EA5680MA04R17
LEAD SPACING 15 MM							
0.033	B04	5.5	10.5	18.0	5.9	100	PHE840EB5330MB04R17
0.039	B04	5.5	10.5	18.0	5.4	100	PHE840EB5390MB04R17
0.047	B04	5.5	10.5	18.0	5.0	100	PHE840EB5470MB04R17
0.056	B04	5.5	10.5	18.0	4.6	100	PHE840EB5560MB04R17
0.068	B04	5.5	10.5	18.0	4.2	100	PHE840EB5680MB04R17
0.082	B05	5.5	12.5	18.0	3.9	100	PHE840EB5820MB05R17
0.10	B05	5.5	12.5	18.0	3.7	100	PHE840EB6100MB05R17
0.12	B10	6.5	12.5	18.0	3.3	100	PHE840EB6120MB10R17
0.15	B10	6.5	12.5	18.0	2.8	100	PHE840EB6150MB10R17
0.18	B06	7.5	14.5	18.0	2.7	100	PHE840EB6180MB06R17
0.22	B06	7.5	14.5	18.0	2.6	100	PHE840EX6220MB06R17 *
0.22	B17	13.0	12.5	18.0	2.5	100	PHE840EQ6220MB17R17
0.22	B12	8.0	15.0	18.0	2.5	100	PHE840EB6220MB12R17
0.27	B11	8.5	16.5	18.0	2.3	100	PHE840EB6270MB11R17
0.33	B11	8.5	16.5	18.0	2.2	100	PHE840EX6330MB11R17*
0.33	B17	13.0	12.5	18.0	2.2	100	PHE840EH6330MB17R17
0.33	B14	9.5	17.5	18.0	2.0	100	PHE840EB6330MB14R17
0.39	B16	11.0	19.0	18.0	1.9	100	PHE840EB6390MB16R17
0.47	B16	11.0	19.0	18.0	1.8	100	PHE840EB6470MB16R17
LEAD SPACING 22.5 MM							
0.22	D13	6.5	14.5	26.0	2.1	100	PHE840ED6220MD13R06L2
0.27	D17	7.0	16.5	26.0	1.9	100	PHE840ED6270MD17R06L2
0.33	D17	7.0	16.5	26.0	1.8	100	PHE840ED6330MD17R06L2
0.39	D14	8.0	16.0	26.0	1.7	100	PHE840ED6390MD14R06L2
0.47	D14	8.0	16.0	26.0	1.6	100	PHE840EY6470MD14R06L2*
0.47	D15	9.0	18.5	26.0	1.5	100	PHE840ED6470MD15R06L2
LEAD SPACING 22.5 MM							
0.56	D15	9.0	18.5	26.0	1.4	100	PHE840ED6560MD15R06L2
0.68	D15	9.0	18.5	26.0	1.3	100	PHE840EY6680MD15R06L2*
0.68	D18	10.5	19.0	26.0	1.2	100	PHE840ED6680MD18R06L2
0.82	D16	11.0	21.5	26.0	1.1	100	PHE840ED6820MD16R06L2
1.0	D16	11.0	21.5	26.0	1.1	100	PHE840EY7100MD16R06L2*
1.0	D20	13.5	23.0	26.0	1.0	100	PHE840ED7100MD20R06L2
1.2	D19	15.5	24.5	26.0	0.90	100	PHE840ED7120MD19R06L2
1.5	D19	15.5	24.5	26.0	0.85	100	PHE840ED7150MD19R06L2
LEAD SPACING 27.5 MM							
0.82	F11	10.5	20.5	31.5	1.0	100	PHE840EF6820MF11R06L2
1.0	F11	10.5	20.5	31.5	1.0	100	PHE840EZ7100MF11R06L2*
1.0	F12	11.5	22.5	31.5	0.95	100	PHE840EF7100MF12R06L2
1.0	F17	21.0	12.5	31.5	0.95	100	PHE840ET7100MF17R06L2
1.2	F03	13.5	23.0	31.5	0.82	100	PHE840EF7120MF03R06L2
1.5	F13	14.5	24.5	31.5	0.73	100	PHE840EF7150MF13R06L2
1.8	F14	17.5	28.0	31.5	0.65	100	PHE840EF7180MF14R06L2
2.2	F14	17.5	28.0	31.5	0.64	100	PHE840EZ7220MF14R06L2*
2.2	F15	19.0	29.0	31.5	0.62	100	PHE840EF7220MF15R06L2
2.2	F19	27.5	16.0	31.5	0.62	100	PHE840ET7220MF19R06L2
2.7	F15	19.0	29.0	31.5	0.58	100	PHE840EF7270MF15R06L2
3.3	F15	19.0	29.0	31.5	0.54	100	PHE840EZ7330MF15R06L2*
3.3	F16	21.0	30.0	31.5	0.50	100	PHE840EF7330MF16R06L2
3.3	F18	31.0	19.0	31.5	0.50	100	PHE840ET7330MF18R06L2
LEAD SPACING 37.5 MM							
1.8	R05	13.0	24.0	41.0	0.60	100	PHE840ER7180MR05R06L2
2.2	R05	13.0	24.0	41.0	0.58	100	PHE840ER7220MR05R06L2
2.7	R04	15.0	26.0	41.0	0.53	100	PHE840ER7270MR04R06L2
3.3	R04	15.0	26.0	41.0	0.49	100	PHE840ER7330MR04R06L2
3.9	R02	16.5	32.0	41.0	0.46	100	PHE840ER7390MR02R06L2
4.7	R03	19.0	36.0	41.0	0.44	100	PHE840ER7470MR03R06L2
5.6	R06	21.0	38.0	41.0	0.41	100	PHE840ER7560MR06R06L2
6.8	R06	21.0	38.0	41.0	0.39	100	PHE840ER7680MR06R06L2
8.2	R08	28.0	43.0	41.0	0.30	100	PHE840ER7820MR08R06L2
10	R08	28.0	43.0	41.0	0.26	100	PHE840ER8100MR08R06L2

* Only ± 20% tolerance

APPROVALS

Certification Body	Specification
ENEC	EN/IEC 60384-14:2005
UL	UL 60384-14
	CAN/CSA-E60384-14:09

MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Capacitance tolerance code
- Rated voltage
- X2
- Approval marks
- Manufacturing date code
- IEC climatic category
- Passive flammability class

ORDERING INFORMATION

The article code for the standard part is given in the article table.

Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute – and we specifically disclaim – any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.

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

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.