

PHE844

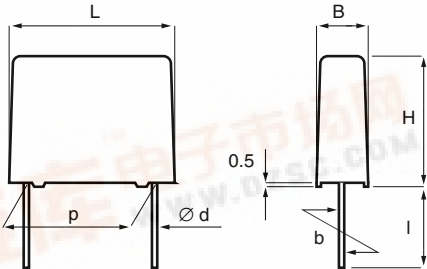
- EMI suppressor, class X1, metallized polypropylene
- 0.1 – 2.2 μF , 440 VAC/480VAC, +105°C
- New, small dimensions

TYPICAL APPLICATIONS

For worldwide use as electromagnetic interference suppressor in all X1 and across-the-line applications.

CONSTRUCTION

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



TECHNICAL DATA

Rated voltage	440 VAC 50/60 Hz (ENEC) 480 VAC 50/60 Hz (UL, CSA)																
Capacitance range	0.1 – 2.2 μF																
Capacitance tolerance	± 20% standard, ± 10% option																
Temperature range	–40 to +105°C																
Climatic category	40/105/56/B																
Approvals	ENEC, UL, CSA																
Dissipation factor	Maximum values at +23°C <table><tr><td></td><td>C ≤ 0.1 μF</td><td>0.1 μF < C ≤ 1 μF</td><td>C > 1 μF</td></tr><tr><td>1 kHz</td><td>0.1%</td><td>0.1%</td><td>0.1%</td></tr><tr><td>10 kHz</td><td>0.2%</td><td>0.4%</td><td>0.8%</td></tr><tr><td>100 kHz</td><td>0.6%</td><td>–</td><td>–</td></tr></table>		C ≤ 0.1 μF	0.1 μF < 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%	–	–
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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 2700 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 application	Recommended voltage: ≤1000VDC																

p	d	std l	max l	b
22.5 $\pm$ 0.4	0.8	6	30	± 0.4
27.5 $\pm$ 0.4	0.8	6	30	± 0.4
37.5 $\pm$ 0.4	1.0	6	30	± 0.4

Tolerance in lead length
 $< 30\,\text{mm}$ $^{+0}_{-1}\,\text{mm}$
 $\geq 30\,\text{mm}$ $^{+5}_{-0}\,\text{mm}$

ENVIRONMENTAL TEST DATA

Endurance	IEC 60384-14	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/s ²	No visible damage No open or short circuit
Bump	IEC 60068-2-29 Test Eb	1000 bumps at 390 m/s ²	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 132400		
Passive flammability	IEC 60384-14 (1993) EN 132400 UL1414	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	Max dimensions in mm				Quantity per package			Max dU/dt V/μs	Approvals			Article code
	B	H	L	p	Tray pcs	Weight g	f ₀ MHz		ENEC	UL	CSA	
LEAD SPACING 22.5 MM												
0.10	8.0	16.0	26.0	22.5	186	3.8	3.2	100	✓	✓	✓	PHE844RD6100MR06L2
0.15	9.0	18.5	26.0	22.5	168	5.0	2.6	100	✓	✓	✓	PHE844RD6150MR06L2
0.22	11.0	21.5	26.0	22.5	253	6.6	2.1	100	✓	✓	✓	PHE844RD6220MR06L2
0.33	13.5	23.0	26.0	22.5	209	9.0	1.8	100	✓	✓	✓	PHE844RD6330MR06L2
0.47	15.5	24.5	26.0	22.5	176	10.0	1.5	100	✓	✓	✓	PHE844RD6470MR06L2
LEAD SPACING 27.5 MM												
0.22	10.5	20.5	31.5	27.5	216	8.0	2.2	100	✓	✓	✓	PHE844RF6220MR06L2
0.33	13.5	23.0	31.5	27.5	171	10.8	1.7	100	✓	✓	✓	PHE844RF6330MR06L2
0.47	14.5	24.5	31.5	27.5	153	14.5	1.4	100	✓	✓	✓	PHE844RF6470MR06L2
0.68	17.5	28.0	31.5	27.5	126	17.0	1.1	100	✓	✓	✓	PHE844RF6680MR06L2
1.0	21.0	30.0	31.5	27.5	108	22.6	1.0	100	✓	✓	✓	PHE844RF7100MR06L2
LEAD SPACING 37.5 MM												
0.47	13.0	24.0	41.0	37.5	140	14.0	1.3	100	✓	✓	✓	PHE844RR6470MR06L2
0.68	13.0	24.0	41.0	37.5	140	14.0	1.1	100	✓	✓	✓	PHE844RR6680MR06L2
1.0	15.0	26.0	41.0	37.5	119	17.0	0.92	100	✓	✓	✓	PHE844RR7100MR06L2
1.5	19.0	36.0	41.0	37.5	91	28.5	0.74	100	✓	✓	✓	PHE844RR7150MR06L2
2.2	21.0	38.0	41.0	37.5	84	34.4	0.60	100	✓	✓	✓	PHE844RR7220MR06L2

APPROVALS/REFERENCE DOCUMENTS

Certification Body	Specification	Approval reference
ENEC	EN 132400	SE/0140-1
UL	UL 1283 ($U_R=480\text{ VAC}$)	E100117
	UL 1414 ($U_R=250\text{ VAC}$)	E73869
cUL recognition	C 22.2 No. 8 ($U_R=480\text{ VAC}$)	E100117
(CSA)	C 22.2 No. 1 ($U_R=250\text{ VAC}$)	E73869

MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Capacitance tolerance code
- Rated voltage
- X1
- 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.
For other options, see page 21.

PACKING

The box dimensions for bulk packaging are 245 x 145 x 80 mm. Quantity/package as per article table.

Reels with taped capacitors are packed 10 in a box with dimension 370 x 370 x 560 mm. Quantity/reel according to article table. The standard quantity/reel is for 360 mm reel. If 500 mm reel is required, it must be specified when ordering and the quantity is 2 x the given quantity.