

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

$\pm 20\%$ standard, $\pm 10\%$ option

Temperature range

-40 to +105°C

Climatic category

40/105/56/B

Approvals

ENEC, UL, CSA

Dissipation factor

Maximum values at +23°C

	$C \leq 0.1 \mu\text{F}$	$0.1 \mu\text{F} < C \leq 1 \mu\text{F}$	$C > 1 \mu\text{F}$
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

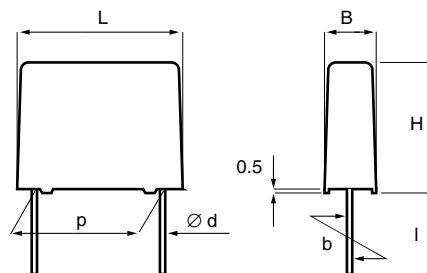
Tabulated self-resonance frequencies f_0 refer to 5 mm lead length.

Insulation resistance

$C \leq 0.33 \mu\text{F}$: $\geq 30\,000 \text{ M}\Omega$
 $C > 0.33 \mu\text{F}$: $\geq 10\,000 \text{ s}$

In DC application

Recommended voltage: $\leq 1000 \text{ VDC}$



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 mm $+0/-1$ mm

≥ 30 mm $+5/-0$ 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/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 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

Capaci- tance 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.