PHE844

RoHS Compliant

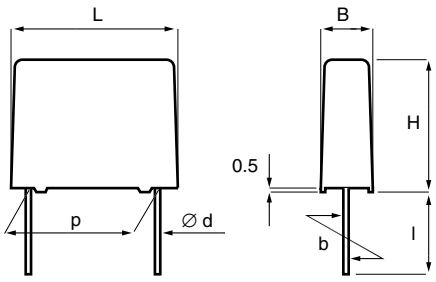
- **EMI suppressor, class X1, metallized polypropylene**
- **0.1 – 2.2 µF, 440 VAC/480 VAC, +105°C**

TYPICAL APPLICATIONS

For worldwide use as electromagnetic interference suppressor in all X1 and across-the-line applications.
Not for use in series with the mains.
See www.kemet.com for more information.

CONSTRUCTION

Series winding of metallized polypropylene. Encapsulated in self-extinguishing material meeting the requirements of UL 94 V–0.



p	d	std l	max l	b
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
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, cUL

Dissipation factor
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 3000 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

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 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	Box code	Max dimensions in mm B	H	L	f_o MHz	Max dU/dt V/µs	Article code
LEAD SPACING 22.5 MM							
0.10	D14	8.0	16.0	26.0	3.2	100	PHE844RD6100MR06L2
0.15	D15	9.0	18.5	26.0	2.6	100	PHE844RD6150MR06L2
0.22	D16	11.0	21.5	26.0	2.1	100	PHE844RD6220MR06L2
0.33	D20	13.5	23.0	26.0	1.8	100	PHE844RD6330MR06L2
0.47	D19	15.5	24.5	26.0	1.5	100	PHE844RD6470MR06L2
LEAD SPACING 27.5 MM							
0.22	F11	10.5	20.5	31.5	2.2	100	PHE844RF6220MR06L2
0.33	F03	13.5	23.0	31.5	1.7	100	PHE844RF6330MR06L2
0.47	F13	14.5	24.5	31.5	1.4	100	PHE844RF6470MR06L2
0.68	F14	17.5	28.0	31.5	1.1	100	PHE844RF6680MR06L2
1.0	F16	21.0	30.0	31.5	1.0	100	PHE844RF7100MR06L2
LEAD SPACING 37.5 MM							
0.47	R05	13.0	24.0	41.0	1.3	100	PHE844RR6470MR06L2
0.68	R05	13.0	24.0	41.0	1.1	100	PHE844RR6680MR06L2
1.0	R04	15.0	26.0	41.0	0.92	100	PHE844RR7100MR06L2
1.5	R03	19.0	36.0	41.0	0.74	100	PHE844RR7150MR06L2
2.2	R06	21.0	38.0	41.0	0.60	100	PHE844RR7220MR06L2

APPROVALS

Certification Body	Specification	
ENEC	EN/IEC 60384-14:2005	
UL	UL 1283	(U_R=480 VAC)
	UL 1414	(U_R=250 VAC)
cUL recognition	C 22.2 No. 8	(U_R=480 VAC)
	C 22.2 No. 1	(U_R=250 VAC)

ORDERING INFORMATION

The article code for the standard part is given in the article table. For other options, see page 11.

MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Capacitance tolerance code
- Rated voltage
- X1
- Approval marks
- Manufacturing date code
- IEC climatic category
- Passive flammability class