



**THE DATASHEET OF  
PHE845VD5470MR06**



# PHE845

**RoHS**  
Compliant

- EMI suppressor, class X1, metallized polypropylene
- 0.01 – 1.0  $\mu\text{F}$ , 760 VAC/600 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](http://www.kemet.com) for more information.

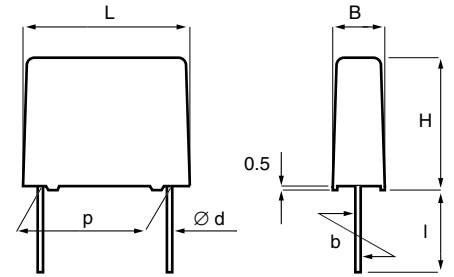
## CONSTRUCTION

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

## TECHNICAL DATA

<b>Rated voltage</b>	760 VAC 50/60 Hz (ENEC) 600 VAC 50/60 Hz (UL, CSA)												
<b>Capacitance range</b>	0.01 – 1.0 $\mu\text{F}$												
<b>Capacitance tolerance</b>	$\pm 20\%$ standard, $\pm 10\%$ option												
<b>Temperature range</b>	-40 to +105°C												
<b>Climatic category</b>	40/105/56/B												
<b>Approvals</b>	ENEC, UL, cUL												
<b>Dissipation factor</b>	Maximum values at +23°C												
	<table border="1"> <thead> <tr> <th></th> <th><math>C \leq 0.1 \mu\text{F}</math></th> <th><math>0.1 \mu\text{F} &lt; C \leq 1 \mu\text{F}</math></th> </tr> </thead> <tbody> <tr> <td>1 kHz</td> <td>0.1%</td> <td>0.1%</td> </tr> <tr> <td>10 kHz</td> <td>0.2%</td> <td>0.4%</td> </tr> <tr> <td>100 kHz</td> <td>0.6%</td> <td>-</td> </tr> </tbody> </table>		$C \leq 0.1 \mu\text{F}$	$0.1 \mu\text{F} < C \leq 1 \mu\text{F}$	1 kHz	0.1%	0.1%	10 kHz	0.2%	0.4%	100 kHz	0.6%	-
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100 kHz	0.6%	-											

<b>Test voltage between terminals</b>	The 100% screening factory test is carried out at 4250 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test.
<b>Resonance frequency</b>	Tabulated self-resonance frequencies $f_0$ refer to 5 mm lead length.
<b>Insulation resistance</b>	$C \leq 0.33 \mu\text{F}$ : $\geq 30\,000 \text{ M}\Omega$ $C > 0.33 \mu\text{F}$ : $\geq 10\,000 \text{ s}$
<b>In DC application</b>	Recommended voltage: $\leq 1500\text{VDC}$



p	d	std l	max l	b
$22.5 \pm 0.4$	0.8	6	30	$\pm 0.4$
$27.5 \pm 0.4$	0.8	6	30	$\pm 0.4$
$37.5 \pm 0.5$	1.0	6	30	$\pm 0.7$

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

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

## ENVIRONMENTAL TEST DATA

<b>Endurance</b>	EN/IEC 60384-14:2005	$1.25 \times U_R$ VAC 50 Hz, once every hour increased to 1000 VAC for 0.1 s, 1000 h at upper rated temperature	
<b>Vibration</b>	IEC 60068-2-6 Test Fc	3 directions at 2 hours each, 10-55 Hz at 0.75 mm or 98 $\text{m/s}^2$	No visible damage No open or short circuit
<b>Bump</b>	IEC 60068-2-29 Test Eb	1000 bumps at 390 $\text{m/s}^2$	No visible damage No open or short circuit
<b>Change of temperature</b>	IEC 60068-2-14 Test Na	Upper and lower rated temperature 5 cycles	No visible damage
<b>Active flammability</b>	EN/IEC 60384-14:2005		
<b>Passive flammability</b>	EN/IEC 60384-14:2005 UL1414	Enclosure material of UL94V-0 flammability class	
<b>Humidity</b>	IEC 60068-2-3 Test Ca	+40°C and 90 – 95% R.H.	56 days

## ARTICLE TABLE

Capacitance $\mu\text{F}$	Box code	Max dimensions in mm			$f_o$ MHz	Max dU/dt V/ $\mu\text{s}$	Article code
		B	H	L			
<b>LEAD SPACING 22.5 MM</b>							
0.010	D13	6.5	14.5	26.0	11	100	PHE845VD5100MR06L2
0.015	D13	6.5	14.5	26.0	9.2	100	PHE845VD5150MR06L2
0.022	D13	6.5	14.5	26.0	7.6	100	PHE845VD5220MR06L2
0.033	D17	7.0	16.5	26.0	6.4	100	PHE845VD5330MR06L2
0.047	D15	9.0	18.5	26.0	5.3	100	PHE845VD5470MR06L2
0.068	D18	10.5	19.0	26.0	4.4	100	PHE845VD5680MR06L2
0.10	D16	11.0	21.5	26.0	3.5	100	PHE845VD6100MR06L2
0.15	D20	13.5	23.0	26.0	3.1	100	PHE845VD6150MR06L2
0.22	D19	15.5	24.5	26.0	2.7	100	PHE845VY6220MR06L2*

## LEAD SPACING 27.5 MM

0.10	F11	10.5	20.5	31.5	3.4	100	PHE845VF6100MR06L2
0.15	F12	11.5	22.5	31.5	3.0	100	PHE845VF6150MR06L2
0.22	F03	13.5	23.0	31.5	2.4	100	PHE845VF6220MR06L2
0.33	F15	19.0	29.0	31.5	2.0	100	PHE845VF6330MR06L2
0.47	F16	21.0	30.0	31.5	1.6	100	PHE845VZ6470MR06L2*

## LEAD SPACING 37.5 MM

0.47	R04	15.0	26.0	41.0	1.6	100	PHE845VW6470MR06L2*
0.47	R02	16.5	32.0	41.0	1.6	100	PHE845VR6470MR06L2
0.68	R03	19.0	36.0	41.0	1.2	100	PHE845VR6680MR06L2
1.0	R06	21.0	38.0	41.0	1.0	100	PHE845VW7100MR06L2*

\* Only  $\pm 20\%$ 

## APPROVALS

Certification Body	Specification
ENEC	EN/IEC 60384-14:2005
UL	UL 1283 (U <sub>R</sub> =600 VAC)
cUL recognition	C 22.2 No. 8 (U <sub>R</sub> =600 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

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