

# PHE843

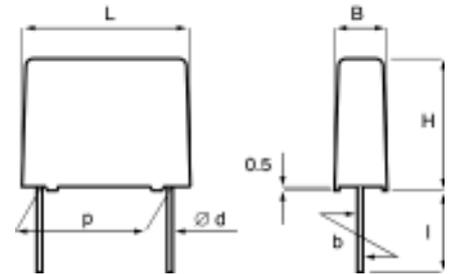
- EMI suppressor, class X2, metallized polypropylene
- 0.01 – 6.8  $\mu\text{F}$ , 275/280 VAC, +105°C
- Highest volumetric efficiency, more capacitance and smaller case sizes
- Complement to PHE840M

## TYPICAL APPLICATIONS

For worldwide use as electromagnetic interference suppressor in all X2 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	275 VAC 50/60 Hz (280 VAC North America)			
Capacitance range	0.01 – 6.8 $\mu\text{F}$			
Capacitance tolerance	$\pm 20\%$ standard, $\pm 10\%$ option			
Temperature range	-40 to +105°C			
Climatic category	40/105/56/B			
Approvals	S, UL, CSA			
Dissipation factor $\tan\delta$	Maximum values at +23°C			
		$C \leq 0.1 \mu\text{F}$	$0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$	$C > 0.47 \mu\text{F}$
	1 kHz	0.1%	0.1%	0.1%
	10 kHz	0.1%	0.2%	0.5%
	100 kHz	0.6%	0.9%	-
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	$C \leq 0.33 \mu\text{F}$ : $\geq 30\,000 \text{ M}\Omega$ $C > 0.33 \mu\text{F}$ : $\geq 10\,000 \text{ s}$			
In DC applications	Recommended voltage: $\leq 630 \text{ VDC}$			

p	d	std l	max l	b
10.0 $\pm$ 0.4	0.6	17	30	$\pm$ 0.4
15.0 $\pm$ 0.4	0.8	17	30	$\pm$ 0.4
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 mm	$^{+0}_{-1}$ mm
$\geq 30$ 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/s <sup>2</sup>	No visible damage No open or short circuit
Bump	IEC 60068-2-29 Test Eb	1000 bumps at 390 m/s <sup>2</sup>	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 $\mu\text{F}$	Max dimensions in mm			p	Quantity per package			Weight g	$f_0$ MHz	Max dU/dt V/ $\mu\text{s}$	Approvals			Article code 1 st block
	B	H	L		Bulk pcs	Tray pcs	reel taped pcs				UL	CSA		
<b>LEAD SPACING 10 MM</b>														
0.068	5.0	11.0	13.0	10.0	800		700	1.0	7.5	100	P	P	P	PHE843MA5680M
0.10	6.0	12.0	13.0	10.0	600		500	1.2	6.0	100	P	P	P	PHE843MA6100M
<b>LEAD SPACING 15 MM</b>														
0.15	7.5	14.5	18.0	15.0	400		400	2.2	2.8	100	P	P	P	PHE843MB6150M
0.22	8.0	15.0	18.0	15.0	400		400	2.9	2.5	100	P	P	P	PHE843MB6220M
0.33	9.5	17.5	18.0	15.0	300		350	3.5	2.0	100	P	P	P	PHE843MB6330M
<b>LEAD SPACING 22.5 MM</b>														
0.47	9.0	18.5	26.0	22.5		168		5.0	1.5	100	P	P	P	PHE843MD6470M
0.68	10.5	19.0	26.0	22.5		264		6.6	1.2	100	P	P	P	PHE843MD6680M
1.0	13.5	23.0	26.0	22.5		209		10.0	1.0	100	P	P	P	PHE843MD7100M
<b>LEAD SPACING 27.5 MM</b>														
1.5	14.5	24.5	31.5	27.5		153		14.5	0.87	100	P	P	P	PHE843MF7150M
2.2	17.5	28.0	31.5	27.5		126		17.0	0.78	100	P	P	P	PHE843MF7220M
3.3	21.0	30.0	31.5	27.5		108		22.6	0.66	100	P	P	P	PHE843MF7330M
<b>LEAD SPACING 37.5 MM</b>														
4.7	19.0	36.0	41.0	37.5		91		28.5	0.44	100	P	P	P	PHE843MR7470M
6.8	21.0	38.0	41.0	37.5		84		34.4	0.39	100	P	P	P	PHE843MR7680M

P = Approvals pending

## APPROVALS/REFERENCE DOCUMENTS

Country	Specification	Approval reference PHE843
S = Sweden	EN 132400	Pending
UL = USA	UL 1283 ( $U_R = 280$ VAC)	Pending
	UL 1414 ( $U_R = 250$ VAC)	Pending
CSA = Canada	C 22.2 No. 8 ( $U_R = 280$ VAC)	Pending
(cUL recognition)	C 22.2 No. 1 ( $U_R = 250$ VAC)	Pending

## 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

## Article code

1st block	2nd block
See article table Pos. 13 Capacitance tolerance code: M = $\pm 20\%$ standard K = $\pm 10\%$ option	If not standard lead length, add R06 – R30 in pos. 14–16. For reel taped, add 17T0 or 17T1 in pos. 14–15. For packing on trays (6 mm lead length), add L2 in pos. 17–18.
<b>P H E 8 4 3 M B 6 1 5 0 M</b>	<b>R 0 6</b>
1 2 3 4 5 6 7 8 9 10 11 12 13	14 15 16 17 18 19 20

## 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.