

# PEH 626

- Designed for automotive applications
- Temperature rating 125°C
- Resistance to vibrations
- Low ESR
- High ripple capability

## APPLICATION

PEH626 is a high performance electrolytic capacitor designed for automotive applications with high vibrations and high ambient temperatures.

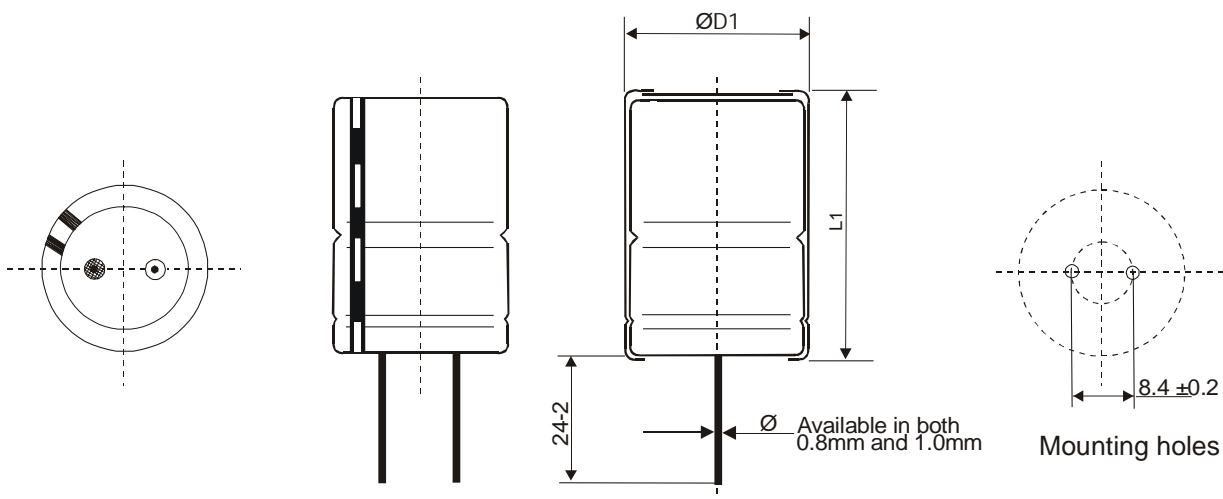
## BASIC DESIGN

PEH626 is an electrolytic capacitor with outstanding electrical performance. The outer case has a plastic cover. The low ESR is a result of a low resistive electrolyte/paper system.

Together with the TDC thermal concept, this gives the PEH626 very high ripple current capability. The capacitor is suitable for both mobile and aircraft applications, with operation up to 125°C.

## SPECIFICATION

Standards	IEC 384-4 Long Life Grade 40/125/56 In accordance with CECC 30 301-809
Capacitance range	820-6800 $\mu\text{F}$
Capacitance tolerance	-20 to +20%
Rated voltage	25-63 VDC
Temperature range	-40 to +125°C
Leakage current, $I_{RL}$ ( $\mu\text{A}$ )	$0.01 (\mu\text{A}) \times C_R(\mu\text{F}) \times U_R(\text{V})$
Operational life time	4000h at 125°C, 20 000h at 105°C
Shelf life	0V +105°C 5000 h +40°C 10 years
Diameter range	22 - 30 mm
Resistance to vibrations	10 – 2000 Hz, 1.5mm displacement amplitude or max. 20 g 3x2 hours. The capacitor shall be clamped by the body.
Life test	4000h, 125°C



Dimensions table PEH 626 (mm)

D x L	Case code	D1 $\pm 0.5$	L1 $\pm 1.0$	Weight Approx (g)
22 x 25	AB	22	26	12
22 x 30	AC	22	31	14
25 x 25	BB	25	26	19
25 x 35	BD	25	36	24
30 x 25	CB	30	26	24
30 x 35	CD	30	36	34

ARTICLE TABLE PEH 626

C <sub>R</sub> μF	D x L mm	I <sub>RAC</sub> * 125°C 100Hz A	I <sub>RAC</sub> * 85°C ≥5 kHz A	I <sub>RAC</sub> * 105°C ≥5 kHz A	I <sub>RAC</sub> * 125°C ≥5 kHz A	ESR* 20°C 100 Hz mΩ	ESR* 20°C 100 kHz mΩ	ESR* 125°C ≥5 kHz mΩ	Article code	Pin Configuration
		25 VDC (U <sub>R</sub> )								
2700	22 x 25	2.0	9.7	7.4	3.7	54	30	14	PEH626HAB4270M--	
3900	22 x 30	2.5	11.9	9.1	4.5	38	22	10	PEH626HAC4390M--	
3900	25 x 25	2.3	10.1	7.7	3.8	41	24	14	PEH626HBB4390M--	
5600	30 x 25	2.7	10.2	7.8	3.8	33	22	17	PEH626HCB4560M--	
6800	25 x 35	3.4	14.4	11.0	5.5	24	14	9	PEH626HBD4680M--	
40 VDC (U <sub>R</sub> )										
1200	22 x 25	1.5	9.4	7.2	3.6	77	28	15	PEH626KAB4120M--	
1500	22 x 30	1.8	11.5	8.8	4.4	59	20	11	PEH626KAC4150M--	
1500	25 x 25	1.7	9.8	7.5	3.7	62	23	16	PEH626KBB4150M--	
1800	22 x 25	1.7	9.6	7.3	3.7	62	28	14	PEH626KAB4180M--	
1800	25 x 35	2.5	14.1	10.7	5.3	36	14	9	PEH626KBD4180M--	
2200	22 x 30	2.0	11.7	8.9	4.5	49	22	11	PEH626KAC4220M--	
2200	25 x 25	1.9	10.0	7.6	3.8	52	24	15	PEH626KBB4220M--	
2200	30 x 25	2.1	9.8	7.4	3.7	48	22	19	PEH626KCB4220M--	
2700	25 x 35	2.5	14.1	10.7	5.3	36	14	9	PEH626KBD4270M--	
3300	30 x 25	2.4	10.0	7.6	3.8	40	22	18	PEH626KCB4330M--	
3900	25 x 35	2.8	14.3	10.9	5.4	30	14	9	PEH626KBD4390M--	
63 VDC (U <sub>R</sub> )										
820	22 x 25	1.2	5.9	4.6	2.3	150	79	36	PEH626MAB3820M--	
1200	22 x 30	1.5	7.4	5.7	2.9	100	55	26	PEH626MAC4120M--	
1200	25 x 25	1.5	6.8	5.3	2.6	110	59	31	PEH626MBB4120M--	
1800	30 x 25	1.8	7.7	5.9	2.9	76	45	29	PEH626MCB4180M--	
2200	25 x 35	2.2	10.0	7.7	3.8	59	34	18	PEH626MBD4220M--	

\* Maximum specified values

OPERATIONAL LIFE AND RIPPLE CURRENT

Operational life (L<sub>OP</sub>), at ambient temperature T<sub>a</sub> and ripple current I<sub>AC</sub>.

Example:

Article: PEH626KBB4220M08  
 Ambient temperature (T<sub>a</sub>): 105°C  
 Ripple current, at 10kHz (I<sub>AC</sub>): 7.6A

$I_{RAC}(125^{\circ}C, \geq 5kHz) = 3.8 \text{ A}$  (from data table)  
 $\Rightarrow I_{AC}/I_{RC}(125^{\circ}C) = 2.0$

Operational life: Interpolation between the L<sub>OP</sub>-curves  $\Rightarrow$  L<sub>OP</sub> 8kh (blue curves)

When the capacitor load is at 100Hz, use I<sub>AC</sub>/I<sub>RAC</sub>(125°C, 100Hz) as input value to the diagram (see data table). At other frequencies use I<sub>AC</sub>/I<sub>RAC</sub> (125°C, ≥5kHz) x 1/Corr =

Frequency correction factor, for ripple current (Corr):

	FREQUENCY			
	300 Hz	1 kHz	5 kHz	100 kHz
Correction factor (Corr) (Typical Value)	0.70	0.89	1.0	1.03

## LEAKAGE CURRENT

Rated leakage current,  $I_{RL}$  ( $\mu A$ )

Rated voltage,  $U_R$  (V)

Rated capacitance,  $C_R$  ( $\mu F$ )

$I_{RL} = 0.01 \times C_R (\mu F) \times U_R (V)$

## CUSTOMER DESIGN

On request PEH 626 can be designed in other capacitance values.

## ORDERING INFORMATION

For further ordering information please see page 8 on catalogue.

Pos 1-20

P E H 6 2 6 K A C 4 1 5 0 M 0 8

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Pos. 14: Capacitance tolerance M = -20 to + 20%

Pos. 15 and 16: Diameter of lead, 08 = 0.8mm, 10 = 1.0mm

CASE CODE	AB	AC	BB	BD	CB	CD
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Weight approx (g)	12	14	19	24	24	34
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Standard box quantity	200	100	200	100	200	100
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