

# PEH 506 85°C

**RoHS**  
Compliant

- Snap-In
- Long Life Grade
- PCB mounting
- Low ERS and ESL
- High ripple current

## APPLICATION

Typical applications for PEH 506 would be SMPS, drives, welding equipment, UPS and other power electronic applications where high current ratings and compact size are important.

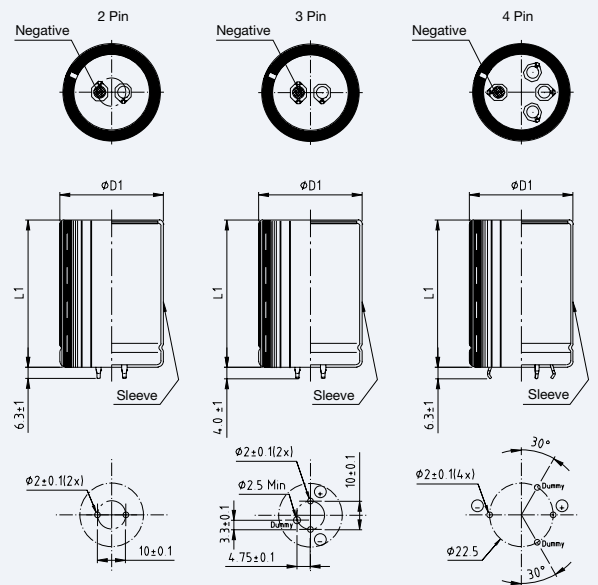
## BASIC DESIGN

PEH 506 is a Long Life electrolytic capacitor designed to offer high ripple current capability and low mounting cost. The low ESR is a result of very low resistive paper/ electrolyte system.

The low ESR together with the TDC thermal concept gives the PEH 506 a high ripple current capability.

## SPECIFICATION

<b>Standards</b>	IEC 60384-4 Long Life Grade 40/85/56, in accordance with CECC 30 301-809
<b>Capacitance range</b>	68–27000 $\mu$ F
<b>Capacitance tolerance</b>	-20 to +20%
<b>Rated voltage</b>	35–450 VDC
<b>Temperature range</b>	-40 to +85°C
<b>Leakage current, <math>I_{RL}</math> (<math>\mu</math>A)</b>	$0.003 (\mu\text{A}) \times C_R (\mu\text{F}) \times U_R (\text{V})$
<b>Operational life time +85°C, <math>U_R</math></b>	6000 hours
<b>Shelf life</b>	4 years at 0 Volt and +40°C
<b>Diameter range</b>	22–35 mm
<b>Pin configuration</b>	Diameter range 22-35 mm: 2-3 pins



Dimensions table PEH 532 (mm)

D x L	Case code	D1 ±0.5	L1 ±1.0	Weight approx (g)
22 x 25	AB	22.5	26	13
22 x 30	AC	22.5	31	14
22 x 35	AD	22.5	36	15
22 x 40	AE	22.5	41	17
22 x 45	AF	22.5	46	19
22 x 50	AG	22.5	51	21
25 x 25	BB	25.5	26	19
25 x 30	BC	25.5	31	21
25 x 35	BD	25.5	36	24
25 x 40	BE	25.5	41	27
25 x 45	BF	25.5	46	30
25 x 50	BG	25.5	51	33
30 x 25	CB	30.5	26	24
30 x 30	CC	30.5	31	29
30 x 35	CD	30.5	36	34
30 x 40	CE	30.5	41	39
30 x 45	CF	30.5	46	45
30 x 50	CG	30.5	51	51
35 x 25	DB	35.5	26	32

D x L	Case code	D1 ±0.5	L1 ±1.0	Weight approx (g)
35 x 30	DC	35.5	31	40
35 x 35	DD	35.5	36	48
35 x 40	DE	35.5	41	56
35 x 45	DF	35.5	46	64
35 x 50	DG	35.5	51	72
35 x 55	DH	35.5	56	85

### Pin Configuration

Description	2 pin	2 pin	3 pin	4 pin	4 pin
Pin length	6.3±1	4.0±1	4.0±1	6.3±1	4.0±1
Code	2	2S	3	4	4S
DIA. mm -0+1					
22	•	•	•		
25	•	•	•		
30	•	•	•		
35	•	•	•	•	•

## ARTICLE TABLE PEH 506 (85°C)

$C_R$	D x L	Case code	$I_{RAC}^*$ 85°C 100 Hz A	$I_{RAC}^*$ 40°C 20 kHz A	ESR* 20°C 100 Hz mΩ	ESR* 20°C 100 kHz mΩ	Article code	Pin configuration
μF	mm							
<b>35 VDC (<math>U_R</math>)</b>								
3300	22 x 30	AC	2.9	6.4	110	92	PEH506JAC4330M2	
3900	22 x 30	AC	3.1	6.6	96	82	PEH506JAC4390M2	
4700	22 x 35	AD	3.5	7.7	79	67	PEH506JAD4470M2	
4700	25 x 30	BC	3.3	7.0	85	72	PEH506JBC4470M2	
5600	22 x 40	AE	4.0	8.6	67	56	PEH506JAE4560M2	
5600	25 x 30	BC	3.4	7.0	76	66	PEH506JBC4560M2	
6800	22 x 40	AE	4.2	8.9	58	50	PEH200JAE4680M2	
6800	25 x 35	BD	4.0	8.2	62	53	PEH506JBD4680M2	
6800	30 x 30	CC	3.6	7.2	70	62	PEH506JCC4680M2	
8200	22 x 50	AG	5.0	10.6	47	40	PEH506JAG4820M2	
8200	25 x 40	BE	4.5	9.4	52	45	PEH506JBE4820M2	
8200	30 x 30	CC	3.6	6.9	66	59	PEH560JCC4820M2	
10000	25 x 45	BF	5.0	10.4	43	38	PEH506JBF5100M2	
10000	30 x 35	CD	4.2	8.3	53	47	PEH506JCD5100M2	
10000	35 x 30	DC	3.7	7.0	66	61	PEH506JDC5100M2	
12000	25 x 50	BG	5.5	11.3	37	32	PEH506JBG5120M2	
12000	30 x 40	CE	4.8	9.4	44	39	PEH506JCE5120M2	
12000	35 x 30	DC	3.5	6.5	69	65	PEH506JDC5120M2	
15000	30 x 45	CF	5.3	10.4	37	33	PEH506JCF5150M2	
15000	35 x 35	DD	4.1	7.8	55	51	PEH506JDD5150M2	
18000	35 x 40	DE	4.7	8.9	45	42	PEH506JDE5180M2	
22000	35 x 45	DF	5.2	9.8	39	37	PEH506JDF5220M2	
27000	35 x 50	DG	5.7	10.6	35	33	PEH506JDG5270M2	
<b>63 VDC (<math>U_R</math>)</b>								
1200	22 x 25	AB	2.1	5.3	160	110	PEH506MAB4120M2	
1500	22 x 30	AC	2.5	6.4	120	89	PEH506MAC4150M2	
1800	22 x 30	AC	2.6	6.6	110	78	PEH506MAC4180M2	
2200	22 x 35	AD	3.1	7.7	87	63	PEH506MAD4220M2	
2200	25 x 30	BC	2.9	7.0	93	69	PEH506MBC4220M2	
2700	22 x 40	AE	3.5	8.8	72	52	PEH506MAE4270M2	
2700	25 x 35	BD	3.4	8.3	75	56	PEH506MBD4270M2	
3300	22 x 50	AG	4.1	10.4	58	42	PEH506MAG4330M2	
3300	25 x 40	BE	3.9	9.4	62	46	PEH506MBE4330M2	
3300	30 x 30	CC	3.3	7.0	76	60	PEH506MCC4330M2	
3900	25 x 45	BF	4.4	10.4	53	40	PEH506MBF4390M2	
3900	30 x 35	CD	3.8	8.4	62	48	PEH506MCD4390M2	
4700	25 x 50	BG	4.8	11.3	45	34	PEH506MBG4470M2	
4700	30 x 40	CE	4.4	9.6	51	40	PEH506MCE4470M2	
4700	35 x 30	DC	3.4	6.7	74	63	PEH506MDC4470M2	
5600	30 x 40	CE	4.4	9.2	48	39	PEH506MCE4560M2	
5600	35 x 35	DD	4.0	8.1	58	49	PEH506MDD4560M2	
6800	30 x 45	CF	4.9	10.2	41	33	PEH506MCF4680M2	
6800	35 x 40	DE	4.6	9.3	48	40	PEH506MDE4680M2	
8200	35 x 45	DF	5.1	10.3	41	35	PEH506MDF4820M2	
10000	35 x 50	DG	5.5	11.0	37	31	PEH506MDG5100M2	
<b>100 VDC (<math>U_R</math>)</b>								
560	22 x 25	AB	1.5	3.6	370	290	PEH506PAB3560M2	
680	22 x 30	AC	1.7	4.3	300	230	PEH506PAC3680M2	
680	25 x 25	BB	1.7	4.1	310	240	PEH506PBB3680M2	
820	22 x 35	AD	2.0	5.0	250	190	PEH506PAD3820M2	
820	25 x 30	BC	2.0	4.8	260	200	PEH506PBC3820M2	
1000	22 x 40	AE	2.3	5.7	210	160	PEH506PAE4100M2	
1000	25 x 30	BC	2.1	5.1	210	170	PEH506PBC4100M2	
1200	22 x 40	AE	2.5	6.1	170	140	PEH506PAE4120M2	
1200	25 x 35	BD	2.5	6.0	180	140	PEH506PBD4120M2	
1500	22 x 45	AF	2.8	6.9	140	110	PEH506PAF4150M2	
1500	25 x 40	BE	2.9	6.8	140	110	PEH506PBE4150M2	

\* Maximum values

## ARTICLE TABLE PEH 506 (85°C)

C <sub>R</sub> μF	D x L mm	Case code	I <sub>RAC</sub> *	I <sub>RAC</sub> *	ESR*	ESR*	Article code	Pin configuration	
			85°C 100 Hz A	40°C 20 kHz A	20°C 100 Hz mΩ	20°C 100 kHz mΩ			
<b>100 VDC (U<sub>R</sub>)</b>									
1800	25 x 45	BF	3.2	7.6	120	95	PEH506PBF4180M2	↓	
1800	30 x 35	CD	3.1	7.0	130	100	PEH506PCD4180M2		
2200	25 x 50	BG	3.6	8.5	100	78	PEH506PBG4220M2		
2200	30 x 40	CE	3.5	8.0	110	84	PEH506PCE4220M2		
2200	35 x 30	DC	2.9	6.2	120	100	PEH506PDC4220M2		
2700	30 x 45	CF	4.0	8.9	88	70	PEH506PCF4270M2		
2700	35 x 35	DD	3.5	7.3	100	82	PEH506PDD4270M2		
3300	30 x 50	CG	4.4	9.8	73	59	PEH506PCG4330M2		
3300	35 x 40	DE	3.9	8.4	82	68	PEH506PDE4330M2		
3900	35 x 45	DF	4.4	9.3	70	58	PEH506PDF4390M2		
4700	35 x 50	DG	4.9	10.1	60	50	PEH506PDG4470M2		
<b>200 VDC (U<sub>R</sub>)</b>									
270	22 x 30	AC	1.2	5.4	510	270	PEH506RAC3270M2		
270	25 x 25	BB	1.2	4.8	520	290	PEH506RBB3270M2		
330	22 x 35	AD	1.4	6.2	420	220	PEH506RAD3330M2		
330	25 x 30	BC	1.4	5.9	420	230	PEH506RBC3330M2		
390	22 x 35	AD	1.5	6.5	360	190	PEH506RAD3390M2		
390	25 x 30	BC	1.5	6.0	360	200	PEH506RBC3390M2		
470	22 x 40	AE	1.7	7.4	300	160	PEH506RAE3470M2		
470	25 x 35	BD	1.7	7.0	300	160	PEH506RBD3470M2		
470	30 x 30	CC	1.7	6.4	310	170	PEH506RCC3470M2		
560	22 x 45	AF	1.9	8.2	250	140	PEH506RAF3560M2		
560	25 x 40	BE	1.9	8.0	250	140	PEH506RBE3560M2		
680	22 x 50	AG	2.1	9.1	210	110	PEH506RAG3680M2		
680	25 x 45	BF	2.2	8.9	210	110	PEH506RBF3680M2		
680	30 x 35	CD	2.1	7.4	220	130	PEH506RCD3680M2		
820	25 x 50	BG	2.5	9.7	170	96	PEH506RBG3820M2		
820	30 x 35	CD	2.3	7.1	190	110	PEH506RCD3820M2		
1000	30 x 40	CE	2.6	8.1	160	92	PEH506RCE4100M2		
1000	35 x 35	DD	2.5	7.2	170	100	PEH506RDD4100M2		
1200	30 x 45	CF	2.9	9.0	130	78	PEH506RCF4120M2		
1200	35 x 40	DE	2.9	8.2	140	85	PEH506RDE4120M2		
1500	35 x 45	DF	3.3	9.0	110	71	PEH506RDF4150M2		
1800	35 x 50	DG	3.6	9.8	97	61	PEH506RDG4180M2		
2200	35 x 55	DH	4.0	10.4	82	53	PEH506RDH4220M2		
<b>250 VDC (U<sub>R</sub>)</b>									
220	22 x 30	AC	1.1	5.5	520	260	PEH506SAC3220M2		
220	25 x 25	BB	1.1	4.8	530	270	PEH506SBB3220M2		
270	22 x 35	AD	1.3	6.4	420	210	PEH506SAD3270M2		
270	25 x 30	BC	1.3	5.9	430	210	PEH506SBC3270M2		
330	22 x 40	AE	1.5	7.2	350	170	PEH506SAE3330M2		
330	25 x 30	BC	1.4	6.0	360	180	PEH506SBC3330M2		
330	30 x 25	CB	1.4	4.9	380	200	PEH506SCB3330M2		
390	22 x 45	AF	1.7	8.1	290	140	PEH506SAF3390M2		
390	25 x 35	BD	1.6	7.1	300	150	PEH506SBD3390M2		
470	22 x 50	AG	1.9	8.9	250	120	PEH506SAG3470M2		
470	25 x 40	BE	1.9	8.0	250	130	PEH506SBE3470M2		
470	30 x 30	CC	1.8	6.1	270	140	PEH506SCC3470M2		
560	22 x 50	AG	2.1	9.2	210	110	PEH506SAG3560M2		
560	25 x 45	BF	2.1	8.9	210	110	PEH506SBF3560M2		
680	25 x 50	BG	2.4	9.8	180	90	PEH506SBG3680M2		
680	30 x 40	CE	2.3	8.3	180	98	PEH506SCE3680M2		
680	35 x 30	DC	2.1	5.8	210	120	PEH506SDC3680M2		
820	30 x 45	CF	2.6	9.2	150	83	PEH506SCF3820M2		
820	35 x 35	DD	2.4	7.0	170	99	PEH506SDD3820M2		
1000	30 x 50	CG	3.0	10.0	130	70	PEH506SCG4100M2		
1000	35 x 40	DE	2.8	8.0	140	82	PEH506SDE4100M2		
1200	35 x 45	DF	3.1	8.9	120	70	PEH506SDF4120M2		
1500	35 x 50	DG	3.5	9.5	98	59	PEH506SDG4150M2		

\* Maximum values

## ARTICLE TABLE PEH 506 (85°C)

C <sub>R</sub>	D x L	Case code	I <sub>RAC</sub> *	I <sub>RAC</sub> *	ESR*	ESR*	Article code	Pin configuration
			85°C	40°C	20°C	20°C		
μF	mm		100 Hz	20 kHz	100 Hz	100 kHz		
			A	A	mΩ	mΩ		
<b>350 VDC (U<sub>R</sub>)</b>								
82	22 x 25	AB	0.71	3.0	1600	970	PEH506UAB2820M2	
100	22 x 30	AC	0.82	3.5	1300	800	PEH506UAC3100M2	
150	22 x 35	AD	1.1	4.4	860	540	PEH506UAD3150M2	
150	25 x 30	BC	1.1	4.3	870	550	PEH506UBC3150M2	
180	22 x 40	AE	1.2	4.9	720	450	PEH506UAE3180M2	
220	22 x 45	AF	1.4	5.6	590	370	PEH506UAF3220M2	
220	25 x 35	BD	1.3	5.3	600	380	PEH506UBD3220M2	
220	30 x 30	CC	1.4	5.1	610	390	PEH506UCC3220M2	
270	22 x 50	AG	1.5	6.3	480	310	PEH506UAG3270M2	
270	25 x 40	BE	1.5	6.0	490	310	PEH506UBE3270M2	
330	25 x 50	BG	1.8	7.1	400	250	PEH506UBG3330M2	
330	30 x 40	CE	1.8	6.8	400	260	PEH506UCE3330M2	
330	35 x 30	DC	1.7	5.6	420	280	PEH506UDC3330M2	
390	25 x 50	BG	2.0	7.5	340	220	PEH506UBG3390M2	
390	30 x 40	CE	2.0	7.0	350	220	PEH506UCE3390M2	
470	30 x 45	CF	2.2	7.9	290	190	PEH506UCF3470M2	
470	35 x 35	DD	2.1	6.6	300	200	PEH506UDD3470M2	
560	30 x 50	CG	2.5	8.7	240	160	PEH506UCG3560M2	
560	35 x 40	DE	2.4	7.5	250	170	PEH506UDE3560M2	
680	35 x 45	DF	2.7	8.4	210	140	PEH506UDF3680M2	
<b>400 VDC (U<sub>R</sub>)</b>								
82	22 x 30	AC	0.79	3.4	1300	810	PEH506VAC2820M2	
100	22 x 30	AC	0.87	3.7	1100	670	PEH506VAC3100M2	
100	25 x 25	BB	0.87	3.6	1100	680	PEH506VBB3100M2	
120	22 x 35	AD	1.0	4.3	920	560	PEH506VAD3120M2	
120	25 x 30	BC	1.0	4.2	930	570	PEH506VBC3120M2	
120	30 x 25	CB	1.0	4.0	940	580	PEH506VCB3120M2	
150	22 x 40	AE	1.2	4.9	740	450	PEH506VAE3150M2	
150	25 x 35	BD	1.2	4.9	740	450	PEH506VBD3150M2	
150	30 x 25	CB	1.1	4.2	770	480	PEH506VCB3150M2	
180	22 x 45	AF	1.3	5.5	620	380	PEH506VAF3180M2	
180	30 x 30	CC	1.3	5.1	630	390	PEH506VCC3180M2	
220	22 x 50	AG	1.5	6.2	510	310	PEH506VAG3220M2	
220	25 x 40	BE	1.5	6.0	510	320	PEH506VBE3220M2	
220	30 x 35	CD	1.5	5.9	520	320	PEH506VCD3220M2	
220	35 x 25	DB	1.4	4.5	550	350	PEH506VDB3220M2	
270	25 x 45	BF	1.7	6.7	420	260	PEH506VBF3270M2	
270	30 x 35	CD	1.7	6.2	430	270	PEH506VCD3270M2	
330	30 x 40	CE	1.9	7.0	350	220	PEH506VCE3330M2	
330	35 x 35	DD	1.9	6.7	360	230	PEH506VDD3330M2	
390	30 x 50	CG	2.2	8.4	290	180	PEH506VCG3390M2	
390	35 x 40	DE	2.2	7.6	300	190	PEH506VDE3390M2	
470	35 x 45	DF	2.5	8.5	250	160	PEH506VDF3470M2	
560	35 x 50	DG	2.8	9.3	210	140	PEH506VDG3560M2	
<b>450 VDC (U<sub>R</sub>)</b>								
68	22 x 30	AC	0.77	3.5	1300	780	PEH506YAC2680M2	
68	25 x 25	BB	0.77	3.4	1300	790	PEH506YBB2680M2	
82	22 x 30	AC	0.85	3.7	1100	670	PEH506YAC2820M2	
82	25 x 25	BB	0.85	3.6	1100	680	PEH506YBB2820M2	
100	22 x 35	AD	0.98	4.4	910	540	PEH506YAD3100M2	
100	25 x 30	BC	0.99	4.3	920	540	PEH506YBC3100M2	
120	22 x 40	AE	1.1	5.0	760	450	PEH506YAE3120M2	
120	25 x 30	BC	1.1	4.5	780	470	PEH506YBC3120M2	
120	30 x 25	CB	1.1	4.2	800	480	PEH506YCB3120M2	
150	22 x 45	AF	1.3	5.6	620	370	PEH506YAF3150M2	
150	25 x 35	BD	1.3	5.3	620	370	PEH506YBD3150M2	
150	30 x 30	CC	1.3	5.1	630	380	PEH506YCC3150M2	
180	22 x 50	AG	1.4	6.2	520	310	PEH506YAG3180M2	

\* Maximum values

## ARTICLE TABLE PEH 506 (85°C)

$C_R$	D x L	Case code	$I_{RAC}^*$	$I_{RAC}^*$	ESR*	ESR*	Article code	Pin configuration
			85°C	40°C	20°C	20°C		
$\mu F$	mm		100 Hz	20 kHz	100 Hz	100 kHz		
			A	A	m $\Omega$	m $\Omega$		
<b>450 VDC (<math>U_R</math>)</b>								
180	25 x 40	BE	1.4	6.0	520	310	PEH506YBE3180M2	
180	30 x 30	CC	1.4	5.3	540	330	PEH506YCC3180M2	
220	25 x 45	BF	1.6	6.8	430	260	PEH506YBF3220M2	
220	30 x 35	CD	1.6	6.2	440	270	PEH506YCD3220M2	
220	35 x 30	DC	1.6	5.6	450	280	PEH506YDC3220M2	
270	30 x 40	CE	1.9	7.1	360	220	PEH506YCE3270M2	
270	35 x 35	DD	1.9	6.7	360	230	PEH506YDD3270M2	
330	30 x 50	CG	2.2	8.5	290	170	PEH506YCG3330M2	
330	35 x 40	DE	2.2	7.6	300	180	PEH506YDE3330M2	
390	35 x 40	DE	2.3	7.4	260	160	PEH506YDE3390M2	
470	35 x 50	DG	2.7	9.3	210	130	PEH506YDG3470M2	

\* Maximum values

## ORDERING INFORMATION

For further ordering information please see page 8.

Pos 1–20

<b>P</b>	<b>E</b>	<b>H</b>	<b>5</b>	<b>0</b>	<b>6</b>	<b>M</b>	<b>A</b>	<b>B</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>M</b>	<b>2</b>					
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>

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

Pos. 15: Pin configuration

## Quantities and weights for PEH506

CASE CODE	AB	AC	AD	AE	AF	AG	BB	BC	BD	BE	BF	BG	CB	CC	CD	CE	CF	CG
Weight approx (g)	13	14	15	17	19	21	19	21	24	27	30	33	24	29	34	39	45	51
Standard box quantity	200	100	100	100	100	100	200	100	100	100	100	100	200	100	100	100	100	100

## Quantities and weights for PEH506

CASE CODE	DB	DC	DD	DE	DF	DG	DH
Weight approx (g)	32	40	48	56	64	72	85
Standard box quantity	200	100	100	100	100	100	100

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