

## APPLICATION

Typical applications for the new PEH 205 would be high temperature, high ripple current applications such as Welding Equipment, Industrial and Automotive Drives, and High End Professional power supplies.

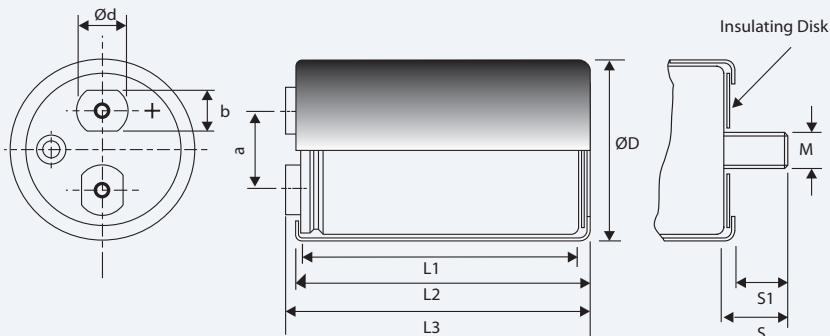
## BASIC DESIGN

PEH 205 series has a polarized, all-welded design, heavy duty screw terminals, extended cathode construction, safety vent and plastic insulation. The sealing systems designed for electrolyte leakage free operation and a very low gas-diffusion rate of electrolyte.

Mechanical contact between the winding and the aluminium case allows excellent heat transfer from the winding hot spot to the ambient, which means cooler operation and very high current ratings.

## SPECIFICATION

<b>Standards</b>	IEC 60384-4 Long Life Grade 55/125/56,
<b>Capacitance range</b>	1500 – 390000 µF
<b>Capacitance tolerance</b>	-10 to +30%
<b>Rated voltage</b>	16 – 100VDC
<b>Temperature range</b>	-55 to +125°C
<b>Shelf life</b>	2000 h at 0V +85°C, or 4 years at 0V +40°C
<b>Operational life time</b>	4000 h at $U_r, I_r, +125^\circ\text{C}$ (Case $\varnothing \leq 50$ mm) 8000 h at $U_r, I_r, +125^\circ\text{C}$ (Case $\varnothing > 50$ mm)
<b>End of Life</b>	$\Delta C/C \leq \pm 10\%$ ESR $\leq 3 \times$ initial value $I_L \leq$ initial specified limit
<b>Diameter range</b>	35 - 75 mm



Dimensions table PEH 205 (mm) - Other sizes available on request.

D x L	Case code	D ±1.0	L1 ±1.0	L2 ±1.0	L3 ±1.0	S	S1	M	a ±0.5	b	d	m*	Weight approx (g)
35 x 51	A	35.2	51.5	52.2	58.5	12	11.4	M8	13.0	—	8	M5	70
35 x 75	C	35.2	73.5	74.2	80.5	12	11.4	M8	13.0	—	8	M5	105
35 x 95	D	35.2	94.5	95.2	101.5	12	11.4	M8	13.0	—	8	M5	130
50 x 75	H	50.2	74.5	75.2	82.0	16	15.4	M12	22.0	13	15	M5	180
65 x 105	O	65.2	106.0	106.7	112.6	16	15.4	M12	28.5	13	15	M5	415
75 x 105	T	75.2	106.0	106.7	112.6	16	15.4	M12	32.0	13	15	M5	585
75 x 145	V	75.2	146.0	146.7	152.6	16	15.4	M12	32.0	13	15	M5	800

Can size (mm) / rating data - PEH205 series

Cap (µF)	Rated Voltage $U_r$					
	16	25	40	55	63	100
1500						35x51
2200					35x51	35x75
2700				35x51		
3300						35x95
4700			35x51	35x75	35x75	50x75
5600				35x95	35x95	
10000		35x51	35x75		50x75	
12000				50x75		
15000			35x95			65x105
18000	35x51	35x75				
22000		35x95	50x75		65x105	75x105
27000				65x105		
33000	35x75				75x105	75x145
39000	35x95	50x75		75x105		
47000			65x105		75x145	
56000				75x145		
68000	50x75		75x105			
100000			75x145			
120000		65x105				
180000	65x105	75x105				
270000	75x105	75x145				
390000	75x145					

## ARTICLE TABLE PEH 205 (125°C)

$C_R$	D x L	Case code	$I_{RAC}^*$ 125°C	$I_{RAC}^*$ 85°C	$I_{RAC}^*$ 40°C	ESRmax 20°C	Zmax 20°C	Article code
$\mu F$	mm		100 Hz A	100 Hz A	100 Hz A	100 Hz m $\Omega$	20 kHz m $\Omega$	U2 = Plain can B2 = Stud can
<b>16VDC (<math>U_R</math>)</b>								
18000	35 x 51	A	6.2	17.8	25.4	26	20	PEH205GA5180Q--
33000	35 x 75	C	8.1	23.2	33.5	17	13	PEH205GC5330Q--
39000	35 x 95	D	8.5	24.3	35.2	15	12	PEH205GD5390Q--
68000	50 x 75	H	13.7	39.1	56.6	10	9	PEH205GH5680Q--
180000	65 x 105	O	17.4	50.0	72.8	7	9	PEH205GO6180Q--
270000	75 x 105	T	22.9	66.1	80.0	7	10	PEH205GT6270Q--
390000	75 x 145	V	24.8	71.9	80.0	6	10	PEH205GV6390Q--
<b>25VDC (<math>U_R</math>)</b>								
10000	35 x 51	A	5.3	15.2	22.0	31	21	PEH205HA5100Q--
18000	35 x 75	C	7.0	20.0	28.9	19	14	PEH205HC5180Q--
22000	35 x 95	D	7.5	21.3	30.8	17	12	PEH205HD5220Q--
39000	50 x 75	H	12.0	34.5	50.0	12	10	PEH205HH5390Q--
120000	65 x 105	O	19.8	56.8	80.0	7	9	PEH205HO6120Q--
180000	75 x 105	T	20.8	60.0	80.0	8	10	PEH205HT6180Q--
270000	75 x 145	V	23.5	67.7	80.0	6	10	PEH205HV6270Q--
<b>40VDC (<math>U_R</math>)</b>								
4700	35 x 51	A	4.8	13.6	19.7	36	21	PEH205KA4470Q--
10000	35 x 75	C	6.8	19.6	28.4	20	13	PEH205KC5100Q--
15000	35 x 95	D	8.1	23.2	33.8	16	11	PEH205KD5150Q--
22000	50 x 75	H	11.7	33.6	48.9	12	9	PEH205KH5220Q--
47000	65 x 105	O	18.1	51.9	75.6	8	9	PEH205KO5470Q--
68000	75 x 105	T	19.9	57.4	80.0	8	10	PEH205KT5680Q--
100000	75 x 145	V	22.2	63.9	80.0	7	10	PEH205KV6100Q--
<b>55VDC (<math>U_R</math>)</b>								
2700	35 x 51	A	4.4	12.5	18.2	44	28	PEH205LA4270Q--
4700	35 x 75	C	5.9	16.7	24.3	28	17	PEH205LC4470Q--
5600	35 x 95	D	6.3	18.0	26.1	24	15	PEH205LD4560Q--
12000	50 x 75	H	10.9	31.1	45.5	15	11	PEH205LH5120Q--
27000	65 x 105	O	17.3	49.5	72.1	9	9	PEH205LO5270Q--
39000	75 x 105	T	19.1	54.9	80.0	9	10	PEH205LT5390Q--
56000	75 x 145	V	21.7	62.3	80.0	7	10	PEH205LV5560Q--
<b>63VDC (<math>U_R</math>)</b>								
2200	35 x 51	A	4.4	12.6	18.3	43	27	PEH205MA4220Q--
4700	35 x 75	C	6.4	18.4	26.8	24	16	PEH205MC4470Q--
5600	35 x 95	D	7.1	20.3	29.6	21	14	PEH205MD4560Q--
10000	50 x 75	H	10.6	30.3	44.2	15	11	PEH205MH5100Q--
22000	65 x 105	O	16.9	48.6	70.9	9	9	PEH205MO5220Q--
33000	75 x 105	T	18.2	52.3	76.5	9	11	PEH205MT5330Q--
47000	75 x 145	V	21.2	61.1	80.0	8	10	PEH205MV5470Q--

\* Maximum values

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$C_R$	D x L	Case code	$I_{RAC}^*$ 125°C	$I_{RAC}^*$ 85°C	$I_{RAC}^*$ 40°C	ESRmax 20°C	Zmax 20°C	Article code
$\mu F$	mm		100 Hz A	100 Hz A	100 Hz A	100 Hz m $\Omega$	20 kHz m $\Omega$	U2 = Plain can B2 = Stud can
100VDC ( $U_R$ )								
1500	35 x 51	A	3.0	8.7	12.5	85	54	PEH205PA4150Q--
2200	35 x 75	C	3.8	10.9	15.7	58	36	PEH205PC4220Q--
3300	35 x 95	D	4.8	13.7	19.8	41	27	PEH205PD4330Q--
4700	50 x 75	H	6.9	19.7	28.5	30	21	PEH205PH4470Q--
15000	65 x 105	O	13.4	38.3	56.6	13	12	PEH205PO5150Q--
22000	75 x 105	T	15.2	43.6	63.5	11	13	PEH205PT5220Q--
33000	75 x 145	V	18.5	53.1	77.5	9	7	PEH205PV5330Q--

\* Maximum values

## LEAKAGE CURRENT

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

Rated voltage,  $U_R$  (V)

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

$$I_{RL} = 0.002 \times C_R \times U_R + 4 \text{ or } 3mA, \text{ whichever is smaller}$$

## MECHANICAL DATA

**Mounting position**

The capacitor can be mounted upright or inclined to a horizontal position.

**Clamp fixing**

Clips must be ordered separately. See "Accessories".

**Stud fixing**

Nylon cap nut must be ordered separately. For the stud fixing insulated version the outer insulation serves as lock washer.

See "Accessories". Max tightening torque: M8: 3 Nm M12: 8 Nm. Max chassis thickness 5 mm. Mounting hole: See "Accessories".

**Screw terminals**

M5 x 10 according to DIN 41.248. Max tightening torque: 2.5 Nm. Must be ordered separately: See "Accessories". Recommended max connector thickness with delivered screw: 4 mm. M6 thread on request (65 & 75mm dia).