PEG 122 105°C

- **105 °C**
- **Long Life, > 20 years at 50°C**
- **Low ESR, down to 40mΩ**
- **Low ESL, down to 5nH**

APPLICATION

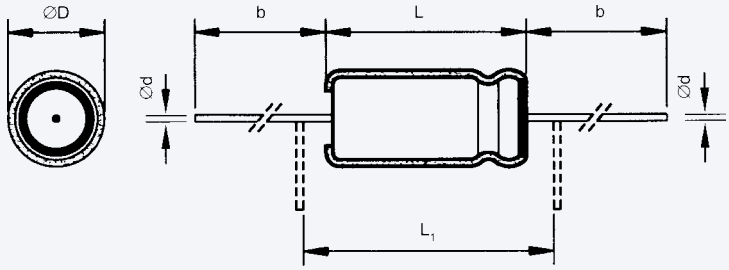
Smoothing, coupling/decoupling and energy storage in telecommunication, power supply systems, process control and measuring equipment. Due to the long term stability and the low leakage current this series also meets all the requirements for timing and integration.

BASIC DESIGN

PEG 122 is a Long Life electrolytic capacitor, high reliability version, polarized, all-welded design, tinned copper wire leads, negative pole connected to the case, plastic insulation. PEG 122 is designed to achieve very Long Life and offer outstanding electrical performance. Long Life and very high reliability is achieved by the dimensioning of the capacitor, the careful selection of materials/ methods and disciplined quality control. The PEG 122 winding is housed in a cylindrical aluminium can with a high purity aluminium lid and a high performance rubber gasket. The sealing system is designed for electrolyte leakage free operation and a very low gasdiffusion rate of electrolyte. Low ESR is a result of low resistive electrolyte/ paper system and an allwelded design. Thanks to their robust construction they are suitable in mobile and in aircraft installations.

SPECIFICATION

Standards	IEC 384-4 Long Life Grade, 40/105/56, DIN 412401, type 1A, CECC 30300
British Telecom	BT No 4511A
French standard	C031
CECC	CECC DS 30301-021
Capacitance range	2.2–3300µF
Capacitance tolerance	–10 to +30%
Rated voltage	10–100 VDC
Temperature range	–40 to +105°
Shelf life	at 0V +105°C 5000 h, +40°C 10 years
Diameter range	10–20 mm



Dimensions table PEG 122 (mm)

D x L	Case code	D ±0.5	d ±0.03	L ±1	L_1 min	b + 3/–2 Box	b + 3/–2 Taped	Weight approx (g)
10 x 20	A	10	0.8	20	26	–	31	3
10 x 29	B	10	0.8	29	35	–	27	4
13 x 29	D	13	0.8	29	35	–	27	6
13 x 37	E	13	0.8	37	43	42	24	7
16 x 29	F	16	0.8	29	35	42	–	8
16 x 37	G	16	0.8	37	43	42	–	11
20 x 37	J	20	0.8	37	43	42	–	20
20 x 46	L	20	0.8	46	52	42	–	24

ARTICLE TABLE PEG 122 (105°C)

C_R µF	D x L mm	Case code	I_{RAC} * 105°C 100 Hz mA	I_{RAC} 40°C 20kHz A	ESR* 20°C 100 Hz Ω	ESR* 20°C 100 kHz Ω	L_{ESL} Approx. nH	Article code 1st block
				10 VDC (U_R)				
100	10 x 20	A	120	1.1	3.10	1.26	5	PEG 122EA3100Q
220	10 x 20	A	260	1.7	1.40	0.58	5	PEG 122EA3220Q
330	10 x 29	B	390	2.1	0.95	0.39	6	PEG 122EB3330Q
680	13 x 29	D	650	3.5	0.46	0.20	8	PEG 122ED3680Q
1000	13 x 29	D	780	4.0	0.31	0.15	8	PEG 122ED4100Q
1500	16 x 29	F	1120	5.9	0.21	0.09	10	PEG 122EF4150Q
2200	16 x 37	G	1360	6.9	0.14	0.07	12	PEG 122EG4220Q
3300	20 x 37	J	1800	8.8	0.10	0.05	15	PEG 122EJ4330Q
				16 VDC (U_R)				
68	10 x 20	A	130	1.1	2.80	1.32	5	PEG 122GA2680Q
100	10 x 20	A	190	1.4	1.90	0.84	5	PEG 122GA3100Q
150	10 x 20	A	270	1.6	1.20	0.64	5	PEG 122GA3150Q
220	10 x 29	B	340	2.1	0.86	0.41	6	PEG 122GB3220Q
470	13 x 29	D	570	3.5	0.40	0.19	8	PEG 122GD3470Q
680	13 x 29	D	780	4.1	0.28	0.15	8	PEG 122GD3680Q
1000	16 x 29	F	960	5.6	0.19	0.10	10	PEG 122GF4100Q
1500	16 x 37	G	1200	6.9	0.12	0.07	12	PEG 122GG4150Q
2200	20 x 37	J	1590	8.8	0.09	0.05	15	PEG 122GJ4220Q
				25 VDC (U_R)				
33	10 x 20	A	100	1.0	5.70	1.38	5	PEG 122HA2330Q
47	10 x 20	A	140	1.4	4.00	0.84	5	PEG 122HA2470Q
100	10 x 20	A	230	1.7	1.90	0.54	5	PEG 122HA3100Q
150	10 x 29	B	300	2.3	1.20	0.36	6	PEG 122HB3150Q
220	13 x 29	D	410	3.0	0.86	0.26	8	PEG 122HD3220Q
470	16 x 29	F	700	5.0	0.40	0.12	10	PEG 122HF3470Q
680	16 x 29	F	850	5.9	0.28	0.09	10	PEG 122HF3680Q
1000	16 x 37	G	1110	7.5	0.19	0.06	12	PEG 122HG4100Q
1500	20 x 37	J	1450	9.6	0.12	0.04	15	PEG 122HJ4150Q
				40 VDC (U_R)				
22	10 x 20	A	100	1.0	5.70	1.48	5	PEG 122KA2220Q
33	10 x 20	A	140	1.4	3.80	0.82	5	PEG 122KA2330Q
47	10 x 20	A	175	1.5	2.70	0.71	5	PEG 122KA2470Q
68	10 x 29	B	210	2.0	1.80	0.41	6	PEG 122KB2680Q
100	10 x 29	B	275	2.4	1.20	0.34	6	PEG 122KB3100Q
150	13 x 29	D	375	3.1	0.84	0.24	8	PEG 122KD3150Q
220	13 x 29	D	480	4.1	0.57	0.15	8	PEG 122KD3220Q
330	13 x 37	E	580	4.9	0.38	0.11	10	PEG 122KE3330Q
470	16 x 29	F	790	6.2	0.27	0.08	10	PEG 122KF3470Q
680	16 x 37	G	960	7.4	0.18	0.06	12	PEG 122KG3680Q
1000	20 x 37	J	1240	8.7	0.12	0.05	15	PEG 122KJ4100Q
				63 VDC (U_R)				
2.2	10 x 20	A	34	1.1	57.00	1.05	5	PEG 122MA1220Q
3.3	10 x 20	A	43	1.2	38.00	0.90	5	PEG 122MA1330Q
4.7	10 x 20	A	48	1.3	27.00	0.85	5	PEG 122MA1470Q
6.8	10 x 20	A	58	1.3	18.00	0.83	5	PEG 122MA1680Q
10	10 x 20	A	76	1.4	12.50	0.80	5	PEG 122MA2100Q
15	10 x 20	A	110	1.5	8.40	0.72	5	PEG 122MA2150Q
22	10 x 20	A	135	1.5	5.70	0.70	5	PEG 122MA2220Q
33	10 x 29	B	160	2.0	3.80	0.42	6	PEG 122MB2330Q
47	10 x 29	B	190	2.0	2.70	0.42	6	PEG 122MB2470Q
68	10 x 29	B	240	2.4	1.80	0.30	6	PEG 122MB2680Q
100	13 x 29	D	325	3.4	1.20	0.20	8	PEG 122MD3100Q
150	13 x 29	D	415	4.4	0.84	0.13	8	PEG 122MD3150Q

* Maximum values

ARTICLE TABLE PEG 122 (105°C)

C_R	D x L	Case code	I_{RAC}* 105°C 100 Hz	I_{RAC} 40°C 20kHz	ESR* 20°C 100 Hz	ESR* 20°C 100 kHz	L_{ESL} Approx.	Article code 1st block
µF	mm		mA	A	Ω	Ω	nH	
63 VDC (U_R)								
220	16 x 29	F	580	5.6	0.57	0.10	10	PEG 122MF3220Q
330	16 x 37	G	710	6.8	0.38	0.07	12	PEG 122MG3330Q
470	20 x 37	J	940	8.7	0.27	0.05	15	PEG 122MJ3470Q
100 VDC (U_R)								
4.7	10 x 20	A	48	0.72	16.00	3.00	5	PEG 122PA1470Q
10	10 x 20	A	84	0.85	6.70	2.40	5	PEG 122PA2100Q
22	10 x 29	B	115	1.00	3.50	1.60	6	PEG 122PB2220Q
33	10 x 29	B	125	1.30	3.50	1.10	6	PEG 122PB2330Q
47	13 x 29	D	195	1.70	1.70	0.77	8	PEG 122PD2470Q
68	13 x 37	E	245	2.10	1.20	0.53	10	PEG 122PE2680Q
100	16 x 29	F	360	2.80	0.85	0.42	10	PEG 122PF3100Q
150	16 x 37	G	450	3.70	0.54	0.25	12	PEG 122PG3150Q
220	20 x 37	J	610	5.00	0.37	0.17	15	PEG 122PJ3220Q

* Maximum values

OPERATIONAL DATA

Please see operational lifetime section, page 62.

RELIABILITY

The failure rate is derived from our periodic test results. The failure rate (λ_R) is therefore only given at test temperature for life tests. An estimation is also given at 60°C.

The expected failure rate for this capacitor range is based on our periodic test results for capacitors with structural similarity.

T_a	Failure rate per hour
100°C	1×10^{-6}
60°C	1×10^{-8}

Failure rate per hour for catastrophic plus parametric failures.

TECHNICAL DATA

Leakage current
Rated leakage current, I_{RL} (µA)
Rated voltage, U_R (V)
Rated capacitance, C_R (µF)
For $C_R \times U_R \leq 1000$ $I_{RL} = 0.01 \times C_R \times U_R$
For $C_R \times U_R > 1000$
$I_{RL} = 0.003 \times C_R \times U_R + 4$

ORDERING INFORMATION

1st block (pos 1–13)

P	E	G	1	2	2	K	D	3	1	5	0	Q
1	2	3	4	5	6	7	8	9	10	11	12	13

2nd block (pos 14–20)

T	1					
14	15	16	17	18	19	20

Capacitance tolerances:
Pos. 13: Q: –10 to +30%

T1: taped delivery on reels
L1: Packed in boxes

Quantities and weights

CASE CODE	A	B	D	E	F	G	J	L
Weight approx (g)	3	4	6	7	8	10	14	17
Standard content per reel	500	500	400	400[1]				
Standard box quantity	250[1]	200[1]	200[1]	100	100	100	100	100

[1] On request.

NOTES

PEG 124 125°C and 105°C

- **125°C and 105°C**
- **Long Life > 30 years at 50°C**
- **Low ESR**
- **Low ESL**

APPLICATION

Smoothing, coupling/decoupling and energy storage in telecommunication, power supply system, data processing, process control and measuring where Long Life and high reliability are of paramount importance.

Due to the long term stability and their low leakage current this series also meets all the requirements for timing and integration.

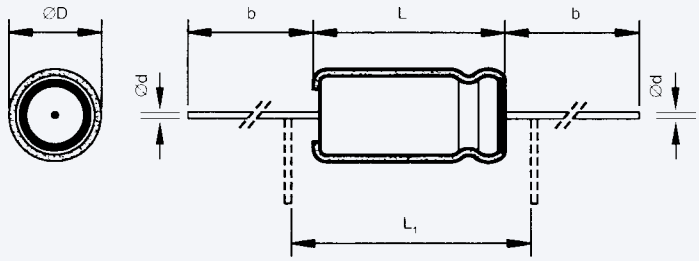
BASIC DESIGN

PEG 124 is an electrolytic capacitor with very Long Life and outstanding electrical performance. Polarized, all-welded design, tinned copper wire leads, negative pole connected to the case, plastic insulation. Long Life and very high reliability are achieved by the dimensioning of the capacitor, the careful selection of materials/ methods and discipline in quality control allowing operation up to +125°C/105°C.

The PEG 124 winding is housed in a cylindrical aluminium can with a high purity aluminium lid and a high quality rubber gasket. The sealing system is designed for electrolyte leakage free operation and a very low gasdiffusion rate of electrolyte. Low ESR is a result of a low resistive electrolyte/paper system and an all-welded design. Thanks to its mechanical robustness the PEG 124 is also suitable for use in mobile and in aircraft installations.

SPECIFICATION

Standards	IEC 384-4 Long Life Grade 40/125/56, DIN 41240, type 1A and 1B, DIN 40040 GKF, IEC 384-4 Long Life Grade 40/105/56, DIN 41240, type 1A and 1B, DIN 40040 GMF,
CECC	CECC 30301-053 (10–450 VDC)
Capacitance range	1–4700µF
Capacitance tolerance	–10 to +30%
Rated voltage	10–450 VDC
Temperature range	–40 to +125°C
Shelf life	at 0V +105°C 5000 h, +40°C 10 years
Diameter range	10 – 20 mm



Dimensions table PEG 124 (mm)

D x L	Case code	D ±0.5	d ±0.03	L ±1	L_1 min	b + 3/–2 Box	b + 3/–2 Taped	Weight approx (g)
10 x 20	A	10	0.8	20.0	26.0	–	31	3
10 x 29	B	10	0.8	29.0	35.0	–	27	4
13 x 20	C	13	0.8	20.0	26.0	–	31	4
13 x 29	D	13	0.8	29.0	35.0	–	27	6
13 x 37	E	13	0.8	37.0	43.0	42	24	7
16 x 29	F	16	0.8	29.0	35.0	42	–	8
16 x 37	G	16	0.8	37.0	43.0	42	–	11
20 x 29	H	20	0.8	29.0	35.0	42	–	13
20 x 37	J	20	0.8	37.0	43.0	42	–	20
20 x 46	L	20	0.8	46.0	52.0	42	–	24

ARTICLE TABLE PEG 124 (125°C)

C_R µF	D x L mm	Case code	I_{RAC} * 125°C 100 Hz mA	I_{RAC} 40°C 20kHz A	ESR* 20°C 100 Hz Ω	ESR* 20°C 100 kHz Ω	L_{ESL} Approx. nH	Article code 1st block
			10 VDC (U_R)					
1000	16 x 29	F	1035	4.6	0.20	0.14	10	PEG 124EF4100Q
1500	16 x 37	G	1276	5.6	0.14	0.10	12	PEG 124EG4150Q
2200	20 x 37	J	1804	8.0	0.09	0.06	15	PEG 124EJ4220Q
3300	20 x 46	L	2088	8.8	0.07	0.05	17	PEG 124EL4330Q
			16 VDC (U_R)					
68	10 x 20	A	130	0.95	2.40	1.60	5	PEG 124GA2680Q
100	10 x 20	A	191	1.2	1.70	1.10	5	PEG 124GA3100Q
150	10 x 29	B	287	1.5	1.10	0.71	6	PEG 124GB3150Q
220	10 x 29	B	315	1.5	0.80	0.54	6	PEG 124GB3220Q
220	13 x 20	C	422	3.9	0.39	0.14	6	PEG 124GC322AQ
330	13 x 29	D	515	2.6	0.50	0.33	8	PEG 124GD3330Q
470	13 x 20	C	645	3.9	0.25	0.12	6	PEG 124GC347AQ
470	13 x 29	D	632	3.1	0.37	0.25	8	PEG 124GD3470Q
680	13 x 37	E	851	4.6	0.20	0.12	10	PEG 124GE3680Q
680	16 x 29	F	850	4.0	0.26	0.18	10	PEG 124GF3680Q
680	16 x 29	F	1005	7.6	0.13	0.05	10	PEG 124GF368AQ
1000	16 x 29	F	1166	7.6	0.11	0.05	10	PEG 124GF410AQ
1000	16 x 37	G	1031	4.8	0.19	0.13	12	PEG 124GG4100Q
1500	16 x 37	G	1490	9.3	0.07	0.04	12	PEG 124GG415AQ
1500	20 x 37	J	1372	6.0	0.14	0.10	´15	PEG 124GJ4150Q
2200	16 x 37	G	1720	9.3	0.06	0.04	12	PEG 124GG422AQ
2200	20 x 46	L	1782	8.0	0.09	0.06	17	PEG 124GL4220Q
3300	20 x 37	J	2251	11.8	0.04	0.02	15	PEG 124GJ433AQ
4700	20 x 37	J	2685	12.7	0.04	0.02	15	PEG 124GJ447AQ
			25 VDC (U_R)					
47	10 x 20	A	141	1.1	2.40	1.30	5	PEG 124HA2470Q
100	10 x 29	B	255	1.5	1.20	0.67	6	PEG 124HB3100Q
220	13 x 20	C	452	3.1	0.46	0.20	6	PEG 124HC322AQ
220	13 x 29	D	448	2.6	0.59	0.32	8	PEG 124HD3220Q
330	13 x 20	C	525	3.1	0.37	0.20	6	PEG 124HC333AQ
330	13 x 37	E	570	3.4	0.36	0.20	10	PEG 124HE3330Q
470	16 x 29	F	806	4.7	0.25	0.14	10	PEG 124HF3470Q
470	16 x 29	F	827	6.1	0.20	0.08	10	PEG 124HF347AQ
680	16 x 29	F	946	6.0	0.17	0.08	10	PEG 124HF368AQ
680	16 x 37	G	960	5.3	0.19	0.11	12	PEG 124HG3680Q
1000	16 x 37	G	1248	7.8	0.11	0.05	12	PEG 124HG410AQ
1000	20 x 37	J	1323	7.4	0.12	0.07	15	PEG 124HJ4100Q
1500	16 x 37	G	1437	7.8	0.09	0.06	12	PEG 124HG415AQ
1500	20 x 46	L	1659	8.9	0.09	0.05	17	PEG 124HL4150Q
2200	20 x 37	J	1803	9.5	0.06	0.04	15	PEG 124HJ422BQ
3300	20 x 37	J	2067	9.5	0.06	0.04	15	PEG 124HJ433BQ
			40 VDC (U_R)					
33	10 x 20	A	153	1.1	2.90	1.30	5	PEG 124KA2330Q
68	10 x 29	B	221	1.5	1.40	0.65	6	PEG 124KB2680Q
150	13 x 20	C	381	3.1	0.58	0.20	6	PEG 124KC315AQ
150	13 x 29	D	416	2.8	0.62	0.29	8	PEG 124KD3150Q
220	13 x 20	C	452	3.1	0.44	0.20	6	PEG 124KC322AQ
220	13 x 37	E	487	3.5	0.44	0.19	10	PEG 124KE3220Q
220	16 x 29	F	575	3.9	0.41	0.19	10	PEG 124KF3220Q
330	16 x 29	F	739	6.1	0.24	0.08	10	PEG 124KF333AQ
330	16 x 37	G	692	4.8	0.29	0.13	12	PEG 124KG3330Q
470	16 x 29	F	827	6.1	0.20	0.08	10	PEG 124KF347CQ
470	20 x 37	J	898	6.0	0.22	0.10	15	PEG 124KJ3470Q
680	16 x 37	G	1048	7.7	0.13	0.05	12	PEG 124KG368AQ
680	20 x 37	J	1132	7.3	0.15	0.07	15	PEG 124KJ3680Q
1000	16 x 37	G	1242	7.8	0.11	0.05	12	PEG 124KG410AQ
1000	20 x 46	L	1414	8.8	0.10	0.05	17	PEG 124KL4100Q
1500	20 x 37	J	1598	9.5	0.07	0.04	15	PEG 124KJ415AQ

ARTICLE TABLE PEG 124 (125°C)

C_R µF	D x L mm	Case code	I_{RAC} * 125°C 100 Hz mA	I_{RAC} 40°C 20kHz A	ESR* 20°C 100 Hz Ω	ESR* 20°C 100 kHz Ω	L_{ESL} Approx. nH	Article code 1st block
40 VDC (U_R)								
2200	20 x 37	J	1900	9.6	0.06	0.04	15	PEG 124KJ422AQ
63 VDC (U_R)								
10	10 x 20	A	76	0.9	5.90	1.60	5	PEG 124MA2100Q
15	10 x 20	A	113	1.0	4.30	1.40	5	PEG 124MA2150Q
22	10 x 20	A	134	1.1	3.40	1.20	5	PEG 124MA2220Q
33	10 x 29	B	158	1.4	2.20	0.78	6	PEG 124MB2330Q
47	10 x 29	B	190	1.6	1.60	0.55	6	PEG 124MB2470Q
68	13 x 29	D	274	2.3	1.10	0.40	8	PEG 124MD2680Q
100	13 x 20	C	328	3.1	0.73	0.22	6	PEG 124MC310AQ
100	13 x 29	D	355	3.0	0.74	0.26	8	PEG 124MD3100Q
100	13 x 20	C	328	3.1	0.73	0.22	6	PEG 124MC310AQ
150	16 x 29	F	491	4.0	0.50	0.18	10	PEG 124MF3150Q
150	13 x 29	D	455	3.6	0.46	0.15	8	PEG 124MD315AQ
220	16 x 29	F	647	6.1	0.29	0.08	10	PEG 124MF322AQ
220	16 x 37	G	610	5.0	0.34	0.12	12	PEG 124MG3220Q
330	16 x 29	F	737	6.1	0.24	0.08	10	PEG 124MF333AQ
330	20 x 37	J	845	6.8	0.22	0.08	15	PEG 124MJ3330Q
470	16 x 37	G	927	7.5	0.17	0.06	12	PEG 124MG347AQ
470	20 x 46	L	1018	7.9	0.16	0.06	17	PEG 124ML3470Q
680	16 x 37	G	1090	7.5	0.14	0.06	12	PEG 124MG368AQ
1000	20 x 37	J	1399	9.2	0.09	0.04	15	PEG 124MJ410AQ
1500	20 x 46	L	1715	10.2	0.07	0.04	17	PEG 124ML415AQ
100 VDC (U_R)								
4.7	10 x 20	A	54	0.8	16.00	2.80	5	PEG 124PA1470Q
10	10 x 29	B	79	1.1	7.70	1.40	6	PEG 124PB2100Q
22	13 x 29	D	132	1.4	3.90	1.00	8	PEG 124PD2220Q
33	13 x 29	D	199	1.7	2.10	0.80	8	PEG 124PD2330Q
47	13 x 37	E	222	1.5	1.80	0.92	10	PEG 124PE2470Q
68	16 x 29	F	336	2.7	1.10	0.43	10	PEG 124PF2680Q
100	16 x 37	G	412	3.3	0.74	0.29	12	PEG 124PG3100Q
150	20 x 37	J	573	4.0	0.55	0.26	15	PEG 124PJ3150Q
220	20 x 46	L	710	4.9	0.40	0.19	17	PEG 124PL3220Q

ARTICLE TABLE PEG 124 (105°C)

C_R µF	D x L mm	Case code	I_{RAC} * 105°C 100 Hz mA	I_{RAC} 40°C 20kHz A	ESR* 20°C 100 Hz Ω	ESR* 20°C 100 kHz Ω	L_{ESL} Approx. nH	Article code 1st block
16 VDC (U_R)								
220	10 x 29	B	312	1.40	0.79	0.53	6	PEG 124GB322VQ
470	13 x 29	D	551	2.50	0.36	0.24	8	PEG 124GD347VQ
1000	16 x 29	F	922	4.10	0.18	0.12	10	PEG 124GF410VQ
2200	20 x 29	H	1328	4.90	0.13	0.10	12	PEG 124GH422VQ
4700	20 x 46	L	1991	7.30	0.06	0.05	17	PEG 124GL447VQ
25 VDC (U_R)								
100	10 x 20	A	212	1.10	1.30	0.79	5	PEG 124HA310VQ
220	13 x 20	C	391	2.00	0.61	0.37	6	PEG 124HC322VQ
470	13 x 37	E	587	2.90	0.29	0.18	10	PEG 124HE347VQ
1000	16 x 37	G	968	4.60	0.16	0.10	12	PEG 124HG410VQ
2200	20 x 37	J	1487	6.00	0.10	0.07	15	PEG 124HJ422VQ

ARTICLE TABLE PEG 124 (105°C)

C_R µF	D x L mm	Case code	I_{RAC} * 105°C 100 Hz mA	I_{RAC} 40°C 20kHz A	ESR* 20°C 100 Hz Ω	ESR* 20°C 100 kHz Ω	L_{ESL} Approx. nH	Article code 1st block
40 VDC (U_R)								
100	10 x 29	B	224	1.30	1.10	0.53	6	PEG 124KB310VQ
220	13 x 29	D	405	2.40	0.48	0.24	8	PEG 124KD322VQ
470	16 x 29	F	693	4.00	0.23	0.12	10	PEG 124KF347VQ
1000	20 x 29	H	1035	4.80	0.15	0.10	12	PEG 124KH410VQ
2200	20 x 46	L	1576	7.00	0.07	0.05	17	PEG 124KL422VQ
63 VDC (U_R)								
47	10 x 29	B	179	1.30	1.50	0.55	6	PEG 124MB247VQ
100	13 x 29	D	298	2.30	0.78	0.26	8	PEG 124MD310VQ
220	16 x 29	F	518	3.80	0.36	0.13	10	PEG 124MF322VQ
470	20 x 29	H	804	4.70	0.20	0.10	12	PEG 124MH347VQ
1000	20 x 46	L	1168	6.30	0.11	0.06	17	PEG 124ML410VQ
100 VDC (U_R)								
22	10 x 29	B	120	0.96	3.00	1.10	6	PEG 124PB222VQ
47	13 x 29	D	212	1.60	1.50	0.54	8	PEG 124PD247VQ
100	16 x 29	F	369	2.80	0.69	0.26	10	PEG 124PF310VQ
220	20 x 29	H	590	3.30	0.44	0.24	12	PEG 124PH322VQ
470	20 x 46	L	909	4.90	0.21	0.12	17	PEG 124PL347VQ
200 VDC (U_R)								
10	10 x 29	B	65	0.47	10.00	4.20	6	PEG 124RB2100Q
15	13 x 29	D	96	0.74	6.30	2.40	8	PEG 124RD2150Q
22	13 x 29	D	120	0.86	4.60	1.90	8	PEG 124RD2220Q
33	16 x 29	F	167	1.20	3.10	1.30	10	PEG 124RF2330Q
47	16 x 29	F	210	1.50	2.20	0.92	10	PEG 124RF2470Q
68	20 x 29	H	294	2.00	1.50	0.66	12	PEG 124RH2680Q
100	20 x 37	J	353	2.40	1.00	0.44	15	PEG 124RJ3100Q
150	20 x 46	L	446	3.10	0.69	0.30	17	PEG 124RL3150Q
350 VDC (U_R)								
4.7	10 x 29	B	55	0.37	17.00	7.50	6	PEG 124UB1470Q
6.8	13 x 29	D	92	0.59	9.00	4.20	8	PEG 124UD1680Q
10	13 x 29	D	102	0.65	7.60	3.60	8	PEG 124UD2100Q
22	16 x 29	F	184	1.20	3.30	1.50	10	PEG 124UF2220Q
33	20 x 29	H	248	1.60	2.30	1.10	12	PEG 124UH2330Q
47	20 x 37	J	328	2.10	1.50	0.66	15	PEG 124UJ2470Q
68	20 x 46	L	389	2.50	1.10	0.50	17	PEG 124UL2680Q
400 VDC (U_R)								
2.2	10 x 29	B	42	0.27	25.00	12.00	6	PEG 124VB1220Q
4.7	13 x 29	D	78	0.52	11.00	5.10	8	PEG 124VD1470Q
10	13 x 37	E	116	0.70	5.90	3.00	10	PEG 124VE2100Q
22	16 x 37	G	209	1.40	2.70	1.20	12	PEG 124VG2220Q
33	20 x 37	J	304	1.90	1.60	0.76	15	PEG 124VJ2330Q
47	20 x 46	L	377	2.40	1.20	0.53	17	PEG 124VL2470Q
450 VDC (U_R)								
1.0	10 x 20	A	30	0.21	49.00	20.00	5	PEG 124YA1100Q
2.2	10 x 29	B	43	0.29	24.00	11.00	6	PEG 124YB1220Q
3.3	10 x 29	B	55	0.38	17.00	7.30	6	PEG 124YB1330Q
4.7	13 x 29	D	79	0.54	11.00	4.80	8	PEG 124YD1470Q
6.8	13 x 29	D	97	0.61	8.30	4.00	8	PEG 124YD1680Q
10	16 x 29	F	133	0.82	5.70	2.80	10	PEG 124YF2100Q
15	16 x 37	G	171	1.10	3.60	1.70	12	PEG 124YG2150Q
22	20 x 29	H	240	1.60	2.40	1.10	12	PEG 124YH2220Q
33	20 x 37	J	306	2.00	1.60	0.74	15	PEG 124YJ2330Q
47	20 x 46	L	377	2.40	1.20	0.53	17	PEG 124YL2470Q

OPERATIONAL DATA

Please see operational lifetime section, page 62.

RELIABILITY

The failure rate is derived from our periodic test results. The failure rate (λ_R) is therefore only given at test temperature for life tests. An estimation is also given at 60°C.

The expected failure rate for this capacitor range is based on our periodic test results for capacitors with structural similarity.

For U_R = 10 - 125V

T_a	Failure rate per hour
125°C	5×10^{-7}
105°C	1×10^{-7}
60°C	5×10^{-9}

For U_R > 125V

T_a	Failure rate per hour
105°C	1×10^{-6}
60°C	5×10^{-8}

Failure rate per hour for catastrophic plus parametric failures.

TECHNICAL DATA

Leakage current
Rated leakage current, I_{RL} (µA)
Rated voltage, U_R (V)
Rated capacitance, C_R (µF)

For $U_R \leq 160$ V and $C_R \times U_R \leq 1000$
$I_{RL} = 0.01 \times C_R \times U_R$
For $U_R \leq 160$ V and $C_R \times U_R > 1000$
$I_{RL} = 0.003 \times C_R \times U_R + 4$
For $U_R > 160$ V
$I_{RL} = 0.006 \times C_R \times U_R + 4$

ORDERING INFORMATION

1st block (pos 1–13) | **2nd block** (pos 14–20)

P	**E**	**G**	**1**	**2**	**4**	**K**	**D**	**3**	**1**	**5**	**0**	**Q**	**T**	**1**					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Capacitance tolerances:
Pos. 13: Q: –10 to +30%
M: –20 to 20%

T1: Taped delivery on reels
L1: Packed in boxes

Quantities and weights

CASE CODE	A	B	C	D	E	F	G	H	J	L
Weight approx (g)	3	4	4	6	7	8	11	13	20	24
Standard content per reel	500	500	400	400	400[1]					
Standard box quantity	250[1]	200[1]	200[1]	200[1]	100	100	100	100	100	100

[1] On request.

PEG 125 125°C (150°)

- **125°C (150°C)**
- **Resistance to vibrations**
- **Low ESR**
- **Low ESL**

APPLICATION

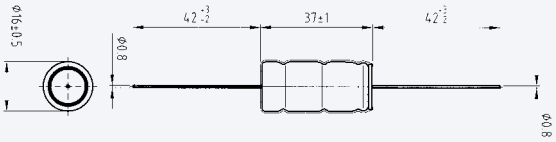
PEG 125 is a high performance axial electrolytic capacitor. It is designed for automotive applications with high demands on resistance to vibrations and high ambient temperatures.

BASIC DESIGN

PEG 125 is an electrolytic capacitor with outstanding electrical performance. Polarized, all-welded design, tinned copper wire leads, negative pole connected to the case, plastic insulation. The PEG 125 winding is housed in a cylindrical aluminium can with a high purity aluminium lid and a high quality silicone gasket. Low ESR is a result of a low resistive electrolyte/ paper system and an all-welded design. Thanks to its mechanical robustness the PEG 125 is suitable for use in mobile and aircraft installations. With reduced voltage up to 150°C.

SPECIFICATION

Standards	IEC 384-4 Long Life Grade 40/125/56
Capacitance range	470-2700µF
Capacitance tolerance	–10 to +30%, -20 to + 20%
Rated voltage	40 VDC
Temperature range	–40 to +125°C (150°C, 15 VDC)
Shelf life	at 0V+105°C 3500h, +40°C 7 years
Diameter range	16 – 20 mm
Resistance to vibrations	10-2000 Hz, 1.5 mm displacement amplitude or max 20 g 3x12 hours. The capacitors shall be clamped by their body.
Life test	1000 h, 150°C,15 VDC



Dimensions table PEG 125 (mm)

D x L	Case code	D ±0.5	d ± 0.03	L ±1	L_1 min	b+3/-2 Box	Weight approx (g)
16 x 29	F	16	0.8	29.0	35.0	42	8
16 x 37	G	16	0.8	37.0	43.0	42	11
20 x 29	H	20	0.8	29.0	35.0	42	13
20 x 37	J	20	0.8	37.0	43.0	42	20
20 x 46	L	20	0.8	46.0	52.0	42	24

ARTICLE TABLE PEG 125 (125°C)

C_R µF	D x L mm	I_{RAC} * 125°C 100 Hz A	ESR* 20°C 100 Hz mΩ	ESR* 100 kHz mΩ	L_{ESL} Approx nH	Article code 1st block
40 VDC (U_R)						
470	16 x 29	0.91	150	44	10	PEG125KF347AQL1
600	16 x 37	1.1	120	34	12	PEG125KG360AQL1
1200	20 x 29	1.6	70	24	12	PEG125KH412AQL1
1600	20 x 37	2.0	55	21	15	PEG125KJ416AQL1
2700	20 x 46	2.6	36	15	17	PEG125KL427BML1

* Maximum specified values.

OPERATIONAL DATA

Please see operational lifetime section, page 62.

RELIABILITY

The failure rate is derived from our periodic test results. The failure rate (λ_R) is therefore only given at test temperature for life tests. An estimation is also given at 60°C.

The expected failure rate for this capacitor range is based on our periodic test results for capacitors with structural similarity.

T_a	Failure rate per hour
125°C	5×10^{-7}
105°C	1×10^{-7}
60°C	5×10^{-9}

TECHNICAL DATA

Leakage current
Rated leakage current, I_{RL} (µA)
Rated voltage, U_R (V)
Rated capacitance, C_R (µF)
$I_{RL} = 0.003 \times C_R \times U_R + 4$

ORDERING INFORMATION

1st block (pos 1–13) | **2nd block** (pos 14–20)

P	**E**	**G**	**1**	**2**	**5**	**K**	**F**	**3**	**4**	**7**	**A**	**Q**	**L**	**1**						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

Capacitance tolerances:
Pos. 13: Q: –10 to +30%

L1: Packed in boxes

Quantities and weights

CASE CODE	F	G	H	J	L
Weight approx (g)	8	11	13	20	24
Standard box quantity	100	100	100	100	100

[1] On request.