

PEH 169 105°C

RoHS
Compliant

- High performance
- Long Life, > 10 years at 50°C
- Low ESR and ESL
- High stability, 10 years shelf life
- Optimized designs available on request

APPLICATION

Smoothing, energy storage, or pulse operation in telecommunication demanding power supplies, process control, AC-motor control, traction, welding and measuring.

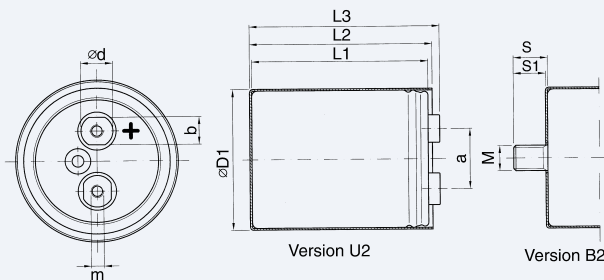
BASIC DESIGN

PEH 169 is a Long Life electrolytic capacitor with outstanding reliability and electrical performance. Polarized, all-welded design, heavy duty screw terminals, extended cathode construction, safety vent and plastic insulation. The PEH 169 winding is housed in a cylindrical aluminium can with a reinforced moulded lid incorporating a safety vent. The sealing system is designed

for electrolyte leakage free operation and a very low gas-diffusion rate of electrolyte. Mechanical contact between the winding and the case allows excellent heat transfer from the winding to the ambient, which means cooler operation. Low ESR is a result of a low resistive paper/electrolyte system, at least two tabs per foil and all-welded design.

SPECIFICATION

| | |
|------------------------------|---|
| Standards | Standards IEC 60384-4 Long Life Grade 40/105/56, DIN 41240, type 1A CECC 30300 DIN 40040 GPF, DIN 41248 |
| CECC | CECC 30301-030, Corresponding to CECC 30301-803 |
| Capacitance range | 100–330000 µF |
| Capacitance tolerance | –10 to +30% |
| Rated voltage | 10–350 VDC |
| Temperature range | –40 to +105°C |
| Operational life time | 25000 h at 105°C Case Ø = 90 mm |
| Shelf life | 5000h at 0V +105°C, or 10 years at 0V +40°C |
| Diameter range | 35–90 mm |



Dimensions table PEH 169 (mm)

| D x L | Case code | D1 ±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 | 36.6 | 51.5 | 54.5 | 58.9 | 12 | 11.0 | M8 | 13.0 | — | 8 | M5 | 70 |
| 35 x 60 | B | 36.6 | 59.5 | 62.5 | 66.9 | 12 | 11.0 | M8 | 13.0 | — | 8 | M5 | 85 |
| 35 x 75 | C | 36.6 | 73.5 | 76.5 | 80.9 | 12 | 11.0 | M8 | 13.0 | — | 8 | M5 | 105 |
| 35 x 95 | D | 36.6 | 94.5 | 97.5 | 101.9 | 12 | 11.0 | M8 | 13.0 | — | 8 | M5 | 130 |
| 50 x 75 | H | 51.6 | 74.5 | 77.5 | 82.4 | 16 | 15.0 | M12 | 22.0 | 13 | 15 | M5 | 180 |
| 50 x 95 | J | 51.6 | 95.5 | 98.5 | 103.4 | 16 | 15.0 | M12 | 22.0 | 13 | 15 | M5 | 240 |
| 50 x 105 | K | 51.6 | 103.5 | 106.5 | 111.4 | 16 | 15.0 | M12 | 22.0 | 13 | 15 | M5 | 265 |
| 50 x 115 | I** | 51.6 | 115.5 | 118.5 | 123.4 | 16 | 15.0 | M12 | 22.0 | 13 | 15 | M5 | 300 |
| 65 x 105 | O | 66.6 | 106.0 | 109.2 | 113.0 | 16 | 14.8 | M12 | 28.5 | 13 | 15 | M5 | 415 |
| 65 x 115 | Q** | 66.6 | 118.0 | 121.2 | 125.0 | 16 | 14.8 | M12 | 28.5 | 13 | 15 | M5 | 460 |
| 65 x 130 | S** | 66.6 | 129.0 | 132.2 | 136.0 | 16 | 14.8 | M12 | 28.5 | 13 | 15 | M5 | 520 |
| 75 x 78 | L | 76.6 | 77.0 | 80.2 | 84.0 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 430 |
| 75 x 98 | P** | 76.6 | 98.0 | 101.2 | 105.0 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 530 |
| 75 x 105 | T | 76.6 | 106.0 | 109.2 | 113.0 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 585 |
| 75 x 115 | U | 76.6 | 118.0 | 121.2 | 125.0 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 640 |
| 75 x 145 | V | 76.6 | 146.0 | 149.2 | 153.0 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 800 |
| 75 x 220 | X | 76.6 | 221.0 | 224.2 | 228.0 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 1400 |
| 90 x 78 | M | 91.6 | 76.5 | 79.7 | 83.4 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 750 |
| 90 x 98 | N | 91.6 | 97.5 | 100.7 | 104.4 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 950 |
| 90 x 145 | Y | 91.6 | 145.5 | 148.7 | 152.4 | 16 | 14.8 | M12 | 32.0 | 13 | 15 | M5 | 1400 |

* M6 and other threads on request. **on request

ARTICLE TABLE PEH 169 (105°C)

| C_R | D x L | Case code | I_{RAC}^* 105°C | I_{RAC}^* 50°C ** | I_{RAC}^* 40°C | ESR* 20°C | ESR* 20°C | L_{ESL} Approx. | Article code |
|----------------------------------|----------|-----------|----------------------|---------------------------|---------------------|----------------------|-----------------------|----------------------|---------------------------------|
| μF | mm | | 100 Hz A | 10 kHz A | 10 kHz A | 100 Hz m Ω | 100 kHz m Ω | nH | U2 = Plain can B2 = Stud can |
| 10 VDC (U_R) | | | | | | | | | |
| 6800 | 35 x 51 | A | 5.2 | 21.8 | 15.4 | 46 | 37 | 12 | PEH169EA4680Q-- |
| 10000 | 35 x 51 | A | 6.2 | 26.3 | 17.5 | 33 | 27 | 12 | PEH169EA5100Q-- |
| 15000 | 35 x 60 | B | 7.4 | 28.9 | 20.5 | 23 | 19 | 12 | PEH169EB5150Q-- |
| 22000 | 35 x 75 | C | 8.8 | 34.8 | 24.3 | 17 | 14 | 12 | PEH169EC5220Q-- |
| 33000 | 35 x 95 | D | 10.4 | 38.3 | 28.0 | 12 | 10 | 12 | PEH169ED5330Q-- |
| 47000 | 50 x 75 | H | 11.0 | 42.9 | 30.0 | 12 | 10 | 16 | PEH169EH5470Q-- |
| 68000 | 50 x 95 | J | 13.5 | 51.8 | 34.1 | 9 | 8 | 16 | PEH169EJ5680Q-- |
| 100000 | 50 x 105 | K | 14.0 | 48.5 | 35.0 | 8 | 7 | 16 | PEH169EK6100Q-- |
| 150000 | 65 x 105 | O | 14.7 | 47.6 | 35.5 | 9 | 8 | 16 | PEH169EO6150Q-- |
| 220000 | 75 x 105 | T | 19.4 | 62.8 | 46.7 | 6 | 5 | 17 | PEH169ET6220Q-- |
| 330000 | 75 x 145 | V | 22.5 | 70.7 | 54.6 | 4 | 4 | 17 | PEH169EV6330Q-- |
| 16 VDC (U_R) | | | | | | | | | |
| 6800 | 35 x 51 | A | 5.5 | 25.5 | 16.7 | 36 | 28 | 12 | PEH169GA4680Q-- |
| 10000 | 35 x 51 | A | 6.4 | 28.0 | 18.9 | 27 | 21 | 12 | PEH169GA5100Q-- |
| 15000 | 35 x 75 | C | 8.3 | 34.3 | 24.6 | 18 | 14 | 12 | PEH169GC5150Q-- |
| 22000 | 35 x 95 | D | 9.7 | 38.6 | 28.5 | 13 | 10 | 12 | PEH169GD5220Q-- |
| 33000 | 50 x 75 | H | 11.7 | 43.0 | 31.0 | 12 | 10 | 16 | PEH169GH5330Q-- |
| 47000 | 50 x 95 | J | 13.2 | 46.2 | 34.5 | 9 | 8 | 16 | PEH169GJ5470Q-- |
| 68000 | 65 x 105 | O | 14.4 | 47.7 | 36.2 | 9 | 8 | 16 | PEH169GO5680Q-- |
| 100000 | 75 x 105 | T | 21.6 | 70.9 | 54.7 | 6 | 5 | 17 | PEH169GT6100Q-- |
| 150000 | 75 x 115 | U | 19.8 | 67.3 | 50.0 | 5 | 5 | 17 | PEH169GU6150Q-- |
| 220000 | 75 x 145 | V | 23.6 | 74.7 | 58.0 | 4 | 4 | 17 | PEH169GV6220Q-- |
| 25 VDC (U_R) | | | | | | | | | |
| 4700 | 35 x 51 | A | 4.9 | 24.1 | 16.5 | 41 | 29 | 12 | PEH169HA4470Q-- |
| 6800 | 35 x 51 | A | 5.8 | 27.7 | 18.5 | 30 | 22 | 12 | PEH169HA4680Q-- |
| 10000 | 35 x 75 | C | 7.1 | 31.2 | 22.8 | 20 | 15 | 12 | PEH169HC5100Q-- |
| 15000 | 35 x 95 | D | 8.7 | 36.8 | 27.2 | 15 | 11 | 12 | PEH169HD5150Q-- |
| 22000 | 50 x 75 | H | 11.0 | 42.9 | 30.9 | 13 | 10 | 16 | PEH169HH5220Q-- |
| 33000 | 50 x 95 | J | 12.6 | 46.5 | 34.6 | 10 | 8 | 16 | PEH169HJ5330Q-- |
| 47000 | 65 x 105 | O | 15.8 | 53.7 | 42.1 | 8 | 7 | 16 | PEH169HO5470Q-- |
| 68000 | 75 x 105 | T | 20.2 | 68.1 | 51.9 | 6 | 6 | 17 | PEH169HT5680Q-- |
| 100000 | 75 x 115 | U | 21.9 | 70.3 | 55.4 | 5 | 5 | 17 | PEH169HU6100Q-- |
| 150000 | 75 x 145 | V | 22.1 | 71.4 | 55.3 | 4 | 4 | 17 | PEH169HV6150Q-- |
| 40 VDC (U_R) | | | | | | | | | |
| 3300 | 35 x 51 | A | 4.6 | 26.3 | 17.6 | 41 | 25 | 12 | PEH169KA4330Q-- |
| 4700 | 35 x 60 | B | 5.6 | 29.6 | 20.5 | 30 | 19 | 12 | PEH169KB4470Q-- |
| 6800 | 35 x 75 | C | 6.7 | 32.6 | 23.6 | 22 | 14 | 12 | PEH169KC4680Q-- |
| 10000 | 35 x 95 | D | 7.8 | 34.8 | 26.8 | 16 | 11 | 12 | PEH169KD5100Q-- |
| 15000 | 50 x 75 | H | 10.2 | 42.9 | 30.5 | 14 | 10 | 16 | PEH169KH5150Q-- |
| 22000 | 50 x 95 | J | 11.9 | 46.5 | 34.8 | 10 | 8 | 16 | PEH169KJ5220Q-- |
| 33000 | 65 x 105 | O | 15.0 | 53.8 | 41.4 | 8 | 7 | 16 | PEH169KO5330Q-- |
| 47000 | 75 x 105 | T | 19.9 | 69.5 | 55.0 | 6 | 5 | 17 | PEH169KT5470Q-- |
| 68000 | 75 x 115 | U | 20.6 | 70.7 | 53.9 | 6 | 5 | 17 | PEH169KU5680Q-- |
| 100000 | 75 x 145 | V | 23.0 | 71.0 | 59.0 | 4 | 4 | 17 | PEH169KV6100Q-- |
| 63 VDC (U_R) | | | | | | | | | |
| 1500 | 35 x 51 | A | 3.5 | 23.1 | 15.9 | 63 | 31 | 12 | PEH169MA4150Q-- |
| 2200 | 35 x 51 | A | 4.1 | 27.0 | 18.1 | 46 | 23 | 12 | PEH169MA4220Q-- |
| 3300 | 35 x 75 | C | 5.3 | 31.6 | 22.9 | 30 | 15 | 12 | PEH169MC4330Q-- |
| 4700 | 35 x 95 | D | 6.2 | 34.2 | 25.9 | 22 | 11 | 12 | PEH169MD4470Q-- |
| 6800 | 50 x 75 | H | 8.5 | 42.6 | 30.8 | 18 | 10 | 16 | PEH169MH4680Q-- |
| 10000 | 50 x 95 | J | 9.9 | 45.3 | 34.2 | 13 | 8 | 16 | PEH169MJ5100Q-- |

* Maximum values

** 2 m/s forced air, studmounted on 3°C/W aluminium chassis.

ARTICLE TABLE PEH 169 (105°C)

| C_R | D x L | Case code | I_{RAC}^* 105°C | I_{RAC}^* 50°C ** | I_{RAC}^* 40°C | ESR* 20°C | ESR* 20°C | L_{ESL} Approx. | Article code |
|-----------------------------------|----------|-----------|----------------------|---------------------------|---------------------|----------------------|-----------------------|----------------------|---------------------------------|
| μF | mm | | 100 Hz A | 10 kHz A | 10 kHz A | 100 Hz m Ω | 100 kHz m Ω | nH | U2 = Plain can B2 = Stud can |
| 63 VDC (U_R) | | | | | | | | | |
| 15000 | 65 x 105 | O | 13.1 | 53.0 | 41.1 | 10 | 6 | 16 | PEH169MO5150Q-- |
| 22000 | 75 x 105 | T | 17.7 | 73.0 | 55.8 | 6 | 4 | 17 | PEH169MT5220Q-- |
| 33000 | 75 x 115 | U | 18.9 | 71.0 | 54.3 | 6 | 5 | 17 | PEH169MU5330Q-- |
| 47000 | 75 x 145 | V | 20.9 | 73.0 | 58.0 | 5 | 4 | 17 | PEH169MV5470Q-- |
| 100 VDC (U_R) | | | | | | | | | |
| 680 | 35 x 51 | A | 2.4 | 14.4 | 9.9 | 160 | 95 | 12 | PEH169PA3680Q-- |
| 1000 | 35 x 51 | A | 2.9 | 17.4 | 11.7 | 110 | 67 | 12 | PEH169PA4100Q-- |
| 1500 | 35 x 75 | C | 3.6 | 20.5 | 14.9 | 73 | 44 | 12 | PEH169PC4150Q-- |
| 2200 | 35 x 95 | D | 4.3 | 23.2 | 17.6 | 50 | 31 | 12 | PEH169PD4220Q-- |
| 3300 | 50 x 75 | H | 6.4 | 33.8 | 23.8 | 30 | 23 | 16 | PEH169PH4330Q-- |
| 4700 | 50 x 95 | J | 7.7 | 37.1 | 27.6 | 26 | 17 | 16 | PEH169PJ4470Q-- |
| 6800 | 65 x 105 | O | 10.4 | 46.4 | 35.5 | 18 | 12 | 16 | PEH169PO4680Q-- |
| 10000 | 65 x 105 | O | 11.7 | 49.1 | 36.6 | 14 | 10 | 16 | PEH169PO5100Q-- |
| 15000 | 75 x 115 | U | 16.0 | 67.5 | 51.1 | 9 | 6 | 17 | PEH169PU5150Q-- |
| 22000 | 75 x 145 | V | 18.2 | 70.6 | 55.3 | 7 | 5 | 17 | PEH169PV5220Q-- |
| 160 VDC (U_R) | | | | | | | | | |
| 330 | 35 x 51 | A | 1.4 | 9.6 | 6.6 | 400 | 210 | 12 | PEH169QA3330Q-- |
| 470 | 35 x 51 | A | 1.7 | 11.2 | 7.6 | 290 | 160 | 12 | PEH169QA3470Q-- |
| 680 | 35 x 75 | C | 2.1 | 13.8 | 10.3 | 190 | 100 | 12 | PEH169QC3680Q-- |
| 1000 | 35 x 95 | D | 2.6 | 15.7 | 12.3 | 130 | 70 | 12 | PEH169QD4100Q-- |
| 1500 | 50 x 75 | H | 3.8 | 22.1 | 16.2 | 93 | 51 | 16 | PEH169QH4150Q-- |
| 2200 | 50 x 95 | J | 4.7 | 25.4 | 19.6 | 64 | 36 | 16 | PEH169QJ4220Q-- |
| 3300 | 65 x 105 | O | 6.5 | 32.0 | 25.0 | 45 | 26 | 16 | PEH169QO4330Q-- |
| 4700 | 75 x 105 | T | 8.7 | 48.1 | 36.9 | 26 | 13 | 17 | PEH169QT4470Q-- |
| 6800 | 75 x 115 | U | 10.2 | 50.9 | 39.6 | 19 | 10 | 17 | PEH169QU4680Q-- |
| 10000 | 75 x 145 | V | 11.9 | 55.7 | 43.2 | 14 | 8 | 17 | PEH169QV5100Q-- |
| 200 VDC (U_R) | | | | | | | | | |
| 330 | 35 x 51 | A | 1.5 | 8.1 | 5.6 | 480 | 300 | 12 | PEH169RA3330Q-- |
| 470 | 35 x 60 | B | 1.8 | 9.7 | 6.9 | 340 | 210 | 12 | PEH169RB3470Q-- |
| 680 | 35 x 95 | D | 2.2 | 10.0 | 7.9 | 250 | 160 | 12 | PEH169RD3680Q-- |
| 1000 | 50 x 75 | H | 3.3 | 15.5 | 11.4 | 170 | 110 | 16 | PEH169RH4100Q-- |
| 1500 | 50 x 95 | J | 4.0 | 18.0 | 14.0 | 120 | 76 | 16 | PEH169RJ4150Q-- |
| 2200 | 50 x 105 | K | 4.9 | 23.1 | 17.2 | 76 | 49 | 16 | PEH169RK4220Q-- |
| 3300 | 65 x 105 | O | 6.7 | 28.8 | 22.0 | 55 | 37 | 16 | PEH169RO4330Q-- |
| 4700 | 75 x 105 | T | 8.6 | 41.6 | 31.1 | 33 | 20 | 17 | PEH169RT4470Q-- |
| 6800 | 75 x 145 | V | 10.1 | 45.2 | 35.2 | 24 | 16 | 17 | PEH169RV4680Q-- |
| 250 VDC (U_R) | | | | | | | | | |
| 150 | 35 x 51 | A | 1.0 | 7.0 | 4.9 | 730 | 370 | 12 | PEH169SA3150Q-- |
| 220 | 35 x 51 | A | 1.3 | 8.9 | 6.0 | 500 | 250 | 12 | PEH169SA3220Q-- |
| 330 | 35 x 60 | B | 1.6 | 11.0 | 7.7 | 320 | 160 | 12 | PEH169SB3330Q-- |
| 470 | 35 x 75 | C | 2.0 | 11.7 | 8.9 | 240 | 130 | 12 | PEH169SC3470Q-- |
| 680 | 50 x 75 | H | 2.9 | 17.2 | 12.6 | 170 | 90 | 16 | PEH169SH3680Q-- |
| 1000 | 50 x 75 | H | 3.5 | 21.0 | 15.5 | 110 | 58 | 16 | PEH169SH4100Q-- |
| 1500 | 50 x 105 | K | 4.2 | 24.1 | 17.9 | 79 | 43 | 16 | PEH169SK4150Q-- |
| 2200 | 65 x 105 | O | 5.8 | 25.8 | 23.6 | 56 | 32 | 16 | PEH169SO4220Q-- |
| 3300 | 75 x 105 | T | 7.9 | 41.5 | 31.5 | 36 | 20 | 17 | PEH169ST4330Q-- |
| 4700 | 75 x 145 | V | 9.2 | 46.6 | 37.8 | 26 | 14 | 17 | PEH169SV4470Q-- |
| 6800 | 75 x 220 | X | 9.4 | 42.6 | 36.8 | 19 | 12 | 17 | PEH169SX4680Q-- |
| 6800 | 90 x 145 | Y | 11.9 | 53.5 | 43.5 | 20 | 12 | 16 | PEH169SY4680Q-- |

* Maximum values.

** 2 m/s forced air, studmounted on 3°C/W aluminium chassis.

ARTICLE TABLE PEH 169 (105°C)

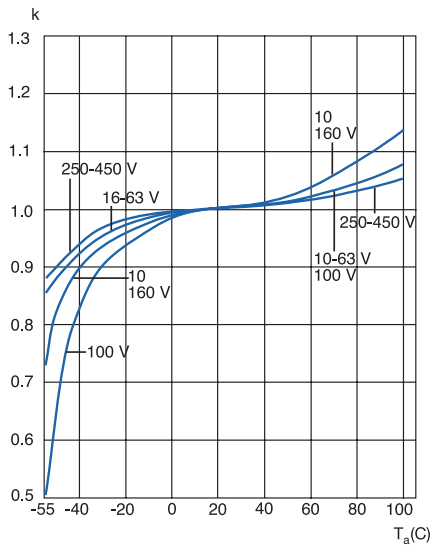
| C_R | D x L | Case code | I_{RAC}^* 105°C | I_{RAC}^* 50°C ** | I_{RAC}^* 40°C | ESR* 20°C | ESR* 20°C | L_{ESL} Approx. | Article code |
|-----------------------------------|----------|-----------|----------------------|---------------------------|---------------------|---------------------|----------------------|----------------------|---------------------------------|
| μF | mm | | 100 Hz A | 10 kHz A | 10 kHz A | 100 Hz $m\Omega$ | 100 kHz $m\Omega$ | nH | U2 = Plain can B2 = Stud can |
| 350 VDC (U_R) | | | | | | | | | |
| 100 | 35 x 51 | A | 1.0 | 6.7 | 4.6 | 810 | 410 | 12 | PEH169UA3100Q-- |
| 150 | 35 x 51 | A | 1.3 | 8.8 | 6.1 | 520 | 250 | 12 | PEH169UA3150Q-- |
| 220 | 35 x 75 | C | 1.5 | 10.1 | 7.3 | 360 | 180 | 12 | PEH169UC3220Q-- |
| 330 | 35 x 95 | D | 1.9 | 11.8 | 9.1 | 250 | 120 | 12 | PEH169UD3330Q-- |
| 470 | 50 x 75 | H | 2.7 | 17.1 | 12.3 | 180 | 91 | 16 | PEH169UH3470Q-- |
| 680 | 50 x 95 | J | 3.3 | 19.9 | 14.8 | 120 | 64 | 16 | PEH169UJ3680Q-- |
| 1000 | 50 x 105 | K | 4.1 | 24.3 | 18.0 | 82 | 42 | 16 | PEH169UK4100Q-- |
| 1500 | 65 x 105 | O | 5.5 | 30.6 | 23.5 | 60 | 33 | 16 | PEH169UO4150Q-- |
| 2200 | 75 x 105 | T | 7.5 | 42.6 | 32.6 | 39 | 20 | 17 | PEH169UT4220Q-- |
| 3300 | 75 x 145 | V | 9.0 | 44.1 | 38.0 | 26 | 14 | 17 | PEH169UV4330Q-- |
| 4700 | 75 x 220 | X | 9.4 | 41.4 | 35.9 | 22 | 13 | 17 | PEH169UX4470Q-- |
| 4700 | 90 x 145 | Y | 11.6 | 50.8 | 41.7 | 23 | 14 | 16 | PEH169UY4470Q-- |

* Maximum values

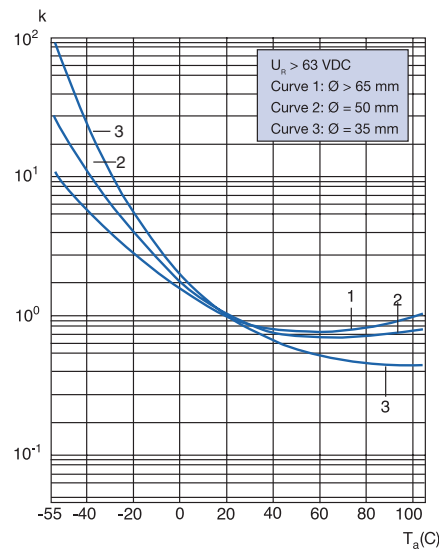
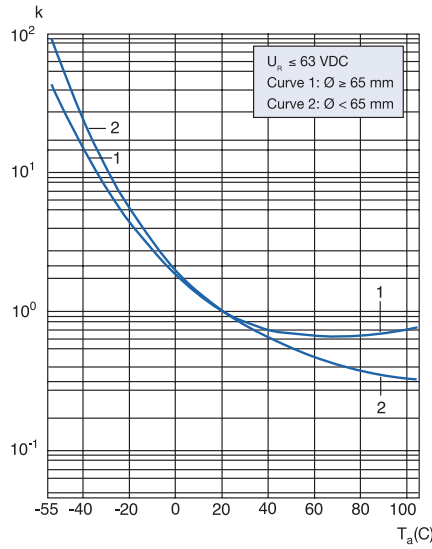
** 2 m/s forced air, studmounted on 3°C/W aluminium chassis.

TECHNICAL DATA PEH 169 (85°C AND 105°C)

The capacitance vs ambient temperature (T_a) at $f = 100$ Hz



ESR as a function of ambient temperature (T_a) at $f = 100$ kHz. $k = R_{ESR}(T_a)/R_{ESR}(20^\circ C)$



LEAKAGE CURRENT

Rated leakage current, I_{RL} (μA).

Rated voltage, U_R (V).

Rated capacitance, C_R (μF). $I_{RL} = 0.003 \times C_R \times U_R + 4$

R_{th} – short form table versus chassis area and air speed

| D x L | Case code | STUD MOUNTED | | | | CLIP MOUNTED | |
|----------|-----------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--------------|-----------|
| | | $R_{thhs} = 3^\circ C/W$ (0.5 m/s) | $R_{thhs} = 2^\circ C/W$ (0.5 m/s) | $R_{thhs} = 3^\circ C/W$ (2.0 m/s) | $R_{thhs} = 2^\circ C/W$ (2.0 m/s) | (0.5 m/s) | (2.0 m/s) |
| 35 x 51 | A | 5.6 | 5.3 | 4.5 | 4.4 | 10.6 | 7.4 |
| 35 x 60 | B | 5.4 | 5.1 | 4.4 | 4.3 | 9.8 | 7.0 |
| 35 x 75 | C | 5.3 | 5.1 | 4.4 | 4.3 | 9.2 | 6.7 |
| 35 x 95 | D | 5.3 | 5.1 | 4.4 | 4.3 | 8.9 | 6.7 |
| 50 x 75 | H | 3.6 | 3.3 | 2.8 | 2.7 | 6.3 | 4.4 |
| 50 x 95 | J | 3.4 | 3.2 | 2.7 | 2.6 | 5.8 | 4.2 |
| 50 x 105 | K | 3.4 | 3.2 | 2.7 | 2.6 | 5.8 | 4.2 |
| 50 x 115 | I | 3.4 | 3.2 | 2.7 | 2.6 | 5.8 | 4.2 |
| 65 x 105 | O | 2.6 | 2.4 | 2.1 | 2.0 | 4.2 | 3.1 |
| 65 x 115 | Q | 2.6 | 2.4 | 2.1 | 2.0 | 4.2 | 3.1 |
| 65 x 130 | S | 2.6 | 2.4 | 2.1 | 2.0 | 4.2 | 3.1 |
| 75 x 78 | L | 2.3 | 2.0 | 1.8 | 1.7 | 4.1 | 2.7 |
| 75 x 98 | P | 2.3 | 2.0 | 1.8 | 1.7 | 4.0 | 2.7 |
| 75 x 105 | T | 2.3 | 2.1 | 1.7 | 1.6 | 3.7 | 2.6 |
| 75 x 115 | U | 2.2 | 2.0 | 1.6 | 1.5 | 3.5 | 2.5 |
| 75 x 145 | V | 2.2 | 2.0 | 1.6 | 1.5 | 3.4 | 2.5 |
| 75 x 220 | X | 2.3 | 2.1 | 2.0 | 1.9 | 3.4 | 2.6 |
| 90 x 78 | M | 1.9 | 1.7 | 1.6 | 1.4 | 3.4 | 2.2 |
| 90 x 98 | N | 1.9 | 1.7 | 1.5 | 1.4 | 3.1 | 2.1 |
| 90 x 145 | Y | 1.8 | 1.6 | 1.5 | 1.4 | 2.7 | 1.9 |

OPERATIONAL DATA

Please see operational lifetime section.

RELIABILITY

The failure rate is derived from our periodic test results. The failure rate (I_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 |
|-------|-----------------------|
| 85°C | 1×10^{-6} |
| 60°C | 1×10^{-7} |

Failure rate per hour for catastrophic plus parametric failures.

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.

Insulation can

PEH169 is supplied with a polypropylene insulation can, thickness 0.8 mm. Voltage proof of the insulation sleeve: ≥ 4000 VDC.

PVC shrink sleeve only on request.

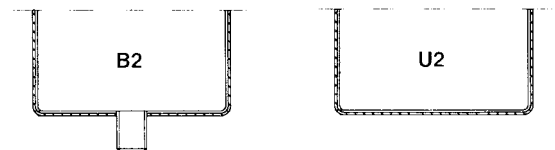
ORDERING INFORMATION

Pos 1-20

| P | E | H | 1 | 6 | 9 | K | U | 5 | 6 | 8 | 0 | Q | B | 2 | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|--|
| 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%

Pos. 14-15: B2 = with bottom stud
U2 = without bottom stud



Quantities and weights

| CASE CODE | A | B | C | D | H | I | J | K | L | M | N | O | P | Q | S | T | U | V | X | Y |
|-----------------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Weight approx (g) | 70 | 85 | 105 | 130 | 180 | 300 | 240 | 265 | 430 | 750 | 950 | 415 | 530 | 460 | 520 | 585 | 640 | 800 | 1400 | 1400 |
| Standard box quantity | 42 | 42 | 42 | 42 | 20 | 20 | 20 | 20 | 9 | 6 | 6 | 12 | 9 | 12 | 12 | 9 | 9 | 9 | 9 | 6 |