

# PEG 226 150°C

RoHS  
Compliant

- Up to 150°C
- Extremely high ripple current  
Up to 28A ripple, RMS, Continuous load
- High vibration resistance

## APPLICATION

PEG 226 is a new generation of high performance axial electrolytic capacitors, designed for automotive applications with extremely high demands.

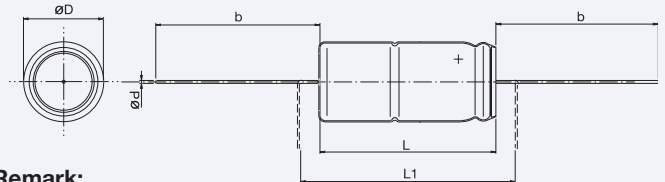
## BASIC DESIGN

PEG 226 is an electrolytic capacitor with outstanding electrical performance. Polarized, all-welded design, tinned copper wire leads, negative pole connected to the case. The PEG 226 winding is housed in a cylindrical aluminium can with a high purity aluminium lid and a high quality rubber

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 226 is suitable for use in mobile and in aircraft installations, operation up to 150°C.

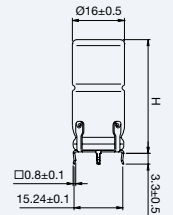
## SPECIFICATION

<b>Standards</b>	IEC 60384-4 Long Life Grade 40/125/56
<b>Capacitance range</b>	250 - 4700 $\mu$ F
<b>Capacitance tolerance</b>	-10 to +30%, -20 to +20%
<b>Rated voltage</b>	25 - 63 VDC
<b>Temperature range</b>	-40 to +150°C
<b>Shelf life at</b>	0V +105°C 5000 h, +40°C 10 years
<b>Diameter range</b>	16 - 20 mm
<b>Resistance to vibrations</b>	10 - 2000 Hz, 1.5 mm displacement amplitude or max 20 g 3x22 hours
<b>Life test</b>	The capacitors must be clamped by the body. 2000 h, 150°C ( $\varnothing$ 20 case) 1500 h, 150°C ( $\varnothing$ 16 case)



**Remark:**  
Capacitor in standard version is without insulation. Polyester insulation on request

**Radial version**  
See page 39



Dimensions table PEG 226 (mm)

D x L	Case code	D ±0.5	d ± 0.03	L ±1	L <sub>1</sub> min	b±2 Box	Weight approx (g)
16 x 27	F	16	1.0	26.5	33	40	8
16 x 35	G	16	1.0	34.5	41	40	11
20 x 27	H	20	1.0	26.5	33	40	13
20 x 35	J	20	1.0	34.5	41	40	20
20 x 43	L	20	1.0	42.5	49	40	24

## ARTICLE TABLE PEG 226 (150°C)

C <sub>R</sub>	D x L	I <sub>RAC</sub> * T <sub>c</sub> =125°C ≥ 5 kHz	I <sub>RAC</sub> * T <sub>c</sub> =140°C ≥ 5 kHz	I <sub>RAC</sub> * T <sub>c</sub> =150°C ≥ 5 kHz	I <sub>RAC</sub> ** T <sub>a</sub> =125°C ≥ 5 kHz	I <sub>AC</sub> (max)*** T <sub>a</sub> =125°C ≥ 5 kHz	ESR (max) 20°C 100 Hz	ESR (max) 20°C 100 kHz	ESR (max) 125-150°C 5-100 kHz	Article code
$\mu$ F	mm	A	A	A	A	A	m $\Omega$	m $\Omega$	m $\Omega$	
<b>25 VDC (U<sub>R</sub>)</b>										
1500	16x27	16.8	10.6	4.7	5.9	7.4	72	36	12.7	PEG226HF4150M
2200	16x35	19.2	12.1	5.4	7.2	9.1	51	26	9.7	PEG226HG4220M
2200	20x27	22.2	14.0	6.3	7.1	9.1	50	25	10.6	PEG226HH4220Q
3300	20x35	25.8	16.3	7.3	8.9	11.3	34	17	7.8	PEG226HJ4330Q
4700	20x43	28.5	18.0	8.1	10.3	13.1	25	13	6.4	PEG226HL4470Q

- \* Capacitor mounted with low thermal resistance path (heat-sink). Maximum ripple current continuous operation.  
 \*\* Rated ripple current, continuous operation at natural convection ( $\varnothing$ 20 case 4000 h,  $\varnothing$ 16 case 3000 h).  
 \*\*\* Max ripple current, at natural convection ( $\varnothing$ 20 case 2000 h,  $\varnothing$ 16 case 1500 h)

ARTICLE TABLE PEG 226 (150°C)

C <sub>R</sub>	D × L	I <sub>RAC</sub> *	I <sub>RAC</sub> *	I <sub>RAC</sub> *	I <sub>RAC</sub> **	I <sub>AC</sub> (max)***	ESR (max)	ESR (max)	ESR (max)	Article code
		T <sub>c</sub> =125°C ≥ 5 kHz	T <sub>c</sub> =140°C ≥ 5 kHz	T <sub>c</sub> =150°C ≥ 5 kHz	T <sub>a</sub> =125°C ≥ 5 kHz	T <sub>a</sub> =125°C ≥ 5 kHz	20°C	20°C	125-150°C	
μF	mm	A	A	A	A	A	mΩ	mΩ	mΩ	
<b>40 VDC (U<sub>R</sub>)</b>										
800	16x27	16.2	10.2	4.6	5.6	7.2	100	36	13.6	PEG226KF3800Q
1200	16x35	18.6	11.8	5.3	7.0	8.8	69	26	10.3	PEG226KG4120Q
1500	20x27	22.8	14.4	6.5	7.3	9.3	57	22	10.0	PEG226KH4150Q
2200	20x35	25.7	16.2	7.3	8.9	11.2	41	17	7.9	PEG226KJ4220Q
2700	20x43	27.9	17.6	7.9	10.1	12.8	32	13	6.7	PEG226KL4270Q

63 VDC (U<sub>R</sub>)

250	16x27	11.5	7.3	3.3	4.0	5.1	227	53	26.9	PEG226MF3250Q
370	16x35	13.6	8.6	3.9	5.1	6.4	155	37	19.2	PEG226MG3370Q
470	20x27	17.3	10.9	4.9	5.5	7.0	125	32	17.5	PEG226MH3470Q
680	20x35	20.0	12.7	5.7	6.9	8.7	87	23	13.0	PEG226MJ3680Q
900	20x43	22.2	14.0	6.3	8.1	10.2	67	18	10.6	PEG226ML3900Q

- \* Capacitor mounted with low thermal resistance path (heat-sink). Maximum ripple current continuous operation (see below).
- \*\* Rated ripple current, continuous operation at natural convection (∅20 case 4000 h, ∅16 case 3000 h).
- \*\*\* Max ripple current, at natural convection (∅20 case 2000 h, ∅16 case 1500 h)

RIPPLE CURRENT SPECIFICATION AND OPERATIONAL LIFE

The ripple current specification (see table above) is given at case temperature (T<sub>c</sub>) and at ambient temperature (T<sub>a</sub>). To be able to operate at specified ripple current at temperature T<sub>c</sub>, the capacitor needs to be mounted with low thermal resistance path to application chassis.  
Frequency correction factor, for ripple current (Corr), see table to the right:  
For operational life time calculation, please see pages 148 to 149.

	FREQUENCY				
	100 Hz	300 Hz	1 kHz	5 kHz	100 kHz
<b>Correction factor (Corr)</b> (Typical value)	0.35	0.57	0.80	1.00	1.04

RELIABILITY

Estimated field failure rate: < 2 ppm/year.  
The expected failure rate, for this capacitor range, is based on field experience for capacitors with structural similarity. This failure rate is valued during first year of operation.  
Expected failure rate thereafter: < 1 ppm/y.  
(Until end of specified operational life)

LEAKAGE CURRENT

Rated leakage current, I<sub>RL</sub> (μA)  
Rated voltage, U<sub>R</sub> (V)  
Rated capacitance, C<sub>R</sub> (μF)  
I<sub>RL</sub> = 0.003 × C<sub>R</sub> × U<sub>R</sub> + 4

ORDERING INFORMATION

For further ordering information please see page 8.

<b>P</b>	<b>E</b>	<b>G</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>K</b>	<b>F</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>Q</b>	<b>E</b>	<b>1</b>
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

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

**E1: Packed in boxes**

Quantities and weights

CASE CODE	F	G	H	J	L
Weight approx (g)	8	11	13	20	24
Standard box quantity	125	100	150	125	100

Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute – and we specifically disclaim – any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.