

KEMET Axial Electrolytic Capacitors, 150°C

KEMET Aluminum Caps, Leaded

Dimensions: mm

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 aluminum can with a high purity aluminum 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.

Features:

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

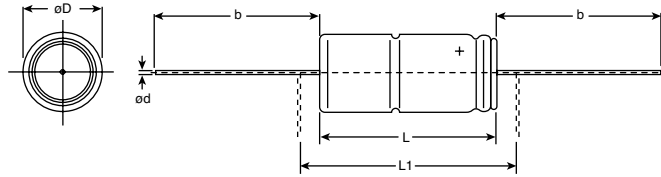
Application:

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

Specification:

- Standards: IEC 60384-4 long life Grade 40/125/56
- Capacitance range: 250-4700µF
- Capacitance tolerance: -10 to +30%, -20 to +20%
- Rated voltage: 25 - 63VDC
- Temperature range: -40 to +150°C
- Shelf life at: 0V +105°C 5000 h, +40°C 10 years

- Diameter range: 16 - 20mm
- Resistance to vibrations: 10 - 2000Hz, 1.5mm displacement amplitude or max 20g 3x22 hours
- The capacitors must be clamped by the body
- Life test: 2000h, 150°C (ø20 case) 1500h, 150°C (ø16 case)



D x L	Case Code	D ±0.5	d ±0.03	L ±1	L1 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

Life Calculation Example

Article No:	PEG 226KL4270Q
Input data:	Capacitor case temperature Tc = 125°C Ripple current = 27.9 A (≥ 5 kHz) ESR (125°C, 5 kHz) = 6.7 mΩ (see specifications for part of interest) Thermal resistance Rthhc = 2.4°C/W (Hot-spot to case, see table below)
Calculation:	Ploss = Irms² x ESR = 27.9² x 6.7 x 10⁻³ = 5.2 W Hot spot temp. Th = Ta + Rthhc x Ploss = 125 + 2.4 x 5.2 = 137.5°C
Output:	Expected Life time, Lop = 85 kh x 2^((85-137.5)/12) = 4.1k hours (Use 85 for dia. 20, use 64 for dia 16)
Max allowed hot temperature, continuous operation:	Th max = 0.5 x Tc + 75[°C] (heat-sinked) Th - Tc = max 15°C Th max = 0.5 x Ta + 75[°C] (not heat-sinked) Th - Ta = max 40°C

Thermal Parameters

Article	C _{thw} (J/°C)	C _{thc} (J/°C)	C _{thtot} (J/°C)	Internal Thermal Res. R _{thhc} (C/W)	Typ. Natural Conv. R _{thca} (C/W)	Typ. Heat Sunked R _{thcc} (C/W)
PEG 226 F-Case	5.8	2.2	8.0	3.5	26	2.0
PEG 226 G-Case	8.0	2.5	10.4	3.5	21	2.0
PEG 226 H-Case	10.0	3.4	13.4	2.4	21	1.5
PEG 226 J-Case	14.0	4.1	18.2	2.4	18	1.5
PEG 226 L-Case	18.4	4.6	23.0	2.4	16	1.5

ESR Correction Factor vs. Frequency [ESR / ESR (5kHz, 125°C)]

	Frequency			
	100 Hz	300 Hz	1 kHz	≥5 kHz
Correction factor (Corr)	8.0	3.0	1.5	1.0

ESR Correction Factor vs. Temperature [ESR / ESR (5kHz, 125°C)]

	Frequency			
	-10°C	60°C	105°C	125°C
Correction factor (Corr)	4.4	1.3	1.1	1.0

PEG 226 150°C

For quantities of 500 and up, call for quote.

MOUSER STOCK NO.	Evox-Rifa Part No.	Cap µF	Volts WVDC	D X L (mm)	Case Code	IRAC Tc=125°C ≥5 kHz (A)	IRAC Tc=140°C ≥5 kHz (A)	IAC (max) Ta=125°C ≥5 kHz (A)	ESR (max) 20°C/100kHz mΩ	ESR (max) 125-150°C 5-100kHz mΩ	Price Each			
											1	10	50	100
80-PEG226HF4150ME1	PEG226HF4150ME1	1500	25	16x27	F	16.8	10.6	7.4	36	12.7				
80-PEG226HG4220ME1	PEG226HG4220ME1	2200	25	16x35	G	19.2	12.1	9.1	26	9.7				
80-PEG226HH4220QE1	PEG226HH4220QE1	2200	25	20x27	H	22.2	14.0	9.1	25	10.6				
80-PEG226HJ4330QE1	PEG226HJ4330QE1	3300	25	20x35	J	25.8	16.3	11.3	17	7.8				
80-PEG226HL4470QE1	PEG226HL4470QE1	4700	25	20x43	L	28.5	18.0	13.1	13	6.4				
80-PEG226KF3800QE1	PEG226KF3800QE1	800	40	16x27	F	16.2	10.2	7.2	36	13.6				
80-PEG226KG4120QE1	PEG226KG4120QE1	1200	40	16x35	G	18.6	11.8	8.8	26	10.3				
80-PEG226KH4150QE1	PEG226KH4150QE1	1500	40	20x27	H	22.8	14.4	9.3	22	10.0				
80-PEG226KJ4220QE1	PEG226KJ4220QE1	2200	40	20x35	J	25.7	16.2	11.2	17	7.9				
80-PEG226KL4270QE1	PEG226KL4270QE1	2700	40	20x43	L	27.9	17.6	12.8	13	6.7				
80-PEG226MF3250QE1	PEG226MF3250QE1	250	63	16x27	F	11.5	7.3	5.1	53	26.9				
80-PEG226MG3370QE1	PEG226MG3370QE1	370	63	16x35	G	13.6	8.6	6.4	37	19.2				
80-PEG226MH3470QE1	PEG226MH3470QE1	470	63	20x27	H	17.3	10.9	7.0	32	17.5				
80-PEG226MJ3680QE1	PEG226MJ3680QE1	680	63	20x35	J	20.0	12.7	8.7	23	13.0				
80-PEG226ML3900QE1	PEG226ML3900QE1	900	63	20x43	L	22.2	14.0	10.2	18	10.6				