PEH532 Series, +105ºC

Overview

KEMET's PEH532 is a long-life electrolytic capacitor designed to offer high ripple current capability and low mounting cost. Low ESR is the result of a very low resistive paper/electrolyte system. Low ESR, together with the TDC thermal concept, gives the PEH532 a high ripple current capability.

Applications

Typical applications for KEMET's PEH532 capacitor include switch mode power supplies (SMPS), drives, welding equipment, uninterruptible power supplies (UPS), and other power electronic applications where high current ratings and compact size are important.

Benefits

- Snap-In
- 1,500 hours at +105°C (V_R, I_R applied)
- PCB mounting
- Low ESR and ESL
- High ripple current



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Part Number System

PEH532	J	AC	433	0	M	2
Series	Rated Voltage (VDC)	Size Code	Capacitance Code (µF)	Version	Capacitance Tolerance	Termination
Snap-In type Aluminum Electrolytic	J = 35 M = 63 P = 100 R = 200 S = 250 U = 350 V = 400 Y = 450	See Dimension Table	The last two digits represent significant figures. The first digit indicates the total number digits.	0 = Standard	M = ±20%	See Termination Table

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Performance Characteristics

Item	Performance Characteristics		
Capacitance Range	68 – 27,000 µF		
Rated Voltage	35 – 450 VDC		
Operating Temperature	-40 to +105°C		
Capacitance Tolerance	±20% at 100 Hz / +20°C		
Operational Lifetime	D (mm)	Rated Voltage and Ripple Current at +105°C (hours)	Rated Voltage at +105°C (hours)
	22 – 35	1,500	2,000
Shelf Life	4 years at +40°C 0 VDC		
Leakage Current	I = 0.003 CV (µA)		
	C = rated capacitance (µF), V = rated voltage (VDC). Voltage applied for 5 minutes at +20°C.		
Vibration Test Specifications	Procedure	Requirements	
	0.75 mm displacement amplitude or 10 g maximum acceleration. Vibration applied for three 2-hour sessions at 10 – 500 Hz (Capacitor clamped by body).	No leakage of electrolyte or other visible damage. Deviations in capacitance and tanδ from initial measurements must not exceed: Δ C/C < 5%	
Standards	IEC 60384-4 long life grade 40/85/56, in accordance with CECC 30 301–809		

Test Method & Performance

Endurance Life Test		
Conditions	Performance	
Temperature	+105°C	
Test Duration	2,000 hours	
Ripple Current	Maximum ripple current specified in table	
Voltage	The sum of DC voltage and the peak AC voltage must not exceed the rated voltage of the capacitor	
Performance	**The following specifications will be satisfied when the capacitor is tested at +20°C:**	
Capacitance Change	≤ 160 V	Within 15% of the initial value
	> 160 V	Within 10% of the initial value
Equivalent Series Resistance	Does not exceed 200% of the initial value	
Leakage Current	Does not exceed leakage current limit	

Dimensions – Millimeters

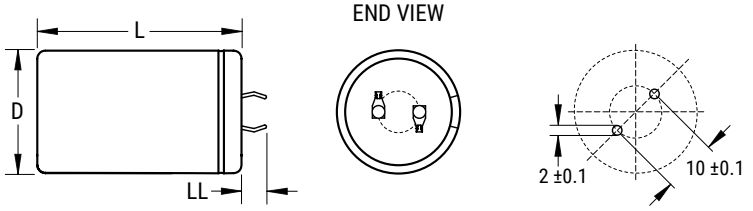
D X L	Size Code	Dimensions in mm		Approximate Weight Grams
		D1	L1	
		±0.5	±1.0	
22 x 25	AB	22.5	26	13
22 x 30	AC	22.5	31	14
22 x 35	AD	22.5	36	15
22 x 40	AE	22.5	41	17
22 x 45	AF	22.5	46	19
22 x 50	AG	22.5	51	21
25 x 25	BB	25.5	26	19
25 x 30	BC	25.5	31	21
25 x 35	BD	25.5	36	24
25 x 40	BE	25.5	41	27
25 x 45	BF	25.5	46	30
25 x 50	BG	25.5	51	33
30 x 25	CB	30.5	26	24
30 x 30	CC	30.5	31	29
30 x 35	CD	30.5	36	34
30 x 40	CE	30.5	41	39
30 x 45	CF	30.5	46	45
30 x 50	CG	30.5	51	51
35 x 25	DB	35.5	26	32
35 x 30	DC	35.5	31	40
35 x 35	DD	35.5	36	48
35 x 40	DE	35.5	41	56
35 x 45	DF	35.5	46	64
35 x 50	DG	35.5	51	72
35 x 55	DH	35.5	56	85
Note: Add 0.5 mm to D and 1 mm to L for Sleeving				

Termination Tables

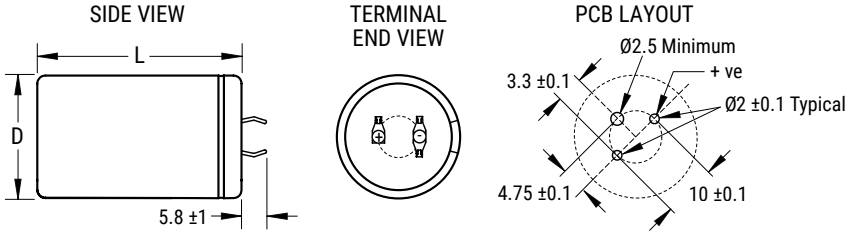
Termination Code / Diameter (mm)	2	2S	3	4	4S
22	•	•	•		
25	•	•	•		
30	•	•	•		
35	•	•	•	•	•
Mounting: These capacitors are designed to be mounted by their terminations alone and may be used in any position. Dummy pins on 4-pin decks must be isolated.					

Termination Code	Termination Style	LL
		±1
Standard Termination Option		
2	2 Pin	6.3
Other Termination Options		
2S	2 Pin	4
3	3 Pin	4
4	4 Pin	6.3
4S	4 Pin	4
Dimensions in mm		

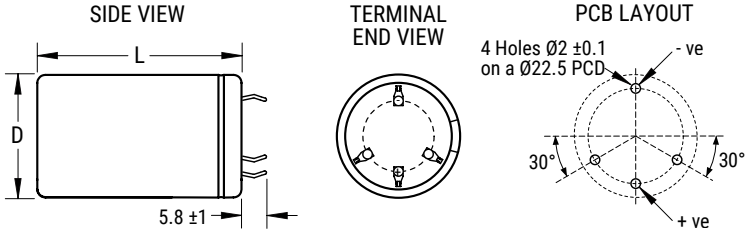
Style 2/2S



Style 3



Style 4/4S



Shelf Life

The capacitance, ESR and impedance of a capacitor will not change significantly after extended storage periods, however the leakage current will very slowly increase. KEMET products are particularly stable and allow a shelf life in excess of three years at 40°C. See sectional specification under each product series for specific data.

Re-age (Reforming) Procedure

Apply the rated voltage to the capacitor at room temperature for a period of one hour, or until the leakage current has fallen to a steady value below the specified limit. During re-aging a maximum charging current of twice the specified leakage current or 5 mA (whichever is greater) is suggested.

Reliability

The reliability of a component can be defined as the probability that it will perform satisfactorily under a given set of conditions for a given length of time.

In practice, it is impossible to predict with absolute certainty how any individual component will perform; thus, we must utilize probability theory. It is also necessary to clearly define the level of stress involved (e.g. operating voltage, ripple current, temperature and time). Finally, the meaning of satisfactory performance must be defined by specifying a set of conditions which determine the end of life of the component.

Reliability as a function of time, R(t), is normally expressed as: $R(t)=e^{-\lambda t}$
where R(t) is the probability that the component will perform satisfactorily for time t, and λ is the failure rate.

Failure Rate

The failure rate is the number of components failing per unit time. The failure rate of most electronic components follows the characteristic pattern:

- Early failures are removed during the manufacturing process.
- The operational life is characterized by a constant failure rate.
- The wear out period is characterized by a rapidly increasing failure rate.

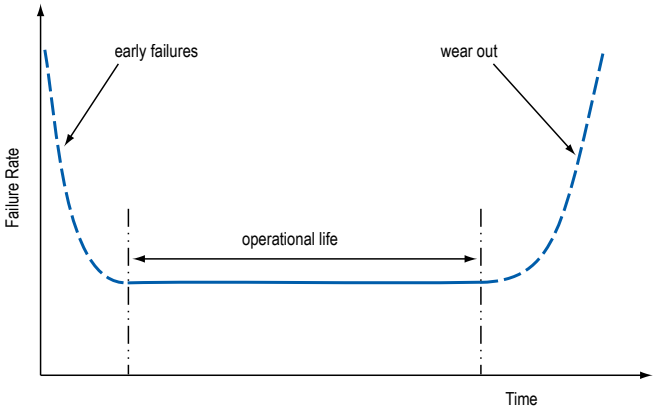
The failures in time (FIT) are given with a 60% confidence level for the various type codes. By convention, FIT is expressed as 1×10^{-9} failures per hour. Failure rate is also expressed as a percentage of failures per 1,000 hours.
e.g., 100 FIT = 1×10^{-7} failures per hour = 0.01%/1,000 hours

End of Life Definition
Catastrophic Failure: short circuit, open circuit or safety vent operation
Parametric Failure:

- Change in capacitance > ±10%
- Leakage current > specified limit
- ESR > 2 x initial ESR value

MTBF

The mean time between failures (MTBF) is simply the inverse of the failure rate.
MTBF= 1/λ



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 40°C. The expected failure rate for this capacitor range is based on our periodic test results for capacitors with structural similarity. Failure rate is frequently quoted in FIT (Failures In Time) where 1 FIT = 1 x 10^{-9} failures per hour. Failure rate per hour includes both catastrophic and parametric failures.

Environmental Compliance

As an environmentally conscious company, KEMET is working continuously with improvements concerning the environmental effects of both our capacitors and their production. In Europe (RoHS Directive) and in some other geographical areas like China, legislation has been put in place to prevent the use of some hazardous materials, such as lead (Pb), in electronic equipment. All products in this catalog are produced to help our customers' obligations to guarantee their products and fulfill these legislative requirements. The only material of concern in our products has been lead (Pb), which has been removed from all designs to fulfill the requirement of containing less than 0.1% of lead in any homogeneous material. KEMET will closely follow any changes in legislation world wide and makes any necessary changes in its products, whenever needed.

Some customer segments such as medical, military and automotive electronics may still require the use of lead in electrode coatings. To clarify the situation and distinguish products from each other, a special symbol is used on the packaging labels for RoHS compatible capacitors.

Because of customer requirements, there may appear additional markings such as LF = Lead Free or LFW = Lead Free Wires on the label.

Table 1 – Ratings & Part Number Reference

VDC	Rated Capacitance	Size Code	Case Size	Ripple Current Maximum		ESR Maximum		Part Number
	100 Hz 20°C (µF)		D x L (mm)	100 Hz 105°C (A)	20 kHz 40°C (A)	100 Hz 20°C (mΩ)	100 kHz 20°C (mΩ)	
35	3300	AC	22 x 30	1.9	5.1	110	93	PEH532JAC4330M(1)
35	3900	AC	22 x 30	2.0	5.4	97	83	PEH532JAC4390M(1)
35	4700	AD	22 x 35	2.3	6.2	80	67	PEH532JAD4470M(1)
35	4700	BC	25 x 30	2.1	5.8	86	74	PEH532JBC4470M(1)
35	5600	AE	22 x 40	2.6	7.1	67	56	PEH532JAE4560M(1)
35	5600	BC	25 x 30	2.2	5.9	78	68	PEH532JBC4560M(1)
35	6800	AE	22 x 40	2.8	7.5	58	50	PEH532JAE4680M(1)
35	6800	BD	25 x 35	2.6	7.0	63	54	PEH532JBD4680M(1)
35	6800	CC	30 x 30	3.1	8.4	54	46	PEH532JCC4680M(1)
35	8200	AG	22 x 50	3.3	8.8	47	40	PEH532JAG4820M(1)
35	8200	BE	25 x 40	2.9	8.0	52	45	PEH532JBE4820M(1)
35	8200	CC	30 x 30	3.3	8.8	47	40	PEH532JCC4820M(1)
35	10000	BF	25 x 45	3.3	9.0	43	38	PEH532JBF5100M(1)
35	10000	CD	30 x 35	3.8	10.3	38	32	PEH532JCD5100M(1)
35	10000	DC	35 x 30	3.6	9.6	42	36	PEH532JDC5100M(1)
35	12000	BG	25 x 50	3.6	9.9	37	32	PEH532JBG5120M(1)
35	12000	CE	30 x 40	4.4	11.7	32	27	PEH532JCE5120M(1)
35	12000	DC	35 x 30	3.6	9.7	38	33	PEH532JDC5120M(1)
35	15000	CF	30 x 45	5.0	13.3	26	22	PEH532JCF5150M(1)
35	15000	DD	35 x 35	4.2	11.5	30	26	PEH532JDD5150M(1)
35	18000	DE	35 x 40	4.9	13.2	25	22	PEH532JDE5180M(1)
35	22000	DF	35 x 45	5.4	14.8	21	18	PEH532JDF5220M(1)
35	27000	DG	35 x 50	5.9	16.3	18	16	PEH532JDG5270M(1)
63	1200	AB	22 x 25	1.3	3.7	160	120	PEH532MAB4120M(1)
63	1500	AC	22 x 30	1.6	4.4	120	90	PEH532MAC4150M(1)
63	1800	AC	22 x 30	1.7	4.7	110	79	PEH532MAC4180M(1)
63	2200	AD	22 x 35	2.0	5.5	88	64	PEH532MAD4220M(1)
63	2200	BC	25 x 30	1.9	5.2	95	71	PEH532MBC4220M(1)
63	2700	AE	22 x 40	2.3	6.3	72	52	PEH532MAE4270M(1)
63	2700	BD	25 x 35	2.2	6.1	76	56	PEH532MBD4270M(1)
63	3300	AG	22 x 50	2.7	7.4	58	42	PEH532MAG4330M(1)
63	3300	BE	25 x 40	2.5	7.0	62	46	PEH532MBE4330M(1)
63	3300	CC	30 x 30	2.7	7.4	58	42	PEH532MCC4330M(1)
63	3900	BF	25 x 45	2.8	7.8	53	40	PEH532MBF4390M(1)
63	3900	CD	30 x 35	3.1	8.5	48	35	PEH532MCD4390M(1)
63	4700	BG	25 x 50	3.1	8.7	45	34	PEH532MBG4470M(1)
63	4700	CE	30 x 40	3.6	9.7	40	29	PEH532MCE4470M(1)
63	4700	DC	35 x 30	3.1	8.5	46	34	PEH532MDC4470M(1)
63	5600	CE	30 x 40	3.8	10.3	35	26	PEH532MCE4560M(1)
63	5600	DD	35 x 35	3.7	10.1	37	28	PEH532MDD4560M(1)
63	6800	CF	30 x 45	4.3	11.7	29	22	PEH532MCF4680M(1)
63	6800	DE	35 x 40	4.2	11.5	31	23	PEH532MDE4680M(1)
63	8200	DF	35 x 45	4.7	13.0	26	19	PEH532MDF4820M(1)
63	10000	DG	35 x 50	5.2	14.4	22	17	PEH532MDG5100M(1)
100	560	AB	22 x 25	1.0	2.6	380	290	PEH532PAB3560M(1)
100	680	AC	22 x 30	1.1	3.1	300	240	PEH532PAC3680M(1)
100	680	BB	25 x 25	1.1	2.9	320	250	PEH532PBB3680M(1)
100	820	AD	22 x 35	1.3	3.5	250	190	PEH532PAD3820M(1)
100	820	BC	25 x 30	1.3	3.5	260	200	PEH532PBC3820M(1)
100	1000	AE	22 x 40	1.5	4.0	210	160	PEH532PAE4100M(1)
100	1000	BC	25 x 30	1.4	3.8	220	170	PEH532PBC4100M(1)
100	1200	AE	22 x 40	1.6	4.4	170	140	PEH532PAE4120M(1)
100	1200	BD	25 x 35	1.6	4.4	180	140	PEH532PBD4120M(1)
100	1500	AF	22 x 45	1.9	5.0	140	110	PEH532PAF4150M(1)
100	1500	BE	25 x 40	1.9	5.0	140	110	PEH532PBE4150M(1)
100	1800	BF	25 x 45	2.1	5.7	120	95	PEH532PBF4180M(1)
100	1800	CD	30 x 35	2.2	6.0	120	90	PEH532PCD4180M(1)
100	2200	BG	25 x 50	2.4	6.4	99	78	PEH532PBG4220M(1)
100	2200	CE	30 x 40	2.6	6.9	95	73	PEH532PCE4220M(1)
100	2200	DC	35 x 30	2.4	6.4	100	79	PEH532PDC4220M(1)
VDC	Rated Capacitance	Size Code	Case Size	Ripple Current		ESR		Part Number

(1) Termination code: See Termination Tables for available options.

Table 1 – Ratings & Part Number Reference cont'd

VDC	Rated Capacitance	Size Code	Case Size	Ripple Current Maximum		ESR Maximum		Part Number
	100 Hz 20°C (µF)		D x L (mm)	100 Hz 105°C (A)	20 kHz 40°C (A)	100 Hz 20°C (mΩ)	100 kHz 20°C (mΩ)	
100	2700	CF	30 x 45	2.9	7.8	78	60	PEH532PCF4270M(1)
100	2700	DD	35 x 35	2.8	7.5	81	64	PEH532PDD4270M(1)
100	3300	CG	30 x 50	3.3	8.9	64	50	PEH532PCG4330M(1)
100	3300	DE	35 x 40	3.2	8.6	66	52	PEH532PDE4330M(1)
100	3900	DF	35 x 45	3.6	9.7	56	44	PEH532PDF4390M(1)
100	4700	DG	35 x 50	4.0	10.9	47	37	PEH532PDG4470M(1)
200	270	AC	22 x 30	0.8	2.1	510	270	PEH532RAC3270M(1)
200	270	BB	25 x 25	0.8	2.1	530	290	PEH532RBB3270M(1)
200	330	AD	22 x 35	0.9	2.5	420	220	PEH532RAD3330M(1)
200	330	BC	25 x 30	0.9	2.5	420	230	PEH532RBC3330M(1)
200	390	AD	22 x 35	1.0	2.7	360	190	PEH532RAD3390M(1)
200	390	BC	25 x 30	1.0	2.7	370	200	PEH532RBC3390M(1)
200	470	AE	22 x 40	1.1	3.1	300	160	PEH532RAE3470M(1)
200	470	BD	25 x 35	1.1	3.1	300	170	PEH532RBD3470M(1)
200	470	CC	30 x 30	1.2	3.3	290	160	PEH532RCC3470M(1)
200	560	AF	22 x 45	1.2	3.5	250	140	PEH532RAF3560M(1)
200	560	BE	25 x 40	1.2	3.5	250	140	PEH532RBE3560M(1)
200	680	AG	22 x 50	1.4	3.9	210	110	PEH532RAG3680M(1)
200	680	BF	25 x 45	1.4	4.0	210	110	PEH532RBF3680M(1)
200	680	CD	30 x 35	1.5	4.1	200	110	PEH532RCD3680M(1)
200	820	BG	25 x 50	1.6	4.5	170	96	PEH532RBG3820M(1)
200	820	CD	30 x 35	1.6	4.5	170	93	PEH532RCD3820M(1)
200	1000	CE	30 x 40	1.8	5.2	140	76	PEH532RCE4100M(1)
200	1000	DD	35 x 35	1.9	5.2	140	79	PEH532RDD4100M(1)
200	1200	CF	30 x 45	2.1	5.8	120	64	PEH532RCF4120M(1)
200	1200	DE	35 x 40	2.1	6.0	120	66	PEH532RDE4120M(1)
200	1500	DF	35 x 45	2.5	6.9	96	53	PEH532RDF4150M(1)
200	1800	DG	35 x 50	2.8	7.7	81	45	PEH532RDG4180M(1)
200	2200	DH	35 x 55	3.1	8.7	67	38	PEH532RDH4220M(1)
250	220	AC	22 x 30	0.7	2.1	520	260	PEH532SAC3220M(1)
250	220	BB	25 x 25	0.7	2.0	540	270	PEH532SBB3220M(1)
250	270	AD	22 x 35	0.9	2.4	420	210	PEH532SAD3270M(1)
250	270	BC	25 x 30	0.9	2.4	430	220	PEH532SBC3270M(1)
250	330	AE	22 x 40	1.0	2.7	350	170	PEH532SAE3330M(1)
250	330	BC	25 x 30	0.9	2.6	360	180	PEH532SBC3330M(1)
250	330	CB	30 x 25	1.0	2.7	350	170	PEH532SCB3330M(1)
250	390	AF	22 x 45	1.1	3.1	290	140	PEH532SAF3390M(1)
250	390	BD	25 x 35	1.1	3.0	300	150	PEH532SBD3390M(1)
250	470	AG	22 x 50	1.2	3.5	250	120	PEH532SAG3470M(1)
250	470	BE	25 x 40	1.2	3.4	250	130	PEH532SBE3470M(1)
250	470	CC	30 x 30	1.2	3.4	250	120	PEH532SCC3470M(1)
250	560	AG	22 x 50	1.3	3.8	210	110	PEH532SAG3560M(1)
250	560	BF	25 x 45	1.4	3.8	210	110	PEH532SBF3560M(1)
250	680	BG	25 x 50	1.5	4.3	180	90	PEH532SBG3680M(1)
250	680	CE	30 x 40	1.6	4.5	170	84	PEH532SCE3680M(1)
250	680	DC	35 x 30	1.5	4.3	180	91	PEH532SDC3680M(1)
250	820	CF	30 x 45	1.8	5.1	140	70	PEH532SCF3820M(1)
250	820	DD	35 x 35	1.8	5.0	150	75	PEH532SDD3820M(1)
250	1000	CG	30 x 50	2.1	5.8	120	58	PEH532SCG4100M(1)
250	1000	DE	35 x 40	2.1	5.8	120	61	PEH532SDE4100M(1)
250	1200	DF	35 x 45	2.3	6.5	100	51	PEH532SDF4120M(1)
250	1500	DG	35 x 50	2.7	7.5	81	42	PEH532SDG4150M(1)
350	82	AB	22 x 25	0.5	1.3	1600	980	PEH532UAB2820M(1)
350	100	AC	22 x 30	0.5	1.5	1300	800	PEH532UAC3100M(1)
350	150	AD	22 x 35	0.7	1.9	860	540	PEH532UAD3150M(1)
350	150	BC	25 x 30	0.7	1.9	870	550	PEH532UBC3150M(1)
350	180	AE	22 x 40	0.8	2.2	720	450	PEH532UAE3180M(1)
350	220	AF	22 x 45	0.9	2.5	590	370	PEH532UAF3220M(1)
350	220	BD	25 x 35	0.9	2.4	600	380	PEH532UBD3220M(1)
350	220	CC	30 x 30	0.9	2.5	590	370	PEH532UCC3220M(1)
VDC	Rated Capacitance	Size Code	Case Size	Ripple Current		ESR		Part Number

(1) Termination code: See Termination Tables for available options.

Table 1 – Ratings & Part Number Reference cont'd

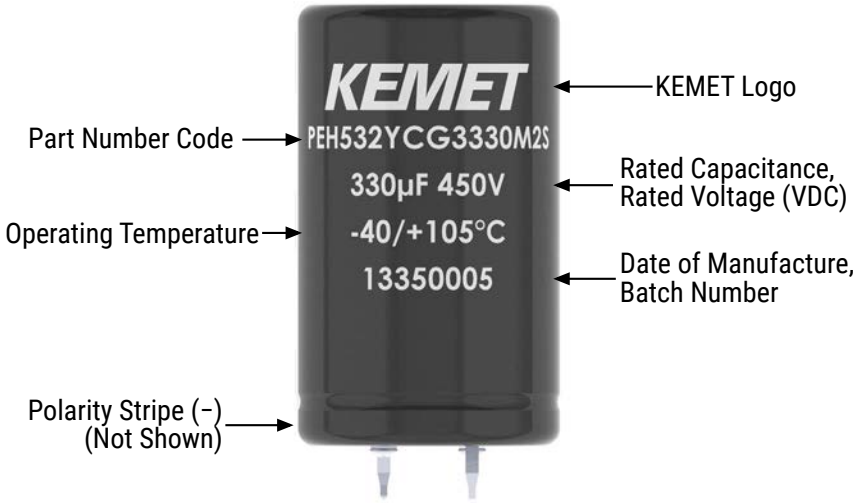
VDC	Rated Capacitance	Size Code	Case Size	Ripple Current Maximum		ESR Maximum		Part Number
	100 Hz 20°C (µF)		D x L (mm)	100 Hz 105°C (A)	20 kHz 40°C (A)	100 Hz 20°C (mΩ)	100 kHz 20°C (mΩ)	
350	270	AG	22 x 50	1.0	2.8	480	300	PEH532UAG3270M(1)
350	270	BE	25 x 40	1.0	2.8	490	310	PEH532UBE3270M(1)
350	330	BG	25 x 50	1.2	3.2	400	250	PEH532UBG3330M(1)
350	330	CE	30 x 40	1.2	3.4	390	250	PEH532UCE3330M(1)
350	330	DC	35 x 30	1.2	3.3	400	250	PEH532UDC3330M(1)
350	390	BG	25 x 50	1.3	3.5	340	220	PEH532UBG3390M(1)
350	390	CE	30 x 40	1.3	3.7	330	210	PEH532UCE3390M(1)
350	470	CF	30 x 45	1.5	4.2	280	180	PEH532UCF3470M(1)
350	470	DD	35 x 35	1.5	4.1	280	180	PEH532UDD3470M(1)
350	560	CG	30 x 50	1.7	4.7	230	150	PEH532UCG3560M(1)
350	560	DE	35 x 40	1.7	4.7	240	150	PEH532UDE3560M(1)
350	680	DF	35 x 45	1.9	5.3	190	120	PEH532UDF3680M(1)
400	82	AC	22 x 30	0.5	1.4	1300	810	PEH532VAC2820M(1)
400	100	AC	22 x 30	0.6	1.6	1100	670	PEH532VAC3100M(1)
400	100	BB	25 x 25	0.6	1.6	1100	690	PEH532VBB3100M(1)
400	120	AD	22 x 35	0.6	1.8	920	560	PEH532VAD3120M(1)
400	120	BC	25 x 30	0.7	1.8	930	570	PEH532VBC3120M(1)
400	120	CB	30 x 25	0.7	1.9	920	560	PEH532VCB3120M(1)
400	150	AE	22 x 40	0.8	2.1	740	450	PEH532VAE3150M(1)
400	150	BD	25 x 35	0.8	2.1	740	450	PEH532VBD3150M(1)
400	150	CB	30 x 25	0.8	2.1	740	460	PEH532VCB3150M(1)
400	180	AF	22 x 45	0.8	2.4	620	380	PEH532VAF3180M(1)
400	180	CC	30 x 30	0.9	2.4	620	380	PEH532VCC3180M(1)
400	220	AG	22 x 50	1.0	2.7	510	310	PEH532VAG3220M(1)
400	220	BE	25 x 40	1.0	2.7	510	320	PEH532VBE3220M(1)
400	220	CD	30 x 35	1.0	2.8	500	310	PEH532VCD3220M(1)
400	220	DB	35 x 25	1.0	2.7	510	320	PEH532VDB3220M(1)
400	270	BF	25 x 45	1.1	3.0	420	260	PEH532VBF3270M(1)
400	270	CD	30 x 35	1.1	3.1	410	250	PEH532VCD3270M(1)
400	330	CE	30 x 40	1.3	3.6	340	210	PEH532VCE3330M(1)
400	330	DD	35 x 35	1.3	3.7	340	210	PEH532VDD3330M(1)
400	390	CG	30 x 50	1.5	4.1	280	170	PEH532VCG3390M(1)
400	390	DE	35 x 40	1.5	4.1	290	180	PEH532VDE3390M(1)
400	470	DF	35 x 45	1.7	4.7	240	150	PEH532VDF3470M(1)
400	560	DG	35 x 50	1.9	5.3	200	120	PEH532VDG3560M(1)
450	68	AC	22 x 30	0.5	1.4	1300	790	PEH532YAC2680M(1)
450	68	BB	25 x 25	0.5	1.4	1400	800	PEH532YBB2680M(1)
450	82	AC	22 x 30	0.6	1.5	1100	670	PEH532YAC2820M(1)
450	82	BB	25 x 25	0.6	1.5	1100	680	PEH532YBB2820M(1)
450	100	AD	22 x 35	0.6	1.8	910	540	PEH532YAD3100M(1)
450	100	BC	25 x 30	0.6	1.8	920	540	PEH532YBC3100M(1)
450	120	AE	22 x 40	0.7	2.0	760	450	PEH532YAE3120M(1)
450	120	BC	25 x 30	0.7	1.9	780	470	PEH532YBC3120M(1)
450	120	CB	30 x 25	0.7	2.0	770	460	PEH532YCB3120M(1)
450	150	AF	22 x 45	0.8	2.3	620	370	PEH532YAF3150M(1)
450	150	BD	25 x 35	0.8	2.3	620	370	PEH532YBD3150M(1)
450	150	CC	30 x 30	0.9	2.4	620	360	PEH532YCC3150M(1)
450	180	AG	22 x 50	0.9	2.6	520	310	PEH532YAG3180M(1)
450	180	BE	25 x 40	0.9	2.6	520	310	PEH532YBE3180M(1)
450	180	CC	30 x 30	0.9	2.6	520	310	PEH532YCC3180M(1)
450	220	BF	25 x 45	1.1	3.0	430	260	PEH532YBF3220M(1)
450	220	CD	30 x 35	1.1	3.0	420	250	PEH532YCD3220M(1)
450	220	DC	35 x 30	1.1	3.1	420	250	PEH532YDC3220M(1)
450	270	CE	30 x 40	1.3	3.5	340	200	PEH532YCE3270M(1)
450	270	DD	35 x 35	1.3	3.6	350	210	PEH532YDD3270M(1)
450	330	CG	30 x 50	1.5	4.1	280	160	PEH532YCG3330M(1)
450	330	DE	35 x 40	1.5	4.1	280	170	PEH532YDE3330M(1)
450	390	DE	35 x 40	1.6	4.5	240	140	PEH532YDE3390M(1)
450	470	DG	35 x 50	1.9	5.2	200	120	PEH532YDG3470M(1)
VDC	Rated Capacitance	Size Code	Case Size	Ripple Current		ESR		Part Number

(1) Termination code: See Termination Tables for available options.

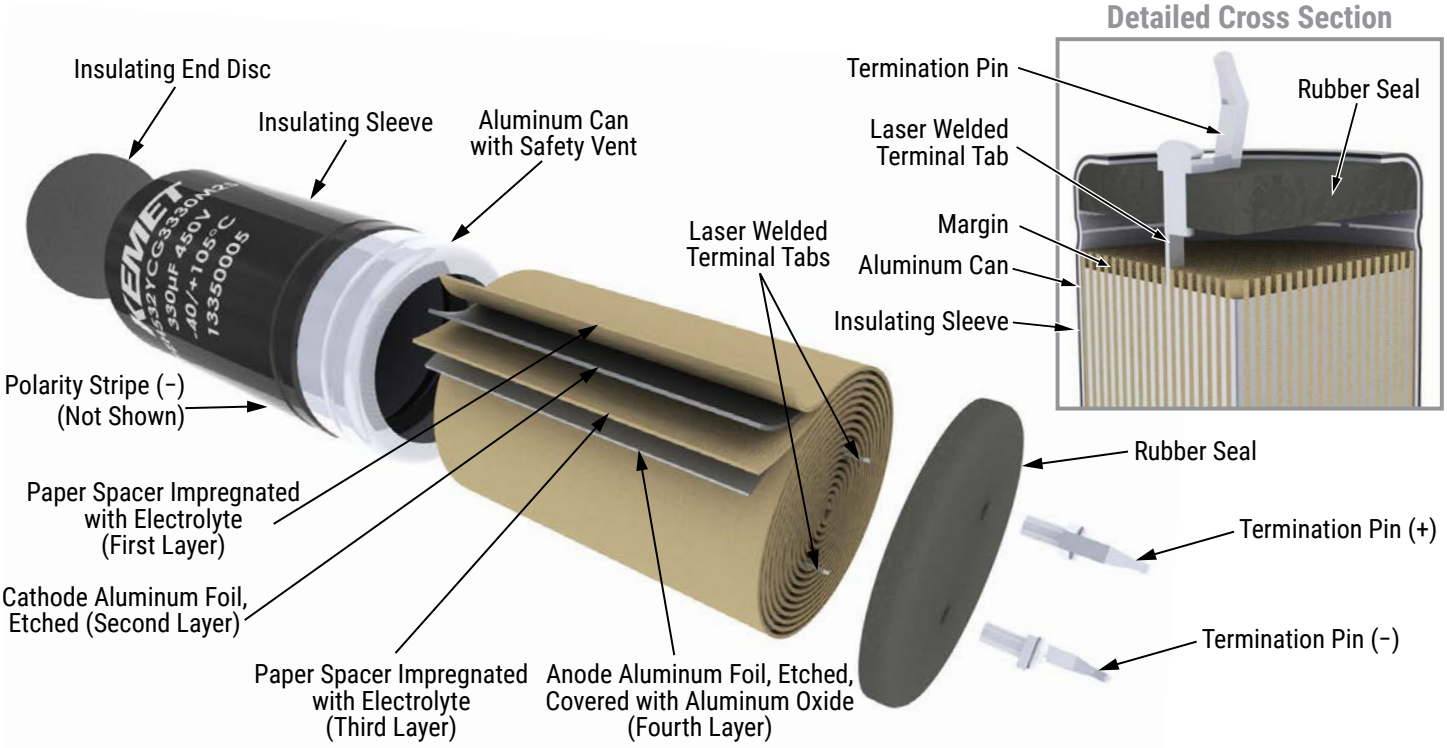
Mechanical Data

The capacitor may be mounted in any position. PEH532 is supplied with an insulation sleeve. Voltage proof of the insulation sleeve = 2.5 kVDC (1 minute). The minus pole is marked on the case surface. UL recognized sleeving is available for custom parts in this range, upon request. (UL No. E358957)

Marking

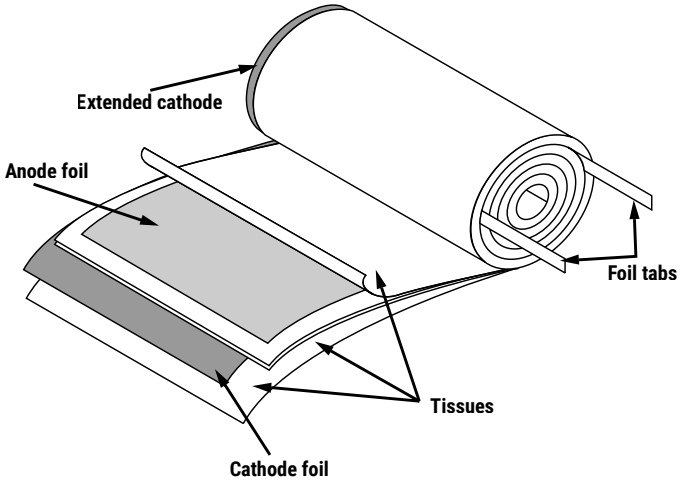


Construction



Construction Data

The manufacturing process begins with the anode foil being electrochemically etched to increase the surface area and then "formed" to produce the aluminum oxide layer. Both the anode and cathode foils are then interleaved with absorbent paper and wound into a cylinder. During the winding process, aluminum tabs are attached to each foil to provide the electrical contact.



The deck, complete with terminals, is attached to the tabs and then folded down to rest on top of the winding. The complete winding is impregnated with electrolyte before being housed in a suitable container, usually an aluminum can, and sealed. Throughout the process, all materials inside the housing must be maintained at the highest purity and be compatible with the electrolyte.

Each capacitor is aged and tested before being sleeved and packed. The purpose of aging is to repair any damage in the oxide layer and thus reduce the leakage current to a very low level. Aging is normally carried out at the rated temperature of the capacitor and is accomplished by applying voltage to the device while carefully controlling the supply current. The process may take several hours to complete.

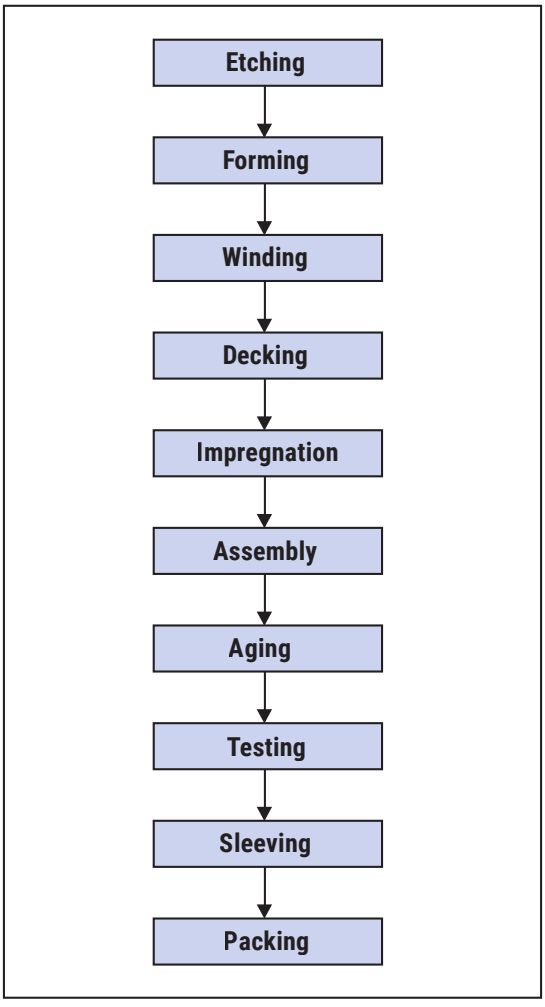
Damage to the oxide layer can occur due to variety of reasons:
- Slitting of the anode foil after forming
- Attaching the tabs to the anode foil
- Minor mechanical damage caused during winding

A sample from each batch is taken by the quality department after completion of the production process.

The following tests are applied and may be varied at the request of the customer. In this case the batch, or special procedure, will determine the course of action.

Electrical:
- Leakage current
- Capacitance
- ESR
- Impedance
- Tan Delta

Mechanical/Visual:
- Overall dimensions
- Torque test of mounting stud
- Print detail
- Box labels
- Packaging, including packed quantity



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Although all product–related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicted or that other measures may not be required.

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