Aluminum Capacitors
+ 125 °C, Non-Polar, Miniature

Fig.1 Component outline

FEATURES

- Extended temperature range
- Exceptional capacitance stability
- Low DF
- Low DC leakage current
- Tantalum foil replacement
- Axial lead

Pb-free Available

QUICK REFERENCE DATA

DESCRIPTION	VALUE
Nominal case size Ø D x L in inches [mm]	0.296 x 1.000 [7.518 x 25.40] to 0.390 x 2.812 [9.906 x 71.425]
Operating temperature	- 55 °C to + 125 °C
Rated capacitance range, C_R	0.68 µF to 680 µF
Tolerance on C_R	- 10 %, + 50 %; - 10 %, + 75 %
Rated voltage range, U_R	7 WVDC to 250 WVDC
Termination	axial leads
Life validation test 2000 h at + 125 °C	ΔCAP < 15 % from initial measurement ΔESR < 1.3 x initial specified limit ΔDCL < initial specified limit
Shelf life 500 h at + 125 °C	ΔCAP < 10 % from initial measurement ΔESR < 1.2 x initial specified limit ΔDCL < 2.0 x initial specified limit

RIPPLE CURRENT MULTIPLIERS

TEMPERATURE				
AMBIENT TEMPERATURE			MULTIPLIERS	
+ 100 °C			1.5	
+ 85 °C			2.0	
+ 65 °C			2.5	
FREQUENCY (Hz)				
WVDC	50 to 60	100 to 120	300 to 400	> 100K
6 to 60	0.85	1.0	1.10	1.15
61 to 250	0.83	1.0	1.15	1.20

LOW TEMPERATURE PERFORMANCE

Capacitance: The maximum allowable capacitance change with temperature from + 25 °C shall be in accordance with the following:

RATED VOLTAGE AT + 125 °C	PERCENT CAPACITANCE CHANGE AT		
	- 55 °C	+ 85 °C	+ 125 °C
5 to 15	- 30	+ 15	+ 20
20 and up	- 25	+ 15	+ 20

DIMENSIONS in inches [millimeters]

CASE CODE	WITH OUTER INSULATION		
	DIAMETER	LENGTH (1) (max.)	TYPICAL WEIGHT (g)
KD	0.297 ± 0.031 [7.54 ± 0.79]	1.000 [25.40]	1.90
DE	0.390 ± 0.031 [9.92 ± 0.79]	1.187 [30.16]	3.90
DU	0.390 ± 0.031 [9.92 ± 0.79]	1.500 [38.10]	4.90
DL	0.390 ± 0.031 [9.92 ± 0.79]	2.187 [55.56]	7.00
DR	0.390 ± 0.031 [9.92 ± 0.79]	2.812 [71.42]	8.60

Note

(1) Style 2. For style 5, increase the maximum length by 0.125" [3.18 mm].

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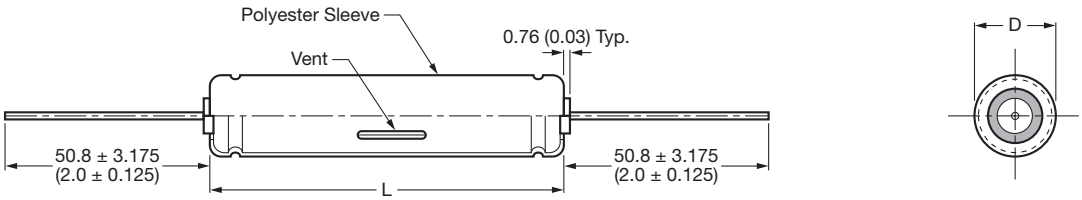
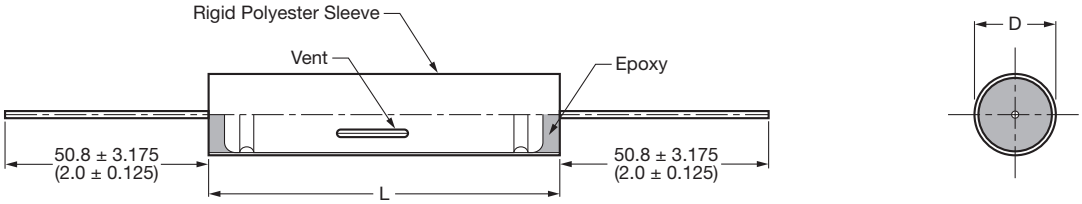
DIMENSIONS AND AVAILABLE FORMS

Style 2



Style 5



PART NUMBER INFORMATION

610D	476	F	007	KD	2
TYPE	**CAPACITANCE**	**CAPACITANCE TOLERANCE**	**DC VOLTAGE RATING**	**CASE CODE**	**CASE STYLE**
Identifies the series name.	Expressed in pF. The first two digits are significant figures. The third is the number of zeros.	F = - 10 %/+ 50 % G = - 10 %/+ 75 %	Expressed in volts. Zeros are used to precede the voltage rating (i.e. 007 = 7 V).	(see table dimensions)	2 = Polyester sleeve (std.) 5 = Polyester sleeve with resin end seal (required for exposure to halogenated cleaning solvents)

For technical questions, contact: aluminumcaps4@vishay.com

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