

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



FEATURES

- Extended temperature range
- Exceptional capacitance stability
- Low DF
- Low DC leakage current
- Tantalum foil replacement
- Axial lead
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

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 WV _{DC} to 250 WV _{DC}
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)				
WV _{DC}	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

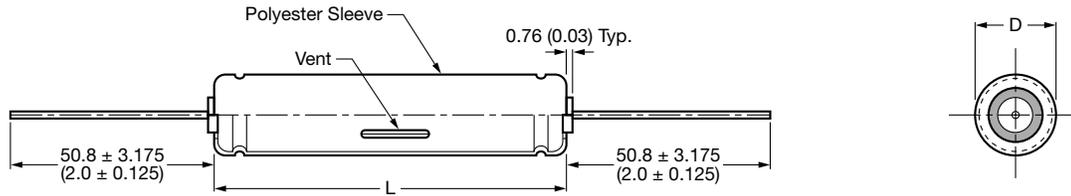
DIMENSIONS in inches [millimeters]			
CASE CODE	WITH OUTER INSULATION		
	DIAMETER	LENGTH ⁽¹⁾ (max.)	TYPICAL WEIGHT (g)
KD	0.297 ± 0.031 [7.54 ± 0.79]	1.000 [25.40]	1.90
DE	0.390 ± 0.031 [9.92 ± 0.79]	1.187 [30.16]	3.90
DU	0.390 ± 0.031 [9.92 ± 0.79]	1.500 [38.10]	4.90
DL	0.390 ± 0.031 [9.92 ± 0.79]	2.187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

Note

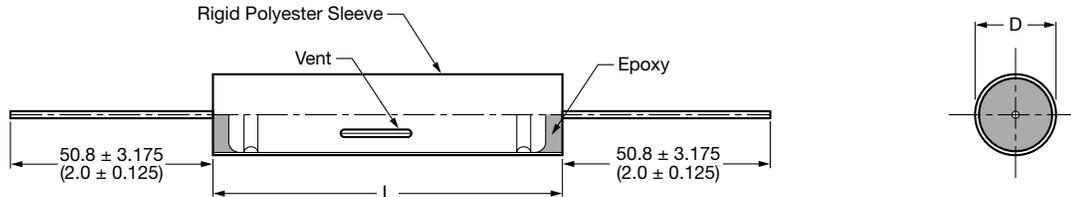
⁽¹⁾ Style 2. For style 5, increase the maximum length by 0.125" [3.18 mm].

DIMENSIONS AND AVAILABLE FORMS

Style 2



Style 5



Lead diameter
No. 20 AWG (0.032" [0.813 mm] Dia.)

PART NUMBER INFORMATION

610D

TYPE

Identifies the series name.

476

CAPACITANCE

Expressed in pF. The first two digits are significant figures. The third is the number of zeros.

F

CAPACITANCE TOLERANCE

F = -10 % / +50 %
G = -10 % / +75 %

007

DC VOLTAGE RATING

Expressed in volts. Zeros are used to precede the voltage rating (i.e. 007 = 7 V).

KD

CASE CODE

See table Dimensions

2

CASE STYLE

2 = polyester sleeve (std.)
5 = polyester sleeve with resin end seal (required for exposure to halogenated cleaning solvents)

Note

- For lead (Pb)-free / RoHS compliant products add suffix "E3" to part number.
Example: 610D105F200KD2E3



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