

QUICK REFERENCE DATA

DESCRIPTION

Nominal case size

Ø D x L in inches [mm]

Operating temperature

Rated capacitance

Tolerance on C_R

Rated voltage range,

Life validation test

2000 h at +125 °C

500 h at +125 °C

range, C_R

Termination

Shelf life

 U_R

EXTRALYTIC® 610D406 G020DE2

VALUE

0.296 x 1.000 [7.518 x 25.40]

to 0.390 x 2.812 [9.906 x 71.425]

-55 °C to +125 °C

0.68 µF to 680 µF

-10 %, +50 %; -10 %, +75 %

7 WV_{DC} to 250 WV_{DC}

Axial leads

 $\Delta CAP < 15$ % from initial measurement

 Δ ESR < 1.3 x initial specified limit

 $\Delta DCL <$ initial specified limit $\Delta CAP < 10$ % from initial measurement

 Δ ESR < 1.2 x initial specified limit

△DCL < 2.0 x initial specified limit

610D

Vishay Sprague

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



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

| 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 | | | | | |
| AI +125 C | -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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1

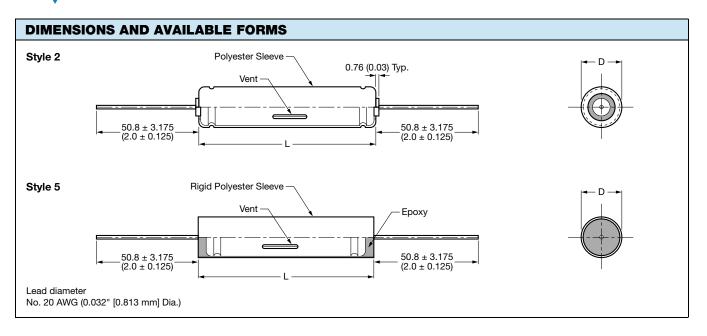
Pb-free

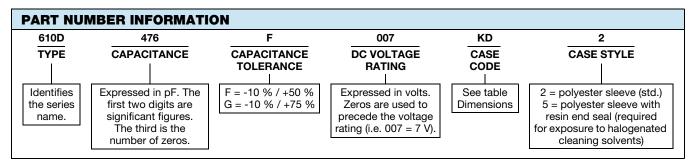


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610D

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Note

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

Statements about product lifetime are based on calculations and internal testing. They should only be interpreted as estimations. Also due to external factors, the lifetime in the field application may deviate from the calculated lifetime. In general, nothing stated herein shall be construed as a guarantee of durability.



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1