

Aluminum Capacitors +85 °C, Snap-In


FEATURES

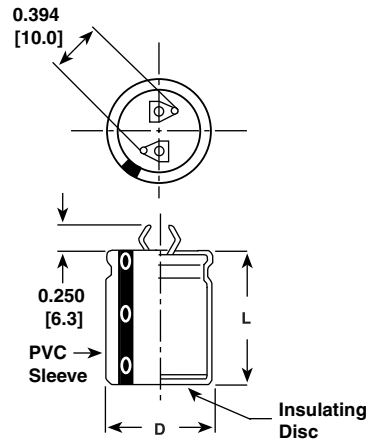
- Useful life: 2000 h at +85 °C
- General purpose
- Polarized aluminum electrolytic capacitors, non-solid electrolyte
- High ripple capability
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


**RoHS
COMPLIANT**

| QUICK REFERENCE DATA | |
|---|---|
| DESCRIPTION | VALUE |
| Nominal case size Ø D x L in inches (mm) | 1.38 x 3.15 (35.0 x 80.0) |
| Operating temperature | -40 °C to +85 °C |
| Rated capacitance range, C _R | 82 µF to 56 000 µF |
| Tolerance on C _R | -10 %, +30 % |
| Rated voltage range, U _R | 6.3 WV _{DC} to 250 WV _{DC} |
| Termination | Snap mount |
| Life validation test 2000 h at 85 °C | $\Delta\text{CAP} \leq 15\%$ from initial measurement. $\Delta\text{ESR} \leq 1.5 \times$ initial specified limit. $\Delta\text{DCL} \leq$ initial specified limit |
| Shelf life 500 h at 85 °C | $\Delta\text{CAP} \leq 15\%$ from initial measurement. $\Delta\text{ESR} \leq 1.3 \times$ initial specified limit. $\Delta\text{DCL} \leq 2 \times$ initial specified limit |
| DC leakage current | $I = k\sqrt{CV}$ k = 4.0 at +25 °C I in µA, C in µF, V in Volts |

| RIPPLE CURRENT MULTIPLIERS | | | |
|---|--------------|-------------|-------------|
| TEMPERATURE | | | |
| AMBIENT TEMPERATURE | | MULTIPLIERS | |
| -55 °C | | 2.0 | |
| -65 °C | | 1.7 | |
| -75 °C | | 1.4 | |
| -85 °C | | 1.0 | |
| FREQUENCY (Hz) | | | |
| WV _{DC} | 50 TO 60 | 300 TO 1000 | 1000 AND UP |
| 0 to 49 | 0.85 | 1.10 | 1.15 |
| 50 to 199 | 0.83 | 1.15 | 1.20 |
| 200 to 250 | 0.80 | 1.30 | 1.40 |
| ESL (TYPICAL VALUES AT 1 MHz TO 10 MHz) | | | |
| Nominal Diameter | 0.984 (25.0) | 1.18 (30.0) | 1.38 (35.0) |
| Typical ESL (nH) | 8.0 | 10.0 | 12.0 |

| DIMENSIONS in inches (millimeters) | | | | | | | | | |
|------------------------------------|-------------------------------|--|-----------------|--|-----------|-------------------------------|--|-----------------|--|
| CASE CODE | DIAMETER | | LENGTH | | CASE CODE | DIAMETER | | LENGTH | |
| | D + 0.039 / - 0 (+ 1.0 / - 0) | | L ± 0.079 (2.0) | | | D + 0.039 / - 0 (+ 1.0 / - 0) | | L ± 0.079 (2.0) | |
| JA | 1.00 (25.0) | | 1.00 (25.0) | | KD | 1.18 (30.0) | | 1.57 (40.0) | |
| JB | 1.00 (25.0) | | 1.18 (30.0) | | KE | 1.18 (30.0) | | 2.00 (50.0) | |
| JC | 1.00 (25.0) | | 1.38 (35.0) | | MB | 1.38 (35.0) | | 1.18 (30.0) | |
| JD | 1.00 (25.0) | | 1.57 (40.0) | | MC | 1.38 (35.0) | | 1.38 (35.0) | |
| JE | 1.00 (25.0) | | 2.00 (50.0) | | MD | 1.38 (35.0) | | 1.57 (40.0) | |
| KA | 1.18 (30.0) | | 1.00 (25.0) | | ME | 1.38 (35.0) | | 2.00 (50.0) | |
| KB | 1.18 (30.0) | | 1.18 (30.0) | | MF | 1.38 (35.0) | | 2.50 (63.0) | |
| KC | 1.18 (30.0) | | 1.38 (35.0) | | MG | 1.38 (35.0) | | 3.18 (80.0) | |

DIMENSIONAL AND AVAILABLE FORMS
STYLE D

ORDERING EXAMPLE

Electrolytic capacitor 80D series: 80D122P200ME2DE3

| DESCRIPTION | |
|-------------|------------------------------------|
| CODE | EXPLANATION |
| 80D | Product type |
| 122 | Capacitance value (1200 μ F) |
| P | Tolerance (P = -10 % / +30 %) |
| 200 | Voltage rating at 85 °C (200 V) |
| ME | Can size (see dimensions table) |
| 2 | PVC insulating sleeve |
| D | Terminal style (D = 2 pin snap-in) |
| E3 | RoHS compliant |

| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | |
|---|------------------|----------------------------|------------------------|------------------|---------------------------|------------------|
| CAPACITANCE (μ F) | PART NUMBER | NOMINAL CASE SIZE D x L | MAX. ESR (m Ω) | | MAX. RIPPLE AT +85 °C (A) | |
| | | | 120 Hz | 10 kHz TO 40 kHz | 120 Hz | 10 kHz TO 40 kHz |
| 16 WV_{DC} AT +85 °C, SURGE = 20 V | | | | | | |
| 8200.0 | 80D822P016JB2DE3 | 0.984 x 1.18 (25.0 x 30.0) | 73.0 | 65.0 | 3.3 | 3.6 |
| 8200.0 | 80D822P016KA2DE3 | 1.18 x 0.984 (30.0 x 25.0) | 91.0 | 84.0 | 2.8 | 3.0 |
| 10 000.0 | 80D103P016JC2DE3 | 0.984 x 1.38 (25.0 x 35.0) | 59.0 | 53.0 | 3.9 | 4.2 |
| 15 000.0 | 80D153P016JE2DE3 | 0.984 x 1.97 (25.0 x 50.0) | 37.0 | 33.0 | 5.6 | 6.0 |
| 22 000.0 | 80D223P016KE2DE3 | 1.18 x 1.97 (30.0 x 50.0) | 35.0 | 32.0 | 5.8 | 6.1 |
| 33 000.0 | 80D333P016ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 19.0 | 17.0 | 9.4 | 10.0 |
| 25 WV_{DC} AT +85 °C, SURGE = 30 V | | | | | | |
| 4700.0 | 80D472P025JB2DE3 | 0.984 x 1.18 (25.0 x 30.0) | 76.0 | 65.0 | 3.2 | 3.6 |
| 6800.0 | 80D682P025KB2DE3 | 1.18 x 1.18 (30.0 x 30.0) | 71.0 | 63.0 | 3.4 | 3.6 |
| 10 000.0 | 80D103P025JE2DE3 | 0.984 x 1.97 (25.0 x 50.0) | 39.0 | 33.0 | 5.4 | 6.0 |
| 10 000.0 | 80D103P025MB2DE3 | 1.38 x 1.18 (35.0 x 30.0) | 38.0 | 33.0 | 5.5 | 6.2 |
| 15 000.0 | 80D153P025KE2DE3 | 1.18 x 1.97 (30.0 x 50.0) | 36.0 | 32.0 | 5.7 | 6.1 |
| 22 000.0 | 80D223P025ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 19.0 | 17.0 | 9.1 | 10.0 |



| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | |
|---|------------------|-----------------------------|---------------|------------------|---------------------------|------------------|
| CAPACITANCE (μF) | PART NUMBER | NOMINAL CASE SIZE D x L | MAX. ESR (mΩ) | | MAX. RIPPLE AT +85 °C (A) | |
| | | | 120 Hz | 10 kHz TO 40 kHz | 120 Hz | 10 kHz TO 40 kHz |
| 35 WV_{DC} AT +85 °C, SURGE = 44 V | | | | | | |
| 6800.0 | 80D682P035KC2DE3 | 1.18 x 1.38 (30.0 x 35.0) | 60.0 | 51.0 | 3.8 | 4.2 |
| 10 000.0 | 80D103P035MC2DE3 | 1.38 x 1.38 (35.0 x 35.0) | 33.0 | 27.0 | 6.2 | 7.2 |
| 12 000.0 | 80D123P035KE2DE3 | 1.18 x 1.97 (30.0 x 50.0) | 33.0 | 27.0 | 6.2 | 7.2 |
| 15 000.0 | 80D153P035ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 20.0 | 17.0 | 8.8 | 10.0 |
| 50 WV_{DC} AT +85 °C, SURGE = 63 V | | | | | | |
| 3300.0 | 80D332P050JD2DE3 | 0.984 x 1.57 (25.0 x 40.0) | 57.0 | 42.0 | 3.9 | 4.9 |
| 3300.0 | 80D332P050KB2DE3 | 1.18 x 1.18 (30.0 x 30.0) | 79.0 | 63.0 | 3.1 | 3.6 |
| 4700.0 | 80D472P050KD2DE3 | 1.18 x 1.57 (30.0 x 40.0) | 51.0 | 41.0 | 4.3 | 4.9 |
| 6800.0 | 80D682P050KE2DE3 | 1.18 x 1.97 (30.0 x 50.0) | 40.0 | 32.0 | 5.3 | 6.1 |
| 63 WV_{DC} AT +85 °C, SURGE = 79 V | | | | | | |
| 1500.0 | 80D152P063JB2DE3 | 0.984 x 1.18 (25.0 x 30.0) | 82.0 | 55.0 | 2.8 | 3.8 |
| 2200.0 | 80D222P063KB2DE3 | 1.18 x 1.18 (30.0 x 30.0) | 72.0 | 54.0 | 3.2 | 3.9 |
| 3300.0 | 80D332P063MB2DE3 | 1.38 x 1.18 (35.0 x 30.0) | 40.0 | 28.0 | 5.0 | 6.6 |
| 4700.0 | 80D472P063KE2DE3 | 1.18 x 1.97 (30.0 x 50.0) | 36.0 | 28.0 | 5.4 | 6.4 |
| 6800.0 | 80D682P063ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 21.0 | 15.0 | 8.3 | 10.0 |
| 100 WV_{DC} AT +85 °C, SURGE = 125 V | | | | | | |
| 680.0 | 80D681P100JB2DE3 | 0.984 x 1.18 (25.0 x 30.0) | 139.0 | 85.0 | 2.2 | 3.5 |
| 1000.0 | 80D102P100KB2DE3 | 1.18 x 1.18 (30.0 x 30.0) | 111.0 | 74.0 | 2.7 | 3.7 |
| 1500.0 | 80D152P100JE2DE3 | 0.984 x 1.97 (25.0 x 50.0) | 68.0 | 42.0 | 3.9 | 5.9 |
| 2200.0 | 80D222P100KE2DE3 | 1.18 x 1.97 (30.0 x 50.0) | 55.0 | 37.0 | 4.7 | 6.2 |
| 3300.0 | 80D332P100ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 50.0 | 37.0 | 5.2 | 6.2 |
| 200 WV_{DC} AT +85 °C, SURGE = 250 V | | | | | | |
| 150.0 | 80D151P200JA2DE3 | 0.984 x 0.984 (25.0 x 25.0) | 660.0 | 375.0 | 1.3 | 3.2 |
| 220.0 | 80D221P200KA2DE3 | 1.18 x 0.984 (30.0 x 25.0) | 460.0 | 272.0 | 1.7 | 3.6 |
| 330.0 | 80D331P200KC2DE3 | 1.18 x 1.38 (30.0 x 35.0) | 278.0 | 165.0 | 2.4 | 4.9 |
| 470.0 | 80D471P200KD2DE3 | 1.18 x 1.57 (30.0 x 40.0) | 220.0 | 131.0 | 2.8 | 5.7 |
| 680.0 | 80D681P200KD2DE3 | 1.18 x 1.57 (30.0 x 40.0) | 248.0 | 127.0 | 2.1 | 4.7 |
| 820.0 | 80D821P200ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 130.0 | 82.0 | 4.3 | 7.4 |
| 1000.0 | 80D102P200ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 144.0 | 81.0 | 3.4 | 6.6 |
| 1200.0 | 80D122P200ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 141.0 | 75.0 | 3.4 | 6.6 |
| 250 WV_{DC} AT +85 °C, SURGE = 300 V | | | | | | |
| 100.0 | 80D101P250JA2DE3 | 0.984 x 0.984 (25.0 x 25.0) | 720.0 | 377.0 | 1.1 | 3.2 |
| 150.0 | 80D151P250JB2DE3 | 0.984 x 1.18 (25.0 x 30.0) | 541.0 | 284.0 | 1.4 | 3.8 |
| 220.0 | 80D221P250JD2DE3 | 0.984 x 1.57 (25.0 x 40.0) | 343.0 | 182.0 | 2.0 | 5.2 |
| 330.0 | 80D331P250JE2DE3 | 0.984 x 1.97 (25.0 x 50.0) | 263.0 | 140.0 | 2.5 | 6.3 |
| 470.0 | 80D471P250KE2DE3 | 1.18 x 1.97 (30.0 x 50.0) | 185.0 | 101.0 | 3.2 | 7.0 |
| 680.0 | 80D681P250ME2DE3 | 1.38 x 1.97 (35.0 x 50.0) | 191.0 | 81.0 | 4.0 | 7.4 |

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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