

# 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](http://www.vishay.com/doc?99912)


RoHS  
COMPLIANT

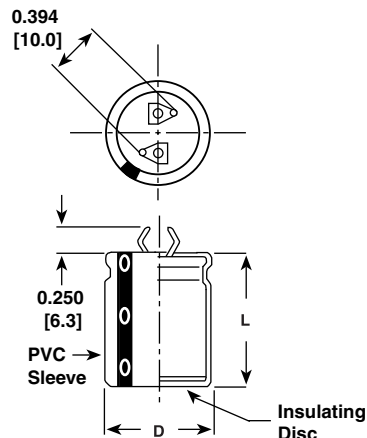
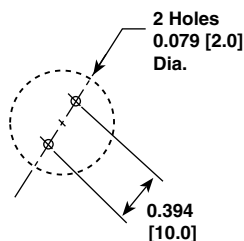
| QUICK REFERENCE DATA                        |                                                                                                                      |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| DESCRIPTION                                 | VALUE                                                                                                                |
| Nominal case size<br>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 <sub>R</sub>     | 82 µF to 56 000 µF                                                                                                   |
| Tolerance on C <sub>R</sub>                 | -10 %, +30 %                                                                                                         |
| Rated voltage range, U <sub>R</sub>         | 6.3 WV <sub>DC</sub> to 250 WV <sub>DC</sub>                                                                         |
| Termination                                 | Snap mount                                                                                                           |
| Life validation test<br>2000 h at 85 °C     | ΔCAP ≤ 15 % from initial measurement.<br>ΔESR ≤ 1.5 x initial specified limit.<br>ΔDCL ≤ initial specified limit     |
| Shelf life<br>500 h at 85 °C                | ΔCAP ≤ 15 % from initial measurement.<br>ΔESR ≤ 1.3 x initial specified limit.<br>ΔDCL ≤ 2 x initial specified limit |
| DC leakage current                          | $I = k\sqrt{CV}$<br>k = 4.0 at +25 °C<br>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 <sub>DC</sub>                        | 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<br>(25.0) | 1.18<br>(30.0) | 1.38<br>(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 $\mu$ 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 (μF)                            | PART NUMBER      | NOMINAL CASE SIZE<br>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 |
| 16 WV <sub>DC</sub> 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 <sub>DC</sub> 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<br>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 <sub>DC</sub> 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 <sub>DC</sub> 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 <sub>DC</sub> 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 <sub>DC</sub> 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 <sub>DC</sub> 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 <sub>DC</sub> 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              |



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- Подбор аналогов;
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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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