

## 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 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 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 <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 (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 $\mu$ 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 ( $\mu$ F)	PART NUMBER	NOMINAL CASE SIZE D x L	MAX. ESR (m $\Omega$ )		MAX. RIPPLE AT +85 °C (A)	
			120 Hz	10 kHz TO 40 kHz	120 Hz	10 kHz TO 40 kHz
<b>16 WV<sub>DC</sub> AT +85 °C, SURGE = 20 V</b>						
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
<b>25 WV<sub>DC</sub> AT +85 °C, SURGE = 30 V</b>						
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



<b>ELECTRICAL DATA AND ORDERING INFORMATION</b>						
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
<b>35 WV<sub>DC</sub> AT +85 °C, SURGE = 44 V</b>						
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
<b>50 WV<sub>DC</sub> AT +85 °C, SURGE = 63 V</b>						
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
<b>63 WV<sub>DC</sub> AT +85 °C, SURGE = 79 V</b>						
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
<b>100 WV<sub>DC</sub> AT +85 °C, SURGE = 125 V</b>						
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
<b>200 WV<sub>DC</sub> AT +85 °C, SURGE = 250 V</b>						
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
<b>250 WV<sub>DC</sub> AT +85 °C, SURGE = 300 V</b>						
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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