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

Pb-free

e3

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	ΔCAP ≤ 15 % from initial measurement. ΔESR ≤ 1.5 x initial specified limit. ΔDCL ≤ initial specified limit
Shelf life 500 h at 85 °C	ΔCAP ≤ 15 % from initial measurement. ΔESR ≤ 1.3 x initial specified limit. ΔDCL ≤ 2 x 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

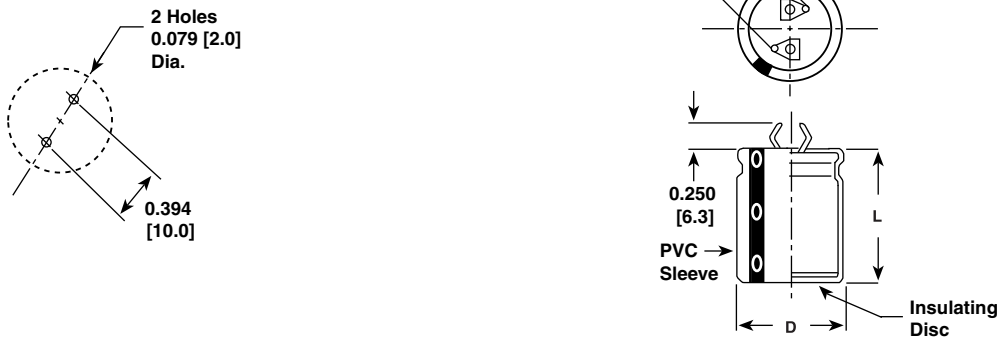
TEMPERATURE			
AMBIENT TEMPERATURE	**MULTIPLIERS**		
-55 °C -65 °C -75 °C -85 °C	2.0 1.7 1.4 1.0		
FREQUENCY (Hz)			
WV_{DC}	**50 TO 60**	**300 TO 1000**	**1000 AND UP**
0 to 49 50 to 199 200 to 250	0.85 0.83 0.80	1.10 1.15 1.30	1.15 1.20 1.40
ESL (TYPICAL VALUES AT 1 MHz TO 10 MHz)			
Nominal Diameter	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 µF)
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 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_{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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