

Aluminum Capacitors

+ 85 °C, Snap-in, General Purpose

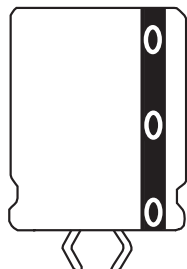


Fig.1 Component Outlines.

FEATURES

- Maximum CV
- General purpose design
- Wide voltage range
- Molded cover available in 2 or 3 terminal design with standoffs
- Replaces Type 82D



QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Nominal case size ØD x L in mm	0.87" x 1.00" [22.0 x 25.0] to 1.57" x 3.18" [40.0 x 80.0]
Operating temperature	- 40 °C to + 85 °C
Rated capacitance range, C _R	33 µF to 270 000 µF
Tolerance on C _R	± 20 %
Rated voltage range, U _R	6.3 WVDC to 500 WVDC
Termination	Snap in
Life validation test at 85 °C	2000 hours: Δ CAP ≤ 15 % from initial measurement. Δ ESR ≤ 1.5 x initial specified limit. Δ DCL ≤ initial specified limit
Shelf life at 85 °C	500 hours: Δ CAP ≤ 15 % from initial measurement. Δ ESR ≤ 1.3 x initial specified limit. Δ DCL ≤ 2 x initial specified limit
DC leakage current 5 minute charge time	$I = K\sqrt{CV}$ K = 4.0 at + 25 °C I in µA, C in µF, V in Volts

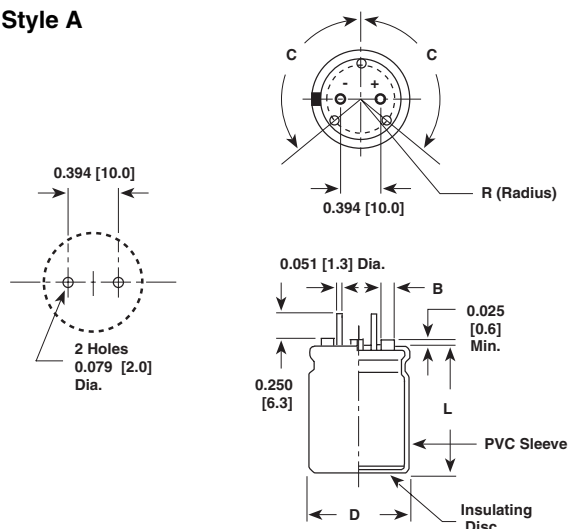
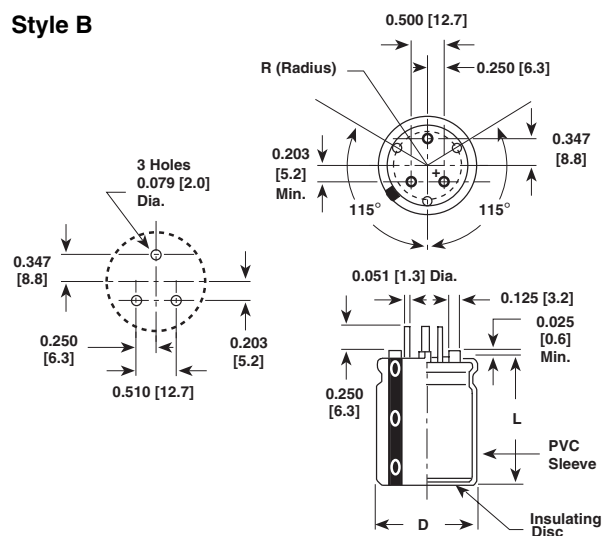
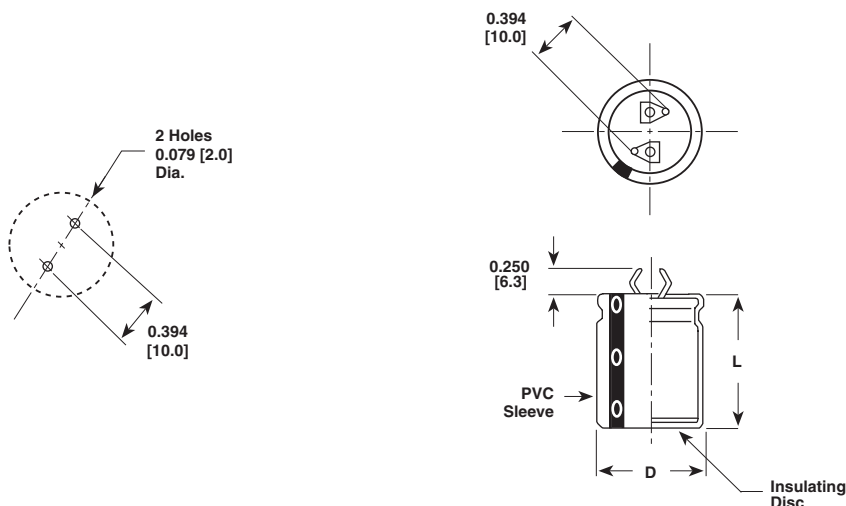
RIPPLE CURRENT MULTIPLIERS			
TEMPERATURE			
AMBIENT TEMPERATURE		MULTIPLIERS	
+ 55 °C		2.0	
+ 65 °C		1.7	
+ 75 °C		1.4	
+ 85 °C		1.0	
FREQUENCY (Hz)			
WVDC	50-60	300 - 1000	1000 AND UP
16 - 49	0.85	1.10	1.15
50 - 199	0.83	1.15	1.20
200 - 400	0.80	1.30	1.40

DIMENSIONS in inches [millimeters]							
CASE CODE	DIAMETER	LENGTH	STYLE 2 TYPICAL WEIGHT (Grams)	CASE CODE	DIAMETER	LENGTH	STYLE 2 TYPICAL WEIGHT (Grams)
	D + 0.04 - 0 [+ 1.0 - 0]	L ± 0.08 [2.0]			D + 0.04 - 0 [+ 1.0 - 0]	L ± 0.08 [2.0]	
HA	0.87 [22.0]	1.00 [25.0]	16.0	MB	1.38 [35.0]	1.18 [30.0]	48.0
HB	0.87 [22.0]	1.18 [30.0]	19.0	MC	1.38 [35.0]	1.38 [35.0]	54.0
HD	0.87 [22.0]	1.57 [40.0]	24.0	MD	1.38 [35.0]	1.57 [40.0]	61.0
JA	1.00 [25.0]	1.00 [25.0]	20.0	ME	1.38 [35.0]	2.00 [50.0]	74.0
JB	1.00 [25.0]	1.18 [30.0]	24.0	MF	1.38 [35.0]	2.50 [63.0]	91.0
JC	1.00 [25.0]	1.38 [35.0]	27.0	MG	1.38 [35.0]	3.18 [80.0]	113.0
JD	1.00 [25.0]	1.57 [40.0]	31.0	NA	1.58 [40.0]	1.00 [25.0]	48.0
JE	1.00 [25.0]	2.00 [50.0]	38.0	NB	1.58 [40.0]	1.18 [30.0]	58.0
KA	1.18 [30.0]	1.00 [25.0]	30.0	NC	1.58 [40.0]	1.38 [35.0]	66.0
KB	1.18 [30.0]	1.18 [30.0]	35.0	ND	1.58 [40.0]	1.57 [40.0]	81.0
KC	1.18 [30.0]	1.38 [35.0]	39.0	NE	1.58 [40.0]	2.00 [50.0]	103.0
KD	1.18 [30.0]	1.57 [40.0]	44.0	NF	1.58 [40.0]	2.50 [63.0]	128.0
KE	1.18 [30.0]	2.00 [50.0]	53.0	NG	1.58 [40.0]	3.18 [80.0]	183.0

DIMENSIONS in inches [millimeters]**CIRCUIT BOARD MOUNT TERMINAL DIMENSIONS***

DIAMETER		STYLE A			STYLE B
D	CASE CODE	B	R	C	R
1.00 [25.0]	J	0.093 [2.4]	0.301 [7.6]	140 °	N/A
1.18 [30.0]	K	0.125 [3.2]	0.363 [9.2]	120 °	0.391 [9.9]
1.38 [35.0]	M	0.125 [3.2]	0.458 [11.6]	120 °	0.458 [11.6]

*Style A and B not available in 0.87" [22.0mm] diameter units.

DIMENSIONS AND AVAILABLE FORMS**Style A****Style B****Style D**

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Vishay Sprague

TERMINAL CONFIGURATION [numbers in brackets indicate millimeters]					
LEAD CODE	DESCRIPTION	OUTLINE DRAWINGS		AVAILABLE DIAMETERS	AVAILABLE VOLTAGES AND TYPES
		MOUNTING CONFIGURATION	TERMINAL CONFIGURATION		
D	Standard 2 pin snap in			0.87 [22.0] - H 0.98 [25.0] - J 1.18 [30.0] - K 1.38 [35.0] - M	All voltages 81D, 81DA 82D, 82DA
A	2 straight wire lead molded cover with standoffs			0.98 [25.0] - J 1.18 [30.0] - K 1.38 [35.0] - M	All voltages 82D, 82DA V < = 250 VDC 81D, 81DA
B	3 straight wire lead molded cover with standoffs			1.18 [30.0] - K 1.38 [35.0] - M	All voltages 82D, 82DA V < = 250 VDC 81D, 81DA

ELECTRICAL DATA	
SYMBOL	DESCRIPTION
μF	rated capacitance
$\pm \%$	M = $\pm 20 \%$
DC	voltage rating at 85° C
HA	see dimensions in millimeters table
2	PVC insulating sleeve
D	2 pin snap-in

ORDERING EXAMPLE*

Electrolytic capacitor 82DA series

82DA 123 M 6R3 HA 2 D

*Note: For lead (Pb)-free, add suffix E3 to part number.

Example: 82DAM6R3HA2DE3

ELECTRICAL DATA AND ORDERING INFORMATION						
CAPACITANCE (μF)	PART NUMBER	NOMINAL CASE SIZE D X L	MAX. ESR at 25 °C (mΩ)		MAX. RIPPLE at + 85 °C (A)	
			120 Hz	20 k - 40 kHz	120 Hz	20 k - 40 kHz
16 WVDC at + 85 °C, SURGE = 20 V						
15000.0	82DA153M016KA2D	1.181 x 0.984 [30.0 x 25.0]	67.7	54.0	3.07	3.47
25 WVDC at + 85 °C, SURGE = 30 V						
6800.0	82DA682M025HB2D	0.866 x 1.181 [22.0 x 30.0]	73.5	56.1	2.57	2.94
6800.0	82DA682M025JA2D	0.984 x 0.984 [25.0 x 25.0]	83.8	60.0	2.48	2.93
10000.0	82DA103M025KA2D	1.181 x 0.984 [30.0 x 25.0]	71.0	54.0	3.00	3.47
35 WVDC at + 85 °C, SURGE = 40 V						
2700.0	82DA272M035HA2D	0.866 x 0.984 [22.0 x 25.0]	120.0	87.4	1.91	2.24
4700.0	82DA472M035JA2D	0.984 x 0.984 [25.0 x 25.0]	89.0	62.0	2.42	2.86
6800.0	82DA682M035KA2D	1.181 x 0.984 [30.0 x 25.0]	75.0	540.0	2.92	3.42
10000.0	82DA103M035KB2D	1.181 x 1.181 [30.0 x 30.0]	57.0	41.0	3.60	4.20
50 WVDC at + 85 °C, SURGE = 63 V						
2200.0	82DA222M050HA2D	0.866 x 0.984 [22.0 x 25.0]	115.0	76.0	1.94	2.39
3300.0	82DA332M050HB2D	0.866 x 1.181 [22.0 x 30.0]	86.0	57.0	2.38	2.92
6800.0	82DA682M050JD2D	0.984 x 1.575 [25.0 x 40.0]	47.0	31.0	3.91	4.96
200 WVDC at + 85 °C, SURGE = 250V						
330.0	82DA331M200JB2D	0.984 x 1.181 [25.0 x 30.0]	401.0	191.0	1.28	1.86
820.0	82DA821M200KD2D	1.181 x 1.575 [30.0 x 40.0]	180.0	87.0	2.36	3.41
1000.0	82DA102M200KE2D	1.181 x 1.969 [30.0 x 50.0]	142.0	67.0	2.89	4.22
1200.0	82DA122M200MD2D	1.378 x 1.575 [35.0 x 40.0]	147.0	74.0	2.89	4.06
250 WVDC at + 85 °C, SURGE = 300V						
220.0	82DA221M250HD2D	0.866 x 1.575 [22.0 x 40.0]	558.0	166.0	1.12	2.12

Note: Other ratings and voltages available on special order.