Aluminum Capacitors
+ 105 °C, Snap-In

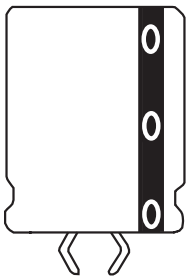


Fig.1 Component Outlines

FEATURES

- Improved performance
- Operating temperature to + 105 °C
- High ripple current capability
- Low ESR
- Replaces type 81D

Pb-free Available

QUICK REFERENCE DATA

DESCRIPTION	VALUE
Noal case size ØD x L in mm	0.87" x 1.00" (22.0 x 25.0) to 1.38" x 3.18" (35.0 x 80.0)
Operating temperature	- 40 °C to + 105 °C
Rated capacitance range, C_R	47 µF to 180 000 µF
Tolerance on C_R	± 20 %
Rated voltage range, U_R	6.3 WVDC to 400 WVDC
Termination	Snap in
Life validation test at 105 °C	2000 h: 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 h: 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 min 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	1.5
+ 65 C	1.34
+ 75 °C	1.2
+ 85 °C	1.0
+ 95 °C	0.77
+ 105 °C	0.45

FREQUENCY (Hz)			
WVDC	**50 TO 60**	**300 TO 1000**	**1000 AND UP**
0 - 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)

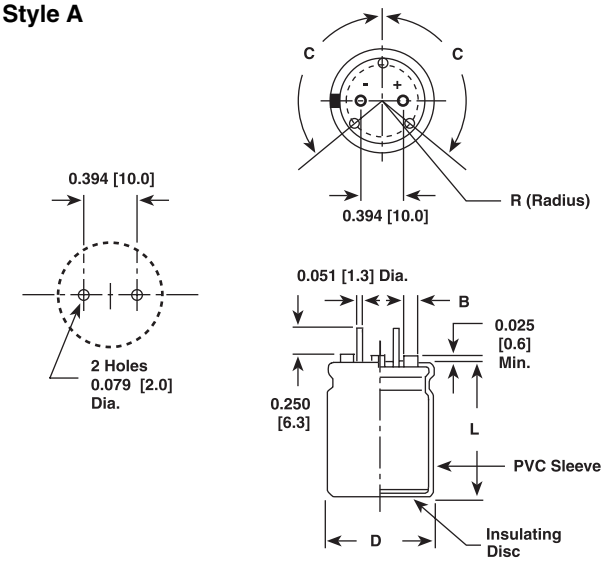
CASE CODE	DIAMETER	LENGTH	STYLE 2 TYPICAL WEIGHT (g)	CASE CODE	DIAMETER	LENGTH	STYLE 2 TYPICAL WEIGHT (g)
	D + 0.04 - 0 (+ 1.0 - 0)	L ± 0.08 (2.0)			D + 0.04 - 0 (+ 1.0 - 0)	L ± 0.08 (2.0)	
HA	0.87 (22.0)	1.00 (25.0)	16.0	MB	1.38 (35.0)	1.18 (30.0)	48.0
HB	0.87 (22.0)	1.18 (30.0)	19.0	MC	1.38 (35.0)	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 (1)					
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)

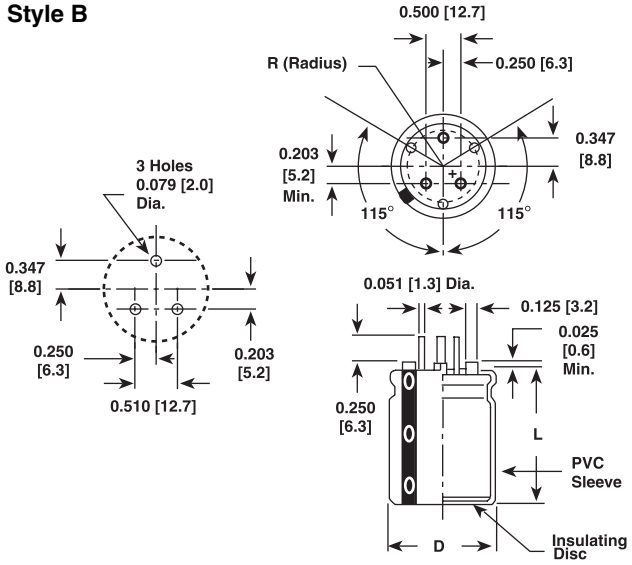
Note
(1) Style A and B not available in 0.87" (22.0 mm) diameter units

DIMENSIONS AND AVAILABLE FORMS

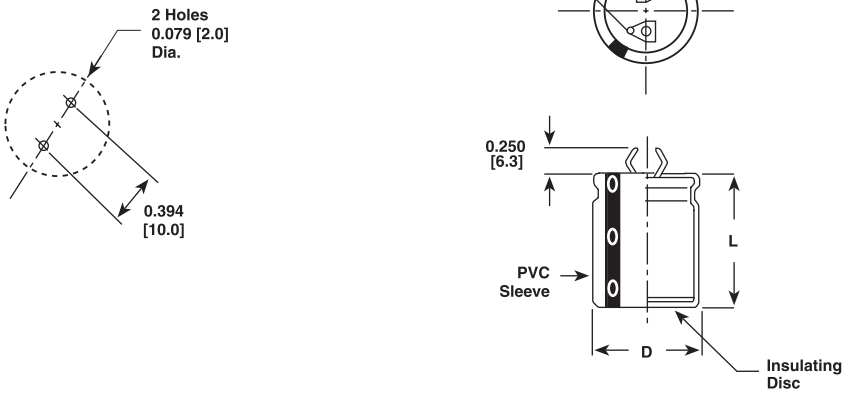
Style A

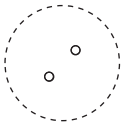
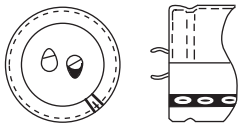
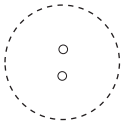
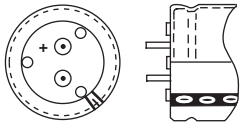
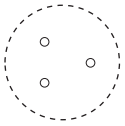
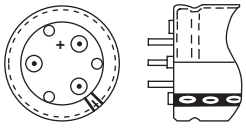


Style B



Style D



TERMINAL CONFIGURATION in inches (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

ORDERING EXAMPLE

Electrolytic capacitor 81DA series: 81DA 271 M 250 HD 2 D E3

DESCRIPTION	
CODE	**EXPLANATION**
81DA	product type
271	capacitance value (270 µF)
M	tolerance (M = ± 20 %)
250	voltage rating at 105 °C (250 V)
HD	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 at 25 °C (mΩ)**		**MAX. RIPPLE at + 85 °C (A)**	
			120 Hz	**20 to 40 kHz**	**120 Hz**	**20 to 40 kHz**
25 WVDC at + 105 °C, SURGE = 30 V						
10 000.0	81DA103M025JC2D	0.984 x 1.378 (25.0 x 35.0)	48.9	37.2	5.16	6.64
15 000.0	81DA153M025KC2D	1.181 x 1.378 (30.0 x 35.0)	42.2	33.0	6.17	7.30
35 WVDC at + 105 °C, SURGE = 40 V						
4700.0	81DA472M035JA2D	0.984 x 0.984 (25.0 x 25.0)	83.3	60.3	3.53	4.76
10 000.0	81DA103M035KB2D	1.181 x 1.181 (30.0 x 30.0)	53.4	41.0	5.19	5.94
50 WVDC at + 105 °C, SURGE = 63 V						
6800.0	81DA682M050KC2D	1.181 x 1.378 (30.0 x 50.0)	47.5	33.0	5.82	7.05
200 WVDC at + 105 °C, SURGE = 250V						
330.0	81DA331M200JB2D	0.984 x 1.181 (25.0 x 30.0)	399.3	184.4	1.81	2.67
820.0	81DA821M200KD2D	1.181 x 1.575 (30.0 x 40.0)	175.4	85.5	3.37	4.84
250 WVDC at + 105 °C, SURGE = 300V						
270.0	81DA271M250HD2D	0.866 x 1.575 (22.0 x 40.0)	408.9	159.5	1.83	2.93
560.0	81DA561M250MB2D	1.378 x 1.181 (35.0 x 30.0)	254.0	113.0	2.82	4.23

Note

• Other ratings and voltages available on special order

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