

81DA Series



- Snap Mount
- +105°C General Purpose
- High Ripple Current
- High Capacitance



The 81DA series has a high ripple current capability giving the advantage to SMPS input filter circuits. Along with high ripple currents and low ESR's, the 81DA operates in a temperature range from -40°C to $+105^{\circ}\text{C}$. For very high capacitance requirements, these capacitors are available in case sizes up to $40 \times 80 \text{ mm}$. Options include four terminal configurations, depending on case size, including the standard 2-pin snap-in.

The standard 81DA capacitors are non-solvent proof and are not recommended when halogenated cleaning solvents are used. If solvent proof capacitors are required, this series is offered with an optional epoxy end-seal. Refer to the Mini-Glossary for recommended cleaning conditions.

For new designs, refer to the KMH series.

Summary of Specifications

- PC board 2-terminal snap-in; optional 3, 4, or 5 straight standoff pin terminals.
- Capacitance range: 56 to $270,000\mu\text{F}$.
- Voltage range: 6.3 to 400VDC.
- Operating temperature range: -40°C to $+105^{\circ}\text{C}$.
- Leakage current in μA : $I = K\sqrt{CV}$: $K = 4.0$ at $+25^{\circ}\text{C}$ after 5 minutes.
- Standard capacitance tolerance: $\pm 20\%$
- Nominal case size (D \times L): $22 \times 25 \text{ mm}$ to $40 \times 80 \text{ mm}$.
- Rated lifetime: 2,000 hours at $+105^{\circ}\text{C}$.

81DA Series

81DA Specifications

Item	Characteristics																												
Operating Temperature Range	− 40 to +105°C																												
Rated Voltage Range	6.3 to 400VDC																												
Capacitance Range	56 to 270,000μF at +25°C, 120Hz																												
Capacitance Tolerance	± 20% (M) at +25°C, 120Hz																												
Leakage Current	$I = K\sqrt{CV}$: K = 4.0 at +25°C after 5 minutes. Where I = Leakage current (μA), C = Nominal capacitance (μF) and V = Rated voltage (V)																												
Ripple Current Multipliers	<div>Ambient Temperature (°C)</div> <table><tr><td>+55°C</td><td>+65°C</td><td>+75°C</td><td>+85°C</td><td>+95°C</td><td>+105°C</td></tr><tr><td>1.50</td><td>1.34</td><td>1.20</td><td>1.00</td><td>0.77</td><td>0.45</td></tr></table> <div>Frequency (Hz)</div> <table><tr><td>DC Rated Voltage</td><td>50-60Hz</td><td>300-1kHz</td><td>>1kHz</td></tr><tr><td>0-49V</td><td>0.85</td><td>1.10</td><td>1.15</td></tr><tr><td>50-199V</td><td>0.83</td><td>1.15</td><td>1.20</td></tr><tr><td>200-400V</td><td>0.80</td><td>1.30</td><td>1.40</td></tr></table>	+55°C	+65°C	+75°C	+85°C	+95°C	+105°C	1.50	1.34	1.20	1.00	0.77	0.45	DC Rated Voltage	50-60Hz	300-1kHz	>1kHz	0-49V	0.85	1.10	1.15	50-199V	0.83	1.15	1.20	200-400V	0.80	1.30	1.40
+55°C	+65°C	+75°C	+85°C	+95°C	+105°C																								
1.50	1.34	1.20	1.00	0.77	0.45																								
DC Rated Voltage	50-60Hz	300-1kHz	>1kHz																										
0-49V	0.85	1.10	1.15																										
50-199V	0.83	1.15	1.20																										
200-400V	0.80	1.30	1.40																										
Life Validation Test	<p>The following specifications shall be satisfied when the capacitors are restored to +25°C after subjecting them to the DC rated voltage for 2,000 hours at +105°C.</p> <p>Capacitance change: ≤ 15% from initial measurement ESR change : ≤ 1.5 × initial specified limit Leakage current : ≤ initial specified limit</p>																												
Shelf Test	<p>The following specifications shall be satisfied when the capacitors are restored to +25°C after exposing them for 500 hours at +85°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.</p> <p>Capacitance change: ≤ 15% from initial measurement ESR change : ≤ 1.3 × initial specified limit Leakage current : ≤ 2 × initial specified limit</p>																												

Part Numbering System for 81DA Series

When ordering, always specify complete catalog number for 81DA Series.

81DA	102	M	250	ME	2	D	
							Lead Code: D = 2 - Pin Snap-in (Standard). See diagrams for optional terminal configurations.
							Case Style: 2 = PVC Sleeve.
							Case Code: See Dimensions in Ratings Tables.
							DC Rated Voltage: Expressed in Volts. Zero proceeds the voltage rating when less than 100 volts. An R indicates a decimal point (e.g. 6R3 = 6.3V).
							Capacitance Tolerance: M = ±20%
							Capacitance Value: Expressed in Microfarads. The first two digits are significant figures, the third digit indicates the number of zeros.
							Series Name: Indicates Basic Capacitor Design.

81DA
SNAP MOUNT - 105°C

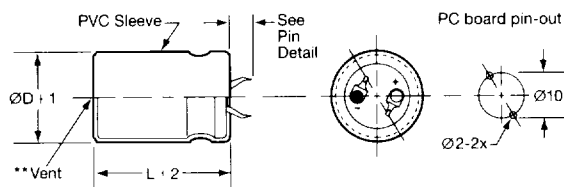
81DA Series

Diagram of Dimensions

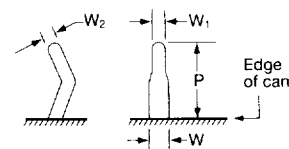
Snap Mount

Unit (mm)

Types D & T $\varnothing D = \varnothing 22 \sim \varnothing 35$

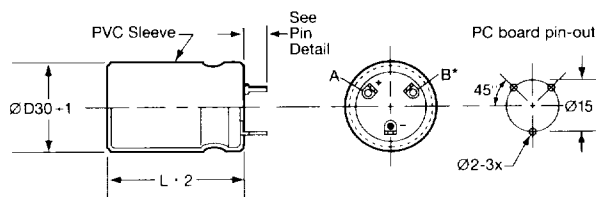


D & T Pin Dimensions

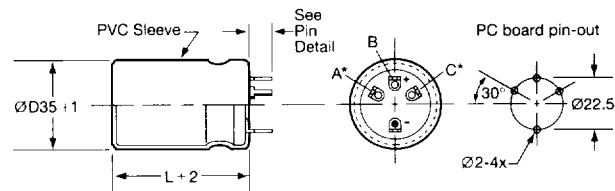


Type	P	W	W ₁	W ₂
D	5.8 ± 1.0	1.5 ± 0.2	1.0 ± 0.1	1.0 ± 0.1
T	4.0 ± 0.5			

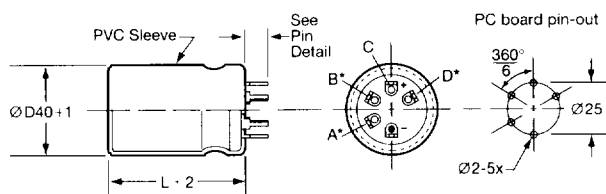
Type G $\varnothing D = \varnothing 30$



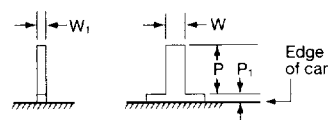
Type H $\varnothing D = \varnothing 35$



Type F $\varnothing D = \varnothing 40$



G, H, & F Standoff Pin Dimensions



Type	P	P ₁	W	W ₁
G, H, F	3.75 ± 0.1	0.6 min.	1.5 ± 0.1	0.7

CAUTION:

* Use the blank terminals for mechanical support only. The blank terminals must not be connected to a solder trace on the PC board, but be electrically isolated from the negative or positive terminal.

**Vent may be located either on the bottom or side of the can.

Dimensions

Case Code	Millimeters		Inches		Typical Weight (grams)
	D+1.0	L±2.0	D+0.04	L±0.08	
HA	22	25	0.87	1.00	16
HB	22	30	0.87	1.18	19
HD	22	40	0.87	1.57	24
JA	25	25	1.00	1.00	20
JB	25	30	1.00	1.18	24
JC	25	35	1.00	1.38	27
JD	25	40	1.00	1.57	31
JE	25	50	1.00	2.00	38
KA	30	25	1.18	1.00	30
KB	30	30	1.18	1.18	35
KC	30	35	1.18	1.38	39
KD	30	40	1.18	1.57	44
KE	30	50	1.18	2.00	53

Case Code	Millimeters		Inches		Typical Weight (grams)
	D+1.0	L±2.0	D+0.04	L±0.08	
MB	35	30	1.38	1.18	48
MC	35	35	1.38	1.38	54
MD	35	40	1.38	1.57	61
ME	35	50	1.38	2.00	74
MF	35	63	1.38	2.50	91
MG	35	80	1.38	3.18	113
NA	40	25	1.58	1.00	48
NB	40	30	1.58	1.18	58
NC	40	35	1.58	1.38	66
ND	40	40	1.58	1.57	81
NE	40	50	1.58	2.00	103
NF	40	63	1.58	2.50	128
NG	40	80	1.58	3.18	183

81DA Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (µF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (mΩ) at +25°C		Maximum Ripple Current (A rms) at +85°C	
				120Hz	20k-40kHz	120Hz	20k-40kHz
6.3 Volts 8 Volts Surge	12,000	81DA123M6R3HA2D	22 × 25	87.0	68.0	3.15	3.57
	18,000	81DA183M6R3HB2D	22 × 30	68.6	54.7	3.76	4.22
	27,000	81DA273M6R3HD2D	22 × 40	44.8	35.9	5.19	5.80
	18,000	81DA183M6R3JA2D	25 × 25	70.6	56.8	3.83	4.20
	27,000	81DA273M6R3JB2D	25 × 30	53.7	43.3	4.65	5.18
	33,000	81DA333M6R3JC2D	25 × 35	43.7	35.3	5.46	6.28
	39,000	81DA393M6R3JD2D	25 × 40	35.5	28.8	6.35	7.05
	56,000	81DA563M6R3JE2D	25 × 50	28.2	22.9	7.83	8.69
	27,000	81DA273M6R3KA2D	30 × 25	57.8	47.3	4.74	5.24
	39,000	81DA393M6R3KB2D	30 × 30	44.2	36.2	5.70	6.30
	47,000	81DA473M6R3KC2D	30 × 35	36.2	29.8	6.67	7.35
	68,000	81DA683M6R3KD2D	30 × 40	29.6	24.4	7.72	8.50
	82,000	81DA823M6R3KE2D	30 × 50	23.7	19.6	9.45	10.39
	56,000	81DA563M6R3MB2D	35 × 30	26.5	21.4	8.21	9.14
	68,000	81DA683M6R3MC2D	35 × 35	21.6	17.5	9.57	10.63
	82,000	81DA823M6R3MD2D	35 × 40	17.6	14.2	11.08	12.33
	120,000	81DA124M6R3ME2D	35 × 50	13.9	11.4	12.20	13.60
	150,000	81DA154M6R3MF2D	35 × 63	11.2	9.2	15.30	16.23
	180,000	81DA184M6R3MG2D	35 × 80	9.1	7.5	18.10	20.10
	56,000	81DA563M6R3NA2F	40 × 25	28.8	23.6	8.23	9.09
	82,000	81DA823M6R3NB2F	40 × 30	22.0	18.1	9.88	10.89
	100,000	81DA104M6R3NC2F	40 × 35	18.0	14.8	10.25	11.30
	120,000	81DA124M6R3ND2F	40 × 40	14.7	12.1	11.83	12.99
	180,000	81DA184M6R3NE2F	40 × 50	11.8	9.8	14.36	15.76
	220,000	81DA224M6R3NF2F	40 × 63	9.6	8.0	17.24	18.88
	270,000	81DA274M6R3NG2F	40 × 80	7.9	6.6	20.86	22.82
10 Volts 12 Volts Surge	10,000	81DA103M010HA2D	22 × 25	92.0	70.0	3.07	3.52
	12,000	81DA123M010HB2D	22 × 30	71.7	55.8	3.68	4.17
	22,000	81DA223M010HD2D	22 × 40	46.7	36.5	5.08	5.75
	15,000	81DA153M010JA2D	25 × 25	73.5	57.0	3.76	4.86
	18,000	81DA183M010JB2D	25 × 30	55.8	43.9	4.57	5.69
	22,000	81DA223M010JC2D	25 × 35	45.4	35.9	5.35	6.68
	27,000	81DA273M010JD2D	25 × 40	36.8	29.2	6.24	7.00
	39,000	81DA393M010JE2D	25 × 50	29.2	23.2	7.70	8.64
	22,000	81DA223M010KA2D	30 × 25	59.5	47.7	4.67	5.22
	27,000	81DA273M010KB2D	30 × 30	45.4	36.5	5.63	6.28
	39,000	81DA393M010KC2D	30 × 35	37.2	30.0	6.58	7.32
	47,000	81DA473M010KD2D	30 × 40	30.4	24.6	7.62	8.47
	56,000	81DA563M010KE2D	30 × 50	24.3	19.7	9.33	10.36
	39,000	81DA393M010MB2D	35 × 30	27.6	21.7	8.05	9.07
	47,000	81DA473M010MC2D	35 × 35	22.4	17.7	9.40	10.57
	56,000	81DA563M010MD2D	35 × 40	18.2	14.4	10.90	12.25
	82,000	81DA823M010ME2D	35 × 50	14.4	11.5	12.10	13.70
	100,000	81DA104M010MF2D	35 × 63	11.6	9.3	14.90	16.90
	150,000	81DA154M010MG2D	35 × 80	9.4	7.6	18.10	19.90
	47,000	81DA473M010NA2F	40 × 25	29.6	23.7	8.12	9.07
	56,000	81DA563M010NB2F	40 × 30	22.6	18.2	9.74	10.86
	68,000	81DA683M010NC2F	40 × 35	18.5	14.9	10.11	11.27
	82,000	81DA823M010ND2F	40 × 40	15.1	12.2	11.67	12.99
	120,000	81DA124M010NE2F	40 × 50	12.1	9.8	14.18	15.76
	150,000	81DA154M010NF2F	40 × 63	9.8	8.0	17.06	18.88
	220,000	81DA224M010NG2F	40 × 80	8.0	6.6	20.73	22.82

*The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

81DA
SNAP MOUNT - 105°C

81DA Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (mΩ) at +25°C		Maximum Ripple Current (A rms) at +85°C	
				120Hz	20k-40kHz	120Hz	20k-40kHz
16 Volts 20 Volts Surge	5,600	81DA562M016HA2D	22 × 25	96.0	71.0	2.92	3.39
	10,000	81DA103M016HB2D	22 × 30	76.4	56.8	3.57	4.14
	15,000	81DA153M016HD2D	22 × 40	49.6	37.1	4.93	5.70
	8,200	81DA822M016JA2D	25 × 25	77.0	58.0	3.65	4.83
	12,000	81DA123M016JB2D	25 × 30	58.9	44.5	4.44	5.66
	15,000	81DA153M016JC2D	25 × 35	47.9	36.3	5.21	6.64
	22,000	81DA223M016JD2D	25 × 40	38.7	29.5	6.08	6.97
	27,000	81DA273M016JE2D	25 × 50	30.6	23.5	7.52	8.58
	12,000	81DA123M016KA2D	30 × 25	62.1	48.0	4.57	5.20
	22,000	81DA223M016KB2D	30 × 30	47.4	36.8	5.51	6.25
	27,000	81DA273M016KC2D	30 × 35	38.7	30.2	6.45	7.30
	33,000	81DA333M016KD2D	30 × 40	31.6	24.7	7.47	8.45
	39,000	81DA393M016KE2D	30 × 50	25.2	19.9	9.16	10.31
	27,000	81DA273M016MB2D	35 × 30	29.1	22.0	7.84	9.01
	33,000	81DA333M016MC2D	35 × 35	23.7	18.0	9.14	10.48
	47,000	81DA473M016MD2D	35 × 40	19.2	14.6	10.61	12.16
	56,000	81DA563M016ME2D	35 × 50	15.1	11.6	12.00	13.80
	68,000	81DA683M016MF2D	35 × 63	12.1	9.4	14.40	16.90
	100,000	81DA104M016MG2D	35 × 80	9.8	7.6	18.00	19.90
	27,000	81DA273M016NA2F	40 × 25	30.9	23.9	7.94	9.03
	33,000	81DA333M016NB2F	40 × 30	23.6	18.3	9.53	10.83
	47,000	81DA473M016NC2F	40 × 35	19.3	15.0	9.90	11.23
	56,000	81DA563M016ND2F	40 × 40	15.7	12.3	11.45	12.93
	68,000	81DA683M016NE2F	40 × 50	12.5	9.9	13.95	15.68
	100,000	81DA104M016NF2F	40 × 63	10.2	8.1	16.72	18.76
	120,000	81DA124M016NG2F	40 × 80	8.3	6.7	20.35	22.65
25 Volts 30 Volts Surge	3,900	81DA392M025HA2D	22 × 25	98.4	72.6	2.96	3.39
	5,600	81DA562M025HB2D	22 × 30	74.2	55.0	3.62	4.14
	8,200	81DA822M025HD2D	22 × 40	48.2	36.0	5.00	5.74
	5,600	81DA562M025JA2D	25 × 25	79.5	60.0	3.61	4.83
	8,200	81DA822M025JB2D	25 × 30	60.2	45.6	4.40	5.66
	10,000	81DA103M025JC2D	25 × 35	48.9	37.2	5.16	6.64
	12,000	81DA123M025JD2D	25 × 40	39.6	30.2	6.01	7.02
	15,000	81DA153M025JE2D	25 × 50	31.2	24.0	7.45	8.58
	8,200	81DA822M025KA2D	30 × 25	68.0	54.0	4.37	5.20
	12,000	81DA123M025KB2D	30 × 30	51.7	41.0	5.27	6.25
	15,000	81DA153M025KC2D	30 × 35	42.2	33.0	6.17	7.30
	18,000	81DA183M025KD2D	30 × 40	34.3	27.0	7.17	8.45
	27,000	81DA273M025KE2D	30 × 50	27.3	22.0	8.80	10.31
	15,000	81DA153M025MB2D	35 × 30	29.9	22.7	7.73	9.01
	18,000	81DA183M025MC2D	35 × 35	24.3	18.5	9.02	10.48
	27,000	81DA273M025MD2D	35 × 40	19.7	15.0	10.47	12.16
	33,000	81DA333M025ME2D	35 × 50	15.5	12.0	12.00	13.90
	47,000	81DA473M025MF2D	35 × 63	12.4	9.6	15.00	17.70
	56,000	81DA563M025MG2D	35 × 80	10.0	7.8	18.00	19.90
	18,000	81DA183M025NA2F	40 × 25	34.1	27.1	7.56	9.03
	22,000	81DA223M025NB2F	40 × 30	25.9	20.7	9.10	10.83
	27,000	81DA273M025NC2F	40 × 35	21.1	16.9	9.47	11.23
	39,000	81DA393M025ND2F	40 × 40	17.2	13.8	10.94	12.93
	47,000	81DA473M025NE2F	40 × 50	13.6	11.0	13.37	15.68
	68,000	81DA683M025NF2F	40 × 63	11.0	8.9	16.10	18.76
	82,000	81DA823M025NG2F	40 × 80	8.9	7.3	19.65	22.65

* The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

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SNAP MOUNT - 105°C

81DA Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (mΩ) at +25°C		Maximum Ripple Current (A rms) at +85°C	
				120Hz	20k-40kHz	120Hz	20k-40kHz
35 Volts 40 Volts Surge	3,300	81DA332M035HA2D	22 × 25	103.8	73.1	2.88	3.44
	3,900	81DA392M035HB2D	22 × 30	78.2	55.3	3.52	4.19
	6,800	81DA682M035HD2D	22 × 40	50.7	36.3	4.88	5.77
	4,700	81DA472M035JA2D	25 × 25	83.3	60.3	3.53	4.76
	5,600	81DA562M035JB2D	25 × 30	63.0	45.8	4.30	5.58
	6,800	81DA682M035JC2D	25 × 35	51.1	37.4	5.05	6.54
	10,000	81DA103M035JD2D	25 × 40	41.3	30.0	5.89	7.19
	12,000	81DA123M035JE2D	25 × 50	32.6	24.0	7.29	8.47
	6,800	81DA682M035KA2D	30 × 25	70.3	54.0	4.30	4.89
	10,000	81DA103M035KB2D	30 × 30	53.4	41.0	5.19	5.94
	12,000	81DA123M035KC2D	30 × 35	43.5	33.0	6.08	7.05
	15,000	81DA153M035KD2D	30 × 40	35.3	27.0	7.07	8.16
	18,000	81DA183M035KE2D	30 × 50	28.1	22.0	8.68	9.81
	12,000	81DA123M035MB2D	35 × 30	31.3	22.8	7.56	8.85
	15,000	81DA153M035MC2D	35 × 35	25.4	18.6	8.82	10.31
	18,000	81DA183M035MD2D	35 × 40	20.5	15.1	10.27	11.96
	27,000	81DA273M035ME2D	35 × 50	16.2	12.0	11.50	13.90
	33,000	81DA333M035MF2D	35 × 63	12.9	9.7	14.50	17.70
	47,000	81DA473M035MG2D	35 × 80	10.3	7.8	17.30	19.90
	12,000	81DA123M035NA2F	40 × 25	35.2	27.0	7.44	8.50
	18,000	81DA183M035NB2F	40 × 30	26.8	20.6	8.95	10.21
	22,000	81DA223M035NC2F	40 × 35	21.8	16.9	9.31	10.58
	27,000	81DA273M035ND2F	40 × 40	17.7	13.8	10.78	12.21
	39,000	81DA393M035NE2F	40 × 50	14.1	11.0	13.13	14.87
	47,000	81DA473M035NF2F	40 × 63	11.3	8.9	15.89	17.90
	68,000	81DA683M035NG2F	40 × 80	9.1	7.3	19.43	21.70
50 Volts 63 Volts Surge	1,800	81DA182M050HA2D	22 × 25	119.0	73.9	2.69	3.42
	2,700	81DA272M050HB2D	22 × 30	89.4	55.9	3.30	4.17
	3,900	81DA392M050HD2D	22 × 40	57.7	36.6	4.57	5.74
	2,700	81DA272M050JA2D	25 × 25	93.9	60.7	3.32	4.74
	3,300	81DA332M050JB2D	25 × 30	70.9	46.2	4.05	5.56
	4,700	81DA472M050JC2D	25 × 35	57.4	37.6	4.76	6.52
	5,600	81DA562M050JD2D	25 × 40	46.2	30.6	5.57	7.02
	6,800	81DA682M050JE2D	25 × 50	36.3	24.0	6.90	8.44
	3,900	81DA392M050KA2D	30 × 25	77.0	54.0	4.11	4.90
	5,600	81DA562M050KB2D	30 × 30	58.4	41.0	4.96	5.94
	6,800	81DA682M050KC2D	30 × 35	47.5	33.0	5.82	7.05
	8,200	81DA822M050KD2D	30 × 40	38.4	27.5	6.78	8.01
	12,000	81DA123M050KE2D	30 × 50	30.4	22.0	8.34	9.81
	6,800	81DA682M050MB2D	35 × 30	35.2	23.0	7.12	8.81
	8,200	81DA822M050MC2D	35 × 35	28.5	18.7	8.33	10.28
	12,000	81DA123M050MD2D	35 × 40	23.0	15.2	9.69	11.92
	15,000	81DA153M050ME2D	35 × 50	18.0	12.1	10.76	13.97
	18,000	81DA183M050MF2D	35 × 63	14.3	9.7	13.48	17.33
	27,000	81DA273M050MG2D	35 × 80	11.4	7.9	16.14	19.98
	8,200	81DA822M050NA2F	40 × 25	38.6	27.0	7.11	8.50
	10,000	81DA103M050NB2F	40 × 30	29.3	20.6	8.56	10.21
	12,000	81DA123M050NC2F	40 × 35	23.8	16.8	8.91	10.61
	18,000	81DA183M050ND2F	40 × 40	19.3	13.7	10.32	12.26
	22,000	81DA223M050NE2F	40 × 50	15.2	11.0	12.65	14.87
	27,000	81DA273M050NF2F	40 × 63	12.2	8.9	15.29	17.90
	39,000	81DA393M050NG2F	40 × 80	9.8	7.3	18.73	21.70

*The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

81DA
SNAP MOUNT -105°C

81DA Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (mΩ) at +25°C		Maximum Ripple Current (A rms) at +85°C	
				120Hz	20k-40kHz	120Hz	20k-40kHz
63 Volts 79 Volts Surge	1,500	81DA152M063HA2D	22 × 25	128.4	71.7	2.59	3.47
	1,800	81DA182M063HB2D	22 × 30	96.4	54.3	3.74	4.23
	2,700	81DA272M063HD2D	22 × 40	62.0	35.6	4.41	5.82
	1,800	81DA182M063JA2D	25 × 25	102.5	60.2	3.18	4.76
	2,700	81DA272M063JB2D	25 × 30	77.2	45.8	3.88	5.58
	3,300	81DA332M063JC2D	25 × 35	62.4	37.3	4.57	6.55
	3,900	81DA392M063JD2D	25 × 40	50.1	30.0	5.35	7.19
	5,600	81DA562M063JE2D	25 × 50	39.2	24.0	6.64	8.47
	2,700	81DA272M063KA2D	30 × 25	83.2	54.0	3.95	4.86
	3,900	81DA392M063KB2D	30 × 30	62.9	41.0	4.78	5.95
	4,700	81DA472M063KC2D	30 × 35	51.1	33.0	5.61	7.05
	6,800	81DA682M063KD2D	30 × 40	41.2	27.0	6.54	8.16
	8,200	81DA822M063KE2D	30 × 50	32.5	22.0	8.07	9.75
	5,600	81DA562M063MB2D	35 × 30	38.1	22.7	6.85	8.87
	6,800	81DA682M063MC2D	35 × 35	30.8	18.5	8.01	10.34
	8,200	81DA822M063MD2D	35 × 40	24.8	15.0	9.33	12.00
	12,000	81DA123M063ME2D	35 × 50	19.4	12.0	10.52	13.97
	15,000	81DA153M063MF2D	35 × 63	15.3	9.6	13.10	17.42
	18,000	81DA183M063MG2D	35 × 80	12.1	7.8	18.05	19.98
	5,600	81DA562M063NA2F	40 × 25	41.7	27.5	6.84	8.42
	8,200	81DA822M063NB2F	40 × 30	31.5	20.9	8.25	10.13
	10,000	81DA103M063NC2F	40 × 35	25.6	17.1	8.59	10.52
	12,000	81DA123M063ND2F	40 × 40	20.7	14.0	9.97	12.12
	18,000	81DA183M063NE2F	40 × 50	16.3	11.1	12.22	14.80
	22,000	81DA223M063NF2F	40 × 63	13.0	9.0	14.81	17.80
	27,000	81DA273M063NG2F	40 × 80	10.4	7.3	18.18	21.70
100 Volts 125 Volts Surge	560	81DA561M100HA2D	22 × 25	272.3	136.1	1.78	2.52
	680	81DA681M100HB2D	22 × 30	202.7	101.9	2.19	3.09
	1,200	81DA122M100HD2D	22 × 40	128.2	65.2	3.07	4.30
	820	81DA821M100JA2D	25 × 25	206.8	106.9	2.24	3.59
	1,000	81DA102M100JB2D	25 × 30	154.3	80.3	2.74	4.24
	1,200	81DA122M100JC2D	25 × 35	123.5	64.7	3.24	5.01
	1,500	81DA152M100JD2D	25 × 40	98.0	51.8	3.82	5.26
	2,200	81DA222M100JE2D	25 × 50	75.4	40.3	4.79	6.55
	1,200	81DA122M100KA2D	30 × 25	150.3	83.7	2.94	3.94
	1,500	81DA152M100KB2D	30 × 30	112.6	63.2	3.57	4.77
	1,800	81DA182M100KC2D	30 × 35	90.4	51.1	4.22	5.61
	2,200	81DA222M100KD2D	30 × 40	72.1	41.1	4.95	6.55
	3,300	81DA332M100KE2D	30 × 50	55.8	32.3	6.16	8.09
	2,200	81DA222M100MB2D	35 × 30	75.9	39.6	4.85	6.72
	2,700	81DA272M100MC2D	35 × 35	60.8	31.9	5.70	7.87
	3,300	81DA332M100MD2D	35 × 40	48.2	25.5	6.69	9.20
	3,900	81DA392M100ME2D	35 × 50	37.1	19.9	7.44	10.72
	5,600	81DA562M100MF2D	35 × 63	28.7	15.6	9.19	13.54
	8,200	81DA822M100MG2D	35 × 80	22.1	12.3	11.53	16.40
	2,200	81DA222M100NA2F	40 × 25	75.5	42.0	5.08	6.81
	3,300	81DA332M100NB2F	40 × 30	56.6	31.7	6.16	8.23
	3,900	81DA392M100NC2F	40 × 35	45.4	25.6	6.45	8.59
	4,700	81DA472M100ND2F	40 × 40	36.2	20.6	7.54	9.99
	6,800	81DA682M100NE2F	40 × 50	28.0	16.2	9.32	12.25
	8,200	81DA822M100NF2F	40 × 63	21.8	12.8	11.44	14.93
	12,000	81DA123M100NG2F	40 × 80	17.0	10.2	14.22	18.36

* The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

81DA
SNAP MOUNT - 105°C

81DA Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (mΩ) at +25°C		Maximum Ripple Current (A rms) at +85°C	
				120Hz	20k-40kHz	120Hz	20k-40kHz
160 Volts 200 Volts Surge	220	81DA221M160HA2D	22 × 25	656.4	338.5	1.22	1.70
	330	81DA331M160HB2D	22 × 30	486.7	251.5	1.50	2.09
	470	81DA471M160HD2D	22 × 40	304.6	158.2	2.12	2.94
	330	81DA331M160JA2D	25 × 25	470.1	246.7	1.58	2.18
	470	81DA471M160JB2D	25 × 30	348.9	183.6	1.94	2.68
	560	81DA561M160JC2D	25 × 35	277.9	146.6	2.30	3.17
	680	81DA681M160JD2D	25 × 40	219.0	116.0	2.72	3.74
	1,000	81DA102M160JE2D	25 × 50	166.8	88.8	3.43	4.70
	560	81DA561M160KA2D	30 × 25	330.1	179.7	2.11	2.86
	680	81DA681M160KB2D	30 × 30	245.4	134.1	2.58	3.48
	820	81DA821M160KC2D	30 × 35	195.8	107.4	3.05	4.12
	1,000	81DA102M160KD2D	30 × 40	154.7	85.2	3.59	4.84
	1,500	81DA152M160KE2D	30 × 50	118.2	65.6	4.50	6.05
	1,000	81DA102M160MB2D	35 × 30	196.7	112.4	3.21	4.24
	1,200	81DA122M160MC2D	35 × 35	157.2	90.2	3.77	4.98
	1,500	81DA152M160MD2D	35 × 40	124.4	71.7	4.43	5.84
	1,800	81DA182M160ME2D	35 × 50	95.3	55.4	5.15	6.65
	2,700	81DA272M160MF2D	35 × 63	73.2	42.9	6.12	8.00
	3,300	81DA332M160MG2D	35 × 80	56.1	33.3	8.07	10.30
	1,000	81DA102M160NA2F	40 × 25	163.4	89.1	3.68	4.98
	1,500	81DA152M160NB2F	40 × 30	121.5	66.5	4.47	6.05
	1,800	81DA182M160NC2F	40 × 35	97.0	53.3	4.70	6.34
	2,200	81DA222M160ND2F	40 × 40	76.6	42.3	5.52	7.42
	2,700	81DA272M160NE2F	40 × 50	58.5	32.5	6.86	9.21
	3,900	81DA392M160NF2F	40 × 63	44.8	25.1	8.49	11.35
	5,600	81DA562M160NG2F	40 × 80	34.2	19.4	10.67	14.17
200 Volts 250 Volts Surge	180	81DA181M200HA2D	22 × 25	754.0	340.0	1.14	1.69
	220	81DA221M200HB2D	22 × 30	558.8	252.6	1.40	2.09
	390	81DA391M200HD2D	22 × 40	349.5	158.9	1.98	2.93
	270	81DA271M200JA2D	25 × 25	538.2	247.7	1.48	2.18
	330	81DA331M200JB2D	25 × 30	399.3	184.4	1.81	2.67
	390	81DA391M200JC2D	25 × 35	317.8	147.2	2.15	3.16
	560	81DA561M200JD2D	25 × 40	250.3	116.5	2.54	3.81
	680	81DA681M200JE2D	25 × 50	190.4	89.2	3.21	4.69
	390	81DA391M200KA2D	30 × 25	375.1	180.4	1.98	2.85
	560	81DA561M200KB2D	30 × 30	278.7	134.6	2.42	3.51
	680	81DA681M200KC2D	30 × 35	222.2	107.0	2.86	4.18
	820	81DA821M200KD2D	30 × 40	175.4	85.5	3.37	4.84
	1,000	81DA102M200KE2D	30 × 50	133.8	65.8	4.23	6.04
	680	81DA681M200MB2D	35 × 30	221.3	112.7	3.02	4.24
	820	81DA821M200MC2D	35 × 35	176.7	90.4	3.56	4.98
	1,200	81DA122M200MD2D	35 × 40	139.7	71.9	4.18	5.83
	1,500	81DA152M200ME2D	35 × 50	106.9	55.5	5.01	7.07
	1,800	81DA182M200MF2D	35 × 63	81.9	43.1	6.37	8.93
	2,700	81DA272M200MG2D	35 × 80	62.6	33.4	7.88	10.70
	820	81DA821M200NA2F	40 × 25	185.7	89.4	3.45	4.97
	1,000	81DA102M200NB2F	40 × 30	138.0	66.7	4.20	6.04
	1,200	81DA122M200NC2F	40 × 35	110.0	53.4	4.41	6.33
	1,800	81DA182M200ND2F	40 × 40	86.8	42.4	5.18	7.41
	2,200	81DA222M200NE2F	40 × 50	66.2	32.6	6.45	9.19
	2,700	81DA272M200NF2F	40 × 63	50.6	25.2	7.99	11.32
	3,900	81DA392M200NG2F	40 × 80	38.5	19.5	10.06	14.13

* The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

81DA
SNAP MOUNT - 105°C

81DA Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (mΩ) at +25°C		Maximum Ripple Current (A rms) at +85°C	
				120Hz	20k-40kHz	120Hz	20k-40kHz
250 Volts 300 Volts Surge	120	81DA121M250HA2D	22 × 25	883.4	385.0	1.05	1.69
	180	81DA181M250HB2D	22 × 30	654.4	253.6	1.29	2.08
	270	81DA271M250HD2D	22 × 40	408.9	159.5	1.83	2.93
	180	81DA181M250JA2D	25 × 25	628.5	248.6	1.37	2.17
	270	81DA271M250JB2D	25 × 30	466.0	185.0	1.68	2.67
	330	81DA331M250JC2D	25 × 35	370.7	147.8	1.99	3.16
	390	81DA391M250JD2D	25 × 40	291.8	116.9	2.36	3.81
	560	81DA561M250JE2D	25 × 50	221.7	89.5	2.97	4.68
	270	81DA271M250KA2D	30 × 25	434.9	180.9	1.84	2.85
	390	81DA391M250KB2D	30 × 30	322.9	135.0	2.24	3.52
	470	81DA471M250KC2D	30 × 35	257.3	108.1	2.66	4.12
	560	81DA561M250KD2D	30 × 40	202.9	85.8	3.14	4.83
	820	81DA821M250KE2D	30 × 50	154.6	66.0	3.94	6.03
	560	81DA561M250MB2D	35 × 30	254.0	113.0	2.82	4.23
	680	81DA681M250MC2D	35 × 35	202.6	90.6	3.32	4.97
	820	81DA821M250MD2D	35 × 40	160.0	72.1	3.91	5.83
	1,000	81DA102M250ME2D	35 × 50	122.2	55.6	4.69	7.07
	1,500	81DA152M250MF2D	35 × 63	93.5	43.2	5.78	8.77
	1,800	81DA182M250MG2D	35 × 80	71.3	33.5	6.83	10.80
	560	81DA561M250NA2F	40 × 25	215.2	89.7	3.20	4.96
	820	81DA821M250NB2F	40 × 30	159.8	66.9	3.90	6.03
	1,000	81DA102M250NC2F	40 × 35	127.3	53.6	4.10	6.32
	1,200	81DA122M250ND2F	40 × 40	100.4	42.5	4.82	7.41
	1,500	81DA152M250NE2F	40 × 50	76.5	32.7	6.00	9.18
	2,200	81DA222M250NF2F	40 × 63	58.4	25.3	7.44	11.30
	2,700	81DA272M250NG2F	40 × 80	44.3	19.5	9.38	14.13
300 Volts 350 Volts Surge	82	81DA820M300HA2D	22 × 25	2,830.5	1,800.0	0.58	0.73
	120	81DA121M300HB2D	22 × 30	2,024.0	1,210.0	0.73	0.92
	180	81DA181M300HD2D	22 × 40	1,217.0	780.0	1.06	1.32
	120	81DA121M300JA2D	25 × 25	2,020.8	1,270.0	0.76	0.95
	180	81DA181M300JB2D	25 × 30	1,445.4	870.0	0.95	1.38
	220	81DA221M300JC2D	25 × 35	1,125.7	680.0	1.18	1.54
	270	81DA271M300JD2D	25 × 40	869.8	520.0	1.46	1.93
	390	81DA391M300JE2D	25 × 50	649.2	390.0	1.78	2.33
	180	81DA181M300KA2D	30 × 25	1,331.0	863.4	1.05	1.30
	270	81DA271M300KB2D	30 × 30	952.6	570.0	1.31	1.62
	330	81DA331M300KC2D	30 × 35	742.3	460.0	1.56	1.94
	390	81DA391M300KD2D	30 × 40	574.0	350.0	1.86	2.31
	560	81DA561M300KE2D	30 × 50	428.9	260.0	2.36	2.93
	330	81DA331M300MB2D	35 × 30	748.9	450.0	1.64	2.03
	470	81DA471M300MC2D	35 × 35	583.8	350.0	1.96	2.42
	560	81DA561M300MD2D	35 × 40	450.0	270.0	2.33	2.87
	680	81DA681M300ME2D	35 × 50	337.9	200.0	2.62	3.27
	1,000	81DA102M300MF2D	35 × 63	250.0	150.0	3.29	4.21
	1,200	81DA122M300MG2D	35 × 80	189.4	110.0	4.76	5.28
	390	81DA391M300NA2F	40 × 25	681.9	442.1	1.80	2.23
	470	81DA471M300NB2F	40 × 30	488.0	316.6	2.23	2.77
	680	81DA681M300NC2F	40 × 35	380.3	246.8	2.37	2.94
	820	81DA821M300ND2F	40 × 40	294.0	191.0	2.81	3.49
	1,200	81DA122M300NE2F	40 × 50	219.7	142.9	3.54	4.39
	1,500	81DA152M300NF2F	40 × 63	164.6	107.2	4.43	5.49
	1,800	81DA182M300NG2F	40 × 80	122.8	80.1	5.63	6.97

* The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

81DA Series

Standard Voltage Ratings - Snap Mount

Rated Voltage (WVDC)	Capacitance (μF)	Catalog Part Number	Nominal Case Size* D × L (mm)	Maximum ESR (mΩ) at +25°C		Maximum Ripple Current (A rms) at +85°C	
				120Hz	20k-40kHz	120Hz	20k-40kHz
350 Volts 400 Volts Surge	68	81DA680M350HA2D	22 × 25	3,039.2	1,823.8	0.56	0.73
	100	81DA101M350HB2D	22 × 30	2,173.1	1,304.5	0.71	0.92
	150	81DA151M350HD2D	22 × 40	1,306.5	784.9	1.02	1.32
	100	81DA101M350JA2D	25 × 25	2,168.8	1,305.0	0.73	0.95
	120	81DA121M350JB2D	25 × 30	1,551.2	933.9	0.92	1.19
	180	81DA181M350JC2D	25 × 35	1,207.9	727.5	1.10	1.42
	220	81DA221M350JD2D	25 × 40	933.2	562.4	1.32	1.70
	270	81DA271M350JE2D	25 × 50	696.5	420.1	1.68	2.16
	150	81DA151M350KA2D	30 × 25	1,426.8	864.8	1.01	1.30
	220	81DA221M350KB2D	30 × 30	1,021.0	619.3	1.26	1.62
	270	81DA271M350KC2D	30 × 35	795.5	482.9	1.51	1.94
	330	81DA331M350KD2D	30 × 40	615.1	373.7	1.80	2.31
	470	81DA471M350KE2D	30 × 50	459.5	279.5	2.28	2.93
	270	81DA271M350MB2D	35 × 30	801.6	490.2	1.59	2.03
	330	81DA331M350MC2D	35 × 35	624.8	382.4	1.89	2.42
	470	81DA471M350MD2D	35 × 40	483.4	296.2	2.25	2.87
	560	81DA561M350ME2D	35 × 50	361.4	221.8	2.54	3.27
	820	81DA821M350MF2D	35 × 63	271.1	166.8	3.18	4.21
	1,000	81DA102M350MG2D	35 × 80	202.4	124.9	4.05	5.16
	270	81DA271M350NA2F	40 × 25	731.1	442.9	1.74	2.23
	390	81DA391M350NB2F	40 × 30	523.2	317.1	2.15	2.77
	470	81DA471M350NC2F	40 × 35	407.6	247.2	2.29	2.94
	680	81DA681M350ND2F	40 × 40	315.1	191.3	2.72	3.49
	820	81DA821M350NE2F	40 × 50	235.4	143.1	3.42	4.39
	1,200	81DA122M350NF2F	40 × 63	176.3	107.4	4.28	5.48
	1,500	81DA152M350NG2F	40 × 80	131.4	80.2	5.44	6.97
400 Volts 450 Volts Surge	56	81DA560M400HA2D	22 × 25	3,212.9	1,825.8	0.55	0.73
	82	81DA820M400HB2D	22 × 30	2,297.2	1,306.0	0.69	0.91
	120	81DA121M400HD2D	22 × 40	1,381.0	785.8	0.99	1.32
	82	81DA820M400JA2D	25 × 25	2,291.9	1,306.5	0.71	0.95
	120	81DA121M400JB2D	25 × 30	1,639.2	934.9	0.89	1.18
	150	81DA151M400JC2D	25 × 35	1,276.4	728.4	1.07	1.42
	180	81DA181M400JD2D	25 × 40	986.1	563.1	1.28	1.70
	270	81DA271M400JE2D	25 × 50	735.8	420.6	1.63	2.16
	120	81DA121M400KA2D	30 × 25	1,506.5	865.7	0.99	1.30
	180	81DA181M400KB2D	30 × 30	1,078.0	620.0	1.23	1.62
	220	81DA221M400KC2D	30 × 35	839.8	483.4	1.47	1.94
	270	81DA271M400KD2D	30 × 40	649.2	374.1	1.76	2.31
	390	81DA391M400KE2D	30 × 50	485.0	279.8	2.22	2.93
	220	81DA221M400MB2D	35 × 30	845.5	490.7	1.54	2.03
	270	81DA271M400MC2D	35 × 35	659.0	382.8	1.84	2.42
	390	81DA391M400MD2D	35 × 40	509.7	296.5	2.19	2.87
	470	81DA471M400ME2D	35 × 50	381.0	222.1	2.47	3.24
	680	81DA681M400MF2D	35 × 63	285.7	166.9	3.10	4.05
	820	81DA821M400MG2D	35 × 80	213.2	125.0	3.95	5.16
	270	81DA271M400NA2F	40 × 25	772.0	443.3	1.69	2.23
	330	81DA331M400NB2F	40 × 30	552.4	317.5	2.10	2.76
	470	81DA471M400NC2F	40 × 35	430.3	247.5	2.23	2.94
	560	81DA561M400ND2F	40 × 40	332.7	191.5	2.64	3.49
	680	81DA681M400NE2F	40 × 50	248.5	143.3	3.33	4.38
	1,000	81DA102M400NF2F	40 × 63	186.1	107.5	4.16	5.48
	1,200	81DA122M400NG2F	40 × 80	138.7	80.3	5.30	6.96

*The case sizes in table are with no sleeve, refer to diagrams for case sizes with sleeve.

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