NDLW Series
High Temperature Coin Type Supercapacitor

9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

FEATURES
- STANDARD COIN TYPE CONSTRUCTION
- HIGH TEMPERATURE (-40°C TO +85°C)
- GREEN MEETING RoHS REQUIREMENTS
- LONG CHARGE-DISCHAREGE CYCLE LIFE
- LOW LEAKAGE CURRENT, SUITABLE FOR MAINTAIN RTC

NDLW CHARACTERISTICS

Rated Voltage Rating	3.6 ~ 5.5VDC
Rated Capacitance Range	0.1 ~ 1.5F (100,000μF ~ 1,500,000μF)
Operating Temp. Range	-40°C ~ +85°C
Capacitance Tolerance	+80/-20% (Z)
Load Life @ +85°C 1,000 hours	ΔC: Less than or equal to 30% of the initial value
	ESR: Less than or equal to 4 times the initial value
	Appearance: No leakage or mechanical damage

CASE DIMENSIONS (mm)

NIC P/N	DIMENSIONS (mm)						
	D±0.5	h±0.5	H±1.0	P±0.5	B	C±0.10	Fig.
NDLW684Z5.5V21X7.5BF	21.0	7.5	12.5	5.5	0.5±0.1	0.8	1
NDLW105Z5.5V21X7.5BF	21.0	7.5	12.5	5.5	0.5±0.1	0.8	1
NDLW155Z5.5V21X7.5BF	21.0	7.5	12.5	5.5	0.5±0.1	0.8	1
NDLW224Z3.6V13.2X7BF	13.2	7.0	13.0	5.0	0.4±0.1	0.8	2
NDLW104Z5.5V13.2X7BF	13.2	7.0	13.0	5.0	0.4±0.1	0.8	2
NDLW224Z5.5V13.2X7BF	13.2	7.0	13.0	5.0	0.4±0.1	0.8	2
NDLW334Z5.5V13.2X7BF	13.2	7.0	13.0	5.0	0.4±0.1	0.8	2
NDLW474Z5.5V13.2X7BF	13.2	7.0	13.0	5.0	0.4±0.1	0.8	2

PART NUMBER SYSTEM

NDLW 104 Z 5.5V 13.2x7 B F

- F — RoHS Compliant
- B — Configuration (B, H or V)
- 13.2x7 — Size in mm
- 5.5V — Working Voltage
- Z — Tolerance Code Z = +80%/-20%
- 104 — Capacitance Code in μF, first 2 digits are significant, third digit is no. of zeros
- NDLW — Series

Fig. 1

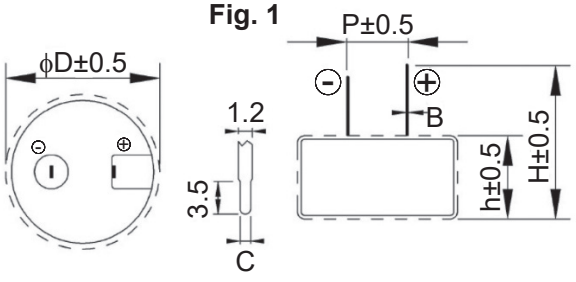
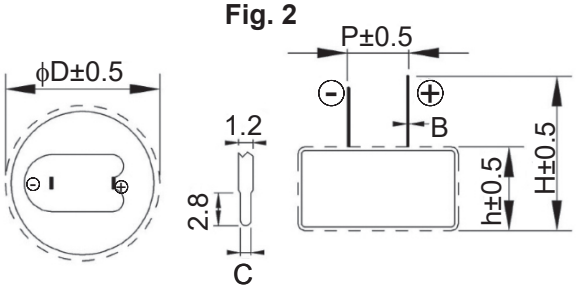


Fig. 2



CASE DIMENSIONS (mm)

NIC P/N	DIMENSIONS (mm)						
	D±0.5	h±0.5	H	P±0.5	B	C±0.10	Fig.
NDLW224Z3.6V12X4.8HF	12.0	4.8	10.0±1.0	10.0	0.20±0.05	0.8	3
NDLW104Z5.5V12X4.8HF	12.0	4.8	10.0±1.0	10.0	0.20±0.05	0.8	3
NDLW224Z5.5V12X4.8HF	12.0	4.8	10.0±1.0	10.0	0.20±0.05	0.8	3
NDLW334Z5.5V12X4.8HF	12.0	4.8	10.0±1.0	10.0	0.20±0.05	0.8	3
NDLW474Z5.5V12X4.8HF	12.0	4.8	10.0±1.0	10.0	0.20±0.05	0.8	3
NDLW105Z3.6V19.2X4.8HF	19.2	4.8	9.5±1.0	19.5	0.20±0.05	1.0	4
NDLW155Z3.6V19.2X4.8HF	19.2	4.8	9.5±1.0	19.5	0.20±0.05	1.0	4
NDLW684Z5.5V19.2X4.8HF	19.2	4.8	9.5±1.0	19.5	0.20±0.05	1.0	4
NDLW105Z5.5V19.2X4.8HF	19.2	4.8	9.5±1.0	19.5	0.20±0.05	1.0	4
NDLW155Z5.5V19.2X4.8HF	19.2	4.8	9.5±1.0	19.5	0.20±0.05	1.0	4
NDLW684Z5.5V19.2X4.8VF	19.2	4.8	24.0±0.5	5.0	0.20±0.05	1.0	5
NDLW105Z5.5V19.2X4.8VF	19.2	4.8	24.0±0.5	5.0	0.20±0.05	1.0	5
NDLW155Z5.5V19.2X4.8VF	19.2	4.8	24.0±0.5	5.0	0.20±0.05	1.0	5
NDLW105Z3.6V19.2X4.8VF	19.2	4.8	24.0±0.5	5.0	0.20±0.05	1.0	5
NDLW224Z3.6V12X4.8VF	12.0	4.8	16.2±0.5	5.0	0.20±0.05	0.8	6
NDLW104Z5.5V12X4.8VF	12.0	4.8	16.2±0.5	5.0	0.20±0.05	0.8	6
NDLW224Z5.5V12X4.8VF	12.0	4.8	16.2±0.5	5.0	0.20±0.05	0.8	6
NDLW334Z5.5V12X4.8VF	12.0	4.8	16.2±0.5	5.0	0.20±0.05	0.8	6
NDLW474Z5.5V12X4.8VF	12.0	4.8	16.2±0.5	5.0	0.20±0.05	0.8	6

Fig. 3

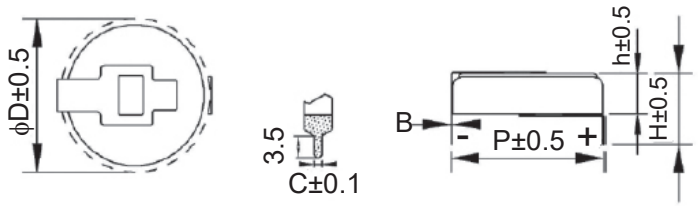


Fig. 4

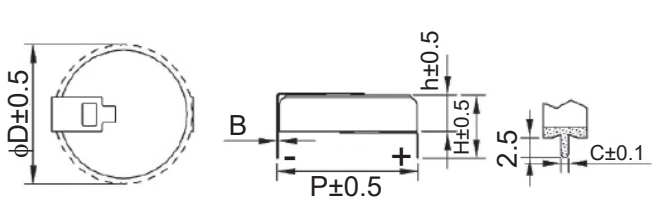


Fig. 5

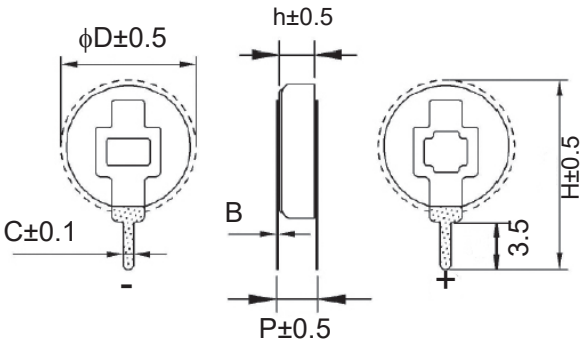
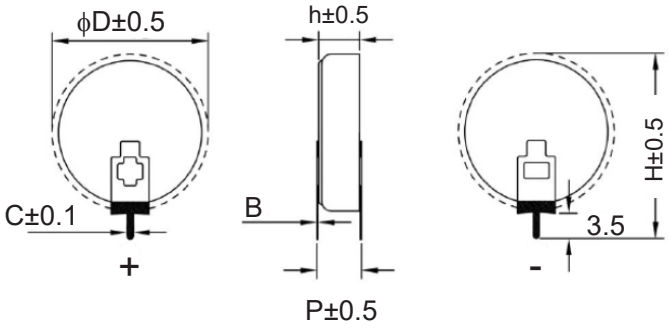


Fig. 6



NDLW Series
High Temperature Coin Type Supercapacitor

9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

NDLW ELECTRICAL SPECIFICATIONS

NIC P/N	Cap. (F)	Voltage (VDC)	Max ESR 1KHz (Ω @25°C)	Test Current (mA @ 25°C)	LC after 24h (mA@ 25°C)	Max. Stored Energy (mWh)	Figure
NDLW684Z5.5V21X7.5BF	0.68	5.5	30	6.8	0.006	2.86	1
NDLW105Z5.5V21X7.5BF	1.0	5.5	15	10	0.006	4.20	1
NDLW155Z5.5V21X7.5BF	1.5	5.5	15	15	0.010	6.30	1
NDLW224Z3.6V13.2X7BF	0.22	3.6	50	2.2	0.003	0.40	2
NDLW104Z5.5V13.2X7BF	0.1	5.5	50	1.0	0.003	0.42	2
NDLW224Z5.5V13.2X7BF	0.22	5.5	50	2.2	0.003	0.92	2
NDLW334Z5.5V13.2X7BF	0.33	5.5	50	3.3	0.004	1.39	2
NDLW474Z5.5V13.2X7BF	0.47	5.5	50	4.7	0.004	1.97	2
NDLW224Z3.6V12X4.8HF	0.22	3.6	50	2.2	0.003	0.40	3
NDLW104Z5.5V12X4.8HF	0.1	5.5	50	1.0	0.003	0.42	3
NDLW224Z5.5V12X4.8HF	0.22	5.5	50	2.2	0.003	0.92	3
NDLW334Z5.5V12X4.8HF	0.33	5.5	50	3.3	0.004	1.39	3
NDLW474Z5.5V12X4.8HF	0.47	5.5	50	4.7	0.004	1.97	3
NDLW105Z3.6V19.2X4.8HF	1.0	3.6	15	10	0.006	1.80	4
NDLW155Z3.6V19.2X4.8HF	1.5	3.6	15	10	0.010	2.70	4
NDLW684Z5.5V19.2X4.8HF	0.68	5.5	30	6.8	0.006	2.86	4
NDLW105Z5.5V19.2X4.8HF	1.0	5.5	15	10	0.006	4.20	4
NDLW155Z5.5V19.2X4.8HF	1.5	5.5	15	10	0.010	6.30	4
NDLW105Z3.6V19.2X4.8VF	1.0	3.6	15	10	0.006	1.80	5
NDLW684Z5.5V19.2X4.8VF	0.68	5.5	30	6.8	0.006	2.86	5
NDLW105Z5.5V19.2X4.8VF	1.0	5.5	15	10	0.006	4.20	5
NDLW155Z5.5V19.2X4.8VF	1.5	5.5	15	15	0.010	6.30	5
NDLW224Z3.6V12X4.8VF	0.22	3.6	50	2.2	0.003	0.40	6
NDLW104Z5.5V12X4.8VF	0.1	5.5	50	1.0	0.003	0.42	6
NDLW224Z5.5V12X4.8VF	0.22	5.5	50	2.2	0.003	0.92	6
NDLW334Z5.5V12X4.8VF	0.33	5.5	50	3.3	0.004	1.39	6
NDLW474Z5.5V12X4.8VF	0.47	5.5	50	4.7	0.004	1.97	6

NIC P/N	Quantity per Plastic Tray
NDLW684Z5.5V21X7.5BF	70
NDLW105Z5.5V21X7.5BF	70
NDLW155Z5.5V21X7.5BF	70
NDLW224Z3.6V13.2X7BF	117
NDLW104Z5.5V13.2X7BF	117
NDLW224Z5.5V13.2X7BF	117
NDLW334Z5.5V13.2X7BF	117
NDLW474Z5.5V13.2X7BF	117
NDLW224Z3.6V12X4.8HF	117
NDLW104Z5.5V12X4.8HF	168
NDLW224Z5.5V12X4.8HF	168
NDLW334Z5.5V12X4.8HF	168
NDLW474Z5.5V12X4.8HF	168
NDLW105Z3.6V19.2X4.8HF	70

NIC P/N	Quantity per Plastic Tray
NDLW155Z3.6V19.2X4.8HF	70
NDLW684Z5.5V19.2X4.8HF	70
NDLW105Z5.5V19.2X4.8HF	70
NDLW155Z5.5V19.2X4.8HF	70
NDLW105Z3.6V19.2X4.8VF	70
NDLW684Z5.5V19.2X4.8VF	70
NDLW105Z5.5V19.2X4.8VF	70
NDLW155Z5.5V19.2X4.8VF	70
NDLW224Z3.6V12X4.8VF	196
NDLW104Z5.5V12X4.8VF	196
NDLW224Z5.5V12X4.8VF	196
NDLW334Z5.5V12X4.8VF	196
NDLW474Z5.5V12X4.8VF	196

NDLW Series
High Temperature Coin Type Supercapacitor

ISO 9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

NDLW ENVIRONMENTAL CHARACTERISTICS

ITEM	REQUIREMENT		TEST CONDITION
Endurance	ΔC	Less than or equal to 30% of the initial value	Applied voltage: Rated voltage Temperature: +85°C ± 2°C Test Duration:1000 hours
	ESR	Less than or equal to 4 times the initial value	
	Appearance	No leakage or mechanical damage	
Cycle Life	ΔC	Less than or equal to 30% of the initial value	At 25°C, charge to the rated voltage with constant current, stand for 5s, discharge to 50% voltage with constant current, stand for 5s, cycle 500000
	ESR	Less than or equal to 4 times the initial value	
Humidity Characteristics	ΔC	Within 30% of the initial rating	Temperature: +40°C ± 2°C Relative humidity: 90~95%RH Test Duration: 240 hours
	ESR	Less than or equal to 4 times the initial value	
	Appearance	No leakage or mechanical damage	
Temperature Cycle	ΔC	Less than or equal to 10% of the initial value	Temperature cycle:-40°C ± 2°C temperature →+85°C ± 2°C Number of Cycles: 5
	Appearance	No mechanical damage or leakage	
Low Temperature Storage Characteristics	ΔC	Less than or equal to 30% of the initial rating	Applied Voltage: 0v Temperature: -40°C ± 2°C Test Duration:96 hours
	ESR	Less than or equal to 2 times the initial value	
	Appearance	No leakage or mechanical damage	
High Temperature Storage Characteristics	ΔC	Less than or equal to 30% of the initial rating	Applied Voltage: 0v Temperature: +85°C ± 2°C Test Duration:96 hours
	ESR	Less than or equal to 2 times the initial value	
	Appearance	No leakage or mechanical damage	
Self-Discharge (Voltage Holding Characteristics)	The self-discharge cut off voltage is greather than or equal to 80% of the rated voltage		Charging process: Normal temperature, no load, rated voltage charge 8h Placement process: Temperature less than or equal 25 °C, relative humidity less than 60% RH, open 24 h
Lead Strength	No damage to the outlet		DL/T 1652-2016
Solderability	More than 3/4 of the terminal surface is covered by a tin layer		DL/T 1652-2016

FLOW (WAVE) SOLDERING PROFILE