NDCS Series
Standard Combined Type Supercapacitor

9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

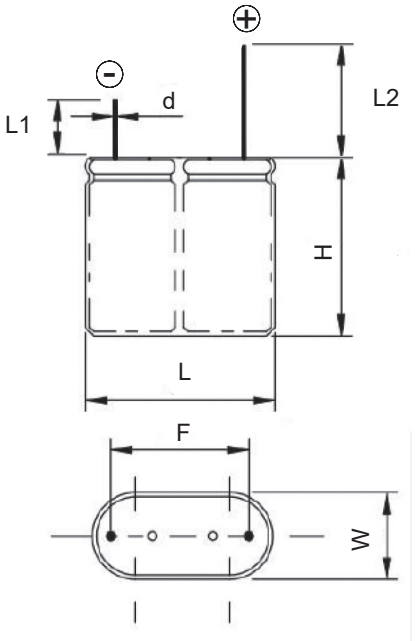
FEATURES
- COMBINED TYPE CONSTRUCTION
- HIGH TEMPERATURE (-40°C TO +70°C)
- GREEN MEETING RoHS REQUIREMENTS
- LONG CHARGE-DISCHAREGE CYCLE LIFE
- LOW LEAKAGE CURRENT, SUITABLE FOR MAINTAIN RTC

NDCS CHARACTERISTICS

Rated Voltage Rating	5.5VDC
Rated Capacitance Range	0.22 ~ 25F (220,000μF ~ 25,000,000μF)
Operating Temp. Range	-40°C ~ +70°C
Capacitance Tolerance	± 20% (M), +30%/-10% (Q), +80/-20% (Z) (See Case Size Table for Available Tolerance for Each Value)
Load Life @ +65°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

NDCS CASE DIMENSIONS (mm)

NIC P/N	DIMENSIONS (mm)						
	L ±1.0	W ±1.0	H ±2.0	F ±0.5	d ±0.05	L1 ±2.0	L2 ±2.0
NDCS224Z5.5V6.5X13.8BF	13.5	6.5	13.8	9.0	0.5	19.0	24.0
NDCS334Z5.5V6.5X13.8BF	13.5	6.5	13.8	9.0	0.5	19.0	24.0
NDCS334Q5.5V8.5X14BF	17.0	8.5	14.0	12.0	0.6	19.0	24.0
NDCS474M5.5V6.5X13.8BF	13.5	6.5	13.8	9.0	0.5	19.0	24.0
NDCS474Q5.5V8.5X14BF	17.0	8.5	14.0	12.0	0.6	19.0	24.0
NDCS504M5.5V6.5X13.8BF	13.5	6.5	13.8	9.0	0.5	19.0	24.0
NDCS504M5.5V8.5X14BF	17.0	8.5	14.0	12.0	0.6	19.0	24.0
NDCS105M5.5V8.5X14BF	17.0	8.5	14.0	12.0	0.6	19.0	24.0
NDCS105M5.5V8.5X17BF	17.0	8.5	17.0	12.0	0.6	19.0	24.0
NDCS105Z5.5V8.5X21BF	17.0	8.5	21.0	12.0	0.6	19.0	24.0
NDCS155M5.5V8.5X17BF	17.0	8.5	17.0	12.0	0.6	19.0	24.0
NDCS155M5.5V8.5X21BF	17.0	8.5	21.0	12.0	0.6	19.0	24.0
NDCS205M5.5V8.5X21BF	17.0	8.5	21.0	12.0	0.6	19.0	24.0
NDCS205M5.5V8.5X25BF	17.0	8.5	25.0	12.0	0.6	19.0	24.0
NDCS255M5.5V8.5X25BF	17.0	8.5	25.0	12.0	0.6	19.0	24.0
NDCS255M5.5V10X21BF	21.0	10.0	21.0	15.5	0.6	19.0	24.0
NDCS305M5.5V8.5X25BF	17.0	8.5	25.0	12.0	0.6	19.0	24.0
NDCS305M5.5V10X21BF	21.0	10.0	21.0	15.5	0.6	19.0	24.0
NDCS355M5.5V10X21BF	21.0	10.0	21.0	15.5	0.6	19.0	24.0
NDCS505M5.5V10X26BF	21.0	10.0	26.0	15.5	0.6	21.0	27.0
NDCS505M5.5V13X22BF	26.0	13.0	22.0	18.0	0.6	22.0	28.0
NDCS505M5.5V13X27BF	26.0	13.0	27.0	18.0	0.6	19.0	24.0
NDCS755M5.5V13X22BF	26.0	13.0	22.0	18.0	0.6	22.0	28.0
NDCS106M5.5V13X27BF	26.0	13.0	27.0	18.0	0.6	21.0	27.0
NDCS106M5.5V16X28BF	33.0	16.0	28.0	24.0	0.8	21.0	27.0
NDCS156M5.5V16X33BF	33.0	16.0	33.0	24.0	0.8	21.0	27.0
NDCS256M5.5V18X43BF	37.0	18.0	43.0	26.0	0.8	23.0	28.0



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NDCS ELECTRICAL SPECIFICATIONS

NIC P/N	Capacitance (F)	Voltage (VDC)	Tolerance %	ESR 1KHz (mΩ @25°C) Max.	Peak Current (A @ 25°C<1s) Max.	LC after 72h (mA@ 25°C)	Stored Energy (mWh) Max.
NDCS224Z5.5V6.5X13.8BF	0.22	5.5	+80/-20%	1000	0.48	0.008	0.92
NDCS334Z5.5V6.5X13.8BF	0.33	5.5	+80/-20%	1000	0.68	0.008	1.39
NDCS334Q5.5V8.5X14BF	0.33	5.5	+30%/-10%	700	0.74	0.008	1.39
NDCS474M5.5V6.5X13.8BF	0.47	5.5	± 20%	1000	0.88	0.008	1.97
NDCS474Q5.5V8.5X14BF	0.47	5.5	+30%/-10%	600	1.01	0.010	1.97
NDCS504M5.5V6.5X13.8BF	0.50	5.5	± 20%	1000	0.88	0.008	2.10
NDCS504M5.5V8.5X14BF	0.50	5.5	± 20%	600	1.06	0.010	2.10
NDCS105M5.5V8.5X14BF	1.0	5.5	± 20%	500	1.83	0.012	4.20
NDCS105M5.5V8.5X17BF	1.0	5.5	± 20%	360	2.02	0.012	4.20
NDCS105Z5.5V8.5X21BF	1.0	5.5	+80/-20%	400	1.96	0.017	4.20
NDCS155M5.5V8.5X17BF	1.5	5.5	± 20%	300	2.84	0.016	6.30
NDCS155M5.5V8.5X21BF	1.5	5.5	± 20%	270	3.03	0.017	6.30
NDCS205M5.5V8.5X21BF	2.0	5.5	± 20%	220	3.93	0.020	8.40
NDCS205M5.5V8.5X25BF	2.0	5.5	± 20%	220	4.04	0.020	8.40
NDCS255M5.5V8.5X25BF	2.5	5.5	± 20%	170	4.91	0.020	10.50
NDCS255M5.5V10X21BF	2.5	5.5	± 20%	200	5.00	0.020	10.50
NDCS305M5.5V8X25BF	3.0	5.5	± 20%	160	5.69	0.025	12.60
NDCS305M5.5V10X21BF	3.0	5.5	± 20%	180	5.69	0.025	12.60
NDCS355M5.5V10X21BF	3.5	5.5	± 20%	160	6.31	0.030	14.70
NDCS505M5.5V10X26BF	5.0	5.5	± 20%	120	8.59	0.050	21.01
NDCS505M5.5V13X22BF	5.0	5.5	± 20%	120	8.59	0.050	21.01
NDCS505M5.5V13X27BF	5.0	5.5	± 20%	120	8.59	0.050	21.01
NDCS755M5.5V13X22BF	7.5	5.5	± 20%	120	10.86	0.065	31.51
NDCS106M5.5V13X27BF	10	5.5	± 20%	100	14.47	0.080	42.01
NDCS106M5.5V16X28BF	10	5.5	± 20%	90	14.47	0.060	42.01
NDCS156M5.5V16X33BF	15	5.5	± 20%	70	20.21	0.078	63.02
NDCS256M5.5V18X43BF	25	5.5	± 20%	60	27.50	0.100	105.03

Nominal Current: Is the current taking 5 sec. to discharge from UR to $1/2U_R$.
Maximum Peak Current: Is the current taking 1 sec. to discharge from UR to $1/2U_R$.

PART NUMBER SYSTEM

NDCS 105 Z 5.5V 8.5x21 B F

- F — RoHS Compliant
- B — B = Combined Configuration
- 8.5x21 — Size in mm
- 5.5V — Working Voltage
- Z — Tolerance Code M = ± 20%, Q = +30%/-10%, Z=+80/-20%
- 105 — Capacitance Code in µF, first 2 digits are significant, third digit is no. of zeros
- NDCS — Series

PACKAGING QUANTITY

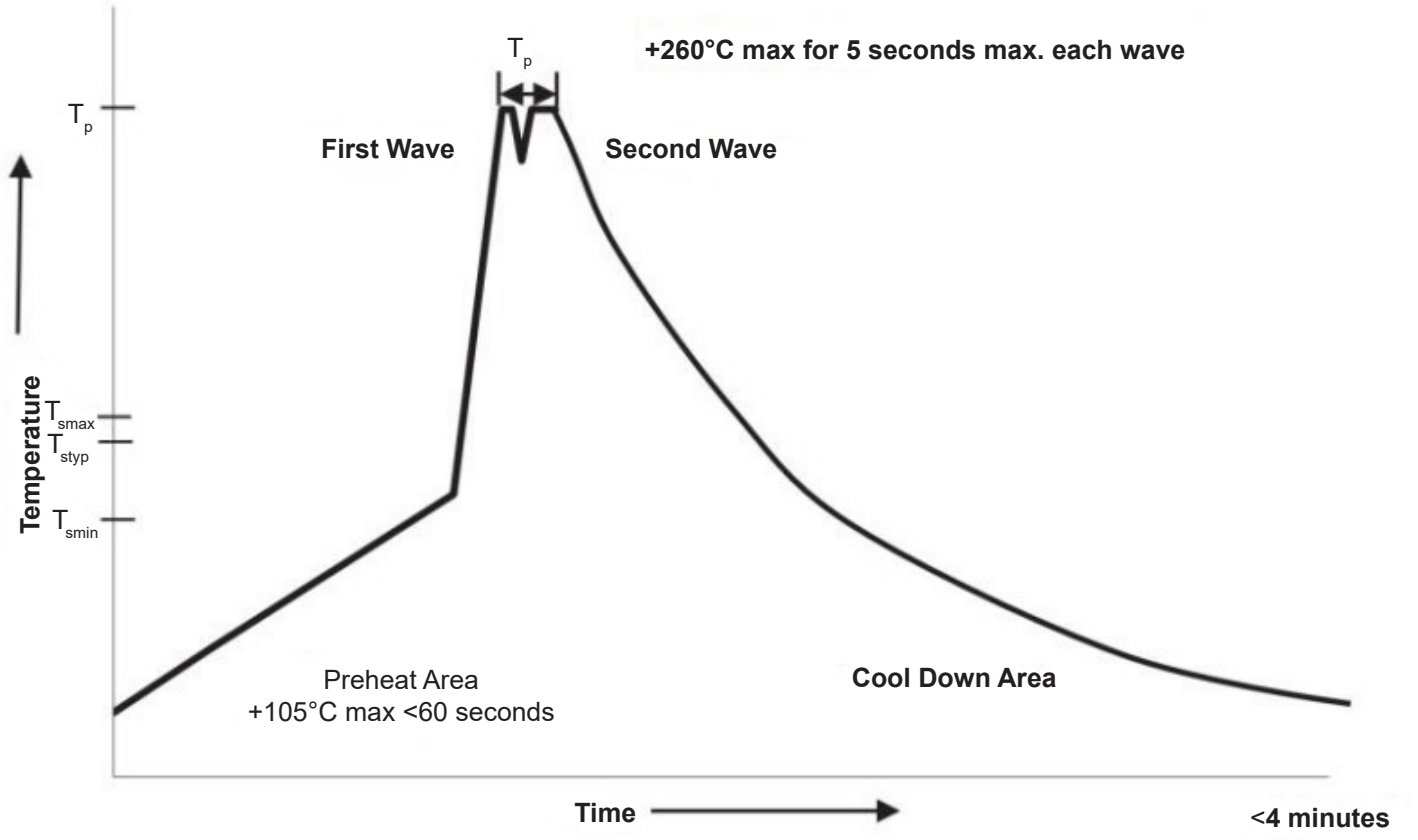
NIC P/N	Quantity per Plastic Tray
NDCS224Z5.5V6.5X13.8BF	80
NDCS334Z5.5V6.5X13.8BF	80
NDCS334Q5.5V8.5X14BF	64
NDCS474M5.5V6.5X13.8BF	80
NDCS474Q5.5V8.5X14BF	64
NDCS504M5.5V6.5X13.8BF	80
NDCS504M5.5V8.5X14BF	64
NDCS105M5.5V8.5X14BF	64
NDCS105M5.5V8.5X17BF	48
NDCS105Z5.5V8.5X21BF	48
NDCS155M5.5V8.5X17BF	48
NDCS155M5.5V8.5X21BF	48
NDCS205M5.5V8.5X21BF	48
NDCS205M5.5V8.5X25BF	48
NDCS255M5.5V8.5X25BF	48
NDCS255M5.5V10X21BF	40

NIC P/N	Quantity per Plastic Tray
NDCS305M5.5V8X25BF	48
NDCS305M5.5V10X21BF	40
NDCS355M5.5V10X21BF	40
NDCS505M5.5V10X26BF	30
NDCS505M5.5V13X22BF	32
NDCS505M5.5V13X27BF	20
NDCS755M5.5V13X22BF	32
NDCS106M5.5V13X27BF	20
NDCS106M5.5V16X28BF	20
NDCS156M5.5V16X33BF	16
NDCS256M5.5V18X43BF	40 (Plastic Bag)

NDRH ENVIRONMENTAL CHARACTERISTICS

ITEM	REQUIREMENT		TEST CONDITION
Endurance	ΔC	Less than or equal to 30% of the initial measured value	Applied voltage: 5V Temperature: +65°C ± 2°C Test Duration:1000 hours
	ESR	Less than or equal to 4 times the initial measured value	
	Appearance	No leakage or mechanical damage	
Cycle Life	ΔC	Less than or equal to 30% of the initial measured 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 measured value	
Humidity Characteristics	ΔC	Within 30% of the rated specification	Temperature: +40°C ± 2°C Relative humidity: 90~95%RH Test Duration: 240 hours
	ESR	Less than or equal to 4 times the initial measured value	
	Appearance	No leakage or mechanical damage	
Temperature Cycle	ΔC	Less than or equal to 10% of the initial measured value	Temperature cycle: -40°C ± 2°C →normal temperature →+70°C ± 2°C →normal temperature Number of Cycles: 5
	Appearance	No mechanical damage or leakage	
Low Temperature Storage Characteristics	ΔC	Within 10% of the rated specification	Applied Voltage: 0v Temperature: -40°C ± 2°C Test Duration:96 hours
	ESR	Less than or equal to 2 times the initial measured value	
	Appearance	No leakage or mechanical damage	
High Temperature Storage Characteristics	ΔC	Within 10% of the rated specification	Applied Voltage: 0v Temperature: +70°C ± 2°C Test Duration:96 hours
	ESR	Less than or equal to 2 times the initial measured value	
	Appearance	No leakage or mechanical damage	
Self-Discharge (Voltage Holding Characteristics)	The self-discharge cut off voltage is greater than or equal to 80% of the rated voltage.		Charging process: Normal temperature, no load, rated voltage charge 8 hours Placement process: Temperature less than or equal to 25 °C, relative humidity less than 60% RH, open 24 hours
Lead Strength	No damage to the outlet		DL/T1652-2016
Solderability	More than 3/4 of the terminal surface is covered by a tin layer		DL/T1652-2016

FLOW (WAVE) SOLDERING PROFILE



Note: The capacitor cannot be powered on immediately after wave soldering and must be left standing for more than 12 hours before use.