

NDRH Series

High Voltage Cylindrical Type Supercapacitor



FEATURES

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

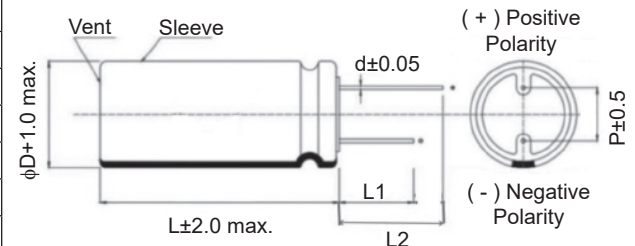
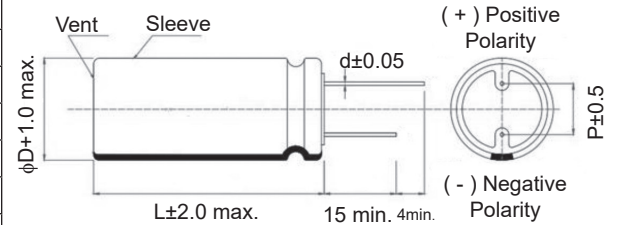
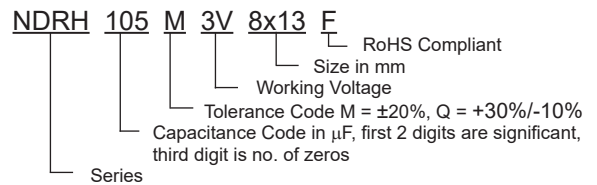
NDRH CHARACTERISTICS

Rated Voltage Rating	3.0VDC
Rated Capacitance Range	0.5 ~ 60F (1,000,000 μ F ~ 60,000,000 μ F)
Operating Temp. Range	-40°C ~ +65°C (3.0V), -40°C ~ +70°C (2.7V)
Capacitance Tolerance	\pm 20% (M), +30%/-10% (Q)
Load Life @ +65°C 1,000 hours	Δ C: 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

NDRH CASE DIMENSIONS (mm)

NIC P/N	DIMENSIONS (mm)					
	D \pm 1.0	L	P \pm 0.5	d \pm 0.05	L1 \pm 2.0	L2 \pm 2.0
NDRH504M3V6.3X12.5F	6.3	12.5 \pm 1.5	2.5	0.5	20.0	25.0
NDRH105M3V6.3X12.5F	6.3	12.5 \pm 1.5	2.5	0.5	20.0	25.0
NDRH105M3V8X13F	8.0	13 \pm 1.5	3.5	0.6	20.0	26.0
NDRH155M3V6.3X12.5F	6.3	12.5 \pm 1.5	2.5	0.5	20.0	25.0
NDRH155M3V8X13F	8.0	13 \pm 1.5	3.5	0.6	20.0	26.0
NDRH205M3V8X13F	8.0	13 \pm 1.5	3.5	0.6	20.0	26.0
NDRH205M3V8X16F	8.0	16 \pm 1.5	3.5	0.6	20.0	26.0
NDRH305M3V8X20F	8.0	20 \pm 1.5	3.5	0.6	20.0	26.0
NDRH335M3V8X20F	8.0	20 \pm 1.5	3.5	0.6	20.0	26.0
NDRH505M3V8X24F	8.0	24 \pm 1.0	3.5	0.6	20.0	26.0
NDRH505M3V10X20F	10	20 \pm 1.5	5.0	0.6	19.0	25.0
NDRH605M3V10X20F	10	20 \pm 1.5	5.0	0.6	19.0	25.0
NDRH605Q3V10X20F	10	20 \pm 1.5	5.0	0.6	19.0	25.0
NDRH705M3V10X20F	10	20 \pm 1.5	5.0	0.6	19.0	25.0
NDRH106M3V10X25F	10	25 \pm 2.0	5.0	0.6	22.0	28.0
NDRH106M3V12.5X20F	12.5	20 \pm 2.0	5.0	0.6	23.0	29.0
NDRH126M3V12.5X20F	12.5	20 \pm 2.0	5.0	0.6	23.0	29.0
NDRH156M3V12.5X20F	12.5	20 \pm 2.0	5.0	0.6	23.0	29.0
NDRH156M3V12.5X25F	12.5	25 \pm 2.0	5.0	0.6	22.0	28.0
NDRH206M3V12.5X25F	12.5	25 \pm 2.0	5.0	0.6	22.0	28.0
NDRH206M3V12.5X30F	12.5	30 \pm 2.0	5.0	0.6	22.0	28.0
NDRH256M3V16X25F	16	25 \pm 2.0	7.5	0.8	22.0	28.0
NDRH256Q3V16X25F	16	25 \pm 2.0	7.5	0.8	22.0	28.0
NDRH306M3V16X30F	16	30 \pm 2.0	7.5	0.8	22.0	28.0
NDRH406M3V18X30F	18	30 \pm 2.0	7.5	0.8	-	-
NDRH506M3V18X40F	18	40 \pm 2.0	7.5	0.8	-	-
NDRH606M3V18X40F	18	40 \pm 2.0	7.5	0.8	-	-

PART NUMBER SYSTEM



NDRH Series

High Voltage Cylindrical Type Supercapacitor



NDRH ELECTRICAL SPECIFICATIONS

NIC P/N	Capacitance (F)	Tolerance (%)	Voltage (VDC)	ESR 1KHz (mW @25°C) Max.	Peak Current (A @ 25°C<1s) Max.	LC after 72h (mA@ 25°C)	Stored Energy (mWh) Max.
NDRH504M3V6.3X12.5F	0.5	±20	3	500	0.54	0.008	0.63
NDRH105M3V6.3X12.5F	1.0	±20	3	500	0.90	0.008	1.25
NDRH105M3V8X13F	1.0	±20	3	350	1.00	0.008	1.25
NDRH155M3V6.3X12.5F	1.5	±20	3	500	1.16	0.008	1.88
NDRH155M3V8X13F	1.5	±20	3	350	1.33	0.010	1.88
NDRH205M3V8X13F	2.0	±20	3	240	1.93	0.012	2.50
NDRH205M3V8X16F	2.0	±20	3	200	1.99	0.012	2.50
NDRH305M3V8X20F	3.0	±20	3	160	2.98	0.013	3.75
NDRH335M3V8X20F	3.3	±20	3	160	3.19	0.013	4.13
NDRH505M3V8X24F	5.0	±20	3	120	4.82	0.016	6.25
NDRH505M3V10X20F	5.0	±20	3	120	4.91	0.016	6.25
NDRH605M3V10X20F	6.0	±20	3	100	5.59	0.024	7.50
NDRH605Q3V10X20F	6.0	30%/-10%	3	100	5.59	0.024	7.50
NDRH705M3V10X20F	7.0	±20	3	80	6.34	0.028	8.75
NDRH106M3V10X25F	10	±20	3	65	8.18	0.030	12.50
NDRH106M3V12.5X20F	10	±20	3	70	7.94	0.030	12.50
NDRH126M3V12.5X20F	12	±20	3	65	9.01	0.032	15.00
NDRH156M3V12.5X20F	15	±20	3	70	10.97	0.050	18.75
NDRH156M3V12.5X25F	15	±20	3	55	11.10	0.050	18.75
NDRH206M3V12.5X25F	20	±20	3	50	14.21	0.060	25.00
NDRH206M3V12.5X30F	20	±20	3	70	11.25	0.065	25.00
NDRH256M3V16X25F	25	±20	3	45	19.29	0.070	31.25
NDRH256Q3V16X25F	25	30%/-10%	3	45	19.29	0.070	31.25
NDRH306M3V16X30F	30	±20	3	30	21.32	0.078	37.50
NDRH406M3V18X30F	40	±20	3	30	25.47	0.088	50.00
NDRH506M3V18X40F	50	±20	3	25	30.00	0.100	62.50
NDRH606M3V18X40F	60	±20	3	25	32.40	0.120	75.00

NDRH Series

High Voltage Cylindrical Type Supercapacitor



PACKAGING QUANTITY

NIC P/N	Quantity per Plastic Tray
NDRH504M3V6.3X12.5F	180
NDRH105M3V6.3X12.5F	180
NDRH105M3V8X13F	160
NDRH155M3V6.3X12.5F	180
NDRH155M3V8X13F	160
NDRH205M3V8X13F	160
NDRH205M3V8X16F	140
NDRH305M3V8X20F	120
NDRH335M3V8X20F	120
NDRH505M3V8X24F	100
NDRH505M3V10X20F	120
NDRH605M3V10X20F	120
NDRH605Q3V10X20F	120
NDRH705M3V10X20F	120
NDRH106M3V10X25F	80
NDRH106M3V12.5X20F	64
NDRH126M3V12.5X20F	64
NDRH156M3V12.5X20F	64
NDRH156M3V12.5X25F	60
NDRH206M3V12.5X25F	60
NDRH206M3V12.5X30F	60
NDRH256M3V16X25F	50
NDRH256Q3V16X25F	50
NDRH306M3V16X30F	50
NDRH406M3V18X30F	44
NDRH506M3V18X40F	26
NDRH606M3V18X40F	26

NDRH Series

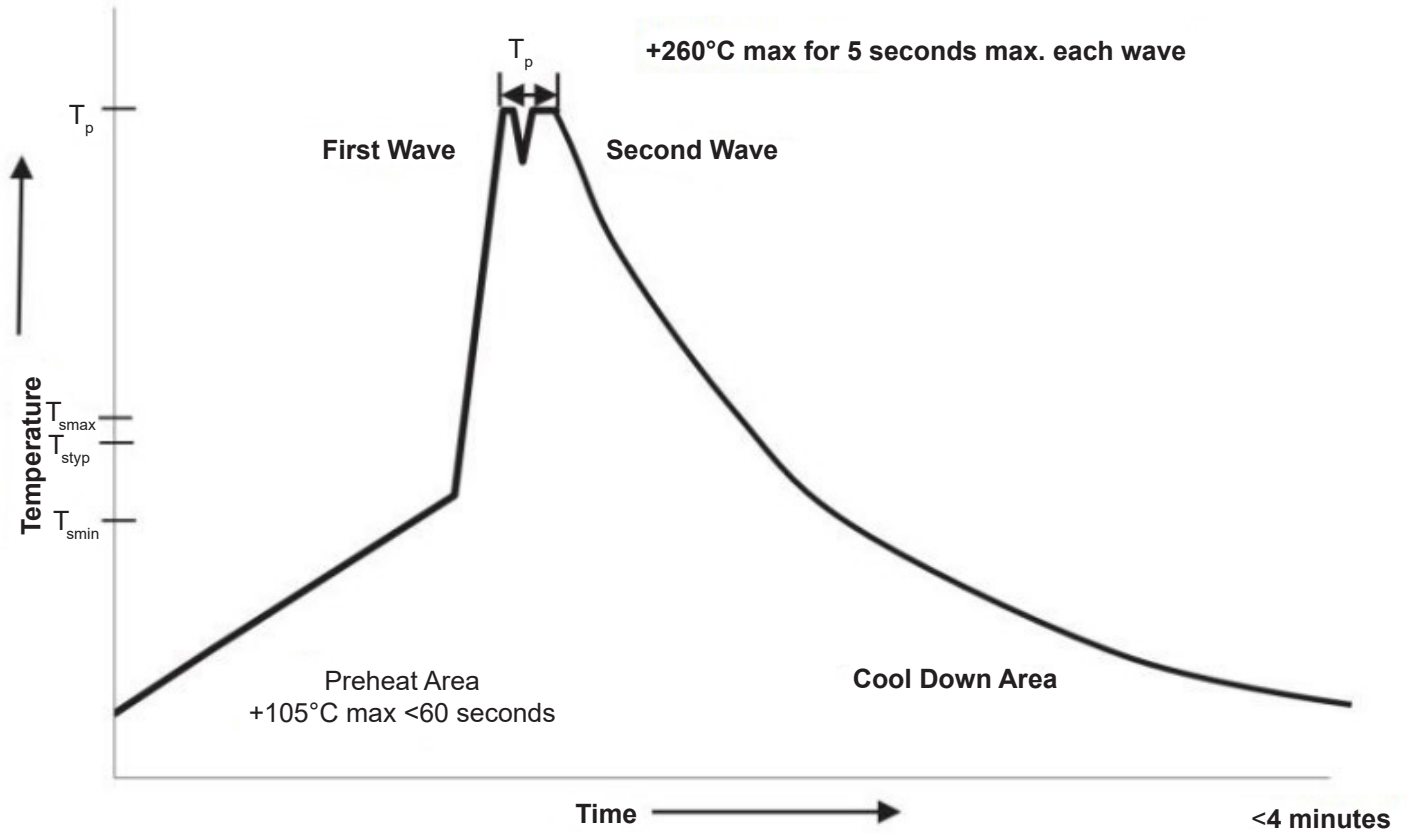
High Voltage Cylindrical Type Supercapacitor



NDRH ENVIRONMENTAL CHARACTERISTICS

ITEM	REQUIREMENT		TEST CONDITION
Endurance	ΔC	Less than or equal to 30% of the initial measured value	Applied voltage: 3V 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: +25°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.