NDRW Series
High Temperature Cylindrical Type Supercapacitor

ISO 9001:2015 CERTIFIED

ROHS/REACH COMPLIANT HALOGEN FREE

NIC Components Corp.

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

NDRW CHARACTERISTICS

Rated Voltage Rating	2.7VDC
Rated Capacitance Range	0.5 ~ 60F (500,000μF ~ 60,000,000μF)
Operating Temp. Range	-40°C ~ +70°C (2.7V), +85°C (2.5V)
Capacitance Tolerance	± 20% (M)
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

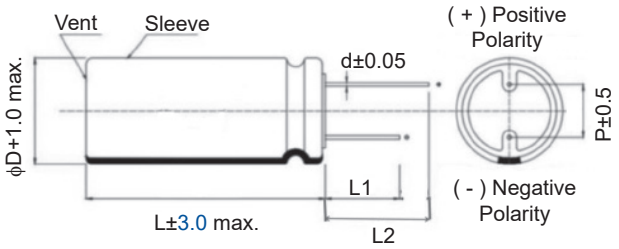
CASE DIMENSIONS (mm)

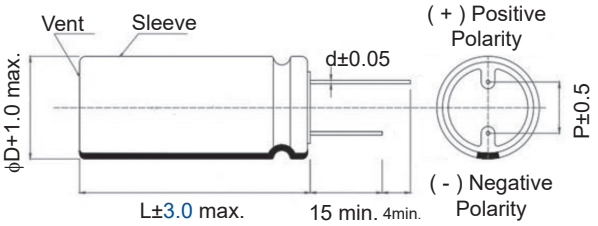
NIC P/N	DIMENSIONS (mm)					
	D ±1.0	L	P ±0.5	d ±0.05	L1 ±2.0	L2 ±2.0
NDRW504M2.7V6.3X12.5F	6.3	12.5±1.5	2.5	0.5	20.0	25.0
NDRW105M2.7V6.3X12.5F	6.3	12.5±1.5	2.5	0.5	20.0	25.0
NDRW105M2.7V8X13F	8.0	13.0±1.5	3.5	0.6	20.0	26.0
NDRW155M2.7V6.3X12.5F	6.3	12.5±1.5	2.5	0.5	20.0	25.0
NDRW155M2.7V8X13F	8.0	13.0±1.5	3.5	0.6	20.0	26.0
NDRW205M2.7V8X13F	8.0	13.0±1.5	3.5	0.6	20.0	26.0
NDRW205M2.7V8X16F	8.0	16.0±1.5	3.5	0.6	20.0	26.0
NDRW205M2.7V8X20F	8.0	20.0±1.5	3.5	0.6	20.0	26.0
NDRW305M2.7V8X16F	8.0	16.0±1.5	3.5	0.6	20.0	26.0
NDRW305M2.7V8X20F	8.0	20.0±1.5	3.5	0.6	20.0	26.0
NDRW335M2.7V8X20F	8.0	20.0±1.5	3.5	0.6	20.0	26.0
NDRW405M2.7V8X16F	8.0	16.0±1.5	3.5	0.6	20.0	26.0
NDRW505M2.7V8X24F	8.0	24.0±1.5	3.5	0.6	20.0	26.0
NDRW505M2.7V10X20F	10.0	20.0±1.5	5.0	0.6	19.0	25.0
NDRW605M2.7V10X20F	10.0	20.0±1.5	5.0	0.6	19.0	25.0
NDRW705M2.7V10X20F	10.0	20.0±1.5	5.0	0.6	19.0	25.0
NDRW106M2.7V10X25F	10.0	25.0±2.0	5.0	0.6	22.0	28.0
NDRW106M2.7V12.5X20F	12.5	20.0±2.0	5.0	0.6	23.0	29.0
NDRW126M2.7V12.5X20F	12.5	20.0±2.0	5.0	0.6	23.0	29.0
NDRW156M2.7V12.5X25F	12.5	25.0±2.0	5.0	0.6	22.0	28.0
NDRW206M2.7V12.5X25F	12.5	25.0±2.0	5.0	0.6	22.0	28.0
NDRW206M2.7V12.5X30F	12.5	30.0±2.0	5.0	0.6	22.0	28.0
NDRW256M2.7V12.5X30F	12.5	30.0±2.0	5.0	0.6	22.0	28.0
NDRW256M2.7V16X25F	16.0	25.0±3.0	7.5	0.8	22.0	28.0
NDRW306M2.7V16X30F	16.0	30.0±3.0	7.5	0.8	22.0	28.0
NDRW406M2.7V18X30F	18.0	30.0±3.0	7.5	0.8	-	-
NDRW506M2.7V18X40F	18.0	40.0±3.0	7.5	0.8	-	-
NDRW606M2.7V18X40F	18.0	40.0±3.0	7.5	0.8	-	-

PART NUMBER SYSTEM

NDRW 105 M 2.7V 8x13 F

- NDRW — Series
- 105 — Capacitance Code in μF, first 2 digits are significant, third digit is no. of zeros
- M — Tolerance Code Z = +80%/-20%
- 2.7V — Working Voltage
- 8x13 — Size in mm
- F — RoHS Compliant





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NDRW ELECTRICAL SPECIFICATIONS

NIC P/N	Capacitance (F)	Tolerance %	Voltage (VDC)	ESR 1KHz (mΩ @25°C) Max.	Peak Current (A @ 25°C<1s) Max.	LC after 72h (mA@ 25°C)	Stored Energy (mWh) Max.
NDRW504M2.7V6.3X12.5F	0.5	±20	2.7	500	0.54	0.008	0.51
NDRW105M2.7V6.3X12.5F	1.0	±20	2.7	500	0.90	0.008	1.01
NDRW105M2.7V8X13F	1.0	±20	2.7	350	1.00	0.008	1.01
NDRW155M2.7V6.3X12.5F	1.5	±20	2.7	500	1.16	0.008	1.52
NDRW155M2.7V8X13F	1.5	±20	2.7	350	1.33	0.010	1.52
NDRW205M2.7V8X13F	2.0	±20	2.7	240	1.93	0.012	2.03
NDRW205M2.7V8X16F	2.0	±20	2.7	200	1.99	0.012	2.03
NDRW205M2.7V8X20F	2.0	±20	2.7	200	1.92	0.012	2.03
NDRW305M2.7V8X16F	3.0	±20	2.7	160	2.74	0.015	3.04
NDRW305M2.7V8X20F	3.0	±20	2.7	160	2.98	0.017	3.04
NDRW335M2.7V8X20F	3.3	±20	2.7	160	3.19	0.017	3.34
NDRW405M2.7V8X16F	4.0	±20	2.7	150	3.38	0.015	4.05
NDRW505M2.7V8X24F	5.0	±20	2.7	120	4.82	0.020	5.06
NDRW505M2.7V10X20F	5.0	±20	2.7	120	4.91	0.020	5.06
NDRW605M2.7V10X20F	6.0	±20	2.7	100	5.59	0.025	6.08
NDRW705M2.7V10X20F	7.0	±20	2.7	80	6.34	0.030	7.09
NDRW106M2.7V10X25F	10	±20	2.7	65	8.18	0.050	10.13
NDRW106M2.7V12.5X20F	10	±20	2.7	70	7.94	0.050	10.13
NDRW126M2.7V12.5X20F	12	±20	2.7	65	9.01	0.050	12.15
NDRW156M2.7V12.5X25F	15	±20	2.7	55	11.10	0.065	15.19
NDRW206M2.7V12.5X25F	20	±20	2.7	50	14.21	0.080	20.25
NDRW206M2.7V12.5X30F	20	±20	2.7	70	11.25	0.065	20.25
NDRW256M2.7V12.5X30F	25	±20	2.7	65	12.86	0.070	25.31
NDRW256M2.7V16X25F	25	±20	2.7	45	19.29	0.070	25.31
NDRW306M2.7V16X30F	30	±20	2.7	30	21.32	0.078	30.38
NDRW406M2.7V18X30F	40	±20	2.7	30	25.47	0.088	40.50
NDRW506M2.7V18X40F	50	±20	2.7	25	30.00	0.100	50.63
NDRW606M2.7V18X40F	60	±20	2.7	25	32.40	0.120	60.75

PACKAGING QUANTITY

NIC P/N	Quantity per Plastic Tray
NDRW504M2.7V6.3X12.5F	180
NDRW105M2.7V6.3X12.5F	180
NDRW105M2.7V8X13F	160
NDRW155M2.7V6.3X12.5F	180
NDRW155M2.7V8X13F	160
NDRW205M2.7V8X13F	160
NDRW205M2.7V8X16F	140
NDRW205M2.7V8X20F	120
NDRW305M2.7V8X16F	140
NDRW305M2.7V8X20F	120
NDRW335M2.7V8X20F	120
NDRW405M2.7V8X16F	140
NDRW505M2.7V8X24F	100
NDRW505M2.7V10X20F	120
NDRW605M2.7V10X20F	120
NDRW705M2.7V10X20F	120
NDRW106M2.7V10X25F	80
NDRW106M2.7V12.5X20F	64
NDRW126M2.7V12.5X20F	64
NDRW156M2.7V12.5X25F	60
NDRW206M2.7V12.5X25F	60
NDRW206M2.7V12.5X30F	60
NDRW256M2.7V12.5X30F	60
NDRW256M2.7V16X25F	50
NDRW306M2.7V16X30F	50
NDRW406M2.7V18X30F	44
NDRW5-6M2.7V18X40F	26
NDRW606M2.7V18X40F	26

NDRW ENVIRONMENTAL CHARACTERISTICS

ITEM	REQUIREMENT		TEST CONDITION
Endurance	ΔC	Less than or equal to 30% of the initial measured value	Applied voltage: 2.5V Temperature: +85°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 →+85°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: +85°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