

## FEATURES

- DOUBLE LAYER CAPACITOR
- WIDE TEMPERATURE (-40°C~ +85°C)
- SUITABLE FOR FLOW SOLDERING
- LEAD-FREE FINISH

**RoHS  
Compliant**  
includes all homogeneous materials



## CHARACTERISTICS

Rated Voltage Range	5.5VDC	
Rated Capacitance Range	0.047F ~ 1.0F (47,000μF ~ 1,000,000μF)	
Operating Temp. Range	-40°C ~ +85°C	
Capacitance Tolerance	+80%/-20% (Z)	
Load Life Test @ 85°C 1,000 hours	Δ Capacitance Change	Less than ±30% of initial measured value
	Maximum ESR	Less than 400% of the specified maximum value
Temperature Characteristics -40°C & +85°C	Δ Capacitance Change	Within ±30% of 20°C value
	Maximum ESR	@ -40°C x7, @ +85°C x5 of 20°C value
Shelf Life @ +85°C (1,000 hours)	Δ Capacitance Change	Less than ±30% of initial measured value
	Maximum ESR	Less than 400% of the specified maximum value

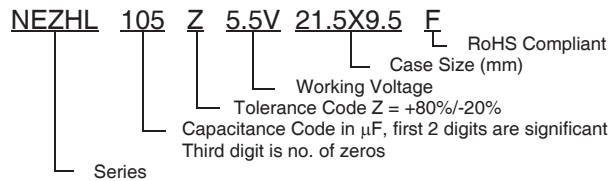
**Super Capacitor  
Application Guide**

## STANDARD VALUES AND SPECIFICATIONS

NIC P/N	Case Size (mm)	Capacitance (F)	Holding Voltage (VDC min.)*	Max. Leakage Current @ minutes (μA)	Max. ESR @ 1KHz (Ω)
NEZHL473Z5.5V13.5X9.5F	13.5X9.5	0.047	4.0	69 @ 30 minutes	40
NEZHL104Z5.5V13.5X9.5F	13.5X9.5	0.1	4.0	100 @ 30 minutes	40
NEZHL224Z5.5V13.5X9.5F	13.5X9.5	0.22	4.0	135 @ 30 minutes	40
NEZHL474Z5.5V21.5X9.5F	21.5X9.5	0.47	4.0	216 @ 30 minutes	20
NEZHL105Z5.5V21.5X9.5F	21.5X9.5	1.0	4.0	315 @ 30 minutes	20

\*Minimum voltage at 24 hours after charging for 1 hour at 5VDC.

## PART NUMBER SYSTEM



## PRECAUTIONS

WASHING is NOT RECOMMENDED. Additional guidelines and precautions can be found at [www.niccomp.com/precautions](http://www.niccomp.com/precautions)  
If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: [tpmg@niccomp.com](mailto:tpmg@niccomp.com)



## CASE DIMENSIONS (mm)

NIC P/N	DIMENSIONS (mm)					
	D	H	S	L	d <sub>1</sub>	d <sub>2</sub>
NEZHL473Z5.5V13.5X9.5F	13.5	9.5	5.0	6.0	1.2	0.5
NEZHL104Z5.5V13.5X9.5F	13.5	9.5	5.0	6.0	1.2	0.5
NEZHL224Z5.5V13.5X9.5F	13.5	9.5	5.0	6.0	1.2	0.5
NEZHL474Z5.5V21.5X9.5F	21.5	9.5	5.0	6.0	1.2	0.5
NEZHL105Z5.5V21.5X9.5F	21.5	9.5	5.0	6.0	1.2	0.5

