

## FEATURES

- DOUBLE LAYER CONSTRUCTION
- HIGH CURRENT DISCHARGE (UP TO 50mA)
- IDEAL AS MEMORY BACK-UP POWER SUPPLY
- SUITABLE FOR FLOW SOLDERING
- LEAD-FREE FINISH

**RoHS**  
**Compliant**  
includes all homogeneous materials

\*See Part Number System for Details



## CHARACTERISTICS

Rated Voltage Range	5.5 ~ 12VDC	
Rated Capacitance Range	0.022F ~ 5.0F (22,000 $\mu$ F ~ 5,000,000 $\mu$ F)	
Operating Temp. Range	-25°C ~ +70°C	
Capacitance Tolerance	+80%/-20% (Z)	
Load Life Test @ 70°C 1,000 hours	$\Delta$ Capacitance Change	5.5V Parts - Less than $\pm 15\%$ of initial measured value Others $\pm 30\%$ of initial measured value
	Maximum ESR	Less than 200% of the specified maximum value
	Current at 30 minutes	Less than 200% of the specified maximum value
Temperature Cycling (5 cycles, -25 ~ +70°C)	$\Delta$ Capacitance Change	Within +80%/-20% of specified value
	Maximum ESR	Less than specified maximum value
	Current at 30 minutes	Less than specified maximum value
Humidity Resistance (240 hours @ 40°C/90% RH)	$\Delta$ Capacitance Change	5.5V Parts - Less than $\pm 10\%$ of initial measured value Others $\pm 20\%$ of initial measured value
	Maximum ESR	Less than 120% of the specified maximum value
	Current at 30 minutes	Less than 120% of the specified maximum value

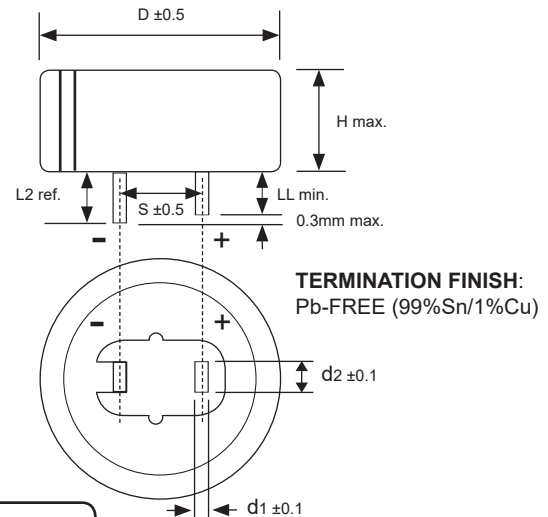
Super Capacitor  
Application Guide

## STANDARD VALUES AND SPECIFICATIONS

NIC P/N	Capacitance Value (F)		Voltage (VDC)	Max. Current @ 30 minutes (mA)	Max. ESR @ 1KHz ( $\Omega$ )	Typical DCR ( $\Omega$ )
	Charge	Discharge				
NEXS223Z5.5V11.5X8.5F	0.022	0.033	5.5	0.033	60	51
NEXS473Z5.5V13X8.5F	0.047	0.072	5.5	0.071	40	18
NEXS104Z5.5V16.5X8.5F	0.10	0.15	5.5	0.15	25	11
NEXS224Z5.5V16.5X13F	0.22	0.33	5.5	0.33	25	9.0
NEXS474Z5.5V21.5X13F	0.47	0.75	5.5	0.71	13	4.2
NEXS474Z11V28.5X25.5F	0.47	0.60	11	1.41	7.0	3.4
NEXS105Z5.5V28.5X14F	1.0	1.3	5.5	1.5	7.0	2.9
NEXS105Z11V28.5X31.5F	1.0	1.3	11	3.0	7.0	5.0
NEXS105Z12V28.5X38F	1.0	1.3	12	3.6	7.5	5.0
NEXS505Z12V44.8X60F	5.0	6.5	12	18.0	4.0	2.0

## CASE DIMENSIONS (mm)

NIC P/N	DIMENSIONS (mm)						
	D	H	S	L2 (ref)	LL	d1	d2
NEXS223Z5.5V11.5X8.5F	11.5	8.5	5.08	4.1 $\pm$ 1.0	2.7	0.4	1.2
NEXS473Z5.5V13X8.5F	13.0	8.5	5.08	3.4 $\pm$ 1.0	2.2	0.4	1.2
NEXS104Z5.5V16.5X8.5F	16.5	8.5	5.08	4.1 $\pm$ 1.0	2.7	0.4	1.2
NEXS224Z5.5V16.5X13F	16.5	13.0	5.08	4.1 $\pm$ 1.0	2.7	0.4	1.2
NEXS474ZZ5.5V21.5X13F	21.5	13.0	7.62	4.5 $\pm$ 1.5	3.0	0.6	1.2
NEXS474Z11V28.5X25.5F	28.5	25.5	10.16	8.0 $\pm$ 1.5	6.1	0.6	1.4
NEXS105Z5.5V28.5X14F	28.5	14.0	10.16	8.0 $\pm$ 1.5	6.1	0.6	1.4
NEXS105Z11V28.5X31.5F	28.5	31.5	10.16	8.0 $\pm$ 1.5	6.1	0.6	1.4
NEXS105Z12V28.5X38F	28.5	38.0	10.16	8.0 $\pm$ 1.5	6.1	0.6	1.4
NEXS505Z12V44.8X60F	44.8	60.0	20.00	7.5 $\pm$ 2.0	9.5	1.0	1.4



## PRECAUTIONS

Please review the notes on correct use, safety and precautions found at [https://www.niccomp.com/resource/files/double/Double\\_Layer\\_Capacitor\\_Guide\\_0810-RevBrA7.pdf](https://www.niccomp.com/resource/files/double/Double_Layer_Capacitor_Guide_0810-RevBrA7.pdf)  
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)

