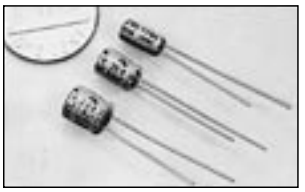
Miniature Aluminum Electrolytic Capacitors

NLES Series

SUPER LOW PROFILE, LOW LEAKAGE, ELECTROLYTIC CAPACITORS



FEATURES

- LOW LEAKAGE CURRENT
- 5mm HEIGHT

RoHS Compliant
includes all homogeneous materials
*See Part Number System for Details

CHARACTERISTICS

Rated Voltage Range	6.3 ~ 50Vdc						
Capacitance Range	0.1 ~ 100µF						
Operating Temperature Range	-40~+85°C						
Capacitance Tolerance	±20% (M)						
Max. Leakage Current After 1 minute At 20°C	0.002CV, or 0.4µA, whichever is greater						
Surge Voltage & Max. Tan δ	W.V. (Vdc)	6.3	10	16	25	35	50
	S.V. (Vdc)	8	13	20	32	44	63
	Tan d at 120Hz/20°C	0.24	0.20	0.16	0.14	0.12	0.10
Low Temperature Stability (Impedance Ratio at 120Hz)	W.V. (Vdc)	6.3	10	16	25	35	50
	Z-25°C/Z+20°C	4	3	2	2	2	2
	Z-40°C/Z+20°C	8	6	6	4	3	3
Load Life Test 85°C 1,000 Hours	Capacitance Change	Within ±20% of initial measured value					
	Tan δ	Less than 200% of specified value					
	Leakage Current	Less than specified value					

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms AT 120Hz AND 85°C)

Cap. (µF)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
0.1	-	-	-	-	-	1.0
0.22	-	-	-	-	-	2.0
0.33	-	-	-	-	-	2.8
0.47	-	-	-	-	-	4.0
1.0	-	-	-	-	-	4.0
2.2	-	-	-	-	-	8.5
3.3	-	-	-	-	-	13
4.7	-	-	-	16	18	17
10	-	-	23	27	29	20
22	28	33	37	42	46	-
33	37	41	49	52	-	-
47	45	52	58	-	-	-
100	70	-	-	-	-	-

MAXIMUM E.S.R. (Ω AT 120HZ AND 20°C)

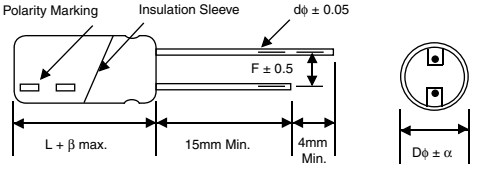
Cap. (µF)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
0.1	-	-	-	-	-	1660
0.22	-	-	-	-	-	755
0.33	-	-	-	-	-	503
0.47	-	-	-	-	-	353
1.0	-	-	-	-	-	166
2.2	-	-	-	-	-	75.5
3.3	-	-	-	-	-	50.3
4.7	-	-	-	49.4	42.4	35.3
10	-	-	26.6	23.3	19.9	16.6
22	18.1	15.1	12.1	10.6	9.05	-
33	12.1	10.1	8.05	7.04	-	-
47	8.47	7.06	5.64	-	-	-
100	3.98	-	-	-	-	-

STANDARD VALUES AND CASE SIZE TABLE Dϕ x L(mm)

Cap.(µF)	Code	Working Voltage (Vdc)					
		6.3	10	16	25	35	50
0.1	R10	-	-	-	-	-	4 x 5
0.22	R22	-	-	-	-	-	4 x 5
0.33	R33	-	-	-	-	-	4 x 5
0.47	R47	-	-	-	-	-	4 x 5
1.0	1R0	-	-	-	-	-	4 x 5
2.2	2R2	-	-	-	-	-	4 x 5
3.3	3R3	-	-	-	-	-	4 x 5
4.7	4R7	-	-	-	4 x 5	4 x 5	5 x 5
10	100	-	-	4 x 5	5 x 5	5 x 5	6.3 x 5
22	220	4 x 5	5 x 5	5 x 5	6.3 x 5	6.3 x 5	-
33	330	5 x 5	5 x 5	6.3 x 5	6.3 x 5	-	-
47	470	5 x 5	6.3 x 5	6.3 x 5	-	-	-
100	101	6.3 x 5	-	-	-	-	-

LEAD SPACING AND DIAMETER (mm)

Case Dia. (DØ)	4	5	6.3
Leads Dia. (dØ)	0.45	0.45	0.45
Lead Spacing (F)	1.5	2.0	2.5
Dim. α	0.5	0.5	0.5
Dim. β	1.0	1.0	1.0



PART NUMBER SYSTEM

NLE-S 100 M 25V 5x5 F

- F — RoHS Compliant
- 5x5 — Size (DØ x L)
- 25V — Rated Voltage
- M — Tolerance Code
- 100 — Capacitance Code
- NLE-S — Series

PRECAUTIONS

Please review the notes on correct use, safety and precautions found on **pages T10 & T11** of NIC's **Electrolytic Capacitor catalog**.
Also found at **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**