Surface Mount Aluminum Electrolytic Capacitors

NACS Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION
- LOW PROFILE, 5.5mm MAXIMUM HEIGHT
- SPACE AND COST SAVINGS
- DESIGNED FOR REFLOW SOLDERING

RoHS Compliant

includes all homogeneous materials

*See Part Number System for Details

CHARACTERISTICS

Rated Voltage Rating	6.3 ~ 50Vdc**						
Rated Capacitance Range	4.7 ~ 220µF						
Operating Temperature Range	-40° ~ +85°C						
Capacitance Tolerance	±20%(M), ±10%(K)*						
Max. Leakage Current After 2 Minutes at 20°C	0.01CV or 3µA, whichever is greater						
Surge Voltage & Max. Tanδ	W.V. (Vdc)	6.3	10	16	25	35	50
	S.V. (Vdc)	8.0	13	20	32	44	63
	Tanδ @ 120Hz/20°C	0.28	0.24	0.20	0.16	0.14	0.12
Low Temperature Stability (Impedance Ratio @ 120Hz)	W.V. (Vdc)	6.3	10	16	25	35	50
	Z-40°C/Z +20°C	4	3	2	2	2	2
	Z-55°C/Z +20°C	10	8	6	4	4	4
Load Life Test at Rated W.V. 85°C 2,000 Hours	Capacitance Change	Within ±25% of initial measured value					
	Tanδ	Less than 200% of specified value					
	Leakage Current	Less than specified value					

*Optional ± 10% (K) Tolerance available on most values. Contact factory for availability.

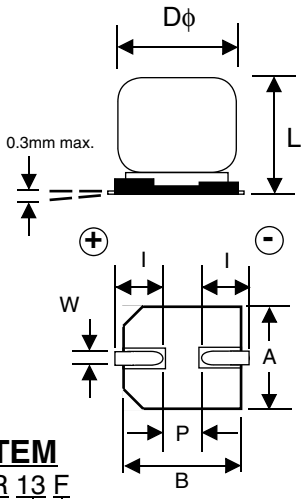
** For higher voltages, 200V and 400V, see NACV series.

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

Cap. (µF)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
4.7	-	-	-	-	-	18
10	-	-	-	20	20	27
22	-	28	28	35	36	40
33	31	32	40	42	65	-
47	36	43	44	65	-	-
56	46	46	48	68	-	-
100	47	50	-	-	-	-
150	71	76	-	-	-	-
220	74	-	-	-	-	-

MAXIMUM ESR (Ω AT 120Hz AND 20°C)

Cap. (µF)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
4.7	-	-	-	-	-	42.3
10	-	-	-	26.5	23.2	19.9
22	-	18.1	15.1	12.1	10.6	9.05
33	14.1	12.6	10.1	8.04	7.04	-
47	9.88	8.47	7.06	5.65	-	-
56	8.29	7.11	5.92	4.74	-	-
100	4.64	3.98	-	-	-	-
150	3.10	2.66	-	-	-	-
220	2.11	-	-	-	-	-



RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency Hz	50 ≤ f<100	100 ≤ f<1K	1K ≤ f<10K	f ≥ 10K
Correcton Factor	0.8	1.0	1.3	1.5

STANDARD PRODUCT AND CASE SIZE Dϕ xL (mm)

Cap. (µF)	Code	Working Voltage (Vdc)					
		6.3	10	16	25	35	50
4.7	4R7	-	-	-	-	-	4x5.5
10	100	-	-	-	4x5.5	4x5.5	5x5.5
22	220	-	4x5.5	4x5.5	5x5.5	5x5.5	6.3x5.5
33	330	4x5.5	4x5.5	5x5.5	5x5.5	6.3x5.5	-
47	470	4x5.5	5x5.5	5x5.5	6.3x5.5	-	-
56	560	5x5.5	5x5.5	5x5.5	6.3x5.5	-	-
100	101	5x5.5	5x5.5	-	-	-	-
150	151	6.3x5.5	6.3x5.5	-	-	-	-
220	221	6.3x5.5	-	-	-	-	-

PART NUMBER SYSTEM

NACS 100 M 35V 4x5.5 TR 13 F

- F — RoHS Compliant 97% Sn (min.), 3% Bi (max.)
- 13 — 330mm (13") Reel
- TR — Tape & Reel
- 4x5.5 — Size in mm
- 35V — Working Voltage
- M — Tolerance Code M=20%, K=10%
- 100 — Capacitance Code in µF, first 2 digits are significant. Third digit is no. of zeros, "R" indicates decimal for values under 10µF
- NACS — Series

DIMENSIONS (mm)

Case Size	Dϕ±0.5	L max.	A/B±0.2	I ± 0.2	W	P±0.2
4x5.5	4.0	5.5	4.3	1.8	0.5 ~ 0.8	1.0
5x5.5	5.0	5.5	5.3	2.1	0.5 ~ 0.8	1.4
6.3x5.5	6.3	5.5	6.6	2.5	0.5 ~ 0.8	2.2

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**