Surface Mount Aluminum Electrolytic Capacitors NACVF Series

FEATURES

- CYLINDRICAL V-CHIP CONSTRUCTION FOR SURFACE MOUNT
- HIGH VOLTAGE (160VDC AND 450VDC)
- 10mm x 14mm ~ 18mm x 22mm CASE SIZES
- LONG LIFE (5000 HOURS AT +105°C)
- DESIGNED FOR REFLOW SOLDERING

RoHS Compliant
includes all homogeneous materials

*See Part Number System for Details

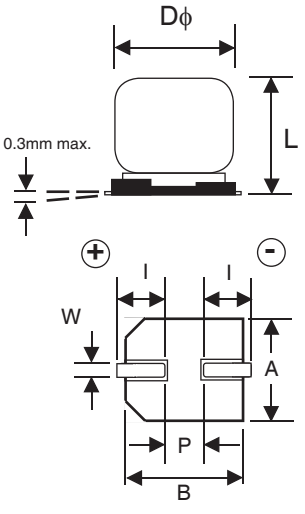


CHARACTERISTICS

Rated Voltage Range		160 ~ 450Vdc					
Rated Capacitance Range		2.2 ~ 100μF					
Operating Temperature Range		-25°C ~ +105°C					
Capacitance Tolerance		±20% (M)					
Max. Leakage Current After 2 Minutes		0.06CV + 10μA					
Max. Tan δ at 120Hz & 20°C		160Vdc	200Vdc	250Vdc	350Vdc	400Vdc	450Vdc
		0.15			0.20	0.24	
Low Temperature Stability (Impedance Ratio @ 120Hz)	Z -25°C/+20°C	2	2	3	5	6	6
Load Life @ 105°C & Rated Voltage 10x14mm 3,000 hours 10x18mm 4,000 hours 12.5 ~ 18mm Dia 5,000 hours	Capacitance Change	Within ±20% of initial measured value					
	Tan δ	Less than 200% of specificed value					
	Leakage Current	Less than the specificed maximum value					
Resistance to Soldering Heat Within the Recommended Reflow Conditions	Capacitance Change	Within ±10% of initial measured value					
	Tan δ	Less than the specificed maximum value					
	Leakage Current	Less than the specificed maximum value					

STANDARD PRODUCT AND CASE SIZE TABLE Dϕx L (mm)

Cap (μF)	Code	Working Voltage (Vdc)					
		160	200	250	350	400	450
2.2	2R2	-	-	-	-	-	10 x 14
3.3	3R3	-	-	-	10 x 14	10 x 14	10 x 18
4.7	4R7	-	-	-	10 x 18	10 x 18	12.5 x 17
10	100	10 x 14	10 x 18	10 x 18	16 x 17	16 x 17	18 x 17
22	220	-	12.5 x 17	16 x 17	18 x 17	16 x 22	18 x 22
33	330	12.5 x 17	16 x 17	18 x 17	16 x 22	18 x 22	-
47	470	16 x 17	18 x 17	16 x 22	18 x 22	-	-
68	680	18 x 17	16 x 22	18 x 22	-	-	-
		16 x 22					
100	101	18 x 22	18 x 22	-	-	-	-

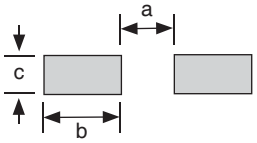


DIMENSIONS (mm)

Case Size	Dϕ ±0.5	L max.	A ±0.2	B ±0.2	I ±0.2	W	P ±0.2
10 x 14T2	10.0	14.0	10.3	10.3	3.5	0.7 ~ 1.4	4.6
10 x 18T2	10.0	18.5	10.3	10.3	3.5	1.1 ~ 1.4	4.6
12.5 x 17T2	12.5	17.5	13.5	13.5	4.7	0.6 ~ 1.2	4.4
16 x 17T2	16.0	17.5	17.0	17.0	5.5	0.9 ~ 1.5	6.7
18 x 17T2	18.0	17.5	19.0	19.0	6.5	0.9 ~ 1.5	6.7
18 x 22T2	18.0	22.5	19.0	19.0	6.5	0.9 ~ 1.5	6.7

RECOMMENDED LAND PATTERN DIMENSIONS (mm)

Case Size	a	b	c
10 ϕ	4.0	4.5	2.0
12.5 ϕ	4.0	5.7	2.0
16 ϕ	6.0	6.5	2.5
18 ϕ	6.0	7.5	2.5



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**

Surface Mount Aluminum Electrolytic Capacitors NACVF Series

STANDARD VALUES, CASE SIZES AND SPECIFICATIONS

NIC Part Number	Cap. (μF)	W.V. (Vdc)	Dissipaton Factor (Tan δ)	Max. Ripple Current (mA) +105°C/100KHz	Max. ESR (Ω) +20°C/120Hz	Load Life Hours @ +105°C
NACVF100M160V10X14TR13T2F	10	160	0.15	70	24.9	3,000
NACVF330M160V12.5X17TR13T2F	33		0.15	470	7.55	5,000
NACVF470M160V16X17TR13T2F	47		0.15	600	5.30	5,000
NACVF680M160V18X17TR13T2F	68		0.15	750	3.66	5,000
NACVF680M160V16X22TR13T2F						
NACVF101M160V18X22TR13T2F	100		0.15	1060	2.49	5,000
NACVF100M200V10X18TR13T2F	10	200	0.15	80	24.9	4,000
NACVF220M200V12.5X17TR13T2F	22		0.15	470	11.3	5,000
NACVF330M200V16X17TR13T2F	33		0.15	600	7.55	5,000
NACVF470M200V18X17TR13T2F	47		0.15	600	5.30	5,000
NACV680M200V16X22TR13T2F	68		0.15	750	3.66	5,000
NACVF101M200V18X22TR13T2F	100		0.15	1060	2.49	5,000
NACVF100M250V10X18TR13T2F	10	250	0.15	88	24.9	4,000
NACVF220M250V16X17TR13T2F	22		0.15	560	11.3	5,000
NACVF330M250V18X17TR13T2F	33		0.15	560	7.55	5,000
NACVF470M250V16X22TR13T2F	47		0.15	710	5.30	5,000
NACVF680M250V18X22TR13T2F	68		0.15	990	3.66	5,000
NACVF3R3M350V10X14TR13T2F	3.3	350	0.20	38	101	3,000
NACVF4R7M350V10X18TR13T2F	4.7		0.20	50	70.7	3,000
NACVF100M350V16X17TR13T2F	10		0.20	270	33.2	5,000
NACVF220M350V18X17TR13T2F	22		0.20	350	15.1	5,000
NACVF330M350V16X22TR13T2F	33		0.20	480	10.1	5,000
NACVF470M350V18X22TR13T2F	47		0.20	670	7.07	5,000
NACVF3R3M400V10X14TR13T2F	3.3	400	0.24	40	121	3,000
NACVF4R7M400V10X18TR13T2F	4.7		0.24	50	84.8	4,000
NACVF100M400V16X17TR13T2F	10		0.24	250	39.9	5,000
NACVF220M400V16X22TR13T2F	22		0.24	410	18.1	5,000
NACVF330M400V18X22TR13T2F	33		0.24	600	12.1	5,000
NACVF2R2M450V10X14TR13T2F	2.2	450	0.24	29	181	3,000
NACVF3R3M450V10X18TR13T2F	3.3		0.24	41	121	4,000
NACVF4R7M450V12.5X17TR13T2F	4.7		0.24	49	84.8	5,000
NACVF100M450V18X17TR13T2F	10		0.24	310	39.9	5,000
NACVF220M450V18X22TR13T2F	22		0.24	560	18.1	5,000

RIPPLE CURRENT FREQUENCY CORRECTION FACTORS

Voltage (Vdc)	Frequecy (Hz)			
	120	1K	10K ~ 30K	31K ~ 100K
160V ~ 250V	0.55	0.85	0.90	1.00
350V ~ 450V	0.50	080	0.90	1.00

Review & Compare Reflow Soldering Heat Limits
V-chip SMT Aluminum Electrolytic Capacitors
www.niccomp.com/RSL

PART NUMBER SYSTEM

NACVF 330 M 200V 16x17 TR 13 T2 F

- F — RoHS Compliant / Termination Code if Applicable
- T2 — Terminal Style: T2 = 2 Terminal; T4 = 4 Terminal (Discontinued)
- 13 — 330mm (13") Reel
- TR — Tape & Reel
- 16x17 — Size in mm
- 200V — Working Voltage
- M — Tolerance Code M=20%
- 330 — Capacitance Code in μF, first 2 digits are significant. Third digit is no. of zeros, "R" indicates decimal for values under 10μF
- NACVF — Series

TERMINATION CODES

Case Diameter	Termination Material	Termination Code
10 ~ 12.5mm ϕ	97% Sn, 3% Bi	None
	100% Sn	S
16 ~ 18mm ϕ	100% Sn	None