

## PRODUCT CHANGE NOTICE

### END - OF - LIFE / P R O D U C T D I S C O N T I N U A T I O N N O T I C E

PCN LINK: <http://www.niccomp.com/pcn.html-ssi>

**REF:** NACM series of molded case SMT aluminum electrolytic capacitors

**PRODUCT SERIES:** NACM

**NOTICE DATE:** March 24, 2006

**LAST ORDER DATE:** March 24, 2006

**SUB:** Above referenced product series is discontinued.

**REASON FOR DISCONTINUATION:**  
Non-competitive against V-Chip format versions

**REPLACEMENT - ALTERNATE:**  
Replace NACM with V-Chip format versions [Selection Guide: <http://www.niccomp.com/Catalog/smcap.html-ssi#SG> ]

+ Contact NIC for assistance in migrating to alternate part numbers [ <http://www.niccomp.com/contact.html-ssi> ]

PREPARED BY:  
Jim Wright, NIC Components Corp.

# Surface Mount Aluminum Electrolytic Capacitors NACM Series

## FEATURES

- NEW GENERATION HORIZONTAL MOUNT CHIP
- FLAT TOP RESIN PACKAGE FOR EASY PICK AND PLACEMENT
- EPOXY SEALED FOR EXTENDED LIFE (2000 HOURS AT +105°C)
- LOW IMPEDANCE AND HIGH RIPPLE AT 100KHZ
- FIXED TERMINALS FOR HIGH MECHANICAL STABILITY
- COMPATIBLE WITH REFLOW SOLDERING

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



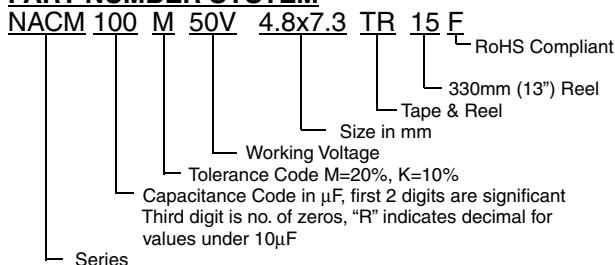
## CHARACTERISTICS

Rated Voltage Range	4 ~ 50VDC							
Rated Capacitance Range	0.47 ~ 270μF							
Operating Temperature Range	-55 ~ 105°C							
Capacitance Tolerance	+/-20%(M)							
Max. Leakage Current After 2 Minutes	0.01CV or 3μA, whichever is greater							
Working Voltage	WV (VDC)	4	6.3	10	16	25	50	
Surge Voltage	SV (VDC)	5	7	13	20	32	63	
Max. Tan δ	120Hz, +20°C	0.44	0.24	0.20	0.16	0.14	0.12	
Low Temperature Stability (Impedance Ratio @ 120Hz)	WV (VDC)	4	6.3	10	16	25	50	
	Z-25°C/+20°C	3	4	3	2	2	2	
	Z-55°C/+20°C	8	10	8	6	4	4	
High Temperature Load Life 2000 Hours at +105°C	Rated WVDC	Capacitance Change						Within + 30% of initial measured value
		Tan δ						Less than 200% of specified max. value
		Leakage Current						Less than specified max. value

## STANDARD PRODUCTS AND CASE SIZE WxL (mm)

Capacitance (μF)	Code	Working Voltage (Vdc)						
		4	6.3	10	16	25	50	
0.47	R47	-	-	-	-	-	3.8 x 6.5	
1.0	1R0	-	-	-	-	-	3.8 x 6.5	
1.5	1R5	-	-	-	-	-	3.8 x 6.5	
2.2	2R2	-	-	-	-	-	3.8 x 6.5	
3.3	3R3	-	-	-	-	3.8 x 6.5	4.8 x 7.3	
4.7	4R7	-	-	-	-	3.8 x 6.5	4.8 x 7.3	
6.8	6R8	-	-	-	-	3.8 x 6.5	4.8 x 7.3	
10	100	-	-	-	-	3.8 x 6.5	4.8 x 7.3	
15	150	-	-	-	3.8 x 6.5	4.8 x 7.3	-	
22	220	-	-	3.8 x 6.5	-	4.8 x 7.3	-	
33	330	-	3.8 x 6.5	-	3.8 x 9.5	4.8 x 7.3	4.8 x 10.3	
47	470	3.8 x 6.5	-	3.8 x 9.5	4.8 x 7.3	4.8 x 10.3	-	
68	680	-	3.8 x 9.5	4.8 x 7.3	-	4.8 x 10.3	-	
100	101	3.8 x 9.5	4.8 x 7.3	-	4.8 x 10.3	-	-	
150	151	4.8 x 7.3	-	4.8 x 10.3	-	-	-	
220	221	-	4.8 x 10.3	-	-	-	-	
270	271	4.8 x 10.3	-	-	-	-	-	

## PART NUMBER SYSTEM



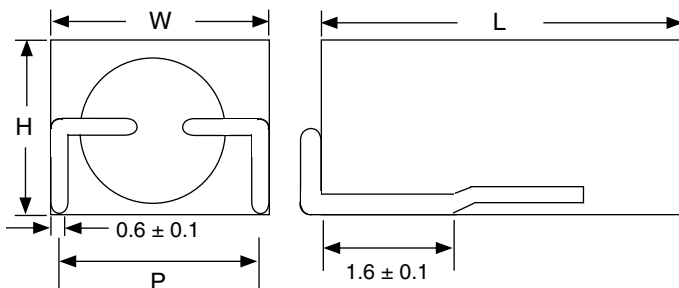
# Surface Mount Aluminium Electrolytic Capacitors NACM Series

## STANDARD PRODUCTS AND SPECIFICATIONS

NIC Part Number	WV (VDC)	Cap. (μF)	Case Size WxHxL (mm)	Max. L.C. (μA)	Tan δ	Max. Ripple Current At +105°C & 100KHZ (mA)	Max. Impedance At +20°C & 100KHZ (Ω)
NACM470M4V3.8X6.5TR	4	47	3.8x3.8x6.5	3.0	0.44	28	6.5
NACM101M4V3.8X9.5TR	4	100	3.8x3.8x9.5	4.0	0.44	60	3.0
NACM151M4V4.8X7.3TR	4	150	4.8x4.8x7.3	6.0	0.44	80	2.5
NACM271M4V4.8X10.3TR	4	270	4.8x4.8x10.3	13.2	0.44	150	2.0
NACM330M6.3V3.8X6.5TR	6.3	33	3.8x3.8x6.5	3.0	0.24	30	6.5
NACM680M6.3V3.8X9.5TR	6.3	68	3.8x3.8x9.5	4.2	0.28	60	3.0
NACM101M6.3V4.8X7.3TR	6.3	100	4.8x4.8x7.3	6.3	0.28	75	2.5
NACM221M6.3V4.8X10.3TR	6.3	220	4.8x4.8x10.3	13.8	0.28	150	2.0
NACM220M10V3.8X6.5TR	10	22	3.8x3.8x6.5	3.0	0.24	30	6.5
NACM470M10V3.8X9.5TR	10	47	3.8x3.8x9.5	4.7	0.24	60	3.0
NACM680M10V4.8X7.3TR	10	68	4.8x4.8x7.3	6.8	0.24	75	2.5
NACM151M10V4.8X10.3TR	10	150	4.8x4.8x10.3	15.0	0.24	150	2.0
NACM150M16V3.8X6.5TR	16	15	3.8x3.8x6.5	3.0	0.20	30	6.5
NACM330M16V3.8X9.5TR	16	33	3.8x3.8x9.5	4.2	0.20	60	3.0
NACM470M16V4.8X7.3TR	16	47	4.8x4.8x7.3	7.5	0.20	75	2.5
NACM101M16V4.8X10.3TR	16	100	4.8x4.8x10.3	15.0	0.20	150	2.0
NACM3R3M25V3.8X6.5TR	25	3.3	3.8x3.8x6.5	3.0	0.16	15	6.5
NACM4R7M25V3.8X6.5TR	25	4.7	3.8x3.8x6.5	3.0	0.16	18	6.5
NACM6R8M25V3.8X6.5TR	25	6.8	3.8x3.8x6.5	3.0	0.16	22	6.5
NACM100M25V3.8X6.5TR	25	10	3.8x3.8x6.5	3.0	0.16	30	6.5
NACM150M25V4.8X7.3TR	25	15	4.8x4.8x7.3	3.7	0.16	65	2.5
NACM220M25V4.8X7.3TR	25	22	4.8x4.8x7.3	5.5	0.16	70	2.5
NACM330M25V4.8X7.3TR	25	33	4.8x4.8x7.3	8.2	0.16	75	2.5
NACM470M25V4.8X10.3TR	25	47	4.8x4.8x10.3	11.7	0.16	150	2.0
NACM680M25V4.8X10.3TR	25	68	4.8x4.8x10.3	17.0	0.16	150	2.0
NACMR47M50V3.8X6.5TR	50	0.47	3.8x3.8x6.5	3.0	0.14	5	7.0
NACM1R0M50V3.8X6.5TR	50	1.0	3.8x3.8x6.5	3.0	0.14	6	7.0
NACM1R5M50V3.8X6.5TR	50	1.5	3.8x3.8x6.5	3.0	0.14	8	7.0
NACM2R2M50V3.8X6.5TR	50	2.2	3.8x3.8x6.5	3.0	0.14	11	7.0
NACM3R3M50V3.8X6.5TR	50	3.3	3.8x3.8x6.5	3.0	0.14	25	7.0
NACM4R7M50V4.8X7.3TR	50	4.7	4.8x4.8x7.3	3.0	0.14	60	3.0
NACM6R8M50V4.8X7.3TR	50	6.8	4.8x4.8x7.3	3.4	0.14	65	3.0
NACM100M50V4.8X7.3TR	50	10	4.8x4.8x7.3	5.0	0.14	70	3.0
NACM150M50V4.8X10.3TR	50	15	4.8x4.8x10.3	7.5	0.14	120	2.5
NACM220M50V4.8X10.3TR	50	22	4.8x4.8x10.3	11.0	0.14	150	2.5
NACM330M50V4.8X10.3TR	50	33	4.8x4.8x10.3	16.5	0.14	150	2.5

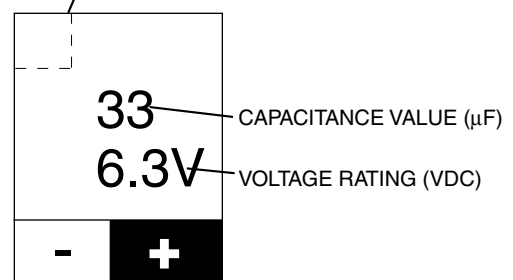
## DIMENSIONS (mm)

Case Size	W Max.	H Max.	L Max.	P±0.3
3.8 x 3.8 x 6.5	3.8	3.8	6.5	3.0
3.8 x 3.8 x 9.5	3.8	3.8	9.5	3.0
4.8 x 4.8 x 7.3	4.8	4.8	7.3	4.0
4.8 x 4.8 x 10.3	4.8	4.8	10.3	4.0



## COMPONENT MARKING:

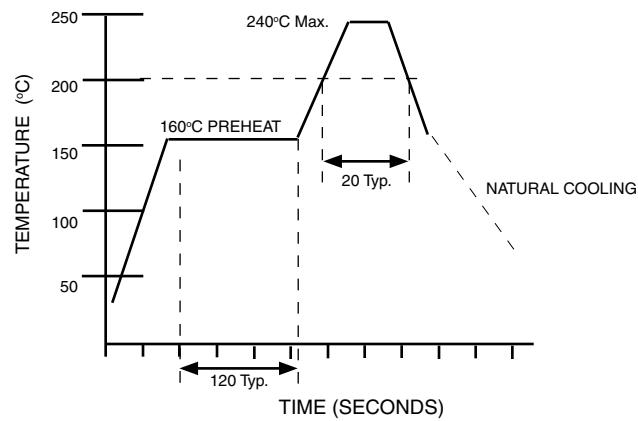
NOTCH IN BODY IDENTIFIES CATHODE



CATHODE ANODE

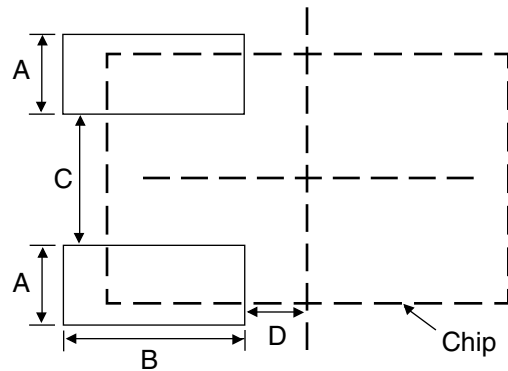
# Surface Mount Aluminum Electrolytic Capacitors NACM Series

## RECOMMENDED REFLOW SOLDERING PROFILE



## RECOMMENDED LAND PATTERNS (mm)

Case Size	A	B	C	D
3.8 x 3.8 x 6.5	1.2	3.0	2.2	0.6
3.8 x 3.8 x 9.5	1.2	3.0	2.2	0.6
4.8 x 4.8 x 7.3	1.2	3.3	3.2	2.1
4.8 x 4.8 x 10.3	1.2	3.3	3.2	2.1



## TAPING SPECIFICATIONS (mm)

Case Size	W $\pm$ 0.2	A $\pm$ 0.1	B $\pm$ 0.2	C $\pm$ 0.1	P $\pm$ 0.1	F $\pm$ 0.05	W1 $\pm$ 0.5	Reel Qty.
3.8x3.8x6.5	12.0	7.0	4.1	4.1	8.0	5.5	13.5	3000
3.8x3.8x9.5	16.0	10.0	4.1	4.1	8.0	7.5	17.5	3000
4.8x4.8x7.3	16.0	7.7	5.0	5.2	8.0	7.5	17.5	2500
4.8x4.8x10.3	16.0	10.7	5.0	5.2	8.0	7.5	17.5	2500

