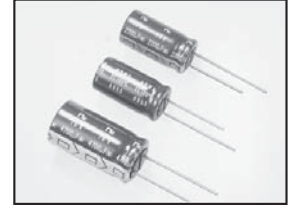


# Aluminum Electrolytic Capacitors

NRE-WX Series

ULTRA HIGH TEMPERATURE, RADIAL LEADS, POLARIZED ALUMINUM ELECTROLYTIC CAPACITORS

**RoHS Compliant**  
includes all homogeneous materials



## FEATURES

- HIGH TEMPERATURE 150°C
- CAPACITANCE VALUES (UP TO 1,000μF)
- IDEAL FOR ELECTRONIC BALLAST & POWER SUPPLIES

\*See Part Number System for Details

## CHARACTERISTICS

Rated Voltage Range		16 ~ 50Vdc				
Rated Capacitance Range		330 ~ 1,000μF				
Operating Temperature Range		-40°C ~ +150°C				
Capacitance Tolerance		±20% (M)				
Max. Leakage Current After 5 Minutes		0.01CV or 3μA whichever is greater				
Maximum Tanδ @ 120Hz/20°C		16	25	35	50	
		0.16	-	0.12	0.12	
Low Temperature Stability (Impedance Ratio @ 120Hz)		Z -25°C/+20°C	2	-	2	2
		Z -40°C/+20°C	4	-	4	4
Load Life @ 150°C 1,000 hours		Capacitance Change	Within ±30% of initial measured value			
		Tan δ	Less than 300% of specified value			
		Leakage Current	Less than the specified maximum value			

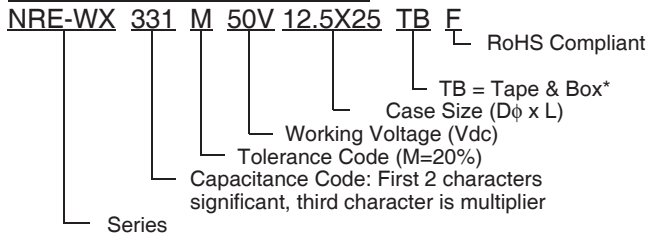
## STANDARD PRODUCT AND CASE SIZES TABLE Dφ x L (mm)

Cap. μF	Cap. Code	Working Voltage (Vdc)			
		16	25	35	50
330	331	-	-	-	12.5 x 25
470	471	-	-	12.5 x 25	-
1,000	102	12.5 x 25	-	-	-

## LEAD SPACING AND DIAMETER (mm)

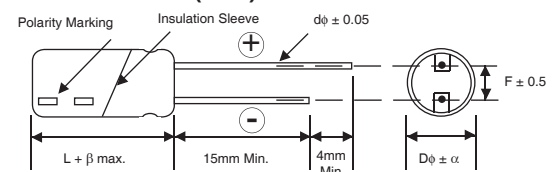
Case Dia. (Dφ)	12.5
Lead Space (F)	5.0
Lead Dia. (dφ)	0.6
Dim. α	1.0

## PART NUMBERING SYSTEM



\*see tape specification for details

## DIMENSIONS (mm)



Drawing is representative of parts as supplied in bulk or straight lead format, please see taping specification for details on taped format packaging.

## STANDARD VALUES, SPECIFICATIONS AND CASE SIZES (mm)

Part Number	Cap. (μF)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (mA) +150°C/100KHz	Max. ESR (Ω) +20°C/120Hz	Load Life Hours @+150°C
NRE-WX102M16V12.5 x 25F	1000	16	0.16	750	0.266	1,000
NRE-WX471M35V12.5 x 25F	470	35	0.12	750	0.424	1,000
NRE-WX331M50V12.5 x 25F	330	50	0.12	500	0.604	1,000

## RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Capacitance Value	50Hz	120Hz	1KHz	10KHz	100KHz
330μF ~ 1000μF	0.40	0.50	0.80	0.95	1.00

## 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](http://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](mailto:tpmg@niccomp.com)

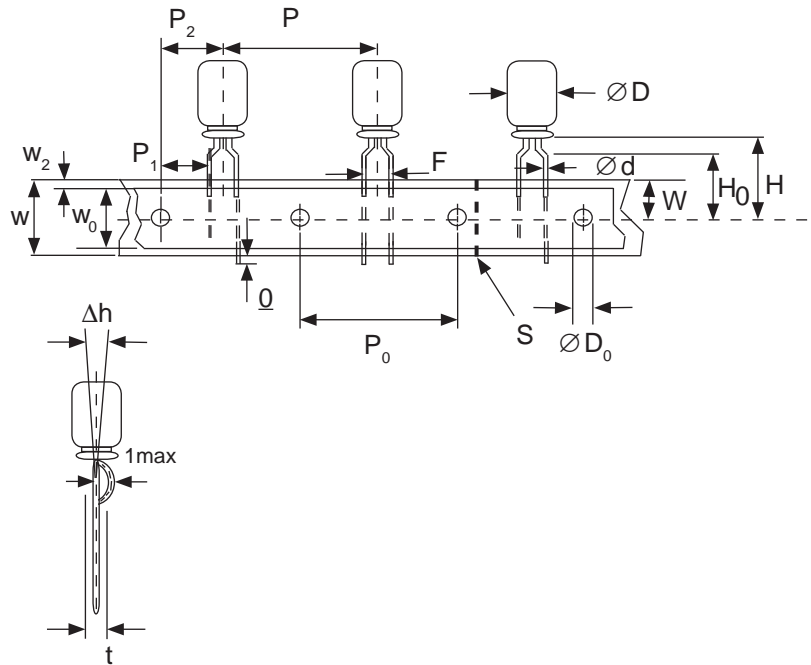


# Miniature Aluminum Electrolytic Capacitors Taping Specifications

## STANDARD RADIAL TAPING (5mm LEAD SPACING, FORMED LEADS) TB

Taping Dimensions (mm)

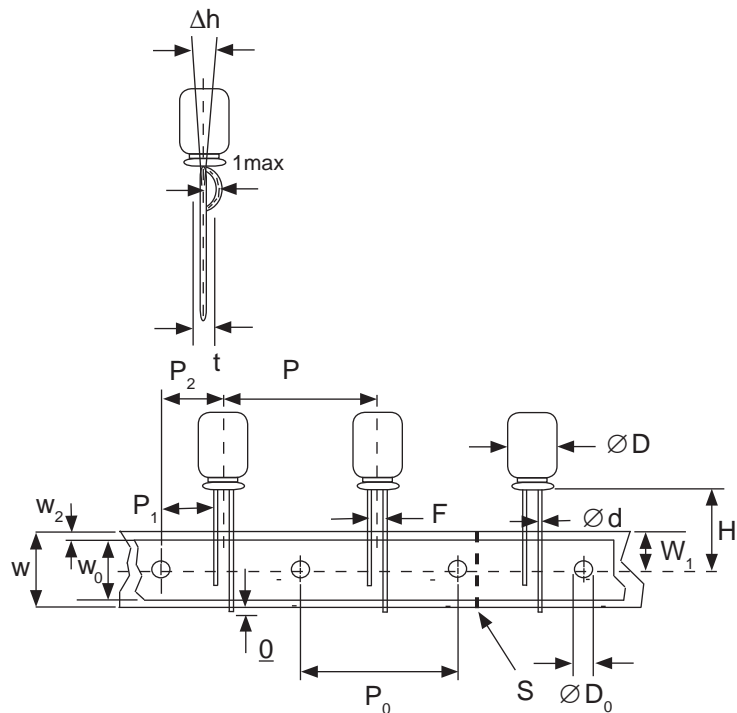
Case Dia. (D $\phi$ )	4	5	6.3	8
Case Size	4x5	5x5	6.3x5	8x11.5
Dim.	4x7	5x7	6.3x7	6.3x11
d $\phi$ $\pm$ 0.05	0.45	0.45	0.5	0.5
H $\pm$ 0.75	17.5	17.5	18.5	20.0
F +0.8 ~ -0.2	5.0 -0.2 ~ +0.8			
P	12.7 $\pm$ 1.0			
P <sub>0</sub>	12.7 $\pm$ 0.2			
P <sub>1</sub>	3.85 $\pm$ 0.5 (at end of tape)			
P <sub>2</sub>	6.35 $\pm$ 1.0			
W	18.0 $\pm$ 0.5			
W <sub>0</sub>	11.5 min.			
W <sub>1</sub>	9.0 $\pm$ 0.5			
W <sub>2</sub>	0 ~ 2.5			
H <sub>0</sub>	16.0 $\pm$ 0.5			
l	1.0 max.			
D <sub>0</sub> $\phi$	4.0 $\pm$ 0.2			
$\Delta$ h	0 $\pm$ 1.0 (at top of can)			
t	0.7 $\pm$ 0.2 (not including lead)			



## STANDARD RADIAL TAPING (5mm LEAD SPACING, STRAIGHT LEADS) TB

Taping Dimensions (mm)

Case Dia. (D $\phi$ )	10	12.5
Case Size	All	All
Dim.	All	All
d $\phi$ $\pm$ 0.05	0.6	0.6
H $\pm$ 0.75	19.0	19.0
F +0.8 ~ -0.2	5.0	5.0
P $\pm$ 1.0	25.4*	
P <sub>0</sub>	12.7 $\pm$ 0.2	
P <sub>1</sub>	3.85	
P <sub>2</sub>	6.35 $\pm$ 1.0	
W	18.0 $\pm$ 0.5	
W <sub>0</sub>	11.5 min	
W <sub>1</sub>	9.0 $\pm$ 0.5	
W <sub>2</sub>	0 ~ 2.5	
H <sub>0</sub>	16.0 $\pm$ 0.5	
l	1.0 max.	
D <sub>0</sub> $\phi$	4.0 $\pm$ 0.2	
$\Delta$ h	0 $\pm$ 1.0 (at top of can)	
t	0.7 $\pm$ 0.2 (not including lead)	



### \*Optional Taping Specifications

10mm diameter available with P dim. = 12.7mm  
(P/N Suffix: TB12.7MMP)

12.5mm diameter available with P dim. = 15mm, P<sub>1</sub> = 5.0mm,  
P<sub>0</sub> = 15.0mm & P<sub>2</sub> = 7.5mm (P/N Suffix: TB15MMP)

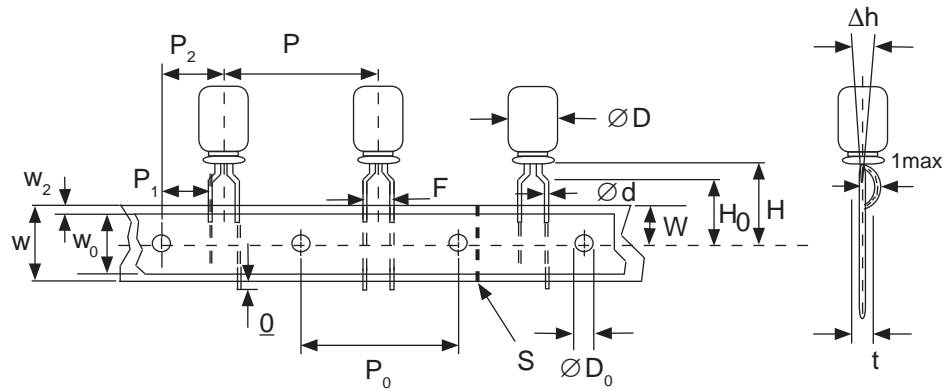
**NOTE:** ANODE (+) LEAD FEEDS OFF FIRST.  
FOR OPTION OF NEGATIVE (-) LEAD FIRST,  
SPECIFY "TBN".



## SPECIAL RADIAL TAPING (2.5mm LEAD SPACING, FORMED LEADS) TBF1

Taping Dimensions (mm)

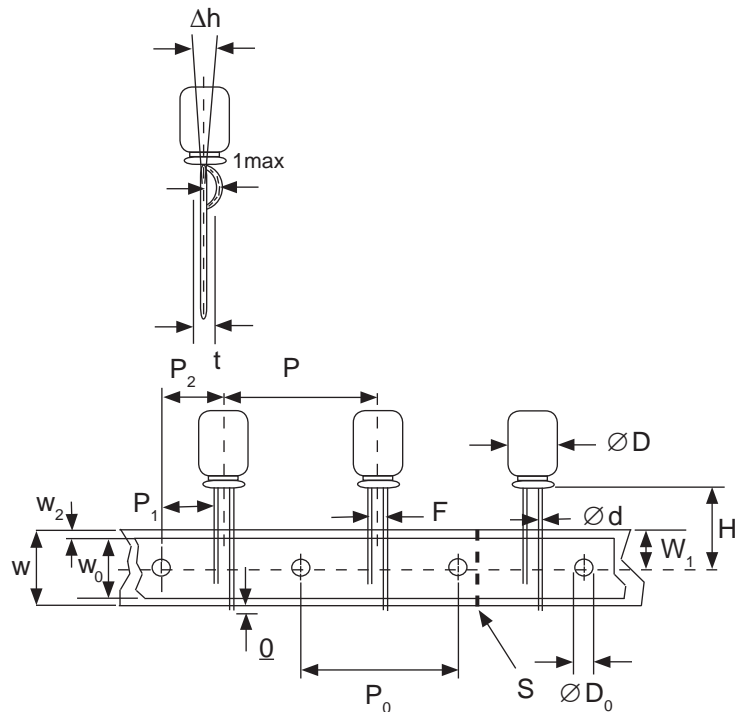
Case Dia. (D $\phi$ )	4		5	
Case Size Dim.	4x5 4x7	5x5 5x7	5x11	
d $\phi$ $\pm$ 0.05	0.45	0.45	0.5	
H $\pm$ 0.75	17.5	17.5	18.5	
H <sub>0</sub> $\pm$ 0.5	16.0	-	-	
F	2.5 -0.2 ~ +0.8			
P	12.7 $\pm$ 1.0			
P <sub>0</sub>	12.7 $\pm$ 0.2			
P <sub>1</sub>	5.1 $\pm$ 0.5			
P <sub>2</sub>	6.35 $\pm$ 1.0			
W	18.0 $\pm$ 0.5			
W <sub>0</sub>	11.5 min.			
W <sub>1</sub>	9.0 $\pm$ 0.5			
W <sub>2</sub>	0 ~ 1.5			
l	1.0 max.			
D <sub>0</sub> $\phi$	4.0 $\pm$ 0.2			
$\Delta$ h	0 $\pm$ 1.0			
t	0.7 $\pm$ 0.2			



## SPECIAL STRAIGHT LEAD TAPING TBST

Taping Dimensions (mm)

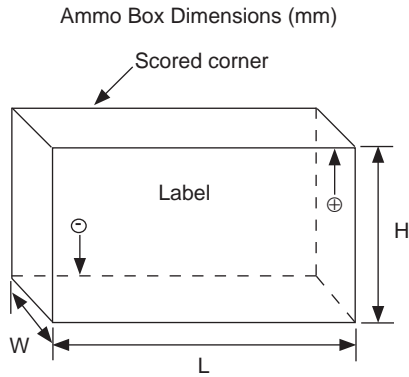
Case Dia. (D $\phi$ )	4			5			6.3		8	
Case Size Dim.	4x5 4x7	5x5 5x7	5x11		6.3x5 6.3x7	6.3x11	8x11.5			
d $\phi$ $\pm$ 0.05	0.45	0.45	0.5		0.45	0.5	0.6			
H $\pm$ 0.75	17.5	17.5	18.5		17.5	18.5	20.0			
F +0.8 ~ -0.2	2.0*	2.0	2.0		2.5	2.5	3.5			
P $\pm$ 1.0	12.7 $\pm$ 0.2									
P <sub>0</sub>	12.7 $\pm$ 0.2									
P <sub>1</sub>	5.1	5.1	5.1	5.1	5.1	5.1	4.6			
P <sub>2</sub>	6.35 $\pm$ 1.0									
W	18.0 $\pm$ 0.5									
W <sub>0</sub>	11.5 min.									
W <sub>1</sub>	9.0 $\pm$ 0.5									
W <sub>2</sub>	0 ~ 2.5									
H <sub>0</sub>	16.0 $\pm$ 0.5									
l	1.0 max.									
D <sub>0</sub> $\phi$	4.0 $\pm$ 0.2									
$\Delta$ h	0 $\pm$ 1.0 (at top of can)									
t	0.7 $\pm$ 0.2 (not including lead)									



\* Parts with 4mm diameter are taped with a slight flare in the lead and a 2.0mm lead-space.



## RADIAL TAPED PACKAGING



Ammo Box (Tape & Box) TB, TBF1, TBST

Size of box and component quantity

Case Dia (D $\phi$ ) or Case Size	Q'ty per Box (pcs)	Dim. L	Dim. H	Dim. W
4x5, 4x7	2,000	331	175	43
5x5, 5x7	2,000	331	220	43
5x11	2,000	340	255	55
6.3x5, 6.3x7	2,000	331	280	43
6.3x11	2,000	331	280	48
8x11.5, 8x12.5	1,000	335	235	53
10x12.5*	500	335	190	53
10x16*	500	335	300	53
10x20*	500	335	300	55
12.x20*	500	335	300	55
12.5x25*	500	335	300	61

\*Special Taping Consult Factory For Availability