

HIGH TEMPERATURE, EXTENDED LOAD LIFE, RADIAL LEADS, POLARIZED

### FEATURES

- IMPROVED ENDURANCE AT HIGH TEMPERATURE (up to 10,000HRS @ 105°C)
- LOW IMPEDANCE & HIGH RIPPLE CURRENT RATINGS
- NEW REDUCED SIZES

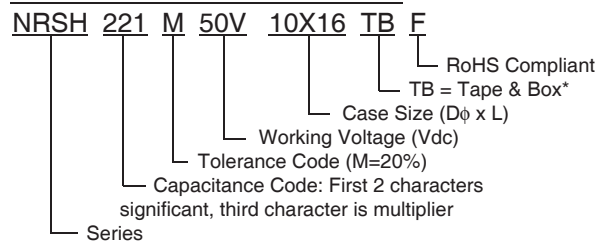
**EXPANDED!**  
**63V ~ 100V**



### CHARACTERISTICS

Rated Voltage Range		6.3 ~ 100VDC								
Capacitance Range		8.2 ~ 8,200 $\mu$ F								
Operating Temperature Range		-40°C ~ +105°C								
Capacitance Tolerance		$\pm$ 20% (M)								
Maximum Leakage Current After 2 minutes		0.01CV or 3 $\mu$ A whichever is greater								
Max. Tan $\delta$ at 120Hz/20°C	W.V. (Vdc)	6.3	10	16	25	35	50	63	80	100
	S.V. (Vdc)	8	13	20	32	44	63	79	100	125
	C $\leq$ 1,000 $\mu$ F	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08
	C = 1,200 $\mu$ F	0.22	0.19	0.16	0.14	0.12	-	0.09	0.08	-
	C = 1,500 $\mu$ F	0.22	0.19	0.16	0.14	0.12	-	0.09	0.08	-
	C = 1,800 $\mu$ F	0.22	0.19	0.16	0.14	0.12	-	0.09	-	-
	C = 2,200 $\mu$ F	0.24	0.21	0.18	0.16	0.14	-	0.11	-	-
	C = 2,700 $\mu$ F	0.24	0.21	0.18	0.16	-	-	-	-	-
	C = 3,300 $\mu$ F	0.26	0.23	0.20	0.18	-	-	-	-	-
	C = 3,900 $\mu$ F	0.26	0.23	0.20	-	-	-	-	-	-
	C = 4,700 $\mu$ F	0.28	0.25	0.22	-	-	-	-	-	-
	C = 5,600 $\mu$ F	0.30	0.27	-	-	-	-	-	-	-
C = 6,800 $\mu$ F	0.32	0.29	-	-	-	-	-	-	-	
C = 8,200 $\mu$ F	0.36	-	-	-	-	-	-	-	-	
Low Temperature Stability Impedance Ratio @ 120Hz	Z-25°C/Z+20°C	2	2	2	2	2	2	2	2	2
	Z-40°C/Z+20°C	3	3	3	3	3	3	3	3	3
Load Life Test @ 105°C	Duration	$\phi$ D = 5 & 6.3: 6,000 hours, $\phi$ D = 8: 8,000 hours, $\phi$ D = 10>: 10,000 hours								
	$\Delta$ Capacitance	Within $\pm$ 25% of initial measured value								
	$\Delta$ Tan $\delta$	Less than 200% of specified value								
	$\Delta$ LC	Less than specified value								

### PART NUMBER SYSTEM



\*see taping specifications for details

### 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)



## STANDARD PRODUCT AND CASE SIZE TABLE D $\phi$ x L (mm)

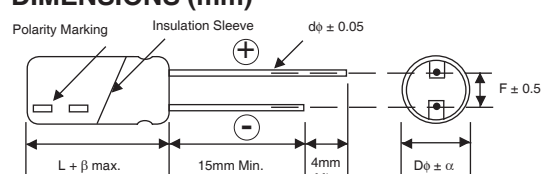
Cap. ( $\mu$ F)	Code	Working Voltage (Vdc)								
		6.3	10	16	25	35	50	63	80	100
8.2	8R2	-	-	-	-	-	-	-	-	5 x 11
12	120	-	-	-	-	-	-	-	5 x 11	-
18	180	-	-	-	-	-	-	5 x 11	-	-
27	270	-	-	-	-	-	5 x 11	-	-	-
33	330	-	-	-	-	-	-	-	6.3 x 11	8 x 11.5
47	470	-	-	-	-	5 x 11	-	6.3 x 11	-	8 x 16
56	560	-	-	-	-	-	6.3 x 11	-	8 x 11.5	10 x 12.5
68	680	-	-	-	5 x 11	-	-	-	8 x 16	8 x 20
82	820	-	-	-	-	-	-	8 x 11.5	10 x 12.5	10 x 16
100	101	-	-	5 x 11	-	6.3 x 11	8 x 11.5	8 x 16	8 x 20	10 x 20 12.5 x 16
120	121	-	-	-	-	-	8 x 16	10 x 12.5	10 x 16	10 x 23
150	151	-	5 x 11	-	6.3 x 11	-	10 x 12.5	8 x 20	-	12.5 x 20
180	181	-	-	-	-	-	8 x 20	10 x 16	10 x 20 12.5 x 16	-
220	221	5 x 11	-	6.3 x 11	-	8 x 11.5	10 x 16	-	10 x 23	12.5 x 25
270	271	-	-	-	-	8 x 16	10 x 20	10 x 20 12.5 x 16	12.5 x 20	12.5 x 30 16 x 20
330	331	-	6.3 x 11	-	8 x 11.5	10 x 12.5	10 x 23	10 x 23	12.5 x 25 12.5 x 30	12.5 x 35 12.5 x 40
390	391	-	-	-	8 x 16	8 x 20	-	12.5 x 20	16 x 20	16 x 25 18 x 20
470	471	6.3 x 11	-	8 x 11.5	10 x 12.5	10 x 16	12.5 x 20	12.5 x 25	12.5 x 35	16 x 31.5 18 x 25
560	561	-	-	-	8 x 20	10 x 20	12.5 x 25	12.5 x 30 16 x 20	12.5 x 40 16 x 25 18 x 20	16 x 35.5 18 x 31.5
680	681	-	8 x 11.5	8 x 16 10 x 12.5	10 x 16	10 x 23	12.5 x 30	12.5 x 35	16 x 31.5	16 x 40 18 x 35.5
820	821	8 x 11.5	-	-	10 x 20	-	12.5 x 35 16 x 20	12.5 x 40 16 x 25 18 x 20	16 x 35.5 18 x 25	18 x 40
1,000	102	-	8 x 16 10 x 12.5	8 x 20 10 x 16	10 x 23	12.5 x 20	16 x 25	-	16 x 40 18 x 31.5	-
1,200	122	8 x 16 10 x 12.5	-	-	-	12.5 x 25	-	16 x 31 18 x 25	18 x 35.5	-
1,500	152	8 x 20	8 x 20 10 x 16	10 x 20	12.5 x 20	12.5 x 30 16 x 20	-	16 x 35.5 18 x 31.5	18 x 40	-
1,800	182	10 x 16	10 x 20	10 x 23	12.5 x 25	12.5 x 35	-	16 x 40 18 x 35.5	-	-
2,200	222	10 x 20	10 x 23	12.5 x 20	12.5 x 30 16 x 20	16 x 25	-	18 x 40	-	-
2,700	272	10 x 23	-	12.5 x 25	12.5 x 35	-	-	-	-	-
3,300	332	-	12.5 x 20	12.5 x 30 16 x 20	16 x 25	-	-	-	-	-
3,900	392	12.5 x 20	12.5 x 25	12.5 x 35	-	-	-	-	-	-
4,700	472	12.5 x 25	12.5 x 30 16 x 20	16 x 25	-	-	-	-	-	-
5,600	562	12.5 x 30	12.5 x 35	-	-	-	-	-	-	-
6,800	682	16 x 20 12.5 x 35	16 x 25	-	-	-	-	-	-	-
8,200	822	16 x 25	-	-	-	-	-	-	-	-

### LEAD SPACING AND DIAMETER (mm)

Case Dia. (D $\phi$ )	5	6.3	8	10	12.5	16	18
Lead Dia. (d $\phi$ )	0.5	0.5	0.6	0.6	0.6	0.8	0.8
Lead Spacing (F)	2.0	2.5	3.5	5.0	5.0	7.5	7.5
Dim. $\alpha$	0.5						

$\beta = L \leq 16\text{mm} = 1.5\text{mm}, L \geq 20\text{mm} = 2.0\text{mm}$

### 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) +105°C/100KHz	Max. ESR (Ω) +20°C/100KHz	Load Life Hours @+105°C
NRSH221M6.3V5 x 11F	220	6.3	0.22	345	0.220	6,000
NRSH471M6.3V6.3 x 11F	470		0.22	540	0.094	6,000
NRSH821M6.3V8 x 11.5F	820		0.22	945	0.056	8,000
NRSH122M6.3V8 x 16F	1,200		0.22	1250	0.045	8,000
NRSH122M6.3V10 x 12.5F			0.22	1330	0.039	10,000
NRSH152M6.3V8 x 20F	1,500		0.22	1500	0.029	10,000
NRSH182M6.3V10 x 16F	1,800		0.22	1760	0.028	10,000
NRSH222M6.3V10 x 20F	2,200		0.24	1960	0.020	10,000
NRSH272M6.3V10 x 23F	2,700		0.24	2250	0.018	10,000
NRSH392M6.3V12.5 x 20F	3,900		0.26	2480	0.017	10,000
NRSH472M6.3V12.5 x 25F	4,700		0.28	2900	0.015	10,000
NRSH562M6.3V12.5 x 30F	5,600		0.30	3450	0.013	10,000
NRSH682M6.3V16 x 20F	6,800		0.32	3250	0.015	10,000
NRSH682M6.3V12.5 x 35F			0.32	3570	0.012	10,000
NRSH822M6.3V16 x 25F	8,200	0.36	3630	0.013	10,000	
NRSH151M10V5 x 11F	150	10	0.19	345	0.220	6,000
NRSH331M10V6.3 x 11F	330		0.19	540	0.094	6,000
NRSH681M10V8 x 11.5F	680		0.19	945	0.056	8,000
NRSH102M10V8 x 16F	1,000		0.19	1250	0.045	8,000
NRSH102M10V10 x 12.5F			0.19	1330	0.039	10,000
NRSH152M10V8 x 20F	1,500		0.19	1500	0.029	10,000
NRSH152M10V10 x 16F			0.19	1760	0.028	10,000
NRSH182M10V10 x 20F	1,800		0.19	1960	0.020	10,000
NRSH222M10V10 x 23F	2,200		0.21	2250	0.018	10,000
NRSH332M10V12.5 x 20F	3,300		0.23	2480	0.017	10,000
NRSH392M10V12.5 x 25F	3,900		0.23	2900	0.015	10,000
NRSH472M10V12.5 x 30F	4,700		0.25	3450	0.013	10,000
NRSH472M10V16 x 20F			0.25	3250	0.015	10,000
NRSH562M10V12.5 x 35F	5,600		0.27	3570	0.012	10,000
NRSH682M10V16 x 25F	6,800	0.29	3630	0.013	10,000	
NRSH101M16V5 x 11F	100	16	0.16	345	0.220	6,000
NRSH221M16V6.3 x 11F	220		0.16	540	0.094	6,000
NRSH471M16V8 x 11.5F	470		0.16	945	0.056	8,000
NRSH681M16V8 x 16F	680		0.16	1250	0.045	8,000
NRSH681M16V10 x 12.5F			0.16	1330	0.039	10,000
NRSH102M16V8 x 20F	1,000		0.16	1500	0.029	10,000
NRSH102M16V10 x 16F			0.16	1760	0.028	10,000
NRSH152M16V10 x 20F	1,500		0.16	1960	0.020	10,000
NRSH182M16V10 x 23F	1,800		0.16	2250	0.018	10,000
NRSH222M16V12.5 x 20F	2,200		0.18	2480	0.017	10,000
NRSH272M16V12.5 x 25F	2,700		0.18	2900	0.015	10,000
NRSH332M16V12.5 x 30F	3,300		0.20	3450	0.013	10,000
NRSH332M16V16 x 20F			0.20	3250	0.015	10,000
NRSH392M16V12.5 x 35F	3,900		0.20	3570	0.012	10,000
NRSH472M16V16 x 25F	4,700	0.22	3630	0.013	10,000	
NRSH101M25V5 x 11F	68	25	0.14	345	0.220	6,000
NRSH151M25V6.3 x 11F	150		0.14	540	0.094	6,000
NRSH331M25V8 x 11.5F	330		0.14	945	0.056	8,000
NRSH391M25V8 x 16F	390		0.14	1250	0.045	8,000
NRSH471M25V10 x 12.5F	470		0.14	1330	0.039	10,000
NRSH561M25V8 x 20F	560		0.14	1500	0.029	10,000
NRSH681M25V10 x 16F	680		0.14	1760	0.028	10,000
NRSH821M25V10 x 20F	820		0.14	1960	0.020	10,000
NRSH102M25V10 x 23F	1,000		0.14	2250	0.018	10,000
NRSH152M25V12.5 x 20F	1,500		0.14	2480	0.017	10,000
NRSH182M25V12.5 x 25F	1,800		0.14	2900	0.015	10,000
NRSH222M25V12.5 x 30F	2,200		0.16	3450	0.013	10,000
NRSH222M25V16 x 20F			0.16	3250	0.015	10,000
NRSH272M25V12.5 x 35F	2,700		0.16	3570	0.012	10,000
NRSH332M25V16 x 25F	3,300	0.18	3630	0.013	10,000	



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

Part Number	Cap. (µF)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (mA) +105°C/100KHz	Max. ESR (Ω) +20°C/100KHz	Load Life Hours @+105°C
NRSH470M35V5x11F	47	35	0.12	345	0.220	6,000
NRSH101M35V6.3x11F	100		0.12	540	0.094	6,000
NRSH221M35V8x11.5F	220		0.12	945	0.056	8,000
NRSH271M35V8x16F	270		0.12	1250	0.045	8,000
NRSH331M35V10x12.5F	330		0.12	1330	0.039	10,000
NRSH391M35V8x20F	390		0.12	1500	0.029	10,000
NRSH471M35V10x16F	470		0.12	1760	0.028	10,000
NRSH561M35V10x20F	560		0.12	1960	0.020	10,000
NRSH681M35V10x23F	680		0.12	2250	0.018	10,000
NRSH102M35V12.5x20F	1,000		0.12	2480	0.017	10,000
NRSH122M35V12.5x25F	1,200		0.12	2900	0.015	10,000
NRSH152M35V12.5x30F	1,500		0.12	3450	0.013	10,000
NRSH152M35V16x20F			0.12	3250	0.015	10,000
NRSH182M35V12.5x35F	1,800		0.12	3570	0.012	10,000
NRSH222M35V16x25F	2,200		0.14	3630	0.013	10,000
NRSH270M50V5x11F	27	50	0.10	238	0.340	6,000
NRSH560M50V6.3x11F	56		0.10	385	0.140	6,000
NRSH101M50V8x11.5F	100		0.10	724	0.074	8,000
NRSH121M50V8x16F	120		0.10	950	0.061	8,000
NRSH151M50V10x12.5F	150		0.10	979	0.061	10,000
NRSH181M50V8x20F	180		0.10	1190	0.046	10,000
NRSH221M50V10x16F	220		0.10	1370	0.042	10,000
NRSH271M50V10x20F	270		0.10	1580	0.030	10,000
NRSH331M50V10x23F	330		0.10	1870	0.028	10,000
NRSH471M50V12.5x20F	470		0.10	2050	0.027	10,000
NRSH561M50V12.5x25F	560		0.10	2410	0.023	10,000
NRSH681M50V12.5x30F	680		0.10	2860	0.021	10,000
NRSH821M50V12.5x35F	820		0.10	2960	0.019	10,000
NRSH821M50V16x20F			0.10	2730	0.023	10,000
NRSH102M50V16x25F	1,000		0.10	3010	0.021	10,000
NRSH180M63V5x11F	18	63	0.09	173	0.88	6,000
NRSH470M63V6.3x11F	47		0.09	278	0.35	6,000
NRSH820M63V8x11.5F	82		0.09	525	0.22	8,000
NRSH101M63V8x16F	100		0.09	688	0.16	8,000
NRSH121M63V10x12.5F	120		0.09	725	0.15	10,000
NRSH151M63V8x20F	150		0.09	861	0.12	8,000
NRSH181M63V10x16F	180		0.09	998	0.11	10,000
NRSH271M63V10x20F	270		0.09	1200	0.078	10,000
NRSH271M63V12.5x16F	270		0.09	1200	0.082	10,000
NRSH331M63V10x23F	330		0.09	1410	0.069	10,000
NRSH391M63V12.5x20F	390		0.09	1570	0.060	10,000
NRSH471M63V12.5x25F	470		0.09	1990	0.043	10,000
NRSH561M63V12.5x30F	560		0.09	2410	0.035	10,000
NRSH561M63V16x20F	560		0.09	2100	0.043	10,000
NRSH681M63V12.5x35F	680		0.09	2620	0.033	10,000
NRSH821M63V12.5x40F	820		0.09	2940	0.027	10,000
NRSH821M63V16x25F	820		0.09	2730	0.032	10,000
NRSH821M63V18x20F	820		0.09	2500	0.038	10,000
NRSH122M63V16x31.5F	1200		0.09	2990	0.024	10,000
NRSH122M63V18x25F	1200		0.09	2800	0.031	10,000
NRSH152M63V16x35.5F	1500		0.09	3040	0.021	10,000
NRSH152M63V18x31.5F	1500		0.09	3300	0.025	10,000
NRSH182M63V16x40F	1800		0.09	3570	0.019	10,000
NRSH182M63V18x35.5F	1800		0.09	3570	0.020	10,000
NRSH222M63V18x40F	2200		0.11	3670	0.018	10,000



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

Part Number	Cap. (μF)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (mA) +105°C/100KHz	Max. ESR (Ω) +20°C/100KHz	Load Life Hours @+105°C
NRSH120M80V5x11F	12	80	0.08	163	1.40	6,000
NRSH330M80V6.3x11F	33		0.08	267	0.57	6,000
NRSH560M80V8x11.5F	56		0.08	462	0.36	8,000
NRSH680M80V8x16F	68		0.08	585	0.25	8,000
NRSH820M80V10x12.5F	82		0.08	624	0.96	10,000
NRSH101M80V8x20F	100		0.08	735	0.19	10,000
NRSH121M80V10x16F	120		0.08	780	0.17	10,000
NRSH181M80V10x20F	180		0.08	1040	0.12	10,000
NRSH181M80V12.5x16F	180		0.08	975	0.13	10,000
NRSH221M80V10x23F	220		0.08	1170	0.11	10,000
NRSH271M80V12.5x20F	270		0.08	1430	0.085	10,000
NRSH331M80V12.5x25F	330		0.08	1620	0.060	10,000
NRSH391M80V12.5x30F	390		0.08	1950	0.058	10,000
NRSH391M80V16x20F	390		0.08	1750	0.058	10,000
NRSH471M80V12.5x35F	470		0.08	2140	0.043	10,000
NRSH561M80V12.5x40F	560		0.08	2340	0.036	10,000
NRSH561M80V16x25F	560		0.08	2210	0.044	10,000
NRSH561M80V18x20F	560		0.08	1950	0.054	10,000
NRSH681M80V16x31.5F	680		0.08	2400	0.033	10,000
NRSH821M80V16x35.5F	820		0.08	2600	0.029	10,000
NRSH821M80V18x25F	820		0.08	2270	0.038	10,000
NRSH102M80V16x40F	1000		0.08	2860	0.027	10,000
NRSH102M80V18x35.5F	1000		0.08	2470	0.031	10,000
NRSH122M80V18x35.5F	1200		0.08	2860	0.027	10,000
NRSH152M80V18x40F	1500	0.08	3510	0.026	10,000	
NRSH8R2M100V5x11F	8.2	100	0.08	163	1.40	6,000
NRSH180M100V6.3x11F	18		0.08	267	0.57	6,000
NRSH330M100V8x11.5F	33		0.08	462	0.36	8,000
NRSH470M100V8x16F	47		0.08	585	0.25	8,000
NRSH560M100V10x12.5F	56		0.08	624	0.23	10,000
NRSH680M100V8x20F	68		0.08	735	0.19	8,000
NRSH820M100V10x16F	82		0.08	780	0.17	10,000
NRSH101M100V10x20F	100		0.08	1040	0.12	10,000
NRSH101M100V12.5x16F	100		0.08	975	0.13	10,000
NRSH121M100V10x23F	120		0.08	1170	0.11	10,000
NRSH151M100V12.5x20F	150		0.08	1430	0.085	10,000
NRSH221M100V12.5x25F	220		0.08	1620	0.060	10,000
NRSH271M100V12.5x30F	270		0.08	1950	0.051	10,000
NRSH271M100V16x20F	270		0.08	1750	0.058	10,000
NRSH331M100V12.5x35F	330		0.08	2140	0.043	10,000
NRSH391M100V12.5x40F	390		0.08	2340	0.036	10,000
NRSH391M100V16x25F	390		0.08	2210	0.044	10,000
NRSH391M100V18x20F	390		0.08	1950	0.054	10,000
NRSH471M100V16x31.5F	470		0.08	2400	0.033	10,000
NRSH471M100V18x25F	470		0.08	2270	0.038	10,000
NRSH561M100V16x35.5F	560		0.08	2600	0.029	10,000
NRSH681M100V16x40F	680		0.08	2860	0.027	10,000
NRSH681M100V18x35.5F	680		0.08	2860	0.027	10,000
NRSH821M100V18x40F	820		0.08	3510	0.026	10,000

## RIPPLE CURRENT FREQUENCY CORRECTION FACTORS

Frequency (Hz)	120	1K	10K	≤100K
8.2 ~ 33μF	0.42	0.70	0.90	1.00
47 ~ 270μF	0.50	0.73	0.92	1.00
330 ~ 680μF	0.55	0.77	0.94	1.00
820 ~ 1800μF	0.60	0.80	0.96	1.00
2200 ~ 8200μF	0.70	0.85	0.98	1.00

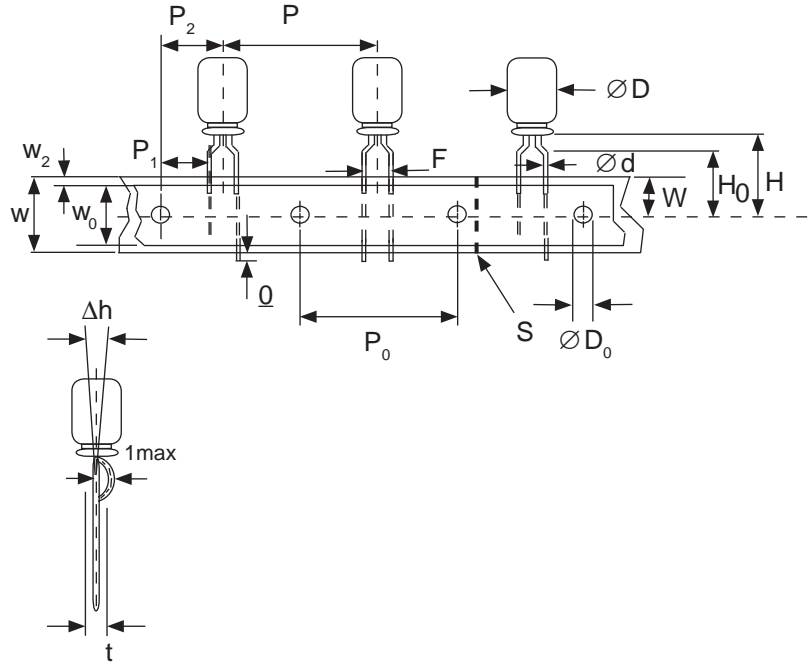


# Miniature Aluminum Electrolytic Capacitors Taping Specifications

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

Taping Dimensions (mm)

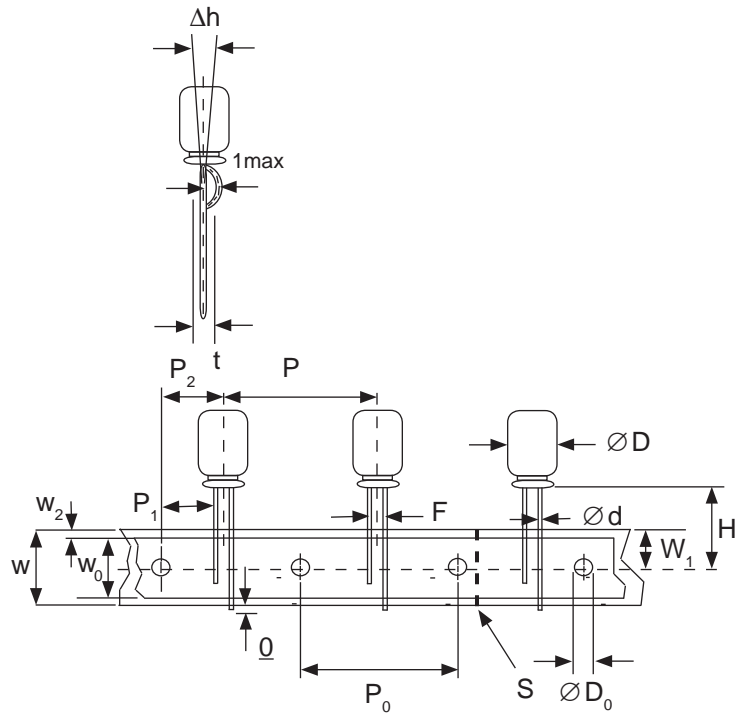
Case Dia. (D $\phi$ )	4	5	6.3	8
Case Size	4x5 4x7	5x5 5x7	5x11	6.3x5 6.3x7 6.3x11 8x11.5
d $\phi$ $\pm$ 0.05	0.45	0.45	0.5	0.45
H $\pm$ 0.75	17.5	17.5	18.5	17.5
F +0.8 ~ -0.2	5.0 -0.2 ~ +0.8			
P	12.7 $\pm$ 1.0			
P <sub>0</sub>	12.7 $\pm$ 0.2			
P <sub>1</sub>	3.85 $\pm$ 0.5 (at end of tape)			
P <sub>2</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
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".

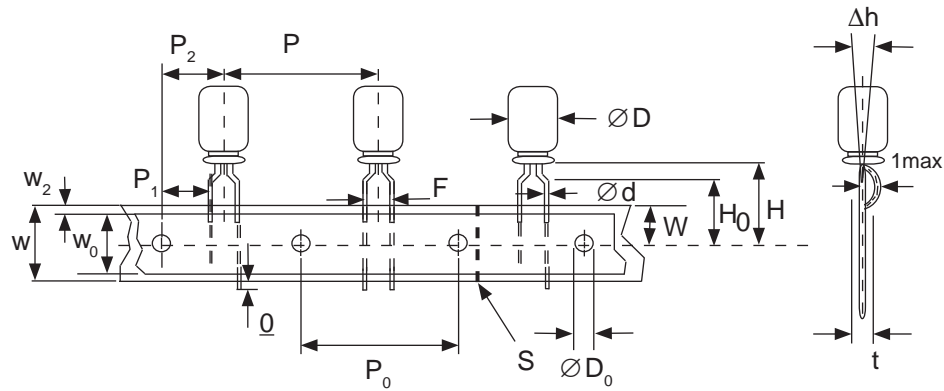


# Miniature Aluminum Electrolytic Capacitors Taping Specifications

## 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		

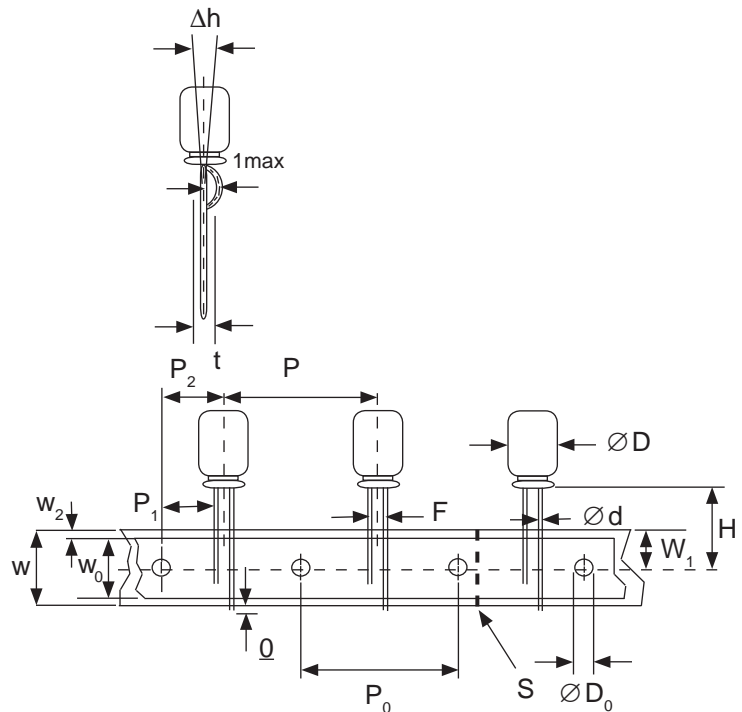


## SPECIAL STRAIGHT LEAD TAPING TBST

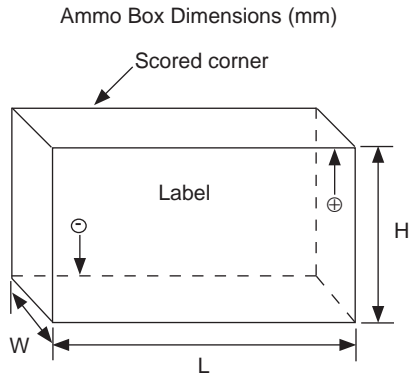
Taping Dimensions (mm)

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	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