

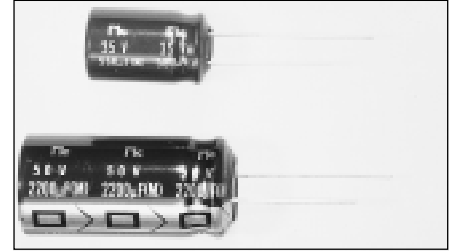
REDUCED SIZE, LOW IMPEDANCE, RADIAL LEADS, POLARIZED ALUMINUM ELECTROLYTIC CAPACITORS

FEATURES

- FURTHER REDUCED SIZING
- LOW IMPEDANCE AT HIGH FREQUENCY
- IDEALLY SUITED FOR USE IN SWITCHERS AND CONVERTERS

CHARACTERISTICS

Rated Voltage Range	6.3 ~ 50Vdc						
Capacitance Range	22 ~ 15,000 μ F						
Operating Temperature Range	-55 $^{\circ}$ ~+105 $^{\circ}$ C						
Capacitance Tolerance	\pm 20% (M)						
Maximum Leakage Current After 2 minutes At 20 $^{\circ}$ C	0.01CV, or 3 μ A, whichever is greater						
Maximum Tan δ At 20 $^{\circ}$ C & 120Hz	W.V. (Vdc)	6.3	10	16	25	35	50
	C \leq 1,000	0.28	0.24	0.20	0.16	0.14	0.12
	C = 2,200	0.30	0.26	0.22	0.18	0.16	0.14
	C = 3,300	0.32	0.28	0.24	0.20	0.18	
	C = 4,700	0.34	0.30	0.26	0.22		
	C = 6,800	0.38	0.34	0.30			
	C = 10,000	0.56	0.42				
C = 15,000	0.56						
Low Temperature Stability	Z-40 $^{\circ}$ C/Z+20 $^{\circ}$ C	3	3	2	2	2	2
(Impedance Ratio@120Hz)	Z-55 $^{\circ}$ C/Z+20 $^{\circ}$ C	6	5	4	4	3	3
Load Life Test at Rated W.V.	Capacitance Change	Within \pm 25% of initial measured value					
105 $^{\circ}$ C 1,000 Hrs. = 8 ϕ & less 105 $^{\circ}$ C 2,000 Hrs. = 10 ϕ	Tan δ	Less than 200% of specified maximum value					
105 $^{\circ}$ C 3,000 Hrs. = 12.5 ϕ & up	Leakage Current	Less than specified value					

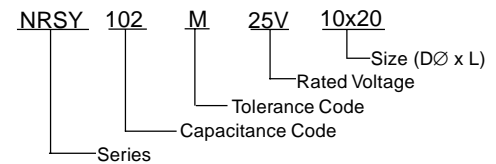


LEADED

STANDARD PRODUCTS TABLE: D ϕ x L (mm)

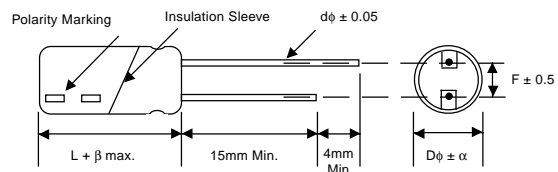
Cap. (μ F)	Code	Working Voltage (Vdc)					
		6.3	10	16	25	35	50
22	220						5x11
33	330					5x11	5x11
47	470					5x11	6.3x11
100	101			5x11	6.3x11	6.3x11	8x11.5
220	221	5x11	6.3x11	6.3x11	8x11.5	8x11.5	10x12.5
330	331	6.3x11	6.3x11	8x11.5	8x11.5	10x12.5	10x16
470	471	6.3x11	8x11.5	8x11.5	10x12.5	10x16	10x20
1000	102	8x11.5	10x12.5	10x16	10x20	12.5x20	12.5x25
2200	222	10x16	10x20	12.5x20	12.5x25	16x25	16x31.5
3300	332	10x20	12.5x20	12.5x25	16x25	16x35.5	
4700	472	12.5x20	12.5x25	16x25	16x31.5		
6800	682	12.5x25	16x25	16x31.5			
10,000	103	16x25	16x31.5				
15,000	153	16x35.5					

PART NUMBERING SYSTEM



LEADSPACE AND DIAMETER (mm)

Case Dia. (D ϕ)	5	6.3	8	10	12.5	16
Leads Dia. (d ϕ)	0.5	0.5	0.6	0.6	0.6	0.8
Lead Spacing (F)	2.0	2.5	3.5	5.0	5.0	7.5
Dim. α	0.5	0.5	0.5	0.5	0.5	0.5



β = L < 20mm = 1.5mm, L \geq 20mm = 2.0mm

SLEEVE COLOR: DARK BROWN



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MAXIMUM IMPEDANCE AT 20°C AND 100KHz (Ω)

Cap (μ F)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
22						1.40
33					0.72	1.40
47					0.50	0.74
100			0.50	0.30	0.24	0.46
220	0.50	0.30	0.24	0.16	0.15	0.22
330	0.30	0.24	0.16	0.15	0.086	0.18
470	0.24	0.16	0.15	0.086	0.066	0.11
1000	0.15	0.086	0.066	0.047	0.042	0.072
2200	0.066	0.047	0.042	0.040	0.026	0.045
3300	0.047	0.042	0.040	0.026	0.022	
4700	0.042	0.031	0.026	0.022		
6800	0.031	0.026	0.022			
10000	0.026	0.022				
15000	0.022					

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA RMS AT 105°C AND 10KHz-200KHz)

Cap (μ F)	Working Voltage (Vdc)					
	6.3	10	16	25	35	50
22						120
33					180	130
47					180	190
100			180	280	280	320
220	180	280	280	410	560	520
330	280	280	410	510	710	670
470	280	410	560	710	950	820
1000	560	710	950	1150	1460	1200
2200	950	1150	1460	1650	2000	1750
3300	1150	1460	1650	2000	2200	
4700	1460	1780	2000	2200		
6800	1780	2000	2200			
10000	2000	2200				
15000	2200					

RIPPLE CURRENT CORRECTION FACTOR

Frequency (Hz)	100<f<1K	1K<f<10K	10K<f
22<C<100	0.55	0.8	1.0
100<C<1000	0.7	0.9	1.0
1000<C	0.9	0.95	1.0

Ambient Temperature	<+65°C	+85°C	+105°C
Correction Factor	1.6	1.4	1