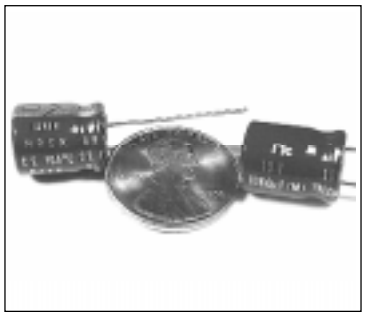
Miniature Aluminum Electrolytic Capacitors

NRSK Series

ULTRA LOW IMPEDANCE AT HIGH FREQUENCY, RADIAL LEADS, POLARIZED ALUMINUM ELECTROLYTIC CAPACITORS



FEATURES

- VERY LOW IMPEDANCE
- LONG LIFE AT 105°C (Up to 4000 Hrs.)
- HIGH STABILITY AT LOW TEMPERATURE
- IDEALLY SUITED FOR USE IN SWITCHING POWER SUPPLIES & CONVERTORS

CHARACTERISTICS

Rated Voltage Range	6.3 ~ 16Vdc			
Capacitance Range	470 ~ 3,300µF			
Operating Temperature Range	-40 ~ +105°C			
Capacitance Tolerance	±20% (M)			
Maximum Leakage Current µA After 2 minutes At 20°C	0.03CV			
Surge Voltage Ratings and Maximum Tan δ (add 0.02 for every 1,000µF for values above 1,000µF)	W.V. (Vdc)	6.3	10	16
	S. V. (Vdc)	8	13	20
	At 20°C & 120Hz	0.22	0.19	0.16
Low Temperature Stability (Impedance Ratio@120Hz)	Z-25°C/Z+20°C	2	2	2
	Z-40°C/Z+20°C	3	3	3
Load Life Test at Rated W.V. & 105°C 2,000 Hrs. for 8x11.5, 8x16, 10x12.5 3,000 Hrs. for 8x20 4,000 Hrs for 10x20, 10x23	Capacitance Change	Within ±25% of initial measured value		
	Tan δ	Less than 200% of specified maximum value		
	Leakage Current	Less than specified value		

MAXIMUM ESR (Ω @ 100KHz/20°C)

Cap. (µF)	Code	Working Voltage (Vdc)		
		6.3	10	16
470	471	-	-	0.036
680	681	-	0.036	0.028
				0.026
820	821	0.036	-	-
1000	102	0.030	0.028	0.019
			0.026	
1200	122	0.028	-	-
1500	152	0.019	0.019	0.013
		0.026		
1800	182	0.019	0.013	0.012
2200	222	0.013	0.012	-
3300	332	0.012	-	-

MAXIMUM RIPPLE CURRENT (mA@ 100KHz/105°C)

Cap. (µF)	Code	Working Voltage (Vdc)		
		6.3	10	16
470	471	-	-	1140
680	681	-	1140	1490
				1540
820	821	1140	-	-
1000	102	1140	1490	1870
			1540	2000
1200	122	1490	-	-
1500	152	1870	1870	2550
		1540	2000	
1800	182	2000	2550	2800
2200	222	2550	2800	-
3300	332	2800	-	-

PART NUMBERING SYSTEM

NRSK 102 M 16V 10x16

- NRSK — Series
- 102 — Capacitance Code
- M — Tolerance Code
- 16V — Rated Voltage
- 10x16 — Size (DØ x L)

STANDARD PRODUCTS AND CASE SIZES (mm)

Cap. (µF)	Code	Working Voltage (Vdc)		
		6.3	10	16
470	471	-	-	8x11.5
680	681	-	8x11.5	8x16
				10x12.5
820	821	8x11.5	-	-
1000	102	8x11.5	8x16	8x20
			10x12.5	10x16
1200	122	8x16	-	-
1500	152	8x20	8x20	10x20
		10x12.5	10x16	
1800	182	10x16	10x20	10x23
2200	222	10x20	10x23	-
3300	332	10x23	-	-

DIAMETER AND LEADSPACE (mm)

Case Dia. (D∅)	8	10
Lead Spacing (F)	3.5	5.0
Leads Dia. (d∅)	0.6	0.6

L ≤ 16mm β = 1.5mm
L ≥ 20mm β = 2.0mm
α = 0.5mm