

Miniature Aluminum Electrolytic Capacitors

NRE-S Series

SUBMINIATURE, RADIAL LEADS, POLARIZED

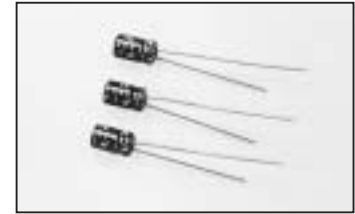
FEATURES

- LOW PROFILE, 7mm HEIGHT
- STABLE & HIGH PERFORMANCE

**RoHS
Compliant**

includes all homogeneous materials

*See Part Number System for Details



CHARACTERISTICS

Rated Voltage Range		6.3 ~ 63Vdc						
Capacitance Range		0.1 ~ 220μF						
Operating Temperature Range		-40 ~ +85°C						
Capacitance Tolerance		±20%(M)						
Max. Leakage Current @ 20°C After 2 min.		0.01CV or 3μA, whichever is greater						
Max. Tan δ @ 120Hz/+20°C	W.V. (Vdc)	6.3	10	16	25	35	50	63
	S.V. (Vdc)	8	13	20	32	44	63	79
	Tan δ	0.24	0.20	0.16	0.14	0.12	0.10	0.08
Low Temperature Stability Impedance Ratio @ 120Hz	Z-25°C/Z+20°C	4	3	2	2	2	2	2
	Z-40°C/Z+20°C	10	8	6	4	4	4	4
Load Life Test at Rated W.V. +85°C 1,000 Hours	Capacitance Change	Within ±25% of initial measured value						
	Tan δ	Less than 200% of specified maximum value						
	Leakage Current	Less than specified maximum value						

STANDARD PRODUCT AND CASE SIZE TABLE D ϕ x L (mm)

Cap. (μ F)	Code	Working Voltage (Vdc)						
		6.3	10	16	25	35	50	63
0.1	R10	-	-	-	-	-	4x7	4x7
0.22	R22	-	-	-	-	-	4x7	4x7
0.33	R33	-	-	-	-	-	4x7	4x7
0.47	R47	-	-	-	-	-	4x7	4x7
1.0	1R0	-	-	-	-	-	4x7	4x7
2.2	2R2	-	-	-	-	-	4x7	4x7
3.3	3R3	-	-	-	-	-	4x7	4x7
4.7	4R7	-	-	-	4x7	4x7	4x7	5x7
10	100	-	-	4x7	4x7	4x7	5x7	6.3x7
22	220	4x7	4x7	4x7	5x7	5x7	6.3x7	6.3x7
33	330	4x7	4x7	5x7	5x7	6.3x7	6.3x7	-
47	470	4x7	5x7	5x7	6.3x7	6.3x7	6.3x7	-
100	101	5x7	6.3x7	6.3x7	6.3x7	6.3x7	-	-
220	221	6.3x7	6.3x7	6.3x7	-	-	-	-
330	331	6.3x7	-	-	-	-	-	-

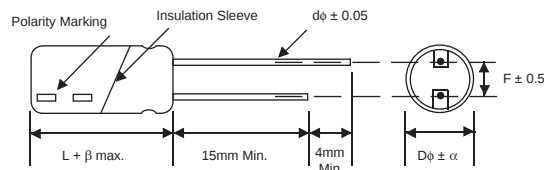
PART NUMBERING SYSTEM

NRES 100 M 35V 4X7 F

NRES: Series
 100: Capacitance Code: First 2 characters significant, third character is multiplier
 M: Tolerance Code (M=20%)
 35V: Working Voltage (Vdc)
 4X7: Case Size (D ϕ x L)
 F: RoHS Compliant

LEAD SPACING AND DIAMETER (mm)

Case Dia. (D ϕ)	4	5	6.3
Lead Dia. (d ϕ)	0.45	0.5	0.5
Lead Spacing (F)	1.5	2.0	2.5
Dim. α	0.5	0.5	0.5
dim. β	1.0	1.0	1.0



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
 If in doubt or uncertainty, please review your specific application - process details with NIC's technical support personnel: tpmg@niccomp.com



STANDARD PRODUCT, SPECIFICATIONS AND CASE SIZES D ϕ x L (mm)

Part Number	Cap. (μ F)	W.V. (Vdc)	Dissipation Factor +20°C/120Hz	Ripple Current Rating (mA) +85°C/120Hz	Max. ESR (Ω) +20°C/120Hz	Load Life Hours @ +85°C
NRE-S220M6.3V4x7F	22	6.3	0.24	29	18.1	1,000
NRE-S330M6.3V4x7F	33		0.24	38	12.1	1,000
NRE-S470M6.3V4x7F	47		0.24	46	8.47	1,000
NRE-S101M6.3V5x7F	100		0.24	70	3.98	1,000
NRE-S221M6.3V6.3x7F	220		0.24	95	2.49	1,000
NRE-S331M6.3V6.3x7F	330		0.24	110	2.21	1,000
NRE-S220M10V4x7F	22	10	0.20	35	15.1	1,000
NRE-S330M10V4x7F	33		0.20	43	10.1	1,000
NRE-S470M10V5x7F	47		0.20	53	7.06	1,000
NRE-S101M10V6.3x7F	100		0.20	80	3.32	1,000
NRE-S221M10V6.3x7F	220		0.20	110	1.51	1,000
NRE-S100M16V4x7F	10	16	0.16	25	26.6	1,000
NRE-S220M16V4x7F	22		0.16	39	12.1	1,000
NRE-S330M16V5x7F	33		0.16	49	8.05	1,000
NRE-S470M16V5x7F	47		0.16	59	5.65	1,000
NRE-S101M16V6.3x7F	100		0.16	120	2.88	1,000
NRE-S221M16V6.3x7F	220		0.16	110	1.21	1,000
NRE-S4R7M25V4x7F	4.7	25	0.14	19	49.5	1,000
NRE-S100M25V4x7F	10		0.14	27	23.3	1,000
NRE-S220M25V5x7F	22		0.14	43	10.6	1,000
NRE-S330M25V5x7F	33		0.14	63	7.04	1,000
NRE-S470M25V6.3x7F	47		0.14	70	4.85	1,000
NRE-S101M25V6.3x7F	100		0.14	100	2.33	1,000
NRE-S4R7M35V4x7F	4.7	35	0.12	20	42.4	1,000
NRE-S100M35V4x7F	10		0.12	29	19.9	1,000
NRE-S220M35V5x7F	22		0.12	47	9.05	1,000
NRE-S330M35V6.3x7F	33		0.12	60	6.03	1,000
NRE-S470M35V6.3x7F	47		0.12	75	4.24	1,000
NRE-S101M35V6.3x7F	100		0.12	105	1.90	1,000
NRE-SR10M50V4x7F	0.1	50	0.10	1.0	1680	1,000
NRE-SR22M50V4x7F	0.22		0.10	2.2	754	1,000
NRE-SR33M50V4x7F	0.33		0.10	3.2	503	1,000
NRE-SR47M50V4x7F	0.47		0.10	5.0	353	1,000
NRE-S1R0M50V4x7F	1.0		0.10	9.0	188	1,000
NRE-S2R2M50V4x7F	2.2		0.10	15	75.4	1,000
NRE-S3R3M50V4x7F	3.3		0.10	18	50.3	1,000
NRE-S4R7M50V4x7F	4.7		0.10	23	35.3	1,000
NRE-S100M50V5x7F	10		0.10	34	16.6	1,000
NRE-S220M50V6.3x7F	22		0.10	55	7.54	1,000
NRE-S330M50V6.3x7F	33		0.10	70	4.80	1,000
NRE-S470M50V6.3x7F	47		0.10	80	3.53	1,000
NRE-SR10M63V4x7F	0.1	63	0.08	1.2	1320	1,000
NRE-SR22M63V4x7F	0.22		0.08	2.9	604	1,000
NRE-SR33M63V4x7F	0.33		0.08	4.4	404	1,000
NRE-SR47M63V4x7F	0.47		0.08	5.0	283	1,000
NRE-S1R0M63V4x7F	1.0		0.08	10	133	1,000
NRE-S2R2M63V4x7F	2.2		0.08	17	60.4	1,000
NRE-S3R3M63V4x7F	3.3		0.08	21	40.4	1,000
NRE-S4R7M63V5x7F	4.7		0.08	26	26.3	1,000
NRE-S100M63V6.3x7F	10		0.08	43	6.04	1,000
NRE-S220M63V6.3x7F	22		0.08	65	4.04	1,000