

Miniature Aluminum Electrolytic Capacitors

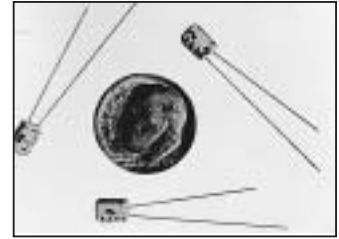
NSR Series

FEATURES

- LOW PROFILE 5mm HEIGHT
- SPACE SAVING AT COMPETITIVE PRICING

**RoHS
Compliant**
includes all homogeneous materials

*See Part Number System for Details



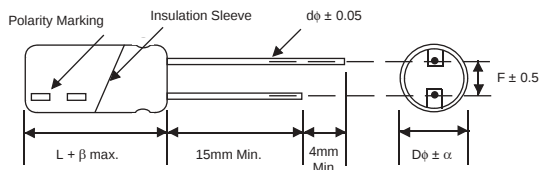
CHARACTERISTICS

Rated Voltage Range	4 ~ 50Vdc							
Capacitance Range	0.1 ~ 470μF							
Operating Temperature Range	-40 ~ +85°C							
Capacitance Tolerance	±20%(M)							
Max. Leakage Current @ 20°C	After 1 min.	0.01CV or 3μA, whichever is greater						
Max. Tan δ @ 120Hz/+20°C	W.V. (Vdc)	4	6.3	10	16	25	35	50
	S.V. (Vdc)	5	8	13	20	32	44	63
	Tan δ	0.35	0.24	0.20	0.16	0.14 (8φ=0.15)	0.12	0.10
Low Temperature Stability Impedance Ratio @ 120Hz	Z-25°C/Z+20°C	7	4	3	2	2	2	2
	Z-40°C/Z+20°C	15	10	8	6	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 Dφ x L (mm)

Cap. (μF)	Code	Working Voltage (Vdc)						
		4	6.3	10	16	25	35	50
0.1	R10	-	-	-	-	-	-	3x5
0.22	R22	-	-	-	-	-	-	3x5
0.33	R33	-	-	-	-	-	-	3x5
0.47	R47	-	-	-	-	-	-	3x5
1.0	1R0	-	-	-	-	-	-	3x5
								4x5
2.2	2R2	-	-	-	-	-	3x5	3x5
								4x5
3.3	3R3	-	-	-	-	3x5	3x5	4x5
4.7	4R7	-	-	-	3x5	3x5	4x5	5x5
10	100	-	3x5	3x5	3x5	5x5	5x5	6.3x5
					4x5			
22	220	-	4x5	5x5	5x5	6.3x5	6.3x5	6.3x5
33	330	4x5	5x5	5x5	6.3x5	6.3x5	6.3x5	-
47	470	4x5	5x5	6.3x5	6.3x5	6.3x5	6.3x5	-
100	101	5x5	6.3x5	6.3x5	6.3x5	8x5	-	-
220	221	6.3x5	6.3x5	6.3x5	-	-	-	-
330	331	6.3x5	6.3x5	-	-	-	-	-
470	471	8x5	-	-	-	-	-	-

DIMENSIONS (mm)



LEAD SPACING AND DIAMETER (mm)

Case Dia. (Dφ)	3	4	5	6.3	8*
Lead Dia. (dφ)	0.4	0.45	0.5	0.5	0.6
Lead Spacing (F)	1.0	1.5	2.0	2.5	3.5
Dim. α	0.5	0.5	0.5	0.5	0.5
dim. β	1.0	1.0	1.5	1.5	1.5

*LEAD SPACING OF 8x5mm SIZE IS 2.5mm.

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



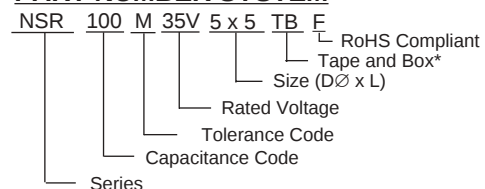
STANDARD PRODUCT, SPECIFICATIONS AND CASE SIZES D ϕ x L (mm)

Part Number	Cap. (μF)	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
NSR330M4V4x5F	33	4	0.35	26	17.6	1,000
NSR470M4V4x5F	47		0.35	34	12.4	1,000
NSR101M4V5x5F	100		0.35	61	5.80	1,000
NSR221M4V6.3x5F	220		0.35	82	2.60	1,000
NSR331M4V6.3x5F	330		0.35	85	1.80	1,000
NSR471M4V8x5F	470		0.35	145	1.23	1,000
NSR100M6.3V3x5F	10	6.3	0.24	13	39.8	1,000
NSR220M6.3V4x5F	22		0.24	31	18.1	1,000
NSR330M6.3V5x5F	33		0.24	39	12.1	1,000
NSR470M6.3V5x5F	47		0.24	47	8.50	1,000
NSR101M6.3V6.3x5F	100		0.24	71	4.00	1,000
NSR221M6.3V6.3x5F	220		0.24	90	1.80	1,000
NSR331M6.3V6.3x5F	330	0.24	92	1.20	1,000	
NSR100M10V3x5F	10	10	0.20	17	33.2	1,000
NSR220M10V5x5F	22		0.20	35	15.1	1,000
NSR330M10V5x5F	33		0.20	43	10.1	1,000
NSR470M10V6.3x5F	47		0.20	59	7.10	1,000
NSR101M10V6.3x5F	100		0.20	76	3.30	1,000
NSR221M10V6.3x5F	220		0.20	90	1.50	1,000
NSR4R7M16V3x5F	4.7	16	0.16	12	56.5	1,000
NSR100M16V3x5F	10		0.16	25	26.5	1,000
NSR100M16V4x5F			0.16			1,000
NSR220M16V5x5F	22		0.16	39	12.1	1,000
NSR330M16V6.3x5F	33		0.16	57	8.00	1,000
NSR470M16V6.3x5F	47		0.16	68	5.60	1,000
NSR101M16V6.3x5F	100	25	0.16	86	2.70	1,000
NSR3R3M25V3x5F	3.3		0.14	10	70.4	1,000
NSR4R7M25V3x5F	4.7		0.14	19	49.4	1,000
NSR100M25V5x5F	10		0.14	28	23.2	1,000
NSR220M25V6.3x5F	22		0.14	52	10.6	1,000
NSR330M25V6.3x5F	33		0.14	63	7.00	1,000
NSR470M25V6.3x5F	47	35	0.14	73	4.90	1,000
NSR101M25V8x5F	100		0.15	110	2.49	1,000
NSR2R2M35V3x5F	2.2		0.12	8.4	90.5	1,000
NSR3R3M35V3x5F	3.3		0.12	17	60.3	1,000
NSR4R7M35V4x5F	4.7		0.12	20	42.4	1,000
NSR100M35V5x5F	10		0.12	30	19.9	1,000
NSR220M35V6.3x5F	22	50	0.12	54	9.00	1,000
NSR330M35V6.3x5F	33		0.12	68	6.00	1,000
NSR470M35V6.3x5F	47		0.12	73	4.20	1,000
NSRR10M50V3x5F	0.1		0.10	1.0	1659	1,000
NSRR22M50V3x5F	0.22		0.10	2.3	754	1,000
NSRR33M50V3x5F	0.33		0.10	3.5	503	1,000
NSRR47M50V3x5F	0.47	1.0	0.10	5.0	353	1,000
NSR1R0M50V3x5F	1.0		0.10	10	166	1,000
NSR1R0M50V4x5F			0.10			1,000
NSR2R2M50V3x5F	2.2		0.10	15	75.4	1,000
NSR2R2M50V4x5F			0.10			1,000
NSR3R3M50V4x5F	3.3		0.10	18	50.3	1,000
NSR4R7M50V5x5F	4.7	0.10	23	35.3	1,000	
NSR100M50V6.3x5F	10	0.10	34	16.6	1,000	
NSR220M50V6.3x5F	22		0.10	54	7.50	1,000

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency (Hz)	120	1K	10K	100K
3x5/4x5	1.00	1.30	1.50	1.60
5x5	1.00	1.20	1.30	1.35
6.3x5	1.00	1.15	1.20	1.25
8x5	1.00	1.13	1.15	1.20

PART NUMBER SYSTEM



*see tape specification for details

