

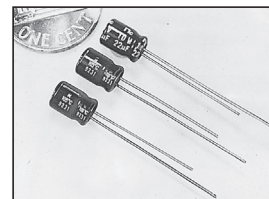
SUPER-MINIATURE, RADIAL LEADS, POLARIZED

### FEATURES

- HIGH PERFORMANCE IN LOW PROFILE (7mm) HEIGHT
- GOOD 100KHz PERFORMANCE CHARACTERISTICS
- WIDE TEMPERATURE -55 TO + 105°C

**RoHS Compliant**  
includes all homogeneous materials

\*See Part Number System for Details



### CHARACTERISTICS

Rated Voltage Range	6.3 ~ 50VDC						
Capacitance Range	1.0 ~ 330μF						
Operating Temperature Range	-55°C ~ +105°C						
Capacitance Tolerance	±20% (M)						
Maximum Leakage Current After 1 minutes	.01CV or 3μA whichever is greater						
Max. Tan δ at 120Hz/20°C	W.V. (Vdc)	6.3	10	16	25	35	50
	S.V. (Vdc)	8	13	20	32	44	63
	Tan δ at 120Hz	0.24	0.21	0.18	0.14	0.12	0.10
Low Temperature Stability Impedance Ratio @ 120Hz	Z-40°C/Z+20°C	4	3	2	2	2	2
	Z-55°C/Z+20°C	6	5	4	3	3	3
Load Life Test 1,000 @ 105°C	Δ Capacitance	Within ±25% of initial measured value					
	Δ Tan δ	Less than 200% of specified value					
	Δ LC	Less than specified value					

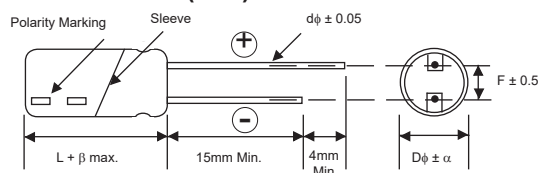
### STANDARD PRODUCT AND CASE SIZE TABLE DφxL (mm)

Cap. (μF)	Code	Working Voltage (Vdc)					
		6.3	10	16	25	35	50
1.0	1R0	-	-	-	-	-	4x7
2.2	2R2	-	-	-	-	-	4x7
3.3	3R3	-	-	-	-	-	4x7
4.7	4R7	-	-	-	4x7	4x7	5x7
10	100	-	-	4x7	5x7	5x7	6.3x7
22	220	4x7	5x7	5x7	6.3x7	6.3x7	6.3x7
33	330	5x7	5x7	6.3x7	6.3x7	6.3x7	6.3x7
47	470	5x7	6.3x7	6.3x7	6.3x7	6.3x7	6.3x7
100	101	6.3x7	6.3x7	6.3x7	6.3x7	6.3x7	-
220	221	6.3x7	6.3x7	6.3x7	-	-	-
330	331	6.3x7	-	-	-	-	-

### LEAD SPACING & DIAMETER (mm)

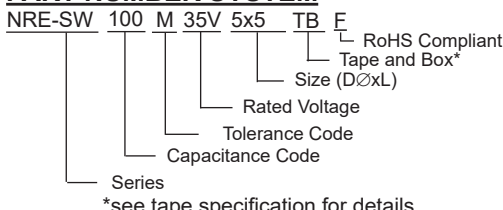
Case Dia. (Dφ)	4	5	6.3
Lead Dia. (dφ)	0.45	0.45	0.45
Lead Spacing (F)	1.5	2.0	2.5
Dim. α	0.5		
Dim. β	1.0		

### 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.

### PART NUMBER SYSTEM



\*see tape specification for details

### PRECAUTIONS

Please review the notes on correct use, safety and precautions found at <https://www.niccomp.com/resource/files/aluminum/AlumApplInfoCautions.pdf>  
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 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
NRE-SW220M6.3V4x7F	22	6.3	0.24	50	4.2	1,000
NRE-SW330M6.3V5x7F	33		0.24	85	2.0	1,000
NRE-SW470M6.3V5x7F	47		0.24	85	2.0	1,000
NRE-SW101M6.3V6.3x7F	100		0.24	120	1.2	1,000
NRE-SW221M6.3V6.3x7F	220		0.24	120	1.2	1,000
NRE-SW331M6.3V6.3x7F	330		0.24	120	1.2	1,000
NRE-SW220M10V5x7F	22	10	0.21	85	4.2	1,000
NRE-SW330M10V5x7F	33		0.21	85	2.0	1,000
NRE-SW470M10V6.3x7F	47		0.21	120	1.2	1,000
NRE-SW101M10V6.3x7F	100		0.21	120	1.2	1,000
NRE-SW221M10V6.3x7F	220		0.21	120	1.2	1,000
NRE-SW100M16V4x7F	10		16	0.18	50	4.2
NRE-SW220M16V5x7F	22	0.18		85	2.0	1,000
NRE-SW330M16V6.3x7F	33	0.18		120	1.2	1,000
NRE-SW470M16V6.3x7F	47	0.18		120	1.2	1,000
NRE-SW101M16V6.3x7F	100	0.18		120	1.2	1,000
NRE-SW221M16V6.3x7F	220	0.18		120	1.2	1,000
NRE-SW4R7M25V4x7F	4.7	25	0.14	50	4.2	1,000
NRE-SW100M25V5x7F	10		0.14	85	2.0	1,000
NRE-SW220M25V6.3x7F	22		0.14	120	1.2	1,000
NRE-SW330M25V6.3x7F	33		0.14	120	1.2	1,000
NRE-SW470M25V6.3x7F	47		0.14	120	1.2	1,000
NRE-SW101M25V6.3x7F	100		0.14	120	1.5	1,000
NRE-SW4R7M35V4x7F	4.7	35	0.12	40	6.0	1,000
NRE-SW100M35V5x7F	10		0.12	70	3.1	1,000
NRE-SW220M35V6.3x7F	22		0.12	100	1.6	1,000
NRE-SW330M35V6.3x7F	33		0.12	100	1.6	1,000
NRE-SW470M35V6.3x7F	47		0.12	100	1.6	1,000
NRE-SW101M35V6.3x7F	100		0.12	100	1.6	1,000
NRE-SW1R0M50V4x7F	1.0	50	0.10	30	10.0	1,000
NRE-SW2R2M50V4x7F	2.2		0.10	35	7.8	1,000
NRE-SW3R3M50V4x7F	3.3		0.10	40	6.2	1,000
NRE-SW4R7M50V5x7F	4.7		0.10	70	3.1	1,000
NRE-SW100M50V6.3x7F	10		0.10	100	1.6	1,000
NRE-SW220M50V6.3x7F	22		0.10	100	1.6	1,000
NRE-SW330M50V6.3x7F	33		0.10	100	1.6	1,000
NRE-SW470M50V6.3x7F	47		0.10	100	1.6	1,000

## RIPPLE CURRENT CORRECTION FACTORS

Frequency (Hz)	120	1K	10K	≤100K
4x7	0.50	0.70	0.93	1.00
5x7	0.60	0.80	0.93	1.00
6.3x7	0.70	0.85	0.93	1.00