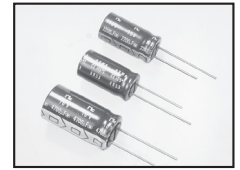


NRE-HL Series

Radial Leaded Aluminum Electrolytic Capacitors



LONG LIFE, LOW IMPEDANCE, HIGH TEMPERATURE, RADIAL LEADS,
POLARIZED ALUMINUM ELECTROLYTIC CAPACITORS



FEATURES

- LONG LIFE AT 105°C (4000 ~ 10,000 hrs.)
- HIGH CAPACITANCE (UP TO 18,000μF)
- LOW IMPEDANCE

CHARACTERISTICS

Rated Voltage Range				6.3 ~ 100Vdc							
Rated Capacitance Range				6.8 ~ 18,000μF							
Operating Temperature Range				-40°C ~ +105°C							
Capacitance Tolerance				±20% (M)							
Max. Leakage Current After 2 Minutes				0.01CV or 3μA whichever is greater							
Maximum Tanδ @120Hz/20°C				(See Specifications Tables)							
Low Temperature Stability (Impedance Ratio @ 120Hz)			W.V. (Vdc)	6.3	10	16	25	35	50	63	100
			Z -25°C/+20°C	4	3	2	2	2	2	2	2
			Z -40°C/+20°C	8	6	4	3	3	3	3	3
Load Life @ 105°C				Allowable Change							
Case Size	6.3V ~ 10V	16V ~ 100V	Appearance	No Notable Changes (except sleeving)							
5mm ~ 6.3mm	4,000 hrs	5,000 hrs	Capacitance Change	Within ±25% of initial measured value							
8mm ~ 10mm	6,000 hrs	7,000 hrs	Tan δ	Less than 200% of specified value							
12.5mm ~ 18mm	8,000 hrs	10,000 hrs	Leakage Current	Less than the specified maximum value							
Shelf Life After storage for 1,000 hours @ 105°C			Appearance	No Notable Changes (except sleeving)							
			Capacitance Change	Within ±25% of initial measured value							
			Tan δ	Less than 200% of specified value							
			Leakage Current	Less than the specified maximum value							

PART NUMBERING SYSTEM

NRE-HL 101 M 25V 8X11 TB F

- Series
- Cap. Code: First 2 characters significant
Third character is multiplier
- Tolerance Code (M=20%)
- Working Voltage (Vdc)
- Case Size (DφxL)
- TB = Tape & Box*
- RoHS Compliant

*see tape specification for details

PRECAUTIONS

Please review the notes on correct use, safety and precautions found at
<https://www.niccomp.com/wp-content/uploads/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

NRE-HL Series

Radial Leaded Aluminum Electrolytic Capacitors



STANDARD PRODUCTS, CASE SIZES AND SPECIFICATIONS

Part Number	Cap. (μF)	W.V. (Vdc)	Max. Tanδ	Max. Impedance		Max. Ripple Current at 100KHz/105°C (mA rms)	Load Life Hours @ +105°C
				100KHz/20°C	100KHz/-10°C		
NRE-HL151M6.3V5x11F	150	6.3	0.22	0.58	2.30	210	4,000
NRE-HL331M6.3V6.3x11F	330		0.22	0.22	0.87	340	4,000
NRE-HL681M6.3V8x11.5F	680		0.22	0.13	0.52	640	6,000
NRE-HL821M6.3V10x12.5F	820		0.22	0.080	0.32	865	6,000
NRE-HL102M6.3V8x16F	1000		0.22	0.087	0.35	840	6,000
NRE-HL122M6.3V8x20F	1200		0.22	0.069	0.27	1050	6,000
NRE-HL122M6.3V10x16F	1200		0.22	0.060	0.24	1210	6,000
NRE-HL152M6.3V10x20F	1500		0.22	0.046	0.18	1400	6,000
NRE-HL182M6.3V12.5x16F	1800		0.22	0.049	0.16	1450	8,000
NRE-HL222M6.3V10x23F	2200		0.24	0.042	0.17	1650	6,000
NRE-HL272M6.3V10x28F	2700		0.24	0.031	0.12	1910	6,000
NRE-HL272M6.3V16x16F	2700		0.24	0.042	0.12	1940	8,000
NRE-HL332M6.3V12.5x20F	3300		0.26	0.035	0.12	1900	8,000
NRE-HL392M6.3V12.5x25F	3900		0.28	0.027	0.089	2230	8,000
NRE-HL392M6.3V18x16F	3900		0.28	0.043	0.11	2210	8,000
NRE-HL472M6.3V12.5x30F	4700		0.28	0.024	0.078	2650	8,000
NRE-HL562M6.3V12.5x35F	5600		0.30	0.020	0.065	2880	8,000
NRE-HL562M6.3V16x20F	5600		0.30	0.027	0.078	2530	8,000
NRE-HL682M6.3V12.5x40F	6800		0.32	0.017	0.056	3350	8,000
NRE-HL682M6.3V16x25F	6800		0.32	0.021	0.060	2930	8,000
NRE-HL682M6.3V18x20F	6800		0.32	0.026	0.067	2860	8,000
NRE-HL822M6.3V16x31.5F	8200		0.36	0.017	0.050	3450	8,000
NRE-HL103M6.3V16x35.5F	10000		0.40	0.015	0.044	3610	8,000
NRE-HL103M6.3V18x25F	10000		0.40	0.019	0.049	3140	8,000
NRE-HL123M6.3V16x40F	12000		0.44	0.013	0.038	4080	8,000
NRE-HL123M6.3V18x31.5F	12000		0.44	0.015	0.040	4170	8,000
NRE-HL153M6.3V18x35.5F	15000		0.50	0.014	0.038	4220	8,000
NRE-HL183M6.3V18x40F	18000		0.56	0.012	0.032	4280	8,000
NRE-HL101M10V5x11F	100	10	0.19	0.58	2.3	210	4,000
NRE-HL221M10V6.3x11F	220		0.19	0.22	0.87	340	4,000
NRE-HL471M10V8x11.5F	470		0.19	0.13	0.52	640	6,000
NRE-HL681M10V8x16F	680		0.19	0.087	0.35	840	6,000
NRE-HL681M10V10x12.5F	680		0.19	0.080	0.32	865	6,000
NRE-HL102M10V8x20F	1000		0.19	0.069	0.27	1050	6,000
NRE-HL102M10V10x16F	1000		0.19	0.060	0.24	1210	6,000
NRE-HL122M10V10x20F	1200		0.19	0.046	0.18	1400	6,000
NRE-HL152M10V10x23F	1500		0.19	0.042	0.17	1650	6,000
NRE-HL152M10V12.5x16F	1500		0.19	0.049	0.16	1450	8,000
NRE-HL222M10V10x28F	2200		0.21	0.031	0.12	1910	6,000
NRE-HL222M10V12.5x20F	2200		0.21	0.035	0.12	1900	8,000
NRE-HL222M10V16x16F	2200		0.21	0.042	0.12	1940	8,000
NRE-HL272M10V18x16F	2700		0.21	0.043	0.11	2210	8,000
NRE-HL332M10V12.5x25F	3300		0.23	0.027	0.089	2230	8,000
NRE-HL392M10V12.5x30F	3900		0.23	0.024	0.078	2650	8,000
NRE-HL392M10V16x20F	3900		0.23	0.027	0.078	2530	8,000
NRE-HL472M10V12.5x35F	4700		0.25	0.020	0.065	2880	8,000
NRE-HL562M10V12.5x40F	5600		0.27	0.017	0.056	3350	8,000
NRE-HL562M10V16x25F	5600		0.27	0.021	0.060	2930	8,000
NRE-HL562M10V18x20F	5600		0.27	0.026	0.067	2860	8,000
NRE-HL682M10V16x31.5F	6800		0.29	0.017	0.050	3450	8,000
NRE-HL682M10V18x25F	6800		0.29	0.019	0.049	3140	8,000
NRE-HL822M10V16x35.5F	8200		0.33	0.015	0.044	3610	8,000
NRE-HL822M10V18x31.5F	8200		0.33	0.015	0.040	4170	8,000

NRE-HL Series

Radial Leaded Aluminum Electrolytic Capacitors



STANDARD PRODUCTS, CASE SIZES AND SPECIFICATIONS

Part Number	Cap. (μF)	W.V. (Vdc)	Max. Tanδ	Max. Impedance		Max. Ripple Current at 100KHz/105°C (mA rms)	Load Life Hours @ +105°C
				100KHz/20°C	100KHz/-10°C		
NRE-HL103M10V16x40F	10000	10	0.37	0.013	0.038	4080	8,000
NRE-HL103M10V18x35.5F	10000		0.37	0.014	0.038	4220	8,000
NRE-HL123M10V18x40F	12000		0.41	0.012	0.032	4280	8,000
NRE-HL560M16V5x11F	56	16	0.16	0.58	2.3	210	5,000
NRE-HL121M16V6.3x11F	120		0.16	0.22	0.87	340	5,000
NRE-HL331M16V8x11.5F	330		0.16	0.13	0.52	640	7,000
NRE-HL471M16V8x16F	470		0.16	0.87	0.35	840	7,000
NRE-HL471M16V10x12.5F	470		0.16	0.080	0.32	865	7,000
NRE-HL681M16V8x20F	680		0.16	0.069	0.27	1050	7,000
NRE-HL681M16V10x16F	680		0.16	0.060	0.24	1210	7,000
NRE-HL102M16V10x20F	1000		0.16	0.046	0.18	1400	7,000
NRE-HL102M16V12.5x16F	1000		0.16	0.049	0.16	1450	10,000
NRE-HL122M16V10x23F	1200		0.16	0.042	0.17	1650	7,000
NRE-HL152M16V10x28F	1500		0.16	0.031	0.12	1910	7,000
NRE-HL152M16V12.5x20F	1500		0.16	0.035	0.12	1900	10,000
NRE-HL152M16V16x16F	1500		0.16	0.042	0.12	1940	10,000
NRE-HL222M16V12.5x25F	2200		0.18	0.027	0.12	2230	10,000
NRE-HL222M16V18x16F	2200		0.18	0.043	0.11	2210	10,000
NRE-HL272M16V12.5x30F	2700		0.18	0.024	0.078	2650	10,000
NRE-HL272M16V16x20F	2700		0.18	0.027	0.078	2530	10,000
NRE-HL332M16V12.5x35F	3300		0.20	0.020	0.065	2880	10,000
NRE-HL392M16V12.5x40F	3900		0.20	0.017	0.056	3350	10,000
NRE-HL392M16V16x25F	3900		0.20	0.021	0.060	2930	10,000
NRE-HL392M16V18x20F	3900		0.20	0.026	0.067	2860	10,000
NRE-HL472M16V16x31.5F	4700		0.22	0.017	0.050	3450	10,000
NRE-HL472M16V18x25F	4700		0.22	0.019	0.049	3140	10,000
NRE-HL562M16V16x35.5F	5600		0.24	0.015	0.044	3610	10,000
NRE-HL562M16V18x31.5F	5600		0.24	0.015	0.040	4170	10,000
NRE-HL682M16V16x40F	6800		0.26	0.013	0.038	4080	10,000
NRE-HL822M16V18x35.5F	8200		0.30	0.014	0.038	4220	10,000
NRE-HL103M16V18x40F	10000		0.34	0.012	0.032	4280	10,000
NRE-HL470M25V5x11F	47	25V	0.14	0.58	2.3	210	5,000
NRE-HL101M25V6.3x11F	100		0.14	0.22	0.87	340	5,000
NRE-HL221M25V8x11.5F	220		0.14	0.13	0.52	640	7,000
NRE-HL331M25V8x16F	330		0.14	0.087	0.35	840	7,000
NRE-HL331M25V10x12.5F	330		0.14	0.080	0.32	865	7,000
NRE-HL471M25V8x20F	470		0.14	0.069	0.27	1050	7,000
NRE-HL471M25V10x16F	470		0.14	0.060	0.24	1210	7,000
NRE-HL681M25V10x20F	680		0.14	0.046	0.18	1400	7,000
NRE-HL681M25V12.5x16F	680		0.14	0.049	0.16	1450	10,000
NRE-HL821M25V10x23F	820		0.14	0.042	0.17	1650	7,000
NRE-HL102M25V10x28F	1000		0.14	0.031	0.12	1910	7,000
NRE-HL102M25V12.5x20F	1000		0.14	0.035	0.12	1900	10,000
NRE-HL102M25V16x16F	1000		0.14	0.042	0.12	1940	10,000
NRE-HL122M25V18x16F	1200		0.14	0.043	0.11	2210	10,000
NRE-HL152M25V12.5x25F	1500		0.14	0.027	0.089	2230	10,000
NRE-HL182M25V12.5x30F	1800		0.14	0.024	0.078	2650	10,000
NRE-HL182M25V16x20F	1800		0.14	0.027	0.078	2530	10,000
NRE-HL222M25V12.5x35F	2200		0.16	0.020	0.065	2880	10,000
NRE-HL222M25V18x20F	2200		0.16	0.026	0.067	2860	10,000
NRE-HL272M25V12.5x40F	2700		0.16	0.017	0.056	3350	10,000
NRE-HL272M25V16x25F	2700		0.16	0.021	0.060	2930	10,000
NRE-HL332M25V16x31.5F	3300		0.18	0.017	0.050	3450	10,000
NRE-HL332M25V18x25F	3300		0.18	0.019	0.049	3140	10,000
NRE-HL392M25V16x35.5F	3900		0.18	0.015	0.044	3610	10,000

NRE-HL Series

Radial Leaded Aluminum Electrolytic Capacitors



STANDARD PRODUCTS, CASE SIZES AND SPECIFICATIONS

Part Number	Cap. (μ F)	W.V. (Vdc)	Max. Tan δ	Max. Impedance		Max. Ripple Current at 100KHz/105°C (mA rms)	Load Life Hours @ +105°C
				100KHz/20°C	100KHz/-10°C		
NRE-HL392M25V18x31.5F	3900	25V	0.18	0.015	0.040	4170	10,000
NRE-HL472M25V16x40F	4700		0.20	0.013	0.038	4080	10,000
NRE-HL472M25V18x35.5F	4700		0.20	0.014	0.038	4220	10,000
NRE-HL562M25V18x40F	5600		0.22	0.012	0.032	4280	10,000
NRE-HL330M35V5x11F	33	35V	0.12	0.58	2.3	210	5,000
NRE-HL560M35V6.3x11F	56		0.12	0.22	0.87	340	5,000
NRE-HL151M35V8x11.5F	150		0.12	0.13	0.52	640	7,000
NRE-HL221M35V8x16F	220		0.12	0.087	0.35	840	7,000
NRE-HL221M35V10x12.5F	220		0.12	0.080	0.32	865	7,000
NRE-HL271M35V8x20F	270		0.12	0.069	0.27	1050	7,000
NRE-HL331M35V10x16F	330		0.12	0.060	0.24	1210	7,000
NRE-HL471M35V10x20F	470		0.12	0.046	0.18	1400	7,000
NRE-HL471M35V12.5x16F	470		0.12	0.049	0.16	1450	10,000
NRE-HL561M35V10x23F	560		0.12	0.042	0.17	1650	7,000
NRE-HL681M35V10x28F	680		0.12	0.031	0.12	1910	7,000
NRE-HL681M35V12.5x20F	680		0.12	0.035	0.12	1900	10,000
NRE-HL681M35V16x16F	680		0.12	0.042	0.12	1940	10,000
NRE-HL102M35V12.5x25F	1000		0.12	0.027	0.12	2230	10,000
NRE-HL102M35V18x16F	1000		0.12	0.043	0.11	2210	10,000
NRE-HL122M35V12.5x30F	1200		0.12	0.024	0.078	2650	10,000
NRE-HL122M35V16x20F	1200		0.12	0.027	0.078	2530	10,000
NRE-HL152M35V12.5x35F	1500		0.12	0.020	0.065	2880	10,000
NRE-HL182M35V12.5x40F	1800		0.12	0.017	0.056	3350	10,000
NRE-HL182M35V16x25F	1800		0.12	0.021	0.060	2930	10,000
NRE-HL182M35V18x20F	1800		0.12	0.026	0.067	2860	10,000
NRE-HL222M35V16x31.5F	2200		0.14	0.017	0.050	3450	10,000
NRE-HL222M35V18x25F	2200		0.14	0.019	0.049	3140	10,000
NRE-HL272M35V16x35.5F	2700		0.14	0.015	0.044	3610	10,000
NRE-HL272M35V18x31.5F	2700		0.14	0.015	0.040	4170	10,000
NRE-HL332M35V16x40F	3300		0.16	0.013	0.038	4080	10,000
NRE-HL332M35V18x35.5F	3300		0.16	0.014	0.038	4220	10,000
NRE-HL392M35V18x40F	3900		0.16	0.012	0.032	4280	10,000
NRE-HL220M50V5x11F	22	50V	0.10	0.70	2.8	180	5,000
NRE-HL560M50V6.3x11F	56		0.10	0.30	1.2	295	5,000
NRE-HL101M50V8x11.5F	100		0.10	0.17	0.68	555	7,000
NRE-HL121M50V8x16F	120		0.10	0.12	0.48	730	7,000
NRE-HL151M50V10x12.5F	150		0.10	0.12	0.48	760	7,000
NRE-HL181M50V8x20F	180		0.10	0.091	0.36	910	7,000
NRE-HL221M50V10x16F	220		0.10	0.084	0.34	1050	7,000
NRE-HL271M50V10x20F	270		0.10	0.060	0.24	1220	7,000
NRE-HL271M50V12.5x16F	270		0.10	0.061	0.20	1260	10,000
NRE-HL331M50V10x23F	330		0.10	0.055	0.22	1440	7,000
NRE-HL471M50V10x28F	470		0.10	0.043	0.17	1690	7,000
NRE-HL471M50V12.5x20F	470		0.10	0.045	0.15	1660	10,000
NRE-HL471M50V16x16F	470		0.10	0.055	0.17	1690	10,000
NRE-HL561M50V12.5x25F	560		0.10	0.034	0.11	1950	10,000
NRE-HL561M50V18x16F	560		0.10	0.054	0.15	1930	10,000
NRE-HL681M50V12.5x30F	680		0.10	0.030	0.10	2310	10,000
NRE-HL821M50V12.5x35F	820		0.10	0.025	0.083	2510	10,000
NRE-HL821M50V16x20F	820		0.10	0.034	0.10	2210	10,000
NRE-HL102M50V12.5x40F	1000		0.10	0.021	0.069	2920	10,000
NRE-HL102M50V16x25F	1000		0.10	0.025	0.075	2555	10,000
NRE-HL102M50V18x20F	1000		0.10	0.036	0.097	2490	10,000
NRE-HL122M50V16x31.5F	1200		0.10	0.022	0.066	3010	10,000

NRE-HL Series

Radial Leaded Aluminum Electrolytic Capacitors



STANDARD PRODUCTS, CASE SIZES AND SPECIFICATIONS

Part Number	Cap. (μ F)	W.V. (Vdc)	Max. Tan δ	Max. Impedance		Max. Ripple Current at 100KHz/105°C (mA rms)	Load Life Hours @ +105°C
				100KHz/20°C	100KHz/-10°C		
NRE-HL122M50V18x25F	1200	50V	0.10	0.026	0.070	2740	10,000
NRE-HL152M50V16x35.5F	1500		0.10	0.019	0.057	3150	10,000
NRE-HL182M50V16x40F	1800		0.10	0.016	0.048	3710	10,000
NRE-HL182M50V18x31.5F	1800		0.10	0.021	0.057	3635	10,000
NRE-HL222M50V18x35.5F	2200		0.10	0.017	0.046	3680	10,000
NRE-HL272M50V18x40F	2700		0.12	0.014	0.038	3800	10,000
NRE-HL150M63V5x11F	15	63V	0.09	1.8	7.3	62	5,000
NRE-HL330M63V6.3x11F	33		0.09	1.0	4.1	126	5,000
NRE-HL560M63V8x11.5F	56		0.09	0.50	2.2	260	7,000
NRE-HL820M63V8x16F	82		0.09	0.36	1.7	335	7,000
NRE-HL820M63V10x12.5F	82		0.09	0.34	1.4	325	7,000
NRE-HL121M63V8x20F	120		0.09	0.26	1.3	408	7,000
NRE-HL121M63V10x16F	120		0.09	0.25	1.2	400	7,000
NRE-HL181M63V10x20F	180		0.09	0.17	0.76	518	7,000
NRE-HL181M63V12.5x16F	180		0.09	0.18	0.86	527	10,000
NRE-HL221M63V10x23F	220		0.09	0.16	0.67	595	7,000
NRE-HL271M63V10x28F	270		0.09	0.12	0.57	740	7,000
NRE-HL271M63V12.5x20F	270		0.09	0.13	0.52	765	10,000
NRE-HL271M63V16x16F	270		0.09	0.11	0.52	895	10,000
NRE-HL331M63V12.5x25F	330		0.09	0.096	0.36	875	10,000
NRE-HL391M63V18x16F	390		0.09	0.096	0.40	1030	10,000
NRE-HL471M63V12.5x30F	470		0.09	0.080	0.34	1010	10,000
NRE-HL471M63V16x20F	470		0.09	0.077	0.32	1130	10,000
NRE-HL561M63V12.5x35F	560		0.09	0.070	0.30	1140	10,000
NRE-HL561M63V16x25F	560		0.09	0.062	0.23	1350	10,000
NRE-HL681M63V12.5x40F	680		0.09	0.060	0.25	1280	10,000
NRE-HL681M63V18x20F	680		0.09	0.072	0.27	1300	10,000
NRE-HL821M63V16x31.5F	820		0.09	0.049	0.18	1650	10,000
NRE-HL821M63V18x25F	820		0.09	0.052	0.19	1560	10,000
NRE-HL102M63V16x35.5F	1000		0.09	0.040	0.15	1900	10,000
NRE-HL102M63V18x31.5F	1000		0.09	0.042	0.15	1720	10,000
NRE-HL122M63V16x40F	1200		0.09	0.036	0.13	2130	10,000
NRE-HL122M63V18x35.5F	1200		0.09	0.036	0.13	1890	10,000
NRE-HL152M63V18x40F	1500		0.09	0.032	0.12	2470	10,000
NRE-HL6R8M100V5x11F	6.8	100V	0.08	1.8	7.3	62	5,000
NRE-HL150M100V6.3x11F	15		0.08	1.0	4.1	126	5,000
NRE-HL270M100V8x11.5F	27		0.08	0.50	2.2	260	7,000
NRE-HL390M100V8x16F	39		0.08	0.36	1.7	335	7,000
NRE-HL470M100V10x12.5F	47		0.08	0.34	1.4	325	7,000
NRE-HL560M100V8x20F	56		0.08	0.26	1.3	408	7,000
NRE-HL680M100V10x16F	68		0.08	0.25	1.2	400	7,000
NRE-HL820M100V10x20F	82		0.08	0.17	0.76	518	7,000
NRE-HL820M100V12.5x16F	82		0.08	0.18	0.86	527	10,000
NRE-HL101M100V10x23F	100		0.08	0.16	0.67	595	7,000
NRE-HL121M100V10x28F	120		0.08	0.12	0.57	740	7,000
NRE-HL121M100V12.5x20F	120		0.08	0.13	0.52	765	10,000
NRE-HL151M100V16x16F	150		0.08	0.11	0.52	895	10,000
NRE-HL181M100V12.5x25F	180		0.08	0.096	0.36	875	10,000
NRE-HL181M100V18x16F	180		0.08	0.096	0.40	1030	10,000
NRE-HL221M100V12.5x30F	220		0.08	0.080	0.34	1010	10,000
NRE-HL221M100V16x20F	220		0.08	0.077	0.32	1130	10,000
NRE-HL271M100V12.5x35F	270		0.08	0.070	0.30	1140	10,000
NRE-HL271M100V16x25F	270		0.08	0.062	0.23	1350	10,000
NRE-HL331M100V12.5x40F	330		0.08	0.060	0.25	1280	10,000

NRE-HL Series

Radial Leaded Aluminum Electrolytic Capacitors



STANDARD PRODUCTS, CASE SIZES AND SPECIFICATIONS

Part Number	Cap. (μ F)	W.V. (Vdc)	Max. Tan δ	Max. Impedance		Max. Ripple Current at 100KHz/105°C (mA rms)	Load Life Hours @ +105°C
				100KHz/20°C	100KHz/-10°C		
NRE-HL331M100V18x20F	330	100	0.08	0.072	0.27	1300	10,000
NRE-HL391M100V16x31.5F	390		0.08	0.049	0.18	1650	10,000
NRE-HL391M100V18x25F	390		0.08	0.052	0.19	1560	10,000
NRE-HL471M100V16x35.5F	470		0.08	0.040	0.15	1900	10,000
NRE-HL471M100V18x31.5F	470		0.08	0.042	0.15	1720	10,000
NRE-HL561M100V16x40F	560		0.08	0.036	0.13	2130	10,000
NRE-HL681M100V18x35.5F	680		0.08	0.036	0.13	1890	10,000
NRE-HL821M100V18x40F	820		0.08	0.032	0.12	2470	10,000
NRE-HL331M100V12.5x40F	330		0.08	0.060	0.25	1280	10,000
NRE-HL331M100V18x20F	330		0.08	0.072	0.27	1300	10,000
NRE-HL391M100V16x31.5F	390		0.08	0.049	0.18	1650	10,000
NRE-HL391M100V18x25F	390		0.08	0.052	0.19	1560	10,000
NRE-HL471M100V16x35.5F	470		0.08	0.040	0.15	1900	10,000
NRE-HL471M100V18x31.5F	470		0.08	0.042	0.15	1720	10,000
NRE-HL561M100V16x40F	560		0.08	0.036	0.13	2130	10,000
NRE-HL681M100V18x35.5F	680		0.08	0.036	0.13	1890	10,000
NRE-HL821M100V18x40F	820		0.08	0.032	0.12	2470	10,000

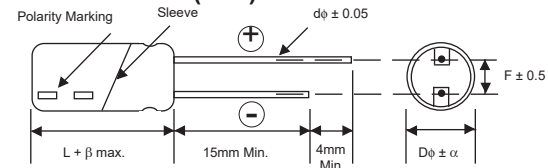
RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Capacitance Value	120Hz	1KHz	10KHz	100KHz
6.8 μ F ~ 33 μ F	0.42	0.70	0.90	1.00
39 μ F ~ 270 μ F	0.50	0.73	0.92	1.00
330 μ F ~ 680 μ F	0.55	0.77	0.94	1.00
820 μ F ~ 1800 μ F	0.60	0.80	0.96	1.00
2200 μ F ~ 18000 μ F	0.70	0.85	0.98	1.00

LEAD SPACING AND DIAMETER (mm)

Case Dia. (D ϕ)	5	6.3	8	10	12.5	16	18
Lead Space (F)	2.0	2.5	3.5	5.0		7.5	
Lead Dia. (d ϕ)	0.5		0.6			0.8	
Dim. β	1.5					2.0	

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.