

Radial Leaded Aluminum Electrolytic Capacitors

REH Series



FEATURES

- High temperature, high ripple current capability, low impedance
- Endurance: 2000 - 5000 hours at 125°C
- RoHS and Halogen Free Compliance



APPLICATIONS

- Power supplies, general industrial, filtering

HOW TO ORDER

Product Type — Radial Aluminum

Series Type —

Case Size — See table below

Capacitance Code —
μF code: 1st two digits represent significant figures,
3rd digit represents multiplier (number of zeros to follow)

Tolerance —
M = ±20%

Special
No Code = std
Different lead cutting and forming upon request

Packaging
K = Ammo Pack
B = Bulk Pack

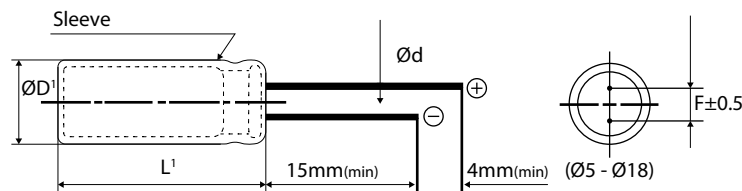
Rated DC Voltage

010 = 10Vdc	063 = 63Vdc	200 = 200Vdc
016 = 16Vdc	080 = 80Vdc	250 = 250Vdc
025 = 25Vdc	100 = 100Vdc	350 = 350Vdc
035 = 35Vdc	120 = 120Vdc	400 = 400Vdc
050 = 50Vdc	160 = 160Vdc	450 = 450Vdc

Ordering Example: **R EH 0812 471 M 016 K -**

CASE DIMENSIONS millimeters (inches)

Code	D'±0.50(0.020)	L'±2.00(0.079)	d±0.05(0.002)	F±0.50(0.020)	Typical Weight (g)	Code	D'±0.50(0.020)	L'±2.00(0.079)	d±0.05(0.002)	F±0.50(0.020)	Typical Weight (g)
0511	5.00 (0.197)	11.00 (0.433)	0.50 (0.020)	2.00 (0.079)	0.40	1218	12.50 (0.492)	18.00 (0.709)	0.60 (0.024)	5.00 (0.197)	4.20
0512	5.00 (0.197)	12.00 (0.472)	0.50 (0.020)	2.00 (0.079)	0.48	1220	12.50 (0.492)	20.00 (0.787)	0.60 (0.024)	5.00 (0.197)	4.33
0611	6.30 (0.248)	11.00 (0.433)	0.50 (0.020)	2.50 (0.098)	0.60	1222	12.50 (0.492)	22.00 (0.866)	0.60 (0.024)	5.00 (0.197)	5.21
0612	6.30 (0.248)	12.00 (0.472)	0.50 (0.020)	2.50 (0.098)	0.70	1225	12.50 (0.492)	25.00 (0.984)	0.60 (0.024)	5.00 (0.197)	5.32
0811	8.00 (0.315)	11.00 (0.433)	0.60 (0.024)	3.50 (0.138)	0.95	1235	12.50 (0.492)	35.00 (1.378)	0.60 (0.024)	5.00 (0.197)	7.21
0812	8.00 (0.315)	12.00 (0.472)	0.60 (0.024)	3.50 (0.138)	1.05	1320	13.00 (0.512)	20.00 (0.787)	0.60 (0.024)	5.00 (0.197)	4.90
0816	8.00 (0.315)	16.00 (0.630)	0.60 (0.024)	3.50 (0.138)	1.50	1325	13.00 (0.512)	25.00 (0.984)	0.60 (0.024)	5.00 (0.197)	5.21
0820	8.00 (0.315)	20.00 (0.787)	0.60 (0.024)	3.50 (0.138)	1.71	1618	16.00 (0.630)	18.00 (0.709)	0.80 (0.031)	7.50 (0.295)	6.78
1011	10.00 (0.394)	11.00 (0.433)	0.60 (0.024)	5.00 (0.197)	1.47	1620	16.00 (0.630)	20.00 (0.787)	0.80 (0.031)	7.50 (0.295)	6.91
1012	10.00 (0.394)	12.00 (0.472)	0.60 (0.024)	5.00 (0.197)	1.55	1625	16.00 (0.630)	25.00 (0.984)	0.80 (0.031)	7.50 (0.295)	8.57
1013	10.00 (0.394)	13.00 (0.512)	0.60 (0.024)	5.00 (0.197)	1.60	1630	16.00 (0.630)	30.00 (1.181)	0.80 (0.031)	7.50 (0.295)	9.88
1014	10.00 (0.394)	14.00 (0.551)	0.60 (0.024)	5.00 (0.197)	2.02	1635	16.00 (0.630)	35.00 (1.378)	0.80 (0.031)	7.50 (0.295)	10.20
1016	10.00 (0.394)	16.00 (0.630)	0.60 (0.024)	5.00 (0.197)	2.12	1820	18.00 (0.709)	20.00 (0.787)	0.80 (0.031)	7.50 (0.295)	9.50
1018	10.00 (0.394)	18.00 (0.709)	0.60 (0.024)	5.00 (0.197)	2.60	1825	18.00 (0.709)	25.00 (0.984)	0.80 (0.031)	7.50 (0.295)	18.25
1020	10.00 (0.394)	20.00 (0.787)	0.60 (0.024)	5.00 (0.197)	2.60	1830	18.00 (0.709)	30.00 (1.181)	0.80 (0.031)	7.50 (0.295)	13.49
1025	10.00 (0.394)	25.00 (0.984)	0.60 (0.024)	5.00 (0.197)	3.11	1835	18.00 (0.709)	35.00 (1.378)	0.80 (0.031)	7.50 (0.295)	13.50
1216	12.50 (0.492)	16.00 (0.630)	0.60 (0.024)	5.00 (0.197)	3.60	1840	18.00 (0.709)	40.00 (1.575)	0.80 (0.031)	7.50 (0.295)	16.00



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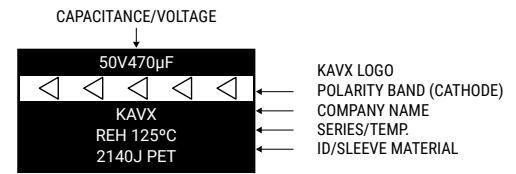


TECHNICAL SPECIFICATIONS

Category Temperature Range:	-40°C to +125°C	
Capacitance Range:	At 25°C, 120Hz	1.0μF - 4700μF
Capacitance Tolerance:	At 25°C, 120Hz	±20%
Dissipation Factor (%)	Measurement Frequency: 120Hz at 25°C	Please see the ratings and part number reference table below
Leakage Current	After 2 minutes at rated working voltage at 25°C*	(10-120V) $I \leq 0.01CV$ or $3\mu A$, whichever is greater
		($CV \leq 1000$ and 160-450V) $I \leq 0.03CV + 15\mu A$
		($CV > 1000$ and 160-450V) $I \leq 0.02CV + 25\mu A$

* Note: In the case of an anomalous reading, re-measure the leakage current after following voltage treatment:
Voltage treatment: DC rated voltage to be applied to the capacitors for 120 minutes at 125°C.

MARKING



CAPACITANCE AND RATED VOLTAGE RANGE (FIGURES DENOTES CASE SIZE)

Capacitance		Rated Voltage DC (V _R)														
μF	Code	10V	16V	25V	35V	50V	63V	80V	100V	120V	160V	200V	250V	350V	400V	450V
1.0	1R0					0511										
2.2	2R2					0511 0811										
3.3	3R3					0511 0811										
4.7	4R7					0511 0811		0511	0511 0811							
10	100					0511 0811		0511	0611 0811		0816 1011	0816 1012	0816 1012	1012 1014	1014 1016	1018 1216
22	220					0512 0811		0611	0612 0812		1012 1014	1014 1016	1018	1018	1018 1218	1320
33	330					0611 0811	0612 0811	0612 0812	0812 1013					1220 1222		
47	470			0511	0611	0611 0811	0812 1013		0816 1016		1018 1216	1218	1220	1225 1618	1620 1625	1825 1630
56	560				0512											
68	680			0512	0612			0812								
82	820										1220	1620	1235 1625	1820 1825	1825	1835
100	101	0511	0511	0611	0612 0811	0812 1013	0812 1016	0816	1016 1220		1225 1618	1625	1630 1825	1630 1825	1830	1840
150	151				0612			1016								
220	221		0611	0812	0812 1013	0816 1013	1016 1220	1020	1320 1625							
330	331	0612 0811	0812	0812 1013	0816 1013 1016	1016 1220	1220 1225	1220	1625 1630	1825						
470	471	0812 1013	0812 1013	0816 1013	0820 1016 1020	1020 1225	1325 1625	1620	1830							
680	681	0812 1013			1220	1220 1620										
1000	102	1016 1020	1020	1020 1220	1220 1225	1225 1630	1630									
1200	122				1220											
1500	152				1225											
1800	182				1225											
2200	222	1225	1025 1225	1630	1635	1840										
3300	332	1625	1630	1635	1835											
4700	472	1630	1635													

Released ratings

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RATINGS & PART NUMBER REFERENCE

Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DF Max. (%)	100kHz RMS Current (mA) / 125°C
10 Volt					
REH0511101M010*	0511	100	10	24	80
REH0612331M010*	0612	330	10	24	180
REH0811331M010*	0811	330	10	24	360
REH0812471M010*	0812	470	10	24	360
REH1013471M010*	1013	470	10	24	620
REH0812681M010*	0812	680	10	24	400
REH1013681M010*	1013	680	10	24	620
REH1016102M010*	1016	1000	10	24	660
REH1020102M010*	1020	1000	10	24	960
REH1225222M010*	1225	2200	10	24	1430
REH1625332M010B	1625	3300	10	24	1900
REH1630472M010B	1630	4700	10	24	2300
16 Volt					
REH0511101M016*	0511	100	16	20	90
REH0611221M016*	0611	220	16	20	125
REH0812331M016*	0812	330	16	20	360
REH0812471M016*	0812	470	16	20	360
REH1013471M016*	1013	470	16	20	620
REH1020102M016*	1020	1000	16	20	960
REH1025222M016*	1025	2200	16	20	980
REH1225222M016*	1225	2200	16	20	1430
REH1630332M016B	1630	3300	16	20	2300
REH1635472M016B	1635	4700	16	20	2550
25 Volt					
REH0511470M025*	0511	47	25	18	60
REH0512680M025*	0512	68	25	18	90
REH0611101M025*	0611	100	25	18	145
REH0812221M025*	0812	220	25	18	360
REH0812331M025*	0812	330	25	18	360
REH1013331M025*	1013	330	25	18	620
REH0816471M025*	0816	470	25	18	610
REH1013471M025*	1013	470	25	18	640
REH1020102M025*	1020	1000	25	18	960
REH1220102M025*	1220	1000	25	18	1100
REH1630222M025B	1630	2200	25	18	2300
REH1635332M025B	1635	3300	25	18	2550
35 Volt					
REH0611470M035*	0611	47	35	16	110
REH0512560M035*	0512	56	35	16	70
REH0612680M035*	0612	68	35	16	130
REH0612101M035*	0612	100	35	16	210
REH0811101M035*	0811	100	35	16	360
REH0612151M035	0612	150	35	16	210
REH0812221M035*	0812	220	35	16	375
REH1013221M035*	1013	220	35	16	620
REH0816331M035*	0816	330	35	16	550
REH1013331M035*	1013	330	35	16	620
REH1016331M035*	1016	330	35	16	800
REH0820471M035*	0820	470	35	16	620
REH1016471M035*	1016	470	35	16	705
REH1020471M035*	1020	470	35	16	960
REH1220681M035*	1220	680	35	16	990
REH1220102M035*	1220	1000	35	16	1180
REH1225102M035*	1225	1000	35	16	1430
REH1220122M035*	1220	1200	35	16	1200
REH1225152M035*	1225	1500	35	16	1430
REH1225182M035*	1225	1800	35	16	1700
REH1635222M035B	1635	2200	35	16	2550
REH1835332M035B	1835	3300	35	16	2800
50 Volt					
REH05111R0M050*	0511	1.0	50	14	26
REH05112R2M050*	0511	2.2	50	14	35

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Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DF Max. (%)	100kHz RMS Current (mA) / 125°C
REH08112R2M050*	0811	2.2	50	14	50
REH05113R3M050*	0511	3.3	50	14	40
REH08113R3M050*	0811	3.3	50	14	70
REH05114R7M050*	0511	4.7	50	14	42
REH08114R7M050*	0811	4.7	50	14	100
REH0511100M050*	0511	10	50	14	90
REH0811100M050*	0811	10	50	14	200
REH0512220M050*	0512	22	50	14	110
REH0812220M050*	0811	22	50	14	260
REH0611330M050*	0611	33	50	14	150
REH0811330M050*	0811	33	50	14	300
REH0611470M050*	0611	47	50	14	180
REH0811470M050*	0811	47	50	14	300
REH0812101M050*	0812	100	50	14	340
REH1013101M050*	1013	100	50	14	520
REH0816221M050*	0816	220	50	14	520
REH1013221M050*	1013	220	50	14	520
REH1016331M050*	1016	330	50	14	530
REH1220331M050*	1220	330	50	14	1000
REH1020471M050*	1020	470	50	14	950
REH1225471M050*	1225	470	50	14	1200
REH1220681M050*	1220	680	50	14	1060
REH1620681M050B	1620	680	50	14	1250
REH1225102M050*	1225	1000	50	14	1500
REH1630102M050B	1630	1000	50	14	2180
REH1840222M050B	1840	2200	50	14	2800
63 Volt					
REH0612330M063*	0612	33	63	12	150
REH0811330M063*	0811	33	63	12	250
REH0812470M063*	0812	47	63	12	250
REH1013470M063*	1013	47	63	12	400
REH0812101M063*	0812	100	63	12	340
REH1016101M063*	1016	100	63	12	450
REH1016221M063*	1016	220	63	12	450
REH1220221M063*	1220	220	63	12	820
REH1220331M063*	1220	330	63	12	850
REH1225331M063*	1225	330	63	12	1000
REH1325471M063B	1325	470	63	12	1000
REH1625471M063B	1625	470	63	12	1500
REH1630102M063B	1630	1000	63	12	1850
80 Volt					
REH05114R7M080*	0511	4.7	80	12	26
REH0511100M080*	0511	10	80	12	68
REH0611220M080*	0611	22	80	12	105
REH0612330M080*	0612	33	80	12	105
REH0812330M080*	0812	33	80	12	250
REH0812680M080*	0812	68	80	12	250
REH0816101M080*	0816	100	80	12	400
REH1016151M080*	1016	150	80	12	450
REH1020221M080*	1020	220	80	12	750
REH1220331M080*	1220	330	80	12	850
REH1620471M080B*	1620	470	80	12	1200
100 Volt					
REH05114R7M100*	0511	4.7	100	10	40
REH08114R7M100*	0811	4.7	100	10	100
REH0611100M100*	0611	10	100	10	130
REH0811100M100*	0811	10	100	10	200
REH0612220M100*	0612	22	100	10	150
REH0812220M100*	0812	22	100	10	220
REH0812330M100*	0812	33	100	10	220
REH1013330M100*	1013	33	100	10	260
REH0816470M100*	0816	47	100	10	240
REH1016470M100*	1016	47	100	10	330
REH1016101M100*	1016	100	100	10	350
REH1220101M100*	1220	100	100	10	670

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Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DF Max. (%)	100kHz RMS Current (mA) / 125°C
REH1320221M100B	1320	220	100	10	720
REH1625221M100B	1625	220	100	10	1100
REH1625331M100B	1625	330	100	10	1300
REH1630331M100B	1630	330	100	10	1300
REH1830471M100B	1830	470	100	10	1600
120 Volt					
REH1825331M120B	1825	330	120	12	775

REH0612151M035 has endurance 2000h

* Used to denote packing type: "K" for Ammo Pack or "B" for Bulk Pack.

DF = When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase

All technical data relates to an ambient temperature of +25C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 2 minutes.

Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (mA) / 125°C
160 Volt					
REH0816100M160*	0816	10	160	16	58
REH1011100M160*	1011	10	160	16	60
REH1012220M160*	1012	22	160	16	110
REH1014220M160*	1014	22	160	16	120
REH1018470M160*	1018	47	160	16	155
REH1216470M160*	1216	47	160	16	160
REH1220820M160*	1220	82	160	16	210
REH1225101M160*	1225	100	160	16	285
REH1618101M160B	1618	100	160	16	292
200 Volt					
REH0816100M200*	0816	10	200	16	82
REH1012100M200*	1012	10	200	16	90
REH1014220M200*	1014	22	200	16	115
REH1016220M200*	1016	22	200	16	120
REH1218470M200*	1218	47	200	16	165
REH1620820M200B	1620	82	200	16	240
REH1625101M200B	1625	100	200	16	310
250 Volt					
REH0816100M250*	0816	10	250	16	80
REH1012100M250*	1012	10	250	16	85
REH1018220M250*	1018	22	250	16	125
REH1220470M250*	1220	47	250	16	175
REH1235820M250B	1235	82	250	16	260
REH1625820M250B	1625	82	250	16	275
REH1630101M250B	1630	100	250	16	325
REH1825101M250B	1825	100	250	16	350
350 Volt					
REH1012100M350*	1012	10	350	24	80
REH1014100M350*	1014	10	350	24	85
REH1018220M350*	1018	22	350	24	125
REH1220330M350*	1220	33	350	24	145
REH1222330M350*	1222	33	350	24	160
REH1225470M350*	1225	47	350	24	175
REH1618470M350B	1618	47	350	24	185
REH1820820M350B	1820	82	350	24	260
REH1825820M350B	1825	82	350	24	275
REH1630101M350B	1630	100	350	24	325
REH1825101M350B	1825	100	350	24	350
400 Volt					
REH1014100M400*	1014	10	400	24	80
REH1016100M400*	1016	10	400	24	85
REH1018220M400*	1018	22	400	24	125
REH1218220M400*	1218	22	400	24	130
REH1620470M400B	1620	47	400	24	200
REH1625470M400B	1625	47	400	24	210
REH1825820M400B	1825	82	400	24	325
REH1830101M400B	1830	100	400	24	395
450 Volt					
REH1018100M450*	1018	10	450	24	85

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Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (mA) / 125°C
REH1216100M450*	1216	10	450	24	90
REH1320220M450B	1320	22	450	24	135
REH1825470M450B	1825	47	450	24	215
REH1630470M450B	1630	47	450	24	225
REH1835820M450B	1835	82	450	24	355
REH1840101M450B	1840	100	450	24	415

* Used to denote packing type: "K" for Ammo Pack or "B" for Bulk Pack.

DF = When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

RATED RIPPLE CURRENT MULTIPLIERS (FREQUENCY CORRECTION FACTOR FOR RIPPLE CURRENT)

10 to 120 Vdc						160 to 400 Vdc				
Cap.(μF) \ Freq.(Hz)	50/60	120	1K	10K	100K	Cap.(μF) \ Freq.(Hz)	120	1K	10K	100K
C < 10	0.35	0.42	0.60	0.80	1.00	<100	0.15	0.30	0.45	0.65
10 ≤ C < 47	0.45	0.55	0.75	0.90	1.00	≥100	0.25	0.35	0.50	0.70
47 ≤ C < 470	0.60	0.70	0.85	0.95	1.00					
470 ≤ C < 2200	0.65	0.75	0.90	0.98	1.00					
C ≥ 2200	0.75	0.80	0.95	1.00	1.00					

QUALIFICATION TABLE

Test	REH Series (Temperature Range -40°C to +125°C)								
	Condition	Characteristics							
Low Temperature Characteristics (Max. Impedance Ratio)	At 120Hz	Rated Voltage (V)	10	16	25-100	120	160-250	350-400	450
		Z(-25°C)/Z(+20°C)	3	2	2	3	3	6	6
		Z(-40°C)/Z(+20°C)	6	4	3	6	8	10	15
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after DC voltage plus rated ripple current is applied for a specified period of time at 125°C.	Visual Examination	no visible damage						
		ΔC/C	≤ ±30% of the initial limit						
		DF	≤ 300% of the initial specified limit						
		DCL	≤ the initial specified limit						
		Voltage: 10V-120V				Voltage: 160V-450V			
		Diameter (mm)	Load life (hours)		2000 hours				
		ØD≤6.3	2000						
		ØD=8	3000						
		ØD=10	4000						
ØD≥12.5	5000								
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after leaving them under no load at 105°C for 1000 hours.		Voltage: 10V-120V			Voltage: 160V-450V			
		Visual Examination	no visible damage			no visible damage			
		ΔC/C	≤ ±30% of the initial limit			≤ ±20% of the initial limit			
		DF:	≤ 300% of the initial specified limit			≤ 200% of the initial specified limit			
		DCL:	≤ 500 % of the initial specified limit			≤ 200 % of the initial specified limit			

SOLDERING

1. When soldering with a soldering iron:

- Soldering conditions (temperature and time) should be within the limits prescribed in the catalogs or the product specifications.
- If the terminal spacing of a capacitor does not fit the terminal hole spacing of the PC board, reform the terminals in a manner to minimize a mechanical stress into the body of the capacitor.
- Remove the capacitors from the PC board, after the solder is completely melted, reworking by using a soldering iron minimizes the mechanical stress to the capacitors.
- Do not touch the capacitor body with the hot tip of the soldering iron.

2. Flow Soldering:

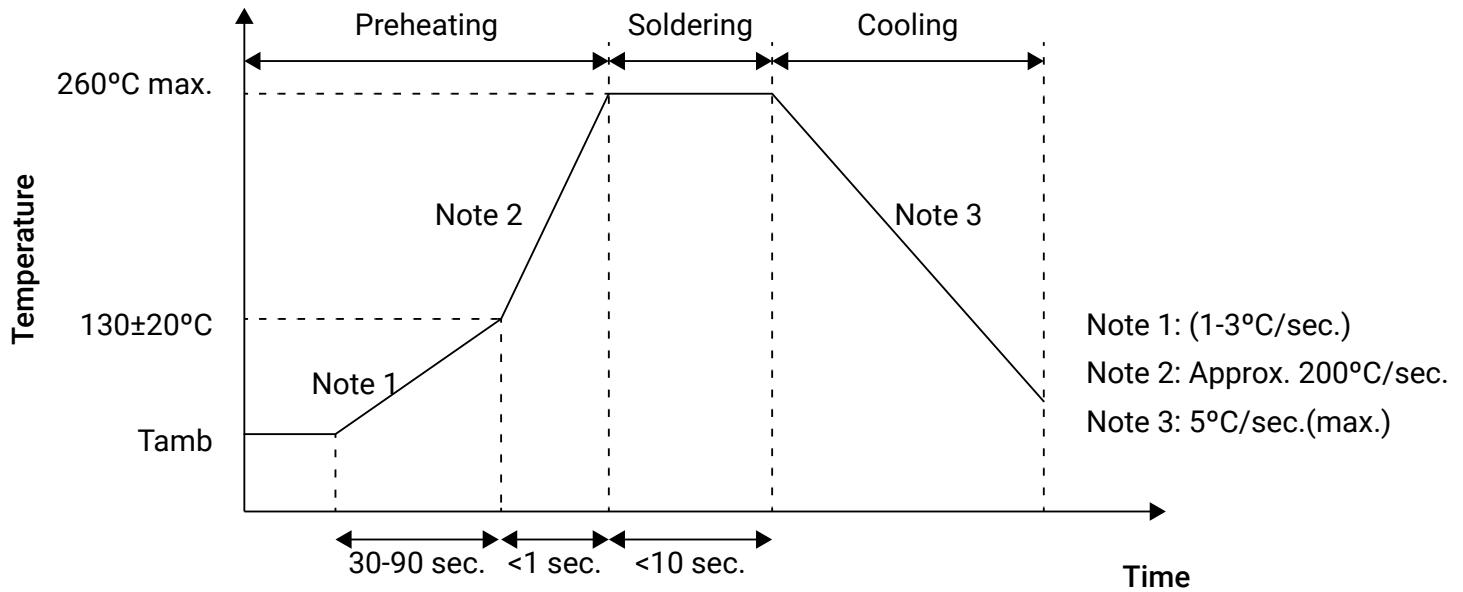
- Do not dip the body of a capacitor into the solder bath, only dip the terminals in. The soldering must be done on the reverse side of PC board.
- Do not apply flux to any part of capacitors other than their terminals.
- Make sure the capacitors do not come into contact with any other components while soldering.
- Soldering conditions (preheat, solder temperature and dipping time) should be within the limits prescribed in the picture below.



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

Radial Leaded Aluminum Electrolytic Capacitors

REH Series



STORAGE

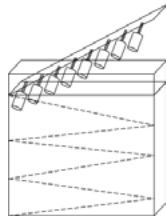
- Store with the temperature range between 5 to 35°C (If between 35 to 85°C, it should be less than three months), and the relative humidity of 75% without direct sunshine and store in the package states if possible.
- It is recommended that you open the bag just before use and use up as early as possible.
- Store the capacitors in places free from water, oil or salt water or in condensation status.
- Never store in any area filled with poisonous gases (including hydrogen sulfide, sulfurous acid, nitrous acid, chlorine and ammonia).
- Store the capacitors in places free from ozone, ultraviolet rays or radiation:

(Radial Lead Type)

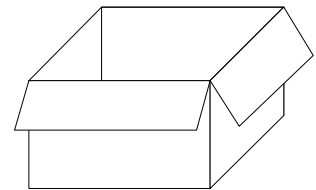
Before unseal: within 1 year after delivery

After opening: within 1 month

AMMO PACKING



BULK PACKING



Radial Leaded Aluminum Electrolytic Capacitors

REH Series

PACKING

Size Code	Bulk Pack					Ammo Pack				
	Bags	Inner Box		Carton		Inner Box		Carton		
		(LxWxH) 290*212*155		(LxWxH) 455*310*350		Quantity	Inner Box Size	Inner Box Quantity	Carton Size	Whole Pieces
	Quantity	Bags Number	Quantity / pcs	Inner Box Number	Quantity / pcs		(LxWxH)		(LxWxH)	
0511	1000	12	12,000	4	48,000	2000	320x230x50	10	485x345x275	20,000
0512	1000	12	12,000	4	48,000	2000	320x230x50	10	485x345x275	20,000
0611	500	10	5000	4	20,000	2000	340x290x48	10	600x354x265	20,000
0612	500	10	5000	4	20,000	2000	340x290x48	10	600x354x265	20,000
0811	500	10	5000	4	20,000	950	320x230x50	10	485x345x275	9500
0812	500	10	5000	4	20,000	950	320x230x50	10	485x345x275	9500
0816	300	10	3000	4	12,000	950	320x230x55	10	485x345x300	9500
0820	300	10	3000	4	12,000	950	320x230x55	10	485x345x300	9500
1011	250	10	2500	4	10,000	600	320x230x50	10	485x345x275	6000
1012	250	10	2500	4	10,000	600	320x230x50	10	485x345x275	6000
1013	250	10	2500	4	10,000	600	320x230x50	10	485x345x275	6000
1014	250	10	2500	4	10,000	600	320x230x50	10	485x345x275	6000
1016	250	10	2500	4	10,000	600	320x230x55	10	485x345x300	6000
1018	200	10	2000	4	8000	600	320x230x55	10	485x345x300	6000
1020	200	10	2000	4	8000	600	320x230x55	10	485x345x300	6000
1025	150	10	1500	4	6000	600	320x230x68	8	485x345x300	4800
1216	100	14	1400	4	5600	500	330x290x55	5	345x305x315	2500
1218	100	12	1200	4	4800	500	330x290x55	5	345x305x315	2500
1220	100	12	1200	4	4800	500	330x290x55	5	345x305x315	2500
1222	100	12	1200	4	4800	500	330x290x55	5	345x305x315	2500
1225	100	10	1000	4	4000	500	330x290x55	5	345x305x315	2500
1235	-	-	440	5	2200	-	-	-	-	-
1320	100	12	1200	4	4800	-	-	-	-	-
1325	100	10	1000	4	4000	-	-	-	-	-
1618	100	8	800	4	3200	-	-	-	-	-
1620	100	5	500	4	2000	-	-	-	-	-
1625	-	-	250	5	1250	-	-	-	-	-
1630	-	-	250	5	1250	-	-	-	-	-
1635	-	-	220	5	1100	-	-	-	-	-
1820	100	5	500	4	2000	-	-	-	-	-
1825	-	-	250	5	1250	-	-	-	-	-
1830	-	-	230	5	1150	-	-	-	-	-
1835	-	-	200	5	1000	-	-	-	-	-
1840	-	-	180	5	900	-	-	-	-	-