

SUBJECT: ECE-AxxGE (NHE) Series Radial Leaded Aluminum Electrolytic Capacitor will be Discontinued Effective per below.

BULLETIN #: ECG.PG44.030700

Date: March 7, 2000

LAST TIME BUY: July 31, 2000

LAST TIME SHIPMENT: September 30, 2000

SUGGESTED REPLACEMENT: ECA-xxHG (NHG series) Radial Leaded Aluminum Lytic Capacitor

The ECA-xxHG "NHG series" radial leaded aluminum electrolytic capacitor is the recommended replacement for the NHE series. Generally the NHG series is a drop in replacement for the NHE series but there maybe some exceptions in can size, lead spacing, footprint and electrical properties depending on the capacitance and voltage values required. Please contact the Resident Engineers for the exact replacement part number and any deviations.

Please notify your customers of the change.

NHE series replacement program to NHG series (last order : July/End/2000)

ECEAxxGExxx



ECAXxHGxxx

1998/9/22

If there are 2 items on NHG-series replacement, First offer = first line item (smaller size) and if customer can not use smaller lead pitch, please offer 2nd line item (higher voltage with same lead space) shows deviation

NHE - series							NHG - series						
Part no.	Volt. V	Cap. uF	Size		Pitch mm	Ripple mA	Part no.	Volt. V	Cap. uF	Size		Pitch mm	Ripple mA
			Dmm	Lmm						Dmm	Lmm		
ECEA0JGE470	6.3	47	5	11	2.0		ECA1CHG470	16	47	5	11	2.0	77
ECEA0JGE101	6.3	100	5	11	2.0	91	ECA0JHG101	6.3	100	5	11	2.0	91
ECEA0JGE221	6.3	220	6.3	11.2	2.5	150	ECA0JHG221	6.3	220	5	11	2.0	140
							ECA1AHG221	10	220	6.3	11.2	2.5	170
ECEA0JGE331	6.3	330	6.3	11.2	2.5	230	ECA0JHG331	6.3	330	6.3	11.2	2.5	190
ECEA0JGE471	6.3	470	8	11.5	3.5	250	ECA0JHG471	6.3	470	6.3	11.2	2.5	230
							ECA1AHG471	10	470	8	12.5	3.5	250
ECEA0JGE102	6.3	1000	10	12.5	5.0	450	ECA0JHG102	6.3	1000	8	11.5	3.5	380
							ECA1AHG102	10	1000	10	12.5	5.0	460
ECEA0JGE222	6.3	2200	13	20	5.0	780	ECA0JHG222	6.3	2200	10	16	5.0	710
ECEA0JGE332	6.3	3300	13	20	5.0	920	ECA0JHG332	6.3	3300	10	20	5.0	840
ECEA0JGE472	6.3	4700	16	25	7.5	1150	ECA0JHG472	6.3	4700	12.5	20	5.0	1090
							ECA1CHG472	16	4700	16	25	7.5	1480
ECEA0JGE682	6.3	6800	16	25	7.5	1440	ECA0JHG682	6.3	6800	12.5	25	5.0	1350
							ECA1AHG682	10	6800	16	25	7.5	1570
ECEA0JGE103	6.3	10000	16	31.5	7.5	1700	ECA0JHG103	6.3	10000	16	25	7.5	1650
ECEA0JGE153	6.3	15000	18	35.5	7.5	1910	ECA0JHG153	6.3	15000	16	31.5	7.5	2010
ECEA1AGE220	10	22	5	11	2.0		ECA1HHG220	50	22	5	11	2.0	65
ECEA1AGE330	10	33	5	11	2.0		ECA1VHG330	35	33	5	11	2.0	75
ECEA1AGE470	10	47	5	11	2.0		ECA1CHG470	16	47	5	11	2.0	77
ECEA1AGE101	10	100	5	11	2.0	110	ECA1AHG101	10	100	5	11	2.0	110
ECEA1AGE221	10	220	6.3	11.2	2.5	160	ECA1AHG221	10	220	6.3	11.2	2.5	170
ECEA1AGE331	10	330	8	11.5	3.5	230	ECA1AHG331	10	330	6.3	11.2	2.5	200
							ECA1CHG331	16	330	8	11.5	3.5	260
ECEA1AGE471	10	470	8	11.5	3.5	270	ECA1AHG471	10	470	8	11.5	3.5	250
ECEA1AGE102	10	1000	10	16	5.0	500	ECA1AHG102	10	1000	10	12.5	5.0	460
ECEA1AGE222	10	2200	13	20	5.0	850	ECA1AHG222	10	2200	10	20	5.0	760
ECEA1AGE332	10	3300	13	25	5.0	1080	ECA1AHG332	10	3300	12.5	20	5.0	1000
ECEA1AGE472	10	4700	16	25	7.5	1270	ECA1AHG472	10	4700	12.5	25	5.0	1260
							ECA1CHG472	16	4700	16	25	7.5	1480
ECEA1AGE682	10	6800	16	31.5	7.5	1530	ECA1AHG682	10	6800	16	25	7.5	1570
ECEA1AGE103	10	10000	18	35.5	7.5	1870	ECA1AHG103	10	10000	16	31.5	7.5	1890
ECEA1CGE100	16	10	5	11	2.0		ECA1HHG100	50	10	5	11	2.0	39
ECEA1CGE220	16	22	5	11	2.0		ECA1HHG220	50	22	5	11	2.0	65
ECEA1CGE330	16	33	5	11	2.0		ECA1VHG330	35	33	5	11	2.0	75
ECEA1CGE470	16	47	5	11	2.0	77	ECA1CHG470	16	47	5	11	2.0	77
ECEA1CGE101	16	100	6.3	11.2	2.5	120	ECA1CHG101	16	100	5	11	2.0	110
							ECA1EHG101	25	100	6.3	11.2	2.5	130
ECEA1CGE221	16	220	8	11.5	3.5	210	ECA1CHG221	16	220	6.3	11.2	2.5	180
							ECA1EHG221	25	220	8	11.5	3.5	230
ECEA1CGE331	16	330	8	11.5	3.5	260	ECA1CHG331	16	330	8	11.5	3.5	260
ECEA1CGE471	16	470	10	12.5	5.0	330	ECA1CHG471	16	470	8	11.5	3.5	310
							ECA1EHG471	25	470	10	12.5	5.0	380
ECEA1CGE102	16	1000	10	20	5.0	600	ECA1CHG102	16	1000	10	16	5.0	560
ECEA1CGE222	16	2200	13	25	5.0	1010	ECA1CHG222	16	2200	12.5	20	5.0	920
ECEA1CGE332	16	3300	16	25	7.5	1210	ECA1CHG332	16	3300	12.5	25	5.0	1170
							ECA1EHG332	25	3300	16	25	7.5	1400
ECEA1CGE472	16	4700	16	31.5	7.5	1490	ECA1CHG472	16	4700	16	25	7.5	1480
ECEA1CGE682	16	6800	18	35.5	7.5	1740	ECA1CHG682	16	6800	16	31.5	7.5	1780
ECEA1EGE100	25	10	5	11	2.0		ECA1HHG100	50	10	5	11	2.0	39
ECEA1EGE220	25	22	5	11	2.0		ECA1HHG220	50	22	5	11	2.0	65
ECEA1EGE330	25	33	5	11	2.0		ECA1VHG330	35	33	5	11	2.0	75
ECEA1EGE470	25	47	5	11	2.0	91	ECA1EHG470	25	47	5	11	2.0	91
ECEA1EGE101	25	100	6.3	11.2	2.5	130	ECA1EHG101	25	100	6.3	11.2	2.5	130
ECEA1EGE221	25	220	8	11.5	3.5	220	ECA1EHG221	25	220	8	11.5	3.5	230
ECEA1EGE331	25	330	10	12.5	5.0	300	ECA1EHG331	25	330	8	11.5	3.5	310
							ECA1VHG331	35	330	10	12.5	5.0	350
ECEA1EGE471	25	470	10	16	5.0	410	ECA1EHG471	25	470	10	12.5	5.0	380
ECEA1EGE102	25	1000	13	20	5.0	720	ECA1EHG102	25	1000	10	20	5.0	680
ECEA1EGE222	25	2200	16	25	7.5	1110	ECA1EHG222	25	2200	12.5	25	5.0	1090
							ECA1VHG222	35	2200	16	25	7.5	1260
ECEA1EGE332	25	3300	16	31.5	7.5	1380	ECA1EHG332	25	3300	16	25	7.5	1400
ECEA1EGE472	25	4700	18	35.5	7.5	1690	ECA1EHG472	25	4700	16	31.5	7.5	1750

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NHE - series							NHG - series						
Part no.	Volt. V	Cap. uF	Size		Pitch mm	Ripple mA	Part no.	Volt. V	Cap. uF	Size		Pitch mm	Ripple mA
			Dmm	Lmm						Dmm	Lmm		
ECEA1VGE4R7	35	4.7	5	11	2.0		ECA1HHG4R7	50	4.7	5	11	2.0	26
ECEA1VGE100	35	10	5	11	2.0		ECA1HHG100	50	10	5	11	2.0	39
ECEA1VGE220	35	22	5	11	2.0		ECA1HHG220	50	22	5	11	2.0	65
ECEA1VGE330	35	33	5	11	2.0	84	ECA1VHG330	35	33	5	11	2.0	75
ECEA1VGE470	35	47	6.3	11.2	2.5	98	ECA1VHG470	35	47	5	11	2.0	90
							ECA1HHG470	50	47	6.3	11.2	2.5	110
ECEA1VGE101	35	100	8	11.5	3.5	160	ECA1VHG101	35	100	6.3	11.2	2.5	150
							ECA1HHG101	50	100	8	11.5	3.5	180
ECEA1VGE221	35	220	10	12.5	5.0	260	ECA1VHG221	35	220	8	11.5	3.5	270
							ECA1HHG221	50	220	10	12.5	5.0	330
ECEA1VGE331	35	330	10	16	5.0	360	ECA1VHG331	35	330	10	12.5	5.0	350
ECEA1VGE471	35	470	10	20	5.0	480	ECA1VHG471	35	470	10	16	5.0	460
ECEA1VGE102	35	1000	13	25	5.0	840	ECA1VHG102	35	1000	12.5	20	5.0	810
ECEA1VGE222	35	2200	16	31.5	7.5	1270	ECA1VHG222	35	2200	16	25	7.5	1260
ECEA1VGE332	35	3300	18	35.5	7.5	1540	ECA1VHG332	35	3300	16	31.5	7.5	1610
ECEA1HGE0R1	50	0.1	5	11	2.0	1.1	ECA1HHG0R1	50	0.1	5	11	2.0	1.1
ECEA1HGER22	50	0.22	5	11	2.0	2.3	ECA1HHGR22	50	0.22	5	11	2.0	2.3
ECEA1HGER33	50	0.33	5	11	2.0	3.5	ECA1HHGR33	50	0.33	5	11	2.0	3.5
ECEA1HGER47	50	0.47	5	11	2.0	5	ECA1HHGR47	50	0.47	5	11	2.0	5
ECEA1HGE010	50	1	5	11	2.0	10	ECA1HHG010	50	1	5	11	2.0	10
ECEA1HGE2R2	50	2.2	5	11	2.0	18	ECA1HHG2R2	50	2.2	5	11	2.0	18
ECEA1HGE3R3	50	3.3	5	11	2.0	22	ECA1HHG3R3	50	3.3	5	11	2.0	22
ECEA1HGE4R7	50	4.7	5	11	2.0	26	ECA1HHG4R7	50	4.7	5	11	2.0	26
ECEA1HGE100	50	10	5	11	2.0	39	ECA1HHG100	50	10	5	11	2.0	39
ECEA1HGE220	50	22	5	11	2.0	70	ECA1HHG220	50	22	5	11	2.0	65
ECEA1HGE330	50	33	6.3	11.2	2.5	91	ECA1HHG330	50	33	5	11	2.0	90
							ECA1JHG330	63	33	6.3	11.2	2.5	100
ECEA1HGE470	50	47	6.3	11.2	2.5	100	ECA1HHG470	50	47	6.3	11.2	2.5	110
ECEA1HGE101	50	100	8	11.5	3.5	170	ECA1HHG101	50	100	8	11.5	3.5	180
ECEA1HGE221	50	220	10	16	5.0	330	ECA1HHG221	50	220	10	12.5	5.0	330
ECEA1HGE331	50	330	10	20	5.0	440	ECA1HHG331	50	330	10	16	5.0	410
ECEA1HGE471	50	470	13	20	5.0	580	ECA1HHG471	50	470	10	20	5.0	530
ECEA1HGE102	50	1000	16	25	7.5	940	ECA1HHG102	50	1000	12.5	25	5.0	950
							ECA1JHG102	63	1000	16	25	7.5	930
ECEA1HGE222	50	2200	18	35.5	7.5	1490	ECA1HHG222	50	2200	16	31.5	7.5	1470
ECEA1JGE4R7	63	4.7	5	11	2.0		ECA2AHG4R7	100	4.7	5	11	2.0	38
ECEA1JGE100	63	10	5	11	2.0	51	ECA1JHG100	63	10	5	11	2.0	46
ECEA1JGE220	63	22	6.3	11.2	2.5	84	ECA1JHG220	63	22	5	11	2.0	71
							ECA2AHG220	100	22	6.3	11.2	2.5	93
ECEA1JGE330	63	33	6.3	11.2	2.5	98	ECA1JHG330	63	33	6.3	11.2	2.5	100
ECEA1JGE470	63	47	8	11.5	3.5	130	ECA1JHG470	63	47	6.3	11.2	2.5	120
ECEA1JGE101	63	100	10	12.5	5.0	210	ECA1JHG101	63	100	10	12.5	5.0	215
ECEA1JGE221	63	220	10	20	5.0	400	ECA1JHG221	63	220	10	16	5.0	335
ECEA1JGE331	63	330	13	20	5.0	550	ECA1JHG331	63	330	10	20	5.0	510
ECEA1JGE471	63	470	13	25	5.0	700	ECA1JHG471	63	470	12.5	20	5.0	640
ECEA1JGE102	63	1000	16	31.5	7.5	1130	ECA1JHG102	63	1000	16	25	7.5	930
ECEA2AGER47	100	0.47	5	11	2.0	9	ECA2AHGR47	100	0.47	5	11	2.0	9
ECEA2AGE010	100	1	5	11	2.0	14	ECA2AHG010	100	1	5	11	2.0	14
ECEA2AGE2R2	100	2.2	5	11	2.0	21	ECA2AHG2R2	100	2.2	5	11	2.0	21
ECEA2AGE3R3	100	3.3	5	11	2.0	31	ECA2AHG3R3	100	3.3	5	11	2.0	31
ECEA2AGE4R7	100	4.7	5	11	2.0	38	ECA2AHG4R7	100	4.7	5	11	2.0	38
ECEA2AGE100	100	10	6.3	11.2	2.5	61	ECA2AHG100	100	10	6.3	11.2	2.5	54
ECEA2AGE220	100	22	8	11.5	3.5	98	ECA2AHG220	100	22	6.3	11.2	2.5	93
ECEA2AGE330	100	33	10	12.5	5.0	130	ECA2AHG330	100	33	8	11.5	3.5	130
ECEA2AGE470	100	47	10	16	5.0	160	ECA2AHG470	100	47	10	12.5	5.0	165
ECEA2AGE101	100	100	13	20	5.0	280	ECA2AHG101	100	100	10	20	5.0	265
ECEA2AGE221	100	220	16	25	7.5	510	ECA2AHG221	100	220	12.5	25	5.0	440
ECEA2AGE331	100	330	16	25	7.5	650	ECA2AHG331	100	330	16	25	7.5	540
ECEA2AGE471	100	470	16	31.5	7.5	880	ECA2AHG471	100	470	16	25	7.5	715

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NHE - series							NHG - series						
Part no.	Volt. V	Cap. uF	Size		Pitch mm	Ripple mA	Part no.	Volt. V	Cap. uF	Size		Pitch mm	Ripple mA
			Dmm	Lmm						Dmm	Lmm		
ECEA2CGE010	160	1	6.3	11.2	2.5	17	ECA2CHG010	160	1	6.3	11.2	2.5	17
ECEA2CGE2R2	160	2.2	6.3	11.2	2.5	25	ECA2CHG2R2	160	2.2	6.3	11.2	2.5	25
ECEA2CGE3R3	160	3.3	8	11.5	3.5	36	ECA2CHG3R3	160	3.3	6.3	11.2	2.5	36
							ECA2EHG3R3	250	3.3	8	11.5	3.5	42
ECEA2CGE4R7	160	4.7	8	11.5	3.5	43	ECA2CHG4R7	160	4.7	6.3	11.2	2.5	43
							ECA2DHG4R7	200	4.7	8	11.5	3.5	50
ECEA2CGE100	160	10	10	12.5	5.0	70	ECA2CHG100	160	10	10	12.5	5.0	70
ECEA2CGE220	160	22	10	20	5.0	130	ECA2CHG220	160	22	10	20	5.0	130
ECEA2CGE330	160	33	13	20	5.0	180	ECA2CHG330	160	33	10	20	5.0	180
ECEA2CGE470	160	47	13	25	5.0	220	ECA2CHG470	160	47	12.5	20	5.0	220
ECEA2CGE101	160	100	16	25	7.5	330	ECA2CHG101	160	100	16	25	7.5	335
ECEA2CGE221	160	220	18	31.5	7.5	500	ECA2CHG221	160	220	16	31.5	7.5	540
ECEA2DGE010	200	1	6.3	11.2	2.5	17	ECA2DHG010	200	1	6.3	11.2	2.5	17
ECEA2DGE2R2	200	2.2	6.3	11.2	2.5	25	ECA2DHG2R2	200	2.2	6.3	11.2	2.5	25
ECEA2DGE3R3	200	3.3	8	11.5	3.5	36	ECA2DHG3R3	200	3.3	6.3	11.2	2.5	36
							ECA2EHG3R3	250	3.3	8	11.5	3.5	42
ECEA2DGE4R7	200	4.7	10	12.5	5.0	50	ECA2DHG4R7	200	4.7	8	11.5	3.5	50
ECEA2DGE100	200	10	10	16	5.0	80	ECA2DHG100	200	10	10	16	5.0	80
ECEA2DGE220	200	22	10	20	5.0	140	ECA2DHG220	200	22	10	20	5.0	140
ECEA2DGE330	200	33	13	25	5.0	190	ECA2DHG330	200	33	12.5	20	5.0	190
ECEA2DGE470	200	47	13	25	5.0	220	ECA2DHG470	200	47	12.5	20	5.0	220
ECEA2DGE101	200	100	16	31.5	7.5	335	ECA2DHG101	200	100	16	25	7.5	335
ECEA2EGE010	250	1	6.3	11.2	2.5	17	ECA2EHG010	250	1	6.3	11.2	2.5	17
ECEA2EGE2R2	250	2.2	8	11.5	3.5	29	ECA2EHG2R2	250	2.2	6.3	11.2	2.5	29
							ECA2VHG2R2	350	2.2	8	11.5	3.5	31
ECEA2EGE3R3	250	3.3	10	12.5	5.0	42	ECA2EHG3R3	250	3.3	8	11.5	3.5	42
							ECA2VHG3R3	350	3.3	10	12.5	5.0	38
ECEA2EGE4R7	250	4.7	10	12.5	5.0	50	ECA2EHG4R7	250	4.7	8	11.5	3.5	50
ECEA2EGE100	250	10	10	20	5.0	88	ECA2EHG100	250	10	10	16	5.0	88
ECEA2EGE220	250	22	13	25	5.0	155	ECA2EHG220	250	22	12.5	20	5.0	155
ECEA2EGE330	250	33	13	25	5.0	190	ECA2EHG330	250	33	12.5	20	5.0	190
ECEA2EGE470	250	47	16	25	7.5	230	ECA2EHG470	250	47	12.5	25	5.0	230
							ECA2VHG470	350	47	16	25	7.5	230
ECEA2EGE101	250	100	18	31.5	7.5	340	ECA2EHG101	250	100	16	31.5	7.5	365
ECEA2VGE010	350	1	10	12.5	5.0	18	ECA2VHG010	350	1	6.3	11.2	2.5	18
ECEA2VGE2R2	350	2.2	10	16	5.0	31	ECA2VHG2R2	350	2.2	8	11.5	3.5	31
							ECA2WHG2R2	450	2.2	10	12.5	5.0	29
ECEA2VGE3R3	350	3.3	10	16	5.0	38	ECA2VHG3R3	350	3.3	10	12.5	5.0	38
ECEA2VGE4R7	350	4.7	10	20	5.0	49	ECA2VHG4R7	350	4.7	10	16	5.0	50
ECEA2VGE100	350	10	13	20	5.0	82	ECA2VHG100	350	10	10	20	5.0	82
ECEA2VGE220	350	22	16	25	7.5	130	ECA2VHG220	350	22	12.5	20	5.0	130
							ECA2WHG220	450	22	16	25	7.5	115
ECEA2VGE330	350	33	16	25	7.5	175	ECA2VHG330	350	33	16	25	7.5	195
ECEA2VGE470	350	47	16	31.5	7.5	230	ECA2VHG470	350	47	16	25	7.5	230
ECEA2GGE010	400	1	10	12.5	5.0	18	ECA2GHG010	400	1	6.3	11.2	2.5	18
ECEA2GGE2R2	400	2.2	10	16	5.0	30	ECA2GHG2R2	400	2.2	8	11.5	3.5	30
							ECA2WHG2R2	450	2.2	10	12.5	5.0	29
ECEA2GGE3R3	400	3.3	10	20	5.0	40	ECA2GHG3R3	400	3.3	10	12.5	5.0	40
ECEA2GGE4R7	400	4.7	10	20	5.0	45	ECA2GHG4R7	400	4.7	10	16	5.0	50
ECEA2GGE100	400	10	13	25	5.0	79	ECA2GHG100	400	10	10	20	5.0	80
ECEA2GGE220	400	22	16	25	7.5	145	ECA2GHG220	400	22	12.5	25	5.0	145
							ECA2WHG220	450	22	16	25	7.5	115
ECEA2GGE330	400	33	16	31.5	7.5	185	ECA2GHG330	400	33	16	25	7.5	195
ECEA2GGE470	400	47	18	31.5	7.5	230	ECA2GHG470	400	47	16	31.5	7.5	250
ECEA2WGE010	450	1	10	16	5.0	18	ECA2WHG010	450	1	8	11.5	3.5	18
ECEA2WGE2R2	450	2.2	10	20	5.0	29	ECA2WHG2R2	450	2.2	10	12.5	5.0	29
ECEA2WGE3R3	450	3.3	13	20	5.0	41	ECA2WHG3R3	450	3.3	10	16	5.0	41
ECEA2WGE4R7	450	4.7	13	20	5.0	49	ECA2WHG4R7	450	4.7	10	20	5.0	49
ECEA2WGE100	450	10	16	25	7.5	75	ECA2WHG100	450	10	12.5	20	5.0	75
ECEA2WGE220	450	22	16	31.5	7.5	115	ECA2WHG220	450	22	16	25	7.5	115
ECEA2WGE330	450	33	18	31.5	7.5	145	ECA2WHG330	450	33	16	31.5	7.5	155