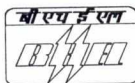


Bill of Material (BOM) for ALCS Controller Card

S.NO	VALUE	TOL.	PACKAGE	LEGEND	MAKE	Quantity
1	4.7K	5%		1206 R1	WALSIN, YAGEO, VISHAY, AVX	7
2	4.7K	5%		1206 R32		
3	4.7K	5%		1206 R45		
4	4.7K	5%		1206 R38		
5	4.7K	5%		1206 RX7		
6	4.7K	5%		1206 RX		
7	4.7K	5%		1206 RX0		
8	1K	5 %		1206 R2		4
9	1K	5 %		1206 R43		
10	1K	5 %		1206 R44		
11	1K	5 %		1206 R40		4
12	470R	5%		1206 R3		
13	470R	5%		1206 R16		
14	470R	5%		1206 R17		
15	470R	5%		1206 R26		2
16	6.8K	5%		1206 R4		
17	6.8K	5%		1206 R6		2
18	68K	5%		1206 R10		
19	68K	5%		1206 R12		4
20	1.5K	5%		1206 R8		
21	1.5K	5%		1206 R9		
22	1.5K	5%		1206 R14		
23	1.5K	5%		1206 R15		1
24	12K	5%		1206 R11		
25	1.2K	5%		1206 R5		-
26				1206 R13**		
27				805 R7**		9
28	10K	5%		1206 R18		
29	10K	5%		1206 R19		
30	10K	5%		1206 R20		
31	10K	5%		1206 R21		
32	10K	5%		1206 R22		
33	10K	5%		1206 R23		
34	10K	5%		1206 R24		
35	10K	5%		1206 R25		
36	10K	5%		1206 R48		2
37	2.4K	1%		1206 R27		
38	2.4K	1%		1206 R28		3
39	2.2K	5%		1206 R29		
40	2.2K	5%		1206 R30		
41	2.2K	5%		1206 R31		

NOTE: ** Marked components need not be required.

Rev Status: Rev 01. Col. Alignment done.



BOM-1 OF ALCS CONTROLLER CARD

DRG NO: 4-00-114-32051	PAGE 01 OF 01	REV. DATE : 03-06-2017	REV : 01
Prepd AB		BHARAT HEAVY ELECTRICAL LTD, BOILER AUXILIARIES PLANT, RANIPET-632 406.	
Rev'd DSP			
App'd AMM			
DATE 20/11/2012			

Bill of Material (BOM) for ALCS Controller Card

S.NO	VALUE	TOL	PACKAGE	LEGEND	MAKE	Quantity
42	2.2K	5%	1206	R37	WALSIN, YAGEO, VISHAY, AVX	2
43	2.2K	5%	1206	R39		1
44	47K	5%	1206	R50		4
45	33E	5%	1206	R33		
46	33E	5%	1206	R34		
47	33E	5%	1206	R35		1
48	33E	5%	1206	R36		
49	220R	5%	1206	R49		5
50	390R	5%	1206	RX2		
51	390R	5%	1206	RX3		
52	390R	5%	1206	RX6		
53	390R	5%	1206	R41		
54	390R	5%	1206	R42		5
55	560K	5%	1206	R46		
56	560K	5%	1206	R47		
57	560K	5%	1206	RX1		
58	560K	5%	1206	RX4		
59	560K	5%	1206	RX5		5
60	LED YELLOW		1206	LD1		
61	LED YELLOW		1206	LD4	Everlight	
62	LED YELLOW		1206	LD9	Everlight	
63	LED YELLOW		1206	LD15	Everlight	
64	LED YELLOW		1206	LD17	Everlight	5
65	LED RED		1206	LD17A	Everlight	
66	LED RED		1206	LD15A	Everlight	
67	LED RED		1206	LD10	Everlight	
68	LED RED		1206	LD6	Everlight	
69	LED RED		1206	LD2	Everlight	4
70	LED GREEN		1206	LD7	Everlight	
71	LED GREEN		1206	LD5	Everlight	
72	LED GREEN		1206	LD13	Everlight	1
73	LED GREEN		1206	LD14	Everlight	
74	10 PIN BERG ST. 2X5		15MM GOLD	CON4	TOYO, PROTECTRON, XINYA	5
75	10 PIN BERG ST. 2X5		15MM GOLD	CON9		
76	10 PIN BERG ST. 2X5		15MM GOLD	CON7		
77	10 PIN BERG ST. 2X5		15MM GOLD	CON12		
78	10 PIN BERG ST. 2X5		15MM GOLD	CON13		
79	14 PIN BERG ST. 2X7		15MM GOLD	CON15		1
80	6 PIN BERG ST. 1X6		10MM GOLD	CON2		1

Rev Status: Rev 01. Col. Alignment done.



BOM-2 OF ALCS CONTROLLER CARD

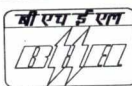
DRG NO: 4-00-114-32052	PAGE 01 OF 01	REV. DATE : 03-06-2017	REV : 01
Pred	AB	BHARAT HEAVY ELECTRICAL LTD, BOILER AUXILIARIES PLANT, RANIPET-632 406.	
Revd	DSP		
Appd	AMM		
DATE	20/11/2012		

Bill of Material (BOM) for ALCS Controller Card

S.NO	VALUE	TOL	PACKAGE	LEGEND	MAKE	Quantity
81	6 PIN BERG ST. 2X3		10MM GOLD	J1	TOYO, PROTECTRON, XINYA	1
82				J4**		-
83	5 PIN BERG		15MM GOLD	CON1		1
84	5 PIN BERG RT angle		10MM GOLD	J8		1
85	0.01UF /50V, Multilyer		1206	C1	WALSIN, YAGEO, VISHAY, AVX	14
86	0.01UF /50V, Multilyer		1206	C2		
87	0.01UF /50V, Multilyer		1206	C15		
88	0.01UF /50V, Multilyer		1206	C21		
89	0.01UF /50V, Multilyer		1206	DC1		
90	0.01UF /50V, Multilyer		1206	DC2		
91	0.01UF /50V, Multilyer		1206	DC3		
92	0.01UF /50V, Multilyer		1206	DC4		
93	0.01UF /50V, Multilyer		1206	DC5		
94	0.01UF /50V, Multilyer		1206	DC6		
95	0.01UF /50V, Multilyer		1206	DC7		
96	0.01UF /50V, Multilyer		1206	DC8		
97	0.01UF /50V, Multilyer		1206	DC9		
98	0.01UF /50V, Multilyer		1210	C22		
99	0.1UF /50V, Multilyer		1206	C6	5	
100	0.1UF /50V, Multilyer		1206	C8		
101	0.1UF /50V, Multilyer		1206	C14		
102	0.1UF /50V, Multilyer		1206	C18		
103	0.1UF /50V, Multilyer		1206	C16	G-Luxon [GV107M050 S0ANG U30]/ Rubycon/Jack on/ Panasonic	6
104	10uF/35V, Alu Elec Cap		5.3x 5.3 mm SMD	C5		
105	10uF/35V, Alu Elec Cap			C7		
106	10uF/35V, Alu Elec Cap			C13		
107	10uF/35V, Alu Elec Cap			C17		
108	10uF/35V, Alu Elec Cap			C19		
109	10uF/35V, Alu Elec Cap			C25		
110			805	C9**	-	
111			1206	C10**	-	
112	0.047UF/50V, Multilyer		1206	C3	WALSIN, YAGEO, VISHAY, AVX	1
113	22pF/50V, Multilyer		1206	C11		
114	22pF/50V, Multilyer		1206	C12	JACKCON, SAMWHA	1
115	2200UF/25V, Electrlyt		TH	C20		
116	2200UF/63V, Electrlyt		TH	C4	Philips,CDIL, Vishay, Fairchild	1
117	Diode 1N4148		SOD-80	D2		
118	1N4007		DO-214	D1	Vishay, Fairchild	2
119	1N4007		DO-214	D5		

NOTE: ** Marked components need not be required.


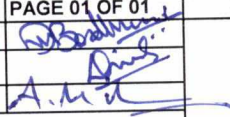
Rev STATUS:
Rev 01: SI No. 104 to 109 changed as Electrolytic Capacitor; SI no. 82, 110, 111 Qty Changed to 0.(zero).



BOM-3 OF ALCS CONTROLLER CARD

DRG NO: 4-00-114-32053	PAGE 01 OF 01	REV. DATE :03-06-2017	REV : 01
Prepd AB		BHARAT HEAVY ELECTRICAL LTD, BOILER AUXILIARIES PLANT, RANIPET-632 406.	
Revd DSP			
Appd AMM			
DATE 20/11/2012			

Bill of Material (BOM) for Areca ii Controller Card

S.NO	VALUE	TOL	PACKAGE	LEGEND	MAKE	Quantity
120	Zener diode BZX70-C36		SOD-80	D3	Philips,CDIL, Vishay, Fairchild	1
121				CON14**	Phoenix, DECA	-
122	2PIN Combcon ST Male & Female		TH	CON11		1
123				CON5**		-
124				CON10**		-
125				CON3**		-
126				CON6**		-
127	2 PIN BERG		15MM GOLD	TP1	Toyo, PROTECTRON, XINYA	2
128	2 PIN BERG		15MM GOLD	TP2		
129	TEL3-2411 DC-DC or MIW 1131		TH	U17	Traco Power or MINMAX	1
130	TEL3-2422 DC-DC or MIW 1134		TH	U1	Traco Power or MINMAX	1
131	TMA2405S or MAU122		TH	U13	Traco Power or MINMAX	1
132	MAX 487		S08	U3, U4	Maxim	2
133	P6SMB6.8C		SOD	D6,D7,D8,D9	Vishay	4
134	SN75188N		SOIC	U6	Texas, ST	1
135	74HCT00		SOIC	U8	Texas,Philips	1
136	DS1307N		SOIC	U18	Dallas,Maxim	1
137	DSPIC30F6012A-30I		TQFP-64	U5	Microchip	1
138	PCN-112D 3MHz		TH	RY1	Tyco Electronics	1
139	CNY17-3		S08	U7	Fairchild, VISHAY	5
140	CNY17-3		S08	U9		
141	CNY17-3		S08	U14		
142	CNY17-3		S08	U15		
143	CNY17-3		S08	U16		
NOTE: ** Marked components need not be required.						
Rev Status : Rev 01. SI no. 121, 123 to 126 Qty Changed to 0(zero).						
 BOM-4 OF Aics CONTROLLER CARD						
DRG NO: 4-00-114-32054		PAGE 01 OF 01		REV. DATE : 03-06-2017		REV : 01
Prepd	AB			BHARAT HEAVY ELECTRICAL LTD, BOILER AUXILIARIES PLANT, RANIPET-632 406.		
Revd	DSP					
Appd	AMM					
DATE	20/11/2012					

Bill of Material (BOM) for ALCS Controller Card

S.NO	VALUE	TOL	PACKAGE	LEGEND	MAKE	Quantity
144	CR2032		BartteryHolder	BY1	COMMON	1
145	CR2032		coin cell	(BY1)	Maxell	1
146	14.318MHZ		TH-HALF CAN	Y1	KDS, KEL,	1
147	32.768KHZ		TH - CAN TYPE	Y2	SJK	1
148	GS-SH-224T 24V DC		TH	K1	Goodsky	2
149	GS-SH-224T 24V DC		TH	K2	Goodsky	
150	PBF-3 FUSE HOLDER		TH	F1	Elcom	1
151	BC337-25		TO-92	BD875 legend	Philips, ON SEMI	1
152	100V/2A (2W06)		TH	BR1	HY, MIC	1
153	850uh +/- 10%		15mm E ferrite core-TH	EMI filter	Industrial make	1
154	1A		TH	FUSE	Protectron	1
155	LCD2S-204FHA (Modtronix) or WINSTAR WH2004A- AFH-ET# with piggy back PCB 001(Ref. annexure 03)		REFER RESPECTIVE SPECIFICATION	LCD-1	Modtronix or WINSTAR WH2004A-AFH- ET# with piggy back PCB 001(Ref. annexure 03 of technical Specification)	1

Rev Status :
Rev 01:Page formatting is done.



BOM-5 OF ALCS CONTROLLER CARD

DRG NO: 4-00-114-32055	PAGE 01 OF 01	REV. DATE : 03-06-2017	REV : 01
Prepd AB		BHARAT HEAVY ELECTRICAL LTD, BOILER AUXILIARIES PLANT, RANIPET-632 406.	
Revd DSP			
Appd AMM			
DATE 20/11/2012			