

# Compal Confidential

## Churchill 13.3" M/B Schematics Document Intel Arrandale SFF Processor with DDRIII + Ixex Peak-M

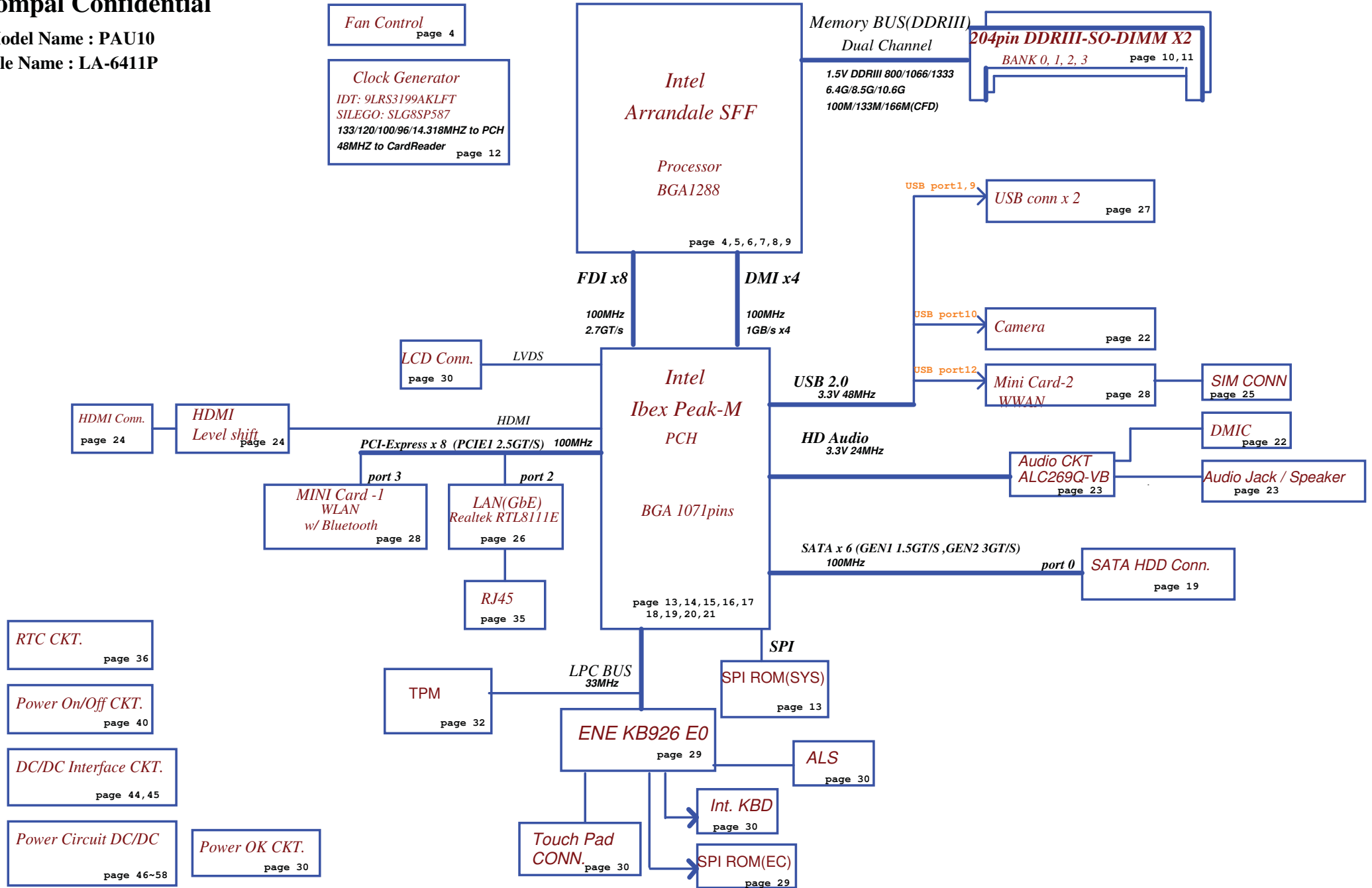
2010-03-31

REV: 0.1

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title	Cover Page
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				LA-6411P	0.1
				Date: Wednesday, March 31, 2010	Sheet 1 of 43

# Compal Confidential

Model Name : PAU10  
File Name : LA-6411P

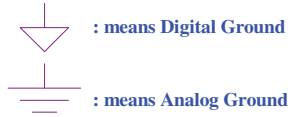


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title	Block Diagrams
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER.				Document Number	LA-6411P
MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Date	Wednesday, March 31, 2010
				Sheet	2 of 43
				Rev	0.1

**Voltage Rails** ( O MEANS ON X MEANS OFF )

power plane State	+RTCVCC	B+	+5VALW +3VALW	+1.5V	+5VS +3VS +1.5VS +VGF_X_CORE +VCCP +CPU_CORE +1.05VS +1.8VS +0.75VS +1.5V_CPU
S0	O	O	O	O	O
S3 / DC	O	O	O	O	X
S3 / AC	O	O	O	O	X
S5 S4/AC	O	O	O	X	X
S5 S4/ Battery only	O	O	X	X	X
S5 S4/AC & Battery don't exist	O	X	X	X	X

**Symbol Note :**



@ : means just reserve , no build  
CONN@ : means ME part.

**Install below 45 level BOM structure for ver. 0.1**

45@ : means just put it in the BOM of 45 level.

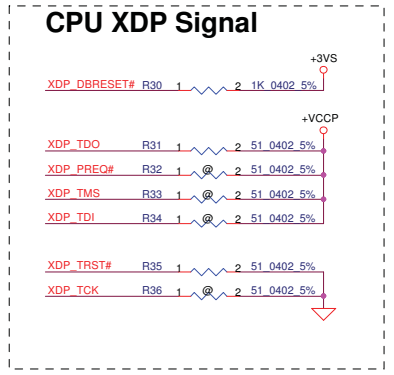
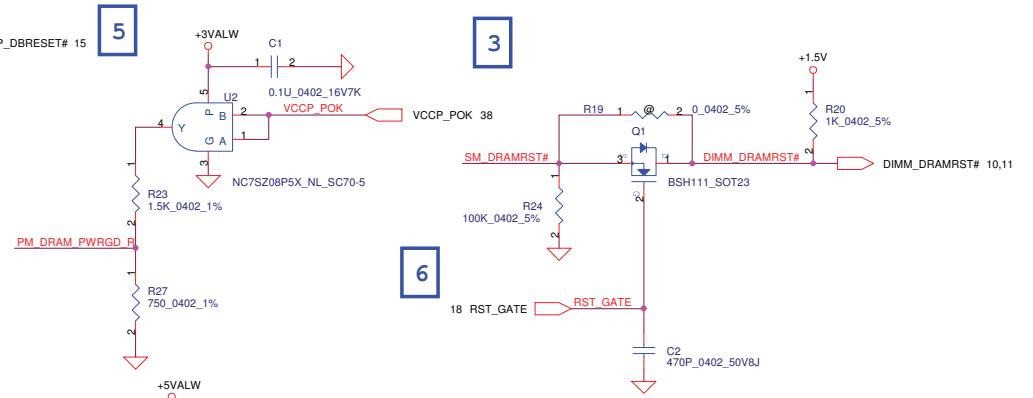
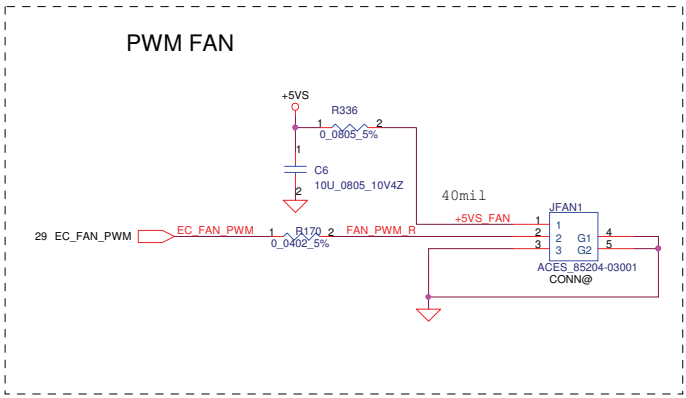
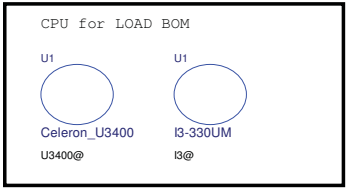
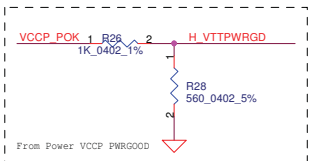
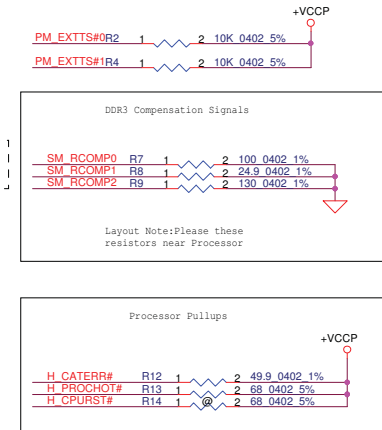
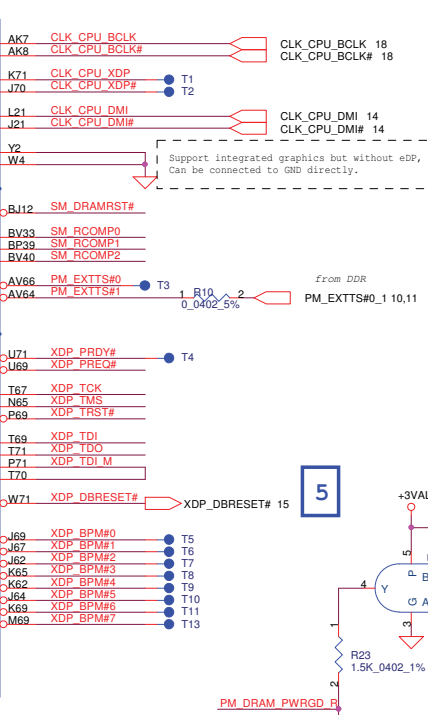
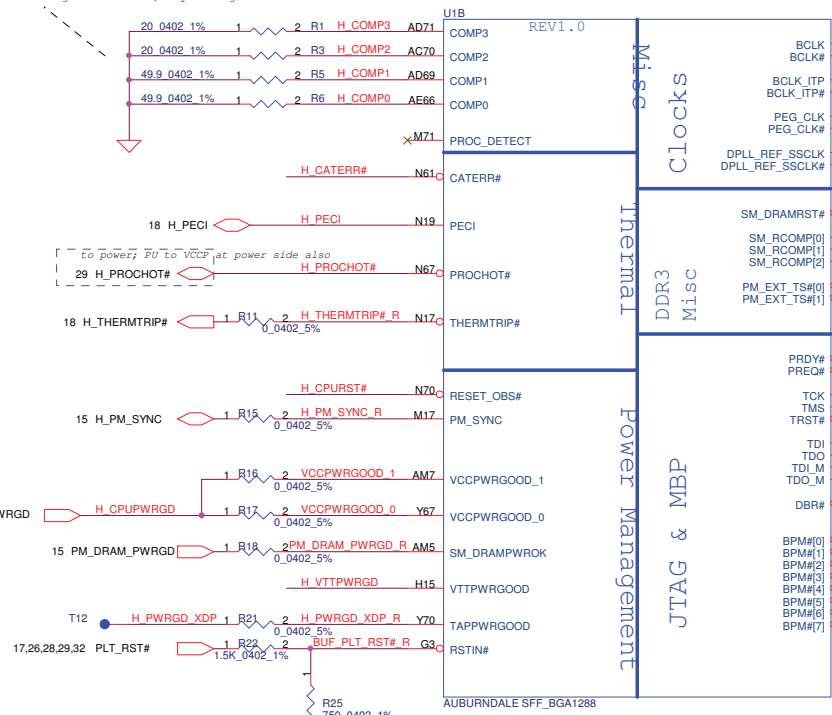
**Install below 43 level BOM structure for ver. 0.1**

**SMBUS Control Table**

	SOURCE	BATT	SODIMM	CLKGEN	G-SENSOR
SMB_EC_CHK1 SMB_EC_DA1	EC	V	X	X	V
SMBCLK SMBDATA	Calpella	X	V	V	X
SML1CLK SML1DATA	Calpella	X	X	X	X

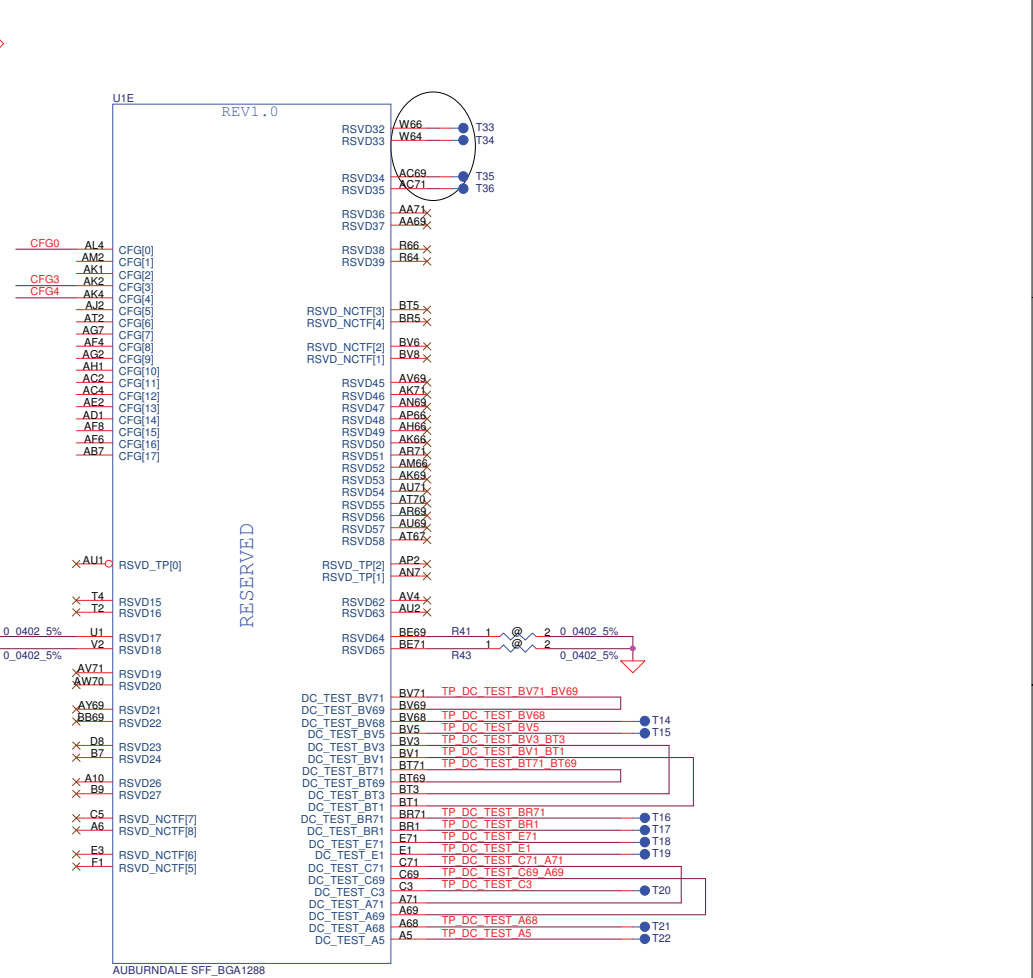
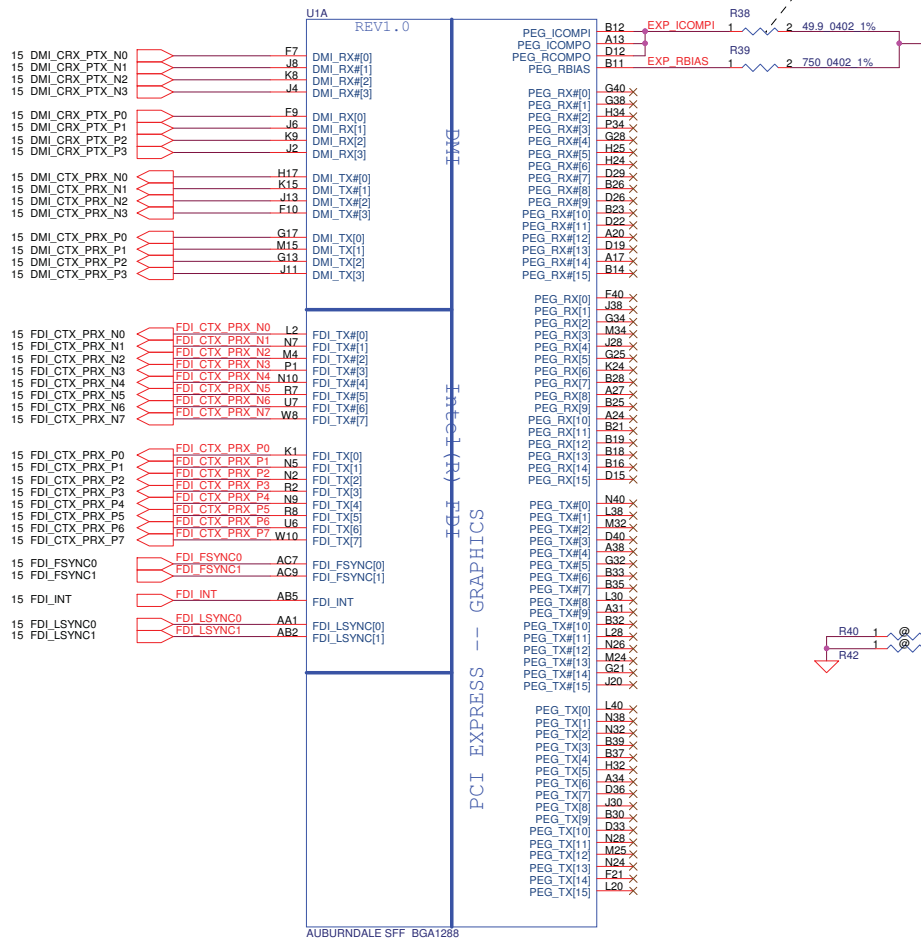
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title <b>Notes List</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Doc Number LA-6411P	Rev 0.1
Date: Wednesday, March 31, 2010				Sheet	3 of 43

Layout rule: 10mil width trace  
length < 0.5", spacing 20mil



Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number LA-6411P
Date: Wednesday, March 31, 2010				Rev 0.1

Layout rule : trace length < 0.5"



### CFG Straps for PROCESSOR

**CFG0** R44 1 @ 2 3.01K 0402 1%

PCI-Express Configuration Select	
1:	Single PEG
0:	Biturcation enabled
Not applicable for Clarkfield Processor	

**CFG3** R45 1 @ 2 3.01K 0402 1%

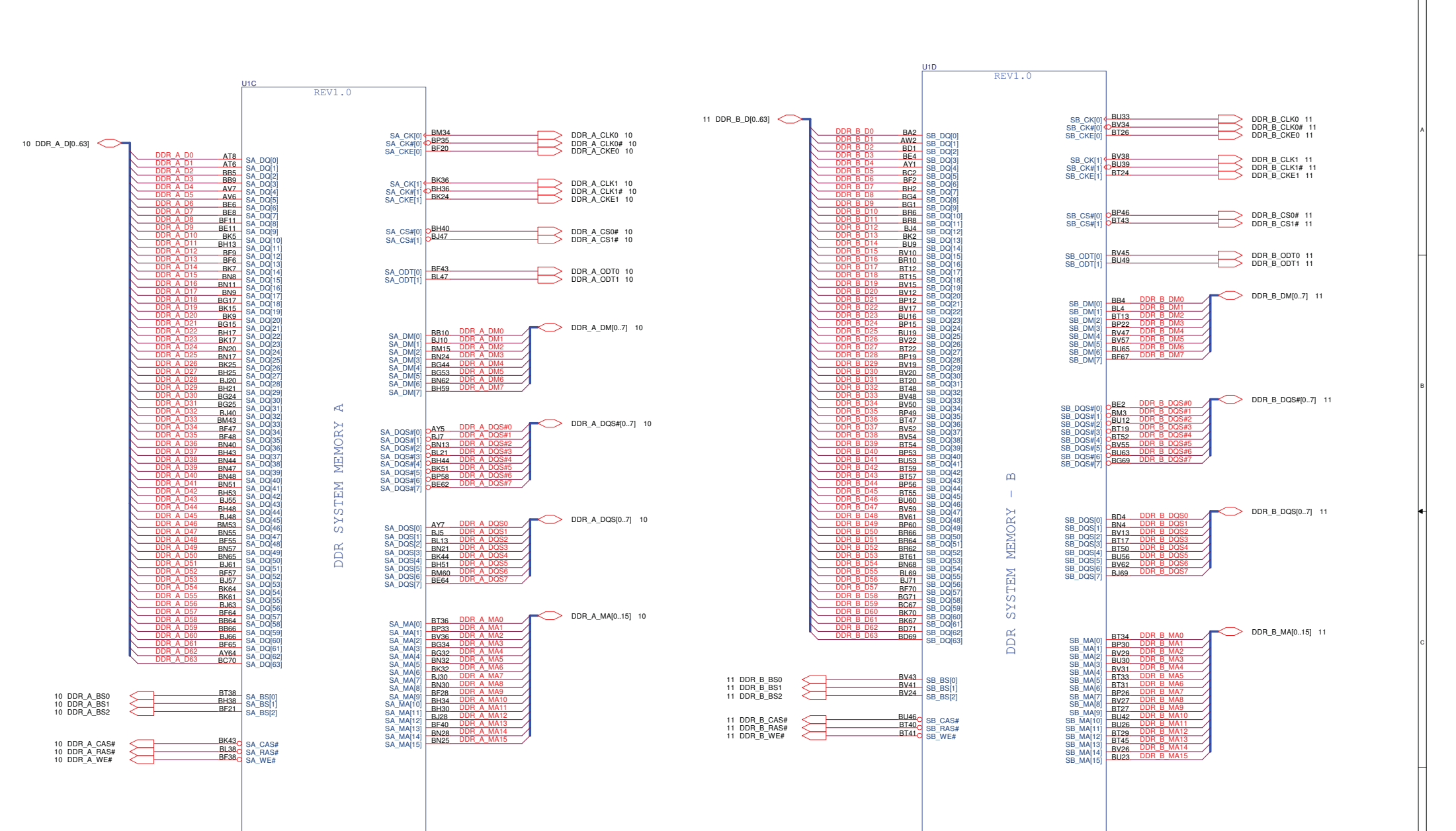
CFG3-PCI Express Static Lane Reversal	
1:	Normal Operation
0:	Lane Numbers Reversed
15 -> 0, 14 -> 1, .....	

**CFG4** R46 1 @ 2 3.01K 0402 1%

CFG4-Display Port Presence	
1:	Disabled; No Physical Display Port attached to Embedded Display Port
0:	Enabled; An external Display Port device is connected to the Embedded Display Port

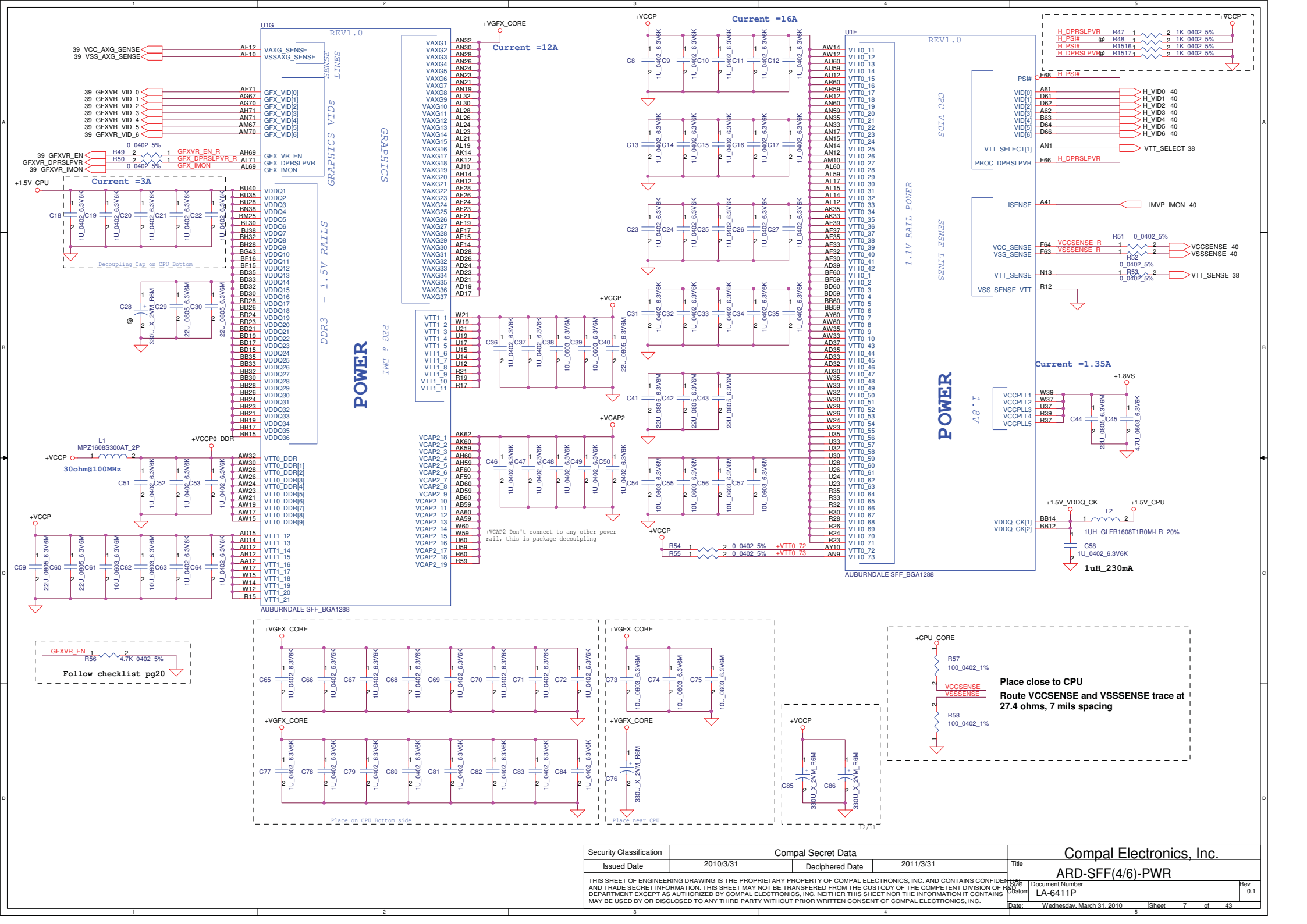
- Package Daisy Chain:** Daisy Chain Recommendation for SMT Connectivity
- 1: BR71 - pkg - BT71- board - BT69 - pkg - BV71 - board - BV69 - pkg - BV68
  - 2: A68 - pkg - A69 - board - C69 - pkg - A71 - board - C71 - pkg - E71
  - 3: A5 - pkg - C3
  - 4: BR1 - pkg - BT1 - board - BV1 - pkg - BT3 - board - BV3 - pkg - BV5

Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	ARD-SFF(2/6)-DMI/PEG/CFG
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER TO ANY OTHER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				
Doc Number	LA-6411P	Rev	0.1	Date: Wednesday, March 31, 2010
Sheet		5 of 43		



AUBURNDALE SFF\_BGA1288

Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				ARD-SFF(3/6)-DDR3 Document Number <b>LA-6411P</b> Date: Wednesday, March 31, 2010   Sheet 6 of 43



REV1.0

REV1.0

GRAPHICS VIDS

CPU VIDS

DDR3 - 1.5V RAILS

1.1V RAIL POWER

POWER

POWER

AUBURNDALE SFF\_BGA1288

AUBURNDALE SFF\_BGA1288

Follow checklist pg20

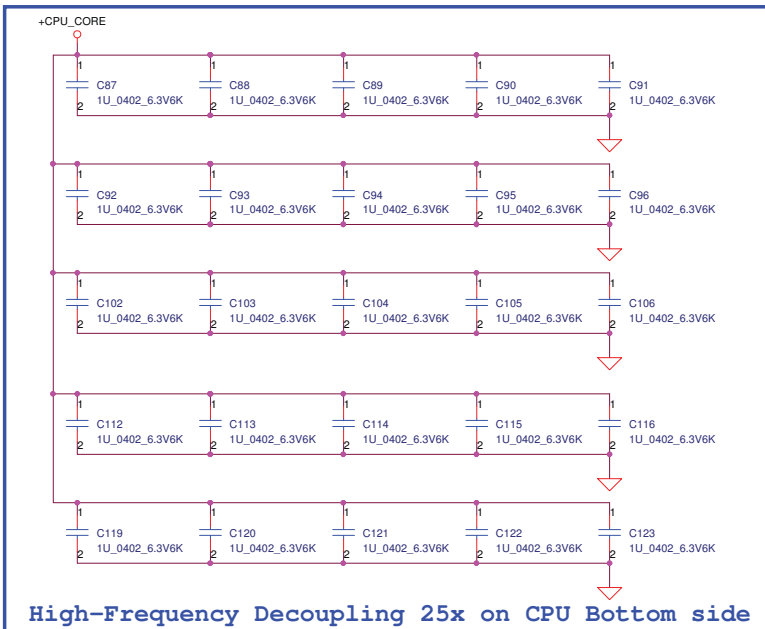
Place close to CPU  
Route VCCSENSE and VSSSENSE trace at 27.4 ohms, 7 mils spacing

Place on CPU Bottom side

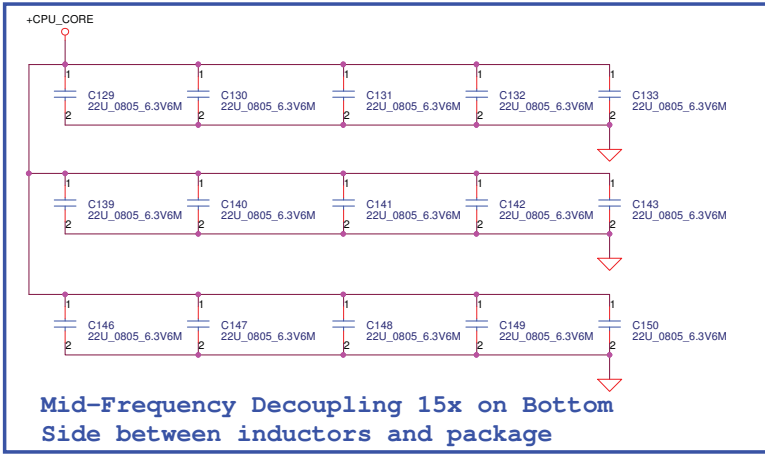
Place near CPU

T2,T1

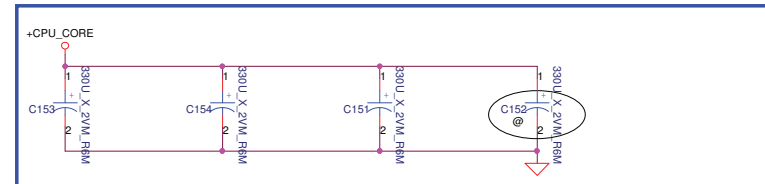
Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	ARD-SFF(4/6)-PWR
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				
Date: Wednesday, March 31, 2010			Sheet 7 of 43	



High-Frequency Decoupling 25x on CPU Bottom side



Mid-Frequency Decoupling 15x on Bottom Side between inductors and package

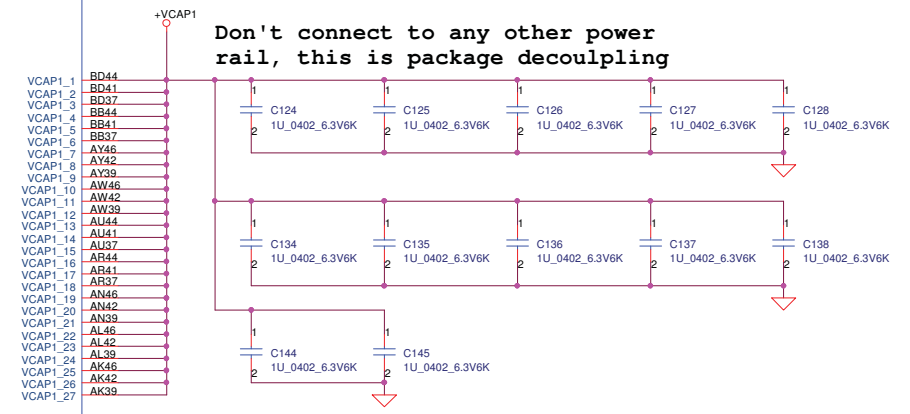
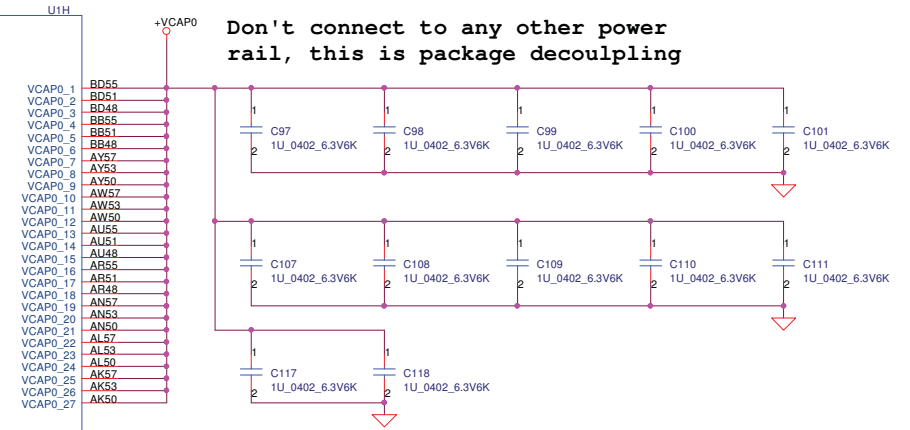


Low-Frequency Bulk 4x on Bottom Side, 1x on Top

Current =274A

Pin	Label
AF57	VCC_1
AF55	VCC_2
AF53	VCC_3
AF51	VCC_4
AF50	VCC_5
AF48	VCC_6
AF46	VCC_7
AF44	VCC_8
AF42	VCC_9
AF41	VCC_10
AD55	VCC_11
AD51	VCC_12
AD48	VCC_13
AD44	VCC_14
AD41	VCC_15
AB55	VCC_16
AB51	VCC_17
AB48	VCC_18
AB44	VCC_19
AB41	VCC_20
AA55	VCC_21
AA51	VCC_22
AA48	VCC_23
AA44	VCC_24
AA41	VCC_25
W55	VCC_26
W51	VCC_27
W48	VCC_28
W44	VCC_29
W41	VCC_30
U55	VCC_31
U51	VCC_32
U48	VCC_33
U44	VCC_34
U41	VCC_35
R55	VCC_36
R51	VCC_37
R48	VCC_38
R44	VCC_39
R41	VCC_40
P60	VCC_41
N55	VCC_42
N51	VCC_43
N48	VCC_44
N44	VCC_45
N42	VCC_46
M60	VCC_47
M55	VCC_48
M51	VCC_49
M44	VCC_50
L55	VCC_51
K60	VCC_52
K51	VCC_53
K44	VCC_54
J55	VCC_55
H60	VCC_56
H51	VCC_57
H44	VCC_58
G60	VCC_59
G55	VCC_60
G51	VCC_61
G44	VCC_62
F55	VCC_63
F50	VCC_64
E57	VCC_65
E53	VCC_66
E50	VCC_67
E48	VCC_68
E42	VCC_69
D59	VCC_70
D57	VCC_71
D55	VCC_72
D54	VCC_73
D52	VCC_74
D50	VCC_75
D48	VCC_76
D47	VCC_77
D45	VCC_78
D43	VCC_79
B60	VCC_80
B58	VCC_81
B53	VCC_82
B49	VCC_83
B46	VCC_84
B42	VCC_85
A57	VCC_86
A54	VCC_87
A50	VCC_88
A47	VCC_89
A43	VCC_90

POWER  
CPU CORE SUPPLY



AUBURNDALE SFF\_BGA1288

Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER SERVICE DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number LA-6411P
Date: Wednesday, March 31, 2010				Rev 0.1
Sheet 8 of 43				



U11 REV1.0

BU62	VSS1	VSS90	AY24
BU58	VSS2	VSS91	AY23
BU55	VSS3	VSS92	AY21
BU51	VSS4	VSS93	AY19
BU48	VSS5	VSS95	AY15
BU44	VSS6	VSS96	AY14
BU37	VSS7	VSS97	AY12
BU32	VSS8	VSS98	AY8
BU25	VSS9	VSS99	AY4
BU21	VSS10	VSS100	AW67
BU18	VSS11	VSS101	AW62
BU14	VSS12	VSS102	AW59
BU11	VSS13	VSS103	AW55
BU7	VSS14	VSS104	AW51
BP42	VSS15	VSS105	AW48
BN64	VSS16	VSS106	AW44
BN6	VSS17	VSS107	AW41
BM70	VSS18	VSS108	AW37
BM51	VSS19	VSS109	AW9
BM44	VSS20	VSS110	AW1
BM32	VSS21	VSS111	AU70
BM24	VSS22	VSS112	AU62
BM17	VSS23	VSS113	AU57
BL57	VSS24	VSS114	AU53
BL55	VSS25	VSS115	AU50
BL48	VSS26	VSS116	AU46
BL40	VSS27	VSS117	AU42
BL28	VSS28	VSS118	AU39
BL20	VSS29	VSS119	AU35
BK63	VSS30	VSS120	AU33
BK60	VSS31	VSS121	AU32
BK53	VSS32	VSS122	AU30
BK34	VSS33	VSS123	AU28
BK10	VSS34	VSS124	AU26
BJ64	VSS35	VSS125	AU24
BJ21	VSS36	VSS126	AU23
BJ9	VSS37	VSS127	AU21
BJ1	VSS38	VSS128	AU19
BH70	VSS39	VSS129	AU17
BH57	VSS40	VSS130	AU15
BH55	VSS41	VSS131	AU14
BH47	VSS42	VSS132	AU4
BH24	VSS43	VSS133	AT64
BH20	VSS44	VSS134	AT10
BH15	VSS45	VSS135	AR62
BG51	VSS46	VSS136	AR57
BG36	VSS47	VSS137	AR53
BF62	VSS48	VSS138	AR50
BF50	VSS49	VSS139	AR46
BF13	VSS50	VSS140	AN51
BF8	VSS51	VSS141	AN48
BE70	VSS52	VSS142	AN44
BE65	VSS53	VSS143	AN41
BE9	VSS54	VSS144	AN37
BE1	VSS55	VSS145	AN5
BD57	VSS56	VSS146	AN4
BD53	VSS57	VSS147	AM64
BD50	VSS58	VSS148	AM8
BD46	VSS59	VSS149	AL62
BD42	VSS60	VSS150	AL55
BD39	VSS61	VSS151	AL51
BD14	VSS62	VSS152	AL48
BB71	VSS63	VSS153	AL44
BB62	VSS64	VSS154	AL41
BB57	VSS65	VSS155	AL37
BB53	VSS66	VSS156	AL35
BB50	VSS67	VSS157	AL33
BB46	VSS68	VSS158	AL1
BB42	VSS69	VSS159	AK70
BB39	VSS70	VSS160	AK70
BB7	VSS71	VSS161	AK64
BB1	VSS72	VSS162	AK55
BA70	VSS73	VSS163	AK51
AY71	VSS74	VSS164	AK48
AY66	VSS75	VSS165	AK44
AY62	VSS76	VSS166	AK41
AY59	VSS77	VSS167	AK37
AY55	VSS78	VSS168	AK32
AY51	VSS79	VSS169	AK30
AY48	VSS80	VSS170	AK28
AR39	VSS140	VSS191	AK26
AR42	VSS141	VSS192	AK24
AR39	VSS142	VSS193	AK24
AR33	VSS143	VSS194	AK21
AR32	VSS144	VSS195	AK19
AR30	VSS145	VSS196	AK17
AR28	VSS146	VSS197	AK15
AR26	VSS147	VSS198	AJ70
AR24	VSS148	VSS199	AH62
AR23	VSS149	VSS200	AH57
AR21	VSS150	VSS201	AH55
AR19	VSS151	VSS202	BV66
AR17	VSS152	VSS203	BV64
AR15	VSS153	VSS204	BT68
AR14	VSS154	VSS205	BR69
AR4	VSS155	VSS206	BR68
AR1	VSS156	VSS207	BR3
AP70	VSS157	VSS208	BN71
AP64	VSS158	VSS209	BN1
AN62	VSS159	VSS210	BL71
AN55	VSS160	VSS211	BL1
AY44	VSS81	VSS212	R14
AY41	VSS82	VSS213	H71
AY37	VSS83	VSS214	F71
AY35	VSS84	VSS215	E69
AY33	VSS85	VSS216	E68
AY32	VSS86	VSS217	A66
AY30	VSS87	VSS218	A64
AY28	VSS88	VSS219	E5
AY26	VSS89	VSS220	C68

AUBURNDALE SFF\_BGA1288

VSS

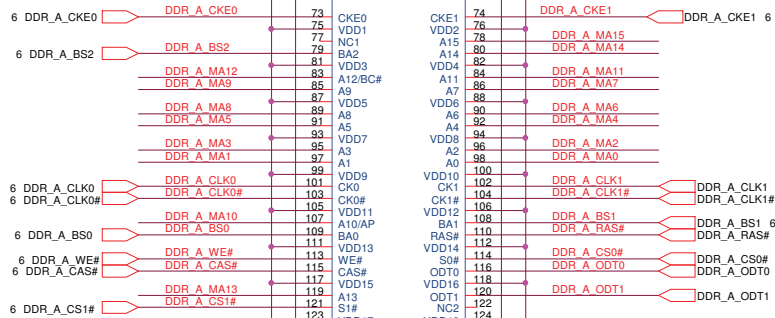
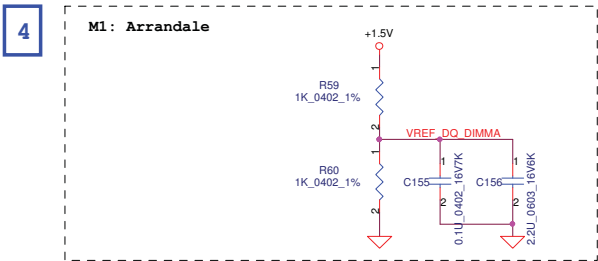
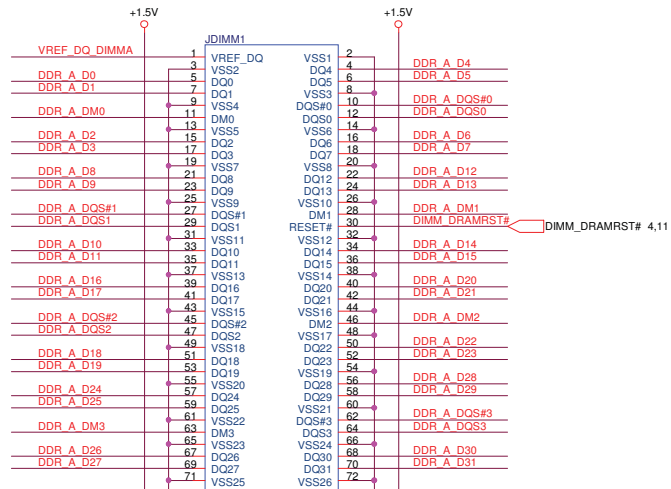
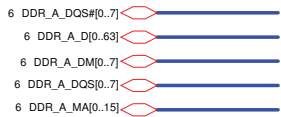
U1J REV1.0

AH53	VSS202	VSS404	A40
AH51	VSS203	VSS405	A36
AH50	VSS204	VSS406	A33
AH48	VSS205	VSS407	A29
AH46	VSS206	VSS408	A28
AH44	VSS207	VSS409	A22
AH42	VSS208	VSS410	A19
AH41	VSS209	VSS411	A15
AH39	VSS210	VSS412	A12
AH37	VSS211	VSS413	A8
AH35	VSS212	VSS414	A7
AH33	VSS213	VSS394	B68
AH32	VSS214	VSS395	B55
AH30	VSS215	VSS396	B51
AH28	VSS216	VSS397	B48
AH26	VSS217	VSS398	B44
AH24	VSS218	VSS399	B42
AH23	VSS219	VSS400	A52
AH21	VSS220	VSS401	A52
AH19	VSS221	VSS402	A48
AH17	VSS222	VSS403	A45
AH15	VSS223	VSS288	AA17
AH4	VSS224	VSS289	AA15
AG64	VSS225	VSS290	AA14
AG9	VSS226	VSS291	AA2
AG6	VSS227	VSS292	W69
AF69	VSS228	VSS292	W62
AF62	VSS229	VSS293	W59
AF1	VSS230	VSS294	W57
AE70	VSS231	VSS295	W50
AE64	VSS232	VSS296	W46
AD62	VSS233	VSS297	W42
AD57	VSS234	VSS298	W42
AD53	VSS235	VSS299	W6
AD50	VSS236	VSS300	V70
AD46	VSS237	VSS301	U64
AD42	VSS238	VSS302	U62
AD4	VSS239	VSS303	U62
AC67	VSS240	VSS304	U57
AC64	VSS241	VSS305	U53
AC10	VSS242	VSS306	U50
AC5	VSS243	VSS307	U46
AC1	VSS244	VSS308	U42
AB70	VSS245	VSS309	U38
AB62	VSS246	VSS310	U9
AB57	VSS247	VSS311	U4
AB53	VSS248	VSS312	T1
AB50	VSS249	VSS313	R70
AB46	VSS250	VSS314	R62
AB42	VSS251	VSS315	R57
AB39	VSS252	VSS316	R53
AB37	VSS253	VSS317	R50
AB35	VSS254	VSS318	R46
AB33	VSS255	VSS319	R42
AB32	VSS256	VSS320	R5
AB30	VSS257	VSS321	P4
AB28	VSS258	VSS322	N63
AB26	VSS259	VSS323	N57
AB24	VSS260	VSS324	N53
AB23	VSS261	VSS325	N50
AB21	VSS262	VSS326	N46
AB19	VSS263	VSS327	N30
AB17	VSS264	VSS328	N21
AB14	VSS265	VSS329	N15
AB9	VSS266	VSS330	M53
AA68	VSS267	VSS331	M42
AA64	VSS268	VSS332	M36
AA62	VSS269	VSS333	M1
AA57	VSS270	VSS334	L70
AA53	VSS271	VSS335	L48
AA50	VSS272	VSS337	L47
AA46	VSS273	VSS338	L13
AA42	VSS274	VSS339	K64
AA39	VSS275	VSS340	K53
AA37	VSS276	VSS341	K43
AA35	VSS277	VSS342	K36
AA33	VSS278	VSS343	K34
AA32	VSS279	VSS344	K32
AA30	VSS280	VSS345	K25
AA28	VSS281	VSS346	K17
AA26	VSS282	VSS347	K11
AA24	VSS283	VSS348	K6
AA23	VSS284	VSS349	K4
AA21	VSS285	VSS350	J65
AA19	VSS286	VSS351	J48
F20	VSS287	VSS352	J57
F4	VSS374	VSS353	J47
E37	VSS375	VSS354	J40
E33	VSS376	VSS355	J9
E30	VSS377	VSS356	H53
E16	VSS378	VSS357	H43
E12	VSS379	VSS358	H36
D41	VSS380	VSS359	H1
D38	VSS381	VSS360	G70
D34	VSS382	VSS361	G57
D31	VSS383	VSS362	G53
D27	VSS384	VSS363	G48
D24	VSS385	VSS364	G47
D20	VSS386	VSS365	G43
D17	VSS387	VSS366	G30
D13	VSS388	VSS367	G24
D10	VSS389	VSS368	G20
D6	VSS390	VSS369	G15
B65	VSS391	VSS370	F61
B40	VSS392	VSS371	F48
VSS415	VSS393	VSS372	F47
		VSS373	F28

AUBURNDALE SFF\_BGA1288

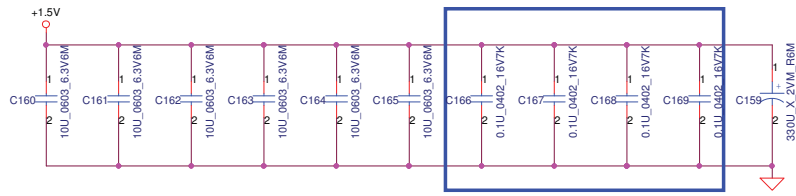
VSS

Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	ARD-SFF(6/6)-GND
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number <b>LA-6411P</b>
Date:	Wednesday, March 31, 2010	Sheet:	9	of 43

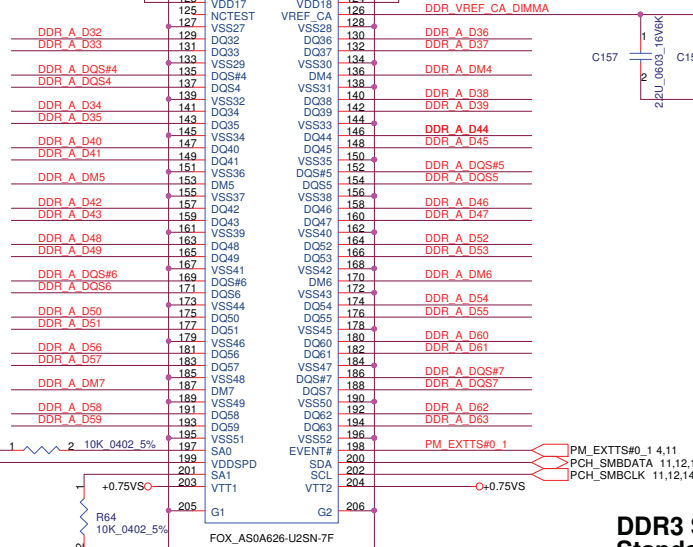
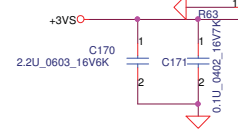
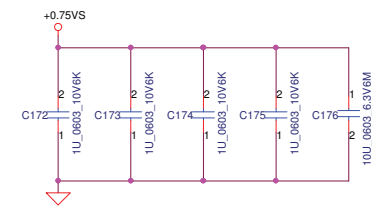


**Layout Note:**  
Place near JDIMM1

**Layout Note:** Place these 4 Caps near Command and Control signals of DIMMA

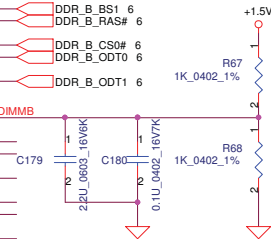
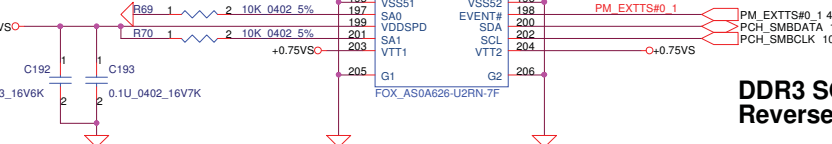
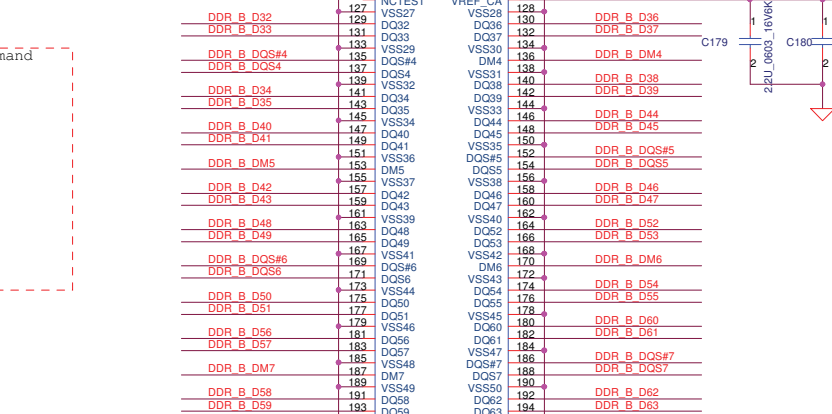
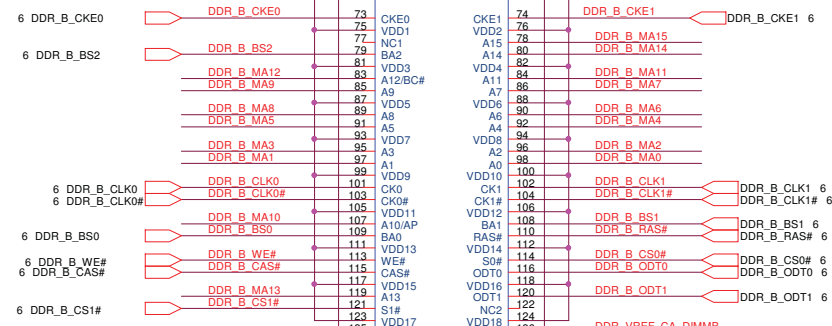
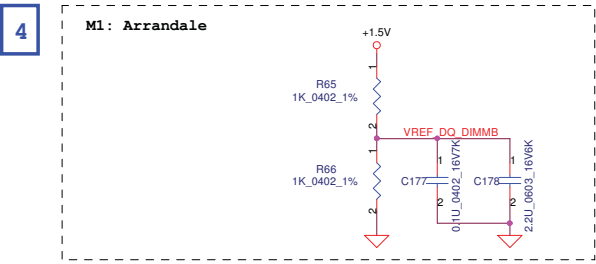
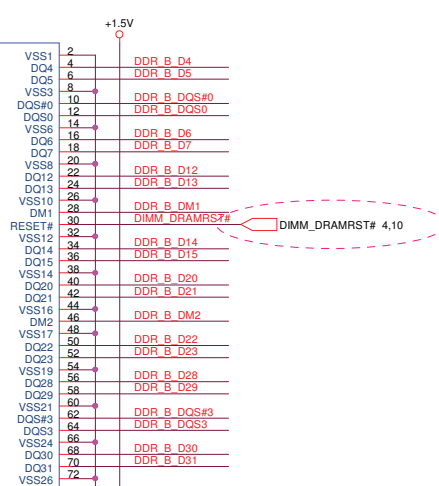
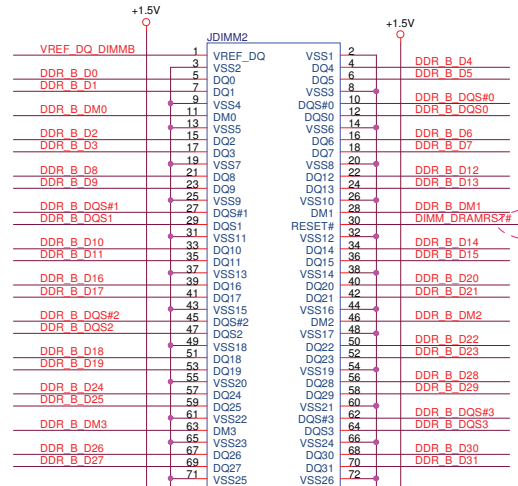
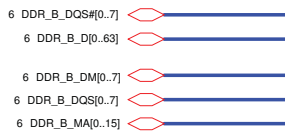


**Layout Note:**  
Place near JDIMM1.203 & JDIMM1.204

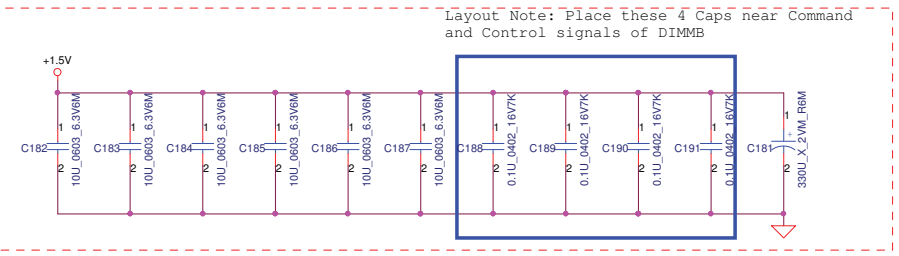


**DDR3 SO-DIMM A**  
Standard Type

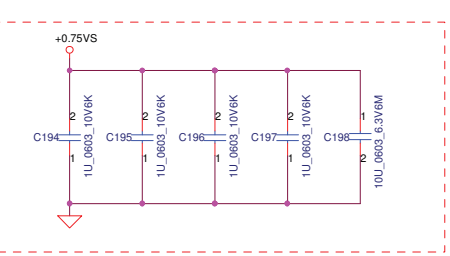
Security Classification	Compal Secret Data		Title
Issued Date	2010/3/31	Deciphered Date	2011/3/31
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			<p>Compal Electronics, Inc.</p> <p>DDRIII SO-DIMM A</p> <p>Document Number: LA-6411P</p> <p>Date: Wednesday, March 31, 2010   Sheet 10 of 43</p>
Rev	1.0	Rev	0.1



**Layout Note:**  
Place near JDIMM2

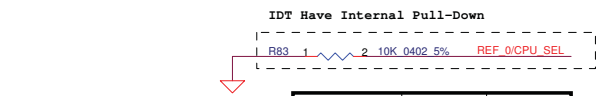
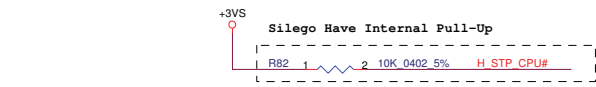
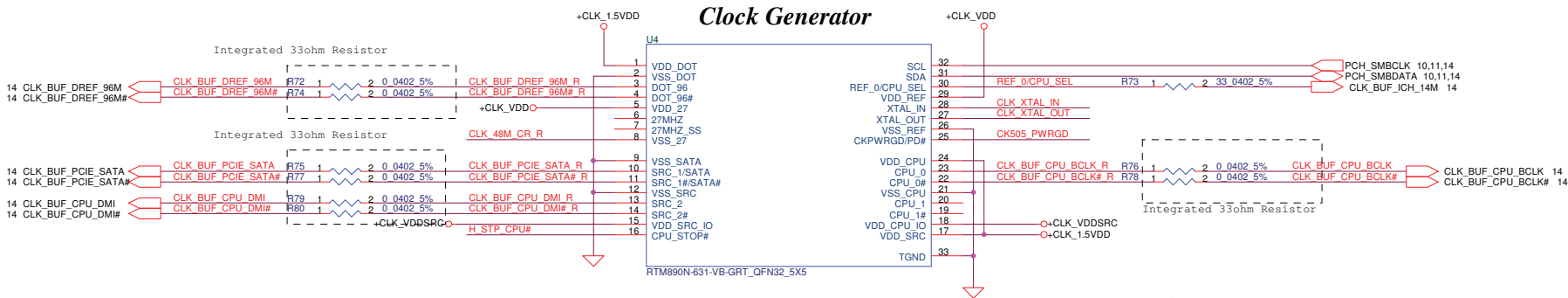
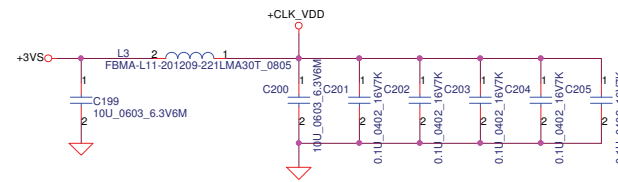
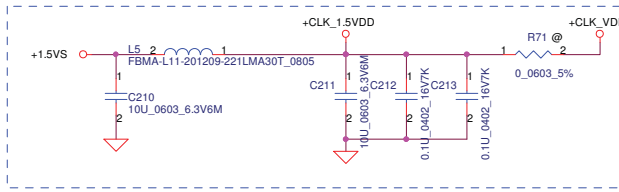
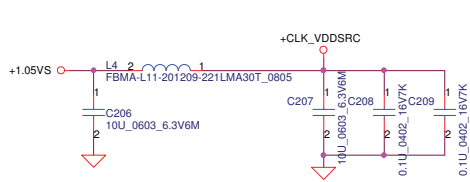


**Layout Note:**  
Place near JDIMM2.203 & JDIMM2.204



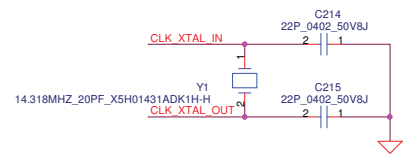
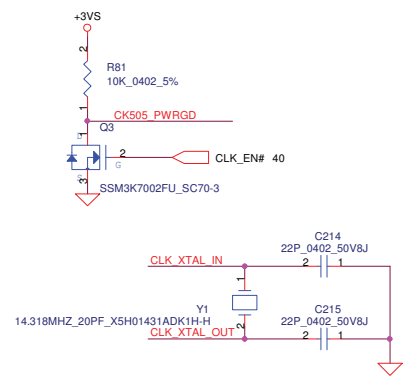
**DDR3 SO-DIMM B  
Reverse Type**

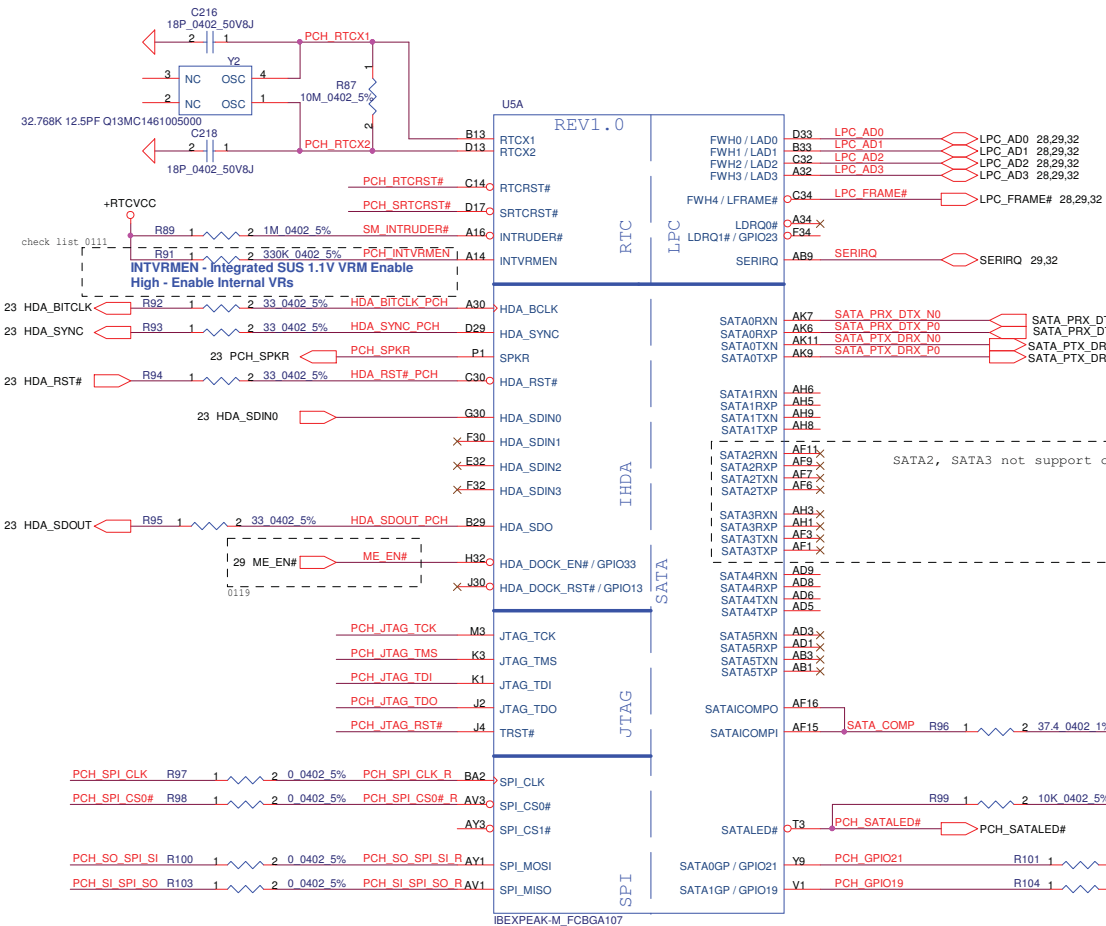
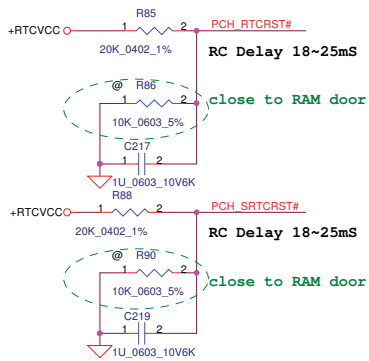
Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
				DDRIII SO-DIMM B
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				Rev 1.0 LA-6411P Date: Wednesday, March 31, 2010   Sheet 11 of 43



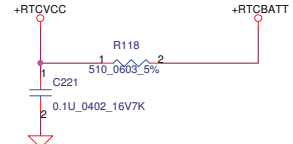
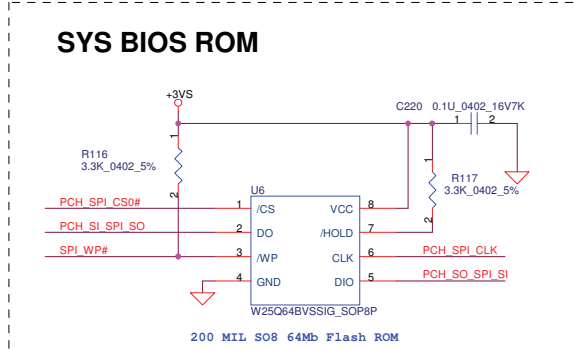
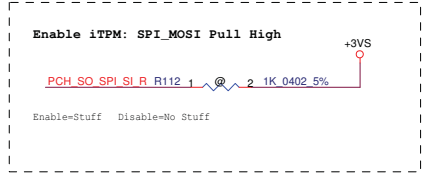
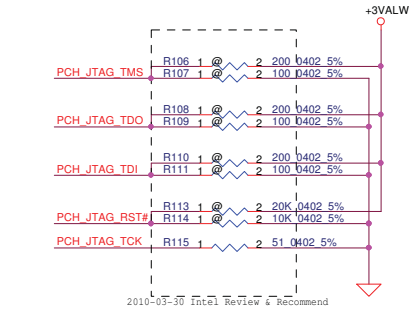
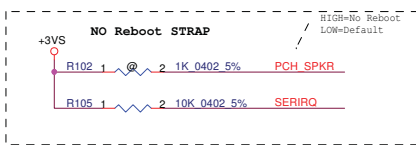
PIN 30	CPU_0	CPU_1
0 (Default)	133MHz	133MHz
1	100MHz	100MHz

@R84  
 CLK\_48M\_CR\_R 1 2 0.0402 5%  
**PIN8 IS GND FOR ICS3197**  
**PIN8 IS 48MHz FOR ICS3199**





SATA for HDD



Security Classification	Compal Secret Data	
Issued Date	2010/3/31	Deciphered Date
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.		2011/3/31

Compal Electronics, Inc.	
SATA, HDA, SPI, LPC	
Title	LA-6411P
Document Number	LA-6411P
Date	Wednesday, March 31, 2010
Sheet	13 of 43
Rev	0.1

For LAN

For WLAN

For LAN

For Wireless LAN

USB

REV1.0

SMBUS

PCI-E\*

controller

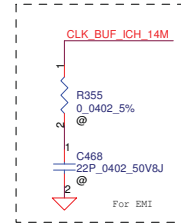
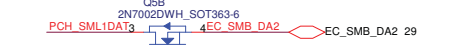
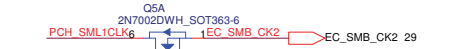
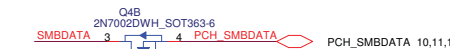
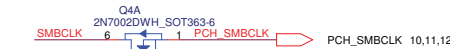
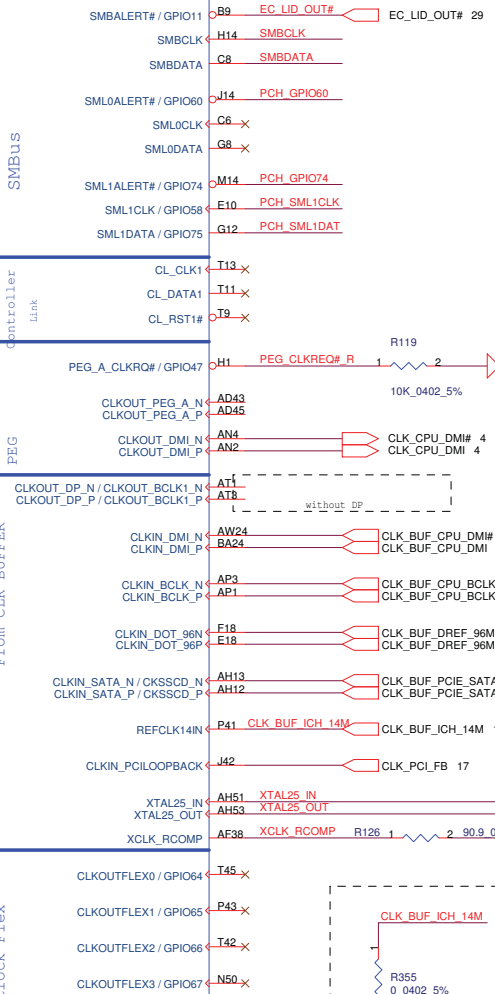
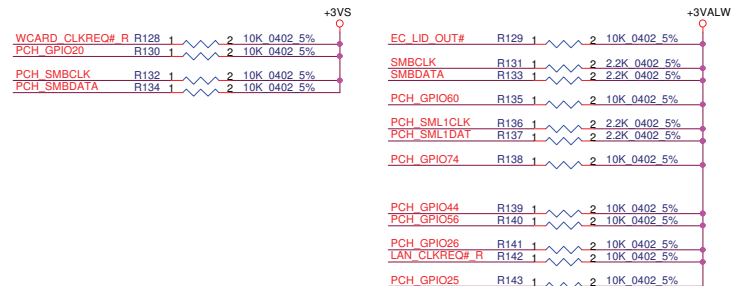
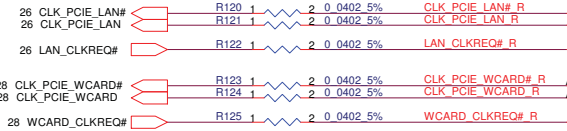
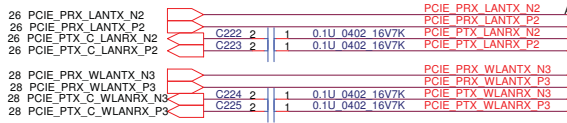
Link

PEG

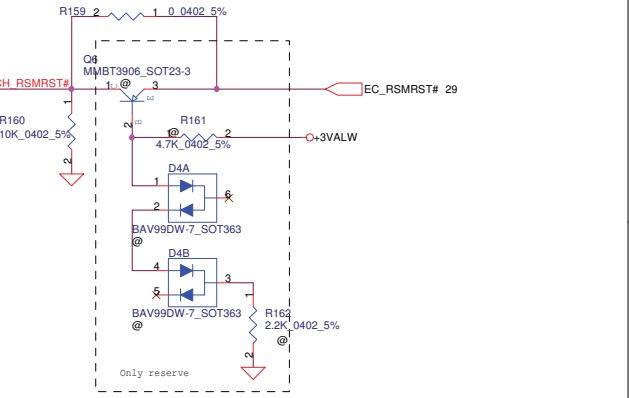
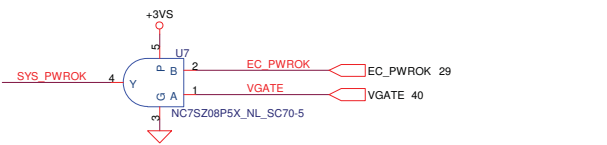
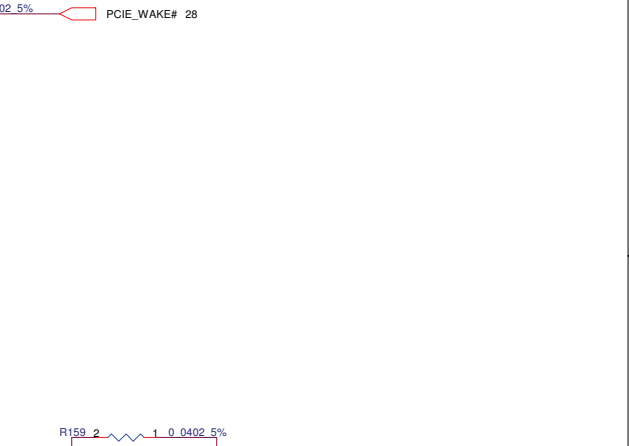
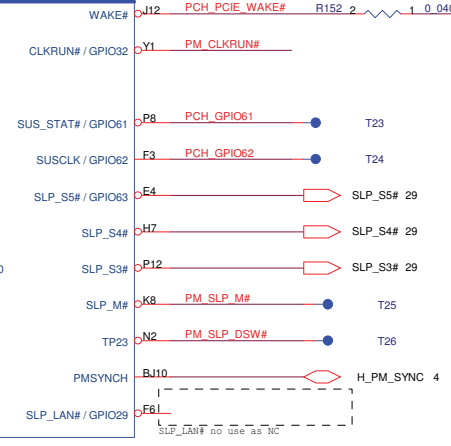
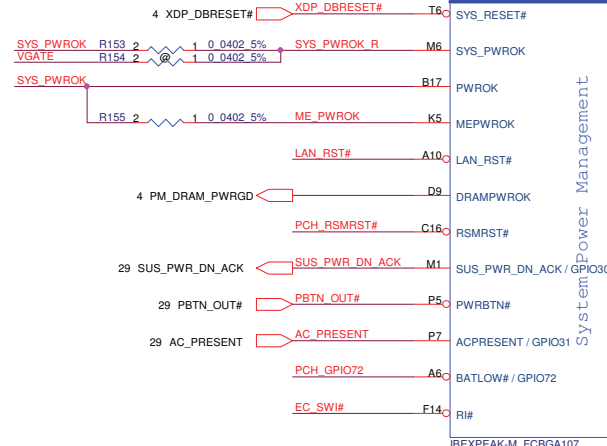
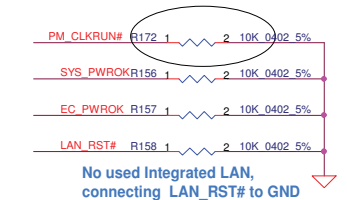
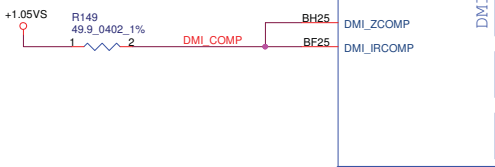
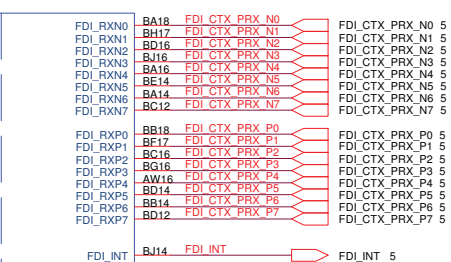
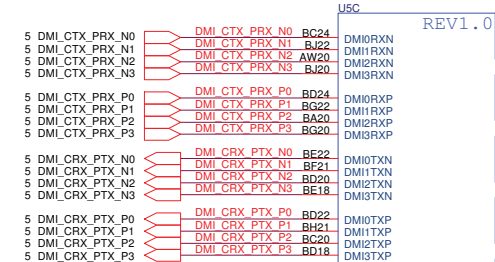
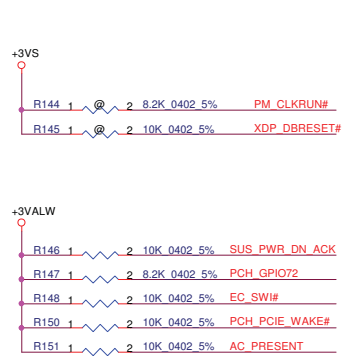
From CLK BUFFER

Clock Flex

IBEXPEAK\_M\_FCBGA107



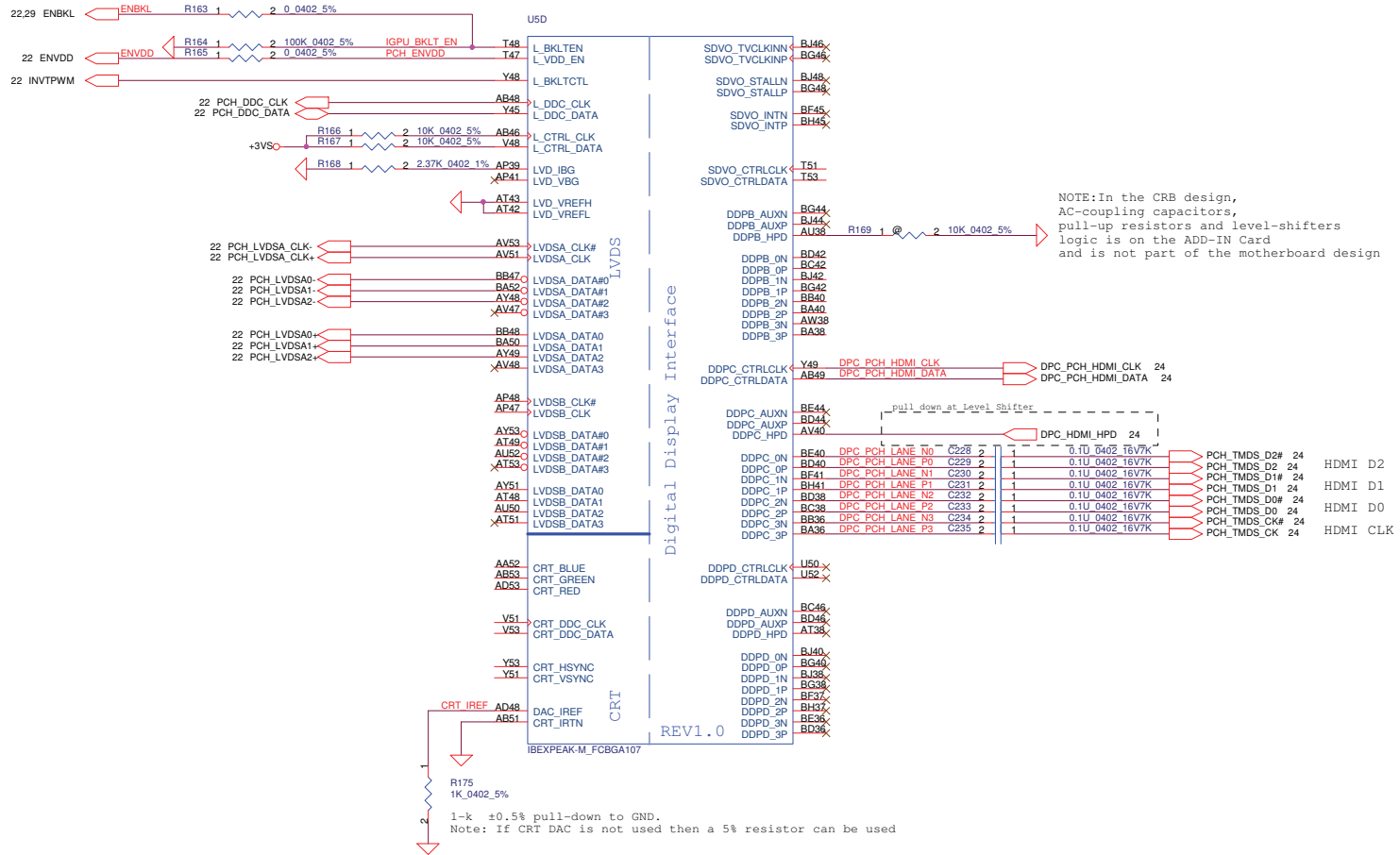
Security Classification	Compal Secret Data			Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER SERVICE TO ANY OTHER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				LA-6411P	0.1
				Date: Wednesday, March 31, 2010	Sheet 14 of 43



Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	PCH (3/9) DMI, FDI, PM	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Doc Number	LA-6411P	Rev 0.1
			Date:	Wednesday, March 31, 2010	Sheet 15 of 43

**BACKLIGHT**

**LCDVDD  
BACKLIGHT\_PWM (DPST)**

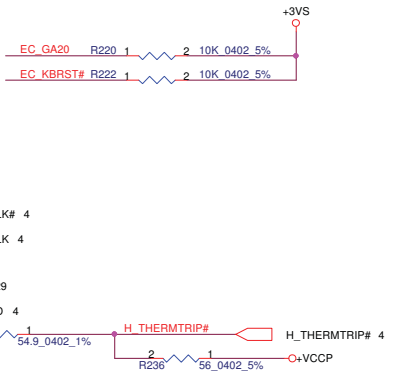
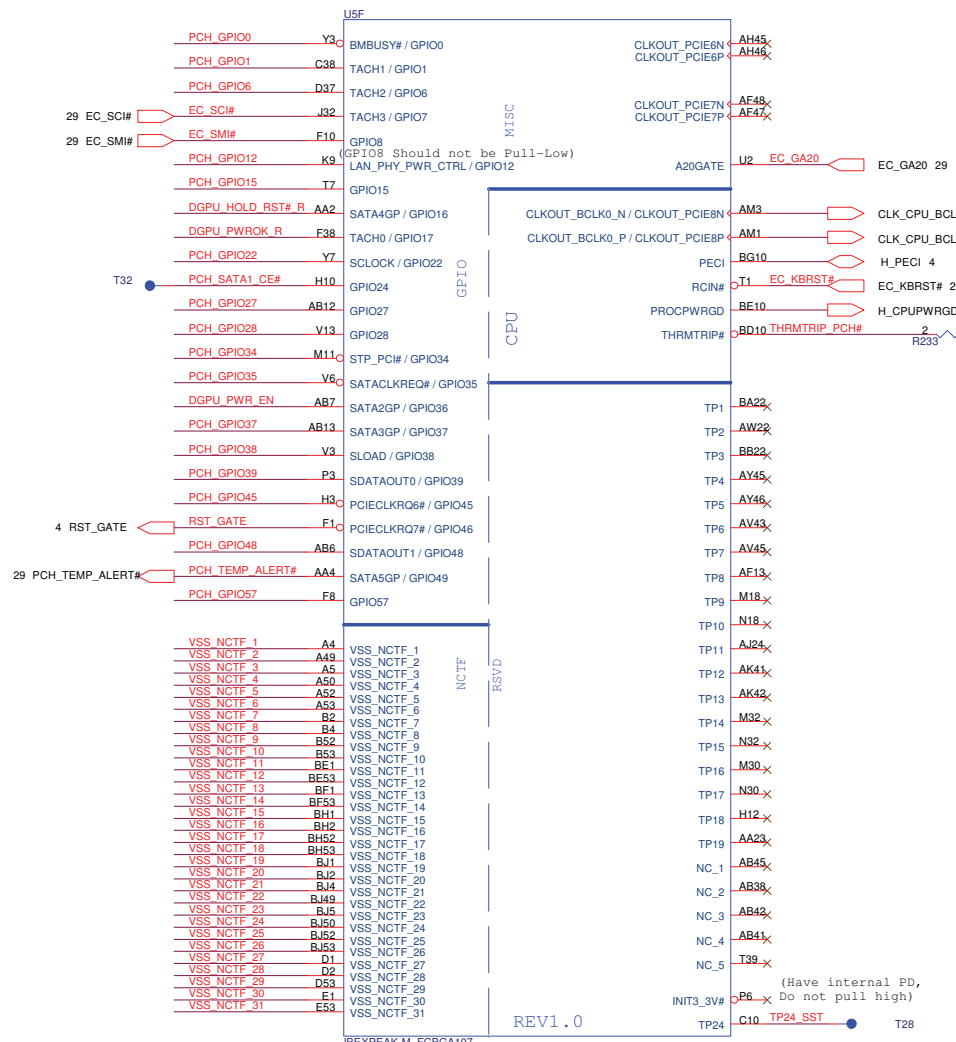
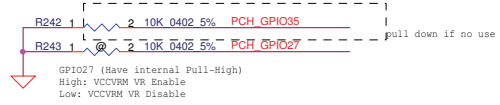
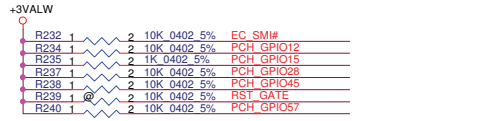
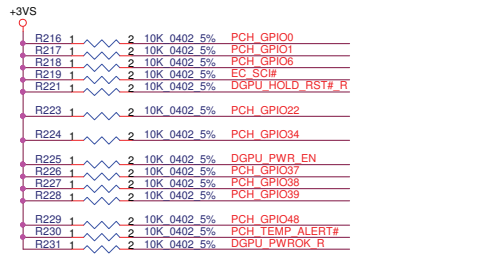


1-k ±0.5% pull-down to GND.  
Note: If CRT DAC is not used then a 5% resistor can be used

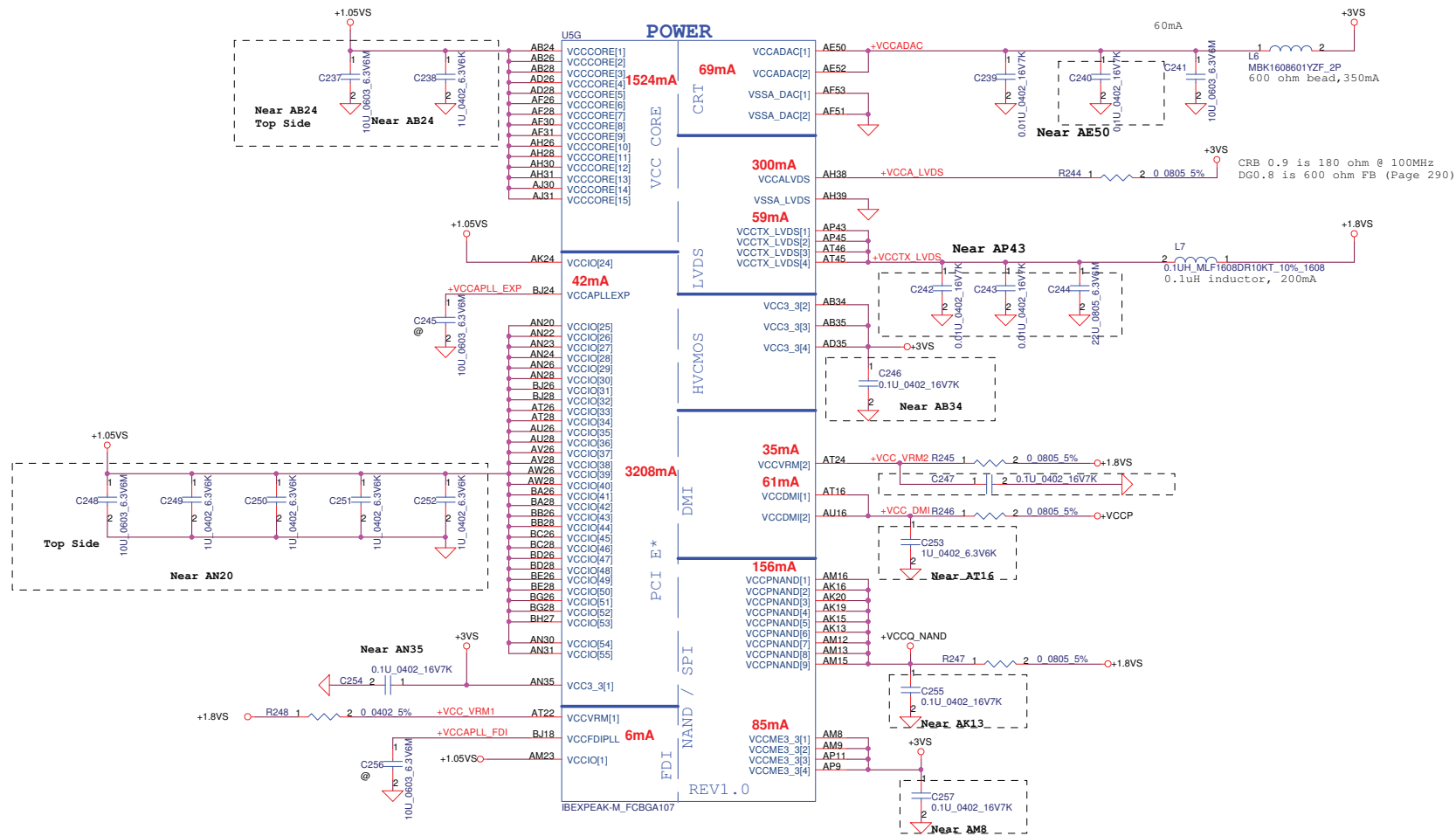
Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number
				LA-6411P
				Rev 0.1
				Date: Wednesday, March 31, 2010
				Sheet 16 of 43







Security Classification		Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				LA-6411P	0.1
				Date: Wednesday, March 31, 2010	Sheet 18 of 43



Security Classification	Compal Secret Data			Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Revision	0.1
				Document Number	LA-6411P
				Date	Wednesday, March 31, 2010
				Sheet	19 of 43



US1		H49	
A7	VSS[159]	VSS[259]	H5
B11	VSS[160]	VSS[260]	J24
B15	VSS[161]	VSS[261]	K11
B19	VSS[162]	VSS[262]	K17
B23	VSS[163]	VSS[263]	K47
B31	VSS[164]	VSS[264]	K7
B35	VSS[165]	VSS[265]	L12
B39	VSS[166]	VSS[266]	L14
B43	VSS[167]	VSS[267]	L18
B47	VSS[168]	VSS[268]	L2
B7	VSS[169]	VSS[269]	L22
BG12	VSS[170]	VSS[270]	L32
BG12	VSS[171]	VSS[271]	L36
BG16	VSS[172]	VSS[272]	L40
BB20	VSS[173]	VSS[273]	L52
BB24	VSS[174]	VSS[274]	M12
BB30	VSS[175]	VSS[275]	M16
BB34	VSS[176]	VSS[276]	M20
BB38	VSS[177]	VSS[277]	M38
BB42	VSS[178]	VSS[278]	M34
BB49	VSS[179]	VSS[279]	M38
BB5	VSS[180]	VSS[280]	M42
BC10	VSS[181]	VSS[281]	M48
BC14	VSS[182]	VSS[282]	M49
BC18	VSS[183]	VSS[283]	M5
BC22	VSS[184]	VSS[284]	M8
BC22	VSS[185]	VSS[285]	N24
BC32	VSS[186]	VSS[286]	P11
BC36	VSS[187]	VSS[287]	AD15
BC40	VSS[188]	VSS[288]	P22
BC44	VSS[189]	VSS[289]	P30
BC52	VSS[190]	VSS[290]	P32
BH9	VSS[191]	VSS[291]	P34
BH48	VSS[192]	VSS[292]	P42
BD49	VSS[193]	VSS[293]	P45
BD5	VSS[194]	VSS[294]	P47
BE12	VSS[195]	VSS[295]	R2
BE16	VSS[196]	VSS[296]	R62
BE20	VSS[197]	VSS[297]	T12
BE24	VSS[198]	VSS[298]	T41
BE30	VSS[199]	VSS[299]	T46
BE34	VSS[200]	VSS[300]	T49
BE38	VSS[201]	VSS[301]	T5
BE42	VSS[202]	VSS[302]	T8
BE46	VSS[203]	VSS[303]	U30
BE48	VSS[204]	VSS[304]	U31
BE50	VSS[205]	VSS[305]	U32
BE6	VSS[206]	VSS[306]	U34
BE8	VSS[207]	VSS[307]	P38
BF3	VSS[208]	VSS[308]	V11
BF49	VSS[209]	VSS[309]	P16
BF51	VSS[210]	VSS[310]	Y19
BG18	VSS[211]	VSS[311]	V20
BG24	VSS[212]	VSS[312]	V22
BG4	VSS[213]	VSS[313]	V30
BG50	VSS[214]	VSS[314]	V31
BH11	VSS[215]	VSS[315]	V32
BH15	VSS[216]	VSS[316]	V34
BH19	VSS[217]	VSS[317]	V35
BH23	VSS[218]	VSS[318]	V38
BH31	VSS[219]	VSS[319]	V43
BH35	VSS[220]	VSS[320]	V45
BH39	VSS[221]	VSS[321]	V46
BH43	VSS[222]	VSS[322]	V47
BH47	VSS[223]	VSS[323]	V49
BH7	VSS[224]	VSS[324]	V5
C12	VSS[225]	VSS[325]	V7
C50	VSS[226]	VSS[326]	V8
E12	VSS[227]	VSS[327]	W2
D51	VSS[228]	VSS[328]	W52
E16	VSS[229]	VSS[329]	Y11
E20	VSS[230]	VSS[330]	Y12
E24	VSS[231]	VSS[331]	Y15
E30	VSS[232]	VSS[332]	Y19
E34	VSS[233]	VSS[333]	Y23
E38	VSS[234]	VSS[334]	Y28
E42	VSS[235]	VSS[335]	Y30
E46	VSS[236]	VSS[336]	Y31
E48	VSS[237]	VSS[337]	Y32
E6	VSS[238]	VSS[338]	Y38
E8	VSS[239]	VSS[339]	Y43
F49	VSS[240]	VSS[340]	Y46
F5	VSS[241]	VSS[341]	P49
G10	VSS[242]	VSS[342]	Y5
G14	VSS[243]	VSS[343]	Y6
G18	VSS[244]	VSS[344]	Y8
G2	VSS[245]	VSS[345]	P24
G22	VSS[246]	VSS[346]	T43
G32	VSS[247]	VSS[347]	AD51
G36	VSS[248]	VSS[348]	AT3
G40	VSS[249]	VSS[349]	AD47
G44	VSS[250]	VSS[350]	Y47
G52	VSS[251]	VSS[351]	AT12
AF39	VSS[252]	VSS[352]	AM6
H16	VSS[253]	VSS[353]	AT13
H20	VSS[254]	VSS[354]	AM5
H30	VSS[255]	VSS[355]	AK45
H34	VSS[256]	VSS[356]	AK38
H38	VSS[257]	VSS[357]	AV14
H42	VSS[258]	VSS[358]	

REV1.0

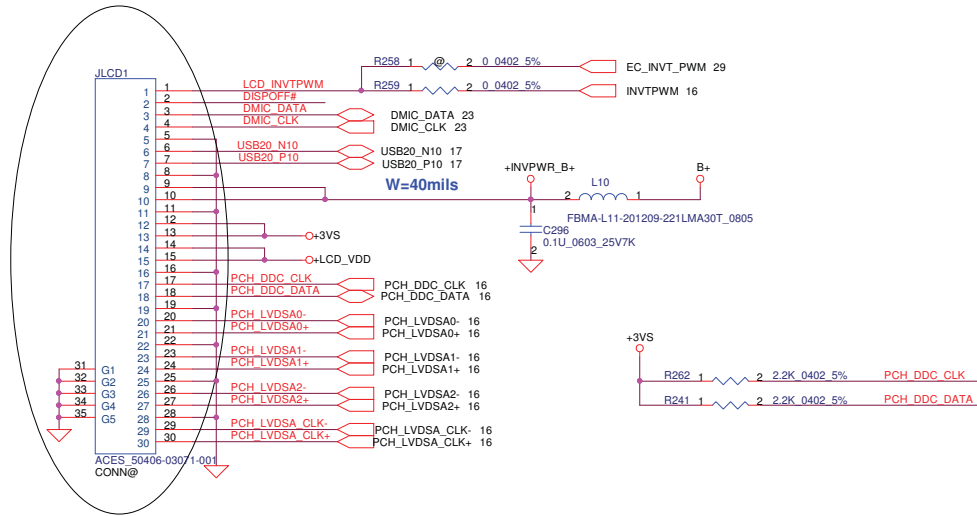
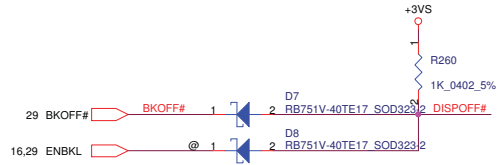
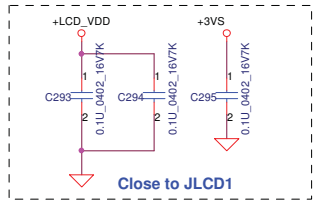
IBEXPEAK-M\_FCBGA107

USH		AK30	
AB16	VSS[0]	VSS[80]	AK31
AA19	VSS[1]	VSS[81]	AK32
AA20	VSS[2]	VSS[82]	AK34
AA22	VSS[3]	VSS[83]	AK35
AA19	VSS[4]	VSS[84]	AK38
AA24	VSS[5]	VSS[85]	AK43
AA26	VSS[6]	VSS[86]	AK46
AA28	VSS[7]	VSS[87]	AK49
AA30	VSS[8]	VSS[88]	AK5
L2	VSS[9]	VSS[89]	AK8
AA31	VSS[10]	VSS[90]	AL2
AA32	VSS[11]	VSS[91]	AL52
AB11	VSS[12]	VSS[92]	AM11
AB15	VSS[13]	VSS[93]	BB44
AB23	VSS[14]	VSS[94]	AD24
AB30	VSS[15]	VSS[95]	AM20
AM19	VSS[16]	VSS[96]	AM22
AA24	VSS[17]	VSS[97]	AM24
AA26	VSS[18]	VSS[98]	AM28
AA28	VSS[19]	VSS[99]	BA42
AA30	VSS[20]	VSS[100]	AM30
AA32	VSS[21]	VSS[101]	AM31
AC2	VSS[22]	VSS[102]	AM32
AC52	VSS[23]	VSS[103]	AM34
AD11	VSS[24]	VSS[104]	AM35
AD12	VSS[25]	VSS[105]	AM39
AD16	VSS[26]	VSS[106]	AM38
AD23	VSS[27]	VSS[107]	AM42
AD30	VSS[28]	VSS[108]	AU20
AD31	VSS[29]	VSS[109]	AM46
AD32	VSS[30]	VSS[110]	AY22
AD34	VSS[31]	VSS[111]	AM49
AU22	VSS[32]	VSS[112]	AM7
AD42	VSS[33]	VSS[113]	AE10
AD46	VSS[34]	VSS[114]	AN32
AD49	VSS[35]	VSS[115]	AN50
AF2	VSS[36]	VSS[116]	AN52
AF4	VSS[37]	VSS[117]	AP2
AF12	VSS[38]	VSS[118]	AP42
Y13	VSS[39]	VSS[119]	AP46
AH49	VSS[40]	VSS[120]	AP49
TR	VSS[41]	VSS[121]	AT11
AF35	VSS[42]	VSS[122]	BA12
AP13	VSS[43]	VSS[123]	AH48
AN34	VSS[44]	VSS[124]	AT32
AF45	VSS[45]	VSS[125]	AT36
AF46	VSS[46]	VSS[126]	AT41
AF49	VSS[47]	VSS[127]	AT47
AF5	VSS[48]	VSS[128]	AT7
AF9	VSS[49]	VSS[129]	AV12
AG2	VSS[50]	VSS[130]	AV20
AG52	VSS[51]	VSS[131]	AV24
AH11	VSS[52]	VSS[132]	AV30
AH15	VSS[53]	VSS[133]	AV34
AH16	VSS[54]	VSS[134]	AV38
AH24	VSS[55]	VSS[135]	AV42
AH32	VSS[56]	VSS[136]	AV46
AV18	VSS[57]	VSS[137]	AV49
AH43	VSS[58]	VSS[138]	AV5
AH47	VSS[59]	VSS[139]	AV8
AH7	VSS[60]	VSS[140]	AW14
AJ19	VSS[61]	VSS[141]	AW18
AJ2	VSS[62]	VSS[142]	AW2
AJ20	VSS[63]	VSS[143]	BF9
AJ22	VSS[64]	VSS[144]	AW32
AJ23	VSS[65]	VSS[145]	AW36
AJ26	VSS[66]	VSS[146]	AW40
AJ28	VSS[67]	VSS[147]	AW52
AJ32	VSS[68]	VSS[148]	AY11
AJ34	VSS[69]	VSS[149]	AY43
Y15	VSS[70]	VSS[150]	AY47
AJ4	VSS[71]	VSS[151]	
AK12	VSS[72]	VSS[152]	
AM41	VSS[73]	VSS[153]	
AN19	VSS[74]	VSS[154]	
AK26	VSS[75]	VSS[155]	
AK22	VSS[76]	VSS[156]	
AK23	VSS[77]	VSS[157]	
AK28	VSS[78]	VSS[158]	
	VSS[79]	VSS[159]	

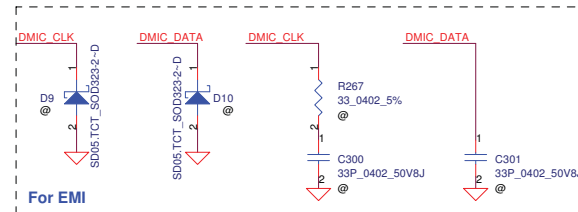
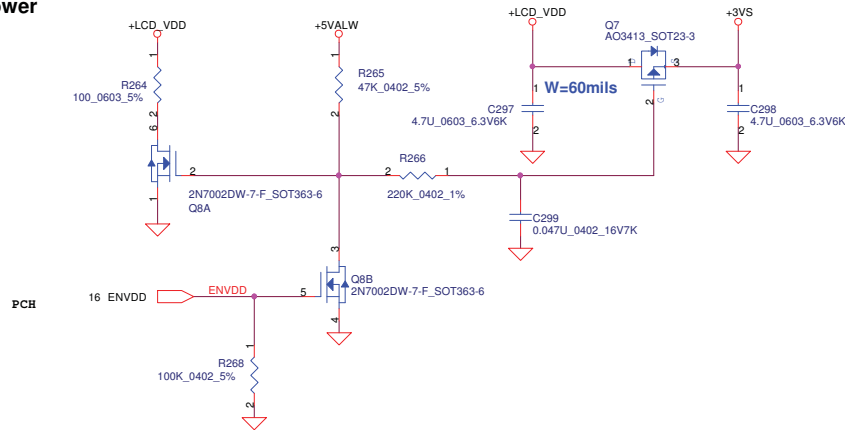
REV1.0

IBEXPEAK-M\_FCBGA107

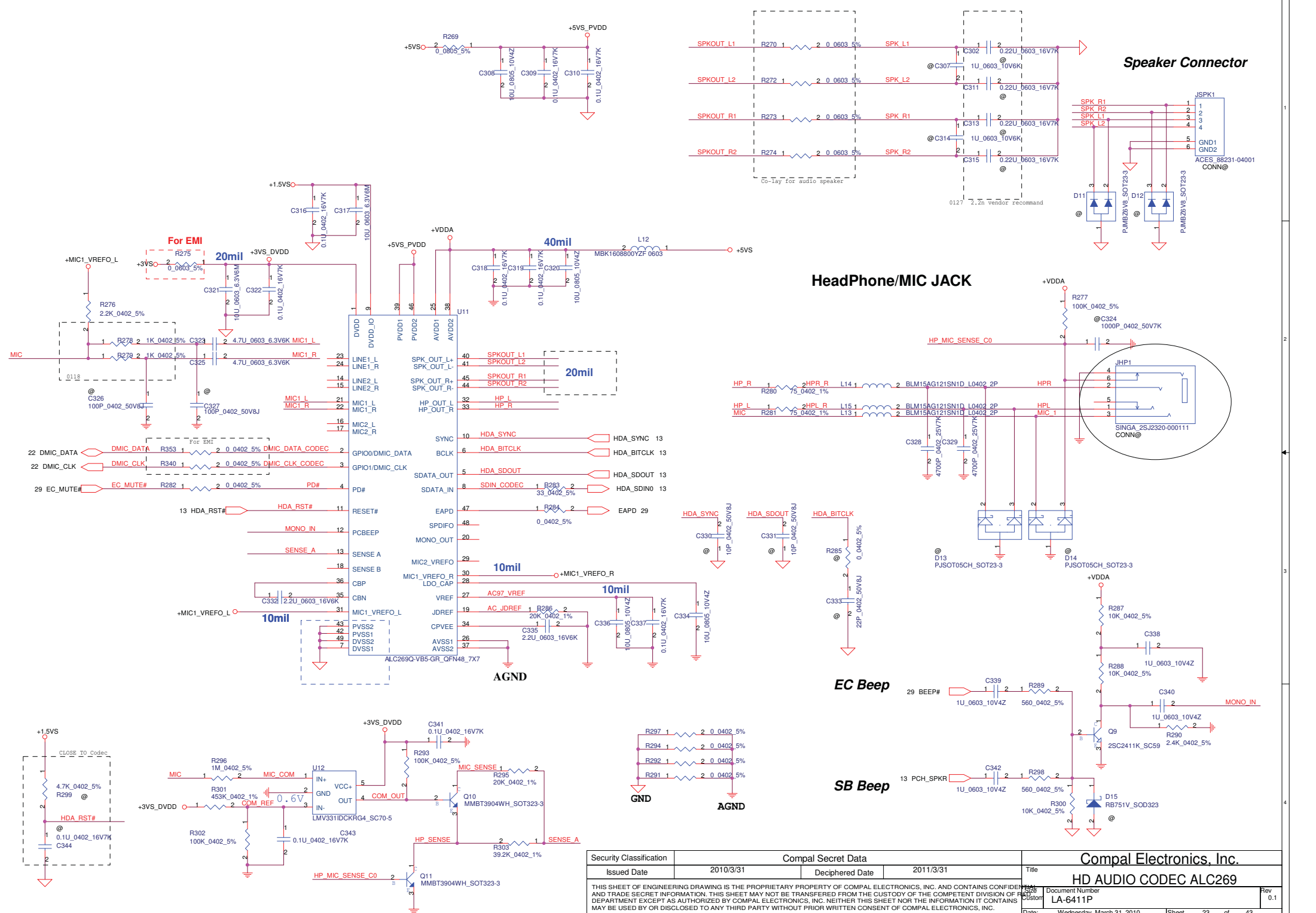
Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number <b>LA-6411P</b>
Date: Wednesday, March 31, 2010				Sheet 21 of 43



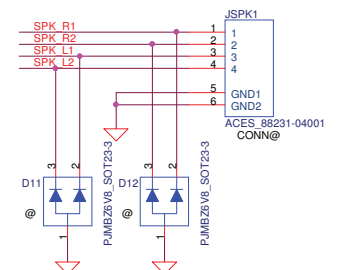
**LCD Power**



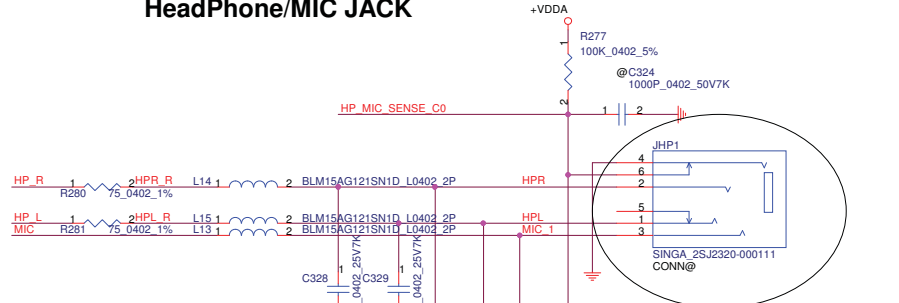
Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title LCD/ CAMERA Conn	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev 0.1	Date: Wednesday, March 31, 2010   Sheet 22 of 43



**Speaker Connector**



**HeadPhone/MIC JACK**

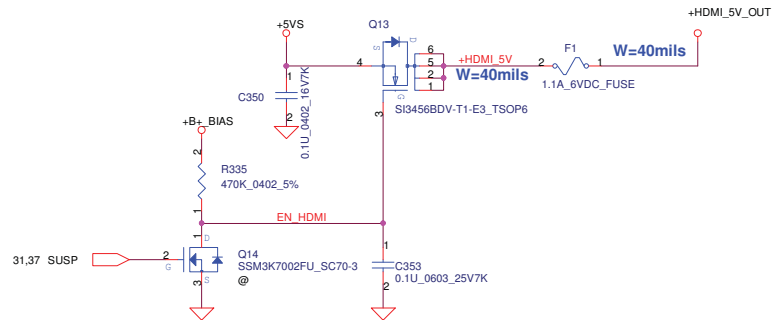
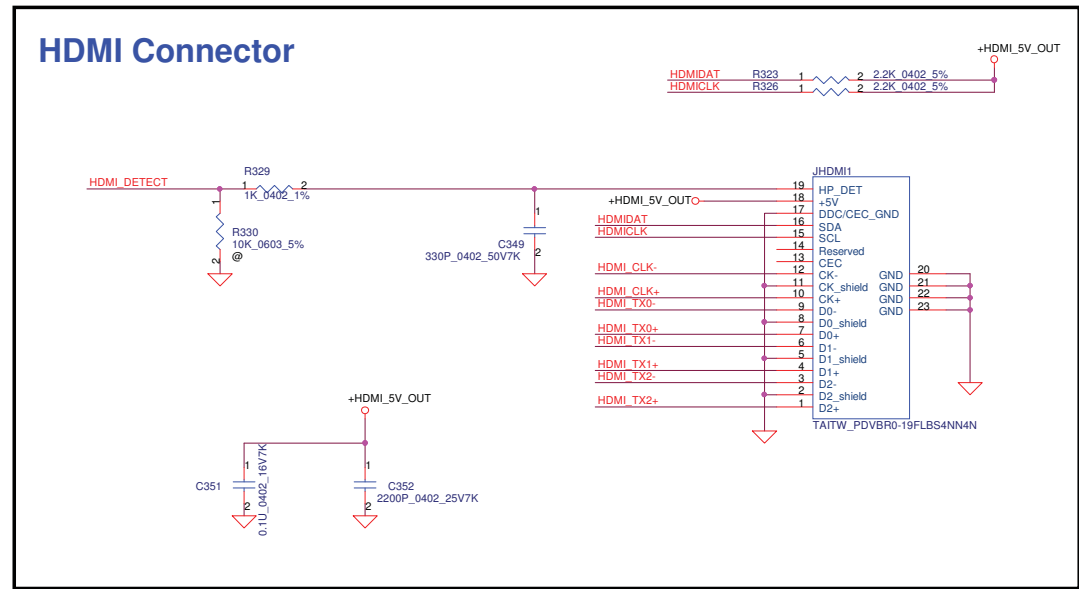
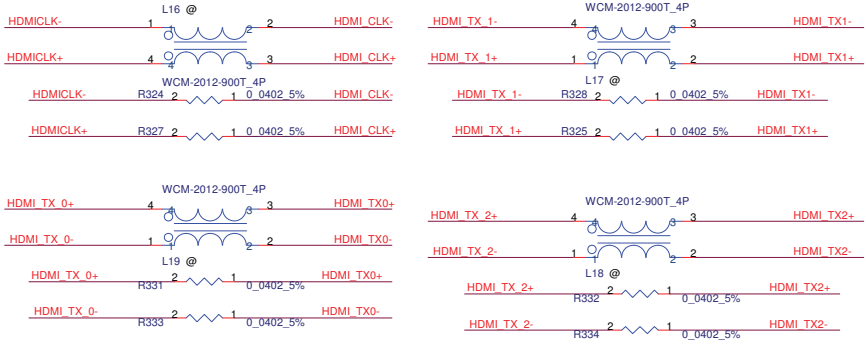
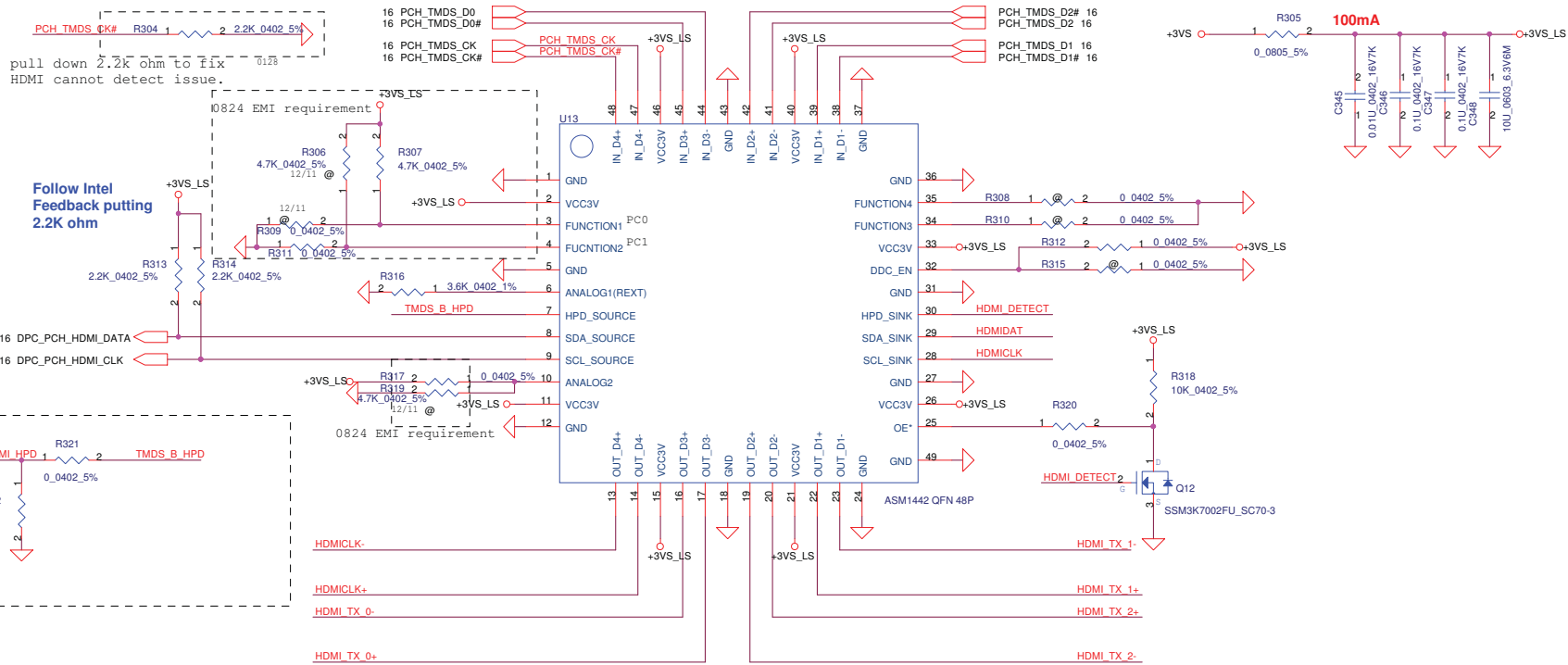


Security Classification	Compal Secret Data	
Issued Date	2010/3/31	Deciphered Date
		2011/3/31

THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.

<b>Compal Electronics, Inc.</b>	
<b>HD AUDIO CODEC ALC269</b>	
Doc Number	LA-6411P
Date:	Wednesday, March 31, 2010
Sheet	23 of 43

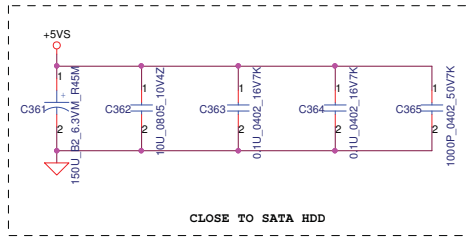
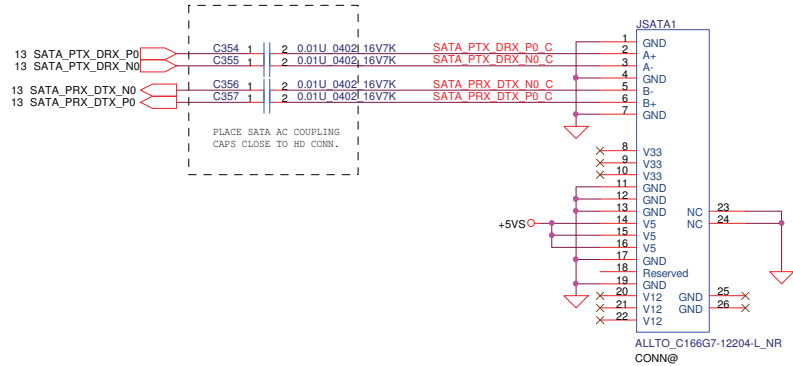
EQUALIZATION SETTING:  
 [PC1\_PC0]=00,8dB  
 [PC1\_PC0]=01,4dB (Recommended)  
 [PC1\_PC0]=10,12dB  
 [PC1\_PC0]=11,0dB



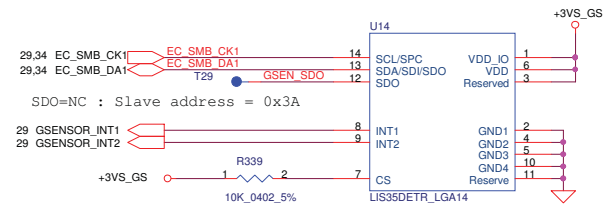
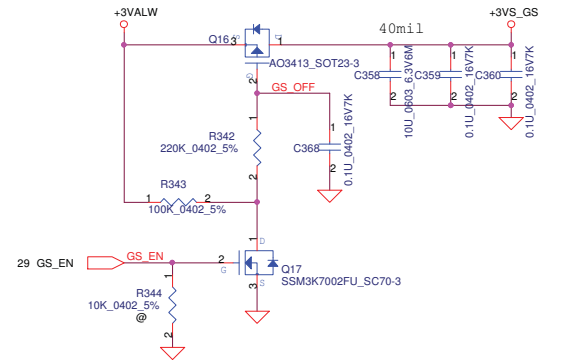
Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number LA-6411P
Date:	Wednesday, March 31, 2010	Sheet	24	of 43



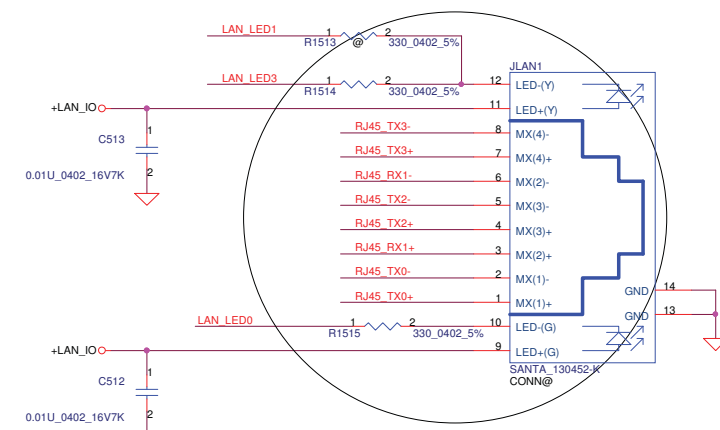
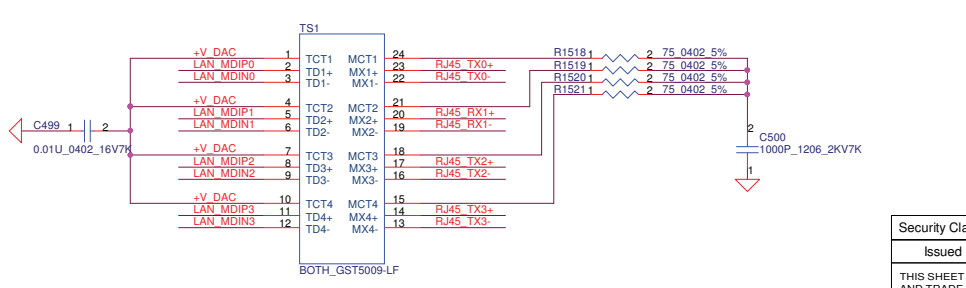
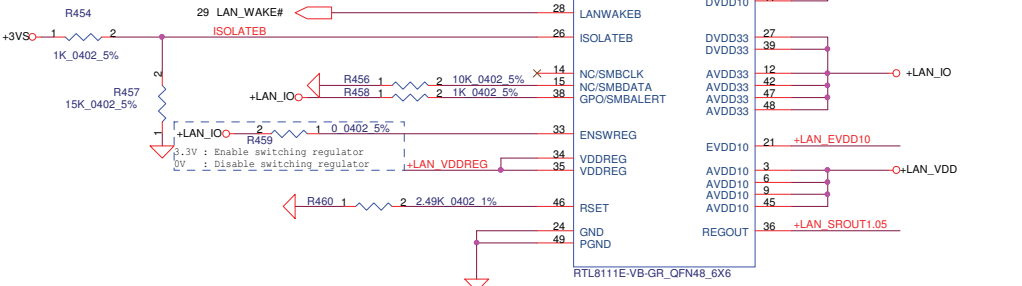
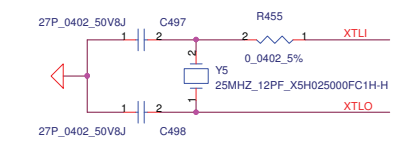
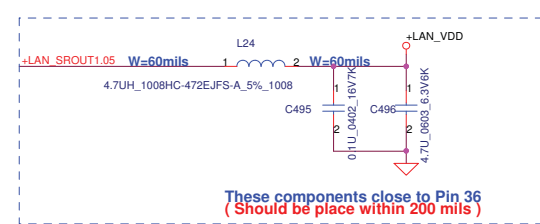
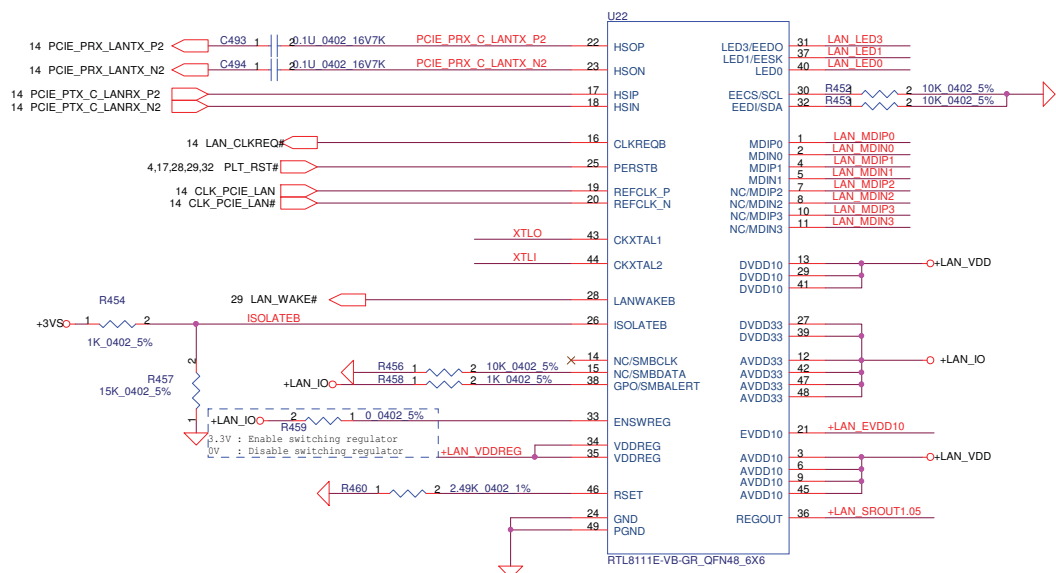
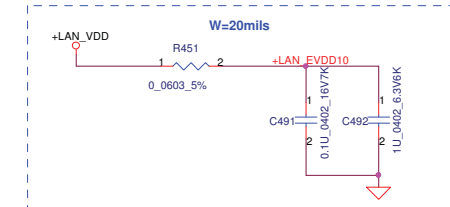
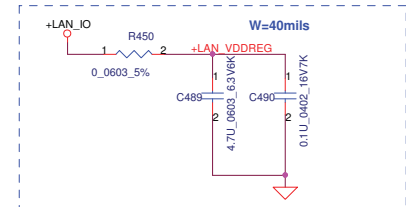
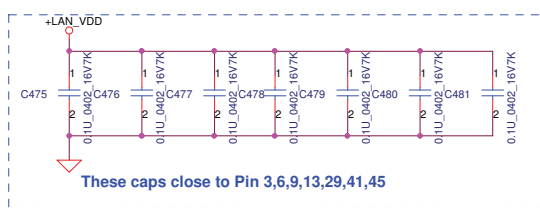
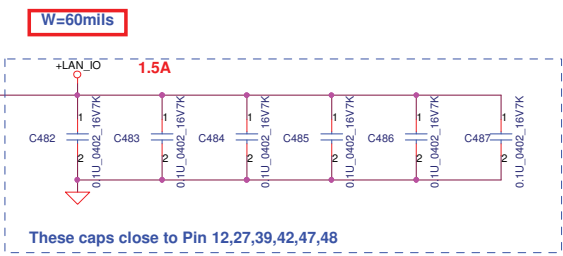
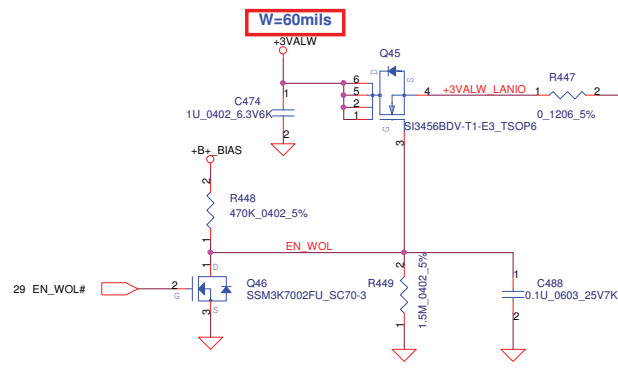
# SATA HDD CONN



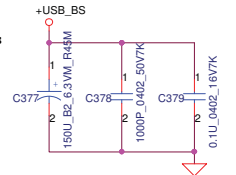
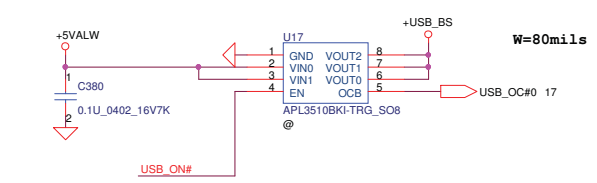
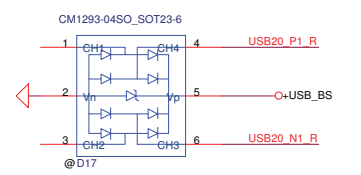
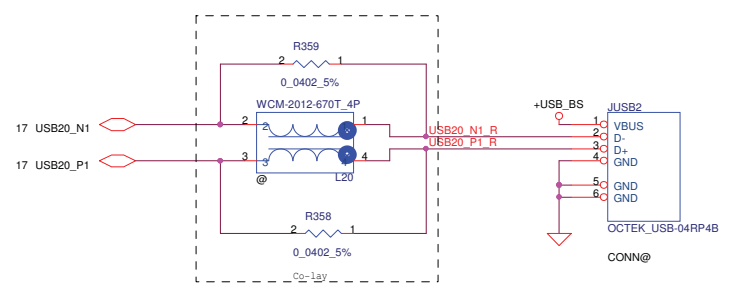
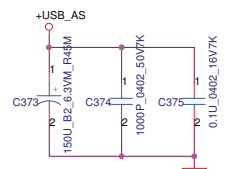
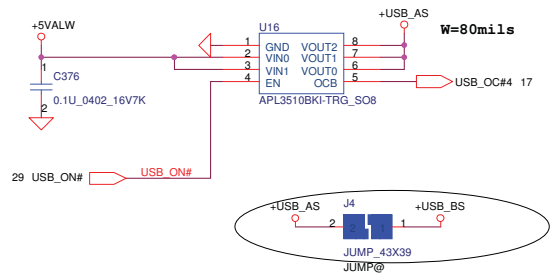
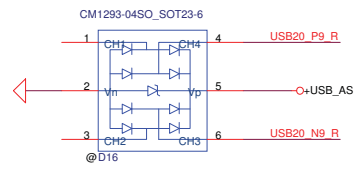
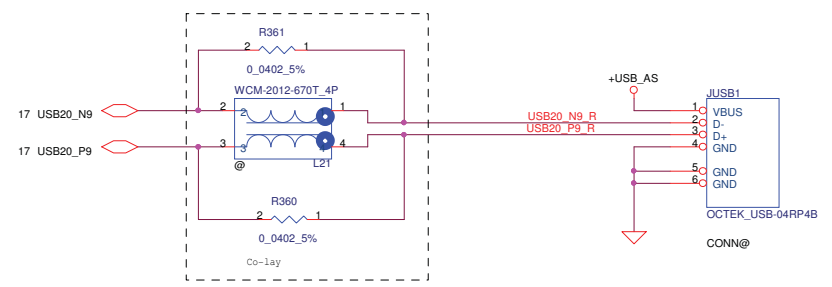
# APS G-Sensor



Security Classification	Compal Secret Data		Title	Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	SATA HDD/ APS	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.			Doc Number	LA-6411P	Rev 0.1
Date:	Wednesday, March 31, 2010	Sheet	25	of 43	

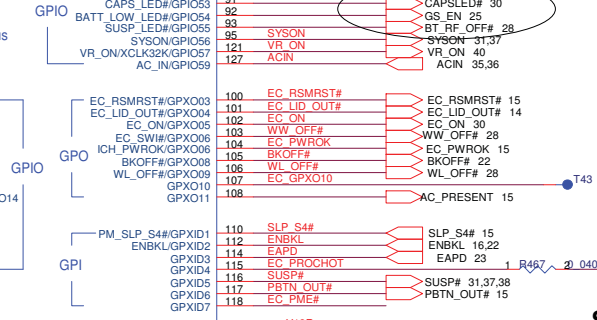
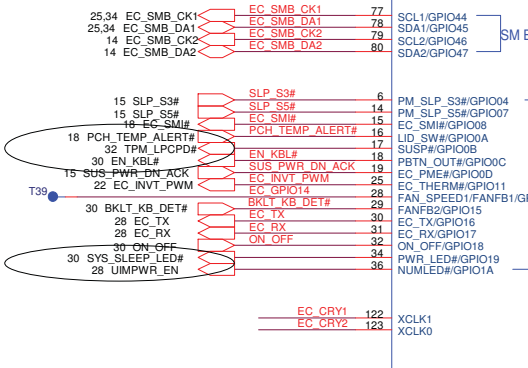
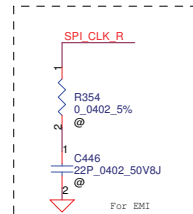
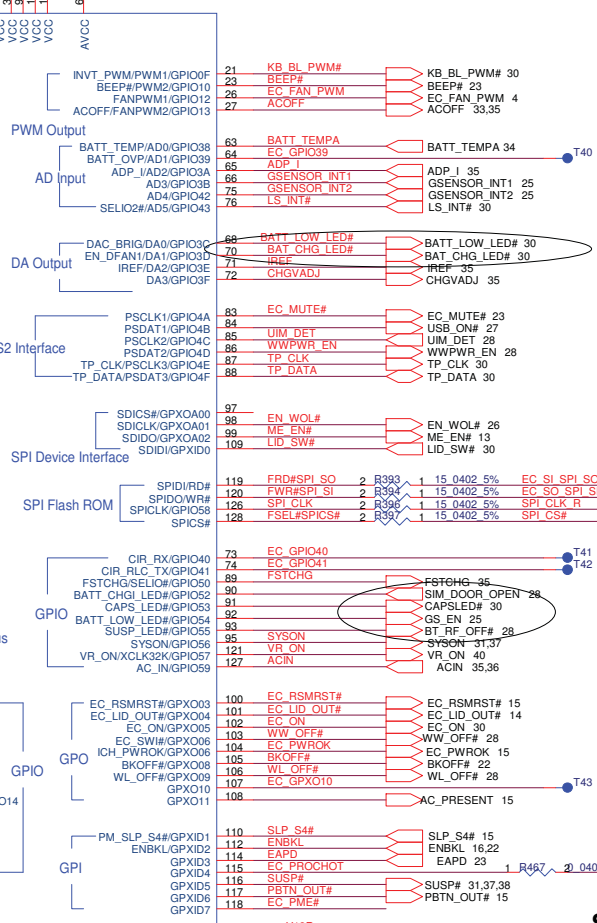
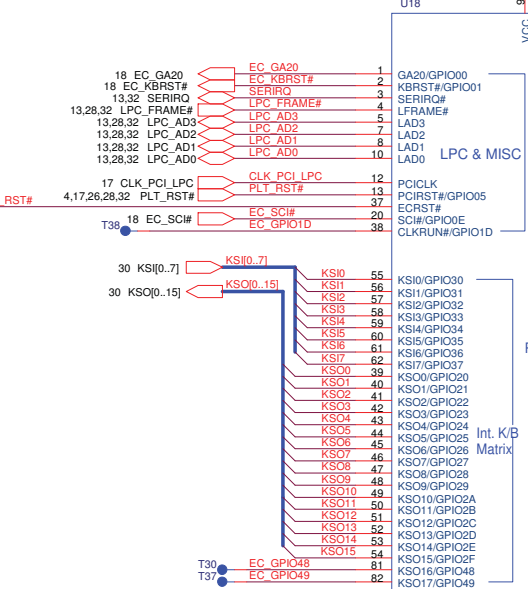
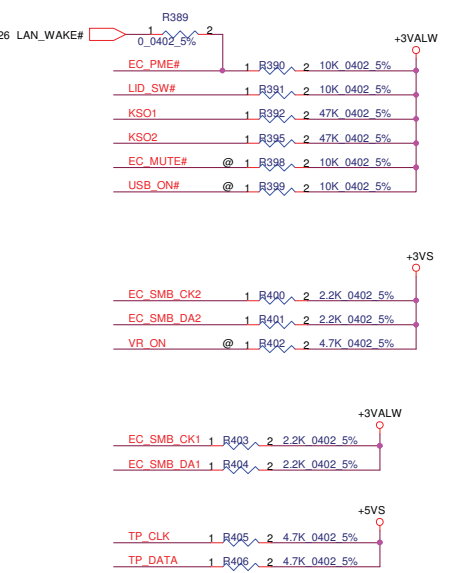
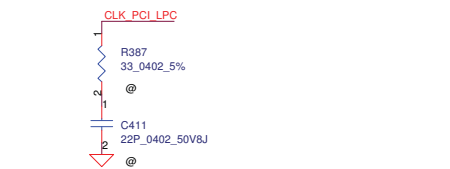
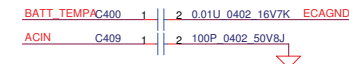
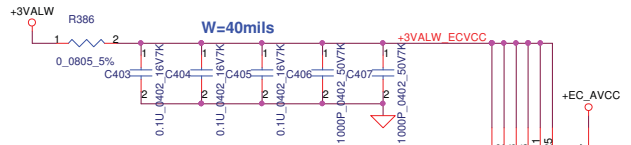
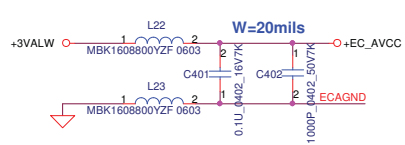


Security Classification	Compal Secret Data			Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. WITHOUT THE WRITTEN PERMISSION OF COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number	Rev
				LA-6411P	0.1
				Date: Wednesday, March 31, 2010	Sheet 26 of 43

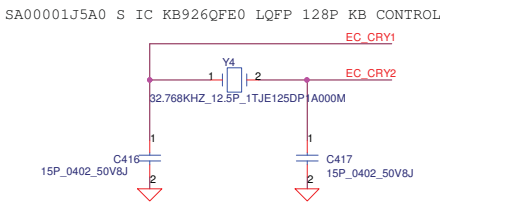
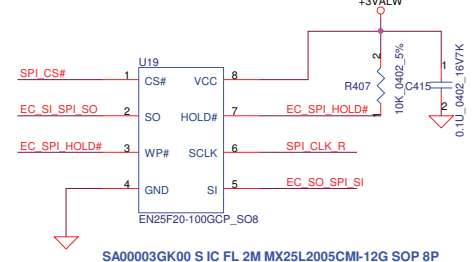


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title <b>USB2.0</b>	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER SERVICE DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Doc Number <b>LA-6411P</b>	Rev 0.1
Date: Wednesday, March 31, 2010				Sheet	27 of 43



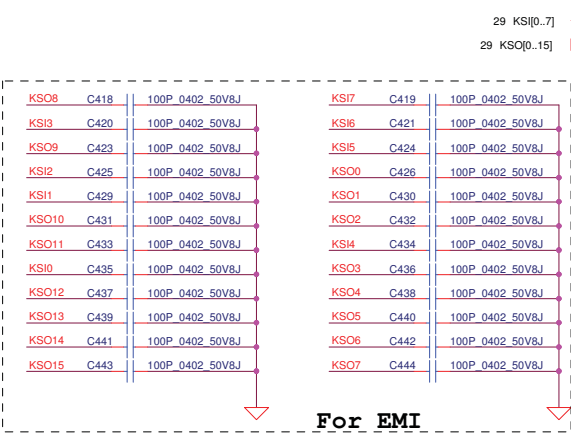


**SPI ROM 256KB**

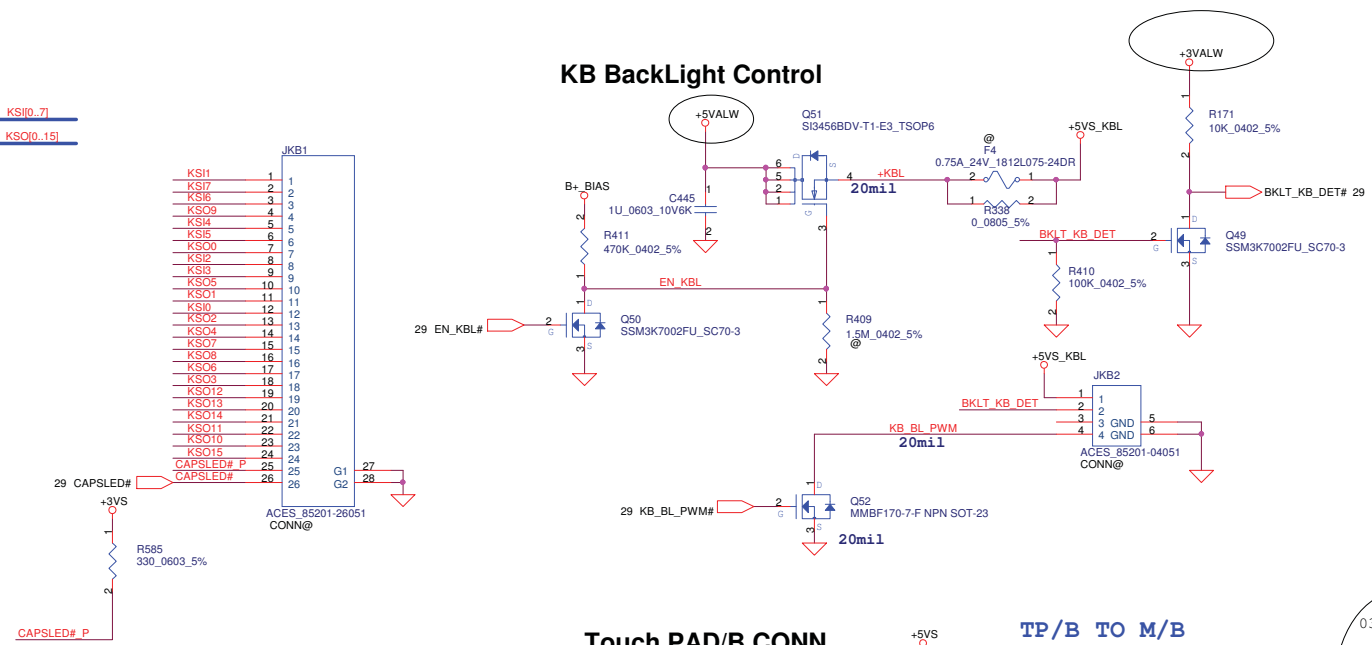


Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF COMPAL ELECTRONICS, INC. DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				EC ENE-KB926/ ROM Document Number <b>LA-6411P</b> Date: Wednesday, March 31, 2010   Sheet 29 of 43

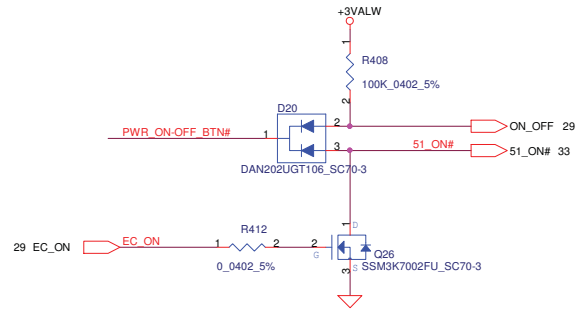
# Int. KB CONN.



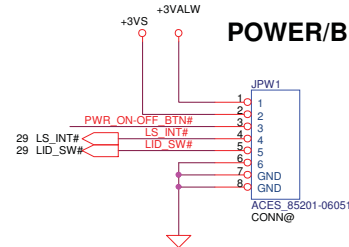
# KB BackLight Control



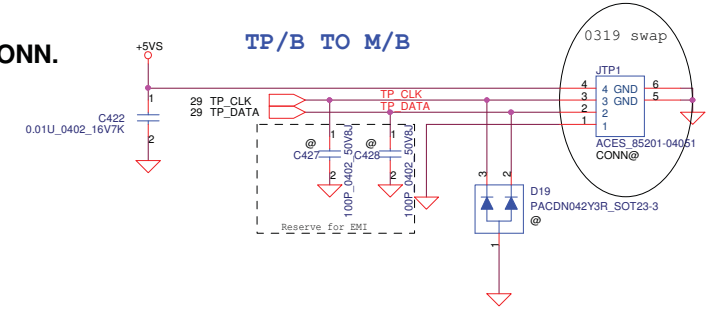
# Power Button



# POWER/B CONN



# Touch PAD/B CONN.

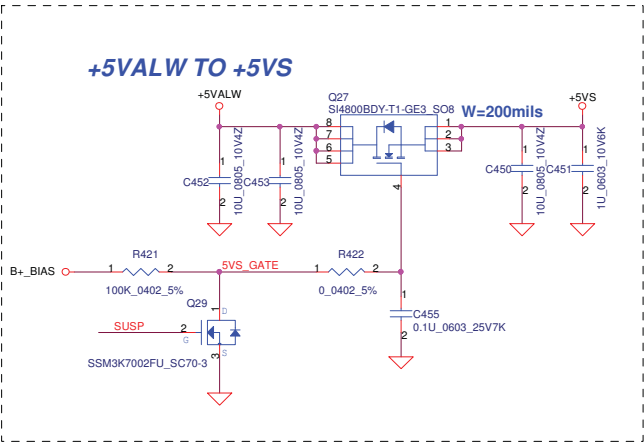


# LED/B CONN

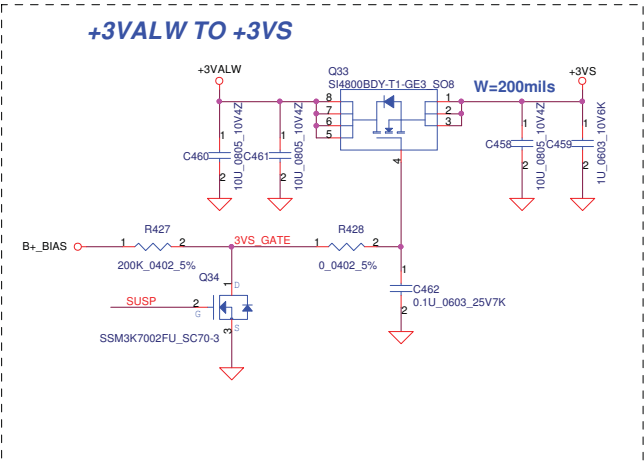


Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title KB/ TP/ FUNC/ LED/ALS	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				File No LA-6411P	Rev 0.1
Date:	Wednesday, March 31, 2010	Sheet	30	of	43

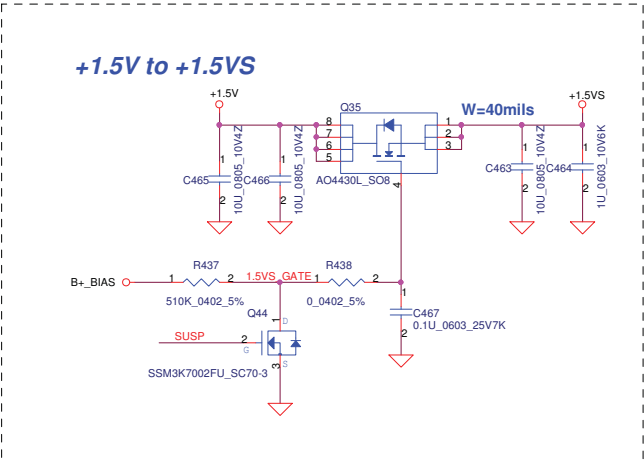
**+5VALW TO +5VS**



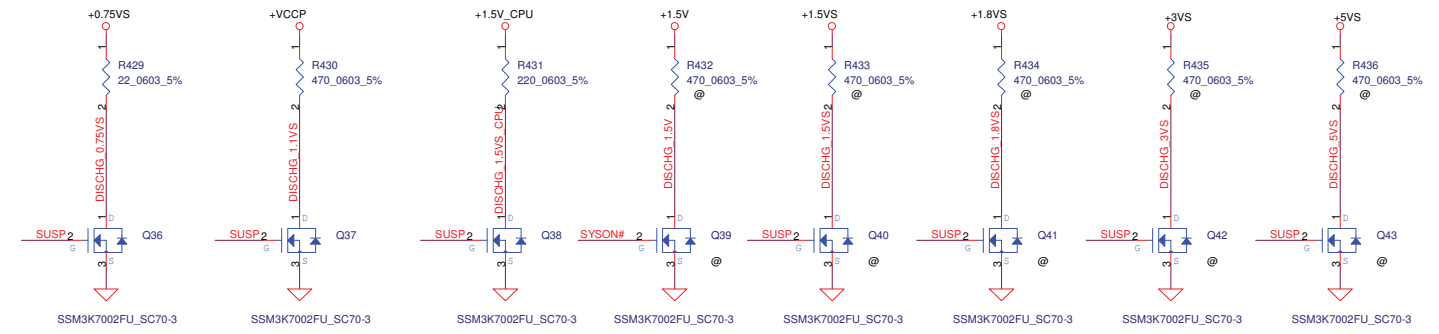
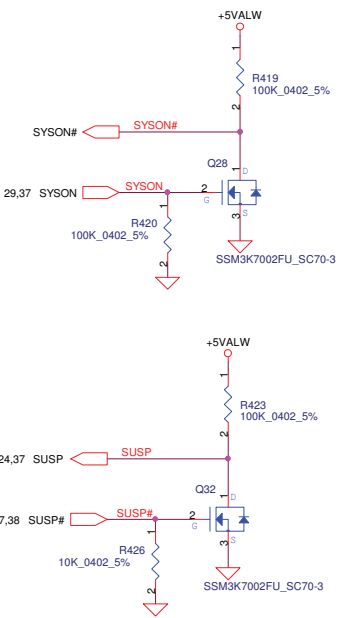
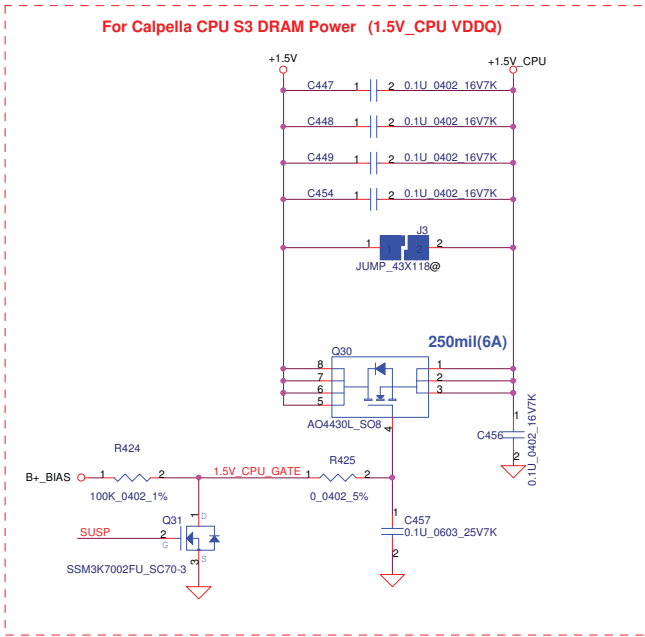
**+3VALW TO +3VS**



**+1.5V to +1.5VS**



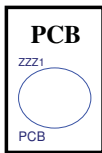
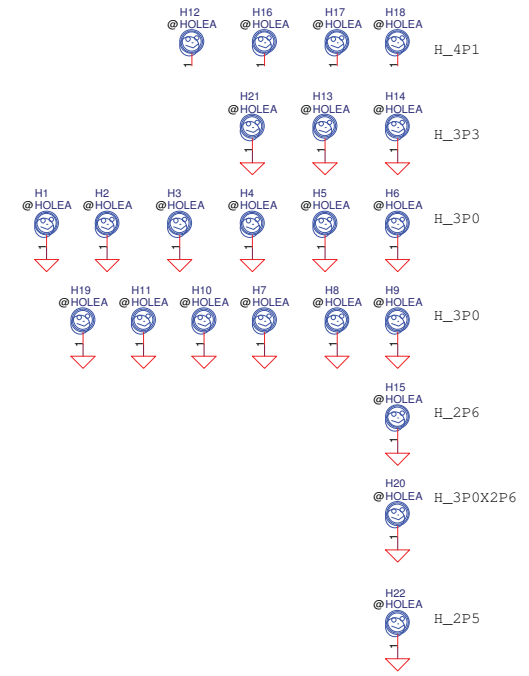
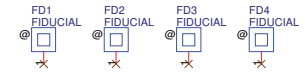
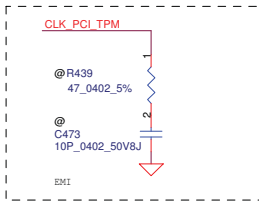
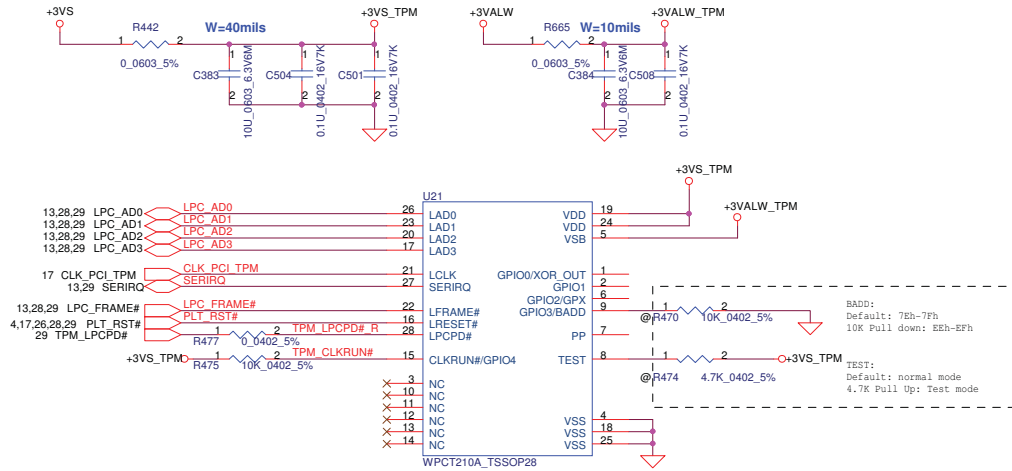
**For Calpella CPU S3 DRAM Power (1.5V\_CPU VDDQ)**



Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Document Number
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Rev 0.1
Date: Wednesday, March 31, 2010				Sheet 31 of 43

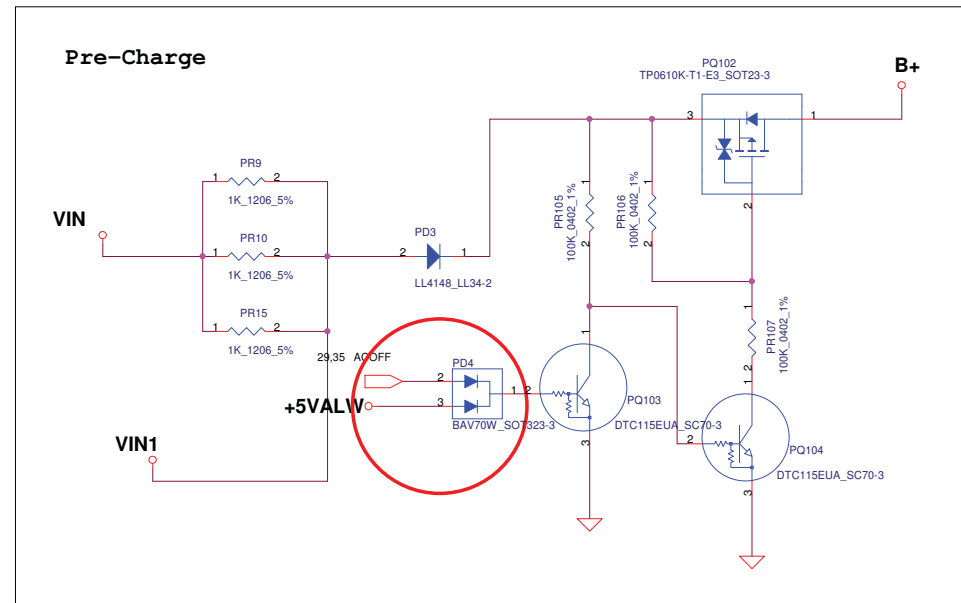
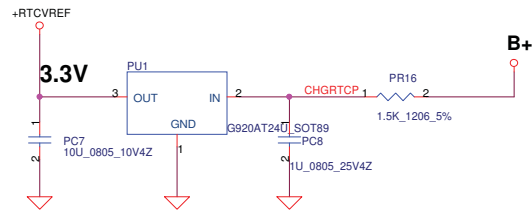
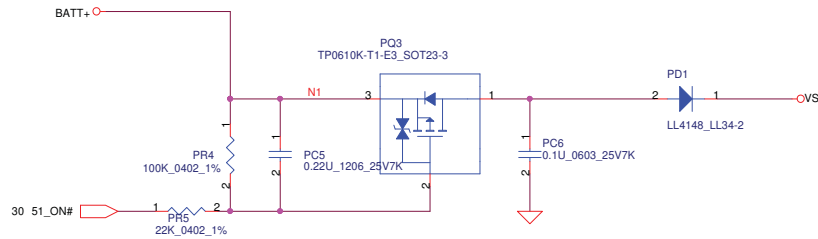
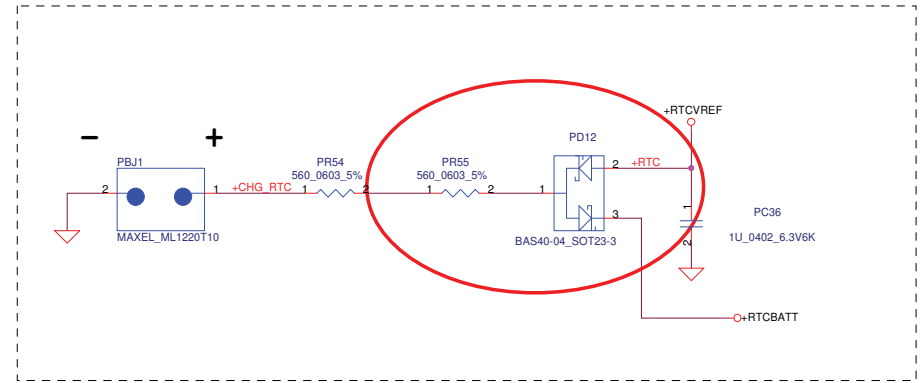
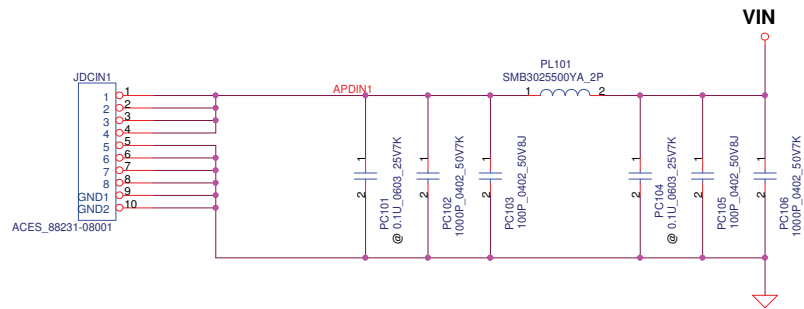
**Compal Electronics, Inc.**  
**DC/DC INTERFACE**

# TPM

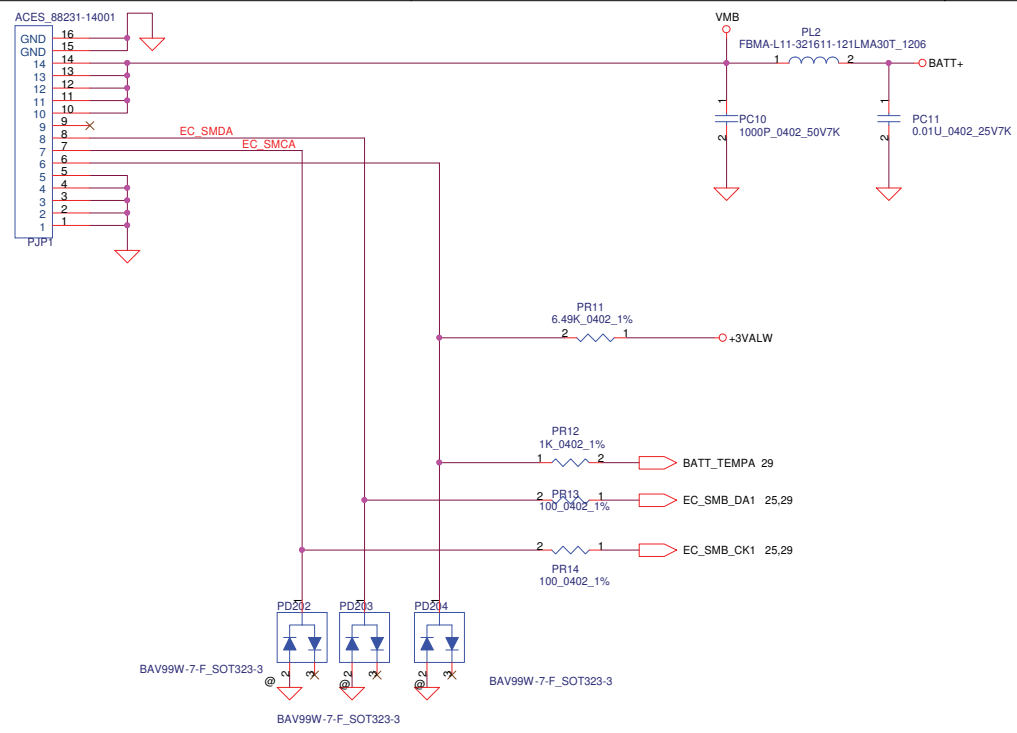


Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY CUSTOMER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number <b>LA-6411P</b>
Date: Wednesday, March 31, 2010				Rev 0.1
Sheet 32 of 43				

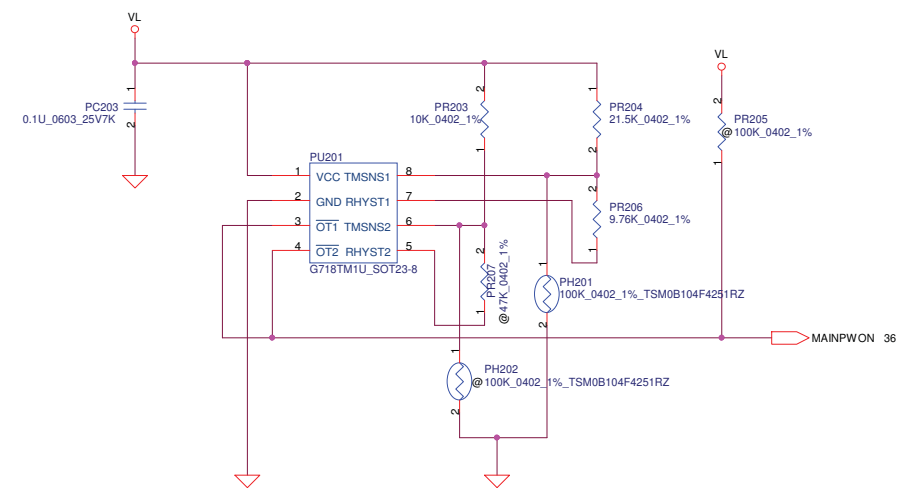
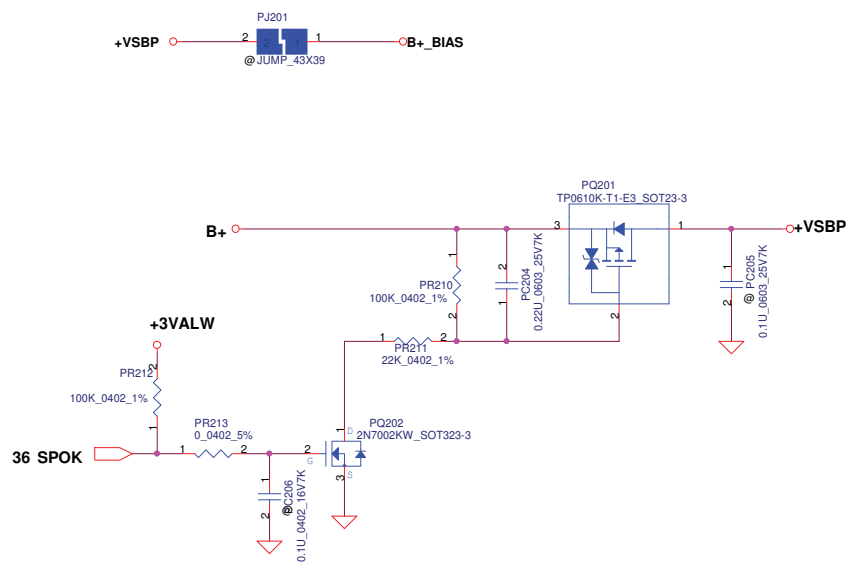




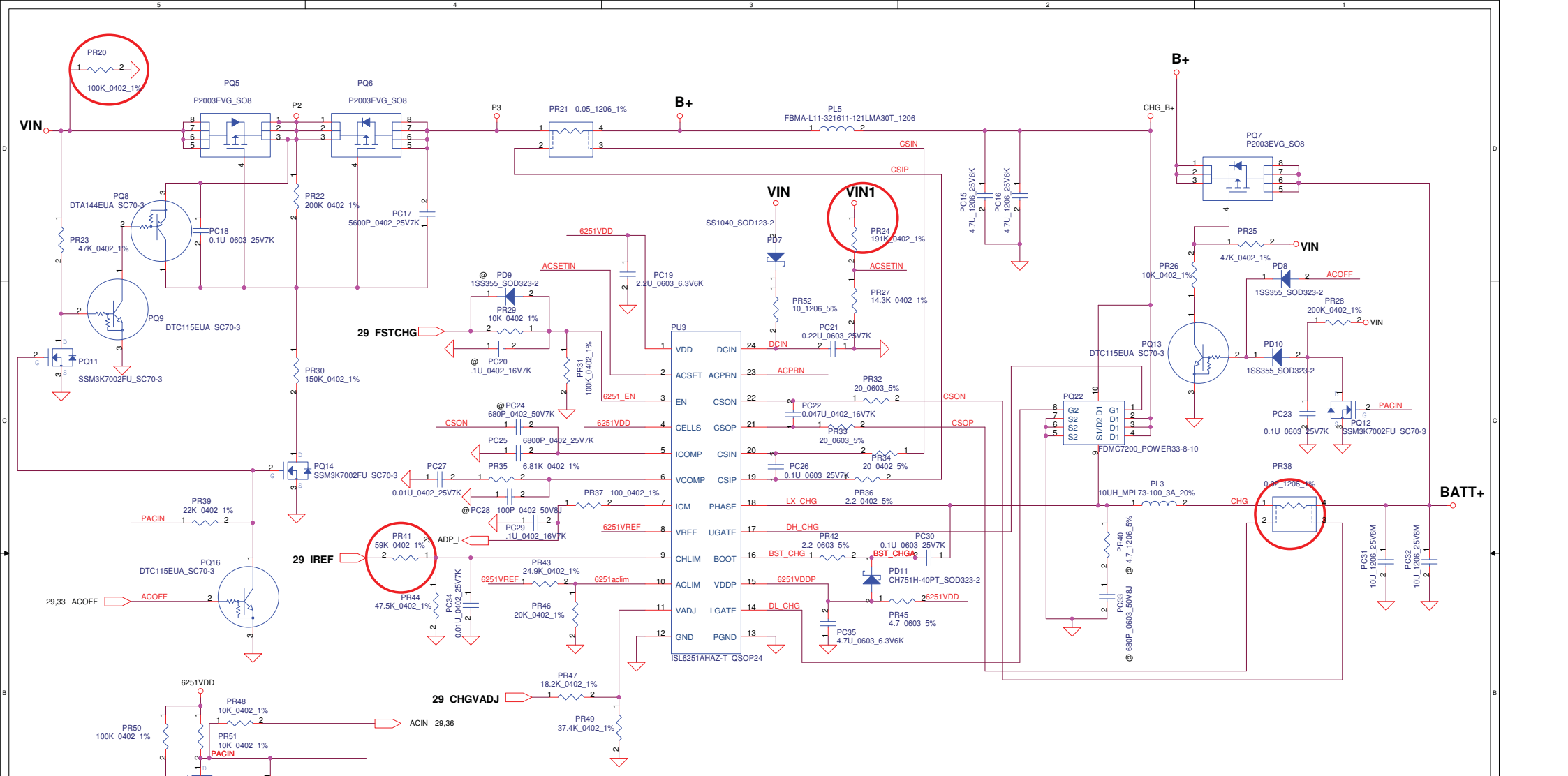
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title	
				DCIN & DETECTOR	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.					
Size	Document Number			Rev	0.1
Custom	LA-6411P				
Date:	Wednesday, March 31, 2010	Sheet	33	of	43



**PH1 under CPU bottom side :**  
 CPU thermal protection at 92 degree C  
 Recovery at 56 degree C



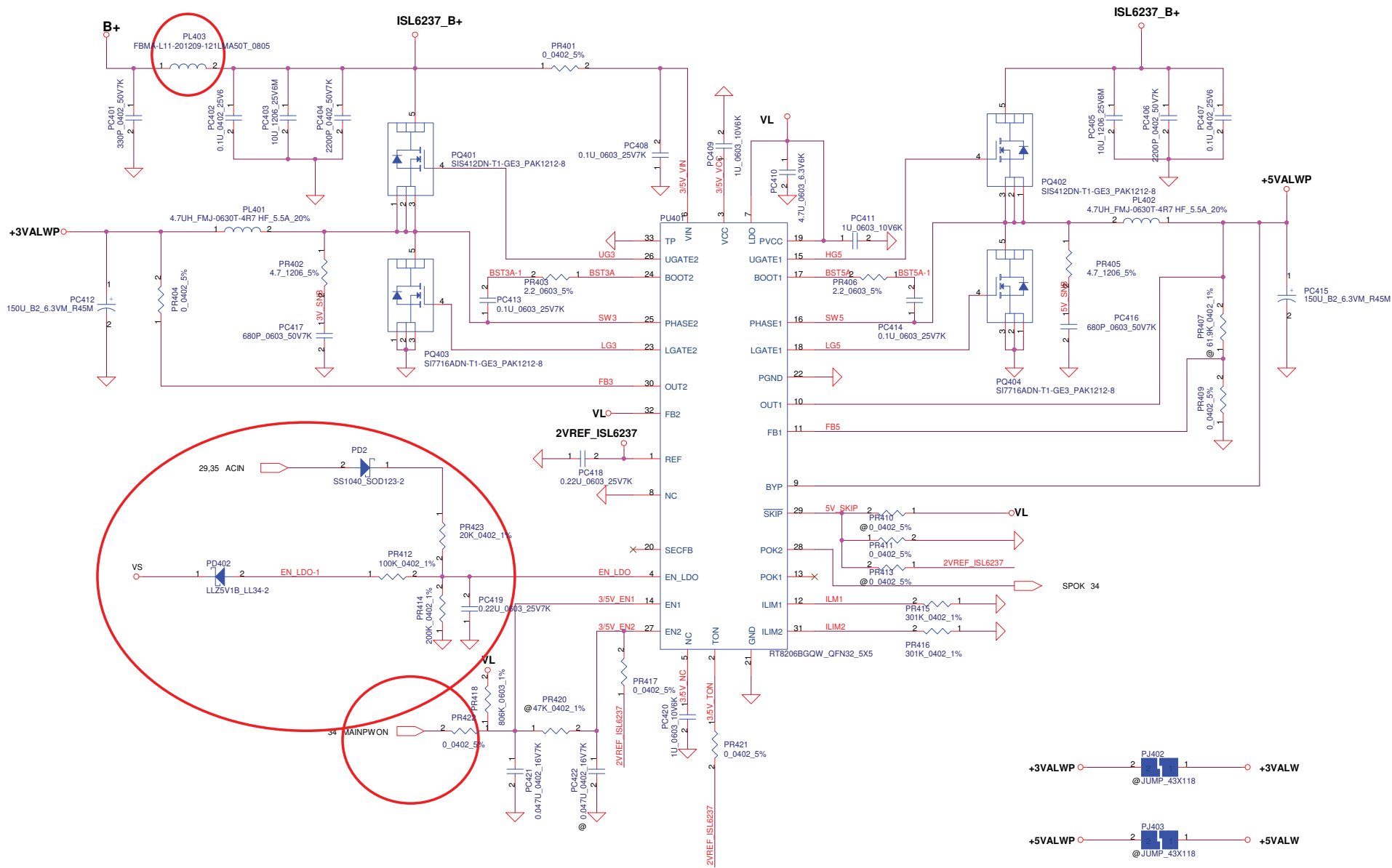
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				BATTERY CONN / OTP	
Size	Document Number	Date		Rev	0.1
Custom	LA-6411P	Wednesday, March 31, 2010		Sheet	34 of 43



**Ki:0.89**  
**Maximum charging current for Sanyo battery**  
**IREF=3.3, Ichg= 0.7C for Sanyo battery**  
**Kv:9.405 for 4S battery**

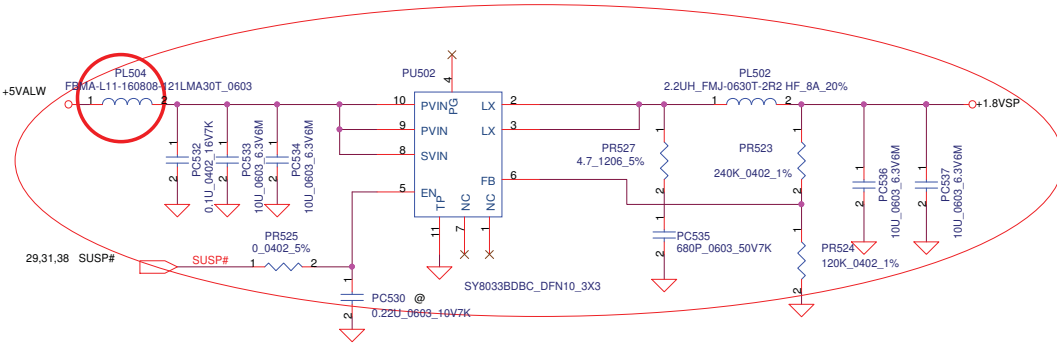
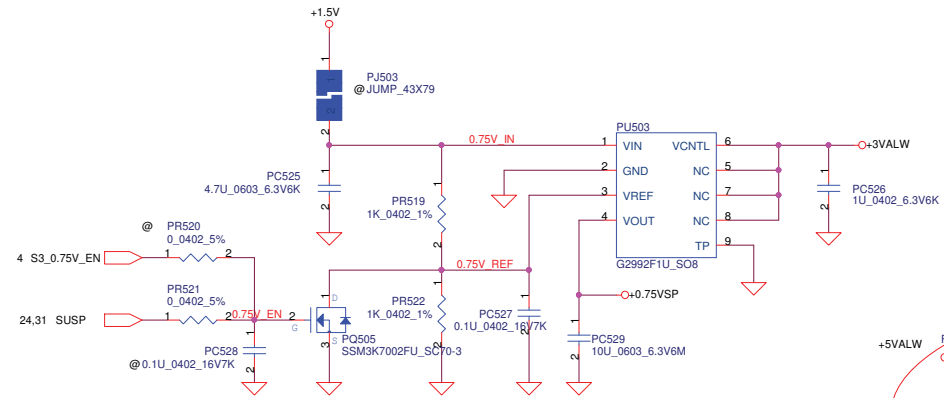
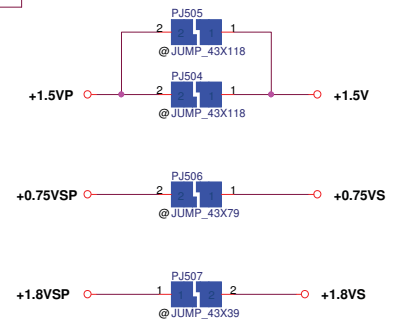
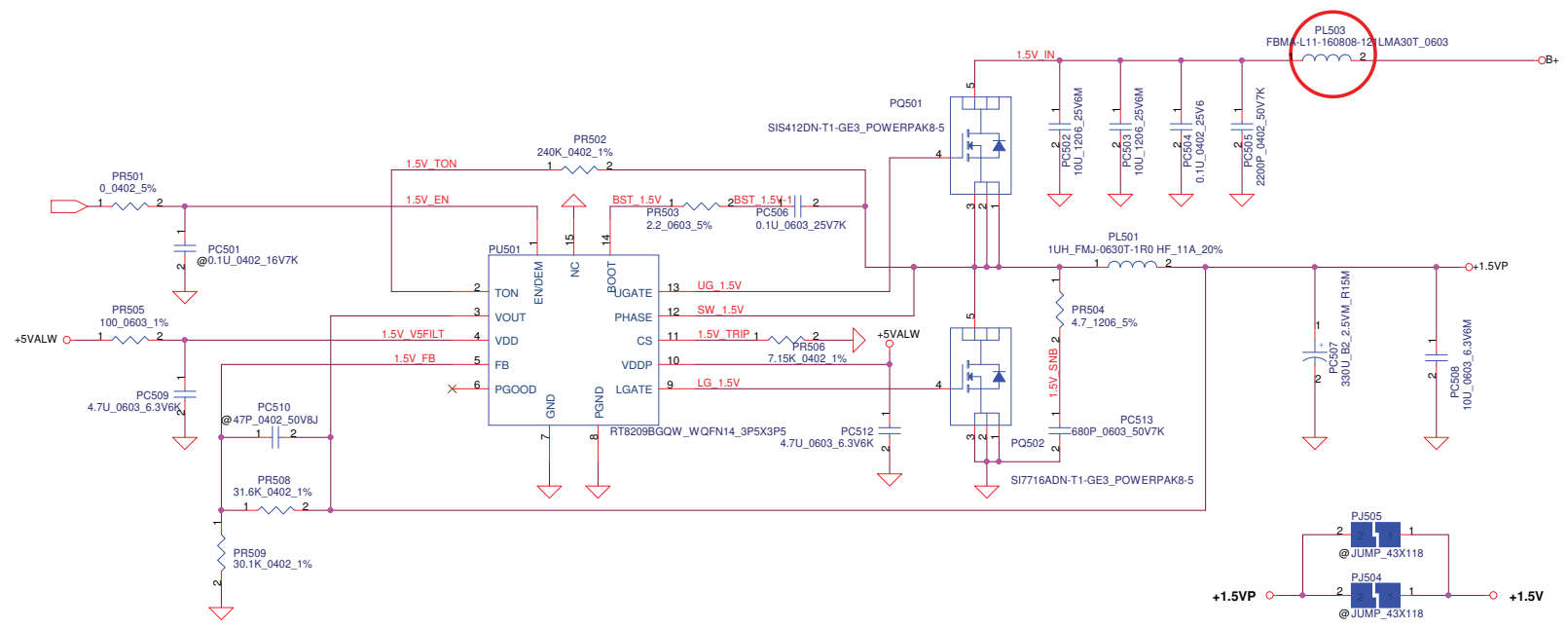
**Vin Detector**  
**High 18.089v**  
**Low 17.44v**

Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				CHARGER
Size Custom	Document Number	Rev		
	LA-6411P	0.1		
Date:	Wednesday, March 31, 2010	Sheet	35	of 43

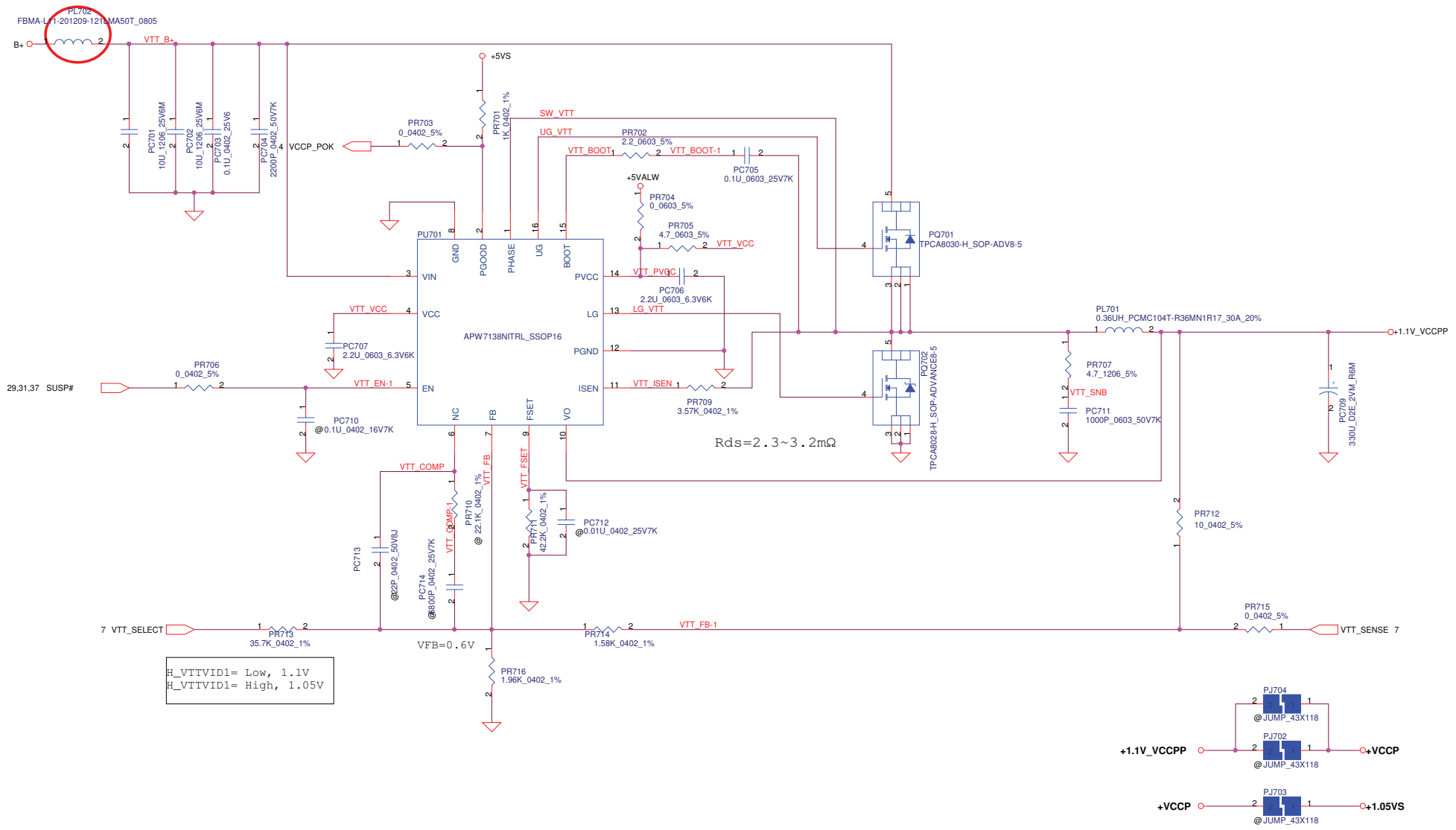


Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				3VALW/5VALW
Size	Custom	Document Number	LA-6411P	Rev
Date:	Wednesday, March 31, 2010	Sheet	36	of 43

29.31 SYSON

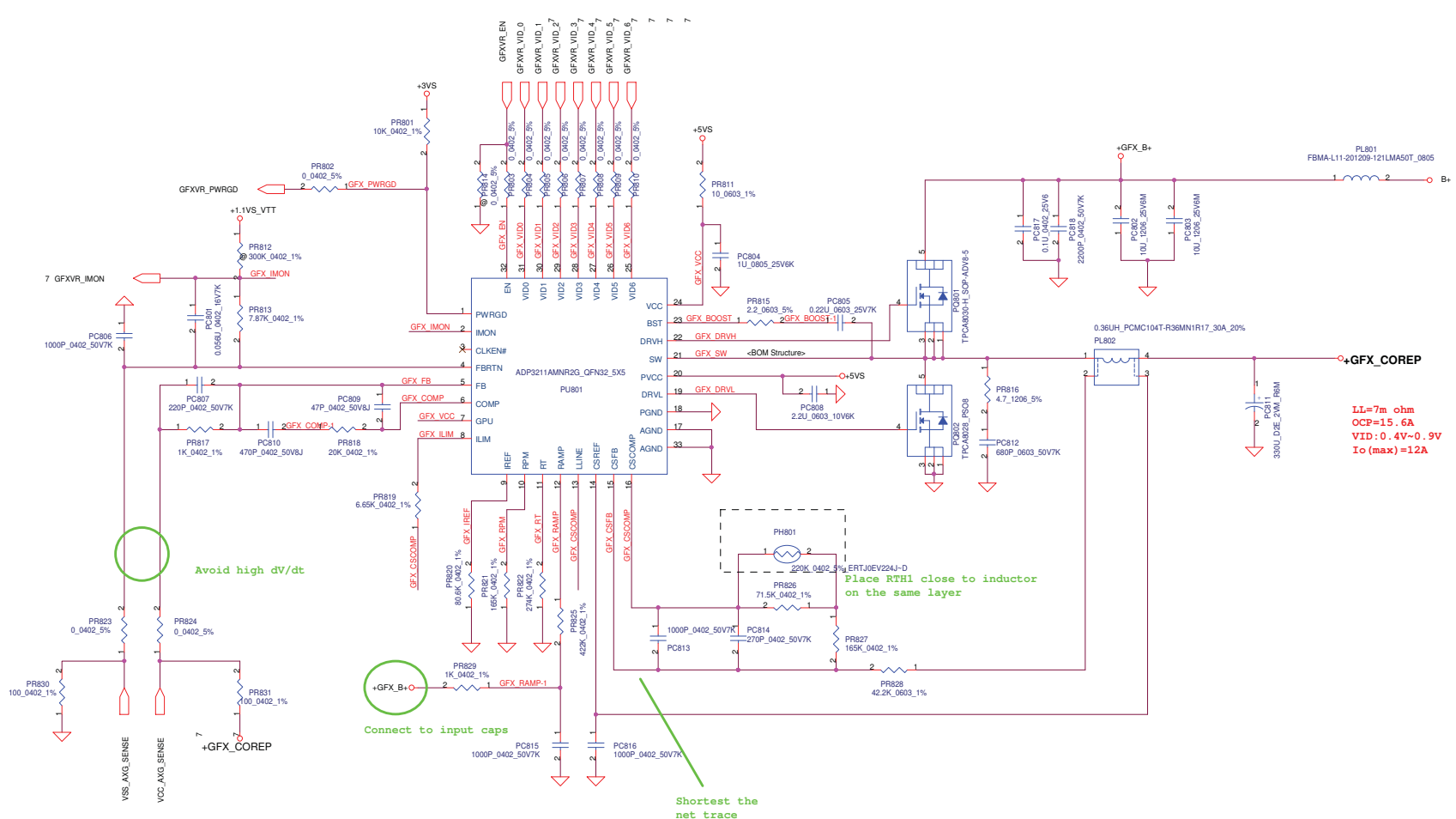


Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size Custom
				Document Number LA-6411P
				Rev 0.1
Date:	Wednesday, March 31, 2010	Sheet	37	of 43



Security Classification	Compal Secret Data		Title	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Compal Electronics, Inc.
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number <b>LA-6411P</b>
Date:	Wednesday, March 31, 2010	Sheet	38	of 43

change name



LL=7m ohm  
 OCP=15.6A  
 VID: 0.4V-0.9V  
 Io (max)=12A

Avoid high dV/dt

Connect to input caps

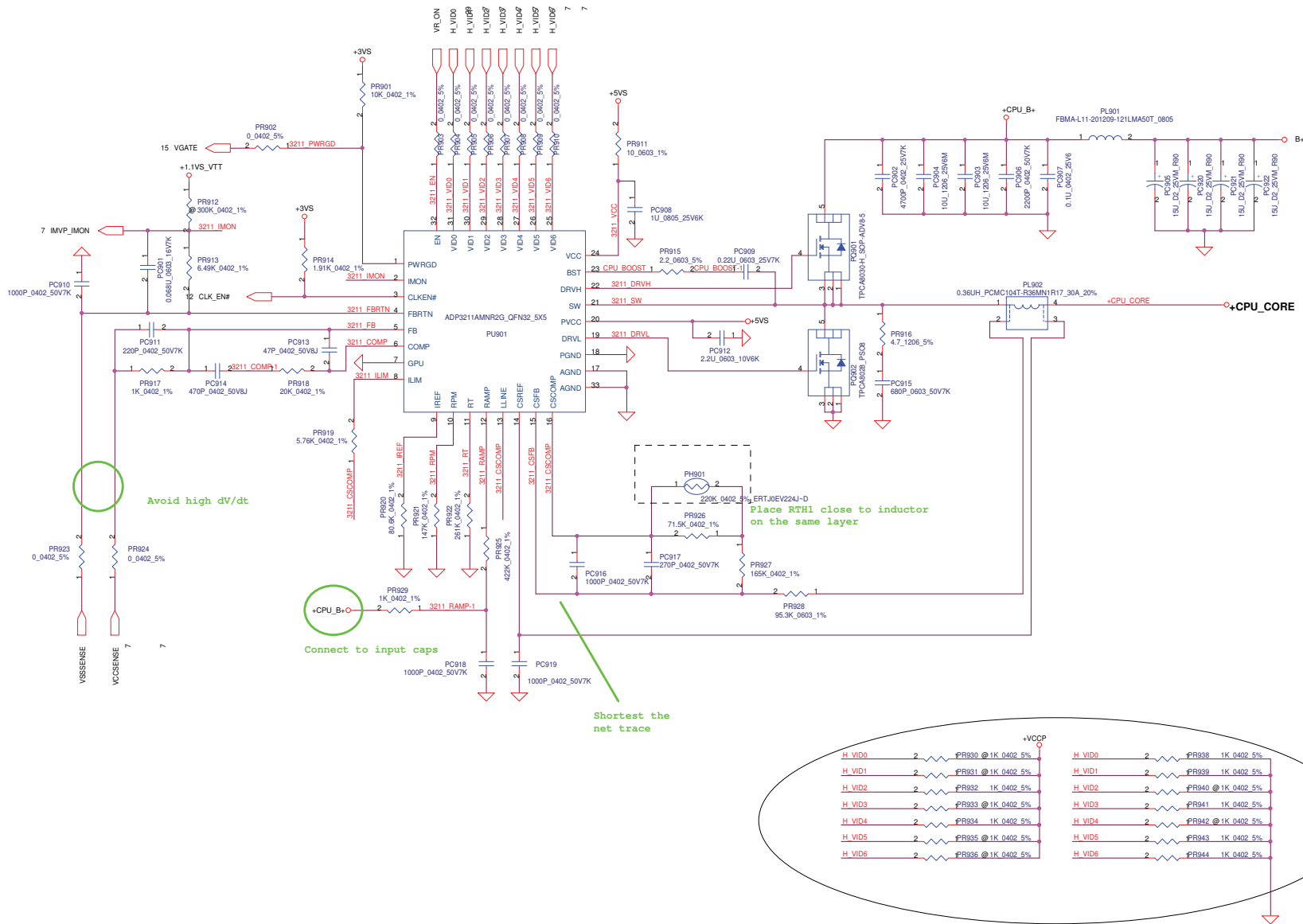
Shortest the net trace

Place RTH1 close to inductor on the same layer



(15A, 600mils, Via NO. = 30)

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Document Number
Size	LA-6411P	Rev	0.1	
Date:	Wednesday, March 31, 2010	Sheet	39	of 43



Auburndale ULV: VID(0-5):001010

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size
C	LA-6411P	Document Number	Rev	0.1
Date:	Wednesday, March 31, 2010	Sheet	40	of 43



Version change list (P.I.R. List)

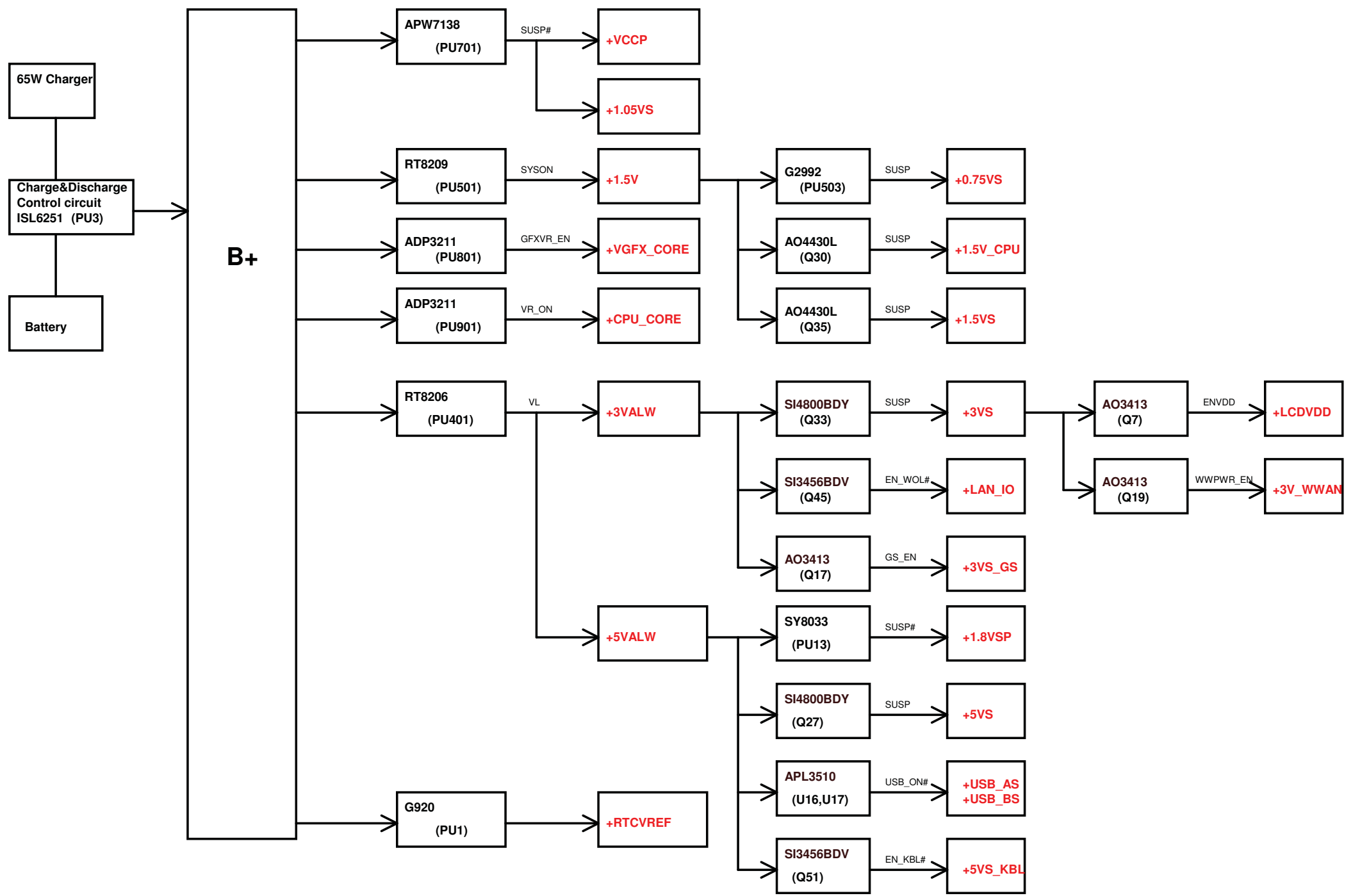
Item	Reason for change	PG#	Modify List	Date	Phase
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17				20081022	

Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PIR (PWR)
Size	Document Number	Rev		
Custom	LA-6411P	0.1		
Date:	Wednesday, March 31, 2010	Sheet	41	of 43

*Version change list (P.I.R. List)*

Item	Reason for change	PG#	Modify List	Date	Phase
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF R&D DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				PIR (HW)	
Size	Document Number	Rev		0.1	
Custom	LA-6411P	Date:		Wednesday, March 31, 2010	
		Sheet		42 of 43	



Security Classification	Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2010/3/31	Deciphered Date	2011/3/31	Title
				Power Rail
<small>THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT DIVISION OF FACTORY AND CUSTOMER SERVICE TO ANY OTHER DEPARTMENT EXCEPT AS AUTHORIZED BY COMPAL ELECTRONICS, INC. NEITHER THIS SHEET NOR THE INFORMATION IT CONTAINS MAY BE USED BY OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.</small>				Document Number <b>LA-6411P</b> Date: Wednesday, March 31, 2010   Sheet 43 of 43
				Rev 0.1