

機密

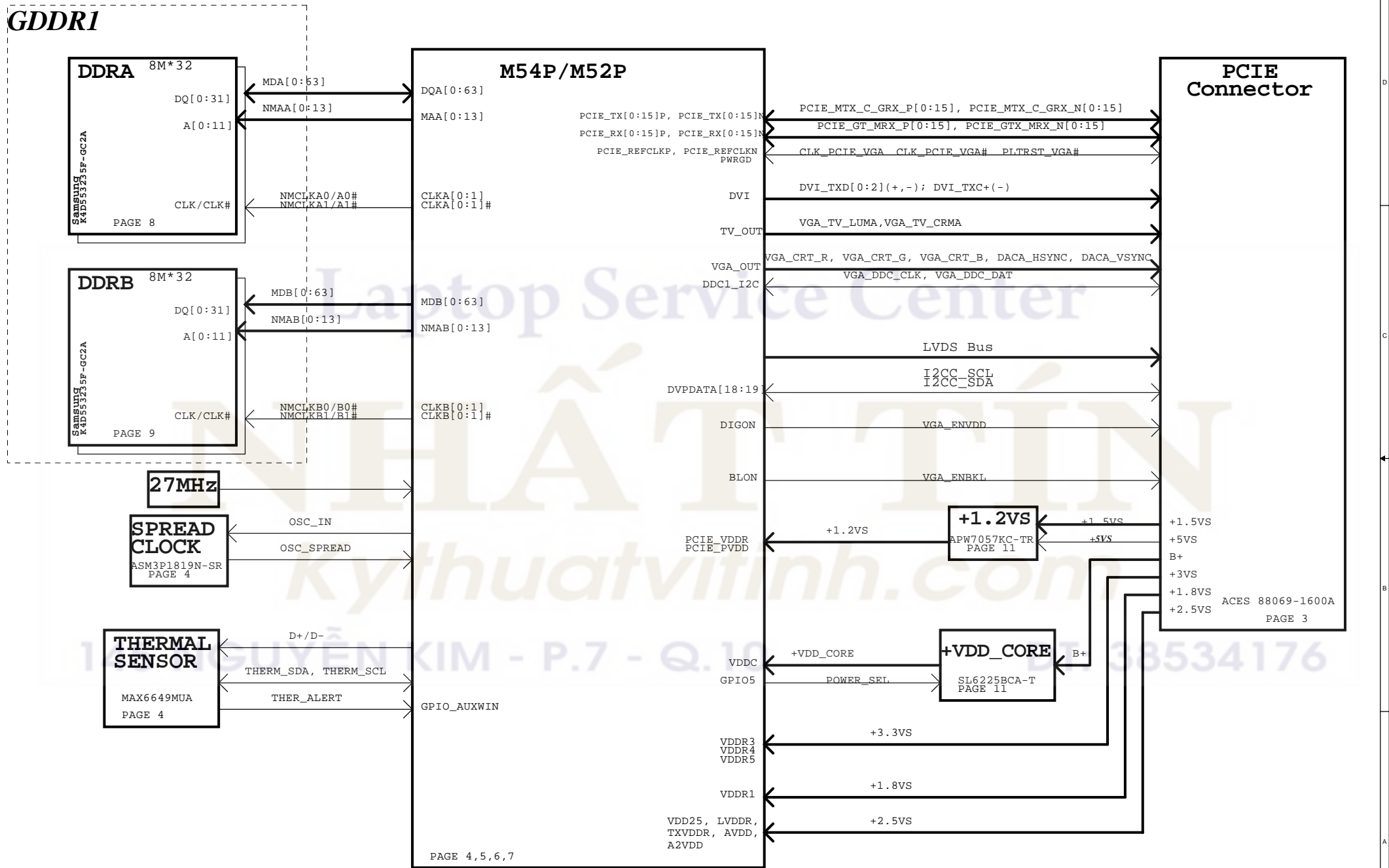
Mini (EFL50) ATI VGA/B M52-P

Revision 1.0

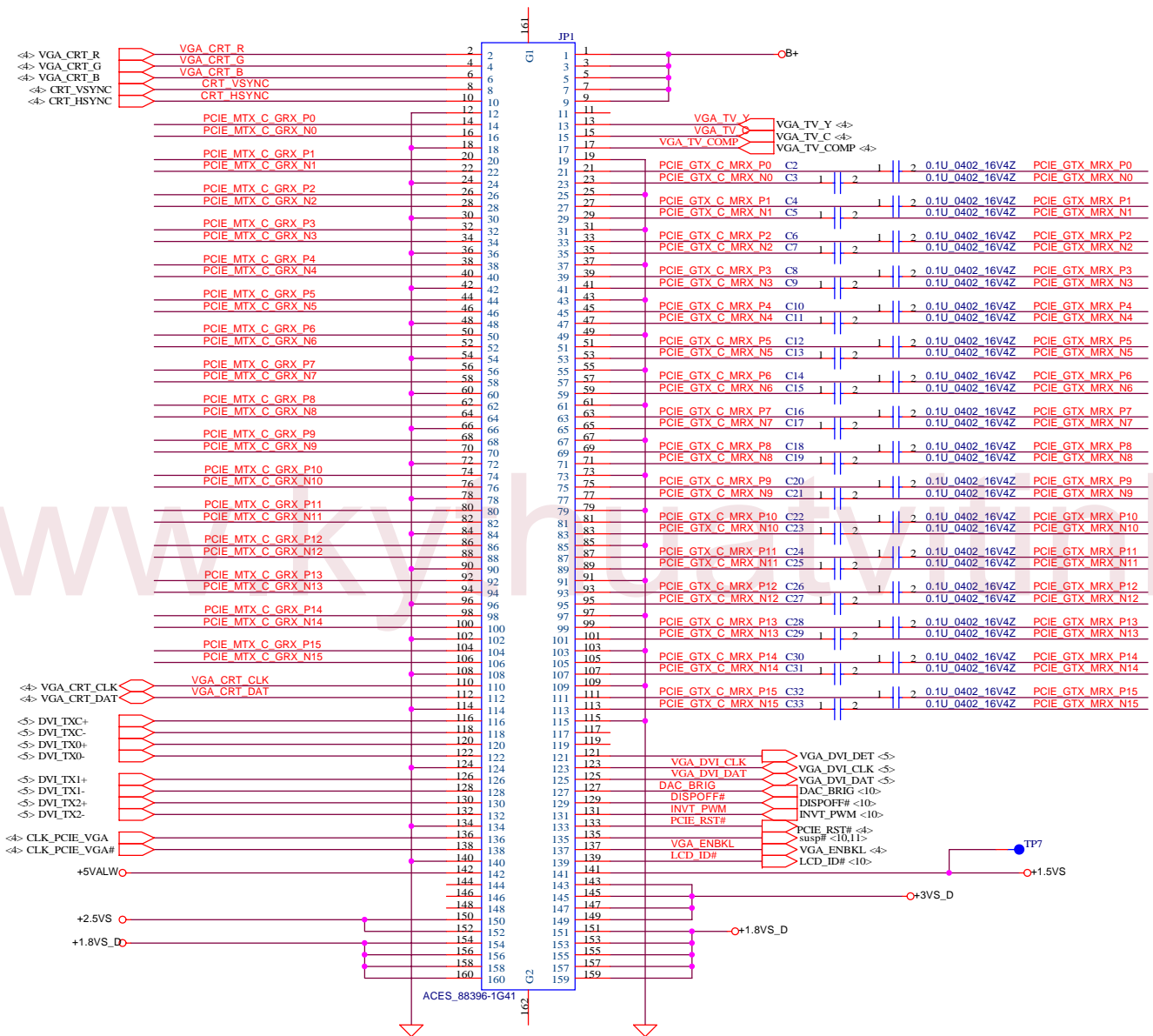
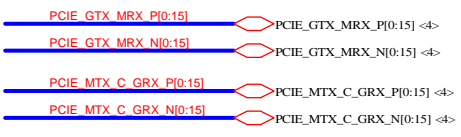
www.kythuatvithinh.com

Security Classification	Compal Secret Data			Compal Electronics, Inc.	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	Title	Cover Sheet
<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 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.</small>				Size	Document Number
				Date:	122305 14:40:19

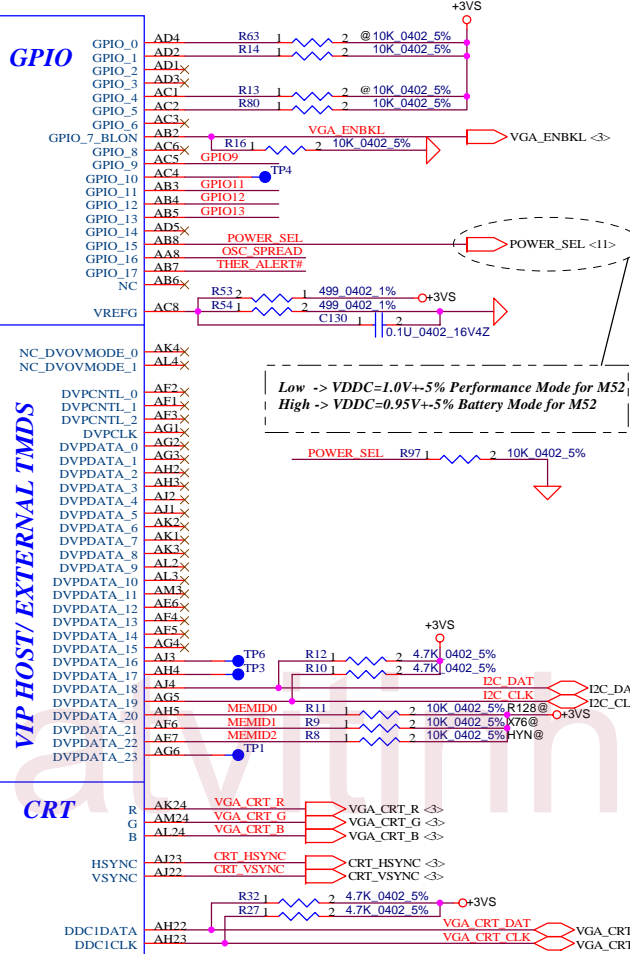
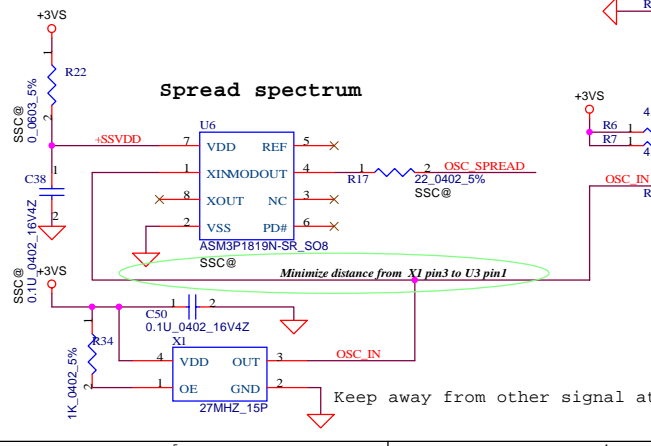
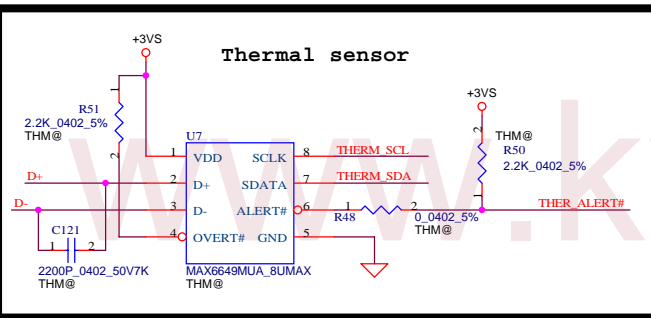
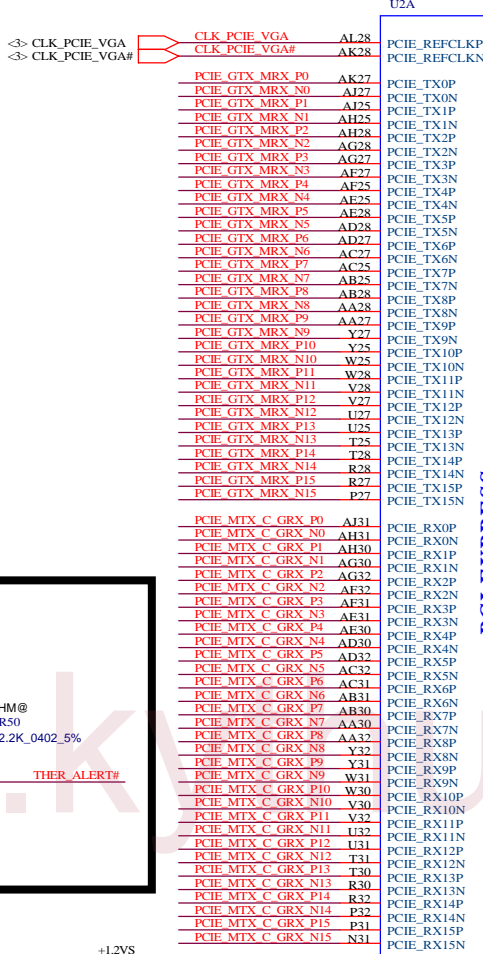
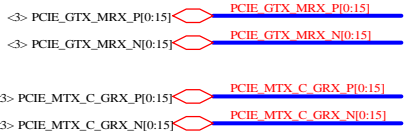
M54P/M52P BLOCK DIAGRAM



Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	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.				Block Diagram	
Size	Document Number			Rev	
	EFL50 LS-2766P			1.0	
Date:	122305 14:40:19			Sheet 2 of 13	



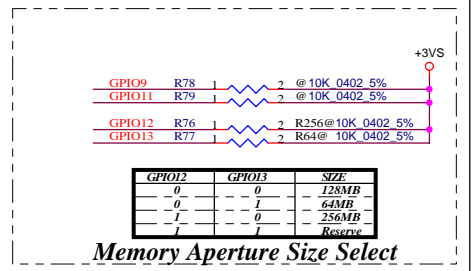
Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	Title	VGA Connector PCIE Connector
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. 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 EFL50 LS-2766P
Date:	12/23/05 14:40:19	Sheet	3 of 13	Rev	1.0



Straps: (Internal pull down)

Transmitter power saving enable	GPIO[0]	0: 50% TX output swing 1: Full TX output swing
Transmitter de-emphasis enable	GPIO[1]	0: TX de-emphasis disable 1: TX de-emphasis enable
Debug Access	GPIO[4]	0: OFF 1: ON
Current bias for the PCI Express PHY PLL	GPIO[5]	GPIO5 = 1 (must be pulled to 3.3V at reset using)
ROM ID Config	GPIO[9, 13:11]	GPIO[9]=1 External ROM Attached GPIO[9]=0 No External ROM For No External ROM: GPIO[13,12] is for MEM_AP_SIZE[1,0] GPIO[11] don't care
VIP_DEVICE	VSYNC	0: Slave VIP host device present 1: No slave VIP host device present

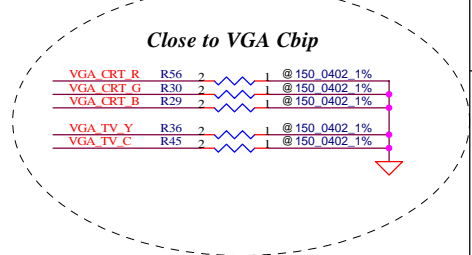
* The readback of this strap is the inverted with respect to the value on the pin



For DDRII

Vedio Memory Config. (VGA Internal PD)

MEMID[2:0]	Size	Size (Speed)	Vender	Chips
0 0 0	64MB	16M16 (300MHz)	Samsung	2
0 0 1	128MB	16M16 (300MHz)	Samsung	4
1 0 0	64MB	16M16 (300MHz)	Hynix	2
1 0 1	128MB	16M16 (300MHz)	Hynix	4

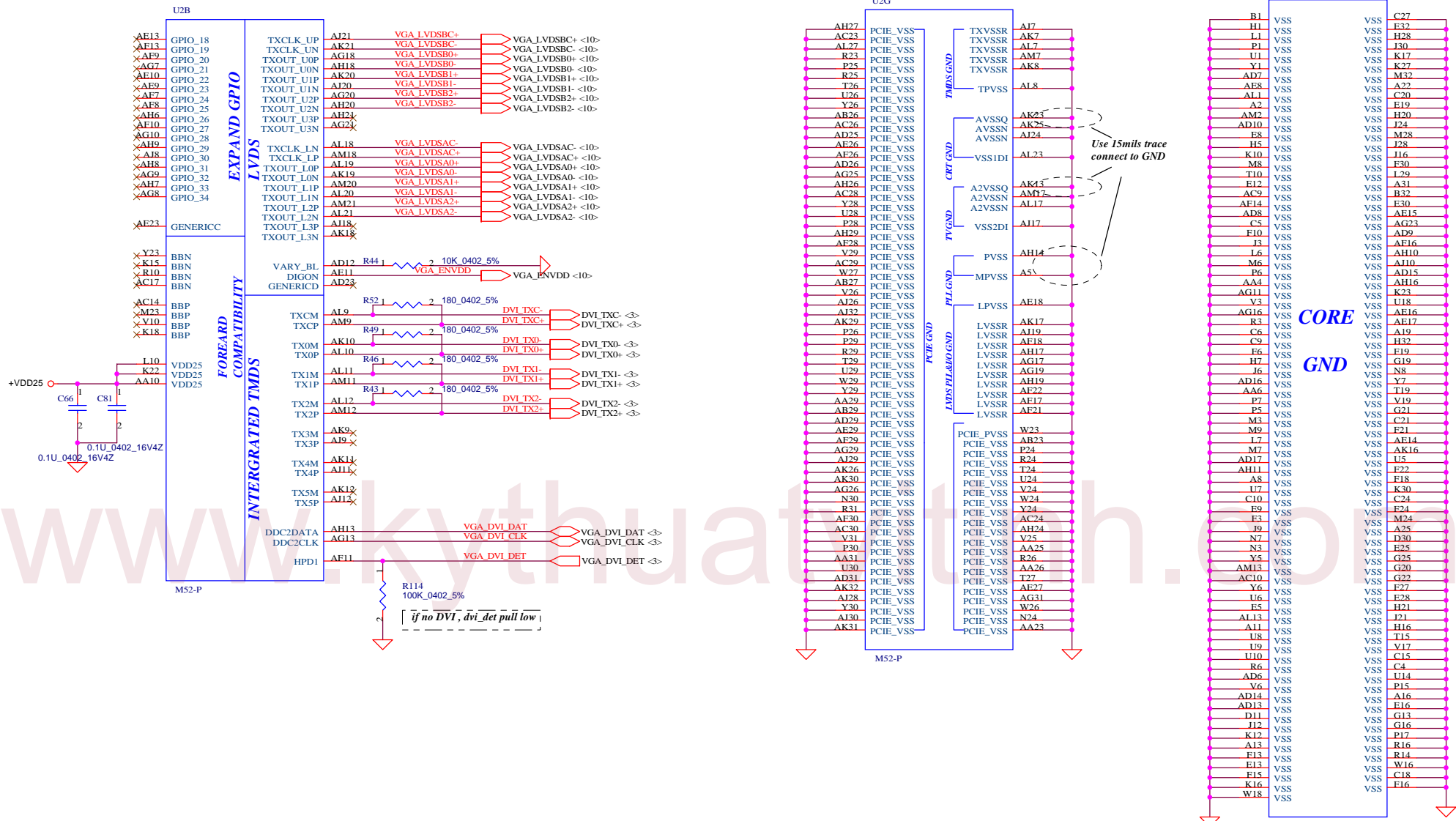


Security Classification	Compal Secret Data	
Issued Date	2005/12/22	Deciphered Date
		2006/12/22
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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.		

Compal Electronics, Inc.

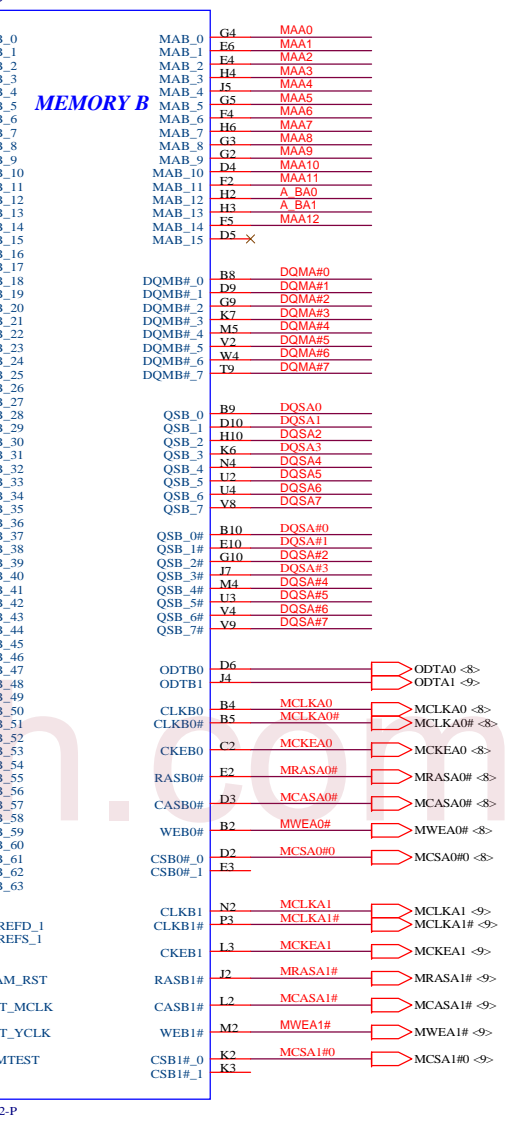
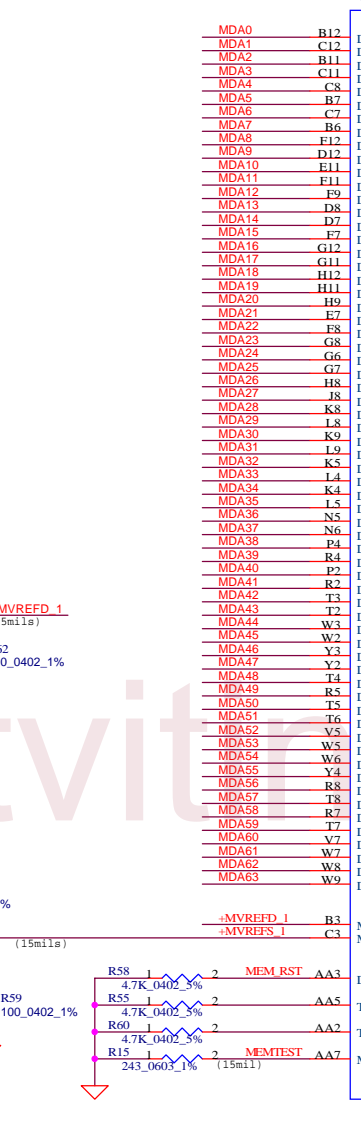
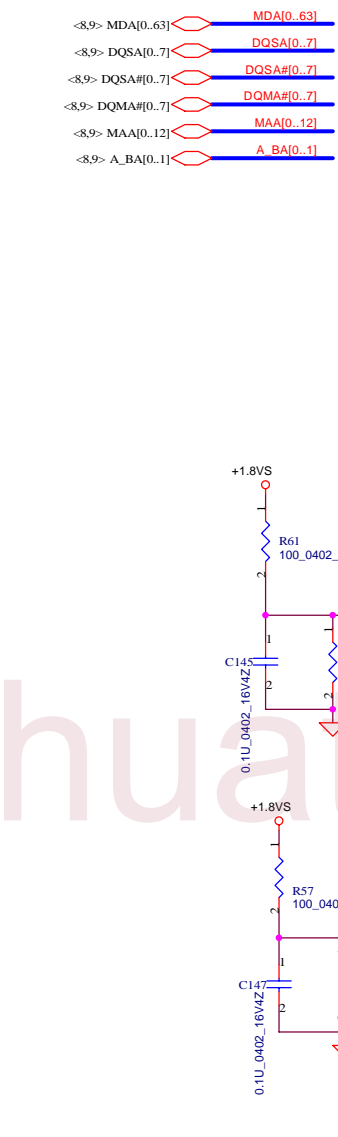
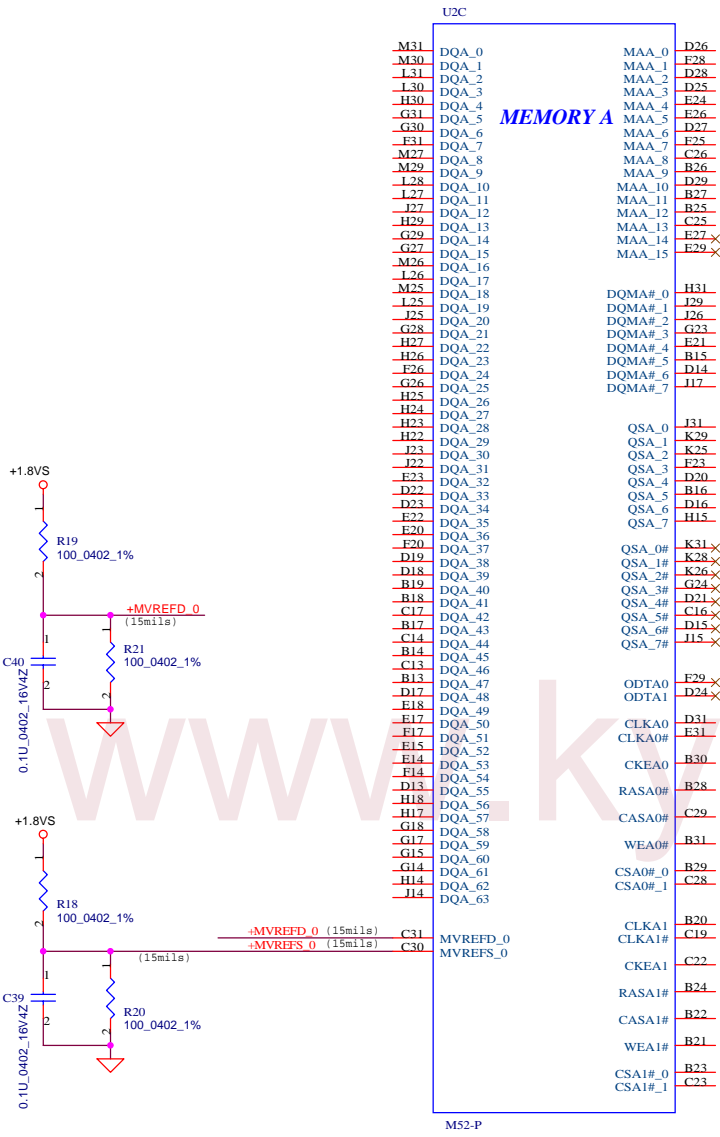
M52-P Main

Title	M52-P Main	
Size	Document Number	Rev
Custom	EFL50 LS-2766P	1.0
Date:	122305 14:40:18	Sheet 4 of 13



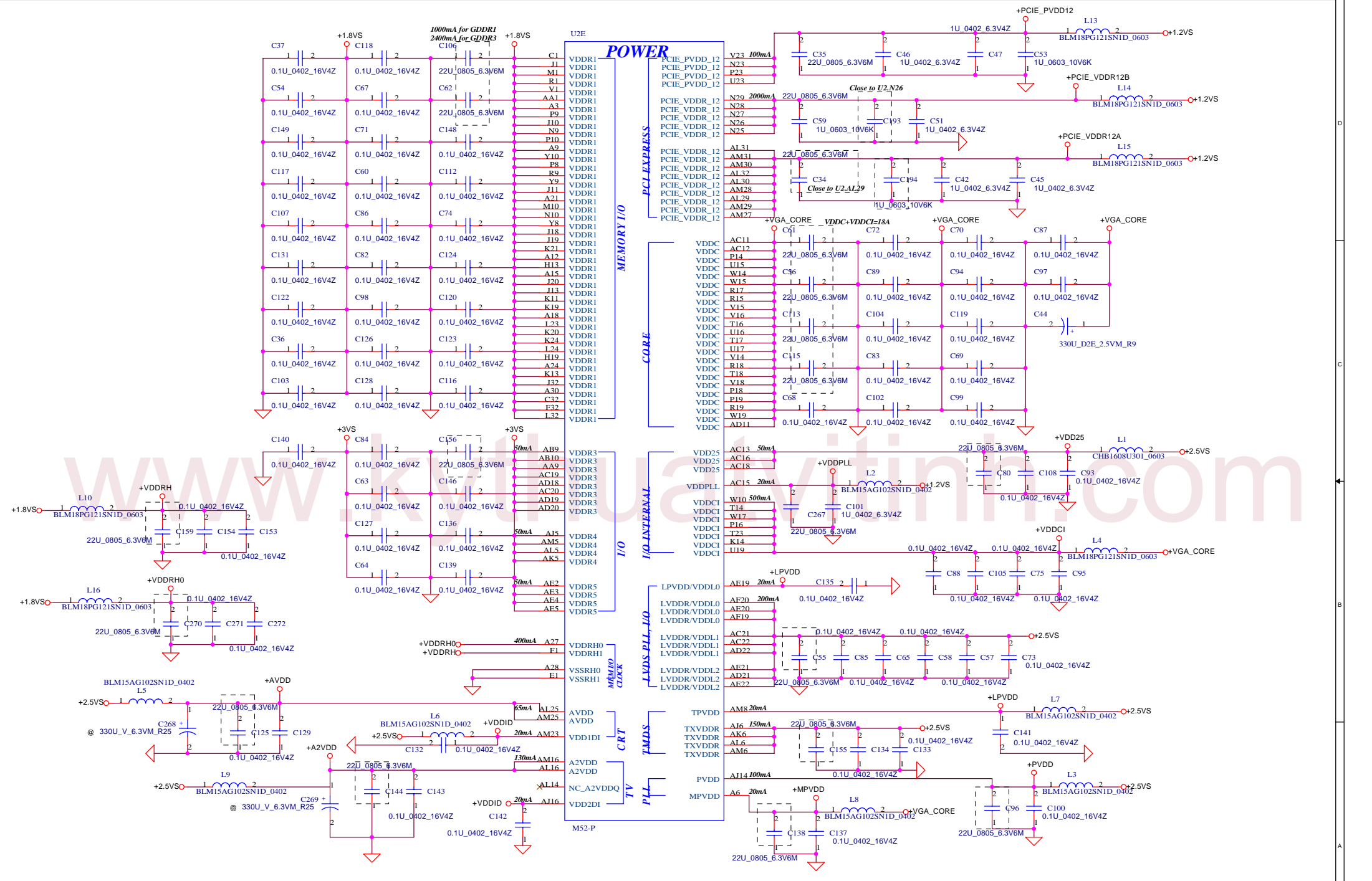
Security Classification		Compal Secret Data		Title	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	M52-P LVD,DVI,GND,Screw	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Date:		Rev	
Custom	EFL50 LS-2766P	122305 14:40:18		1.0	

Compal Electronics, Inc.	
M52-P LVD,DVI,GND,Screw	
Sheet	5 of 13



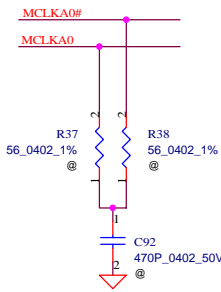
GDDR2

Security Classification		Compal Secret Data		Title	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	M52-P Memory Interface	
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 OR DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT OF COMPAL ELECTRONICS, INC.				Size	Rev
				Document Number	1.0
				EFL50 LS-2766P	
Date:	122305 14:40:18	Sheet	6	of	13



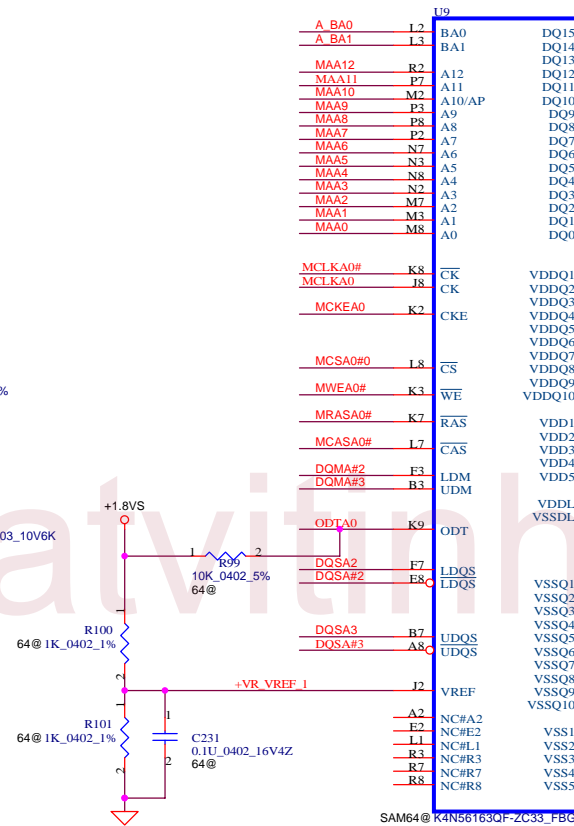
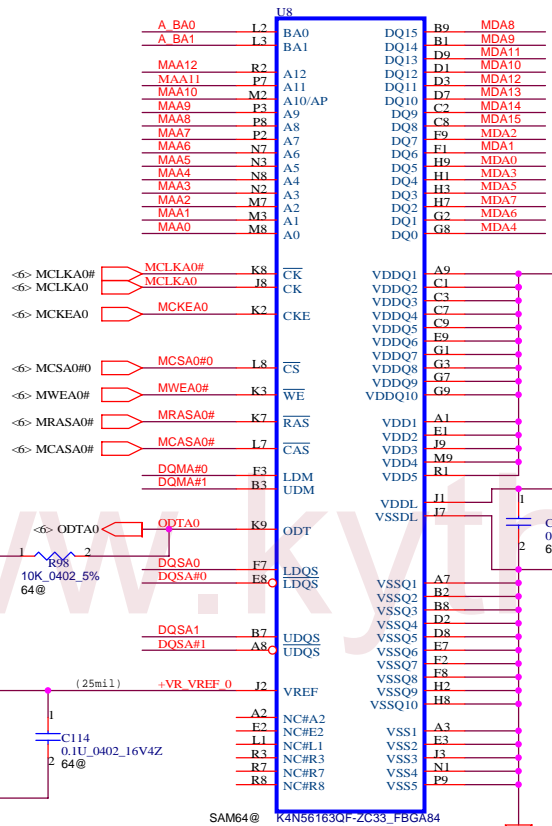
Security Classification		Compal Secret Data	
Issued Date	2005/12/22	Deciphered Date	2006/12/22
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED FROM THE CUSTODY OF THE COMPETENT 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.			

Compal Electronics, Inc.		
Title M52-P Power		
Size Custom	Document Number EFL50 LS-2766P	Rev 1.0
Date: 122305 14:40:19	Sheet 7	of 13

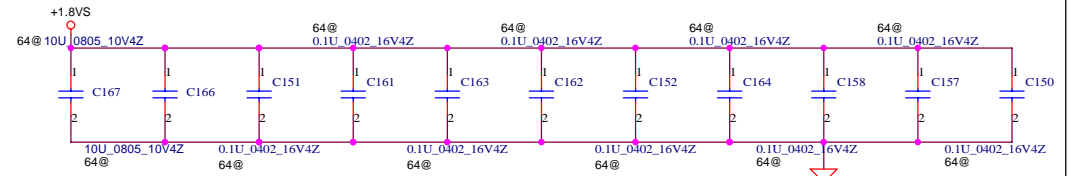
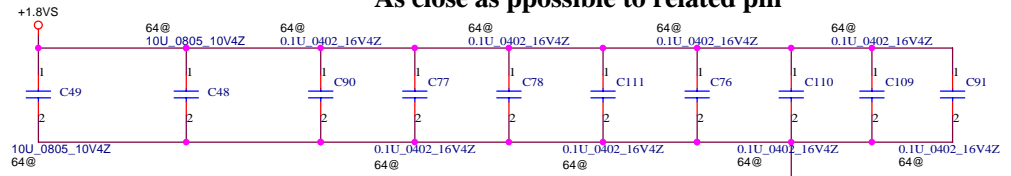


- <6.9> MDA[0..63] MDA[0..63]
- <6.9> DQSA[0..7] DQSA[0..7]
- <6.9> DQSA#[0..7] DQSA#[0..7]
- <6.9> DQMA[0..7] DQMA[0..7]
- <6.9> MAA[0..12] MAA[0..12]
- <6.9> A_BA[0..11] A_BA[0..11]

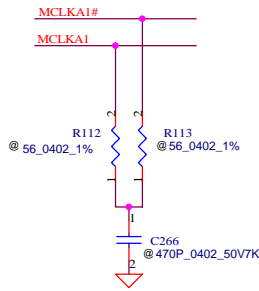
Default VRAM chip is SAM: SA00000YC00.



As close as possible to related pin

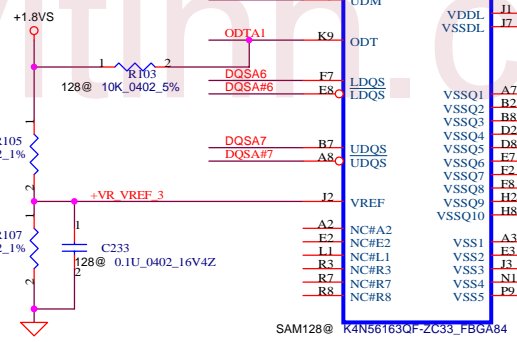
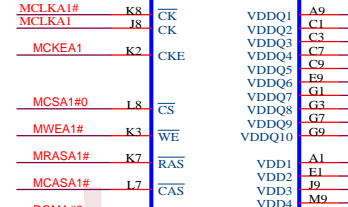
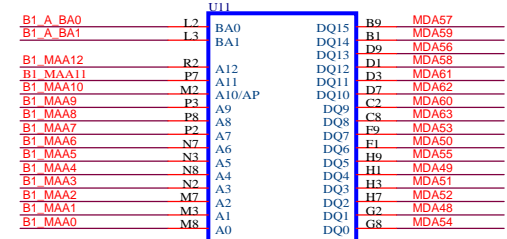
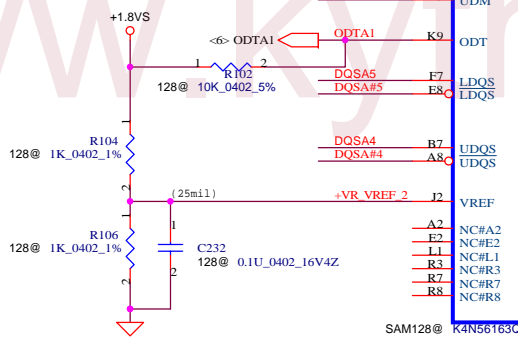
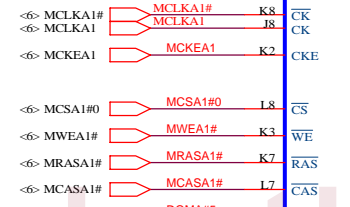
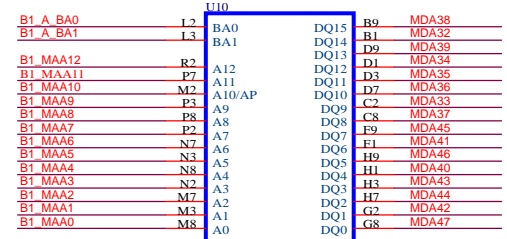
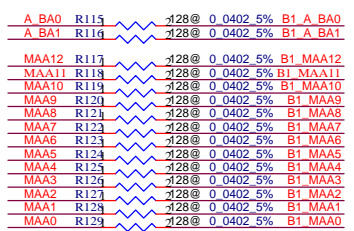


Security Classification		Compal Secret Data		Title	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	External GDDR2 A0	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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		1.0	
Custom	EFL50 LS-2766P	Date:		122305 14:40:19	Sheet 8 of 13

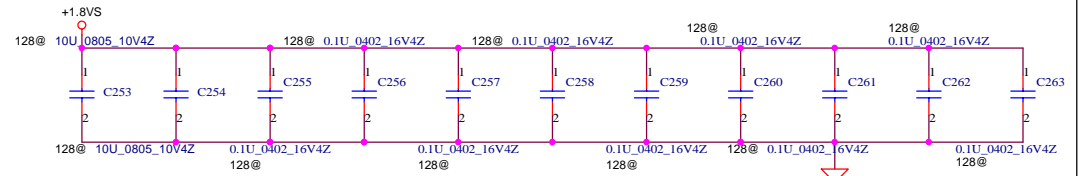
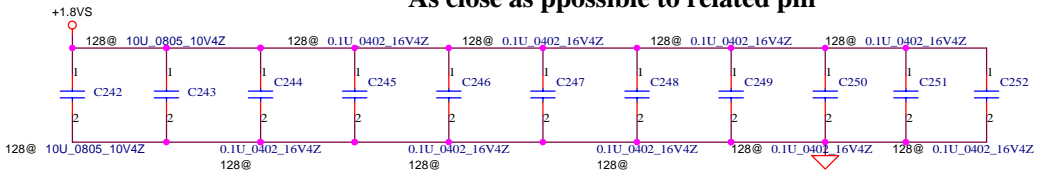


- <6,8> MDA[0..63] ◇ MDA[0..63]
- <6,8> DQSA[0..7] ◇ DQSA[0..7]
- <6,8> DQSA#[0..7] ◇ DQSA#[0..7]
- <6,8> DQMA#[0..7] ◇ DQMA#[0..7]
- <6,8> MAA[0..12] ◇ MAA[0..12]
- <6,8> A_BA[0..1] ◇ A_BA[0..1]

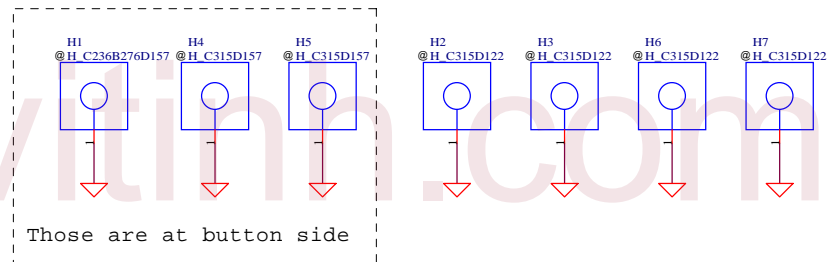
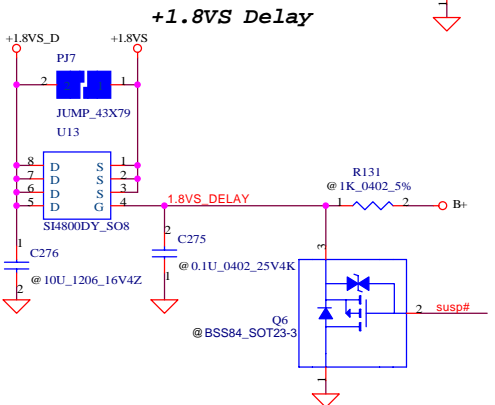
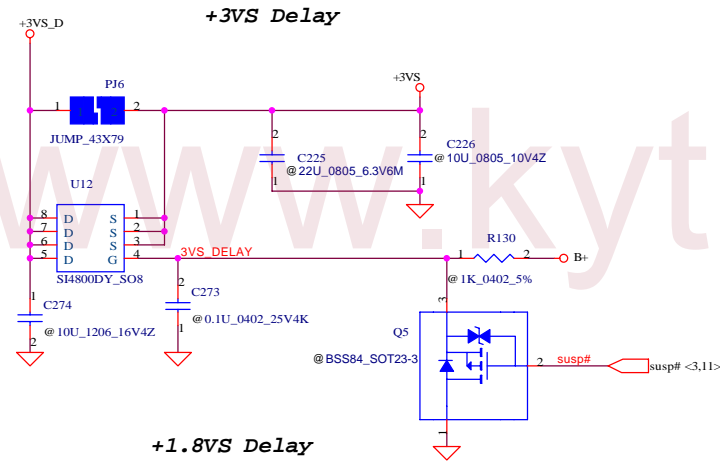
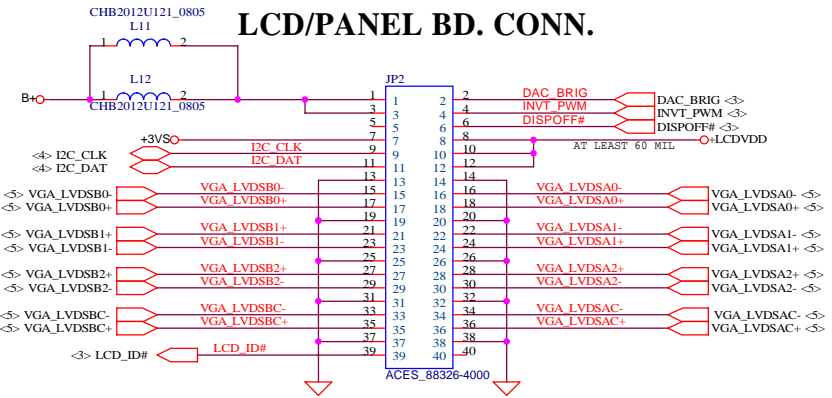
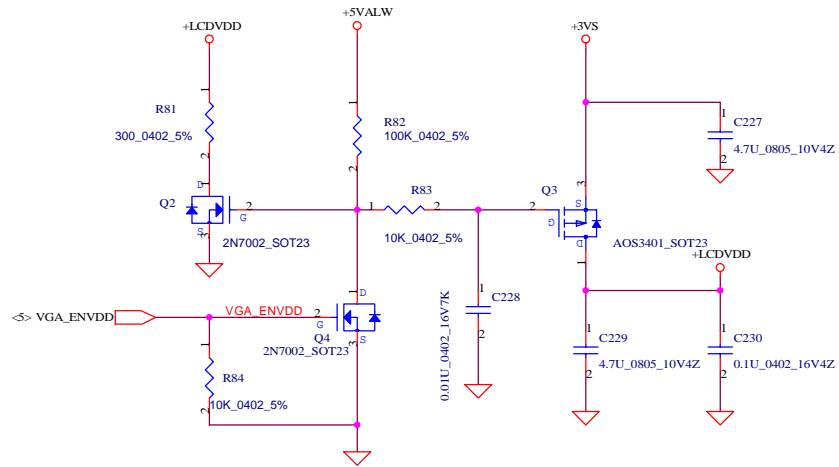
Default VRAM chip is SAM: SA00000YC00.



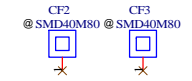
As close as possible to related pin



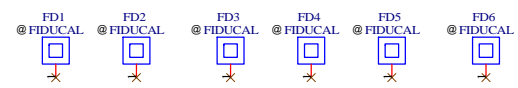
Security Classification		Compal Secret Data		Title	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	External GDDR2 A0	
THIS SHEET OF ENGINEERING DRAWING IS THE PROPRIETARY PROPERTY OF COMPAL ELECTRONICS, INC. AND CONTAINS CONFIDENTIAL AND TRADE SECRET INFORMATION. THIS SHEET MAY NOT BE TRANSFERRED 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	Date:		Sheet	Rev
Custom	EFL50 LS-2766P	122305 14:40:19		9	1.0
				of	13



Those are at button side

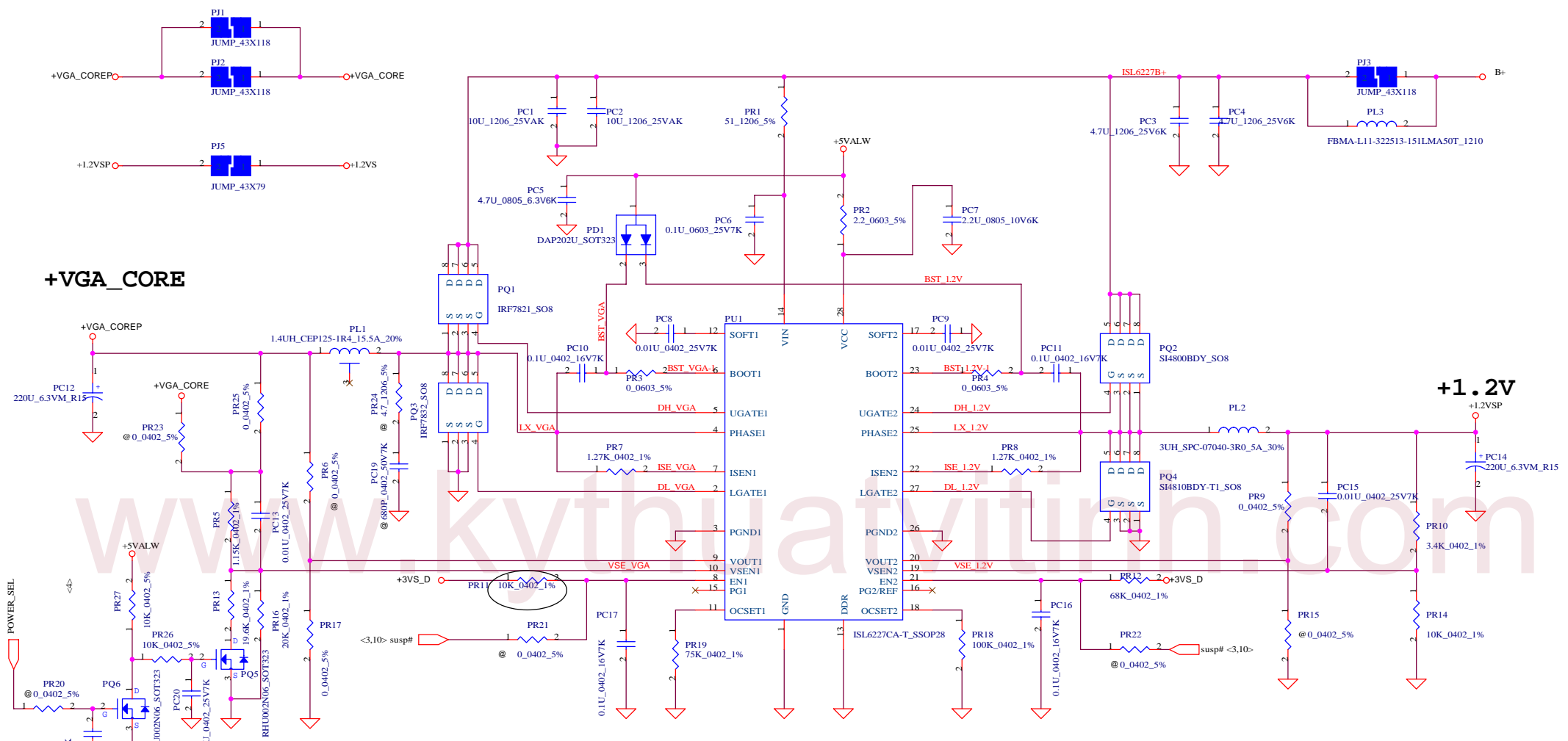


For IC FIXED



For Board FIXED

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	Title	LVDS Conn/ Screw Hole
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
				EFL50 LS-2766P	Rev 1.0
				Date:	12/23/05 14:40:19
				Sheet	10 of 13



+VGA_CORE

	W/O POWER PLAY	With POWER PLAY
POWER_SEL	Low	High
+VGA_CORE	1.0V	0.95V
	PR5=1.15K, PR16=20K, PR13=19.6K	PR5=1.15K, PR16=20K
	PJ3, PJ1, PJ2, PJ4 short	PJ3, PJ1, PJ2, PJ4 short

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	Title	Power
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	Power
				Custom	Document Number
Date:	12/23/05 14:40:19	Sheet	11	of	13

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

===== 2005/12 R0.2 =====

- 01. Reserve +3VS and +1.8VS delay circuit and reserve Jump. == To meet ATI PWR sequence.
Reserve PJ6, PJ7, U12, U13, C273, C274, C275, C276,
Q5, Q6, R130 and R131.
- 02. Change C42, C45, C46, C47 and C51, from 0.1U to 1U. == For 3D hang issue.
- 03. Change C101, from 0.1U to 1U. == For 3D hang issue.
- 04. Add C44 as 330U == For 3D hang issue.
- 05. Delete R63, 10K_0402_5% == PCIE TX power saving.

www.kythuativinh.com

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	Title P.I.R.	
<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 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.</small>				Size Custom	Document Number EFL50 LS-2766P
				Date:	122305 14:40:19

ZZZ
DA800005F10
 --PCB ZKD LS-2766P
 REV1 VGA/B

DA800005F10

U8
SA00000JW00
 --S IC D2 16M16/600
 HY5PS561621AFP-33
 FBGA

HYN64@ SA00000JW00

U9
SA00000JW00
 --S IC D2 16M16/600
 HY5PS561621AFP-33
 FBGA

HYN64@ SA00000JW00

U10
SA00000JW00
 --S IC D2 16M16/600
 HY5PS561621AFP-33
 FBGA

HYN128@ SA00000JW00

U11
SA00000JW00
 --S IC D2 16M16/600
 HY5PS561621AFP-33
 FBGA

HYN128@ SA00000JW00

www.kythuativinh.com

Security Classification		Compal Secret Data		Compal Electronics, Inc.	
Issued Date	2005/12/22	Deciphered Date	2006/12/22	Title For BOM	
<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 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.</small>				Size Custom	Document Number EFL50 LS-2766P
				Date:	122305 14:40:19