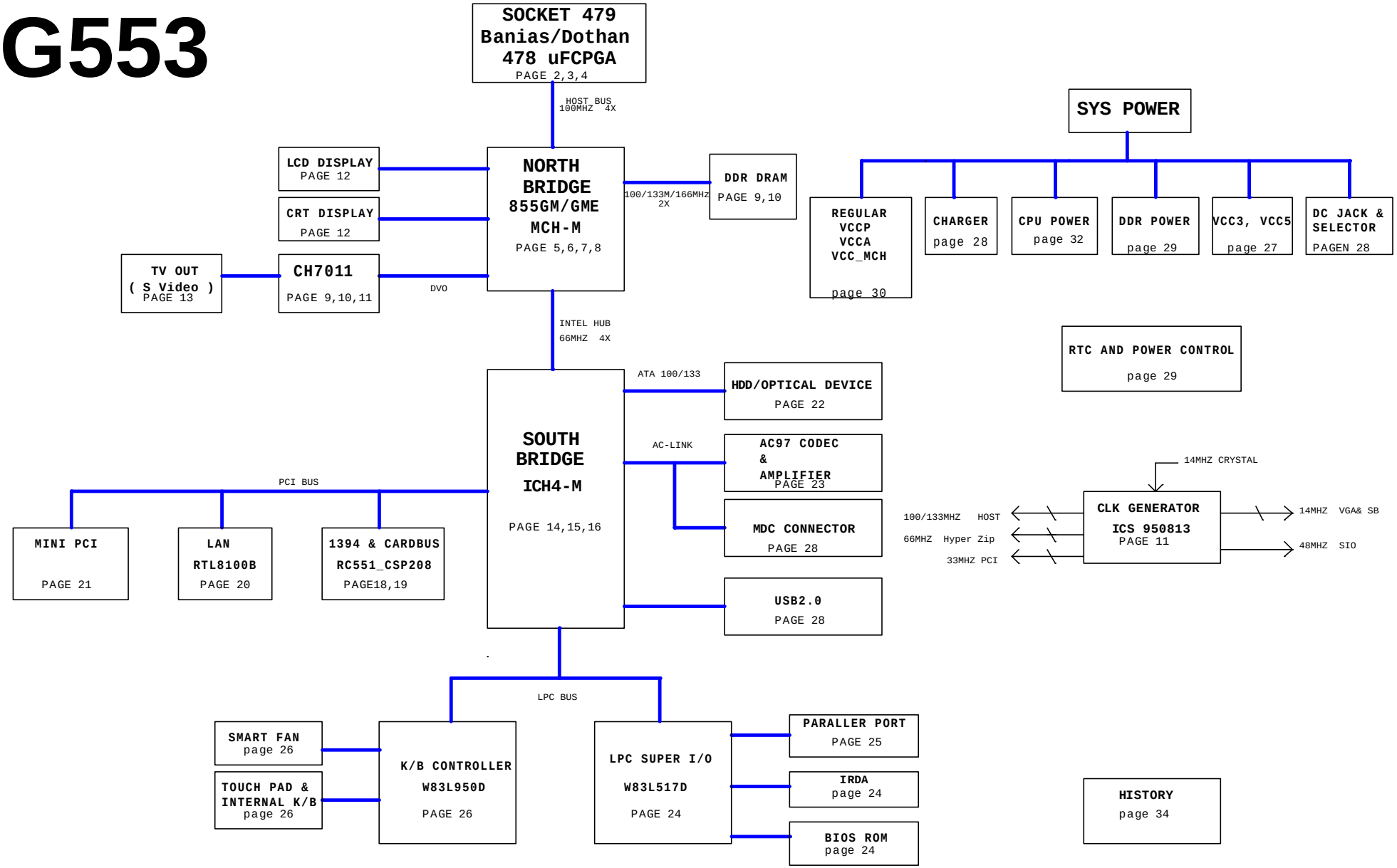
G553



PAGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
REV	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0
DATE	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31

PAGE	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
REV	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0	V.3.0		
DATE	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31	2003 12/31		

P/N : 15-F44-013000

Approved by	Checked by	Designed by

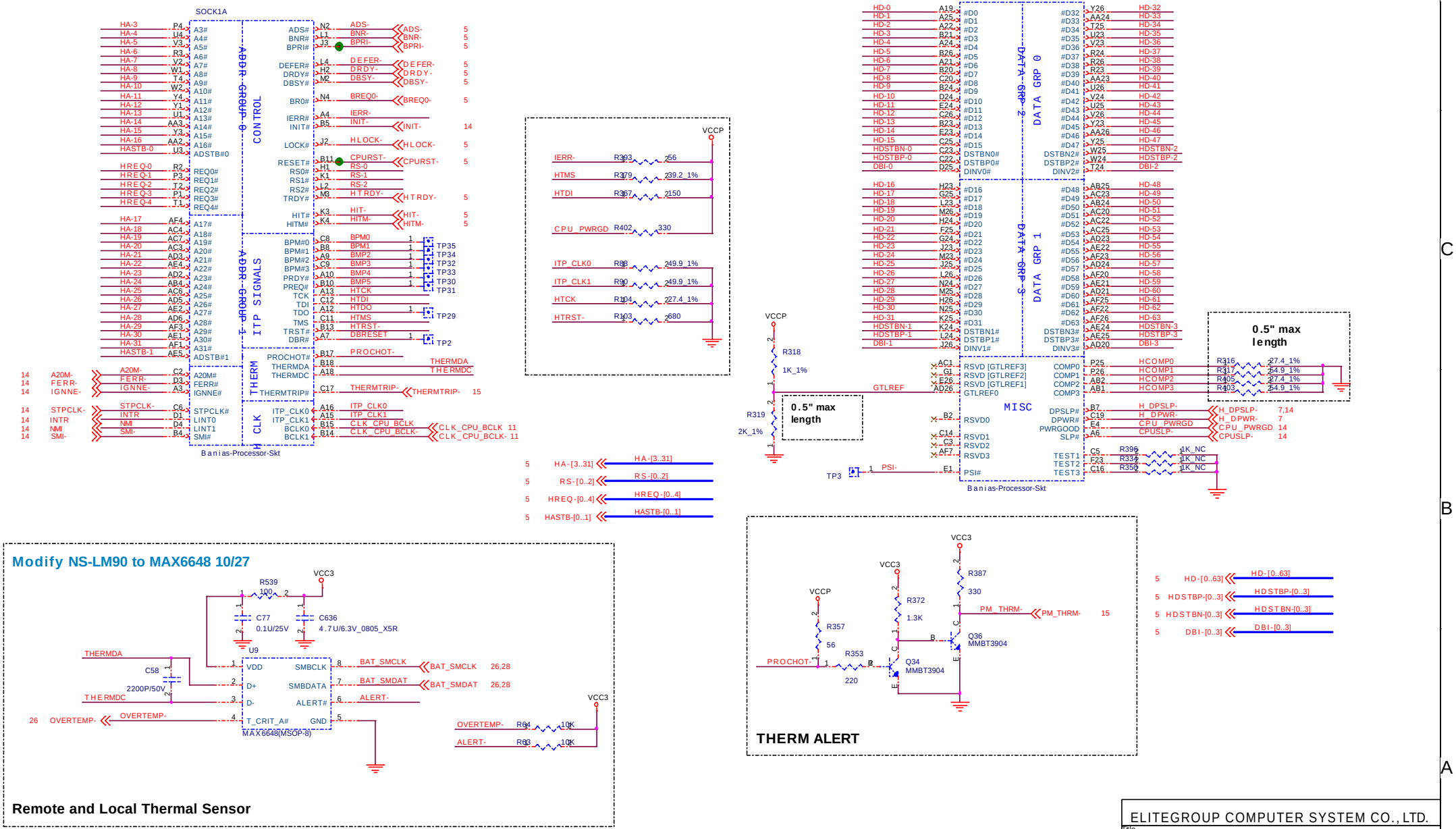
ELITEGROUP COMPUTER SYSTEM CO., LTD.

P.Leader

File: G553 BLOCK DIAGRAM

Size: C | Document Number: G553-1-401 | Rev: 3.0

Date: Tuesday, January 06, 2004 | Sheet 1 of 34



Company	ELITEGROUP COMPUTER SYSTEM CO., LTD.
Title	G553 Banias-1
Size	A3
Document Number	G551-1-4-01
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Date	Tuesday, January 06, 2004
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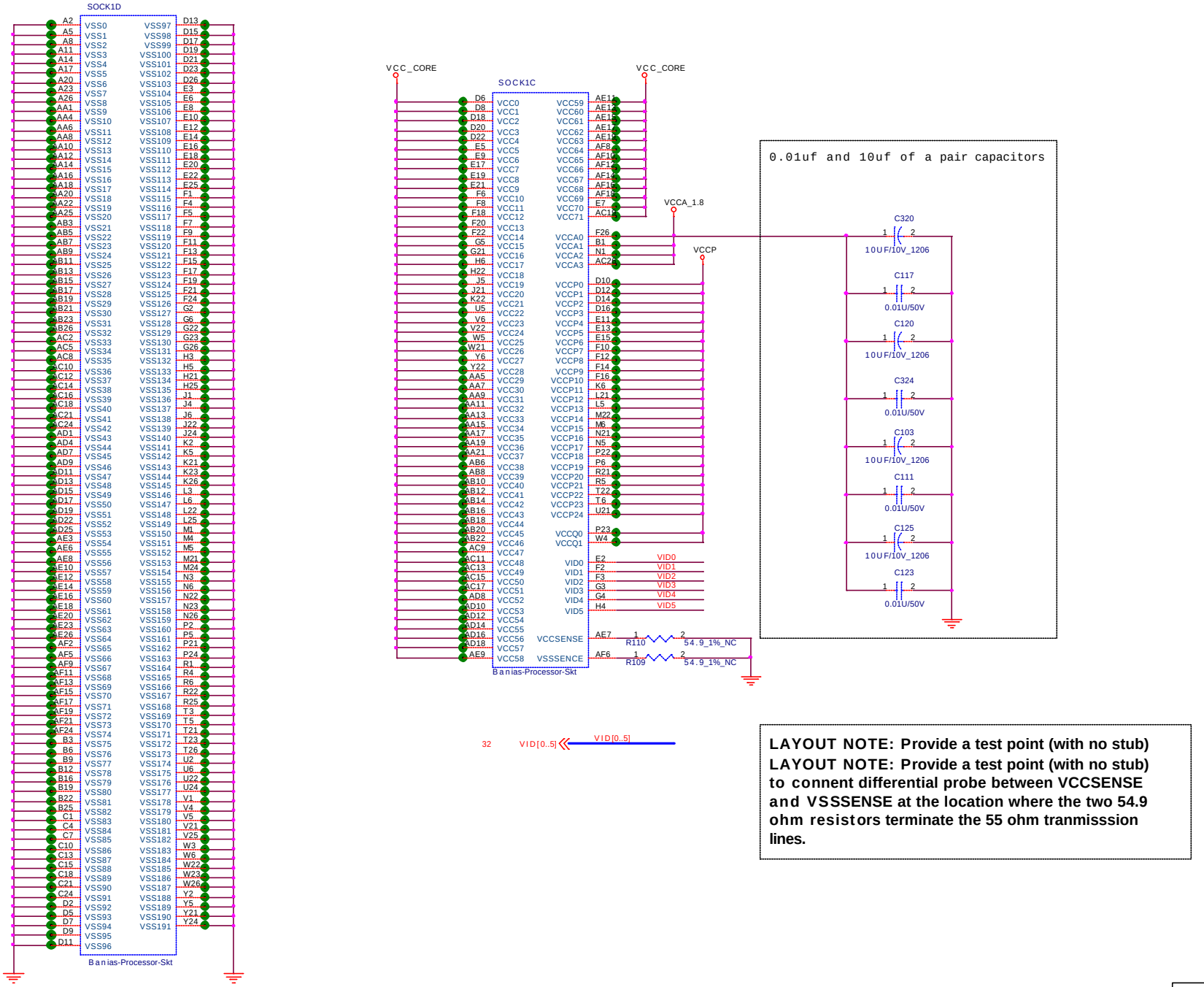
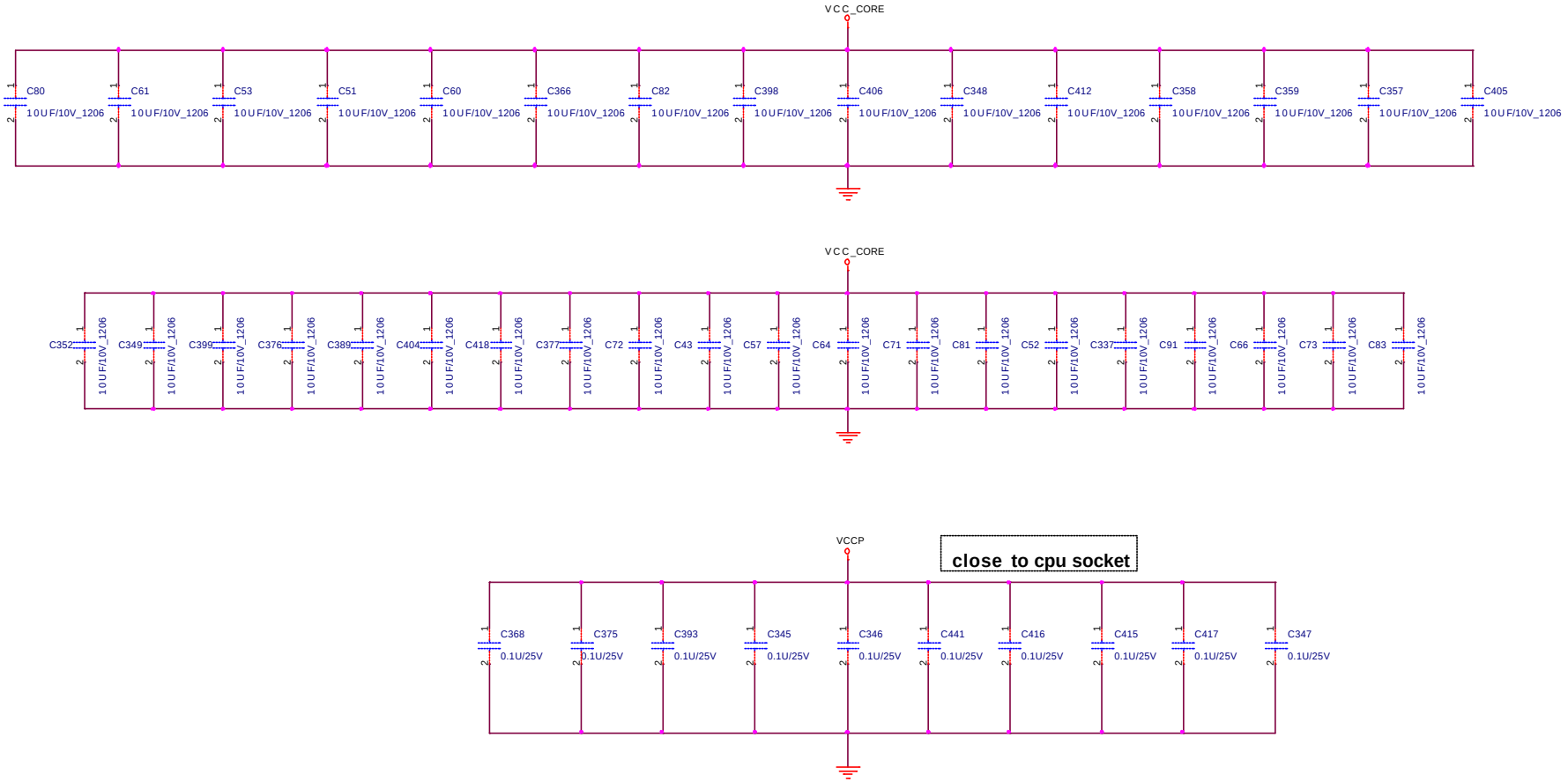


LAYOUT NOTE: Provide a test point (with no stub)
LAYOUT NOTE: Provide a test point (with no stub) to connent differential probe between VCCSENSE and VSSSENSE at the location where the two 54.9 ohm resistors terminate the 55 ohm tranmisssion lines.

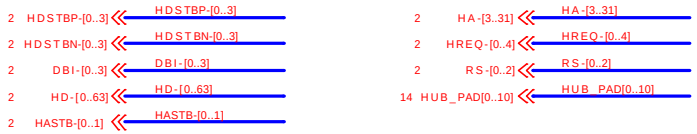
ELITEGROUP COMPUTER SYSTEM CO., LTD.

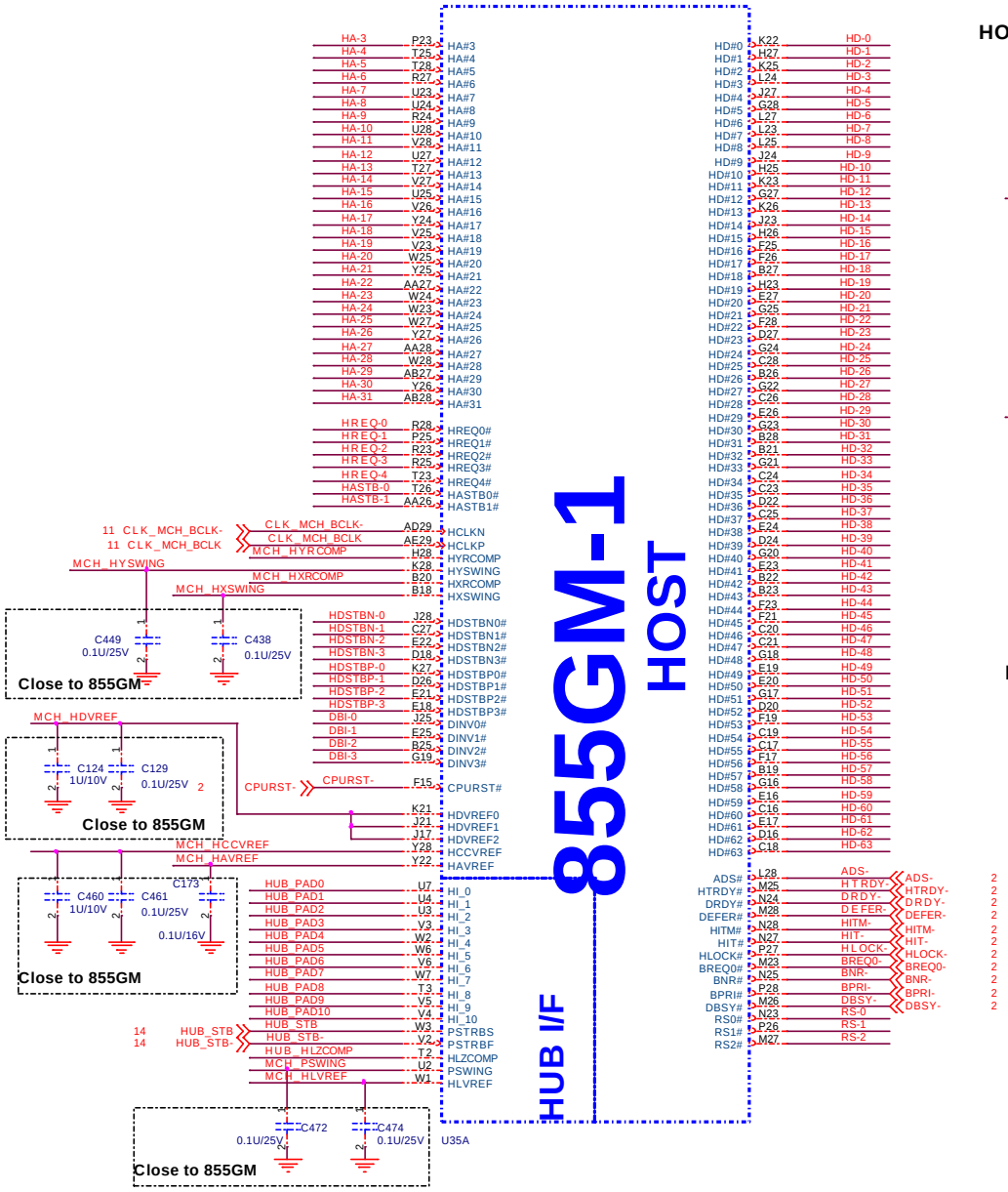
Title: G553 Banias-2			
Size: A3	Document Number: G553-1-4-01		Rev: 3.0
Date: Tuesday, January 06, 2004	Sheet 3 of 34		



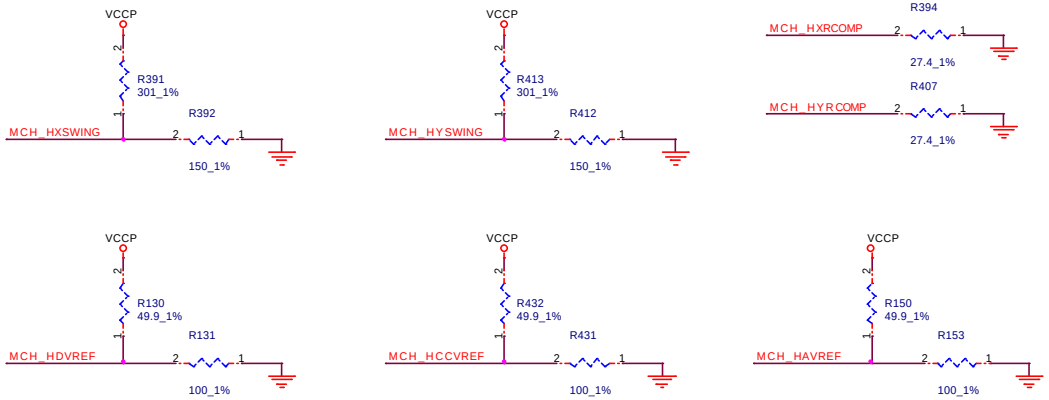
ELITEGROUP COMPUTER SYSTEM CO., LTD.		
Title: G553 Banias-3		
Size: B	Document Number: G553-1-4-01	Rev: 3.0
Date: Tuesday, January 06, 2004	Sheet 4 of 34	

GMCH Compensation & Reference Voltages

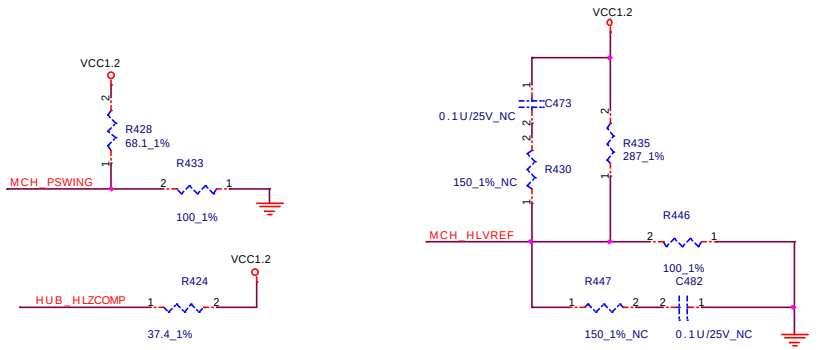




HOST



Hub Interface



	855GM	855GME
R428	49.9_1%	68.1_1%
R424	27.4_1%	37.4_1%
R435	243_1%	287_1%

ELITEGROUP COMPUTER SYSTEM CO., LTD.	
Title	G553 855GM (HOST/AGP)
Size: A3	Document Number: G553-1-4-01
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DDR Serirs Termination

MD2	RP33D	5	4	10_8P4R_0402	/RMD2	
MD3	RP33A	8	1	10_8P4R_0402	/RMD3	
MD7	RP33B	7	2	10_8P4R_0402	/RMD7	
MD6	RP33C	6	3	10_8P4R_0402	/RMD6	
MD4	RP15A	8	1	10_8P4R_0402	/RMD4	
MD1	RP15B	7	2	10_8P4R_0402	/RMD1	
MD0	RP15C	6	3	10_8P4R_0402	/RMD0	
MD5	RP15D	5	4	10_8P4R_0402	/RMD5	
MD11	RP14A	8	1	10_8P4R_0402	/RMD11	
MD14	RP14B	7	2	10_8P4R_0402	/RMD14	
MD8	RP14C	6	3	10_8P4R_0402	/RMD8	
MD12	RP14D	5	4	10_8P4R_0402	/RMD12	
MD13	RP32A	8	1	10_8P4R_0402	/RMD13	
MD9	RP32B	7	2	10_8P4R_0402	/RMD9	
MD15	RP32C	6	3	10_8P4R_0402	/RMD15	
MD10	RP32D	5	4	10_8P4R_0402	/RMD10	
MD20	RP31A	8	1	10_8P4R_0402	/RMD20	
MD17	RP31B	7	2	10_8P4R_0402	/RMD17	
MD18	RP31C	6	3	10_8P4R_0402	/RMD18	
MD19	RP31D	5	4	10_8P4R_0402	/RMD19	
MD23	RP13A	8	1	10_8P4R_0402	/RMD23	
MD21	RP13B	7	2	10_8P4R_0402	/RMD21	
MD22	RP13C	6	3	10_8P4R_0402	/RMD22	
MD16	RP13D	5	4	10_8P4R_0402	/RMD16	
MD24	RP30A	8	1	10_8P4R_0402	/RMD24	
MD28	RP30B	7	2	10_8P4R_0402	/RMD28	
MD25	RP30C	6	3	10_8P4R_0402	/RMD25	
MD26	RP30D	5	4	10_8P4R_0402	/RMD26	
MD31	RP12A	8	1	10_8P4R_0402	/RMD31	
MD27	RP12B	7	2	10_8P4R_0402	/RMD27	
MD29	RP12C	6	3	10_8P4R_0402	/RMD29	
MD30	RP12D	5	4	10_8P4R_0402	/RMD30	
MD35	RP11A	8	1	10_8P4R_0402	/RMD35	
MD34	RP11B	7	2	10_8P4R_0402	/RMD34	
MD36	RP11C	6	3	10_8P4R_0402	/RMD36	
MD37	RP11D	5	4	10_8P4R_0402	/RMD37	
MD32	RP37A	8	1	10_8P4R_0402	/RMD32	
MD33	RP37B	7	2	10_8P4R_0402	/RMD33	
MD38	RP37C	6	3	10_8P4R_0402	/RMD38	
MD39	RP37D	5	4	10_8P4R_0402	/RMD39	
MD42	RP10A	8	1	10_8P4R_0402	/RMD42	
MD43	RP10B	7	2	10_8P4R_0402	/RMD43	
MD47	RP10C	6	3	10_8P4R_0402	/RMD47	
MD44	RP10D	5	4	10_8P4R_0402	/RMD44	
MD45	RP36A	8	1	10_8P4R_0402	/RMD45	
MD41	RP36B	7	2	10_8P4R_0402	/RMD41	
MD40	RP36C	6	3	10_8P4R_0402	/RMD40	
MD46	RP36D	5	4	10_8P4R_0402	/RMD46	
MD54	RP8A	8	1	10_8P4R_0402	/RMD54	
MD50	RP8B	7	2	10_8P4R_0402	/RMD50	
MD48	RP8C	6	3	10_8P4R_0402	/RMD48	
MD53	RP8D	5	4	10_8P4R_0402	/RMD53	
MD52	RP35A	8	1	10_8P4R_0402	/RMD52	
MD49	RP35B	7	2	10_8P4R_0402	/RMD49	
MD55	RP35C	6	3	10_8P4R_0402	/RMD55	
MD51	RP35D	5	4	10_8P4R_0402	/RMD51	
MD60	RP34A	8	1	10_8P4R_0402	/RMD60	
MD56	RP34B	7	2	10_8P4R_0402	/RMD56	
MD59	RP34C	6	3	10_8P4R_0402	/RMD59	
MD58	RP34D	5	4	10_8P4R_0402	/RMD58	
MD63	RP9A	8	1	10_8P4R_0402	/RMD63	
MD62	RP9B	7	2	10_8P4R_0402	/RMD62	
MD57	RP9C	6	3	10_8P4R_0402	/RMD57	
MD61	RP9D	5	4	10_8P4R_0402	/RMD61	

/RDQS0	R192	2	10_1%_0402	M_DQS0	
/RDQS1	R205	2	10_1%_0402	M_DQS1	
/RDQS2	R203	2	10_1%_0402	M_DQS2	
/RDQS3	R202	2	10_1%_0402	M_DQS3	
/RDQS4	R200	2	10_1%_0402	M_DQS4	
/RDQS5	R198	2	10_1%_0402	M_DQS5	
/RDQS6	R196	2	10_1%_0402	M_DQS6	
/RDQS7	R194	2	10_1%_0402	M_DQS7	
/RDM0	R207	2	10_1%_0402	M_DM0	
/RDM1	R206	2	10_1%_0402	M_DM1	
/RDM2	R204	2	10_1%_0402	M_DM2	
/RDM3	R201	2	10_1%_0402	M_DM3	
/RDM4	R199	2	10_1%_0402	M_DM4	
/RDM5	R197	2	10_1%_0402	M_DM5	
/RDM6	R195	2	10_1%_0402	M_DM6	
/RDM7	R193	2	10_1%_0402	M_DM7	

U35B

MD0	AF2	SDQ0
MD1	AE3	SDQ1
MD2	AF4	SDQ2
MD3	AH2	SDQ3
MD4	AD3	SDQ4
MD5	AE2	SDQ5
MD6	AG4	SDQ6
MD7	AH3	SDQ7
MD8	AD6	SDQ8
MD9	AG5	SDQ9
MD10	AG7	SDQ10
MD11	AE8	SDQ11
MD12	AF5	SDQ12
MD13	AH4	SDQ13
MD14	AF7	SDQ14
MD15	AH6	SDQ15
MD16	AF8	SDQ16
MD17	AG8	SDQ17
MD18	AH9	SDQ18
MD19	AG10	SDQ19
MD20	AH7	SDQ20
MD21	AD9	SDQ21
MD22	AF10	SDQ22
MD23	AE11	SDQ23
MD24	AH10	SDQ24
MD25	AH11	SDQ25
MD26	AG13	SDQ26
MD27	AF14	SDQ27
MD28	AG11	SDQ28
MD29	AD12	SDQ29
MD30	AF13	SDQ30
MD31	AH13	SDQ31
MD32	AH16	SDQ32
MD33	AG17	SDQ33
MD34	AF19	SDQ34
MD35	AE20	SDQ35
MD36	AD18	SDQ36
MD37	AE18	SDQ37
MD38	AH18	SDQ38
MD39	AG19	SDQ39
MD40	AH20	SDQ40
MD41	AG20	SDQ41
MD42	AF22	SDQ42
MD43	AH22	SDQ43
MD44	AF20	SDQ44
MD45	AH19	SDQ45
MD46	AH21	SDQ46
MD47	AG22	SDQ47
MD48	AE23	SDQ48
MD49	AH23	SDQ49
MD50	AE24	SDQ50
MD51	AH25	SDQ51
MD52	AG23	SDQ52
MD53	AF23	SDQ53
MD54	AF25	SDQ54
MD55	AG25	SDQ55
MD56	AH26	SDQ56
MD57	AE26	SDQ57
MD58	AG28	SDQ58
MD59	AF28	SDQ59
MD60	AG26	SDQ60
MD61	AF26	SDQ61
MD62	AE27	SDQ62
MD63	AD27	SDQ63
	AG14	SDQ64
	AE14	SDQ65
	AE17	SDQ66
	AG16	SDQ67
	AH14	SDQ68
	AE15	SDQ69
	AF16	SDQ70
	AF17	SDQ71

SMA0	AC18	M_A0	M_A0 9,10
SMA1	AD14	M_A1	M_A1 9,10
SMA2	AD13	M_A2	M_A2 9,10
SMA3	AD17	M_A3	M_A3 9,10
SMA4	AD11	M_A4	M_A4 9,10
SMA5	AC13	M_A5	M_A5 9,10
SMA6	AD8	M_A6	
SMA7	AD7	M_A7	
SMA8	AC6	M_A8	
SMA9	AC5	M_A9	
SMA10	AC19	M_A10	
SMA11	AD5	M_A11	
SMA12	AB5	M_A12	
SMA_B1	AD16	M_AB1	M_AB1 9,10
SMA_B2	AC12	M_AB2	M_AB2 9,10
SMA_B4	AF11	M_AB4	M_AB4 9,10
SMA_B5	AD10	M_AB5	M_AB5 9,10
SCKE0	AC7	CKE0	
SCKE1	AB7	CKE1	
SCKE2	AC9	CKE2	
SCKE3	AC10	CKE3	
SCS0#	AD23	/RCS-0	
SCS1#	AD26	/RCS-1	
SCS2#	AC22	/RCS-2	
SCS3#	AC25	/RCS-3	
SBA0	AD22	M_BS0	M_BS0 9,10
SBA1	AD20	M_BS1	M_BS1 9,10
SRAS#	AC21	M_RAS-	M_RAS- 9,10
SCAS#	AC24	M_CAS-	M_CAS- 9,10
SWE#	AD25	M_WE-	M_WE- 9,10
SCK0	AB2	M_CLK0	
SCK#0	AA2	M_CLK-0	
SCK1	AC26	M_CLK1	
SCK#1	AB25	M_CLK-1	
SCK2	AC3	M_CLK2	
SCK#2	AD4	M_CLK-2	
SCK3	AC2	M_CLK3	
SCK#3	AD2	M_CLK-3	
SCK4	AB23	M_CLK4	
SCK#4	AB24	M_CLK-4	
SCK5	AA3	M_CLK5	
SCK#5	AB4	M_CLK-5	
SDQS0	AG2	M_DQS0	
SDQS1	AH5	M_DQS1	
SDQS2	AH8	M_DQS2	
SDQS3	AE12	M_DQS3	
SDQS4	AH17	M_DQS4	
SDQS5	AE21	M_DQS5	
SDQS6	AH24	M_DQS6	
SDQS7	AH27	M_DQS7	
SDQS8	AD15		
SDM0	AE5	M_DM0	
SDM1	AE6	M_DM1	
SDM2	AE9	M_DM2	
SDM3	AH12	M_DM3	
SDM4	AD19	M_DM4	
SDM5	AD21	M_DM5	
SDM6	AD24	M_DM6	
SDM7	AH28	M_DM7	
SDM8	AH15		
SRCVENOUT#	AC15		
SRCVENIN	AC16		
SMRCOMP	AB1		
SMVREF0	AJ22		
SMVREF1	AJ19		
SMVREF	AJ24		

855GM-2 DDR SYSTEM MEMORY

SM_VREF_MCH — R164 0_0402_NC — MCH_SMRCOMP

SM_VREF_MCH — 100P/50V C202 — 1000P/50V C517 — 0.1U/25V C511

Close to 855GM

MCH_SMVSWINGL — 0.1U/25V C197 — 0.1U/25V C195 — 0.1U/25V C476

MCH_SMVSWINGH

Close to 855GM

/RMD[0..63] /RMD[0..63] 9,10
/RDQS[0..7] /RDQS[0..7] 9,10
/RCS-[0..3] /RCS-[0..3] 9,10
CKE[0..3] CKE[0..3] 9,10
M_A[6..12] M_A[6..12] 9,10
/RDM[0..7] /RDM[0..7] 9,10
M_CLK[0..5] M_CLK[0..5] 9
M_CLK-[0..5] M_CLK-[0..5] 9

System Memory

VCC_DIMM — R177 1K_1% — SM_VREF_MCH — R472 1K_1%

VCC_DIMM — R176 604_1% — MCH_SMVSWINGL — R173 150_1%

VCC_DIMM — R175 150_1% — MCH_SMVSWINGH — R172 604_1%

VCC_DIMM — R450 60.4_1% — MCH_SMRCOMP — R448 60.4_1% — C485 0.1U/25V

ELITEGROUP COMPUTER SYSTEM CO., LTD.	
Title	G553 855GM-2 (RAM CONTROLLER)
Size: A3	Document Number: G553-1-4-01 — Rev: 3.0
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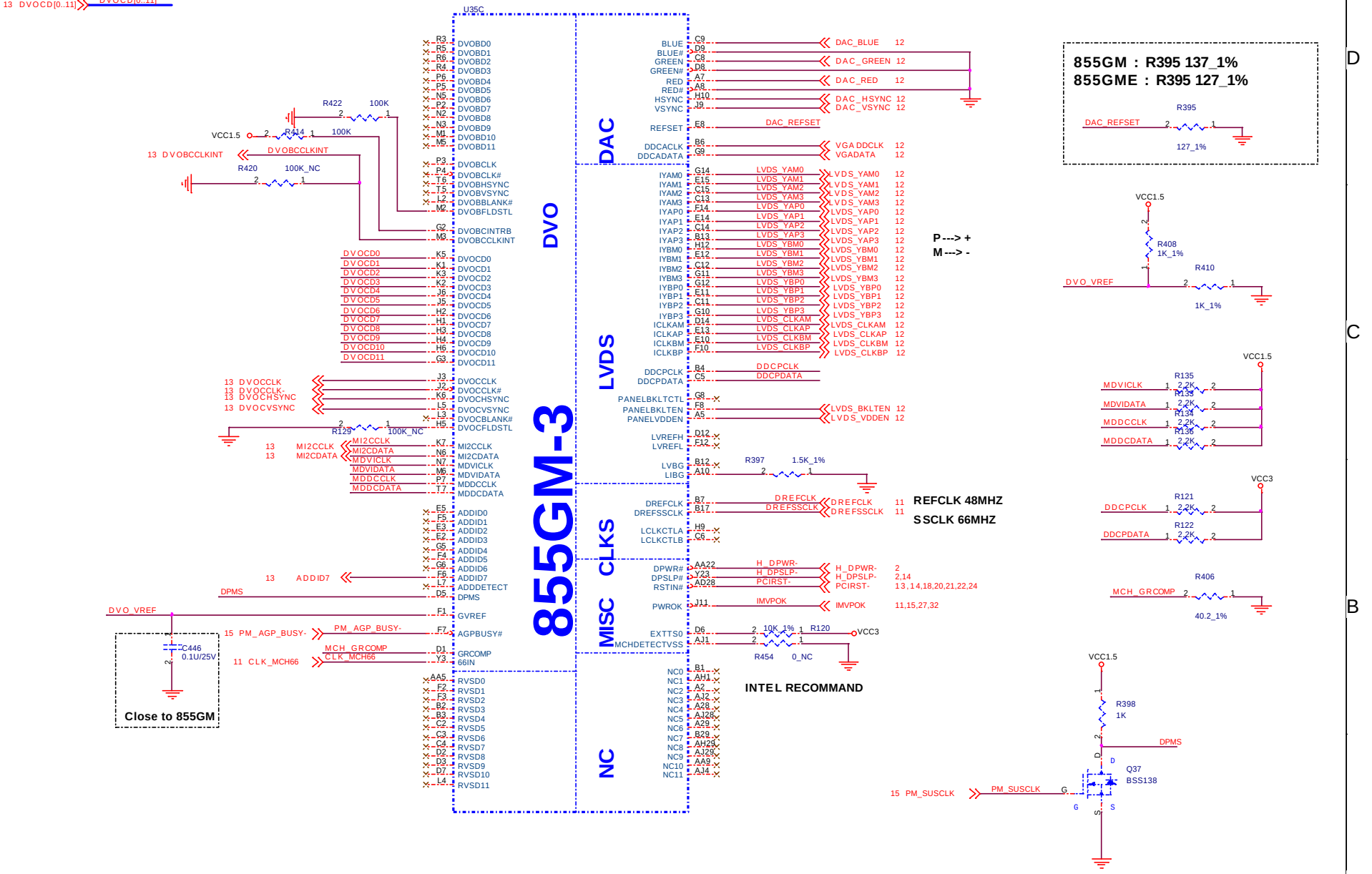
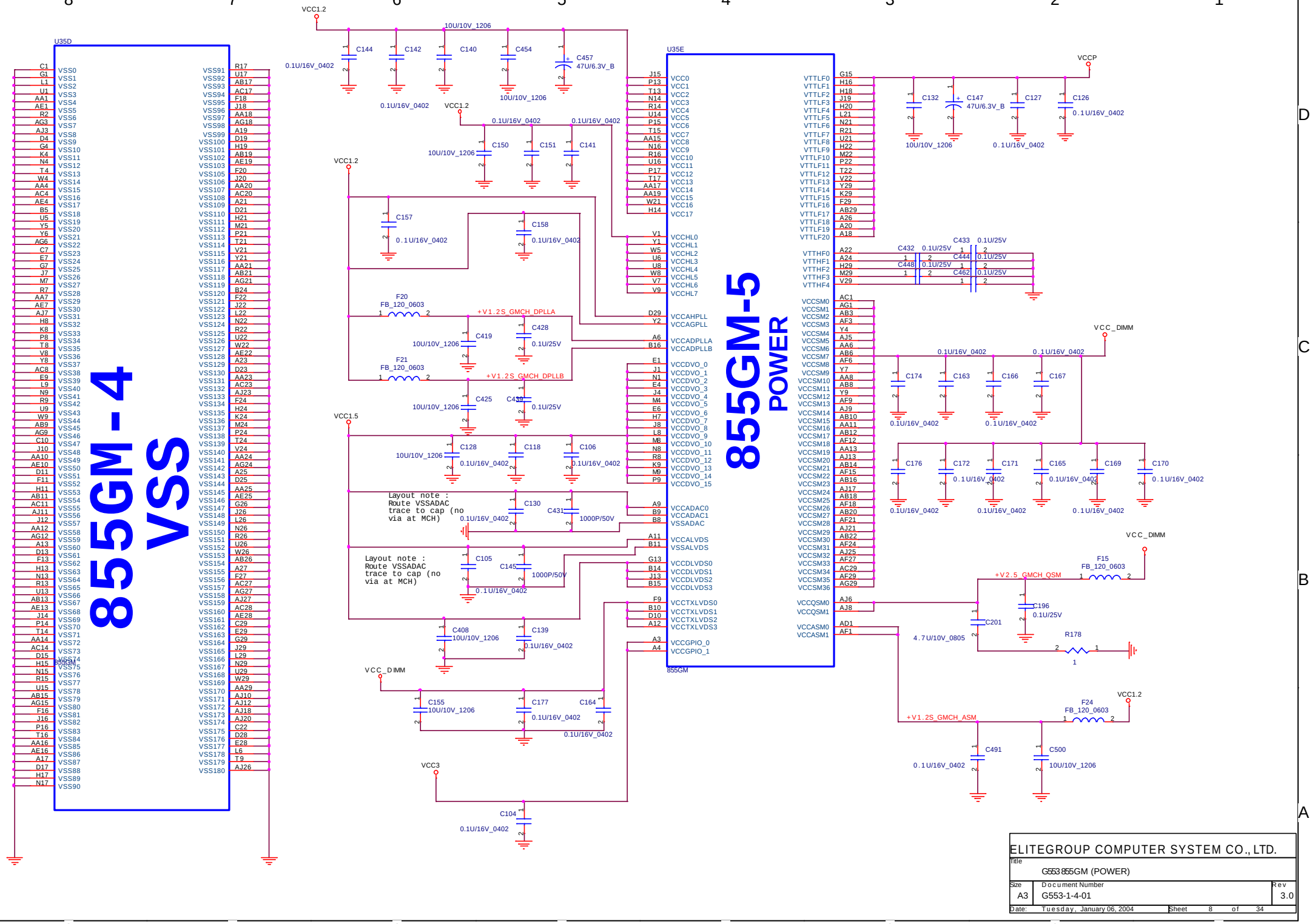


ELITEGROUP COMPUTER SYSTEM CO., LTD.		
Title: G553 855GM (HYPERZIP/VGA)		
Size: B	Document Number: G553-1-4-01	Rev: 3.0
Date: Tuesday, January 06, 2004	Sheet 7 of 34	


855GM-4
VSS
U35D
U35E
855GM-5
POWER
855GM
VCC1.2
VCC1.5
VCC3
VCCP
VCC_DIMM
10U/10V_1206
0.1U/16V_0402
47U/6.3V_B
1000P/50V
0.1U/25V
FB_120_0603
+V1.2S_GMCH_DPLLA
+V1.2S_GMCH_DPLLB
+V2.5_GMCH_QSM
+V1.2S_GMCH_ASM
F20
F21
F15
F24
Layout note :
Route VSSADAC
trace to cap (no
via at MCH)
Layout note :
Route VSSADAC
trace to cap (no
via at MCH)
ELITEGROUP COMPUTER SYSTEM CO., LTD.
Title
G553855GM (POWER)
Size
A3
Document Number
G553-1-4-01
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3.0
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Tuesday, January 06, 2004
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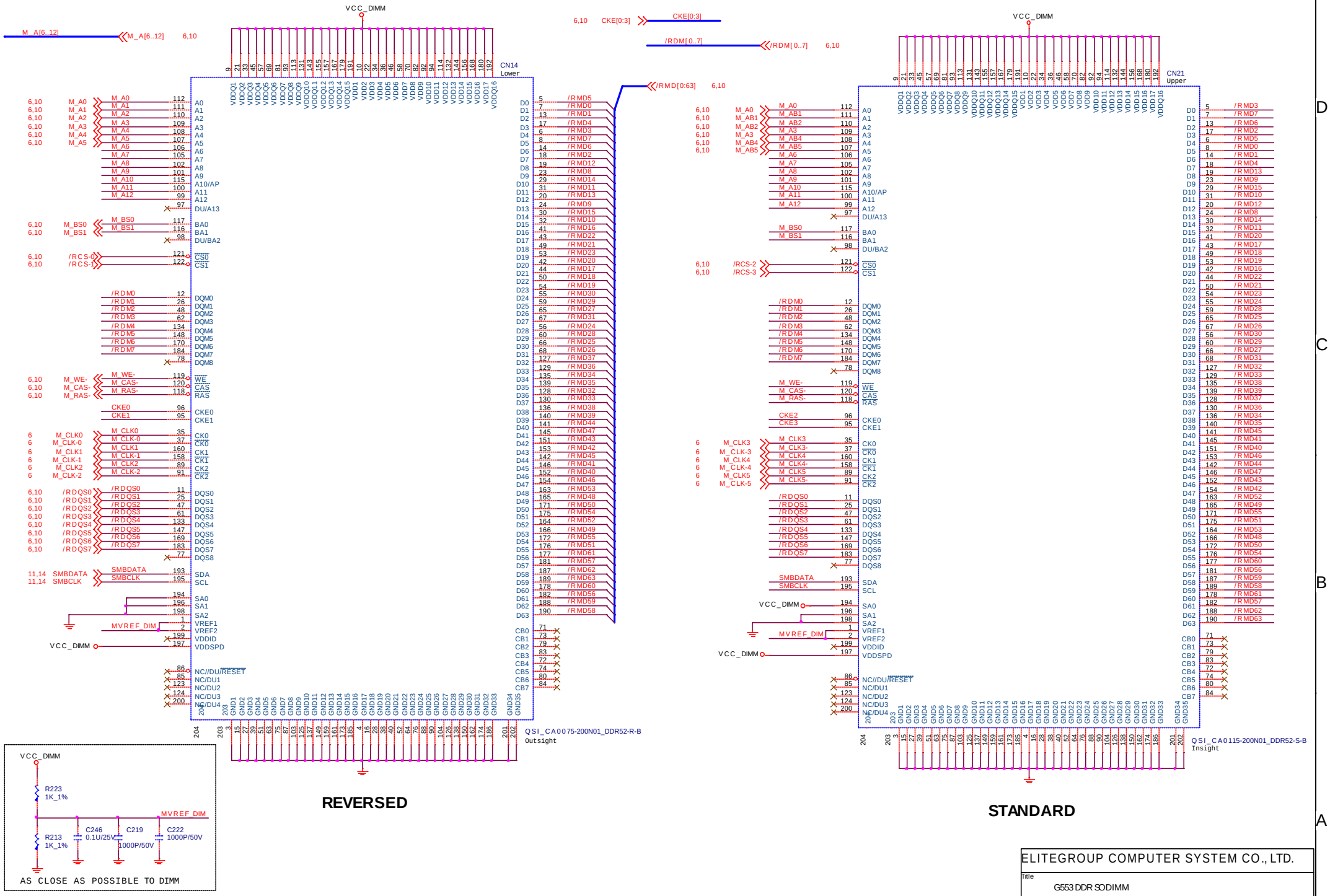

ELITEGROUP COMPUTER SYSTEM CO., LTD.	
Title	G553 DDR SODIMM
Size: A3	Document Number: G553-1-4-01
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DDR Parallel Termination

/RMD[0..63] /RMD[0..63] 6,9
/RDQS[0..7] /RDQS[0..7] 6,9
M_A[6..12] M_A[6..12] 6,9
/RCS-[0..3] /RCS-[0..3] 6,9
CKE[0..3] CKE[0..3] 6,9
M_BS[0..1] M_BS[0..1] 6,9
/RDM[0..7] /RDM[0..7] 6,9

DDR_VTT

RP26 8 1 56_8P4R_0402 /RMD5
7 2 /RMD0
6 3 /RMD1
5 4 /RMD4
RP48 8 1 56_8P4R_0402 /RMD7
7 2 /RMD6
6 3 /RMD7
5 4 /RMD3
RP25 8 1 56_8P4R_0402 /RMD12
7 2 /RMD8
6 3 /RMD14
5 4 /RMD11
RP47 8 1 56_8P4R_0402 /RMD10
7 2 /RMD15
6 3 /RMD9
5 4 /RMD13
RP24 8 1 56_8P4R_0402 /RMD16
7 2 /RMD22
6 3 /RMD21
5 4 /RMD23
RP46 8 1 56_8P4R_0402 /RMD19
7 2 /RMD18
6 3 /RMD17
5 4 /RMD20
RP45 8 1 56_8P4R_0402 /RMD26
7 2 /RMD25
6 3 /RMD28
5 4 /RMD24
RP23 8 1 56_8P4R_0402 /RMD30
7 2 /RMD29
6 3 /RMD27
5 4 /RMD31
RP18 8 1 56_8P4R_0402 /RMD37
7 2 /RMD36
6 3 /RMD34
5 4 /RMD35
RP40 8 1 56_8P4R_0402 /RMD39
7 2 /RMD38
6 3 /RMD33
5 4 /RMD32
RP27 8 1 56_8P4R_0402 /RMD44
7 2 /RMD47
6 3 /RMD43
5 4 /RMD42
RP49 8 1 56_8P4R_0402 /RMD46
7 2 /RMD40
6 3 /RMD41
5 4 /RMD45
RP39 8 1 56_8P4R_0402 /RMD51
7 2 /RMD55
6 3 /RMD49
5 4 /RMD52
RP17 8 1 56_8P4R_0402 /RMD53
7 2 /RMD48
6 3 /RMD50
5 4 /RMD54
RP38 8 1 56_8P4R_0402 /RMD58
7 2 /RMD59
6 3 /RMD56
5 4 /RMD60
RP16 8 1 56_8P4R_0402 /RMD61
7 2 /RMD57
6 3 /RMD62
5 4 /RMD63

R247 1 2 56.2_1%_0402 /RDQS0
R248 1 2 56.2_1%_0402 /RDQS1
R246 1 2 56.2_1%_0402 /RDQS2
R245 1 2 56.2_1%_0402 /RDQS3
R242 1 2 56.2_1%_0402 /RDQS4
R241 1 2 56.2_1%_0402 /RDQS5
R240 1 2 56.2_1%_0402 /RDQS6
R239 1 2 56.2_1%_0402 /RDQS7

DDR_VTT

RP41 8 1 56_8P4R_0402 /RCS-2
7 2 M_WE- M_WE- 6,9
6 3 M_BS0
5 4 M_A10
RP42 8 1 56_8P4R_0402 M_A1
7 2 M_A3 M_A1 6,9
6 3 M_A5 M_A3 6,9
5 4 M_A7 M_A5 6,9
RP44 8 1 56_8P4R_0402 M_A9
7 2 M_A12
6 3
5 4
C247 1 2 10UF/10V_1206
RP19 8 1 56_8P4R_0402 M_BS1
7 2 M_RAS- M_RAS- 6,9
6 3 M_CAS- M_CAS- 6,9
5 4 /RCS-3
RP20 8 1 56_8P4R_0402 M_A6
7 2 M_A4 M_A4 6,9
6 3 M_A2 M_A2 6,9
5 4 M_A0 M_A0 6,9
RP21 8 1 56_8P4R_0402 M_A11
7 2 M_A8
6 3
5 4
RP43 8 1 56_8P4R_0402
7 2 M_AB1 6,9
6 3 M_AB2 6,9
5 4 M_AB4 6,9
M_AB5 6,9

R244 1 2 56.2_1%_0402 /RCS-0
R243 1 2 56.2_1%_0402 /RCS-1

R509 1 2 56_0402 /RDM0
R508 1 2 56_0402 /RDM1
R507 1 2 56_0402 /RDM2
R506 1 2 56_0402 /RDM3
R505 1 2 56_0402 /RDM4
R504 1 2 56_0402 /RDM5
R502 1 2 56_0402 /RDM6
R503 1 2 56_0402 /RDM7

DDR_VTT

RP22
CKE0 1 8
CKE2 2 7
CKE1 3 6
CKE3 4 5
56_8P4R_0402

DDR_VTT

C272 0.1U/16V_0402 C271 0.1U/16V_0402
C269 0.1U/16V_0402 C267 0.1U/16V_0402
C268 0.1U/16V_0402 C265 0.1U/16V_0402

DDR_VTT

C261 0.1U/16V_0402 C262 0.1U/16V_0402 C268 0.1U/16V_0402 C252 0.1U/16V_0402
C248 0.1U/16V_0402 C250 0.1U/16V_0402 C263 0.1U/16V_0402 C253 0.1U/16V_0402
C270 0.1U/16V_0402 C249 0.1U/16V_0402 C255 0.1U/16V_0402 C258 0.1U/16V_0402
C607 0.1U/16V_0402 C256 0.1U/16V_0402 C254 0.1U/16V_0402 C257 0.1U/16V_0402
C251 0.1U/16V_0402 C259 0.1U/16V_0402
C260 0.1U/16V_0402

DDR_VTT

C603 0.1U/16V_0402 C619 0.1U/16V_0402 C610 0.1U/16V_0402 C608 0.1U/16V_0402
C604 0.1U/16V_0402 C614 0.1U/16V_0402 C611 0.1U/16V_0402 C609 0.1U/16V_0402
C605 0.1U/16V_0402 C616 0.1U/16V_0402 C598 0.1U/16V_0402 C595 0.1U/16V_0402
C617 0.1U/16V_0402 C600 0.1U/16V_0402

VCC_DIMM

DIMM DECOUPLING

C573 0.1U/16V_0402 C571 0.1U/16V_0402 C566 0.1U/16V_0402 C570 0.1U/16V_0402 C577 0.1U/16V_0402
C569 0.1U/16V_0402 C241 0.1U/16V_0402 C240 0.1U/16V_0402 C234 0.1U/16V_0402 C233 0.1U/16V_0402
C572 0.1U/16V_0402 C231 0.1U/16V_0402 C575 0.1U/16V_0402 C567 0.1U/16V_0402
C568 0.1U/16V_0402 C239 0.1U/16V_0402 C574 0.1U/16V_0402
C232 0.1U/16V_0402 C565 0.1U/16V_0402 C242 0.1U/16V_0402
C230 0.1U/16V_0402
C229 0.1U/16V_0402
C235 0.1U/16V_0402
C576 0.1U/16V_0402
C236 0.1U/16V_0402
C238 0.1U/16V_0402
C237 0.1U/16V_0402
C228 0.1U/16V_0402
C564 0.1U/16V_0402
C182 0.1U/16V_0402
C227 0.1U/16V_0402

DDR_VTT

C606 0.1U/16V_0402 C264 0.1U/16V_0402
C596 0.1U/16V_0402 C593 0.1U/16V_0402
C594 0.1U/16V_0402 C597 0.1U/16V_0402
C599 0.1U/16V_0402 C601 0.1U/16V_0402
C602 0.1U/16V_0402 C612 0.1U/16V_0402
C613 0.1U/16V_0402 C618 0.1U/16V_0402
C273 0.1U/16V_0402 C615 0.1U/16V_0402

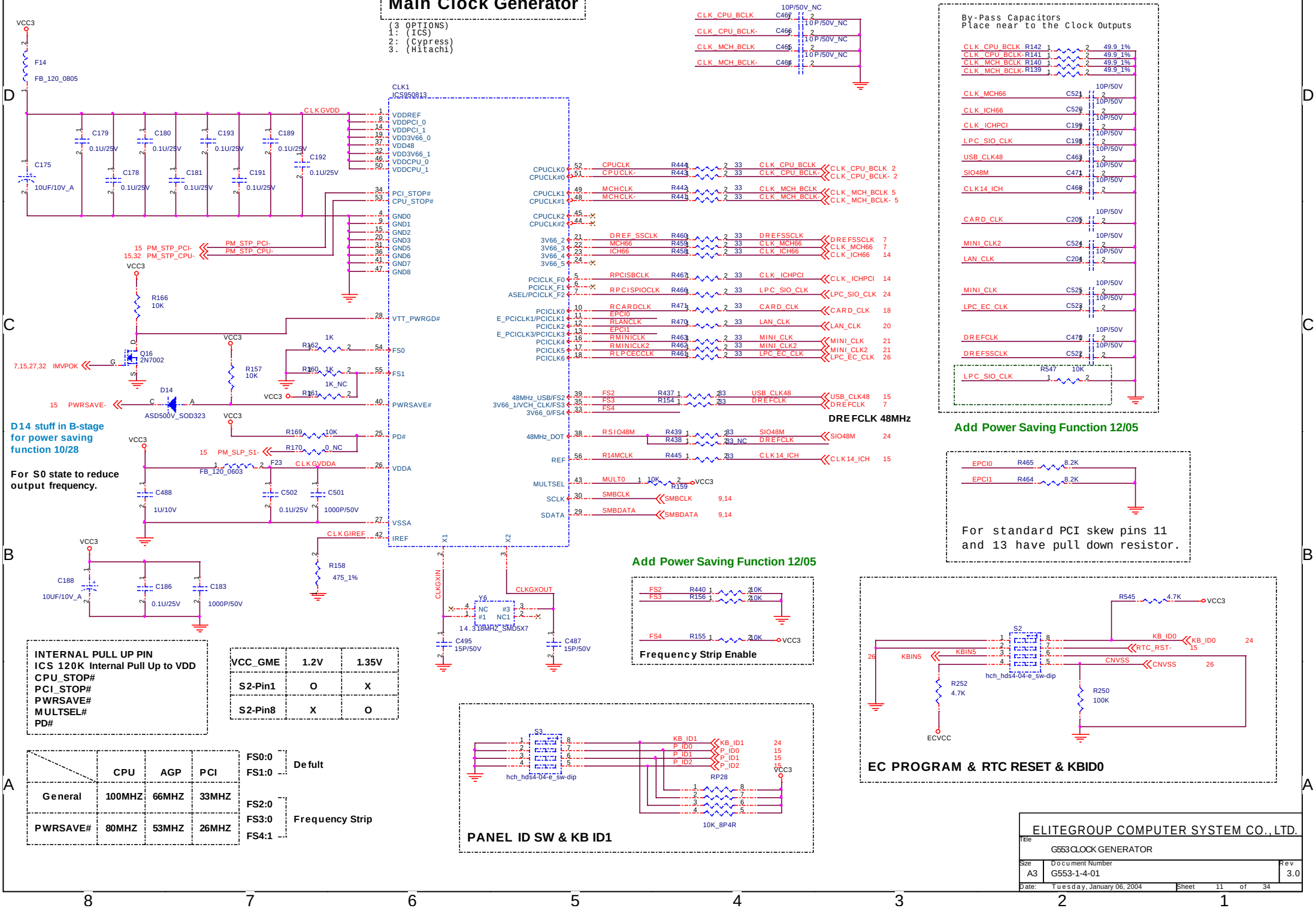
DDR_VTT

ELITEGROUP COMPUTER SYSTEM CO., LTD.

Title	G553 DDR_RES VTT	
Size A3	Document Number G553-1-4-01	Rev 3.0
Date: Tuesday, January 06, 2004	Sheet 10 of 34	

Main Clock Generator

(3 OPTIONS)
1: (ICS)
2: (Cypress)
3. (Hitachi)



INTERNAL PULL UP PIN
ICS 120K Internal Pull Up to VDD
CPU_STOP#
PCI_STOP#
PWRSAVE#
MULTSEL#
PD#

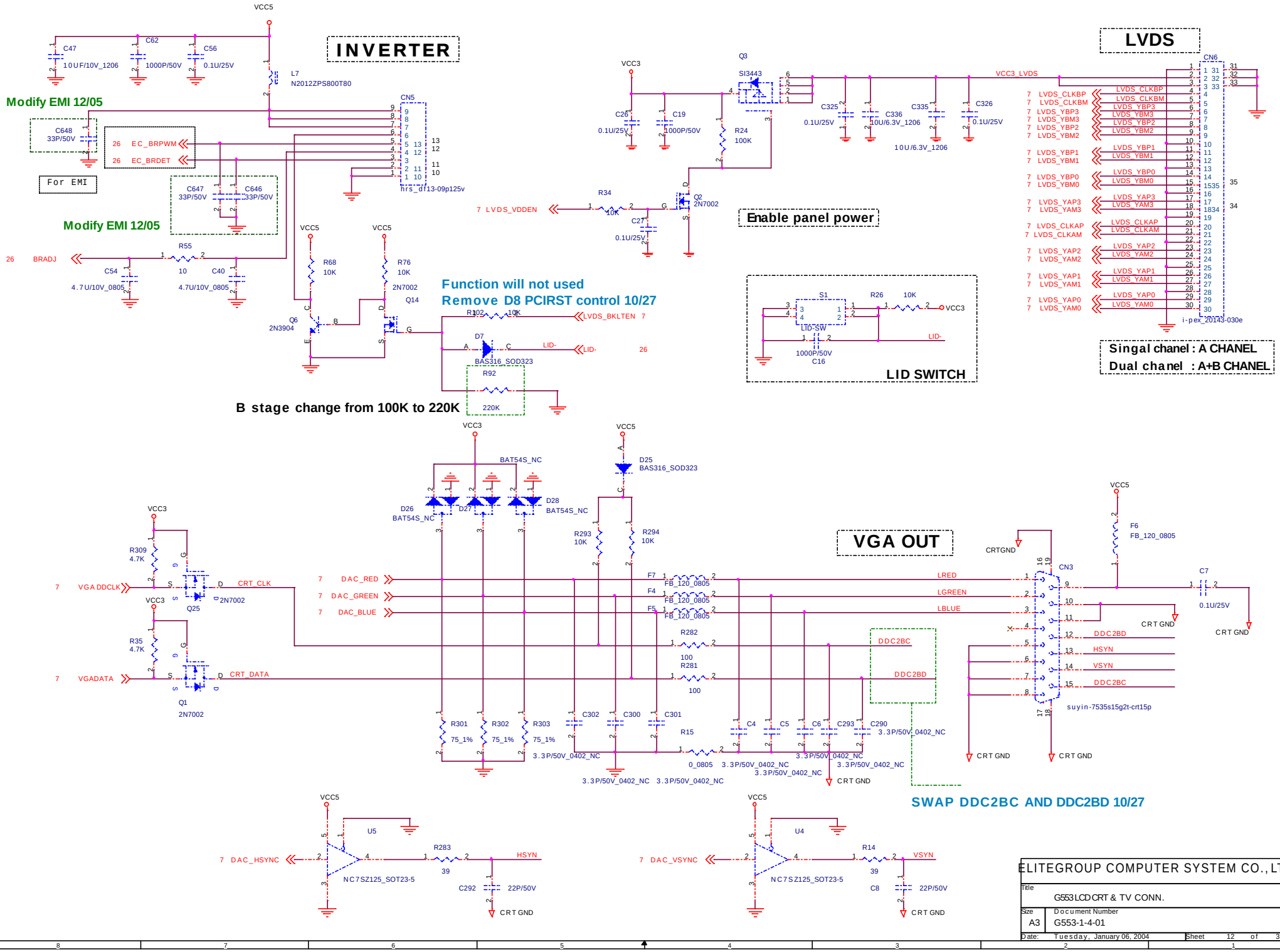
VCC_GME	1.2V	1.35V
S2-Pin1	O	X
S2-Pin8	X	O

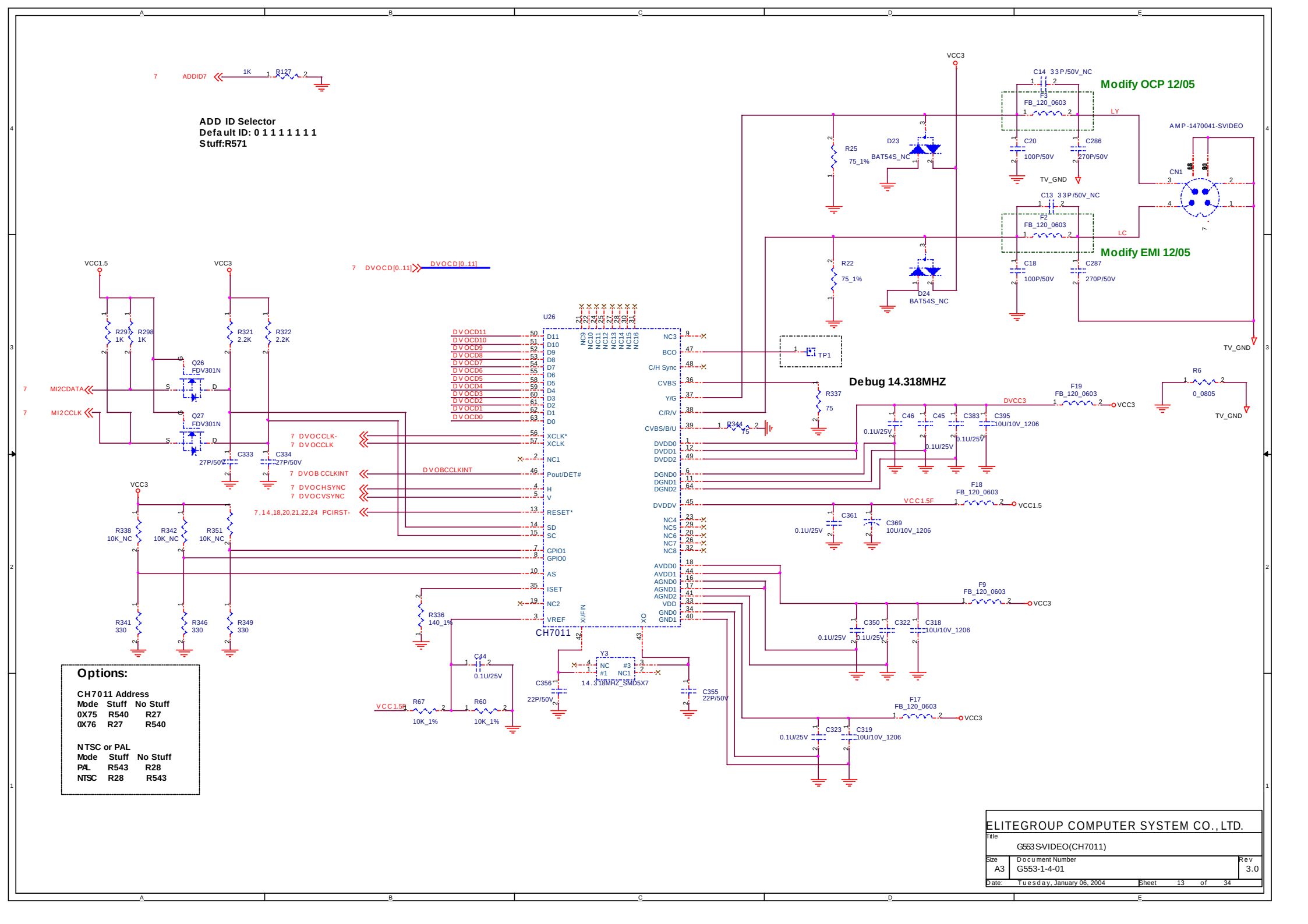
	CPU	AGP	PCI
General	100MHZ	66MHZ	33MHZ
PWRSAVE#	80MHZ	53MHZ	26MHZ

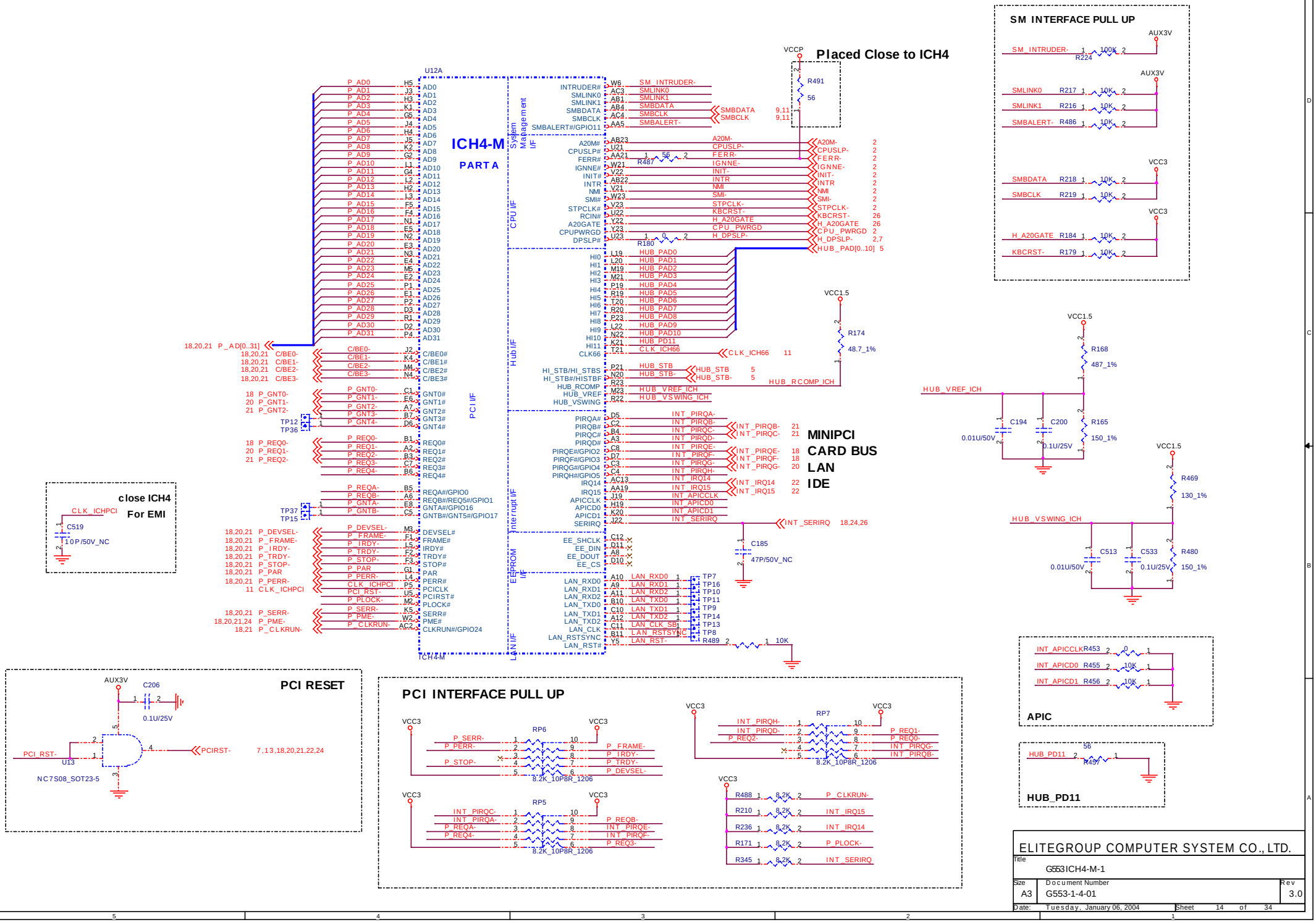
FS0:0
FS1:0 — Defult

FS2:0
FS3:0
FS4:1 — Frequency Strip

Title		
ELITEGROUP COMPUTER SYSTEM CO., LTD.		
G553 CLOCK GENERATOR		
Size: A3	Document Number: G553-1-4-01	Rev: 3.0
Date: Tuesday, January 06, 2004	Sheet 11 of 34	


INVERTER
LVDS
VGA OUT
Modify EMI 12/05
Modify EMI 12/05
For EMI
Enable panel power
Function will not used
Remove D8 PCIRST control 10/27
B stage change from 100K to 220K
LID SWITCH
Singal chanel : A CHANEL
Dual chanel : A+B CHANEL
SWAP DDC2BC AND DDC2BD 10/27
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553 LCD CRT & TV CONN.
Document Number G553-1-4-01
Rev 3.0
Date: Tuesday, January 06, 2004
Sheet 12 of 34


ADD ID Selector
Default ID: 0 1 1 1 1 1 1 1
Stuff:R571
Modify OCP 12/05
Modify EMI 12/05
Debug 14.318MHZ
CH7011
U26
Y3
14.318MHZ_SMD5X7
AMP-1470041-SVIDEO
Options:
CH7011 Address
Mode Stuff No Stuff
0X75 R540 R27
0X76 R27 R540
NTSC or PAL
Mode Stuff No Stuff
PAL R543 R28
NTSC R28 R543
ELITEGROUP COMPUTER SYSTEM CO., LTD.
Title
G553 S-VIDEO(CH7011)
Size A3
Document Number G553-1-4-01
Rev 3.0
Date: Tuesday, January 06, 2004
Sheet 13 of 34


SM INTERFACE PULL UP
Placed Close to ICH4
ICH4-M
PARTA
U12A
MINIPCI
CARD BUS
LAN
IDE
close ICH4
For EMI
PCI RESET
PCI INTERFACE PULL UP
HUB_PD11
APIC
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553ICH4-M-1
Document Number
G553-1-4-01
Tuesday, January 06, 2004

RTC Circuitry

Placed close to ICH4

Delete KBSWI- 10/27

FOR CARDBUS WEAK UP

U12B

ICH4-M PART B

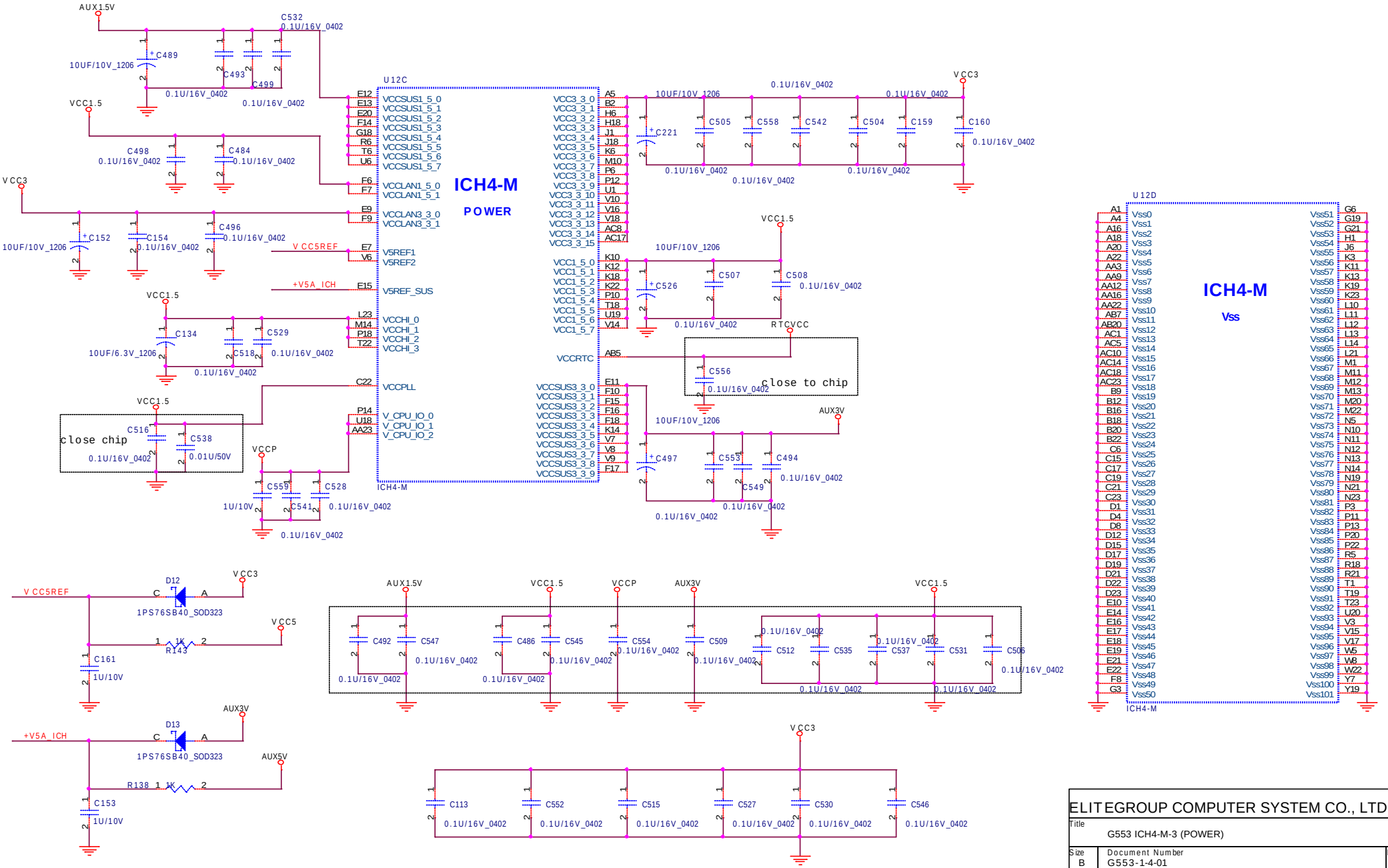
PANEL ID

RTC INTERFACE

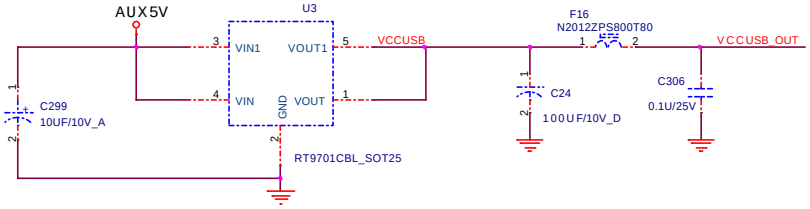
USB OVER CURRENT PULL UP

close SB chip

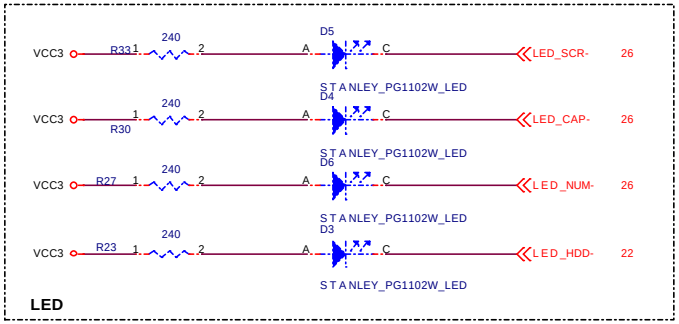
ELITEGROUP COMPUTER SYSTEM CO., LTD.	
Title	G553ICH4-M-2
Size: A3	Document Number: G553-1-4-01
Rev: 3.0	
Date: Tuesday, January 06, 2004	Sheet 15 of 34

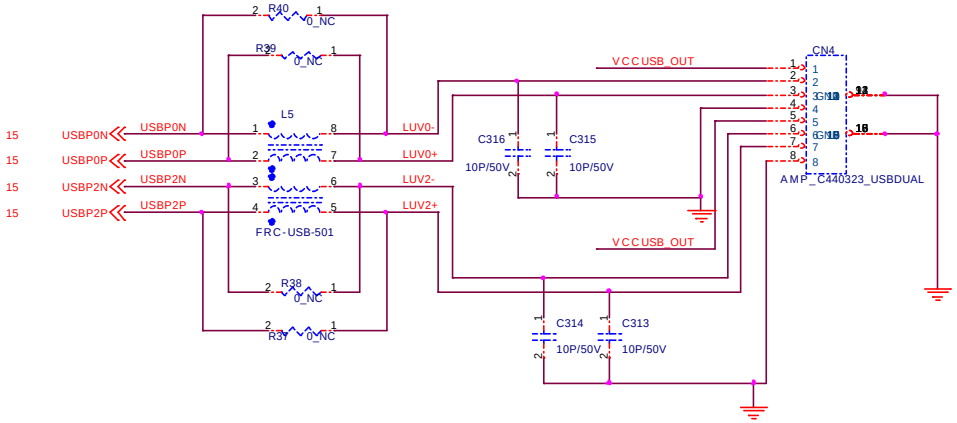

U12C
ICH4-M
POWER
U12D
ICH4-M
Vss
close chip
close to chip
AUX1.5V
VCC1.5
VCC3
AUX3V
VCCP
AUX5V
V_CC5REF
+V5A_ICH
RTCVCC
1PS76SB40_SOD323
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553 ICH4-M-3 (POWER)
Size B
Document Number G553-1-4-01
Rev 3.0
Date: Tuesday, January 06, 2004
Sheet 16 of 34

Note :
Add Capacitor on AUX5V trace

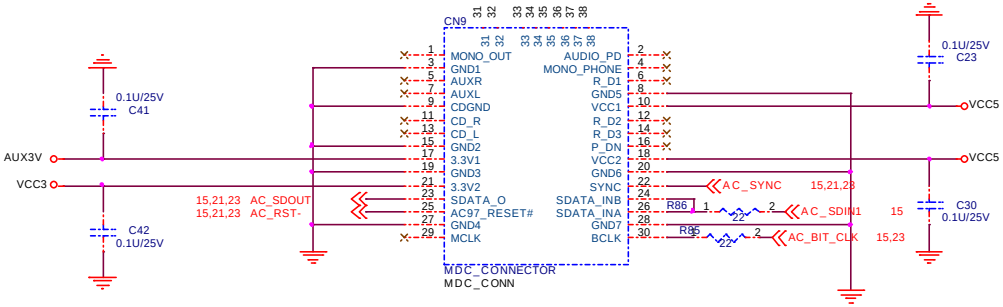


POWER trace above 80 mils





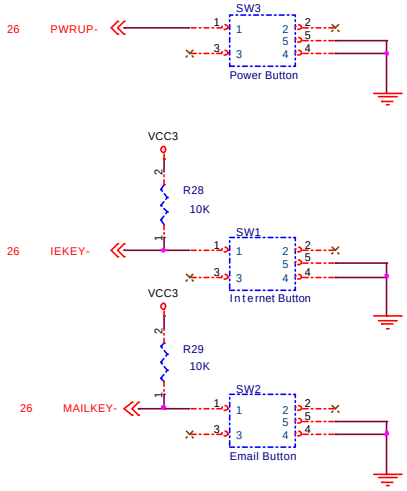
Modem Daughter Card Connector



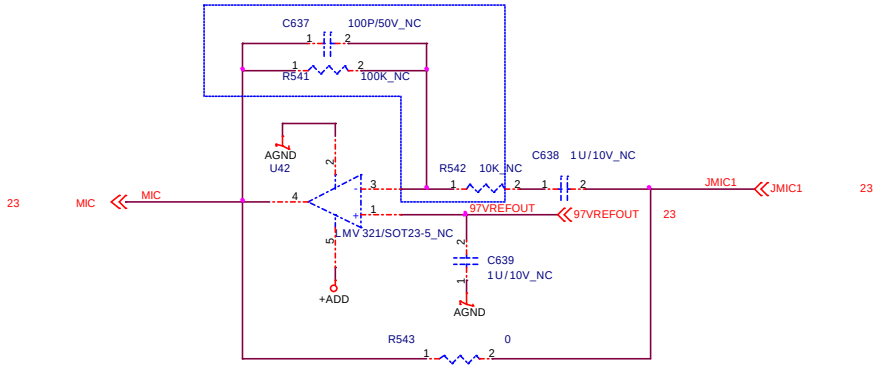
For two brand MDC, Pin 24 and Pin 26 must be shoot 10/27

Modify MDC Footprint 12/08

pin 1 & 4 to press

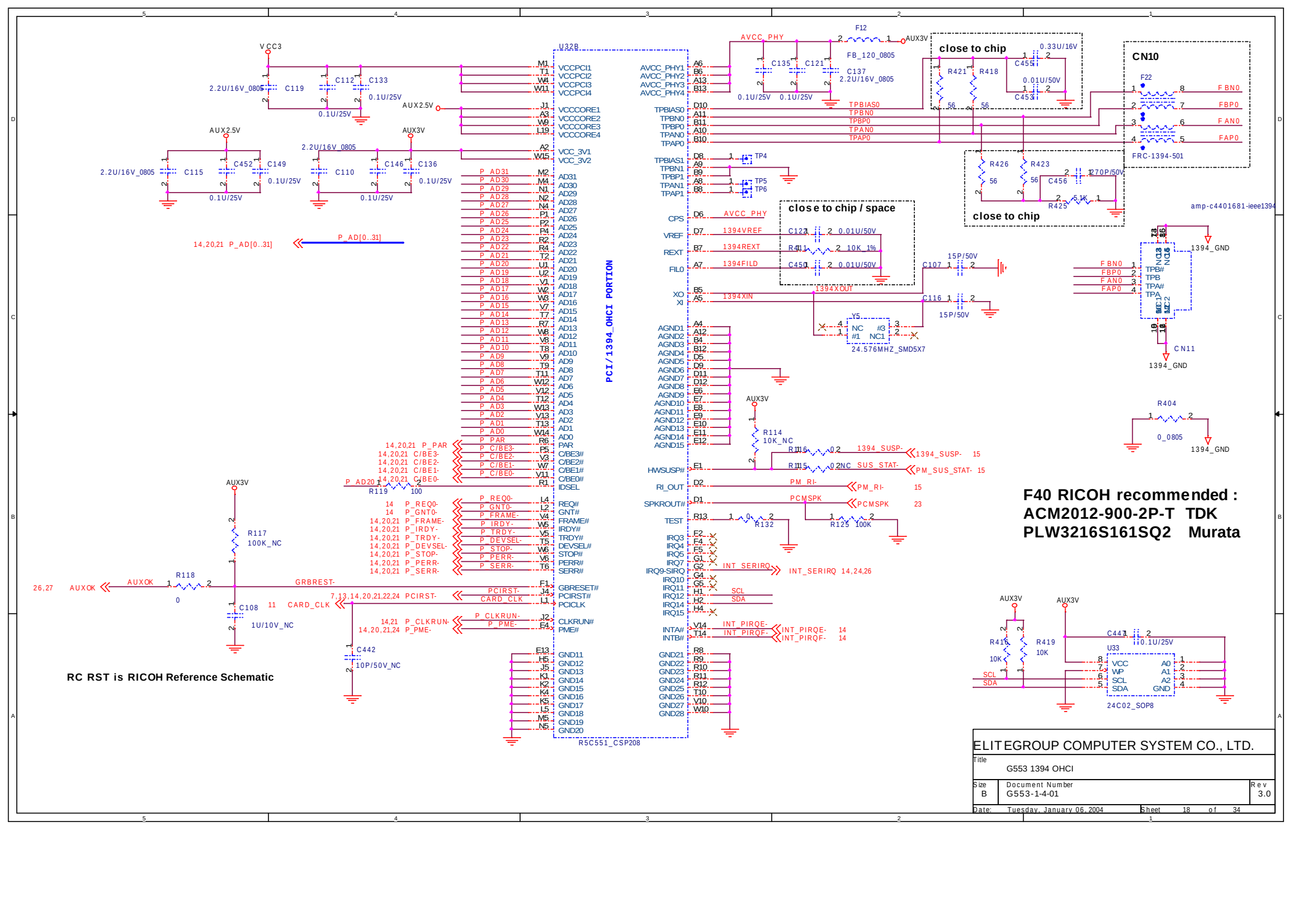


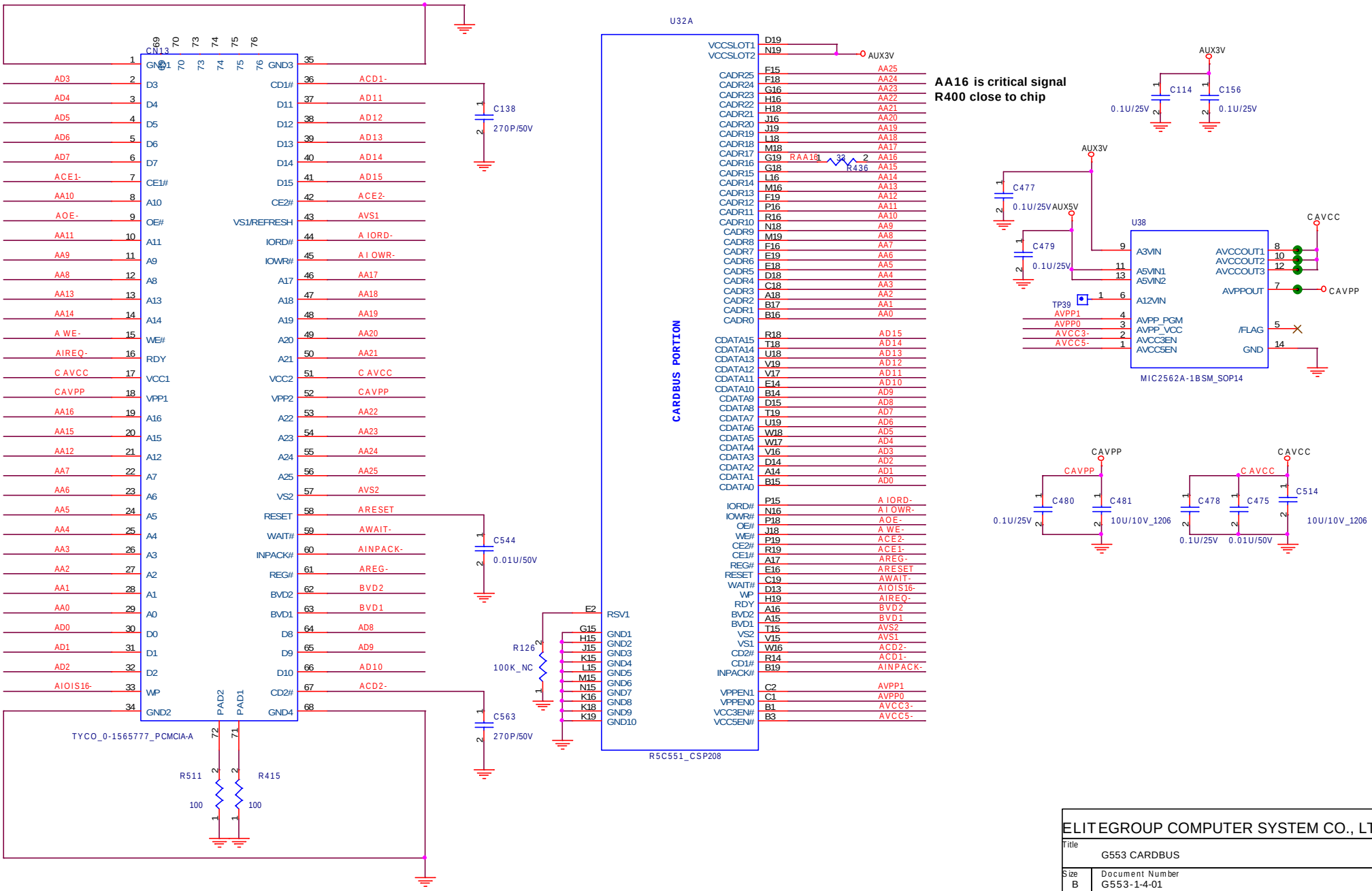
Add MIC Pre-AMP circuit for special customer request 10/27
+20dB Gain



ELITEGROUP COMPUTER SYSTEM CO., LTD.

Title: G553 USB & LED & MDC CONN		
Size: A3	Document Number: G553-1-4-01	Rev: 3.0
Date: Tuesday, January 06, 2004	Sheet 17 of 34	


U32B
PCI/1394_OHCI PORTION
R5C551_CSP208
F40 RICOH recommended :
ACM2012-900-2P-T TDK
PLW3216S161SQ2 Murata
RC RST is RICOH Reference Schematic
close to chip
close to chip / space
close to chip
CN10
FRC-1394-501
amp-c4401681-ieee1394
CN11
1394_GND
24.576MHZ_SMD5X7
24C02_SOP8
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553 1394 OHCI
G553-1-4-01
Tuesday, January 06, 2004


CN13
TYCO_0-1565777_PCMCIA-A
U32A
CARDBUS PORTION
R5C551_CSP208
AA16 is critical signal
R400 close to chip
U38
MIC2562A-1BSM_SOP14
AUX3V
CAVPP
CAVCC
C138
270P/50V
C544
0.01U/50V
C563
270P/50V
R511
R415
100
100
R126
100K_NC
R436
33
RAA16
C114
C156
0.1U/25V
C477
C479
C480
C481
C478
C475
C514
10U/10V_1206
0.01U/50V
TP39
ELITEGROUP COMPUTER SYSTEM CO., LTD.
Title
G553 CARDBUS
Size
B
Document Number
G553-1-4-01
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3.0
Date:
Tuesday, January 06, 2004
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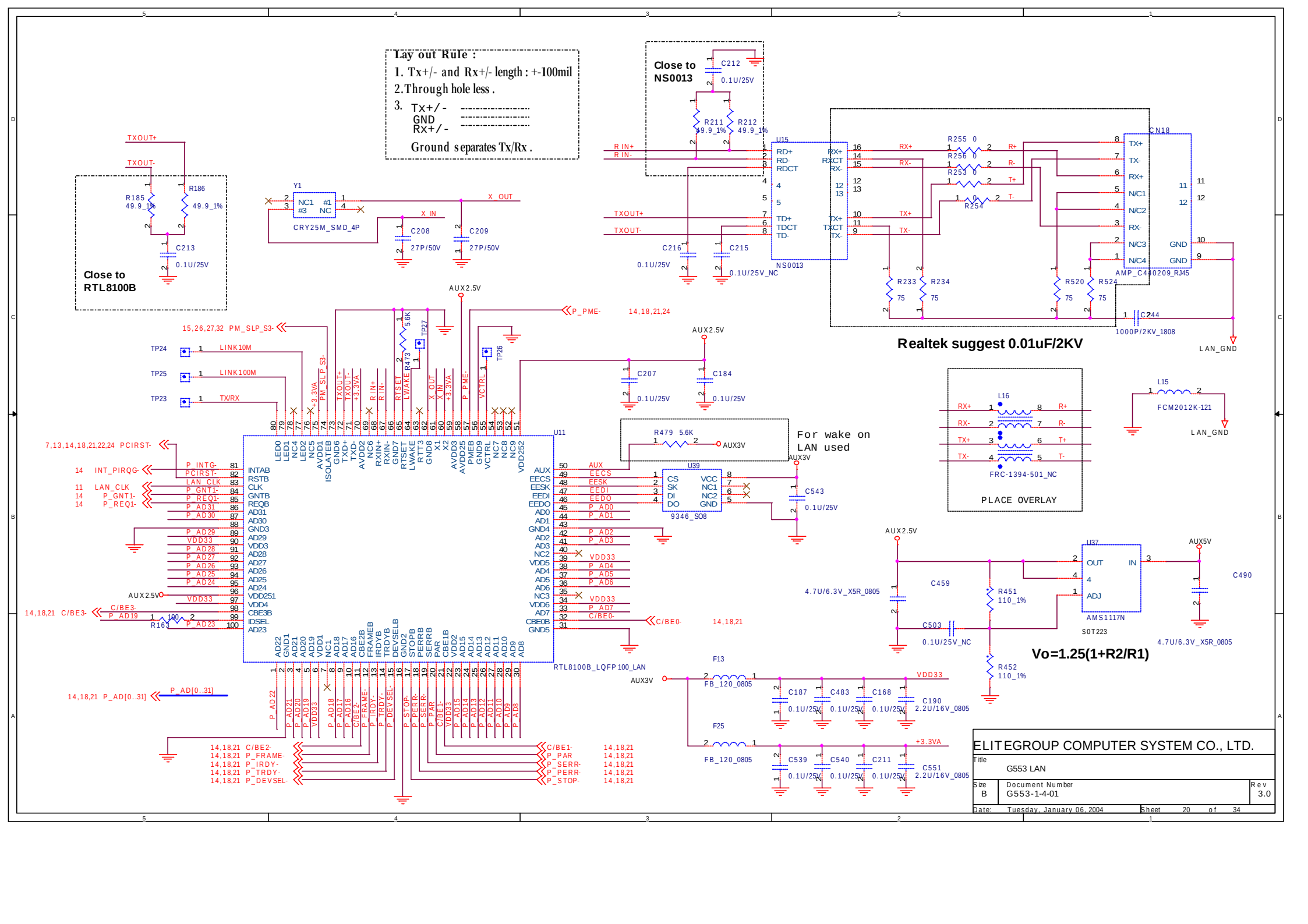
19
of
34


Lay out Rule :
1. Tx+/- and Rx+/- length : +-100mil
2.Through hole less .
3. Tx+/-
GND
Rx+/-
Ground separates Tx/Rx .
Close to RTL8100B
Close to NS0013
Realtek suggest 0.01uF/2KV
For wake on LAN used
PLACE OVERLAY
Vo=1.25(1+R2/R1)
RTL8100B_LQFP100_LAN
NS0013
AMP_C440209_RJ45
FRC-1394-501_NC
AMS1117N
9346_SO8
CRY25M_SMD_4P
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553 LAN
Document Number G553-1-4-01
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Tuesday, January 06, 2004
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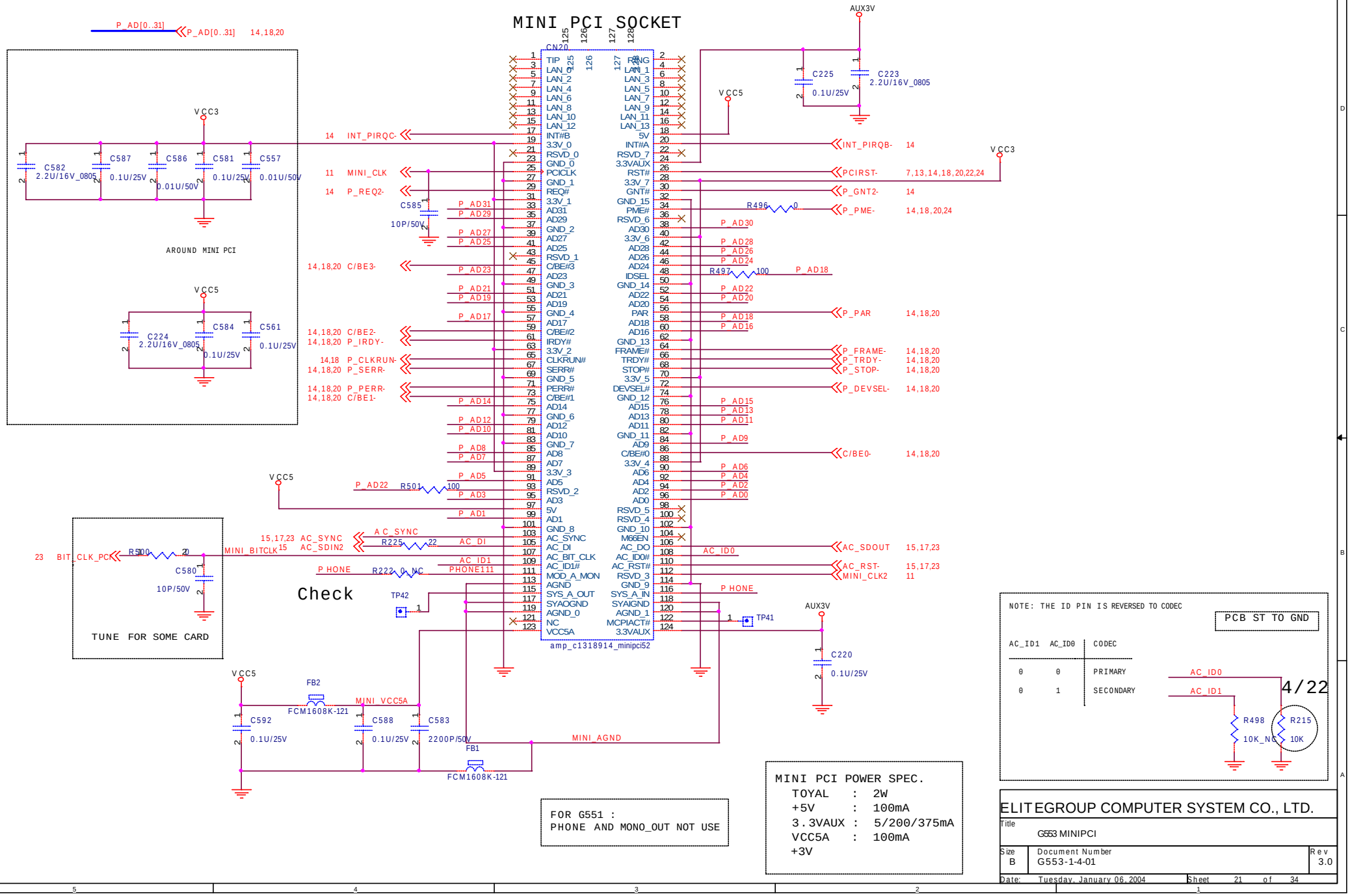
MINI PCI SOCKET



NOTE: THE ID PIN IS REVERSED TO CODEC

PCB ST TO GND

AC_ID1	AC_ID0	CODEC
0	0	PRIMARY
0	1	SECONDARY

FOR G551 :
PHONE AND MONO_OUT NOT USE

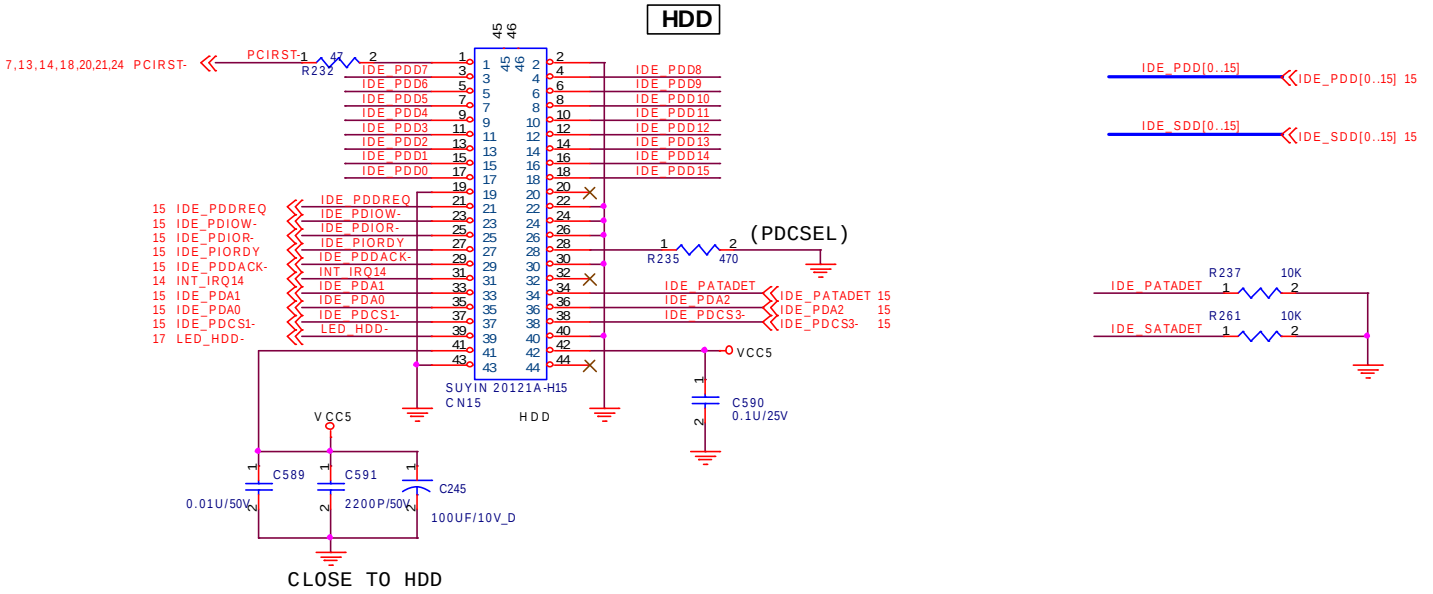
MINI PCI POWER SPEC.
TOYAL : 2W
+5V : 100mA
3.3VAUX : 5/200/375mA
VCC5A : 100mA
+3V

ELITEGROUP COMPUTER SYSTEM CO., LTD.

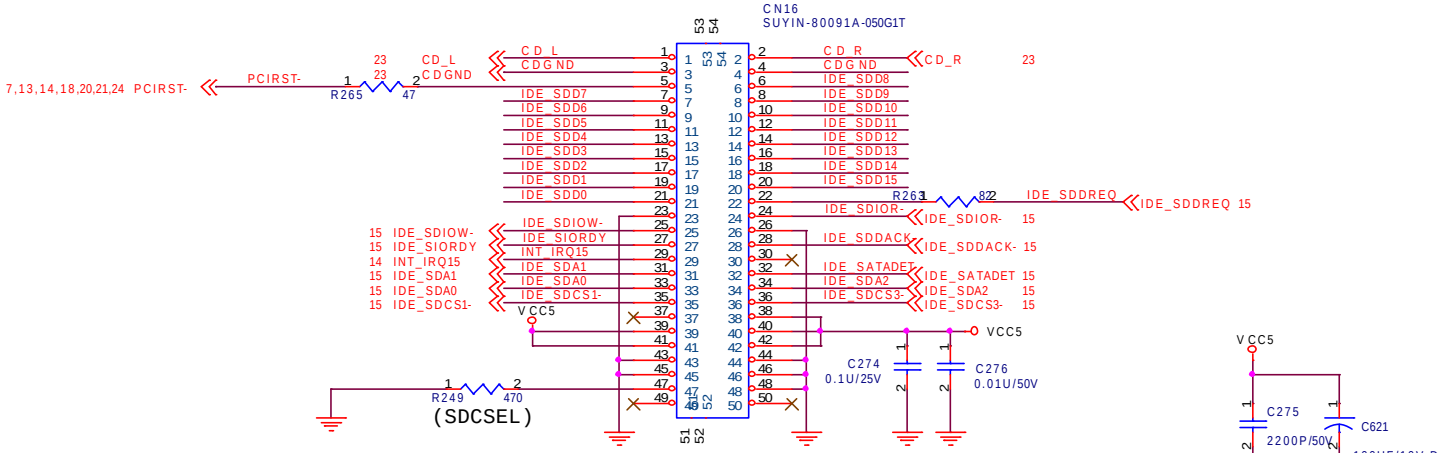
Title		
	G553 MINIPCI	
Size B	Document Number G553-1-4-01	Rev 3.0
Date: Tuesday, January 06, 2004	Sheet 21 of 34	

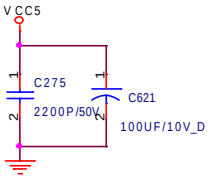
4/22

HDD



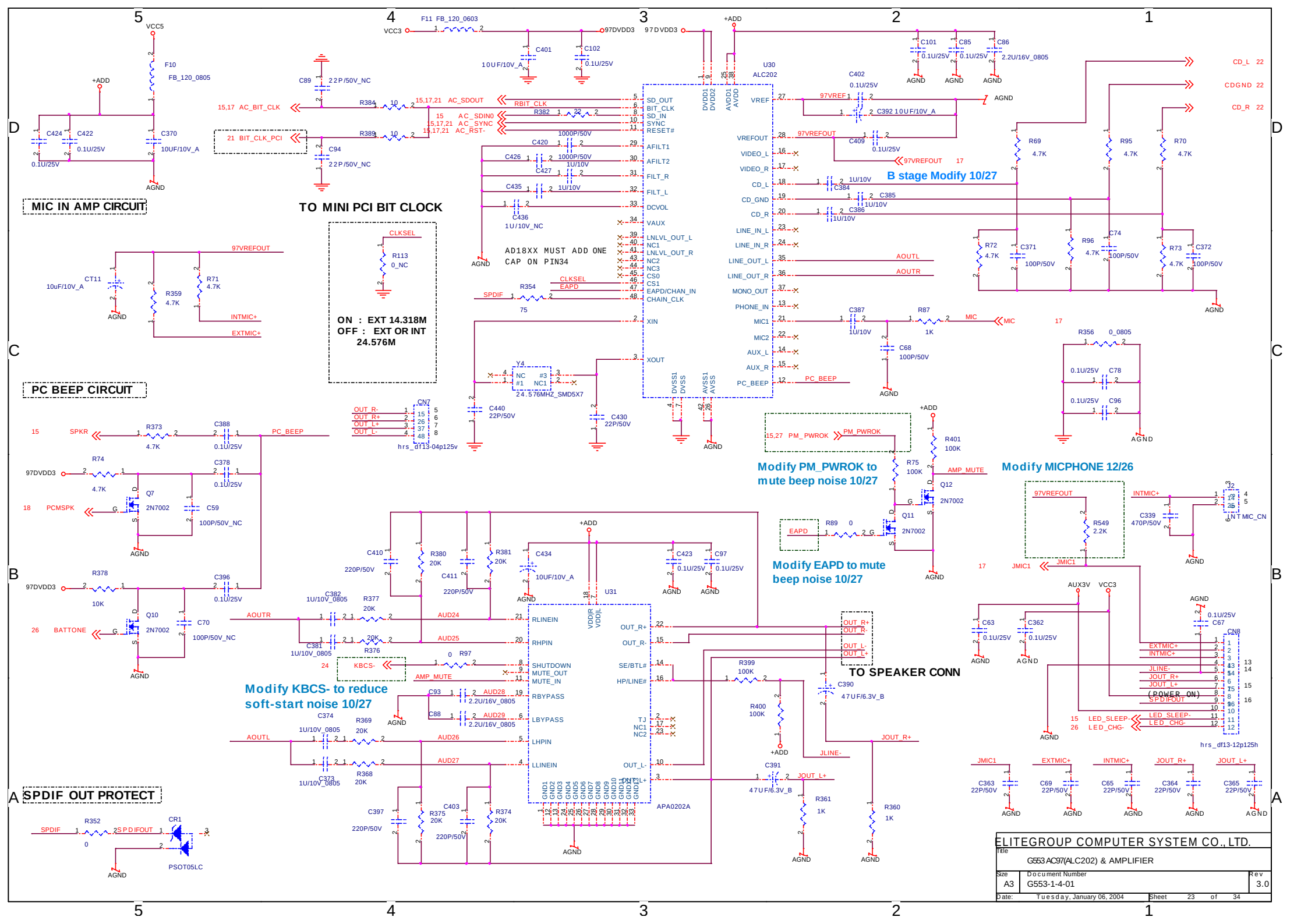
CD-ROM

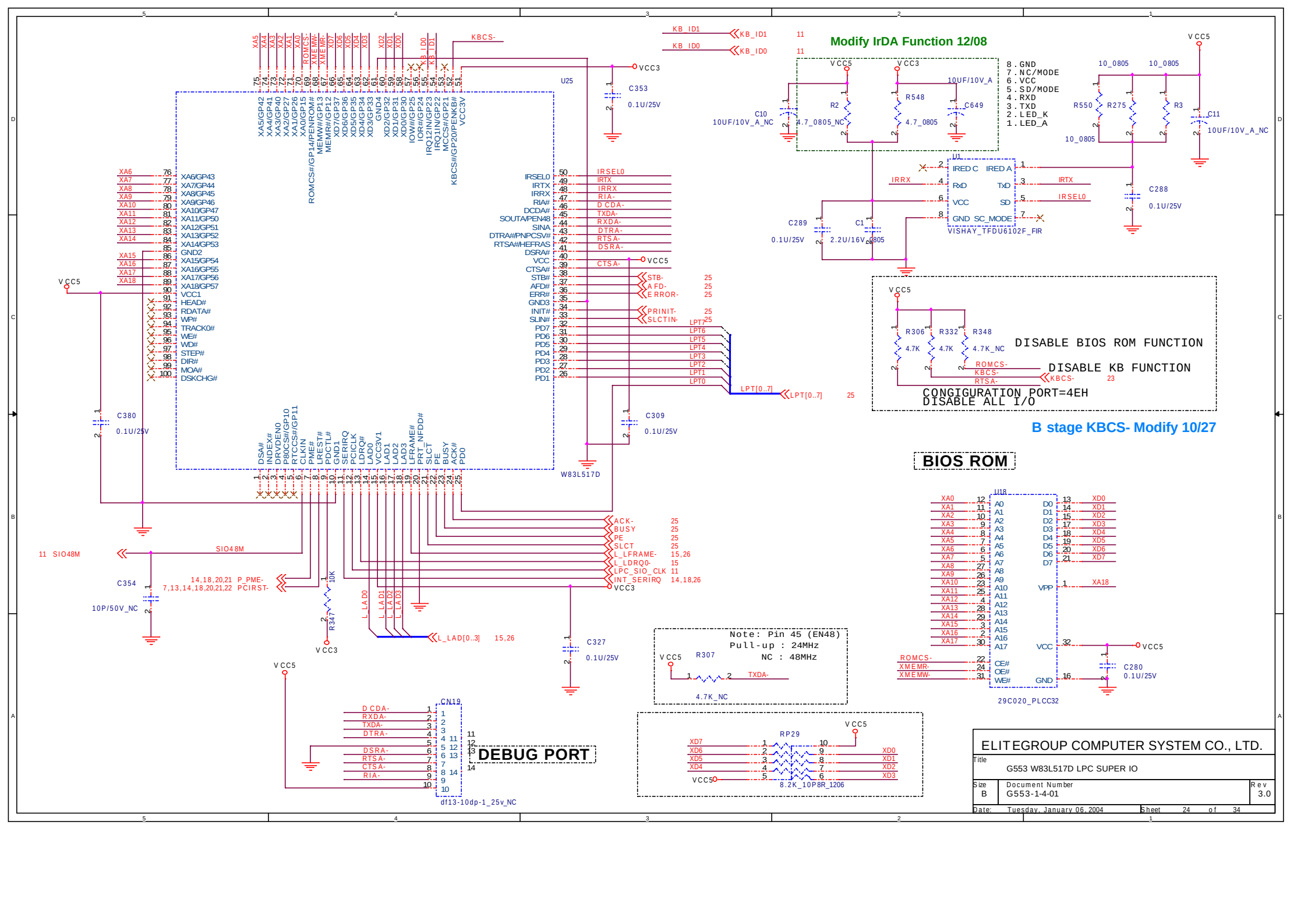


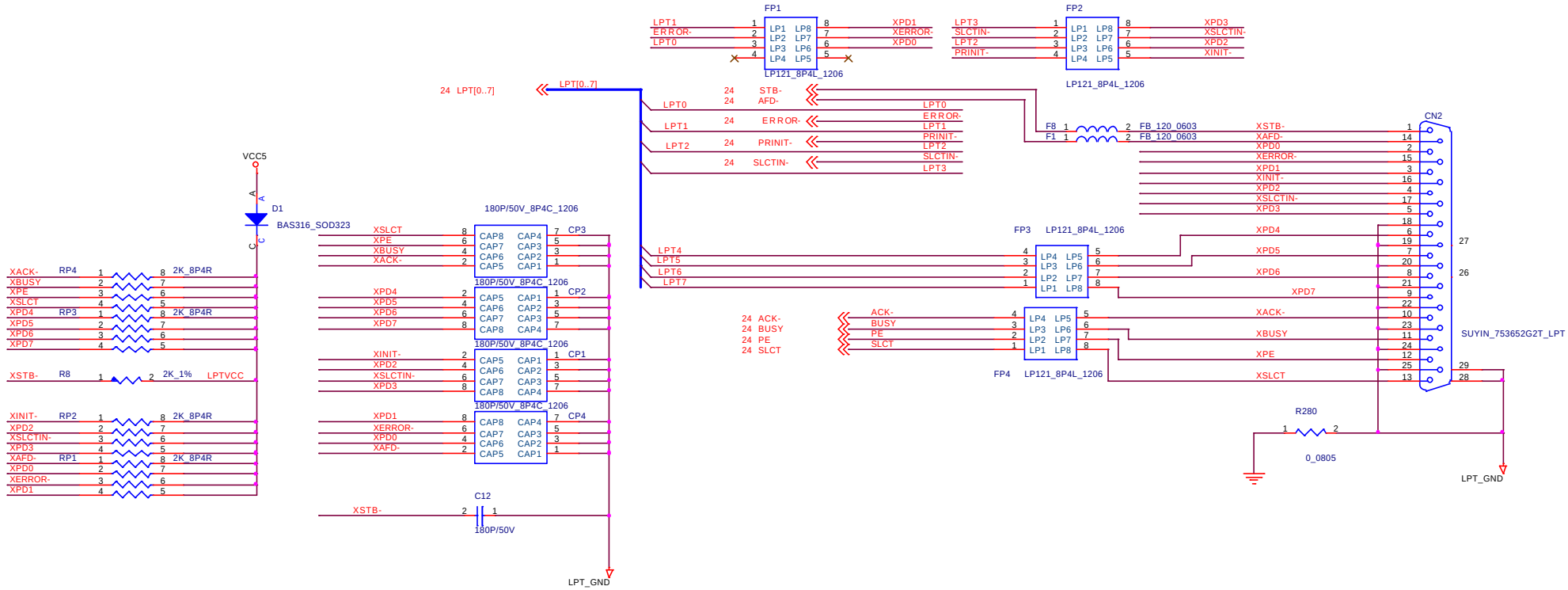


CLOSE TO CDROM/DVDROM

ELITEGROUP COMPUTER SYSTEM CO., LTD.		
Title: G553 HDD & CDROM CONN.		
Size: B	Document Number: G553-1-4-01	Rev: 3.0
Date: Tuesday, January 06, 2004	Sheet 22 of 34	


MIC IN AMP CIRCUIT
TO MINI PCI BIT CLOCK
AD18XX MUST ADD ONE CAP ON PIN34
ON : EXT 14.318M
OFF : EXT OR INT 24.576M
PC BEEP CIRCUIT
SPDIF OUT PROTECT
B stage Modify 10/27
Modify PM_PWROK to mute beep noise 10/27
Modify EAPD to mute beep noise 10/27
Modify MICPHONE 12/26
Modify KBCS- to reduce soft-start noise 10/27
TO SPEAKER CONN
U30 ALC202
U31 APA0202A
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553 AC97(ALC202) & AMPLIFIER
Size A3
Document Number G553-1-4-01
Rev 3.0
Date: Tuesday, January 06, 2004
Sheet 23 of 34


Modify IrDA Function 12/08
B stage KBCS- Modify 10/27
BIOS ROM
DEBUG PORT
U25
W83L517D
U18
29C020_PLCC32
U1
VISHAY_TFDU6102F_FIR
CN19
df13-10dp-1_25v_NC
DISABLE BIOS ROM FUNCTION
DISABLE KB FUNCTION
CONGIGURATION PORT=4EH
DISABLE ALL I/O
Note: Pin 45 (EN48)
Pull-up : 24MHz
NC : 48MHz
8.GND
7.NC/MODE
6.VCC
5.SD/MODE
4.RXD
3.TXD
2.LED_K
1.LED_A
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553 W83L517D LPC SUPER IO
Document Number
G553-1-4-01
Rev
3.0
Tuesday, January 06, 2004
Sheet 24 of 34



ELITEGROUP COMPUTER SYSTEM CO., LTD.	
Title: G553 PRINTER PORT	
Size: A3	Document Number: G553-1-4-01
Rev: 3.0	
Date: Tuesday, January 06, 2004	Sheet 25 of 34

EC Rework 10/27
Modify EC_BRPWM to pin27
Modify BATTONE to pin12
Modify PM_RSMRST to pin13
Modify LID- to pin78
Modify ON3_5 to pin10
Modify PM_SLP_S5- to pin34

W83L950D

S/W DEBUG PORT

SYSTEM THERM SENSOR

FAN CONTROL

CPU

Modify LED_CHG- 10/27

Modify BRADJ Buffer 10/27

EC LATCH CIRCUIT

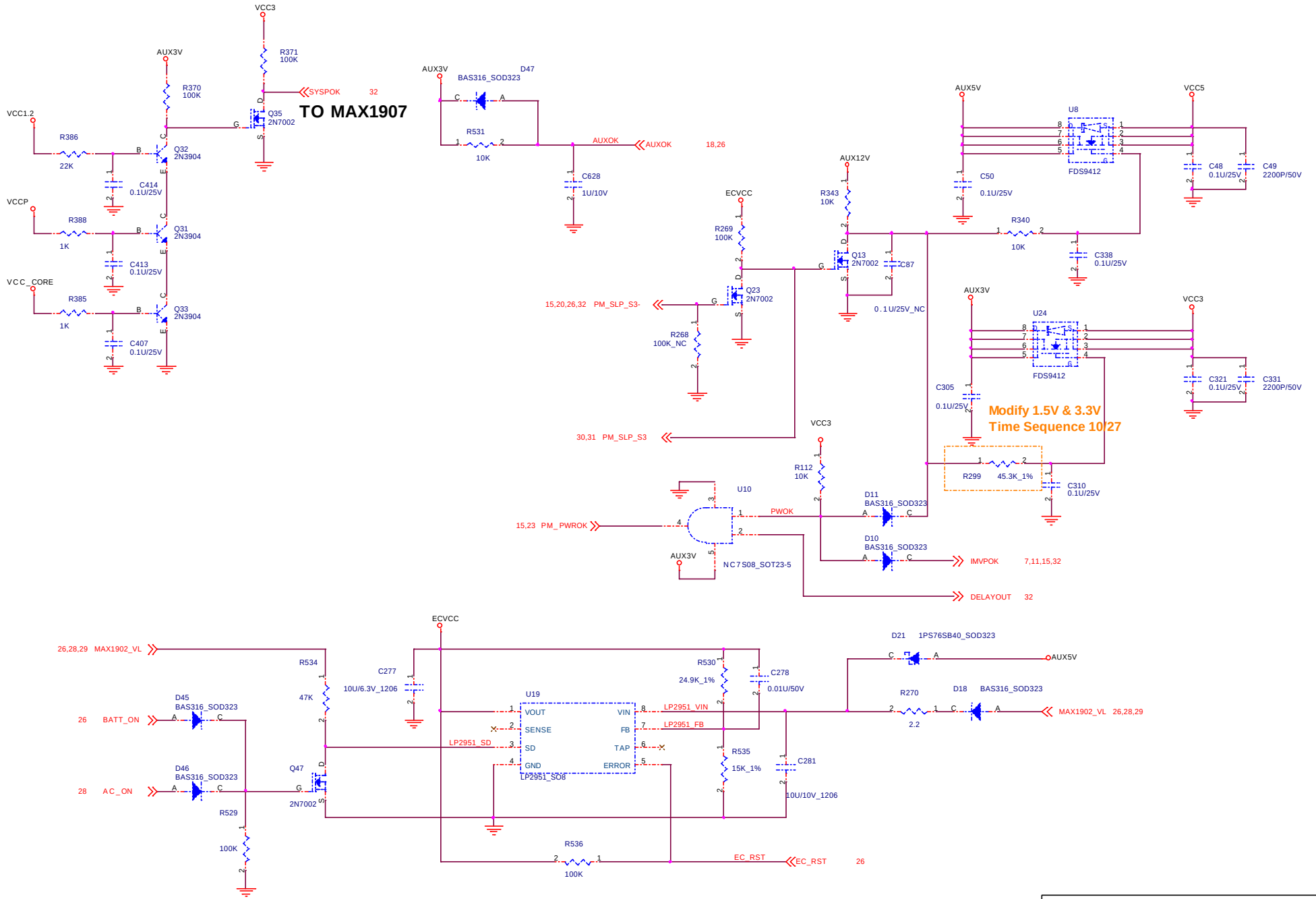
TOUCH PAD

ELITEGROUP COMPUTER SYSTEM CO., LTD.

Title: G553 KBC (W83L950D)

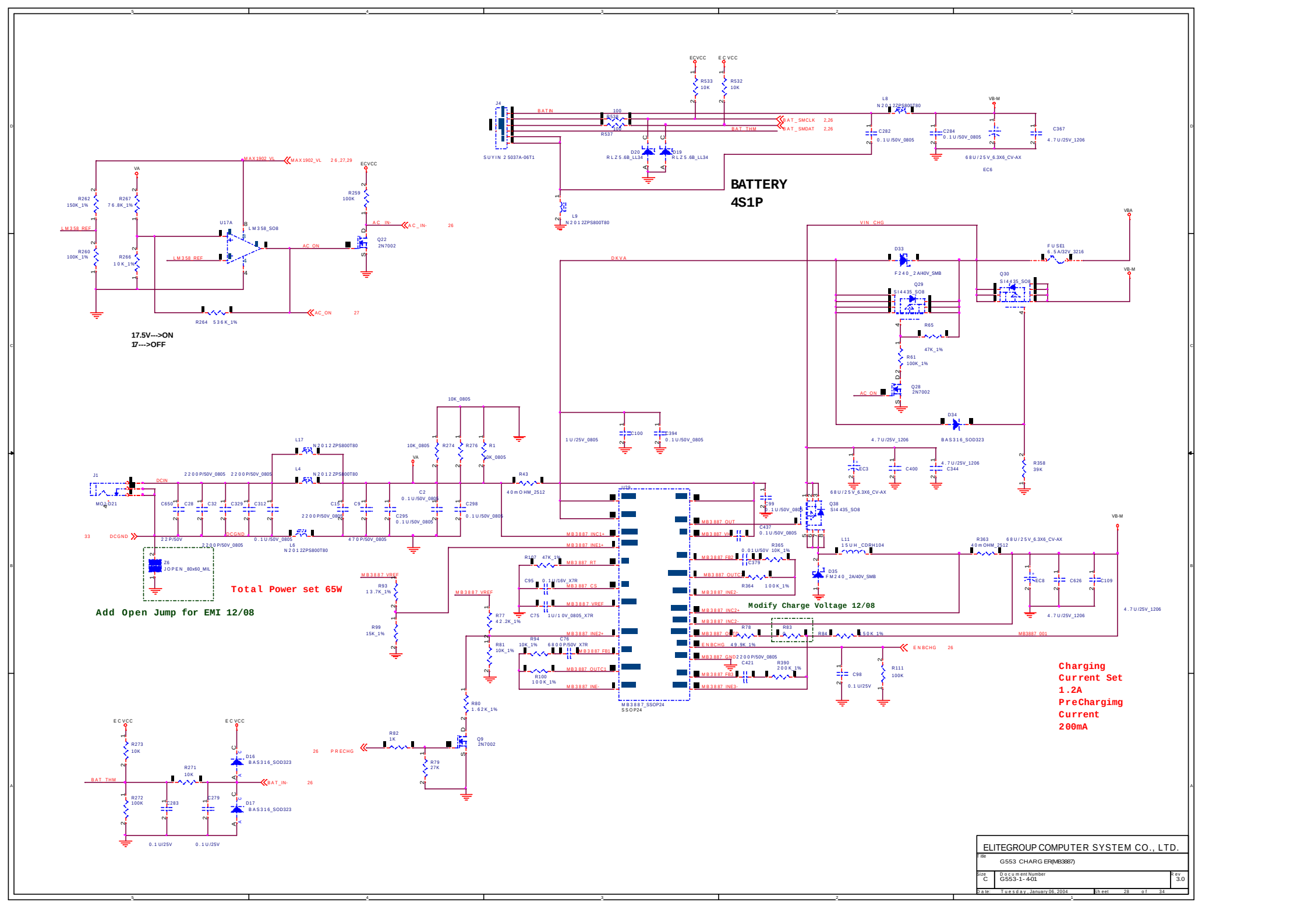
Size: C | Document Number: G553-1-4-01 | Rev: 3.0

Date: Tuesday, January 06, 2004 | Sheet 26 of 34



ELITEGROUP COMPUTER SYSTEM CO., LTD.

Title	G553 RTC & POWER SW	
Size: A3	Document Number: G553-1-4-01	Rev: 3.0
Date: Tuesday, January 06, 2004	Sheet 27 of 34	


BATTERY
4S1P
17.5V--->ON
17--->OFF
Total Power set 65W
Add Open Jump for EMI 12/08
Modify Charge Voltage 12/08
Charging
Current Set
1.2A
PreChargimg
Current
200mA
MB3887_SSOP24
SUYIN 25037A-06T1
ELITEGROUP COMPUTER SYSTEM CO., LTD.
G553 CHARGER(MB3887)
Size: C
Document Number: G553-1-401
Rev: 3.0
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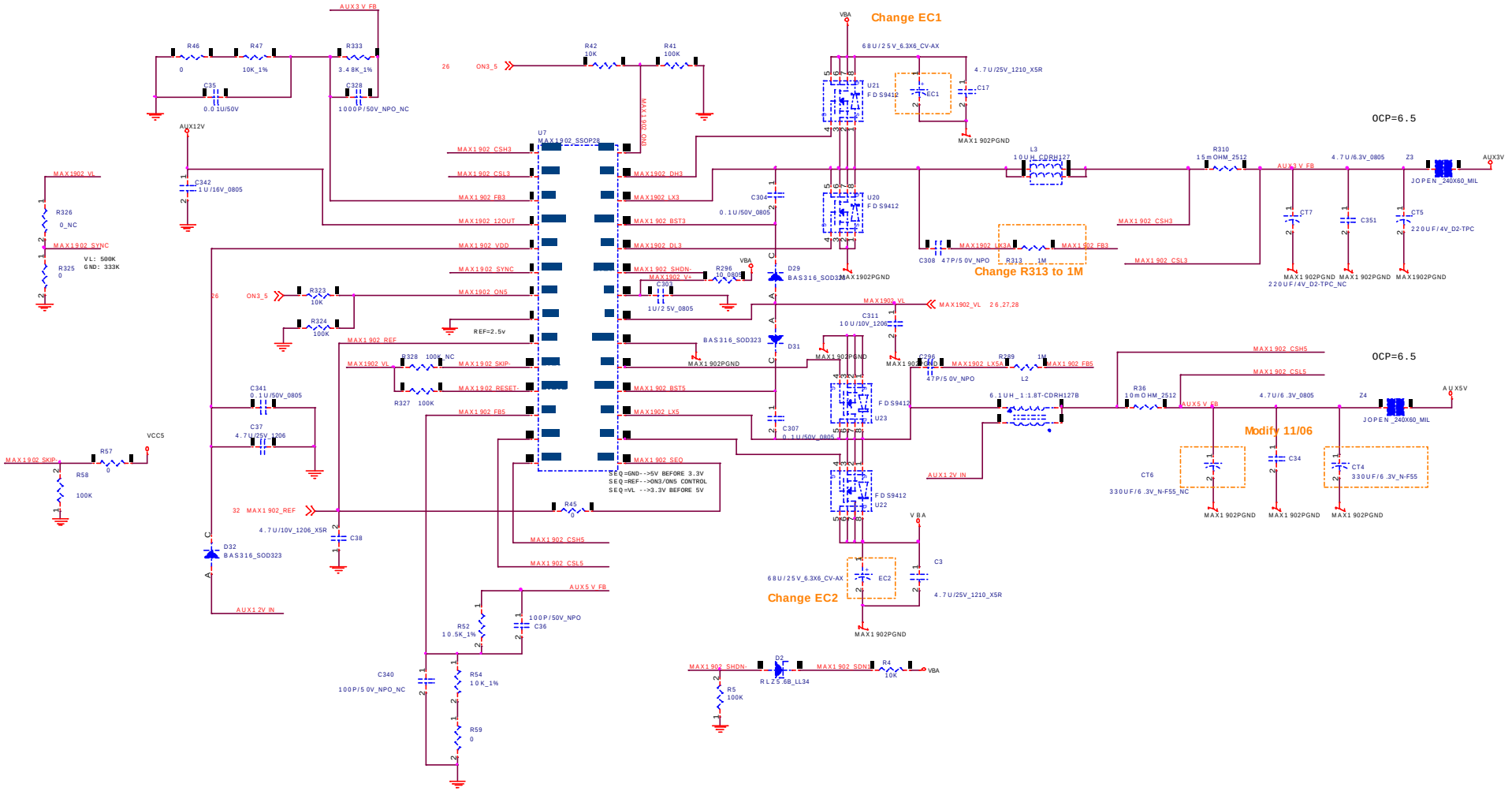
Change EC1
OCP=6.5
Change R313 to 1M
Modify 11/06
Change EC2
SEQ=GND-->5V BEFORE 3.3V
SEQ=REF-->ON3/ON5 CONTROL
SEQ=VL -->3.3V BEFORE 5V
MAX1902_SSOP28
FDS9412
BAS316_SOD323
RLZ5.6B_LL34
JOPEN_240X60_MIL
AUX3V_FB
AUX5V_FB
MAX1902_VL
MAX1902_SYNC
MAX1902_ON5
MAX1902_REF
MAX1902_SKIP-
MAX1902_RESET-
MAX1902_FB5
MAX1902_SEQ
MAX1902_CSH3
MAX1902_CSL3
MAX1902_FB3
MAX1902_12OUT
MAX1902_VDD
MAX1902_SHDN-
MAX1902_V+
MAX1902_DH3
MAX1902_LX3
MAX1902_BST3
MAX1902_DL3
MAX1902_CSH5
MAX1902_CSL5
MAX1902_BST5
MAX1902_LX5
MAX1902_DH5
MAX1902_LX5A
MAX1902_FB5
MAX1902_VL 26,27,28
AUX12V_IN
MAX1902PGND
VBA
VCC5
AUX12V
ON3_5
REF=2.5v
L3 10UH_CDRH127
L2 6.1UH_1:1.8T-CDRH127B
L1 6.8UH_CDRH127
R310 15mOHM_2512
R36 10mOHM_2512
R313 1M
R289 1M
C308 47P/50V_NPO
C296 47P/50V_NPO
C304 0.1U/50V_0805
C307 0.1U/50V_0805
C311 10U/10V_1206
C301 1U/25V_0805
C341 0.1U/50V_0805
C37 4.7U/25V_1206
C38 4.7U/10V_1206_X5R
C340 100P/50V_NPO_NC
C35 0.01U/50V
C328 1000P/50V_NPO_NC
C342 1U/16V_0805
C17 4.7U/25V_1210_X5R
C3 4.7U/25V_1210_X5R
C34 4.7U/6.3V_0805
CT4 330UF/6.3V_N-F55
CT5 220UF/4V_D2-TPC
CT6 330UF/6.3V_N-F55_NC
CT7 220UF/4V_D2-TPC_NC
C351 4.7U/6.3V_0805
EC1 68U/25V_6.3X6_CV-AX
EC2 68U/25V_6.3X6_CV-AX
R326 0_NC
R325 0
VL: 500K
GND: 333K
R58 100K
R57 0
R46 0
R47 10K_1%
R333 3.48K_1%
R42 10K
R41 100K
R323 10K
R324 100K
R328 100K_NC
R327 100K
R45 0
R52 10.5K_1%
R54 10K_1%
R59 0
R5 100K
R4 10K
R296 10_0805
C36 100P/50V_NPO
D29 BAS316_SOD323
D31 BAS316_SOD323
D32 BAS316_SOD323
D2 RLZ5.6B_LL34
U7 MAX1902_SSOP28
U20 FDS9412
U21 FDS9412
U22 FDS9412
U23 FDS9412
Title
G553 SYSTEMPOWER
Size C
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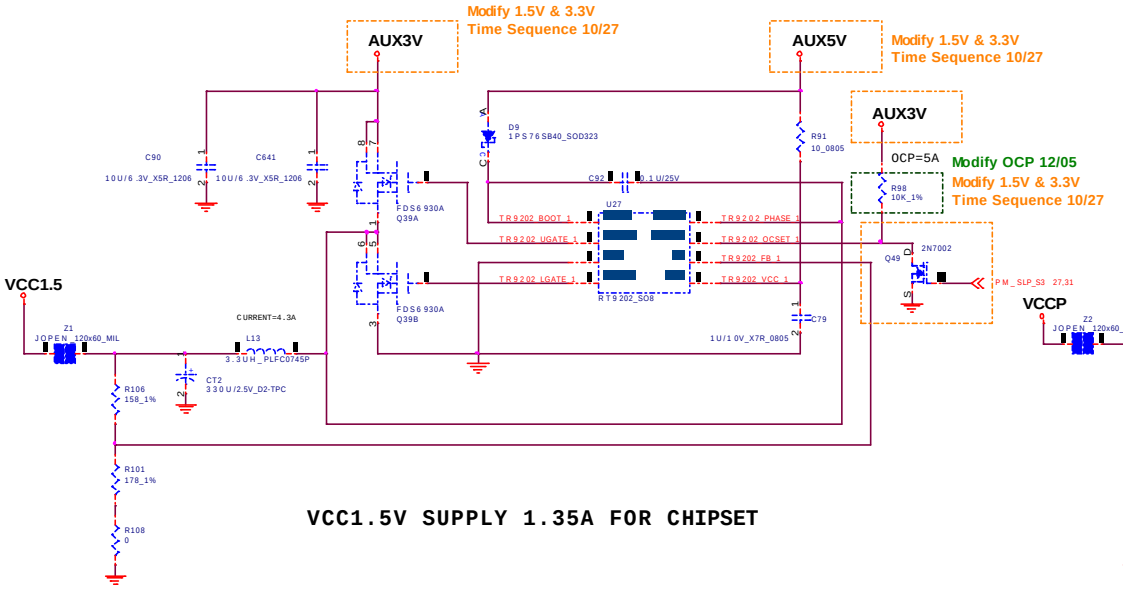
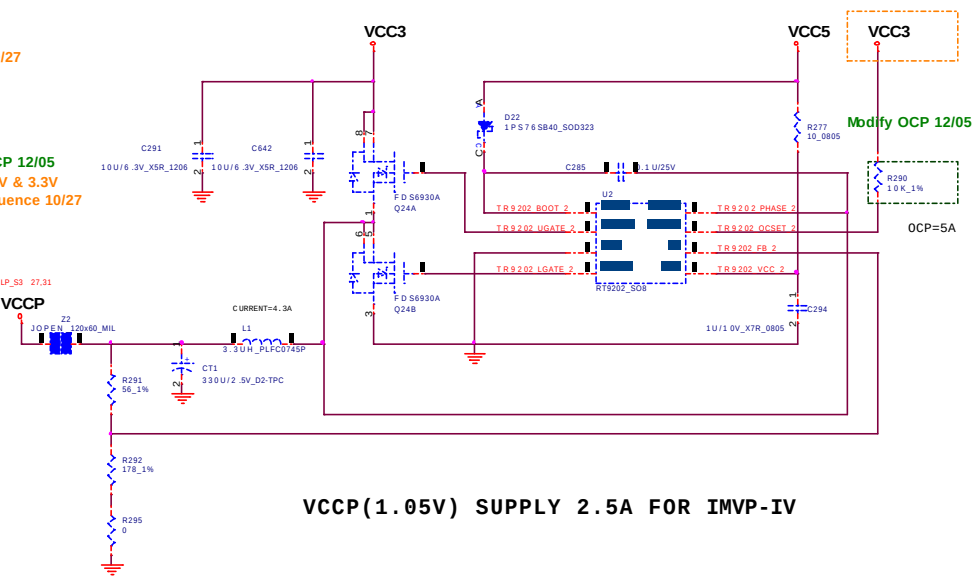
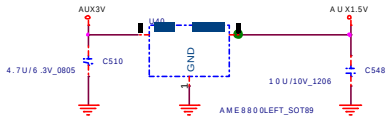


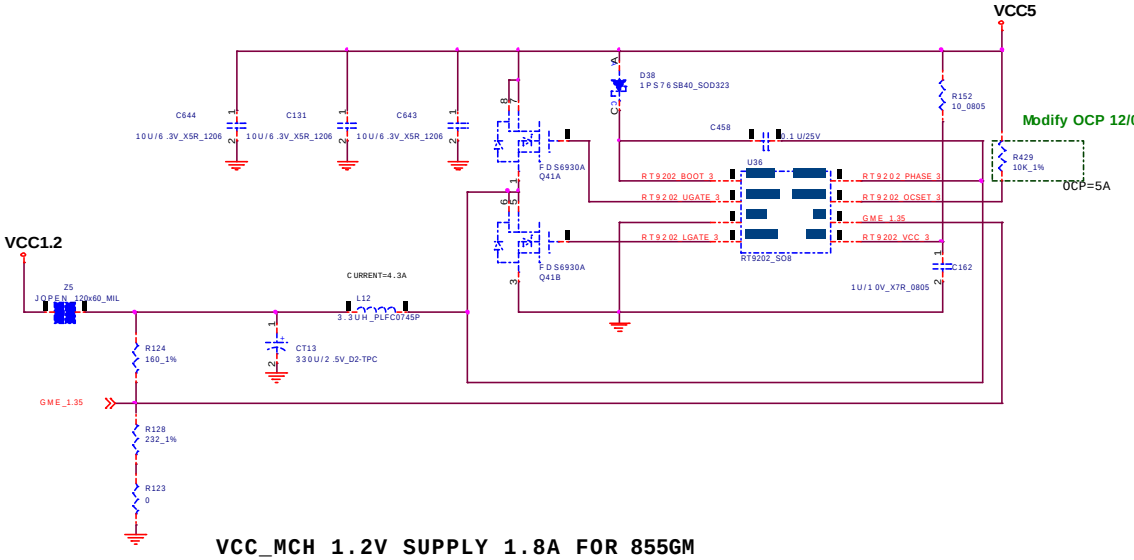
VCC1.5V SUPPLY 1.35A FOR CHIPSET



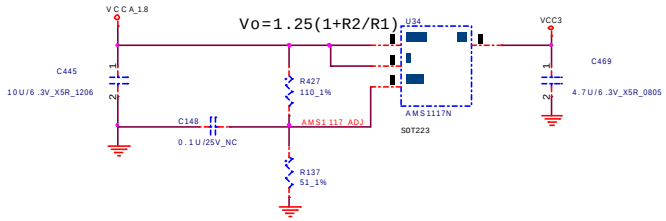
VCCP(1.05V) SUPPLY 2.5A FOR IMVP-IV



AUX1.5V SUPPLY 100mA for ICH4-M



VCC_MCH 1.2V SUPPLY 1.8A FOR 855GM
VCC_MCH 1.35V SUPPLY 1.8A FOR 855GME



VCCA(1.8V) SUPPLY 600mA FOR Banias (PLL VOLTAGE)
VCCA(1.5V & 1.8V) SUPPLY FOR DOTHAN (PLL VOLTAGE)

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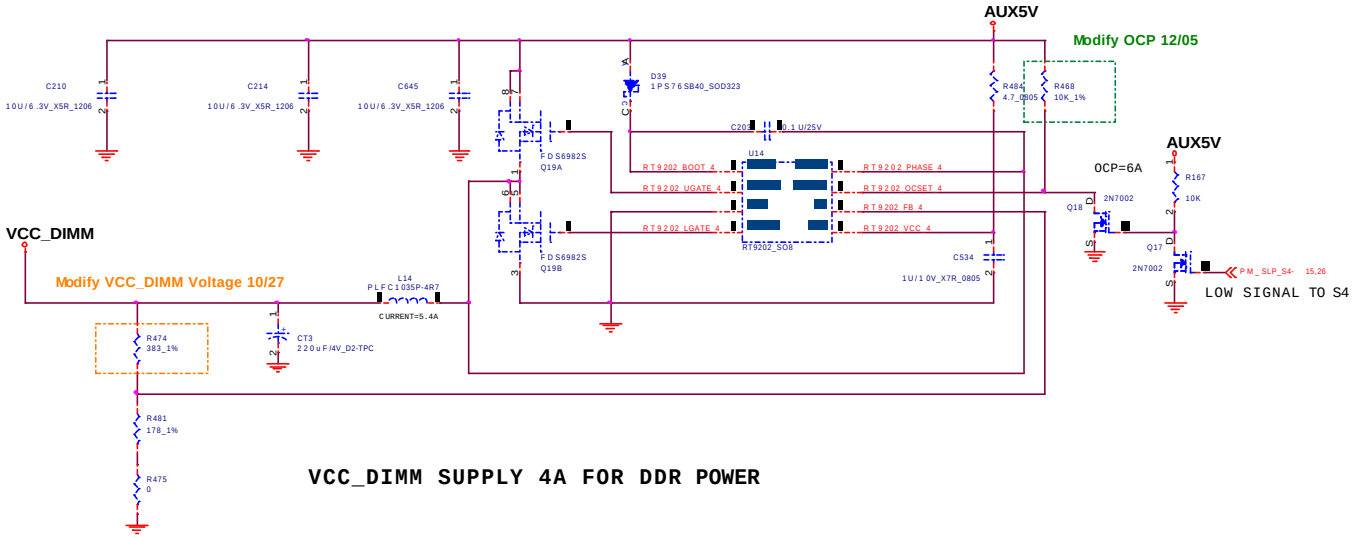
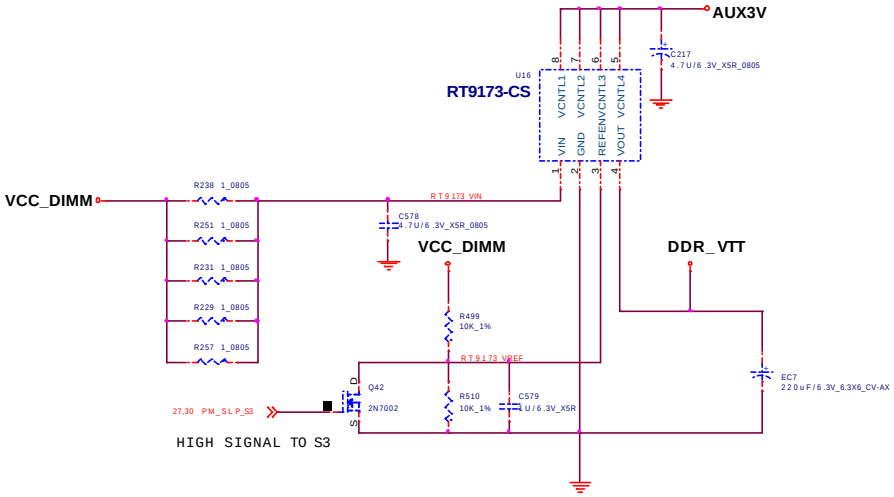


VCC_DIMM SUPPLY 4A FOR DDR POWER



VTT1.25V for DDR

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Title: G553 DDR POWER		
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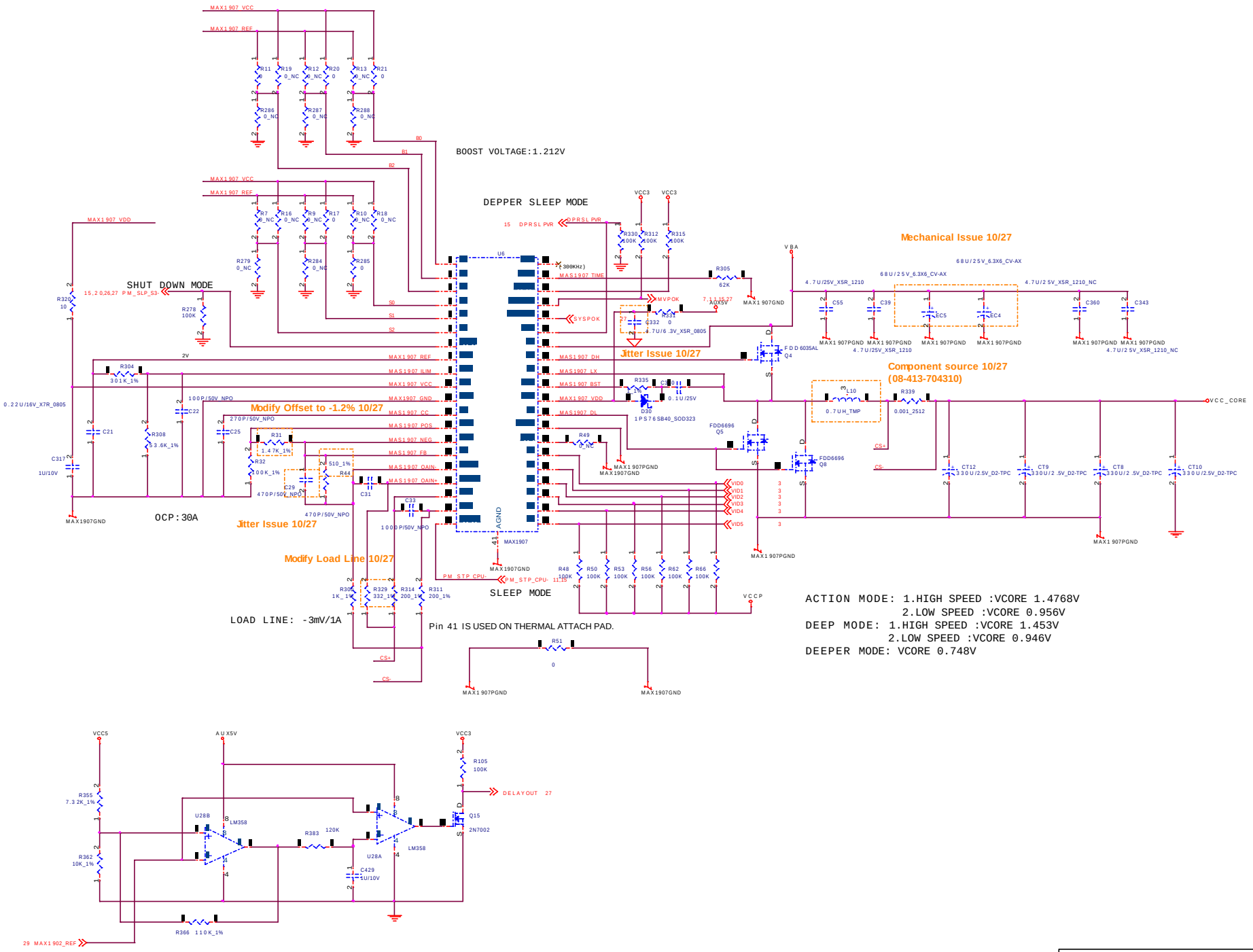

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Title: G553 MAX1907(VCORE)			
Size: C	Document Number: G553-1-401		Rev: 3.0
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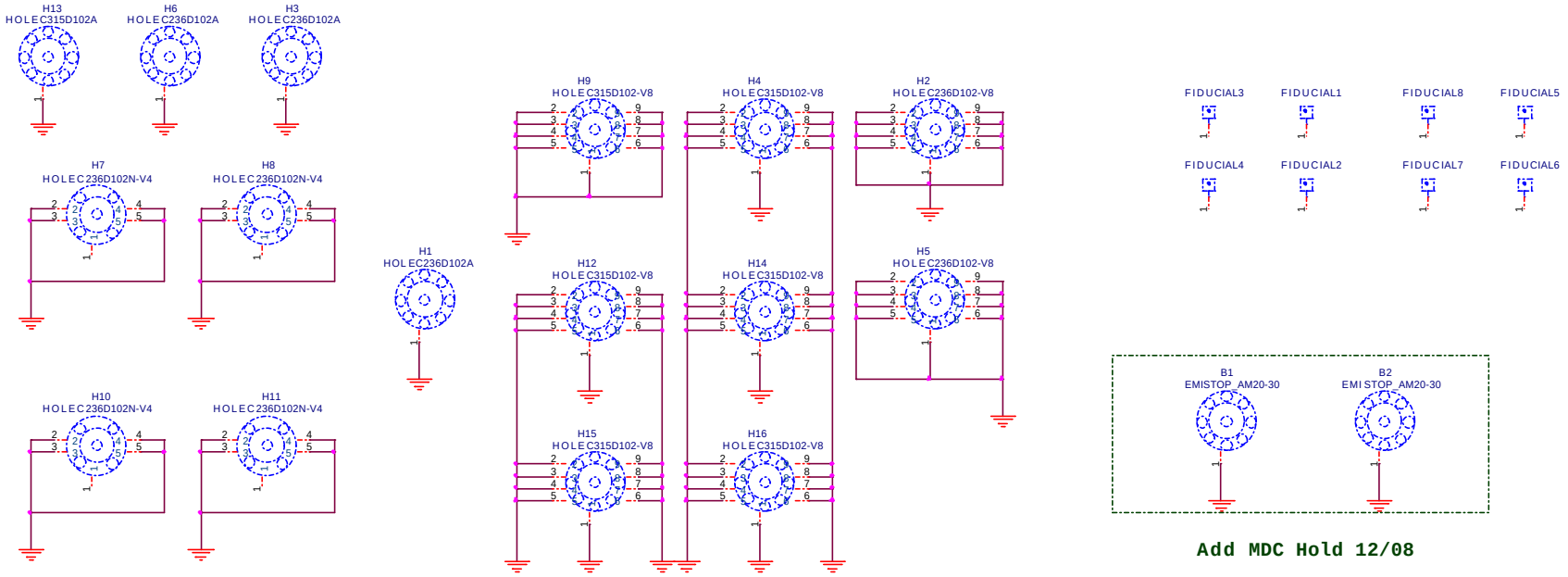
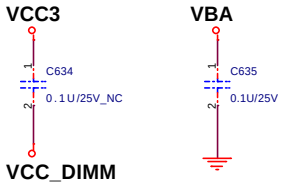
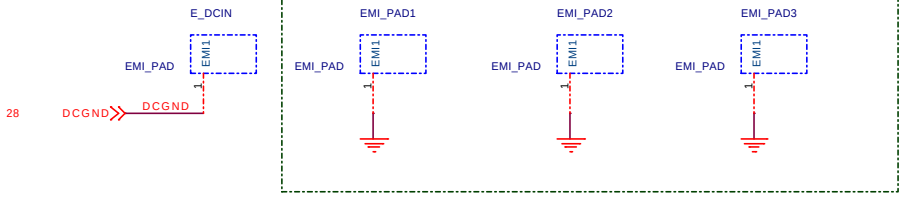


Add MDC Hold 12/08

EMI SOLUTION



Modify EMI Spring 12/05



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Title: G553 SCREW		
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0.0 : Initial Release. 2003/9/18 15-F44-010010

1.0 : Initial Release. 2003/11/05 15-F44-011000

2.0 : By pass for waiting EMI solution

3.0 : Initial Release. 2003/12/31 15-F44-013000

ELITEGROUP COMPUTER SYSTEM CO., LTD.		
Title: G553 HISTORY		
Size: A3	Document Number: G553-1-4-01	Rev: 3.0
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