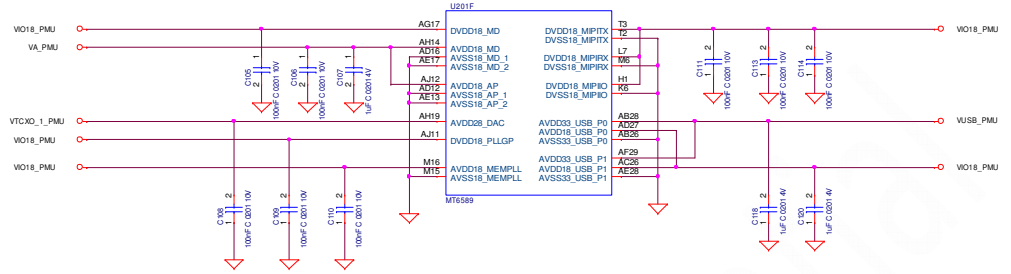
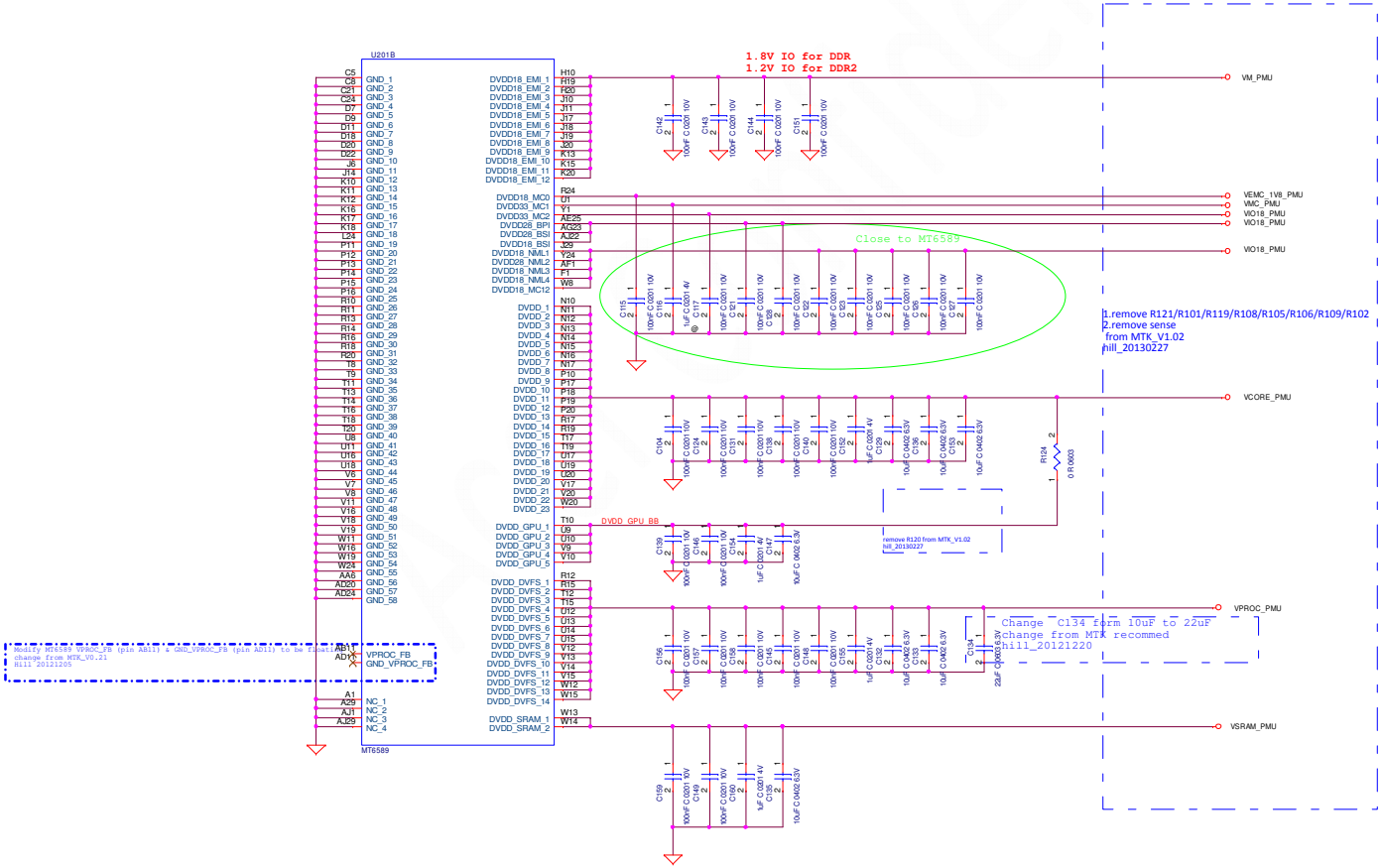
Remove R110~R111/R113~R118
chnge from MTK_V1.0 recomment
hill_20130103





acer	Acer Inc.		Drawing Rule
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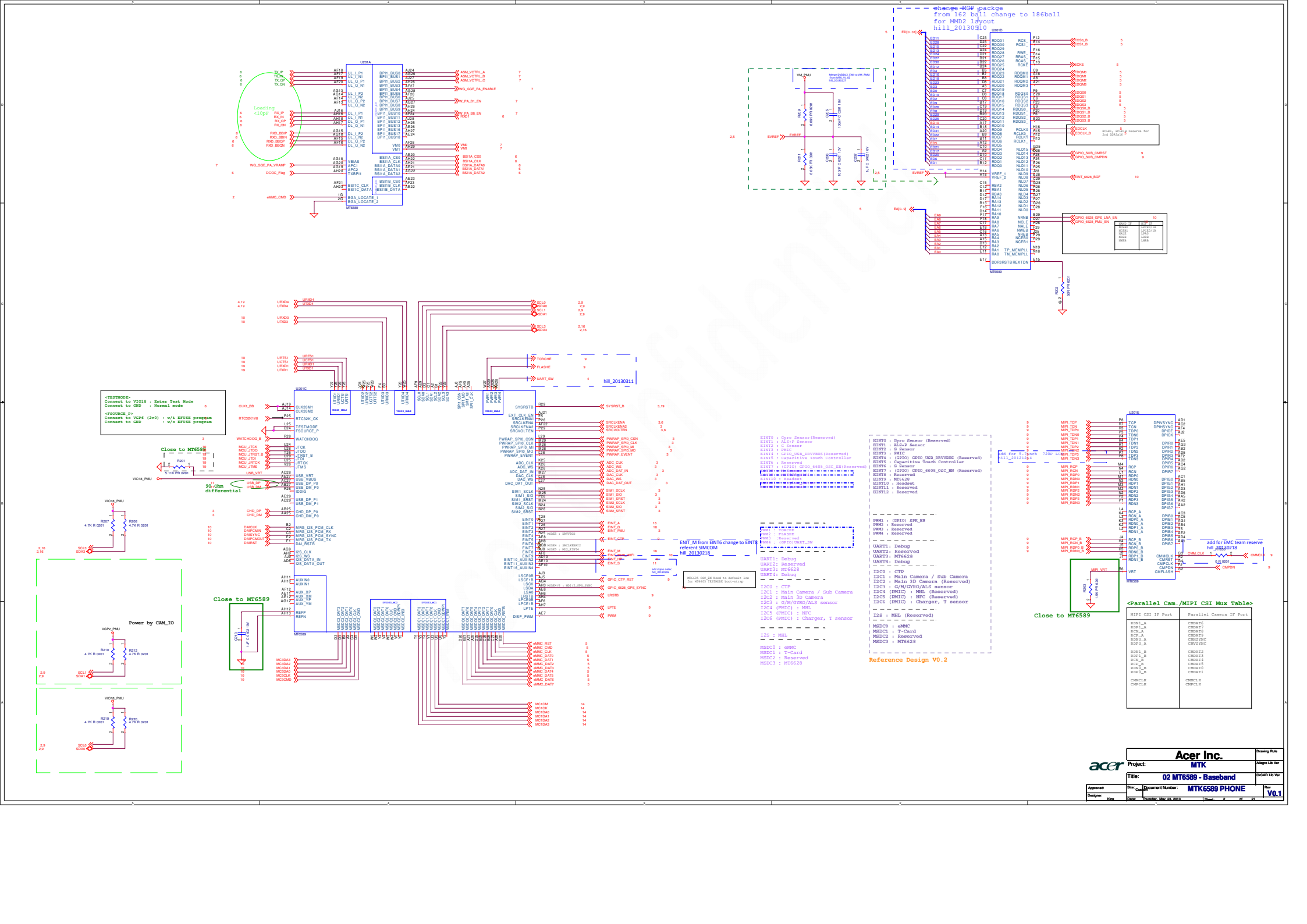
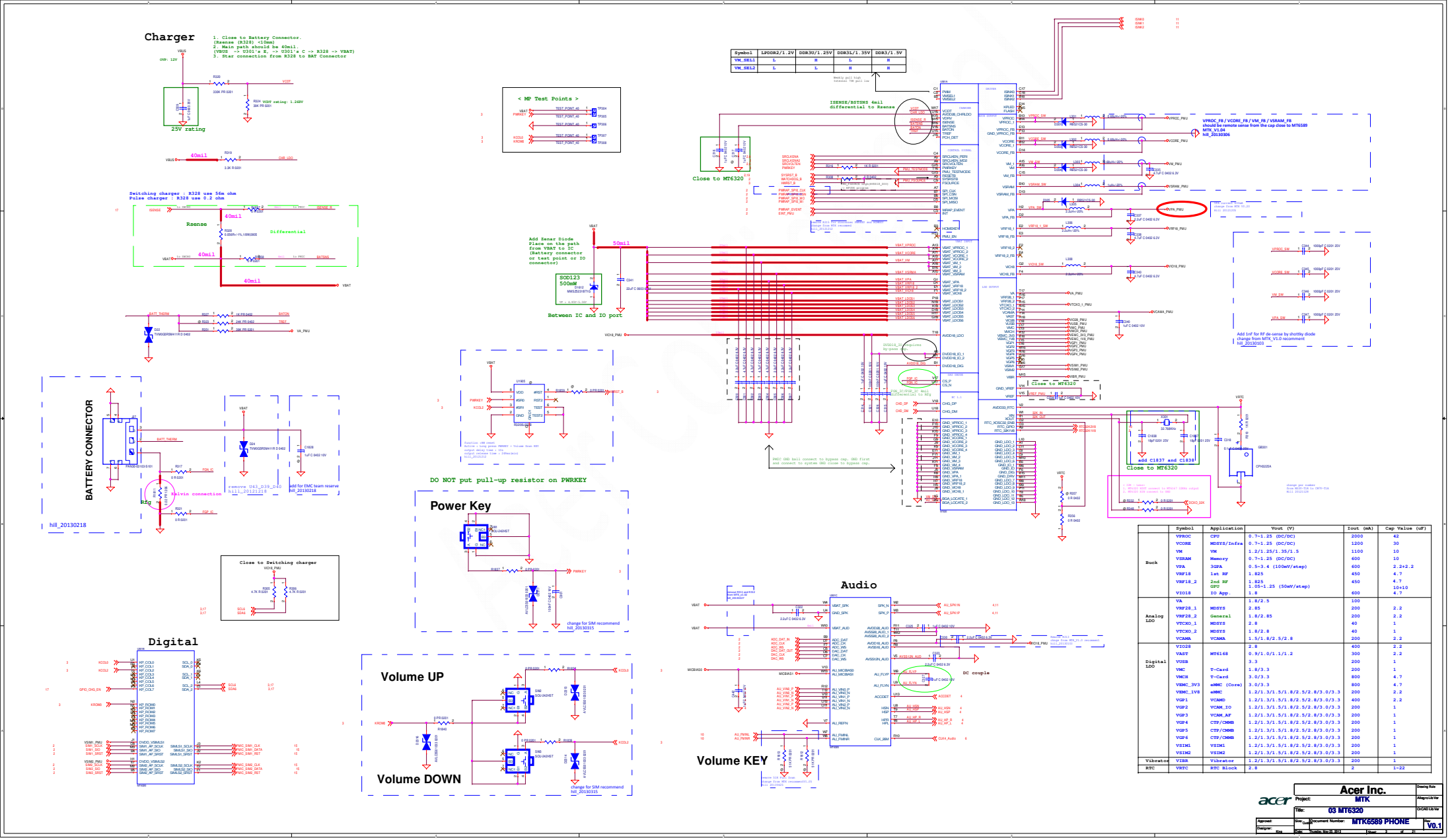
	Title:	01 MT6589 - Power	OrCAD Lib Ver
Approved:	Size: Custom	Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013	Sheet: 1 of 21	


change MCP packge
from 162 ball change to 186ball
for MMD2 layout
hill_20130510
U201A
U201D
U201C
U201E
MT6589
Loading
<10pF
Close to MT6589
90 Ohm
differential
Power by CAM_IO
hill_20130311
ENIT_M from EINT6 change to EINT8
referent SIMCOM
hill_20130218
add for EMC team reserve
hill_20130218
Reference Design V0.2
<Parallel Cam./MIPI CSI Mux Table>
Acer Inc.
MTK
02 MT6589 - Baseband
MTK6589 PHONE
V0.1

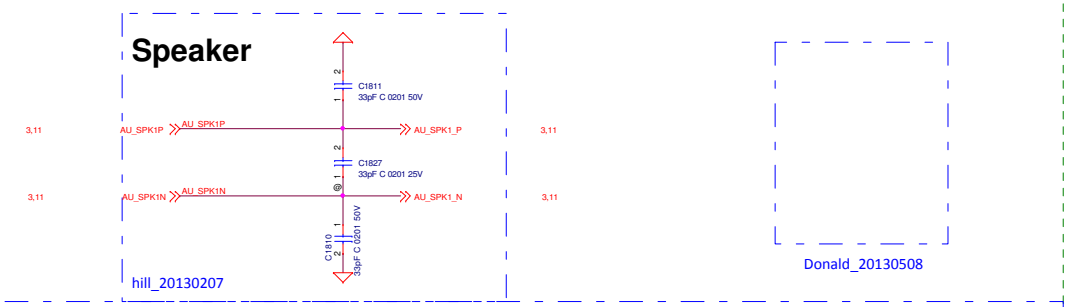


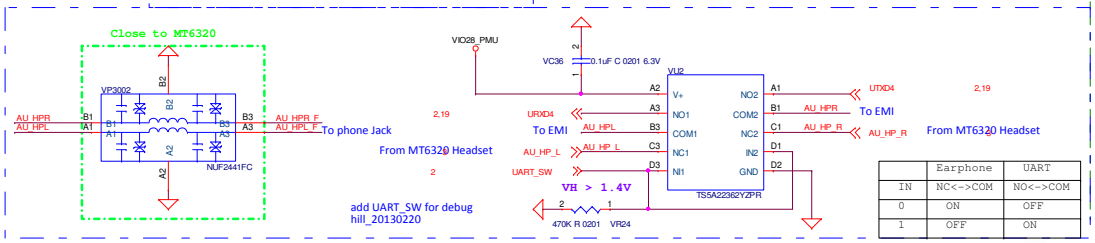
Symbol	LPDDR2/1.2V	DDR3U/1.25V	DDR3L/1.35V	DDR3/1.5V
VM_SEL1	L	H	L	H
VM_SEL2	L	L	H	H

	Symbol	Application	Vout (V)	Iout (mA)	Cap Value (uF)
Buck	VPROC	CPU	0.7~1.25 (DC/DC)	2000	42
	VCORE	MDSYS/Infra	0.7~1.25 (DC/DC)	1200	30
	VM	VM	1.2/1.25/1.35/1.5	1100	10
	VSRAM	Memory	0.7~1.25 (DC/DC)	600	10
	VPA	3GPA	0.5~3.4 (100mV/step)	600	2.2+2.2
	VRF18	1st RF	1.825	450	4.7
	VRF18_2	2nd RF GPU	1.825 1.05~1.25 (50mV/step)	450	4.7 10+10
	VIO18	IO App.	1.8	600	4.7
Analog LDO	VA		1.8/2.5	100	
	VRF28_1	MDSYS	2.85	200	2.2
	VRF28_2	General	1.8/2.85	200	2.2
	VTCXO_1	MDSYS	2.8	40	1
	VTCXO_2	MDSYS	1.8/2.8	40	1
	VCAMA	VCAMA	1.5/1.8/2.5/2.8	200	2.2
Digital LDO	VIO28		2.8	400	2.2
	VAST	MT6168	0.9/1.0/1.1/1.2	300	2.2
	VUSB		3.3	200	1
	VMC	T-Card	1.8/3.3	200	1
	VMCH	T-Card	3.0/3.3	800	4.7
	VEMC_3V3	eMMC (Core)	3.0/3.3	800	4.7
	VEMC_1V8	eMMC	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	2.2
	VGP1	VCAMD	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	400	2.2
	VGP2	VCAM_IO	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
	VGP3	VCAM_AF	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
	VGP4	CTP/CMMB	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
	VGP5	CTP/CMMB	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
	VGP6	CTP/CMMB	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
	VSIM1	VSIM1	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
	VSIM2	VSIM2	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
Vibrator	VIBR	Vibrator	1.2/1.3/1.5/1.8/2.5/2.8/3.0/3.3	200	1
RTC	VRTC	RTC Block	2.8	2	1~22

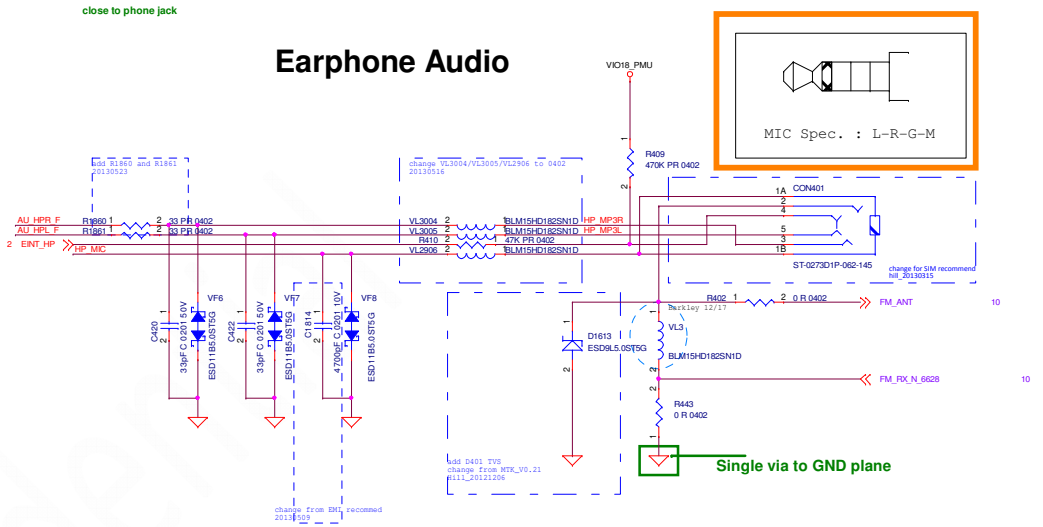
acer	Acer Inc.		Drawing Rule
	Project:	MTK	Allegro Lib Ver
	Title:	03 MT6320	OrCAD Lib Ver
Approved:	Size: A3	Document Number: MTK6589 PHONE	Rev V0.1
Designer: Kira	Date: Tuesday, May 28, 2013	Sheet 3 of 21	

Speaker

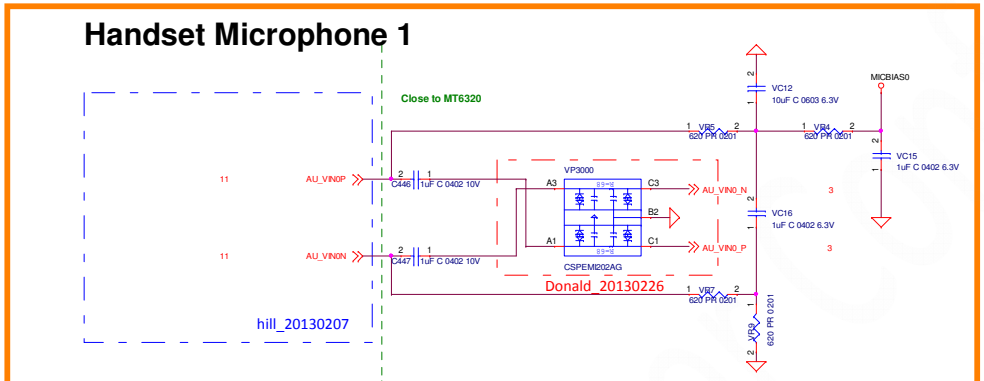




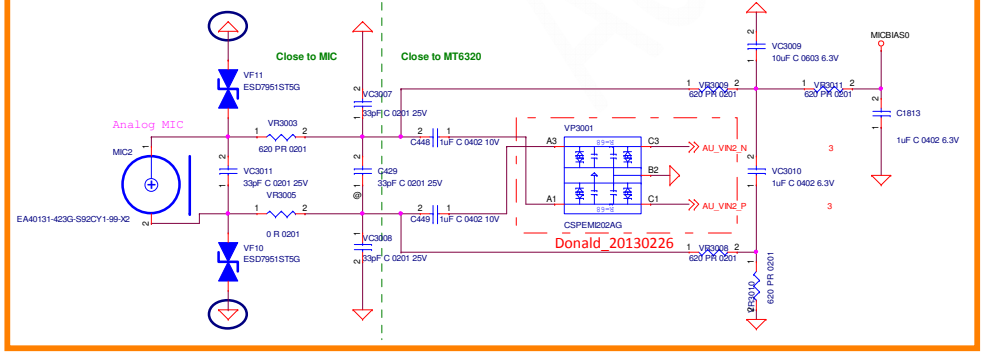
Earphone Audio

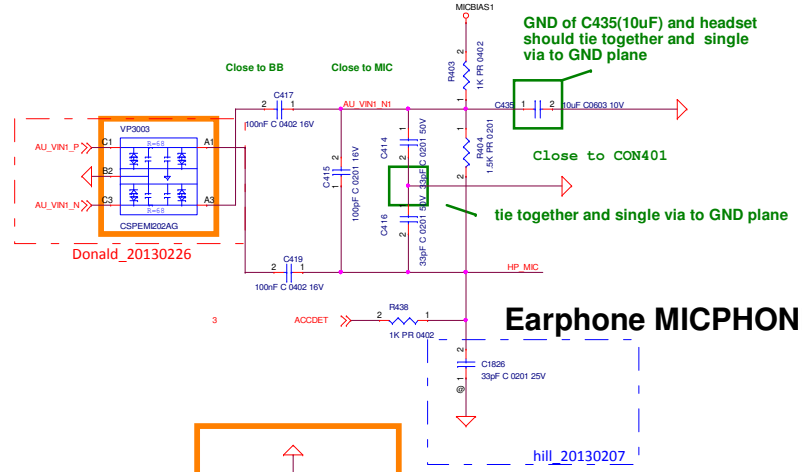


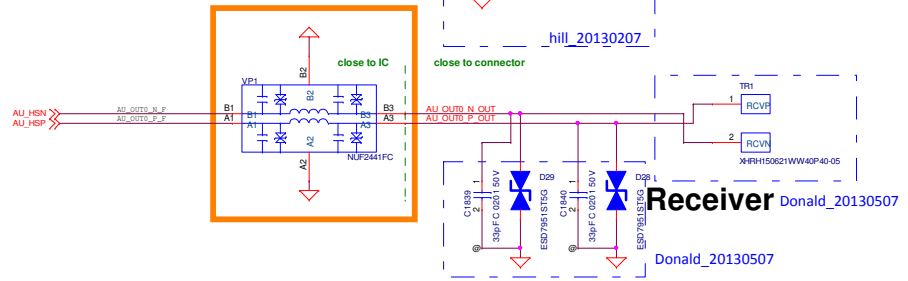
Handset Microphone 1



Handset Microphone 2





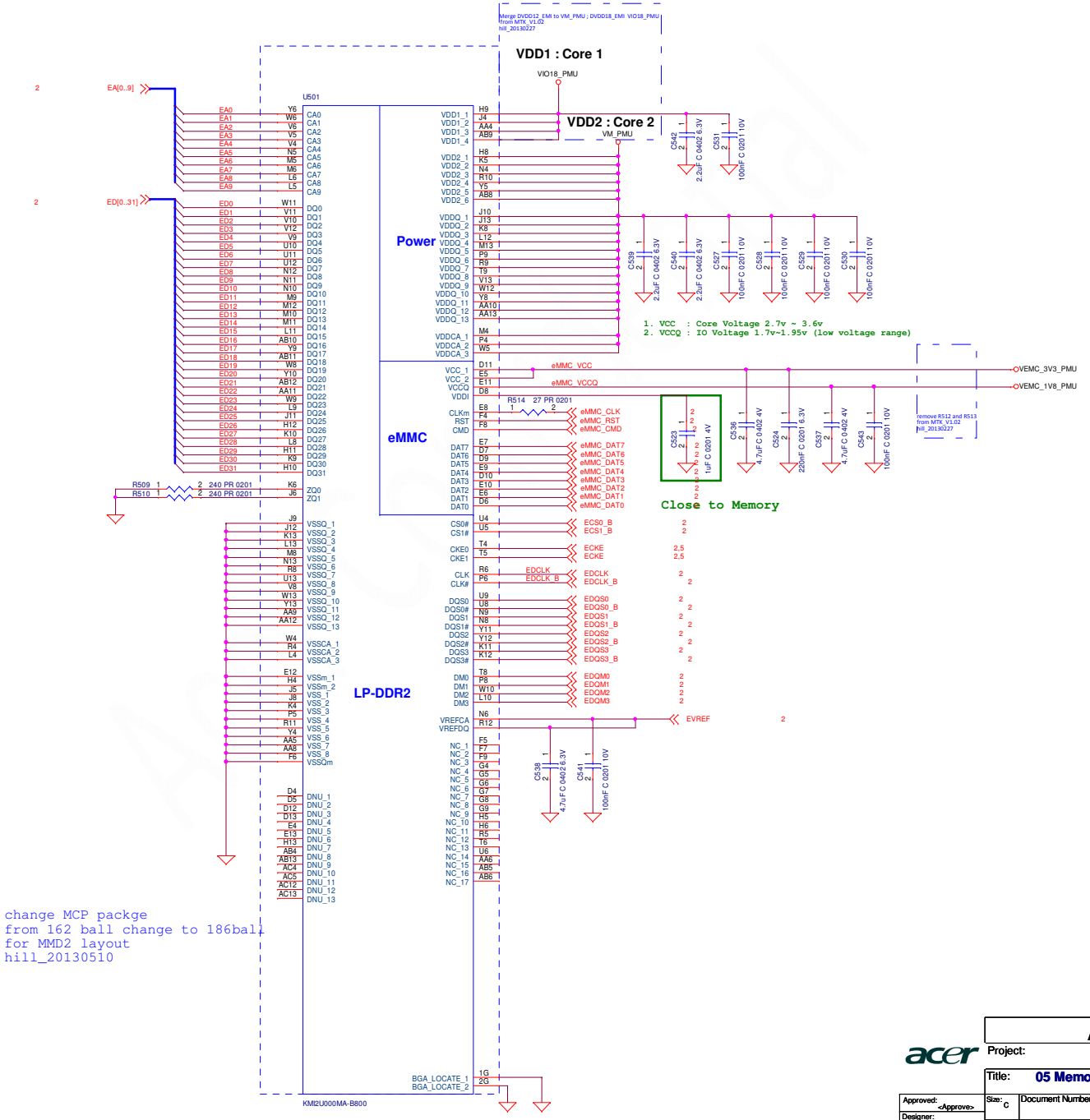


Acer Inc.		Drawing Rule
Project:	MTK	Allegro Lib Ver
Title:	04 MT6589 - Audio	OrCAD Lib Ver
Approved:		Size: Custom
Designer:	King	Document Number: MTK6589 PHONE
Date:	Thursday, May 23, 2013	Sheet: 4 of 21
		Rev V0.1

eMMC+LPDDR2

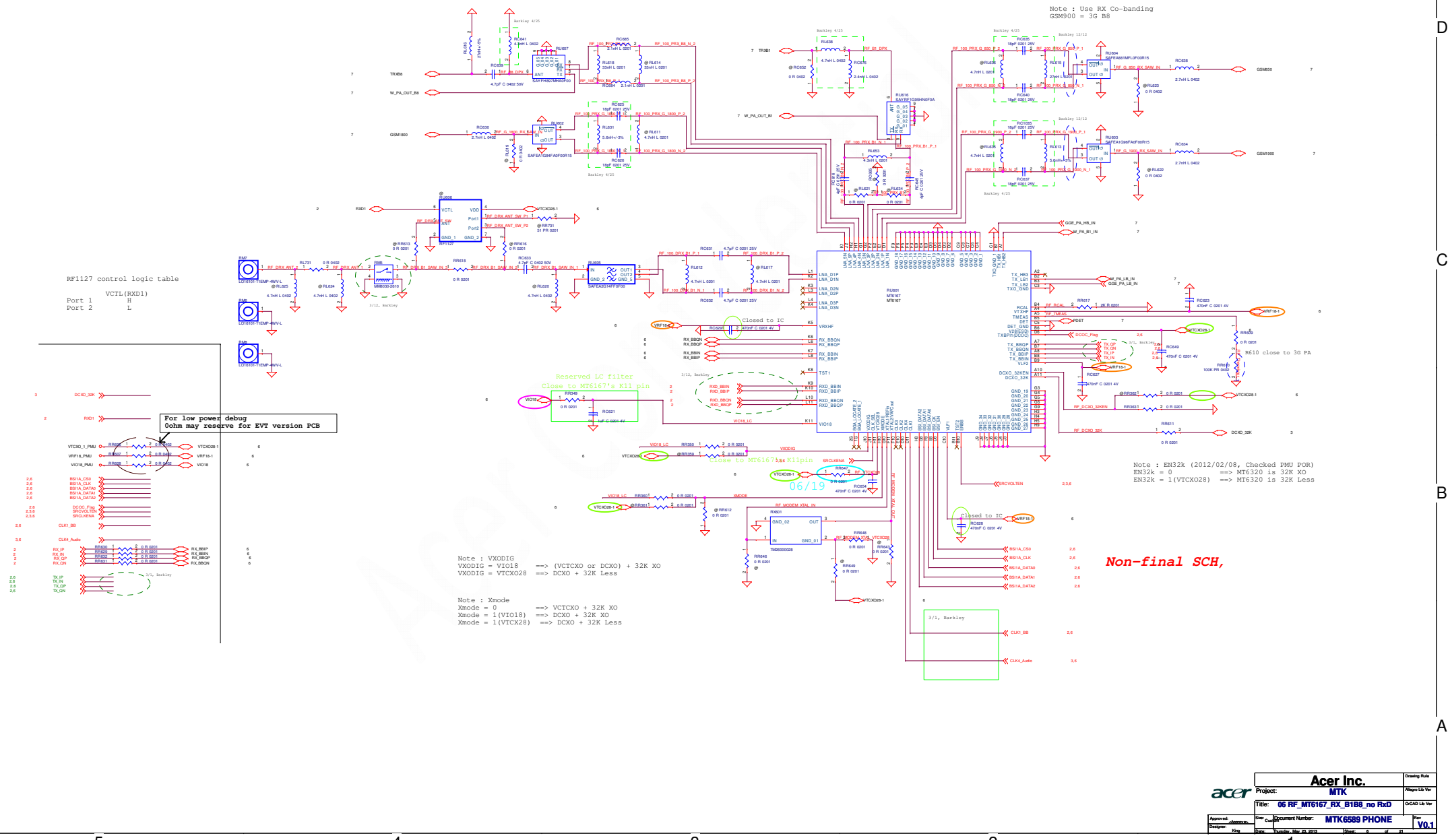
162 Ball, 0.5mm pitch

VDD1=1.8V
VDD2=1.20V
VDDCA=1.2V
VDDQ= 1.20V



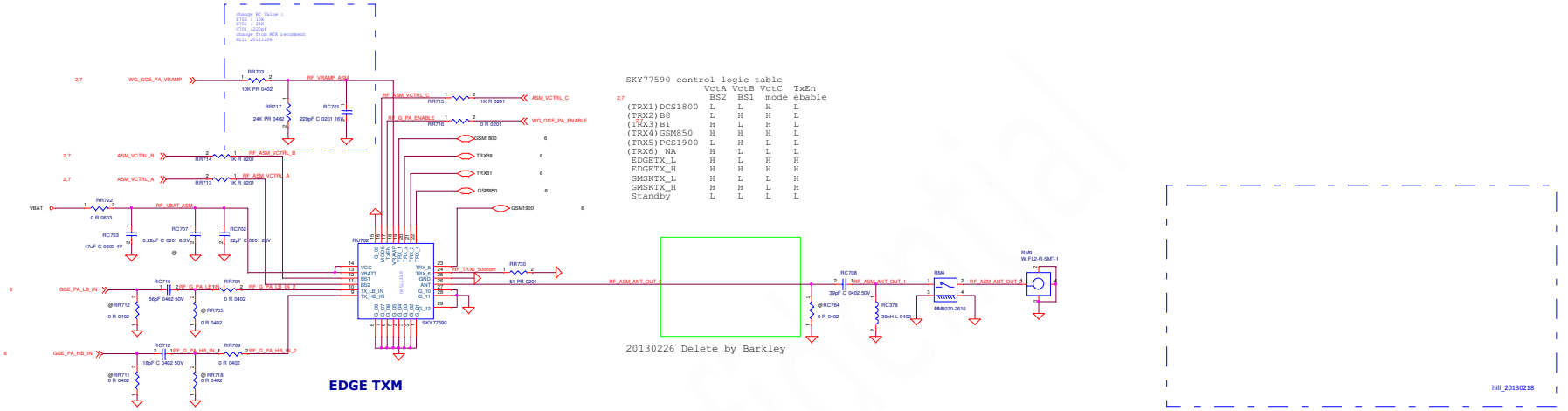
change MCP packge
from 162 ball change to 186ball
for MMD2 layout
hill_20130510

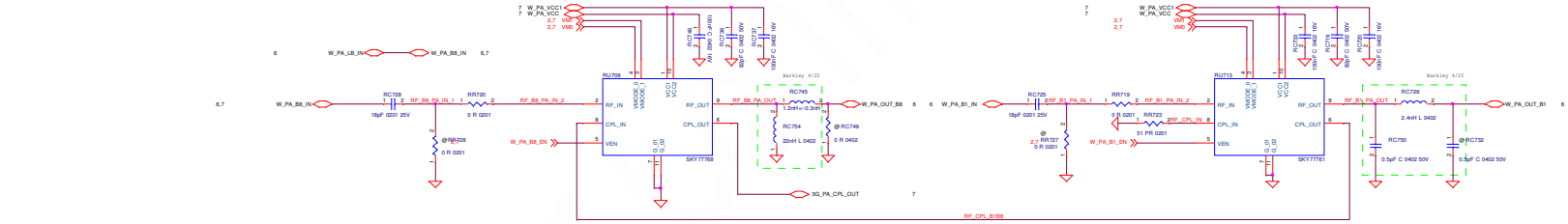
Acer Inc.			Drawing Rule
Project:	MTK		Allegro Lib Ver
Title:	05 Memory (eMMC + x32LPDDR2)		OrCAD Lib Ver
Approved: <Approve>	Size: C	Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013	Sheet: 5 of 21	



Acer Inc.		Drawing Rule
Project: MTK		Allegro Lib Ver
Title: 06 RF_MT6167_RX_B1B8_no RxD		OrCAD Lib Ver
Approved:	Size: C	Document Number: MTK6589 PHONE
Designer: King	Date: Thursday, May 23, 2013	Sheet: 6 of 21

Rev V0.1



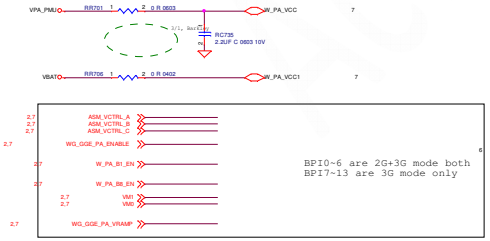


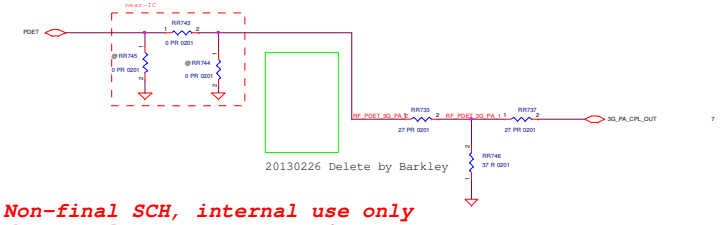
SKY777618 control logic table(B8)

	W_PA_B8_ENn (VEN)	VM0 (Mode_0)	VM1 (Mode_1)	VCC
Power Down Mode	L	L	L	On
Standby Mode	L	-	-	On
HPM	H	L	-	On
MPM	H	H	L	On
LPM	H	H	H	On

SKY77761 control logic table(B1)

	W_PA_B1_ENn (VEN)	VM0 (Mode_0)	VM1 (Mode_1)	VCC
Power Down Mode	L	L	L	On
Standby Mode	L	-	-	On
HPM	H	L	-	On
MPM	H	H	L	On
LPM	H	H	H	On





Non-final SCH, internal use only
don't release to customer!

acer	Acer Inc.	Drawing Rule
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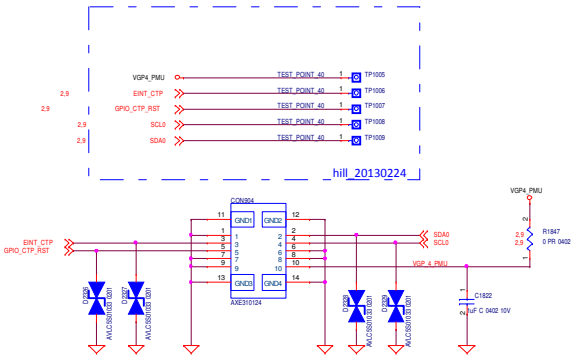
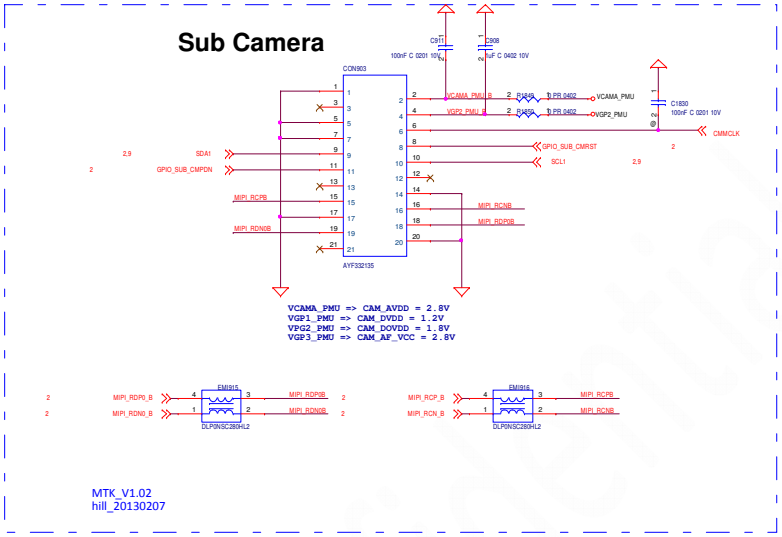
	Title: 07 RF_TX_ASM_B1B8	OrCAD Lib Ver
Approved: <Approver>	Size: Custom Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013 Sheet: 7 of 21	

acer	Acer Inc.	Drawing Rule
	Project: MTK	Allegro Lib Ver
	Title: 08 Reserved	OrCAD Lib Ver
Approved: <Approve>	Size: Custom Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013 Sheet: 8 of 21	

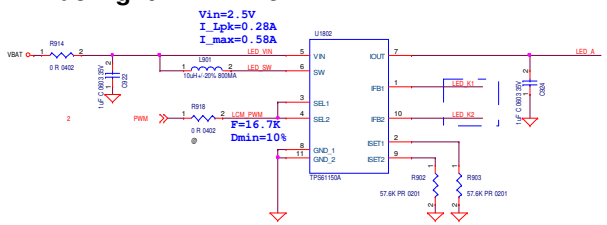
CTP



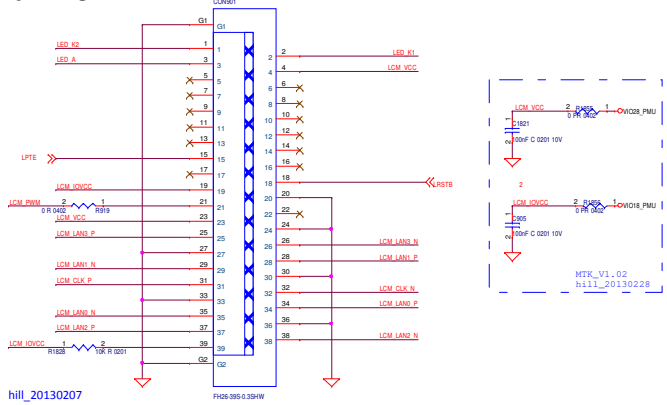
Sub Camera



Backlight LED Driver

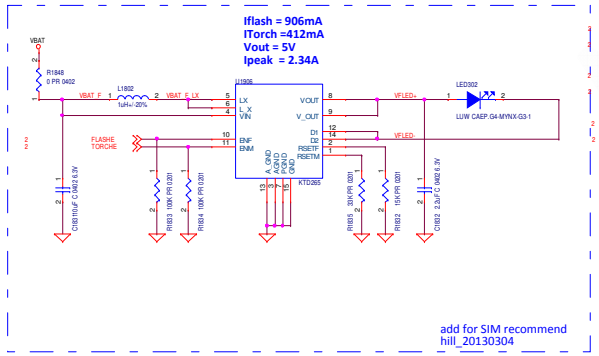


Main LCM

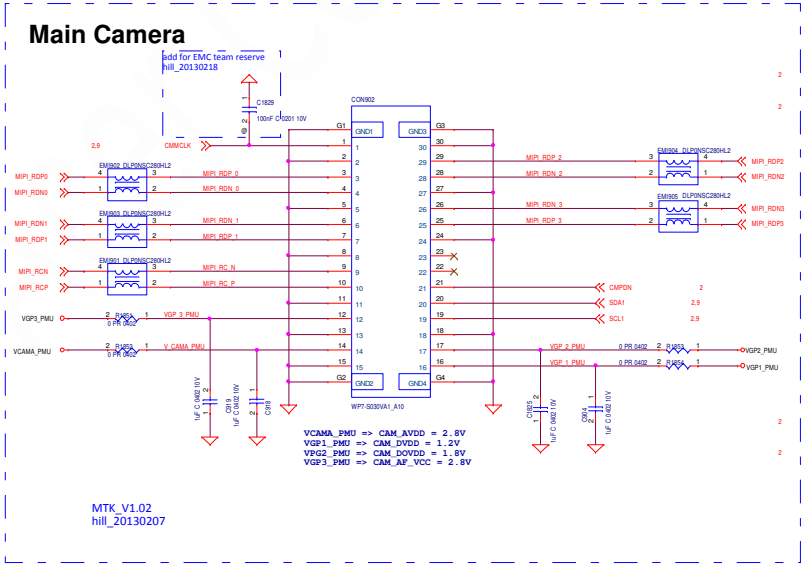


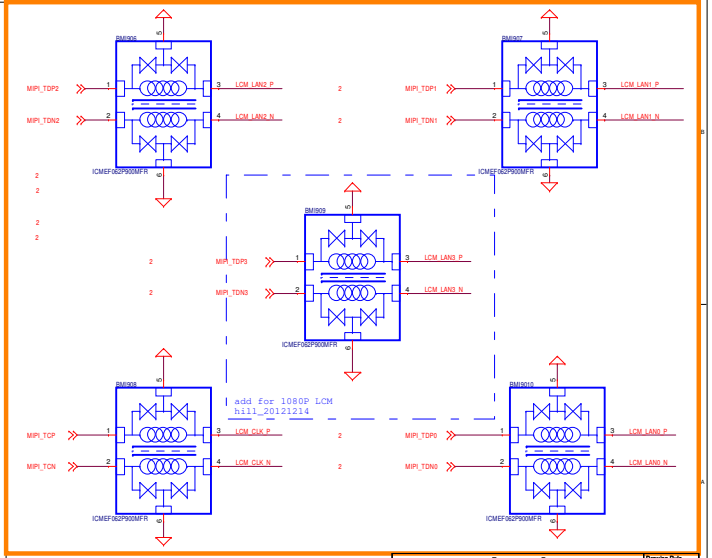
Main Camera / Sub Camera share power domain design
should double check the voltage level is compatible

Flash LED



Main Camera





acer	Acer Inc.	Drawing Rule
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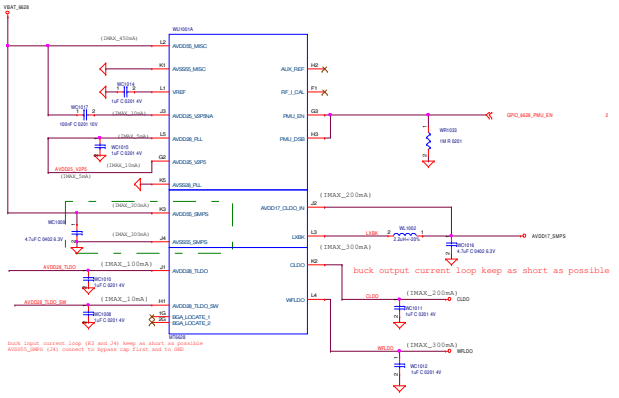
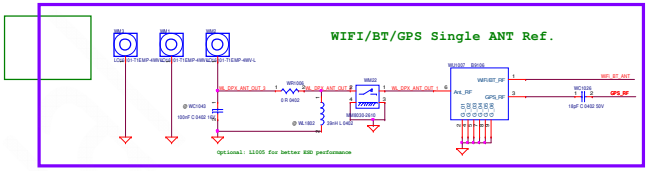
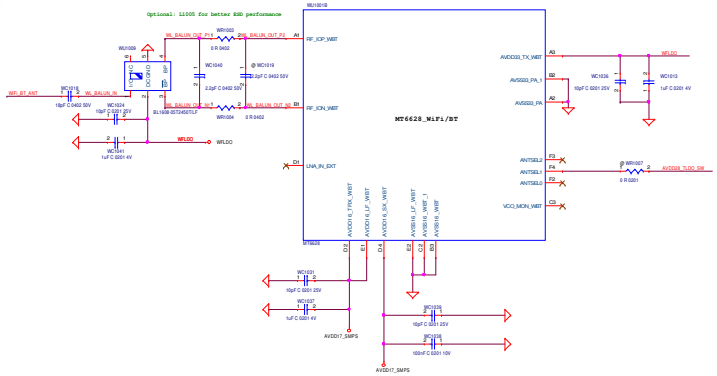
	Title: 09 LCD, CTP, Camera, Sidekey	OrCAD Lib Ver
Approved: <Approver>	Size: Custom Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013 Sheet: 9 of 21	

MT6628_PMU



MT6628_BT/WiFi





MT6628_GPIO

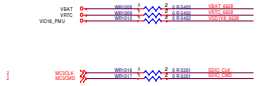
WIFI_Host	0	SDIO	
ANTSEL-2	1	SPI	

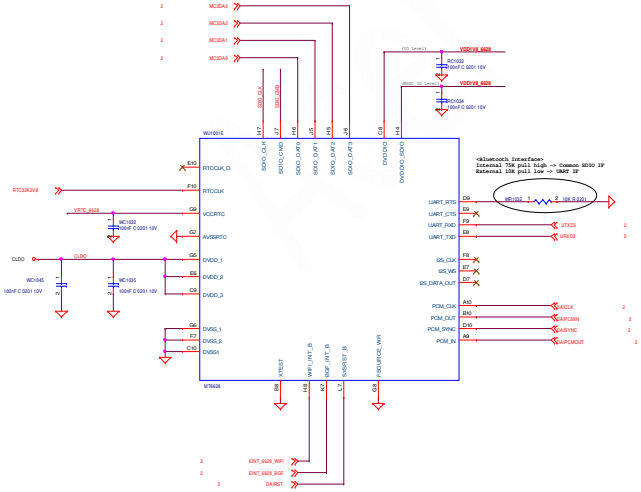
Xtal/OCS	00	TCXO	
ANTSEL-1 (b'0)	01	Xtal	
	10	EXTCK	
	11	RESERVED	

BT/COM Host	0	UART	MT6628E2
UART_RTS	1	SDIO	MT6628E2

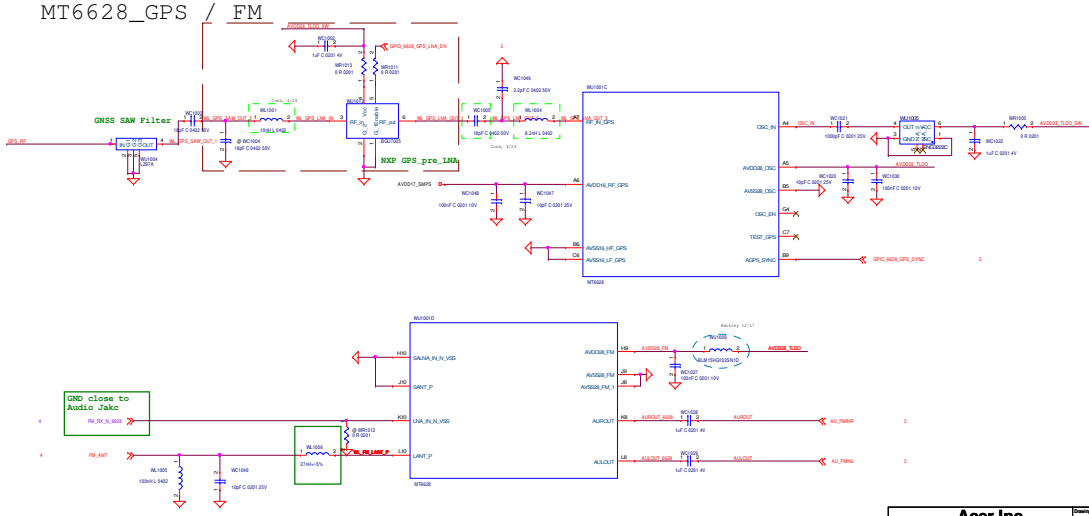
BT/COM Host	0	SDIO	MT6628E1
ANTSEL-0	1	UART	MT6628E1

MT6589 <==> MT6628 Connector

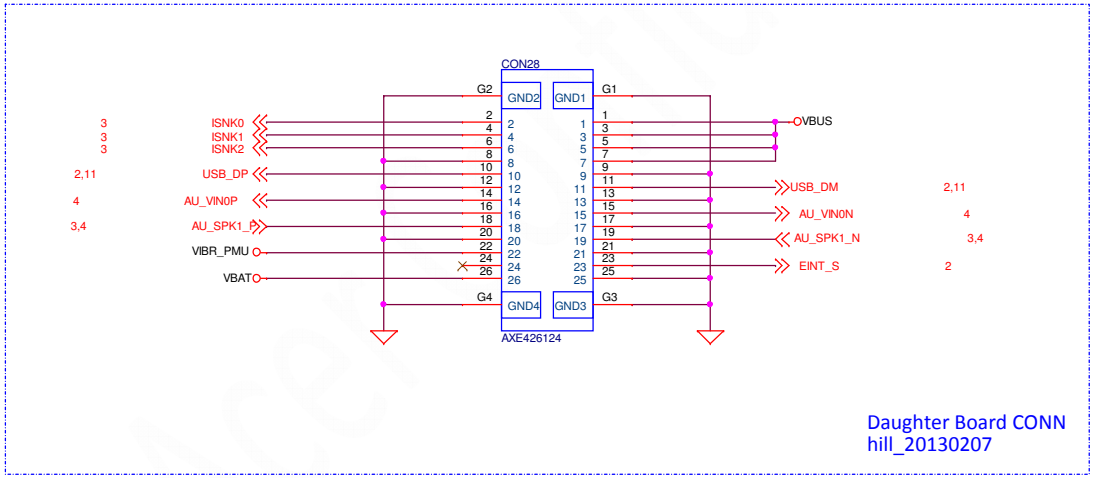


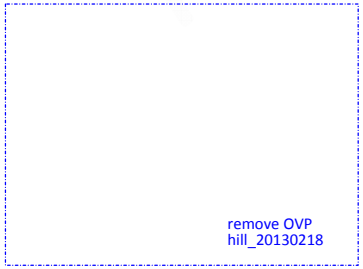


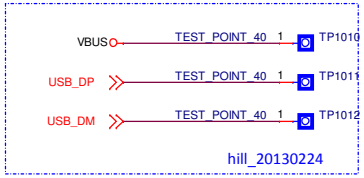
MT6628_GPS / FM



Acer Inc.		Drawing Rule	
Project: MTK		Allegro/Ubi/Var	
Title: 10 BT, FM, GPS, WiFi (MT6628)		OrCAD/Ubi/Var	
Approved:	Size:	Document Number: MTK6589 PHONE	Rev: V0.1
Designer: Rita	Date: Tuesday, May 28, 2013	Sheet 16 of 21	





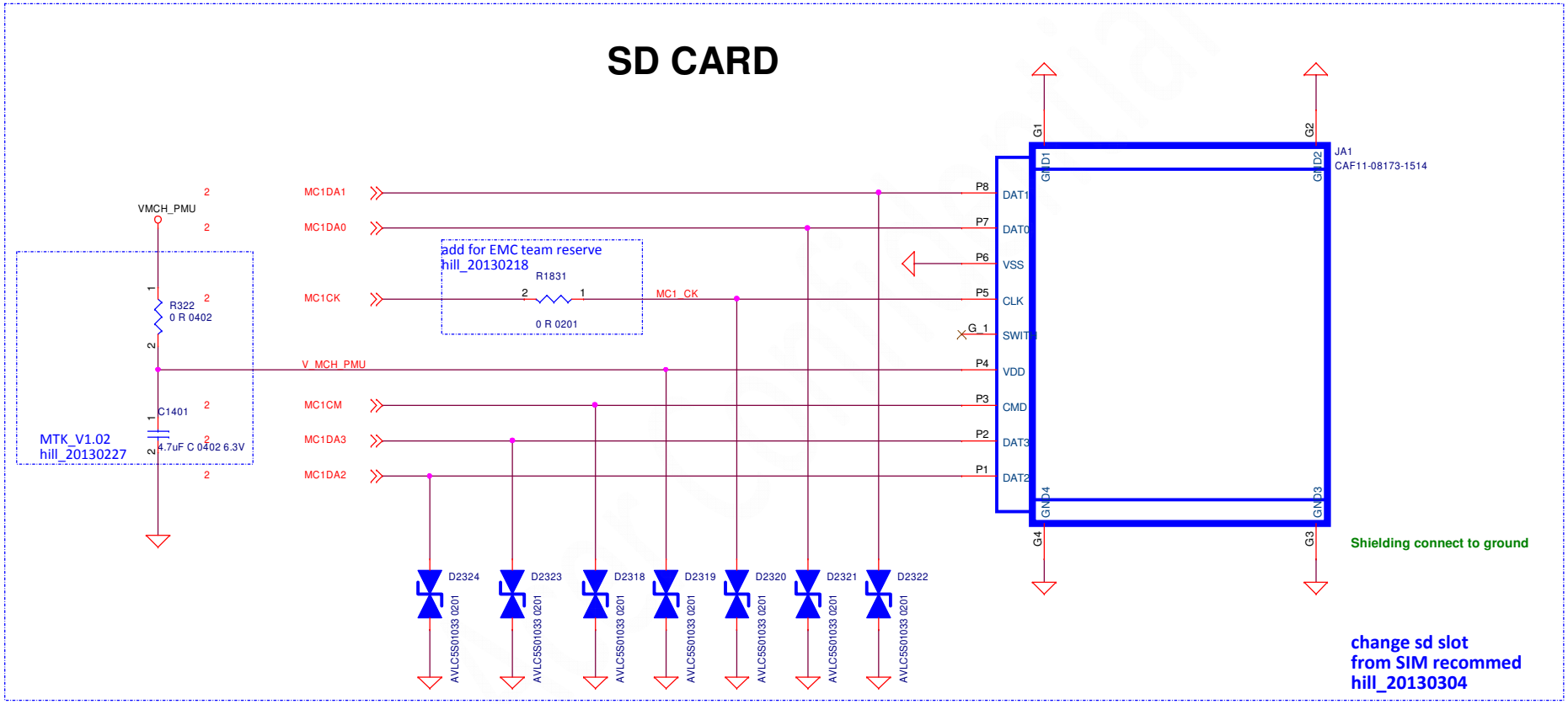


acer	Acer Inc.		Drawing Rule
	Project:	MTK	Allegro Lib Ver
	Title:	11.USB	OrCAD Lib Ver
Approved: <Approve>	Size: Custom	Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013	Sheet: 11 of 21	

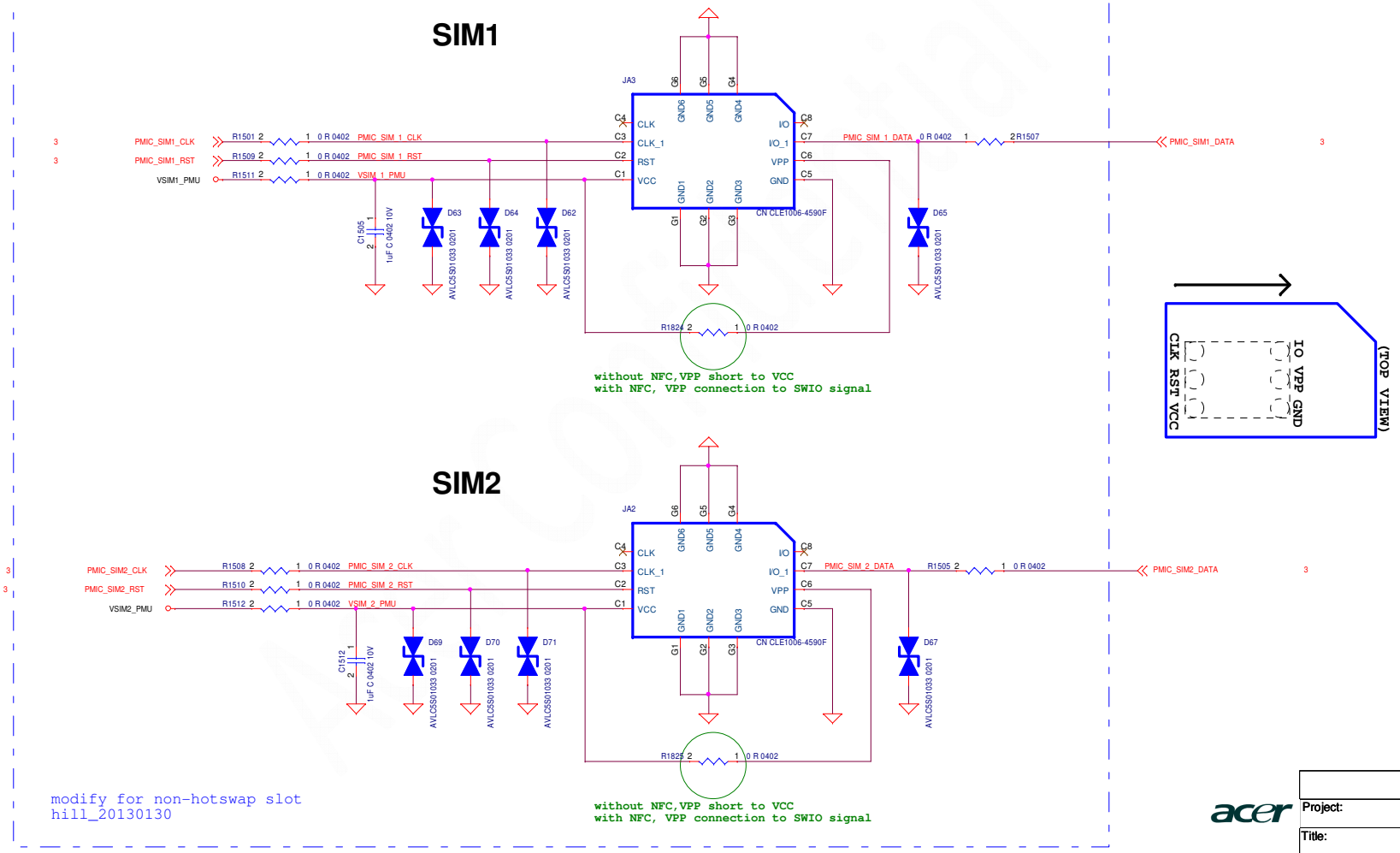
Acer Inc.		Drawing Rule
Project: MTK		Allegro Lib Ver
Title: 12. NFC_MT6605 (Reserved)		OrCAD Lib Ver
Approved: <Approve>	Size: C / Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013	Sheet: 12 of 21

acer	Acer Inc.	Drawing Rule
	Project: MTK	Allegro Lib Ver
	Title: 13 Reserved	OrCAD Lib Ver
Approved: <Approve>	Size: Custom / Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013	Sheet: 13 of 21

SD CARD



acer	Acer Inc.		Drawing Rule
	Project:	MTK	Allegro Lib Ver
	Title:	14 Memory CARD	OrCAD Lib Ver
Approved: <Approve>	Size: Custom	Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013	Sheet: 14 of 21	

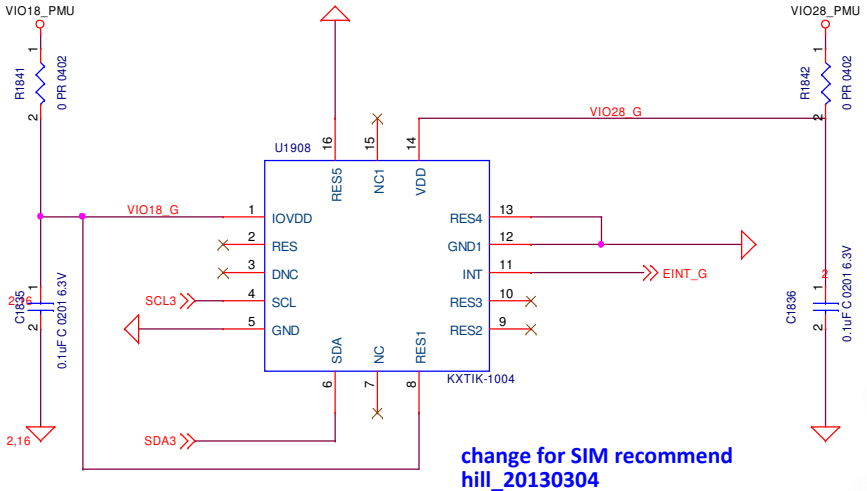


Acer Inc.		Drawing Rule
Project:	MTK	Allegro Lib Ver
Title:	15 Dual SIM, IC-USB	OrCAD Lib Ver
Approved: <Approve>	Size: Custom	Document Number: MTK6589 PHONE
Designer: King	Date: Thursday, May 23, 2013	Sheet: 15 of 21

Rev V0.1

The Slave Address associated with the KXTIK is 0001111.

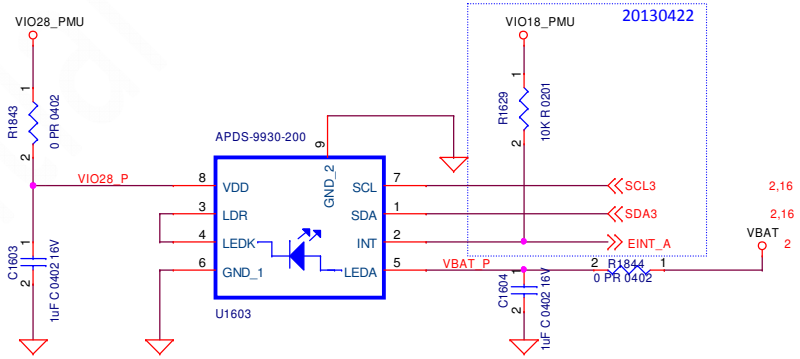
G-Sensor



change for SIM recommend
hill_20130304

ALS & PS Sensor

I2C Address: 0x39 (Write:0x72, Read:0x73)



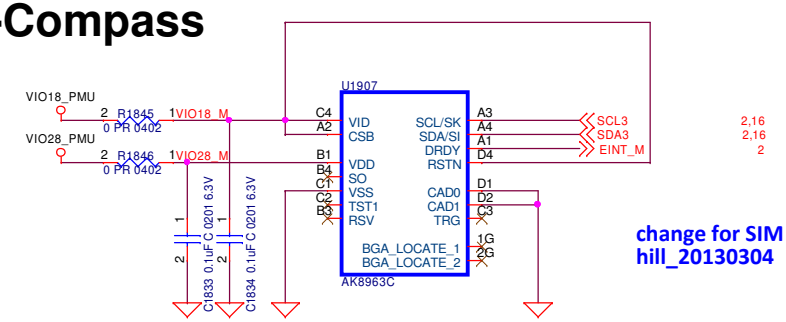
hill_20130304

Gyro Sensor

I2C Address: 0x68 (Write:0xD0, Read:0xD1)

hill_20130206

e-Compass



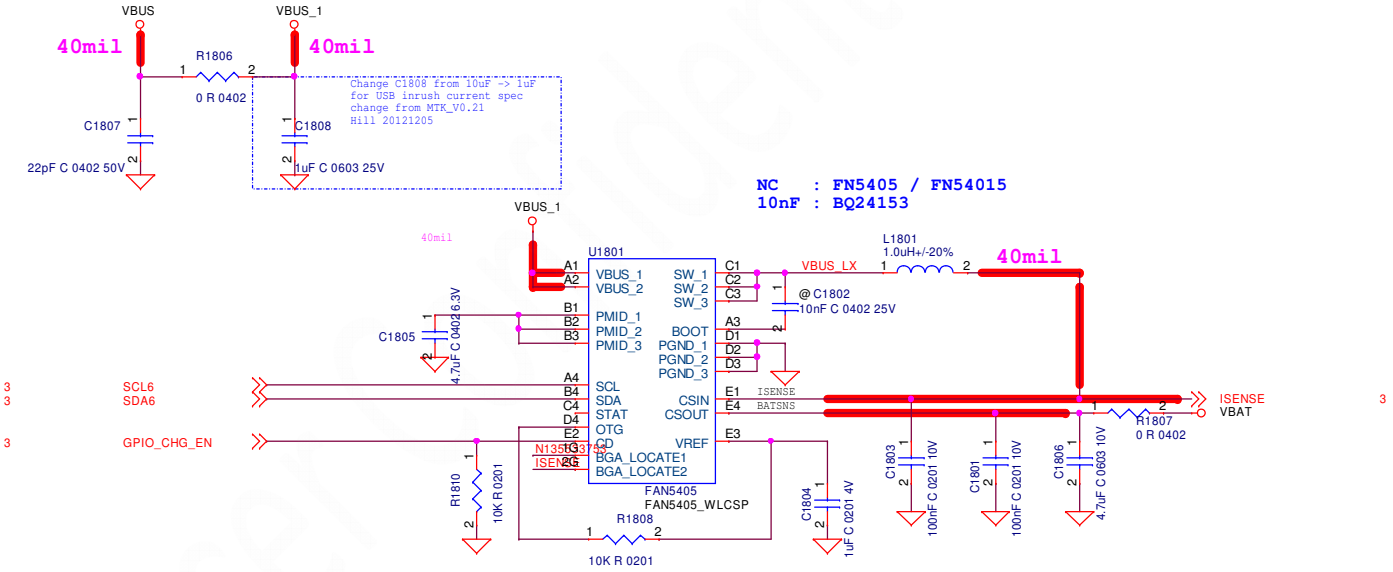
change for SIM recommend
hill_20130304

Slave address select

CAD1	CAD0	address
VSS	VSS	0 0 0 1 1 **0 0** R/W
VSS	VDD	0 0 0 1 1 **0 1** R/W
VDD	VSS	0 0 0 1 1 **1 0** R/W
VDD	VDD	0 0 0 1 1 **1 1** R/W

acer	Acer Inc.	Drawing Rule
	Project: MTK	Allegro Lib Ver
	Title: 16 Sensors, OFN (Key)	OrCAD Lib Ver
Approved: <Approve>	Size: Custom Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013 Sheet: 16 of 21	

Switching Charger



If switching charger is used:
(1) R1801~R1805, C1801~C1806, L1801, U1801 are needed
(2) U303, U304 change to NC

Acer Inc.		Drawing Rule
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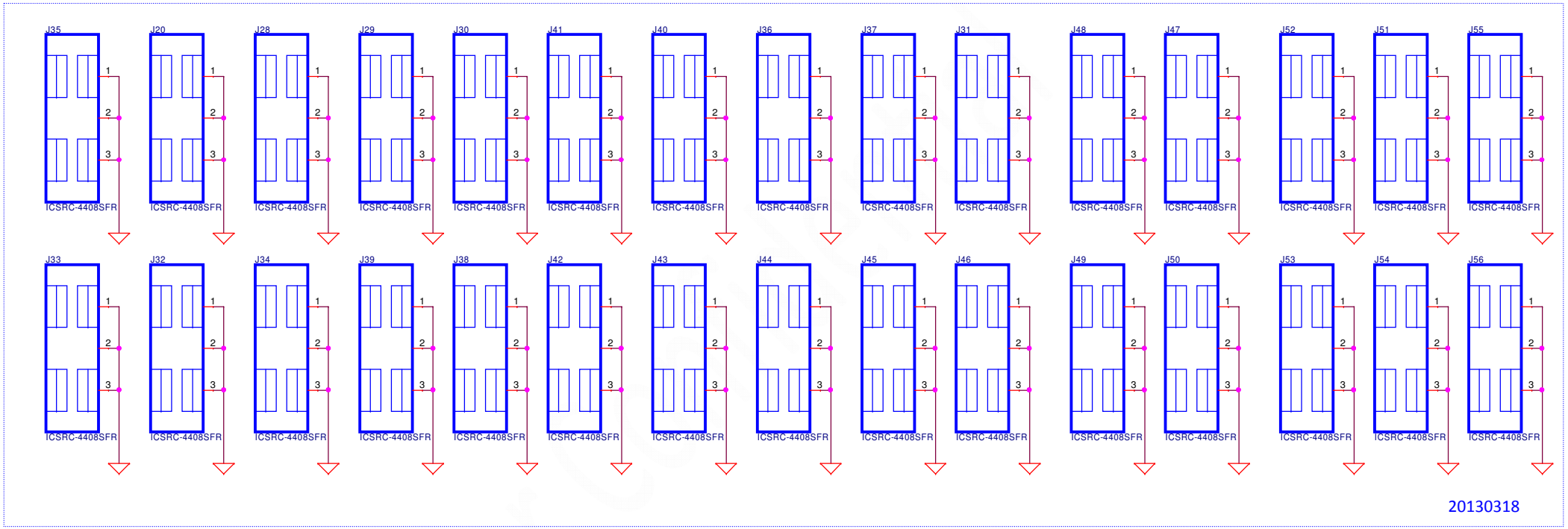
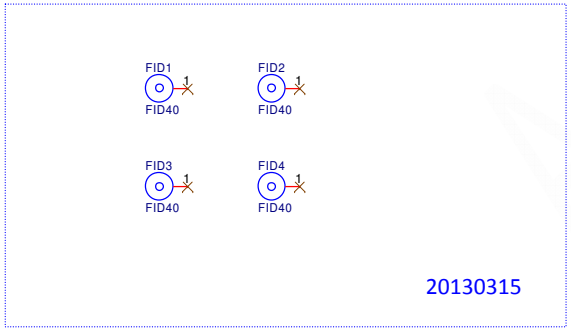
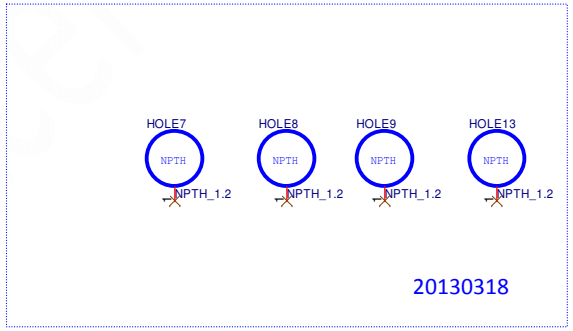
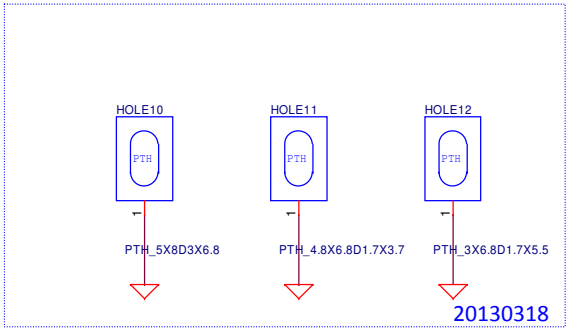
Title:	18 Switching Charger	OrCAD Lib Ver
Approved: <Approve>	Size: Custom Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013 Sheet: 17 of 21	









acer	Acer Inc.		Drawing Rule
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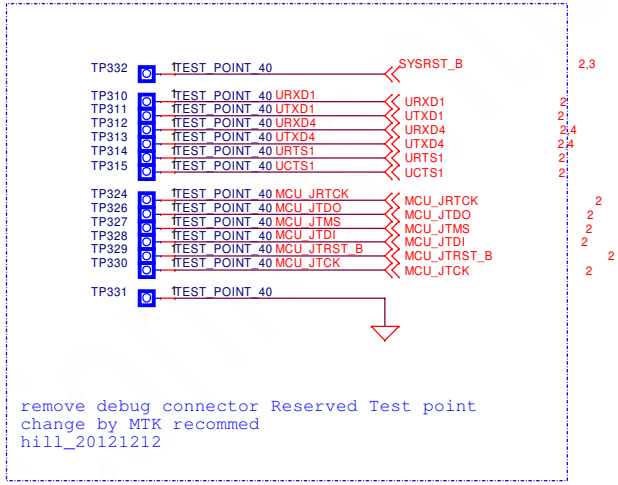
Designer: King	Date: Thursday, May 23, 2013	Sheet: 18 of 21	



remove debug connector Reserved Test point
change by MTK recommed
hill_20121212

acer	Acer Inc.	Drawing Rule
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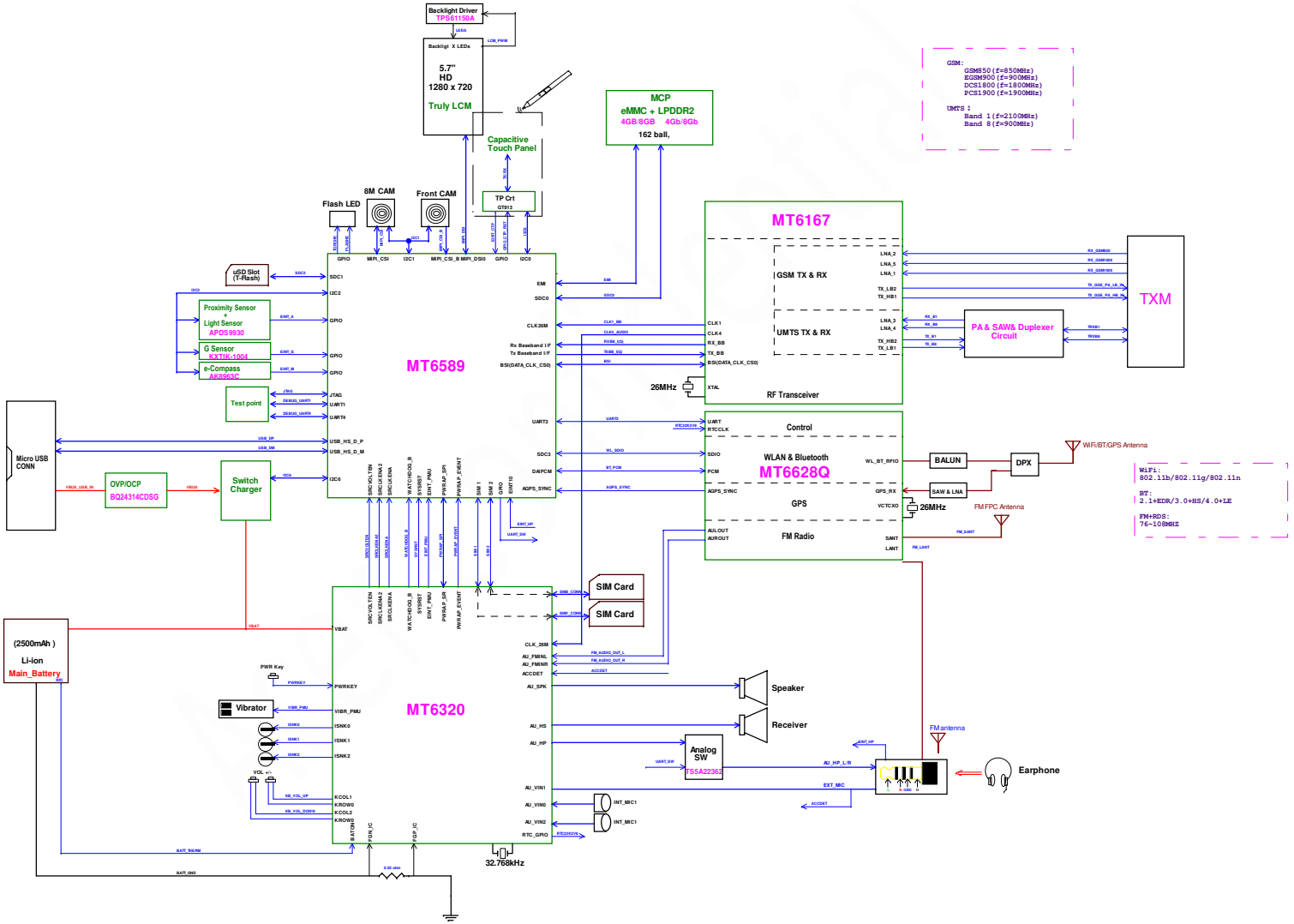
	Title: 20 Debug	OrCAD Lib Ver
Approved: <Approve>	Size: Custom Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013 Sheet: 19 of 21	

A10 System Block Diagram



Reference Version	Category	Item
A10 MB V02	page 03	add C1837 and C1838
A10 MB V02	page 16	change R1629 pin2 connect to U1603 pin 2
A10 MB V02	page 03	add C1839 and C1840 / change TR1 PAD size
A10 MB V02	page 03 , 04	change Net AU_HP_R and AU_HP_L connect to VU2 pinC1 and pin C3 Vu2 pin B1 and pin B3 connect to Vp3002 pin B1 and pin A1 VP3002 pin B3 and pin A3 connect to phone net AU_HPR_F and AU_HPL_F
A10 MB V02	page 04	delete TP309 and VR2921 and VR2917 and VC2918
A10 MB V02	page 04	change VL3005 and VL2906 and VL3005 to BLM15HD182SN1_0402
A10 MB V03	page 05	change U501 emmc_LPDDR2 MCP frrom 162 ball chanege to 186 ball
A10 MB V1.0	page 04	add R1860 and R1861

acer	Acer Inc.		Drawing Rule
	Project:	MTK	Allegro Lib Ver
	Title:	99 Change Notice	OrCAD Lib Ver
Approved: <Approver>	Size: Custom	Document Number: MTK6589 PHONE	Rev V0.1
Designer: King	Date: Thursday, May 23, 2013	Sheet: 21 of 21	