

	1	2	3	4	5	6	7	8	
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B									B
C									C
D									D
E									E
F									F

ROCKY AMD-Sabine 15"

DB

2010/08/09

DATE	CHANGE NO.	REV
1	2	

	EE	DATE	POWER	DATE
DRAWER	ALAN W		ALBERT	
DESIGN	VENS HUANG		ALBERT	
CHECK				
RESPONSIBLE				
SIZE = 3 VER :				
FILE NAME : XXXX-XXXXXX-XX				
P/N	XXXXXXXXXXXX			
SHEET 1 OF 60				

INVENTEC

ROCKY-AMD

Project Name

SIZE CODE DOC. NUMBER REV

A3 CS 1234 X01

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 02- Index
 03- Power Sequence
 04- Power Procedure
 05- Block Diagram
 06- DC & BATTERY CHARGER
 07- BATTERY CONN
 08- +V5A & +V3A & +V2.5S
 09- +V1.1A & +VDDA
 10- +VCC_CORE & +VDDIO_SUS&+V0.75S
 11- +APU_VDD&+VDDNB
 12- +VDDP&+V1.8S
 13- +V5S&+V3S&+V1.5S
 14- +GPU_VDDC&+VPCIE
 15- BLANK
 16- Reserve
 17- BLANK
 18- CPU-1
 19- CPU-2
 20- CPU-3
 21- CPU-4
 22- DDR3 DIMM0
 23- DDR3 DIMM1
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 36- GPU-6
 37- VRAM-1
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 39- KBC
 40- HDMI
 41- BLANK
 42- CRT
 43- LCM
 44- Keyboard CONN & Indicate LED
 45- Card reader-RTS5219
 46- SATA HDD & SATA ODD CONN
 47- NA
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 49- LAN
 50- RJ45 CONN
 51- AUDIO CODEC & SPEAKER CONN
 52- HP JACK & MIC JACK
 53- LED BOARD ON MB
 54- SCREW
 55- WLAN&BT

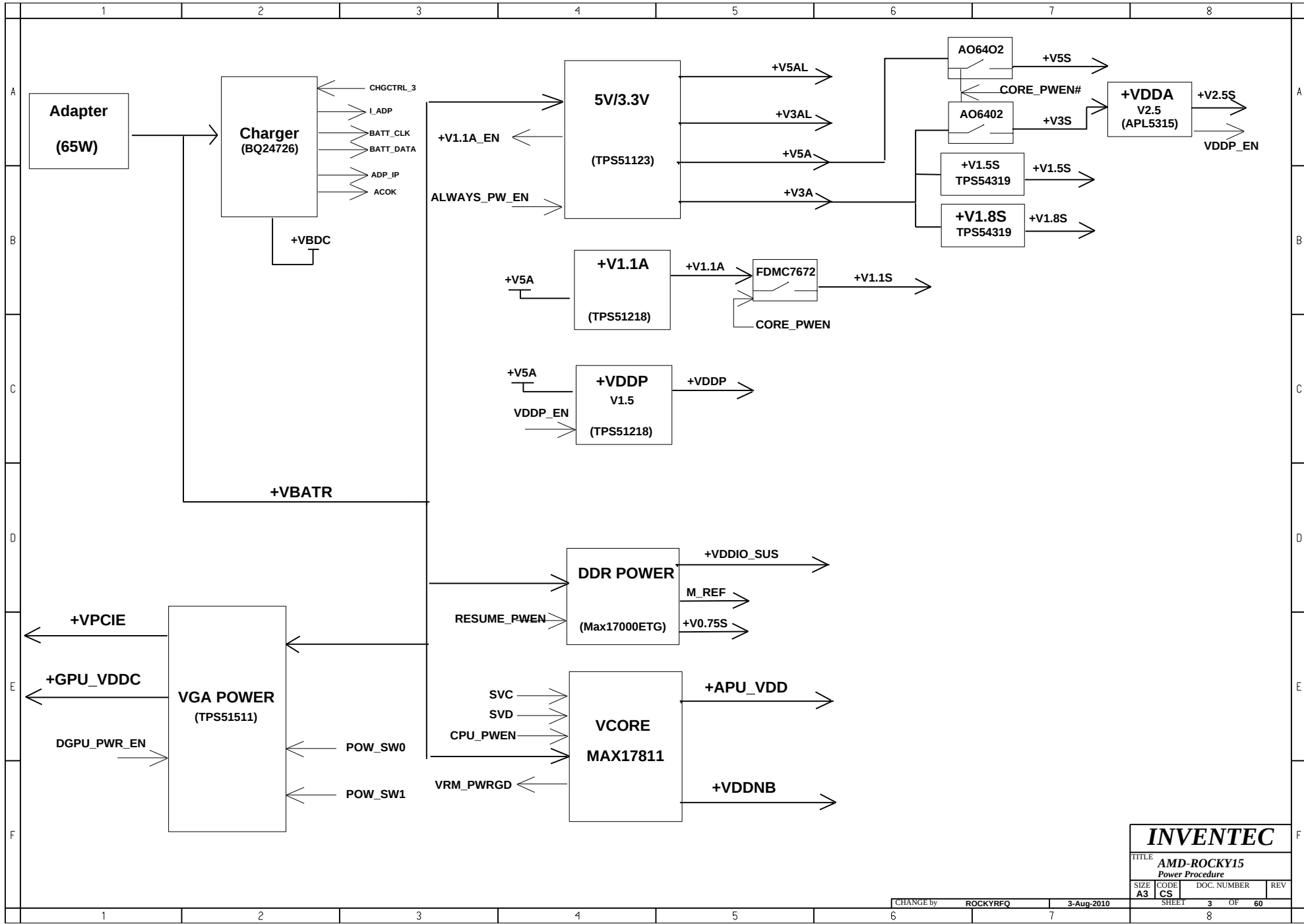
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 58- SATA HDD BOARD
 59- TRAVIS
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TITLE ROCKY-AMD Index			
SIZE A3	CODE CS	DOC. NUMBER 1234	REV X01
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CHANGE by *Ken, Chiang* 6-Aug-2010



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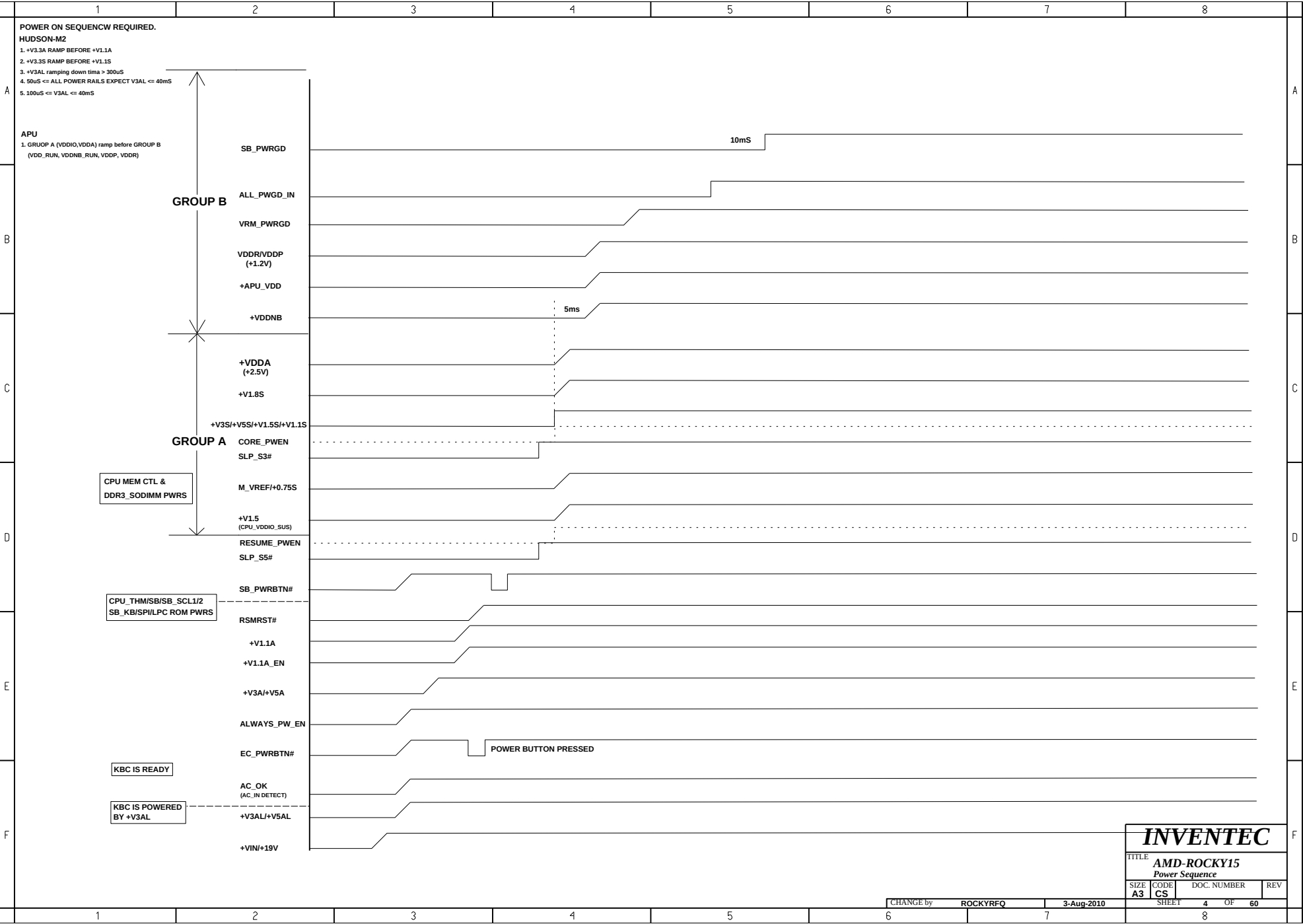
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AMD-ROCKY15
Power Procedure

SIZE CODE DOC. NUMBER REV

A3 CS 3 OF 60

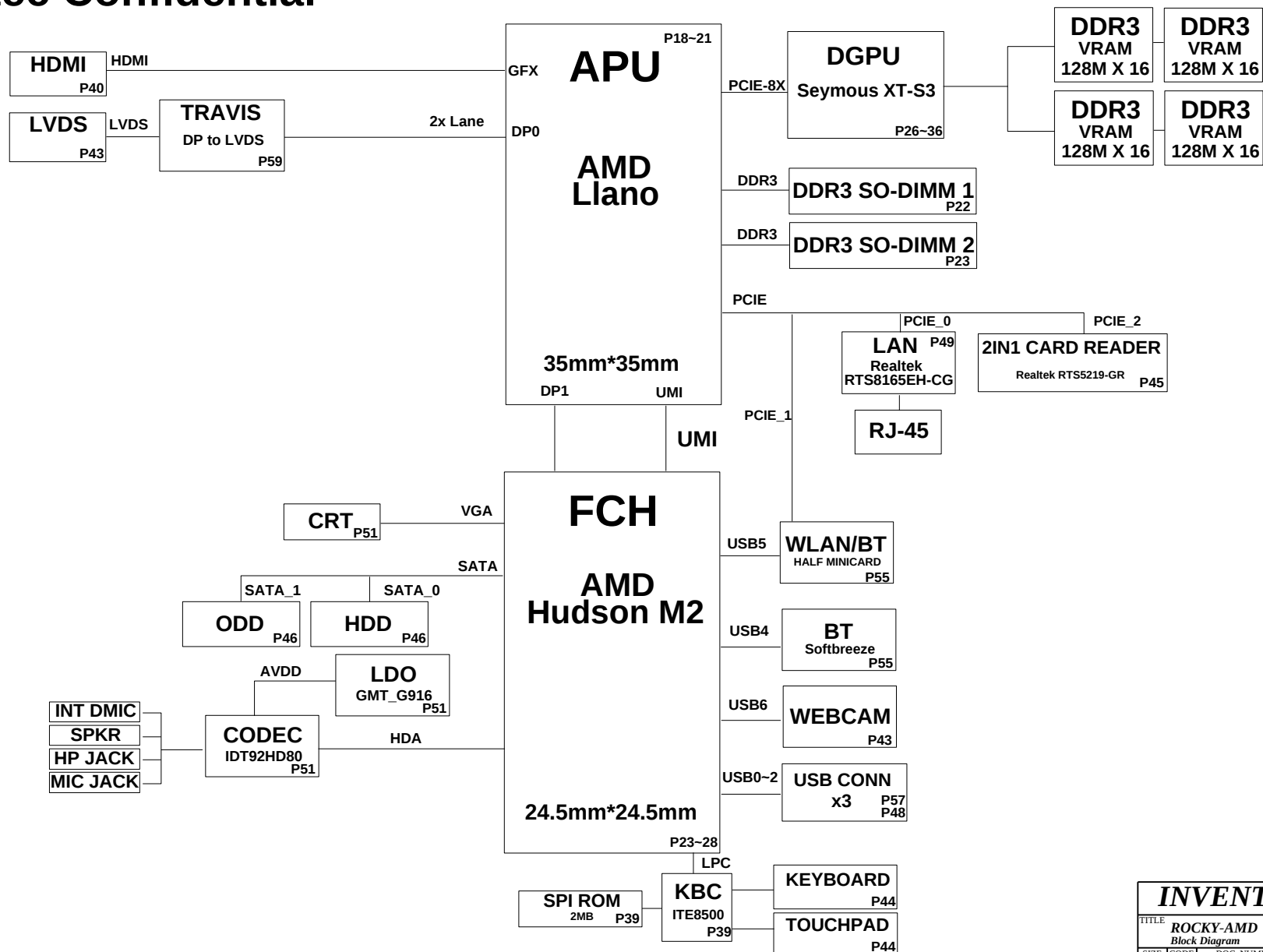
CHANGE by ROCKYRFQ 3-Aug-2010

SHEET 3 OF 60



Inventec Confidential

Sabine - DIS



INVENTEC

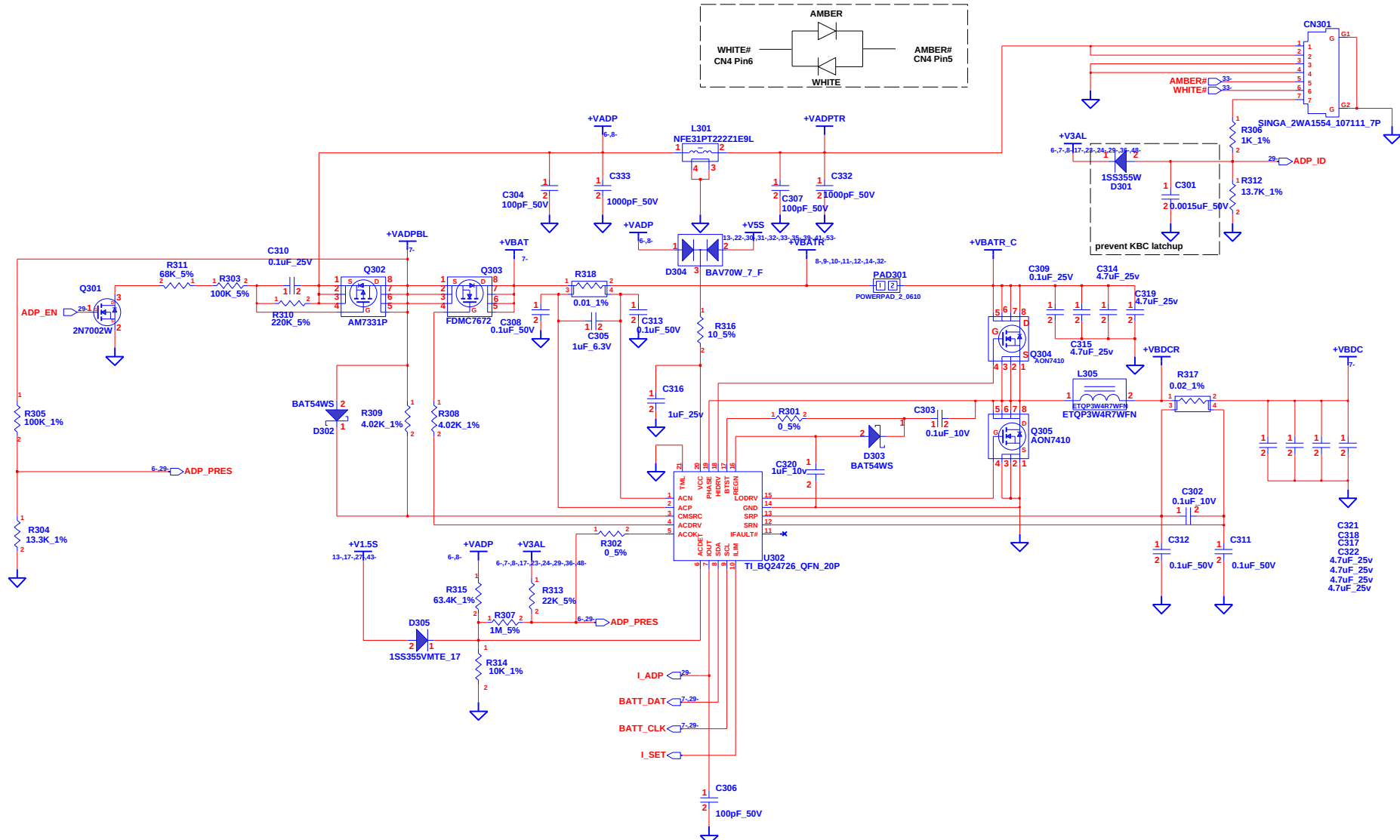
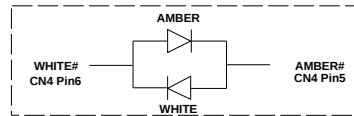
TITLE	ROCKY-AMD <i>Block Diagram</i>
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SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01

CHANGE by	<i>Ken, Chiang</i>	<i>3-Aug-2010</i>
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CS 1234
SHEET 5 OF 60

AC IN

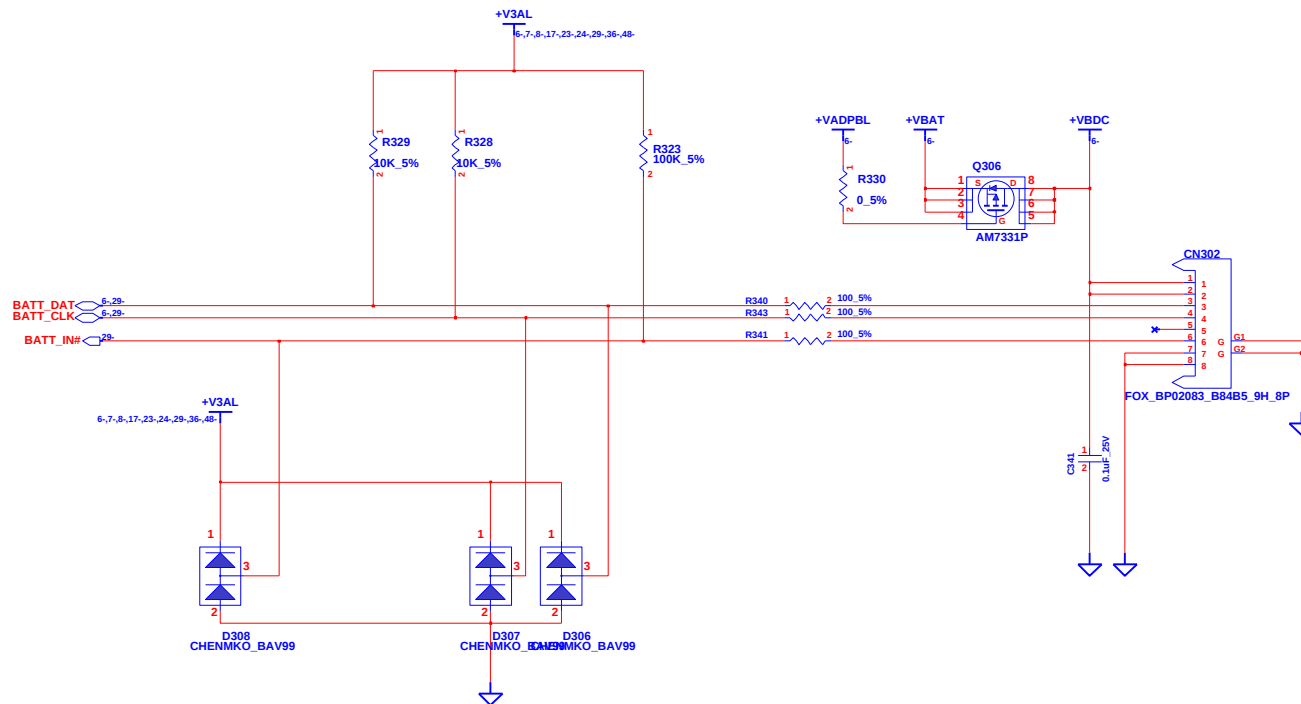


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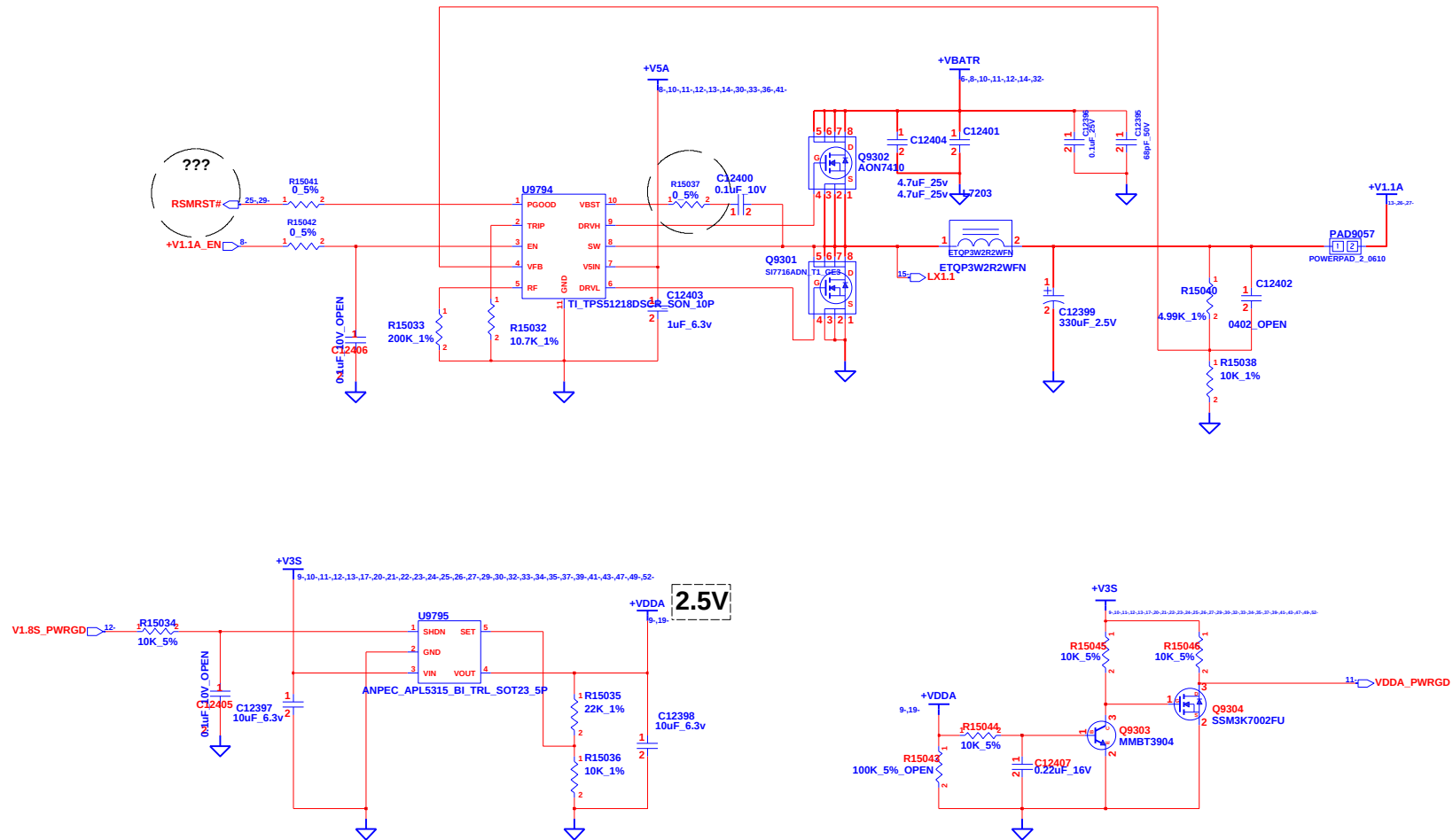
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ROCKY-AMD			
Power Procedure			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01

CHANGE by Ken, Chiang 9-Aug-2010

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INVENTEC			
TITLE			
ROCKY-AMD			
Power Sequence			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01
CHANGE by		9-Aug-2010	
Ken, Chiang			
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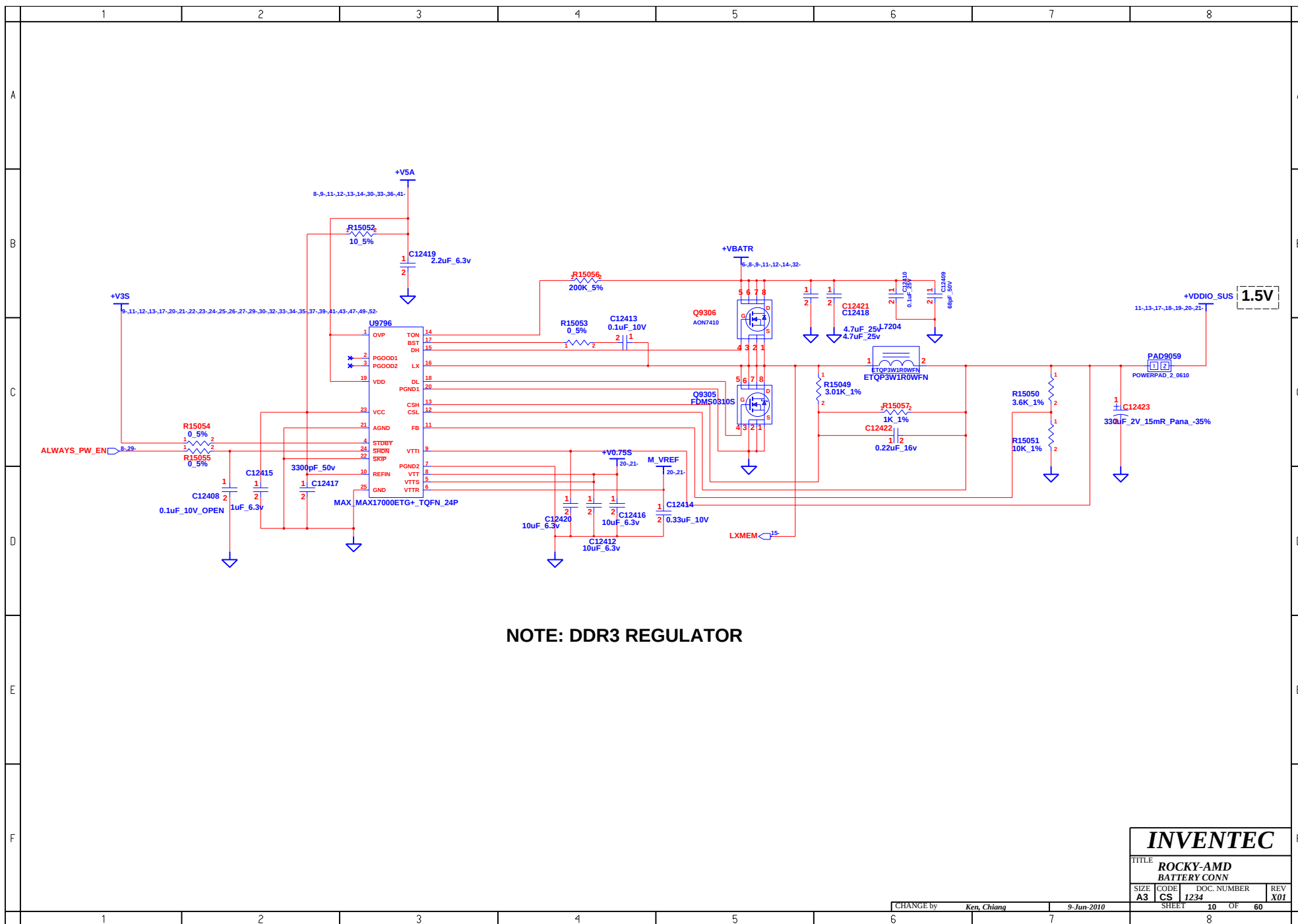


INVENTEC

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ROCKY-AMD			
DC & BATTERY CHARGER			
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CHANGE by Ken, Chiang 9-Jun-2010

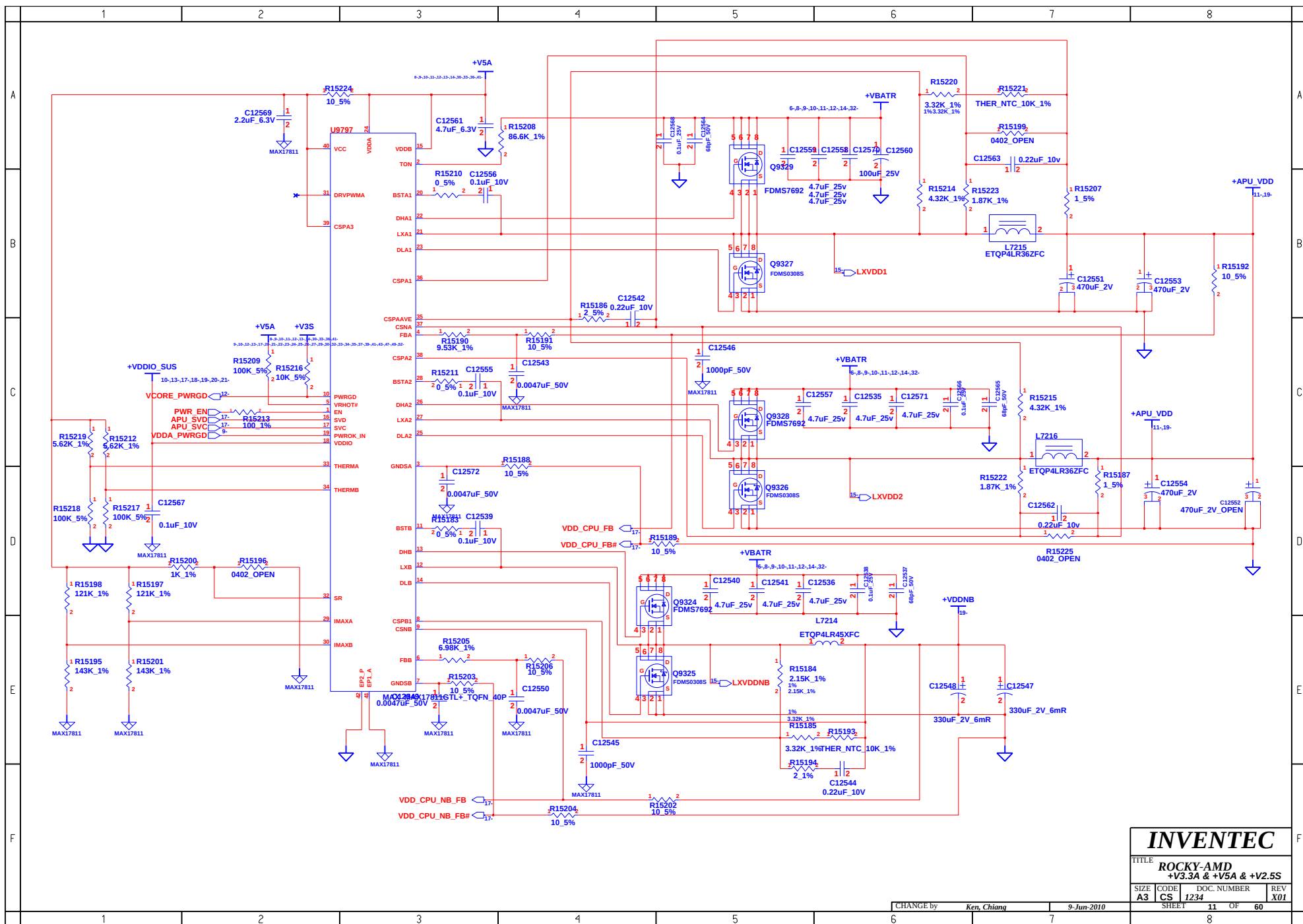
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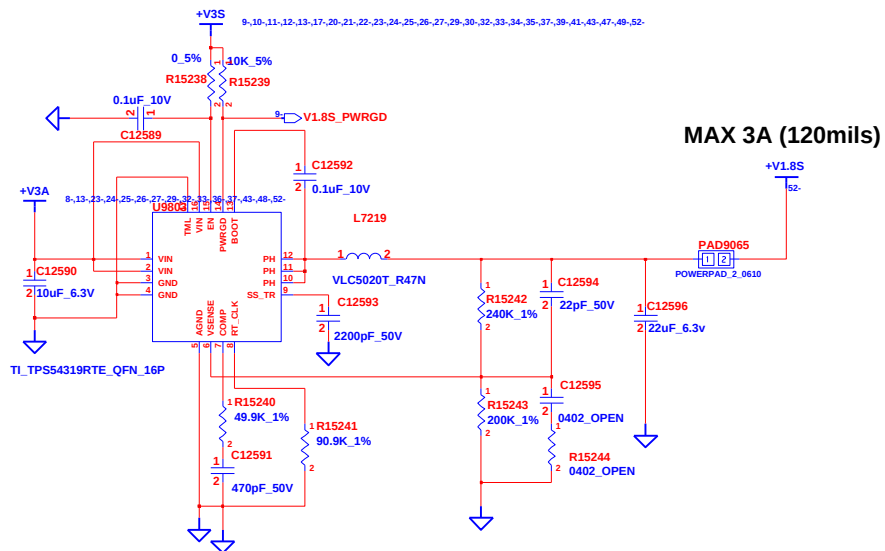
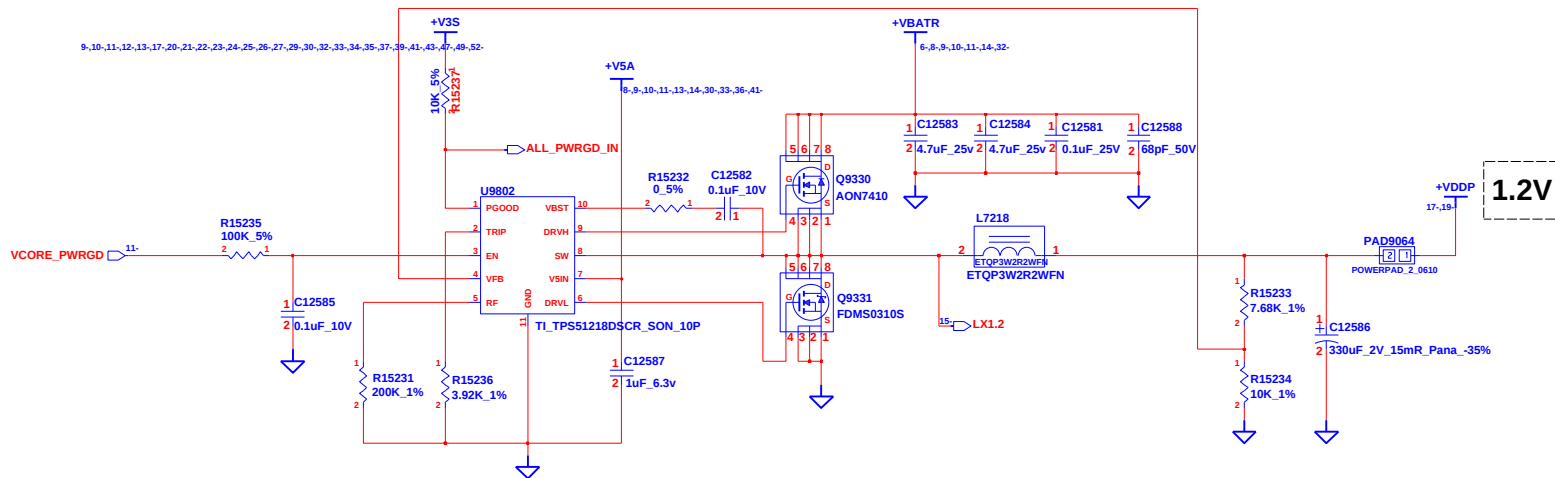


INVENTEC

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ROCKY-AMD BATTERY CONN			
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CHANGE by	Ken, Chiang	9-Jun-2010	SHEET	10	OF	60
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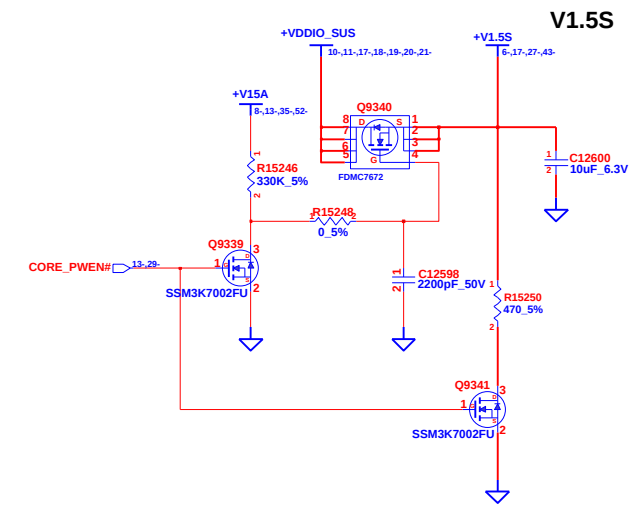
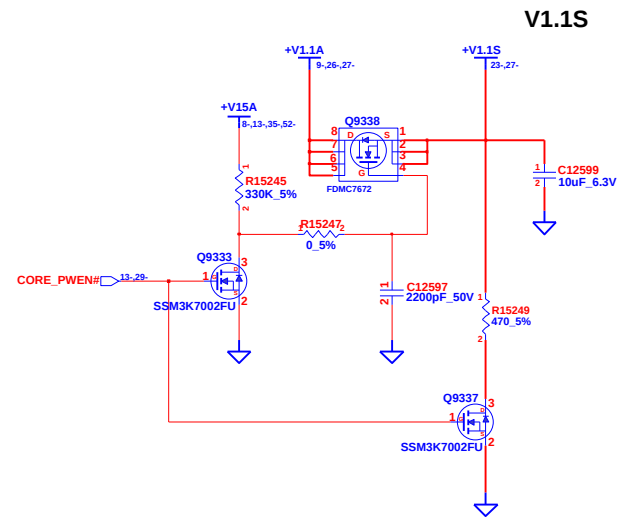
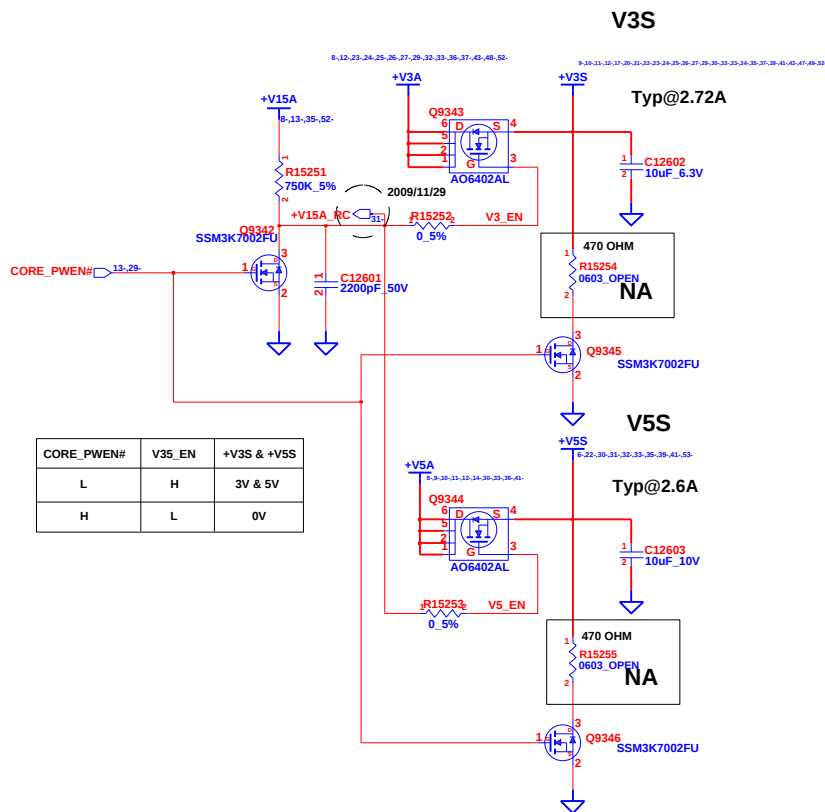




1.2V

MAX 3A (120mils)

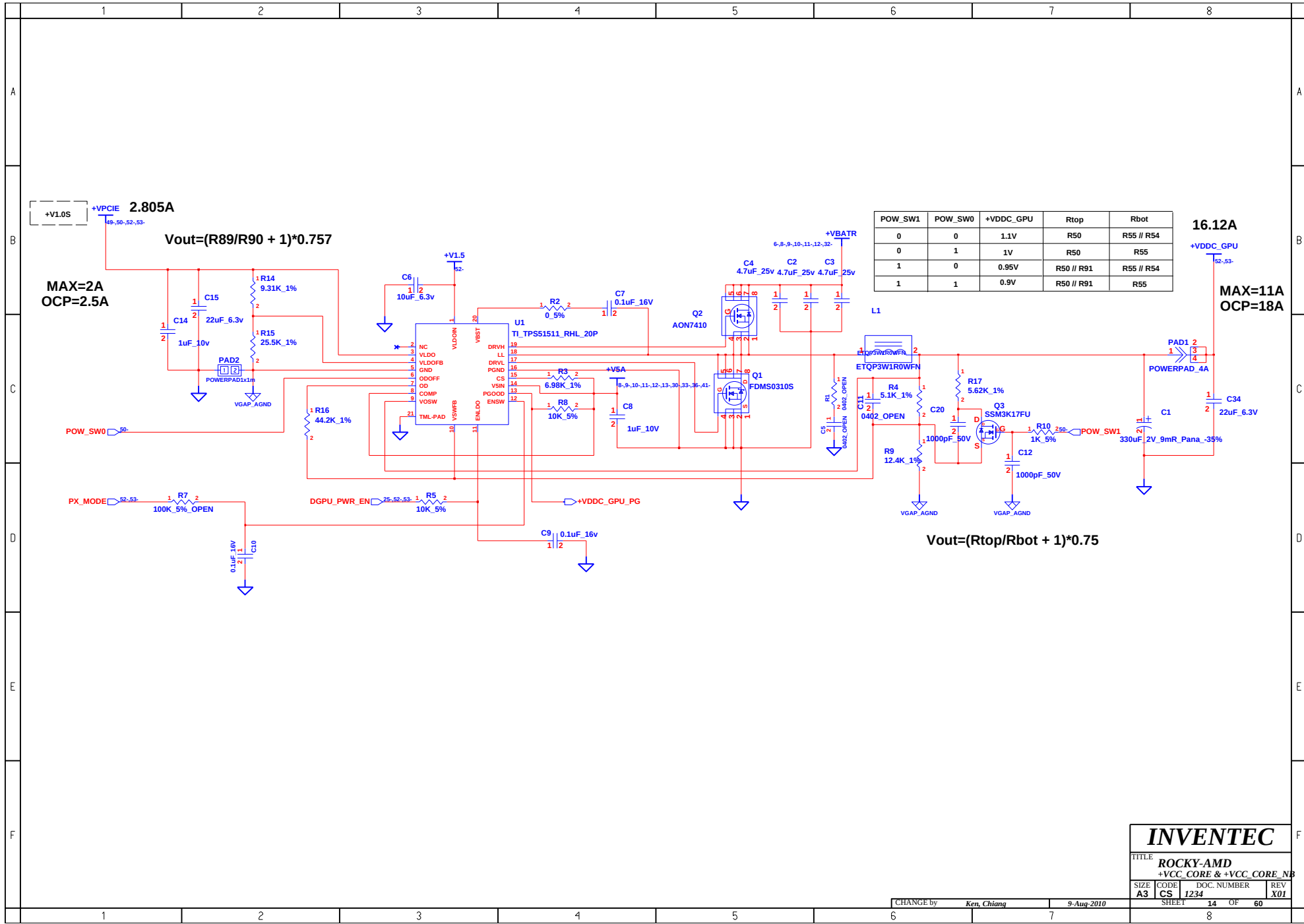
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ROCKY-AMD			
+V1.2A & VCC_NB			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01
CHANGE by		9-Jun-2010	
Ken Chiang			
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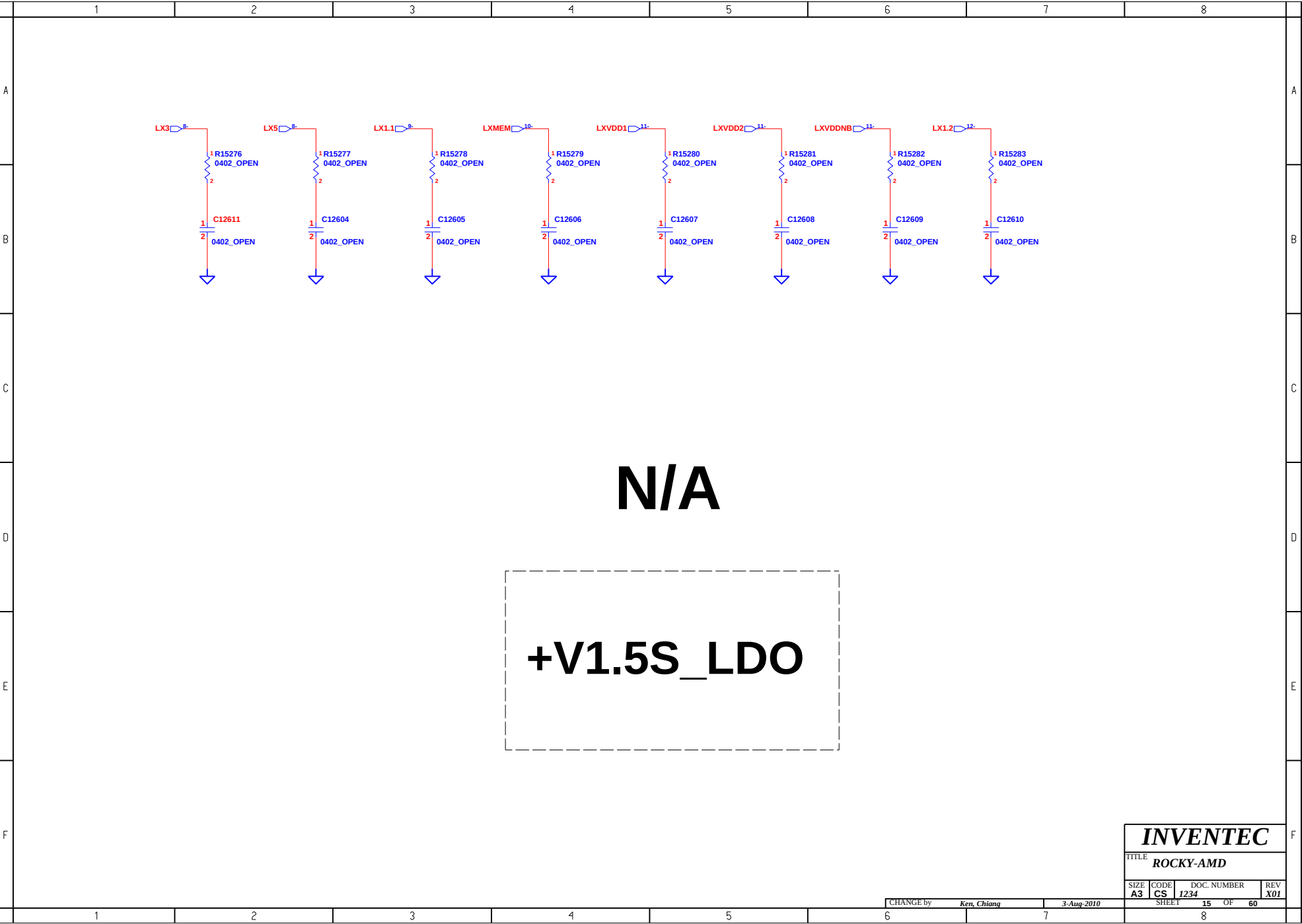


INVENTEC

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ROCKY-AMD			
DDR3 POWER			
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CHANGE by Ken Chiang 9-Jun-2010





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TITLE ROCKY-AMD			
SIZE A3	CODE CS	DOC. NUMBER 1234	REV X01
CHANGE by Ken, Chiang		3-Aug-2010	
SHEET		15	OF 60

CPU

U9804-6

PCI EXPRESS

GRAPHICS

GPP

UMLINK

HDMI

PEG

LAN WLAN CardReader

INVENTEC

ROCKY-AMD

+VSS & +V3.3S & +V1.5S & +V1.2S

SIZE A3

CODE CS

DOC. NUMBER 1234

REV X01

CHANGE by Ken, Chiang

9-Jun-2010

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**LAN
WLAN
CardReader**

INVENTEC			
TITLE ROCKY-AMD +V5S & +V3.3S & +V1.5S & +V1.2S			
SIZE A3	CODE CS	DOC. NUMBER 1234	REV X01
SHEET 16		OF 60	

CPU

To VGA Receiver

To FCH

ANALOG/DISPLAY/MISC

DISPLAY PORT 0

DISPLAY PORT 1

DISPLAY PORT MISC

CLK

SER

CTRL

TEST

JTAG

RSVD

SENSE

FCH

INVENTEC

ROCKY-AMD

CLK GEN

CHANGE by Ken, Chiang

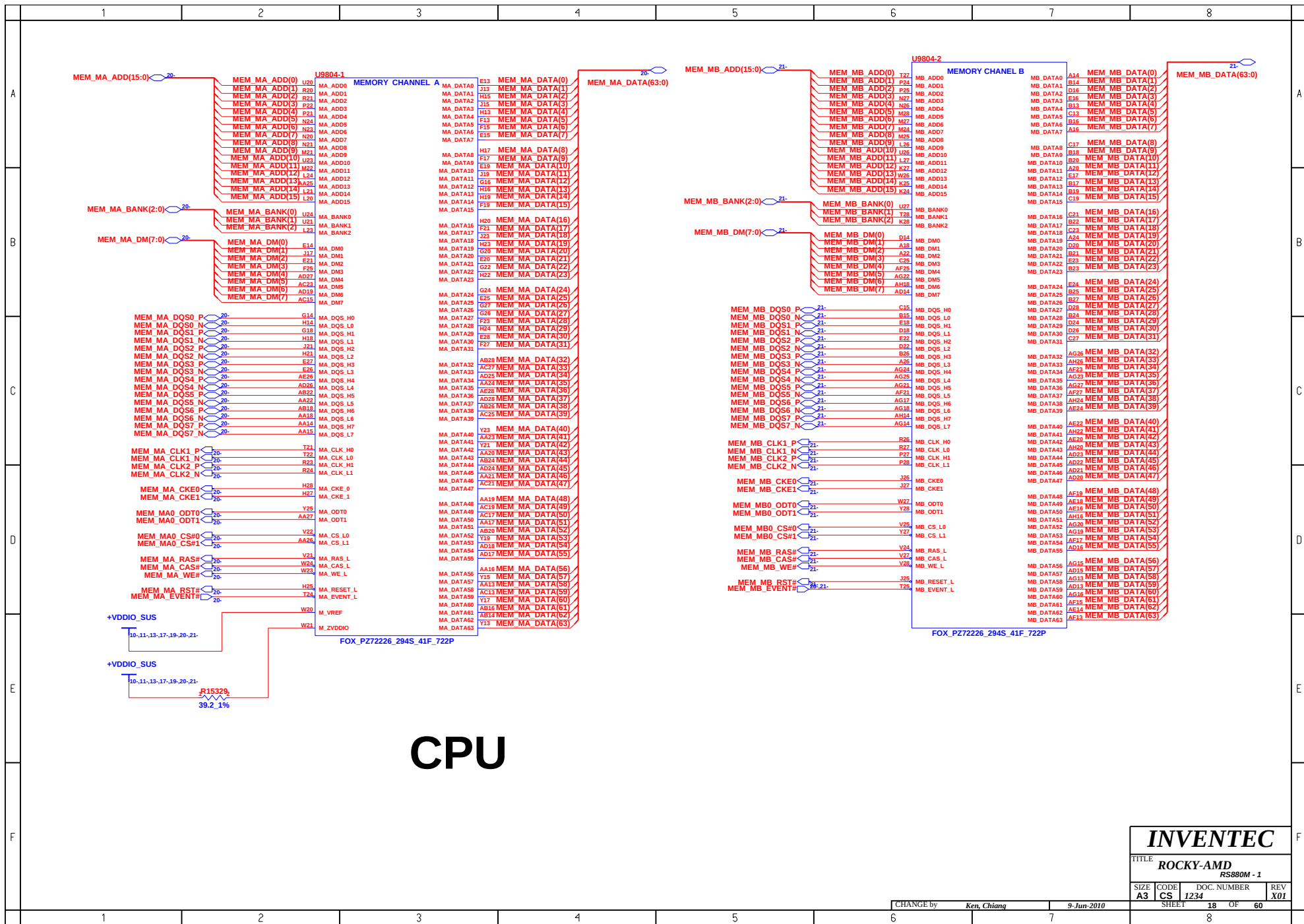
9-Jun-2010

SHEET 17 OF 60

SIZE	CODE	DOC. NUMBER
A3	CS	1234

CHANGE by	<i>Ken, Chiang</i>	9-Jun-2010
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A3	CS	1234			
SHEET		17	OF	60	



CPU

INVENTEC

TITLE
ROCKY-AMD
RS880M - 1

SIZE CODE CS 1234 DOC. NUMBER REV X01

CHANGE by Ken, Chiang 9-Jun-2010

SHEET 18 OF 60

8

SO-DIMM0

4A

Layout NOTE: Place these Caps near SO-DIMM0 power pin

U9805-1

U9805-2

FOX_AS0A626_U4SG_7H_204P

INVENTEC

ROCKY-AMD

CPU-1

SIZE A3 CODE CS DOC. NUMBER 1234 REV X01 SHEET 20 OF 60

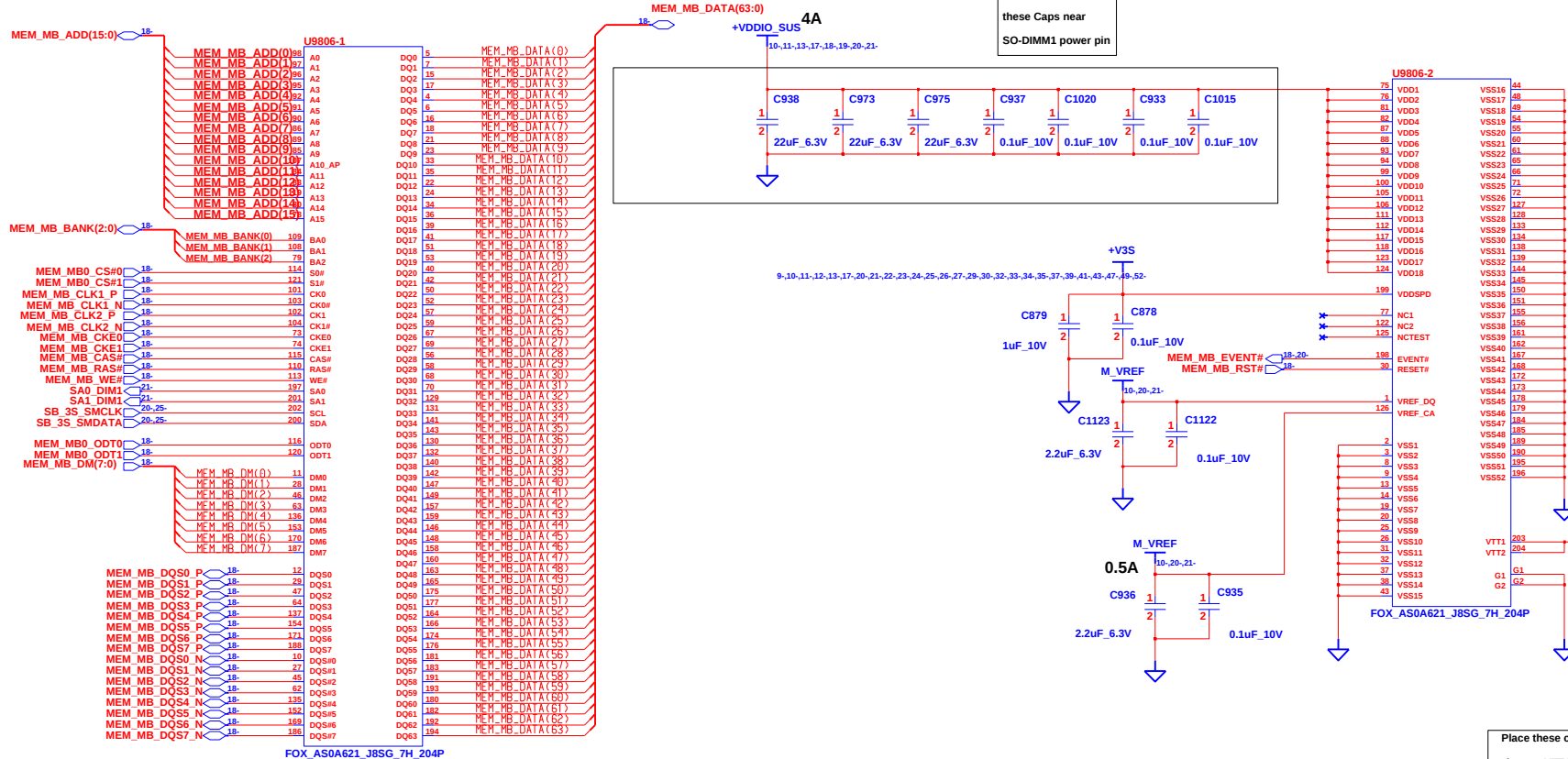
CHANGE by Ken, Chiang 30-Jul-2010

8

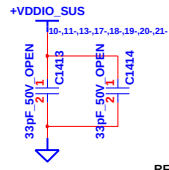
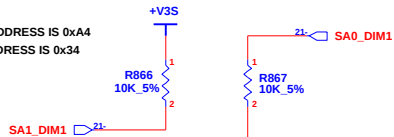
TITLE			
ROCKY-AMD CPU-1			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01
SHEET 20 OF 60			

SO-DIMM1

Layout Note: Place
these Caps near
SO-DIMM1 power pin



NOTE:
SO-DIMMB SPD ADDRESS IS 0xA4
SO-DIMMB TS ADDRESS IS 0x34



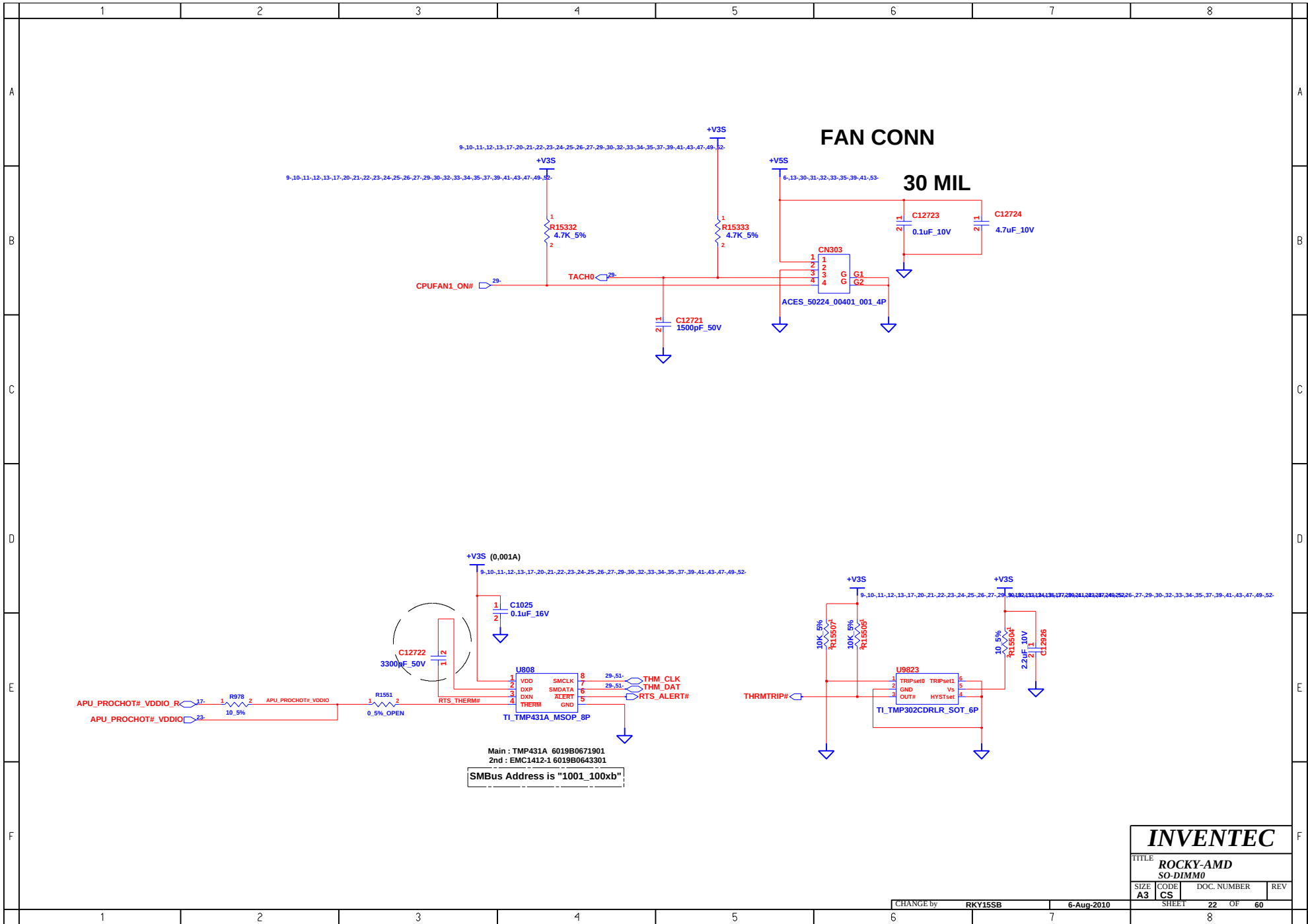
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ROCKY-AMD

SIZE CODE CS 1234 DOC. NUMBER REV
A3 X01

CHANGE by Ken, Chiang 9-Jun-2010

SHEET 21 OF 60

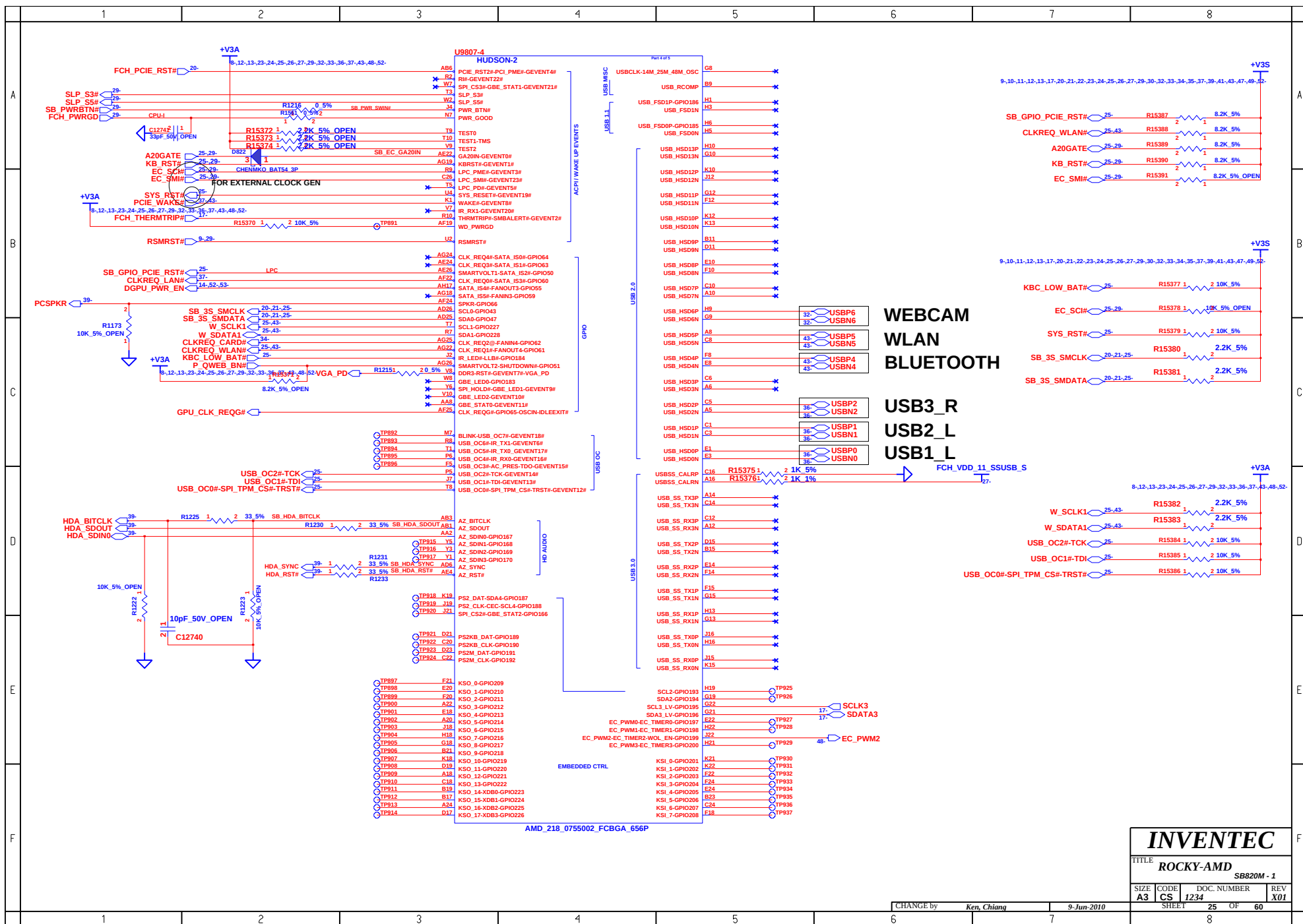


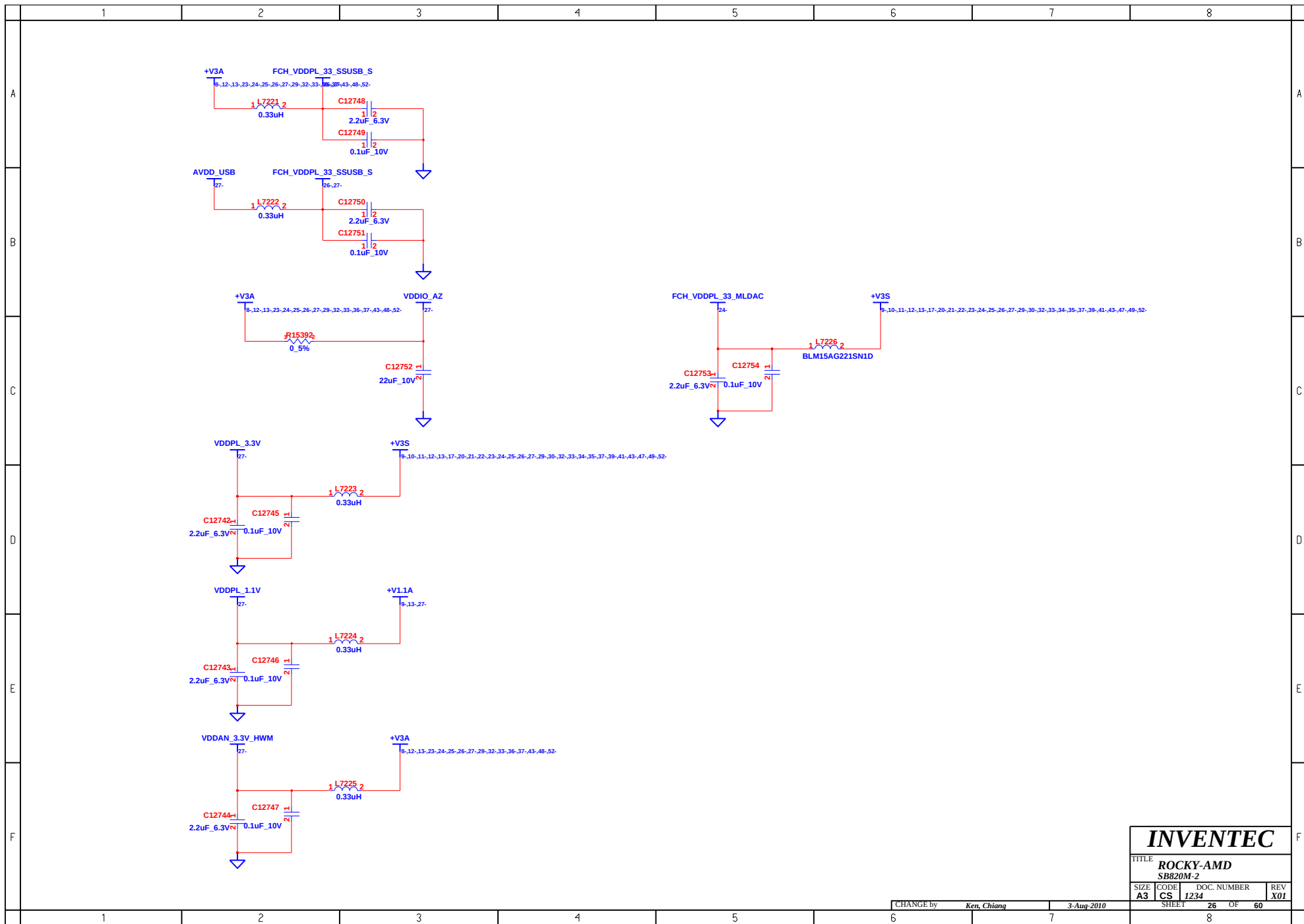
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ROCKY-AMD			
SO-DIMM0			
SIZE	CODE	DOC. NUMBER	REV
A3	CS		

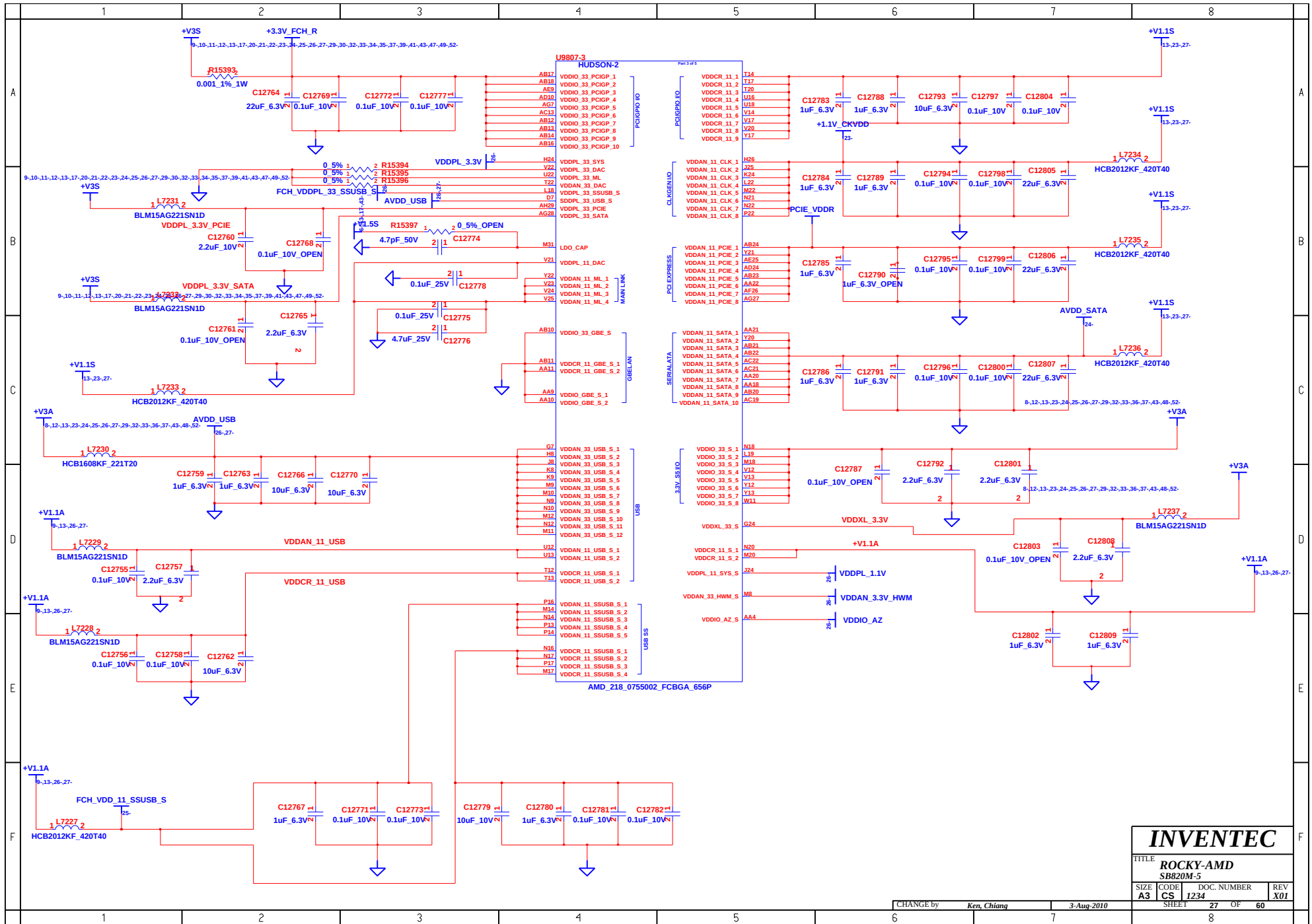
CHANGE by RKY15SB 6-Aug-2010

SHEET 22 OF 60





INVENTEC			
TITLE ROCKY-AMD SB820M-2			
SIZE A3	CODE CS	DOC. NUMBER 1234	REV X01
CHANGE by Ken, Chiang		3-Aug-2010	
SHEET 26		OF 60	
1		8	



INVENTEC

TITLE			
ROCKY-AMD			
SB820M-5			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01

CHANGE by		Ken, Chiang	3-Aug-2010	27	OF	60
				8		

KBC

U805_6019B0724201

U805
ITE_I78502E-KX_L_LQFP_128P

BOARD ID

INVENTEC

TITLE
ROCKY-AMD SB820M - 3

SIZE CODE DOC. NUMBER REV
A3 CS 1234 29 OF 60 X01

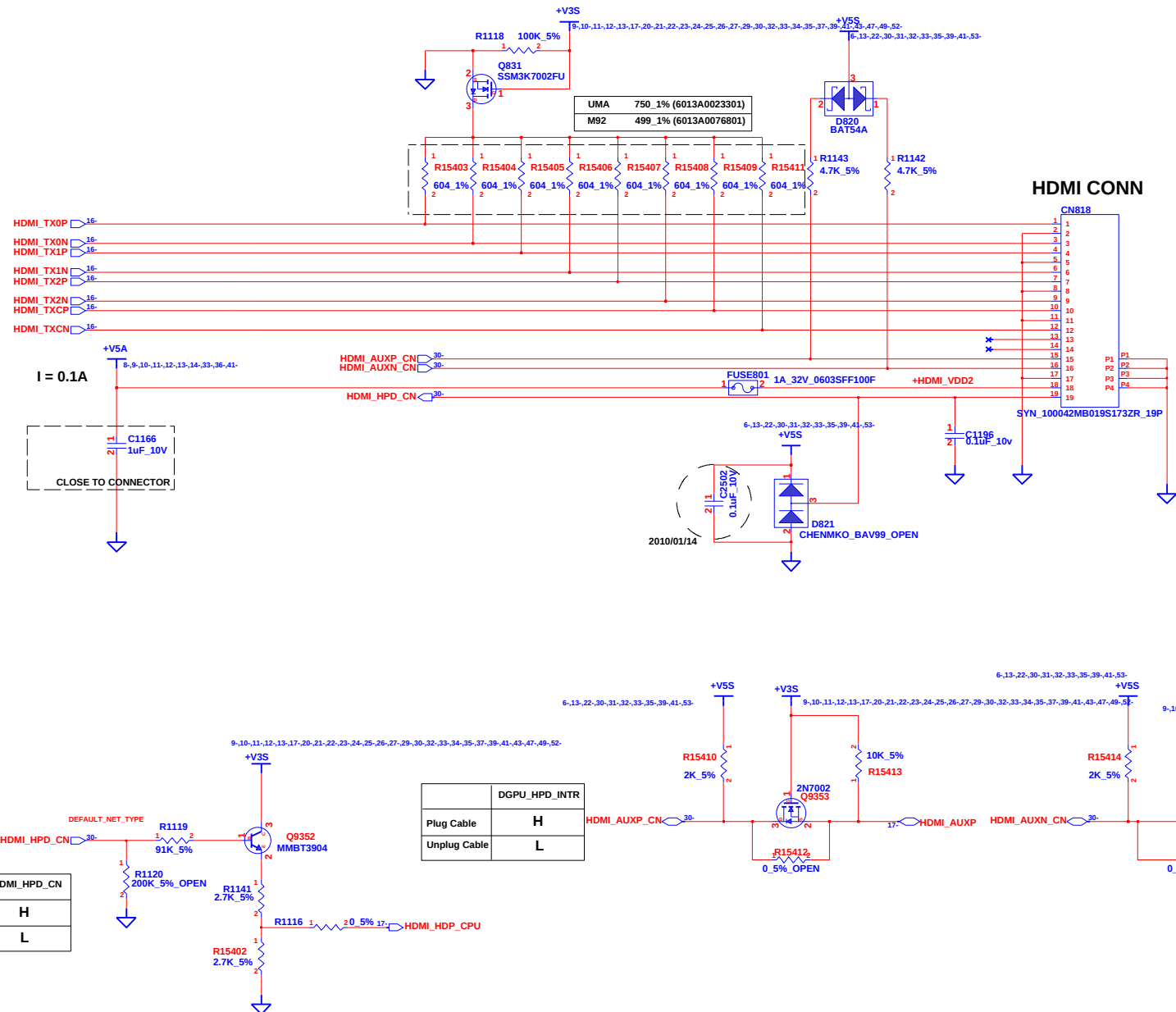
CHANGE by Ken Chiang

9-Jun-2010

SHEET 29 OF 60

8

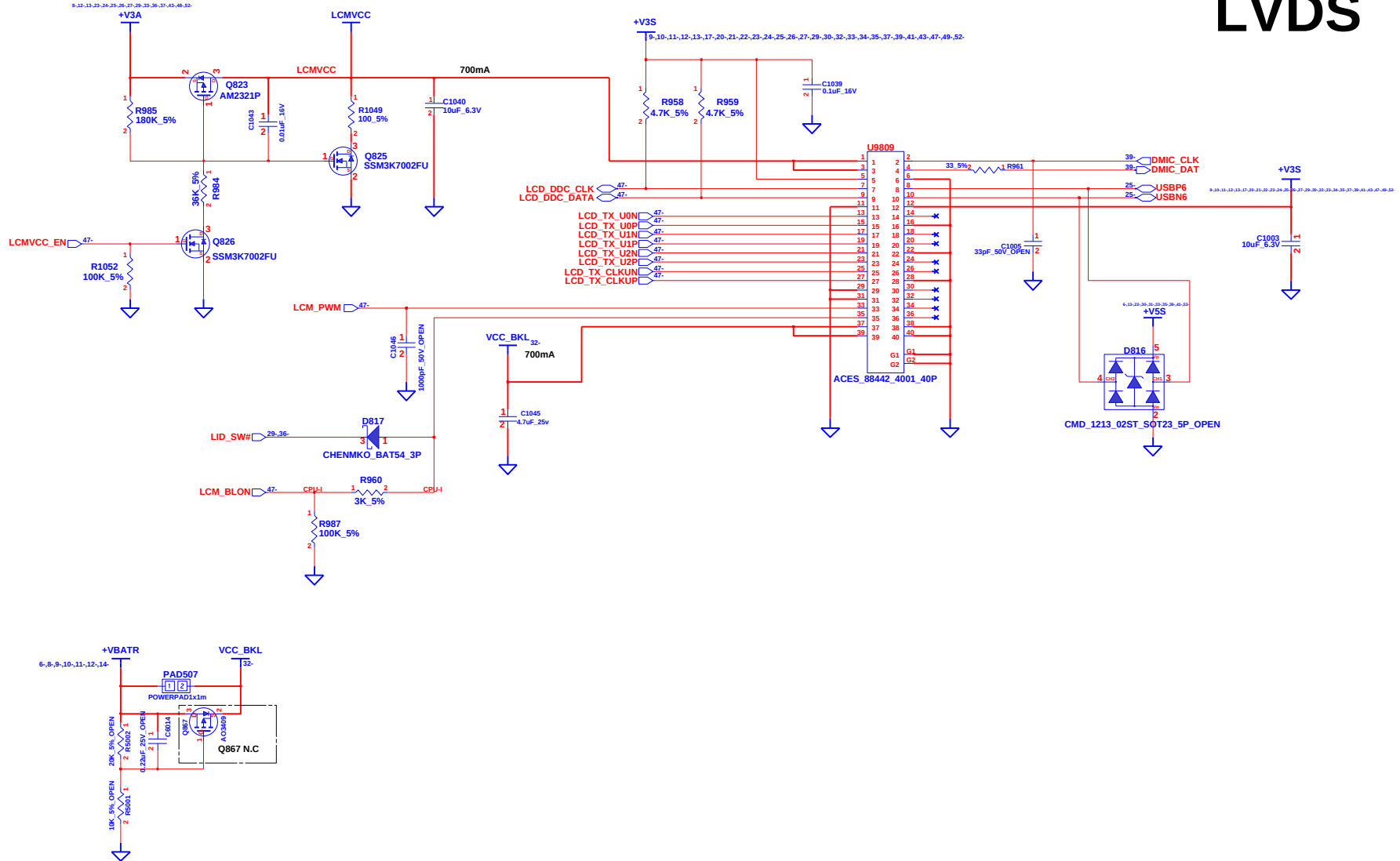
HDMI



INVENTEC				
TITLE ROCKY-AMD				
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A3	CS	1234		X0
SHEET 30 OF 60				
2				

CHANGE by Ken Chiang 9-Jun-2010

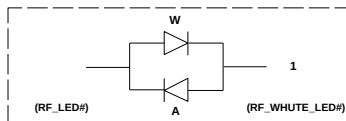
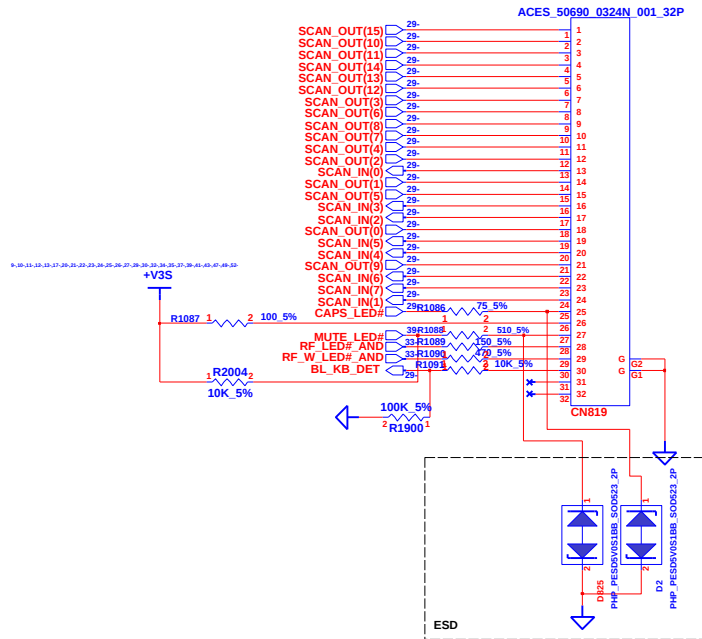
LVDS



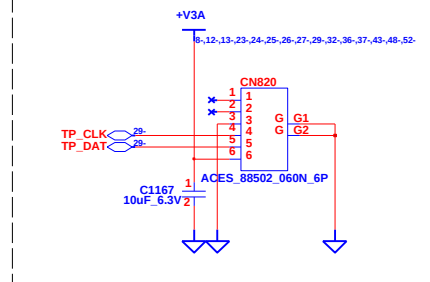
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A3	CS		
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CHANGE by RKY15SB 9-Aug-2010

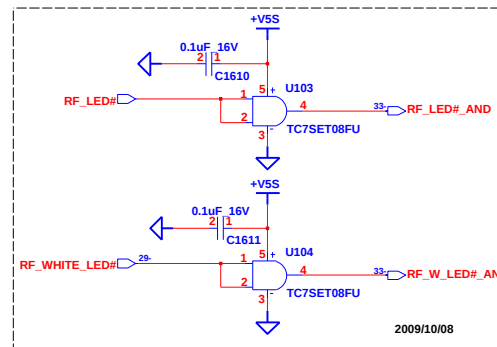
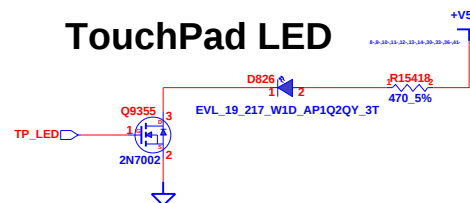
KeyBoard CONN (30 pin)



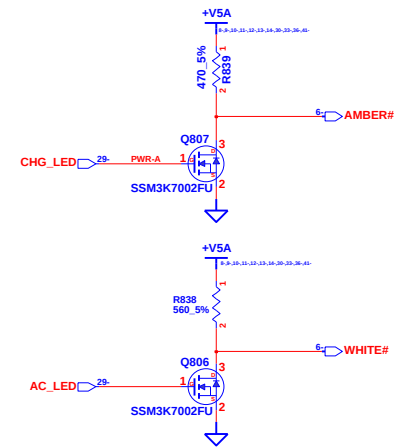
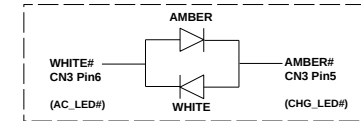
TouchPad on MB



TouchPad LED



DC-JACK LED



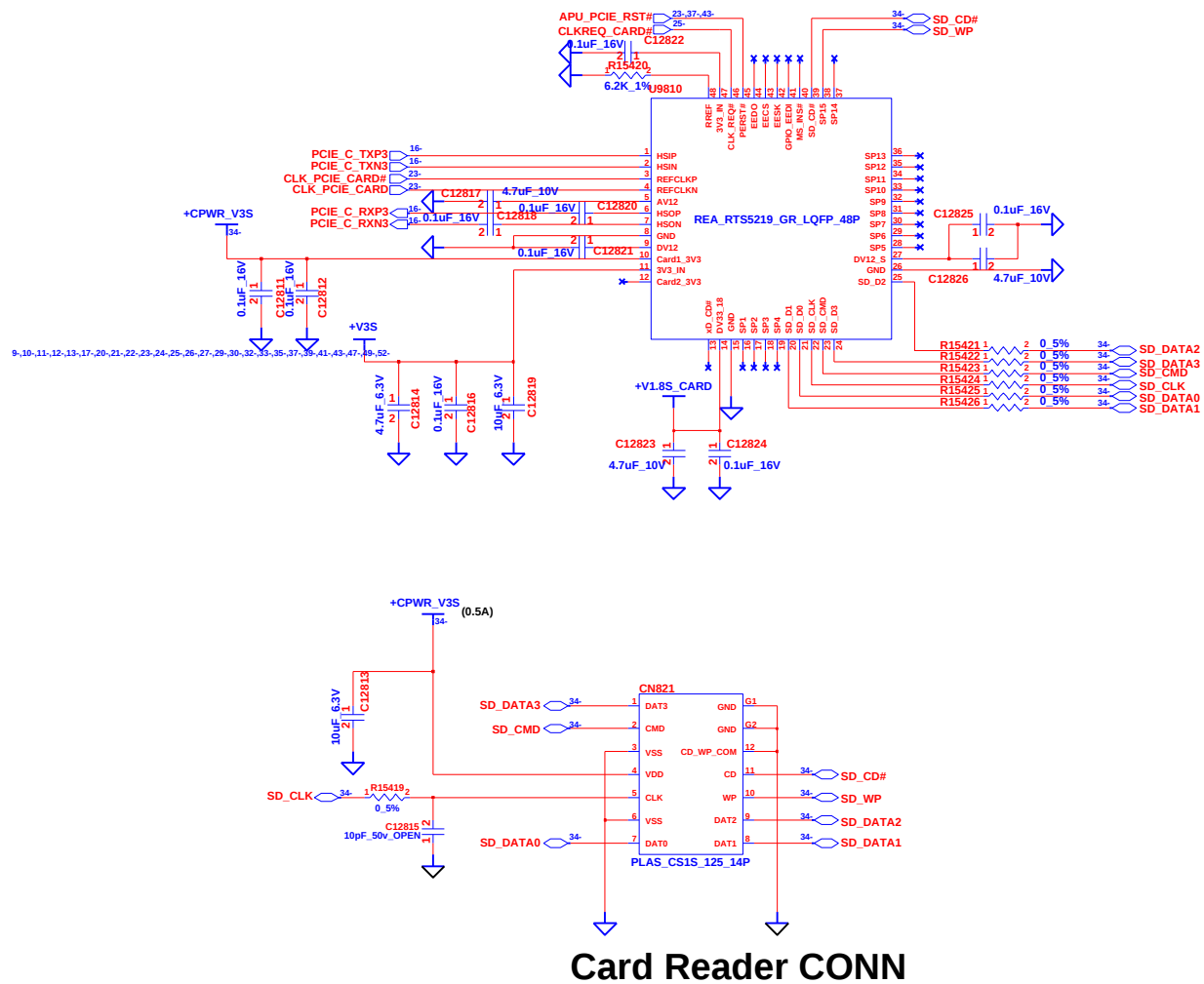
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TITLE
ROCKY-AMD

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01

CHANGE by Ken, Chiang 5-Aug-2010

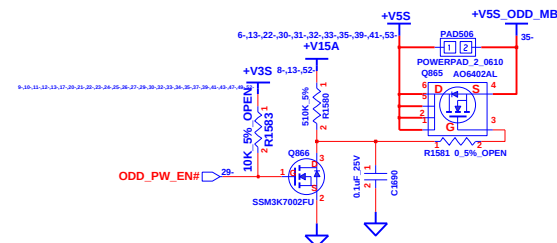
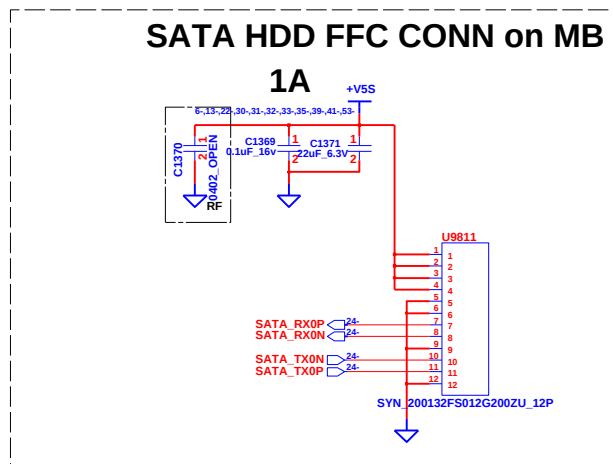
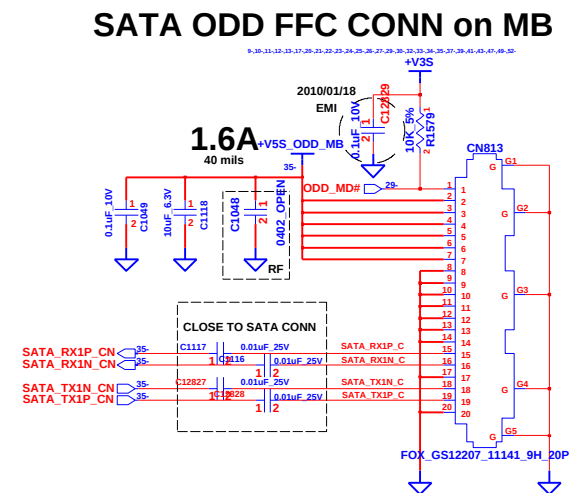
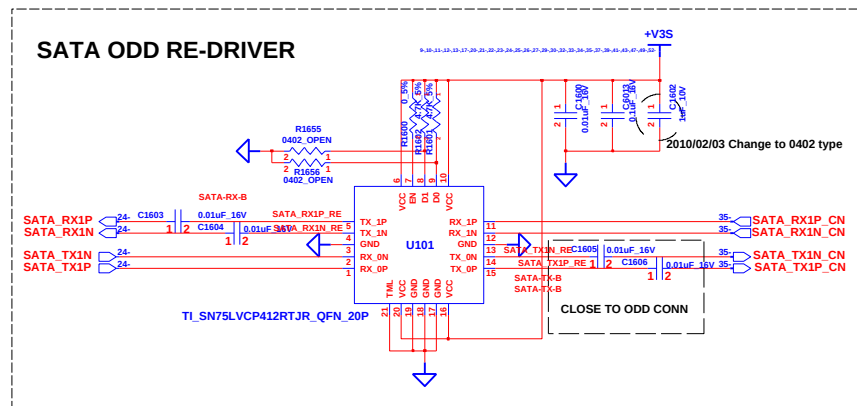
SHEET 33 OF 60



Card Reader CONN

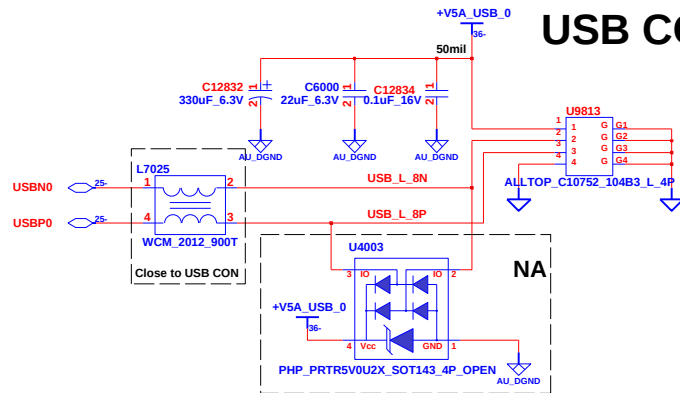
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Ken, Chiang		34 OF 60	

5-Aug-2010

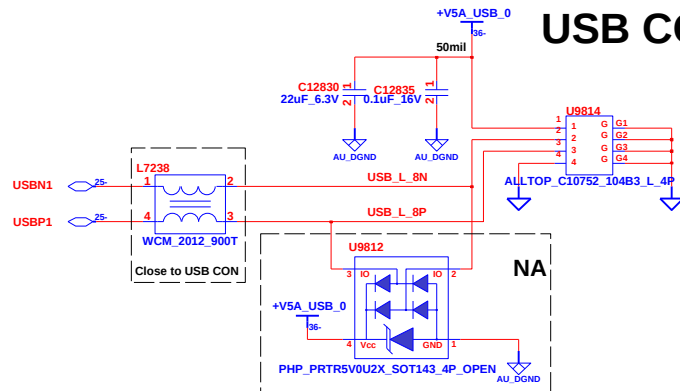


USB

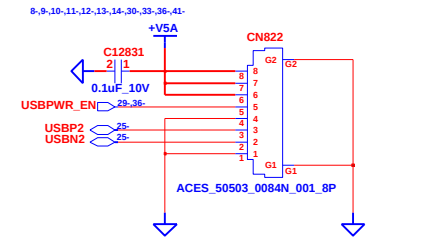
USB CONN01



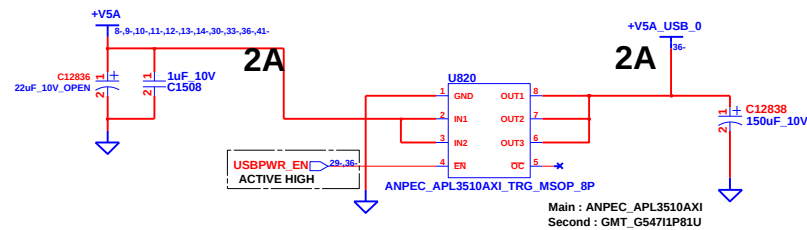
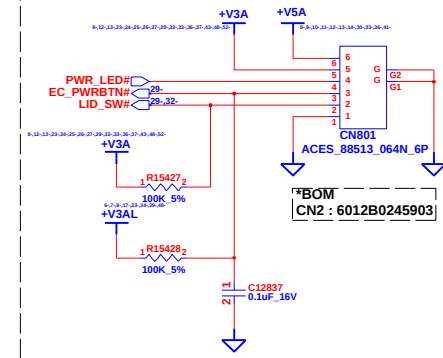
USB CONN02



USB BOARD Cable on MB



PBN Cable CN on MB



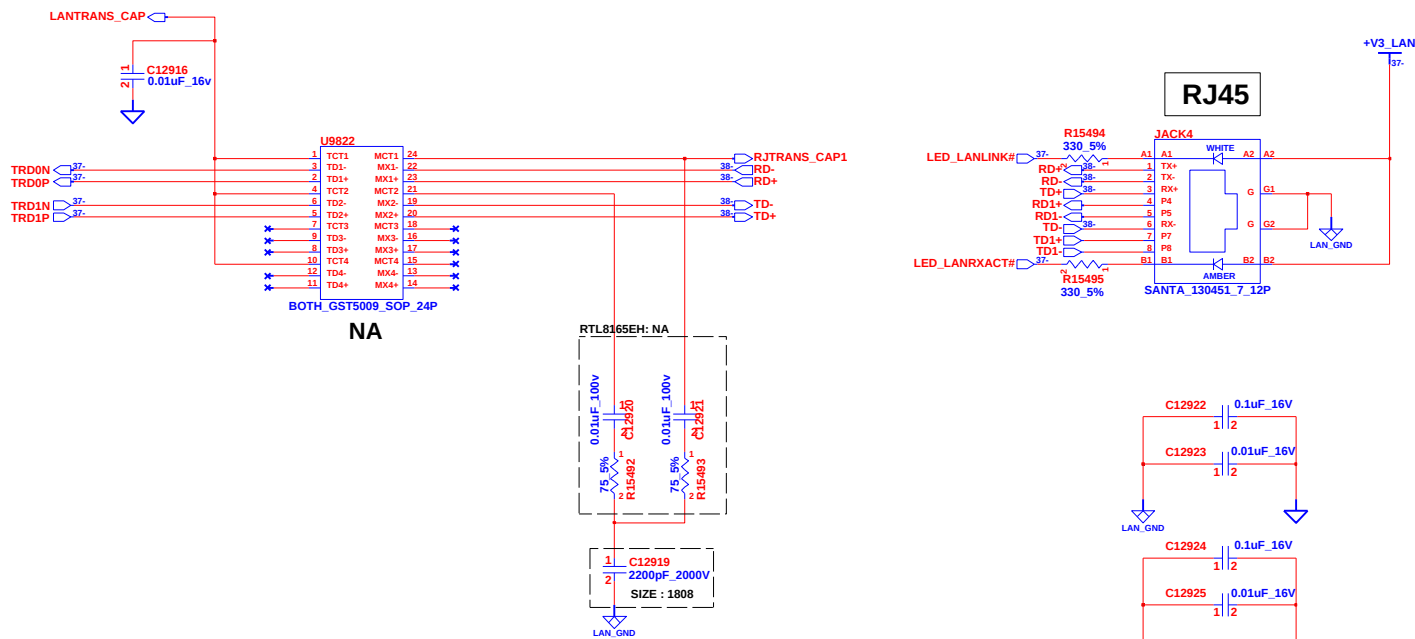
INVENTEC

TITLE
ROCKY-AMD

SIZE CODE DOC. NUMBER REV
A3 CS 1234 X01

CHANGE by Ken Chiang 5-Aug-2010

SHEET 36 OF 60



LAYOUT NOTE : Place termination resistors and caps as close to LAN controller as possible

INVENTEC

TITLE
ROCKY-AMD

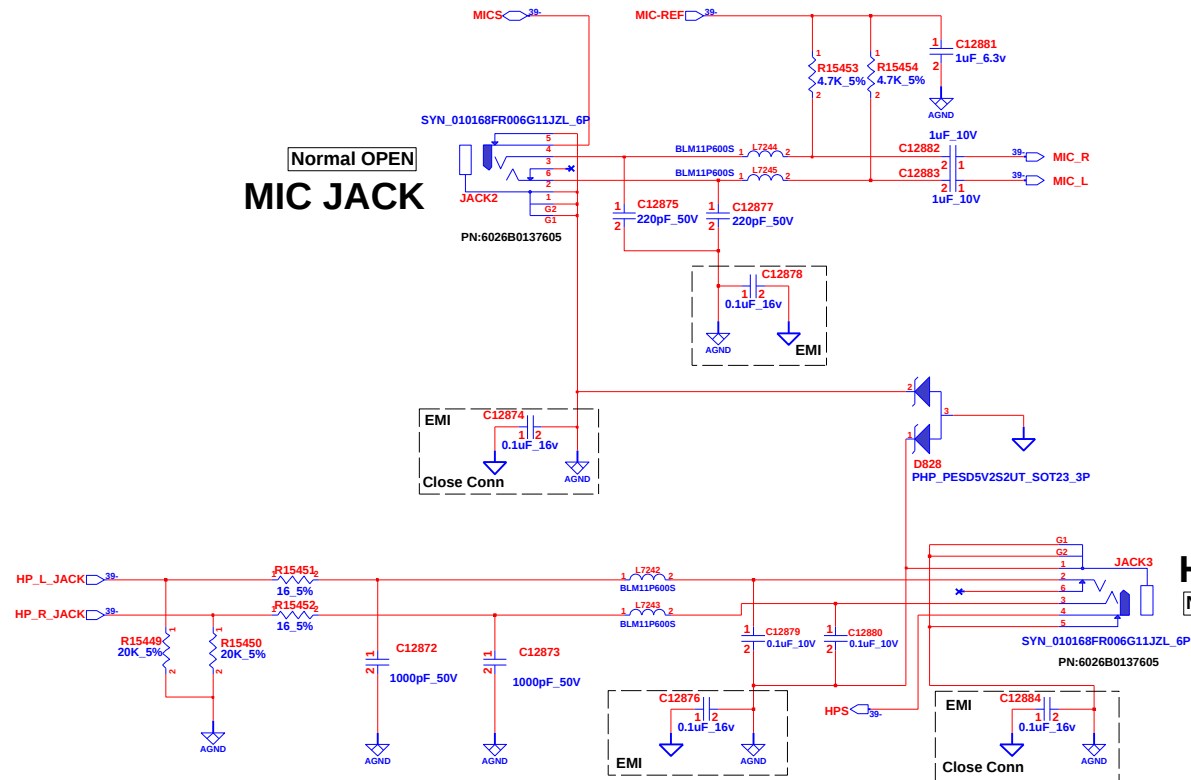
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A3	CS	1234	X01

CHANGE by	Ken, Chiang	5-Aug-2010
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SHEET	38	OF	60
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Normal OPEN
MIC JACK

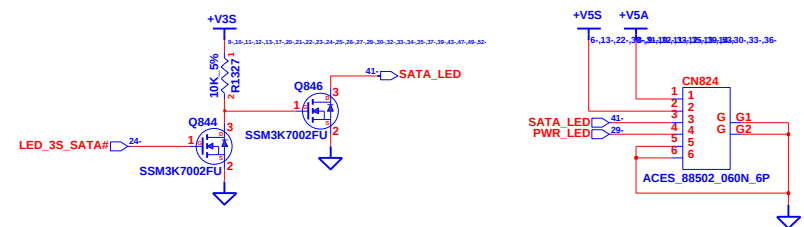
HP JACK
Normal OPEN



INVENTEC			
TITLE ROCKY-AMD HDMI			
SIZE A3	CODE CS	DOC. NUMBER 1234	REV X01
SHEET		40	OF 60

CHANGE by Ken, Chiang 9-Jun-2010

LED BOARD on MB

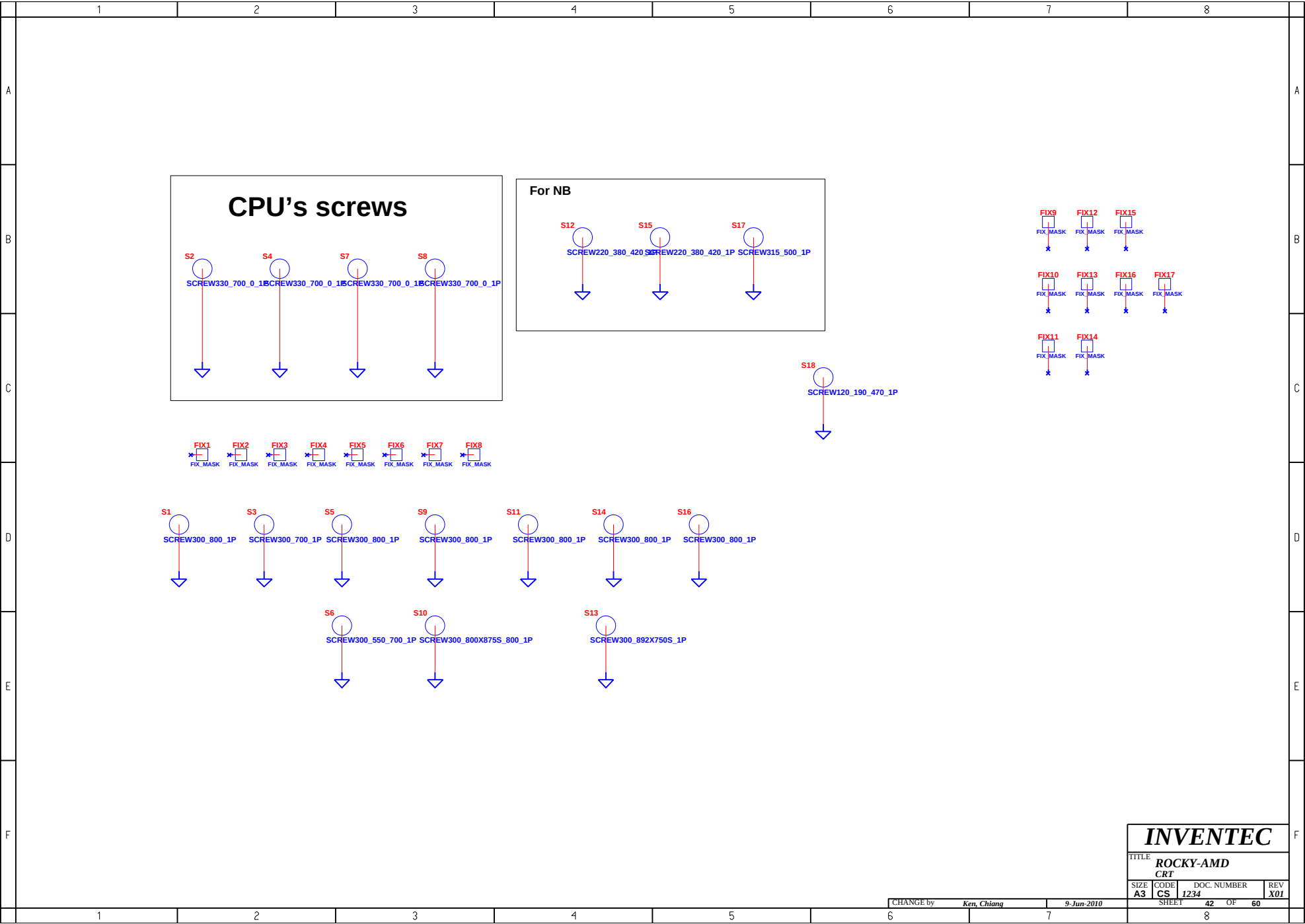


INVENTEC

TITLE
**ROCKY-AMD
DDR3 DAMPING**

SIZE CODE DOC. NUMBER REV
A3 CS 1234 41 OF 60 X01

CHANGE by *Ken, Chiang* 4-Aug-2010



A



D

3



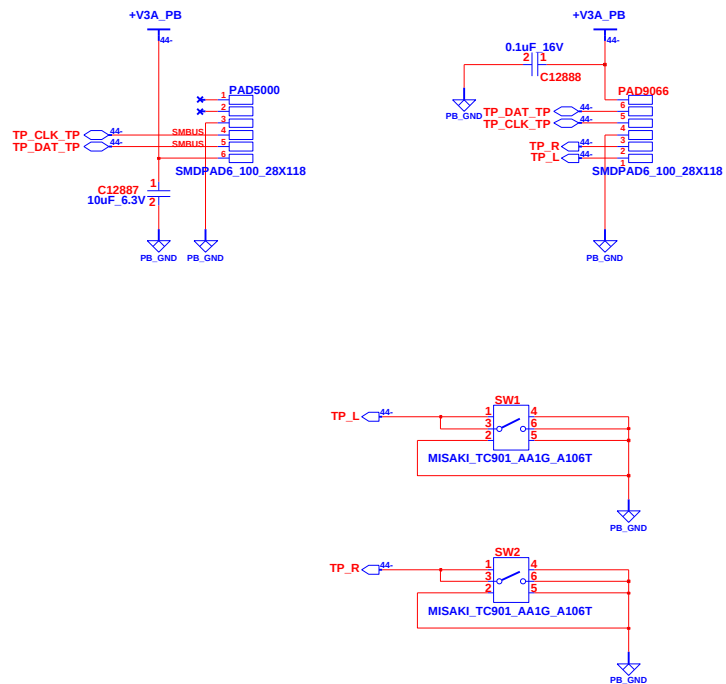
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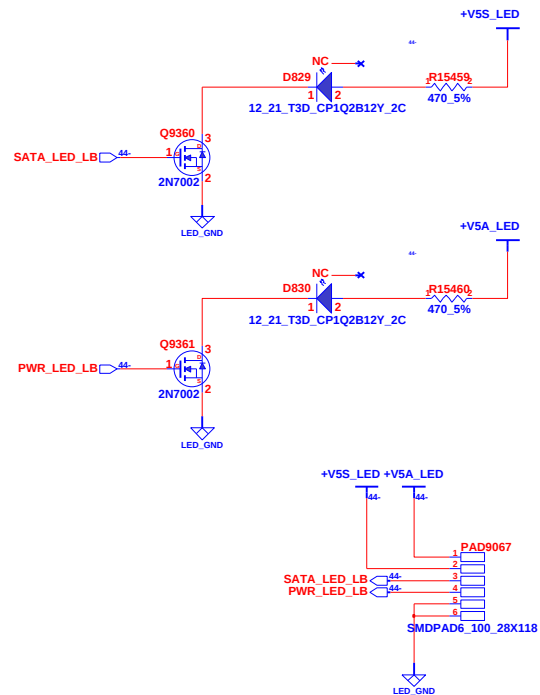
3

3

PICK BUTTON BOARD



LED BOARD



INVENTEC

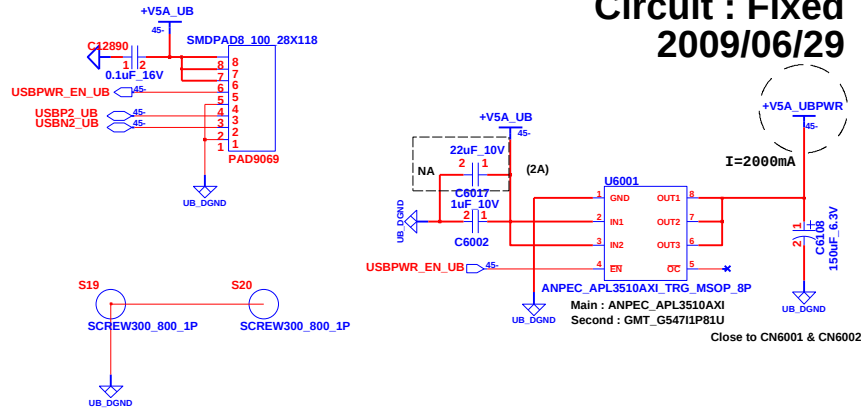
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SIZE A3	CODE CS	DOC. NUMBER 1234	REV X01
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CHANGE by *Ken Chiang* 9-Jun-2010

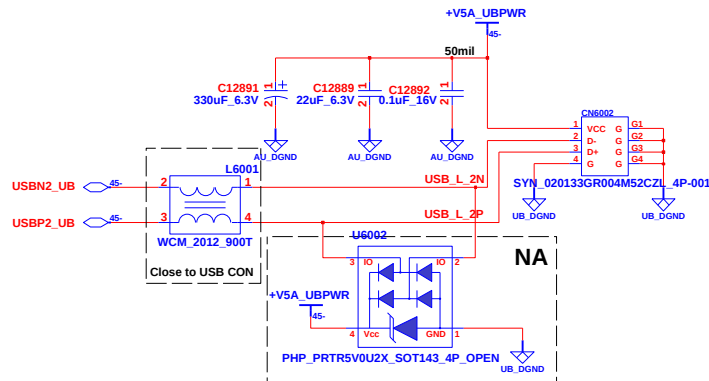
USB BOARD

USB BOARD Cable ON UB

Circuit : Fixed
2009/06/29

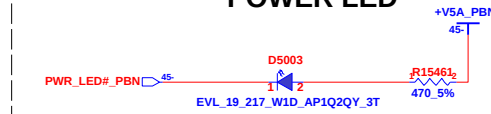


USB CONN03

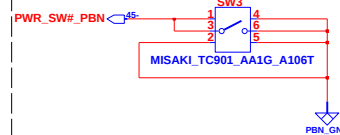


POWER BOTTON BOARD

POWER LED

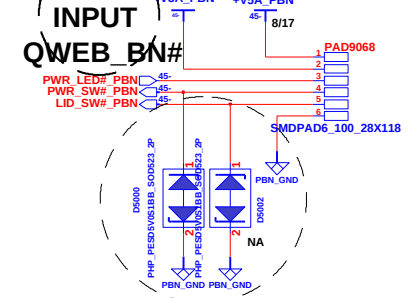


POWER BUTTON

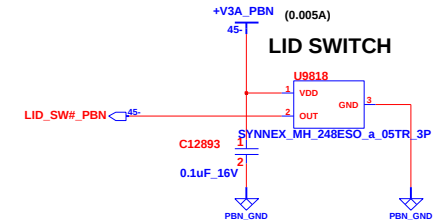


Circuit : Fixed
2009/06/29

PBN Cable CN on PBN



LID SWITCH



INVENTEC

TITLE			
ROCKY-AMD			
AU6433 & CARDREADER CONN			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01

CHANGE by Ken, Chiang 9-Jun-2010

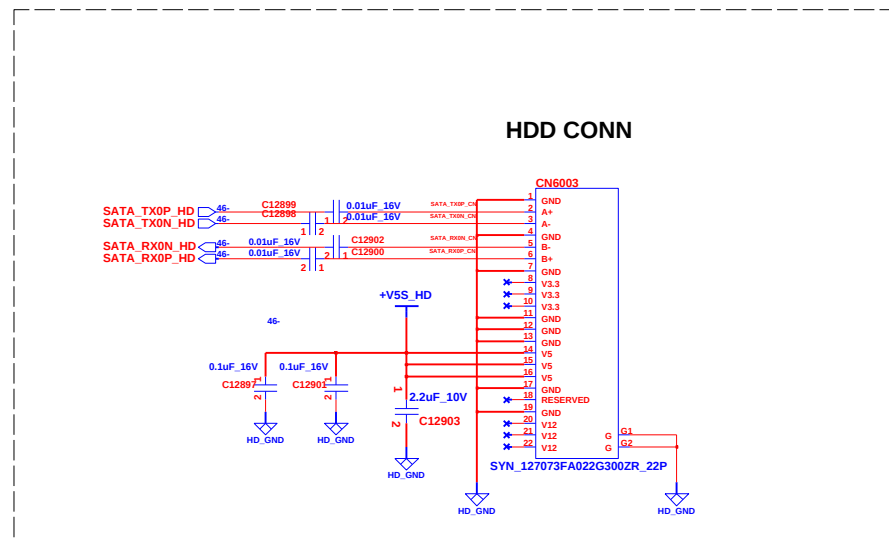
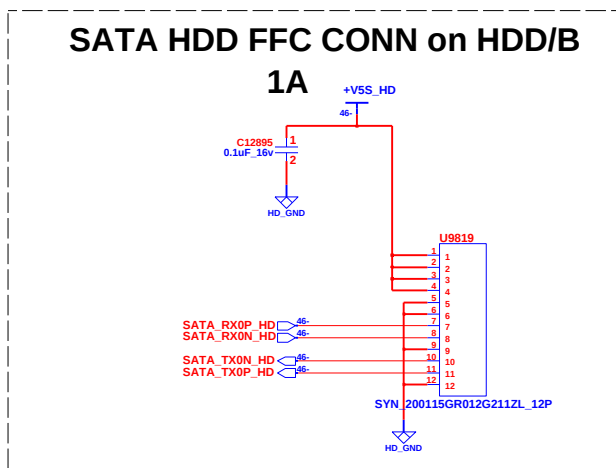
SHEET 45 OF 60

SATA HDD BOARD

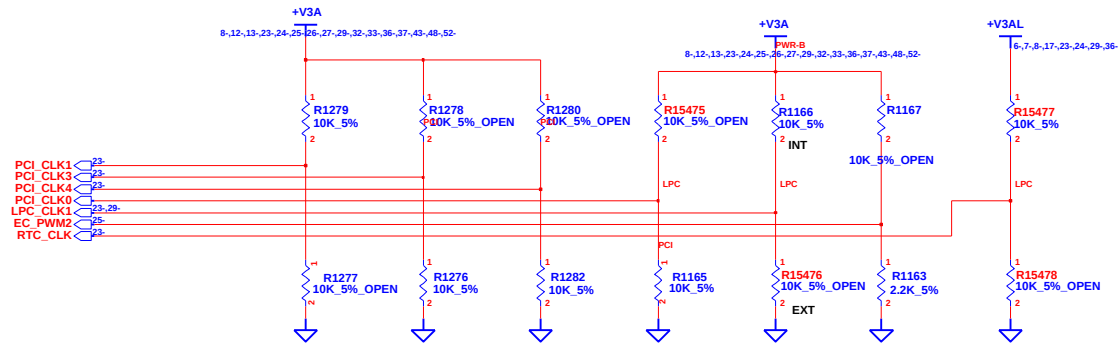
SATA HDD FFC CONN on HDD/B
1A

HDD CONN

INVENTEC
TITLE
ROCKY-AMD
SATA HDD & SATA ODD
SIZE CODE DOC. NUMBER REV
A3 CS I234 8 OF 60

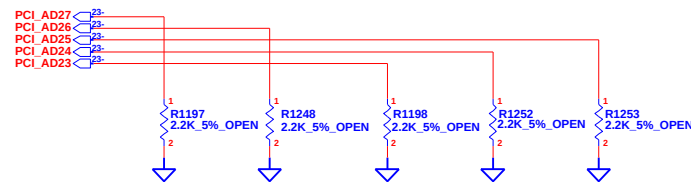


TITLE			
ROCKY-AMD SATA HDD & SATA ODD			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01



Required Straps:

RTCCCLK		PCI_CLK1	PCI_CLK3	PCI_CLK4	PCI_CLK0	PCI_CLK1	EC_PWM2
S5 PLUS MODE DISABLE (DEFAULT)	PULL HIGH	ALLOW PCIE Gen2 DEFAULT	USE DEBUG STRAP	non Fusion CLOCK MODE APU_CLK AND DISP_CLK NO CLOCK OUTPUT	EC ENABLED	INTEGRATED CLKGEN ENABLED DEFAULT	LPC ROM DEFAULT
S5 PLUS MODE ENABLE	PULL LOW	FORCE PCIE Gen1	IGNORE DEBUG STRAPE DEFAULT	Fusion CLOCK MODE DEFAULT APU_CLK AND DISP_CLK CLOCK OUTPUT FROM INT CLOCK GEN	EC DISABLED DEFAULT	INTEGRATED CLKGEN DISABLED	SPI ROM



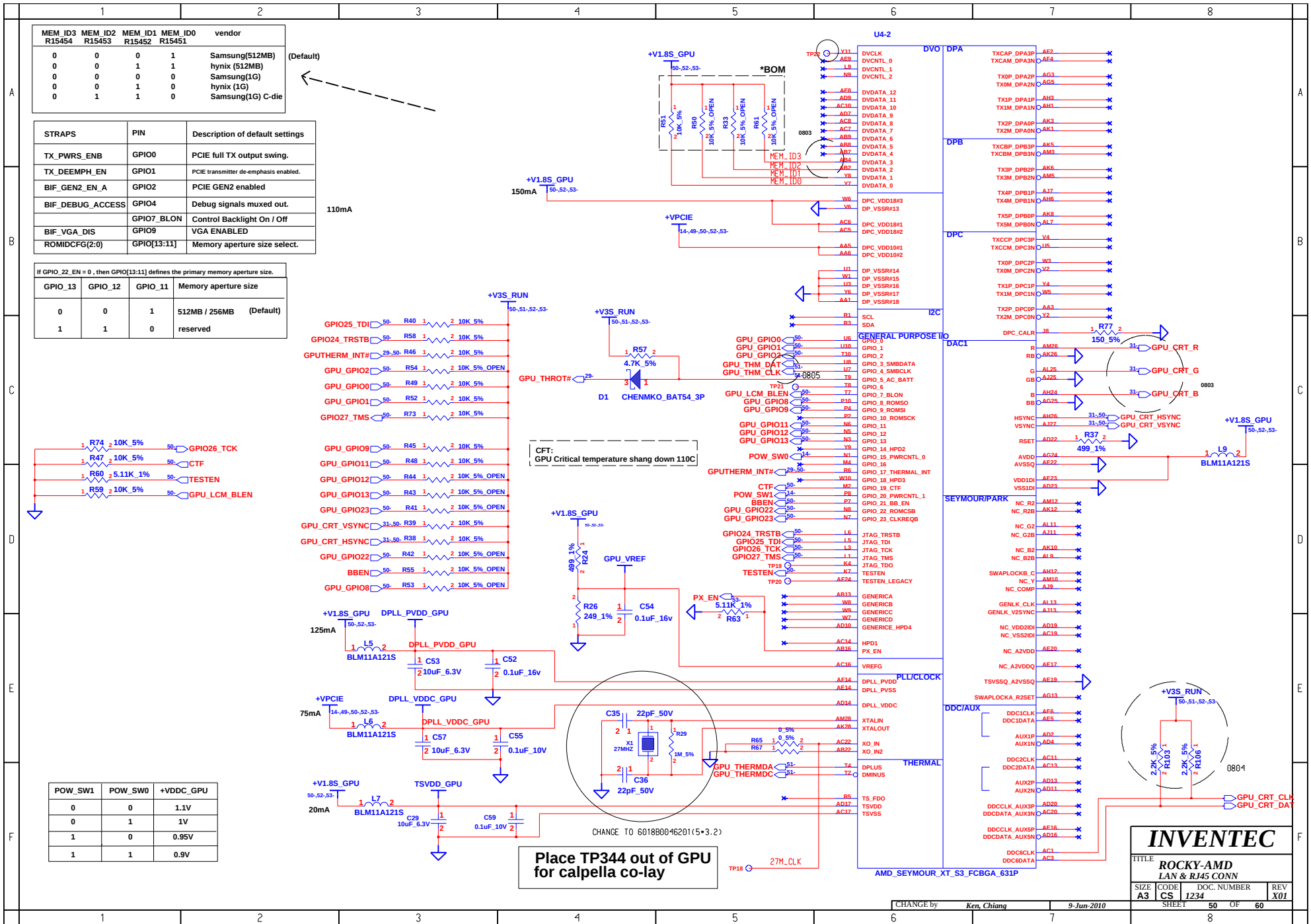
Debug Straps

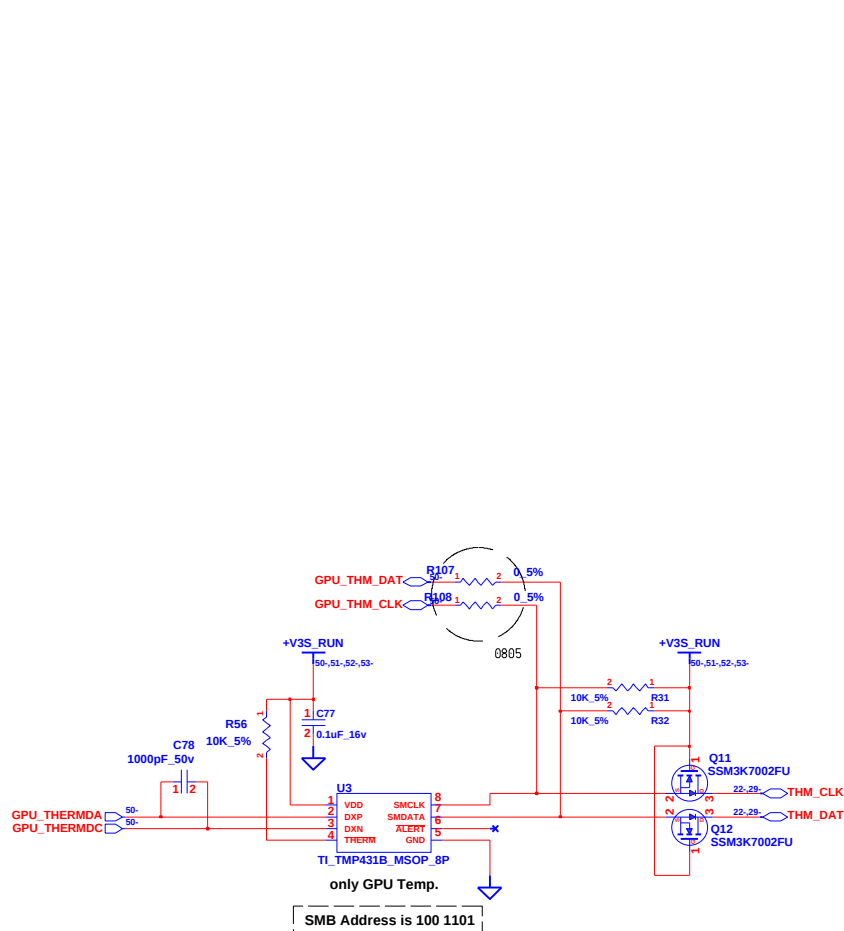
SB800 HAS 15K INTERNAL PU FOR PCI_AD[27:23]

	PCI_3S_AD27	PCI_3S_AD24	PCI_3S_AD23
PULL HIGH	USE PCI PLL (default)	GETTING I2C ROM ENABLE	DISABLE PCI MEM BOOT (default)
PULL LOW	BYPASS PCI PLL	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT

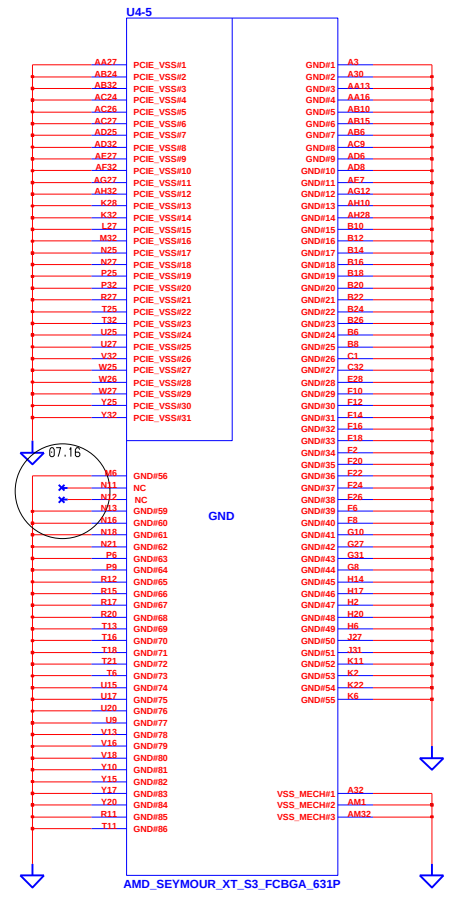
INVENTEC			
TITLE ROCKY-AMD ESATA & USB BOARD CABLE			
SIZE A3	CODE CS	DOC. NUMBER 1234	REV X01
SHEET 48 OF 60			

CHANGE by Ken Chiang 9-Jun-2010





MV Buid :
Main : 6019B0437702 EMC1402-2
2nd : 6019B0671902 TMP431B



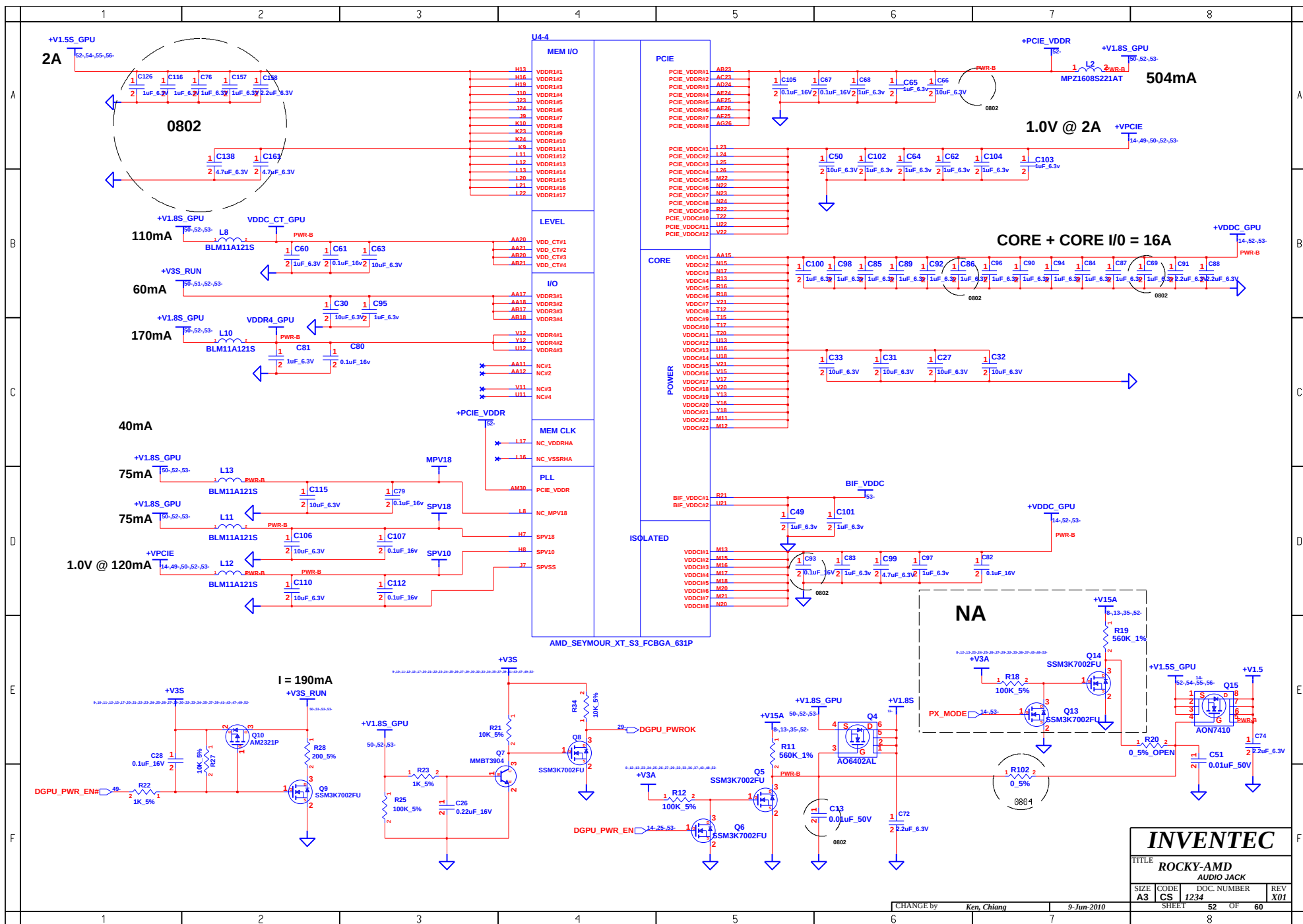
INVENTEC

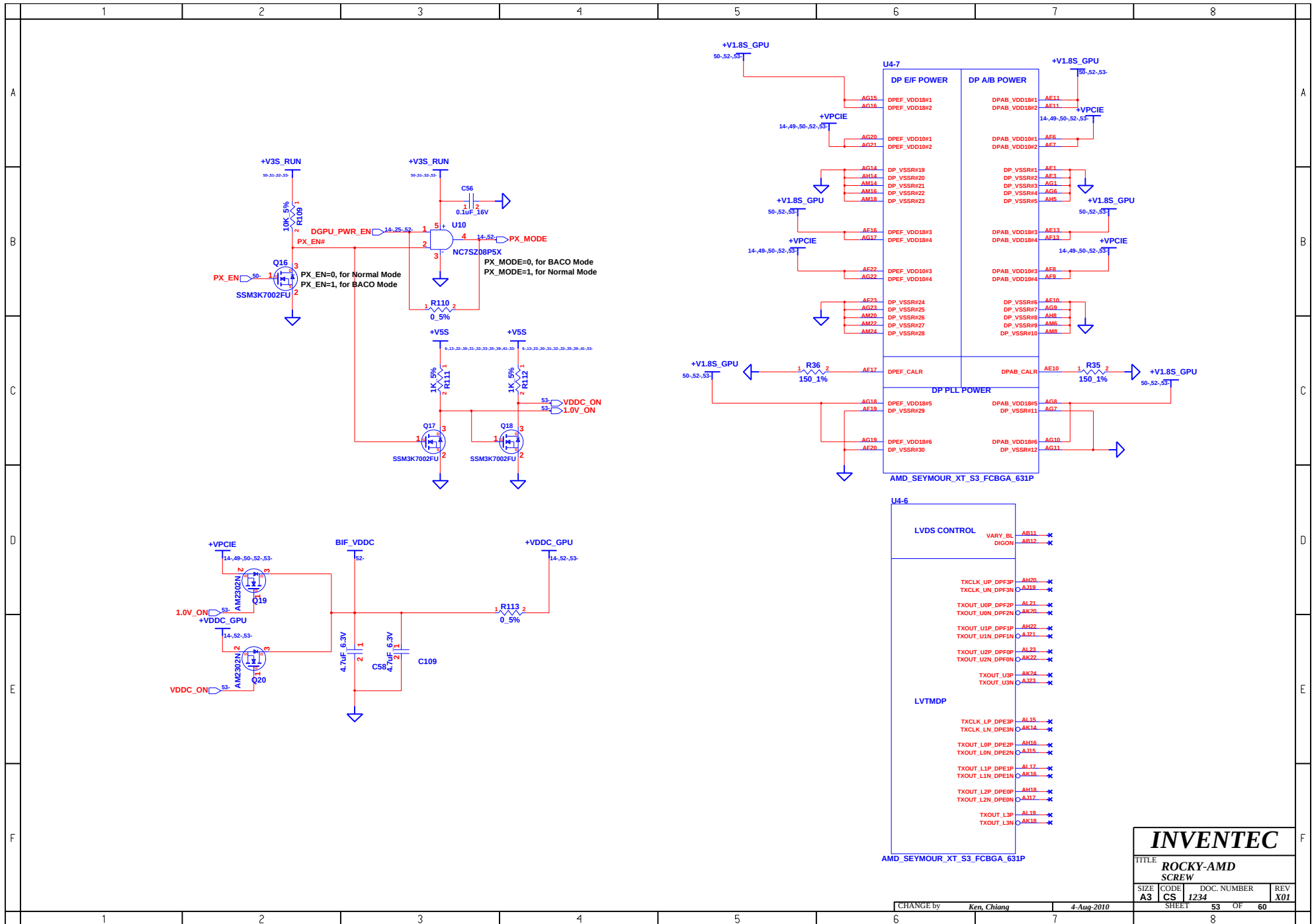
TITLE			
ROCKY-AMD			
AUDIO CODEC IDT_92HD80			
SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01

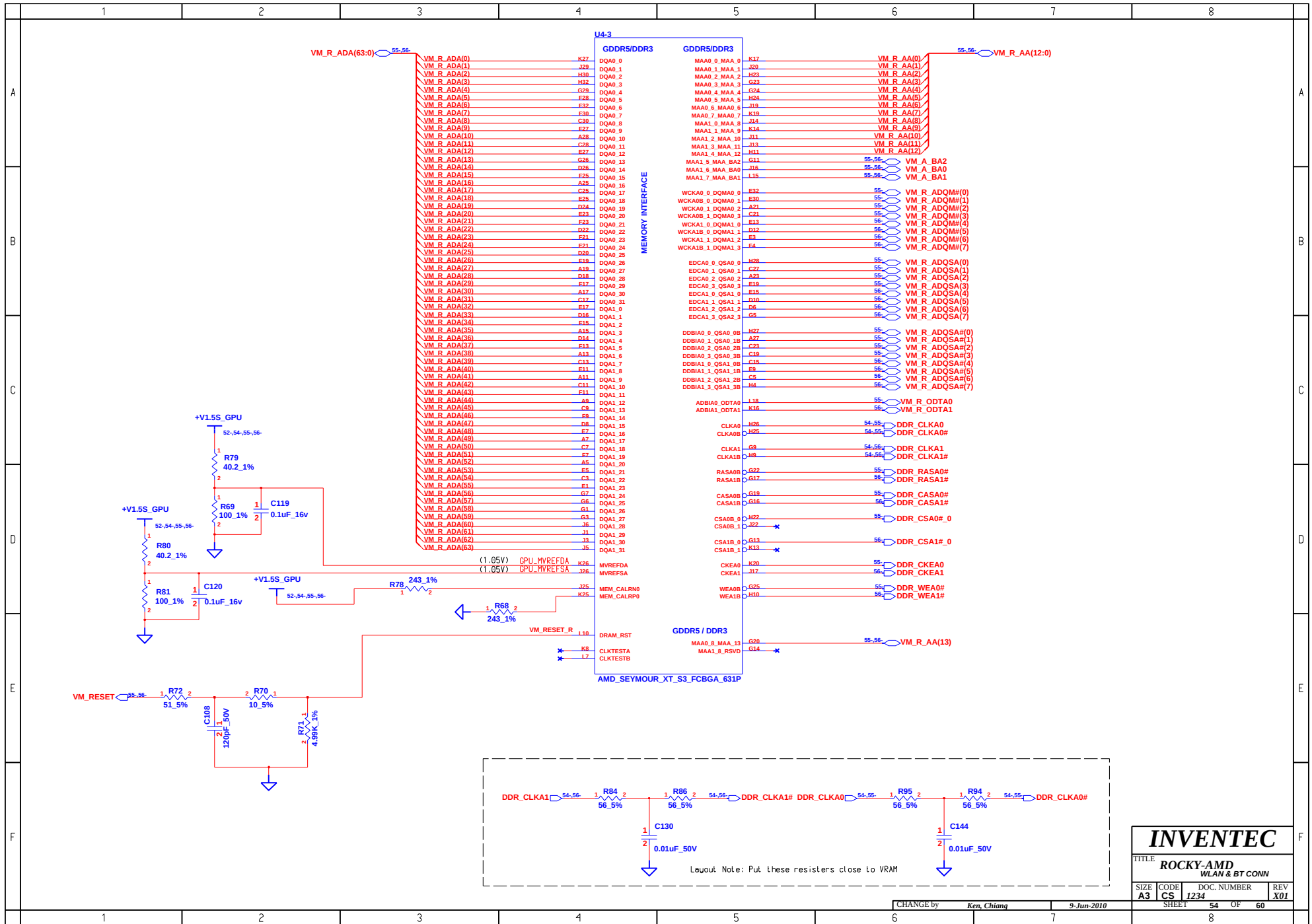
CHANGE by Ken, Chiang

9-Jun-2010

SHEET 51 OF 60







INVENTEC

TITLE
ROCKY-AMD
WLAN & BT CONN

SIZE	CODE	DOC. NUMBER	REV
A3	CS	1234	X01

CHANGE by Ken, Chiang 9-Jun-2010

SHEET 54 OF 60

