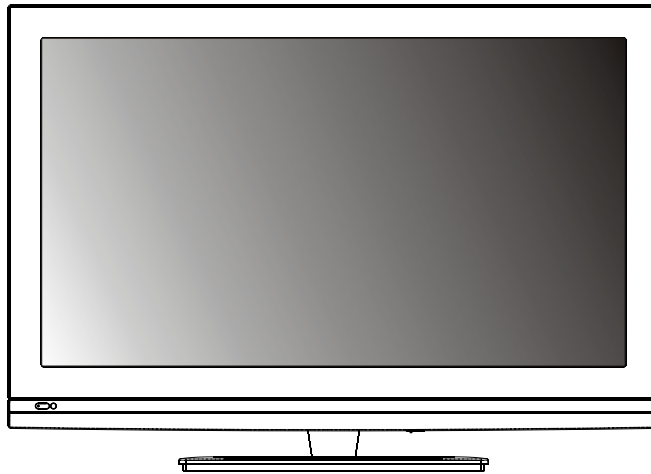


SERVICE MANUAL

8M19B CHASSIS



Design and specifications are subject to change without prior notice.
(Only Reference)

SIZE:A5

Description: SERVICE MANUAL 8M19B	
MODEL.	Brand Name:
JOB NO.	SKYWORTH
Engineering Dept:	
Artwork By:	Date: 2011-5-13
Checked By:	Date:
Approved By:	Date:

Content

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MAIN PCB-BOT-----28

Circuit Diagrams-----29-37

Technical Specification

1.Application Area:

This product standard is used for LCD 8M19B chassis.

2.Specification:

All the standard are measured under following conditions without other specification.

2.1 Ambient Temperature:20+/-5°C

2.2 Relative Humidity:65+/-10%

2.3 Power Supply Voltage: Standard Input Voltage(100V~240Vac 50/60Hz)

2.4 Adjust after 20 minutes warm-up.

3.Test and check method:

3.1 Capability:According to nation test standard

3.2 Safety:_____ standard

EMC:_____ standard

Technical Specification

4

Safety and Regulation

No	Item	Min	Typ	Max	Unit	Remark
1.	Force Stability – Incline Plane Tip Test		10		deg	
2.	Force Stability – Level Tip Test		100		N	
3.	Isolation Gap, AC-AC/ AC-DC	3			mm	
4.	Isolation Gap	6			mm	
5.	Power Consumption, Max			80	W	For 32LED
					W	
					W	
6.	Power Consumption, Stand by			1	W	
7.	Dielectric Voltage	3			kV	
8.	Isolation Resistance	4			M Ω	
9.	Leakage Current		5		mApp	
10.	Power Cord Captivity		40		N	
11.	Flammability – Back Cover		PASS			
12.	Sharp Edge		PASS			
13.	UL Compliance		NO			
14.	FCC Compliance		NO			
15.	CDRH Radiation Compliance		NO			
16.	CSA Compliance		NO			
17.	CEB Compliance		NO			Base on different order
18.	CE Compliance					
19.	CB Compliance		YES			

5.

Video

No	Item	Min	Typ	Max	Unit	Remark
1.	Linearity Distortion, Vertical		1		%	
2.	Linearity Distortion, Horizontal		1		%	
3.	Trapezoidal Distortion, Vertical		1		%	
4.	Trapezoidal Distortion, Horizontal		1		%	
5.	Over Scan, Vertical	90	93	95	%	
6.	Over Scan, Horizontal	90	93	95	%	FOR 32LED
7.	Brightness, Maximum			340	cd/m ²	FOR 32LED
					cd/m ²	
					cd/m ²	
8.	Video Noise Limited Sensitivity(@S/N=30db) VHF			51	dBV	
9.	Video Noise Limited Sensitivity(@S/N=30db) UHF			54	dBV	

Technical Specification

10.	Selectivity -1.5M	35			dB	
11.	Selectivity +8M	40			dB	
12.	Tuning Range	-0.7			MHz	
13.	Resolution Horizontal		1366		Lines	1920 For 42LED
14.	Resolution Vertical		768		Lines	1080 For 42LED

6. Chroma

No	Item	Min	Typ	Max	Unit	Remark
1.	White Balance, X axis		280			
2.	White Balance, Y axis		290			
3.	White Balance, Color Temperature	6500	9300	13000	kdeg	13000kdeg(268,273) 9300(281,311) 6500(313,329)
4.	Color Sensitivity		30		dB	
5.	Color Burst Lock-in Range	+/-300			Hz	
6.	Color Killer Sensitivity		30		dBuv	

7. Audio

No	Item	Min	Typ	Max	Unit	Remark
1.	Audio Noise Limited Sensitivity, VHF-L		25		dBuv	
2.	Audio Noise Limited Sensitivity, VHF-H		25		dBuv	
3.	Audio Noise Limited Sensitivity, UHF		28		dBuv	
4.	Buzz (S/N Ratio)		40		dB	
5.	Distortion		3		%	
6.	Audio Output, L/R, at 10% THD		5		W	
7.	Audio Output, Center		5		W	
8.	Stereo Separation		21		dB	
9.	Speaker Impedance		8		ohm	
10.	Speaker Power Rating		8	12	W	

Technical Specification

8. Power

No	Item	Min	Typ	Max	Unit	Remark
1.	DC Voltage, Audio		12		V	
2.	DC Voltage, Tuner(5)		5		V	

9. External Interface

No	Item	Min	Typ	Max	Unit	Remark
1.	Video Input Level		1		Vpp	75 OHM
2.	Video Input Frequency Response	4.5			MHz	
3.	Video Input S/N		40		dB	
4.	Audio Input Level		0.5		Vrms	
5.	Audio Input Frequency Response			15	kHz	
6.	Audio Input S/N		40		dB	
7.	Audio Input Distortion		3		%	
8.	Audio Input Dynamic Range			2	V	
9.	Video Output Level		1		Vpp	
10.	Video Output Frequency Response		4.2		MHz	
11.	Video Output S/N		50		dB	
12.	Audio Output Level		0.5		Vrms	
13.	Audio Output Frequency Response	80		12000	Hz	
14.	Audio Output S/N		40		dB	
15.	Audio Output Distortion				%	

Technical Specification

16.	Video Input Level, R/G/B		0.7		Vpp	
17.	Video Input Level, Component(Y, P _B , P _R)		0.7		Vpp	75 ohm
18.	RGB Input Resolution, Vertical		768		pixel	1080 For 42LED
19.	RGB Input Resolution, Horizontal		1366		pixel	1920 For 42LED
20.	RGB Input Horizontal Frequency		68		kHz	
21.	RGB Input Frame Rate		60		Hz	

10. The others

No	Item	Min	Typ	Max	Unit	Remark
1.	Search Sensitivity		40		dBuv	
2.	Clock, real time gain or loss (sec per day)		NO		sec	
3.	Soft Ware Functionality Test		YES			
4.	REMOCON Working Sensitivity, Straight		8		m	
5.	REMOCON Working Sensitivity, T/B/L/R		6		m	
6.	Closed Caption Sensitivity		46		dBuv	
7.	Teletext Sensitivity		46		dBm	
8.	Resonance of unit (Sweep freq : 50 ~ 1000)		NO			

11. Customer Menu Setup (as shipped condition)

No	Item	Specification	Remark
1.	PSM	Standard	
2.	SSM	Standard	
3.	Volume	20	
4.	Mute	Off	
5.	Input Mode	RF	
6.	Customer Menu Language	English	Base on different order
7.	AVL	Off	
8.	Sleep Timer	Off	
9.	Auto Sleep	Off	
10.	Blue Back	No	
11.	Surround	Off	
12.	Caption	Off	
13.	Noise Reducer	Middle	"Low" in some status

Technical Specification

12. Reliability

No	Item	Min	Typ	Max	Unit	Remark
1.	ESD		4		kV	IEC-1000-4-2
2.	EFT/Burst				kV	IEC-1000-4-4
3.	Surge Immunity				kV	IEC-1000-4--5
4.	Voltage Dip Test, 10ms				%	IEC-1000-4-11
5.	Voltage Dip Test, 100ms				%	IEC-1000-4—11
6.	Operation Temperature				deg	
7.	Operation Humidity				%	
8.	Storage Temperature				deg	
9.	MTBF (Confidence Level : 90 %)				hour	

Technical Specification

DTV-PRODUCTOINS SPECIFICATION

Model #	32"
Country(West Eu./East Eu./Russia/AP/US/S.A./Japan/...)	Brazil & Argentina
Brand	Skyworth/ODM
Category (Monitor/TV/Combo/Portable TV...)	TV
Panel technology (LCD / PDP)	LCD/LED
Market Position (High/Mid/Access,,)	Class
Cabinet Design (Example: 01,23 series)	K06/E60
Product Nb	-
Chassis solution	MSD309
Chassis name	8M19B
Chassis PCB Standard	Skyworth RGB New Standard
Predecessor (replace)	-
MP date requested (ETD)	2011.1
MP date confirmed by supplier (ETD/ETA)	-
Status(Pre./Finish)	-
Regional requirement	
Homologation (Gostandard/CE/MPTT/CB/...)	CB
RoHS	Yes
Power supply(100-240V AC +/-10%/...)	100-240V AC (-20%,+10%)
Power consumption working / Annual	-
Power consumption standby	<1W
Power plug(VDE/UL/BS/...)	UCIEE/2pins
Picture display	
Screen size : diagonale (inch)	32"
Aspect ratio (16/9 // 4/3 // 15/9)	16:9
1st panel supplier : panel suppliers	LG
1st panel supplier : panel reference	
Panel Display Type(MVA/PVA/IPS/...)	TFT LCD
1st panel supplier : resolution	32:1366x768、42/46:1920x1080
Dynamic contrast ratio	>1000: 1
Video signal process	
Comb Filter (2D/3D)	2D
Noise Reduction (adaptative/3D/...)	NO
Picture improvement (LTI/CTI,BLE,WLE,...)	LTI/CTI
Color process (Gama correction/Skin correction /...)	Follow main IC

Technical Specification

Colour preset (Cool/Normal/Warm/Personal)	Medium, Cool, Warm and Personal in PC mode
Picture control (Bright/Con./Sharpness/Color/Tint/...)	Yes
Picture presets : Standard / Bright / Soft / User	Standard / Mild / Film / Dynamic / Personal
Picture freeze	Yes
Multi picture : PIP (AV)/POP (AV)	No
Dynamic Backlight Control	Yes
LED Backlight	Yes
Deinterlacer (No/linear/motion adaptive/motion compensative)	NO
Film mode / reverse 3:2/2:2 pull down	Yes / Yes
Full HD support (1080P)	Yes
Single scan / Dual scan (120HZ)	32:Single scan
Zoom type : 4/3 format	Yes
Zoom type : 14/9 Zoom	Yes
Zoom type : 16/9 Zoom	16/9 ZOOM 1
Zoom type : 16/9 Zoom up/down	16/9 ZOOM 2
Zoom type : Cinerama	Yes
Zoom type : 16/9 Format	Yes
Zoom type : Auto (by SCART Pin8 and WSS)	Yes
Picture Auto adjustment (PC mode)	Yes
Sound	
Sound type (Mono/AV stereo/Stereo)	stereo
Music Power (Watt)/RMS Power (Watt)	2 x 5W
Tone control (Bass&Treble / Graphic Equalizer)	Bass&Treble
Special sound effect (AVL / WIDE / Pseudo / ...)	AVL
Surround system (Dolby / VD / SRS / BBE / ...)	Built-in Surround
Sound control (Volume , Balance , Mute)	Volume, Balance, Mute
Sound presets (User/Speech/News/Standard)	Standard / Music / Movie / Sport / Personal
Headphone volume control (Separated / linked)	Yes(Linked)
Sound quality (High / Mid / Low)	Mid
Reception and Decoding capability	
RF range (ATV)	54MHz~864MHz
RF range (DTV)	VHF 177-213 MHZ, UHF 473-803 MHZ
Color System (PAL/SECAM/NTSC/PAL M,N)	PAL M,PAL N,NTSC M
Audio Standard (B/G/H/D/K/K'/I/L/L')	M,N
Stereo audio system (Nicam,MTS,A2,...)	BTSC,SAP
Video standard NTSC 3.58 / 4.43 (AV)/PAL 60	NTSC 3.58/4.43 , PAL
DTV SD support (DVB-T/S/C , ATSC , QAM , ...)	ISDB-T
DTV HD Support	MPEG2,MPEG4,H.264
MHEG5	No
HD capability with YPbPr	Yes (720p; 1080i; 1080p@24/50/60Hz; 480i/p; 576i/p)
PC capability (up to maximum format)	Up to 1280X1024 60Hz
HDMI capability (AV/PC Format)	Up to 1080P 24/50/60HZ
Compatible video format if DVD/USB: DviX/VCD/SVCD/JPEG/AVI/MPEG2/WMV- HD/SD	JPEG/MPEG2/MPEG4/H.264/DivX (depending on license)

Technical Specification

Compatible audio format if DVD/USB: MP3/WMA/AAC/MPEG1/...	MP3/WMA(depending on license)
Playable Discs (CD/CD-R(RW)/CD-ROM/DVD+R/+RW/-R/-RW)	No
Card reader format compatibility	No
Macrovision	Yes
PVR	Yes (FOR USB)
Network	No
User convenience	
OSD Language*	English/Spanish/Portuguese/French
OSD Positioning	No
OSD Transparency Adjust	No
OSD Timeout Adjust	No
Customer Brand name(LOGO)	Yes
IB languages	English
ATV Program Numbers (example: 99+3AV input)	99+7AV
DTV Program Numbers	600
Program edit (naming , sorting , skip , swap)	Naming / Skip / Swap
Auto Naming/Auto Sorting	No
TV Guide(DTV EPG)	EPG(next Seven-day)
Favorite program	Yes
Number of buttons on cabinet (Power; Vol+/-; Pr+/-, Menu)	Vol+/-; Pr+/-, Menu ,Source,Power(optional)
Main switch button (yes/No)	Yes
CCD (Closed Caption)/V-CHIP	Yes/No
Text Standard: (Top, FLOF,...)	No
Teletext Level: 2.5 / 1.5	-
Pages for teletext	-
Teletext character sets ****	-
DVB-T teletext	-
Real clock	From DTV
Sleep timer	10-240 Min.
Timer	Turn On / Off, Program Switch
Parent Control -Source and Channel lock (Input code for certain channel)	Yes
Parent Control - Child lock (set the lock of the keyboard, only the RCU can control the TV)	No
Parent Control - Kid pass (preset the ontime, channel for each day of the week)	No
Parent Control - Channel lock (For digital transmission and DVD program, to filter some programmes)	Yes
Calendar / Games	No
No program auto switch off	15 mins.
Hotel mode (Y/N)	T.B.D
DVD player (No/slot/tray)	No
Tuner FM (yes/No)	No
software download(RS232/CI/USB/OAD)	USB
Factory reset	Yes (in factory menu,reset the setting to shipment state)

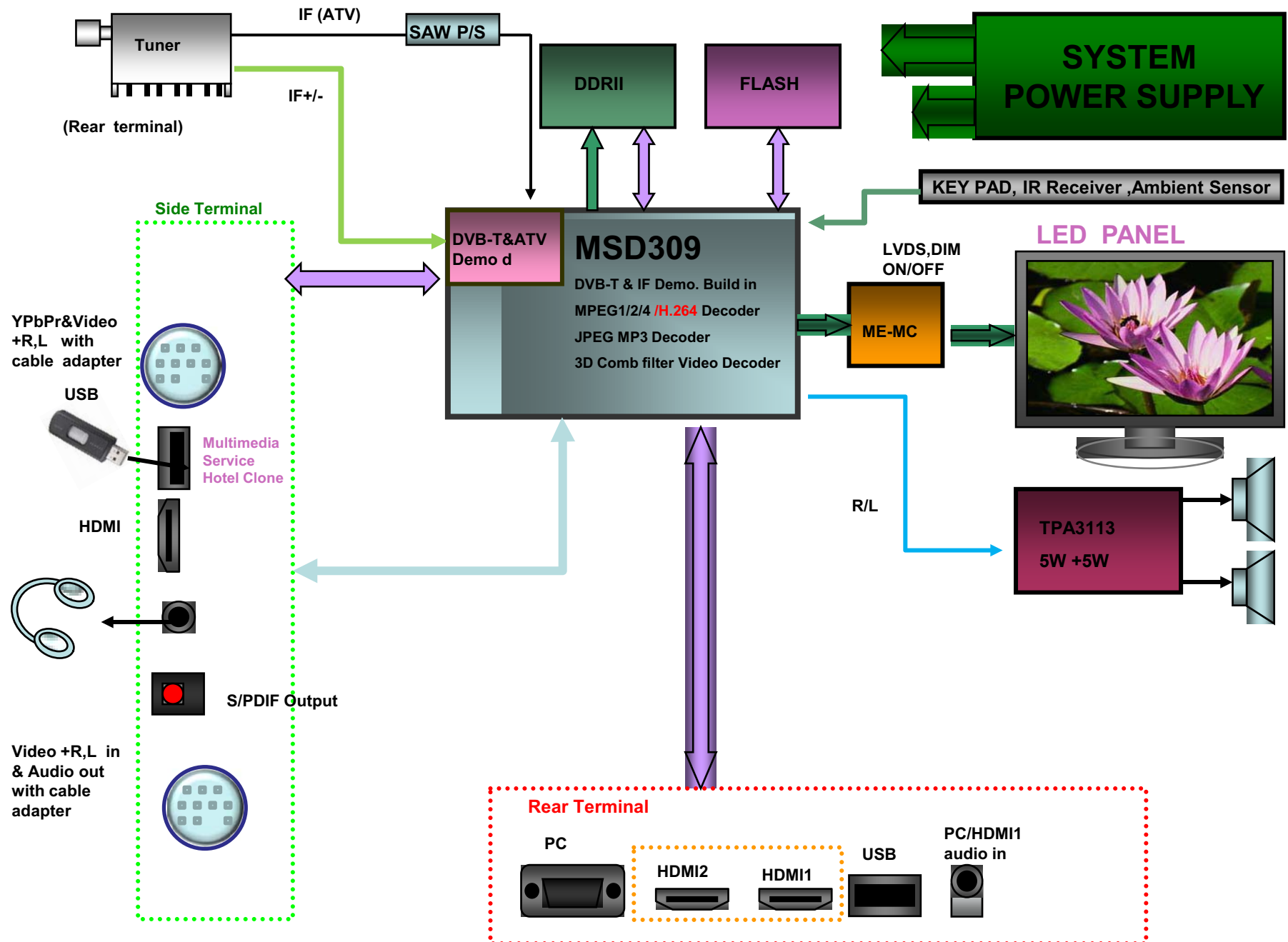
Technical Specification

Screen saver	Yes
Blue Back	No
LED indicator(Power on/Standby)	Blue / Red
Connectors -Rear	
RF Input (Antenna): Air/ Cable/ 2in1	Air+Cable
Scart : CVBS in&out / RGB / S-VIDEO	No
CINCH video in / out (AV1)	No
CINCH audio in / out (No volume control on Audio out/can be jack 3,5mm)	No
S-video in	No
Component Video Input (YCrCb/YPrPb)	No
Component Audio Input (YCrCb/YPrPb)	No
VGA in / Audio L/R in / Jack audio in 3.5mm	VGA + dia. 3.5mm for audio in
HDMI	2
DVI	No
Audio input for DVI	No
CINCH subwoofer out / Coaxial out (S/PDIF)	S/PDIF out (optical)
Headphone output connector (mm)	No
RS232 (Y/N , VGA or DB9 port ...)	No
Card Readers	No
USB slot (No/1.1/2)	NO
DVB-CI (common interface)	No
External power converter input	No
Connectors -Side	
HDMI	1
AV-IN	1
AV-OUT	No
Component Video Input (YCrCb/YPrPb)	NO
Component Audio Input (YCrCb/YPrPb)	NO
Headphone output connector (dia.mm)	1 (3.5mm)
CINCH subwoofer out / Coaxial out (S/PDIF)	NO
USB slot (No/1.1/2)	1 (Software update, JPEG, MP3, WMA, DivX) Multimedia depends on license
DVB-CI (common interface)	No
DLNA	No
UI/RC	
UI design (font/pixel, 2D/3D graphic engine..)	NO
RC Model	NO
RC system	NO
RC # of keys	
Accessories included	
Carton (English/French/Spanish)	English
IB	English

Technical Specification

Circuit diagram	No
Batteries	Yes
Product registration Card	Yes (English)
AC Cable Length	1.8m
Audio Cord (Jack 3.5mm)	Yes(For component audio in)
VGA Cord	No
Wallmount frame	Optional
Antenna Cable	No
6 in 1(YPbPr & CVBS) cable adapter	No
General Data	
Size (W x H x D, with stand) in mm	-
Size (W x H x D, without stand) in mm	-
Package Size (W x H x D, without stand) in mm	-
Net Weight in kg	-
Gross Weight in Kg	-
Design / Mechanical	
Wallmount VESA compatible (standard reference)	Yes
Adaptor for VESA wallmount compatibility (accessory ref)	Yes
Desktop Stand (included/optionnal + ref/No)	included
Panel Tilt (Fowards/Backwards/Rotation)	No
Swivel function desktop stand (yes/No) + motorized?	No
Docking station (yes/No)	No
Floor Stand (included/optionnal + ref/No)	No
Glass shield (yes/No)	No
Finish on Front	-
Finish on side	-
Finish on back	-
Finish on stand	-
number of colors on carton box	2
Brand logo	Customer Inlet
Other logo	Optional
External AC/DC Power with DC power cord (yes/No)	No
Handle (yes/No)	No
Detachable speaker (yes/No)	No
Rating Label languages	English

8M19 Block Diagram of LAMTAM



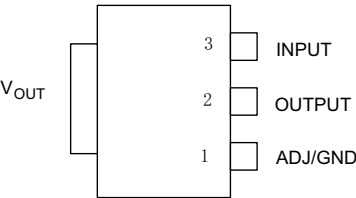
List of key parts

NO	Name		Factory mode	P/N
1	Receiver	IR1	HM238R	5300-148430-0000
2	Speaker		YDT2610-02AU	5656R108104-0090
3	Crystal	Y1	HC-49U	4900-124053-R000
		Y2	49U3H	4900-125453-R000
4	Tuner	U10	VA1P1BF8401	5202-45733D-7H10
5	SAW	U30	F4401	4900-744015-0X00
6	IC	U50	EUP3482D	47AP-E34820-0080
		U51	EUP3482D	47AP-E34820-0080
		U52	EUP3482D	47AP-E34820-0080
		U49	MP1492DS-LF-Z	476A-M14920-0080
		U9	W9751G6JB-25	4737-W97511-0840
		U15	W9751G6JB-25-	4737-W97511-0840
		U24	EN25F32-100HIP	471R-N25321-0080
		U38	AS1117L-3.3	47B6-A11170-03
		U37	AS1117L-1.8	47B6-A11172-03
		N2	AS1117L-1.2	47B6-A11175-0300
		U18	AS7805R	47B6-A78050-0030
		U45	LM4558	47DG-G45580-0080
		U56	TPA3113D2	4722-T31130-0280
		U2	MSD309PX-LF-Z1-SB	475C-M30903-5230

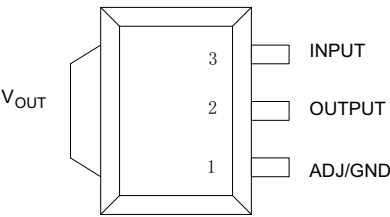
IC Block Diagram

Pin Configurations---AS1117L-3.3

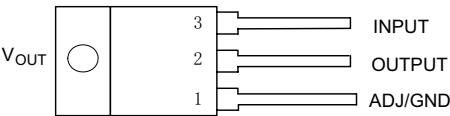
L Package
(SOT-223)



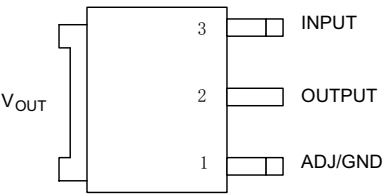
U Package
(SOT-89)



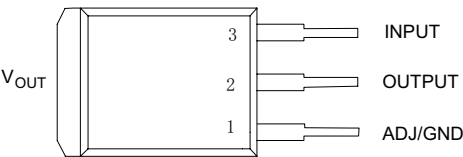
T Package
(TO-220)



R Package
(TO-252)



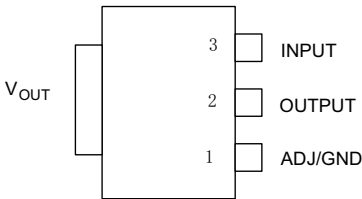
S Package
(TO-263)



IC Block Diagram

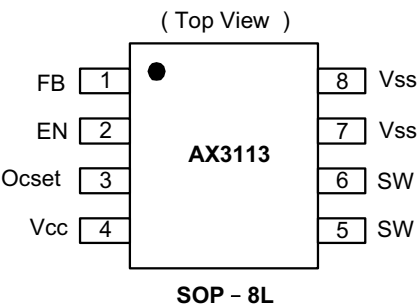
Pin Configurations---AS1117L-ADJ

L Package
(SOT-223)



❖ PIN ASSIGNMENT

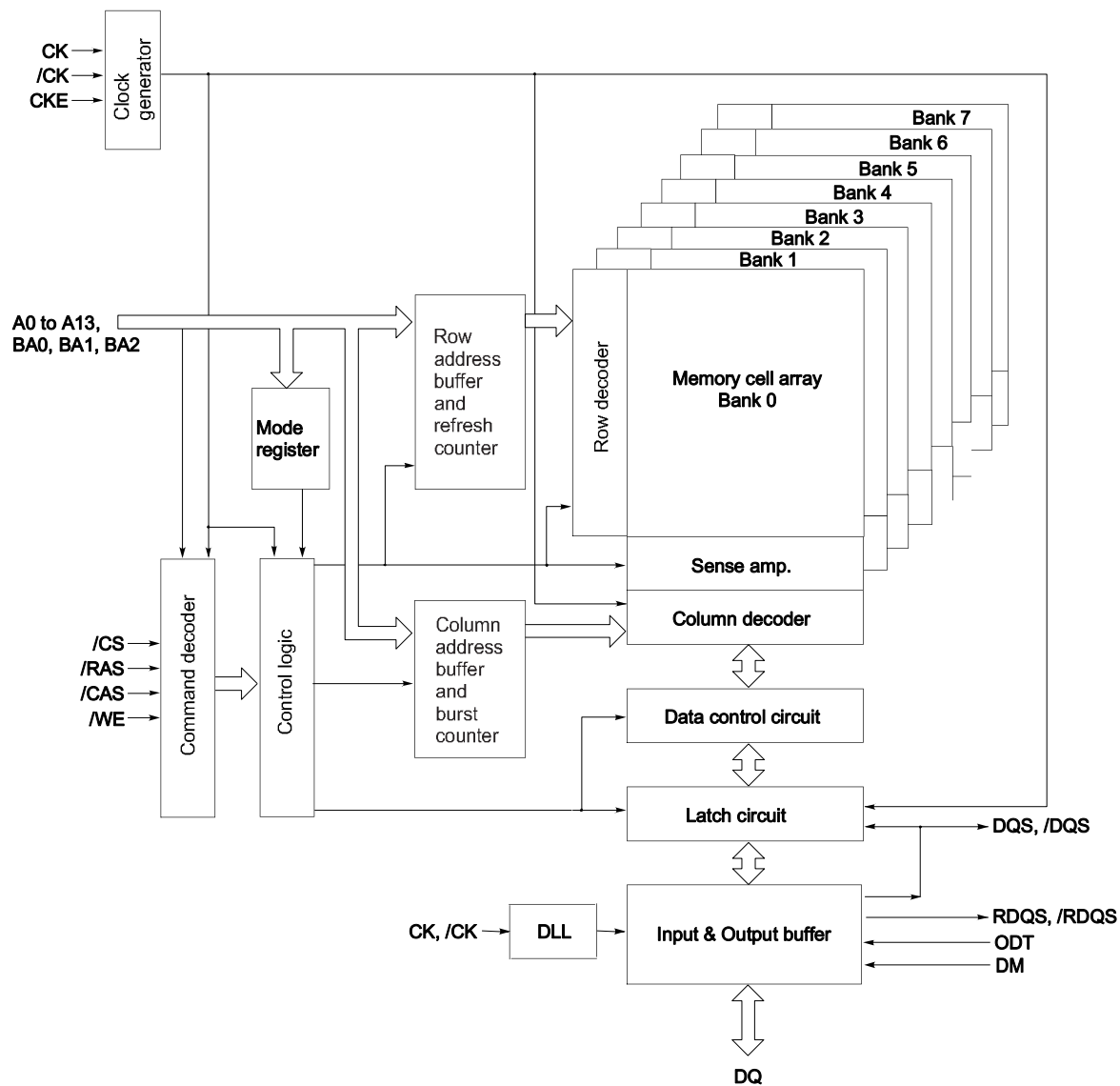
The package of AX3113 is SOP-8L; the pin assignment is given by:



Name	Description
FB	Feedback pin
EN	Power-off pin H : normal operation(Step-down) L : Step-down operation stopped (All circuits deactivated)
OCSET	Add an external resistor to set max switch output current.
Vcc	IC power supply pin
SW	Switch pin. Connect external inductor & diode here.
Vss	GND pin

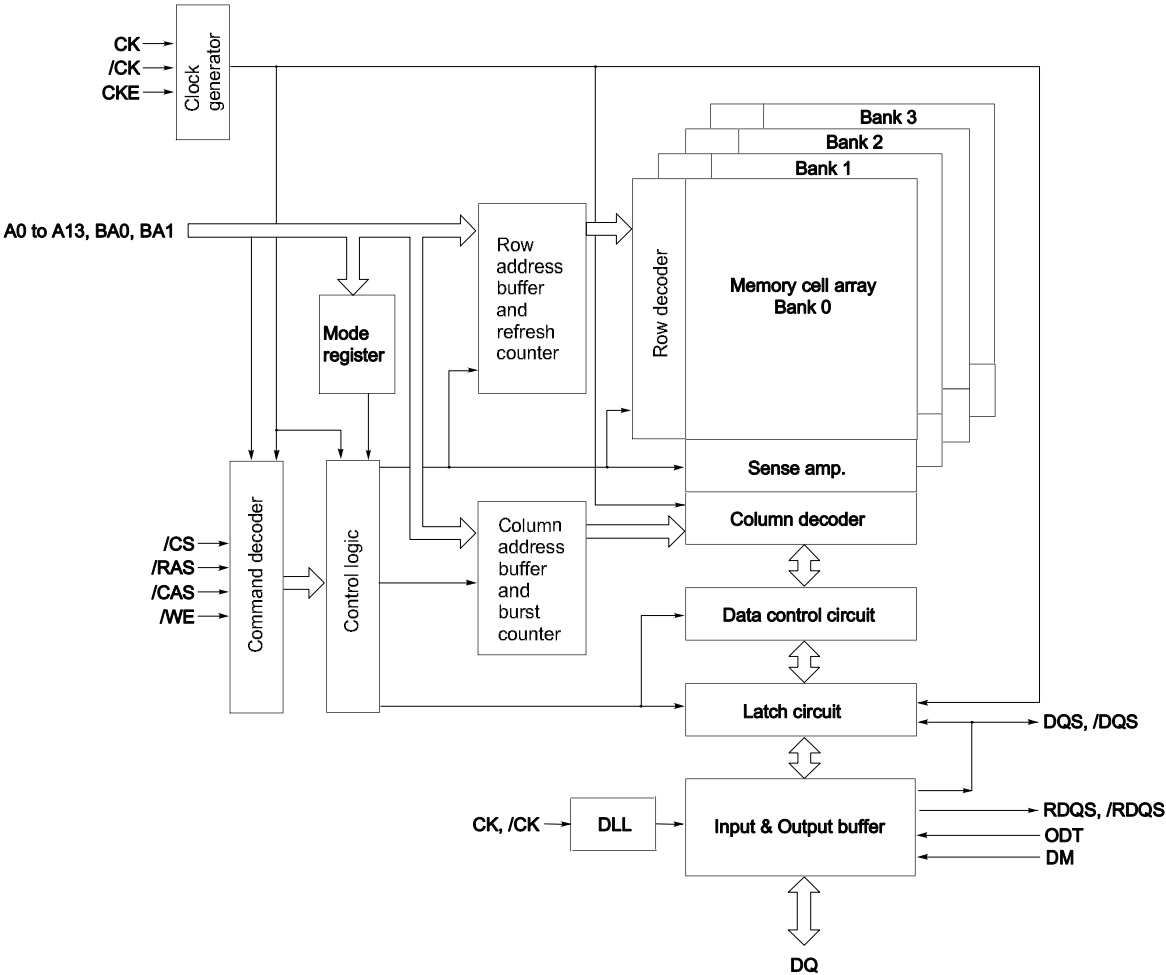
IC Block Diagram

Block Diagram--EDE116AEBG-8E-F



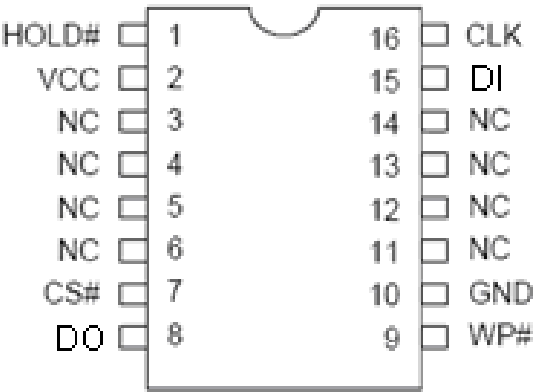
IC Block Diagram

Block Diagram --EDE5116AJBG-8E-E

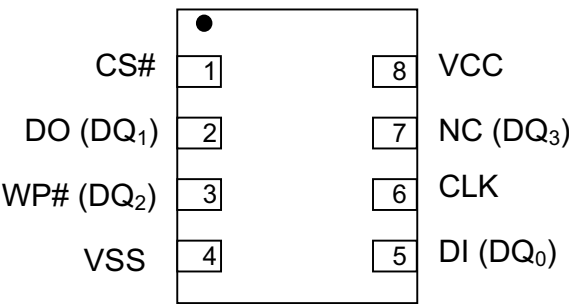


IC Block Diagram

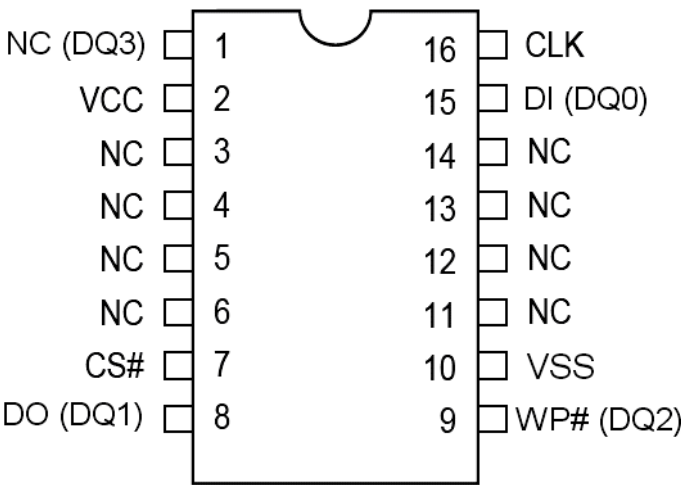
EN25B64--100FIP



EN25Q128-104FIP



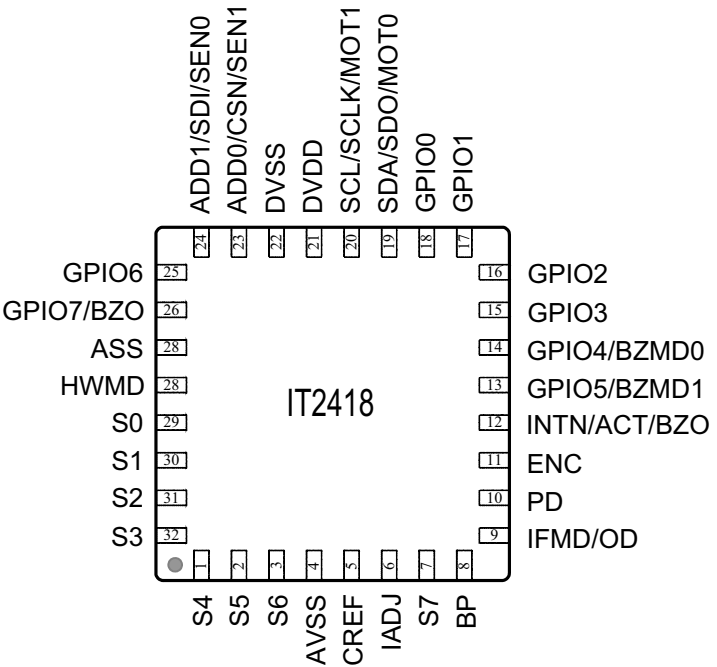
8 - LEAD VDFN



16 - LEAD SOP

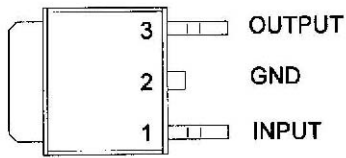
IC Block Diagram

IT2418



LM78D05

TO-252-2



IC Block Diagram

LM4558

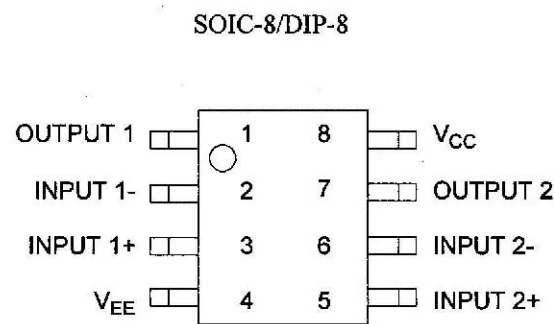
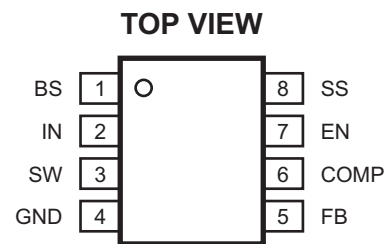


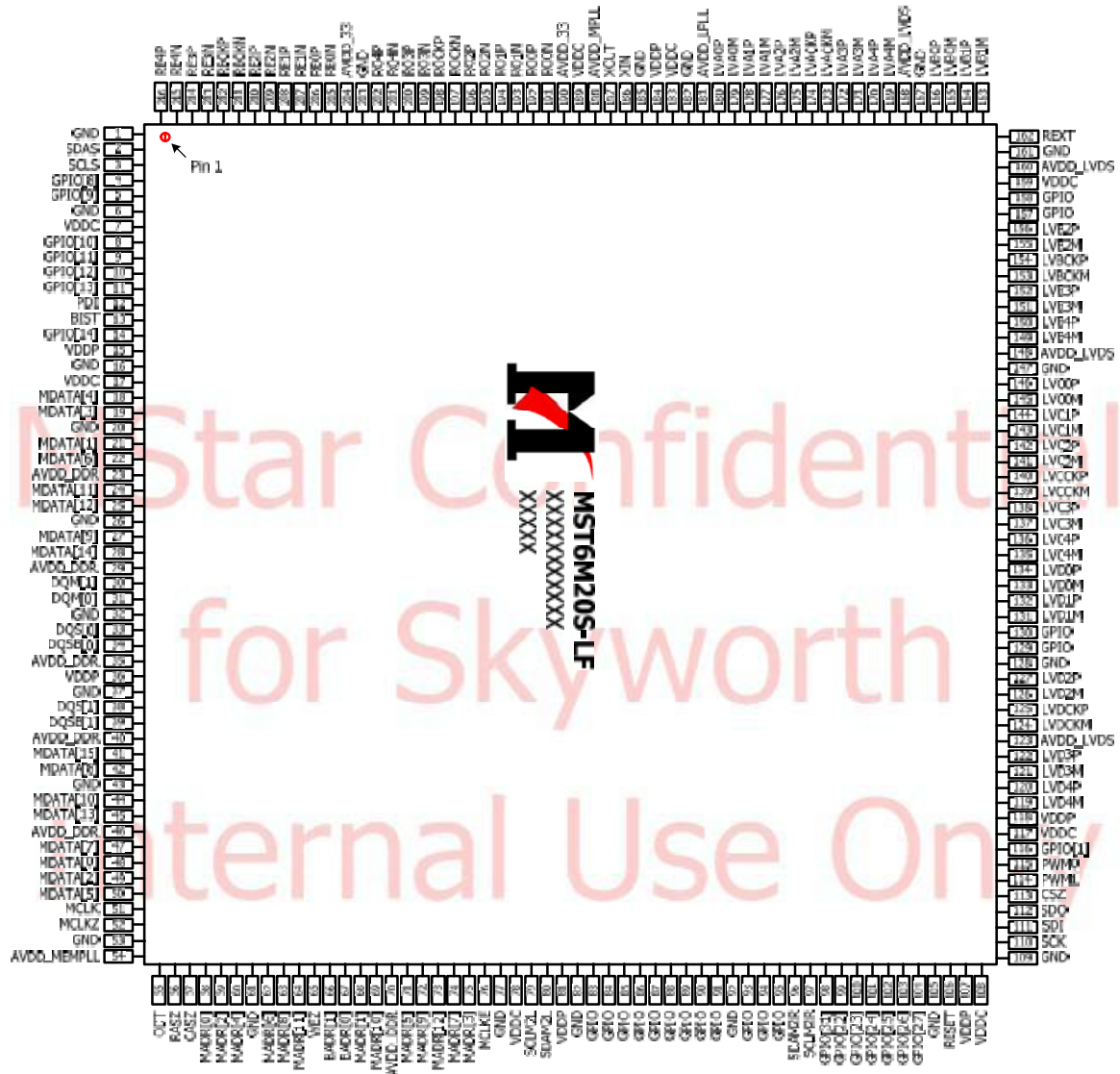
Figure 2. Pin Configuration of LM4558 (Top View)

MP1482DS



IC Block Diagram

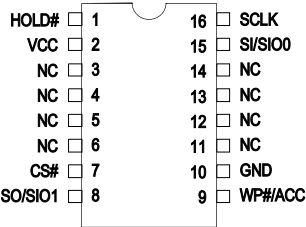
MST6M20S-LF



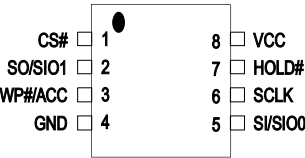
IC Block Diagram

MX25L6405DMI-12G

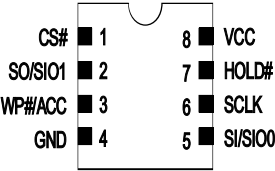
16-PIN SOP (300mil)



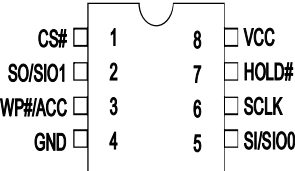
8-PIN SOP (200mil, 150mil)



8-LAND WSON (8x6mm, 6x5mm) for MX25Lxx05D



8-PIN PDIP (300mil)



PACKAGE OPTIONS

	16M	32M	64M
150mil 8-SOP	V		
200mil 8-SOP	V	V	
300mil 16-SOP	V	V	V
300mil 8-PDIP	V	V	
6x5mm WSON	V	V	
8x6mm WSON			V

PIN DESCRIPTION

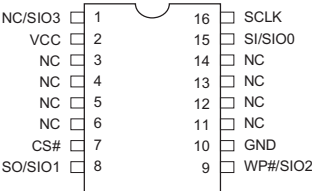
SYMBOL	DESCRIPTION
CS#	Chip Select
SI/SIO0	Serial Data Input (for 1 x I/O)/ Serial Data Input & Output (for 2xI/O read mode)
SO/SIO1	Serial Data Output (for 1 x I/O)/ Serial Data Input & Output (for 2xI/O read mode)
SCLK	Clock Input
WP#/ACC	Write protection: connect to GND ; 11.0~11.5V for program/erase acceleration: connect to 11.0~11.5V
HOLD#	Hold, to pause the device without deselecting the device
VCC	+ 3.3V Power Supply
GND	Ground

IC Block Diagram

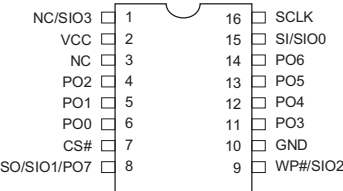
MX25L12845EMI-10G

PIN CONFIGURATION

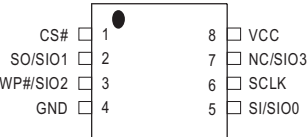
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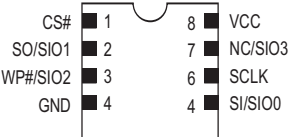
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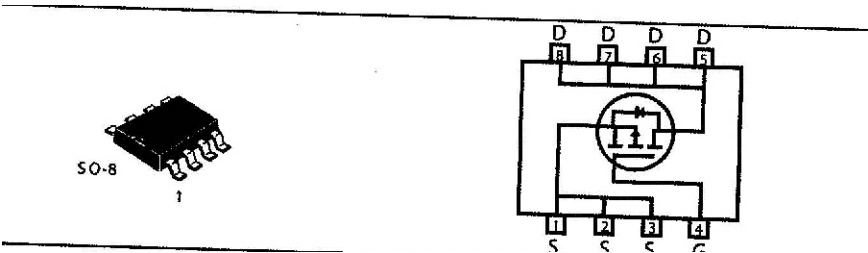
8-PIN SOP (200mil)



8-WSON (8x6mm)

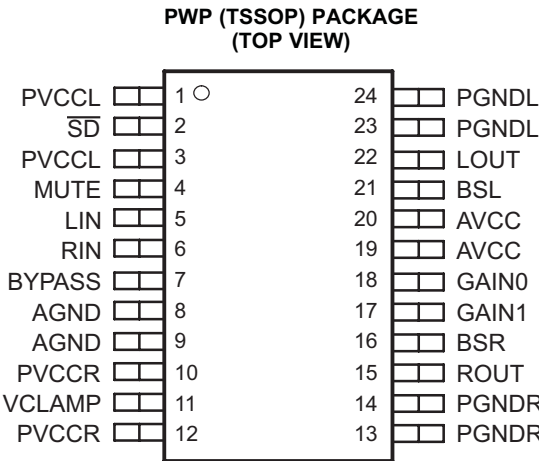


STM9435

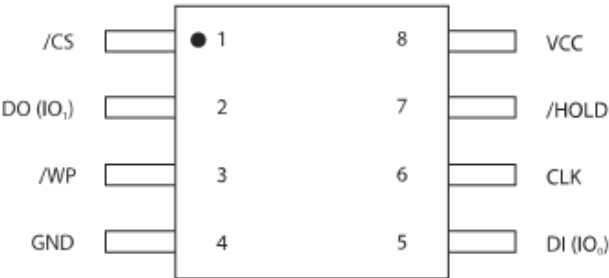


IC Block Diagram

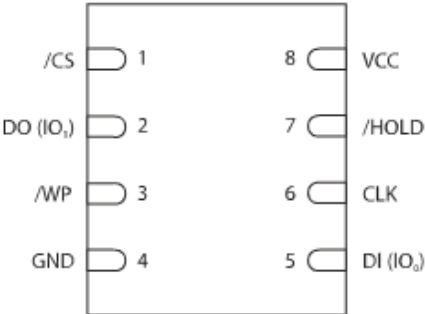
W25X40BVSNI



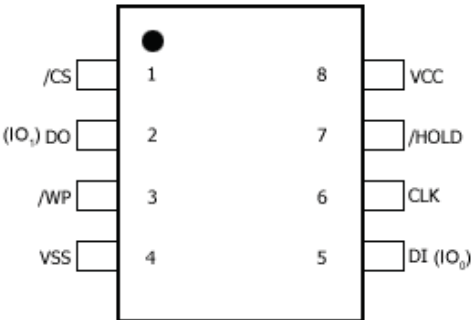
PIN CONFIGURATION SOIC 150-MIL / 208-MIL

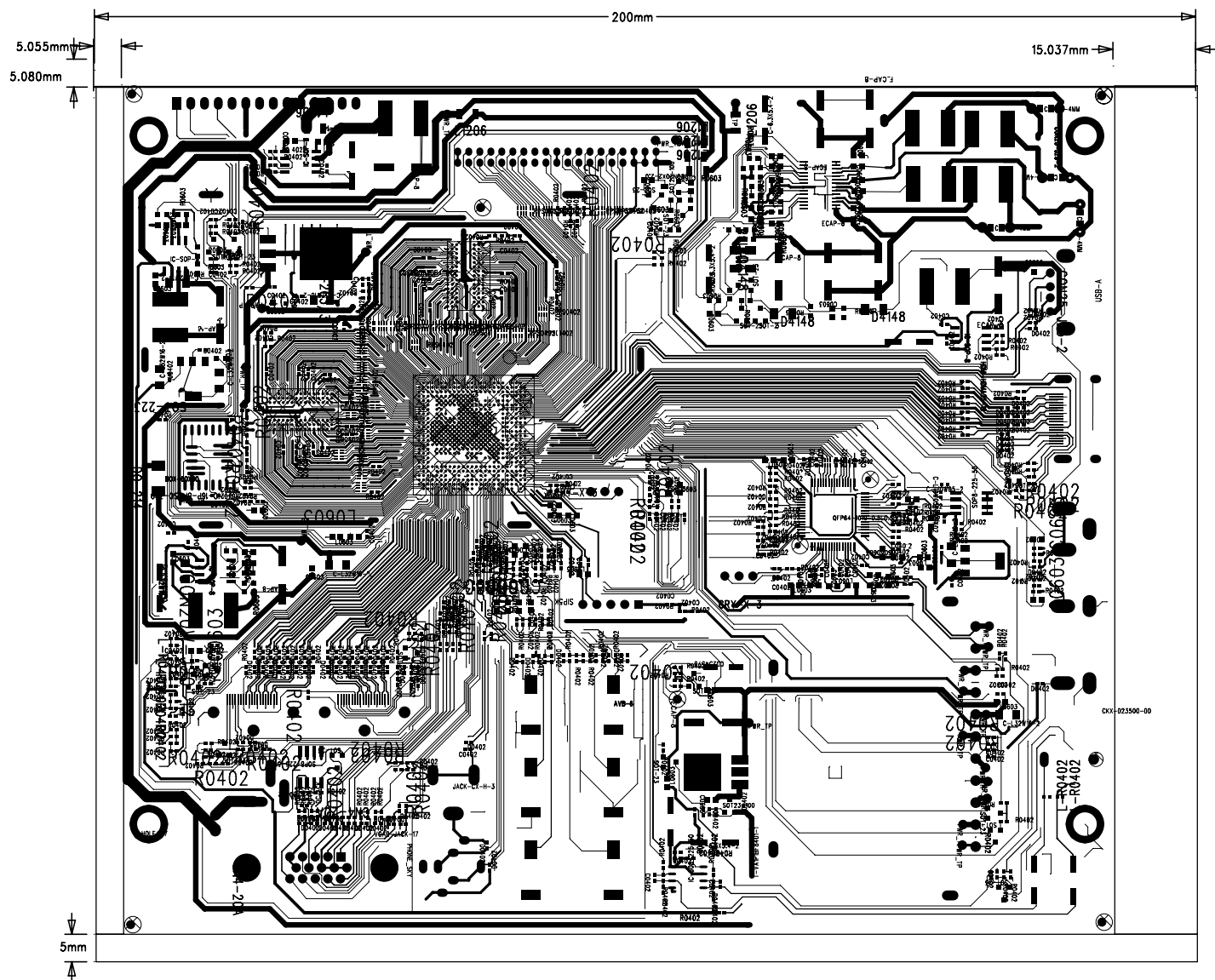


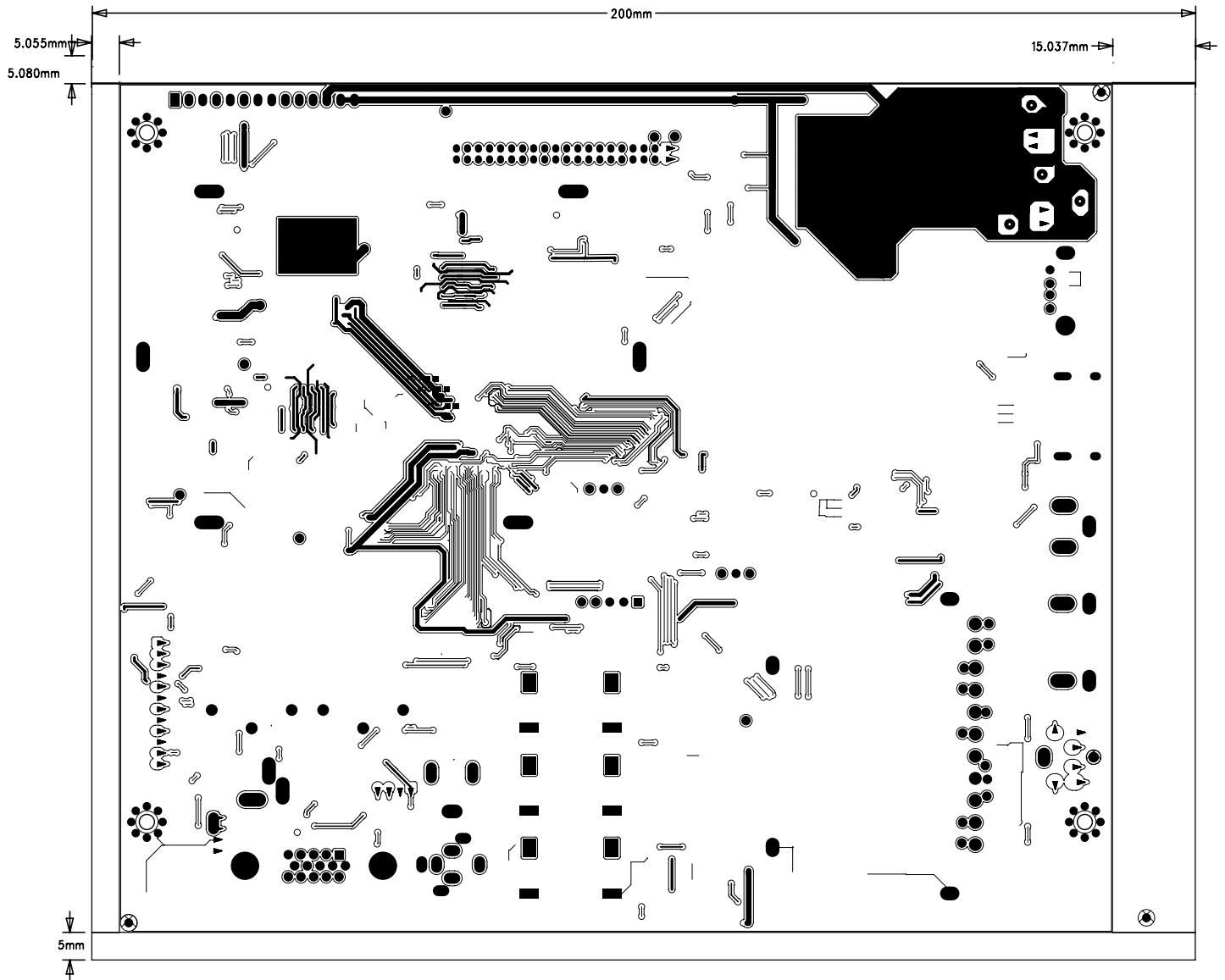
PAD CONFIGURATION WSO 6X5-MM



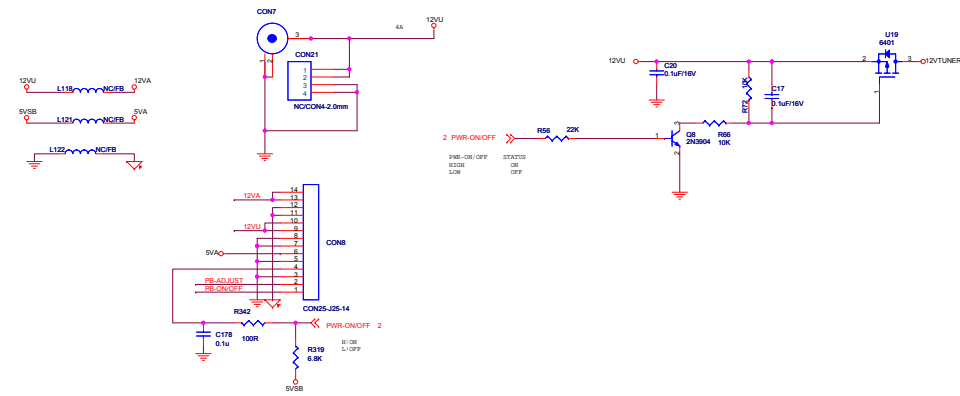
PIN CONFIGURATION PDIP 300-MIL



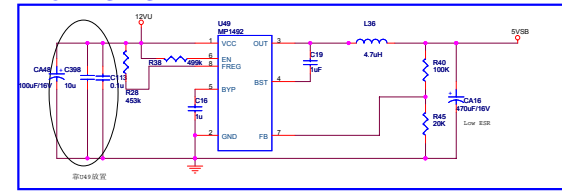




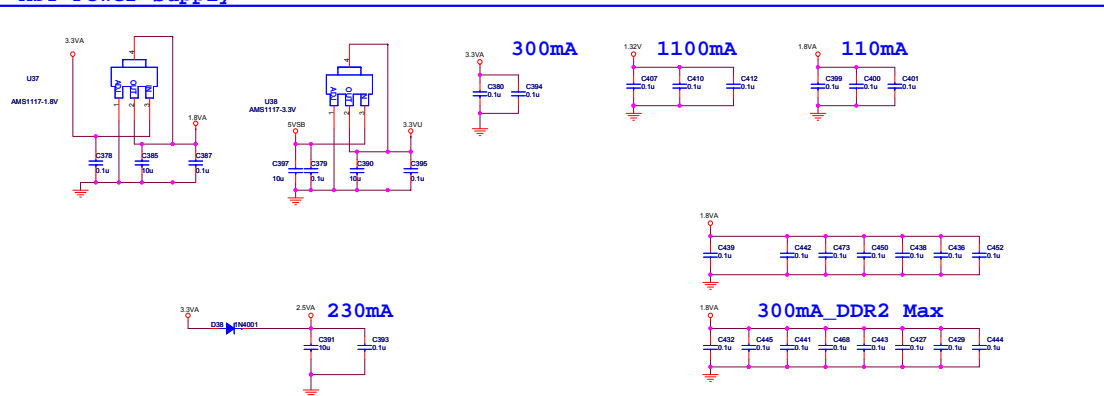
Power Input



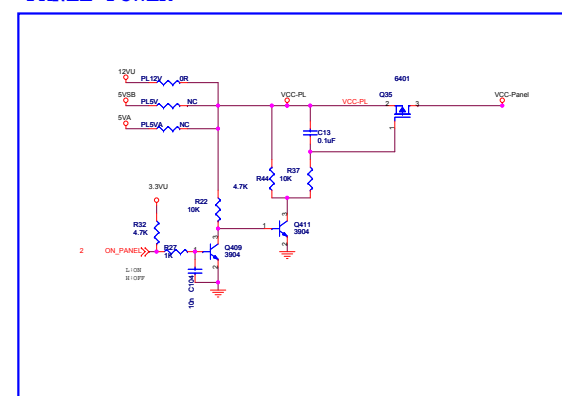
5V DC-DC



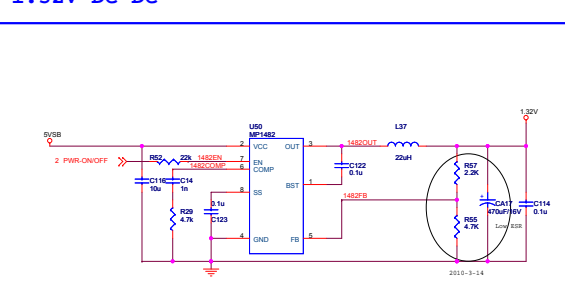
MST Power supply



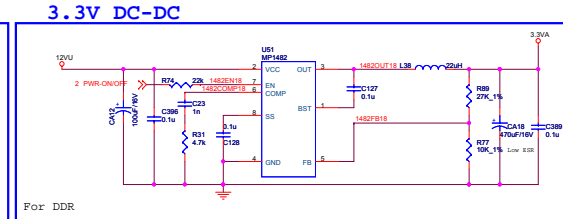
PANEL POWER



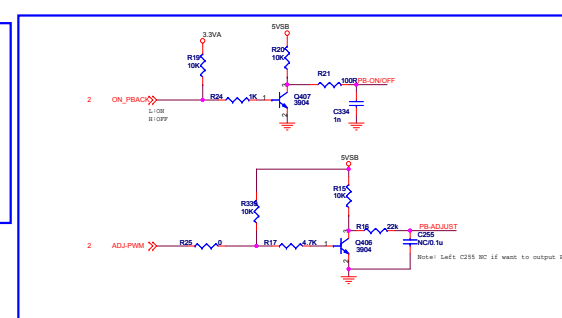
1.32V DC-DC

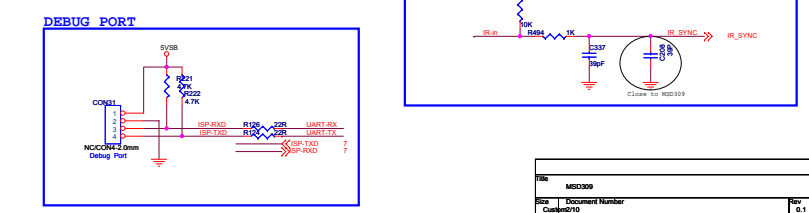
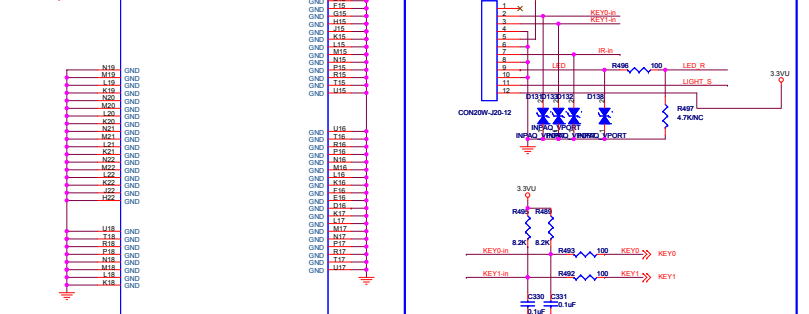
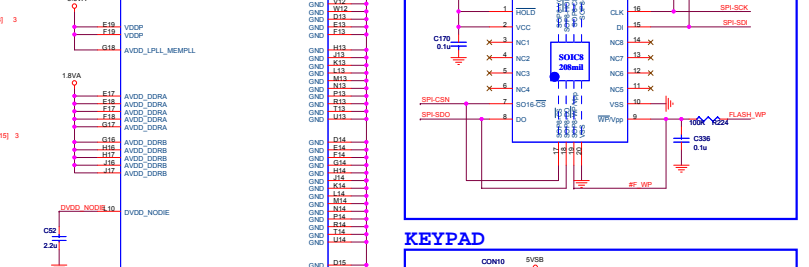
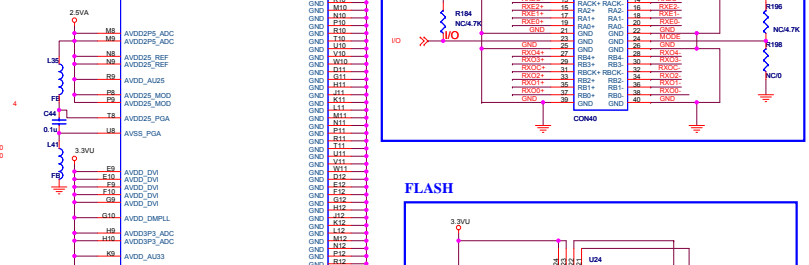
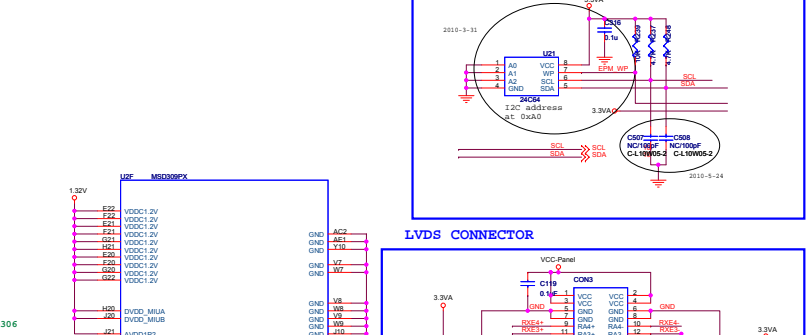
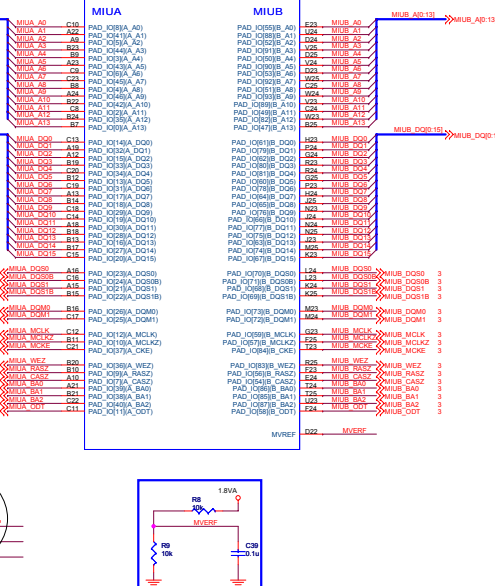
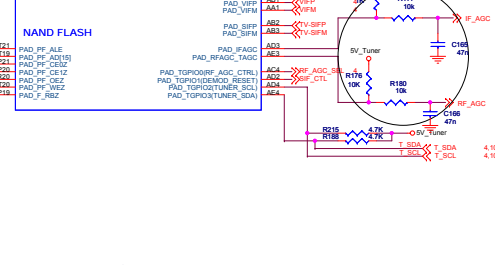
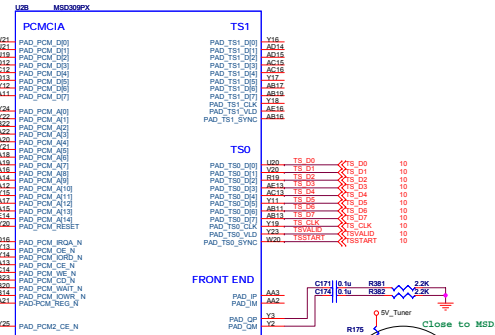
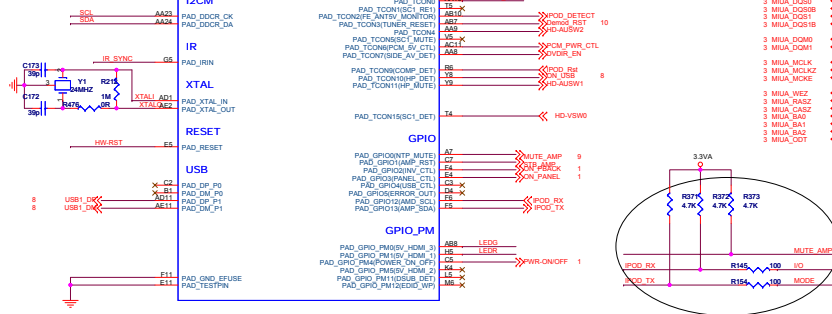
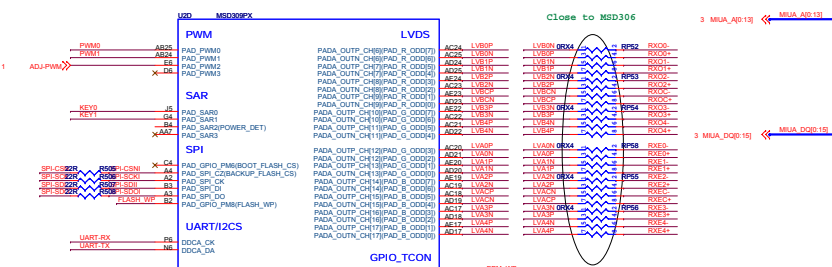
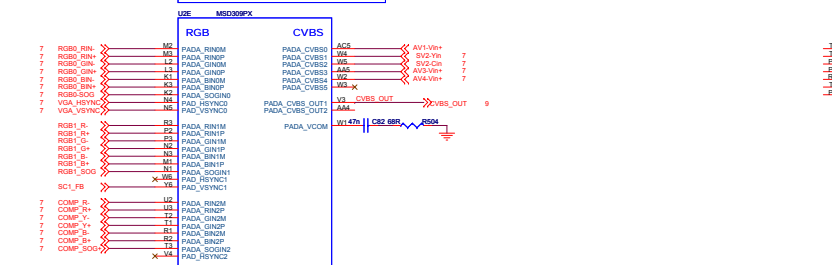
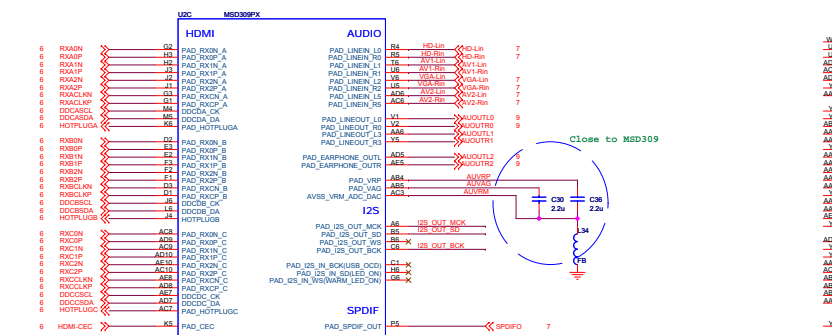


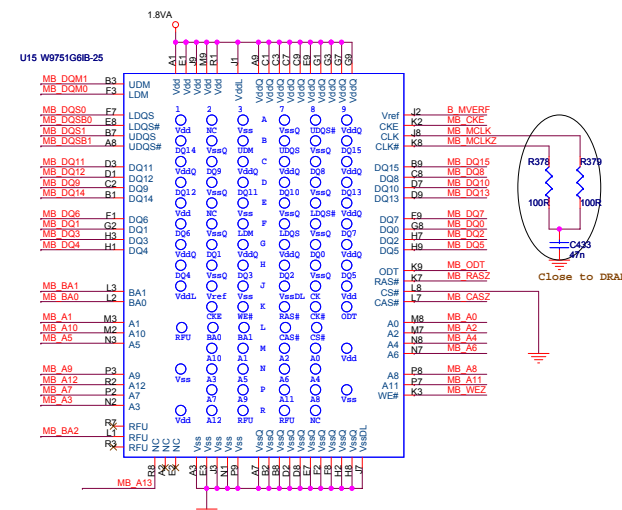
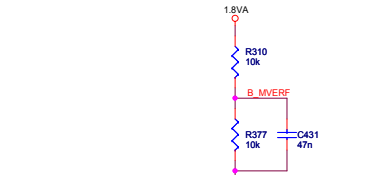
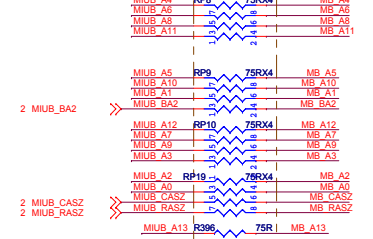
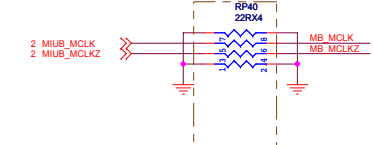
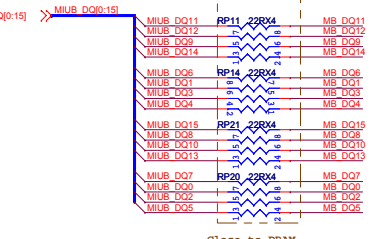
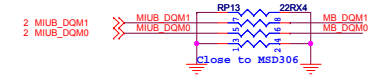
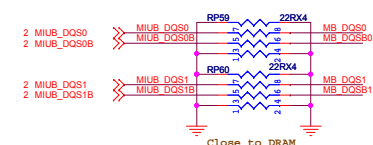
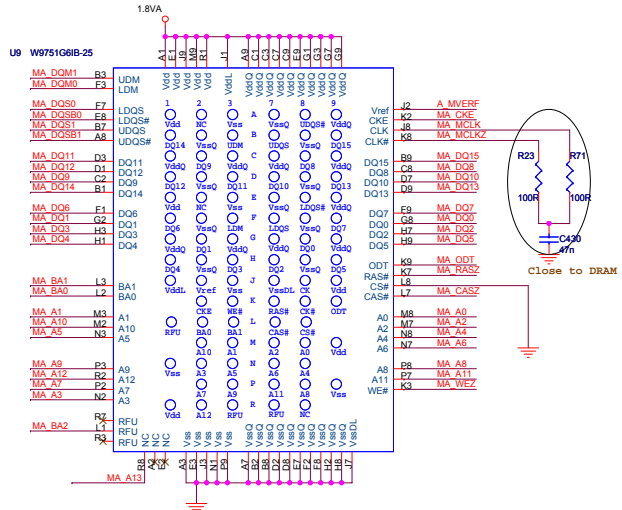
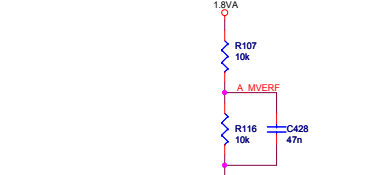
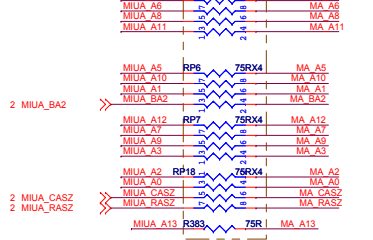
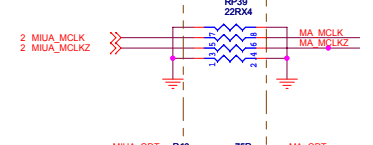
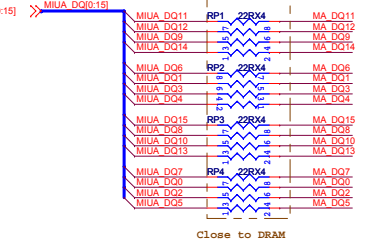
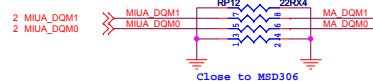
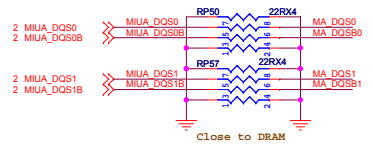
3.3V DC-DC



Inverter Interface

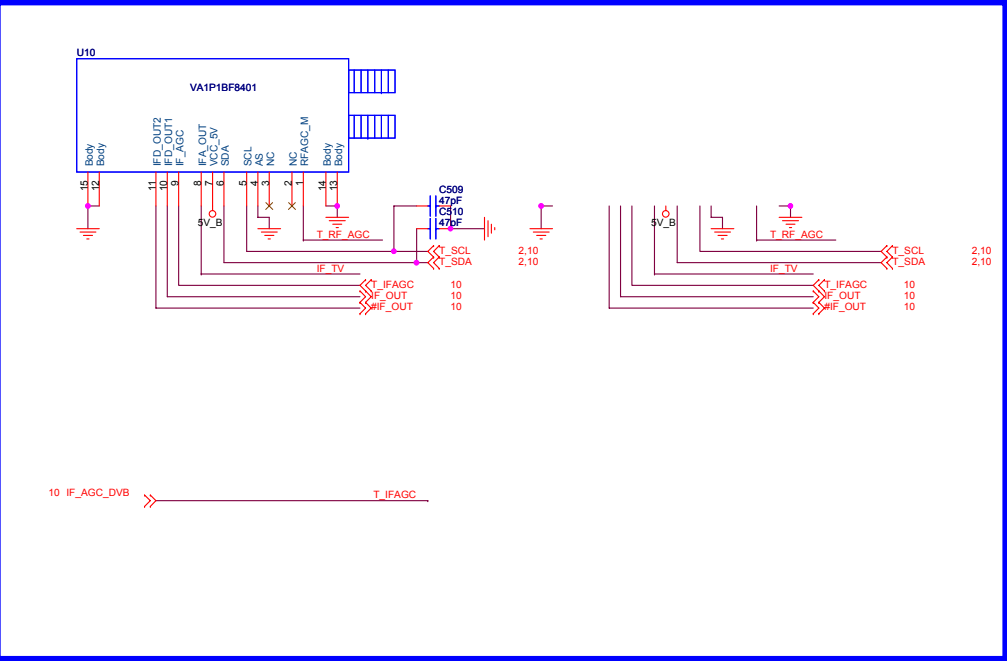




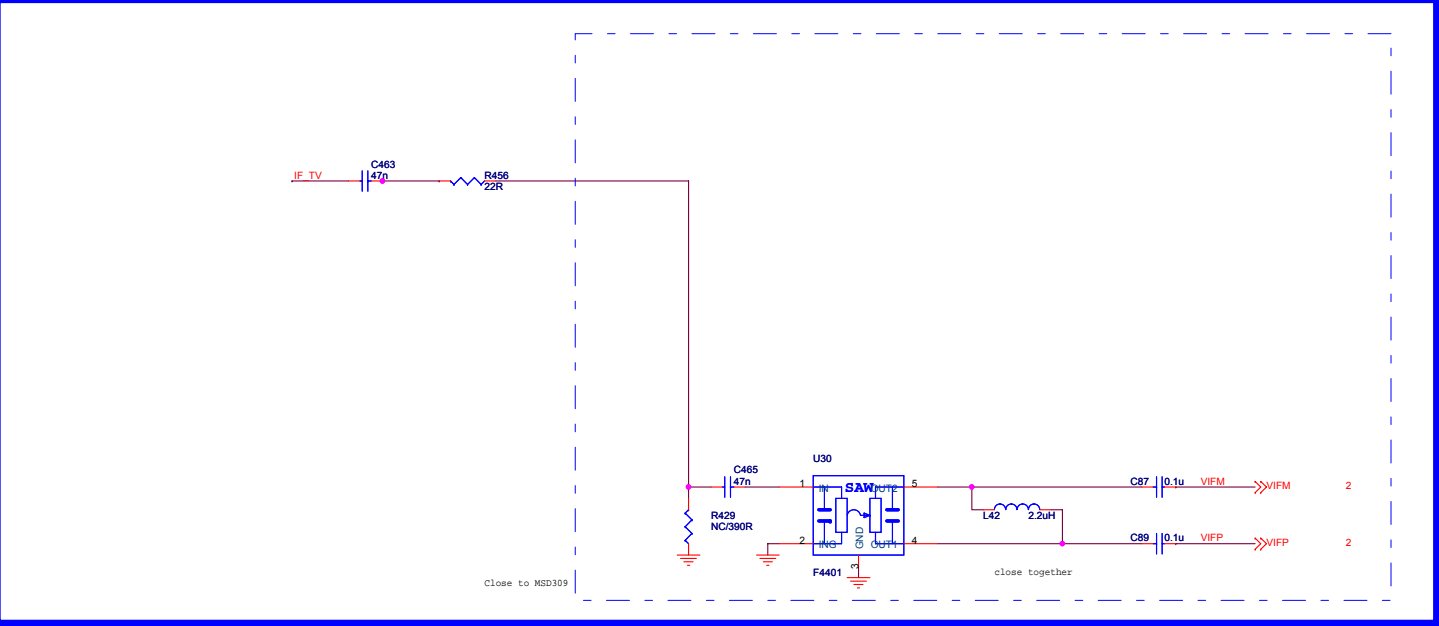


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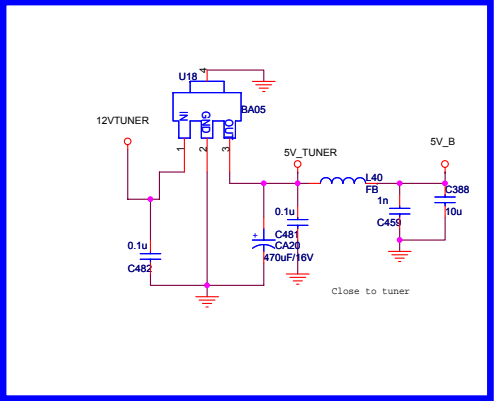
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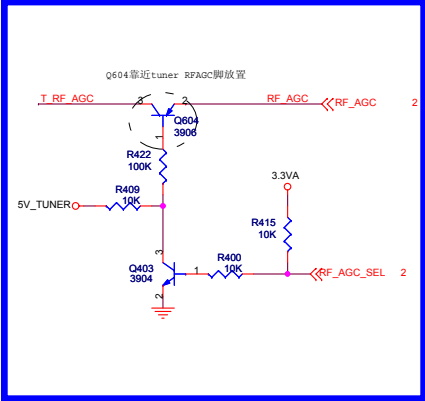
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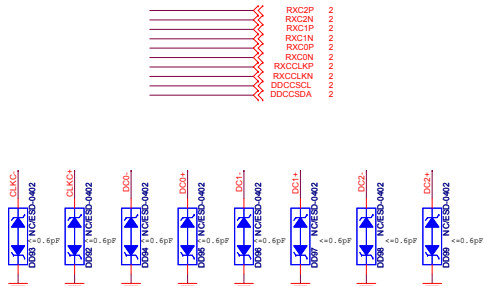
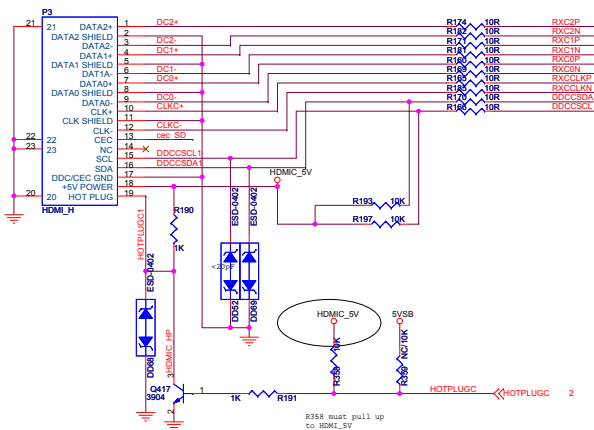
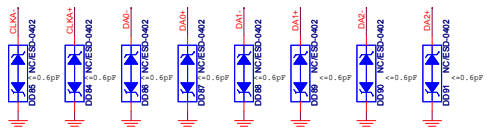
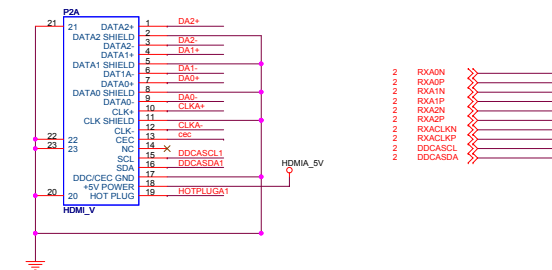
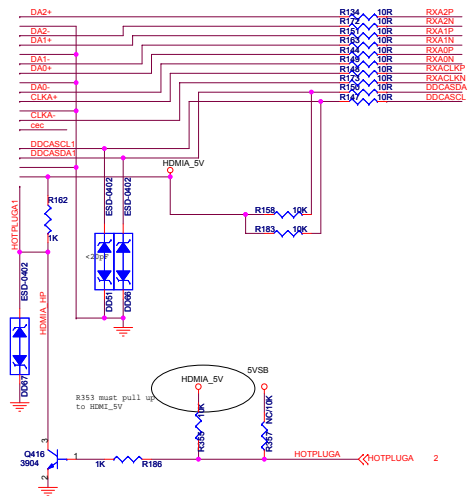
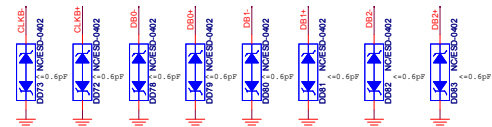
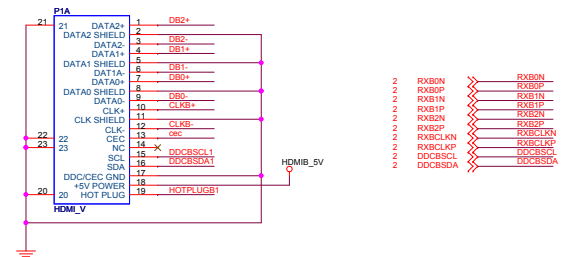
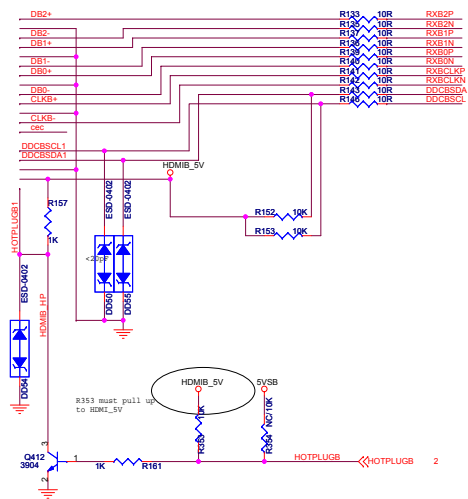
TUNER POWER



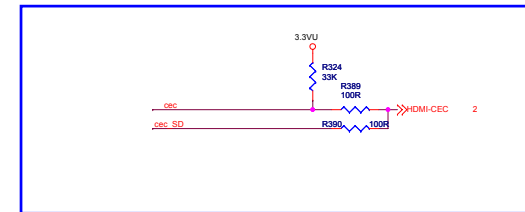
RF AGC Switch



HDMI Input

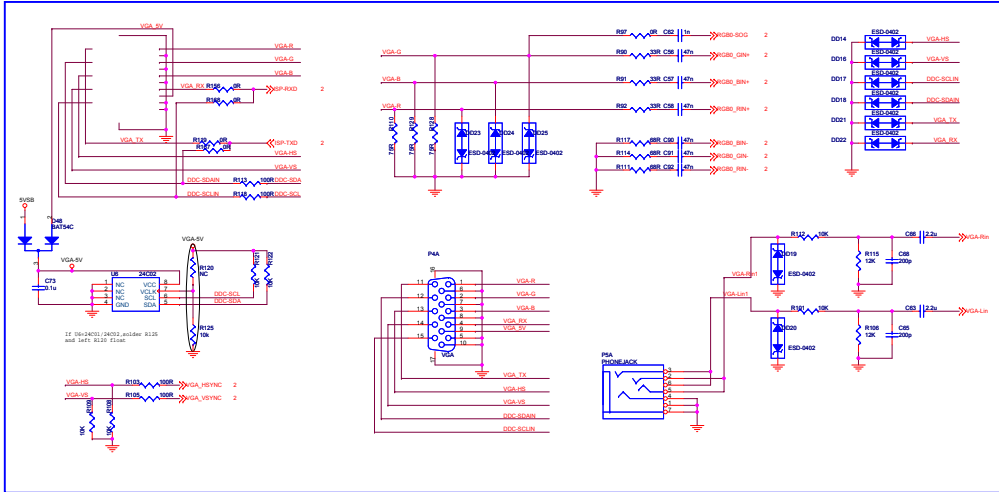


HDMI CEC

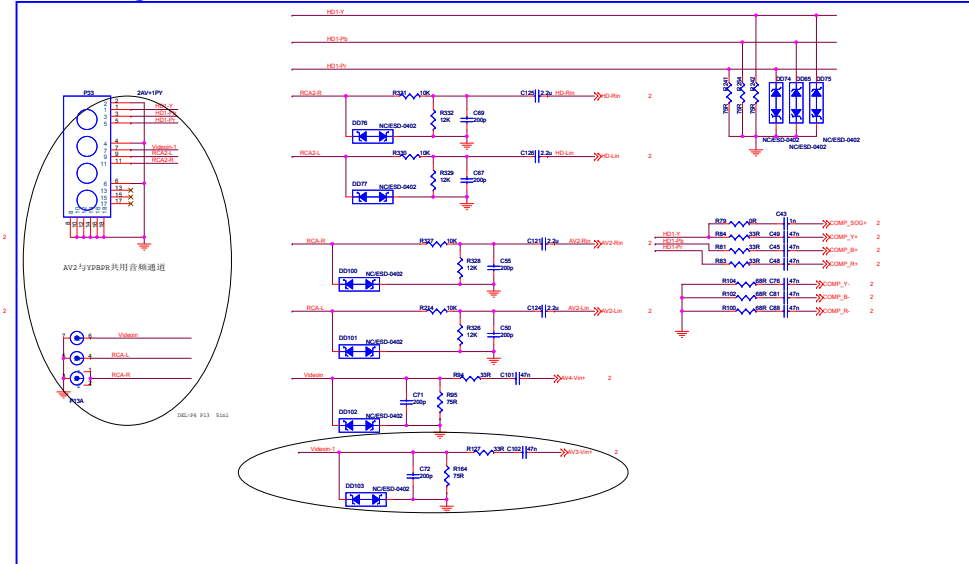


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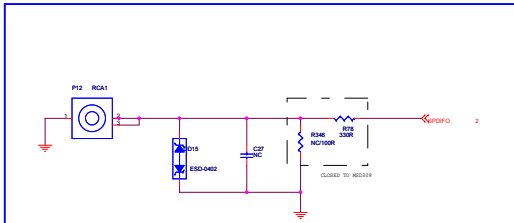
VGA INPUT



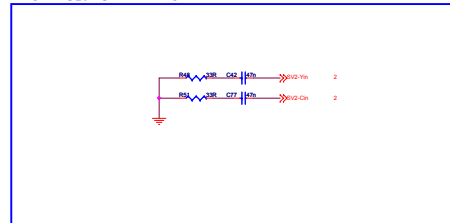
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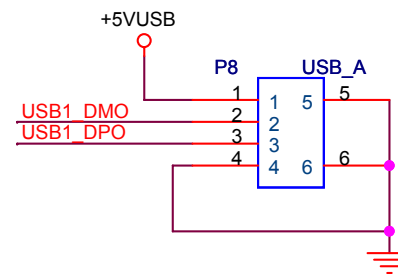
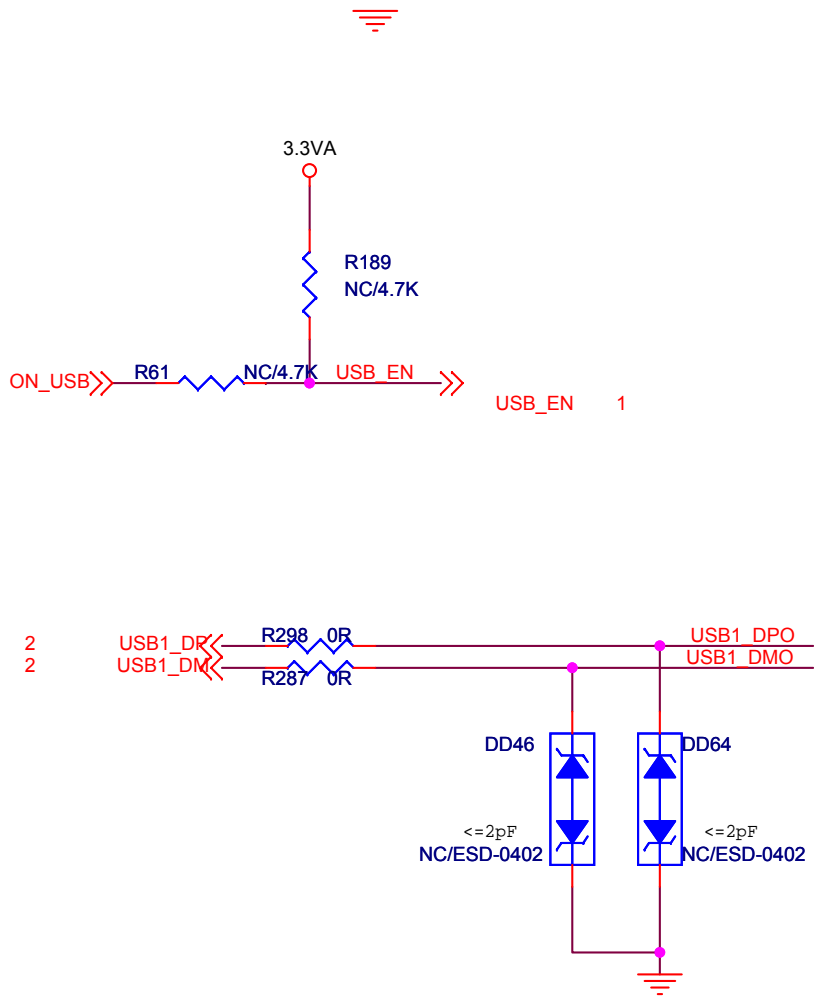


SPDIF_Optical Out



FOR UN-USED PORTS





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USB		
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