

SERVICE MANUAL

8M27 A/E/S/B CHASSIS



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8M27 CHASSIS PFS(production feature specification)

Model #	机芯机型型号	8M27 E57系列	8M27 E57系	8M27 E57系列	8M27 E57系列
Production content	主要内容	A	E	S	B
ID for reference only	产品造型（图）				
Country(West Eu./East Eu./Russia/AP/US/S.A./Japan/...)	国家（西欧/东欧/俄罗斯/亚太/美国/南非/日本...）	AP	AP	S.A	S.A
Brand name	品牌名称				
Category (Monitor/TV/Combo/Portable TV...)	品类（显示器/电视机/组合产品/移动电视）	TV	TV	TV	TV
TV Type (ATV、DTV(DVB-T/DVB-T2/DTMB/ATSC/ISDB-T...))	TV Type (ATV、DTV(DVB-T/DVB-T2/DTMB/ATSC/ISDB-T...))	ATV	ATV+DVB-T,ATV+DVB	ATV	ATV+ISDB-T
Panel technology (LCD / LED/PDP)	屏体技术（LCD/LED/PDP）	LED	LED	LED	LED
Market Position (High/Mid/Access,,)	市场定位（高/中/低）	LOW-class	LOW-class	LOW-class	LOW-class
Cabinet Design (Example: 01,23 series)	货柜设计（如：01、23系列）				
Product NO.	产品型号(机壳)				
Chassis solution(IC)	设计方案(IC)	MST6E182XDT-UZ	MSD13	MST6E182XDT	MSD1306
Chassis name	机芯名称				
Chassis PCB Standard	PCB板标准	SKYWORTH	SKYWORTH	SKYWORTH	SKYWORTH
Predecessor (replace,Base mark)	参考样机或被替代产品				
Status(Pre./Finish)	状态（预研/完成）				
Status(PP/Finish)	状态（试产/完成）				
MP date requested (ETD)	量产要求时间（预计的发货时间）				
MP date confirmed by supplier (ETD/ETA)	量产要求时间（预计的发货时间/预计的到货时间）				
Regional requirement	区域需求				
Homologation (Gostandard/CE/MPTT/CB/U	认证 (Gostandard/CE/MPTT/C	CB	CB	CB	CB
RoHS	ROHS	RoHS	RoHS	RoHS	RoHS
PSU Description	电源描述				
PSU P/N	电源料号、型号				

PSU PCB Dimension	电源PCB尺寸				
Power supply(100-240V AC +/-10%/...)	电源输入（100-240V AC +/-10%/...）	AC 100-240V	AC 100-240V	AC 100-240V	AC 100-240V
Power consumption working / Annual	功率消耗/每年	TBD	TBD	TBD	TBD
Power consumption standby	待机功耗	<1W	<1W	<1W	<1W
Power plug(VDE/UL/BS/...)	电源插头（VDE/UL/BS/...）	TBD	TBD	TBD	TBD
Picture display	图像显示				
Screen size : diagonale (inch)	屏幕尺寸：对角线（英寸）				
Aspect ratio (16/9 // 4/3 // 15/9)	宽高比（16:9/4:3/15:9）				
1st panel supplier : panel suppliers	第一屏体供应商：	TBD	TBD	TBD	TBD
Luminance	亮度				
Colour Temp@ maximum brightness	色温				
Horizontal and vertical viewing angle	视角				
Contrast ratio	对比度				
Typical panel Life Time (Hours)	屏体寿命				
second panel supplier : panel reference	第二屏体供应商	TBD	TBD	TBD	TBD
Panel Display Type(MVA/PVA/IPS/...)	面板显示种类（MVA/PVA/IPS...）	TBD	TBD	TBD	TBD
1st panel supplier : resolution	第一面板供应商：分辨率	TBD	TBD	TBD	TBD
Dynamic contrast ratio	动态对比度				
Video signal process	视频信号处理				
Comb Filter (2D/3D)	梳状滤波（2D/3D）	3D	3D	3D	3D
Noise Reduction (adaptive/3D/...)	降噪技术（适度/3D等）	3D	3D	3D	3D
Picture improvement (LTI/CTI,BLE,WLE,...)	画质提升技术（LTI/CTI/BLE/WLE）	Mstar ACE-5UC	Mstar ACE-	Mstar ACE-	Mstar ACE-5UC
Color process (Gama correction/Skin correction /...)	彩色信号处理（伽玛校正/趋肤效应校正）	Yes	Yes	Yes	Yes
Colour preset (Cool/Normal/Warm/Personal)	色彩设置（冷/标准/暖和/个性）	Neutral/Warm/Cool	Neutral/Warm/C	Neutral/Warm/C	Neutral/Warm/Cool
Picture control (Bright/Con./Sharpness/Color/Ti)	图像控制(Bright/Con./Sharpness/Color/Ti)	Bright/Con./Sharpness/C	Bright/Con./Sharpness/C	Bright/Con./Sharpness/C	Bright/Con./Sharpness/C
Picture presets : Standard / Bright / Soft / User	图像设置（标准/明亮/柔和/用户）	Bright / Normal/Soft / User	Bright / Normal/Soft / User	Bright / Normal/Soft / User	Bright / Normal/Soft / User
Picture freeze	图像冻结	Yes	Yes	Yes	Yes
Multi picture : PIP (AV)/POP (AV)	多画面（PIP画中画和POP画中画）	No	No	No	No
Dynamic Backlight Control	动态背光调节	No	No	No	No

Backlight	背光源	Yes	Yes	Yes	Yes
Deinterlacer (No/linear/motion adaptive/motion compensative)	逐行转换 (没有/线性/运动自适应/运动补偿)	Yes	Yes	Yes	Yes
Film mode / reverse 3:2/2:2 pull down	电影模式/3:2翻转 或2:2拉伸	3:2/2:2 pull down	3:2/2:2 pull	3:2/2:2 pull	3:2/2:2 pull down
Full HD support (1080P)	支持全高清 (1080P)	Yes	Yes	Yes	Yes
Single scan / Dual scan (120HZ)	单扫描及双扫描 (120Hz)	Single scan	Single scan	Single scan	Single scan
Zoom type : 4/3 format	放大类型: 4:3格式	Yes	Yes	Yes	Yes
Zoom type : 16/9 Format	放大类型: 16:9格式	Yes	Yes	Yes	Yes
Zoom type : Auto (by SCART Pin8 and WSS)	放大类型: 自动 (以8PIN SCART 和WSS)	WSS	WSS	WSS	WSS
Picture Auto adjustment (PC mode)	图像自动调整 (电脑模式)	Yes	Yes	Yes	Yes
Sound	声音				
Sound type (Mono/AV stereo/Stereo)	声音类别 (单声道/AV 立体声/立体声)	Stereo	Stereo	Stereo	Stereo
Music Power (Watt)/RMS Power (Watt)	伴音功率 (单位为瓦特) / 有效功率 (单位为瓦特)	19"/22":1.5W X2 23"/24":3WX2 2 32":6WX2	19"/22": 1.5WX2 23"/24": 3WX2	19"/22": 1.5WX2 23"/24": 3WX2	19"/22":1.5WX2 23"/24":3 WX2
Tone control (Bass&Treble / Graphic Equalizer)	音调控制 (低音&高音/图示均衡器)	Bass&Treble	Bass&Treble	Bass&Treble	Bass&Treble
Special sound effect (AVL / WIDE / Pseudo / ...)	特殊的声效果 (AVL/WIDE/Pseudo)	AVL	AVL	AVL	AVL
Surround system (Dolby / VD / SRS / BBE / ...)	环绕声系统 (Dolby / VD / SRS / BBE / ...)	Surround	Surround	Surround	Surround
Sound control (Volume , Balance , Mute)	声音控制 (音量、平衡、静音)	Volume,Balance,Mute	Volume,Balance	Volume,Balance	Volume,Balance,Mute
Sound presets (User/Speech/News/Standard)	声音设置 (用户模式/演讲模式/新闻模式/标准模式)	Standard/Music/News/Fil	Standard/Music/	Standard/Music/	Standard/Music/Ne
Headphone volume control (Separated / linked)	耳机声音控制 (独立的/关联的)	LINKED	LINKED	LINKED	LINKED
Sound quality (High / Mid / Low)	声音质量 (高/中/低)	LOW	LOW	LOW	LOW
Reception and Decoding capability	接收和解码能力				
RF range (ATV)	RF范围 (ATV)	45MHz ~ 860MHz	45MHz ~ 860MHz	45MHz ~ 860MHz	45MHz ~ 860MHz
RF range (DTV)	RF范围 (DTV)	45MHz ~ 860MHz	45MHz ~ 860MHz	45MHz ~ 860MHz	45MHz ~ 860MHz
Color System (PAL/SECAM/NTSC/PAL M,N)	彩色制式 (PAL/SECAM/NTSC/PAL M,N)	PAL/NTSC/SECAM	PAL/SECAM	NTSC-M,PAL-M, N	NTSC-M,PAL-M, N
Audio Standard (B/G/H/D/K/K'/I/L/L')	音频标准 (B/G/H/D/K/K'/I/L/L')	DK/I/BG/M	DK/I/BG/M	M/N	M/N
Stereo audio system (Nicam,MTS,A2,...)	立体音频系统(Nicam,MTS,A2,...)	NICAM/A2	NICAM/A2	BTSC	BTSC
Video standard NTSC 3.58 / 4.43 (AV)/PAL 60	视频标准 NTSC 3.58 / 4.43 (AV)/PAL 60	NTSC3.58/4.43,PAL50/60	NTSC3.58/4.43,PAL50/60	NTSC3.58/4.43,PAL50/60	NTSC3.58/4.43,PAL50/60

DTV SD support (DVB-T/S/C , ATSC , QAM , ...)	数字标清支持(DVB-T/S/C , ATSC , QAM , ...)	No	DVB-T/DVB-T2	No	ISDB-T
DTV HD Support	数字高清支持	No	No	No	No
MHEG5	MHEG5	No	No	No	No
GINGA	GINGA	No	No	No	No
HD capability with YPbPr	分量高清解码能力	YES (720p, 1080i, 50/60/480i/1280x1024 60Hz)	YES (720p, 1080i, 1080i)	YES (720p, 1080i, 1080i)	YES (720p, 1080i, 1080i)
PC capability (up to maximum format)	PC通道解码能力（最大范围的格式）	1280x1024 60Hz	1280x1024	1280x1024	1280x1024 60Hz
HDMI capability (AV/PC Format)	HDMI解码能力（AV/PC 格式）	AV/PC	AV/PC	AV/PC	AV/PC
Compatible video format if DVD/USB:	USB的视频支持格式：DviX/VCD/SVCD/JPEG/AVI/MPEG2/WMV- HD/SD	MPEG-4(H.264AVC Lv3.0/4.0) /	MPEG-4(H.264 AVC	MPEG-4(H.264 AVC	MPEG-4(H.264A VC
Compatible audio format if DVD/USB:	USB的音频支持格式：DviX/VCD/SVCD/JPEG/AVI	MPEG-1 Layer I / II	MPEG-1 Layer	MPEG-1 Layer	MPEG-1 Layer I /
Playable Discs (CD/CD-R(RW)/CD-ROM/DVD+R/+RW/-R/-	可播放的Discs (CD/CD-R(RW)/CD-ROM/DVD+R/+RW/-R/-	No	No	No	No
Card reader format compatibility	读卡支持的格式	No	No	No	No
Macrovision	模拟CPS	No	No	No	No
PVR	可录	No	YES	No	YES
TV 3D feature	3D功能				
PR	偏光式	NO	NO	NO	NO
SG	快门式	No	No	No	No
IPTV(Network)	网络功能				
Web browser	浏览器	No	No	No	No
Netflix	Netflix	No	No	No	No
Youtube	Youtube	No	No	No	No
Facebook	Facebook	No	No	No	No
Terra	Terra	No	No	No	No
Twitter	Twitter	No	No	No	No
Picasa	Picasa	No	No	No	No
WiFi	无线网络	No	No	No	No
User convenience	用户适用性				

OSD Language*	OSD 语言	Optional OSD languages:English/Russian/Arabic/French/Hebrew/Thai/Vietnamese/Turkish/Spanish/Portuguese/Indonesia/	Optional OSD languages:English/Russian/Arabic/French/Hebrew/Thai/Vietnamese/Turkish/Spanish/Portuguese/Indonesia/	Optional OSD languages:English/French/Spanish/Portuguese	Optional OSD languages:English/French/Spanish/Portuguese
OSD Positioning	OSD定位	Low-class	Low-class	Low-class	Low-class
OSD Transparency Adjust	OSD 透明度调整	No	No	No	No
OSD Timeout Adjust	菜单消逝时间调整	15s	15s	15s	15s
Customer Brand name(LOGO)	客户品牌LOGO	OPTION	OPTION	OPTION	OPTION
IB languages	IB语言	English	English	English	English
ATV Program Numbers (example: 99+3AV input)	ATV 频道数	200	100	181	181
DTV Program Numbers	DTV 频道数	370	370	370	370
Program edit (naming , sorting , skip , swap)	节目编辑 (名称、排序、跳跃、交换)	skip	skip	skip	skip
Auto Naming/Auto Sorting	自动命名/自动排序	No	No	No	No
TV Guide(DTV EPG)	电视节目指南	No	YES(Only for	No	YES(Only for
Favorite programs	喜爱节目	No	No	No	No
Number of buttons on cabinet (Power; Vol+/-; Pr+/-, Menu)	按键数 (电源、音量+/-、节目+/-、菜单)	6	6	6	6
Main switch button (yes/no)	电源开关按钮	NO	NO	NO	NO
CCD (Closed Caption)/V-CHIP	隐藏的带有解释意味字幕/V-CHIP	No	No	CCD	CCD
Text Standard: (Top, FLOF,,,))	文字标准 (Top, FLOF,,,))	YES	YES	No	No
Teletext Level: 2.5 / 1.5	图文水平	1.5	1.5	No	No
Pages for teletext	图文的页数	1000	1000	No	No
Teletext character sets ****	图文字母设置	Yes	Yes	No	No
DVB-T/T2 teletext	DVB-T/T2 下的图文	No	No	No	No
Real clock	实时时钟	No	No	No	No
Sleep timer	睡眠时间	Yes	Yes	Yes	Yes

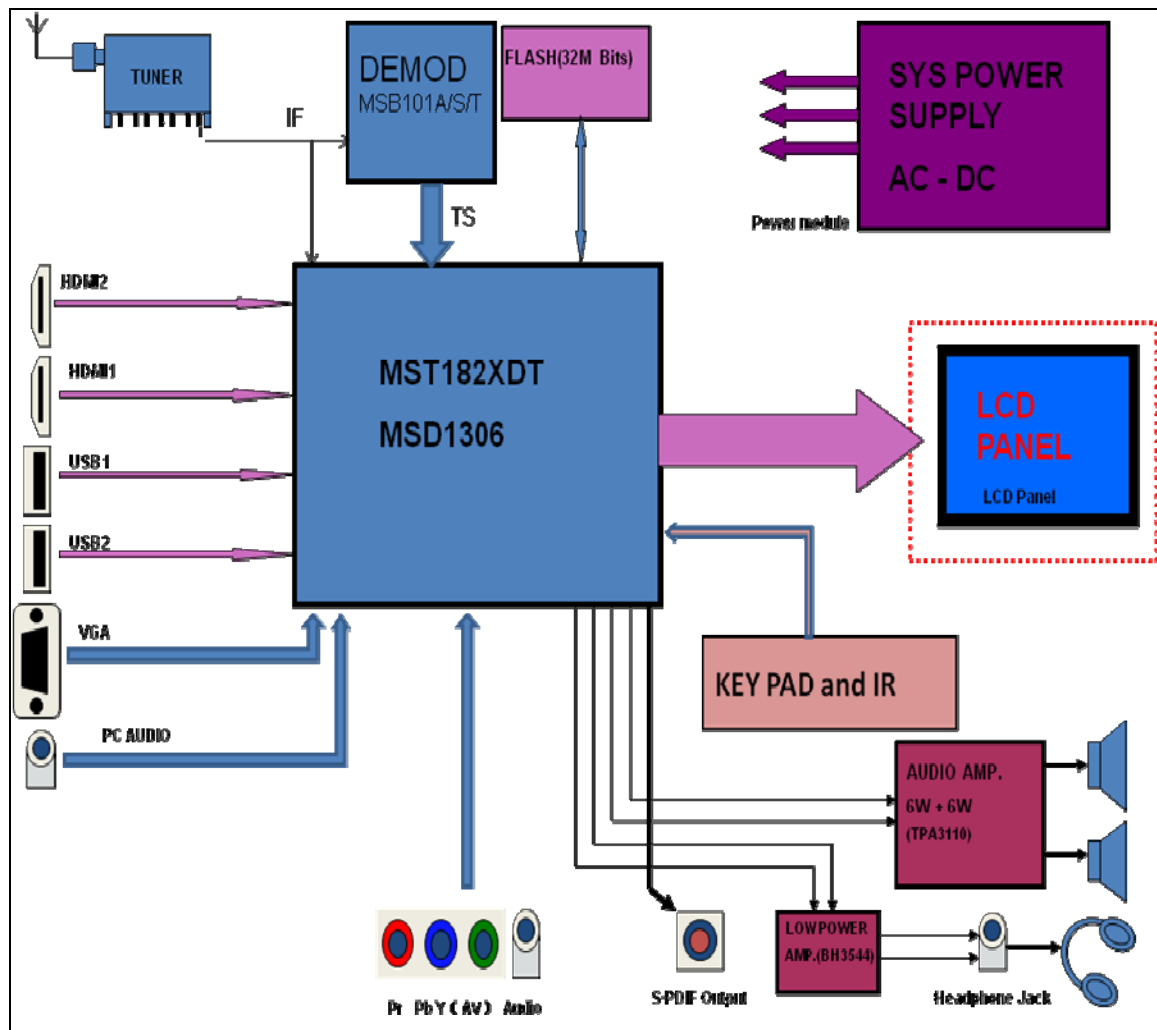
Timer	计时器	No	No	No	No
Parent Control -Source and Channel lock (Input code for certain channel)	父母控制-信源及频道锁（对某些特定的频道输入密码）	No	No	No	No
Parent Control - Child lock (set the lock of the keyboard, only the RCU can control the TV)	父母控制-童锁（遥控器锁住、只是部分按键可以控制电视）	Yes	Yes	Yes	Yes
Parent Control - Kid pass (preset the ontime, channel for each day of the week)	父母控制-每周固定某个时段开通频道	No	No	No	No
Parent Control - Channel lock (For digital transmission and	父母控制-频道锁（特别过滤某些节目）	No	No	No	No
Calendar / Games	日历及游戏	--/yes	--/yes	--/yes	--/yes
No program auto switch off	无信号自动关机	Yes	Yes	Yes	Yes
Hotel mode (Y/N)	酒店模式（Y/N）	Yes(in factory	Yes(in factory	Yes(in factory	Yes(in factory
DVD/BD module player (No/slot/tray)	DVD 播放器	No	No	No	No
Tuner FM (yes/No)	广播接收	No	No	No	No
software download(RS232/CI/USB/OAD/	软件下载 (RS232/CI/USB/OAD)	USB	USB	USB	USB
Factory reset	工厂设置	Yes	Yes	Yes	Yes
Screen saver	屏幕保护	No	No	No	No
Blue Back	蓝底	Yes	Yes	Yes	Yes
LED indicator(Power on/Standby)	LED 指示灯（开机/待机）	Green/Red	Green/Red	Green/Red	Green/Red
Connectors -Rear	端子-后出				
RF Input (Antenna): Air/ Cable/ 2in1	RF输入（天线）：有线/无线/2合1	2 in1	2 in1	2 in1	Air/Cable
Scart : CVBS) in&out / RGB/ S-VIDEO	Scart : CVBS in&out / RGB / S-VIDEO	No	No	No	No
CINCH video in / out（AV1）	CINCH video in / out（AV1）	yes/--	yes/--	yes/--	yes/--
CINCH audio in / out (No volumn control on Audio	CINCH audio in / out（音频输出无音量控制/can be	yes/--	yes/--	yes/--	yes/--
S-video in	S端子输入	No	No	No	No
Component Video Input (YCrCb/YPrPb)	分量视频输入	yes	yes	yes	yes
Component Audio Input (YCrCb/YPrPb)	分量音频输入	yes(share with CINCH	yes(share with	yes(share with	yes(share with
PC(VGA) in / Audio L/R in / Jack audio in 3.5mm	PC(VGA) 输入/左右声道输入/3.5耳机输入	Jack audio in 3.5mm	Jack audio in 3.5mm	Jack audio in 3.5mm	Jack audio in 3.5mm
HDMI(1/2/3/4)	HDMI(1/2/3/4)	2	2	2	2
DVI	DVI	No	No	No	No

Audio input for DVI	DVI 音频输入	Share with VGA(3.5mm)	Share with	Share with	Share with VGA(3.5m
CINCH subwoofer out / Coaxial out (S/PDIF)	CINCH subwoofer out / Coaxial out (S/PDIF)	no	no	no	no
Headphone output connector (mm)	耳机输出接口	No	No	No	No
RS232 (Y/N , VGA or DB9 port ...)	RS232 (Y/N , VGA or DB9 port ...)	VGA	VGA	VGA	VGA
Card Readers	读卡器	No	No	No	No
USB slot (No/1.1/2/3/4)	USB接口数	no	no	no	no
DVB-CI (common interface CI+)	DVB-CI (公共接口,CI+)	No	No	No	No
External power converter input	外部电源转换输入	No	No	No	No
Connectors -Side	端子-侧置				
CINCH video in / out (AV1)	CINCH video in / out (AV1)	no	no	no	no
CINCH audio in / out (No volumpe control on Audio	CINCH audio in / out (音 频输出无音量控制/can be	no	no	no	no
AV-OUT	AV-OUT	No video out;with audio out	No video out;with	No video out;with	No video out;with audio out
Component Video Input (YCrCb/YPrPb)	分量视频输入	no	no	no	no
Component Audio Input (YCrCb/YPrPb)	分量音频输入	no	no	no	no
Headphone output connector (dia.mm)	耳机输出端子	3.5mm	3.5mm	3.5mm	3.5mm
CINCH subwoofer out / Coaxial out (S/PDIF)	CINCH subwoofer out / Coaxial out (S/PDIF)	No	No	No	No
USB slot (No/1.1/2/3/4)	USB 接口数	1	1	1	1
DVB-CI (common interface CI+)	DVB-CI (公共接口,CI+)	No	No	No	No
DLNA	DLNA	No	No	No	No
UI/RC	UI和遥控				
UI design spec.	UI设计标准	skyworth standard	skywort h standar	skywort h standar	skyworth standard
UI design (font/pixel, 2D/3D graphic engine..)	UI设计(font/pixel, 2D/3D graphic engine..)	2D	2D	2D	2D
RC Model	RC 模式	TBD	TBD	TBD	TBD
RC system	RC系统	TOSHIBA system	TOSHIB A system	TOSHIB A system	TOSHIBA system
RC # of keys	遥控器按键数	TBD	TBD	TBD	TBD
Accessories included	包含附件				
Carton (English/French/Spanish)	卡通箱语言 (英语\法语\西 班牙语)				

IB	IB				
Circuit diagram	电路图	No	No	No	No
Batteries	电池	Yes	Yes	Yes	Yes
Product registration Card	产品注册卡				
AC Cable Length	AC线长	180MM	180MM	180MM	180MM
Audio Cord (Jack 3.5mm)	音频线 (3.5MM Jack)	Yes	Yes	Yes	Yes
VGA(PC) Cord	VGA(PC)线	No	No	No	No
Wallmount frame	挂墙支架				
Antenna Cable	天线	No	No	No	No
6 in 1(YPbPr & CVBS) cable adapter	6合1 (分量和复合) 线	No	No	No	No
General Data	通用数据				
Size (W x H x D, with stand) in mm	大小 (含底座)				
Size (W x H x D, without stand) in mm	大小 (未含底座)				
Package Size (W x H x D, without stand) in mm	包装尺寸 (未含底座)				
Net Weight in kg	净重				
Gross Weight in Kg	毛重				
Design / Mechanical	结构设计				
Wallmount VESA compatible (standard reference)	视频电子设备标准协会挂墙孔的兼容性 (参考标准)				
Adaptor for VESA wallmount compatibility (accessory ref)	视频电子设备标准协会挂墙孔的兼容性 (参考附件)				
Desktop Stand (included/optionnal + ref/No)	底座 (标配或可选+参考或无)				
Panel Tilt (Fowards/Backwards/Rotation)	屏体倾斜 (前倾、后倾/前后旋转)				
Swivel function desktop stand (yes/No) + motorized?	旋转底座 (是/否) + 电动底座				
Docking station (yes/No)	扩展底座 (是否有)				
Floor Stand (included/optionnal + ref/No)	落地底座 (包含或可选)				
Glass shield (yes/No)	是否为封屏结构				
Finish on Front	底座的表面处理方案				
Finish on side	底座的表面处理方案				
Finish on back	边框的表面处理方案				
Finish on stand	底座的表面处理方案				
number of colors on carton box	卡通箱上有几种颜色				

Brand logo	品牌LOGO				
Other logo	其它LOGO	TBD	TBD	TBD	TBD
External AC/DC Power with DC power cord (yes/No)	外接AC To DC				
Handle (yes/No)	是否有手柄				
Detachable speaker (yes/No)	是否有可粘贴喇叭				
Rating Label langages	标签语言	TBD	TBD	TBD	TBD
USB media support format(refer. Usb media list)	USB支持媒体格式（参考USB媒体支持格式表）				
Issued by: Han Shixin 2013/2/25 Checked by: Approved by: Date:					

8M47E Block Diagram:



List of key part:

No.	Name	Position	Type	P/N
1	IC	U14	MSD1306XSET	475C-M13060-1560
2		U16	MSB101T	475C-M10102-0480
3		U3	TDA18274HD	4706-T18270-0480
4		U7	MP1495	476A-M14950-0080
5		U2	TPA3110D2	4722-T31100-0280
6		U100	GD25Q32B	47F2-G25320-0080
7		U13	BH3544	4740-B35440-0080
8		U30	G5250F2T1	474R-G52500-0050
9		U31		
10		U53	SY8086	47EC-S80860-0050
11		U10	ME9435A	47D9-M94350-0080
12		U12	AS1117L-3.3	47B6-A11170-03
13		U8		
14		U4	AS1117L-1.8	47B6-A11172-03

MSD1306XSET:

Attention Please: Under the technology license agreement between MStar and Dolby/SRS/BBE/DivX/Microsoft/QSound, MStar is obliged not to provide samples that incorporate Dolby/SRS/BBE/DivX/Microsoft/QSound technology to any third party who is not a qualified licensee of Dolby/SRS/BBE/DivX/Microsoft/QSound respectively.

FEATURES

MSD1306XSET is a highly integrated single chip solution for analog TV systems supporting TV channel and various multi-media decoding

Key features includes,

1. Analog TV Front-End Demodulator
2. Multi-Standard A/V Format Decoder
3. The MStarACE-6 Video Processor
4. Home Theater Sound Processor
5. Embedded Memory for optimized BOM cost
6. Transport-Stream Input for Extended DTV System
7. Peripherals and Low-Power Standby Mode

■ High Performance Micro-processor

- High speed/performance 32-bit RISC CPU
- One full duplex UART
- Supports USB and ISP programming
- DMA Engine

■ MPEG-2 Video Decoder

- ISO/IEC 13818-2 MPEG-2 video
- Automatic frame rate conversion
- Supports resolution up to HDTV (720p) and SDTV

■ MPEG-4 Video Decoder

- ISO/IEC 14496-2 MPEG-4 ASP video decoding
- Supports resolutions up to HDTV (720p@30fps)
- Supports DivX¹ Home Theater ^{Optional}
- Supports VC-1 ^{Optional}, FLV video format decoding

■ H.264 Decoder

- ITU-T H.264, ISO/IEC 14496-10 (main and high profile up to level 4.1) video decoding
- Supports resolutions for all DVB, ATSC, HDTV, DVD and VCD
- Supports resolution up to 720p@30fps
- Supports CABAC and CAVLC stream types

- Processing of ES and PES streams, extraction and provision of time stamps
- Up to 40 Mbits bitrate (Blu-ray spec.)

■ RealMedia Decoder ^{Optional}

- Supports maximum resolution up to 1080p@30fps
- Supports RV8, RV9, RV10, RA8-LBR and HE-AAC decoders
- Supports file formats with RM and RMVB
- Supports Picture Re-sampling
- Supports in-loop de-block for B-frame

■ AVS Video Decoder ^{Optional}

- Jizhun profile, level 6.0
- Max. resolutions up to 1920x1080@30fps
- Supports bit rate up to 20Mbps
- Supports TSP and file mode input

■ Hardware JPEG

- Supports sequential mode, single scan
- Supports both color and grayscale pictures
- Following the file header scan the hardware decoder fully handles the decode process
- Supports programmable Region of Interest (ROI)
- Supports formats: 422/411/420/444/422T
- Supports scaling down ratios: 1/2, 1/4, 1/8
- Supports picture rotation

■ NTSC/PAL/SECAM Video Decoder

- Supports NTSC-M, NTSC-J, NTSC-4.43, PAL (B, D, G, H, M, N, I, Nc), and SECAM standards
- Automatic standard detection
- Motion adaptive 3D comb filter
- Three configurable CVBS & Y/C S-video inputs
- Supports Teletext, V-chip and SCTE

■ Multi-Standard TV Sound Processor

- SIF audio decoding
- Supports BTSC/A2/EIA-J demodulation
- Supports NICAM/FM/AM demodulation
- Supports MTS Mode Mono/Stereo/SAP in BTSC/EIA-J mode
- Supports Mono/Stereo/Dual in A2/NICAM mode

¹ Trademark of DivX, Inc.

^{Optional} Please contact MStar sales for the correct suffix.

- Built-in audio sampling rate conversion (SRC)
- Audio processing for loudspeaker channel, including volume, balance, mute, tone, EQ, virtual stereo/surround and treble/bass controls
- Advanced sound processing options available, for example: Dolby¹, SRS², BBE³, QSound⁴
- Supports digital audio format decoding:
 - MPEG-1, MPEG-2 (Layer I/II), MP3, Dolby Digital (AC-3) ^{Optional}, AAC-LC, WMA
 - Dolby Digital Plus ^{Optional}
- **Audio Interface**
 - Four L/R audio line-inputs
 - Two L/R outputs for main speakers and additional line-outputs
 - I2S digital audio input & output
 - S/PDIF digital audio output
 - HDMI audio channel processing
 - Programmable delay for audio/video synchronization
- **Analog RGB Compliant Input Ports**
 - Two analog ports support up to 1080P
 - Supports PC RGB input up to SXGA@75Hz
 - Supports HDTV RGB/YpPr/YCbCr
 - Supports Composite Sync and SOG Sync-on-Green
 - Automatic color calibration
 - AV-link support
- **Analogue RGB Auto-Configuration & Detection**
 - Auto input signal format and mode detection
 - Auto-tuning function including phasing, positioning, offset, gain, and jitter detection
 - Sync Detection for H/V Sync
- **DVI/HDCP/HDMI Compliant Input Ports**
 - Two HDMI/DVI Input ports
 - HDMI 1.3/1.4 Compliant
 - HDCP 1.2 Compliant
 - 225MHz @ 1080P 60Hz input with 12-bit Deep-color support
 - Supports CEC
- Supports HDMI 3D format input
- Supports HDMI 4Kx2K input
- Supports HDMI ARC
- Single link DVI 1.0 compliant
- Robust receiver with excellent long-cable support
- **MStar Advanced Color Engine (MStarACE-5)**
 - 10-bit Data Processing Path
 - Fully programmable multi-function scaling engine
 - Nonlinear video scaling supports various modes including Panorama
 - Supports dynamic scaling for RM, VC-1 ^{Optional}
 - Advanced video processing engine
 - Mstar Ultra-Clear video deinterlacer with edge and artifact smoother
 - Mstar Ultra-Clear Noise Reduction Engine
 - Edge-oriented deinterlacer with edge and artifact smoother
 - Automatic 3:2/2:2/M:N pull-down detection and recovery
 - 3D noise reduction for lousy air/cable input
 - Motion adaptive SNR
 - Arbitrary frame rate conversion
 - MStar Professional Picture Enhancement:
 - Dynamic brilliant and fresh color
 - Dynamic *Blue Stretch*
 - Intensified contrast and details
 - Dynamic *Vivid Skin*
 - Dynamic sharpened Luma/Chroma edges
 - Global and local dynamic depth of field perception
 - Accurate and independent color control
 - Supports sRGB and xvYCC color processing
 - Supports HDMI 1.3 deep color format
 - Programmable 12-bit RGB gamma CLUT

■ Output Interface

- Single/dual link 10-bit Mini-LVDS output
- Supports panel resolution up to Full-HD (1920x1080) @ 60Hz
- Programmable TCON control signals generation
- Supports TH/TL format
- Supports dithering options to 6/8-bit output
- Spread spectrum output for EMI suppression
- Supports 60Hz 3D passive panel (Line alternative mode)

■ CVBS Video Outputs

- Supports CVBS bypass output

■ 3D-like Graphics Engine

- Hardware Graphics Engine for responsive interactive applications
- Supports point draw, line draw, rectangle draw/fill, text draw and trapezoid draw
- BitBlt, stretch BitBlt, trapezoid BitBlt, mirror BitBlt and rotate BitBlt
- Supports alpha and destination alpha compare
- Raster Operation (ROP)
- Support Porter-Duff

■ VIF Demodulator

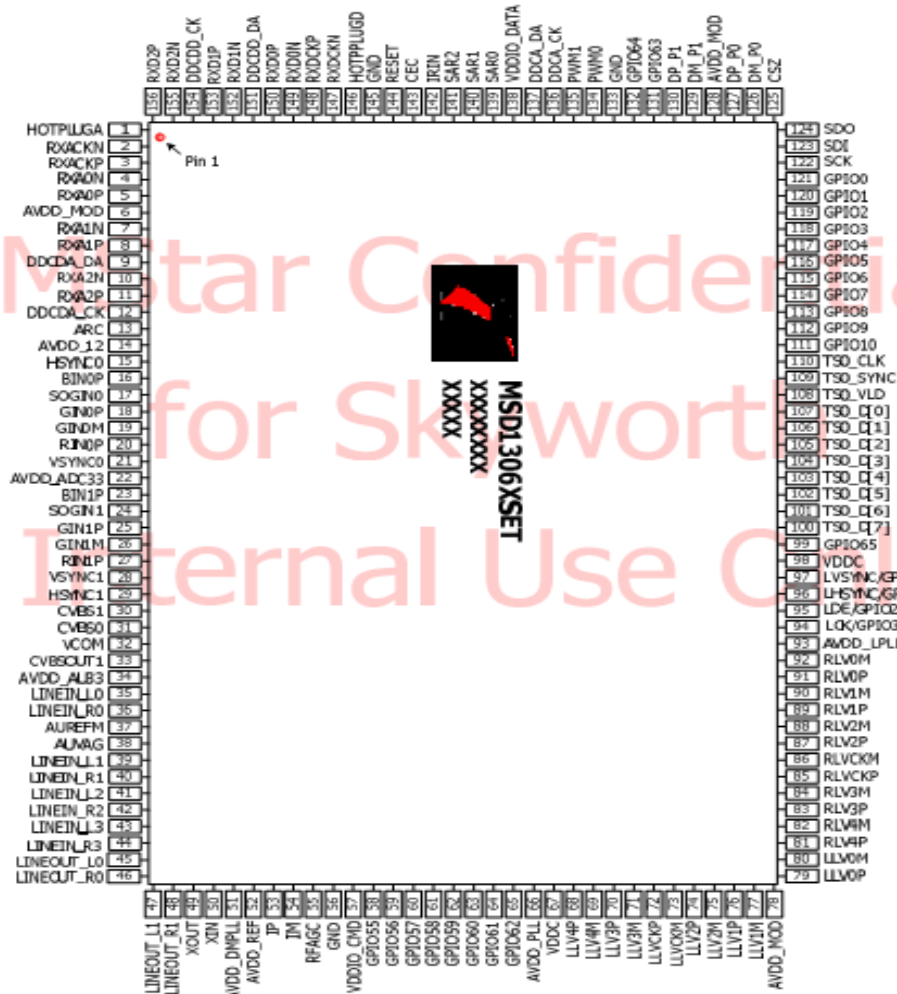
- Compliant with NTSC M/N, PAL B, G/H, I, D/K, SECAM L/L' standards
- Digital low IF architecture
- Audio/Video dual-path processor
- Stepped-gain PGA with 25 dB tuning range and 1 dB tuning resolution
- Maximum IF gain of 37 dB
- Programmable TOP to accommodate different tuner gain and SAW filter insertion loss to optimize noise and linearity performance
- Multi-standard processing with dual SAW or sawless
- Supports silicon tuner low IF output architecture

■ Connectivity

- Two USB 2.0 host ports
- USB architecture designed for efficient support of external storage devices in conjunction with off air broadcasting
- One DisplayPort input compliant to DP1.2a specifications

■ Miscellaneous

- Bootable SPI interface with serial flash support
- Lower power standby mode
- 156-pin EPLQFP package
- Operating Voltages: 1.26V (core), 1.8V (DDR2) and 3.3V (I/O and analog)



Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units
3.3V Supply Voltages	$V_{DD_3.3}$	3.14		3.46	V
1.8V Supply Voltages	$V_{DD_1.8}$	1.70		1.90	V
1.26V Supply Voltages	$V_{DD_1.26}$	1.20		1.32	V
Ambient Operating Temperature	T_A	0		70	°C
Junction Temperature	T_J			125	°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units
3.3V Supply Voltages	$V_{DD_3.3}$		3.6	V
1.8V Supply Voltages	$V_{DD_1.8}$		1.99	V
1.26V Supply Voltages	$V_{DD_1.26}$		1.32	V
Input Voltage (5V tolerant inputs)	V_{IN5VM}		5.0	V
Input Voltage (non 5V tolerant inputs)	V_{IN}		$V_{DD_3.3}$	V
Storage Temperature	T_{STG}	-40	150	°C

Note: Stresses above those listed in Absolute Maximum Ratings may cause permanent damage to the device. This is a stress rating only and does not imply functional operation of the device. Exposure to absolute maximum ratings for extended periods may affect device reliability.

MSB101T:

FEATURES

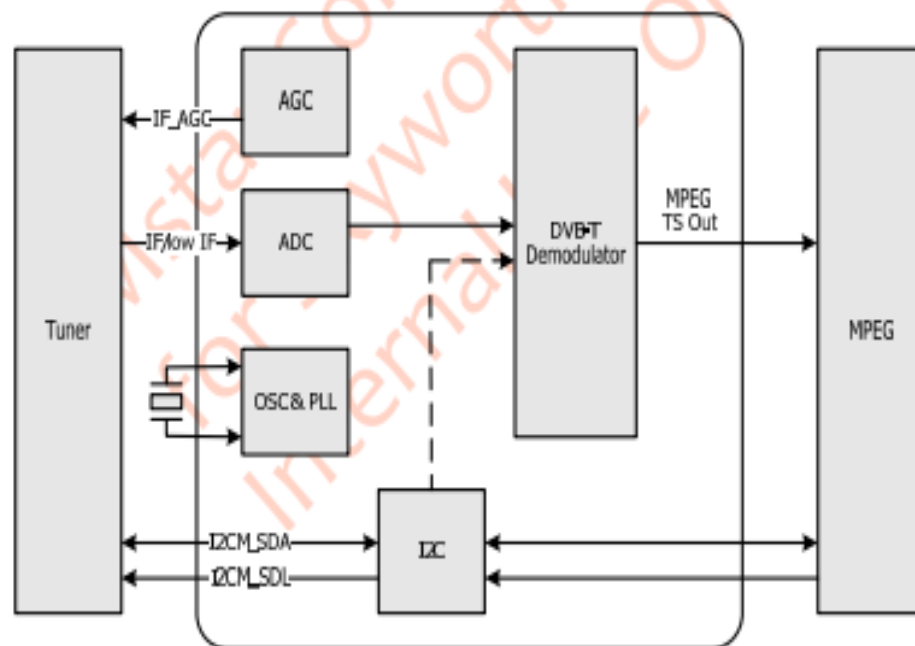
■ Integrated DVB-T Receiver

- Compliant with DVB-T (ETSI EN 300 744)
- Supports all guard intervals (1/32 to 1/4)
- Supports FFT modes 2K and 8K
- Supports all constellations (QPSK, 16-QAM, 64-QAM,)
- Nordig 2.2.1, D-Book 7.0
- Automatic co-channel and adjacent channel interference suppression
- All digital demodulation and timing recovery loops for tracking frequency and clock offset
- CCI and ACI rejection capability
- Impulse-Noise suppression
- Advanced performance for SFN networks

■ Miscellaneous

- Accept IF, low IF inputs in 6, 7, 8MHz channel bandwidths
- Configurable parallel/serial MPEG-2 transport stream interface
- Fast channel acquisition and auto-scan time
- Clock generation from a single crystal
- On chip MCU to reduce host control overhead
- Supports I2C interface with bypass mode
- 48 pin LQFP package

BLOCK DIAGRAM



ELECTRICAL SPECIFICATIONS

Analog Interface Characteristics

Parameter	Min	Typ	Max	Units
Demod ADC INPUT				
Input Signal Full Scale Range (AC-coupled Differential peak-to-peak)		1		V _{dpp}
SAR ADC Input	0		V _{VDD_33}	V
DIGITAL INPUTS				
Input Voltage, High (V _{IH})	2.5			V
Input Voltage, Low (V _{IL})			0.8	V
Input Current, High (I _{IH})			-1.0	μA
Input Current, Low (I _{IL})			1.0	μA
Input Capacitance		5		pF
DIGITAL OUTPUTS				
Output Voltage, High (V _{OH})	V _{VDD_33} -0.1			V
Output Voltage, Low (V _{OL})			0.1	V

Note: Specifications subject to change without notice.

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Units
3.3V Supply Voltages	V _{VDD_33}	3.14	3.3	3.46	V
1.2V Supply Voltages	V _{VDD_12}	1.14	1.2	1.26	V
Ambient Operating Temperature	T _A	0		70	°C
Junction Temperature	T _J			125	°C

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units
3.3V Supply Voltages	V _{VDD_33}		3.6	V
1.2V Supply Voltages	V _{VDD_12}		1.32	V
Input Voltage (5V tolerant inputs)	V _{IN(5Vtol)}		5.0	V
Input Voltage (non 5V tolerant inputs)	V _{IN}		V _{VDD_33}	V
Storage Temperature	T _{STG}	-40	150	°C

Note: Stresses above those listed in Absolute Maximum Ratings may cause permanent damage to the device. This is a stress rating only and does not imply functional operation of the device. Exposure to absolute maximum ratings for extended periods may affect device reliability.

TDA18274HD:

1. General description

The TDA18274 is a high performance silicon tuner designed for terrestrial and cable TV reception for both analog and digital signals.

The TDA18274 supports all analog and digital TV standards and delivers a Low IF (LIF) signal to a demodulator for analog TV and/or a channel demodulator for digital TV.

The TDA18274 facilitates TV design by:

- Allowing on-board integration
- Drastically reducing the tuner Bill Of Material (BOM)
- Providing flexibility in system solution development
- Allowing straightforward and cost effective multi-tuner applications optimization

2. Features and benefits

- Single 3.3 V supply voltage
 - Worldwide multistandard terrestrial and cable capabilities
 - Alignment free
 - RoHS compliant
 - I²C-bus interface compatible with 3.3 V microcontrollers
 - Crystal oscillator output buffer as well as Slave Tuner Output (STO) for multiple tuner applications
 - Fully integrated oscillators
 - Fully integrated RF selectivity (no need for RF tracking filters coils) (TDA18274HD only)
 - 2 programmable General-Purpose Outputs (GPO)
 - 1.7 MHz, 6 MHz, 7 MHz, 8 MHz and 10 MHz channel bandwidths
 - LIF channel center frequency output ranging from 0.8 MHz to 7.5 MHz
 - Fully integrated IF selectivity; eliminating the need for external SAW filters
 - Large flexibility in the IF filtering stage to ease the matching with various demodulators circuits
 - Single-ended RF input, no need for external balun
 - Up to 1 GHz RF input capability
 - Excellent return loss compatible with cable requirements
 - Power Level Detector (PLD) embedded
 - Integrated gain control
 - Self-AGC synchronization mode (VSync) for analog reception
-
- Very fast tuning time
 - Strong immunity to LTE interferers in the digital dividend bandwidth
 - Strong immunity to WLAN interferers

3. Applications

- Hybrid (analog and digital) for TV, STB, DVD-R and PC TV applications
- All analog (PAL, SECAM, NTSC) and digital (DVB-T/T2/C/C2/H, DTMB, ATSC, ISDB-T, J.83B) standards supported
- Targeted specification (based on channel decoder or demodulator capabilities):
 - ◆ CENELEC EN55020 (EU)
 - ◆ NorDig 2.2 (EU TV)
 - ◆ A74-2010 (US)
 - ◆ C-BOOK (EU)
 - ◆ D-BOOK 7 (UK)
 - ◆ ARIB STD-B21 (Japan, Brazil)
 - ◆ OCUR (US)
 - ◆ E-BOOK (EU)

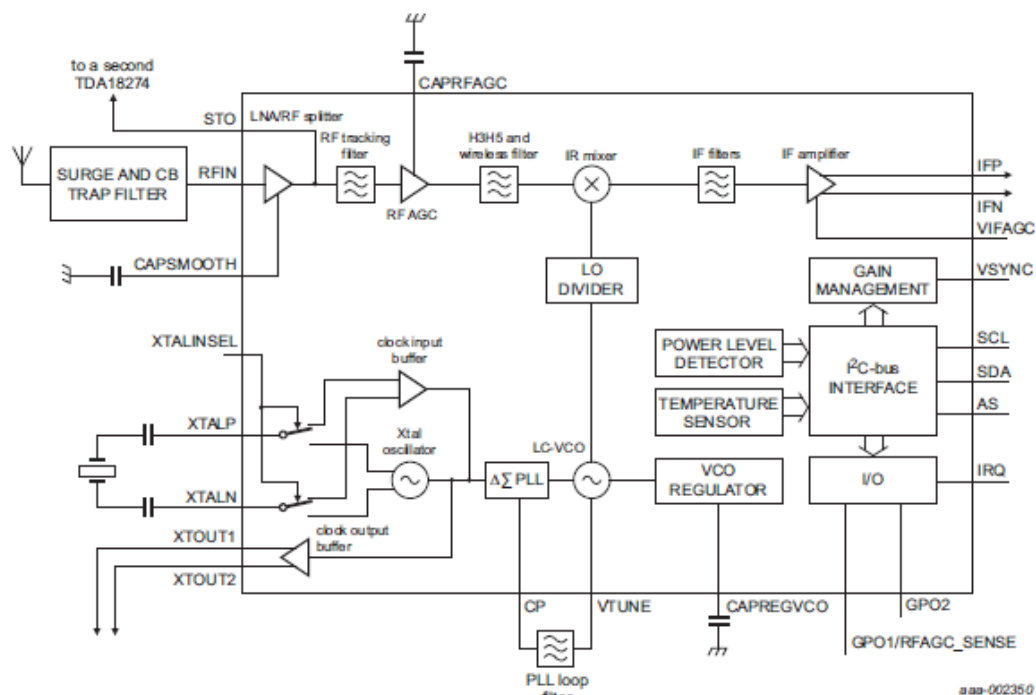
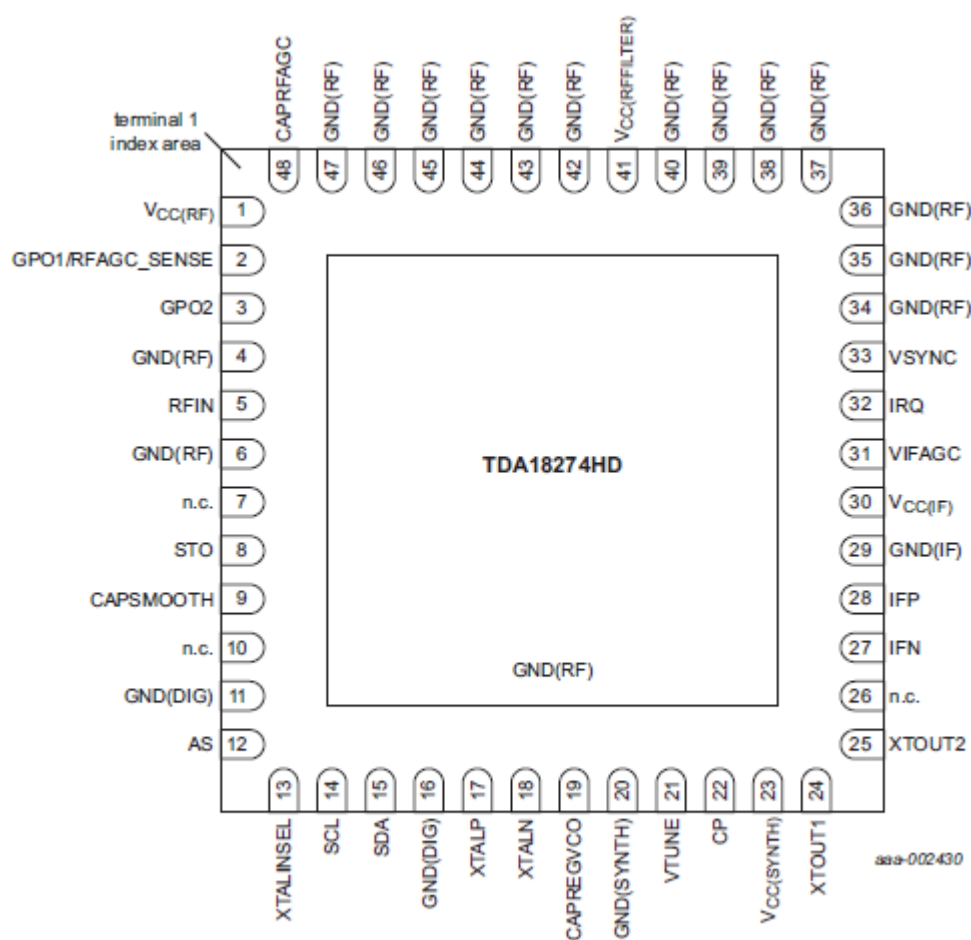


Fig 1. Block diagram



Transparent top view

MP1495:

DESCRIPTION

The MP1495 is a high-frequency, synchronous, rectified, step-down, switch-mode converter with built-in power MOSFETs. It offers a very compact solution to achieve a 3A continuous output current with excellent load and line regulation over a wide input supply range. The MP1495 has synchronous mode operation for higher efficiency over the output current load range.

Current-mode operation provides fast transient response and eases loop stabilization.

Full protection features include over-current protection and thermal shut down.

The MP1495 requires a minimal number of readily-available standard external components, and is available in a space-saving 8-pin TSOT23 package.

FEATURES

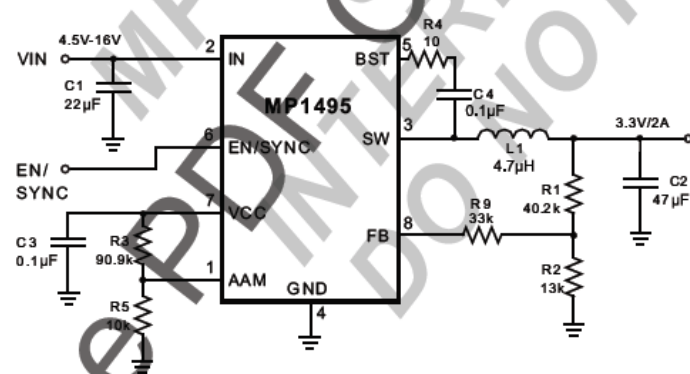
- Wide 4.5V-to-16V Operating Input Range
- 80mΩ/30mΩ Low $R_{DS(ON)}$ Internal Power MOSFETs
- High-Efficiency Synchronous Mode Operation
- Fixed 500kHz Switching Frequency
- Synchronizes to a 200kHz to 2MHz External Clock
- AAM Power-Save Mode
- Internal Soft-Start
- OCP Protection and Hiccup
- Thermal Shutdown
- Output Adjustable from 0.8V
- Available in an 8-pin TSOT-23 package

APPLICATIONS

- Notebook Systems and I/O Power
- Digital Set-Top Boxes
- Flat-Panel Television and Monitors
- Distributed Power Systems

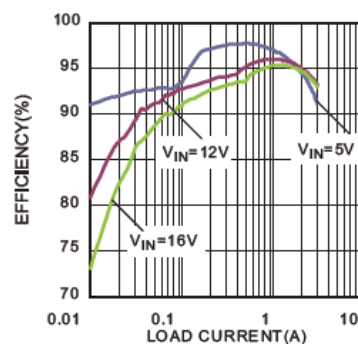
All MPS parts are lead-free and adhere to the RoHS directive. For MPS green status, please visit MPS website under Quality Assurance. "MPS" and "The Future of Analog IC Technology" are Registered Trademarks of Monolithic Power Systems, Inc.

TYPICAL APPLICATION

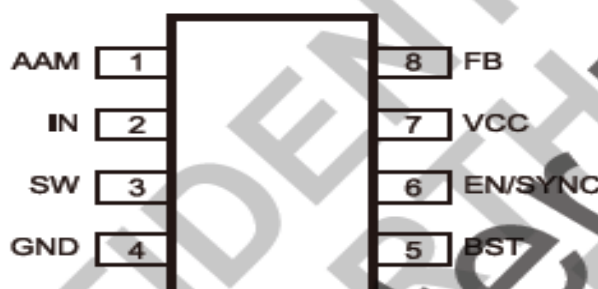


Efficiency vs. Load Current

$V_{IN}=12V$, $V_{OUT}=3.3V$, AAM=0.5V



TOP VIEW

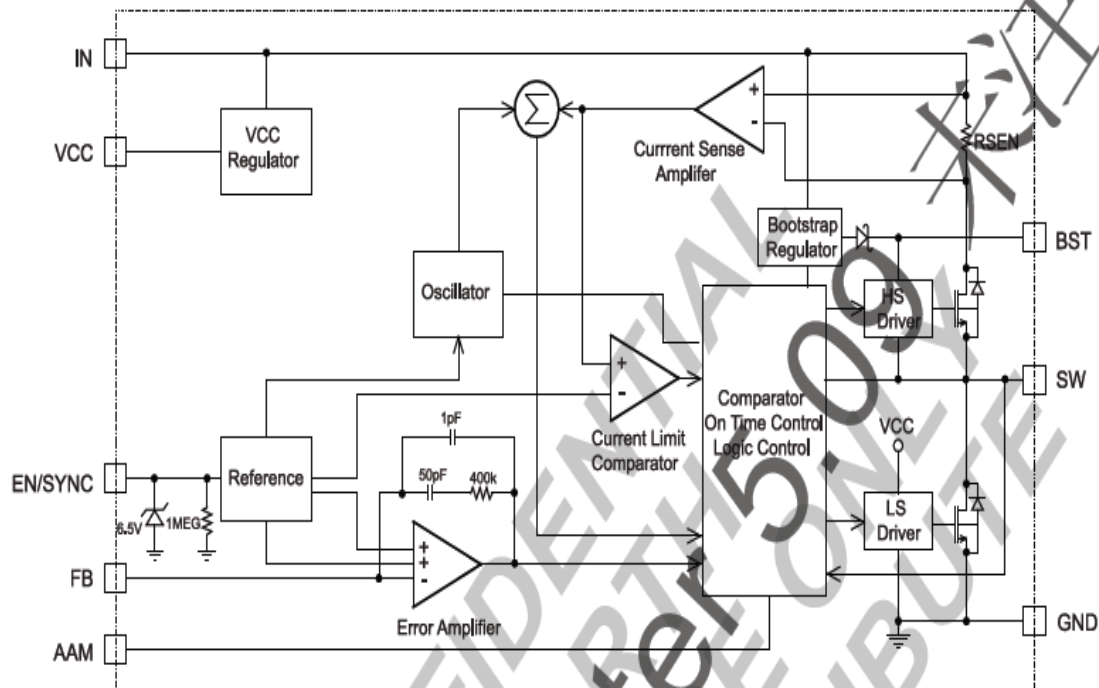


ELECTRICAL CHARACTERISTICS ⁽¹⁾

$V_{IN} = 12V$, $T_A = 25^{\circ}C$, unless otherwise noted.

Parameter	Symbol	Condition	Min	Typ	Max	Units
Supply Current (Shutdown)	I_{IN}	$V_{EN} = 0V$			1	μA
Supply Current (Quiescent)	I_Q	$V_{EN} = 2V$, $V_{FB} = 1V$, $AAM=0.5V$		0.5		mA
HS Switch-ON Resistance	HS_{RDS-ON}	$V_{BST-SW}=5V$		80		m Ω
LS Switch-ON Resistance	LS_{RDS-ON}	$V_{CC} = 5V$		30		m Ω
Switch Leakage	SW_{LKG}	$V_{EN} = 0V$, $V_{SW} = 12V$			1	μA
Current Limit ⁽⁶⁾	I_{LIMIT}	Under 40% Duty Cycle	4.2	5		A
Oscillator Frequency	f_{SW}	$V_{FB}=0.75V$	440	500	580	kHz
Fold-Back Frequency	f_{FB}	$V_{FB}<400mV$		0.25		f_{SW}
Maximum Duty Cycle	D_{MAX}	$V_{FB}=700mV$	90	95		%
Minimum ON Time ⁽⁶⁾	t_{ON_MIN}			60		ns
Sync Frequency Range	f_{SYNC}		0.2		2	MHz
Feedback Voltage	V_{FB}	$T_A = 25^{\circ}C$	791	807	823	mV
		$-40^{\circ}C < T_A < 85^{\circ}C$ ⁽⁷⁾	787	807	827	
Feedback Current	I_{FB}	$V_{FB}=820mV$		10	50	nA
EN Rising Threshold	V_{EN_RISING}		1.2	1.4	1.6	V
EN Falling Threshold	$V_{EN_FALLING}$		1.1	1.25	1.4	V
EN Input Current	I_{EN}	$V_{EN}=2V$		2		μA
		$V_{EN}=0$		0		μA
EN Turn-Off Delay	EN_{td-off}			8		μs
VIN Under-Voltage Lockout Threshold-Rising	$INUV_{Vth}$		3.7	3.9	4.1	V
VIN Under-Voltage Lockout Threshold-Hysteresis	$INUV_{HYS}$			650		mV
VCC Regulator	V_{CC}			5		V
VCC Load Regulation	$I_{CC}=5mA$			3		%
Soft-Start Period	t_{SS}			1.5		ms
Thermal Shutdown ⁽⁸⁾				150		$^{\circ}C$
Thermal Hysteresis ⁽⁸⁾				20		$^{\circ}C$

BLOCK DIAGRAM



TPA3110D2:

FEATURES

- 15-W/ch into an 8- Ω Loads at 10% THD+N From a 16-V Supply
- 10-W/ch into 8- Ω Loads at 10% THD+N From a 13-V Supply
- 30-W into a 4- Ω Mono Load at 10% THD+N From a 16-V Supply
- 90% Efficient Class-D Operation Eliminates Need for Heat Sinks
- Wide Supply Voltage Range Allows Operation from 8 V to 26 V
- Filter-Free Operation
- SpeakerGuard™ Speaker Protection Includes Adjustable Power Limiter plus DC Protection
- Flow Through Pin Out Facilitates Easy Board Layout
- Robust Pin-to-Pin Short Circuit Protection and Thermal Protection with Auto Recovery Option
- Excellent THD+N / Pop-Free Performance
- Four Selectable, Fixed Gain Settings
- Differential Inputs

APPLICATIONS

- Televisions
- Consumer Audio Equipment

DESCRIPTION

The TPA3110D2 is a 15-W (per channel) efficient, Class-D audio power amplifier for driving bridged-tied stereo speakers. Advanced EMI Suppression Technology enables the use of inexpensive ferrite bead filters at the outputs while meeting EMC requirements. SpeakerGuard™ speaker protection circuitry includes an adjustable power limiter and a DC detection circuit. The adjustable power limiter allows the user to set a "virtual" voltage rail lower than the chip supply to limit the amount of current through the speaker. The DC detect circuit measures the frequency and amplitude of the PWM signal and shuts off the output stage if the input capacitors are damaged or shorts exist on the inputs.

The TPA3110D2 can drive stereo speakers as low as 4 Ω . The high efficiency of the TPA3110D2, 90%, eliminates the need for an external heat sink when playing music.

The outputs are also fully protected against shorts to GND, VCC, and output-to-output. The short-circuit protection and thermal protection includes an auto-recovery feature.

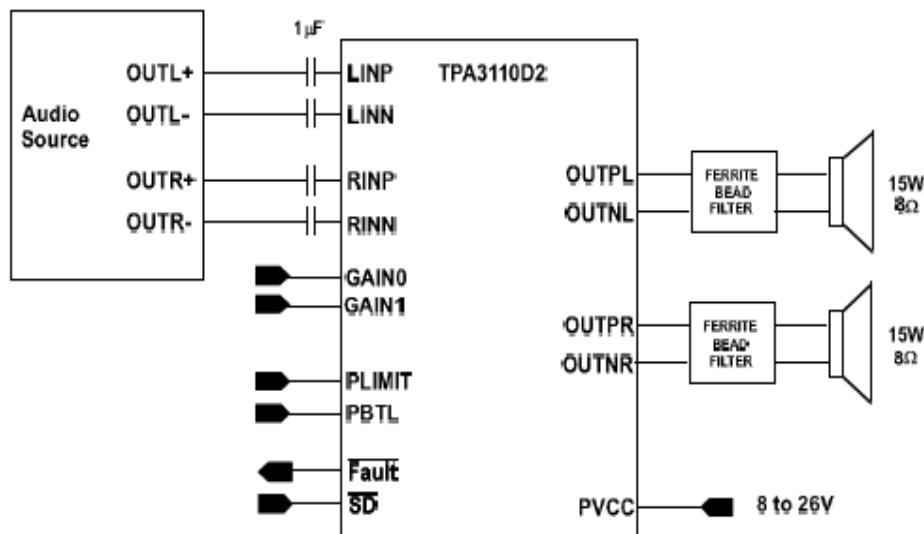


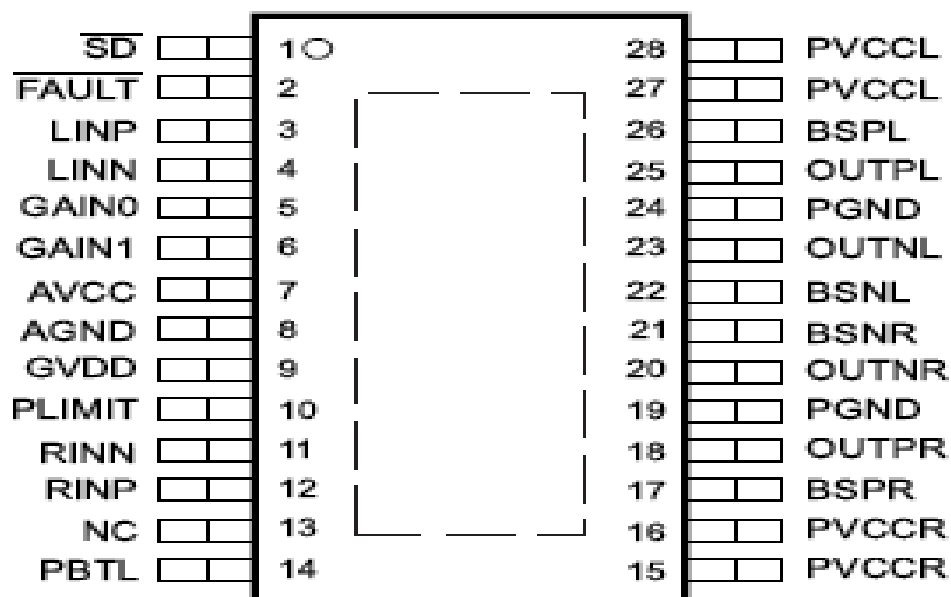
Figure 1. TPA3110D2 Simplified Application Schematic

RECOMMENDED OPERATING CONDITIONS

over operating free-air temperature range (unless otherwise noted)

PARAMETER	TEST CONDITIONS	MIN	MAX	UNIT
V _{CC} Supply voltage	PVCC, AVCC	8	26	V
V _{IH} High-level input voltage	SD, GAIN0, GAIN1, PBTL	2		V
V _{IL} Low-level input voltage	SD, GAIN0, GAIN1, PBTL		0.8	V
V _{OL} Low-level output voltage	FAULT, R _{PULL-UP} =100k, V _{CC} =26V		0.8	V
I _{IH} High-level input current	SD, GAIN0, GAIN1, PBTL, V _I = 2V, V _{CC} = 18 V		50	µA
I _{IL} Low-level input current	SD, GAIN0, GAIN1, PBTL, V _I = 0.8 V, V _{CC} = 18 V		5	µA
T _A Operating free-air temperature		-40	85	°C

PWP (TSSOP) PACKAGE (TOP VIEW)



APPLICATION INFORMATION

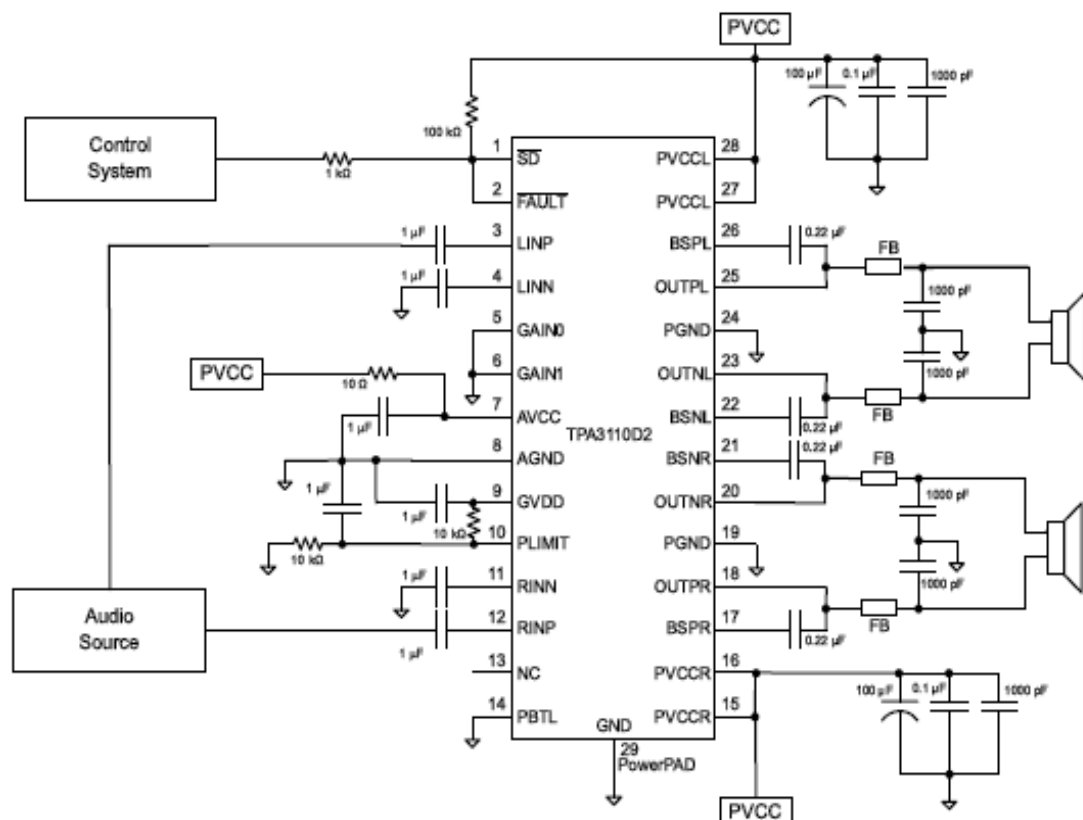


Figure 37. Stereo Class-D Amplifier with BTL Output and Single-Ended Inputs

GD25Q32B:

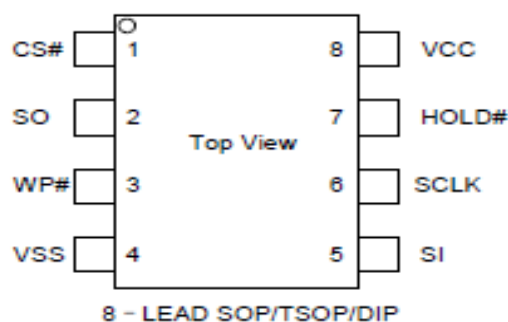
FEATURES

- ◆ 32M-bit Serial Flash
 - 4096K-byte
 - 256 bytes per programmable page
- ◆ Standard, Dual, Quad SPI
 - Standard SPI: SCLK, CS#, SI, SO, WP#, HOLD#
 - Dual SPI: SCLK, CS#, IO0, IO1, WP#, HOLD#
 - Quad SPI: SCLK, CS#, IO0, IO1, IO2, IO3
- ◆ High Speed Clock Frequency
 - 120MHz for fast read with 30PF load
 - Dual I/O Data transfer up to 240Mbps/s
 - Quad I/O Data transfer up to 480Mbps/s
- ◆ Software/Hardware Write Protection
 - Write protect all/portion of memory via software
 - Enable/Disable protection with WP# Pin
 - Top or Bottom, Sector or Block selection
- ◆ Minimum 100,000 Program/Erase Cycles
- ◆ Program/Erase Speed
 - Page Program time: 0.7ms typical
 - Sector Erase time: 100ms typical
 - Block Erase time: 0.2/0.4s typical
 - Chip Erase time: 20s typical
- ◆ Flexible Architecture
 - Sector of 4K-byte
 - Block of 32/64k-byte
- ◆ Low Power Consumption
 - 20mA maximum active current
 - 5uA maximum power down current
- ◆ Advanced security Features⁽¹⁾
 - 16-Bit Customer ID
 - 4*256-Byte Security Registers With OTP Lock
- ◆ Single Power Supply Voltage
 - Full voltage range:2.7~3.6V

Note: 1.Please contact Gigadevice for details.

GENERAL DESCRIPTION

The GD25Q32B (32M-bit) Serial flash supports the standard Serial Peripheral Interface (SPI), and supports the Dual/Quad SPI: Serial Clock, Chip Select, Serial Data I/O0 (SI), I/O1 (SO), I/O2 (WP#), and I/O3 (HOLD#). The Dual I/O data is transferred with speed of 240Mbps/s and the Quad I/O & Quad output data is transferred with speed of 480Mbps/s.



PIN DESCRIPTION

Pin Name	I/O	Description
CS#	I	Chip Select Input
SO (IO1)	I/O	Data Output (Data Input Output 1)
WP# (IO2)	I/O	Write Protect Input (Data Input Output 2)
VSS		Ground
SI (IO0)	I/O	Data Input (Data Input Output 0)
SCLK	I	Serial Clock Input
HOLD# (IO3)	I/O	Hold Input (Data Input Output 3)
VCC		Power Supply

BH3544:

Description

BH3541F, BH3544F, BH3547F, BH3548F is headphone amplifiers suitable for portable products. BH3541F has a fixed gain of 0 dB and BH3544F, BH3547F, BH3548F has a fixed gain of 6 dB. External resistors for gain setting are not needed. Package of BH3541F, BH3544F, BH3547F, BH3548F is pin-to-pin compatible (SOP8), enable to replace each other easily. BH3541F, BH3544F, BH3547F, BH3548F also has mute functions that make it easy to prevent pop noise when power supply turns on/off. Moreover, thermal shutdown function is built-in. BH3541F, BH3544F, BH3547F can drive 16/32 Ω load, BH3548F can drive 8/16/32 Ω . So, BH3548F is suitable for 8 Ω receiver.

Features

- 1) Built-in mute function for preventing pop noise when power supply turns on/off
- 2) Built-in thermal shutdown function
- 3) BH3541F, BH3544F, BH3547F, BH3548F are pin-to-pin compatible
- 4) SOP8 small package

Applications

TV, Desktop PC, Notebook PC, Camcorder and other equipment having headphone output

Line up

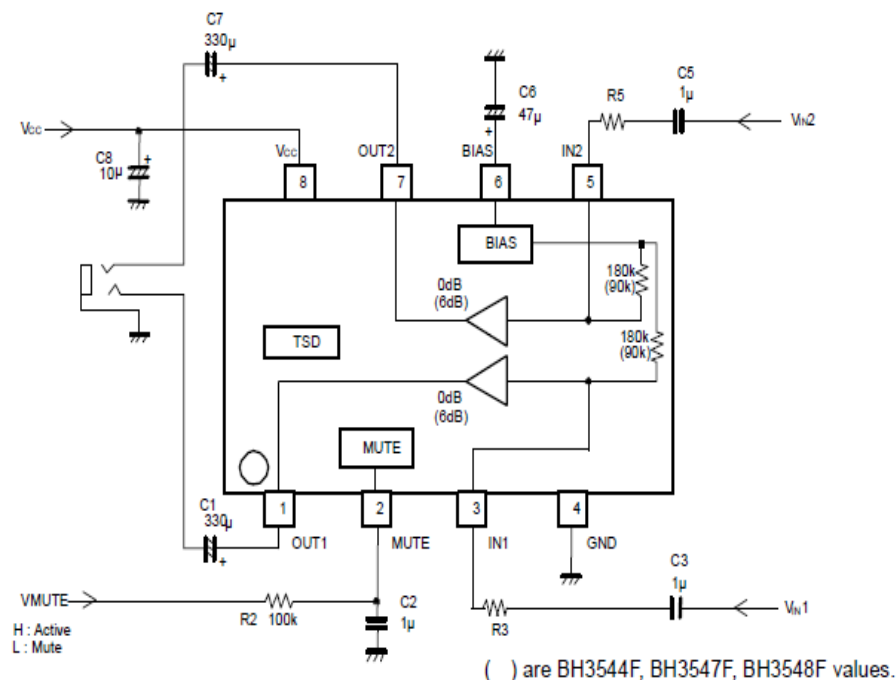
Part No.	BH3541F	BH3544F	BH3547F	BH3548F	Unit
Supply voltage	+2.8 ~ +6.5		+4.5 ~ +5.5	+4.0 ~ +5.5	V
Quiescent current	7.0		3.7	6.5	mA
Amplifier gain	0	6			dB
Output [R _L =16 Ω]	62		77	62	mW
load impedance	16 / 32			8/16/32	Ω
Operating temperature range	-25 ~ +75			-40 ~ +85	$^{\circ}$ C

Absolute maximum ratings(T_a=25 $^{\circ}$ C)

Parameter	Symbol	Ratings	Unit
		BH3541F,BH3544F,BH3547F,BH3548F	
Applied voltage	VCC	7.0	V
Power dissipation	P _d	550 ^{*1}	mW
Storage temperature	T _{stg}	-55~+125	$^{\circ}$ C

*1 Derating is done at 5.5mW/ $^{\circ}$ C above T_a=25 $^{\circ}$ C. (When mounted on a 70mmX70mmX1.6mm PCB board, FR4)

Application circuit



G5250F2T1:

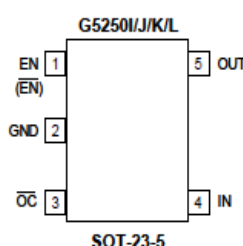
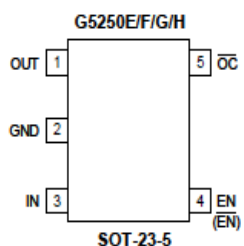
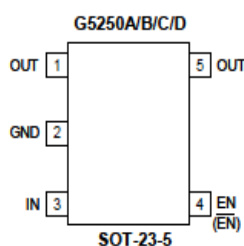
Features

- 85mΩ High-Side MOSFET
- Available with 4 Versions of Current Limits with Foldback
- Operating Range: 2.7V to 5.5V
- 400μS Typical Rise Time
- Under Voltage Lockout
- 65μA Quiescent Supply Current
- 1μA Maximum Shutdown Supply Current
- Logic Level Enable Pin, Available with Active-High or Active-Low Version
- No Reverse Current when Power Off
- Deglitched Open-Drain Over-Current Flag Output (\overline{OC}) Available for 2 Kinds of Pin Out (G5250 E/F/G/H) (G5250 I/J/K/L)
- SOT-23-5 Package
- UL Approved #E232223
- Nemko IEC 60950-1 CB/CCA_scheme certification Report #67291
- CSA Approved #230321

Applications

- High-Side Power Protection Switch
- USB Power Management
- USB Host and Self-Powered Hubs
- USB Bus-Powered Hubs
- Hot Plug-In Power Supplies
- Battery-Charger Circuits

Pin Configuration



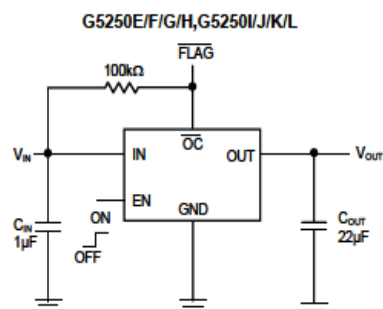
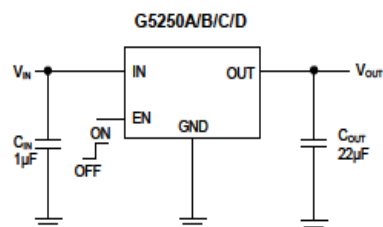
General Description

The G5250 is an integrated 85mΩ power switch for self-powered and bus-powered Universal Serial Bus (USB) applications.

Several Protection features include current limiting with foldback, and thermal shutdown to prevent catastrophic switch failure caused by increasing power dissipation when continuous heavy loads or short circuit occurs. And a built-in charge pump is used to drive the N-channel MOSFET that is free of parasitic body diode to eliminate any reversed current flow across the switch when it is powered off.

G5250E/F/G/H and G5250I/J/K/L has open-drain \overline{OC} output reports over-current or over-temperature event and has typical 9ms glitch timeout period.

Typical Application Circuit



SY8086:

General Description

The SY8086 is a high-efficiency 1.4MHz synchronous step-down DC-DC regulator ICs capable of delivering up to 1A output current. The SY8086 operates over a wide input voltage range from 2.5V to 5.5V and integrate main switch and synchronous switch with very low $R_{DS(ON)}$ to minimize the conduction loss.

Low output voltage ripple and small external inductor and capacitor sizes are achieved with 1.4MHz switching frequency. This along with small SOT-23 footprint provides small PCB area application.

Ordering Information

SY8086 () () ()
└─┬─┬─┘
Temperature Code
Package Code
Optional Spec Code

Temperature Range: -40° C to 85° C

Ordering Number	Package type	Note
SY8086AAC	SOT23-5	1A

Features

- Low $R_{DS(ON)}$ for internal switches (top/bottom): 250mΩ / 200mΩ
- 2.5-5.5V input voltage range
- 1.4MHz switching frequency minimizes the external components
- Internal softstart limits the inrush current
- RoHS Compliant and Halogen Free
- Compact package: SOT23 5 pin

Applications

- Portable Navigation Device
- Smart phone
- USB Dongle
- Set Top Box
- Media Player

Typical Applications

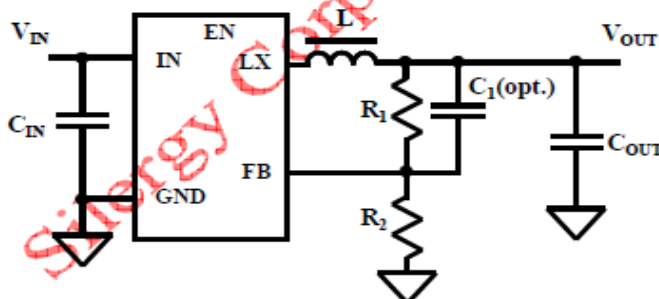
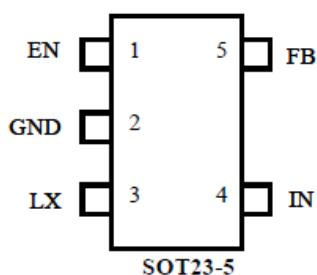


Figure 1. Schematic Diagram

Pinout (top view)



Top mark: BExyz (Device code: BE, x=year code, y=week code, z=lot number code)

Pin Name	Pin Number	Pin Description
EN	1	Enable control. Pull high to turn on. Do not float.
GND	2	Ground pin
LX	3	Inductor pin. Connect this pin to the switching node of inductor
IN	4	Input pin. Decouple this pin to GND pin with at least 1uF ceramic cap
FB	5	Output Feedback Pin. Connect this pin to the center point of the output resistor divider (as shown in Figure 1) to program the output voltage: $V_{out}=0.6*(1+R_1/R_2)$

Electrical Characteristics

($V_{IN} = 3.6V$, $V_{OUT} = 2.5V$, $L = 2.2\mu H$, $C_{OUT} = 10\mu F$, $T_A = 25^\circ C$, $I_{MAX} = 1A$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage Range	V_{IN}		2.5		5.5	V
Shutdown Current	I_{SHDN}	EN=0		0.1	1	μA
Feedback Reference Voltage	V_{REF}		0.58	0.6	0.62	V
FB Input Current	I_{FB}	$V_{FB}=V_{IN}$	-50		50	nA
PFET RON	$R_{ds(on),P}$			0.25		Ω
NFET RON	$R_{ds(on),N}$			0.2		Ω
PFET Current Limit	I_{LDM}		1.2			A
EN rising threshold	V_{ENH}		1.5			V
EN falling threshold	V_{ENL}				0.4	V
Input UVLO threshold	V_{UVLO}				2.5	V
UVLO hysteresis	V_{HYS}			0.1		V
Oscillator Frequency	FOSC	$I_{OUT}=100mA$		1.4		MHz
Min ON Time				50		ns
Max Duty Cycle			100			%
Thermal Shutdown Temperature	TSD			160		C

ME9435A:

GENERAL DESCRIPTION

The ME9435A is the P-Channel logic enhancement mode power field effect transistors, using high cell density, DMOS trench technology.

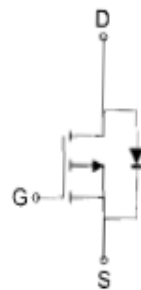
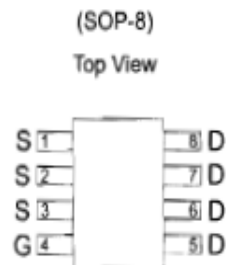
This high density process is especially tailored to minimize on-state resistance.

These devices are particularly suited for low voltage application such as cellular phone, notebook computer power management and other battery powered circuits, and lower power loss that are needed in a very small outline surface mount package.

FEATURES

1. $R_{DS(ON)} \leq 40m\Omega @ V_{GS} = -10V$
2. $R_{DS(ON)} \leq 60m\Omega @ V_{GS} = -4.5V$

PIN CONFIGURATION



P-Channel MOSFET

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	10 secs	Steady State	Unit
Drain-Source Voltage	V_{DS}	-30		V
Gate-Source Voltage	V_{GS}	± 20		V
Continuous Drain Current	I_D	-6.3		A
Pulsed Drain Current ¹⁾	I_{DM}	-30		A
Maximum Power Dissipation	P_D	2.5		W
Operating Junction Temperature	T_J	-55 to 150		$^\circ\text{C}$
Junction-to-Case Thermal Resistance	$R_{\theta JC}$	28		$^\circ\text{C/W}$
Junction-to-Ambient Thermal Resistance*	$R_{\theta JA}$	$T \leq 10 \text{ sec}$	34	$^\circ\text{C/W}$
		Steady State	62	

*The device mounted on 1in2 FR4 board with 2 oz copper

AS1117L:

General Description

The AS1117 is a series of low dropout three-terminal regulators with a dropout of 1.15V at 1A output current.

The AS1117 has an adjustable version, that can provide the output voltage from 1.25V to 12V with only 2 external resistors.

The AS1117 series provides current limiting and thermal shutdown. Its circuit includes a trimmed bandgap reference to assure output voltage accuracy to be within 1%. Current limit is trimmed to ensure specified output current and controlled short-circuit current. On-chip thermal shutdown provides protection against any combination of overload and ambient temperature that would create excessive junction temperature.

The AS1117 series is available in the industry standard SOT-223, SOT-89, TO-220, TO-252 and TO-263 power packages.

Features

- Low dropout voltage: 1.15V at 1A output current
- Trimmed current limit
- On-chip thermal shutdown
- Standard SOT-223, SOT-89, TO-220, TO-252 and TO-263 packages
- Three-terminal adjustable or fixed 1.5V, 1.8V, 2.5V, 3.3V, 5V
- Operation junction temp.: 0°C to 125°C

Applications

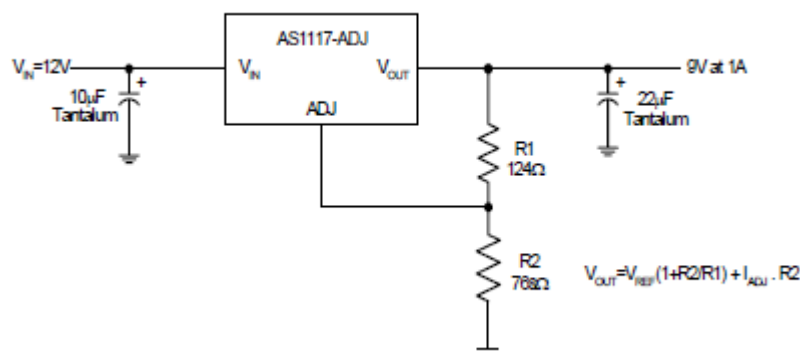
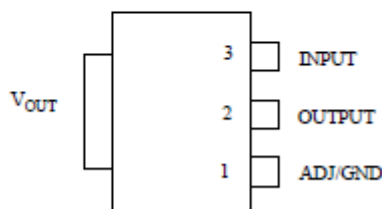
- PC Motherboard
- LCD Monitor
- Graphic Card
- DVD-Video Player
- NIC/Switch
- Telecom Equipment
- ADSL Modem
- Printer and other Peripheral Equipment

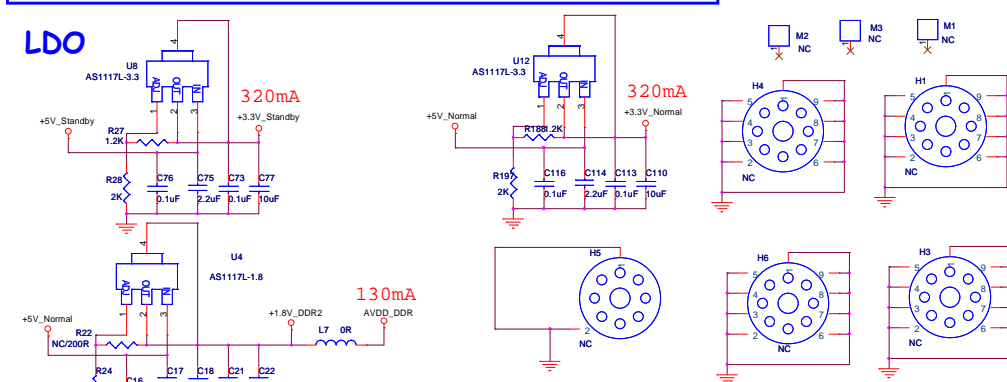
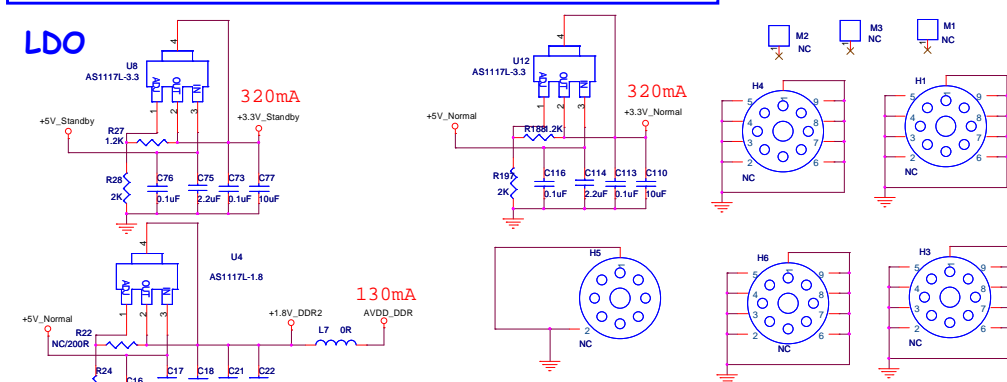
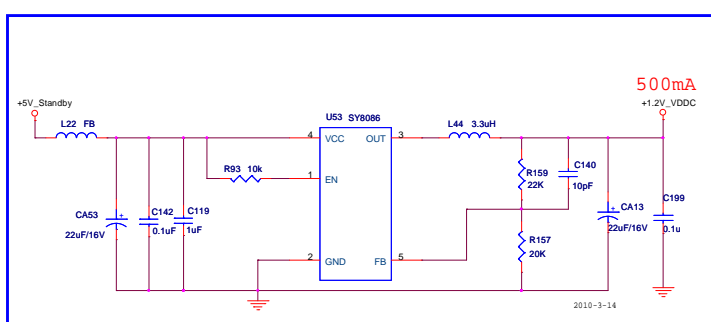
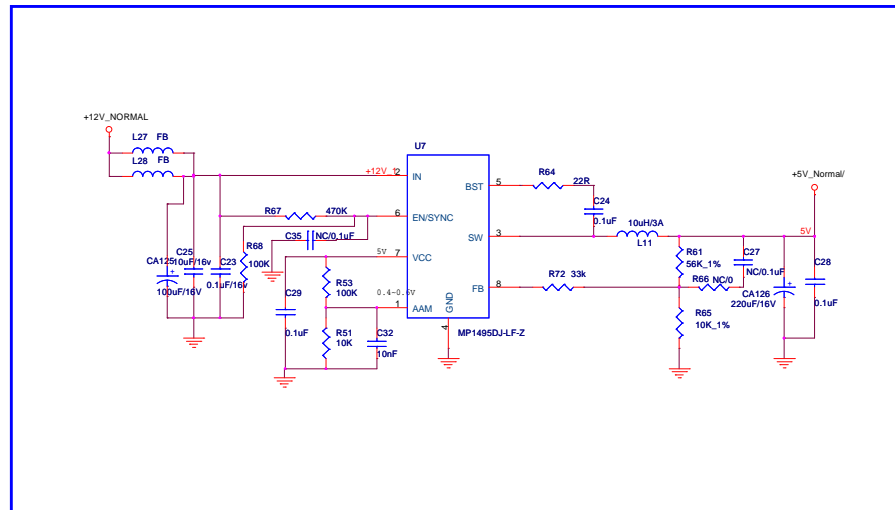
A1 半导体有

代理商: 深圳

Pin Configurations

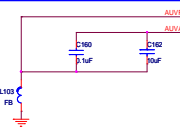
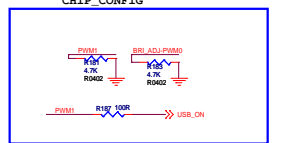
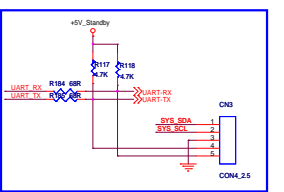
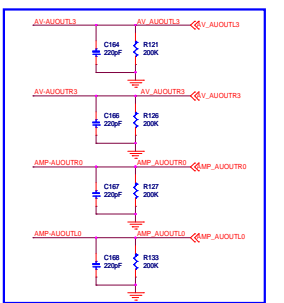
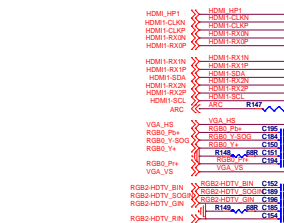
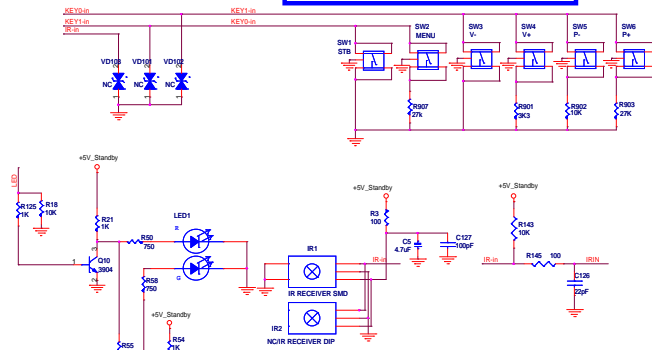
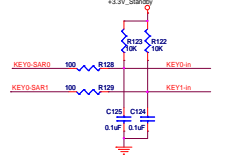
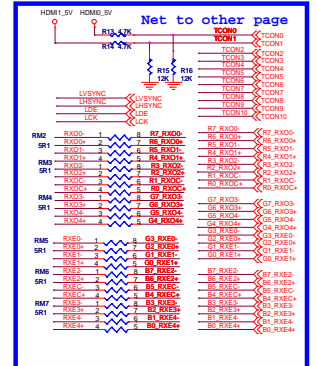
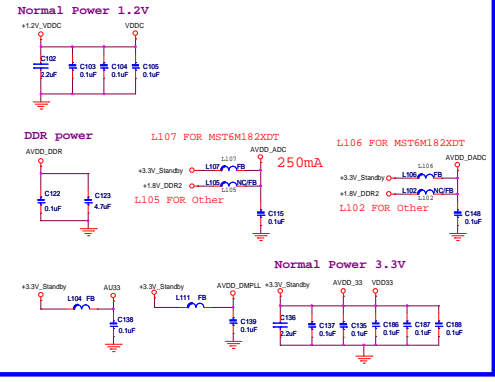
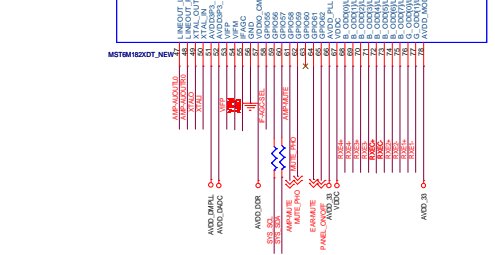
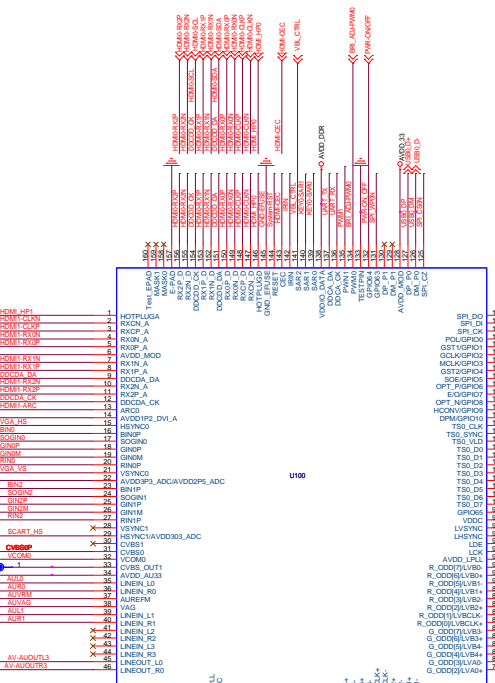
L Package
(SOT-223)





(1)

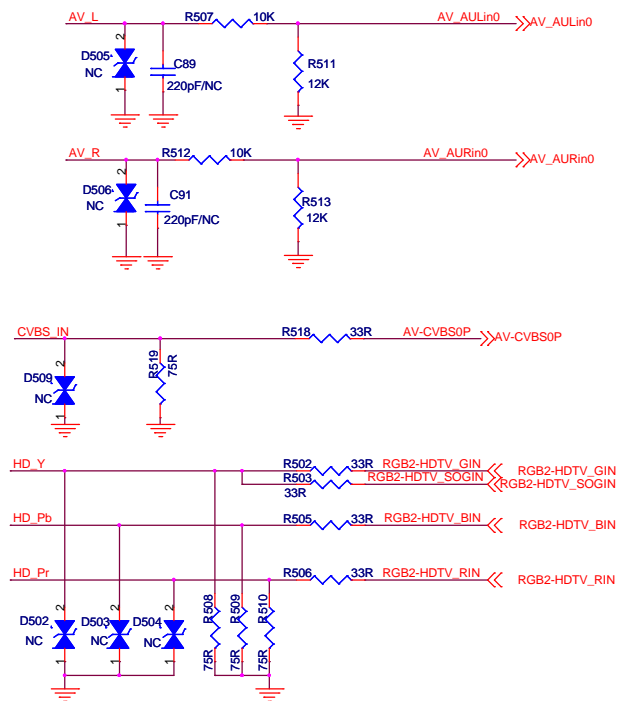
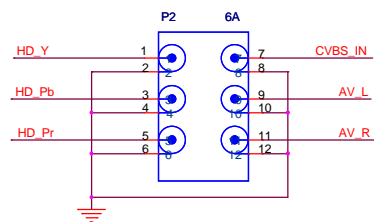
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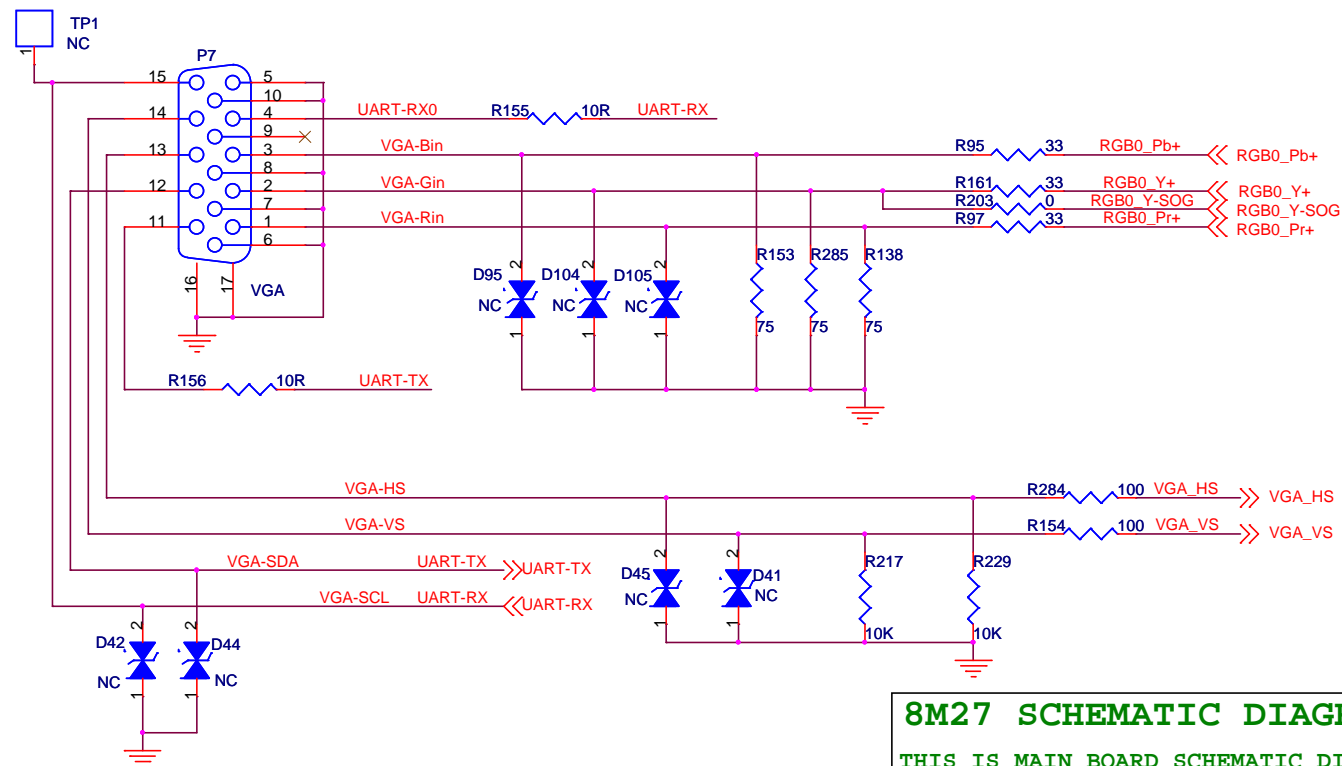
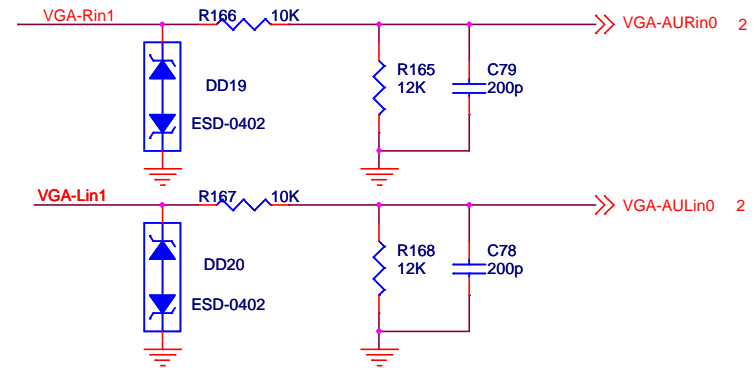
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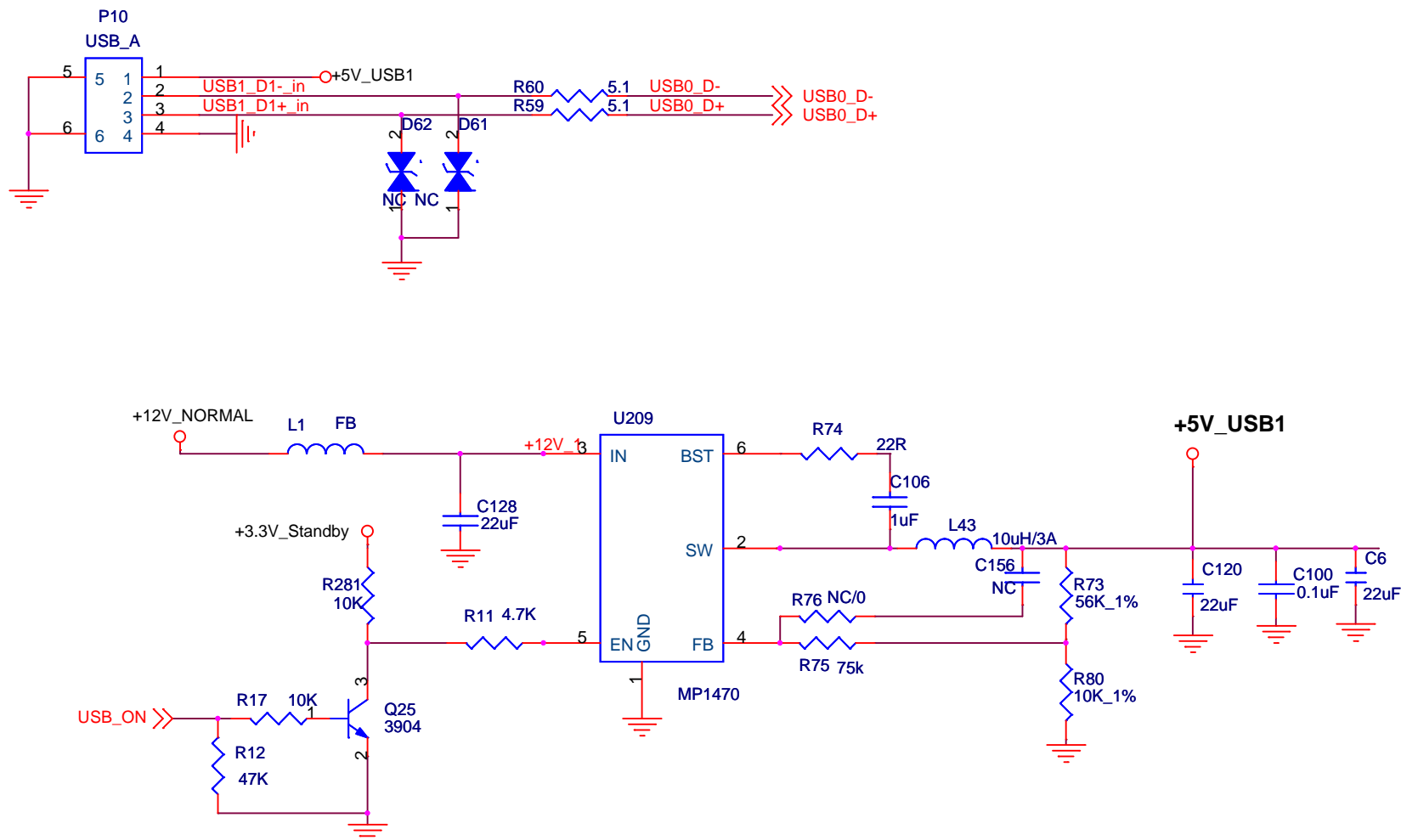
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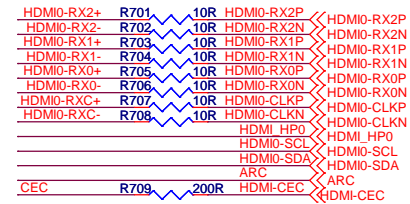
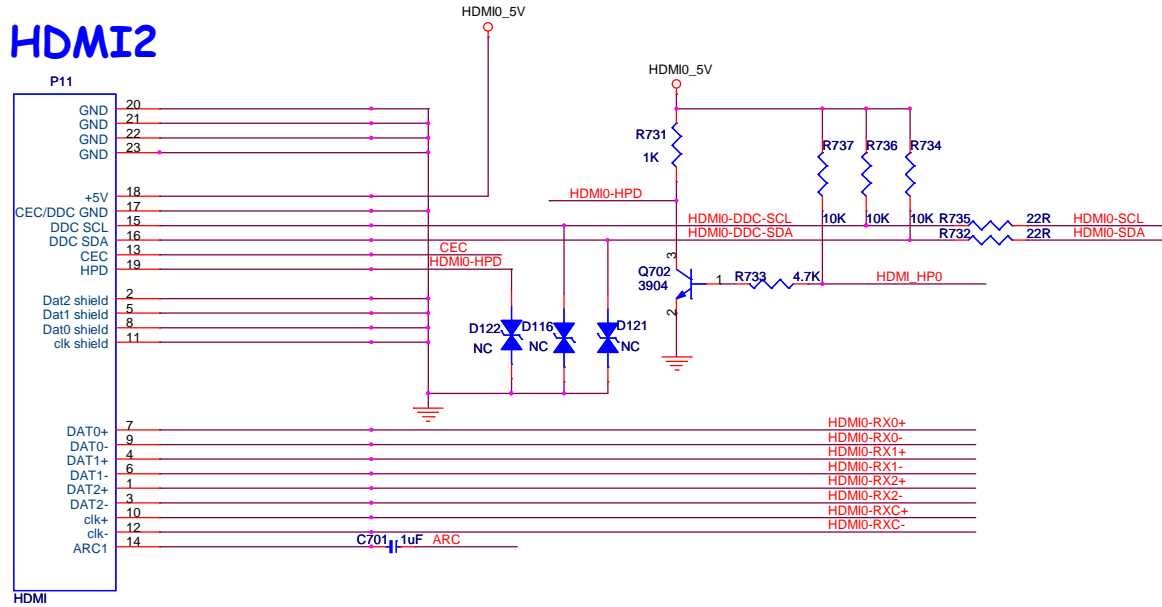


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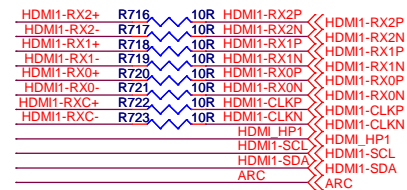
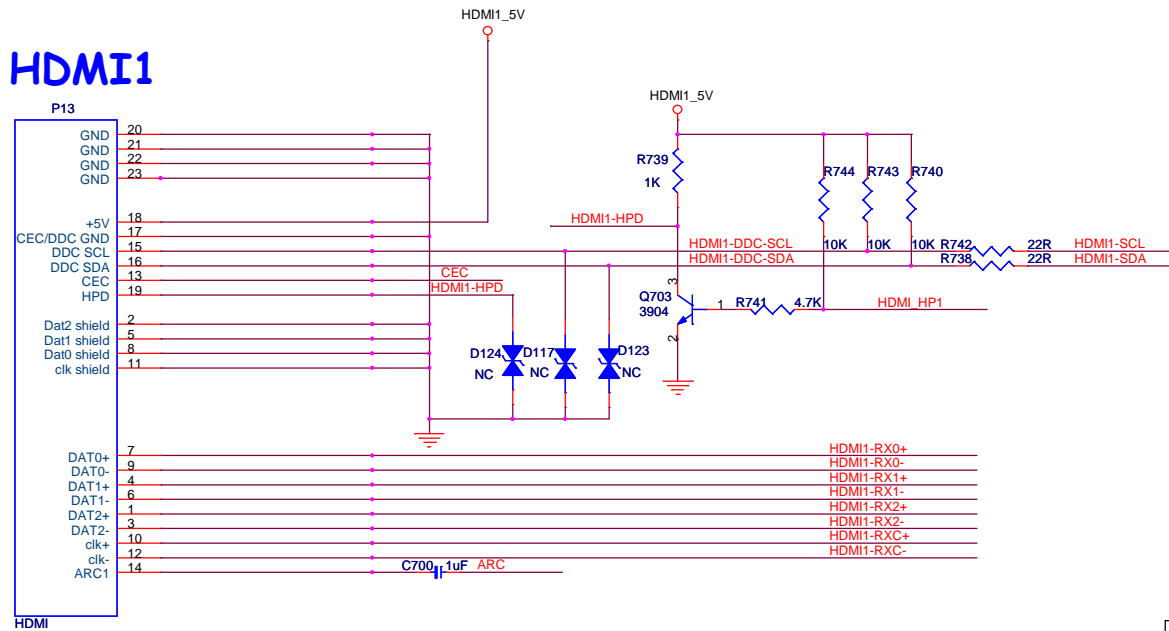
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HDMI2



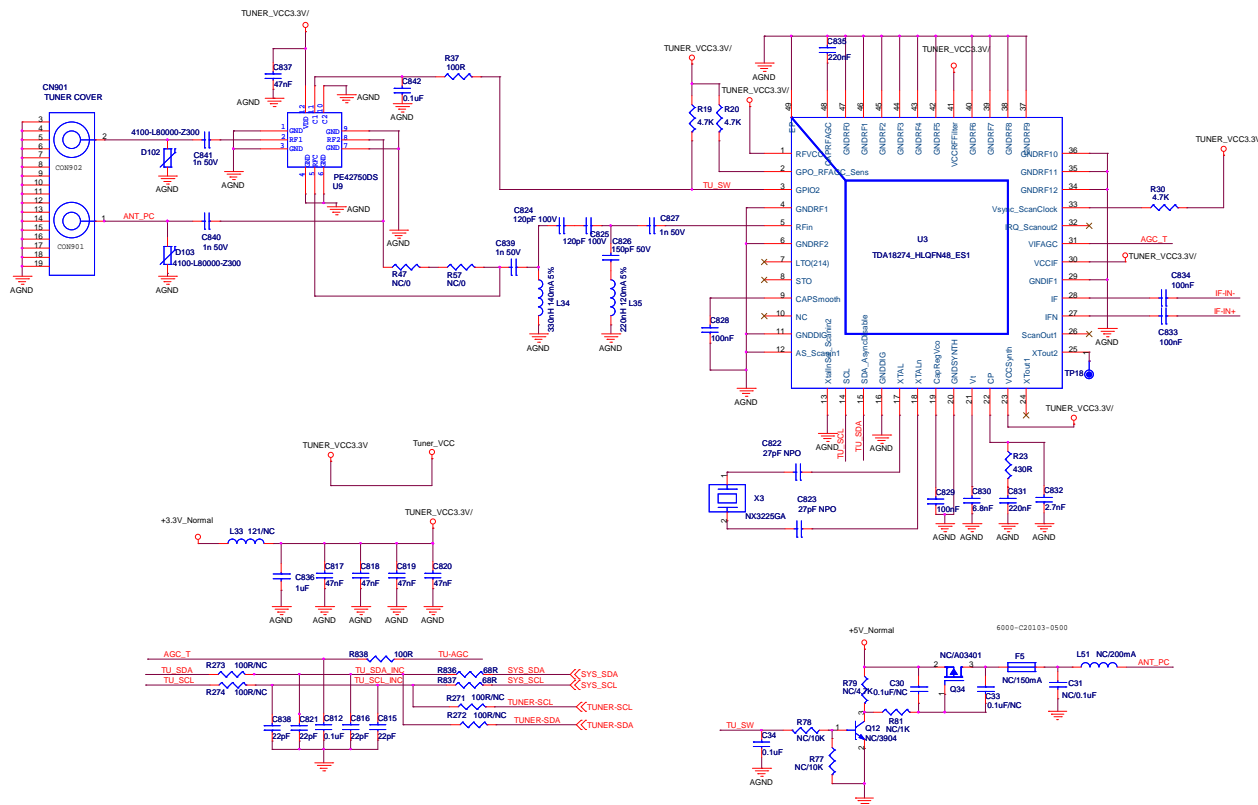
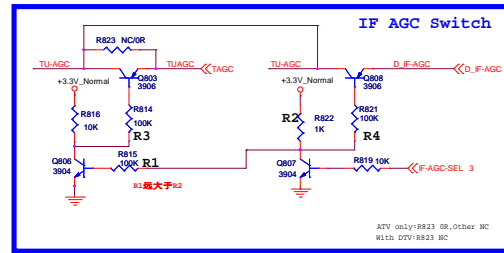
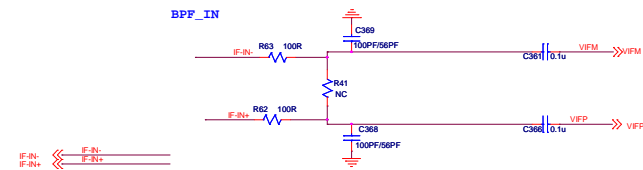
HDMI1



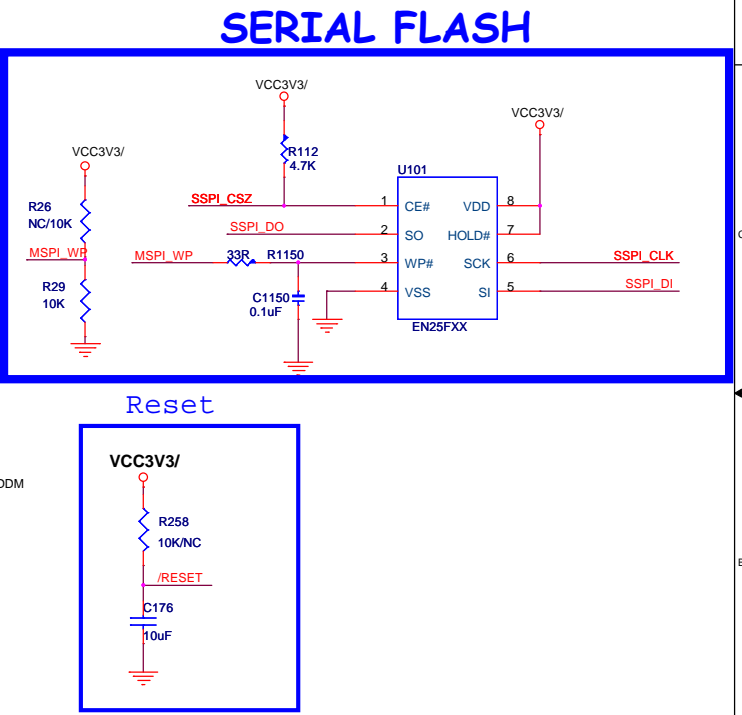
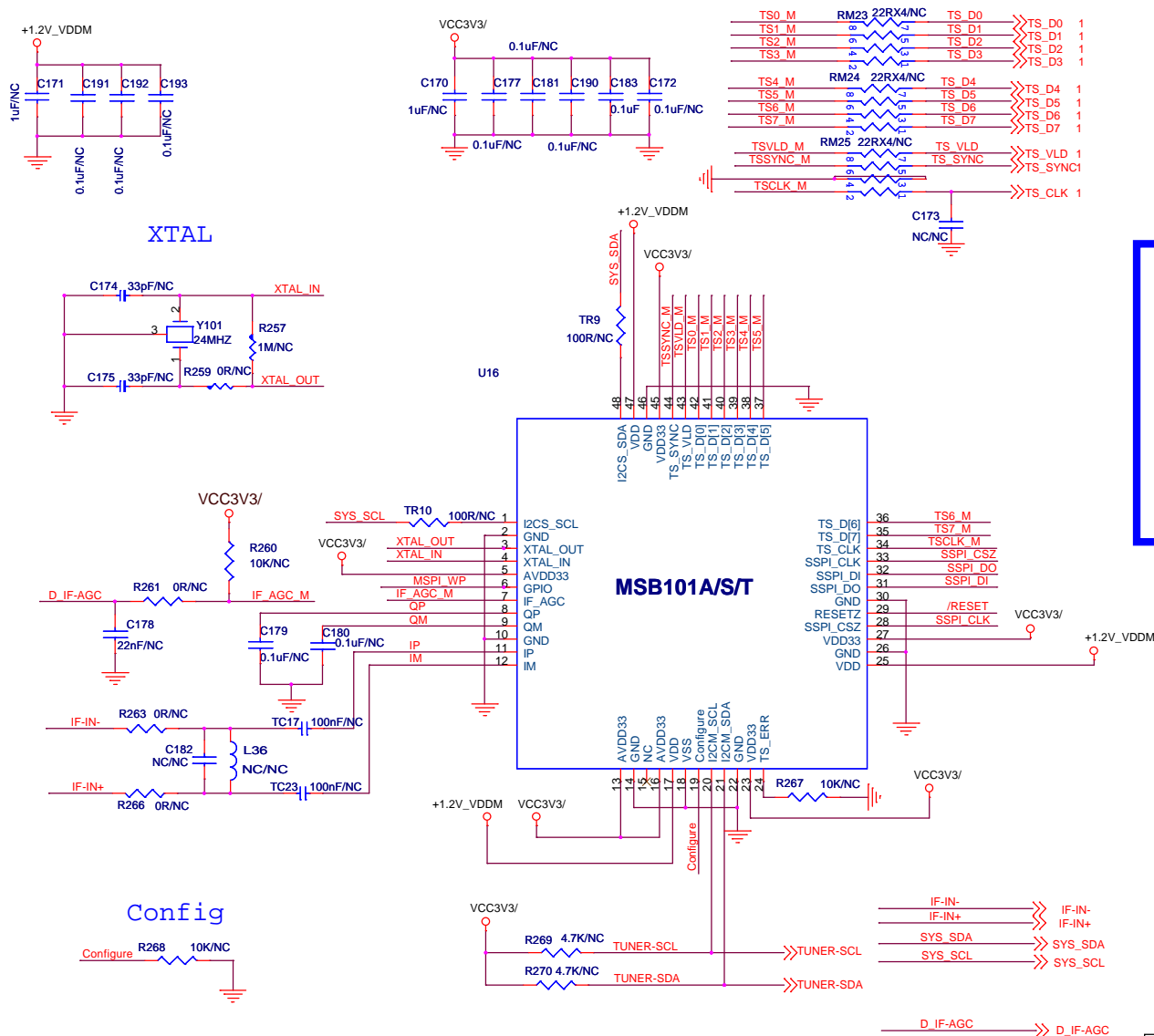
8M27 SCHEMATIC DIAGRAM

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LVDS

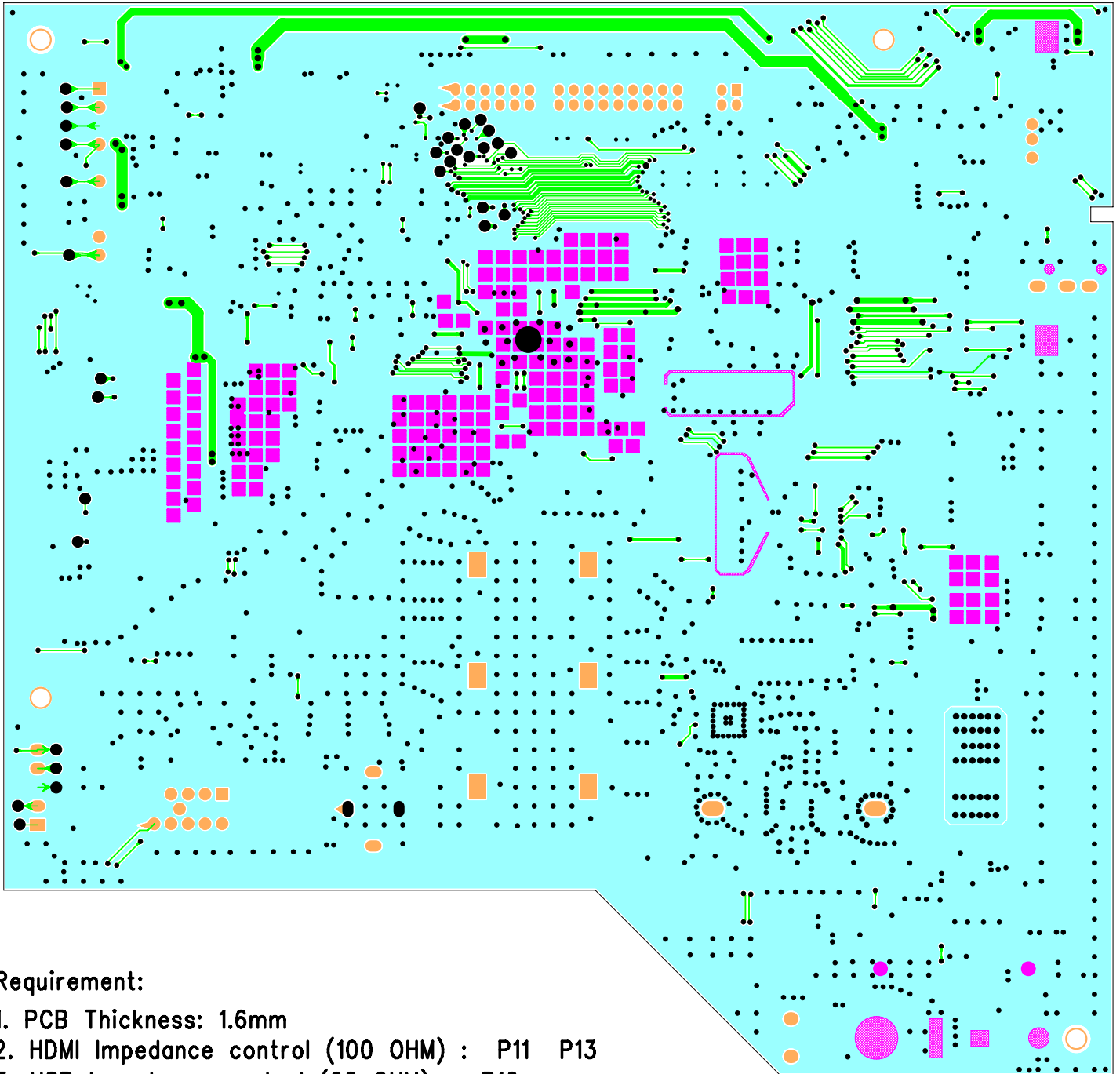
The schematic diagram illustrates the main board of the 8M27 module, showing connections for LVDS, TCONs, and various control signals. The diagram is divided into several sections:

- Top Section:** Shows the LVDS input section with connections for RX00- through RX04+ and RXE0- through RXE4+. It includes a 3D FLAG signal and a 3D SYNC signal. The LVDS input is connected to the CN6 J450 connector.
- Bottom Section:** Shows the LVDS output section with connections for RX00- through RX04+ and RXE0- through RXE4+. It includes a 3D FLAG signal and a 3D SYNC signal. The LVDS output is connected to the CN7 connector.
- Right Section:** Shows the TCON (Timing Control) signals, including TCON 0 through TCON 10. It also includes connections for GAMMA Bank0, GAMMA Bank1, and VCOM DYN.
- Left Section:** Shows the power supply section, including +5V_Normal, VCC, and GND connections. It includes a 3D SYNC signal and a 3D FLAG signal.
- Bottom Right Section:** Shows the TCON 3 signal and a 3D FLAG signal.

The diagram includes various components such as resistors (R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283, R284, R285, R286, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R300, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R332, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R343, R344, R345, R346, R347, R348, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R359, R360, R361, R362, R363, R364, R365, R366, R367, R368, R369, R370, R371, R372, R373, R374, R375, R376, R377, R378, R379, R380, R381, R382, R383, R384, R385, R386, R387, R388, R389, R390, R391, R392, R393, R394, R395, R396, R397, R398, R399, R400, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984

8M27 SCHEMATIC DIAGRAM (10)

THIS IS MAIN BOARD SCHEMATIC DIAGRAM, ONLY FOR REFERENCE.
SOME SPECIAL FUNCTIONS ARE OPTIONAL. IT IS SUBJECT TO CHANGE
WITHOUT PRIOR NOTICE.

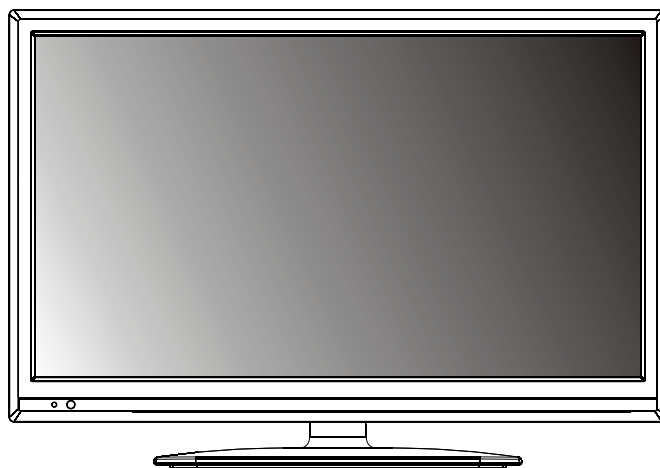


Requirement:

1. PCB Thickness: 1.6mm
2. HDMI Impedance control (100 OHM) : P11 P13
3. USB Impedance control (90 OHM) : P10
4. Impedance control (75 OHM) : U9 D102 D103 C825 C839
5. Add stamp holes in the four positions that indicated in this drawing.

Skyworth

Instruction Manual



19E57

Size:A5

Description: MANUAL(8M27A)	
Job No.	Brand Name: SKYWORTH
MODEL: 19E57	P/No.
REV:	Scale:
Engineering Dept:	
Artwork By:	Date: 2013-3-28
Checked By:	Date:
Approved By:	Date:


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WARNING AND PRECAUTION

Read all of the instructions before operating the set. Keep these instructions well for later use.

Warning

- ◆ Only use attachments/accessories specified or provided by the manufacturer (such as the exclusive supply adapter, battery etc).
- ◆ Please refer the information on exterior back enclosure for electrical and safety information before installing or operating the apparatus.
- ◆ To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- ◆ The ventilation should not be impeded by covering the ventilation openings with items, such as newspaper, table-cloths, curtains, etc.
- ◆ The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- ◆ For the terminals marked with symbol of “⚡” may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.
- ◆ To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.
- ◆ Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- ◆ The battery (battery or batteries or battery pack) shall not be exposed to excessive heat such as sunshine, fire or the like.
- ◆ Excessive sound pressure from earphones and headphones can cause hearing loss.
- ◆ Listening to music at high volume levels and for extended durations can damage one's hearing. In order to reduce the risk of damage to hearing, one should lower the volume to a safe, comfortable level, and reduce the amount of time listening at high levels.
- ◆ The mains plug is used as disconnect device, the disconnect device shall remain readily operable.
- ◆ When not in use and during movement, please take care of the power cordset, e.g. tie up the power cordset with cable tie or something like that. It shall be free from sharp edges and the like that can cause abrasion of the power cordset. When put into use again, please make sure the power cordset being not damaged, If any damages found, please look for the service person to replace the power cordset specified by the manufacturer or have the same characteristics as the original one.
- ◆ Explanation of symbol, marking, signal lamp or similar means indicate that apparatus is completely disconnected from the mains.
- ◆ Attention should be drawn to environmental aspects of battery disposal.
- ◆ No naked flame sources, such as lighted candles, should be placed on the apparatus.
- ◆  To prevent the spread of fire, keep candles or other open flames away from this product at all times.
- ◆ Each USB terminal shall be loaded with 500mA under normal operation.

WARNING AND PRECAUTION

Important Information For Austria

- ◆ Using cabinets or stands recommended by the manufacture of the television.
- ◆ Only using furniture that can safely support the television.
- ◆ Ensuring the television is not overhanging the edge of the supporting furniture.
- ◆ Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
- ◆ Not standing the television on cloth or other materials placed between the television and supporting furniture.
- ◆ Educating children about the dangers of climbing on furniture to reach the television or its controls.
- ◆ The apparatus should be provided with a restraining device such as a fixing point to facilitate restraining the apparatus from toppling forward.

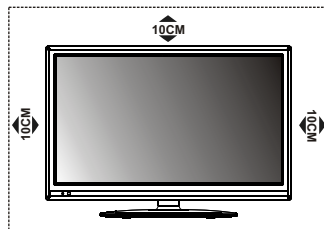
WEEE Directive



Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

Positioning The TV Set

- ◆ Install Display on solid horizontal surface such as a table or desk. For ventilation, leave a space of at least 10cm free all around the set. To prevent any fault and unsafe situations, please do not place any objects on top of the set. This apparatus can be used in tropical and/or moderate climates.



Use Environment

- ◆ Do not install this equipment in a confined space such as a bookcase or similar unit.
- ◆ Do not use the set near damp, and cold areas, protect the set from overheating.
- ◆ Keep away from direct sunlight.
- ◆ Do not use the set near dust place.
- ◆ Do not attach candle to accessible opening area, to avoid flammable foreign material from entering the TV.

WARNING AND PRECAUTION

Precautions For Using Remote Control

- ◆ Use the remote control by pointing it towards the remote sensor. The items between the remote control and the remote sensor will interfere the normal operation.
- ◆ Do not make remote control vibrate violently. Also, do not splash liquid on the remote control, also do not put the remote control in high humidity place.
- ◆ Do not place remote control under direct sunlight which will cause deformation of the unit by heat.
- ◆ When the remote sensor is under direct sunlight or strong lighting, the remote control will do not work. If so please change the lighting or TV's position, or operate the remote control closer to the remote sensor.

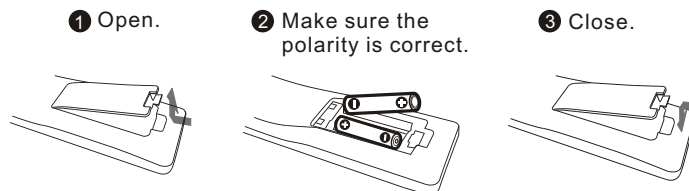
Precautions For Using Battery

Improper using of the battery will cause leakage. So please do as the following methods and use carefully.

1. Please note the batteries' polarity, to avoid short circuit.
2. When the battery's voltage is insufficient which affect the use range, you should replace new battery. Remove the batteries from the remote control unit if you do not intend to use it for a long time.
3. Do not use different types of batteries(for example, Manganese and Alkaline batteries) together.
4. Do not put the battery into fire, and charge or decompose the battery.
5. Please dispose batteries abide by relevant environmental protection regulation.

Installation Of Remote Control Battery

Place two AA size batteries in the remote controls battery compartment, making sure to match the polarity markings inside the compartment.



FUNCTIONS AND FEATURES

Brief Introduction:

Thanks for your purchase of our digital high-definition LED television! This product with diverse functions is designed to fulfill the optimum requirements from commercial, industrial and household uses. LED television possesses the display function of both TV and PC. It features advanced picture performance, smaller in size and lighter in weight, meanwhile, consumes less power and makes no radiation. The new generation LED provides you with comfortable, safe and environmental protection feeling. Some description could be little different base on different model.

Basic Function

1. Auto and manual tuning.
2. AV and COMPONENT inputs are available.
3. Full-function infrared remote control.
4. Sleep timer and program recall shortcut.
5. Narrow design of ultra-thin ultra-light.
6. A wealth of reception(TV / AV / COMPONENT / PC / HDMI / USB1 / GAME).

PC Monitor Functions

1. Auto resizing & centering, perfect geometric graphic.
2. Supports PC sound source input.
3. Supports 800x600, 1024x768, 1360x768, PC formats, refresh rate is 60Hz.

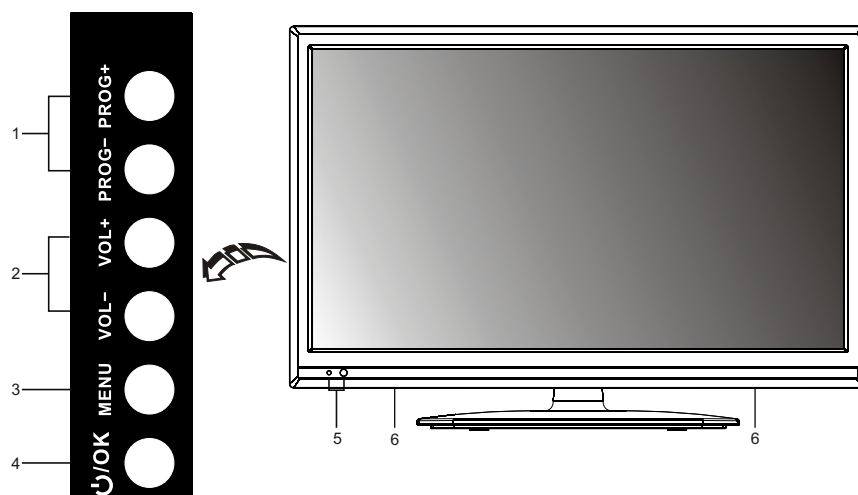
Features

1. Embedded digital color gain control circuit, provides better brightness and reality.
2. Embedded 3D comb filter.
3. Black/white Level Stretch Circuit.
4. High class LCD screen features, high brightness, high contrast and wide viewing angle, responding fast.
5. Component input supports 1080P high definition signal formats.
6. Support HDMI input.
7. This TV can be used as a high-performance PC monitor for it has a VGA interface. Computer sound source can also be supported to realize the multimedia function.
8. Low power consumption in standby mode to save energy.
9. Latest high integrated digital processor chip.

EXTERNAL SCHEMATIC AND INSTALLATION

Front Panel

Note: The graphics are for representation only.

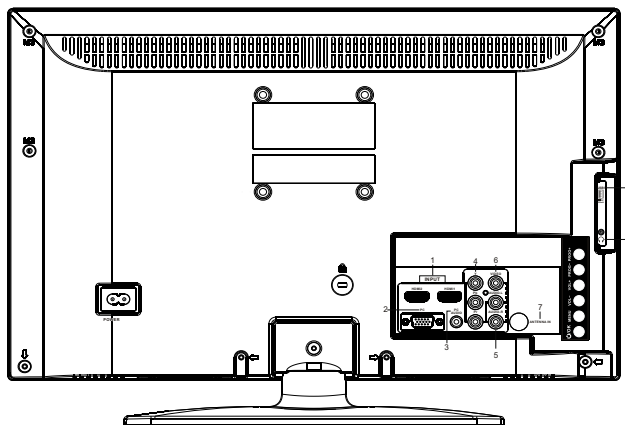


- 1. Program Up/Down Button
- 2. Volume Up/Down Button
- 3. Menu Button
- 4. Standby button or OK button (OK button is available when there is a menu displayed on screen).
- 5. Power Indicator / Remote Sensor
- 6. Speakers

EXTERNAL SCHEMATIC AND INSTALLATION

Back Panel

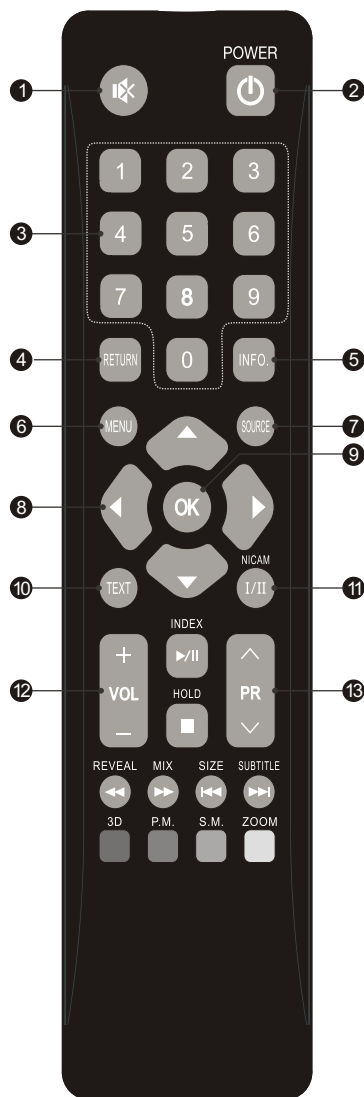
Note: The graphics are for representation only.



1. **HDMI1\HDMI2:** Connect HDMI input signal from signal source such as DVD.
2. **PC IN:** Connect a PC via a VGA cable.
3. **PC AUDIO IN:** Audio input for PC and Audio input for HDMI when the signal is DVI timing.
4. **COMPONENT IN (Y Pb Pr IN):** Connect COMPONENT signal from signal source such as DVD.
Share the same AUDIO input with AV IN.
5. **AUDIO IN:** Connect AUDIO input signal from signal source such as DVD.
6. **VIDEO IN:** Connect VIDEO input signal from signal source such as DVD.
7. **ANTENNA IN:** Connect a coaxial cable to receive signal from the antenna or cable.
8. **USB1:** USB port.
9. **EARPHONE:** Audio output, speakers will be muted when earphone is plugged and select headphone; speaker will be not muted when an audio output plug is inserted and line output is selected in the auto pop-up menu or in the audio output item of sound mode menu. The output audio signal is needed when TV connects to other audio instruments, such as an audio amplifier.

EXTERNAL SCHEMATIC AND INSTALLATION

Remote Control



1.Mute(🔇)

Press to mute or restore the volume.

2.POWER(🔌)

Press to turn the TV on or standby.

3.Number buttons

Press to set the TV channel directly.

4.Return Button

Press to return to the previously viewed channel.

5.Information (INFO.)

Press to display the current information including screen format, source, etc.

6.Menu

Press to enter or exit from the TV menu.

7.Source

Press to select the input source mode.

8.Up/Down/Left/Right(▲ / ▼ / ◀ / ▶)

Press to select or adjust the desired item on the TV menu.

9.OK button

Press to confirm and execute the selection.

10.TEXT Buttons(Optional)

Press to enter the teletext menu.

11.NICAM (Option)

Press to select desired sound output(Mono,Stereo or NICAM)depending on the broadcasting channel.

12.Volume Up/Down(V+/V-)

Press to adjust the volume.

13.Program Up/Down(PR+/PR-)

Press to select previous/next channel.

EXTERNAL SCHEMATIC AND INSTALLATION

Remote Control



14. USB Play Control Buttons

Play & Pause (▶/II)

Press to pause playback, press again to continue playback.

Stop (■)

Press the stop button to exit full-screen playback, access to the preview.

Fast Backward Button(◀◀)

Press to fast reverse.

Fast Forward (▶▶)

Press to fast forward.

Previous (◀◀)

Press to play the previous file.

Next (▶▶)

Press to play the next file.

15.3D

Not used.

16.Zoom

Press to the desired picture format.

17.Picture Mode(P.M.)

Press to select the desired picture mode.

18.Sound Mode(S.M.)

Press to select the desired sound mode.

19.Color Buttons

(Red/Green/Yellow/Blue)

Press these buttons that corresponds to the desired menu or page number.

Note : use in teletext mode.

EXTERNAL SCHEMATIC AND INSTALLATION

Remote Control



20. INDEX

Press this button to display index page.

HOLD

Press to hold the teletext page on screen without update and changes. Press again to release the hold state. When not in teletext mode, press this button to freeze the picture display.

REVEAL

Press this button to display concealed information, such as solutions to riddles or puzzles. Press again to remove the information from the display.

MIX

Press this button to superimpose the teletext over the TV program. Press again to return to normal teletext mode.

SIZE

Enlarge the teletext display: Press this button once to enlarge upper half of the screen. Press this button again to enlarge lower half of the screen. Press this button again to resume to normal screen size.

SUBTITLE

Press this button to access subtitle service directly (if the channel has the subtitle service broadcasting).

Note: if you want to use subtitle function in USB, please operate the  info bar.

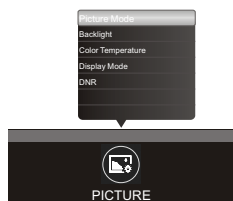
MENU CONTROL

Menu Operation

Press "MENU" key to enter the main menu .
Press the[◀]/[▶]key to selecta menu.
Press the[▲]/[▼]key to selecta item.
Press "OK" key to enter the item.
Press "MENU" key to exit the item.



PICTURE



Picture Mode: Contain "Bright", "Normal", "Soft", "Personal" four modes .

Contrast: Adjusts the difference between the light and dark areas of the picture. To get better picture value, Contrast should be adjusted to the proper value.

Brightness: Adjusts the brightness of the picture, and usually is adjusted together with Contrast.

Color: Adjusts the richness of colour. This function is not available in PC mode.

Sharpness: Adjusts the sharpness of the picture. This function is not available in PC mode.

Tint: Adjust the tint of the picture. Only can be done under the NTSC system.

Backlight: Contain "Low", "Middle", "High" three modes .

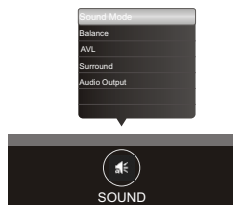
Color Temperature: Contain "Neutral", "Warm", "Cool" three modes.

Display Mode: Contain "Caption", "16:9", "4:3", "Panorama", "Just Scan", "Movie" six modes. (Some option is not visible at some source).

DNR: Contain "Off", "Low", "Middle", "High". (No useful at PC source)

MENU CONTROL

SOUND



Sound Mode: Contain "Standard", "Music", "News", "Film" and "Personal".

Treble: Adjusts the highest part of the sound.

Bass: Adjusts the lowest part of the sound.

Balance: Control the sound balance between the right and left loudspeaker (earphone).

AVL: This function may be set as On or Off. Auto Volume Level can set the volume automatically adjust corresponding to the input audio.

Surround: Contain On and Off.

Audio Output: Select Headphone or Line Output when an earphone or an audio output plug is inserted.

INSTALLATION

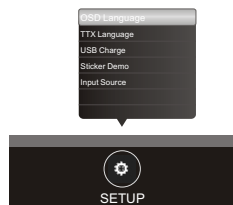


Auto Search: Search and save all programs at current source by automatically.

TV Manual Search: Search and save the digital programs at TV source by manually.

MENU CONTROL

SETUP



OSD Language: Select you desired OSD language.

TTX Language: Select you desired teletext language.

USB Charge: The standby charging, choose to On or Off In Standby (only to USB port).

Sticker Demo: Functional demo switch.

Input Source: Select the input source mode.

TIME

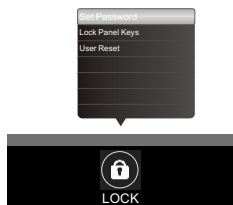


Sleep Timer: Contain Off, 10, 20, 30, 60, 90, 120, 180, 240 minutes.

Auto Sleep: TV set auto to standby when there is no signal. Contain On and Off.

MENU CONTROL

LOCK



Set Password: Reset the password.

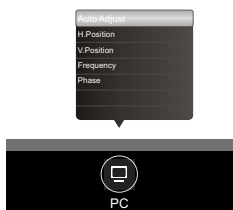
Lock Panel keys: Switch the lock system between On and Off.

User Reset: Restore the menu setting back to default, do not include the "Set Password" item.

NOTE:

- Default password is [0000].
 - The Super password is [8899].
- In the event whereby new password is forgotten, you can use Super Password as the old password to reset a new password. Or directly using the super password to enter.

PC



Auto Adjust: Adjust PC size and position.

H.Position: Adjust the H.Position of the television.

V.Position: Adjust the V.Position of the television.

Frequency: Adjust the updating frequency of the picture.

Phase: Adjust the phase of the picture.

MENU CONTROL

USB Menu

You can view video, music, photo and text files from your USB storage devices. Depending on which USB input terminal you connect first, that particular USB port will be named as C:\ drive follow by D:\ .

- 1.Connect USB storage device to USB input terminal.
- 2.Press the source to select the USB.
- 3.Press [◀] / [▶] to select the types of media modes: VIDEO, MUSIC, PHOTO and TEXT.

VIDEO: Play videos from USB.

MUSIC: Play music from USB.

PHOTO: View photos from USB.

TEXT: View text files from USB.



Game

Note: game settings are only available in GAME mode.

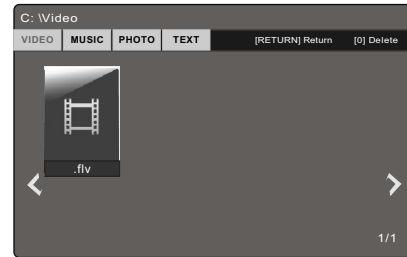
- 1.Press [▲] / [▼] to select game "Push Box" or "Snaker". Press [OK] to enter.
- 2.Press "MENU" or "0" to exit game.



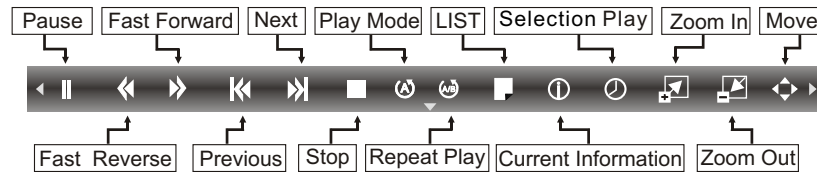
USB CONTROL

Video Menu

1. Press [◀] / [▶] to select VIDEO. Press [OK] to enter.
2. Press [◀] / [▶] or [▲] / [▼] to select the desired folder and press [OK] to open the folder, press [▶/■] to start playing.
3. Press [■] to stop movie playing and return to video list.
4. Press "RETURN" to the previous menu screens.



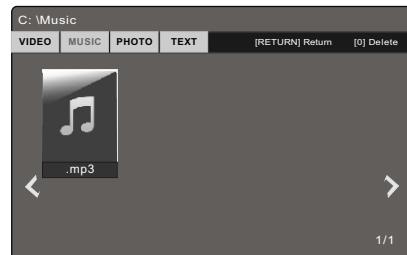
Video Control Bar



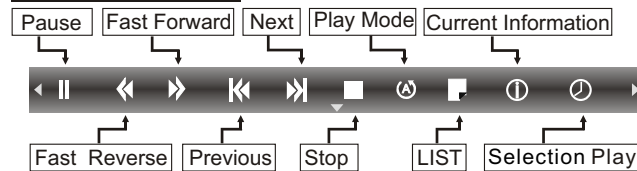
- Press [INFO] to display Video Control Bar while playing the video.
- Press [◀] / [▶] to select the desired settings.
- Press [▼] to exit from Video Control Bar.

Music Menu

1. Press [◀] / [▶] to select MUSIC. Press [OK] to enter.
2. Press [◀] / [▶] or [▲] / [▼] to select the desired folder and press [OK] to open the folder, press [▶/■] to start playing.
3. Press [■] to stop music playing and return to music list.
4. Press "RETURN" to the previous menu screens.



Music Control Bar



- Press [INFO] to display Music Control Bar while playing the music.
- Press [◀] / [▶] to select the desired settings.
- Press [▼] to exit from music Control Bar.

Note: For lyric function to work, the music and lyric files must be named in the same format.

USB CONTROL

Photo Menu

1. Press [◀] / [▶] to select PHOTO. Press [OK] to enter.
2. Press [◀] / [▶] or [▲] / [▼] to select the desired folder and press [OK] to open the folder, press [▶/⏏] to start playing.
3. Press [■] to stop picture playing and return to picture list.
4. Press "RETURN" to the previous menu screens.

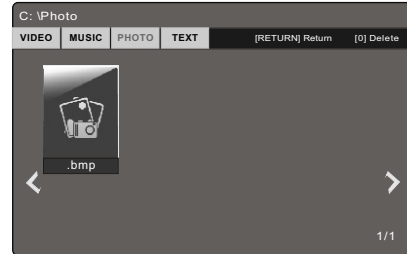
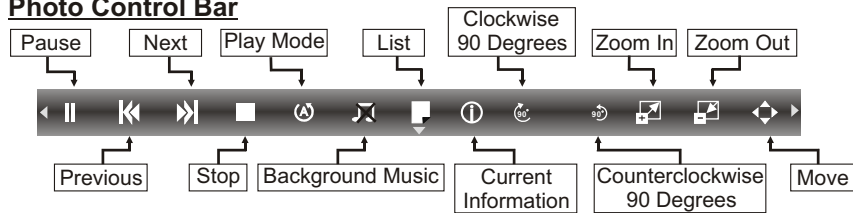


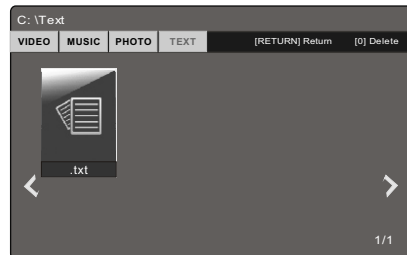
Photo Control Bar



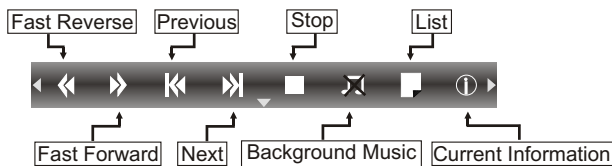
- Press [INFO] to display Photo Control Bar during photo slide show.
- Press [◀] / [▶] to select the desired settings.
- Press [▼] to exit from photo Control Bar.

Text Menu

1. Press [◀] / [▶] to select TEXT. Press [OK] to enter.
2. Press [◀] / [▶] or [▲] / [▼] to select the desired folder and press [OK] to open the folder, press [▶/⏏] to start playing.
3. Press [■] to stop text playing and return to text list.
4. Press "RETURN" to the previous menu screens.



Text Control Bar



- Press [INFO] to display Text Control Bar while reading the text.
- Press [◀] / [▶] to select the desired settings.
- Press [▼] to exit from Info bar.

Note: The txt documents supports up to 1000 pages.

TROUBLESHOOTING

NO PICTURE, NO SOUND

1. Check if the fuse or circuit breaker is working.
2. Plug another electrical device into the outlet to make sure it is working or turned on.
3. Power plug is bad contact with the outlet.
4. Check the signal source.

NO COLOR

1. Change the color system.
2. Adjust the saturation.
3. Try another channel. Black-white program may be received.

REMOTE CONTROL DOES NOT WORK

1. Change the batteries.
2. Batteries are not installed correctly.
3. Main power is not connected.

NO PICTURE, NORMAL SOUND

1. Adjust the brightness and contrast.
2. Broadcasting failure may happen.

NORMAL PICTURE, NO SOUND

1. Press the volume up button to increase volume.
2. Volume is set to mute, press MUTE to restore sound.
3. Change the sound system.
4. Broadcasting failure may happen.

UNORDERLY RIPPLES ON THE PICTURE

It is usually caused by local interference, such as cars, daylight lamps and hair driers. Adjust the antenna to minimize the interference.

BLANK SCREEN IN PC MODE

Perhaps the TV can not recognize the resolution set by the PC. Suggest to change to the best resolution or other standard resolutions of Windows system. Set refresh rate to be 60Hz.

SNOWY DOTS AND INTERFERENCE

If the antenna is located in the fringe area of a television signal where the signal is weak, the picture may be marred by dots. When the signal is extremely weak, it may be necessary to install a special antenna to improve the reception.

1. Adjust the position and orientation of the indoor/outdoor antenna.
2. Check the connection of antenna.
3. Fine tune the channel.
4. Try another channel. Broadcasting failure may happen.

IGNITION

Black spots or horizontal streaks appear, or the picture flutters or drifts. This is usually caused by interference from car ignition system, neon lamps, electric drills, or other electrical appliance.

GHOST

Ghosts are caused by the television signal following two paths. One is the direct path, the other is reflected from tall buildings, hills, or other objects. Changing the direction or position of the antenna may improve the reception.

RADIO FREQUENCY INTERFERENCE

This interference produces moving ripples or diagonal streaks, and in some case, loss of contrast in the picture. Find out and remove the radio interference source.

SPECIFICATIONS

Screen size - diagonal:	48cm
Screen resolution:	1366x768
Audio output power (L+R):	1.5W + 1.5W
Working voltage:	100-240V~ 50/60Hz
Rated power consumption:	25W
Dimensions (W x D x H):	451X130X325.5mm
Net weight:	2.4Kg

Environment(only for Tropical climates zone):

Working temperature: 5°C~45°C

Working humidity: 20%~80%

Storage temperature: -15°C~50 °C

Storage humidity: 10%~90%

Environment(only for Moderate climates zone):

Working temperature: 5°C~35°C

Working humidity: 20%~80%

Storage temperature: -15°C~45 °C

Storage humidity: 10%~90%

Channel coverage: 43.25~869.25MHz full range of RF input

System:

TV:PAL / SECAM-BG / DK, PAL-I, NTSC-M

AV:PAL, NTSC, SECAM

Preset programs: ATV: 200

Status displaying method: On screen display

Function adjustment indicator: Menu display

Language of OSD: Multiple options

RF aerial input: 75 ohm unbalanced

AV video input: 75 ohm, 1.0Vp-p, RCA

AV audio input: 10k ohm, 0.5Vrms
