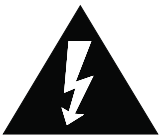
TCL
SERVICE MANUAL

LED28T3520-MS82L-LA

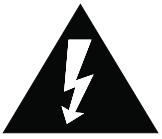
This manual is the latest at the time of printing, and does not include the modification which may be made after the printing, by the constant improvement of product

1. CAUTION

CAUTION:
Use of controls, adjustments or procedures other than those specified herein may result in hazardous radiation exposure.



CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lighting flash with arrowhead symbol, with an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to the person.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION:

Read all of these instructions. Save these instructions for later use. Follow all Warnings and Instructions marked on the audio equipment.

1. Read Instructions- All the safety and operating instructions should be read before the product is operated.
2. Retain Instructions- The safety and operating instructions should be retained for future reference.
3. Heed Warnings- All warnings on the product and in the operating instructions should be adhered to.
4. Follow Instructions- All operating and use instructions should be followed.

FOR YOUR PERSONAL SAFETY

1. When the power cord or plug is damaged or frayed, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
2. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
3. Do not allow anything to rest on or roll over the power cord, and do not place the TV where power cord is subject to traffic or abuse. This may result in a shock or fire hazard.
4. Do not attempt to service this television set yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
5. Never push objects of any kind into this television set through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the television set.
6. If the television set has been dropped or the cabinet has been damaged, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
7. If liquid has been spilled into the television set, unplug this television set from the wall outlet and refer servicing to qualified service personnel.
8. Do not subject your television set to impact of any kind. Be particularly careful not to damage the picture tube surface.
9. Unplug this television set from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

10.1. Do not place this television set on an unstable cart, stand, or table. The television set may fall, causing serious injury to a child or an adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the television set. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

10.2. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PROTECTION AND LOCATION OF YOUR SET

11. • Do not use this television set near water ... for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
    • Never expose the set to rain or water. If the set has been exposed to rain or water, unplug the set from the wall outlet and refer servicing to qualified service personnel.

12. Choose a place where light (artificial or sunlight) does not shine directly on the screen.

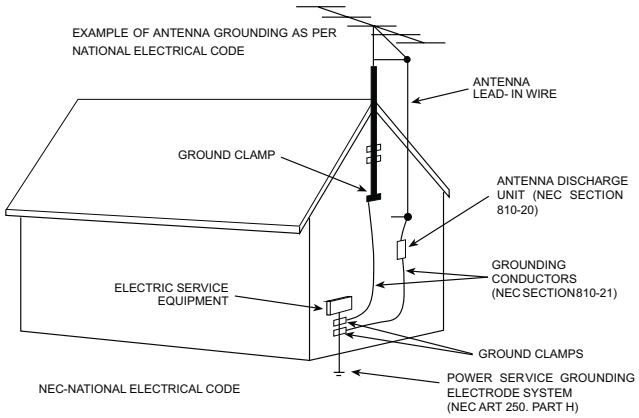
13. Avoid dusty places, since piling up of dust inside TV chassis may cause failure of the set when high humidity persists.

14. The set has slots, or openings in the cabinet for ventilation purposes, to provide reliable operation of the receiver, to protect it from overheating. These openings must not be blocked or covered.
    • Never cover the slots or openings with cloth or other material.
    • Never block the bottom ventilation slots of the set by placing it on a bed, sofa, rug, etc.
    • Never place the set near or over a radiator or heat register.
    • Never place the set in a "built-in" enclosure, unless proper ventilation is provided.

PROTECTION AND LOCATION OF YOUR SET

15.1. If an outside antenna is connected to the television set, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges, Section 810 of the National Electrical Code, NFPA No. 70-1975, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrode, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS



15.2. Note to CATV system installer : (Only for the television set with CATV reception)

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

16. An outside antenna system should not be located in the vicinity of overhead power lines or other electric lights or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

17. For added protection for this television set during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage due to lightning and power-line surges.

OPERATION OF YOUR SET

18. This television set should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply at your home, consult your television dealer or local power company. For television sets designed to operate from battery power, refer to the operating instructions.
19. If the television set does not operate normally by following the operating instructions, unplug this television set from the wall outlet and refer servicing to qualified service personnel. Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the television set to normal operation.
20. When going on a holiday : If your television set is to remain unused for a period of time, for instance, when you go on a holiday, turn the television set "off" and unplug the television set from the wall outlet.

IF THE SET DOES NOT OPERATE PROPERLY

21. If you are unable to restore normal operation by following the detailed procedure in your operating instructions, do not attempt any further adjustment. Unplug the set and call your dealer or service technician.
22. Whenever the television set is damaged or fails, or a distinct change in performance indicates a need for service, unplug the set and have it checked by a professional service technician.
23. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off. If the snapping or popping is continuous or frequent, unplug the set and consult your dealer or service technician.

FOR SERVICE AND MODIFICATION

24. Do not use attachments not recommended by the television set manufacturer as they may cause hazards.
25. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
26. Upon completion of any service or repairs to the television set, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.

TCL MULTIMEDIA

TV SPECIFICATION RELEASE

Version: V1.0 **Issued Date:** 2012.07.31

Model: LED28T3520/MS82L-LA

PICTURE	
Panel Size (inch)	28"
Category	LCD TV
Aspect Ratio	16:9
Color Temperature	Normal/Warm/Cool
Backlight Adjustable	Yes
Scaler Mode	Full,Subtitle,Wide Screen,4:3,Nature,Original
Picture Effect	4 picture effects preset (Standard/Bright/Soft/Personal)
Film Mode (3:2 pull down)	Auto
Picture Enhancement	
Comb Filter	3D
Dynamic Niose Reduction	3D
Adaptive Deinterlacing	3D
Blue Stretch	Yes
Black Stretch	Yes
Motion Compensation	Yes
DLTI	Yes
DCTI	Yes
Dynamic Skin Correction	Yes
Panel Specification	
Back Light Unit	LED
Panel supplier	CSOT(ST2751A01-1)
Viewing Technology	16:9
Display Resolution	1366*768
Brightness (cd/m2)	280
Contrast Ratio	4000:1
Response Time	6.5ms
Viewing Angle (H/V)	178°/178°
Life Time	＞30,000hrs (min)
Color	16.7M (8 bit)

SOUND	
Speakers	Integrated speakers (Bottom side)
Audio Power Output	5W+5W
Sound Effect	Stereo ,Music,Movie,News,Personal
Sound processing	BTSC (Mono;Stereo;Sap)
Sound Control	Balance,Sound EQ Adjust

Function	
CCD (Closed Caption)	Yes
V-Chip	Yes
Wake up Source/Chanel	Yes
Wake up/Turn off time	Yes
Clock/Sleep timers	Yes
Watch Time limit	Yes
OSD Language	English/Portuguese/Spanish
OSD Features	Motion Bmp Style
Startup Setting	Yes(User can set a picture for turning on Logo display)
Smart Switch(Ais)	Yes(Signal Auto Detecting and Changing Source)
Picture Freeze	X
USB Connection	Movie Show：Support H.264、RM/RMVB
	VC1、MPEG4、MPEG2；
	Photo Show: Suppor JPEG、BMP、PNG；
	Music Show: support MP3、WMA；
Hotel	In factory mode

Design and specifications are subject to change without notice!

SIGNAL FORMAT CAPABILITY	
Component Video Format	Y,Pb/Cb,Pr/Cr:up to 1080P
DVI Video Format	Up to XGA for HDMI-PC
HDMI Video Format	up to 1080P
PC Compatibility	Up to SXGA
TERMINALS	
AV Input (Composite)	2 (AV1 on side, ,AV2 Share with "YPbPr")
S-Video Input	X
Audio Input for S-Video	X
YPbPr Input	1
Audio Input for YPbPr	1
YCbCr Input	Share with for "YPbPr"
Audio Input for YCbCr	Share with for "YPbPr"
VGA Input(RGB)	1 (D-Sub,15 Pins)
Audio Input for RGB	Share with for "YPbPr"
DVI	Share with "HDMI" PORT
Audio Input for DVI	Share with for "YPbPr"
HDMI	1
AV Output (Composite)	1
SPDIF	X
Headphone Output	X
RF Input(Antenna)	1 (F Type)
USB 2.0	1
Basic Info.	
TV System	PAL/M/N;NTSC-M
AV System	PAL,NTSC
Channels	181 （Antenna：2～69；CATV：1～125）
Chassis	MS82L-LA
Certification	CB
Power Supply	AC 110V-240V 50/60Hz
Power Consumption-TV on	40W
Power Consumption-Standby	≤0.5W
Default Color of Front Cabinet	
Keyboard Position	Back
Base Stand Detachable	Yes
Unpackaged Dimension for Main Body (L*H*D) (mm)	
With Base Stand (mm)	646*454*180（mm）
Without Base Stand (mm)	646*398*60.8（mm）
Packaged Dimension (L*H*D)	813*153*520（mm）
Main Body (mm)	813*153*520
Speaker Box	x
Base Stand	Packaged with ALL
Net Weight (Kg)	6.3
Gross Weight (Kg)	7.9
Container Loading	
20 feet	448
40 feet	920
40 feet high	1080

ACCESSORIES	
Operation Manual	English(Default)
Remote Control Mode	RC200B (with two 7# batteries)
Base Stand	Integrated Packaging
Speaker Box	Integrated
Wall Mount	Optional
Others	AC Power cord

Drafted by:

Approved by:

文件编号：CRT/SJ/FK02-2010
序号：

OEM 事业部
OEM 设计中心

Alignment Procedure

(MODEL)：MS82L Series

VERSION：V1.0

PREPARED BY : Xiongzp DATE : 2012-12-25

APPROVED BY : _____ DATE : _____

History	Description of major changes	Release Date
V1.0		**2012-12-25**

1.Overview

MS82L chassis is designed for Asia Pacific/South America market. Both Full HD panel and HD panel can be compatible. The signal sources include TV,AV,YPBPR/YCBCR,VGA,HDMI and USB. For YPBPR,HDMI source ,Format up to 1080p can be supported; USB support image, audio and video(up to H.264)playing; The whole process of alignment includes ADC calibration and White Balance adjustments.

2.Factory Menu

1、Methods of Entering

Method 1: Using the remote ,enter the “Picture” submenu in the OSD; choosing the “contrast” item and press the 9,7,3 and 5 in series, Factory Menu will appear in the left top of screen

Method 2: Press RETURN button when FACTORY HOTKEY is enabled(ON).

2. General introduction

FACTORY MENU

ITEMS	Default Setting	Description	Status
1-FAC HOTKEY	OFF	Factory hotkey Switch (OFF/ON).Should be OFF after factory alignment	OK
2-WARM UP	OFF	OFF: The set would enter standby mode after 15 minutes without input signal; ON : Aging mode. Aging time will display on the left bottom of screen.	OK
3-ADC		ADC calibration (refer as follow)	OK
4-WHITE BALANCE		White Balance data adjustment (refer as follow) The balance data is set by PE before the mass production. Do not need adjust.	OK

5-SHOP	DO	Reset the set after production alignment;(This operation will remove all unnecessary factory value; The factory hotkey will be turn off)	OK
6-NVM reset	DO	System initialization. Restore all data except the White Balance and ADC data ;Only for R&D.	OK
7-SET FAC CH	DO	Preset specific factory channels for specific factory. Press left and right button to select the factory, and then press OK to confirm.	OK
8-POWER ON	LAST	ON: Always turns on TV when AC power on STB: Always goes to standby mode when AC power on LAST: Restore the status before the last AC power off	OK
9-USB UPDATE		USB update, **(refer as follow)**	OK
10 ReloadEFBItem…		This item only factory used,	OK

Note: Below the factory menu, some model information are showed, including software version, Project Name, SIACP Version, and SW release time.

ADC Submenu:

ITEMS	Default Setting	Description	Status
Source	RGB/YPbPr (HD)	Sources need calibration. RGB means PC and YPbPr(HD) means YPbPr	OK
R-GAIN	4478	R-GAIN	OK
G-GAIN	4478	R-GAIN	OK
B-GAIN	4478	R-GAIN	OK
R-OFFSET	2048	B-OFFSET	OK
G-OFFSET	2048	B-OFFSET	OK
B-OFFSET	2048	B-OFFSET	OK
AUTO ADC	WAIT/OK	With appropriate pattern (mentioned below) inputted, press left or right key to start auto calibration.	OK

WHITE BALANCE Submenu

ITEMS	Default Setting	Description	Status
Source	Current Source	Current Source(TV,AV1/AV2/YPbPr, HDMI need adjustment)	OK
COLOR TEMP	NORMAL	NORMAL/COOL/WARM	OK
R-GAIN	128	R-GAIN	OK
G-GAIN	128	G-GAIN	OK
B-GAIN	128	B-GAIN	OK
R-OFFSET	128	R-OFFSET	OK
G-OFFSET	128	G-OFFSET	OK
B-OFFSET	128	B-OFFSET	OK
WB INIT	DO	ONLY FOR TCL R&D	OK

The first step is to adjust HDMI.

3.Design Menu

1、Methods of Entering:

Method 1: Using the remote, enter the “Picture” submenu in the OSD; choosing the “contrast” item and press the 1,9,5,and 0 in series ,Design Menu will appear in the left top of screen.

Method 2: Press RETURN button when DESIGN HOTKEY is enabled (ON).

2、General introduction

DESIGN MENU

ITEMS	Default Setting	Description	Status
1-DESIGN HOTKEY	OFF	ON/OFF	OK
2-FACTORY MENU		ON/OFF	OK
3-SHOP INIT		Default setting submenu after production alignment refer to **	OK
4-OTHER		Other set .Only for TCL R&D	OK

5-SERVICE MENU		After service menu description	OK
6-PARAM SETTING		Parameter setting submenu	OK
7-HOTEL MENU		Hotel submenu	OK
8，LANGUAGE MENU		OSD 语言设定	

SHOP INIT submenu

ITEMS	Default Setting	Description	Status
Volume	30	0-100 adjustable	OK
PIC MODE	STANDARD	STANDARD/BRIGHT/SOFT/PERSONAL	OK
SOUND MODE	STEREO	STEREO/MUSIC/MOVIE/NEWS	OK
Channel	199	0-199 adjustable	OK
Language	English	Up to 7 languages optional	OK
COLOR SYS	AUTO	AUTO、PAL、 NTSC、SECAM	OK
SOUND SYS	DK	DK、BG、I、M	OK
PRESET CH	1	0-199 adjustable	OK
COLOR TEMP	NORMAL	NORMAL、WARM、COOL	OK

Other

ITEMS	Default Setting	Description	Status
VIF1		VIF adjust	OK
VIF2		VIF adjust	OK
VIF3		VIF adjust	OK
QMAP ADJUST		PQ debug	OK

SSC		SSC adjust	OK
DBC ENABLE		DBC adjust	OK
BP			OK
CP			OK
DBC MODE			OK
MIU DQS0			
MIU DQS1			
TELETEXT	ON	TELETEXT SWITCH (only for MS82B/E series)	OK
NICAM	ON	NICAM SWITCH (only for MS82B/E series)	OK

PARAM SET **SETTING**

ITEMS	Default Setting	Description	Status
Brightness Curve		Brightness curve. Exclusively used by R&D	OK
Contrast Curve		Contrast curve. Exclusively used by R&D	OK
Saturation Curve		Saturation curve. Exclusively used by R&D	OK
Hue Curve		Hue curve. Exclusively used by R&D	OK
Sharpness Curve		Sharpness curve. Exclusively used by R&D	OK
Volume Curve		Volume curve. Exclusively used by R&D	OK
BackLight Curve		BackLight curve. Exclusively used by R&D	OK
OverScan		Exclusively used by R&D	

4、Service Menu

1、Methods of Entering

Using the remote, enter the “Picture” submenu in the OSD; choosing the “contrast” item and press the 9,7,0 and 5 in series, Service Menu will appear in the left top of screen

SERVICE MENU:

ITEM	Default Setting	Description	Status
SW NO		Software Version	OK

DATE		Date and time of software releasing	OK
Project Name		Module name	OK
SIACP VERSION		SIACP VERSION	OK
Chassis	MS82VG	Chassis name	OK
PANEL NAME		P/N of panel	OK
			NG
PROJECT ID		Project Select submenu	OK
CONFIG		Project Select submenu	
USB UPDATE		USB UPDATE	ok
HOTEL ENABLE	OFF	HOTEL MENU SWITCH	ok
ReloadEFBItem	Do	Only for factory adjust	OK

CONFIG submenu

ITEM	Default Setting	Description	Status
PWON_MUSIC	OFF	Power on music	OK
POWER LOGO	OFF/TCL	Power on ,panel display logo	OK
SAANDBY LOGO	ON/OFF	NO USE	OK
LOGO_LIGHT	ON/OFF	LOGO BACKLIGHT, Some model used	OK
TCL SHOW	ON/OFF	default	OK
ERROR CODE			OK
Erase HDCP Key	**Do**	**Only for R&D**	OK
Reset HDCP Key	**Do**	**Only for R&D**	OK
UsbHdcpkey Update	**Do**	**Only for R&D**	OK
Timbre_Improve	ON	AUDIO Timbre_Improve	
USBPortNumSET	2	USB port number select	
BLUE CREEN	ON	BLUE CREEN select	
AV2 MODE	MS82C/MS82L	MS82C/MS82L select	

5. Debugging

5.1. General Steps of debugging

According to the requirement of the order, below steps are needed for appropriate setting.

1) Enter the Factory Menu, enable FAC HOTKEY.
2) Check Project ID and the version of software, release date displayed at the bottom of Factory Menu.
3) Enter Design Menu, choose SERVICE MENU->Project ID, choose corresponding Project ID number of the product (Refer to the "V6-PROJECT -IDO**" in the BOM list).
4) Return to Factory Menu, check the Product model.
5) Choose Factory Menu->NVM RESET and press the right button of the remote and wait until prompt OK appears.
6) Restart the set
7) According to the requirement of the order, Set the items of SHOP INIT and Hotel Menu etc.
8) After aging under normal temperature, calibrate ADC and adjust white balance.
9) Choose Factory Menu ->SHOP and press the button of remote to initialize the set.

Note: After step 9, Hotel Menu will be disabled by default. Therefore, if the order requires hotel function, it is necessary to enable hotel function by set Design MENU->Service Menu->HOTEL ENABLE to ON.

5.2. Equipments

- Color Analyzer CA-210.
- Video Pattern Generator Chroma2329.
- Color TV Pattern Generator PM5418/Fluke5418.
- VGA cable , AV(RCA) cable ,YPBPB (RCA) cable, HDMI cable etc.

Chroma2329

Fluke5418

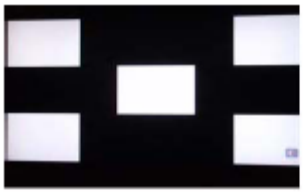
CA-210

5.3. ADC Calibration

5.3.1. Signal and generator

PC: Chroma2329 Pattern 42,Timing 14(1024X768@60Hz 5 MOSAIC)

YPBPR: Chroma2329 pattern 103, Timing 79(100% Color Bar,720p)



5 MOSAIC

100% Color Bar

5.3.2. Steps of Calibration:

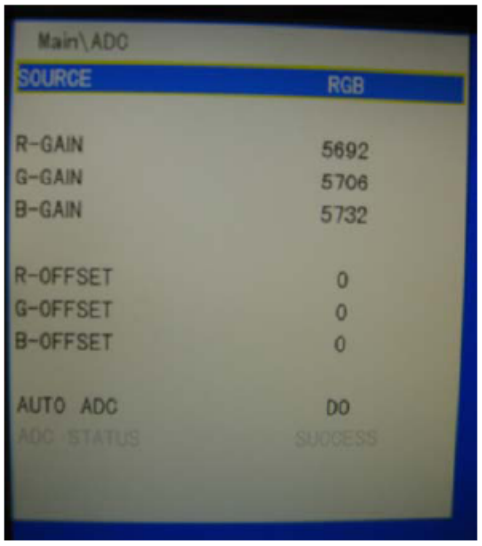
1). Access to the Factory menu->ADC

2). select RGB source and see the 5 MOSAIC appear on the screen

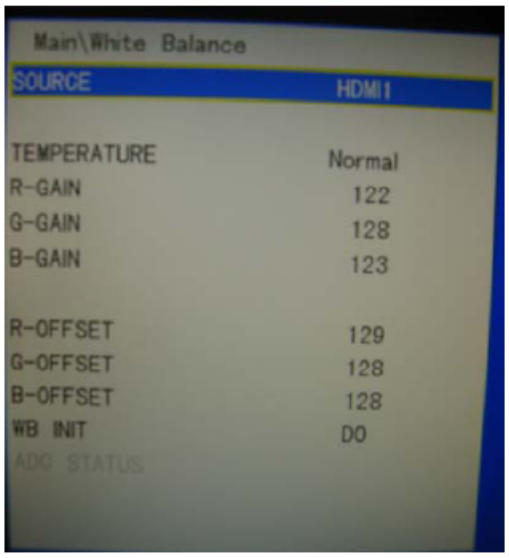
3). Select AUTO ADC , Press the right button on the your remote to calibrate the ADC automatically.

4). Select YPBPR source and Repeat step 5.3 .

When the OK appears the calibration has been finished successfully.



VGA calibration



HDMI 1 WB adjustment

5.4. White Balance adjustments (Manual)

Before adjustment , you must make sure the ADC status(only PC and YPbPr) is “success” and Color Analyzer has been calibrated .Only AV1,YPbPr,PC,HDMI1 need to be adjusted. HDMI1 should be the first.

5.4.1. Signal and generator

The pattern of the signal should be used are White (Chroma2329 pattern

113) and Grey (pattern 114).

The format of signal are respectively 720P for HDMI1 (Chroma2329 Timing 69),PAL (Chroma2329 Timing38) for AV1,1024X768@60Hz(Chroma2329 Timing14) for VGA and 720P(Chroma2329 Timing79) for YPbPr.

5.4.2. Steps of adjustment

1).Enter the factory menu-> White Balance, select source HDMI 1 and Normal Temperature.

2).Input grey signal in 720p format.

3).Change R-OFFSET and B-OFFSET to make sure the value of color coordination equal to (X=0.280 +/-0.015;Y=0.290 +/-0.015).

4).Input white signal in 720p format.

5). Change R-GAIN and B-GAIN to make sure the value of color coordination equal to (X=0.280 +/-0.015;Y=0.290 +/-0.015).

6).Repeat step 2—5 until both of the value of color coordination of white and grey equal to (X=0.280 +/-0.015;Y=0.290 +/-0.015).

For COOL and WARM color temperature, just repeat step 2—5.The color coordination we recommend for COOL and WARM color temperature is respectively(X=0.270 +/-0.015;Y=0.270 +/-0.015) and

(X=0.300 +/-0.015;Y=0.305 +/-0.015).

After the adjustment of HDMI1, you can switch to other source AV, PC and YPbPr and repeat step 1—6 to do the WB adjustment.

Note: *For some small size LED panel,the color coordination of specifications is not X=0.280/Y=0.290,and we recommend you adopt the values from panel specifications.*

5.5. ADC Calibration and White Balance Adjustment (automatic)

The process of adjusting ADC and White Balance automatically is out of the range of this file, Please refer to the relevant technical file of HuiZhou factory of TCL.

6.Chip list of software programming before SMT

Following chips must be programmed before SMT by tools

Position	Chip type	Software description
U102	EN25Q32	HDMI HDCP Key, System Software etc.

7.Software update

Method of SW update:

1, Download the bin file “MS82VGUP_D.bin or MS82VGUP_C.bin” to the root directory of your USB device (DO not change the file name); Then

insert the USB device to USB interface of TV set.

2,using the remote, enter the “Picture” submenu of the OSD; choosing the “contrast” item and press 9,7,3 and 5 in series, Factory Menu will appear in the left top of screen.

3,Select the “USB UPDATE” item , press left or right key to enter the update box;

4,Select “YES” of the dialog box and press OK button to start the update, you will see a progress box on the screen.

5,After updating , the set will reset automatically.

8, Project ID selecting

1) Press the Menu button of remote control, then select Contrast item of Picture submenu; press 1,9,5,0 consecutively, there you go the Design Menu.

2) Select the SERVICE MENU item, press OK and RIGHT button of the remote to enter submenu,

3) Select the PROJECT ID item, press OK or RIGHT button of the remote to enter the submenu;

4) Press the right or left button of the remote to select the ID you want;

5) After ID selection, press MENU button of the remote to exit DESIGN MENU.

6) Finally, do AC power on/off.

MODEL:	
DESCRIPITION:	
DRAWN:	**DATE:**
CHECK:	**DATE:**
APPR:	**DATE:**

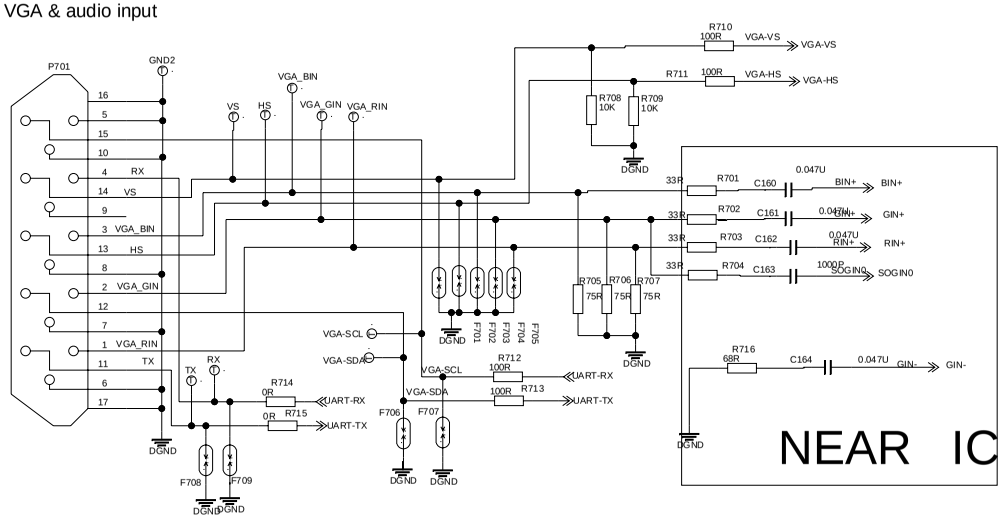
MS82L

TCL
WW R&D CENTER T.C.L MULTIMEDIA TECHNOLOGY HOLDING L TD.
5TH FLOOR,TCL BUILDING,SOUTH NANHAI ROAD
NANSHAN DISTRICT,SHENZHEN,GUANGDONG,518067 CHINA
TEL:+86 755 3331 2403

NOTE:	……	PAGE:	OF

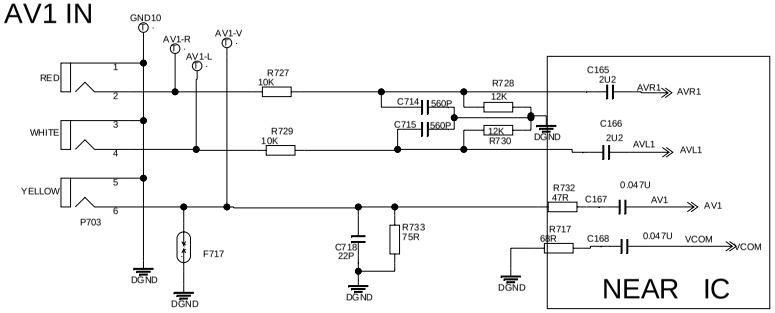
FORMAT DIN A4

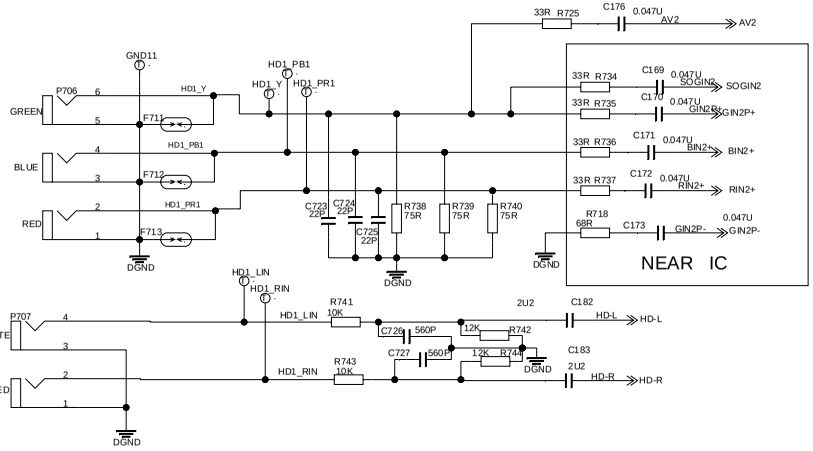
VGA & audio input

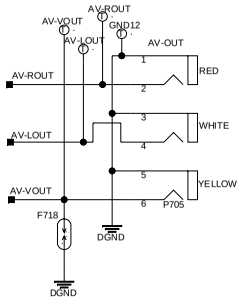


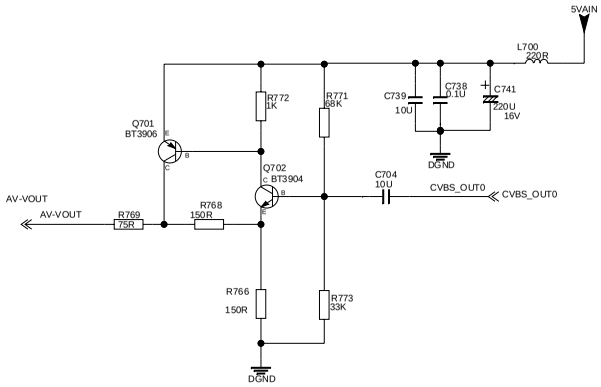
AV1 IN

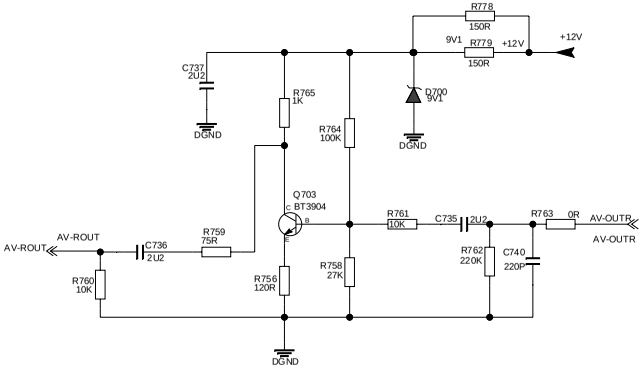
BACK AV1 IN

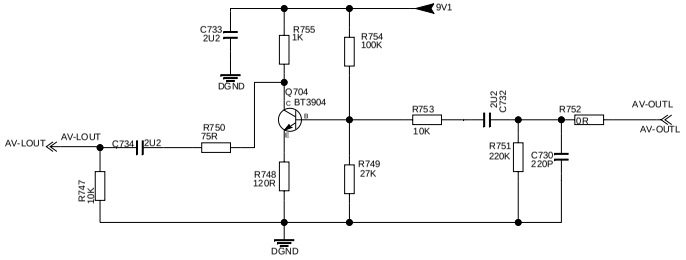


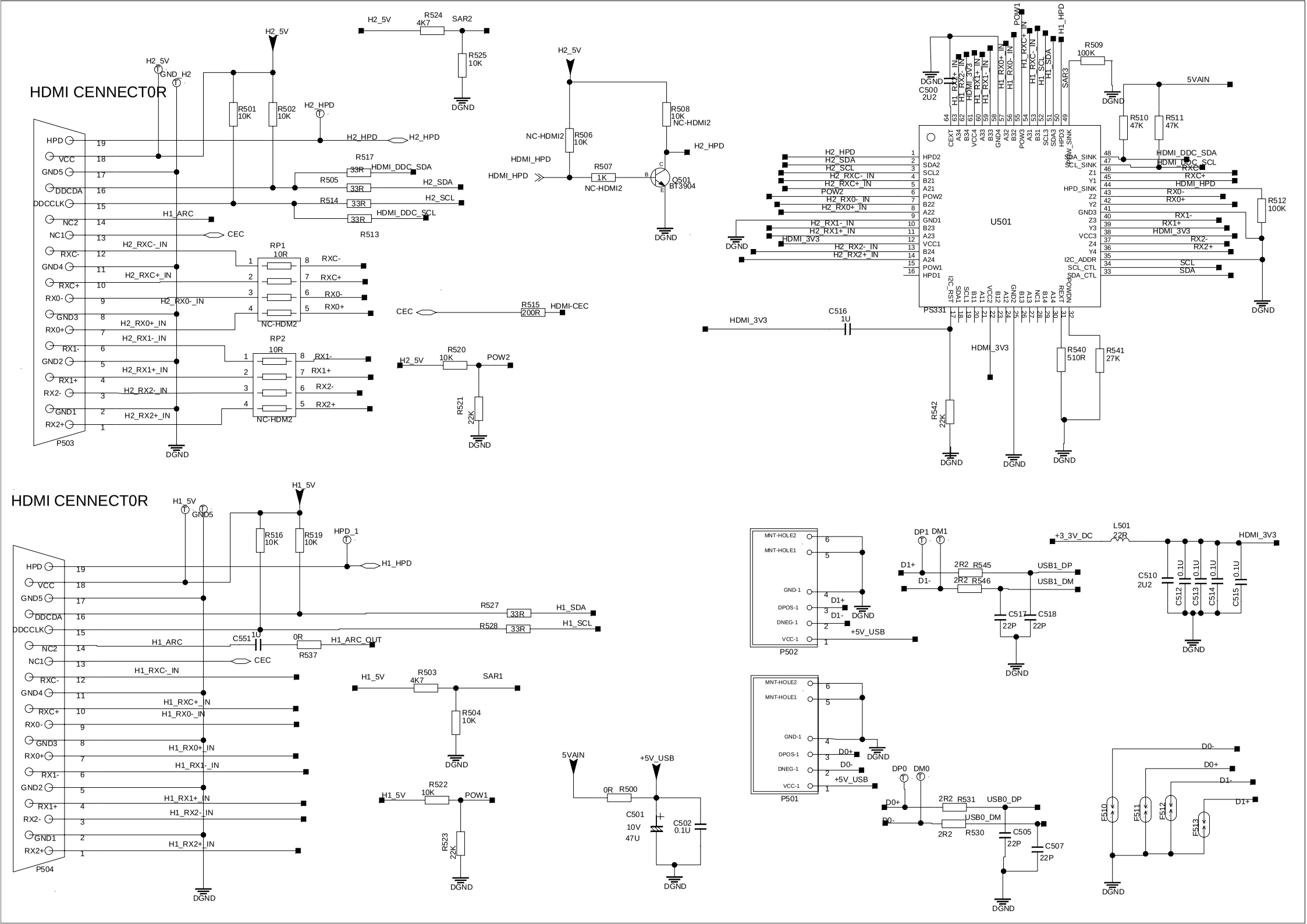


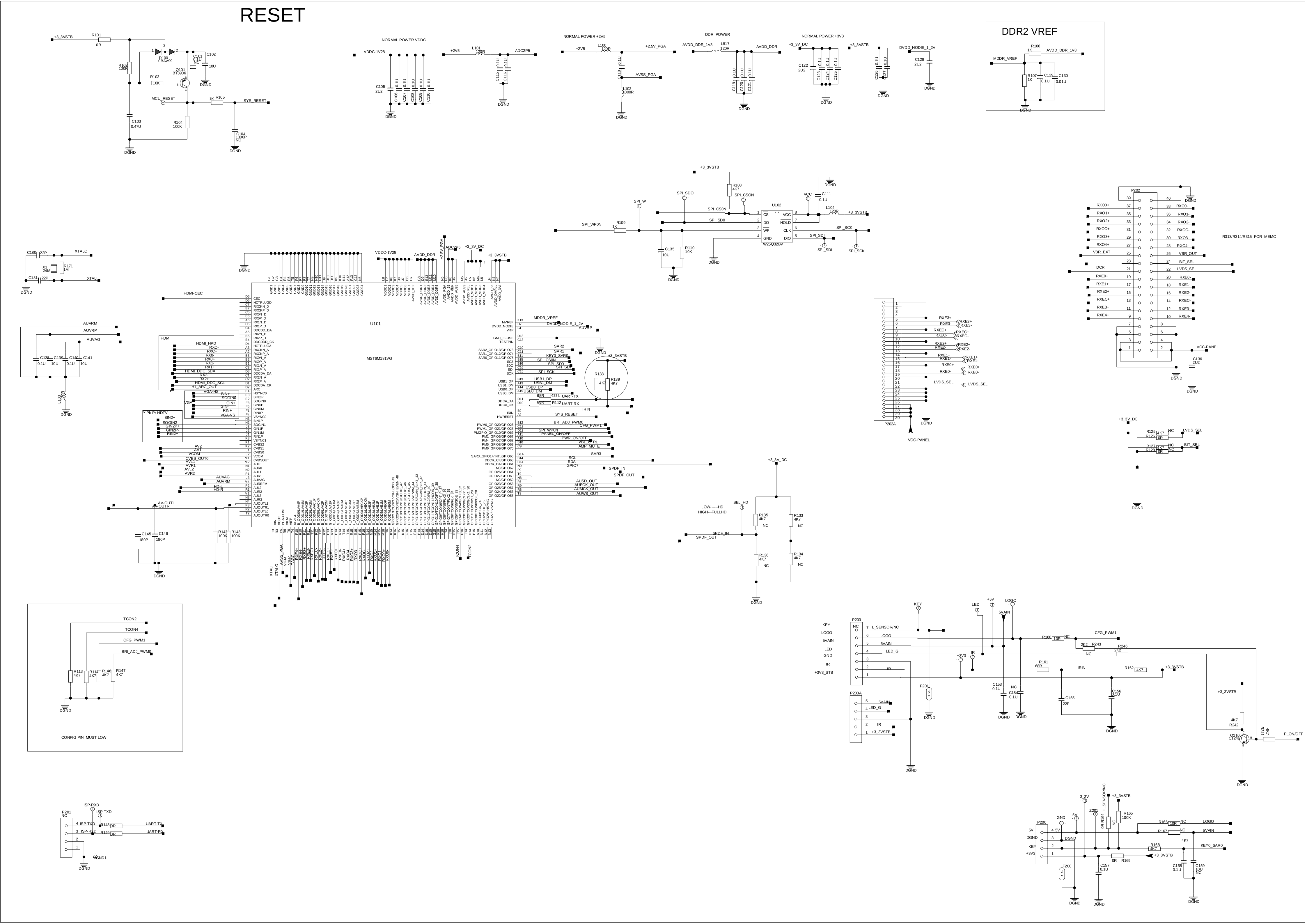




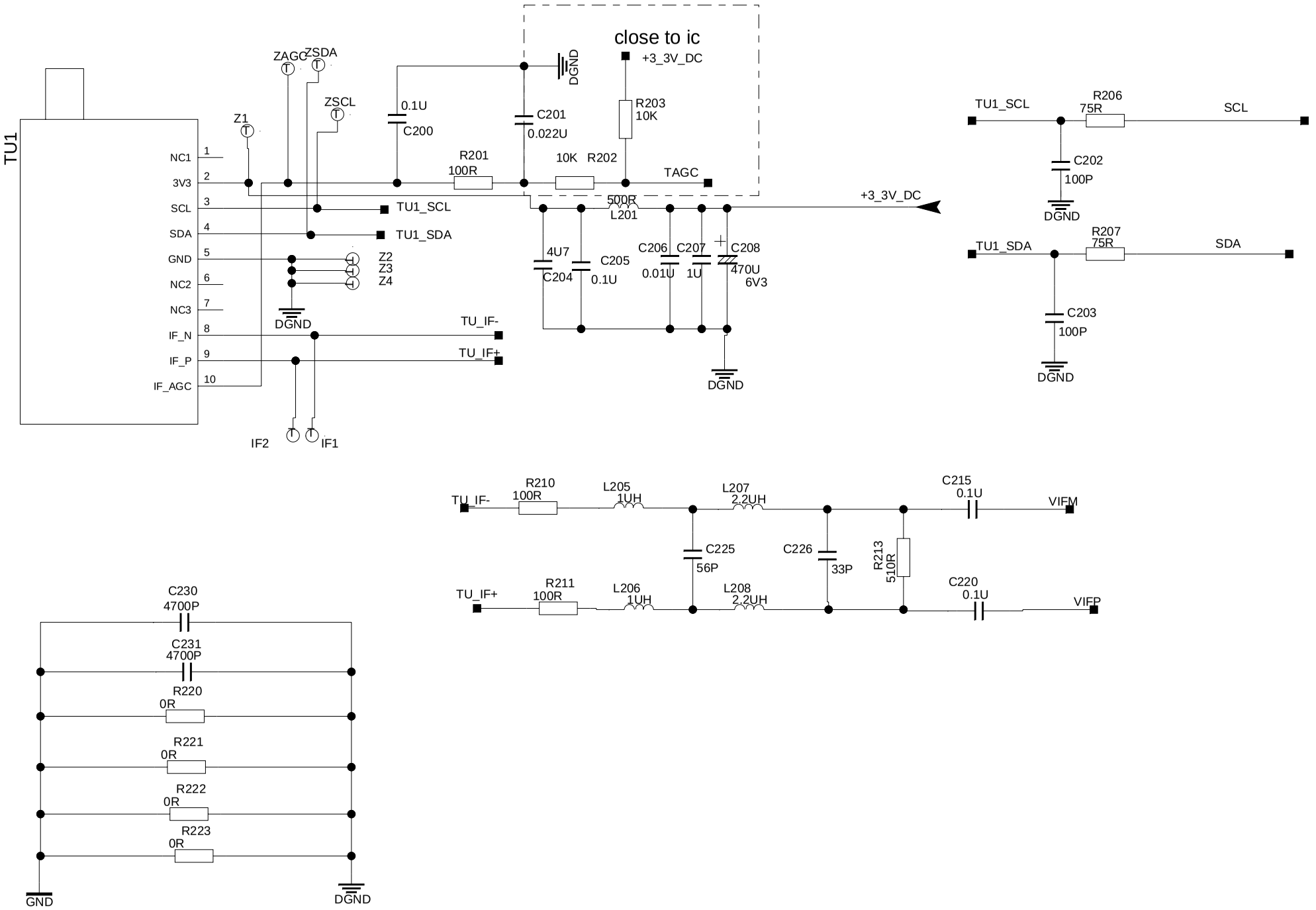


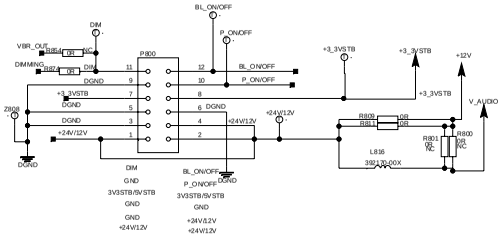


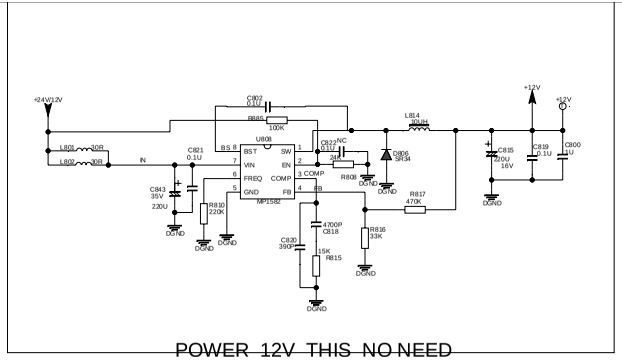

HDMI CENNECT0R
P503
HPD
VCC
GND5
DDCDA
DDCCLK
NC2
NC1
RXC-
GND4
RXC+
RX0-
GND3
RX0+
RX1-
GND2
RX1+
RX2-
GND1
RX2+
H2_5V
GND_H2
R501 10K
R502 10K
H2_HPD
R524 4K7
SAR2
R525 10K
R517 33R
R505 33R
R514 33R
R513 33R
HDMI_DDC_SDA
HDMI_DDC_SCL
H2_SDA
H2_SCL
H1_ARC
CEC
H2_RXC-_IN
H2_RXC+_IN
H2_RX0-_IN
H2_RX0+_IN
H2_RX1-_IN
H2_RX1+_IN
H2_RX2-_IN
H2_RX2+_IN
RP1 10R
RP2 10R
NC-HDM2
R515 200R
HDMI-CEC
R520 10K
POW2
R521 22K
DGND
R508 10K
NC-HDMI2
R506 10K
R507 1K
Q501 BT3904
HDMI_HPD
U501
PS331
H1_HPD
H1_RXC+_IN
H1_RXC-_IN
H1_SCL
H1_SDA
H1_RX0+_IN
H1_RX0-_IN
H1_RX1+_IN
H1_RX1-_IN
H1_RX2+_IN
H1_RX2-_IN
SAR3
R509 100K
5VAIN
R510 47K
R511 47K
R512 100K
C500 2U2
C516 1U
HDMI_3V3
R540 510R
R541 27K
R542 22K
HDMI_DDC_SDA
HDMI_DDC_SCL
RXC-
RXC+
HDMI_HPD
RX0-
RX0+
RX1-
RX1+
RX2-
RX2+
SCL
SDA
HDMI CENNECT0R
P504
H1_5V
GND5
R516 10K
R519 10K
HPD_1
H1_HPD
R527 33R
R528 33R
H1_SDA
H1_SCL
C551 1U
0R
R537
H1_ARC_OUT
H1_ARC
CEC
H1_RXC-_IN
H1_RXC+_IN
H1_RX0-_IN
H1_RX0+_IN
H1_RX1-_IN
H1_RX1+_IN
H1_RX2-_IN
H1_RX2+_IN
R503 4K7
SAR1
R504 10K
R522 10K
POW1
R523 22K
5VAIN
+5V_USB
0R R500
C501 10V 47U
C502 0.1U
P502
P501
MNT-HOLE1
MNT-HOLE2
GND-1
DPOS-1
DNEG-1
VCC-1
D1+
D1-
DP1
DM1
USB1_DP
USB1_DM
2R2_R545
2R2_R546
C517 22P
C518 22P
+3_3V_DC
L501 22R
C510 2U2
C512 0.1U
C513 0.1U
C514 0.1U
C515 0.1U
D0+
D0-
DP0
DM0
USB0_DP
USB0_DM
2R2_R531
2R2
R530
C505 22P
C507 22P
F510
F511
F512
F513



RESET
DDR2 VREF
NORMAL POWER VDDC
NORMAL POWER +2V5
DDR POWER
NORMAL POWER +3V3
R313/R314/R315 FOR MEMC
U101
MST6M181VG
U102
W25Q32BV
HDMI
VGA
Y Pb Pr HDTV
LOW----HD
HIGH--FULLHD
CONFIG PIN MUST LOW

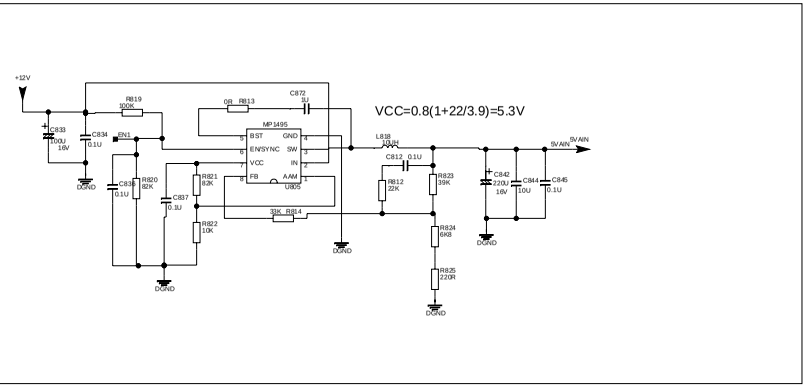

close to ic
TU1
NC1
3V3
SCL
SDA
GND
NC2
NC3
IF_N
IF_P
IF_AGC
ZAGC
ZSDA
ZSCL
Z1
Z2
Z3
Z4
IF2
IF1
DGND
0.1U
C200
C201
0.022U
+3_3V_DC
R203
10K
R201
100R
10K
R202
TAGC
500R
L201
TU1_SCL
TU1_SDA
TU_IF-
TU_IF+
4U7
C204
C205
0.1U
C206
0.01U
C207
1U
C208
470U
6V3
R206
75R
C202
100P
R207
75R
C203
100P
R210
100R
L205
1UH
L207
2.2UH
C215
0.1U
VIFM
C225
56P
C226
33P
R213
510R
R211
100R
L206
1UH
L208
2.2UH
C220
0.1U
VIFP
C230
4700P
C231
4700P
R220
0R
R221
0R
R222
0R
R223
0R
GND



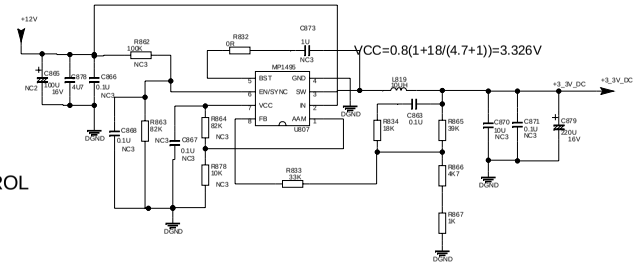


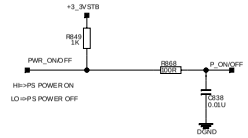
POWER 12V THIS NO NEED

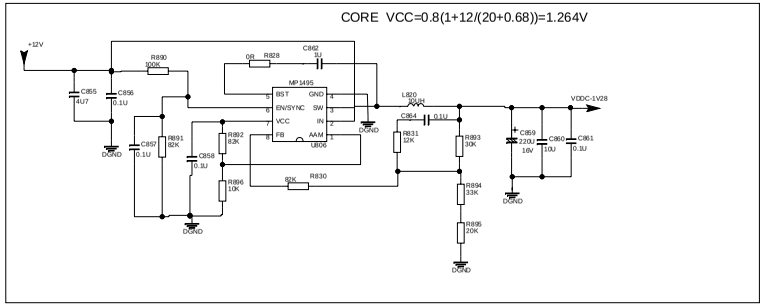
Vout=0.8(1+R817/R816)=0.8(1+470/33)=12.19V

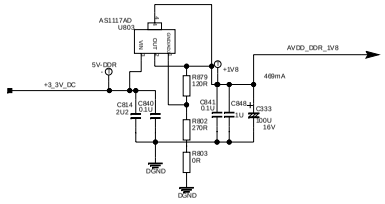


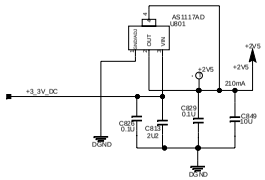
POWER&PANEL CONTROL

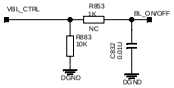


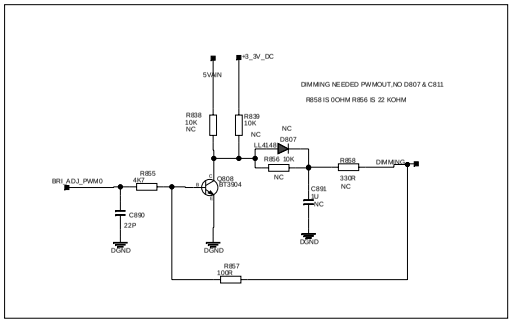


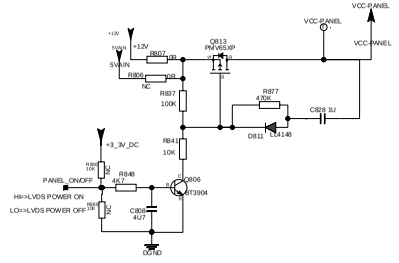


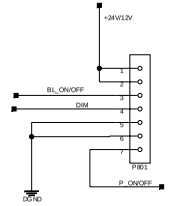


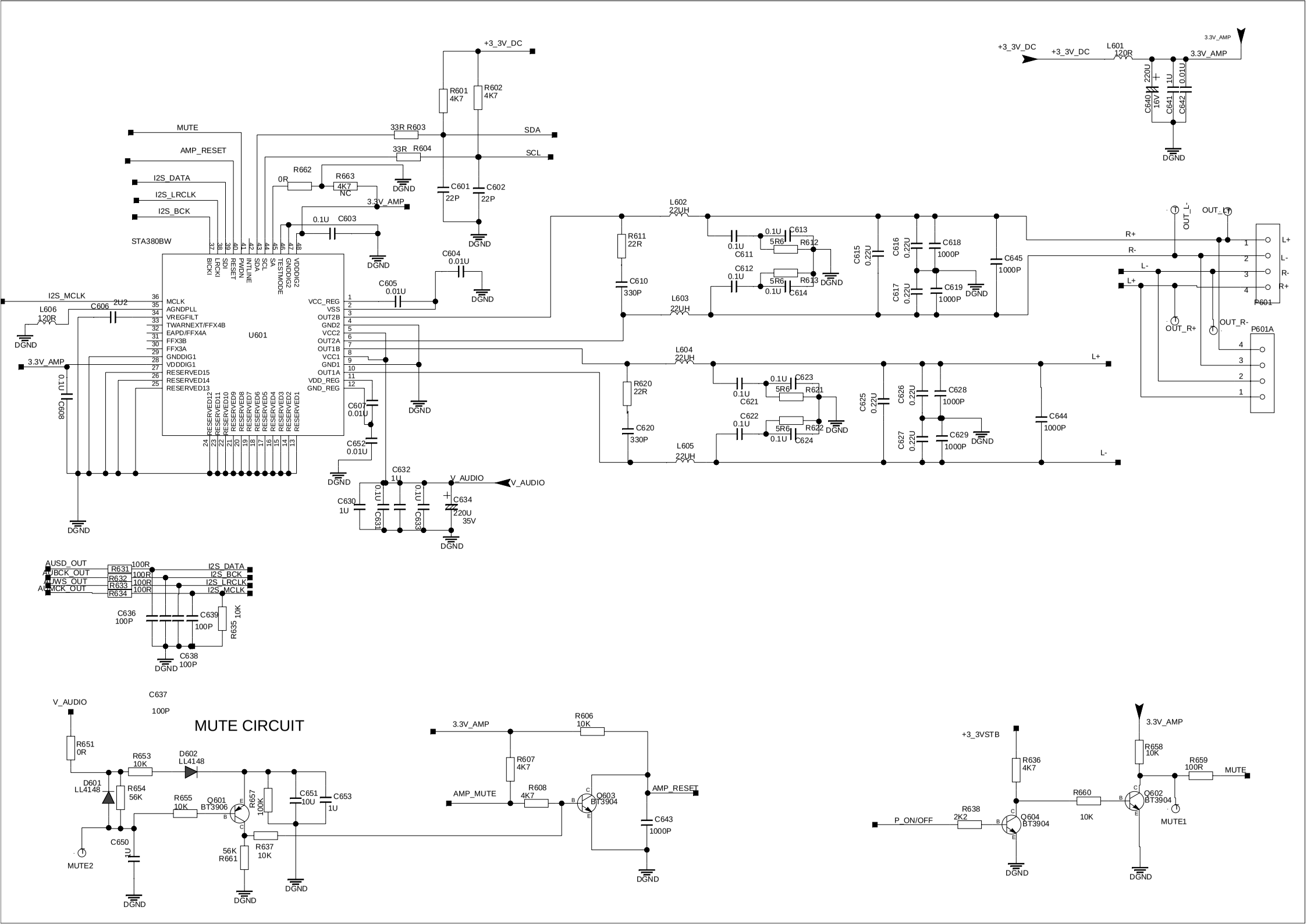




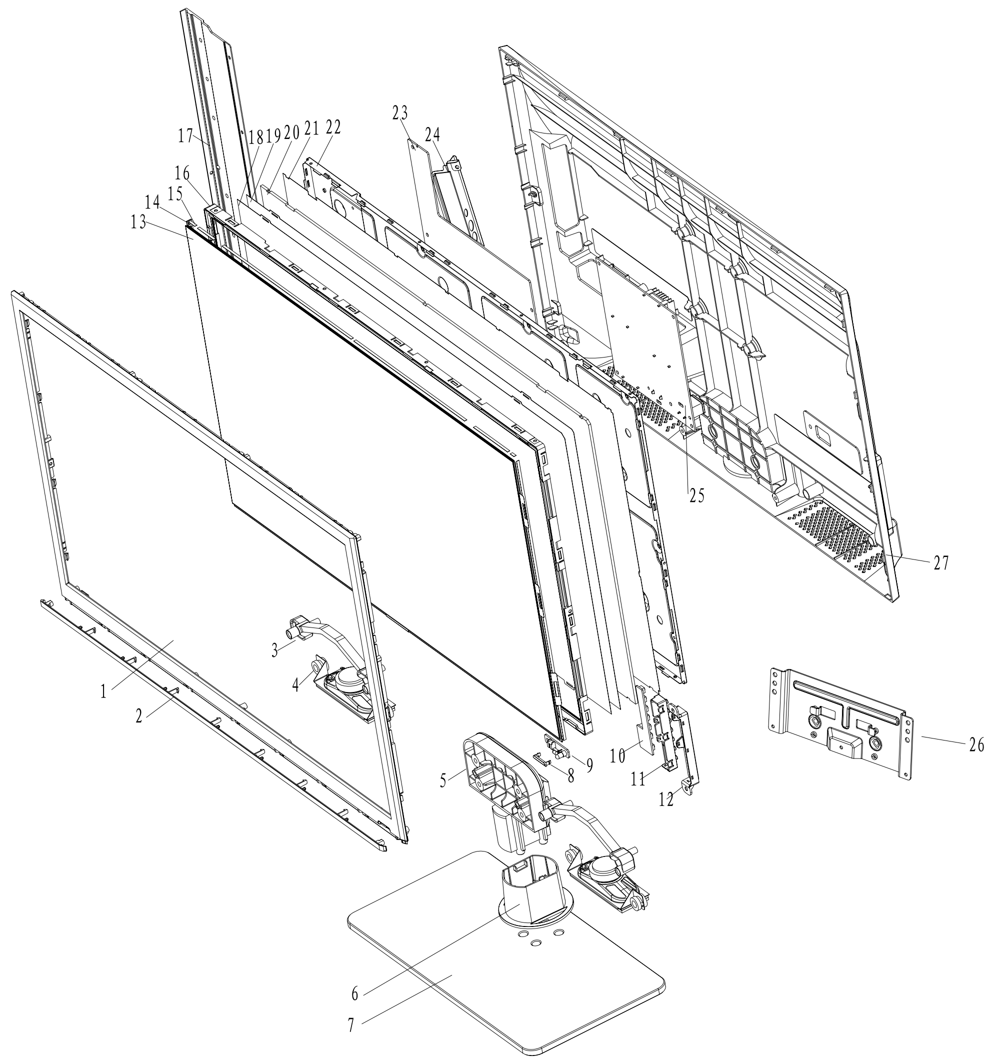







+3_3V_DC
R601 4K7
R602 4K7
MUTE
33R R603
SDA
AMP_RESET
33R R604
SCL
I2S_DATA
R662 0R
R663 4K7 NC
I2S_LRCLK
C601 22P
C602 22P
I2S_BCK
3.3V_AMP
0.1U C603
STA380BW
DGND
C604 0.01U
C605 0.01U
I2S_MCLK
L606 120R
C606 2U2
U601
MCLK
AGNDPLL
VREGFILT
TWARNEXT/FFX4B
EAPD/FFX4A
FFX3B
FFX3A
GNDDIG1
VDDDIG1
RESERVED15
RESERVED14
RESERVED13
VCC_REG
VSS
OUT2B
GND2
VCC2
OUT2A
OUT1B
VCC1
GND1
OUT1A
VDD_REG
GND_REG
C607 0.01U
C652 0.01U
C608 0.1U
C632 1U
V_AUDIO
C630 1U
C631 0.1U
C633 0.1U
C634 220U 35V
L602 22UH
L603 22UH
L604 22UH
L605 22UH
R611 22R
C610 330P
R620 22R
C620 330P
C611 0.1U
C612 0.1U
C613 0.1U
C614 0.1U
C621 0.1U
C622 0.1U
C623 0.1U
C624 0.1U
R612 5R6
R613 5R6
R621 5R6
R622 5R6
C615 0.22U
C616 0.22U
C617 0.22U
C618 1000P
C619 1000P
C625 0.22U
C626 0.22U
C627 0.22U
C628 1000P
C629 1000P
C645 1000P
C644 1000P
L+
L-
R+
R-
OUT_L+
OUT_L-
OUT_R+
OUT_R-
P601
P601A
+3_3V_DC
L601 120R
3.3V_AMP
C640 220U 16V
C641 1U
C642 0.01U
AUSD_OUT
AUBCK_OUT
AUWS_OUT
AUMCK_OUT
R631 100R
R632 100R
R633 100R
R634 100R
I2S_DATA
I2S_BCK
I2S_LRCLK
I2S_MCLK
C636 100P
C639 100P
R635 10K
C638 100P
C637 100P
MUTE CIRCUIT
V_AUDIO
R651 0R
R653 10K
D602 LL4148
D601 LL4148
R654 56K
R655 10K
Q601 BT3906
R657 100K
C651 10U
C653 1U
C650 1U
MUTE2
56K R661
R637 10K
3.3V_AMP
R606 10K
R607 4K7
AMP_MUTE
R608 4K7
Q603 BT3904
AMP_RESET
C643 1000P
+3_3VSTB
R636 4K7
P_ON/OFF
R638 2K2
Q604 BT3904
R658 10K
R659 100R
MUTE
R660 10K
Q602 BT3904
MUTE1

Notes:
The explode drawing is only for reference, correcting parts and screws are according to BOM please.

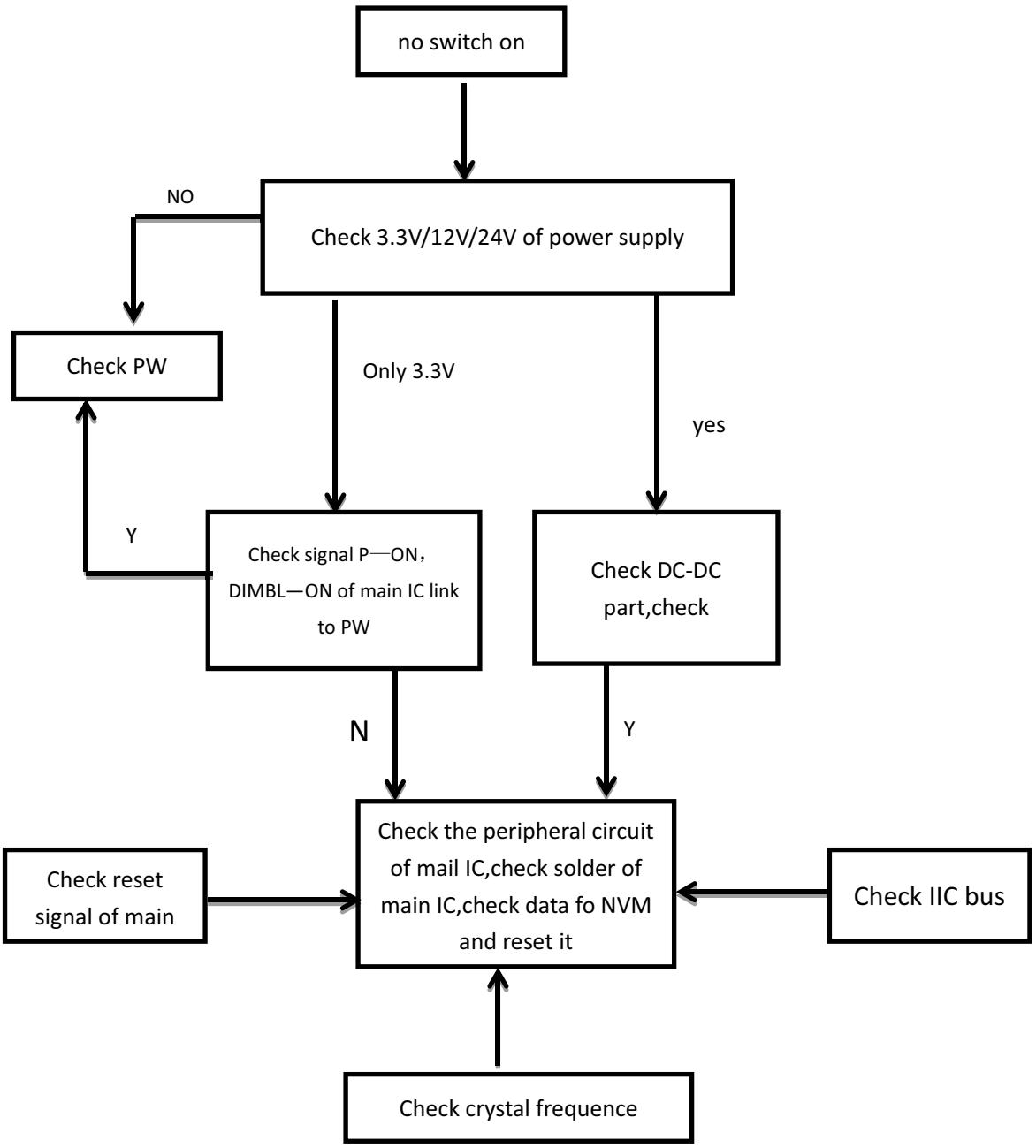


No	Code No	Description ; Specification	Q'ty	Remark
1	55-728680-0HQ	面壳（Front Cabinet）	1	
2	56-728690-0HA	装饰条（Trim strip）	1	
3	62-729280-0HN	喇叭支架（Speaker support）	2	
4	42-41016D-XX5G	29D15改外磁喇叭(16欧/5W)（Speaker）	2	
5	56-728010-0HA	底座脖子（Base neck）	1	
6	56-727980-0HQ	装饰圈（Ornament）	1	
7	68-S96513-0006MEM	玻璃底座组件（Base glass）	1	
8	56-727570-0HH	透镜（Lens）	1	
9	40-0MS82L-MAB2LG	NA_E330_IR_PCB	1	
10		排扭PCB（Button PCB）	1	
11	56-960380-0HA	排钮（Button）	1	
12	56-960390-0HN	排扭支架（Button Support）	1	
13	4A-LCD280-CS2GTA	OPEN CELL	1	
14	4C-LB280T-LG2	LED灯条(LIGHT BAR)	1	
15		反射片 双面胶 (REF DOUBLE TAPE)	1	
16	55-465440-0UH	胶框(Frame)	1	
17	67-465460-0A4	散热片(Heatsink)	1	
18	4C-PF280T-JF1	增光片(Prism)	1	
19	4C-KF280T-XL1	扩散片(dif sheet)	1	
20	4C-LP280T-TL2	导光板(LIGHT GUIDE PLATE)	1	
21	4C-RF280T-HL2	反射片(Ref sheet)	1	
22	67-465450-0G4	背板(Back cover)	1	
23		机芯(Chassis)	1	
24	67-725160-AG0	机芯支架(Chsssis support)	1	
25		电源(Power)	1	
26	67-729320-0G0	屏支撑件（Base metal support）	1	
27	55-728700-0HL	后壳（Rear Cover）	1	

TCL Mechanical development

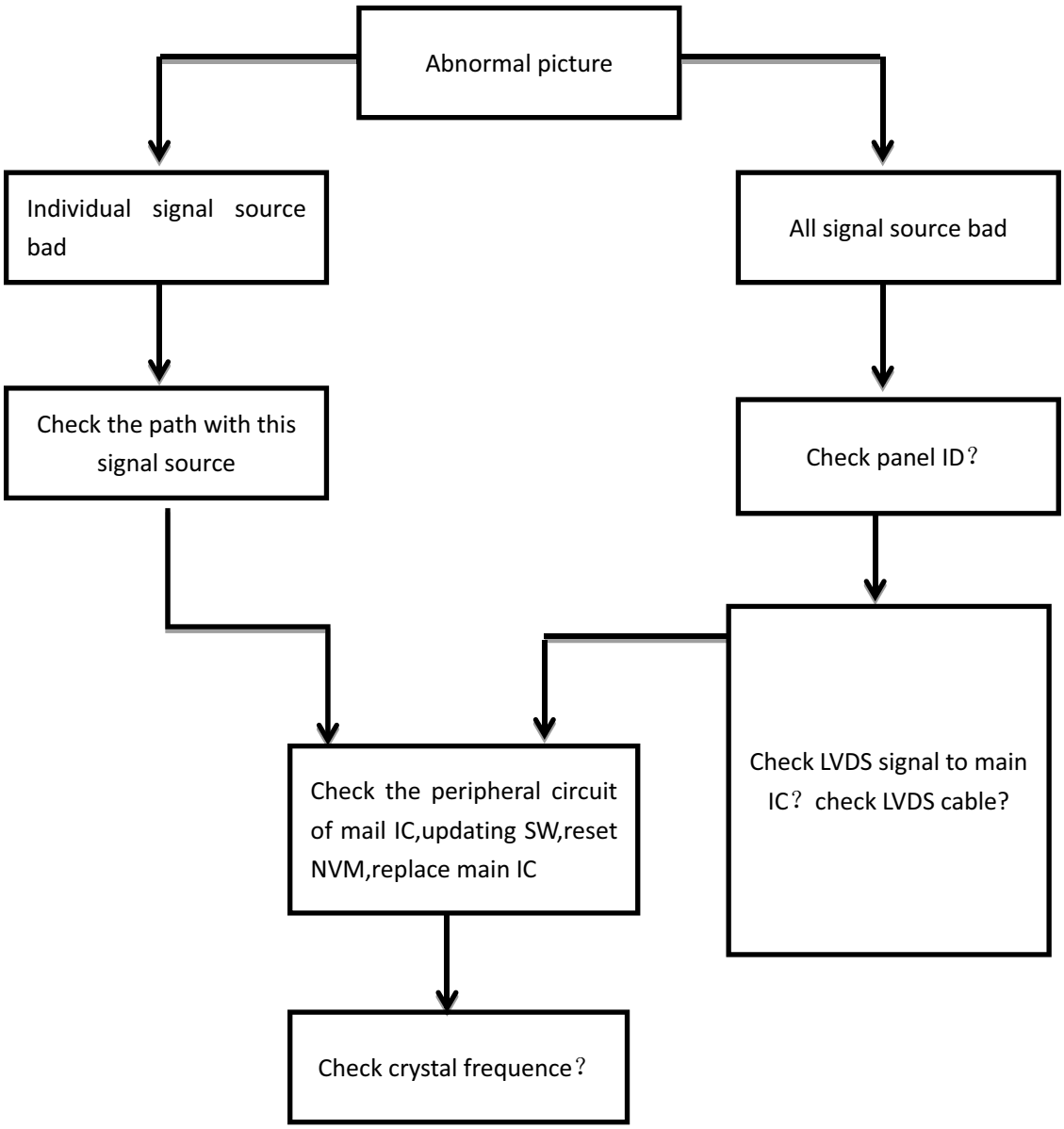
Trouble shooting

1、 Can not switch on：

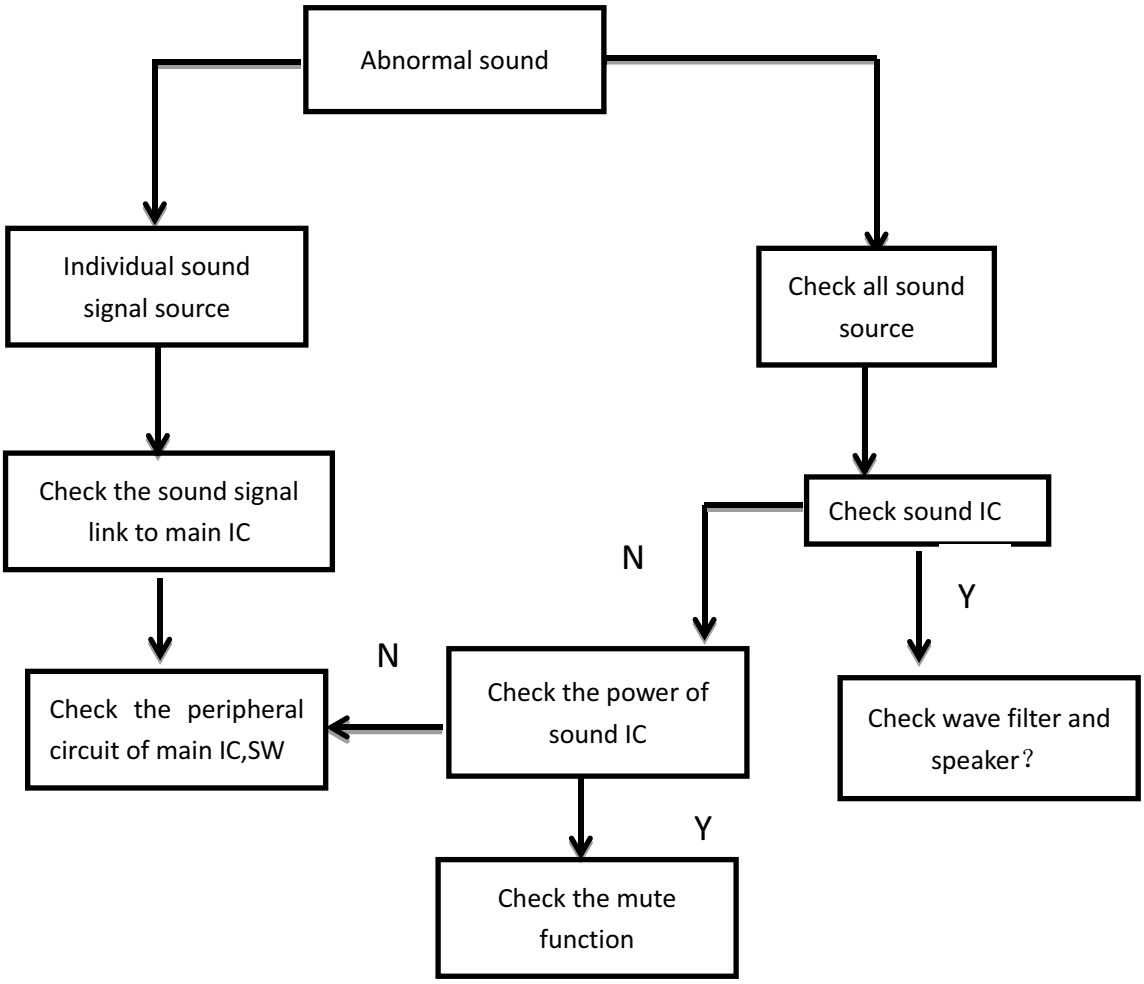


i

2、abnormal picture ：



3、 Abnormal sound：



H3-28T352SK8-B00A

LED28T3520/MS82L-LA/CS2GTA/TT E1 V1

parent	child	description	BOM text
H3-28T352SK8-B00A	06-520W37-B002X	RCT TCL BLACK 3.0V 300MA 3UA 0	
H3-28T352SK8-B00A	T8-28T3520-LPM1	LVW280CSOT E1 V1 带前壳模组 CS2GTA/TT	
T8-28T3520-LPM1	T8-CS28TTL-LC1	LVW280CSOT E1 28T3520 TOT背光配华星	
T8-CS28TTL-LC1	T8-28LEDEM-BL1	L28T3520 B/L PARTS	
T8-28LEDEM-BL1	67-465460-0A4	RAW SUPPORT HEAT SINK -- 00 00 00 R=Y	
T8-28LEDEM-BL1	54-465490-000	RAW FITTING L/B 0 0 R=Y	FOR L/B
T8-28LEDEM-BL1	64-P30042-102G	SCREW M3MM 4.2MM ISO ENVIRONMENTAL PROTE	ROR HEAT
T8-28LEDEM-BL1	64-P25025-102G	SCREW M2.5MM 2.5MM ISO ENVIRONMENTAL PRO	FOR SOURC
T8-28LEDEM-BL1	4C-KF280T-XL1	FILM DIFFUSER 28INCH 0.21MM 616.5MM 358.	
T8-28LEDEM-BL1	4C-PF280T-JF1	FILM PRISM 28INCH 0.29MM 616.5MM 358.4MM	
T8-28LEDEM-BL1	4C-RF280T-HL2	FILM REFLECTOR 28INCH 0.32MM 621.4MM 365	
T8-28LEDEM-BL1	4C-LB280T-LG2	LIGHTBAR SIDE IN 28INCH 20W 51LEDS R=Y	
T8-28LEDEM-BL1	54-466200-000	SPONGE STRIPE -- R=Y	FOR BACK
T8-28LEDEM-BL1	54-731660-000	RAW FITTING L/B 0 0 R=Y	
T8-28LEDEM-BL1	67-465450-1G4	RAW SUPPORT BACK COVER 28T3520 -- 00 00	
T8-28LEDEM-BL1	4C-LP280T-TL3	LGP PRINT 3MM X 362.2MM 617.8MM R=Y	
T8-CS28TTL-LC1	T8-28T3520-MC1	ASS'Y - MIDDLE CABINET	
T8-28T3520-MC1	59-465470-000	RAW BUFFER V 0 0 R=Y	FOR MOLD
T8-28T3520-MC1	59-465480-000	RAW BUFFER H 0 0 R=Y	FOR MOLD
T8-28T3520-MC1	62-732120-0UHG	RAW MIDDLE-FRAME FRAME 28T3520 00 00 00	
T8-CS28TTL-LC1	71-BAR011-0A9	TV PRI LABEL -- WHITE & BLACK R=Y	FOR PRODU
T8-CS28TTL-LC1	4A-LCD280-CS2GTA	27.5INCH 60HZ HD ST2751A01-1 OPENCELL	
T8-28T3520-LPM1	T8-28T3520-FC1	ASS'Y - FRONT CABINET	
T8-28T3520-FC1	62-729280-0HN	RAW BOLD 28T3520 -- - - - R=N	
T8-28T3520-FC1	63-B3008T-BF4G	SCREW-ST 3MM 8MM ISO R=Y	锁装饰条
T8-28T3520-FC1	63-B3008T-BF4G	SCREW-ST 3MM 8MM ISO R=Y	锁屏支架
T8-28T3520-FC1	64-B40060-104G	MACHINE SCREW	锁屏支架
T8-28T3520-FC1	64-F25035-104G	SCREW M2.5MM 4MM ISO 32F220 R=Y	FOR FC+B/
T8-28T3520-FC1	89-025005-JZ0	SUNDRIES-FILM 25MM LDPE WH 1040# R=Y	
T8-28T3520-FC1	54-969530-0U4	CLOTH STRIPE -- --MM R=Y	贴在前壳X
T8-28T3520-FC1	T8-28T3520-FC1Z	ASS'Y - FRONT CABINET ART	
T8-28T3520-FC1Z	56-728690-0HA50	RAW DECOR ... -- 00 00 00 R=N	
T8-28T3520-FC1Z	56-727570-0HH9B	TV DEC BUTTON 56-727570-0HH - - - - R=N	
T8-28T3520-FC1Z	55-728680-1HQ	RAW BACKCOVER 28T3520 -- 00 00 00 R=N	
T8-28T3520-FC1	89-604792-JZK	SUNDRIES-FILM SELF ADHESIVE FILM	贴于底部
T8-28T3520-FC1	89-025005-JZ0	SUNDRIES-FILM 25MM LDPE WH 1040# R=Y	贴于两侧
T8-28T3520-FC1	67-729320-1G0	RAW SUPPORT 28T3520 -- PANEL BKT 00 00 R	
T8-28T3520-FC1	54-729640-200	SPONGE STRIPE -- R=Y	贴在前壳左
T8-28T3520-FC1	54-729650-200	SPONGE STRIPE -- R=Y	贴在前壳_
T8-28T3520-LPM1	71-W28CST-EPN9A	PRI LABEL -- --- R=Y	
T8-28T3520-LPM1	63-B3008T-BF4G	SCREW-ST 3MM 8MM ISO R=Y	锁喇叭支架
T8-28T3520-LPM1	46-AB350D-AU0HG	WIRE 40PIN LVDS WIRE UL1571#28 PHDK-2*20	PANEL TO
H3-28T352SK8-B00A	T8-28T352K8-RC1	ASS'Y - REAR CABINET	
T8-28T352K8-RC1	46-FZ050T-03PG	WIRE KEY WIRE UL1571#28 A2004Y-4P+PH-3Y	MAIN BD T
T8-28T352K8-RC1	46-ZZ050T-04PG	WIRE IR WIRE UL1571#28 A2004Y-5P+GH-06Y	MAIN BD T
T8-28T352K8-RC1	89-BX8915-JZ0U	SUNDRIES-TAPE ADHESIVE 18MMX55M --	FOR SPEAK
T8-28T352K8-RC1	89-BX8915-JZ0U	SUNDRIES-TAPE ADHESIVE 18MMX55M --	FOR POWER
T8-28T352K8-RC1	89-BX8915-JZ0U	SUNDRIES-TAPE ADHESIVE 18MMX55M --	FOR KEY B
T8-28T352K8-RC1	89-BX8915-JZ0U	SUNDRIES-TAPE ADHESIVE 18MMX55M --	FOR INVER
T8-28T352K8-RC1	T8-28T352K8-RC1Z	ASS'Y - REAR CABINET(ART)	

T8-28T352K8-RC1Z	55-728700-0HL6R	DEC BACKCOVER 28T3520 -- 00 00 00 R=N	
T8-28T352K8-RC1Z	67-725160-AG09A	RAW SUPPORT SIDE AV -- 00 00 00 R=N	
T8-28T352K8-RC1Z	62-839350-0HG6R	TV PAI HOLDER VESA BOSS -- 00 00 R=N	
T8-28T352K8-RC1Z	58-729670-00J9A	PRI OVERLAY -- -- 01 00 00 R=Y	
T8-28T352K8-RC1Z	58-729660-00J9A	PRI OVERLAY -- -- 01 00 00 R=Y	
T8-28T352K8-RC1Z	58-T352MP-1609F	PRI OVERLAY -- -- 01 00 00 R=Y	
T8-28T352K8-RC1Z	58-962170-0UI9A	PRI OVERLAY -- -- 00 00 00 R=Y	
T8-28T352K8-RC1Z	56-960380-0HA6R	RAW KEY CLUSTER L19P31 R=N	
T8-28T352K8-RC1Z	56-960390-0HN6R	DEC SUPPORT KEY CLUSTER -- 00 00 00 R=N	
T8-28T352K8-RC1	42-41016D-XX5G	SPEAKER 16OHM 5W 82DB 250HZ RECTANGLE **	
T8-28T352K8-RC1	64-B30060-105G	SCREW 3MM 6MM 53 R=Y	锁侧AV支架
T8-28T352K8-RC1	64-B30060-105G	SCREW 3MM 6MM 53 R=Y	锁后壳（
T8-28T352K8-RC1	63-B4012T-BF5G	SCREW-ST 4MM 12MM ISO 19 R=Y	锁电源支架
T8-28T352K8-RC1	63-B3008T-BF5G	SCREW-ST 3MM 8MM ISO 19 R=Y	锁前后壳
T8-28T352K8-RC1	46-LL025L-12X02G	DC WIRE 250MM 12 PHD PHD 2	POWER BD
T8-28T352K8-RC1	46-ZZ067T-04ZG	WIRE LED DRIVER CONVERTER CABLE 670MM 3P	FOR LIGHT
T8-28T352K8-RC1	64-B30040-104G	MACHINE SCREW B3X4	锁排扭支架
T8-28T352K8-RC1	64-B30060-104G	M/C SCREW B 3 X 6	锁机芯
T8-28T352K8-RC1	64-B30060-104G	M/C SCREW B 3 X 6	锁电源
T8-28T352K8-RC1	46-CT035T-04JG	WIRE SPEAKER CONNECT WIRE 350MM 4PIN TJC	
T8-28T352K8-RC1	63-B3008T-BF4G	SCREW-ST 3MM 8MM ISO R=Y	LOCK IR P
H3-28T352SK8-B00A	T8-28T352K8-PA1	ASS'Y - PACKING	
T8-28T352K8-PA1	49-R03P80-BAT	BATTERY 1.5V	
T8-28T352K8-PA1	51-DC0160-0CR0HG	POWER CORD 1600MM DTIII-2P-03/DTIII-2P-0	
T8-28T352K8-PA1	74-004006-12C	RAW PACKING BAG 60X40X0.08MM - R=Y	
T8-28T352K8-PA1	T8-28T352K8-PA1Z	ASS'Y - PACKING ART	
T8-28T352K8-PA1Z	74-022032-6WEEM	PRI PACKING BAG - RED 186C 01 00 00 R=N	FOR 说明书
T8-28T352K8-PA1Z	74-080060-50HEM	DEC PACKING BAG -- R=Y	FOR 整机
T8-28T352K8-PA1Z	72-T352MD-E829E	PRI -- IB -- -- -- R=Y	
T8-28T352K8-PA1Z	76-729460-0AT	RAW CARTON-BOX -- K3A3A 28T3520 00 00 R=	
T8-28T352K8-PA1Z	71-CNDZLS-LAB9A	PRI LABEL -- --- R=Y	
T8-28T352K8-PA1	75-729440-CC0	RAW POLYFOAM 28T3520 -- -- 01 00 R=Y	
T8-28T352K8-PA1	75-729450-CC0	RAW POLYFOAM 28T3520 -- -- 01 00 R=Y	
H3-28T352SK8-B00A	T8-28T352K8-BS1	ASS'Y - BASE	
T8-28T352K8-BS1	64-B40120-105G	SCREW M4MM 12MM 62 R=Y	锁底座脖子
T8-28T352K8-BS1	89-604820-JZ0	PROTECTING LABEL 55mm	
T8-28T352K8-BS1	T8-28T352K8-BS1Z	ASS'Y - BASE(ART)	
T8-28T352K8-BS1Z	68-S96513-0006MEM	DEC STAND 32S12B -- 00 00 00 R=Y	
T8-28T352K8-BS1Z	56-728010-0HA6R	RAW DECOR 32T3520 - - - - R=N	
T8-28T352K8-BS1Z	56-727980-0HQ6Q	DEC SUPPORT -- -- 00 00 00 R=N	
T8-28T352K8-BS1	63-B4020T-BF5G	SCREW-ST 4MM 20MM ISO R=Y	FOR STD &
H3-28T352SK8-B00A	T8-28LAK8-MA1	ASS'Y - MAIN BD	
T8-28LAK8-MA1	09-0BAV99-ATX	D,SMD 70.0V 200MI0_A 855MI0V 4N 0.25W SO	D100
T8-28LAK8-MA1	09-55C9V1-DTX	SMD.DIODE BZV55-C9V1	D700
T8-28LAK8-MA1	09-LL4148-ATX	SMD. SWITCHING DIODE LL4148	D811
T8-28LAK8-MA1	09-LL4148-ATX	SMD. SWITCHING DIODE LL4148	D601
T8-28LAK8-MA1	09-LL4148-ATX	SMD. SWITCHING DIODE LL4148	D602
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q501
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q604
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q603
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q602
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q704
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q806
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q808

T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q703
T8-28LAK8-MA1	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q702
T8-28LAK8-MA1	12-BT3906-0BX	TR-SMD PNP 40V 200MI0_A 250MHZ 225MI0W S	Q101
T8-28LAK8-MA1	12-BT3906-0BX	TR-SMD PNP 40V 200MI0_A 250MHZ 225MI0W S	Q701
T8-28LAK8-MA1	12-BT3906-0BX	TR-SMD PNP 40V 200MI0_A 250MHZ 225MI0W S	Q601
T8-28LAK8-MA1	12-C124ET-0BX	TR-SMD NPN 50VV 100MA_A 80HZ 0.25W SOT23	Q210
T8-28LAK8-MA1	12-MV65XP-0BX	MOSFET-SMD P 20V 3.9A 1.92W SOT23 PMV65X	Q813
T8-28LAK8-MA1	13-AP2111-25B	IC LDO AP2111-2.5	U801
T8-28LAK8-MA1	13-DC1582-ENB33	IC DC-DC STEP-DOWN CONVERTER MP1582	U808
T8-28LAK8-MA1	13-MP1494-DJB	IC DC-DC CONTROL MP1494DJ	U807
T8-28LAK8-MA1	13-MP1494-DJB	IC DC-DC CONTROL MP1494DJ	U806
T8-28LAK8-MA1	13-MP1494-DJB	IC DC-DC CONTROL MP1494DJ	U805
T8-28LAK8-MA1	13-MST3M1-82BVG	IC A SINGLE CHIP SUPORT MULTIMEDIA TV SO	U101
T8-28LAK8-MA1	13-STA380-BWB	IC AUDIO AMP STA380BW	U601
T8-28LAK8-MA1	13-W25Q32-FVB	IC MAIN MEMORY WINBOND	U102 (CPP
T8-28LAK8-MA1	19-AB0000-JTX	RES SMD 0 OHM 1/10W +/-5% 0603	R874
T8-28LAK8-MA1	19-AB0000-JTX	RES SMD 0 OHM 1/10W +/-5% 0603	R854
T8-28LAK8-MA1	19-AB0000-JTX	RES SMD 0 OHM 1/10W +/-5% 0603	R149
T8-28LAK8-MA1	19-AB0000-JTX	RES SMD 0 OHM 1/10W +/-5% 0603	R651
T8-28LAK8-MA1	19-AB0000-JTX	RES SMD 0 OHM 1/10W +/-5% 0603	R856
T8-28LAK8-MA1	19-AB0000-JTX	RES SMD 0 OHM 1/10W +/-5% 0603	R148
T8-28LAK8-MA1	19-AB0101-JTX	RES SMD 100 OHM 1/10W 0603	R868
T8-28LAK8-MA1	19-AB0101-JTX	RES SMD 100 OHM 1/10W 0603	R659
T8-28LAK8-MA1	19-AB0102-JTX	RES SMD 1K OHM 1/10W 0603	R849
T8-28LAK8-MA1	19-AB0102-JTX	RES SMD 1K OHM 1/10W 0603	R772
T8-28LAK8-MA1	19-AB0102-JTX	RES SMD 1K OHM 1/10W 0603	R755
T8-28LAK8-MA1	19-AB0102-JTX	RES SMD 1K OHM 1/10W 0603	R765
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R836
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R747
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R838
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R760
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R660
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R658
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R869
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R655
T8-28LAK8-MA1	19-AB0104-JTX	SMD. RES 100K OHM 1/10W 0603	R657
T8-28LAK8-MA1	19-AB0104-JTX	SMD. RES 100K OHM 1/10W 0603	R885
T8-28LAK8-MA1	19-AB0121-JTX	SMD.RES +/-5% 120OHM1/10W 0603	R748
T8-28LAK8-MA1	19-AB0121-JTX	SMD.RES +/-5% 120OHM1/10W 0603	R756
T8-28LAK8-MA1	19-AB0151-JTX	R-SMD 150R00HM 5% 1/10W 0603 -	R768
T8-28LAK8-MA1	19-AB0151-JTX	R-SMD 150R00HM 5% 1/10W 0603 -	R778
T8-28LAK8-MA1	19-AB0151-JTX	R-SMD 150R00HM 5% 1/10W 0603 -	R766
T8-28LAK8-MA1	19-AB0151-JTX	R-SMD 150R00HM 5% 1/10W 0603 -	R779
T8-28LAK8-MA1	19-AB0220-JTX	SMD RES 22 OHM 1/10W 0603	R620
T8-28LAK8-MA1	19-AB0220-JTX	SMD RES 22 OHM 1/10W 0603	R611
T8-28LAK8-MA1	19-AB0222-JTX	RES SMD 2.2K OHM 1/10W 0603	R638
T8-28LAK8-MA1	19-AB0224-JTX	SMD RES 220K OHM 1/10W 0603	R810
T8-28LAK8-MA1	19-AB0243-JTX	R-SMD 24K00HM 5% 1/10W 0603 -	R808
T8-28LAK8-MA1	19-AB0330-JTX	RES SMD 33 OHM 1/10W +/-5%0603	R603
T8-28LAK8-MA1	19-AB0330-JTX	RES SMD 33 OHM 1/10W +/-5%0603	R604
T8-28LAK8-MA1	19-AB0331-JTX	RES. SMD 330 OHM 1/10W 0603	R858
T8-28LAK8-MA1	19-AB0333-FTX	SMD. RES 33K OHM 1/10W +/-1% 0603	R816
T8-28LAK8-MA1	19-AB0333-JTX	RES. SMD 33K OHM 1/10W 0603	R773
T8-28LAK8-MA1	19-AB0470-JTX	RES SMD 47 OHM 1/10W +/-5%0603	R732

T8-28LAK8-MA1	19-AB0472-JTX	RES SMD 4.7K OHM 1/10W 0603	R848
T8-28LAK8-MA1	19-AB0472-JTX	RES SMD 4.7K OHM 1/10W 0603	R636
T8-28LAK8-MA1	19-AB0474-JTX	RES.SMD. 1/10W 0.47MOHM +/-5%	R877
T8-28LAK8-MA1	19-AB0474-JTX	RES.SMD. 1/10W 0.47MOHM +/-5%	R817
T8-28LAK8-MA1	19-AB0563-JTX	SMD. RES 56K OHM 1/10W +/-5%	R661
T8-28LAK8-MA1	19-AB0563-JTX	SMD. RES 56K OHM 1/10W +/-5%	R654
T8-28LAK8-MA1	19-AB0569-JTX	0603 RES. SMD 5.6 OHM 1/16W +/-5%	R622
T8-28LAK8-MA1	19-AB0569-JTX	0603 RES. SMD 5.6 OHM 1/16W +/-5%	R621
T8-28LAK8-MA1	19-AB0569-JTX	0603 RES. SMD 5.6 OHM 1/16W +/-5%	R613
T8-28LAK8-MA1	19-AB0569-JTX	0603 RES. SMD 5.6 OHM 1/16W +/-5%	R612
T8-28LAK8-MA1	19-AB0683-JTX	RES SMD 68K OHM 1/10W 0603	R771
T8-28LAK8-MA1	19-AB0750-JTX	SMD. RES 75 OHM 1/10W 0603	R750
T8-28LAK8-MA1	19-AB0750-JTX	SMD. RES 75 OHM 1/10W 0603	R769
T8-28LAK8-MA1	19-AB0750-JTX	SMD. RES 75 OHM 1/10W 0603	R759
T8-28LAK8-MA1	19-CD0000-JTX	RES.SMD 0OHM1/1/4W+/-5%	R807
T8-28LAK8-MA1	19-CD0000-JTX	RES.SMD 0OHM1/1/4W+/-5%	R500
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R715
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R752
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R101
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R714
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R126
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R803
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R537
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R763
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R662
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R710
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R631
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R211
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R713
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R712
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R632
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R633
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R634
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R201
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R210
T8-28LAK8-MA1	19-GA0101-JTX	SMD. RES 100 OHM 1/16W +/-5%	R711
T8-28LAK8-MA1	19-GA0102-FTX	SMD.RES 1K OHM 1/16W +/-1%	R107
T8-28LAK8-MA1	19-GA0102-FTX	SMD.RES 1K OHM 1/16W +/-1%	R106
T8-28LAK8-MA1	19-GA0102-JTX	SMD. RES 1K OHM 1/16W +/-5%	R507
T8-28LAK8-MA1	19-GA0102-JTX	SMD. RES 1K OHM 1/16W +/-5%	R508
T8-28LAK8-MA1	19-GA0102-JTX	SMD. RES 1K OHM 1/16W +/-5%	R109
T8-28LAK8-MA1	19-GA0102-JTX	SMD. RES 1K OHM 1/16W +/-5%	R853
T8-28LAK8-MA1	19-GA0102-JTX	SMD. RES 1K OHM 1/16W +/-5%	R105
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R506
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R883
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R822
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R525
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R519
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R516
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R202
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R635
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R761
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R841
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R753

T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R606
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R110
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R203
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R709
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R708
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R504
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R103
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R764
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R892
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R165
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R143
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R142
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R819
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R890
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R837
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R864
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R862
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R104
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R512
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R754
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R102
T8-28LAK8-MA1	19-GA0104-JTX	SMD. RES 100K OHM 1/16W +/-5%	R509
T8-28LAK8-MA1	19-GA0105-JTX	SMD.RES 1M OHM 1/16W +/-5%	R171
T8-28LAK8-MA1	19-GA0113-FTX	R-CHIP 11KOHM +/-1% 1005 1/16W	R878
T8-28LAK8-MA1	19-GA0123-FTX	SMD.RES 12K OHM 1/16W +/-1%	R866
T8-28LAK8-MA1	19-GA0201-JTX	SMD.RES 200 OHM 1/16W +/-5% 0402	R515
T8-28LAK8-MA1	19-GA0203-FTX	SMD.RES 20K OHM 1/16W +/-1%	R895
T8-28LAK8-MA1	19-GA0222-JTX	SMD. RES 2.2K OHM 1/16W +/-5%	R246
T8-28LAK8-MA1	19-GA0222-JTX	SMD. RES 2.2K OHM 1/16W +/-5%	R243
T8-28LAK8-MA1	19-GA0224-JTX	R-SMD 220K00HM 5% 1/16W 0402 -	R762
T8-28LAK8-MA1	19-GA0224-JTX	R-SMD 220K00HM 5% 1/16W 0402 -	R751
T8-28LAK8-MA1	19-GA0229-JTX	SMD.RES 1/16W 2.2 OHM ±5%	R531
T8-28LAK8-MA1	19-GA0229-JTX	SMD.RES 1/16W 2.2 OHM ±5%	R545
T8-28LAK8-MA1	19-GA0229-JTX	SMD.RES 1/16W 2.2 OHM ±5%	R530
T8-28LAK8-MA1	19-GA0229-JTX	SMD.RES 1/16W 2.2 OHM ±5%	R546
T8-28LAK8-MA1	19-GA0273-JTX	R-SMD 27K00HM 5% 1/16W 0402 -	R758
T8-28LAK8-MA1	19-GA0273-JTX	R-SMD 27K00HM 5% 1/16W 0402 -	R749
T8-28LAK8-MA1	19-GA0303-FTX	R-SMD 30KOHM +/-1% 1/16W 0402 0402	R893
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R702
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R704
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R734
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R513
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R517
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R735
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R736
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R737
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R701
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R703
T8-28LAK8-MA1	19-GA0331-FTX	SMD.RES 330 OHM 1/16W +/-1%	R867
T8-28LAK8-MA1	19-GA0333-FTX	SMD.RES 33K OHM 1/16W +/-1%	R833
T8-28LAK8-MA1	19-GA0333-FTX	SMD.RES 33K OHM 1/16W +/-1%	R894
T8-28LAK8-MA1	19-GA0333-JTX	SMD. RES 33K OHM 1/16W +/-5%	R814
T8-28LAK8-MA1	19-GA0393-JTX	R-SMD 39K00HM 5% 1/16W 0402 -	R823
T8-28LAK8-MA1	19-GA0393-JTX	R-SMD 39K00HM 5% 1/16W 0402 -	R865

T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R607
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R601
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R602
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R855
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R608
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R663
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R896
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R168
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R113
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R524
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R242
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R114
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R146
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R147
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R162
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R138
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R139
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R134
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R503
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R108
T8-28LAK8-MA1	19-GA0473-JTX	SMD.RES 47K OHM 1/16W +/-5%	R510
T8-28LAK8-MA1	19-GA0473-JTX	SMD.RES 47K OHM 1/16W +/-5%	R511
T8-28LAK8-MA1	19-GA0511-JTX	SMD.RES 0402 1/16W 510 OHM +/-5%	R213
T8-28LAK8-MA1	19-GA0561-FTX	SMD.RES 560 OHM 1/16W +/-1%	R825
T8-28LAK8-MA1	19-GA0680-JTX	SMD.RES 68 OHM 1/16W +/-5%	R112
T8-28LAK8-MA1	19-GA0680-JTX	SMD.RES 68 OHM 1/16W +/-5%	R717
T8-28LAK8-MA1	19-GA0680-JTX	SMD.RES 68 OHM 1/16W +/-5%	R716
T8-28LAK8-MA1	19-GA0680-JTX	SMD.RES 68 OHM 1/16W +/-5%	R111
T8-28LAK8-MA1	19-GA0680-JTX	SMD.RES 68 OHM 1/16W +/-5%	R718
T8-28LAK8-MA1	19-GA0680-JTX	SMD.RES 68 OHM 1/16W +/-5%	R161
T8-28LAK8-MA1	19-GA0682-FTX	SMD.RES 6.8K OHM 1/16W +/-1%	R824
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R707
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R206
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R705
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R706
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R207
T8-28LAK8-MA1	19-GA0823-JTX	R-SMD 82K0OHM 5% 1/16W 0402 -	R863
T8-28LAK8-MA1	19-GA0823-JTX	R-SMD 82K0OHM 5% 1/16W 0402 -	R891
T8-28LAK8-MA1	19-GA0823-JTX	R-SMD 82K0OHM 5% 1/16W 0402 -	R820
T8-28LAK8-MA1	19-GA0823-JTX	R-SMD 82K0OHM 5% 1/16W 0402 -	R821
T8-28LAK8-MA1	19-GA0823-JTX	R-SMD 82K0OHM 5% 1/16W 0402 -	R830
T8-28LAK8-MA1	23-D08100-JBX	NETWORK RES. 1/16W 10 OHM +/-5%	RP1
T8-28LAK8-MA1	23-D08100-JBX	NETWORK RES. 1/16W 10 OHM +/-5%	RP2
T8-28LAK8-MA1	25-BAS471-M1X9	CAP.ELE 3.5MM 470UF 6.3V 8*9 85 LELON	C208
T8-28LAK8-MA1	25-BEB221-M1L	CAP.ELE 5.0MM 220UF 35V 10 85 REA221M1VS	C634
T8-28LAK8-MA1	25-BEB221-M1L	CAP.ELE 5.0MM 220UF 35V 10 85 REA221M1VS	C843
T8-28LAK8-MA1	25-HBB470-M1X	CAP.ELE 5MM 47UF 10VV 5X7 85 \	C501
T8-28LAK8-MA1	25-HCB101-M1X	CAP.ELE 5MM 100UF 16.0V 6.3*7 85 \	C865
T8-28LAK8-MA1	25-HCB101-M1X	CAP.ELE 5MM 100UF 16.0V 6.3*7 85 \	C333
T8-28LAK8-MA1	25-HCB101-M1X	CAP.ELE 5MM 100UF 16.0V 6.3*7 85 \	C833
T8-28LAK8-MA1	25-HCB221-M1S	CAP.ELE 5MM 220UF 16V 6.3*7 85 \	C640
T8-28LAK8-MA1	25-HCB221-M1X	CAP.ELE 5MM 220UF 16V +/-20%(8*7)	C842
T8-28LAK8-MA1	25-HCB221-M1X	CAP.ELE 5MM 220UF 16V +/-20%(8*7)	C859
T8-28LAK8-MA1	25-HCB221-M1X	CAP.ELE 5MM 220UF 16V +/-20%(8*7)	C741

T8-28LAK8-MA1	28-AA0105-KBX	CAP.CER,SMD 1UF 10V 0603 -- +/-10% R=Y	C551
T8-28LAK8-MA1	28-AA0105-KBX	CAP.CER,SMD 1UF 10V 0603 -- +/-10% R=Y	C873
T8-28LAK8-MA1	28-AA0105-KBX	CAP.CER,SMD 1UF 10V 0603 -- +/-10% R=Y	C862
T8-28LAK8-MA1	28-AA0105-KBX	CAP.CER,SMD 1UF 10V 0603 -- +/-10% R=Y	C872
T8-28LAK8-MA1	28-AA0105-ZFX	CAP.CER,SMD 1UF 10.0V 0603 - +80/-20% R=	C848
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C105
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C182
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C183
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C510
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C165
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C166
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C122
T8-28LAK8-MA1	28-AA0225-KBX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C128
T8-28LAK8-MA1	28-AA0225-ZFX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C736
T8-28LAK8-MA1	28-AA0225-ZFX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C734
T8-28LAK8-MA1	28-AA0225-ZFX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C732
T8-28LAK8-MA1	28-AA0225-ZFX	CAP.CER,SMD 2U2F 10V DCV 0603 -	C735
T8-28LAK8-MA1	28-AA0475-KBX	CAP.CER,SMD 4.7UF 10V 0603 CL10B475KP8NN	C204
T8-28LAK8-MA1	28-AB0102-KBX	CAP.CER,SMD 1NF 50.0V 0603 - +/-10% R=Y	C619
T8-28LAK8-MA1	28-AB0102-KBX	CAP.CER,SMD 1NF 50.0V 0603 - +/-10% R=Y	C629
T8-28LAK8-MA1	28-AB0102-KBX	CAP.CER,SMD 1NF 50.0V 0603 - +/-10% R=Y	C628
T8-28LAK8-MA1	28-AB0102-KBX	CAP.CER,SMD 1NF 50.0V 0603 - +/-10% R=Y	C618
T8-28LAK8-MA1	28-AB0103-KBX	CAP.CER,SMD 10NF 50.0V 0603 - +/-10% R=Y	C604
T8-28LAK8-MA1	28-AB0103-KBX	CAP.CER,SMD 10NF 50.0V 0603 - +/-10% R=Y	C832
T8-28LAK8-MA1	28-AB0103-KBX	CAP.CER,SMD 10NF 50.0V 0603 - +/-10% R=Y	C652
T8-28LAK8-MA1	28-AB0103-KBX	CAP.CER,SMD 10NF 50.0V 0603 - +/-10% R=Y	C607
T8-28LAK8-MA1	28-AB0103-KBX	CAP.CER,SMD 10NF 50.0V 0603 - +/-10% R=Y	C605
T8-28LAK8-MA1	28-AB0103-KBX	CAP.CER,SMD 10NF 50.0V 0603 - +/-10% R=Y	C838
T8-28LAK8-MA1	28-AB0103-ZFX	CAP.CER,SMD 10NF 50.0V 0603 - +80/-20% R	C642
T8-28LAK8-MA1	28-AB0103-ZFX	CAP.CER,SMD 10NF 50.0V 0603 - +80/-20% R	C206
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C821
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C819
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C613
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C622
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C612
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C802
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C611
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C621
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C624
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C608
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C623
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C603
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C633
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C631
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C822
T8-28LAK8-MA1	28-AB0104-KBX	CAP.CER,SMD 100NF 50.0V 0603 - +/-10% R=	C614
T8-28LAK8-MA1	28-AB0104-ZFX	CAP.CER,SMD 100N0F 50V DCV 0603 -	C502
T8-28LAK8-MA1	28-AB0104-ZFX	CAP.CER,SMD 100N0F 50V DCV 0603 -	C200
T8-28LAK8-MA1	28-AB0220-JCX	CAP.CER,SMD 22PF 50.0V 0603 - +/-5% R=Y	C718
T8-28LAK8-MA1	28-AB0220-JCX	CAP.CER,SMD 22PF 50.0V 0603 - +/-5% R=Y	C724
T8-28LAK8-MA1	28-AB0220-JCX	CAP.CER,SMD 22PF 50.0V 0603 - +/-5% R=Y	C725
T8-28LAK8-MA1	28-AB0220-JCX	CAP.CER,SMD 22PF 50.0V 0603 - +/-5% R=Y	C723
T8-28LAK8-MA1	28-AB0331-KBX	CAP.CER,SMD 330P0F 50.0V 0603 -	C620
T8-28LAK8-MA1	28-AB0331-KBX	CAP.CER,SMD 330P0F 50.0V 0603 -	C610

T8-28LAK8-MA1	28-AB0391-JCX	CAP.SMD 390P 50V +/-5% 0603	C820
T8-28LAK8-MA1	28-AC0104-ZFX	SMD. CAP 16VDC/100NF/+80%/-20%	C841
T8-28LAK8-MA1	28-AC0104-ZFX	SMD. CAP 16VDC/100NF/+80%/-20%	C840
T8-28LAK8-MA1	28-AC0104-ZFX	SMD. CAP 16VDC/100NF/+80%/-20%	C829
T8-28LAK8-MA1	28-AC0104-ZFX	SMD. CAP 16VDC/100NF/+80%/-20%	C826
T8-28LAK8-MA1	28-AC0104-ZFX	SMD. CAP 16VDC/100NF/+80%/-20%	C738
T8-28LAK8-MA1	28-AC0105-KBX	SMD.CAP 16V 1UF +/-10%	C828
T8-28LAK8-MA1	28-AC0105-KBX	SMD.CAP 16V 1UF +/-10%	C800
T8-28LAK8-MA1	28-AC0225-KBX	SMD.CAP 2.2UF +/-10% 16V SP (188605643)	C737
T8-28LAK8-MA1	28-AC0225-KBX	SMD.CAP 2.2UF +/-10% 16V SP (188605643)	C733
T8-28LAK8-MA1	28-BB0105-KBX	CAP.CER,SMD 1UF 10% 50V 0.2 0805 CL21B10	C630
T8-28LAK8-MA1	28-BB0105-KBX	CAP.CER,SMD 1UF 10% 50V 0.2 0805 CL21B10	C632
T8-28LAK8-MA1	28-AD0561-JCX	SMD. CAP. 560PF 25V +/-5%	C714
T8-28LAK8-MA1	28-AD0561-JCX	SMD. CAP. 560PF 25V +/-5%	C715
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C704
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C135
T8-28LAK8-MA1	28-BC0475-KBX	SMD.CAP 16V 4.7UF +/-10%	C878
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C844
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C141
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C139
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C860
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C870
T8-28LAK8-MA1	28-BC0475-KBX	SMD.CAP 16V 4.7UF +/-10%	C855
T8-28LAK8-MA1	28-BA0106-KBX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C159
T8-28LAK8-MA1	28-BA0106-ZFX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C739
T8-28LAK8-MA1	28-BA0106-ZFX	CAP.CER,SMD 10U0F 10V DCV 0805 -	C849
T8-28LAK8-MA1	28-BA0225-ZFX	SMD.CAP 10V 2.2UF +80% -20%	C814
T8-28LAK8-MA1	28-BA0225-ZFX	SMD.CAP 10V 2.2UF +80% -20%	C813
T8-28LAK8-MA1	28-BA0475-ZFX	CAP.CER,SMD 4U7F 10V DCV 0805 -	C808
T8-28LAK8-MA1	28-BB0105-ZFX	CAP.CER,SMD 1U0F 50V DCV 0805 -	C207
T8-28LAK8-MA1	28-BB0105-ZFX	CAP.CER,SMD 1U0F 50V DCV 0805 -	C641
T8-28LAK8-MA1	28-BB0105-ZFX	CAP.CER,SMD 1U0F 50V DCV 0805 -	C650
T8-28LAK8-MA1	28-BB0224-KBX	CAP.CER,SMD 220N0F 50V DCV 0805 -	C615
T8-28LAK8-MA1	28-BB0224-KBX	CAP.CER,SMD 220N0F 50V DCV 0805 -	C625
T8-28LAK8-MA1	28-BC0225-ZFX	CAP.CER,SMD 2U2F 16.0V 0805 -	C136
T8-28LAK8-MA1	28-BC0225-ZFX	CAP.CER,SMD 2U2F 16.0V 0805 -	C606
T8-28LAK8-MA1	28-BC0474-KBX	CAP.CER,SMD 470NF 16.0V 0805 - +/-10% R=	C103
T8-28LAK8-MA1	28-BF0106-ZFX	SMD.CAP 10uF	C102
T8-28LAK8-MA1	28-HB0101-JCX	CAP.CER,SMD 100P0F 50V DCV 0402 -	C203
T8-28LAK8-MA1	28-HB0101-JCX	CAP.CER,SMD 100P0F 50V DCV 0402 -	C202
T8-28LAK8-MA1	28-HB0102-KBX	CAP.CER,SMD 1N0F 50V DCV 0402 -	C643
T8-28LAK8-MA1	28-HB0102-KBX	CAP.CER,SMD 1N0F 50V DCV 0402 -	C163
T8-28LAK8-MA1	28-HB0102-KBX	CAP.CER,SMD 1N0F 50V DCV 0402 -	C104
T8-28LAK8-MA1	28-HB0181-JCX	CAPACITORS 0402 50V 180P ±5%	C146
T8-28LAK8-MA1	28-HB0181-JCX	CAPACITORS 0402 50V 180P ±5%	C145
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C517
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C601
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C180
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C181
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C890
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C602
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C518
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C507
T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C505

T8-28LAK8-MA1	28-HB0220-JCX	CAP.CER,SMD 22P0F 50V DCV 0402 -	C155
T8-28LAK8-MA1	28-HB0221-KBX	SMD.CAP 220PF 50V +/-10%	C730
T8-28LAK8-MA1	28-HB0221-KBX	SMD.CAP 220PF 50V +/-10%	C740
T8-28LAK8-MA1	28-HB0330-JCX	CAP.CER,SMD 33PF 50V DCV 0402 -	C226
T8-28LAK8-MA1	28-HB0560-JCX	CAP.CER,SMD 56P0F 50V DCV 0402 -	C225
T8-28LAK8-MA1	28-HC0103-KBX	CAP.CER,SMD 10N0F 16V DCV 0402 -	C130
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C205
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C125
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C108
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C116
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C110
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C109
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C107
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C106
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C111
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C153
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C156
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C866
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C867
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C868
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C857
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C837
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C515
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C115
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C836
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C215
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C845
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C834
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C861
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C140
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C856
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C158
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C512
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C514
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C858
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C513
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C138
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C220
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C118
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C121
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C120
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C119
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C127
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C126
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C124
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C123
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C154
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C871
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C129
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C101
T8-28LAK8-MA1	28-HC0104-KBX	CAP.CER,SMD 100NF 16V 0402 -	C157
T8-28LAK8-MA1	28-HC0223-KBX	CAP.CER,SMD 22N0F 16V DCV 0402 -	C201
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C171
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C172

T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C160
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C173
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C168
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C164
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C161
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C162
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C167
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C169
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C170
T8-28LAK8-MA1	33-ELN221-NTB	CHIP BEAD 220 OHM	L700
T8-28LAK8-MA1	33-ELN501-NTX	CHIP BEAD 500 OHM +/-25%	L201
T8-28LAK8-MA1	33-GLN300-NTX	CHIP BEAD 30 OHM +/-25%	L801
T8-28LAK8-MA1	33-GLN300-NTX	CHIP BEAD 30 OHM +/-25%	L802
T8-28LAK8-MA1	33-KLL109-KTX	IND-SMD 0.60HM 35 25A 0603 /	L205
T8-28LAK8-MA1	33-KLL109-KTX	IND-SMD 0.60HM 35 25A 0603 /	L206
T8-28LAK8-MA1	33-KLL229-KTX	IND-SMD 1.150HM 35 15MA 0603 /	L207
T8-28LAK8-MA1	33-KLL229-KTX	IND-SMD 1.150HM 35 15MA 0603 /	L208
T8-28LAK8-MA1	33-KLN121-NTB	IND FXD 0603 EMI 100MHZ	L100
T8-28LAK8-MA1	33-KLN121-NTB	IND FXD 0603 EMI 100MHZ	L601
T8-28LAK8-MA1	33-KLN121-NTB	IND FXD 0603 EMI 100MHZ	L606
T8-28LAK8-MA1	33-KLN121-NTB	IND FXD 0603 EMI 100MHZ	L101
T8-28LAK8-MA1	33-KLN121-NTB	IND FXD 0603 EMI 100MHZ	L817
T8-28LAK8-MA1	33-KLN121-NTB	IND FXD 0603 EMI 100MHZ	L104
T8-28LAK8-MA1	33-KLN121-NTB	IND FXD 0603 EMI 100MHZ	L103
T8-28LAK8-MA1	33-KLN220-NTA	FB-SMD 220HM 0603 MGSB1608-220T-LF	L501
T8-28LAK8-MA1	33-NLL100-MTX	IND-SMD 0.0460HM 40 2.5A 6*6*4.5 VLC6045	L820
T8-28LAK8-MA1	33-NLL100-MTX	IND-SMD 0.0460HM 40 2.5A 6*6*4.5 VLC6045	L819
T8-28LAK8-MA1	33-NLL100-MTX	IND-SMD 0.0460HM 40 2.5A 6*6*4.5 VLC6045	L818
T8-28LAK8-MA1	33-NLL220-MTX	IND-SMD 0.10HM 40 1.7A SMD VLC6045T	L602
T8-28LAK8-MA1	33-NLL220-MTX	IND-SMD 0.10HM 40 1.7A SMD VLC6045T	L603
T8-28LAK8-MA1	33-NLL220-MTX	IND-SMD 0.10HM 40 1.7A SMD VLC6045T	L605
T8-28LAK8-MA1	33-NLL220-MTX	IND-SMD 0.10HM 40 1.7A SMD VLC6045T	L604
T8-28LAK8-MA1	35-392170-00X	FERR.COIL BF-I35050C-683	L816
T8-28LAK8-MA1	45-OSC24M-0Y2	CRYSTAL 24MHZ	X1
T8-28LAK8-MA1	46-35199W-04XG	CONN.PH-4A 4PIN PITCH=2.0MM	P201
T8-28LAK8-MA1	46-40336W-04XG	CONN PH 4 2.0MM FEMALE R	P200
T8-28LAK8-MA1	46-40336W-05XG	CONN PH 5 2.0MM FEMALE R	P203A
T8-28LAK8-MA1	46-40337W-04XG	CONN TJC3 4 2.5MM FEMALE R	P601
T8-28LAK8-MA1	46-40338W-12XG	CONN PHD 12 2.0MM FEMALE R	P800
T8-28LAK8-MA1	46-40338W-40XG	CONN PHD 40 2.0MM FEMALE R	P202
T8-28LAK8-MA1	47-RCA302-XR0G	SOCKET-RCA N RD-WH 2PIN R N AV-3.2-2W72	P707
T8-28LAK8-MA1	47-RCA303-XG0G	SOCKET-RCA N RD-BU-GN 3PIN R N AV-3.2-3W	P706
T8-28LAK8-MA1	47-RCA303-XY0G	SOCKET-RCA N RD-WH-YE 3PIN R N AV-3.2-3W	P705
T8-28LAK8-MA1	47-RCA303-XY0G	SOCKET-RCA N RD-WH-YE 3PIN R N AV-3.2-3W	P703
T8-28LAK8-MA1	47-USB011-XX1	SOCKET USB R N USB-04WE-BHY	P501
T8-28LAK8-MA1	71-AV0000-V00	SOFT LABEL PAPER WHITE	
T8-28LAK8-MA1	71-BAR008-0A9	BARCODE LABEL	
T8-28LAK8-MA1	19-GA0472-JTX	SMD. RES 4.7K OHM 1/16W +/-5%	R136
T8-28LAK8-MA1	13-AS1117-18B	ICSOT-223 AS1117-18CX	U803
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R802
T8-28LAK8-MA1	25-HCB221-M1X	CAP.ELE 5MM 220UF 16V +/-20%(8*7)	C854
T8-28LAK8-MA1	25-HCB221-M1X	CAP.ELE 5MM 220UF 16V +/-20%(8*7)	C879
T8-28LAK8-MA1	25-HCB221-M1X	CAP.ELE 5MM 220UF 16V +/-20%(8*7)	C815
T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R653

T8-28LAK8-MA1	19-AB0103-JTX	RES SMD 10K OHM 1/10W 0603	R637
T8-28LAK8-MA1	28-BB0105-KBX	CAP.CER,SMD 1UF 10% 50V 0.2 0805 CL21B10	C653
T8-28LAK8-MA1	47-HDI011-KS0	SOCKET HDMI ST N A111989-F-15-R	P503
T8-28LAK8-MA1	67-387200-1A0	HEAT SINK	FOR U101
T8-28LAK8-MA1	33-YLL100-MTA	SMD.COIL 10uH NR8040T100M	L814
T8-28LAK8-MA1	19-BC0000-JTX	SMD.RES 0 OHM 1/8W +/-5%	R220
T8-28LAK8-MA1	19-BC0000-JTX	SMD.RES 0 OHM 1/8W +/-5%	R221
T8-28LAK8-MA1	19-BC0000-JTX	SMD.RES 0 OHM 1/8W +/-5%	R222
T8-28LAK8-MA1	19-BC0000-JTX	SMD.RES 0 OHM 1/8W +/-5%	R223
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R725
T8-28LAK8-MA1	28-HC0473-KBX	CAP.CER,SMD 47NF 16V 0402 -	C176
T8-28LAK8-MA1	19-GA0000-JTX	SMD. RES 0 OHM 1/16W +/-5%	R169
T8-28LAK8-MA1	33-KLN102-NTX	SMD.COLL MGGB1608M102HB	L102
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R741
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R743
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R727
T8-28LAK8-MA1	19-GA0103-JTX	SMD. RES 10K OHM 1/16W +/-5%	R729
T8-28LAK8-MA1	28-HB0561-KBX	CAP.CER,SMD 560P0F 50V DCV 0402 -	C726
T8-28LAK8-MA1	28-HB0561-KBX	CAP.CER,SMD 560P0F 50V DCV 0402 -	C727
T8-28LAK8-MA1	19-GA0123-JTX	SMD. RES 12K OHM 1/16W +/-5%	R742
T8-28LAK8-MA1	19-GA0123-JTX	SMD. RES 12K OHM 1/16W +/-5%	R744
T8-28LAK8-MA1	19-GA0123-JTX	SMD. RES 12K OHM 1/16W +/-5%	R728
T8-28LAK8-MA1	19-GA0123-JTX	SMD. RES 12K OHM 1/16W +/-5%	R730
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R733
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R738
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R739
T8-28LAK8-MA1	19-GA0750-JTX	SMD. RES 75 OHM 1/16W +/-5%	R740
T8-28LAK8-MA1	47-VGA018-XX1	SOCKET-VGA 15 R FEMALE	P701
T8-28LAK8-MA1	40-0MS82L-MAB2LG	PCB MA 166*250MM 2PC DOUBLESIDED 1.6MM 1	
T8-28LAK8-MA1	07-389SF3-NF4G	TUNER A NTSC 7MHZ F CONNECTOR SIDE XF-3S	TU1
T8-28LAK8-MA1	09-00SR34-STX	D-BR,SMD 40V 3A 0.5V DO-214AA SR34	D806
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R813
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R828
T8-28LAK8-MA1	19-GA0330-JTX	SMD. RES 33 OHM 1/16W +/-5%	R832
T8-28LAK8-MA1	28-AB0102-KBX	CAP.CER,SMD 1NF 50.0V 0603 - +/-10% R=Y	C818
T8-28LAK8-MA1	19-AB0224-JTX	SMD RES 220K OHM 1/10W 0603	R815
T8-28LAK8-MA1	V8-MS82LLA-LF1V02	SOFTWARE CODE	
H3-28T352SK8-B00A	T8-HT3517V-KE1	ASS'Y - KEY BD	
T8-HT3517V-KE1	19-AB0471-JTX	SMD. RES 470 OHM 1/10W +/-5%	R16
T8-HT3517V-KE1	19-AB0471-JTX	SMD. RES 470 OHM 1/10W +/-5%	R10
T8-HT3517V-KE1	19-AB0471-JTX	SMD. RES 470 OHM 1/10W +/-5%	R15
T8-HT3517V-KE1	19-AB0471-JTX	SMD. RES 470 OHM 1/10W +/-5%	R14
T8-HT3517V-KE1	19-AB0471-JTX	SMD. RES 470 OHM 1/10W +/-5%	R11
T8-HT3517V-KE1	19-AB0471-JTX	SMD. RES 470 OHM 1/10W +/-5%	R13
T8-HT3517V-KE1	19-AB0471-JTX	SMD. RES 470 OHM 1/10W +/-5%	R12
T8-HT3517V-KE1	28-AB0104-ZFX	CAP.CER,SMD 100N0F 50V DCV 0603 -	C10
T8-HT3517V-KE1	46-35135W-03XG	PIN BASE PH-03AW	P3
T8-HT3517V-KE1	48-TAC001-XX0	TACT SWITCH	K6
T8-HT3517V-KE1	48-TAC001-XX0	TACT SWITCH	K4
T8-HT3517V-KE1	48-TAC001-XX0	TACT SWITCH	K1
T8-HT3517V-KE1	48-TAC001-XX0	TACT SWITCH	K2
T8-HT3517V-KE1	48-TAC001-XX0	TACT SWITCH	K7
T8-HT3517V-KE1	48-TAC001-XX0	TACT SWITCH	K5
T8-HT3517V-KE1	48-TAC001-XX0	TACT SWITCH	K3

T8-HT3517V-KE1	40-HT3510-KEA2LG	PCB UR 151*168.4MM 12PC DOUBLESIDED 1.6M	
H3-28T352SK8-B00A	81-PBE028-PW1XT	PSU 54W SHG3203G-101HN（泰国）	
H3-28T352SK8-B00A	V6-PROJECT-ID040	SOFTWARE PROJECT ID: 40	
H3-28T352SK8-B00A	71-BAR030-0A0	PRI LABEL TCL WHITE & BLACK R=Y	FOR CTV
H3-28T352SK8-B00A	T8-HT3527V-IR2	ASS'Y - IR BD	
T8-HT3527V-IR2	02-IRR002-X12T	IR RECEIVER 37.9KHZ 5V HM238	IR1
T8-HT3527V-IR2	12-BT3904-0BX	TR-SMD NPN 40VV 200MA_A 300HZ 0.25W SOT2	Q1
T8-HT3527V-IR2	19-AB0101-JTX	RES SMD 100 OHM 1/10W 0603	R1
T8-HT3527V-IR2	19-AB0101-JTX	RES SMD 100 OHM 1/10W 0603	R2
T8-HT3527V-IR2	19-AB0122-JTX	SMD. RES 1.2K OHM 1/10W +/-5% 0603	R3
T8-HT3527V-IR2	19-AB0152-JTX	R-SMD 1K5OHM 5% 1/10W 0603 -	R4
T8-HT3527V-IR2	28-AB0101-JCX	CAP.CER,SMD 100PF 50.0V 0603 -	C3
T8-HT3527V-IR2	28-AB0104-ZFX	CAP.CER,SMD 100N0F 50V DCV 0603 -	C2
T8-HT3527V-IR2	28-AC0105-ZFX	SMD. CAP 1 UF 16VDC +80%/-20%	C1
T8-HT3527V-IR2	28-AC0105-ZFX	SMD. CAP 1 UF 16VDC +80%/-20%	C4
T8-HT3527V-IR2	46-GHSR01-06SG	CONN SMT 6 1.25MM FEMALE W ST	P1
T8-HT3527V-IR2	40-0MS82J-IRA2LG	PCB IR 103*123.5MM 20PC DOUBLESIDED 1.6M	
T8-HT3527V-IR2	14-LED03R-XX1	LED RED Φ3MM FO203	D1