



DRIVING CIRCUIT DESIGN GUIDE

FOR BACKLIGHT AND DC-DC CONVERTER

Rev.1.1
2024-02-05

This document is applied for the Riverdi HB, IPS, 7.0" LVDS series:

PRODUCT NAME	DESCRIPTION
RVT70HSLNWN00	HB, IPS, 7.0", 1024x600, 1000cd/m ² , LVDS, No touch panel,
RVT70HSLFWN00	HB, IPS, 7.0", 1024x600, 1000cd/m ² , LVDS, No touch panel, Metal frame
RVT70HSLNWC00-B	HB, IPS, 7.0", 1024x600, 850cd/m ² , LVDS, uxTouch, Optical bonding
RVT70HSLNWC00	HB, IPS, 7.0", 1024x600, 800cd/m ² , LVDS, uxTouch, Air bonding
RVT70HSLNWC00	HB, IPS, 7.0", 1024x600, 800cd/m ² , LVDS, uxTouch, Air bonding
RVT70HSLNWCA0	HB, IPS, 7.0", 1024x600, 800cd/m ² , LVDS, aTouch, Air bonding
RVT70HSLFWCA0	HB, IPS, 7.0", 1024x600, 800cd/m ² , LVDS, aTouch, Air bonding, Metal frame



1. REVISION RECORD

REV NO.	REV DATE	CONTENTS	REMARKS
1.0	2022-12-20	Initial Release	
1.1	2024-02-05	Change R7 value to 30.9k and change R4 value to 22k to have VGL voltage - 6V. Correct MIN and MAX values of VGL	



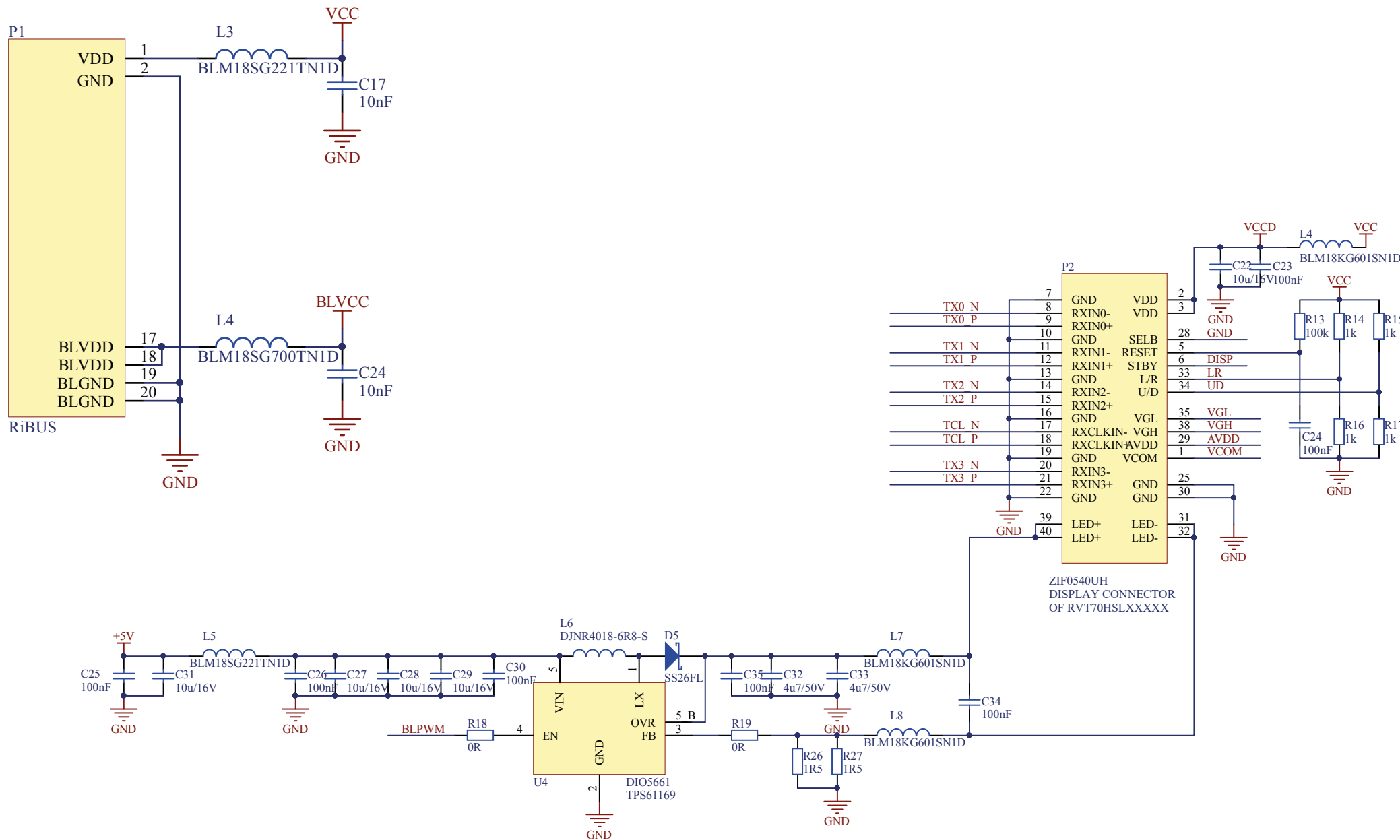
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4. DRIVING CIRCUIT OF VGH/VGL/ AVDD/VCOM

Riverdi HB, IPS, 7.0" LVDS series TFT require VGH, VGL, AVDD and VCOM voltages to drive the TFT glass driver properly.

Below tables are the VGH, VGL, VCOM, and AVDD specifications for Riverdi HB, IPS, 7.0" LVDS series.

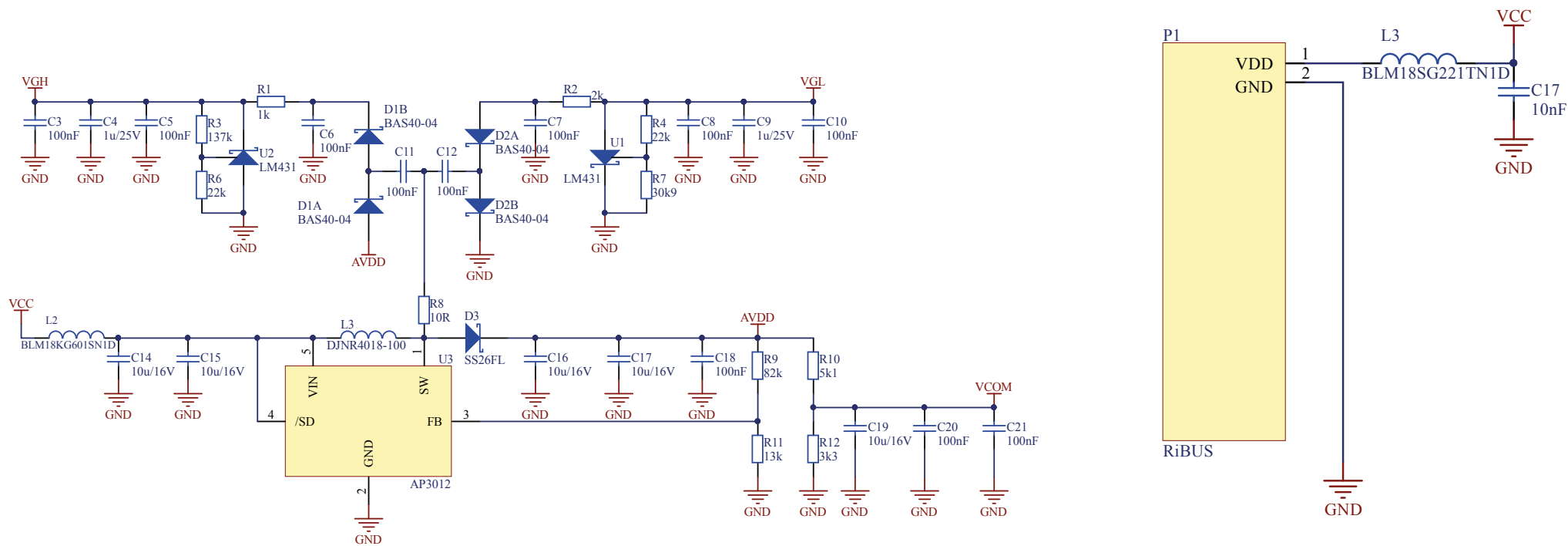
Absolute maximum ratings:

PARAMETER	SYMBOL	MIN	MAX	UNIT
Power for Circuit Driving	VDD	-0.3	3.96	V
	AVDD	-0.5	14.85	
	VGH	-0.3	40	
	VGL	-20.0	0.3	

Electrical specifications:

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	NOTE
Supply Voltage for Module	VGH	17	18	19	V	
	VGL	-5.4	-6.0	-6.6		
	AVDD	9.4	9.6	9.8		
	VCOM	3.6	3.8	4.0		
Current of Power Supply	IAVDD	-	35	45	mA	AVDD = 9.6V
	IGH	-	0.5	1	uA	VGH = 18V
	IGL	-	0.5	1	mA	VGL= -6V

The schematic of VGH, VGL, AVDD and VCOM circuit with AP3012KTR-E1 DC-DC converter.





Hi, I am here to help you!
If you have any additional
questions, please contact
our support via email:
contact@riverdi.com

