

Rev01
Revision1

Serial
Serial1

uz_per_loopback_tutorial
Project1

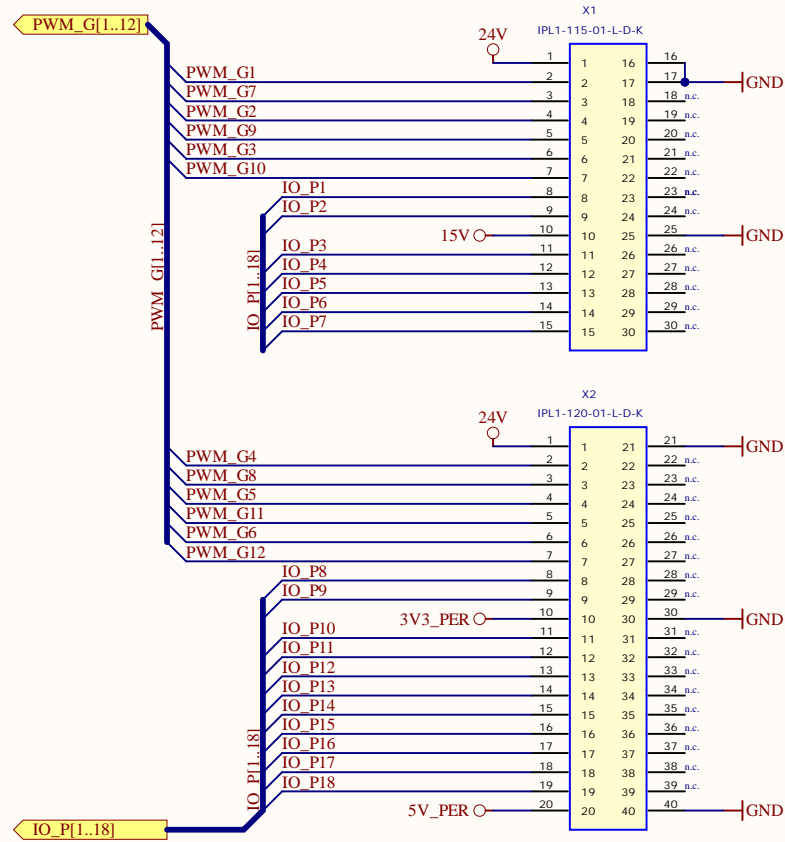
N. Diring
Designer1

Title Interface_TopSheet.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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Input connectors

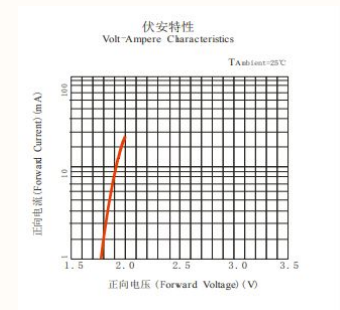
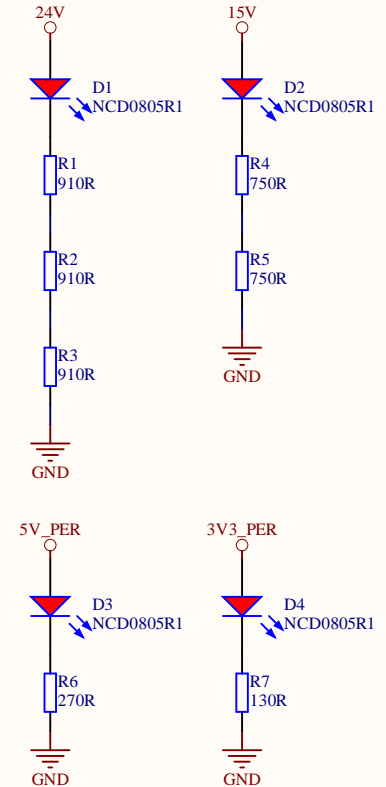


Pin header

X3			
PWM_G1	01	02	PWM_G12
PWM_G7	03	04	PWM_G6
PWM_G2	05	06	PWM_G11
PWM_G9	07	08	PWM_G5
PWM_G3	09	10	PWM_G8
PWM_G10	11	12	PWM_G4
GND	13	14	GND
IO_P1	15	16	IO_P18
IO_P2	17	18	IO_P17
IO_P3	19	20	IO_P16
IO_P4	21	22	IO_P15
IO_P5	23	24	IO_P14
IO_P6	25	26	IO_P13
IO_P7	27	28	IO_P12
IO_P8	29	30	IO_P11
IO_P9	31	32	IO_P10
GND	33	34	GND
GND	35	36	GND
24V	37	38	3V3_PER
15V	39	40	5V_PER

TSW-120-05-L-D

LEDs for input voltages - RED



Title Connectors&PIN_Header.SchDoc

Revision: Rev01 Design Engineer: N. Diringner

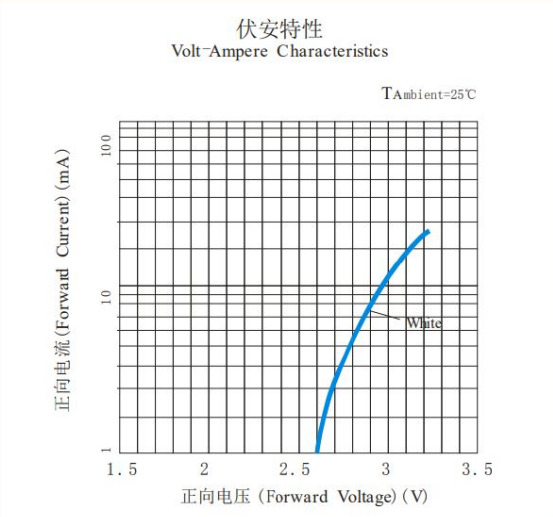
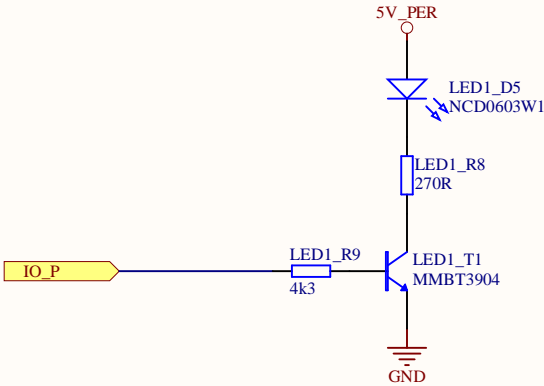
Project: UZ_PER_loopback_tutorial.PrjPcb

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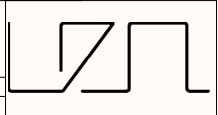


LEDs for Signals (5V) - WHITE

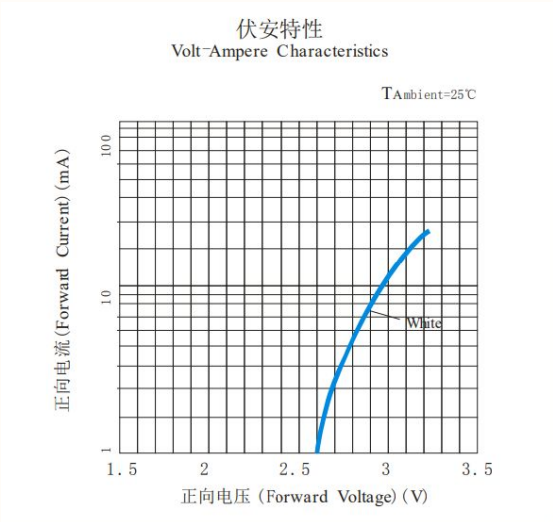
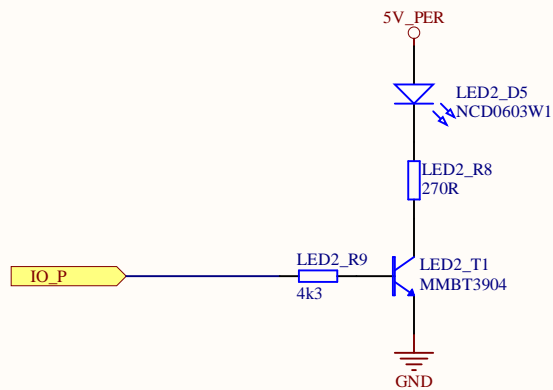


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
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LEDs for Signals (5V) - WHITE

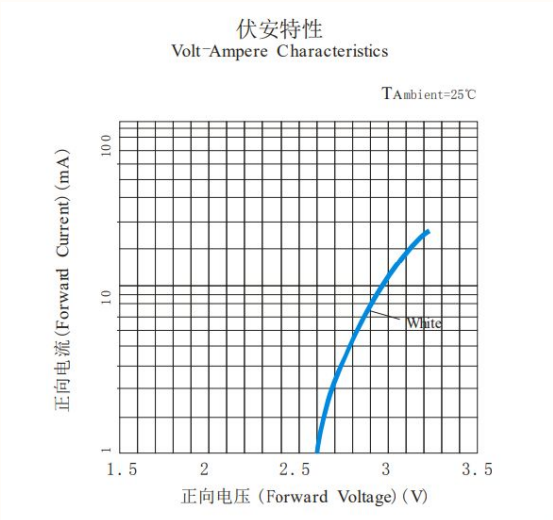
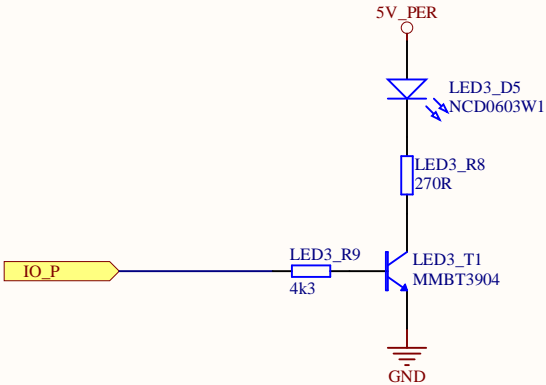


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Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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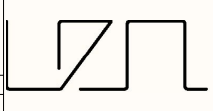


LEDs for Signals (5V) - WHITE

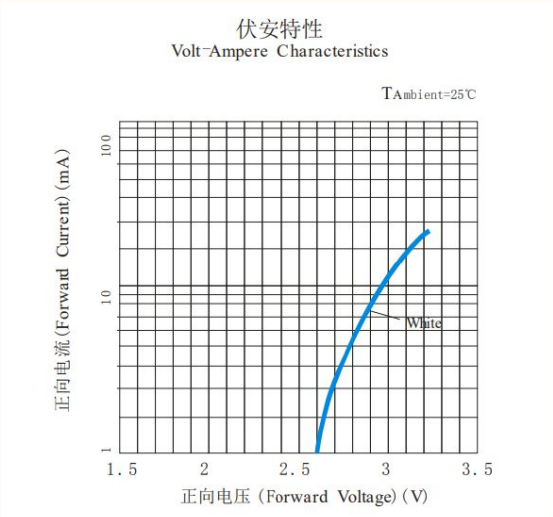
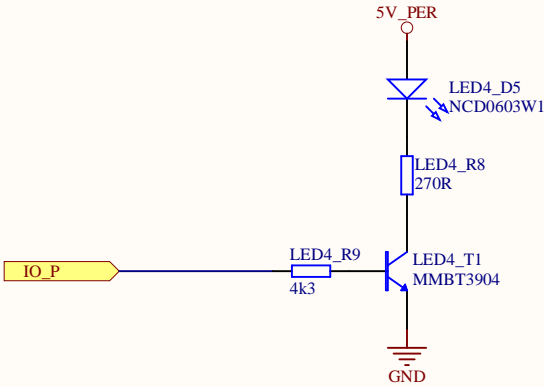


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Revision: Rev01	Design Engineer: N. Diring
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LEDs for Signals (5V) - WHITE

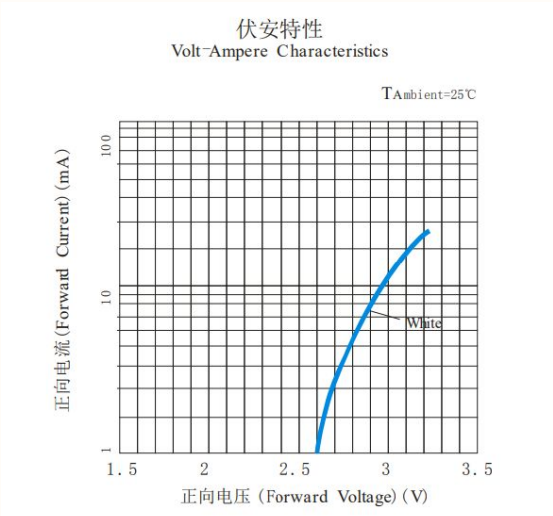
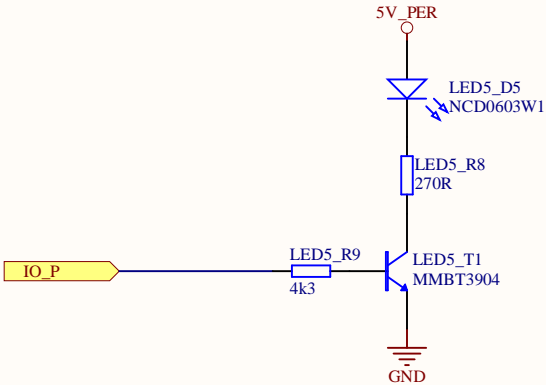


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Revision: Rev01	Design Engineer: N. Diring
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LEDs for Signals (5V) - WHITE

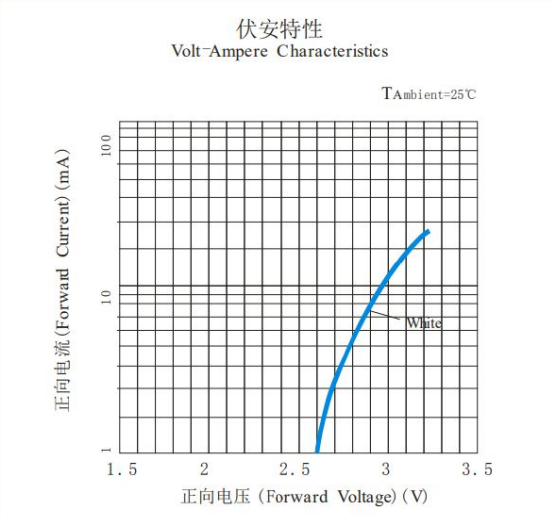
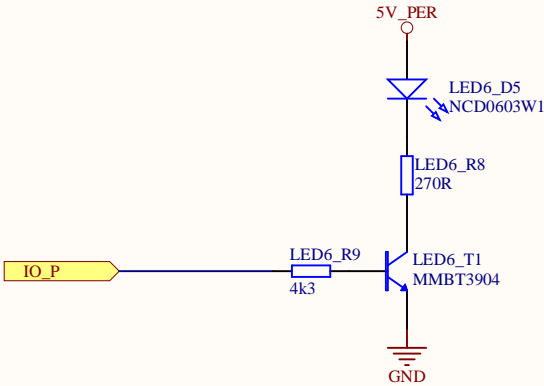


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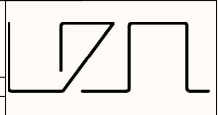


LEDs for Signals (5V) - WHITE

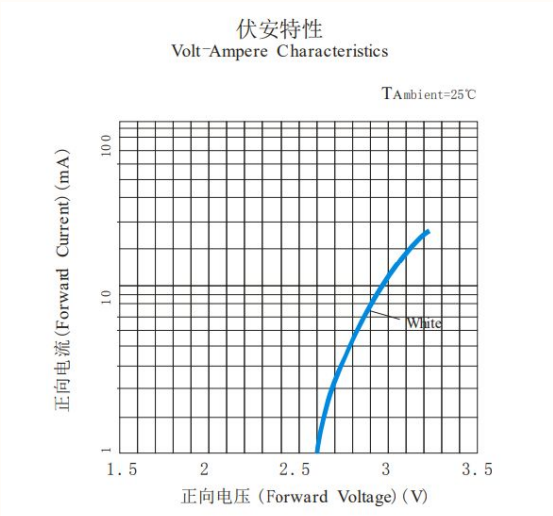
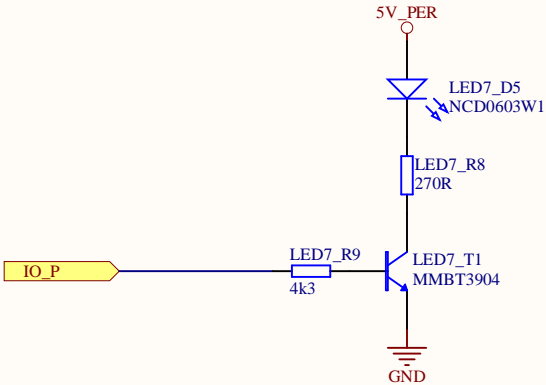


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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LEDs for Signals (5V) - WHITE

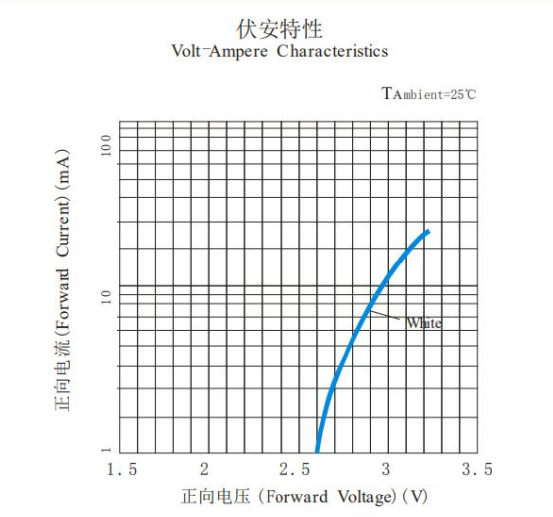
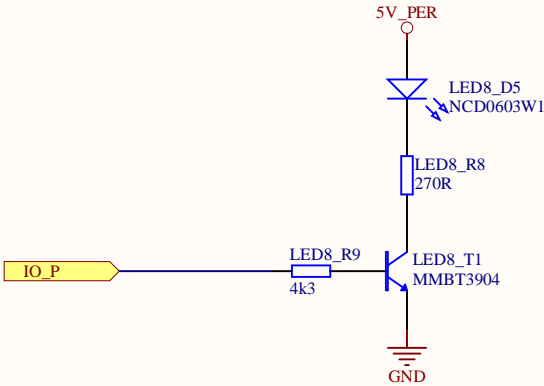


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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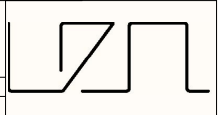


LEDs for Signals (5V) - WHITE

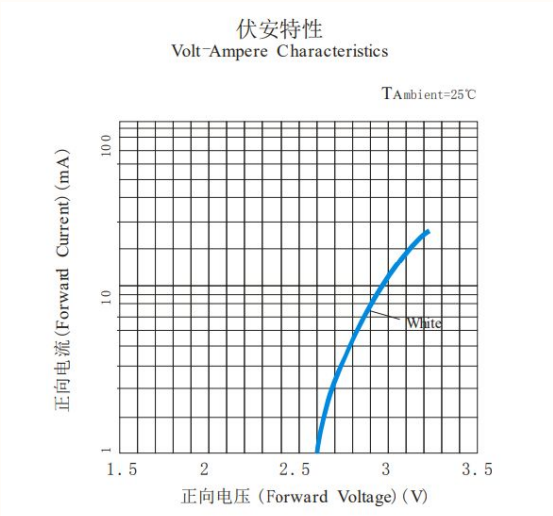
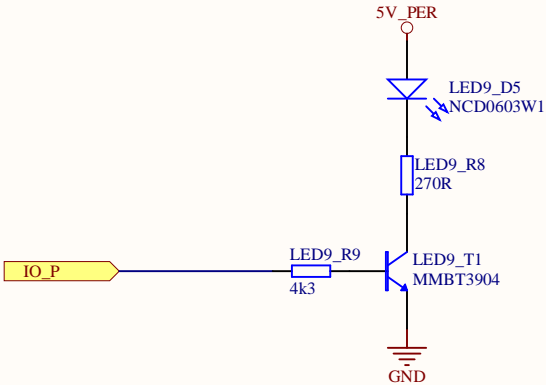


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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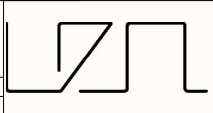


LEDs for Signals (5V) - WHITE

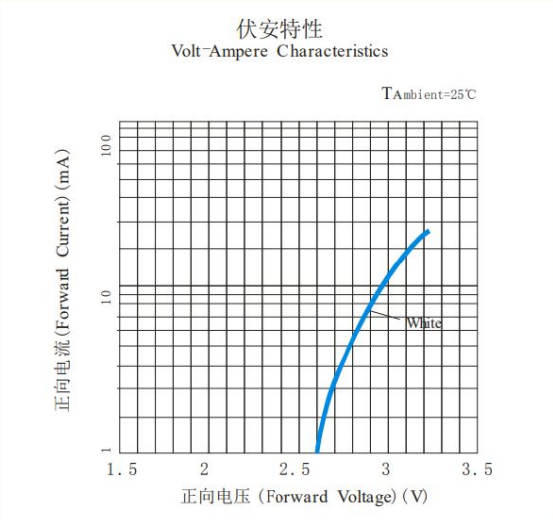
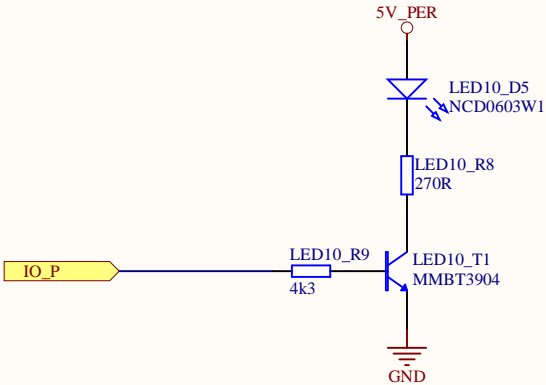


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LEDs for Signals (5V) - WHITE

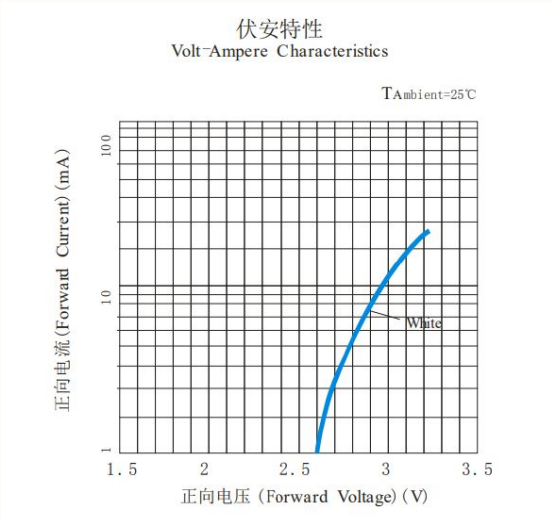
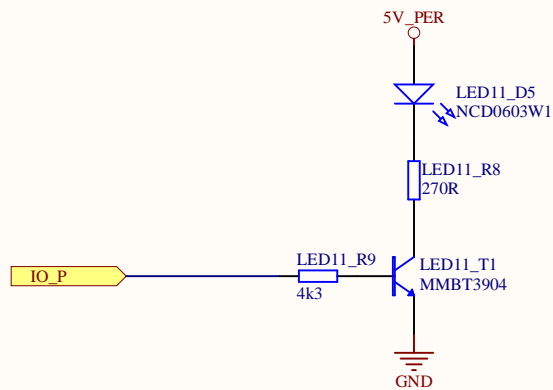


Title LED_circuits.SchDoc	
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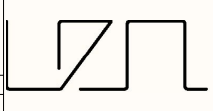


LEDs for Signals (5V) - WHITE

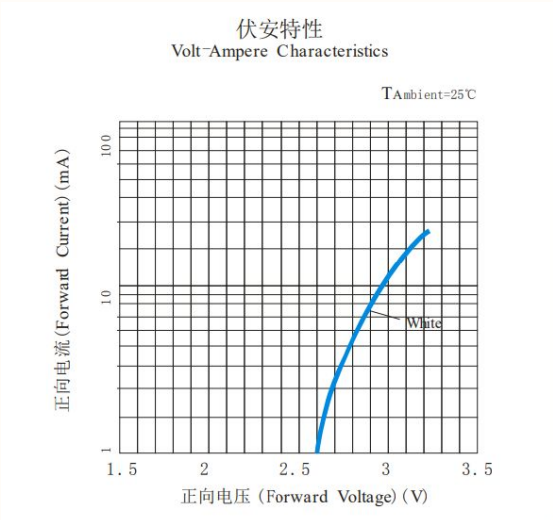
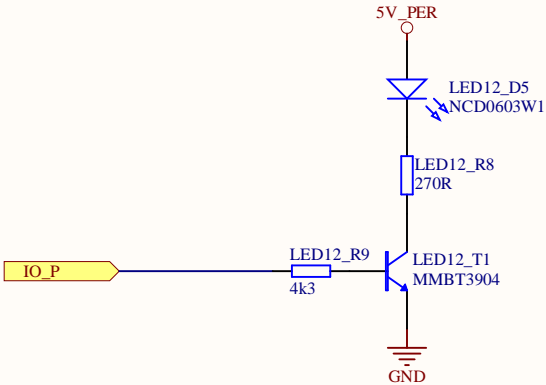


Title LED_circuits.SchDoc	
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Project: UZ_PER_loopback_tutorial.PrjPcb	

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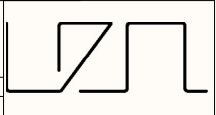


LEDs for Signals (5V) - WHITE

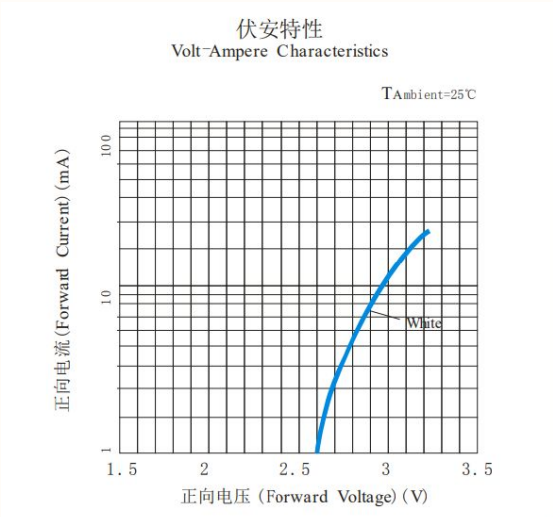
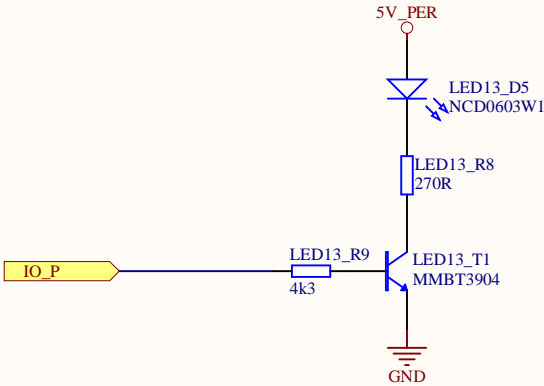


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

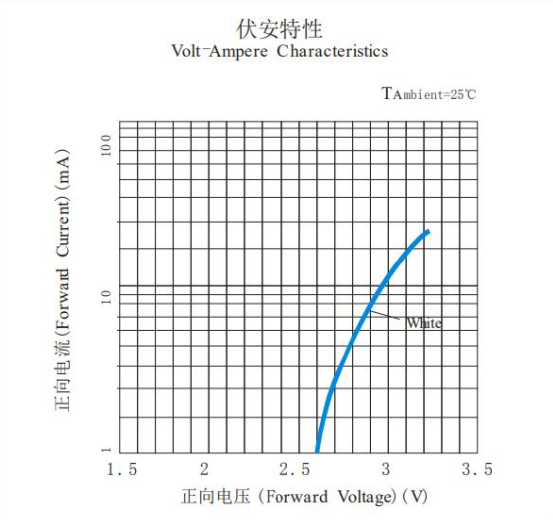
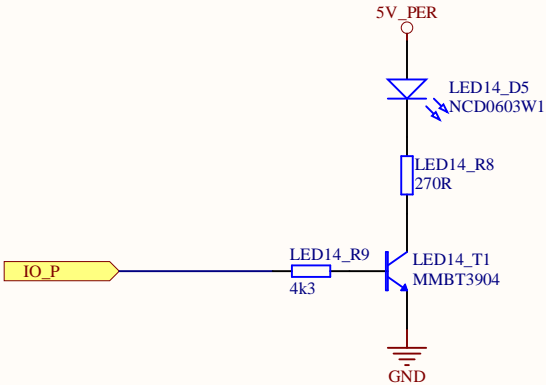
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LEDs for Signals (5V) - WHITE



LEDs for Signals (5V) - WHITE

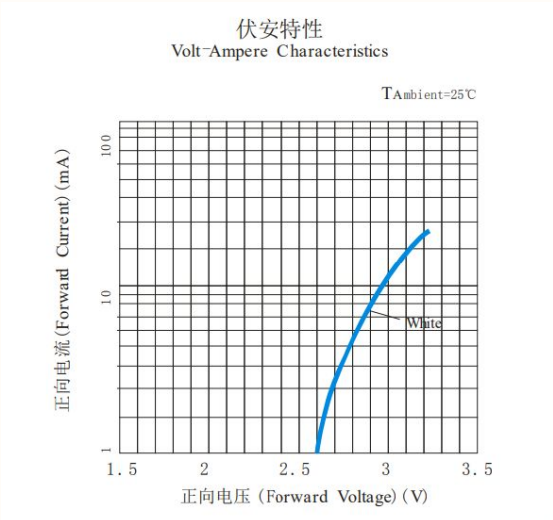
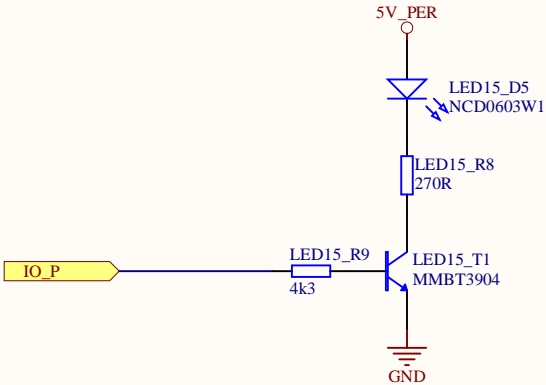


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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LEDs for Signals (5V) - WHITE

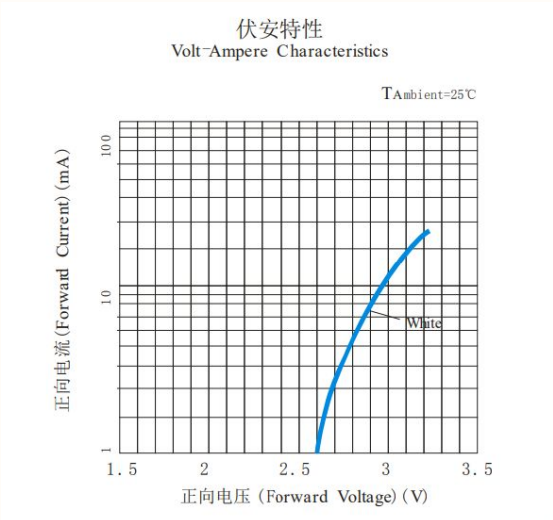
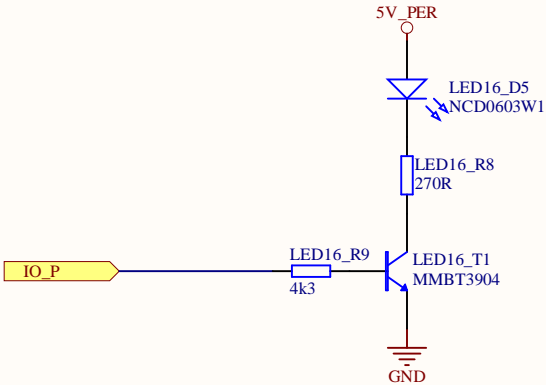


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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LEDs for Signals (5V) - WHITE

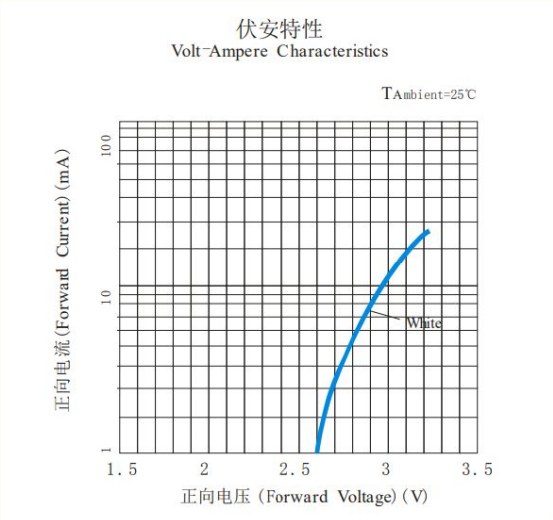
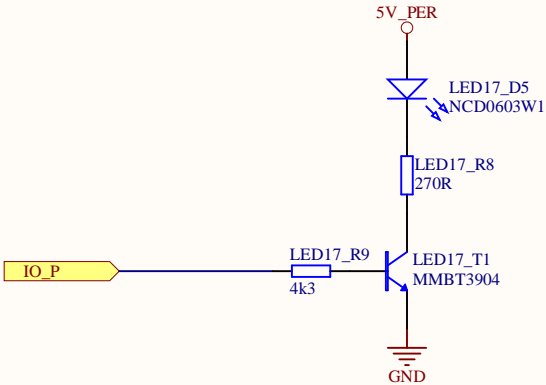


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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LEDs for Signals (5V) - WHITE

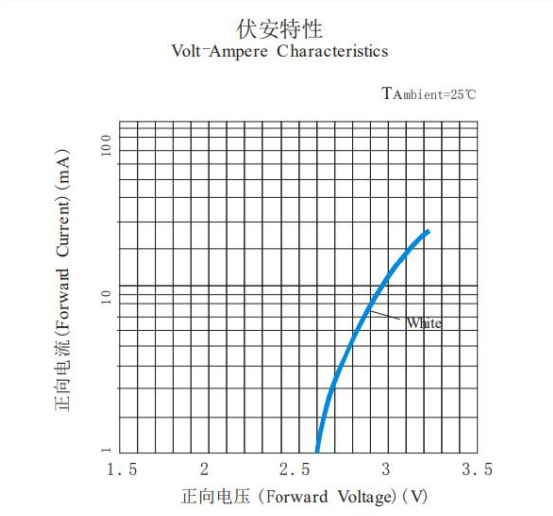
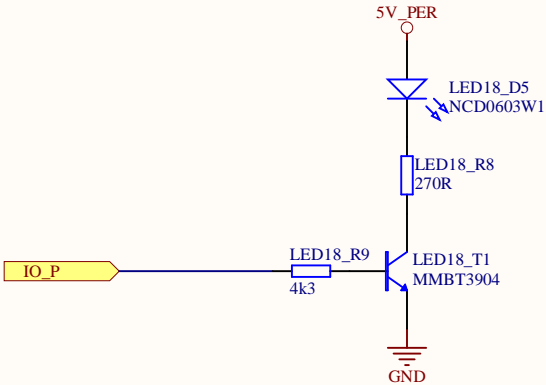


Title LED_circuits.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
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LEDs for Signals (5V) - WHITE

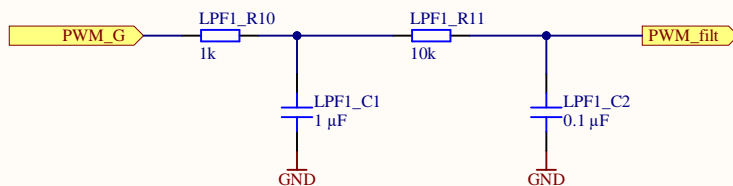


Title LED_circuits.SchDoc	
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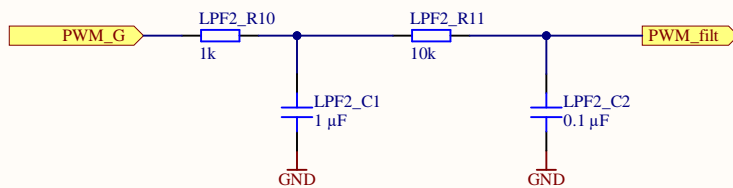


Low pass filters



▲ Low pass filter
 cutoff-frequency
 $f_c =$
 $1/(2*\pi*\sqrt{r10*C1*R11*C2})=$
 159 Hz

Low pass filters



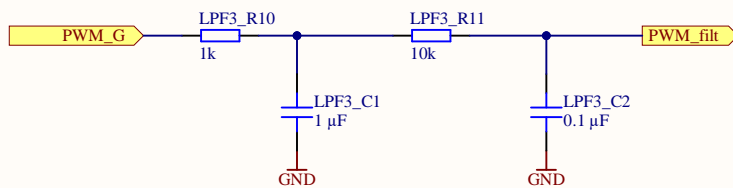
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Title LowPass_Filter.SchDoc	
Revision: Rev01	Design Engineer: N. Diring
Project: UZ_PER_loopback_tutorial.PrjPcb	

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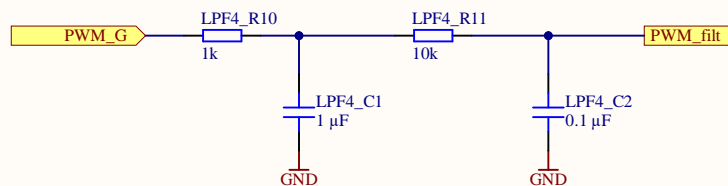


Low pass filters



▲ Low pass filter
 cutoff-frequency
 $f_c =$
 $1/(2*\pi*\sqrt{r10*C1*R11*C2})=$
 159 Hz

Low pass filters



▲ Low pass filter
 cutoff-frequency
 $f_c =$
 $1/(2*\pi*\sqrt{r10*C1*R11*C2})=$
 159 Hz

Title LowPass_Filter.SchDoc

Revision: Rev01

Design Engineer: N. Diring

Project: UZ_PER_loopback_tutorial.PrjPcb

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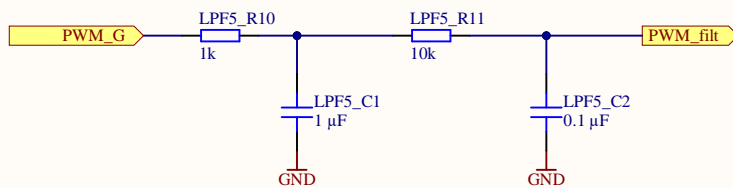
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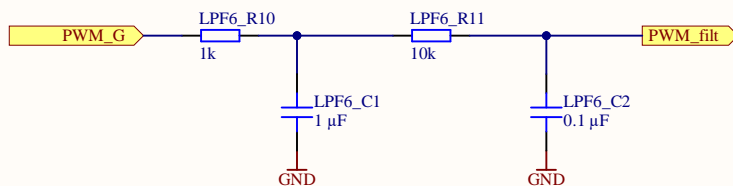
Low pass filters



▲ Low pass filter
 cutoff-frequency
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 159 Hz

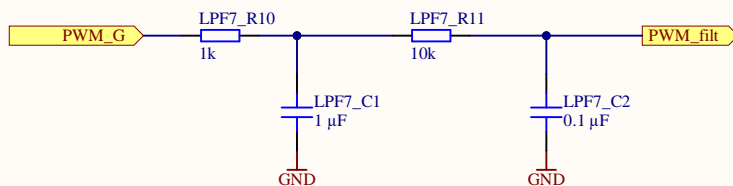
Title LowPass_Filter.SchDoc		 www.ultrazohm.com 
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Project: UZ_PER_loopback_tutorial.PrjPcb		
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Low pass filters



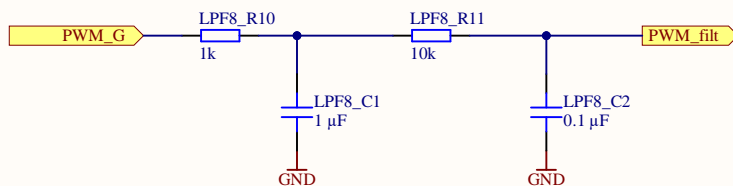
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Low pass filters



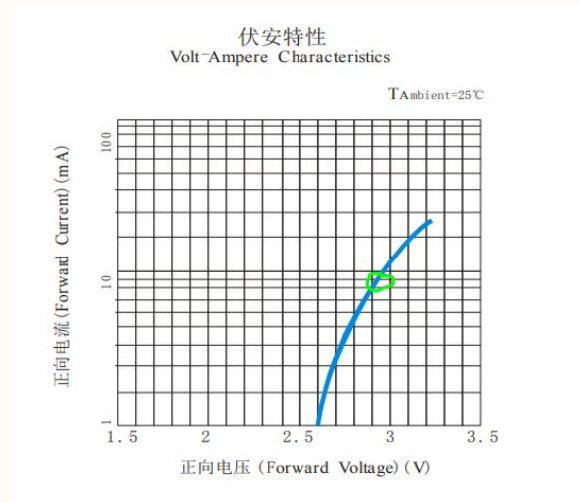
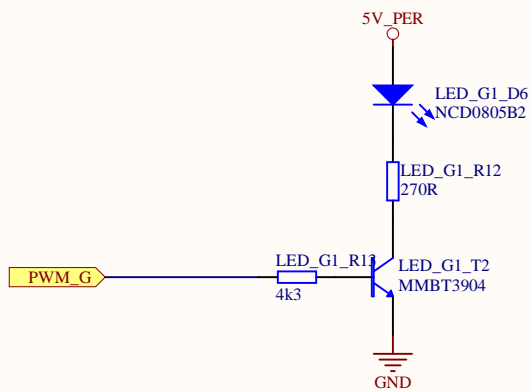
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Low pass filters



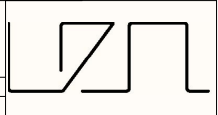
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LEDs for gate voltages - BLUE

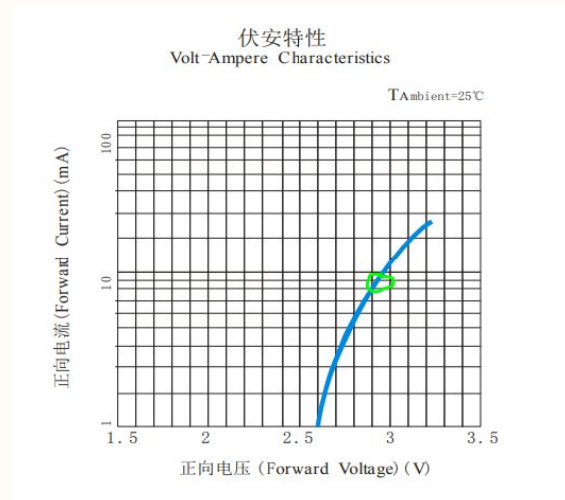
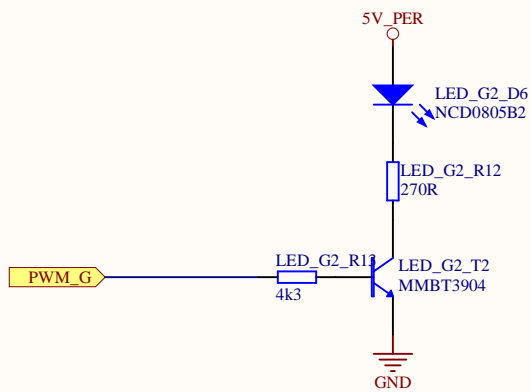


Title LEDcircuits_PWM.SchDoc	
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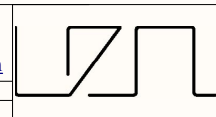


LEDs for gate voltages - BLUE

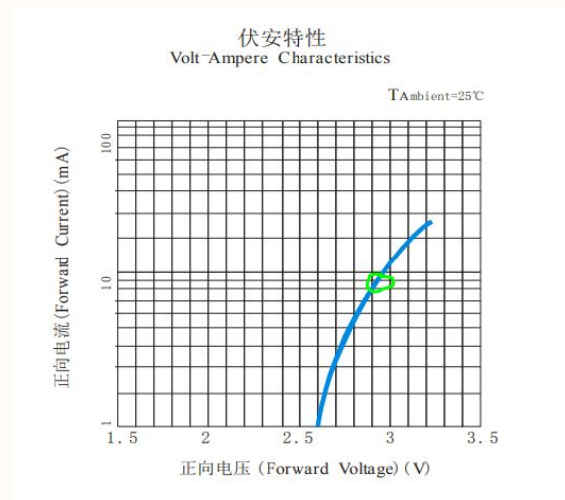
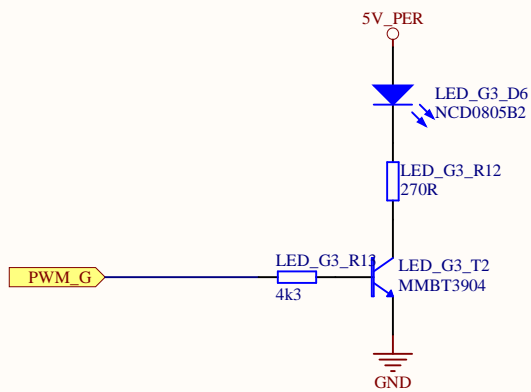


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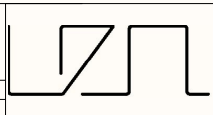


LEDs for gate voltages - BLUE

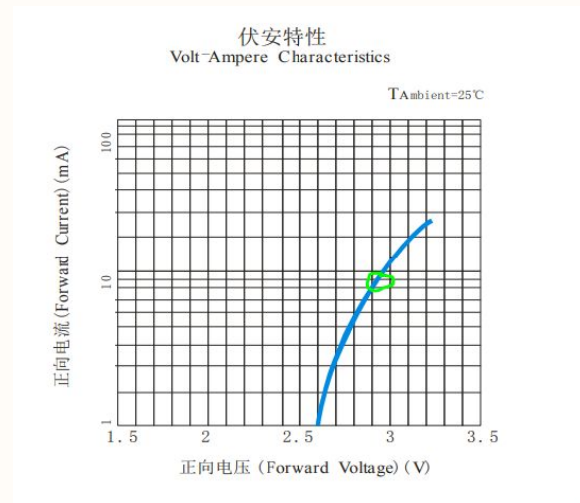
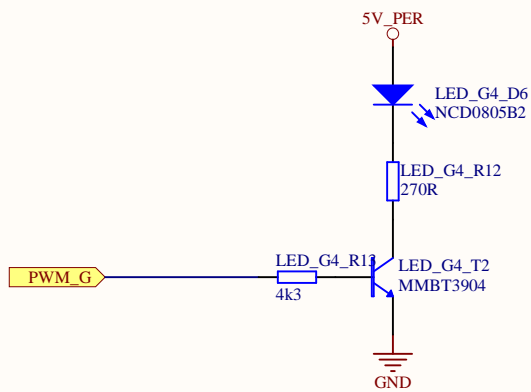


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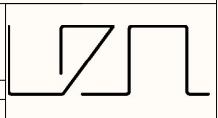


LEDs for gate voltages - BLUE

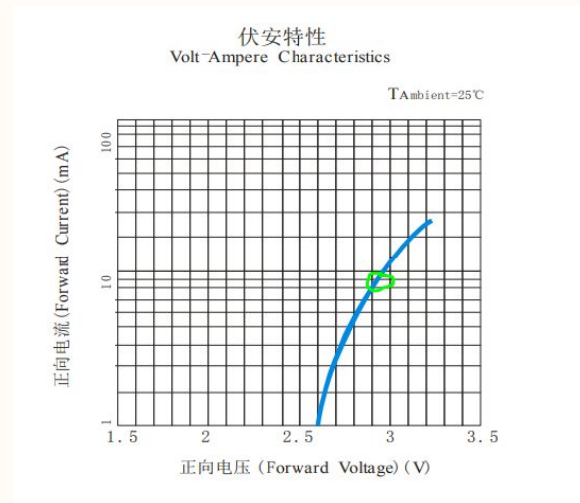
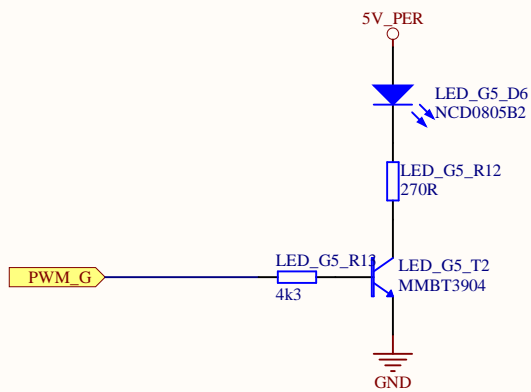


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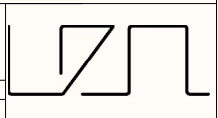


LEDs for gate voltages - BLUE

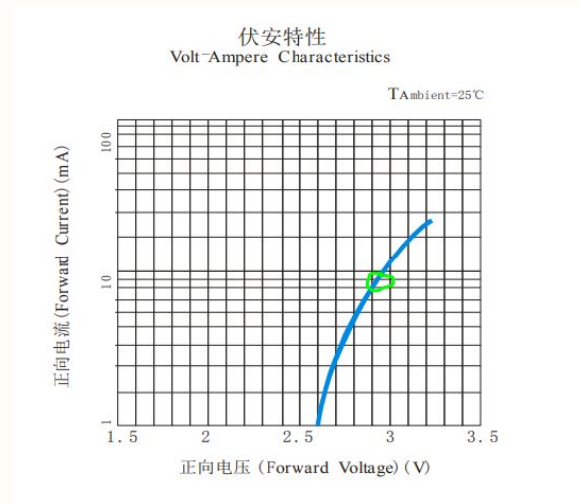
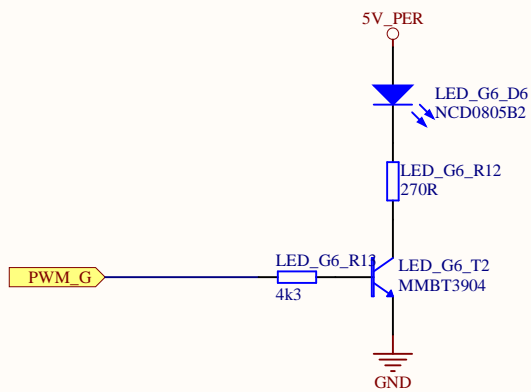


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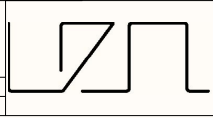


LEDs for gate voltages - BLUE

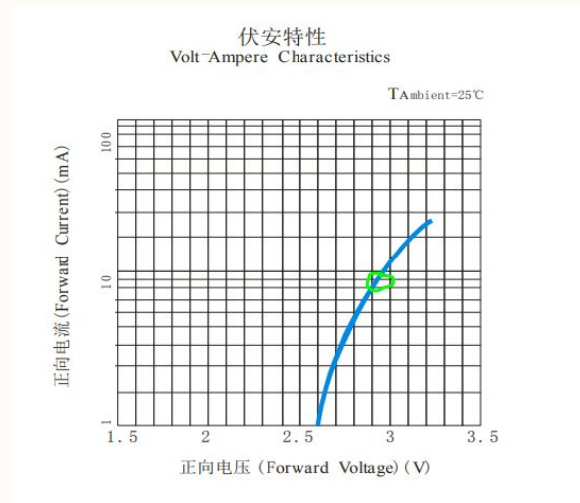
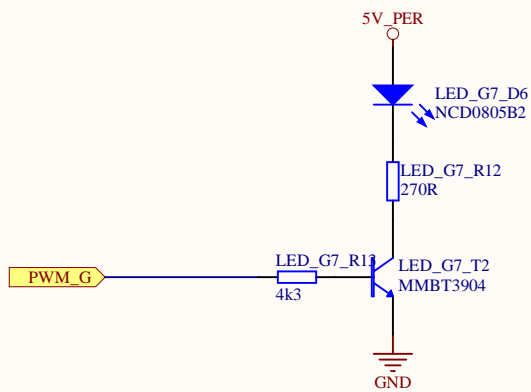


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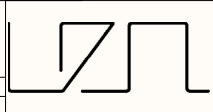


LEDs for gate voltages - BLUE

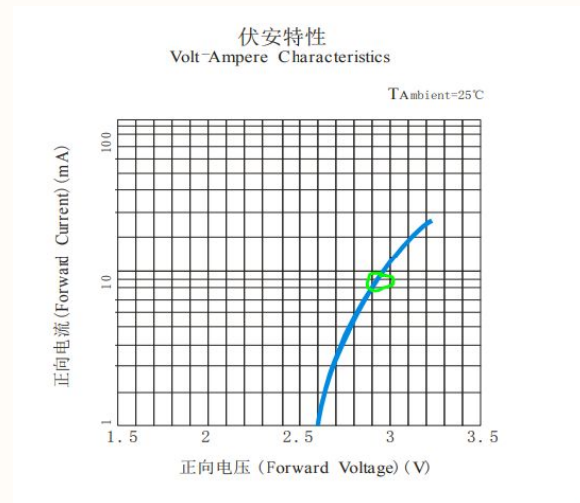
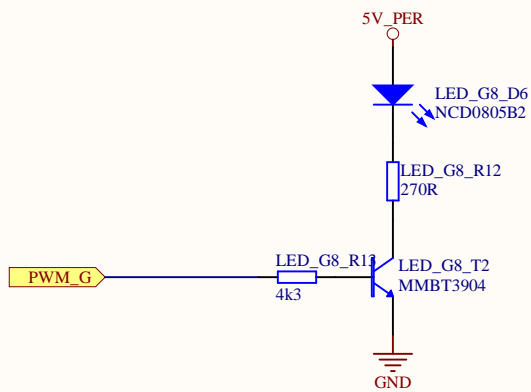


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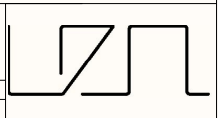


LEDs for gate voltages - BLUE

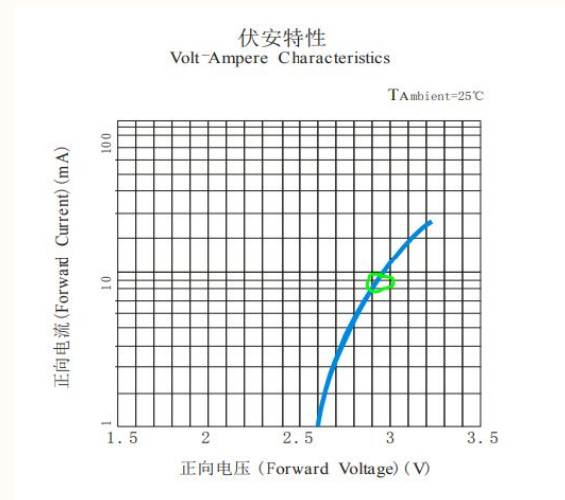
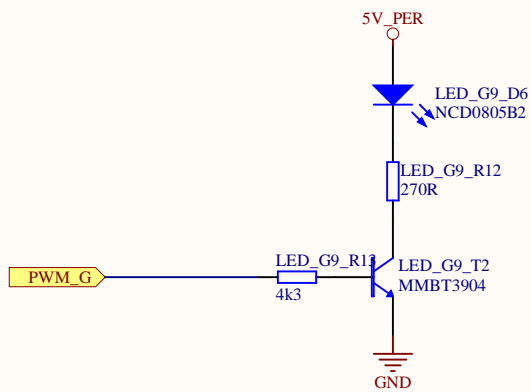


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LEDs for gate voltages - BLUE

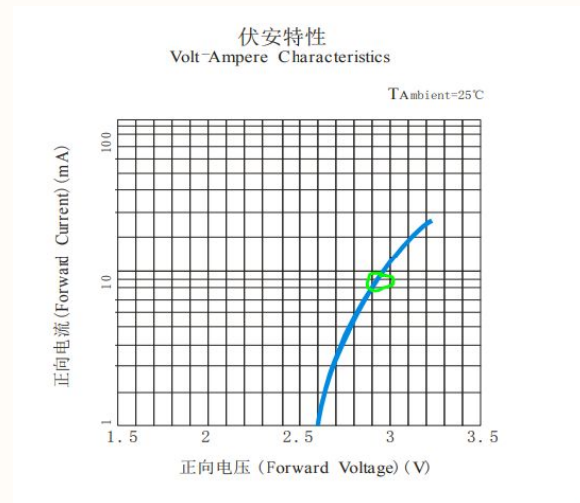
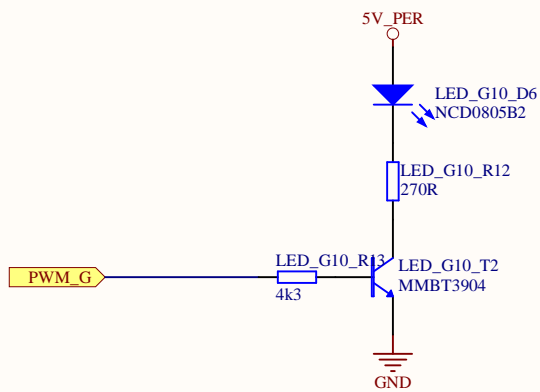


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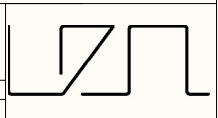


LEDs for gate voltages - BLUE

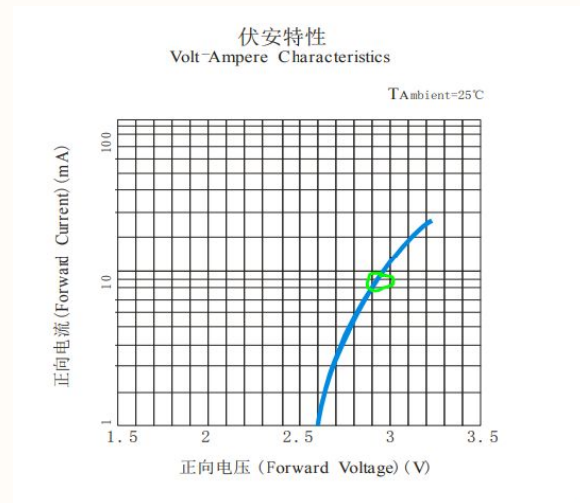
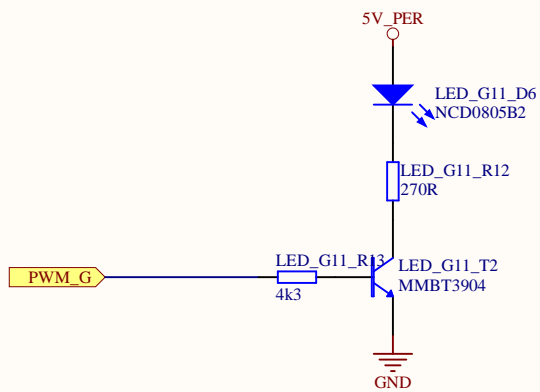


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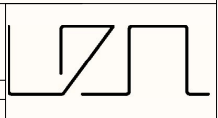


LEDs for gate voltages - BLUE

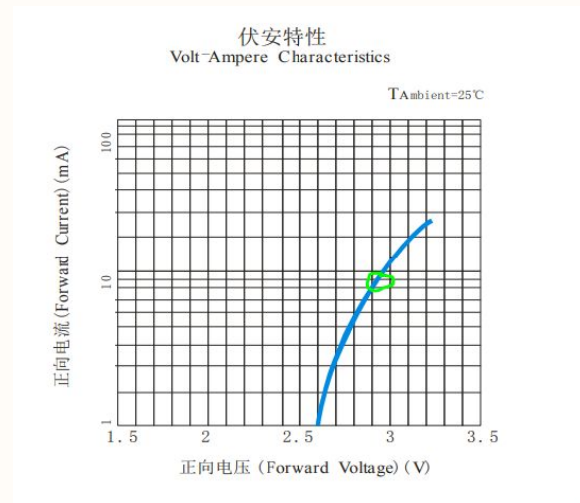
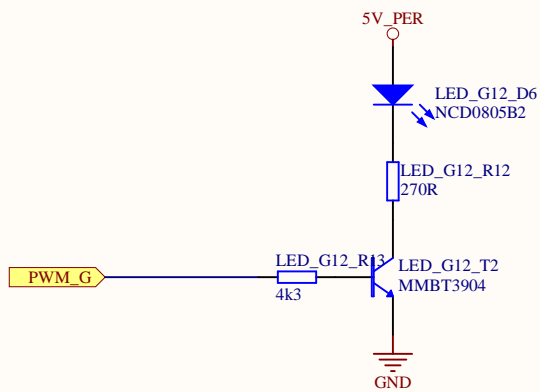


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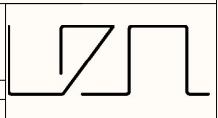


LEDs for gate voltages - BLUE

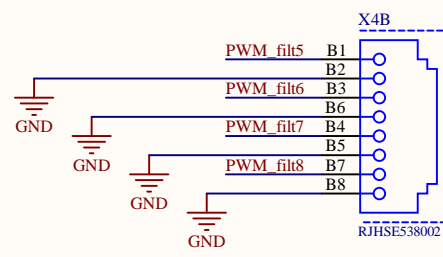
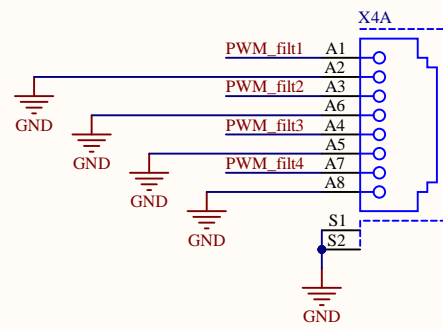
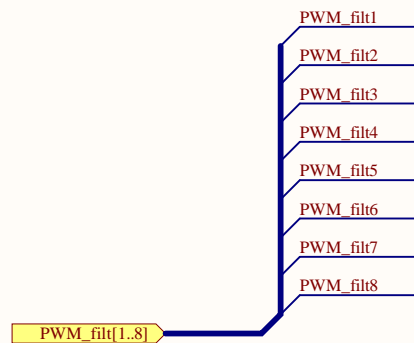



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Ethernet Connectors



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