

5

4

3

2

1

D

D

C

C

B

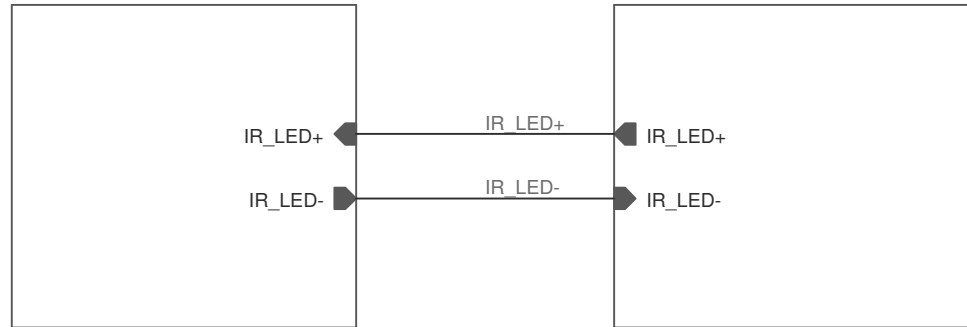
B

A

A

01-IR_LED

02-CONNECTOR



01-IR_LED

02-CONNECTOR

ALPCB1



1 Layer | 1.6 mm | 0.5 oz | Black Solder Masked | ROHS/REACH | HASL
 SHC008_BTC-9D_IR_LED_1610040_V0_05

SCREW HOLES :

MH1 HOLE1.8-SP3.5 MH2 HOLE1.8-SP3.5



PILLAR HOLES :

MH3 HOLE1.7 MH4 HOLE1.7



SYSTECH ELECTRONICS LTD.

PRODUCT: **HUNTING CAMERA**
 PCB NUMBER: BTC-9D_IR_LED_PCB
 DESIGN ENGINEER: TIM

Title		
01-MAIN		
Size	Document Number	Rev
A	SHC008_BTC-9D_IR_LED_1610040	V0.04
Date:	Friday, October 14, 2016	Sheet 1 of 4

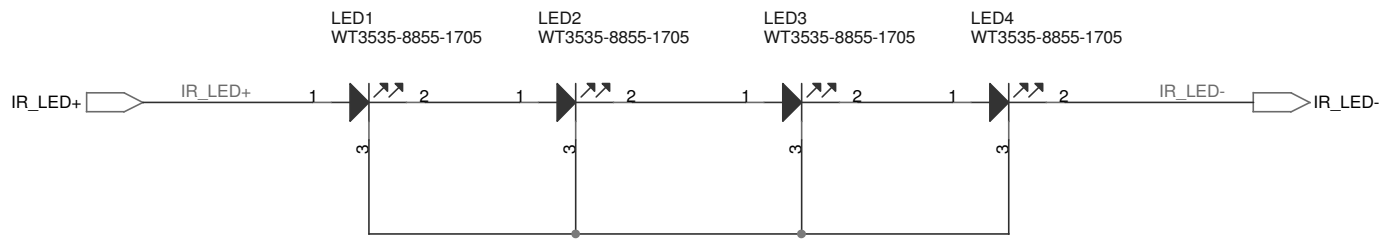
5

4

3

2

1

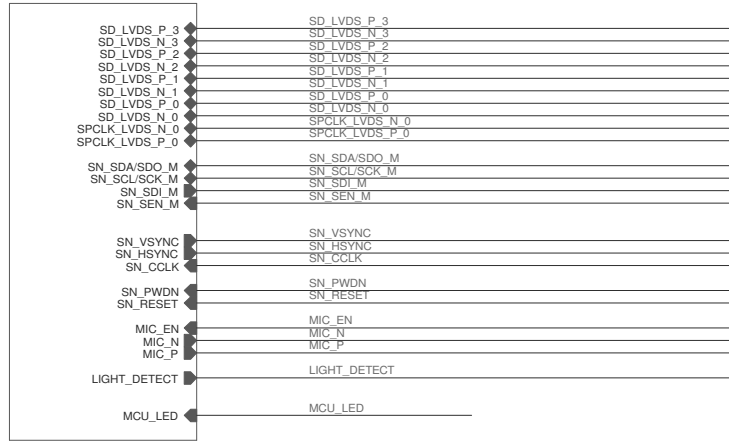


SYSTECH ELECTRONICS LTD.	
PRODUCT: HUNTING CAMERA	
PCB NUMBER: BTC-9D_IR_LED_PCB	
DESIGN ENGINEER: TIM	
Title: 02-IR_LED	
Size: A4	Document Number: SHC008_BTC-9D_IR_LED_1610040
Date: Friday, October 14, 2016	Rev: V0.04
Sheet 2 of 4	



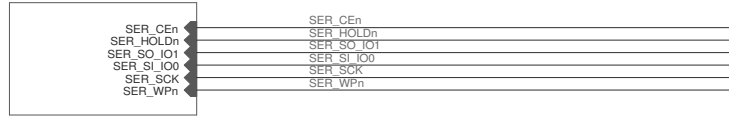
SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: BTC-9D_IR_LED_PCB		
DESIGN ENGINEER: TIM		
Title 03-CONNECTOR		
Size A	Document Number SHC008_BTC-9D_IR_LED_1610040	Rev V0.04
Date: Friday, October 14, 2016		Sheet 3 of 4

02-SENSOR_PCB



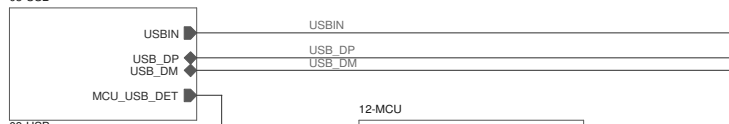
02-SENSOR_PCB

04-SPI_FLASH



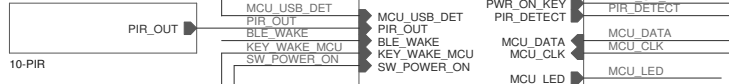
04-SPI_FLASH

08-USB



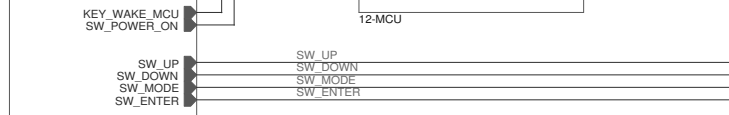
08-USB

10-PIR



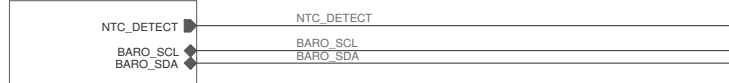
10-PIR

13-KEY



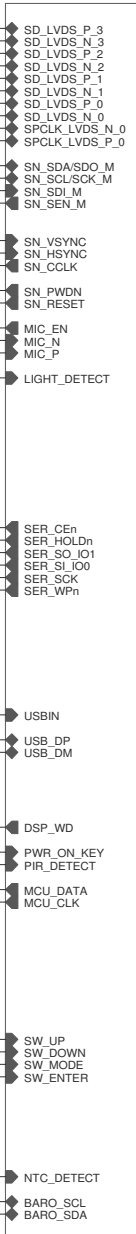
13-KEY

14-OTHER_SENSORS



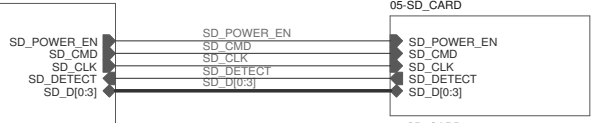
14-OTHER_SENSORS

03-DSP



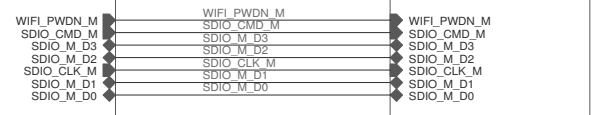
03-DSP

05-SD_CARD



05-SD_CARD

06-WIFI_BT



06-WIFI_BT

BT_MISO_M



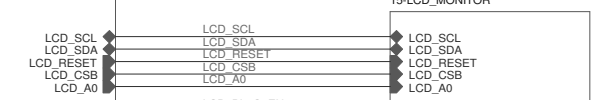
BT_MISO_M

BLE_CAPTURE



BLE_CAPTURE

LCD_SCL



LCD_SCL

LCD_RESET



LCD_RESET

LCD_CSb



LCD_CSb

LCD_A0



LCD_A0

LCD_BL_G_EN



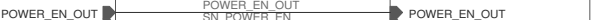
LCD_BL_G_EN

IR_PWM



IR_PWM

M_EN1



M_EN1

M_EN2



M_EN2

POWER_EN_OUT



POWER_EN_OUT

SN_POWER_EN



SN_POWER_EN

WIFI_POWER_EN



WIFI_POWER_EN

RESET_POWER



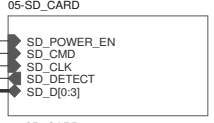
RESET_POWER

BT_POWER_EN



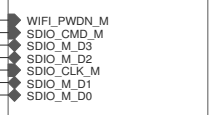
BT_POWER_EN

05-SD_CARD



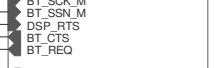
05-SD_CARD

06-WIFI_BT



06-WIFI_BT

BT_MISO_M



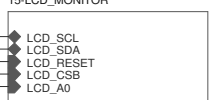
BT_MISO_M

BLE_CAPTURE



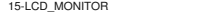
BLE_CAPTURE

LCD_SCL



LCD_SCL

LCD_RESET



LCD_RESET

LCD_CSb



LCD_CSb

LCD_A0



LCD_A0

LCD_BL_G_EN



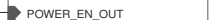
LCD_BL_G_EN

IR_PWM



IR_PWM

M_EN1



M_EN1

M_EN2



M_EN2

POWER_EN_OUT



POWER_EN_OUT

SN_POWER_EN



SN_POWER_EN

WIFI_POWER_EN



WIFI_POWER_EN

RESET_POWER

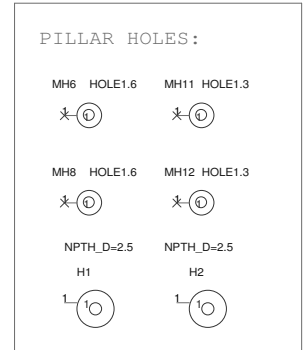
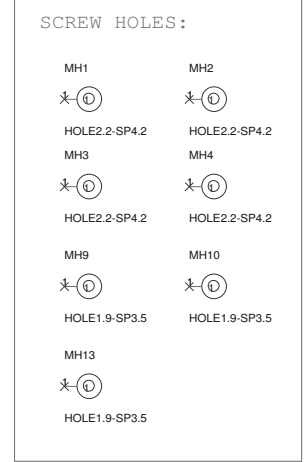


RESET_POWER

BT_POWER_EN



BT_POWER_EN



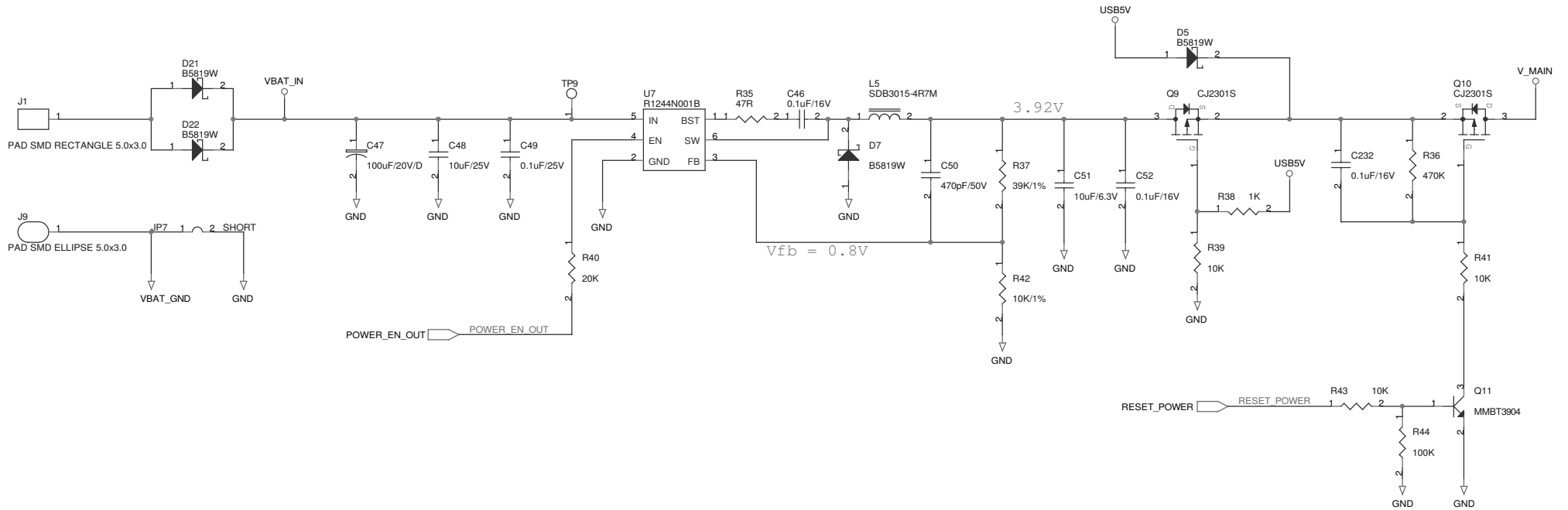
PCB1



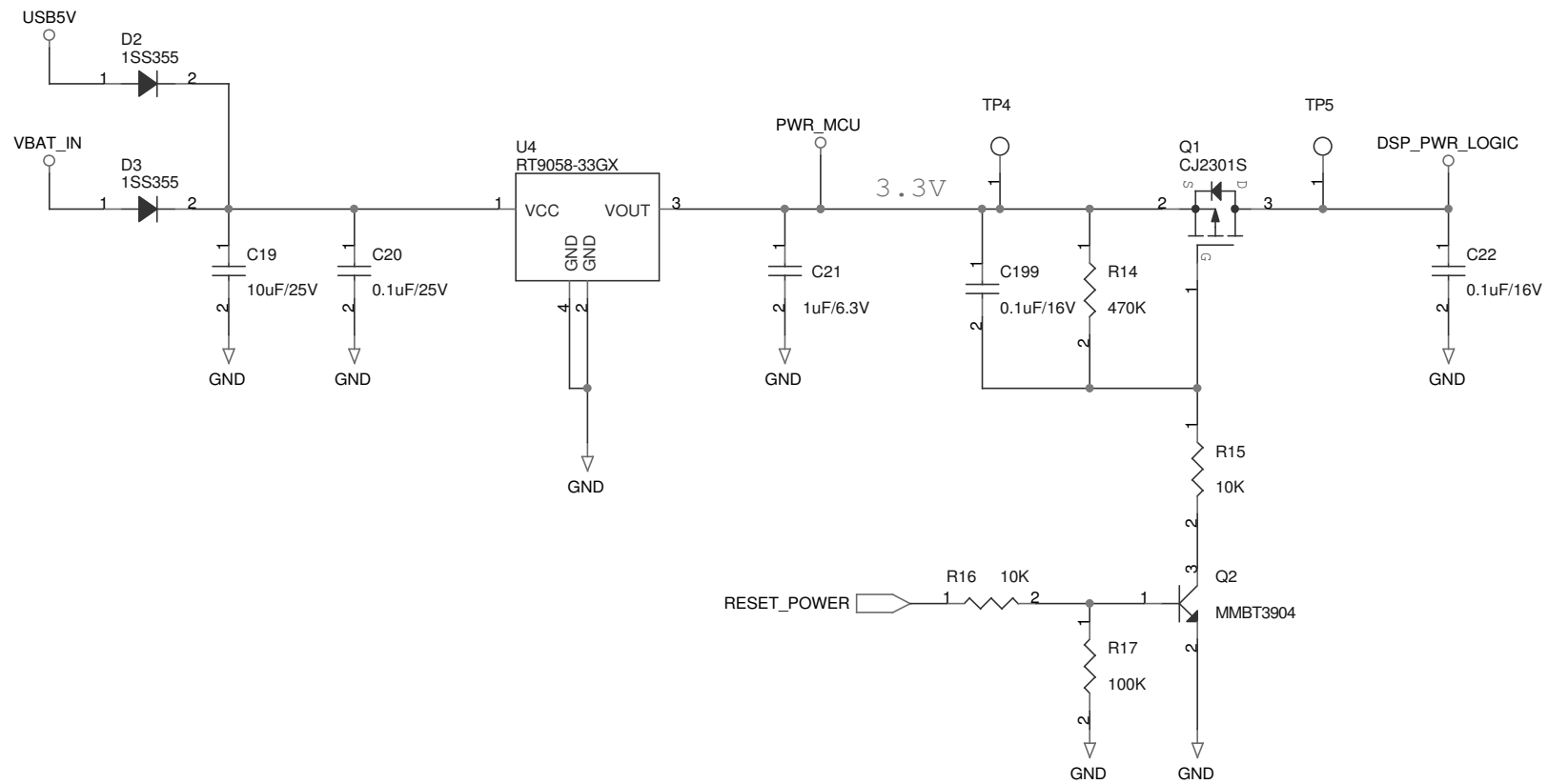
6 Layer | 1.2 mm | H/H/H/H/H | Black Solder Masked | ROHS/REACH | Gold Immersion SHC008_BTC-9D_MAIN_1612050_V0_07

<p>SYSTECH ELECTRONICS LTD. PRODUCT: HUNTING CAMERA PCB NUMBER: MAIN PCB DESIGN ENGINEER: TIM</p>		
		<p>Title: 00-MAIN</p>
<p>Size: Custom</p>	<p>Document Number: SHC008_BTC-9D_MAIN_1612050</p>	<p>Rev: V0.22</p>
<p>Date: Wednesday, December 07, 2016</p>	<p>Sheet 1 of 29</p>	

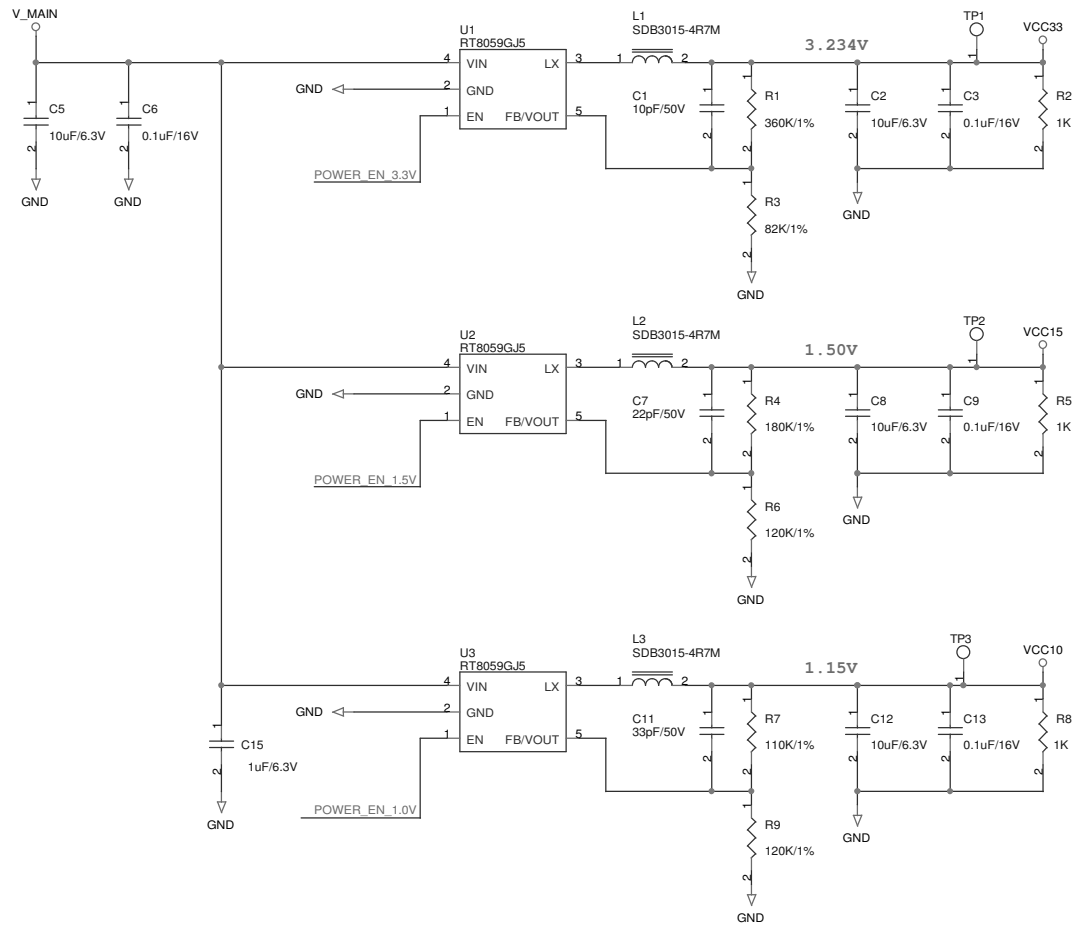
BATTERY Input:
 1. 12V from Primary CR123A*4
 2. 16.8V from Secondary RCR123A, 4.2V*4



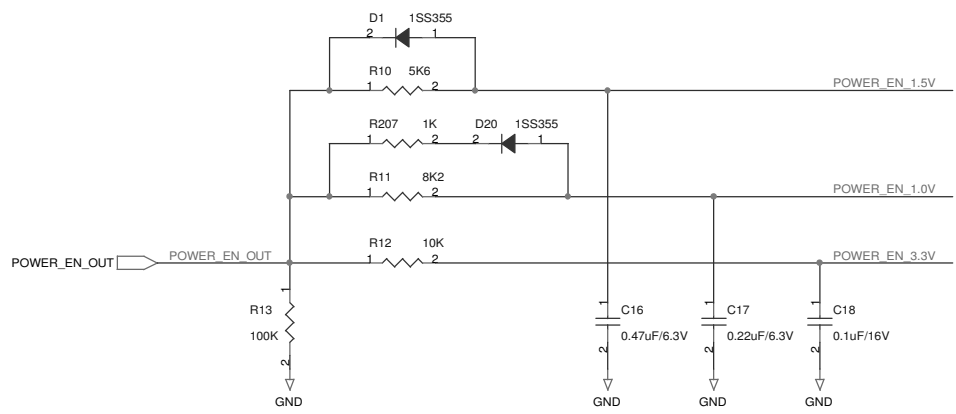
SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title 01-SYSTEM_POWER		
Size A3	Document Number SHC008_BTC-9D_MAIN_1612050	Rev V0.22
Date: Wednesday, December 07, 2016	Sheet 1	of 29



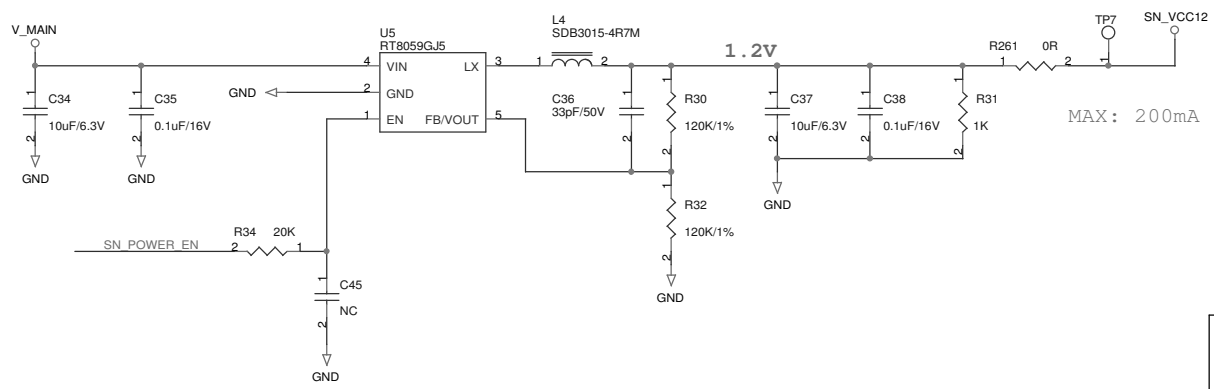
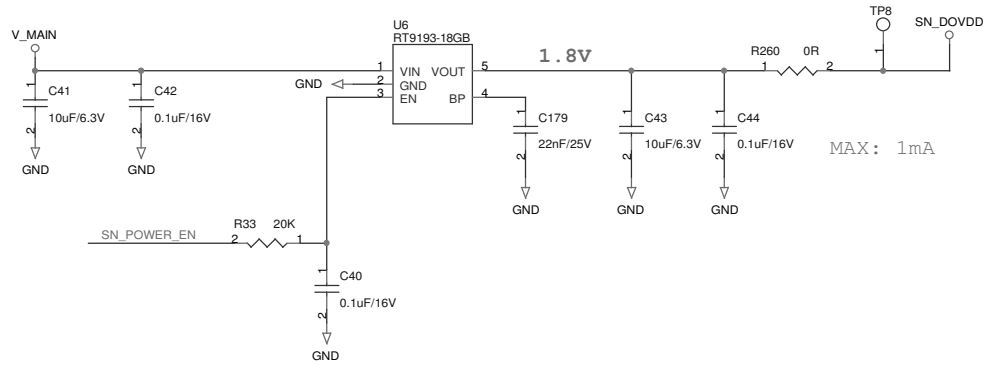
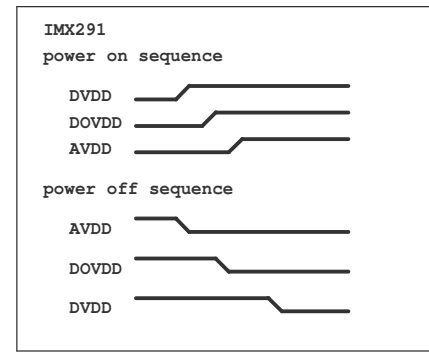
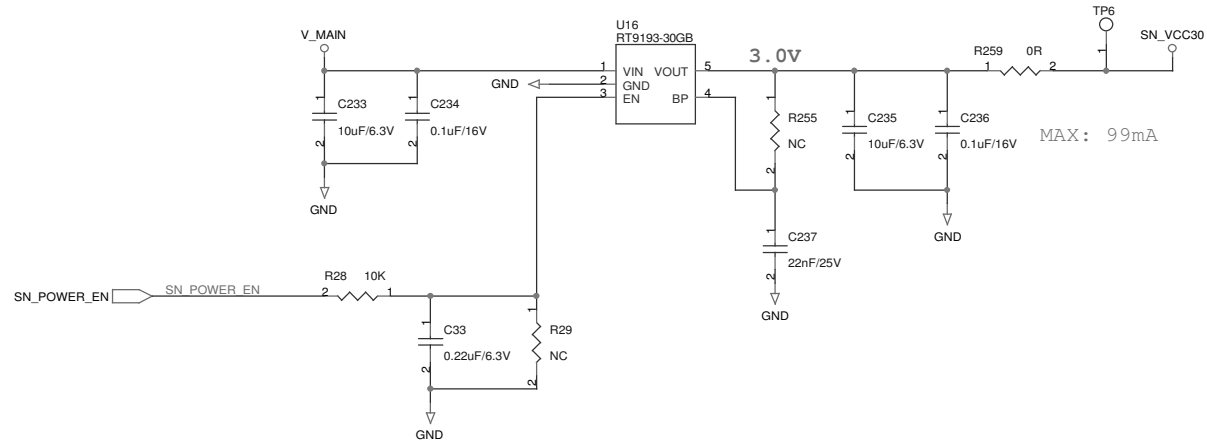
SYSTECH ELECTRONICS LTD.	
PRODUCT: HUNTING CAMERA	
PCB NUMBER: MAIN PCB	
DESIGN ENGINEER: TIM	
Title 01-MCU_POWER	
Size A4	Document Number SHC008_BTC-9D_MAIN_1612050
Date: Wednesday, December 07, 2016	
Rev V0.22	
Sheet 2 of 29	



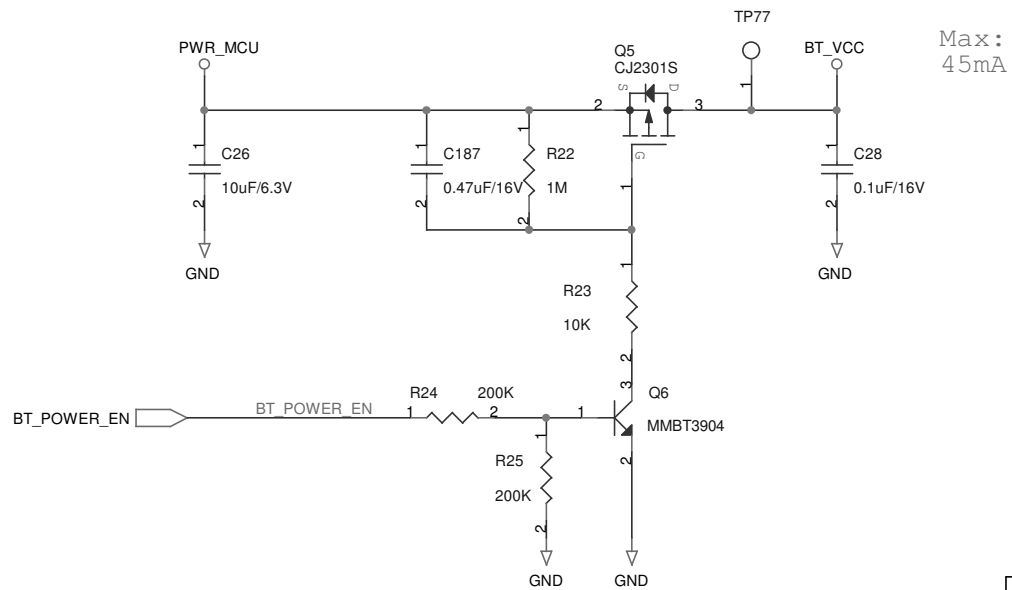
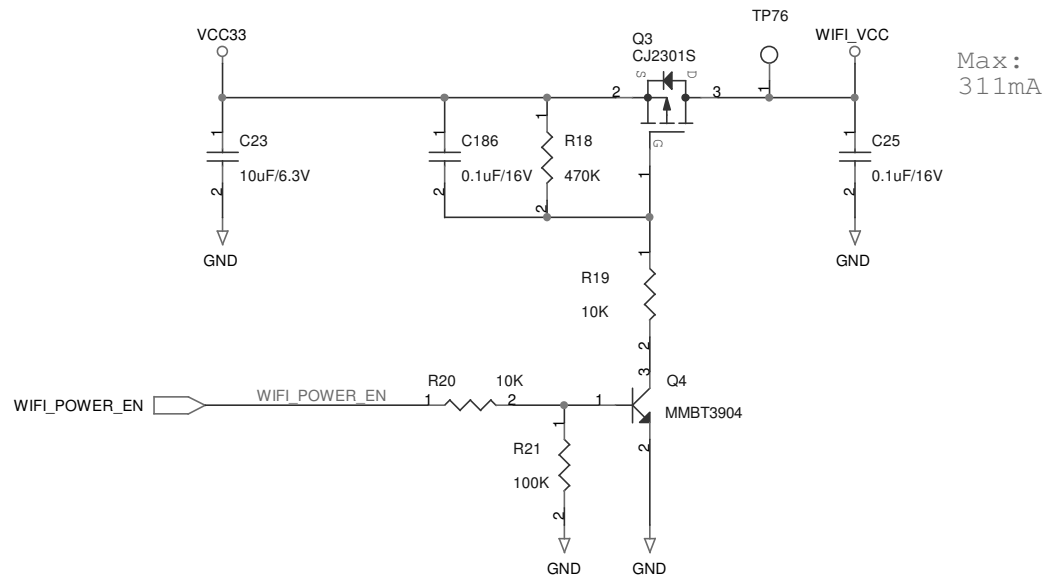
POWER SEQUENCE:
POWER ON: VCC33>>VCC10>>VCC15
POWER OFF: VCC15>>VCC10>>VCC33



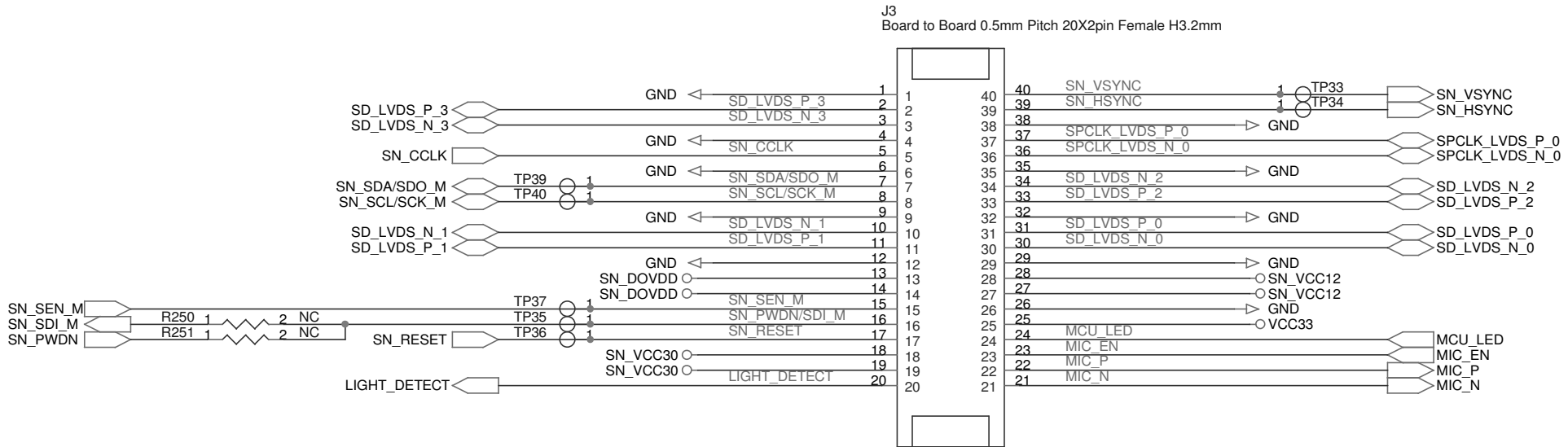
SYSTECH ELECTRONICS LTD.	
PRODUCT:	HUNTING CAMERA
PCB NUMBER:	MAIN PCB
DESIGN ENGINEER:	TIM
Title 01-DSP_POWER	
Size A3	Document Number SHC008_BTC-9D_MAIN_1612050
Date:	Wednesday, December 07, 2016
Sheet	3 of 29
Rev	V0.22



SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title: 01-SENSOR_POWER		
Size: A3	Document Number: SHC008_BTC-9D_MAIN_1612050	Rev: V0.22
Date: Wednesday, December 07, 2016 Sheet 4 of 29		

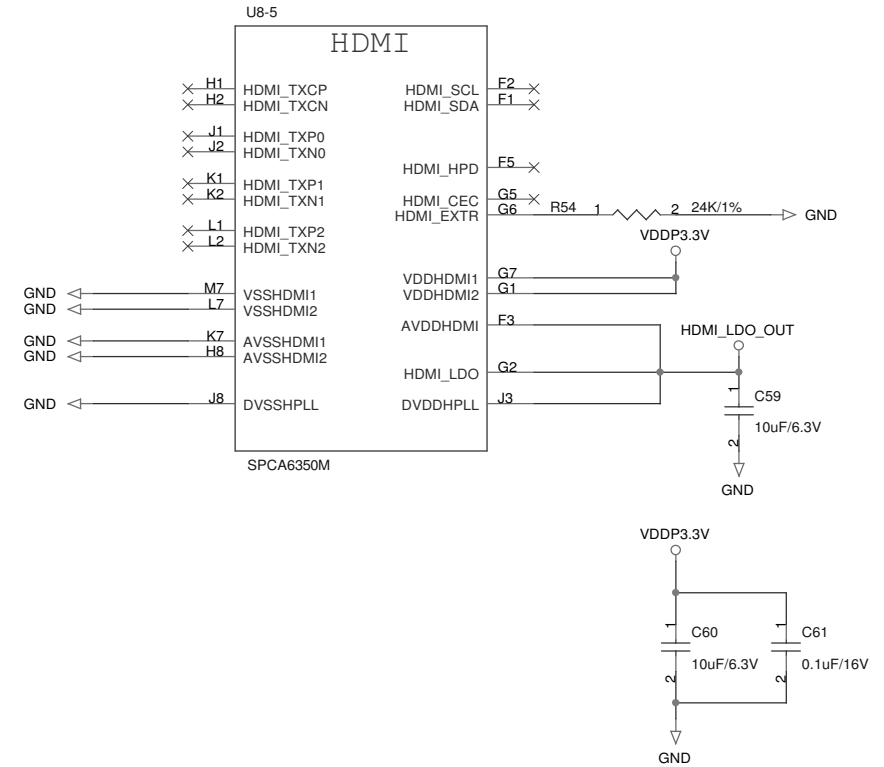
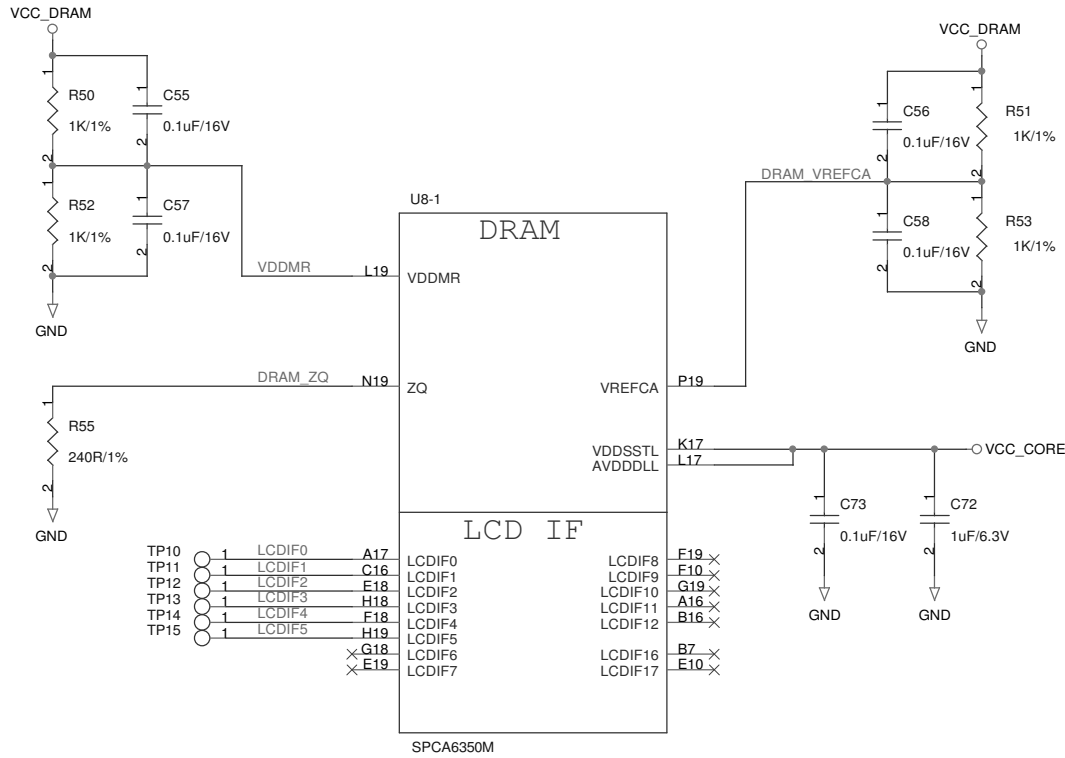


SYSTECH ELECTRONICS LTD.	
PRODUCT:	HUNTING CAMERA
PCB NUMBER:	MAIN PCB
DESIGN ENGINEER:	TIM
Title 01-RF_POWER	
Size Custom	Document Number SHC008_BTC-9D_MAIN_1612050
Date:	Wednesday, December 07, 2016
Sheet	5 of 29
Rev	V0.22

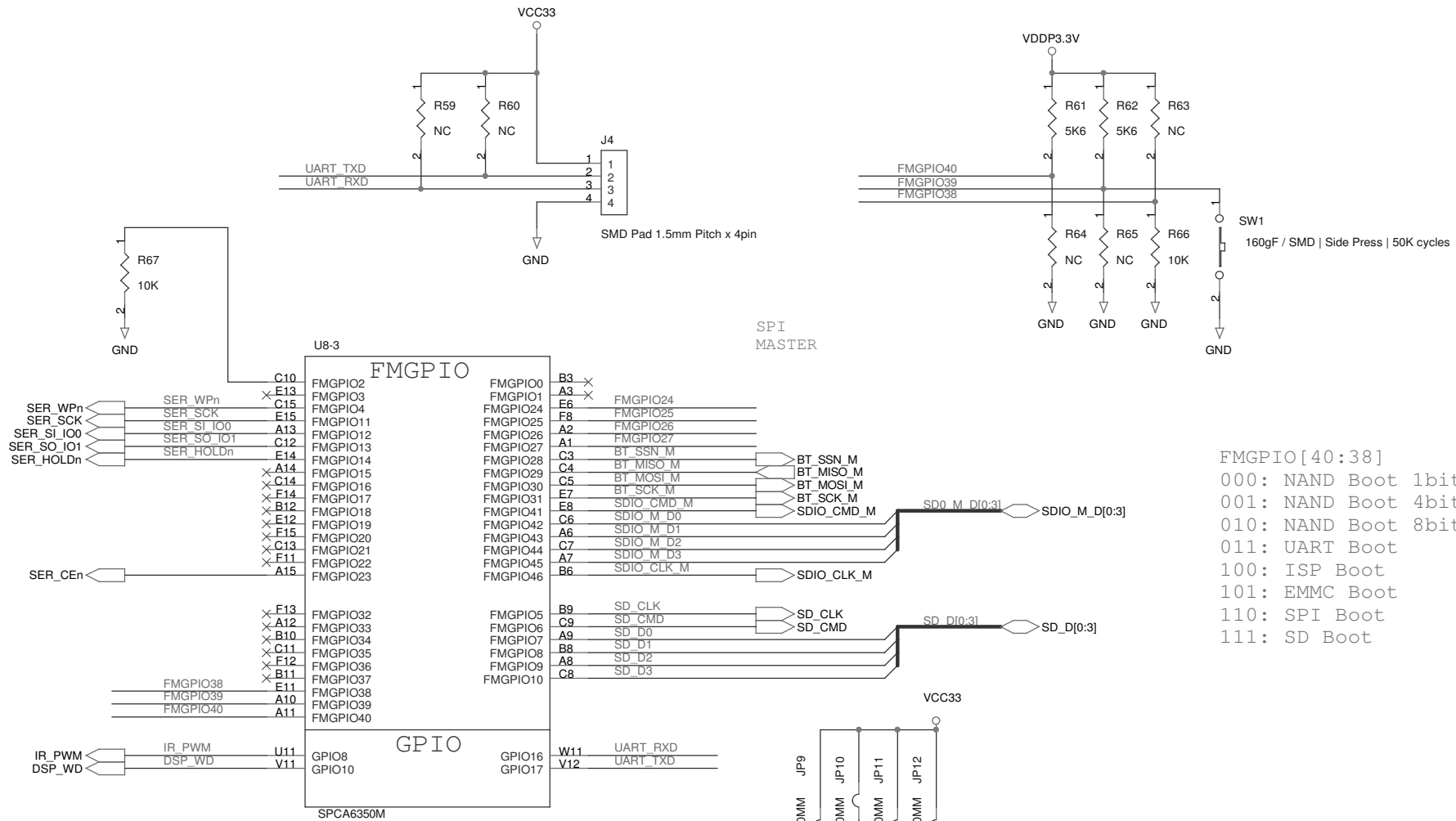


Remarks: With B1M40U-B1S5-R-01, total height = 5.0mm

SYSTECH ELECTRONICS LTD.	
PRODUCT: HUNTING CAMERA	
PCB NUMBER: MAIN PCB	
DESIGN ENGINEER: TIM	
Title 02-OV4689	
Size A4	Document Number SHC008_BTC-9D_MAIN_1612050
Date: Wednesday, December 07, 2016	Rev V0.22
Date: Wednesday, December 07, 2016 Sheet 7 of 29	



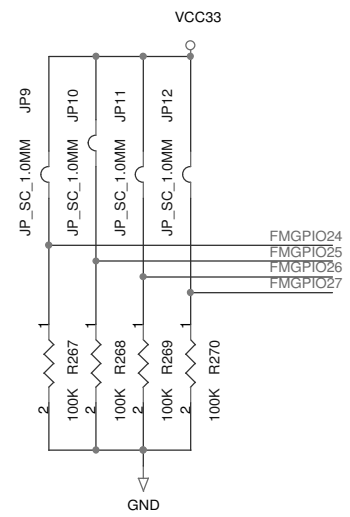
SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title 03-SPCA6350M		
Size	Document Number CustprSHC008_BTC-9D_MAIN_1612050	Rev V0.22
Date:	Wednesday, December 07, 2016	Sheet 8 of 29



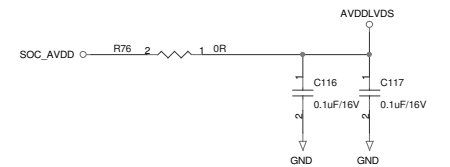
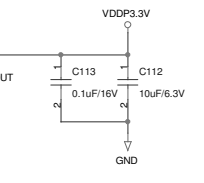
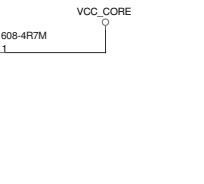
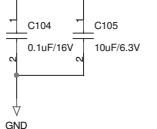
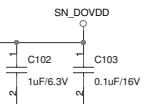
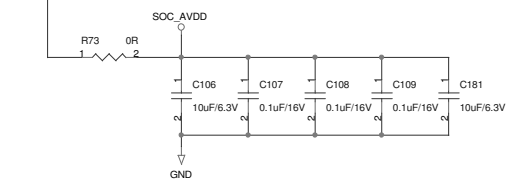
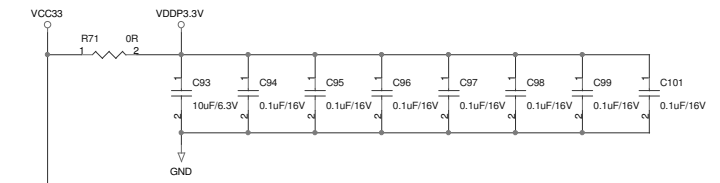
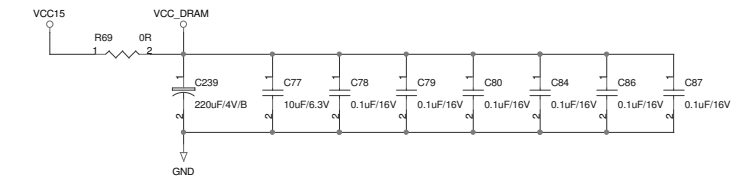
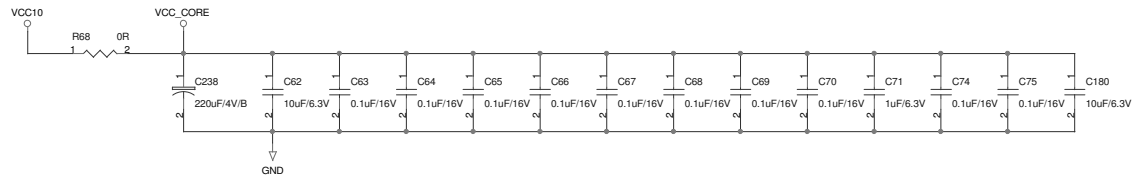
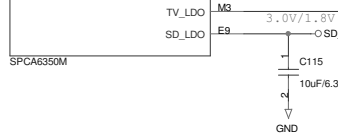
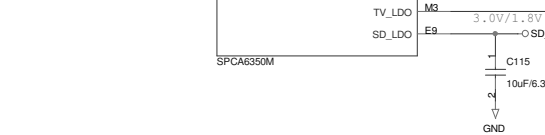
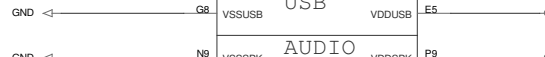
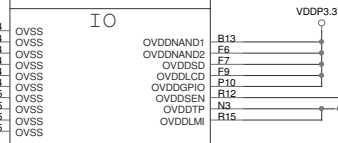
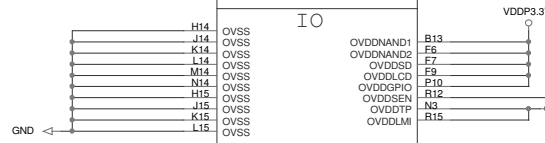
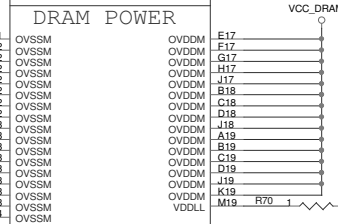
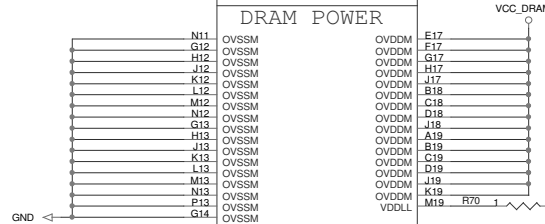
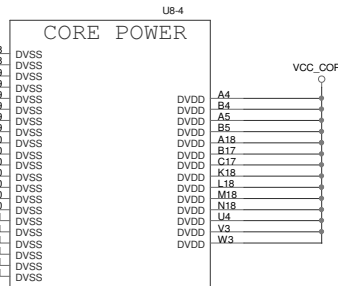
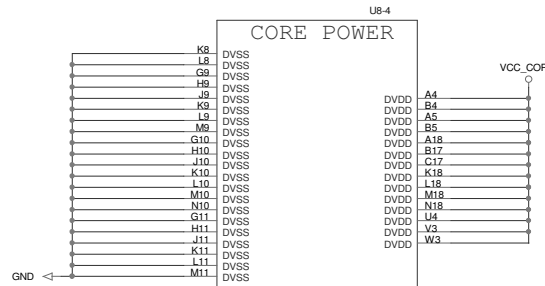
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FMGPIO[40:38]
000: NAND Boot 1bit ECC
001: NAND Boot 4bit ECC
010: NAND Boot 8bit ECC
011: UART Boot
100: ISP Boot
101: EMMC Boot
110: SPI Boot
111: SD Boot

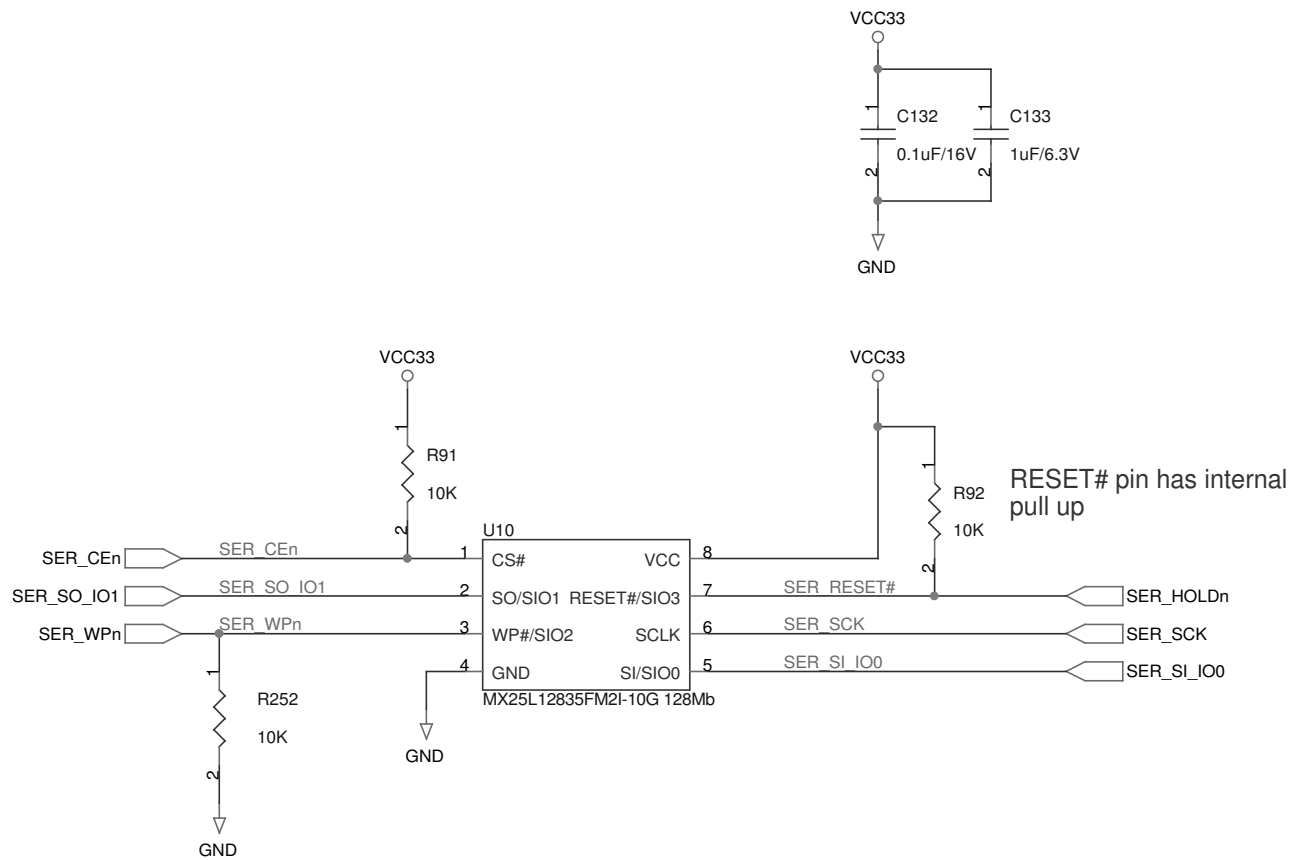
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SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title 03-SPCA6350M		
Size	Document Number	Rev
Customer	6HC008_BTC-9D_MAIN_1612050	V0.22
Date:	Wednesday, December 07, 2016	Sheet 9 of 29

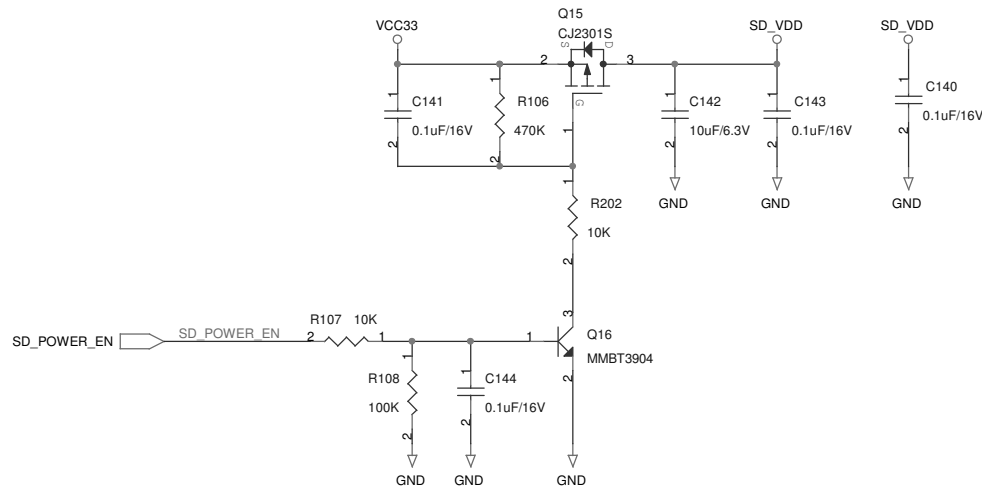
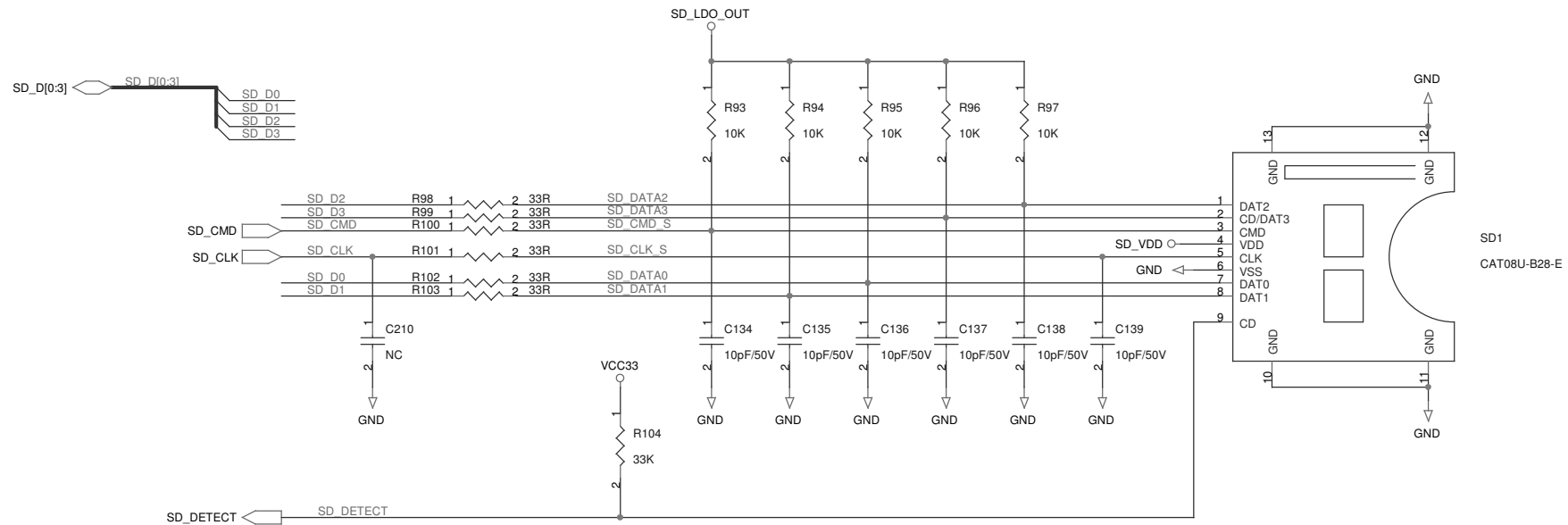


SYSTECH ELECTRONICS LTD.	
PRODUCT:	HUNTING CAMERA
PCB NUMBER:	MAIN PCB
DESIGN ENGINEER:	TIM
Title 03-SPCA6350M	
Size	Document Number
Customers	SHC008_BTC-9D_MAIN_1612050
Date:	Wednesday, December 07, 2016
Sheet	10 of 29
Rev	V0.22

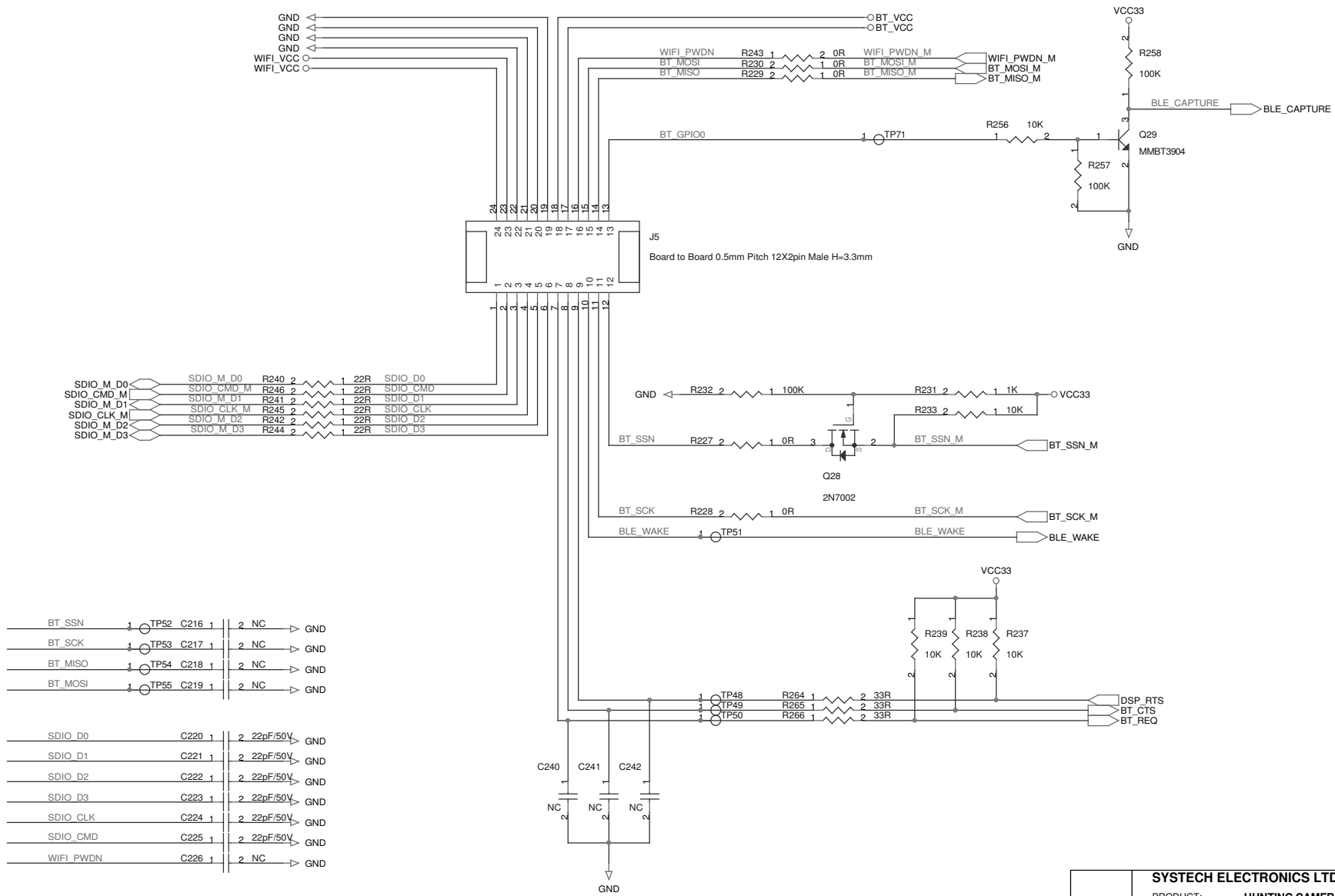


SYSTECH ELECTRONICS LTD.		
PRODUCT:		HUNTING CAMERA
PCB NUMBER:		MAIN PCB
DESIGN ENGINEER:		TIM
Title		
04-SPI_FLASH		
Size	Document Number	Rev
A4	SHC008_BTC-9D_MAIN_1612050	V0.22
Date:	Wednesday, December 07, 2016	Sheet 12 of 29

Micro SD Card



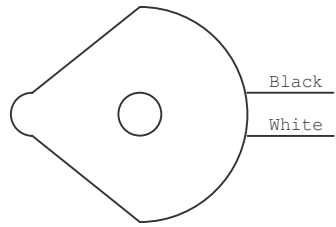
SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title: 05-MIRCO_SD		
Size: B	Document Number: SHC008_BTC-9D_MAIN_1612050	Rev: V0.22
Date: Friday, December 09, 2016	Sheet: 13	of 29



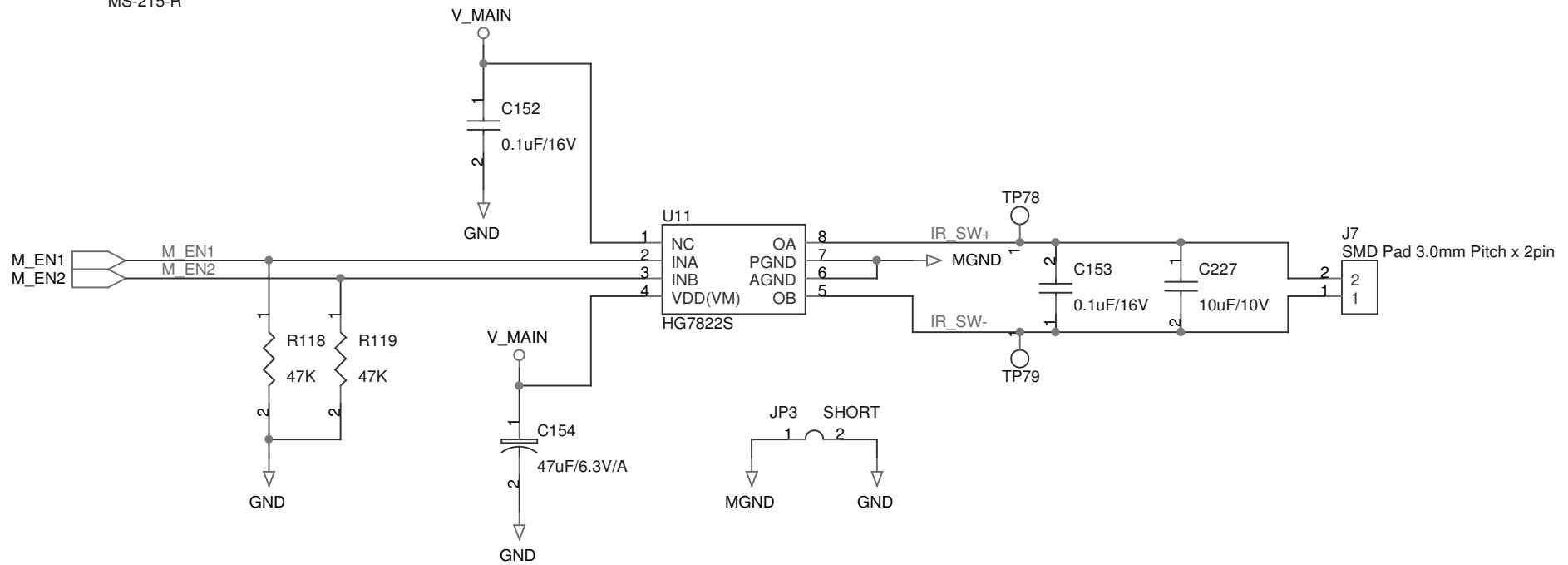
BT_SSN	1	TP52	C216	1	2	NC	GND
BT_SCK	1	TP53	C217	1	2	NC	GND
BT_MISO	1	TP54	C218	1	2	NC	GND
BT_MOSI	1	TP55	C219	1	2	NC	GND
SDIO_D0	C220	1	2	22pF/50V	GND		
SDIO_D1	C221	1	2	22pF/50V	GND		
SDIO_D2	C222	1	2	22pF/50V	GND		
SDIO_D3	C223	1	2	22pF/50V	GND		
SDIO_CLK	C224	1	2	22pF/50V	GND		
SDIO_CMD	C225	1	2	22pF/50V	GND		
WIFI_PWDN	C226	1	2	NC	GND		

SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title		
06-WIFI_BT		
Size	Document Number	Rev
A3	SHC008_BT-C-9D_MAIN_1612050	V0.22
Date:	Wednesday, December 07, 2016	Sheet 14 of 29

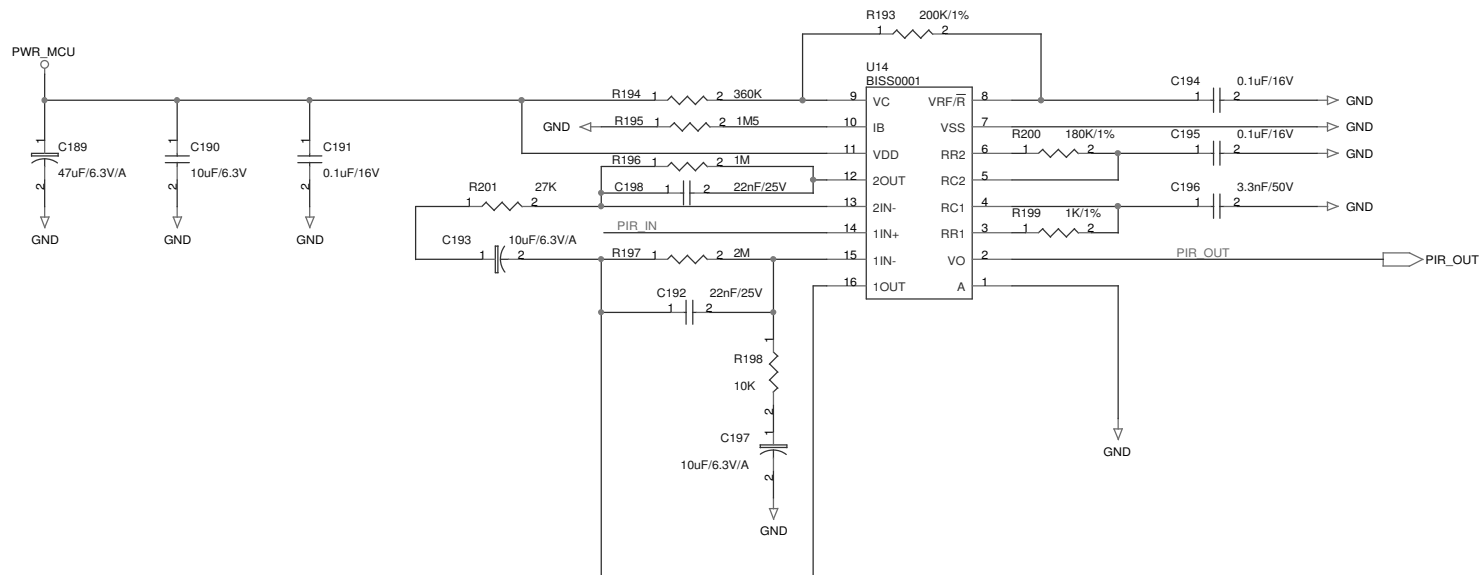
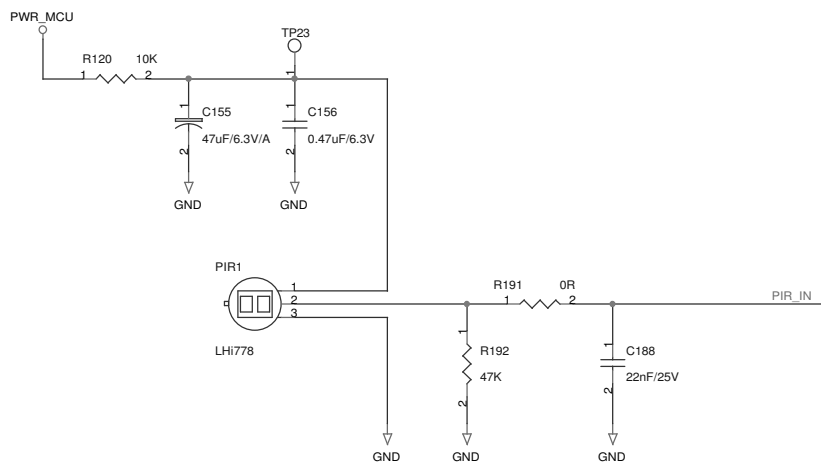
LH1



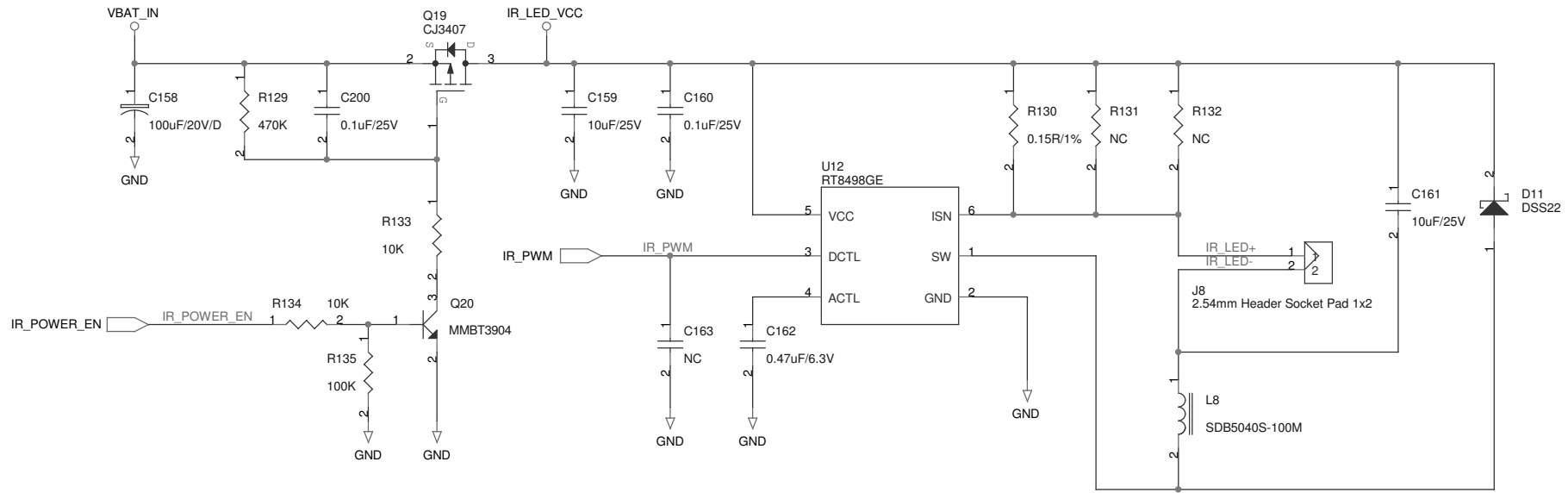
MS-215-R



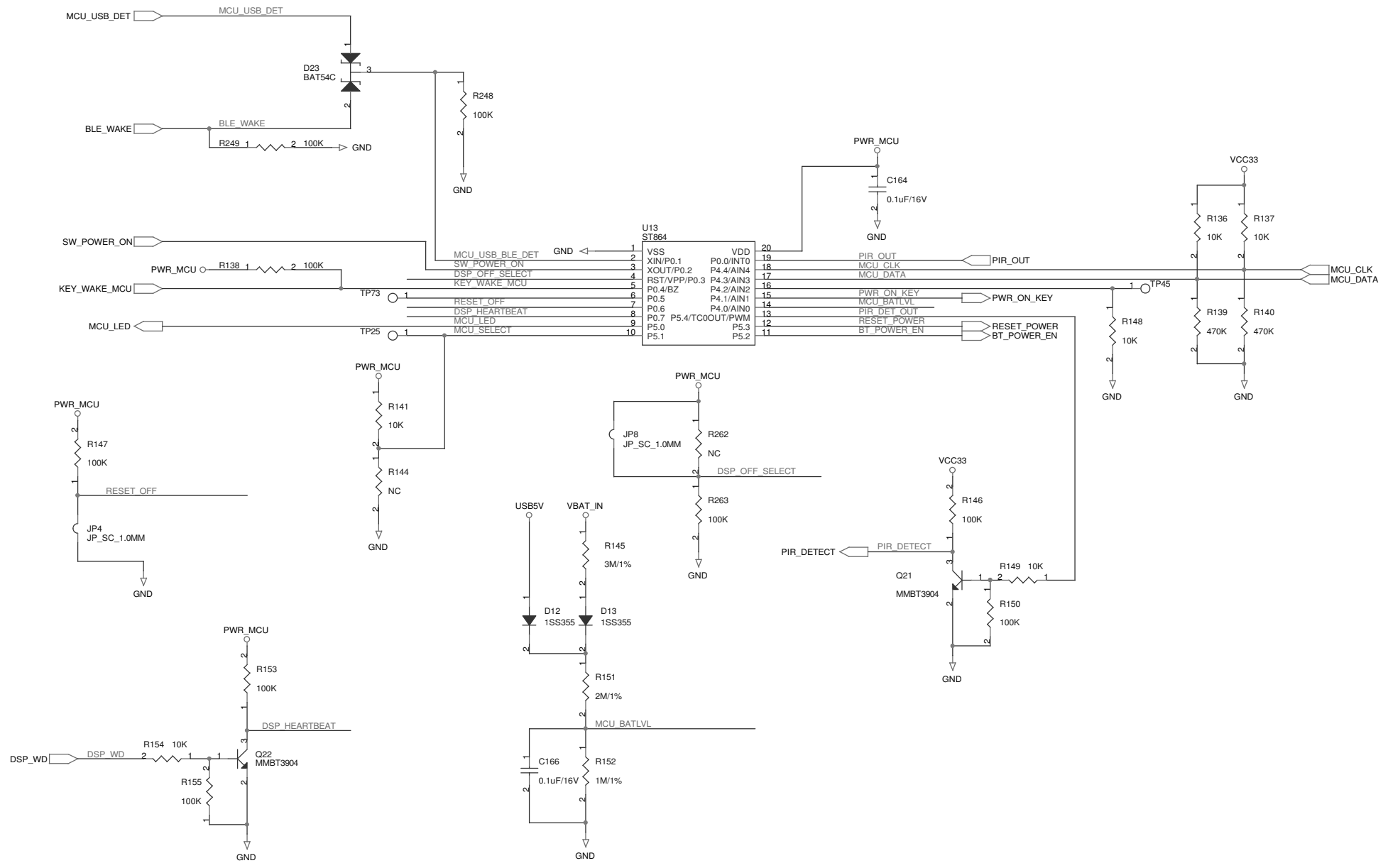
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PRODUCT:		HUNTING CAMERA
PCB NUMBER:		MAIN PCB
DESIGN ENGINEER:		TIM
Title		
09-IR_SWITCH		
Size	Document Number	Rev
A	SHC008_BTC-9D_MAIN_1612050	V0.22
Date:	Wednesday, December 07, 2016	Sheet 16 of 29



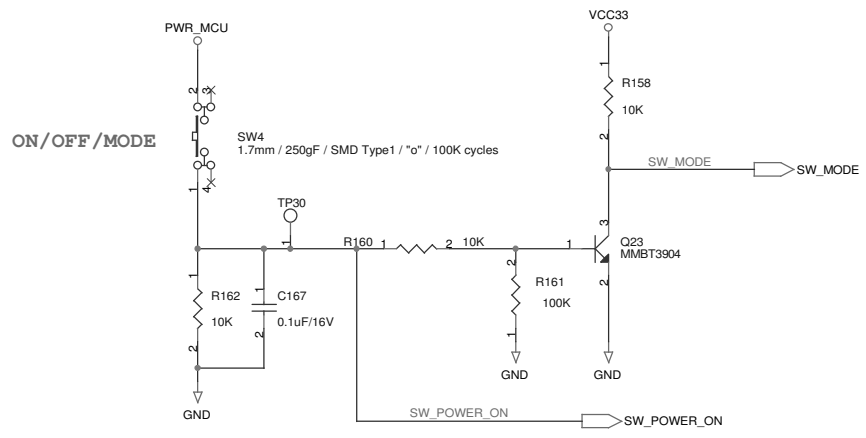
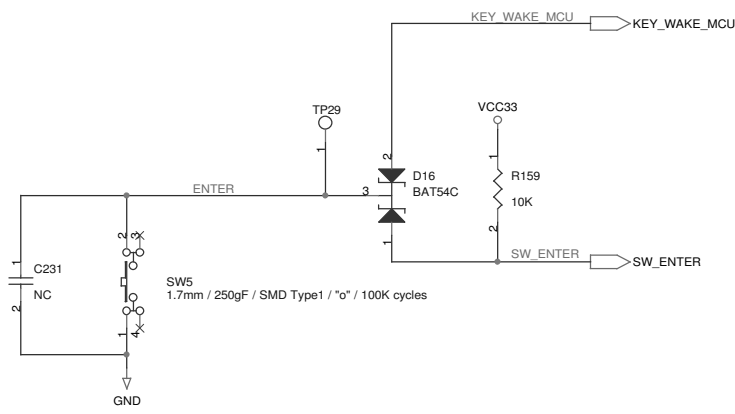
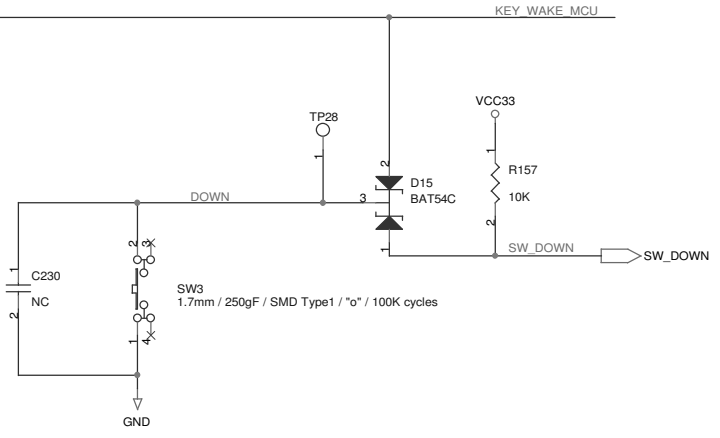
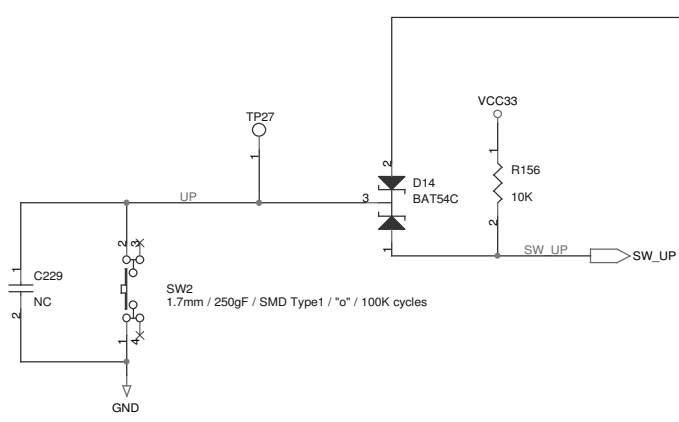
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PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title: 10-PIR		
Size: A3	Document Number: SHC008_BTC-9D_MAIN_1612050	Rev: V0.22
Date: Wednesday, December 07, 2016	Sheet: 17	of: 29



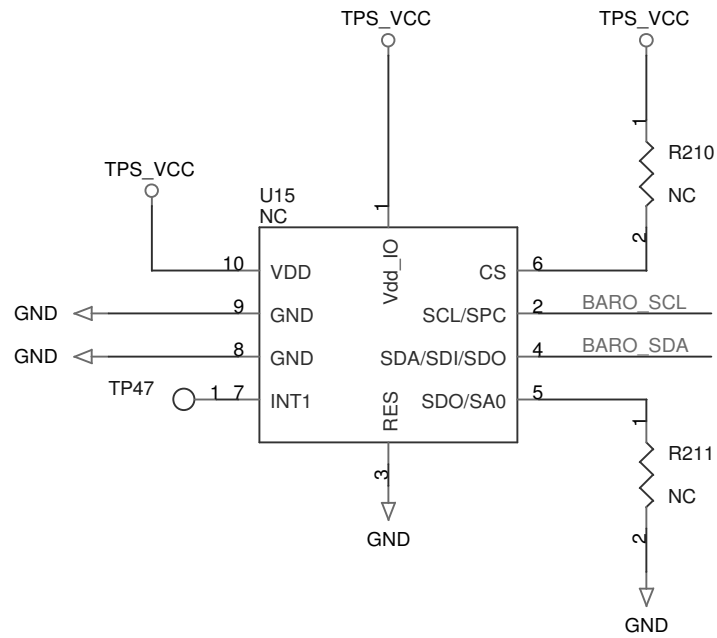
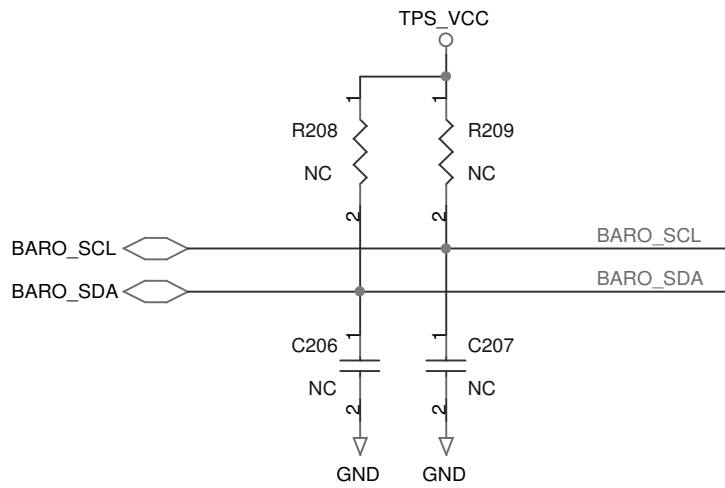
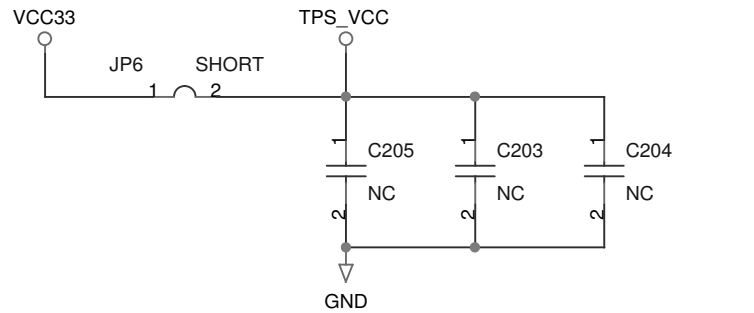
SYSTECH ELECTRONICS LTD.		
PRODUCT:		HUNTING CAMERA
PCB NUMBER:		MAIN PCB
DESIGN ENGINEER:		TIM
Title 11-IR_LED		
Size Custom	Document Number SHC008_BTC-9D_MAIN_1612050	Rev V0.22
Date:	Wednesday, December 07, 2016	Sheet 18 of 29



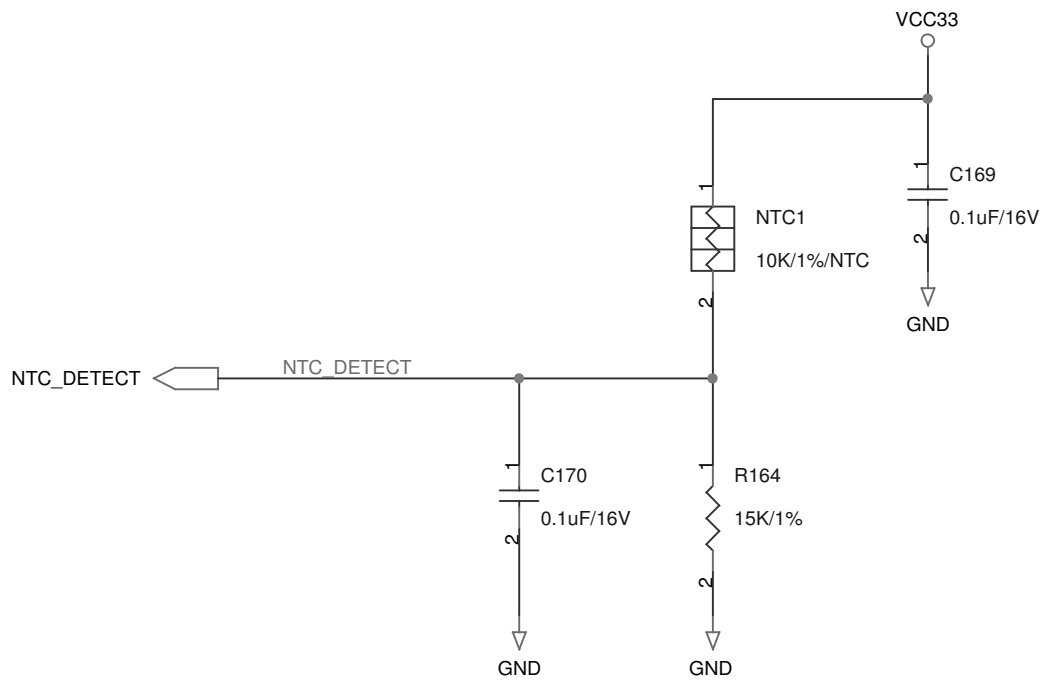
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PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title: 12-MCU		
Size: A3	Document Number: SHC008_BTC-9D_MAIN_1612050	Rev: V0.22
Date: Wednesday, December 07, 2016	Sheet: 19	of 29



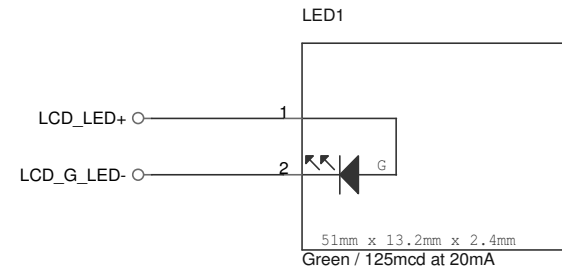
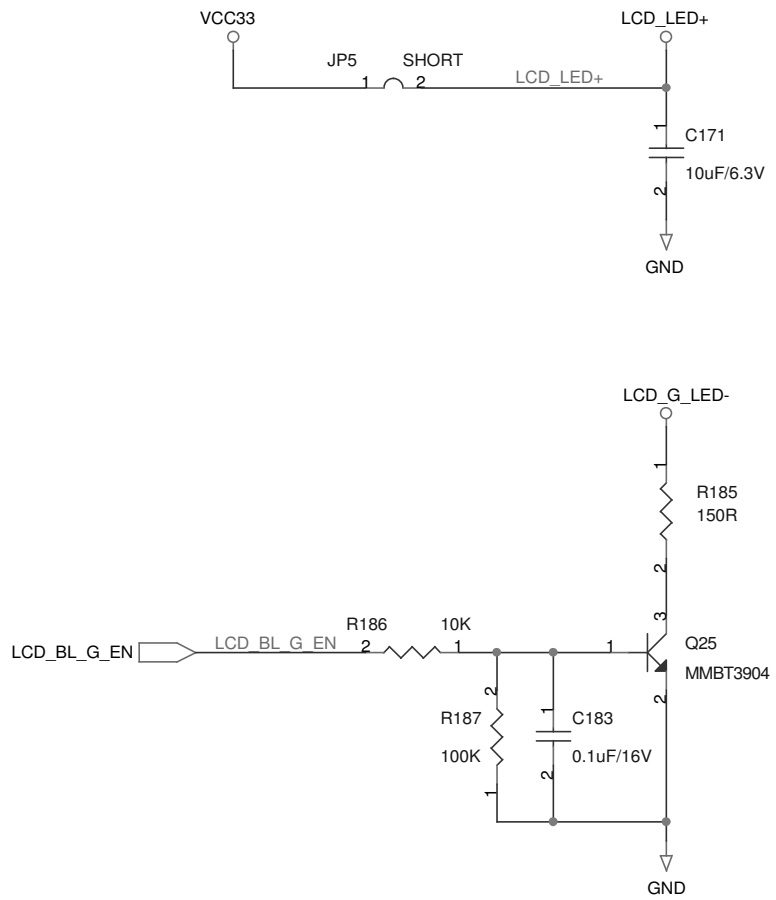
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PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title: 13-KEY		
Size: A3	Document Number: SHC008_BTC-9D_MAIN_1612050	Rev: V0.22
Date: Wednesday, December 07, 2016	Sheet: 20	of 29



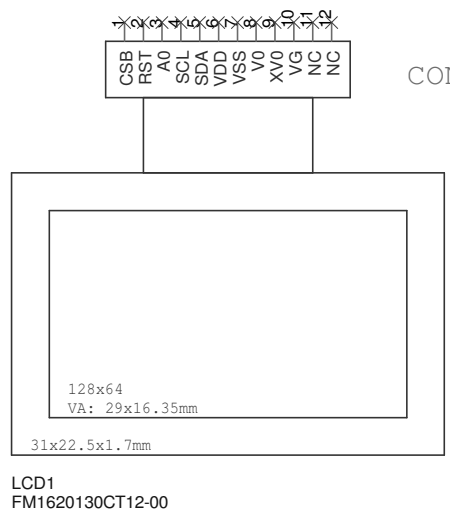
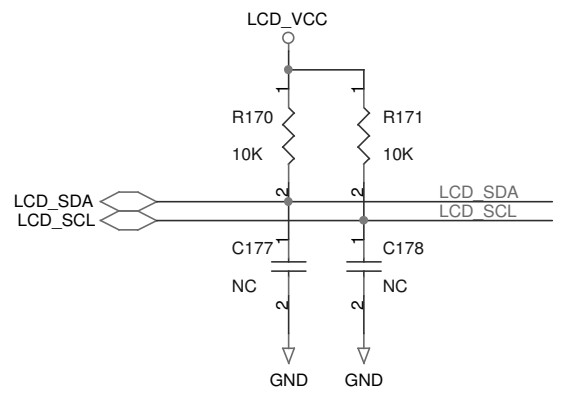
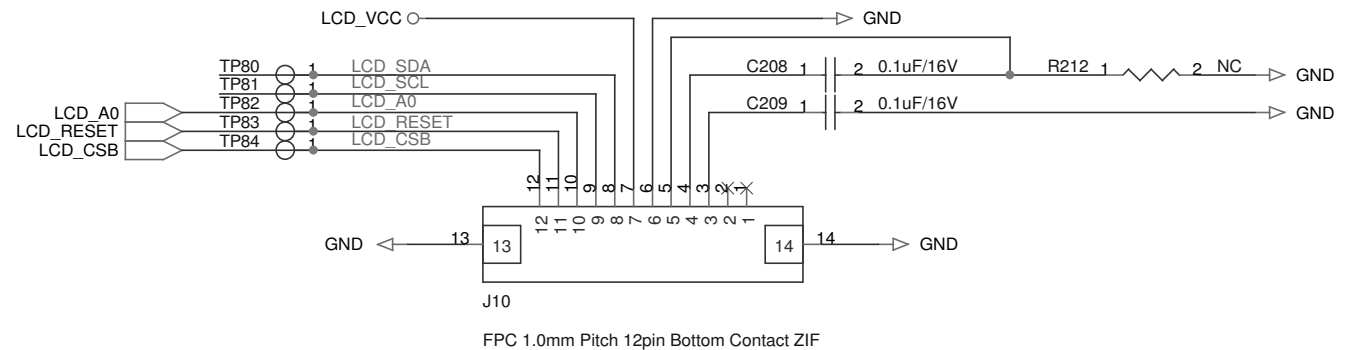
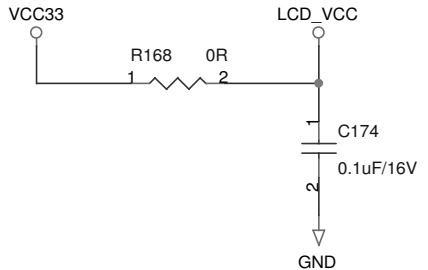
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PRODUCT:		HUNTING CAMERA
PCB NUMBER:		MAIN PCB
DESIGN ENGINEER:		TIM
Title		
10-LPS25HBTR		
Size	Document Number	Rev
A	SHC008_BTC-9D_MAIN_1612050	V0.22
Date:	Wednesday, December 07, 2016	Sheet 21 of 29



SYSTECH ELECTRONICS LTD.		
PRODUCT:		HUNTING CAMERA
PCB NUMBER:		MAIN PCB
DESIGN ENGINEER:		TIM
Title		
14-NTC		
Size	Document Number	Rev
A	SHC008_BTC-9D_MAIN_1612050	V0.22
Date:	Wednesday, December 07, 2016	Sheet 22 of 29



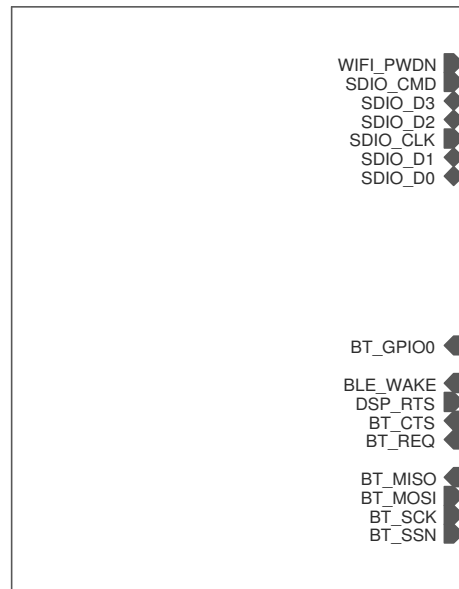
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		PRODUCT:	HUNTING CAMERA
		PCB NUMBER:	MAIN PCB
		DESIGN ENGINEER:	TIM
Title		15-LCD_BACKLIGHT	
Size	Document Number	Rev	
A4	SHC008_BTC-9D_MAIN_1612050	V0.22	
Date:	Wednesday, December 07, 2016	Sheet	23 of 29



CONNECTION: 1.0mm Pitch FPC

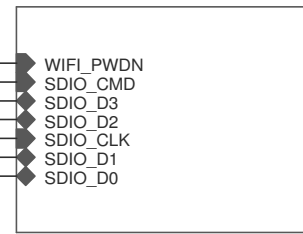
SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: MAIN PCB		
DESIGN ENGINEER: TIM		
Title 15-LCD_DISPLAY		
Size A4	Document Number SHC008_BTC-9D_MAIN_1612050	Rev V0.22
Date:	Wednesday, December 07, 2016	Sheet 24 of 29

01-CONNECTOR



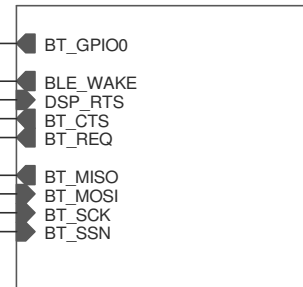
01-CONNECTOR

02-WIFI



02-WIFI

03-BLUETOOTH_PA



03-BLUETOOTH_PA

SCREW HOLES :

MH1



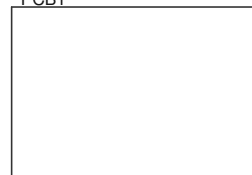
HOLE1.9-SP3.5

MH2



HOLE1.9-SP3.5

PCB1

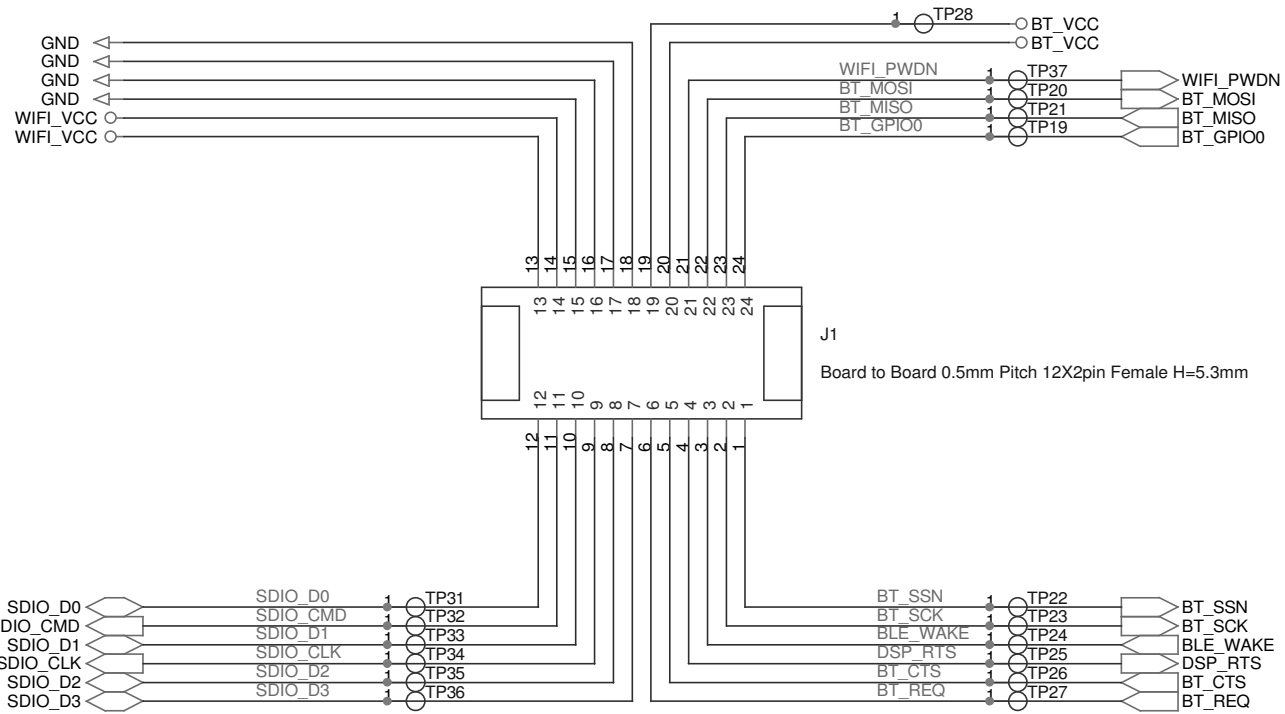


4 Layer | 1.2 mm | H/H/H/H | Black Solder Masked | ROHS/REACH | Gold Immersion
SHC008_BTC-BABY_RF_1612050_V0-14_YP

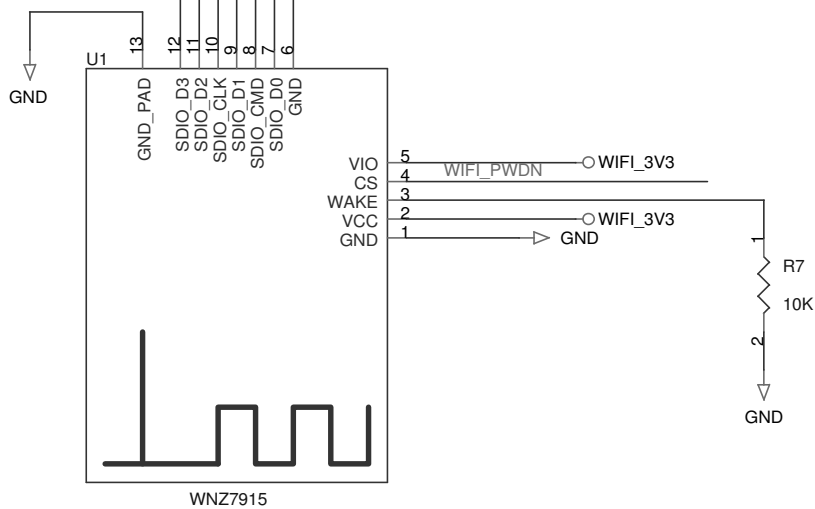
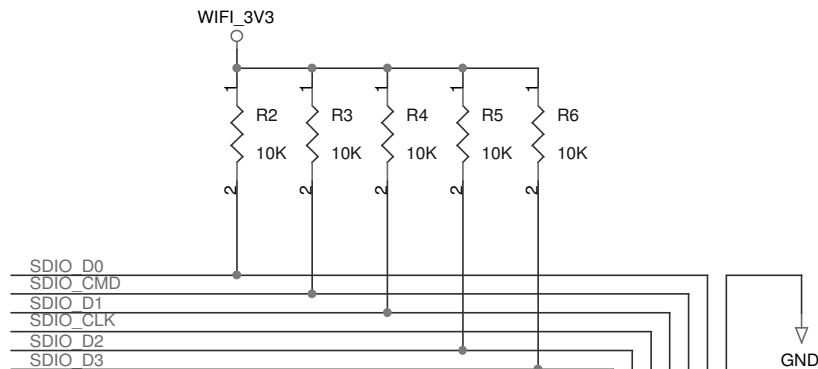
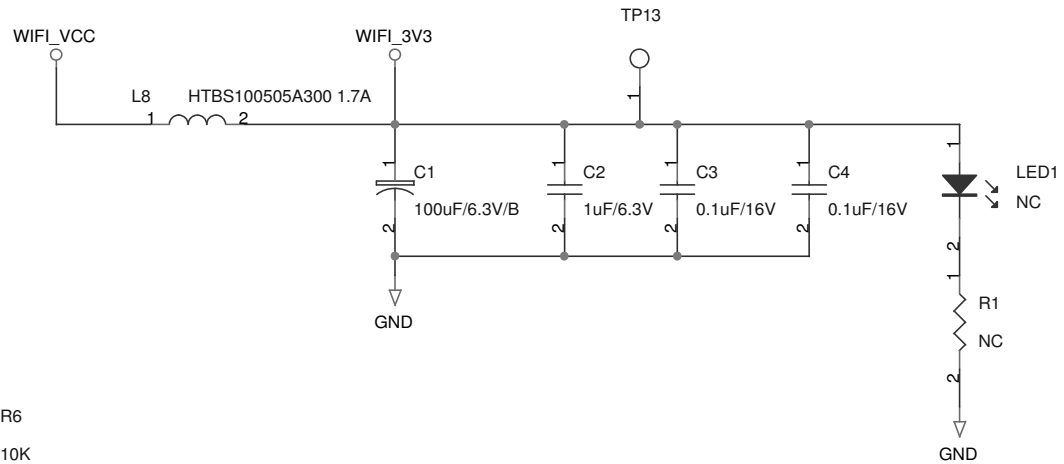
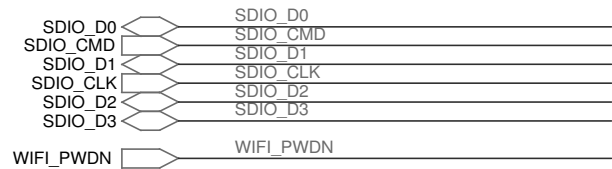
SYSTECH ELECTRONICS LTD.

PRODUCT: **HUNTING CAMERA**
PCB NUMBER: RF_PCB
DESIGN ENGINEER: TIM

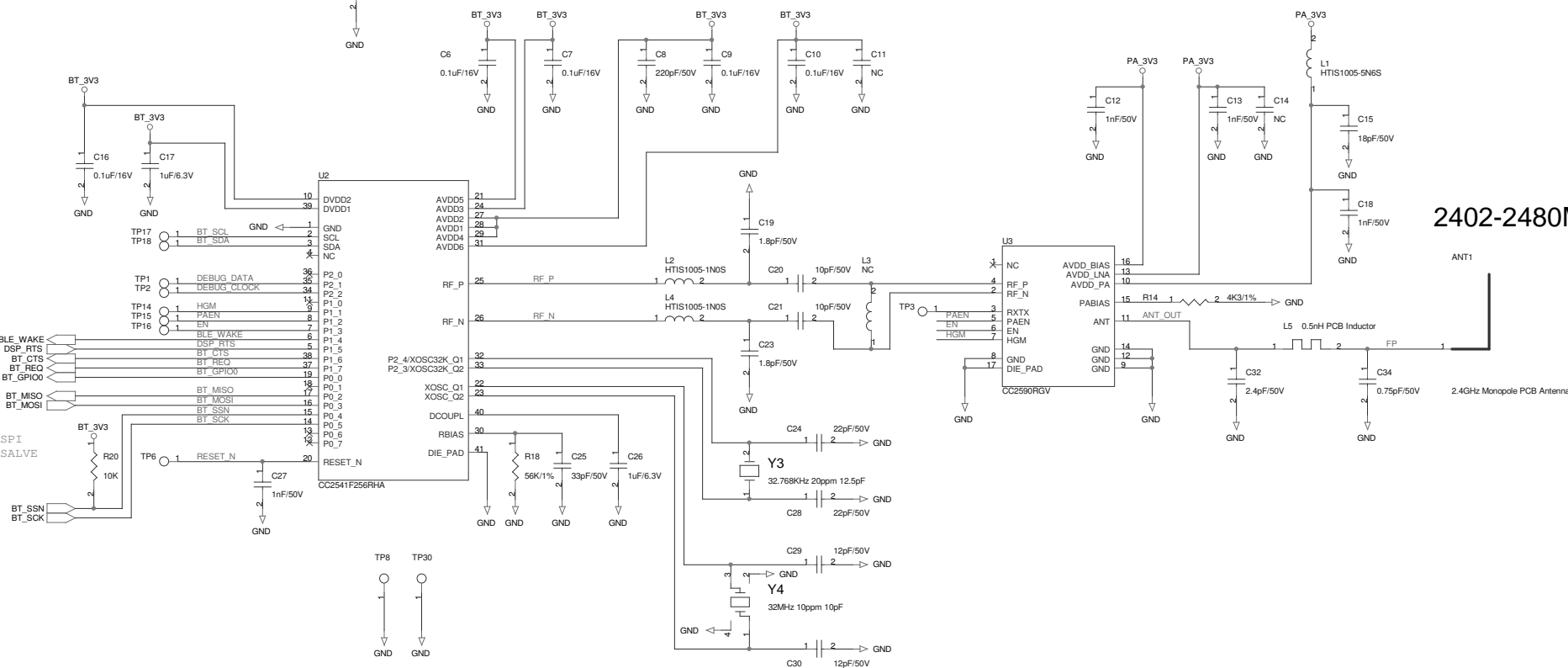
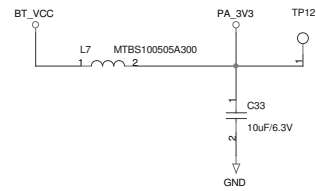
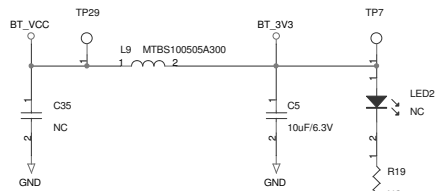
Title 00-MAIN		
Size A4	Document Number SHC008_BTC-BABY_RF_1612050	Rev V0.14
Date: Friday, December 09, 2016	Sheet 1	of 6



SYSTECH ELECTRONICS LTD.	
PRODUCT: HUNTING CAMERA	
PCB NUMBER: RF_PCB	
DESIGN ENGINEER: TIM	
Title 01-CONNECTOR	
Size A4	Document Number SHC008_BTC-BABY_RF_1612050
Date: Tuesday, December 06, 2016	Rev V0.14
Sheet 2 of 6	



		SYSTECH ELECTRONICS LTD.	
		PRODUCT: HUNTING CAMERA	
		PCB NUMBER: RF_PCB	
		DESIGN ENGINEER: TIM	
Title: 02-WIFI			
Size: A4	Document Number: SHC008_BTC-BABY_RF_1612050	Rev: V0.14	
Date: Tuesday, December 06, 2016	Sheet 3	of 6	

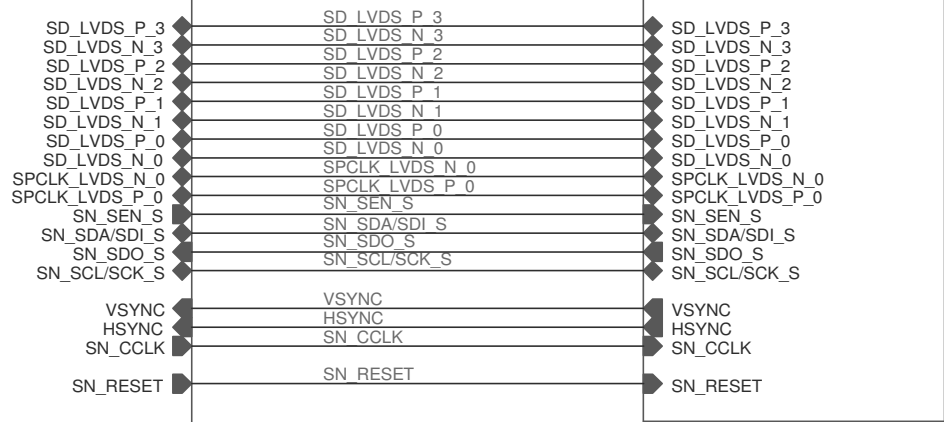


2402-2480MHz

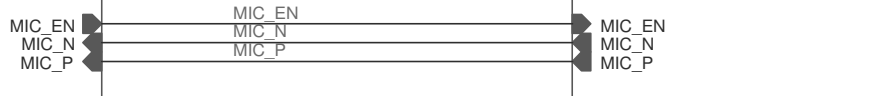
2.4GHz Monopole PCB Antenna

SYSTECH ELECTRONICS LTD.	
PRODUCT:	HUNTING CAMERA
PCB NUMBER:	RF_PCB
DESIGN ENGINEER:	TIM
Title	03-BLE_PA
Size	Document Number
Custom	SHC008_BT-C-BABY_RF_1612050
Date:	Friday, December 09, 2016
Sheet	4 of 6
Rev	V0.14

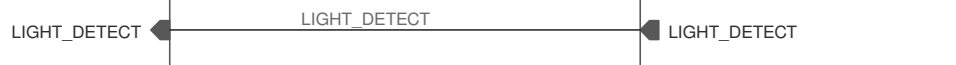
01-CONNECTOR



02-IMAGE_SENSOR



03-MIC

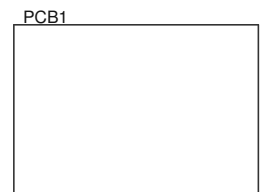
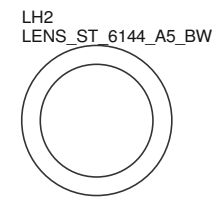
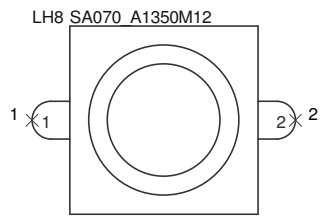


04-LIGHT_SENSOR

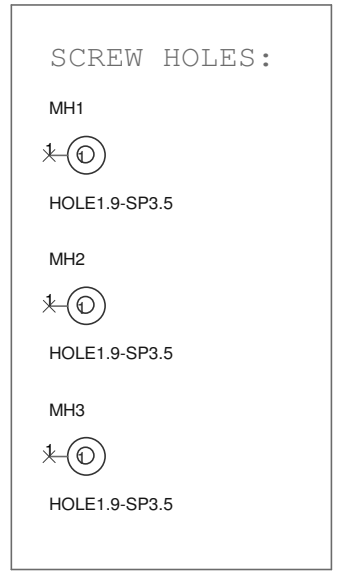


05-MCU_LED

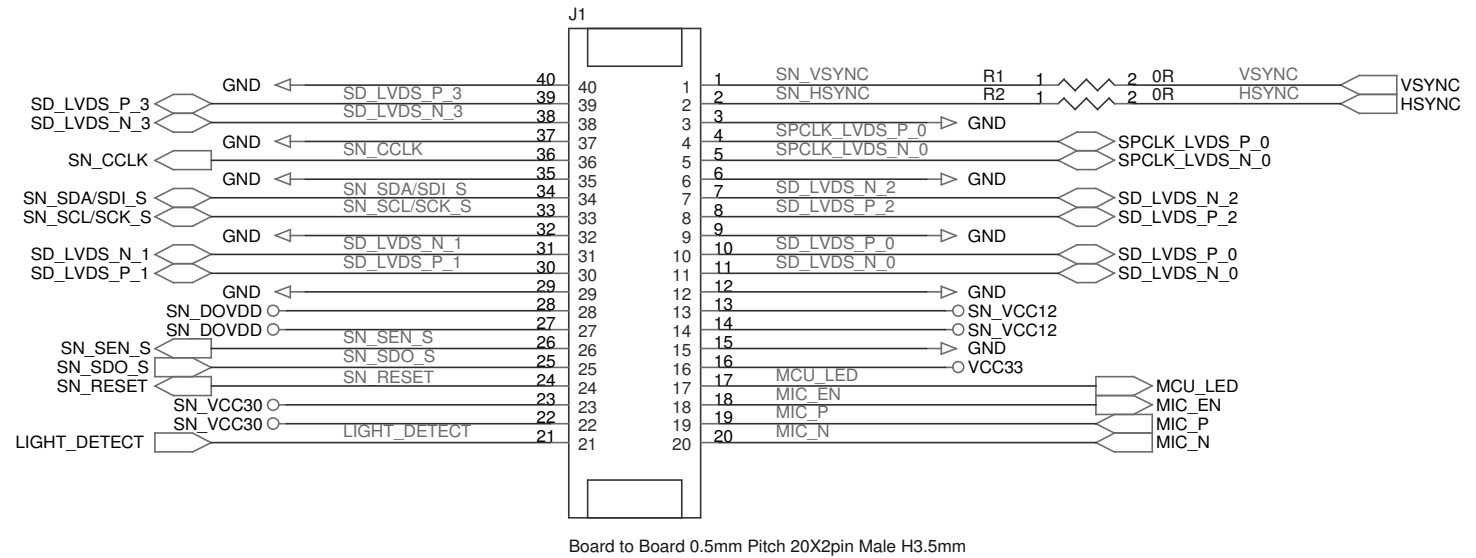
01-CONNECTOR



4 Layer | 1.2 mm | H/H/H/H | Black Solder Masked | ROHS/REACH | Gold Immersion
SHC008_BTC-9-10D_SENSOR_IMX291_1612050_V0_05

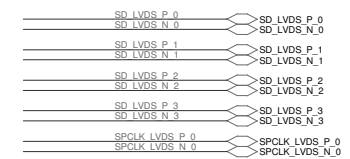
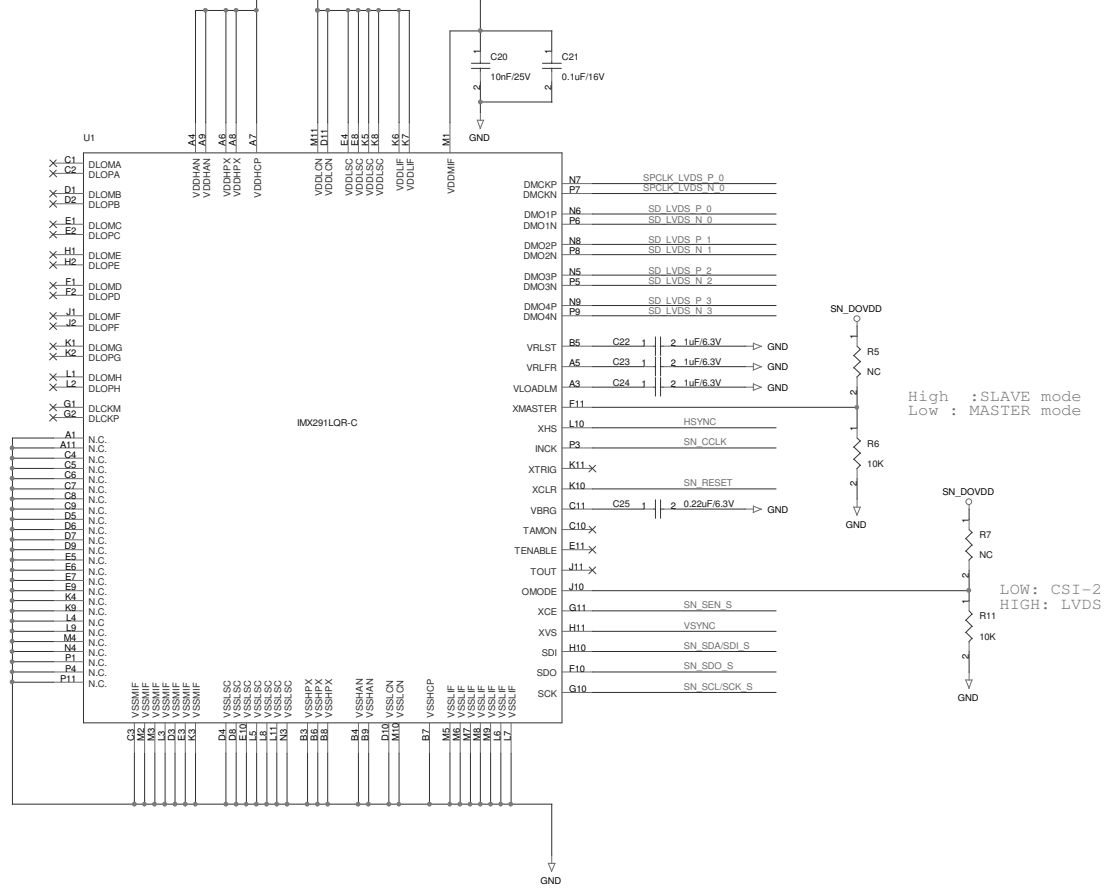
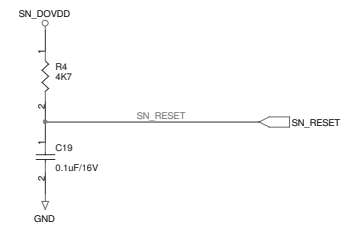
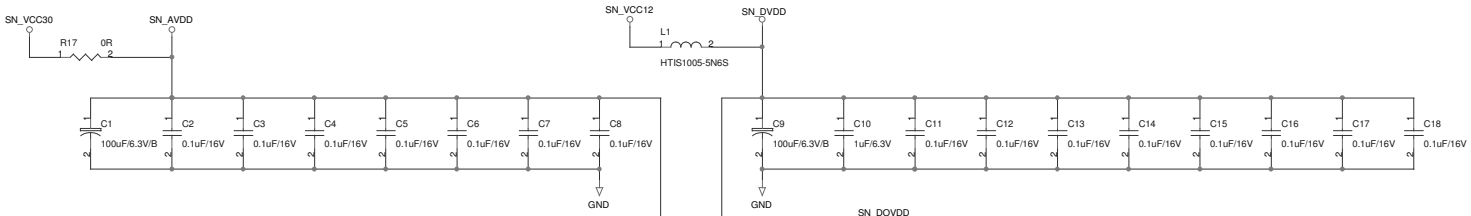


SYSTECH ELECTRONICS LTD.		
PRODUCT: HUNTING CAMERA		
PCB NUMBER: SENSOR_PCB		
DESIGN ENGINEER: YP		
Title: 00-MAIN		
Size: A4	Document Number: SHC008_BTC-9-10D_SENSOR_IMX291_1612050	Rev: V0.06
Date: Tuesday, December 06, 2016	Sheet 1	of 7

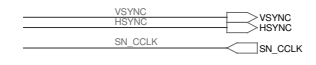


Remarks: With B1F40U-B1S6-R-01, total height = 5.0mm

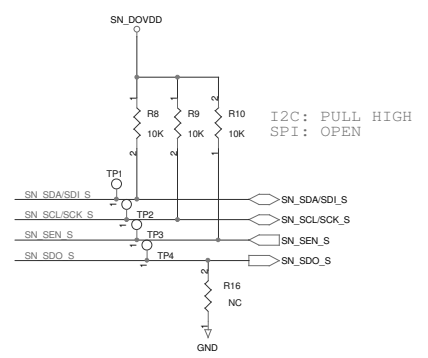
SYSTECH ELECTRONICS LTD.		
PRODUCT:		HUNTING CAMERA
PCB NUMBER:		SENSOR_PCB
DESIGN ENGINEER:		YP
Title		
01-CONNECTOR		
Size	Document Number	Rev
A4	SHC008_BTC-9-10D_SENSOR_IMX291_1612050	V0.06
Date:	Tuesday, December 06, 2016	Sheet 2 of 7



Differential pairs /impedance 100ohm

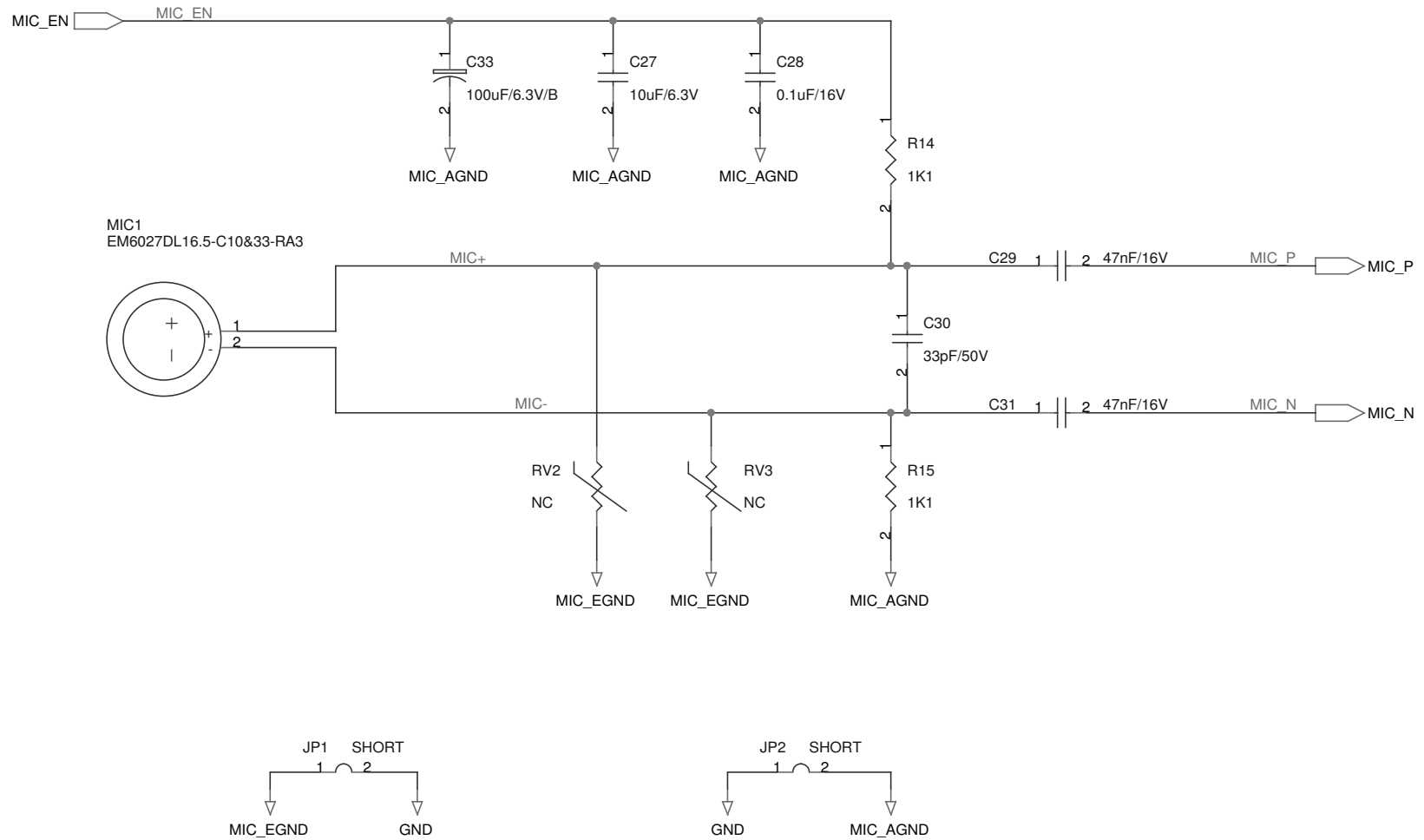


High : SLAVE mode
Low : MASTER mode

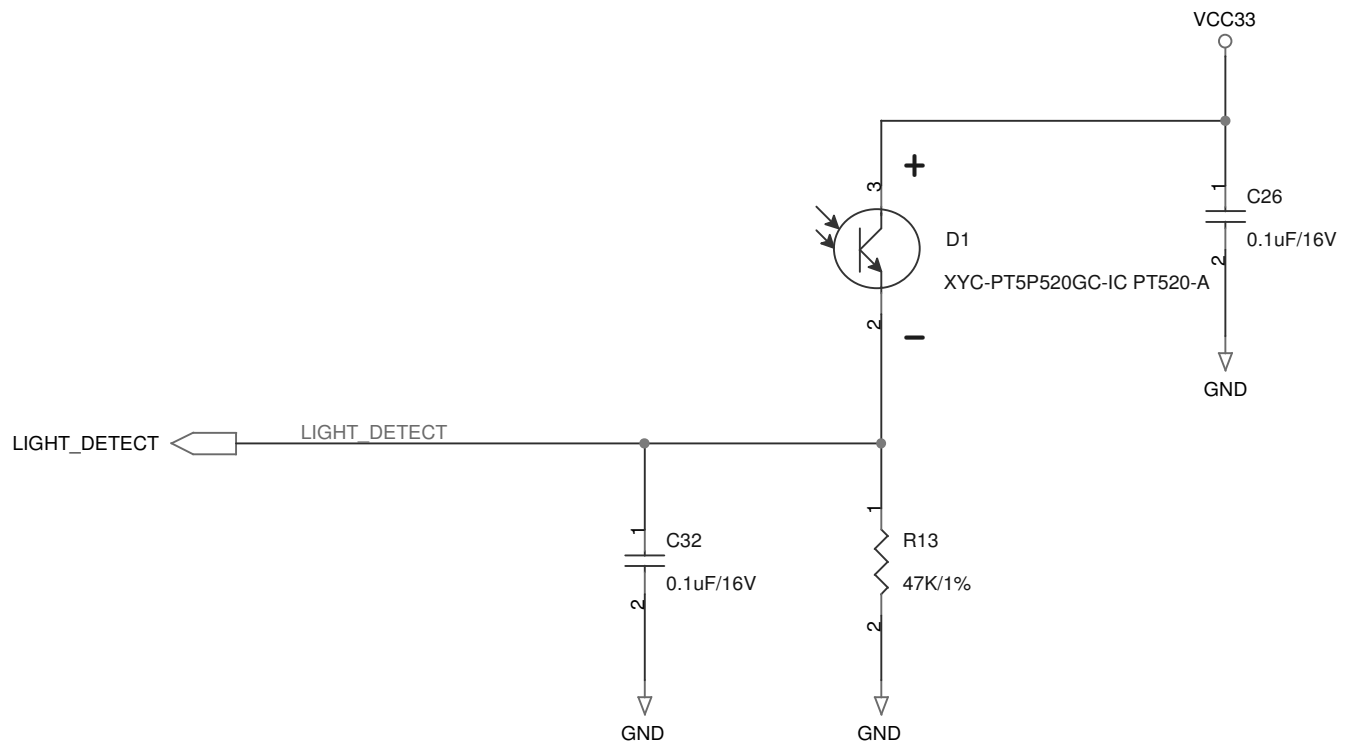


I2C: PULL HIGH
SPI: OPEN

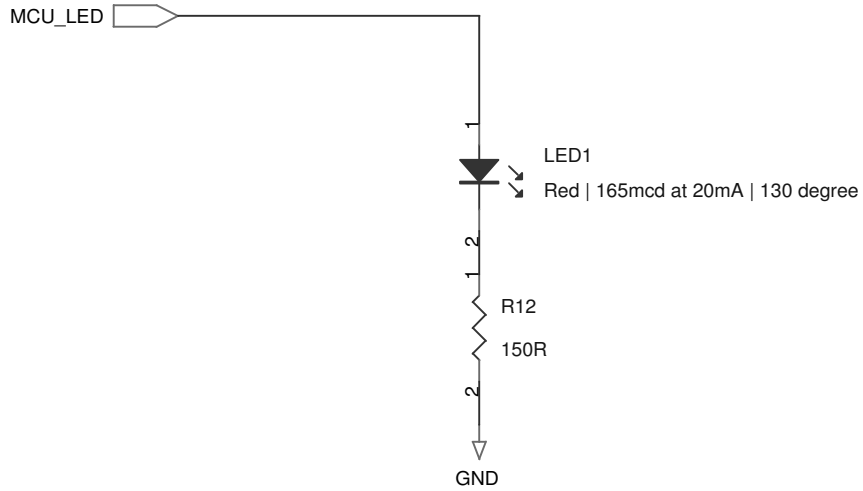
SYSTECH ELECTRONICS LTD. PRODUCT: HUNTING CAMERA PCB NUMBER: SENSOR_PCB DESIGN ENGINEER: YP		
Title	02-IMX291	
Size	Document Number SHC008_BTC-9-100_SENSOR_IMX291_1612050	Rev V0.06
Date:	Tuesday, December 06, 2016	Sheet 3 of 7



SYSTECH ELECTRONICS LTD.		
PRODUCT:		HUNTING CAMERA
PCB NUMBER:		SENSOR_PCB
DESIGN ENGINEER:		YP
Title		
03-MIC		
Size	Document Number	Rev
A4	SHC008_BTC-9-10D_SENSOR_IMX291_1612050	V0.06
Date:	Friday, December 16, 2016	Sheet 4 of 7



SYSTECH ELECTRONICS LTD.		
PRODUCT:		HUNTING CAMERA
PCB NUMBER:		SENSOR_PCB
DESIGN ENGINEER:		YP
Title		
04-LIGHT_SENSOR		
Size	Document Number	Rev
A	SHC008_BTC-9-10D_SENSOR_IMX291_1612050	V0.06
Date:	Tuesday, December 06, 2016	Sheet 5 of 7



SYSTECH ELECTRONICS LTD.

PRODUCT: **HUNTING CAMERA**
 PCB NUMBER: SENSOR_PCB
 DESIGN ENGINEER: YP

Title
05-MCU_LED

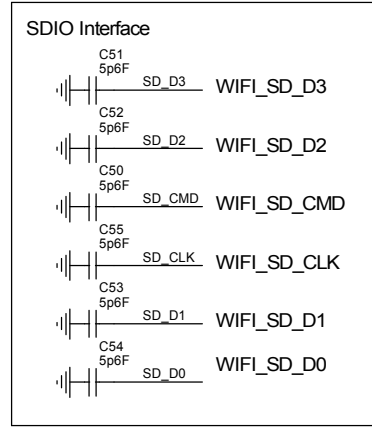
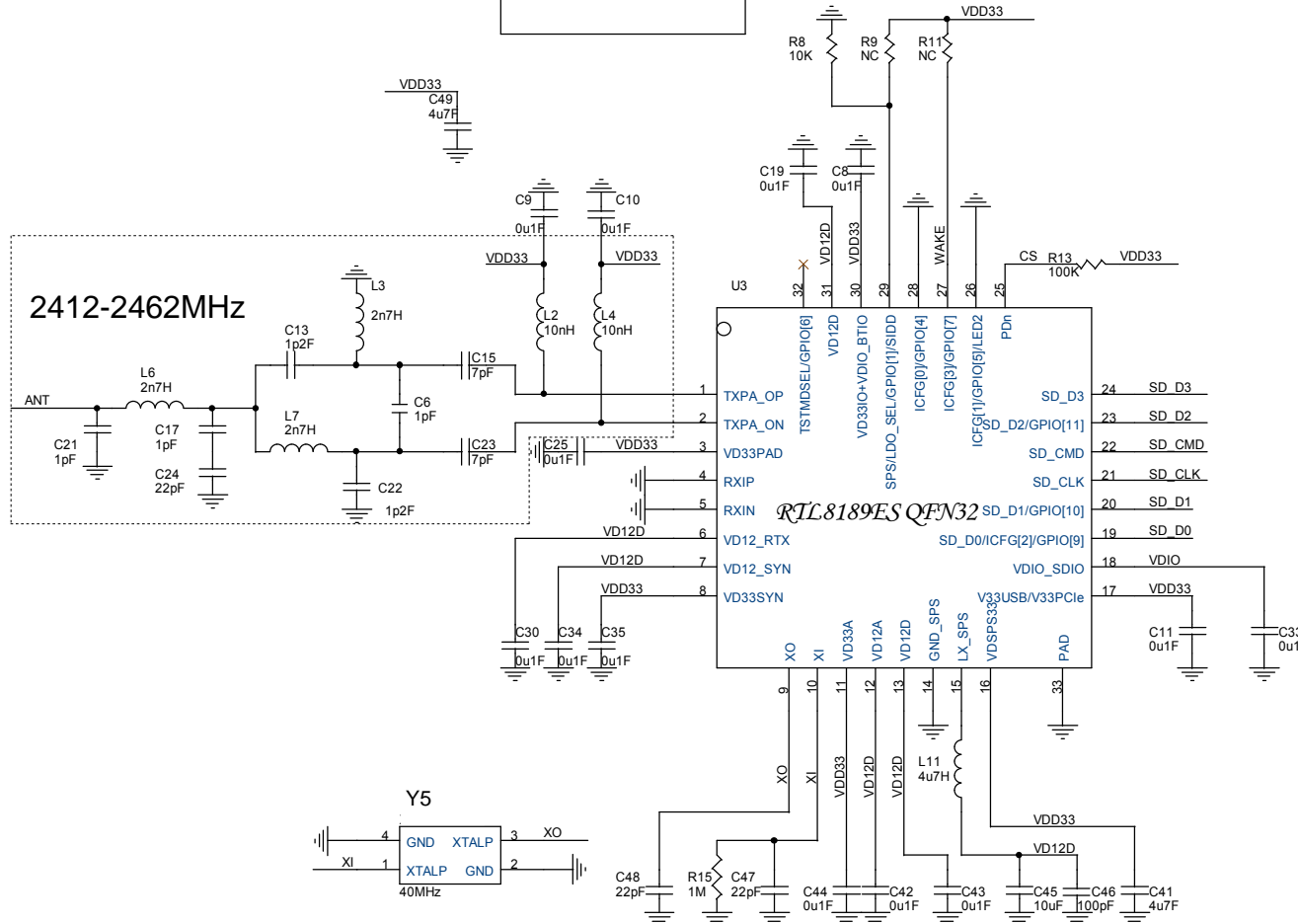
Size A	Document Number SHC008_BTC-9-10D_SENSOR_IMX291_1612050	Rev V0.06
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Date: Tuesday, December 06, 2016 Sheet 6 of 7

Description #

(1) Internal 1.2V Switching Regulator:
 - 10K for R8 & NC for R9
 - 4.7uH for L11

(2) Internal 1.2V LDO:
 - NC for R8 & 10K for R9
 - 0R/0805 for L11



SDIO Interface

- WIFI_SD_CMD
- WIFI_SD_D3
- WIFI_SD_D2
- WIFI_SD_D1
- WIFI_SD_D0
- WIFI_SD_CLK

- GND
- ANTENNA
- WAKE
- VDIOSDIO
- 3V3
- CS

		CON2 ST_13P_PCB	
WIFI_SD_CMD	SD_CMD	1	WIFI_SD_CMD / SPI_MOSI
WIFI_SD_D3	SD_D3	2	WIFI_SD_D3 / NC
WIFI_SD_D2	SD_D2	3	WIFI_SD_D2 / SPI_INI
WIFI_SD_D1	SD_D1	4	WIFI_SD_D1 / SPI_CS
WIFI_SD_D0	SD_D0	5	WIFI_SD_D0 / SPI_MISO
WIFI_SD_CLK	SD_CLK	6	WIFI_SD_CLK / SPI_CLK
		7	GND
		8	GND
ANTENNA	ANT	9	ANT
WAKE	WAKE	10	WAKE
VDIOSDIO	VADIO	11	VDIOSDIO
3V3	VDD33	12	3V3
CS	CS	13	CS

(PIN ASSIGNMENT)

RTL8189ES STAMP Module-1V0

Realtek Confidential

Title

Size	Document Number	Rev
B		v1

Date: Friday, March 02, 2012 Sheet 1 of 1