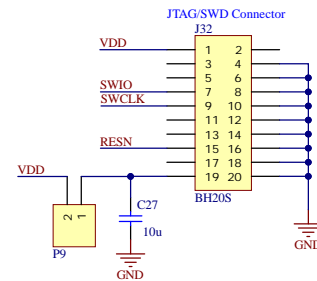
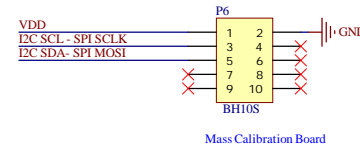
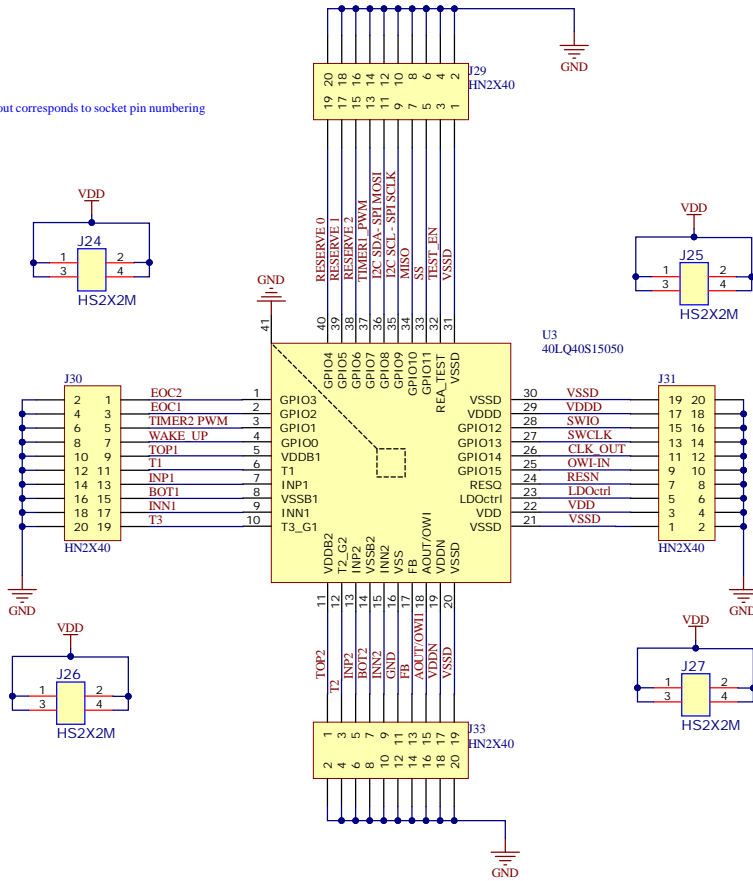
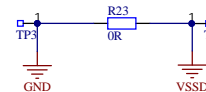
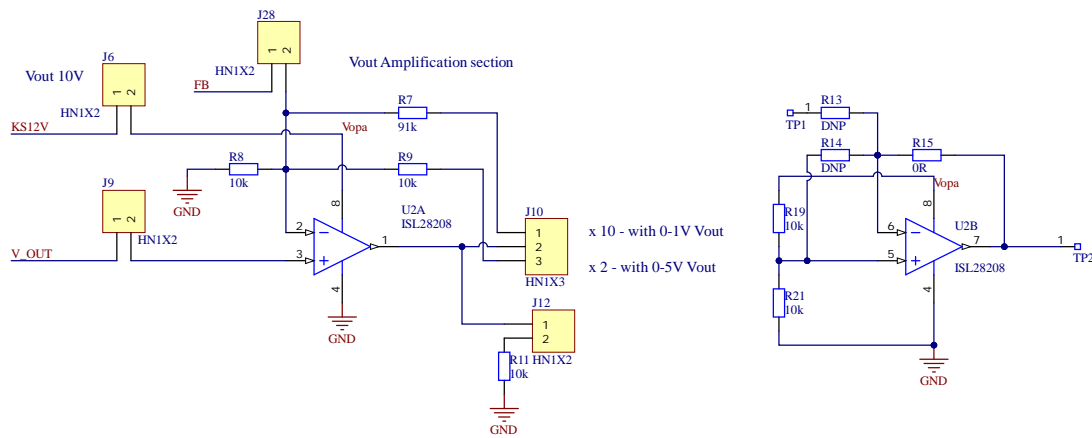
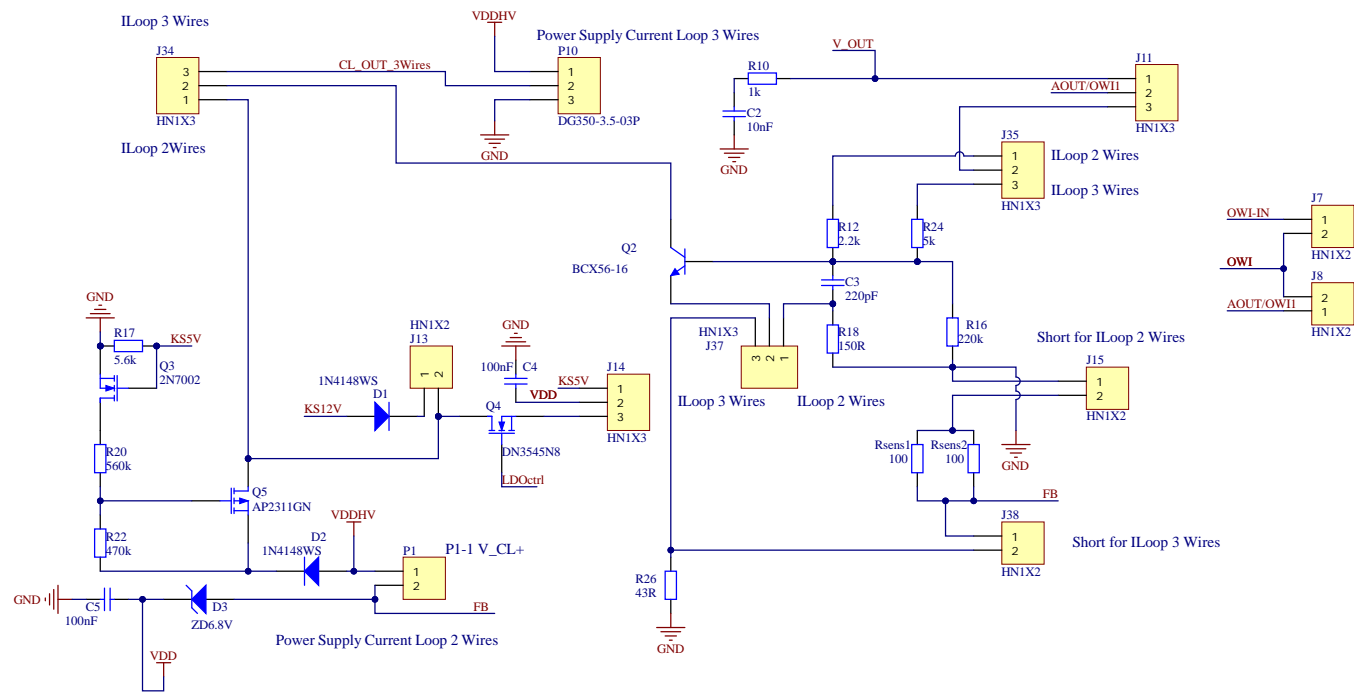


ZSSC328X QFN40 pinout corresponds to socket pin numbering



READ NOTES ON GNDS CONNECTIONS

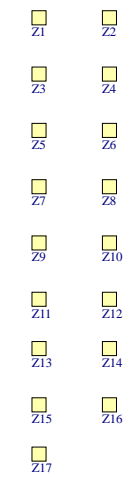
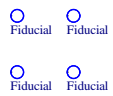




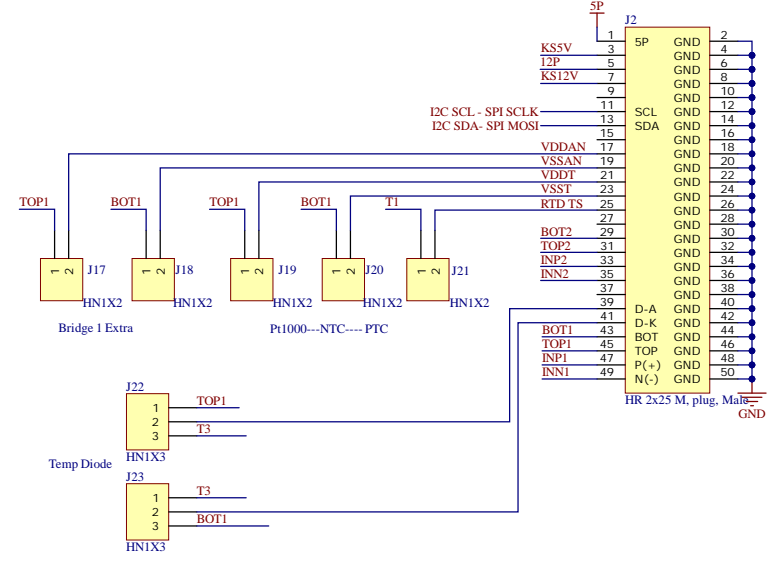
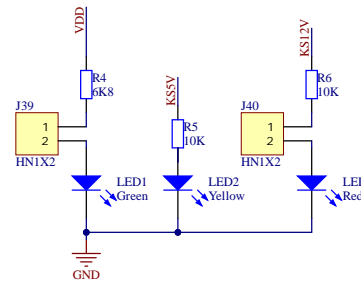
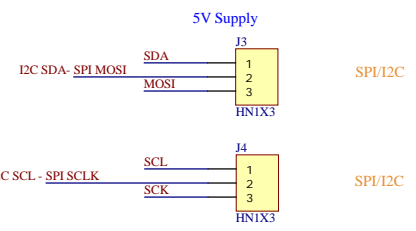
Title: ZSSC3281 EVB Main			
Project: ZSSC3281 EVB			
Size: A3	Sheet: 1 of 3	Drawn by: G Kostadinov	Revision: V4
File: ZSSC3281_EVB_V4_main_1.SchDoc			Date: 22.2.2022 r.

J1	
5P	1 SP
GND	2 GND
K55V	3 K55V
GND	4 GND
I2P	5 I2P
GND	6 GND
GND	7 KS12V
KS12V	8
VDD-LS	9
VPP	10
KSLS	11 SCL
SCL	12
SCL LS	13 SDA
SDA	14
SDA LS	15 SS
PB0 / SS	16
SS LS	17 MOSI
PB2 / MOSI	18
MOSI LS	19 MISO
PB3 / MISO	20
MISO LS	21 SCK
PB1 / SCK	22
SCK LS	23
LIN	24 GND
GND	25 OWI
OWI	26
OWI LS	27
ADC1	28 Reset
PE7	29
LINw	30
PE6	31
ADC3	32 TEST EN
PE5	33
ADC4	34
PE4	35
PE0 / RXD0	36
PE3 / AIN1	37
PE1 / TXD0	38
PE2 / AIN0	39
TR_PD2	40 GND
GND	41 EOC1
PD3 / INT1	42
PD3 LS	43 EOC2
PD4 / OC1B	44
PB7	45
PD5 / OC1A	46
PB6	47
PD6 / ICP	48
PB5	49
PD7 / OC2	50
PB4	50

HR 2x25 F, receptacle, Female

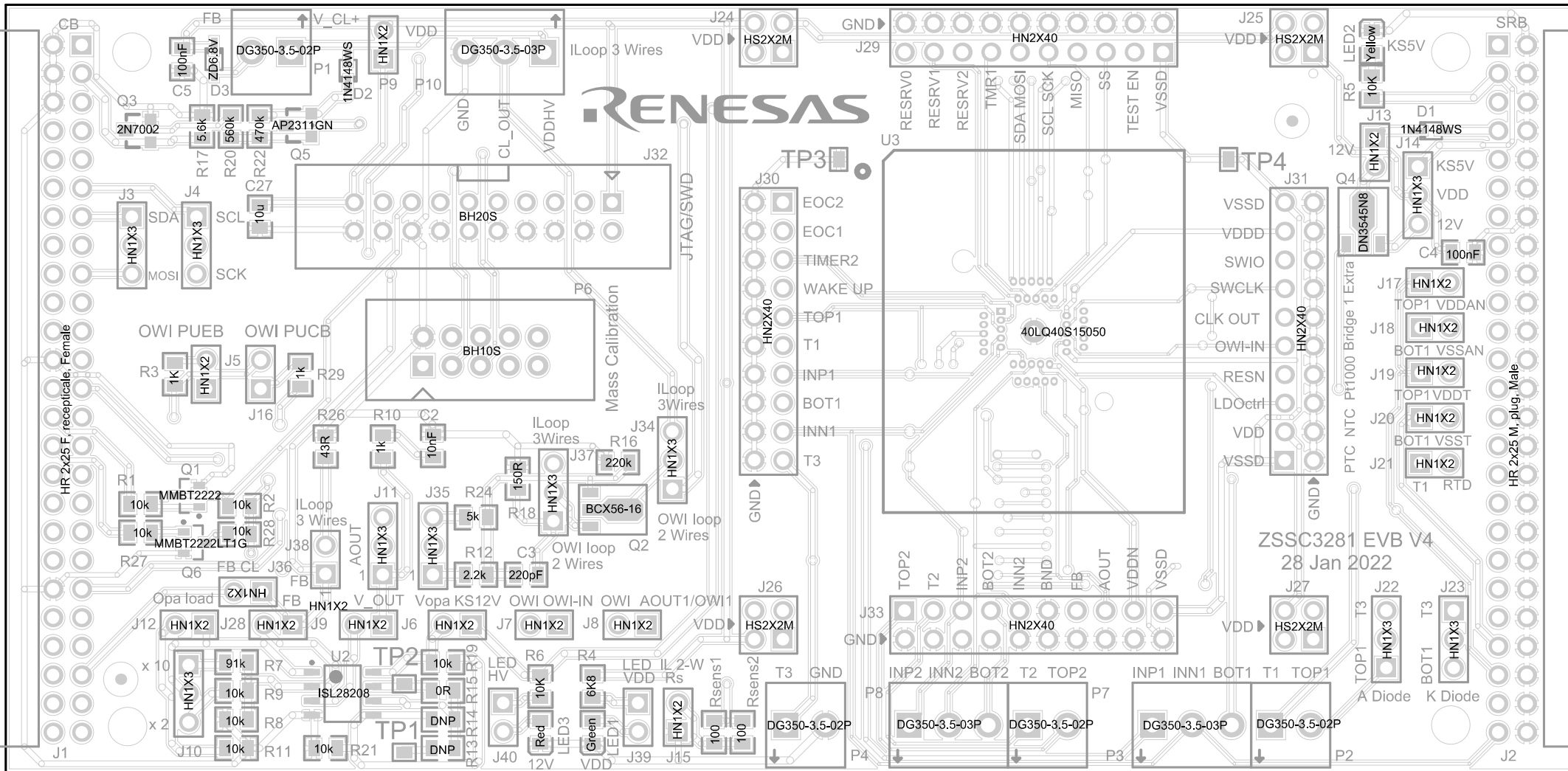


COMM BOARD Interface Selection via jumper settings

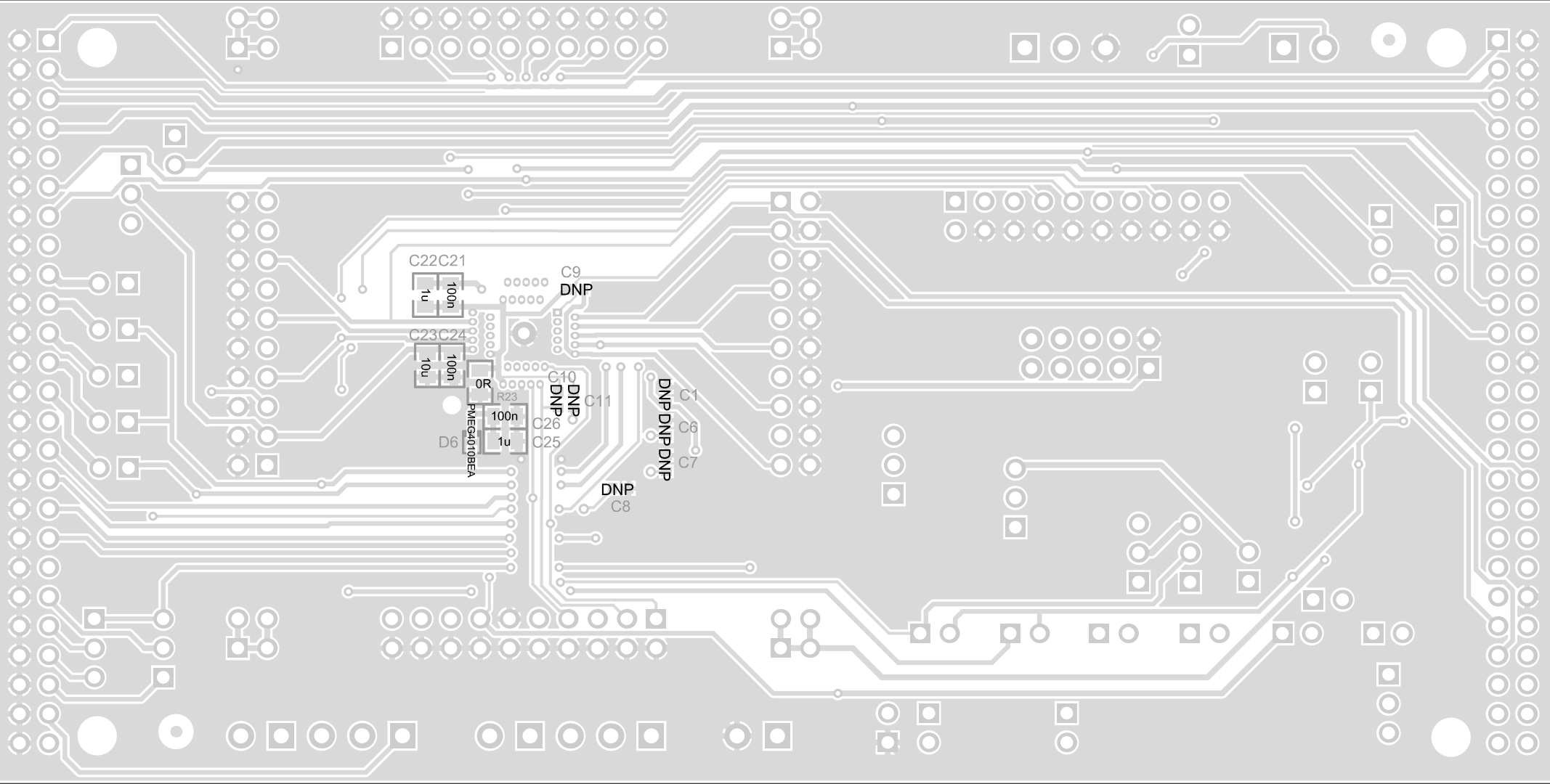


Title: ZSSC3281 EVB Main			
Project: ZSSC3281 EVB			
Size: A3	Sheet: 1 of 3	Drawn by: G Kostadinov	Revision: V4
File: ZSSC3281_EVB_V4_main.SchDoc			Date: 22.2.2022 r.

RENESAS



ZSSC3281 EVB V4
28 Jan 2022



Nr	Designator	Component description	Package	Manufacturer	Part Number	Order Code	Quantity
1	C1, C6, C7, C8, C9, C10, C11	Do not Mount	C0805		NA		
2	C2	C0805 10nF 50V X7R 5% SAMSUNG	C0805	SAMSUNG	CL21B103JBANNNC	C0805 10nF 50V X7R	1
3	C3	C0805 220pF 50V C0G SAMSUNG	C0805	SAMSUNG	CL21C221JBNC	C0805 220pF 50V C0G SAMSUNG	1
4	C4, C5	C0805 100nF 50V X7R SAMSUNG	C0805	SAMSUNG ELECTRO-MECHANICS	CL21B104KBNC	C0805 100nF 50V X7R SAMSUNG	2
5	C21, C24, C26	C0805 100nF 50V X7R SAMSUNG	C0805	SAMSUNG ELECTRO-MECHANICS	CL21B104KBNC	C0805 100nF 50V X7R SAMSUNG	3
6	C22, C25	C0805 1.0uF 100V X7S 10% Mur	C0805	MURATA	GRJ21BC72A105KE 11L	C0805 1.0uF 100V X7S 10% Mur	2
7	C23, C27	C0805 10uF 16V X5R SAMSUNG	C0805	SAMSUNG ELECTRO-MECHANICS	CL21A106KOQNNNE	C0805 10uF 16V X5R SAMSUNG	2
8	D1, D2	75V 300mA 4ns 2pF	SOD323	DIODES/ZETEX	1N4148WS-7-F	1N4148WS	2
9	D3	ZD6.8V 0.2W ROHM SMD	SOD323	ROHM	UDZSTE-176.8B	ZD6.8V 0.2W ROHM SMD	1
10	D6	Schottky 40V 1A	SOD323	NEXPERIA	PMEG4010BEA	Schottky 40V 1A	1
11	F1, F2, F3, F4	Fiducial					4
12	J1	2x 25-pin socket terminal strip, angled, RM 2.54	HR2X25M	N.A	N.A	BL 2X25W 2,54	1
13	J2	2 x 25-pin header, angled, pitch 2.54	HR2X25F	N.A	N.A	SL 2X25W 2,54	1
14	J3, J4, J10, J11, J14, J22, J23, J34, J35, J37	HN1X3	HS1X3M	CVILUX	CH31032V200	HN1X3	10
15	J5, J6, J7, J8, J9, J12, J13, J15, J16, J17, J18, J19, J20, J21, J28, J36, J38, J39, J40	HN1X2	HS1X2M	3M	961102-6404-AR	HN1X2 3M	19
16	J24, J25, J26, J27	HS2X2M	HS2X2M	CVILUX	HS2X2M (CUT)	HN2X40 (CUT)	4
17	J29, J30, J31, J33	HN2X40	HS2X10M	CVILUX	HN2X40	HN2X40 (CUT)	4
18	J32	BH20S	BH20S	CVILUX	CH87202V200	CH87202V200	1
19	LED1	KP-2012ZGC	805	KINGBRIGHT	KP-2012ZGC	KP-2012ZGC	1
20	LED2	OSY50805C1E	LED0805 Y 3D	OPTOSUPPLY INTERNATIONAL	OSY50805C1E	OSY50805C1E	1
21	LED3	OSR50805C1E	LED0805 R 3D	OPTOSUPPLY INTERNATIONAL	OSR50805C1E	OSR50805C1E	1
22	P1, P2, P4, P7	DG350-3.5-02P	HDR 1x2	DEGSON	DG350-3.5-02P-14-00AH	DG350-3.5-02P	4
23	P3, P8, P10	DG350-3.5-03P	HDR 1x3	DEGSON	DG350-3.5-03P-14-00AH	5866	3
24	P6	BH10S	BH10S	CVILUX	CH87102V200	CH87102V200	1
25	P9	HN1X2	HS1X2M	CVILUX	CH31022V200	HN1X2	1
26	Q1	MMBT2222LT1G. - Bipolar (BJT) Single Transistor, General Purpose, NPN, 30 V, 250 MHz, 225 mW, 600 mA, 250 hFE	ONSC-SOT-23-3-318-08_L	ON SEMICONDUCTOR	MMBT2222ALT1G	1459098	1
27	Q2	BCX56-16	SOT89	DIODES/ZETEX	BCX5616TC	BCX56-16	1
28	Q3	2N7002	SOT23	ON SEMICONDUCTOR	2N7002LT1G	2N7002	1
29	Q4	DN3545N8-G - MOSFET Transistor, N Channel, 200 mA, 450 V, 20 ohm, 0 V	SOT89	MICROCHIP	DN3545N8-G	2450518	1

30	Q5	AP2311GN	SOT23	ADVANCED POWER ELECTR. CO	AP2311GN-HF-3TR	AP2311GN	1
31	Q6	MMBT2222LT1G. - Bipolar (BJT) Single Transistor, General Purpose, NPN, 30 V, 250 MHz, 225 mW, 600 mA, 250 hFE	ONSC-SOT- 23-3-318- 08_L	ON SEMICONDUCT OR	MMBT2222ALT1G	1459098	1
32	R1, R2, R5, R6, R8, R9, R11, R19, R21, R27, R28	R0805 10K 5%	R0805 3D	UNI OHM	0805S8J0103T50	R0805 10K 5%	11
33	R3, R10, R29	R0805 1.0K 5%	R0805 3D	UNI OHM	0805S8J0102T50	R0805 1.0K 5%	3
34	R4	R0805 6.8K 5%	R0805 3D	UNI OHM	0805S8J0682T50	R0805 6.8K 5%	1
35	R7	R0805 91K 5%	R0805 3D	UNI OHM	0805S8J0913T50	R0805 91K 5%	1
36	R12	R0805 2.2K 5%	R0805 3D	UNI OHM	0805S8J0222T50	R0805 2.2K 5%	1
37	R13, R14	DNP	R0805 3D	DNP	DNP	DNP	2
38	R15, R23	R0805 0R 5% YAG/ASJ	R0805 3D	YAG/ASJ	N.A	R0805 0R 5% YAG/ASJ	2
39	R16	R0805 220K 5% YAG/ASJ	R0805 3D	UNI OHM	N.A	R0805 220K 5% YAG/ASJ	1
40	R17	R0805 5.6K 1% YAG/ASJ	R0805 3D	YAG/ASJ	N.A	R0805 5.6K 1% YAG/ASJ	1
41	R18	R0805 150R 5%	R0805 3D	UNI OHM	0805S8J0151T50	R0805 150R 5%	1
42	R20	R0805 560K 5%	R0805 3D	UNI OHM	0805S8J0564T50	R0805 560K 5%	1
43	R22	R0805 470K 5%	R0805 3D	UNI OHM	0805S8J0474T50	R0805 470K 5%	1
44	R24	R0805 4.99K 1%	R0805 3D	YAG/ASJ	5100258	R0805 4.99K 1%	1
45	R26	R0805 43R 1%	R0805 3D	UNI OHM	3501	R0805 43R 1%	1
46	Rsens1, Rsens2	R0805 100R 5%	R0805 3D	UNI OHM	0805S8J0101T50	R0805 100R 5%	2
47	U2	ISL28208 SMD	SO8	Renesas	ISL28208FBZ	internal supply	1
48	U3	QFN40 ZIF socket	QFN40 ZIF socket	Renesas	40LQ40S15050	internal supply	1

Notice

1. Descriptions of circuits, software and other related information in this document are provided only to illustrate the operation of semiconductor products and application examples. You are fully responsible for the incorporation or any other use of the circuits, software, and information in the design of your product or system. Renesas Electronics disclaims any and all liability for any losses and damages incurred by you or third parties arising from the use of these circuits, software, or information.
2. Renesas Electronics hereby expressly disclaims any warranties against and liability for infringement or any other claims involving patents, copyrights, or other intellectual property rights of third parties, by or arising from the use of Renesas Electronics products or technical information described in this document, including but not limited to, the product data, drawings, charts, programs, algorithms, and application examples.
3. No license, express, implied or otherwise, is granted hereby under any patents, copyrights or other intellectual property rights of Renesas Electronics or others.
4. You shall be responsible for determining what licenses are required from any third parties, and obtaining such licenses for the lawful import, export, manufacture, sales, utilization, distribution or other disposal of any products incorporating Renesas Electronics products, if required.
5. You shall not alter, modify, copy, or reverse engineer any Renesas Electronics product, whether in whole or in part. Renesas Electronics disclaims any and all liability for any losses or damages incurred by you or third parties arising from such alteration, modification, copying or reverse engineering.
6. Renesas Electronics products are classified according to the following two quality grades: "Standard" and "High Quality". The intended applications for each Renesas Electronics product depends on the product's quality grade, as indicated below.
 - "Standard": Computers; office equipment; communications equipment; test and measurement equipment; audio and visual equipment; home electronic appliances; machine tools; personal electronic equipment; industrial robots; etc.
 - "High Quality": Transportation equipment (automobiles, trains, ships, etc.); traffic control (traffic lights); large-scale communication equipment; key financial terminal systems; safety control equipment; etc.Unless expressly designated as a high reliability product or a product for harsh environments in a Renesas Electronics data sheet or other Renesas Electronics document, Renesas Electronics products are not intended or authorized for use in products or systems that may pose a direct threat to human life or bodily injury (artificial life support devices or systems; surgical implantations; etc.), or may cause serious property damage (space system; undersea repeaters; nuclear power control systems; aircraft control systems; key plant systems; military equipment; etc.). Renesas Electronics disclaims any and all liability for any damages or losses incurred by you or any third parties arising from the use of any Renesas Electronics product that is inconsistent with any Renesas Electronics data sheet, user's manual or other Renesas Electronics document.
7. No semiconductor product is absolutely secure. Notwithstanding any security measures or features that may be implemented in Renesas Electronics hardware or software products, Renesas Electronics shall have absolutely no liability arising out of any vulnerability or security breach, including but not limited to any unauthorized access to or use of a Renesas Electronics product or a system that uses a Renesas Electronics product. RENESAS ELECTRONICS DOES NOT WARRANT OR GUARANTEE THAT RENESAS ELECTRONICS PRODUCTS, OR ANY SYSTEMS CREATED USING RENESAS ELECTRONICS PRODUCTS WILL BE INVULNERABLE OR FREE FROM CORRUPTION, ATTACK, VIRUSES, INTERFERENCE, HACKING, DATA LOSS OR THEFT, OR OTHER SECURITY INTRUSION ("Vulnerability Issues"). RENESAS ELECTRONICS DISCLAIMS ANY AND ALL RESPONSIBILITY OR LIABILITY ARISING FROM OR RELATED TO ANY VULNERABILITY ISSUES. FURTHERMORE, TO THE EXTENT PERMITTED BY APPLICABLE LAW, RENESAS ELECTRONICS DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THIS DOCUMENT AND ANY RELATED OR ACCOMPANYING SOFTWARE OR HARDWARE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.
8. When using Renesas Electronics products, refer to the latest product information (data sheets, user's manuals, application notes, "General Notes for Handling and Using Semiconductor Devices" in the reliability handbook, etc.), and ensure that usage conditions are within the ranges specified by Renesas Electronics with respect to maximum ratings, operating power supply voltage range, heat dissipation characteristics, installation, etc. Renesas Electronics disclaims any and all liability for any malfunctions, failure or accident arising out of the use of Renesas Electronics products outside of such specified ranges.
9. Although Renesas Electronics endeavors to improve the quality and reliability of Renesas Electronics products, semiconductor products have specific characteristics, such as the occurrence of failure at a certain rate and malfunctions under certain use conditions. Unless designated as a high reliability product or a product for harsh environments in a Renesas Electronics data sheet or other Renesas Electronics document, Renesas Electronics products are not subject to radiation resistance design. You are responsible for implementing safety measures to guard against the possibility of bodily injury, injury or damage caused by fire, and/or danger to the public in the event of a failure or malfunction of Renesas Electronics products, such as safety design for hardware and software, including but not limited to redundancy, fire control and malfunction prevention, appropriate treatment for aging degradation or any other appropriate measures. Because the evaluation of microcomputer software alone is very difficult and impractical, you are responsible for evaluating the safety of the final products or systems manufactured by you.
10. Please contact a Renesas Electronics sales office for details as to environmental matters such as the environmental compatibility of each Renesas Electronics product. You are responsible for carefully and sufficiently investigating applicable laws and regulations that regulate the inclusion or use of controlled substances, including without limitation, the EU RoHS Directive, and using Renesas Electronics products in compliance with all these applicable laws and regulations. Renesas Electronics disclaims any and all liability for damages or losses occurring as a result of your noncompliance with applicable laws and regulations.
11. Renesas Electronics products and technologies shall not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable domestic or foreign laws or regulations. You shall comply with any applicable export control laws and regulations promulgated and administered by the governments of any countries asserting jurisdiction over the parties or transactions.
12. It is the responsibility of the buyer or distributor of Renesas Electronics products, or any other party who distributes, disposes of, or otherwise sells or transfers the product to a third party, to notify such third party in advance of the contents and conditions set forth in this document.
13. This document shall not be reprinted, reproduced or duplicated in any form, in whole or in part, without prior written consent of Renesas Electronics.
14. Please contact a Renesas Electronics sales office if you have any questions regarding the information contained in this document or Renesas Electronics products.

(Note1) "Renesas Electronics" as used in this document means Renesas Electronics Corporation and also includes its directly or indirectly controlled subsidiaries.

(Note2) "Renesas Electronics product(s)" means any product developed or manufactured by or for Renesas Electronics.

(Disclaimer Rev.5.0-1)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

Trademarks

Renesas and the Renesas logo are trademarks of Renesas Electronics Corporation. All trademarks and registered trademarks are the property of their respective owners.

Contact Information

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:
www.renesas.com/contact/