

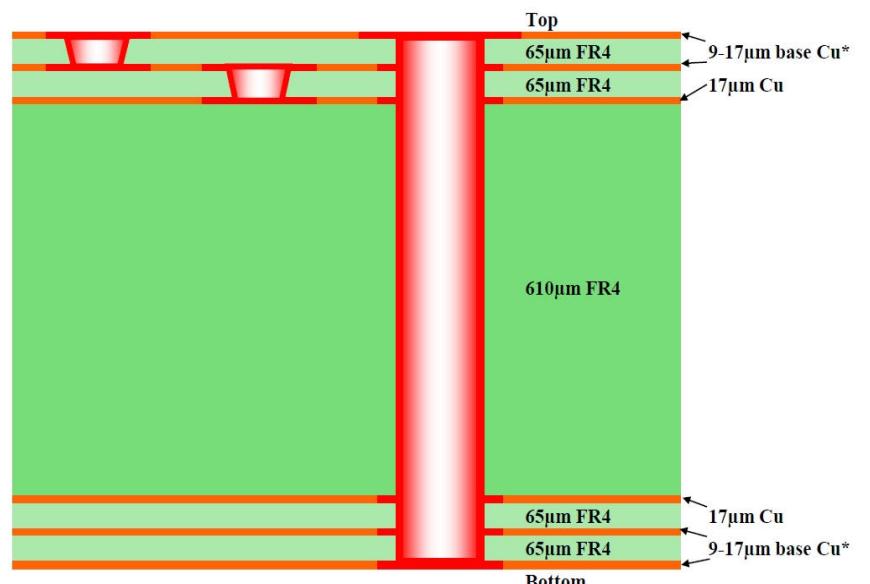
WMI Mainboard

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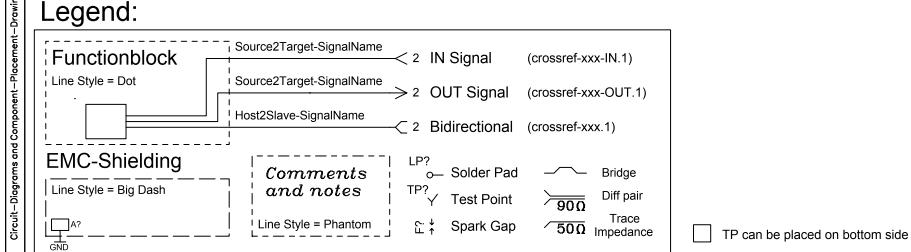
PCB-Stackup:

6M12i65i65i610iMicV1



1

Legend:



EP2015/005	Copyright Protection according to DIN 34 / DIN ISO 16016	CAD-CODE: LP1449-8	V1222-308	Page: 1 of 12
Substitute for:				
<input type="checkbox"/>	2018	Date	Name	
<input type="checkbox"/>	Drawn	13.04.	Raiser	
<input type="checkbox"/>	Check.			
<input type="checkbox"/>	Viewed			
Schematic V1222-308/LP1449-8				
WMI02 MainPCB BR205 Basic DAG				
<input type="checkbox"/>	Revision	Date	Name	
Valeo	2189-222-308-10			

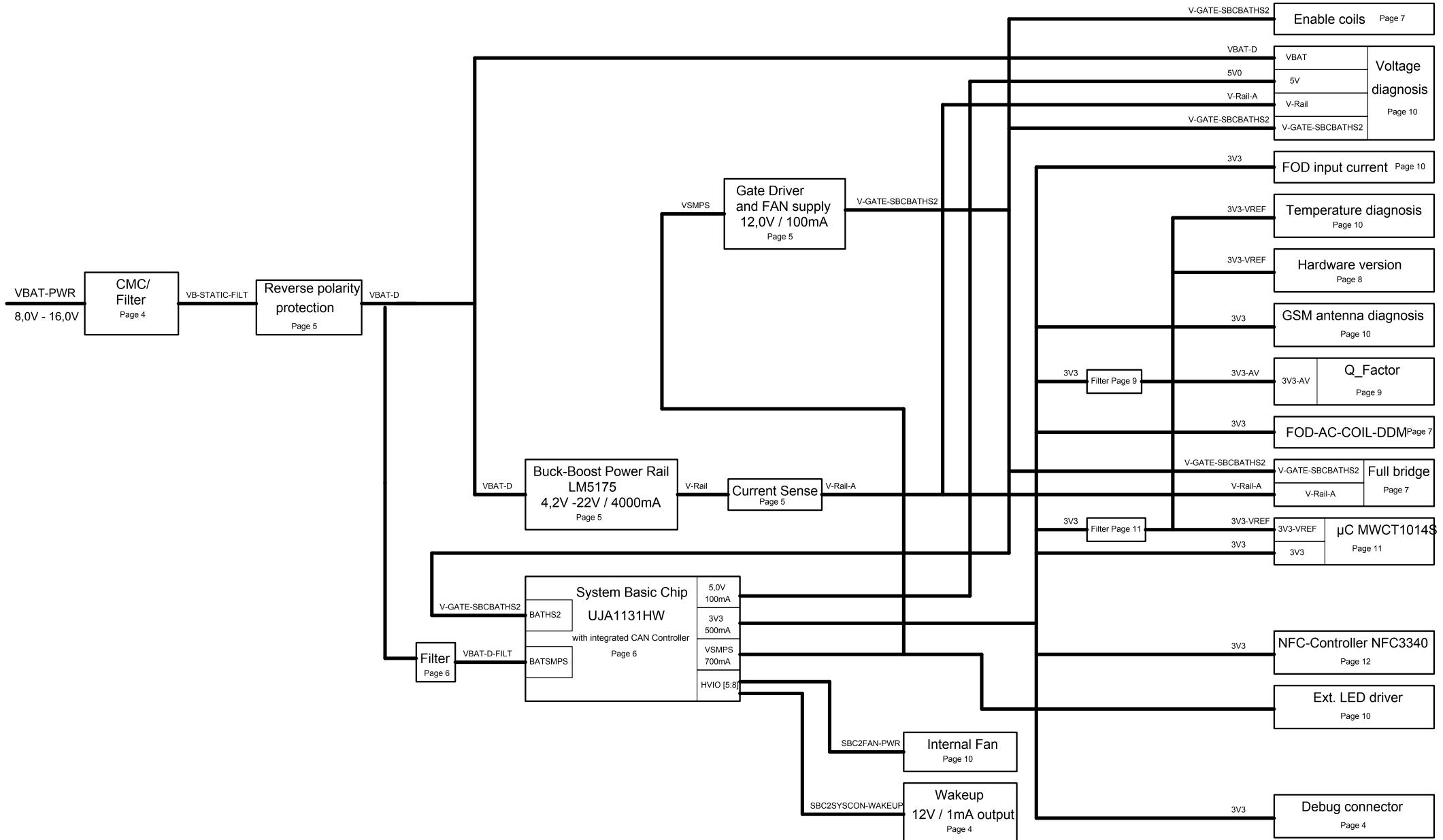
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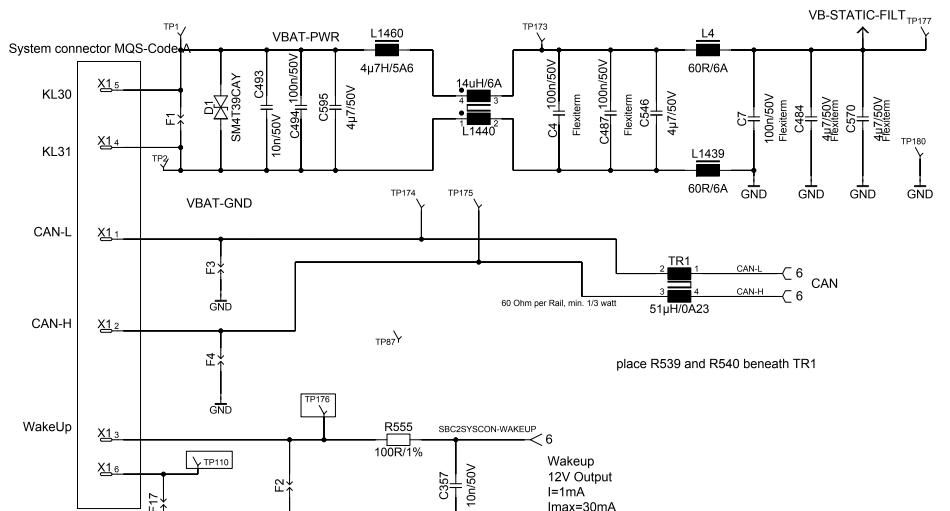
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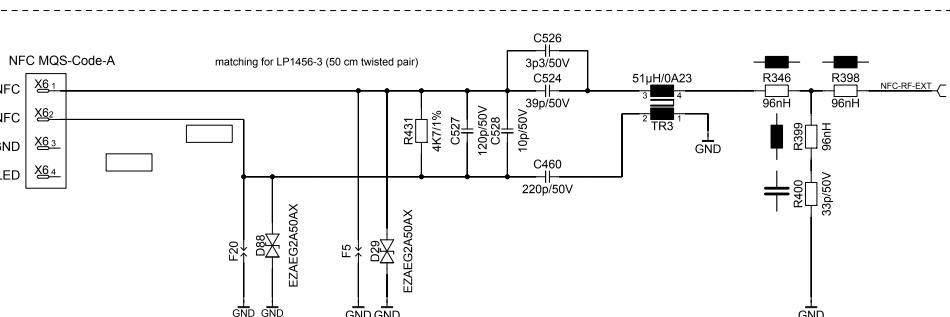
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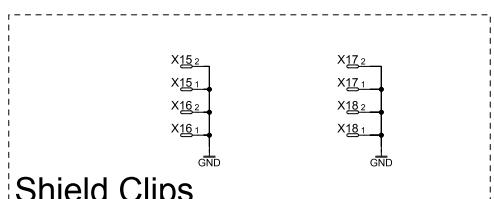




Systemconnector



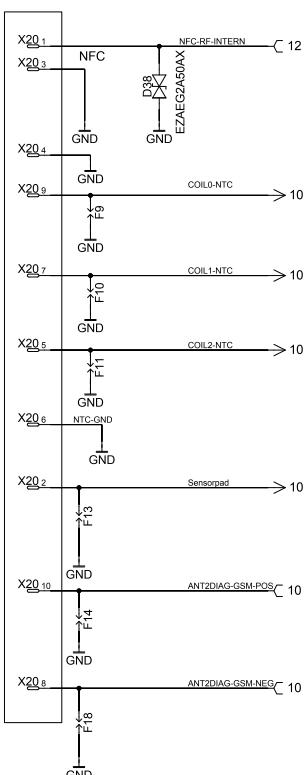
Ext. NFC-Antenna



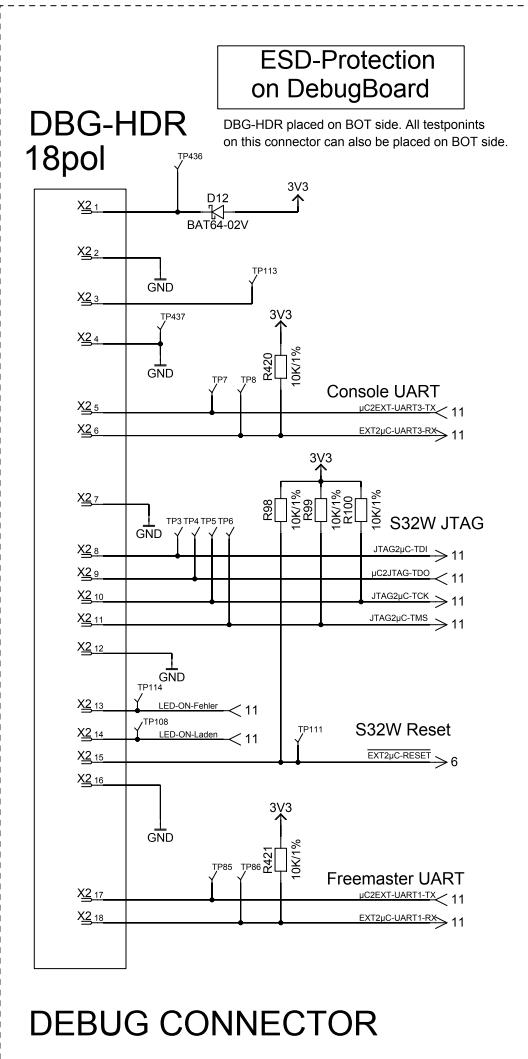
Shield Clips

Pin numbers need to be matched with LP1450-x

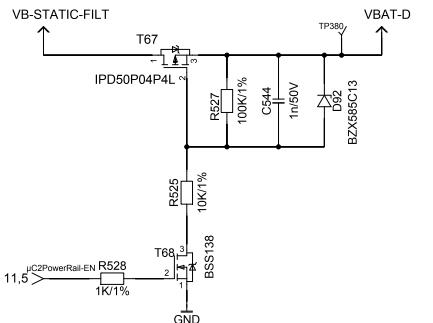
NTC- NFC- Capsensor- Connector



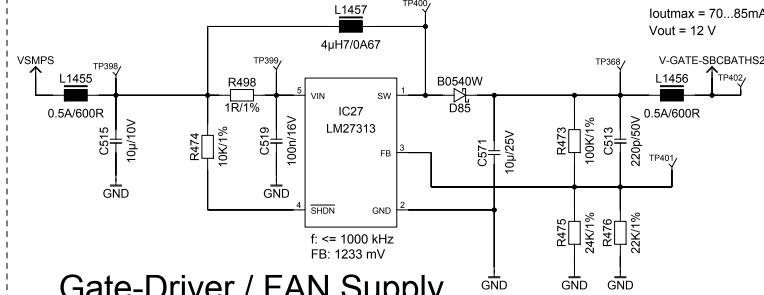
COILS- Connectors



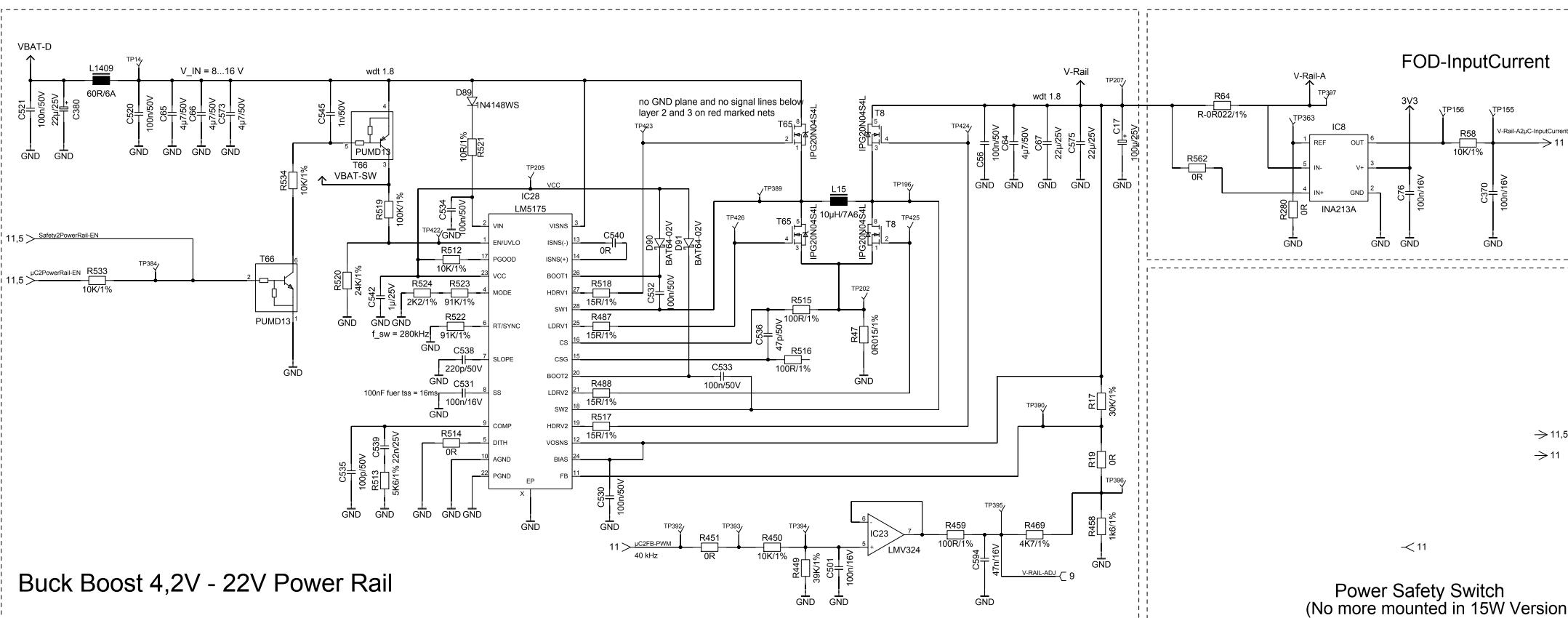
DEBUG CONNECTOR



Reverse Polarity Protection



Gate-Driver / FAN Supply

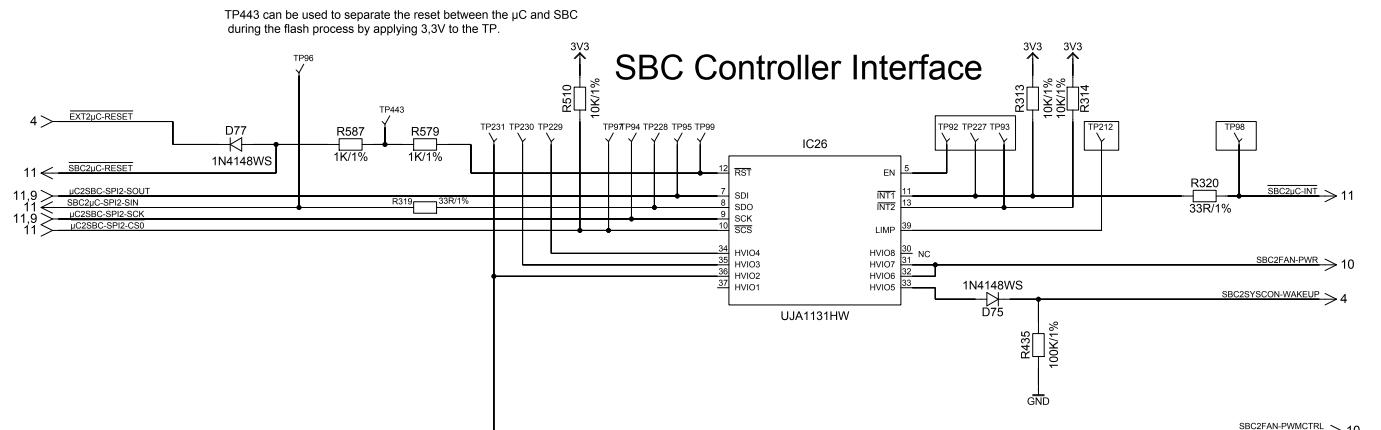


Buck Boost 4,2V - 22V Power Rail

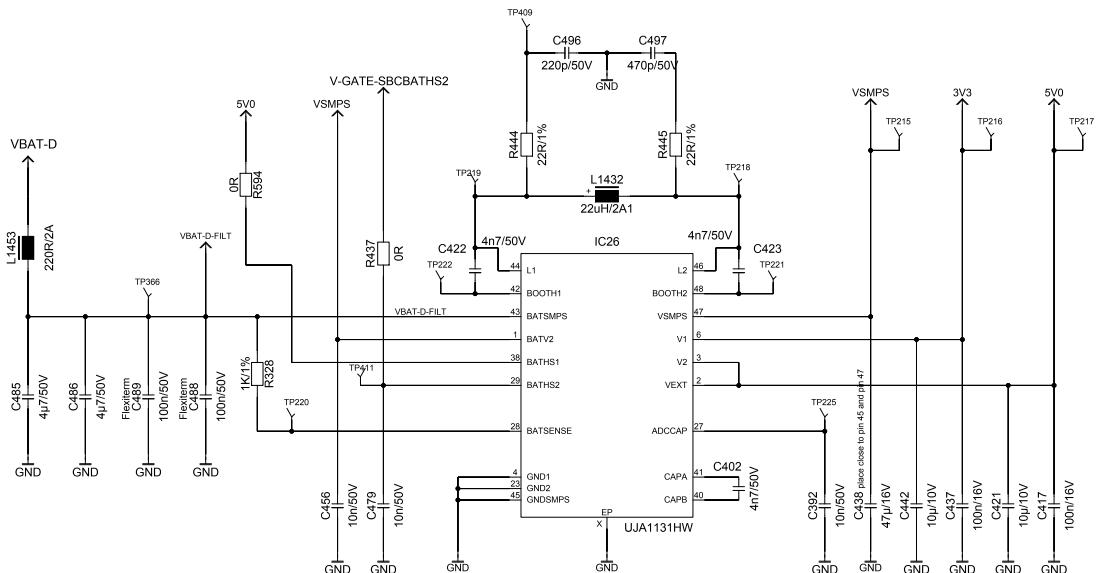
Power Safety Switch
(No more mounted in 15W Version)

Valeo

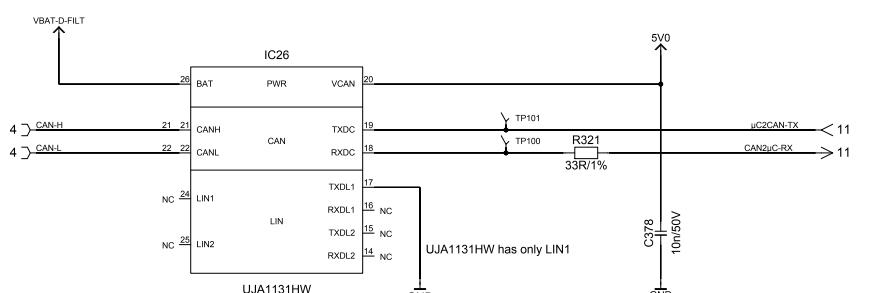
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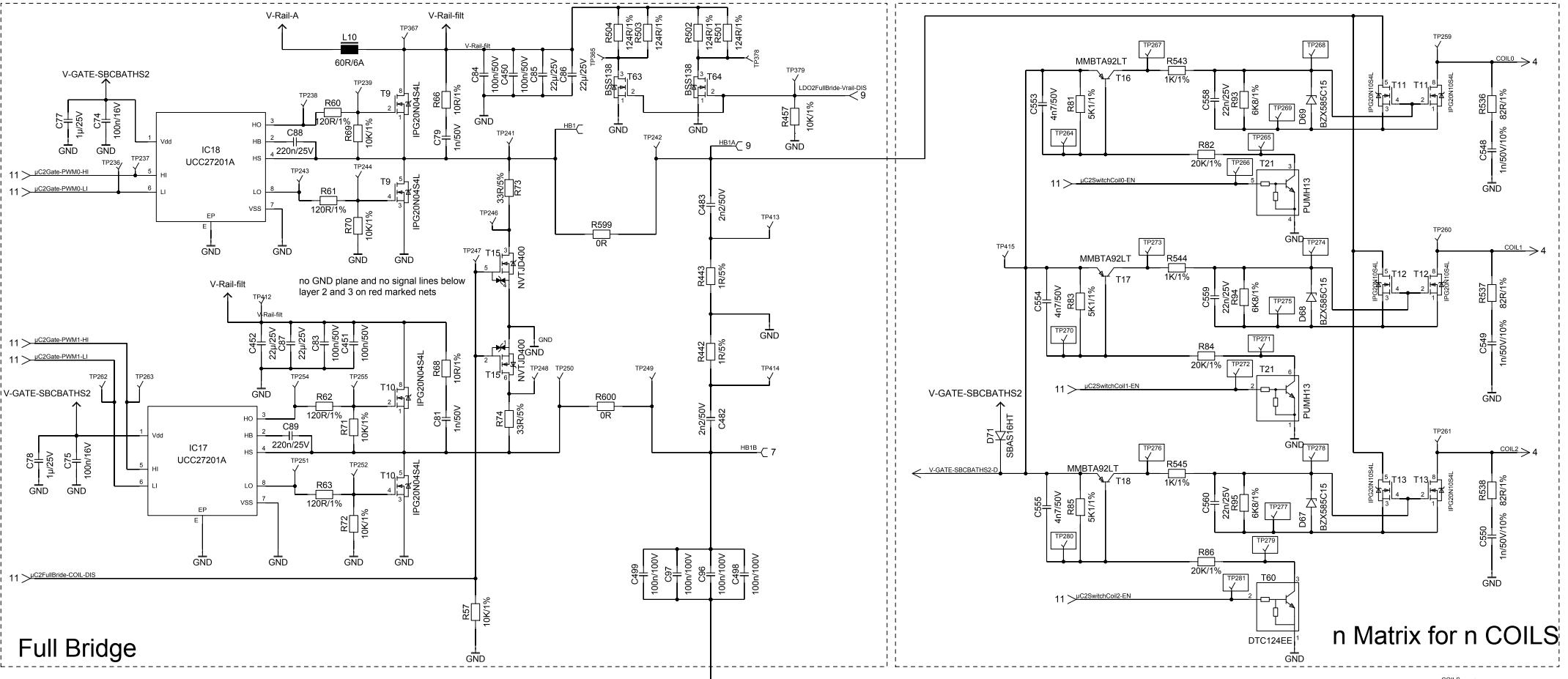


SBC Power Supply

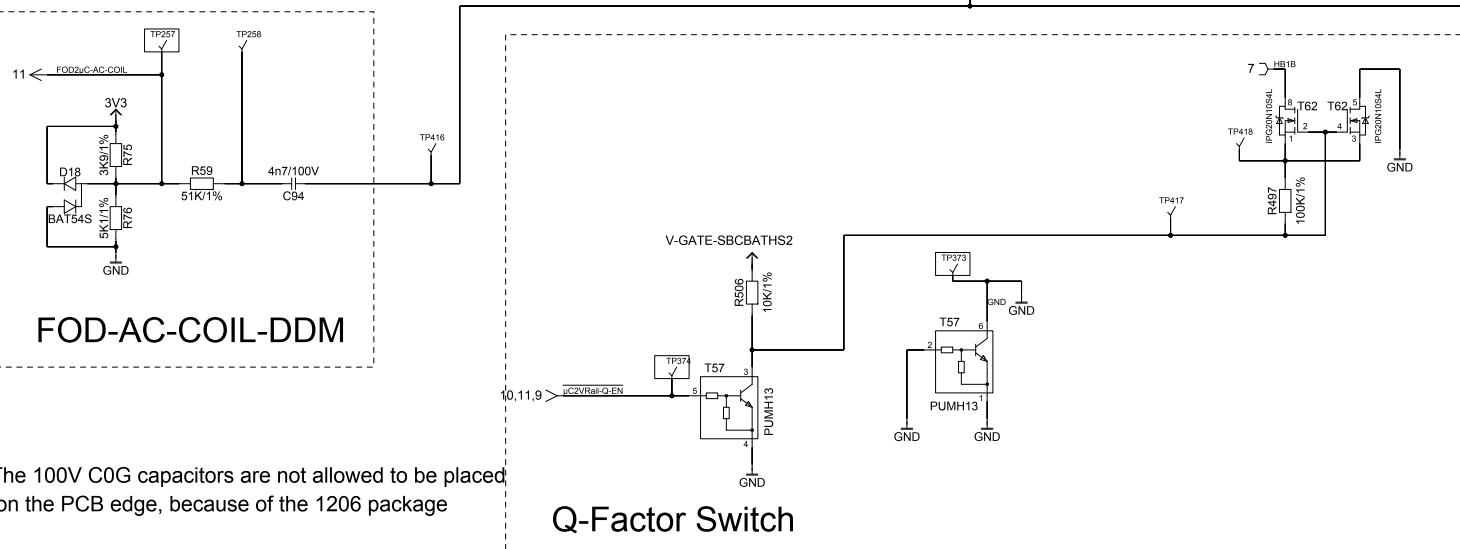


SBC CAN / LIN Interface





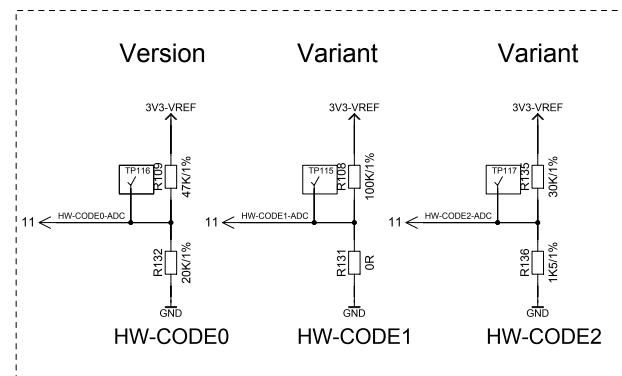
Full Bridge



The 100V C0G capacitors are not allowed to be placed on the PCB edge, because of the 1206 package

Q-Factor Switch

EP2015/005 Substitute for:		Copyright Protection according to DIN 34 / DIN ISO 16016		CAD-CODE: LP1449-8 Printed: 07-11-2018 / 15:33	V1222-308	Page: 7 of 12
		2018	Date	Name	Schematic V1222-308/LP1449-8 WMI02 MainPCB BR205 Basic DAG	
			Drawn	13.04.		
			Check:	see page 1		
			Viewed	see page 1		
						2189-222-308-10

**HW-CODE - Variants**

Variant	HW-CODE0	HW-CODE1	HW-CODE2	Description
V1222	00000 XXXXX	00000 XXXXX	10000 XXXXX	WMI BR205
V1222-100	00000 XXXXX	00100 XXXXX	10000 XXXXX	WMI BR167
V1222-1	00001 XXXXX	00000 XXXXX	10000 XXXXX	WMI BR205 B-Sample
V1222-101	00001 XXXXX	00100 XXXXX	10000 XXXXX	WMI BR167 B-Sample
V1222-2	00010 XXXXX	00000 XXXXX	10000 XXXXX	WMI BR205 B1-Sample
V1222-3	00011 XXXXX	00000 XXXXX	10000 XXXXX	WMI BR205 B1.1-Sample
V1222-103	00011 XXXXX	00100 XXXXX	10000 XXXXX	WMI BR167 B1.1-Sample
V1222-4	00100 XXXXX	00000 XXXXX	10000 XXXXX	WMI BR205 C0-Sample
V1222-104	00100 XXXXX	00100 XXXXX	10000 XXXXX	WMI BR167 C0-Sample
V1222-204	00101 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Ex. NFC DAG; C1-Sample
V1222-304	00101 XXXXX	00000 XXXXX	10000 XXXXX	WMI02 MainPCB BR205 Basic DAG; C1-Sample
V1222-404	00101 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Basic DAG; C1-Sample
V1222-504	00101 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 LED DAG; C1-Sample
V1222-999	00101 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Voll; C1-Sample
V1222-204	00110 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Ex. NFC DAG; D0-Sample
V1222-304	00110 XXXXX	00000 XXXXX	10000 XXXXX	WMI02 MainPCB BR205 Basic DAG; D0-Sample
V1222-404	00110 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Basic DAG; D0-Sample
V1222-504	00110 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 LED DAG; D0-Sample
V1222-999	00110 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Voll; D0-Sample
V1222-205	00111 XXXXX	01100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Ex. NFC DAG; D1-Sample
V1222-305	00111 XXXXX	00000 XXXXX	10000 XXXXX	WMI02 MainPCB BR205 Basic DAG; D1-Sample
V1222-405	00111 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Basic DAG; D1-Sample
V1222-505	00111 XXXXX	01000 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 LED DAG; D1-Sample
V1222-999	00111 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 full stuffed; D1-Sample
V1222-206	00111 XXXXX	01100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Ex. NFC DAG; D1-Sample
V1222-306	00111 XXXXX	00000 XXXXX	10000 XXXXX	WMI02 MainPCB BR205 Basic DAG; D1-Sample
V1222-406	00111 XXXXX	00100 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 Basic DAG; D1-Sample
V1222-506	00111 XXXXX	01000 XXXXX	10000 XXXXX	WMI02 MainPCB BR167 LED DAG; D1-Sample

MWCTuC-HWID

HW-CODE - Definition

ADC CODE	ADC-BIT	MEANING	VALUE/DEFINITION
HW-CODE0	9 (MSB)	HW-Version	00000 - A-Sample WMI 00110 - D0-Sample WMI
	8		00001 - B-Sample WMI 00111 - D1-Sample WMI
	7		00010 - B1-Sample WMI
	6		00011 - B1.1-Sample WMI 01000 - D1-15W-Sample WMI
	5 (LSB)		00100 - C0-Sample WMI 01001 - D2-15W-Sample WMI 00101 - C1-Sample WMI 10 - 31 Reserve
HW-CODE1	9 (MSB)	HW-Variant product line (extended for D1-Samples)	000 - BR205 011 - BR167-Trucks 110 -
	8		001 - BR167 100 -
	7		010 - BR167-Fond 101 -
	6		RESERVE
	5 (LSB)	RESERVE	RESERVE
HW-CODE2	9 (MSB)	WLC-Power-Variant	0 - 15W-Solution 1 - reduced power
	8	HW-Variant	0 - 1 -
	7	HW-Variant	0 - 1 -
	6	HW-Variant	0 - 1 -
	5 (LSB)	HW-Limiter (D-Sample)	0 - with HW-Limiter 1 - w/o HW-Limiter

BIT 0-4 will be ignored by the three ADCs (HW-CODE0-2)! This implies for each HW-CODE 32 combinations

ADC-INFO:

- 10Bit ADC
- ADC-Voltage 3,3V
- 3,223mV/digit
- Self-Calibration by SW

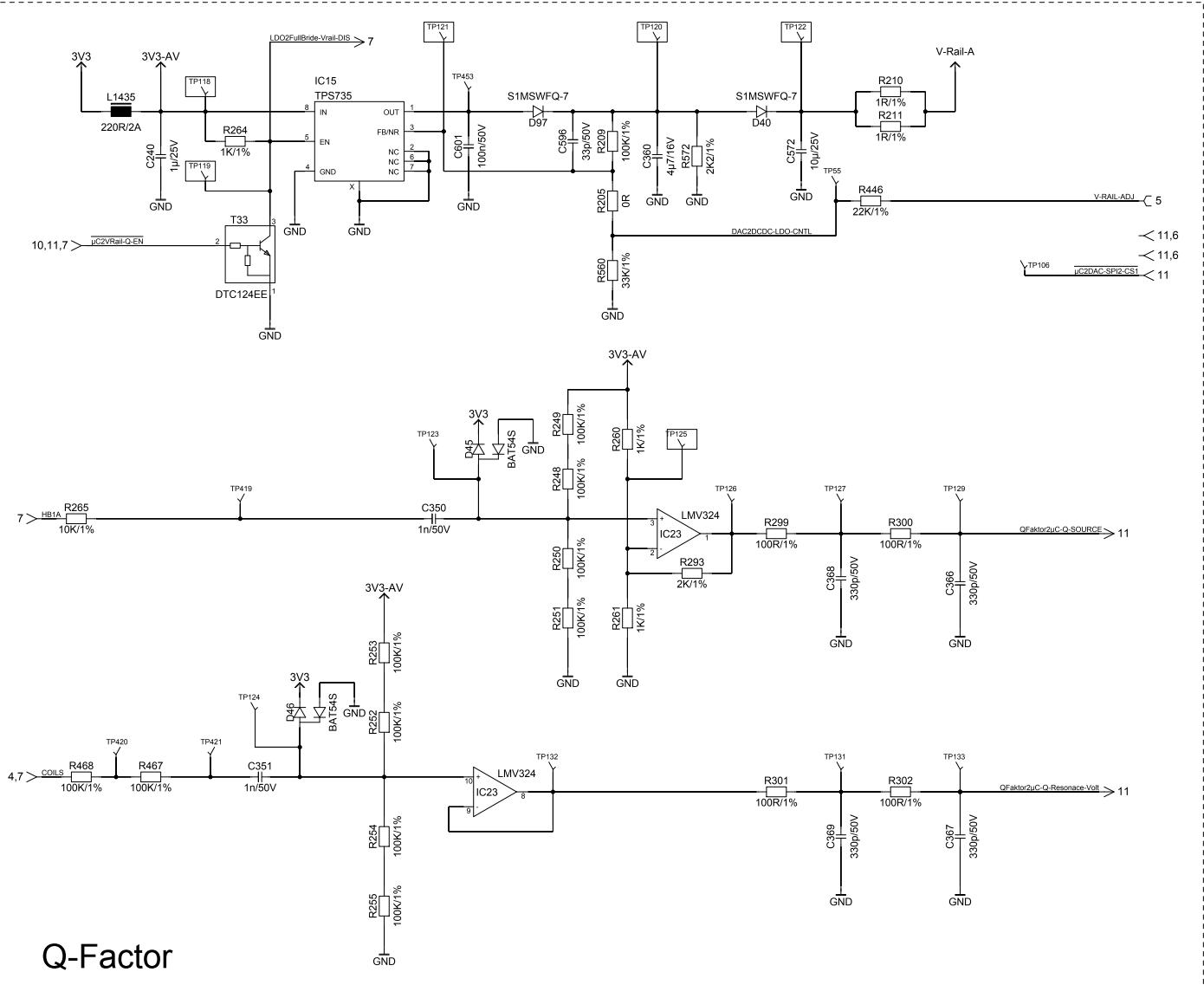
HW-CODE - Configuration

#	Dez	Rup	Rdown	Voltage	Digitrange
00000	0	100 000	0	0 mV	0 - 31
00001	1	30 000	1 500	154 mV	32 - 63
00010	2	18 000	1 500	254 mV	64 - 95
00011	3	27 000	3 300	360 mV	96 - 127
00100	4	62 000	10 000	464 mV	128 - 159
00101	5	16 000	3 300	567 mV	160 - 191
00110	6	39 000	10 000	673 mV	192 - 223
00111	7	33 000	10 000	773 mV	224 - 255
01000	8	36 000	13 000	876 mV	256 - 287
01001	9	47 000	20 000	979 mV	288 - 319
01010	10	33 000	16 000	1082 mV	320 - 351
01011	11	18 000	10 000	1185 mV	352 - 383
01100	12	47 000	30 000	1289 mV	384 - 415
01101	13	33 000	24 000	1392 mV	416 - 447
01110	14	36 000	30 000	1495 mV	448 - 479
01111	15	16 000	15 000	1598 mV	480 - 511
10000	16	15 000	16 000	1701 mV	512 - 543
10001	17	30 000	36 000	1804 mV	544 - 575
10010	18	24 000	33 000	1907 mV	576 - 607
10011	19	30 000	47 000	2010 mV	608 - 639
10100	20	10 000	18 000	2114 mV	640 - 671
10101	21	16 000	33 000	2217 mV	672 - 703
10110	22	20 000	47 000	2320 mV	704 - 735
10111	23	13 000	36 000	2423 mV	736 - 767
11000	24	10 000	33 000	2526 mV	768 - 799
11001	25	10 000	39 000	2626 mV	800 - 831
11010	26	3 300	16 000	2732 mV	832 - 863
11011	27	10 000	62 000	2835 mV	864 - 895
11100	28	3 300	27 000	2939 mV	896 - 927
11101	29	1 500	18 000	3046 mV	928 - 959
11110	30	1 500	30 000	3145 mV	960 - 991
11111	31	1 500	75 000	3248 mV	992 - 1024

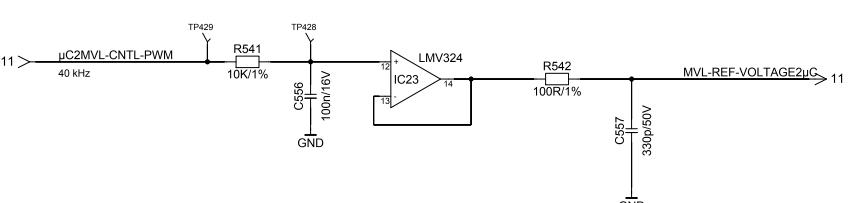
Digit value = 1024 * Rdown / (Rup+Rdown)

15W Solutions

V1222-207	01000 XXXXX	01100 XXXXX	00001 XXXXX	WMI02 MainPCB BR167 Ex. NFC DAG; D1-Sample
V1222-307	01000 XXXXX	00000 XXXXX	00001 XXXXX	WMI02 MainPCB BR205 Basic DAG; D1-Sample
V1222-407	01000 XXXXX	00100 XXXXX	00001 XXXXX	WMI02 MainPCB BR167 Basic DAG; D1-Sample
V1222-507	01000 XXXXX	01000 XXXXX	00001 XXXXX	WMI02 MainPCB BR167 LED DAG; D1-Sample
V1222-208	01001 XXXXX	01100 XXXXX	00001 XXXXX	WMI02 MainPCB BR167 Ex. NFC DAG; D2-Sample
V1222-308	01001 XXXXX	00000 XXXXX	00001 XXXXX	WMI02 MainPCB BR205 Basic DAG; D2-Sample
V1222-408	01001 XXXXX	00100 XXXXX	00001 XXXXX	WMI02 MainPCB BR167 Basic DAG; D2-Sample
V1222-508	01001 XXXXX	01000 XXXXX	00001 XXXXX	WMI02 MainPCB BR167 LED DAG; D2-Sample



Q-Factor



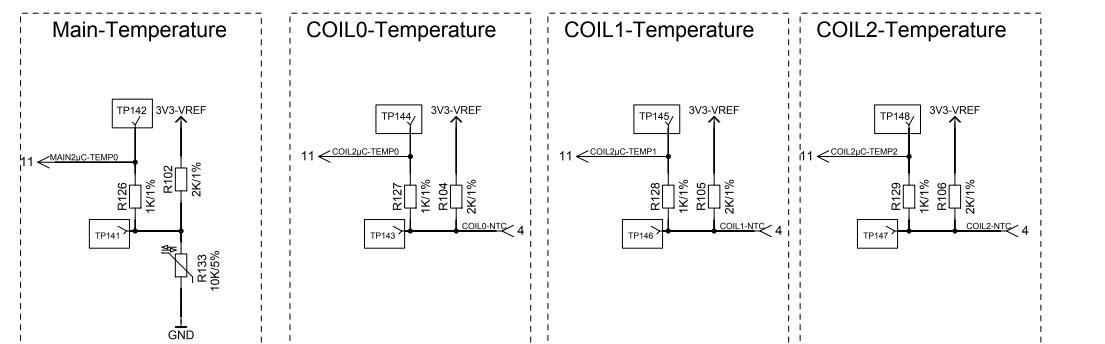
Schematic V1222-308/LP1449-8

nomatic V1222-308/LP1449-8

2 MainPCB BR205 Basic DAG

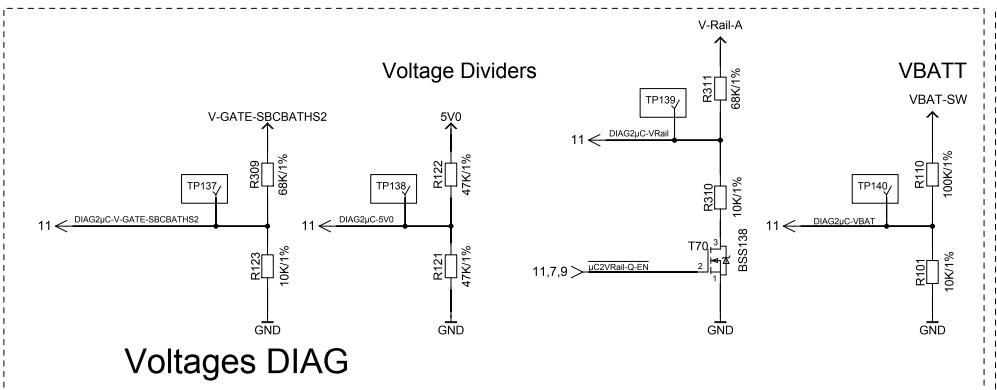
2189-222-308-10

MVI

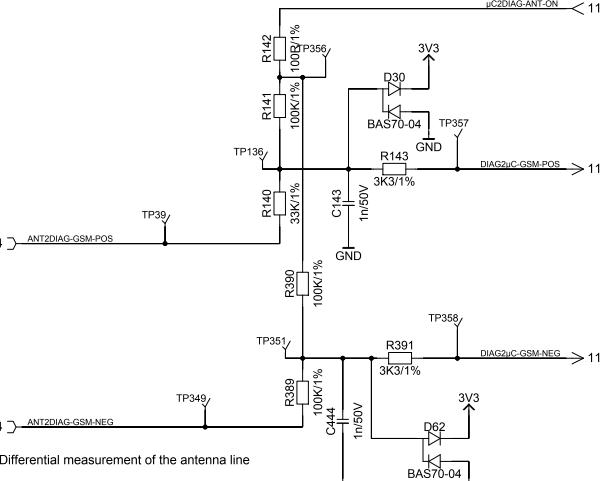


Temperature DIAG

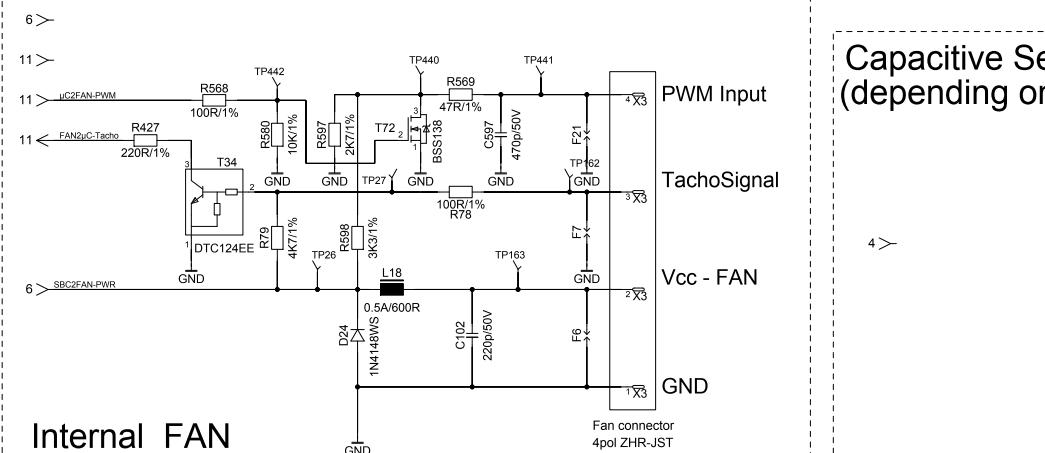
Neue TP müssen mit der PME abgeklärt werden !



Voltages DIAG



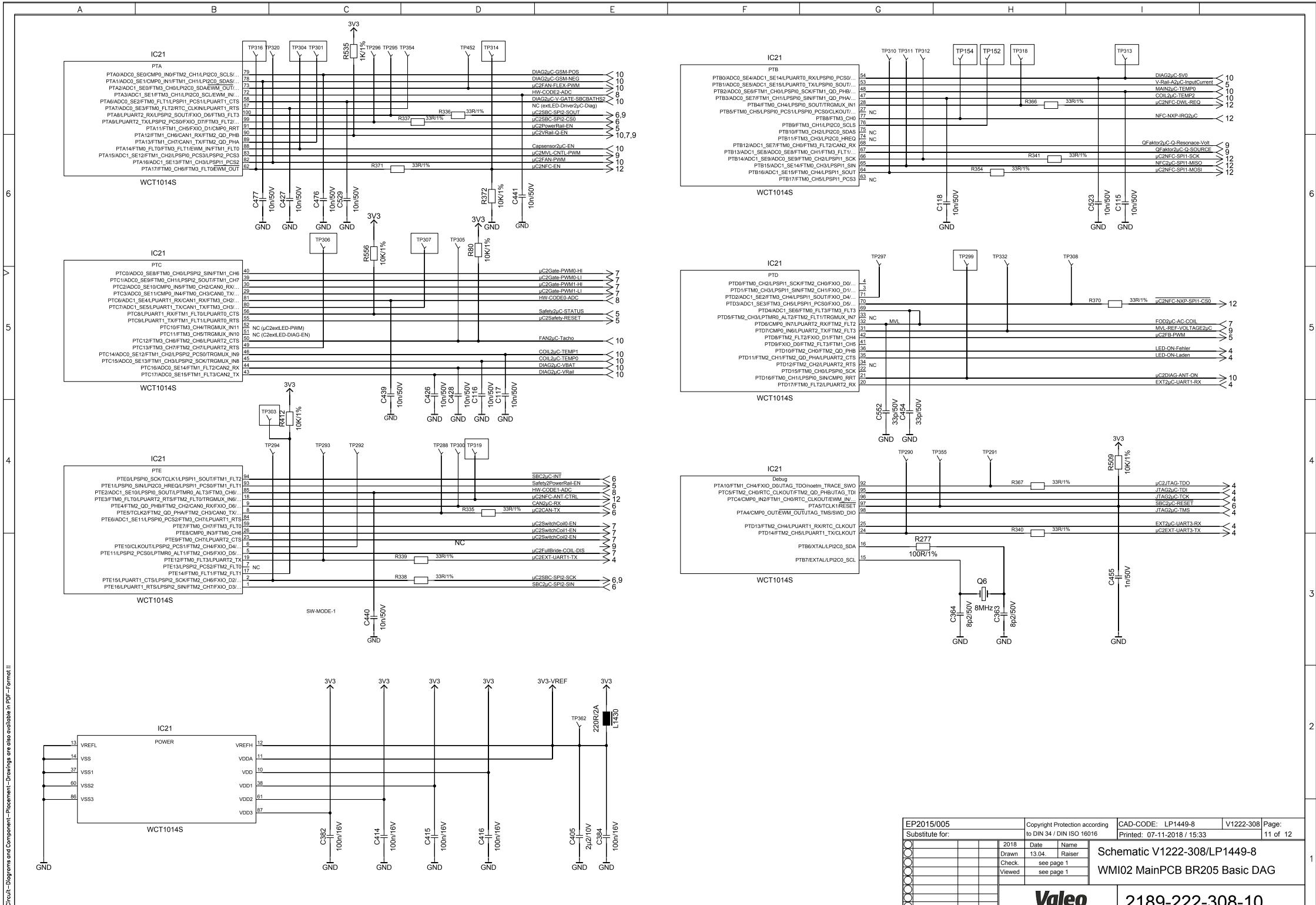
Differential measurement of the antenna line



Internal FAN



EP2015/005 Copyright Protection according to CAD-CODE: LP1449-8 V1222-308 Page:
 Substitute for: DIN 34 / DIN ISO 16016 Printed: 07-11-2018 / 15:33 10 of 12
 2018 Date Name Schematic V1222-308/LP1449-8
 Drawn 13.04. Raiser
 Check. see page 1
 Viewed see page 1 WMI02 MainPCB BR205 Basic DAG
 2189-222-308-10



NFC-Chip NXP Controller

