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HCS08-OSBDM+

Description V 0.4

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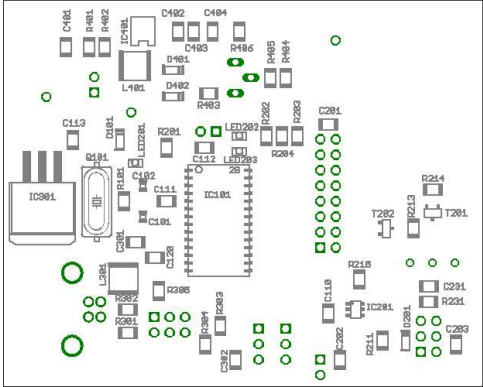
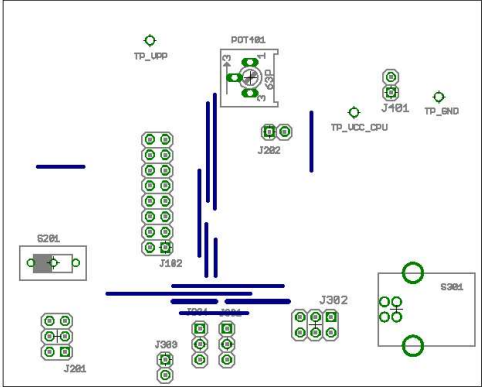
Shortform



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OSBDM+ Programmer for HCS08 and RS08 devices

 <p>Top</p>	 <p>Bottom</p>
<p>The board can be produced as a single sided PCB. In this case pieces of wire have to be put on the bottom of the PCB!</p>	
<p>Dimension: 79mm x 64mm</p>	
<ul style="list-style-type: none"> S201 Target power switch S301 USB connector J102 MON8 interface J201 BDM interface J301 5/3.3V internal voltage selector J302 Normal/ICP mode selector J303 External voltage input J304 internal/external voltage selector J401 VPP enable 	
<p style="text-align: right;">Version 0.3</p>	

Description / Beschreibung

This board is a improved reproduction of the original BDM from the Open Source BDM Group.
It works with HCS08 as well as RC08 devices.

It uses SMD elements since the micro controller and the level shifters are available only in this technology. We have tried to create a simple layout with EAGLE and we also have chosen elements witch easy to assemble.

The board can be produced As a single sided PCB. In this case pieces of wire have to be put on the PCB in place of the missing connections.

Be sure to program the JB16 device with the right version of firmware!

Dieser Print ist eine verbesserte Version des original BDM der Open Source BDM Group.

Es ist für HCS08 und RC08 Prozessoeren geeignet.

Es werden SMD Elemente verwendet, da der Mikrocontroller und die Lever-Shifter nur in dieser Technologie erhältlich sind. Wir haben versucht, ein einfaches Lauyot mit EAGLE zu kreieren. Zudem werden nur relativ einfach zu handhabende Elemente verwendet.

Der Print kann als einseitige Platine hergestellt werden. In diesem Fall sind auf der Platine die entsprechenden Drahtbrücken einzusetzen.

Bitte programmieren Sie den JB16 Mikrocontroller mit der entsprechenden Firmware!

Pinout / Steckerbelegung

USB Connector / USB Stecker

S301

1	+VUSB
2	D+
3	D-
4	GND

BDM Connector / BDM Stecker

J201

1	BDM	2	GND
3	NC	4	RST
5	NC	6	BMD_PWR

MON8 Connector / MON8 Stecker

J102 (MON8)

1	--	2	GND
3	--	4	/RESET
5	--	6	/IRQ
7	--	8	PE3
9	--	10	PA0
11	--	12	PA1
13	OSC1	14	PA2
15	+5V	16	PA3

BDM Power / BDM Speisung

J301

Internal power (5V) from USB bus
Interne Speisung (5V) vom USB-Bus

1	2	3
---	---	---

No internal power
Keine interne Speisung

1	2	3
---	---	---

Internal power 3.3V via IC301
Interne Speisung 3,3V via IC301

1	2	3
---	---	---

J303

1	+1.8..5V
2	GND

J304

Internal power (5V or 3.3V)
Interne Speisung (5V oder 3,3V)

1	2	3
---	---	---

Level shifter powered by the target (normal mode)
Spannungs-Anpassung erfolgt via Ziel-System (normal)

1	2	3
---	---	---

External power
Externe Speisung

1	2	3
---	---	---

USB data / USB Datenleitungen

J302

Normal
Normal

5	3	1
6	4	2

ICP mode
ICP mode

5	3	1
6	4	2

Programming via MON08 (no jumper)
Programmierung mit MON08 (keine Jumper)

5	3	1
6	4	2

VPP / Programmier-Spannung

J401

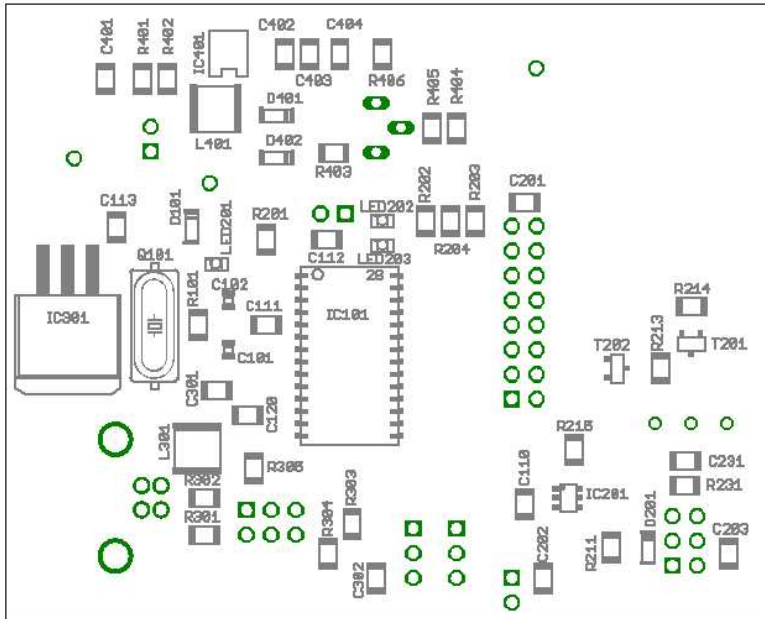
Enable
Freigegeben

1	2
---	---

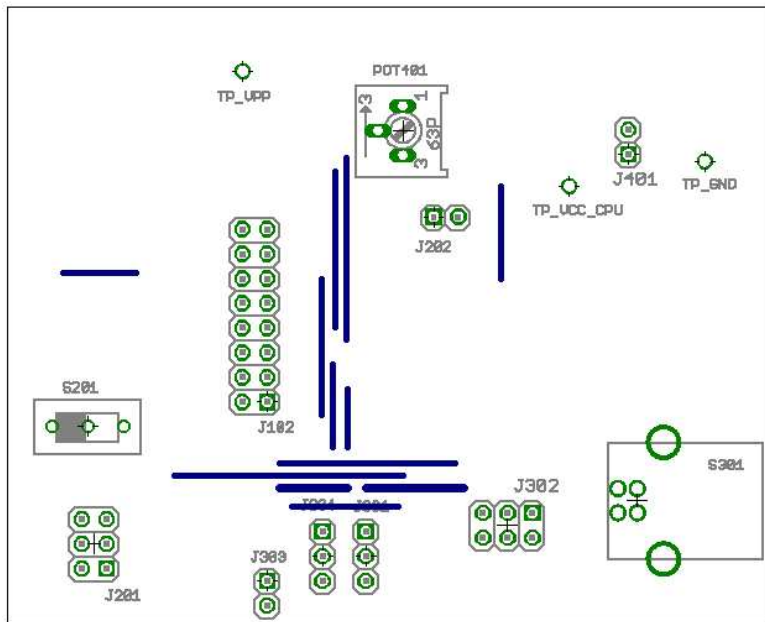
Disable
Ausgeschaltet

1	2
---	---

Component placing / Bestückungsplan



Top



Bottom

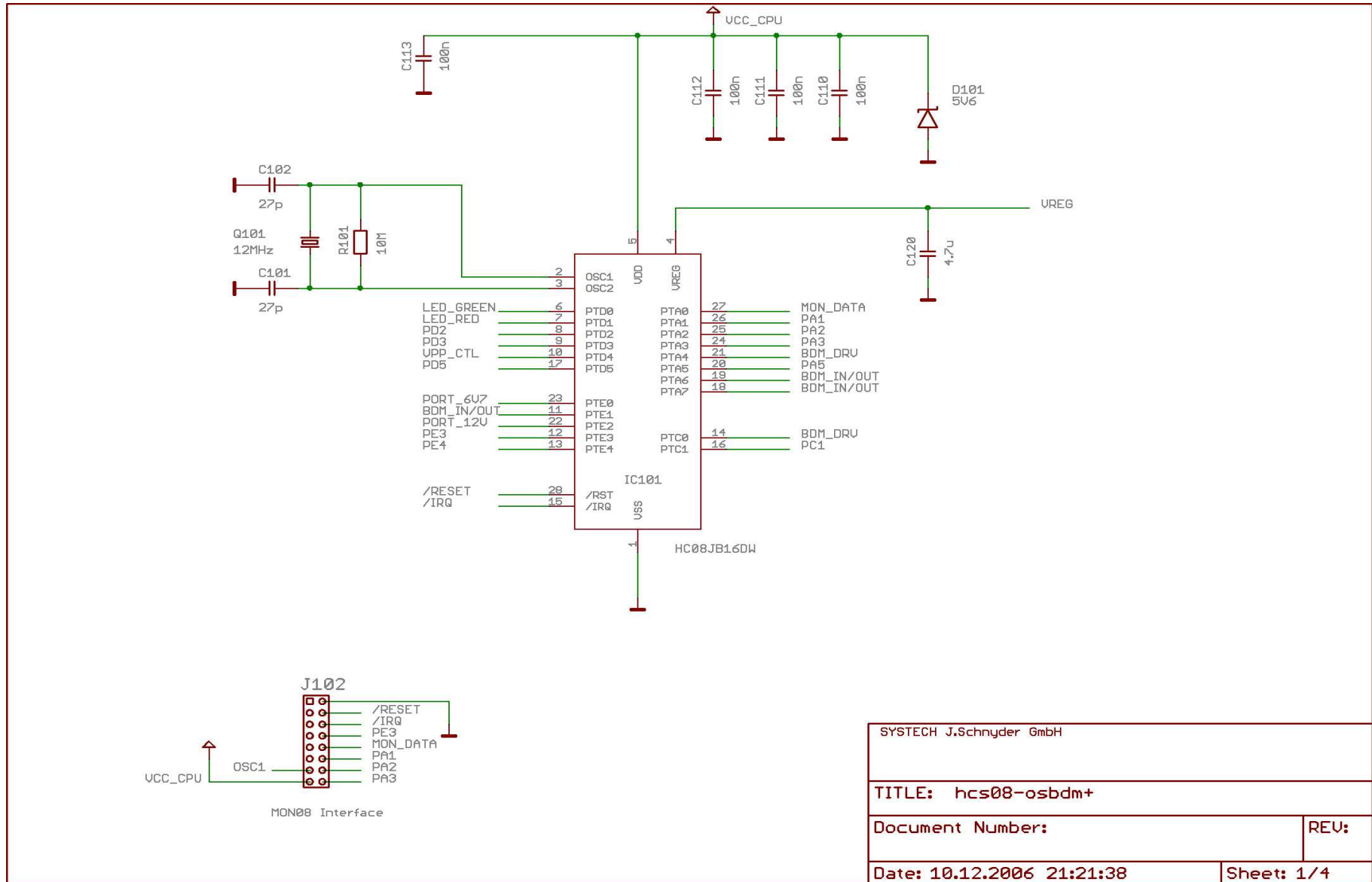
BOM / Stückliste

Name	Type	Value	Case	Distrelec	Farnell	Digikey	Other	Remarks
C101	C-805-22P	22P	805	831416				
C102	C-805-22P	22P	805	831416				
C110	C-1206-100N	100N	1206	831546				
C111	C-1206-100N	100N	1206	831546				
C112	C-1206-100N	100N	1206	831546				
C113	C-1206-100N	100N	1206	831546				
C120	C-1206-4U7-50V	4U7-50V	1206	823525				
C201	C-1206-4U7-50V	4U7-50V	1206	823525				
C202	C-1206-4U7-50V	4U7-50V	1206	823525				
C203	C-1206-1N	1N	1206	831522				
C231	C-1206-1U	1U	1206	830028				
C301	C-1206-100N	100N	1206	831546				
C302	C-1206-100N	100N	1206	831546				
C401	C-1206-4U7-50V	4U7-50V	1206	823525				
C402	C-1206-470P	470P	1206	831504				
C403	C-1206-4U7-50V	4U7-50V	1206	823525				
C404	C-1206-100N	100N	1206	831546				
D101	ZMM5V6	5V6	MM	600808				
D201	TMMBAT43		MM	600309				
D401	TMMBAT43		MM	600309				
D402	LL4148		MM	601496				
IC101	MC68HC908JB16DW		SO28W				Freescall	
IC201	SN74LVC1T45DBV		SOT23/6		9592725			
IC301	LM1086CS-3.3		TO263-3	641023				
IC401	KA34063AD		SO8		3458052			

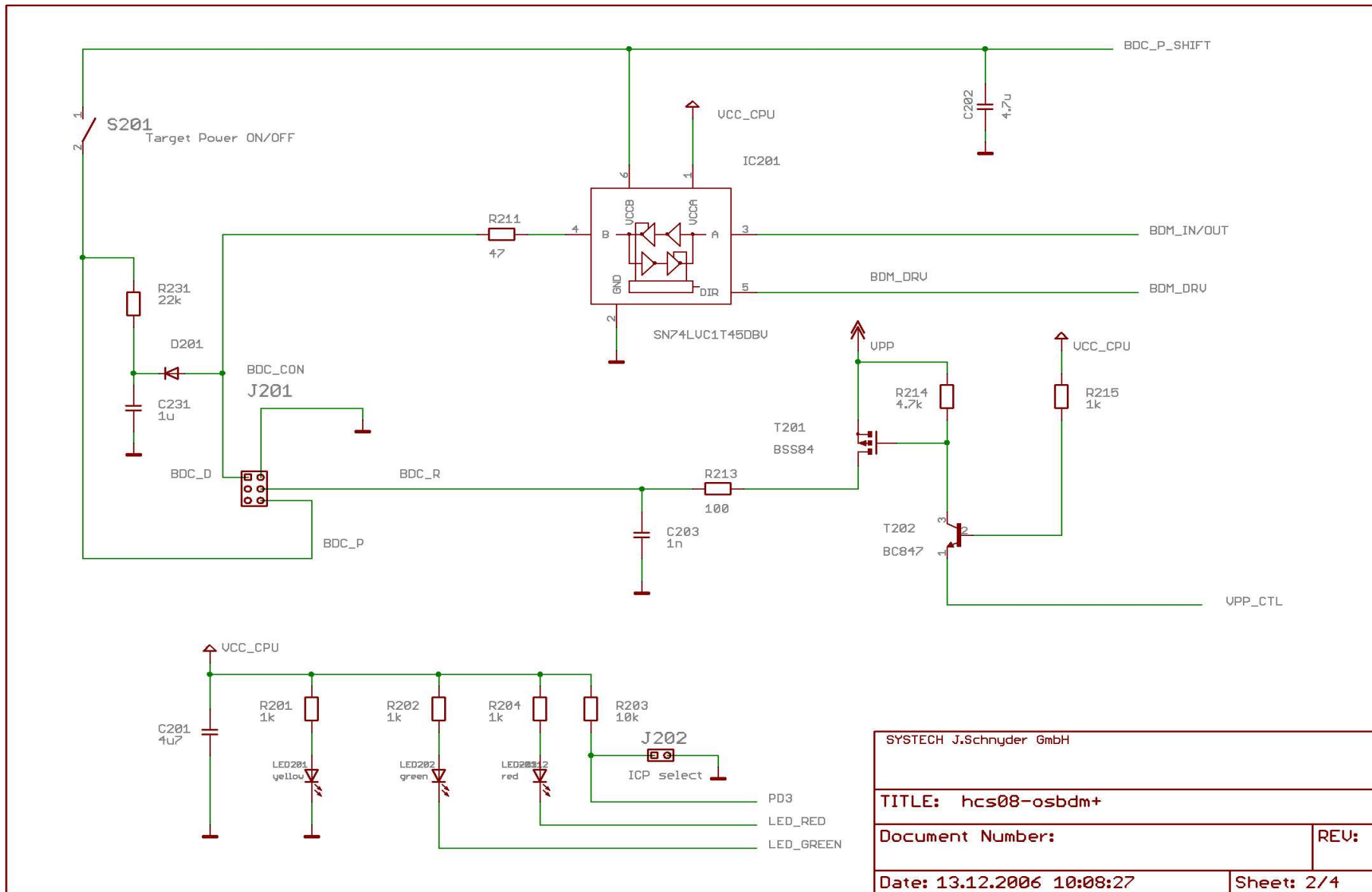
J102	ST-2X8			122512				1/12 of 122106
J201	ST-2X3			122106/12				1/18 of 122096
J202	ST-1X2			122096/18				1/12 of 122096
J301	ST-1X3			122096/12				1/12 of 122106
J302	ST-2X3			122106/12				1/18 of 122096
J303	ST-1X2			122096/18				1/12 of 122096
J304	ST-1X3			122096/12				1/18 of 122096
J401	ST-1X2			122096/18				
L301	L-2220-47U	47U	2220		158770			
L401	L-2220-1000U	1000U	2220		158914			
LED201	FY1112H		1112	253194				
LED202	FG1112H		1112	253193				
LED203	FR1112H		1112	253192				
POT401	POT-63P-20K	20K	63P	740510				
Q101	Q-SM49-12MHZ	12MHz	SM49	644816				
R101	R-1206-10M	10M	1206	714981				
R201	R-1206-1K	1K	1206	714973				
R202	R-1206-1K	1K	1206	714973				
R203	R-1206-10K	10K	1206	714980				
R204	R-1206-1K	1K	1206	714973				
R211	R-1206-47	47	1206	715029				
R213	R-1206-100	100	1206	714984				
R214	R-1206-4K7	4K7	1206	715027				
R215	R-1206-1K	1K	1206	714973				
R231	R-1206-22K	22K	1206	715004				
R301	R-1206-10	10	1206	714982				
R302	R-1206-10	10	1206	714982				

R303	R-1206-470K	470K	1206	711324				
R304	R-1206-470K	470K	1206	711324				
R305	R-1206-1K5	1K5	1206	714976				
R401	R-1206-3R3	3R3	1206	711265				
R402	R-1206-560	560	1206	715038				
R403	R-1206-82K	82K	1206	715050				
R404	R-1206-20K	20K	1206	715002				
R405	R-1206-10K	10K	1206	714980				
R406	R-1206-4K7	4K7	1206	715027				
S201	SWITCH-SLG1201		SLG1201	203082				
S301	ST-USB-B			124164				
T201	BSS84		SOT23	610533				
T202	BC847		SOT23	610379				
PCB	P-HCS-OSBDM08+							

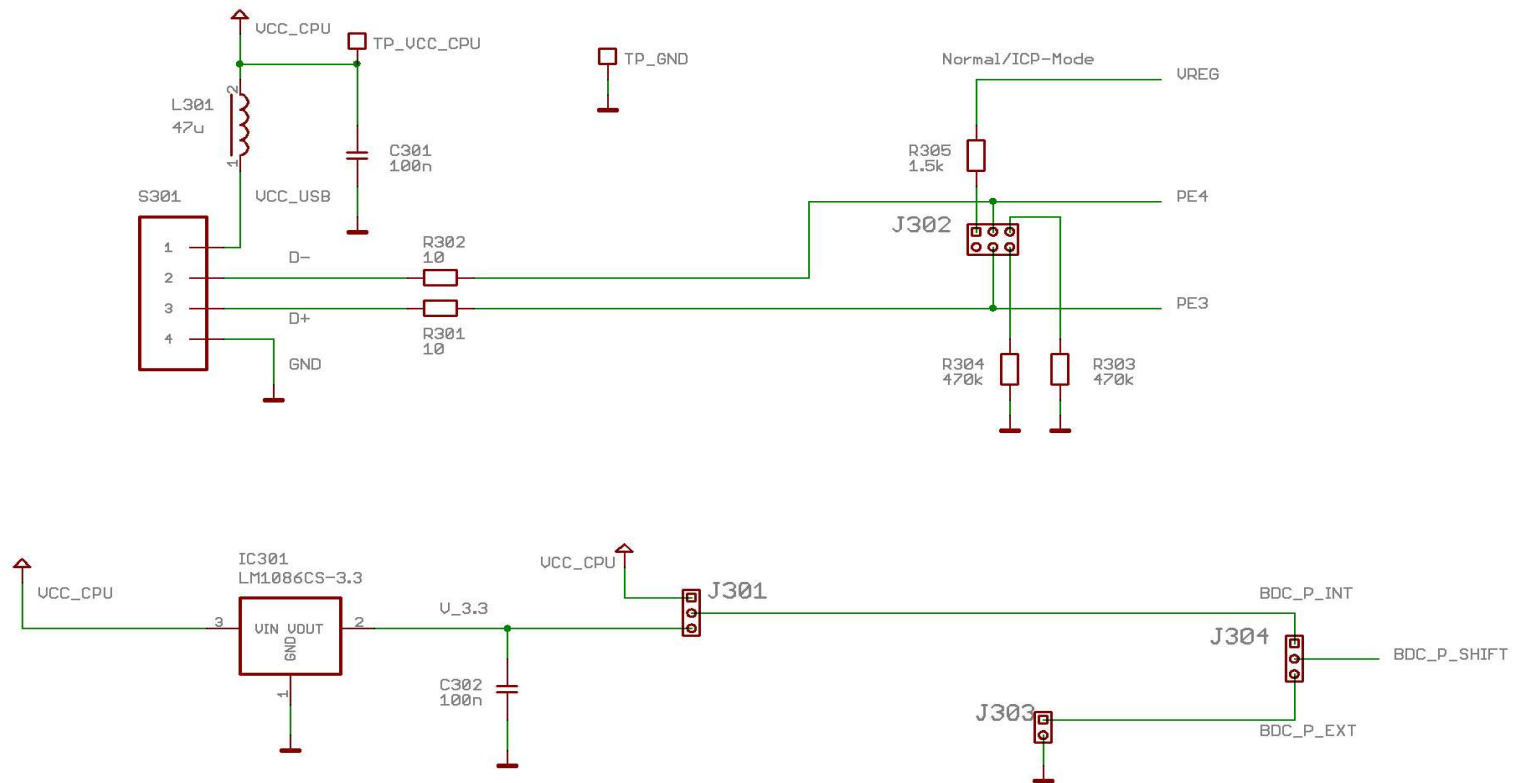
Schematics / Schemata



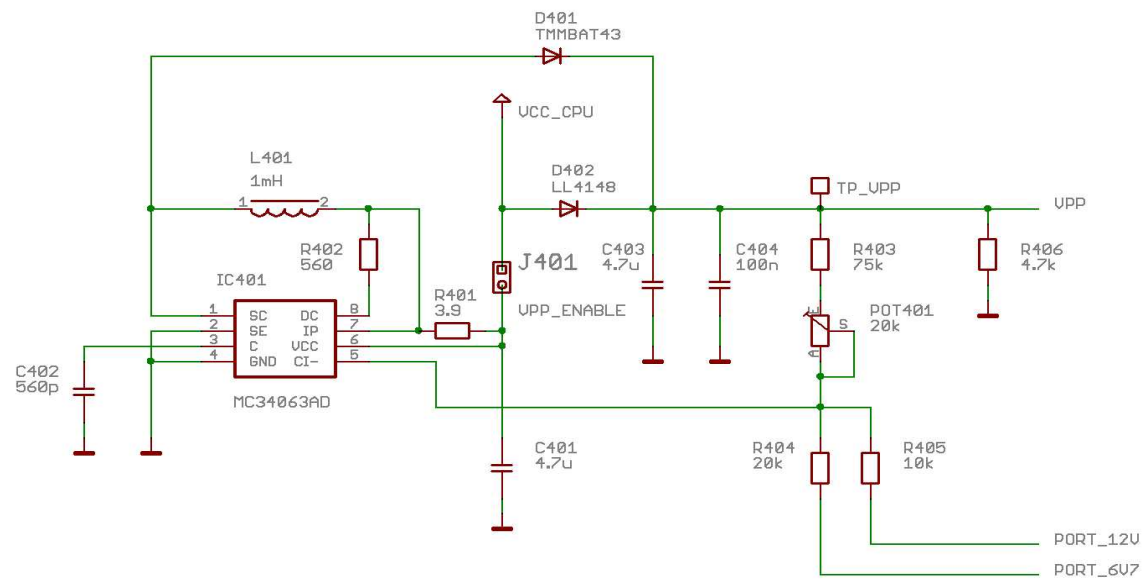
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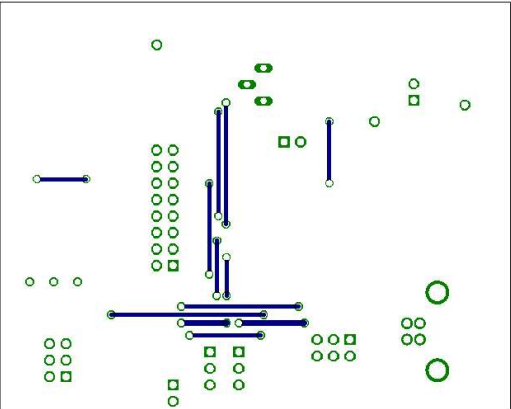
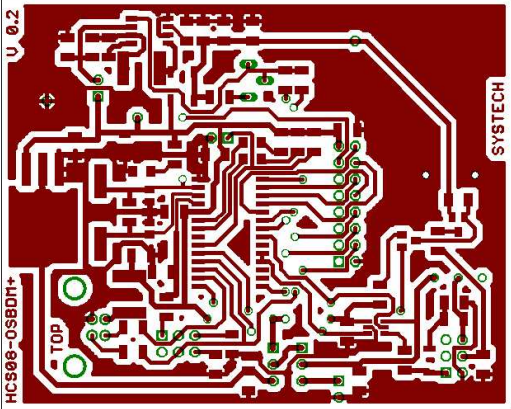


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