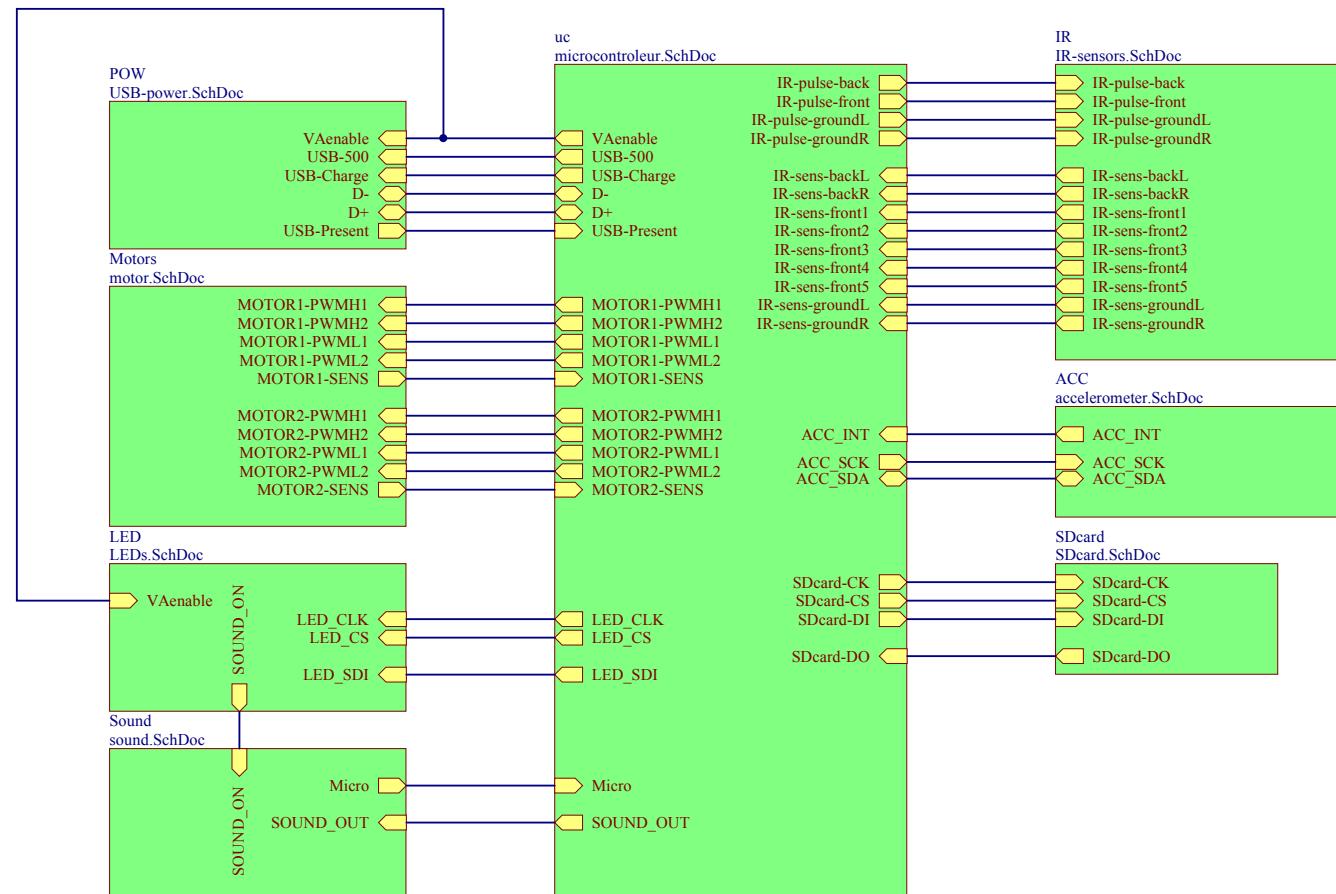


A



B

A

B

C

C

D

D

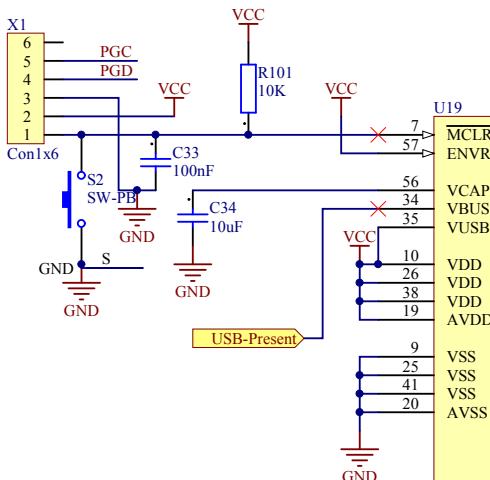
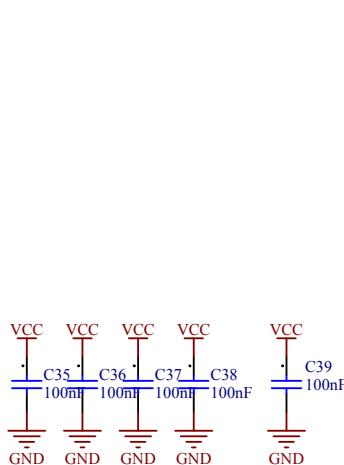
Project **thymio2-main.PrjPCB**Part **Thymio2
PCB principal**File : **thymio2-main.SchDoc**Date:
15.02.2011
01:34:37Michael Bonani
STI-IMT-LSRO1
EPFL
CH-1015 LAUSANNE

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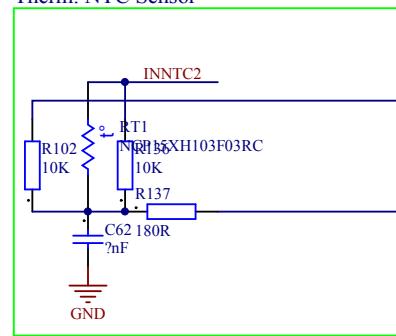
FÉDÉRALE DE LAUSANNE

Revision: A

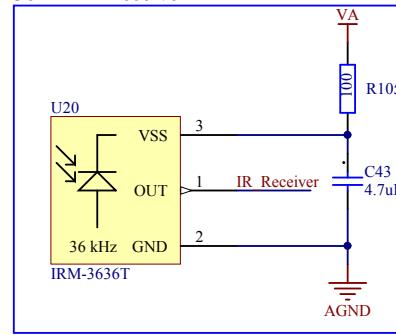
Page 1 de 9

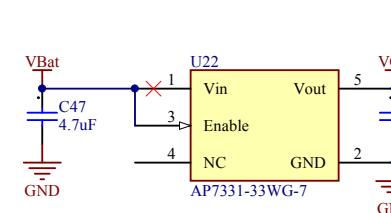
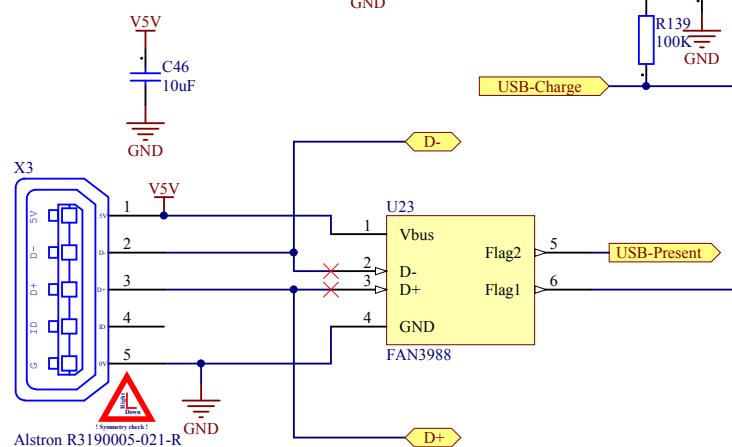
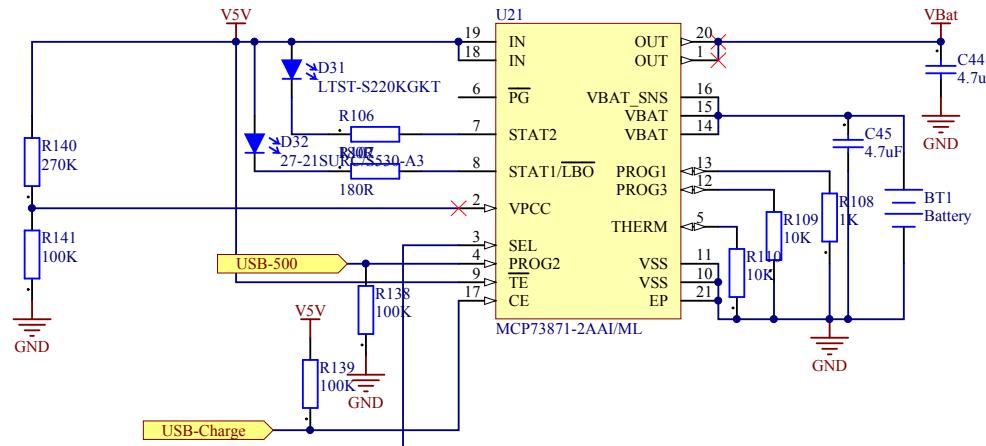
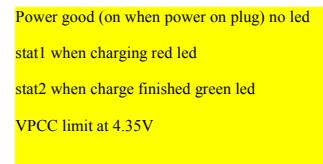


Therm. NTC Sensor

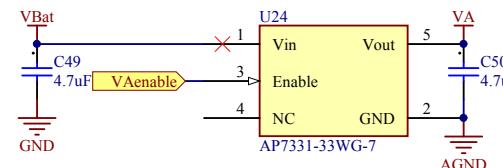


36 kHz IR receiver

Project *thymio2-main.PrcPCB*Part *Thymio2 PCB principal*File: *microcontroleur.SchDoc*Date: 15.02.2011
01:34:38Revision: A
Michael Bonani
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EPFL
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300mA max
 1x pic24F = 24 mA
 13x led 20mA = 260mA
 1 MMA7660 = 47uA
 3 shift register 160uA = 0.48mA



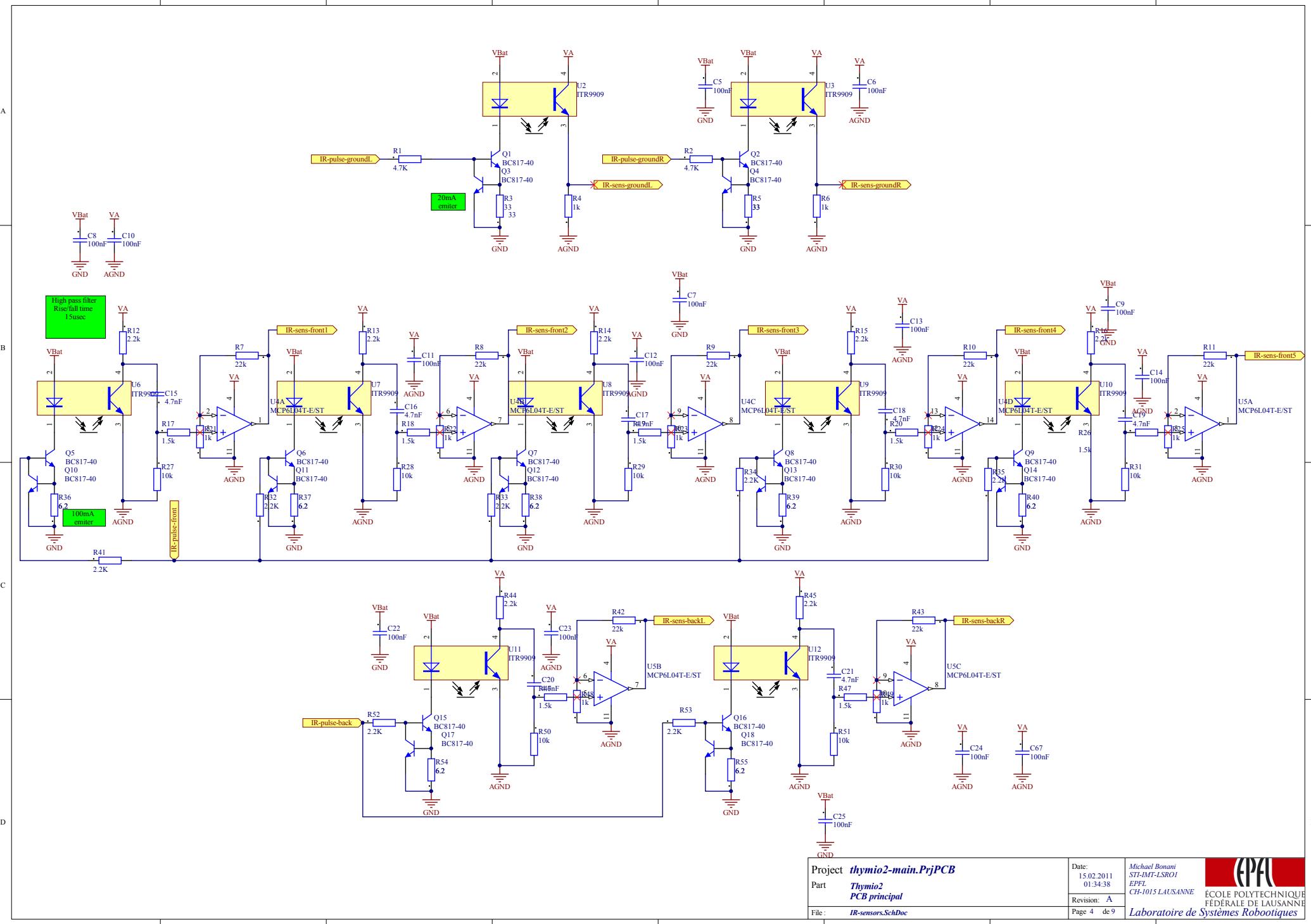
AGND : Analog Ground GND : Logical Ground

Project ***thymio2-main.PrjPCB***
Part ***Thymio2***
 PCB principal
File : ***USB-power.SchDoc***

2011
13:38
Michael Bonani
STI-IMT-LSRO1
EPFL
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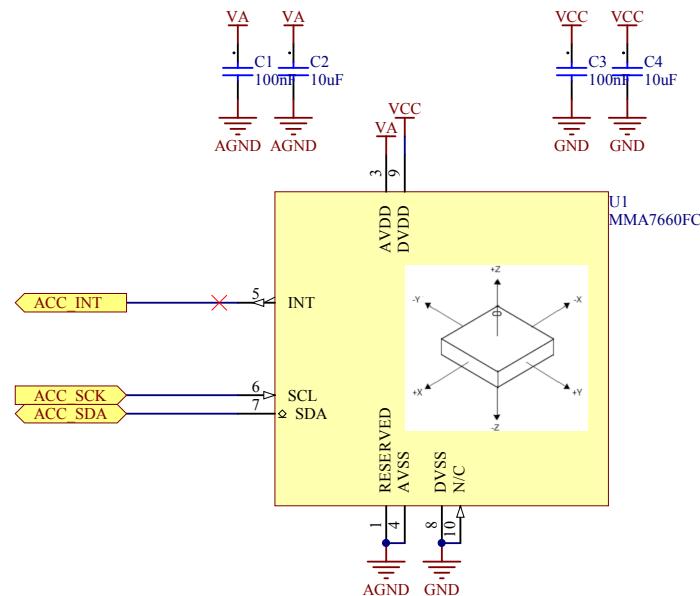


A
de 9
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A

A



B

B

C

C

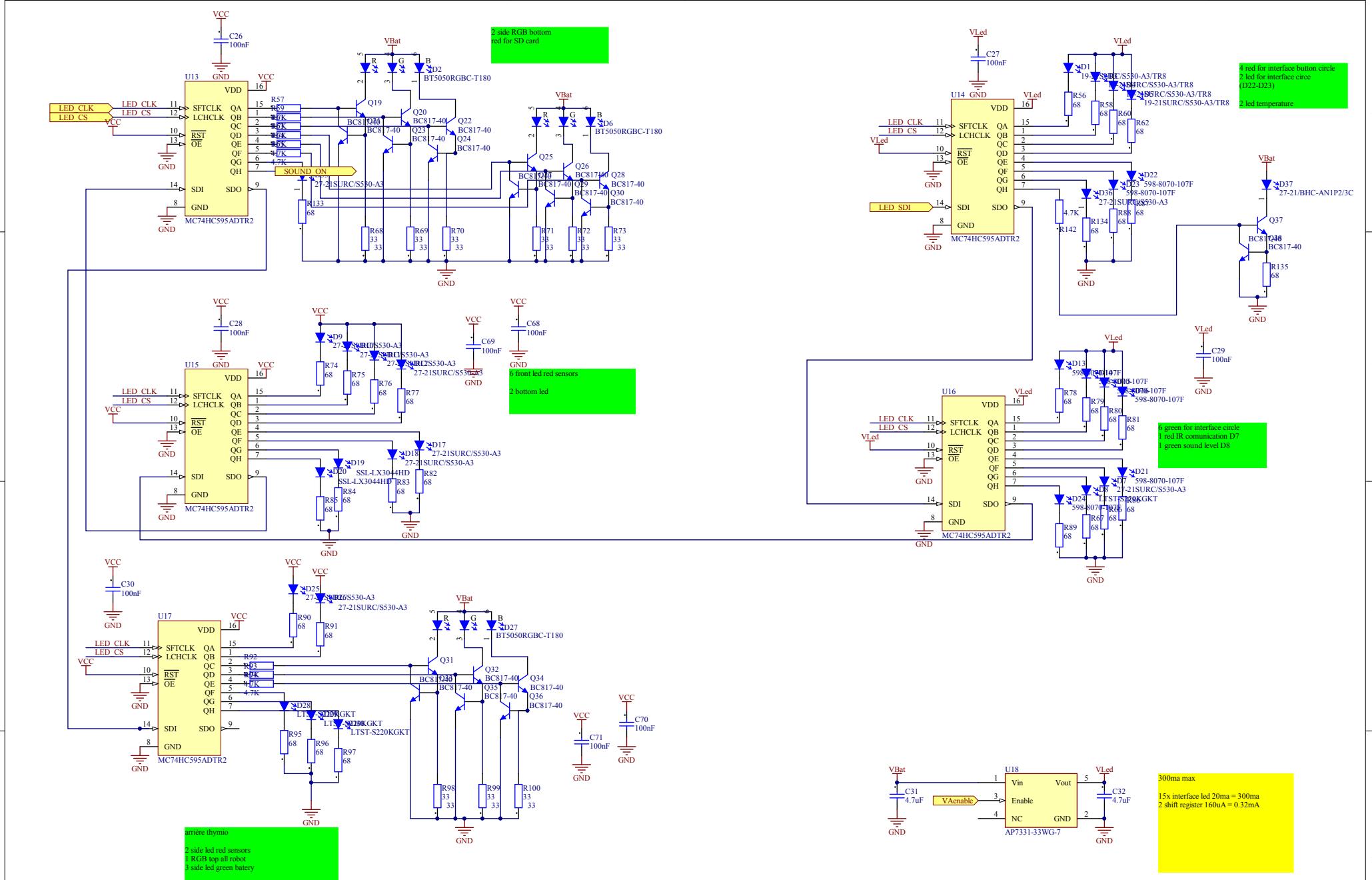
D

D

Project *thymio2-main.PrjPCB*Part *Thymio2 PCB principal*File : *accelerometer.SchDoc*Date:
15.02.2011
01:34:38Michael Bonani
STI-IMT-LSRO1
EPFL
*

*

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Project	thymio2-main.PrjPCB
Part	Thymio2 PCB principal
File :	LEDs.SchDoc

Date: 15.02.2011
01:34:38
Revision: *
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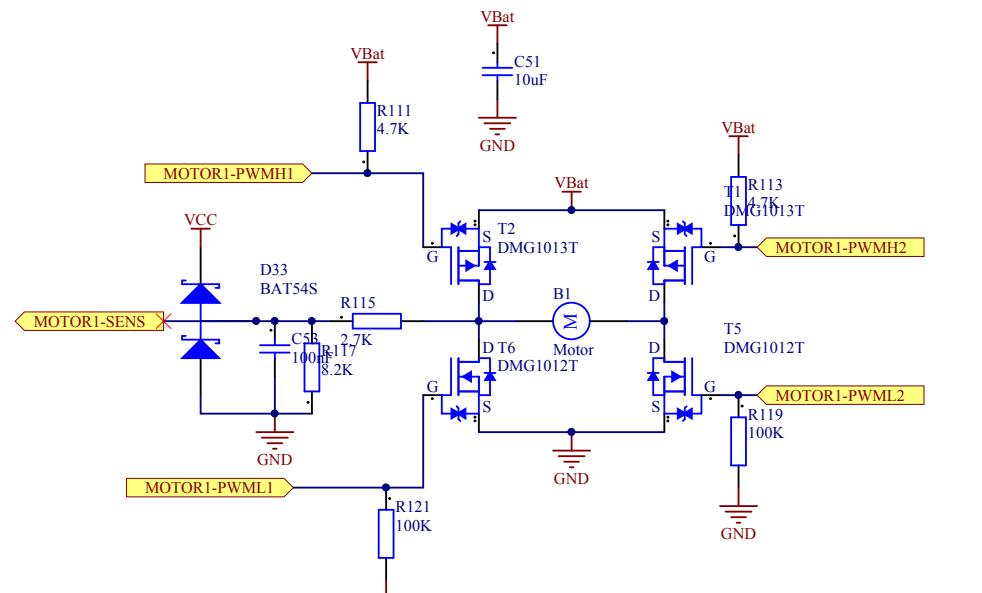
Michael Bonani
STI-JMT-LSROJ
EPFL
*
*
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FÉDÉRALE DE LAUSANNE



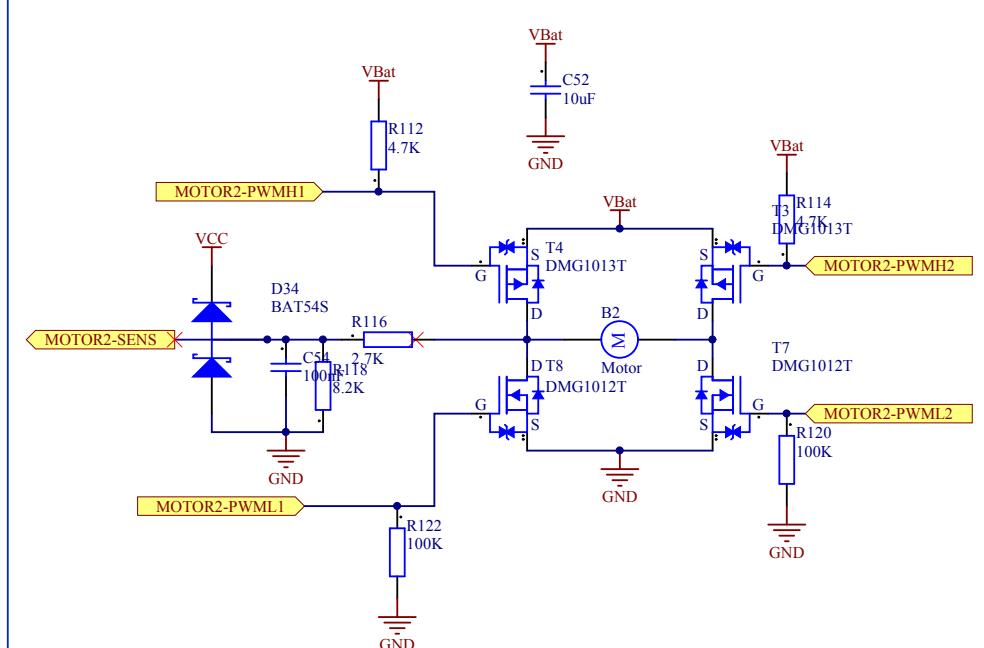
A

A

Motor Left



Motor Right



D

D

Project *thymio2-main.PrjPCB*Part *Thymio2*
*PCB principal*File : *motor.SchDoc*Date:
15.02.2011
01:34:38

Revision: A

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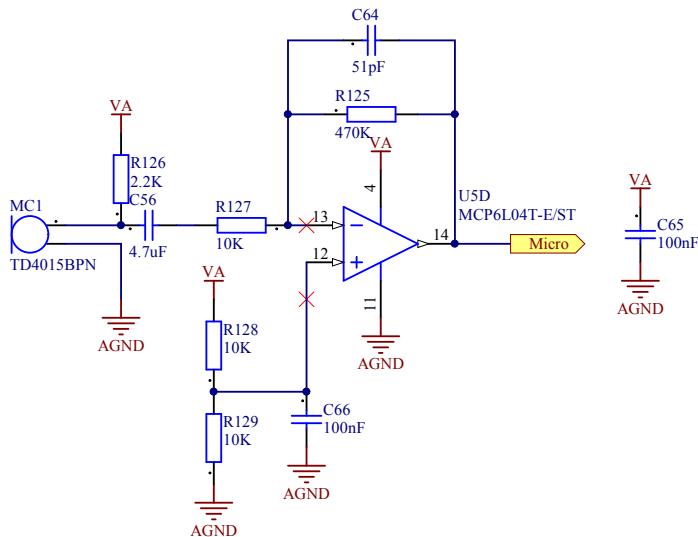


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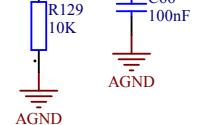
Laboratoire de Systèmes Roboوتiques

A



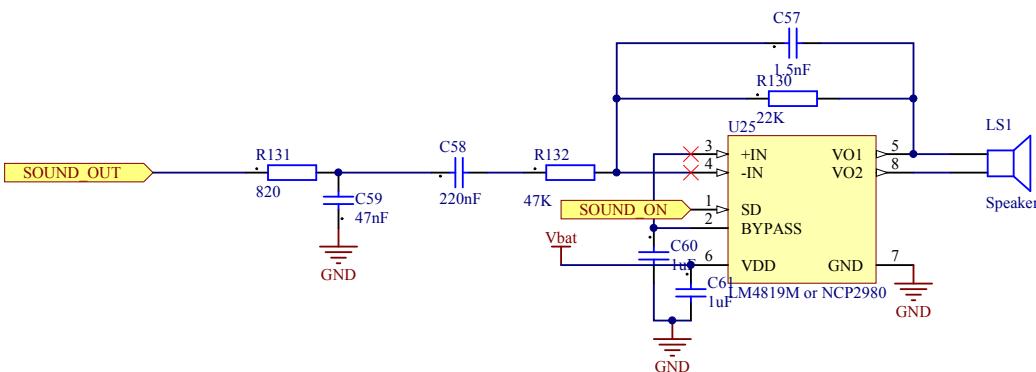
A

B



B

C



C

D

Project *thymio2-main.PrjPCB*Part
Line 1 of project part
Line 2 of project partFile : *sound.SchDoc*Date:
15.02.2011
01:34:39Daniel Burnier
STI-IMT-LSRO1
EPFL
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A

A

B

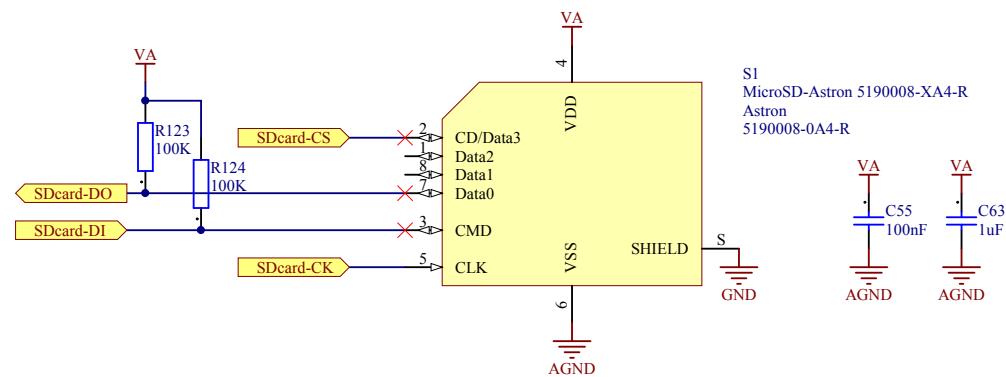
B

C

C

D

D



Quantity	Comment	LibRef	Designator	Description	Footprint	Supplier	Supplier Nr.
2	Motor	Motor	B1, B2	Motor, General Kind	RBS-10.5		
1	Battery	Battery	BAT1	Multicell Battery	BAT-2		
			C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C20, C23, C24, C25, C28, C29, C30, C33, C35, C36, C37, C38, C39, C50, C54, C55, C65, C66, C67, C68, C69, C70, C71	100nF[1][J]0603[1][1]	Capacitor	RESC1608X06L	Farnell 1288255
37	100nF						
6	10uF						
7	7.7uF						
10	4.7uF						
2	18uF						
1	1.5uF						
4	10uF[1][J]0603[1][1]						
12	220nF						
1	47nF						
3	1uF						
1	7nF						
4	15pF						
4	19-21SURC S530-A3/ TR8	LED RGB SMD	D1, D3, D4, D5	SMD Red 0603 2V@20ma 56 mcd	DIOD1608008N		
3	BT5050RGBC-T180		D2, D6, D7	0.027/20ma	LEDSMD5		
12	27-21SURC S530-A3	LED	D7, D9, D11, D12, D17, D18, D25, D28, D32, D35, D36	SDM Green led right angle mount 2V@20ma 57mcd	27-21 Everlight		
5	LTS7-S220KGKT	LED	D8, D28, D29, D30, D31	SDM Green led right angle mount 2V@20ma 35mcd	LTS7ON-sideview		
6	6588-8709-107F	LED	D13, D14, D15, D16, D21, D22, D23, D24	SMD Green 0603 2V@20ma 20mcd	DIOD1608008N		
2	SSL-LX044HD	LED	D19, D20	Red led 2V@20ma 57mcd	Led_TH_3mm_20mm		
2	BAT54S	BAT54S	D33, D34	Schottky Barrier Double Diode	SOT23_N		
1	27-21/BHC-AN1P2/3C	LED	D37	SMD blue led right angle mount 3.3V@20ma 28mcd	27-21 Everlight Blue		
1	Speaker	Speaker	LS1	Loudspeaker	PIN2		
1	TD4015BN	Micro1	MC1	Omni-directional Back Electret Condenser Microphone	MICRO_PANASONIC_WM-64PN		
			C1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38	NPN General-purpose Transistor	SOT23_N		
38	BC817-40	BC817-40	R1, R2, R57, R59, R61, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R103, R106, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135	Resistor	RESC1608X06L	Distrelec	715604
18	4.7K		R1, R6, R12, R13, R14, R16, R32, R33, R34, R35, R41, R44, R45, R52, R53, R126	120, Resistor	RESC1608X06L	Distrelec	715588
11	33		R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R133, R134, R135	120, Resistor	RESC1608X06L	Distrelec	715620
15	2.2k		R12, R13, R14, R16, R32, R33, R34, R35, R41, R44, R45, R52, R53, R126	120, Resistor	RESC1608X06L	Distrelec	715596
7	1.5k		R17, R18, R19, R20, R26, R46, R47	120, Resistor	RESC1608X06L	Distrelec	715612, 8330399
15	10k		R27, R28, R29, R30, R31, R50, R51, R101, R102, R109, R110, R127, R128, R129, R138	120, Resistor	RESC1608X06L	Distrelec, Farnell	
7	8.2	RES	R36, R37, R38, R39, R40, R54, R55	120, Resistor	RESC1608X06L		
			R56, R58, R60, R62, R66, R67, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R133, R134, R135	Resistor	RESC1608X06N	Distrelec	715632
30	68		R106, R107, R137	Resistor	RESC1608X06L	Distrelec	715570
1	100		R115, R116	Resistor	RESC1608X06L	Distrelec	715596
3	180R		R117, R118	Resistor	RESC1608X06L	Distrelec	715636, 8331565
2	2.7K		R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135	Resistor	RESC1608X06L	Distrelec	715612, 715636
9	100K		R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135	Resistor	RESC1608X06L	Distrelec	715620
1	470K		R125	Resistor	RESC1608X06L	Distrelec	715652
1	820		R131	Resistor	RESC1608X06L	Distrelec	715620
1	147K		R132	Resistor	RESC1608X06L	Distrelec	715620
1	270K		R140	Resistor	RESC1608X06L	Farnell	8330941
1	NCP15KH103F03RC	Res Thermal	R1T	Thermistor - NTC 10K Ohm 1% 0402	RESC1005X04L		
			SD Card Micro-ASTRON 5190008-XA4-R	Micro-SD Card connector 5190008-XA4-R	Atron 5190008-XA4-R		
1	MicroSD-Astron 5190008-XA4-R		S1				
1	SW-P8	SW-P8	S2	Switch	FSMRA2JH		
4	DMG1013T	DMG1013T	T1, T2, T3, T4	Transistor MOSFET 1x P 1n, P1n - 1n, 2x S, 3-D	SOT50P160X08-3N		
4	DMG1012T	DMG1012T	T5, T6, T7, T8	Transistor MOSFET 1x N, P1n - 1n, 2x S, 3-D	SOT50P160X08-3N		
1	MMA7660FC	MMA7660F	U1	MMA7660FC_XYZ_AXIS ACCELEROMETER 15.5 g	DFN50P300X300X100-12N		
2	ITR9909	ITR9909	U2	Everlight Opto Interrupter	ITR9909_LONG		
2	MCP8604T-E/ST	MCP8604T-E/ST	U4, U5	12bit ADC with Temperature Range, Tape and Reel	TSSOP-ST14_N		
7	ITR9909	ITR9909	U5, U7, U8, U9, U10, U11, U12	Everlight Opto Interrupter	ITR9909_EDGE		
5	MC74HC595ADTR2	MC74HC595ADTR2	TR2	8-Bit Serial-in/Parallel-out Shift Register with Latched 3-State Outputs	948F-01_N		
3	AP7331-33WG-7	AP7331	U18, U22, U24	Low Quiescent Current, Fast Transient LDO	SOT95P285X100-5N		
1	PIC24FJ64GB106I/PT	PIC24FJ64GB106I/PT	U19	General Purpose, 16 bit Flash Microcontroller, 16x16 ROM, 64x16 EEPROM, 4KB Flash, 16x16 SRAM, 64x16 TGP, Industrial Temperature	TQFP-PT84_N		
1	IRM4363T	TSOP2232	U20	IR Receiver Module (8 kHz) for Remote Control Systems	IR-receiver		
				Standby current limit, Sleep and Low Power Battery Charge Management Controller, 4.2V, 20-Pin QFN, Industrial Temperature	QFN-MIL20_N		
1	MCP73871-2AAI/ML	MCP73871-2AAI/ML	U21	User Charger and Over Voltage Protection	MLP_1.45x1mm		
1	FAN3988	FAN3988	U23	320mW Audio Power Amplifier with Shutdown Mode	MOPA_N		
1	LM4819M or NCP2980	LM4819M	U25				
1	Contx8	Contx8	X1	1 x 6 pins connector	TYCO 7-215079-6		
1	Contx8	Contx8	X2	1 x 6 pins connector	MHDRIX8		
1	Aletron R3190005-021-R	USB_MINIAB	X3	USB connector Micro-B	Aletron R3190005+21+		
1	B15-ABLS-8-82	HC49/4H_SMX	Y1	Surface Mount Quartz Crystal 8MHz	HC49/4H_SMX		

