

Project:	Kello.PrjPCB	Revision:	1.0
File:	Kello_uC.SchDoc	Sheet:	1
Variant:	Prototype	Total Sheet:	4
Author:	Krzysztof Belewicz	Modified:	2018-07-15

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1

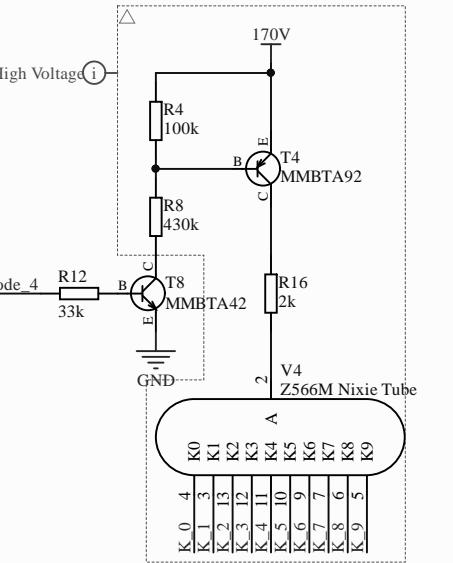
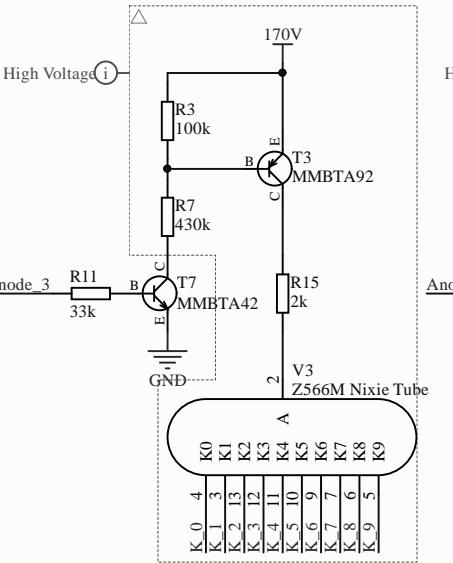
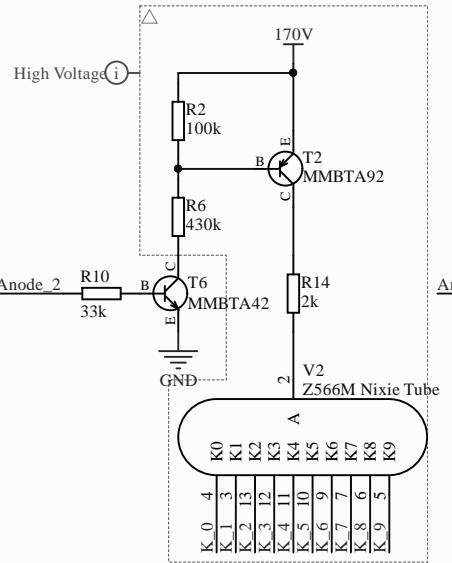
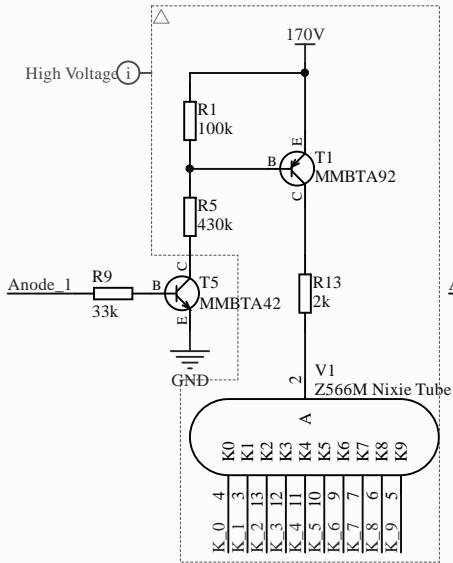
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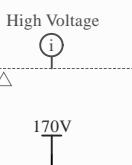
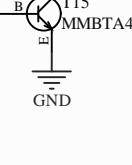
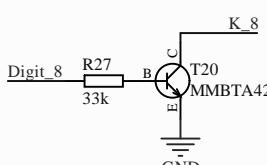
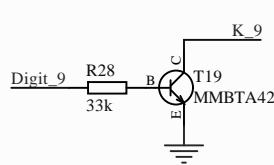
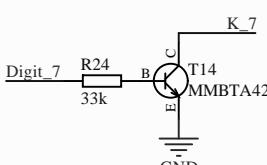
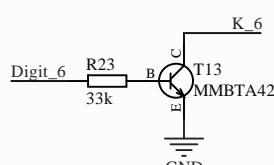
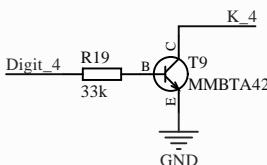
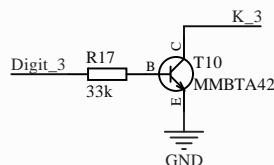
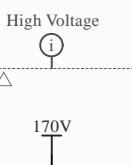
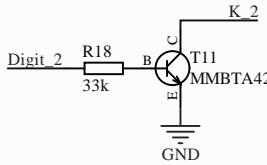
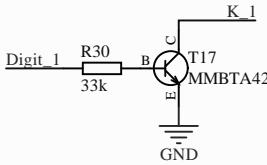
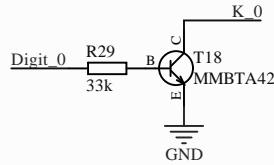
A

A



B

B



Project:	Kello.PjPCB	Revision:	1.0	
File:	Kello_Nixie.SchDoc	Sheet:	2	
Variant:	Prototype	Total Sheet:	4	
Author:	Krzysztof Belewicz	Modified:	2018-07-14	

1

2

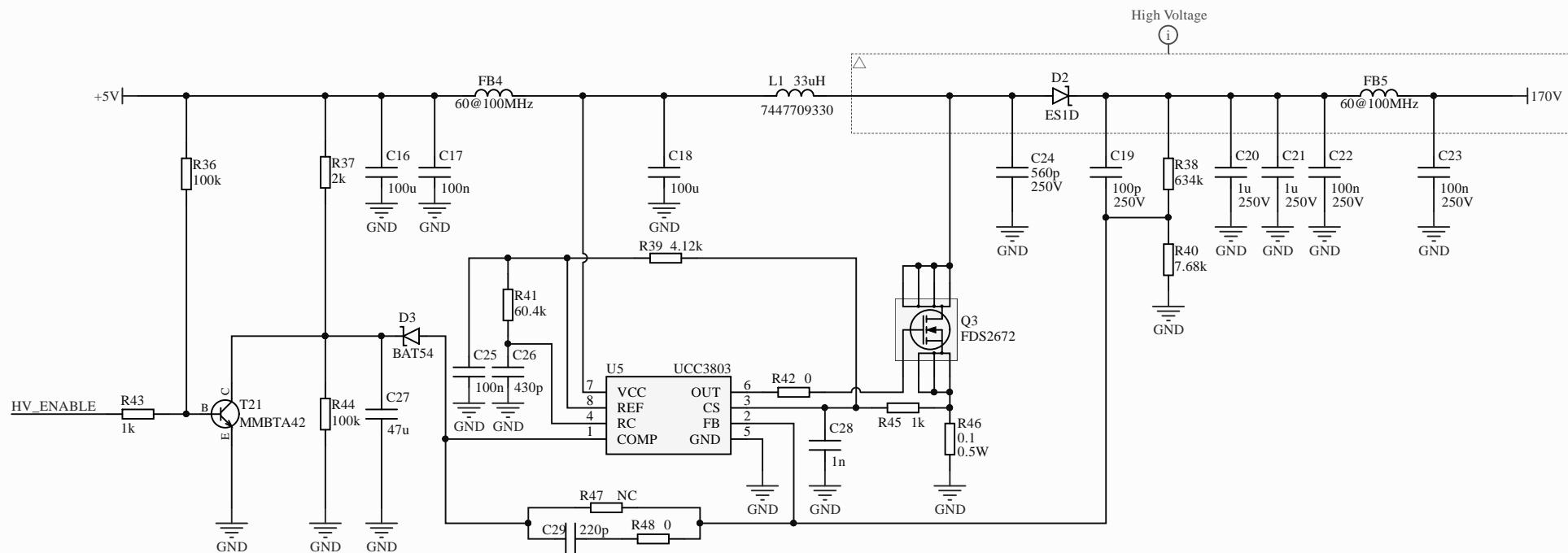
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4

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A

A



B

B

C

C

D

D

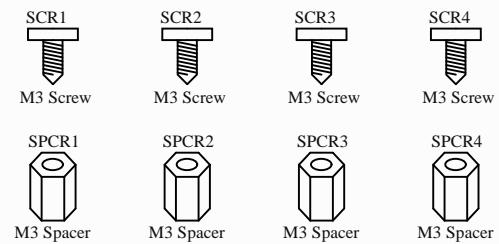
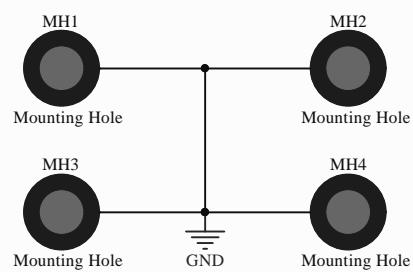
Project:	Kello.Pj PCB	Revision:	1.0	© ANNAC
File:	Kello_Nixie_PWR.SchDoc	Sheet:	3	
Variant:	Prototype	Total Sheet:	4	
Author:	Krzysztof Belewicz	Modified:	2018-07-12	

A

A

B

B



C

C

D

D

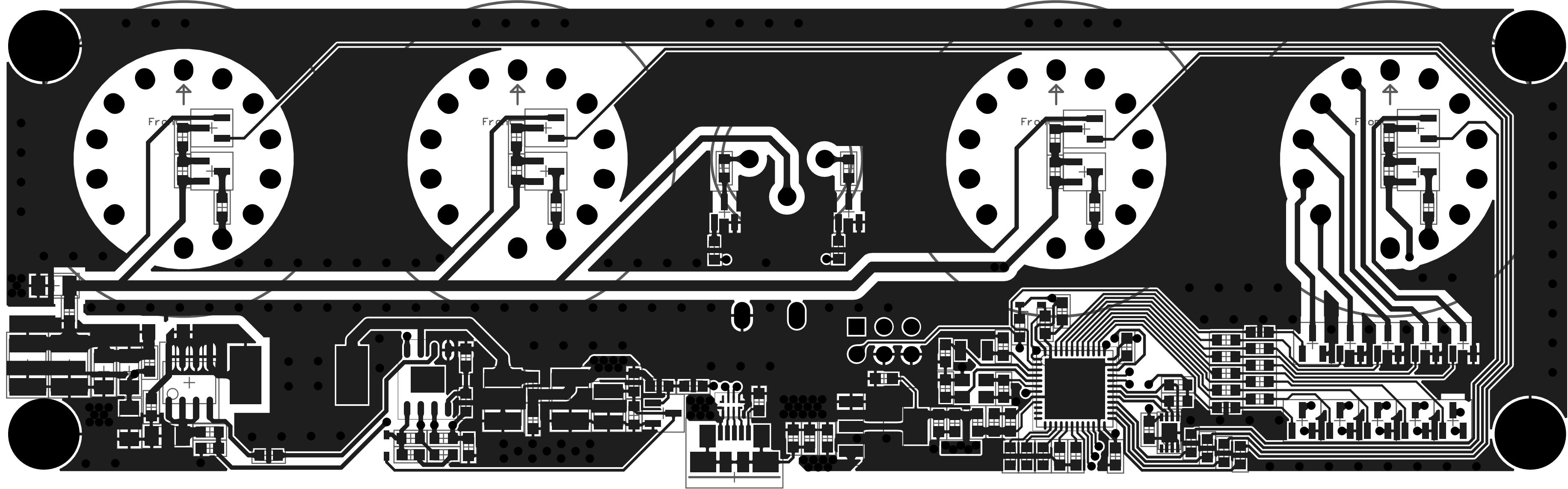
Project:	Kello.PjrPCB	Revision:	1.0
File:	Kello_Mechanical.SchDoc	Sheet:	4
Variant:	Prototype	Total Sheet:	4
Author:	Krzysztof Belewicz	Modified:	2018-07-12

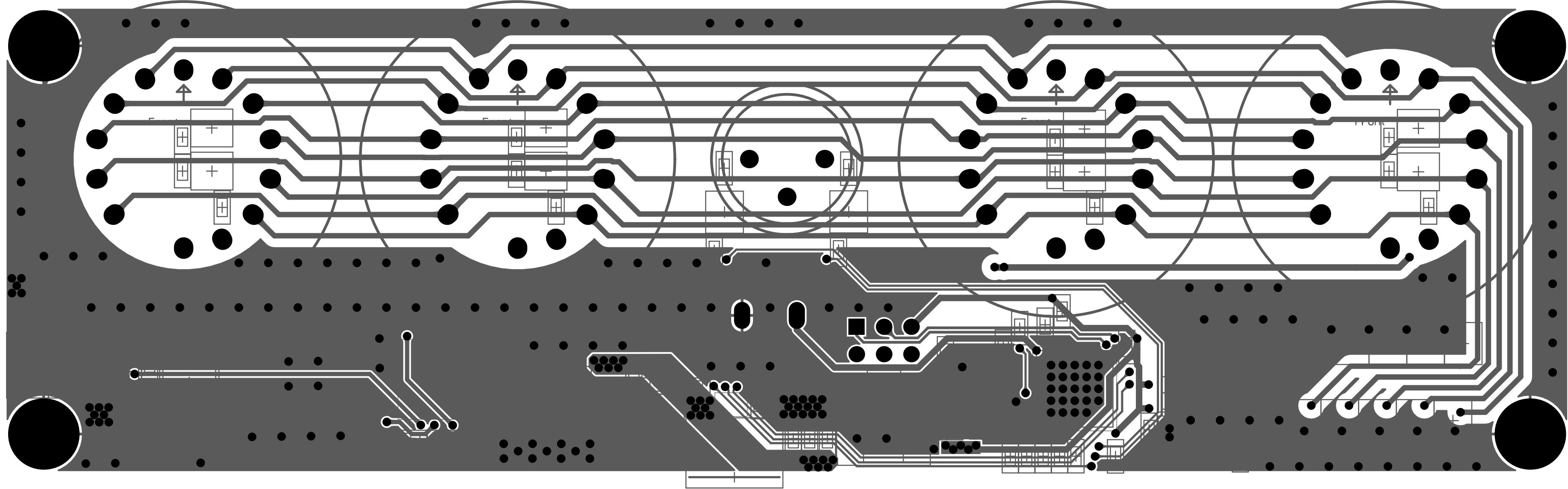
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Designator	Comment	Value	Tolerance	MaxVoltage	Quantity	Supplier 1	Supplier Part Number 1	Manufacturer 1	Manufacturer Part Number 1
V1, V2, V3, V4	Z566M Nixie Tube				4				
C30, C31, C32, C33, P2, R47, SCR1, SCR2, SCR3, SCR4, SPCR1, SPCR2, SPCR3, SPCR4	Capacitor, Header 1x5, Resistor, M3 Screw, M3 Spacer	DNP, [NoValue], [NoParam], NC	[NoValue], [NoParam], 1%		14				
C2	Capacitor	470n	10%	10V	1	Farnell	2524844	WALSIN	0603B474K100CT
C16, C18	Capacitor	100u	20%	10V	2	Farnell	2525204	TDK	C4532XSR1A107M280KC
C19	Capacitor	100p	5%	250V	1	Farnell	2812519	WURTH ELEKTRONIK	885342006003 CGA8P3X7T2E105K250KA
C20, C21	Capacitor	1u	10%	250V	2	Farnell	2435499	TDK	C1206C104KARECAUTO
C22, C23	Capacitor	100n	10%	250V	2	Farnell	2852360	KEMET	C0603C561JAGACAUTO
C24	Capacitor	560p	5%	250V	1	Farnell	2810275	KEMET	C0603C431J5GACTU
C26	Capacitor	430p	5%	50V	1	Farnell	2821196	KEMET	C1210C476M4PACTU
C27	Capacitor	47u	20%	16V	1	Farnell	1838761	KEMET	
D1, D3	BAT54				2	Farnell	2322476		
L1		7447709330	33uH	20%		1	Farnell	2082854	WURTH ELEKTRONIK
R38	Resistor	634k	1%		1	Farnell	2139670	VISHAY	CRCW1206634KFKEA
R39	Resistor	4.12k	1%		1	Farnell	1652883	VISHAY	CRCW06034K12FKEA
R40	Resistor	7.68k	1%		1	Farnell	2307849	PANASONIC	ERJ8ENF7681V
R41	Resistor	60.4k	1%		1	Farnell	2138476	VISHAY	CRCW060360K4FKEA
R46	Resistor	0.1	1%		1	Farnell	1099914	WELWYN	LR1206-R10FW
U2	ECMF02-4CMX8				1	Farnell	2629721		
U5	UCC3803				1	Farnell	2323690	TEXAS INSTRUMENTS	UCC3803D
C1, C3, C7, C9, C10, C12, C13, C14, C15, C17, C25	Capacitor	100n	-20/+80%	25V	11	TME	CL10F104ZA8NNNC	SAMSUNG	CL10F104ZA8NNNC
C4	Capacitor	47n	10%	16V	1	TME	VJ0603Y473KXJCW1BC	VISHAY	VJ0603Y473KXJCW1BC
C5	Capacitor	10u	20%	6.3V	1	TME	GRM188R60J106ME47D	MURATA	GRM188R60J106M E47D
C6, C8	Capacitor	1u	10%	25V	2	TME	GCM188R71E105KA64D	MURATA	GCM188R71E105KA64D
C11	0.47F	0.47F			1	TME	FGHOV474ZF	KEMET	FGHOV474ZF
C28	Capacitor	1n	10%	50V	1	TME	VJ0603Y102KXACW1BC	VISHAY	VJ0603Y102KXACW1BC
C29	Capacitor	220p	10%	50V	1	TME	VJ0603Y221KXACW1BC	VISHAY	VJ0603Y221KXACW1BC
D2	ES1D				1	TME	ES1D		
FB1, FB2, FB3	Ferrite Bead	120@100MHz			3	TME	BLM18KG121TN1D		
FB4, FB5	Ferrite Bead	60@100MHz			2	TME	BLM18BB600SN1D	MURATA	BLM18BB600SN1D
N1	NEON				1	TME	NEON-9		
P1	MicroUSB-B				1	TME	MX-47346-0001	MOLEX	473460001
Q1	Crystal 2 pin	32.768 kHz			1	TME	IL3X2-HXF12.5-32.768KHZ	ILSI	IL3X2-HXF12.5-32.768KHZ
Q2	24Mhz	24 Mhz			1	TME	3225-24M-SR	SR PASSIVES	3225-24M-SR
Q3	FDS2672				1	TME	FDS2672	ON SEMICONDUCTOR (FAIRCHILD)	FDS2672
R1, R2, R3, R4, R36, R44	Resistor	100k	1%		6	TME	CRCW0603100KFKEA	VISHAY	CRCW0603100KFKEA
R5, R6, R7, R8	Resistor	430k	1%		4	TME	SMD0603-430k		
R9, R10, R11, R12, R17, R18, R19, R22, R23, R24, R25, R26, R27, R28, R29, R30	Resistor	33k	1%		16	TME	SMD0603-33k		
R13, R14, R15, R16, R34, R35, R37, R49	Resistor	2k	1%		8	TME	SMD0603-2K-1%	ROYAL OHM	0603SAF2001T5E
R20, R21	Resistor	220k	1%		2	TME	SMD0603-220k		
R31, R32, R33, R43, R45	Resistor	1k	1%		5	TME	SMD0603-1K-1%	ROYAL OHM	0603SAF1001T5E
R42, R48	Resistor	0	1%		2	TME	CRCW06030000ZOTABC	VISHAY	CRCW06030000ZOTABC
T1, T2, T3, T4	MMBT492				4	TME	MMBT492		
T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21	MMBT42				17	TME	MMBT42LT1G		
U1	STM32F042C6U6				1	TME	STM32F042C6U6		
U3	LD1117AV33				1	TME	LD1117AS33	ST MICROELECTRONICS	LD1117AS33TR
U4	AT24C04D				1	TME	AT24C04D-MAHM-T	MICROCHIP	AT24C04D-MAHM-T

# Board Stack Report

Stack Up		Layer Stack			
Layer	Board Layer Stack	Name	Material	Thickness	Constant
1		Top Paste			
2		Top Overlay			
3		Top Solder	Solder Resist	0,40mil	3,5
4	■ ■ ■	Top Layer	Copper	1,40mil	
5		Dielectric 1	FR-4	39,37mil	4,8
6	■ ■ ■	Bottom Layer	Copper	1,40mil	
7		Bottom Solder	Solder Resist	0,40mil	3,5
8		Bottom Overlay			
9		Bottom Paste			
	Height : 42,97mil				





KELLO REV 1.0

ATTENTION  
ELECTROSTATIC  
SENSITIVE DEVICE

