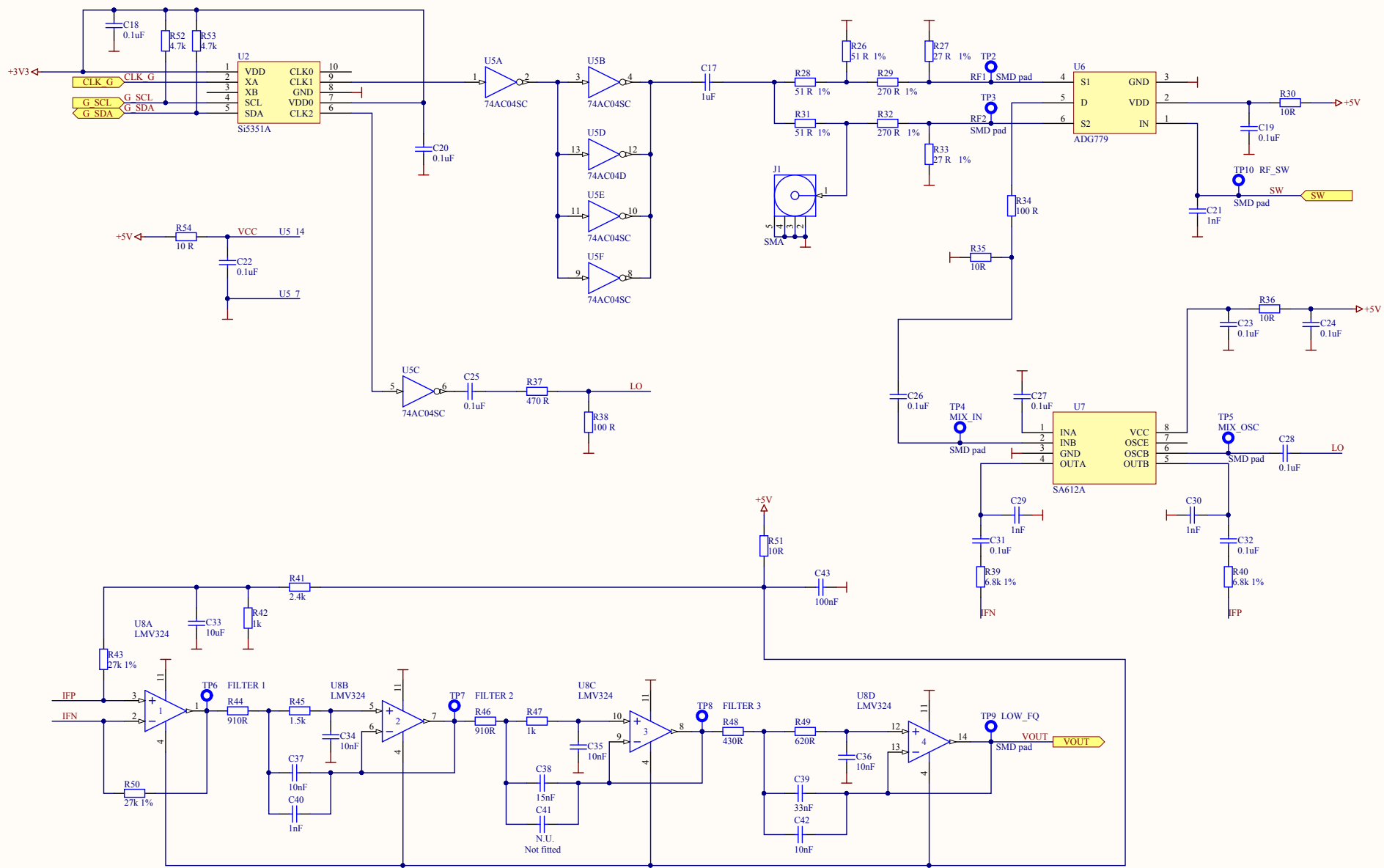


| | | | |
|-------|-------------------------------|---------------|----------|
| Title | | AA-30.ZERO | |
| Size | | CPU and Power | |
| A3 | Number | REU.1301 | Revision |
| | | | 1.6 |
| Date: | 13.11.2017 | Sheet of | 1 |
| File: | E:\@s.chumak\...\Page1.SchDoc | Drawn By: | Chumak |



| | | | |
|-------|-----------------------------|-----------|--------------------|
| Title | | | AA-30.ZERO |
| Size | | | PLL, MIXER and LPF |
| A3 | Number | REU.1301 | Revision 1.6 |
| Date: | 13.11.2017 | Sheet of | 2 |
| File: | E:\@s.chumak\1\Page2.SchDoc | Drawn By: | Chumak |

| Item # | Designator | Comment | Description | Quantity | Note |
|--------|------------|---------|------------------------------|----------|------------|
| 1 | C1 | 100pF | Chip capacitor 0603 | 1 | |
| 2 | C2 | 0.1uF | Chip capacitor 0603 | 1 | |
| 3 | C3 | 0.1uF | Chip capacitor 0603 | 1 | |
| 4 | C4 | 0.1uF | Chip capacitor 0603 | 1 | |
| 5 | C5 | 0.1uF | Chip capacitor 0603 | 1 | |
| 6 | C6 | 0.1uF | Chip capacitor 0603 | 1 | |
| 7 | C7 | 0.1uF | Chip capacitor 0603 | 1 | |
| 8 | C8 | 10uF | Tantalum Capacitor TAJ-A 10V | 1 | |
| 9 | C9 | 10uF | Tantalum Capacitor TAJ-A 10V | 1 | |
| 10 | C10 | 0.1uF | Chip capacitor 0603 | 1 | |
| 11 | C11 | 10nF | Chip capacitor 0603 | 1 | |
| 12 | C12 | 10uF | Tantalum Capacitor TAJ-A 10V | 1 | |
| 13 | C13 | 10uF | Tantalum Capacitor TAJ-A 10V | 1 | |
| 14 | C14 | 10uF | Tantalum Capacitor TAJ-A 10V | 1 | |
| 15 | C15 | 0.1uF | Chip capacitor 0603 | 1 | |
| 16 | C16 | 0.1uF | Chip capacitor 0603 | 1 | |
| 17 | C17 | 1uF | Chip capacitor 0603 | 1 | |
| 18 | C18 | 0.1uF | Chip capacitor 0603 | 1 | |
| 19 | C19 | 0.1uF | Chip capacitor 0603 | 1 | |
| 20 | C20 | 0.1uF | Chip capacitor 0603 | 1 | |
| 21 | C21 | 1nF | Chip capacitor 0603 | 1 | |
| 22 | C22 | 0.1uF | Chip capacitor 0603 | 1 | |
| 23 | C23 | 0.1uF | Chip capacitor 0603 | 1 | |
| 24 | C24 | 0.1uF | Chip capacitor 0603 | 1 | |
| 25 | C25 | 0.1uF | Chip capacitor 0603 | 1 | |
| 26 | C26 | 0.1uF | Chip capacitor 0603 | 1 | |
| 27 | C27 | 0.1uF | Chip capacitor 0603 | 1 | |
| 28 | C28 | 0.1uF | Chip capacitor 0603 | 1 | |
| 29 | C29 | 1nF | Chip capacitor 0603 | 1 | |
| 30 | C30 | 1nF | Chip capacitor 0603 | 1 | |
| 31 | C31 | 0.1uF | Chip capacitor 0603 | 1 | |
| 32 | C32 | 0.1uF | Chip capacitor 0603 | 1 | |
| 33 | C33 | 10uF | Chip capacitor 0603 | 1 | |
| 34 | C34 | 10nF | Chip capacitor 0603 | 1 | |
| 35 | C35 | 10nF | Chip capacitor 0603 | 1 | |
| 36 | C36 | 10nF | Chip capacitor 0603 | 1 | |
| 37 | C37 | 10nF | Chip capacitor 0603 | 1 | |
| 38 | C38 | 15nF | Chip capacitor 0603 | 1 | |
| 39 | C39 | 33nF | Chip capacitor 0603 | 1 | |
| 40 | C40 | 1nF | Chip capacitor 0603 | 1 | |
| 41 | C41 | N.U. | Chip capacitor 0603 | 1 | Not fitted |
| 42 | C42 | 10nF | Chip capacitor 0603 | 1 | |

| | | | | | |
|----|-----|-------------|---|---|------------|
| 43 | C43 | 100nF | Chip capacitor 0603 | 1 | |
| 44 | D1 | LED | Super high brightness of surface mount LED | 1 | Red |
| 45 | D2 | LED | Super high brightness of surface mount LED | 1 | Yellow |
| 46 | D3 | LED | Super high brightness of surface mount LED | 1 | Yellow |
| 47 | D4 | LED | Super high brightness of surface mount LED | 1 | Green |
| 48 | D5 | LED | Super high brightness of surface mount LED | 1 | Yellow |
| 49 | D6 | LED | Super high brightness of surface mount LED | 1 | Yellow |
| 50 | D9 | LL4148 | Small Signal Fast Switching Diode | 1 | |
| 51 | D10 | SS-14 | Surface Mount Schottky Barrier Rectifier | 1 | |
| 52 | D11 | LED | Super high brightness of surface mount LED | 1 | Green |
| 53 | GND | Ground pins | PLS connector, pitch 2.54 mm , 4-Pin | 1 | Not fitted |
| 54 | J1 | SMA | SMA Connector Jack, Female Socket Board Edge, End Launch Solder | 1 | |
| 55 | L1 | 10uH | SMD Power Inductor 10UH 800MA 250 MOHM | 1 | |
| 56 | L2 | 10uH | SMD Power Inductor 10UH 800MA 250 MOHM | 1 | |
| 57 | L3 | 10uH | Chip inductor 0805 | 1 | |
| 58 | P1 | Digital 1 | PLS connector, pitch 2.54 mm , 8-Pin | 1 | Not fitted |
| 59 | P2 | Digital 2 | PLS connector, pitch 2.54 mm , 8-Pin | 1 | Not fitted |
| 60 | P3 | Power | PLS connector, pitch 2.54 mm , 6-Pin | 1 | Not fitted |
| 61 | P4 | Analog | PLS connector, pitch 2.54 mm , 6-Pin | 1 | Not fitted |
| 62 | P5 | PROG | PLS connector, pitch 2.54 mm , 4-Pin | 1 | Not fitted |
| 63 | P6 | BOOT | Header, 2-Pin | 1 | Not fitted |
| 64 | P8 | RST | Header, 2-Pin | 1 | Not fitted |
| 65 | R1 | 10 R | Chip resistor 0603 | 1 | |
| 66 | R2 | 10k | Chip resistor 0603 | 1 | |
| 67 | R3 | 1k | Chip resistor 0603 | 1 | |
| 68 | R4 | 0 R | Chip resistor 0603 | 1 | |
| 69 | R5 | 430R | Chip resistor 0603 | 1 | |
| 70 | R6 | 100 R | Chip resistor 0603 | 1 | |
| 71 | R7 | 430R | Chip resistor 0603 | 1 | |
| 72 | R8 | 430R | Chip resistor 0603 | 1 | |
| 73 | R9 | 100 R | Chip resistor 0603 | 1 | |
| 74 | R10 | 3.6k | Chip resistor 0603 | 1 | |
| 75 | R11 | 430R | Chip resistor 0603 | 1 | |
| 76 | R12 | 430R | Chip resistor 0603 | 1 | |
| 77 | R13 | 0R | Chip resistor 0805 | 1 | |
| 78 | R14 | 100 R | Chip resistor 0603 | 1 | |
| 79 | R15 | 0R | Chip resistor 0805 | 1 | |
| 80 | R16 | 10k | Chip resistor 0603 | 1 | |
| 81 | R17 | 100 R | Chip resistor 0603 | 1 | |
| 82 | R18 | 10 R | Chip resistor 0603 | 1 | |
| 83 | R19 | 10 R | Chip resistor 0603 | 1 | |
| 84 | R20 | 220 R | Chip resistor 0603 | 1 | |

| | | | | | |
|-----|-----|----------|----------------------------|---|------------|
| 85 | R21 | 0R | Chip resistor 0603 | 1 | Not fitted |
| 86 | R22 | 300k 1% | Chip resistor 0603 1% | 1 | |
| 87 | R23 | 0R | Chip resistor 0603 | 1 | |
| 88 | R24 | 100k 1% | Chip resistor 0603 1% | 1 | |
| 89 | R25 | 3.6k | Chip resistor 0603 | 1 | |
| 90 | R26 | 51 R 1% | Chip resistor 0805 1% | 1 | |
| 91 | R27 | 27 R 1% | Chip resistor 0805 1% | 1 | |
| 92 | R28 | 51 R 1% | Chip resistor 0805 1% | 1 | |
| 93 | R29 | 270 R 1% | Chip resistor 0805 1% | 1 | |
| 94 | R30 | 10R | Chip resistor 0603 | 1 | |
| 95 | R31 | 51 R 1% | Chip resistor 0805 1% | 1 | |
| 96 | R32 | 270 R 1% | Chip resistor 0805 1% | 1 | |
| 97 | R33 | 27 R 1% | Chip resistor 0805 1% | 1 | |
| 98 | R34 | 100 R | Chip resistor 0603 | 1 | |
| 99 | R35 | 10R | Chip resistor 0603 | 1 | |
| 100 | R36 | 10R | Chip resistor 0603 | 1 | |
| 101 | R37 | 470 R | Chip resistor 0603 | 1 | |
| 102 | R38 | 100 R | Chip resistor 0603 | 1 | |
| 103 | R39 | 6.8k 1% | Chip resistor 0603 1% | 1 | |
| 104 | R40 | 6.8k 1% | Chip resistor 0603 1% | 1 | |
| 105 | R41 | 2.4k | Chip resistor 0603 | 1 | |
| 106 | R42 | 1k | Chip resistor 0603 | 1 | |
| 107 | R43 | 27k 1% | Chip resistor 0603 1% | 1 | |
| 108 | R44 | 910R | Chip resistor 0603 | 1 | |
| 109 | R45 | 1.5k | Chip resistor 0603 | 1 | |
| 110 | R46 | 910R | Chip resistor 0603 | 1 | |
| 111 | R47 | 1k | Chip resistor 0603 | 1 | |
| 112 | R48 | 430R | Chip resistor 0603 | 1 | |
| 113 | R49 | 620R | Chip resistor 0603 | 1 | |
| 114 | R50 | 27k 1% | Chip resistor 0603 1% | 1 | |
| 115 | R51 | 10R | Chip resistor 0603 | 1 | |
| 116 | R52 | 4.7k | Chip resistor 0603 | 1 | |
| 117 | R53 | 4.7k | Chip resistor 0603 | 1 | |
| 118 | R54 | 10 R | Chip resistor 0603 | 1 | |
| 119 | R55 | 0R | Chip resistor 0805 | 1 | Not fitted |
| 120 | R56 | 0R | Chip resistor 0805 | 1 | Not fitted |
| 121 | S1 | SWITCH | SWITCH SLIDE DPDT 300MA 6V | 1 | Not fitted |
| 122 | S2 | Button | | 1 | Not fitted |
| 123 | TP1 | 25 MHz | Testpoint | 1 | SMD pad |
| 124 | TP2 | RF1 | Testpoint | 1 | SMD pad |
| 125 | TP3 | RF2 | Testpoint | 1 | SMD pad |
| 126 | TP4 | MIX_IN | Testpoint | 1 | SMD pad |
| 127 | TP5 | MIX_OSC | Testpoint | 1 | SMD pad |

| | | | | | |
|-----|------|---------------|---|-----|---|
| 128 | TP6 | FILTER 1 | Testpoint | 1 | SMD pad |
| 129 | TP7 | FILTER 2 | Testpoint | 1 | SMD pad |
| 130 | TP8 | FILTER 3 | Testpoint | 1 | SMD pad |
| 131 | TP9 | LOW_FQ | Testpoint | 1 | SMD pad |
| 132 | TP10 | RF_SW | Testpoint | 1 | SMD pad |
| 133 | U1 | STM32F070CBT6 | ARM® Cortex®-M0 STM32 F0 Microcontroller IC 32-Bit 48MHz 128KB (128K x 8) FLASH 48-LQFP (7x7) | 1 | |
| 134 | U2 | Si5351A | I2C-PROGRAMMABLE ANY-FREQUENCY CMOS CLOCK GENERATOR + VCXO | 1 | |
| 135 | U3 | TPS61040DBVR | Boost Switching Regulator IC Positive Adjustable 1.25V 1 Output 500mA (Switch) SC-74A, SOT-753 | 1 | Alternate AP3012KTR-G1 |
| 136 | U4 | LM1117-3.3 | Linear Voltage Regulator 3.3V, 800mA | 1 | |
| 137 | U5 | 74AC04SC | Hex Inverter, 14-Pin SOIC | 1 | |
| 138 | U6 | ADG779 | CMOS 1.8 V to 5.5 V, 2.5 ? SPDT Switch 2:1 Mux in Tiny SC70 Package | 1 | |
| 139 | U7 | SA612A | Double-balanced mixer and oscillator | 1 | |
| 140 | U8 | LMV324 | Low-Voltage Rail-to-Rail Output Operational Amplifiers | 1 | 14-Pin Small Outline Integrated Circuit 1.27 mm Pitch |
| 141 | Y1 | 25 MHz | SMD Clock Oscillator 25MHz 50ppm | 1 | |
| | | | | 141 | |