

## DDS connections.

Note that J7 connector is near the DDS PCB border

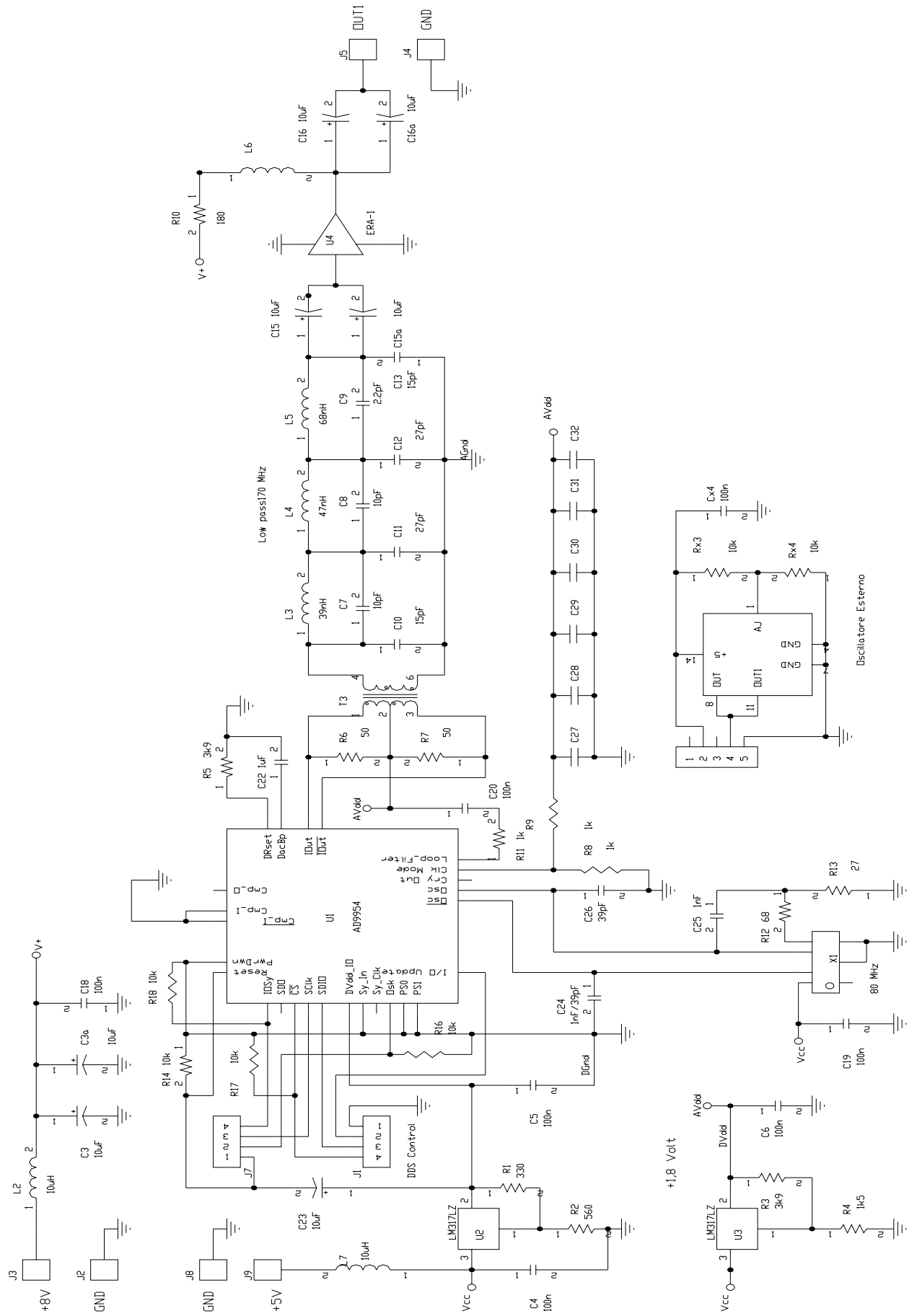
DDS board connector	DDS Signal
J1-1	GND
J1-2	IO-Update
J1-3	SDIO
J1-4	CS
J7-1	RESET
J7-2	OSK
J7-3	SCLK
J7-4	IOSY

Power supply:

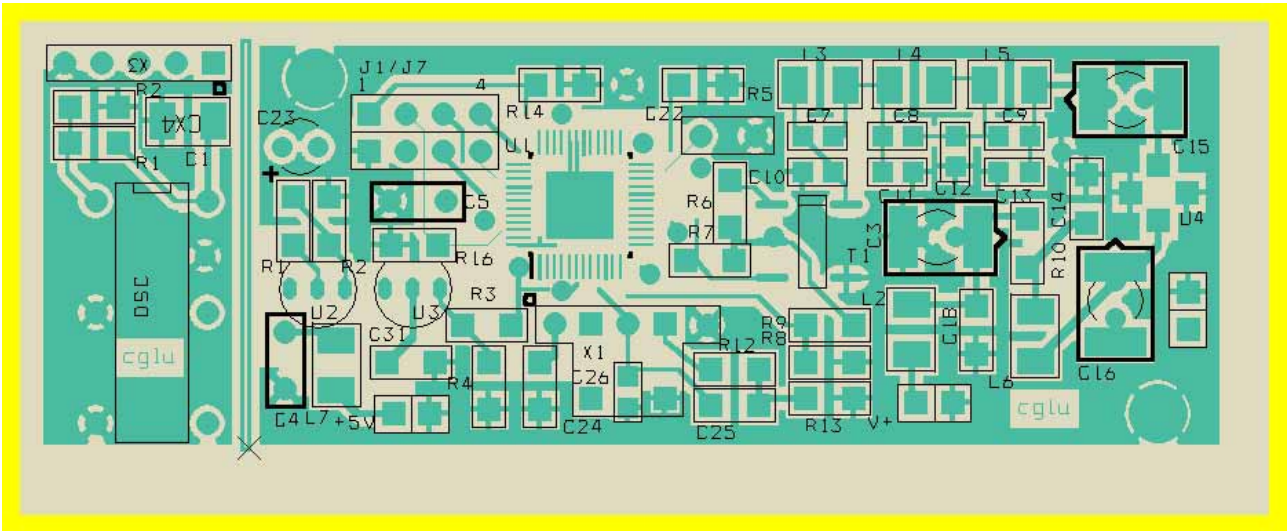
J3	+12V
J2	GND
J9	+5V
J8	GND

## DDS AD9951 (ED2) schematic

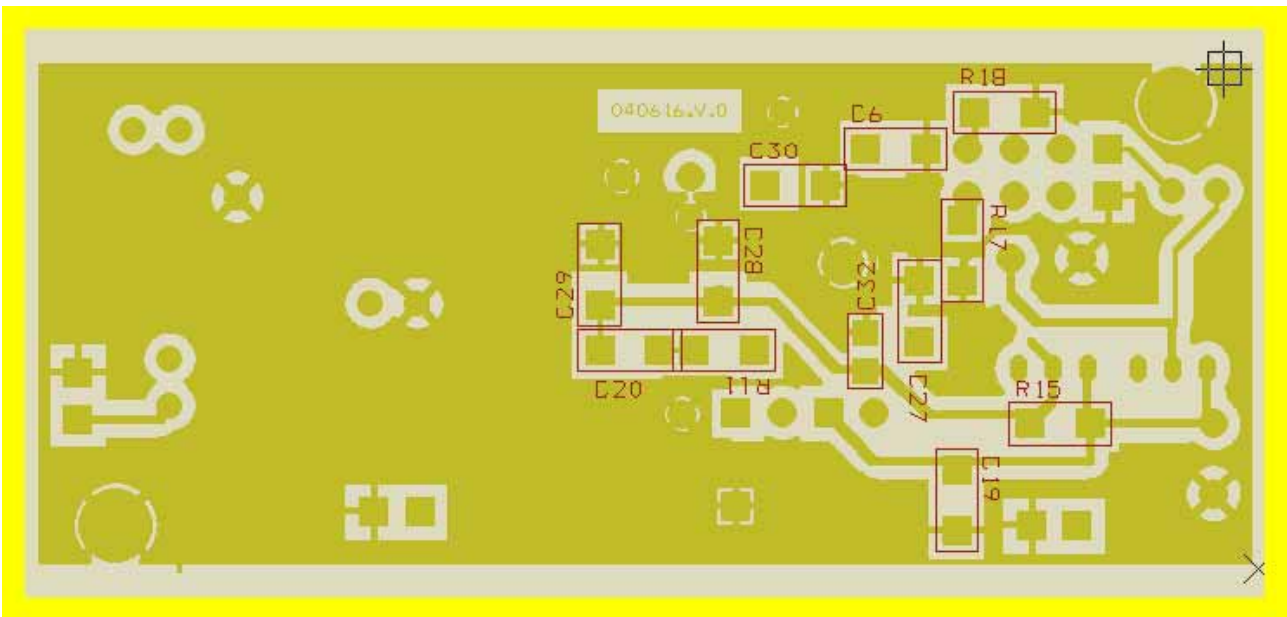
The correct components value are in the Bill of materials



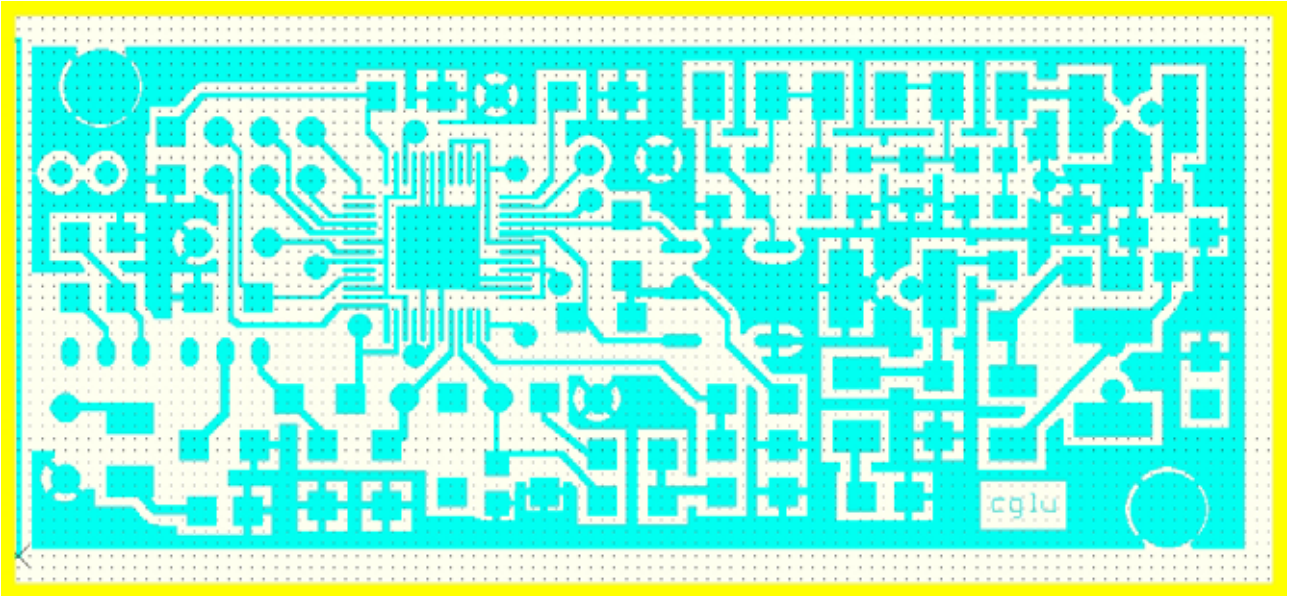
## DDS Layout



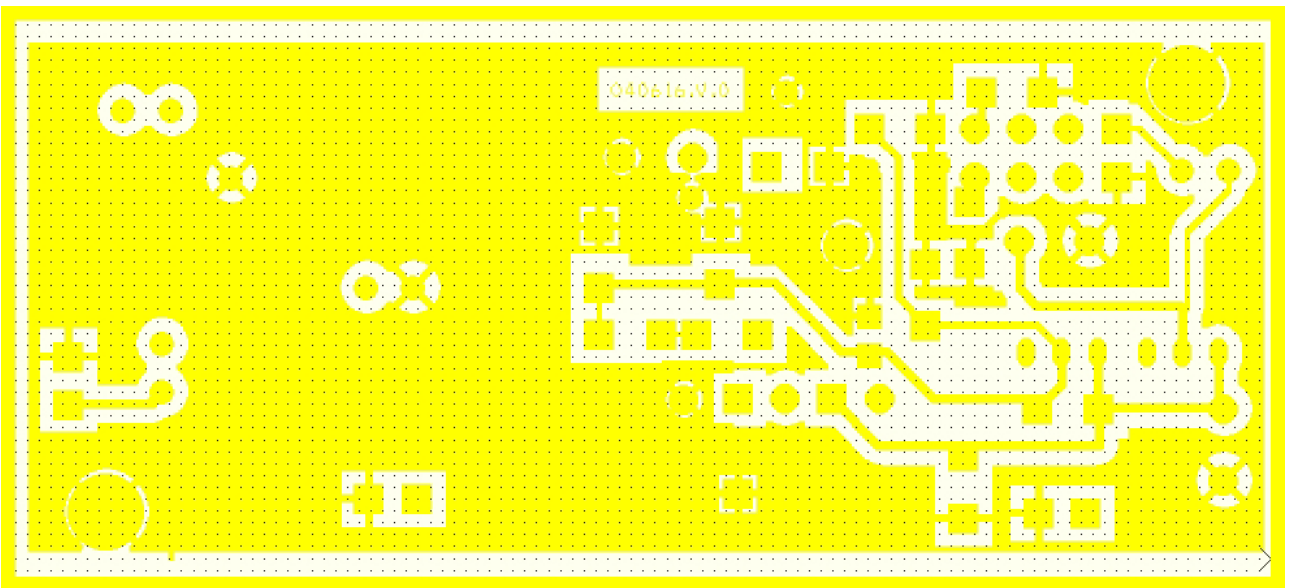
Layout – Top View



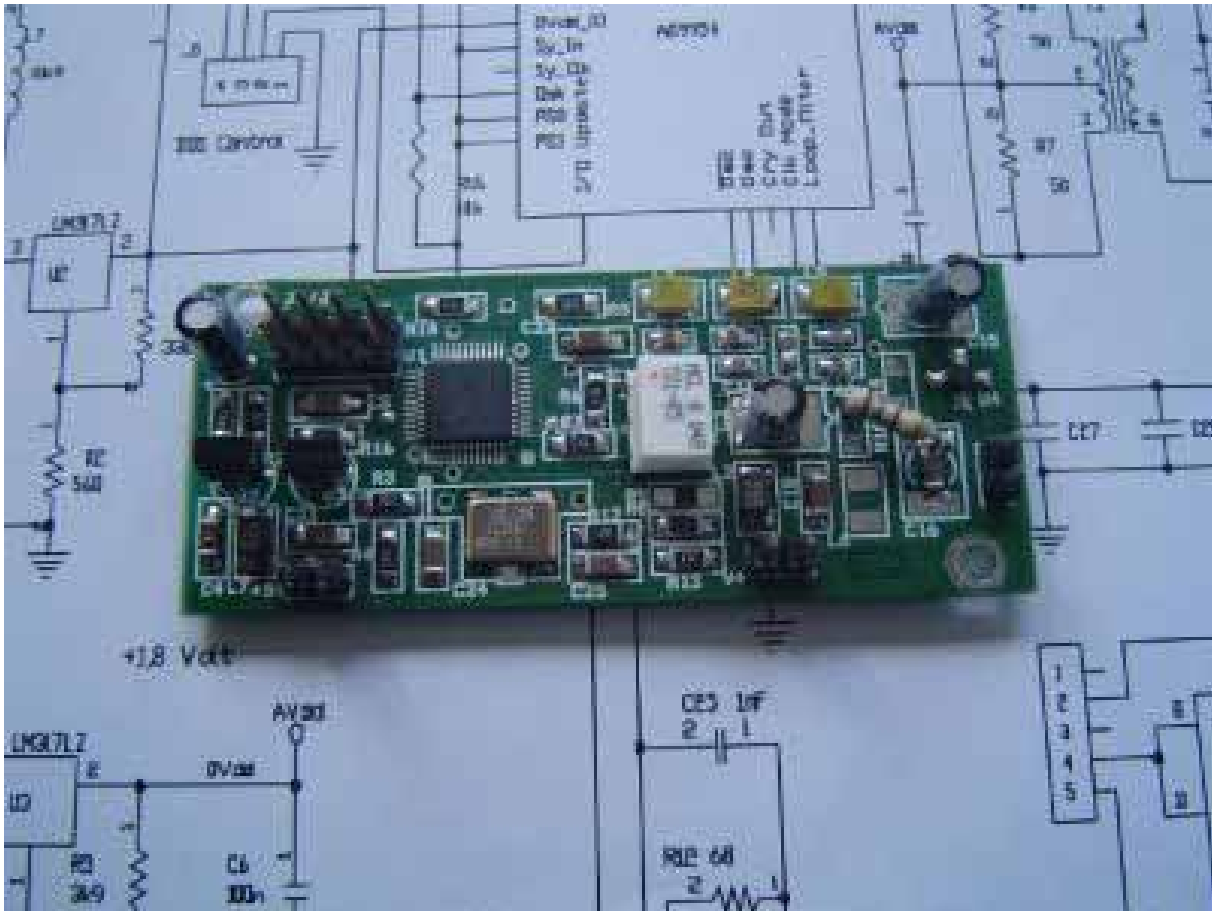
Layout – Bottom View



**Top layer**



**Bottom Layer**



Notes:

1: if use a quartz as oscillator : install R9, C26 , not install R8

2: if use an external oscillator: Install R8, not install R9, C26

3: if use the on board 100 MHz oscillator R12 must be 330 ohm, R13 must be 33 ohm

4:if use a 500 MHz external oscillator R12 must be 33 ohm, R13 must be removed.

Bill of materials

Quantity	Reference	Part
7	Cx4,C4,C5,C6,C18,C19,C20	100n
4	C3, C15, C16, C23	2.2uF
1	C7	10pF
1	C8	10pF
1	C9	2.2pF
1	C10	15pF
1	C11	27pF
1	C12	27pF
1	C13	15pF
1	C14	not installed
1	C25	100nF
1	C22	1uF
1	C24	100nF/(39pF if Quartz installed )
1	C26	not installed (39pF if quartz installed)
6	C27,C28,C29,C30,C31,C32	100 nF
1	J1	5 pin HEDER
2	J8,J2	HEADER 1 GND
1	J3	HEADER 1 +12V
1	J4	HEADER 1 GND
1	J5	HEADER 1 OUT1
1	J7	5 pin HEDER
1	J9	HEADER 1 +5V
2	L2,L7	10uH
1	L3	39nH
1	L4	56nH
1	L5	68nH
1	L6	NOT INSTALLED
1	OS2	Optional external oscillator
5	Rx3,Rx4,R14,R16,R17	10k
1	R1	330
1	R2	560
1	R3	3k3
1	R4	1k5
1	R5	3k9
2	R7,R6	50
2	R8,R9	1k
1	R10	180 1/4 W (no SMD )
1	R11	220
1	R12	330
1	R13	33
1	R15	NOT INSTALLED
1	T3	TRANSFORMER 1:1
1	U1	AD9951/4
2	U2,U3	LM317LZ
1	U4	ERA-1
1	X1	100 MHz 5V SMD oscillator
1	X3	5 pin HEADER (external oscillator connector)