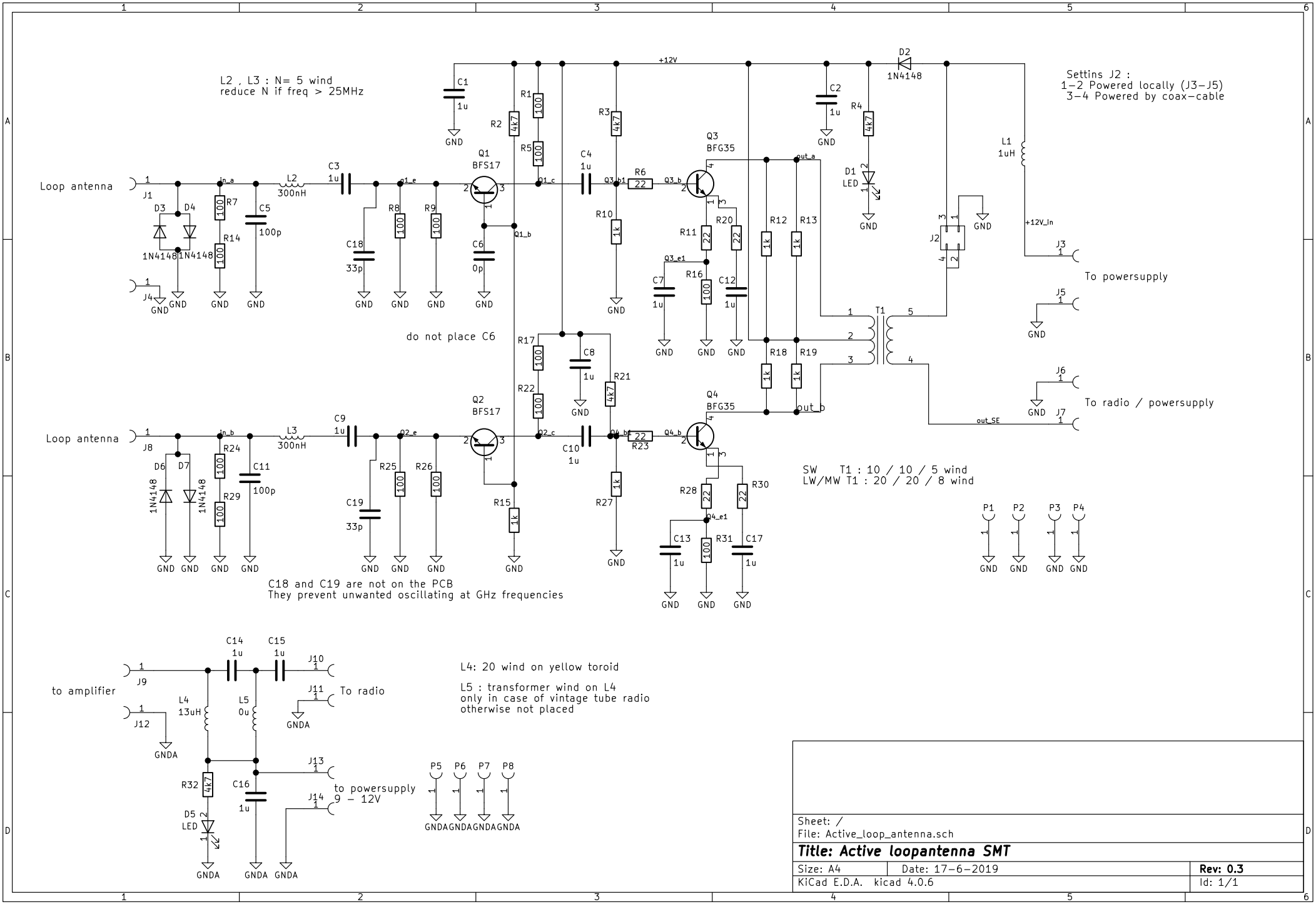
L2 , L3 : N= 5 wind
reduce N if freq > 25MHz
Settins J2 :
1-2 Powered locally (J3-J5)
3-4 Powered by coax-cable
Loop antenna
J1
D3
D4
1N4148
1N4148
R7
100
R14
100
J4
GND
C5
100p
L2
300nH
C3
1u
C18
33p
R8
100
R9
100
Q1
BFS17
C6
0p
Q1_b
Q1_c
Q1_e
in_a
R1
100
R2
4k7
R5
100
C1
1u
+12V
C4
1u
R3
4k7
R10
1k
R6
22
Q3_b1
Q3_b
Q3
BFG35
R11
22
R20
22
Q3_e1
R16
100
C7
1u
C12
1u
out_a
R12
1k
R13
1k
R18
1k
R19
1k
out_b
C2
1u
R4
4k7
D2
1N4148
D1
LED
L1
1uH
+12V_In
J2
J3
To powersupply
J5
J6
To radio / powersupply
J7
out_SE
T1
do not place C6
R17
100
R22
100
C8
1u
R21
4k7
Q2
BFS17
Q2_c
Q2_e
in_b
Q4_b
Q4_b1
Q4
BFG35
R23
22
C10
1u
Loop antenna
J8
D6
D7
1N4148
1N4148
R24
100
R29
100
C11
100p
L3
300nH
C9
1u
C19
33p
R25
100
R26
100
R15
1k
R27
1k
R28
22
R30
22
Q4_e1
C13
1u
R31
100
C17
1u
SW T1 : 10 / 10 / 5 wind
LW/MW T1 : 20 / 20 / 8 wind
P1
P2
P3
P4
C18 and C19 are not on the PCB
They prevent unwanted oscillating at GHz frequencies
C14
1u
C15
1u
J10
J9
to amplifier
J11
To radio
GNDA
L4
13uH
L5
0u
J12
J13
R32
4k7
C16
1u
to powersupply
9 - 12V
J14
D5
LED
P5
P6
P7
P8
L4: 20 wind on yellow toroid
L5 : transformer wind on L4
only in case of vintage tube radio
otherwise not placed
Sheet: /
File: Active_loop_antenna.sch
Title: Active loopantenna SMT
Size: A4
Date: 17-6-2019
Rev: 0.3
KiCad E.D.A. kicad 4.0.6
Id: 1/1