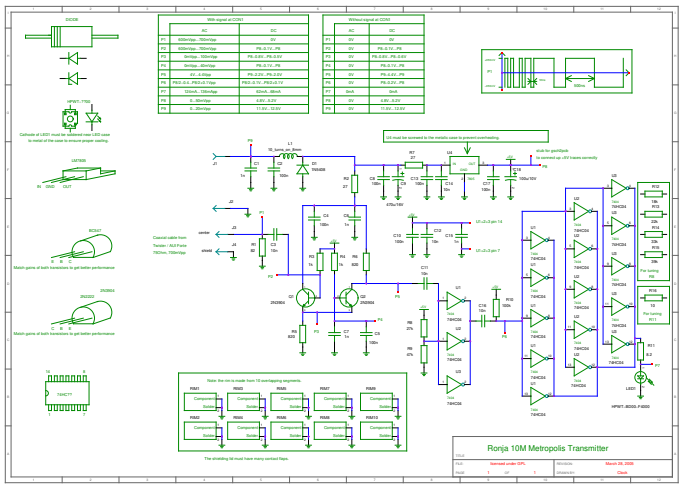
1N4148
HPWT-7700
Cathode of LED1 must be soldered into LED case to metal of the case to ensure proper cooling.
LM7805
IN GND OUT
BC547
Match gains of both transistors to get better performance
2N3904
2N3906
Match gains of both transistors to get better performance
74HC74
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Wiper signal at CON1
AC DC
P1 600mVpp...700mVpp 0V
P2 600mVpp...700mVpp P6..0.1V...P6
P3 0mVpp...100mVpp P6..0.6V...P6..0.6V
P4 0mVpp...60mVpp P6..0.1V...P6
P5 4V...4.6Vpp P5..2.2V...P5..2.2V
P6 P6/2..0.4...P6/2+0.7Vpp P6/2..0.7V...P6/2+0.7V
P7 12mA...100mVpp 42mA...66mA
P8 0...80mVpp 4.6V...5.2V
P9 0...20mVpp 11.6V...12.6V
Wiper signal at CON1
AC DC
P1 0V 0V
P2 0V P6..0.1V...P6
P3 0V P6..0.6V...P6..0.6V
P4 0V P6..0.1V...P6
P5 0V P6..0.4V...P6
P6 0V P6..0.2V...P6
P7 0mA 0mA
P8 0V 4.6V...5.2V
P9 0V 11.6V...12.6V
P1
P2
P3
P4
P5
P6
P7
P8
P9
600mVpp
700mVpp
P6..0.1V...P6
P6..0.6V...P6..0.6V
P6..0.1V...P6
P6..0.4V...P6
P6..0.2V...P6
P6..0.7V...P6
0mA
4.6V...5.2V
11.6V...12.6V
L1
TE_Sunx_ec_8mm
D1
1N4148
C1
100n
C2
100n
C3
100n
C4
100n
C5
1n
C6
100n
C7
100n
C8
100n
C9
100n
C10
100n
C11
10n
C12
10n
C13
10n
C14
100n
C15
10n
C16
10n
C17
100n
C18
100n/16V
R1
1k
R2
27
R3
820
R4
1k
R5
820
R6
25k
R7
25k
R8
45k
R9
82
R10
560k
R11
6.2
R12
10k
R13
20k
R14
30k
R15
10k
R16
10
R17
10k
R18
10k
Q1
2N3906
Q2
2N3904
U1
74HC04
U2
74HC04
U3
74HC04
U4
74HC04
U5
74HC04
U6
74HC04
U7
74HC04
U8
74HC04
U9
74HC04
U10
74HC04
U11
74HC04
U12
74HC04
U13
74HC04
U14
74HC04
U15
74HC04
U16
74HC04
U17
74HC04
U18
74HC04
U19
74HC04
U20
74HC04