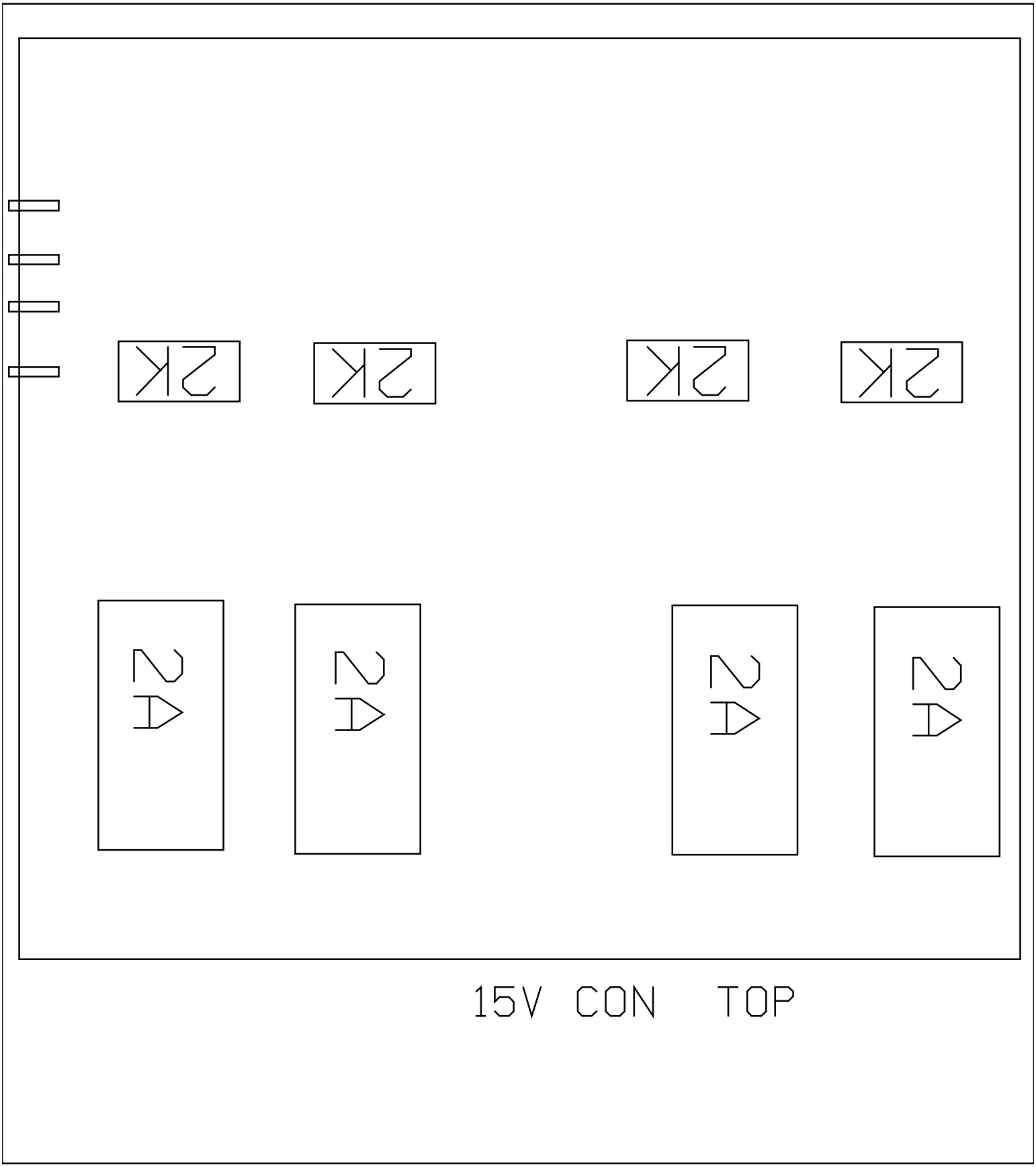
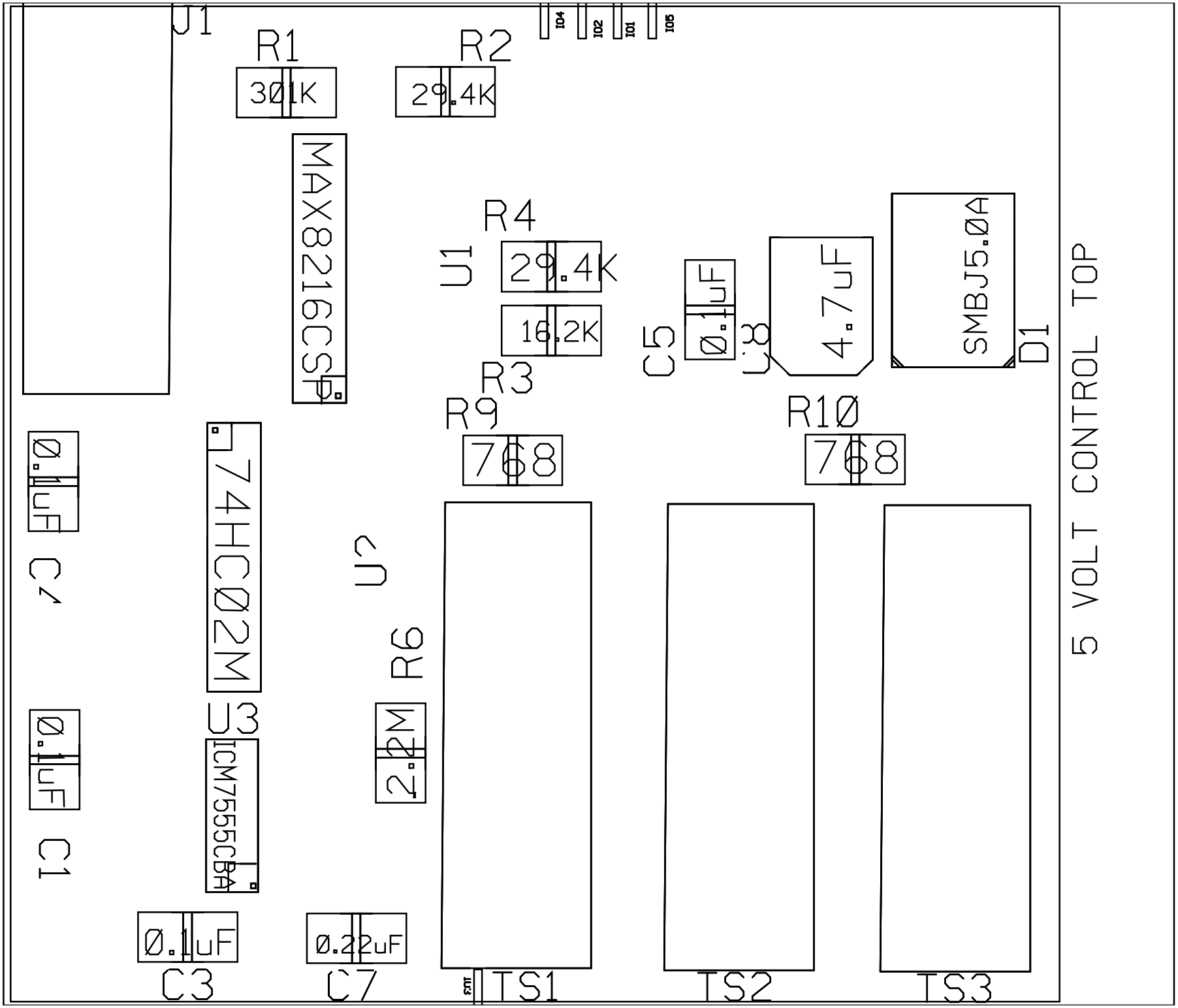
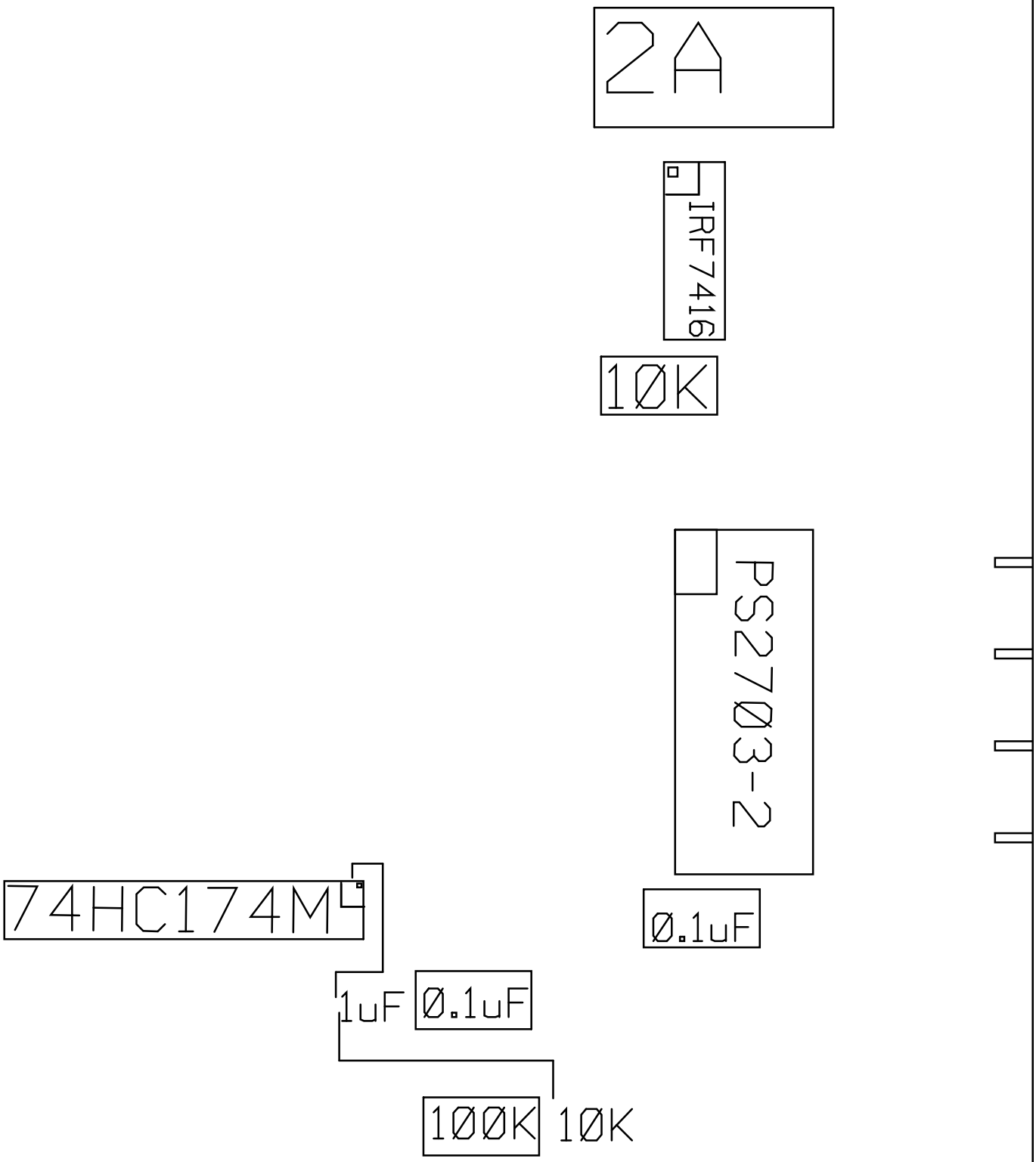
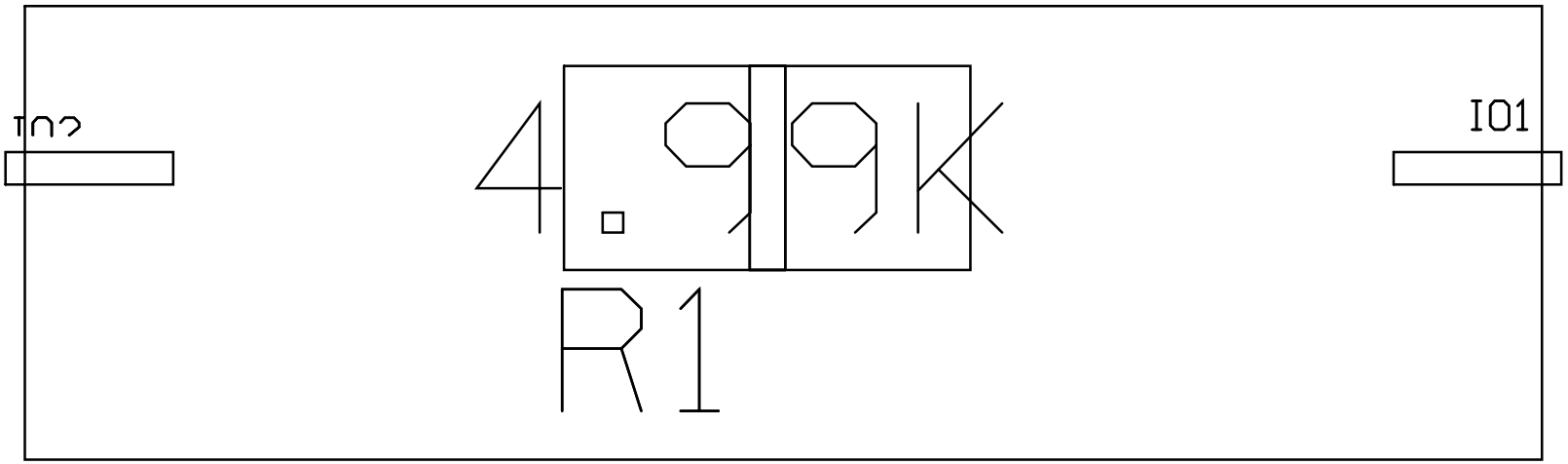

2K
2K
2K
2K
N
D
N
D
N
D
N
D
15V CON TOP

15V CONTROL BOTTOM


J1
R1
301K
R2
29.4K
MAX8216CSA
R4
U1
29.4K
16.2K
R3
C5
0.1uF
L8
4.7uF
SMBJ5.0A
D1
R9
768
R10
768
0.1uF
C4
74HC02M
U3
U2
R6
2.2M
0.1uF
C1
ICM7555CBA
0.1uF
C3
0.22uF
C7
TS1
TS2
TS3
5 VOLT CONTROL TOP

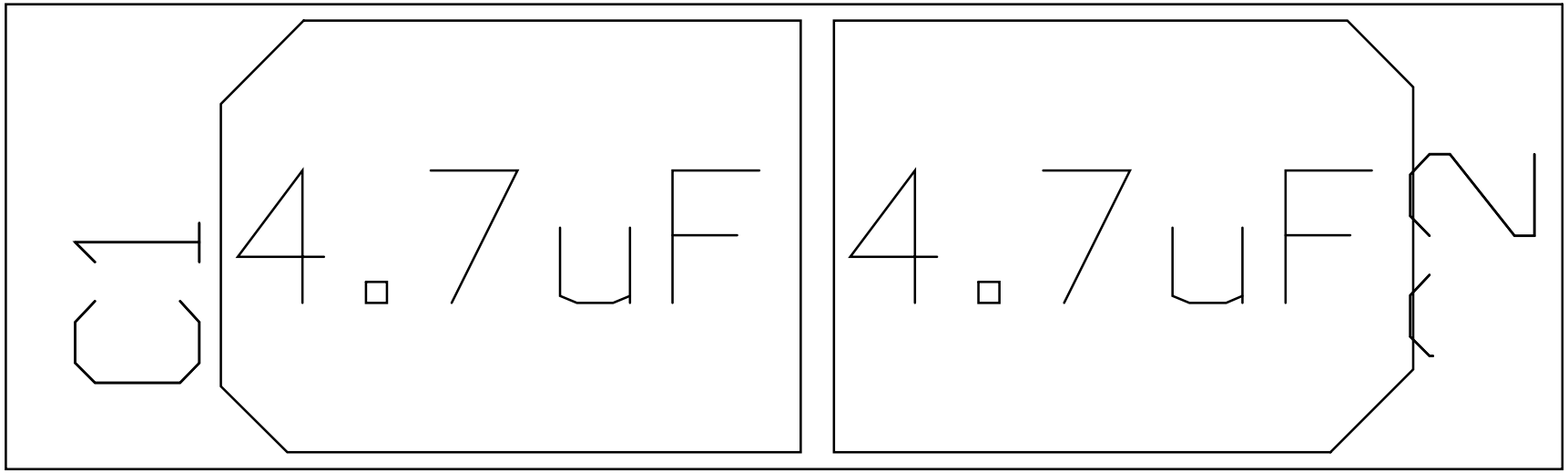
5 VOLT CONTROLBOTTOM





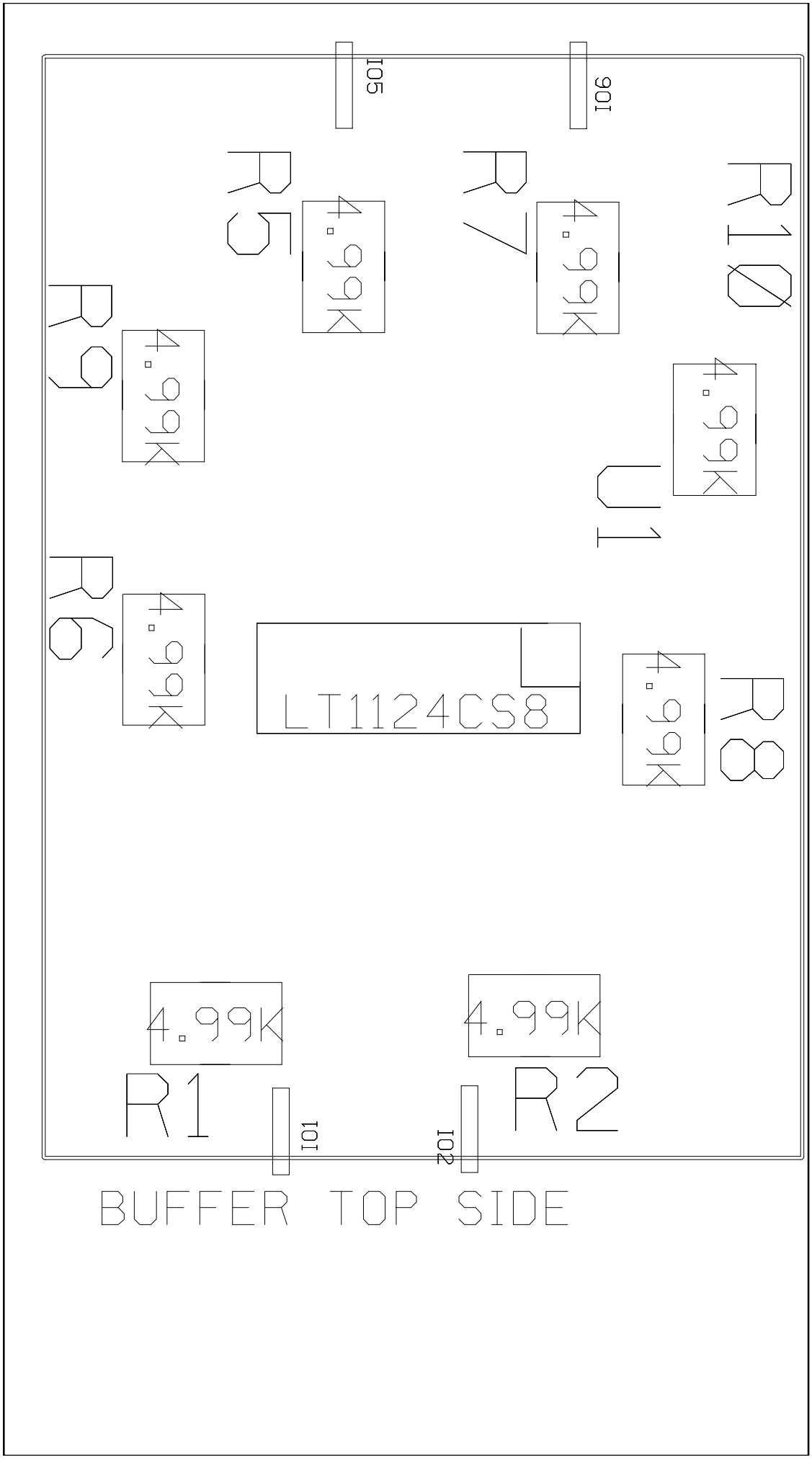
BUFFER FILTER

TOP SIDE



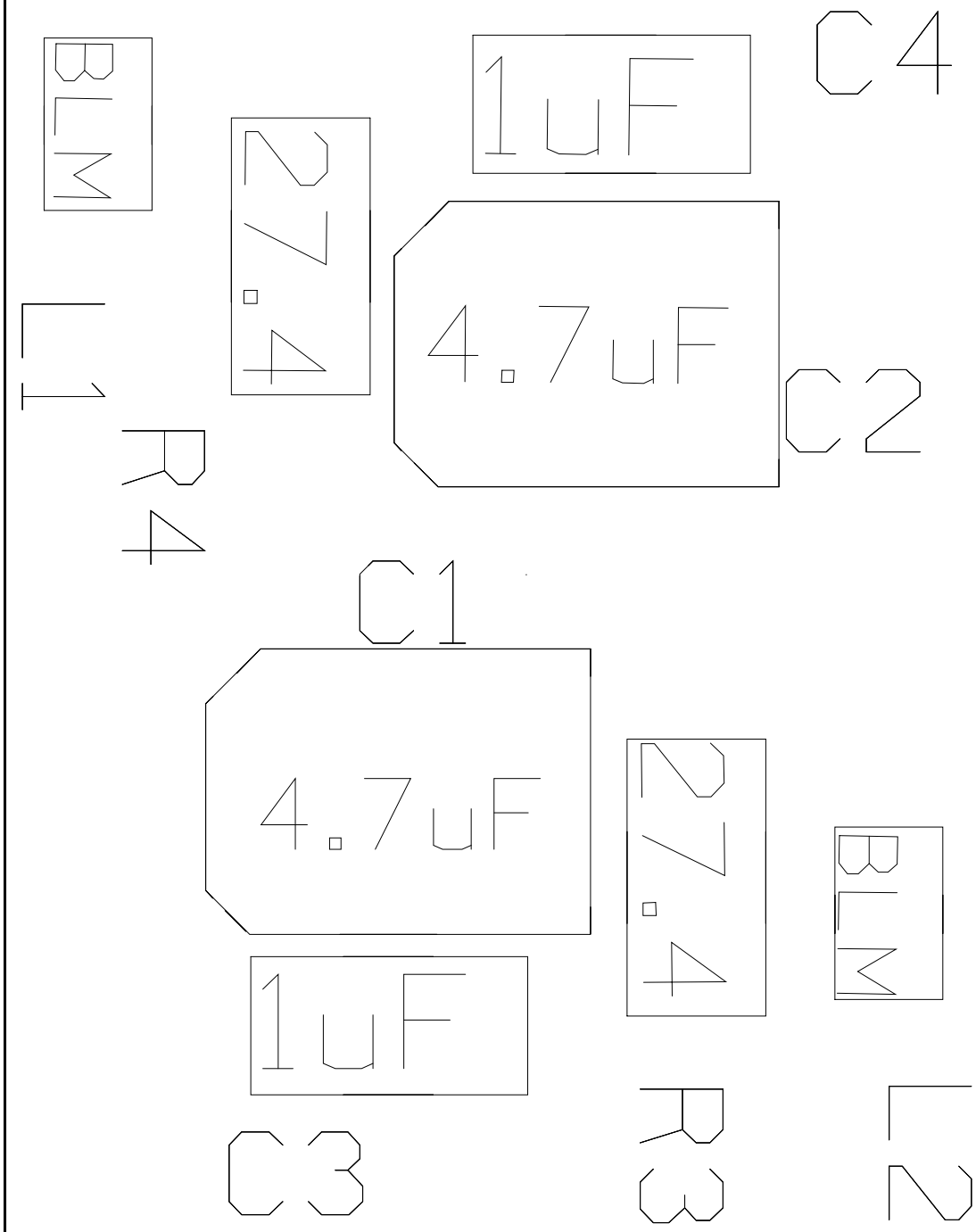
BUFFER FILTER

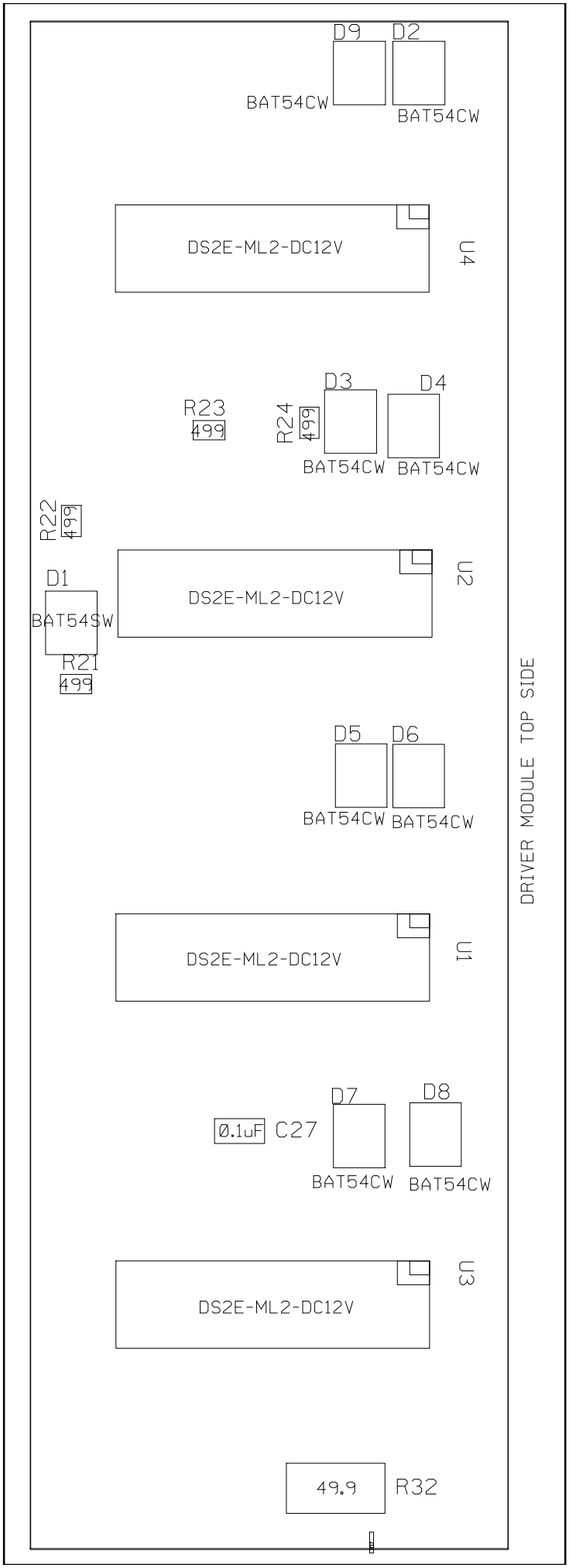
BOTTOM SIDE



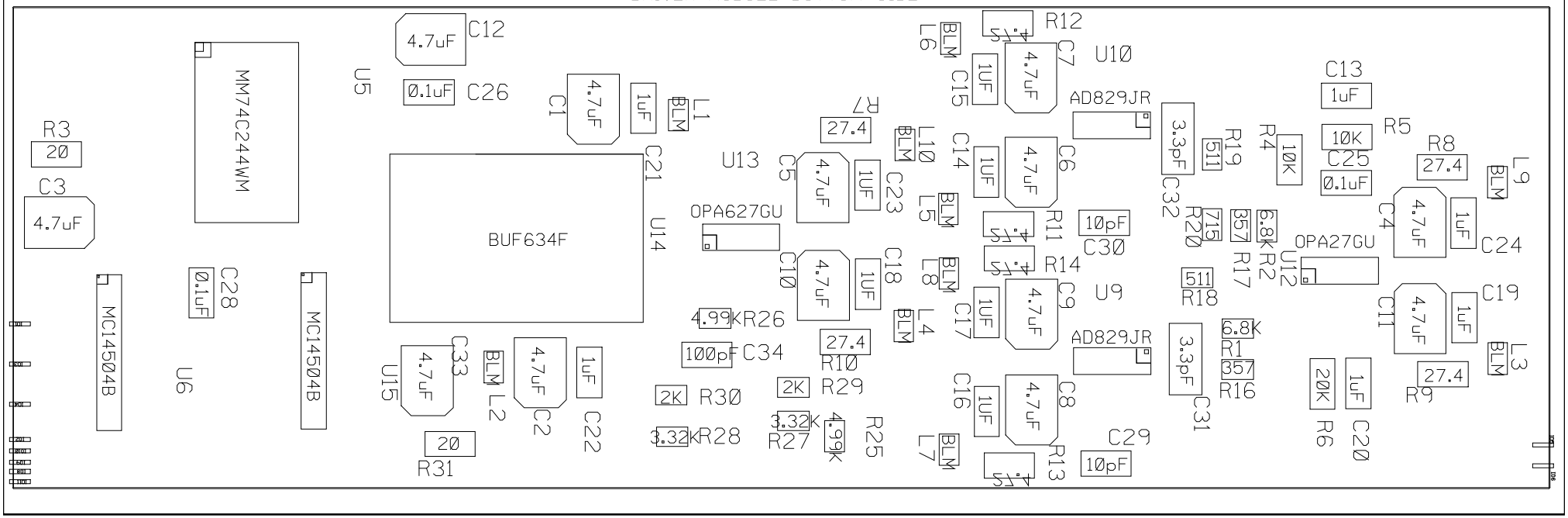
BUFFER TOP SIDE

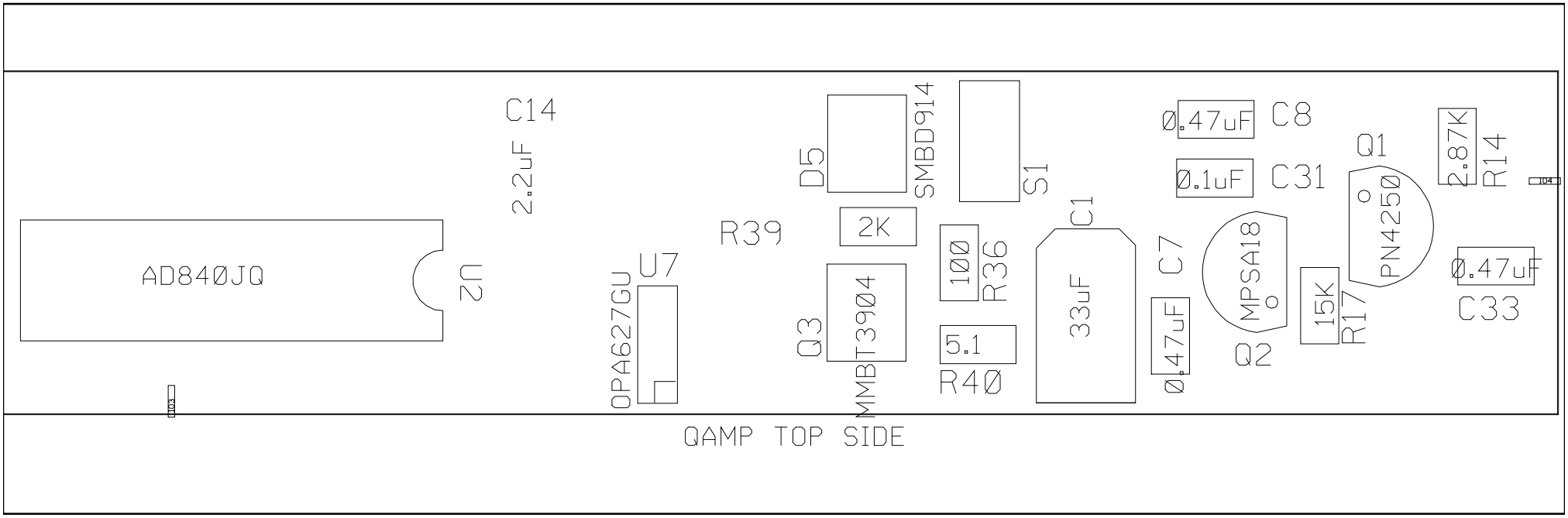
BUFFER BOTTOM SIDE

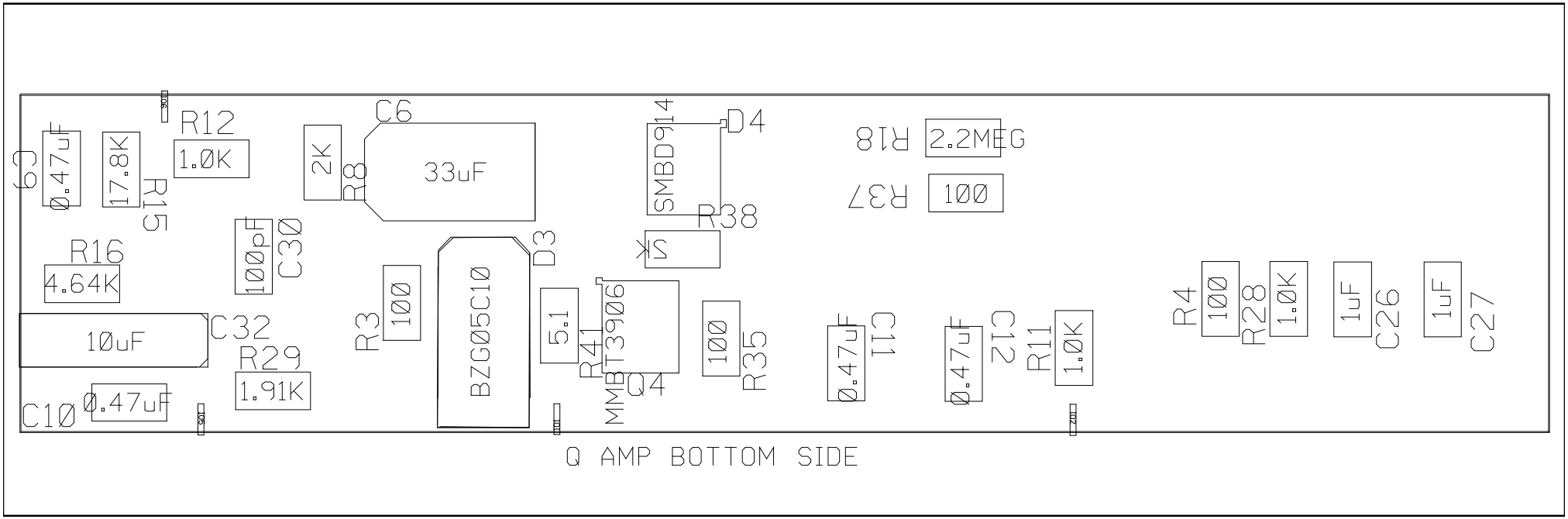



D9
D2
BAT54CW
BAT54CW
DS2E-ML2-DC12V
U4
D3
D4
R23
499
R24
499
BAT54CW
BAT54CW
R22
499
D1
BAT54SW
DS2E-ML2-DC12V
U2
R21
499
D5
D6
BAT54CW
BAT54CW
DRIVER MODULE TOP SIDE
DS2E-ML2-DC12V
U1
D7
D8
0.1uF
C27
BAT54CW
BAT54CW
DS2E-ML2-DC12V
U3
49.9
R32

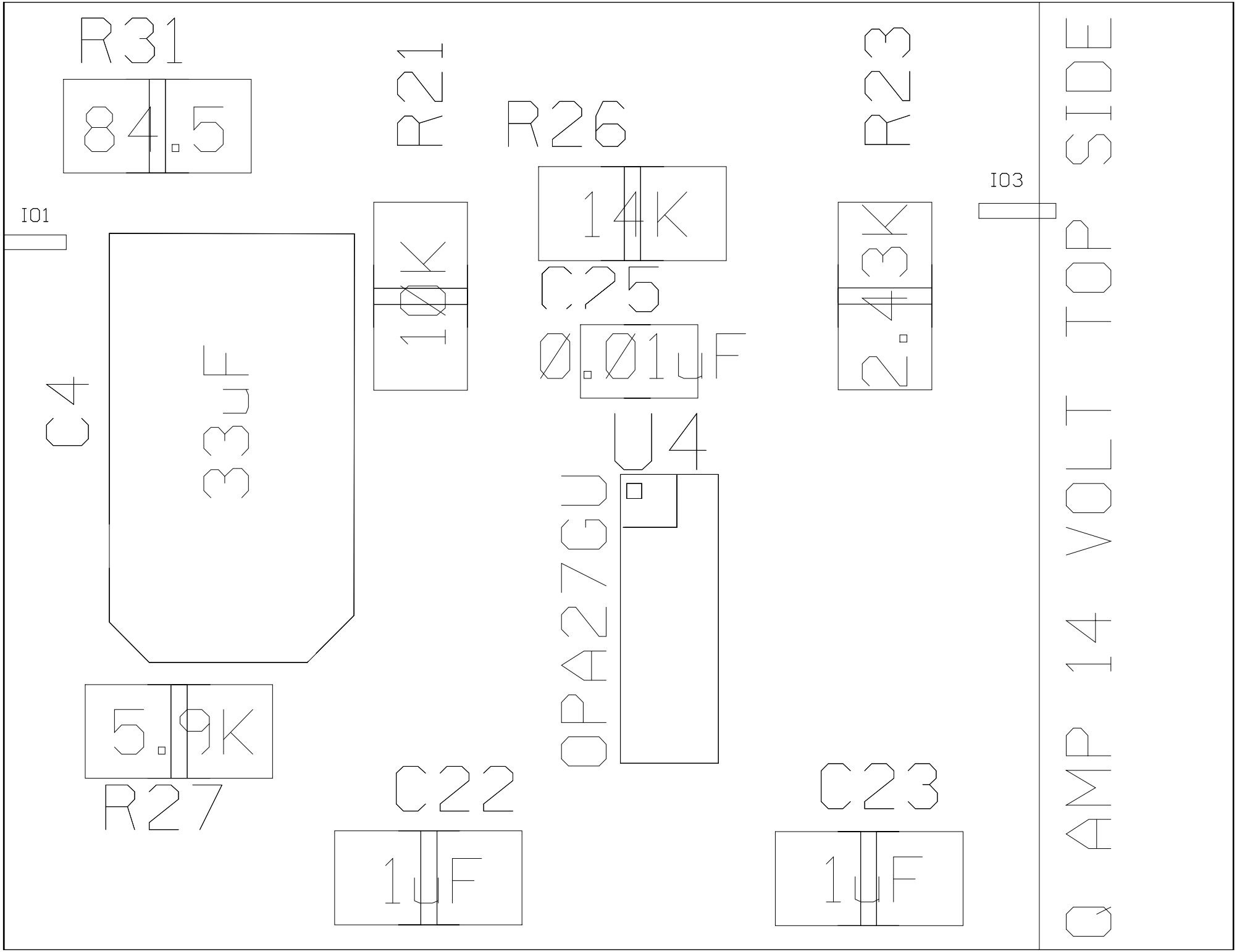
DRIVER MODULE BOTTOM SIDE



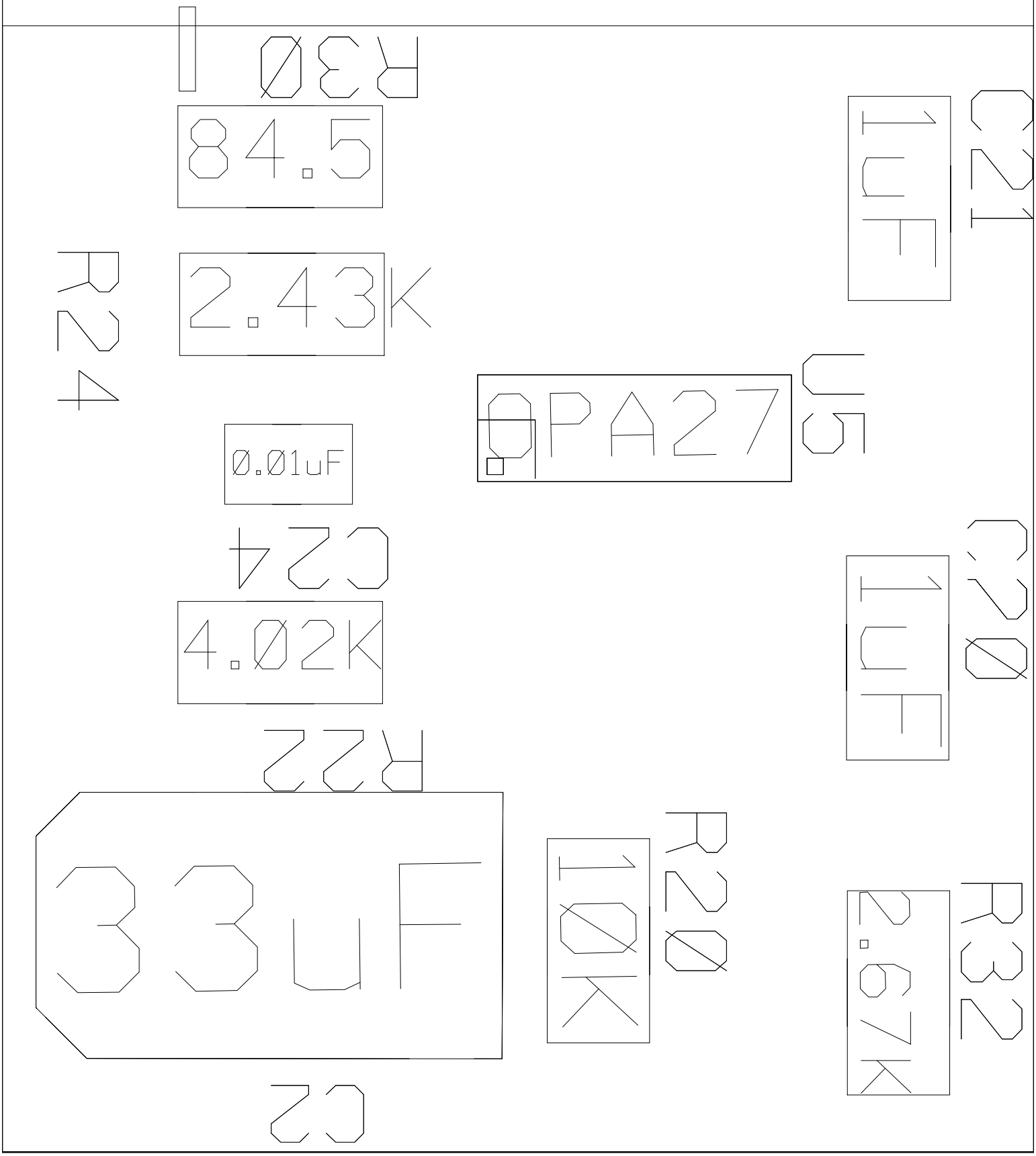

AD840JQ
U2
C14
2.2uF
OPA627GU
U7
R39
2K
D5
SMBD914
Q3
MMBT3904
100
R36
5.1
R40
S1
C1
33uF
0.47uF
C7
0.47uF
C8
0.1uF
C31
MPSA18
Q2
15K
R17
Q1
PN4250
2.87K
R14
0.47uF
C33
QAMP TOP SIDE



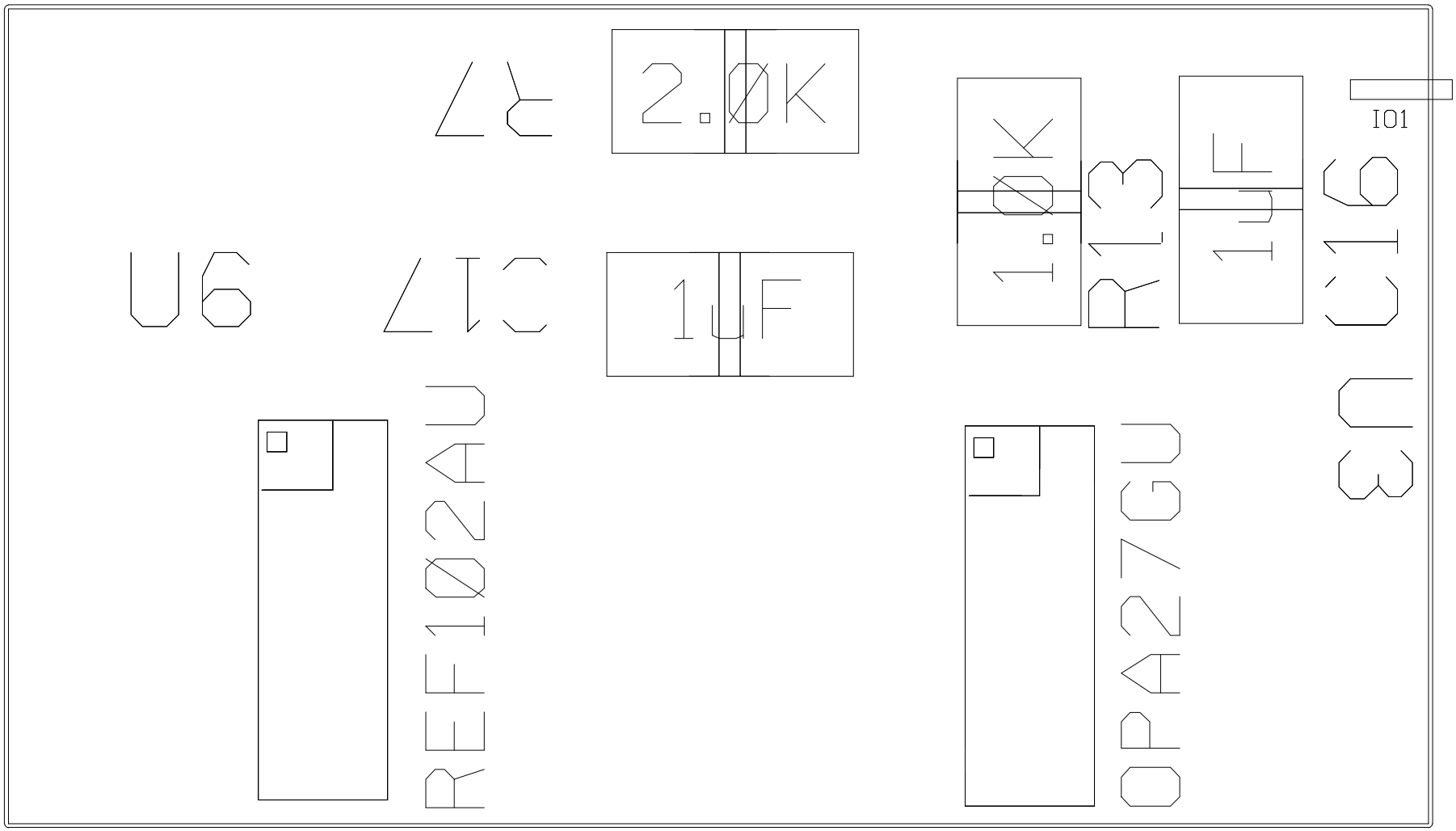
Q AMP BOTTOM SIDE


R31
84.5
R21
10K
R26
14K
R23
2.43K
IO1
IO3
C4
33uF
C25
0.01uF
U4
OPA27GU
5.9K
R27
C22
1uF
C23
1uF
O AMP 14 VOLT TOP SIDE

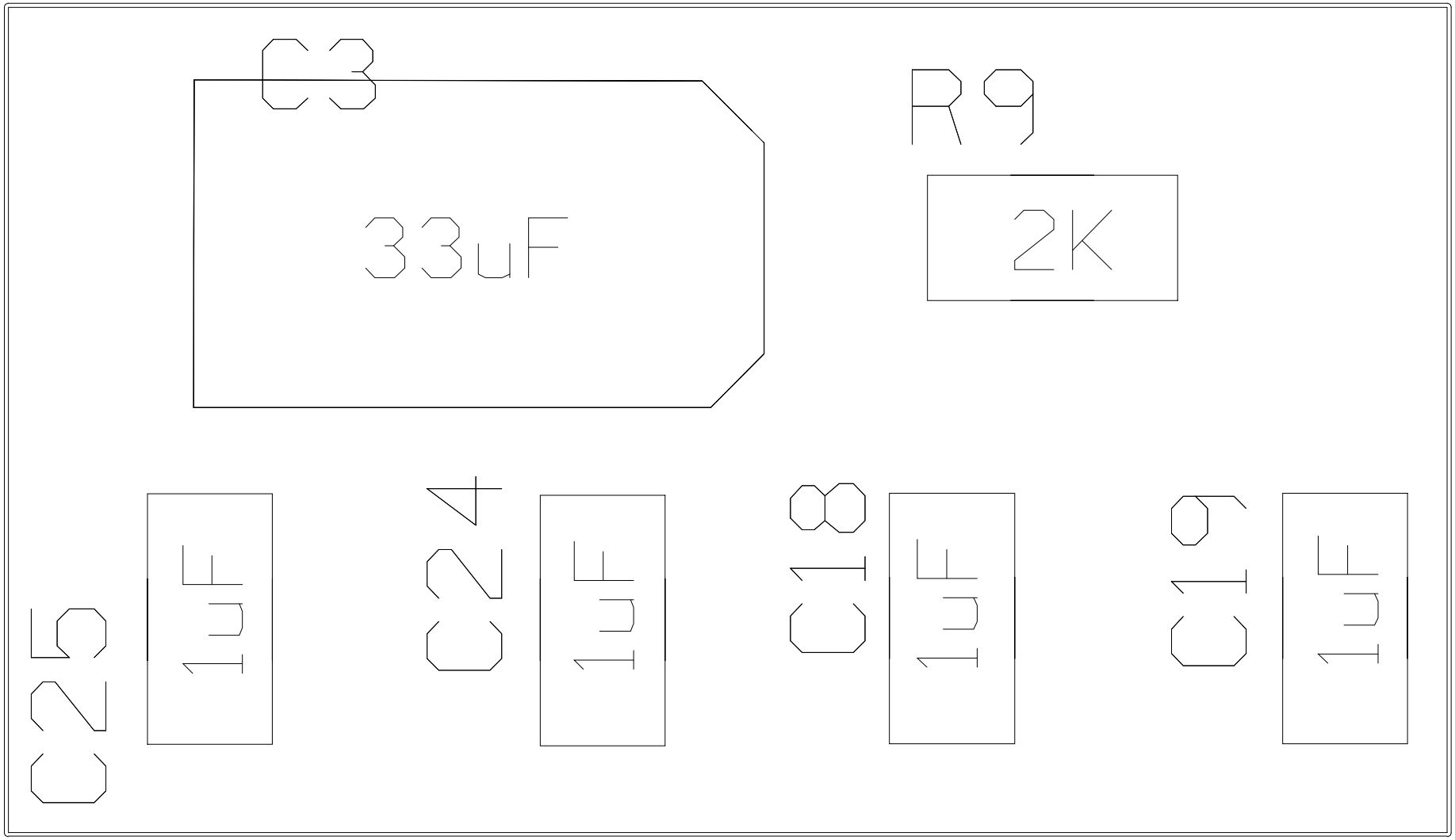
QAMP 14 VOLT BOT SIDE



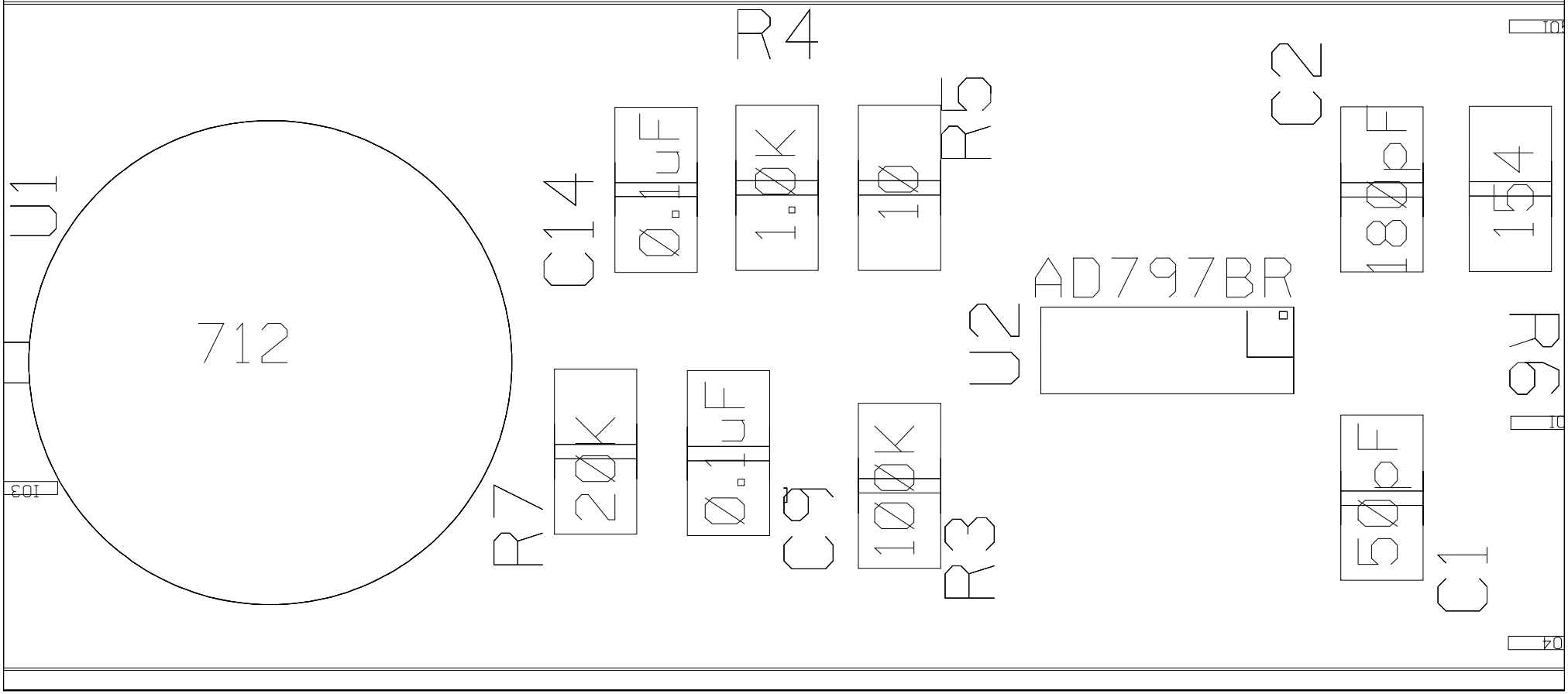
QAMP REFERENCE TOP



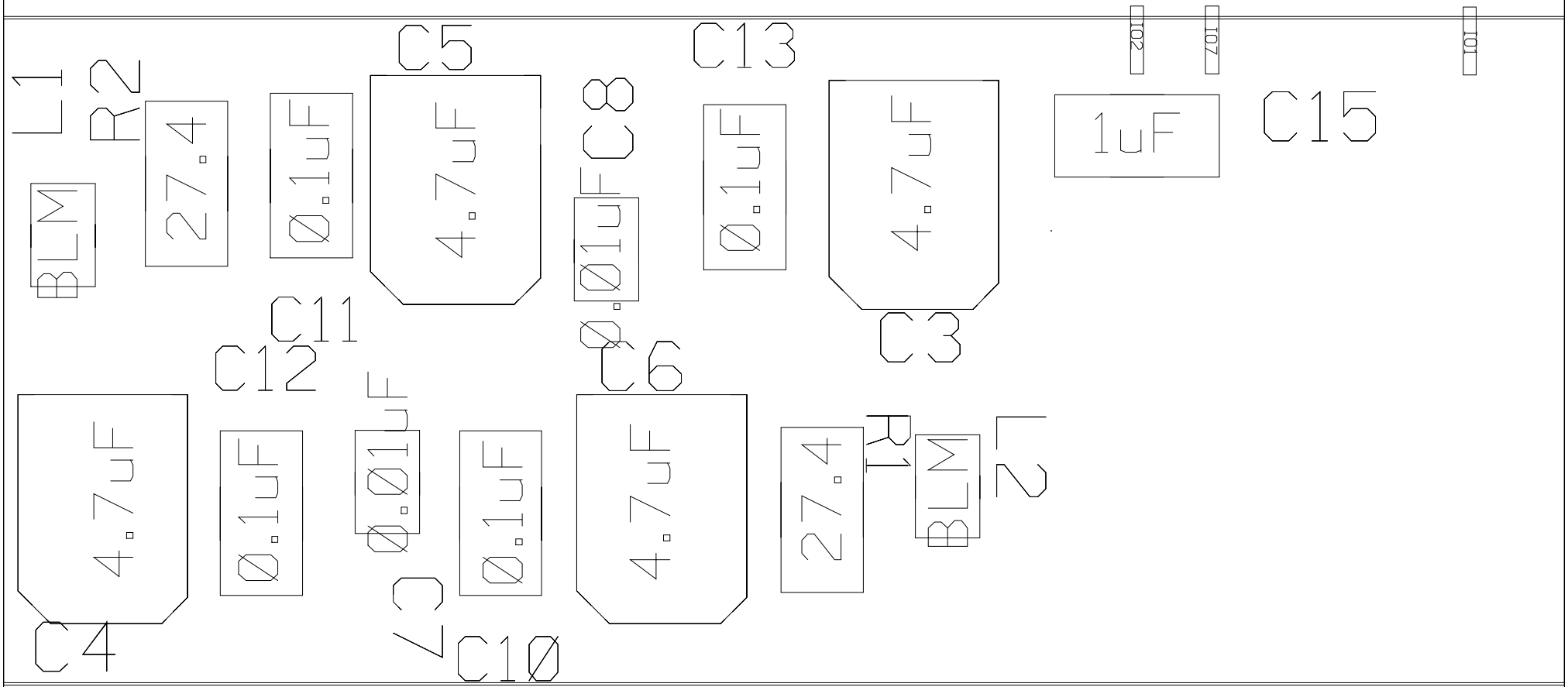
QAMP REFERENCE BOTTOM



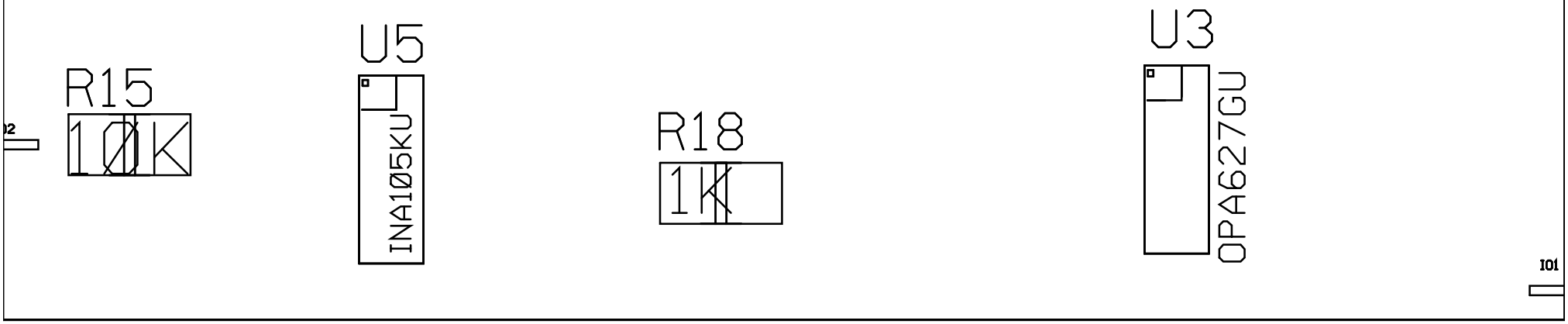
SQUID FRONTEND TOP SIDE



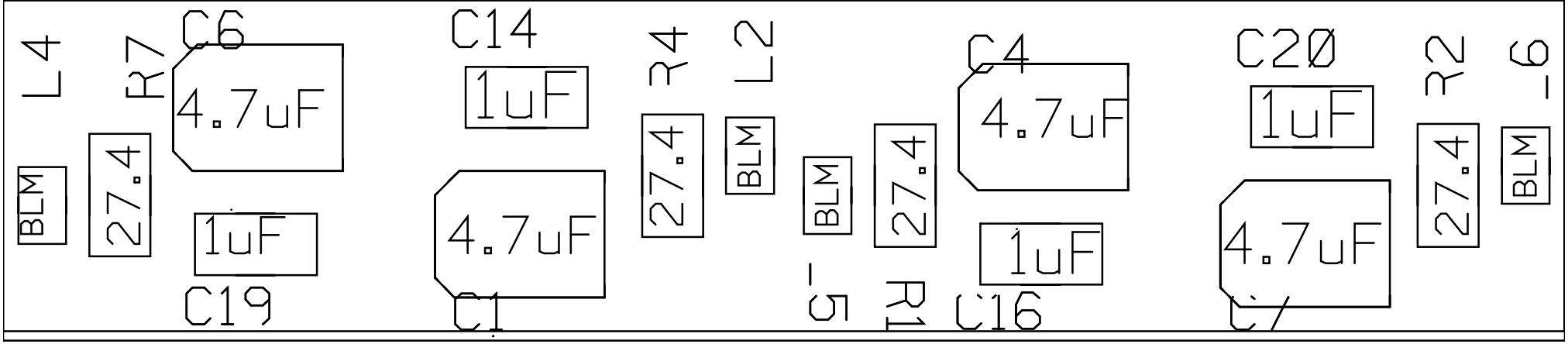
SQUID FRONT END BOTTOM SIDE

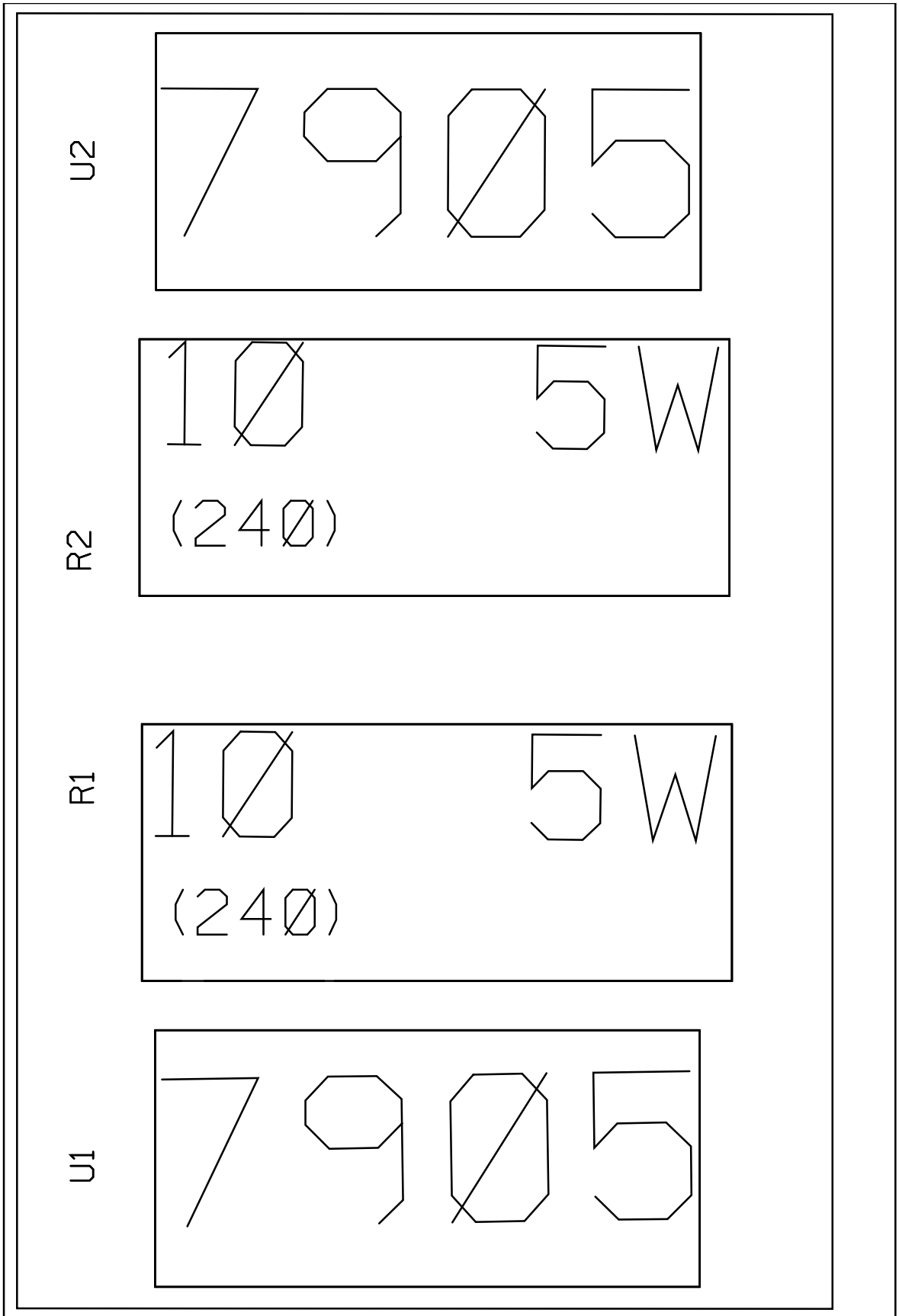


LED CURRENT SOURCE TOP SIDE



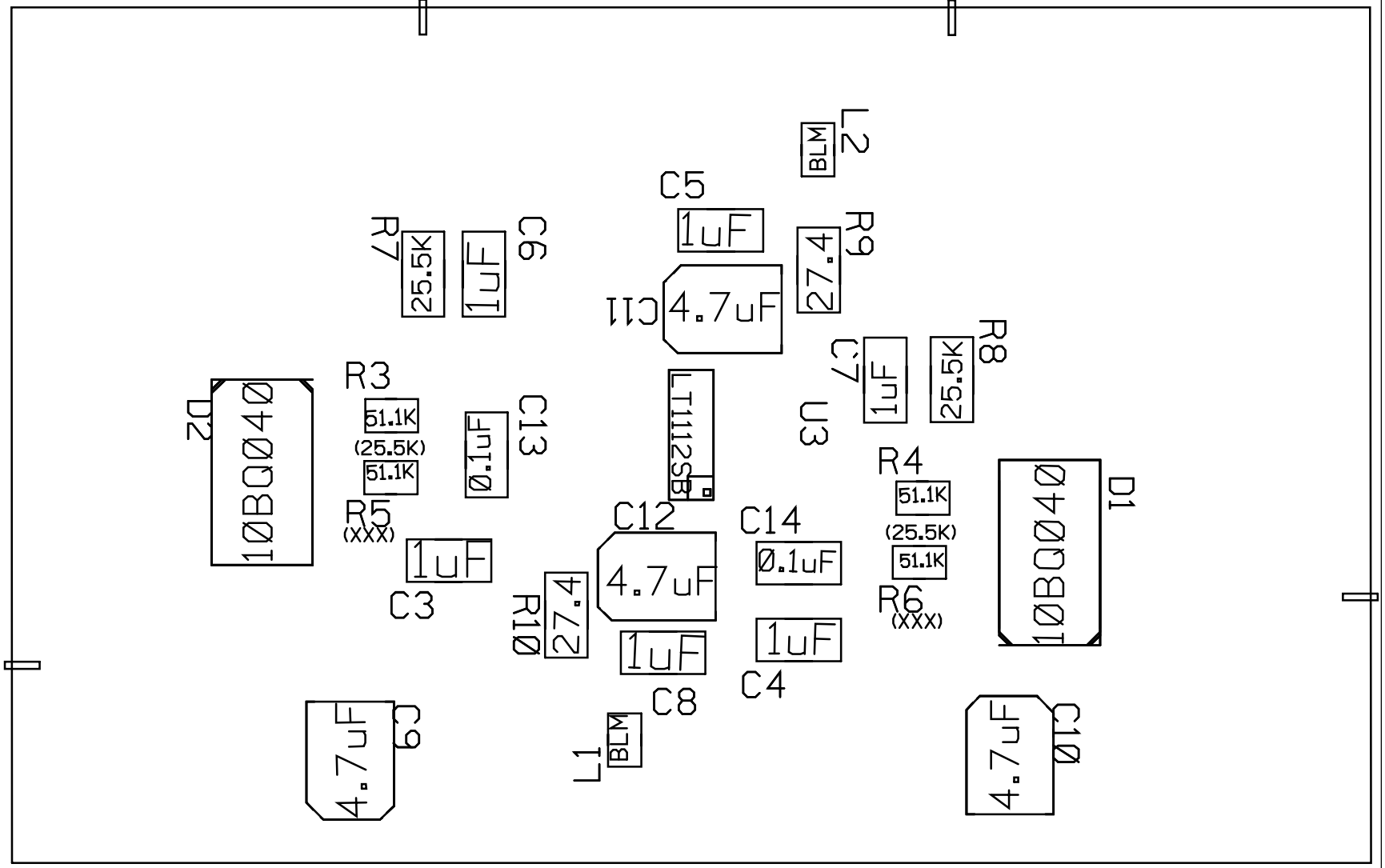
LED CURRENT SOURCE BOTTOM





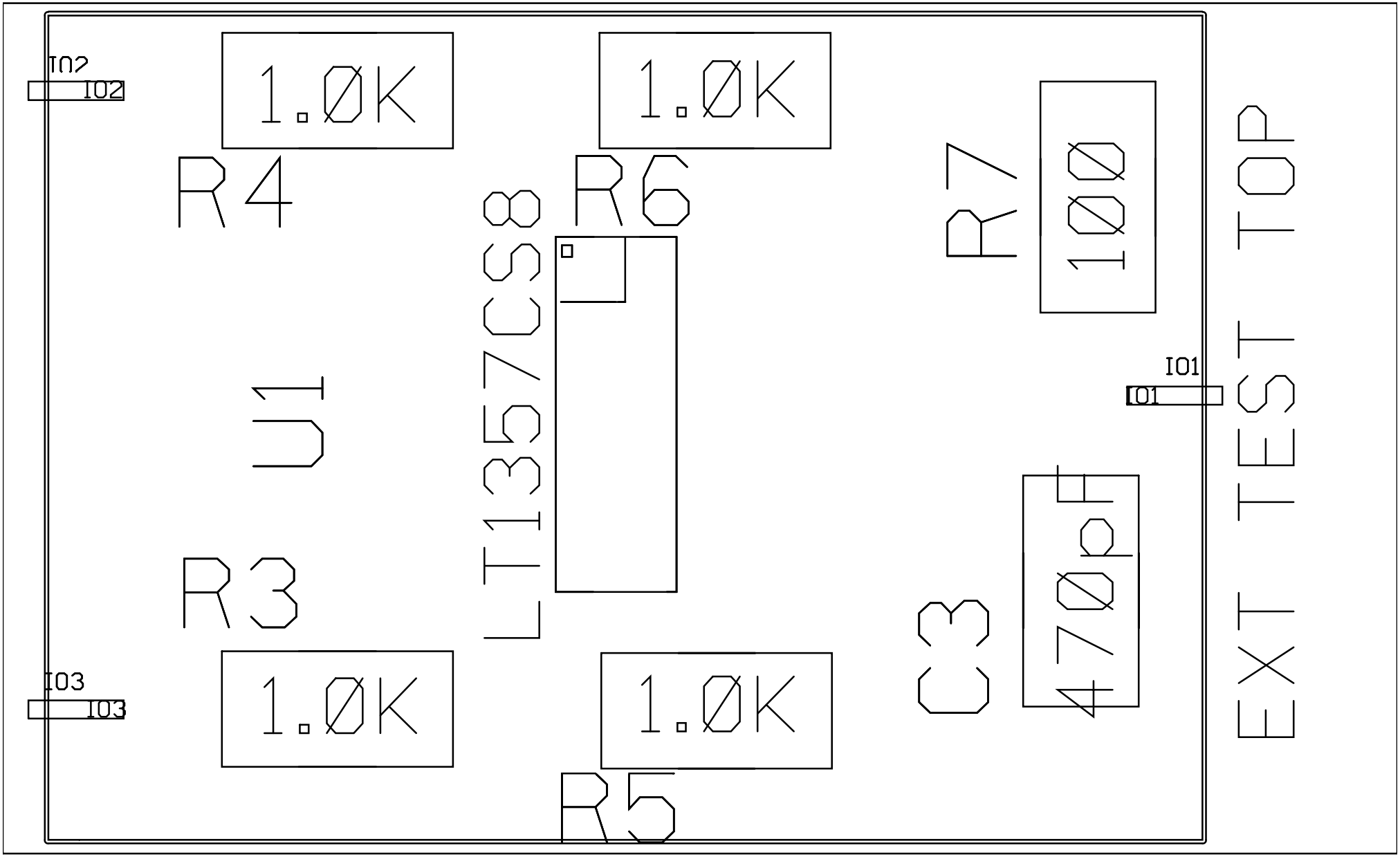
DAC 10 VOLT REFERENCE TOP
(DAC 5 VOLT)

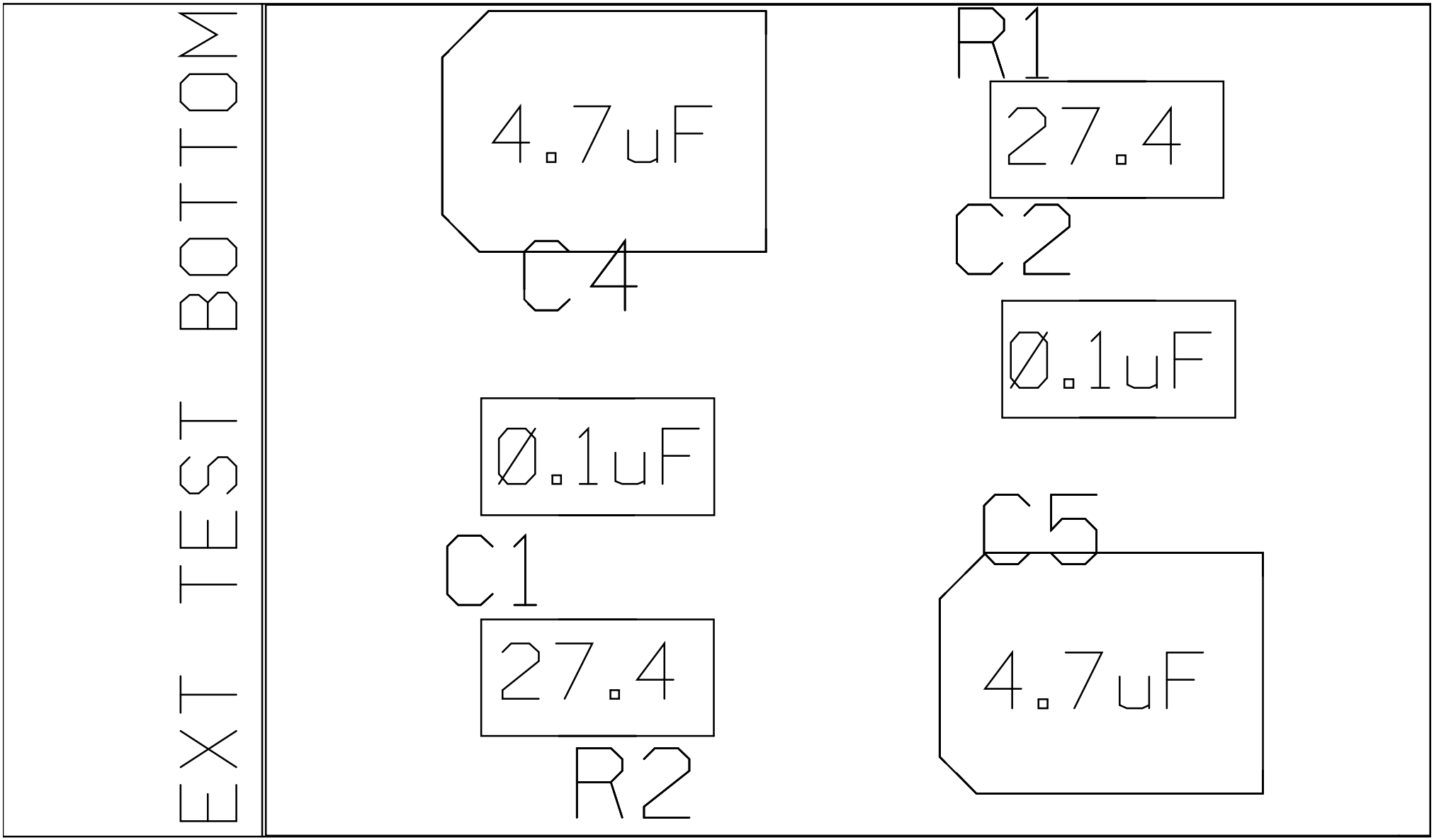
(DAC 5V) DAC 10 VOLT REFERENCE BOTTOM

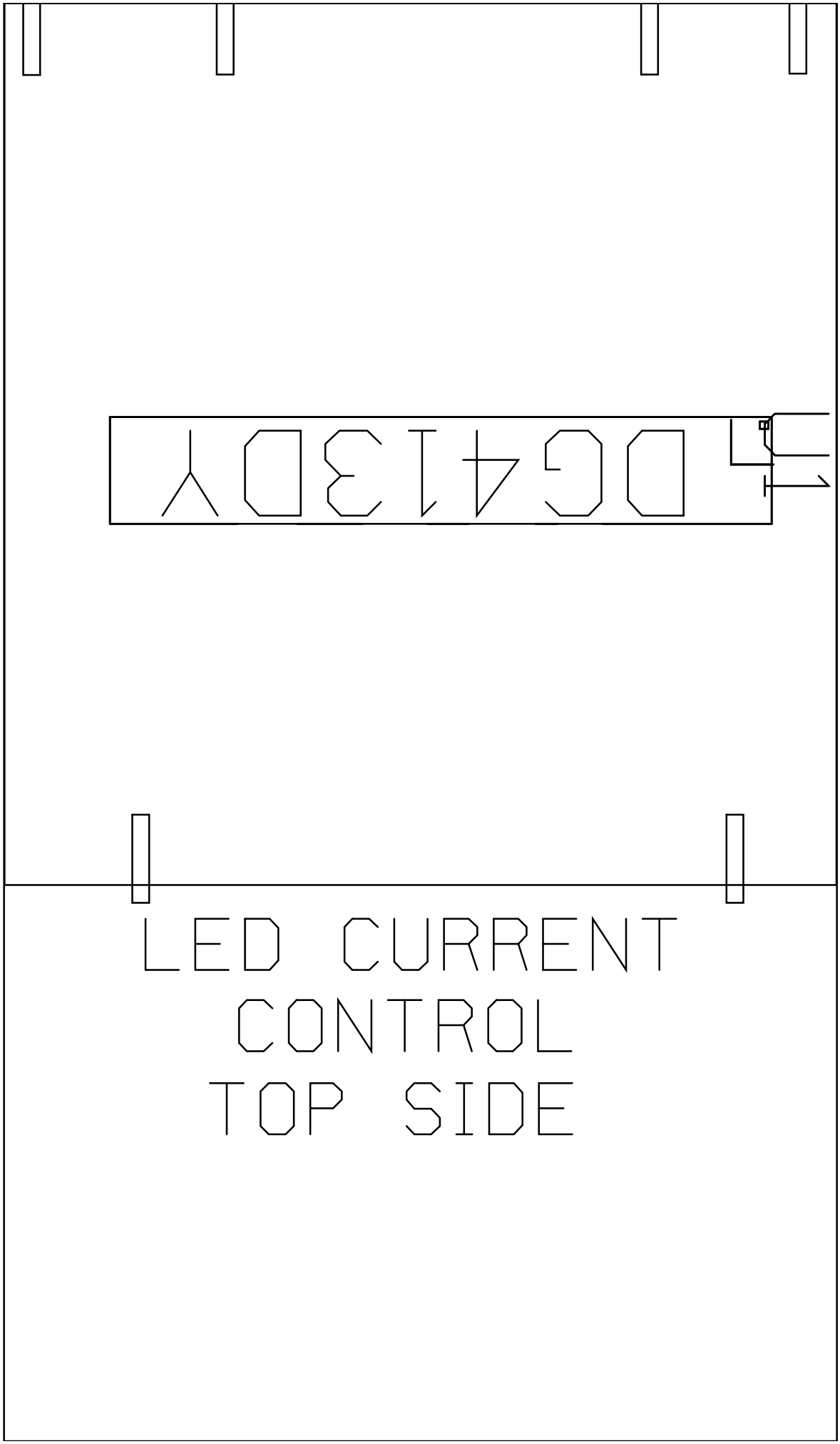


DAC PRECISION REFERENCE TOP

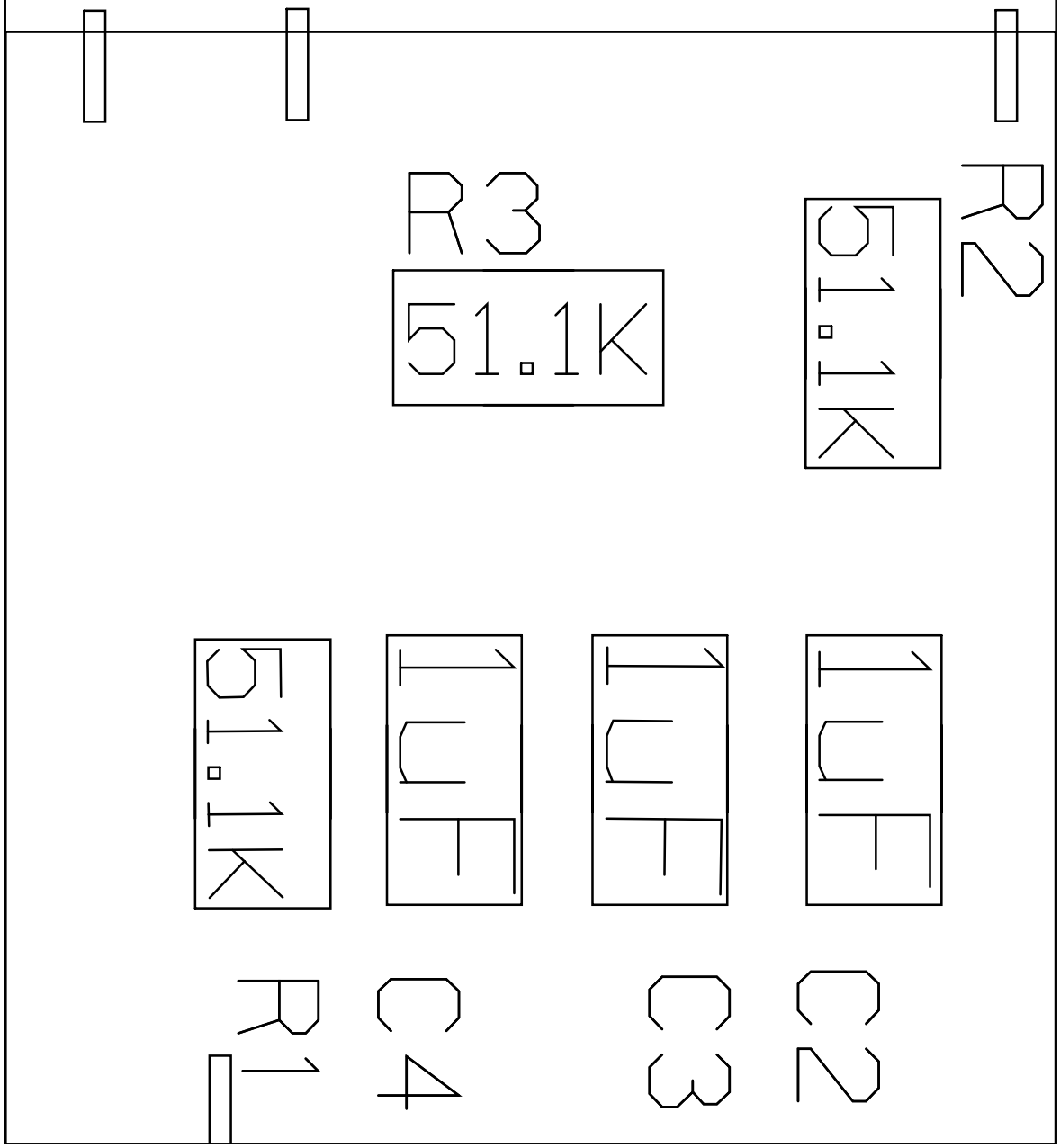
DAC PRECISION REFERENCE BOTTOM

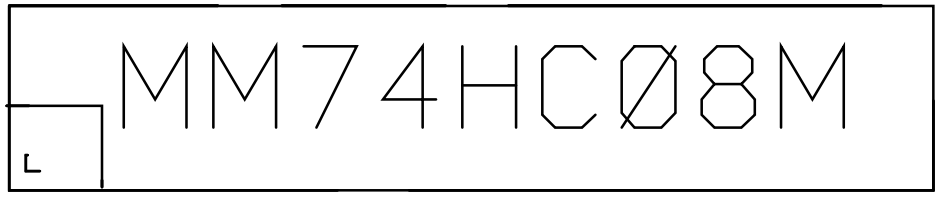

IO2
IO2
1.0K
1.0K
R4
R6
LT1357CS8
R7
100
IO1
IO1
U1
R3
C3
470pF
IO3
IO3
1.0K
1.0K
R5
EXT TEST TOP


EXT TEST BOTTOM
4.7uF
C4
R1
27.4
C2
0.1uF
0.1uF
C1
27.4
R2
C5
4.7uF


LED CURRENT
CONTROL
TOP SIDE
5
DG413DY

LED CURENT CONTROL BOTTOM SIDE

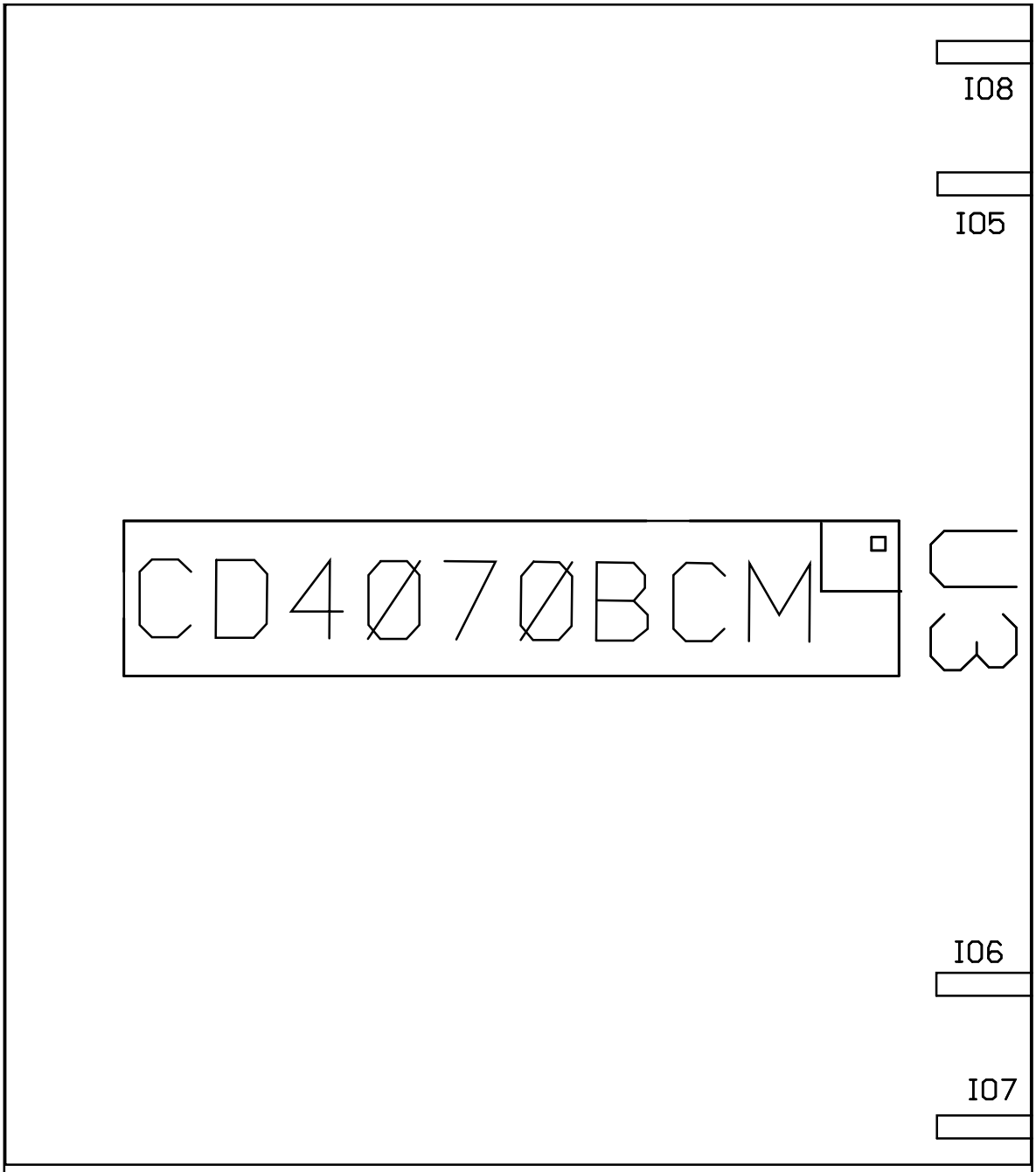




U1

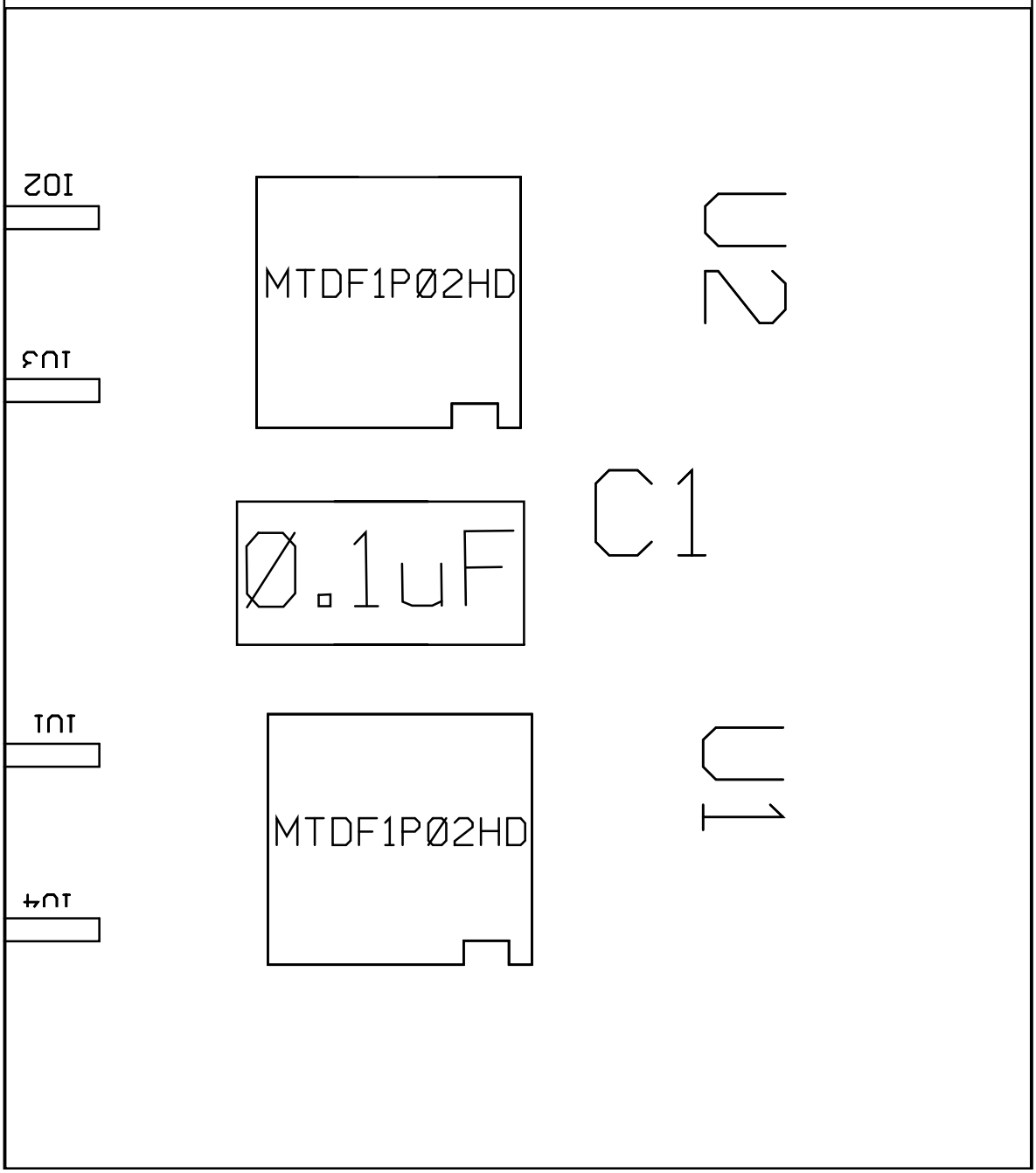
LED PULSE
CONTROL
TOP SIDE

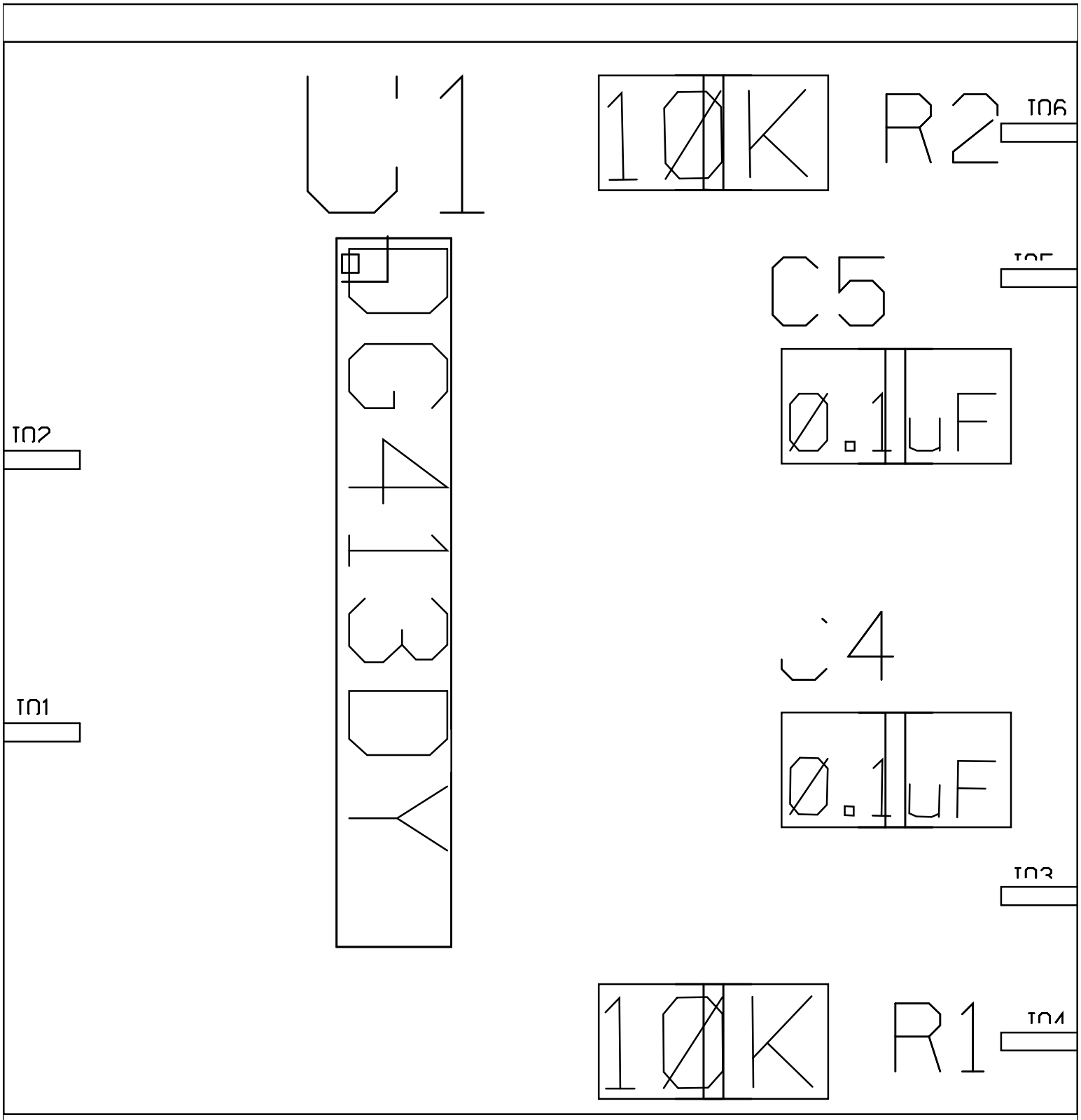
LED PULSE
CONTROL
BOTTOM SIDE
106
107
C1
1uF
R5
1.0K
R4
R1
R3
R2
10K
10K
10K
10K
101
102
104
103



POLARITY CONTROL TOP

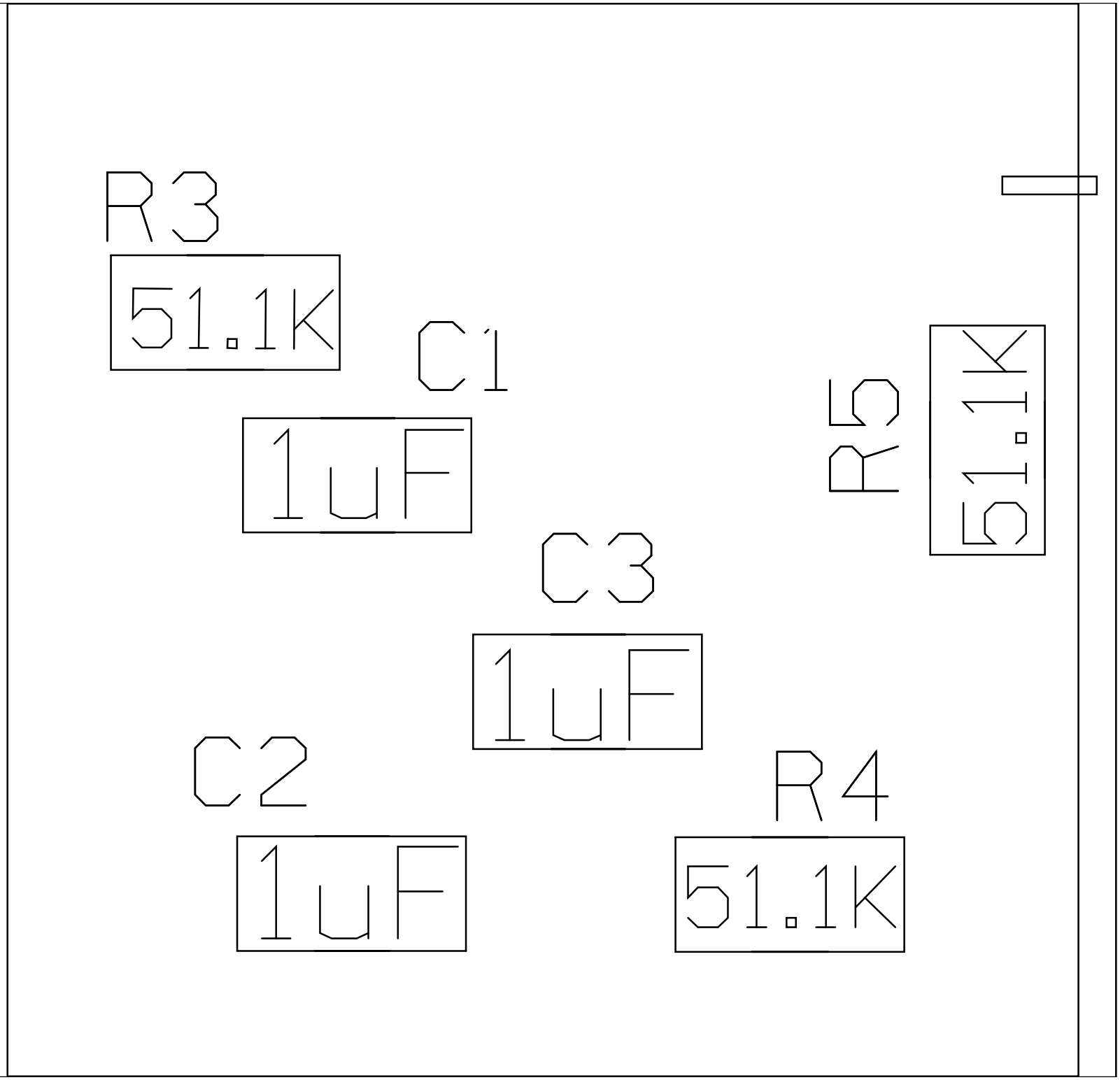
POLARITY CONTROL BOTTOM

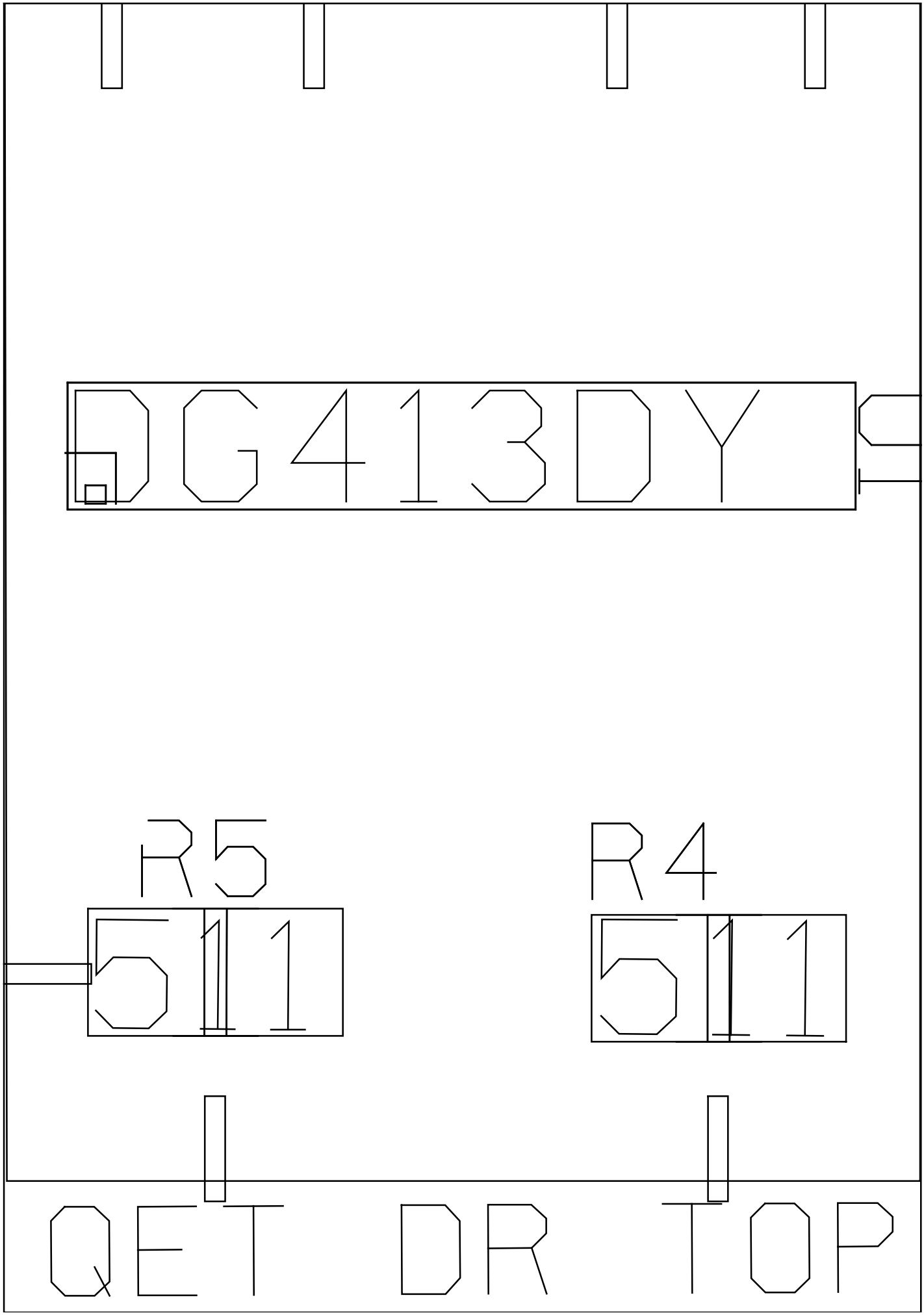




QBIAS FE TOP SIDE

QBIAS FE
BOTTOM SIDE




DG413DY
R5
R4
511
511
QET DR TOP

QET DR BOT

51.1K
R2

1uF
C1

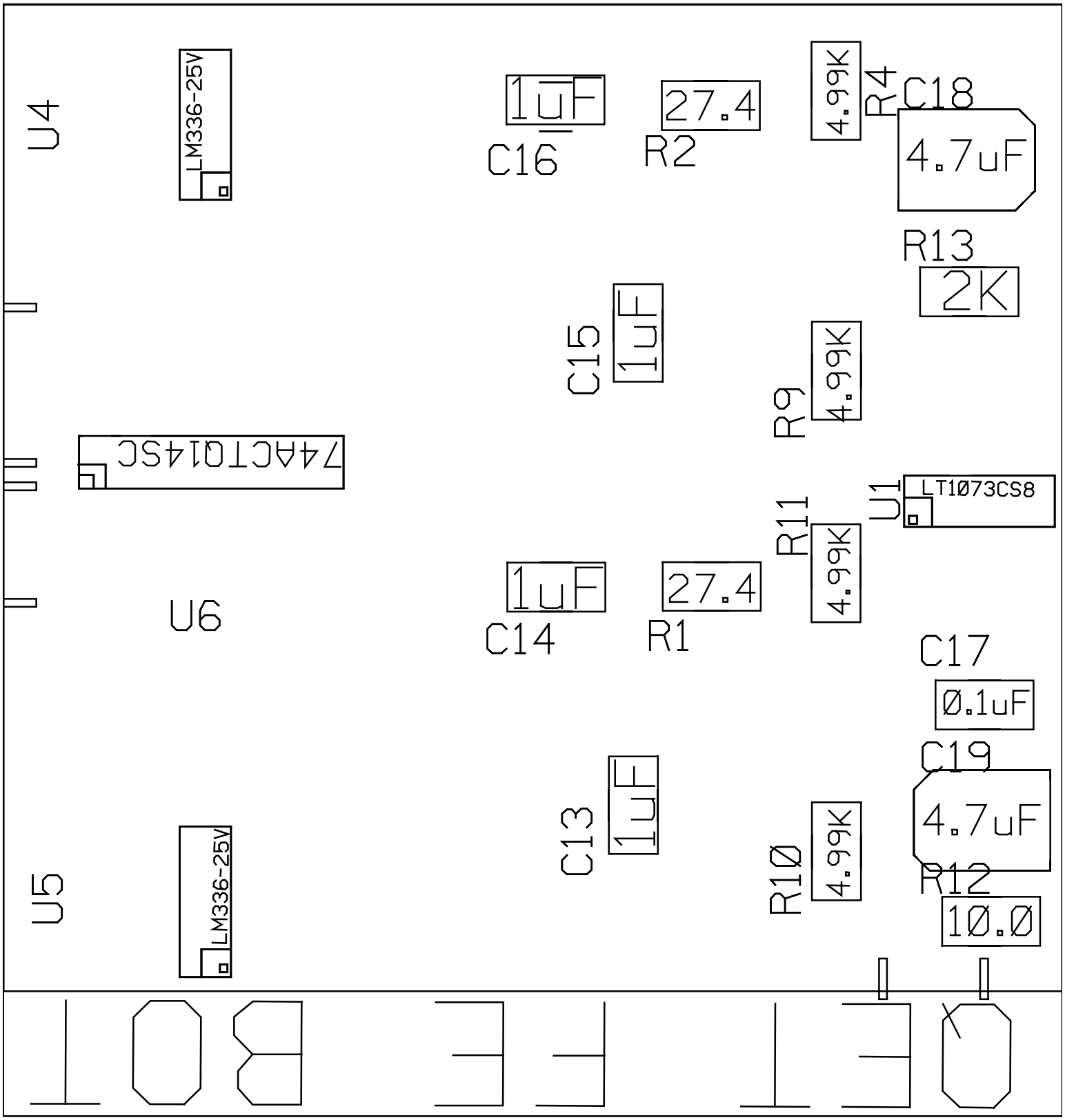
1uF
C2

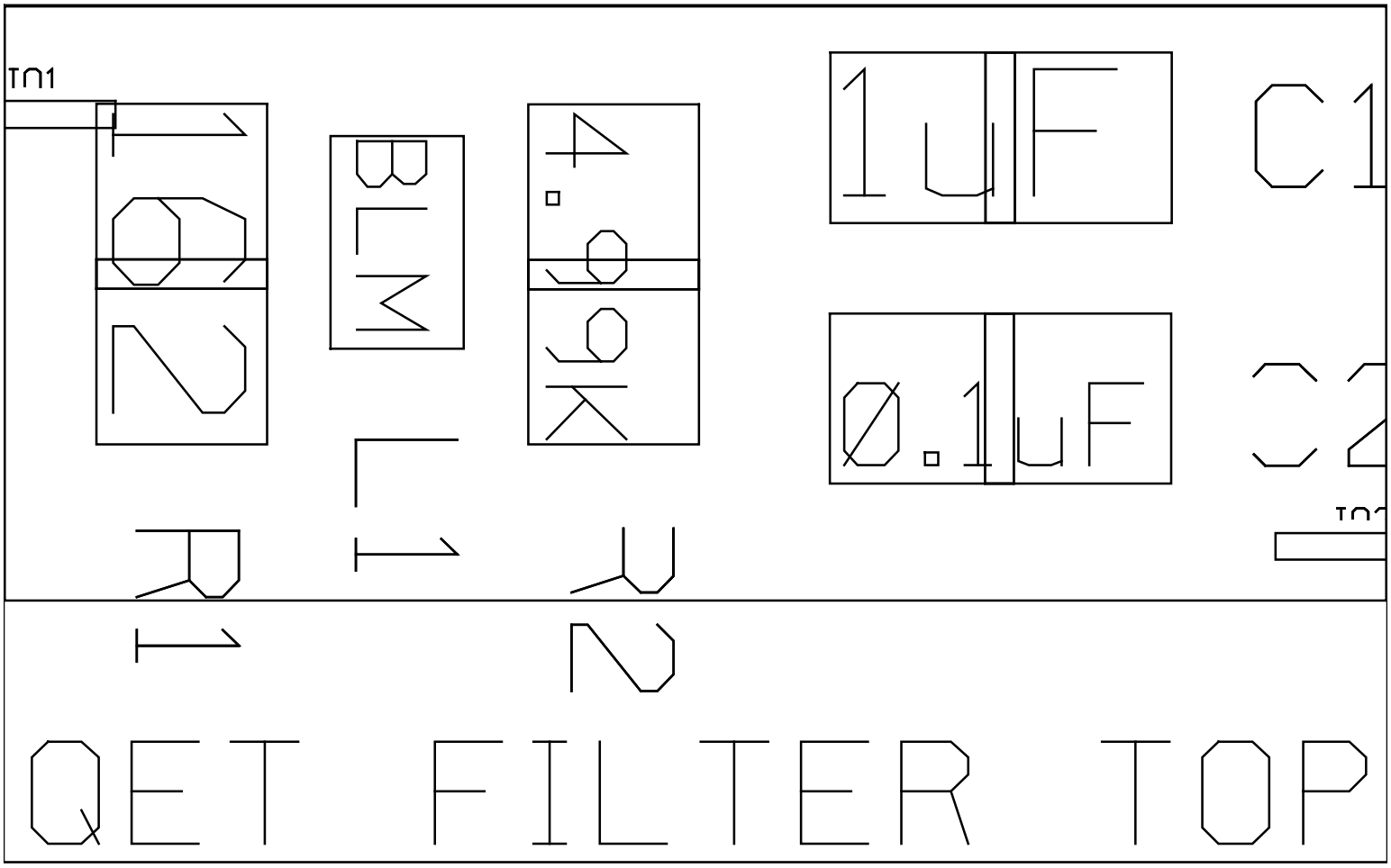
51.1K
R3

1uF
C3

51.1K
R1

TOP
U3
DG540DN
U2
DG540DN
C1D
1uF
C2D
0.1uF
C1A
1uF
C2A
0.1uF
C3
0.1uF
C1B
1uF
C2B
0.1uF
C1C
1uF
C2C
0.1uF
R2
4.99K
L1D
BLM
R11
162
R2
4.99K
L1A
BLM
R11
162
R2
4.99K
L1B
BLM
R11
162
R2
4.99K
L1C
BLM
R11
162

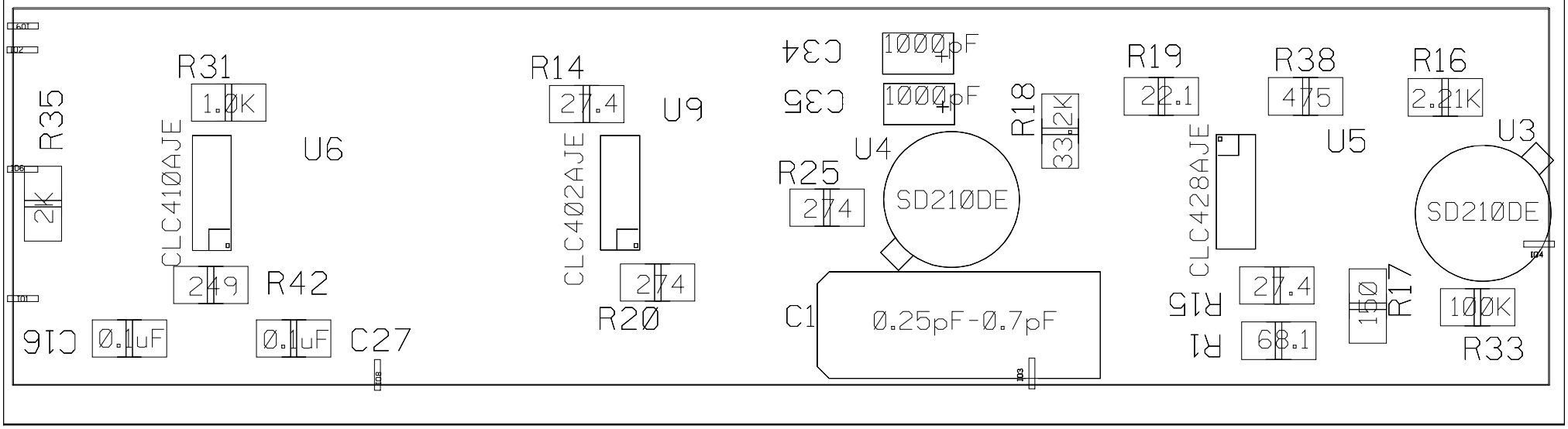

U4
LM336-25V
1uF
C16
27.4
R2
4.99K
R4
C18
4.7uF
R13
2K
C15
1uF
R9
4.99K
74ACT0144SC
U1
LT1073CS8
R11
4.99K
1uF
C14
27.4
R1
U6
C17
0.1uF
C19
4.7uF
C13
1uF
R10
4.99K
R12
10.0
U5
LM336-25V



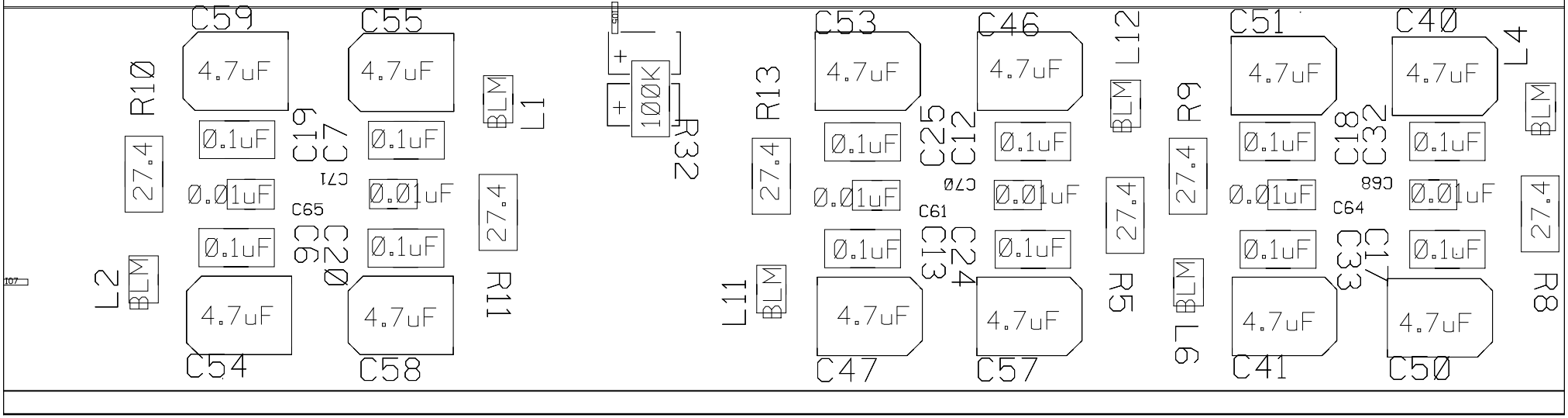
QET FILTER TOP

QET FILTER BOT

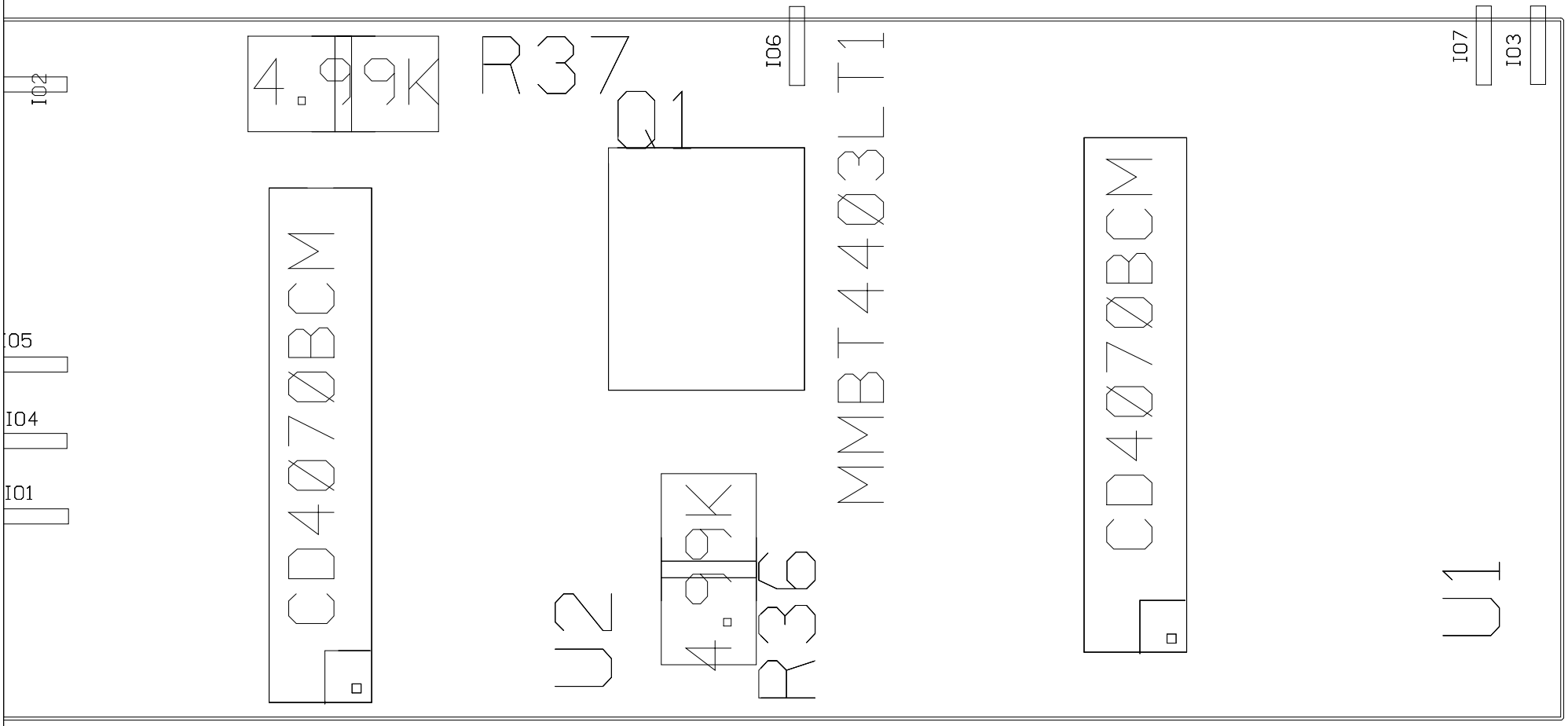
SQUID INTEGERATOR TOP SIDE



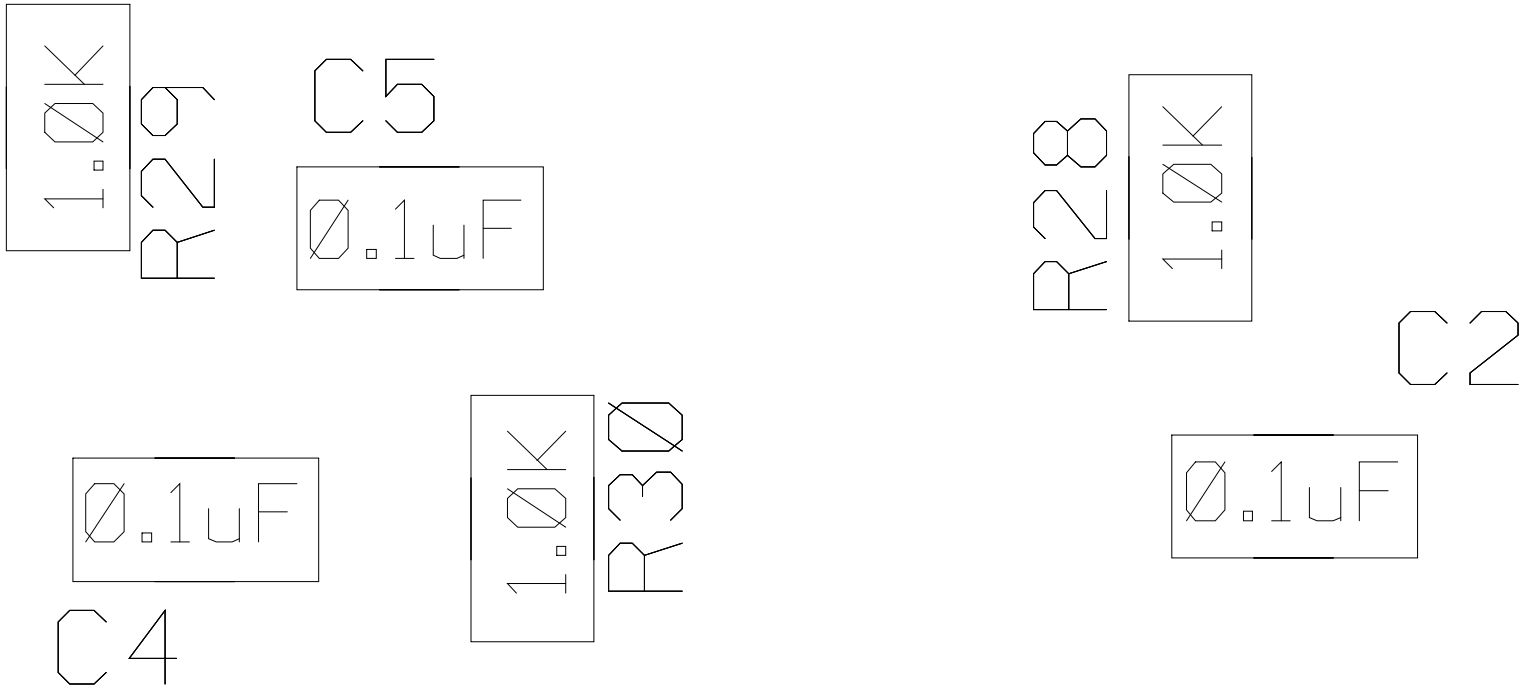
SQUID INTEGRATOR BOTTOM SIDE



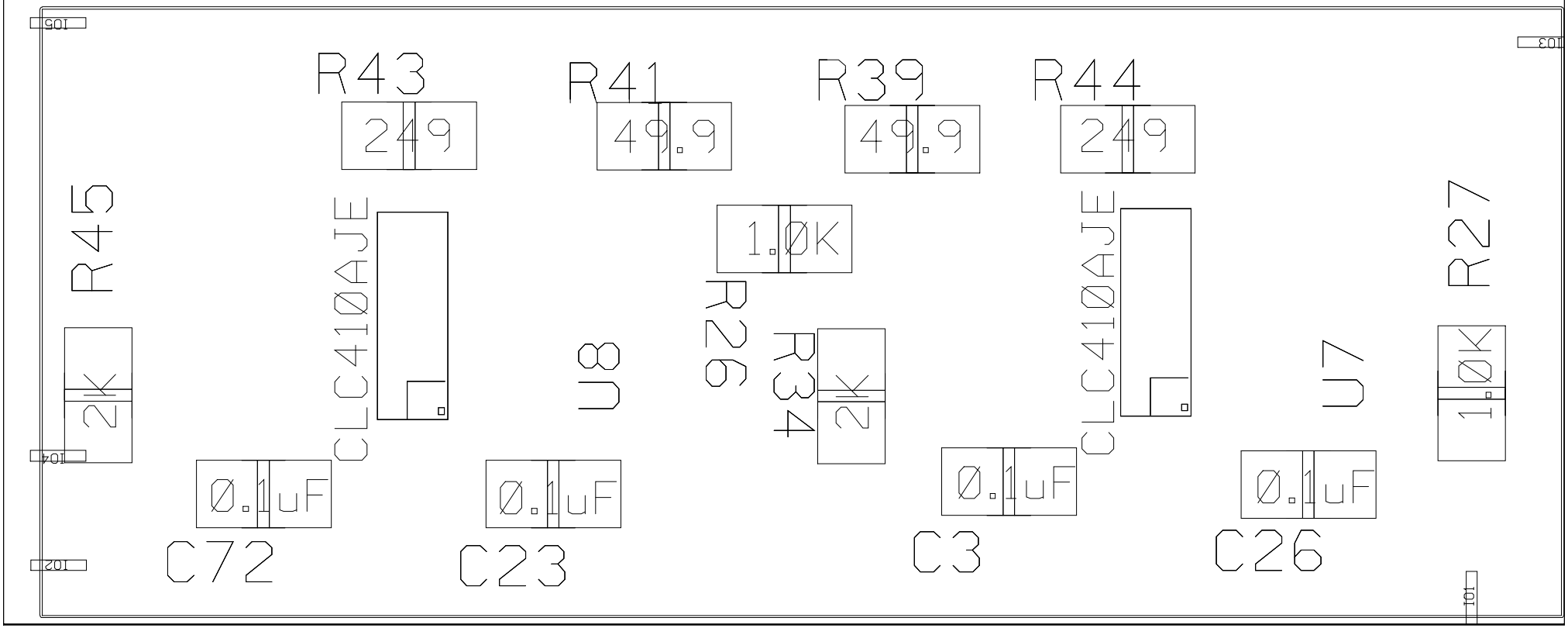
SQUID LOGIC TOP SIDE



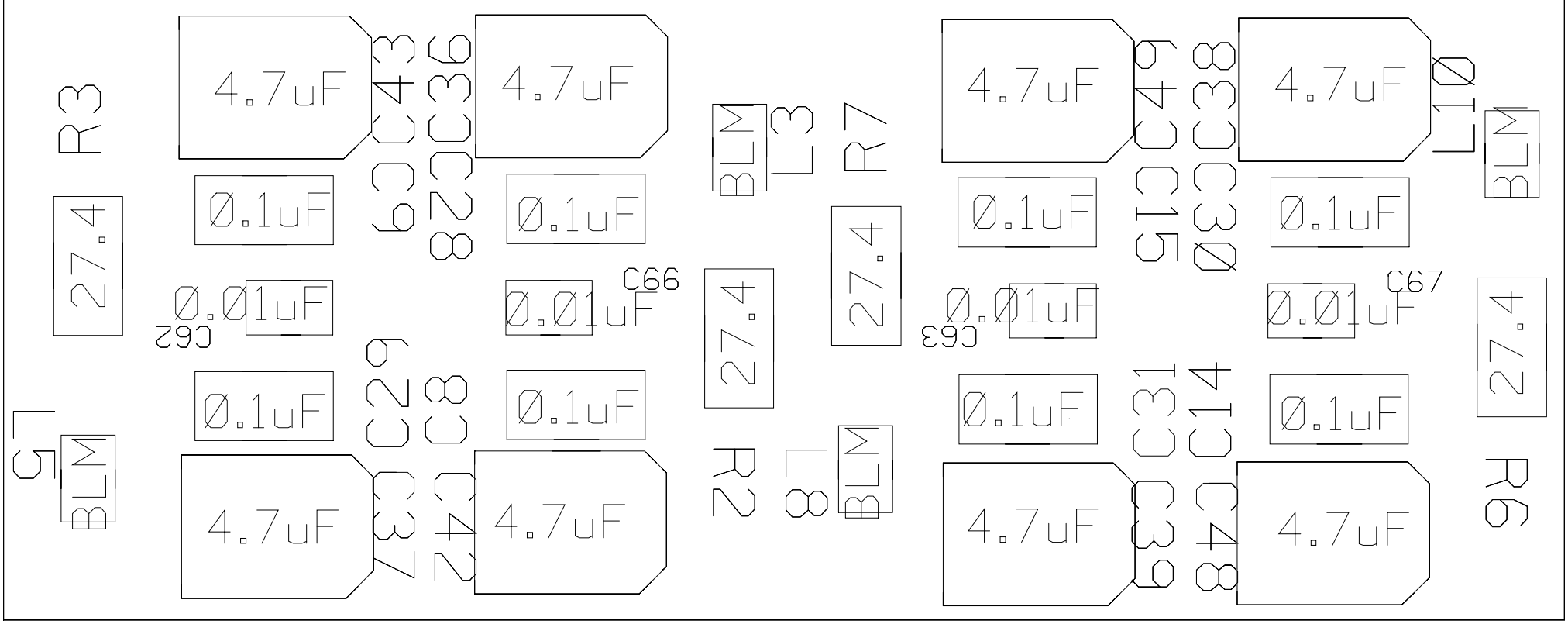
SQUID LOGIC BOTTOM SIDE



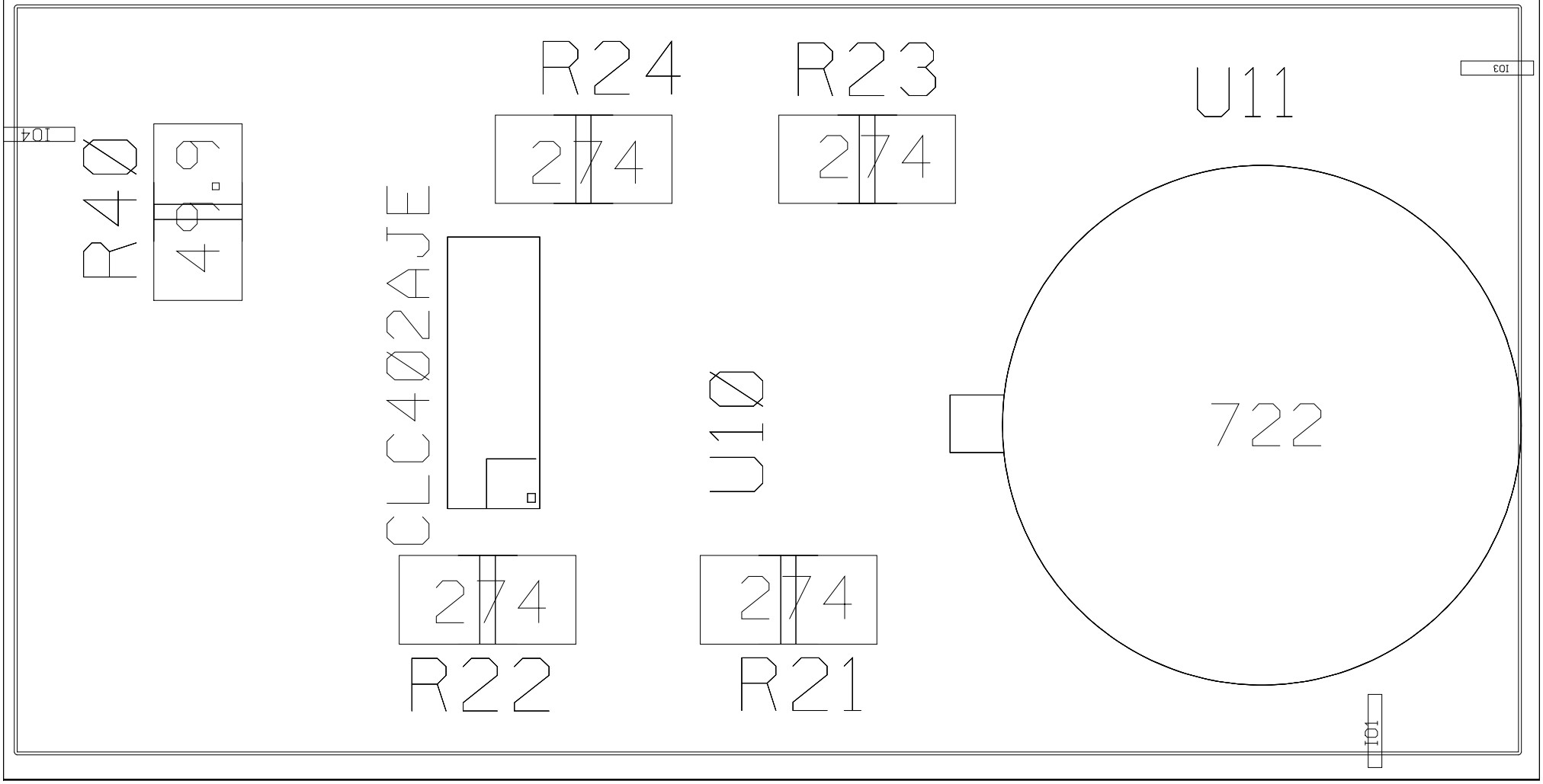
SQUID MONITOR TOP SIDE



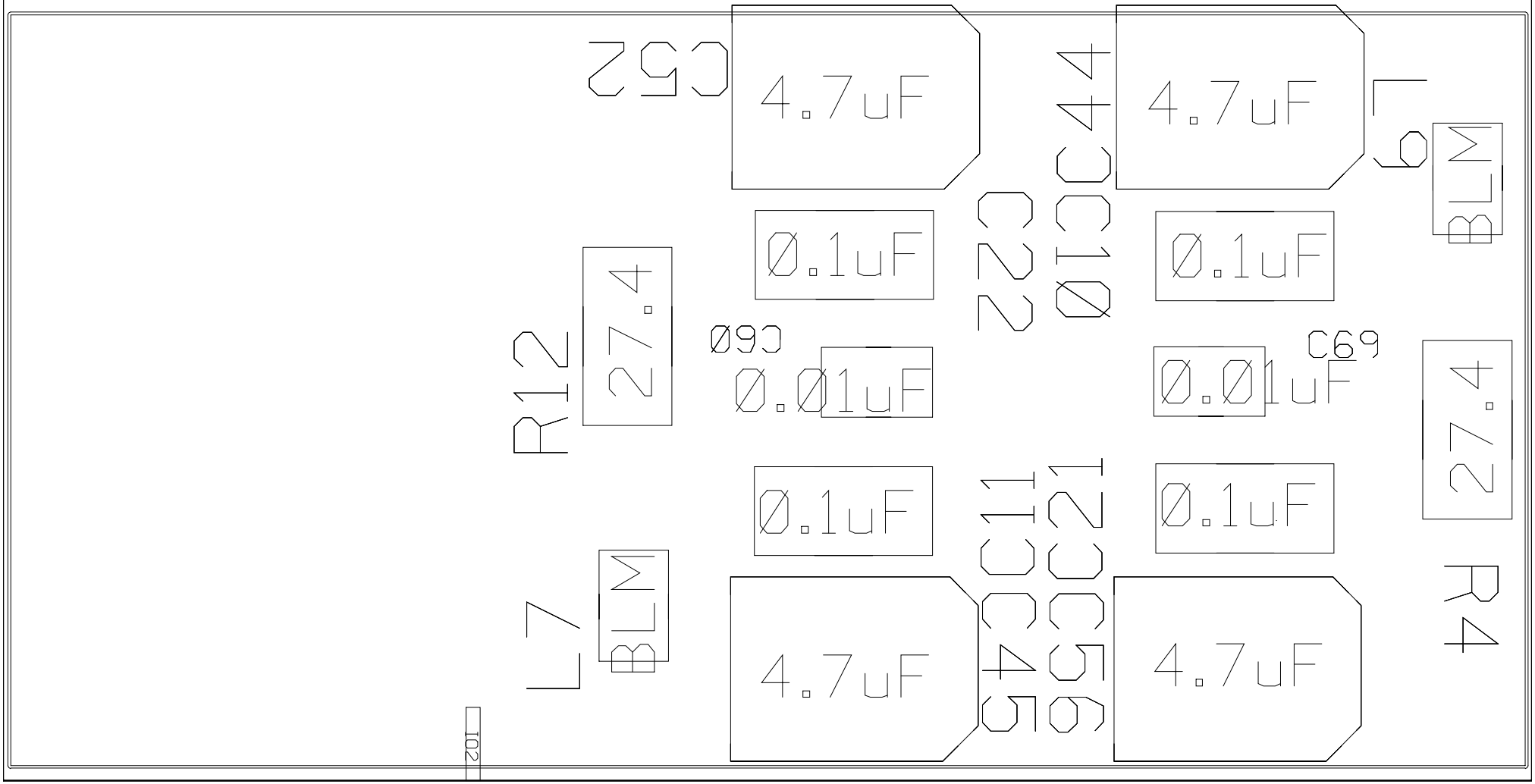
SQUID MONITOR BOTTOM SIDE

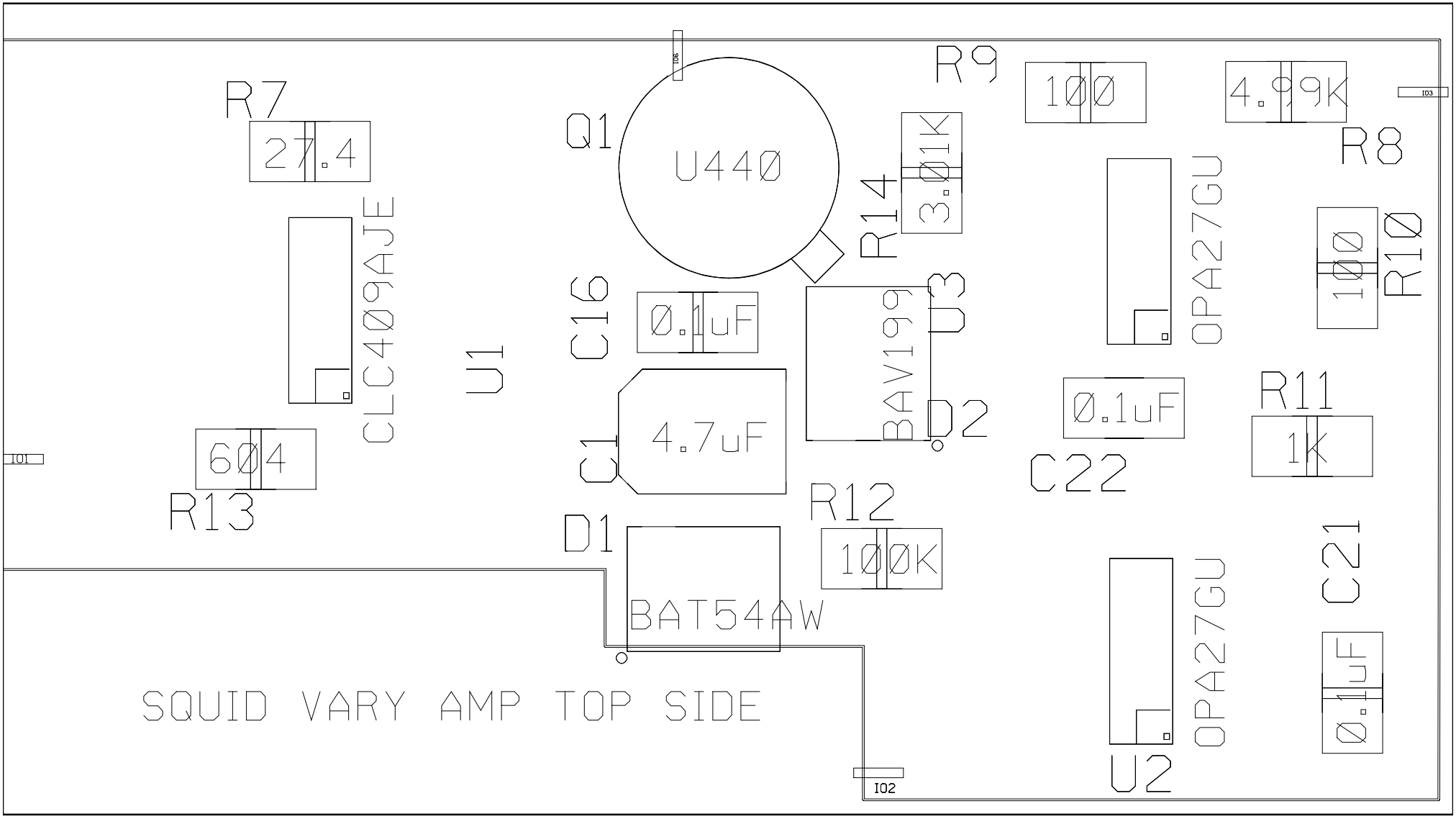


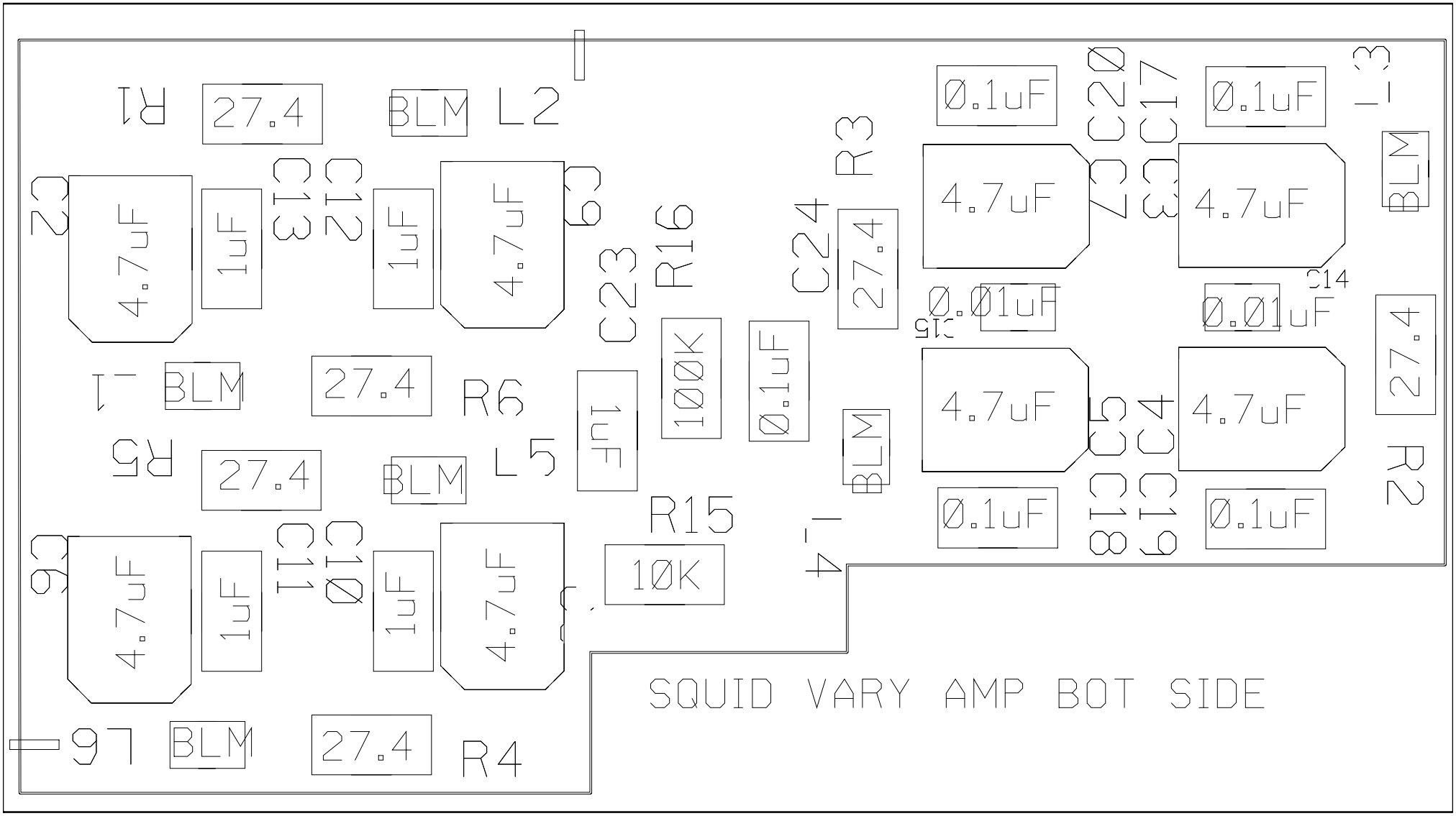
SQUID POLARITY TOP SIDE

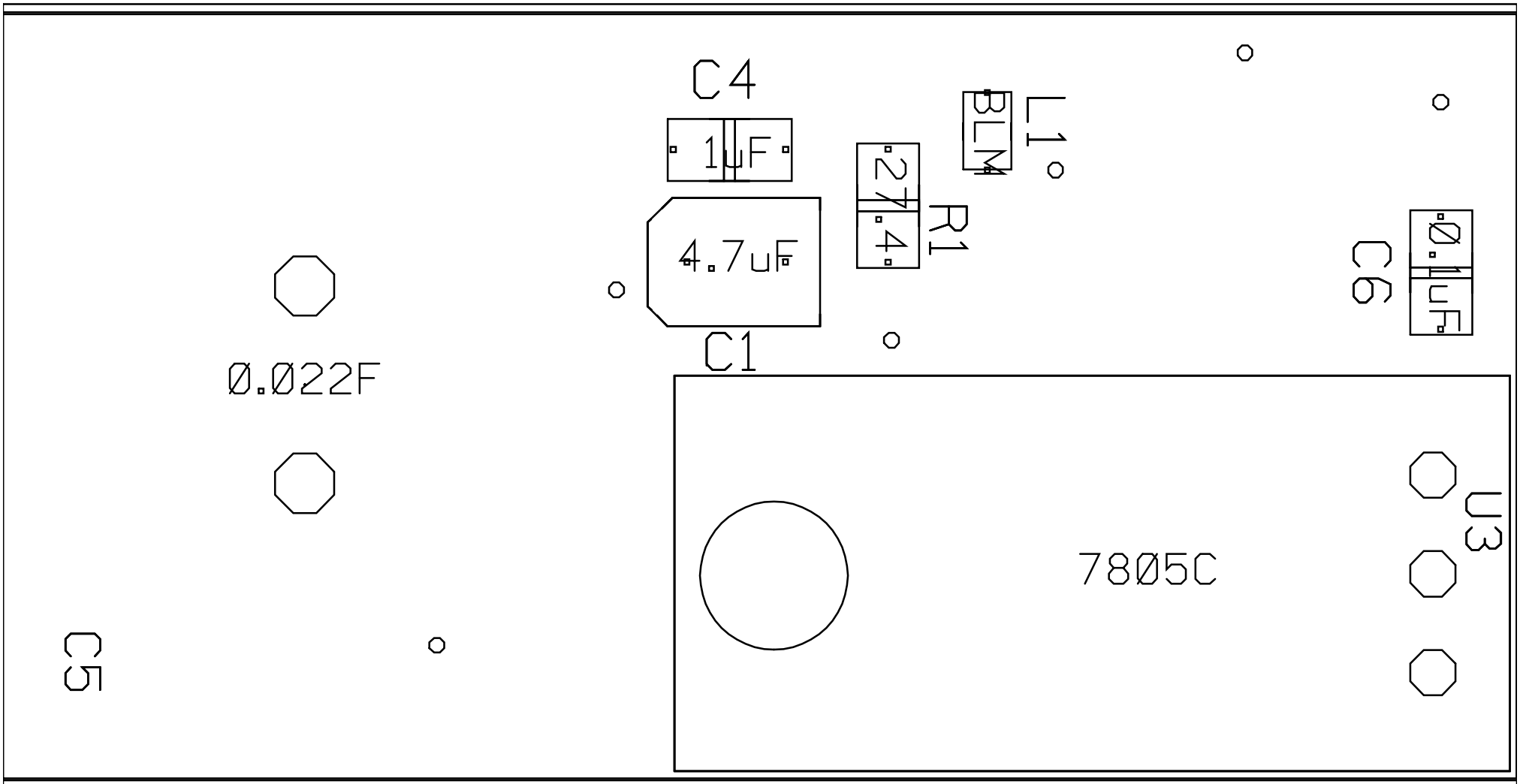


SQUID POLARITY BOTTOM SIDE

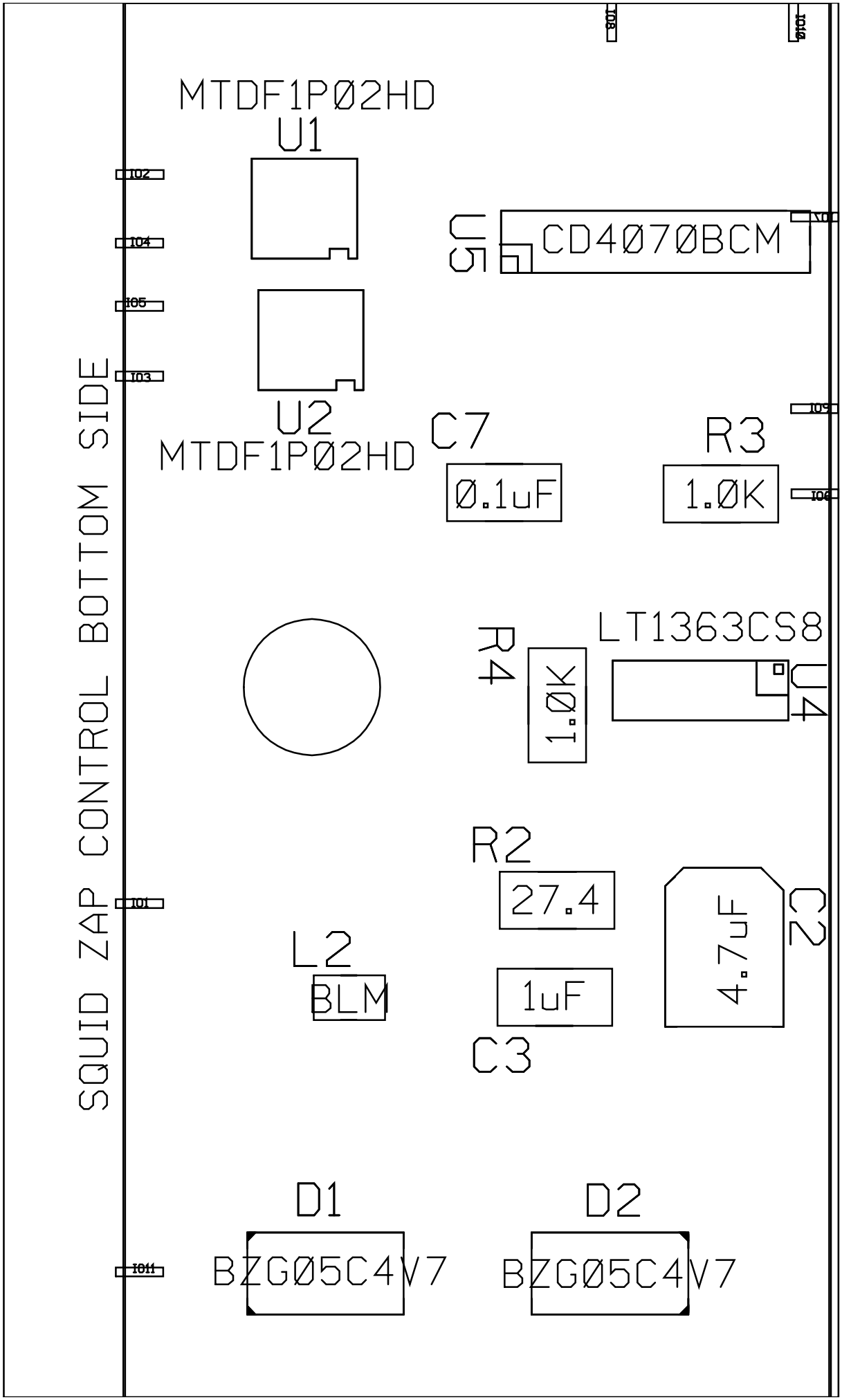


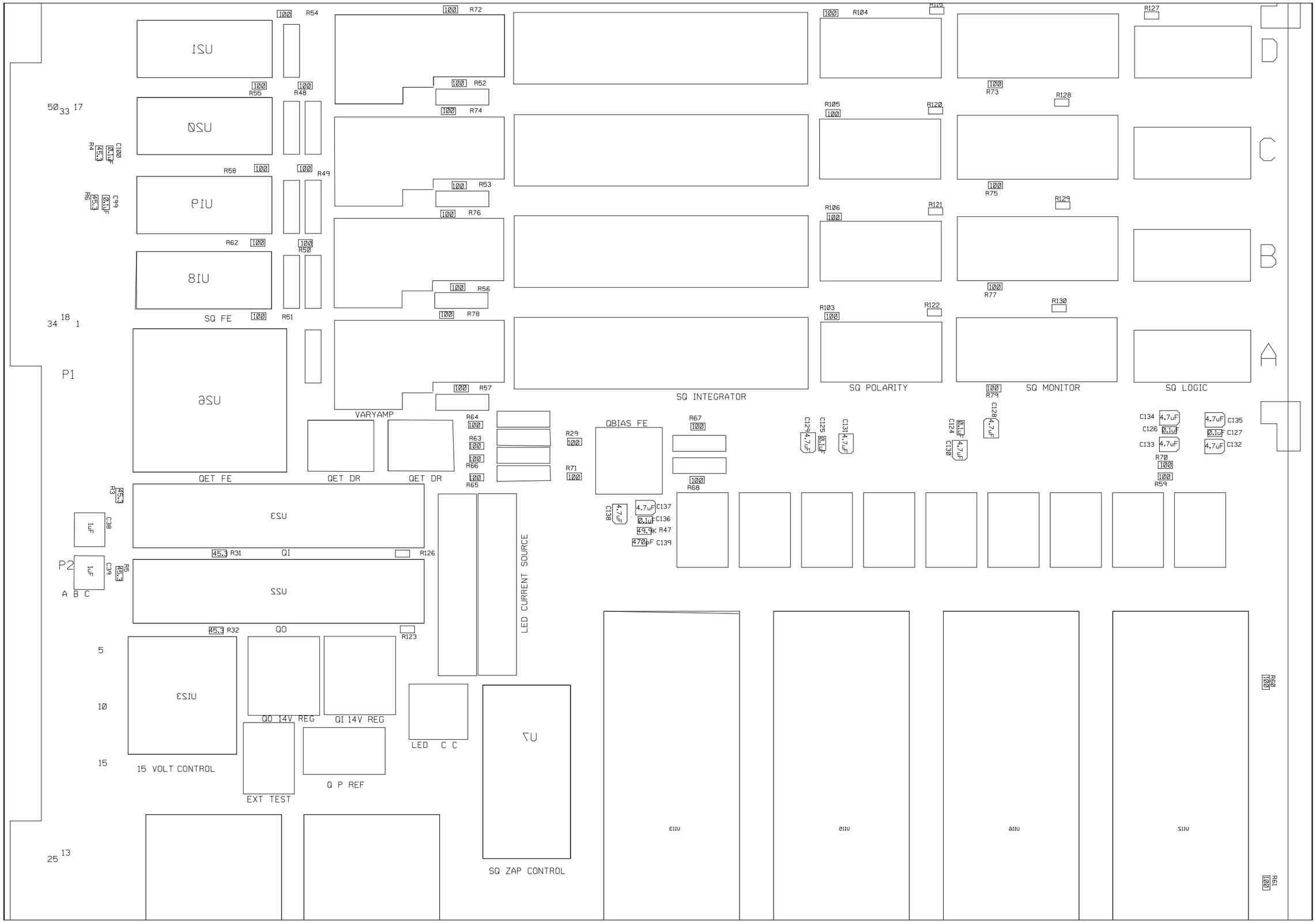

R7
27.4
CLC409AJE
U1
Q1
U440
R9
100
4.99K
R8
R14
3.01K
OPA27GU
R10
100
C16
0.1uF
BAV199
D3
D2
0.1uF
R11
1K
C22
C1
4.7uF
604
R13
R12
100K
D1
BAT54AW
C21
0.1uF
OPA27GU
U2
SQUID VARY AMP TOP SIDE
IO1
IO2
IO3

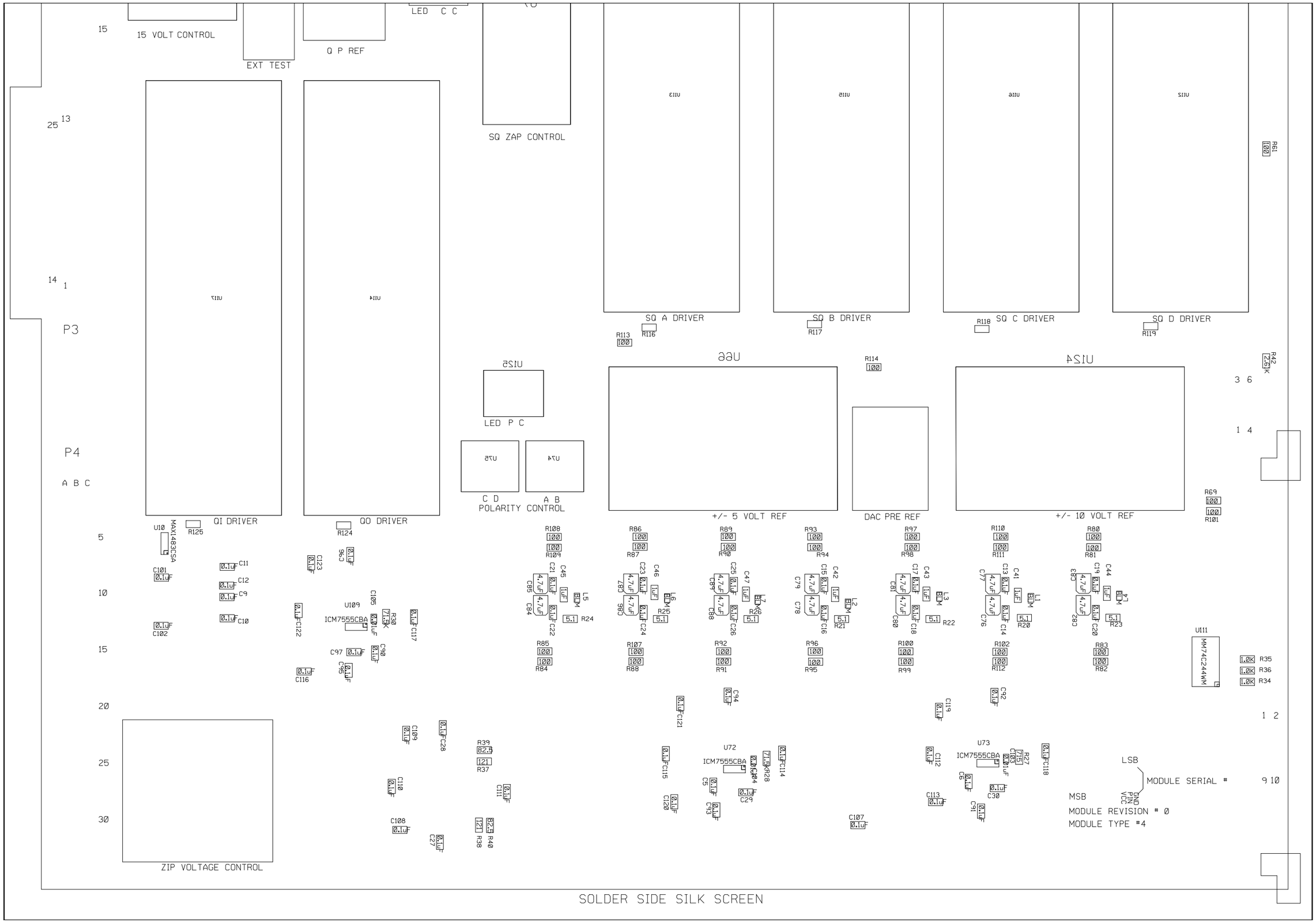

R1
27.4
BLM
L2
C13
C12
C2
4.7uF
1uF
1uF
4.7uF
C9
C23
R16
C24
R3
27.4
0.1uF
C20
C17
0.1uF
L3
BLM
4.7uF
C27
C33
4.7uF
C14
0.01uF
0.01uF
27.4
L1
BLM
27.4
R6
1uF
100K
0.1uF
BLM
4.7uF
C5
C4
4.7uF
R5
27.4
BLM
L5
R15
L4
0.1uF
C18
C19
0.1uF
R2
C11
C10
C6
4.7uF
1uF
1uF
4.7uF
10K
SQUID VARY AMP BOT SIDE
L6
BLM
27.4
R4

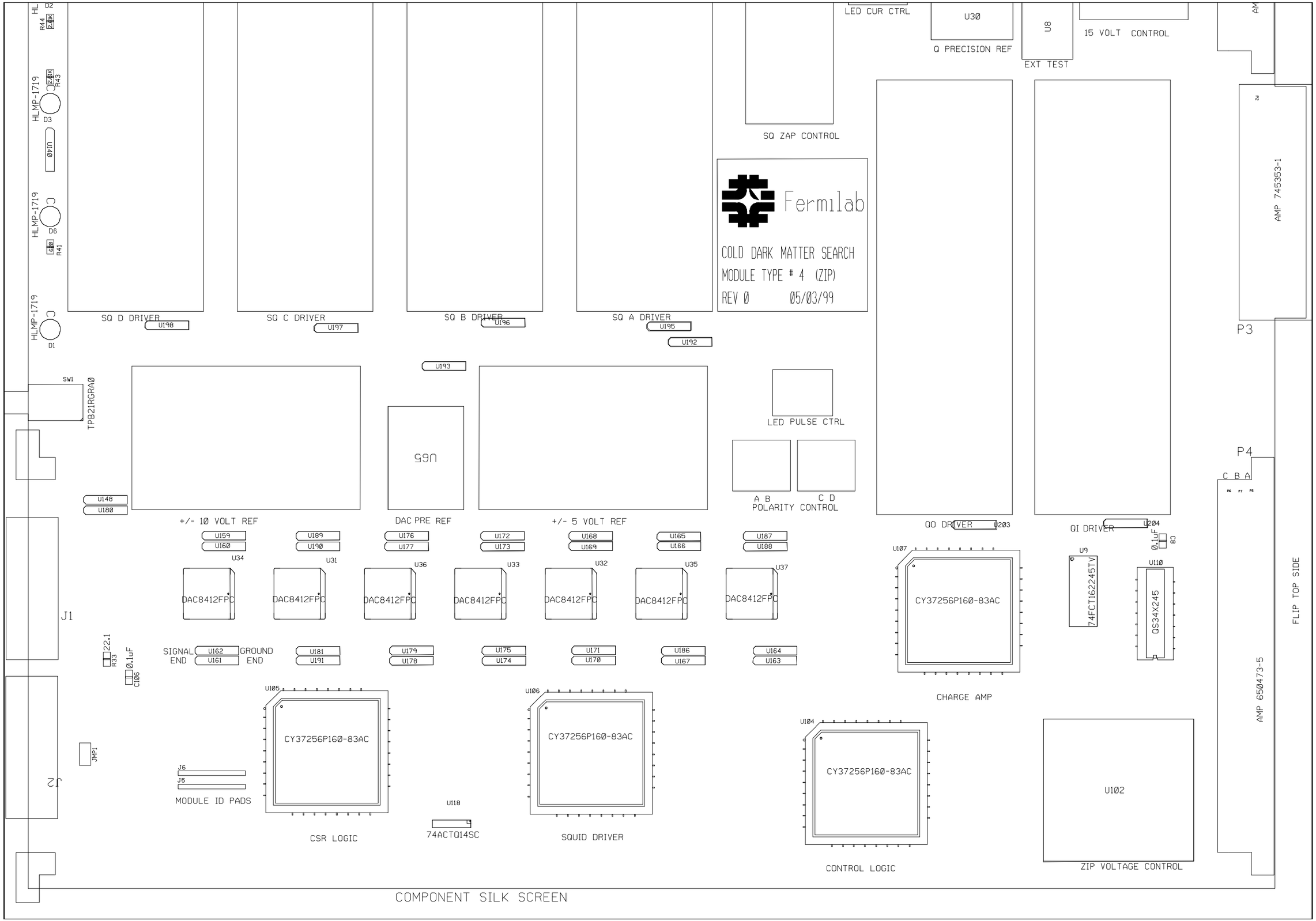


SQUID ZAP CONTROL TOP SIDE

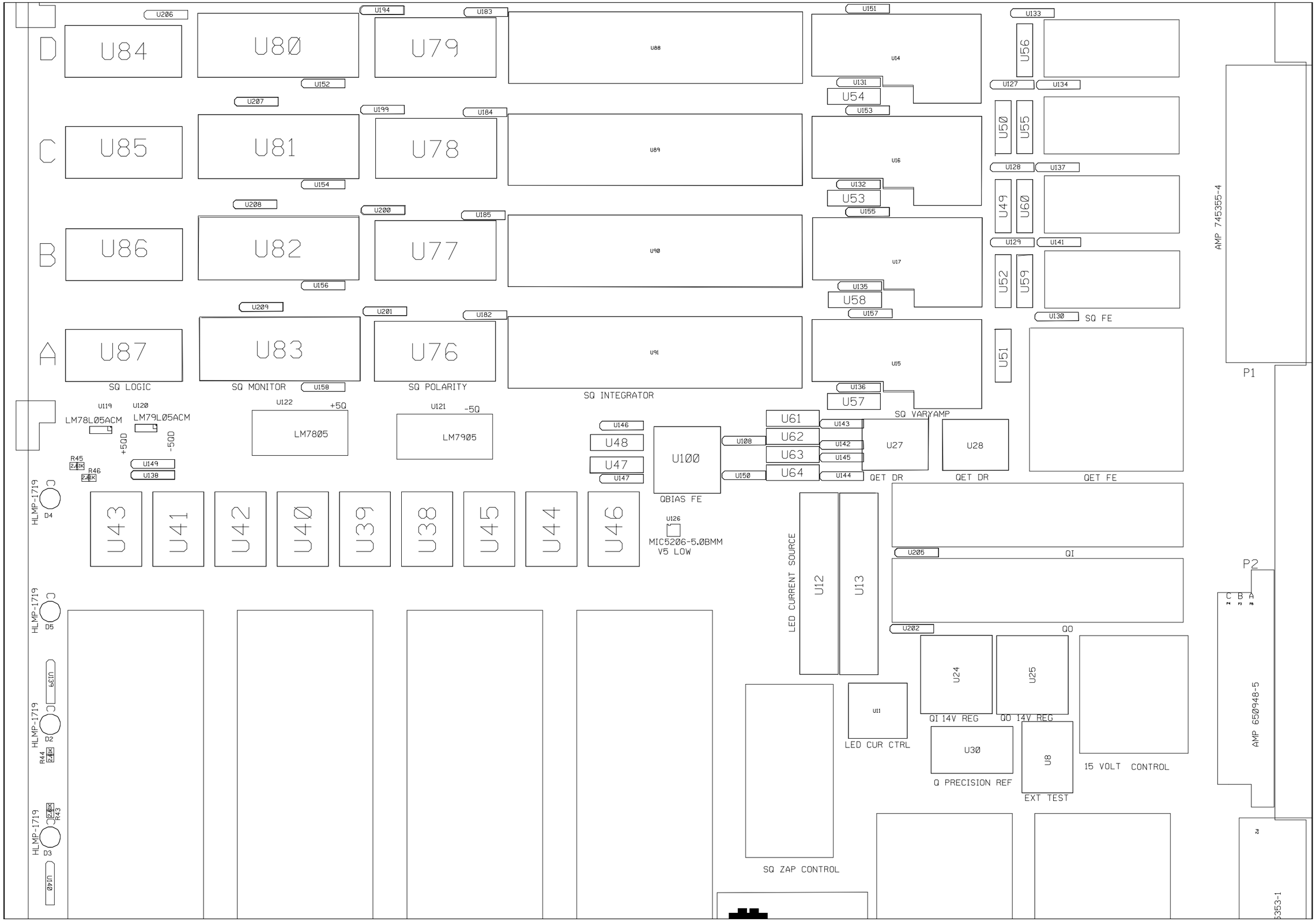

SQUID ZAP CONTROL BOTTOM SIDE
MTDF1P02HD
U1
U2
MTDF1P02HD
U5
CD4070BCM
C7
0.1uF
R3
1.0K
R4
1.0K
LT1363CS8
U4
R2
27.4
C2
4.7uF
L2
BLM
1uF
C3
D1
BZG05C4V7
D2
BZG05C4V7


SQ FE
VARYAMP
SQ INTEGRATOR
SQ POLARITY
SQ MONITOR
SQ LOGIC
QET FE
QET DR
QET DR
QBIAS FE
LED CURRENT SOURCE
QI
QO
QO 14V REG
QI 14V REG
15 VOLT CONTROL
EXT TEST
Q P REF
LED C C
SQ ZAP CONTROL
P1
P2
A B C


15 VOLT CONTROL
EXT TEST
Q P REF
LED C C
SQ ZAP CONTROL
SQ A DRIVER
SQ B DRIVER
SQ C DRIVER
SQ D DRIVER
LED P C
C D
A B
POLARITY CONTROL
+/- 5 VOLT REF
DAC PRE REF
+/- 10 VOLT REF
QI DRIVER
QO DRIVER
ZIP VOLTAGE CONTROL
P3
P4
A B C
MAX1483CSA
ICM7555CBA
MM74C244WM
LSB
MODULE SERIAL #
MSB
MODULE REVISION # 0
MODULE TYPE #4
SOLDER SIDE SILK SCREEN



COMPONENT SILK SCREEN


D
C
B
A
U84
U80
U79
U88
U14
U56
U85
U81
U78
U89
U16
U50
U55
U86
U82
U77
U90
U17
U49
U60
U52
U59
U87
U83
U76
U91
U15
U51
SQ LOGIC
SQ MONITOR
SQ POLARITY
SQ INTEGRATOR
SQ VARYAMP
SQ FE
U54
U53
U58
U57
LM78L05ACM
LM79L05ACM
+5Q
-5Q
LM7805
LM7905
U48
U47
U100
QBIAS FE
U61
U62
U63
U64
U27
U28
QET DR
QET DR
QET FE
HLMP-1719
D4
D5
D2
D3
R45
R46
R44
R43
U43
U41
U42
U40
U39
U38
U45
U44
U46
MIC5206-5.0BMM
V5 LOW
LED CURRENT SOURCE
U12
U13
QI
QO
U24
U25
QI 14V REG
QO 14V REG
U11
LED CUR CTRL
U30
Q PRECISION REF
U8
EXT TEST
15 VOLT CONTROL
SQ ZAP CONTROL
AMP 745355-4
P1
P2
AMP 650948-5