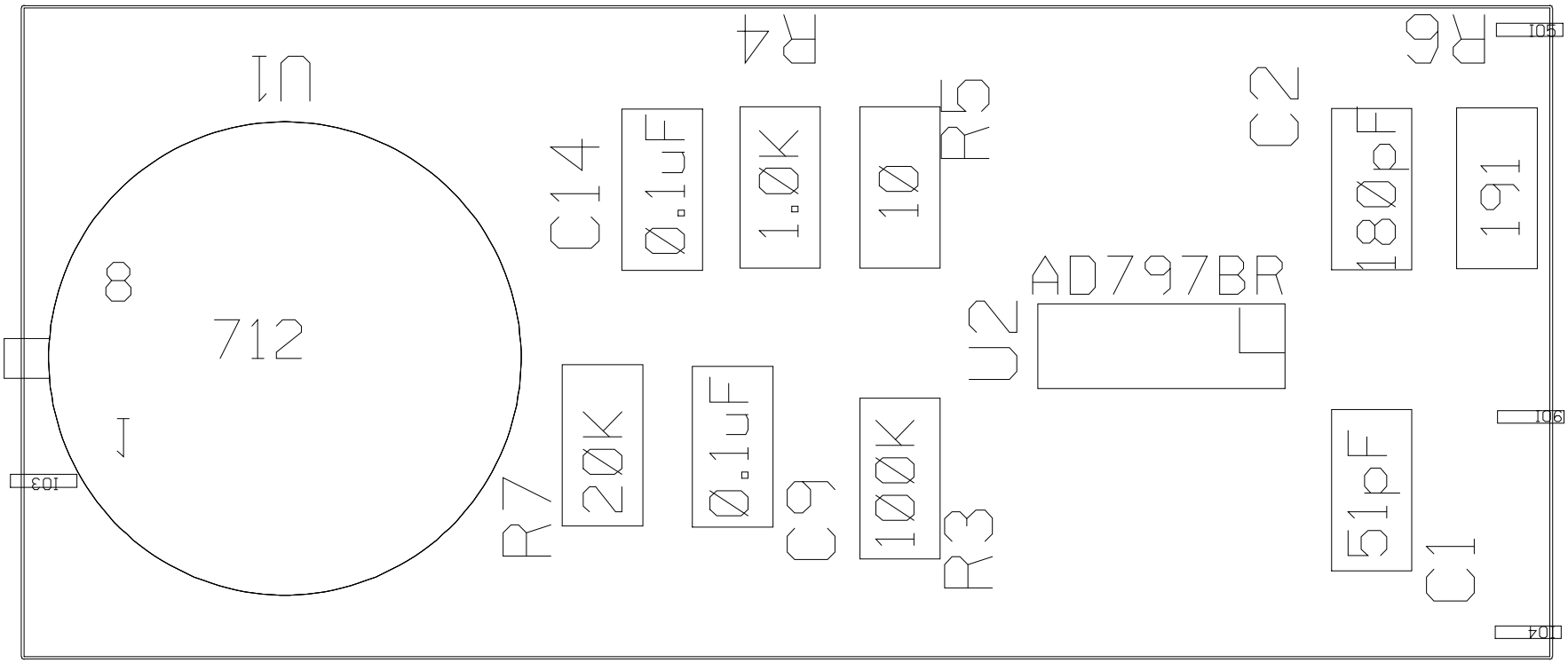
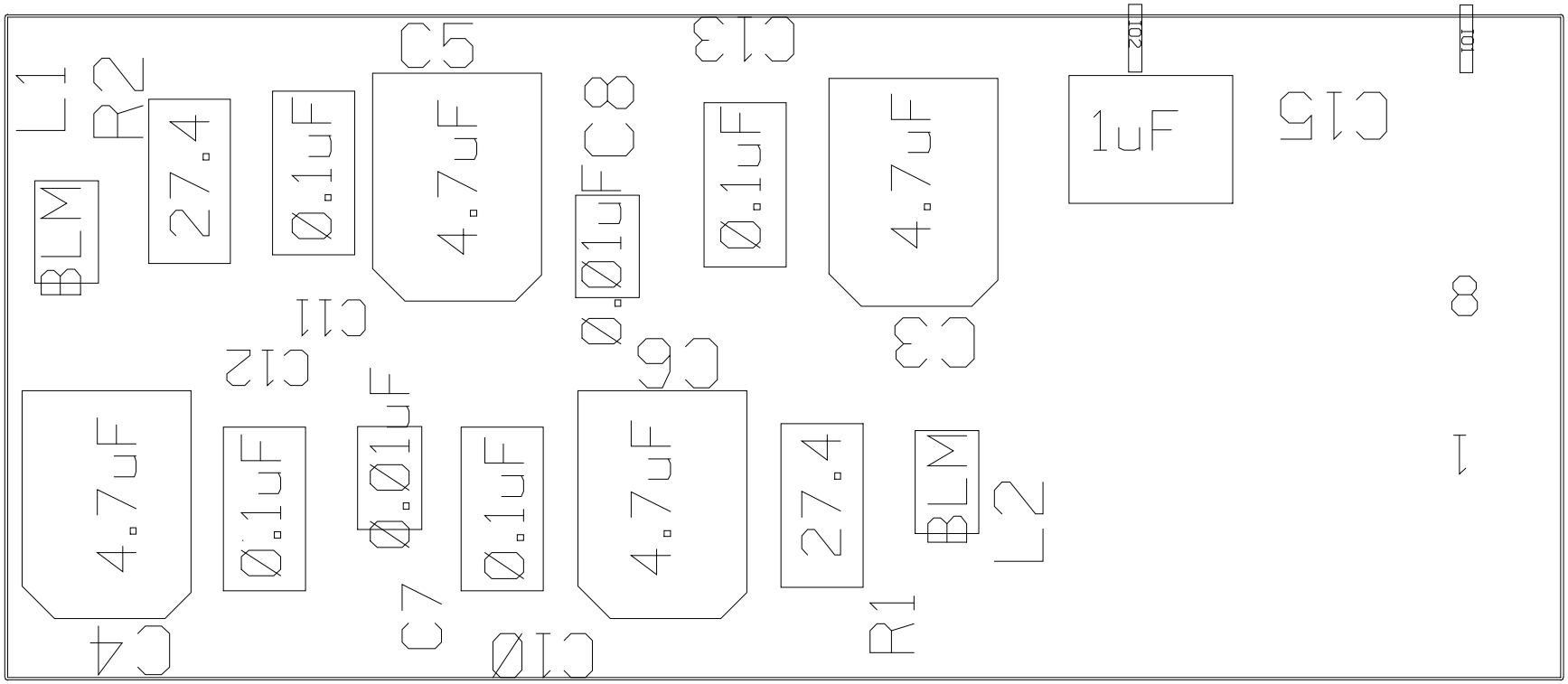
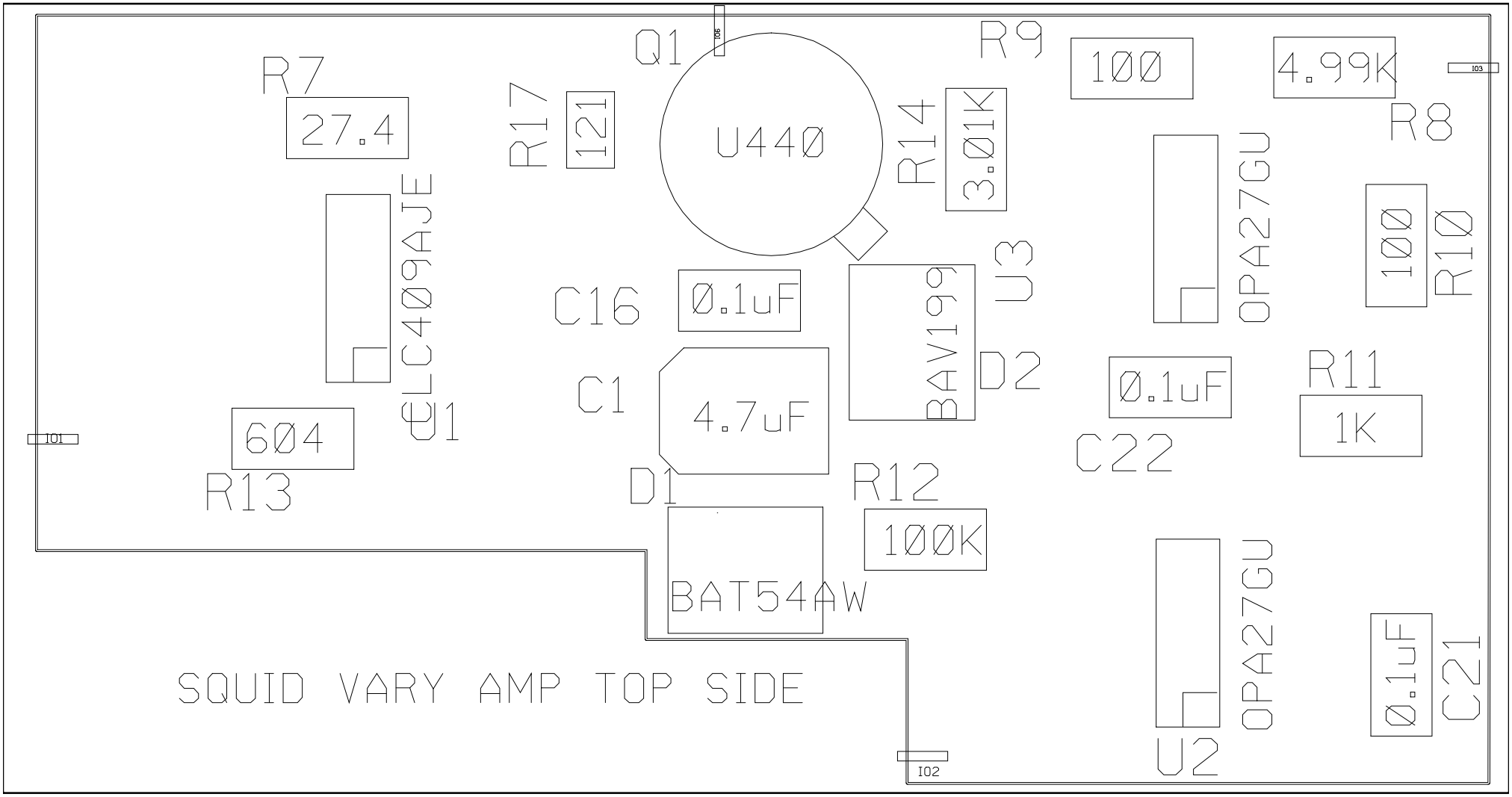
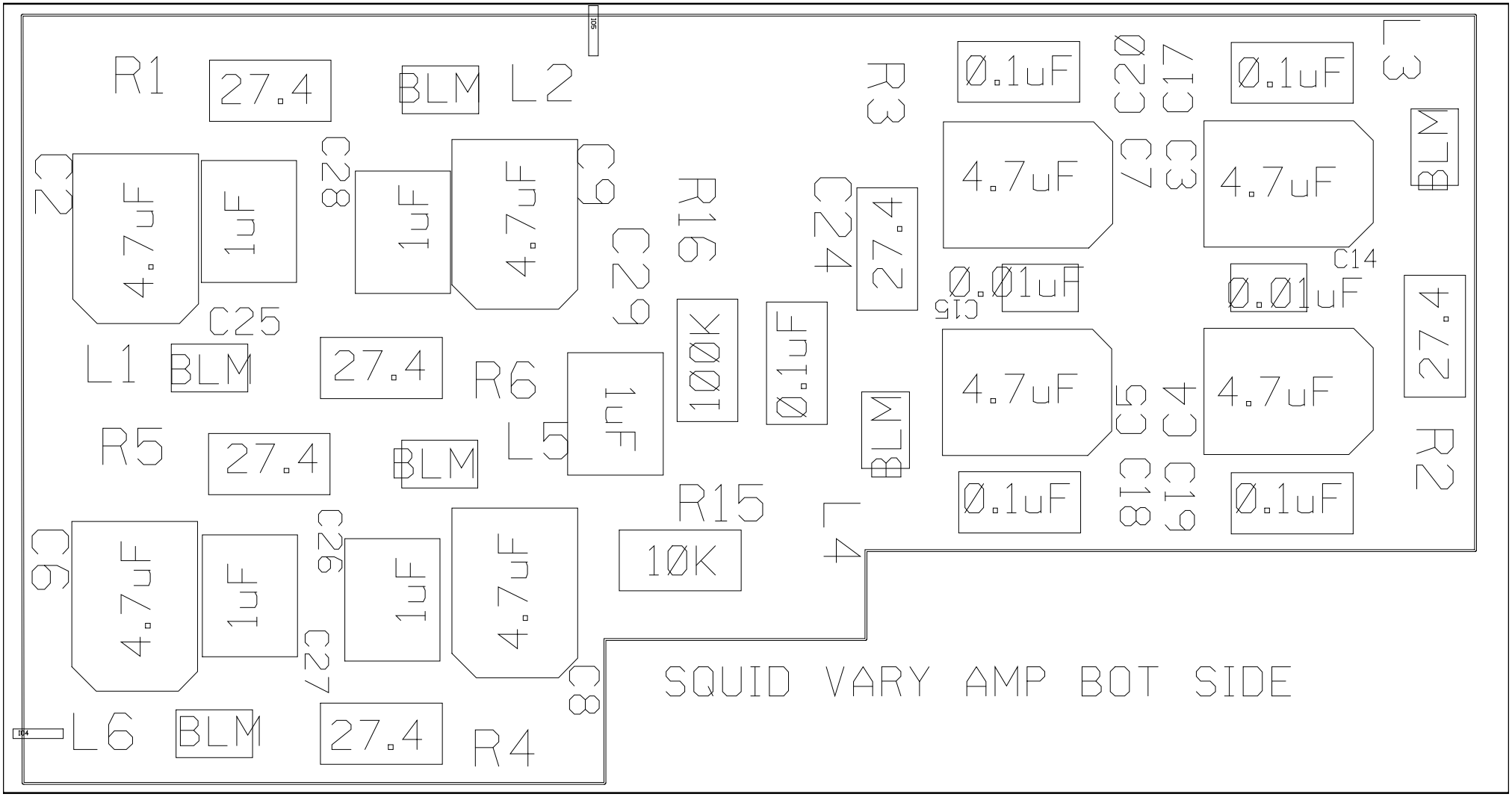
SQUID FRONTEND TOP SIDE



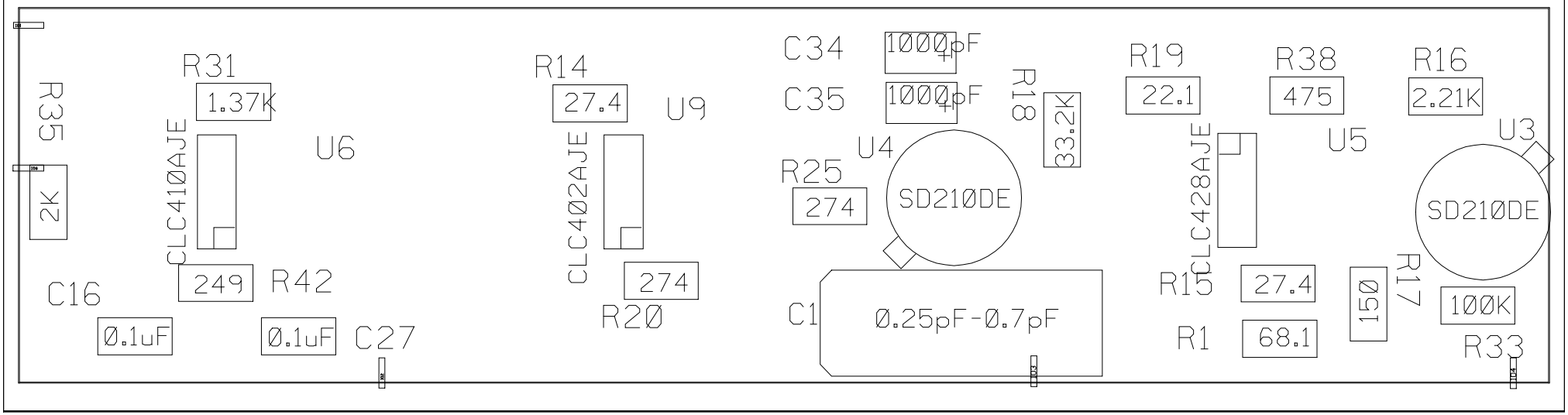
SQUID FRONT END BOTTOM SIDE



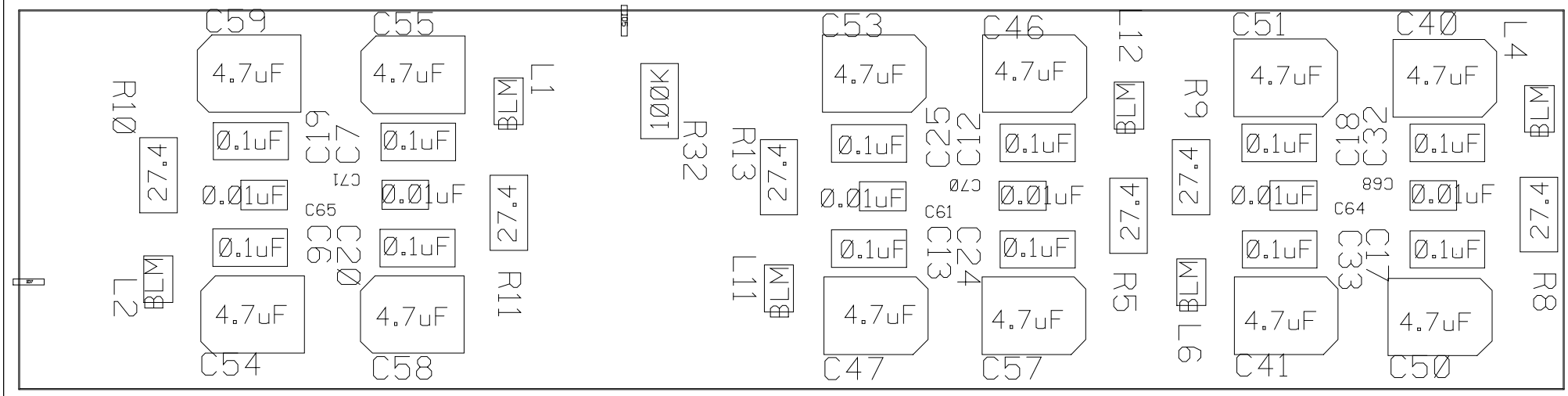

Q1
R9
100
4.99K
R8
R7
27.4
R17
121
U440
R14
3.01K
OPA27GU
100
R10
ELC409AJE
U3
C16
0.1uF
BAV199
D2
U1
C1
4.7uF
0.1uF
R11
1K
604
C22
R13
D1
R12
100K
BAT54AW
OPA27GU
0.1uF
C21
SQUID VARY AMP TOP SIDE
U2
I01
I02
I03


R1
27.4
BLM
L2
C22
4.7uF
1uF
C28
1uF
4.7uF
C29
R19
100K
0.1uF
C24
27.4
R3
0.1uF
C20
C17
0.1uF
L3
BLM
C23
4.7uF
4.7uF
C14
0.01uF
C15
0.01uF
27.4
C25
L1
BLM
27.4
R6
1uF
L5
BLM
4.7uF
C5
C4
4.7uF
R2
R5
27.4
BLM
R15
10K
L4
0.1uF
C18
C19
0.1uF
C26
C6
4.7uF
1uF
1uF
4.7uF
C27
C8
L6
BLM
27.4
R4
SQUID VARY AMP BOT SIDE

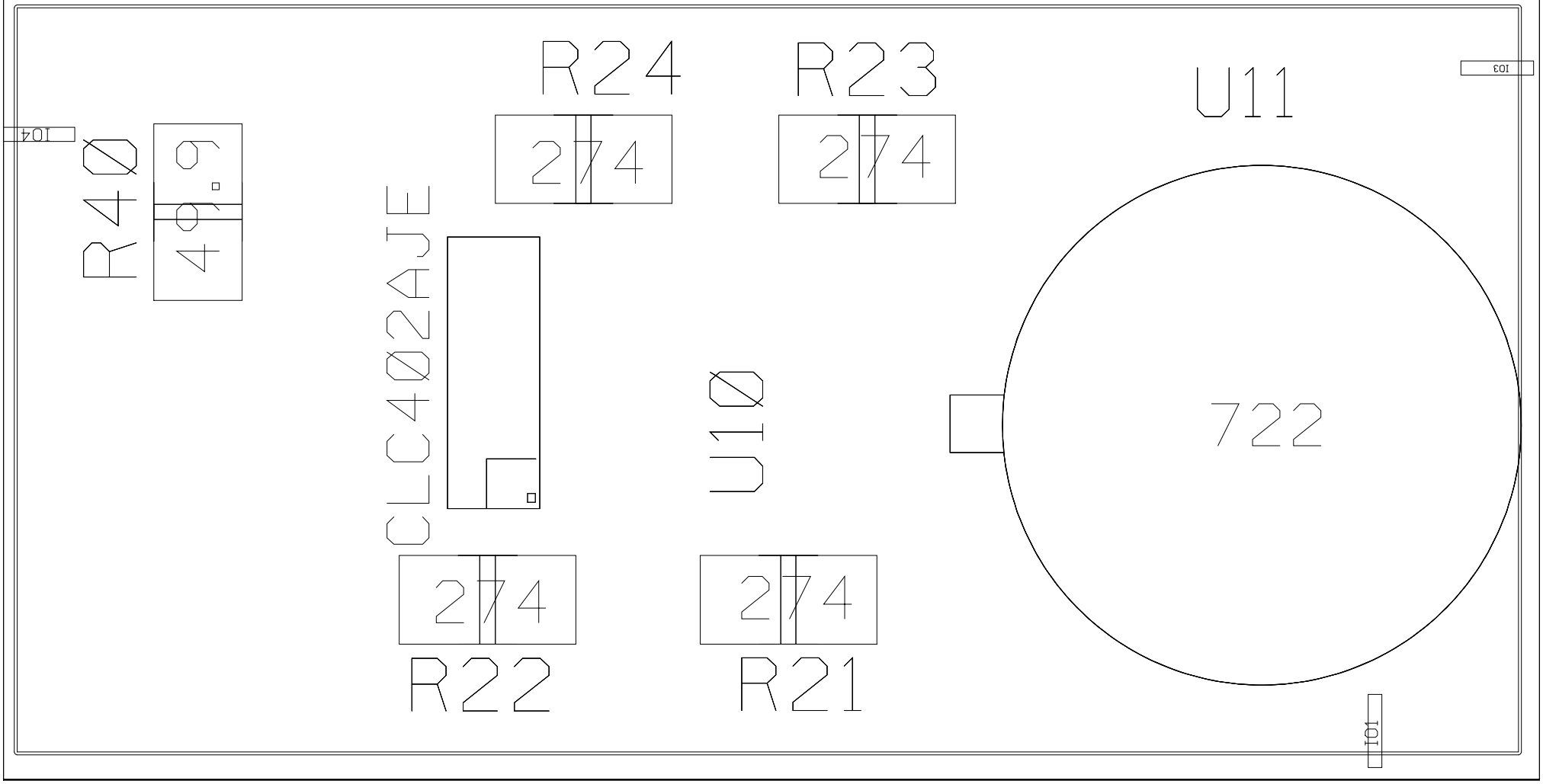
SQUID INTEGERATOR TOP SIDE



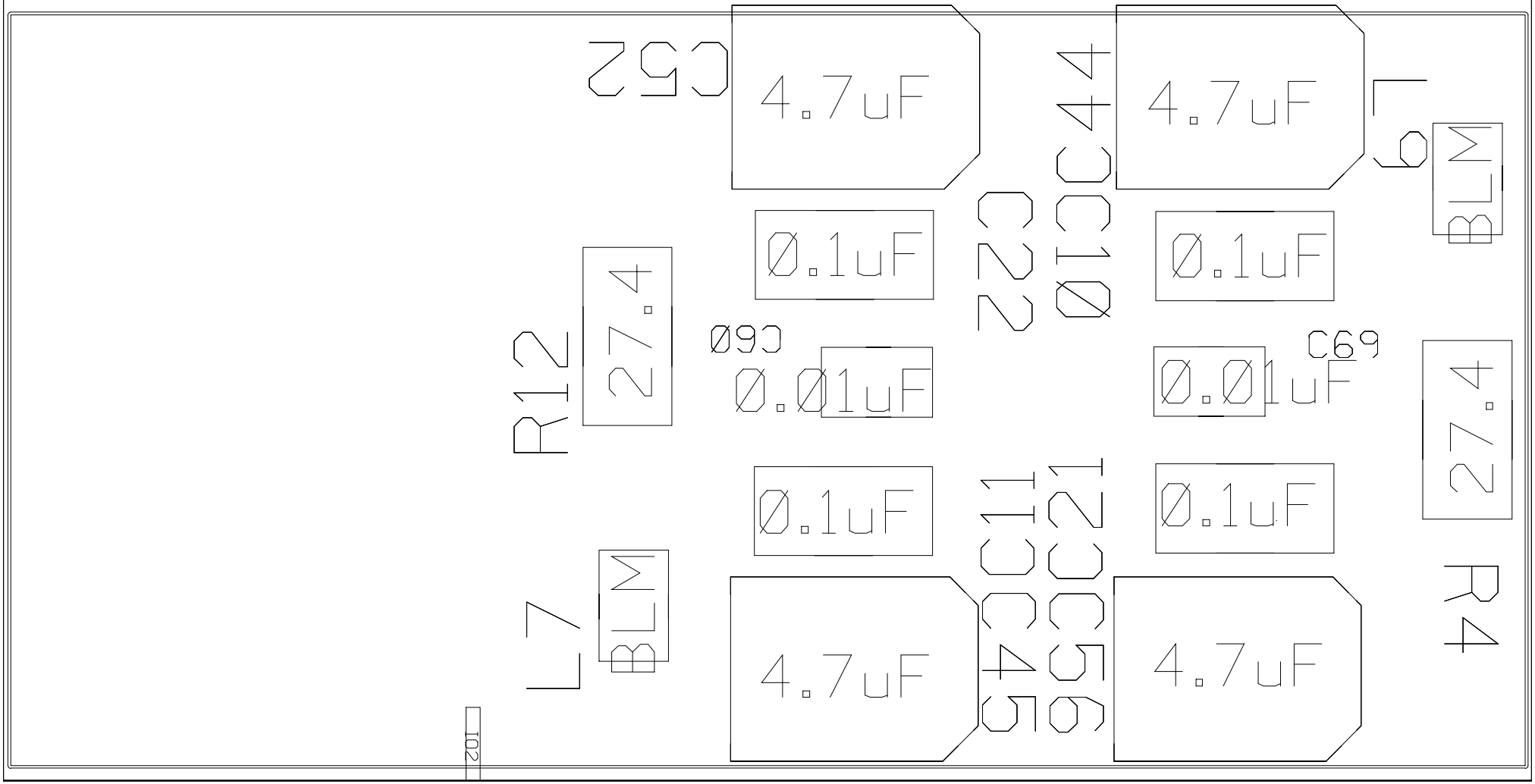
SQUID INTEGRATOR BOTTOM SIDE



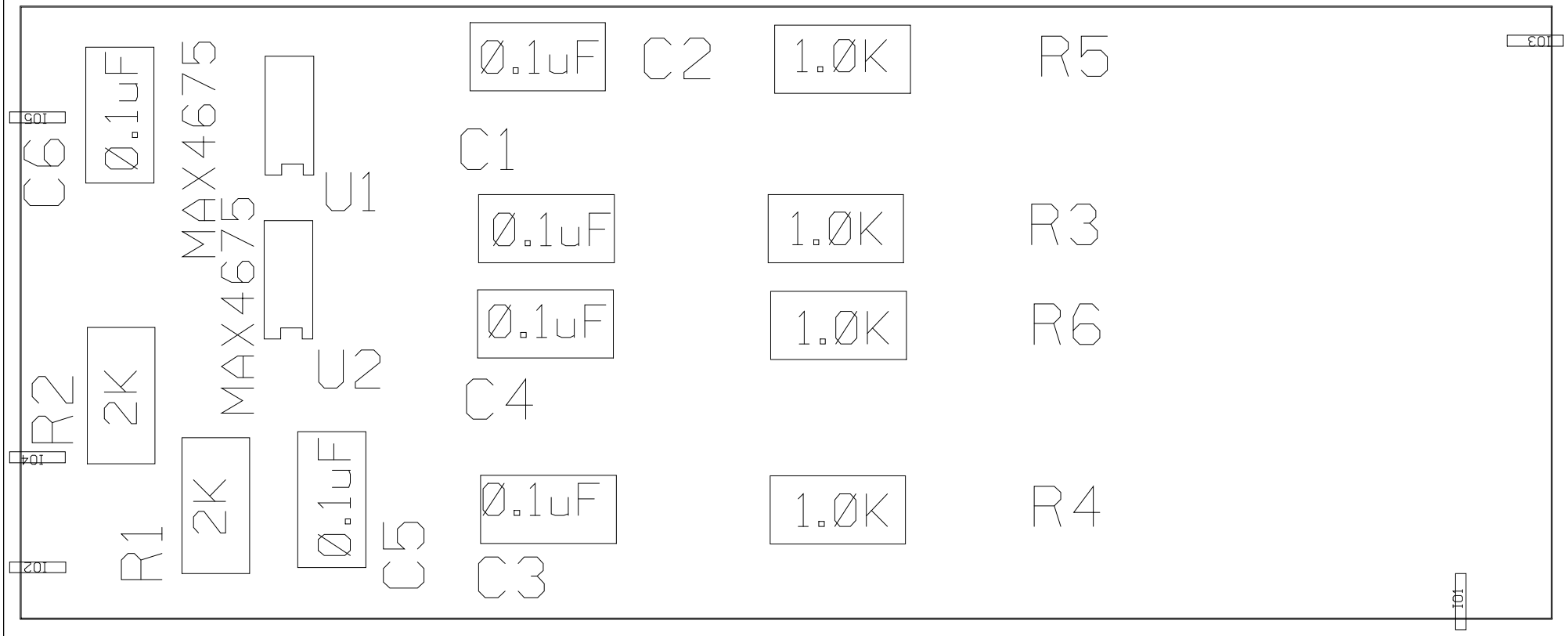
SQUID POLARITY TOP SIDE



SQUID POLARITY BOTTOM SIDE

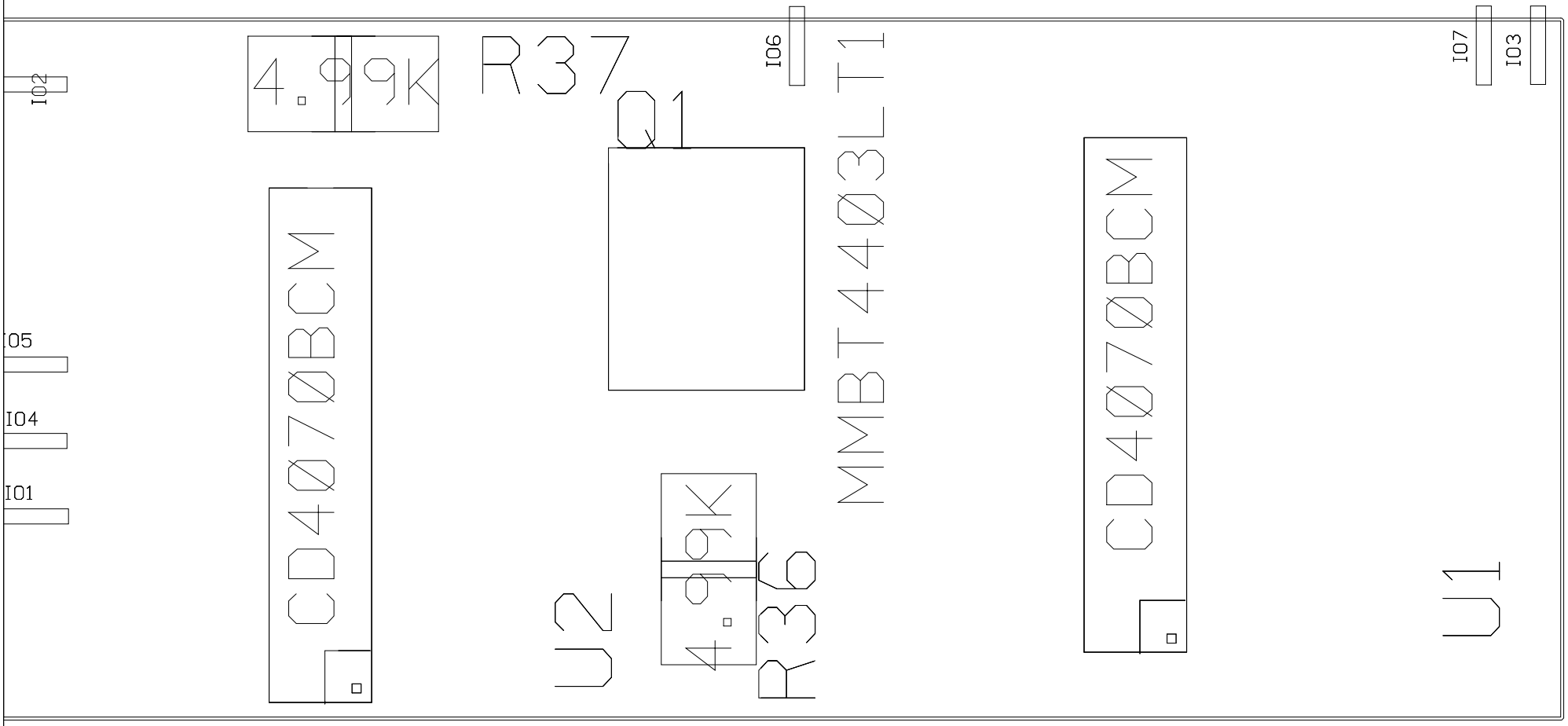


SQUID MONITOR TOP SIDE

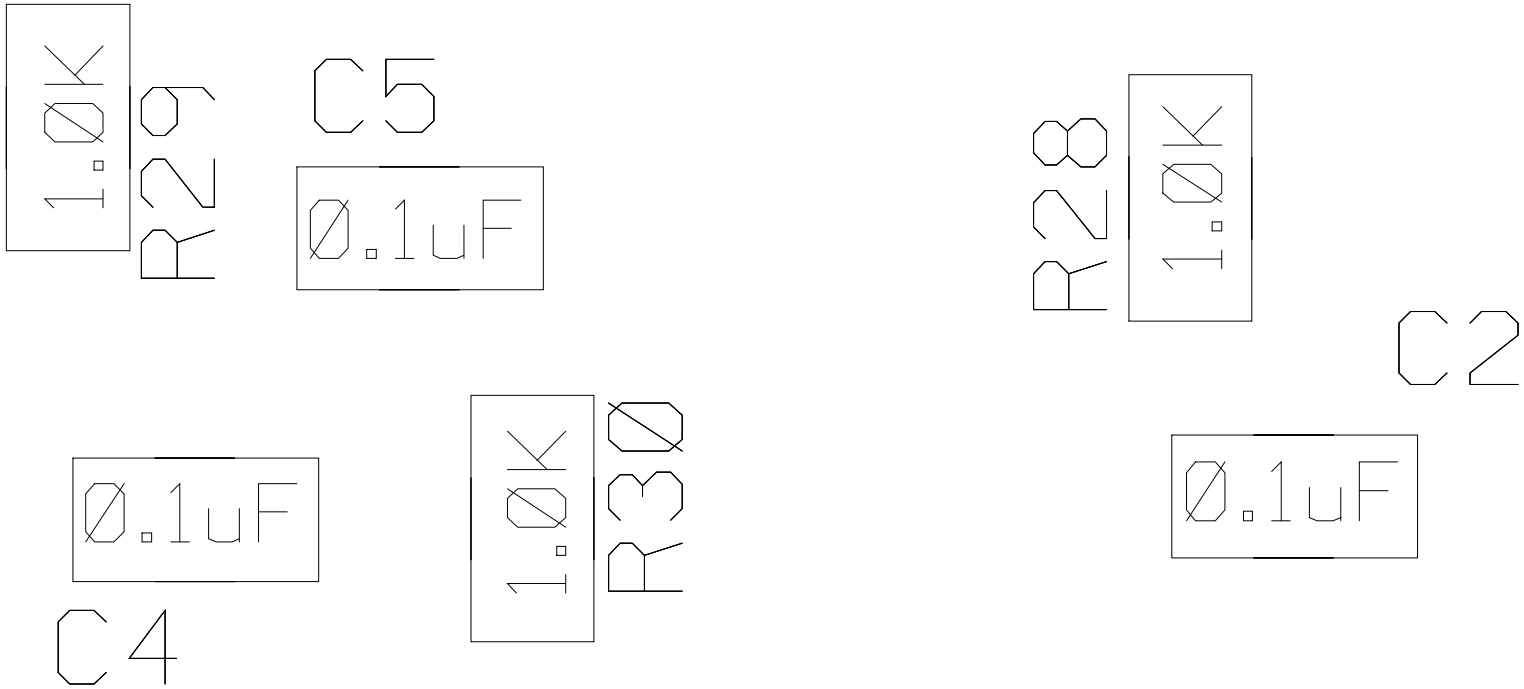


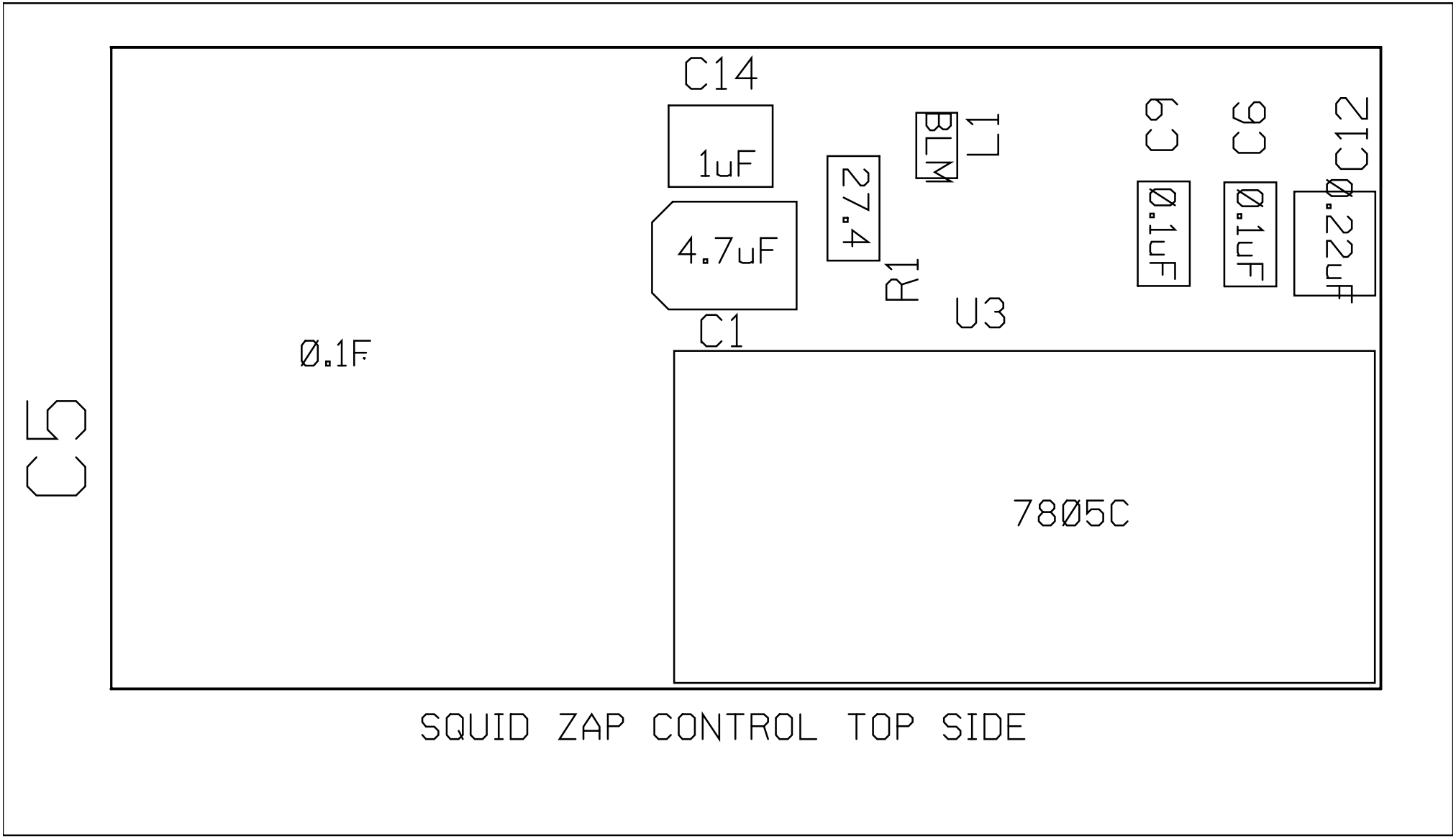
SQUID MONITOR BOTTOM SIDE

SQUID LOGIC TOP SIDE



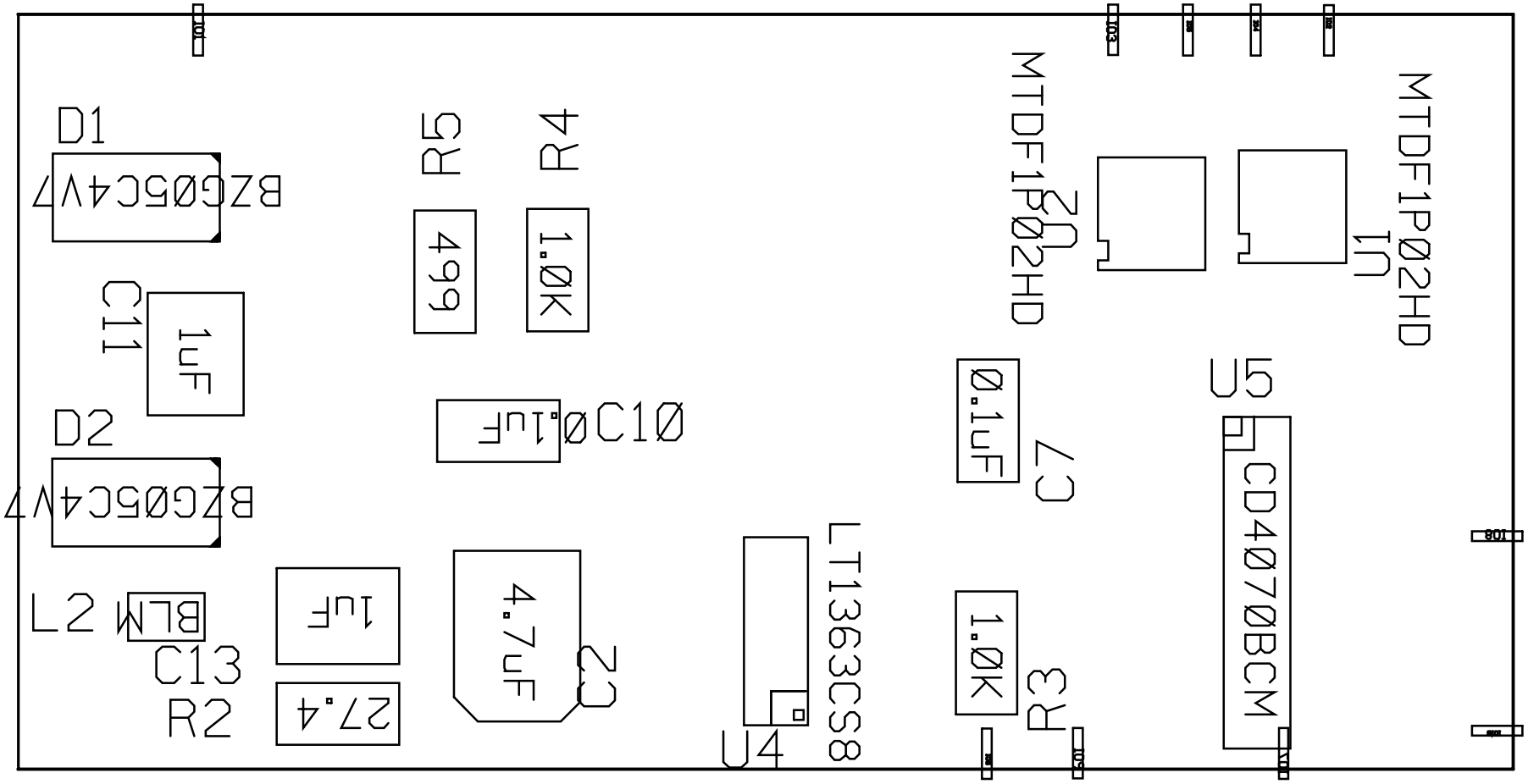
SQUID LOGIC BOTTOM SIDE

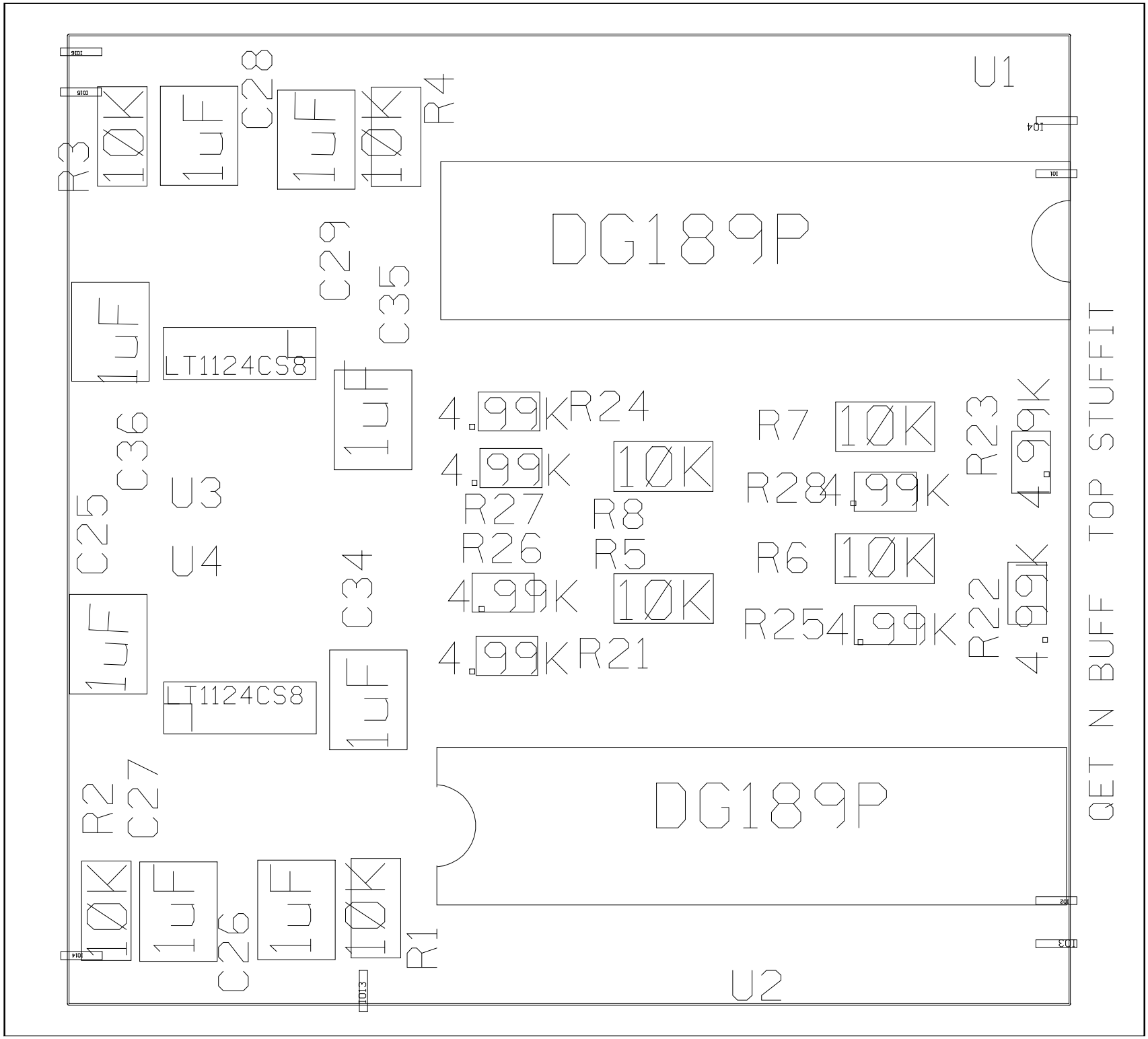




SQUID ZAP CONTROL TOP SIDE

SQUID ZAP CONTROL BOTTOM SIDE

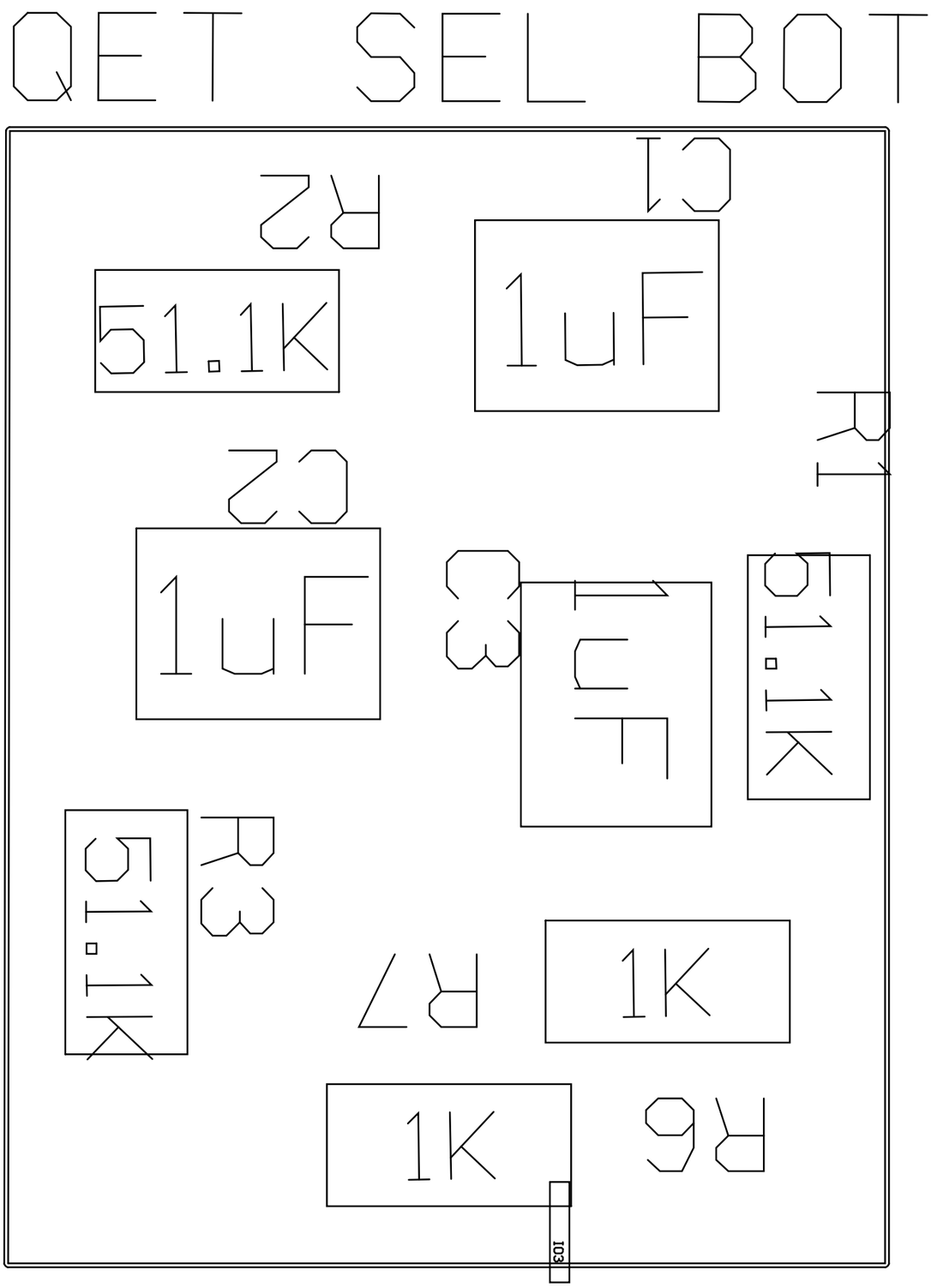


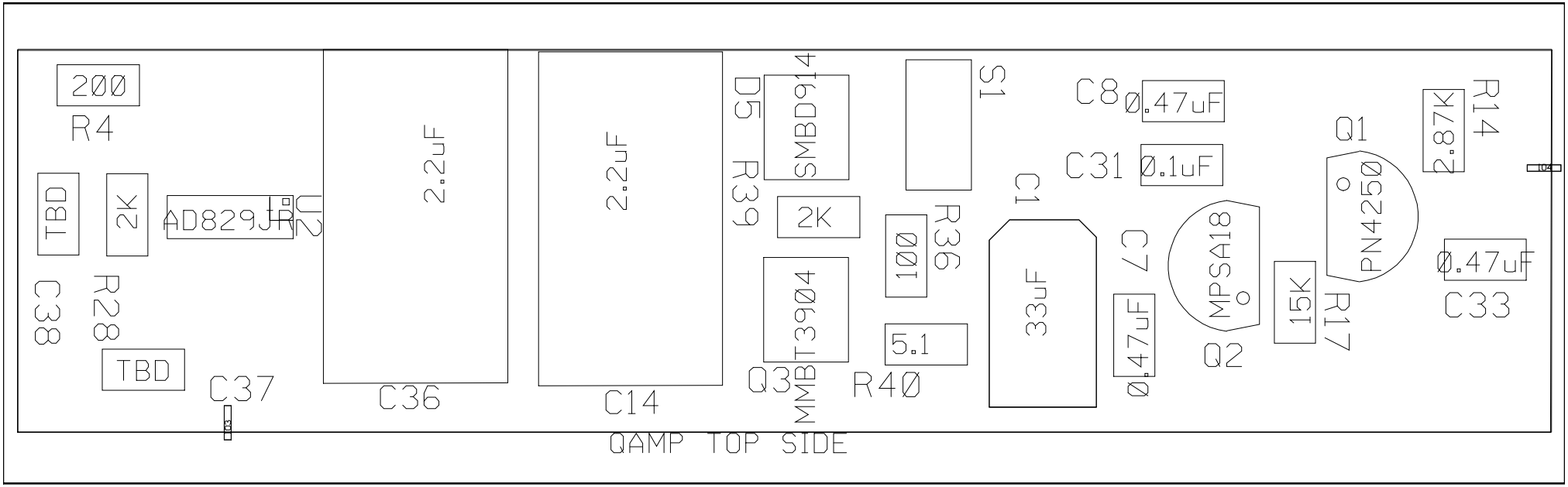


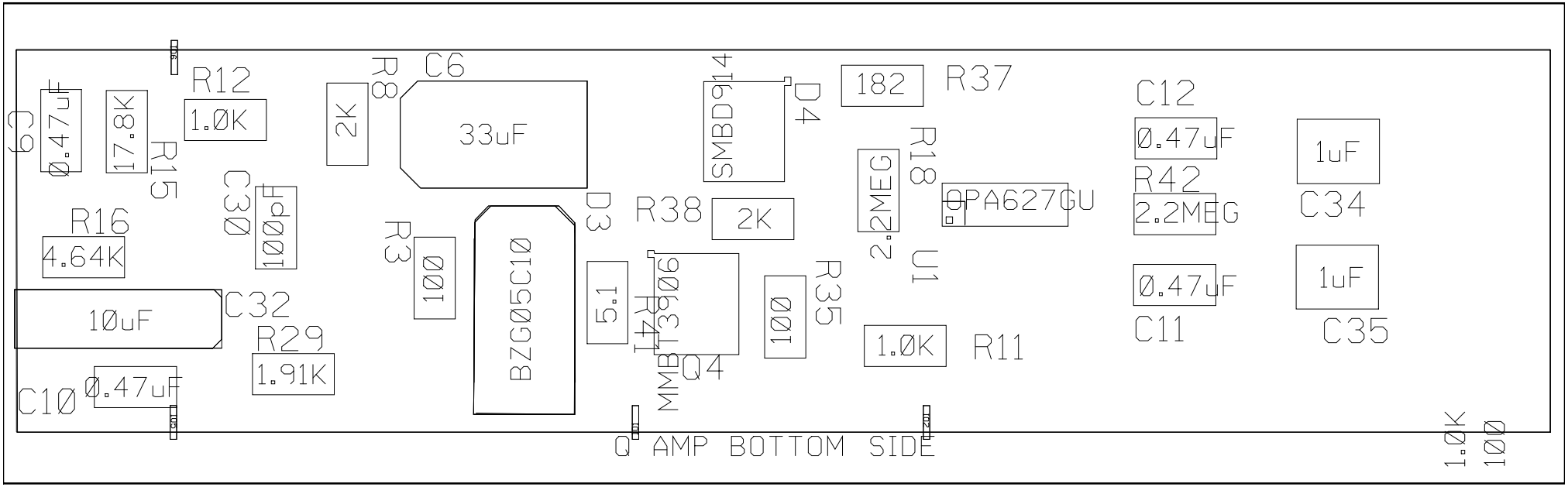
U1
DG189P
DG189P
U2
U3
U4
LT1124CS8
LT1124CS8
R3
10K
1uF
C28
1uF
10K
R4
C29
C35
1uF
C36
C25
1uF
C34
1uF
1uF
4.99K
R24
4.99K
10K
R27
R8
R26
R5
4.99K
10K
4.99K
R21
R7
10K
R28
4.99K
R6
10K
R25
4.99K
R23
4.99K
R22
4.99K
R2
C27
10K
1uF
C26
1uF
10K
R1
QET N BUFF TOP STUFFIT

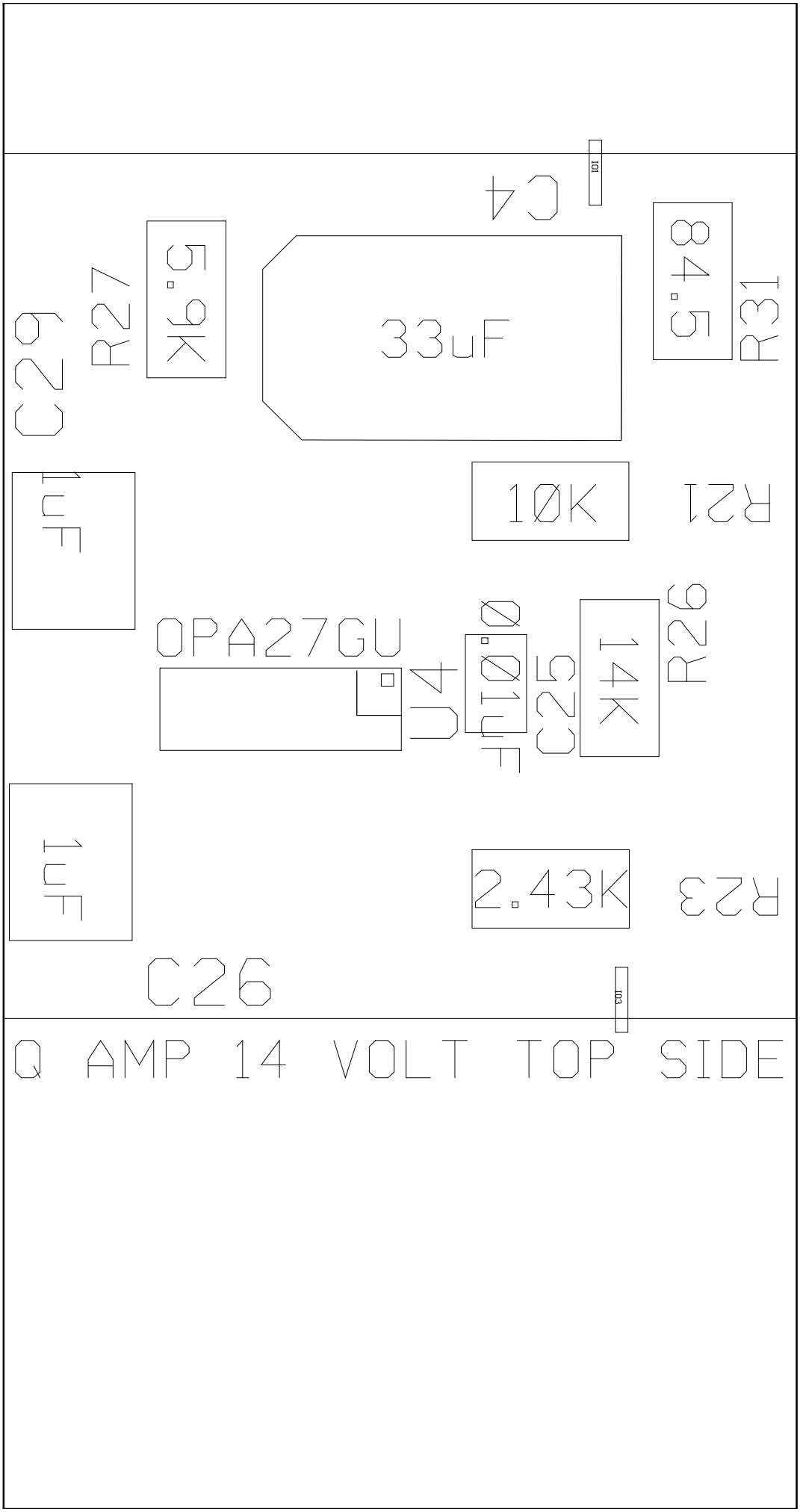
QET N BUFF BOT STUFFIT
L2
BLM
R18
27.4
C37
1uF
C19
4.7uF
R13
1.0K
C17
4.7uF
C24
4.7uF
R16
1.0K
L1
BLM
C38
1uF
C18
4.7uF
C33
1uF
C32
1uF
27.4
R17
C30
1uF
C31
1uF
R19
27.4
C40
1uF
C20
4.7uF
C39
1uF
C21
4.7uF
R14
1.0K
L3
BLM
L4
BLM
R15
1.0K
C23
4.7uF
C22
4.7uF
27.4
R20

U1
I06
I05
G413Y
R4
G11
R5
G11
I02
I01
I04
OPTOSEL


QET SEL BOT
R2
51.1K
C1
1uF
R1
C2
1uF
C3
1uF
51.1K
R3
51.1K
R7
1K
R6
1K
IO3

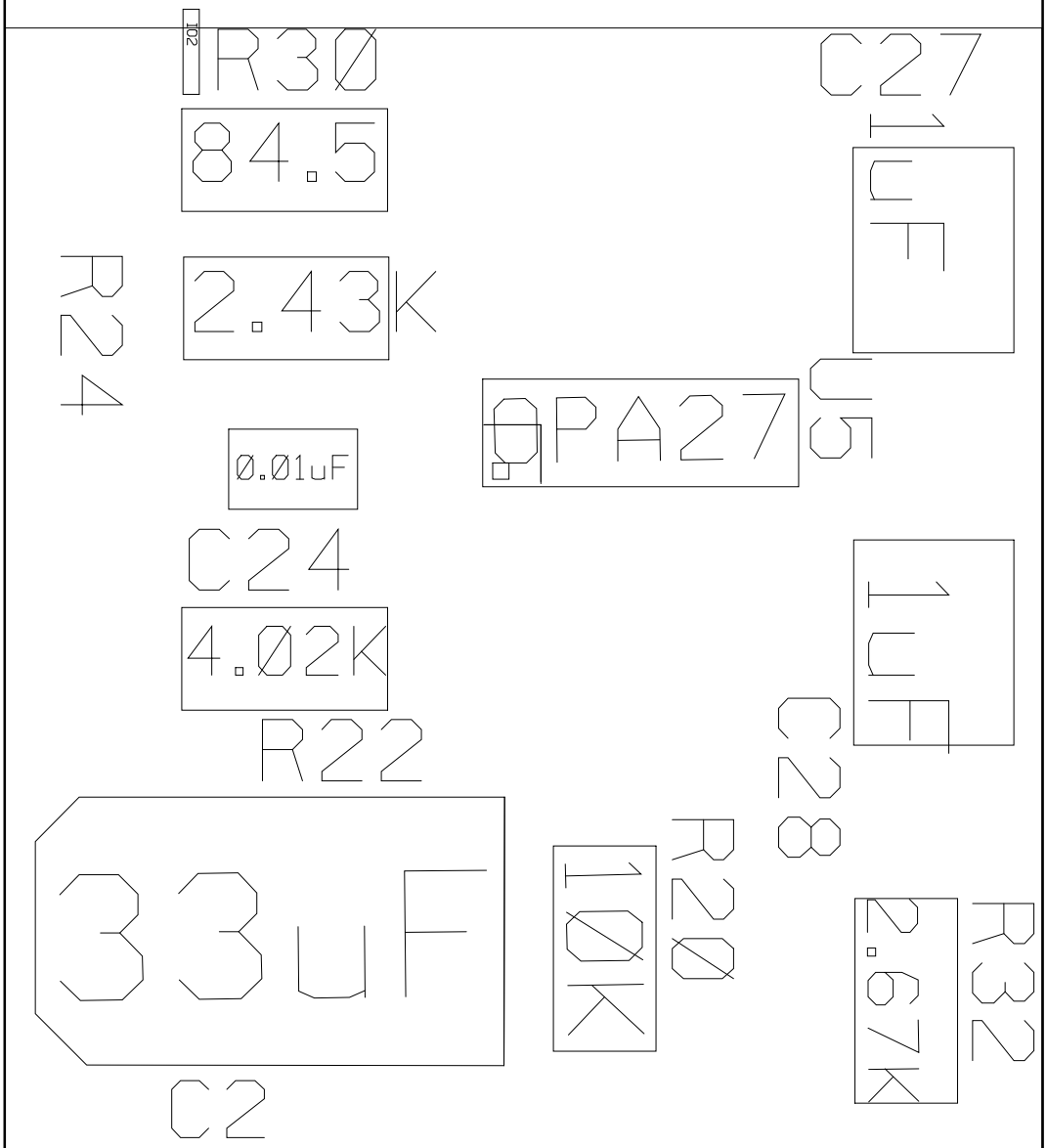

200
R4
TBD
2K
R28
C38
TBD
AD829JR
U2
C37
2.2uF
C36
2.2uF
C14
D5
SMBD914
R39
2K
Q3
MMBT3904
S1
R36
100
R40
5.1
C1
33uF
C8
0.47uF
C31
0.1uF
C7
0.47uF
Q2
MPSA18
15K
R17
Q1
PN4250
R14
2.87K
0.47uF
C33
QAMP TOP SIDE

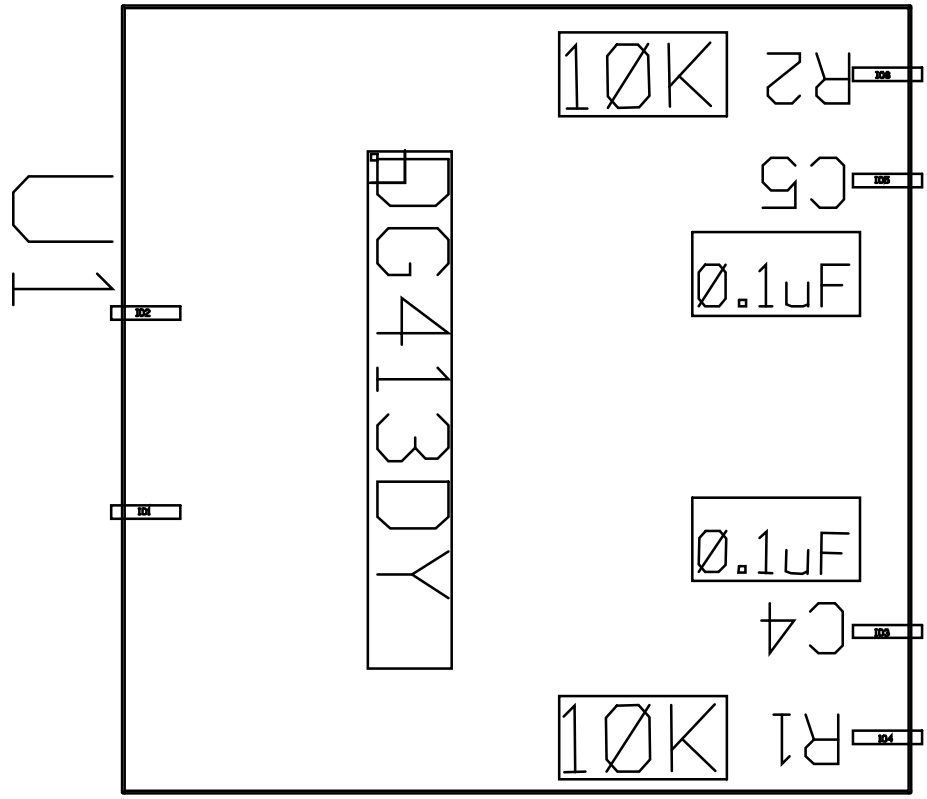

C9
0.47uF
17.8K
R15
R12
1.0K
R8
2K
C6
33uF
SMBD914
D4
182
R37
C12
0.47uF
1uF
R18
2.2MEG
OPA627GU
R42
2.2MEG
C34
C30
100pF
R16
4.64K
R3
100
BZG05C10
D3
R38
2K
MMBT3906
Q4
R41
5.1
R35
100
U1
0.47uF
1uF
10uF
C32
R29
1.91K
1.0K
R11
C11
C35
C10
0.47uF
Q AMP BOTTOM SIDE
1.0K
100



Q AMP 14 VOLT TOP SIDE

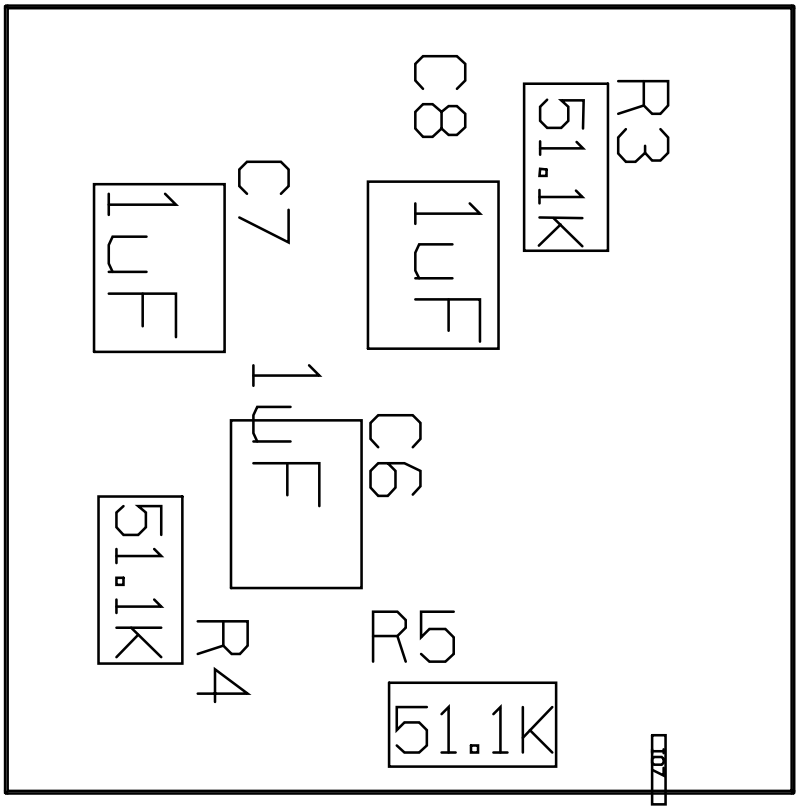
QAMP 14 VOLT BOT SIDE

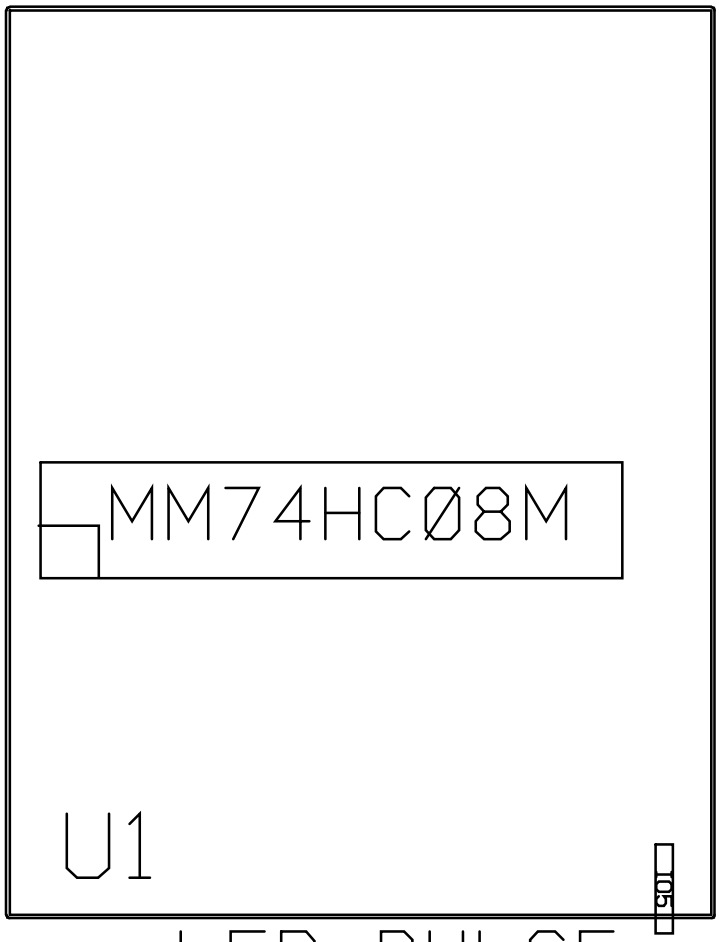




QBIAS FE TOP SIDE

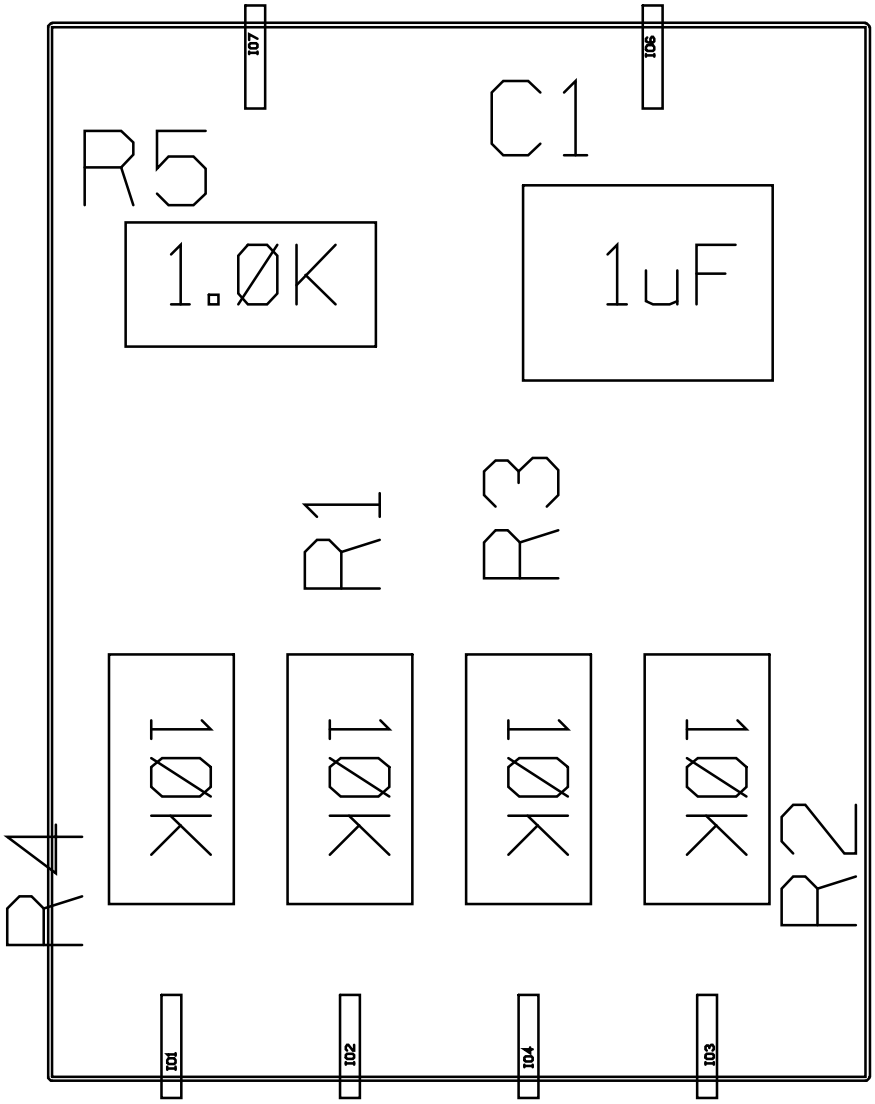
QBIAS FE
BOTTOM SIDE

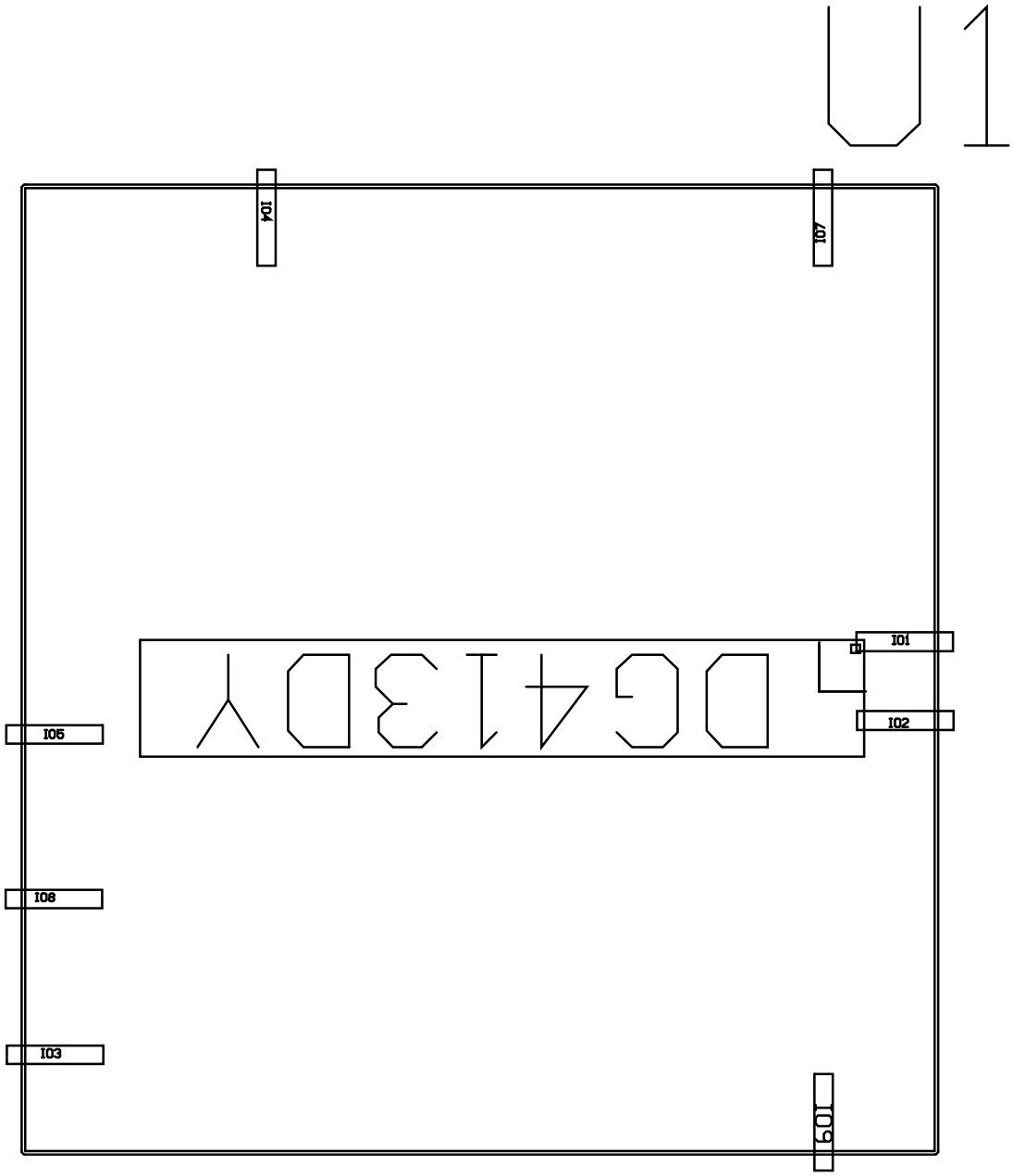




LED PULSE
CONTROL
TOP SIDE

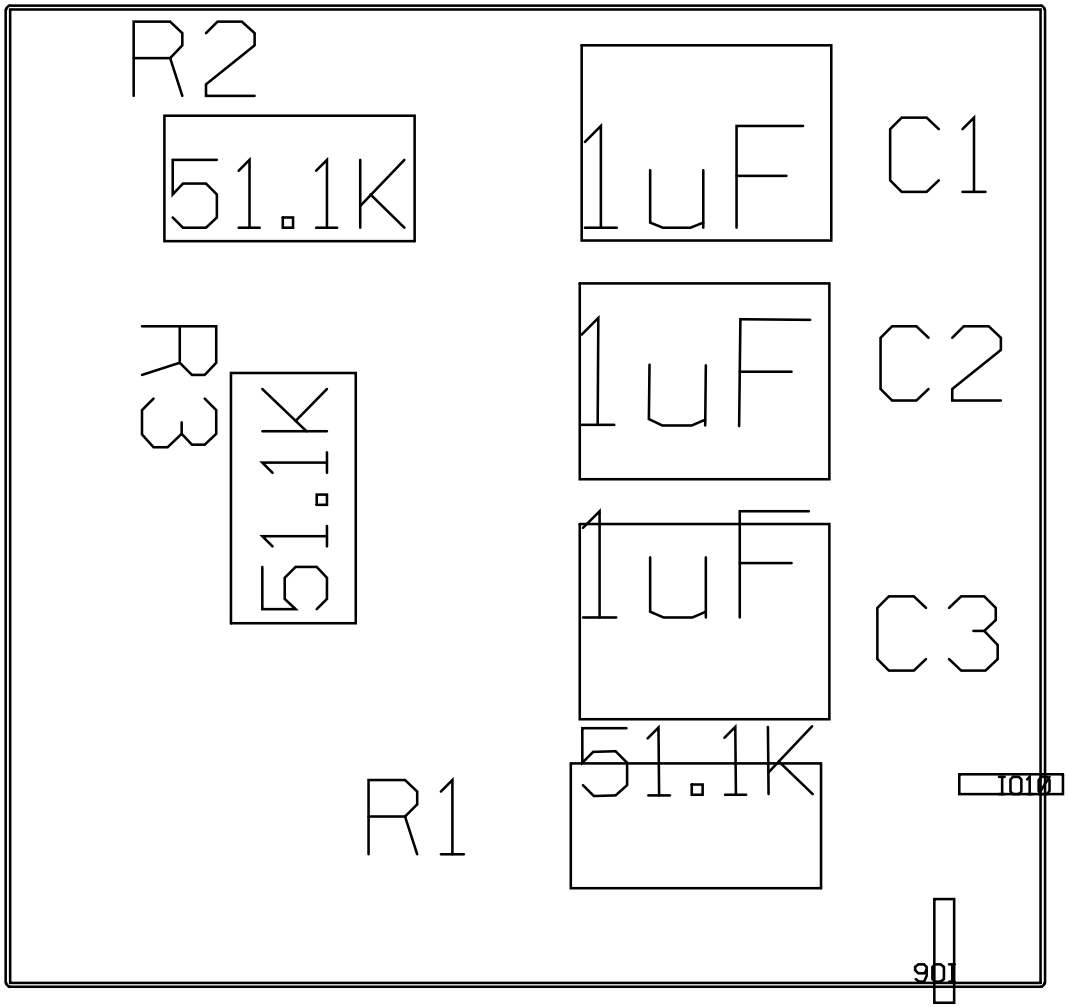
LED PULSE CONTROL BOTTOM SIDE



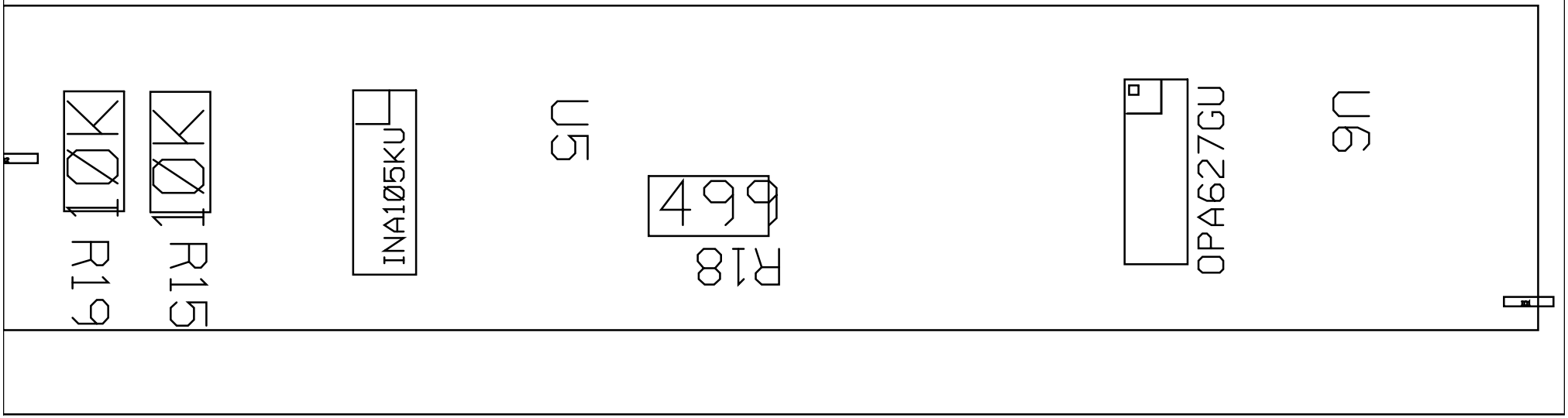


LED CURRENT
CONTROL
TOP SIDE

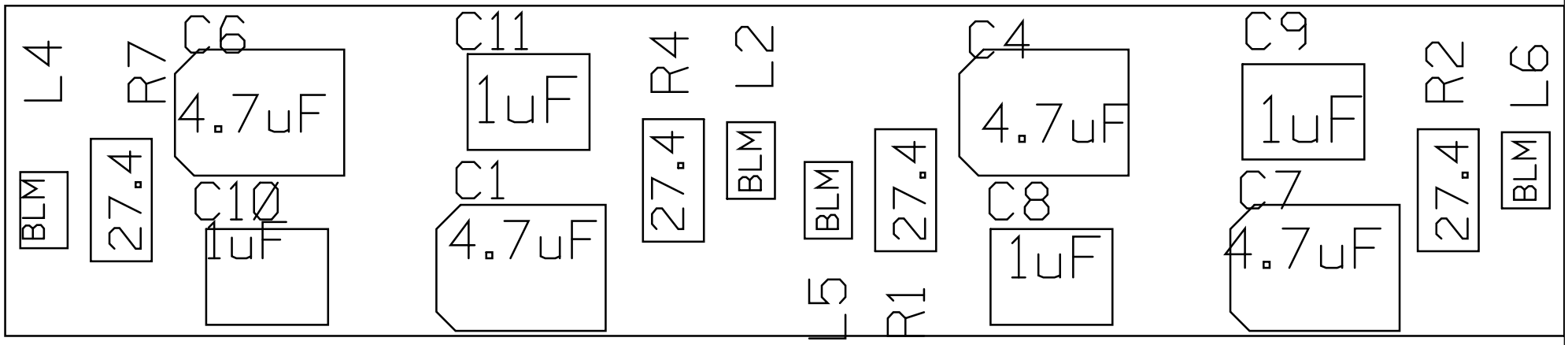
LED CURENT
CONTROL
BOTTOM SIDE

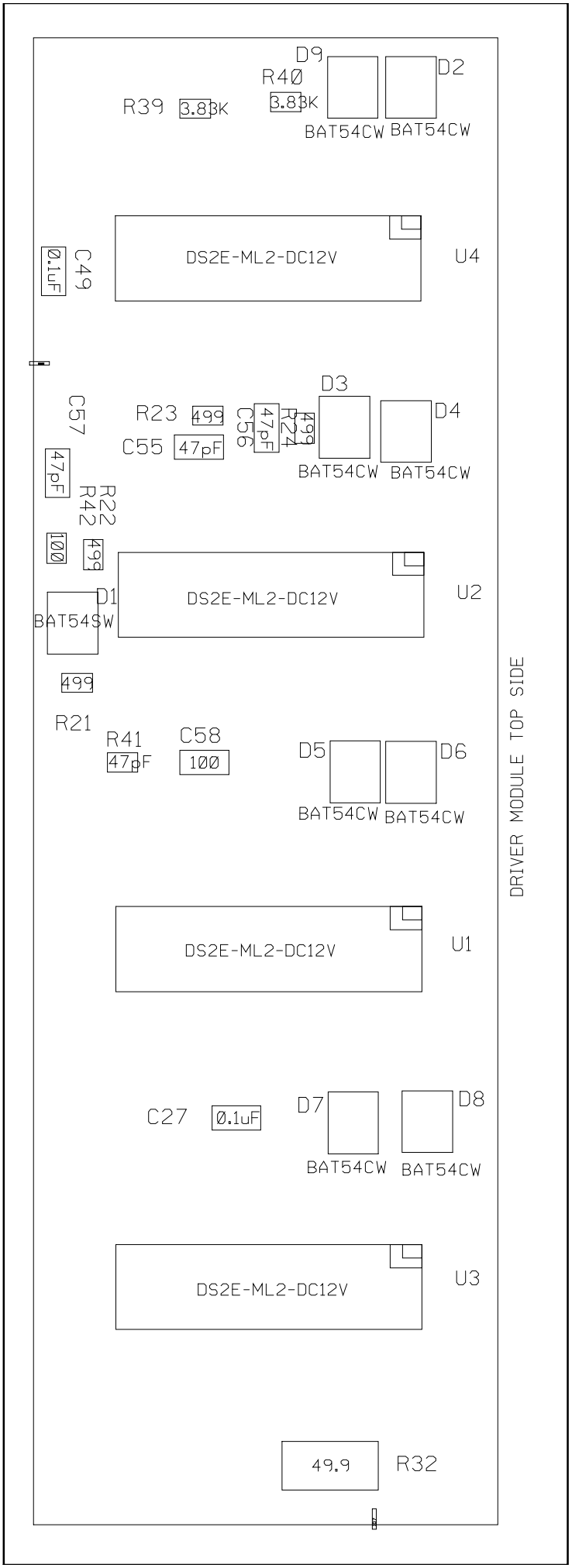


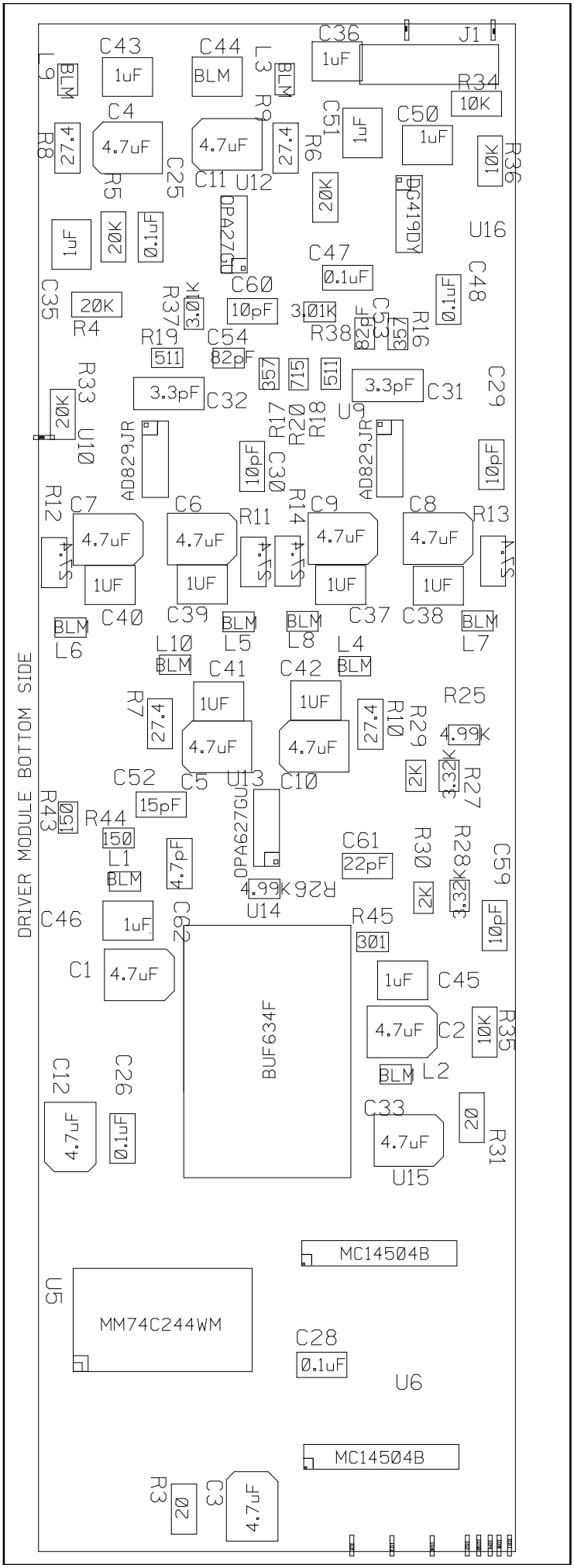
LED CURRENT SOURCE TOP SIDE

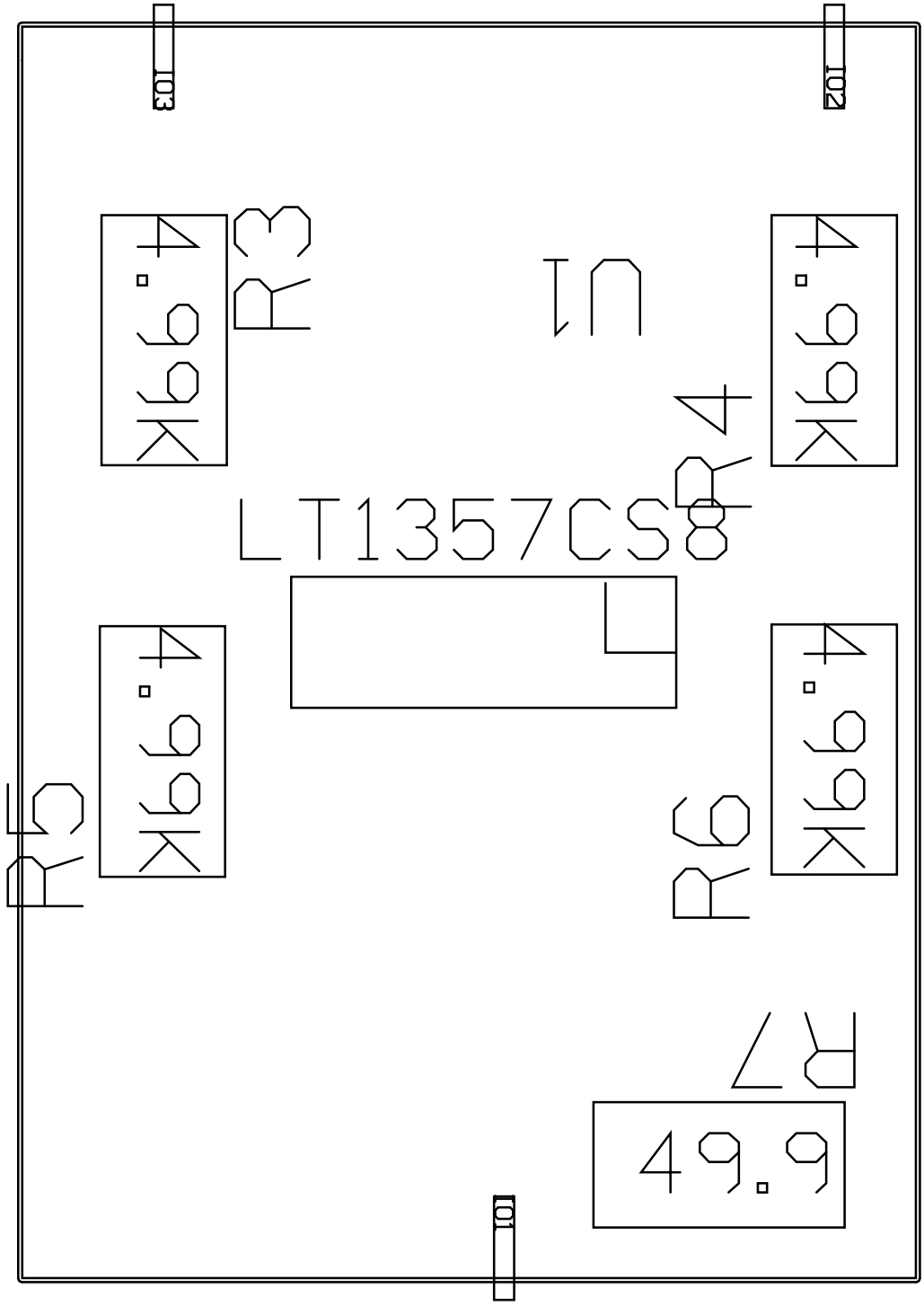


LED CURRENT SOURCE BOTTOM

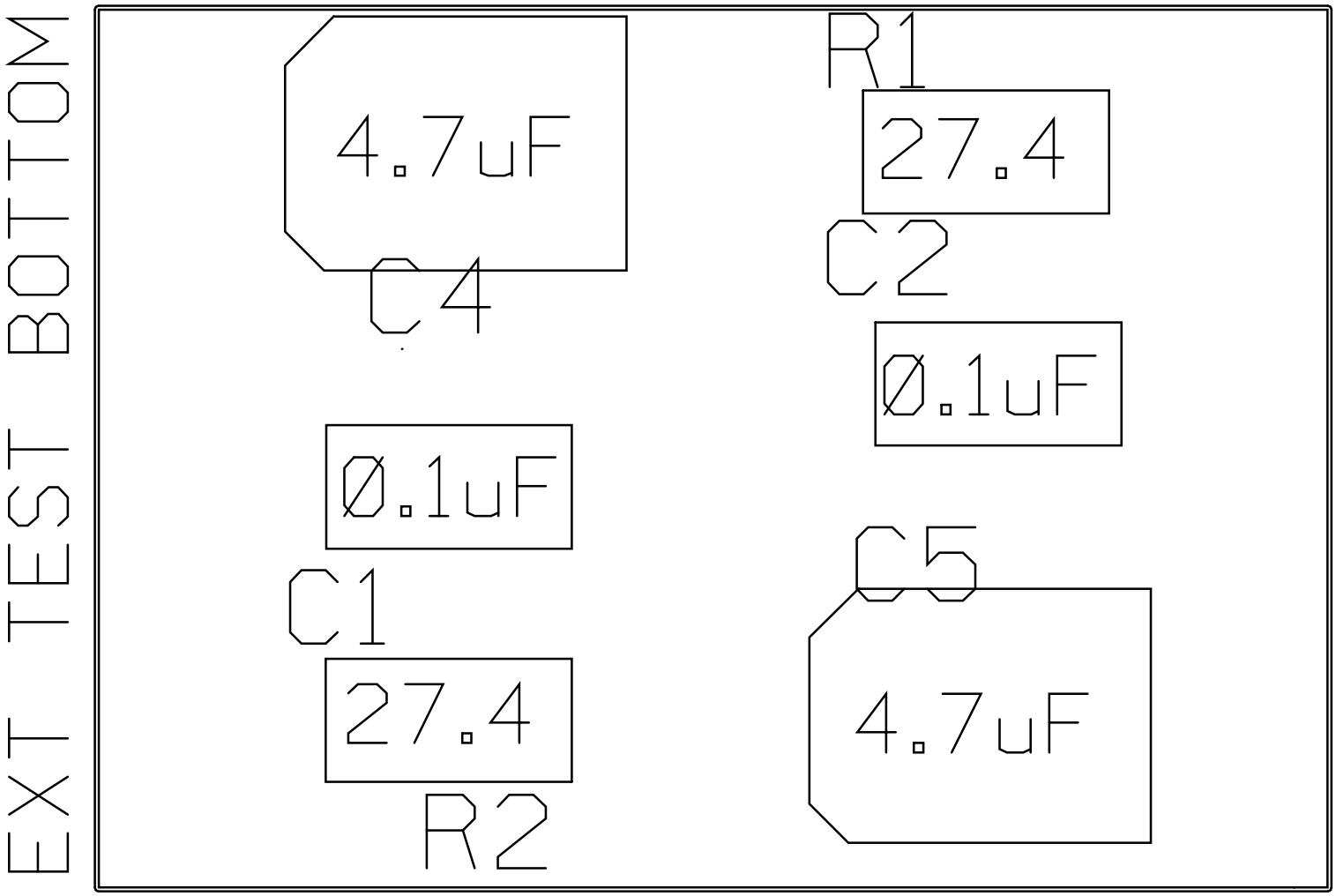



D9
R40
D2
R39
3.83K
3.83K
BAT54CW
BAT54CW
DS2E-ML2-DC12V
U4
C49
0.1uF
D3
D4
C57
R23
499
C56
47pF
R24
499
C55
47pF
BAT54CW
BAT54CW
47pF
R22
R42
100
499
D1
BAT54SW
DS2E-ML2-DC12V
U2
499
R21
R41
47pF
C58
100
D5
D6
BAT54CW
BAT54CW
DRIVER MODULE TOP SIDE
DS2E-ML2-DC12V
U1
C27
0.1uF
D7
D8
BAT54CW
BAT54CW
DS2E-ML2-DC12V
U3
49.9
R32

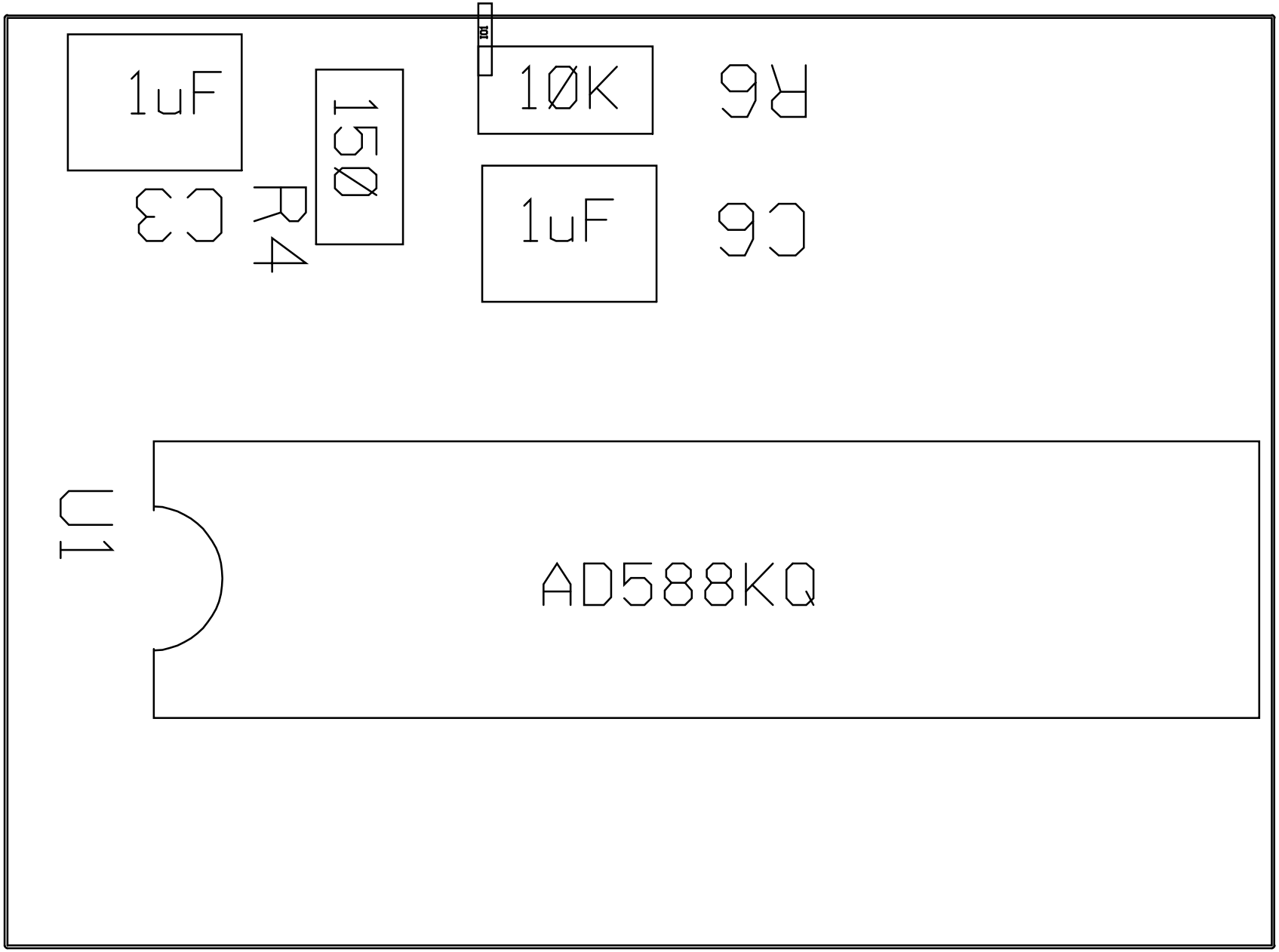

DRIVER MODULE BOTTOM SIDE
J1
C36
1uF
C43
1uF
C44
BLM
L3
BLM
L9
BLM
R34
10K
C4
4.7uF
R9
4.7uF
C51
1uF
C50
1uF
R8
27.4
R6
27.4
R36
10K
C25
C11
U12
R5
20K
DG419DY
U16
OPA27GU
1uF
20K
0.1uF
C47
0.1uF
C48
0.1uF
C35
20K
R4
R37
3.01K
C60
10pF
3.01K
R38
82pF
C53
357
R16
R19
511
C54
82pF
357
715
511
3.3pF
C31
C29
R33
20K
3.3pF
C32
U9
R17
R20
R18
U10
AD829JR
AD829JR
10pF
C30
10pF
R12
C7
4.7uF
C6
4.7uF
R11
R14
C9
4.7uF
C8
4.7uF
R13
1UF
1UF
1UF
1UF
C40
C39
C37
C38
BLM
L6
L10
L5
L8
L4
L7
BLM
C41
C42
BLM
R7
27.4
1UF
1UF
R25
27.4
R10
R29
4.99K
4.7uF
4.7uF
C52
C5
U13
C10
2K
3.32K
R27
R43
150
R44
150
15pF
OPA627GU
C61
22pF
R30
R28
C59
L1
BLM
4.7pF
4.99K
R26
2K
3.32K
10pF
C46
1uF
C62
U14
R45
301
C1
4.7uF
1uF
C45
BUF634F
4.7uF
C2
10K
R35
C12
C26
BLM
L2
4.7uF
0.1uF
C33
4.7uF
20
R31
U15
MC14504B
U5
MM74C244WM
C28
0.1uF
U6
MC14504B
R3
20
C3
4.7uF



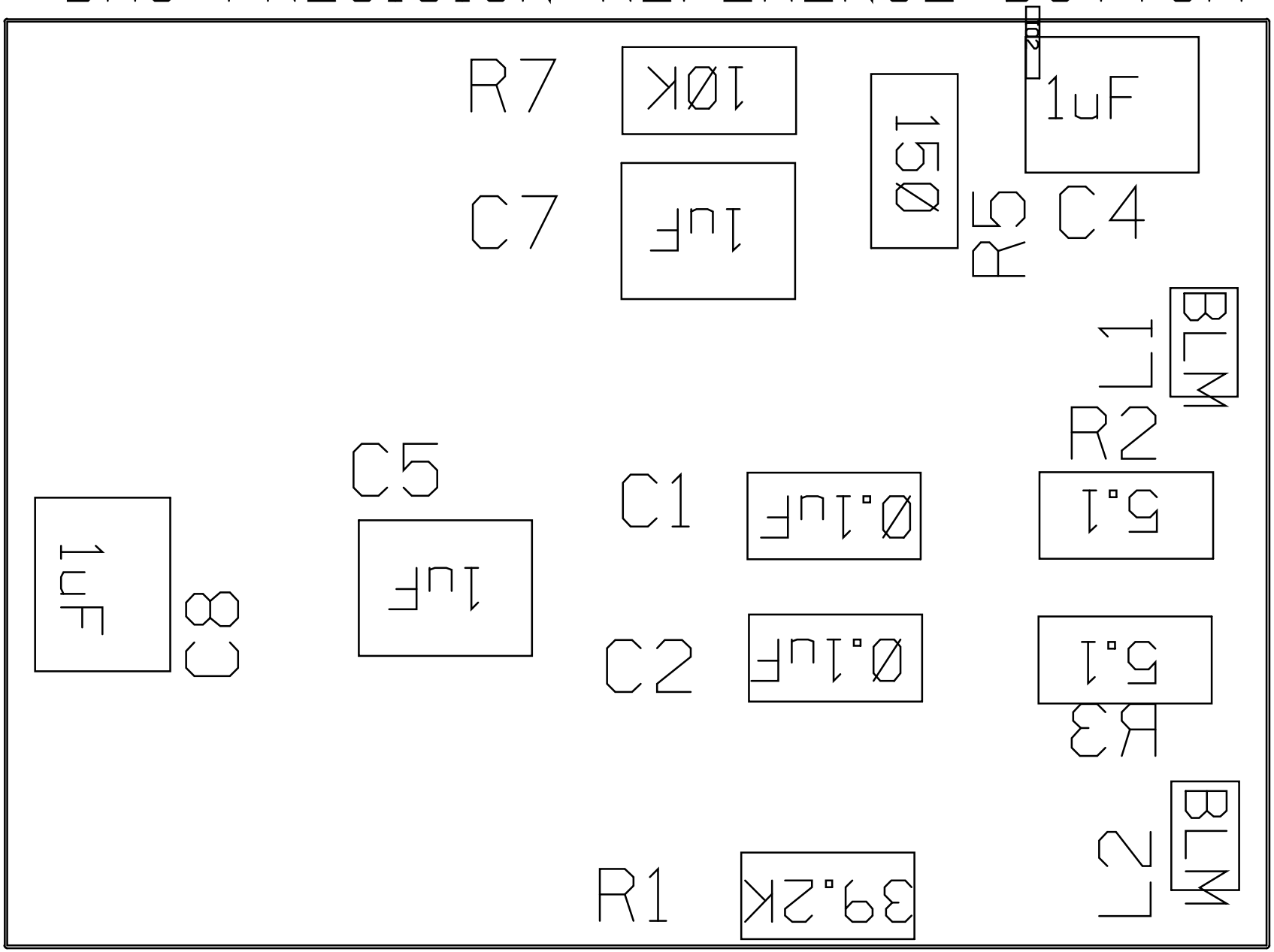
EXT TEST TOP


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

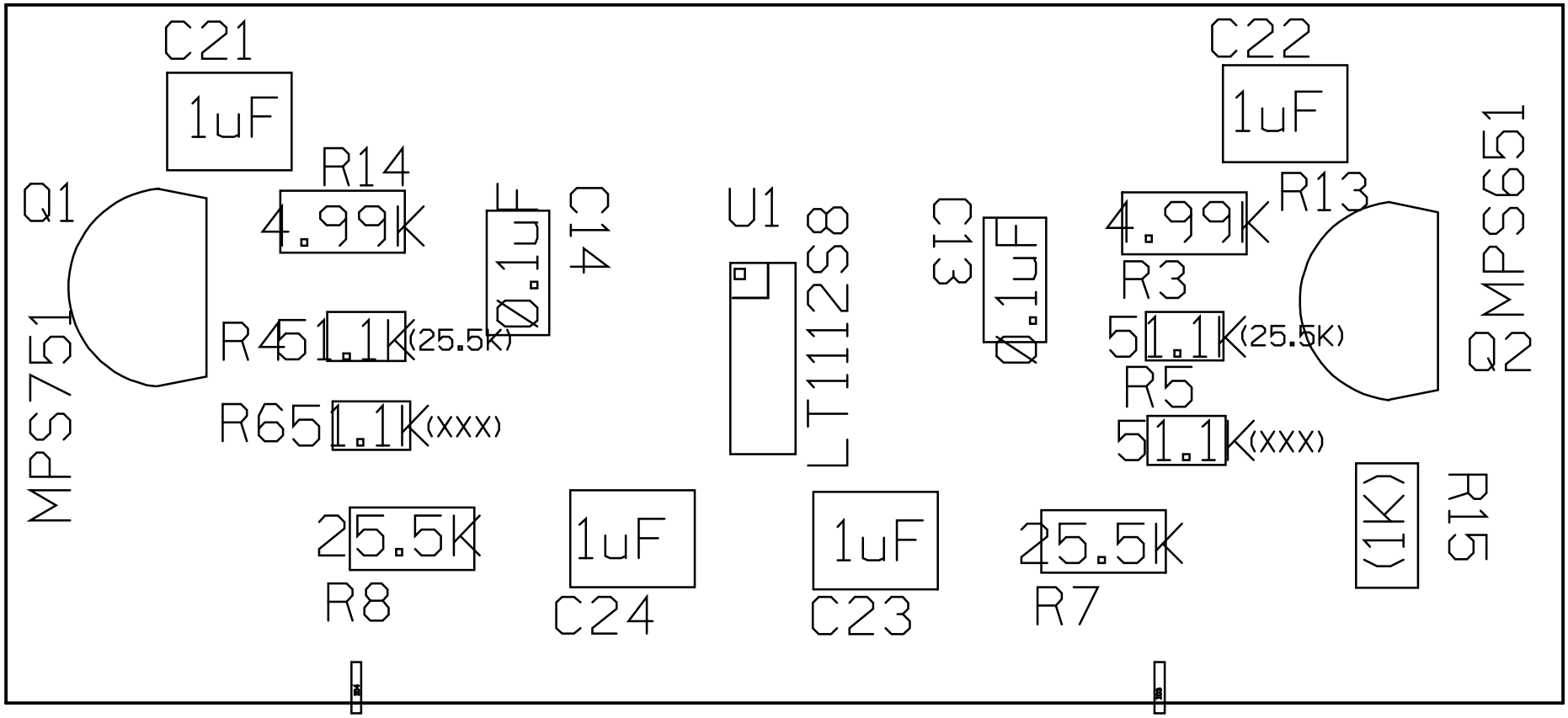
DAC PRECISION REFERENCE TOP



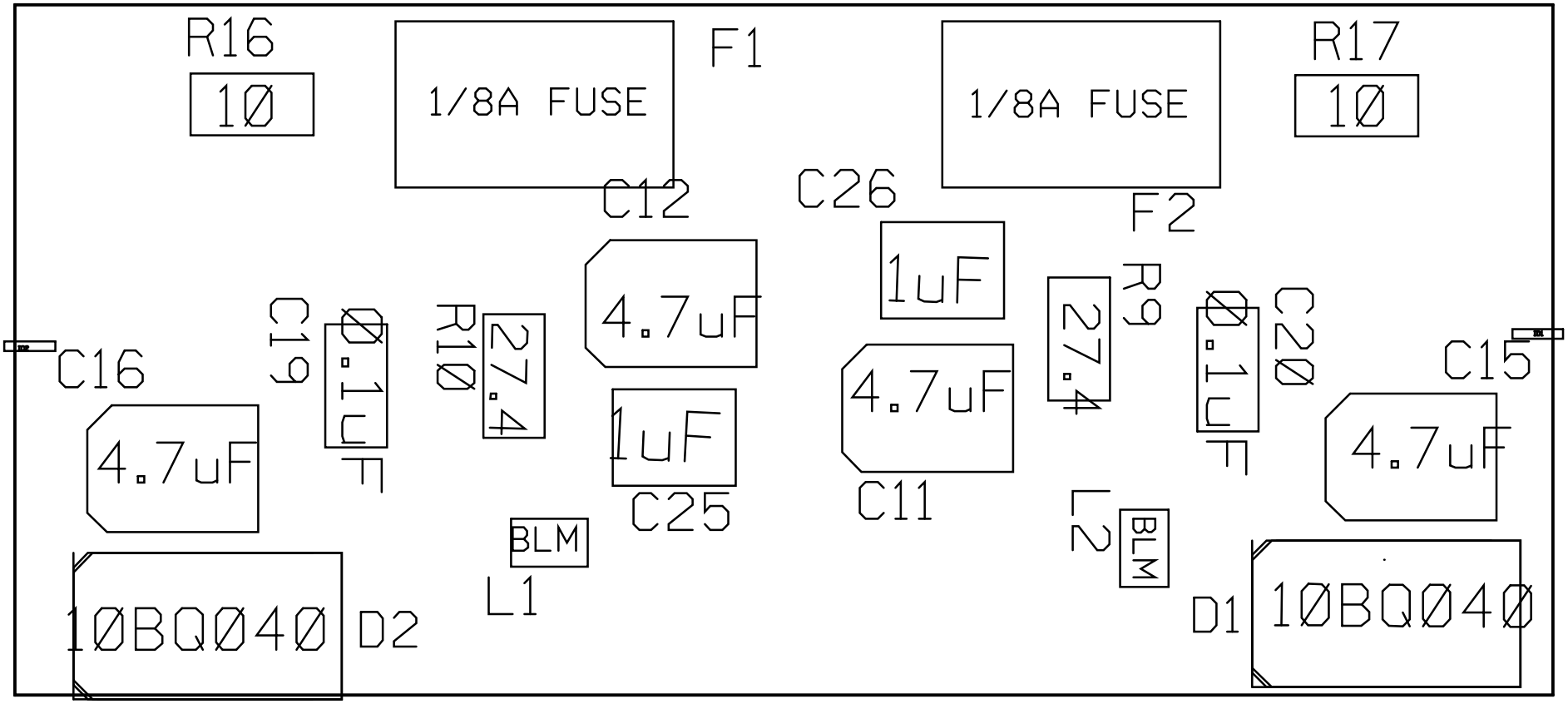
DAC PRECISION REFERENCE BOTTOM

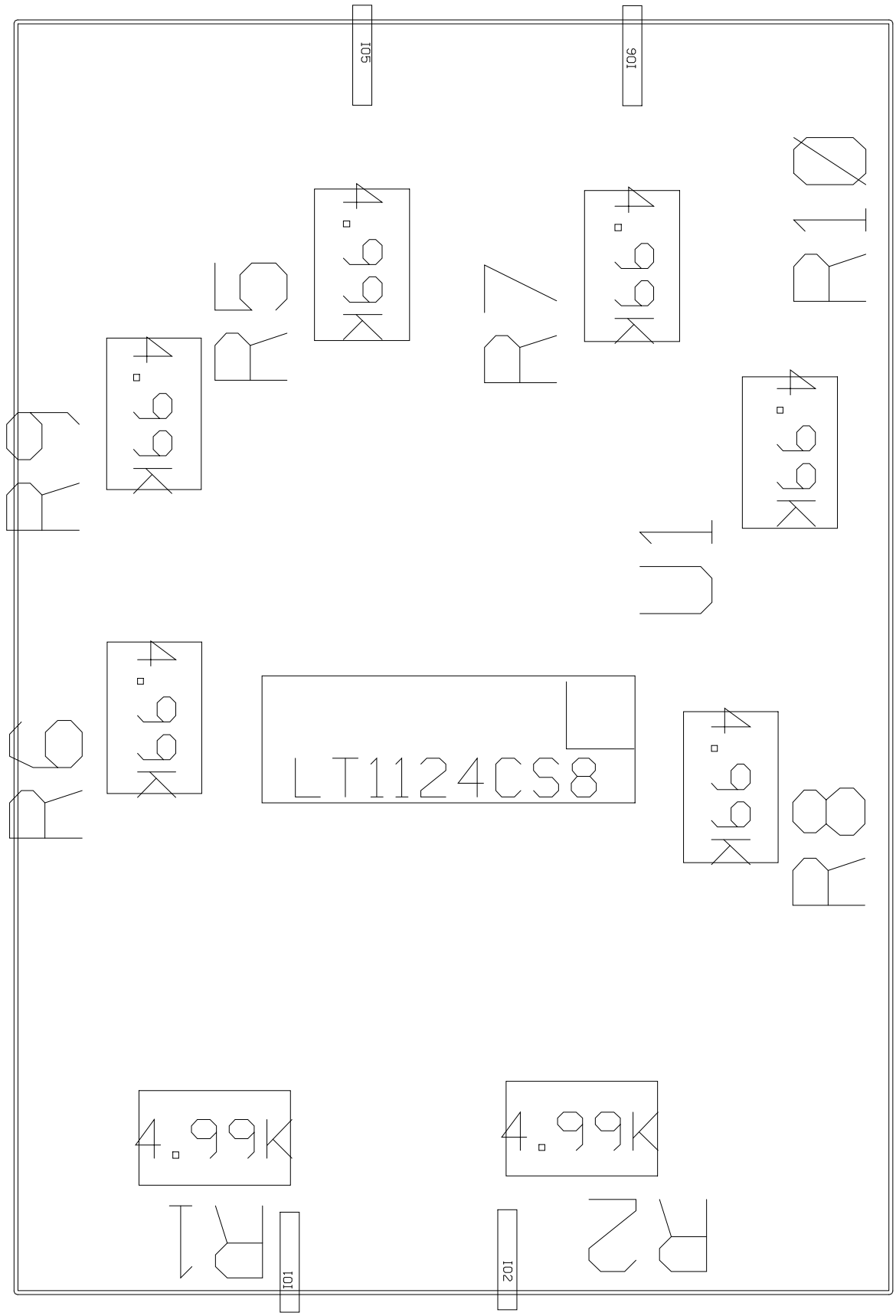


DAC 10 VOLT REFERENCE TOP
(DAC 5 VOLT)



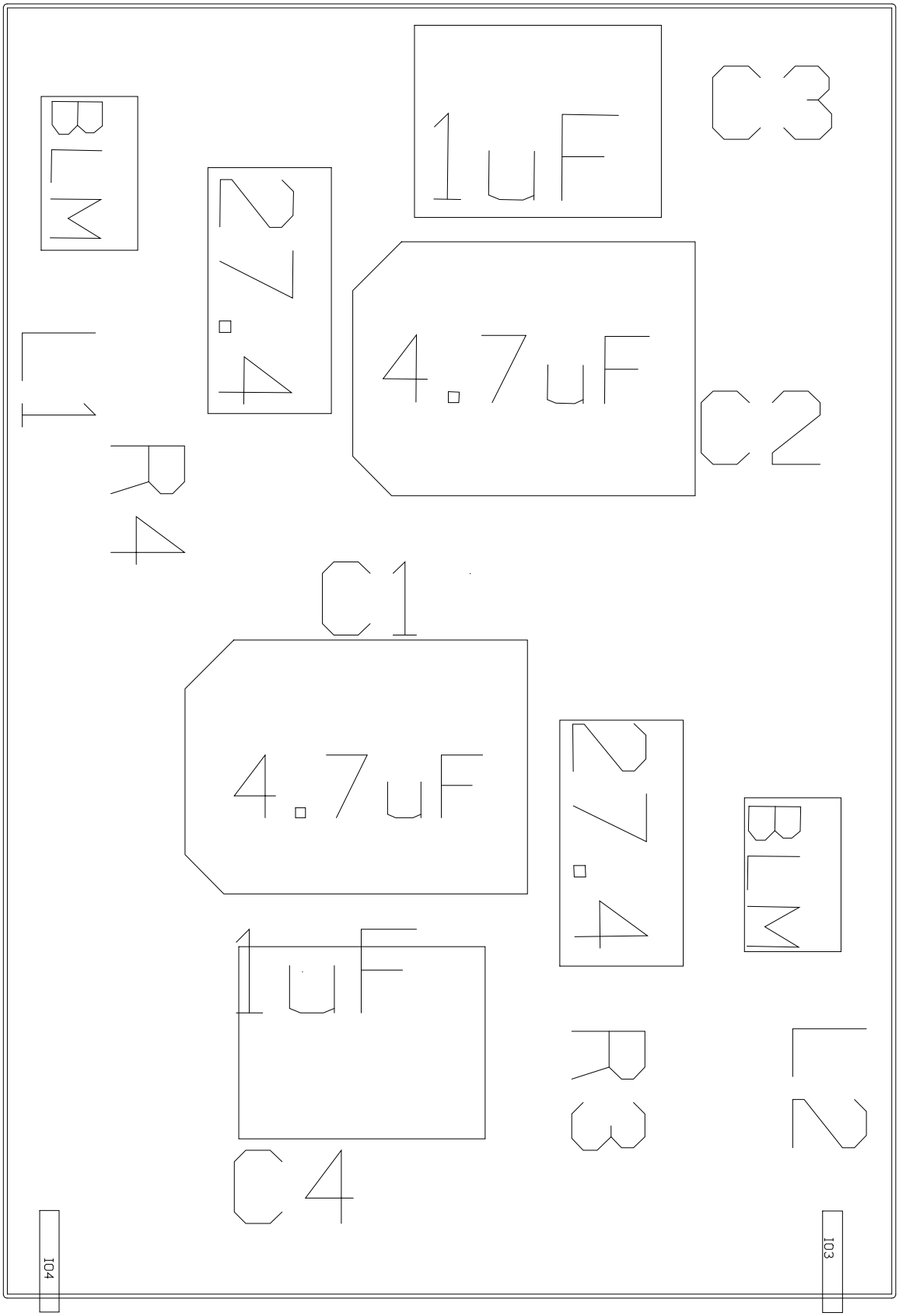
DAC 10 VOLT REFERENCE BOTTOM
(DAC 5V)

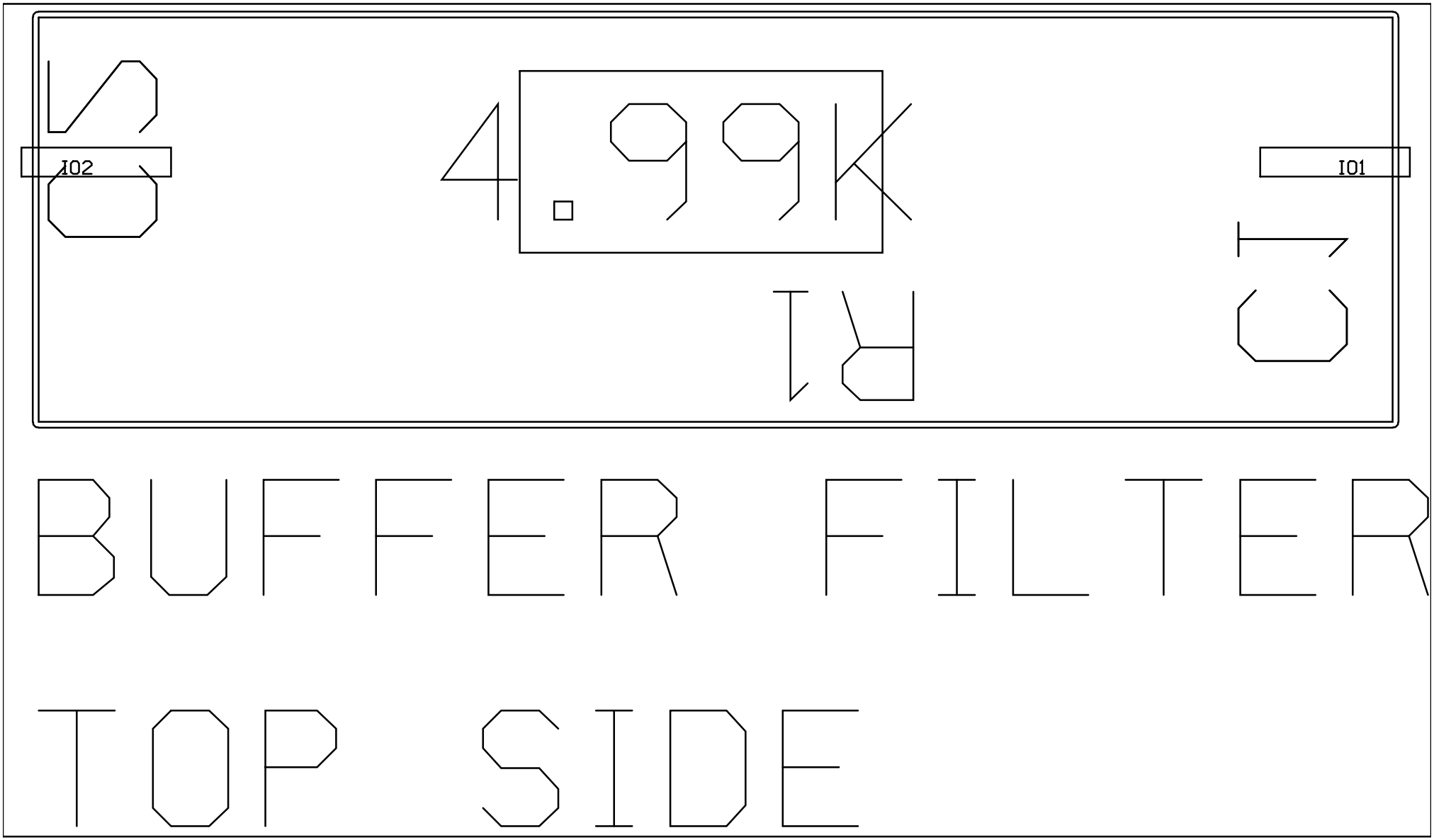


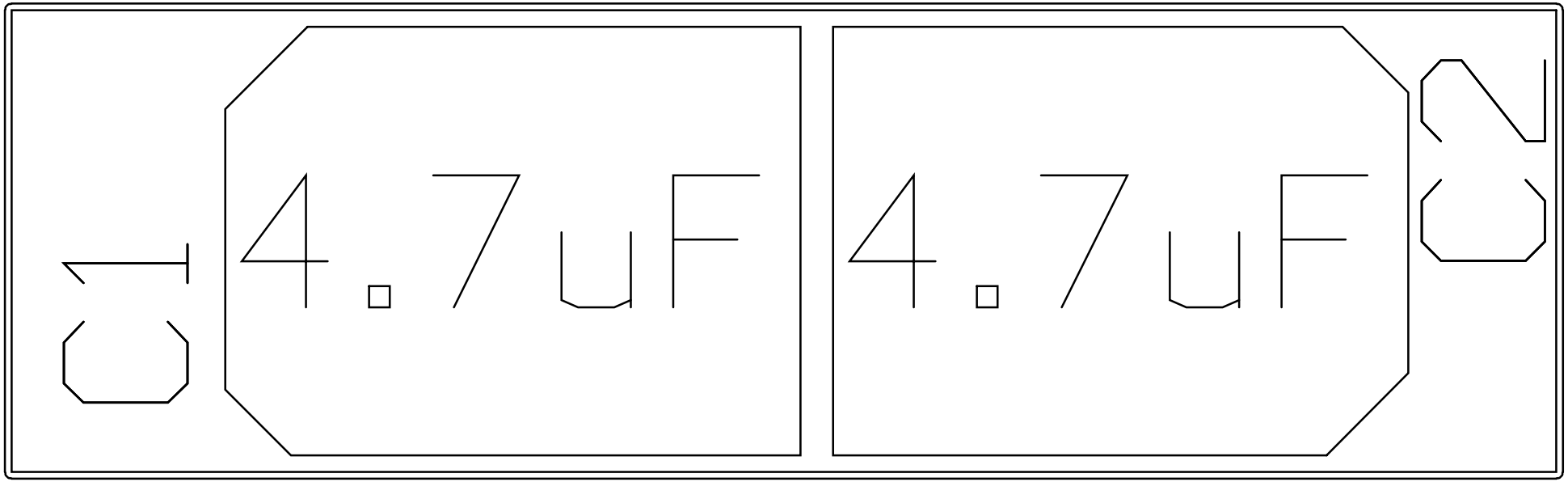


BUFFER TOP SIDE

BUFFER BOTTOM SIDE



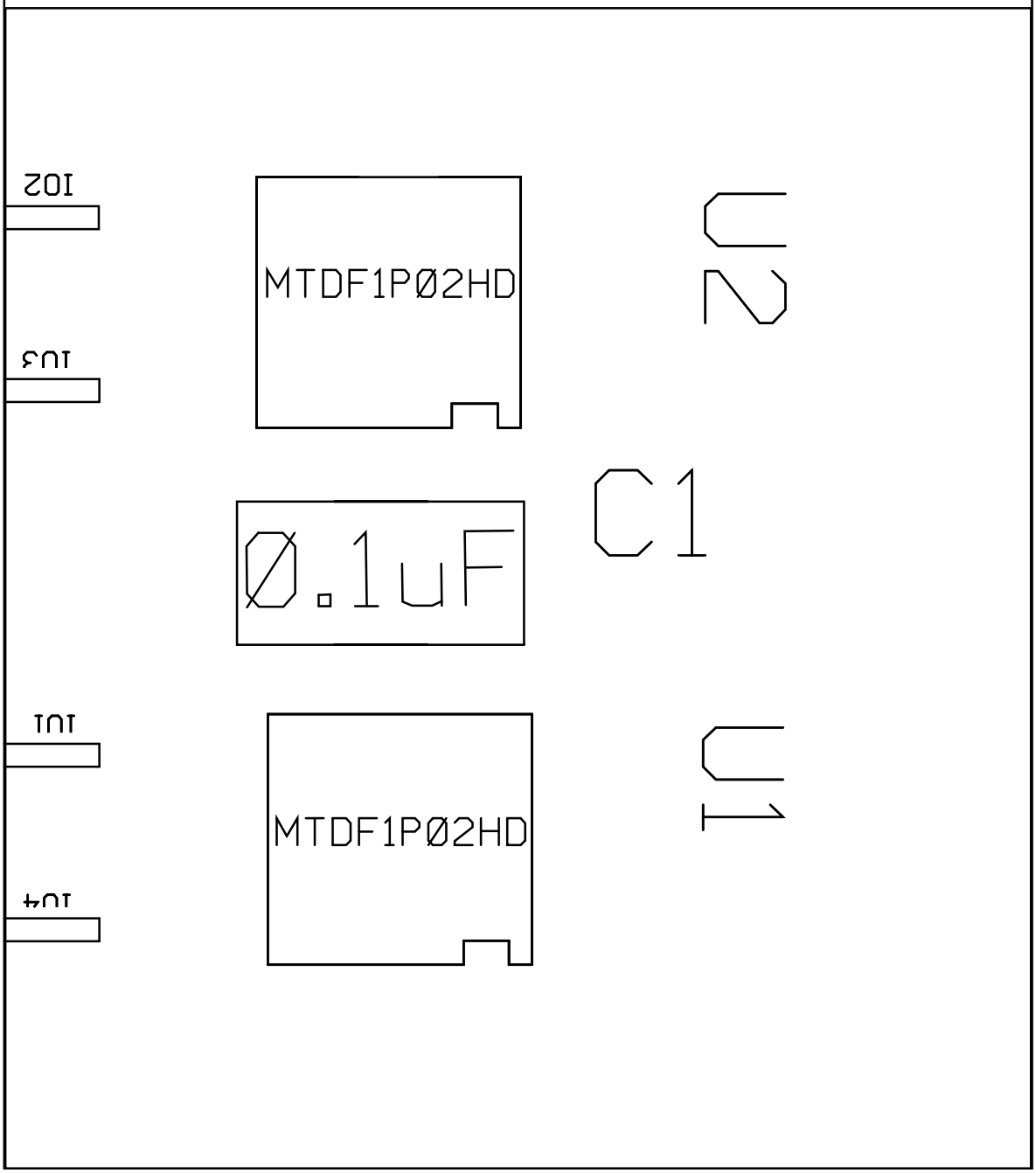

6
I02
4.99K
R1
5
I01
BUFFER FILTER
TOP SIDE

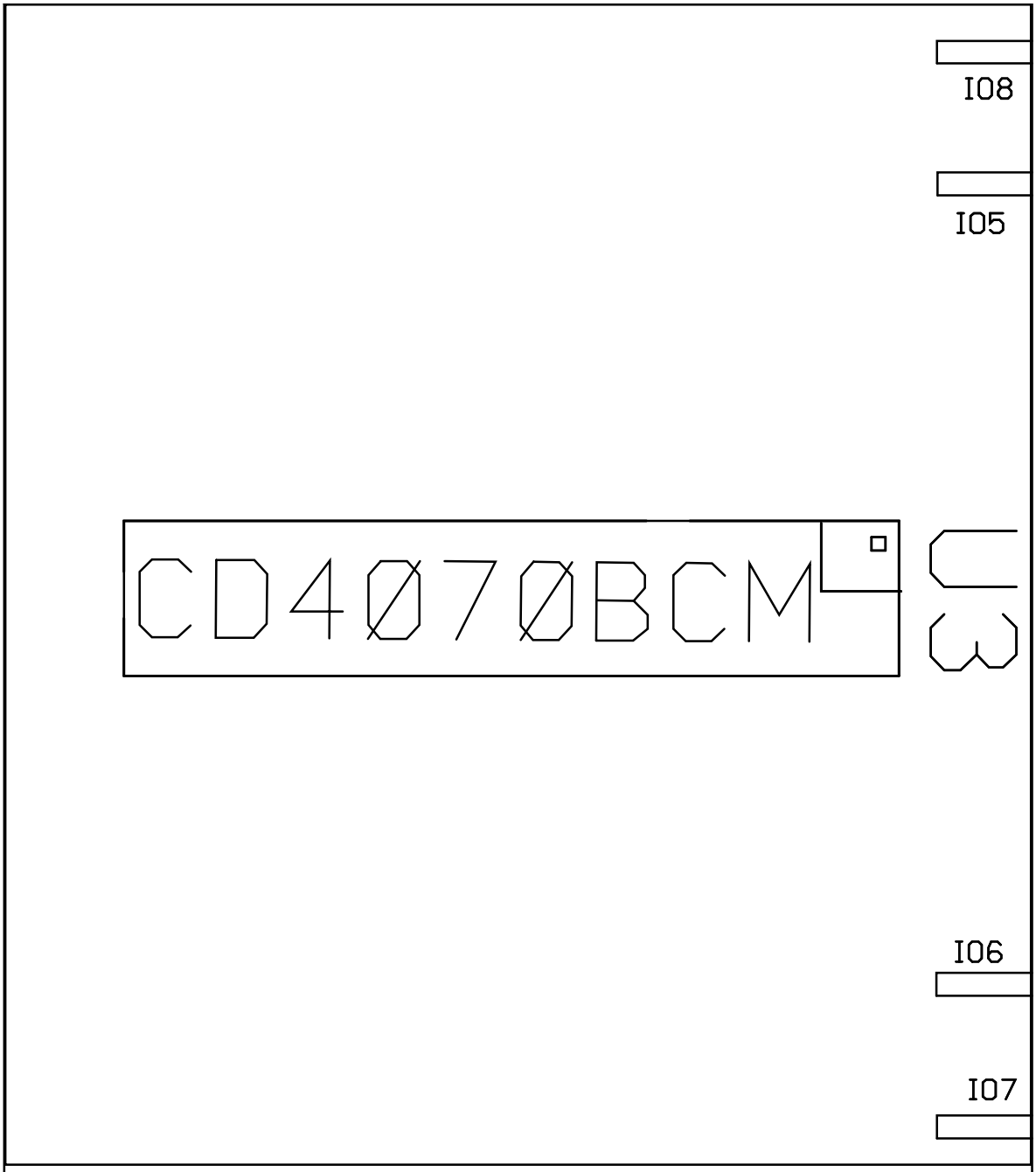


BUFFER FILTER

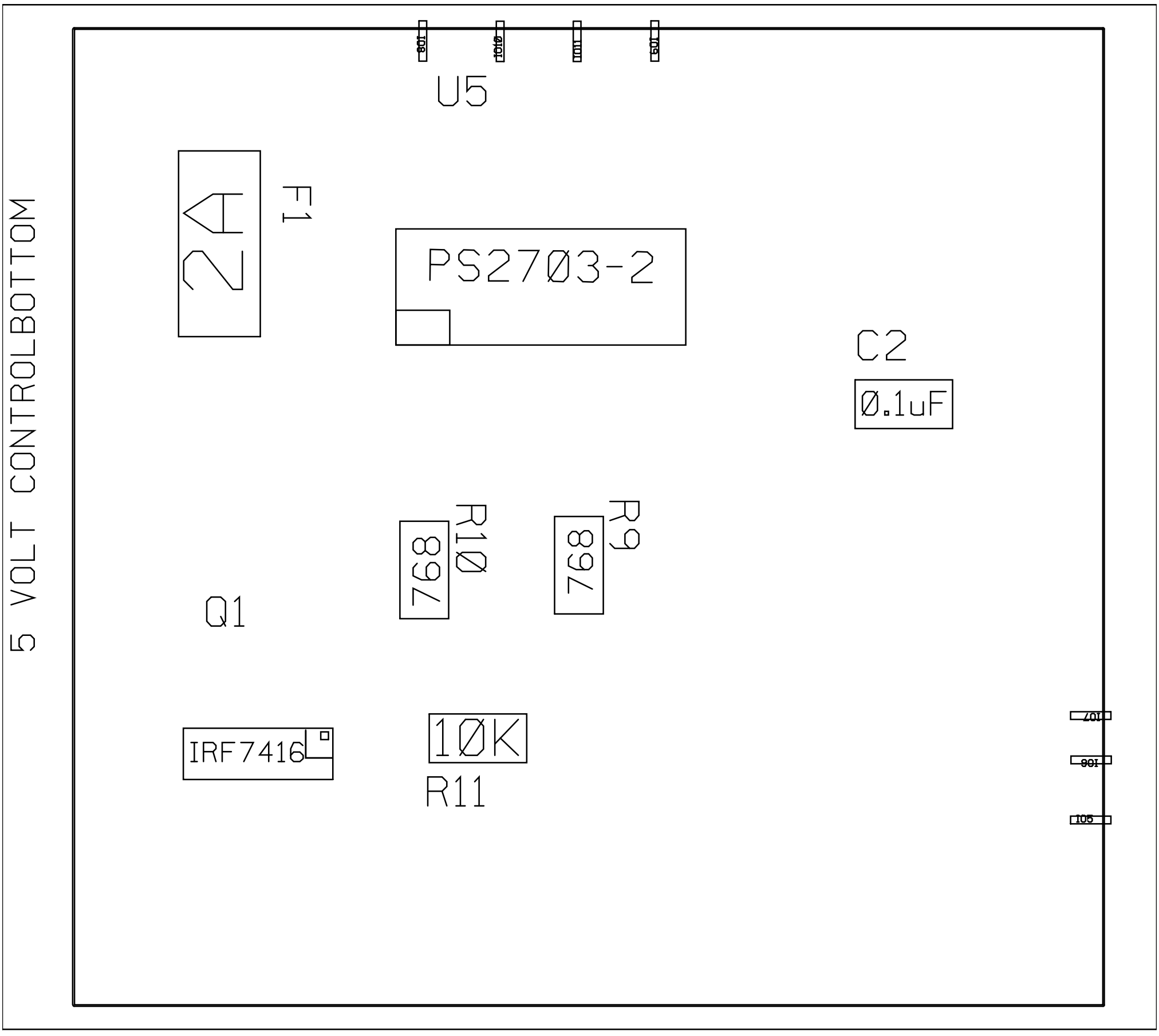
BOTTOM SIDE

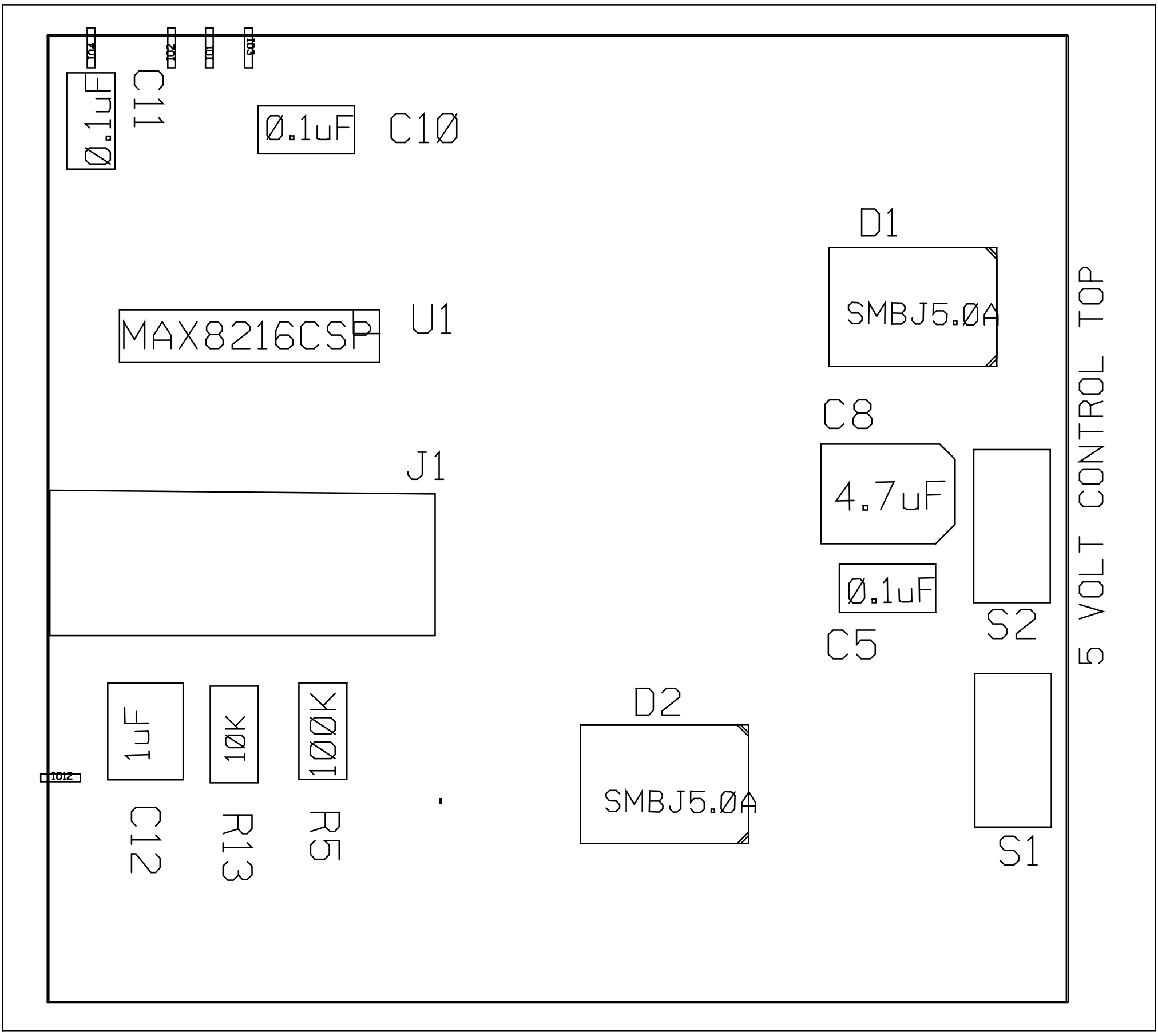
POLARITY CONTROL BOTTOM



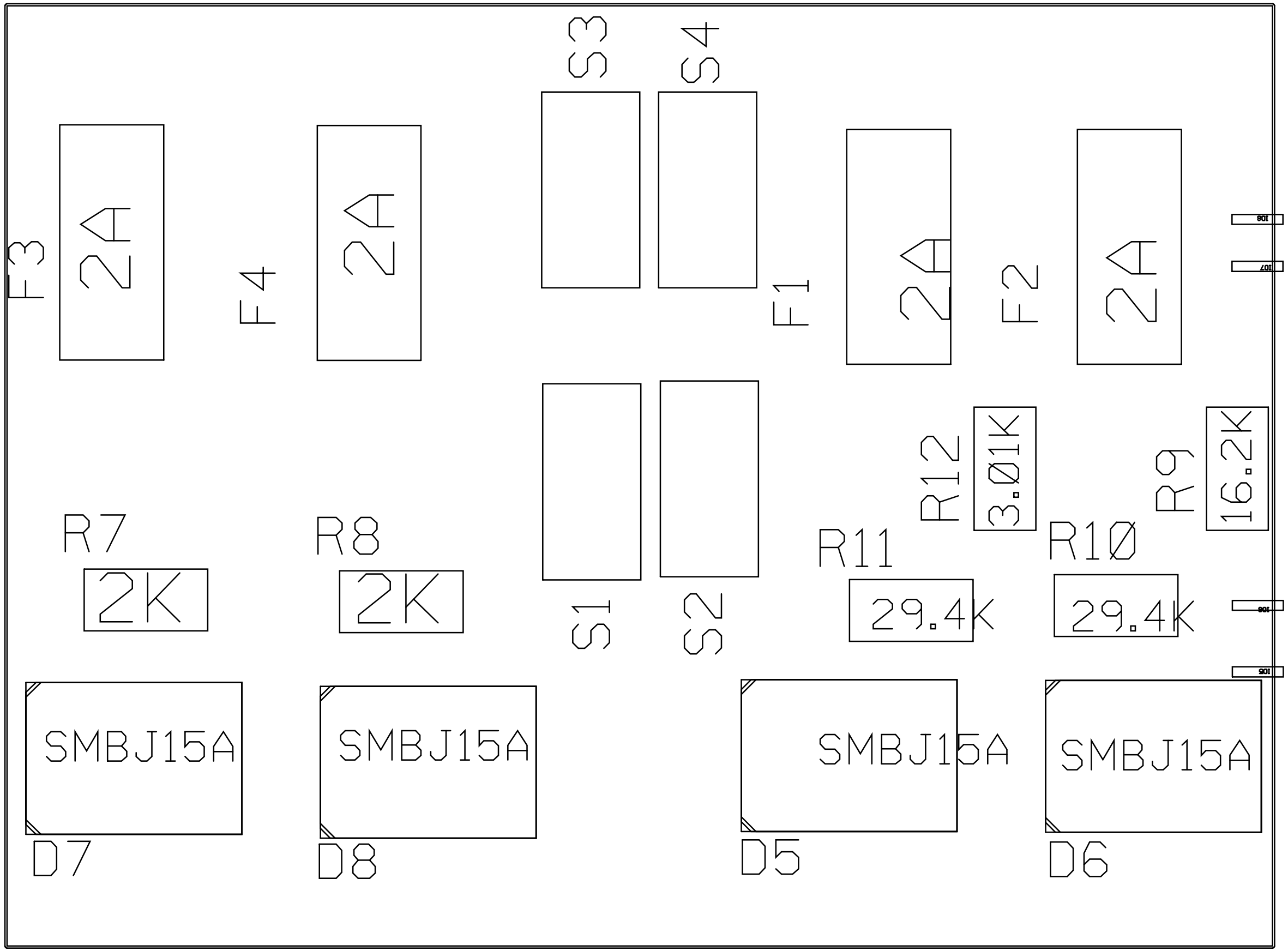


POLARITY CONTROL TOP


5 VOLT CONTROLBOTTOM
U5
2A
F1
PS2703-2
C2
0.1uF
768
R10
768
R9
Q1
IRF7416
10K
R11


T04
T02
T01
C01
0.1uF
C11
0.1uF
C10
D1
SMBJ5.0A
MAX8216CSP
U1
C8
J1
4.7uF
0.1uF
C5
S2
5 VOLT CONTROL TOP
1uF
10K
100K
D2
SMBJ5.0A
T012
C12
R13
R5
S1

15V CON TOP


F3
2A
F4
2A
S3
S4
F1
2A
F2
2A
106
107
R12
3.01K
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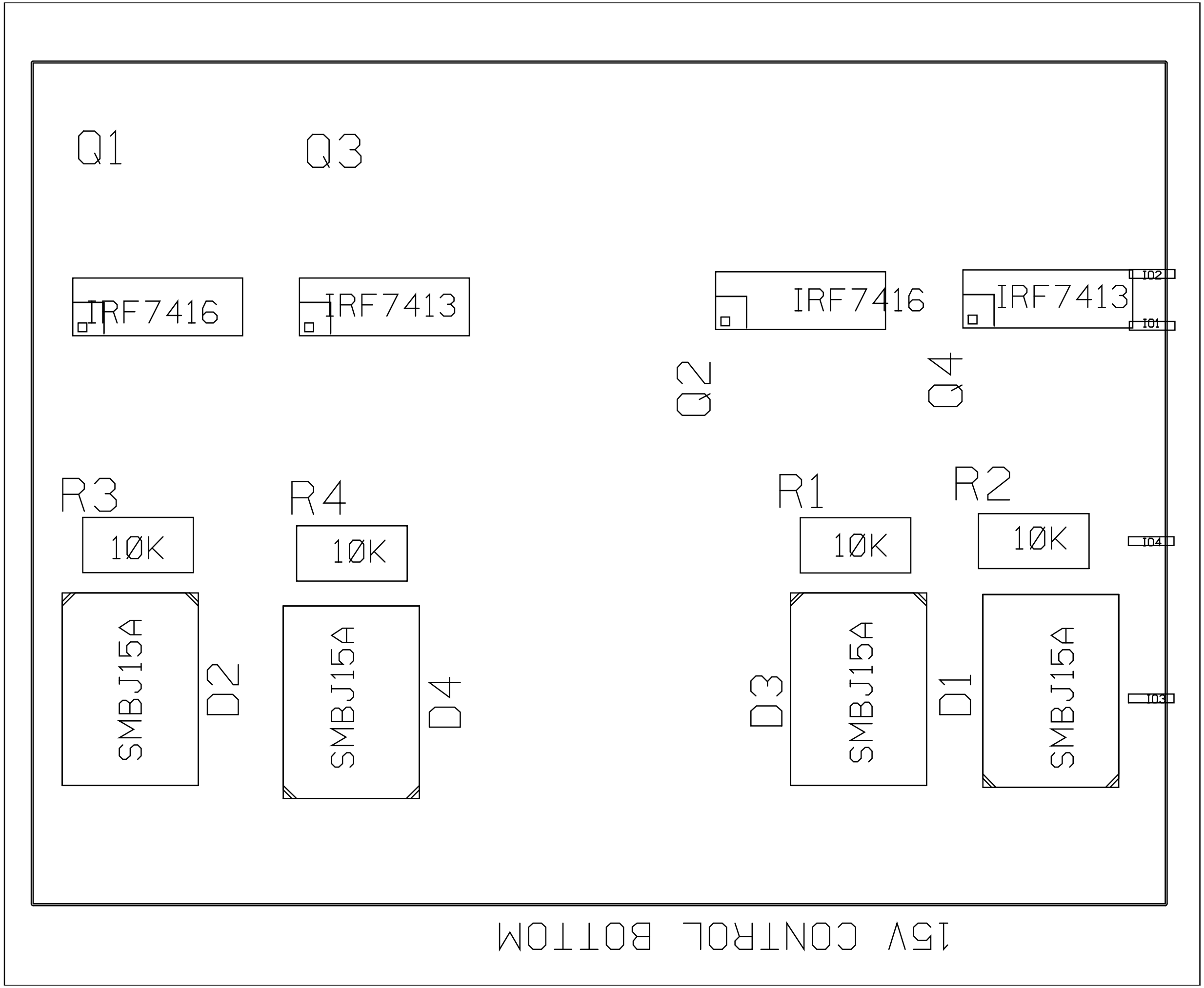
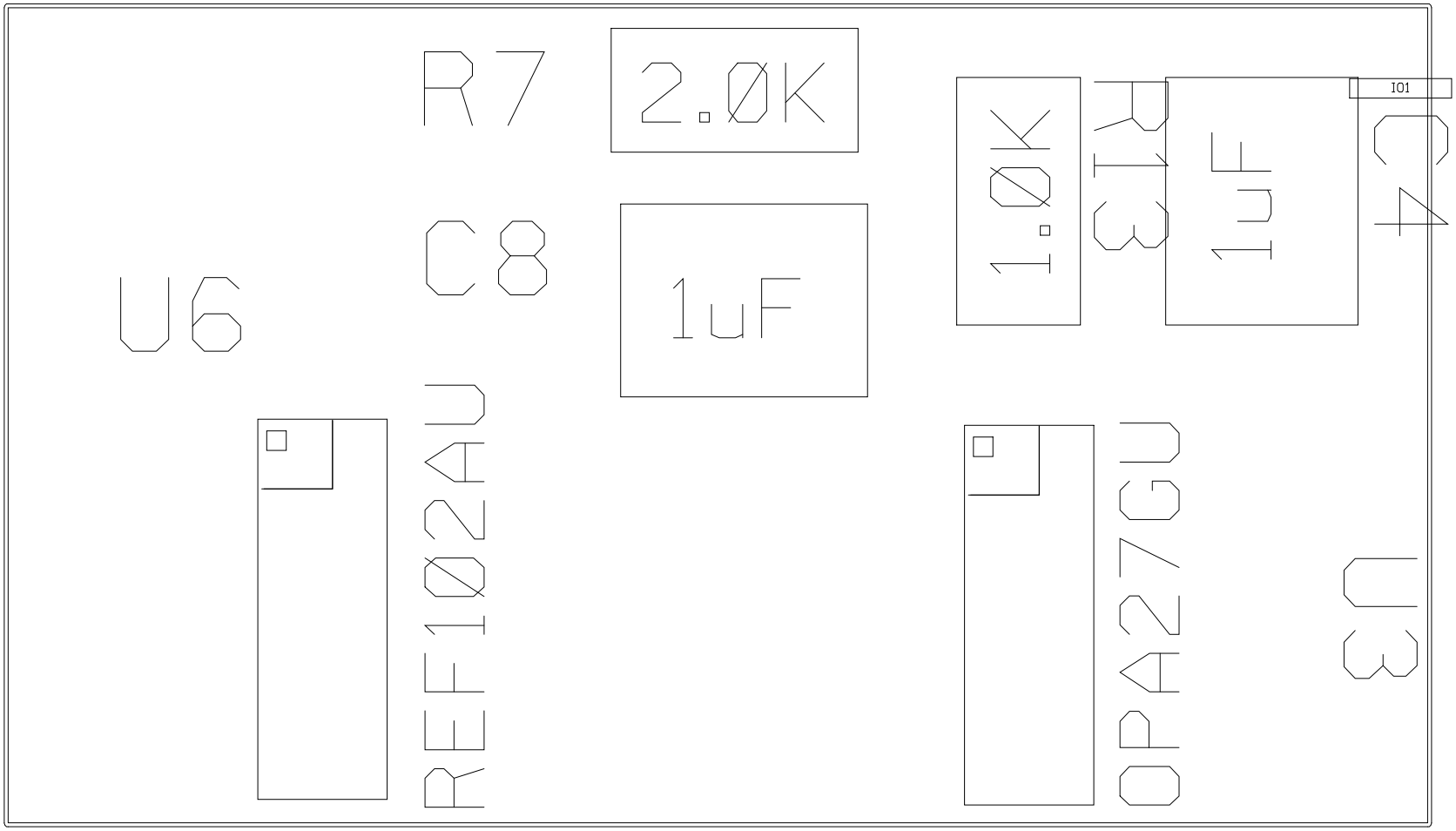
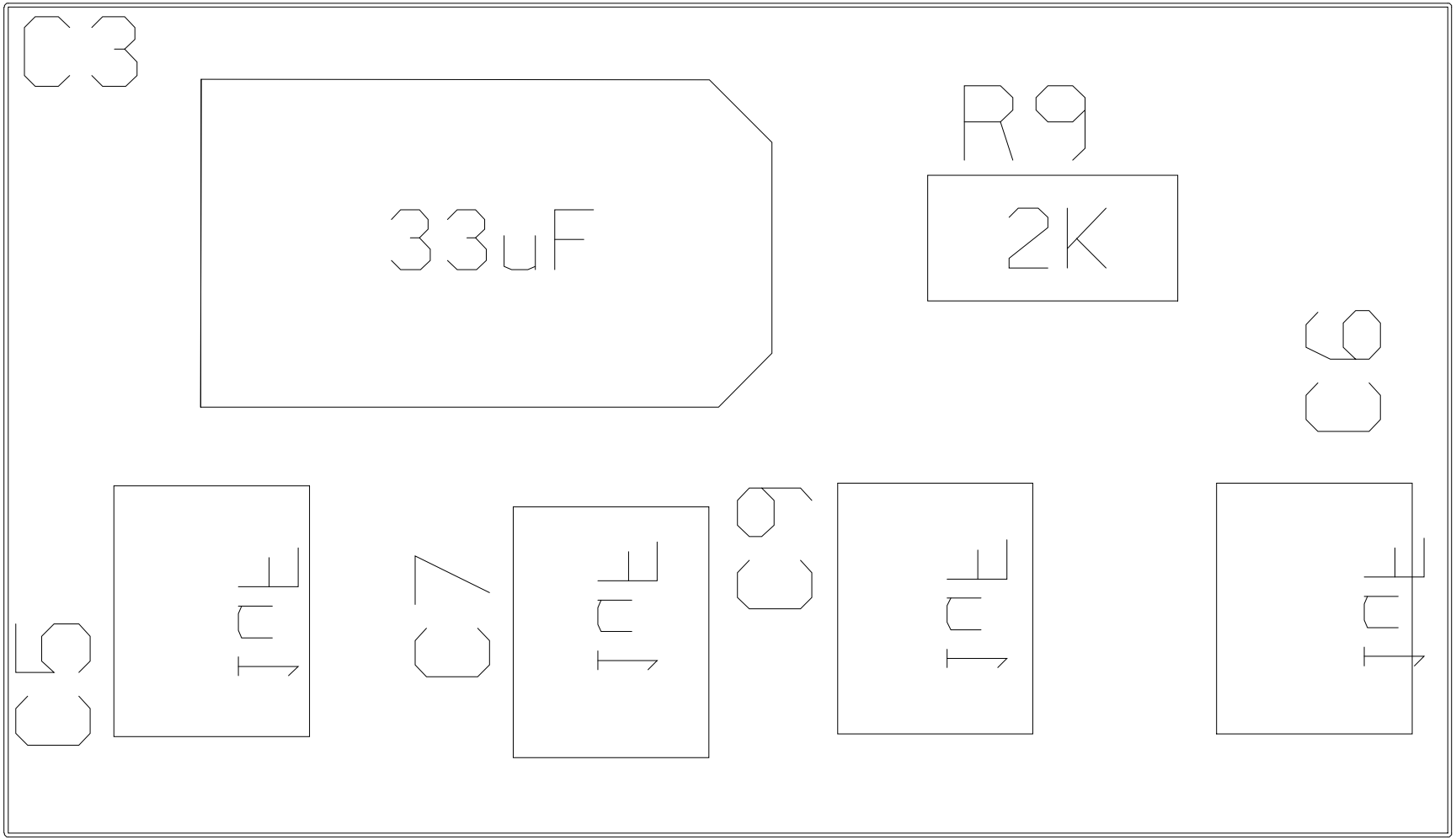
R7
2K
R8
2K
S1
S2
R11
29.4K
R10
29.4K
106
105
SMBJ15A
SMBJ15A
SMBJ15A
SMBJ15A
D7
D8
D5
D6

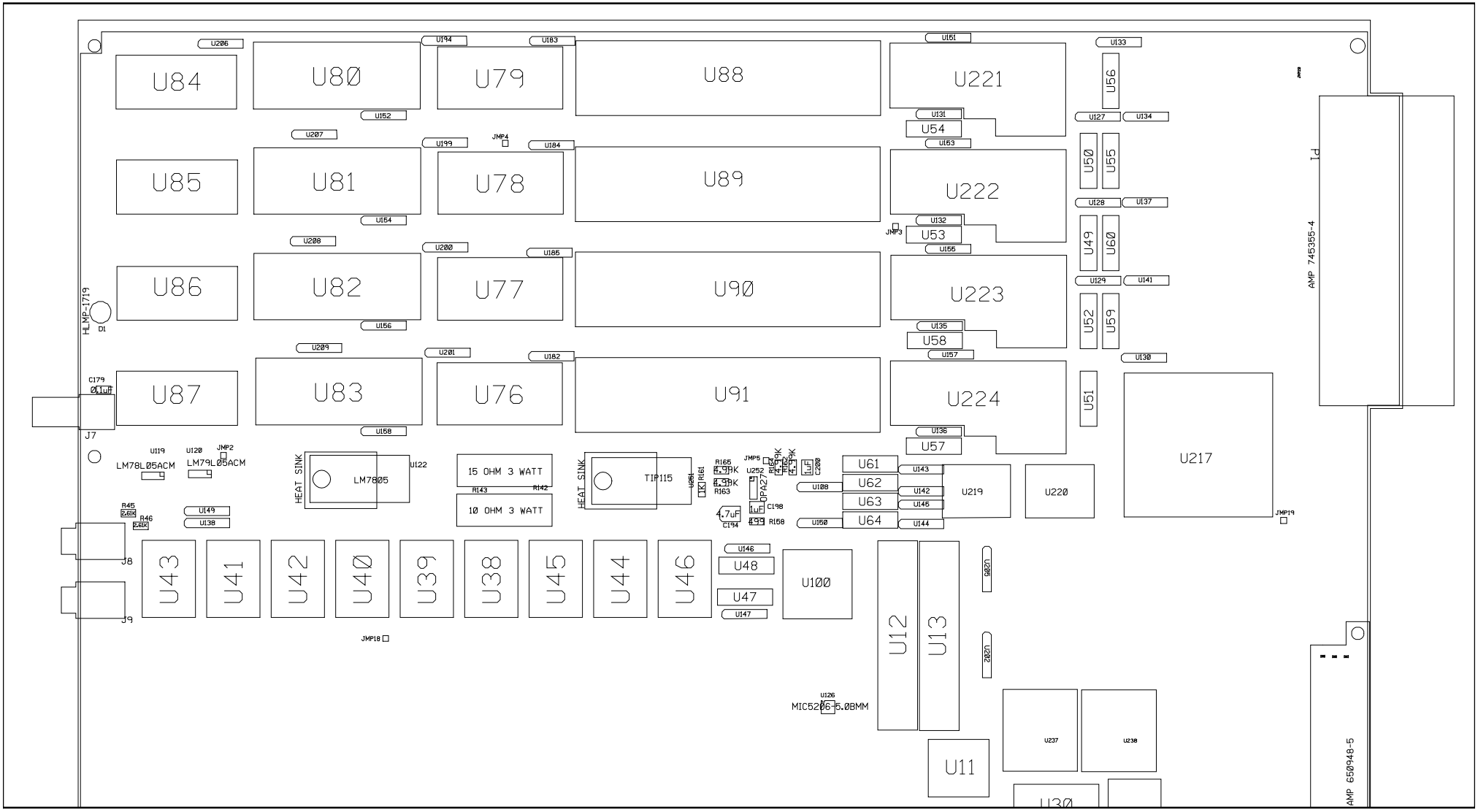

Q1
Q3
IRF7416
IRF7413
IRF7416
IRF7413
I02
I01
Q2
Q4
R3
10K
R4
10K
R1
10K
R2
10K
I04
SMBJ15A
D2
SMBJ15A
D4
D3
SMBJ15A
D1
SMBJ15A
I03
15V CONTROL BOTTOM

QAMP REFERENCE TOP



QAMP REFERENCE BOTTOM

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U88
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U56
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U50
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U82
U77
U90
U223
U53
U49
U60
U87
U83
U76
U91
U224
U58
U52
U59
U51
U57
U217
U61
U62
U63
U64
U219
U220
U43
U41
U42
U40
U39
U38
U45
U44
U46
U48
U47
U100
U12
U13
U11
U237
U238
U30
U206
U194
U183
U151
U133
U152
U131
U127
U134
U207
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U184
U163
U128
U137
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U238
U206
U202
U261
U252
U251
U108
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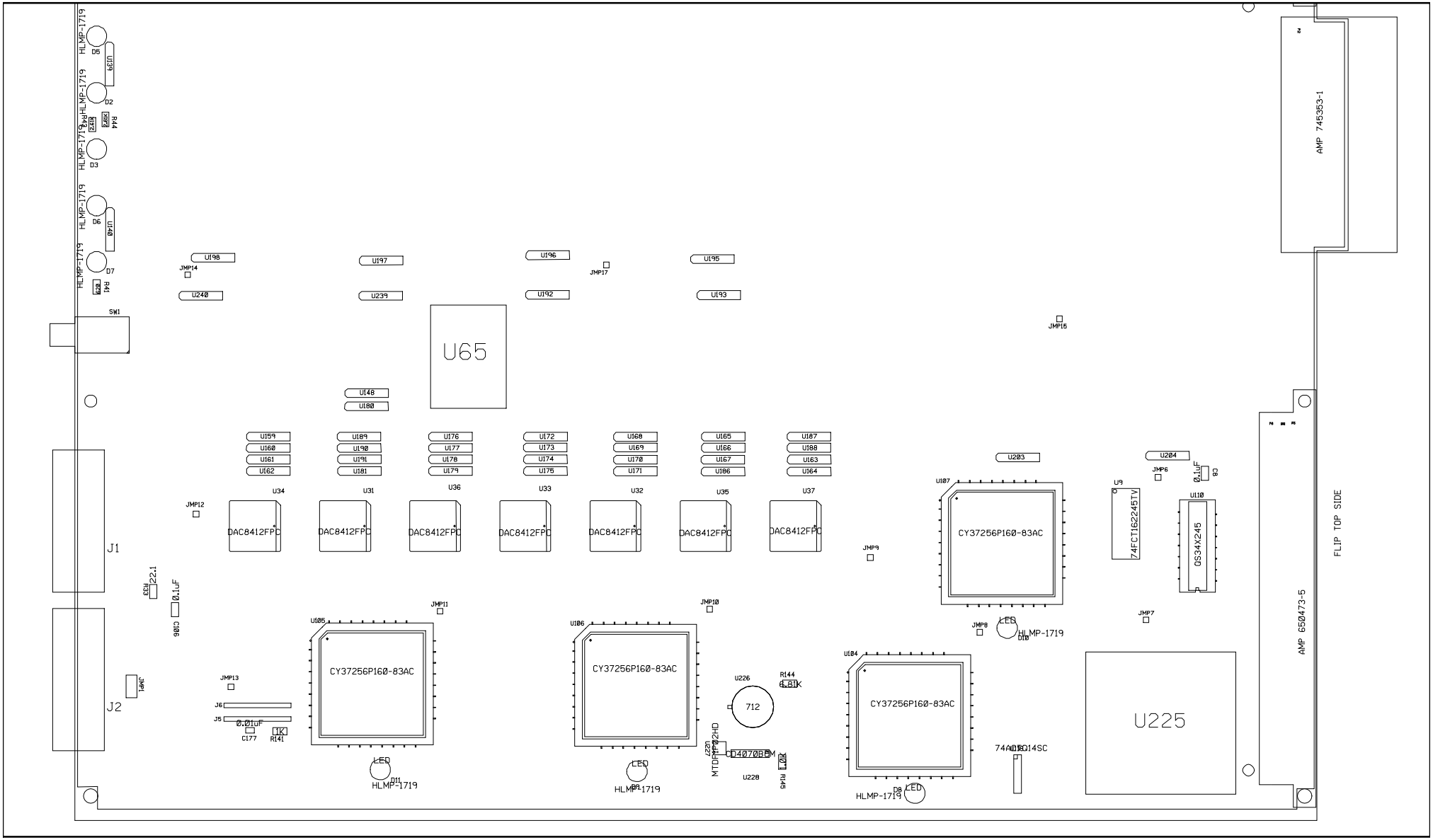
U261
U251
U252



HLMP-1719
D5
U139
D2
R44
D3
D6
U140
D7
R41
SW1
U198
JMP14
U240
U197
U239
U196
JMP17
U192
U195
U193
U65
JMP15
U148
U180
U159
U160
U161
U162
U189
U190
U191
U181
U176
U177
U178
U179
U172
U173
U174
U175
U168
U169
U170
U171
U165
U166
U167
U186
U187
U188
U163
U164
U203
U204
JMP6
0.1uF
U34
U31
U36
U33
U32
U35
U37
U107
U9
U110
JMP12
DAC8412FPC
CY37256P160-83AC
74FCT162245TV
QS34X245
J1
JMP9
22.1
R33
0.1uF
C106
JMP11
JMP10
JMP8
LED
HLMP-1719
JMP7
U105
U106
U104
CY37256P160-83AC
JMP13
J2
JMP1
J6
J5
0.01uF
C177
1K
R141
U226
712
R144
6.81K
CD4070BCM
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R145
U225
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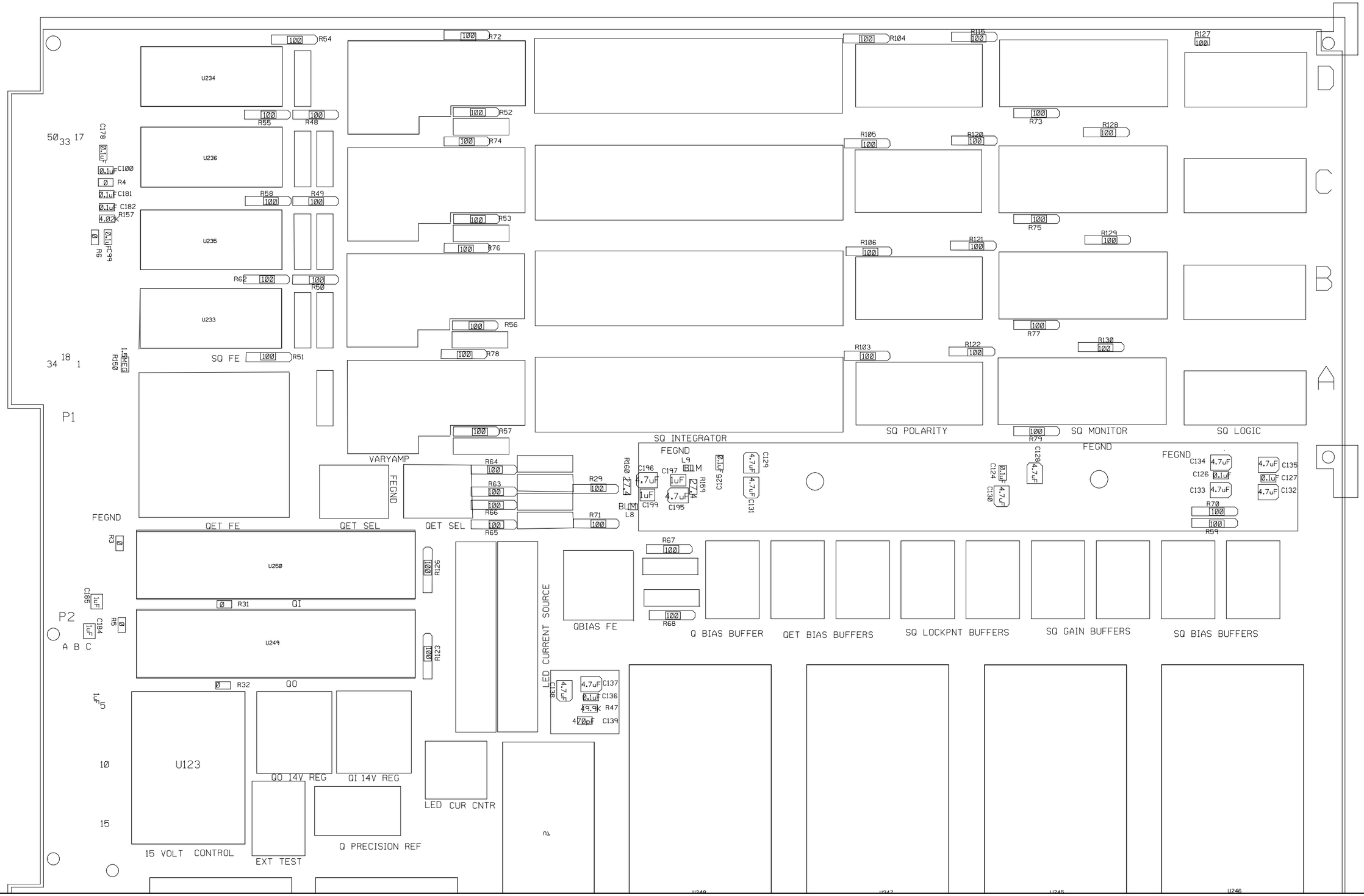
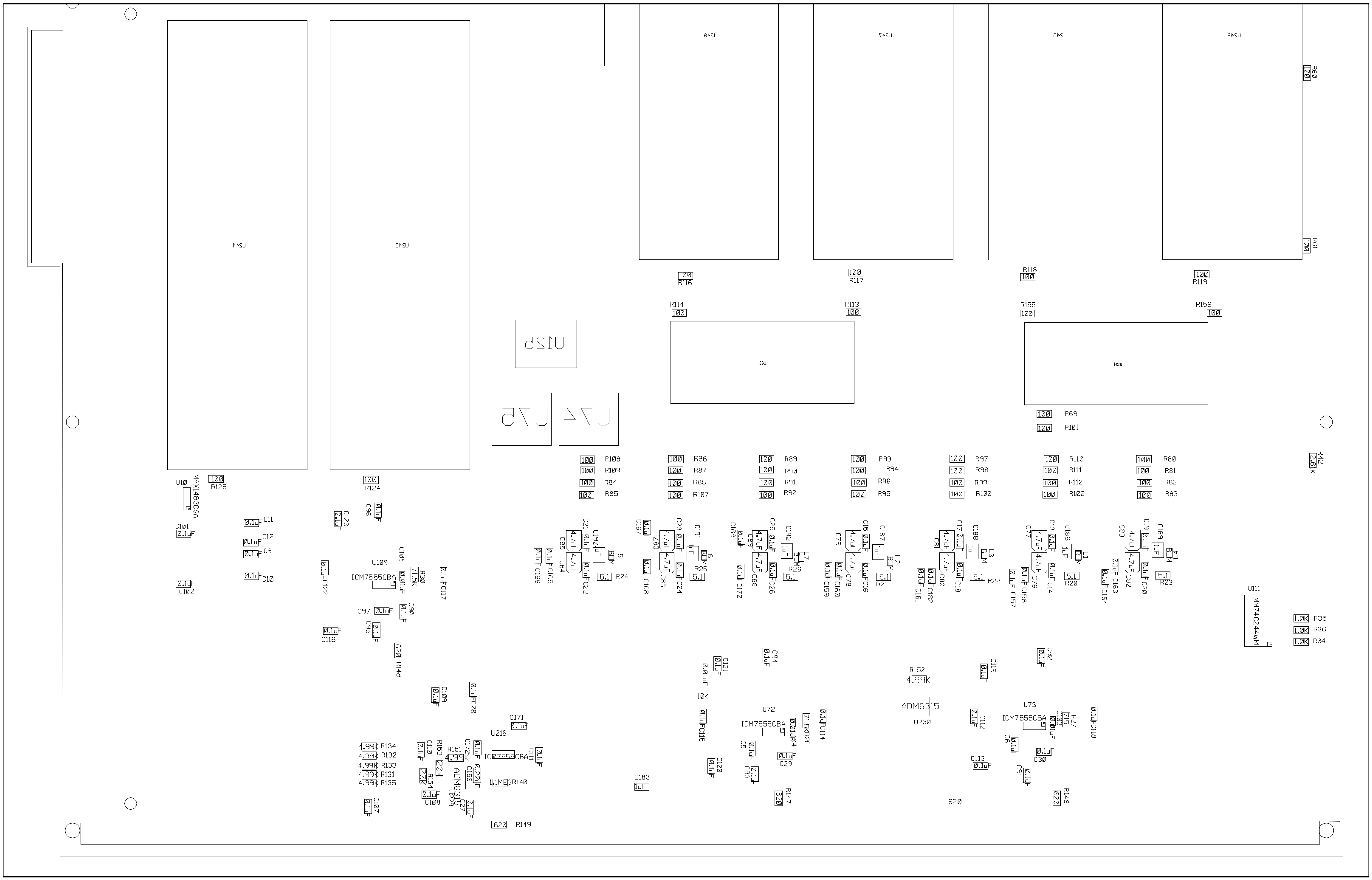
AMP 745353-1
AMP 650473-5
FLIP TOP SIDE


SQ FE
VARYAMP
QET FE
QET SEL
QET SEL
SQ INTEGRATOR
SQ POLARITY
SQ MONITOR
SQ LOGIC
QBIAS FE
Q BIAS BUFFER
QET BIAS BUFFERS
SQ LOCKPNT BUFFERS
SQ GAIN BUFFERS
SQ BIAS BUFFERS
LED CURRENT SOURCE
QI
QO
QO 14V REG
QI 14V REG
LED CUR CNTR
15 VOLT CONTROL
EXT TEST
Q PRECISION REF
FEGND
P1
P2
U234
U236
U235
U233
U250
U249
U123
U248
U247
U245
U246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R109
R84
R85
R86
R87
R88
R107
R89
R90
R91
R92
R93
R94
R96
R95
R97
R98
R99
R100
R110
R111
R112
R102
R80
R81
R82
R83
R42
2.61K
U10
MAX1483CSA
R125
R124
C101
C102
C11
C12
C9
C10
C123
C96
C105
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ICM7555CBA
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71.5K
C117
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C90
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C116
620
R148
C109
C28
C171
U216
R134
R132
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R135
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C110
R153
R151
C172
C156
R154
20K
ADM6315
U229
C108
C107
C27
C111
1.1MEG
R140
R149
C183
1uF
L5
L6
L7
L2
L3
L1
L4
BLM
R24
R25
R26
R21
R22
R20
R23
5.1
4.7uF
0.1uF
C21
C22
C84
C85
C165
C166
C190
C23
C24
C86
C87
C167
C168
C191
C25
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C13
C14
C76
C77
C157
C158
C186
C19
C20
C82
C83
C163
C164
C189
C121
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C115
U72
C104
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C114
C5
C29
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R152
U230
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715
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C6
C30
C113
C91
R146
U111
MM74C244WM
R35
R36
R34
1.0K

ZIP MODULE STUFFING INDEX
(7/26/99)

STUFFITS VERSION 1 SCHEMATIC SECTION AND PAGE # **(X-X)**	CCKT'S NUMBER	LAST REV DATE
SQUID FRONT END **(3-2)**	CCM005	9/17/99
SQUID VAR. GAIN AMP **(3-3)**	CCM006	12/11/00
SQUID FEEDBACK INTEGRATOR **(3-5)**	CCM008	9/17/99
SQUID FEEDBACK POLARITY **(3-6)**	CCM009	4/30/99
SQUID FEEDBACK MONITOR V2 (3-7)	CCM034	12/11/00
SQUID FEEDBACK MONITOR **(3-7)**	CCM010	4/30/99
SQUID FEEDBACK LOGIC **(3-8)**	CCM011	4/30/99
SQUID ZAP CONTROLL **(4-1)**	CCM012	9/21/99
QET FRONT END **(5-2)**	CCM015	12/11/00
QET FILTER **(5-3)**	CCM014	XXXXXX
QET DIRECTOR **(5-4)**	CCM021	9/29/99
DISCRETE Q AMPLIFIER **(6-2)**	CCM001	12/11/00
QAMP 14V **(6-3)**	CCM003	4/30/99
QBIAS FRONT END **(7-1)**	CCM016	4/30/99
LED PULSE CONTROL **(8-3)**	CCM028	4/30/99
LED CURRENTCONTROL **(8-4)**	CCM020	12/11/00
LED CURRENT SOURCE **(8-5)**	CCM019	12/11/00
DRIVER **(10-1)**	CCM002	12/11/00
EXTERNAL TEST RECEIVER **(11-1)**	CCM022	9/29/99
DAC PRECISION REFERENCE **(12-3)**	CCM023	12/11/00
DAC 10 VOLT REFERENCE **(12-4)**	CCM024	12/11/00
DUAL NON-INVERT. BUFFERS **(12-8)**	CCM007	4/29/99
BUFFER FILTER **(12-9)**	CCM017	12/11/00
POLARITY CONTROL **(13-6)**	CCM018	4/29/99
5 VOLT SECTION **(14-2)**	CCM026	12/11/00
15 VOLT SECTION **(14-3_)**	CCM027	12/11/00
Q AMP REFERENCE **(14-4)**	CCM004	12/11/00
9U ZIP BOARD FRONT LOWER HALF	N/A	12/11/00
9U ZIP BOARD FRONT UPPER HALF	N/A	12/11/00
9U ZIP BOARD BACK LOWER HALF	N/A	12/11/00
9U ZIP BOARD BACK UPPER HALF	N/A	12/11/00