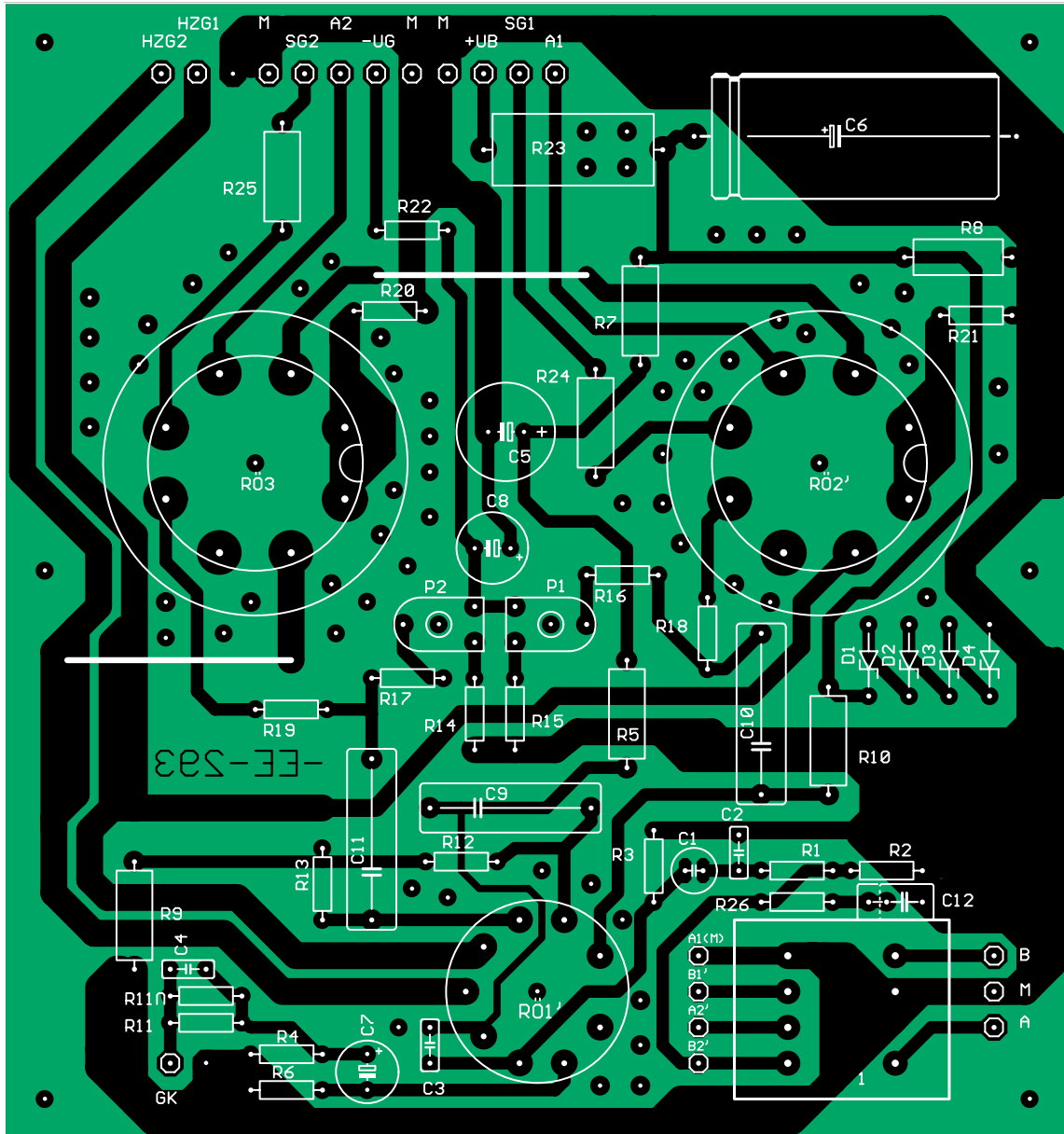


EL156 AUDIO POWER AMPLIFIER



COMPONENTS LIST

Main board

Resistors:

R1 = 1k
 R2, R3 = 100 k
 R4 = 220 Ω
 R5 = 18 k, 2W
 R6 = 180 Ω
 R7 = 2k2, 2W
 R8 = 10 k, 2W
 R11 = 1k3

R12 = 680 k
 R13 = 220 Ω
 R14, R15 = 10 k
 R16, R17 = 68 k
 R18, R19 = 1 k
 R20, R21 = 10 Ω , 2W
 R22 = 1k5
 R23 = 10 k, 4.5 W
 R24, R25 = 100 Ω , 2W
 R26 = 4k7
 P1, P2 = preset 5 k

Capacitors:

C1 = 2 μ 2, 50 V bipolar
 C2 = 10 p ceramic

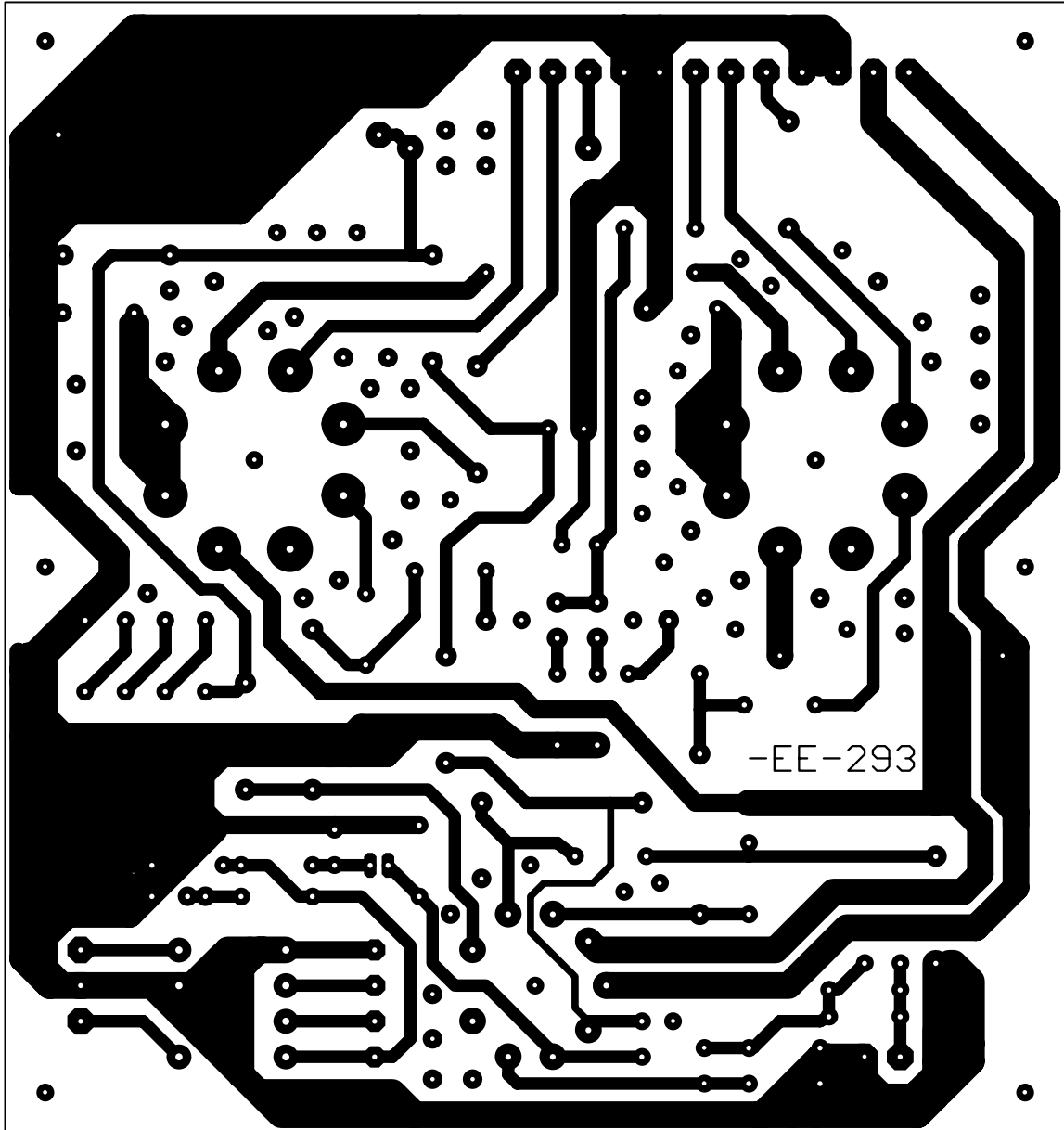
C3 = 33 p ceramic
 C4 = 1n5 ceramic
 C5 = 10 μ , 450 V
 C6 = 22 μ , 500 V
 C7 = 220 μ , 25 V
 C8 = 100 μ , 63 V
 C9-C11 = 470 n, 630 V
 MKS4
 C12 = 2n2 ceramic

Semiconductors:

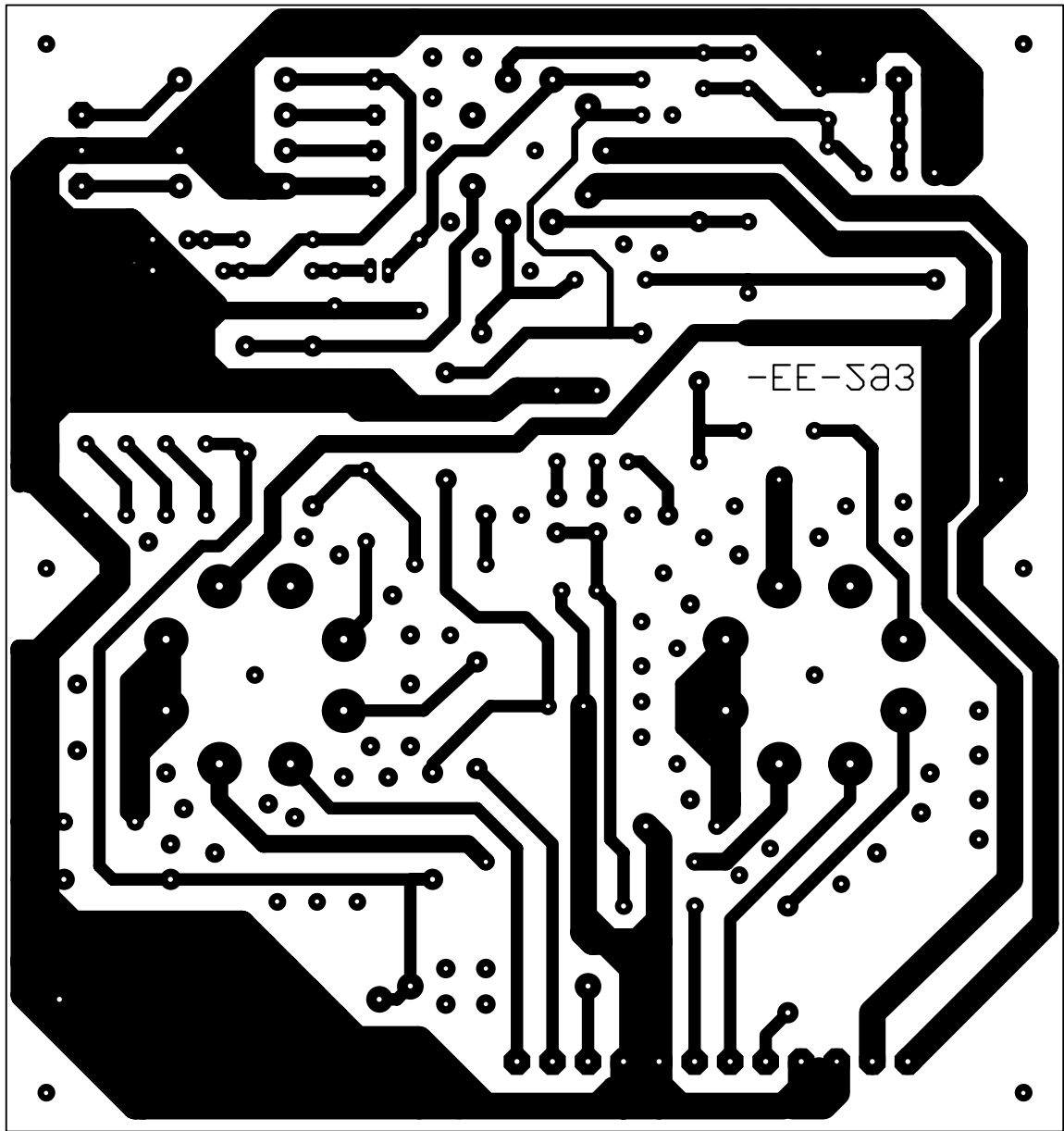
D1 = Zener diode
 56 V, 1.3 W
 D2-D4 = Zener diode
 100 V, 1.3 W

Miscellaneous:

Rö1 (V1) = ECC81
 Rö2, Rö3 (V2, V3) = EL156
 Ü1 (Tr1) = transformer type E-1220
 Ü2 (Tr2) = transformer type B-2156
 1 Noval (9-way) socket, ceramic, PCB mount
 2 Octal (8-way) socket, ceramic, PCB mount



non reflected



reflected

COMPONENTS LIST

DC filament supply

Resistors:

R1,R10,R15,R17 = 4k7
 R2 = 100Ω
 R3,R9,R11,R14,R16 = 1 k
 R4,R5 = 0Ω22, 5 W metal film
 R6 = 47 Ω
 R7 = 2k2
 R8 = 470 Ω
 R9 = 1 k
 R12,R13 = 2k7
 P1 = preset 1 k

Capacitors:

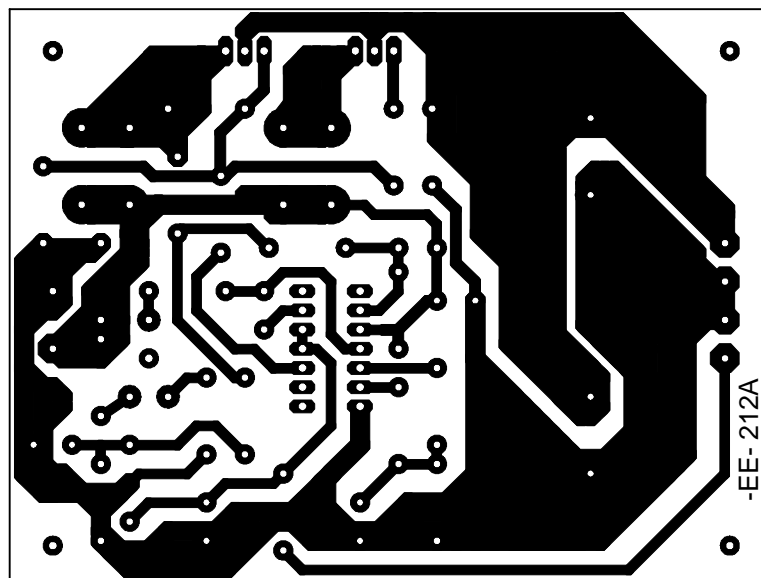
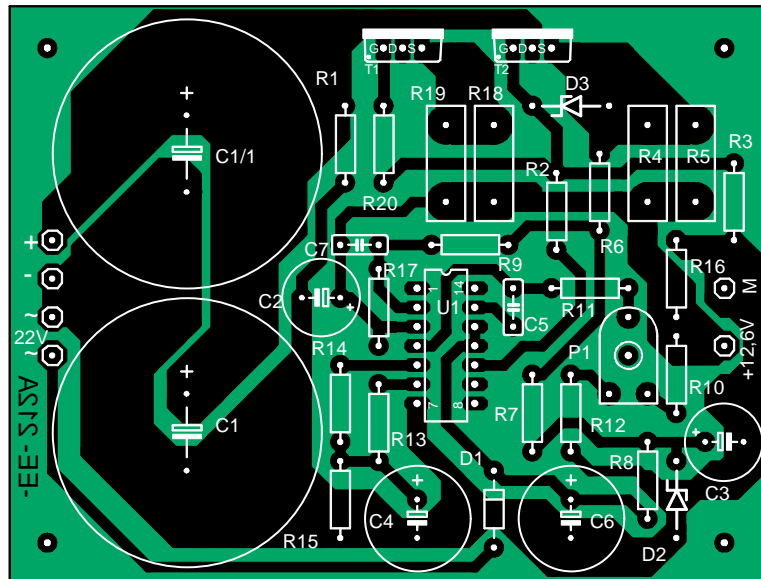
C1 = 10.000 μ, 25 V
 C2 = 47 μ, 40 V
 C3 = 220 μ, 40 V
 C4 = 1000 μ, 25 V
 C5 = 470 p ceramic

Semiconductors:

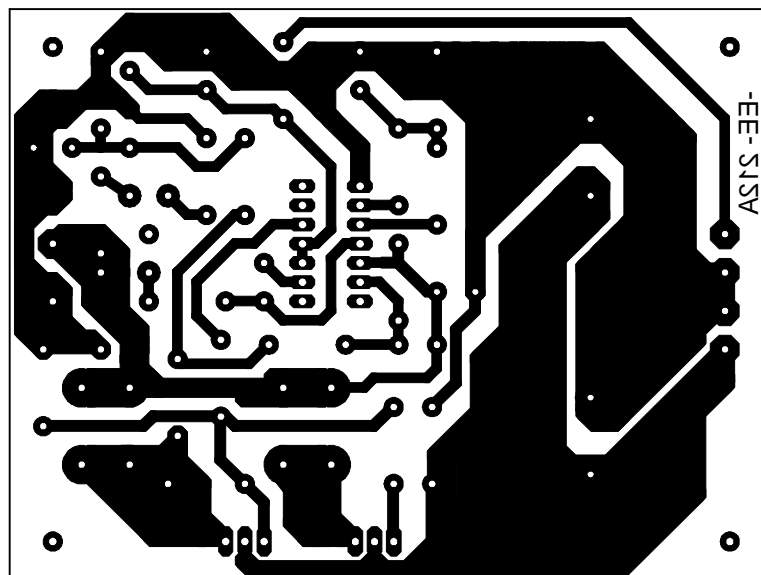
D1 = 1N007
 D2 = ZTK22
 D3 = Zener diode 18 V, 1.3 W
 G1 = rectifier KBU 8 B
 IC1 = 723 (DIL)
 T1 = BUZ12

Miscellaneous:

1 mains transformer type NTR-15



non reflected



reflected

COMPONENTS LIST

Power-on delay

Resistors:

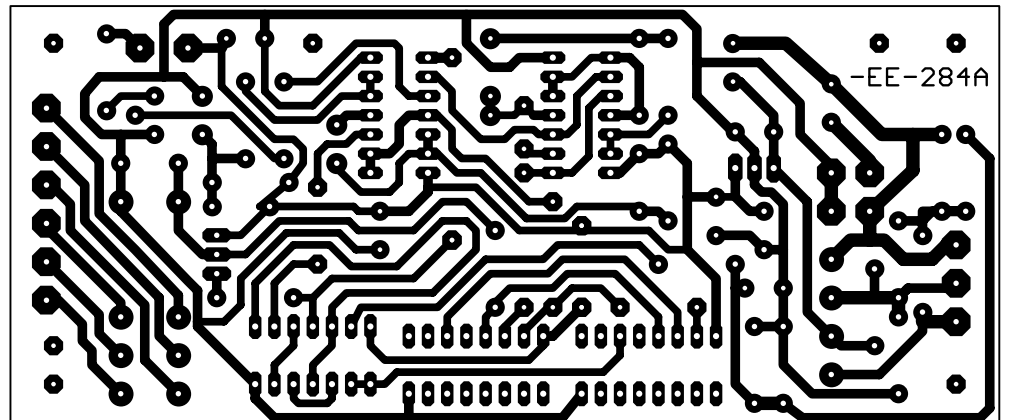
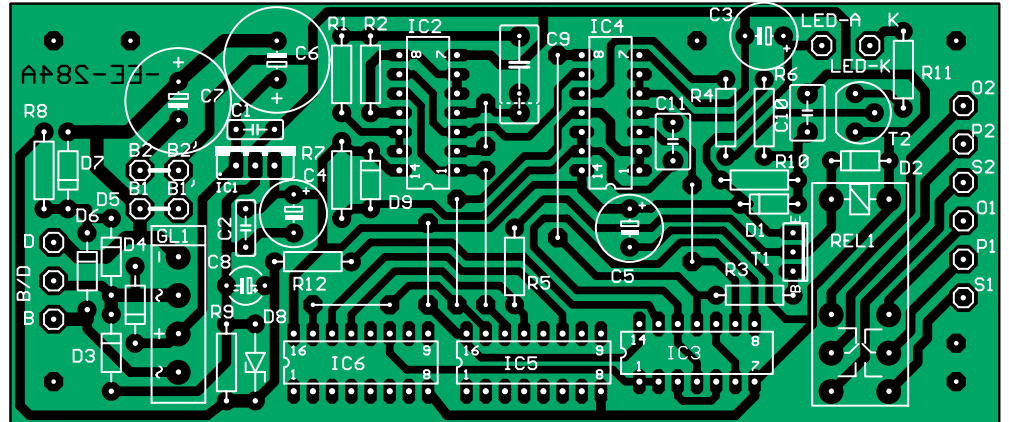
R1,R5,R12 = 100 k
 R2 = 680 k
 R3,R4,R6,R7,R10 = 10 k
 R8 = 2k2
 R9=33k
 R11 = 1k5 (see text)

Capacitors:

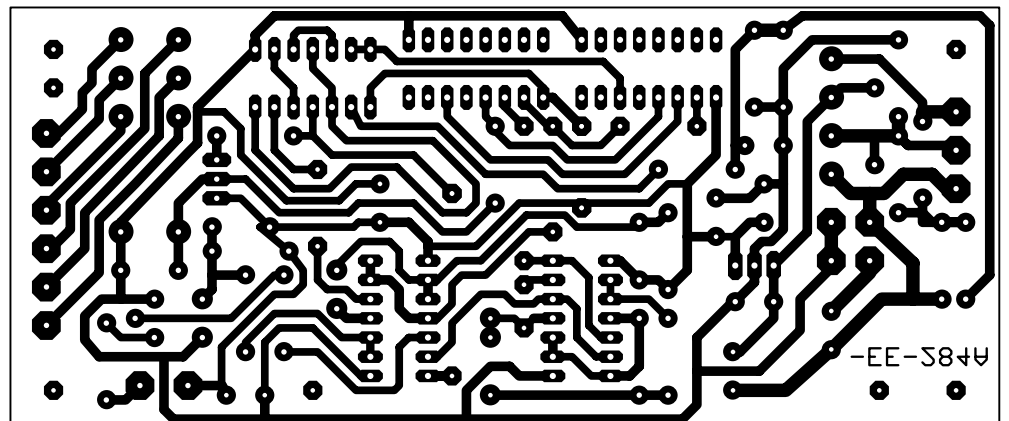
C1,C2 = 100 n ceramic
 C3-C5 = 10 μ , 63 V
 C6,C7 = 220 μ , 25 V (470 μ ,
 25 V at 6.3 V)
 C8 = 1 μ ,63 V
 C9 = 680 n MKT
 C10= 100 n MKT
 C11 = 10 n MKT

Semiconductors:

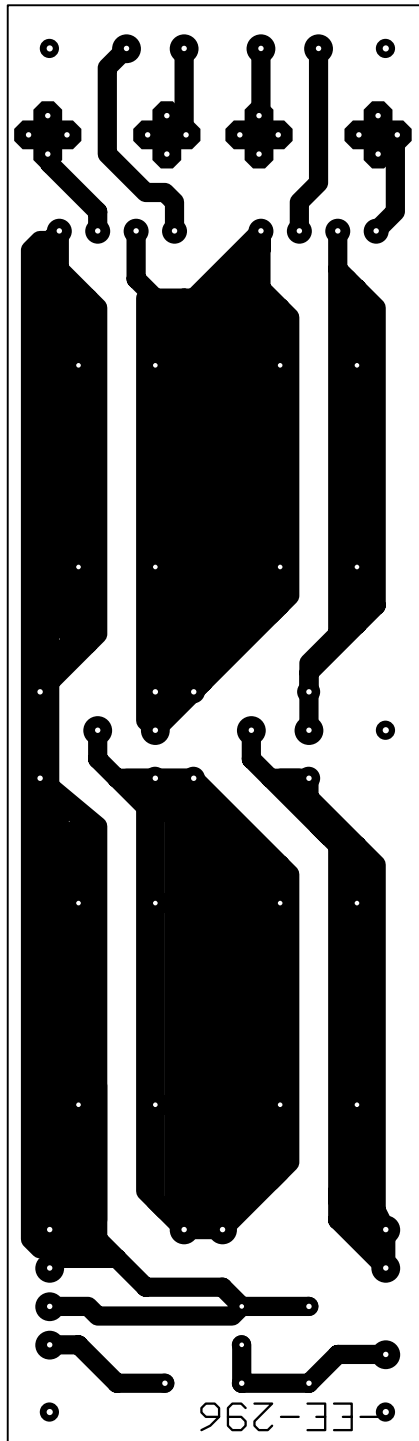
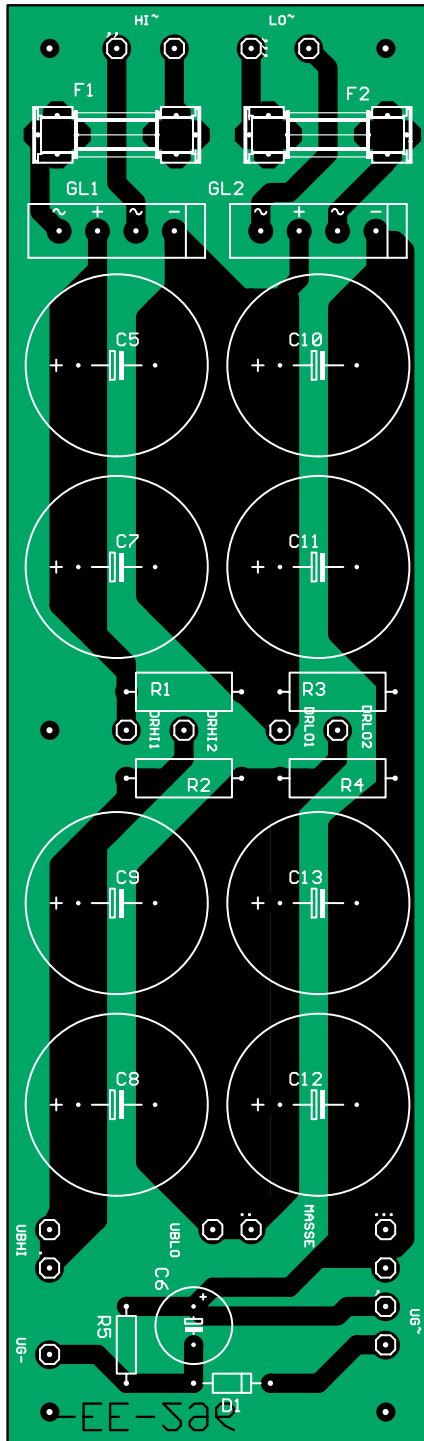
D1,D2,D9 = 1N4148
 D5,D6 = 1N4007 (only with
 15-V supply)
 D3-D5,D7= 1N4007 (only
 with 6.3-V supply)
 D8 = Zener diode 12 V, 1.3
 W
 T1 =BD140-16
 T2 = BC549
 G11 = B80C1500
 IC1 = 7812 (TO220)
 IC2,IC4 = 4011
 IC5,IC6 = 4017



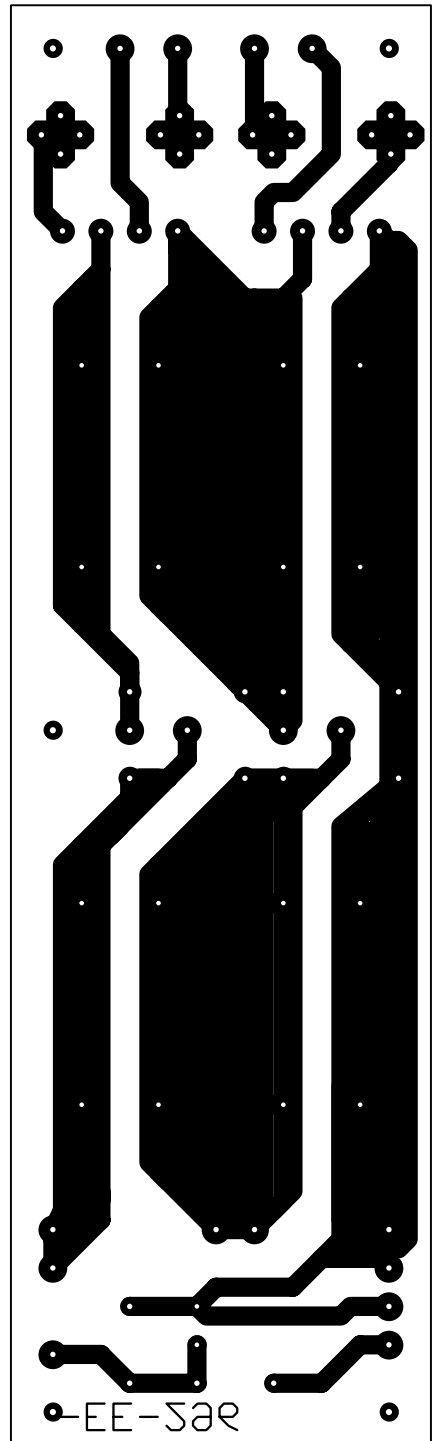
non reflected



reflected



non reflected



reflected

COMPONENTS LIST
High-voltage PSU

Resistors:

R1-R4 = 150 k, 2 W
R5 = 47 k

Capacitors:

C1-C8 = 100 μ , 500 V

C9 = 100 μ , 63 V

Semiconductors:

GL1, GL2 = B500C1500
in flat case
D1 = 1N4007

Miscellaneous:

Si, Si2 = 0.63 A slow, with holder
Dr1 = 2H3, 0.3 A (D-2360)
Dr2 = 4 H, 0.18 A (D-4060)