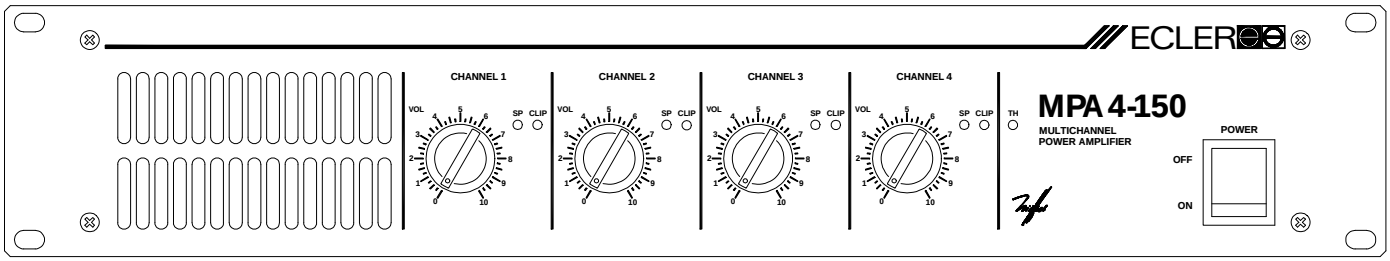
MPA4-150

SERVICE MANUAL



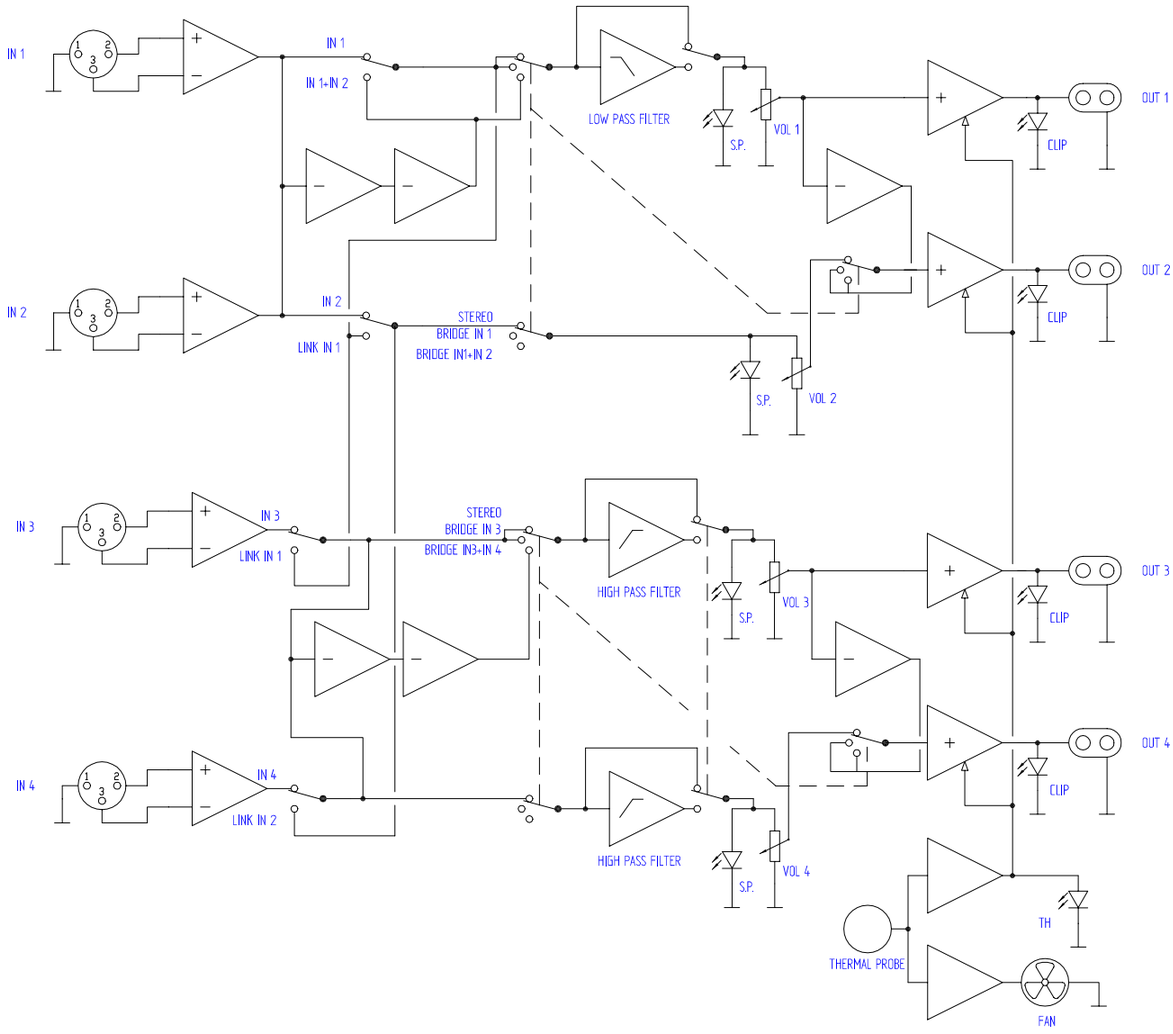
ECLER

AUDIO CREATIVE POWER

SERVICE MANUAL MPA4-150

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- BLOCK DIAGRAM
- SCHEMATICS
- COMPONENTS LOCATION SCHEMA AND PART LIST
- TESTING AND QUALITY CONTROL
- TECHNICAL CHARACTERISTICS
- WIRING DIAGRAM
- MECHANICAL DIAGRAM
- PACKING DIAGRAM



ECLER

drawn by: J. Colomines | date: 000222 | approved by: Josep M. Sans

number: 10.0494 | version 01.00 | title: **EPO5-99 BLOCK DIAGRAM**

The amplifying stage basic structure is actually the one commonly used until now, this is, a push-pull mounted A-B class amplifier, using P-type (IRFP9240) and N-type (IRFP240) mosfets.

The system's controlling core is a NE5534 OpAmp, which is internally compensated in order to obtain an amplifying gain ratio equal or greater than 3. The amplifier's feedback runs through a resistor and a capacitor associated to the OpAmp's non-inverting input.

Transistors BF471 and BF472 are common-base configured, becoming actually a current source structure. They accomplish a dual function: on one hand, they polarise the mosfet's gate-source junction, keeping them on their conduction knee. On the other hand, they carry out the OpAmp's output voltage variations, referred to signal ground.

The polarisation current adjustment is fixed by a 2k5 trimming potentiometer connected to the BF transistors base. This current is added to the current source's output, which passes through the BF-transistors load resistors. The bias current stability against temperature is fixed through the BD437 transistors. Their temperature- dependent base-emitter voltage curve is used to alter adequately the current source's reference voltage. As a consequence, if the temperature rises, the reference voltage decreases, thus the gate-source voltage also does, and finally the bias current also decreases.

The Zobel network, formed by a resistor-inductor-capacitor group, and which is located at the amplifier's output, intends to keep the amplifier's load impedance as constant as possible, no matter which load is connected to the stage's output, or which signal frequency is to be amplified, in order to prevent an inverted-phase feedback signal.

In order to avoid a DC offset on the output signal, a diac-triac tandem system is used, which shorts the output to signal ground when the DC level is enough to get the diac triggered. To prevent this from happening while carrying audio signal (sine-wave, music), the diac's reference voltage is taken from a filter formed by resistor 33k2 and capacitor 1µ.

The protection circuitry supervises at any time the power consumed by the MOSFETS. The circuitry basically consists on two sections: MOSFET's drain current (Id) monitoring and drain-source voltage (Vds) monitoring.
When Id exceeds a fixed values a control transistor in every branch starts to conduct like a switch, apliying a parallel resistor to BF's load resisitor, reduring the gate-source voltage, and also reducing Id.

If the MOSFET's drain-source voltage (Vds) drops too low, a second circuitry actuates to alter the control-transistor's triggering level, obtaining a SOA-like curve section and a current stage, which can be adjusted adequately in order to maintain the MOSFET's power consumption as close as possible to its SOA.

Moreover, the amplifier also includes an ANTICLIP system.
When the amplifier reaches its clipping level, the OpAmp becomes unable to keep the system under control, and as a consequence ±V peaks appear at its output (15V power supply). This peaks are used to be rectified and sent to an optocupler (led-resistor) which modifies its impedance as a function of those peaks' amplitude. The resulting impedance is part of a voltage divider, together with the amplifier's input impedance. So, as the optocoupler increases its impedance, the amplifier's input signal level decreases until the system becomes stable.

Also a dual-function temperature control circuitry is provided:
- Temperature-depending control of the cooling fan speed, whose voltage supply is variable between 7 and 14 Vac.
- Amplifier shutdown when temperature exceeds approximately 90ºC.
The circuitry is formed by LM35D-type IC, which acts like a thermal probe, an amplifier, thermal probe level comparator and a 7805-type voltage regulator.
The amplifier is responsible for the cooling fan speed control. The comparator triggers a relay, which cuts off the MOSFETs' bias current by shunting a 22Ω resistance to the BF-type transistors' load resistors. This way, the output signal of the amplifier is effectively cutted off.

The STAND-BY circuit.
This circuit keeps the safety relay closed for about 10 seconds, thus the MOSFET's bias current is cutted off during this period, until the whole system reaches again a voltage-stable situation. Due to this, hearing annoying transients and noises during start up through the loudspeakers is avoided. This delay is obtained by a RC-cell, where R=287K, and C=47µF/50V. During start up, this RC-cell's voltage smoothly rises until the 40106-type Trigger-Schmitt trigging level is reached, and the amplifier starts functioning. C=47µF resets or discharges when the unit is turned off. During a short period of time, a BC817-type transistor acts like a switch, connecting two 75Ω parallel resistors to C=47µ/50V.

OLD VERSION

The amplifying stage basic structure is actually the one commonly used until now, this is, a push-pull mounted A-B class amplifier, using P-type (IRFP9240) and N-type (IRFP240) mosfets.

The system's controlling core is a NE5534 OpAmp, which is internally compensated in order to obtain an amplifying gain ratio equal or greater than 3. The amplifier's feedback runs through a resistor and a capacitor associated to the OpAmp's non-inverting input.

Transistors BF871 and BF872 are common-base configured, becoming actually a current source structure. They accomplish a dual function: on one hand, they polarise the mosfet's gate-source junction, keeping them on their conduction knee. On the other hand, they carry out the OpAmp's output voltage variations, referred to signal ground.

The polarisation current adjustment is fixed by a 2k5 trimming potentiometer connected to the BF transistors base. This current is added to the current source's output, which passes through the BF-transistors load resistors. The bias current stability against temperature is fixed through the BD437 transistors. Their temperature- dependent base emitter voltage curve is used to alter adequately the current source's reference voltage. As a consequence, if the temperature rises, the reference voltage decreases, thus the gate-source voltage also does, and finally the bias current also decreases.

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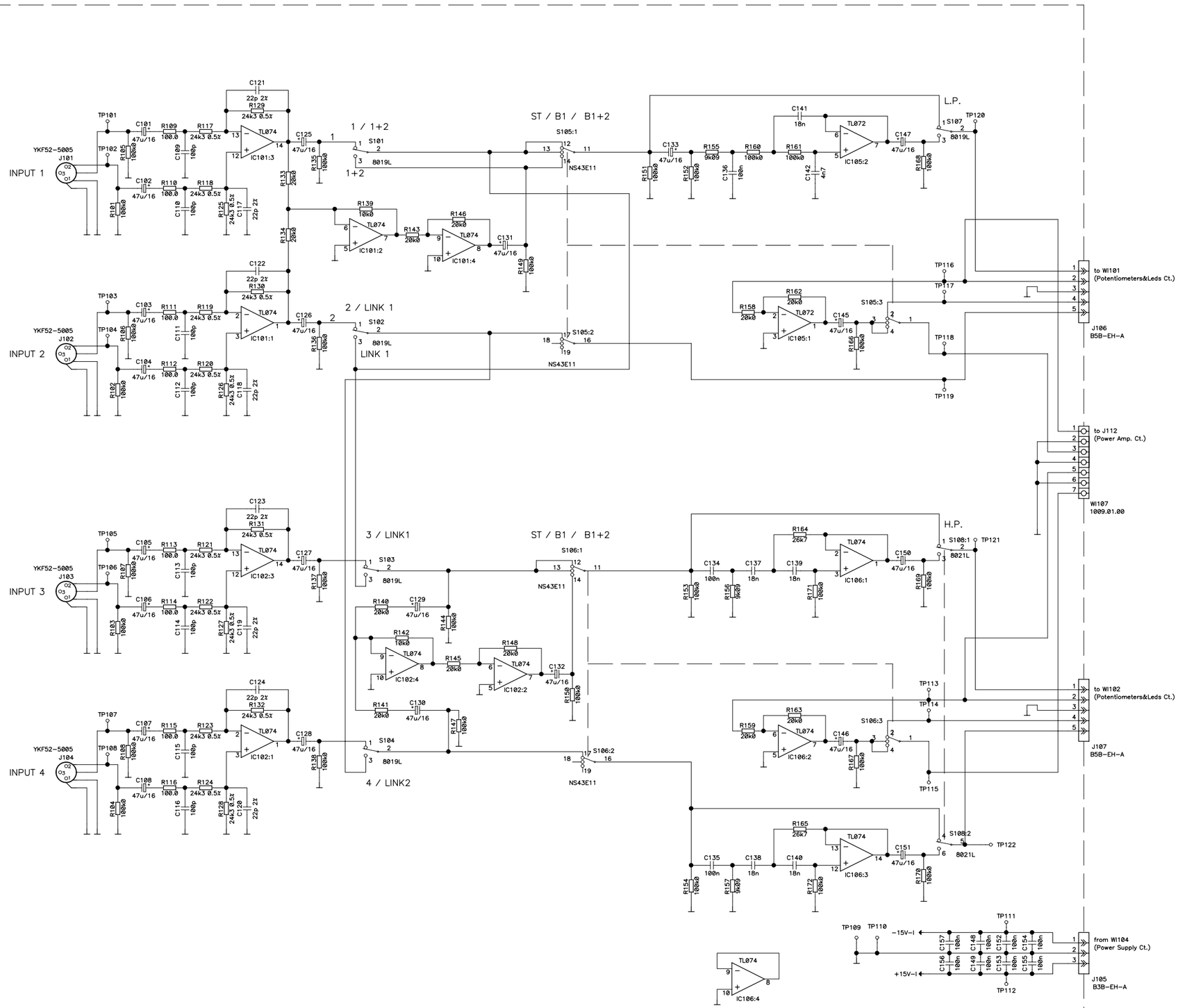
If the MOSFET's drain-source voltage (Vds) drops too low, a second circuitry actuates to alter the control-transistor's triggering level, obtaining a SOA-like curve section and a current stage, which can be adjusted adequately in order to maintain the MOSFET's power consumption as close as possible to its SOA.

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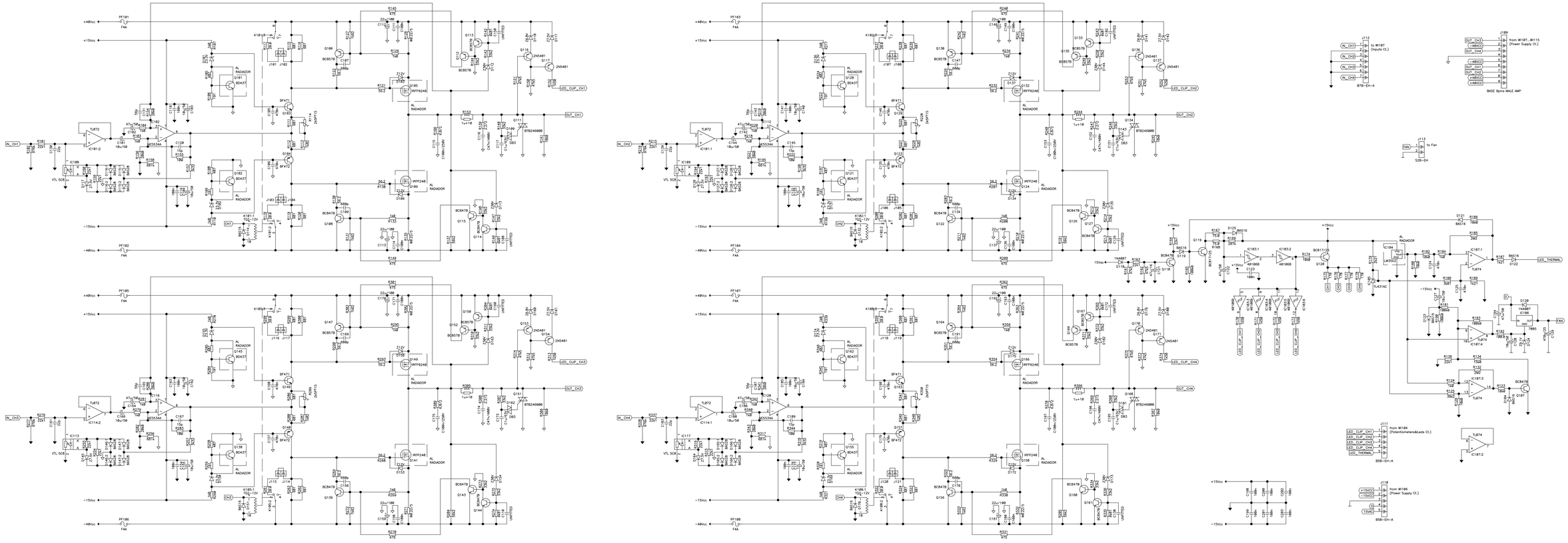
OLD VERSION

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- Amplifier shutdown when temperature exceeds approximately 90ºC.
The circuitry is formed by LM35D-type IC, which acts like a thermal probe, an amplifier, thermal probe level comparator and a 7805-type voltage regulator.
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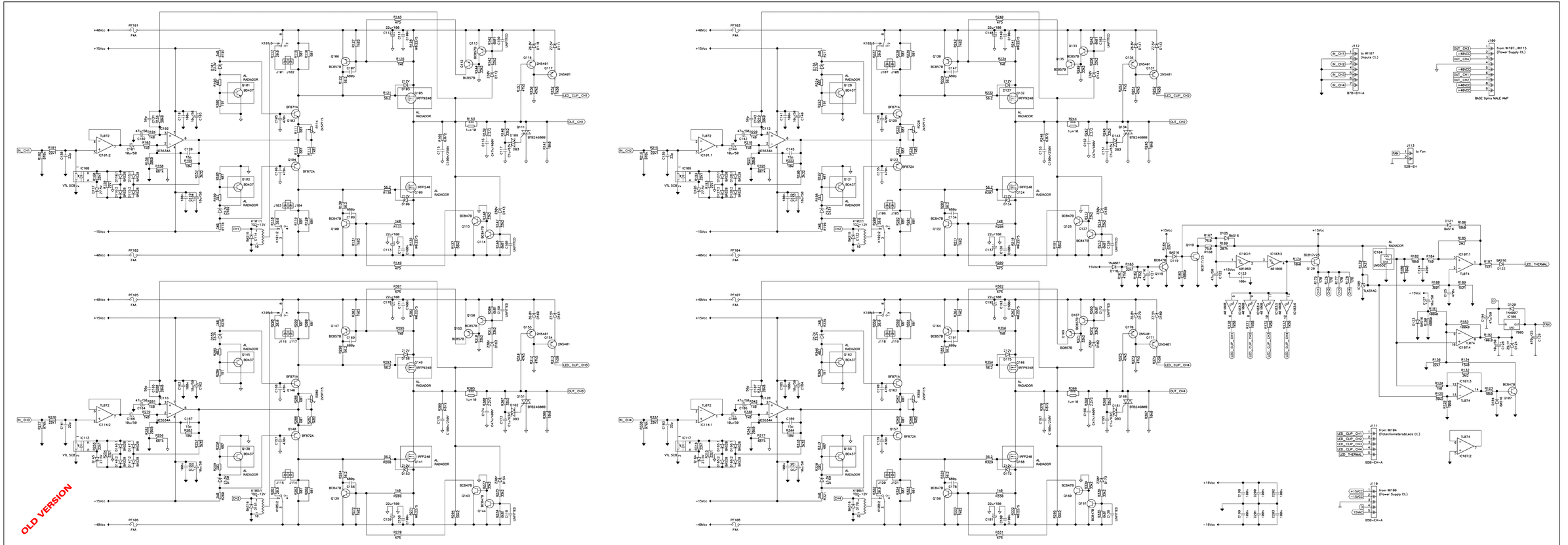


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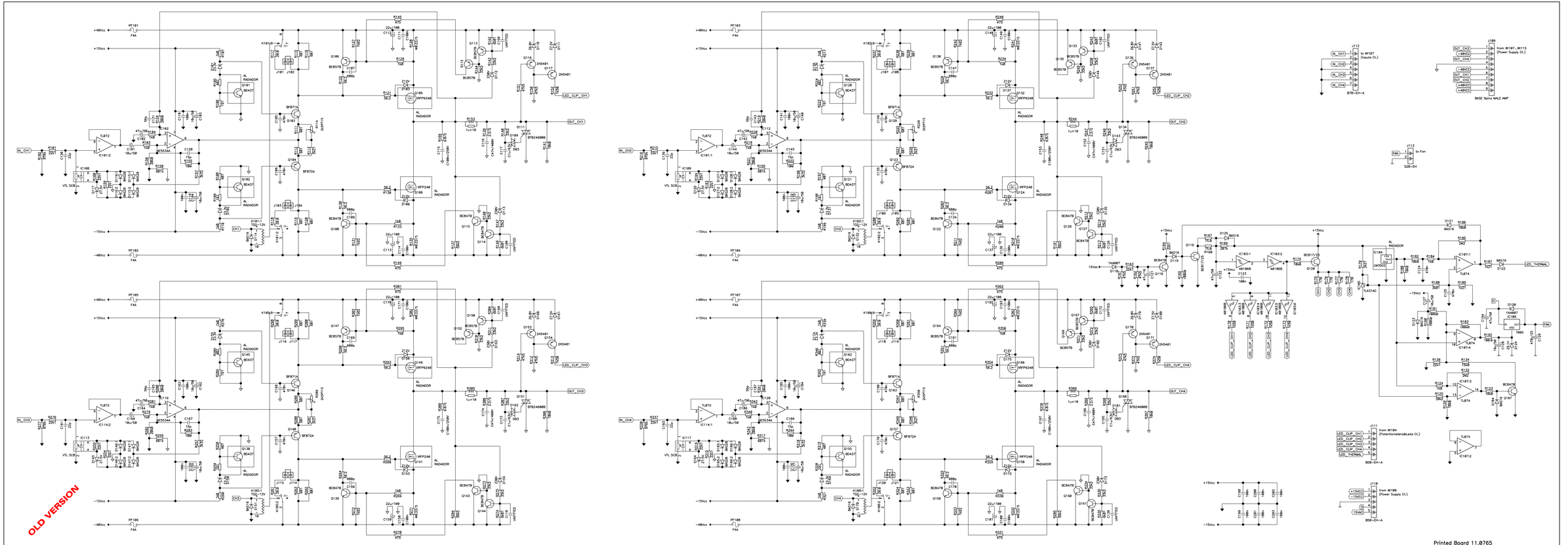


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	product n: MPA4-150		
number: 10.0490	version: 01.06	page: 1 of 1	

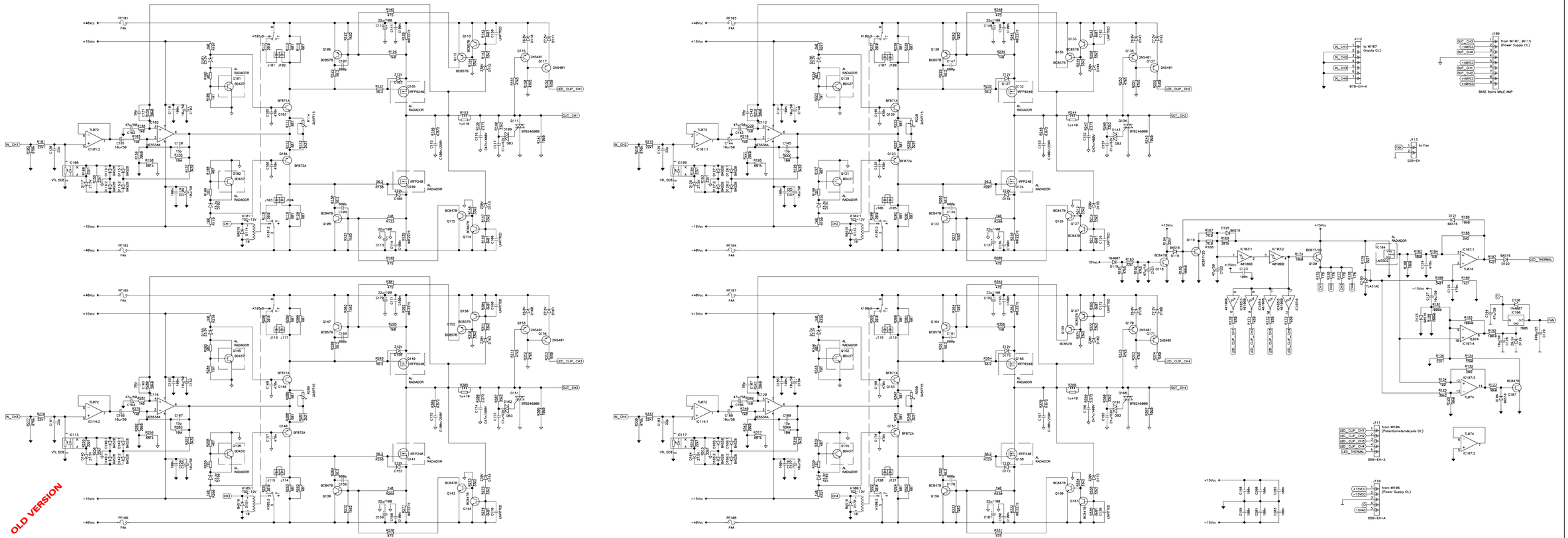
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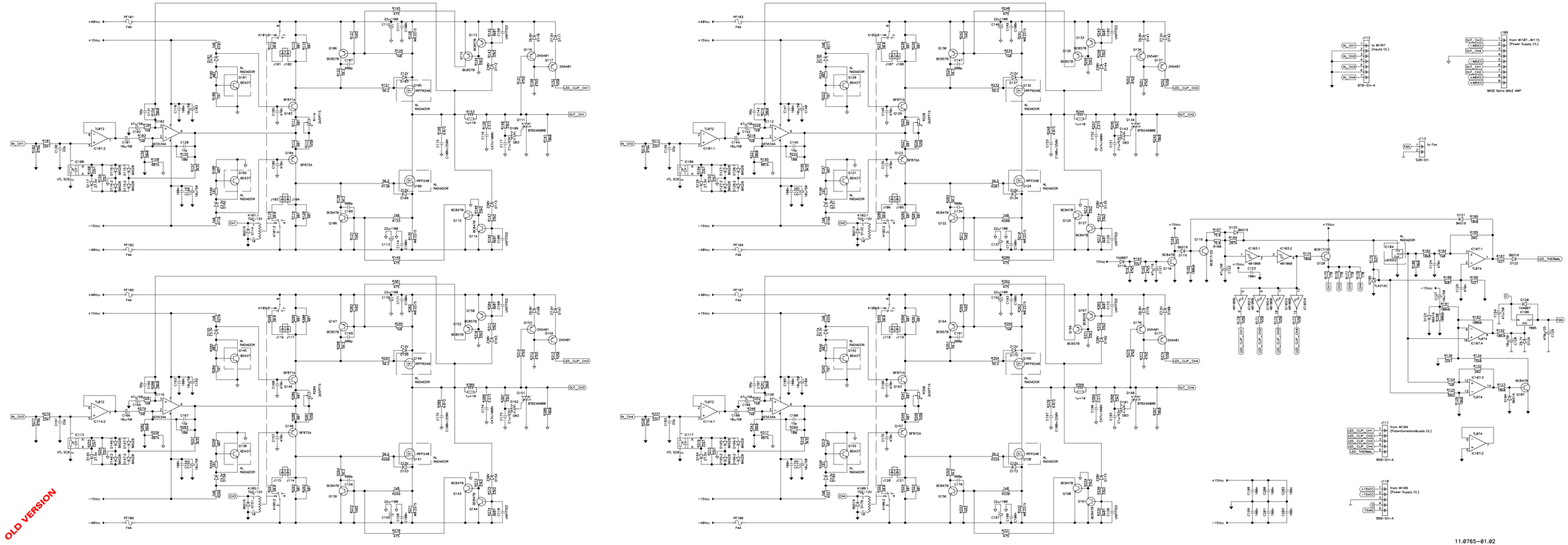
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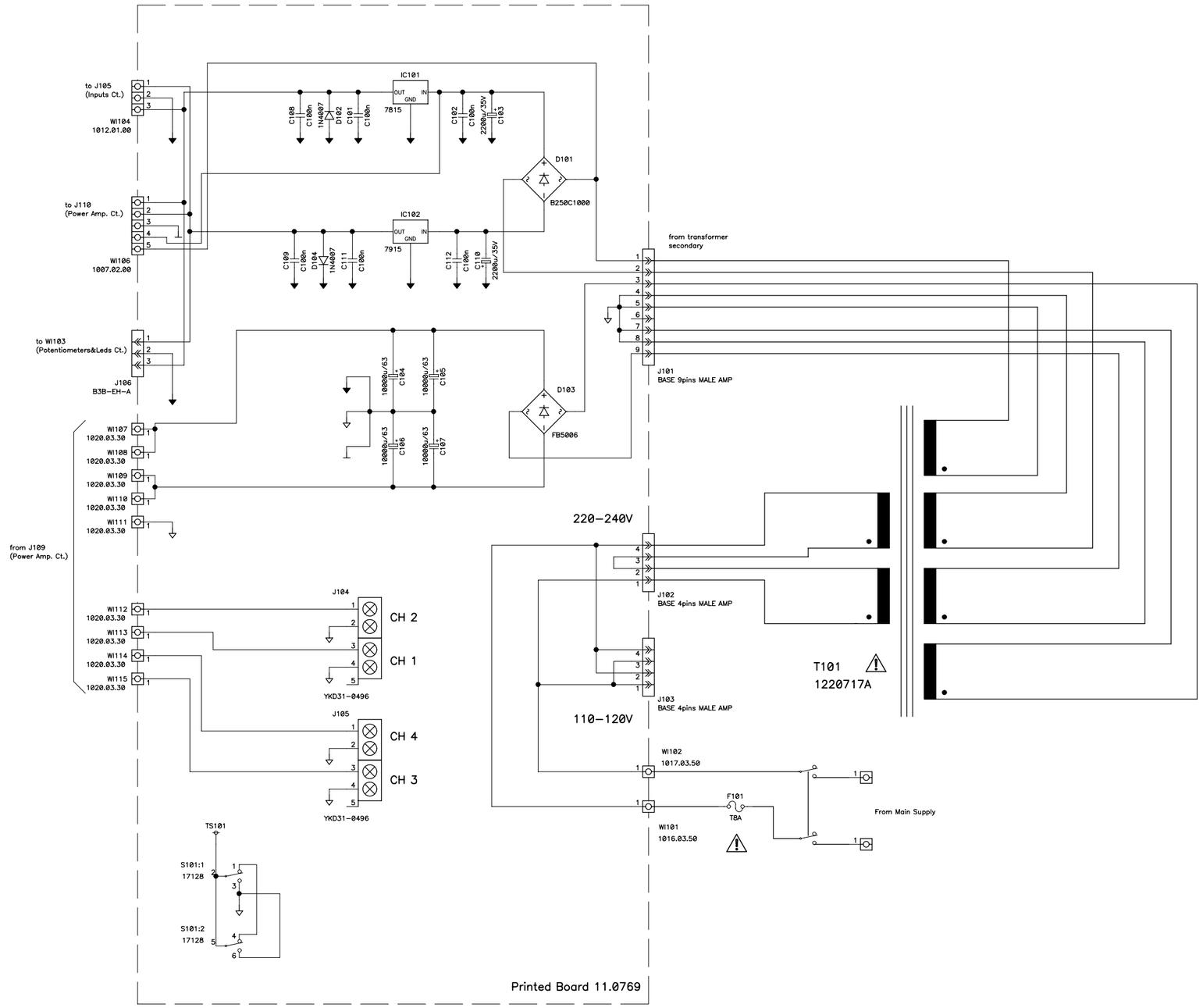
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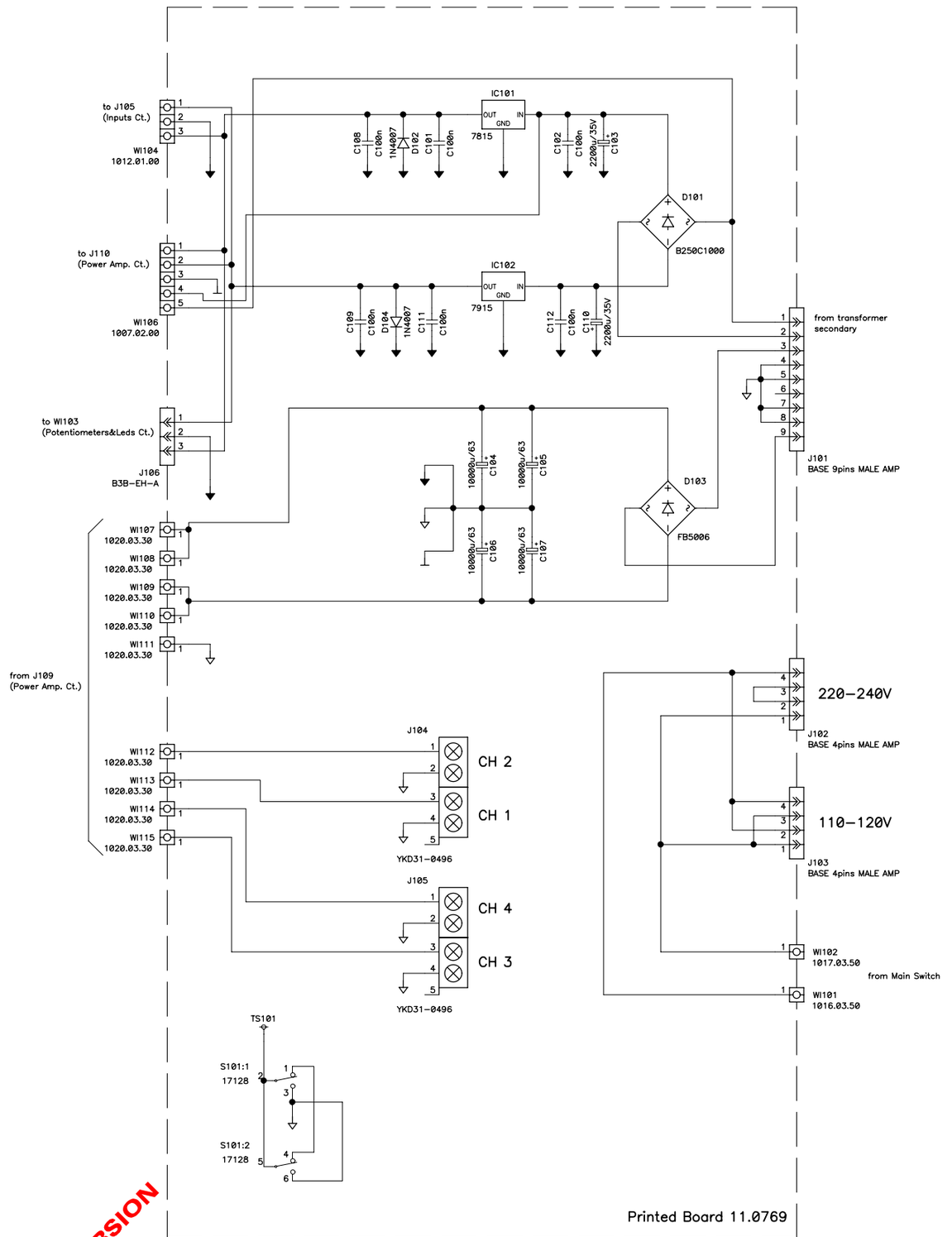
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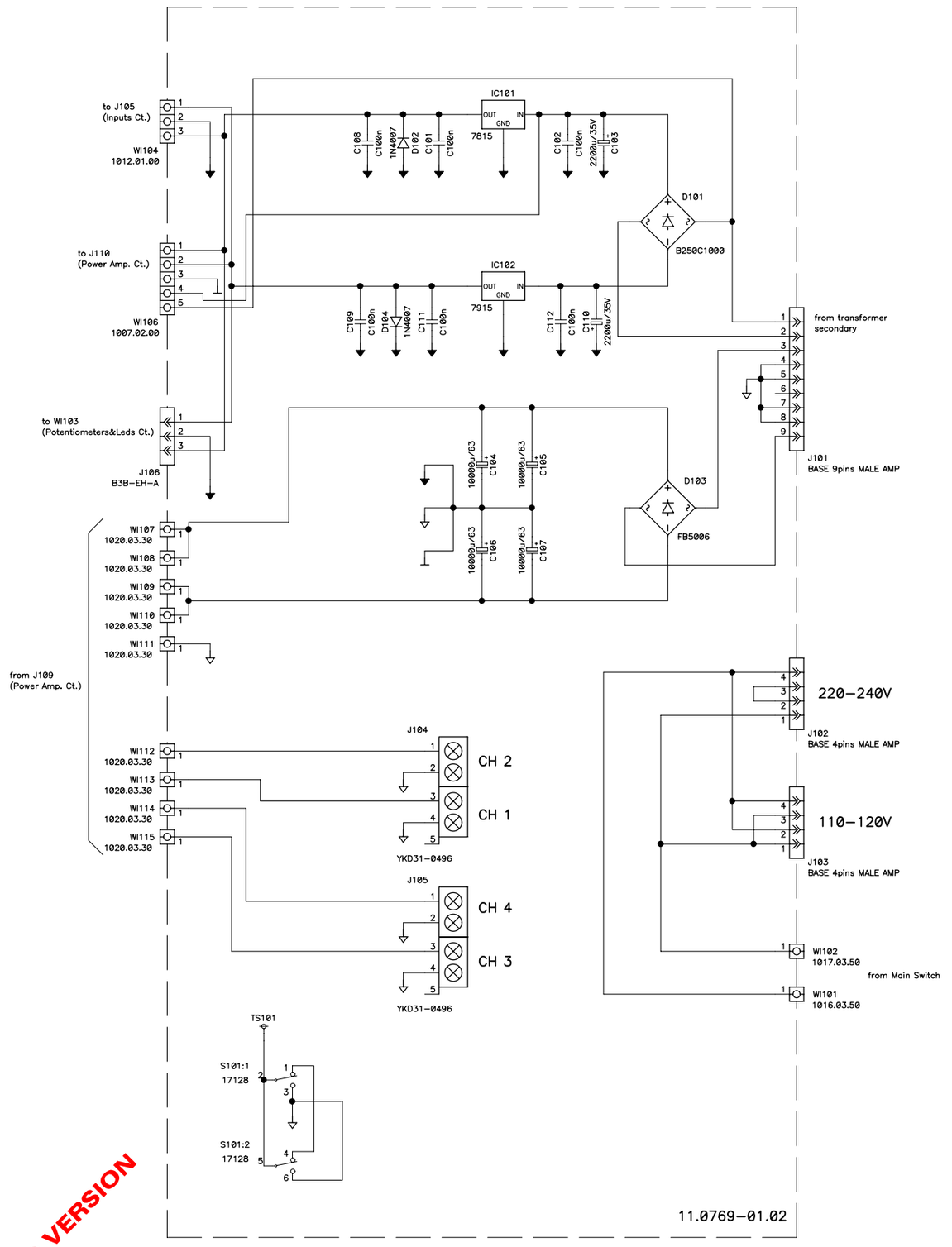
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	product n: {Product Name}		
number: 10.0493	version: 01.04	page: {Page}	

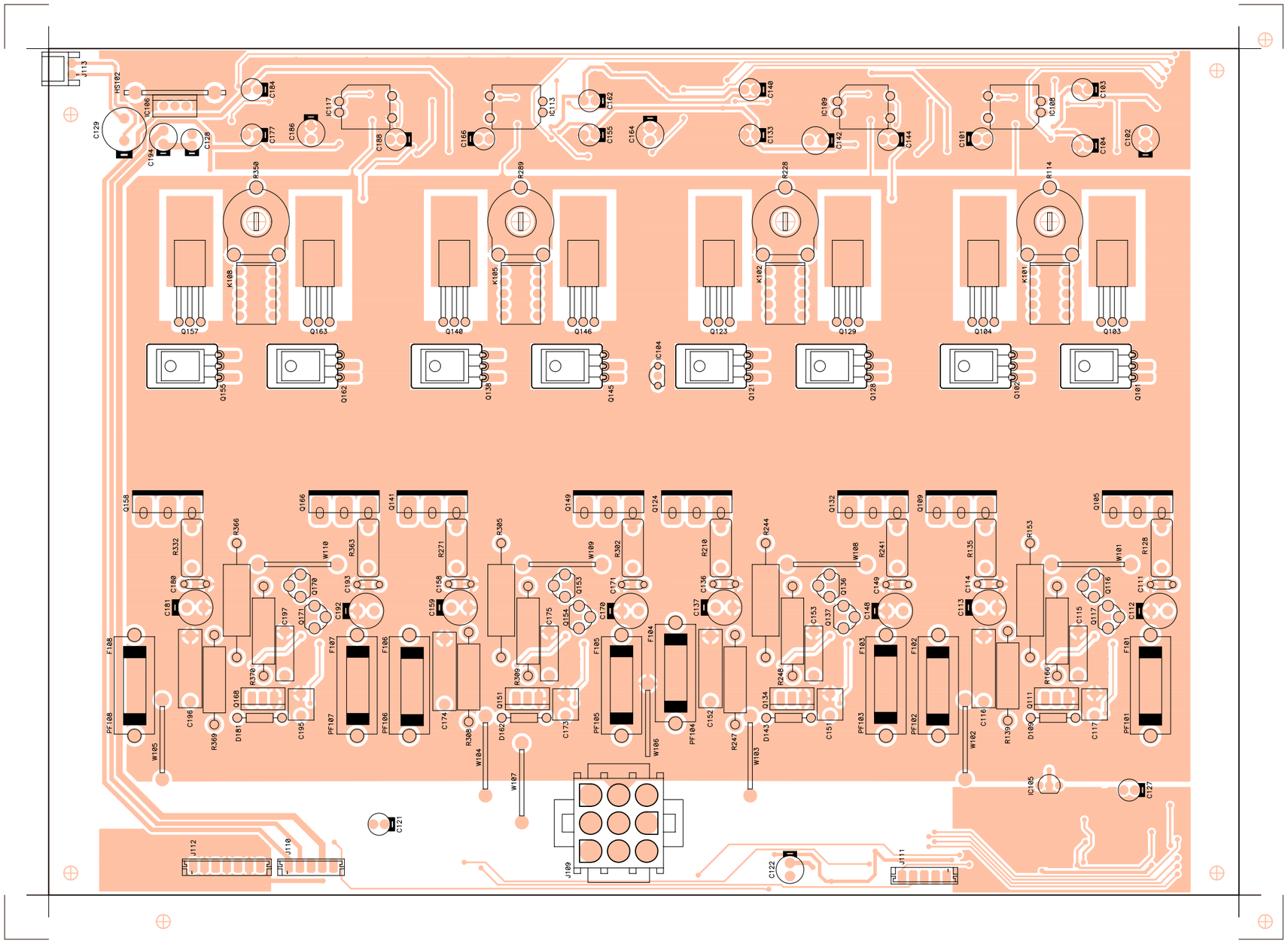


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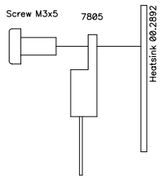
OLD VERSION

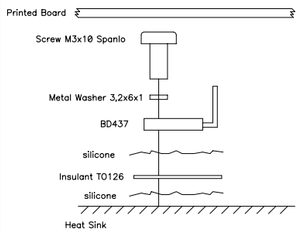
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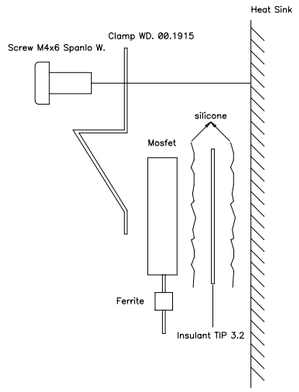


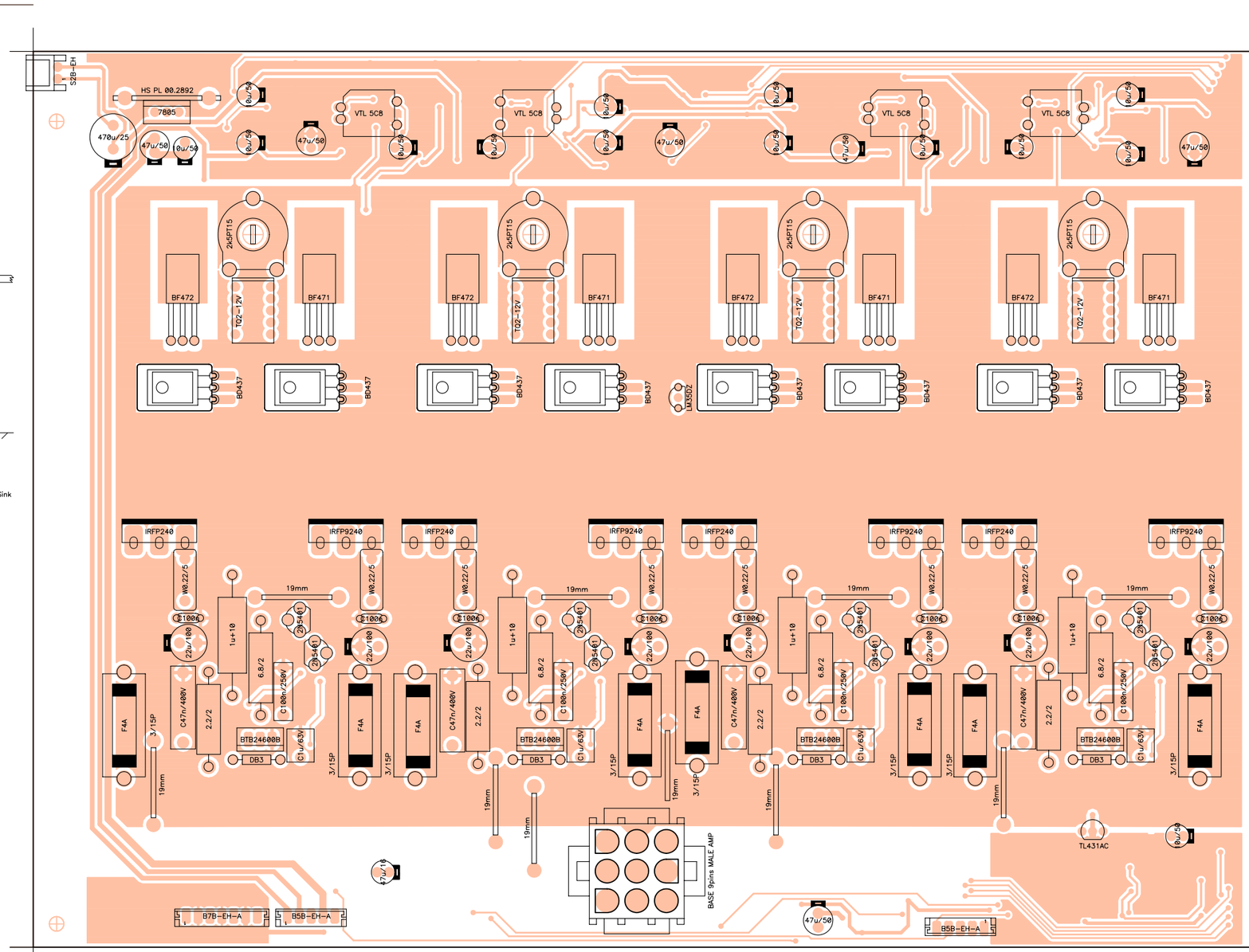
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drawn by: M. Amoros	date: 050315	approved: Angel Sanuy	product n: MPA4-150

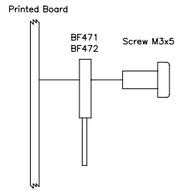
Note!
Tightening Torque:
0.6±0.1Nw/m



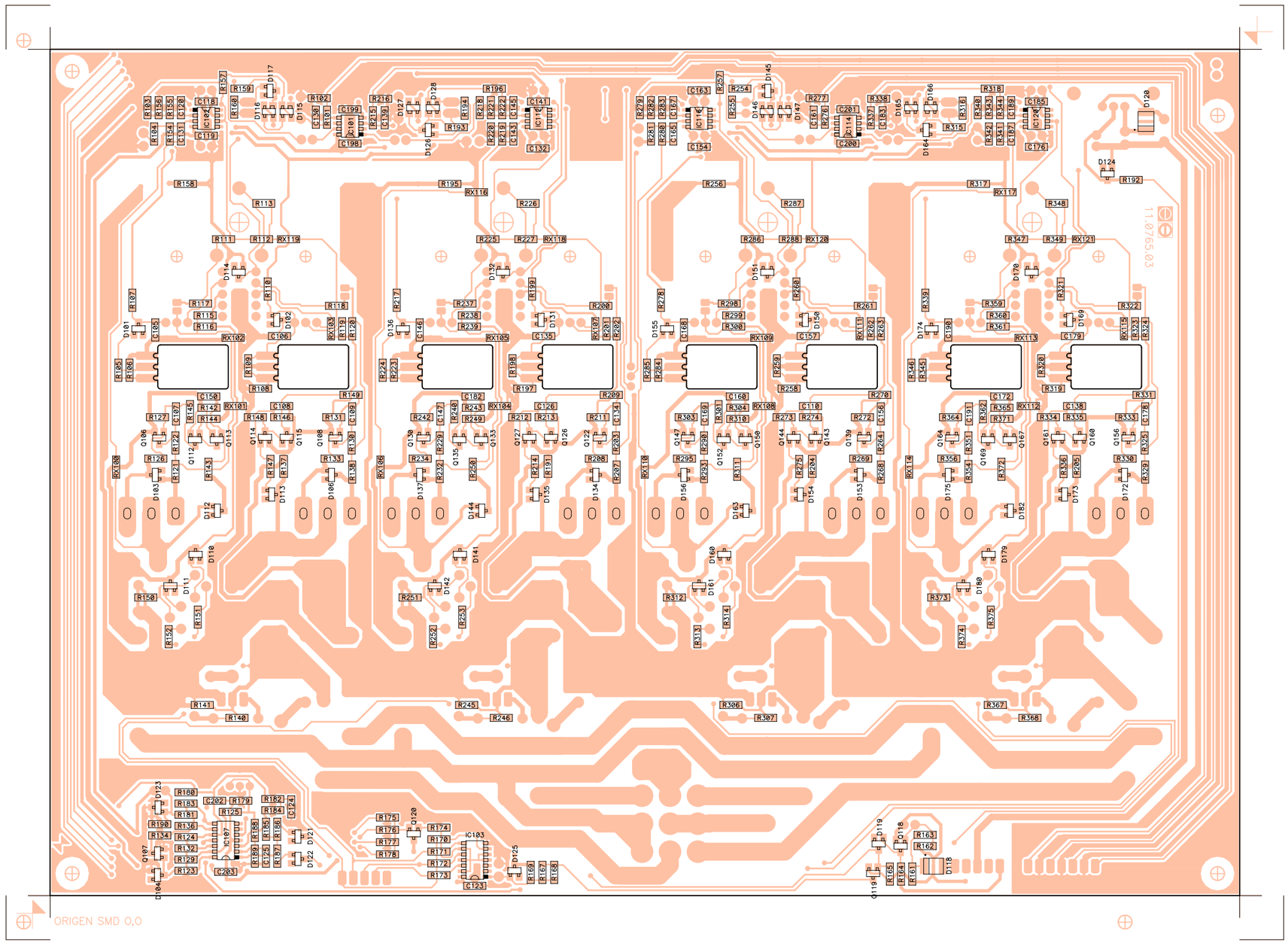




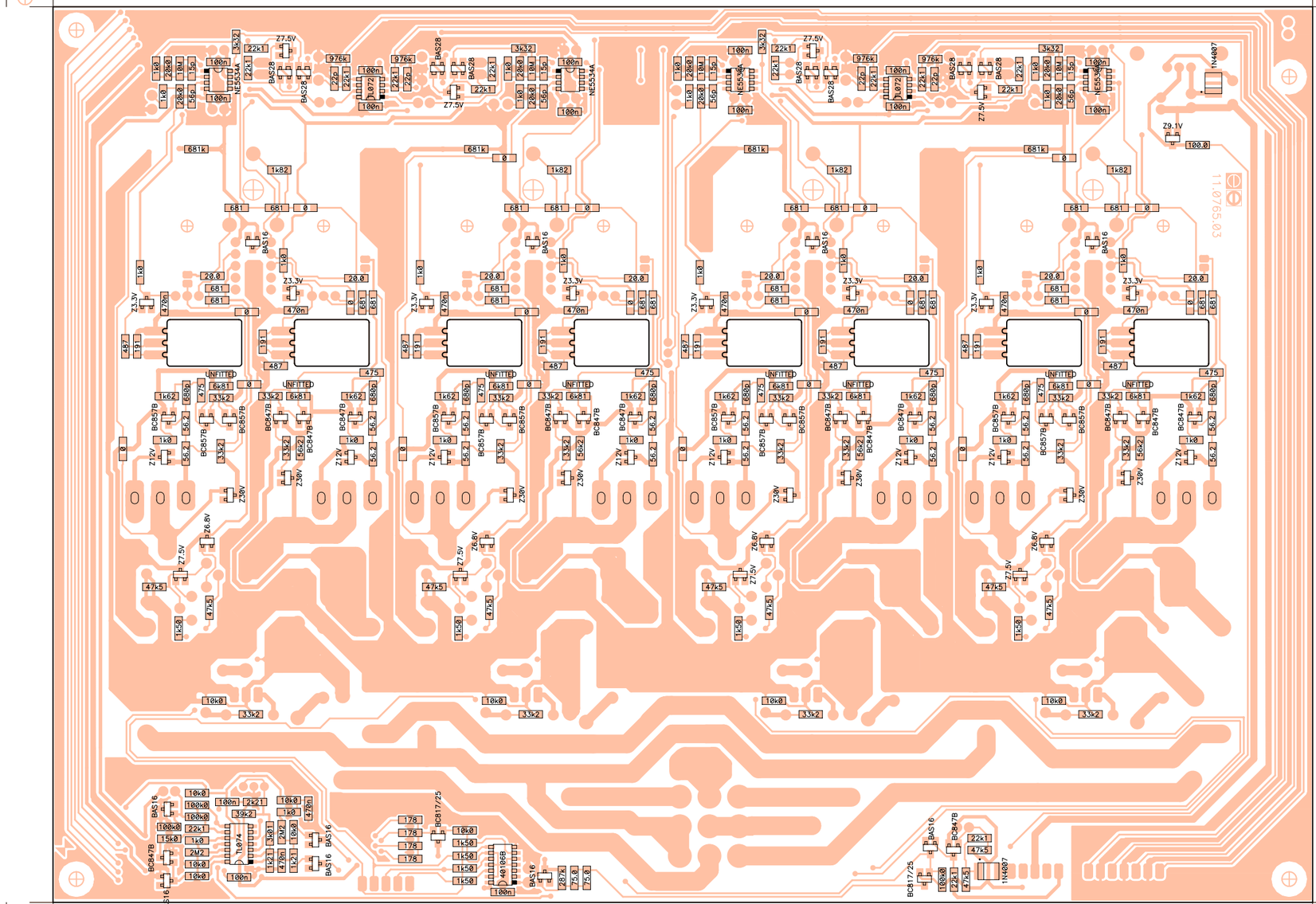




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drawn by: M. Amoros	date: 050315	product n: MPA4-150 approved: Angel Sanuy	



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drawn by: M. Amoros	date: 050315	product n: MPA4-150	
		approved: Angel Sanuy	



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number: 33.0392	version: 01.06	title: Power Amplifier Ct.	

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D103	Z12V	FCXZ00012000
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D150	Z3.3V	FCXZ00003300
D151	BAS16	FCXDDBAS1600
D153	Z12V	FCXZ00012000
D154	Z30V	FCXZ00030000
D155	Z3.3V	FCXZ00003300
D156	Z12V	FCXZ00012000
D160	Z6.8V	FCXZ00006800
D161	Z7.5V	FCXZ00007500
D162	DB3	FCDIDB300000
D163	Z30V	FCXZ00030000
D164	Z7.5V	FCXZ00007500
D165	BAS28	FCXDDBAS2800
D166	BAS28	FCXDDBAS2800
D169	Z3.3V	FCXZ00003300
D170	BAS16	FCXDDBAS1600
D172	Z12V	FCXZ00012000
D173	Z30V	FCXZ00030000
D174	Z3.3V	FCXZ00003300
D175	Z12V	FCXZ00012000
D179	Z6.8V	FCXZ00006800
D180	Z7.5V	FCXZ00007500
D181	DB3	FCDIDB300000
D182	Z30V	FCXZ00030000
F101	F4A	FCFUS5020000
F102	F4A	FCFUS5020000
F103	F4A	FCFUS5020000
F104	F4A	FCFUS5020000
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F106	F4A	FCFUS5020000
F107	F4A	FCFUS5020000
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HS101	HEAT SINK	FCRAD0200000
HS102	HS PL 00.2892	FP0289200000
IC101	TL072	FCIC07201000
IC102	NE5534A	FCIC55341000
IC103	40106B	FCIC40106000
IC104	LM35DZ	FCIC35000000
IC105	TL431AC	FCIC43100000
IC106	7805	FCREG7805000
IC107	TL074	FCIC07401000
IC108	VTL 5C8	FCOPTVTL5000
IC109	VTL 5C8	FCOPTVTL5000
IC112	NE5534A	FCIC55341000
IC113	VTL 5C8	FCOPTVTL5000
IC114	TL072	FCIC07201000
IC116	NE5534A	FCIC55341000
IC117	VTL 5C8	FCOPTVTL5000
IC120	NE5534A	FCIC55341000
IN100	INSULANT TO126	FCMICTO12600
IN101	INSULANT TO126	FCMICTO12600
IN102	INSULANT TO126	FCMICTO12600
IN103	INSULANT TO126	FCMICTO12600
IN104	INSULANT TO126	FCMICTO12600
IN105	INSULANT TO126	FCMICTO12600
IN106	INSULANT TO126	FCMICTO12600
IN107	INSULANT TO126	FCMICTO12600
IN108	INSULANT TIP3.2	FCMICTIP3200
IN109	INSULANT TIP3.2	FCMICTIP3200
IN110	INSULANT TIP3.2	FCMICTIP3200
IN111	INSULANT TIP3.2	FCMICTIP3200
IN112	INSULANT TIP3.2	FCMICTIP3200
IN113	INSULANT TIP3.2	FCMICTIP3200
IN114	INSULANT TIP3.2	FCMICTIP3200
IN115	INSULANT TIP3.2	FCMICTIP3200
IN116	INSULANT TIP3.2	FCMICTIP3200
J109	BASE 9pins MALE	FCCTAMP09000
J110	B5B-EH-A	FCCTM0005000
J111	B5B-EH-A	FCCTM0005000
J112	B7B-EH-A	FCCTM0007000
J113	S2B-EH	FCCTM1002000
J114	S2B-EH	FCCTM1002000
J115	S2B-EH	FCCTM1002000
J116	S2B-EH	FCCTM1002000
J117	S2B-EH	FCCTM1002000
J118	S2B-EH	FCCTM1002000
J119	S2B-EH	FCCTM1002000
J120	S2B-EH	FCCTM1002000
J121	S2B-EH	FCCTM1002000
K101	TQ2-12V	FCREL0030000
K102	TQ2-12V	FCREL0030000
K105	TQ2-12V	FCREL0030000
K108	TQ2-12V	FCREL0030000
MP100	CLAMP WD00191O5	FCPINZAM0000
MP101	CLAMP WD00191O5	FCPINZAM0000
PF101	FUSE HOLDER	FCPORF315000
PF102	FUSE HOLDER	FCPORF315000
PF103	FUSE HOLDER	FCPORF315000
PF104	FUSE HOLDER	FCPORF315000
PF105	FUSE HOLDER	FCPORF315000

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PF107	FUSE HOLDER	FCPORF315000
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Q103	BF471	FCTR47100000
Q104	BF472	FCTR47200000
Q105	IRFP9240	FCTR24300000
Q106	BC857B	FCXTT0857000
Q107	BC847B	FCXTT0847000
Q108	BC847B	FCXTT0847000
Q109	IRFP240	FCTR24000000
Q111	BTB24600B	FCTI24600000
Q112	BC857B	FCXTT0857000
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Q116	2N5401	FCTR25401000
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Q119	BC817/25	FCXTT0817000
Q120	BC817/25	FCXTT0817000
Q121	BD437	FCTR43700000
Q122	BC847B	FCXTT0847000
Q123	BF472	FCTR47200000
Q124	IRFP240	FCTR24000000
Q126	BC847B	FCXTT0847000
Q127	BC847B	FCXTT0847000
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Q130	BC857B	FCXTT0857000
Q132	IRFP9240	FCTR24300000
Q133	BC857B	FCXTT0857000
Q134	BTB24600B	FCTI24600000
Q135	BC857B	FCXTT0857000
Q136	2N5401	FCTR25401000
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Q138	BD437	FCTR43700000
Q139	BC847B	FCXTT0847000
Q140	BF472	FCTR47200000
Q141	IRFP240	FCTR24000000
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Q151	BTB24600B	FCTI24600000
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Q161	BC847B	FCXTT0847000

REFERENCE	VALUE	CODE
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Q163	BF471	FCTR47100000
Q164	BC857B	FCXTT0857000
Q166	IRFP9240	FCTR24300000
Q167	BC857B	FCXTT0857000
Q168	BTB24600B	FCTI24600000
Q169	BC857B	FCXTT0857000
Q170	2N5401	FCTR25401000
Q171	2N5401	FCTR25401000
R101	22k1	FCXR14221000
R102	976k	FCXR15976000
R103	1k0	FCXR13100000
R104	1k0	FCXR13100000
R105	487	FCXR12487000
R106	191	FCXR12191000
R107	1k0	FCXR13100000
R108	487	FCXR12487000
R109	191	FCXR12191000
R110	1k0	FCXR13100000
R111	681	FCXR12681000
R112	681	FCXR12681000
R113	1k82	FCXR13182000
R114	2k5PT15	FCRJG4250000
R115	681	FCXR12681000
R116	681	FCXR12681000
R117	20.0	FCXR11200000
R118	20.0	FCXR11200000
R119	681	FCXR12681000
R120	681	FCXR12681000
R121	56.2	FCXR11562000
R122	56.2	FCXR11562000
R123	10k0	FCXR14100000
R124	1k0	FCXR13100000
R125	39k2	FCXR14392000
R126	1k0	FCXR13100000
R127	1k62	FCXR13162000
R128	W0.22/5	FCRY00010000
R129	10k0	FCXR14100000
R130	56.2	FCXR11562000
R131	1k62	FCXR13162000
R132	2M2	FCXR06220000
R133	1k0	FCXR13100000
R134	15k0	FCXR14150000
R135	W0.22/5	FCRY00010000
R136	22k1	FCXR14221000
R138	56k2	FCXR14562000
R138	56.2	FCXR11562000
R139	2.2/2	FCRC51220000
R140	33k2	FCXR14332000
R141	10k0	FCXR14100000
R142	6k81	FCXR13681000
R143	33k2	FCXR14332000
R144	33k2	FCXR14332000
R145	475	FCXR12475000
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R147	33k2	FCXR14332000
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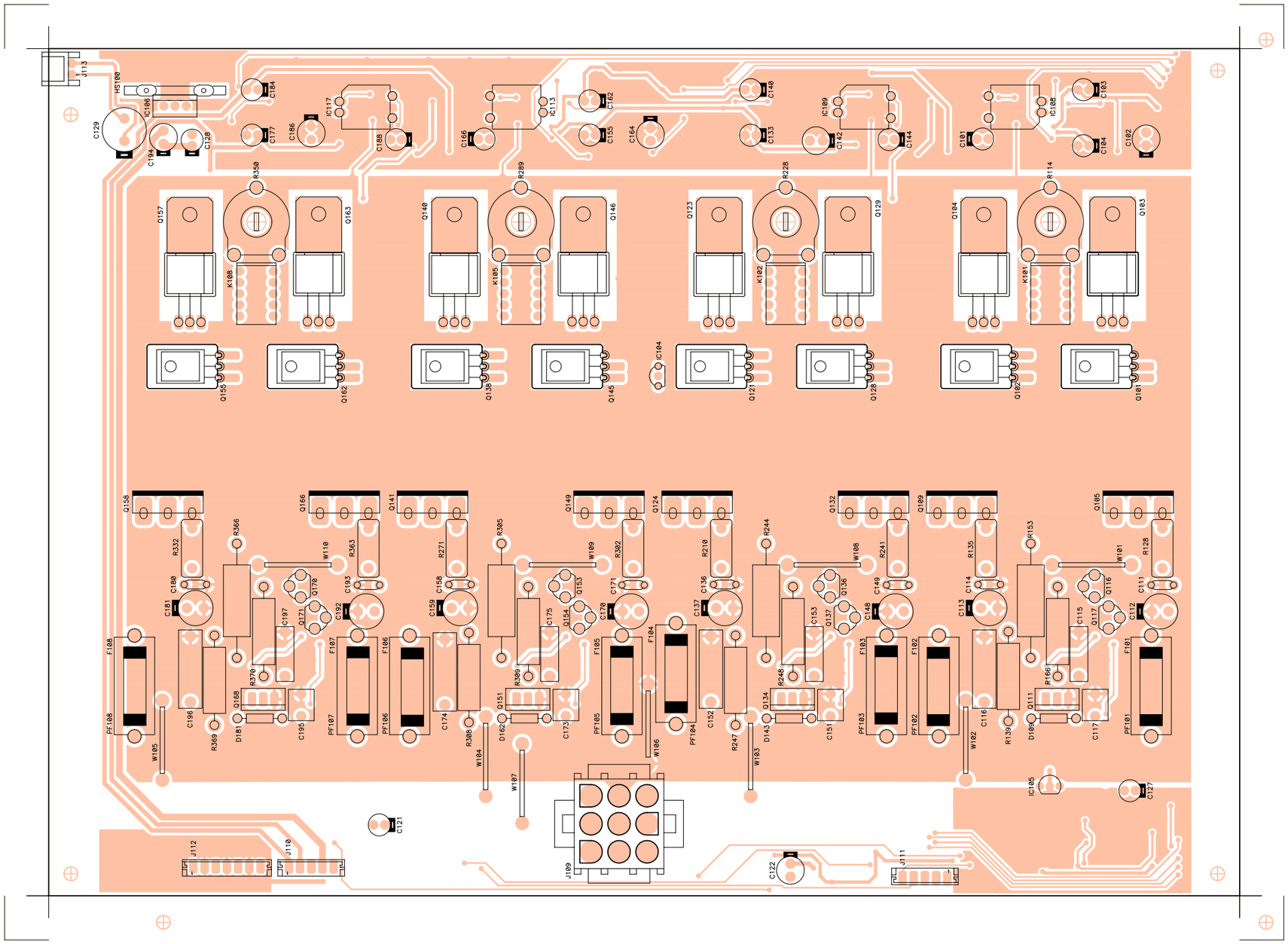
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R152	1k50	FCXR13150000
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R154	20k0	FCXR14200000
R155	10M	FCXR07100000
R156	20k0	FCXR14200000
R157	3k32	FCXR13332000
R158	681k	FCXR15681000
R159	22k1	FCXR14221000
R160	22k1	FCXR14221000
R161	47k5	FCXR14475000
R162	47k5	FCXR14475000
R163	22k1	FCXR14221000
R164	22k1	FCXR14221000
R165	100k0	FCXR15100000
R166	6.8/2	FCRC51680000
R167	75.0	FCXR11750000
R168	75.0	FCXR11750000
R169	287k	FCXR15287000
R170	1k50	FCXR13150000
R171	1k50	FCXR13150000
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R173	1k50	FCXR13150000
R174	10k0	FCXR14100000
R175	178	FCXR12178000
R176	178	FCXR12178000
R177	178	FCXR12178000
R178	178	FCXR12178000
R179	2k21	FCXR13221000
R180	10k0	FCXR14100000
R181	100k0	FCXR15100000
R182	10k0	FCXR14100000
R183	100k0	FCXR15100000
R184	1k0	FCXR13100000
R185	2M2	FCXR06220000
R186	10k0	FCXR14100000
R187	1k21	FCXR13121000
R188	3k01	FCXR13301000
R189	1k21	FCXR13121000
R190	100k0	FCXR15100000
R191	56k2	FCXR14562000
R192	100.0	FCXR12100000
R193	22k1	FCXR14221000
R194	22k1	FCXR14221000
R195	681k	FCXR15681000
R196	3k32	FCXR13332000
R197	487	FCXR12487000
R198	191	FCXR12191000
R199	1k0	FCXR13100000
R200	20.0	FCXR11200000
R201	681	FCXR12681000
R202	681	FCXR12681000
R203	56.2	FCXR11562000
R205	56k2	FCXR14562000
R206	56k2	FCXR14562000
R207	56.2	FCXR11562000
R208	1k0	FCXR13100000

REFERENCE	VALUE	CODE
R209	475	FCXR12475000
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R211	1k62	FCXR13162000
R212	33k2	FCXR14332000
R213	6k81	FCXR13681000
R214	33k2	FCXR14332000
R215	22k1	FCXR14221000
R216	976k	FCXR15976000
R217	1k0	FCXR13100000
R218	1k0	FCXR13100000
R219	20k0	FCXR14200000
R220	1k0	FCXR13100000
R221	20k0	FCXR14200000
R222	10M	FCXR07100000
R223	191	FCXR12191000
R224	487	FCXR12487000
R225	681	FCXR12681000
R226	1k82	FCXR13182000
R227	681	FCXR12681000
R228	2k5PT15	FCRJG4250000
R229	56.2	FCXR11562000
R232	56.2	FCXR11562000
R234	1k0	FCXR13100000
R237	20.0	FCXR11200000
R238	681	FCXR12681000
R239	681	FCXR12681000
R240	475	FCXR12475000
R241	W0.22/5	FCRY00010000
R242	1k62	FCXR13162000
R243	6k81	FCXR13681000
R244	1uH+10	FCIND0020000
R245	10k0	FCXR14100000
R246	33k2	FCXR14332000
R247	2.2/2	FCRC51220000
R248	6.8/2	FCRC51680000
R249	33k2	FCXR14332000
R250	33k2	FCXR14332000
R251	47k5	FCXR14475000
R252	1k50	FCXR13150000
R253	47k5	FCXR14475000
R254	22k1	FCXR14221000
R255	22k1	FCXR14221000
R256	681k	FCXR15681000
R257	3k32	FCXR13332000
R258	487	FCXR12487000
R259	191	FCXR12191000
R260	1k0	FCXR13100000
R261	20.0	FCXR11200000
R262	681	FCXR12681000
R263	681	FCXR12681000
R264	56.2	FCXR11562000
R268	56.2	FCXR11562000
R269	1k0	FCXR13100000
R270	475	FCXR12475000
R271	W0.22/5	FCRY00010000
R272	1k62	FCXR13162000
R273	33k2	FCXR14332000
R274	6k81	FCXR13681000

REFERENCE	VALUE	CODE
R275	33k2	FCXR14332000
R276	22k1	FCXR14221000
R277	976k	FCXR15976000
R278	1k0	FCXR13100000
R279	1k0	FCXR13100000
R280	20k0	FCXR14200000
R281	1k0	FCXR13100000
R282	20k0	FCXR14200000
R283	10M	FCXR07100000
R284	191	FCXR12191000
R285	487	FCXR12487000
R286	681	FCXR12681000
R287	1k82	FCXR13182000
R288	681	FCXR12681000
R289	2k5PT15	FCRJG4250000
R290	56.2	FCXR11562000
R293	56.2	FCXR11562000
R295	1k0	FCXR13100000
R298	20.0	FCXR11200000
R299	681	FCXR12681000
R300	681	FCXR12681000
R301	475	FCXR12475000
R302	W0.22/5	FCRY00010000
R303	1k62	FCXR13162000
R304	6k81	FCXR13681000
R305	1u+10	FCIND0020000
R306	10k0	FCXR14100000
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R314	47k5	FCXR14475000
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R316	22k1	FCXR14221000
R317	681k	FCXR15681000
R318	3k32	FCXR13332000
R319	487	FCXR12487000
R320	191	FCXR12191000
R321	1k0	FCXR13100000
R322	20.0	FCXR11200000
R323	681	FCXR12681000
R324	681	FCXR12681000
R325	56.2	FCXR11562000
R329	56.2	FCXR11562000
R330	1k0	FCXR13100000
R331	475	FCXR12475000
R332	W0.22/5	FCRY00010000
R333	1k62	FCXR13162000
R334	33k2	FCXR14332000
R335	6k81	FCXR13681000
R336	33k2	FCXR14332000
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R338	976k	FCXR15976000
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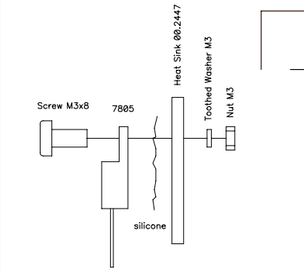
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R342	1k0	FCXR13100000
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R345	191	FCXR12191000
R346	487	FCXR12487000
R347	681	FCXR12681000
R348	1k82	FCXR13182000
R349	681	FCXR12681000
R350	2k5PT15	FCRJG4250000
R351	56.2	FCXR11562000
R354	56.2	FCXR11562000
R356	1k0	FCXR13100000
R359	20.0	FCXR11200000
R360	681	FCXR12681000
R361	681	FCXR12681000
R362	475	FCXR12475000
R363	W0.22/5	FCRY00010000
R364	1k62	FCXR13162000
R365	6k81	FCXR13681000
R366	1uH+10	FCIND0020000
R367	10k0	FCXR14100000
R368	33k2	FCXR14332000
R369	2.2/2	FCRC51220000
R370	6.8/2	FCRC51680000
R371	33k2	FCXR14332000
R372	33k2	FCXR14332000
R373	47k5	FCXR14475000
R374	1k50	FCXR13150000
R375	47k5	FCXR14475000
RX100	0	FCXR00000000
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RX115	0	FCXR00000000
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RX117	0	FCXR00000000
RX118	0	FCXR00000000
RX119	0	FCXR00000000
RX120	0	FCXR00000000
RX121	0	FCXR00000000
SC100	SCREW M4x6 SPAN	FCT804006100
SC101	SCREW M4x6 SPAN	FCT804006100
SC102	SCREW M4x6 SPAN	FCT804006100
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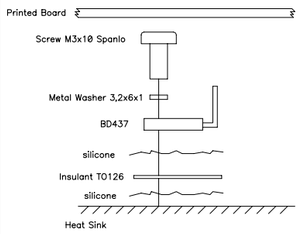
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SC109	SCREW M3x10 SPA	FCT803010000
SC110	SCREW M3x10 SPA	FCT803010000
SC111	SCREW M3x10 SPA	FCT803010000
SC112	SCREW M3x5	FCT850300500
SC113	SCREW M3x5	FCT850300500
SC114	SCREW M3x5	FCT850300500
SC115	SCREW M3x5	FCT850300500
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SC118	SCREW M3x5	FCT850300500
SC119	SCREW M3x5	FCT850300500
SC120	SCREW M3x5	FCT850300500
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W102	19mm	FCMECPON1900
W103	19mm	FCMECPON1900
W104	19mm	FCMECPON1900
W105	19mm	FCMECPON1900
W106	19mm	FCMECPON1900
W107	19mm	FCMECPON1900
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W109	19mm	FCMECPON1900
W110	19mm	FCMECPON1900
WA100	WASHER 3.2x6x1	FCARM3201000
WA101	WASHER 3.2x6x1	FCARM3201000
WA102	WASHER 3.2x6x1	FCARM3201000
WA103	WASHER 3.2x6x1	FCARM3201000
WA104	WASHER 3.2x6x1	FCARM3201000
WA105	WASHER 3.2x6x1	FCARM3201000
WA106	WASHER 3.2x6x1	FCARM3201000
WA107	WASHER 3.2x6x1	FCARM3201000

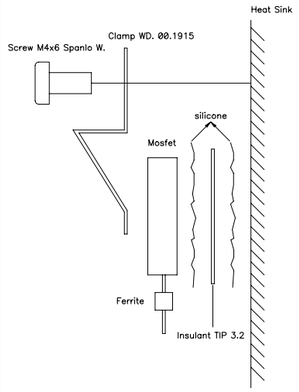


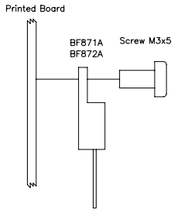
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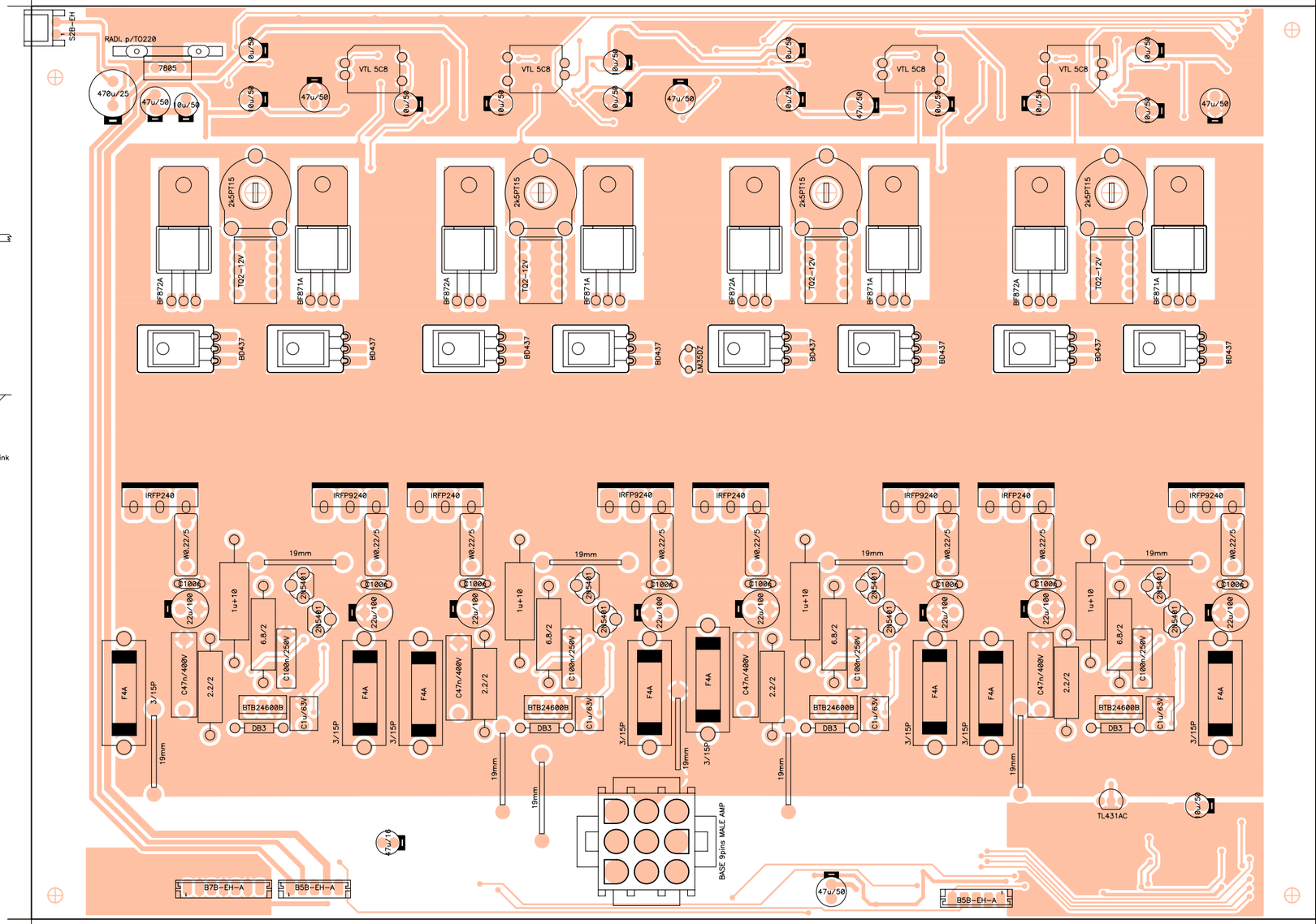
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number: 33.0389	version: 01.05	title: EP05-99 Power Amp.	





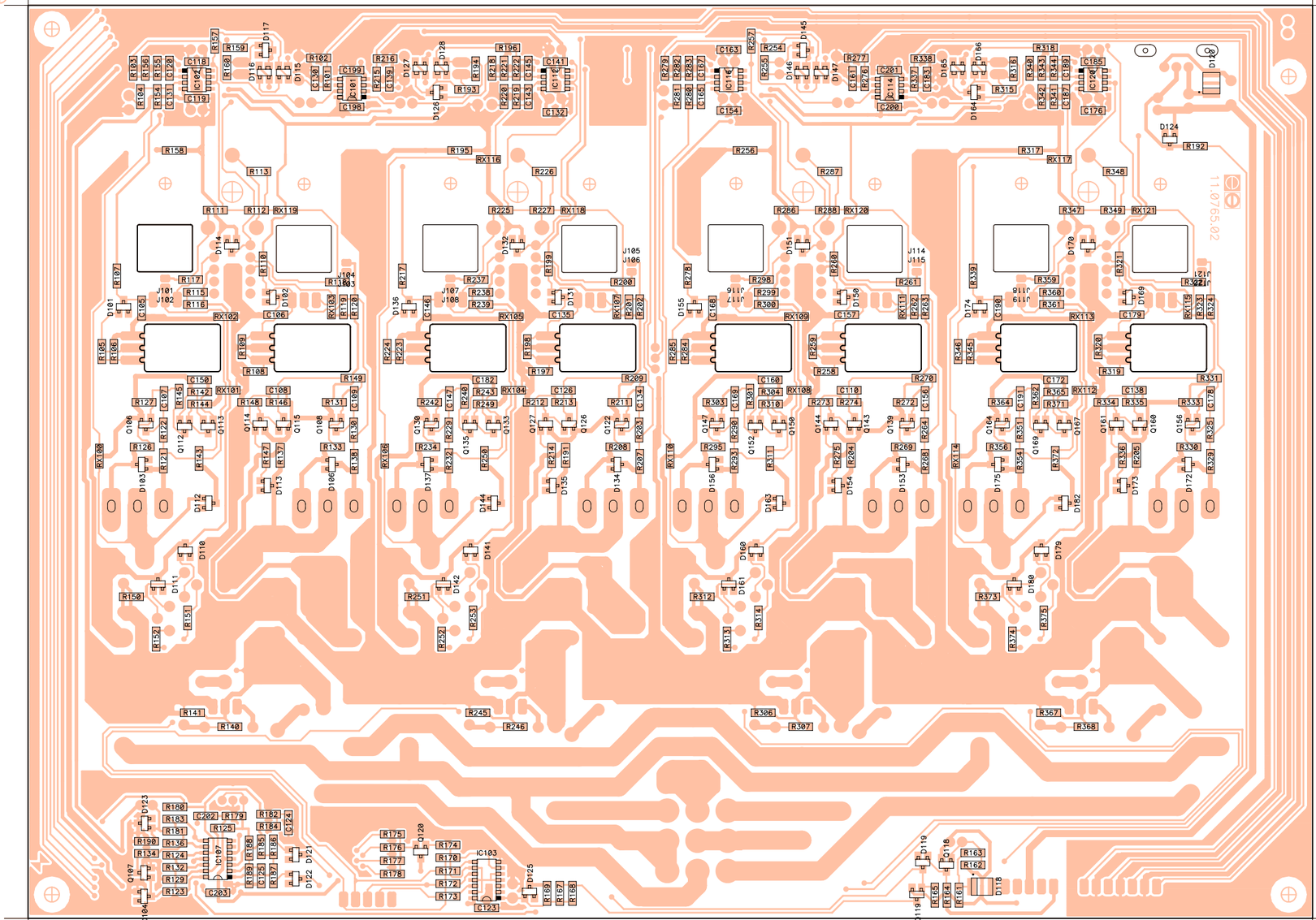






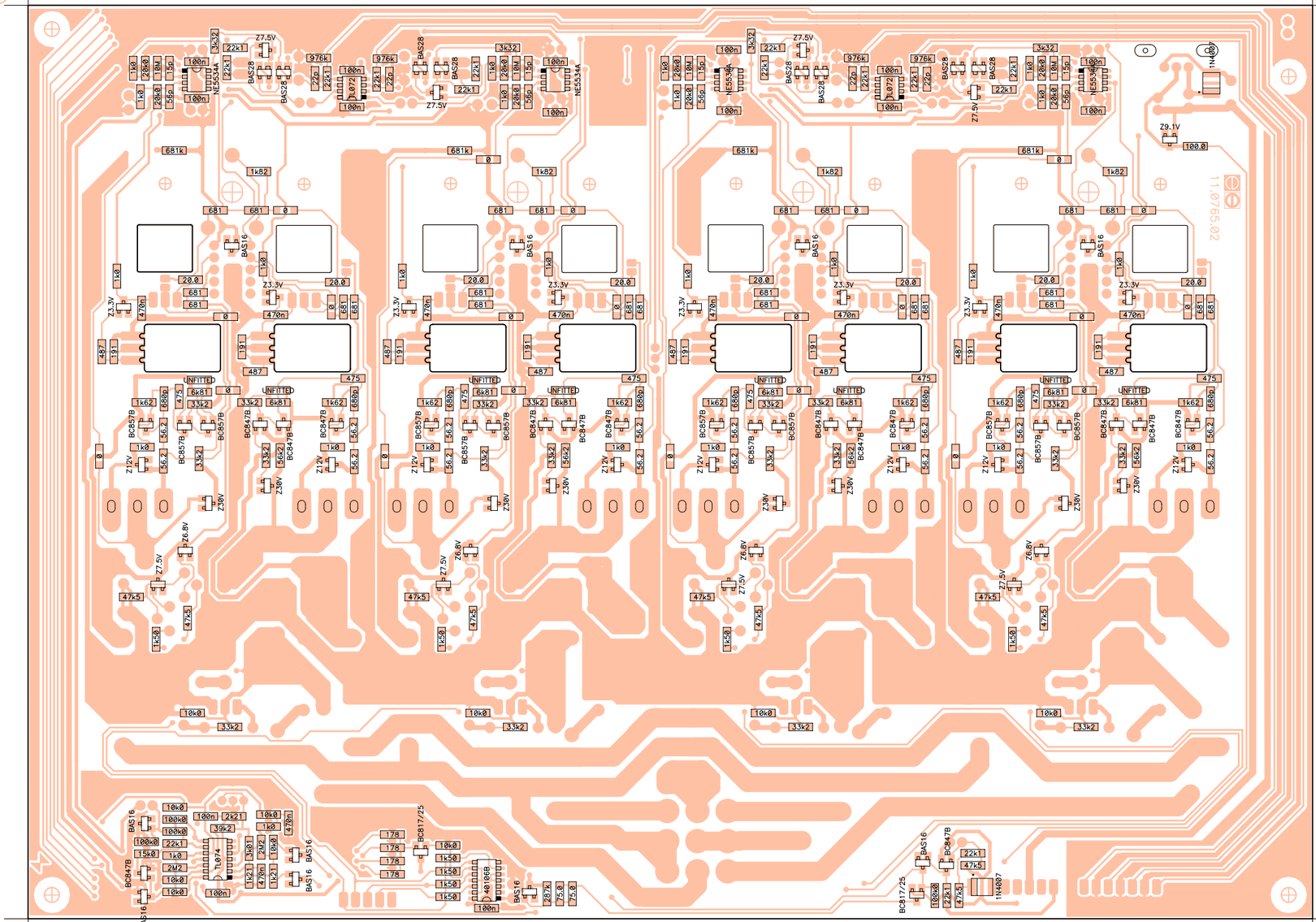
OLD VERSION

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			view: Value
	drawn by: M. Amoros	date: 040115	approved by: Angel Sanuy
number: 33.0390	version: 01.07	title: EP05-99 Power Amp.	



OLD VERSION

ECLEREE LABORATORIO DE ELECTRO–ACUSTICA S.A.	related to: circuit no: 11.0765–02.01 schema no: 10.0490–01.05 insertion file no: 81.0011–01.04		side: Solder
			view: Reference
	drawn by: M. Amoros	date: 040115	approved by: Angel Sanuy
number: 33.0391	version: 01.05	title: EP05–99 Power Amp.	



OLD VERSION

ECLEREE LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-02.01 schema no: 10.0490-01.05 insertion file no: 81.0011-01.04		side: Solder
			view: Value
	drawn by: M. Amoros	date: 040115	approved by: Angel Sanuy
number: 33.0392	version: 01.05	title: EP05-99 Power Amp.	

REFERENCE	VALUE	CODE
C101	10u/50	FCCE250100
C102	47u/50	FCCE250470
C103	10u/50	FCCE250100
C104	10u/50	FCCE250100
C105	470n	FCXCN44700
C106	470n	FCXCN44700
C107	680p	FCXCN26800
C108	UNFITTED	UNFITTED
C109	680p	FCXCN26800
C110	UNFITTED	UNFITTED
C111	C100n	FCCC151010
C112	22u/100	FCCE350220
C113	22u/100	FCCE350220
C114	C100n	FCCC151010
C115	C100n/250V	FCCDN11000
C116	C47n/400V	FCCDH71047
C117	C1u/63V	FCCDK20010
C118	100n	FCXCN41000
C119	100n	FCXCN41000
C120	15p	FCXCN11500
C121	47u/16	FCCE100000
C122	47u/50	FCCE250470
C123	100n	FCXCN41000
C124	470n	FCXCN44700
C125	470n	FCXCN44700
C126	UNFITTED	UNFITTED
C127	10u/50	FCCE250100
C128	10u/50	FCCE250100
C129	470u/25	FCCE154700
C130	22p	FCXCN12200
C131	56p	FCXCN15600
C132	100n	FCXCN41000
C133	10u/50	FCCE250100
C134	680p	FCXCN26800
C135	470n	FCXCN44700
C136	C100n	FCCC151010
C137	22u/100	FCCE350220
C138	UNFITTED	UNFITTED
C139	22p	FCXCN12200
C140	10u/50	FCCE250100
C141	100n	FCXCN41000
C142	47u/50	FCCE250470
C143	56p	FCXCN15600
C144	10u/50	FCCE250100
C145	15p	FCXCN11500
C146	470n	FCXCN44700
C147	680p	FCXCN26800
C148	22u/100	FCCE350220
C149	C100n	FCCC151010
C150	UNFITTED	UNFITTED
C151	C1u/63V	FCCDK20010
C152	C47n/400V	FCCDH71047
C153	C100n/250V	FCCDN11000
C154	100n	FCXCN41000
C155	10u/50	FCCE250100
C156	680p	FCXCN26800
C157	470n	FCXCN44700

OLD VERSION

REFERENCE	VALUE	CODE
C158	C100n	FCCC151010
C159	22u/100	FCCE350220
C160	UNFITTED	UNFITTED
C161	22p	FCXCN12200
C162	10u/50	FCCE250100
C163	100n	FCXCN41000
C164	47u/50	FCCE250470
C165	56p	FCXCN15600
C166	10u/50	FCCE250100
C167	15p	FCXCN11500
C168	470n	FCXCN44700
C169	680p	FCXCN26800
C170	22u/100	FCCE350220
C171	C100n	FCCC151010
C172	UNFITTED	UNFITTED
C173	C1u/63V	FCCDK20010
C174	C47n/400V	FCCDH71047
C175	C100n/250V	FCCDN11000
C176	100n	FCXCN41000
C177	10u/50	FCCE250100
C178	680p	FCXCN26800
C179	470n	FCXCN44700
C180	C100n	FCCC151010
C181	22u/100	FCCE350220
C182	UNFITTED	UNFITTED
C183	22p	FCXCN12200
C184	10u/50	FCCE250100
C185	100n	FCXCN41000
C186	47u/50	FCCE250470
C187	56p	FCXCN15600
C188	10u/50	FCCE250100
C189	15p	FCXCN11500
C190	470n	FCXCN44700
C191O	680p	FCXCN26800
C192	22u/100	FCCE350220
C193	C100n	FCCC151010
C194	47u/50	FCCE250470
C195	C1u/63V	FCCDK20010
C196	C47n/400V	FCCDH71047
C197	C100n/250V	FCCDN11000
C198	100n	FCXCN41000
C199	100n	FCXCN41000
C200	100n	FCXCN41000
C201	100n	FCXCN41000
C202	100n	FCXCN41000
C203	100n	FCXCN41000
CI101	11.0765	FCCIMPA765
D101	Z3.3V	FCXZ000033
D102	Z3.3V	FCXZ000033
D103	Z12V	FCXZ000120
D104	BAS16	FCXDDBAS16
D106	Z12V	FCXZ000120
D109	DB3	FCDIDB3000
D110	Z6.8V	FCXZ000068
D111	Z7.5V	FCXZ000075
D112	Z30V	FCXZ000300
D113	Z30V	FCXZ000300
D114	BAS16	FCXDDBAS16

OLD VERSION

REFERENCE	VALUE	CODE
D115	BAS28	FCXDDBAS28
D116	BAS28	FCXDDBAS28
D117	Z7.5V	FCXZ000075
D118	1N4007	FCXDD40070
D119	BAS16	FCXDDBAS16
D120	1N4007	FCXDD40070
D121	BAS16	FCXDDBAS16
D122	BAS16	FCXDDBAS16
D123	BAS16	FCXDDBAS16
D124	Z9.1V	FCXZ000091
D125	BAS16	FCXDDBAS16
D126	Z7.5V	FCXZ000075
D127	BAS28	FCXDDBAS28
D128	BAS28	FCXDDBAS28
D131	Z3.3V	FCXZ000033
D132	BAS16	FCXDDBAS16
D134	Z12V	FCXZ000120
D135	Z30V	FCXZ000300
D136	Z3.3V	FCXZ000033
D137	Z12V	FCXZ000120
D141	Z6.8V	FCXZ000068
D142	Z7.5V	FCXZ000075
D143	DB3	FCDIDB3000
D144	Z30V	FCXZ000300
D145	Z7.5V	FCXZ000075
D146	BAS28	FCXDDBAS28
D147	BAS28	FCXDDBAS28
D150	Z3.3V	FCXZ000033
D151	BAS16	FCXDDBAS16
D153	Z12V	FCXZ000120
D154	Z30V	FCXZ000300
D155	Z3.3V	FCXZ000033
D156	Z12V	FCXZ000120
D160	Z6.8V	FCXZ000068
D161	Z7.5V	FCXZ000075
D162	DB3	FCDIDB3000
D163	Z30V	FCXZ000300
D164	Z7.5V	FCXZ000075
D165	BAS28	FCXDDBAS28
D166	BAS28	FCXDDBAS28
D169	Z3.3V	FCXZ000033
D170	BAS16	FCXDDBAS16
D172	Z12V	FCXZ000120
D173	Z30V	FCXZ000300
D174	Z3.3V	FCXZ000033
D175	Z12V	FCXZ000120
D179	Z6.8V	FCXZ000068
D180	Z7.5V	FCXZ000075
D181	DB3	FCDIDB3000
D182	Z30V	FCXZ000300
F101	F4A	FCFUS50200
F102	F4A	FCFUS50200
F103	F4A	FCFUS50200
F104	F4A	FCFUS50200
F105	F4A	FCFUS50200
F106	F4A	FCFUS50200
F107	F4A	FCFUS50200
F108	F4A	FCFUS50200

OLD VERSION

REFERENCE	VALUE	CODE
HS100	HEAT SINK TO220	FCMECT0220
HS101	HEAT SINK	FCRAD02000
IC101	TL072	FCIC072010
IC102	NE5534A	FCIC553410
IC103	40106B	FCIC401060
IC104	LM35DZ	FCIC350000
IC105	TL431AC	FCIC431000
IC106	7805	FCREG78050
IC107	TL074	FCIC074010
IC108	VTL 5C8	FCOPTVTL50
IC109	VTL 5C8	FCOPTVTL50
IC112	NE5534A	FCIC553410
IC113	VTL 5C8	FCOPTVTL50
IC114	TL072	FCIC072010
IC116	NE5534A	FCIC553410
IC117	VTL 5C8	FCOPTVTL50
IC120	NE5534A	FCIC553410
IN100	INSULANT TO126	FCMICTO126
IN101	INSULANT TO126	FCMICTO126
IN102	INSULANT TO126	FCMICTO126
IN103	INSULANT TO126	FCMICTO126
IN104	INSULANT TO126	FCMICTO126
IN105	INSULANT TO126	FCMICTO126
IN106	INSULANT TO126	FCMICTO126
IN107	INSULANT TO126	FCMICTO126
IN108	INSULANT TIP3.2	FCMICTIP32
IN109	INSULANT TIP3.2	FCMICTIP32
IN110	INSULANT TIP3.2	FCMICTIP32
IN111	INSULANT TIP3.2	FCMICTIP32
IN112	INSULANT TIP3.2	FCMICTIP32
IN113	INSULANT TIP3.2	FCMICTIP32
IN114	INSULANT TIP3.2	FCMICTIP32
IN115	INSULANT TIP3.2	FCMICTIP32
IN116	INSULANT TIP3.2	FCMICTIP32
J109	BASE 9pins MALE	FCCTAMP090
J110	B5B-EH-A	FCCTM00050
J111	B5B-EH-A	FCCTM00050
J112	B7B-EH-A	FCCTM00070
J113	S2B-EH	FCCTM10020
J114	S2B-EH	FCCTM10020
J115	S2B-EH	FCCTM10020
J116	S2B-EH	FCCTM10020
J117	S2B-EH	FCCTM10020
J118	S2B-EH	FCCTM10020
J119	S2B-EH	FCCTM10020
J120	S2B-EH	FCCTM10020
J121	S2B-EH	FCCTM10020
K101	TQ2-12V	FCREL00300
K102	TQ2-12V	FCREL00300
K105	TQ2-12V	FCREL00300
K108	TQ2-12V	FCREL00300
MP100	CLAMP WD00191O5	FCPINZAM00
MP101	CLAMP WD00191O5	FCPINZAM00
NV100	NUT M3	FCTUE00300
PF101	FUSE HOLDER	FCPORF3150
PF102	FUSE HOLDER	FCPORF3150
PF103	FUSE HOLDER	FCPORF3150
PF104	FUSE HOLDER	FCPORF3150

OLD VERSION

REFERENCE	VALUE	CODE
PF105	FUSE HOLDER	FCPORF3150
PF106	FUSE HOLDER	FCPORF3150
PF107	FUSE HOLDER	FCPORF3150
PF108	FUSE HOLDER	FCPORF3150
Q101	BD437	FCTR437000
Q102	BD437	FCTR437000
Q103	BF871A	FCTR871000
Q104	BF872A	FCTR872000
Q105	IRFP9240	FCTR243000
Q106	BC857B	FCXTT08570
Q107	BC847B	FCXTT08470
Q108	BC847B	FCXTT08470
Q109	IRFP240	FCTR240000
Q111	BTB24600B	FCTI246000
Q112	BC857B	FCXTT08570
Q113	BC857B	FCXTT08570
Q114	BC847B	FCXTT08470
Q115	BC847B	FCXTT08470
Q116	2N5401	FCTR254010
Q117	2N5401	FCTR254010
Q118	BC847B	FCXTT08470
Q119	BC817/25	FCXTT08170
Q120	BC817/25	FCXTT08170
Q121	BD437	FCTR437000
Q122	BC847B	FCXTT08470
Q123	BF872A	FCTR872000
Q124	IRFP240	FCTR240000
Q126	BC847B	FCXTT08470
Q127	BC847B	FCXTT08470
Q128	BD437	FCTR437000
Q129	BF871A	FCTR871000
Q130	BC857B	FCXTT08570
Q132	IRFP9240	FCTR243000
Q133	BC857B	FCXTT08570
Q134	BTB24600B	FCTI246000
Q135	BC857B	FCXTT08570
Q136	2N5401	FCTR254010
Q137	2N5401	FCTR254010
Q138	BD437	FCTR437000
Q139	BC847B	FCXTT08470
Q140	BF872A	FCTR872000
Q141	IRFP240	FCTR240000
Q143	BC847B	FCXTT08470
Q144	BC847B	FCXTT08470
Q145	BD437	FCTR437000
Q146	BF871A	FCTR871000
Q147	BC857B	FCXTT08570
Q149	IRFP9240	FCTR243000
Q150	BC857B	FCXTT08570
Q151	BTB24600B	FCTI246000
Q152	BC857B	FCXTT08570
Q153	2N5401	FCTR254010
Q154	2N5401	FCTR254010
Q155	BD437	FCTR437000
Q156	BC847B	FCXTT08470
Q157	BF872A	FCTR872000
Q158	IRFP240	FCTR240000
Q160	BC847B	FCXTT08470

OLD VERSION

REFERENCE	VALUE	CODE
Q161	BC847B	FCXTT08470
Q162	BD437	FCTR437000
Q163	BF871A	FCTR871000
Q164	BC857B	FCXTT08570
Q166	IRFP9240	FCTR243000
Q167	BC857B	FCXTT08570
Q168	BTB24600B	FCTI246000
Q169	BC857B	FCXTT08570
Q170	2N5401	FCTR254010
Q171	2N5401	FCTR254010
R101	22k1	FCXR142210
R102	976k	FCXR159760
R103	1k0	FCXR131000
R104	1k0	FCXR131000
R105	487	FCXR124870
R106	191	FCXR121910
R107	1k0	FCXR131000
R108	487	FCXR124870
R109	191	FCXR121910
R110	1k0	FCXR131000
R111	681	FCXR126810
R112	681	FCXR126810
R113	1k82	FCXR131820
R114	2k5PT15	FCRJG42500
R115	681	FCXR126810
R116	681	FCXR126810
R117	20.0	FCXR112000
R118	20.0	FCXR112000
R119	681	FCXR126810
R120	681	FCXR126810
R121	56.2	FCXR115620
R122	56.2	FCXR115620
R123	10k0	FCXR141000
R124	1k0	FCXR131000
R125	39k2	FCXR143920
R126	1k0	FCXR131000
R127	1k62	FCXR131620
R128	W0.22/5	FCRY000100
R129	10k0	FCXR141000
R130	56.2	FCXR115620
R131	1k62	FCXR131620
R132	2M2	FCXR062200
R133	1k0	FCXR131000
R134	15k0	FCXR141500
R135	W0.22/5	FCRY000100
R136	22k1	FCXR142210
R137	56k2	FCXR145620
R138	56.2	FCXR115620
R139	2.2/2	FCRC512200
R140	33k2	FCXR143320
R141	10k0	FCXR141000
R142	6k81	FCXR136810
R143	33k2	FCXR143320
R144	33k2	FCXR143320
R145	475	FCXR124750
R146	6k81	FCXR136810
R147	33k2	FCXR143320
R148	33k2	FCXR143320

OLD VERSION

REFERENCE	VALUE	CODE
R149	475	FCXR124750
R150	47k5	FCXR144750
R151	47k5	FCXR144750
R152	1k50	FCXR131500
R153	1uH+10	FCIND00200
R154	20k0	FCXR142000
R155	10M	FCXR071000
R156	20k0	FCXR142000
R157	3k32	FCXR133320
R158	681k	FCXR156810
R159	22k1	FCXR142210
R160	22k1	FCXR142210
R161	47k5	FCXR144750
R162	47k5	FCXR144750
R163	22k1	FCXR142210
R164	22k1	FCXR142210
R165	100k0	FCXR151000
R166	6.8/2	FCRC516800
R167	75.0	FCXR117500
R168	75.0	FCXR117500
R169	287k	FCXR152870
R170	1k50	FCXR131500
R171	1k50	FCXR131500
R172	1k50	FCXR131500
R173	1k50	FCXR131500
R174	10k0	FCXR141000
R175	178	FCXR121780
R176	178	FCXR121780
R177	178	FCXR121780
R178	178	FCXR121780
R179	2k21	FCXR132210
R180	10k0	FCXR141000
R181	100k0	FCXR151000
R182	10k0	FCXR141000
R183	100k0	FCXR151000
R184	1k0	FCXR131000
R185	2M2	FCXR062200
R186	10k0	FCXR141000
R187	1k21	FCXR131210
R188	3k01	FCXR133010
R189	1k21	FCXR131210
R190	100k0	FCXR151000
R191	56k2	FCXR145620
R192	100.0	FCXR121000
R193	22k1	FCXR142210
R194	22k1	FCXR142210
R195	681k	FCXR156810
R196	3k32	FCXR133320
R197	487	FCXR124870
R198	191	FCXR121910
R199	1k0	FCXR131000
R200	20.0	FCXR112000
R201	681	FCXR126810
R202	681	FCXR126810
R203	56.2	FCXR115620
R205	56k2	FCXR145620
R206	56k2	FCXR145620
R207	56.2	FCXR115620

OLD VERSION

REFERENCE	VALUE	CODE
R208	1k0	FCXR131000
R209	475	FCXR124750
R210	W0.22/5	FCRY000100
R211	1k62	FCXR131620
R212	33k2	FCXR143320
R213	6k81	FCXR136810
R214	33k2	FCXR143320
R215	22k1	FCXR142210
R216	976k	FCXR159760
R217	1k0	FCXR131000
R218	1k0	FCXR131000
R219	20k0	FCXR142000
R220	1k0	FCXR131000
R221	20k0	FCXR142000
R222	10M	FCXR071000
R223	191	FCXR121910
R224	487	FCXR124870
R225	681	FCXR126810
R226	1k82	FCXR131820
R227	681	FCXR126810
R228	2k5PT15	FCRJG42500
R229	56.2	FCXR115620
R232	56.2	FCXR115620
R234	1k0	FCXR131000
R237	20.0	FCXR112000
R238	681	FCXR126810
R239	681	FCXR126810
R240	475	FCXR124750
R241	W0.22/5	FCRY000100
R242	1k62	FCXR131620
R243	6k81	FCXR136810
R244	1uH+10	FCIND00200
R245	10k0	FCXR141000
R246	33k2	FCXR143320
R247	2.2/2	FCRC512200
R248	6.8/2	FCRC516800
R249	33k2	FCXR143320
R250	33k2	FCXR143320
R251	47k5	FCXR144750
R252	1k50	FCXR131500
R253	47k5	FCXR144750
R254	22k1	FCXR142210
R255	22k1	FCXR142210
R256	681k	FCXR156810
R257	3k32	FCXR133320
R258	487	FCXR124870
R259	191	FCXR121910
R260	1k0	FCXR131000
R261	20.0	FCXR112000
R262	681	FCXR126810
R263	681	FCXR126810
R264	56.2	FCXR115620
R268	56.2	FCXR115620
R269	1k0	FCXR131000
R270	475	FCXR124750
R271	W0.22/5	FCRY000100
R272	1k62	FCXR131620
R273	33k2	FCXR143320

OLD VERSION

REFERENCE	VALUE	CODE
R274	6k81	FCXR136810
R275	33k2	FCXR143320
R276	22k1	FCXR142210
R277	976k	FCXR159760
R278	1k0	FCXR131000
R279	1k0	FCXR131000
R280	20k0	FCXR142000
R281	1k0	FCXR131000
R282	20k0	FCXR142000
R283	10M	FCXR071000
R284	191	FCXR121910
R285	487	FCXR124870
R286	681	FCXR126810
R287	1k82	FCXR131820
R288	681	FCXR126810
R289	2k5PT15	FCRJG42500
R290	56.2	FCXR115620
R293	56.2	FCXR115620
R295	1k0	FCXR131000
R298	20.0	FCXR112000
R299	681	FCXR126810
R300	681	FCXR126810
R301	475	FCXR124750
R302	W0.22/5	FCRY000100
R303	1k62	FCXR131620
R304	6k81	FCXR136810
R305	1u+10	FCIND00200
R306	10k0	FCXR141000
R307	33k2	FCXR143320
R308	2.2/2	FCRC512200
R309	6.8/2	FCRC516800
R310	33k2	FCXR143320
R311	33k2	FCXR143320
R312	47k5	FCXR144750
R313	1k50	FCXR131500
R314	47k5	FCXR144750
R315	22k1	FCXR142210
R316	22k1	FCXR142210
R317	681k	FCXR156810
R318	3k32	FCXR133320
R319	487	FCXR124870
R320	191	FCXR121910
R321	1k0	FCXR131000
R322	20.0	FCXR112000
R323	681	FCXR126810
R324	681	FCXR126810
R325	56.2	FCXR115620
R329	56.2	FCXR115620
R330	1k0	FCXR131000
R331	475	FCXR124750
R332	W0.22/5	FCRY000100
R333	1k62	FCXR131620
R334	33k2	FCXR143320
R335	6k81	FCXR136810
R336	33k2	FCXR143320
R337	22k1	FCXR142210
R338	976k	FCXR159760
R339	1k0	FCXR131000

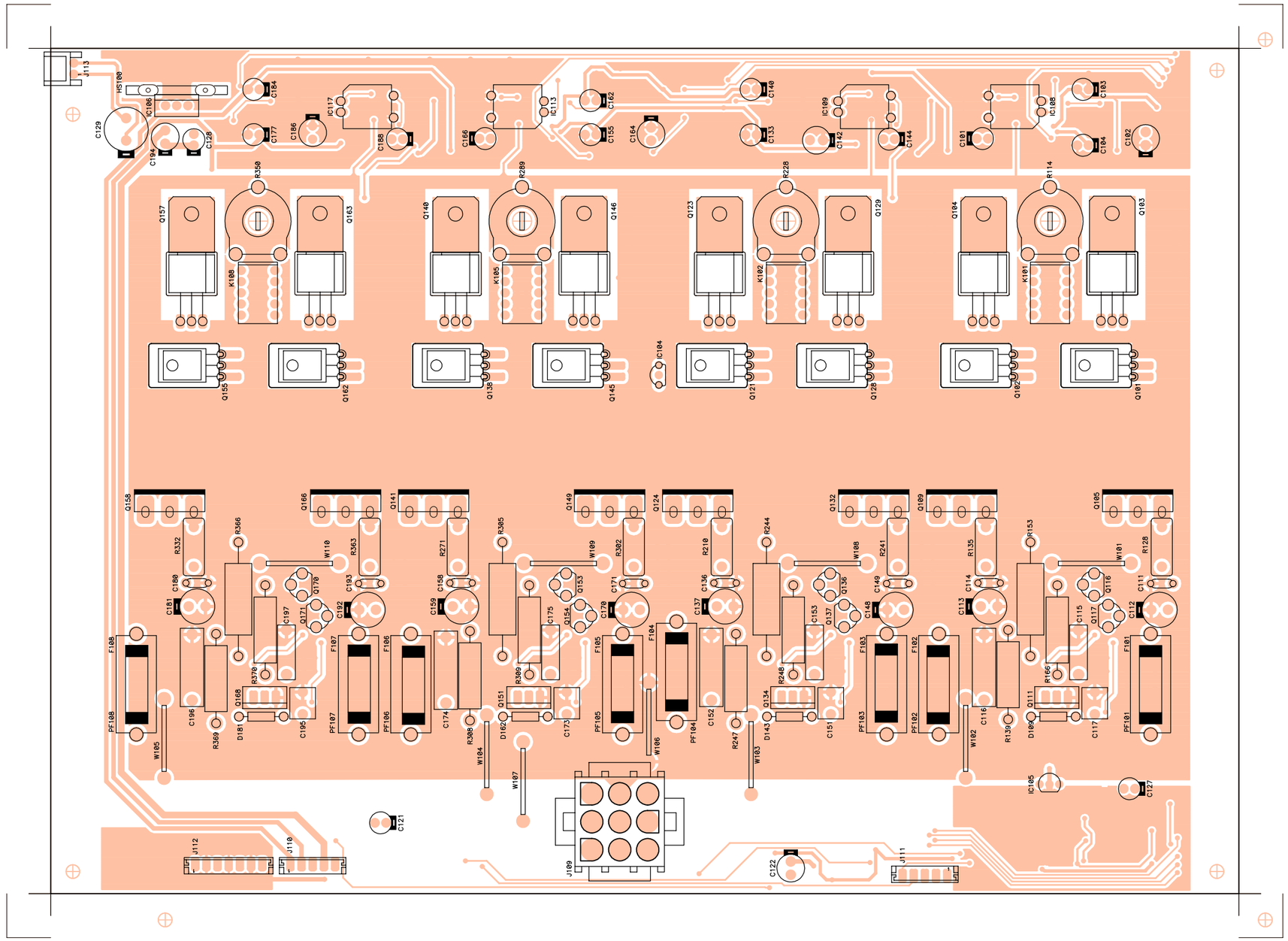
OLD VERSION

REFERENCE	VALUE	CODE
R340	1k0	FCXR131000
R341	20k0	FCXR142000
R342	1k0	FCXR131000
R343	20k0	FCXR142000
R344	10M	FCXR071000
R345	191	FCXR121910
R346	487	FCXR124870
R347	681	FCXR126810
R348	1k82	FCXR131820
R349	681	FCXR126810
R350	2k5PT15	FCRJG42500
R351	56.2	FCXR115620
R354	56.2	FCXR115620
R356	1k0	FCXR131000
R359	20.0	FCXR112000
R360	681	FCXR126810
R361	681	FCXR126810
R362	475	FCXR124750
R363	W0.22/5	FCRY000100
R364	1k62	FCXR131620
R365	6k81	FCXR136810
R366	1uH+10	FCIND00200
R367	10k0	FCXR141000
R368	33k2	FCXR143320
R369	2.2/2	FCRC512200
R370	6.8/2	FCRC516800
R371	33k2	FCXR143320
R372	33k2	FCXR143320
R373	47k5	FCXR144750
R374	1k50	FCXR131500
R375	47k5	FCXR144750
RX100	0	FCXR000000
RX101	0	FCXR000000
RX102	0	FCXR000000
RX103	0	FCXR000000
RX104	0	FCXR000000
RX105	0	FCXR000000
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RX107	0	FCXR000000
RX108	0	FCXR000000
RX109	0	FCXR000000
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RX111	0	FCXR000000
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RX113	0	FCXR000000
RX114	0	FCXR000000
RX115	0	FCXR000000
RX116	0	FCXR000000
RX117	0	FCXR000000
RX118	0	FCXR000000
RX119	0	FCXR000000
RX120	0	FCXR000000
RX121	0	FCXR000000
SC100	SCREW M4x6 SPAN	FCT8040061
SC101	SCREW M4x6 SPAN	FCT8040061
SC102	SCREW M4x6 SPAN	FCT8040061
SC103	SCREW M4x6 SPAN	FCT8040061
SC104	SCREW M3x10 SPA	FCT8030100

OLD VERSION

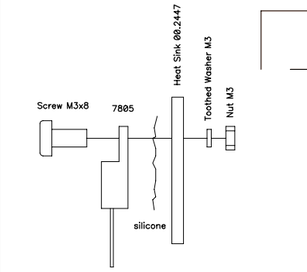
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SC107	SCREW M3x10 SPA	FCT8030100
SC108	SCREW M3x10 SPA	FCT8030100
SC109	SCREW M3x10 SPA	FCT8030100
SC110	SCREW M3x10 SPA	FCT8030100
SC111	SCREW M3x10 SPA	FCT8030100
SC112	SCREW M3x5	FCT8503005
SC113	SCREW M3x5	FCT8503005
SC114	SCREW M3x5	FCT8503005
SC115	SCREW M3x5	FCT8503005
SC116	SCREW M3x5	FCT8503005
SC117	SCREW M3x5	FCT8503005
SC118	SCREW M3x5	FCT8503005
SC119	SCREW M3x5	FCT8503005
SC120	SCREW M3x8	FCT7503008
W101	19mm	FCMECPON19
W102	19mm	FCMECPON19
W103	19mm	FCMECPON19
W104	19mm	FCMECPON19
W105	19mm	FCMECPON19
W106	19mm	FCMECPON19
W107	19mm	FCMECPON19
W108	19mm	FCMECPON19
W109	19mm	FCMECPON19
W110	19mm	FCMECPON19
WA100	WASHER 3.2x6x1	FCARM32010
WA101	WASHER 3.2x6x1	FCARM32010
WA102	WASHER 3.2x6x1	FCARM32010
WA103	WASHER 3.2x6x1	FCARM32010
WA104	WASHER 3.2x6x1	FCARM32010
WA105	WASHER 3.2x6x1	FCARM32010
WA106	WASHER 3.2x6x1	FCARM32010
WA107	WASHER 3.2x6x1	FCARM32010
WA108	WASHER M3 DIN6798	FCARDE0300

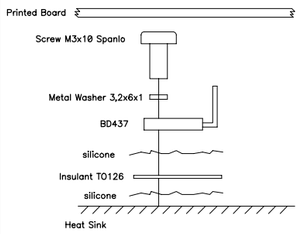
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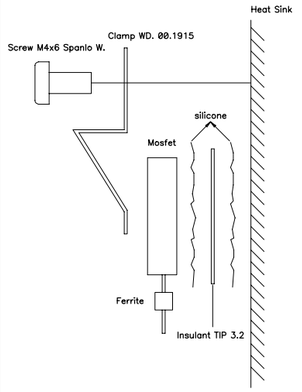


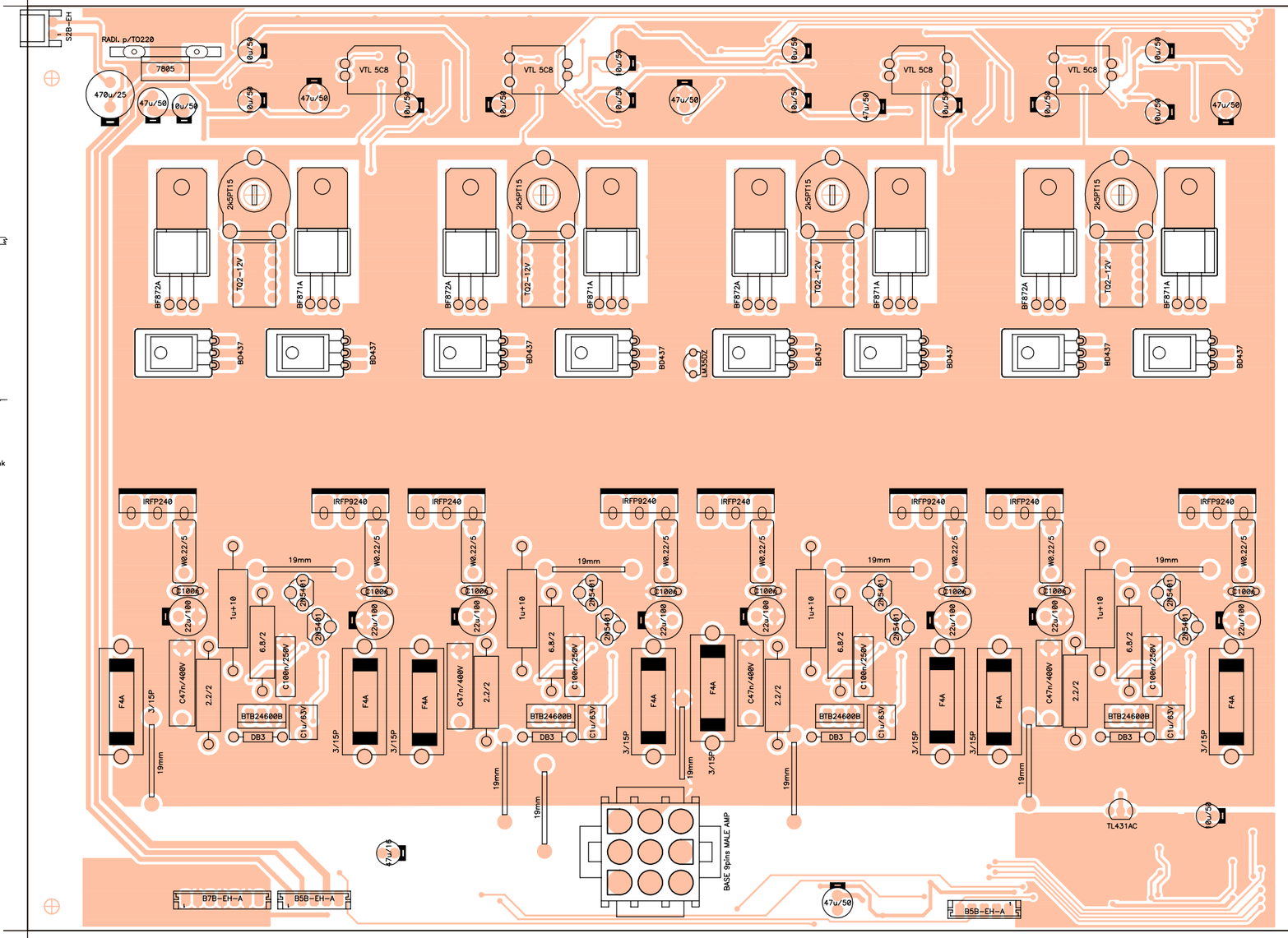
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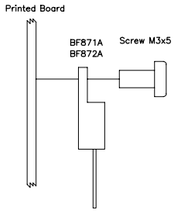
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			view: Reference
	drawn by: M. Amoros	date: 030721	approved by: Angel Sanuy
number: 33.0389	version: 01.04	title: EP05-99 Power Amp.	





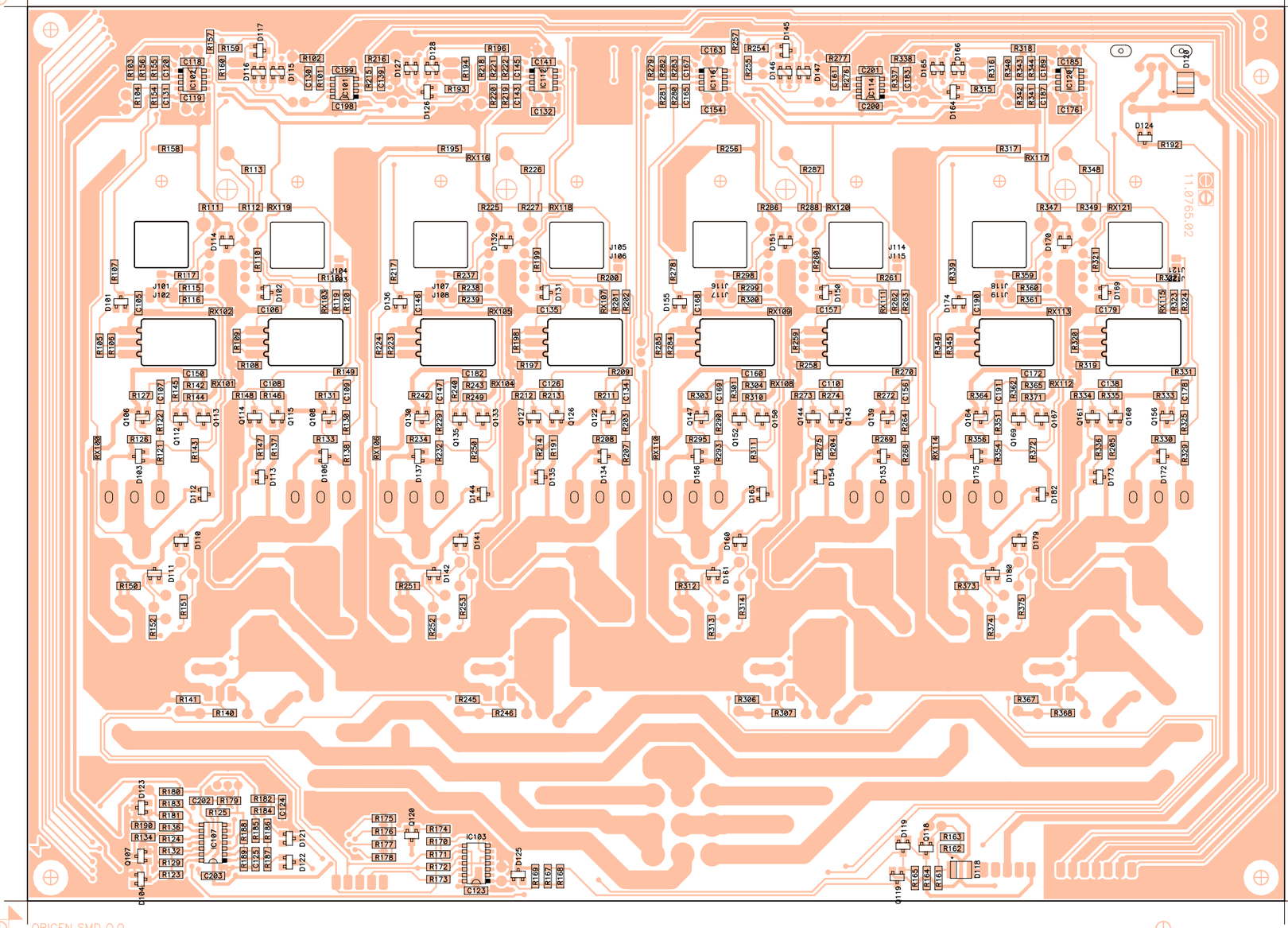






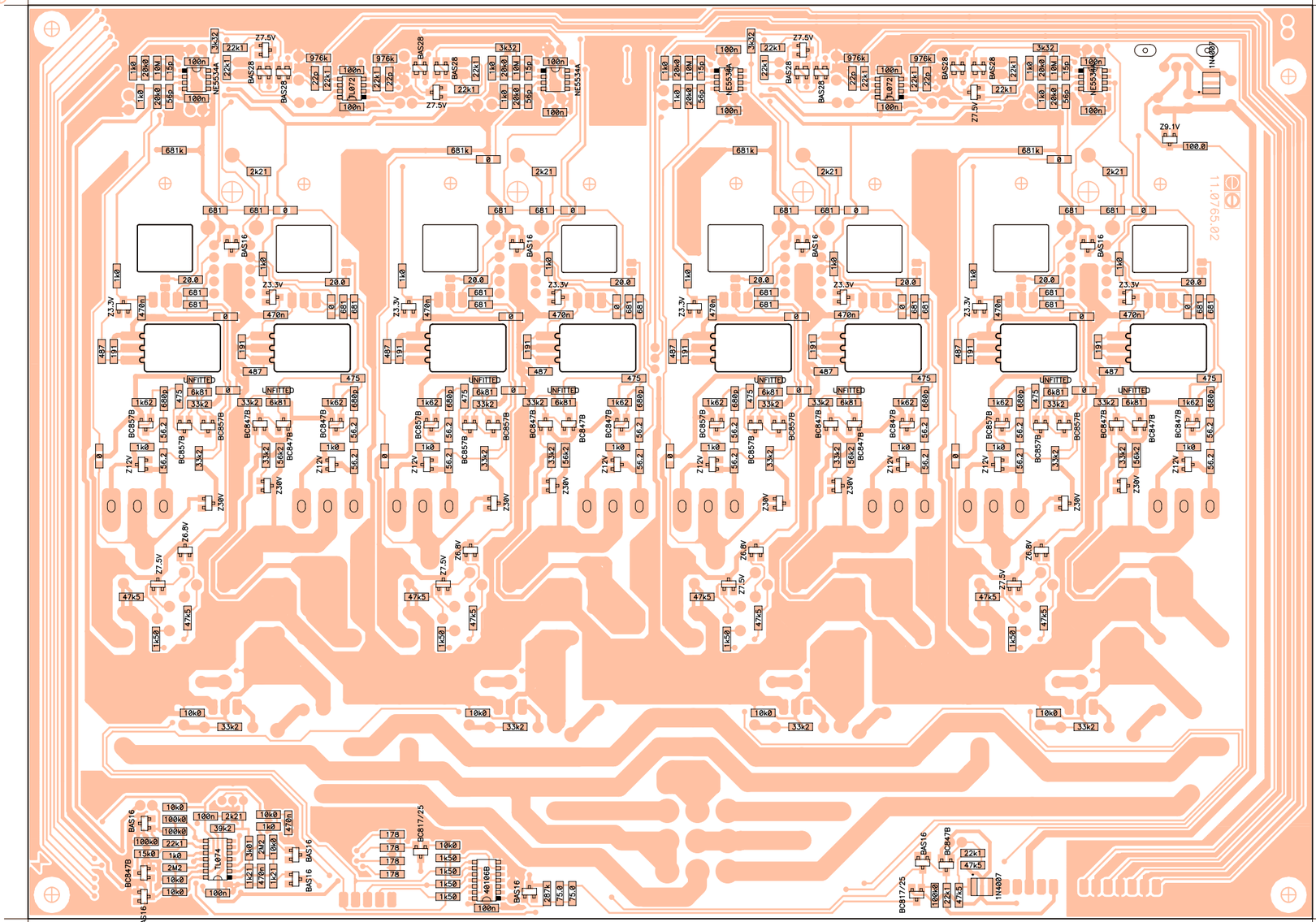
OLD VERSION

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-02.00 schema no: 10.0490-01.04 insertion file no:	side: Component view: Value	
number: 33.0390	version: 01.06	drawn by: M. Amoros	date: 030721	approved by: Angel Sanuy
	title: EP05-99 Power Amp.		



OLD VERSION

ECLER ee LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-02.00 schema no: 10.0490-01.04 insertion file no: 81.0011-01.03	side: Solder view: Reference
	drawn by: M. Amoros — date: 030721	approved by: Angel Sanuy
number: 33.0391 — version: 01.04	title: EP05-99 Power Amp.	



OLD VERSION

ECLEREE LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-02.00 schema no: 10.0490-01.04 insertion file no: 81.0011-01.03		side: Solder
			view: Value
	drawn by: M. Amoros	date: 030721	approved by: Angel Sanuy
number: 33.0392	version: 01.04	title: EP05-99 Power Amp.	

REFERENCE	VALUE	CODE
C101	10u/50	FCCE250100
C102	47u/50	FCCE250470
C103	10u/50	FCCE250100
C104	10u/50	FCCE250100
C105	470n	FCXCN44700
C106	470n	FCXCN44700
C107	680p	FCXCN26800
C108	UNFITTED	UNFITTED
C109	680p	FCXCN26800
C110	UNFITTED	UNFITTED
C111	C100n	FCCC151010
C112	22u/100	FCCE350220
C113	22u/100	FCCE350220
C114	C100n	FCCC151010
C115	C100n/250V	FCCDN11000
C116	C47n/400V	FCCDH71047
C117	C1u/63V	FCCDK20010
C118	100n	FCXCN41000
C119	100n	FCXCN41000
C120	15p	FCXCN11500
C121	47u/16	FCCE100000
C122	47u/50	FCCE250470
C123	100n	FCXCN41000
C124	470n	FCXCN44700
C125	470n	FCXCN44700
C126	UNFITTED	UNFITTED
C127	10u/50	FCCE250100
C128	10u/50	FCCE250100
C129	470u/25	FCCE154700
C130	22p	FCXCN12200
C131	56p	FCXCN15600
C132	100n	FCXCN41000
C133	10u/50	FCCE250100
C134	680p	FCXCN26800
C135	470n	FCXCN44700
C136	C100n	FCCC151010
C137	22u/100	FCCE350220
C138	UNFITTED	UNFITTED
C139	22p	FCXCN12200
C140	10u/50	FCCE250100
C141	100n	FCXCN41000
C142	47u/50	FCCE250470
C143	56p	FCXCN15600
C144	10u/50	FCCE250100
C145	15p	FCXCN11500
C146	470n	FCXCN44700
C147	680p	FCXCN26800
C148	22u/100	FCCE350220
C149	C100n	FCCC151010
C150	UNFITTED	UNFITTED
C151	C1u/63V	FCCDK20010
C152	C47n/400V	FCCDH71047
C153	C100n/250V	FCCDN11000
C154	100n	FCXCN41000
C155	10u/50	FCCE250100
C156	680p	FCXCN26800
C157	470n	FCXCN44700

OLD VERSION

REFERENCE	VALUE	CODE
C158	C100n	FCCC151010
C159	22u/100	FCCE350220
C160	UNFITTED	UNFITTED
C161	22p	FCXCN12200
C162	10u/50	FCCE250100
C163	100n	FCXCN41000
C164	47u/50	FCCE250470
C165	56p	FCXCN15600
C166	10u/50	FCCE250100
C167	15p	FCXCN11500
C168	470n	FCXCN44700
C169	680p	FCXCN26800
C170	22u/100	FCCE350220
C171	C100n	FCCC151010
C172	UNFITTED	UNFITTED
C173	C1u/63V	FCCDK20010
C174	C47n/400V	FCCDH71047
C175	C100n/250V	FCCDN11000
C176	100n	FCXCN41000
C177	10u/50	FCCE250100
C178	680p	FCXCN26800
C179	470n	FCXCN44700
C180	C100n	FCCC151010
C181	22u/100	FCCE350220
C182	UNFITTED	UNFITTED
C183	22p	FCXCN12200
C184	10u/50	FCCE250100
C185	100n	FCXCN41000
C186	47u/50	FCCE250470
C187	56p	FCXCN15600
C188	10u/50	FCCE250100
C189	15p	FCXCN11500
C190	470n	FCXCN44700
C191O	680p	FCXCN26800
C192	22u/100	FCCE350220
C193	C100n	FCCC151010
C194	47u/50	FCCE250470
C195	C1u/63V	FCCDK20010
C196	C47n/400V	FCCDH71047
C197	C100n/250V	FCCDN11000
C198	100n	FCXCN41000
C199	100n	FCXCN41000
C200	100n	FCXCN41000
C201	100n	FCXCN41000
C202	100n	FCXCN41000
C203	100n	FCXCN41000
CI101	11.0765	FCCIMPA765
D101	Z3.3V	FCXZ000033
D102	Z3.3V	FCXZ000033
D103	Z12V	FCXZ000120
D104	BAS16	FCXDDBAS16
D106	Z12V	FCXZ000120
D109	DB3	FCDIDB3000
D110	Z6.8V	FCXZ000068
D111	Z7.5V	FCXZ000075
D112	Z30V	FCXZ000300
D113	Z30V	FCXZ000300
D114	BAS16	FCXDDBAS16

OLD VERSION

REFERENCE	VALUE	CODE
D115	BAS28	FCXDDBAS28
D116	BAS28	FCXDDBAS28
D117	Z7.5V	FCXZ000075
D118	1N4007	FCXDD40070
D119	BAS16	FCXDDBAS16
D120	1N4007	FCXDD40070
D121	BAS16	FCXDDBAS16
D122	BAS16	FCXDDBAS16
D123	BAS16	FCXDDBAS16
D124	Z9.1V	FCXZ000091
D125	BAS16	FCXDDBAS16
D126	Z7.5V	FCXZ000075
D127	BAS28	FCXDDBAS28
D128	BAS28	FCXDDBAS28
D131	Z3.3V	FCXZ000033
D132	BAS16	FCXDDBAS16
D134	Z12V	FCXZ000120
D135	Z30V	FCXZ000300
D136	Z3.3V	FCXZ000033
D137	Z12V	FCXZ000120
D141	Z6.8V	FCXZ000068
D142	Z7.5V	FCXZ000075
D143	DB3	FCDIDB3000
D144	Z30V	FCXZ000300
D145	Z7.5V	FCXZ000075
D146	BAS28	FCXDDBAS28
D147	BAS28	FCXDDBAS28
D150	Z3.3V	FCXZ000033
D151	BAS16	FCXDDBAS16
D153	Z12V	FCXZ000120
D154	Z30V	FCXZ000300
D155	Z3.3V	FCXZ000033
D156	Z12V	FCXZ000120
D160	Z6.8V	FCXZ000068
D161	Z7.5V	FCXZ000075
D162	DB3	FCDIDB3000
D163	Z30V	FCXZ000300
D164	Z7.5V	FCXZ000075
D165	BAS28	FCXDDBAS28
D166	BAS28	FCXDDBAS28
D169	Z3.3V	FCXZ000033
D170	BAS16	FCXDDBAS16
D172	Z12V	FCXZ000120
D173	Z30V	FCXZ000300
D174	Z3.3V	FCXZ000033
D175	Z12V	FCXZ000120
D179	Z6.8V	FCXZ000068
D180	Z7.5V	FCXZ000075
D181	DB3	FCDIDB3000
D182	Z30V	FCXZ000300
F101	F4A	FCFUS50200
F102	F4A	FCFUS50200
F103	F4A	FCFUS50200
F104	F4A	FCFUS50200
F105	F4A	FCFUS50200
F106	F4A	FCFUS50200
F107	F4A	FCFUS50200
F108	F4A	FCFUS50200

OLD VERSION

REFERENCE	VALUE	CODE
HS100	HEAT SINK TO220	FCMECT0220
HS101	HEAT SINK	FCRAD02000
IC101	TL072	FCIC072010
IC102	NE5534A	FCIC553410
IC103	40106B	FCIC401060
IC104	LM35DZ	FCIC350000
IC105	TL431AC	FCIC431000
IC106	7805	FCREG78050
IC107	TL074	FCIC074010
IC108	VTL 5C8	FCOPTVTL50
IC109	VTL 5C8	FCOPTVTL50
IC112	NE5534A	FCIC553410
IC113	VTL 5C8	FCOPTVTL50
IC114	TL072	FCIC072010
IC116	NE5534A	FCIC553410
IC117	VTL 5C8	FCOPTVTL50
IC120	NE5534A	FCIC553410
IN100	INSULANT TO126	FCMICTO126
IN101	INSULANT TO126	FCMICTO126
IN102	INSULANT TO126	FCMICTO126
IN103	INSULANT TO126	FCMICTO126
IN104	INSULANT TO126	FCMICTO126
IN105	INSULANT TO126	FCMICTO126
IN106	INSULANT TO126	FCMICTO126
IN107	INSULANT TO126	FCMICTO126
IN108	INSULANT TIP3.2	FCMICTIP32
IN109	INSULANT TIP3.2	FCMICTIP32
IN110	INSULANT TIP3.2	FCMICTIP32
IN111	INSULANT TIP3.2	FCMICTIP32
IN112	INSULANT TIP3.2	FCMICTIP32
IN113	INSULANT TIP3.2	FCMICTIP32
IN114	INSULANT TIP3.2	FCMICTIP32
IN115	INSULANT TIP3.2	FCMICTIP32
IN116	INSULANT TIP3.2	FCMICTIP32
J109	BASE 9pins MALE	FCCTAMP090
J110	B5B-EH-A	FCCTM00050
J111	B5B-EH-A	FCCTM00050
J112	B7B-EH-A	FCCTM00070
J113	S2B-EH	FCCTM10020
J114	S2B-EH	FCCTM10020
J115	S2B-EH	FCCTM10020
J116	S2B-EH	FCCTM10020
J117	S2B-EH	FCCTM10020
J118	S2B-EH	FCCTM10020
J119	S2B-EH	FCCTM10020
J120	S2B-EH	FCCTM10020
J121	S2B-EH	FCCTM10020
K101	TQ2-12V	FCREL00300
K102	TQ2-12V	FCREL00300
K105	TQ2-12V	FCREL00300
K108	TQ2-12V	FCREL00300
MP100	CLAMP WD00191O5	FCPINZAM00
MP101	CLAMP WD00191O5	FCPINZAM00
NV100	NUT M3	FCTUE00300
PF101	FUSE HOLDER	FCPORF3150
PF102	FUSE HOLDER	FCPORF3150
PF103	FUSE HOLDER	FCPORF3150
PF104	FUSE HOLDER	FCPORF3150

OLD VERSION

REFERENCE	VALUE	CODE
PF105	FUSE HOLDER	FCPORF3150
PF106	FUSE HOLDER	FCPORF3150
PF107	FUSE HOLDER	FCPORF3150
PF108	FUSE HOLDER	FCPORF3150
Q101	BD437	FCTR437000
Q102	BD437	FCTR437000
Q103	BF871A	FCTR871000
Q104	BF872A	FCTR872000
Q105	IRFP9240	FCTR243000
Q106	BC857B	FCXTT08570
Q107	BC847B	FCXTT08470
Q108	BC847B	FCXTT08470
Q109	IRFP240	FCTR240000
Q111	BTB24600B	FCTI246000
Q112	BC857B	FCXTT08570
Q113	BC857B	FCXTT08570
Q114	BC847B	FCXTT08470
Q115	BC847B	FCXTT08470
Q116	2N5401	FCTR254010
Q117	2N5401	FCTR254010
Q118	BC847B	FCXTT08470
Q119	BC817/25	FCXTT08170
Q120	BC817/25	FCXTT08170
Q121	BD437	FCTR437000
Q122	BC847B	FCXTT08470
Q123	BF872A	FCTR872000
Q124	IRFP240	FCTR240000
Q126	BC847B	FCXTT08470
Q127	BC847B	FCXTT08470
Q128	BD437	FCTR437000
Q129	BF871A	FCTR871000
Q130	BC857B	FCXTT08570
Q132	IRFP9240	FCTR243000
Q133	BC857B	FCXTT08570
Q134	BTB24600B	FCTI246000
Q135	BC857B	FCXTT08570
Q136	2N5401	FCTR254010
Q137	2N5401	FCTR254010
Q138	BD437	FCTR437000
Q139	BC847B	FCXTT08470
Q140	BF872A	FCTR872000
Q141	IRFP240	FCTR240000
Q143	BC847B	FCXTT08470
Q144	BC847B	FCXTT08470
Q145	BD437	FCTR437000
Q146	BF871A	FCTR871000
Q147	BC857B	FCXTT08570
Q149	IRFP9240	FCTR243000
Q150	BC857B	FCXTT08570
Q151	BTB24600B	FCTI246000
Q152	BC857B	FCXTT08570
Q153	2N5401	FCTR254010
Q154	2N5401	FCTR254010
Q155	BD437	FCTR437000
Q156	BC847B	FCXTT08470
Q157	BF872A	FCTR872000
Q158	IRFP240	FCTR240000
Q160	BC847B	FCXTT08470

OLD VERSION

REFERENCE	VALUE	CODE
Q161	BC847B	FCXTT08470
Q162	BD437	FCTR437000
Q163	BF871A	FCTR871000
Q164	BC857B	FCXTT08570
Q166	IRFP9240	FCTR243000
Q167	BC857B	FCXTT08570
Q168	BTB24600B	FCTI246000
Q169	BC857B	FCXTT08570
Q170	2N5401	FCTR254010
Q171	2N5401	FCTR254010
R101	22k1	FCXR142210
R102	976k	FCXR159760
R103	1k0	FCXR131000
R104	1k0	FCXR131000
R105	487	FCXR124870
R106	191	FCXR121910
R107	1k0	FCXR131000
R108	487	FCXR124870
R109	191	FCXR121910
R110	1k0	FCXR131000
R111	681	FCXR126810
R112	681	FCXR126810
R113	2k21	FCXR132210
R114	2k5PT15	FCRJG42500
R115	681	FCXR126810
R116	681	FCXR126810
R117	20.0	FCXR112000
R118	20.0	FCXR112000
R119	681	FCXR126810
R120	681	FCXR126810
R121	56.2	FCXR115620
R122	56.2	FCXR115620
R123	10k0	FCXR141000
R124	1k0	FCXR131000
R125	39k2	FCXR143920
R126	1k0	FCXR131000
R127	1k62	FCXR131620
R128	W0.22/5	FCRY000100
R129	10k0	FCXR141000
R130	56.2	FCXR115620
R131	1k62	FCXR131620
R132	2M2	FCXR062200
R133	1k0	FCXR131000
R134	15k0	FCXR141500
R135	W0.22/5	FCRY000100
R136	22k1	FCXR142210
R137	56k2	FCXR145620
R138	56.2	FCXR115620
R139	2.2/2	FCRC512200
R140	33k2	FCXR143320
R141	10k0	FCXR141000
R142	6k81	FCXR136810
R143	33k2	FCXR143320
R144	33k2	FCXR143320
R145	475	FCXR124750
R146	6k81	FCXR136810
R147	33k2	FCXR143320
R148	33k2	FCXR143320

OLD VERSION

REFERENCE	VALUE	CODE
R149	475	FCXR124750
R150	47k5	FCXR144750
R151	47k5	FCXR144750
R152	1k50	FCXR131500
R153	1uH+10	FCIND00200
R154	20k0	FCXR142000
R155	10M	FCXR071000
R156	20k0	FCXR142000
R157	3k32	FCXR133320
R158	681k	FCXR156810
R159	22k1	FCXR142210
R160	22k1	FCXR142210
R161	47k5	FCXR144750
R162	47k5	FCXR144750
R163	22k1	FCXR142210
R164	22k1	FCXR142210
R165	100k0	FCXR151000
R166	6.8/2	FCRC516800
R167	75.0	FCXR117500
R168	75.0	FCXR117500
R169	287k	FCXR152870
R170	1k50	FCXR131500
R171	1k50	FCXR131500
R172	1k50	FCXR131500
R173	1k50	FCXR131500
R174	10k0	FCXR141000
R175	178	FCXR121780
R176	178	FCXR121780
R177	178	FCXR121780
R178	178	FCXR121780
R179	2k21	FCXR132210
R180	10k0	FCXR141000
R181	100k0	FCXR151000
R182	10k0	FCXR141000
R183	100k0	FCXR151000
R184	1k0	FCXR131000
R185	2M2	FCXR062200
R186	10k0	FCXR141000
R187	1k21	FCXR131210
R188	3k01	FCXR133010
R189	1k21	FCXR131210
R190	100k0	FCXR151000
R191	56k2	FCXR145620
R192	100.0	FCXR121000
R193	22k1	FCXR142210
R194	22k1	FCXR142210
R195	681k	FCXR156810
R196	3k32	FCXR133320
R197	487	FCXR124870
R198	191	FCXR121910
R199	1k0	FCXR131000
R200	20.0	FCXR112000
R201	681	FCXR126810
R202	681	FCXR126810
R203	56.2	FCXR115620
R205	56k2	FCXR145620
R206	56k2	FCXR145620
R207	56.2	FCXR115620

OLD VERSION

REFERENCE	VALUE	CODE
R208	1k0	FCXR131000
R209	475	FCXR124750
R210	W0.22/5	FCRY000100
R211	1k62	FCXR131620
R212	33k2	FCXR143320
R213	6k81	FCXR136810
R214	33k2	FCXR143320
R215	22k1	FCXR142210
R216	976k	FCXR159760
R217	1k0	FCXR131000
R218	1k0	FCXR131000
R219	20k0	FCXR142000
R220	1k0	FCXR131000
R221	20k0	FCXR142000
R222	10M	FCXR071000
R223	191	FCXR121910
R224	487	FCXR124870
R225	681	FCXR126810
R226	2k21	FCXR132210
R227	681	FCXR126810
R228	2k5PT15	FCRJG42500
R229	56.2	FCXR115620
R232	56.2	FCXR115620
R234	1k0	FCXR131000
R237	20.0	FCXR112000
R238	681	FCXR126810
R239	681	FCXR126810
R240	475	FCXR124750
R241	W0.22/5	FCRY000100
R242	1k62	FCXR131620
R243	6k81	FCXR136810
R244	1uH+10	FCIND00200
R245	10k0	FCXR141000
R246	33k2	FCXR143320
R247	2.2/2	FCRC512200
R248	6.8/2	FCRC516800
R249	33k2	FCXR143320
R250	33k2	FCXR143320
R251	47k5	FCXR144750
R252	1k50	FCXR131500
R253	47k5	FCXR144750
R254	22k1	FCXR142210
R255	22k1	FCXR142210
R256	681k	FCXR156810
R257	3k32	FCXR133320
R258	487	FCXR124870
R259	191	FCXR121910
R260	1k0	FCXR131000
R261	20.0	FCXR112000
R262	681	FCXR126810
R263	681	FCXR126810
R264	56.2	FCXR115620
R268	56.2	FCXR115620
R269	1k0	FCXR131000
R270	475	FCXR124750
R271	W0.22/5	FCRY000100
R272	1k62	FCXR131620
R273	33k2	FCXR143320

OLD VERSION

REFERENCE	VALUE	CODE
R274	6k81	FCXR136810
R275	33k2	FCXR143320
R276	22k1	FCXR142210
R277	976k	FCXR159760
R278	1k0	FCXR131000
R279	1k0	FCXR131000
R280	20k0	FCXR142000
R281	1k0	FCXR131000
R282	20k0	FCXR142000
R283	10M	FCXR071000
R284	191	FCXR121910
R285	487	FCXR124870
R286	681	FCXR126810
R287	2k21	FCXR132210
R288	681	FCXR126810
R289	2k5PT15	FCRJG42500
R290	56.2	FCXR115620
R293	56.2	FCXR115620
R295	1k0	FCXR131000
R298	20.0	FCXR112000
R299	681	FCXR126810
R300	681	FCXR126810
R301	475	FCXR124750
R302	W0.22/5	FCRY000100
R303	1k62	FCXR131620
R304	6k81	FCXR136810
R305	1u+10	FCIND00200
R306	10k0	FCXR141000
R307	33k2	FCXR143320
R308	2.2/2	FCRC512200
R309	6.8/2	FCRC516800
R310	33k2	FCXR143320
R311	33k2	FCXR143320
R312	47k5	FCXR144750
R313	1k50	FCXR131500
R314	47k5	FCXR144750
R315	22k1	FCXR142210
R316	22k1	FCXR142210
R317	681k	FCXR156810
R318	3k32	FCXR133320
R319	487	FCXR124870
R320	191	FCXR121910
R321	1k0	FCXR131000
R322	20.0	FCXR112000
R323	681	FCXR126810
R324	681	FCXR126810
R325	56.2	FCXR115620
R329	56.2	FCXR115620
R330	1k0	FCXR131000
R331	475	FCXR124750
R332	W0.22/5	FCRY000100
R333	1k62	FCXR131620
R334	33k2	FCXR143320
R335	6k81	FCXR136810
R336	33k2	FCXR143320
R337	22k1	FCXR142210
R338	976k	FCXR159760
R339	1k0	FCXR131000

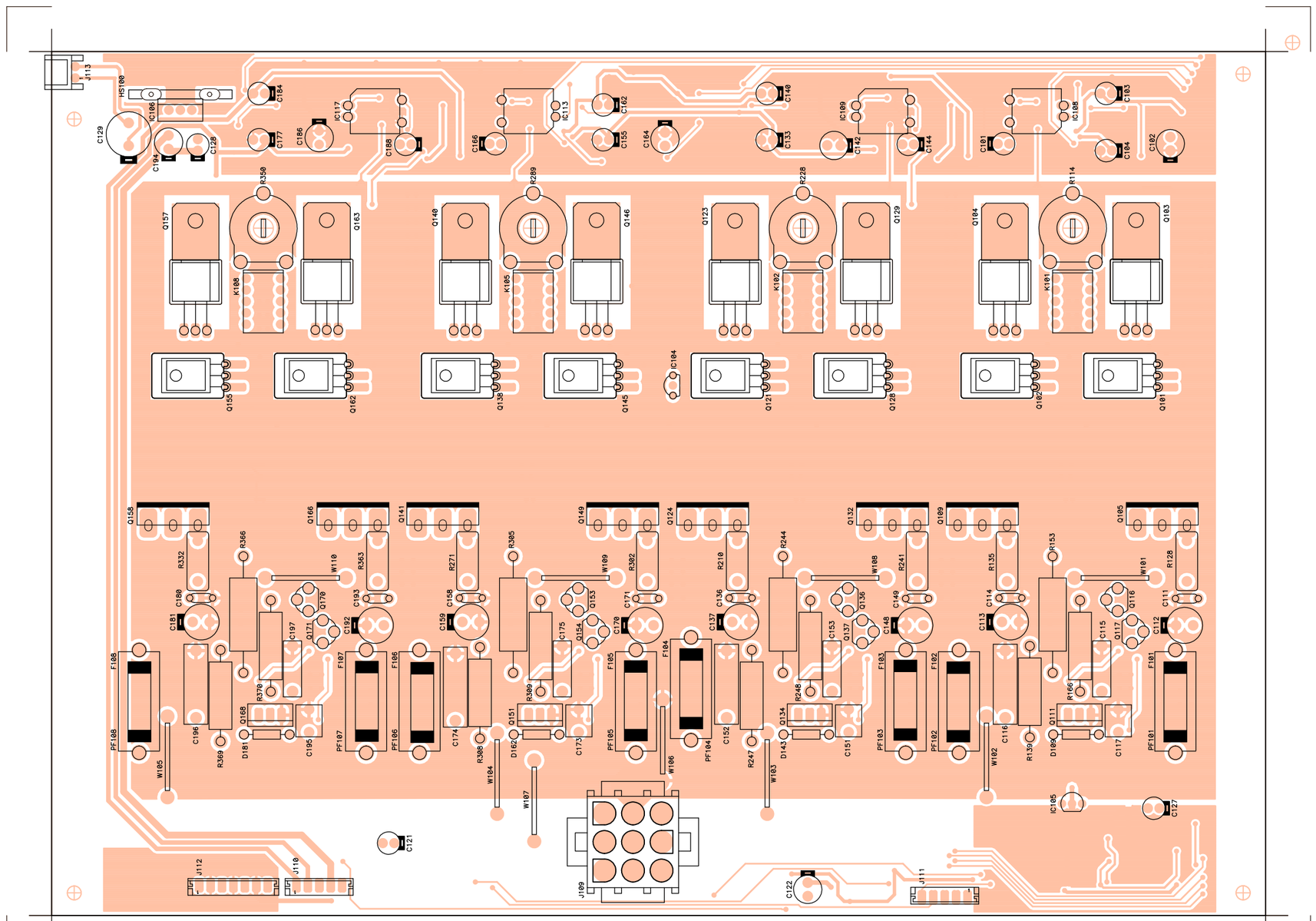
OLD VERSION

REFERENCE	VALUE	CODE
R340	1k0	FCXR131000
R341	20k0	FCXR142000
R342	1k0	FCXR131000
R343	20k0	FCXR142000
R344	10M	FCXR071000
R345	191	FCXR121910
R346	487	FCXR124870
R347	681	FCXR126810
R348	2k21	FCXR132210
R349	681	FCXR126810
R350	2k5PT15	FCRJG42500
R351	56.2	FCXR115620
R354	56.2	FCXR115620
R356	1k0	FCXR131000
R359	20.0	FCXR112000
R360	681	FCXR126810
R361	681	FCXR126810
R362	475	FCXR124750
R363	W0.22/5	FCRY000100
R364	1k62	FCXR131620
R365	6k81	FCXR136810
R366	1uH+10	FCIND00200
R367	10k0	FCXR141000
R368	33k2	FCXR143320
R369	2.2/2	FCRC512200
R370	6.8/2	FCRC516800
R371	33k2	FCXR143320
R372	33k2	FCXR143320
R373	47k5	FCXR144750
R374	1k50	FCXR131500
R375	47k5	FCXR144750
RX100	0	FCXR000000
RX101	0	FCXR000000
RX102	0	FCXR000000
RX103	0	FCXR000000
RX104	0	FCXR000000
RX105	0	FCXR000000
RX106	0	FCXR000000
RX107	0	FCXR000000
RX108	0	FCXR000000
RX109	0	FCXR000000
RX110	0	FCXR000000
RX111	0	FCXR000000
RX112	0	FCXR000000
RX113	0	FCXR000000
RX114	0	FCXR000000
RX115	0	FCXR000000
RX116	0	FCXR000000
RX117	0	FCXR000000
RX118	0	FCXR000000
RX119	0	FCXR000000
RX120	0	FCXR000000
RX121	0	FCXR000000
SC100	SCREW M4x6 SPAN	FCT8040061
SC101	SCREW M4x6 SPAN	FCT8040061
SC102	SCREW M4x6 SPAN	FCT8040061
SC103	SCREW M4x6 SPAN	FCT8040061
SC104	SCREW M3x10 SPA	FCT8030100

OLD VERSION

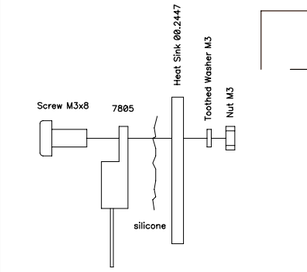
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SC105	SCREW M3x10 SPA	FCT8030100
SC106	SCREW M3x10 SPA	FCT8030100
SC107	SCREW M3x10 SPA	FCT8030100
SC108	SCREW M3x10 SPA	FCT8030100
SC109	SCREW M3x10 SPA	FCT8030100
SC110	SCREW M3x10 SPA	FCT8030100
SC111	SCREW M3x10 SPA	FCT8030100
SC112	SCREW M3x5	FCT8503005
SC113	SCREW M3x5	FCT8503005
SC114	SCREW M3x5	FCT8503005
SC115	SCREW M3x5	FCT8503005
SC116	SCREW M3x5	FCT8503005
SC117	SCREW M3x5	FCT8503005
SC118	SCREW M3x5	FCT8503005
SC119	SCREW M3x5	FCT8503005
SC120	SCREW M3x8	FCT7503008
W101	19mm	FCMECPON19
W102	19mm	FCMECPON19
W103	19mm	FCMECPON19
W104	19mm	FCMECPON19
W105	19mm	FCMECPON19
W106	19mm	FCMECPON19
W107	19mm	FCMECPON19
W108	19mm	FCMECPON19
W109	19mm	FCMECPON19
W110	19mm	FCMECPON19
WA100	WASHER 3.2x6x1	FCARM32010
WA101	WASHER 3.2x6x1	FCARM32010
WA102	WASHER 3.2x6x1	FCARM32010
WA103	WASHER 3.2x6x1	FCARM32010
WA104	WASHER 3.2x6x1	FCARM32010
WA105	WASHER 3.2x6x1	FCARM32010
WA106	WASHER 3.2x6x1	FCARM32010
WA107	WASHER 3.2x6x1	FCARM32010
WA108	WASHER M3 DIN6798	FCARDE0300

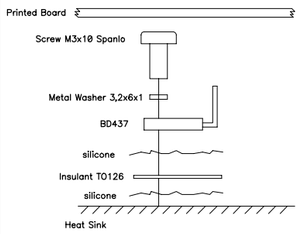
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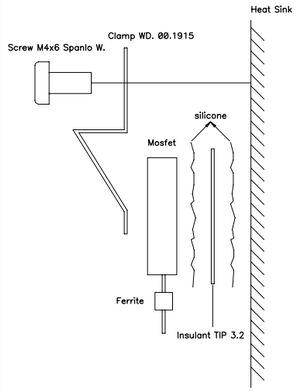


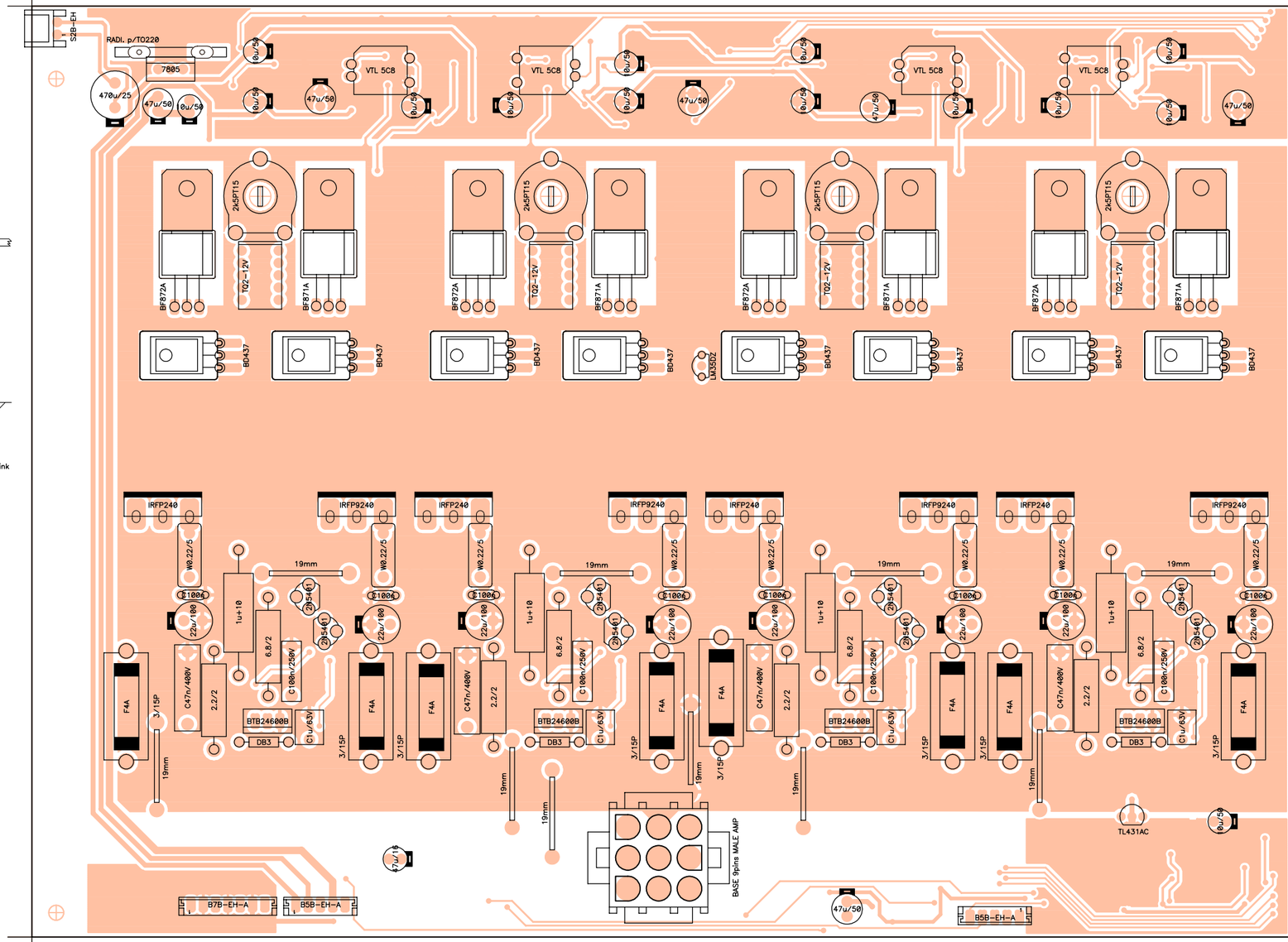
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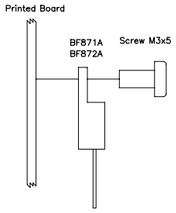
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			view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0389	version: 01.03	title: EP05-99 Power Amp.	





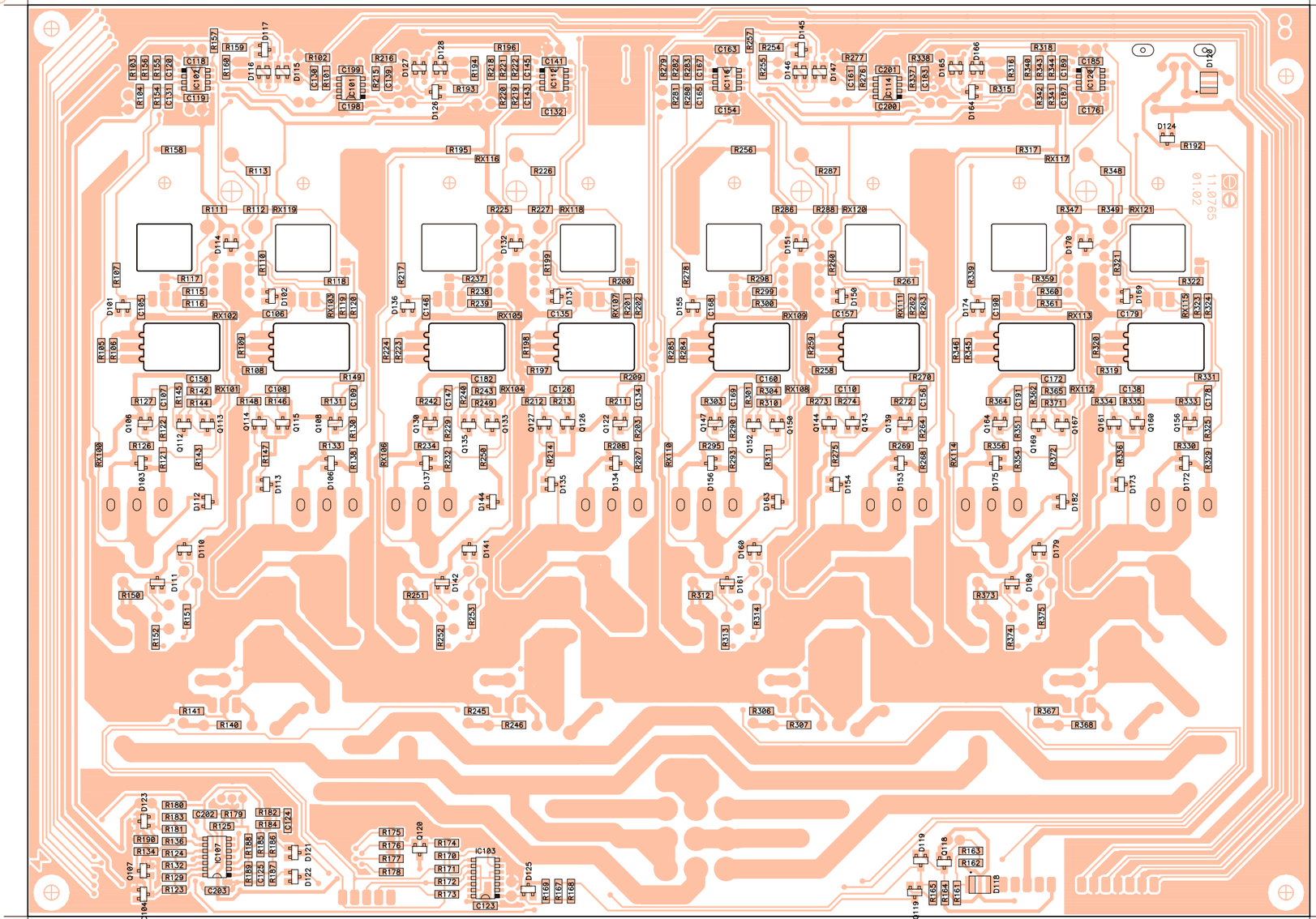






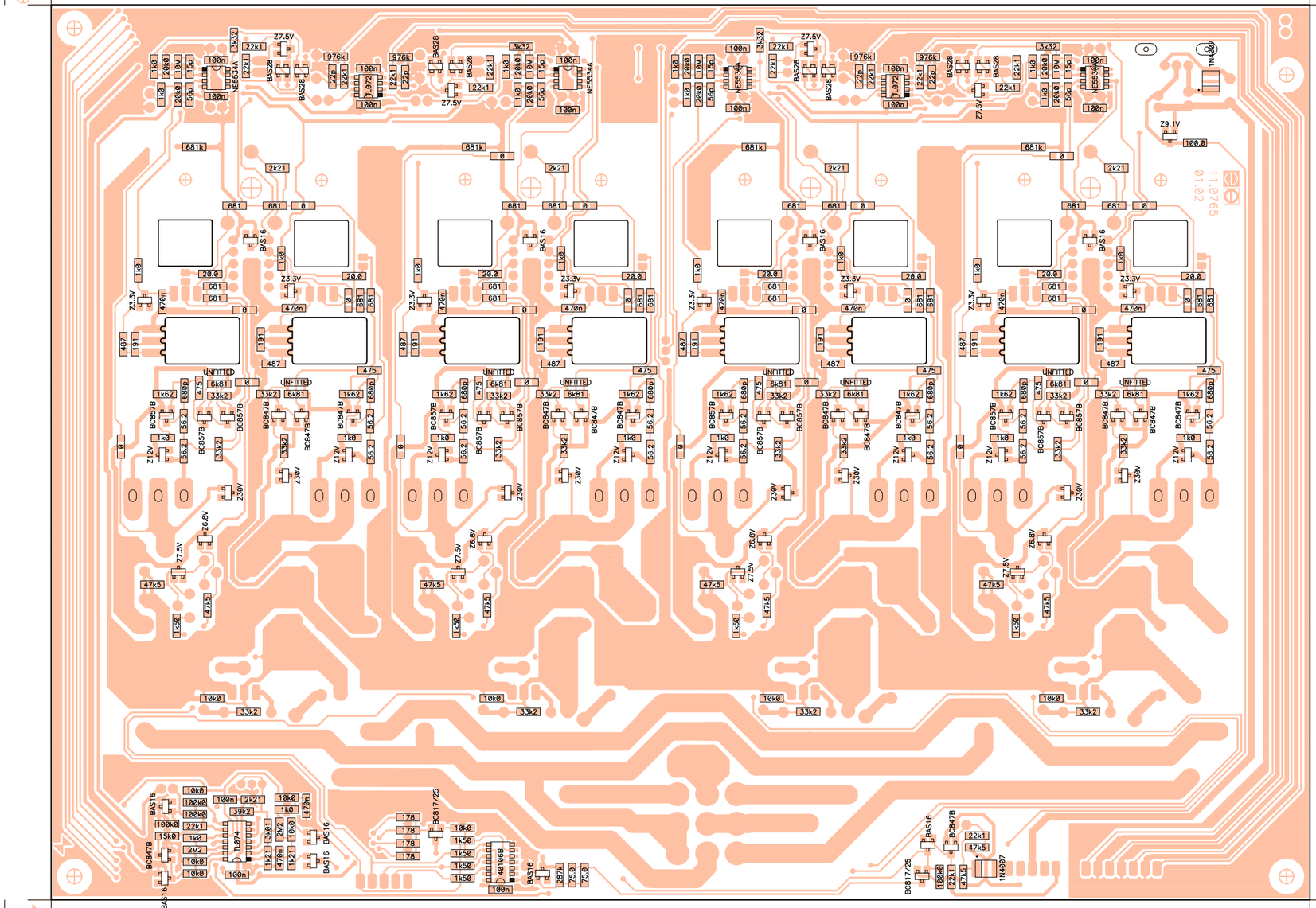
OLD VERSION

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.03 insertion file no:	side: Component view: Value	
number: 33.0390	version: 01.05	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
	title: EP05-99 Power Amp.		



OLD VERSION

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.03 insertion file no: 81.0011-01.02		side: Solder view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0391 / version: 01.03	title: EP05-99 Power Amp.		



OLD VERSION

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.03 insertion file no: 81.0011-01.02		side: Solder view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0392 / version: 01.03	title: EP05-99 Power Amp.		

REFERENCE	VALUE	CODE
C101	10u/50	FCCE250100
C102	47u/50	FCCE250470
C103	10u/50	FCCE250100
C104	10u/50	FCCE250100
C105	470n	FCXCN44700
C106	470n	FCXCN44700
C107	680p	FCXCN26800
C108	UNFITTED	UNFITTED
C109	680p	FCXCN26800
C110	UNFITTED	UNFITTED
C111	C100n	FCCC151010
C112	22u/100	FCCE350220
C113	22u/100	FCCE350220
C114	C100n	FCCC151010
C115	C100n/250V	FCCDN11000
C116	C47n/400V	FCCDH71047
C117	C1u/63V	FCCDK20010
C118	100n	FCXCN41000
C119	100n	FCXCN41000
C120	15p	FCXCN11500
C121	47u/16	FCCE100000
C122	47u/50	FCCE250470
C123	100n	FCXCN41000
C124	470n	FCXCN44700
C125	470n	FCXCN44700
C126	UNFITTED	UNFITTED
C127	10u/50	FCCE250100
C128	10u/50	FCCE250100
C129	470u/25	FCCE154700
C130	22p	FCXCN12200
C131	56p	FCXCN15600
C132	100n	FCXCN41000
C133	10u/50	FCCE250100
C134	680p	FCXCN26800
C135	470n	FCXCN44700
C136	C100n	FCCC151010
C137	22u/100	FCCE350220
C138	UNFITTED	UNFITTED
C139	22p	FCXCN12200
C140	10u/50	FCCE250100
C141	100n	FCXCN41000
C142	47u/50	FCCE250470
C143	56p	FCXCN15600
C144	10u/50	FCCE250100
C145	15p	FCXCN11500
C146	470n	FCXCN44700
C147	680p	FCXCN26800
C148	22u/100	FCCE350220
C149	C100n	FCCC151010
C150	UNFITTED	UNFITTED
C151	C1u/63V	FCCDK20010
C152	C47n/400V	FCCDH71047
C153	C100n/250V	FCCDN11000
C154	100n	FCXCN41000
C155	10u/50	FCCE250100
C156	680p	FCXCN26800
C157	470n	FCXCN44700

OLD VERSION

REFERENCE	VALUE	CODE
C158	C100n	FCCC151010
C159	22u/100	FCCE350220
C160	UNFITTED	UNFITTED
C161	22p	FCXCN12200
C162	10u/50	FCCE250100
C163	100n	FCXCN41000
C164	47u/50	FCCE250470
C165	56p	FCXCN15600
C166	10u/50	FCCE250100
C167	15p	FCXCN11500
C168	470n	FCXCN44700
C169	680p	FCXCN26800
C170	22u/100	FCCE350220
C171	C100n	FCCC151010
C172	UNFITTED	UNFITTED
C173	C1u/63V	FCCDK20010
C174	C47n/400V	FCCDH71047
C175	C100n/250V	FCCDN11000
C176	100n	FCXCN41000
C177	10u/50	FCCE250100
C178	680p	FCXCN26800
C179	470n	FCXCN44700
C180	C100n	FCCC151010
C181	22u/100	FCCE350220
C182	UNFITTED	UNFITTED
C183	22p	FCXCN12200
C184	10u/50	FCCE250100
C185	100n	FCXCN41000
C186	47u/50	FCCE250470
C187	56p	FCXCN15600
C188	10u/50	FCCE250100
C189	15p	FCXCN11500
C190	470n	FCXCN44700
C191O	680p	FCXCN26800
C192	22u/100	FCCE350220
C193	C100n	FCCC151010
C194	47u/50	FCCE250470
C195	C1u/63V	FCCDK20010
C196	C47n/400V	FCCDH71047
C197	C100n/250V	FCCDN11000
C198	100n	FCXCN41000
C199	100n	FCXCN41000
C200	100n	FCXCN41000
C201	100n	FCXCN41000
C202	100n	FCXCN41000
C203	100n	FCXCN41000
CI101	11.0765-01.02	FCCIMPA765
D101	Z3.3V	FCXZ000033
D102	Z3.3V	FCXZ000033
D103	Z12V	FCXZ000120
D104	BAS16	FCXDDBAS16
D106	Z12V	FCXZ000120
D109	DB3	FCDIDB3000
D110	Z6.8V	FCXZ000068
D111	Z7.5V	FCXZ000075
D112	Z30V	FCXZ000300
D113	Z30V	FCXZ000300
D114	BAS16	FCXDDBAS16

OLD VERSION

REFERENCE	VALUE	CODE
D115	BAS28	FCXDDBAS28
D116	BAS28	FCXDDBAS28
D117	Z7.5V	FCXZ000075
D118	1N4007	FCXDD40070
D119	BAS16	FCXDDBAS16
D120	1N4007	FCXDD40070
D121	BAS16	FCXDDBAS16
D122	BAS16	FCXDDBAS16
D123	BAS16	FCXDDBAS16
D124	Z9.1V	FCXZ000091
D125	BAS16	FCXDDBAS16
D126	Z7.5V	FCXZ000075
D127	BAS28	FCXDDBAS28
D128	BAS28	FCXDDBAS28
D131	Z3.3V	FCXZ000033
D132	BAS16	FCXDDBAS16
D134	Z12V	FCXZ000120
D135	Z30V	FCXZ000300
D136	Z3.3V	FCXZ000033
D137	Z12V	FCXZ000120
D141	Z6.8V	FCXZ000068
D142	Z7.5V	FCXZ000075
D143	DB3	FCDIDB3000
D144	Z30V	FCXZ000300
D145	Z7.5V	FCXZ000075
D146	BAS28	FCXDDBAS28
D147	BAS28	FCXDDBAS28
D150	Z3.3V	FCXZ000033
D151	BAS16	FCXDDBAS16
D153	Z12V	FCXZ000120
D154	Z30V	FCXZ000300
D155	Z3.3V	FCXZ000033
D156	Z12V	FCXZ000120
D160	Z6.8V	FCXZ000068
D161	Z7.5V	FCXZ000075
D162	DB3	FCDIDB3000
D163	Z30V	FCXZ000300
D164	Z7.5V	FCXZ000075
D165	BAS28	FCXDDBAS28
D166	BAS28	FCXDDBAS28
D169	Z3.3V	FCXZ000033
D170	BAS16	FCXDDBAS16
D172	Z12V	FCXZ000120
D173	Z30V	FCXZ000300
D174	Z3.3V	FCXZ000033
D175	Z12V	FCXZ000120
D179	Z6.8V	FCXZ000068
D180	Z7.5V	FCXZ000075
D181	DB3	FCDIDB3000
D182	Z30V	FCXZ000300
F101	F4A	FCFUS50200
F102	F4A	FCFUS50200
F103	F4A	FCFUS50200
F104	F4A	FCFUS50200
F105	F4A	FCFUS50200
F106	F4A	FCFUS50200
F107	F4A	FCFUS50200
F108	F4A	FCFUS50200

OLD VERSION

REFERENCE	VALUE	CODE
HS100	HEAT SINK TO220	FCMECT0220
HS101	HEAT SINK	FCRAD02000
IC101	TL072	FCIC072010
IC102	NE5534A	FCIC553410
IC103	40106B	FCIC401060
IC104	LM35DZ	FCIC350000
IC105	TL431AC	FCIC431000
IC106	7805	FCREG78050
IC107	TL074	FCIC074010
IC108	VTL 5C8	FCOPTVTL50
IC109	VTL 5C8	FCOPTVTL50
IC112	NE5534A	FCIC553410
IC113	VTL 5C8	FCOPTVTL50
IC114	TL072	FCIC072010
IC116	NE5534A	FCIC553410
IC117	VTL 5C8	FCOPTVTL50
IC120	NE5534A	FCIC553410
IN100	INSULANT TO126	FCMICTO126
IN101	INSULANT TO126	FCMICTO126
IN102	INSULANT TO126	FCMICTO126
IN103	INSULANT TO126	FCMICTO126
IN104	INSULANT TO126	FCMICTO126
IN105	INSULANT TO126	FCMICTO126
IN106	INSULANT TO126	FCMICTO126
IN107	INSULANT TO126	FCMICTO126
IN108	INSULANT TIP3.2	FCMICTIP32
IN109	INSULANT TIP3.2	FCMICTIP32
IN110	INSULANT TIP3.2	FCMICTIP32
IN111	INSULANT TIP3.2	FCMICTIP32
IN112	INSULANT TIP3.2	FCMICTIP32
IN113	INSULANT TIP3.2	FCMICTIP32
IN114	INSULANT TIP3.2	FCMICTIP32
IN115	INSULANT TIP3.2	FCMICTIP32
IN116	INSULANT TIP3.2	FCMICTIP32
J109	BASE 9pins MALE	FCCTAMP090
J110	B5B-EH-A	FCCTM00050
J111	B5B-EH-A	FCCTM00050
J112	B7B-EH-A	FCCTM00070
J113	S2B-EH	FCCTM10020
J114	S2B-EH	FCCTM10020
J115	S2B-EH	FCCTM10020
J116	S2B-EH	FCCTM10020
J117	S2B-EH	FCCTM10020
J118	S2B-EH	FCCTM10020
J119	S2B-EH	FCCTM10020
J120	S2B-EH	FCCTM10020
J121	S2B-EH	FCCTM10020
K101	TQ2-12V	FCREL00300
K102	TQ2-12V	FCREL00300
K105	TQ2-12V	FCREL00300
K108	TQ2-12V	FCREL00300
MP100	CLAMP WD00191O5	FCPINZAM00
MP101	CLAMP WD00191O5	FCPINZAM00
NV100	NUT M3	FCTUE00300
PF101	FUSE HOLDER	FCPORF3150
PF102	FUSE HOLDER	FCPORF3150
PF103	FUSE HOLDER	FCPORF3150
PF104	FUSE HOLDER	FCPORF3150

OLD VERSION

REFERENCE	VALUE	CODE
PF105	FUSE HOLDER	FCPORF3150
PF106	FUSE HOLDER	FCPORF3150
PF107	FUSE HOLDER	FCPORF3150
PF108	FUSE HOLDER	FCPORF3150
Q101	BD437	FCTR437000
Q102	BD437	FCTR437000
Q103	BF871A	FCTR871000
Q104	BF872A	FCTR872000
Q105	IRFP9240	FCTR243000
Q106	BC857B	FCXTT08570
Q107	BC847B	FCXTT08470
Q108	BC847B	FCXTT08470
Q109	IRFP240	FCTR240000
Q111	BTB24600B	FCTI246000
Q112	BC857B	FCXTT08570
Q113	BC857B	FCXTT08570
Q114	BC847B	FCXTT08470
Q115	BC847B	FCXTT08470
Q116	2N5401	FCTR254010
Q117	2N5401	FCTR254010
Q118	BC847B	FCXTT08470
Q119	BC817/25	FCXTT08170
Q120	BC817/25	FCXTT08170
Q121	BD437	FCTR437000
Q122	BC847B	FCXTT08470
Q123	BF872A	FCTR872000
Q124	IRFP240	FCTR240000
Q126	BC847B	FCXTT08470
Q127	BC847B	FCXTT08470
Q128	BD437	FCTR437000
Q129	BF871A	FCTR871000
Q130	BC857B	FCXTT08570
Q132	IRFP9240	FCTR243000
Q133	BC857B	FCXTT08570
Q134	BTB24600B	FCTI246000
Q135	BC857B	FCXTT08570
Q136	2N5401	FCTR254010
Q137	2N5401	FCTR254010
Q138	BD437	FCTR437000
Q139	BC847B	FCXTT08470
Q140	BF872A	FCTR872000
Q141	IRFP240	FCTR240000
Q143	BC847B	FCXTT08470
Q144	BC847B	FCXTT08470
Q145	BD437	FCTR437000
Q146	BF871A	FCTR871000
Q147	BC857B	FCXTT08570
Q149	IRFP9240	FCTR243000
Q150	BC857B	FCXTT08570
Q151	BTB24600B	FCTI246000
Q152	BC857B	FCXTT08570
Q153	2N5401	FCTR254010
Q154	2N5401	FCTR254010
Q155	BD437	FCTR437000
Q156	BC847B	FCXTT08470
Q157	BF872A	FCTR872000
Q158	IRFP240	FCTR240000
Q160	BC847B	FCXTT08470

OLD VERSION

REFERENCE	VALUE	CODE
Q161	BC847B	FCXTT08470
Q162	BD437	FCTR437000
Q163	BF871A	FCTR871000
Q164	BC857B	FCXTT08570
Q166	IRFP9240	FCTR243000
Q167	BC857B	FCXTT08570
Q168	BTB24600B	FCTI246000
Q169	BC857B	FCXTT08570
Q170	2N5401	FCTR254010
Q171	2N5401	FCTR254010
R101	22k1	FCXR142210
R102	976k	FCXR159760
R103	1k0	FCXR131000
R104	1k0	FCXR131000
R105	487O	FCXR124870
R106	191O	FCXR121910
R107	1k0	FCXR131000
R108	487O	FCXR124870
R109	191O	FCXR121910
R110	1k0	FCXR131000
R111	681O	FCXR126810
R112	681O	FCXR126810
R113	2k21	FCXR132210
R114	2k5PT15	FCRJG42500
R115	681O	FCXR126810
R116	681O	FCXR126810
R117	20.0O	FCXR112000
R118	20.0O	FCXR112000
R119	681O	FCXR126810
R120	681O	FCXR126810
R121	56.2O	FCXR115620
R122	56.2O	FCXR115620
R123	10k0	FCXR141000
R124	1k0	FCXR131000
R125	39k2	FCXR143920
R126	1k0	FCXR131000
R127	1k62	FCXR131620
R128	W0.22O/5	FCRY000100
R129	10k0	FCXR141000
R130	56.2O	FCXR115620
R131	1k62	FCXR131620
R132	2M2	FCXR062200
R133	1k0	FCXR131000
R134	15k0	FCXR141500
R135	W0.22O/5	FCRY000100
R136	22k1	FCXR142210
R138	56.2O	FCXR115620
R139	2.2O/2	FCRC512200
R140	33k2	FCXR143320
R141	10k0	FCXR141000
R142	6k81	FCXR136810
R143	33k2	FCXR143320
R144	33k2	FCXR143320
R145	475	FCXR124750
R146	6k81	FCXR136810
R147	33k2	FCXR143320
R148	33k2	FCXR143320
R149	475	FCXR124750

OLD VERSION

REFERENCE	VALUE	CODE
R150	47k5	FCXR144750
R151	47k5	FCXR144750
R152	1k50	FCXR131500
R153	1uH+10O	FCIND00200
R154	20k0	FCXR142000
R155	10M	FCXR071000
R156	20k0	FCXR142000
R157	3k32	FCXR133320
R158	681k	FCXR156810
R159	22k1	FCXR142210
R160	22k1	FCXR142210
R161	47k5	FCXR144750
R162	47k5	FCXR144750
R163	22k1	FCXR142210
R164	22k1	FCXR142210
R165	100k0	FCXR151000
R166	6.8O/2	FCRC516800
R167	75.0	FCXR117500
R168	75.0	FCXR117500
R169	287k	FCXR152870
R170	1k50	FCXR131500
R171	1k50	FCXR131500
R172	1k50	FCXR131500
R173	1k50	FCXR131500
R174	10k0	FCXR141000
R175	178	FCXR121780
R176	178	FCXR121780
R177	178	FCXR121780
R178	178	FCXR121780
R179	2k21	FCXR132210
R180	10k0	FCXR141000
R181	100k0	FCXR151000
R182	10k0	FCXR141000
R183	100k0	FCXR151000
R184	1k0	FCXR131000
R185	2M2	FCXR062200
R186	10k0	FCXR141000
R187	1k21	FCXR131210
R188	3k01	FCXR133010
R189	1k21	FCXR131210
R190	100k0	FCXR151000
R192	100.0	FCXR121000
R193	22k1	FCXR142210
R194	22k1	FCXR142210
R195	681k	FCXR156810
R196	3k32	FCXR133320
R197	487O	FCXR124870
R198	191O	FCXR121910
R199	1k0	FCXR131000
R200	20.0O	FCXR112000
R201	681O	FCXR126810
R202	681O	FCXR126810
R203	56.2O	FCXR115620
R207	56.2O	FCXR115620
R208	1k0	FCXR131000
R209	475	FCXR124750
R210	W0.22O/5	FCRY000100
R211	1k62	FCXR131620

OLD VERSION

REFERENCE	VALUE	CODE
R212	33k2	FCXR143320
R213	6k81	FCXR136810
R214	33k2	FCXR143320
R215	22k1	FCXR142210
R216	976k	FCXR159760
R217	1k0	FCXR131000
R218	1k0	FCXR131000
R219	20k0	FCXR142000
R220	1k0	FCXR131000
R221	20k0	FCXR142000
R222	10M	FCXR071000
R223	191O	FCXR121910
R224	487O	FCXR124870
R225	681O	FCXR126810
R226	2k21	FCXR132210
R227	681O	FCXR126810
R228	2k5PT15	FCRJG42500
R229	56.2O	FCXR115620
R232	56.2O	FCXR115620
R234	1k0	FCXR131000
R237	20.0O	FCXR112000
R238	681O	FCXR126810
R239	681O	FCXR126810
R240	475	FCXR124750
R241	W0.22O/5	FCRY000100
R242	1k62	FCXR131620
R243	6k81	FCXR136810
R244	1uH+10O	FCIND00200
R245	10k0	FCXR141000
R246	33k2	FCXR143320
R247	2.2O/2	FCRC512200
R248	6.8O/2	FCRC516800
R249	33k2	FCXR143320
R250	33k2	FCXR143320
R251	47k5	FCXR144750
R252	1k50	FCXR131500
R253	47k5	FCXR144750
R254	22k1	FCXR142210
R255	22k1	FCXR142210
R256	681k	FCXR156810
R257	3k32	FCXR133320
R258	487O	FCXR124870
R259	191O	FCXR121910
R260	1k0	FCXR131000
R261	20.0O	FCXR112000
R262	681O	FCXR126810
R263	681O	FCXR126810
R264	56.2O	FCXR115620
R268	56.2O	FCXR115620
R269	1k0	FCXR131000
R270	475	FCXR124750
R271	W0.22O/5	FCRY000100
R272	1k62	FCXR131620
R273	33k2	FCXR143320
R274	6k81	FCXR136810
R275	33k2	FCXR143320
R276	22k1	FCXR142210
R277	976k	FCXR159760

OLD VERSION

REFERENCE	VALUE	CODE
R278	1k0	FCXR131000
R279	1k0	FCXR131000
R280	20k0	FCXR142000
R281	1k0	FCXR131000
R282	20k0	FCXR142000
R283	10M	FCXR071000
R284	191O	FCXR121910
R285	487O	FCXR124870
R286	681O	FCXR126810
R287	2k21	FCXR132210
R288	681O	FCXR126810
R289	2k5PT15	FCRJG42500
R290	56.2O	FCXR115620
R293	56.2O	FCXR115620
R295	1k0	FCXR131000
R298	20.0O	FCXR112000
R299	681O	FCXR126810
R300	681O	FCXR126810
R301	475	FCXR124750
R302	W0.22O/5	FCRY000100
R303	1k62	FCXR131620
R304	6k81	FCXR136810
R305	1u+10	FCIND00200
R306	10k0	FCXR141000
R307	33k2	FCXR143320
R308	2.2O/2	FCRC512200
R309	6.8O/2	FCRC516800
R310	33k2	FCXR143320
R311	33k2	FCXR143320
R312	47k5	FCXR144750
R313	1k50	FCXR131500
R314	47k5	FCXR144750
R315	22k1	FCXR142210
R316	22k1	FCXR142210
R317	681k	FCXR156810
R318	3k32	FCXR133320
R319	487O	FCXR124870
R320	191O	FCXR121910
R321	1k0	FCXR131000
R322	20.0O	FCXR112000
R323	681O	FCXR126810
R324	681O	FCXR126810
R325	56.2O	FCXR115620
R329	56.2O	FCXR115620
R330	1k0	FCXR131000
R331	475	FCXR124750
R332	W0.22O/5	FCRY000100
R333	1k62	FCXR131620
R334	33k2	FCXR143320
R335	6k81	FCXR136810
R336	33k2	FCXR143320
R337	22k1	FCXR142210
R338	976k	FCXR159760
R339	1k0	FCXR131000
R340	1k0	FCXR131000
R341	20k0	FCXR142000
R342	1k0	FCXR131000
R343	20k0	FCXR142000

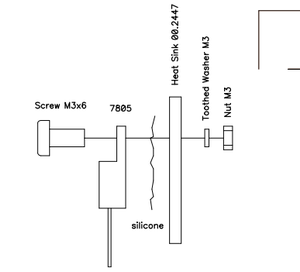
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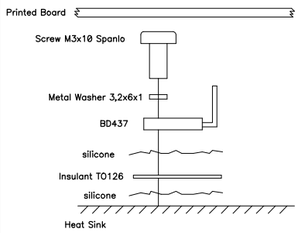
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R344	10M	FCXR071000
R345	191O	FCXR121910
R346	487O	FCXR124870
R347	681O	FCXR126810
R348	2k21	FCXR132210
R349	681O	FCXR126810
R350	2k5PT15	FCRJG42500
R351	56.2O	FCXR115620
R354	56.2O	FCXR115620
R356	1k0	FCXR131000
R359	20.0O	FCXR112000
R360	681O	FCXR126810
R361	681O	FCXR126810
R362	475	FCXR124750
R363	W0.22O/5	FCRY000100
R364	1k62	FCXR131620
R365	6k81	FCXR136810
R366	1uH+10O	FCIND00200
R367	10k0	FCXR141000
R368	33k2	FCXR143320
R369	2.2O/2	FCRC512200
R370	6.8O/2	FCRC516800
R371	33k2	FCXR143320
R372	33k2	FCXR143320
R373	47k5	FCXR144750
R374	1k50	FCXR131500
R375	47k5	FCXR144750
RX100	0O	FCXR000000
RX101	0O	FCXR000000
RX102	0O	FCXR000000
RX103	0O	FCXR000000
RX104	0O	FCXR000000
RX105	0O	FCXR000000
RX106	0O	FCXR000000
RX107	0O	FCXR000000
RX108	0O	FCXR000000
RX109	0O	FCXR000000
RX110	0O	FCXR000000
RX111	0O	FCXR000000
RX112	0O	FCXR000000
RX113	0O	FCXR000000
RX114	0O	FCXR000000
RX115	0O	FCXR000000
RX116	0O	FCXR000000
RX117	0O	FCXR000000
RX118	0O	FCXR000000
RX119	0O	FCXR000000
RX120	0O	FCXR000000
RX121	0O	FCXR000000
SC100	SCREW M4x6 SPAN	FCT8040061
SC101	SCREW M4x6 SPAN	FCT8040061
SC102	SCREW M4x6 SPAN	FCT8040061
SC103	SCREW M4x6 SPAN	FCT8040061
SC104	SCREW M3x10 SPA	FCT8030100
SC105	SCREW M3x10 SPA	FCT8030100
SC106	SCREW M3x10 SPA	FCT8030100
SC107	SCREW M3x10 SPA	FCT8030100
SC108	SCREW M3x10 SPA	FCT8030100

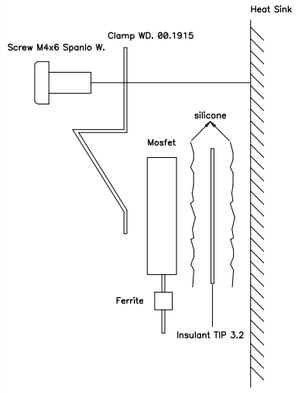
OLD VERSION

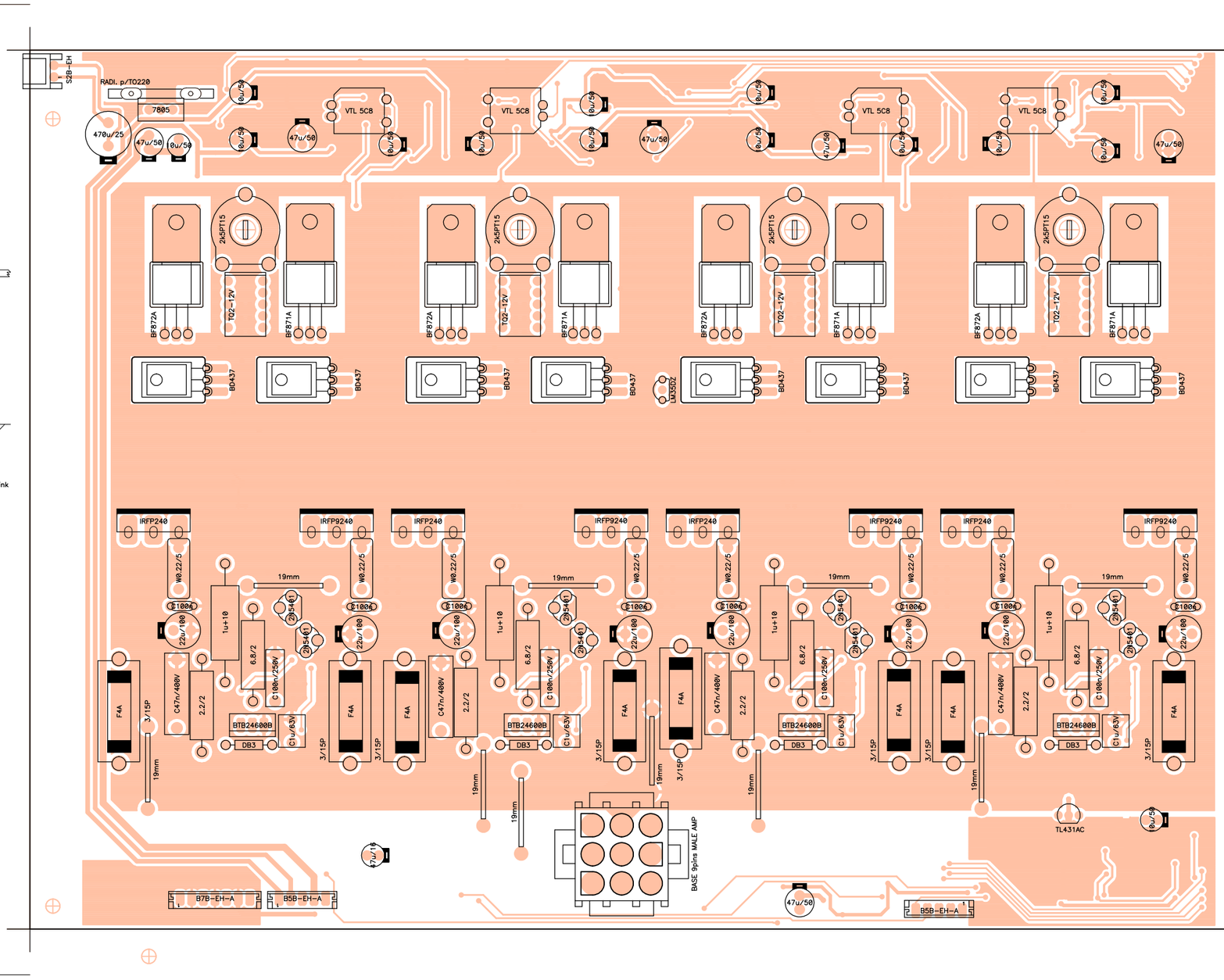
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SC109	SCREW M3x10 SPA	FCT8030100
SC110	SCREW M3x10 SPA	FCT8030100
SC111	SCREW M3x10 SPA	FCT8030100
SC112	SCREW M3x5	FCT8503005
SC113	SCREW M3x5	FCT8503005
SC114	SCREW M3x5	FCT8503005
SC115	SCREW M3x5	FCT8503005
SC116	SCREW M3x5	FCT8503005
SC117	SCREW M3x5	FCT8503005
SC118	SCREW M3x5	FCT8503005
SC119	SCREW M3x5	FCT8503005
SC120	SCREW M3x8	FCT7503008
W101	19mm	FCMECPON19
W102	19mm	FCMECPON19
W103	19mm	FCMECPON19
W104	19mm	FCMECPON19
W105	19mm	FCMECPON19
W106	19mm	FCMECPON19
W107	19mm	FCMECPON19
W108	19mm	FCMECPON19
W109	19mm	FCMECPON19
W110	19mm	FCMECPON19
WA100	WASHER 3.2x6x1	FCARM32010
WA101	WASHER 3.2x6x1	FCARM32010
WA102	WASHER 3.2x6x1	FCARM32010
WA103	WASHER 3.2x6x1	FCARM32010
WA104	WASHER 3.2x6x1	FCARM32010
WA105	WASHER 3.2x6x1	FCARM32010
WA106	WASHER 3.2x6x1	FCARM32010
WA107	WASHER 3.2x6x1	FCARM32010
WA108	WASHER M3 DIN6798	FCARDE0300

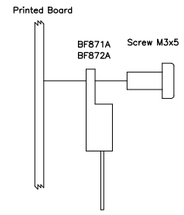
OLD VERSION











OLD VERSION

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.03 insertion file no:		side: Component
			view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0390	version: 01.04	title: EP05-99 Power Amp.	

ECLER

author: Queralt
approved:

date: 000727
model:

num: 40.0044 version: 01.01

PARTS LIST

EP05-99

PRINTED CIRCUIT 11.0765-01.02

OLD VERSION

REFERENCE	VALUE	CODE
C101	10u/50	FCCE250100
C102	47u/50	FCCE250470
C103	10u/50	FCCE250100
C104	10u/50	FCCE250100
C105	470n	FCXCN44700
C106	470n	FCXCN44700
C107	680p	FCXCN26800
C108	UNFITTED	UNFITTED
C109	680p	FCXCN26800
C110	UNFITTED	UNFITTED
C111	C100n	FCCC151010
C112	22u/100	FCCE350220
C113	22u/100	FCCE350220
C114	C100n	FCCC151010
C115	C100n/250V	FCCDN11000
C116	C47n/400V	FCCDH71047
C117	C1u/63V	FCCDK20010
C118	100n	FCXCN41000
C119	100n	FCXCN41000
C120	15p	FCXCN11500
C121	47u/16	FCCE100000
C122	47u/50	FCCE250470
C123	100n	FCXCN41000
C124	470n	FCXCN44700
C125	470n	FCXCN44700
C126	UNFITTED	UNFITTED
C127	10u/50	FCCE250100
C128	10u/50	FCCE250100
C129	470u/25	FCCE154700
C130	22p	FCXCN12200
C131	56p	FCXCN15600
C132	100n	FCXCN41000
C133	10u/50	FCCE250100
C134	680p	FCXCN26800
C135	470n	FCXCN44700
C136	C100n	FCCC151010
C137	22u/100	FCCE350220
C138	UNFITTED	UNFITTED
C139	22p	FCXCN12200
C140	10u/50	FCCE250100
C141	100n	FCXCN41000
C142	47u/50	FCCE250470
C143	56p	FCXCN15600
C144	10u/50	FCCE250100
C145	15p	FCXCN11500
C146	470n	FCXCN44700
C147	680p	FCXCN26800
C148	22u/100	FCCE350220
C149	C100n	FCCC151010
C150	UNFITTED	UNFITTED
C151	C1u/63V	FCCDK20010
C152	C47n/400V	FCCDH71047

REFERENCE	VALUE	CODE
C153	C100n/250V	FCCDN11000
C154	100n	FCXCN41000
C155	10u/50	FCCE250100
C156	680p	FCXCN26800
C157	470n	FCXCN44700
C158	C100n	FCCC151010
C159	22u/100	FCCE350220
C160	UNFITTED	UNFITTED
C161	22p	FCXCN12200
C162	10u/50	FCCE250100
C163	100n	FCXCN41000
C164	47u/50	FCCE250470
C165	56p	FCXCN15600
C166	10u/50	FCCE250100
C167	15p	FCXCN11500
C168	470n	FCXCN44700
C169	680p	FCXCN26800
C170	22u/100	FCCE350220
C171	C100n	FCCC151010
C172	UNFITTED	UNFITTED
C173	C1u/63V	FCCDK20010
C174	C47n/400V	FCCDH71047
C175	C100n/250V	FCCDN11000
C176	100n	FCXCN41000
C177	10u/50	FCCE250100
C178	680p	FCXCN26800
C179	470n	FCXCN44700
C180	C100n	FCCC151010
C181	22u/100	FCCE350220
C182	UNFITTED	UNFITTED
C183	22p	FCXCN12200
C184	10u/50	FCCE250100
C185	100n	FCXCN41000
C186	47u/50	FCCE250470
C187	56p	FCXCN15600
C188	10u/50	FCCE250100
C189	15p	FCXCN11500
C190	470n	FCXCN44700
C191Ω	680p	FCXCN26800
C192	22u/100	FCCE350220
C193	C100n	FCCC151010
C194	47u/50	FCCE250470
C195	C1u/63V	FCCDK20010
C196	C47n/400V	FCCDH71047
C197	C100n/250V	FCCDN11000
C198	100n	FCXCN41000
C199	100n	FCXCN41000
C200	100n	FCXCN41000
C201	100n	FCXCN41000
C202	100n	FCXCN41000
C203	100n	FCXCN41000
CI101	11.0765-01.02	FCCIMPA765
D101	Z3.3V	FCXZ000033
D102	Z3.3V	FCXZ000033
D103	Z12V	FCXZ000120
D104	BAS16	FCXDDBAS16
D106	Z12V	FCXZ000120
D109	DB3	FCDIDB3000

OLD VERSION

REFERENCE	VALUE	CODE
D110	Z6.8V	FCXZ000068
D111	Z7.5V	FCXZ000075
D112	Z30V	FCXZ000300
D113	Z30V	FCXZ000300
D114	BAS16	FCXDDBAS16
D115	BAS28	FCXDDBAS28
D116	BAS28	FCXDDBAS28
D117	Z7.5V	FCXZ000075
D118	1N4007	FCXDD40070
D119	BAS16	FCXDDBAS16
D120	1N4007	FCXDD40070
D121	BAS16	FCXDDBAS16
D122	BAS16	FCXDDBAS16
D123	BAS16	FCXDDBAS16
D124	Z9.1V	FCXZ000091
D125	BAS16	FCXDDBAS16
D126	Z7.5V	FCXZ000075
D127	BAS28	FCXDDBAS28
D128	BAS28	FCXDDBAS28
D131	Z3.3V	FCXZ000033
D132	BAS16	FCXDDBAS16
D134	Z12V	FCXZ000120
D135	Z30V	FCXZ000300
D136	Z3.3V	FCXZ000033
D137	Z12V	FCXZ000120
D141	Z6.8V	FCXZ000068
D142	Z7.5V	FCXZ000075
D143	DB3	FCDIDB3000
D144	Z30V	FCXZ000300
D145	Z7.5V	FCXZ000075
D146	BAS28	FCXDDBAS28
D147	BAS28	FCXDDBAS28
D150	Z3.3V	FCXZ000033
D151	BAS16	FCXDDBAS16
D153	Z12V	FCXZ000120
D154	Z30V	FCXZ000300
D155	Z3.3V	FCXZ000033
D156	Z12V	FCXZ000120
D160	Z6.8V	FCXZ000068
D161	Z7.5V	FCXZ000075
D162	DB3	FCDIDB3000
D163	Z30V	FCXZ000300
D164	Z7.5V	FCXZ000075
D165	BAS28	FCXDDBAS28
D166	BAS28	FCXDDBAS28
D169	Z3.3V	FCXZ000033
D170	BAS16	FCXDDBAS16
D172	Z12V	FCXZ000120
D173	Z30V	FCXZ000300
D174	Z3.3V	FCXZ000033
D175	Z12V	FCXZ000120
D179	Z6.8V	FCXZ000068
D180	Z7.5V	FCXZ000075
D181	DB3	FCDIDB3000
D182	Z30V	FCXZ000300
F101	F4A	FCFUS50200
F102	F4A	FCFUS50200
F103	F4A	FCFUS50200

OLD VERSION

REFERENCE	VALUE	CODE
F104	F4A	FCFUS50200
F105	F4A	FCFUS50200
F106	F4A	FCFUS50200
F107	F4A	FCFUS50200
F108	F4A	FCFUS50200
HS100	HEAT SINK TO220	FCMECT0220
HS101	HEAT SINK	FCRAD02000
IC101	TL072	FCIC072010
IC102	NE5534A	FCIC553410
IC103	40106B	FCIC401060
IC104	LM35DZ	FCIC350000
IC105	TL431AC	FCIC431000
IC106	7805	FCREG78050
IC107	TL074	FCIC074010
IC108	VTL 5C8	FCOPTVTL50
IC109	VTL 5C8	FCOPTVTL50
IC112	NE5534A	FCIC553410
IC113	VTL 5C8	FCOPTVTL50
IC114	TL072	FCIC072010
IC116	NE5534A	FCIC553410
IC117	VTL 5C8	FCOPTVTL50
IC120	NE5534A	FCIC553410
IN100	INSULANT TO126	FCMICTO126
IN101	INSULANT TO126	FCMICTO126
IN102	INSULANT TO126	FCMICTO126
IN103	INSULANT TO126	FCMICTO126
IN104	INSULANT TO126	FCMICTO126
IN105	INSULANT TO126	FCMICTO126
IN106	INSULANT TO126	FCMICTO126
IN107	INSULANT TO126	FCMICTO126
IN108	INSULANT TIP3.2	FCMICTIP32
IN109	INSULANT TIP3.2	FCMICTIP32
IN110	INSULANT TIP3.2	FCMICTIP32
IN111	INSULANT TIP3.2	FCMICTIP32
IN112	INSULANT TIP3.2	FCMICTIP32
IN113	INSULANT TIP3.2	FCMICTIP32
IN114	INSULANT TIP3.2	FCMICTIP32
IN115	INSULANT TIP3.2	FCMICTIP32
IN116	INSULANT TIP3.2	FCMICTIP32
J109	BASE 9pins MALE	FCCTAMP090
J110	B5B-EH-A	FCCTM00050
J111	B5B-EH-A	FCCTM00050
J112	B7B-EH-A	FCCTM00070
J113	S2B-EH	FCCTM10020
J114	S2B-EH	FCCTM10020
J115	S2B-EH	FCCTM10020
J116	S2B-EH	FCCTM10020
J117	S2B-EH	FCCTM10020
J118	S2B-EH	FCCTM10020
J119	S2B-EH	FCCTM10020
J120	S2B-EH	FCCTM10020
J121	S2B-EH	FCCTM10020
K101	TQ2-12V	FCREL00300
K102	TQ2-12V	FCREL00300
K105	TQ2-12V	FCREL00300
K108	TQ2-12V	FCREL00300
MP100	CLAMP WD00191Ω5	FCPINZAM00
MP101	CLAMP WD00191Ω5	FCPINZAM00

OLD VERSION

REFERENCE	VALUE	CODE
NV100	NUT M3	FCTUE00300
PF101	FUSE HOLDER	FCPORF3150
PF102	FUSE HOLDER	FCPORF3150
PF103	FUSE HOLDER	FCPORF3150
PF104	FUSE HOLDER	FCPORF3150
PF105	FUSE HOLDER	FCPORF3150
PF106	FUSE HOLDER	FCPORF3150
PF107	FUSE HOLDER	FCPORF3150
PF108	FUSE HOLDER	FCPORF3150
Q101	BD437	FCTR437000
Q102	BD437	FCTR437000
Q103	BF871A	FCTR871000
Q104	BF872A	FCTR872000
Q105	IRFP9240	FCTR243000
Q106	BC857B	FCXTT08570
Q107	BC847B	FCXTT08470
Q108	BC847B	FCXTT08470
Q109	IRFP240	FCTR240000
Q111	BTB24600B	FCTI246000
Q112	BC857B	FCXTT08570
Q113	BC857B	FCXTT08570
Q114	BC847B	FCXTT08470
Q115	BC847B	FCXTT08470
Q116	2N5401	FCTR254010
Q117	2N5401	FCTR254010
Q118	BC847B	FCXTT08470
Q119	BC817/25	FCXTT08170
Q120	BC817/25	FCXTT08170
Q121	BD437	FCTR437000
Q122	BC847B	FCXTT08470
Q123	BF872A	FCTR872000
Q124	IRFP240	FCTR240000
Q126	BC847B	FCXTT08470
Q127	BC847B	FCXTT08470
Q128	BD437	FCTR437000
Q129	BF871A	FCTR871000
Q130	BC857B	FCXTT08570
Q132	IRFP9240	FCTR243000
Q133	BC857B	FCXTT08570
Q134	BTB24600B	FCTI246000
Q135	BC857B	FCXTT08570
Q136	2N5401	FCTR254010
Q137	2N5401	FCTR254010
Q138	BD437	FCTR437000
Q139	BC847B	FCXTT08470
Q140	BF872A	FCTR872000
Q141	IRFP240	FCTR240000
Q143	BC847B	FCXTT08470
Q144	BC847B	FCXTT08470
Q145	BD437	FCTR437000
Q146	BF871A	FCTR871000
Q147	BC857B	FCXTT08570
Q149	IRFP9240	FCTR243000
Q150	BC857B	FCXTT08570
Q151	BTB24600B	FCTI246000
Q152	BC857B	FCXTT08570
Q153	2N5401	FCTR254010
Q154	2N5401	FCTR254010

OLD VERSION

REFERENCE	VALUE	CODE
Q155	BD437	FCTR437000
Q156	BC847B	FCXTT08470
Q157	BF872A	FCTR872000
Q158	IRFP240	FCTR240000
Q160	BC847B	FCXTT08470
Q161	BC847B	FCXTT08470
Q162	BD437	FCTR437000
Q163	BF871A	FCTR871000
Q164	BC857B	FCXTT08570
Q166	IRFP9240	FCTR243000
Q167	BC857B	FCXTT08570
Q168	BTB24600B	FCTI246000
Q169	BC857B	FCXTT08570
Q170	2N5401	FCTR254010
Q171	2N5401	FCTR254010
R101	22k1	FCXR142210
R102	976k	FCXR159760
R103	1k0	FCXR131000
R104	1k0	FCXR131000
R105	487Ω	FCXR124870
R106	191Ω	FCXR121910
R107	1k0	FCXR131000
R108	487Ω	FCXR124870
R109	191Ω	FCXR121910
R110	1k0	FCXR131000
R111	681Ω	FCXR126810
R112	681Ω	FCXR126810
R113	2k21	FCXR132210
R114	2k5PT15	FCRJG42500
R115	681Ω	FCXR126810
R116	681Ω	FCXR126810
R117	20.0Ω	FCXR112000
R118	20.0Ω	FCXR112000
R119	681Ω	FCXR126810
R120	681Ω	FCXR126810
R121	56.2Ω	FCXR115620
R122	56.2Ω	FCXR115620
R123	10k0	FCXR141000
R124	1k0	FCXR131000
R125	39k2	FCXR143920
R126	1k0	FCXR131000
R127	1k62	FCXR131620
R128	W0.22Ω/5	FCRY000100
R129	10k0	FCXR141000
R130	56.2Ω	FCXR115620
R131	1k62	FCXR131620
R132	2M2	FCXR062200
R133	1k0	FCXR131000
R134	15k0	FCXR141500
R135	W0.22Ω/5	FCRY000100
R136	22k1	FCXR142210
R138	56.2Ω	FCXR115620
R139	2.2Ω/2	FCRC512200
R140	33k2	FCXR143320
R141	10k0	FCXR141000
R142	6k81	FCXR136810
R143	33k2	FCXR143320
R144	33k2	FCXR143320

OLD VERSION

REFERENCE	VALUE	CODE
R145	475	FCXR124750
R146	6k81	FCXR136810
R147	33k2	FCXR143320
R148	33k2	FCXR143320
R149	475	FCXR124750
R150	47k5	FCXR144750
R151	47k5	FCXR144750
R152	1k50	FCXR131500
R153	1uH+10Ω	FCIND00200
R154	20k0	FCXR142000
R155	10M	FCXR071000
R156	20k0	FCXR142000
R157	3k32	FCXR133320
R158	681k	FCXR156810
R159	22k1	FCXR142210
R160	22k1	FCXR142210
R161	47k5	FCXR144750
R162	47k5	FCXR144750
R163	22k1	FCXR142210
R164	22k1	FCXR142210
R165	100k0	FCXR151000
R166	6.8Ω/2	FCRC516800
R167	75.0	FCXR117500
R168	75.0	FCXR117500
R169	287k	FCXR152870
R170	1k50	FCXR131500
R171	1k50	FCXR131500
R172	1k50	FCXR131500
R173	1k50	FCXR131500
R174	10k0	FCXR141000
R175	178	FCXR121780
R176	178	FCXR121780
R177	178	FCXR121780
R178	178	FCXR121780
R179	2k21	FCXR132210
R180	10k0	FCXR141000
R181	100k0	FCXR151000
R182	10k0	FCXR141000
R183	100k0	FCXR151000
R184	1k0	FCXR131000
R185	2M2	FCXR062200
R186	10k0	FCXR141000
R187	1k21	FCXR131210
R188	3k01	FCXR133010
R189	1k21	FCXR131210
R190	100k0	FCXR151000
R192	100.0	FCXR121000
R193	22k1	FCXR142210
R194	22k1	FCXR142210
R195	681k	FCXR156810
R196	3k32	FCXR133320
R197	487Ω	FCXR124870
R198	191Ω	FCXR121910
R199	1k0	FCXR131000
R200	20.0Ω	FCXR112000
R201	681Ω	FCXR126810
R202	681Ω	FCXR126810
R203	56.2Ω	FCXR115620

OLD VERSION

REFERENCE	VALUE	CODE
R207	56.2Ω	FCXR115620
R208	1k0	FCXR131000
R209	475	FCXR124750
R210	W0.22Ω/5	FCRY000100
R211	1k62	FCXR131620
R212	33k2	FCXR143320
R213	6k81	FCXR136810
R214	33k2	FCXR143320
R215	22k1	FCXR142210
R216	976k	FCXR159760
R217	1k0	FCXR131000
R218	1k0	FCXR131000
R219	20k0	FCXR142000
R220	1k0	FCXR131000
R221	20k0	FCXR142000
R222	10M	FCXR071000
R223	191Ω	FCXR121910
R224	487Ω	FCXR124870
R225	681Ω	FCXR126810
R226	2k21	FCXR132210
R227	681Ω	FCXR126810
R228	2k5PT15	FCRJG42500
R229	56.2Ω	FCXR115620
R232	56.2Ω	FCXR115620
R234	1k0	FCXR131000
R237	20.0Ω	FCXR112000
R238	681Ω	FCXR126810
R239	681Ω	FCXR126810
R240	475	FCXR124750
R241	W0.22Ω/5	FCRY000100
R242	1k62	FCXR131620
R243	6k81	FCXR136810
R244	1uH+10Ω	FCIND00200
R245	10k0	FCXR141000
R246	33k2	FCXR143320
R247	2.2Ω/2	FCRC512200
R248	6.8Ω/2	FCRC516800
R249	33k2	FCXR143320
R250	33k2	FCXR143320
R251	47k5	FCXR144750
R252	1k50	FCXR131500
R253	47k5	FCXR144750
R254	22k1	FCXR142210
R255	22k1	FCXR142210
R256	681k	FCXR156810
R257	3k32	FCXR133320
R258	487Ω	FCXR124870
R259	191Ω	FCXR121910
R260	1k0	FCXR131000
R261	20.0Ω	FCXR112000
R262	681Ω	FCXR126810
R263	681Ω	FCXR126810
R264	56.2Ω	FCXR115620
R268	56.2Ω	FCXR115620
R269	1k0	FCXR131000
R270	475	FCXR124750
R271	W0.22Ω/5	FCRY000100
R272	1k62	FCXR131620

OLD VERSION

REFERENCE	VALUE	CODE
R273	33k2	FCXR143320
R274	6k81	FCXR136810
R275	33k2	FCXR143320
R276	22k1	FCXR142210
R277	976k	FCXR159760
R278	1k0	FCXR131000
R279	1k0	FCXR131000
R280	20k0	FCXR142000
R281	1k0	FCXR131000
R282	20k0	FCXR142000
R283	10M	FCXR071000
R284	191Ω	FCXR121910
R285	487Ω	FCXR124870
R286	681Ω	FCXR126810
R287	2k21	FCXR132210
R288	681Ω	FCXR126810
R289	2k5PT15	FCRJG42500
R290	56.2Ω	FCXR115620
R293	56.2Ω	FCXR115620
R295	1k0	FCXR131000
R298	20.0Ω	FCXR112000
R299	681Ω	FCXR126810
R300	681Ω	FCXR126810
R301	475	FCXR124750
R302	W0.22Ω/5	FCRY000100
R303	1k62	FCXR131620
R304	6k81	FCXR136810
R305	1u+10	FCIND00200
R306	10k0	FCXR141000
R307	33k2	FCXR143320
R308	2.2Ω/2	FCRC512200
R309	6.8Ω/2	FCRC516800
R310	33k2	FCXR143320
R311	33k2	FCXR143320
R312	47k5	FCXR144750
R313	1k50	FCXR131500
R314	47k5	FCXR144750
R315	22k1	FCXR142210
R316	22k1	FCXR142210
R317	681k	FCXR156810
R318	3k32	FCXR133320
R319	487Ω	FCXR124870
R320	191Ω	FCXR121910
R321	1k0	FCXR131000
R322	20.0Ω	FCXR112000
R323	681Ω	FCXR126810
R324	681Ω	FCXR126810
R325	56.2Ω	FCXR115620
R329	56.2Ω	FCXR115620
R330	1k0	FCXR131000
R331	475	FCXR124750
R332	W0.22Ω/5	FCRY000100
R333	1k62	FCXR131620
R334	33k2	FCXR143320
R335	6k81	FCXR136810
R336	33k2	FCXR143320
R337	22k1	FCXR142210
R338	976k	FCXR159760

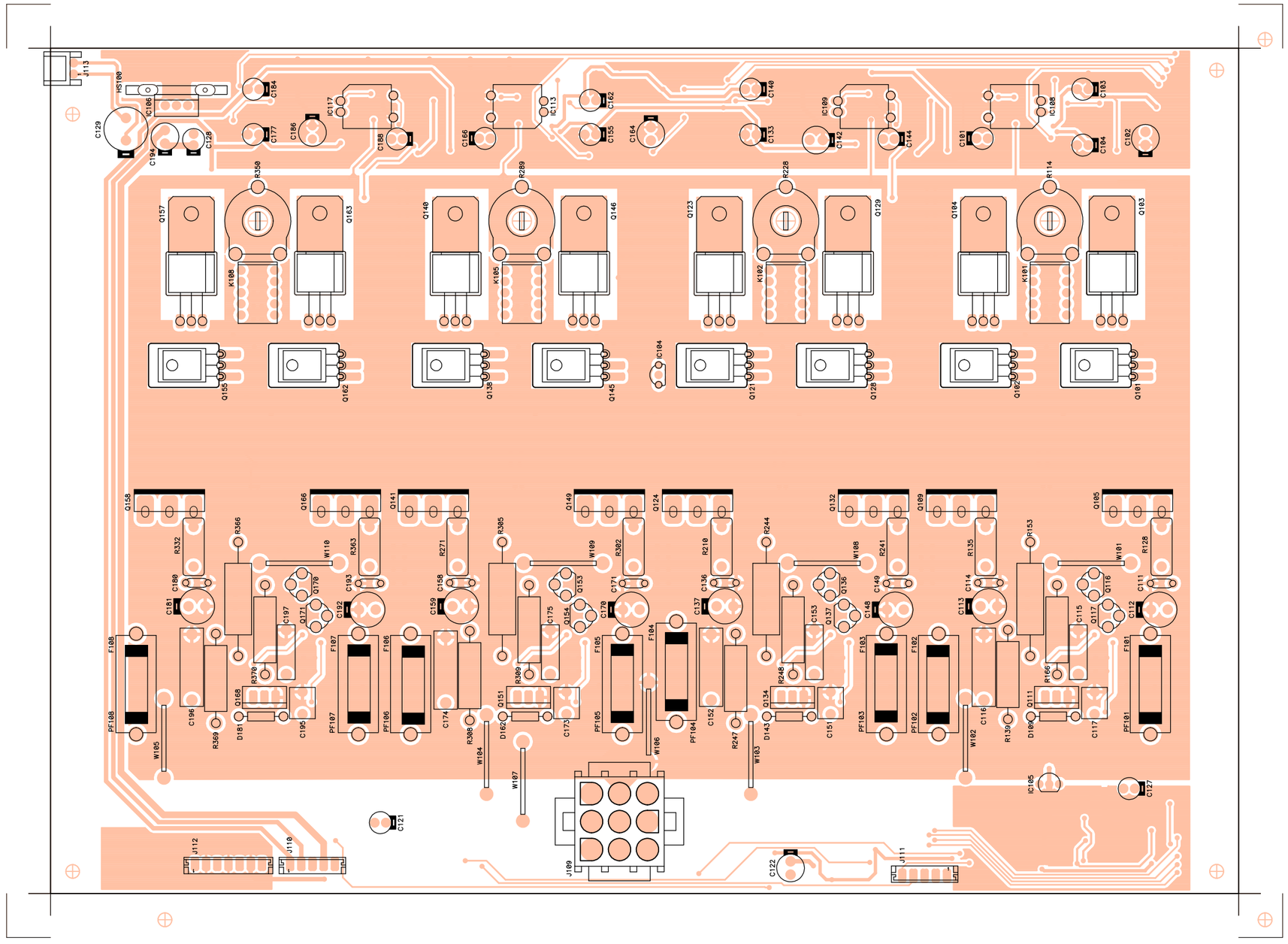
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REFERENCE	VALUE	CODE
R339	1k0	FCXR131000
R340	1k0	FCXR131000
R341	20k0	FCXR142000
R342	1k0	FCXR131000
R343	20k0	FCXR142000
R344	10M	FCXR071000
R345	191Ω	FCXR121910
R346	487Ω	FCXR124870
R347	681Ω	FCXR126810
R348	2k21	FCXR132210
R349	681Ω	FCXR126810
R350	2k5PT15	FCRJG42500
R351	56.2Ω	FCXR115620
R354	56.2Ω	FCXR115620
R356	1k0	FCXR131000
R359	20.0Ω	FCXR112000
R360	681Ω	FCXR126810
R361	681Ω	FCXR126810
R362	475	FCXR124750
R363	W0.22Ω/5	FCRY000100
R364	1k62	FCXR131620
R365	6k81	FCXR136810
R366	1uH+10Ω	FCIND00200
R367	10k0	FCXR141000
R368	33k2	FCXR143320
R369	2.2Ω/2	FCRC512200
R370	6.8Ω/2	FCRC516800
R371	33k2	FCXR143320
R372	33k2	FCXR143320
R373	47k5	FCXR144750
R374	1k50	FCXR131500
R375	47k5	FCXR144750
RX100	0Ω	FCXR000000
RX101	0Ω	FCXR000000
RX102	0Ω	FCXR000000
RX103	0Ω	FCXR000000
RX104	0Ω	FCXR000000
RX105	0Ω	FCXR000000
RX106	0Ω	FCXR000000
RX107	0Ω	FCXR000000
RX108	0Ω	FCXR000000
RX109	0Ω	FCXR000000
RX110	0Ω	FCXR000000
RX111	0Ω	FCXR000000
RX112	0Ω	FCXR000000
RX113	0Ω	FCXR000000
RX114	0Ω	FCXR000000
RX115	0Ω	FCXR000000
RX116	0Ω	FCXR000000
RX117	0Ω	FCXR000000
RX118	0Ω	FCXR000000
RX119	0Ω	FCXR000000
RX120	0Ω	FCXR000000
RX121	0Ω	FCXR000000
SC100	SCREW M4x6 SPAN	FCT8040061
SC101	SCREW M4x6 SPAN	FCT8040061
SC102	SCREW M4x6 SPAN	FCT8040061
SC103	SCREW M4x6 SPAN	FCT8040061

OLD VERSION

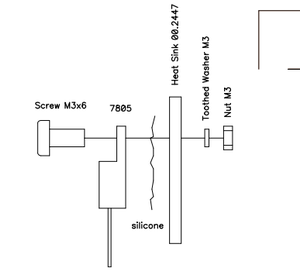
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SC104	SCREW M3x10 SPA	FCT8030100
SC105	SCREW M3x10 SPA	FCT8030100
SC106	SCREW M3x10 SPA	FCT8030100
SC107	SCREW M3x10 SPA	FCT8030100
SC108	SCREW M3x10 SPA	FCT8030100
SC109	SCREW M3x10 SPA	FCT8030100
SC110	SCREW M3x10 SPA	FCT8030100
SC111	SCREW M3x10 SPA	FCT8030100
SC112	SCREW M3x5	FCT8503005
SC113	SCREW M3x5	FCT8503005
SC114	SCREW M3x5	FCT8503005
SC115	SCREW M3x5	FCT8503005
SC116	SCREW M3x5	FCT8503005
SC117	SCREW M3x5	FCT8503005
SC118	SCREW M3x5	FCT8503005
SC119	SCREW M3x5	FCT8503005
SC120	SCREW M3x6	FCT7503006
W101	19mm	FCMECPON19
W102	19mm	FCMECPON19
W103	19mm	FCMECPON19
W104	19mm	FCMECPON19
W105	19mm	FCMECPON19
W106	19mm	FCMECPON19
W107	19mm	FCMECPON19
W108	19mm	FCMECPON19
W109	19mm	FCMECPON19
W110	19mm	FCMECPON19
WA100	WASHER 3.2x6x1	FCARM32010
WA101	WASHER 3.2x6x1	FCARM32010
WA102	WASHER 3.2x6x1	FCARM32010
WA103	WASHER 3.2x6x1	FCARM32010
WA104	WASHER 3.2x6x1	FCARM32010
WA105	WASHER 3.2x6x1	FCARM32010
WA106	WASHER 3.2x6x1	FCARM32010
WA107	WASHER 3.2x6x1	FCARM32010
WA108	WASHER M3 DIN6798	FCARDE0300

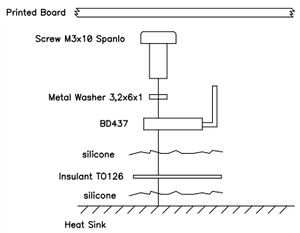
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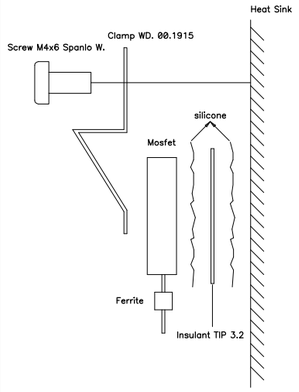


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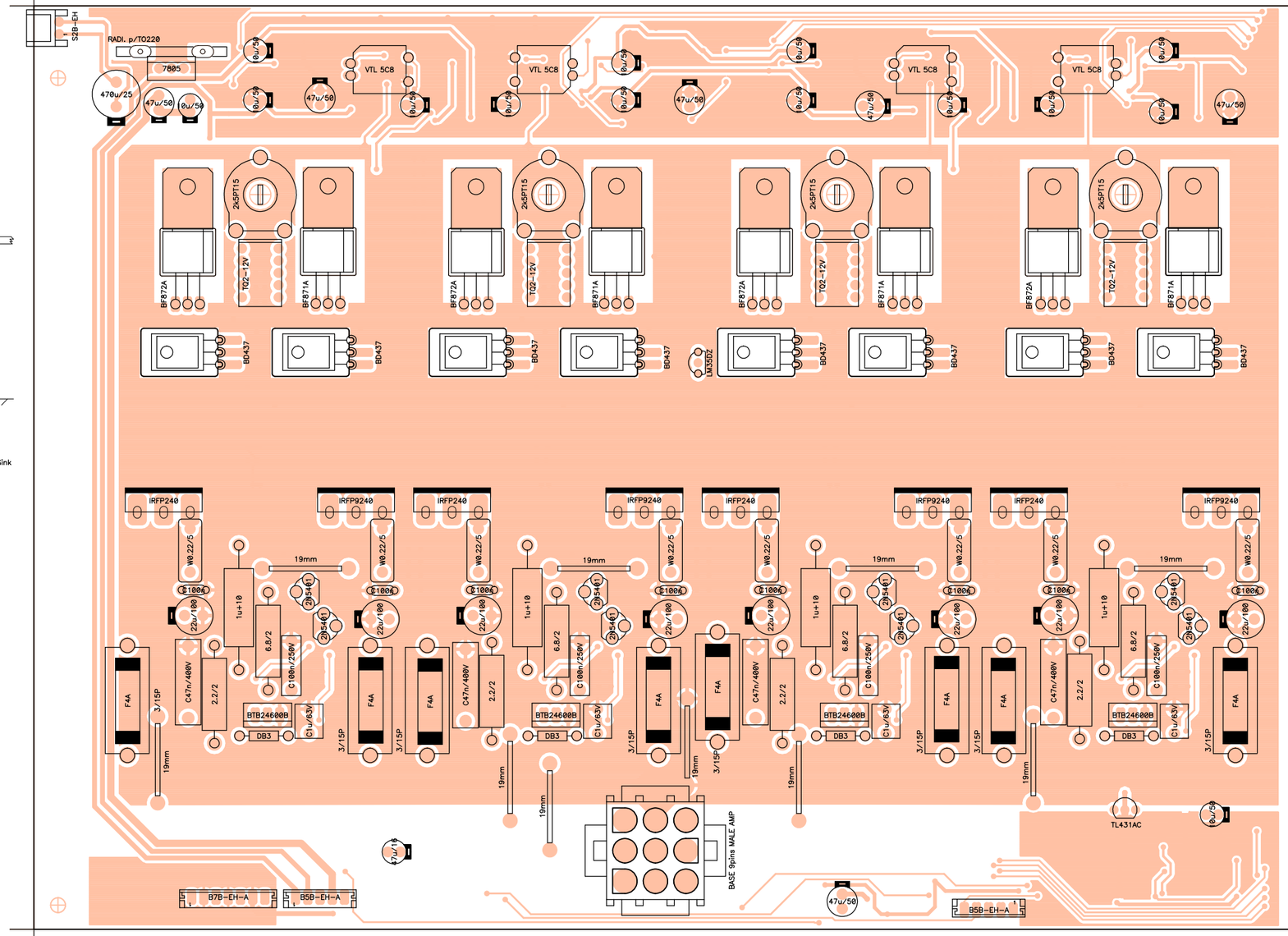
ECLEREE LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.02 insertion file no: 81.0011-01.01		side: Component
			view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0389	version: 01.02	title: EP05-99 Power Amp.	

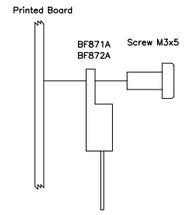




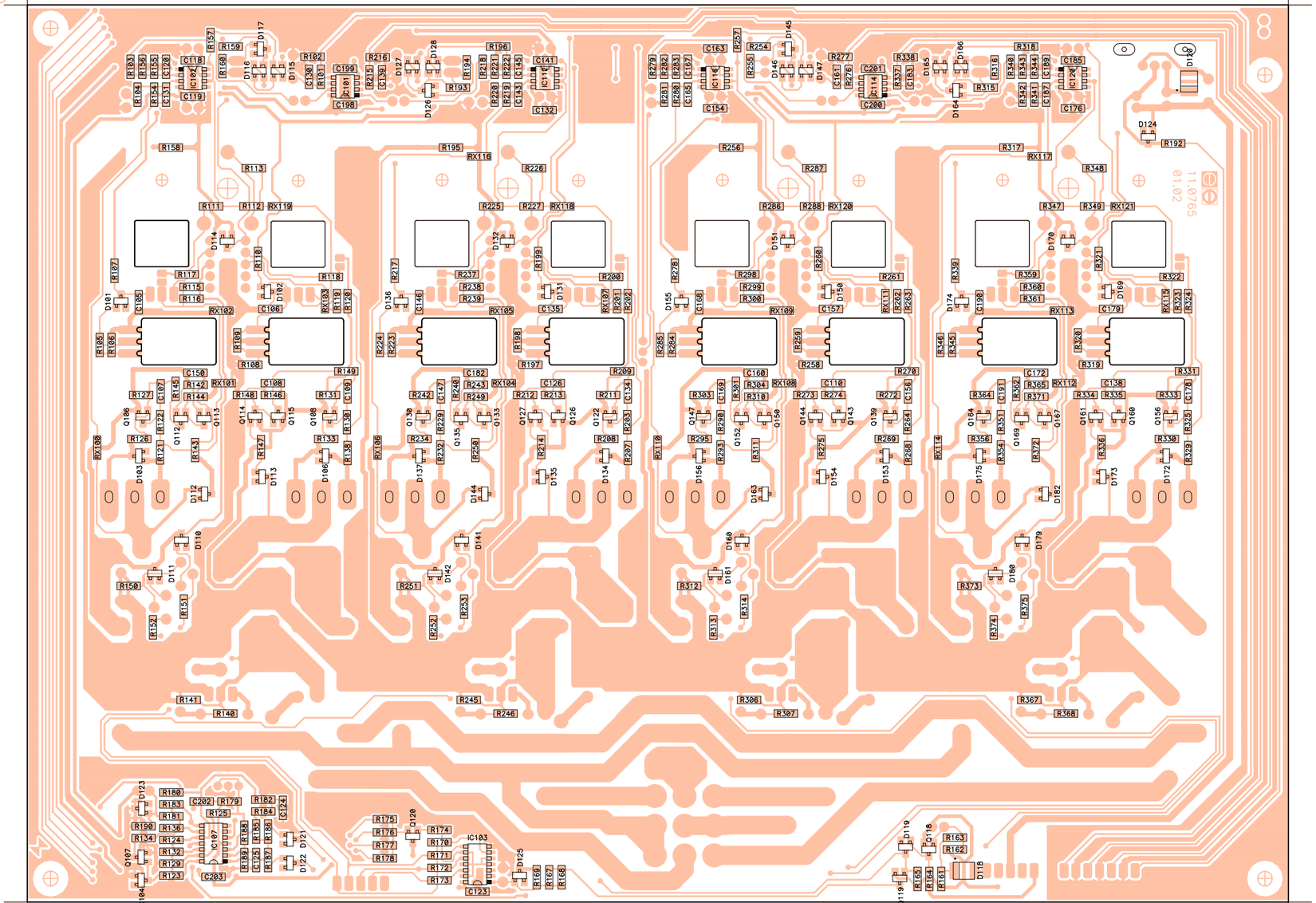


OLD VERSION

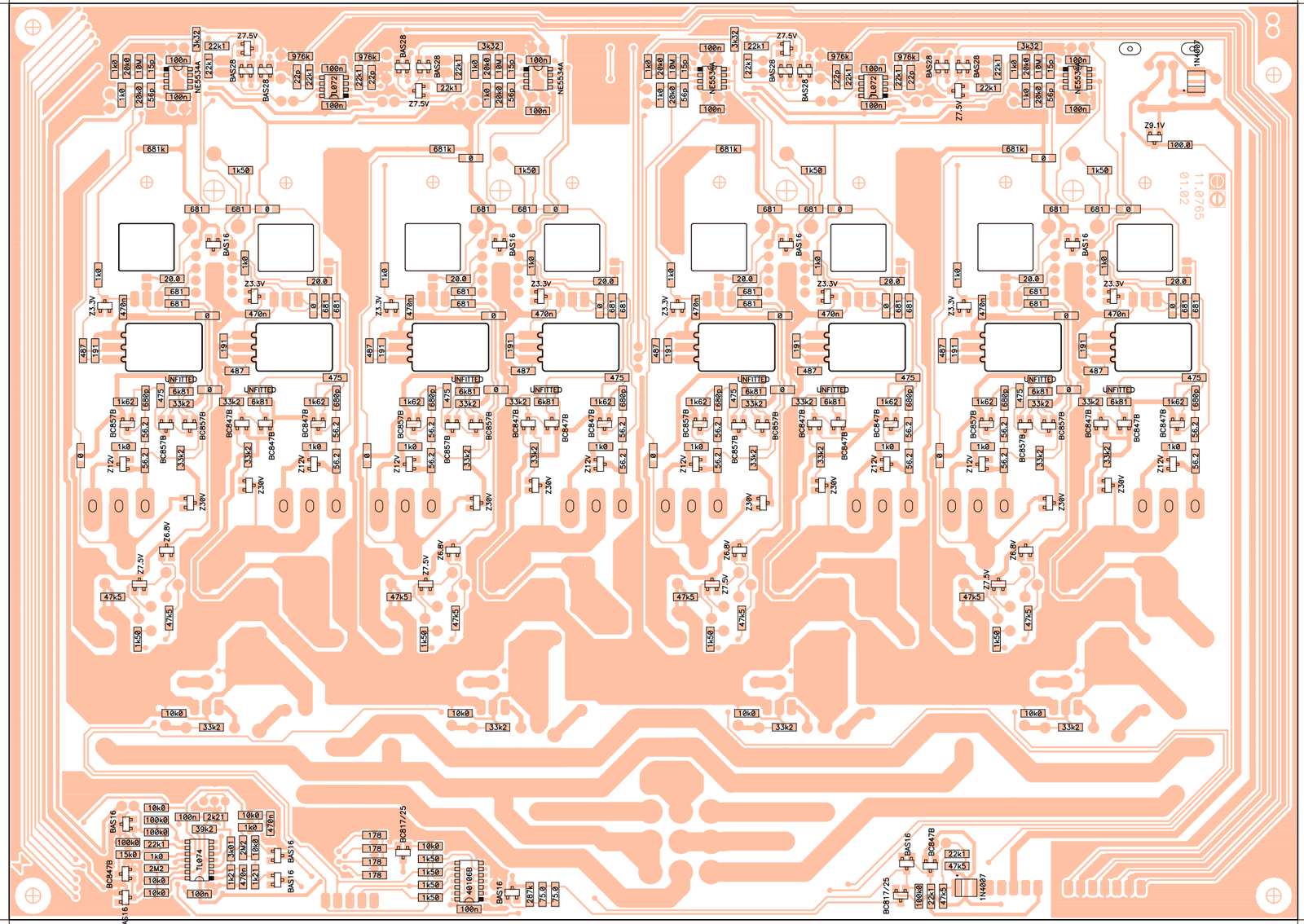




ECLER — LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.02 insertion file no: 81.0011-01.01	side: Component view: Value
number: 33.0390 / version: 01.03	drawn by: M. Amoros / date: 000222	approved by: Angel Sanuy
	title: EP05-99 Power Amp.	



ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.02 insertion file no: 81.0011-01.01		side: Solder
			view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0391	version: 01.02	title: EP05-99 Power Amp.	



ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0765-01.02 schema no: 10.0490-01.02 insertion file no: 81.0011-01.01		side: Solder
			view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0392 / version: 01.02	title: EP05-99 Power Amp.		

PRINTED CIRCUIT 11.0765-01.02

REFERENCE	VALUE	CODE
C101	10u/50	FCCE250100
C102	47u/50	FCCE250470
C103	10u/50	FCCE250100
C104	10u/50	FCCE250100
C105	470n	FCXCN44700
C106	470n	FCXCN44700
C107	680p	FCXCN26800
C108	UNFITTED	UNFITTED
C109	680p	FCXCN26800
C110	UNFITTED	UNFITTED
C111	C100n	FCCC151010
C112	22u/100	FCCE350220
C113	22u/100	FCCE350220
C114	C100n	FCCC151010
C115	C100n/250V	FCCDN11000
C116	C47n/400V	FCCDH71047
C117	C1u/63V	FCCDK20010
C118	100n	FCXCN41000
C119	100n	FCXCN41000
C120	15p	FCXCN11500
C121	47u/16	FCCE100000
C122	47u/50	FCCE250470
C123	100n	FCXCN41000
C124	470n	FCXCN44700
C125	470n	FCXCN44700
C126	UNFITTED	UNFITTED
C127	10u/50	FCCE250100
C128	10u/50	FCCE250100
C129	470u/25	FCCE154700
C130	22p	FCXCN12200
C131	56p	FCXCN15600
C132	100n	FCXCN41000
C133	10u/50	FCCE250100
C134	680p	FCXCN26800
C135	470n	FCXCN44700
C136	C100n	FCCC151010
C137	22u/100	FCCE350220
C138	UNFITTED	UNFITTED
C139	22p	FCXCN12200
C140	10u/50	FCCE250100
C141	100n	FCXCN41000
C142	47u/50	FCCE250470
C143	56p	FCXCN15600
C144	10u/50	FCCE250100
C145	15p	FCXCN11500
C146	470n	FCXCN44700
C147	680p	FCXCN26800
C148	22u/100	FCCE350220
C149	C100n	FCCC151010
C150	UNFITTED	UNFITTED
C151	C1u/63V	FCCDK20010
C152	C47n/400V	FCCDH71047

OLD VERSION

REFERENCE	VALUE	CODE
C153	C100n/250V	FCCDN11000
C154	100n	FCXCN41000
C155	10u/50	FCCE250100
C156	680p	FCXCN26800
C157	470n	FCXCN44700
C158	C100n	FCCC151010
C159	22u/100	FCCE350220
C160	UNFITTED	UNFITTED
C161	22p	FCXCN12200
C162	10u/50	FCCE250100
C163	100n	FCXCN41000
C164	47u/50	FCCE250470
C165	56p	FCXCN15600
C166	10u/50	FCCE250100
C167	15p	FCXCN11500
C168	470n	FCXCN44700
C169	680p	FCXCN26800
C170	22u/100	FCCE350220
C171	C100n	FCCC151010
C172	UNFITTED	UNFITTED
C173	C1u/63V	FCCDK20010
C174	C47n/400V	FCCDH71047
C175	C100n/250V	FCCDN11000
C176	100n	FCXCN41000
C177	10u/50	FCCE250100
C178	680p	FCXCN26800
C179	470n	FCXCN44700
C180	C100n	FCCC151010
C181	22u/100	FCCE350220
C182	UNFITTED	UNFITTED
C183	22p	FCXCN12200
C184	10u/50	FCCE250100
C185	100n	FCXCN41000
C186	47u/50	FCCE250470
C187	56p	FCXCN15600
C188	10u/50	FCCE250100
C189	15p	FCXCN11500
C190	470n	FCXCN44700
C191Ω	680p	FCXCN26800
C192	22u/100	FCCE350220
C193	C100n	FCCC151010
C194	47u/50	FCCE250470
C195	C1u/63V	FCCDK20010
C196	C47n/400V	FCCDH71047
C197	C100n/250V	FCCDN11000
C198	100n	FCXCN41000
C199	100n	FCXCN41000
C200	100n	FCXCN41000
C201	100n	FCXCN41000
C202	100n	FCXCN41000
C203	100n	FCXCN41000
CI101	11.0765-01.02	FCCIMPA765
D101	Z3.3V	FCXZ000033
D102	Z3.3V	FCXZ000033
D103	Z12V	FCXZ000120
D104	BAS16	FCXDDBAS16
D106	Z12V	FCXZ000120
D109	DB3	FCDIDB3000

OLD VERSION

REFERENCE	VALUE	CODE
D110	Z6.8V	FCXZ000068
D111	Z7.5V	FCXZ000075
D112	Z30V	FCXZ000300
D113	Z30V	FCXZ000300
D114	BAS16	FCXDDBAS16
D115	BAS28	FCXDDBAS28
D116	BAS28	FCXDDBAS28
D117	Z7.5V	FCXZ000075
D118	1N4007	FCXDD40070
D119	BAS16	FCXDDBAS16
D120	1N4007	FCXDD40070
D121	BAS16	FCXDDBAS16
D122	BAS16	FCXDDBAS16
D123	BAS16	FCXDDBAS16
D124	Z9.1V	FCXZ000091
D125	BAS16	FCXDDBAS16
D126	Z7.5V	FCXZ000075
D127	BAS28	FCXDDBAS28
D128	BAS28	FCXDDBAS28
D131	Z3.3V	FCXZ000033
D132	BAS16	FCXDDBAS16
D134	Z12V	FCXZ000120
D135	Z30V	FCXZ000300
D136	Z3.3V	FCXZ000033
D137	Z12V	FCXZ000120
D141	Z6.8V	FCXZ000068
D142	Z7.5V	FCXZ000075
D143	DB3	FCDIDB3000
D144	Z30V	FCXZ000300
D145	Z7.5V	FCXZ000075
D146	BAS28	FCXDDBAS28
D147	BAS28	FCXDDBAS28
D150	Z3.3V	FCXZ000033
D151	BAS16	FCXDDBAS16
D153	Z12V	FCXZ000120
D154	Z30V	FCXZ000300
D155	Z3.3V	FCXZ000033
D156	Z12V	FCXZ000120
D160	Z6.8V	FCXZ000068
D161	Z7.5V	FCXZ000075
D162	DB3	FCDIDB3000
D163	Z30V	FCXZ000300
D164	Z7.5V	FCXZ000075
D165	BAS28	FCXDDBAS28
D166	BAS28	FCXDDBAS28
D169	Z3.3V	FCXZ000033
D170	BAS16	FCXDDBAS16
D172	Z12V	FCXZ000120
D173	Z30V	FCXZ000300
D174	Z3.3V	FCXZ000033
D175	Z12V	FCXZ000120
D179	Z6.8V	FCXZ000068
D180	Z7.5V	FCXZ000075
D181	DB3	FCDIDB3000
D182	Z30V	FCXZ000300
F101	F4A	FCFUS50200
F102	F4A	FCFUS50200
F103	F4A	FCFUS50200

OLD VERSION

REFERENCE	VALUE	CODE
F104	F4A	FCFUS50200
F105	F4A	FCFUS50200
F106	F4A	FCFUS50200
F107	F4A	FCFUS50200
F108	F4A	FCFUS50200
HS100	HEAT SINK TO220	FCMECT0220
HS101	HEAT SINK	FCRAD02000
IC101	TL072	FCIC072010
IC102	NE5534A	FCIC553410
IC103	40106B	FCIC401060
IC104	LM35DZ	FCIC350000
IC105	TL431AC	FCIC431000
IC106	7805	FCREG78050
IC107	TL074	FCIC074010
IC108	VTL 5C8	FCOPTVTL50
IC109	VTL 5C8	FCOPTVTL50
IC112	NE5534A	FCIC553410
IC113	VTL 5C8	FCOPTVTL50
IC114	TL072	FCIC072010
IC116	NE5534A	FCIC553410
IC117	VTL 5C8	FCOPTVTL50
IC120	NE5534A	FCIC553410
IN100	INSULANT TO126	FCMICTO126
IN101	INSULANT TO126	FCMICTO126
IN102	INSULANT TO126	FCMICTO126
IN103	INSULANT TO126	FCMICTO126
IN104	INSULANT TO126	FCMICTO126
IN105	INSULANT TO126	FCMICTO126
IN106	INSULANT TO126	FCMICTO126
IN107	INSULANT TO126	FCMICTO126
IN108	INSULANT TIP3.2	FCMICTIP32
IN109	INSULANT TIP3.2	FCMICTIP32
IN110	INSULANT TIP3.2	FCMICTIP32
IN111	INSULANT TIP3.2	FCMICTIP32
IN112	INSULANT TIP3.2	FCMICTIP32
IN113	INSULANT TIP3.2	FCMICTIP32
IN114	INSULANT TIP3.2	FCMICTIP32
IN115	INSULANT TIP3.2	FCMICTIP32
IN116	INSULANT TIP3.2	FCMICTIP32
J109	BASE 9pins MALE	FCCTAMP090
J110	B5B-EH-A	FCCTM00050
J111	B5B-EH-A	FCCTM00050
J112	B7B-EH-A	FCCTM00070
J113	S2B-EH	FCCTM10020
J114	S2B-EH	FCCTM10020
J115	S2B-EH	FCCTM10020
J116	S2B-EH	FCCTM10020
J117	S2B-EH	FCCTM10020
J118	S2B-EH	FCCTM10020
J119	S2B-EH	FCCTM10020
J120	S2B-EH	FCCTM10020
J121	S2B-EH	FCCTM10020
K101	TQ2-12V	FCREL00300
K102	TQ2-12V	FCREL00300
K105	TQ2-12V	FCREL00300
K108	TQ2-12V	FCREL00300
MP100	CLAMP WD00191Ω5	FCPINZAM00
MP101	CLAMP WD00191Ω5	FCPINZAM00

OLD VERSION

REFERENCE	VALUE	CODE
NV100	NUT M3	FCTUE00300
PF101	FUSE HOLDER	FCPORF3150
PF102	FUSE HOLDER	FCPORF3150
PF103	FUSE HOLDER	FCPORF3150
PF104	FUSE HOLDER	FCPORF3150
PF105	FUSE HOLDER	FCPORF3150
PF106	FUSE HOLDER	FCPORF3150
PF107	FUSE HOLDER	FCPORF3150
PF108	FUSE HOLDER	FCPORF3150
Q101	BD437	FCTR437000
Q102	BD437	FCTR437000
Q103	BF871A	FCTR871000
Q104	BF872A	FCTR872000
Q105	IRFP9240	FCTR243000
Q106	BC857B	FCXTT08570
Q107	BC847B	FCXTT08470
Q108	BC847B	FCXTT08470
Q109	IRFP240	FCTR240000
Q111	BTB24600B	FCTI246000
Q112	BC857B	FCXTT08570
Q113	BC857B	FCXTT08570
Q114	BC847B	FCXTT08470
Q115	BC847B	FCXTT08470
Q116	2N5401	FCTR254010
Q117	2N5401	FCTR254010
Q118	BC847B	FCXTT08470
Q119	BC817/25	FCXTT08170
Q120	BC817/25	FCXTT08170
Q121	BD437	FCTR437000
Q122	BC847B	FCXTT08470
Q123	BF872A	FCTR872000
Q124	IRFP240	FCTR240000
Q126	BC847B	FCXTT08470
Q127	BC847B	FCXTT08470
Q128	BD437	FCTR437000
Q129	BF871A	FCTR871000
Q130	BC857B	FCXTT08570
Q132	IRFP9240	FCTR243000
Q133	BC857B	FCXTT08570
Q134	BTB24600B	FCTI246000
Q135	BC857B	FCXTT08570
Q136	2N5401	FCTR254010
Q137	2N5401	FCTR254010
Q138	BD437	FCTR437000
Q139	BC847B	FCXTT08470
Q140	BF872A	FCTR872000
Q141	IRFP240	FCTR240000
Q143	BC847B	FCXTT08470
Q144	BC847B	FCXTT08470
Q145	BD437	FCTR437000
Q146	BF871A	FCTR871000
Q147	BC857B	FCXTT08570
Q149	IRFP9240	FCTR243000
Q150	BC857B	FCXTT08570
Q151	BTB24600B	FCTI246000
Q152	BC857B	FCXTT08570
Q153	2N5401	FCTR254010
Q154	2N5401	FCTR254010

OLD VERSION

REFERENCE	VALUE	CODE
Q155	BD437	FCTR437000
Q156	BC847B	FCXTT08470
Q157	BF872A	FCTR872000
Q158	IRFP240	FCTR240000
Q160	BC847B	FCXTT08470
Q161	BC847B	FCXTT08470
Q162	BD437	FCTR437000
Q163	BF871A	FCTR871000
Q164	BC857B	FCXTT08570
Q166	IRFP9240	FCTR243000
Q167	BC857B	FCXTT08570
Q168	BTB24600B	FCTI246000
Q169	BC857B	FCXTT08570
Q170	2N5401	FCTR254010
Q171	2N5401	FCTR254010
R101	22k1	FCXR142210
R102	976k	FCXR159760
R103	1k0	FCXR131000
R104	1k0	FCXR131000
R105	487Ω	FCXR124870
R106	191Ω	FCXR121910
R107	1k0	FCXR131000
R108	487Ω	FCXR124870
R109	191Ω	FCXR121910
R110	1k0	FCXR131000
R111	681Ω	FCXR126810
R112	681Ω	FCXR126810
R113	1k50	FCXR131500
R114	2k5PT15	FCRJG42500
R115	681Ω	FCXR126810
R116	681Ω	FCXR126810
R117	20.0Ω	FCXR112000
R118	20.0Ω	FCXR112000
R119	681Ω	FCXR126810
R120	681Ω	FCXR126810
R121	56.2Ω	FCXR115620
R122	56.2Ω	FCXR115620
R123	10k0	FCXR141000
R124	1k0	FCXR131000
R125	39k2	FCXR143920
R126	1k0	FCXR131000
R127	1k62	FCXR131620
R128	W0.22Ω/5	FCRY000100
R129	10k0	FCXR141000
R130	56.2Ω	FCXR115620
R131	1k62	FCXR131620
R132	2M2	FCXR062200
R133	1k0	FCXR131000
R134	15k0	FCXR141500
R135	W0.22Ω/5	FCRY000100
R136	22k1	FCXR142210
R138	56.2Ω	FCXR115620
R139	2.2Ω/2	FCRC512200
R140	33k2	FCXR143320
R141	10k0	FCXR141000
R142	6k81	FCXR136810
R143	33k2	FCXR143320
R144	33k2	FCXR143320

OLD VERSION

REFERENCE	VALUE	CODE
R145	475	FCXR124750
R146	6k81	FCXR136810
R147	33k2	FCXR143320
R148	33k2	FCXR143320
R149	475	FCXR124750
R150	47k5	FCXR144750
R151	47k5	FCXR144750
R152	1k50	FCXR131500
R153	1uH+10Ω	FCIND00200
R154	20k0	FCXR142000
R155	10M	FCXR071000
R156	20k0	FCXR142000
R157	3k32	FCXR133320
R158	681k	FCXR156810
R159	22k1	FCXR142210
R160	22k1	FCXR142210
R161	47k5	FCXR144750
R162	47k5	FCXR144750
R163	22k1	FCXR142210
R164	22k1	FCXR142210
R165	100k0	FCXR151000
R166	6.8Ω/2	FCRC516800
R167	75.0	FCXR117500
R168	75.0	FCXR117500
R169	287k	FCXR152870
R170	1k50	FCXR131500
R171	1k50	FCXR131500
R172	1k50	FCXR131500
R173	1k50	FCXR131500
R174	10k0	FCXR141000
R175	178	FCXR121780
R176	178	FCXR121780
R177	178	FCXR121780
R178	178	FCXR121780
R179	2k21	FCXR132210
R180	10k0	FCXR141000
R181	100k0	FCXR151000
R182	10k0	FCXR141000
R183	100k0	FCXR151000
R184	1k0	FCXR131000
R185	2M2	FCXR062200
R186	10k0	FCXR141000
R187	1k21	FCXR131210
R188	3k01	FCXR133010
R189	1k21	FCXR131210
R190	100k0	FCXR151000
R192	100.0	FCXR121000
R193	22k1	FCXR142210
R194	22k1	FCXR142210
R195	681k	FCXR156810
R196	3k32	FCXR133320
R197	487Ω	FCXR124870
R198	191Ω	FCXR121910
R199	1k0	FCXR131000
R200	20.0Ω	FCXR112000
R201	681Ω	FCXR126810
R202	681Ω	FCXR126810
R203	56.2Ω	FCXR115620

OLD VERSION

REFERENCE	VALUE	CODE
R207	56.2Ω	FCXR115620
R208	1k0	FCXR131000
R209	475	FCXR124750
R210	W0.22Ω/5	FCRY000100
R211	1k62	FCXR131620
R212	33k2	FCXR143320
R213	6k81	FCXR136810
R214	33k2	FCXR143320
R215	22k1	FCXR142210
R216	976k	FCXR159760
R217	1k0	FCXR131000
R218	1k0	FCXR131000
R219	20k0	FCXR142000
R220	1k0	FCXR131000
R221	20k0	FCXR142000
R222	10M	FCXR071000
R223	191Ω	FCXR121910
R224	487Ω	FCXR124870
R225	681Ω	FCXR126810
R226	1k50	FCXR131500
R227	681Ω	FCXR126810
R228	2k5PT15	FCRJG42500
R229	56.2Ω	FCXR115620
R232	56.2Ω	FCXR115620
R234	1k0	FCXR131000
R237	20.0Ω	FCXR112000
R238	681Ω	FCXR126810
R239	681Ω	FCXR126810
R240	475	FCXR124750
R241	W0.22Ω/5	FCRY000100
R242	1k62	FCXR131620
R243	6k81	FCXR136810
R244	1uH+10Ω	FCIND00200
R245	10k0	FCXR141000
R246	33k2	FCXR143320
R247	2.2Ω/2	FCRC512200
R248	6.8Ω/2	FCRC516800
R249	33k2	FCXR143320
R250	33k2	FCXR143320
R251	47k5	FCXR144750
R252	1k50	FCXR131500
R253	47k5	FCXR144750
R254	22k1	FCXR142210
R255	22k1	FCXR142210
R256	681k	FCXR156810
R257	3k32	FCXR133320
R258	487Ω	FCXR124870
R259	191Ω	FCXR121910
R260	1k0	FCXR131000
R261	20.0Ω	FCXR112000
R262	681Ω	FCXR126810
R263	681Ω	FCXR126810
R264	56.2Ω	FCXR115620
R268	56.2Ω	FCXR115620
R269	1k0	FCXR131000
R270	475	FCXR124750
R271	W0.22Ω/5	FCRY000100
R272	1k62	FCXR131620

OLD VERSION

REFERENCE	VALUE	CODE
R273	33k2	FCXR143320
R274	6k81	FCXR136810
R275	33k2	FCXR143320
R276	22k1	FCXR142210
R277	976k	FCXR159760
R278	1k0	FCXR131000
R279	1k0	FCXR131000
R280	20k0	FCXR142000
R281	1k0	FCXR131000
R282	20k0	FCXR142000
R283	10M	FCXR071000
R284	191Ω	FCXR121910
R285	487Ω	FCXR124870
R286	681Ω	FCXR126810
R287	1k50	FCXR131500
R288	681Ω	FCXR126810
R289	2k5PT15	FCRJG42500
R290	56.2Ω	FCXR115620
R293	56.2Ω	FCXR115620
R295	1k0	FCXR131000
R298	20.0Ω	FCXR112000
R299	681Ω	FCXR126810
R300	681Ω	FCXR126810
R301	475	FCXR124750
R302	W0.22Ω/5	FCRY000100
R303	1k62	FCXR131620
R304	6k81	FCXR136810
R305	1u+10	FCIND00200
R306	10k0	FCXR141000
R307	33k2	FCXR143320
R308	2.2Ω/2	FCRC512200
R309	6.8Ω/2	FCRC516800
R310	33k2	FCXR143320
R311	33k2	FCXR143320
R312	47k5	FCXR144750
R313	1k50	FCXR131500
R314	47k5	FCXR144750
R315	22k1	FCXR142210
R316	22k1	FCXR142210
R317	681k	FCXR156810
R318	3k32	FCXR133320
R319	487Ω	FCXR124870
R320	191Ω	FCXR121910
R321	1k0	FCXR131000
R322	20.0Ω	FCXR112000
R323	681Ω	FCXR126810
R324	681Ω	FCXR126810
R325	56.2Ω	FCXR115620
R329	56.2Ω	FCXR115620
R330	1k0	FCXR131000
R331	475	FCXR124750
R332	W0.22Ω/5	FCRY000100
R333	1k62	FCXR131620
R334	33k2	FCXR143320
R335	6k81	FCXR136810
R336	33k2	FCXR143320
R337	22k1	FCXR142210
R338	976k	FCXR159760

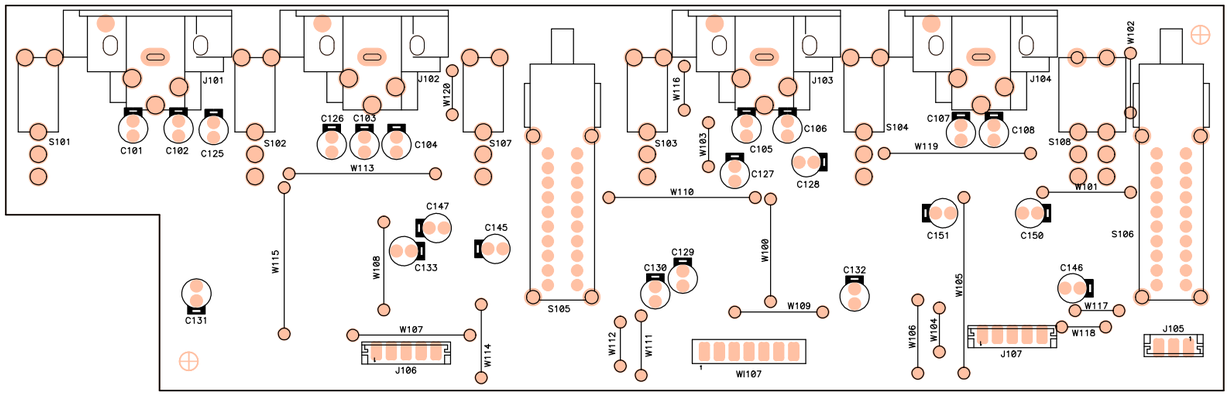
OLD VERSION

REFERENCE	VALUE	CODE
R339	1k0	FCXR131000
R340	1k0	FCXR131000
R341	20k0	FCXR142000
R342	1k0	FCXR131000
R343	20k0	FCXR142000
R344	10M	FCXR071000
R345	191Ω	FCXR121910
R346	487Ω	FCXR124870
R347	681Ω	FCXR126810
R348	1k50	FCXR131500
R349	681Ω	FCXR126810
R350	2k5PT15	FCRJG42500
R351	56.2Ω	FCXR115620
R354	56.2Ω	FCXR115620
R356	1k0	FCXR131000
R359	20.0Ω	FCXR112000
R360	681Ω	FCXR126810
R361	681Ω	FCXR126810
R362	475	FCXR124750
R363	W0.22Ω/5	FCRY000100
R364	1k62	FCXR131620
R365	6k81	FCXR136810
R366	1uH+10Ω	FCIND00200
R367	10k0	FCXR141000
R368	33k2	FCXR143320
R369	2.2Ω/2	FCRC512200
R370	6.8Ω/2	FCRC516800
R371	33k2	FCXR143320
R372	33k2	FCXR143320
R373	47k5	FCXR144750
R374	1k50	FCXR131500
R375	47k5	FCXR144750
RX100	0Ω	FCXR000000
RX101	0Ω	FCXR000000
RX102	0Ω	FCXR000000
RX103	0Ω	FCXR000000
RX104	0Ω	FCXR000000
RX105	0Ω	FCXR000000
RX106	0Ω	FCXR000000
RX107	0Ω	FCXR000000
RX108	0Ω	FCXR000000
RX109	0Ω	FCXR000000
RX110	0Ω	FCXR000000
RX111	0Ω	FCXR000000
RX112	0Ω	FCXR000000
RX113	0Ω	FCXR000000
RX114	0Ω	FCXR000000
RX115	0Ω	FCXR000000
RX116	0Ω	FCXR000000
RX117	0Ω	FCXR000000
RX118	0Ω	FCXR000000
RX119	0Ω	FCXR000000
RX120	0Ω	FCXR000000
RX121	0Ω	FCXR000000
SC100	SCREW M4x6 SPAN	FCT8040061
SC101	SCREW M4x6 SPAN	FCT8040061
SC102	SCREW M4x6 SPAN	FCT8040061
SC103	SCREW M4x6 SPAN	FCT8040061

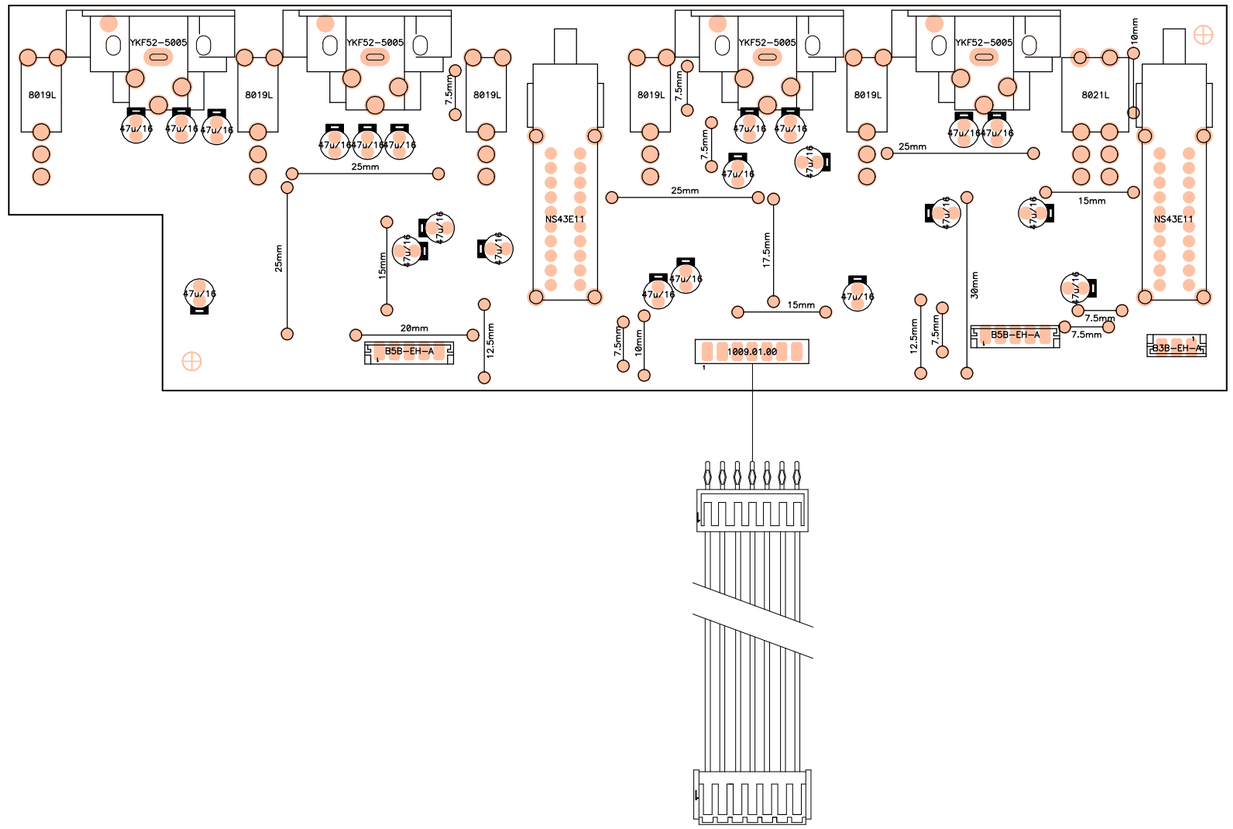
OLD VERSION

REFERENCE	VALUE	CODE
SC104	SCREW M3x10 SPA	FCT8030100
SC105	SCREW M3x10 SPA	FCT8030100
SC106	SCREW M3x10 SPA	FCT8030100
SC107	SCREW M3x10 SPA	FCT8030100
SC108	SCREW M3x10 SPA	FCT8030100
SC109	SCREW M3x10 SPA	FCT8030100
SC110	SCREW M3x10 SPA	FCT8030100
SC111	SCREW M3x10 SPA	FCT8030100
SC112	SCREW M3x5	FCT8503005
SC113	SCREW M3x5	FCT8503005
SC114	SCREW M3x5	FCT8503005
SC115	SCREW M3x5	FCT8503005
SC116	SCREW M3x5	FCT8503005
SC117	SCREW M3x5	FCT8503005
SC118	SCREW M3x5	FCT8503005
SC119	SCREW M3x5	FCT8503005
SC120	SCREW M3x6	FCT7503006
W101	19mm	FCMECPON19
W102	19mm	FCMECPON19
W103	19mm	FCMECPON19
W104	19mm	FCMECPON19
W105	19mm	FCMECPON19
W106	19mm	FCMECPON19
W107	19mm	FCMECPON19
W108	19mm	FCMECPON19
W109	19mm	FCMECPON19
W110	19mm	FCMECPON19
WA100	WASHER 3.2x6x1	FCARM32010
WA101	WASHER 3.2x6x1	FCARM32010
WA102	WASHER 3.2x6x1	FCARM32010
WA103	WASHER 3.2x6x1	FCARM32010
WA104	WASHER 3.2x6x1	FCARM32010
WA105	WASHER 3.2x6x1	FCARM32010
WA106	WASHER 3.2x6x1	FCARM32010
WA107	WASHER 3.2x6x1	FCARM32010
WA108	WASHER M3 DIN6798	FCARDE0300

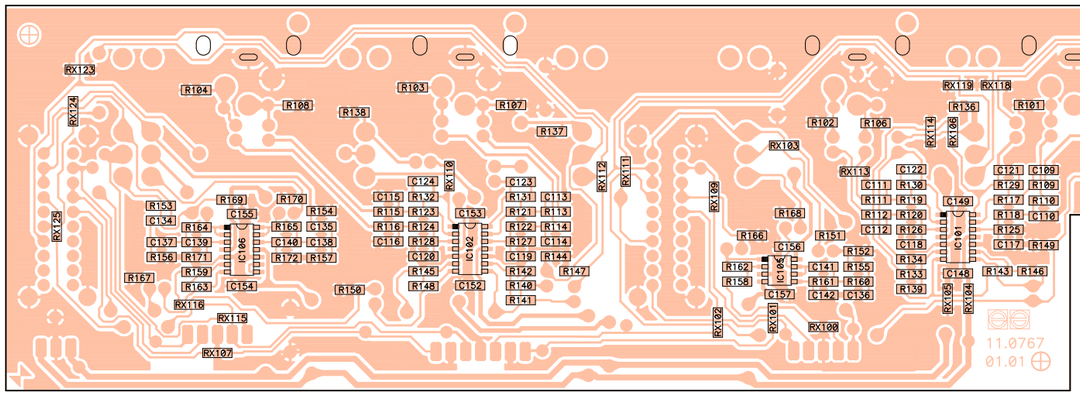
OLD VERSION



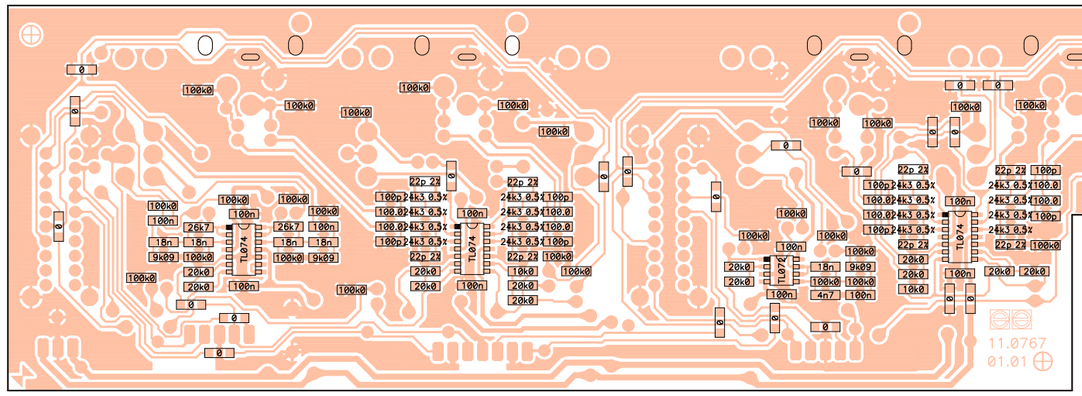
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			view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0393	version: 01.02	title: EP05-99 Inputs Circuit	



ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0767-01.01 schema no: 10.0491-01.02 insertion file no: 81.0012-01.01		side: Component view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0394	version: 01.02	title: EP05-99 Inputs Circuit	



ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0767-01.01 schema no: 10.0491-01.02 insertion file no: 81.0012-01.01		side: Solder view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0395 / version: 01.02	title: EP05-99 Inputs Circuit		



ECLER LABORATORIO DE ELECTRO–ACUSTICA S.A.	related to: circuit no: 11.0767–01.01 schema no: 10.0491–01.02 insertion file no: 81.0012–01.01		side: Solder view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0396 / version: 01.02	title: EP05–99 Inputs Circuit		

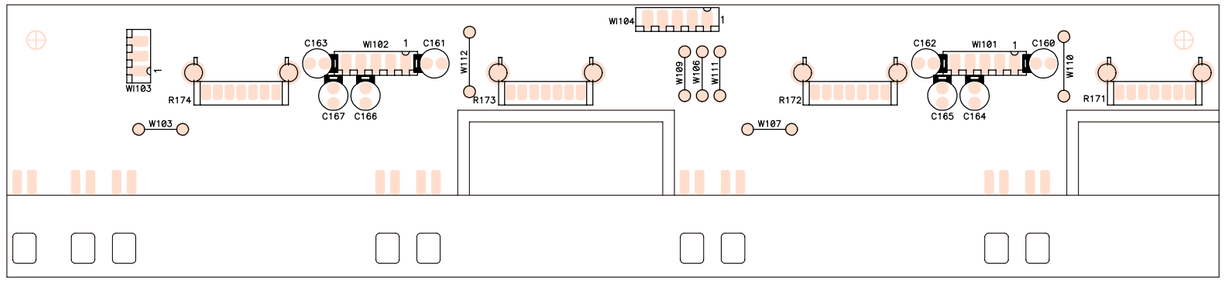
PRINTED CIRCUIT 11.0767-01.01

REFERENCE	VALUE	CODE
C101	47u/16	FCCE100000
C102	47u/16	FCCE100000
C103	47u/16	FCCE100000
C104	47u/16	FCCE100000
C105	47u/16	FCCE100000
C106	47u/16	FCCE100000
C107	47u/16	FCCE100000
C108	47u/16	FCCE100000
C109	100p	FCXCN21000
C110	100p	FCXCN21000
C111	100p	FCXCN21000
C112	100p	FCXCN21000
C113	100p	FCXCN21000
C114	100p	FCXCN21000
C115	100p	FCXCN21000
C116	100p	FCXCN21000
C117	22p 2%	FCXCN12201
C118	22p 2%	FCXCN12201
C119	22p 2%	FCXCN12201
C120	22p 2%	FCXCN12201
C121	22p 2%	FCXCN12201
C122	22p 2%	FCXCN12201
C123	22p 2%	FCXCN12201
C124	22p 2%	FCXCN12201
C125	47u/16	FCCE100000
C126	47u/16	FCCE100000
C127	47u/16	FCCE100000
C128	47u/16	FCCE100000
C129	47u/16	FCCE100000
C130	47u/16	FCCE100000
C131	47u/16	FCCE100000
C132	47u/16	FCCE100000
C133	47u/16	FCCE100000
C134	100n	FCXCN41000
C135	100n	FCXCN41000
C136	100n	FCXCN41000
C137	18n	FCXCN40180
C138	18n	FCXCN40180
C139	18n	FCXCN40180
C140	18n	FCXCN40180
C141	18n	FCXCN40180
C142	4n7	FCXCN40047
C145	47u/16	FCCE100000
C146	47u/16	FCCE100000
C147	47u/16	FCCE100000
C148	100n	FCXCN41000
C149	100n	FCXCN41000
C150	47u/16	FCCE100000
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C152	100n	FCXCN41000
C153	100n	FCXCN41000
C154	100n	FCXCN41000

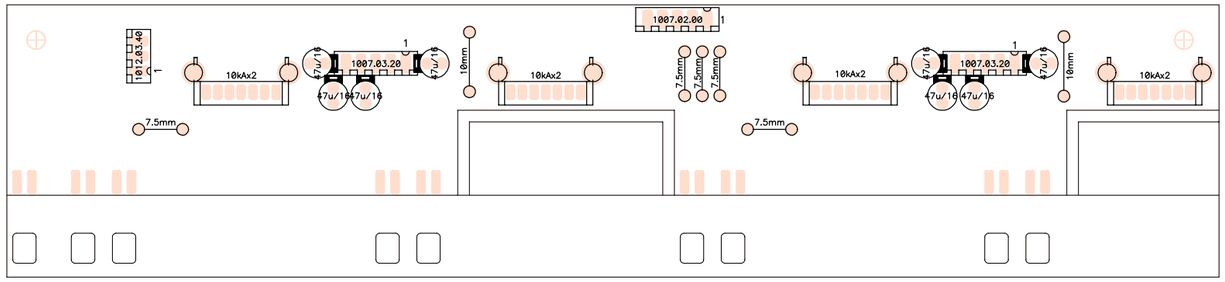
REFERENCE	VALUE	CODE
C155	100n	FCXCN41000
C156	100n	FCXCN41000
C157	100n	FCXCN41000
CI101	11.0767-01.01	FCCIMPA767
IC101	TL074	FCIC074010
IC102	TL074	FCIC074010
IC105	TL072	FCIC072010
IC106	TL074	FCIC074010
J101	YKF52-5005	FCBASX0900
J102	YKF52-5005	FCBASX0900
J103	YKF52-5005	FCBASX0900
J104	YKF52-5005	FCBASX0900
J105	B3B-EH-A	FCCTM00030
J106	B5B-EH-A	FCCTM00050
J107	B5B-EH-A	FCCTM00050
R101	100k0	FCXR151000
R102	100k0	FCXR151000
R103	100k0	FCXR151000
R104	100k0	FCXR151000
R105	100k0	FCXR151000
R106	100k0	FCXR151000
R107	100k0	FCXR151000
R108	100k0	FCXR151000
R109	100.0Ω	FCXR121000
R110	100.0Ω	FCXR121000
R111	100.0Ω	FCXR121000
R112	100.0Ω	FCXR121000
R113	100.0Ω	FCXR121000
R114	100.0Ω	FCXR121000
R115	100.0Ω	FCXR121000
R116	100.0Ω	FCXR121000
R117	24k3 0.5%	FCXR242430
R118	24k3 0.5%	FCXR242430
R119	24k3 0.5%	FCXR242430
R120	24k3 0.5%	FCXR242430
R121	24k3 0.5%	FCXR242430
R122	24k3 0.5%	FCXR242430
R123	24k3 0.5%	FCXR242430
R124	24k3 0.5%	FCXR242430
R125	24k3 0.5%	FCXR242430
R126	24k3 0.5%	FCXR242430
R127	24k3 0.5%	FCXR242430
R128	24k3 0.5%	FCXR242430
R129	24k3 0.5%	FCXR242430
R130	24k3 0.5%	FCXR242430
R131	24k3 0.5%	FCXR242430
R132	24k3 0.5%	FCXR242430
R133	20k0	FCXR142000
R134	20k0	FCXR142000
R135	100k0	FCXR151000
R136	100k0	FCXR151000
R137	100k0	FCXR151000
R138	100k0	FCXR151000
R139	10k0	FCXR141000
R140	20k0	FCXR142000
R141	20k0	FCXR142000
R142	10k0	FCXR141000
R143	20k0	FCXR142000

REFERENCE	VALUE	CODE
R144	100k0	FCXR151000
R145	20k0	FCXR142000
R146	20k0	FCXR142000
R147	100k0	FCXR151000
R148	20k0	FCXR142000
R149	100k0	FCXR151000
R150	100k0	FCXR151000
R151	100k0	FCXR151000
R152	100k0	FCXR151000
R153	100k0	FCXR151000
R154	100k0	FCXR151000
R155	9k09	FCXR139090
R156	9k09	FCXR139090
R157	9k09	FCXR139090
R158	20k0	FCXR142000
R159	20k0	FCXR142000
R160	100k0	FCXR151000
R161	100k0	FCXR151000
R162	20k0	FCXR142000
R163	20k0	FCXR142000
R164	26k7	FCXR142670
R165	26k7	FCXR142670
R166	100k0	FCXR151000
R167	100k0	FCXR151000
R168	100k0	FCXR151000
R169	100k0	FCXR151000
R170	100k0	FCXR151000
R171	100k0	FCXR151000
R172	100k0	FCXR151000
RX100	0Ω	FCXR000000
RX101	0Ω	FCXR000000
RX102	0Ω	FCXR000000
RX103	0Ω	FCXR000000
RX104	0Ω	FCXR000000
RX105	0Ω	FCXR000000
RX106	0Ω	FCXR000000
RX107	0Ω	FCXR000000
RX109	0Ω	FCXR000000
RX110	0Ω	FCXR000000
RX111	0Ω	FCXR000000
RX112	0Ω	FCXR000000
RX113	0Ω	FCXR000000
RX114	0Ω	FCXR000000
RX115	0Ω	FCXR000000
RX116	0Ω	FCXR000000
RX118	0Ω	FCXR000000
RX119	0Ω	FCXR000000
RX123	0Ω	FCXR000000
RX124	0Ω	FCXR000000
RX125	0Ω	FCXR000000
S101	8019L	FCINTAP130
S102	8019L	FCINTAP130
S103	8019L	FCINTAP130
S104	8019L	FCINTAP130
S105	NS43E11	FCINTAP090
S106	NS43E11	FCINTAP090
S107	8019L	FCINTAP130
S108	8021L	FCINTAP140

REFERENCE	VALUE	CODE
W100	17.5mm	FCPONT0175
W101	15mm	FCPONT0150
W102	10mm	FCPONT0100
W103	7.5mm	FCPONT0075
W104	7.5mm	FCPONT0075
W105	30mm	FCPONT0300
W106	12.5mm	FCPONT0125
W107	20mm	FCPONT0200
W108	15mm	FCPONT0150
W109	15mm	FCPONT0150
W110	25mm	FCPONT0250
W111	10mm	FCPONT0100
W112	7.5mm	FCPONT0075
W113	25mm	FCPONT0250
W114	12.5mm	FCPONT0125
W115	25mm	FCPONT0250
W116	7.5mm	FCPONT0075
W117	7.5mm	FCPONT0075
W118	7.5mm	FCPONT0075
W119	25mm	FCPONT0250
W120	7.5mm	FCPONT0075
WI107	1009.01.00	FC4M009100

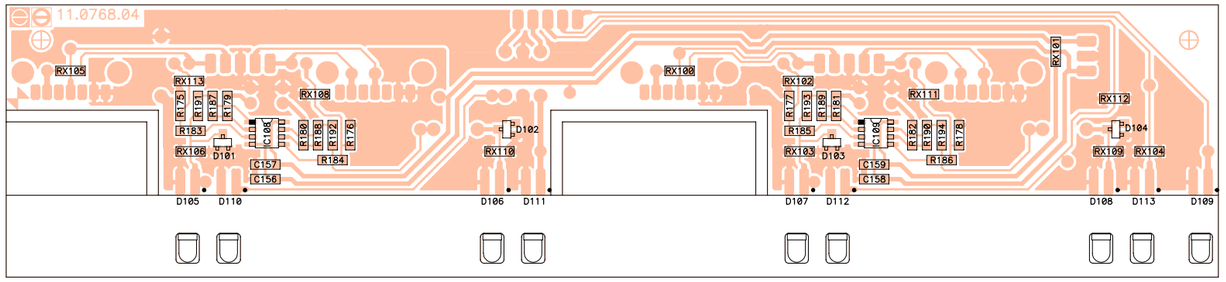


ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.		related to: circuit no: 11.0768-04.00 schema no: 10.0492-01.01 insertion file no:	side: Component view: Reference
number: 33.0397	version: 01.05	project n: EP05-99	title: Potentiomtrs&Leds Ct.
drawn by: M. Amoros	date: 020426	product n: MPA4-150 approved: Angel Sanuy	



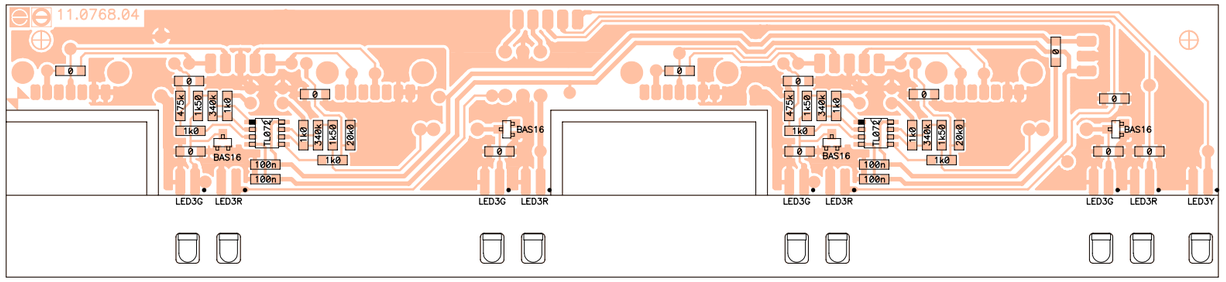
Note: Leds mounted on the bottom or solder side
and touching the window border (see drawing)

ECLEREE LABORATORIO DE ELECTRO–ACUSTICA S.A.		related to: circuit no: 11.0768–04.00 schema no: 10.0492–01.01 insertion file no:	side: Component view: Value
number: 33.0398	version: 01.05	project n: EP05–99	title: Potentiomtrs&Leds Ct.
drawn by: M. Amoros	date: 020426	product n: MPA4–150 approved: Angel Sanuy	



Note: Leds mounted on the bottom or solder side
and touching the window border (see drawing)

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.		related to: circuit no: 11.0768-04.00 schema no: 10.0492-01.01 insertion file no: 81.0013-01.01	side: Solder view: Reference
number: 33.0399	version: 01.05	project n: EP05-99	title: Potentiomtrs&Leds Ct.
drawn by: M. Amoros	date: 020426	product n: MPA4-150	
		approved: Angel Sanuy	



Note: Leds mounted on the bottom or solder side
and touching the window border (see drawing)

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0768-04.00 schema no: 10.0492-01.01 insertion file no: 81.0013-01.01	side: Solder view: Value	
number: 33.0400	version: 01.05	project n: EP05-99	title: Potentiomtrs&Leds Ct.
drawn by: M. Amoros	date: 020426	product n: MPA4-150 approved: Angel Sanuy	

ECLER

author: Queralt
approved:

date: 000728
model:

num: 40.0046 version: 01.01

PARTS LIST

EP05-99

PRINTED CIRCUIT 11.0768-04.00

REFERENCE	VALUE	CODE
C156	100n	FCXCN41000
C157	100n	FCXCN41000
C158	100n	FCXCN41000
C159	100n	FCXCN41000
C160	47u/16	FCCE100000
C161	47u/16	FCCE100000
C162	47u/16	FCCE100000
C163	47u/16	FCCE100000
C164	47u/16	FCCE100000
C165	47u/16	FCCE100000
C166	47u/16	FCCE100000
C167	47u/16	FCCE100000
CI101	11.0768	FCCIMPA768
D101	BAS16	FCXDDBAS16
D102	BAS16	FCXDDBAS16
D103	BAS16	FCXDDBAS16
D104	BAS16	FCXDDBAS16
D105	LED3G	FCLED300VE
D106	LED3G	FCLED300VE
D107	LED3G	FCLED300VE
D108	LED3G	FCLED300VE
D109	LED3Y	FCLED300AM
D110	LED3R	FCLED300RO
D111	LED3R	FCLED300RO
D112	LED3R	FCLED300RO
D113	LED3R	FCLED300RO
IC108	TL072	FCIC072010
IC109	TL072	FCIC072010
R171	10kAx2	FCPR210040
R172	10kAx2	FCPR210040
R173	10kAx2	FCPR210040
R174	10kAx2	FCPR210040
R175	475k	FCXR154750
R176	20k0	FCXR142000
R177	475k	FCXR154750
R178	20k0	FCXR142000
R179	1k0	FCXR131000
R180	1k0	FCXR131000
R181	1k0	FCXR131000
R182	1k0	FCXR131000
R183	1k0	FCXR131000
R184	1k0	FCXR131000
R185	1k0	FCXR131000
R186	1k0	FCXR131000
R187	340k	FCXR153400
R188	340k	FCXR153400
R189	340k	FCXR153400
R190	340k	FCXR153400
R191	1k50	FCXR131500

REFERENCE	VALUE	CODE
R192	1k50	FCXR131500
R193	1k50	FCXR131500
R194	1k50	FCXR131500
RX100	0Ω	FCXR000000
RX101	0Ω	FCXR000000
RX102	0Ω	FCXR000000
RX103	0Ω	FCXR000000
RX104	0Ω	FCXR000000
RX105	0Ω	FCXR000000
RX106	0Ω	FCXR000000
RX108	0Ω	FCXR000000
RX109	0Ω	FCXR000000
RX110	0Ω	FCXR000000
RX111	0Ω	FCXR000000
RX112	0Ω	FCXR000000
RX113	0Ω	FCXR000000
W103	7.5mm	FCPONT0075
W105	7.5mm	FCPONT0075
W106	7.5mm	FCPONT0075
W107	7.5mm	FCPONT0075
W109	7.5mm	FCPONT0075
W110	10mm	FCPONT0100
W111	7.5mm	FCPONT0075
WI112	10mm	FCPONT0100
WI101	1007.03.20	FC4K007320
WI102	1007.03.20	FC4K007320
WI103	1012.03.40	FCOCO12340
WI104	1007.02.00	FC4K007200

ECLER	author: J. Colomines	date: 020426	project:	product: POWER AMPLIFIERS
num: 51.0078 version: 01.00	approved:	title: TECHNICAL BRIEFING		

Announcement addressed to Technical Support Services

Involved series:

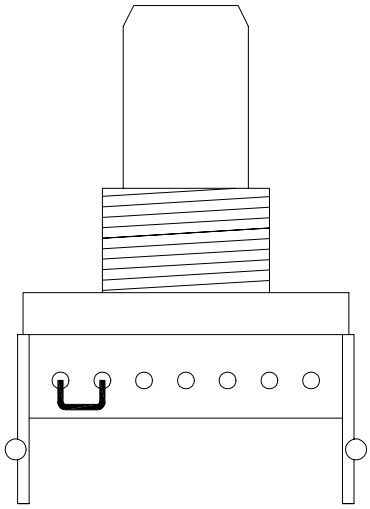
OLD VERSION

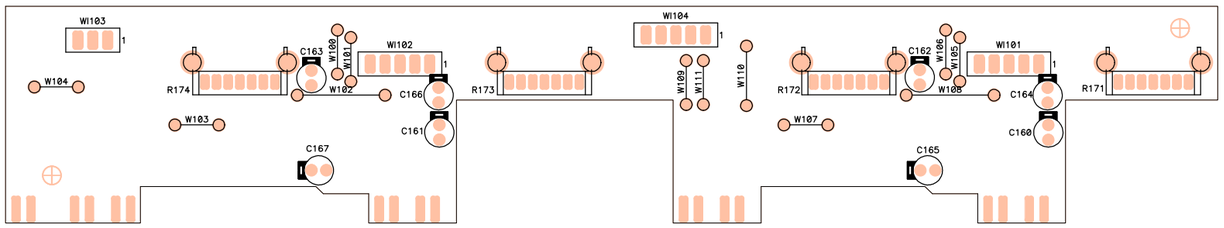
APA1400 / APA1000 / APA600
PAM1100 / PAM2100
MPA4-80 / MPA6-80 / MPA4-150

VOLUME potentiometer replacement.

Replaced service part code: FCPR210040

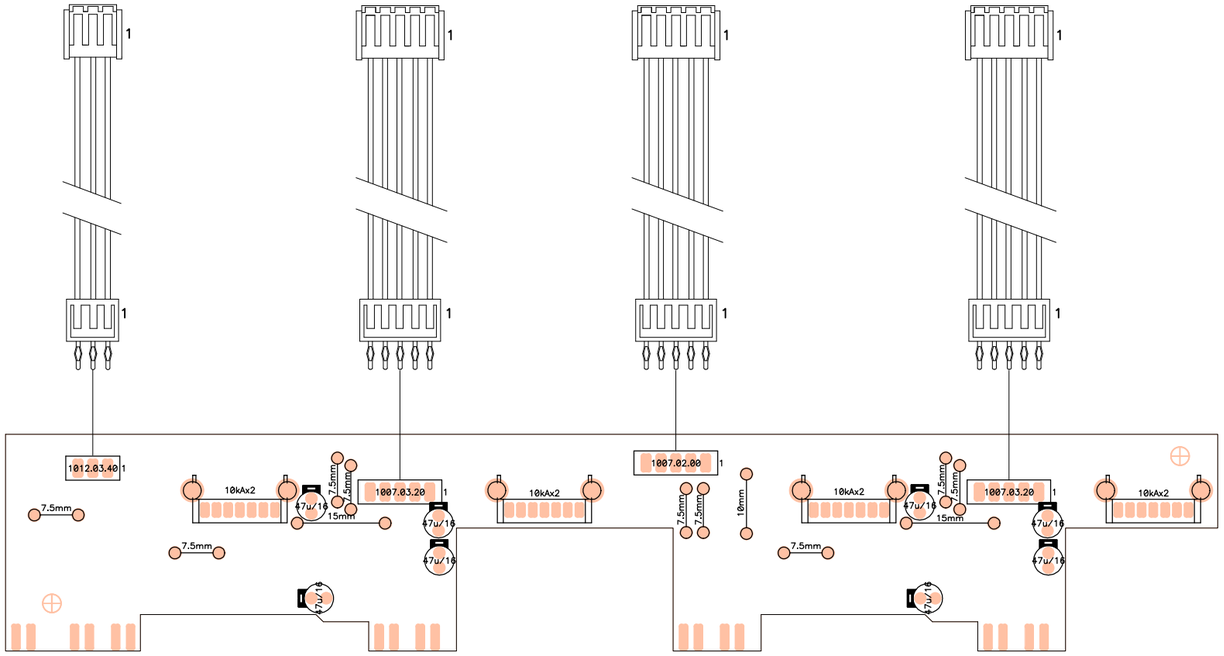
When this potentiometer is being replaced, after soldering it on the printed circuit board, the two leads should be shorted as shown in the picture, in order to ensure a correct performance depending on the available service part.





OLD VERSION

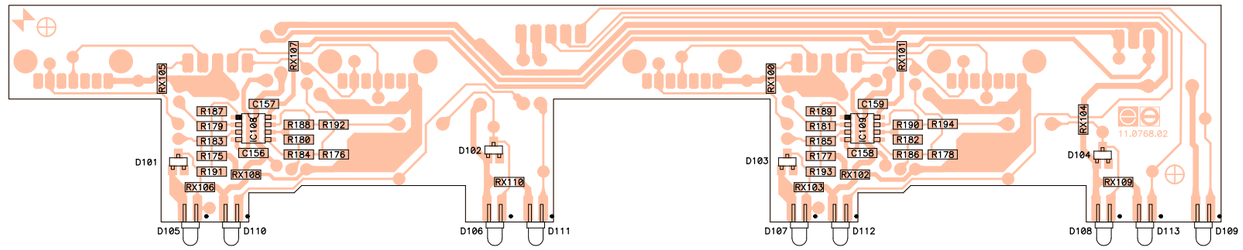
ECLER ee LABORATORIO DE ELECTRO–ACUSTICA S.A.	related to: circuit no: 11.0768–02.00 schema no: 10.0492–01.01 insertion file no:		side: Component view: Reference
	drawn by: M. Amoros	date: 000619	approved by: Angel Sanuy
number: 33.0397 / version: 01.03	title: EP05–99 Potentiometers & Leds Ct.		



Note: Leds mounted on the bottom or solder side
and touching the circuit border (see drawing)

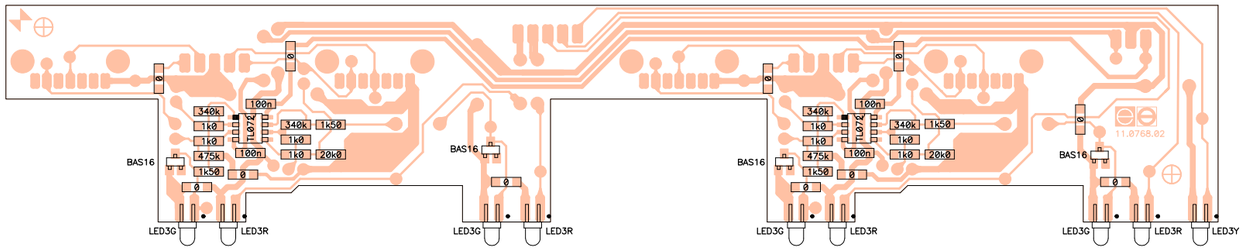
OLD VERSION

ECLEREE LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0768-02.00 schema no: 10.0492-01.01 insertion file no:		side: Component view: Value
	drawn by: M. Amoros	date: 000619	approved by: Angel Sanuy
number: 33.0398	version: 01.03	title: EP05-99 Potentiometers & Leds Ct.	



OLD VERSION

ECLER LABORATORIO DE ELECTRO–ACUSTICA S.A.	related to: circuit no: 11.0768–02.00 schema no: 10.0492–01.01 insertion file no: 81.0013–01.00		side: Solder
			view: Reference
	drawn by: M. Amoros	date: 000619	approved by: Angel Sanuy
number: 33.0399	version: 01.03	title: EP05–99 Potentiometers & Leds Ct.	



Note: Leds mounted on the bottom or solder side
and touching the circuit border (see drawing)

OLD VERSION

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0768-02.00 schema no: 10.0492-01.01 insertion file no: 81.0013-01.00		side: Solder view: Value
	drawn by: M. Amoros	date: 000619	approved by: Angel Sanuy
number: 33.0400	version: 01.03	title: EP05-99 Potentiometers & Leds Ct.	

ECLER

author: Queralt
approved:

date: 000728
model:

num: 40.0046 version: 01.00

PARTS LIST

EP05-99

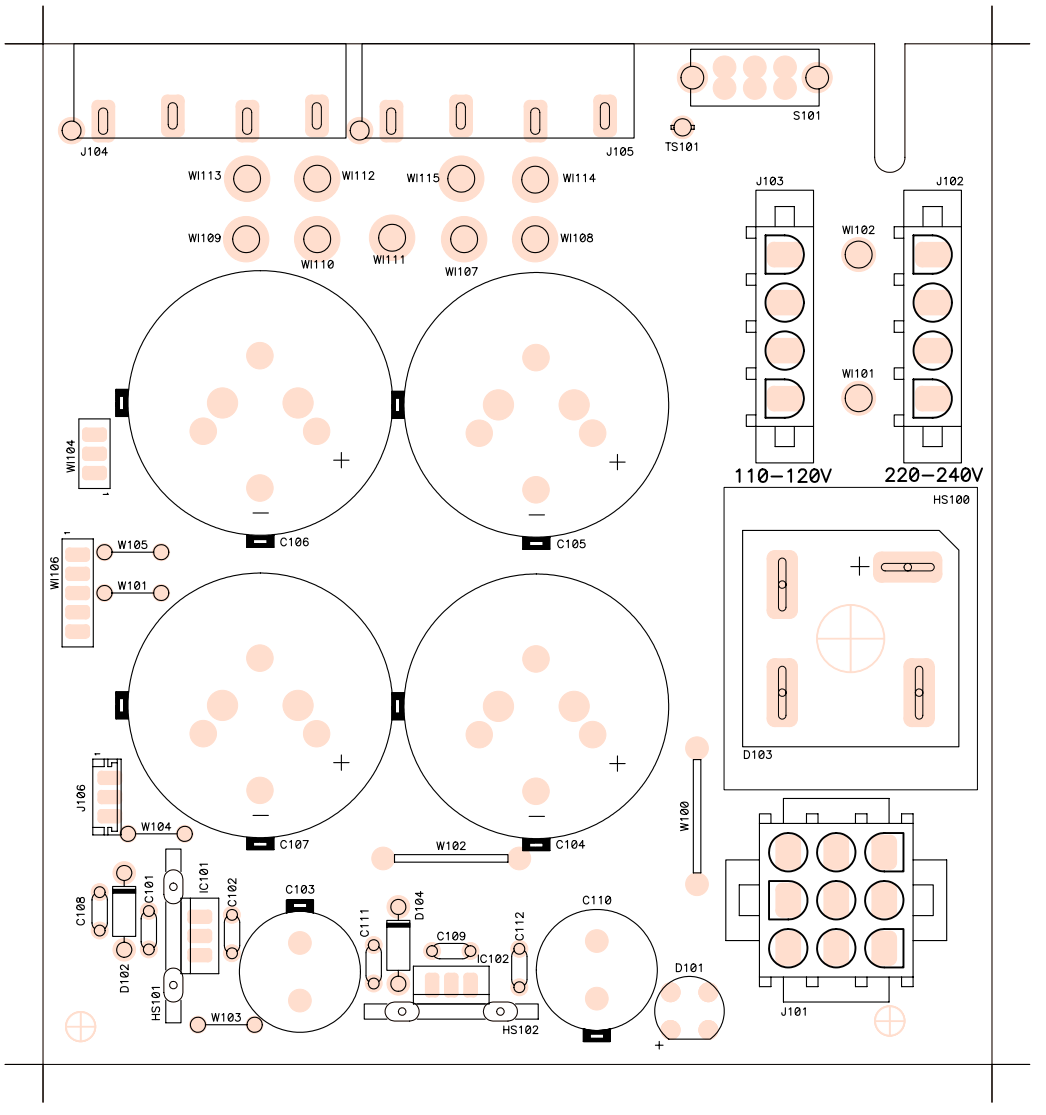
PRINTED CIRCUIT 11.0768-01.01

OLD VERSION

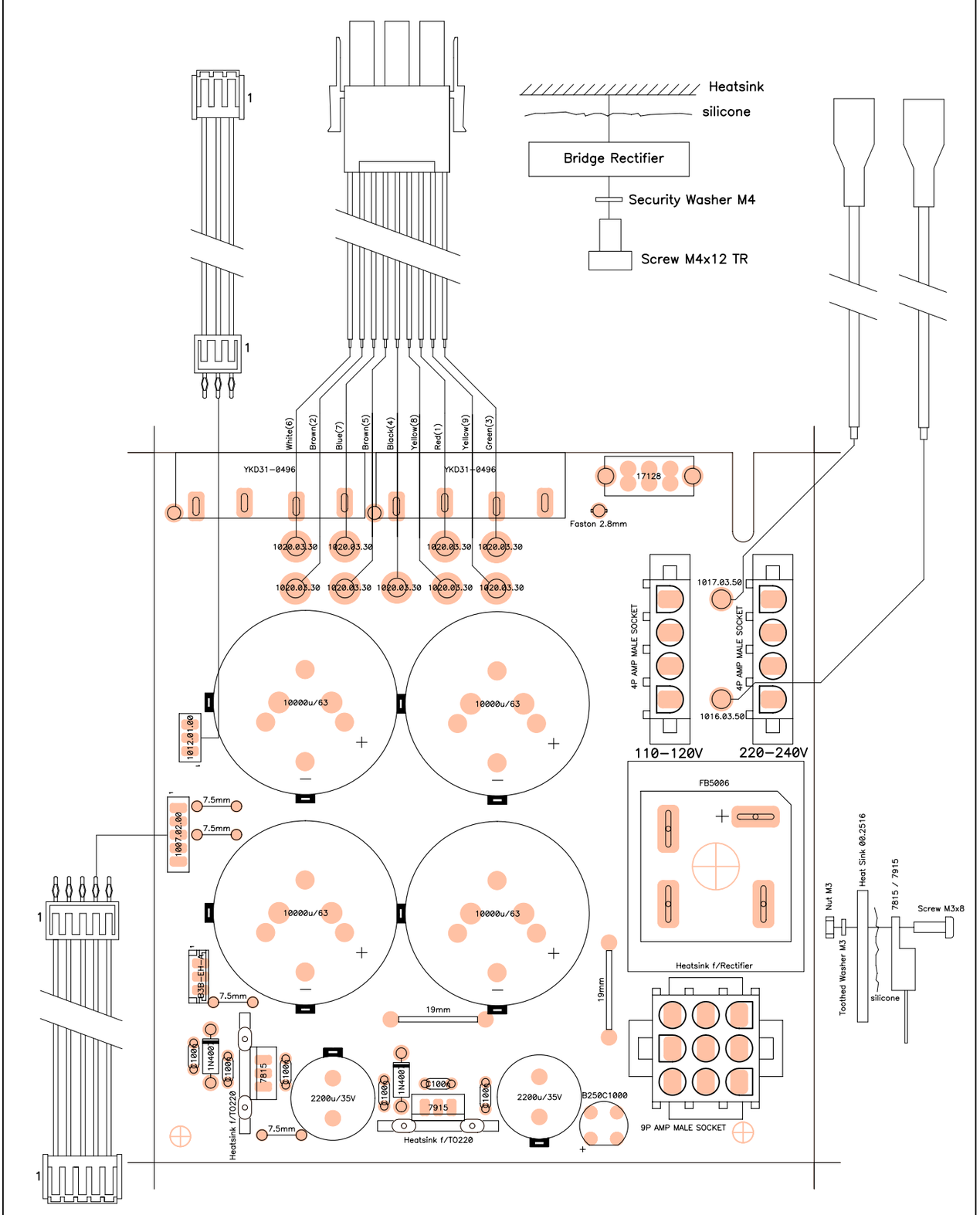
REFERENCE	VALUE	CODE
C156	100n	FCXCN41000
C157	100n	FCXCN41000
C158	100n	FCXCN41000
C159	100n	FCXCN41000
C160	47u/16	FCCE100000
C161	47u/16	FCCE100000
C162	47u/16	FCCE100000
C163	47u/16	FCCE100000
C164	47u/16	FCCE100000
C165	47u/16	FCCE100000
C166	47u/16	FCCE100000
C167	47u/16	FCCE100000
CI101	11.0768	CONSULTAR
D101	BAS16	FCXDDBAS16
D102	BAS16	FCXDDBAS16
D103	BAS16	FCXDDBAS16
D104	BAS16	FCXDDBAS16
D105	LED3G	FCLED300VE
D106	LED3G	FCLED300VE
D107	LED3G	FCLED300VE
D108	LED3G	FCLED300VE
D109	LED3Y	FCLED300AM
D110	LED3R	FCLED300RO
D111	LED3R	FCLED300RO
D112	LED3R	FCLED300RO
D113	LED3R	FCLED300RO
IC108	TL072	FCIC072010
IC109	TL072	FCIC072010
R171	10kAx2	FCPR210040
R172	10kAx2	FCPR210040
R173	10kAx2	FCPR210040
R174	10kAx2	FCPR210040
R175	475k	FCXR154750
R176	20k0	FCXR142000
R177	475k	FCXR154750
R178	20k0	FCXR142000
R179	1k0	FCXR131000
R180	1k0	FCXR131000
R181	1k0	FCXR131000
R182	1k0	FCXR131000
R183	1k0	FCXR131000
R184	1k0	FCXR131000
R185	1k0	FCXR131000
R186	1k0	FCXR131000
R187	340k	FCXR153400
R188	340k	FCXR153400
R189	340k	FCXR153400
R190	340k	FCXR153400
R191	1k50	FCXR131500
R192	1k50	FCXR131500
R193	1k50	FCXR131500
R194	1k50	FCXR131500

REFERENCE	VALUE	CODE
RX100	0Ω	FCXR000000
RX101	0Ω	FCXR000000
RX102	0Ω	FCXR000000
RX103	0Ω	FCXR000000
RX104	0Ω	FCXR000000
RX105	0Ω	FCXR000000
RX106	0Ω	FCXR000000
RX107	0Ω	FCXR000000
RX108	0Ω	FCXR000000
RX109	0Ω	FCXR000000
RX110	0Ω	FCXR000000
W100	7.5mm	FCPONT0075
W101	7.5mm	FCPONT0075
W102	15mm	FCPONT0150
W103	7.5mm	FCPONT0075
W104	7.5mm	FCPONT0075
W105	7.5mm	FCPONT0075
W106	7.5mm	FCPONT0075
W107	7.5mm	FCPONT0075
W108	15mm	FCPONT0150
W109	7.5mm	FCPONT0075
W110	10mm	FCPONT0100
W111	7.5mm	FCPONT0075
WI101	1007.03.20	FC4K007320
WI102	1007.03.20	FC4K007320
WI103	1012.03.40	FCOCO12340
WI104	1007.02.00	FC4K007200

OLD VERSION



ECLER LABORATORIO DE ELECTRO–ACUSTICA S.A.	related to: circuit no: 11.0769–02.00 schema no: 10.0493–01.03 insertion file no:		side: Component view: Reference
	drawn by: M. Amoros	date: 040311	approved by: Angel Sanuy
number: 33.0401	version: 01.05	title: EP05–99 Power Supply	



ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0769-02.00 schema no: 10.0493-01.03 insertion file no:		side: Component view: Value
	drawn by: M. Amoros	date: 040311	approved by: Angel Sanuy
number: 33.0402	version: 01.06	title: EP05-99 Power Supply	

ECLER

author: Queralt
approved:

date: 040316
model:

num: 40.0047 version: 01.03

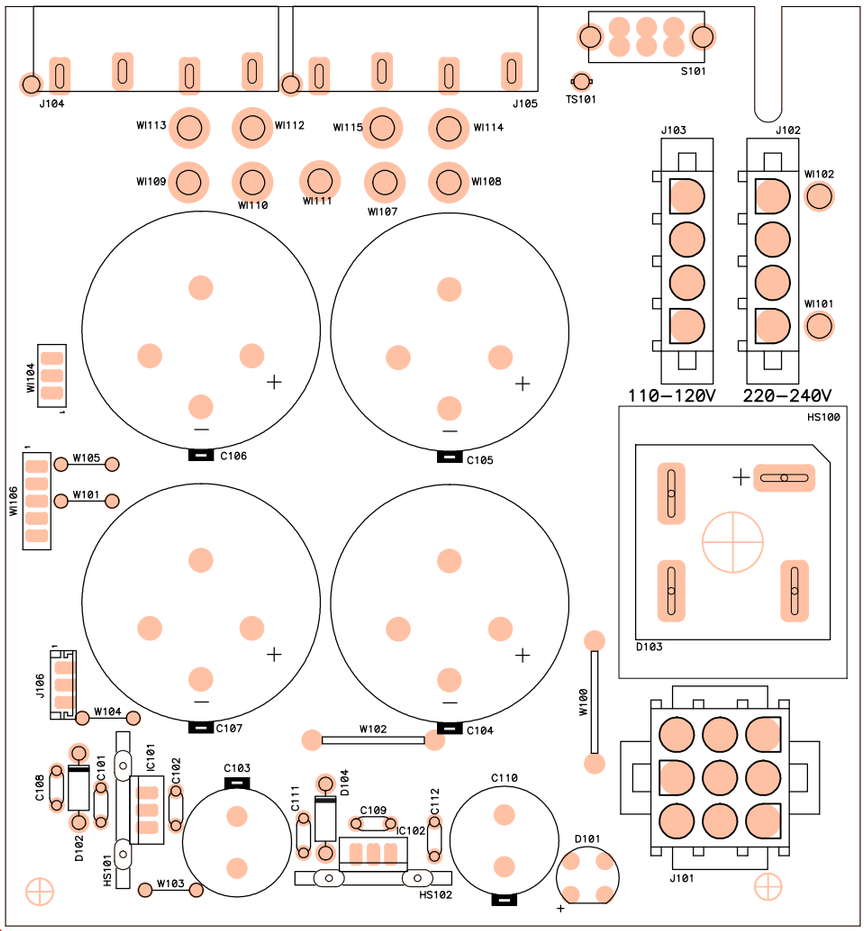
PARTS LIST

EP05-99

PRINTED CIRCUIT 11.0769.02.00

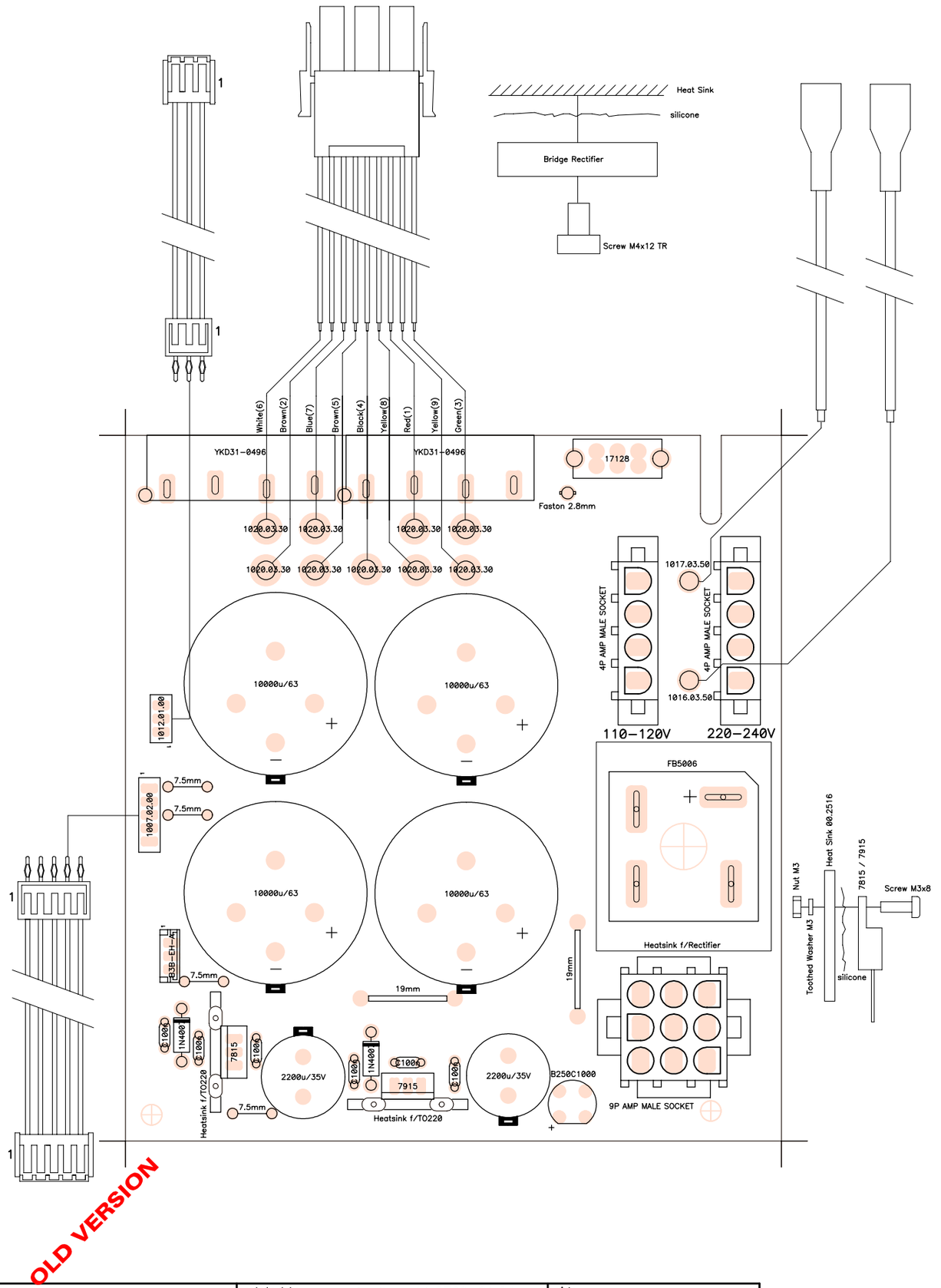
REFERENCE	VALUE	CODE
C101	C100n	FCCC151010
C102	C100n	FCCC151010
C103	2200u/35V	FCCE212200
C104	10000u/63	FCCE321000
C105	10000u/63	FCCE321000
C106	10000u/63	FCCE321000
C107	10000u/63	FCCE321000
C108	C100n	FCCC151010
C109	C100n	FCCC151010
C110	2200u/35V	FCCE212200
C111	C100n	FCCC151010
C112	C100n	FCCC151010
CI101	11.0769-01.02	FCCIMPA769
D101	B250C1000	FCREC25100
D102	1N4007	FCDD140070
D103	FB5006	FCREC50060
D104	1N4007	FCDD140070
HS100	HEAT SINK	FCRAD11515
HS101	HEAT SINK TO220	FCMECT0220
HS102	HEAT SINK TO220	FCMECT0220
IC101	7815	FCREG78150
IC102	7915	FCREG79150
J101	BASE 9pins MALE	FCCTAMP090
J102	BASE 4pins MALE	FCCTAMP040
J103	BASE 4pins MALE	FCCTAMP040
J104	YKD31-0496	FCCTJAL100
J105	YKD31-0496	FCCTJAL100
J106	B3B-EH-A	FCCTM00030
NV101	Nut M3	FCTUE00300
NV102	Nut M3	FCTUE00300
S101	17128	FCINTD4000
SC100	Screw M4x12 TR	FCT3804012
SC101	Screw M3x8	FCT7503008
SC102	Screw M3x8	FCT7503008
TS101	T-120	FCTERMF280
W100	19mm	FCMECPON19
W101	7.5mm	FCPONT0075
W102	19mm	FCMECPON19
W103	7.5mm	FCPONT0075
W104	7.5mm	FCPONT0075
W105	7.5mm	FCPONT0075
WI101	1016.03.50	FC2F016350
WI102	1017.03.50	FC2F017350
WI104	1012.01.00	FC0C012100
WI106	1007.02.00	FC4K007200
WI107	1020.03.30	FC0H020330
WI108	1020.03.30	FC0H020330
WI109	1020.03.30	FC0H020330
WI110	1020.03.30	FC0H020330
WI111	1020.03.30	FC0H020330
WI112	1020.03.30	FC0H020330
WI113	1020.03.30	FC0H020330

REFERENCE	VALUE	CODE
WI114	1020.03.30	FC0H020330
WI115	1020.03.30	FC0H020330
WA101	Toothed Washer f/M3	FCARDE0300
WA102	Toothed Washer f/M3	FCARDE0300



OLD VERSION

ECLER LABORATORIO DE ELECTRO–ACUSTICA S.A.	related to: circuit no: 11.0769–01.03 schema no: 10.0493–01.03 insertion file no:		side: Component view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0401	version: 01.03	title: EP05–99 Power Supply	

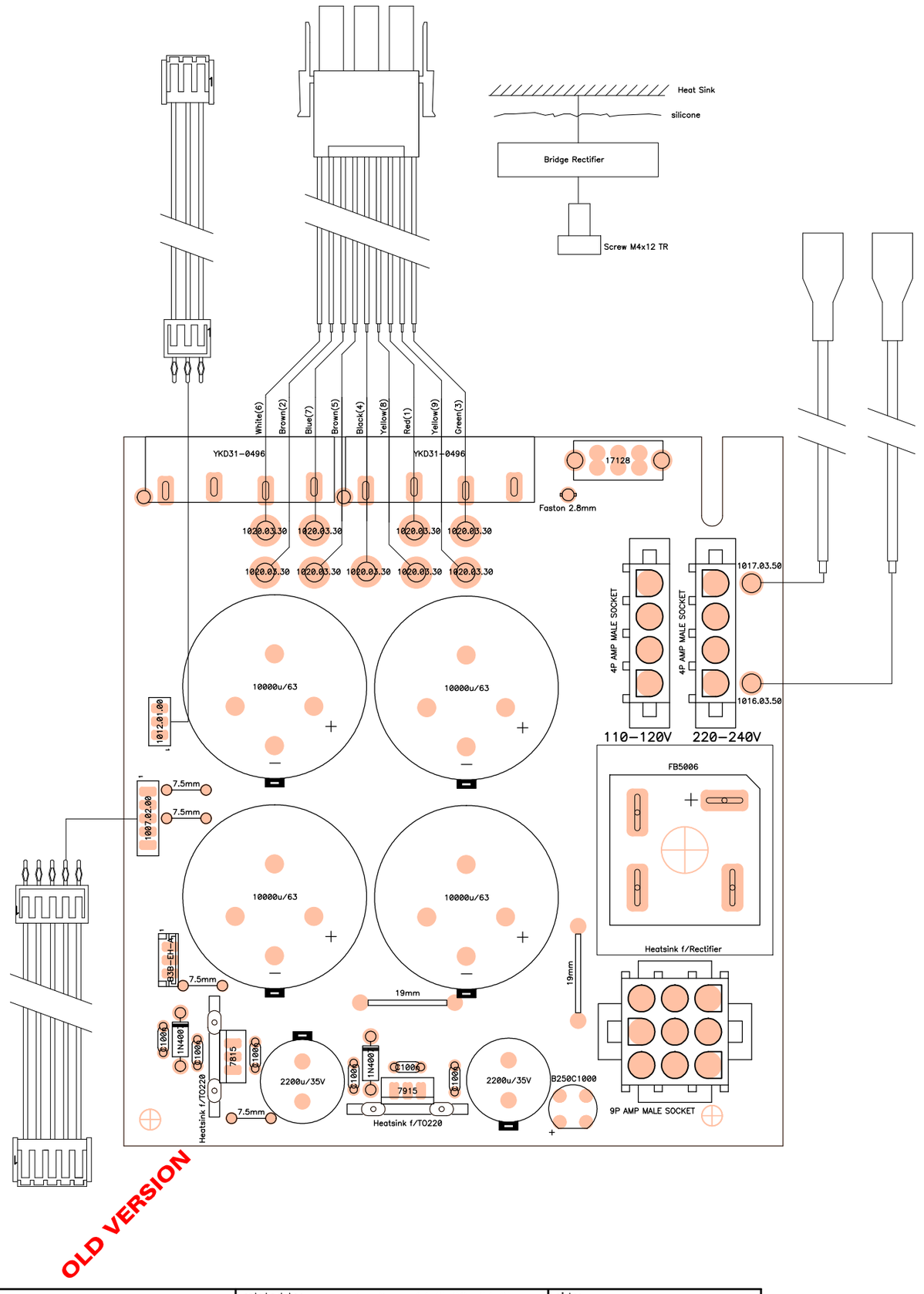


ECLEREE LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0769-01.04 schema no: 10.0493-01.03 insertion file no:		side: Component view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0402	version: 01.05	title: EP05-99 Power Supply	

PRINTED CIRCUIT 11.0769-01.04

REFERENCE	VALUE	CODE
C101	C100n	FCCC151010
C102	C100n	FCCC151010
C103	2200u/35V	FCCE212200
C104	10000u/63	FCCE321000
C105	10000u/63	FCCE321000
C106	10000u/63	FCCE321000
C107	10000u/63	FCCE321000
C108	C100n	FCCC151010
C109	C100n	FCCC151010
C110	2200u/35V	FCCE212200
C111	C100n	FCCC151010
C112	C100n	FCCC151010
CI101	11.0769-01.02	FCCIMPA769
D101	B250C1000	FCREC25100
D102	1N4007	FCDD140070
D103	FB5006	FCREC50060
D104	1N4007	FCDD140070
HS100	HEAT SINK	FCRAD11515
HS101	HEAT SINK TO220	FCMECT0220
HS102	HEAT SINK TO220	FCMECT0220
IC101	7815	FCREG78150
IC102	7915	FCREG79150
J101	BASE 9pins MALE	FCCTAMP090
J102	BASE 4pins MALE	FCCTAMP040
J103	BASE 4pins MALE	FCCTAMP040
J104	YKD31-0496	FCCTJAL100
J105	YKD31-0496	FCCTJAL100
J106	B3B-EH-A	FCCTM00030
NV101	Nut M3	FCTUE00300
NV102	Nut M3	FCTUE00300
S101	17128	FCINTD4000
SC100	Screw M4x12 TR	FCT3804012
SC101	Screw M3x8	FCT7503008
SC102	Screw M3x8	FCT7503008
TS101	T-120	FCTERMF280
W100	19mm	FCMECPON19
W101	7.5mm	FCPONT0075
W102	19mm	FCMECPON19
W103	7.5mm	FCPONT0075
W104	7.5mm	FCPONT0075
W105	7.5mm	FCPONT0075
WI101	1016.03.50	FC2F016350
WI102	1017.03.50	FC2F017350
WI104	1012.01.00	FC0C012100
WI106	1007.02.00	FC4K007200
WI107	1020.03.30	FC0H020330
WI108	1020.03.30	FC0H020330
WI109	1020.03.30	FC0H020330
WI110	1020.03.30	FC0H020330
WI111	1020.03.30	FC0H020330
WI112	1020.03.30	FC0H020330
WI113	1020.03.30	FC0H020330
WI114	1020.03.30	FC0H020330
WI115	1020.03.30	FC0H020330
WA101	Toothed Washer f/M3	FCARDE0300
WA102	Toothed Washer f/M3	FCARDE0300

OLD VERSION



ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0769-01.03 schema no: 10.0493-01.03 insertion file no:		side: Component view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0402	version: 01.03	title: EP05-99 Power Supply	

ECLER

author: Queralt
approved:

date: 000728
model:

num: 40.0047 version: 01.01

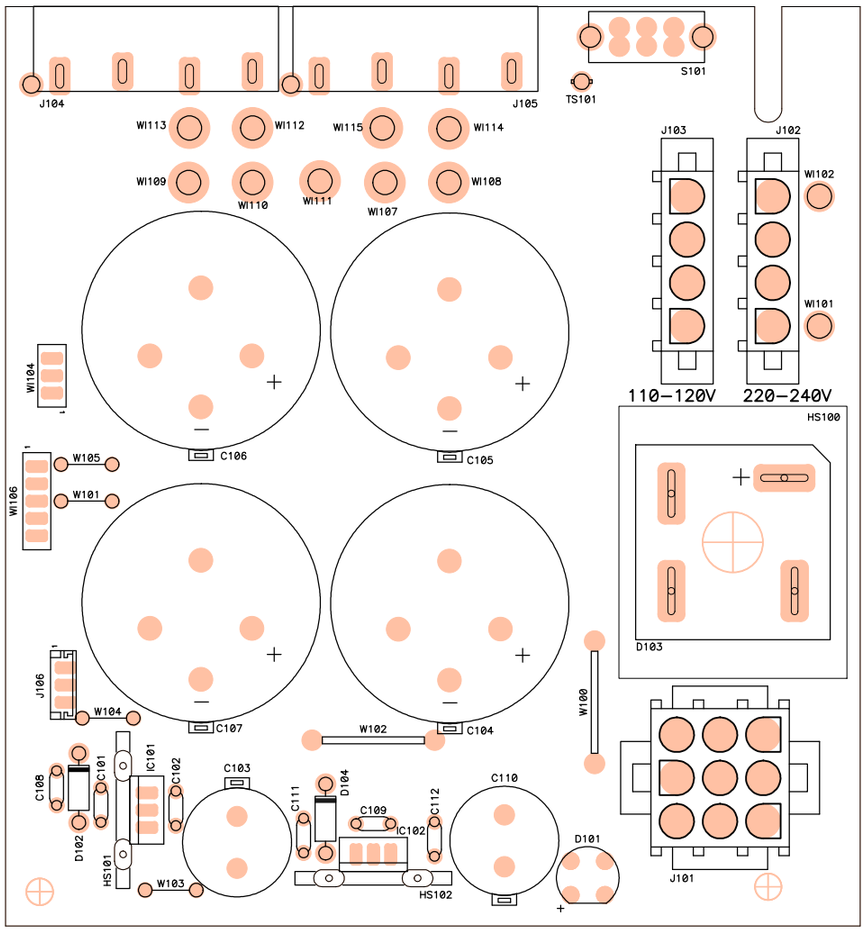
PARTS LIST

EP05-99

PRINTED CIRCUIT 11.0769-01.03

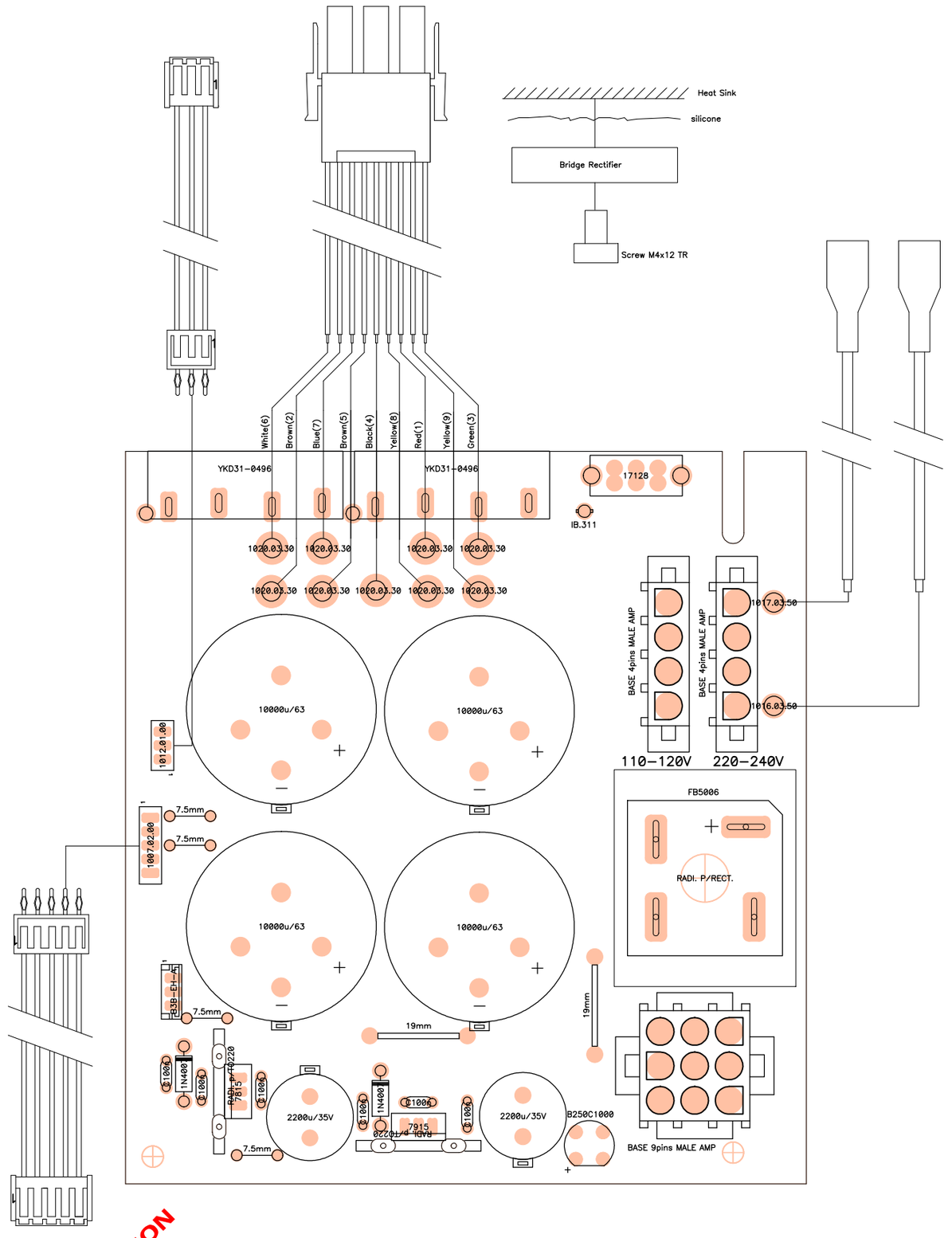
REFERENCE	VALUE	CODE
C101	C100n	FCCC151010
C102	C100n	FCCC151010
C103	2200u/35V	FCCE212200
C104	10000u/63	FCCE321000
C105	10000u/63	FCCE321000
C106	10000u/63	FCCE321000
C107	10000u/63	FCCE321000
C108	C100n	FCCC151010
C109	C100n	FCCC151010
C110	2200u/35V	FCCE212200
C111	C100n	FCCC151010
C112	C100n	FCCC151010
CI101	11.0769-01.02	FCCIMPA769
D101	B250C1000	FCREC25100
D102	1N4007	FCDD140070
D103	FB5006	FCREC50060
D104	1N4007	FCDD140070
HS100	HEAT SINK	FCRAD11515
HS101	HEAT SINK TO220	FCMECT0220
HS102	HEAT SINK TO220	FCMECT0220
IC101	7815	FCREG78150
IC102	7915	FCREG79150
J101	BASE 9pins MALE	FCCTAMP090
J102	BASE 4pins MALE	FCCTAMP040
J103	BASE 4pins MALE	FCCTAMP040
J104	YKD31-0496	FCCTJAL100
J105	YKD31-0496	FCCTJAL100
J106	B3B-EH-A	FCCTM00030
S101	17128	FCINTD4000
SC100	Screw M4x12 TR	FCT3804012
TS101	T-120	FCTERMF280
W100	19mm	FCMECPON19
W101	7.5mm	FCPONT0075
W102	19mm	FCMECPON19
W103	7.5mm	FCPONT0075
W104	7.5mm	FCPONT0075
W105	7.5mm	FCPONT0075
WI101	1016.03.50	FC2F016350
WI102	1017.03.50	FC2F017350
WI104	1012.01.00	FC0C012100
WI106	1007.02.00	FC4K007200
WI107	1020.03.30	FC0H020330
WI108	1020.03.30	FC0H020330
WI109	1020.03.30	FC0H020330
WI110	1020.03.30	FC0H020330
WI111	1020.03.30	FC0H020330
WI112	1020.03.30	FC0H020330
WI113	1020.03.30	FC0H020330
WI114	1020.03.30	FC0H020330
WI115	1020.03.30	FC0H020330

OLD VERSION



OLD VERSION

ECLER LABORATORIO DE ELECTRO–ACUSTICA S.A.	related to: circuit no: 11.0769–01.02 schema no: 10.0493–01.02 insertion file no:		side: Component view: Reference
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0401	version: 01.02	title: EP05–99 Power Supply	



OLD VERSION

ECLER LABORATORIO DE ELECTRO-ACUSTICA S.A.	related to: circuit no: 11.0769-01.02 schema no: 10.0493-01.02 insertion file no:		side: Component view: Value
	drawn by: M. Amoros	date: 000222	approved by: Angel Sanuy
number: 33.0402	version: 01.02	title: EP05-99 Power Supply	

ECLER

author: Queralt
approved:

date: 000728
model:

num: 40.0047 version: 01.00

PARTS LIST

EP05-99

PRINTED CIRCUIT 11.0769-01.02

REFERENCE	VALUE	CODE
C101	C100n	FCCC151010
C102	C100n	FCCC151010
C103	2200u/35V	FCCE212200
C104	10000u/63	FCCE321000
C105	10000u/63	FCCE321000
C106	10000u/63	FCCE321000
C107	10000u/63	FCCE321000
C108	C100n	FCCC151010
C109	C100n	FCCC151010
C110	2200u/35V	FCCE212200
C111	C100n	FCCC151010
C112	C100n	FCCC151010
CI101	11.0769-01.02	FCCIMPA769
D101	B250C1000	FCREC25100
D102	1N4007	FCDD140070
D103	FB5006	FCREC50060
D104	1N4007	FCDD140070
HS100	HEAT SINK	FCRAD11515
HS101	HEAT SINK TO220	FCMECT0220
HS102	HEAT SINK TO220	FCMECT0220
IC101	7815	FCREG78150
IC102	7915	FCREG79150
J101	BASE 9pins MALE	FCCTAMP090
J102	BASE 4pins MALE	FCCTAMP040
J103	BASE 4pins MALE	FCCTAMP040
J104	YKD31-0496	FCCTJAL100
J105	YKD31-0496	FCCTJAL100
J106	B3B-EH-A	FCCTM00030
S101	17128	FCINTD4000
SC100	Screw M4x12 TR	FCT3804012
TS101	IB.311	FCTERMSOL0
W100	19mm	FCMECPON19
W101	7.5mm	FCPONT0075
W102	19mm	FCMECPON19
W103	7.5mm	FCPONT0075
W104	7.5mm	FCPONT0075
W105	7.5mm	FCPONT0075
WI101	1016.03.50	FC2F016350
WI102	1017.03.50	FC2F017350
WI104	1012.01.00	FC0C012100
WI106	1007.02.00	FC4K007200
WI107	1020.03.30	FC0H020330
WI108	1020.03.30	FC0H020330
WI109	1020.03.30	FC0H020330
WI110	1020.03.30	FC0H020330
WI111	1020.03.30	FC0H020330
WI112	1020.03.30	FC0H020330
WI113	1020.03.30	FC0H020330
WI114	1020.03.30	FC0H020330
WI115	1020.03.30	FC0H020330

OLD VERSION

PRELIMINARY

- Check the Ground Link.
- Have a look at the unit's mains cable, inputs, outputs and other cables and connectors.
- Check out that there are no shortings between the unit's mounting frame, mains carriers, and outputs.
- Set tested unit's power main switch to Off position.
- While the signal generator is still turned off, adjust the generator's output in order to obtain a 1KHz 0dB output signal.
- Connect four 4Ω load impedances to outputs 1, 2, 3 and 4.
- Using a set formed by a mVoltmeter and a dual-channel oscilloscope, connect oscilloscope's channel one test probe between Output1 and signal ground, and connect channel two's test probe between Output2 and signal ground.
- Turn down both input trimming potentiometers to their minimum position.
- Connect the power amplifier to a 230Vac variac output.

- Set the following front-end selector switches to the positions as listed bellow:
- IN1/IN1+IN2 to IN1
- IN2/LINK IN1 to LINK IN1
- LP FILTER ON/OFF to OFF
- ST/B IN1/B IN1+IN2 to ST
- IN3/LINK IN1 to LINK IN1
- IN4/LINK IN2 to LINK IN2
- ST/BRIDGE to ST
- HP FILTER ON/OFF to OFF

VERIFICATION

- Switch the tested unit's Power main switch to ON. Verify that the power on LED is lit.
- Set the signal generator to ON. At this point, all Signal Present LED's should light up.
- Turn up channel one's input triming potentiometer, and check that it's sweep is complete and smooth. At its maximum position, check that Vo=20Vrms, and that the output signal monitored on OUTPUT1 is only dependent from the INPUT1 signal.
- Turn up channel two's input triming potentiometer, and check that it's sweep is complete and smooth. At its maximum position, check that Vo=20Vrms, and that the output signal monitored on OUTPUT2 is only dependent from the INPUT2 signal.
- Both output signals should have no phase differs.
- Now change the ST/B IN1/B IN1+IN2 selector to the B IN1+IN2 position, and verify that OUTPUT1 and OUTPUT2 phase differ has turned to push-pull. S.P. CHII's LED has turned off, and the unit's channels 1&2 section is now controlled only by channel one's input trimming potentiometer. Turn it up and leave it at its maximum position.
- Apply a 1KHz square wave signal. Moreover, shunt a 2μ2 capacitor to channel 1's 4Ω output load. While monitoring the output signal on the osciloscope, vary the input

signal level until the output signal clips. At this point, a two- or three-cycled ripple should appear on the flat sections of the square waveform. Repeat this same process with channel two.
- Disconnect the oscilloscope's both channels test probes, and connect them to outputs 3-4.
- Turn up channel three's input triming potentiometer, and check that it's sweep is complete and smooth. At its maximum position, check that Vo = 20Vrms, and that the output signal monitored on OUTPUT3 is only dependent from the INPUT3 signal.
- Turn up channel four's input triming potentiometer, and check that it's sweep is complete and smooth. At its maximum position, check that Vo = 20Vrms, and that the output signal monitored on OUTPUT4 is only dependent from the INPUT4 signal.
- Both output signals should have no phase differs.
- Now change the ST/B IN1/B IN3 + IN4 selector to the B IN3 + IN4 position, and verify that OUTPUT1 and OUTPUT2 phase differ has turned to push-pull. S.P. CHII's LED has turned off, and the unit's channels 1&2 section is now controlled only by channel three's input trimming potentiometer. Turn it up and leave it at its maximum position.
- Apply a 1KHz square wave signal. Moreover, shunt a 2μ2 capacitor to channel 3's 4Ω output load. While monitoring the output signal on the osciloscope, vary the input signal level until the output signal clips. At this point, a two- or three-cycled ripple should appear on the flat sections of the square waveform. Repeat this same process with channel four.
- Set back the signal generator to its normal sine-wave operation mode.
- At this point, all clip indicators should be lighting. If necessary, add a little bit of level to the input signal.
- Set the IN1/IN1 + IN2 selector to IN1 + IN2, and verify that the output level as decreased 6dB.
- Return this switch to IN1.
- To verify the thermal protection circuits, short the thermal probe leads 1 and 2, and verify that the relay releases and opens up, while the THERMAL LED indicator lights on and the cooling fan increases its speed untill it reaches maximum airflow.

PROTECTIONS

- Disconnect the 4Ω load impedances.
- Switch the signal generator off, and select a 1V scale on it, while turning down and leaving its output amplitude level potentiometer to minimum.
- Load the channel 1's output terminal with a 1Ω impedance.
- Turn on the signal generator, and increase its output amplitude level until the tested unit's output signal starts to clip. At this oint, Vo = 14Vpp.
- Decrease gradually the mains voltage using the variac, just until the unit's output signal is no longer clipping.
- Then continue increasing smoothly the generator's output level, until the unit's output level starts clipping again, which should occur when Vo = 27'7Vpp. In both clipping cases, however, the cliped signal should be clear and free of ringings and

other oscillations.
- Repeat the same process with the remaining channels.

QUALITY CONTROL

All mechanical parts should be visually revised, in order to detect scratches on the unit's painting; all screws should be on their place,correctly tight and unmarked. Check out the unit's general presentation.

BURNING (BURN-IN) TEST

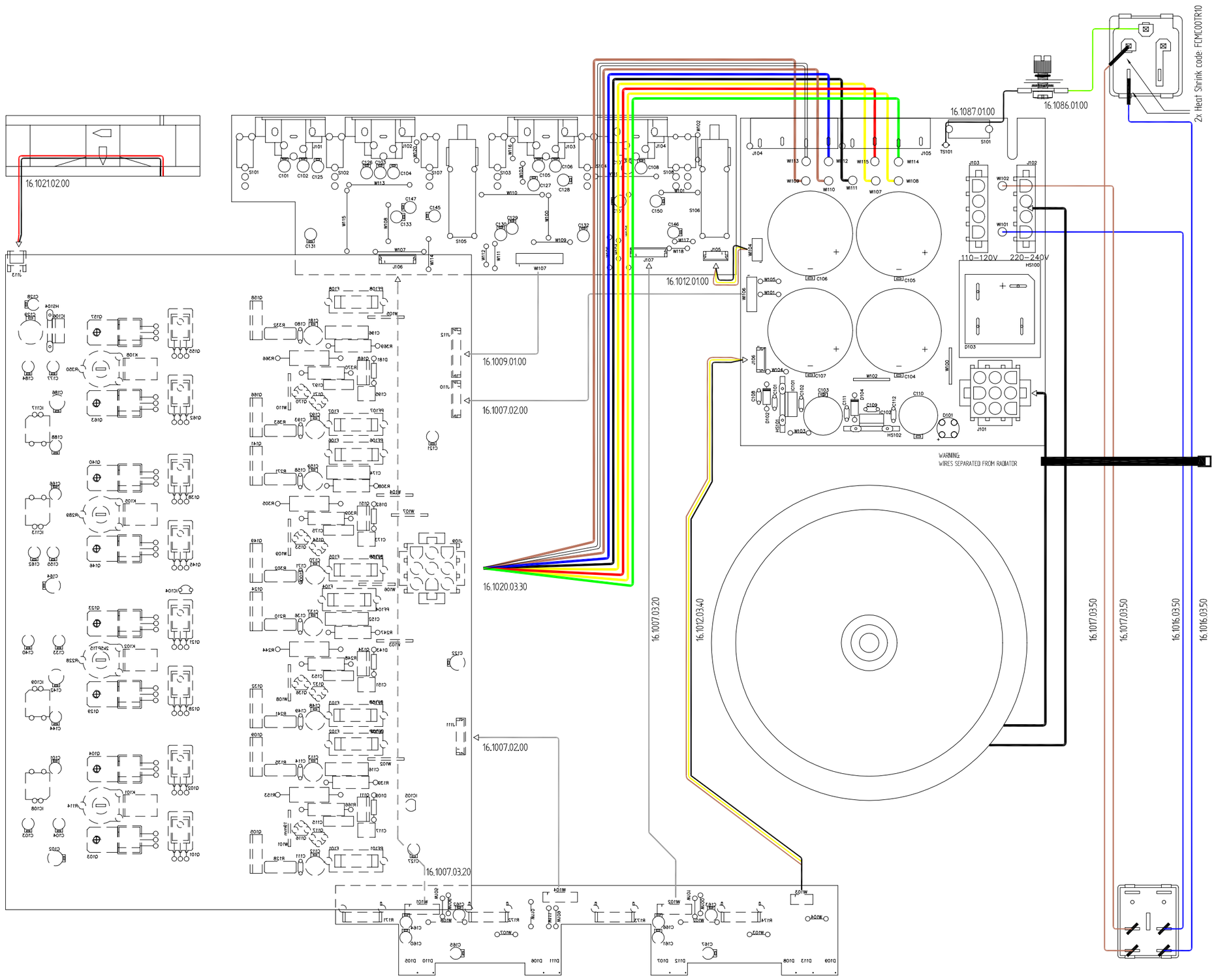
Leave the tested unit connected to its correspondent voltage mains socket, applying input signal and connecting load impedances, and working at 3dB under its maximum output power level for at least 24 hours.

VERIFICATION USING MUSIC

Verify the unit's sound quality, which should be distorsion- and noise-free. Also check that all potentiometers can run smoothly their whole sweep, without annoying noises and crisperings. At their minimum position, check that output signal is completely cutted off. To ensure that all electrical junctions are well-fixed, hit the tested unit against your working table, obviously without damaging its outer presentation. Verify also all inputs and outputs. Also verify the HPF and LPF filters' performance. At last, short-circuit the output terminals while carrying amplified signal, and verify that once short-circuit is removed, the amplifying stages still are working.

POWER 20-20kHz 1% THD

1 Channel @ 4Ω		147 WRMS
1 Channel @ 8Ω		100 WRMS
All Channels @ 4Ω		112 WRMS
All Channels @ 8Ω		83 WRMS
1 Bridged channel @ 8Ω		224 WRMS
Frequency response (-1dB)		7Hz - 40kHz
Filter (Hi-Lo) 3rd order Butterworth		160Hz
THD + Noise @ 1kHz Full Pwr.		< 0.04%
Intermodulation distortion 50Hz & 7kHz, 4:1		< 0.06%
TIM 100		< 0.08%
S + N/N 20Hz -20kHz @ 1W/4Ω		> 86dB
Damping factor 1kHz @ 8Ω		> 160
Slew Rate		±18V/μs
Channel crosstalk @ 1kHz		> 65dB
Input Sensitivity / Impedance		0dB / >20kΩ
Power consumption (max. Out)		750VA
Dimensions	Panel	482.6x88 mm
	Depth	342.5 mm
Weight		11.4kg
Mains Depending on your country	See characteristics in the back of the unit.	



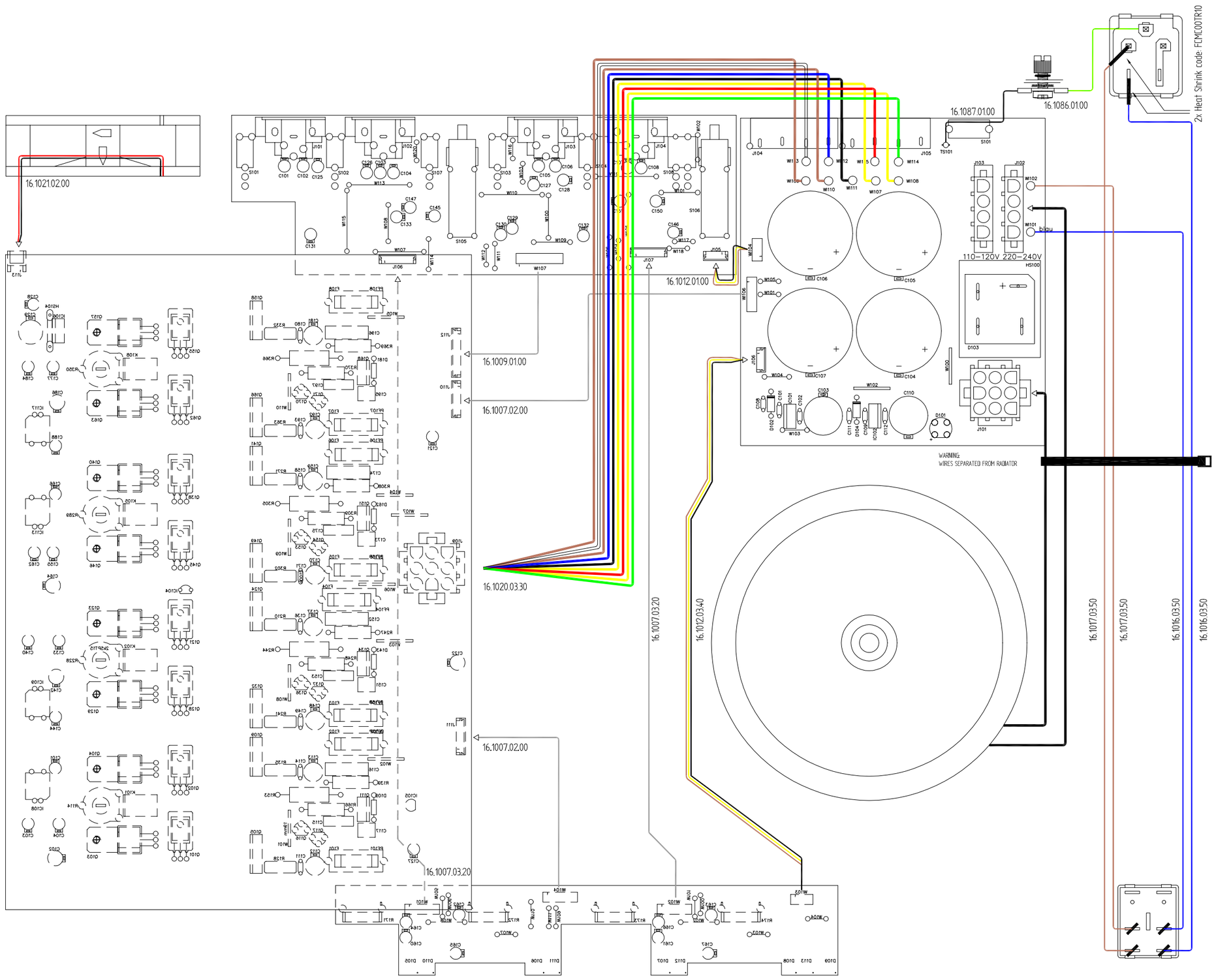
ECLER

drawn by: J. Colomines | date: 010626 | approved by: Josep M. Sans

number: 31.0108 | version 01.04

title:

WIRING DIAGRAM EP05-99

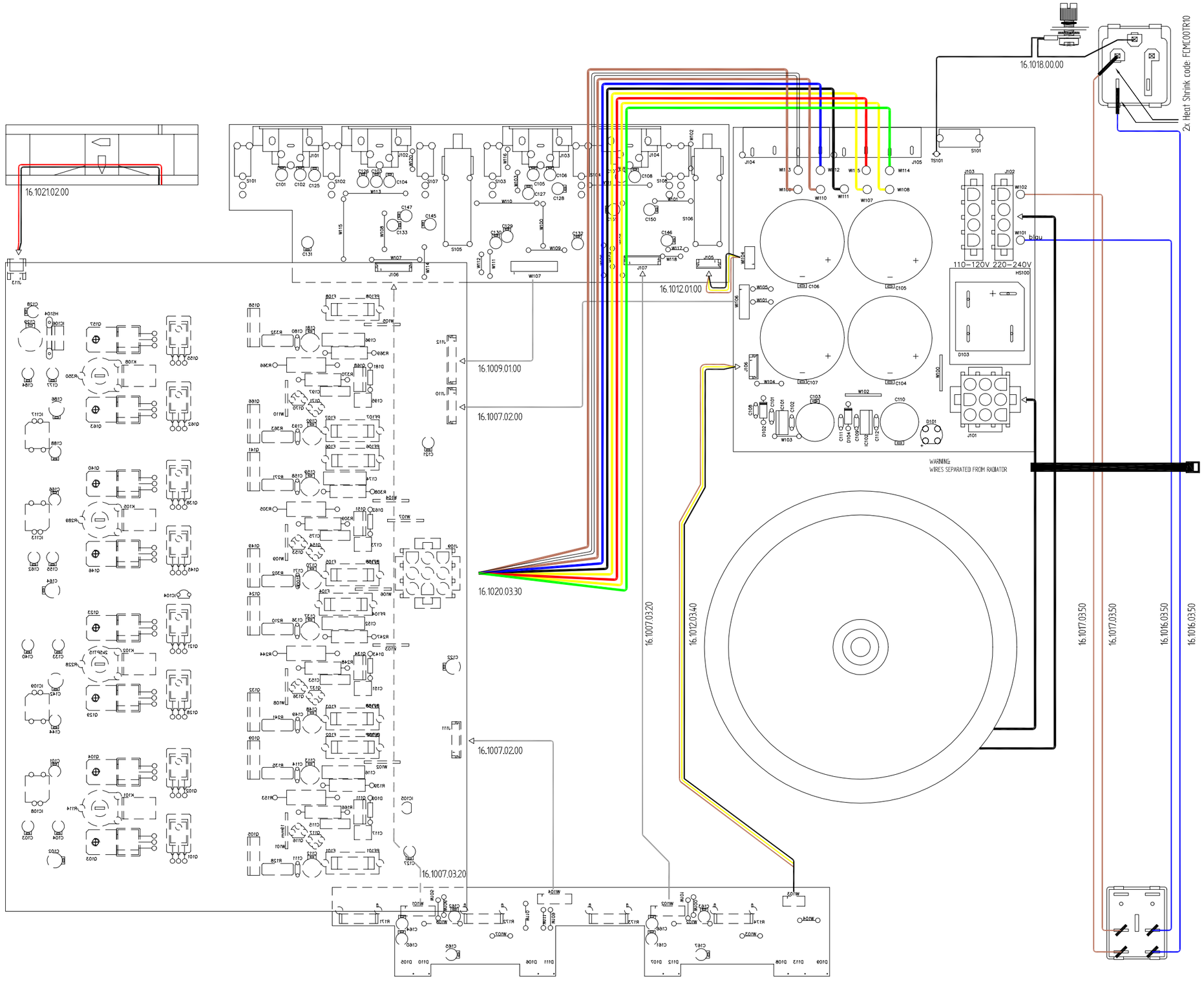


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drawn by: J. Colomines | date: 010417 | approved by: Josep M. Sans

title: **WIRING DIAGRAM EP05-99**

number: 31.0108 | version 01.03

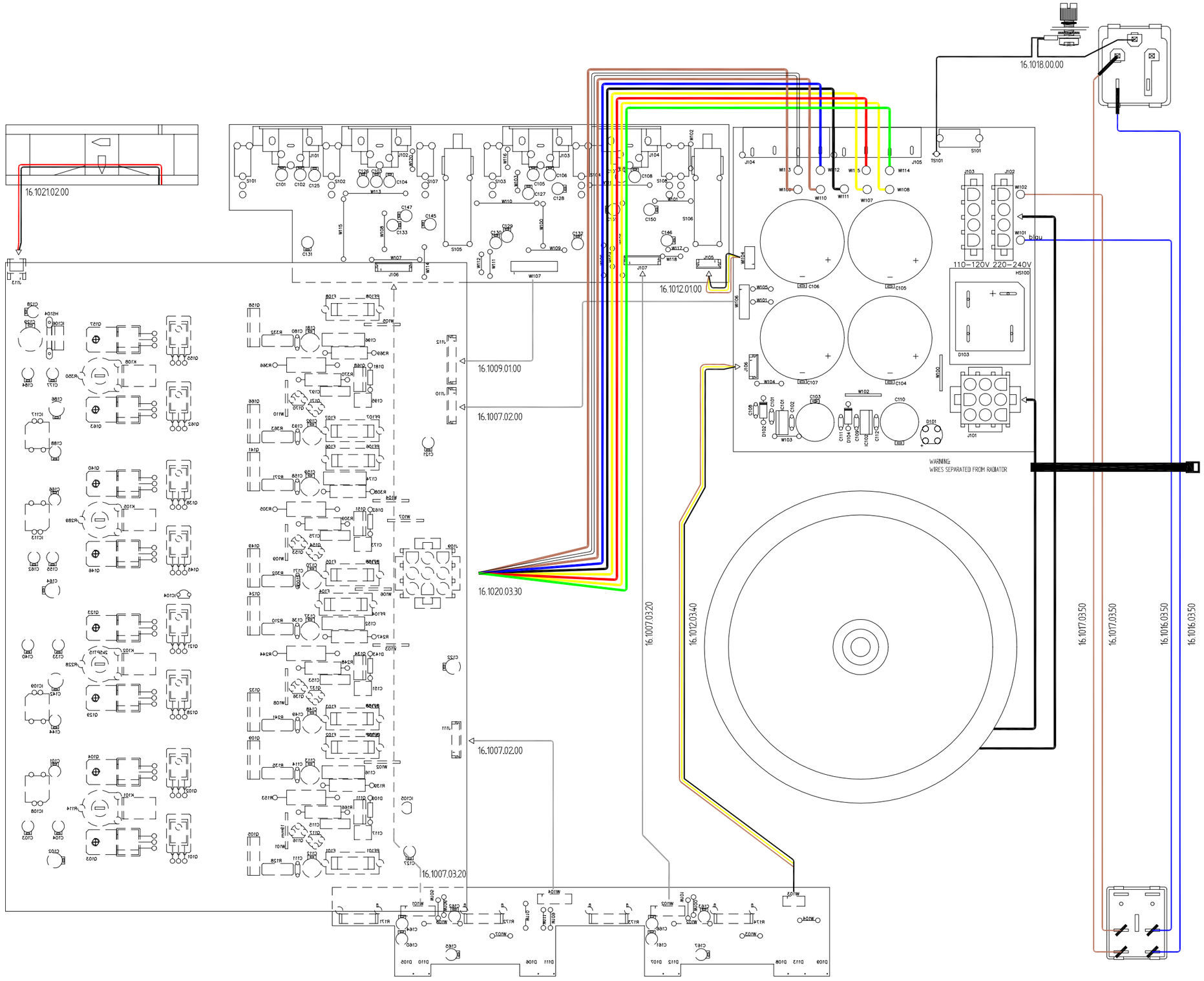


ECLER

drawn by: J. Colomines | date: 001018 | approved by: Josep M. Sans

title: **WIRING DIAGRAM EP05-99**

number: 31.0108 | version 01.02

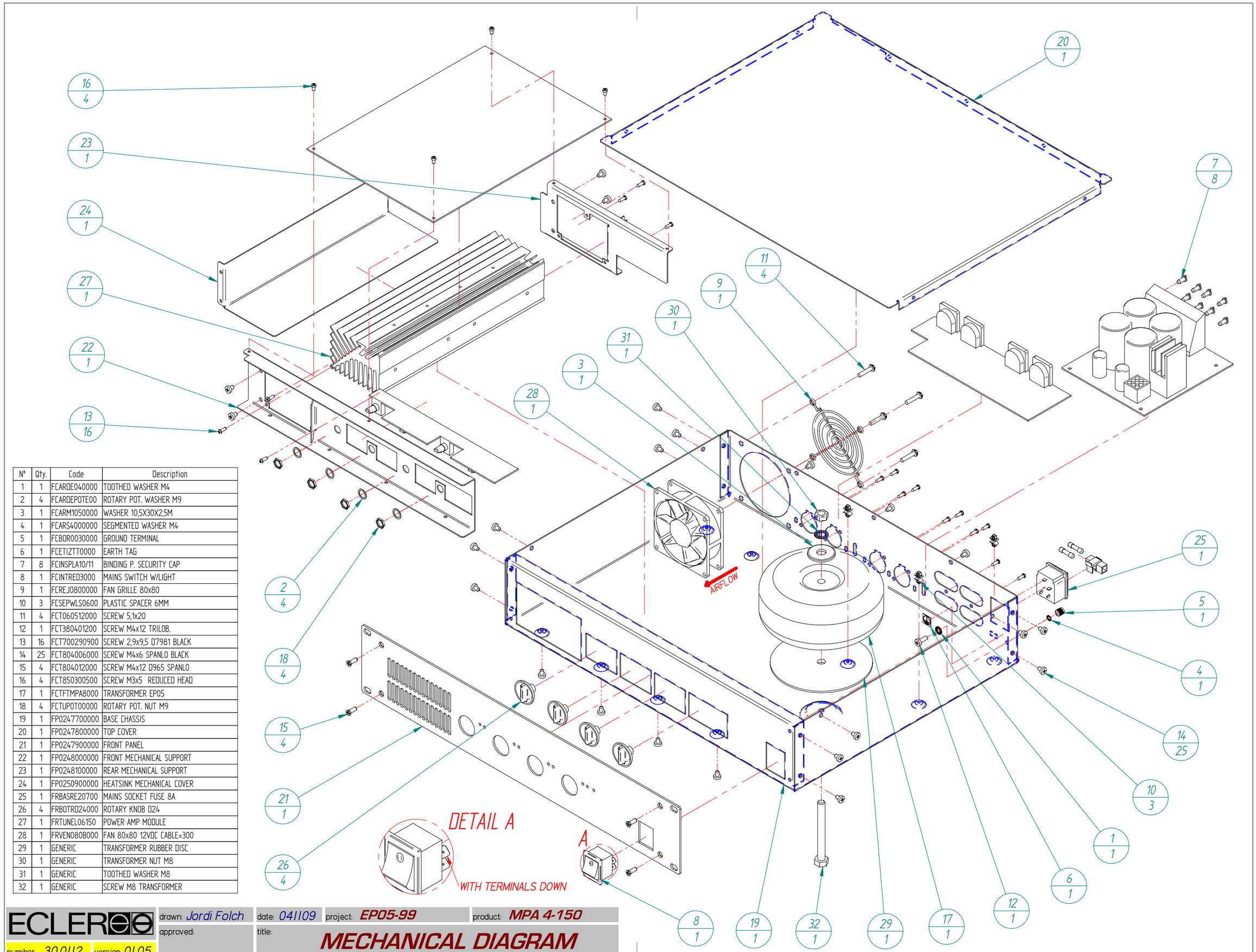


ECLER

drawn by: J. Colomines | date: 000407 | approved by: Josep M. Sans

title: **WIRING DIAGRAM EP05-99**

number: 31.0108 | version 01.01



Nº	Qty.	Code	Description
1	1	FCARDE040000	TOOTHED WASHER M4
2	4	FCARDEPOTE00	ROTARY POT. WASHER M9
3	1	FCARM1050000	WASHER 10,5X30X2,5M
4	1	FCARS4000000	SEGMENTED WASHER M4
5	1	FCBOR0030000	GROUND TERMINAL
6	1	FCETIZTT0000	EARTH TAG
7	8	FCINSPLA10/11	BINDING P. SECURITY CAP
8	1	FCINTRED3000	MAINS SWITCH W/LIGHT
9	1	FCREJ0800000	FAN GRILLE 80x80
10	3	FCSEPWLS0600	PLASTIC SPACER 6MM
11	4	FCT060512000	SCREW 5,1x20
12	1	FCT380401200	SCREW M4x12 TRILOB.
13	16	FCT700290900	SCREW 2,9x9,5 D7981 BLACK
14	25	FCT804006000	SCREW M4x6 SPANLO BLACK
15	4	FCT804012000	SCREW M4x12 D965 SPANLO
16	4	FCT850300500	SCREW M3x5 REDUCED HEAD
17	1	FCTFTMPA8000	TRANSFORMER EP05
18	4	FCTUPOT00000	ROTARY POT. NUT M9
19	1	FP0247700000	BASE CHASSIS
20	1	FP0247800000	TOP COVER
21	1	FP0247900000	FRONT PANEL
22	1	FP0248000000	FRONT MECHANICAL SUPPORT
23	1	FP0248100000	REAR MECHANICAL SUPPORT
24	1	FP0250900000	HEATSINK MECHANICAL COVER
25	1	FRBASRE20700	MAINS SOCKET FUSE 8A
26	4	FRBOTRD24000	ROTARY KNOB D24
27	1	FRTUNEL06150	POWER AMP MODULE
28	1	FRVEN080B000	FAN 80x80 12VDC CABLE=300
29	1	GENERIC	TRANSFORMER RUBBER DISC
30	1	GENERIC	TRANSFORMER NUT M8
31	1	GENERIC	TOOTHED WASHER M8
32	1	GENERIC	SCREW M8 TRANSFORMER

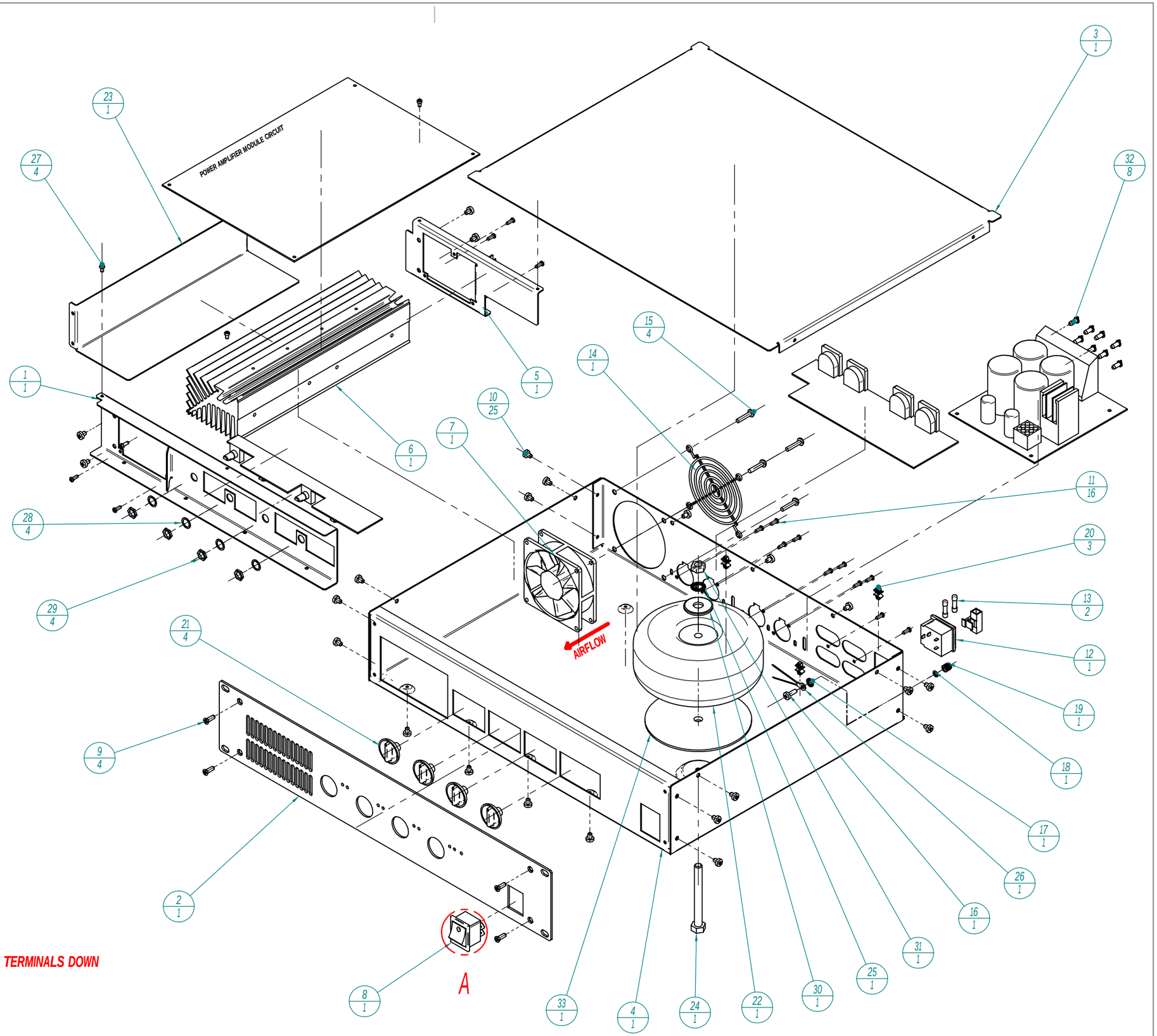
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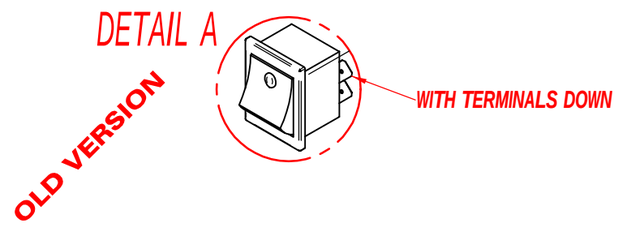
drawn: Jordi Folch | date: 041109 | project: EP05-99 | product: MPA 4-150

approved: | title: **MECHANICAL DIAGRAM**

number: 30.0112 | version 01.05

Nº	Qty	ECLER Code	Description
1	1	FCMECPM240	FRONT MECHANICAL SUPPORT
2	1	FCMECPM220	FRONT PANEL
3	1	FCMECPM210	TOP COVER
4	1	FCMECPM200	BASE CHASSIS
5	1	FCMECPM230	REAR MECHANICAL SUPPORT
6	1	FCRAD02000	HEATSINK EP05 250MM
7	1	FCVEN08000	FAN 80x80 12VDC
8	1	FCINTRED30	MAINS SWITCH W/LIGHT
9	4	FCT8040120	SCREW M4x12 D965 SPANLO
10	25	FCT8040060	SCREW M4x6 SPANLO BLACK
11	16	FCT7002909	SCREW 2,9x9,5 D7981 BLACK
12	1	FCBASRE300	MAINS SOCKET
13	2	FCFUS50350	FUSE 8A
14	1	FCREJ08000	FAN GRILLE 80x80
15	4	FCT0605120	SCREW 5,1x20
16	1	FCT8504110	SCREW M4x10 TRILOB. WHITE
17	1	FCARDE0400	TOOTHED WASHER M4
18	1	FCARS40000	SEG. WASHER M4
19	1	FCBOR00300	GROUND TERMINAL
20	3	FCSEPWLS06	PLASTIC SPACER 6MM
21	4	FCBOTD2400	ROTARY KNOB D24
22	1	FCTFTMPA80	TRANSFORMER EP05
23	1	FCMECPM250	HEATSINK MECHANICAL COVER
24	1	GENERIC	SCREW M8 TRANSFORMER
25	1	FCARDE0800	TOOTHED WASHER M8
26	1	FC0C018000	GROUND CABLE
27	4	FCT8503005	SCREW M3x5 REDUCED HEAD
28	4	FCARDEPOTE	ROT. POT. WASHER M9
29	4	FCTUPOT000	ROTARY POT. NUT M9
30	1	FCARM10500	WASHER 10,5X30X2,5M
31	1	GENERIC	TRANS. NUT M8
32	8	FCINSPLA10/11	BINDING P. SECURITY CAP
33	1	GENERIC	TRANS. RUBBER DISC





ECLER

autor: Jordi Folch

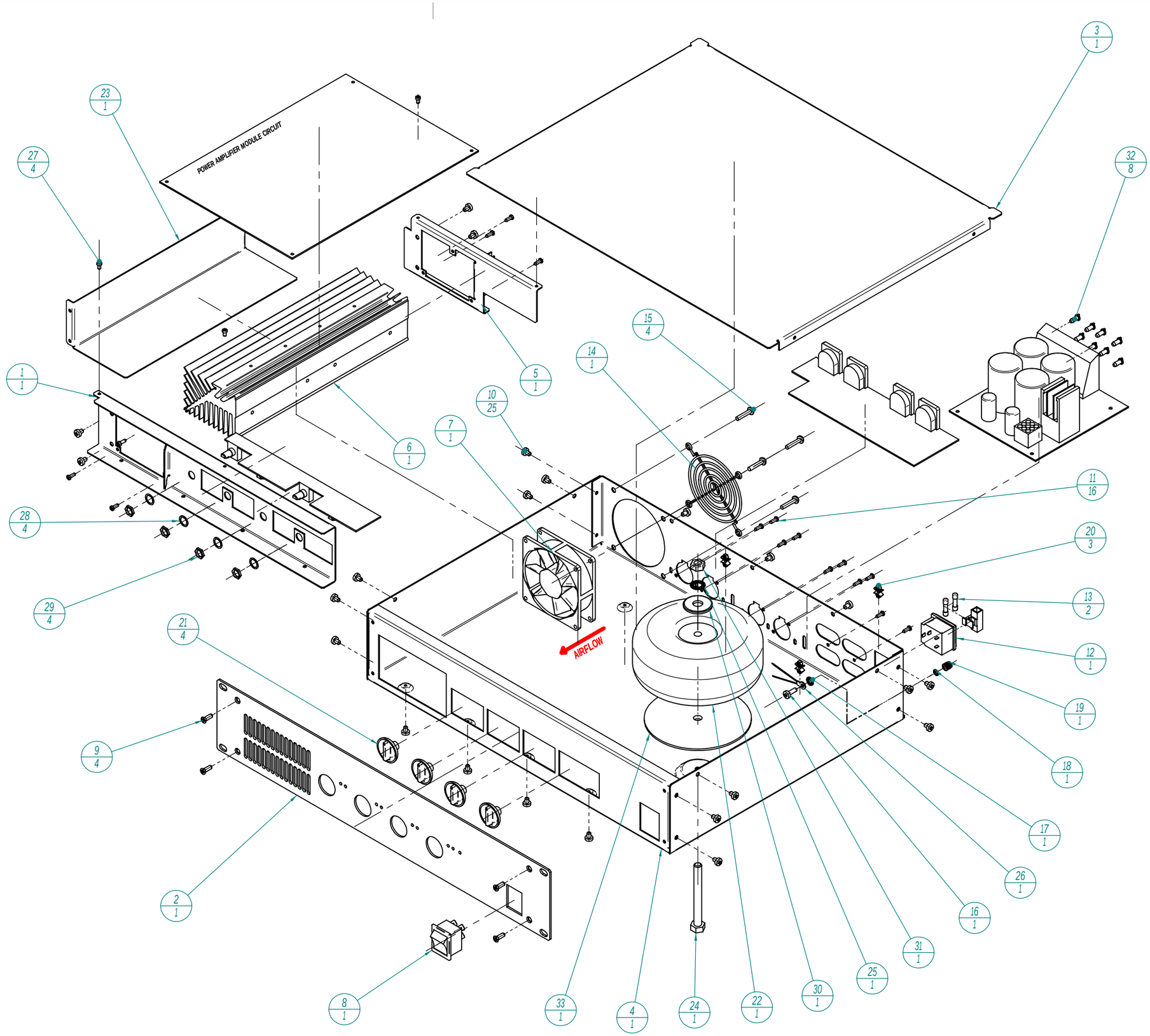
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títol: **MECHANICAL DIAGRAM EP05-99**

número: 30.0112 versió: 01.04

Nº	Qty	ECLER Code	Description
1	1	FCMECPM240	FRONT MECHANICAL SUPPORT
2	1	FCMECPM220	FRONT PANEL
3	1	FCMECPM210	TOP COVER
4	1	FCMECPM200	BASE CHASSIS
5	1	FCMECPM230	REAR MECHANICAL SUPPORT
6	1	FCRAD02000	HEATSINK EP05 250MM
7	1	FCVEN08000	FAN 80x80 12VDC
8	1	FCINTRED25	MAINS SWITCH
9	4	FCT8040120	SCREW M4x12 D965 SPANLO
10	25	FCT8040060	SCREW M4x6 SPANLO BLACK
11	16	FCT7002909	SCREW 2,9x9,5 D7981 BLACK
12	1	FCBASRE300	MAINS SOCKET
13	2	FCFUS50350	FUSE 8A
14	1	FCREJ08000	FAN GRILLE 80x80
15	4	FCT0605120	SCREW 5,1x20
16	1	FCT8504110	SCREW M4x10 TRILOB. WHITE
17	1	FCARDE0400	TOOTHED WASHER M4
18	1	FCARS40000	SEG. WASHER M4
19	1	FCBOR00300	GROUND TERMINAL
20	3	FCSEPWLS06	PLASTIC SPACER 6MM
21	4	FCBOTD2400	ROTARY KNOB D24
22	1	FCTFTMPA80	TRANSFORMER EP05
23	1	FCMECPM250	HEATSINK MECHANICAL COVER
24	1	GENERIC	SCREW M8 TRANSFORMER
25	1	FCARDE0800	TOOTHED WASHER M8
26	1	FC0C018000	GROUND CABLE
27	4	FCT8503005	SCREW M3x5 REDUCED HEAD
28	4	FCARDEPOTE	ROT. POT. WASHER M9
29	4	FCTUPOT000	ROTARY POT. NUT M9
30	1	FCARM10500	WASHER 10,5X30X2,5M
31	1	GENERIC	TRANS. NUT M8
32	8	FCINSPLA10/11	BINDING P. SECURITY CAP
33	1	GENERIC	TRANS. RUBBER DISC



OLD VERSION

ECLER

autor: Jordi Folch

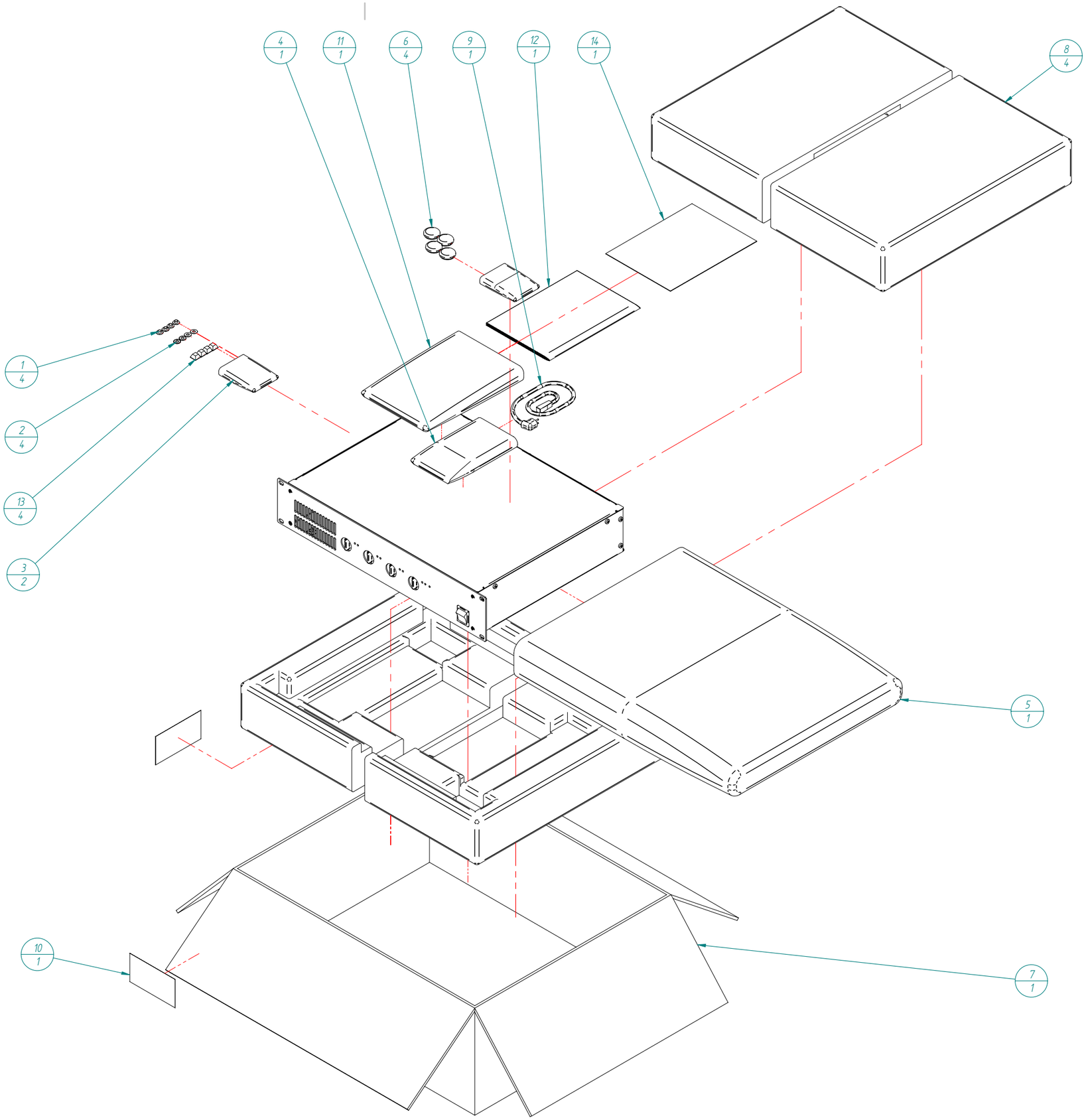
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número: 30.0112 versió: 01.03

títol: MECHANICAL DIAGRAM EP05-99

Nº	Qty	Code	Description
1	4	FCARAT300000	SCREW INSULATOR
2	4	FCARN5000000	WASHER 5X11,5X0,8
3	2	FCBOL0010000	BAG 60x80
4	1	FCBOL0020000	PLASTIC BAG 120x180
5	1	FCBOLS020000	STANDARD BAG 75x65
6	4	FCBOTD240100	ROT. KNOB PROTECTION COVER
7	1	FCCAJSTA0100	BOX STANDARD 1
8	4	FCCANT118000	INTERIOR REINFORCEMENT
9	1	FCCONX017500	MAINS CABLE 3x1
10	1	FCETI0951140	PRODUCT LABEL PACK (ONE FOR EACH UNIT)
11	1	FCFUNMAN0000	USER MANUAL BAG
12	1	FCMANMPA7000	USER MANUAL MPA 70W
13	4	FCPIE1125500	RUBBER FOOT
14	1	FCTARJG00000	WARRANTY CARD



ECLER

drawn: Jordi Folch

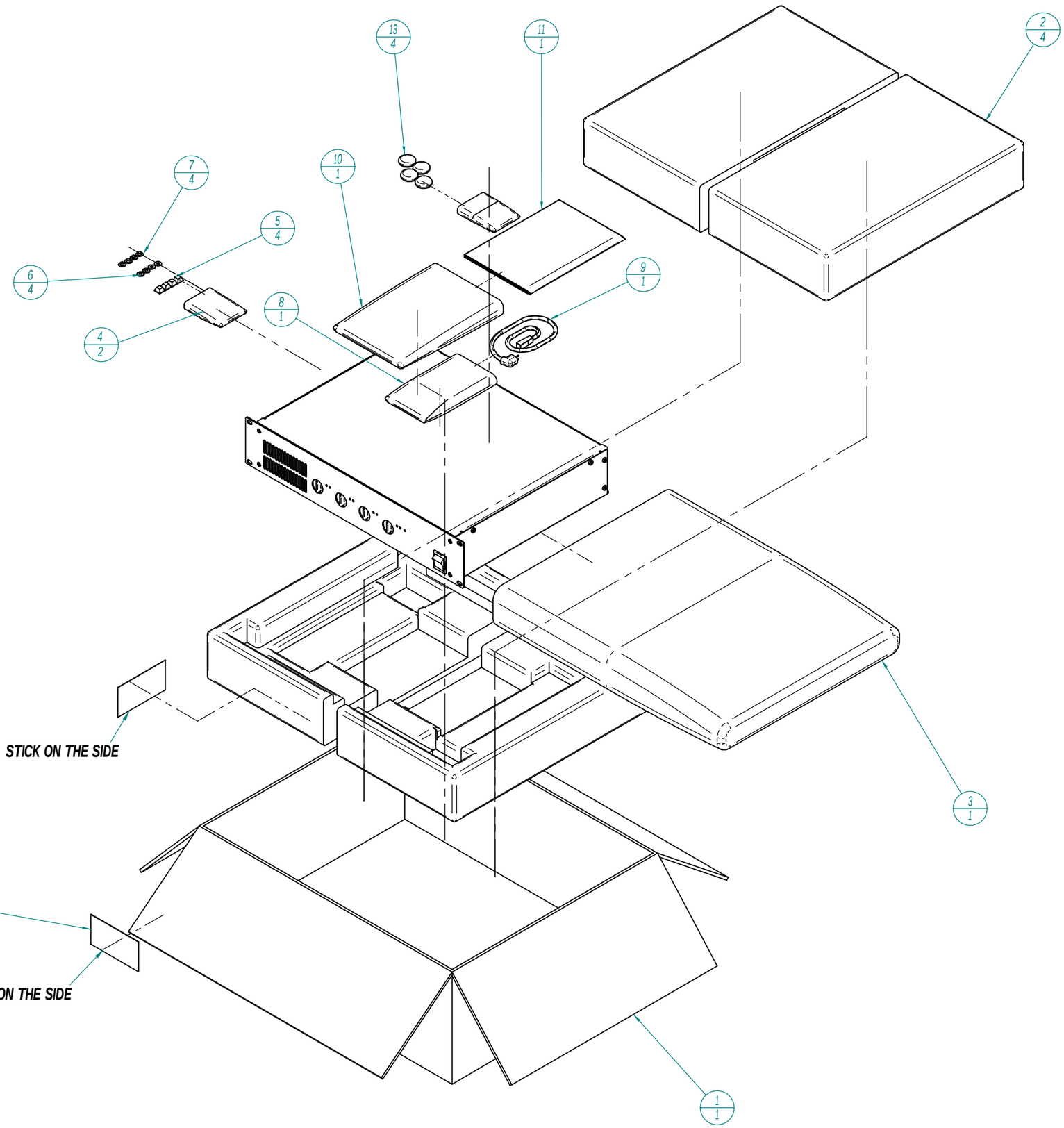
date: 040210

approved by:

title: **PACKING DIAGRAM EP05-99**

number: 32.0049 version 01.02

Nº	Qty	ECLER Code	Description
1	1	FCCAJSTA01	BOX STANDARD 1
2	4	FCCANT1010	INTERIOR REINFORCEMENT
3	1	FCBOLS0200	STANDARD BAG 75x65
4	2	FCBOL00100	BAG 60x80
5	4	FCPIE11255	RUBBER FOOT
6	4	FCARN50000	WASHER 5X11,5X0,8M
7	4	FCARAT3000	SCREW INSULATOR
8	1	FCBOL00200	BAG 120x180
9	1	FCCONX0175	MAINS CABLE 3x1
10	1	FCFUNMAN00	USER MANUAL BAG
11	1	FCMANPAM70	USER MANUAL MPA 70W
12	2	FCETICAJA0	UNIT INFORMATION LABEL
13	4	FCBOTD2401	ROT. KNOB PROTECTION COVER



OLD VERSION

ECLER

drawn: Jordi Folch

date: 000524

approved by:

title: PACKING DIAGRAM EP05-99

number: 32.0049 version 01.01