



GT07001

1 CHANNEL POWER AMPLIFIER

SERVICE MANUAL



JBL Consumer Products

250 Crossways Park Dr.

Woodbury, New York 11797

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Discontinued XXXX

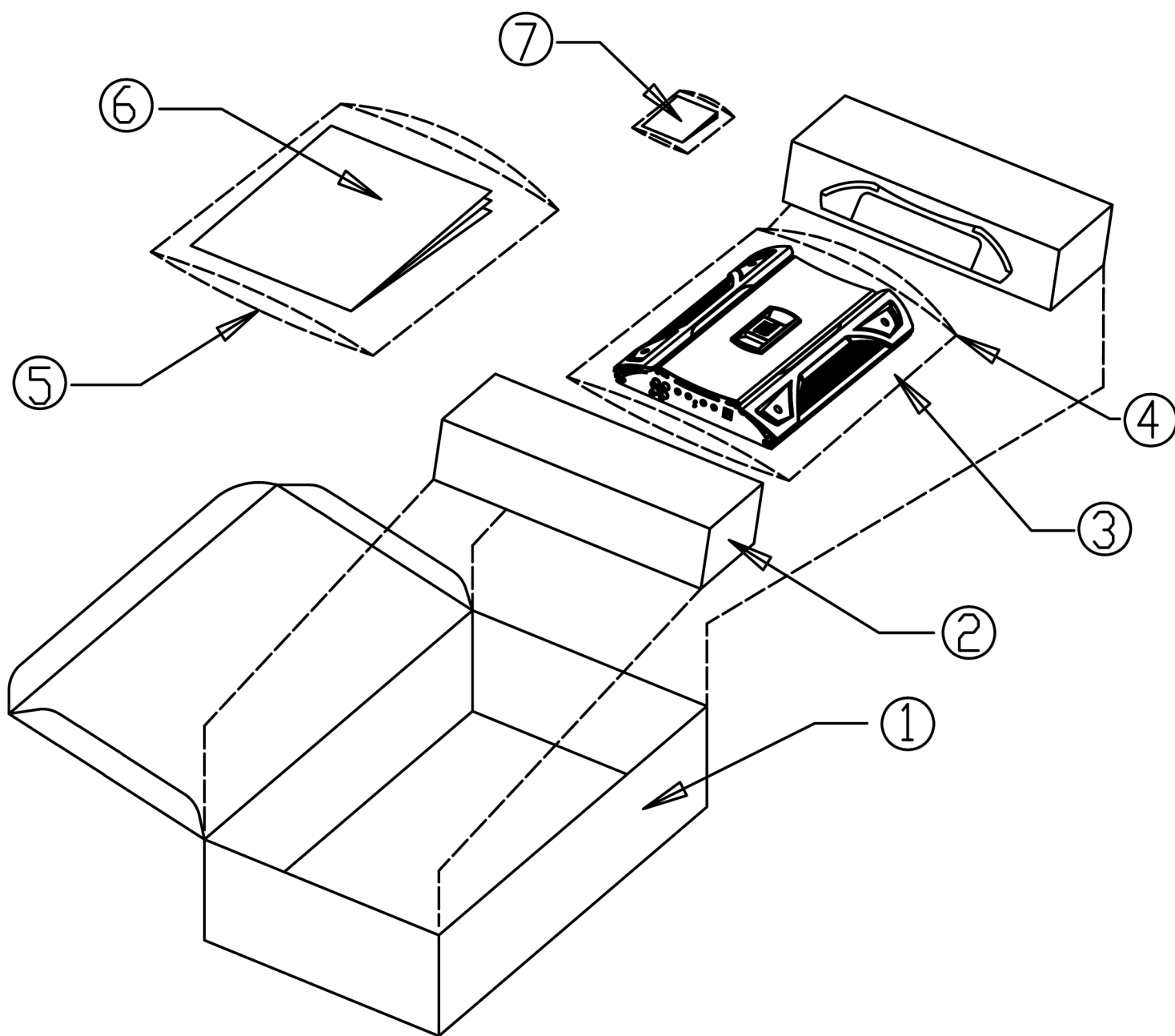
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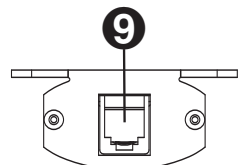
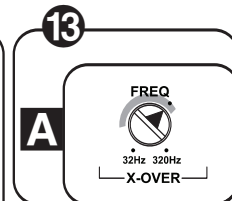
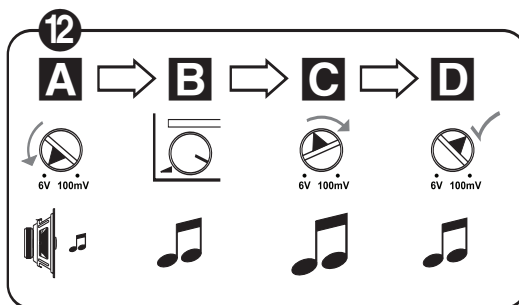
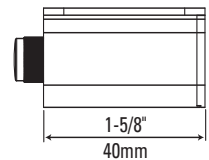
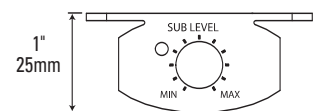
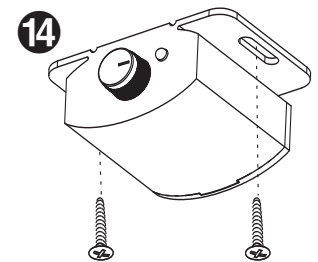
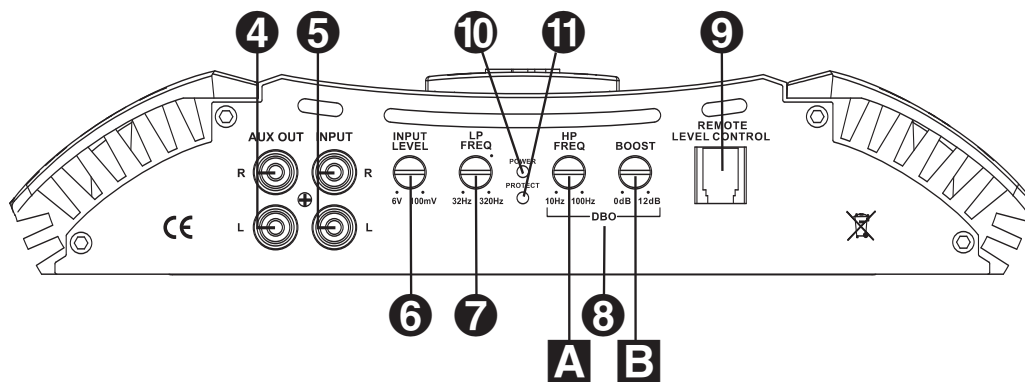
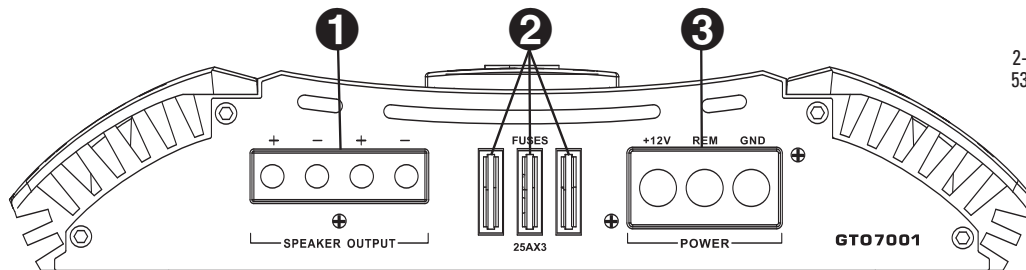
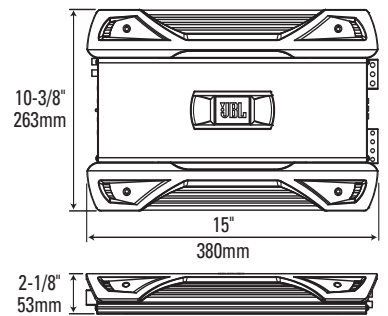
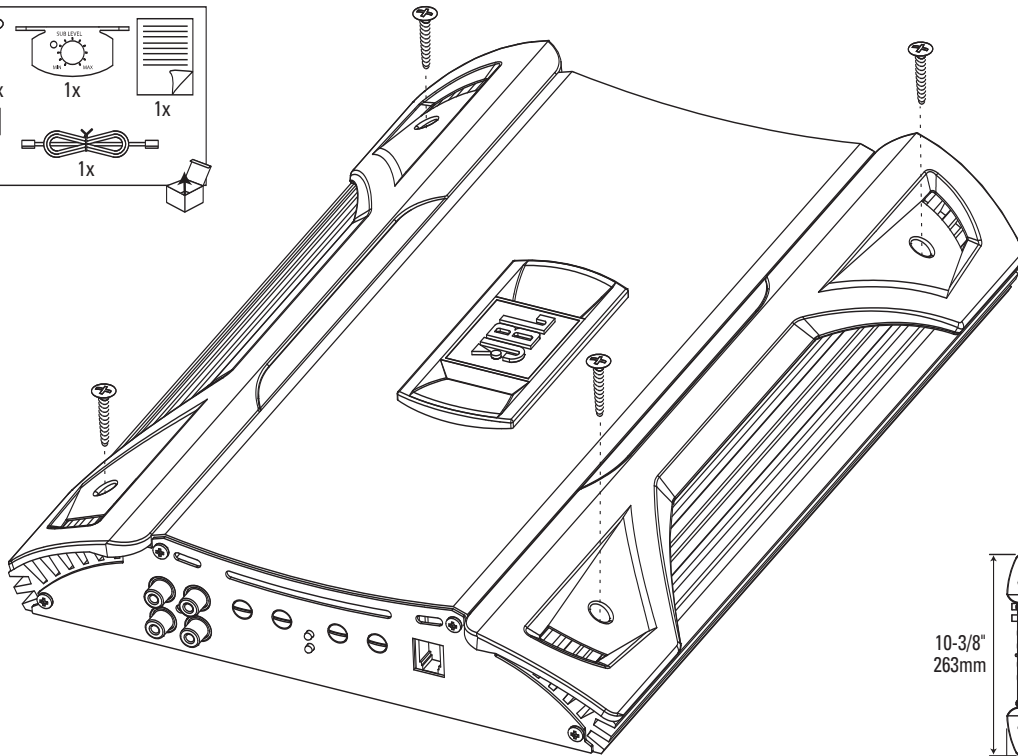
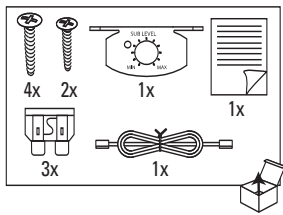
GTO 7001 Specifications

Output Power:	425W RMS x 1 channels @ 4 ohms; $\leq 1\%$ THD + N
(14.4V supply)	700W RMS x 1 channels @ 2 ohms; $\leq 1\%$ THD + N
Signal-to-noise ratio:	80dBA (reference 1W into 4 ohms)
	107dBA (reference rated power into 4 ohms)
Dynamic power:	900W @ 2 ohms
Frequency response:	20Hz – 330Hz (–3dB)
THD+N 1KHz LPF=22KHz	$\leq 0.02\%$ (rated power @ 4 ohms)
Maximum input signal:	6.0V
Maximum sensitivity:	100mV
Bass Boost @ 50Hz	0-6dB
DC Offset	<30mV
Output regulation:	.03dB @ 4 ohms
Idle Current @ 2 ohms	1.2A
Max Current Draw	<58A @ 2 ohms
Remote Operating Voltages	ON 5V OFF 3.5V
Turn-on delay time	2-3 sec
Circuit Protection	Temperature (80 $\pm$ 5C), Short circuit, Operating voltage range (8-16V)
Dimensions:	15 x 10 3/8 x 2 1/8" (380 x 263 x 53mm)
Fuse:	25A x 3

JBL continually strives to update and improve existing products, as well as create new ones. The specifications and details in this and related JBL publications are therefore subject to change without notice.



Item	Part Number	Description	Qty
1	CH4623221132	Outer Carton	1
2	BZL311105120	Packing Foam	2
3	GTO7001	Amplifier	1
4		Plastic bag	1
5		Plastic bag	1
6	Visit www.jbl.com	Owner's manual	1
7		Accessory kit (Screws, Fuse, Remote Level control, Cable)	1



GTO7001 CAR AUDIO SUBWOOFER AMPLIFIER

Installation Warnings and Tips

- Disconnect the negative (–) lead from your vehicle's battery.
- At the installation sites, locate and make a note of all fuel lines, hydraulic brake lines, vacuum lines and electrical wiring. Use extreme caution when cutting or drilling in and around these areas.
- Choose a safe mounting location away from moisture.
- Make sure there is sufficient air circulation at the mounting location for the amplifier to cool itself.
- Mount the amplifier, using the supplied hardware.

Specifications

- 425W RMS x 1 channel @ 4 ohms and $\leq 1\%$ THD + N*
- 700W RMS x 1 channel @ 2 ohms and $\leq 1\%$ THD + N*
- THD + N: 0.02% (rated power @ 4 ohms)
- Signal-to-noise ratio: 80dBA (reference 1W into 4 ohms)*
- Signal-to-noise ratio: 107dBA (reference rated power into 4 ohms)
- Frequency response: 20Hz – 330Hz (–3dB)
- Max power: 700 watts

* CEA-2006A-compliant

1 Speaker Output Connectors

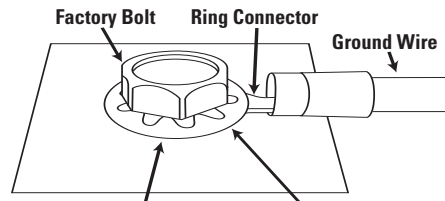
- Connect the subwoofer to these terminals, observing proper polarity. Either + or – terminal may be used. Minimum total impedance is 2 ohms.

2 Fuses

- Replace only with the same type and rating.

3 Power Input Connectors

- +12V: Connect to the positive terminal of the vehicle's battery. 4 AWG wire is recommended. Install an appropriate fuse holder and fuse (75A minimum) within 18 inches of the battery. Make sure the wire is not damaged or pinched during installation. Install protective grommets when routing wires through the firewall or other sheet metal.
- GND: Connect to the vehicle's chassis. Refer to the picture below.



Note: Remove any paint below ring connector.

- REM: Connect to the "Remote Out" lead from the source unit or to a source of switched 12V+ (ACC).

4 Aux Output Connectors (RCA)

- Nonfiltered pass-through output. Connect to the input of an additional amplifier.

5 Input Connectors (RCA)

- Connect to the RCA outputs from the source unit or signal processor.

6 Input-Level Control

- Used to match the input level of the amplifier to the output level of the source unit.
- See 12 for the adjustment procedure.

7 Low-Pass Filter Frequency Control

- 12dB/octave low-pass filter, variable from 32Hz to 320Hz.
- See 13 for the adjustment procedure.

8 DBO (Dynamic Bass Optimization) Variable Subsonic High-Pass Filter With Variable Boost (Q)

- For woofers in tuned (vented) enclosures, set the Frequency control to a value 10Hz below the enclosure's resonance (tuned) frequency.
- For woofers in sealed boxes, set the control to any value you prefer between 30Hz and 50Hz.
- Set the Boost control according to your preference, being careful not to apply enough boost to damage your woofer(s).

A DBO High-Pass Filter Frequency control, variable between 10Hz and 100Hz. See above for appropriate settings.

B DBO Boost control provides up to 12dB of boost slightly above the high-pass filter's frequency. See above for appropriate settings.

9 Remote Level Control (RLC) Connector

- Connect the Remote Level Control (RLC) here, using the supplied RJ-11 cable.

10 Power On LED

- Illuminated when the amplifier is on.

11 Protect LED

- Illuminated under any of the following fault conditions: battery over/under voltage, short circuit in speaker wires, amplifier is too hot, amplifier's output circuit has failed (DC voltage is present in the amplifier's output).

12 Setting Input Level

A Turn Input Level control counterclockwise to 6V (minimum).

B With a dynamic music track playing, turn the head unit's volume control to the 3/4 position.

C Turn Input Level control clockwise until the bass output is proportionate to the output of the high-frequency speakers, according to your preference.

D Input level is now adjusted correctly.

13 Setting the Crossover

A Crossover setting for subwoofers.

Note: Acceptable frequency ranges are indicated in gray.

14 Remote Level Control

The Remote Level Control, if installed, will allow you to adjust the level of bass while seated in the listening position.

Amplifier Troubleshooting Guide

1. Status LED on Amplifier not Lit - Head Unit (Source) Turned ON

Verify:

- A. Remote turn-on wire from source to amplifier has proper voltage
- B. Power (B+) connections at amplifier, terminal blocks, and battery are secure
- C. Ground (GND) connections at amplifier and vehicle chassis are secure
- D. Battery B+ fuse (if used) is OK
- E. Amplifier fuse is OK
- F. B+ at battery and B+ at amplifier has proper voltage

2. Status LED's Lit, No Output from Speakers in Normal Operating Condition

Verify:

- A. RCA cables from amplifier to source are securely connected
- B. Volume adjustment on amplifier is correctly adjusted
- C. Source is ON and playing

3. Engine Noise From Speaker(s)

Turn source OFF, Disconnect RCA cables at amplifier. If noise stops, check equipment & cables leading to amplifier.

Verify:

- A. RCA cables are of good quality with no breakage to internal shields
- B. RCA cables from source to amplifier are not run alongside any power cables

4. Amplifier Output Distorted Music

Verify:

- A. Source output music to amplifier is not distorted
- B. Source output sensitivity is correctly adjusted

5. Amplifier Shuts Down, Green LED's are Lit - Amplifier is in Thermal Protection Mode

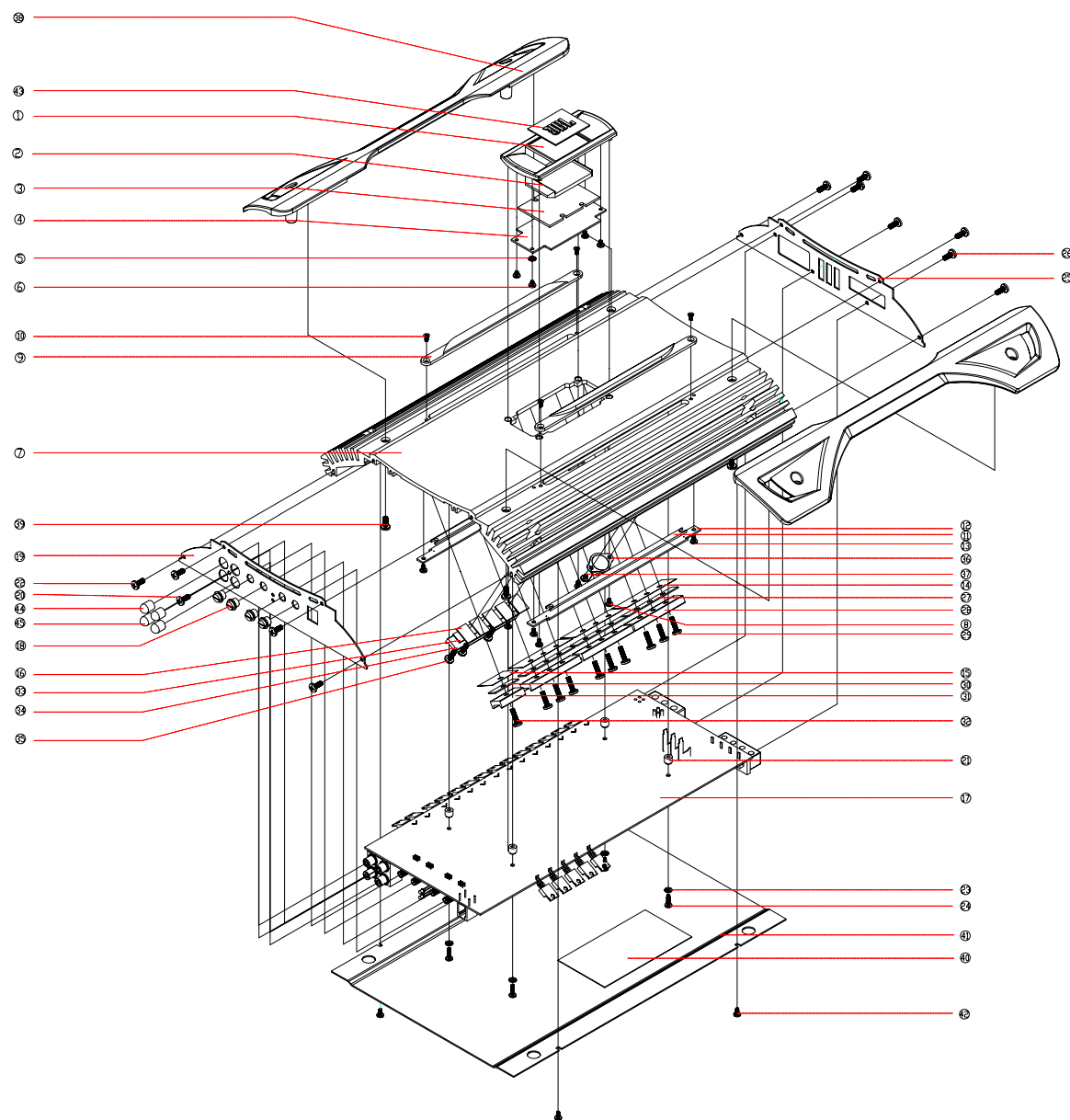
Verify:

- A. Amplifier is mounted with adequate air circulation around heatsinks or vents
- B. Amplifier is not mounted under carpet or sealed enclosure
- C. Speakers meet correct impedance for application (mono or stereo hookup)

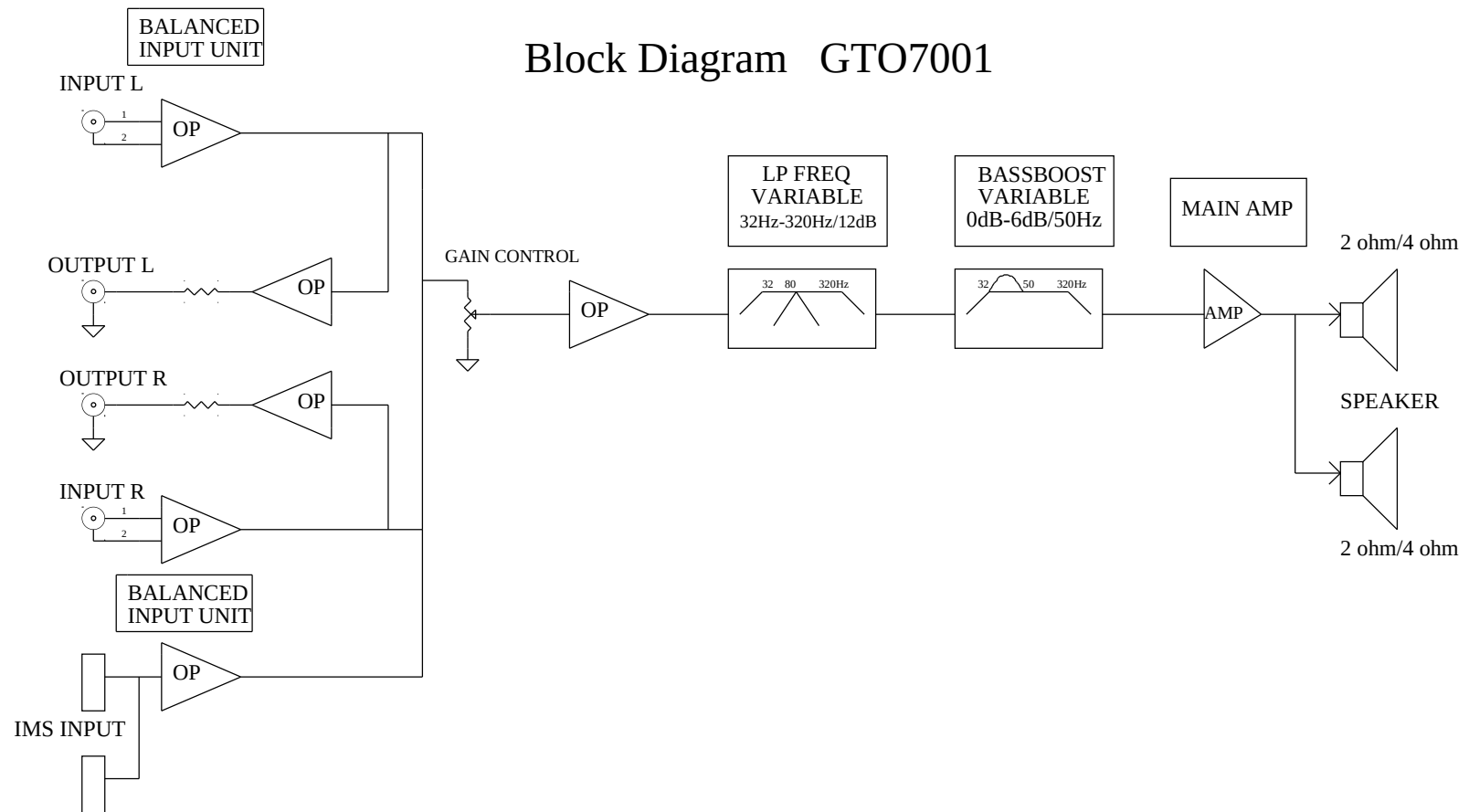
6. Amplifier Does Not Turn ON, and Red LED is Lit Amplifier (and not Connected to a Shorted Speaker)

Verify:

- A. Speaker crossover (if used) is not defective



No.	item	Part Number	Qty	No.	item	Part Number	Qty
①	Top plate	ZS-D00010112	1	②⑦	Insulated paper	JY464A10A10X	3
②	Reflector board	GD-500012400	1	②⑧	Trans. Clamp	PL-A0005-000	3
③	Reflector board#2	GD-600030003	1	②⑨	Screw BM4*14	LS1JM0401401	9
④	PCB		1	③⑩	Insulated paper	JY430A10A10X	2
⑤	Washer	DQ8069032084	1	③①	Trans. Clamp	PL-A0002-000	2
⑥	Screw BM3*4	LS1JM0300401	4	③②	Screw BM4*14	LS1JM0401401	2
⑦	Heatsink	SR-7001-0124	1	③③	Insulated paper	JY445A10A10X	1
⑧	Screw BM3*5	LS1JM0300501	4	③④	Trans. Clamp	PL-A0004-000	1
⑨	Light bar	PL-A0048-000	2	③⑤	Screw BM4*14	LS1JM0401401	2
⑩	Screw KT3*6	LS1FP0300011	4	③⑥	Temperature switch	1380-0206-00	1
⑪	Reflector board#1	GD-600040003	2	③⑦	Screw BM3*4	LS1JM0300401	2
⑫	PCB		2	③⑧	Side panel	ZS-A00020104	2
⑬	Screw BM3*5	LS1JM0300501	4	③⑨	Screw BM4*10	LS1JM0401001	4
⑭	Mica	JY264A22A01X	3	④⑩	Insulated paper	JY411260A05X	1
⑮	Mica	JY233A22A01X	1	④①	Bottom plate	XG-0036-0501	1
⑯	Ceramic	JY217A12A10A	5	④②	Screw BT3*6	LS1JT0300601	4
⑰	PCB		1	④③	Logo plate	MP-0752-3001	1
⑱	Knob	XN-10500-012	4	④④	RCA CAP (Red)	KT-200021300	2
⑲	Front Plate	MK-0112-0507	1	④⑤	RCA CAP (Wht)	KT-200012200	2
⑳	Screw BT3*10	LS1JT0301001	1				
㉑	Standoff	ZL-10038A-15	4				
㉒	Screw BT3*8	LS1JT0300801	4				
㉓	Washer	DQ8069032084	4				
㉔	Screw BT3*12	LS1JT0301201	4				
㉕	Rear plate	HG-0031-0507	1				
㉖	Screw BT3*8	LS1JT0300801	7				



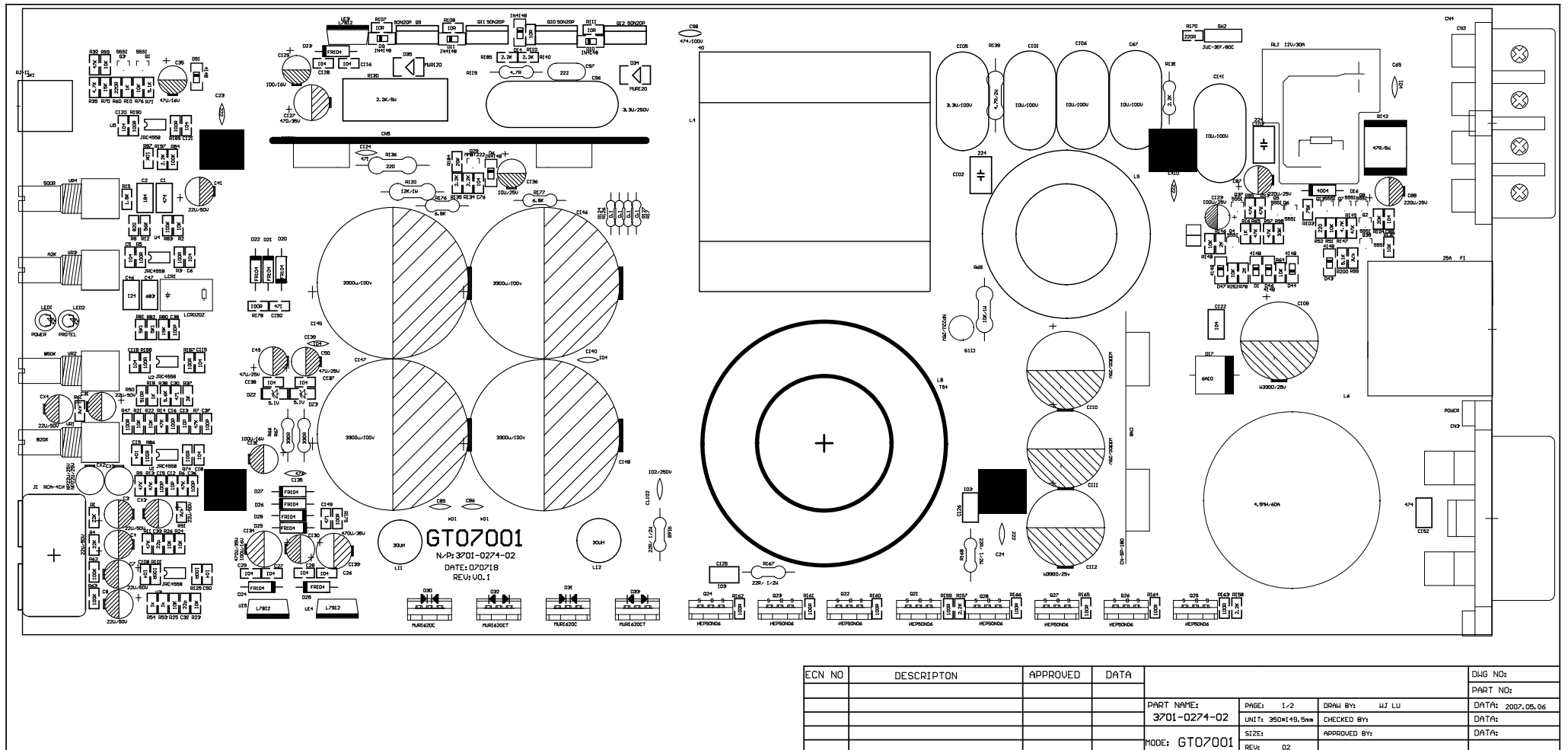
GTO7001 Electrical Parts List				
Part Number		Description	Qty	Reference Designator
MAIN PCB				
Resistors				
0701-2100-02	Resistor	SMD 10Ω 1/8W ±5% 0805	4	R107 R108 R110 R111
0701-2101-02	Resistor	SMD 100Ω 1/8W ±5% 0805	21	R3 R5 R47 R74 R86 R101 R125 R159 R160 R161 R162 R163 R164 R165 R166 R178 R179 R187 R188 R189 R190
0701-2221-02	Resistor	SMD 220Ω 1/8W ±5% 0805	3	R52 R60 R170
0701-2471-02	Resistor	SMD 470Ω 1/8W ±5% 0805	1	R50
0701-2102-02	Resistor	SMD 1KΩ 1/8W ±5% 0805	5	R10 R16 R18 R53 R54
0701-2821-02	Resistor	SMD 820Ω 1/8W ±5% 0805	1	R8
0701-2182-02	Resistor	SMD 1.8KΩ 1/8W ±5% 0805	1	R15
0701-2202-02	Resistor	SMD R0805 2KΩ 1/8W ±5%	3	R37 R146 R78
0701-2222-02	Resistor	SMD 2.2KΩ 1/8W ±5% 0805	7	R134 R135 R140 R157 R158 R185 R197
0701-2472-02	Resistor	SMD 4.7KΩ 1/8W ±5% 0805	2	R39 R147
0701-2512-02	Resistor	SMD 5.1KΩ 1/8W ±5% 0805	4	R71 R200 R81 R82
0701-2562-02	Resistor	SMD 5.6KΩ 1/8W ±5% 0805	1	R38
0701-2103-02	Resistor	SMD 10KΩ 1/8W ±5% 0805	16	R2 R21 R22 R23 R24 R25 R26 R152 R51 R76 R87 R99 R137 R148 R59 R64
0701-2153-02	Resistor	SMD 15KΩ 1/8W ±5% 0805	1	R70
0701-2822-02	Resistor	SMD 8.2KΩ 1/8W ±5% 0805	1	R80
0701-2203-02	Resistor	SMD R0805 20KΩ 1/8W ±5%	2	R104 R184
0701-2223-02	Resistor	SMD 22KΩ 1/8W ±5% 0805	2	R1 R4
0701-2333-02	Resistor	SMD 33KΩ 1/8W ±5% 0805	1	R98
0701-2473-02	Resistor	SMD 47KΩ 1/8W ±5% 0805	14	R6 R7 R9 R11 R13 R14 R32 R61 R65 R85 R91 R97 R145 RX3
0701-2753-02	Resistor	SMD 75K ±5% 1/8W 0805	1	R103
0701-2563-02	Resistor	SMD 56KΩ 1/8W ±5% 0805	1	R12
0701-2104-02	Resistor	SMD 100KΩ 1/8W ±5% 0805	4	R62 R63 R83 R84
0702-0106-03	Resistor	0.01Ω ±1%	4	R17 R124 R126 R127
0702-34R7-02	Resistor	1/2W 4.7Ω ±5%	1	R119
0702-6221-02	Resistor	2W 220Ω ±5%	1	R136
0702-3331-02	Resistor	1/2W 330Ω ±5%	2	R66 R67
0702-3222-02	Resistor	1/2W 2.2KΩ ±5%	1	R131
0702-3220-02	Resistor	1/2W 22Ω ±5%	3	R167 R168 R169
0702-4123-02	Resistor	1W 12K ±5%	1	R120
0702-4103-02	Resistor	1W 10KΩ ±5%	1	R69
0702-64R7-02	Resistor	4.7Ω 2W ±5%	1	R139
0702-5222-02	Resistor	5W 2.2K ±5%	1	R130
0705-5470-02	Resistor	5W 47Ω ±5%(	1	R142
04ZL-2512-00	Resistor	SMD MUR120 1A 2512	2	D34 D35
04GS-R104-00	Resistor	FR104 1A 400V 52MM	10	D20 D21 D22 D23 D24 D25 D26 D27 D28 D29
1204-2041-03	Variable Resistor	A2K/A200K L=15 ±10% HP FREQ	1	VR3
1204-5031-30	Variable Resistor	B50K ±10% :R0971G LP FREQ	1	VR2
1201-2031-02	Variable Resistor	A20K L=15mm INPUT LEVEL	1	VR1
1204-5011-01	Variable Resistor	B500 L=15 ±10% BOOST	1	VR4
0702-4682-02	Resistor	1W 6.8K ±5%	2	R176 R177
Capacitors				
06S121046000	Capacitor	SMD 0.1uF/50V 0805 X7R ±10%	20	C5 C6 C18 C19 C26 C27 C28 C29 C76 C89 C90 C108 C115 C116 C118 C120 C121 C128 C137 C138
06S124716000	Capacitor	SMD 470pF/50V 0805 X7R ±10%	3	C30 C149 C150
06S321016000	Capacitor	SMD 100pF/50V 0805 NPO ±5%	5	C15 C16 C36 C37 C38
06S322206000	Capacitor	SMD 22pF/50V 0805 NPO ±5%	2	C32 C33
06S321006000	Capacitor	SMD 10pF/50V 0805 NPO ±5%	2	C12 C13
06D231047000	Capacitor	0.1uF/100V ±20%	5	C65 C85 C86 C139 C140
06D374717400	Capacitor	470pF/100V ±5%	1	C124
06D224747701	Capacitor	474/100V ±20%	3	C135 C98 C152

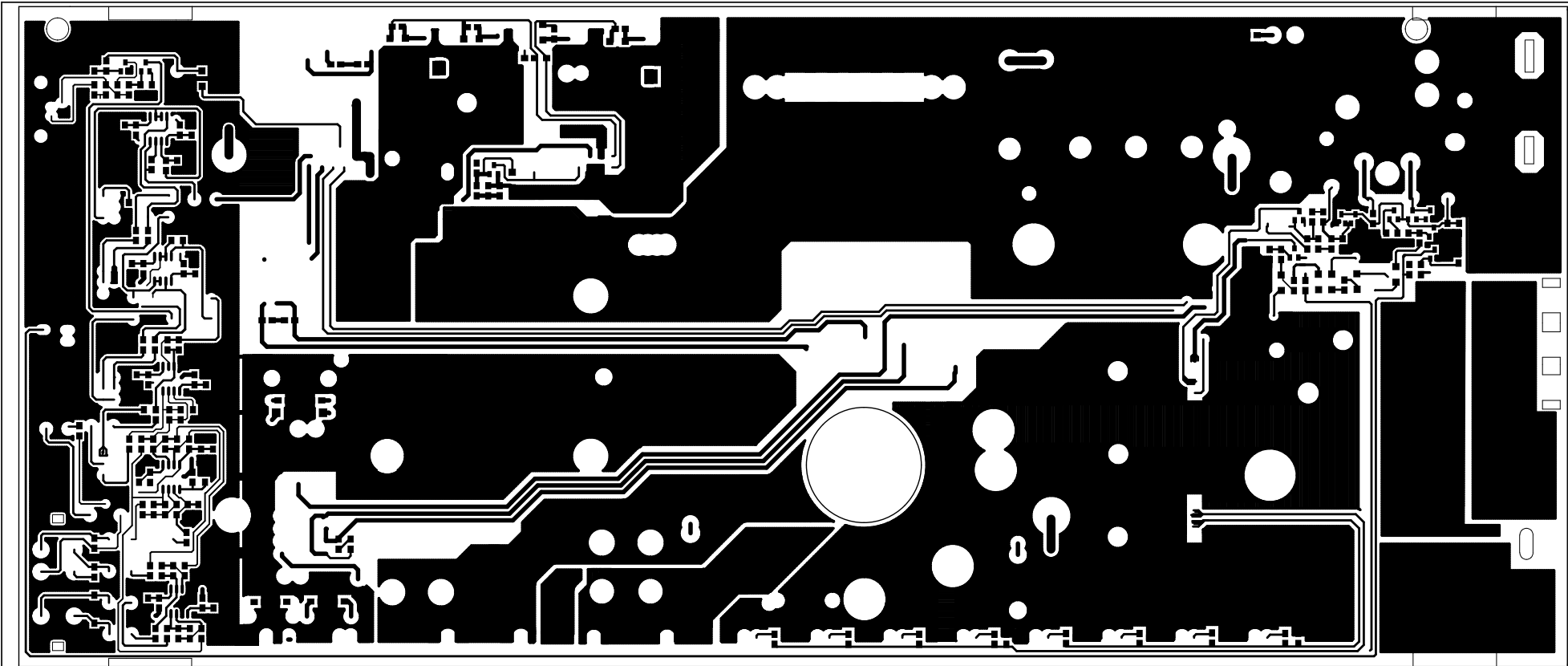
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Part Number	Description		Qty	Reference Designator
MAIN PCB				
06D321047200	Capacitor	104/100V ±5%	1	C122
06D341249000	Capacitor	124/63V ±5% MET	1	C46
06D341849400	Capacitor	184/63V ±5% MET	1	C2
06D322227200	Capacitor	222/100V ±5%	4	C97 C23 C24 CX10
06D344749400	Capacitor	474/63V ±5% MET	1	C1
06D346839001	Capacitor	683/63V ±5% MET	1	C47
06D22102C000	Capacitor	102/250V ±20%	1	CL102
06D342247400	Capacitor	224/100V ±5% MET	2	C102 C103
06D341039000	Capacitor	103/63V ±5% MET	2	C125 C126
06D2C3357700	Capacitor	3.3UF/100V ±20%	1	C105
06D2C335C700	Capacitor	3.3UF/250V ±20%	1	C96
06D212266010	CAP Electro	22uF/50V ±20% 5*11 105□	8	CX3 CX4 C3 C4 C7 C8 C31 C41
06D211064100	CAP Electro	10uF/25V ±20% 5*11 105□	1	C136
06D211074100	CAP Electro	100uF/25V ±20% 6.3*11 105□	1	C123
06D211073001	CAP Electro	100UF/16V ±20% 6*7 105□	3	C130 C131 C129
06D212264103	CAP Electro	220uF/25V ±20% 8*12 105□	2	C87 C88
06D214764102	CAP Electro	47uF/25V ±20% 5*11 105□	3	C49 C50 C35
06D214775101	CAP Electro	470UF/35V ±20% Φ8*20MM 105□	3	C127 C133 C134
06D2C1067001	Capacitor	10UF/100V ±20%	4	C67 C101 C106 C141
06D213387001	CAP Electro	3300UF/100V 35*30MM ±20%	4	C145 C146 C147 C148
06D213384000	CAP Electro	3300UF/25V 16*30MM ±20% 10502	4	C109 C110 C111 C112
06D202264000	CAP Electro	22UF/25V ±20% 5*11 105□	3	C119 cx1 cx2
Semiconductors				
2202-1620-05	Diode	MUR1620CTA KAD 16A/200V TO-220	2	D30 D31
2202-1602-05	Diode	UF1602CT AKA 16/200V TO-220	2	D32 D33
04WY-51AV101	Diode	SMD 5.1V DO-213AA 0.5W	2	DZ2 DZ3
04PT-4148-01	Diode	SMD 1N4148 DO-213AA	11	D1 D43 D44 D46 D47 D51 D6 D9 D10 D11 D44
03N1-5551-04	Transistor	SMD MMBT5551LT1 NPN SOT-23	11	Q13 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q37 Q38
03N1-2222-04	Transistor	SMD BT2222 SOT-23 NPN	1	Q29
01JR-4560-08	Dual Op-amp	SMD 4560 SOP-8 JRC	5	U1 U2 U3 U4 U5
04ZL-4004-03	Diode	1N4004 DO-41	1	D16
04ZL-6A10-00	Diode	6A10 1000V	1	D17
03D1-TP50-24	N-chan Mosfet	TP50N20P TO-220	4	Q9 Q10 Q11 Q12
03D1-50N6-24	N-chan Mosfet	HFP50N06 TO-220	8	Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28
01FA-7912-04	neg -12v Regulator	KA7912 TO-220 FAIRCHILD	1	U14
01FA-7812-04	pos +12V Regulator	KA7812E TO-220 FAIRCHILD	2	U13 U15
2004-0014-00	LED	Φ3.0MM Blue	1	LED1
2000-0017-00	LED	Φ3MM 2P Red	1	LED2
2601-0202-00	Optocoupler	LCR-0202	1	LCR1
Miscellaneous				
1601-253G-00	FUSE	25A/32V	3	F1
2901-224C-00	Relay	YL-224-C DC12V 30A	1	RL1
1001-4000-10	Inductor	40UH 40A :ETD-49 φ0.1*80*14TS	1	L4
1001-1820-10	Inductor	φ32 1.8MH L1=L2 φ1.0*12 4TS 38*22MM	1	L6
1001-3001-10	Inductor	35UH φ25 φ0.3*20*2Ts	1	L5
1413-0001-00	jack	6P4C RJ11 HPCB-3021-6P4C	1	JK1
1404-0020-04	RCA jack	AV4-8.4-38	1	J1
1401-0001-03	Fuse holder	3PIN BXS3-09	1	for F1
3000-7001-01	Transformer	φ47 4:20:6:7 F1=F2=φ1.0*8 4TS S1=S2=φ1.0*6 20TS S3=S4=φ1.0*16TS S5:S6:φ1.0*1 7TS	1	L8
1380-0206-00	temperature switch	80□ KSD301	1	SW2
1501-0300-02	Terminal	BTS3-24	1	CN2
1501-0400-01	Terminal	BTS4-23	1	CN3
1004-3000-10	Inductor	30UH φ12*φ5	2	
1502-0209-00	jack	PITCH 2.54mm 2PIN	1	CN1
2102-0159-02	line	2PIN UL1007 AWG 26 L=70MM	1	SW2

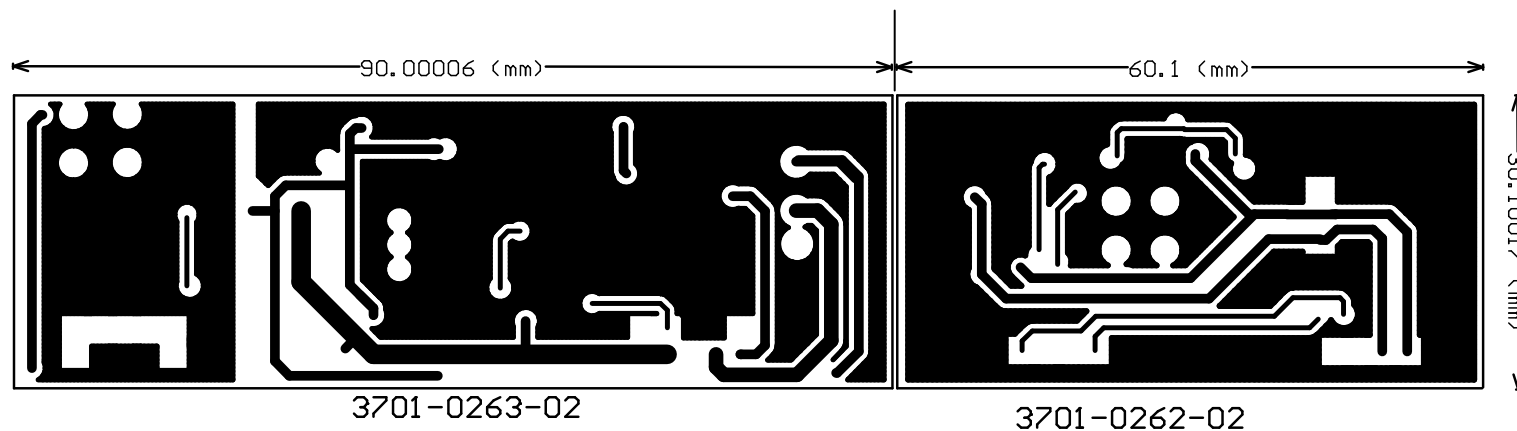
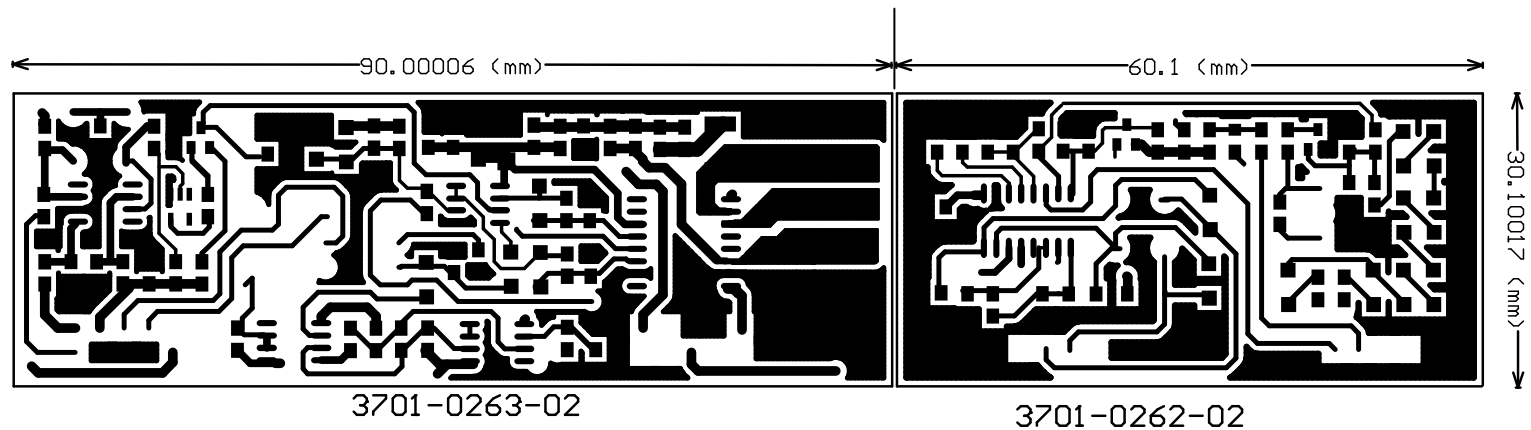
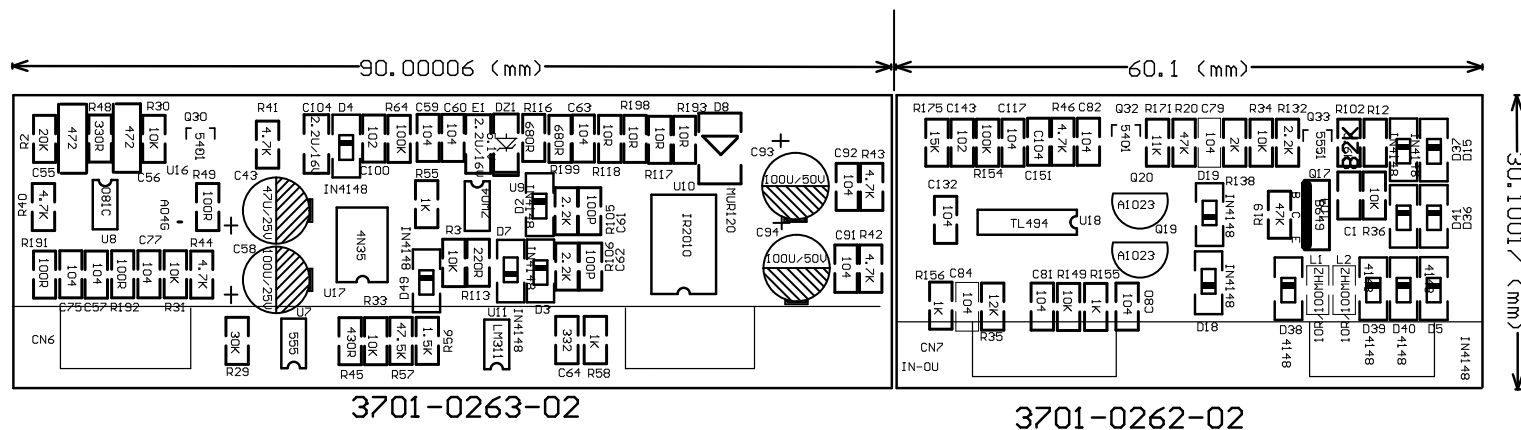
Part Number	Description		Qty	Reference Designator
CONTROL PCB				
Resistors				
0701-2104-02	Resistor	SMD 100KΩ 1/8W ±5% 0805	1	R64
0701-2103-02	Resistor	SMD 10KΩ 1/8W ±5% 0805	4	R3 R33 R30 R31
0701-2100-02	Resistor	SMD 10Ω 1/8W ±5% 0805	4	R117 R118 R193 R198
0701-2102-02	Resistor	SMD 1KΩ 1/8W ±5% 0805	2	R55 R58
0701-2222-02	Resistor	SMD 2.2KΩ 1/8W ±5% 0805	2	R105 R106
0701-2203-02	Resistor	SMD R0805 20KΩ 1/8W ±5%	1	R2
0701-2472-02	Resistor	SMD 4.7KΩ 1/8W ±5% 0805	5	R40 R41 R42 R43 R44
0701-2471-02	Resistor	SMD 470Ω 1/8W ±5% 0805	1	R45
0701-2681-02	Resistor	SMD 680Ω 1/8W ±5% 0805	2	R116 R199
0701-2152-02	Resistor	SMD 1.5KΩ 1/8W ±5% 0805	1	R56
0701-2101-02	Resistor	SMD 100Ω 1/8W ±5% 0805	3	R49 R191 R192
0701-2303-03	Resistor	SMD 30K 1/8W ±1% 0805	1	R29
0701-2221-02	Resistor	SMD 220Ω 1/8W ±5% 0805	1	R113
0701-2331-02	Resistor	SMD 330Ω 1/8W ±5% 0805	1	R48
0701-2473-02	Resistor	SMD 47KΩ 1/8W ±5% 0805	1	R57
Capacitors				
06S121026000	Capacitor	SMD 1000pF/50V 0805 X7R ±10%	1	C100
06S321016000	Capacitor	SMD 100pF/50V 0805 NPO ±5%	2	C61 C62
06S121046000	Capacitor	SMD 0.1uF/50V 0805 X7R ±10%	8	C57 C59 C60 C63 C75 C77 C91 C92
06S132253000	Capacitor	SMD 2.2uF/16V 1206 X7R ±10%	2	C104 E1
06S123326000	Capacitor	SMD 332/50V ±10% X7R 0805	1	C64
06D211076100	CAP Electro	100uF/50V ±20% 8*12 105□	2	C93 C94
06D344727400	Capacitor	472/100V ±5% MET	2	C55 C56
06D214764102	CAP Electro	47uF/25V ±20% 5*11 105□	1	C43
06D211074100	CAP Electro	100uF/25V ±20% 6.3*11 105□	1	C58
Semiconductors				
0100-C081-08	Single Op-Amp	TLC081 SOP-8	1	U8
01LM-M555-08	Timer	SMD LM555 SOP-8	1	U7
0100-74AH-00	Inverter	74AHC1G04 SOT-235	1	U16
0100-2010-00	High/Low side Driver	IR2010S SOL-16	1	U10
03P1-5401-04	Transistor	SMD MMBT5401LT1 PNP SOT-23	1	Q30
01TC-WH04-00	Triple Inverter	TC7WH04F	1	U9
04ZL-2512-00	Diode	SMD MUR120 1A 2512	1	D8
01LM-M311-08	Single Comparator	SMD LM311 SOP-8	1	U11
04PT-4148-01	Diode	SMD 1N4148 DO-213AA	5	D2 D3 D4 D7 D49
04WY-51AV101	Diode	SMD 5.1V DO-213AA 0.5W	1	DZ1
2601-4N35-00	Optocoupler	4N35 6	1	U17
Miscellaneous				
1505-1009-04	jack	PITCH 2.54mm 10PIN	2	CN6
PWM PCB				
Resistors				
0701-2104-02	Resistor	SMD 100KΩ 1/8W ±5% 0805	1	R154
0701-2113-02	Resistor	SMD 11KΩ 1/8W ±5% 0805	1	R171
0701-2183-02	Resistor	SMD 18KΩ 1/8W ±5% 0805	1	R175
0701-2222-02	Resistor	SMD 2.2KΩ 1/8W ±5% 0805	1	R132
0701-2472-02	Resistor	SMD 4.7KΩ 1/8W ±5% 0805	1	R46
0701-2432-02	Resistor	SMD 4.3KΩ 1/8W ±5% 0805	1	R102
0701-2103-02	Resistor	SMD 10KΩ 1/8W ±5% 0805	2	R36 R34
0701-2123-02	Resistor	SMD 12KΩ 1/8W ±5% 0805	2	R35 R149
0701-2102-02	Resistor	SMD 1KΩ 1/8W ±5% 0805	2	R155 R156

Part Number	Description		Qty	Reference Designator
PWM PCB				
0701-2202-02	Resistor	SMD R0805 2KΩ 1/8W ±5%	1	R138
0701-2473-02	Resistor	SMD 47KΩ 1/8W ±5% 0805	2	R19 R20
0701-2623-02	Resistor	SMD 62KΩ 1/8W ±5% 0805	1	R12
Capacitors				
06S121026000	Capacitor	SMD 1000pF/50V 0805 X7R ±10%	1	C143
06S121046000	Capacitor	SMD 0.1uF/50V 0805 X7R ±10%	9	C1 C79 C81 C82 C84 C117 C132 C80 C151
Semiconductors				
04PT-4148-01	Diode	SMD 1N4148 DO-213AA	10	D41 D40 D39 D38 D36 D5 D19D37 D15 D18
03N1-5551-04	Transistor	SMD MMBT5551LT1 NPN SOT-23	1	Q33
03P1-5401-04	Transistor	SMD MMBT5401LT1 PNP SOT-23	1	Q32
01TI-L494-09	PWM IC	SMD TL494C SO-16	1	U18
03P1-1023-01	Transistor	A1023 TO-92 PNP	2	Q19 Q20
03P1-B649-07	Transistor	2SB649A 1.5A 180V 20W PNP TO-126	1	Q17
Miscellaneous				
1501-0509-04	jack	PITCH 2.54mm 5PIN	1	CN7
1501-0409-02	jack	PITCH 2.54mm 4PIN	1	
1003-1010-08	Inductor	SMD 100MH 100MHZ 4A	2	L1 L2
LED PCB				
2100-0067-02	line	2PIN UL1007 AWG26 L=70mm t=5mm	2	
2100-0068-02	line	2PIN UL1007 AWG26 L=210mm	1	
2005-0009-00	LED	LED 2*3*4mm□white	8	LED1 LED2 LED3 LED4 LED5 LED6 LED7 LED8
0701-3102-02	Resistor	SMD 1KΩ 1/4W ±5% 1206	8	R1 R2 R3 R4 R5 R6 R7 R8
06S121046000	Capacitor	SMD 0.1uF/50V 0805 X7R ±10%	1	C1



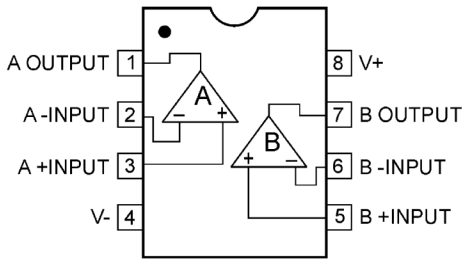


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				3701-0274-02	UNIT: 950*119.5mm	CHECKED BY:	DATE: 2007.05.06
				MODE: GTO7001	SIZE:	APPROVED BY:	DATE:
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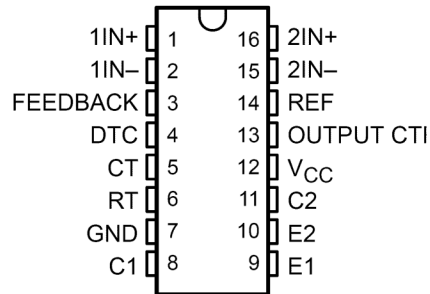


Semiconductor Pinouts

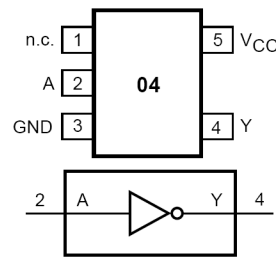
NJM4560 Dual Op-amp
U1-5



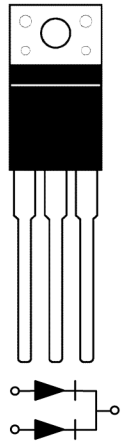
TL494 PWM
U18



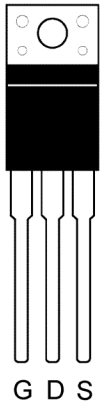
74AHC1G04
U16



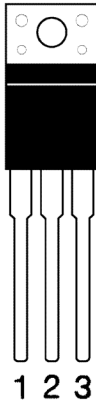
UF1620CT
Rectifier
D32,33



TP50N20P
Q9-12
HFP50N06
Q21-28

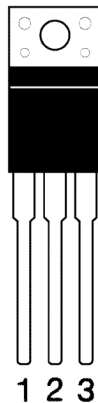


KA7812
+12 REG
U13,15



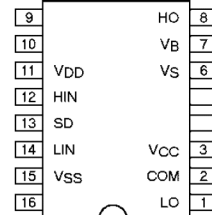
1. IN
2. GROUND
3. OUT

KA7912
-12 REG
U14

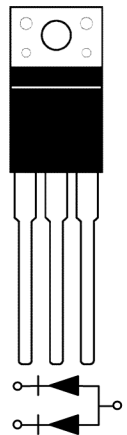


1. GROUND
2. IN
3. OUT

IR2010S
U10



MUR1620CT
Rectifier
D30,31



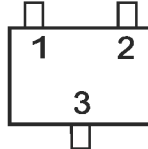
2SB649A
Q17



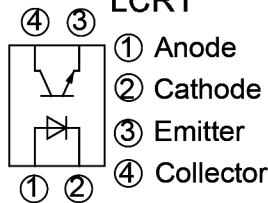
1) Emitter
2) Collector
3) Base

BT2222 Q29
MMBT5551
MMBT5401 Q30,32
Q1-8,13,29, 33,37,38

1) Emitter
2) Base
3) Collector

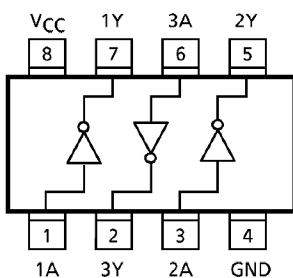


LCR-0202
LCR1

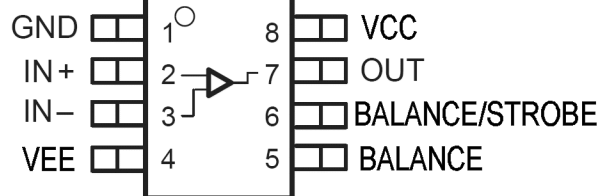


① Anode
② Cathode
③ Emitter
④ Collector

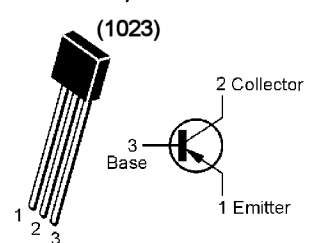
TC7WH04F
U9



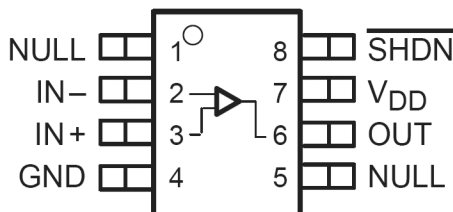
LM311
U11



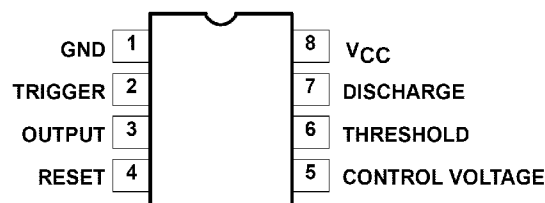
KTA1023
Q19,20
(1023)



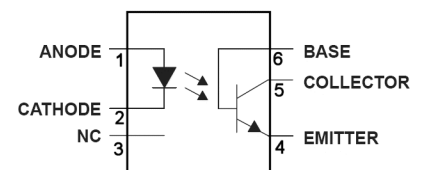
TLC081
U8



LM555 U7

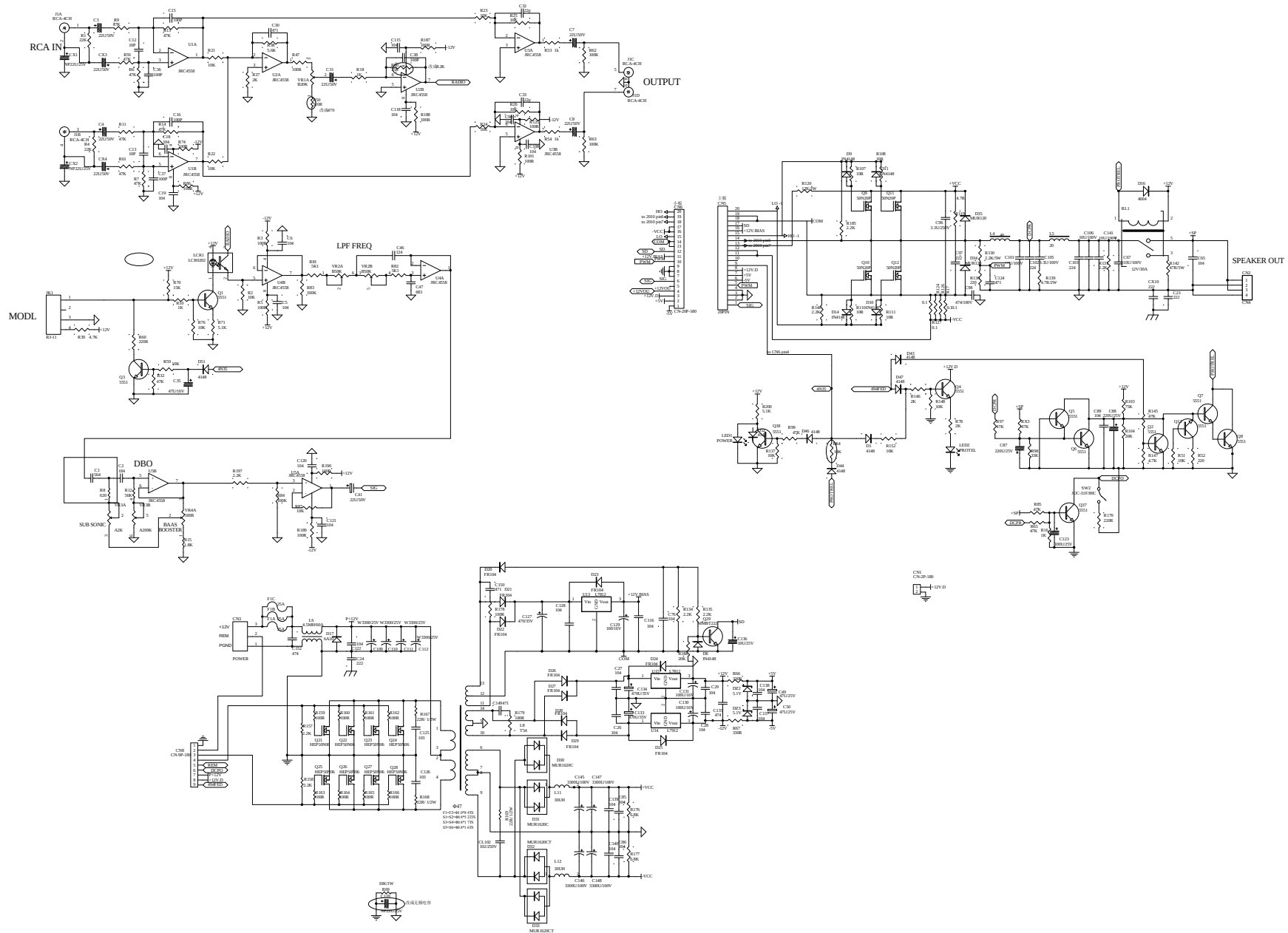


4N35
U17

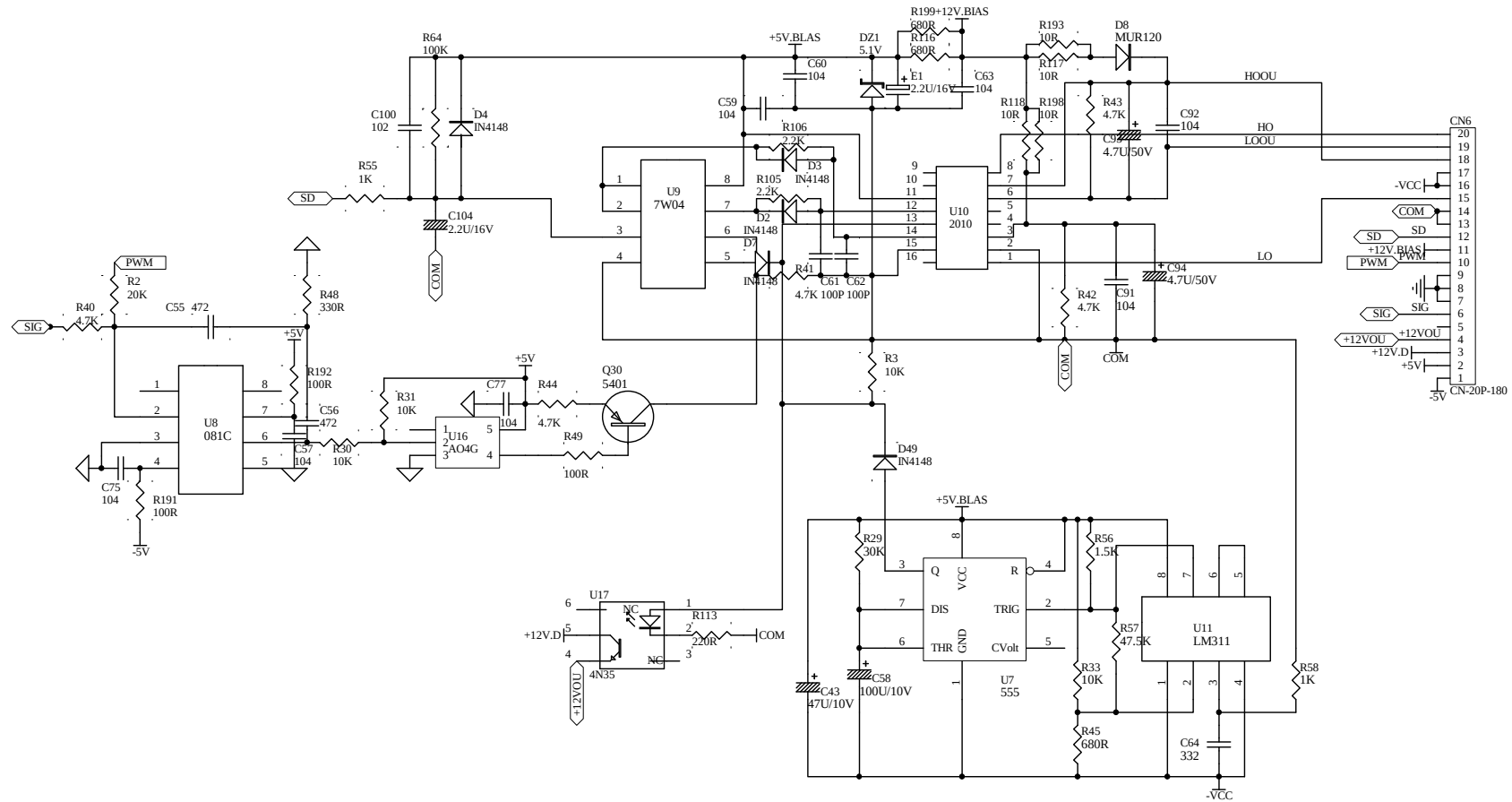


GTO7001

JBL

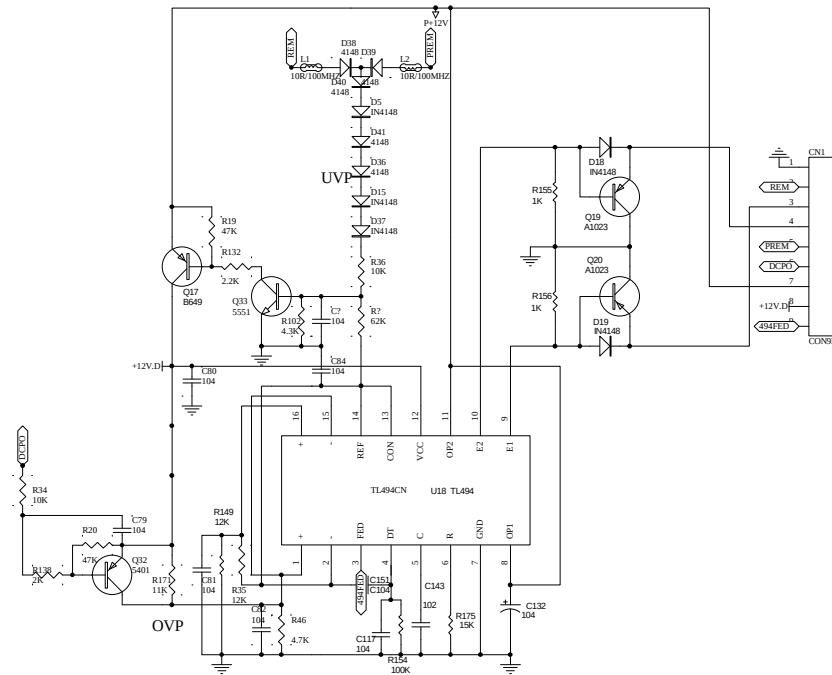


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3				3			
4				4			
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6				6			
7				7			
8				8			
9				9			
10				10			
11				11			
12				12			



ECN NO	DESCRIPTION	APPROVED	DATA	DW GNO:			
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				PART NAME:	PAGE: 3/3	DRAWN BY:	DATA:
				3701-0263-02	UNIT: MM	CHECKED BY:	DATA:
				PRODUCT MODE:	SIZE: B	APPROVED BY:	DATA:
				GTO7001	REV: 1.0		

GTO7001



ECN NO	DESCRIPTION	APPROVED	DATA	DWG NO
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				DATE: 3/11/2012
				UNIT: MM
				CHECKED BY:
				DATE:
				PRODUCT CODE:
				SIZE: C
				APPROVED BY:
				DATA:
				REV: 1.0
				SHEET: 2 OF 3