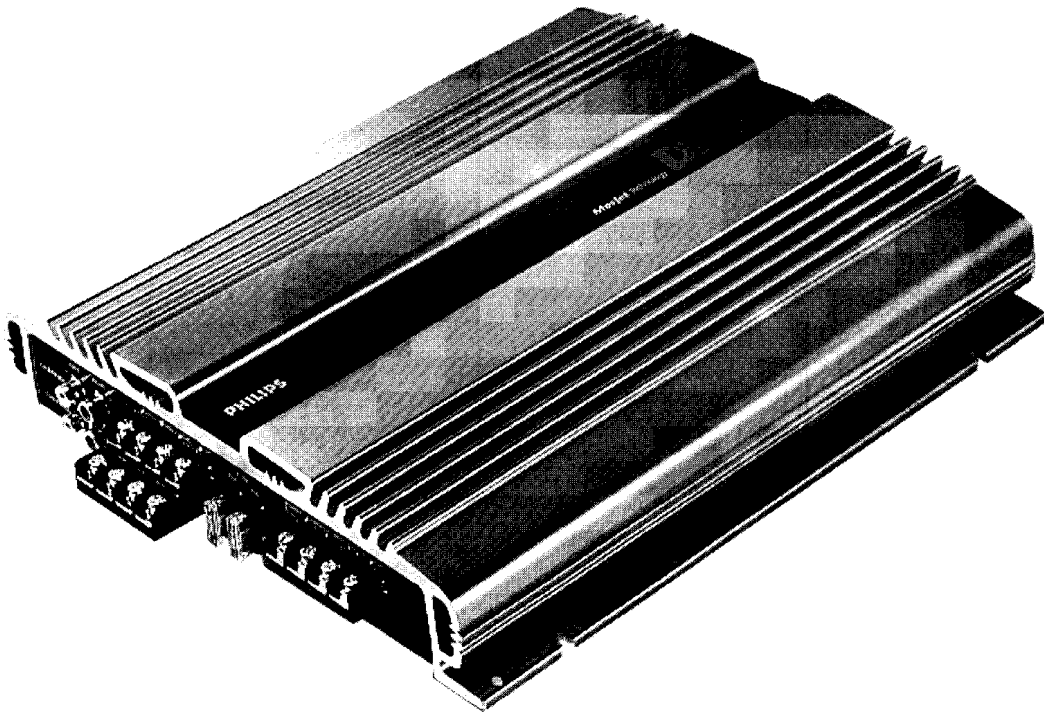


Service  
Service  
**Service**

# Service Manual

12 V 



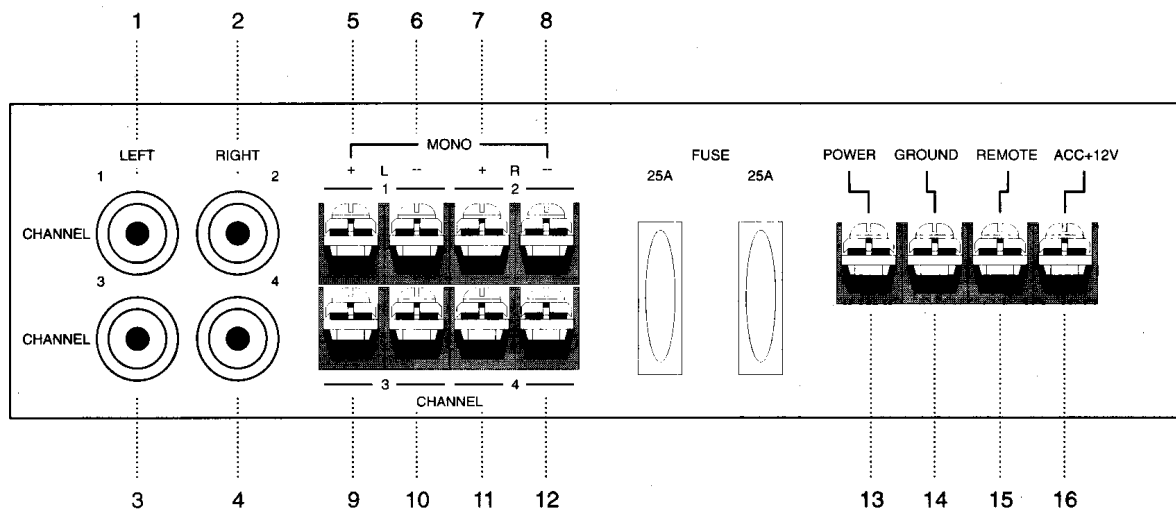
## Technical specifications

Power output	4 x 60 Watt (THD=0.08%) (in bridge mode 2 x 120 W)	Channel separation	> 70 dB
Maximum power	4 x 80 Watt (THD=10%) (in bridge mode 2 x 190 W)	Signal-to-noise ratio	> 100 dB (A-weighted)
Input sensitivity	0.3 - 2.0 V	Low-pass filter	$f_0 = 60, 80, 100, 120\text{Hz}$ , switchable
Input impedance	33 k $\Omega$	Fuse size	2 x 25 A
Frequency response	5 Hz - 100 kHz (-3 dB)	Weight	3.7 kg
CMR	> 40 dB	Size LxWxH	300 x 267 x 56 (mm) 11.81 x 10.51 x 2.2 (inch)



# PHILIPS

## Connections/adjustments DAP6040



- 1 - 4: Input RCA connectors (White=Left, Red=Right)
- 5 - 12: Speaker terminals
- 13 - 16: Power supply terminals

*Note: the INPUT MODE switches, FILTER MODE/FREQUENCY switches and GAIN CONTROLS are at the opposite side of the cabinet.*

### 2-channel system connection/configuration (two 'bridged' channels):

- Line output (e.g. from radio set) 1 Left channel (white plug) to RCA connector 1
- Line output 1 Right channel (red plug) to RCA connector 4
- Line 2 outputs not connected
- Speaker channel 1-2 Left: '+' to terminal 5; '-' to terminal 8
- Speaker channel 3-4 Right: '+' to terminal 9; '-' to terminal 12
- Ch.1-2 Input mode switch: MONO L; Ch.3-4 Input mode switch: MONO R
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: OFF (for use with normal speakers)
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: LPF (for use with subwoofers)
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: HPF (for use with mid/hi-range speakers)
- Ch.1-2 120-100-80-60/Ch.3-4 60-80-100-120 (Hz) switches: position dependent on speaker type (not applicable if LPF-OFF-HPF/HPF-OFF-LPF switches are in OFF position)

### 3-channel system connection/configuration (two 'single' channels and one 'bridged' channel -e.g. for two separate mid/hi-range speakers and one common subwoofer):

- Line 1 output (e.g. from radio set) Left channel (white plug) to RCA connector 1
- Line 1 output Right channel (red plug) to RCA connector 2
- Line 2 output Left channel (white plug) to RCA connector 3
- Line 2 output Right channel (red plug) to RCA connector 4
- Speaker channel 1-2 Left: '+' to terminal 5; '-' to terminal 6
- Speaker channel 1-2 Right: '+' to terminal 7; '-' to terminal 8
- Speaker channel 3-4 Left+Right (MONO): '+' to terminal 9; '-' to terminal 12
- Ch.1-2 Input mode switch: ST; Ch.3-4 Input mode switch: MONO L+R
- Ch.1-2 LPF-OFF-HPF switch: HPF
- Ch.3-4 HPF-OFF-LPF switch: LPF
- Ch.1-2 120-100-80-60/Ch.3-4 60-80-100-120 (Hz) switches: position dependent on speaker type

4-channel system connection/configuration (continued):

- Ch.1-2/Ch.3-4 Input mode switches: ST
- Ch.1-2 LPF-OFF-HPF/Ch.3-4 HPF-OFF-LPF switches: OFF or HPF (dependent on the tone range of the speakers used)
- Ch.1-2 120-100-80-60/Ch.3-4 60-80-100-120 (Hz) switches: position dependent on speaker type (not applicable if LPF-OFF-HPF/HPF-OFF-LPF switches are in OFF position)

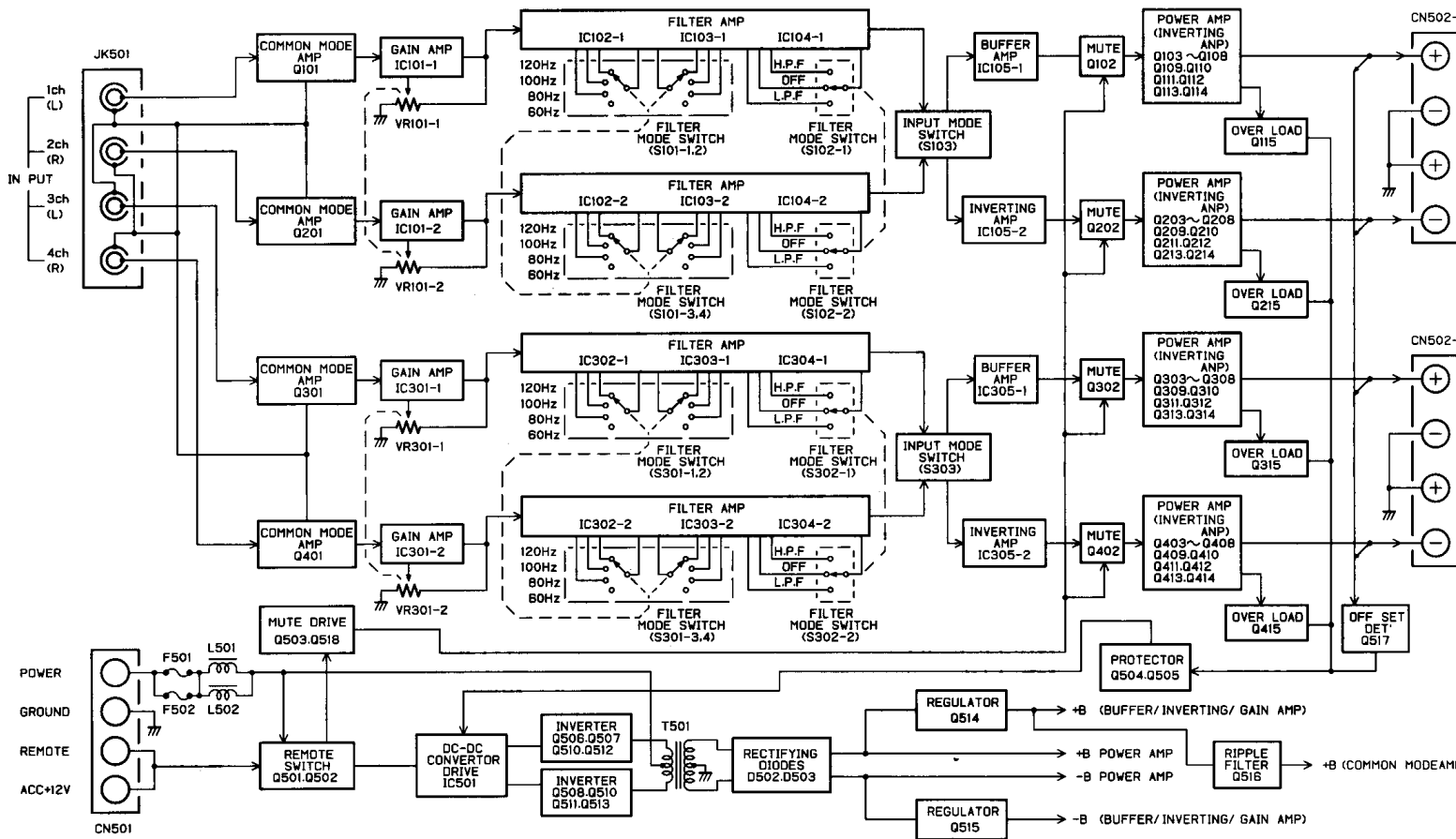
Power connections:

- +12V (permanent) to terminal 13
- Car ground to terminal 14
- 'Automatic aerial' or 'remote' output (e.g. from radio set) to terminal 15
- Terminal 16 (ACC+12V) is only used to control switch on/off other equipment (e.g. other amplifiers and/or equalizer)

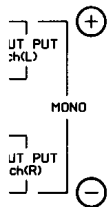
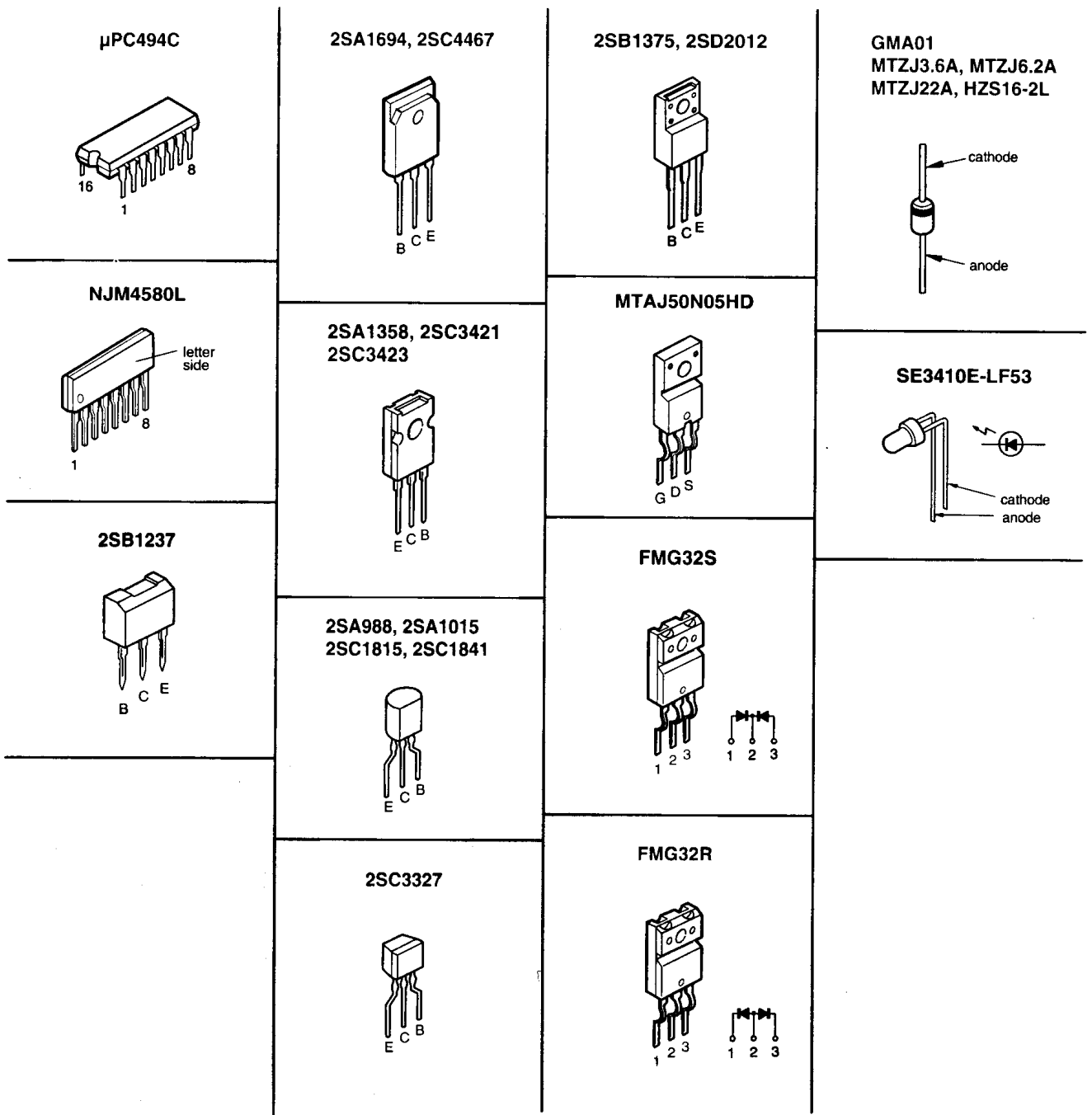
Input sensitivity:

- Adjust the 'Gain Control' levels equal to the normal AF level of the connected set; refer to the technical specifications of the set if necessary
- For all recent radio sets the 'Gain Controls' have to be set to the '1V' position

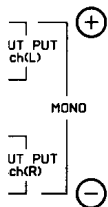
**BLOCK DIAGRAM DAP6040**



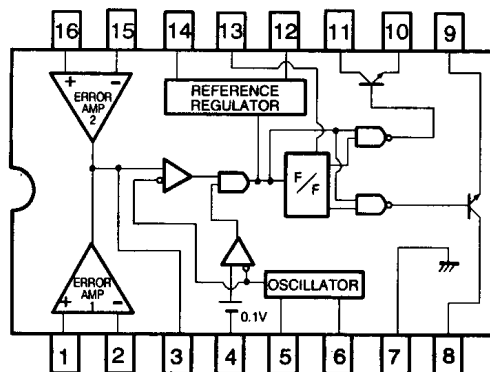
# DAP6040 SEMICONDUCTORS LEAD LAYOUT



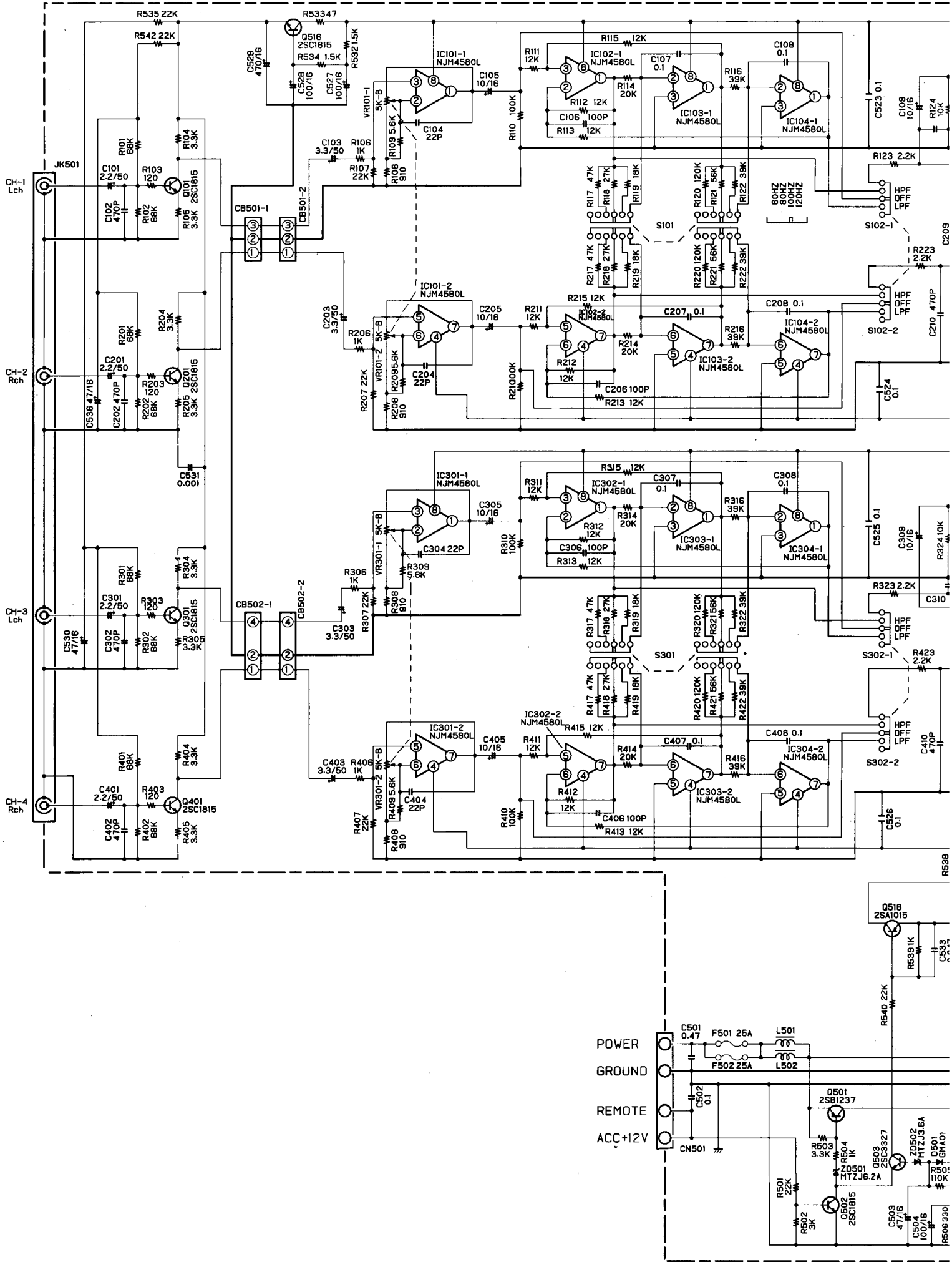
## IC BLOCK DIAGRAM



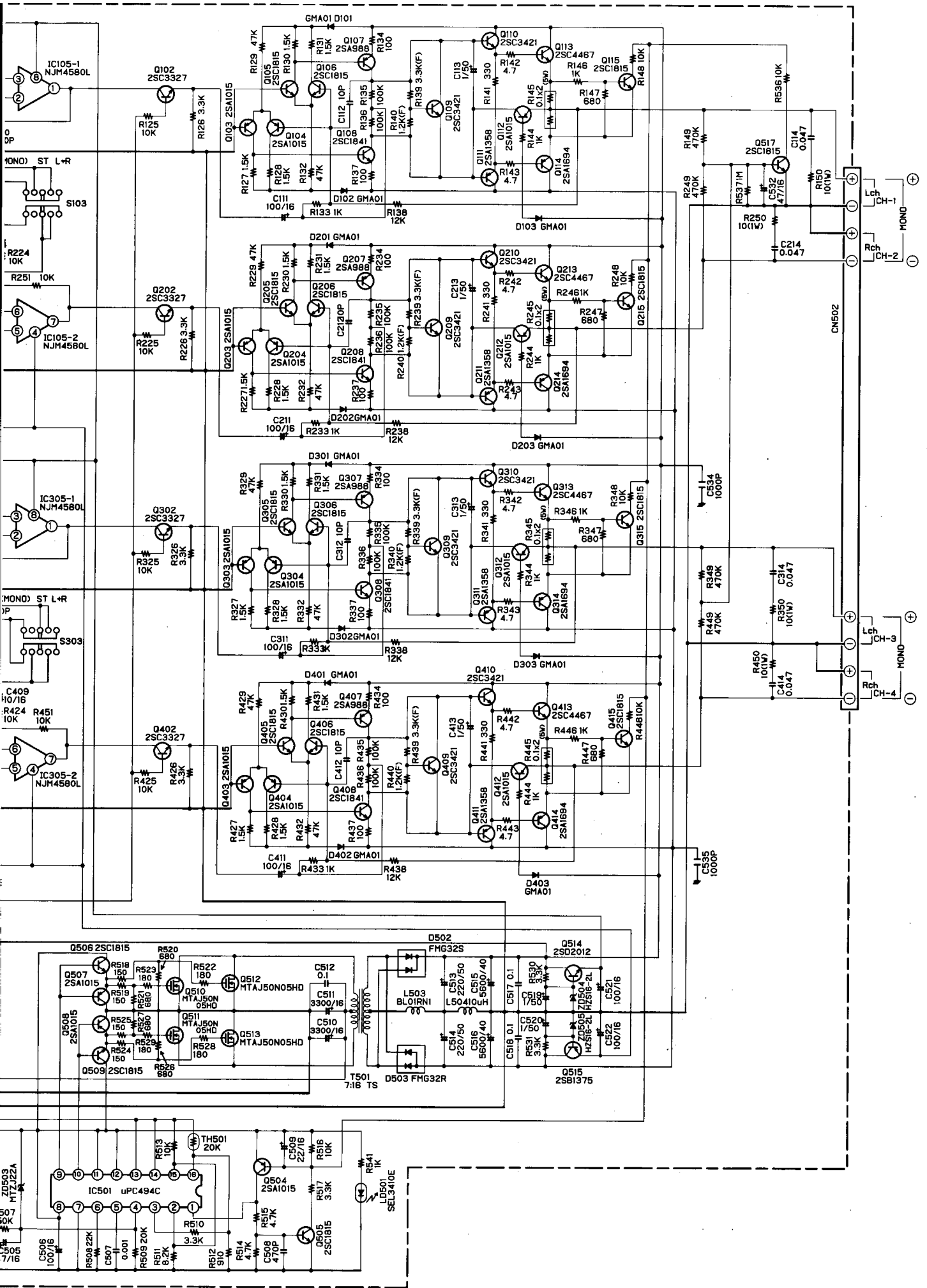
**IC501 μPC494C**



CIRCUIT DIAGRAM DAP6040



PCS 82 348 GB



**Q101-Q201-Q301-Q401**  
B: 5.0V  
C: 10.7V  
E: 4.4V

**Q102-Q202-Q302-Q402**  
B: 0.76V  
C: 0V  
E: 0V

**Q103-Q203-Q303-Q403**  
B: 0V  
C: -31.7V  
E: 0.8V

**Q104-Q204-Q304-Q404**  
B: 0V  
C: -31.7V  
E: 0.8V

**Q105-Q205-Q305-Q405**  
B: 0V  
C: 31.0V  
E: -0.8V

**Q106-Q206-Q306-Q406**  
B: 0V  
C: 31.0V  
E: -0.8V

**Q107-Q207-Q307-Q407**  
B: 31.0V  
C: 1.2V  
E: 31.1V

**Q108-Q208-Q308-Q408**  
B: -31.7V  
C: -1.1V  
E: -31.1V

**Q109-Q209-Q309-Q409**  
B: -0.48V  
C: 1.1V  
E: -1.1V

**Q110-Q210-Q310-Q410**  
B: 1.1V  
C: 32.2V  
E: 0.57V

**Q111-Q211-Q311-Q411**  
B: -1.1V  
C: -32.1V  
E: -0.56V

**Q112-Q212-Q312-Q412**  
B: 0.32V  
C: -1.1V  
E: 0V

**Q113-Q213-Q313-Q413**  
B: 0.56V  
C: 32.2V  
E: 0V

**Q114-Q214-Q314-Q414**  
B: -0.56V  
C: -32.1V  
E: 0V

**Q115-Q215-Q315-Q415**  
B: 0V  
C: 14.3V  
E: 0V

**Q501**  
B: 13.6V  
C: 14.3V  
E: 14.4V

**Q502**  
B: 0.7V  
C: 0.05V  
E: 0V

**Q503**  
B: 0.7V  
C: 0.1V  
E: 0.05V

**Q504**  
B: 14.4V  
C: 0V  
E: 14.4V

**Q505**  
B: 0V  
C: 14.4V  
E: 0V

**Q506**  
B: 5.3V  
C: 14.4V  
E: 4.9V

**Q507**  
B: 5.3V  
C: 0V  
E: 4.9V

**Q508**  
B: 5.3V  
C: 0V  
E: 4.9V

**Q509**  
B: 5.3V  
C: 14.4V  
E: 4.9V

**Q510-Q511-Q512-Q513**  
G: 4.0V  
D: 14.4V  
S: 0V

**Q514**  
B: 16.4V  
C: 32.3V  
E: 16.0V

**Q515**  
B: -16.5V  
C: -32.3V  
E: -16.0V

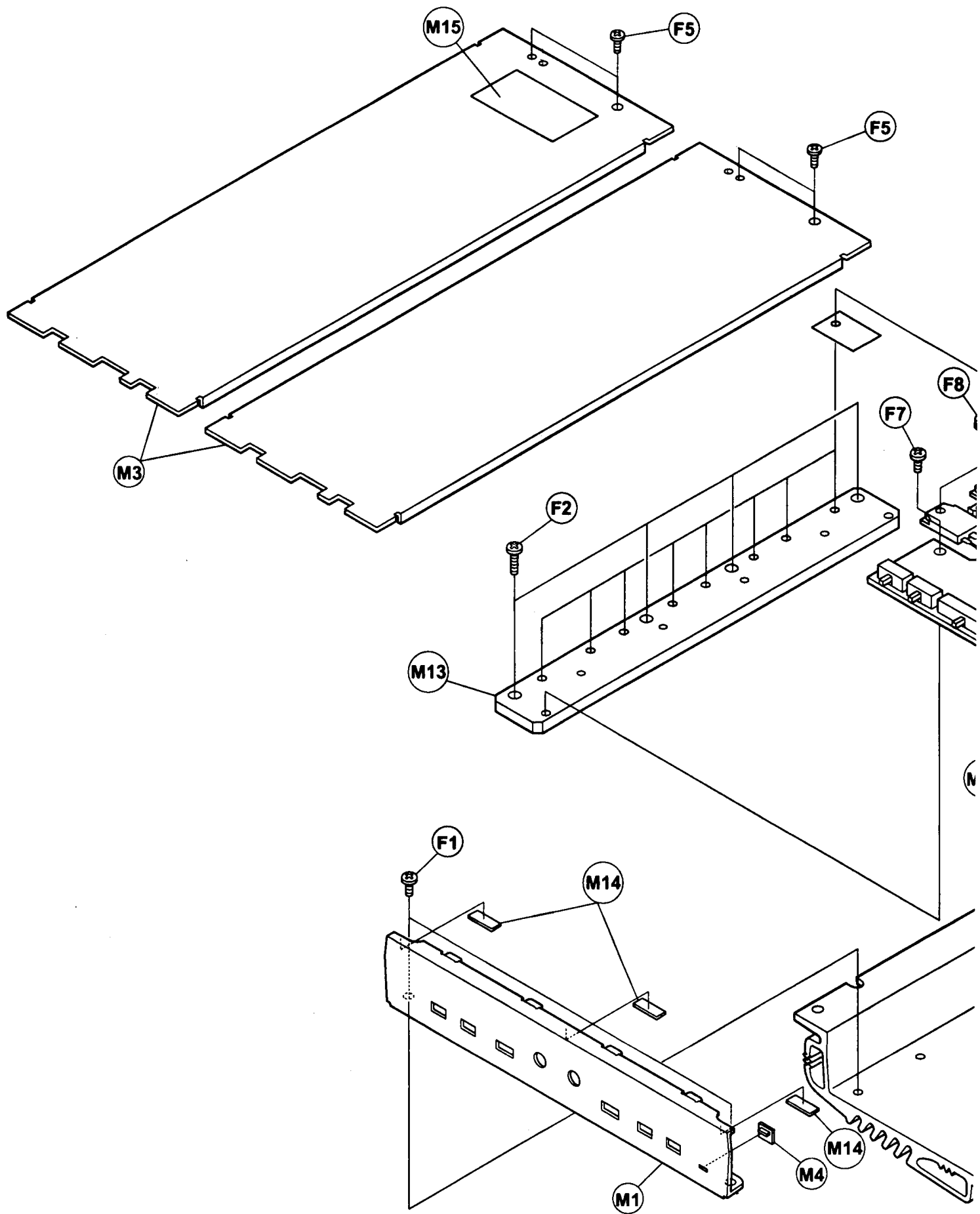
**Q516**  
B: 15.8V  
C: 15.6V  
E: 15.1V

**Q517**  
B: 0V  
C: 14.3V  
E: 0V

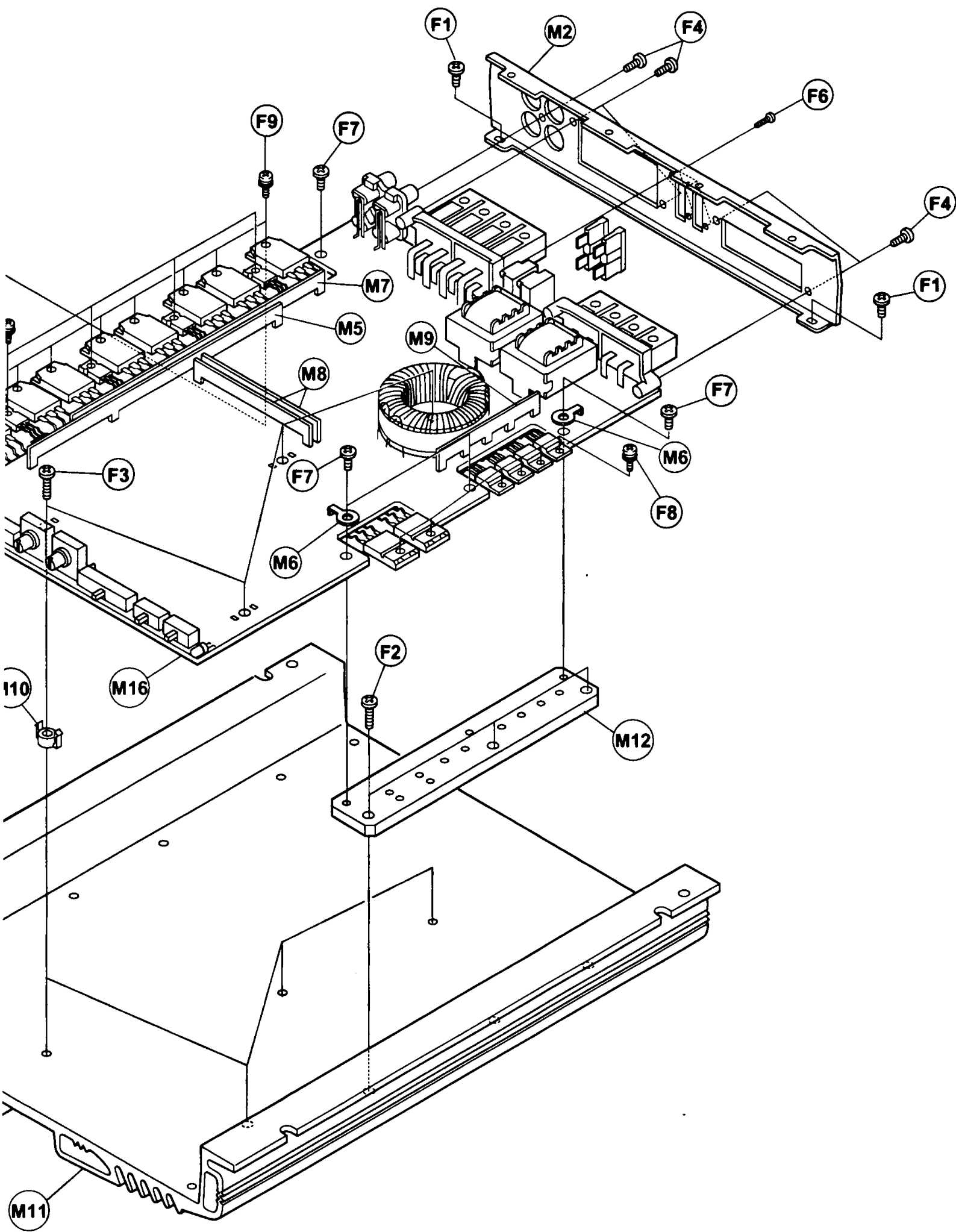
**Q518**  
B: 31.7V  
C: 32.0V  
E: 32.3V

**IC101-IC102-IC103-IC104-IC105  
and  
IC301-IC302-IC303-IC304-IC305**  
PIN 1: 0V  
PIN 2: 0V  
PIN 3: 0V  
PIN 4: 0V  
PIN 5: -15.9V  
PIN 6: 0V  
PIN 7: 0V  
PIN 8: 15.9V

**IC501**  
PIN 1: 0V  
PIN 2: 2.3V  
PIN 3: 0.1V  
PIN 4: 0.6V  
PIN 5: 1.7V  
PIN 6: 3.8V  
PIN 7: 0V  
PIN 8: 14.4V  
PIN 9: 5.3V  
PIN10: 5.3V  
PIN11: 14.4V  
PIN12: 14.4V  
PIN13: 5.0V  
PIN14: 5.0V  
PIN15: 5.0V  
PIN16: 0V










## **Mechanical parts DAP6040**


M1	4822 459 04313	Front chassis
M2	4822 426 10266	Rear chassis
M3	4822 442 00543	Bottom cover
M4	4822 381 11742	LED lens
M10	4822 462 72032	Pcb support

For all resistors/capacitors/coils not mentioned here, refer to a 'Standard Component' catalogue.

AMPLIFIER PCB					
 D101 4822 130 33993 GMA01 D102 4822 130 33993 GMA01 D103 4822 130 33993 GMA01 D201 4822 130 33993 GMA01 D202 4822 130 33993 GMA01  D203 4822 130 33993 GMA01 D301 4822 130 33993 GMA01 D302 4822 130 33993 GMA01 D303 4822 130 33993 GMA01 D401 4822 130 33993 GMA01  D402 4822 130 33993 GMA01 D403 4822 130 33993 GMA01 D501 4822 130 33993 GMA01 D502 4822 130 83687 FMG32S D503 4822 130 83688 FMG32R  LD501 4822 130 83691 LED 3410E-LF53 ZD501 4822 130 83251 Zener 6.2V ZD502 4822 130 80316 Zener 3.6V ZD503 4822 130 83685 Zener 22V ZD504 4822 130 83686 Zener HZS16-2L  ZD505 4822 130 83686 Zener HZS16-2L			Q201	4822 130 41947	2SC1815Y
			Q202	4822 130 63284	2SC3327A
			Q203	4822 130 42959	2SA1015Y
			Q204	4822 130 42959	2SA1015Y
			Q205	4822 130 41947	2SC1815Y
			Q206	4822 130 41947	2SC1815Y
			Q207	4822 130 42386	2SA988
			Q208	4822 130 63583	2SC1841FA
			Q209	4822 130 60354	2SC3421Y
			Q210	4822 130 60354	2SC3421Y
			Q211	4822 130 60353	2SA1358Y
			Q212	4822 130 42959	2SA1015Y
			Q213	4822 130 63433	2SC4467
			Q214	4822 130 63307	2SA1694 P
			Q215	4822 130 41947	2SC1815Y
Q301	4822 130 41947	2SC1815Y			
Q302	4822 130 63284	2SC3327A			
Q303	4822 130 42959	2SA1015Y			
Q304	4822 130 42959	2SA1015Y			
Q305	4822 130 41947	2SC1815Y			
Q306	4822 130 41947	2SC1815Y			
Q307	4822 130 42386	2SA988			
Q308	4822 130 63583	2SC1841FA			
Q309	4822 130 60354	2SC3421Y			
Q310	4822 130 60354	2SC3421Y			
Q311	4822 130 60353	2SA1358Y			
Q312	4822 130 42959	2SA1015Y			
Q313	4822 130 63433	2SC4467			
Q314	4822 130 63307	2SA1694 P			
Q315	4822 130 41947	2SC1815Y			
Q401	4822 130 41947	2SC1815Y			
Q402	4822 130 63284	2SC3327A			
Q403	4822 130 42959	2SA1015Y			
Q404	4822 130 42959	2SA1015Y			
Q405	4822 130 41947	2SC1815Y			
Q406	4822 130 41947	2SC1815Y			
Q407	4822 130 42386	2SA988			
Q408	4822 130 63583	2SC1841FA			
Q409	4822 130 60354	2SC3421Y			
Q410	4822 130 60354	2SC3421Y			
Q411	4822 130 60353	2SA1358Y			
Q412	4822 130 42959	2SA1015Y			
 Q101 4822 130 41947 2SC1815Y Q102 4822 130 63284 2SC3327A Q103 4822 130 42959 2SA1015Y Q104 4822 130 42959 2SA1015Y Q105 4822 130 41947 2SC1815Y  Q106 4822 130 41947 2SC1815Y Q107 4822 130 42386 2SA988 Q108 4822 130 63583 2SC1841FA Q109 4822 130 60354 2SC3421Y Q110 4822 130 60354 2SC3421Y  Q111 4822 130 60353 2SA1358Y Q112 4822 130 42959 2SA1015Y Q113 4822 130 63433 2SC4467 Q114 4822 130 63307 2SA1694 P Q115 4822 130 41947 2SC1815Y					

Q413	4822 130 63433	2SC4467
Q414	4822 130 63307	2SA1694 P
Q415	4822 130 41947	2SC1815Y
Q501	4822 130 63584	2SB1237Q
Q502	4822 130 41947	2SC1815Y
Q503	4822 130 63284	2SC3327A
Q504	4822 130 42959	2SA1015Y
Q505	4822 130 41947	2SC1815Y
Q506	4822 130 41947	2SC1815Y
Q507	4822 130 42959	2SA1015Y
Q508	4822 130 42959	2SA1015Y
Q509	4822 130 41947	2SC1815Y
Q510	4822 130 10653	FET MTAJ50N
Q511	4822 130 10653	FET MTAJ50N
Q512	4822 130 10653	FET MTAJ50N
Q513	4822 130 10653	FET MTAJ50N
Q514	4822 130 63585	2SD2012
Q515	4822 130 63586	2SB1375
Q516	4822 130 41947	2SC1815Y
Q517	4822 130 41947	2SC1815Y
Q518	4822 130 42959	2SA1015Y

		
IC101	4822 209 33468	NJM4580L
IC102	4822 209 33468	NJM4580L
IC103	4822 209 33468	NJM4580L
IC104	4822 209 33468	NJM4580L
IC105	4822 209 33468	NJM4580L
IC301	4822 209 33468	NJM4580L
IC302	4822 209 33468	NJM4580L
IC303	4822 209 33468	NJM4580L
IC304	4822 209 33468	NJM4580L
IC305	4822 209 33468	NJM4580L
IC501	4822 209 83349	UPC494C

		
L501	4822 148 81165	Choke
L502	4822 148 81165	Choke
L503	4822 157 53447	Coil BL01RN1
L504	4822 157 10609	Coil 10μH
T501	4822 146 10628	DC/DC transformer

### Miscellaneous

CB501	4822 321 62465	Wire assy 3-p
CB502	4822 321 62466	Wire assy 4-p
CN501	4822 265 10615	Terminal 4-p
CN502	4822 265 10617	Terminal 8-p
	4822 256 30515	Fuse holder
F501	4822 071 22503	Fuse 25A
F502	4822 071 22503	Fuse 25A
JK501	4822 265 10618	RCA jack 4-p
R145	4822 117 11192	Metal plate 0.1E*2
R245	4822 117 11192	Metal plate 0.1E*2
R345	4822 117 11192	Metal plate 0.1E*2
R445	4822 117 11192	Metal plate 0.1E*2
S101	4822 277 21739	Slide switch
S102	4822 277 11621	Slide switch
S103	4822 277 21738	Slide switch
S301	4822 277 21739	Slide switch
S302	4822 277 11621	Slide switch
S303	4822 277 21738	Slide switch
TH501	4822 111 92181	Thermistor
VR101	4822 100 30192	Potmeter 5K*2 log
VR301	4822 100 30192	Potmeter 5K*2 log

### Accessories

4822 320 11634	Power wire assy
4822 320 11635	Ground wire assy
4822 320 11472	Remote wire
4822 736 14431	Instructions f. use
4822 321 62456	Ad. cable EA6197