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TOSHIBA

SERVICE MANUAL

COLOUR TELEVISION

32WH37G

AK41 Chassis

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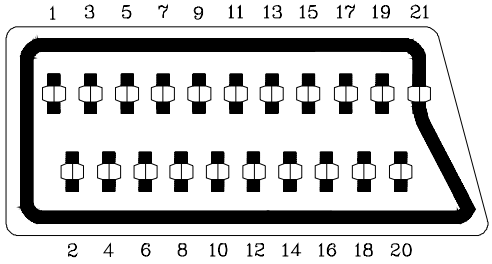
DO NOT CHANGE ANY MODULE UNLESS THE SET IS SWITCH OFF
The mains supply side of the switch mode power supply transformer is live.
Use an isolating transformer.
The receivers fulfill completely the safety requirements.

Safety precautions:
Servicing of this TV should only be carried out by a qualified person.
- Components marked with the warning symbol on the circuit diagram are critical for safety and must only be replaced with an identical component.
- Power resistor and fusable resistors must be mounted in an identical manner to the original component.
- When servicing this TV, check that the EHT does not exceed 26kV.

TV Set switched off:
Make short-circuit between HV-CRT clip and CRT ground layer.
Short C804 (150mF) before changing IC802 or other components in primary side of SMPS.

Measurements:
Voltage readings and oscilloscope traces are measured under following conditions.
Antenna signal 60dB from colourbar generator. (100% white, 75% colour saturation)
Brightness, contrast, colour set for a normal picture.
Mains supply, 220VAC, 50Hz.

PERI-TV SOCKET



	SCART 1 (SC050)		SCART 2 (SC051)	
1	Audio right output	0.5Vrms / 1K	Audio right output	0.5Vrms / 1K
2	Audio right input	0.5Vrms / 10K	Audio right input	0.5Vrms / 10K
3	Audio left output	0.5Vrms / 1K	Audio left output	0.5Vrms / 1K
4	Ground AF		Ground AF	
5	Ground Blue		Ground Blue	
6	Audio left input	0.5Vrms / 10K	Audio left input	0.5Vrms / 10K
7	Blue input	0.7Vpp / 75ohm	Blue input	0.7Vpp / 75ohm
8	AV switching input	0-12VDC /10K	AV switching input	0-12VDC /10K
9	Ground Green		Ground Green	
10	-		-	
11	Green input	0.7Vpp / 75ohm	-	
12	-		-	
13	Ground Red		Ground Red	
14	Ground Blanking		Ground Blanking	
15	Red input	0.7Vpp / 75ohm	-	
16	Blanking input	0-0.4VDC, 1-3VDC / 75ohm	-	
17	Ground CVS output		Ground CVS output	
18	Ground CVS input		Ground CVS input	
19	CVS output	1Vpp / 75ohm	CVS output	1Vpp / 75ohm
20	CVS input	1Vpp / 75ohm	CVS input	1Vpp / 75ohm
21	Ground		Ground	

INTRODUCTION
11Ak41 is a 100Hz flicker free colour television capable of driving 28”4:3/16:9, 33”4:3 and 29”4:3 real flat picture tubes.
The chassis is capable of operation in PAL, SECAM, NTSC (playback) colour standards and multiple transmission standards as B/G, D/K, I/I’, and L/L´.
Sound system output is supplying 12W (10%THD) for left, right and center outputs of 8ohm speakers, and 2 x 7W for surround outputs of 2 x 4ohm speakers, connected in series.
TV supports the level 1.5 teletext standard. It is possible to decode transmissions including high graphical data.
The chassis is equipped with one full EuroScart, ONE OTHER SCART for AV input/output, one front-AV input, one back-AV output, one headphone output, one SVHS input (via SCART and SVHS connector), one VGA input, two external speaker outputs (left and right), one centre speaker output, and one surround speaker output for two speakers in series.

SWITCH-MODE POWER SUPPLY (TDA16846)

A SMPS transformer controlled by the IC TDA16846, which is designed for driving, controlling, and protecting switching transistor, provides the DC voltages required at various parts of the chassis. SMPS generates the necessary 3.3V and 2.5V supplies for the micro-controller, 130V supply for the FBT, +/-16V supply for the audio amplifier, which are active in stand-by and 8V, 12V and 5V supplies for other different parts of the chassis.
When the TV is switched on, a reference voltage is provided to TDA16846 and the start-up operation occurs, then TV enters into the stand-by position.
Two optocouplers are used to control the regulation of line voltage and stand-by power consumption. There are two regulation circuits, one in primary side and one in secondary side. The primary regulation circuit provides a control voltage to pin3 of the IC. Secondary regulation circuit produces a control voltage according to the changes in 130V DC voltage, via an optocoupler (SFH617A) to pin4 of the IC.
During the switch on period of the transistor, energy is stored in the transformer. During the switch off period energy is fed to the load via secondary winding. By varying switch-on time of the power transistor, it controls each portion of energy transferred to the second side such that the output voltage remains nearly independent of load variations. At the same time, the supply voltages 12V, 8V, 5V are stabilised by the series regulators.

Features:

- Line Current Consumption with PFC
- Continuous Frequency Reduction with Decreasing Load
- Stable and Adjustable Stand-by Frequency
- Very Low Start-up Current
- Soft-Start for Quiet Start-up
- Adjustable and Voltage Dependent Ringing Suppression Time
- Synchronization and Fixed Frequency Facility
- Over- and Under-voltage Lockout
- Switch Off at Mains Under-voltage
- Mains Voltage Dependent Fold Back Point Correction
- Low Power Consumption
- Free usable Fault Comparators

Pinning:

1. OTC Off Time Circuit
2. PCS Primary Current Simulation
3. RZI Regulation and Zero Crossing Input
4. SRC Soft-Start and Regulation Capacitor
5. OCI Opto Coupler Input
6. FC2 Fault Comparator 2
7. SYN Synchronization Input
8. N. C. Not Connected
9. REF Reference Voltage and Current
10. FC1 Fault Comparator 1
11. PVC Primary Voltage Check
12. GND Ground
13. OUT Output
14. VCC Supply Voltage

IF PART (TDA4470/72)

The TDA44XX is an integrated bipolar circuit for multistandard video/sound IF (VIF/SIF) signal processing in TV/VCR and multimedia applications. The circuit processes all TV video IF signals with negative modulation (e.g., B/G standard), positive modulation (e.g., L standard) and the AM, FM/NICAM sound IF signals. Active carrier generation by FPLL (frequency phase-locked loop) is the principle for true synchronous demodulation. VCO circuit is operating on picture carrier frequency, the VCO frequency is switchable for L´-mode. AFC without external reference circuit is alignment-free and polarity of the AFC curve is switchable. VIF-AGC for negative modulated signals operates on peak sync detection principle and for positive modulation on peak white / black level detection principle. Tuner AGC is adjustable with determining take over point. It has alignment-free quasi-parallel sound (QPS) mixer for FM/NICAM sound IF signals. Intercarrier output sound is gain controlled (necessary for digital sound processing). AM-demodulator is completely alignment-free with gain controlled AF output. Operation of the AM demodulator and QPS mixer (for NICAM-L stereo sound is parallel. TDA4472 is used for negative modulation and TDA4470 is used for both negative and positive modulation.

Features:

- 5V supply voltage; low power consumption
- Active carrier generation by FPLL principle (frequency-phase-locked-loop) for true synchronous demodulation
- Very linear video demodulation, good pulse response and excellent intermodulation figures
- VCO circuit is operating on picture carrier frequency, the VCO frequency is switchable for the L' mode
- Alignment-free AFC without external reference circuit, polarity of the AFC curve is switchable
- VIF-AGC for negative modulated signals (peak sync detection) and for positive modulation (peak white/black level detector).
- Tuner AGC with adjustable take over point
- Alignment-free quasi parallel sound (QPS) mixer for FM/NICAM sound IF signals
- Intercarrier output signal is gain controlled (necessary for digital sound processing)
- Complete alignment-free AM demodulator with gain controlled AF output
- Separate SIF-AGC with average detection
- Two independent SIF inputs
- Parallel operation of the AM demodulator and QPS mixer (for NICAM-L stereo sound)
- Package and relevant pinning is compatible with the single standard version TDA 4472; simplifies the design of an universal IF module

Pinning:

1.	Input sensitivity, RMS value	: 80mVrms
2.	Input sensitivity, RMS value	: 80mVrms
3.	SIF Input selector switch	: 2.0 V
4.	Ground	
5.	IF gain control range	: 65dB
6.	Input sensitivity, RMS value	: 80mVrms
7.	Input sensitivity, RMS value	: 80mVrms
8.	IF gain control range	: 65dB
9.	Ground	
10.	Available tuner-AGC current	: 2mA
11.	Available tuner-AGC current	: Min : 0.3V Max : 13.5V
12.	Video output	: Min : 1.8V Max : 2.2V
13.	Standard switch	: Min : 0V Max : 0.8V
14.	L' switch	: Min : 0V Max : 3.0V
15.	IF gain control range	: 65dB
16.	Ground	
17.	Internal reference voltage	
18.	FPLL and VCO	: Min : 1mA Max : 4mA
19.	AFC switch	: Min : 0V Max : 0.8V
20.	FPLL and VCO	: Min : 1mA Max : 4mA
21.	FPLL and VCO	: Min : 1mA Max : 4mA
22.	AFC output	: 0.7 mA/kHz
23.	DC supplay	: Min : 4.5V Max : 9.0V
24.	DC output voltage	: 2V
25.	AF output-AM	: 2.2V
26.	FPLL and VCO	: Min : 1mA Max : 4mA
27.	Input sensitivity, RMS value	: 80mVrms
28.	Input sensitivity, RMS value	: 80mVrms

TUNER

The hardware and software of the TV is suitable for tuners, supplied by different companies, which are selected from the Service Menu. These tuners can be combined VHF, UHF tuners suitable for CCIR systems B/G, H, L, L´, I/I´, and D/K. The tuning is available through the digitally controlled I²C bus (PLL). Below you will find info on one of the Tuners in use.

General description of UV1316:

The UV1316 tuner belongs to the UV 1300 family of tuners, which are designed to meet a wide range of applications. It is a combined VHF, UHF tuner suitable for CCIR systems B/G, H, L, L', I and I'. The low IF output impedance has been designed for direct drive of a wide variety of SAW filters with sufficient suppression of triple transient.

Features of UV1316:

- Member of the UV1300 family small sized UHF/VHF tuners
- Systems CCIR: B/G, H, L, L', I and I'; OIRT: D/K
- Digitally controlled (PLL) tuning via I2C-bus
- Off-air channels, S-cable channels and Hyperband
- World standardised mechanical dimensions and world standard pinning
- Compact size
- Complies to "CENELEC EN55020" and "EN55013"

Pinning:

1. Gain control voltage (AGC) : 4.0V, Max:4.5V
2. Tuning voltage
3. I²C-bus address select : Max:5.5V
4. I²C-bus serial clock : Min:-0.3V, Max:5.5V
5. I²C-bus serial data : Min:-0.3V, Max:5.5V
6. Not connected
7. PLL supply voltage : 5.0V, Min:4.75V, Max:5.5V
8. ADC input
9. Tuner supply voltage : 33V, Min:30V, Max:35V
10. Symmetrical IF output 1
11. Symmetrical IF output 2

SAW FILTERS

K9453: Two channels switchable sound IF saw filter of BG, DK, I, L systems for input channel 2 and of L´ system for input channel 1.
K3953: Two channel switchable video IF saw filter of BG, DK, I, L systems for input channel 2 and of L´ system for input channel 1.
J3950: Video IF saw filter for I system

DIGITAL TV SOUND PROCESSING

MSP3410D

The MSP3410D is an I2C controlled single-chip multistandard sound processor for applications in analog and digital TV sets. The full TV sound processing, starting with analog sound IF signal-in, down to processed analog AF-out is performed in a single-chip covering all European TV-standards. It is designed to simultaneously perform digital demodulation and decoding of NICAM-coded TV stereo sound, as well as demodulation of FM-mono TV sound and two FM systems according to the German or Korean terrestrial specs. It is also possible to do AM-demodulation according to the SECAM system. There is AGC for analog inputs: 0.14 - 3Vpp. All demodulation and filtering is performed on chip and is individually programmable. All digital NICAM standards (B/G, L, and I) are realised. Only one crystal clock (18.432Mhz) is necessary. External capacitors at each crystal pin to ground are required. They are necessary for tuning the open-loop frequency of the internal PLL and for stabilising the frequency in closed-loop operation. The higher the capacitors, the lower the clock frequency result. The nominal free running frequency should match the centre of the tolerance range between 18.433 and 18.431Mhz as closely as possible. By means of standardised I2S interface, additional feature processors (DPL35xx, Dolby Prologic processor for this chassis) can be connected to the IC.
I2S bus interface consists of five pins:

I2S_DA_IN1…2	for input four channels (two channels per line) per sampling cycle (32Khz).
I2DA_OUT,	for output, two channels per sampling cycle (32KHz).
I2S_CL,	for timing of the transmission of I2S serial data, 1.024Mhz.
I2S_WS,	for the word strobe line defining the left and right sample.

Features:

- 5-band graphic equalizer (as in MSP3400C)
- Enhanced spatial affect (pseudo stereo / base-width enlargement as in MSP3400C)
- Headphone channel with balance, bass treble, loudness
- Balance for loudspeaker and headphone channels in dB units (optional)
- Additional pair of D/A converters for SCART2 out
- Improved over-sampling filters (as in MSP 3400C)
- Additional SCART input
- Full SCART in/out matrix without restrictions
- SCART volume in dB units (optional)
- Additional I²S input (as in MSP 3400C)
- New FM-identification (as in MSP 3400C)
- Demodulator short programming
- Auto-detection for terrestrial TV-sound standards
- Precise bit-error rate indication
- Automatic switch from NICAM to FM/AM or vice versa
- Improved NICAM synchronisation algorithm
- Improved carrier mute algorithm
- Improved AM-demodulation
- ADR together with DRP 3510A
- Dolby Pro Logic together with DPL 35xx A
- Reduction of necessary controlling
- Less external components
- Significant reduction of radiation

Pinning:

1. ADR wordstrobe
2. Not connected
3. ADR data output
4. I²S 1 data input
5. I²S data output
6. I²S wordstrobe
7. I²S clock
8. I²S data
9. I²S clock
10. Not connected
11. Standby (low-active)
12. I²C Bus address select
13. Digital control output 0
14. Digital control output 1
15. Not connected
16. Not connected
17. Not connected
18. Audio clock output
19. Not connected
20. Crystal oscillator
21. Crystal oscillator
22. Test Pin
23. IF input 2 (if ANA_IN1+is used only, connect
24. IF common
25. IF input 1
26. Analog power supply +5V
27. Analog ground
28. Mono input
29. Reference voltage IF A/D converter
30. Scart input 1 in, right
31. Scart input 1 in, left
32. Analog Shield Ground 2
33. Scart input 2 in, right
34. Scart input 2 in, left
35. Analog Shield Ground 1
36. Scart input 3 in right
37. Scart input 3 in left
38. Analog Shield Ground 4
39. Scart input 4 in, right
40. Scart input 4 in, left
41. Not connected
42. Analog reference voltage high voltage part
43. Analog ground
44. Volume capacitor MAIN
45. Analog power supply 8.0V
46. Volume capacitor AUX
47. Scart output 1, left
48. Scart output 1, right
49. Reference ground 1 high voltage part
50. Scart output 2, left
51. Scart output 2, right
52. Analog Shield Ground 3
53. Not connected
54. Not connected
55. Not connected
56. Analog output MAIN, left
57. Analog output MAIN, right to AVSS with 50 pF capacitor) 58.
58. Reference ground 2 high voltage part
59. Analog output AUX, left
60. Analog output AUX, right
61. Power-on-reset
62. Not connected
63. Not connected
64. Not connected
65. I²S2-data input
66. Digital ground
67. Digital power supply +5V
68. ADR clock

DOLBY PRO LOGIC PROCESSOR IC DPL3519A

The IC DPL3519A processor family is designed to decode Dolby encoded surround sound. The IC integrate the complete Dolby Surround Pro Logic decoding on chip without any necessary external circuitry. It designed as a coprocessor of the MSP34xx family.

It gets digitised sound from the audio processor IC MSP3410D for both C (centre) and S (surround) channels, and for both L (left) and R (right) channels. The analog L and R outputs are supplied by MSP3410D, while the analog S and C outputs are supplied by the DPL33519A.

Two I2S busses obtain synchronisation between the MSP and DPL :

I2S_CL; for timing of the transmission of I2S serial data 1.024Mhz and I2S_WS; The word strobe line defining the left and right sample at 32Khz. The IC is also I2C bus controlled to select the sound feature (Stereo, 3D-Phonic and Dolby Pro Logic).

Pinning:

1. Not connected
2. Not connected
3. Not connected
4. I2S1 data input
5. I2S1 data output
6. I2S wordstrobe
7. I2S clock
8. I2C data
9. I2C clock
10. Not connected
11. Standby (low-active)
12. I2C-Bus address select
13. Digital control IO 0
14. Digital control IO 1
15. Not connected
16. Not connected
17. Not connected
18. Audio clock output
19. Digital control input
20. Crystal oscillator
21. Crystal oscillator
22. Test pin
23. Not connected
24. Not connected
25. Not connected
26. Analog power supply +5 V
27. Analog ground
28. Mono input
29. Reference voltage
30. Scart input 1 in, right

31. Scart input 1 in, left
32. Analog Shield Ground 1
33. Scart input 2 in, right
34. Scart input 2 in, left
35. Analog Shield Ground 2
36. Scart input 3 in, right
37. Scart input 3 in, left
38. Analog Shield Ground 4
39. Not connected
40. Not connected
41. Not connected
42. Analog reference voltage high voltage part
43. Analog ground
44. Volume capacitor Channel1
45. Analog power supply 8.0 V
46. Volume capacitor Channel 2
47. Scart output 1, left
48. Scart output 1, right
49. Reference ground 1 high voltage part
50. Scart output 2, left
51. Scart output 2, right
52. Analog Shield Ground 3
53. Not connected
54. Not connected
55. Not connected
56. Analog output Channel 1, left
57. Analog output Channel 1, right
58. Reference ground 2 high voltage part
59. Analog output Channel 2, left
60. Analog output Channel 2, right
61. Power-on-reset
62. Not connected
63. Not connected
64. I2S2-data output
65. I2S2-data input
66. Digital ground
67. Digital power supply +5 V
68. Not connected

HEADPHONE OUTPUT

TDA1308

The TDA1308 is an integrated class AB stereo headphone driver. It gets its input from two analog audio outputs (DACA_L and DACA_R) of MSP3410D. The gain of the output is adjustable by the feedback resistor between the inputs and outputs.

Features:

- Wide temperature range
- No switch ON/OFF clicks
- Excellent power supply ripple rejection
- Low power consumption
- Short-circuit resistant
- High performance - high signal-to-noise ratio
  - high slew rate
  - low distortion
- Large output voltage swing

Pinning:

1. Output A (Voltage swing) : Min : 0.75V, Max : 4.25V
2. Inverting input A : Vo(clip) : Min : 1400mVrms
3. Non-inverting input A : 2.5V
4. Ground
5. Non-inverting input B : 2.5V
6. Inverting input B : Vo(clip) : Min : 1400mVrms
7. Output B (Voltage swing) : Min : 0.75V, Max : 4.25V
8. Positive supply : 5V, Min : 3.0V, Max : 7.0V

AUDIO OUTPUT

TDA7265

The TDA7265 is a 25W+25W stereo sound amplifier with mute/stand-by facility. STPA control signal coming from microcontroller (when it is at high level) activates the mute function. IC is muted when mute port is at low level. Two stereo audio signals coming from audio module is injected to the inputs of the IC and a power of 12Wrms (10%) is obtained. An external pop-noise circuitry pulls AF inputs of the IC in order to eliminate pop noise when TV is turned on or off via mains supply connection. It is possible to adjust the gain of the amplifiers by feedback external resistors.

Features:

- Wide supply voltage range (up to 50V ABS Max.)
- Split supply
- High output power: 25+25 W @ TDA = 10%, RL = 8ohm, VS = ±20V
- No pop at turn-on / off
- Mute (pop free)
- Stand-By feature (low IQ)
- Few external components
- Thermal overload protection
- Adjustable gain via an external resistor

Pinning:
1. Output (1)
2. +Vs
3. Output (2)
4. Mute / St-By
5. -Vs
6. Input (2)
7. Ground
8. Input (1)

VIDEO INPUT AND OUTPUT SOURCE SWITCHING

TEA6415C

Video switching is performed by the I2C controlled IC TEA6415C with a gain of 0dB. Inputs to the video switch are IF_CVBS, three SCART video signals, front-AV video signal, SVHS luma signal, and one of SC1_R or SVHS_C. Outputs of the video switch are three SCART video signals (SC1_OUT_V and SC3_OUT_V are the same), one video output for the PIP module, Chroma signal (C), and luma (Y) or CVBS signal.

Features:
- 20 MHz Bandwith
- Cascadable with another TEA6415C (Internal address can be changed by pin 7 voltage)
- 8 inputs (CVBS, RGB, Mac, CHROMA, …)
- 6 Outputs
- Possibility of MAC or chroma signal for each input by switching-off the clamp with an external resistor bridge
- Bus controlled
- 6.5dB gain between any input and output
- -55dB crosstaljk at 5MHz
- Fully ESD protected

Pinning:

1.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA
2.	Data	:	Low level	: -0.3V	Max	: 1.5V,		
			High level	: 3.0V	Max	: Vcc+0.5V		
3.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA
4.	Clock	:	Low level	: -0.3V	Max	: 1.5V,		
			High level	: 3.0V	Max	: Vcc+0.5V		
5.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA
6.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA
7.	Prog							
8.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA
9.	Vcc	:	12V					
10.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA
11.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA
12.	Ground							
13.	Output	:	5.5Vpp,	Min : 4.5Vpp				
14.	Output	:	5.5Vpp,	Min : 4.5Vpp				
15.	Output	:	5.5Vpp,	Min : 4.5Vpp				
16.	Output	:	5.5Vpp,	Min : 4.5Vpp				
17.	Output	:	5.5Vpp,	Min : 4.5Vpp				
18.	Output	:	5.5Vpp,	Min : 4.5Vpp				
19.	Ground							
20.	Input	:	Max	: 2Vpp,	Input Current	: 1mA,	Max	: 3mA

VIDEO OUTPUT AMPLIFIER STAGE

TDA6111Q

The TDA6111Q is a video output amplifier with 16Mhz bandwidth. It has a high slew rate. Automatic black-current stabilisation is possible by black-current measurement output. It has two cathode outputs: one for DC currents and one for transient currents. A feedback output is separated from the cathode outputs. An internal protection exists against positive appearing cathode-ray-tube flashover discharges with ESD protection.

Features:
- High bandwidth and slew rate
- Black-current measurement output for Automatic Black-current Stabilisation (ABS)
- Two cathode outputs; one for DC currents, and one for transient currents
- A feedback output separated from the cathode outputs
- Internal protection against positive appearing cathode-ray Tube (CRT) flashover discharges
- ESD protection
- Simple application with a variety of colour decoders
- Differential input with a designed maximum common mode input capacitance of 3pF, a maximum differential mode input capacitance of 0.5 pF and a differential input voltage temperature drift of 50 uV/K
- Defined switch-off behaviour.

Pinning:
1. Non-inverting voltage input
2. Supply voltage LOW
3. Inverting voltage input
4. Ground, substrate
5. Black current measurement output
6. Supply voltage HIGH
7. Cathode transient voltage output
8. Cathode CD voltage output
9. Feedback voltage output

VERTICAL OUTPUT STAGE

TDA9379FA

The IC TDA9379FA is the vertical deflection booster circuit. Two supply voltages, +12V and –12V are needed to scan the inputs VERT+ and VERT-, respectively. And a third supply voltage, +45V for the flyback limiting are needed. The vertical deflection coil is connected in series between the output and feedback to the input.

Features:
- Power Amplifier
- Thermal Protection
- Output Current up to 2.6App
- Flyback Voltage up to 90V
- External Flyback Supply

Pinning:
1. Inverting Input
2. Supply Voltage
3. Flyback Supply
4. GND or Negative Supply
5. Output
6. Output Stage Supply
7. Non-inverting Input

TVTEXT CONTROLLER

(SDA5550M)

The SDA5550M is a single chip teletext decoder for decoding World System Teletext data as well as Video Programming System (VPS), Program Delivery Control (PDC), and Wide Screen Signalling (WSS) data used for PAL plus transmissions (Line 23). The device provides an integrated general-purpose, fully 8051-compatible Microcontroller with television specific hardware features. Microcontroller has been enhanced to provide powerful features such as memory banking, data pointers, and additional interrupts etc. The on-chip display unit for displaying Level 1.5 teletext data can also be used for customer defined on screen displays. Internal XRAM consists of up to17 Kbytes. AK41 has the version without internal ROM. This device can support external memory up to 1Mbyte ROM and RAM.TVTEXT Controller contains a data slicer for VPS, WSS, PDC and TXT, an acceleration acquisition hardware module, a display generator for Level 1.5 TXT and powerful On screen Display capabilities based on parallel attributes, and pixel oriented characters (DRCS). The 8 bit Microcontroller operates at 360nsec cycle time (min). Controller with dedicated hardware does most of the internal TXT acquisition processing, transfer data to/from external memory interface and receives/transmits data via I^2C-firmware user interface. SDA5550M is realized in 0.25 micron technology with 2.5V supply voltage and 3.3V I/O compatible.

The IC produces the following input or output control signals; AGC_CON, MODE_SW, L / L', PIP_MODS, PIP_SEL, ON/OFF (stand-by), SC1..3_IN_AV (pin 8 information from 3 SCARTs), AFC, MUTE (to mute audio output IC), I2CEN.

Features:
- **Genaral**
  - Feature selection via special function register
  - Simultaneous reception of TXT, VPS, PDC and WSS (Line 23)
  - Supply Voltage 2.5 and 3.3V
  - P-MQFP100 Package
- **Microcontroller**
  - Single external 6Mhz crystal, all necessary clocks are generated internally
  - CPU speed selectable via special function registers
  - Normal mode 33.33 MHz CPU clock, Power Save mode 8.33MHz
  - 8 bit 8051 instruction set compatible CPU
  - 360 ns minumum instruction cycle

- Two 16 bit timers, Watchdog timer
- PWM unit (2 channels 14 bit, 6 channels 8 bit)
- ADC (4 channels, 8 bit), UART
- I^2C interface

■ **Memory**

- Non-multiplexed 8-bit data and 16 (up to 20) bit address bus
- Memory banking up to 1Mbyte
- Eight 16 bit data pointer registers (DPTR)
- 256 bytes on-chip internal RAM
- 128 bytes extended stack memory
- 16 Kbytes Extended RAM for Display Memory

■ **Display**

- ROM character set supports all East/West European Languages
- Parallel display attributes
- Single/Double Width/Height of characters
- Variable flash rate
- Programmable screen size
- Up to 16 colours per DRCS character
- Shadowing
- Support of Progressive Scan and 100Hz
- Contrast Reduction

■ **Ports**

- One 8 bit I/O port with open drain output and optional I^2C Bus emulation support (Port 1)
- Two 8 bit multifunction I/O ports (Port1, Port3)
- One 4 bit port operating as digital or analog inputs for ADC (Port 2)
- One 2 bit I/O port with secondary functions (P4.2, 4.3, 4.7)
- One 4 bit I/O port with secondary functions (P4.0, 4.1, 4.4)

SERIAL ACCESS 32K EEPROM (24LC32-W)

It is the 32Kbit electrically erasable programmable memory. The memory is compatible with the I2C standard, two wire serial interface, which uses a bi-directional data bus and serial clock.

Features:

- Single supply with 3.3V (operation down to 2.5V)
- Compatible with I2C extended addressing
- 2-wire I2C serial interface supports 100kHz protocol
- Self-timed ERASE and WRITE cycles
- Power on/off data protection circuitry
- Hardware write protect
- 1,000,000 Erase/Write cycles guaranteed
- 32-byte page or byte writes modes available
- Schmidt trigger filtered inputs for noise suppression
- Output slope control to eliminate ground bounce
- 2 ms typical write cycle time, byte or page
- Electrostatic discharge protection > 4000V
- Data retention > 200 years
- 8-pin PDIP and SOIC packages

Pinning:

1. E0 User Configurable Chip Select
2. E1 User Configurable Chip Select
3. E2 User Configurable Chip Select
4. Vss Ground
5. SDA Serial Address/Data I/O
6. SCL Serial Clock
7. WC Write Protect Input
8. Vcc +2.5V to 6.0V Power Supply

EPROM (M27W401)

The M27W401 is a low voltage 4Mbit EPROM (UV erasable). It is ideally suited for micro processor systems requiring large data or program storage and is organised as 522,288 by 8 bits. The M27W401 operates in the read mode with a supply voltage as low as 2.7V at –40 to 85°C temperature range.

Features:

- Organisation 512K x 8
- Single 3.3V power supply
- Operationally Compatible with Existing Megabit EPROMs
- Industry Standard 32-pinDual-in-line Package
- All inputs/Outputs Fully TTL Compatible
- 8-Bit Output for Use in Microprocessor-Based Systems
- Power Saving CMOS Technology
- 3-State Output Buffers
- 400 mV Minimum DC Noise Immunity with Standard TTL Loads
- Latch up immunity of 250mA on all input and output pins
- No pull-up resistors required
- Low power dissipation

100Hz FEATURE BOX

VPC3215, CIP3250, SDA9400, DDP3310

The feature box consists of four I²C controlled ICs:

Video Processor	VPC3215
Component Interface Processor	CIP3250
Digital Image Processor	SDA9400
Digital Deflection Processor	DDP3310

The input supplies to the feature box are +12V, +5V. The ICs do also need a supply of 3.3V, which is regulated by IC4 LM314.

Besides the composite video in normal operation and luma/chroma inputs in the SVHS applications, there are also R-G-B-FB inputs from the PIP module.

OSD R-G-B-FB inputs from the Megatext IC or from the controller in the case of TV-text option. While the 50Hz sync signals for PIP are supplied by the VPC3215, the 100Hz sync signals for OSD are supplied by the DDP3310.

Control signals for HV stage such as VertQ, Vert, HDrive, EW (East-West) and SVM (Scan Velocity Modulation) are produced by this module. VProt and HProt input signals are used for protection. There are also a flyback sample signal from HV stage and the sense signal from the CRT board.

The feature box also supports the VGA mode.

VPC32X5 (Video Processor)

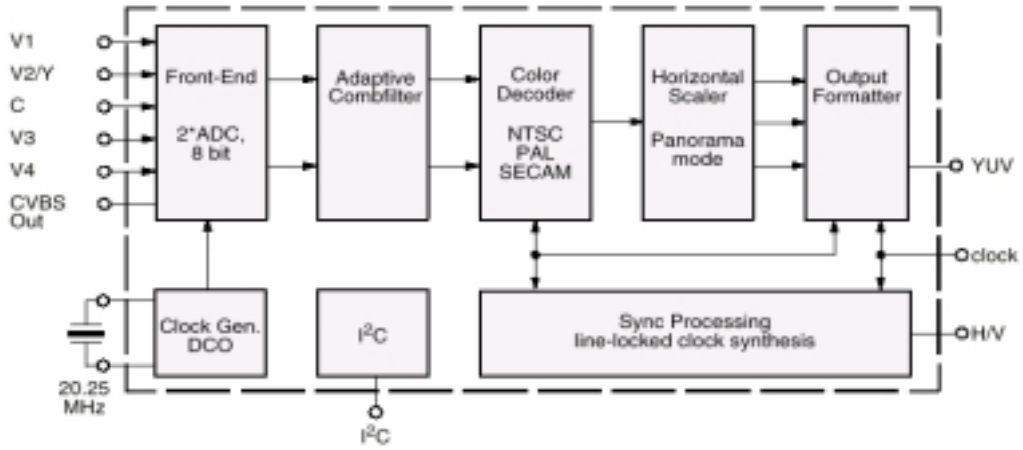


Figure 1

As seen in figure 1 all the processings in VPC are digital. This IC has four composite, one SVHS input, and one composite output which is used for teletext. In AK28 the main video input is Vin2, which is also used for luma input in SVHS applications.

After switching the inputs the signals are converted to digital via two 8 bit ADCs. And these digital data are processed to produce the 4:2:2 formatted digital YUV signals. The main features are, multi-standard color decoding including all sub-standards, multi-standard sync processing, adaptive 4H comb filter, linear horizontal scaling, as well as nonlinear horizontal scaling (panorama vision.) It provides 50Hz vertical and 15625Hz horizontal sync signals for the PIP module.

Features:

- all-digital video processing
- high-performance adaptive 4H comb filter Y/C separator with adjustable vertical peaking
- multi-standard color decoder PAL/NTSC/SECAM including all substandards
- 4 composite, 1 S-VHS input, 1 composite output
- integrated high-quality A/D converters and associated clamp and AGC circuits
- multi-standard sync processing
- linear horizontal scaling (0.25 ... 4), as well as non-linear horizontal scaling 'panorama vision'
- PAL+ preprocessing (VPC 3215)
- line-locked clock, data and sync output (VPC 3215)
- display/deflection control (VPC 3205)
- submicron CMOS technology
- I²C-Bus Interface
- one 20.25 MHz crystal, few external components
- 68-pin PLCC package

Pinning:

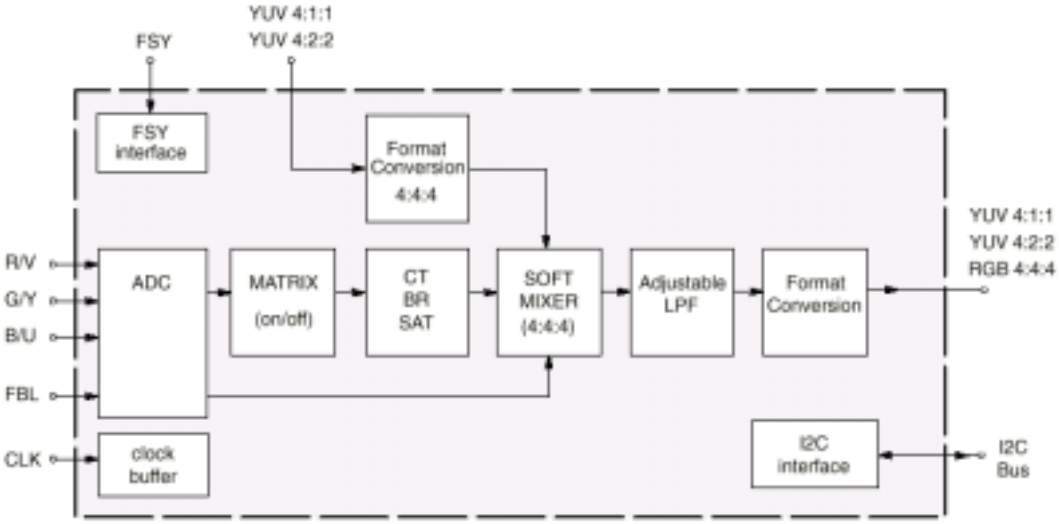
1 Ground
2 Ground
3 5 MHz Clock Out
4 Standby Supply Volt
5 Analog Crystal Out
6 Analog Crystal In
7 Ground
9 Ground
10 Interlace Out
12 Vertical Sync Pulse
13 Front Sync Pulse
14 Main Sync/Horiz Sync Pulse
15 Helper Line Output
16. Horz Clamp Pulse
17. Active Video Out
18. Double Output Clock
19. Output Clock
20...29. Picture Bus Luma
26. Ground
27. Not Connected
30. Main Clock Output 20.25 MHz
31. Supply Volt
34. Ground
35. Ground
36. Supply Voltage
38…47. Picture Bus Chroma
48…50. Picture Bus Priority
51. Ground
52. VGAV Input
53. Front-End/ Back-End Data
54. Reset Input, Active Low
55. I²C Bus Data
56. I²C Bus Clock
57. Test Pin, connect to GND
58. Video 4 Analog Input
59. Ground
60. Video 3 Analog Input
61. Video 2 Analog Input
62. Video 1 Analog Input
63. Chroma/ Video 4 Analog Input
64. Analog Video Output
65. Analog Shield GND F
66. Supply Voltage, Analog Front-End
67. Signal Ground for Analog Input
68. Reference Voltage Top, Analog

CIP3250:

The IC is used to interface the analog input, which is output from the PIP module (SCART RGB or PIP RGB). As can be seen from the block diagram, there is a CT-BR-SAT block, which is used for luma contrast, brightness, hue, and color saturation correction. The soft mixer is controlled by the fast blank signal.

Features:

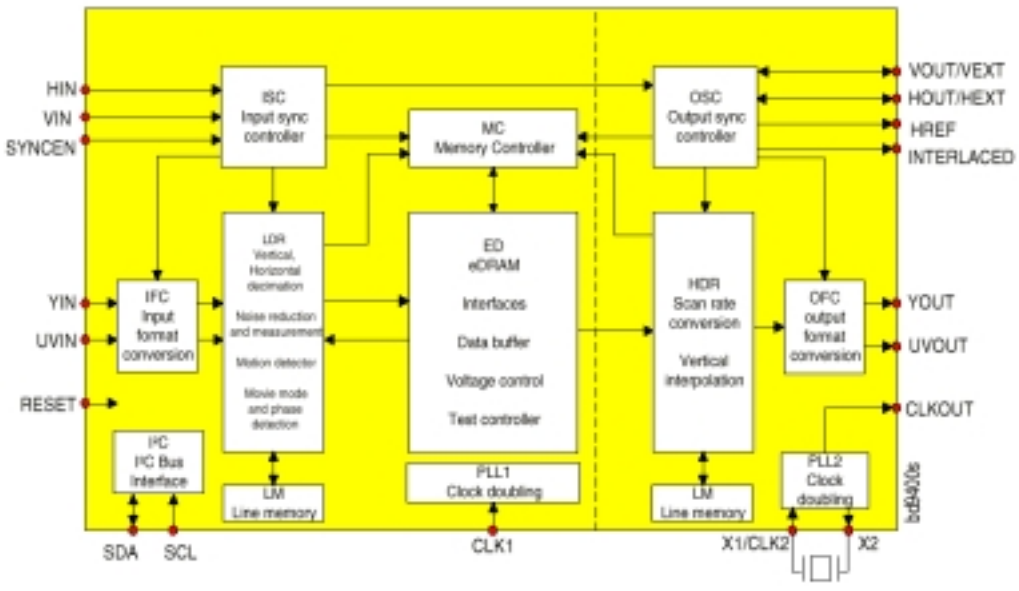
- analog input for RGB or YUV and Fast Blank
- triple 8 bit analog to digital converters for RGB/YUV with internal programmable clamping
- single 6 bit analog to digital converter for Fast Blank signal
- digital matrix RGB % YUV (Y, B–Y, R–Y)
- luma contrast and brightness correction for signals from analog input
- color saturation and hue correction for signals from analog input
- digital input for DIGIT 2000 or DIGIT 3000 formats
- digital interpolation to 4:4:4 format
- high quality soft mixer controlled by Fast Blank signal
- programmable delays to match digital YUVin and ana-log RGB/YUV
- variable low pass filters for YUV output
- digital output in DIGIT 2000 and DIGIT 3000 formats, as well as RGB 4:4:4
- I²C bus interface
- clock frequency 13.5... 20.25 MHz



Pinning:

1. Standby connect to ground
2…9. Blue Output
10…17. Green/Luma Output
18. Pad Ground
19. Pad Supply Voltage +5 V/+3.3 V
20…27. Red/Chroma Output
28. Active Video Output
29. Active Video Input
30. Front Sync Input
31. I²C Clock Input/Output
32. I²C Data Input/Output
33…35. Picture Bus Priority
36…43. Chroma Input
44…51. Luma Input
52. Digital Ground
53. Digital Supply Voltage +5 V
54. Main Clock Input
55. Reset Input
56. In Test Mode connect to ground
57. Analog Supply Voltage +5 V
58. Analog Ground
59. Reference External Capacitor
60. Substrate connect to ground
61. Fast Blank Input
62. Ground Fast Blank
63. Blue/U Input
64. Ground Blue/U
65. Green/Luma Input
66. Ground Green/Luma
67. Red/V Input
68. Ground Red/V

SDA9400:



SDA9400 converts the scan rate from 50/60 Hz to 100/120 Hz

Features:

- **Two input data formats**
  -4:2:2 luminance and chrominance parallel (2 x 8 wires)
  -ITU-R 656 data format (8 wires)

- **Two different representations of input chrominance data**
  -2's complement code
  -Positive dual code

- **Flexible input sync controller**
- **Flexible compression of the input signal**
  -Digital vertical compression of the input signal (1.0, 1.25, 1.5, 1.75, 2.0, 3.0, 4.0)
  -Digital horizontal compression of the input signal (1.0, 2.0, 4.0)

- **Noise reduction**
  -Motion adaptive spatial and temporal noise reduction (3D-NR)
  -Temporal noise reduction for luminance frame based or field based
  -Temporal noise reduction for chrominance field based
  -Separate motion detectors for luminance and chrominance
  -Flexible programming of the temporal noise reduction parameters
  -Automatic measurement of the noise level (5 bit value, readable by I²C bus)

- **3-D motion detection**
  -High performance motion detector for scan rate conversion
  -Global motion detection flag (readable by I²C bus)
  -Movie mode and phase detector (readable by I²C bus)

- **TV mode detection by counting line numbers (PAL, NTSC, readable by I²C bus)**
- **Embedded memory**
  -5 Mbit embedded DRAM core for field memories
  -192 kbit embedded DRAM core for line memories

- **Flexible clock and synchronization concept**
  -Decoupling of the input and output clock system possible

- **Scan rate conversion**
  -Motion adaptive 100/120 Hz interlaced scan conversion
  -Motion adaptive 50/60 Hz progressive scan conversion
  -Simple static interlaced and progressive conversion modes for 100/120 Hz interlaced
  or 50/60 Hz progressive scan conversion : e.g. ABAB, AABB, AA*B*B, AAAA, BBBB, AB, AA*
  -Simple progressive scan conversion with joint lines:
  50 Hz -> 60, 70, 75 Hz progressive
  60 Hz -> 70, 75 Hz progressive
  -Large area and line flicker reduction

- **Flexible digital vertical expansion of the output signal (1.0, ... [1/32] ... , 2.0)**
- **Flexible output sync controller**
  -Flexible positioning of the output signal
  -Flexible programming of the output sync raster
  -External synchronization by backend IC possible
  (e.g. split screen for one TV channel with joint lines and one PC VGA channel)

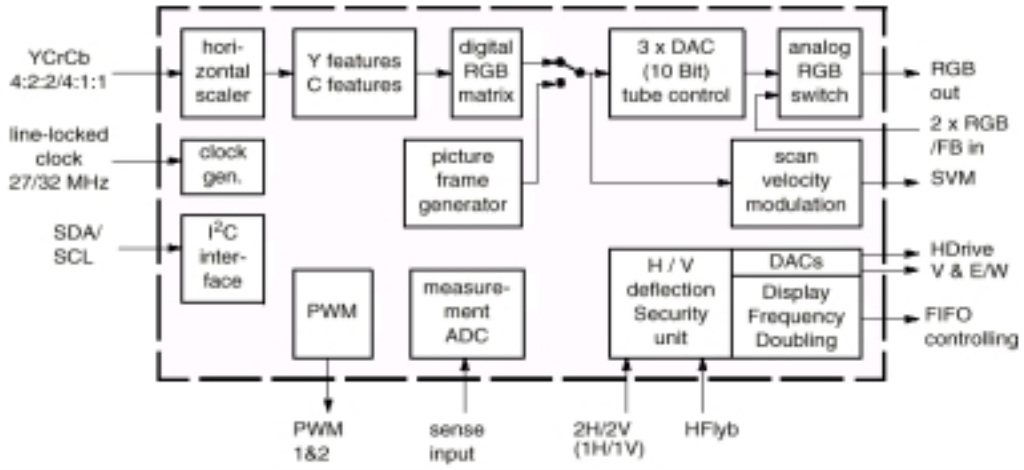
- **Signal manipulations**
  -Insertion of coloured background
  -Vertical and/or horizontal windowing with four different speed factors
  -Flash generation (for supervising applications, motion flag readable by I²C bus)
  -Still frame or field
  -Support of split screen applications
  -Multiple picture display - Tuner scan (4 and 16 times for 4:3, 12 times for 16:9 tubes)
  -Support of multi picture display with PIP or front-end processor with integrated scaler
  (e.g. 9 times display of PIP pictures, picture tracking, random pictures, still-in-moving picture, moving-in-still picture)

- **I²C-bus control (400 kHz)**
- **3.3 V ± 5% supply voltage**

Pinning:

2,8,24,42,55	Supply volt (*V*SS=0V)
9,25,41,56	Supply volt (*V*DD=3.3V)
36,52,58	Supply volt (*V*SS=0V)
35,51,53,57,59	Supply volt (*V*DD=3.3V)
43,..,50	Data input Y
31,..,34;37,..,40	Data input UV
30	System reset.
23	H-Sync input
22	V-Sync input
29	Sync enable input
21	I2C-Bus data line
20	I2C-Bus clock line
54.	System clock 1
17,..,10	Data output UV
7,..,3;1;64;63	Data output Y
62	Horz active video out
61	V-Sync out / Ext V-Sync
60	H-Sync out / Ext H-Sync
18	Interlace signal vert deflection
28	Crystal conn / System clock 2
27	Crystal connection
26	Clock output
19	Test input

DDP3310:



It is the display and deflection processor. All the horizontal and vertical stages are driven by this IC.
The last controls such as contrast, brightness and saturation of the actual video signal, OSD and VGA are accomplished by the blocks in DDP. Tube measurement and SVM controls are also managed by this IC.

Features:

Video processing

– linear horizontal scaling (0.25 … 4)
– non-linear horizontal scaling “panoramavision”
– dynamic peaking
– soft limiter (gamma correction)
– color transient improvement
– programmable RGB matrix
– picture frame generator
– two analog RGB/Fast-Blank inputs

Deflection processing

– scan velocity modulation output
– high-performance H/V deflection
– EHT compensation for vertical / East/West
– soft start/stop of H-Drive
– vertical angle and bow
– differential vertical output
– vertical zoom via deflection
– horizontal and vertical protection circuit
– adjustable horizontal frequency for VGA/SVGA dis-play

Miscellaneous

– selectable 4:1:1/ 4:2:2 YC r C b input
– selectable 27/ 32-MHz line-locked clock input
– crystal oscillator for horizontal protection
– automatic picture tube adjustment (cutoff, white-drive)
– single 5-V power supply

– hardware for simple 50/60-Hz to 100/ 120-Hz con-version (display frequency doubling)
– two I²C-controlled PWM outputs
– beam current limiter

Pinning:

1. Supply Voltage
2. Gnd, Output Pin Driver
3. Additional VSYNC input
4. Read counter Reset
5. FIFO Read Enable
6. FIFO Write Enable
7. FIFO Write counter Reset
8. Horz. Drive Output
9. Horz. Flyback Input
10. Safety Input
11. Vertical Protection Input
12. Select of H-Drv Freq. Range
13. Clock Sel 40.5 or 27/32MHz
14. Clock select 27/32 MHz
15. Range Switch2, Measure ADC
16. Range Switch1, Measure ADC
17. Sense ADC Input
18. Ground, MADC Input
19. Differential Vert Sawtooth Out
20. Differential Vert Sawtooth Out
21. E/W Output
22. Reference Input for RGB DACs
23. Scan Velocity Modulation
24. Analog Output Red
25. Analog Output Green
26. Analog Output Blue
27. Ground, Analog Back-end
28. Sup Volt, Analog Back-end
29. VRD/BCS DAC Ref, Beam Current Safety
30. Fast-Blank1 Input
31. Analog Red1 Input
32. Analog Green1 Input
33. Analog Blue1 Input
34. Fast-Blank2 Input
35. Analog Red2 Input
36. Analog Green2 Input
37. Analog Blue2 Input
38. Test Pin
39. Reset Input, active low
40. PWM out
41. PWM out
42. Half-Contrast

43…50. Picture Bus Chroma

51. Supply Volt, Digital Circuitry
52. Ground, Digital Circuitry
53. Sys. Clock Input(27/32/40.5MHz)

54…61. Y0 Picture Bus Luma

62. Single LLC Input(13.5/16MHz)
63. Horizontal Sync Input
64. Vertical Sync Input
65. Analog Crystal Out (5-MHz Security Clock)
66. Analog Crystal In (5-MHz Security Clock)
67. I²C-Bus Data
68. I²C-Bus Clock

AK41 CHASSIS MANUAL ADJUSTMENTS PROCEDURE

A) PRELIMINARY

Before starting with the alignment procedure, make sure that all the potentiometers on the chassis and also screen and focus pots are in the medium position.

B) SYSTEM VOLTAGE ADJUSTMENT

Inputs - AC power (220V 50 Hz).
- PAL B/G test pattern via RF
(PAL I test pattern for PAL I TV's, SECAM D/K pattern, SECAM L/L´/K´ TV's).

Outputs - Digital voltmeter to anode of D110.

Display - System voltage

Action - Apply power. Check that The stand-by led lights.
- Select TV mode and tune to the applied test pattern via local test keyboard. Chassis should start normally.
- Adjust all analogue controls (volume, bass, treble, brightness, contrast, colour) to minimum settings.
- Adjust VR127 according to the following different types of CRT's

SYSTEM VOLTAGE	TYPE OF CRT
135V±0.5V	PHILIPS A66EAK552X54
135V±0.5V	PHILIPS A66EAK071X54
135V±0.5V	VIDEOCOLOR A66ECY13X12
135V±0.5V	PHILIPS W66ESF002X44

C) AFC ADJUSTMENT

Inputs - AC power.
- 38.9 MHz test pattern for PAL B/G, PAL-SECAM B/G or 39.5 MHz test pattern for PAL I model (90dBmV) to Z403 SAW filter input terminals 1 and 2.

Outputs - Digital Voltmeter to AFC point (pin22 of IC401)

Display - AFC Voltage.

Action - Adjust VL401 for 2.5±0.1 Volts. TV should automatically tune to a station when search tuning is activated.

D) FOCUS ADJUSTMENT

Inputs - AC power
- PAL B/G test pattern via RF input.

Outputs - Picture tube drive.

Display - Picture

Action - Select TV mode and tune to the signal.
- Adjust focus potentiometer (the upper pot on the rear side of the FBT transformer) for optimum focusing.drive.

E) SCREEN ADJUSTMENT

Inputs - AC power
- PAL B/G Colour Bar test pattern via RF

Outputs - 1/100 Oscilloscope probe to RGB cathodes on CRT baseboard.
NOTE:Ground pin of probe will be connected to 1st pin (GND) of the CRT socket.

Display - RGB ratio

Action - Select PAL B/G Colour Bar pattern using the local test keyboard and the user remote control unit.
- Adjust all control functions (brightness, colour and contrast) to minimum settings.
- Measure the most sensitive cathode
- Adjust the screen potentiometer (lower pot on the rear side of FBT transformer) until cathode voltage becomes 150V.

F) IF ADJUSTMENT FOR L' MODE

Inputs - AC power.
- 38.9 MHz test pattern for PAL B/G, PAL-SECAM B/G or 39.5 MHz test pattern for PAL I model. (90dBmV) to Z403 SAW filter input terminals 1 and 2.

Outputs - Digital Voltmeter to AFC point. (pin22 of IC401)
- Digital Voltmeter to AFC_L point. (pin14 of IC401)

Display - AFC Voltage.

Action - Firstly adjust VL401 for 2.5 ± 0.1 Volts. TV should automatically tune to a station. when search tuning is activated.
- Adjust VR401 for 2.5±0.1 Volts at the AFC_L point.

AK41 CHASSIS PRODUCTION MODE ADJUSTMENTS PROCEDURE

A) PRELIMINARY

All system, geometry and white balance alignments are performed in production service mode. Before starting the production mode alignments, make sure that all manual alignments are done correctly. To start production mode alignments enter the MAIN MENU and enter the code **1675** by pressing digit keys. Production mode items will appear on the screen. Production mode groups will be displayed with different colours of headlines , so in order to access a production alignment group press the colour key of the related group on the remote control transmitter. After selecting one of the production service mode groups, you can access its items by pressing the cursor-up and/or cursor-down keys. You can change the value of an item by pressing cursor-left and/or cursor-right keys on the remote control transmitter.
In order to switch between other group of items press the colour key of this groups headline.
To store the settings press OK key. In order to leave this menu press MENU key.

B) HORIZONTAL AND VERTICAL GEOMETRY ALIGNMENTS

- Switch the program to crosshatch test pattern.
- Press RED key to access this group of item.
- Select the items by pressing cursor-up and/or cursor-down keys.
- Adjust the item by pressing cursor-left and/or cursor-right after selecting that item.
- Store the settings by pressing OK key.
- Switch to another item group by pressing the colour keys of the related coloured headline of that group.
- Exit production mode by pressing the MENU key on the remote transmitter..

1) V-SHIFT
- Press cursor-left and/or cursor-right buttons till the test pattern is vertically centred, i.e. horizontal line at the centre of the test pattern is in equal distance both to upper and lower side of the picture tube. Check and readjust V-SHIFT item if the adjustment becomes improper after some other geometric adjustments are done

2) V-SIZE
- Press cursor-left and/or cursor-right buttons till horizontal black lines on both the upper and lower part of the test pattern become very close to the upper and lower horizontal sides of picture tube and nearly about to disappear. Check and readjust V-SIZE item if the adjustment becomes improper after some other geometric adjustments are done.

3) H-SHIFT
- Adjust H-SHIFT item by pressing cursor-left and/or cursor-right buttons till test pattern is horizontally in equal distance both to right and left sides of the picture tube. Check and readjust H-SHIFT item if the adjustment becomes improper after some other geometric adjustments are done.

4) H-SIZE
- Adjust H-WIDTH item by pressing cursor-left and/or cursor-right buttons till no under-scan condition will happen, i.e. no white bars on the left and right side of the test pattern will be visible nor the picture will be so wide. Check and readjust H-WIDTH item if the adjustment becomes improper after some other geometric adjustments are done.

5) S-COR
- Press cursor-left and/or cursor-right buttons till the size of squares on both the upper and lower part of test pattern become equal to the squares laying on the vertical centre of the test pattern. Check and readjust S-COR item if the adjustment becomes improper after some other geometric adjustments are done.

6) LINRT
- Press cursor-left and/or cursor-right buttons till all the size of squares of the test pattern become in equal size from the top of the screen to its bottom of the whole screen. Check and readjust LINRT item if the adjustment becomes improper after some other geometric adjustments (especially after than S-COR adjustment are done.

7) ANGLE
- Press cursor-left and/or cursor-right buttons till the vertical lines of the crosshatch pattern become completely perpendicular to horizontal lines without any angle of vertical deviation. Check and readjust ANGLE item if the adjustment becomes improper after some other geometric adjustments are done.

8) BOW
- Press cursor-left and/or cursor-right buttons till the vertical lines especially ones close to the left and right sides will of equal and symmetrical bending, i.e. they together will neither be towards left side nor right side. Check and readjust BOW item if the adjustment becomes improper after some other geometric adjustments are done.

9) TRPEZ
- Press cursor-left and/or cursor-right buttons till vertical lines, especially lines at the sides of the picture frame became parallel to the both sides of picture tube as close as possible. Check and readjust TRPEZ item if the adjustment becomes improper after some other geometric adjustments are done.

10) PARAB
- Press cursor-left and/or cursor-right buttons till vertical lines close to the both sides of the picture frame become parallel to vertical sides of picture tube without any bending to left or to right side of the screen.. Check and readjust PARAB item if the adjustment becomes improper after some other geometric adjustments are done.

11) U. COR

- Press cursor-left and/or cursor-right buttons till vertical lines at the upper corners of the picture frame become vertical and parallel to vertical corner sides of picture tube. Check and readjust U. COR item if the adjustment becomes improper after some other geometric adjustments are done.

12) L. COR

- Press cursor-left and/or cursor-right buttons till vertical lines at the lower corners of the picture frame become vertical and parallel to vertical corner sides of picture tube. Check and readjust L. COR item if the adjustment becomes improper after some other geometric adjustments are done.

C) VIDEO ALIGNMENTS

- Switch the program to crosshatch test pattern for geometric adjustments.
- Switch the program to colour bar test pattern for video adjustments.
- Press GREEN key to access this group of item.
- Select the items by pressing cursor-up and/or cursor-down keys.
- Adjust the item by pressing cursor-left and/or cursor-right after selecting that item.
- Store the settings by pressing OK key.
- Switch to another item group by pressing the colour keys of the related coloured headline of that group.
- Exit production mode by pressing the MENU key on the remote transmitter..

1) RGn, GGn, BGn: WHITE BALANCE ADJUSTMENT

- Apply WHITE test pattern via RF.

Adjust all analogue functions to medium level and set GGn, RGn, BGn at value 80, if needed.
Use Colour analyser and monitor the colour temperature (X, Y) on colour analyser.
Select RGn and BGn by cursor-up and/or cursor-down buttons and change the values by cursor-left and/or cursor-right buttons till the following values are read:

X=285±10
Y=293±10 on the colour analyser.

2) RRf, GRf, BRf

Set the values of these items as 62 (constant).

3) YDF

Apply COLOUR BAR test pattern.
Select YDF item cursor-up and/or cursor-down buttons.
Adjust YDF by pressing cursor-left and/or cursor-right buttons till the colour transients on the colour bar pattern becomes as sharper and possible as colours between transients do not mix with each other. Check and readjust YDF item if the adjustment becomes improper after YDV adjustment is done.

4) AGC

Apply PAL BG signal, VHF-3 Channel-12 and 60dBmV RF signal level.
Adjust AGC item till voltage at the AGC point (pin1 of the tuner) becomes 3.0 volts.

5) TLAN

This item and its settings will be defined later.

6) APS

This value of this item toggles between ON and OFF while pressing the cursor-left and cursor-right after this item is selected by cursor-up and/or cursor-down buttons.
In order to activate APS installation procedure whenever TV is turned select ON for the very first time.
In order to start TV without APS installation procedure select OFF.

7) T_T

This item is used for the Tuner Selection.
SAM, THO, SIE, ALP, MK2 and MK3 are for Samsung, Thomson, Siemens, Alps and Philips MP2/MP3, respectively.

8) T_P

This item is used for the Tuner Selection.
SAM, THO, TEM, and MK2 are for Samsung, Thomson, Temic, and Philips, respectively.

9) EXT3

This item is toggles between ON and OFF and is used to enable and disable EXT3, respectively.

10) CLT

This item is used to set the Menu colors. 5 choices are possible.

D) SERVICE ALIGNMENTS

IMPORTANT: There will no adjustments in this service mode during production mode alignments.
- Press BLUE key on the remote transmitter when Production mode is active.
- Press the colour key of the related item group's headline colour
- Press cursor-up and/or cursor-down to select the item of the group
- Press cursor-left and/or cursor-right to alter the value of the item.
- Press OK to store the values of items and MENU to exit the service alignments mode.

1) ADJUSTMENTS GROUP

Press RED key on the remote transmitter in order to access this group of items.

PIP CNTRST , level of the PIP picture
PIP YDelay , luma delay of the PIP picture
PIP Frame , color selection of the PIP frame. (edges of the PIP)
EHTHP , EHT compensation coefficient for horizontal phase
EHTH TC , EHT time contant for horizontal phase compensation
EHTH , EHT compensation coefficient for horizontal amplitude
EHTV , EHT compensation coefficient for vertical amplitude
EHTV TC , time contant for control of vertical and horizontal amplitude EHT compenzation. (0 means off.)
OSD LEVEL , contast level of the OSD
INIT NVM , to initiate the NVM

2) OPTIONS GROUP

- Press BLUE key on the remote transmitter in order to access this group of items.

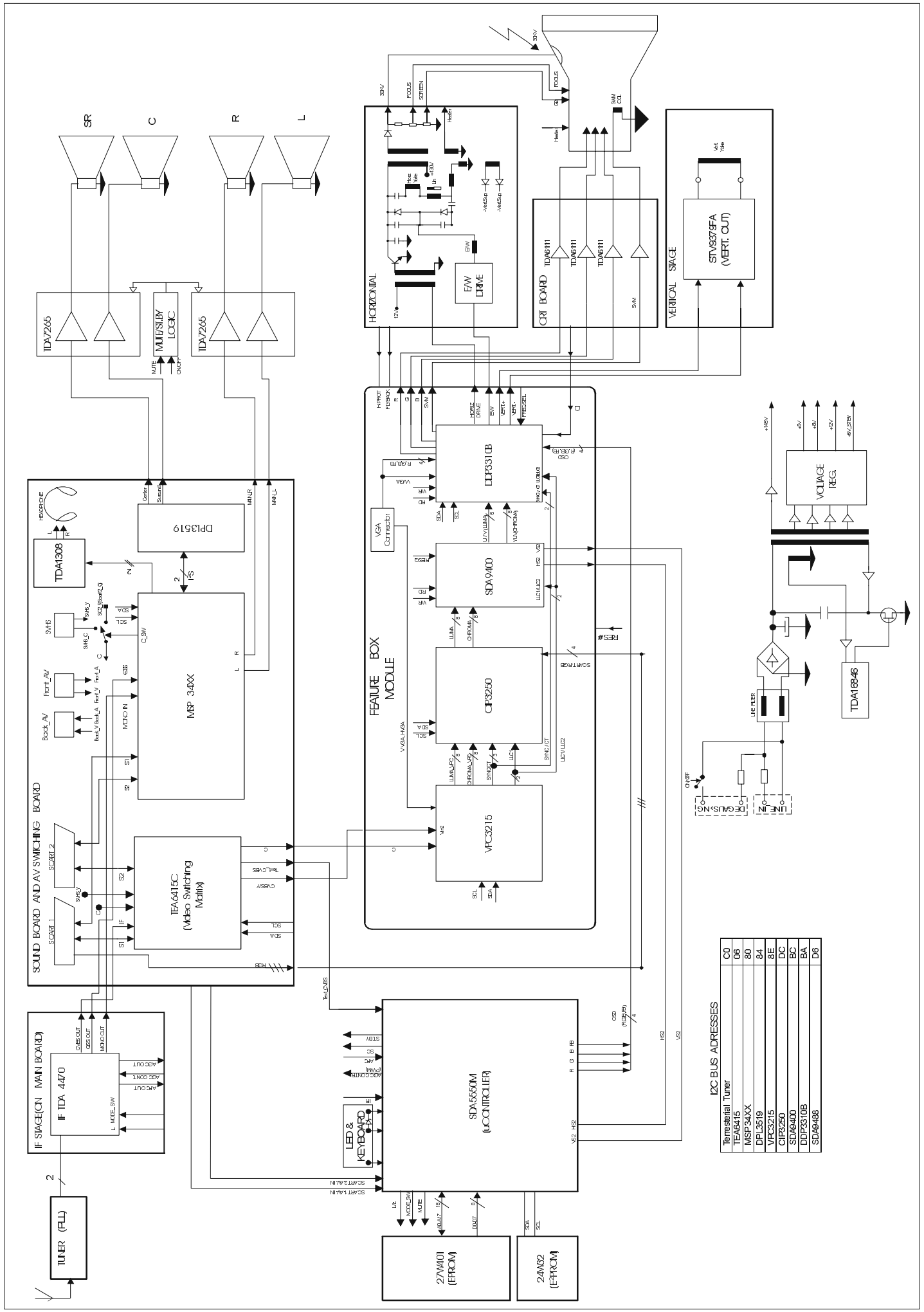
0. HPHONE , on / off
1. CRT , 4:3 / 16:9
2. S-VHS , on / off
3. f(IF) , always set to 38.9
4. Türk. , turkish menu on/off
5. VGA , on / off
6. FRONT , Front AV on/off

3) SYSTEM GROUP

- Press YELLOW key on the remote transmitter in order to access this group of items.

0. PAL B/G , on / off
1. PAL D/K , on / off
2. PAL I , on / off
3. SECAM B/G , on / off
4. SECAM D/K , on / off
5. SECAM L/L' , on / off
6. AUST. , on / off

GENERAL BLOCK DIAGRAM OF CHASSIS AK41

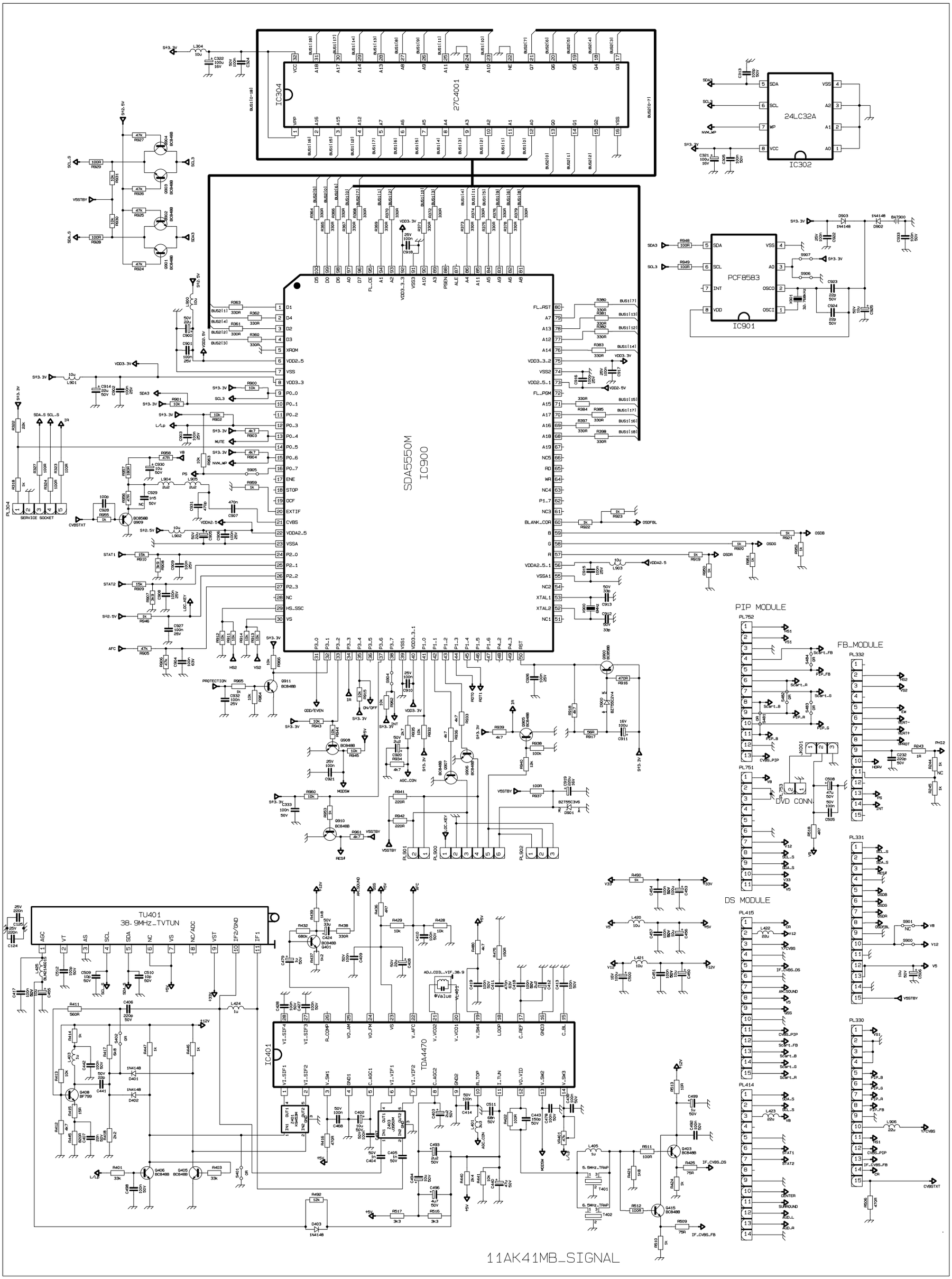


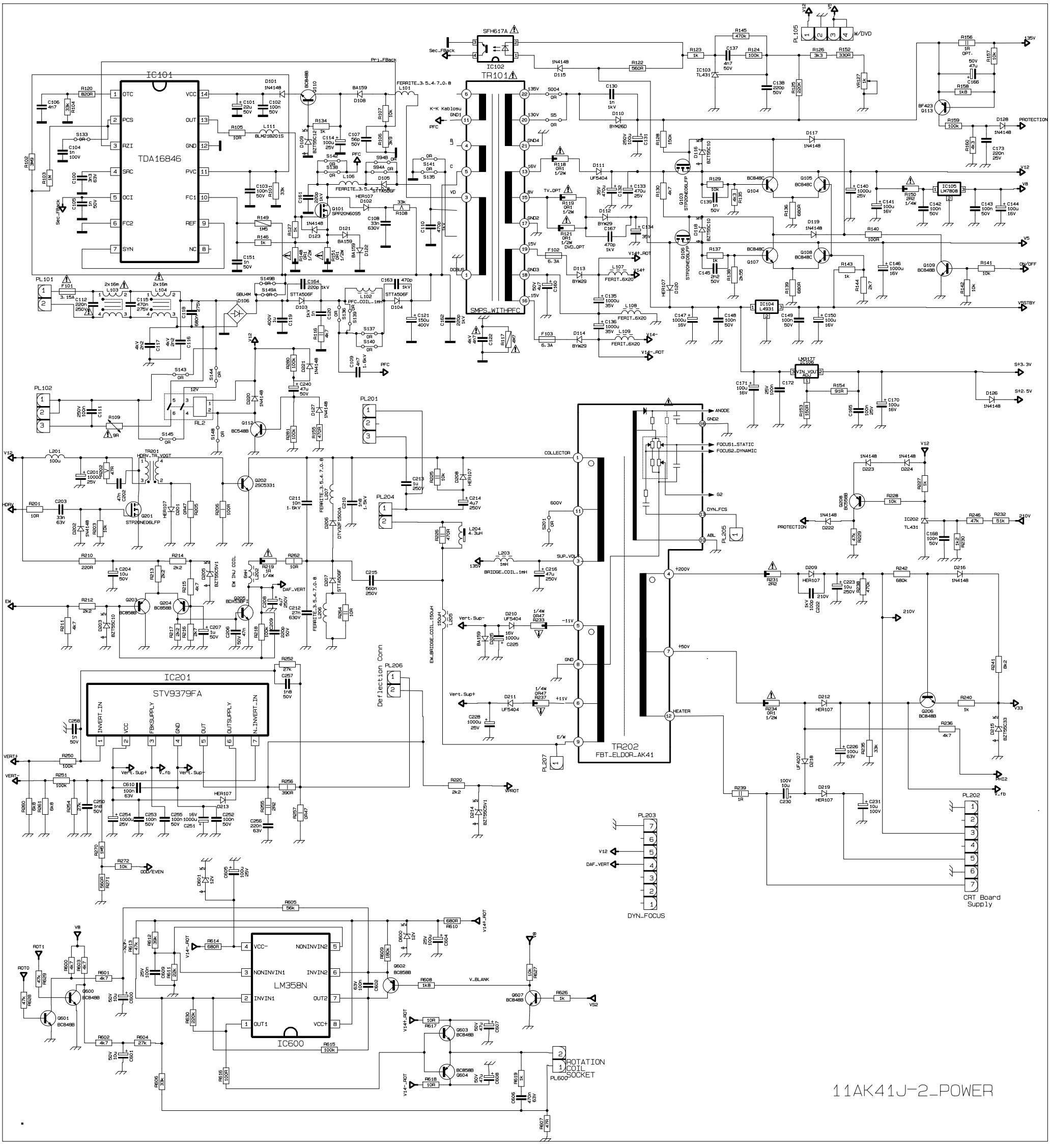
I2C BUS ADRESSES

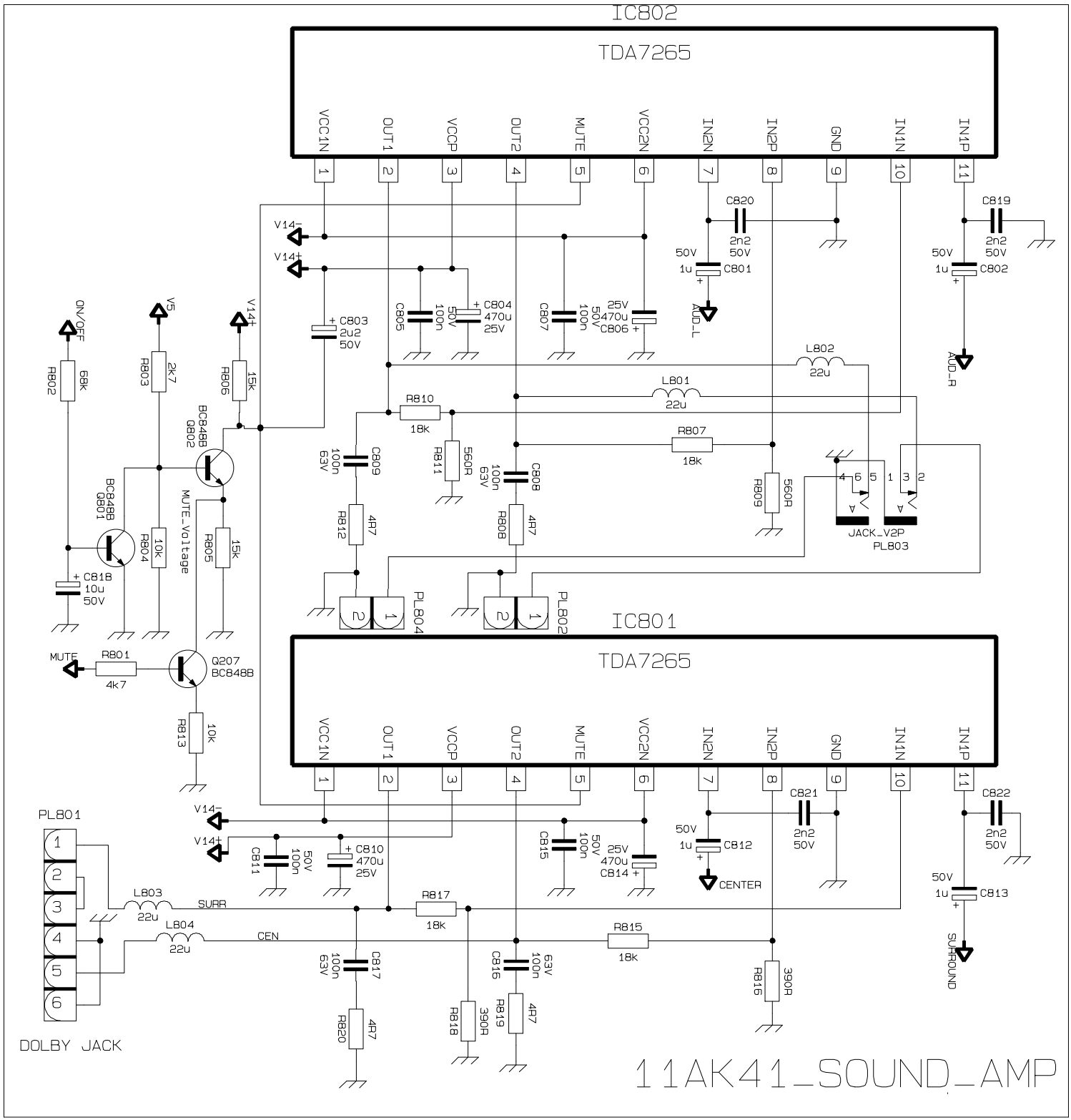
Terrestrial Tuner	C0
TEA6415	06
MSP34XX	80
DPL3519	84
VPC3215	8E
CIP3250	DC
SDA9400	BC
DDP3310B	BA
SDA9488	D6

Schematics

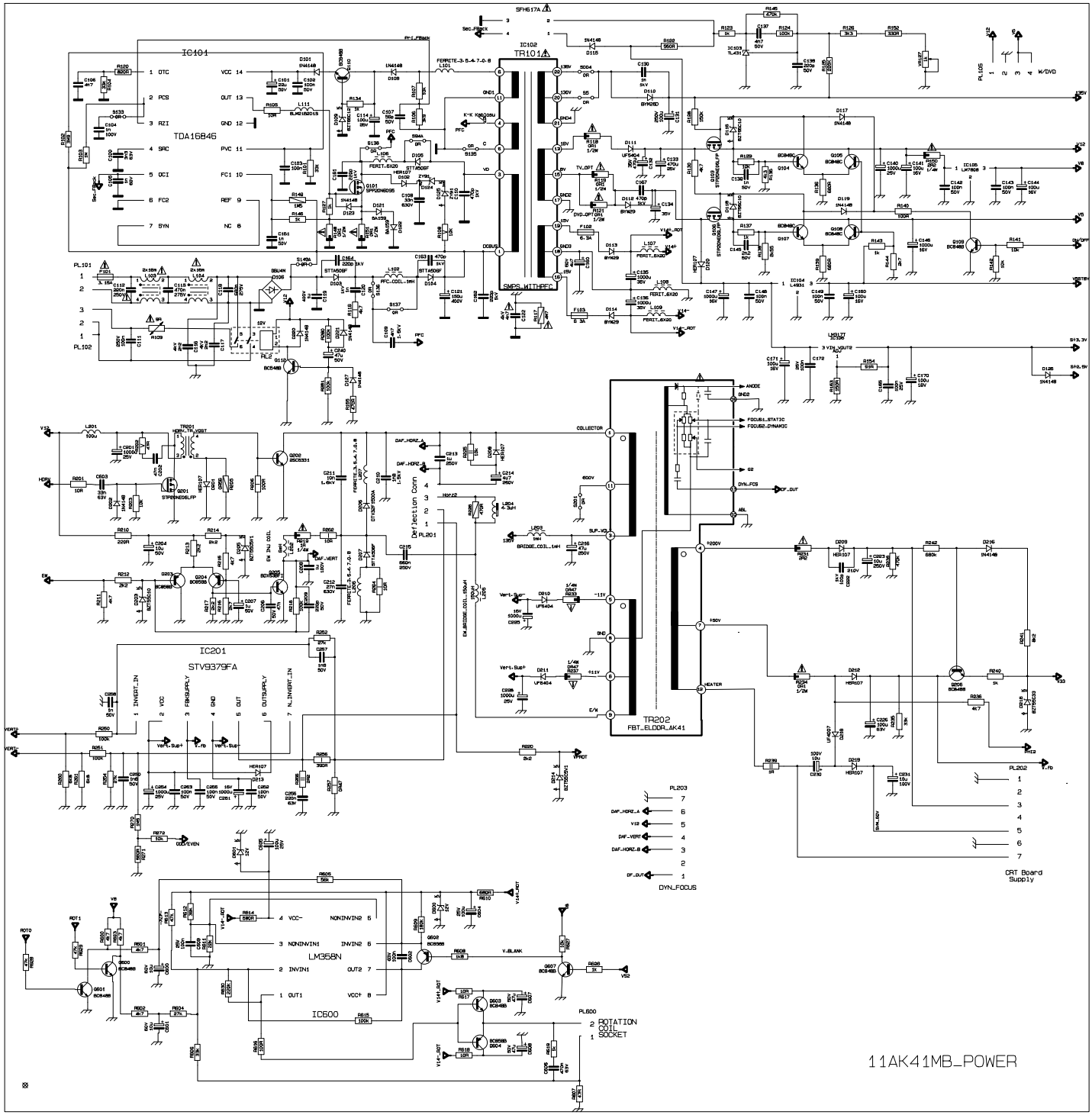
11AK41

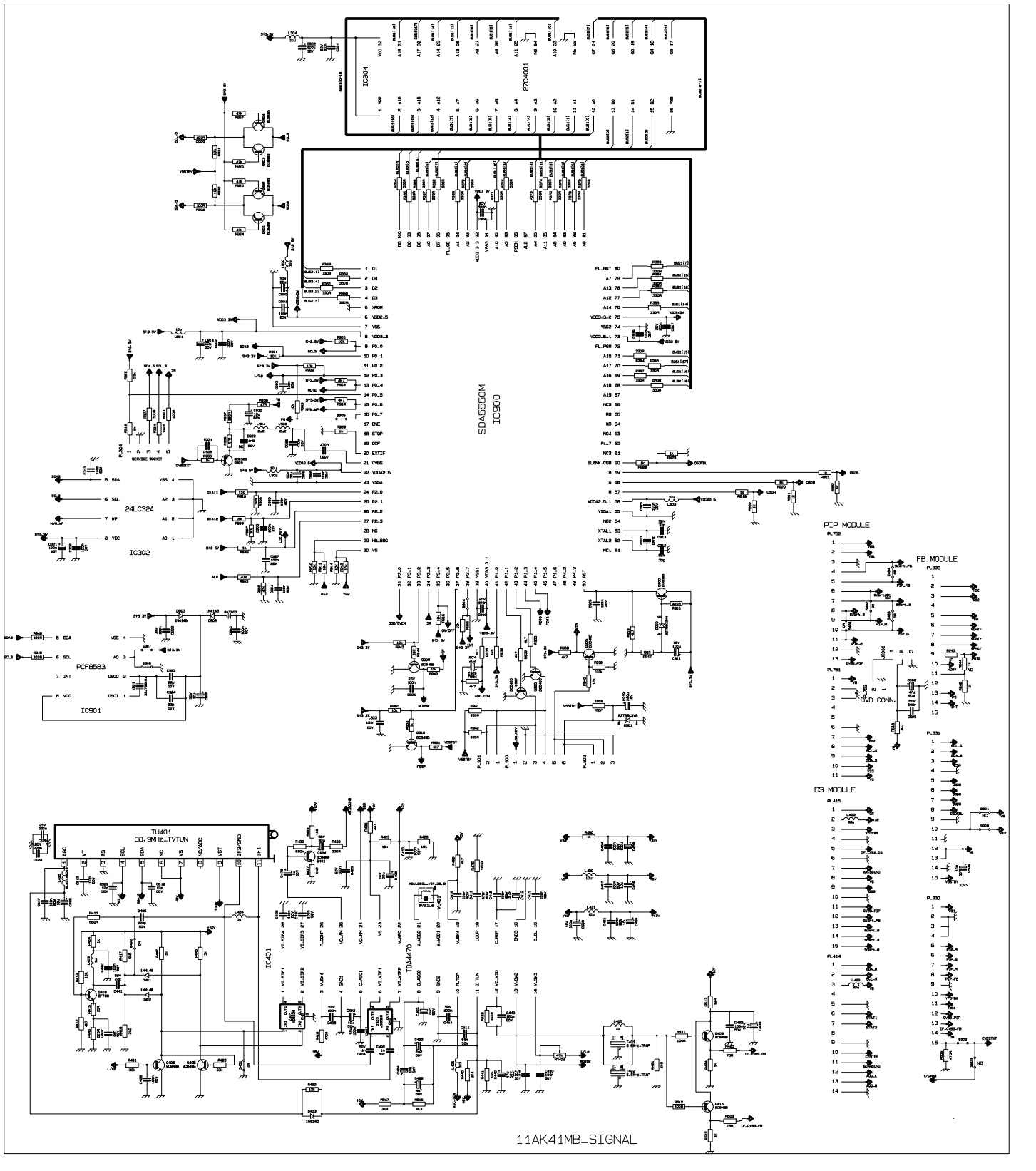

IC304
27C4001
IC302
24LC32A
IC901
PCF8583
IC900
SDA5550M
IC401
TDA4470
TU401
38.9MHz_TVTUN
PIP MODULE
FB_MODULE
DVD CONN.
DS MODULE
SERVICE SOCKET
11AK41MB_SIGNAL

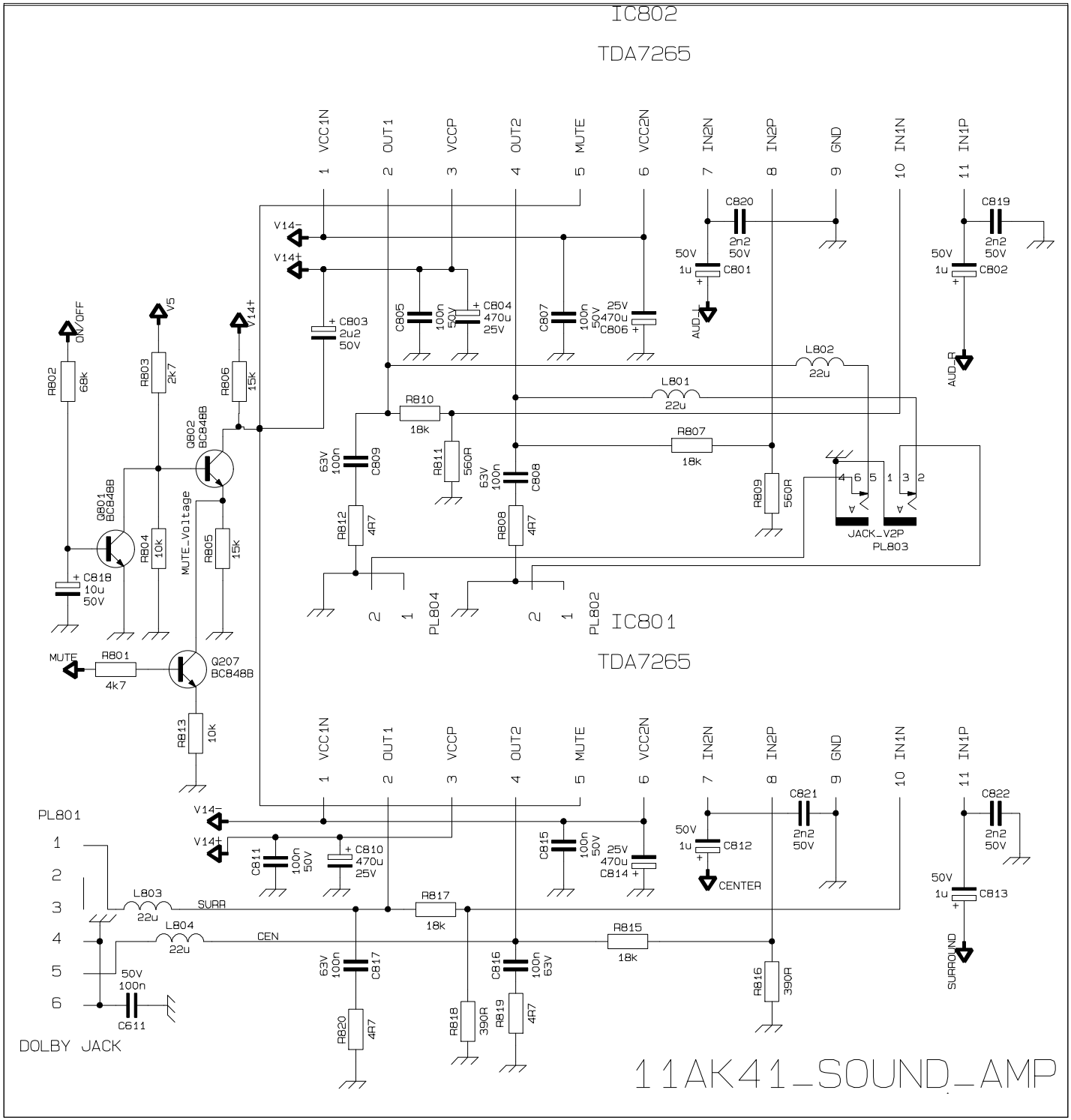

IC101
TDA16846
OTC
PCS
RZI
SRC
OCI
FC2
SYN
VCC
OUT
GND
PVC
FC1
REF
NC
Pri_FBack
Sec_FBack
SFH617A
IC102
TR101
SMPS_WITHPFC
K-K Kablosu
GND1
PFC
B
C
VD
DCBUS
GND2
GND3
GND4
135V
130V
16V
8V
15V
S004
S5
TV_OPT
DVD_OPT
F102
6.3A
F103
6.3A
V14+_ROT
V14+
V14-
V14-_ROT
PL101
PL102
PL201
PL204
PL205
PL206
PL207
PL105
W/DVD
IC103
TL431
IC104
L4931
IC105
LM7808
IC106
LM317T
VIN
VOUT
ADJ
PROTECTION
ON/OFF
VSTBY
V12
V8
V5
V33
S+3.3V
S+2.5V
IC201
STV9379FA
INVERT_IN
VCC
FBKSUPPLY
GND
OUT
OUTSUPPLY
N_INVERT_IN
IC600
LM358N
TR201
HDRV_TR_VOGT
TR202
FBT_ELDOR_AK41
COLLECTOR
600V
SUP_VOL
+200V
+50V
HEATER
-11V
+11V
E/W
ANODE
GND2
FOCUS1_STATIC
FOCUS2_DYNAMIC
G2
DYN_FCS
ABL
DYN_FOCUS
Deflection Conn
CRT Board Supply
ROTATION COIL SOCKET
PL600
V_BLANK
DAF_VERT
EW INJ COIL
BRIDGE_COIL_1mH
EW_BRIDGE_COIL_150uH
FERRITE_3.5.4.7.0.8
FERRITE_5.5.4.7.0.8
STTA506F
STTA506F
STTA506F
STTA506F
STTA509F
BA159
HER107
UF5404
BYM26D
BYW29
FERIT_6X20
PRIMARY
SECONDARY
11AK41J-2_POWER


IC802
TDA7265
VCC1N
OUT1
VCCP
OUT2
MUTE
VCC2N
IN2N
IN2P
GND
IN1N
IN1P
1
2
3
4
5
6
7
8
9
10
11
V14-
V14+
C820
2n2
50V
C819
2n2
50V
50V
1u
C801
50V
1u
C802
AUD_L
AUD_R
C805
100n
50V
C804
470u
25V
C807
100n
50V
C806
25V
470u
C803
2u2
50V
ON/OFF
V5
V14+
R802
68k
R803
2k7
R806
15k
L802
22u
L801
22u
R810
18k
R807
18k
BC848B
Q802
C809
100n
63V
R811
560R
C808
100n
63V
R809
560R
JACK_V2P
PL803
R812
4R7
R808
4R7
BC848B
Q801
R804
10k
MUTE_Voltage
R805
15k
C818
10u
50V
PL804
PL802
IC801
TDA7265
MUTE
R801
4k7
Q207
BC848B
R813
10k
PL801
C811
100n
50V
C810
470u
25V
C815
100n
50V
C814
25V
470u
C812
50V
1u
CENTER
C821
2n2
50V
C822
2n2
50V
50V
1u
C813
SURROUND
L803
22u
SURR
L804
22u
CEN
R817
18k
R815
18k
C817
100n
63V
C816
100n
63V
R820
4R7
R818
390R
R819
4R7
R815
390R
DOLBY JACK
11AK41_SOUND_AMP

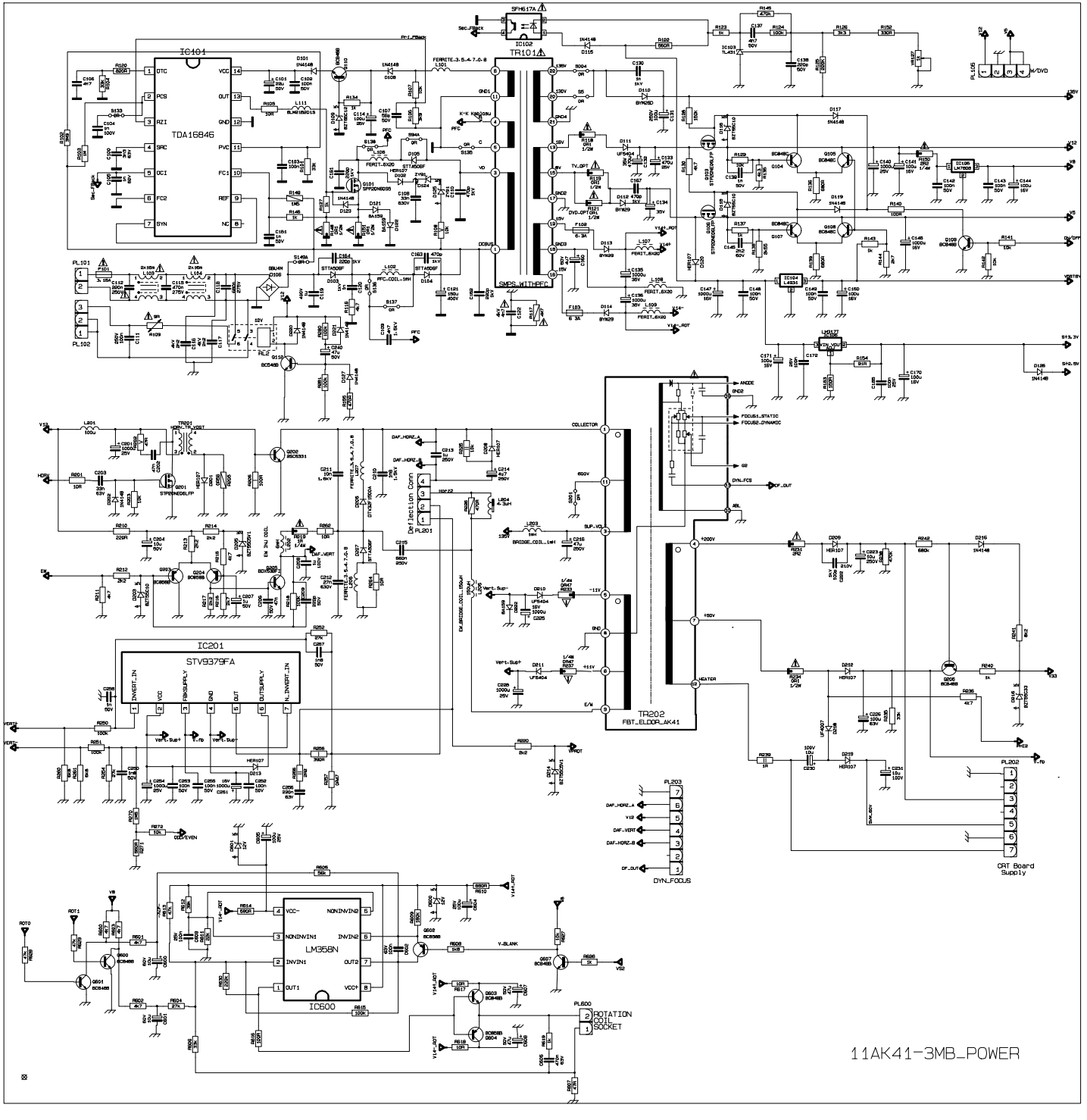
11AK41-2


IC101
TDA16846
TR101
SMPS_WITHPFC
IC102
IC201
STV9379FA
IC600
LM358N
TR202
FBT_ELDOR_AK41
Deflection Conn
PL201
PL203
DYN_FOCUS
PL202
CRT Board Supply
PL600
ROTATION COIL SOCKET
11AK41MB_POWER

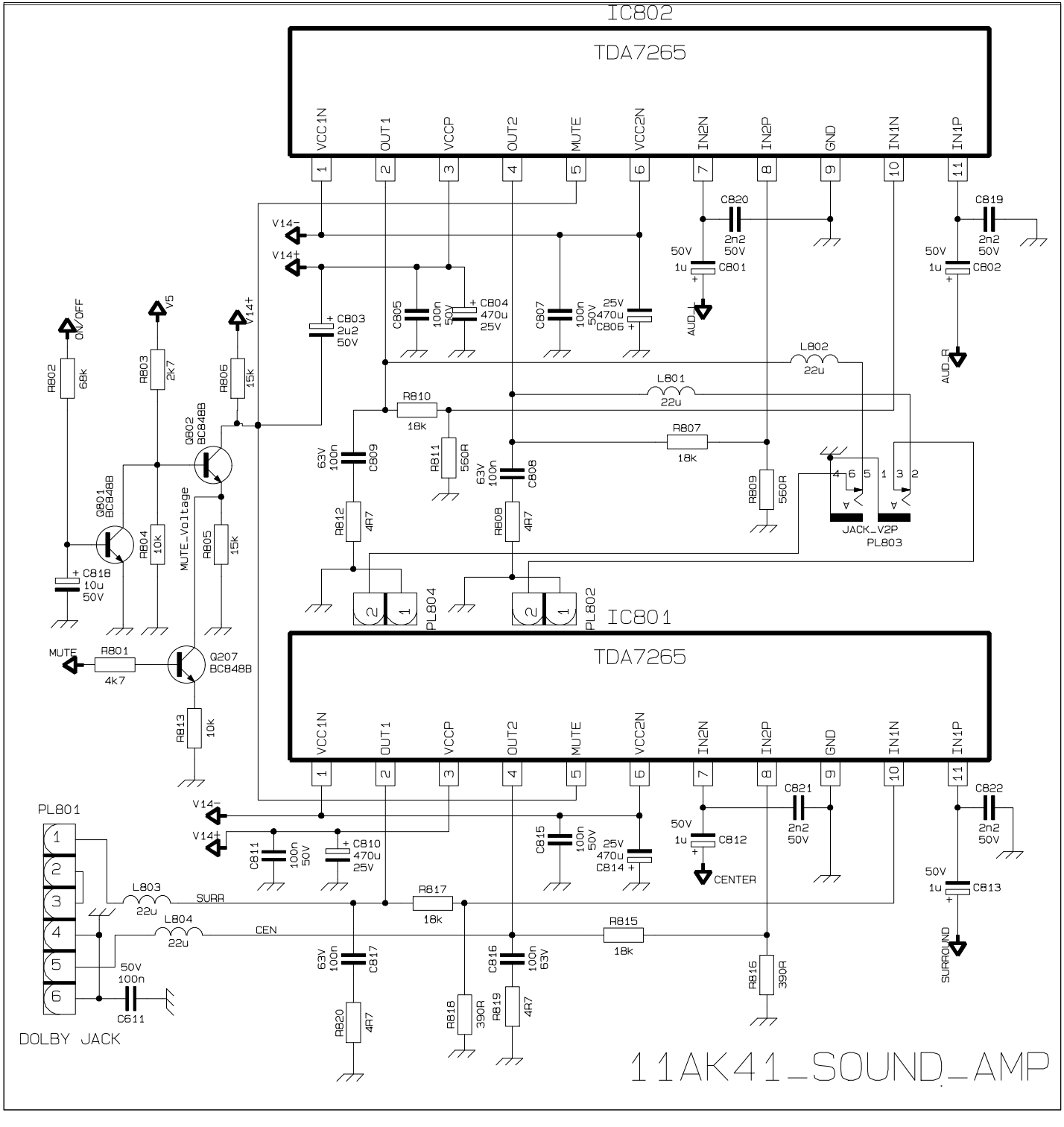

IC304
27C4001
IC900
SDA5550M
IC302
24L32A
IC901
PCF8583
IC401
TDA4470
TU401
38.9MHZ_TVTUN
PIP MODULE
FB_MODULE
DS MODULE
DVD CONN.
11AK41MB_SIGNAL


IC802
TDA7265
1 VCC1N
2 OUT1
3 VCCP
4 OUT2
5 MUTE
6 VCC2N
7 IN2N
8 IN2P
9 GND
10 IN1N
11 IN1P
V14-
V14+
V5
ON/OFF
R802 68k
R803 2k7
R805 15k
C803 2u2 50V
C805 100n 50V
C804 470u 25V
C807 100n 50V
C806 25V 470u
C820 2n2 50V
C801 50V 1u
AUD_L
C819 2n2 50V
C802 50V 1u
AUD_R
L802 22u
L801 22u
R810 18k
R807 18k
Q802 BC848B
Q801 BC848B
R804 10k
MUTE_Voltage
C809 63V 100n
R811 560R
C808 63V 100n
R812 4R7
R808 4R7
R809 560R
JACK_V2P
PL803
C818 10u 50V
PL804
PL802
IC801
TDA7265
MUTE
R801 4k7
Q207 BC848B
R813 10k
PL801
C811 100n 50V
C810 470u 25V
C815 100n 50V
C814 25V 470u
C812 50V 1u
CENTER
C821 2n2 50V
C822 2n2 50V
C813 50V 1u
SURROUND
L803 22u
SURR
R817 18k
L804 22u
CEN
R815 18k
C817 63V 100n
C816 63V 100n
R820 4R7
R818 390R
R819 4R7
R816 390R
50V 100n C611
DOLBY JACK
11AK41_SOUND_AMP

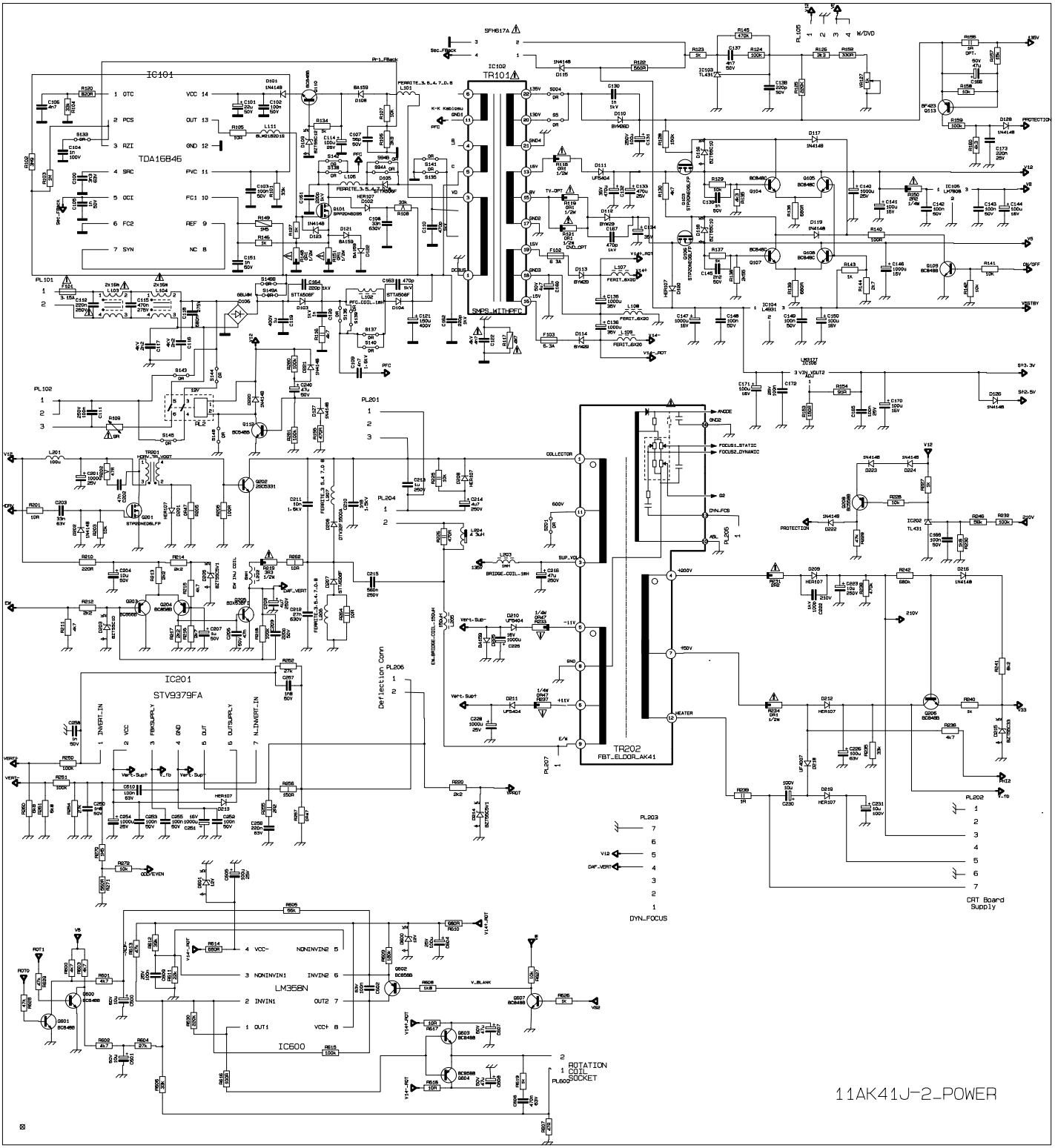
11AK41-3

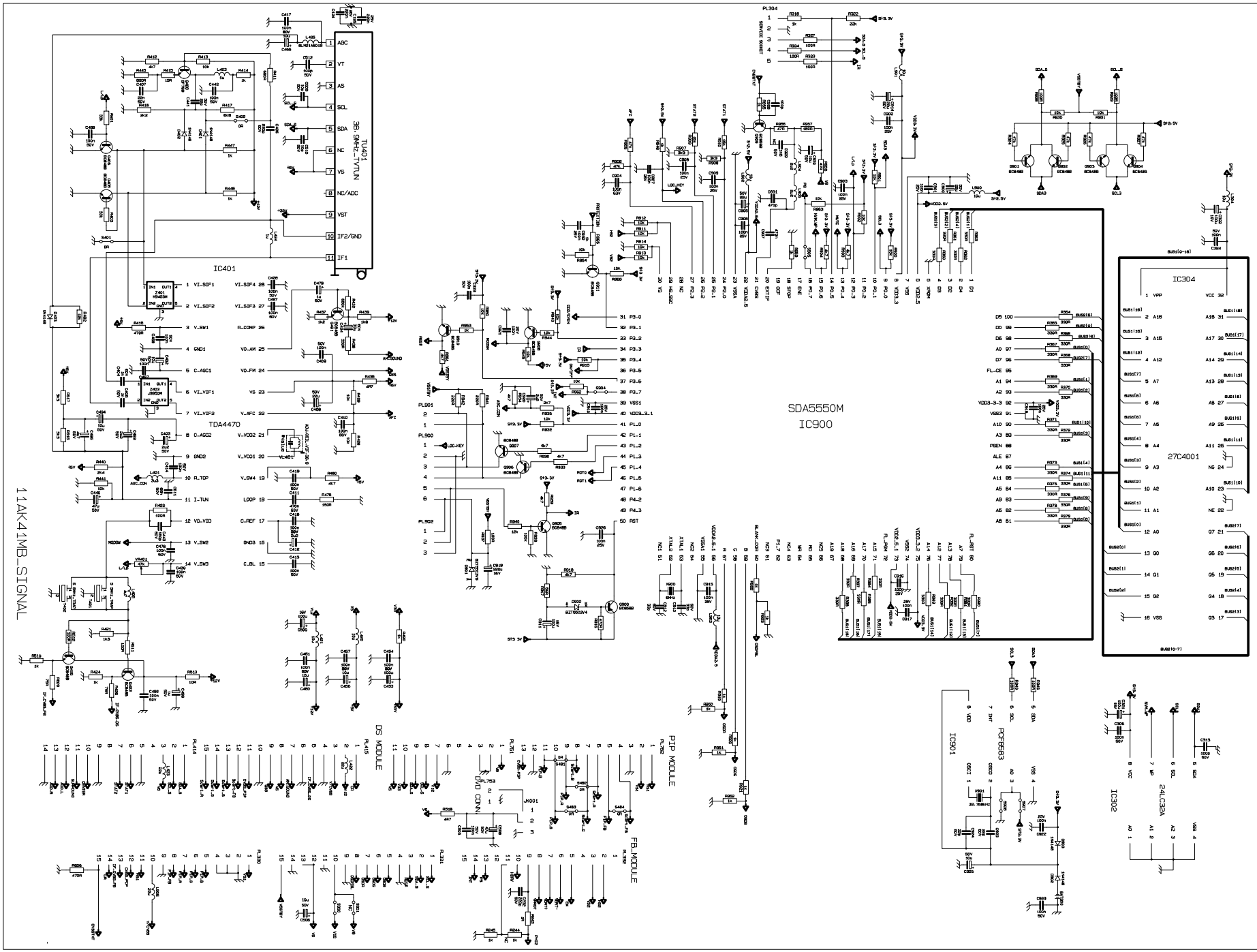

IC101
TDA16846
TR101
SMPS_WITHPFC
IC102
SFH617A
TR202
FBT_ELDOR_AK41
IC201
STV9379FA
IC600
LM358N
Deflection Conn
PL201
DYN_FOCUS
CRT Board Supply
PL600
ROTATION COIL SOCKET
11AK41-3MB_POWER

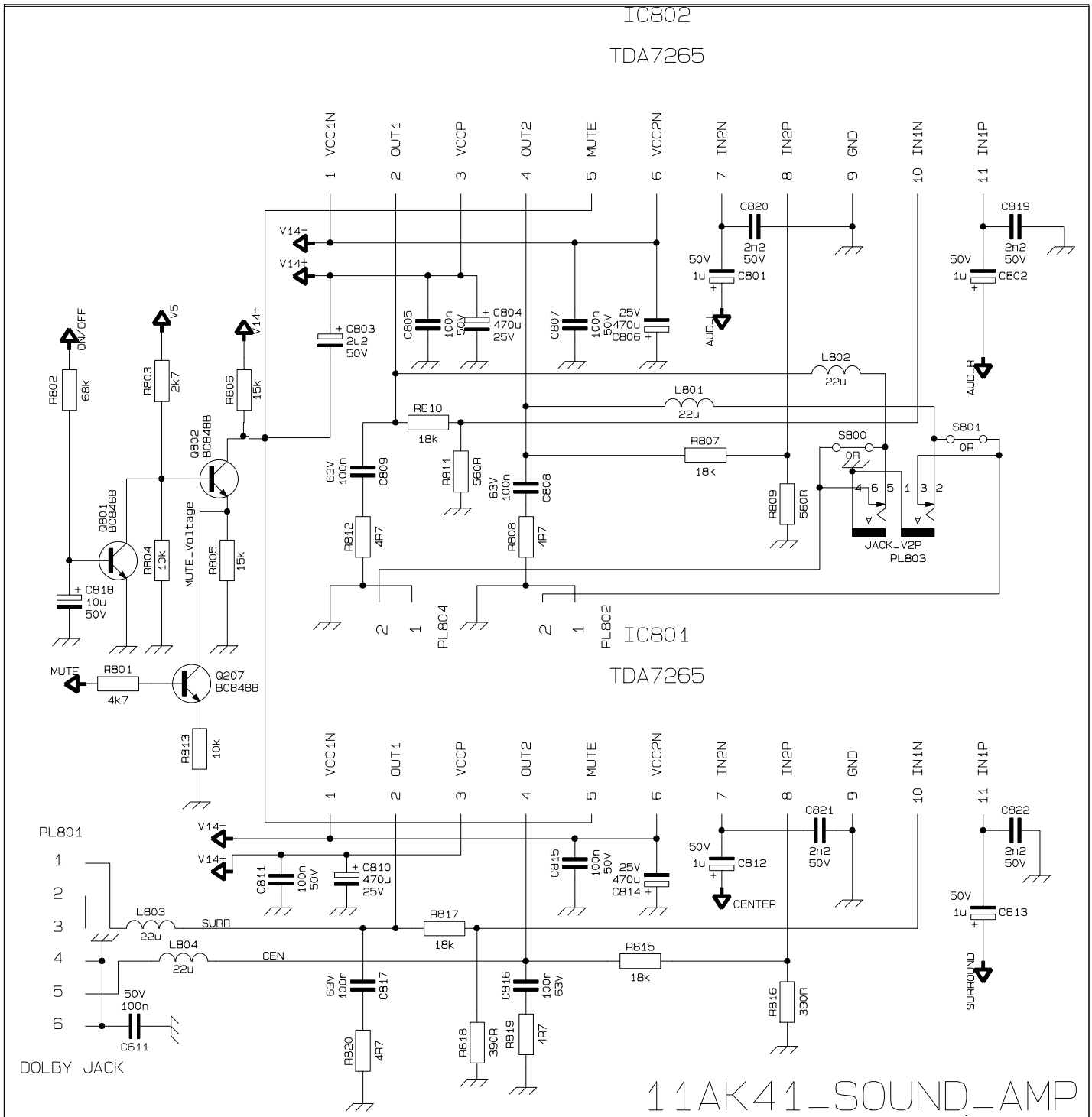
11AK41MB_SIGNAL
TL401
IC401
TDA4470
IC900
SDA5550M
IC304
27C4001
IC302
24LC32A
IC301
PCF8563
DS MODULE
PIP MODULE
FB MODULE


IC802
TDA7265
VCC1N
OUT1
VCCP
OUT2
MUTE
VCC2N
IN2N
IN2P
GND
IN1N
IN1P
V14-
V14+
C803 2u2 50V
C805 100n 50V
C804 470u 25V
C807 100n 50V
C806 25V 470u
C820 2n2 50V
C801 50V 1u
C819 2n2 50V
C802 50V 1u
AUD_L
AUD_R
L802 22u
L801 22u
R810 18k
R807 18k
R809 560R
R811 560R
R812 4R7
R808 4R7
C809 63V 100n
C808 63V 100n
JACK_V2P
PL803
PL804
PL802
IC801
ON/OFF
R802 68k
V5
R803 2k7
R806 15k
Q802 BC848B
Q801 BC848B
R804 10k
R805 15k
MUTE_Voltage
C818 10u 50V
MUTE
R801 4k7
Q207 BC848B
R813 10k
PL801
C811 100n 50V
C810 470u 25V
C815 100n 50V
C814 25V 470u
C812 50V 1u
C821 2n2 50V
C822 2n2 50V
C813 50V 1u
CENTER
SURROUND
L803 22u
SURR
L804 22u
CEN
R817 18k
R815 18k
R816 390R
C817 63V 100n
C816 63V 100n
R820 4R7
R818 390R
R819 4R7
C611 50V 100n
DOLBY JACK
11AK41_SOUND_AMP

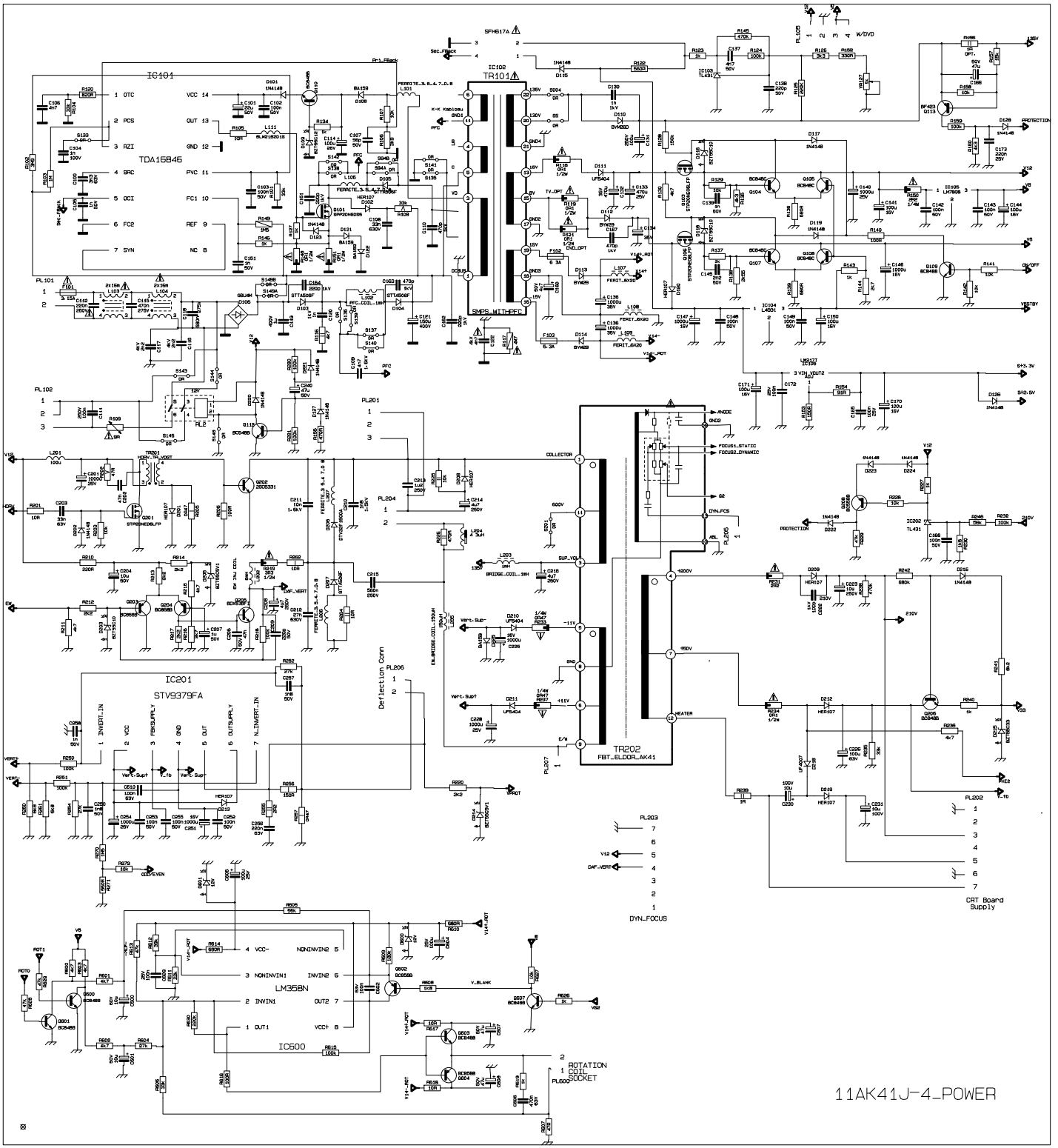
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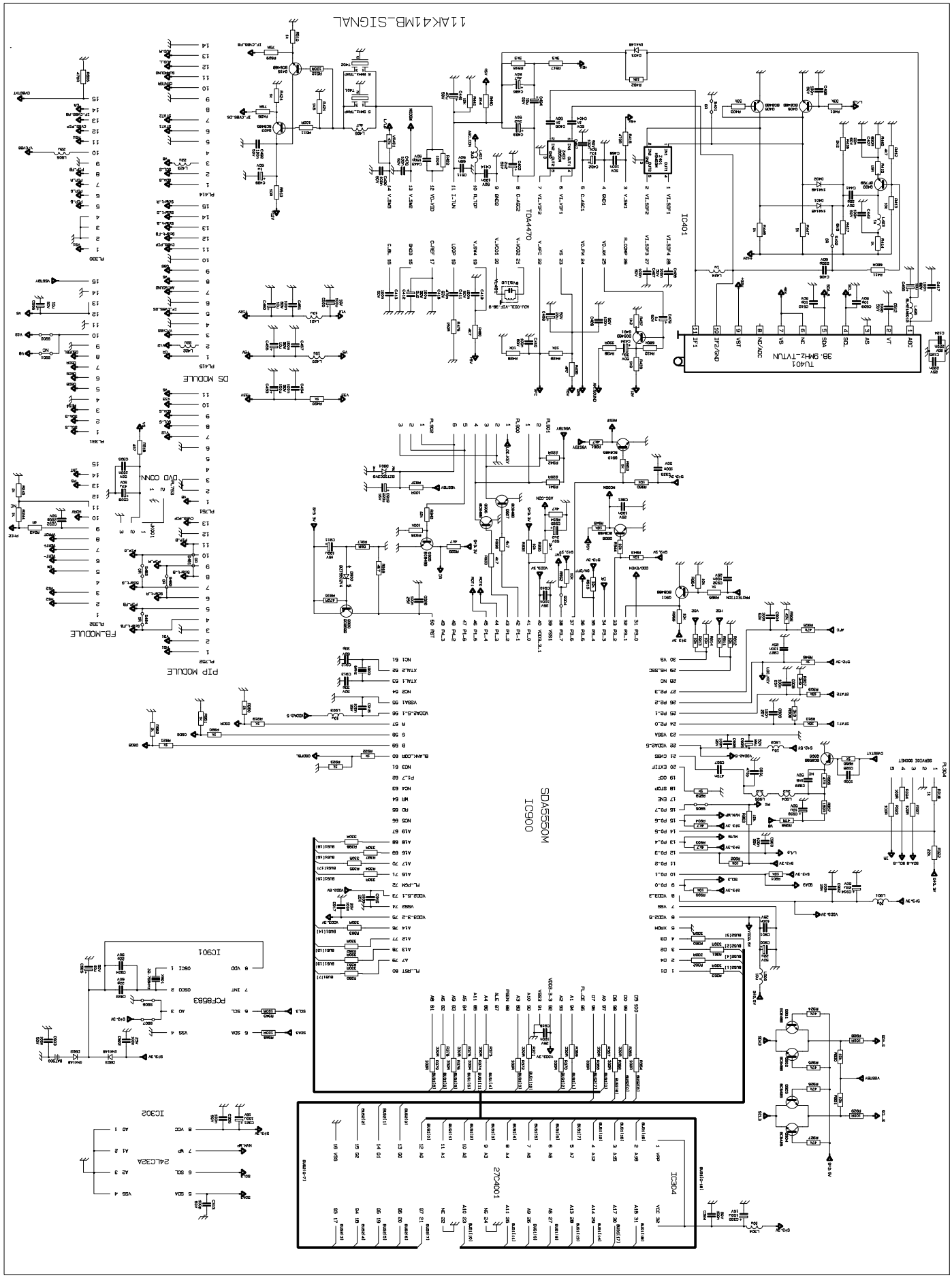

IC101
TDA16846
IC102
TR101
SMPS_WITHPFC
IC201
STV9379FA
LM358N
IC600
TR202
FBT_ELDOR_AK41
Deflection Conn
DYN_FOCUS
CRT Board Supply
ROTATION COIL SOCKET
11AK41J-2_POWER

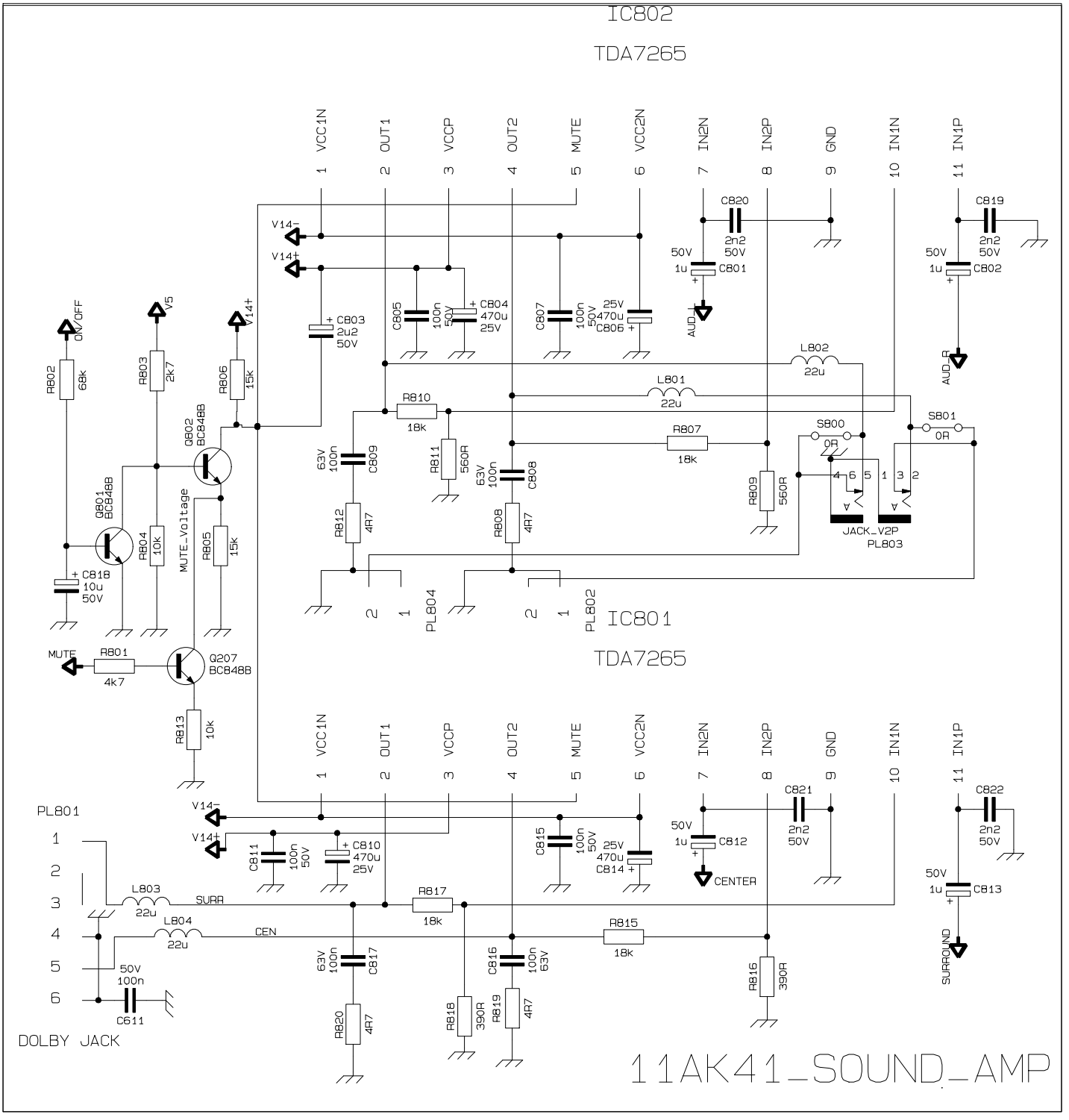

11AK41MB_SIGNAL
IC401
TDA4470
TL401
SDA5550M
IC900
IC304
27C4001
IC901
PCF8583
IC302
24LC32A
DS MODULE
PIP MODULE
DVD CONN
FBL MODULE


IC802
TDA7265
1 VCC1N
2 OUT1
3 VCCP
4 OUT2
5 MUTE
6 VCC2N
7 IN2N
8 IN2P
9 GND
10 IN1N
11 IN1P
V14-
V14+
V5
ON/OFF
R802 68k
R803 2k7
R806 15k
C803 2u2 50V
C805 100n 50V
C804 470u 25V
C807 100n 50V
C806 25V 470u
C820 2n2 50V
C801 50V 1u
C819 2n2 50V
C802 50V 1u
AUD_L
AUD_R
L802 22u
L801 22u
R810 18k
R807 18k
S800 0R
S801 0R
JACK_V2P
PL803
Q802 BC848B
Q801 BC848B
MUTE-Voltage
R804 10k
R805 15k
C818 10u 50V
C809 63V 100n
C808 63V 100n
R811 560R
R812 4R7
R808 4R7
R809 560R
PL804
PL802
IC801
MUTE
R801 4k7
Q207 BC848B
R813 10k
TDA7265
PL801
C811 100n 50V
C810 470u 25V
C815 100n 50V
C814 25V 470u
C821 2n2 50V
C812 50V 1u
CENTER
C822 2n2 50V
C813 50V 1u
SURROUND
L803 22u
SURR
L804 22u
CEN
R817 18k
R815 18k
C817 63V 100n
C816 100n 63V
R820 4R7
R818 390R
R819 4R7
R816 390R
C611 50V 100n
DOLBY JACK
11AK41_SOUND_AMP

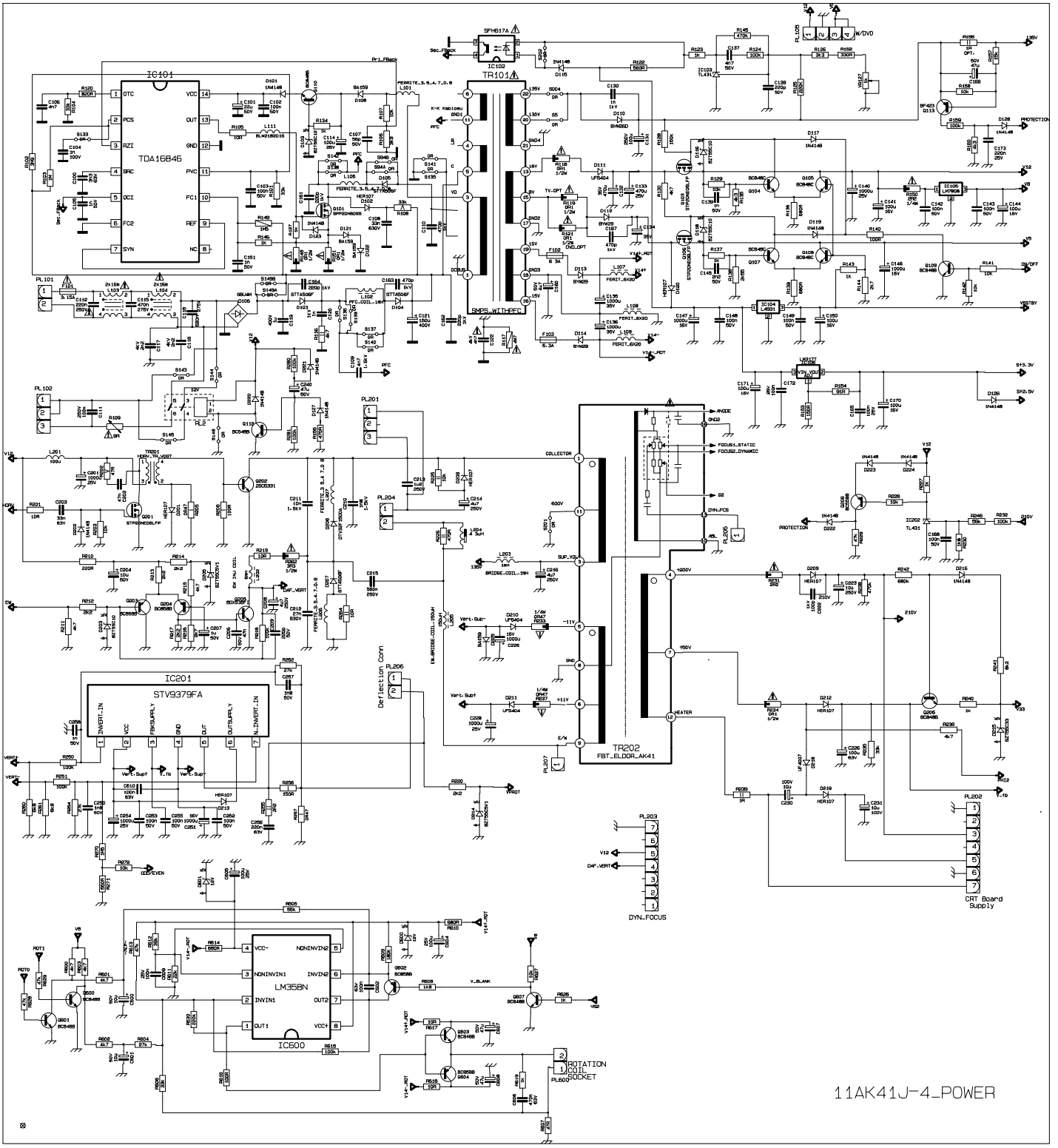
11AK41-J4

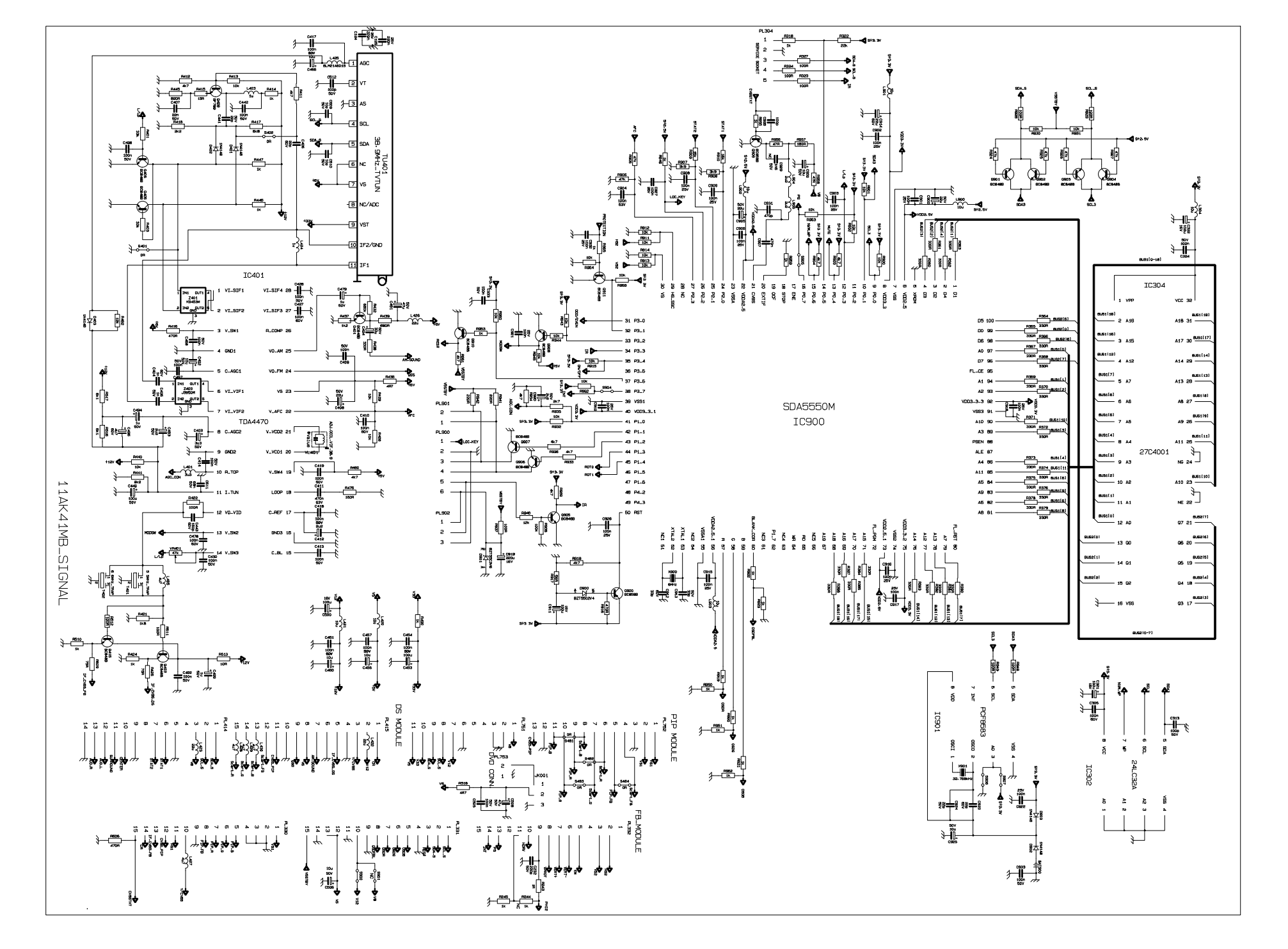

IC101
TDA16846
IC102
TR101
SMPS_WITH_PFC
IC201
STV9379FA
TR202
FBT_ELDOR_AK41
IC600
LM358N
PL600
ROTATION COIL SOCKET
DYN_FOCUS
CRT Board Supply
11AK41J-4_POWER

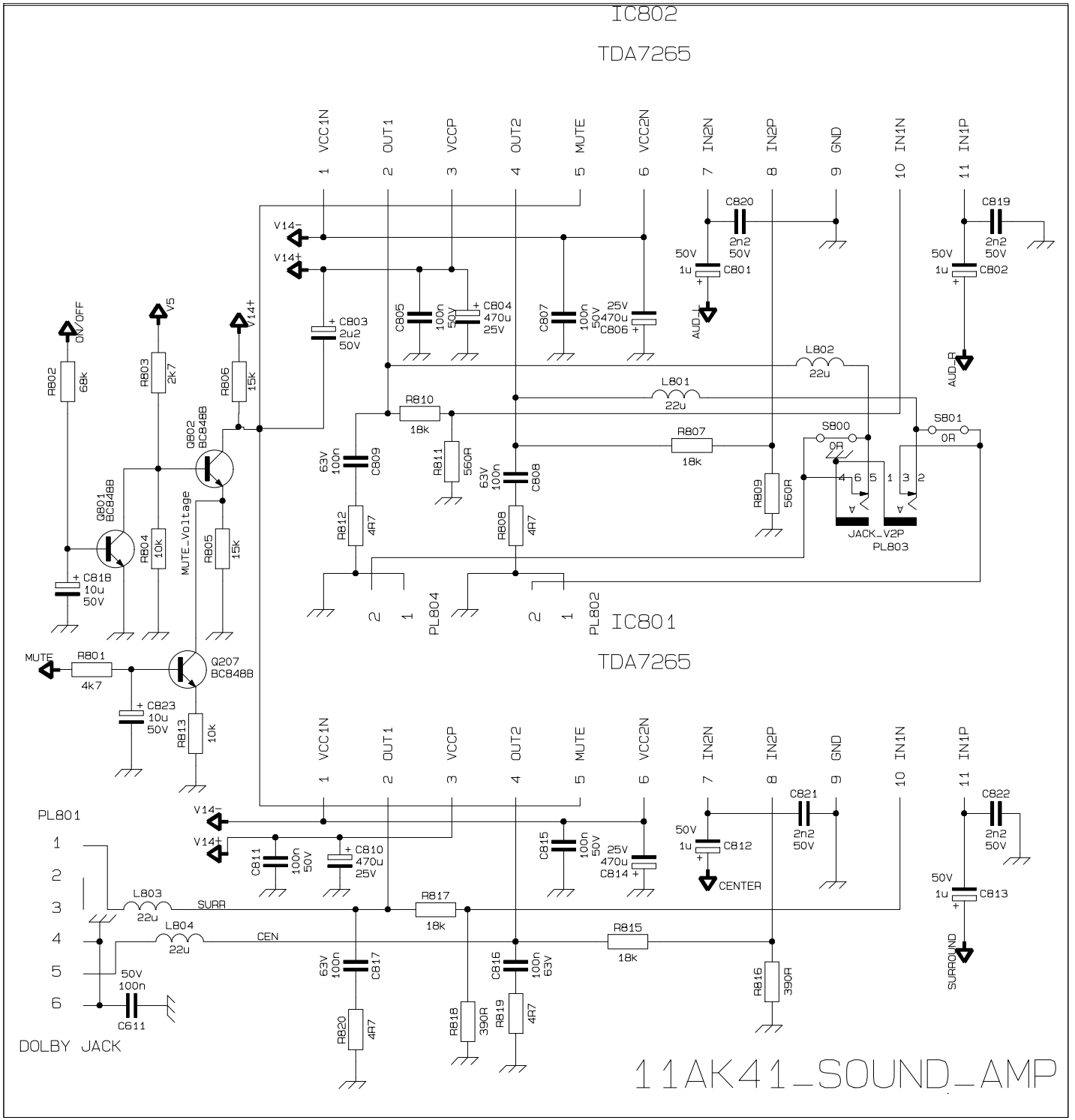

11AK41MB_SIGNAL
IC401
TDA4470
TU401
38, 9MHZ-1TVTUN
DS MODULE
FB_MODULE
PIP MODULE
DVD CONN
SDA5550M
IC900
IC901
PCF8583
IC302
24LC32A
IC304
27C4001


IC802
TDA7265
1 VCC1N
2 OUT1
3 VCCP
4 OUT2
5 MUTE
6 VCC2N
7 IN2N
8 IN2P
9 GND
10 IN1N
11 IN1P
V14-
V14+
V5
ON/OFF
R802 68k
R803 2k7
R806 15k
C803 2u2 50V
C805 100n 50V
C804 470u 25V
C807 100n 50V
C806 25V 470u
C820 2n2 50V
C801 50V 1u
C819 2n2 50V
C802 50V 1u
AUD_L
AUD_R
L802 22u
L801 22u
R810 18k
R807 18k
S800 0R
S801 0R
JACK_V2P
PL803
Q802 BC848B
Q801 BC848B
R804 10k
R805 15k
MUTE_Voltage
C809 63V 100n
R811 560R
C808 63V 100n
R812 4R7
R808 4R7
R809 560R
C818 10u 50V
PL804
PL802
IC801
TDA7265
MUTE
R801 4k7
Q207 BC848B
R813 10k
PL801
C811 100n 50V
C810 470u 25V
C815 100n 50V
C814 25V 470u
C821 2n2 50V
C812 50V 1u
CENTER
C822 2n2 50V
C813 50V 1u
SURROUND
L803 22u
SURR
L804 22u
CEN
R817 18k
R815 18k
C817 63V 100n
C816 63V 100n
R820 4R7
R818 390R
R819 4R7
R816 390R
50V 100n C611
DOLBY JACK
11AK41_SOUND_AMP

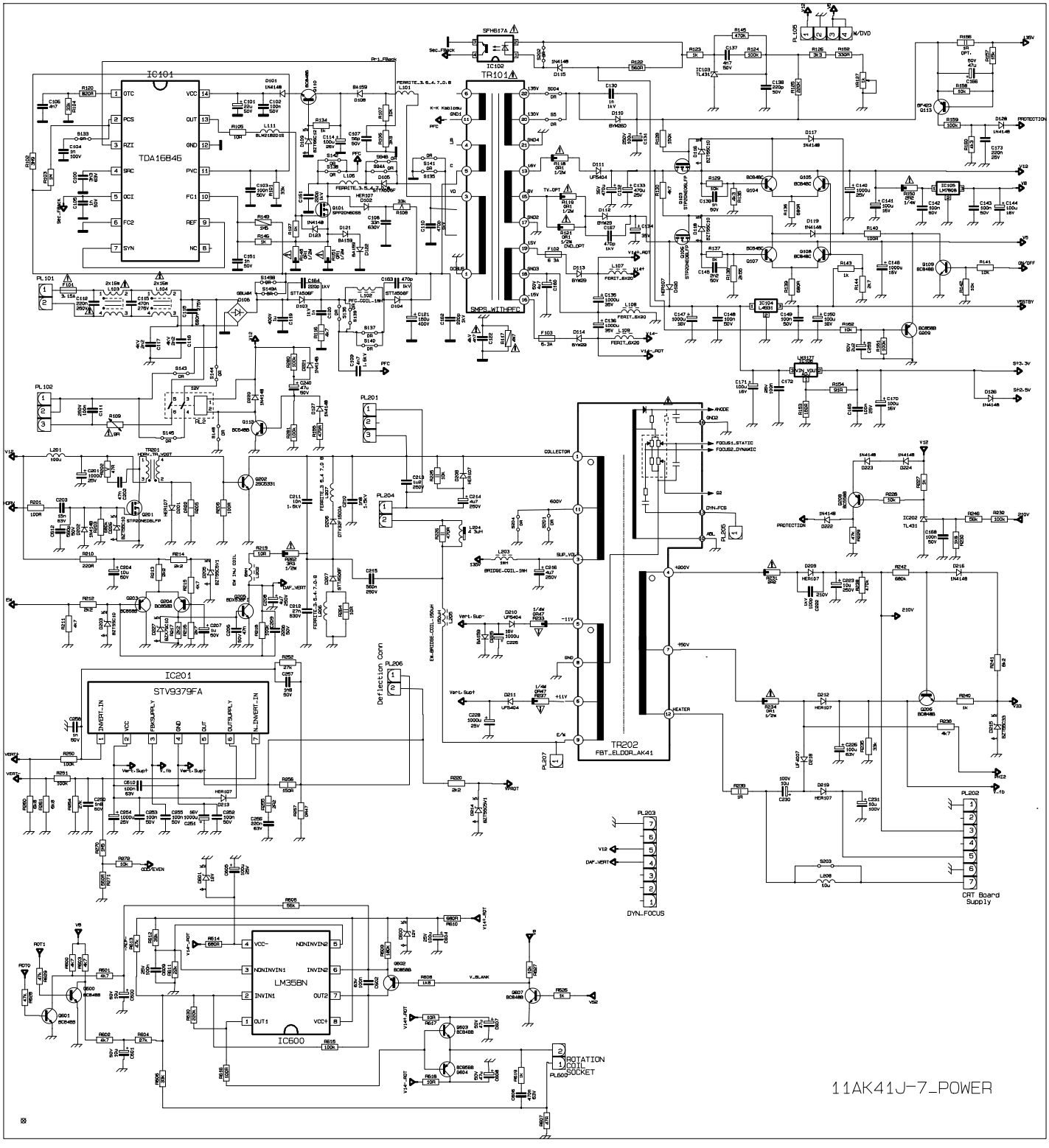
11AK41-J5

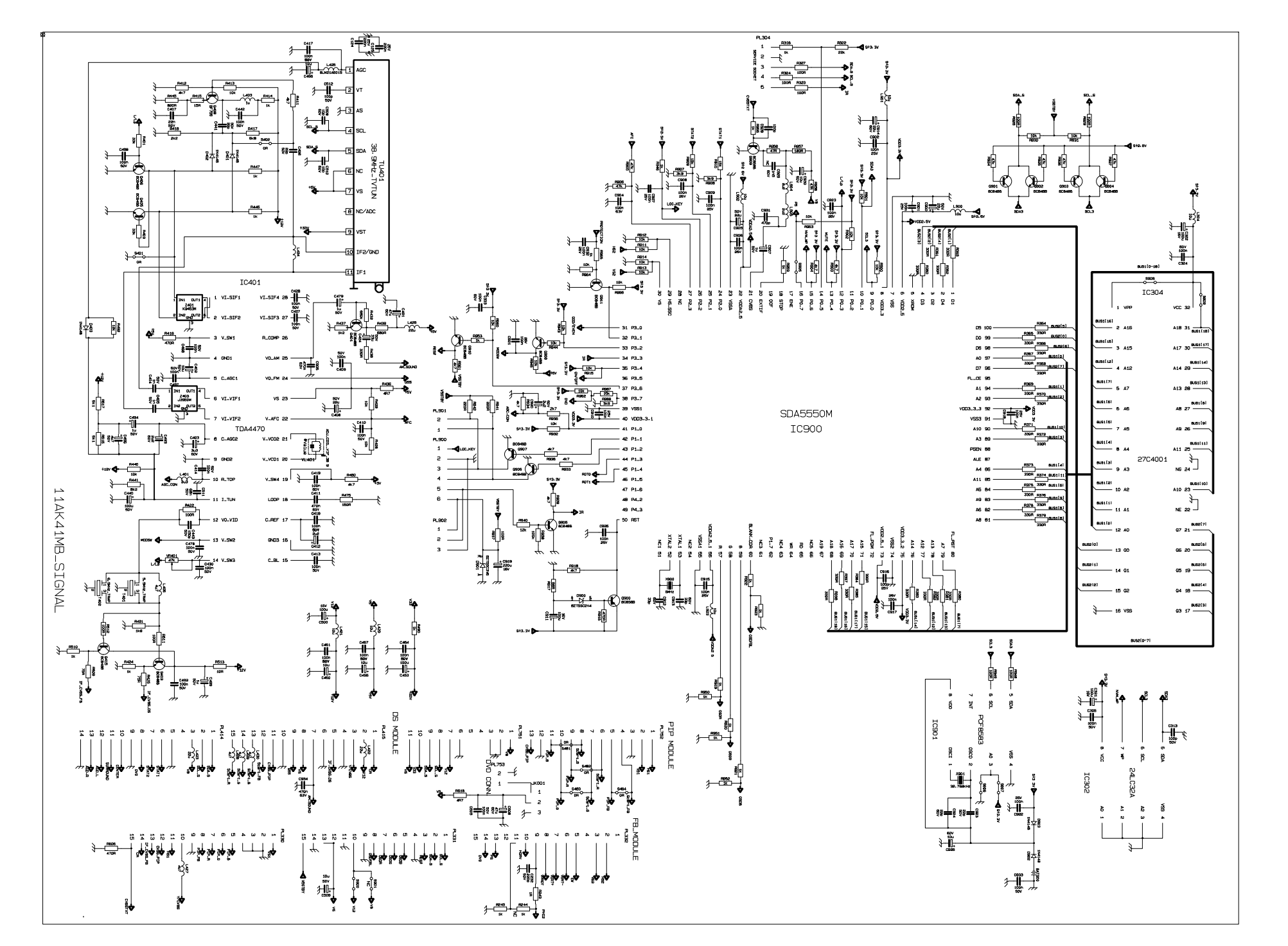

IC101
TDA16846
IC102
SFH617A
TR101
SMPS_WITHPFC
IC201
STV9379FA
TR202
FBT_ELDGR_AK41
IC600
LM358N
PL203
DYN_FOCUS
PL202
CRT Board Supply
PL600
ROTATION COIL SOCKET
Deflection Conn
11AK41J-4_POWER

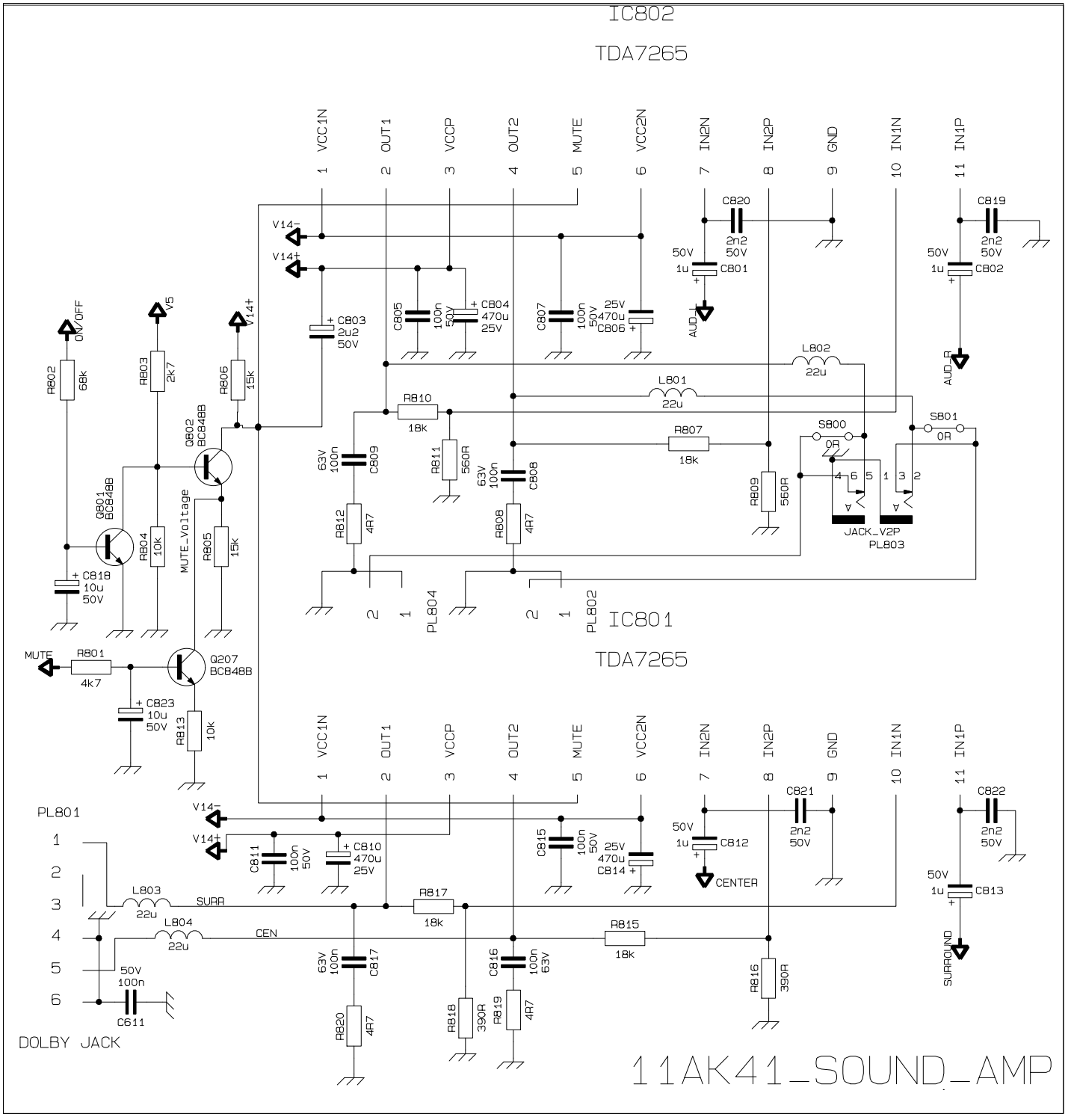

11AK41MB_SIGNAL
IC401
TLM01-TVTUN
TDA4470
SDA5550M
IC900
IC304
27C4001
IC301
PCF8583
IC302
24LC32A
PIP MODULE
DS MODULE
FB_MODULE
DVD CONN


IC802
TDA7265
1 VCC1N
2 OUT1
3 VCCP
4 OUT2
5 MUTE
6 VCC2N
7 IN2N
8 IN2P
9 GND
10 IN1N
11 IN1P
V14-
V14+
V5
ON/OFF
R802 68k
R803 2k7
R806 15k
Q802 BC848B
Q801 BC848B
R804 10k
MUTE_Voltage
R805 15k
C818 10u 50V
C803 2u2 50V
C805 100n 50V
C804 470u 25V
C807 100n 50V
C806 25V 470u
C820 2n2 50V
C801 50V 1u
AUD_L
C819 2n2 50V
C802 50V 1u
AUD_R
L802 22u
L801 22u
R810 18k
R807 18k
S800 OR
S801 OR
JACK_V2P
PL803
C809 63V 100n
R811 560R
C808 63V 100n
R812 4R7
R808 4R7
R809 560R
PL804
PL802
IC801
MUTE
R801 4k7
Q207 BC848B
C823 10u 50V
R813 10k
TDA7265
PL801
C811 100n 50V
C810 470u 25V
C815 100n 50V
C814 25V 470u
C821 2n2 50V
C812 50V 1u
CENTER
C822 2n2 50V
C813 50V 1u
SURROUND
L803 22u
SURR
R817 18k
L804 22u
CEN
R815 18k
C817 63V 100n
C816 63V 100n
R820 4R7
R818 390R
R819 4R7
R816 390R
50V 100n C611
DOLBY JACK
11AK41_SOUND_AMP

11AK41-J7


IC101
TDA16846
TR101
IC102
SFH617A
SMPS_WITHPFC
TR202
FBT_ELDDR_AK41
IC201
STV9379FA
IC600
LM358N
PL203
DYN_FOCUS
PL202
CRT Board Supply
PL206
Deflection Conn
11AK41J-7_POWER


11AK41MB_SIGNAL
IC401
TUA01
36.9MHz_TYTUN
AGC
VT
AS
SCL
SDA
NC
VS
NC/ADC
VST
IF2/GND
IF1
TDA4470
VI_SIF1
VI_SIF2
V_SW1
GND1
C_AGC1
VI_VIF1
VI_VIF2
C_AGC2
GND2
R_TOP
I_TUN
VO_VID
V_SW2
V_SW3
VI_SIF4
VI_SIF3
R_COMP
VO_AM
VO_FM
VS
V_AFC
V_VCO2
V_VCO1
V_SW4
LOOP
C_REF
GND3
C_BL
SDA5550M
IC900
IC304
27C4001
IC901
PCF8583
IC302
24LC32A
DS MODULE
PIP MODULE
DVD CONN
FBL_MODULE


IC802
TDA7265
1 VCC1N
2 OUT1
3 VCCP
4 OUT2
5 MUTE
6 VCC2N
7 IN2N
8 IN2P
9 GND
10 IN1N
11 IN1P
V14-
V14+
V5
ON/OFF
R802 68k
R803 2k7
R806 15k
C803 2u2 50V
C805 100n 50V
C804 470u 25V
C807 100n 50V
C806 25V 470u
C820 2n2 50V
C801 50V 1u
AUD_L
C819 2n2 50V
C802 50V 1u
AUD_R
L802 22u
L801 22u
R810 18k
R807 18k
S800 0R
S801 0R
JACK_V2P
PL803
Q802 BC848B
Q801 BC848B
R804 10k
R805 15k
MUTE_Voltage
C818 10u 50V
63V 100n C809
R811 560R
63V 100n C808
R812 4R7
R808 4R7
R809 560R
PL804
PL802
IC801
TDA7265
MUTE
R801 4k7
Q207 BC848B
C823 10u 50V
R813 10k
PL801
C811 100n 50V
C810 470u 25V
C815 100n 50V
25V 470u C814
C821 2n2 50V
50V 1u C812
CENTER
C822 2n2 50V
50V 1u C813
SURROUND
L803 22u
SURR
L804 22u
CEN
R817 18k
R815 18k
63V 100n C817
C816 100n 63V
R820 4R7
R818 390R
R819 4R7
R816 390R
50V 100n C611
DOLBY JACK
11AK41_SOUND_AMP

Parts List

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
1	V20062642	SPK.AS.8270/71-3250/51 (AK28)WO/WYCOM	PC	1,000	.	.	.	.	.
2	V20062640	SPK.AS.8270/71-3250/51 (AK28) L	PC	1,000	.	.	.	.	.
3	V30000426	CAP EL 6.8UF 50V M (BPL)	PC	1,000	.	.	.	.	.
4	V30001946	SPEAKER 8R 15W 57*160	PC	1,000	.	.	.	.	.
5	V30001947	TWEETER 8R 15W CLOSED	PC	1,000	.	.	.	.	.
6	V30002238	CABL 2P/200 SPK DIS UL1672AWG24	PC	1,000	.	.	.	.	.
7	V30014528	CNAS 2P/100 SIS W/BLC UL1007 AWG24	PC	1,000	.	.	.	.	.
8	V50011720	LABEL HIGH END	PC	1,000	.	.	.	.	.
9	V20062641	SPK.AS.8270/71-3250/51 (AK28) R	PC	1,000	.	.	.	.	.
10	V30000426	CAP EL 6.8UF 50V M (BPL)	PC	1,000	.	.	.	.	.
11	V30001946	SPEAKER 8R 15W 57*160	PC	1,000	.	.	.	.	.
12	V30001947	TWEETER 8R 15W CLOSED	PC	1,000	.	.	.	.	.
13	V30002238	CABL 2P/200 SPK DIS UL1672AWG24	PC	1,000	.	.	.	.	.
14	V30002349	CNAS 2P/900 SPK DIS W/C UL2547 AWG24	PC	1,000	.	.	.	.	.
15	V50011720	LABEL HIGH END	PC	1,000	.	.	.	.	.
16	V20093219	CRT KIT (32"16:9 SFLAT) AK41J WO/UL	PC	1,000	.	.	.	.	.
17	V30014862	32" 16:9 DEG COIL&EARTH CB. WO/UL SLAT	PC	1,000	.	.	.	.	.
18	V30016421	CNAS 2P/600 VRT SIS W/C UL1007AWG24	PC	1,000	.	.	.	.	.
19	V30016483	CNAS 2P/600 HRZ DIS W/C UL1672AWG24	PC	1,000	.	.	.	.	.
20	V20097687	ON/OFF SW ASSY.FTZ(TOSHIBA)28"16:9-32-33	PC	1,000	.	.	.	.	.
21	V30002174	SWITCH ON/OFF 4A/64A	PC	1,000	.	.	.	.	.
22	V30002368	CNAS 2P/650 AC MAINS W/C	PC	1,000	.	.	.	.	.
23	V30016513	POWER CORD 2.2MT JVC (W/FILTER)	PC	1,000	.	.	.	.	.
24	V40000127	SWITCH INSULATION DOOR LK101	PC	1,000	.	.	.	.	.
25	V40001898	MACARON (12cm.lsý ile daralan)	PC	1,000	.	.	.	.	.
26	V20098659	SNOW BOX ASSY 324XW	PC	1,000	.	.	.	.	.
27	V20093536	SNOW BOX BOTTOM 324XW	PC	1,000	.	.	.	.	.
28	V60000011	EPS	KG	0,564	.	.	.	.	.
29	V20093537	SNOW BOX TOP 324XW	PC	1,000	.	.	.	.	.
30	V60000011	EPS	KG	0,564	.	.	.	.	.
31	V20102528	MD.ASY.TK127-XX41-41W 5SW WO/DVD AK37-41	PC	1,000	.	.	.	.	.
33	V30002181	SWITCH TACT	PC	5,000	SW1	SW2	SW3	SW4	SW5
34	V30002302	CNAS 6P/450 TB FLT W/C UL2468AWG24	PC	1,000	PL1	.	.	.	.
35	V30019674	LED RED ORANGE 5MM ULTRA BRIGHT	PC	2,000	LD1	LD2	.	.	.
36	V40000084	BRACKET & PREAMPLIFIER	PC	1,000	IC1	.	.	.	.
41	V30000526	RES CF 1/4W 1.5K J	PC	1,000	R2	.	.	.	.
42	V30000622	RES CF 1/4W 270R J	PC	1,000	R5	.	.	.	.
43	V30000689	RES CF 1/4W 3.9K J	PC	1,000	R1	.	.	.	.
44	V30000712	RES CF 1/4W 470R J	PC	1,000	R4	.	.	.	.
45	V30000718	RES CF 1/4W 4.7K J	PC	1,000	R6	.	.	.	.
46	V30000770	RES CF 1/4W 680R J	PC	1,000	R3	.	.	.	.
48	V30022893	PCB 11TK127-6	PC	1,000	.	.	.	.	.
49	V30000371	CAP EL 22UF 50V M	PC	1,000	C1	.	.	.	.
50	V30001455	TR BC558B	PC	1,000	Q1	.	.	.	.
51	V20106208	BUTTON AS.2841-2841W-3241W-2441W(SILVER)	PC	1,000	.	.	.	.	.
52	V20094341	LENS LED XX41 (I) MILKY	PC	1,000	.	.	.	.	.
53	V60000008	HIPS (NATURAL)	G	0,014	.	.	.	.	.
54	V60000927	CRYSTAL PS (NATURAL)	G	7,000	.	.	.	.	.
55	V20094352	LENS PRE-AMP XX41 (I)	PC	1,000	.	.	.	.	.
56	V60000927	CRYSTAL PS (NATURAL)	G	0,002	.	.	.	.	.
57	V20106209	BUTTON ON/OFF XX41 SILVER(P)	PC	1,000	.	.	.	.	.
58	V20106210	BUTTON ON/OFF XX41 EKO.GRAY(I)	PC	1,000	.	.	.	.	.
59	V60000001	ABS (NATURAL)	KG	0,005	.	.	.	.	.
60	V60001195	MASTERBATCH EKO.GRAY GR 3216 SE1	G	0,026	.	.	.	.	.
61	V60000895	PAINT SILVER 022-6485 (SU BAZLI)L8341413	KG	0,002	.	.	.	.	.
62	V20106211	BUTTON FUNCTION XX41 SILVER(P)	PC	1,000	.	.	.	.	.
63	V20106222	BUTTON FUNCTION XX41 EKO.GRAY(I)	PC	1,000	.	.	.	.	.
64	V60000001	ABS (NATURAL)	KG	0,020	.	.	.	.	.
65	V60001195	MASTERBATCH EKO.GRAY GR 3216 SE1	G	0,101	.	.	.	.	.
66	V60000895	PAINT SILVER 022-6485 (SU BAZLI)L8341413	KG	0,001	.	.	.	.	.
67	V20108360	BUTTON FUNCT.XX42/42W/43W/44W EKO.GR(I)#	PC	1,000	.	.	.	.	.
68	V60000001	ABS (NATURAL)	KG	0,018	.	.	.	.	.
69	V60001195	MASTERBATCH EKO.GRAY GR 3216 SE1	G	0,090	.	.	.	.	.
70	V35000013	SPRING ON/OFF SWITCH	PC	1,000	.	.	.	.	.
71	V20106289	BACK C.3241/42/43/44W W/SB (UL)SILVER(P)	PC	1,000	.	.	.	.	.
72	V20106288	BACK C.3241/42/43/44W SB(UL)EKO.GRAY(I)	PC	1,000	.	.	.	.	.
73	V60000009	FR-HIPS NATR.V-0	KG	4,786	.	.	.	.	.
74	V60001195	MASTERBATCH EKO.GRAY GR 3216 SE1	G	24,050	.	.	.	.	.
75	V60000895	PAINT SILVER 022-6485 (SU BAZLI)L8341413	KG	0,125	.	.	.	.	.
76	V20106290	SCR.A.3241W W/SB/BAV AK41(V0)(GRAY)	PC	1,000	.	.	.	.	.
77	V20098439	BACK DOOR AK28 EKO.GRAY (I) V.0	PC	1,000	.	.	.	.	.
78	V60000009	FR-HIPS NATR.V-0	KG	0,058	.	.	.	.	.
79	V60001195	MASTERBATCH EKO.GRAY GR 3216 SE1	G	0,580	.	.	.	.	.
80	V35000211	SCREW S C ZNSY YSMB 2.9*9.5	PC	4,000	.	.	.	.	.
81	V35000214	SCREW S C ZNSY YSMB 3.5*19	PC	2,000	.	.	.	.	.
82	V35000224	SCREW C SK ZN YFMB 2.9*9.5	PC	17,000	.	.	.	.	.
83	V35000235	SCREW P C ZN AKBR 7*32	PC	4,000	.	.	.	.	.
84	V35004572	SCREW P C AgSYF YSB 4x20	PC	8,000	.	.	.	.	.
85	V40000082	FOOT RUBBER 8410/11	PC	4,000	.	.	.	.	.
86	V20107903	CHS.ASSY.41J-5351411182126N	PC	1,000	.	.	.	.	.
88	V20055386	MD.ASY.FB28-FEATURE BOX 28 (FB28-1)	PC	1,000	.	.	.	.	.
90	V20055388	MD.SMD.FB28-FEATURE BOX 28 (FB28-1)	PC	1,000	.	.	.	.	.
94	V30001986	FIXED COIL 3.3UH Q65 K	PC	3,000	L004	L005	L007	.	.
95	V30001992	FIXED COIL 10UH Q65 K-A	PC	3,000	L001	L002	L003	.	.
96	V30015627	PCB 11FB28-3	PC	1,000	.	.	.	.	.
97	V30000109	CAP MKT 470NF 63V J	PC	4,000	C035	C078	C079	C25	.
98	V30000345	CAP EL 10UF 50V M	PC	19,000	C102	C021	C022	C024	C026
.	.	.	.	.	C027	C028	C036	C037	C074
.	.	.	.	.	C075	C076	C077	C080	C081
.	.	.	.	.	C082	C098	C099	C108	.
99	V30000371	CAP EL 22UF 50V M	PC	2,000	C039	C041	.	.	.
100	V30000392	CAP EL 0.33UF 50V M	PC	4,000	C101	C040	C042	C043	.
101	V30000393	CAP EL 3.3UF 50V M	PC	1,000	C100	.	.	.	.
102	V30001454	TR BC548B	PC	11,000	Q001	Q002	Q004	Q005	Q007
.	.	.	.	.	Q008	Q010	Q011	Q013	Q014

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
.	.	.	.	.	Q015	.	.	.	.
103	V30001455	TR BC558B	PC	4,000	Q003	Q006	Q009	Q012	.
104	V30001986	FIXED COIL 3.3UH Q65 K	PC	3,000	L008	L009	L010	.	.
105	V30001996	FIXED COIL 22UH Q40 K	PC	1,000	L006	.	.	.	.
106	V30000186	CAP SMD 10PF 50V D COG 0805	PC	6,000	C084	C110	C111	C107	C005
.	.	.	.	.	C006	.	.	.	.
107	V30000228	CAP SMD 27PF 50V J CH (0805)	PC	2,000	C054	C055	.	.	.
108	V30000232	CAP SMD 270PF 50V J (0805)	PC	12,000	C007	C010	C013	C016	C048
.	.	.	.	.	C051	C056	C085	C088	C089
.	.	.	.	.	C094	C095	.	.	.
109	V30000242	CAP SMD 330PF 50V J 0805	PC	4,000	C029	C031	C033	C113	.
110	V30000265	CAP SMD 560PF 50V J (0805)	PC	12,000	C008	C011	C014	C017	C049
.	.	.	.	.	C052	C057	C073	C087	C090
.	.	.	.	.	C093	C096	.	.	.
111	V30000284	CAP SMD 1NF 50V K R (0805)	PC	3,000	C059	C104	C112	.	.
112	V30000289	CAP SMD 10NF 50V K R (0805)	PC	11,000	C038	C060	C063	C064	C065
.	.	.	.	.	C066	C067	C069	C070	C071
.	.	.	.	.	C103	.	.	.	.
113	V30000294	CAP SMD 100NF 50V K (0805)	PC	12,000	C002	C020	C045	C046	C047
.	.	.	.	.	C061	C062	C068	C083	C105
.	.	.	.	.	C106	C109	.	.	.
114	V30000309	CAP SMD 2.2NF 50V K R 0805	PC	15,000	C001	C004	C009	C012	C015
.	.	.	.	.	C018	C019	C050	C053	C058
.	.	.	.	.	C072	C086	C091	C092	C097
115	V30000334	CAP SMD 47NF 50V K (0805)	PC	1,000	C003	.	.	.	.
116	V30000464	RES SMD 1/10W 100R J	PC	13,000	R002	R079	R085	R091	R155
.	.	.	.	.	R156	R157	R158	R159	R161
.	.	.	.	.	R162	R163	R164	.	.
117	V30000469	RES SMD 1/10W 1K J 0805	PC	6,000	R120	R007	R034	R084	R090
.	.	.	.	.	R096	.	.	.	.
118	V30000475	RES SMD 1/10W 10K J 0805	PC	7,000	R100	R105	R107	R108	R117
.	.	.	.	.	R119	R033	.	.	.
119	V30000524	RES SMD 1/10W 150R J (0805)	PC	1,000	R032	.	.	.	.
120	V30000534	RES SMD 1/10W 15K J (0805)	PC	3,000	R110	R111	R149	.	.
121	V30000588	RES SMD 1/10W 220R J 0805	PC	5,000	R006	R083	R089	R095	R122
122	V30000593	RES SMD 1/10W 2.2K J (0805)	PC	2,000	R101	R112	.	.	.
123	V30000597	RES SMD 1/10W 22K J	PC	2,000	R050	R098	.	.	.
124	V30000626	RES SMD 1/10W 270R J	PC	1,000	R099	.	.	.	.
125	V30000653	RES SMD 1/10W 33R J	PC	1,000	R005	.	.	.	.
126	V30000659	RES SMD 1/10W 330R J (0805)	PC	32,000	R125	R126	R127	R128	R129
.	.	.	.	.	R130	R131	R132	R133	R134
.	.	.	.	.	R135	R136	R137	R138	R141
.	.	.	.	.	R142	R143	R144	R145	R001
.	.	.	.	.	R008	R009	R010	R011	R012
.	.	.	.	.	R013	R014	R015	R016	R017
.	.	.	.	.	R018	R021	.	.	.
127	V30000664	RES SMD 1/10W 3.3K J (0805)	PC	1,000	R106	.	.	.	.
128	V30000688	RES SMD 1/10W 390R J (0805)	PC	4,000	R003	R080	R086	R092	.
129	V30000721	RES SMD 1/10W 4.7K J	PC	4,000	R074	R075	R076	R165	.
130	V30000797	RES SMD 1/10W 75R J (0805)	PC	21,000	R024	R026	R028	R030	R047
.	.	.	.	.	R053	R054	R055	R056	R057
.	.	.	.	.	R058	R059	R082	R088	R094
.	.	.	.	.	R150	R151	R152	R153	R154
.	.	.	.	.	R140	.	.	.	.
131	V30000833	RES SMD 1/10W 91R J	PC	1,000	R031	.	.	.	.
132	V30001284	DIODE 1N4148 0.15A/100V 0.5A	PC	3,000	D001	D002	D003	.	.
134	V30006462	RES SMD 1/10W 22R J 0805	PC	6,000	R121	R004	R048	R081	R087
.	.	.	.	.	R093	.	.	.	.
135	V30007668	IC SDA9400	PC	1,000	IC003	.	.	.	.
136	V30007739	IC LM317T D2PAK	PC	1,000	IC004	.	.	.	.
137	V30010348	IC CIP325OA	PC	1,000	IC002	.	.	.	.
138	V30010349	IC DDP3310	PC	1,000	IC005	.	.	.	.
139	V30010350	IC VPC3211	PC	1,000	IC001	.	.	.	.
140	V30010560	CAP SMD 220NF 25V K R (0805)	PC	3,000	C030	C032	C034	.	.
142	V30001813	CONN HOUSING 15P 2.5MM SIDE WHT	PC	3,000	PL001	PL002	PL003	.	.
143	V30001962	FERRITE AK18 VIDEO	PC	9,000	Z1	Z10	Z14	Z18	Z24
.	.	.	.	.	Z25	Z26	Z37	Z38	.
144	V30007745	CONN HEADER 10P 2.54MM SIDE WHT DR	PC	1,000	PL004	.	.	.	.
145	V30008778	XTAL 20.25MHZ	PC	1,000	X001	.	.	.	.
146	V30008782	XTAL 5MHZ	PC	1,000	X002	.	.	.	.
147	V35001857	SHIELD SOLDER SIDE (FEATURE BOX-11AK28)	PC	1,000	.	.	.	.	.
148	V35003011	SHIELD COVER (FEATURE BOX AK28)	PC	1,000	.	.	.	.	.
149	V35003321	SHIELD COMPONENT SIDE-1(F-BOX AK28)	PC	1,000	.	.	.	.	.
150	V20082412	MD.ASY.ST41J-FAV+HP+BAV+VD	PC	1,000	.	.	.	.	.
153	V30001207	RES FUSE 1/4W 10R J	PC	1,000	R535	.	.	.	.
154	V30001619	IC VIDEO SWITCH TEA6415C DIP20	PC	1,000	IC502	.	.	.	.
155	V30001756	XTAL 18.432MHZ	PC	1,000	X501	.	.	.	.
156	V30001811	CONN HOUSING 14P 2.5MM SIDE WHT	PC	1,000	PL504	.	.	.	.
157	V30001813	CONN HOUSING 15P 2.5MM SIDE WHT	PC	1,000	PL503	.	.	.	.
158	V30001866	SOCKET SCART (R) VER BLACK	PC	1,000	PL501	.	.	.	.
159	V30001867	SOCKET SCART (R) VER BLUE	PC	1,000	PL506	.	.	.	.
161	V30001518	IC TDA1308	PC	1,000	IC503	.	.	.	.
162	V30001842	CONN HEADER 3P 2.5MM SIDE BLUE SD	PC	1,000	PL508	.	.	.	.
164	V30001833	CONN HEADER 2P 2.5MM SIDE BLUE SD	PC	1,000	PL507	.	.	.	.
165	V30001844	CONN HEADER 3P 2.5MM SIDE GREEN SD	PC	1,000	PL502	.	.	.	.
167	V30001880	JACK RCA 3P (BACK AV) 180°	PC	1,000	JK501	.	.	.	.
169	V30009354	IC MSP3411 SDIP64	PC	1,000	IC501	.	.	.	.
171	V20077175	MD.SMD.ST41-COMMON	PC	1,000	.	.	.	.	.
176	V30000452	RES CF 1/4W 10R J	PC	2,000	R539	R552	.	.	.
177	V30000459	RES CF 1/4W 100R J	PC	4,000	R503	R504	R532	R533	.
178	V30000466	RES CF 1/4W 1K J	PC	1,000	R513	.	.	.	.
179	V30000583	RES CF 1/4W 220R J	PC	1,000	R582	.	.	.	.
180	V30000712	RES CF 1/4W 470R J	PC	1,000	R546	.	.	.	.
181	V30000792	RES CF 1/4W 75R J	PC	4,000	R563	R556	R557	R558	.
182	V30001231	RES FUSE 1/4W 27R J	PC	1,000	R613	.	.	.	.

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
183	V30001284	DIODE 1N4148 0.15A/100V 0.5A	PC	1,000	D502	.	.	.	.
184	V30001349	DIODE ZENER 11V	PC	1,000	IC504	.	.	.	.
185	V30001369	DIODE ZENER 3.6V ZPD	PC	1,000	D501	.	.	.	.
186	V30001996	FIXED COIL 22UH Q40 K	PC	11,000	L501	L502	L517	L507	L508
.	.	.	.	.	L509	L510	L513	L514	L515
.	.	.	.	.	L516	.	.	.	.
187	V30017302	PCB 11ST41-4	PC	1,000	.	.	.	.	.
188	V30000074	CAP MKT 100NF 63V J	PC	5,000	C560	C566	C567	C569	C576
189	V30000092	CAP MKT 220NF 63V J	PC	6,000	C582	C585	C586	C587	C592
.	.	.	.	.	C620	.	.	.	.
190	V30000109	CAP MKT 470NF 63V J	PC	6,000	C522	C523	C524	C525	C527
.	.	.	.	.	C528	.	.	.	.
191	V30000345	CAP EL 10UF 50V M	PC	3,000	C531	C532	C533	.	.
192	V30000352	CAP EL 100UF 16V M	PC	2,000	C504	C556	.	.	.
193	V30000371	CAP EL 22UF 50V M	PC	6,000	C516	C521	C623	C624	C645
.	.	.	.	.	C646	.	.	.	.
194	V30000393	CAP EL 3.3UF 50V M	PC	1,000	C530	.	.	.	.
195	V30000407	CAP EL 470UF 16V M	PC	4,000	C501	C505	C551	C552	.
196	V30000204	CAP SMD 150PF 50V J 0805	PC	5,000	C553	C554	C583	C584	C612
197	V30000216	CAP SMD 1.8PF 50V J CH (0805)	PC	2,000	C536	C537	.	.	.
198	V30000232	CAP SMD 270PF 50V J (0805)	PC	1,000	C635	.	.	.	.
199	V30000237	CAP SMD 33PF 50V J (0805)	PC	5,000	C631	C632	C633	C634	C637
200	V30000247	CAP SMD 39PF 50V J (0805)	PC	2,000	C561	C562	.	.	.
201	V30000252	CAP SMD 47PF 50V J (0805)	PC	2,000	C509	C510	.	.	.
202	V30000256	CAP SMD 470PF 50V J (0805)	PC	1,000	C636	.	.	.	.
203	V30000263	CAP SMD 56PF 50V J CH (0805)	PC	1,000	C542	.	.	.	.
204	V30000265	CAP SMD 560PF 50V J (0805)	PC	1,000	C526	.	.	.	.
205	V30000284	CAP SMD 1NF 50V K R (0805)	PC	1,000	C615	.	.	.	.
206	V30000284	CAP SMD 1NF 50V K R (0805)	PC	12,000	C507	C508	C534	C535	C538
.	.	.	.	.	C539	C540	C541	C545	C546
.	.	.	.	.	C547	C548	.	.	.
207	V30000289	CAP SMD 10NF 50V K R (0805)	PC	1,000	C638	.	.	.	.
208	V30000294	CAP SMD 100NF 50V K (0805)	PC	16,000	C502	C517	C529	C543	C544
.	.	.	.	.	C618	C616	C617	C619	C614
.	.	.	.	.	C630	C563	C643	C644	C549
.	.	.	.	.	C550	.	.	.	.
209	V30000332	CAP SMD 4.7NF 50V K (0805)	PC	10,000	C511	C512	C513	C514	C557
.	.	.	.	.	C558	C564	C565	C590	C591
210	V30000457	RES SMD 1/10W 10R J 0805	PC	6,000	R538	R540	R559	R595	R589
.	.	.	.	.	R591	.	.	.	.
211	V30000464	RES SMD 1/10W 100R J	PC	12,000	R505	R508	R509	R510	R511
.	.	.	.	.	R592	R615	R616	R617	R618
.	.	.	.	.	R619	R620	.	.	.
212	V30000469	RES SMD 1/10W 1K J 0805	PC	10,000	R512	R516	R517	R519	R520
.	.	.	.	.	R590	R593	R587	R594	R588
213	V30000475	RES SMD 1/10W 10K J 0805	PC	9,000	R501	R502	R561	R542	R545
.	.	.	.	.	R547	R549	R597	R600	.
214	V30000480	RES SMD 1/10W 100K J (0805)	PC	2,000	R577	R578	.	.	.
215	V30000503	RES SMD 1/10W 12K J (0805)	PC	2,000	R583	R585	.	.	.
216	V30000588	RES SMD 1/10W 220R J 0805	PC	2,000	R580	R581	.	.	.
217	V30000626	RES SMD 1/10W 270R J	PC	1,000	R507	.	.	.	.
218	V30000636	RES SMD 1/10W 27K J 0805	PC	2,000	R584	R586	.	.	.
219	V30000717	RES SMD 1/10W 470R J (0805)	PC	5,000	R541	R544	R548	R560	R596
220	V30000721	RES SMD 1/10W 4.7K J	PC	7,000	R506	R543	R550	R551	R553
.	.	.	.	.	R562	R598	.	.	.
221	V30000797	RES SMD 1/10W 75R J (0805)	PC	8,000	R524	R525	R536	R555	R576
.	.	.	.	.	R579	R599	R529	.	.
222	V30001285	DIODE 1N4148 SMD	PC	2,000	D504	D505	.	.	.
223	V30001457	TR BC848B SMD	PC	10,000	Q506	Q507	Q508	Q509	Q510
.	.	.	.	.	Q511	Q513	Q512	Q514	Q515
224	V30001458	TR BC858B SMD	PC	1,000	Q501	.	.	.	.
226	V30010964	FERRITE BEAT(805) BLM21A601RPT	PC	2,000	L536	L537	.	.	.
227	V30013413	FERRITE BEAD ACB2012H-300	PC	13,000	L535	L520	L521	L522	L523
.	.	.	.	.	L524	L525	L526	L527	L538
.	.	.	.	.	L539	L540	L541	.	.
228	V20077209	MD.SMD.ST41-HEADPHONE	PC	1,000	.	.	.	.	.
232	V30000718	RES CF 1/4W 4.7K J	PC	2,000	R527	R531	.	.	.
233	V30001996	FIXED COIL 22UH Q40 K	PC	2,000	L518	L519	.	.	.
234	V30000074	CAP MKT 100NF 63V J	PC	1,000	C571	.	.	.	.
235	V30000100	CAP MKT 330NF 63V J	PC	2,000	C555	C559	.	.	.
236	V30000352	CAP EL 100UF 16V M	PC	2,000	C574	C578	.	.	.
237	V30000362	CAP EL 1UF 50V M	PC	1,000	C579	.	.	.	.
238	V30000407	CAP EL 470UF 16V M	PC	1,000	C570	.	.	.	.
239	V30000284	CAP SMD 1NF 50V K R (0805)	PC	4,000	C503	C506	C581	C575	.
240	V30000309	CAP SMD 2.2NF 50V K R 0805	PC	2,000	C573	C580	.	.	.
241	V30000332	CAP SMD 4.7NF 50V K (0805)	PC	2,000	C642	C639	.	.	.
242	V30000475	RES SMD 1/10W 10K J 0805	PC	2,000	R530	R554	.	.	.
243	V30000727	RES SMD 1/10W 47K J (0805)	PC	2,000	R534	R537	.	.	.
244	V30013413	FERRITE BEAD ACB2012H-300	PC	2,000	L528	L529	.	.	.
245	V20077224	MD.SMD.ST41-FAV	PC	1,000	.	.	.	.	.
246	V30000332	CAP SMD 4.7NF 50V K (0805)	PC	2,000	C640	C641	.	.	.
247	V30013413	FERRITE BEAD ACB2012H-300	PC	2,000	L533	L534	.	.	.
248	V20077226	MD.SMD.ST41-BACK AV	PC	1,000	.	.	.	.	.
249	V30013413	FERRITE BEAD ACB2012H-300	PC	3,000	L530	L531	L532	.	.
250	V20082384	MD.SMD.ST41-W/JVC	PC	1,000	.	.	.	.	.
255	V30000797	RES SMD 1/10W 75R J (0805)	PC	1,000	R614	.	.	.	.
257	V20090584	CHASSIS FRAME 288X (AK33)(V.0)	PC	1,000	.	.	.	.	.
258	V60000009	FR-HIPS NATR.V-0	KG	0,350	.	.	.	.	.
259	V35005061	SCREW RB C SK ZN YFMB 2.9*9.5	PC	1,000	.	.	.	.	.
262	V20079177	HE.ASY.41-SOUND WO/DOLBY	PC	1,000	.	.	.	.	.
263	V30007794	IC AAMP TDA7265 2*25W MULTIWATT11	PC	1,000	IC802	.	.	.	.
264	V35000158	NUT C ZN BOTTOM M3	PC	1,000	.	.	.	.	.
265	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	1,000	.	.	.	.	.
266	V35000182	SCREW C ZN YSMB M3*10	PC	1,000	.	.	.	.	.
267	V35004441	HEATSINK AUDIO (AK41)	PC	1,000	.	.	.	.	.

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
268	V70000074	SILICON (GRES)	KG	0,001	.	.	.	.	.
269	V40006901	SPACER SUPPORT (TCBS-29)	PC	1,000	.	.	.	.	.
271	V20030940	HE.ASY.28-REG WO/DVD (28-41)	PC	1,000	.	.	.	.	.
272	V30001302	DIODE BYW29-200 8A/200V 80A	PC	3,000	D112	D113	D114	.	.
273	V30007802	TR STP20N06LFP	PC	2,000	Q103	Q106	.	.	.
274	V35000158	NUT C ZN BOTTOM M3	PC	5,000	.	.	.	.	.
275	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	5,000	.	.	.	.	.
276	V35000182	SCREW C ZN YSMB M3*10	PC	5,000	.	.	.	.	.
277	V35002240	HEATSINK REGULATOR (AK28)	PC	1,000	.	.	.	.	.
279	V30009637	TUNER WSP (PLL) 38.9 MK2 - BATCH	PC	1,000	TU401	.	.	.	.
281	V20000849	FUSE ASSY.TK79-A (3.15A)	PC	1,000	F101	.	.	.	.
282	V30001732	FUSE 3.15A 250V 5*20	PC	1,000	.	.	.	.	.
283	V35000138	FUSE HOLDER TK79A (BLACK)	PC	1,000	.	.	.	.	.
284	V20043480	HE.ASY.28-8V (28-41)	PC	1,000	.	.	.	.	.
285	V30001500	IC LM7808	PC	1,000	IC105	.	.	.	.
286	V35000142	HEATSINK 15AK14/15 15/TP ORTAK	PC	1,000	.	.	.	.	.
287	V35000158	NUT C ZN BOTTOM M3	PC	1,000	.	.	.	.	.
288	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	1,000	.	.	.	.	.
289	V35000182	SCREW C ZN YSMB M3*10	PC	1,000	.	.	.	.	.
290	V20075415	HE.ASSY.41-LM317 (AK41/45)	PC	1,000	IC106	.	.	.	.
291	V30001668	IC LM317T	PC	1,000	.	.	.	.	.
292	V35000142	HEATSINK 15AK14/15 15/TP ORTAK	PC	1,000	.	.	.	.	.
293	V35000158	NUT C ZN BOTTOM M3	PC	1,000	.	.	.	.	.
294	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	1,000	.	.	.	.	.
295	V35000182	SCREW C ZN YSMB M3*10	PC	1,000	.	.	.	.	.
296	V20082099	HE.ASY.41J-HOR	PC	1,000	.	.	.	.	.
297	V30007678	DIODE GUC DTV32F1500A 6A/1500V 100A	PC	1,000	D206	.	.	.	.
298	V30007768	DIODE STTA506F 5A/600V 55A	PC	1,000	D207	.	.	.	.
299	V30007799	TR BDX53BFI	PC	1,000	Q205	.	.	.	.
300	V30016686	TR 2SC5302	PC	1,000	Q202	.	.	.	.
301	V35000015	SPRING TR.HOLDER (BIG)	PC	1,000	.	.	.	.	.
302	V35000158	NUT C ZN BOTTOM M3	PC	3,000	.	.	.	.	.
303	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	3,000	.	.	.	.	.
304	V35000181	SCREW C ZN YSMB M3*8	PC	1,000	.	.	.	.	.
305	V35000182	SCREW C ZN YSMB M3*10	PC	2,000	.	.	.	.	.
306	V35004571	HEATSINK HORIZANTEL AK41	PC	1,000	.	.	.	.	.
307	V30000094	CAP MKT 220NF 275V M AC	PC	1,000	C112	.	.	.	.
308	V30000131	CAP MKP 100NF 250V J	PC	1,000	C111	.	.	.	.
309	V30000287	CAP CER 10NF 50V K B	PC	1,000	CXX3	.	.	.	.
310	V30000351	CAP EL 10UF 350V M	PC	1,000	C223	.	.	.	.
311	V30000356	CAP EL 100UF 63V M	PC	1,000	C226	.	.	.	.
312	V30000359	CAP EL 1000UF 16V M	PC	4,000	C146	C225	C251	C147	.
313	V30000360	CAP EL 1000UF 25V M	PC	3,000	C140	C228	C254	.	.
314	V30000406	CAP EL 47UF 250V M (HR) 105°	PC	1,000	C216	.	.	.	.
315	V30000409	CAP EL 470UF 25V M	PC	3,000	C133	C804	C806	.	.
316	V30000415	CAP EL 4.7UF 250V M	PC	1,000	C208	.	.	.	.
317	V30001041	RES ADJ 1/6W 1K M VER	PC	1,000	VR127	.	.	.	.
318	V30001077	RES MO 2W 10R J	PC	1,000	R264	.	.	.	.
319	V30001089	RES MO 2W 1R J	PC	1,000	R156	.	.	.	.
320	V30001134	RES MO 2W 2.2R J	PC	1,000	R255	.	.	.	.
321	V30001168	RES MO 2W 470RJ	PC	1,000	R226	.	.	.	.
322	V30001229	RES FUSE 1W 2.2R J	PC	1,000	R231	.	.	.	.
323	V30001265	NTC MONITOR 10R/3A SCK-103	PC	1,000	J412	.	.	.	.
324	V30001299	DIODE UF5404 3A/400V 150A	PC	3,000	D111	D210	D211	.	.
325	V30001762	CONN HEADER 2P 2.5MM(9.7MM) TOP	PC	1,000	PL802	.	.	.	.
326	V30001764	CONN HEADER 2P 2.5MM(9.7MM) TOP BLACK	PC	1,000	PL804	.	.	.	.
327	V30001784	CONN HEADER 6P 2.5MM TOP BD	PC	1,000	PL900	.	.	.	.
328	V30001792	CONN HEADER 2P 7.5MM TOP WHT	PC	1,000	PL204	.	.	.	.
329	V30001792	CONN HEADER 2P 7.5MM TOP WHT	PC	1,000	PL101	.	.	.	.
330	V30001795	CONN HEADER 3P 5/7.5MM TOP WHT	PC	1,000	PL102	.	.	.	.
331	V30001810	CONN HEADER 14P 2.5MM TOP WHT	PC	1,000	PL414	.	.	.	.
332	V30001812	CONN HEADER 15P 2.5MM TOP WHT	PC	4,000	PL330	PL331	PL332	PL415	.
333	V30001829	CONN HEADER 2P 2.5MM TOP WHT SD	PC	1,000	PL206	.	.	.	.
334	V30001851	CONN HEADER 7P 2.5MM TOP WHT	PC	1,000	PL202	.	.	.	.
335	V30001853	SOCKET IC 32P	PC	1,000	IC304	.	.	.	.
336	V30001960	FERIT BAR 6*20MM AK16	PC	3,000	L107	L108	L109	.	.
338	V30002183	RELAY MON15 KI-S-212M	PC	1,000	RL2	.	.	.	.
340	V30006662	XTAL 6MHZ	PC	1,000	X900	.	.	.	.
341	V30006712	FERRITE BEAD 3.5X4.7X0.8	PC	1,000	L106	.	.	.	.
342	V30006743	TRF. HORIZONTAL DRIVER 15AK17-17"	PC	1,000	TR201	.	.	.	.
343	V30006744	LINE FILTER 16MH 15AK17-17"	PC	1,000	L103	.	.	.	.
344	V30006909	CAP EL 100UF M 250V	PC	1,000	C131	.	.	.	.
345	V30007442	IC TDA16846 (4646)	PC	1,000	IC101	.	.	.	.
346	V30007444	IC L4931CV50	PC	1,000	IC104	.	.	.	.
347	V30007748	CAP EL 1000UF 35V M	PC	2,000	C135	C136	.	.	.
348	V30007750	CAP EL 470UF 35V (H/R 1150MA)	PC	2,000	C132	C134	.	.	.
349	V30007755	CAP MKT 680NF 275V M AC X2	PC	1,000	C118	.	.	.	.
350	V30007757	COIL INJECTION EW 6MH AK28	PC	1,000	L202	.	.	.	.
351	V30007758	DIODE BRIDGE GBU4M 4A/1000V 150A	PC	1,000	D106	.	.	.	.
352	V30007770	FILTER COIL 1MH AK28	PC	1,000	L203	.	.	.	.
353	V30007771	FIXED COIL 100UH	PC	1,000	L201	.	.	.	.
354	V30007802	TR STP20N06LFP	PC	1,000	Q201	.	.	.	.
355	V30007858	CAP MKT 470NF 275V M AC (P=22.5MM)	PC	1,000	C115	.	.	.	.
356	V30009036	RES FUSE 1/2W 0.1R J	PC	1,000	R234	.	.	.	.
357	V30009036	RES FUSE 1/2W 0.1R J	PC	2,000	R118	R119	.	.	.
358	V30009037	FUSE 6.3A 250V 5mm	PC	2,000	F102	F103	.	.	.
359	V30009832	CABL 1P/130 SIS	PC	1,000	CAB001	.	.	.	.
360	V30012619	CNAS 10P/500 RGB SHL W/DC UL1533AWG24	PC	1,000	PL004	.	.	.	.
361	V30013690	CAP EL 220UF 450V M 105°	PC	1,000	C121	.	.	.	.
362	V30015087	IC OPTOCOUPLER TCET1102G	PC	1,000	IC102	.	.	.	.
363	V30016591	CNAS 5P-7/500 AK41 SIS W/DC UL1007AWG24	PC	1,000	PL202	.	.	.	.
364	V35000224	SCREW C SK ZN YFMB 2.9*9.5	PC	1,000	.	.	.	.	.
365	V35001859	SHIELD CONTROLLER (MAIN BOARD-11AK28)	PC	1,000	.	.	.	.	.
366	V35002631	SHIELD IF (MAIN BOARD-11AK28)	PC	1,000	.	.	.	.	.
367	V35005061	SCREW RB C SK ZN YFMB 2.9*9.5	PC	3,000	.	.	.	.	.

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
368	V40006431	SPACER SUPPORT (SCC-10A)	PC	1,000	.	.	.	.	.
369	V40006432	MOUNTING BUTTON (MB-10)	PC	2,000	.	.	.	.	.
370	V40006903	HOLD PLUG COVER (BH-10)	PC	1,000	.	.	.	.	.
371	V40008183	SPACER SUPPORT (SCC-10C)	PC	1,000	.	.	.	.	.
372	V70000029	SOLDER (INGOT) 63/37	KG	0,019	.	.	.	.	.
373	V70000030	SOLDER WIRE CAP 1.00mm 60Sn40Pb	G	1,200	.	.	.	.	.
375	V20063054	CN.ASY.28-DIODE BYM26D+FERIT+HEATSINK	PC	1,000	D110	.	.	.	.
376	V30001301	DIODE BYM26D 2.3A/800V 45-150A	PC	1,000	.	.	.	.	.
377	V30001964	FERRITE BAR 5*8	PC	1,000	.	.	.	.	.
378	V35003543	HEATSINK DIODE (1)	PC	2,000	.	.	.	.	.
379	V20082157	HE.ASY.41J-SMPS W/PFC	PC	1,000	.	.	.	.	.
380	V30007768	DIODE STTA506F 5A/600V 55A	PC	3,000	D103	D104	D105	.	.
381	V30007801	TR SPP20N60S5	PC	1,000	Q101	.	.	.	.
382	V35000158	NUT C ZN BOTTOM M3	PC	4,000	.	.	.	.	.
383	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	4,000	.	.	.	.	.
384	V35000182	SCREW C ZN YSMB M3*10	PC	3,000	.	.	.	.	.
385	V35000183	SCREW C ZN YSMB M3*12	PC	1,000	.	.	.	.	.
386	V35004184	HEATSINK SMPS AK28-7	PC	1,000	Q101	.	.	.	.
387	V40000020	TR HOLDER TR-06A	PC	1,000	.	.	.	.	.
388	V40000146	INSULATOR SILICON PAD (15*20)	PC	1,000	.	.	.	.	.
389	V30000123	CAP PP 33NF 630V K	PC	1,000	C108	.	.	.	.
390	V30001171	RES MO 2W 4.7K J	PC	1,000	R116	.	.	.	.
391	V30006744	LINE FILTER 16MH 15AK17-17"	PC	1,000	L104	.	.	.	.
392	V30007753	CAP MKP 1NF 1KV	PC	1,000	C120	.	.	.	.
393	V30007754	CAP MKP 1UF 400V	PC	1,000	C119	.	.	.	.
394	V30007775	COIL PFC 1MH 1KHZ 2A	PC	1,000	L102	.	.	.	.
396	V30014023	RES FUSE 1/2W 0.1R J VISHAY	PC	2,000	R148	R151	.	.	.
397	V30016819	TRF SMPS AK41 W/PFC (J)	PC	1,000	TR101	.	.	.	.
398	V30023449	CAP MKP 4.7NF 2KV J	PC	1,000	C109	.	.	.	.
401	V30001494	IC TDA4470B	PC	1,000	IC401	.	.	.	.
402	V30001692	FILTER SAW OFWK3953M	PC	1,000	Z403	.	.	.	.
403	V30001706	FILTER SAW OFWK9453	PC	1,000	Z401	.	.	.	.
404	V30001726	FILTER SER TRAP TPS 6.5MHZ	PC	1,000	T402	.	.	.	.
405	V30001979	FIXED COIL 1UH Q45 M-A	PC	1,000	LXX1	.	.	.	.
406	V30002036	ADJ COIL VIF 38.9MHZ C=12PF	PC	1,000	VL401	.	.	.	.
407	V30009195	CONN HEADER 1P TOP BLACK	PC	1,000	CXXX	.	.	.	.
409	V20043482	HE.ASY.28-VER 28"-29"-32" (28-41)	PC	1,000	.	.	.	.	.
410	V30007793	IC STV9379FA	PC	1,000	IC201	.	.	.	.
411	V35000158	NUT C ZN BOTTOM M3	PC	1,000	.	.	.	.	.
412	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	1,000	.	.	.	.	.
413	V35000183	SCREW C ZN YSMB M3*12	PC	1,000	.	.	.	.	.
414	V35002239	HEATSINK VERTICAL (AK28	PC	1,000	.	.	.	.	.
415	V40000020	TR HOLDER TR-06A	PC	1,000	.	.	.	.	.
416	V40000146	INSULATOR SILICON PAD (15*20)	PC	1,000	.	.	.	.	.
417	V30000447	CAP CER 4.7NF 4KV M E	PC	1,000	C122	.	.	.	.
418	V30001086	RES MO 2W 10K J	PC	1,000	R225	.	.	.	.
419	V30001270	PTC 9 OHM	PC	1,000	R109	.	.	.	.
420	V30007728	CABLE 1P R2.6 50 W/CLIPS	PC	1,000	KXX1	.	.	.	.
421	V20117602	PR.IC.41-AK41J A(32"SF)	PC	1,000	.	.	.	.	.
422	V20118227	PR.IC.41-AK41J A030	PC	1,000	.	.	.	.	.
423	V30016491	IC 27W401	PC	1,000	IC304	.	.	.	.
426	V30000717	RES SMD 1/10W 470R J (0805)	PC	2,000	R809	R811	.	.	.
428	V30007021	RES SMD 1/10W 1K F (0805)	PC	1,000	R137	.	.	.	.
429	V30007786	RES SMD 1/10W 2.55K F (0805)	PC	1,000	R138	.	.	.	.
436	V30001291	DIODE HER107 1A/800V 30A	PC	1,000	D102	.	.	.	.
437	V30009208	CAP CER 470PF 1KV K (PULSE)	PC	3,000	C110	C163	C167	.	.
438	V30000469	RES SMD 1/10W 1K J 0805	PC	1,000	R122	.	.	.	.
439	V30000575	RES SMD 1/10W 2K J	PC	1,000	S133	.	.	.	.
440	V30000664	RES SMD 1/10W 3.3K J (0805)	PC	1,000	R106	.	.	.	.
448	V30000082	CAP MKT 15NF 63V J	PC	1,000	C100	.	.	.	.
449	V30000224	CAP SMD 220PF 50V J (0805)	PC	1,000	C209	.	.	.	.
450	V30000315	CAP SMD 220NF 25V Z (0805)	PC	1,000	C206	.	.	.	.
451	V30000325	CAP SMD 33NF 50V K (0805)	PC	1,000	C137	.	.	.	.
452	V30000506	RES SMD 1/10W 120K J	PC	1,000	R218	.	.	.	.
453	V30000732	RES SMD 1/10W 470K J	PC	1,000	R145	.	.	.	.
454	V30007021	RES SMD 1/10W 1K F (0805)	PC	1,000	R120	.	.	.	.
461	V30000503	RES SMD 1/10W 12K J (0805)	PC	1,000	R492	.	.	.	.
462	V30000751	RES SMD 1/10W 5.6K J 0805	PC	1,000	R441	.	.	.	.
463	V30012692	RES SMD 1/16W 4.7K J (0603)	PC	1,000	R934	.	.	.	.
465	V30000464	RES SMD 1/10W 100R J	PC	1,000	R942	.	.	.	.
473	V30000452	RES CF 1/4W 10R J	PC	1,000	R105	.	.	.	.
474	V30000459	RES CF 1/4W 100R J	PC	3,000	R140	R323	R937	.	.
475	V30000466	RES CF 1/4W 1K J	PC	4,000	R490	R245	R959	R953	.
476	V30000471	RES CF 1/4W 10K J	PC	6,000	R912	R915	R945	R914	R943
.	.	.	.	.	R960	.	.	.	.
477	V30000477	RES CF 1/4W 100K J	PC	2,000	R250	R251	.	.	.
478	V30000500	RES CF 1/4W 12K J	PC	1,000	R940	.	.	.	.
479	V30000531	RES CF 1/4W 15K J	PC	3,000	R806	R909	R910	.	.
480	V30000536	RES CF 1/4W 150K J	PC	1,000	R128	.	.	.	.
481	V30000541	RES CF 1/4W 1.5M J	PC	1,000	R270	.	.	.	.
482	V30000564	RES CF 1/4W 18K J	PC	1,000	R810	.	.	.	.
483	V30000583	RES CF 1/4W 220R J	PC	1,000	R210	.	.	.	.
484	V30000590	RES CF 1/4W 2.2K J	PC	1,000	R220	.	.	.	.
485	V30000594	RES CF 1/4W 22K J	PC	1,000	R322	.	.	.	.
486	V30000628	RES CF 1/4W 2.7K J	PC	1,000	R803	.	.	.	.
487	V30000712	RES CF 1/4W 470R J	PC	1,000	R155	.	.	.	.
488	V30000718	RES CF 1/4W 4.7K J	PC	9,000	R236	R801	R480	R802	R903
.	.	.	.	.	R933	R904	R936	R961	.
489	V30000729	RES CF 1/4W 470K J	PC	1,000	R238	.	.	.	.
490	V30000734	RES CF 1/4W 4.7R J	PC	4,000	R812	R808	R819	R820	.
491	V30000744	RES CF 1/4W 560R J	PC	1,000	R271	.	.	.	.
492	V30000784	RES CF 1/4W 680K J	PC	1,000	R242	.	.	.	.
493	V30000855	RES MF 1/4W 1M F	PC	1,000	R103	.	.	.	.
494	V30000902	RES MF 1/4W 1.8K F	PC	1,000	R230	.	.	.	.
495	V30000927	RES MF 1/4W 220K J	PC	1,000	R125	.	.	.	.

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
496	V30001027	RES MF 1/4W 82K J	PC	1,000	R246	.	.	.	.
497	V30001257	RES MG 1/2W 4.7M J	PC	1,000	R117	.	.	.	.
498	V30001284	DIODE 1N4148 0.15A/100V 0.5A	PC	7,000	D119	D220	D126	D221	D127
.	.	.	.	.	D222	D128	.	.	.
499	V30001291	DIODE HER107 1A/800V 30A	PC	8,000	D120	D201	D208	D209	D212
.	.	.	.	.	D213	D218	D219	.	.
500	V30001318	DIODE BA159 1A/800V 20A	PC	4,000	D121	D122	D225	D108	.
501	V30001979	FIXED COIL 1UH Q45 M-A	PC	1,000	L403	.	.	.	.
502	V30001986	FIXED COIL 3.3UH Q65 K	PC	1,000	L401	.	.	.	.
503	V30001987	FIXED COIL 4.7UH Q70 K-A	PC	5,000	L904	L427	L428	L429	L430
504	V30001992	FIXED COIL 10UH Q65 K-A	PC	6,000	L304	L421	L903	L902	L901
.	.	.	.	.	L900	.	.	.	.
506	V30001996	FIXED COIL 22UH Q40 K	PC	1,000	L420	.	.	.	.
507	V30006712	FERRITE BEAD 3.5X4.7X0.8	PC	3,000	L101	L206	L207	.	.
508	V30007204	RES MF 1/2W 1.5M F	PC	1,000	R149	.	.	.	.
509	V30007782	RES MF 1/4W 3.9M F	PC	1,000	R102	.	.	.	.
510	V30007783	RES FUSE 1/4W 2.2R J	PC	1,000	R150	.	.	.	.
512	V30018481	PCB 11AK41J-7	PC	1,000	.	.	.	.	.
513	V30000074	CAP MKT 100NF 63V J	PC	4,000	C808	C809	C904	C610	.
514	V30000106	CAP MKT 47NF 100V J	PC	1,000	C202	.	.	.	.
515	V30000109	CAP MKT 470NF 63V J	PC	1,000	C411	.	.	.	.
516	V30000345	CAP EL 10UF 50V M	PC	6,000	C204	C402	C450	C506	C930
.	.	.	.	.	C823	.	.	.	.
517	V30000352	CAP EL 100UF 16V M	PC	10,000	C141	C144	C150	C321	C322
.	.	.	.	.	C500	C911	C171	C170	C456
518	V30000353	CAP EL 100UF 25V M	PC	1,000	C114	.	.	.	.
519	V30000354	CAP EL 100UF 35V M	PC	1,000	C240	.	.	.	.
520	V30000355	CAP EL 100UF 50V M	PC	2,000	C453	C166	.	.	.
521	V30000362	CAP EL 1UF 50V M	PC	5,000	C207	C801	C802	C499	C803
522	V30000371	CAP EL 22UF 50V M	PC	5,000	C101	C408	C900	C914	C905
523	V30000375	CAP EL 220UF 16V M	PC	1,000	C919	.	.	.	.
524	V30000384	CAP EL 2.2UF 50V M	PC	2,000	C412	C920	.	.	.
525	V30000431	CAP CER 100PF 1KV M	PC	1,000	C222	.	.	.	.
526	V30001428	TR BF423	PC	1,000	Q113	.	.	.	.
527	V30001454	TR BC548B	PC	1,000	Q112	.	.	.	.
528	V30001455	TR BC558B	PC	1,000	Q208	.	.	.	.
529	V30001506	IC TL431	PC	2,000	IC103	IC202	.	.	.
530	V30007081	CAP EL 4.7UF 50V M (NPL)	PC	1,000	C160	.	.	.	.
531	V30007308	CAP CER 220PF 1KV K (PULSE)	PC	2,000	C161	C162	.	.	.
532	V30007708	CAP CER 1NF 1KV K (PULSE)	PC	1,000	C130	.	.	.	.
533	V30012323	CAP MKT 1NF 100V J WIMA FKI2	PC	1,000	C104	.	.	.	.
534	V30000186	CAP SMD 10PF 50V D COG 0805	PC	2,000	C509	C510	.	.	.
535	V30000189	CAP SMD 100PF 50V J (0805)	PC	1,000	C313	.	.	.	.
536	V30000220	CAP SMD 22PF 50V J (0805)	PC	1,000	C441	.	.	.	.
537	V30000263	CAP SMD 56PF 50V J CH (0805)	PC	1,000	C107	.	.	.	.
538	V30000289	CAP SMD 10NF 50V K R (0805)	PC	1,000	C252	.	.	.	.
539	V30000294	CAP SMD 100NF 50V K (0805)	PC	34,000	C102	C142	C143	C148	C149
.	.	.	.	.	C253	C255	C305	C324	C333
.	.	.	.	.	C454	C409	C410	C413	C414
.	.	.	.	.	C442	C468	C478	C805	C417
.	.	.	.	.	C418	C419	C427	C428	C807
.	.	.	.	.	C457	C451	C492	C497	C498
.	.	.	.	.	C505	C103	C933	C168	.
540	V30000304	CAP SMD 1.8NF 50V K R (0805)	PC	2,000	C257	C250	.	.	.
541	V30000309	CAP SMD 2.2NF 50V K R 0805	PC	3,000	C145	C821	C822	.	.
542	V30000315	CAP SMD 220NF 25V Z (0805)	PC	3,000	C124	C125	C173	.	.
543	V30000332	CAP SMD 4.7NF 50V K (0805)	PC	1,000	C106	.	.	.	.
544	V30000341	CAP SMD 68NF 50V K (0805)	PC	1,000	C511	.	.	.	.
545	V30000457	RES SMD 1/10W 10R J 0805	PC	1,000	R513	.	.	.	.
546	V30000464	RES SMD 1/10W 100R J	PC	4,000	R324	R327	R511	R512	.
547	V30000469	RES SMD 1/10W 1K J 0805	PC	8,000	R123	R318	R414	R146	R127
.	.	.	.	.	R240	R134	R227	.	.
548	V30000475	RES SMD 1/10W 10K J 0805	PC	9,000	R142	R413	R428	R429	R804
.	.	.	.	.	R141	R272	R228	R158	.
549	V30000480	RES SMD 1/10W 100K J (0805)	PC	3,000	R124	R281	R159	.	.
550	V30000517	RES SMD 1/10W 15R J 0805	PC	1,000	R415	.	.	.	.
551	V30000524	RES SMD 1/10W 150R J (0805)	PC	1,000	R475	.	.	.	.
552	V30000534	RES SMD 1/10W 15K J (0805)	PC	1,000	R157	.	.	.	.
553	V30000563	RES SMD 1/10W 1.8K J (0805)	PC	1,000	R421	.	.	.	.
554	V30000567	RES SMD 1/10W 18K J 0805	PC	1,000	R807	.	.	.	.
555	V30000588	RES SMD 1/10W 220R J 0805	PC	1,000	R941	.	.	.	.
556	V30000593	RES SMD 1/10W 2.2K J (0805)	PC	4,000	R212	R213	R214	R217	.
557	V30000631	RES SMD 1/10W 2.7K J 0805	PC	1,000	R216	.	.	.	.
558	V30000636	RES SMD 1/10W 27K J 0805	PC	2,000	R254	R805	.	.	.
559	V30000659	RES SMD 1/10W 330R J (0805)	PC	28,000	R360	R361	R362	R363	R364
.	.	.	.	.	R365	R366	R367	R368	R369
.	.	.	.	.	R370	R371	R372	R373	R374
.	.	.	.	.	R375	R376	R378	R379	R380
.	.	.	.	.	R381	R382	R383	R384	R385
.	.	.	.	.	R397	R398	R152	.	.
560	V30000664	RES SMD 1/10W 3.3K J (0805)	PC	1,000	R126	.	.	.	.
561	V30000668	RES SMD 1/10W 33K J 0805	PC	3,000	R235	R104	R101	.	.
562	V30000692	RES SMD 1/10W 3.9K J 0805	PC	1,000	R968	.	.	.	.
563	V30000717	RES SMD 1/10W 470R J (0805)	PC	1,000	R416	.	.	.	.
564	V30000721	RES SMD 1/10W 4.7K J	PC	3,000	R130	R215	R211	.	.
565	V30000727	RES SMD 1/10W 47K J (0805)	PC	2,000	R229	R280	.	.	.
566	V30000735	RES SMD 1/10W 4.7R J (0805)	PC	1,000	R518	.	.	.	.
567	V30000774	RES SMD 1/10W 680R J (0805)	PC	2,000	R136	R139	.	.	.
568	V30000778	RES SMD 1/10W 6.8K J 0805	PC	2,000	R260	R261	.	.	.
569	V30000797	RES SMD 1/10W 75R J (0805)	PC	2,000	R425	R509	.	.	.
570	V30000814	RES SMD 1/10W 820R J	PC	1,000	R445	.	.	.	.
571	V30000818	RES SMD 1/10W 8.2K J (0805)	PC	2,000	R241	R813	.	.	.
572	V30001285	DIODE 1N4148 SMD	PC	9,000	D115	D117	D202	D216	D403
.	.	.	.	.	D123	D101	D223	D224	.
573	V30001373	DIODE ZENER ZPD 10V	PC	1,000	D227	.	.	.	.

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
574	V30001457	TR BC848B SMD	PC	18,000	Q109	Q206	Q403	Q802	Q801
.	.	.	.	.	Q207	Q110	Q415	Q901	Q902
.	.	.	.	.	Q903	Q904	Q908	Q905	Q906
.	.	.	.	.	Q907	Q911	Q910	.	.
575	V30001458	TR BC858B SMD	PC	4,000	Q203	Q204	Q900	Q909	.
577	V30001971	FERRITE BEAT (805) BLM21A601S	PC	1,000	L425	.	.	.	.
578	V30006923	RES SMD 1/10W 4.3K J	PC	1,000	R160	.	.	.	.
579	V30007019	RES SMD 1/10W 10K F (0805)	PC	2,000	R107	R129	.	.	.
580	V30007021	RES SMD 1/10W 1K F (0805)	PC	3,000	R143	R424	R510	.	.
581	V30007760	DIODE ZENER SMD BZT55C10	PC	4,000	D116	D118	D203	D226	.
582	V30007762	DIODE ZENER SMD BZT55C33	PC	1,000	D215	.	.	.	.
583	V30007763	DIODE ZENER SMD BZT55C5V1	PC	2,000	D205	D214	.	.	.
584	V30007788	RES SMD 1/10W 2.7K F (0805)	PC	1,000	R144	.	.	.	.
585	V30007789	RES SMD 1/10W 27K F (0805)	PC	1,000	R252	.	.	.	.
586	V30007790	RES SMD 1/10W 4.3K F (0805)	PC	1,000	R135	.	.	.	.
587	V30007798	TR BC848C SMD	PC	4,000	Q104	Q105	Q107	Q108	.
588	V30007800	TR BF799	PC	1,000	Q408	.	.	.	.
589	V30009699	DIODE ZENER SMD BZT55C12	PC	1,000	D109	.	.	.	.
590	V30012412	DIODE ZENER 2.4V SMD	PC	1,000	D900	.	.	.	.
591	V30012509	RES SMD 1/16W 100K J (0603)	PC	1,000	R938	.	.	.	.
592	V30012510	RES SMD 1/16W 100R J (0603)	PC	3,000	R928	R929	R956	.	.
593	V30012569	CAP SMD 33PF 50V J (0603)	PC	2,000	C912	C913	.	.	.
594	V30012581	CAP SMD 1NF 50V K R (0603)	PC	7,000	C139	C404	C405	C105	C151
.	.	.	.	.	C819	C820	.	.	.
595	V30012641	RES SMD 1/16W 10K J (0603)	PC	11,000	R900	R901	R902	R930	R931
.	.	.	.	.	R932	R944	R911	R913	R964
.	.	.	.	.	R966	.	.	.	.
596	V30012649	RES SMD 1/16W 150R J (0603)	PC	1,000	R153	.	.	.	.
597	V30012650	RES SMD 1/16W 15K J (0603)	PC	1,000	R967	.	.	.	.
598	V30012657	RES SMD 1/16W 1K J (0603)	PC	11,000	R919	R920	R921	R922	R923
.	.	.	.	.	R946	R955	R965	R950	R951
.	.	.	.	.	R952	.	.	.	.
599	V30012662	RES SMD 1/16W 2.7K J (0603)	PC	1,000	R935	.	.	.	.
600	V30012679	RES SMD 1/16W 3.9K J (0603)	PC	2,000	R907	R908	.	.	.
601	V30012692	RES SMD 1/16W 4.7K J (0603)	PC	2,000	R918	R939	.	.	.
602	V30012695	RES SMD 1/16W 470R J (0603)	PC	2,000	R916	R506	.	.	.
603	V30012696	RES SMD 1/16W 47K J (0603)	PC	5,000	R906	R924	R925	R926	R927
604	V30012984	RES SMD 1/16W 91R J (0603)	PC	1,000	R154	.	.	.	.
606	V30012987	RES SMD 1/16W 56R J (0603)	PC	1,000	R917	.	.	.	.
607	V30013571	IC SDA5550	PC	1,000	IC900	.	.	.	.
608	V30014022	RES SMD 1/16W 47R J (0603)	PC	1,000	R958	.	.	.	.
609	V30016654	CAP SMD 100NF 16V K R (0603)	PC	17,000	C165	C901	C902	C903	C906
.	.	.	.	.	C908	C909	C910	C915	C916
.	.	.	.	.	C917	C918	C921	C172	C927
.	.	.	.	.	C926	C932	.	.	.
610	V70000067	GLUE SMD PANASONIC	G	0,071	.	.	.	.	.
615	V30000560	RES CF 1/4W 1.8K J	PC	1,000	R439	.	.	.	.
616	V30000655	RES CF 1/4W 330R J	PC	1,000	R438	.	.	.	.
617	V30000665	RES CF 1/4W 33K J	PC	1,000	R401	.	.	.	.
618	V30000779	RES CF 1/4W 68K J	PC	1,000	R905	.	.	.	.
619	V30001987	FIXED COIL 4.7UH Q70 K-A	PC	1,000	L405	.	.	.	.
621	V30000071	CAP MKT 10NF 63V J	PC	2,000	C934	C935	.	.	.
622	V30000250	CAP CER 390PF 50V J CH	PC	1,000	C931	.	.	.	.
623	V30000355	CAP EL 100UF 50V M	PC	1,000	C440	.	.	.	.
624	V30000362	CAP EL 1UF 50V M	PC	3,000	C479	C494	C907	.	.
625	V30000387	CAP EL 33UF 50V M	PC	1,000	C424	.	.	.	.
626	V30000393	CAP EL 3.3UF 50V M	PC	1,000	C403	.	.	.	.
627	V30000400	CAP EL 47UF 50V M	PC	1,000	C491	.	.	.	.
628	V30000413	CAP EL 4.7UF 50V M	PC	1,000	C496	.	.	.	.
629	V30001724	FILTER SER TRAP TPS 5.5MHZ	PC	1,000	T401	.	.	.	.
630	V30000220	CAP SMD 22PF 50V J (0805)	PC	1,000	C406	.	.	.	.
631	V30000224	CAP SMD 220PF 50V J (0805)	PC	1,000	C443	.	.	.	.
632	V30000294	CAP SMD 100NF 50V K (0805)	PC	1,000	C430	.	.	.	.
633	V30000469	RES SMD 1/10W 1K J 0805	PC	2,000	R446	R447	.	.	.
634	V30000588	RES SMD 1/10W 220R J 0805	PC	1,000	R422	.	.	.	.
635	V30000593	RES SMD 1/10W 2.2K J (0805)	PC	1,000	R418	.	.	.	.
636	V30000664	RES SMD 1/10W 3.3K J (0805)	PC	1,000	R411	.	.	.	.
637	V30000668	RES SMD 1/10W 33K J 0805	PC	1,000	R403	.	.	.	.
638	V30000721	RES SMD 1/10W 4.7K J	PC	1,000	R437	.	.	.	.
639	V30000751	RES SMD 1/10W 5.6K J 0805	PC	1,000	R412	.	.	.	.
640	V30000778	RES SMD 1/10W 6.8K J 0805	PC	1,000	R417	.	.	.	.
641	V30000787	RES SMD 1/10W 680K J	PC	1,000	R432	.	.	.	.
642	V30001285	DIODE 1N4148 SMD	PC	2,000	D401	D402	.	.	.
643	V30001457	TR BC848B SMD	PC	3,000	Q405	Q406	Q401	.	.
645	V30007026	RES SMD 1/10W 5.1K J(0805)	PC	2,000	R516	R517	.	.	.
646	V30012581	CAP SMD 1NF 50V K R (0603)	PC	1,000	C407	.	.	.	.
647	V30012668	RES SMD 1/16W 220R J (0603)	PC	1,000	R957	.	.	.	.
648	V20107902	IC 24C32 084T511121422	PC	1,000	.	.	.	.	.
649	V30015382	IC 24C32 3V	PC	1,000	IC302	.	.	.	.
650	V20107911	CRT DIFF.KIT AK41-32"VCL(16:9)DAR.LA135V	PC	1,000	.	.	.	.	.
651	V30000090	CAP MKT 22NF 100V J	PC	1,000	C203	.	.	.	.
652	V30000092	CAP MKT 220NF 63V J	PC	1,000	C256	.	.	.	.
653	V30000124	CAP MKP 620NF 250V %5	PC	1,000	C215	.	.	.	.
654	V30000134	CAP MKP 11NF 2000V %3.5	PC	1,000	C211	.	.	.	.
655	V30000137	CAP MKP 15NF 630V J	PC	1,000	C212	.	.	.	.
656	V30000140	CAP MKP 1.8NF 2KV %3.5	PC	1,000	C210	.	.	.	.
657	V30000190	CAP CER 100PF 50V J CH	PC	1,000	C232	.	.	.	.
658	V30000283	CAP CER 1NF 50V K B	PC	1,000	CXX2	.	.	.	.
659	V30000387	CAP EL 33UF 50V M	PC	1,000	C201	.	.	.	.
660	V30000415	CAP EL 4.7UF 250V M	PC	1,000	C214	.	.	.	.
661	V30000692	RES SMD 1/10W 3.9K J 0805	PC	1,000	R203	.	.	.	.
662	V30001036	RES MF 1/4W 95K F	PC	1,000	R232	.	.	.	.
663	V30001080	RES MO 2W 100R J	PC	1,000	R206	.	.	.	.
664	V30001131	RES MO 1W 0.22R J	PC	1,000	R205	.	.	.	.
665	V30001162	RES MO 1W 390R J	PC	1,000	R256	.	.	.	.

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
666	V30001237	RES FUSE 1/2W 3.3R J	PC	1,000	R262	.	.	.	.
667	V30001244	RES FUSE 1/2W 0.47R J	PC	2,000	R233	R237	.	.	.
668	V30001253	RES FUSE 1W 0.56R J	PC	1,000	R239	.	.	.	.
670	V30012271	LINEARTY COIL 4.3UH VOGT	PC	1,000	L204	.	.	.	.
671	V30013003	CAP MKP 1UF 250V J P=15	PC	1,000	C213	.	.	.	.
672	V30015222	RES MO 1W 0.75R J	PC	1,000	R257	.	.	.	.
673	V30017521	TRF FBT SINGLE COMMON FOCUS LAYER (AK41)	PC	1,000	TR202	.	.	.	.
674	V30018581	RES MO 2W 150R J	PC	1,000	R202	.	.	.	.
675	V30019483	COIL BRIDGE 300UH 32KHZ AK52	PC	1,000	L205	.	.	.	.
676	V40006432	MOUNTING BUTTON (MB-10)	PC	2,000	.	.	.	.	.
677	V20107951	MD.ASY.SB103-FAV+HP XX41/W (AK41)	PC	1,000	.	.	.	.	.
680	V30001830	CONN HEADER 2P 2.5MM TOP BLUE SD	PC	1,000	PL106	.	.	.	.
681	V30001839	CONN HEADER 3P 2.5MM TOP GREEN SD	PC	1,000	PL107	.	.	.	.
682	V30001891	RCA JACK 1P WHITE 28 FAV	PC	1,000	JK102	.	.	.	.
683	V30001892	RCA JACK 1P RED 28 FAV	PC	1,000	JK103	.	.	.	.
684	V30001893	RCA JACK 1P YELLOW 28 FAV	PC	1,000	JK101	.	.	.	.
686	V30001902	JACK HEADPHONE STEREO WO/SW	PC	1,000	JK108	.	.	.	.
687	V30013231	CNAS 3P/900 FLT W/C UL2468AWG24	PC	1,000	PL108	.	.	.	.
689	V30002362	CNAS 830 FAV SHL W/4C+FER	PC	1,000	PL106, PL	.	.	.	.
696	V30000594	RES CF 1/4W 22K J	PC	2,000	R102	R104	.	.	.
697	V30000712	RES CF 1/4W 470R J	PC	2,000	R103	R106	.	.	.
698	V30001979	FIXED COIL 1UH Q45 M-A	PC	1,000	L101	.	.	.	.
699	V30019363	PCB 11SB103-2	PC	1,000	.	.	.	.	.
700	V30000190	CAP CER 100PF 50V J CH	PC	3,000	C101	C103	C104	.	.
704	V30000460	RES CF 1/4W 100R G	PC	2,000	R112	R113	.	.	.
705	V30000471	RES CF 1/4W 10K J	PC	2,000	R114	R115	.	.	.
706	V30001996	FIXED COIL 22UH Q40 K	PC	2,000	L103	L104	.	.	.
707	V30000290	CAP CER 10NF 50V Z F	PC	2,000	C105	C106	.	.	.
708	V20110652	ARTWORK TOSH.TOSHIBA 32WH37G(AK41)SILVER	PC	1,000	.	.	.	.	.
709	V20100980	R/C 2143 TOSHIBA CT-841(SILVER/P)(GRAY/S	PC	1,000	.	.	.	.	.
710	V20096229	R/C 2143 NOBRAND SILVER (F)	PC	1,000	.	.	.	.	.
711	V20094768	R/C KIT 2143 TOSHIBA	PC	1,000	.	.	.	.	.
712	V20094767	MD.ASY.UK05	PC	1,000	.	.	.	.	.
713	V20094766	UKV.B.ASSY.UK05 (SMD)	PC	1,000	.	.	.	.	.
714	V30000489	RES SMD 1/10W 1R J (0805)	PC	1,000	R102	.	.	.	.
715	V30012509	RES SMD 1/16W 100K J (0603)	PC	1,000	R103	.	.	.	.
716	V30012510	RES SMD 1/16W 100R J (0603)	PC	1,000	R100	.	.	.	.
717	V30012578	CAP SMD 68PF 50V J (0603)	PC	2,000	C101	C102	.	.	.
718	V30016654	CAP SMD 100NF 16V K R (0603)	PC	2,000	C103	C104	.	.	.
719	V30018063	IC HT48RA0A OTP	PC	1,000	IC101	.	.	.	.
720	V30018712	PCB 11UK05-2	PC	1,000	.	.	.	.	.
721	V30000352	CAP EL 100UF 16V M	PC	1,000	C100	.	.	.	.
722	V30001453	TR BC337	PC	1,000	Q100	.	.	.	.
723	V30002733	LED INFRARED IR333	PC	1,000	D100	.	.	.	.
724	V30002852	XTAL REZ 455KHZ	PC	1,000	X100	.	.	.	.
725	V35002401	BATTERY CONT.SINGLE (-) RC2040	PC	1,000	.	.	.	.	.
726	V35005008	BATTERY CONT.SINGLE (+) RC2040 TOSHIBA	PC	1,000	.	.	.	.	.
727	V35000228	SCREW SK C ZNSY YSMB 2.9*9.5	PC	1,000	.	.	.	.	.
728	V35005007	DOUBLE BATTERY CONTACT UKV-900 TOSHIBA	PC	1,000	.	.	.	.	.
729	V40005467	LENS RC2040(I)	PC	1,000	.	.	.	.	.
730	V40010082	RUBBER PAD TRP41 (RC 2143) TOSHIBA	PC	1,000	.	.	.	.	.
731	V40012344	SPONGE (BATTERY DOOR) (15x31x5mm)	PC	1,000	.	.	.	.	.
732	V40005299	BATTERY COVER RC2040 SILVER(P)	PC	1,000	.	.	.	.	.
733	V40009346	BOTTOM CVR R/C 21/2240 SILVER(P)	PC	1,000	.	.	.	.	.
734	V40010357	TOP CVR R/C 2143 NOBRAND (S) SILVER(P)	PC	1,000	.	.	.	.	.
735	V30002391	BATTERY AAA UM4 1.5V GREEN	PC	2,000	.	.	.	.	.
736	V50031553	I/B TOSHIBA 32WH37G P/5550/2143/GESIFP	PC	1,000	.	.	.	.	.
737	V20110654	LBL.BCK.CVR.TOSHIBA TOSHIBA 32WH37G "41"	PC	1,000	.	.	.	.	.
738	V20013018	LBL.BCK.CVR.ASSY (TV) (WO/UL)	PC	1,000	.	.	.	.	.
739	V50023173	LABEL LOT W/BARCODE (77X256)	PC	1,050	.	.	.	.	.
740	V70000621	RIBBON 80MM*450MM	PC	1,030	.	.	.	.	.
741	V20110655	LBL.CART.BOX TOSHIBA 32WH37G(ÇÝFT KATLI)	PC	1,000	.	.	.	.	.
742	V50023532	LABEL LOT TOSHIBA ÇÝFT KATLI	PC	1,050	.	.	.	.	.
743	V70000621	RIBBON 80MM*450MM	PC	1,050	.	.	.	.	.
744	V20114691	EXP.KIT AK37 324XW V.0	PC	1,000	.	.	.	.	.
745	V20004520	CABLE HOLDER DX15 (I)	PC	1,000	.	.	.	.	.
746	V60000991	KIRMA - HDPE	KG	0,003	.	.	.	.	.
747	V20084045	STRAP TIE (L:118)	PC	1,000	.	.	.	.	.
748	V60000018	COPOLYMER POLYPROPYLENE	KG	0,001	.	.	.	.	.
749	V20085269	CABLE HOLDER CRT (I) UL94V-0	PC	2,000	.	.	.	.	.
750	V60000855	KIRMA FR-ABS BLUE CRT	KG	0,002	.	.	.	.	.
751	V40006731	ISOLATION COTTON (9x25000mm)	M	2,000	.	.	.	.	.
752	V50006325	CARTON SEPERATOR 665x980x6.5 (8270/71)	PC	2,000	.	.	.	.	.
753	V70000331	ADHESIVE TAPE 75MM/660M (4125)	M	2,592	.	.	.	.	.
754	V20116298	CRT B.ASSY.TP41J-28"32"33"WO/BSVM(DARFON	PC	1,000	.	.	.	.	.
756	V20079543	CRT B.ASSY.TP41J-COMMON (SMD)	PC	1,000	.	.	.	.	.
761	V20079548	CRT B.ASSY.TP41J-COMMON (PER)	PC	1,000	.	.	.	.	.
762	V35000176	EYELET BR 2*3MM	PC	2,000	PL905	PL906	.	.	.
764	V30000428	SPARK GAP 300V	PC	5,000	SP901	SP903	SP904	SP905	SP906
765	V30000466	RES CF 1/4W 1K J	PC	1,000	R929	.	.	.	.
766	V30000471	RES CF 1/4W 10K J	PC	1,000	R932	.	.	.	.
767	V30000477	RES CF 1/4W 100K J	PC	3,000	R922	R923	R924	.	.
768	V30000535	RES CF 1/2W 150K J	PC	1,000	R920	.	.	.	.
769	V30000788	RES CF 1/4W 6.8M J	PC	1,000	R918	.	.	.	.
770	V30001284	DIODE 1N4148 0.15A/100V 0.5A	PC	1,000	D907	.	.	.	.
771	V30001291	DIODE HER107 1A/800V 30A	PC	1,000	D908	.	.	.	.
772	V30001318	DIODE BA159 1A/800V 20A	PC	1,000	D902	.	.	.	.
773	V30001347	DIODE ZENER 8.2V	PC	1,000	SP902	.	.	.	.
774	V30001353	DIODE ZENER 18V	PC	1,000	D909	.	.	.	.
775	V30001992	FIXED COIL 10UH Q65 K-A	PC	2,000	J909	L906	.	.	.
777	V30001997	FIXED COIL 33UH Q60 J	PC	1,000	L904	.	.	.	.
778	V30006712	FERRITE BEAD 3.5X4.7X0.8	PC	1,000	J907	.	.	.	.
779	V30020924	PCB 11TP41J-3	PC	1,000	.	.	.	.	.
780	V30000202	CAP CER 15PF 50V J CH	PC	1,000	C901	.	.	.	.
781	V30000295	CAP CER 100NF 50V Z F	PC	1,000	C941	.	.	.	.

BILL OF MATERIAL LIST

10016277 3241 TOSHIBA TOSHIBA 32WH37G(AK41)SILVER

NO	PART NUMBER	DESCRIPTION	UNIT	QTY	POSITION NUMBER				
782	V30000330	CAP CER 4.7NF 50V K B	PC	1,000	C916	.	.	.	.
783	V30000352	CAP EL 100UF 16V M	PC	1,000	C919	.	.	.	.
784	V30000433	CAP CER 1NF 1KV M B	PC	1,000	C938	.	.	.	.
785	V30000436	CAP CER 10NF 1KV ZE	PC	1,000	C942	.	.	.	.
786	V30001427	TR BF422	PC	1,000	Q901	.	.	.	.
787	V30001455	TR BC558B	PC	1,000	Q902	.	.	.	.
788	V30000209	CAP SMD 18PF 50V J (0805)	PC	1,000	C905	.	.	.	.
789	V30000220	CAP SMD 22PF 50V J (0805)	PC	1,000	C909	.	.	.	.
790	V30000265	CAP SMD 560PF 50V J (0805)	PC	4,000	C904	C908	C912	C931	.
791	V30000294	CAP SMD 100NF 50V K (0805)	PC	7,000	C902	C906	C910	C920	C934
.	.	.	.	.	C935	C949	.	.	.
792	V30000469	RES SMD 1/10W 1K J 0805	PC	1,000	R926	.	.	.	.
793	V30000499	RES SMD 1/10W 1.2K J (0805)	PC	6,000	R901	R903	R906	R908	R911
.	.	.	.	.	R913	.	.	.	.
794	V30000524	RES SMD 1/10W 150R J (0805)	PC	3,000	R904	R909	R914	.	.
795	V30000593	RES SMD 1/10W 2.2K J (0805)	PC	1,000	R931	.	.	.	.
796	V30007788	RES SMD 1/10W 2.7K F (0805)	PC	1,000	R925	.	.	.	.
798	V20000989	HE.ASY.TP18-RGB	PC	3,000	IC901	IC903	IC902	.	.
799	V30001551	IC TDA6111Q	PC	1,000	.	.	.	.	.
800	V35000131	HEATSINK 11TP18 RGB	PC	1,000	.	.	.	.	.
801	V35000158	NUT C ZN BOTTOM M3	PC	1,000	.	.	.	.	.
802	V35000165	KNURL WASHER C ZNSY 3*6*04 (M3)	PC	1,000	.	.	.	.	.
803	V35000189	SCREW C NI YSMB M3*6	PC	1,000	.	.	.	.	.
804	V30000072	CAP MKT 10NF 1250V J	PC	1,000	C914	.	.	.	.
805	V30000075	CAP MKT 100NF 250V K (DC)	PC	5,000	C903	C907	C911	C922	C936
806	V30000406	CAP EL 47UF 250V M (HR) 105°	PC	1,000	C923	.	.	.	.
807	V30000415	CAP EL 4.7UF 250V M	PC	1,000	C915	.	.	.	.
808	V30001084	RES MO 1W 1K J	PC	3,000	R905	R910	R915	.	.
809	V30001125	RES MO 2W 2.2K J	PC	1,000	R916	.	.	.	.
810	V30001170	RES MO 1W 4.7K J	PC	1,000	R917	.	.	.	.
811	V30001211	RES FUSE 1W 1K J	PC	1,000	R944	.	.	.	.
812	V30001249	RES FUSE 1W 4.7R J	PC	1,000	R927	.	.	.	.
813	V30001851	CONN HEADER 7P 2.5MM TOP WHT	PC	1,000	PL902	.	.	.	.
814	V30001855	SOCKET CRT NARROWNECK W/GND	PC	1,000	PL904	.	.	.	.
816	V30002876	CNAS 1P/250 EMC DIS W/TER	PC	1,000	.	.	.	.	.
817	V30012894	CONN HEADER 10P 2.54MM TOP WHT	PC	1,000	PL901	.	.	.	.
818	V30017132	RES MF 1W 51K F	PC	3,000	R902	R907	R912	.	.
819	V35000135	TEST PIN 1.1MM	PC	1,000	PL905	.	.	.	.
820	V35000512	NUT C ZN M4	PC	1,000	.	.	.	.	.
821	V30011622	32"SF 100HZ CPT TUBE	PC	1,000	.	.	.	.	.
822	V40012621	LOGO TOSHIBA (W/P-SILVER BR/H.ST)(GRAY)	PC	1,000	.	.	.	.	.
823	V50000007	PLASTIZOTE (1400*1000)	PC	2,000	.	.	.	.	.
824	V50000040	LABEL SCREEN 100HZ (GÖZ)	PC	1,000	.	.	.	.	.
825	V50027594	LABEL EHT/29.8KV BEAM/1700UA (GER)	PC	1,000	.	.	.	.	.
826	V50029320	LABEL SCR.100HZ FASTEXT(AK41-AK52)(2SC)	PC	1,000	.	.	.	.	.

Cabinet Exploded View

N/A

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NOTES



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