

# TX-28SL10F Service Manual

Safety

Specifications

Parts List

Service  
Information

Adjustments

Self Check

Service Hints

Mechanical  
View

Disassembly

Location of  
Controls

Waveforms

Block Diagrams

Schematic Diagrams

PCB Views

## Service Support

Service and repair of this product is supported by Panasonic's LUCI interface.

This interface provides a link between the TV and a standard PC to allow a number of diagnostic and control functions to be performed.

For more details contact your local Panasonic company.

  
BACK

EXIT

Audio

Control

Power supply

Video

  
BACK

D - PCB

E - PCB

F - PCBs

H - PCB

N - PCB

Y - PCB

  
BACK

D - Schematic

E - Schematic

F - Schematic

H - Schematic

N - Schematic

Y - Schematic

  
BACK

# Service Manual



## Colour Television TX-28SL10F

### EURO - 5 Chassis

#### SPECIFICATIONS

<b>Power Source:</b>	220-240V a.c., 50Hz
<b>Power Consumption:</b>	140W
<b>Aerial Impedance:</b>	75Ω unbalanced, Coaxial Type
<b>Standby Power Consumption:</b>	1,9W
<b>Receiving System:</b>	PAL-I, B/G, H, D/K, PAL-525/60 SECAM L/L', B/G, D/K M.NTSC NTSC (AV only)

<b>Receiving Channels:</b>	
VHF E2-E12	VHF H1-H2 (ITALY)
VHF A-H (ITALY)	VHF R1-R2
VHF R3-R5	VHF R6-R12
UHF E21-E69	CATV (S01-S05)
CATV S1-S10 (M1-M10)	CATV S11-S20 (U1-U10)
CATV S21-S41 (HYPERBAND)	

<b>Intermediate Frequency:</b>	
Video	38,9MHz, 34MHz
Sound	32,9MHz, 33,4MHz, 33,16MHz 32,4MHz, 40,4MHz, 33,05MHz 32,66MHz
Colour	34,47MHz (PAL) 34,5MHz, 34,65MHz (SECAM)

<b>Video/Audio Terminals:</b>	
AUDIO MONITOR OUT	Audio (RCAx2) 500mV rms 1kΩ
AV1 IN	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 10kΩ RGB (21 pin)
AV1 OUT	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 1kΩ
AV2 IN	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 10kΩ S-Video IN Y: 1V p-p 75Ω (21 pin) C: 0.3V p-p 75Ω
AV2 OUT	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 1kΩ Selectable Output (21 pin)

**High Voltage:** 28,5kV ±1kV

**Picture Tube:** A66EAK552X54

**Audio Output:** 2 x 20W Left/Right  
(Music Power) 8Ω Impedance

**Accessories supplied:** Remote Control  
2 x R6 (UM3) Batteries

**Dimensions:**  
Height: 596,5mm  
Width: 778mm  
Depth: 481mm  
**Net Weight:** 33kg

Specifications are subject to change without notice.  
Weights and dimensions shown are approximate.

**NOTE:** This Service Manual should be used in conjunction with the EURO - 5 technical guide.

#### TECHNISCHE DATEN

<b>Netzspannung:</b>	220-240V a.c., 50Hz
<b>Leistungsaufnahme:</b>	140W
<b>Antennenimpedanz:</b>	75Ω asymmetrisch, Koaxial-Typ
<b>Standby Leistungsaufnahme:</b>	1,9W
<b>Empfangssystem:</b>	PAL-I, B/G, H, D/K, PAL-525/60 SECAM L/L', B/G, D/K M.NTSC NTSC (nur AV Eingang)

<b>Empfangsbereiche:</b>	
VHF E2-E12	VHF H1-H2 (ITALY)
VHF A-H (ITALY)	VHF R1-R2
VHF R3-R5	VHF R6-R12
UHF E21-E69	CATV (S01-S05)
CATV S1-S10 (M1-M10)	CATV S11-S20 (U1-U10)
CATV S21-S41 (HYPERBAND)	

<b>Zwischenfrequenz:</b>	
Video	38,9MHz, 34MHz
Sound	32,9MHz, 33,4MHz, 33,16MHz 32,4MHz, 40,4MHz, 33,05MHz 32,66MHz
Colour	34,47MHz (PAL) 34,5MHz, 34,65MHz (SECAM)

<b>Video/Audio Anschlüsse:</b>	
AUDIO MONITOR OUT	Audio (RCAx2) 500mV rms 1kΩ
AV1 EINGANG	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 10kΩ RGB (21 pin)
AV1 AUSGANG	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 1kΩ
AV2 EINGANG	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 10kΩ S-Video IN Y: 1V p-p 75Ω (21 pin) C: 0.3V p-p 75Ω
AV2 AUSGANG	Video (21 pin) 1V p-p 75Ω Audio (21 pin) 500mV rms 1kΩ Wählbarer Ausgang

**Hochspannung:** 28,5kV ±1kV

**Bildrohre:** A66EAK552X54

**Ton Ausgangsleistung:** 2 x 20W links/rechts  
(Musikleistung) 8Ω Impedanz

**Mittel. Zubehör:** Fernbedienung  
2 x R6 (UM3) Batterien

**Abmessungen:**  
Höhe: 596,5mm  
Breite: 778mm  
Tiefe: 481mm  
**Gewicht:** 33kg

Änderungen der Technischen Daten vorbehalten.

Gewichte und Abmessungen sind Näherungsangaben.

**Hinweis:** Bitte verwende Sie das Service Manual zusammen mit dem Technical Guide.

# CONTENTS

SAFETY PRECAUTIONS .....	2
SERVICE HINTS .....	4
SERVICE POSITION .....	5
SELF CHECK .....	6
ADJUSTMENT PROCEDURE .....	7
WAVEFORM PATTERN TABLE .....	8
ALIGNMENT SETTINGS .....	9
BLOCK DIAGRAMS .....	11
PARTS LOCATION .....	15
REPLACEMENT PARTS LIST .....	16
SCHEMATIC DIAGRAMS .....	30
CONDUCTOR VIEWS .....	36

## SAFETY PRECAUTIONS

### GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the a.c. supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the a.c. outlet.
5. Potentials as high as 29,5kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazard.

### LEAKAGE CURRENT COLD CHECK

1. Unplug the a.c. cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered a.c. plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts etc. When the exposed metallic part has a return path to the chassis the reading should be between 4M ohm and 20M ohm. When the exposed metal does not have a return path to the chassis the reading must be infinite.

# INHALT

SICHERHEITSVORKEHRUNGEN .....	2
SERVICE HINWEISE .....	4
SERVICEPOSITION .....	5
SELBSTDIAGNOSE .....	6
ABGLEICH .....	7
SIGNAL TABELLE .....	8
ABGLEICHTABELLE .....	10
SCHALTBILD BLOCK .....	11
EXPLOSIONSZEICHNUNG .....	15
ERSATZTEILLISTE .....	16
SCHALTBILD SCHEMA .....	30
ANSICHT DER LEITERBAHNEN .....	36

## SICHERHEITSVORKEHRUNGEN

### ALLGEMEINE RICHTLINIEN

1. Es ist empfehlenswert einen Trenntransformator in die Stromversorgung zu schalten, bevor Reparaturen an einem Gerät vorgenommen werden, dessen Chassis unter Spannung steht.
2. Bei der Durchführung von Servicearbeiten dürfen die ursprünglichen Kabelanschlüsse nicht vertauscht werden. Dies gilt insbesondere für die Anschlüsse im Hochspannungsteil. Hat sich ein Kurzschluß ereignet, dann sind alle Teile, an denen Spuren von Überhitzung sichtbar sind, auszuwechseln.
3. Nach Beenden der Servicearbeiten ist sicherzustellen, daß alle Sicherheitsvorrichtungen, wie Isolationsstege, Isolationspapiere, Abschirmungen und Isolations -R-C- Glieder wieder richtig eingesetzt sind.
4. Wenn der Fernseher während längerer Zeit nicht in Betrieb gesetzt wird, sollte der Netzstecker aus der Netzsteckdose gezogen werden.
5. Im Betrieb sind Spannungen bis zu 29,5kV in diesem Gerät vorhanden. Die Inbetriebnahme des Fernsehers ohne aufgesetzte Rückwand bringt die Gefahr eines elektrischen Schlages von der Fernseher - Stromversorgung mit sich. Servicearbeiten sollten daher auch nie durch Personen versucht werden, die nicht in vollem Umfang mit den Sicherheitsvorkehrungen beim Umgang mit Hochspannungsgeräten vertraut sind. Vor der Handhabung mit der Bildröhre ist die Anode der Bildröhre immer an dem Empfängerchassis zu entladen.
6. Nach Beenden der Servicearbeiten sind die folgenden Kriechstrom-Prüfungen durchzuführen, um den Kunden vor der Gefahr eines elektrischen Schlages zu schützen.

### MESSUNG DES ISOLATIONSWIDERSTANDES IM ABGESCHALTETEN ZUSTAND

1. Den Netzstecker aus der Netzsteckdose ziehen und die beiden Steckerstifte kurzschließen.
2. Den Geräteschalter des Fernsehgerätes einschalten.
3. Mit einem Ohmmeter den Widerstandswert zwischen dem überbrückten Netzkabelstecker und jedem zugänglichen Metallteil am Gehäuse des Fernsehgerätes, wie Schraubenköpfe, Antennen, Achsen der Regler, Griffassungen usw. messen. Wenn ein zugängliches Metallteil keine Rückleitung zum Chassis hat, muß die Anzeige unendlich betragen.

### LEAKAGE CURRENT HOT CHECK

1. Plug the a.c. cord directly into the a.c. outlet. Do not use an isolation transformer for this check.
2. Connect a 2k $\Omega$  10W resistor in series with an exposed metallic part on the receiver and an earth, such as a water pipe.
3. Use an a.c. voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed metallic part and check the voltage at each point.
5. Reverse the a.c. plug at the outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1,4 V rms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

### MESSUNG DES KRIECHSTROMS IM EINGESCHALTETEN ZUSTAND

1. Den Netzstecker direkt in eine Netzsteckdose stecken. Für diese Messung keinen Trenntransformator verwenden.
2. Einen 2k $\Omega$  / 10W-Widerstand in Serie mit einem von außen zugänglichen Metallteil am Fernsehgerät und einer guten, Erdung z.B Wasserleitung, anschließen.
3. Ein Wechselstrom-Voltmeter mit einem Meßbereich von 1000 Ohm.Volt oder größer verwenden, um die Spannung über den Widerstand zu messen.
4. Jedes zugängliche Metallteil prüfen, und an jedem Punkt dies Spannung messen.
5. Den Netzstecker umgekehrt in die Steckdose stecken und jede der obigen Messungen wiederholen.
6. Die Spannung darf an keinem der Punkte 1,4V eff. überschreiten. Wird dieser Wert nicht eingehalten, besteht die Gefahr eines elektrischen Schlages, und das Fernsehgerät sollte daher repariert und nachgeprüft werden, bevor es an den Kunden zurückgegeben wird.

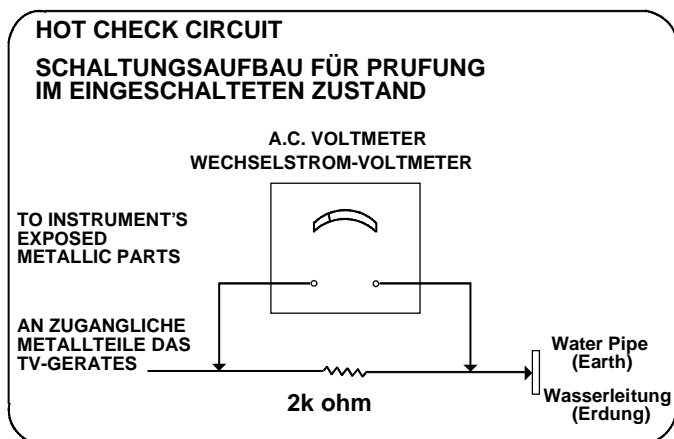


Fig.1.  
Abb.1.

### X-RADIATION WARNING

1. The potential sources of X-Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that the jig is capable of handling 29,5kV without causing X-Radiation.

**NOTE : It is important to use an accurate periodically calibrated high voltage meter.**

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate 28,5kV $\pm$  1kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent any X-Radiation possibility, it is essential to use the specified tube.

### RÖNTGENSTRAHLUNG ACHTUNG :

1. Potentielle Quellen von Röntgenstrahlung in Fernsehgeräten sind das Hochspannungsteil und die Bildröhre.
2. Bei Verwendung eines Bildröhren-Prüfgerätes für den Service ist sicherzustellen, daß es für die Belastung von 29,5kV geeignet ist, ohne daß eine Röntgenstrahlung verursacht wird.

**ANMERKUNG : Es ist wichtig, daß ein präzises, regelmäßig geprüftes Voltmeter verwendet wird.**

1. Helligkeit auf Minimum stellen.
2. Die Hochspannung messen. Die Anzeige des Instrumentes sollte 28,5kV $\pm$  1kV. Falls die Anzeige diese Toleranzgrenzen überschreitet, ist die sofortige Behebung nötig, um die Möglichkeit vorzeitigen Komponentenausfalls zu verhüten.
3. Um die Möglichkeit von Röntgenstrahlung zu begrenzen, ist es wichtig, daß nur die vorgeschriebene Bildröhre verwendet wird.

## SERVICE HINTS

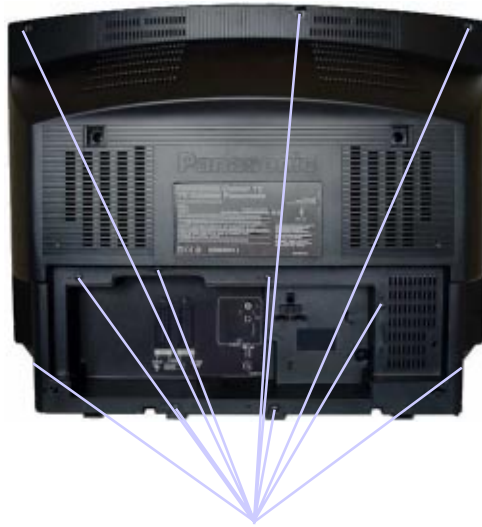
### HOW TO REMOVE THE REAR COVER

1. Remove the 11 screws as shown in Fig.2.

## SERVICE HINWEISE

### ENTFERNEN DER GERÄTERÜCKWAND

1. Die 11 Schrauben entfernen, siehe Abb.2.



Screws  
Schrauben  
Fig.2.  
Abb.2.

## LOCATION OF CONTROLS

## LAGE DER EINSTELLREGLER

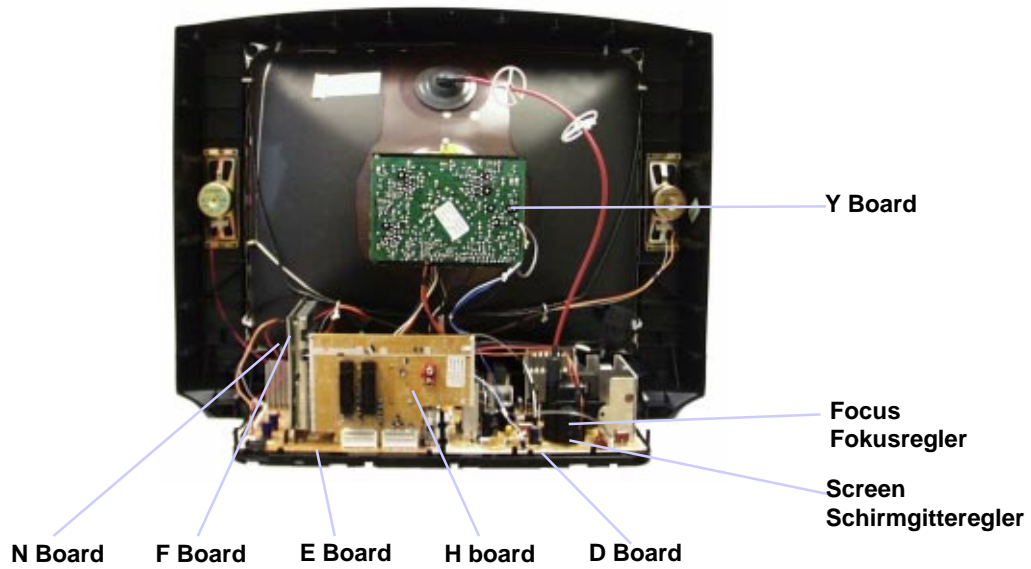


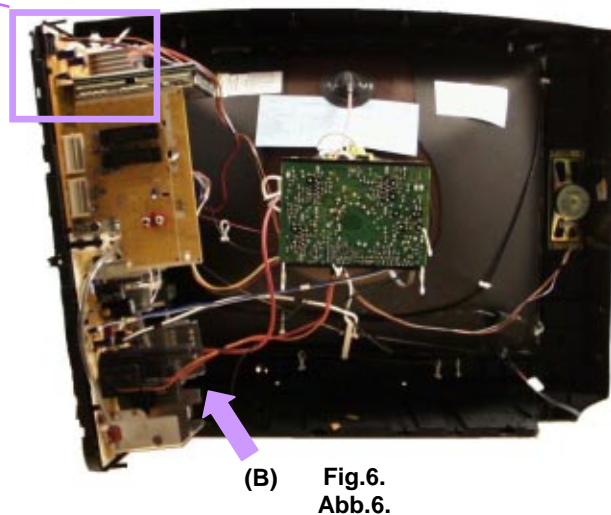
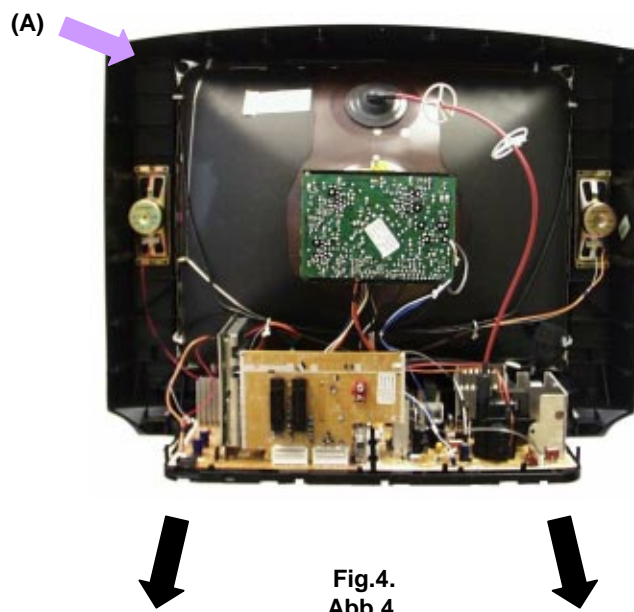
Fig.3.  
Abb.3.

## How to move the chassis into Service position

1. Remove the bead clamber from the mains lead and affix, using back cover screw, into top right-hand cabinet rib **(A)**, shown in **Fig.4**.
2. Hold and lift the rear of the chassis and gently pull the chassis toward you, as shown in **Fig.4**.
3. Release the respective wiring clips and rotate the chassis vertically through 90°, clockwise.
4. Locate the base of the chassis frame into the hole **(B)**, shown in **Fig.6**.
5. Clip the chassis frame onto the bead clamber **(A)**, as shown in **Fig.5**.
6. After servicing replace the bead clamber and ensure all wiring is returned to its original position before returning the receiver to the customer.

## Serviceposition für das Chassis

1. Entfernen Sie den Kabelbinder von der Netzleitung und befestigen Sie ihn mit einer Rückwandschraube am Gehäuse an der Position **(A)**. (**Abbildung.4.**)
2. Das Chassis am hinteren Ende leicht anheben und nach hinten herausziehen, wie in **Abbildung 4** dargestellt.
3. Die Kabelhalterungen lösen und das Chassis vertikal um 90° gegen den Uhrzeigersinn drehen.
4. Die Grundschiene des Chassisrahmens in die Führung **(B)** einschieben, wie in **Abbildung 6** dargestellt.
5. Mit dem Kunststoffhalteband **(A)** den Chassisrahmen am Gehäuseoberenteil befestigen, wie in **Abbildung 5** dargestellt.
6. Nach erfolgter Reparatur sicherstellen, daß sich alle Kabelverbindungen in ihrer korrekten Position befinden und ordnungsgemäß befestigt sind, bevor das Gerät dem Kunden zurückgegeben wird.



## SELF CHECK

1. Self-check is used to automatically check the bus lines and hexadecimal code of the TV set.
2. To get into the Self-Check mode press the down **(-V)** button on the customer controls at the front of the set, at the same time pressing the **STATUS** button on the remote control, and the screen will show :-

VPC	O.K		
TUN	O.K	PCB	O.K.
E2	O.K	Cab	O.K.
DPL	--		
CIP1	O.K	Sum	Factory use only
CIP2	O.K		Nur für Herstellung
VP	O.K		
DFU	O.K		
COL	--		
PIP	--		
DIS	O.K		
OPTION 1	B9		
OPTION 2	1C		
OPTION 3	1F		
OPTION 4	00		
OPTION 5	FB		
OPTION 6	23		

## SELBSTDIAGNOSE

1. Die Selbstdiagnose dient zum automatischen Prüfen der Bus-Leitungen sowie des Hexadezimalcodes des FS-Geräts. Zum Umschalten auf Selbstdiagnose zunächst die Taste "**STATUS**" auf der Fernbedienung und gleichzeitig die-Taste am Bedienteil des FS-Gerätes drücken **(-V)**, auf dem Bildschirm erscheint hierauf :-
2. Nach der Selbstdiagnose wird das Gerät automatisch auf sämtliche werksseitigen Standardeinstellungen zurückgesetzt :-

If the CCU ports have been checked and found to be incorrect or not located then " - - " will appear in place of "O.K.". Wenn der Hauptprozessor (CCU) an den Anschlüssen einen Fehler erkennt, oder der entsprechende Anschluss nicht belegt ist, zeigt die entsprechende Position " - - " anstelle von OK an.

### Service Aids

To aid in the service of our current chassis there are a number of Service Aids which have been made available.

- **LUCI** interface kit (Linked Utility Computer Interface)  
Part number: TZS6EZ002  
This contains interface and cables for connecting TV service connector and a PC as well as diagnostic software. As new models are introduced upgrade software will become available.
- **VICI** (Visual Interactive Computer Information)  
These C.D.'s contain multimedia documentation providing quick access to service information.  
Part No. TZS7EZ006 & TZS7EZ005
  1. Service Manuals
  2. Instruction Books
  3. Technical Information
- **TASMIN** (Technically Advanced System for Multimedia Interactive Notes)  
As well as providing a first step towards more interactive training this product also achieves quick access to Technical Information.

**NOTE:** This TV also has the option of using a Memory Pack which enables you to copy the preset TV channels into the Memory Pack and then download them onto this or any other EURO-5 TV set.

### Service-Hilfen

Zur Unterstützung der Servicearbeiten stehen weitere Hilfsmittel zur Verfügung.

- **LUCI** interface kit (PC-unterstütztes Diagnosesystem)  
Bestell-Nr.: TZS6EZ002  
Es beinhaltet ein Interface, die Anschlusskabel zum FS-Gerät und die Diagnose-Software. Bei Einführung von neuen Modellen ist ein Update der Software jederzeit möglich.
- **VICI** (Interaktive CD-ROM) mit schnellem Zugriff auf Serviceinformationen.  
Bestell-Nr.: TZS7EZ006 & TZS7EZ005
  1. Service Manuals
  2. Bedienungsanleitungen
  3. Technical Information
- **TASMIN** (Technisch erweitertes System für interaktive Multimedia-Hinweise und Notizen)  
Genauso wie dieses Produkt einen ersten Schritt in Richtung erweitertes interaktives Training bereitstellt, ermöglicht es einen noch schnelleren Zugang zu technischen Informationen.

**HINWEIS:** Dieses FS-Gerät bietet auch die Möglichkeit eines Memory Pack, mit dem Sie die gewählten Fernsehkanäle abspeichern und auf jedes beliebige EURO-5 FS-Gerät umkopieren können.



## ADJUSTMENT PROCEDURE

Item/Preparation	Adjustments																																																				
<p><b>+B SET-UP</b></p> <ol style="list-style-type: none"> <li>1. Receive a Greyscale signal.</li> <li>2. Set the controls:-            Brightness Minimum             Contrast Minimum             Volume Minimum</li> </ol>	<p>1. Confirm the following voltages.</p> <table border="0"> <thead> <tr> <th colspan="2">D-Board</th> <th colspan="2">E-Board</th> </tr> </thead> <tbody> <tr> <td>D3</td> <td>PIN5 147V ± 3V</td> <td>U8A</td> <td>E19-PIN8 8V ± 0,5V</td> </tr> <tr> <td>D12</td> <td>PIN5 5V ± 0,3V</td> <td>U9</td> <td>IC3801-PIN3 9V ± 0,5V</td> </tr> <tr> <td>D13</td> <td>PIN1 40V ± 4V</td> <td>U12</td> <td>E22-PIN8 12V ± 0,5V</td> </tr> <tr> <td>D3</td> <td>PIN4 230V ± 10V</td> <td>STD5V</td> <td>E26-PIN4 5V ± 0,5V</td> </tr> <tr> <td>D3</td> <td>PIN4 205V ± 10V</td> <td>U15</td> <td>E23-PIN8 15V ± 1V</td> </tr> <tr> <td>D3</td> <td>PIN4 190V ± 10V</td> <td>U15</td> <td>E23-PIN9 -15V ± 1V</td> </tr> <tr> <td>D3</td> <td>PIN4 190V ± 10V</td> <td>U33</td> <td>E22-PIN10 33V ± 4V</td> </tr> <tr> <td>D14</td> <td>PIN5 5V ± 0,5V</td> <td>U40</td> <td>E24-PIN1 40V ± 3V</td> </tr> <tr> <td>D12</td> <td>PIN7 15V ± 2V</td> <td>U5B</td> <td>E19-PIN5 5V ± 0,5V</td> </tr> <tr> <td>D12</td> <td>PIN9 15V ± 2V</td> <td></td> <td></td> </tr> <tr> <td>D11</td> <td>PIN8 12V ± 2V</td> <td></td> <td></td> </tr> <tr> <td>D11</td> <td>PIN10 33V ± 3V</td> <td></td> <td></td> </tr> </tbody> </table>	D-Board		E-Board		D3	PIN5 147V ± 3V	U8A	E19-PIN8 8V ± 0,5V	D12	PIN5 5V ± 0,3V	U9	IC3801-PIN3 9V ± 0,5V	D13	PIN1 40V ± 4V	U12	E22-PIN8 12V ± 0,5V	D3	PIN4 230V ± 10V	STD5V	E26-PIN4 5V ± 0,5V	D3	PIN4 205V ± 10V	U15	E23-PIN8 15V ± 1V	D3	PIN4 190V ± 10V	U15	E23-PIN9 -15V ± 1V	D3	PIN4 190V ± 10V	U33	E22-PIN10 33V ± 4V	D14	PIN5 5V ± 0,5V	U40	E24-PIN1 40V ± 3V	D12	PIN7 15V ± 2V	U5B	E19-PIN5 5V ± 0,5V	D12	PIN9 15V ± 2V			D11	PIN8 12V ± 2V			D11	PIN10 33V ± 3V		
D-Board		E-Board																																																			
D3	PIN5 147V ± 3V	U8A	E19-PIN8 8V ± 0,5V																																																		
D12	PIN5 5V ± 0,3V	U9	IC3801-PIN3 9V ± 0,5V																																																		
D13	PIN1 40V ± 4V	U12	E22-PIN8 12V ± 0,5V																																																		
D3	PIN4 230V ± 10V	STD5V	E26-PIN4 5V ± 0,5V																																																		
D3	PIN4 205V ± 10V	U15	E23-PIN8 15V ± 1V																																																		
D3	PIN4 190V ± 10V	U15	E23-PIN9 -15V ± 1V																																																		
D3	PIN4 190V ± 10V	U33	E22-PIN10 33V ± 4V																																																		
D14	PIN5 5V ± 0,5V	U40	E24-PIN1 40V ± 3V																																																		
D12	PIN7 15V ± 2V	U5B	E19-PIN5 5V ± 0,5V																																																		
D12	PIN9 15V ± 2V																																																				
D11	PIN8 12V ± 2V																																																				
D11	PIN10 33V ± 3V																																																				
<p><b>Cut-Off</b></p> <ol style="list-style-type: none"> <li>1. Receive a Greyscale signal.</li> <li>2. Degauss the tube externally.</li> <li>3. Set the TV into Service Mode 1.</li> <li>4. Select Cutoff mode.</li> </ol>	<p>Adjust the screen VR until the display shows "O.K."</p>																																																				

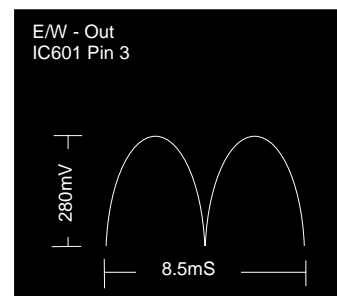
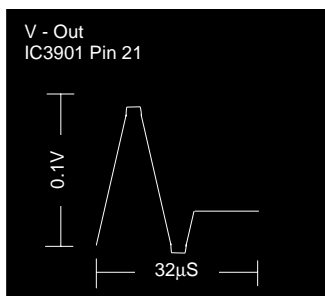
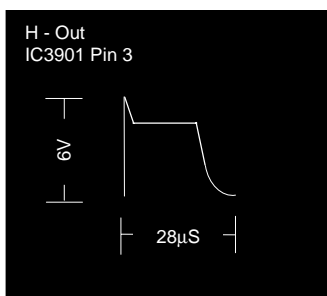
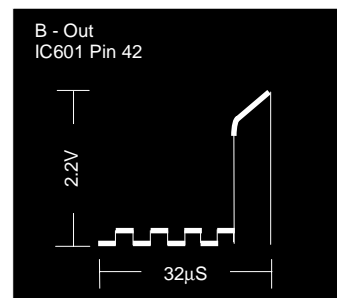
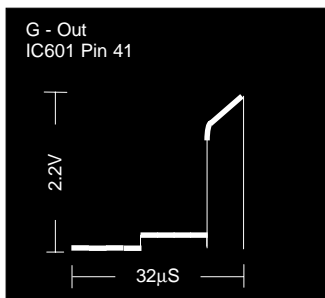
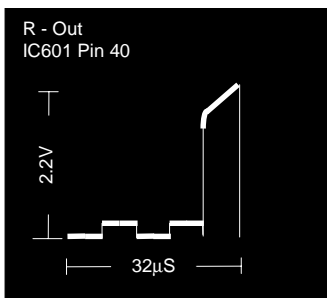
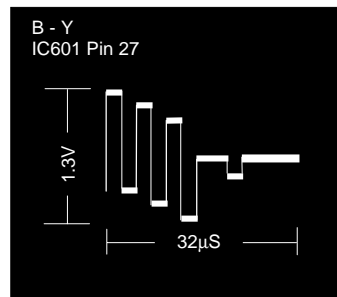
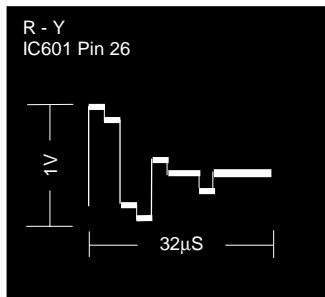
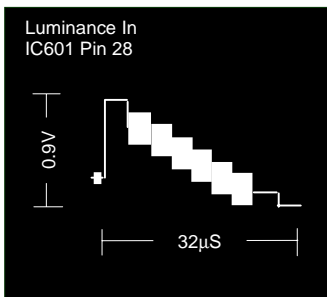
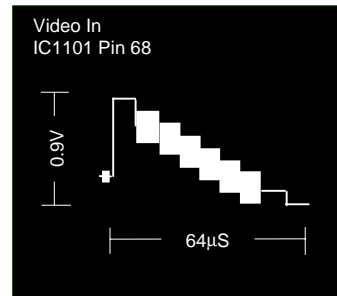
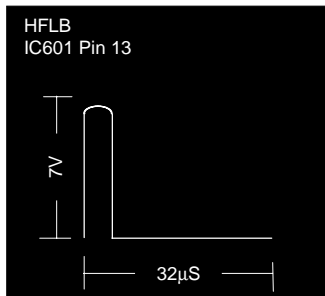
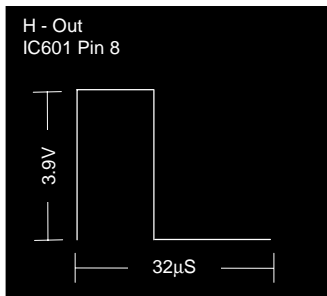
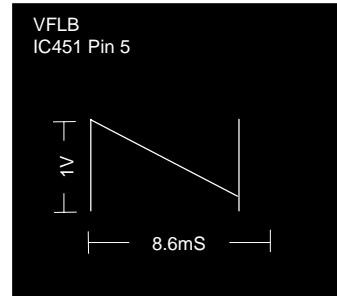
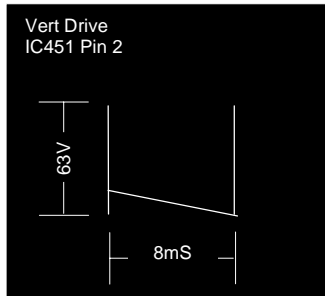
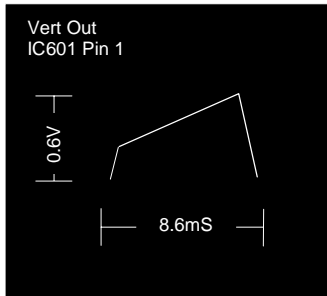
## ABGLEICH

Vorbereitungen	Abgleich																																																				
<p><b>+B - Abgleich</b></p> <ol style="list-style-type: none"> <li>1. Testbild empfangen.            Helligkeit auf Minimum             Kontrast auf Minimum             Lautstärke Minimum</li> </ol>	<p>1. Folgende Spannungen sind zu überprüfen.</p> <table border="0"> <thead> <tr> <th colspan="2">D-Board</th> <th colspan="2">E-Board</th> </tr> </thead> <tbody> <tr> <td>D3</td> <td>PIN5 147V ± 3V</td> <td>U8A</td> <td>E19-PIN8 8V ± 0,5V</td> </tr> <tr> <td>D12</td> <td>PIN5 5V ± 0,3V</td> <td>U9</td> <td>IC3801-PIN3 9V ± 0,5V</td> </tr> <tr> <td>D13</td> <td>PIN1 40V ± 4V</td> <td>U12</td> <td>E22-PIN8 12V ± 0,5V</td> </tr> <tr> <td>D3</td> <td>PIN4 230V ± 10V</td> <td>STD5V</td> <td>E26-PIN4 5V ± 0,5V</td> </tr> <tr> <td>D3</td> <td>PIN4 205V ± 10V</td> <td>U15</td> <td>E23-PIN8 15V ± 1V</td> </tr> <tr> <td>D3</td> <td>PIN4 190V ± 10V</td> <td>U15</td> <td>E23-PIN9 -15V ± 1V</td> </tr> <tr> <td>D3</td> <td>PIN4 190V ± 10V</td> <td>U33</td> <td>E22-PIN10 33V ± 4V</td> </tr> <tr> <td>D14</td> <td>PIN5 5V ± 0,5V</td> <td>U40</td> <td>E24-PIN1 40V ± 3V</td> </tr> <tr> <td>D12</td> <td>PIN7 15V ± 2V</td> <td>U5B</td> <td>E19-PIN5 5V ± 0,5V</td> </tr> <tr> <td>D12</td> <td>PIN9 15V ± 2V</td> <td></td> <td></td> </tr> <tr> <td>D11</td> <td>PIN8 12V ± 2V</td> <td></td> <td></td> </tr> <tr> <td>D11</td> <td>PIN10 33V ± 3V</td> <td></td> <td></td> </tr> </tbody> </table>	D-Board		E-Board		D3	PIN5 147V ± 3V	U8A	E19-PIN8 8V ± 0,5V	D12	PIN5 5V ± 0,3V	U9	IC3801-PIN3 9V ± 0,5V	D13	PIN1 40V ± 4V	U12	E22-PIN8 12V ± 0,5V	D3	PIN4 230V ± 10V	STD5V	E26-PIN4 5V ± 0,5V	D3	PIN4 205V ± 10V	U15	E23-PIN8 15V ± 1V	D3	PIN4 190V ± 10V	U15	E23-PIN9 -15V ± 1V	D3	PIN4 190V ± 10V	U33	E22-PIN10 33V ± 4V	D14	PIN5 5V ± 0,5V	U40	E24-PIN1 40V ± 3V	D12	PIN7 15V ± 2V	U5B	E19-PIN5 5V ± 0,5V	D12	PIN9 15V ± 2V			D11	PIN8 12V ± 2V			D11	PIN10 33V ± 3V		
D-Board		E-Board																																																			
D3	PIN5 147V ± 3V	U8A	E19-PIN8 8V ± 0,5V																																																		
D12	PIN5 5V ± 0,3V	U9	IC3801-PIN3 9V ± 0,5V																																																		
D13	PIN1 40V ± 4V	U12	E22-PIN8 12V ± 0,5V																																																		
D3	PIN4 230V ± 10V	STD5V	E26-PIN4 5V ± 0,5V																																																		
D3	PIN4 205V ± 10V	U15	E23-PIN8 15V ± 1V																																																		
D3	PIN4 190V ± 10V	U15	E23-PIN9 -15V ± 1V																																																		
D3	PIN4 190V ± 10V	U33	E22-PIN10 33V ± 4V																																																		
D14	PIN5 5V ± 0,5V	U40	E24-PIN1 40V ± 3V																																																		
D12	PIN7 15V ± 2V	U5B	E19-PIN5 5V ± 0,5V																																																		
D12	PIN9 15V ± 2V																																																				
D11	PIN8 12V ± 2V																																																				
D11	PIN10 33V ± 3V																																																				
<p><b>Cut-Off</b></p> <ol style="list-style-type: none"> <li>1. Testbild empfangen.</li> <li>2. Bildröhre entmagnetisieren.</li> <li>3. Service-Mode 1 anwählen.</li> <li>4. Im Service-Mode den Abgleichpunkt Cutoff-Mode wählen .</li> </ol>	<p>Bis OK auf dem Bildschirm erscheint. Den Wert abspeichern.</p>																																																				

# WAVEFORM PATTERN TABLE SIGNAL TABELLE

**NOTE:** All waveforms have been taken using a standard colour bar pattern.

**HINWEIS:** Alle oszillogramme wurden unter Verwendung des Standard Farbbalken Testbildes aufgenommen.



## ALIGNMENT SETTINGS:

(The figures below are nominal and used for representative purposes only.)

1. Set the Bass to maximum position, set the Treble to minimum position, press the down button (- / v) on the customer controls at the front of the TV and at the same time press the **INDEX** button on the remote control, this will place the TV into the Service Mode.
2. Press the **RED / GREEN** buttons to step up / down through the functions.
3. Press the **YELLOW / BLUE** buttons to alter the function values.
4. Press the **STR** button after each adjustment has been made to store the required values.
5. To exit the Service Mode, press the **"N"** button.

Alignment Function		Settings / Special features
Horizontal Position	H-Pos +020	Optimum setting.
Vertical Position	V-Pos +024	Optimum setting.
Horizontal Amplitude	H-Amp +049	Optimum setting.
Vert. Amplitude	V-Amp +029	Optimum setting.
EW-amplitude	E/W-Amp1 +022	Optimum setting.
EW-amplitude	E/W-Amp2 +000	Optimum setting.
Trapezium-comp	Trapez-1 +033	Optimum setting.
Horizontal-Parallel	H-Parallel +032	Optimum setting.
Vertical Linearity	V-Lin +004	Optimum setting.
DVCO	DVCO 000	Receive a PAL Colour Bar Pattern. For DVCO alignment press <b>"Blue"</b> button, wait until the colours are stable and press <b>"STR"</b> .
Cut-off DC	Cut-off O.K.	To adjust Cutoff adjust the screen VR until the display shows "O.K."
Highlight	High 0031 0031 0031	Contrast           Maximum A.I.                 Off Optimum setting.
Sub-Brightness	Sub-Brightness 000	Optimum setting.

## ABGLEICHTABELLE:

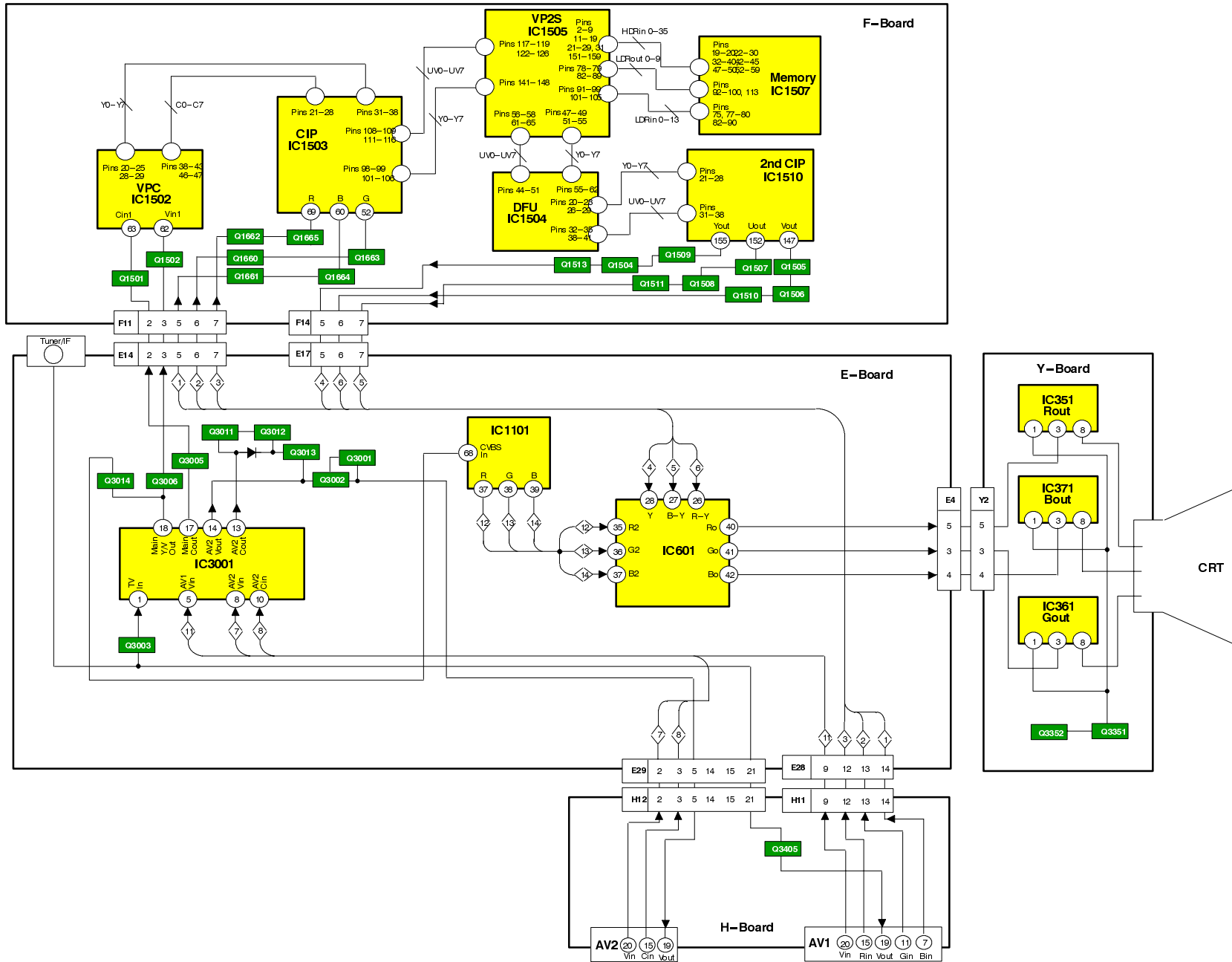
(Die angegebenen Werte sind Mittelwerte und Können individuell nach oben oder unten nach dem korrekten Abgleich abweichen.)

1. Um in den Service-Mode zu gelangen, gehen sie bitte wie folgt vor.
2. Stellen sie im Toneinstellungs-Menü die Bässe auf Maximun und die Höhen auf Minimum.
3. Halten sie die **INDEX**-Taste auf der Fernbedienung gedrückt und drücken zusätzlich die Taste **-V** im Bedienteil des TV-Gerätes. Auf dem Bildschirm erscheint die entsprechende Anzeige für den Service-Mode.
4. Die einzelnen Funktionen mit Hilfe der **ROTEN** und **GRÜNEN** Taste anwählen.
5. Mit der **GELBEN** und **BLAUEN** Taste die Werte der einzelnen Funktionen ändern.
6. Nach jeder Einstellung die Taste **STR** auf der Fernbedienung drücken, um die geänderten Werte abzuspeichern.
7. Zum Verlassen des Service-Modus die **"N"** - Taste auf der Fernbedienung drücken.

Abgleichfunktion		Einstellung / Besondere Merkmale
Horizontal Position	H-Pos +020	Optimale Einstellung.
Vertikale Position	V-Pos +024	Optimale Einstellung.
Horizontale Amplitude	H-Amp +049	Optimale Einstellung.
Vertikale Amplitude	V-Amp +029	Optimale Einstellung.
OW-amplitude	E/W-Amp1 +022	Optimale Einstellung.
OW-amplitude	E/W-Amp2 +000	Optimale Einstellung.
Trapez-Kompensation	Trapez-1 +033	Optimale Einstellung.
Horizontale-Parallel	H-Parallel +032	Optimale Einstellung.
Vertikale linearität	V-Lin +004	Optimale Einstellung.
DVCO	DVCO 000	Ein Farbbalken-Testbild empfangen. Zum Abgleich des Farboszillators (DVCO) die <b>blau</b> Taste drücken. Nachdem ein leichtes Flackern in den Farbbalken zum Stillstand gekommen ist, die <b>STR</b> -Taste drücken.
Cut-off DC	Cut-off O.K.	Den Abgleichwert solange ändern, bis OK auf dem Bildschirm erscheint. Den Wert abspeichern.
Highlight	High 0031 0031 0031	Contrast Maximum A.I. Off Optimale Einstellung.
Sub-Brightness	Sub-Brightness 000	Optimale Einstellung.

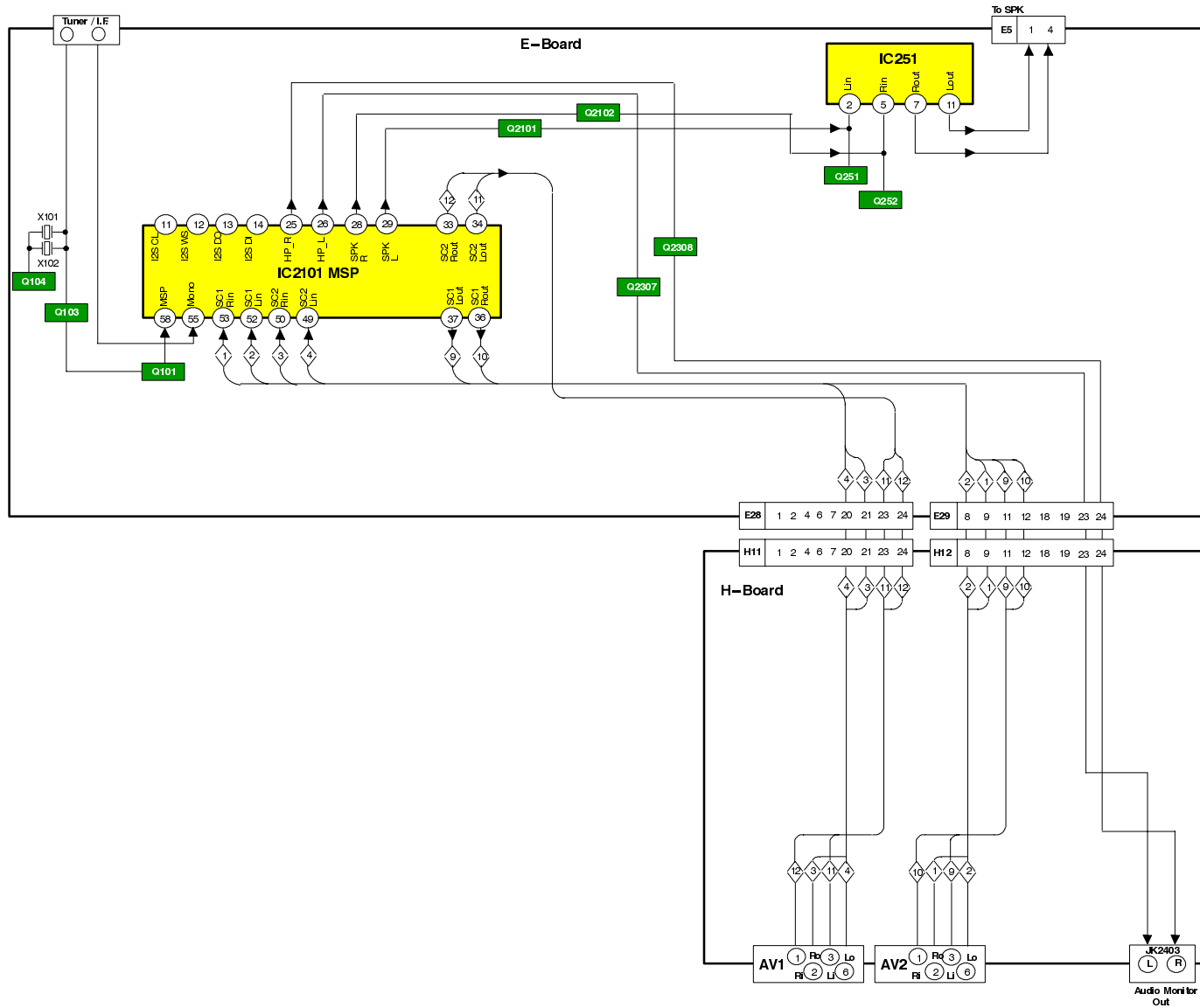
# VIDEO BLOCK DIAGRAM

# BILDSIGNAL BLOCKSCHEMA



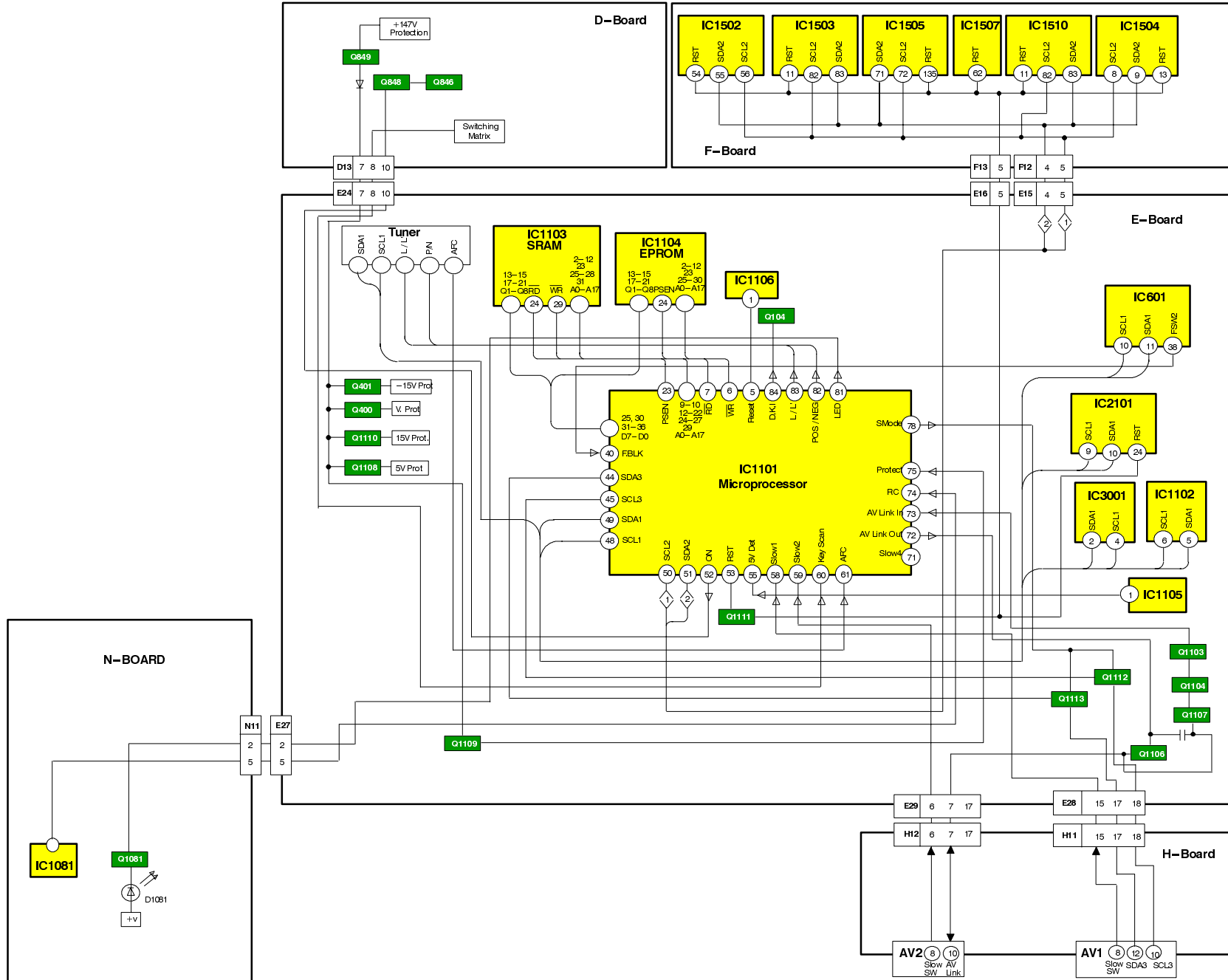
# AUDIO BLOCK DIAGRAM

# TONSIGNAL BLOCKSCHEMA



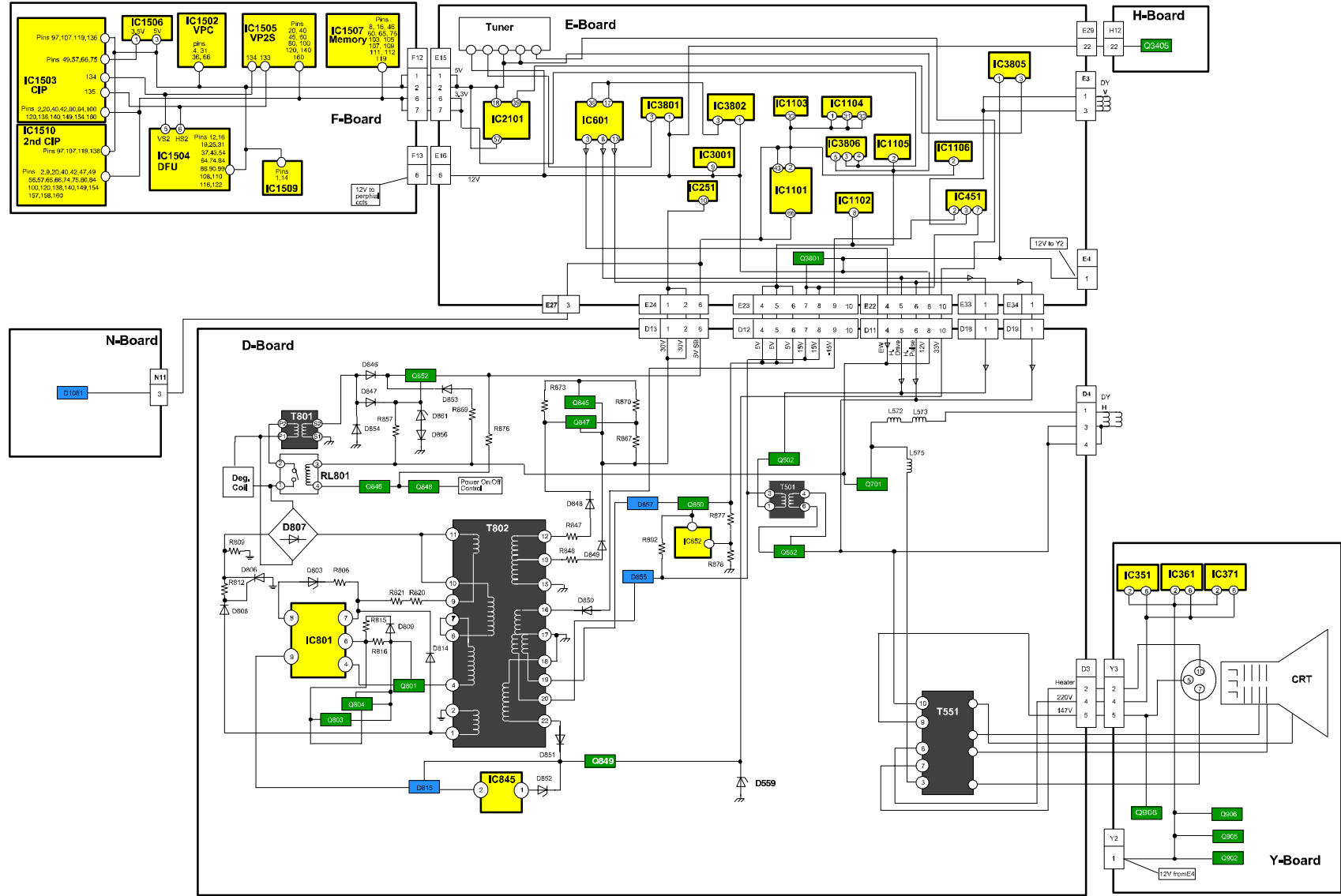
# CONTROL BLOCK DIAGRAM

# KONTROLL BLOCKSCHEMA



# POWER SUPPLY & DEFLECTION BLOCK DIAGRAM

# STROMVERSORGUNGS BLOCKSCHEMA



14



## PARTS LOCATION

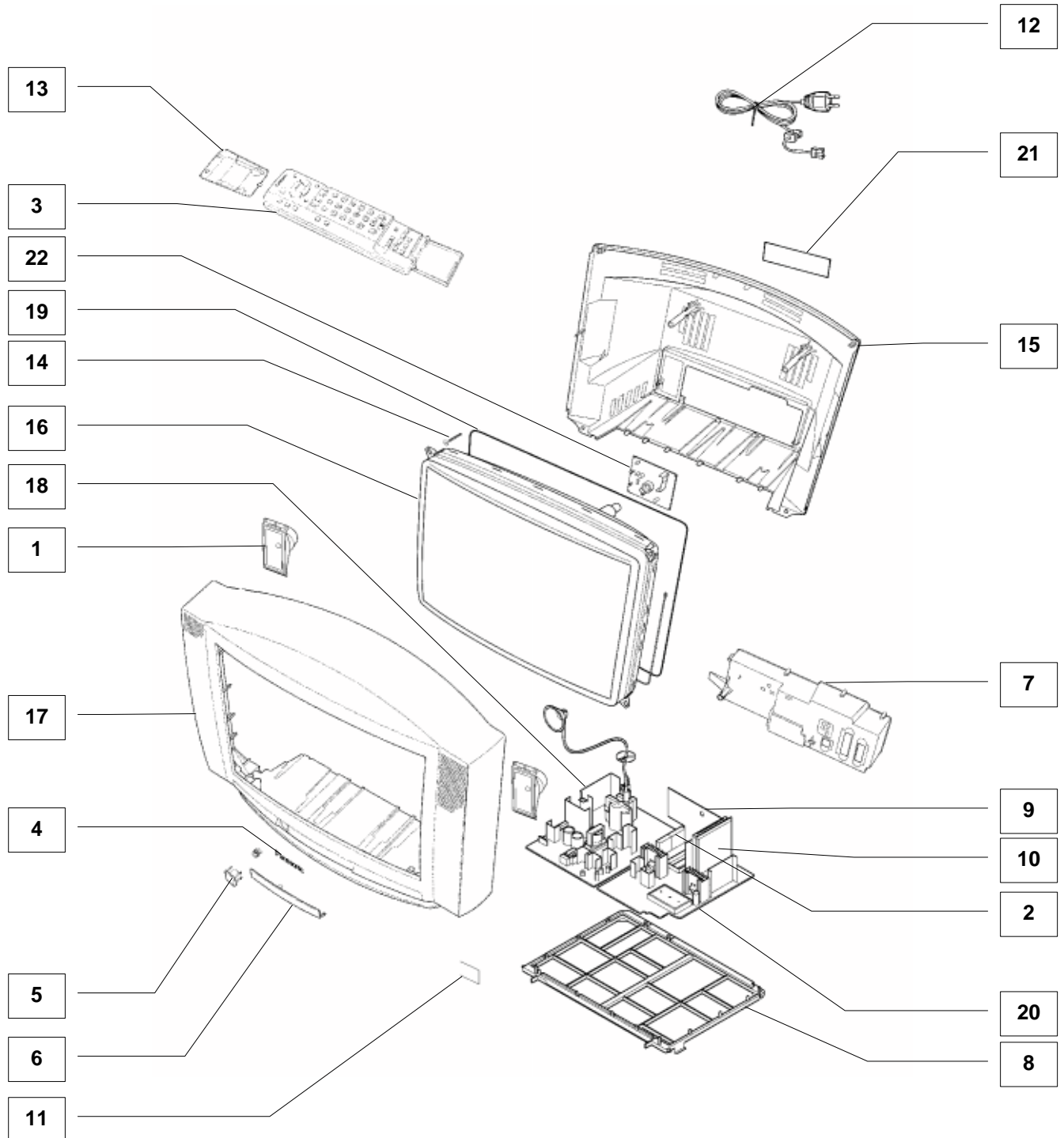
**NOTE:**

The numbers on the exploded view below refer to the mechanical section of the Replacement Parts List.

## EXPLOSIONSZEICHNUNG

**Anmerkung:**

Die Nummer auf den mechanischen Teilen zeigt die Bezugsnummer der Ersatzteilliste an.



## REPLACEMENT PARTS LIST

### Important Safety Notice

Components identified by  $\Delta$  mark have special characteristics important for safety.

When replacing any of these components, use only manufacturer's specified parts.

\* In case of ordering these spare parts, please always add the complete Model-Type number to your order.

Ref No.	Part No.	Description	
<b>MECHANICAL PARTS</b>			
1	EASG15S506A2	SPEAKER	
2	ENG29505G	TUNER	$\Delta$
3	EUR511211	REMOTE CONTROL	
4	TBM8E1728	PANASONIC BADGE	
5	TBX8E056	POWER BUTTON	
6	TKP8E1235	DOOR LID	
7	TKP8E1262	REAR AV PANEL	
8	TMX8E033-1	CHASSIS FRAME	
9	TNPA1047AD	H P.C.B.	$\Delta$
10	TNPA1068AC	F P.C.B.	$\Delta$
11	TNPA1072AA	N P.C.B.	$\Delta$
12	TSX8E0033	AC CORD	$\Delta$
13	UR51EC904A	BATTERY COVER (REMOTE)	
14	VP17005-32	CRT FIXING SCREW	
15	TKU8E00320	BACK COVER	$\Delta$
16	A66EAK552X54	C.R.T.	$\Delta$
17	TKY8E306-3	CABINET	$\Delta$
18	TNPA1014AN	D P.C.B.	$\Delta$
19	TLK8E05140	DEGAUSS COIL	$\Delta$
20	TNPH0176AS	E P.C.B.	$\Delta$
21	TQF8E2740	MODEL LABEL	$\Delta$
22	TNPA1353AF	Y P.C.B.	$\Delta$
<b>MISCELLANEOUS COMPONENTS</b>			
	TBM8E1840	PRESET LABEL	
	TBM8E1903	REAR AV LABEL	
	TEK6940	LID CATCHER	
	TES8E015	POWER BUTTON SPRING	
	TKK8E036	POWER BUTTON SPACER	
	TMW8E027	LED HOLDER	
	TMX8E025	PCB HOLDER	
	TPC8E4765	OUTER CARTON	
	TPD8E655	CUSHION TOP	
	TPD8E656	CUSHION BOTTOM	
	UM-3DJ-2P	BATTERY SET	
	ZTUZAE550A	ANODE CABLE	$\Delta$
	PLCC-84-T	84 PIN IC SOCKET	
	832AG11D-ESL	I.C. SOCKET	
SOD1	31221212478	FIX CLIP	
SOD9	31221212478	FIX CLIP	
<b>INSTRUCTION BOOKS</b>			
	TQB8E2656A-2	GERMAN	$\Delta$
	TQB8E2656C-2	ITALIAN	$\Delta$
	TQB8E2656D-2	FRENCH	$\Delta$
	TQB8E2656F-2	SWEDISH	$\Delta$

## ERSATZTEILLISTE

### Wichtiger Sicherheitshinweis

Teile, die mit einem Hinweis  $\Delta$  gekennzeichnet sind, wichtig für die Sicherheit. Sollte ein Auswechsein erforderlich sein, sind unbedingt Originalteile einzusetzen.

Bei der Bestellung von Ersatzteilen, die mit \* gekennzeichnet sind, geben Sie bitte unbedingt die vollständige Typenbezeichnung mit an.

Ref No.	Part No.	Description	
<b>INTEGRATED CIRCUITS</b>			
IC251	LA4282	AUDIO OUTPUT	
IC351	TDA6111Q-N4	RGB OUTPUT	
IC361	TDA6111Q-N4	RGB OUTPUT	
IC371	TDA6111Q-N4	RGB OUTPUT	
IC381	TL431ACLPM	REGULATOR	
IC451	LA7845N	VERTICAL OUTPUT	
IC601	TDA9330HN1G	VIDEO PROCESSOR	
IC801	AN8029	POWER SUPPLY	
IC845	SE140N	ERROR AMPLIFIER	
IC852	TL431ACLPM	REGULATOR	
IC1081	RPM6937-V4	LED RECEIVER	
IC1101	SDA5450C48-1	MICRO PROCESSOR	
IC1102	X24CWH0501HD	EAROM *	
IC1103	M5M51008BP	SRAM	
IC1104	27C2001-H08	EPROM *	
IC1105	MN1381-T(TA)	RESET	
IC1106	MN1381-R(TA)	RESET	
IC1502	VPC3215CB4TP	VPC	
IC1503	MB87F1720	CIP	
IC1504	FJB007S	DFU	
IC1505	MB87F2131	VP2S	
IC1506	AN77L035M-E1	3.5V REGULATOR	
IC1507	MB87H2010	MEMORY	
IC1509	TLC2932IPWL	CLOCK CONVERTOR	
IC1510	MB87F1720	CIP	
IC2101	MSP3410DPPB4	AUDIO PROCESSOR	
IC3001	TEA6415C	VIDEO SWITCH	
IC3801	AN7809FLB	9V REGULATOR	
IC3802	AN7708FLB	8V REGULATOR	
IC3805	AN7808LB	8V REGULATOR	
IC3806	SI-3033C	3.5V REGULATOR	
<b>FUSES</b>			
F802	XBA2C50TH15	FUSE	
F845	TR5-T3150	FUSE	$\Delta$
F846	TR5-T1250	FUSE	$\Delta$
F8021	EYF52BC	FUSE HOLDER	
F8022	EYF52BC	FUSE HOLDER	
<b>DIODES</b>			
D001	MA4020	DIODE	
D002	MA4020	DIODE	
D252	MA165TA5	DIODE	
D253	MA700TA5	DIODE	
D254	MA700TA5	DIODE	
D255	MA165TA5	DIODE	
D351	ERA15-04V3	DIODE	
D352	ERA15-04V3	DIODE	
D361	ERA15-04V3	DIODE	
D362	ERA15-04V3	DIODE	
D371	ERA15-04V3	DIODE	
D372	ERA15-04V3	DIODE	

Ref No.	Part No.	Description
D387	MA2160LFS	DIODE
D400	MA4104	DIODE
D401	MA165TA5	DIODE
D402	MA165TA5	DIODE
D404	EU02AV1	DIODE
D405	MA165TA5	DIODE
D408	MA165TA5	DIODE
D502	1SS254T-77	DIODE
D503	EU02	DIODE
D504	EU02	DIODE
D505	ERA81004V3	DIODE
D551	EU02	DIODE
D556	AU02V0	DIODE
D559	MTZJT-7736A	DIODE
D560	1SS252T-77	DIODE
D561	1SS254T-77	DIODE
D563	RH3GLF102	DIODE
D565	MTZJT-7736A	DIODE
D566	MA165TA5	DIODE
D571	FMV-3GULF730	DIODE
D575	1SS252T-77	DIODE
D601	MA29TA5	DIODE
D603	MA4075	DIODE
D605	MA4062	DIODE
D607	MA165TA5	DIODE
D610	MA4043	DIODE
D611	MA165TA5	DIODE
D612	MA165TA5	DIODE
D615	MA165TA5	DIODE
D616	MA178TA5	DIODE
D617	MTZJT-779.1C	DIODE
D618	MTZJT-779.1C	DIODE
D620	MA165TA5	DIODE
D651	MA165TA5	DIODE
D701	AU02V0	DIODE
D803	MTZJT-7712C	DIODE
D806	TF361MALF3	DIODE
D807	RBV-608LF-B	DIODE
D808	MA165TA5	DIODE
D809	ERA22-02V3	DIODE
D810	MA2180BLFS	DIODE
D812	MTZJT-775.6B	DIODE
D813	MA700TA5	DIODE
D814	AU01ZV0	DIODE
D815	PC123FY2	DIODE
D817	D5L60F4015	DIODE
D818	TMPG10G3	DIODE
D819	ERA81004V3	DIODE
D820	MA4100	DIODE
D821	EU02AV0	DIODE
D845	MA165TA5	DIODE
D846	EK04V0	DIODE
D847	ERA15-01V3	DIODE
D848	EU02	DIODE
D849	FMGG26S	DIODE
D850	ERB32-02E	DIODE
D851	FMGG2CSLF116	DIODE
D852	MA4062	DIODE
D853	1N4150T-77	DIODE
D854	ERA15-01V3	DIODE
D855	D10SC6MRL	DIODE
D856	MA165TA5	DIODE
D857	FML22SLF610	DIODE
D860	1SS254T-77	DIODE
D861	MTZJT-775.1C	DIODE
D901	1SS254T-77	DIODE
D902	1SS254T-77	DIODE
D903	1SS254T-77	DIODE
D910	R2KNV	DIODE
D1081	SLR56UR3FS	DIODE
D1102	MA4051	DIODE
D1103	MA4051	DIODE

Ref No.	Part No.	Description
D1104	MA165TA5	DIODE
D1105	MA165TA5	DIODE
D1107	MA165TA5	DIODE
D1109	MA165TA5	DIODE
D1110	MA165TA5	DIODE
D1112	MA165TA5	DIODE
D1501	MA151ATX	DIODE
D2101	MTZJT-7712C	DIODE
D2102	MTZJT-7712C	DIODE
D3006	MA4100	DIODE
D3008	MA723TA5	DIODE
D3009	MA170	DIODE
D3011	MA858TA5	DIODE
D3351	1SS254T-77	DIODE
D3352	MA165TA5	DIODE
D3353	MA165TA5	DIODE
D3354	MA165TA5	DIODE
D3401	MTZJT-7712C	DIODE
D3803	MA4043	DIODE
D3804	MTZJT-778.2A	DIODE
D3805	ERA81004V3	DIODE
D3990	MTZJT-7724D	DIODE

### TRANSISTORS

Q101	BC847B	TRANSISTOR
Q103	BC847B	TRANSISTOR
Q104	BC847B	TRANSISTOR
Q251	2SD1328STX	TRANSISTOR
Q252	2SD1328STX	TRANSISTOR
Q253	BC847B	TRANSISTOR
Q254	BC857B	TRANSISTOR
Q400	BC847B	TRANSISTOR
Q401	BC847B	TRANSISTOR
Q502	2SC2925STA	TRANSISTOR
Q552	2SC5144LB230	TRANSISTOR
Q553	2SC1473-RN	TRANSISTOR
Q554	2SC1473-RN	TRANSISTOR
Q601	BC857B	TRANSISTOR
Q602	BC857B	TRANSISTOR
Q603	BC857B	TRANSISTOR
Q604	BC857B	TRANSISTOR
Q607	BC857B	TRANSISTOR
Q608	BC857B	TRANSISTOR
Q701	2SK2538000LB	TRANSISTOR
Q801	2SK1365LB106	TRANSISTOR
Q803	2SD965-R	TRANSISTOR
Q804	2SA719-TA	TRANSISTOR
Q845	2SA684R	TRANSISTOR
Q846	BC547B/126	TRANSISTOR
Q847	BC557B/126	TRANSISTOR
Q848	BC547B/126	TRANSISTOR
Q849	2SA1018QTA	TRANSISTOR
Q850	2SD1474PLB	TRANSISTOR
Q852	2SC1318-S	TRANSISTOR
Q853	BC557C/126	TRANSISTOR
Q854	BC557C/126	TRANSISTOR
Q902	BC847B	TRANSISTOR
Q903	BC847B	TRANSISTOR
Q904	BC857B	TRANSISTOR
Q905	BC847B	TRANSISTOR
Q906	BC847B	TRANSISTOR
Q907	BC857B	TRANSISTOR
Q908	2SA1535ARLB	TRANSISTOR
Q909	2SC3944ARLB	TRANSISTOR
Q1081	BC857B	TRANSISTOR
Q1103	BC847B	TRANSISTOR
Q1104	BC847B	TRANSISTOR
Q1105	BC847B	TRANSISTOR
Q1106	BC847B	TRANSISTOR
Q1107	BC847B	TRANSISTOR

Ref No.	Part No.	Description
Q1108	BC847B	TRANSISTOR
Q1109	BC847B	TRANSISTOR
Q1110	BC847B	TRANSISTOR
Q1111	BC847B	TRANSISTOR
Q1112	BC847B	TRANSISTOR
Q1113	BC847B	TRANSISTOR
Q1118	BC857B	TRANSISTOR
Q1501	BC857B	TRANSISTOR
Q1502	BC857B	TRANSISTOR
Q1503	BC847B	TRANSISTOR
Q1504	BC847B	TRANSISTOR
Q1505	BC847B	TRANSISTOR
Q1506	BC847B	TRANSISTOR
Q1507	BC847B	TRANSISTOR
Q1508	BC847B	TRANSISTOR
Q1509	BC847B	TRANSISTOR
Q1510	BC847B	TRANSISTOR
Q1511	BC847B	TRANSISTOR
Q1513	BC857B	TRANSISTOR
Q1660	BC847B	TRANSISTOR
Q1661	BC847B	TRANSISTOR
Q1662	BC847B	TRANSISTOR
Q1663	BC847B	TRANSISTOR
Q1664	BC847B	TRANSISTOR
Q1665	BC847B	TRANSISTOR
Q1666	BC847B	TRANSISTOR
Q1667	BC847B	TRANSISTOR
Q2101	BC860B	TRANSISTOR
Q2102	BC860B	TRANSISTOR
Q2301	BC847B	TRANSISTOR
Q2302	BC847B	TRANSISTOR
Q2305	BC857B	TRANSISTOR
Q2307	BC860B	TRANSISTOR
Q2308	BC860B	TRANSISTOR
Q3001	BC857B	TRANSISTOR
Q3002	BC847B	TRANSISTOR
Q3003	BC847B	TRANSISTOR
Q3005	BC847B	TRANSISTOR
Q3006	BC847B	TRANSISTOR
Q3010	BC857B	TRANSISTOR
Q3011	BC857B	TRANSISTOR
Q3012	BC847B	TRANSISTOR
Q3013	BC847B	TRANSISTOR
Q3014	BC847B	TRANSISTOR
Q3351	BC847B	TRANSISTOR
Q3352	BC857B	TRANSISTOR
Q3401	BC847B	TRANSISTOR
Q3402	BC847B	TRANSISTOR
Q3403	BC847B	TRANSISTOR
Q3404	BC847B	TRANSISTOR
Q3405	BC847B	TRANSISTOR
Q3801	2SD1474PLB	TRANSISTOR
Q3990	BC847B	TRANSISTOR

**TRANSFORMERS**

T501	ETH19Y187AY	TRANSFORMER	△
T551	ZTFM05004A	F.B.T.	△
T801	ETP35KAN619U	TRANSFORMER	△
T802	ETS49AH1W7AD	TRANSFORMER	△
T803	ETQ24K37AY	TRANSFORMER	△

**COILS**

L002	EXCELD35V	COIL
L003	EXCELD35V	COIL
L004	EXCELSA35T	COIL
L005	TLT100K991R	COIL
L007	EXCELD35V	COIL
L008	ELJFC2R2KF	COIL

Ref No.	Part No.	Description
L009	ELJFC2R2KF	COIL
L251	EXCELSA35T	COIL
L252	EXCELSA35T	COIL
L253	EXCELSA35T	COIL
L254	EXCELSA35T	COIL
L351	SDL5000	DELAY LINE
L353	TLT150K991R	COIL
L361	SDL5000	DELAY LINE
L363	TLT100K991R	COIL
L371	SDL5000	DELAY LINE
L373	TLT150K991R	COIL
L381	TLT220K991R	COIL
L501	ELELN101KA	COIL
L554	EXCELD35V	COIL
L556	EXCELD35C	COIL
L572	ELHKLB025B	COIL
L573	ELHKLB049B	COIL
L575	ELC18B271E	COIL
L601	EXCELD35V	COIL
L602	EXCELD35V	COIL
L603	TLT033K991R	COIL
L604	ELEXT2R7KA	COIL
L605	ELEXT2R7KA	COIL
L606	ELEXT2R7KA	COIL
L607	ELEXT2R7KA	COIL
L701	ELC18B331E	COIL
L805	ELF18D486D	COIL
L806	EXCELSA39V	COIL
L807	ELF18D860C	COIL
L808	EXCELSA39V	COIL
L809	EXCELD35C	COIL
L810	EXCELSA39V	COIL
L811	EXCELSA39V	COIL
L812	EXCELD35V	COIL
L813	EXCELD35V	COIL
L814	ELF18D486D	COIL
L817	EXCELD35V	COIL
L819	EXCELSA39V	COIL
L845	EXCELSA35T	COIL
L847	EXCELSA35B	COIL
L849	EXCELSA35T	COIL
L854	ELEIE150KA	COIL
L859	EXCELSA35T	COIL
L860	EXCELSA35T	COIL
L861	EXCELSA35T	COIL
L910	EXCELSA35T	COIL
L911	EXCELSA35T	COIL
L912	EXCELSA35T	COIL
L1101	EXCELD35V	COIL
L1103	TLT047K991R	COIL
L1104	EXCELD35V	COIL
L1105	EXCELD35V	COIL
L1106	TLT047K991R	COIL
L1507	TLT018K991R	COIL
L1508	TLT033K991R	COIL
L1509	EXCELD35V	COIL
L1510	EXCELD35V	COIL
L1511	TLT018K991R	COIL
L1516	EXCELD35V	COIL
L1519	EXCEMT103DTM	COIL
L1523	EXCEMT103DTM	COIL
L1525	EXCEMT103DTM	COIL
L1527	EXCEMT103DTM	COIL
L1528	EXCELD35V	COIL
L1529	EXCELD35V	COIL
L1532	EXCELD35V	COIL
L1533	EXCELD35V	COIL
L1534	EXCELD35V	COIL
L1535	EXCELD35V	COIL
L1536	EXCELD35V	COIL
L1537	TLT100K991R	COIL
L1538	TLT018K991R	COIL

Ref No.	Part No.	Description
L1539	TLT033K991R	COIL
L1540	TLT018K991R	COIL
L1541	TLT033K991R	COIL
L1542	TLT018K991R	COIL
L1543	TLT033K991R	COIL
L2101	TLT100K991R	COIL
L2102	TLT039K991R	COIL
L2103	TLT100K991R	COIL
L2104	EXCELDR35V	COIL
L2106	TLT068K991R	COIL
L2412	EXCELSA35T	COIL
L2413	EXCELSA35T	COIL
L3001	TLT100K991R	COIL
L3205	EXCELDR35V	COIL
L3401	TLT015K991R	COIL
L3402	TLT015K991R	COIL
L3403	TLT015K991R	COIL
L3404	TLT015K991R	COIL
L3405	TLT015K991R	COIL
L3406	TLT015K991R	COIL
L3407	TLT015K991R	COIL
L3408	TLT015K991R	COIL
L3409	TLT100K991R	COIL
L3801	EXCELDR35V	COIL

### FILTERS

X101	EFCT6504BF	FILTER
X102	EFCT7004BF	CERAMIC FILTER
X601	TSSA010	CRYSTAL
X1101	TSSA121	CRYSTAL
X1501	TSS2169-B	CRYSTAL
X2101	4730007158	CRYSTAL

### RESISTOR

RL801	TSE1885-1	RELAY	△
R001	ERJ6GEYJ223	S.M.CARB 0.1W	5% 22KΩ
R002	ERJ6GEYJ101	S.M.CARB 0.1W	5% 100Ω
R003	ERJ6GEYJ393	S.M.CARB 0.1W	5% 39KΩ
R101	ERJ6GEYJ561	S.M.CARB 0.1W	5% 560Ω
R102	ERJ6GEYJ101	S.M.CARB 0.1W	5% 100Ω
R103	ERJ6GEYJ563	S.M.CARB 0.1W	5% 56KΩ
R104	ERJ6GEYJ471	S.M.CARB 0.1W	5% 470Ω
R105	ERJ6GEYJ332	S.M.CARB 0.1W	5% 3K3Ω
R106	ERJ6GEYJ821	S.M.CARB 0.1W	5% 820Ω
R107	ERJ6GEYJ102	S.M.CARB 0.1W	5% 1KΩ
R109	ERJ6GEYJ103	S.M.CARB 0.1W	5% 10KΩ
R110	ERJ6GEYJ222	S.M.CARB 0.1W	5% 2K2Ω
R111	ERJ6GEYJ331	S.M.CARB 0.1W	5% 330Ω
R251	ERJ6GEYJ331	S.M.CARB 0.1W	5% 330Ω
R252	ERJ6GEYJ333	S.M.CARB 0.1W	5% 33KΩ
R253	ERJ6GEYJ103	S.M.CARB 0.1W	5% 10KΩ
R254	ERJ6GEYJ331	S.M.CARB 0.1W	5% 330Ω
R255	ERJ6GEYJ103	S.M.CARB 0.1W	5% 10KΩ
R256	ERJ6GEYJ681	S.M.CARB 0.1W	5% 680Ω
R257	ERJ6GEY0R00	S.M.CARB 0.1W	5% 0Ω
R258	ERJ6GEYJ333	S.M.CARB 0.1W	5% 33KΩ
R259	ERJ6GEY0R00	S.M.CARB 0.1W	5% 0Ω
R260	ERJ6GEYJ103	S.M.CARB 0.1W	5% 10KΩ
R261	ERJ6GEYJ681	S.M.CARB 0.1W	5% 680Ω
R262	ERJ6GEYJ103	S.M.CARB 0.1W	5% 10KΩ
R263	ERJ6GEYJ104	S.M.CARB 0.1W	5% 100KΩ
R264	ERJ6GEYJ473	S.M.CARB 0.1W	5% 47KΩ
R265	ERDS1TJ2R2	CARBON 0.5W	5% 2R2Ω
R266	ERDS1TJ2R2	CARBON 0.5W	5% 2R2Ω
R269	ERJ6GEYJ273	S.M.CARB 0.1W	5% 27KΩ
R270	ERJ6GEYJ273	S.M.CARB 0.1W	5% 27KΩ
R271	ERJ6GEYJ272	S.M.CARB 0.1W	5% 2K7Ω
R272	ERJ6GEYJ103	S.M.CARB 0.1W	5% 10KΩ

Ref No.	Part No.	Description
R273	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R274	ERJ6GEYJ330	S.M.CARB 0.1W 5% 33Ω
R275	ERJ6GEYJ330	S.M.CARB 0.1W 5% 33Ω
R276	ERX1SJSR56H	RESISTOR 1W 5% R56Ω
R350	ERQ12AJ151P	FUSABLE 12W 5% 150Ω △
R351	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R352	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R354	ERO25CKF4122	METAL 25W 1% 41KΩ △
R355	ERG2FG823H	METAL 2W 2% 82KΩ △
R356	ERJ6GEYJ181	S.M.CARB 0.1W 5% 180Ω
R357	ERJ6GEYJ822	S.M.CARB 0.1W 5% 8K2Ω
R358	ERDS1TJ821	CARBON 0.5W 5% 820Ω
R360	ERO50PKF8251	METAL 50W 1% 8K2Ω △
R361	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R362	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R364	ERO25CKF4122	METAL 25W 1% 41KΩ △
R365	ERG2FG823H	METAL 2W 2% 82KΩ △
R366	ERJ6GEYJ181	S.M.CARB 0.1W 5% 180Ω
R367	ERJ6GEYJ822	S.M.CARB 0.1W 5% 8K2Ω
R368	ERDS1TJ821	CARBON 0.5W 5% 820Ω
R369	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R370	ERQ1CKPR68	FUSABLE 1W 5% R68Ω △
R371	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R372	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R374	ERO25CKF4122	METAL 25W 1% 41KΩ △
R375	ERG2FG823H	METAL 2W 2% 82KΩ △
R376	ERJ6GEYJ181	S.M.CARB 0.1W 5% 180Ω
R377	ERJ6GEYJ822	S.M.CARB 0.1W 5% 8K2Ω
R378	ERDS1TJ821	CARBON 0.5W 5% 820Ω
R379	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R383	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R394	ERJ6ENF7500	SM.CARBO.125W 5% 50Ω
R395	ERJ6ENF5900	SM.CARBO.125W 5% 90Ω
R396	ERJ6ENF7500	SM.CARBO.125W 5% 50Ω
R397	ERJ6ENF5900	SM.CARBO.125W 5% 90Ω
R398	ERJ6ENF7500	SM.CARBO.125W 5% 50Ω
R399	ERJ6ENF5900	SM.CARBO.125W 5% 90Ω
R401	ERJ6GEYJ272	S.M.CARB 0.1W 5% 2K7Ω
R402	ERJ6GEYJ682	S.M.CARB 0.1W 5% 6K8Ω
R403	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R404	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R416	ERJ6GEYJ682	S.M.CARB 0.1W 5% 6K8Ω
R418	ERJ6GEYJ682	S.M.CARB 0.1W 5% 6K8Ω
R419	ERG3FJ471	METAL 3W 5% 470Ω △
R420	ERJ6GEYJ563	S.M.CARB 0.1W 5% 56KΩ
R421	ERJ6GEYJ224	S.M.CARB 0.1W 5% 220KΩ
R441	ERJ6GEYJ393	S.M.CARB 0.1W 5% 39KΩ
R442	ERJ6GEYJ123	S.M.CARB 0.1W 5% 12KΩ
R451	ERDS1TJ2R7	CARBON 0.5W 5% 2R7Ω
R452	ERDS1TJ2R7	CARBON 0.5W 5% 2R7Ω
R453	ERJ6GEYJ393	S.M.CARB 0.1W 5% 39KΩ
R454	ERJ6GEYJ123	S.M.CARB 0.1W 5% 12KΩ
R457	ERJ6GEYJ682	S.M.CARB 0.1W 5% 6K8Ω
R458	ERJ6GEYJ302	S.M.CARB 0.1W 5% 3K0Ω
R470	ERJ6GEYJ682	S.M.CARB 0.1W 5% 6K8Ω
R471	ERDS1FJ1R0	CARBON 0.5W 5% 1Ω △
R504	ERD25TJ271	CARBON 0.25W 5% 270Ω
R505	ERDS1TJ2R7	CARBON 0.5W 5% 2R7Ω
R506	ERDS1TJ681	CARBON 0.5W 5% 680Ω
R507	ERDS1TJ681	CARBON 0.5W 5% 680Ω
R554	ERX3SJSR33	RESISTOR 3W 5% R33Ω
R556	ERDS1TJ273	CARBON 0.5W 5% 27KΩ
R557	ERDS1TJ683	CARBON 0.5W 5% 68KΩ
R558	ERDS1TJ273	CARBON 0.5W 5% 27KΩ
R560	ERD25TJ123	CARBON 0.25W 5% 12KΩ
R561	ERD25TJ333	CARBON 0.25W 5% 33KΩ
R562	ERD25TJ393	CARBON 0.25W 5% 39KΩ
R563	ERD25TJ223	CARBON 0.25W 5% 22KΩ
R564	ERDS1TJ394	CARBON 0.5W 5% 390KΩ
R567	ERG3FJ223	METAL 3W 5% 22KΩ △
R569	ERDS1TJ120	CARBON 0.5W 5% 12Ω
R570	ERD25TJ103	CARBON 0.25W 5% 10KΩ

Ref No.	Part No.	Description				
R572	ERG3FJ821	METAL 3W	5%	820Ω	▲	
R574	ERG3FJ151	METAL 3W	5%	150Ω	▲	
R579	ERD25TJ274	CARBON 0.25W	5%	270KΩ		
R580	ERD25TJ563	CARBON 0.25W	5%	56KΩ		
R581	ERD25TJ104	CARBON 0.25W	5%	100KΩ		
R582	ERD25TJ225	CARBON 0.25W	5%	2M2Ω		
R583	ERD25TJ225	CARBON 0.25W	5%	2M2Ω		
R588	ERD25TJ332	CARBON 0.25W	5%	3K3Ω		
R601	ERJ6GEYJ153	S.M.CARB 0.1W	5%	15KΩ		
R613	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R614	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R615	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R616	ERJ6GEYJ100	S.M.CARB 0.1W	5%	10Ω		
R617	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ		
R619	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R620	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R622	ERJ6GEYJ393	S.M.CARB 0.1W	5%	39KΩ		
R623	ERJ6GEYJ153	S.M.CARB 0.1W	5%	15KΩ		
R626	ERJ6GEYJ331	S.M.CARB 0.1W	5%	330Ω		
R627	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ		
R628	ERJ6GEYJ472	S.M.CARB 0.1W	5%	4K7Ω		
R630	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R631	ERJ6GEYJ105	S.M.CARB 0.1W	5%	1MΩ		
R632	ERJ6GEYJ223	S.M.CARB 0.1W	5%	22KΩ		
R634	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R635	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R636	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R637	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R646	ERJ6GEYJ821	S.M.CARB 0.1W	5%	820Ω		
R647	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R648	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R649	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R650	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R651	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R652	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R653	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R655	ERJ6GEYJ224	S.M.CARB 0.1W	5%	220KΩ		
R657	ERJ6GEYJ750	S.M.CARB 0.1W	5%	75Ω		
R658	ERJ6ENF2212	S.M.CARB 0.125W	5%	2K1Ω		
R663	ERJ6GEYJ334	S.M.CARB 0.1W	5%	330KΩ		
R664	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω		
R665	ERJ6GEYJ472	S.M.CARB 0.1W	5%	4K7Ω		
R666	ERJ6GEYJ222	S.M.CARB 0.1W	5%	2K2Ω		
R667	ERJ6GEYJ393	S.M.CARB 0.1W	5%	39KΩ		
R674	ERJ6GEYJ273	S.M.CARB 0.1W	5%	27KΩ		
R675	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω		
R676	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R677	ERJ6GEYJ273	S.M.CARB 0.1W	5%	27KΩ		
R678	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω		
R679	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R680	ERJ6GEYJ303	S.M.CARB 0.125W	5%	30KΩ		
R681	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R682	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R683	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R684	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω		
R685	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ		
R686	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ		
R688	ERJ6ENF3162	S.M.CARB 0.125W	5%	1K6Ω		
R701	ERX3FJ2R7H	RESISTOR 3W	5%	2R7Ω		
R702	ERDS1TJ683	CARBON 0.5W	5%	68KΩ		
R703	ERD25TJ393	CARBON 0.25W	5%	39KΩ		
R704	ERDS1TJ330	CARBON 0.5W	5%	33Ω		
R802	ERC1Z2GK105D	DIODE				
R805	232266296706	THERMISTOR				
R806	ERD25TJ101	CARBON 0.25W	5%	100Ω		
R807	ERD25TJ104	CARBON 0.25W	5%	100KΩ		
R809	ERF10ZK4R7	WOUND 10W	5%	4R7Ω	▲	
R810	ERD25TJ223	CARBON 0.25W	5%	22KΩ		
R811	ERD25TJ391	CARBON 0.25W	5%	390Ω		
R812	ERD25TJ681	CARBON 0.25W	5%	680Ω		
R814	ERD25TJ392	CARBON 0.25W	5%	3K9Ω		
R815	ERD25TJ100	CARBON 0.25W	5%	10Ω		

Ref No.	Part No.	Description				
R816	ERDS1TJ330	CARBON 0.5W	5%	33Ω		
R818	ERD25TJ511	CARBON 0.25W	5%	510Ω		
R820	ERG3FJ223	METAL 3W	5%	22KΩ	▲	
R821	ERG3FJ223	METAL 3W	5%	22KΩ	▲	
R822	ERD25TJ391	CARBON 0.25W	5%	390Ω		
R823	ERX12SJR22	METAL 0.5W	5%	R22Ω		
R824	ERX12SJR22	METAL 0.5W	5%	R22Ω		
R825	ERX12SJR22	METAL 0.5W	5%	R22Ω		
R827	ERDS1FJ121	CARBON 0.5W	5%	120Ω	▲	
R828	ERD25TJ103	CARBON 0.25W	5%	10KΩ		
R829	ERD25TJ221	CARBON 0.25W	5%	220Ω		
R830	ERX12SJR22	METAL 0.5W	5%	R22Ω		
R831	ERD75TAJ825	CARBON 0.75W	5%	8M2Ω	▲	
R832	ERG3FJ331	METAL 3W	5%	330Ω	▲	
R835	ERD25TJ220	CARBON 0.25W	5%	22Ω		
R836	ERD25TJ100	CARBON 0.25W	5%	10Ω		
R837	ERD25TJ183	CARBON 0.25W	5%	18KΩ		
R838	ERD25TJ821	CARBON 0.25W	5%	820Ω		
R847	TSF19252	FS LINK				▲
R848	TSF19402	FS LINK				▲
R857	ERD25TJ221	CARBON 0.25W	5%	220Ω		
R862	ERD25TJ272	CARBON 0.25W	5%	2K7Ω		
R863	ERG3FJ680H	METAL 3W	5%	68Ω	▲	
R864	ERDS1TJ682	CARBON 0.5W	5%	6K8Ω		
R867	ERD25TJ102	CARBON 0.25W	5%	1KΩ		
R868	ERD25TJ151	CARBON 0.25W	5%	150Ω		
R869	ERD25TJ560	CARBON 0.25W	5%	56Ω		
R870	ERD25TJ101	CARBON 0.25W	5%	100Ω		
R873	ERQ2CJP2R4	FUSABLE 2W	5%	2R4Ω	▲	
R876	ERD25TJ562	CARBON 0.25W	5%	5K6Ω		
R877	ERO25CKF1022	METAL 25W	1%	10KΩ	▲	
R878	ERO25CKF1002	METAL 0.25W	1%	10KΩ	▲	
R883	ERD25TJ103	CARBON 0.25W	5%	10KΩ		
R885	ERD25TJ103	CARBON 0.25W	5%	10KΩ		
R886	ERX3SJR56	RESISTOR 3W	5%	R56Ω		
R888	ERDS1TJ393	CARBON 0.5W	5%	39KΩ		
R889	ERD25TJ392	CARBON 0.25W	5%	3K9Ω		
R891	ERD25TJ103	CARBON 0.25W	5%	10KΩ		
R892	ERD25TJ222	CARBON 0.25W	5%	2K2Ω		
R897	ERD25TJ183	CARBON 0.25W	5%	18KΩ		
R901	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω		
R902	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω		
R903	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω		
R904	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ		
R906	ERJ6GEYJ563	S.M.CARB 0.1W	5%	56KΩ		
R907	ERJ6GEYJ822	S.M.CARB 0.1W	5%	8K2Ω		
R908	ERJ6GEYJ471	S.M.CARB 0.1W	5%	470Ω		
R909	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ		
R910	ERJ6GEYJ221	S.M.CARB 0.1W	5%	220Ω		
R911	ERD25TJ561	CARBON 0.25W	5%	560Ω		
R913	ERJ6GEYJ183	S.M.CARB 0.1W	5%	18KΩ		
R914	ERJ6GEYJ222	S.M.CARB 0.1W	5%	2K2Ω		
R915	ERJ6GEYJ182	S.M.CARB 0.1W	5%	1K8Ω		
R916	ERJ6GEYJ221	S.M.CARB 0.1W	5%	220Ω		
R917	ERJ6GEYJ121	S.M.CARB 0.1W	5%	120Ω		
R919	ERQ14AJW390	FUSABLE 14W	5%	39Ω	▲	
R920	ERQ14AJΩ390	FUSABLE 14W	5%	39Ω	▲	
R922	ERD25TJ683	CARBON 0.25W	5%	68KΩ		
R923	ERD25TJ683	CARBON 0.25W	5%	68KΩ		
R924	ERDS1FYJ390	CARBON 0.5W	5%	39Ω	▲	
R925	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω		
R926	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω		
R927	ERD25TJ122	CARBON 0.25W	5%	1K2Ω		
R928	ERD25TJ5R6	CARBON 0.25W	5%	5R6Ω		
R929	ERDS1FYJ471	CARBON 0.5W	5%	470Ω	▲	
R931	ERDS1FYJ390	CARBON 0.5W	5%	39Ω	▲	
R935	ERQ14AJW3R9	FUSABLE 14W	5%	3R9Ω	▲	
R936	ERQ1CJP102	METAL 1W	5%	1KΩ	▲	
R937	ERQ14AJW100	METAL 0.25W	5%	10Ω	▲	
R938	ERD25TJ122	CARBON 0.25W	5%	1K2Ω		
R941	ERD25TJ5R6	CARBON 0.25W	5%	5R6Ω		

Ref No.	Part No.	Description
R1061	ERD25TJ103	CARBON 0.25W 5% 10KΩ
R1062	ERD25TJ222	CARBON 0.25W 5% 2K2Ω
R1063	ERD25TJ222	CARBON 0.25W 5% 2K2Ω
R1064	ERD25TJ332	CARBON 0.25W 5% 3K3Ω
R1065	ERD25TJ512	CARBON 0.25W 5% 5K1Ω
R1066	ERD25TJ912	CARBON 0.25W 5% 9K1Ω
R1081	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1082	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1083	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1085	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1086	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1101	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1103	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1104	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1105	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1106	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1107	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1108	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1109	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1110	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1113	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1114	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1116	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1117	ERJ6GEYJ332	S.M.CARB 0.1W 5% 3K3Ω
R1118	ERJ6GEYJ332	S.M.CARB 0.1W 5% 3K3Ω
R1119	ERJ6GEYJ332	S.M.CARB 0.1W 5% 3K3Ω
R1120	ERJ6GEYJ332	S.M.CARB 0.1W 5% 3K3Ω
R1121	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1122	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1123	ERJ6GEYJ823	S.M.CARB 0.1W 5% 82KΩ
R1124	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1125	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1126	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1127	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1128	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1129	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1130	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R1131	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1132	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1133	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1134	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1135	ERJ6GEYJ225	S.M.CARB0.125W 5% 2M2Ω
R1138	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ
R1139	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1141	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1142	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1143	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1144	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R1145	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1146	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1147	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R1148	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R1149	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R1150	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R1151	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1152	ERJ6GEYJ224	S.M.CARB 0.1W 5% 220KΩ
R1153	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ
R1154	ERJ6GEYJ221	S.M.CARB 0.1W 5% 220Ω
R1155	ERJ6GEYJ474	S.M.CARB 0.1W 5% 470KΩ
R1156	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1157	ERJ6GEYJ100	S.M.CARB 0.1W 5% 10Ω
R1158	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1160	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1161	ERJ6GEYJ392	S.M.CARB 0.1W 5% 3K9Ω
R1162	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1163	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1164	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1165	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1166	ERJ6GEYJ683	S.M.CARB 0.1W 5% 68KΩ
R1167	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1168	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1169	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ

Ref No.	Part No.	Description
R1170	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1171	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1172	ERJ6GEYJ821	S.M.CARB 0.1W 5% 820Ω
R1173	ERJ6GEYJ681	S.M.CARB 0.1W 5% 680Ω
R1174	ERJ6GEYJ681	S.M.CARB 0.1W 5% 680Ω
R1175	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1176	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1177	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1178	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1179	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1180	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1181	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1183	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1184	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1186	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1187	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1188	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1189	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1190	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1194	ERJ6GEYJ681	S.M.CARB 0.1W 5% 680Ω
R1195	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1200	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R1237	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1238	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1239	ERJ6GEYJ560	S.M.CARB 0.1W 5% 56Ω
R1501	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1502	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R1503	ERJ6GEYJ332	S.M.CARB 0.1W 5% 3K3Ω
R1504	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R1505	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1506	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1507	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1508	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1509	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1510	ERJ6GEYJ8R2	S.M.CARB0.125W 5% 8R2Ω
R1511	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1513	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1514	ERJ6GEYJ180	S.M.CARB 0.1W 5% 18Ω
R1515	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1517	ERJ6GEYJ180	S.M.CARB 0.1W 5% 18Ω
R1518	ERJ6GEYJ180	S.M.CARB 0.1W 5% 18Ω
R1519	ERJ6GEYJ561	S.M.CARB 0.1W 5% 560Ω
R1520	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1521	ERJ6GEYJ820	S.M.CARB 0.1W 5% 82Ω
R1522	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1523	ERJ6GEYJ390	S.M.CARB 0.1W 5% 39Ω
R1524	ERJ6GEYJ560	S.M.CARB 0.1W 5% 56Ω
R1525	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1526	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1527	ERJ6GEYJ100	S.M.CARB 0.1W 5% 10Ω
R1528	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R1530	ERJ6GEYJ560	S.M.CARB 0.1W 5% 56Ω
R1531	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R1532	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R1533	ERJ6GEYJ181	S.M.CARB 0.1W 5% 180Ω
R1534	ERJ6GEYJ272	S.M.CARB 0.1W 5% 2K7Ω
R1535	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1536	ERJ6GEYJ470	S.M.CARB 0.1W 5% 47Ω
R1537	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1538	ERJ6GEYJ181	S.M.CARB 0.1W 5% 180Ω
R1540	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1541	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1542	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R1543	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1544	ERJ6GEYJ561	S.M.CARB 0.1W 5% 560Ω
R1545	ERJ6ENF3600	S.M.CARB0.125W 5% 60Ω
R1546	ERJ6GEYJ561	S.M.CARB 0.1W 5% 560Ω
R1547	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1548	ERJ6GEYJ221	S.M.CARB 0.1W 5% 220Ω
R1550	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1551	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1552	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ

Ref No.	Part No.	Description
R1553	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R1554	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1555	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1556	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1559	ERJ6ENF2200	SM.CARB0.125W 5% 20Ω
R1560	ERJ6GEYJ560	S.M.CARB 0.1W 5% 56Ω
R1561	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1562	ERJ6ENF4750	S.M.CARB0.125W 5% 75Ω
R1563	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1564	ERJ6ENF2200	SM.CARB0.125W 5% 20Ω
R1565	ERJ6GEYJ820	S.M.CARB 0.1W 5% 82Ω
R1566	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R1567	ERJ6ENF1500	SM.CARB0.125W 5% 50Ω
R1568	ERJ6ENF1500	SM.CARB0.125W 5% 50Ω
R1569	ERJ6ENF1500	SM.CARB0.125W 5% 50Ω
R1570	ERJ6ENF2701	SM.CARB0.125W 5% 700Ω
R1571	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1572	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1573	ERJ6ENF1500	SM.CARB0.125W 5% 50Ω
R1574	ERJ6GEYJ560	S.M.CARB 0.1W 5% 56Ω
R1575	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1576	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1577	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1578	ERJ6GEYJ301	SM.CARB0.125W 5% 300Ω
R1579	ERJ6GEYJ431	S.M.CARB 0.1W 5% 430Ω
R1580	ERJ6GEYJ511	S.M.CARB 0.1W 5% 510Ω
R1581	ERJ6GEYJ151	S.M.CARB 0.1W 5% 150Ω
R1582	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1583	ERJ6GEYJ561	S.M.CARB 0.1W 5% 560Ω
R1584	ERJ6GEYJ561	S.M.CARB 0.1W 5% 560Ω
R1585	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1586	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1587	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1588	ERJ6GEYJ221	S.M.CARB 0.1W 5% 220Ω
R1589	ERJ6GEYJ152	S.M.CARB 0.1W 5% 1K5Ω
R1590	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1591	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1592	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1593	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1594	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1595	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1598	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1599	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1600	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1603	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1604	ERJ6GEYJ820	S.M.CARB 0.1W 5% 82Ω
R1605	ERJ6GEYJ183	S.M.CARB 0.1W 5% 18KΩ
R1606	ERJ6GEYJ273	S.M.CARB 0.1W 5% 27KΩ
R1607	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1609	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1610	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1611	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1613	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1614	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1615	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1616	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1617	ERJ6ENF1100	SM.CARB0.125W 5% 10Ω
R1618	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1619	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1620	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R1621	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1622	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R1623	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1624	ERJ6GEYJ333	S.M.CARB 0.1W 5% 33KΩ
R1625	ERJ6GEYJ221	S.M.CARB 0.1W 5% 220Ω
R1626	ERJ6GEYJ332	S.M.CARB 0.1W 5% 3K3Ω
R1627	ERJ6GEYJ100	S.M.CARB 0.1W 5% 10Ω
R1628	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1629	ERJ6GEYJ121	S.M.CARB 0.1W 5% 120Ω
R1630	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1631	ERJ6ENF1500	SM.CARB0.125W 5% 50Ω
R1632	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω

Ref No.	Part No.	Description
R1633	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1634	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1635	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1636	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R1637	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1639	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R1640	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1641	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R1642	ERJ6GEYJ183	S.M.CARB 0.1W 5% 18KΩ
R1643	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R1644	ERJ6GEYJ183	S.M.CARB 0.1W 5% 18KΩ
R1645	ERJ6GEYJ473	S.M.CARB 0.1W 5% 47KΩ
R1646	ERJ6GEYJ183	S.M.CARB 0.1W 5% 18KΩ
R1660	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1661	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1662	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R1663	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R1664	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1665	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1666	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R1667	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R1668	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1669	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1670	ERJ6GEYJ223	S.M.CARB 0.1W 5% 22KΩ
R1671	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R1672	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R1673	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1674	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1675	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R1676	ERJ6GEYJ560	S.M.CARB 0.1W 5% 56Ω
R1677	ERJ6ENF6800	SM.CARB0.125W 5% 80Ω
R1678	ERJ6ENF1500	SM.CARB0.125W 5% 50Ω
R1679	ERJ6ENF1500	SM.CARB0.125W 5% 50Ω
R1680	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1681	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1682	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1683	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1684	ERJ6GEYJ271	S.M.CARB 0.1W 5% 270Ω
R1685	ERQ14AJ100	METAL 0.25W 5% 10Ω ▲
R1686	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1687	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R1688	ERJ6GEYJ331	S.M.CARB 0.1W 5% 330Ω
R1690	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R1691	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R1692	ERJ6GEYJ750	S.M.CARB 0.1W 5% 75Ω
R2101	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2102	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2103	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R2104	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
R2105	ERJ6GEYJ102	S.M.CARB 0.1W 5% 1KΩ
R2106	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2107	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2108	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R2109	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R2110	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2111	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2112	ERJ6GEYJ472	S.M.CARB 0.1W 5% 4K7Ω
R2114	ERJ6GEYJ101	S.M.CARB 0.1W 5% 100Ω
R2117	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2118	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2120	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2121	ERJ6GEYJ222	S.M.CARB 0.1W 5% 2K2Ω
R2125	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R2301	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R2302	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R2303	ERJ6GEYJ104	S.M.CARB 0.1W 5% 100KΩ
R2304	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2307	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω
R2308	ERJ6GEYJ103	S.M.CARB 0.1W 5% 10KΩ
R2312	ERJ6GEYJ272	S.M.CARB 0.1W 5% 2K7Ω
R2314	ERJ6GEYJ471	S.M.CARB 0.1W 5% 470Ω



Ref No.	Part No.	Description			
R2315	ERJ6GEYJ471	S.M.CARB 0.1W	5%	470Ω	
R2316	ERJ6GEYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R2318	ERJ6GEYJ331	S.M.CARB 0.1W	5%	330Ω	
R2319	ERJ6GEYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R2320	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R2321	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R2459	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω	
R2460	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω	
R2474	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R2475	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3003	ERJ6GEYJ750	S.M.CARB 0.1W	5%	75Ω	
R3005	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3006	ERJ6GEYJ221	S.M.CARB 0.1W	5%	220Ω	
R3007	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω	
R3008	ERJ6GEYJ470	S.M.CARB 0.1W	5%	47Ω	
R3009	ERJ6GEYJ470	S.M.CARB 0.1W	5%	47Ω	
R3010	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3012	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3013	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3014	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3015	ERJ6GEYJ470	S.M.CARB 0.1W	5%	47Ω	
R3016	ERJ6GEYJ121	S.M.CARB 0.1W	5%	120Ω	
R3017	ERJ6GEYJ390	S.M.CARB 0.1W	5%	39Ω	
R3018	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3019	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3020	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3021	ERJ6GEYJ681	S.M.CARB 0.1W	5%	680Ω	
R3022	ERJ6GEYJ680	S.M.CARB 0.1W	5%	68Ω	
R3023	ERQ14AJ390	FUSABLE 0.25W	5%	39Ω	△
R3024	ERJ6GEYJ683	S.M.CARB 0.1W	5%	68KΩ	
R3025	ERJ6GEYJ153	S.M.CARB 0.1W	5%	15KΩ	
R3026	ERJ6GEYJ221	S.M.CARB 0.1W	5%	220Ω	
R3027	ERJ6GEYJ100	S.M.CARB 0.1W	5%	10Ω	
R3028	ERJ6GEYJ681	S.M.CARB 0.1W	5%	680Ω	
R3029	ERJ6GEYJ100	S.M.CARB 0.1W	5%	10Ω	
R3030	ERJ6GEYJ153	S.M.CARB 0.1W	5%	15KΩ	
R3031	ERJ6GEYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R3033	ERJ6GEYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3034	ERJ6GEYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3035	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3036	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3037	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3038	ERJ6GEYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3039	ERJ6GEYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3040	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3043	ERJ6GEYJ471	S.M.CARB 0.1W	5%	470Ω	
R3045	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω	
R3046	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3047	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω	
R3048	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3053	ERJ6GEYJ220	S.M.CARB 0.1W	5%	22Ω	
R3057	ERJ6GEYJ151	S.M.CARB 0.1W	5%	150Ω	
R3058	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3059	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3060	ERJ6GEYJ471	S.M.CARB 0.1W	5%	470Ω	
R3061	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω	
R3062	ERJ6GEYJ562	S.M.CARB 0.1W	5%	5K6Ω	
R3063	ERJ6GEYJ222	S.M.CARB 0.1W	5%	2K2Ω	
R3064	ERJ6GEYJ272	S.M.CARB 0.1W	5%	2K7Ω	
R3065	ERJ6GEYJ333	S.M.CARB 0.1W	5%	33KΩ	
R3066	ERJ6GEYJ471	S.M.CARB 0.1W	5%	470Ω	
R3067	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3068	ERJ6GEYJ563	S.M.CARB 0.1W	5%	56KΩ	
R3069	ERJ6GEYJ183	S.M.CARB 0.1W	5%	18KΩ	
R3070	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3071	ERJ6GEYJ621	S.M.CARB0.125W	5%	620Ω	
R3072	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3073	ERJ6GEYJ393	S.M.CARB 0.1W	5%	39KΩ	
R3075	ERJ6GEYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R3076	ERJ6GEYJ331	S.M.CARB 0.1W	5%	330Ω	
R3077	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3078	ERJ6GEY0R00	S.M.CARB 0.1W	5%	0Ω	

Ref No.	Part No.	Description			
R3079	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3080	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3081	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3082	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3087	ERJ6GEYJ750	S.M.CARB 0.1W	5%	75Ω	
R3113	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3114	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3125	ERJ6GEYJ681	S.M.CARB 0.1W	5%	680Ω	
R3126	ERJ6GEYJ681	S.M.CARB 0.1W	5%	680Ω	
R3351	ERJ6GEYJ220	S.M.CARB 0.1W	5%	22Ω	
R3352	ERJ6GEYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R3353	ERJ6GEYJ474	S.M.CARB 0.1W	5%	470KΩ	
R3354	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3355	ERJ6GEYJ391	S.M.CARB 0.1W	5%	390Ω	
R3356	ERJ6GEYJ682	S.M.CARB 0.1W	5%	6K8Ω	
R3357	ERJ6GEYJ682	S.M.CARB 0.1W	5%	6K8Ω	
R3358	ERJ6GEYJ682	S.M.CARB 0.1W	5%	6K8Ω	
R3360	ERDS1TJ471	CARBON 0.5W	5%	470Ω	
R3361	ERO50PKF1133	METAL 50W	1%	113KΩ	△
R3401	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3402	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3403	ERJ6GEYJ333	S.M.CARB 0.1W	5%	33KΩ	
R3404	ERJ6GEYJ333	S.M.CARB 0.1W	5%	33KΩ	
R3405	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3406	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3407	ERJ6GEYJ153	S.M.CARB 0.1W	5%	15KΩ	
R3408	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3409	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3410	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3412	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3413	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3414	ERJ6GEYJ750	S.M.CARB 0.1W	5%	75Ω	
R3415	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3416	ERJ6GEYJ333	S.M.CARB 0.1W	5%	33KΩ	
R3417	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3418	ERJ6GEYJ104	S.M.CARB 0.1W	5%	100KΩ	
R3419	ERJ6GEYJ333	S.M.CARB 0.1W	5%	33KΩ	
R3420	ERJ6GEYJ750	S.M.CARB 0.1W	5%	75Ω	
R3421	ERJ6GEYJ750	S.M.CARB 0.1W	5%	75Ω	
R3422	ERJ6GEYJ153	S.M.CARB 0.1W	5%	15KΩ	
R3423	ERJ6GEYJ470	S.M.CARB 0.1W	5%	47Ω	
R3424	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3425	ERJ6GEYJ221	S.M.CARB 0.1W	5%	220Ω	
R3426	ERJ6GEYJ680	S.M.CARB 0.1W	5%	68Ω	
R3427	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3428	ERJ6GEYJ680	S.M.CARB 0.1W	5%	68Ω	
R3430	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3433	ERJ6GEYJ332	S.M.CARB 0.1W	5%	3K3Ω	
R3446	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3447	ERJ6GEYJ102	S.M.CARB 0.1W	5%	1KΩ	
R3452	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3453	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3454	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3455	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3801	ERJ6GEYJ101	S.M.CARB 0.1W	5%	100Ω	
R3802	ERJ6GEYJ221	S.M.CARB 0.1W	5%	220Ω	
R3803	ERG3FJ100	METAL 3W	5%	10Ω	△
R3990	ERJ6GEYJ472	S.M.CARB 0.1W	5%	4K7Ω	
R3991	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3992	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3993	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	
R3994	ERJ6GEYJ103	S.M.CARB 0.1W	5%	10KΩ	

### CAPACITORS

C002	ECA1HMR33GB	ELECT	50V	0.33μF
C003	ECUV1H104ZFX	S.M.CAP	50V	100nF
C004	ECUV1H104ZFX	S.M.CAP	50V	100nF
C005	ECA1CM221GB	ELECT	16V	220pF
C006	ECUV1H104ZFX	S.M.CAP	50V	100nF
C007	ECUV1H104ZFX	S.M.CAP	50V	100nF

Ref No.	Part No.	Description	
C008	ECUV1H561JCX	S.M.CAP	50V 560pF
C009	ECA1CM221GB	ELECT	16V 220pF
C010	ECA1HM4R7GB	ELECT	50V 4.7μF
C011	ECUV1H100DCX	S.M.CAP	50V 10pF
C012	ECUV1H100DCX	S.M.CAP	50V 10pF
C013	ECA1CM470GB	ELECT	16V 47μF
C014	ECUV1H104ZFX	S.M.CAP	50V 100nF
C015	ECUV1H104ZFX	S.M.CAP	50V 100nF
C017	ECUV1H100DCX	S.M.CAP	50V 10pF
C018	ECJ2VF1H104Z	ELECT	350V 0.10μF
C019	ECJ2VF1H104Z	ELECT	350V 0.10μF
C103	ECUV1H104ZFX	S.M.CAP	50V 100nF
C104	ECJ2VF1H103Z	ELECT	350V 10nF
C107	ECUV1H104ZFX	S.M.CAP	50V 100nF
C108	ECUV1H104ZFX	S.M.CAP	50V 100nF
C109	ECUV1C184KBX	S.M.CAP	16V 0.18μF
C110	ECUV1H104ZFX	S.M.CAP	50V 100nF
C111	ECUV1H104ZFX	S.M.CAP	50V 100nF
C251	ECA1CM220GB	ELECT	16V 22μF
C252	ECUV1H103KBX	S.M.CAP	50V 10nF
C253	ECA1HM4R7GB	ELECT	50V 4.7μF
C254	ECQM1H683J	FILM	50V 68nF
C255	ECA1EHG101B	ELECT	25V 100pF
C256	ECUV1H103KBX	S.M.CAP	50V 10nF
C257	ECA1HM4R7GB	ELECT	50V 4.7μF
C258	ECA1CM220GB	ELECT	16V 22μF
C259	ECQM1H683J	FILM	50V 68nF
C260	ECA1VM102GB	ELECT	35V 1nF
C261	ECA1VM102GB	ELECT	35V 1nF
C262	ECQM1H184J	FILM	50V 0.18μF
C263	ECA1HM100GB	ELECT	50V 10pF
C264	ECA1HM222E	ELECT	50V 2.2nF
C265	ECQM1H184J	FILM	50V 0.18μF
C266	ECA1HM100GB	ELECT	50V 10pF
C267	ECQM1H224J	FILM	50V 220nF
C268	ECQM1H224J	FILM	50V 220nF
C269	ECA1HM470GB	ELECT	50V 47μF
C270	ECQM1H224J	FILM	50V 220nF
C271	ECQM1H224J	FILM	50V 220nF
C277	ECUV1H102JCX	S.M.CAP	50V 1nF
C278	ECUV1H102JCX	S.M.CAP	50V 1nF
C352	ECUV1H224ZFX	S.M.CAP	50V 0.22μF
C353	ECUV1H104KBX	S.M.CAP	50V 100nF
C354	ECQM2104KZ	FILM	250V 100nF
C355	ECKC2H102J	CERAMIC	500V 1nF
C362	ECUV1H224ZFX	S.M.CAP	50V 0.22μF
C363	ECUV1H104KBX	S.M.CAP	50V 100nF
C364	ECQM2104KZ	FILM	250V 100nF
C365	ECKC2H102J	CERAMIC	500V 1nF
C372	ECUV1H224ZFX	S.M.CAP	50V 0.22μF
C373	ECUV1H104KBX	S.M.CAP	50V 100nF
C374	ECQM2104KZ	FILM	250V 100nF
C375	ECKC2H102J	CERAMIC	500V 1nF
C381	ECA1HM101GB	ELECT	50V 100pF
C382	ECA1CM471GB	ELECT	16V 470pF
C383	ECUV1H103KBX	S.M.CAP	50V 10nF
C384	ECQM2104KZ	FILM	250V 100nF
C385	ECA2EM220B	ELECT	250V 22pF
C386	ECKC3D152J	CERAMIC	2KV 1.5nF
C387	ECUV1H681JCX	S.M.CAP	50V 680pF
C395	ECQM1H104J	FILM	50V 100nF
C396	ECJ2VF1H104Z	ELECT	350V 0.10μF
C400	ECA1VM102GB	ELECT	35V 1nF
C402	ECA1HM010GB	ELECT	50V 1pF
C404	ECEA1HU471	ELECT	50V 470μF
C405	ECA1EM102GB	ELECT	25V 1nF
C407	ECQB1224KFW	FILM	100V 0.22μF
C411	ECUV1H102KBX	S.M.CAP	50V 1nF
C501	ECQM1H224J	FILM	50V 220nF
C502	ECQM2104KZ	FILM	250V 100nF
C503	ECKC2H102J	CERAMIC	500V 1nF
C504	ECQB1H223K	FILM	50V 22nF

Ref No.	Part No.	Description	
C505	ECA1EM222GB	ELECT	25V 2.2nF
C506	ECKC2H102J	CERAMIC	500V 1nF
C507	ECA1EM332E	ELECT	25V 3.3nF
C552	ECWH20392JVY	FILM	200V 3.9nF
C553	ECQP1104JZW	FILM	100V 0.10μF
C554	ECQB1H152K	FILM	50V 1.5nF
C555	ECWH20472JV B	FILM	200V 4.7nF
C556	ECEA2CNR47SB	ELECT	160V R47μF
C557	ECKC2H331J	CERAMIC	500V 330pF
C558	ECA2EM330B	ELECT	250V 33pF
C559	ECKC2H103J	CERAMIC	50V 10nF
C563	ECWF2564JBB	FILM	200V 0.56μF
C564	ECKC1H103JB	CERAMIC	50V 10nF
C565	ECQP1823JZW	FILM	100V 82nF
C572	ECWH20332JV B	FILM	200V 3.3nF
C573	ECQF4153JZH	FILM	400V 15nF
C574	ECWF4564JBB	FILM	400V 0.56μF
C575	ECWF4824JBB	FILM	400V 0.82μF
C581	ECQF4123JZH	FILM	400V 12nF
C584	ECKC3D391J	CERAMIC	2KV 390pF
C602	ECUV1H104ZFX	S.M.CAP	50V 100nF
C603	ECUV1H104ZFX	S.M.CAP	50V 100nF
C604	ECUV1H470JCX	S.M.CAP	50V 47pF
C605	ECA1CM221GB	ELECT	16V 220pF
C606	ECA1AM332E	ELECT	10V 3.3nF
C607	ECUV1H104ZFX	S.M.CAP	50V 100nF
C608	ECUV1H104ZFX	S.M.CAP	50V 100nF
C609	ECA1HM3R3GB	ELECT	50V 3.3μF
C610	ECUV1H104ZFX	S.M.CAP	50V 100nF
C611	ECUV1H104ZFX	S.M.CAP	50V 100nF
C612	ECUV1H104ZFX	S.M.CAP	50V 100nF
C613	ECUV1H104ZFX	S.M.CAP	50V 100nF
C614	ECUV1H104ZFX	S.M.CAP	50V 100nF
C615	ECJ2VB1C104K	ELECT	350V 0.10μF
C616	ECQM1H104J	FILM	50V 100nF
C617	ECUV1H104ZFX	S.M.CAP	50V 100nF
C618	ECUV1H104ZFX	S.M.CAP	50V 100nF
C620	ECUV1H100DCX	S.M.CAP	50V 10pF
C622	ECUV1H470JCX	S.M.CAP	50V 47pF
C623	ECUV1H470JCX	S.M.CAP	50V 47pF
C624	ECUV1H820JCX	S.M.CAP	50V 82pF
C625	ECUV1H470JCX	S.M.CAP	50V 47pF
C626	ECUV1H470JCX	S.M.CAP	50V 47pF
C627	ECUV1H470JCX	S.M.CAP	50V 47pF
C628	ECUV1H470JCX	S.M.CAP	50V 47pF
C632	ECUV1H104ZFX	S.M.CAP	50V 100nF
C633	ECUV1H104ZFX	S.M.CAP	50V 100nF
C634	ECUV1H222KBX	S.M.CAP	50V 2.2nF
C635	ECA1EM101GB	ELECT	25V 1μF
C636	ECUV1H103ZFX	S.M.CAP	50V 10nF
C637	ECUV1H470JCX	S.M.CAP	50V 47pF
C638	ECUV1H270JCX	S.M.CAP	50V 27pF
C639	ECUV1H104ZFX	S.M.CAP	50V 100nF
C641	ECUV1H101JCX	S.M.CAP	50V 100pF
C643	ECUV1H102KBX	S.M.CAP	50V 1nF
C644	ECQM1H104J	FILM	50V 100nF
C645	ECQM1H104J	FILM	50V 100nF
C646	ECUV1H103KBX	S.M.CAP	50V 10nF
C651	ECUV1C224KBX	S.M.CAP	16V 220nF
C701	ECQV1H105JZ	FILM	50V 1μF
C702	ECKC2H102J	CERAMIC	500V 1nF
C805	222233510154	FILM	50V 0.15μF
C806	ECQE6104K	FILM	600V 100nF
C807	ECQB1H473K	FILM	50V 47nF
C808	ECQM1H334J	FILM	50V 330nF
C809	ECQE2A474MWB	FILM	100V 0.47μF
C810	222233510154	FILM	50V 0.15μF
C811	ECQB1H104J	FILM	50V 100nF
C812	ECQB1H562K	FILM	50V 5.6nF
C813	ECKC2H472J	CERAMIC	500V 4.7nF
C814	ECKC2H472J	CERAMIC	500V 4.7nF

Ref No.	Part No.	Description	
C815	ECA1CM331B	ELECT 16V 330pF	
C816	ECQB1H122J	FILM 50V 1.2nF	
C817	ECKC2H472J	CERAMIC 500V 4.7nF	△
C818	ECKC2H472J	CERAMIC 500V 4.7nF	△
C819	ECOS2WB221DB	ELECT 16V 220pF	
C820	ECOS2WB221DB	ELECT 16V 220pF	
C821	ECQB1H222J	FILM 50V 2200pF	
C822	ECKC3D471JB	CERAMIC 2KV 470pF	△
C823	EEUFA1V221B	CERAMIC 35V 220μF	
C824	ECQB1H221KF3	FILM 50V 220μF	
C826	ECQB1H473K	FILM 50V 47nF	
C827	ECKCNS332J	CERAMIC 1.2KV 3.3nF	△
C830	ECQE6105JFW	FILM 600V 1μF	
C831	ECKC3D471JB	CERAMIC 2KV 470pF	△
C833	ECQB1H682K	FILM 50V 6.8nF	
C835	ECQB1H332K	FILM 50V 3.3nF	
C847	ECEA1EN101UB	ELECT 25V 100μF	
C848	ECKC2H331J	CERAMIC 500V 330pF	△
C849	ECKC2H391J	CERAMIC 500V 390pF	
C852	ECKC3D222JB	CERAMIC 2KV 2200pF	△
C853	ECEA1CU332	ELECT 16V 3300μF	
C854	ECA1EM221GB	ELECT 25V 220pF	
C855	ECEA1HU102	ELECT 50V 1000μF	
C856	ECA1EM332E	ELECT 25V 3.3nF	
C857	ECA1EM471GB	ELECT 25V 470pF	
C858	ECOS2EA271BB	ELECT 250V 270pF	
C859	ECKC2H471J	CERAMIC 500V 470pF	△
C861	ECOS2EA221AB	ELECT 250V 220μF	
C863	ECA1EM332E	ELECT 25V 3.3nF	
C864	ECA0JM102GB	ELECT 6.3V 1nF	
C866	ECA1HM101GB	ELECT 50V 100pF	
C867	ECA1CM222E	ELECT 16V 2.2nF	
C868	ECA1CM100GB	ELECT 16V 10pF	
C869	ECA1HM101GB	ELECT 50V 100pF	
C871	ECA0JM102GB	ELECT 6.3V 1nF	
C872	ECA1CM222E	ELECT 16V 2.2nF	
C901	ECUV1H030CCX	S.M.CAP 50V 30pF	
C902	ECA1VM101GB	ELECT 35V 100pF	
C904	ECJ2VF1H103Z	ELECT 350V 10nF	
C906	ECUV1H680JCX	S.M.CAP 50V 68pF	
C907	ECUV1H121JCX	S.M.CAP 50V 120pF	
C908	ECUV1H151JCX	S.M.CAP 50V 150pF	
C909	ECKC2H472J	CERAMIC 500V 4.7nF	△
C910	ECKC2H472J	CERAMIC 500V 4.7nF	△
C911	ECUV1H151JCX	S.M.CAP 50V 150pF	
C912	ECA2EM220B	ELECT 250V 22pF	
C913	ECA1HM101GB	ELECT 50V 100pF	
C914	ECA1HM101GB	ELECT 50V 100pF	
C916	ECA2EM220B	ELECT 250V 22pF	
C917	ECA1HM100GB	ELECT 50V 10pF	
C918	ECJ2VF1H103Z	ELECT 50V 10nF	
C919	ECCR2H270J	CERAMIC 500V 27pF	
C1081	ECUV1H101JCX	S.M.CAP 50V 100pF	
C1082	ECA1CM470GB	ELECT 16V 47μF	
C1083	ECUV1H103KBX	S.M.CAP 50V 10nF	
C1101	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1102	ECUV1H101JCX	S.M.CAP 50V 100pF	
C1103	ECUV1H220JCX	S.M.CAP 50V 22pF	
C1104	ECUV1H220JCX	S.M.CAP 50V 22pF	
C1107	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1109	ECUV1C104KBX	S.M.CAP 16V 0.10μF	
C1113	ECUV1C104KBX	S.M.CAP 16V 0.10μF	
C1114	ECA1HM101GB	ELECT 50V 100pF	
C1116	ECUV1H560JCX	S.M.CAP 50V 56pF	
C1117	ECUV1H221JCX	S.M.CAP 50V 220pF	
C1118	ECJ3VB1C474K	ELECT 3.5KV 0.47μF	
C1120	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1121	ECUV1H472KBX	S.M.CAP 50V 4.7nF	
C1122	ECA1HM010GB	ELECT 50V 1pF	
C1123	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1124	ECUV1H101JCX	S.M.CAP 50V 100pF	
C1125	ECUV1H104ZFX	S.M.CAP 50V 100nF	

Ref No.	Part No.	Description	
C1126	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1127	ECA1HM101GB	ELECT 50V 100pF	
C1128	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1129	ECA1HM101GB	ELECT 50V 100pF	
C1130	ECUV1H103KBX	S.M.CAP 50V 10nF	
C1131	ECUV1H221JCX	S.M.CAP 50V 220pF	
C1138	ECUV1H224ZFX	S.M.CAP 50V 0.22μF	
C1145	ECJ2VB1H333K	ELECT 350V 33nF	
C1147	ECA1CM331B	ELECT 16V 330pF	
C1148	ECUV1C224KBX	S.M.CAP 16V 220nF	
C1501	ECUV1H330JCX	S.M.CAP 50V 33pF	
C1502	ECUV1H471JCX	S.M.CAP 50V 470pF	
C1503	ECUV1H390JCX	S.M.CAP 50V 39pF	
C1504	ECUV1H680JCX	S.M.CAP 50V 68pF	
C1505	ECUV1H820JCX	S.M.CAP 50V 82pF	
C1506	ECUV1H331JCX	S.M.CAP 50V 330pF	
C1507	ECUV1H102KBX	S.M.CAP 50V 1nF	
C1508	ECEA1HN010UB	ELECT 50V 1μF	
C1509	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1510	ECA1HM101GB	ELECT 50V 100pF	
C1511	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1512	ECUV1H030CCX	S.M.CAP 50V 30pF	
C1513	ECA1HM100GB	ELECT 50V 10pF	
C1514	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1515	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1516	ECUV1H030CCX	S.M.CAP 50V 30pF	
C1517	ECUV1H473ZFX	S.M.CAP 50V 47nF	
C1518	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1519	ECA1HM101GB	ELECT 50V 100pF	
C1521	ECA1HM101GB	ELECT 50V 100pF	
C1522	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1523	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1524	ECA1VM470B	ELECT 35V 47pF	
C1525	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1527	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1528	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1529	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1530	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1532	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1533	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1534	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1535	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1536	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1537	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1538	EEUNA1E220B	S.M.CAP 25V 22pF	
C1539	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1540	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1541	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1542	ECA1CM471GB	ELECT 16V 470pF	
C1543	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1544	EEUNA1E220B	S.M.CAP 25V 22pF	
C1545	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1546	ECA1HM101GB	ELECT 50V 100pF	
C1547	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1548	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1549	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1550	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1551	EEUNA1E220B	S.M.CAP 25V 22pF	
C1552	ECA1HM101GB	ELECT 50V 100pF	
C1553	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1554	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1555	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1556	ECA1HM101GB	ELECT 50V 100pF	
C1557	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1558	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1559	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1560	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1561	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1562	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1563	ECA1HM101GB	ELECT 50V 100pF	
C1564	ECUV1H104ZFX	S.M.CAP 50V 100nF	
C1565	ECUV1H270JCX	S.M.CAP 50V 27pF	

Ref No.	Part No.	Description		
C1567	ECA1HM101GB	ELECT	50V	100pF
C1568	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1569	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1570	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1571	ECA1CM471GB	ELECT	16V	470pF
C1572	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1573	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1574	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1575	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1576	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1577	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1578	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1579	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1580	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1581	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1582	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1583	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1584	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1585	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1586	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1587	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1588	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1589	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1590	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1591	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1592	ECA1CM221GB	ELECT	16V	220pF
C1593	ECA1CM221GB	ELECT	16V	220pF
C1594	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1595	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1596	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1597	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1598	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1599	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1600	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1601	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1602	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1603	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1604	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1605	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1606	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1607	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1608	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1609	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1610	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1611	ECA1CM471GB	ELECT	16V	470pF
C1612	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1614	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1615	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1616	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1617	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1618	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1619	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1620	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1621	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1622	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1623	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1624	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1625	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1626	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1627	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1628	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1629	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1630	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1631	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1632	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1633	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1636	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1637	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1638	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1639	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1642	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1643	ECUV1H104ZFX	S.M.CAP	50V	100nF

Ref No.	Part No.	Description		
C1644	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1645	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1647	ECUV1H470JCX	S.M.CAP	50V	47pF
C1648	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1649	ECA1HM101GB	ELECT	50V	100pF
C1650	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1651	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1652	ECA1HM101GB	ELECT	50V	100pF
C1653	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1654	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1655	ECA1VM470B	ELECT	35V	47pF
C1656	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1658	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1659	ECA1VM470B	ELECT	35V	47pF
C1660	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1661	ECA1HM101GB	ELECT	50V	100pF
C1662	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1663	ECUV1H560JCX	S.M.CAP	50V	56pF
C1664	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1666	ECUV1H390JCX	S.M.CAP	50V	39pF
C1667	ECUV1H820JCX	S.M.CAP	50V	82pF
C1668	ECUV1H680JCX	S.M.CAP	50V	68pF
C1669	ECUV1H271JCX	S.M.CAP	50V	270pF
C1670	ECUV1H391JCX	S.M.CAP	50V	390pF
C1671	ECUV1H390JCX	S.M.CAP	50V	39pF
C1672	ECUV1H820JCX	S.M.CAP	50V	82pF
C1673	ECUV1H680JCX	S.M.CAP	50V	68pF
C1674	ECUV1H271JCX	S.M.CAP	50V	270pF
C1675	ECUV1H391JCX	S.M.CAP	50V	390pF
C1676	ECUV1H390JCX	S.M.CAP	50V	39pF
C1677	ECUV1H820JCX	S.M.CAP	50V	82pF
C1678	ECUV1H680JCX	S.M.CAP	50V	68pF
C1679	ECUV1H271JCX	S.M.CAP	50V	270pF
C1680	ECUV1H391JCX	S.M.CAP	50V	390pF
C1681	ECUV1H820JCX	S.M.CAP	50V	82pF
C1682	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1683	ECUV1H101JCX	S.M.CAP	50V	100pF
C1685	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1686	ECUV1H101JCX	S.M.CAP	50V	100pF
C1688	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1689	ECUV1H104ZFX	S.M.CAP	50V	100nF
C1690	ECJ2VF1C105Z	ELECT	350V	1µF
C1691	ECJ2VF1C105Z	ELECT	350V	1µF
C1692	EEUNA1E220B	S.M.CAP	25V	22pF
C1693	ECA1HM101GB	ELECT	25V	100pF
C1695	ECUV1H221JCX	S.M.CAP	50V	220pF
C1696	EEUNA1E220B	S.M.CAP	25V	22pF
C1697	EEUNA1E220B	S.M.CAP	25V	22pF
C1698	EEUNA1E220B	S.M.CAP	25V	22pF
C2103	ECUV1H391KBX	S.M.CAP	50V	390pF
C2104	ECUV1H102KBX	S.M.CAP	50V	1nF
C2105	ECUV1H102KBX	S.M.CAP	50V	1nF
C2106	ECUV1H102KBX	S.M.CAP	50V	1nF
C2107	ECUV1H102KBX	S.M.CAP	50V	1nF
C2108	ECUV1H102KBX	S.M.CAP	50V	1nF
C2109	ECUV1H102KBX	S.M.CAP	50V	1nF
C2110	ECUV1H102KBX	S.M.CAP	50V	1nF
C2111	ECA1CM100GB	ELECT	16V	10pF
C2112	ECUV1H104ZFX	S.M.CAP	50V	100nF
C2113	ECA1CM100GB	ELECT	16V	10pF
C2114	ECA1HM101GB	ELECT	50V	100pF
C2115	ECUV1H104ZFX	S.M.CAP	50V	100nF
C2116	ECUV1H102KBX	S.M.CAP	50V	1nF
C2117	ECUV1H471KBX	S.M.CAP	50V	470pF
C2118	ECA1HM3R3GB	ELECT	50V	3.3µF
C2119	ECUV1H471KBX	S.M.CAP	50V	470pF
C2120	ECUV1H104ZFX	S.M.CAP	50V	100nF
C2121	ECUV1H221JCX	S.M.CAP	50V	220pF
C2122	ECUV1H221JCX	S.M.CAP	50V	220pF
C2123	ECUV1H221JCX	S.M.CAP	50V	220pF
C2124	ECUV1H104ZFX	S.M.CAP	50V	100nF
C2125	ECA1CM100GB	ELECT	16V	10pF

Ref No.	Part No.	Description		
C2126	ECUV1H221JCX	S.M.CAP	50V	220pF
C2127	ECUV1H104ZFX	S.M.CAP	50V	100nF
C2128	ECUV1H221JCX	S.M.CAP	50V	220pF
C2129	ECA1CM100GB	ELECT	16V	10pF
C2130	ECUV1H221JCX	S.M.CAP	50V	220pF
C2131	ECQM1H334J	FILM	50V	330nF
C2132	ECA1CM100GB	ELECT	16V	10pF
C2133	ECUV1H470JCX	S.M.CAP	50V	47pF
C2134	ECUV1H470JCX	S.M.CAP	50V	47pF
C2135	ECUV1H070DCX	S.M.CAP	50V	7pF
C2137	ECUV1H104ZFX	S.M.CAP	50V	100nF
C2138	ECUV1H010CCX	S.M.CAP	50V	1pF
C2139	ECUV1H010CCX	S.M.CAP	50V	1pF
C2141	ECUV1H560JCX	S.M.CAP	50V	56pF
C2142	ECA1CM100GB	ELECT	16V	10pF
C2144	ECUV1H560JCX	S.M.CAP	50V	56pF
C2146	ECA1CM100GB	ELECT	16V	10pF
C2147	ECUV1H103KBX	S.M.CAP	50V	10nF
C2148	ECUV1H103KBX	S.M.CAP	50V	10nF
C2301	ECA1CM470GB	ELECT	16V	47µF
C2302	ECA1CM470GB	ELECT	16V	47µF
C2307	ECUV1H103KBX	S.M.CAP	50V	10nF
C2308	ECUV1H103KBX	S.M.CAP	50V	10nF
C2430	ECUV1H561JCX	S.M.CAP	50V	560pF
C2431	ECUV1H561JCX	S.M.CAP	50V	560pF
C2437	ECUV1H561JCX	S.M.CAP	50V	560pF
C2438	ECUV1H561JCX	S.M.CAP	50V	560pF
C3002	ECA1CM470GB	ELECT	16V	47µF
C3003	ECUV1H102ZFX	S.M.CAP	50V	1nF
C3004	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3005	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3006	ECA1HM4R7GB	ELECT	50V	4.7µF
C3007	ECA1HM4R7GB	ELECT	50V	4.7µF
C3008	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3009	ECUV1H473ZFX	S.M.CAP	50V	47nF
C3010	ECUV1H680JCX	S.M.CAP	50V	68pF
C3011	ECA1CM221GB	ELECT	16V	220pF
C3012	ECA1CM470GB	ELECT	16V	47µF
C3013	ECA1CM470GB	ELECT	16V	47µF
C3014	EEUNA1A470B	S.M.CAP	10V	47pF
C3015	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3016	ECA1CM470GB	ELECT	16V	47µF
C3017	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3018	ECUV1H104ZFX	S.M.CAP	50V	100nF
C3021	ECA1CM331B	ELECT	16V	330pF
C3022	ECA1CM102B	ELECT	16V	1nF
C3023	ECA1HM100GB	ELECT	50V	10pF
C3024	ECA1HM2R2GB	ELECT	50V	2.2µF
C3025	ECA1CM470GB	ELECT	16V	47µF
C3026	ECUV1H224ZFX	S.M.CAP	50V	0.22µF
C3027	ECJ2VF1H104Z	ELECT	350V	0.10µF
C3028	ECUV1H470JRX	S.M.CAP	50V	47pF
C3120	ECUV1H103KBX	S.M.CAP	50V	10nF
C3122	ECUV1H102KBX	S.M.CAP	50V	1nF
C3123	ECUV1H103KBX	S.M.CAP	50V	10nF
C3124	ECUV1H102KBX	S.M.CAP	50V	1nF
C3255	ECA1HM4R7GB	ELECT	50V	4.7µF
C3256	ECA1HM4R7GB	ELECT	50V	4.7µF
C3351	ECA1CM221GB	ELECT	16V	220pF
C3401	ECEA1HKA100	ELECT	50V	10pF
C3402	ECUV1H561JCX	S.M.CAP	50V	560pF
C3403	ECUV1H561JCX	S.M.CAP	50V	560pF
C3404	ECUV1H561JCX	S.M.CAP	50V	560pF
C3405	ECUV1H561JCX	S.M.CAP	50V	560pF
C3406	ECUV1H561JCX	S.M.CAP	50V	560pF
C3407	ECUV1H561JCX	S.M.CAP	50V	560pF
C3408	ECUV1H561JCX	S.M.CAP	50V	560pF
C3409	ECEA1HKA4R7	ELECT	50V	4.7µF
C3410	ECEA1HKA100	ELECT	50V	10pF
C3411	ECUV1H561JCX	S.M.CAP	50V	560pF
C3412	ECEA1HKA4R7	ELECT	50V	4.7µF
C3413	ECUV1H102JCX	S.M.CAP	50V	1nF

Ref No.	Part No.	Description			
C3414	ECEA1HKA100	ELECT	50V	10pF	
C3415	ECEA1HKA100	ELECT	50V	10pF	
C3416	ECEA1HKA4R7	ELECT	50V	4.7µF	
C3417	ECEA1HKA100	ELECT	50V	10pF	
C3418	ECEA1HKA100	ELECT	50V	10pF	
C3419	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3420	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3421	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3422	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3423	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3424	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3425	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3426	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3427	ECUV1H102JCX	S.M.CAP	50V	1nF	
C3428	ECEA1HKA4R7	ELECT	50V	4.7µF	
C3429	ECEA1CKA220	ELECT	16V	22µF	
C3430	ECEA1HKA4R7	ELECT	50V	4.7µF	
C3431	ECEA1CN470	ELECT	16V	47µF	
C3432	ECUV1H104ZFX	S.M.CAP	50V	100nF	
C3433	ECA1CM221GB	ELECT	16V	220pF	
C3460	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3461	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3496	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3497	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3498	ECUV1H561JCX	S.M.CAP	50V	560pF	
C3802	ECA1CM100GB	ELECT	16V	10pF	
C3803	ECA1EM100GB	ELECT	25V	0.1µF	
C3804	ECUV1H104ZFX	S.M.CAP	50V	100nF	
C3805	ECUV1H224ZFX	S.M.CAP	50V	0.22µF	
C3806	ECA1HM101GB	ELECT	50V	100pF	
C3807	ECA1HM100GB	ELECT	50V	10pF	
C3808	ECA1CM470GB	ELECT	16V	47µF	
C3814	ECA1HM010GB	ELECT	50V	1pF	
C3816	ECA1CM471GB	ELECT	16V	470pF	
C3817	ECA1CM221GB	ELECT	16V	220pF	
C3818	ECUV1H103KBX	S.M.CAP	50V	10nF	
C3819	ECA1HM010GB	ELECT	50V	1pF	
C3821	ECA1HM010GB	ELECT	50V	1pF	
C3823	ECUV1H104ZFX	S.M.CAP	50V	100nF	
C3824	ECUV1H103KBX	S.M.CAP	50V	10nF	
C3825	ECJ2VB1C224K	ELECT	350V	0.22µF	
C3826	ECUV1H103KBX	S.M.CAP	50V	10nF	
C3827	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω

### TERMINALS AND LINKS

JA1	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA1	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA11	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA12	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA13	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA14	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA15	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA16	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA18	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA19	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA2	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA2	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA20	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA21	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA23	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA24	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA26	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA27	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA29	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA3	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA3	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω
JA30	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA31	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA33	ERJ6GEY0R00	S.M.CARB	0.1W	5%	0Ω
JA35	ERJ8GEY0R00	S.M.CAR	.125W	5%	0Ω

Ref No.	Part No.	Description
JA36	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JA37	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JA4	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JA4	ERJ8GEY0R00	S.M.CAR .125W 5% 0Ω
JA5	ERJ8GEY0R00	S.M.CAR .125W 5% 0Ω
JA6	ERJ8GEY0R00	S.M.CAR .125W 5% 0Ω
JA7	ERJ8GEY0R00	S.M.CAR .125W 5% 0Ω
JA8	ERJ8GEY0R00	S.M.CAR .125W 5% 0Ω
JA9	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JK2403	TJB8E014	RCA TERMINAL (2P)
JK3401	1364-21-21	SCART SOCKET
JK3402	1364-21-21	SCART SOCKET
JSE004	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSE009	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSE011	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSE025	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSE026	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSE044	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSE045	ERD25TJ2R2	CARBON 0.25W 5% 2R2Ω
JSF001	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF005	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF006	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF007	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF009	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF010	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF013	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF015	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF017	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF018	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF019	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF020	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω

Ref No.	Part No.	Description
JSF021	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF022	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF023	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF024	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF025	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF026	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF027	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF028	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF029	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF032	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF034	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF037	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF039	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF041	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF042	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSF043	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSH002	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSH010	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSY03	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω
JSY04	ERJ6GEY0R00	S.M.CARB 0.1W 5% 0Ω

**SWITCHES**


S802	ESB92S11B	SWITCH
S1051	EVQ23405R	SWITCH
S1052	EVQ23405R	SWITCH
S1053	EVQ23405R	SWITCH
S1054	EVQ23405R	SWITCH
S1055	EVQ23405R	SWITCH

# SCHEMATIC DIAGRAMS FOR MODELS






TX-28SL10F

(EURO-5 CHASSIS)

## IMPORTANT SAFETY NOTICE

Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

## NOTES

- RESISTOR**  
All resistors are carbon  $\frac{1}{4}W$  resistor, unless marked otherwise.  
Unit of resistance is OHM ( $\Omega$ ) (k=1,000, M=1,000,000)
- CAPACITORS**  
All capacitors are ceramic 50V unless marked otherwise  
Unit of capacitance is  $\mu F$  unless otherwise stated.
- COIL**  
Unit of inductance is  $\mu H$ , unless otherwise stated.
- Components marked "L" on the schematic diagram shows leadless parts.
- TEST POINT**  
 Test Point Position
- EARTH SYMBOL**  
 Chassis Earth (Cold)  Line Earth (Hot)
- VOLTAGE MEASUREMENT**  
Voltage is measured by a d.c. voltmeter  
Measurement conditions are as follows:  
Power source a.c. 220V-240V, 50Hz  
Receiving Signal Colour Bar signal (RF)  
All customer controls Maximum position
-  Indicates the Video signal path  
 Indicates the Audio signal path

These schematic diagrams are the latest at time of printing and are subject to change without notice.

## REMARKS


- The Power Supply Circuit contains a circuit area which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits except the Power Circuit, are COLD. Take the following precautions :-
  - Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
  - Do not short circuit the hot and cold circuits as electrical components may be damaged.
  - Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
  - Make sure to disconnect the power plug before removing the chassis.

# ZEICHENERKLÄRUNG FÜR MODELL






TX-28SL10F

(EURO-5 CHASSIS)

## WICHTIGER SICHERHEITSHINWEIS

Teile, die mit einem Hinweis  gekennzeichnet sind, sind wichtig für die Sicherheit, Sollte ein Auswechsein erforderlich sein, sind unbedingt Originalteile einzusetzen.

## ANMERKUNG

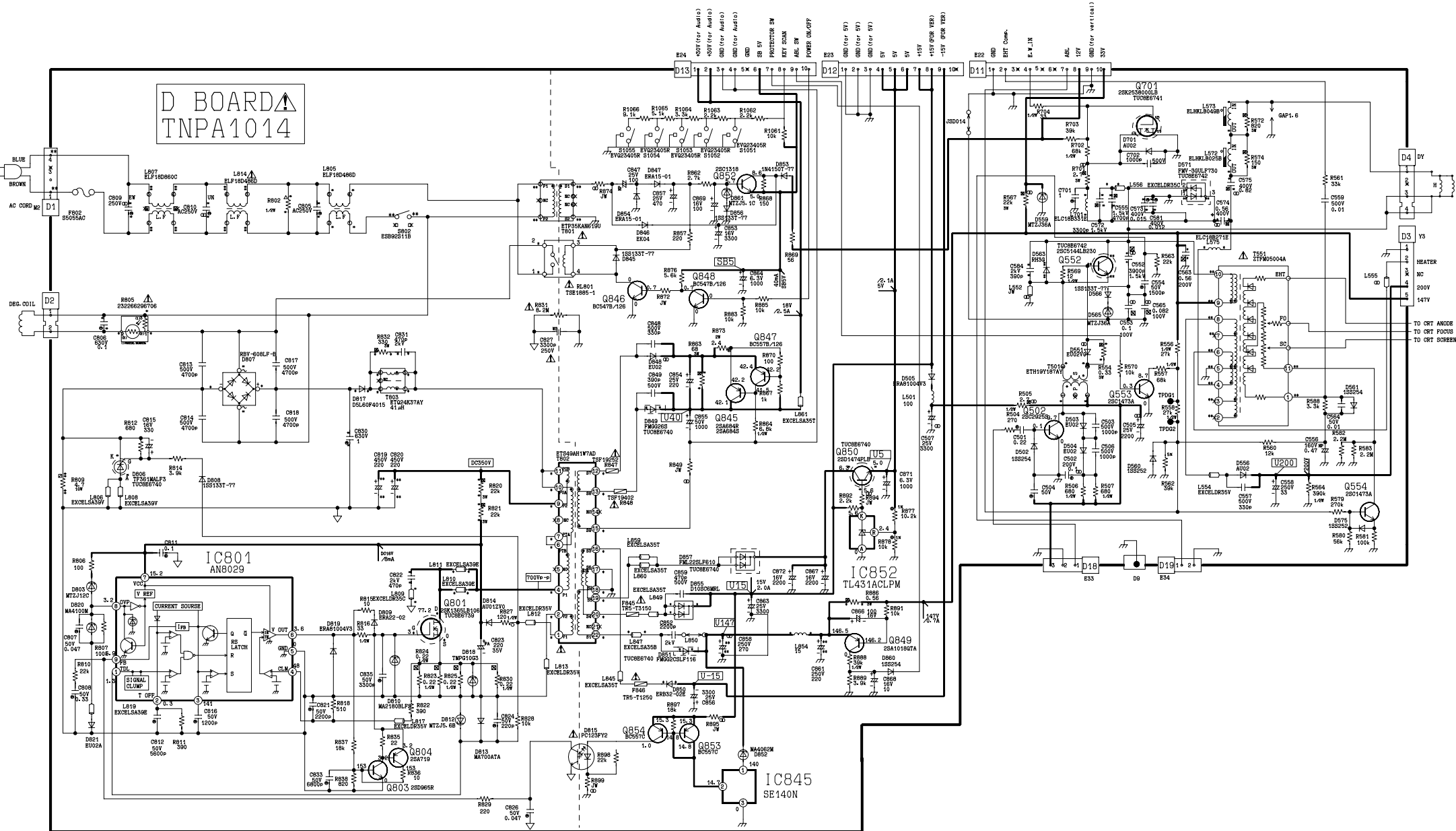
- WIDERSTÄNDE**  
Alle  $\frac{1}{4}W$  Widerstände sind Kohlewiderstände, Abweichungen sind folgt gekennzeichnet.  
Die Maßeinheit ist OHM ( $\Omega$ ) (k=1,000, M=1,000,000)
- KONDENSATOREN**  
Alle Kondensatoren sind Keramikausführungen. Spannungsfestigkeit 50V. Abweichungen sind wie folgt gekennzeichnet. Die Maßeinheit ist  $\mu F$ , wenne keine anderen Bezeichnungen genannt sind.
- SPULEN**  
Die Maßeinheit ist  $\mu H$ , Abweichungen sind gekennzeichnet.
- Mit "L" gekennzeichnete Teile sind ohne Anschlußdrähte.
- TESTPUNKTE**  
 Kennzeichnung der Testpunktposition
- MASSE SYMBOL**  
 Erdung am Chassis  Erdung an Masse-Leitung
- SPANNUNGSMESSUNG**  
Spannungsmessungen sind mit einem d.c.-Voltmeter durchzuführen. Die Meßbedingungen sind folgende:  
Netzspannung a.c. 220V-240V, 50Hz  
Wiedergabe Signal Farbbalken-Testbild  
Wiedergabesignal Farbbalken-Testbild (HF)
-  Videosignalweg  
 Audiosignalweg

Änderungen im Laufe der Fertigung sind möglich.

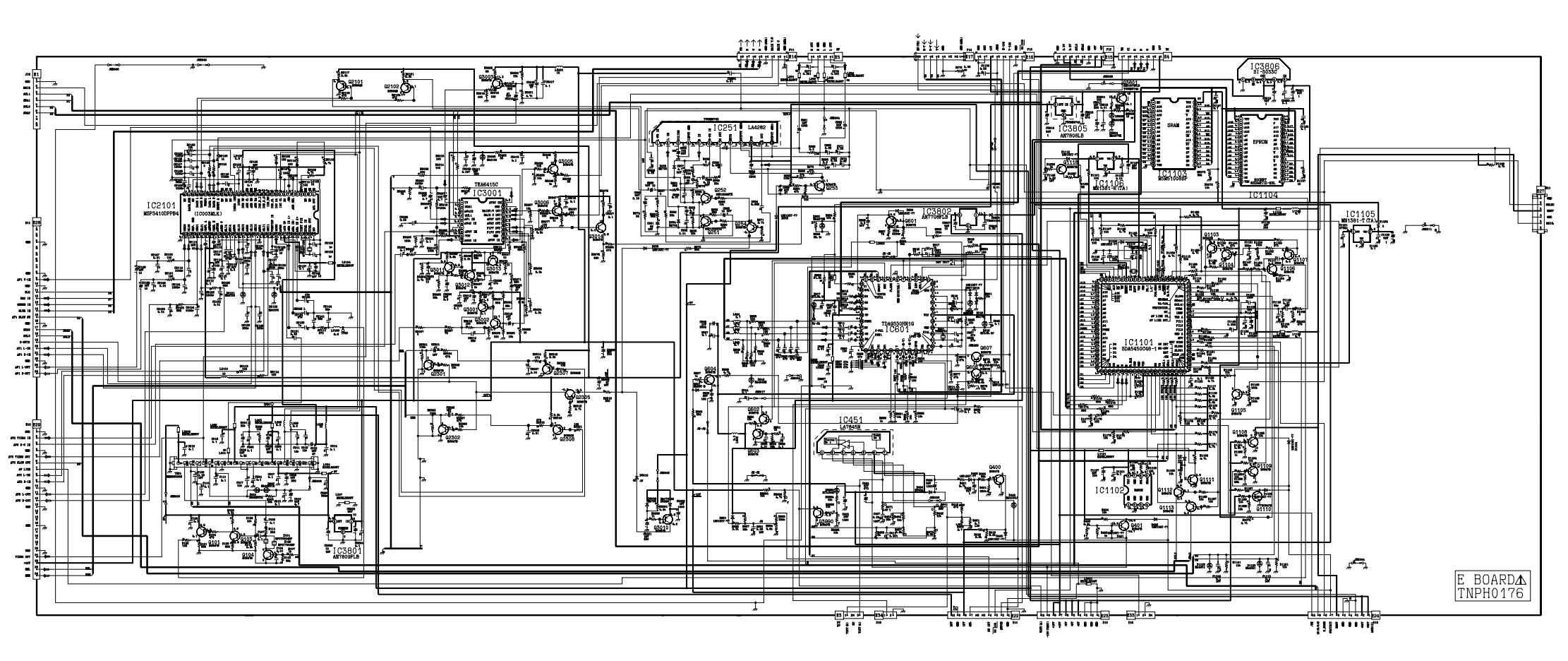
## BEMERKUNGEN

- Das Schaltnetzteil enthält Bereiche, die direkt mit dem Netz verbunden sind. Diese Bereiche sind im Schaltplan mit HOT gekennzeichnet. Alle anderen Schaltungen sind mit COLD gekennzeichnet und haben keine direkte Verbindung mit den Netz :-
  - Weder die Leitungen im heißen noch Leitungen im heißen und im kalten Bereich gleichzeitig berühren. Es besteht die Gefahr eines elektrischen Schlages.
  - Keinesfalls die Leitungen im heißen Bereich mit denen im kalten Bereich verbinden oder kurzschliessen. Dies kann zur Zerstörung von Bauteilen oder Sicherungen führen. Außerdem ist die elektrische Betriebssicherheit des Gerätes nicht mehr gegeben.
  - Keine Messinstrumente gleichzeitig an Leitungen im heissen und kalten Bereich anschliessen. Sicherungen könnten zerstört werden. Die Erde des Messinstrumentes immer mit der des zu prüfenden Schaltkreises verbinden.
  - Vor Ausbau des Chassis, Stecker aus der Netzsteckdose ziehen.

# D BOARD TNPA1014

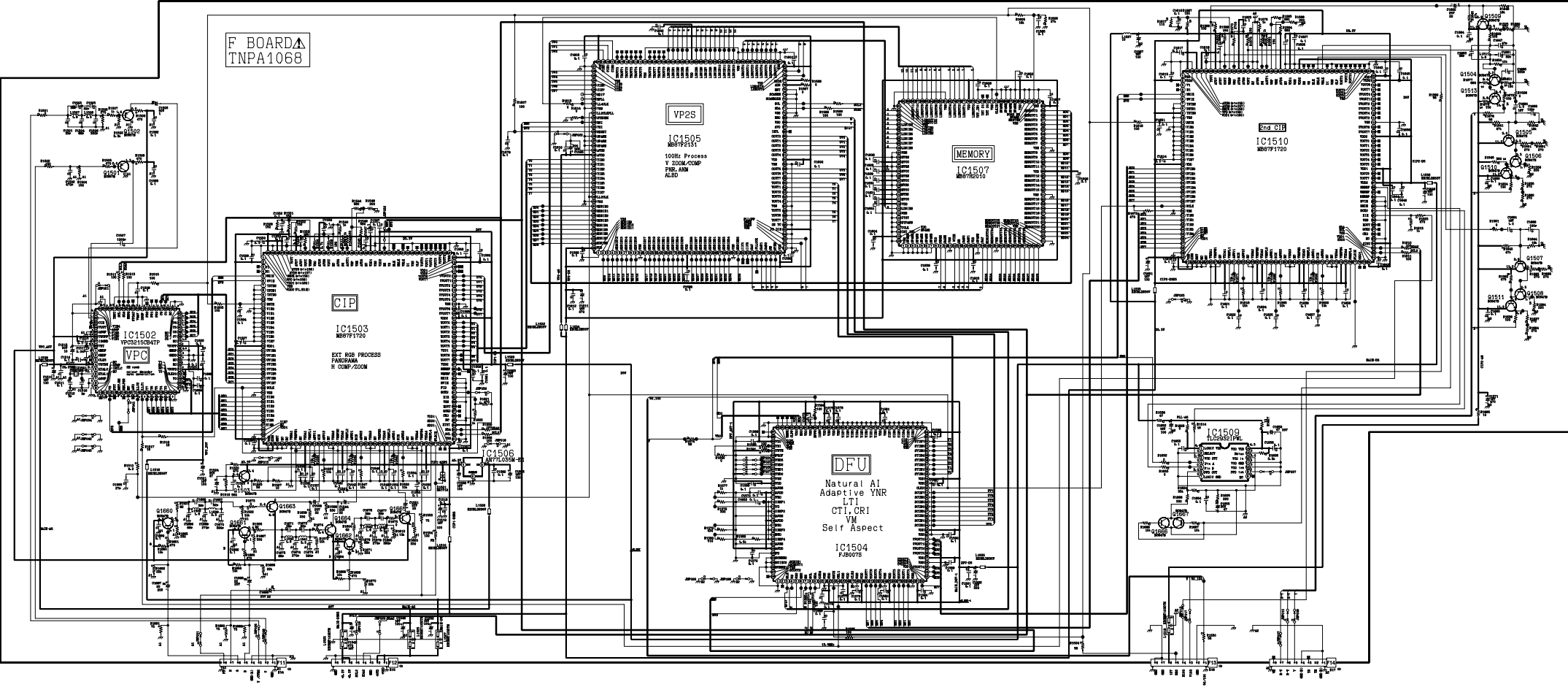




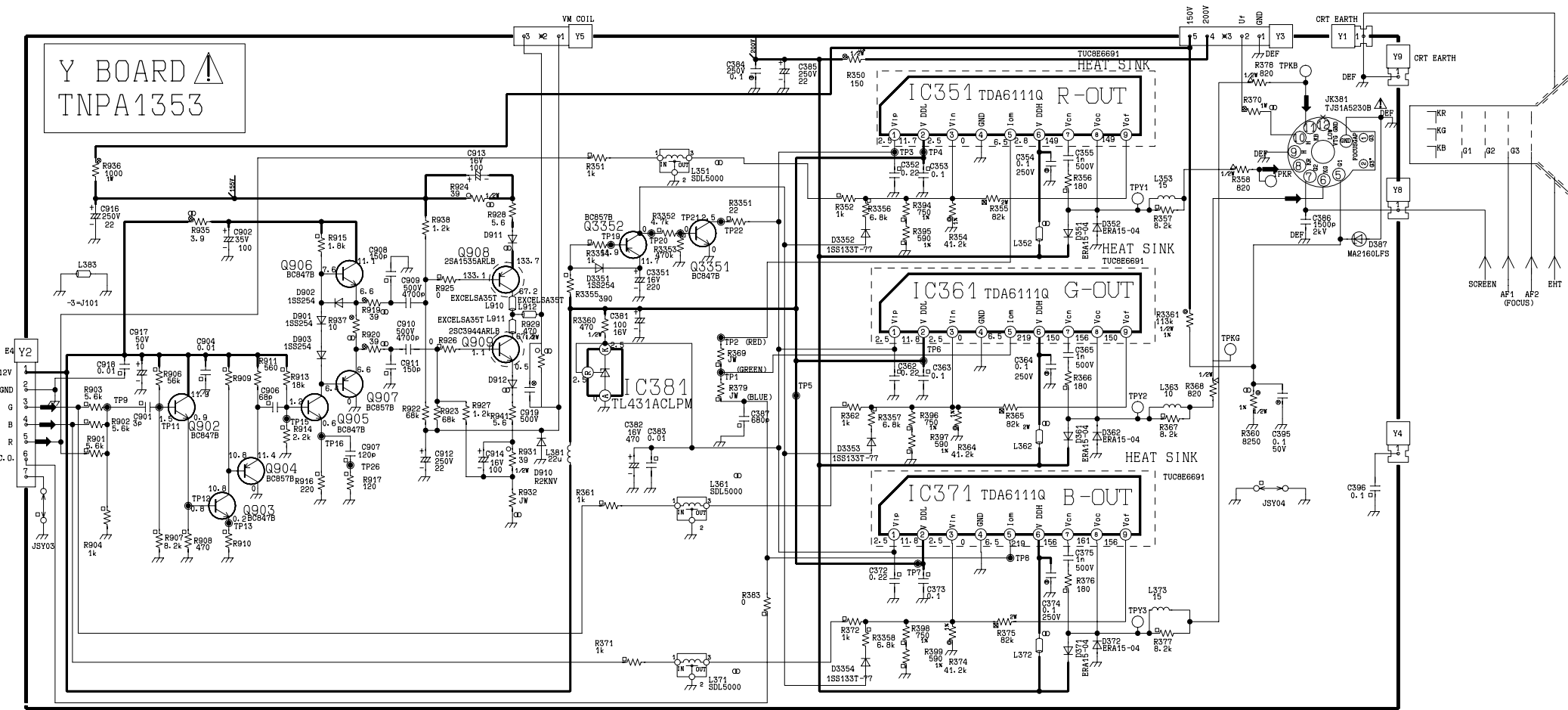


E BOARD  
TNPH0176

F BOARD  
TNPA1068



# Y BOARD TNPA1353



H BOARD  
TNPA1047

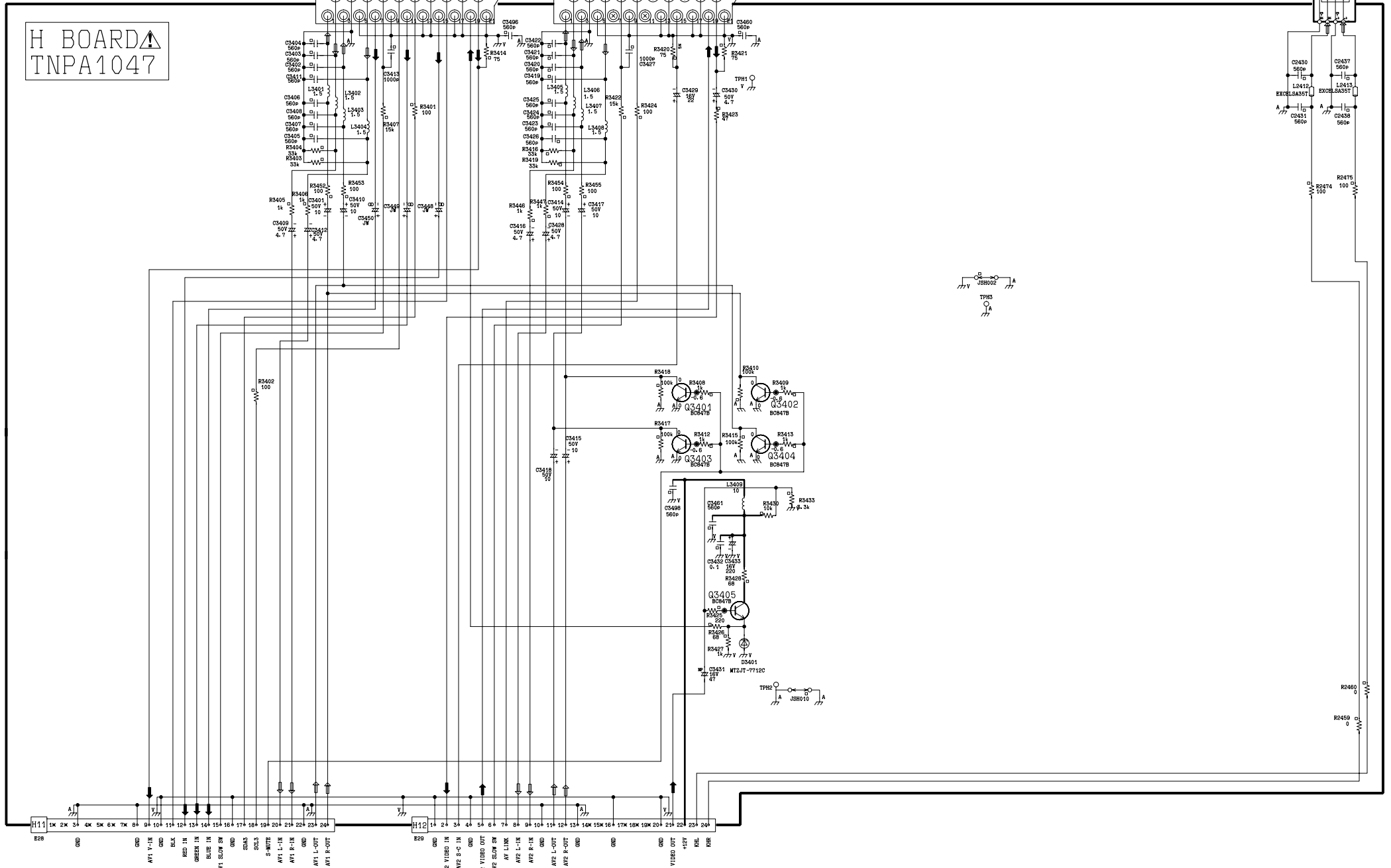
AV1

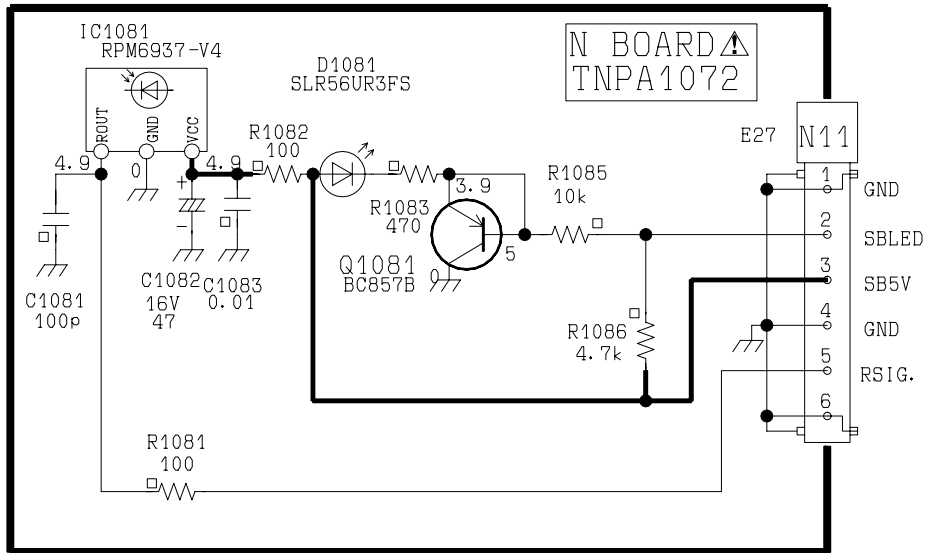
AV2

JK3401

JK3402

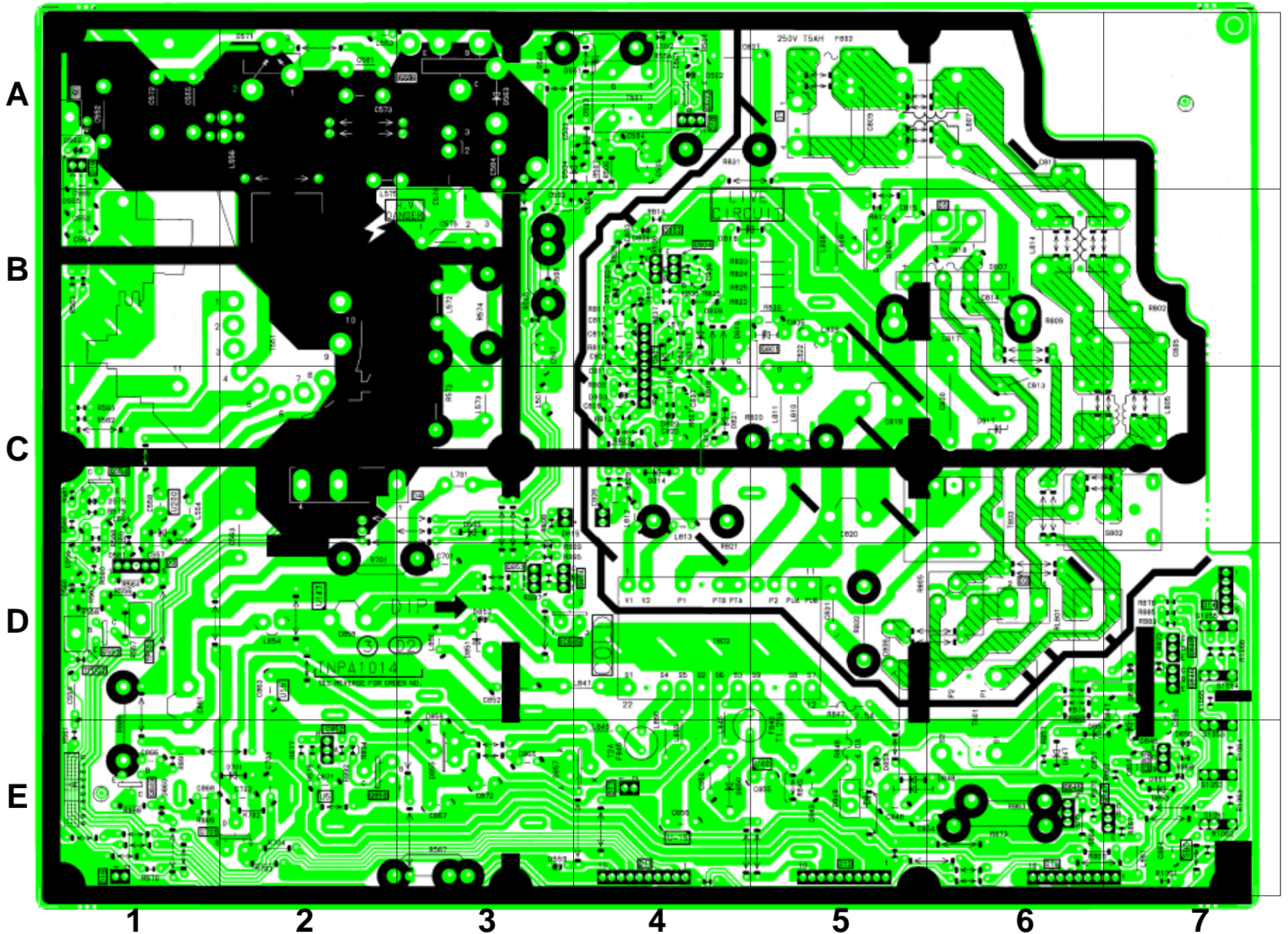
JK2403  
TJB8E014





D - BOARD TNPA1014

DIODE'S	TRAN'S
D503	A4
D504	A3
D505	C3
D551	A4
D556	C1
D559	E3
D560	D1
D561	D1
D563	A3
D565	A1
D566	A1
D571	A2
D575	C1
D701	E2
D803	C4
D807	B6
D808	B4
D809	B4
D810	B4
D812	B4
D813	B4
D814	C4
D815	C3
D817	C6
D818	B4
D819	B4
D820	C4
D821	C4
D845	D7
D846	D7
D847	E6
D848	E5
D849	E5
D850	E4
D851	D3
D852	D3
D853	E7
D854	E6
D855	E3
D856	E7
D857	E3
D858	E5
D860	E1
D861	E7
	I.C.'S
D812	B4
D813	B4
D814	C4
	T.P.'S
D818	B4
D819	B4

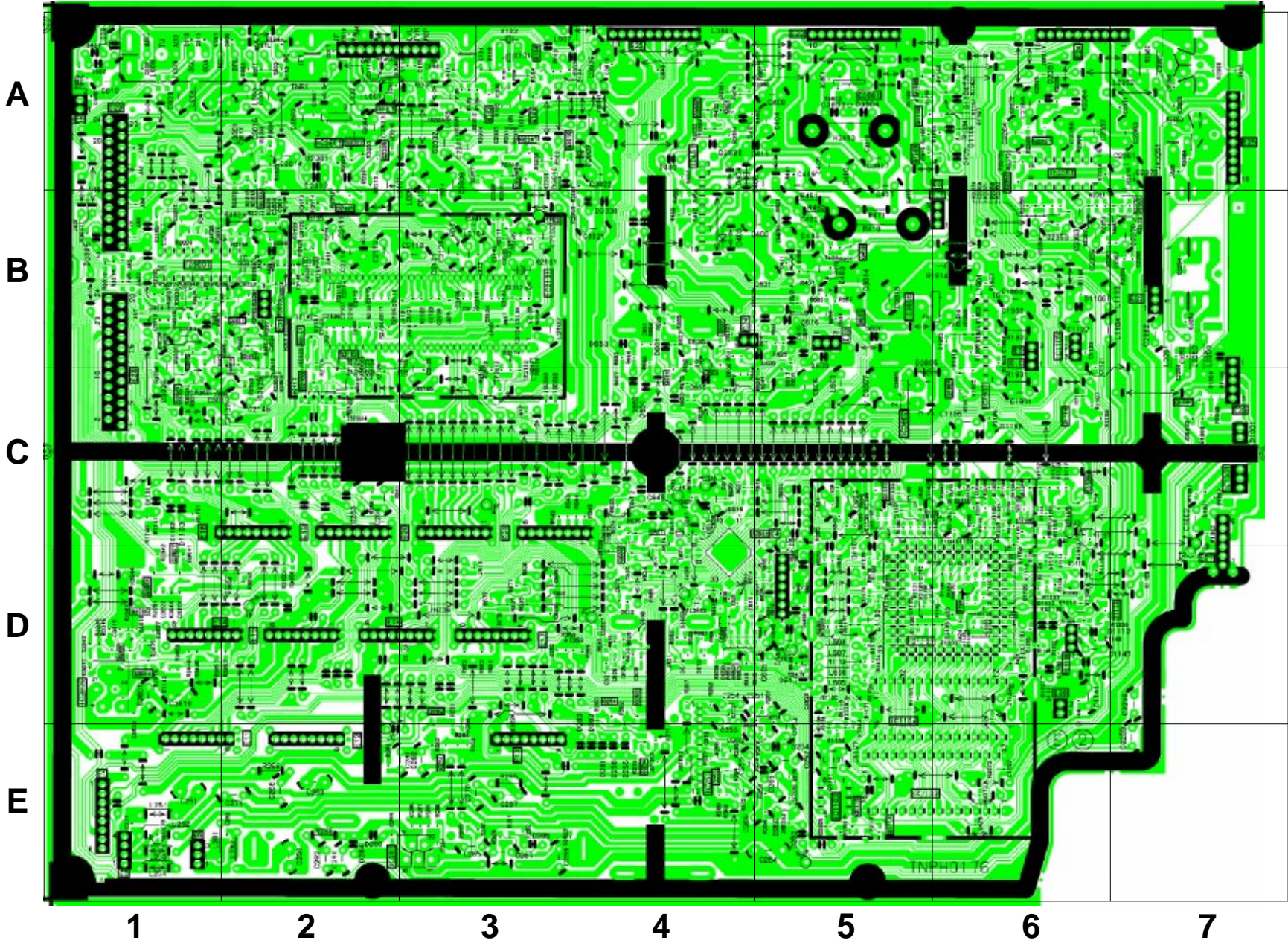


CONDUCTOR VIEWS

ANSICHT DER LEITERBAHNEN

E - BOARD TNPH0176

TRAN'S	DIODE'S				
Q101	A3	D001	A1	D2364	A6
Q103	A3	D002	A1	D3005	B1
Q104	A3	D252	E5	D3006	B2
Q251	D4	D253	E5	D3008	B4
Q252	D4	D254	E5	D3009	A3
Q253	E4	D255	E4	D3010	A3
Q254	E4	D256	E4	D3011	B1
Q281	E3	D281	E4	D3803	A5
Q282	D3	D282	E4	D3804	A5
Q400	B5	D283	E4	D3805	C5
Q401	A4	D284	E2	D3990	A4
Q601	B5	D285	E3		
Q602	B4	D286	E2		
Q603	C4	D400	B5	IC251	E4
Q604	C4	D401	A4	IC281	E2
Q607	C4	D402	A4	IC451	A4
Q608	D4	D403	B4	IC601	C4
Q1001	C7	D404	A4	IC1001	C7
Q1105	C6	D405	A6	IC1101	D5
Q1106	C6	D408	B5	IC1102	E5
Q1107	C6	D411	A4	IC1103	E5
Q1108	A5	D601	B4	IC1104	D5
Q1109	A5	D603	D5	IC1105	B6
Q1110	A5	D605	B5	IC1106	D6
Q1111	C5	D607	B5	IC1901	C6
Q1112	E5	D609	B5	IC2101	B3
Q1113	E5	D610	C4	IC2351	A6
Q1114	C6	D611	C4	IC3001	B1
Q1116	C6	D612	C4	IC3801	A2
Q1118	D6	D615	B5	IC3802	C5
Q1901	C6	D616	B5	IC3805	B5
Q2101	B2	D617	D5	IC3806	D1
Q2102	C2	D618	C4		
Q2103	B2	D620	B5		
Q2301	B2	D651	C4	TPE1	A2
Q2302	A2	D652	C4	TPE2	B3
Q2305	A2	D653	B4	TPE23	D6
Q2307	A3	D1001	C7		
Q2308	A3	D1101	C1		
Q2351	A6	D1102	C1		
Q2352	A6	D1103	C1		
Q3001	C1	D1104	A6		
Q3002	B1	D1105	A6		
Q3003	B2	D1106	B6		
Q3005	D1	D1107	C5		
Q3006	D1	D1108	C6		
Q3007	D1	D1109	D6		
Q3008	D1	D1110	D6		
Q3010	A3	D1111	D6		
Q3011	B2	D1112	D6		
Q3012	B2	D2101	B2		
Q3013	B2	D2102	B2		
Q3014	D1	D2301	A2		
Q3801	A5	D2302	A2		
Q3990	A4	D2351	A6		



# Y - BOARD TNPA1353

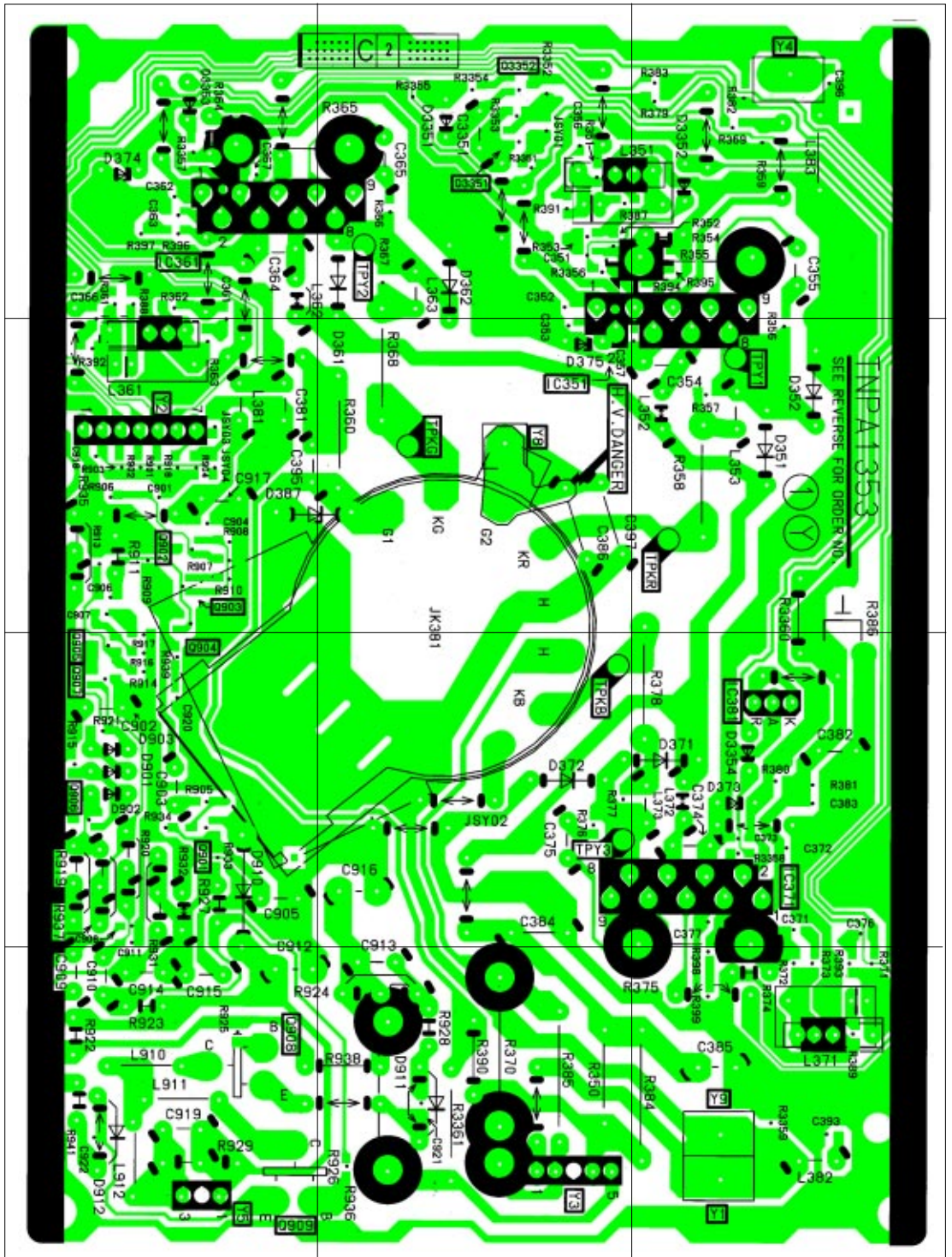
TRAN'S	
Q901	C1
Q902	B1
Q903	B1
Q904	C1
Q906	C1
Q908	D1
Q909	D1
Q3351	A2
Q3352	A2
DIODE'S	
D351	B3
D352	B3
D361	A2
D362	A2
D371	C3
D372	C2
D373	C3
D374	A1
D375	B2
D387	B1
D901	C1
D902	C1
D903	C1
D910	C1
D911	D2
D3351	A2
D3352	A3
D3353	A1
D3354	C3
T.P.'S	
TPY1	B3
TPY2	A2
TPY3	C2
TPKR	B3
TPKG	B2
TPKB	C2
I.C.'S	
IC351	B2
IC361	A1
IC371	C3
IC381	C3

**A**

**B**

**C**

**D**



**1**

**2**

**3**



# H - BOARD TNPA1047

TRAN'S	
Q2401	A2
Q2407	A3
Q2408	A3
Q2409	A3
Q2410	A3
Q2411	A3
Q2412	A3
Q3401	B1
Q3402	C1
Q3403	B1
Q3404	C1
Q3405	C3
Q3406	C3

DIODE'S	
D2401	A2
D2403	A3
D2404	A3
D2405	A3
D2406	A3
D2407	A3
D2408	A3
D3401	C3
D3402	C3

T.P.'S	
TPH1	D1
TPH2	A2
TPH3	D1
TPH004	D1
TPH005	D1

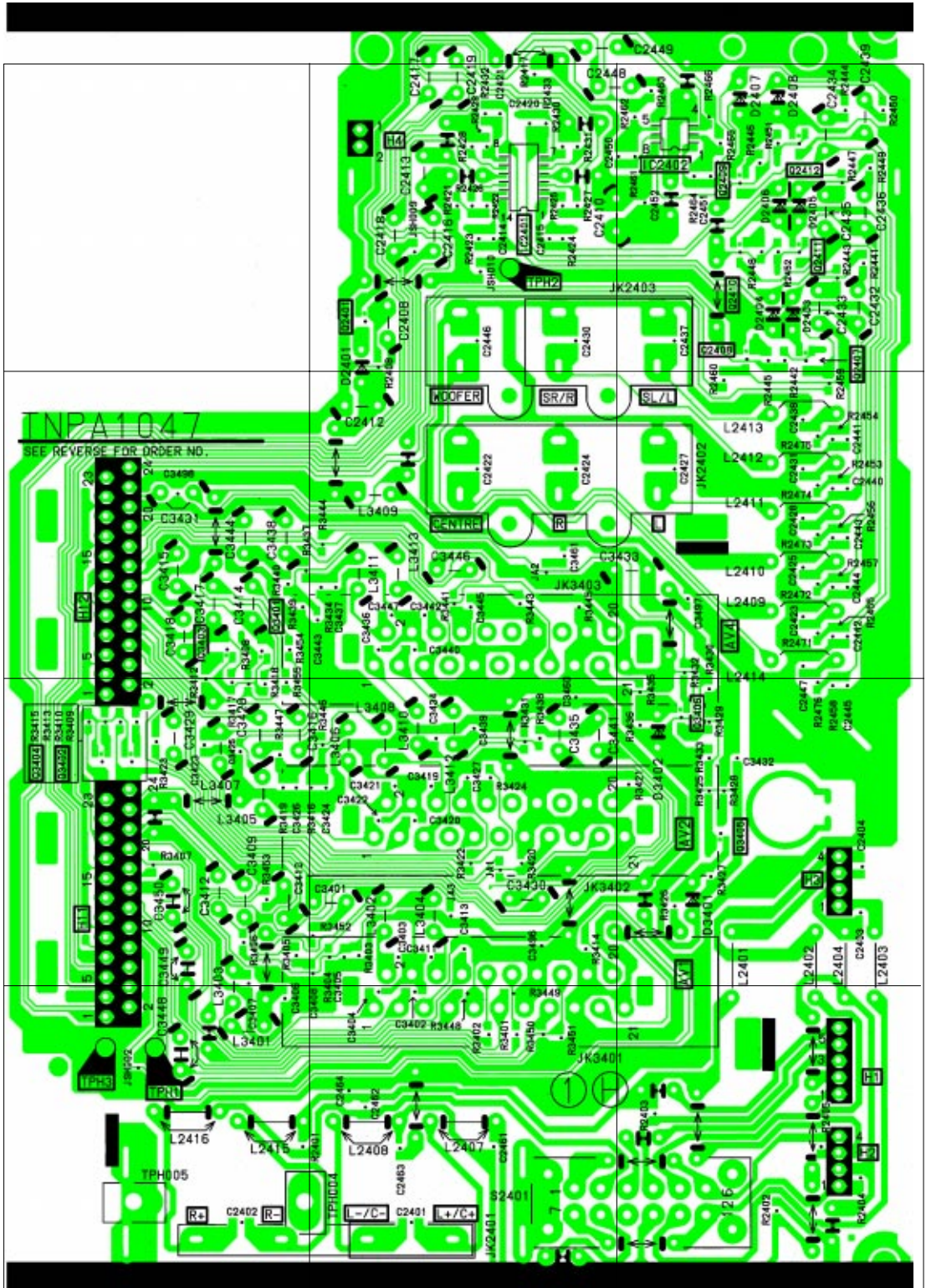
I.C.'S	
IC2401	A2
IC2402	A3

**A**

**B**

**C**

**D**



**1**

**2**

**3**

# F - BOARD TNPA1068

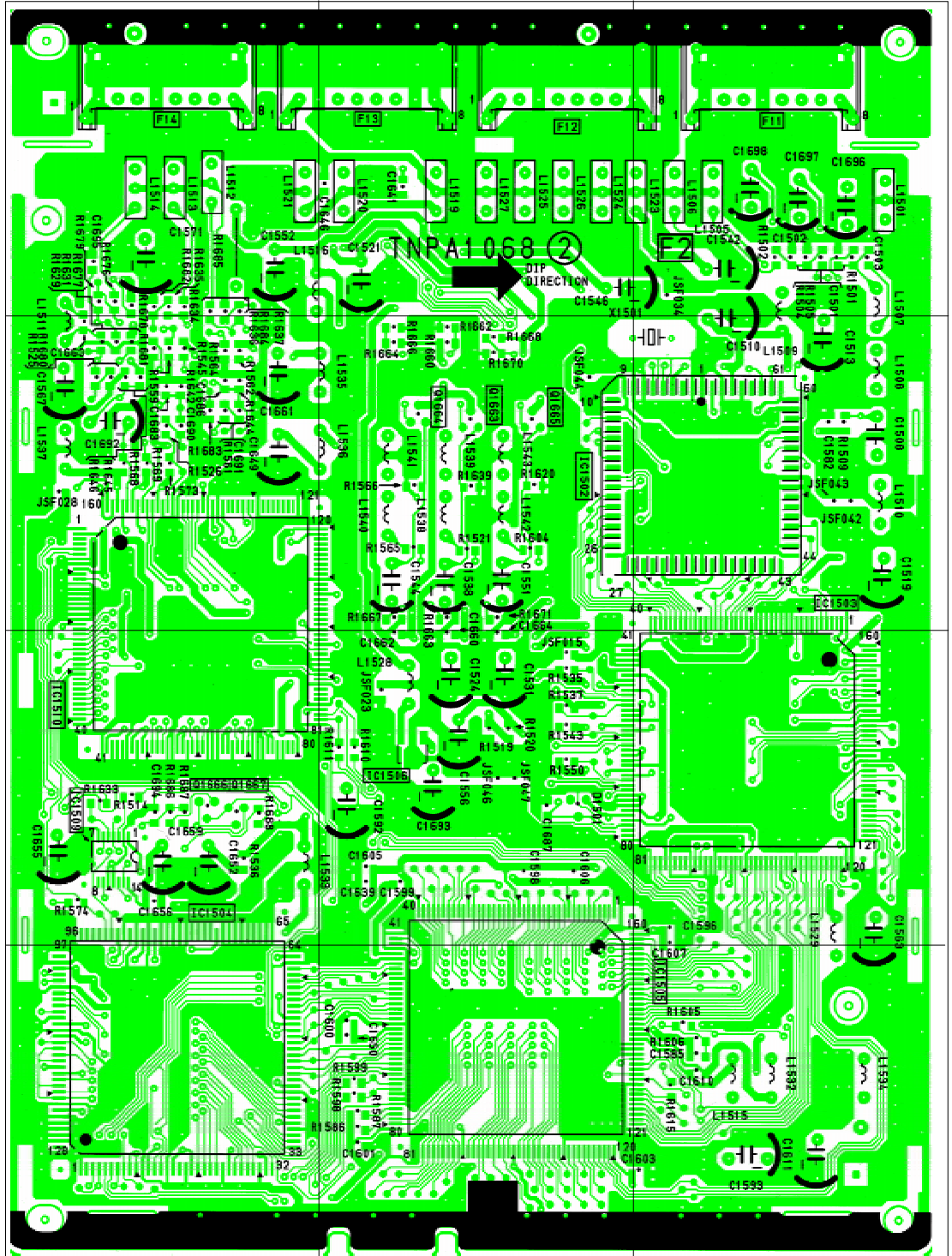
TRAN'S	
Q1663	B2
Q1664	B2
Q1665	B2
Q1666	C1
Q1667	C1
I.C.'S	
IC1502	B3
IC1503	C3
IC1504	D1
IC1505	D2
IC1506	C2
IC1509	C1
IC1510	C1

**A**

**B**

**C**

**D**



**1**

**2**

**3**

# F - BOARD TNPA1068

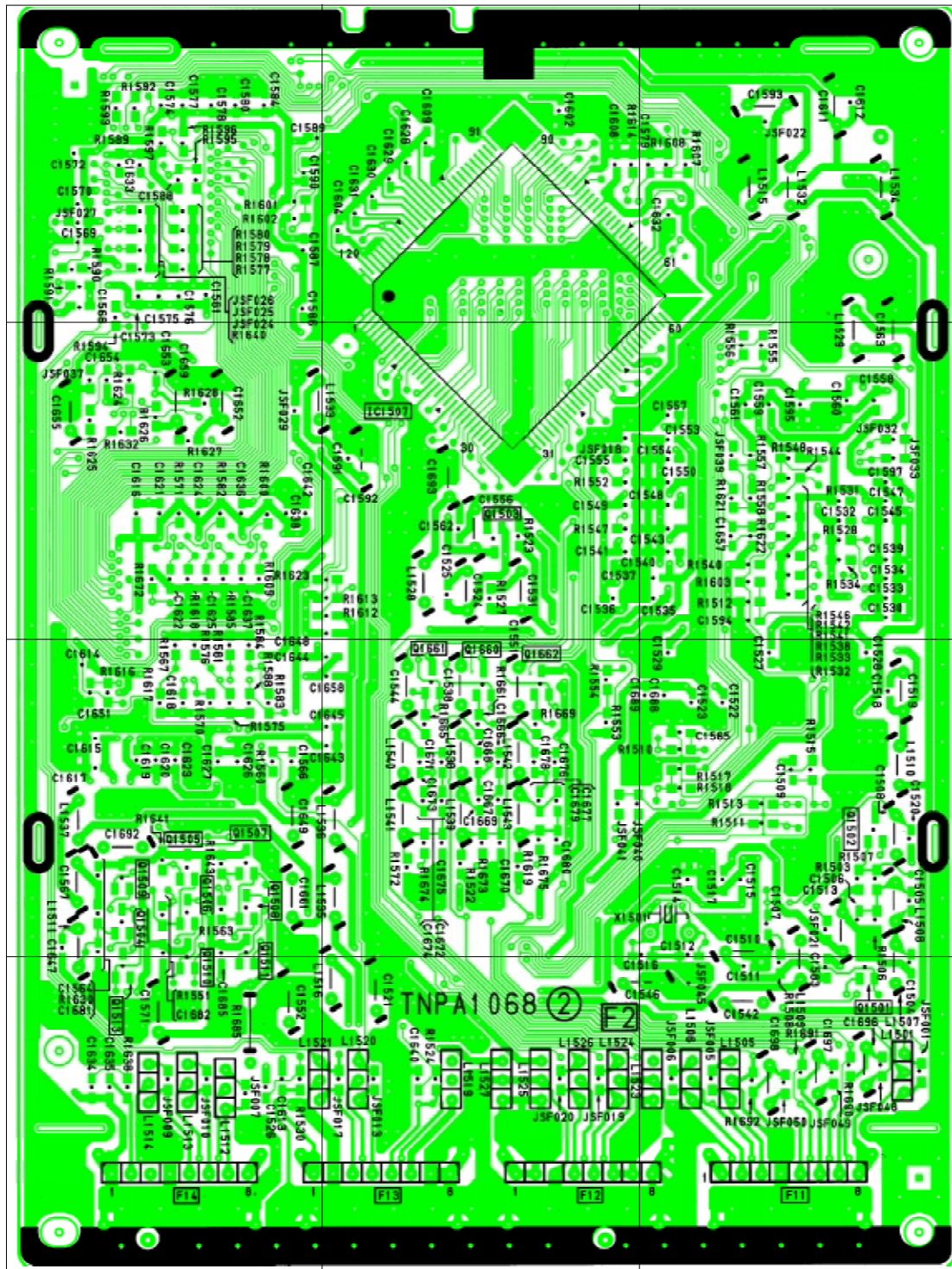
TRAN'S	
Q1501	D3
Q1502	C3
Q1503	B2
Q1504	C1
Q1505	C1
Q1506	C1
Q1507	C1
Q1508	C1
Q1509	C1
Q1510	D1
Q1511	D1
Q1519	D1
Q1660	C2
Q1661	C2
Q1662	C2
I.C.'S	
IC1507	B2

**A**

**B**

**C**

**D**



**1**

**2**

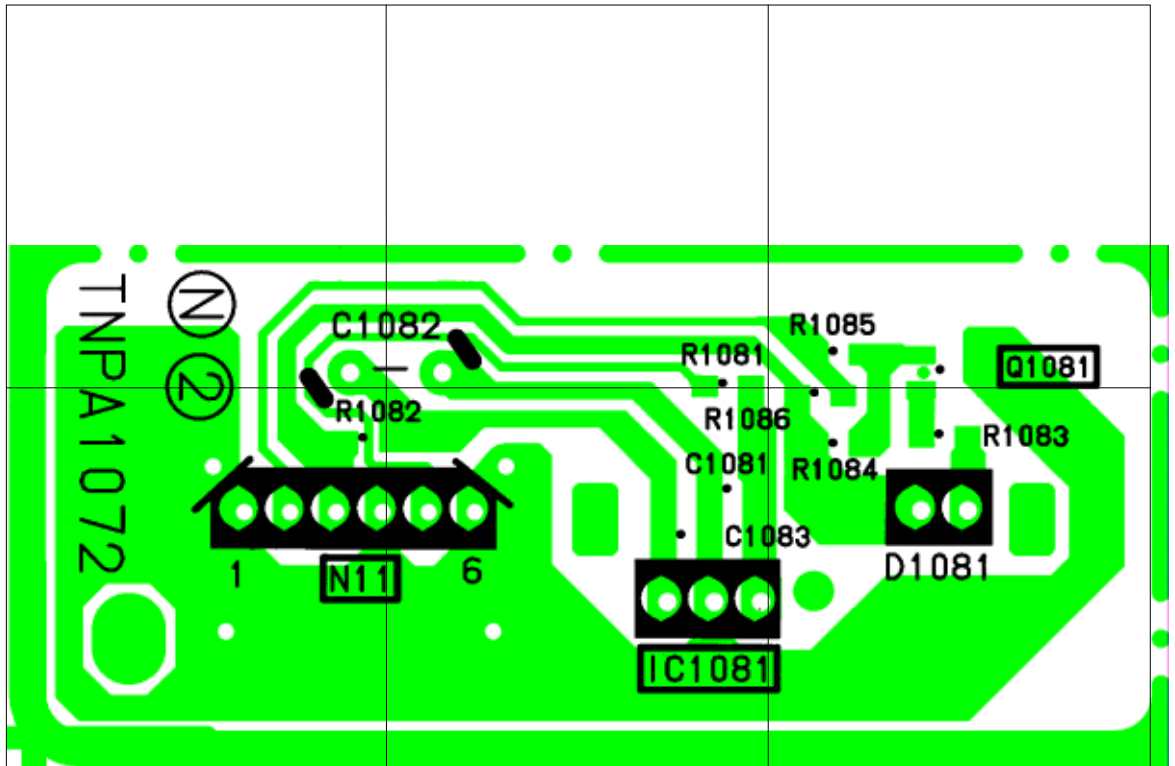
**3**

# N - BOARD TNPA1072

TRAN'S	
Q1081	A3
DIODE'S	
D1081	B3
I.C.'S	
IC1081	B2

A

B



1

2

3