

Service Manual

Color Television

CHASSIS : CN-201A/B
NTSC-M SYSTEM

MODEL: DTQ-14Q1FS, DTQ-14Q2TS
DTQ-14Q3FS, DTQ-14T1AS
DTQ-14T2FS, DTQ-20Q1FS
DTQ-20Q2FS, DTQ-20Q3FS
DTQ-20T1AS, DTQ-20T2AS
DTQ-20T1FS, DTQ-20T2FS
DTQ-20T3FS, DTQ-21T1FS
DTQ-21T2FS, DTQ-21T5FS
DTQ-21T9FS, DTQ-20T1FC

✓ Caution

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (<http://svc.dwe.co.kr>).

DAEWOO ELECTRONICS CO., LTD.

FEATURES

- * FS (Frequency Synthesizer) Tuning System
- * CATV Ready
- * High Focus Minineck CRT

ELECTRICAL SPECIFICATIONS

POWER INPUT

AC90V - AC250V	50/60Hz
DTQ-20T1FC : 120V	60HZ ONLY

POWER RATING

14" Model	60W
20" MONO Model	70W
20" ST Model	80W
21" ST Model	80W

INTERMEDIATE FREQUENCIES

PICTURE IF CARRIER FREQUENCY	45.75MHz
SOUND IF CARRIER FREQUENCY	41.25MHz
COLOR SUB CARRIER FREQUENCY	42.17MHz

AUDIO OUTPUT RATING

MONO(2W) ST(3W+3W)

SPEAKER

3W 16ohm

ANTENNA INPUT IMPEDANCE

VHF/UHF 75 ohm UNBALANCED

TUNING RANGES

VHF	2 THRU 13
UHF	14 THRU 69
CATV	1 THRU 125

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CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

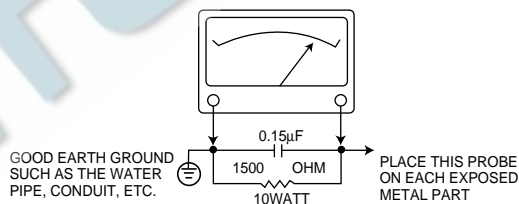
SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED, A CHECK SHOULD BE MADE OF THE FOLLOWING:

SUBJECT: FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE, THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OF SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS, FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY. FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTOR, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES. DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET. (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS, HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER : CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150V A.C. TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED .75 VOLTS R.M.S THIS CORRESPONDS TO 0.5 MILLIAMPS A.C. ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.

A.C. VOLTMETER



SUBJECT : GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION ON SERVICE LITERATURE.

SUBJECT : X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC. OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS X-RAY SHIELD IN COLOR SETS. ALWAYS RE-INSTALL THEM.
3. IT IS ESSENTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD. SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED, THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE, AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV, B + AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

SUBJECT : IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTEGRAL IMPLOSION PROTECTION SYSTEM. BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION. AVOID SCRATCHING THE TUBE. OF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE, OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM. BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERALLY APPROVED FOR USE WITH T.V.S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DASTROUS CONSEQUENCES TO HOME AND FAMILY.

Product safety servicing guidelines for color television receivers

CAUTION : Do not attempt to modify this product in any way. Unauthorized modifications will not only void the warranty, but may lead to your being liable for any resulting property damage or user injury.

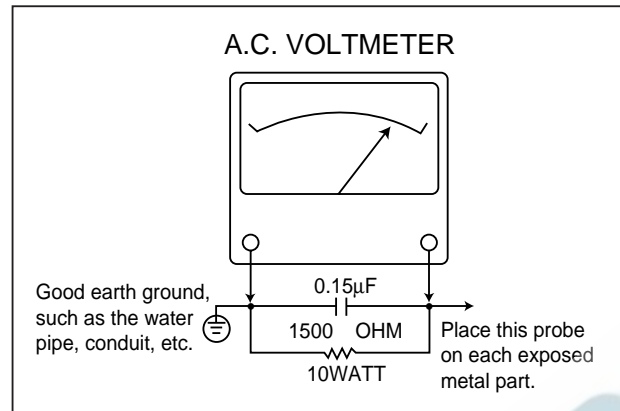
Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines. To do otherwise, increases the risk of potential hazards and injury to the user.

SAFETY CHECKS

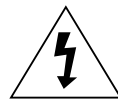
After the original service problem has been corrected, a check should be made of the following:

SUBJECT : FIRE & SHOCK HAZARD

1. Be sure that all components are positioned in such a way as to avoid possibility of adjacent component shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Never release a repair unless all protective devices such as insulators, barriers, covers, shields, strain reliefs, and other hardware have been reinstalled per original design.
3. Soldering must be inspected to discover possible cold solder joints, frayed leads, damaged insulation (including A.C. cord), solder splashes or sharp solder points. Be certain to remove all loose foreign particulates.
4. Check for physical evidence of damage or deterioration to parts and components, and replace if necessary follow original layout, lead length and dress.
5. No leads or components should touch a receiving tube or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. All critical components such as fuses, flameproof resistors, capacitors, etc. must be replaced with exact factory types. Do not use replacement components other than those specified or make unrecommended circuit modifications.
7. After re-assembly of the set always perform an A.C. leakage test on all exposed metallic parts of the cabinet, (the channel selector knob, antenna terminals, handle and screws) to be sure the set is safe to operate without danger of electrical shock. **Do not use a line isolation transformer during this test.** Use an A.C. voltmeter, having 5000 ohms per volt or more sensitivity, in the following manner : connect a 1500 ohm 10 watt resistor, paralleled by a 15 mfd. 150V A.C. type capacitor between a known good earth ground (9water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the A.C. voltage across the combination of 1500 ohm resistor and 0.15 MFD capacitor. Reverse the A.C. plug and repeat A.C. voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts R.M.S. This corresponds to 0.5 milliamp A.C. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



GRAPHIC SYMBOLS :



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the service personnel to the presence of uninsulated "dangerous voltage" that may be of sufficiently magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the service personnel to the presence of important safety information in service literature.



Fuse symbol is printed on pcb adjacent to the fuse, with 'RISK OF FIRE REPLACE FUSE AS MARKED'. The symbol is explained in the service manual with the following wording or equivalent.

"CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 4A, 125V FUSE" and "ATTENTION: AFIN D'ASSU UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET DE 4A, 125V".

SUBJECT : X-RADIATION

1. Be sure procedures and instructions to all service personnel cover the subject of X-rays in current T.V. receivers is the picture tube. However, this tube does not emit X-rays when the high voltage is at the factory specified level. The proper value is given in the applicable schematic. Operation at higher voltages may cause a failure of the picture tube or high voltage supply and, under certain circumstances, may produce radiation in excess of desirable levels.
2. Only factory specified C.R.T. anode connectors must be used. Degaussing shields also serve as X-ray shield in color sets. Always re-install them.
3. It is essential that the serviceman has available an accurate and reliable high voltage meter. The calibration of the meter should be checked periodically against a reference standard. Such as the one available at your distributor.
4. When the high voltage circuitry is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be run up and down while monitoring the high voltage

with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly. We suggest that you and your service organization review test procedures so that voltage regulation is always checked as a standard servicing procedure. And that the high voltage reading be recorded on each customer's invoice.

5. When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage compartment.
Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

6. Refer to HV, B+and Shutdown adjustment procedures described in the appropriate schematic and diagrams(when used).

SUBJECT : IMPLOSION

1. All direct viewed picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage during installation. Avoid scratching the tube. If scratched, replace it.

2. Use only recommended factory replacement tubes.

SUBJECT : TIPS ON PROPER INSTALLATION

1. Never install any receiver in closed-in recess, cubbyhole or closely fitting shelf space over, or close to heat duct, or in the path of heated air flow.

2. Avoid conditions of high humidity such as : Outdoor patio installations where dew is a factor. Near steam radiators where steam leakage is a factor, etc.

3. Avoid placement where draperies may obstruct rear venting. The customer should also avoid the use of decorative scarves or other coverings which might obstruct ventilation.

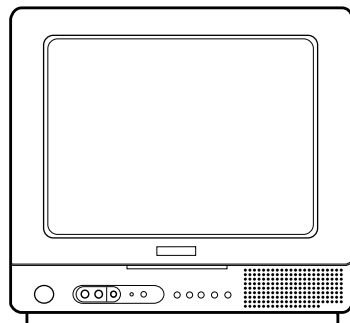
4. Wall and shelf mounted installations using a commercial mounting kit, must follow the factory approved mounting instructions. A receiver mounted to a shelf or platform must retain its original feet(or the equivalent thickness in spacers) to provide adequate air flow across the bottom, bolts or screws used for fasteners must not touch and parts or wiring. Perform leakage test on customized installations.

5. Caution customers against the mounting of a receiver on sloping shelf or a tilted position, unless the receiver is properly secured.

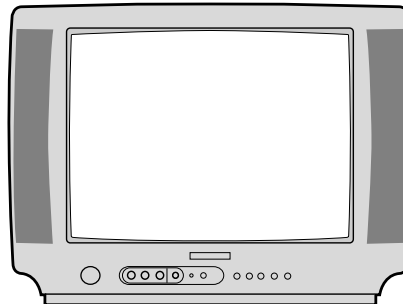
6. A receiver on a roll-about cart should be stable on its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.

7. Caution customers against the use of a cart or stand which has not been listed by underwriters laboratories, inc. For use with their specific model of television receiver or generically approved for use with T.V.'s of the same or larger screen size.

■ CONTROL VIEW



MONO MODEL



STEREO MODEL

Overview of Your Equipment

Your TV comes with a remote control. The section below summarizes the buttons, controls, and terminals that you will use with your TV.

Your TV's Front Panel

1 POWER

Use this button to turn your TV on or off.

2 VIDEO IN jack

Use this jack to receive a video signal from another A/V component.

3 AUDIO IN jack

MONO MODEL use this jack to receive an audio signal from another A/V component. But, STEREO MODEL use this jack to receive audio L/R signal from another A/V component.

4 EARPHONE IN jack

Use this jack to receive a audio signal from your TV.

5 STAND-BY (red) indicator

This indicator lights up when the power is off.

6 Remote control receiver

This receiver receives a signal from your remote control. Don't block it.

7 ▼CH▲

Use these buttons to change channels on your TV, or to select items in the menu system.

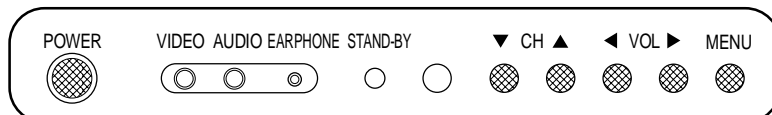
8 ◀VOL▶

Use these buttons to change your TV's volume, to activate selections in the menu system, or to change audio and video settings.

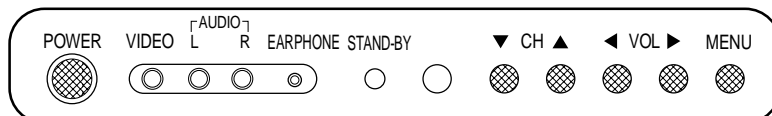
9 MENU

Use this button to turn the TV's menu system on and off.

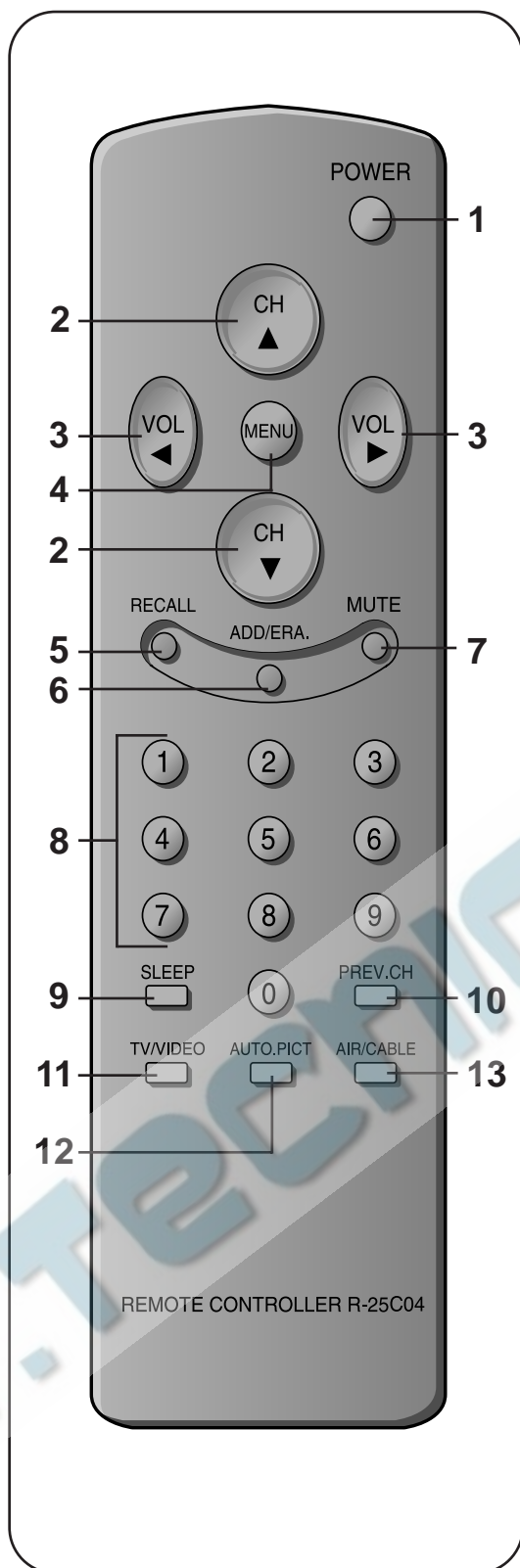
MONO MODEL



STEREO MODEL



■ REMOTE CONTROL UNIT



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3 ◀VOL▶

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4 MENU

Use this button to turn the TV's menu system on and off.

5 RECALL

Press this button to display the channel number.

6 ADD/ERA.

Use this button to add a channel to the TV's memory or erase the channel from memory.

7 MUTE

Use to turn the TV's sound on and off.

8 0-9

Use these buttons to change channels.

9 SLEEP

Use this button to program the TV to turn off after a certain time.

10 PREV. CH

Press this button to return to the previous channel you were watching. If you have set Favorite Ch, this key operates to Favorite function.

11 TV/VIDEO

Use this button to select TV or VIDEO mode.

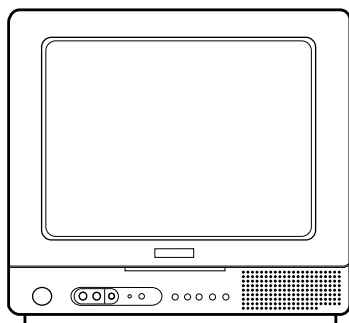
12 AUTO. PICT

Press this button to return the TV's video settings to their original level.

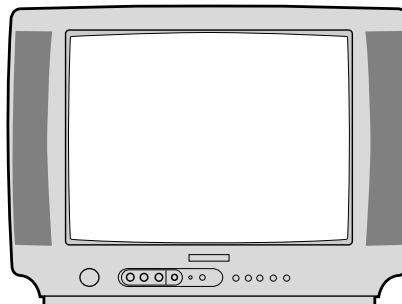
13 AIR/CABLE

Use the button to set up your TV to receive signals from an antenna (AIR) or a cable system (CABLE).

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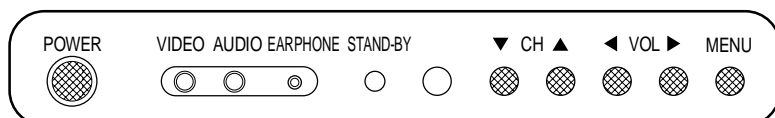
8 ◀VOL▶

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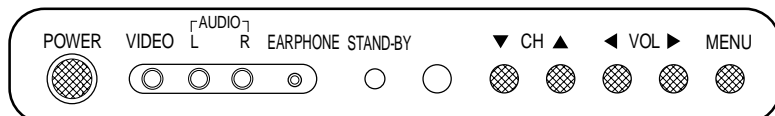
9 MENU

Use this button to turn the TV's menu system on and off.

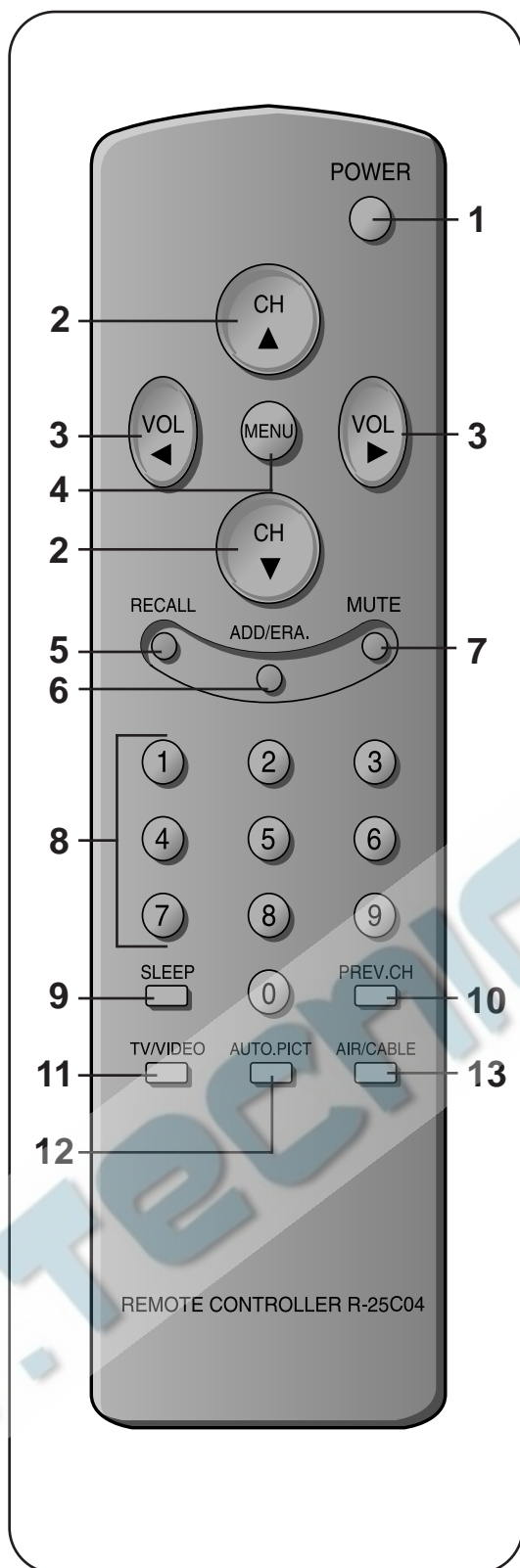
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■ IMPORTANT SERVICE NOTES

1. X-RAY RADIATION PRECAUTION

- 1) Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is 24.4kv at zero beam current (minimum brightness) under a 120V AC power source. The high voltage must not, under any circumstances, exceed 27kv (28.5kv). Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure on page 6 of this manual. It is recommended as a parts of the service record. It is important to use an accurate and reliable high voltage meter.
- 2) This receiver is equipped with X-RADIATION PROTECTION circuit which prevents the receiver from producing an excessively high voltage even if the B+ voltage increases abnormally. Each time the receiver is serviced, X-RADIATION PROTECTION circuit must be checked to determine that the circuit is properly functioning, following the X-RADIATION PROTECTION CIRCUIT CHECK procedure on page 6 of this manual.
- 3) The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
- 4) Some parts in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

2. SAFETY PRECAUTION

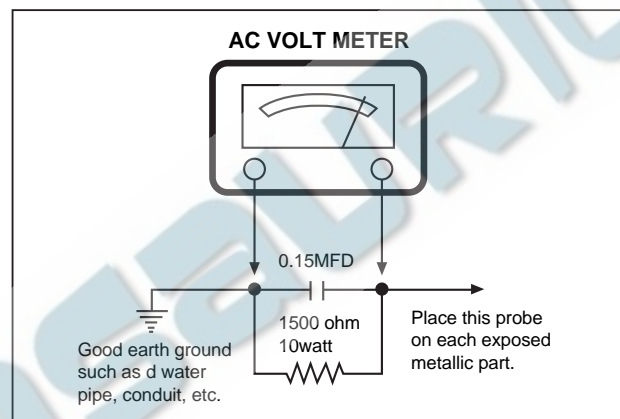
WARNING: Service should not be attempted by anyone unfamiliar with the necessary precaution on this receiver. The following are the necessary precaution to be observed before servicing.

- 1) Since the chassis of this receiver has hazardous potential to ground whenever the receiver is plugged in (floating chassis), an isolation transformer must be used during servicing to avoid shock hazard.
- 2) Always discharge the picture tube anode to the CRT conductive coating the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatterproof goggles and keep picture tube away from the body while handling.
- 3) When placing chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; nonmetallic control knobs, insulating covers, shields, isolation resistor-capacitor network, etc.
- 4) Before returning the set to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, screw-heads, metal overlays, control shafts etc. to be sure the set is safe to operate without danger of electrical shock. Plug the AC line cord directly into a 120V AC outlet (do not use a line isola-

* Minimum brightness

tion transformer during this check). Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner.

Connect a 1500 ohm 10 watt resistor, paralleled by a 0.15 mfd. AC type capacitor, between a known good earth ground (water pipe, conduit etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and 0.15 mfd capacitor. Voltage measured must not exceed 0.3 volts RMS. This corresponds to 0.2 milliamp. AC. Any value exceeding the limit constitutes a potential shock hazard and must be corrected immediately.



3. PRODUCT SAFETY NOTICE

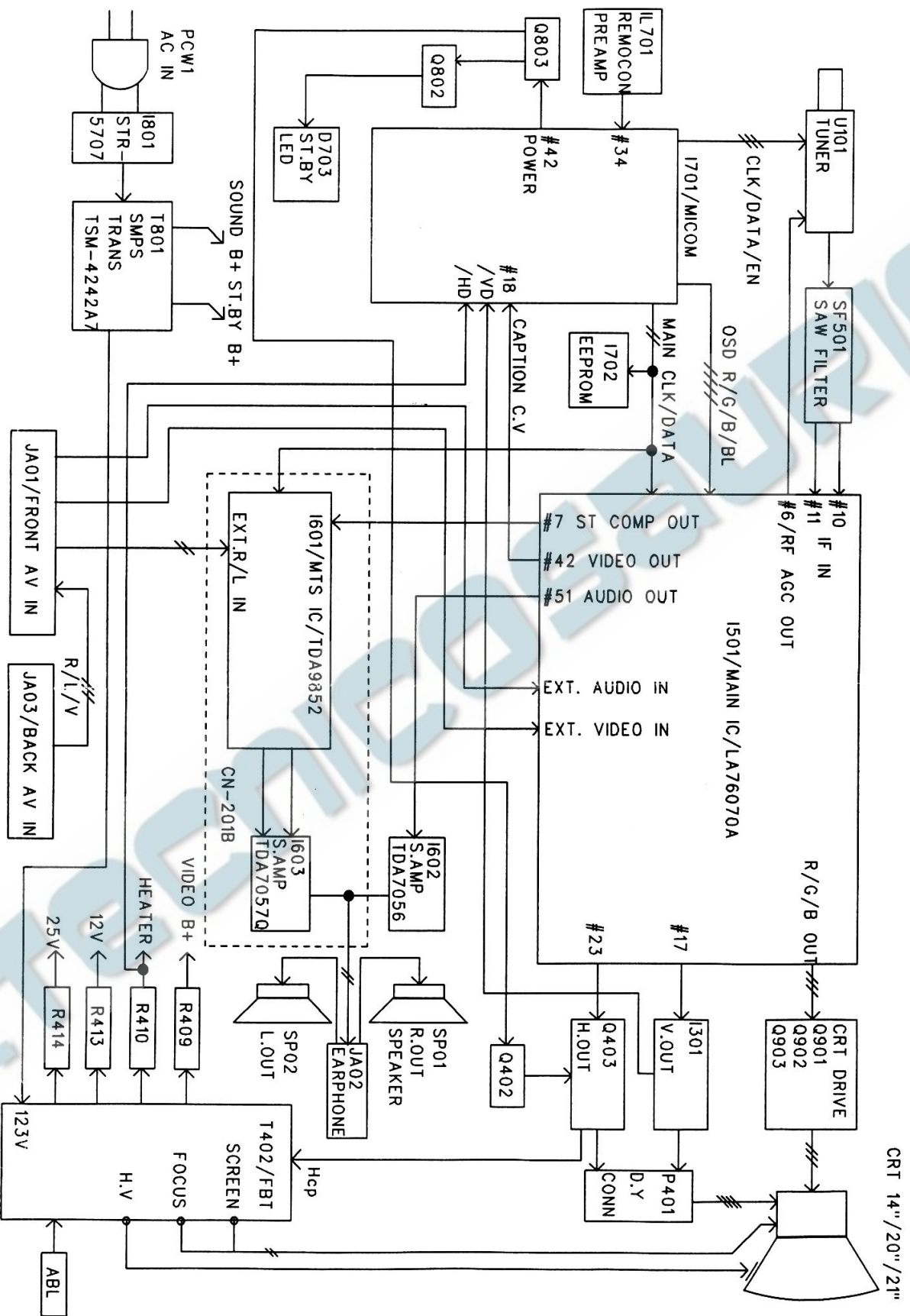
Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by shading on the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create X-ray radiation or other hazards.

4. SERVICE NOTES

- 1) When replacing parts or circuit boards, clamp or bend the lead wires to terminals before soldering.
- 2) When replacing a high wattage resistor (metal oxide film resistor) in the circuit board, keep the resistor min 1/2 inch away from circuit board.
- 3) Keep wires away from high voltage or high temperature components.

CN-201A/B BLOCK DIAGRAM



CRT 14"/20"/21"

■ GENERAL ADJUSTMENTS

1. GENERAL

In the majority of cases, all color televisions will need only slight touch-up adjustment upon installation. Check the basic characteristics such as height, focus and sub- basic characteristics such as height, focus and sub- bright. Observe the picture for good black and white details without objectionable color shading. If color shading is evident, demagnetize the receiver. If color shading still persists, perform purity and convergence adjustments. This should be all that is necessary to achieve Optimum receiver performance.

2. SCREEN ADJUSTMENT

- 1) Turn on TV
- 2) Press the S2 key of Service Remocon to make the One Horizontal Line
- 3) Adjust the Screen adj. VR of FBT so that the One Horizontal Line may be cut off.
- 4) Press the S2 key of Servio Remocon to be normal.

3. FOCUS ADJUSTMENT

- 1) Receive the Retma Pattern.
- 2) Adjust the FOCUS adj. VR to obtain the clearest picture.

4. HORIZONTAL CENTER ADJUSTMENT

- 1) Receive the Retma Pattern.
- 2) Press the S6(59H) key of Service Remocon, select H.Phase, then adjust step so that the L/R Width of picture be alike.
- 3) Press the RECALL key to store.
- 4) Initial value of D.P : 5

5. VERTICAL CENTER ADJUSTMENT

- 1) Receive the Retma Pattern.
- 2) Press the S6(59H) key of Service Remocon, select V.DC, then adjust V.DC so that the horizontal line of RETMA PATTERN'S center may meet with the mechanical CENTER of CRT.
- 3) Press the RECAL key to store.
- 4) Initial value of D.P:35

6. VERTICAL HIGHT ADJUSTMENT

- 1) Receive the Retma Pattern.
- 2) Press the S6(59H) key of Service Remocon, select V.Size, then adjust V.Size so that the center of circumference of big circle may meet with the upper and lower sides of the screen.
- 3) Press the RECALL key to store.
- 4) Initial of value of D.P :35

7. X-RADIATION PROTECTION CIRCUIT TEST

When service has been performed on the horizontal deflection system, high voltage system or B+system. the X-RADIATION protection circuit must be tested for proper operation as follows:

- 1) Operate receiver for at least 15 minutes at 120V AC line.
- 2) Adjust all customer controls for normal picture and sound.
- 3) Short R411(X-RAY Short test), and remove short clip.
- 4) If the operation of horizontal osc. does not stop in step The circuit must be repaired, before the set is returned to the customer.

8. White balance ADJUSTMENT

- 1) Press the S8 key of SERVICE REMOCON, select W/B
- 2) Adjust the R/G/B BIAS of Low BEAM in order that the R/G/B BIAS of Low BEAM may meet with coordinates.
- 3) Adjust the R/B DRIVE of High BEAM in order that the R/B DRIVE of High BEAM may meet with coordinates.
- 4) Confirm the LOW BEAM, HIGH BEAM alternately.
- 5) Press the RECALL key to store.

9. SUB-BRIGHTNESS ADJUSTMENT

- 1) Receive the Retma Pattern.
- 2) Press the S9(5CH) key of Service Remocon, adjust Bright in order that the gradation pattern may set 18%.
- 3) Press the RECALL key to store.
- 4) Initial value of D.P :25

10. CONVERGENCE MAGNET ASSEMBLY POSITIONING

If Convergence magnet assembly and rubber wedges need mechanical positioning follow figure 2.

10-1. COLOR PURITY ADJUSTMENT

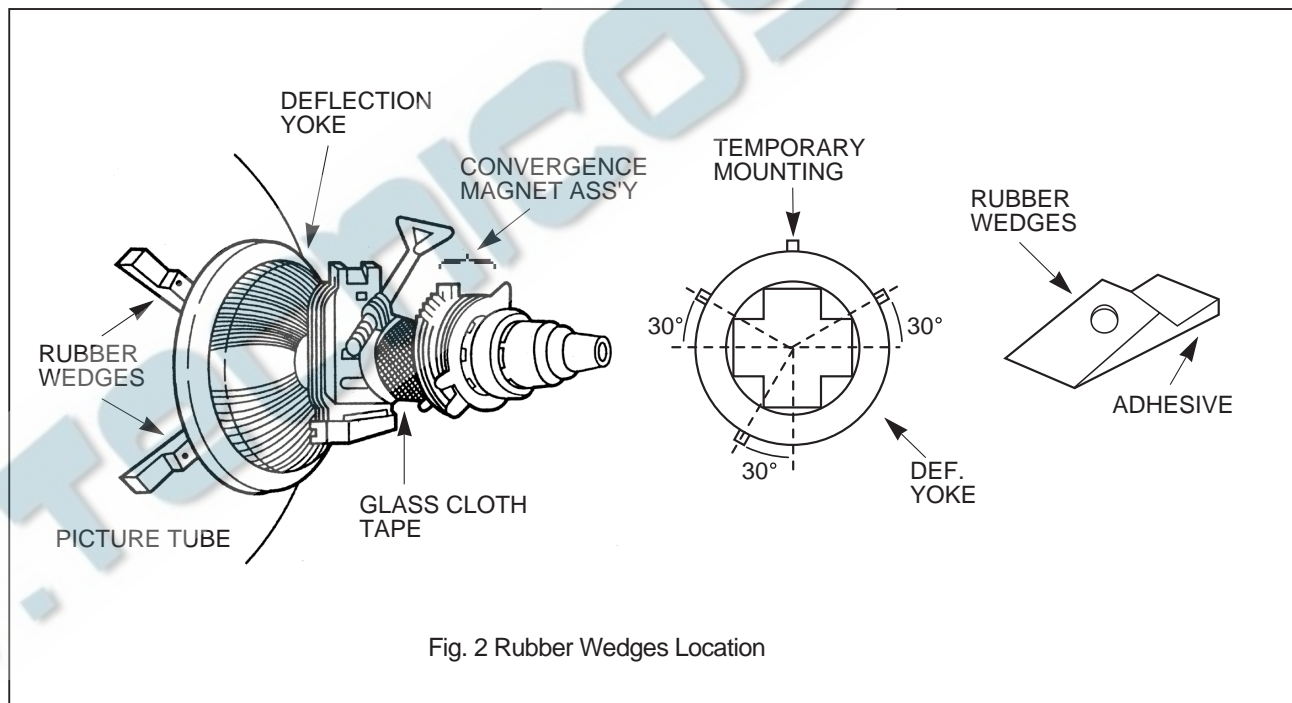
NOTE : Before attempting any purity adjustments, the receiver should be operated for at least 15 minutes.

- 1) Demagnetize the picture tube with a degaussing coil.
- 2) Adjust the CONTRAST and BRIGHTNESS controls to maximum
- 3) Adjust RED and BLUE Bias controls Service Remocon to provide only a green raster. Adjust the GREEN BIAS control Service Remocon if necessary.
- 4) Loosen the clamp screw holding the yoke, and slide the yoke backward to provide vertical green belt(zone) in the picture screen.
- 5) Remove the Rubber Wedges.
- 6) Rotate and spread the tabs of the purity magnet (See figure 2) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, center the raster vertically.
- 7) Move the yoke slowly forward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.

8) Check the purity of the red and blue raster by adjusting the BIAS controls.

9) Obtain a white raster, referring to "White Balance ADJUSTMENT".

10) Proceed with convergence adjustment.



10-2. CONVERGENCE ADJUSTMENTS

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least 15 minutes.

A. CENTER CONVERGENCE ADJUSTMENT

- 1) Receive crosshatch pattern with a crosshatch signal generator.
- 2) Adjust the BRIGHTNESS and CONTRAST Controls for a good picture.
- 3) Adjust two tabs of the 4-Pole Magnets to change the angle between them (See Fig. 3) and superimpose red and blue vertical lines in the center area of the picture screen. (See Fig. 4)
- 4) Turn both tabs at the same time keeping their angles constant to superimpose red and blue horizontal lines at the center of the screen. (See Fig. 4)
- 5) Adjust two tabs of 6-Pole Magnets to superimpose red/blue line with green on top of each other. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
- 6) Repeat adjustments 3), 4), 5) keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets interact and make dot movement complex.

B. CIRCUMFERENCE CONVERGENCE ADJUSTMENT

NOTE : This adjustment requires Rubber Wedge Kit.

- 1) Loosen the clamping screw on deflection yoke to allow the yoke to tilt.
- 2) Place a wedge as shown in figure 2 temporarily. (Do not remove cover paper on adhesive part of the wedge.)
- 3) Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See Fig. 4) Push the mounting wedge into the space between picture and the yoke to hold the yoke temporarily.
- 4) Place other wedge into bottom space and remove the cover paper to stick.
- 5) Tilt front of the yoke right or left to obtain better convergence in circumference. (See Fig. 4)
- 6) Hold the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to hold the yoke.
- 7) Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
- 8) After placing three wedges, re-check overall convergence. Tighten the screw firmly to hold the yoke tightly in place.
- 9) Stick 3 adhesive tapes on wedges as shown in figure32.

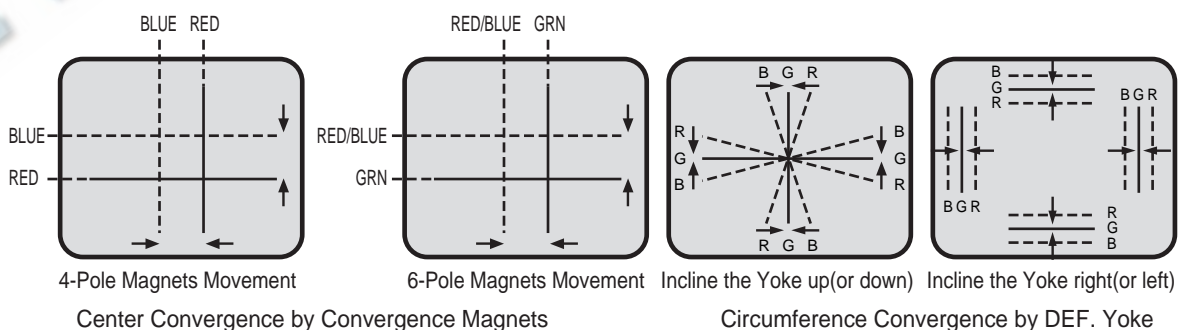
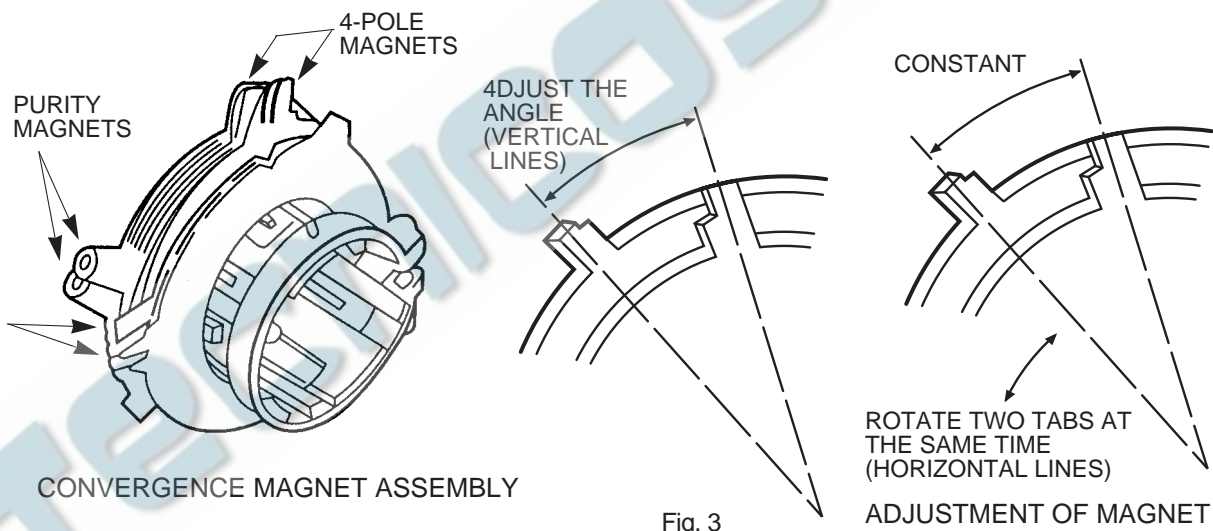


Fig. 4 Dot Movement Pattern

11. APC DET & PLL Tuning ADJUSTMENT

- 1) Receive the signal of RF 100% Full Color bar 85dBuV.
- 2) Press the S5(58H) key of Service Remocon, then execute Auto adj Start.
- 3) Confirm the OSD of Auto adj. OK.
- 4) If it was Auto adj. NG, Receive the signal of adjacent channel, then perform Auto adj. Start again.
- 5) Press the RECALL key to store. (Initial value of D.P APC:30, PLL:40)

12. RF AGC ADJUSTMENT

- 1) Receive the attenuate signal of RF 100% Full Color Bar 60dBuV.
- 2) Connect Scope to TP101(OR P101).
- 3) Press the S5 key of Service Remocon, select RF AGC.D, then adjust the maximum voltage of Scope to attenuate 1V.
(Initial value of the maximum voltage : About 7V)
For example if initial maximum voltage is 7V, adjust it to 6V
- 4) Press the RECALL key to store. (Initial value of D.P :25)

13). Stereo/Sap ADJUSTMENT

- 1) Receive the ZENITH MTS signal of 1KHz(OR 3KHz)CH.
- 2) Press the S10(5D) key of Service Remocon, select Auto Off, then execute Auto on.
- 3) Press the RECALL key to store.
- 4) Slect L ONLY OR R ONLY Channel, then confirm stereo Seperation.

※ If you have only User Remocon, A way of using is as follows;

- 1) Press the 1 key
- 2) Press the MUTE key
- 3) Press the RECALL Key
- 4) Press the MUTE key then the Service mode will appear.
- 5) Use the CH buttons to select the mode you wish to adjust.

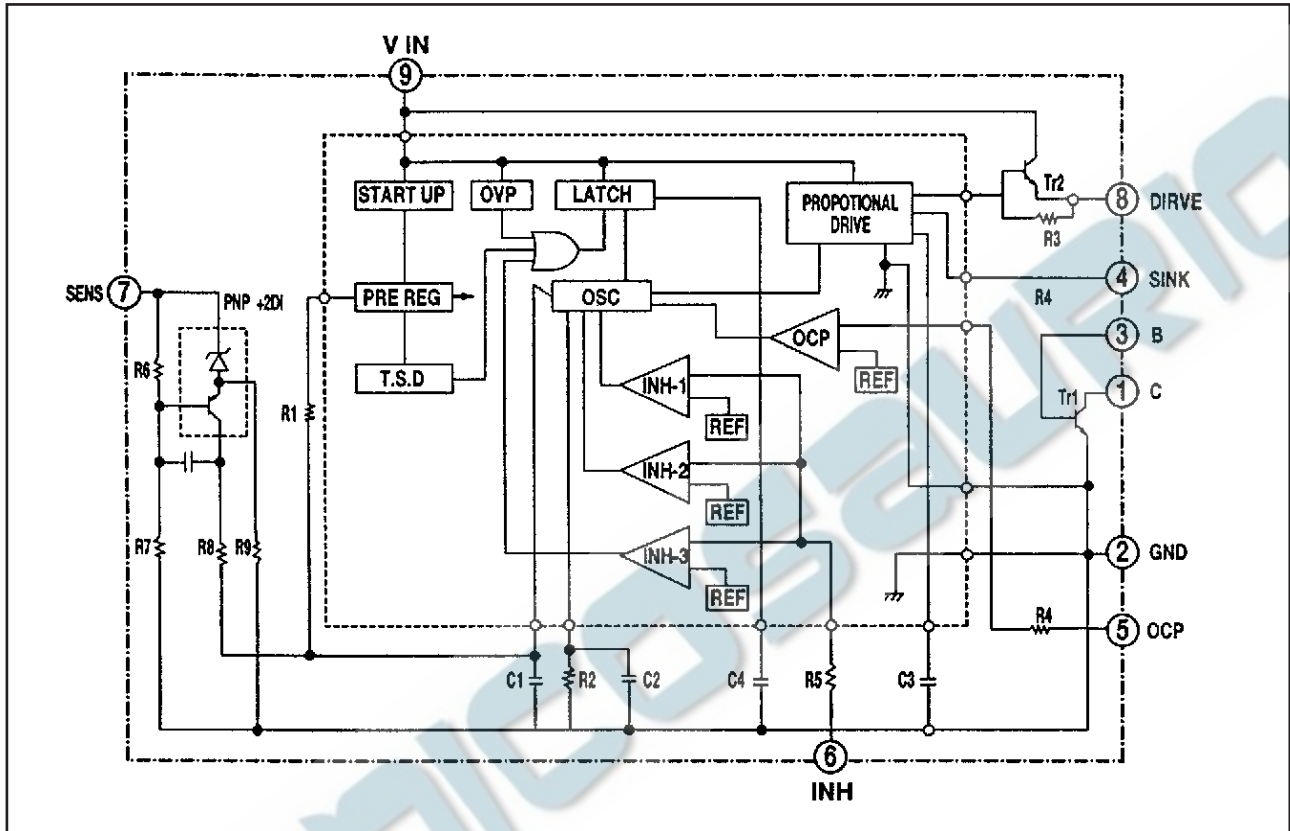
1 → MUTE → RECALL → MUTE

■ OPERATION CHARACTERISTICS OF POWER BLOCK(I801)

This chassis designed for free voltage(AC 100V ~ AC 220V) power. power block contains power IC, SMPS transformer and several passive components.

The power IS STR-S5707 has power transistor. oscillator circuit, voltage comparator circuit, thermal protection circuit, OCP(over current protection)circuit inside.

1. STR-S5707 BLOCK DIAGRAM



2. PIN DESCRIPTION

PIN NO	SYMBOL	NAME	FUNCTION
1	C	COLLECTOR	POWER TRANSISTOR COLLECTOR
2	GND	GROUND	GROUND(POWER TRANSISTOR EMITTER)
3	B	BASE	POWER TRANSISTOR BASE
4	SINK	SINK	BASE CURRENT(I _s) INPUT
5	OCP	OVER CURRENT PROTECTION	OVERCURRENT SENSING SIGNAL INPUT
6	INH	INHIBIT/LATCH	SYNC, OFF TIME/LATCH CIRCUIT CONTROL INPUT
7	F/B(SENS)	FEED BACK(SENSING)INPUT	CONSTANT VOLTAGE CONTROL SIGNAL INPUT
8	DRIVE	DRIVE	BASE DRIVE CURRENT(I _d)OUTPUT
9	Vin	Vin	SUPPLY VOLTAGE FOR CONTROL CIRCUIT

3. OTHER FUNCTION

Symbol	Function
OVP	Built-in Overvoltage Protection Circuit
TSD	Built-in Thermal Shutdown Circuit

4. EXPLANATION OF CIRCUIT OPERATION

1) V_{IN} terminal, start-up circuit

A Start-up circuit is to start and stop a operation of a control IC by detecting a voltage appearing at a V_{IN} terminal(pin-9).At start up of a power supply, when a voltage at the V_{IN} terminal reaches to 8V by charging up C809 by the function of a start-up resistor, R_s , a control circuit starts operating by the function of the start-up circuit. As shown in Fig. 2, since a circuit current is suppressed 200 μA maximum (at $V_{IN} = 7.5V$) until the control circuit starts its operation.

After the control circuit starts its operation, power source is obtained by smoothing voltage appearing at L1 winding. Once the control circuit starts operating, as its voltage doesn't reach the fixed voltage at once, V_{IN} terminal voltage starts dropping. However, as a shut-down voltage is set low(at 4.9V), while V_{IN} terminal voltage reaches a shutdown voltage, L1 winding voltage reaches the fixed voltage earlier so that the control circuit can continue on operating.

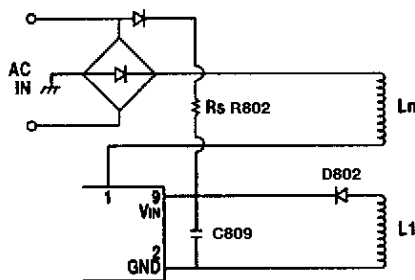


Fig .1 Start-up Circuit

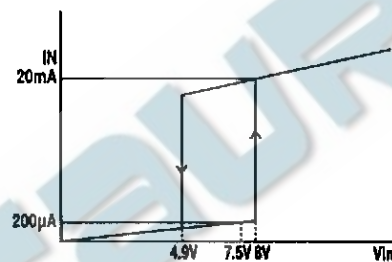


Fig .2 V_{IN} Terminal Voltage Circuit Current V_{IN}

2) Oscillator, F/B terminal voltage (Pin #7)

A oscillator generates pulse signals which turns a power transistor on and off by making use of charge and discharge of C1 and C2 incorporated in the Hybrid IC.

Constant voltage control of a switch-mode power supply is performed by changing both ON-time and OFF-time except when the load is light (ex. remote control stand-by mode of TVs).

Fig. 4 shows how the oscillator works when the Hybrid IC independently operates (with no F/B nor INH signals). When the power transistor is on, C2 is charged to the set voltage (approx 2.3V at $T_a = 25^\circ C$). On the other hand, C1 starts charging up through R1 from almost 0V and the voltage across C1 reaches approx. 0.75V ($T_c = 25^\circ C$). the output from the oscillator is reversed and the power transistor turns off. At the same time C1 is quickly discharged by the function of a internal circuit of the oscillator and the voltage across it decreases to almost 0V. When the power transistor turns off, C2 starts discharging through R2 and the voltage across C2 decreases with the inclination determined by the product of C2 decreases to about 1V. the output from the oscillator is reversed again and the transistor consequently turns on. The power transistor continues turning on and off by repeating the above-mentioned operations.

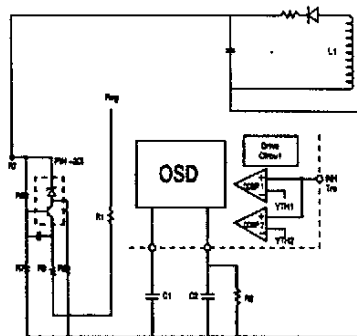


Fig 3 Oscillator Circuit Configuration

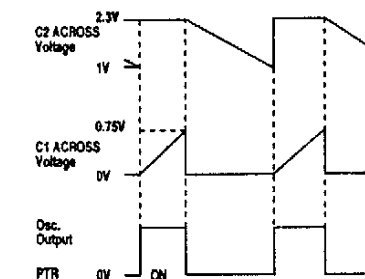


Fig 4 Operation Waveforms of Oscillator without F/B nor INH Signal

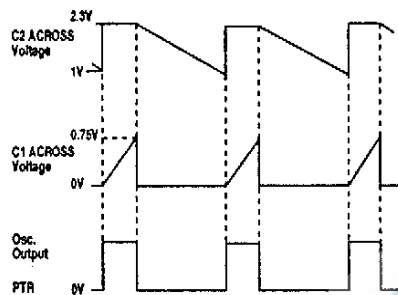


Fig 5 Operation Waveforms of Oscillator with F/B Signal

As the circuit in Fig. 3 shows, the ON-time is controlled by changing a current charged by C1, which is as the result of that the detection winding (L1), which detects a change of voltage in a secondary side, connected to the sensing terminal (Pin No. 7) has the current in accordance with an output signal from an output voltage detection circuit (an error amplifier) built in. As an AC input voltage to the power supply gets the higher and a load current the smaller, the current flowing to the SENS terminal gets the larger, and the ON-time gets the shorter.

3) Function of INH terminal (Pin #6), control OFF-time

Signal to the INH terminal is used as inputs to COMP.1 and COMP.2 inside of the control IC. A threshold voltage of COMP.1 V_{TH1} is set at 0.75V ($T_a = 25^\circ\text{C}$) and an input signal to a drive circuit becomes almost 0V (the power transistor is in OFF mode) when a voltage at the INH terminal reaches the V_{TH1} . As long as the INH terminal voltage does not get lower than V_{TH1} , the power transistor sustains OFF mode. On the other hand, a threshold voltage of COMP.2 V_{TH2} is set at 1.5V ($T_a = 25^\circ\text{C}$). When the INH terminal voltage reaches V_{TH2} , an output from COMP.2 reverses and, as a result, C2, the OFF-time of the oscillator which has been determined by the product of C2 and R2 ($\approx 55 \mu\text{ sec}$) can be quicker up to approx. $2 \mu\text{ sec}$. As long as the INH terminal voltage does not get lower than V_{TH2} , A Voltage across C2 stays at almost 0V and a output from the oscillator keeps the power transistor being on. The relation between the INH terminal voltage and the function of the oscillator described above is shown in Fig. 6 and Fig. 7

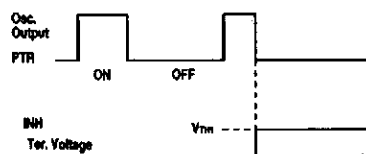


Fig .6 Operation Waveforms of INH Terminal(V_{TH1})

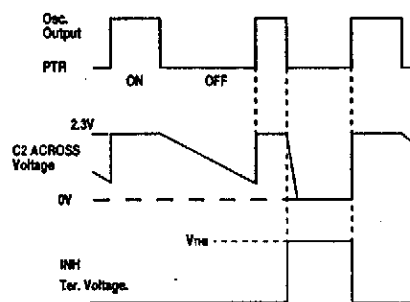


Fig .7 Operation Waveforms of INH Terminal(V_{TH2})

4) Quasi-resonant operation

By inputting a voltage signal which is synchronized with the energy discharge time of a secondary winding of a transformer to the INH terminal, quasi-resonant operation can be achieved. As shown in Fig. 8, the voltage of L1 winding which is synchronized with the energy discharge time of a secondary winding. S1. shall be input to the INH terminal through D804 and R809. Since V_{TH2} is set at 1.5V typical, a voltage at the INH terminal. V_{INH} , shall be set at

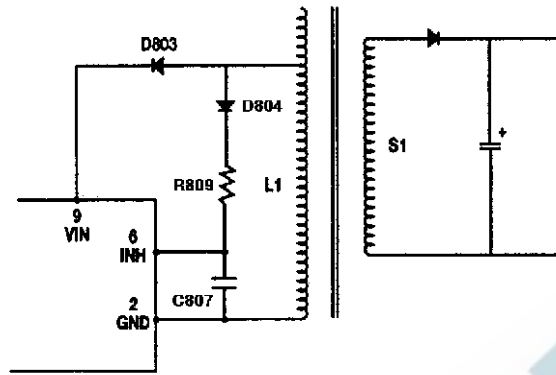


Fig 8 Operation Circuit

Fig. 9 shows waveforms of V_{CE} , I_c and V_{INH} of the transistor, voltage across C807 in the oscillator as well as an output from the oscillator when operating in quasi-resonant mode.

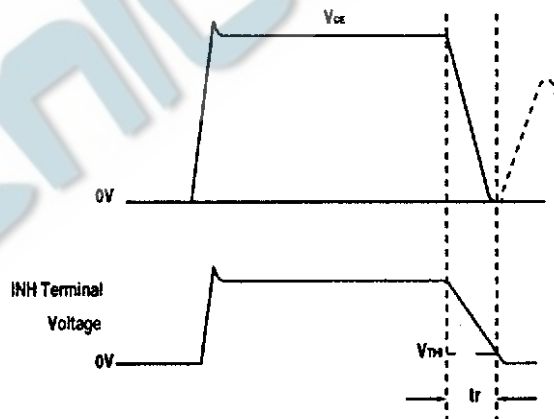


Fig 9 Waveforms of V_{ce} and V_{thL} at Quasi-resonant Operation

when the power transistor turns off and a voltage than V_{TH2} is applied to the INH terminal, C807 immediately discharges and then starts charging again. Even after the discharge of energy of a secondary winding is completed, V_{INH} does not immediately increases. When it gets lower than V_{TH2} after the time, t_r , which is determined by the production of internal impedance of the IC and C_{INH} , has past, the transistor turns on.

5) Drive circuit

The STR-S5707 applies the proportional drive system in order to minimize turn-on and saturation loss, and storage time. In the conventional RCC system, turn-on loss and switching noise due to the surge current appearing when the power transistor turns on are high as because the transistor is driven by the drive current shown in Fig. 10-1. In addition, since it decreases linearly when the transistor turns off and a peak value of I_{B2} is not large, the storage time is long and the $V_{CE(SAT)}$ voltage is high, which results in large turn-off loss. The circuit and the waveforms of the proportional drive system which is applied to the STR-S5707 in order to reduce these switching loss and shorten the storage time are shown in Fig. 10-2 respectively.

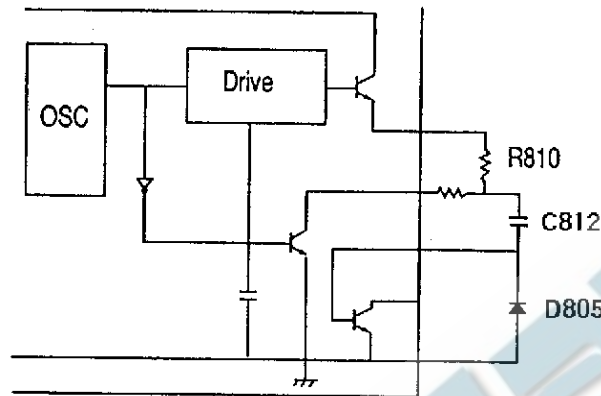


Fig.10 D805 and C812 function to reverse-bias between the base and the emitter of the transistor during its off state.

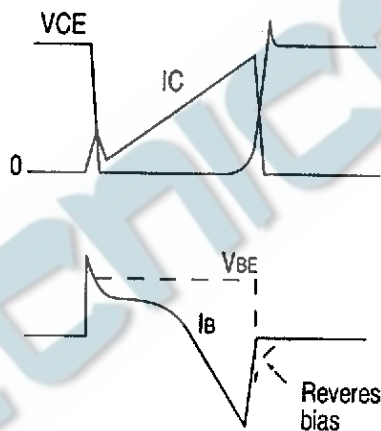


Fig.10-1 Waveforms of Conventional RCC Power Supply

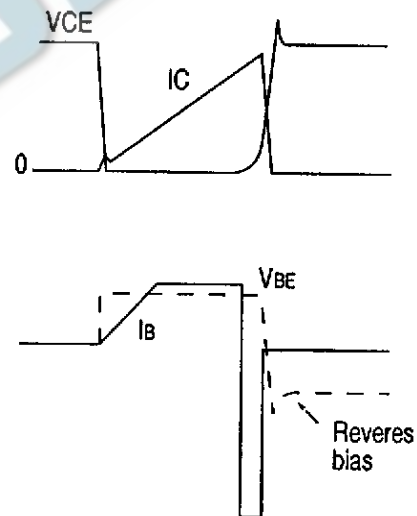


Fig.10-2 Waveforms of power Supply Using STR-S5707

6) OCP (overcurrent protection)function

Overcurrent protection is performed pulse by directly detecting collector current of the power transistor.

Configuration of the OCP circuit is shown in. Detecting voltage is set to -1V below a reference point of GND (ground). In addition, since the detecting voltage is set by a comparator, very stable characteristics against temperature is achieved and drift of the detecting voltage against temperature change is almost 0V.

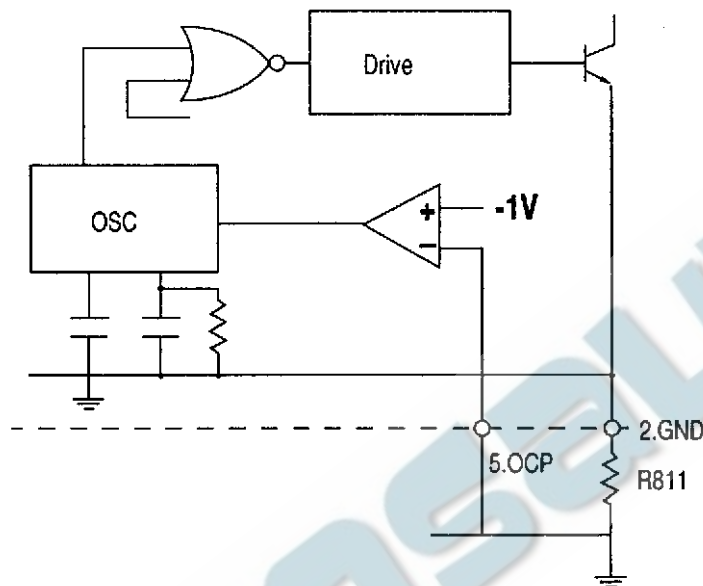


Fig 11 Overcurrent protection Circuit

7) Latch circuit

It is a circuit which sustains an output from the oscillator low and stops operation of the power supply when overvoltage protection (OVP) circuit and thermal shutdown (TSD) circuit are in operation. As the sustaining current of the latch circuit is $500\mu\text{A}$ maximum when V_{IN} terminal voltage is 4V, the power supply circuit sustains the off state as long as current of $500\mu\text{A}$ maximum flows to V_{IN} terminal from a start-up resistor. In order to prevent a malfunction to be caused by a noise and so on, delay time is provided by C1 incorporated in the IC and, therefore, the latch circuit operates when the OVP of TSD circuit is in operation, of an external signal input is provided, for about $10\mu\text{s}$ sec or longer. In addition, even after the latch circuit start operating, the constant voltage regulator (Reg) circuit is in operation and the circuit current is at high level. As a result, V_{IN} terminal voltage rapidly decreases. When V_{IN} terminal voltage becomes lower than the shutdown voltage, $V_{\text{IN}}(\text{OFF})$, (4.9V typical), it starts increasing as the circuit current is below $500\mu\text{A}$. When it reaches the ON-state voltage, $V_{\text{IN}}(\text{ON})$, (8V typical), V_{IN} terminal voltage starts decreasing because the circuit current increases again.

when the latch circuit is on. V_{IN} terminal voltage increases and decreases with-in the range from 4.9V typical to 8V typical and is prevented from abnormally rising. Fig. 12 shows an example of V_{IN} terminal voltage waveform. Cancellation of the latch-is done by decreasing V_{IN} terminal voltage below 3.3V. The power supply can be restarted disconnecting an AC input to the power supply once.

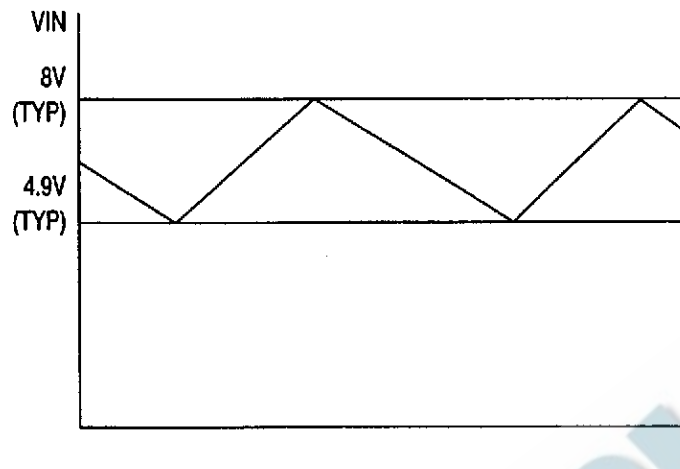


Fig 12 Typical V_{IN} Terminal Voltage Waveform When Latch Circuit Is Operating

8) Thermal shutdown, circuit

It is a circuit to trigger the latch circuit when the frame temperature of the IC exceeds 150°C (typical). Although the temperature is actually sensed at the control chip. It works against overheating of the power transistor as the power transistor and the control IC are mounted on the same lead frame.

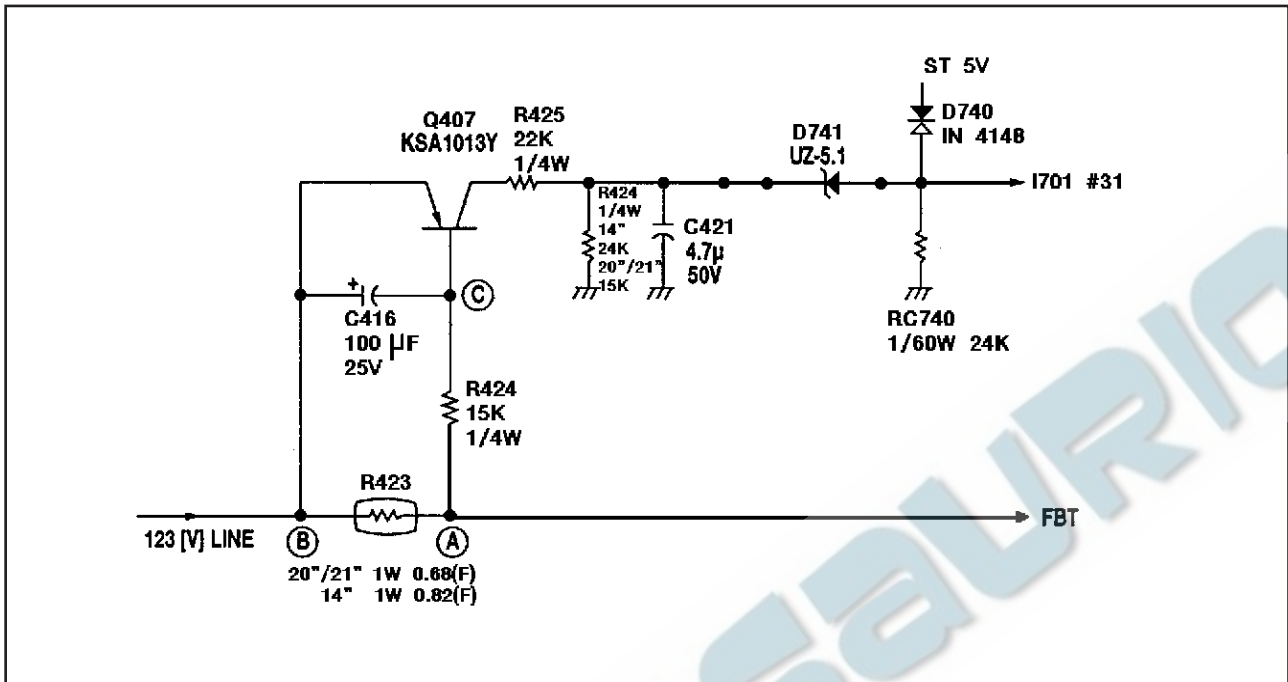
9) Overvoltage protection circuit

It is a circuit to trigger the latch circuit when V_{in} terminal voltage exceeds 11V (typical). Although it basically functions as protection of V_{in} terminal against overvoltage, since V_{in} terminal is usually supplied from the drive winding of the transformer and the voltage is proportional to the output voltage, it also functions against the overvoltage of secondary output which causes when the control circuit opens or in some other events.

5. OCP (OVER CURRENT PROTECTION) CIRCUIT

This circuit is designed to protect the circuit from over current due to overload occurred at the rear of 123[V] line

1) CONFIGURATION OF OCP CIRCUIT

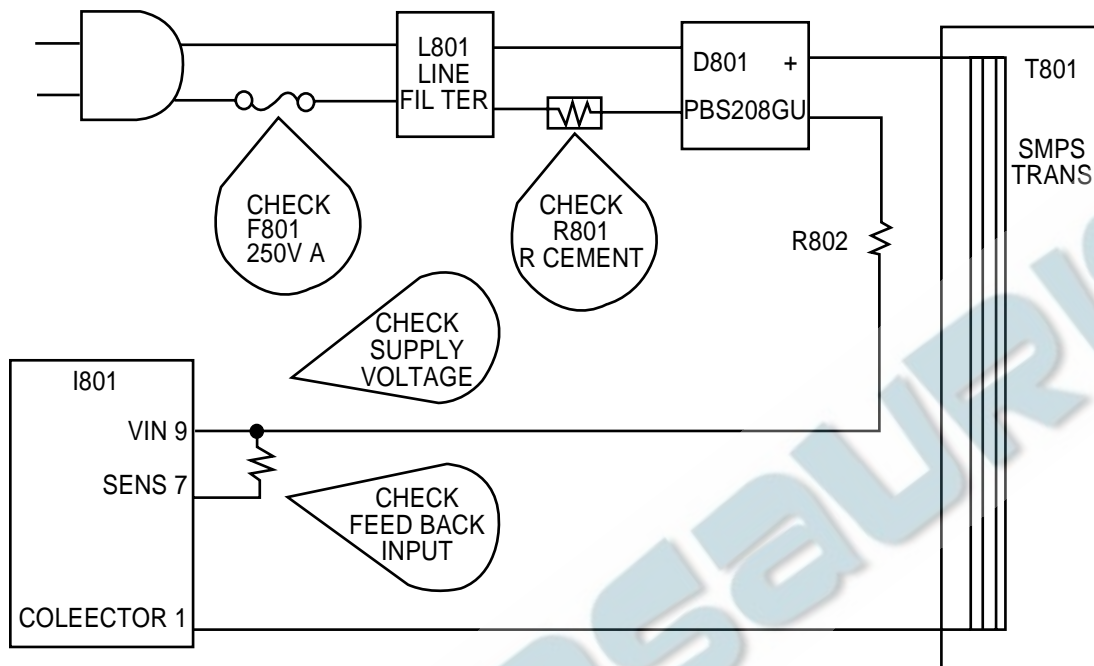


2) EXPLANATION OF THE OPERATION

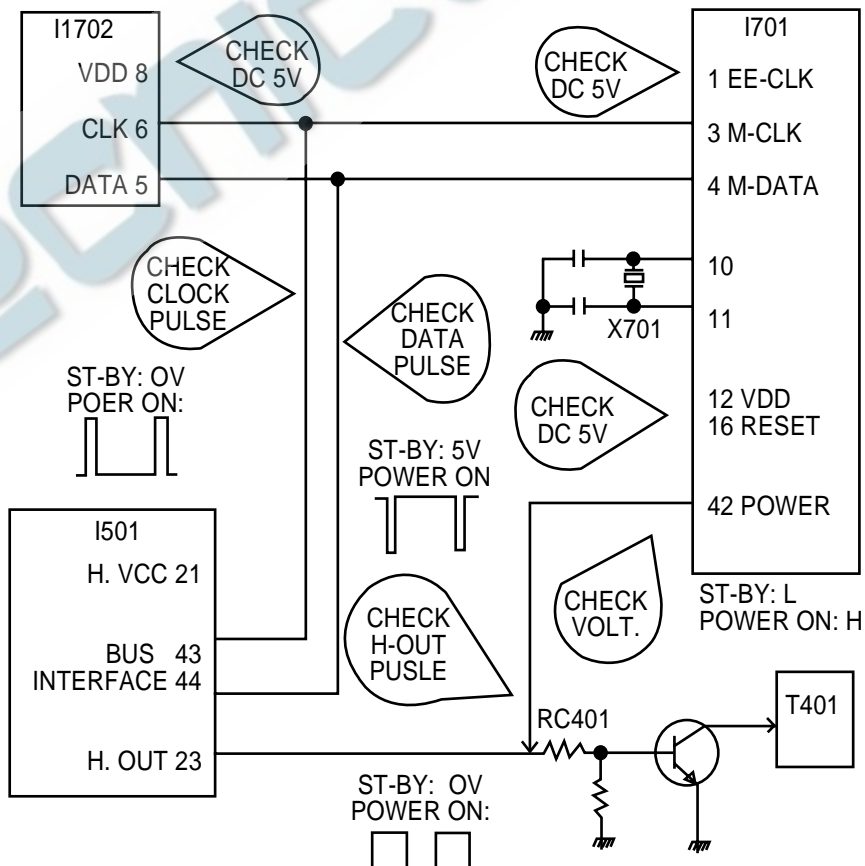
- ① There is very little voltage drop at (A) R423 of 123[V] line.
- ② In case that the overload occurs at the rear of 123[V] line, the increase of the voltage drop at R423 bring down the base voltage of the Q407 so as to drive the Q407
- ③ Because of the overload at the rear of the R423, the voltage of the (C) point decreases. And this makes Q407 turn on so that a voltage is applied to the #31 of I701.
- ④ In case that OCP operates by the #31 of the I701, the set is protected by power off (#42 of I701 → LOW).

■ TROUBLE SHOOTING CHART S

NO POWER (NO OUTPUT SECOND POWER)



DON'T OPERATE POWER ON



NO PICTURE

CHECK THE WAVE FORM OF
U101 #IF

OK

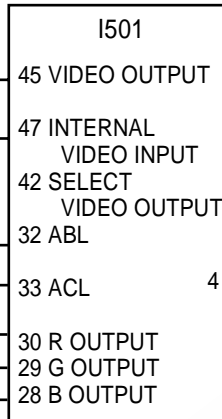
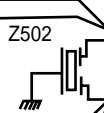
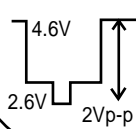
GOTO (A)

NO

GOTO (B)

(A)

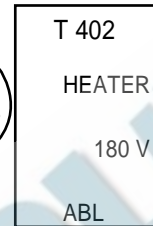
CHECK
VIDEO SIGNAL



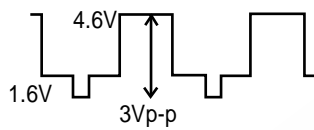
BRIGHT
CONTRAST

CHECK
7.4V LINE

CHECK
HEATER
VTG 6.3Vms



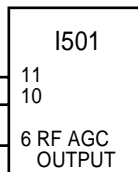
CHECK
180V
LINE



CHECK
R/G/B SIGNAL

(B)

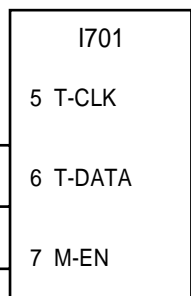
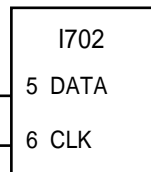
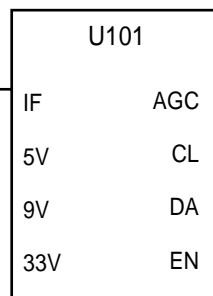
SF 501
SAW FILTER



CHECK
RF AGC OUTPUT
VTG
DC 5V - 8V

CHECK
CLK, EN, DATA
SIGNAL

CHECK
DC 5V, 9V
33V LINE



NO SOUND

MONO MODEL

GOTO ③

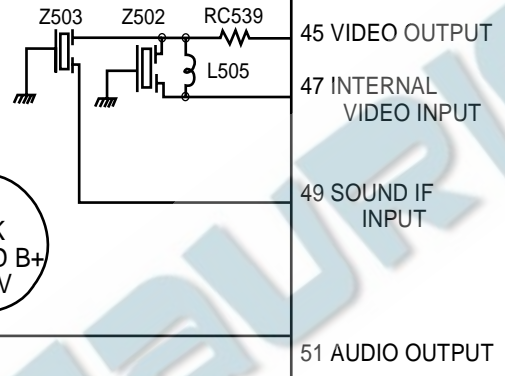
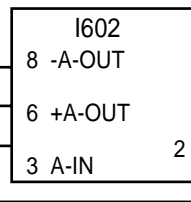
STEREO MODEL

GOTO ④

③

CHECK
AUDIO
OUTPUT
SIGNAL

CHECK
AUDIO
INPUT
SIGNAL



④

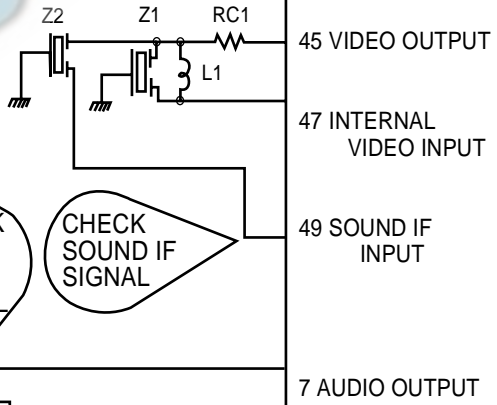
CHECK
DC 9V

CHECK
RESONATOR



CHECK
INPUT
COMP
SIGNAL

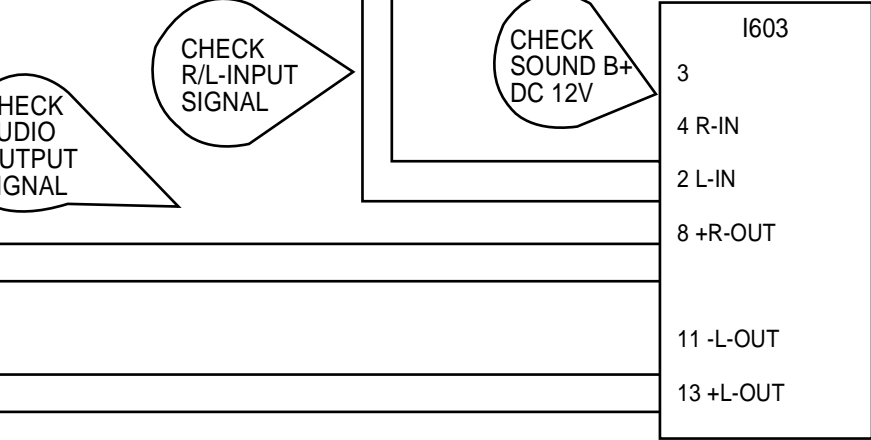
CHECK
SOUND IF
SIGNAL



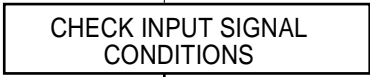
CHECK
AUDIO
OUTPUT
SIGNAL

CHECK
R/L-INPUT
SIGNAL

CHECK
SOUND B+
DC 12V



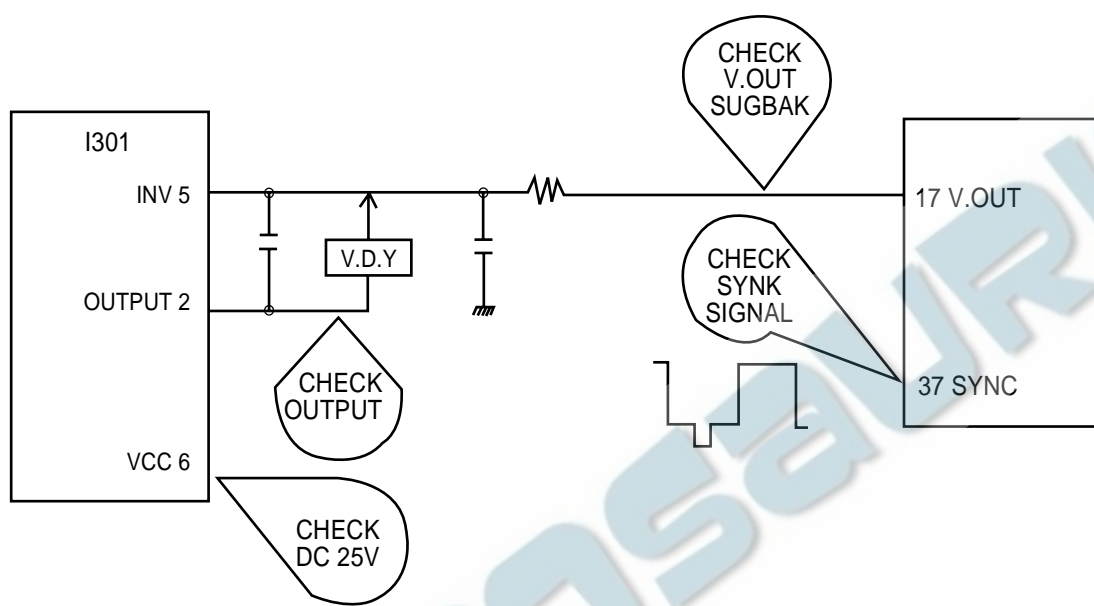
CH DON'T STOP



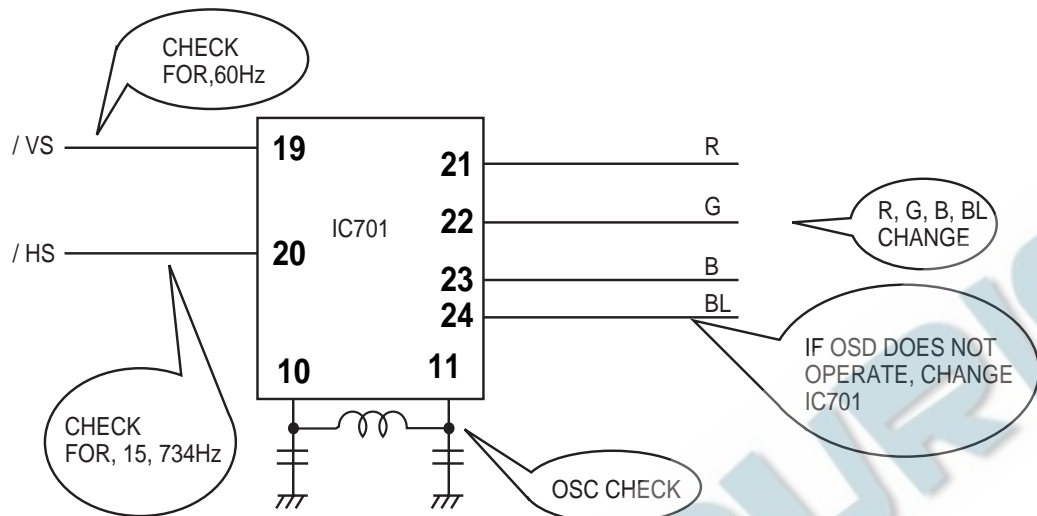
NO COLOR



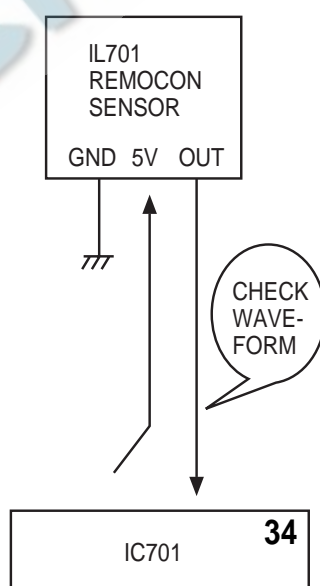
NO VERTICAL DEFLECTION



ON SCREEN DISPLAY DOES NOT OPERATE



REMOTE CONTROL DOES NOT OPERATE

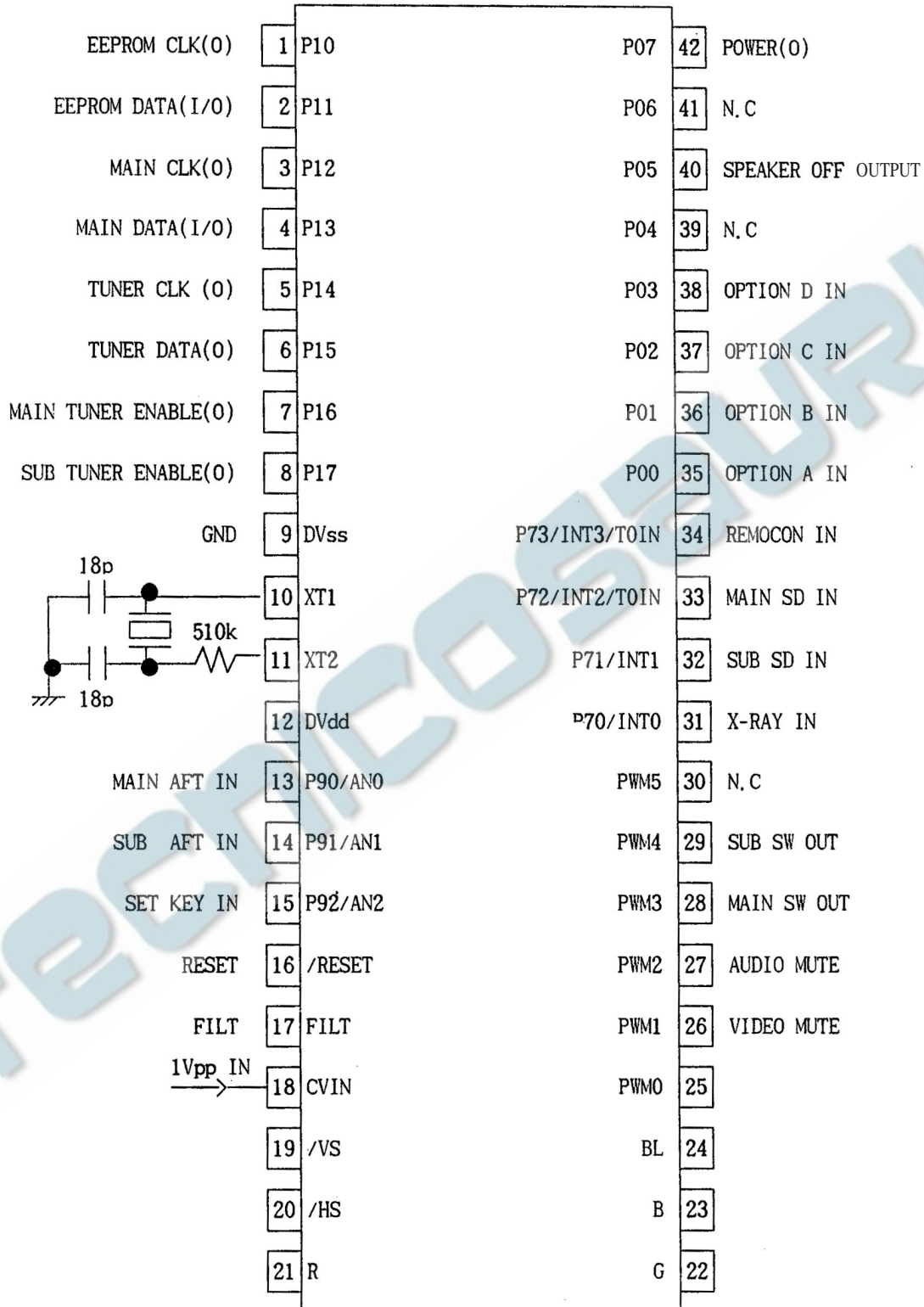


LA76070 (BUS CONTROL, VIF/SIF/Y/C/DEF)

Pinout for TDA9646:

Pin	Function
1	EXT VIDEO IN
2	VCO Tank1
3	VCO Tank2
4	IF VCC
5	AUDIO IN
6	RF AGC OUT
7	FM OUT
8	Volume Filter
9	IF GND
10	PIF IN 1
11	PIF IN 2
12	IF AGC
13	AFT OUT
14	Chroma APC
15	3.58MHz X-TAL
16	Ramp ALC Filter
17	Vertical OUT
18	HLOCK Det. Filter
19	32fh Resonator
20	Horizontal GND
21	Standby VCC
22	Horiz. AFC Filter
23	Horiz. OUT
24	Flyback Pulse IN
25	X-Ray
26	Video/Vertical VCC
27	V/C GND
28	Red OUT
29	Green OUT
30	Blue OUT
31	ACL
32	ABL
33	Red IN
34	Green IN
35	Blue IN
36	Fast Switch IN
37	Sync IN
38	Y IN
39	Black Level Det.
40	C IN
41	Test IT Filter
42	Selected Video OUT
43	Bus Clock
44	Bus Data
45	Video OUT
46	Bus GND
47	Internal Video IN
48	PIF APC Filter
49	Sound IF IN
50	FM Filter
51	Audio OUT
52	FM Coil

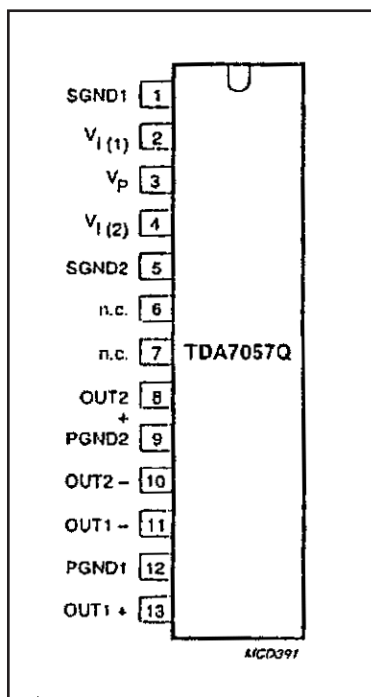
PIN ASSIGN OF IC LC864728V(I701)



NOTE) XT is used 32.768 KHZ X-TAL

■ PIN ASSIGN OF IC TDA 7057Q (I603)

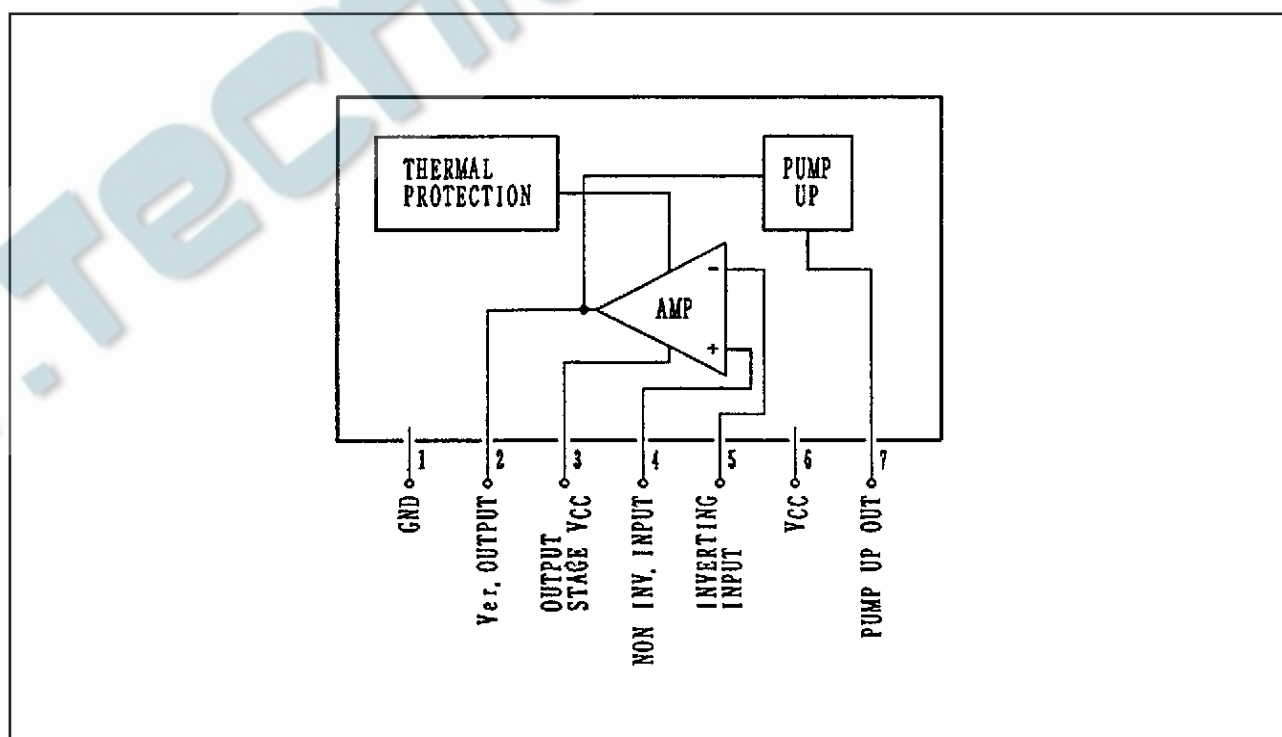
2 X 3 W sterei BTL audio output amplifier



PINNING

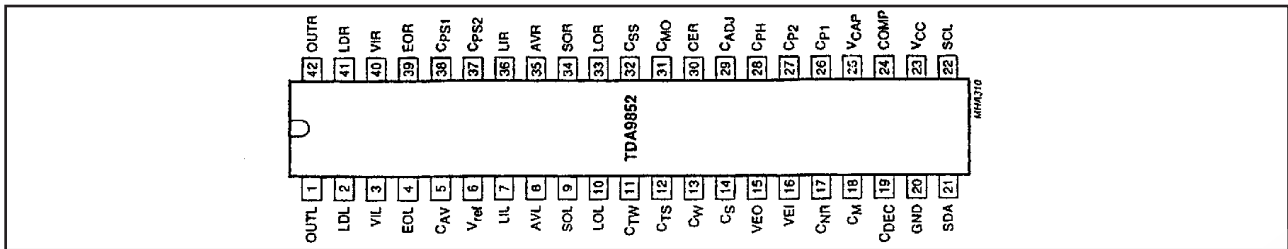
SYMBOL	PIN	DESCRIPTION
SGND1	1	signal ground 1
$V_{i(1)}$	2	voltage input 1
V_p	3	positive supply voltage
$V_{i(p)}$	4	voltage input 2
SGND2	5	signal ground 2
n.c.	6	not connected
n.c.	7	not connected
OUT2+	8	positive output 2
PGND2	9	power ground 2
OUT2-	10	negative output 2
OUT1-	11	negative output 1
PGND1	12	power ground 1
OUT1+	13	positive output 1

■ PIN ASSIGN OF IC LA7841 (I301)



PIN ASSIGN OF IC TDA 9852 (I601)

I²C-bus Controlled BTSC stereo/SAP decoder and audio processor



PINNING

SYMBOL	PINS		DESCRIPTION
	SDIP42	QFP44	
OUTL	1	40	output, left channel
LDL	2	41	input loudness, left channel
VIL	3	42	input volume, left channel
EOL	4	43	output effects, left channel
CAV	5	44	automatic volume control capacitor
VREF	6	1	reference voltage 0.5Vcc
LIL	7	2	input line control, left channel
AVL	8	3	input automatic volume control, left channel
SOL	9	4	output selector, left channel
LOL	10	5	output line control, left channel
CTW	11	6	capacitor timing wideband for dbx
CTS	12	7	capacitor timing spectral for dbx
CW	13	8	capacitor wideband for dbx
CS	14	9	capacitor spectral for dbx
VEO	15	10	variable emphasis output for dbx
VEI	16	11	variable emphasis input for dbx
CNR	17	12	capacitor noise reduction for dbx
CM	18	13	capacitor mute for SAP
CDEC	19	14	capacitor DC-decoupling for SAP
GND	20	-	ground
AGND	-	15	analog ground
DGND	-	16	digital ground
SDA	21	17	serial data input/output(I ² C-bus)
SCL	22	18	serial clock input(I ² C-bus)
Vcc	23	19	supply voltage
COMP	24	20	composite input signal
VCAP	25	21	capacitor for electronic filtering of supply
CP1	26	22	capacitor for pilot detector
CP2	27	23	capacitor for pilot detector
CPH	28	24	capacitor for phase detector
CADJ	29	25	capacitor for filter adjustment
CER	30	26	ceramic resonator
CMO	31	27	capacitor DC-decoupling mono
CSS	32	28	capacitor DC-decoupling stereo/SAP
LOR	33	29	output line control, right channel
SOR	34	30	output selector, right channel
AVR	35	31	input automatic volume control, right channel
LIR	36	32	input line control, right channel
CPS2	37	33	capacitor 2 pseudo function
CPS1	38	34	capacitor 1 pseudo function
EOR	39	35	output effects, right channel
VIR	40	36	input volume, right channel
LDR	41	37	input loudness, right channel
OUTR	42	38	output, right channel
n.c	43	39	not connected

✓ **Caution:** In this Service Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service information Center(<http://svc.dwe.co.kr>)

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
ZZ100	48B3225C04	TRANSMITTER REMOCON	R-25C04
ZZ110	PTACPWJ591	ACCESSORY AS	DTQ-20T1FS
30	486A716200	BATTERY	AAA
40	4859000240	ADAPTER	2P15A 300V(D=4.0)
50	4850A00650	TRANS ANT MATCHING	IMT-060 (CAPRISTOR OUT) B
60	4850A02510	ANT ROD	S3BW216B (L=600 MM)
10000	48586054K1	MANUAL INSTRUCTION	DTM-2082CW
M821	4858213800	BAG INSTRUCTION	L.D.P.E T0.05X250X400
ZZ120	PTBCSHJ596	COVER BACK AS	DTQ-21T1FS
M211	4852147001	COVER BACK	HIPS BK
M541	4855415800	SPEC PLATE	150ART P/E FILM (C/TV)
M591	4855930923	DECO TERM	PVC T0.2
M781	4857817612	CLOTH BLACK	FELT T0.7 L=250
ZZ130	PTPKCPJ596	PACKING AS	DTQ-21T1FS
10	6520010100	STAPLE PIN	18M/M J D O
20	6520010200	STAPLE PIN	#3417
M641	6520010100	STAPLE PIN	18M/M J D O
M801	485804763B	BOX CARTON	DW-3A
M811	4858179000	PAD	EPS 21T1
M821	4858261100	BAG P.E	LDPE T0.02X1200X1000000
ZZ131	58G0000110	COIL DEGAUSSING	DC-2080
ZZ132	48519A5210	CRT GROUND AS	2101H-1015-1P
ZZ140	PTCACAJ596	CABINET AS	DTQ-21T1FS
M191	4851926801	BUTTON CTRL AS	4932801+5530201
M201A	4856013301	SCREW CRT FIXING AS	30X140 YL
M201B	4856214902	WASHER RUBBER	CR T2.0
M201C	4856013303	SCREW CRT FIXING AS	30X250 YL
M211A	7122401412	SCREW TAPPING	T2S TRS 4X14 MFZN BK
M211B	7122401412	SCREW TAPPING	T2S TRS 4X14 MFZN BK
M481	4854848001	BUTTON POWER	ABS BK
M481A	4856716000	SPRING	SWPA PIE0.5
M561	48556159SS	MARK BRAND	SILVER ETCHING DIA-CUTTIN
M681	4856812001	TIE CABLE	NYLON66 DA100
M781	4857821204	CLOTH BLACK	FELT 220X12XT2
SP01A	7128301011	SCREW TAPPING	T2S WAS 3X10 MFZN
SP02A	7128301011	SCREW TAPPING	T2S WAS 3X10 MFZN
V901	4859608761	CRT	A51JSW41X01 P00
ZZ200	PTFMSJJ596	MASK FRONT AS	DTQ-21T1FS
M201	4852060402	MASK FRONT	HIPS BK
ZZ202	PTSPPWJ591	SPEAKER AS	DTQ-20T1FS
PA601	4850703S51	CONN AS	YH025-03+35098+ULW=300
PA602	4850703S53	CONN AS	YH025-03+35098+ULW=500
SP01	4858306810	SPEAKER	3W 16 OHM F2035C03-3
SP02	4858306810	SPEAKER	3W 16 OHM F2035C03-3
A001	4859812792	PCB MAIN	246X330 S1B
C101	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C102	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C103	CEXF1E470V	C ELECTRO	25V RSS 47MF (5X11) TP
C104	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C301	CMXB1H103J	C MYLAR	50V EU 0.01MF J (TP)
C302	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C303	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
C304	CEXF1V471V	C ELECTRO	35V RSS 470MF (10X20) TP
C305	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP
C307	CXSL2H100D	C CERA	500V SL 10PF D (TAPPING)
C308	CMXL1J104J	C MYLAR	63V MEU 0.1MF J
C309	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C310	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP
C311	CEXD1H229Q	C ELECTRO	50V RT 2.2MF (6.3X11) TP
C401	CCXB2H222K	C CERA	500V B 2200PF K (TAPPING)
C402	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
C403	CCYB3A103K	C CERA	1KV B 0.01MF K
C404	CMYH3C722J	C MYLAR	1.6KV BUP 7200PF J
C405	CEXF2C109V	C ELECTRO	160V RSS 1MF (6.3X11) TP
C406	CMYE2D474J	C MYLAR	200V PU 0.47MF J
C407	CEXF2E100V	C ELECTRO	250V RSS 10MF (10X20) TP
C408	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C409	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C410	CEXF1C222V	C ELECTRO	16V RSS 2200MF (13X25) TP
C411	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C412	CMXB1H104J	C MYLAR	50V EU 0.1MF J (TP)
C413	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C414	CEXF1C471V	C ELECTRO	16V RSS 470MF (10X12.5)TP
C415	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C416	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP
C417	CEXF2C101V	C ELECTRO	160V RSS 100MF (16X25) TP
C420	CCXB2H271K	C CERA	500V B 270PF K (TAPPING)
C421	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C444	CCXB3D271K	C CERA	2KV B 270PF K (T)
C501	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C503	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP
C507	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C508	CMXB1H473J	C MYLAR	50V 0.047MF J (TP)
C510	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C511	CMXB1H333J	C MYLAR	50V EU 0.033MF J (TP)
C513	CEXF1H108V	C ELECTRO	50V RSS 0.1MF (5X11) TP
C514	CEXF1H108V	C ELECTRO	50V RSS 0.1MF (5X11) TP
C515	CEXF1H108V	C ELECTRO	50V RSS 0.1MF (5X11) TP
C517	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP
C518	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C519	CMXB1H333J	C MYLAR	50V EU 0.033MF J (TP)
C520	CMXM2A102J	C MYLAR	100V 1000PF J (TP)
C522	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
C524	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP
C531	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C532	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C533	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C537	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C542	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C543	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C544	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
C601	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP
C602	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP
C603	CMXL1J154J	C MYLAR	63V MEU 0.15MF J
C605	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C606	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C607	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP
C608	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C609	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C610	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C611	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C612	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C613	CMXL1J473J	C MYLAR	63V MEU 0.047MF J
C614	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C615	CMXL1J104J	C MYLAR	63V MEU 0.1MF J
C616	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C618	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP
C619	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C620	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP
C621	CMXL1J474J	C MYLAR	63V MEU 0.47MF J
C622	CMXL1J224J	C MYLAR	63V MEU 0.22MF J (TP)
C623	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C624	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C625	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C626	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C627	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C628	CMXB1H153J	C MYLAR	50V EU 0.015MF J (TP)
C629	CMXB1H153J	C MYLAR	50V EU 0.015MF J (TP)
C630	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C632	CMXL1J154J	C MYLAR	63V MEU 0.15MF J
C633	CMXL1J334J	C MYLAR	63V MEU 0.33MF J (TP)
C634	CMXL1J334J	C MYLAR	63V MEU 0.33MF J (TP)
C636	CEXF1E471V	C ELECTRO	25V RSS 470MF (10X16) TP
C637	CMXL1J104J	C MYLAR	63V MEU 0.1MF J
C640	CMXB1H223J	C MYLAR	50V EU 0.022MF J (TP)
C641	CMXB1H223J	C MYLAR	50V EU 0.022MF J (TP)
C704	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP
C706	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C708	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C709	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C711	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C801	CL1UC3104M	C LINE ACROSS	WORLD AC250V 0.1UF M R.47
C802	CCXF3A472Z	C CERA	1KV F 4700PF Z (T)
C803	CCXF3A472Z	C CERA	1KV F 4700PF Z (T)
C804	CEYN2G221P	C ELECTRO	400V LHS 220MF (35X30)
C805	CH1BFE222M	C CERA AC	U/C/V AC400V 2200PF
C806	CBYB3D152K	C CERA	2KV BL (N) 1500PF
C807	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C808	CEXF2A100V	C ELECTRO	100V RSS 10MF (6.3X11) TP
C809	CEXF1E331V	C ELECTRO	25V RSS 330MF (10X12.5)TP

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
C810	CCXB3A471K	C CERA	1KV B 470PF K (T)
C811	CCXB3A471K	C CERA	1KV B 470PF K (T)
C812	CEXF1E221V	C ELECTRO	25V RSS 220MF (8X11.5) TP
C813	CCXB3D102K	C CERA	2KV B 1000PF K (TAPPING)
C814	CEYF2C101V	C ELECTRO	160V RSS 100MF (16X25)
C815	CCXB3A102K	C CERA	1KV B 1000PF K (TAPPING)
C816	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP
C817	CCXB3A102K	C CERA	1KV B 1000PF K (TAPPING)
C818	CEXF1E471V	C ELECTRO	25V RSS 470MF (10X16) TP
C819	CEXF1E101V	C ELECTRO	25V RSS 100MF (6.3X11) TP
C820	CCXB3A102K	C CERA	1KV B 1000PF K (TAPPING)
C888	CH1BFE222M	C CERA AC	U/C/V AC400V 2200PF
C889	CCXF3A472Z	C CERA	1KV F 4700PF Z (T)
C901	CBXB3D102K	C CERA	2KV BL(N) 1000PF K (T)
C908	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
CA01	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
CA02	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
CAC01	HCBK104KCA	C CHIP CERA	50V X7R 0.1MF K 2012
CAC02	HCBK104KCA	C CHIP CERA	50V X7R 0.1MF K 2012
CC101	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC102	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC504	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC505	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC509	HCBK102KCA	C CHIP CERA	50V X7R 1000PF K 2012
CC511	HCBK104KCA	C CHIP CERA	50V X7R 0.1MF K 2012
CC512	HCQK160JCA	C CHIP CERA	50V CH 16PF J 2012
CC516	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC523	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC530	HCQK561JCA	C CHIP CERA	50V CH 560PF J 2012
CC534	HCQK470JCA	C CHIP CERA	50V CH 47PF J 2012
CC535	HCQK220JCA	C CHIP CERA	50V CH 22PF J 2012
CC536	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC538	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC539	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC544	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC601	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC602	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC604	HCBK822KCA	C CHIP CERA	50V X7R 8200PF K 2012
CC617	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC631	HCBK822KCA	C CHIP CERA	50V X7R 8200PF K 2012
CC701	HCQK180JCA	C CHIP CERA	50V CH 18PF J 2012
CC702	HCQK180JCA	C CHIP CERA	50V CH 18PF J 2012
CC703	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC705	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC707	HCBK333KCA	C CHIP CERA	50V X7R 0.033MF K 2012
CC710	HCQK221JCA	C CHIP CERA	50V CH 220PF J 2012
CC712	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC713	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC714	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012

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Loc	Item Code	Item Name	Description
CC715	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
CC716	HCBK104KCA	C CHIP CERA	50V X7R 0.1MF K 2012
CC717	HCBK104KCA	C CHIP CERA	50V X7R 0.1MF K 2012
CC718	HCBK104KCA	C CHIP CERA	50V X7R 0.1MF K 2012
CC722	HCQK101JCA	C CHIP CERA	50V CH 100PF J 2012
Loc	Item Code	Item Name	Description
CC726	HCBK103KCA	C CHIP CERA	50V X7R 0.01MF K 2012
CC902	HCQK271JCA	C CHIP CERA	50V CH 270PF J 2012
CC903	HCQK271JCA	C CHIP CERA	50V CH 270PF J 2012
CC904	HCQK271JCA	C CHIP CERA	50V CH 270PF J 2012
CC908	HCQK102JCA	C CHIP CERA	50V CH 1000PF J 2012
D101	DUZ9R1BM--	DIODE ZENER	UZ-9.1BM 9.1V
D102	DUZ5R1BM--	DIODE ZENER	UZ-5.1BM
D103	DUZ33B----	DIODE ZENER	UZ-33B
D104	DUZ9R1BM--	DIODE ZENER	UZ-9.1BM 9.1V
D301	D1N4003---	DIODE	1N4003 (TAPPING)
D401	NBYD33GT--	DIODE	BYD33G-T
D402	NBYD33GT--	DIODE	BYD33G-T
D403	NBYD33GT--	DIODE	BYD33G-T
D404	NBYD33GT--	DIODE	BYD33G-T
D405	NBYD33GT--	DIODE	BYD33G-T
D406	D1N4148---	DIODE	1N4148 (TAPPING)
D407	DUZ7R5BM--	DIODE ZENER	UZ-7.5BM 7.5V
D408	D1N4148---	DIODE	1N4148 (TAPPING)
D409	DUZ9R1BM--	DIODE ZENER	UZ-9.1BM 9.1V
D412	DBY228----	DIODE	BY228 (TAPPING)
D501	DUZ9R1BM--	DIODE ZENER	UZ-9.1BM 9.1V
D504	D1N4148---	DIODE	1N4148 (TAPPING)
D601	DUZ8R2BM--	DIODE ZENER	UZ-8.2B (8.2V)
D701	DUZ3R9B---	DIODE ZENER	UZ-3.9B
D703	DKLR114L--	LED	KLR114L
D740	D1N4148---	DIODE	1N4148 (TAPPING)
D741	DUZ5R1BM--	DIODE ZENER	UZ-5.1BM
D801	DPBS208GU-	DIODE BRIDGE	PBS208GU-CA
D802	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D803	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D804	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D805	D1N4937GP-	DIODE	1N4937GP (TAPPING)
D806	DPR3005G--	DIODE	PR3005G
D807	DPR1505G--	DIODE	PR1505G
D808	DPR1505G--	DIODE	PR1505G
D809	DUZ6R2BM--	DIODE ZENER	UZ-6.2BM 6.2V
D810	D1N4148---	DIODE	1N4148 (TAPPING)
D901	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
F801	5FKGB4022R	FUSE GLASS TUBE	KS MF51 4A 250V NR
F801A	4857415001	CLIP FUSE	PFC5000-0702
F801B	4857415001	CLIP FUSE	PFC5000-0702
I301	1LA7841---	IC VERTICAL	LA7841
I301	PTB2SW7101	HEAT SINK ASS`Y	1LA7841--- + 7174301011
I301A	4857027101	HEAT SINK	SPCC T1.0+SN

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Loc	Item Code	Item Name	Description
I301B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN
I501	1LA76070A-	IC VIDEO PROCESSOR	LA76070A
I601	1TDA9852--	IC AUDIO PROCESSOR	TDA9852
I603	1TDA7057Q-	IC AUDIO AMP	TDA7057Q
I603	PTC2SW6109	HEAT SINK ASS`Y	1TDA7057Q- + 7174301011
I603A	4857026109	HEAT SINK	AL EX
I603B	7174301011	SCREW TAPPTITE	TT2 RND 3X10 MFZN
I701	1LC8645G79	IC MICOM	LC864728V-5G79
I702	124LC02B--	IC MEMORY	24LC02B
I801	1STRS5707-	IC POWER	STR-S5707
I801	PTA2SW6107	HEAT SINK ASS`Y	1STRS5707- + 7174301211
I801A	4857026107	HEAT SINK	AL EX
I801B	7174301211	SCREW TAPPTITE	TT2 RND 3X12 MFZN
I802	1LTV817C--	IC PHOTO COUPLER	LTV-817C
IL701	1TFMW5380-	IC PREAMP	TFMW5380
J001	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J002	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J004	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J005	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J006	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J007	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J008	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J009	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J010	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J011	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J012	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J013	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J014	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J015	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J017	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J019	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J020	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J021	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J022	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J023	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J024	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J025	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J026	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J027	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J028	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J029	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J030	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J031	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J032	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J033	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J034	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J035	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J036	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING

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Loc	Item Code	Item Name	Description
J037	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J038	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J040	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J041	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J042	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J043	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J044	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J045	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J046	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J047	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J049	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J050	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J051	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J052	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J053	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J055	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J058	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J060	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J101	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J102	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J103	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J301	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J302	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J303	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J305	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J306	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J310	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J402	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J403	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J404	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J405	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J408	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J409	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J410	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J411	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J501	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J502	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J503	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J504	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J505	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J506	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J507	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J509	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J601	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J602	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J603	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J604	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J605	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J606	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING

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Loc	Item Code	Item Name	Description
J607	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J608	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J609	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J610	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J615	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J701	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J702	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J703	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J704	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J705	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J706	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J740	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J741	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J801	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J802	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J803	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J808	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J810	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J813	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J901	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
J902	85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
JA01	4859108450	JACK PIN BOARD	YSC03P-4120-14A
JA02	4859102130	JACK EARPHONE	YSC-1537
JA03	4859109250	JACK PIN BOARD	PH-JB-9614A
JAC03	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC101	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC302	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC303	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC402	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC501	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC503	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC504	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC601	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC602	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC701	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC702	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC703	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC704	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC706	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC707	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC740	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC801	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC901	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC902	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC903	HRFT000-CA	R CHIP	1/10 0 OHM 2012
JC904	HRFT000-CA	R CHIP	1/10 0 OHM 2012
L401	58H0000020	COIL H-LINEARITY	L-76(76.5UH)
L402	58W0000007	COIL WIDTH	TRW-414M
L403	5CPZ150K02	COIL PEAKING	15UH K (AXIAL 3.5MM)

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Loc	Item Code	Item Name	Description
L501	58N0000037	COIL VCO	TRF-V004
L502	5CPZ150K02	COIL PEAKING	15UH K (AXIAL 3.5MM)
L503	58C5580019	COIL CHOKE	TRF-9225 (0.55UH)
L504	5CPZ150K02	COIL PEAKING	15UH K (AXIAL 3.5MM)
L505	5CPZ150K02	COIL PEAKING	15UH K (AXIAL 3.5MM)
L507	58S0000045	COIL SIF	TRF-S001
L601	5MC0000100	COIL BEAD	HC-3550
L602	5MC0000100	COIL BEAD	HC-3550
L604	5CPZ560K03	COIL PEAKING	56UH K (AXIAL 7MM)
L701	5CPZ150K02	COIL PEAKING	15UH K (AXIAL 3.5MM)
L801	5PLF20A1--	FILTER LINE	LF-20A1
L802	5MC0000100	COIL BEAD	HC-3550
L804	58C0000107	COIL CHOKE	L-680
L805	5MC0000100	COIL BEAD	HC-3550
L806	5MC0000100	COIL BEAD	HC-3550
L807	5MC0000100	COIL BEAD	HC-3550
L901	5CPX820J--	COIL PEAKING	82UH J (RADIAL)
M352	4853530901	HOLDER LED	P.P
P102	485923162S	CONN WAFER	YW025-03 (STICK)
P103	485923522S	CONN WAFER	YW025-09 (STICK)
P401	4859240120	CONN WAFER	YFW500-06
P601	485923162S	CONN WAFER	YW025-03 (STICK)
P602	485923162S	CONN WAFER	YW025-03 (STICK)
P802A	4859901111	CORD POWER	KKP-419C KLCE-2F (2.1ME)
P802B	4859203030	CONN TERMINAL	YPT-018
P803	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)
P804	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)
P901	4857417500	TERM PIN	DA-IB0214(D2.3/DY PIN)
PA501	4850708N08	CONN AS	BIC-08T-25T+C-20T+ULW=400
PWC1	4859900910	CORD POWER AS	KKP-419C+YPT-018=2100
Q401	TKTC3207--	TR	KTC3207 (TP)
Q402	TKTC3198Y-	TR	KTC3198Y
Q403	T2SD2499--	TR	2SD2499
Q404	TKTC3205Y-	TR	KTC3205Y (TP)
Q406	TKTC3205Y-	TR	KTC3205Y (TP)
Q407	TKSA1013Y-	TR	KSA1013Y (TP)
Q801	TKTC3207--	TR	KTC3207 (TP)
Q802	TKTC3198Y-	TR	KTC3198Y
Q803	TKTC3198Y-	TR	KTC3198Y
Q901	TKTC3207--	TR	KTC3207 (TP)
Q902	TKTC3207--	TR	KTC3207 (TP)
Q903	TKTC3207--	TR	KTC3207 (TP)
QC401	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
QC405	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
QC501	T2SA1037KB	TR CHIP	2SA1037K-T146-R
QC601	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
QC603	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
QC604	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
QC701	T2SA1037KB	TR CHIP	2SA1037K-T146-R
QC702	T2SC2412KB	TR CHIP	2SC2412K-T146-BR

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Loc	Item Code	Item Name	Description
QC703	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
QC704	T2SC2412KB	TR CHIP	2SC2412K-T146-BR
QC901	T2SA1037KB	TR CHIP	2SA1037K-T146-R
R102	RS02Z220JS	R M-OXIDE FILM	2W 22 OHM J SMALL
R103	RD-2Z820J-	R CARBON FILM	1/2 82 OHM J
R104	RS01Z273J-	R M-OXIDE FILM	1W 27K OHM J (TAPPING)
R305	RS01Z331J-	R M-OXIDE FILM	1W 330 OHM J (TAPPING)
R306	RS01Z471J-	R M-OXIDE FILM	1W 470 OHM J (TAPPING)
R307	RS01Z471J-	R M-OXIDE FILM	1W 470 OHM J (TAPPING)
R313	RS01Z209J-	R M-OXIDE FILM	1W 2 OHM J
R403	RD-2Z272J-	R CARBON FILM	1/2 2.7K OHM J
R405	RS02Z113JS	R M-OXIDE FILM	2W 11K OHM J SMALL
R406	RS02Z113JS	R M-OXIDE FILM	2W 11K OHM J SMALL
R407	RS01Z272J-	R M-OXIDE FILM	1W 2.7K OHM J (TAPPING)
R408	RS01Z562J-	R M-OXIDE FILM	1W 5.6K OHM J (TAPPING)
R409	RS01Z339J-	R M-OXIDE FILM	1W 3.3 OHM J (TAPPING)
R410	RS01Z369J-	R M-OXIDE FILM	1W 3.6 OHM J (TAPPING)
R411	RD-4Z123J-	R CARBON FILM	1/4 12K OHM J
R413	RS02Z229JS	R M-OXIDE FILM	2W 2.2 OHM J SMALL
R414	RS01Z229J-	R M-OXIDE FILM	1W 2.2 OHM J (TAPPING)
R416	RS01Z100J-	R M-OXIDE FILM	1W 10 OHM J (TAPPING)
R417	RD-4Z131J-	R CARBON FILM	1/4 130 OHM J
R419	RD-4Z131J-	R CARBON FILM	1/4 130 OHM J
R420	RS01Z100J-	R M-OXIDE FILM	1W 10 OHM J (TAPPING)
R423	RF01Z688J-	R FUSIBLE	1W 0.68 OHM J (TAPPING)
R424	RD-4Z153J-	R CARBON FILM	1/4 15K OHM J
R425	RD-4Z223J-	R CARBON FILM	1/4 22K OHM J
R426	RD-4Z153J-	R CARBON FILM	1/4 15K OHM J
R601	RD-2Z121J-	R CARBON FILM	1/2 120 OHM J
R602	RD-2Z121J-	R CARBON FILM	1/2 120 OHM J
R801	RX10B339JN	R CEMENT	10W 3.3 OHM J BENCH 4P
R802	RS02Z363JS	R M-OXIDE FILM	2W 36K OHM J SMALL
R803	DJ140M290L	POSISTOR	J503P53D140M290L
R804	RC-2Z565J-	R CARBON COMP	1/2 5.6M OHM J
R805	RF02Z228J-	R FUSIBLE	2W 0.22 OHM J (TAPPING)
R806	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J
R807	RD-4Z330J-	R CARBON FILM	1/4 33 OHM J
R808	RD-4Z104J-	R CARBON FILM	1/4 100K OHM J
R809	RD-4Z182J-	R CARBON FILM	1/4 1.8K OHM J
R810	RS01Z180J-	R M-OXIDE FILM	1W 18 OHM J (TAPPING)
R812	RD-4Z331J-	R CARBON FILM	1/4 330 OHM J
R813	RD-4Z621J-	R CARBON FILM	1/4 620 OHM J
R814	RD-2Z620J-	R CARBON FILM	1/2 62 OHM J
R816	RD-4Z222J-	R CARBON FILM	1/4 2.2K OHM J
R818	RD-4Z432J-	R CARBON FILM	1/4 4.3K OHM J
R820	RD-4Z101J-	R CARBON FILM	1/4 100 OHM J
R821	RD-4Z472J-	R CARBON FILM	1/4 4.7K OHM J
R822	RD-4Z153J-	R CARBON FILM	1/4 15K OHM J
R901	RD-4Z474J-	R CARBON FILM	1/4 470K OHM J

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
R905	RS02Z123JS	R M-OXIDE FILM	2W 12K OHM J SMALL
R906	RS02Z123JS	R M-OXIDE FILM	2W 12K OHM J SMALL
R907	RS02Z123JS	R M-OXIDE FILM	2W 12K OHM J SMALL
R908	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J
R909	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J
R910	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J
RAC01	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RAC02	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RAC03	HRFT391JCA	R CHIP	1/10 390 OHM J 2012
RAC04	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
RAC05	HRFT391JCA	R CHIP	1/10 390 OHM J 2012
RAC06	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
RC101	HRFT184JCA	R CHIP	1/10 180K OHM J 2012
RC102	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC103	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC104	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC301	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC302	HRFT104JCA	R CHIP	1/10 100K OHM J 2012
RC303	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC308	HRFT151JCA	R CHIP	1/10 150 OHM J 2012
RC309	HRFT912JCA	R CHIP	1/10 9.1K OHM J 2012
RC310	HRFT333JCA	R CHIP	1/10 33K OHM J 2012
RC311	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC312	HRFT133JCA	R CHIP	1/10 13K OHM J 2012
RC401	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RC402	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC404	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC412	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC419	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC420	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC421	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC422	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC501	HRFT133JCA	R CHIP	1/10 13K OHM J 2012
RC502	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RC503	HRFT124JCA	R CHIP	1/10 120K OHM J 2012
RC504	HRFT393JCA	R CHIP	1/10 39K OHM J 2012
RC505	HRFT823JCA	R CHIP	1/10 82K OHM J 2012
RC506	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RC507	HRFT622JCA	R CHIP	1/10 6.2K OHM J 2012
RC508	HRFT824JCA	R CHIP	1/10 820K OHM J 2012
RC509	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RC510	HRFT182JCA	R CHIP	1/10 1.8K OHM J 2012
RC511	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RC512	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC513	HRFT332JCA	R CHIP	1/10 3.3K OHM J 2012
RC514	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RC515	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RC516	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RC517	HRFT304JCA	R CHIP	1/10 300K OHM J 2012

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
RC519	HRFT274JCA	R CHIP	1/10 270K OHM J 2012
RC520	HRFT561JCA	R CHIP	1/10 560 OHM J 2012
RC521	HRFT684JCA	R CHIP	1/10 680K OHM J 2012
RC522	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC523	HRFT624JCA	R CHIP	1/10 620K OHM J 2012
RC532	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC533	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC534	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC535	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC536	HRFT162JCA	R CHIP	1/10 1.6K OHM J 2012
RC537	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC538	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC539	HRFT221JCA	R CHIP	1/10 220 OHM J 2012
RC540	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC541	HRFT331JCA	R CHIP	1/10 330 OHM J 2012
RC542	HRFT391JCA	R CHIP	1/10 390 OHM J 2012
RC544	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC545	HRFT432JCA	R CHIP	1/10 4.3K OHM J 2012
RC546	HRFT750JCA	R CHIP	1/10 75 OHM J 2012
RC547	HRFT432JCA	R CHIP	1/10 4.3K OHM J 2012
RC548	HRFT432JCA	R CHIP	1/10 4.3K OHM J 2012
RC549	HRFT202JCA	R CHIP	1/10 2K OHM J 2012
RC550	HRFT272JCA	R CHIP	1/10 2.7K OHM J 2012
RC551	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC552	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC603	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC604	HRFT203JCA	R CHIP	1/10 20K OHM J 2012
RC605	HRFT822FCA	R CHIP	1/10 8.2K OHM F 2012
RC606	HRFT161FCA	R CHIP	1/10 160 OHM F 2012
RC607	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC608	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC610	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC611	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC612	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC613	HRFT203JCA	R CHIP	1/10 20K OHM J 2012
RC614	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC615	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC616	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
RC617	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
RC618	HRFT153JCA	R CHIP	1/10 15K OHM J 2012
RC619	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
RC620	HRFT512JCA	R CHIP	1/10 5.1K OHM J 2012
RC645	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC646	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC647	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC648	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC701	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC703	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC704	HRFT101JCA	R CHIP	1/10 100 OHM J 2012

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
RC705	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC706	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC707	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC708	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC709	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC710	HRFT150JCA	R CHIP	1/10 15 OHM J 2012
RC711	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC712	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC713	HRFT101JCA	R CHIP	1/10 100 OHM J 2012
RC714	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC715	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC716	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC717	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
RC718	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC719	HRFT105JCA	R CHIP	1/10 1M OHM J 2012
RC720	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC721	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC722	HRFT473JCA	R CHIP	1/10 47K OHM J 2012
RC723	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC724	HRFT623JCA	R CHIP	1/10 62K OHM J 2012
RC725	HRFT163JCA	R CHIP	1/10 16K OHM J 2012
RC726	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC727	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC728	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC729	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC730	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC731	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC732	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC733	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC734	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC736	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC737	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC740	HRFT243JCA	R CHIP	1/10 24K OHM J 2012
RC742	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC743	HRFT472JCA	R CHIP	1/10 4.7K OHM J 2012
RC744	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC745	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012
RC746	HRFT222JCA	R CHIP	1/10 2.2K OHM J 2012
RC747	HRFT392JCA	R CHIP	1/10 3.9K OHM J 2012
RC748	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC749	HRFT102JCA	R CHIP	1/10 1K OHM J 2012
RC750	HRFT514JCA	R CHIP	1/10 510K OHM J 2012
RC815	HRFT150JCA	R CHIP	1/10 15 OHM J 2012
RC817	HRFT103JCA	R CHIP	1/10 10K OHM J 2012
RC901	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
RC902	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
RC903	HRFT471JCA	R CHIP	1/10 470 OHM J 2012
RC904	HRFT271JCA	R CHIP	1/10 270 OHM J 2012
RC911	HRFT152JCA	R CHIP	1/10 1.5K OHM J 2012

PARTS LIST

(DTQ-21T1FS)

Loc	Item Code	Item Name	Description
RC913	HRFT201JCA	R CHIP	1/10 200 OHM J 2012
RC917	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC918	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC919	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC920	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC923	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC924	HRFT201JCA	R CHIP	1/10 200 OHM J 2012
RC925	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC926	HRFT241JCA	R CHIP	1/10 240 OHM J 2012
RC927	HRFT121JCA	R CHIP	1/10 120 OHM J 2012
RC928	HRFT241JCA	R CHIP	1/10 240 OHM J 2012
RC929	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC930	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC931	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC932	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RC933	HRFT000-CA	R CHIP	1/10 0 OHM 2012
RLY1	5SC0101325	SW RELAY	HR-CR7 DC12V
RS801	DSVC471D14	VARISTOR	SVC471D14A
SCT1	4859303030	SOCKET CRT	ISMM03S
SF501	5PM1859M--	FILTER SAW	M1859M
SW701	5S50101035	SW TACT	KPT-1112 1C-1P
SW702	5S50101090	SW TACT	SKHV17910A
SW703	5S50101090	SW TACT	SKHV17910A
SW704	5S50101090	SW TACT	SKHV17910A
SW705	5S50101090	SW TACT	SKHV17910A
SW706	5S50101090	SW TACT	SKHV17910A
T401	50D0000022	TRANS DRIVE	HD-15D
T402	50H0000175	FBT	2002SPND
T801	50M4242A7J	TRANS SMPS	TSM-4242A7
U101	4859716730	TUNER VARACTOR	DT9-NF07F
X501	5XEX3R579C	CRYSTAL QUARTZ	HC-49U 3.579545M (TP)
X701	5XYR03276C	CRYSTAL QUARTZ	C-001R 32.768000KHZ 20PPM
Z501	4850L03110	RESONATOR CERA	CSB503F44
Z502	5PXPS45MB-	FILTER CERA	TPS-4.5MB TRAP (TAPPING)
Z503	5PXFSH4R5D	FILTER CERA	SFSH4.5MDB
Z601	4850L03810	RESONATOR CERA	CSB503F58

DTQ-20T1FC DIFFERENT PARTS LIST

Loc	Item Code	Item Name	Description
PCW1	4859903610	POWER CORD AS	DJ-10W + BSP3 -1/2H = 2100
F801	5F1GB4021L	FUSE GLASS TUBE	4L/CSA TL 4A 125V MF51
RS801	DSVC271D14	VARISTOR	SVC271D14A

■ OPTION LIST

CN-201A/B MODEL(Inch, Mono, Stereo)

14 Inch (Mono)	DTQ-14Q1 SERIES, DTQ-14Q2 SERIES, DTQ-14Q3 SERIES, DTQ-14T1 SERIES, DTQ-14T2 SERIES
20 Inch (Mono)	DTQ-20Q1 SERIES, DTQ-20Q2 SERIES, DTQ-20Q3 SERIES, DTQ-20T1AS DTQ-20T2AS, DTQ-20T3AS
20Inch (Stereo)	DTQ-20T1FS, DTQ-20T2FS, DTQ-20T3FS
21 Inch (Stereo)	DTQ-21T1FS, DTQ-21T2FS, DTQ-21T5FS, DTQ-21T9FS

CN-201A/B 14"/20"/21" OPTION(MAIN PCB)

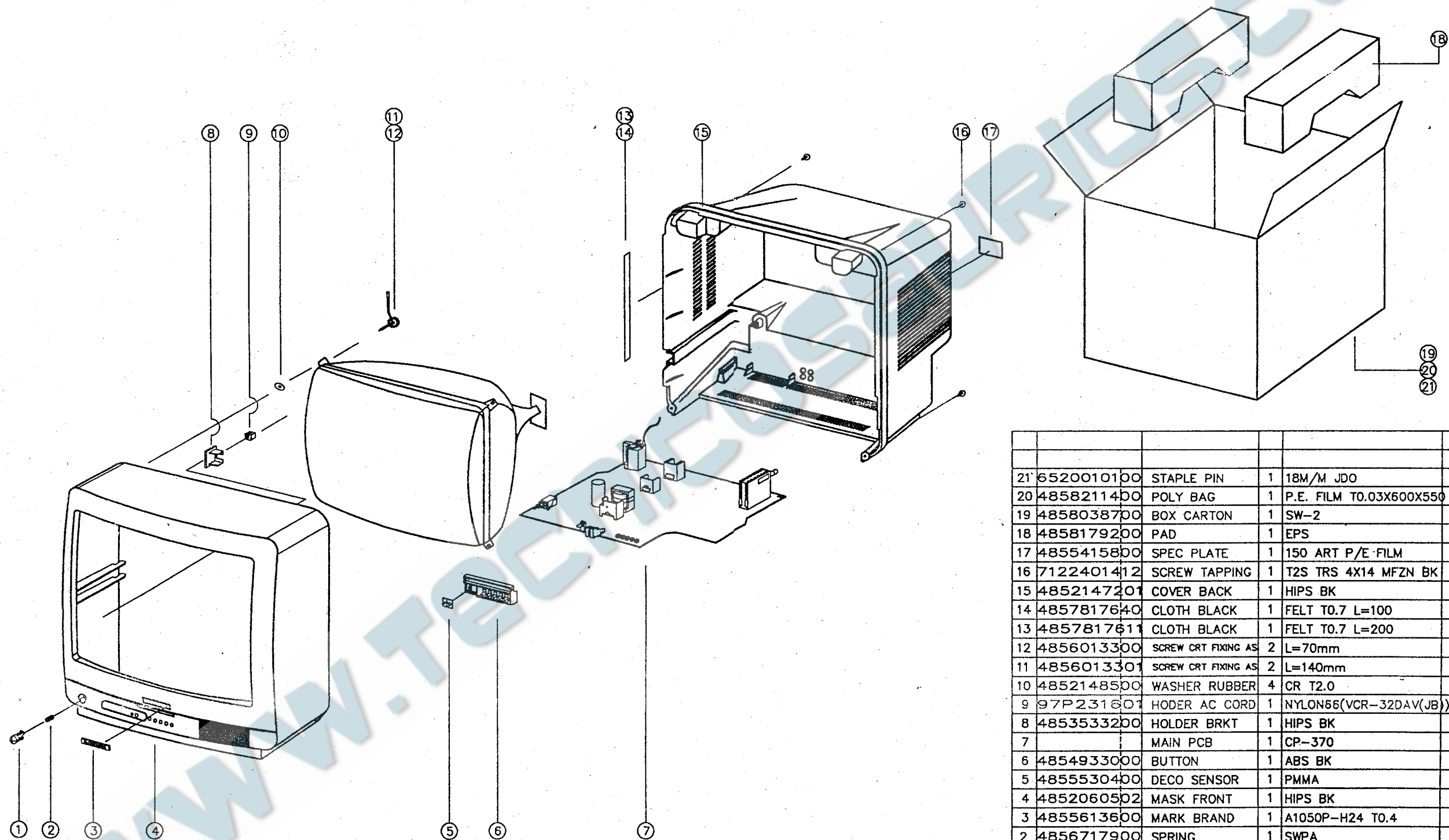
Loc.	14 Inch(Mono)	20 Inch(Mono)	20 Inch(Stereo)	21 Inch(Stereo)
C404	1.6KV BUP 6000PF	1.6KV BUP 7500PF	1.6KV BUP 7500PF	1.6KV BUP 720PF
C406	200V PU 0.47MF	200V PU 0.51MF	200V PU 0.51MF	200V PU 0.47MF
C421	50V RSS 4.7MF	50V RSS 4.7MF	50V RSS 4.7MF	50V RSS 4.7MF
CC506	50V X7R 0.01MF	50V X7R 0.01MF	*	*
CC509	50V X7R 1000PF	50V X7R 1000PF	50V X7R 1000PF	50V X7R 1000PF
J406	INSERT	*	*	*
J407	INSERT	INSERT	INSERT	*
J506	*	*	INSERT	INSERT
L401	*	L-76(76.5UH)	L-76(76.5UH)	L-76(76.5UH)
L402	*	*	*	TRW-414M
R407	*	1W 2.7K OHM	1W 2.7K OHM	1W 2.7K OHM
R423	1W 0.82 OHM	1W 0.68 OHM	1W 0.68 OHM	1W 0.68 OHM
R426	1/4 24K OHM	1/4 15K OHM	1/4 15K OHM	1/4 15K OHM
RC302	1/10 110K OHM	1/10 110K OHM	1/10 110K OHM	1/10 110K OHM
RC303	1/10 15K OHM	1/10 16K OHM	1/10 16K OHM	1/10 15K OHM
RC309	1/10 27K OHM	1/10 27K OHM	1/10 27K OHM	1/10 9.1K OHM
RC311	1/10 1K OHM	1/10 1K OHM	1/10 1K OHM	1/10 1K OHM
RC312	1/10 11K OHM	1/10 13K OHM	1/10 13K OHM	1/10 13K OHM
RC543	1/10 1K OHM	1/10 1K OHM	*	*
RC550	1/10 5.1K OHM	1/10 2.7K OHM	1/10 2.7K OHM	1/10 2.7K OHM
RC551	1/10 16K OHM	1/10 15K OHM	1/10 115K OHM	1/10 15K OHM
RC924	1/10 240 OHM	1/10 200 OHM	1/10 200 OHM	1/10 200 OHM
T402	1401SPND	2002SPND	2002SPND	2002SPND
CRT	A34JLL40X	A48JLL40X	A48JLL40X	A51JSW40X40X
	A34JLL40X: CHILE, PERU	A48JLL40X: CHILE, PERU	A48JLL40X: CHILE, PERU	A51JSW41X(G): CHILE, PERU
D.COIL	DC-1450	DC-2050	DC-2050	DC-2080
COIL D.Y	ODY-M1401N	ODY-M2002N	ODY-M2002N	ODY-F2101W(L)
	ODY-M1401: CHILE,PERU	ODY-M2002: CHILE,PERU	ODY-M2002: CHILE,PERU	ODY-F2101(L): CHILE,PERU

CN-201A/B 14"/20"/21" AUDIO OPTION

Loc.	14 Inch(Mono)	20 Inch(Mono)	20 Inch(Stereo)	21 Inch(Stereo)
C603	*	*	63V MEU 0.15MF	63V MEU 0.15MF
C605	*	*	50V RSS 2.2MF	50V RSS 2.2MF
C606	*	*	50V RSS 0.47MF	50V RSS 0.47MF
C607	*	*	25V RSS 100MF	25V RSS 100MF
C608	*	*	50V RSS 2.2MF	50V RSS 2.2MF
C609	*	*	50V RSS 10MF	50V RSS 10MF
C610	*	*	50V RSS 10MF	50V RSS 10MF
C611	*	*	50V RSS 1MF	50V RSS 1MF
C612	*	*	50V RSS 1MF	50V RSS 1MF
C613	*	*	63V MEU 0.047MF	63V MEU 0.047MF
C614	*	*	50V RSS 10MF	50V RSS 10MF
C615	*	*	63V MEU 0.1MF	63V MEU 0.1MF
C616	*	*	50V RSS 4.7MF	50V RSS 4.7MF
C618	*	*	25V RSS 100MF	25V RSS 100MF
C619	*	*	50V RSS 10MF	50V RSS 10MF
C620	*	*	25V RSS 100MF	25V RSS 100MF
C621	*	*	63V MEU 0.47MF	63V MEU 0.47MF
C622	*	*	63V MEU 0.22MF	63V MEU 0.22MF
C623	*	*	50V RSS 4.7MF	50V RSS 4.7MF
C624	*	*	50V RSS 10MF	50V RSS 10MF
C625	*	*	50V RSS 4.7MF	50V RSS 4.7MF
C626	*	*	50V RSS 4.7MF	50V RSS 4.7MF
C627	*	*	50V RSS 2.2MF	50V RSS 2.2MF
C628	*	*	50V EU 0.015MF	50V EU 0.015MF
C629	*	*	50V EU 0.015MF	50V EU 0.015MF
C630	*	*	50V RSS 2.2MF	50V RSS 2.2MF
C631	50V EU 0.012MF	50V EU 0.012MF	*	*
C632	*	*	63V MEU 0.15MF	63V MEU 0.15MF
C633	*	*	63V MEU 0.33MF	63V MEU 0.33MF
C634	*	*	63V MEU 0.33MF	63V MEU 0.33MF
C635	63V MEU 0.33MF	63V MEU 0.33MF	*	*
C640	*	*	50V EU 0.022MF	50V EU 0.022MF
C641	*	*	50V EU 0.022MF	50V EU 0.022MF
C642	50V RSS 47MF	50V RSS 47MF	*	*
CA01	*	*	50V RSS 2.2MF	50V RSS 2.2MF
CA02	50V RSS 2.2MF	50V RSS 2.2MF	50V RSS 2.2MF	50V RSS 2.2MF
CAC02	50V X7R 0.1MF	50V X7R 0.1MF	*	*
CAC01	*	*	50V X7R 0.1MF	50V X7R 0.1MF
CAC02	*	*	50V X7R 0.1MF	50V X7R 0.1MF
CC601	*	*	50V CH 100PF	50V CH 100PF
CC602	*	*	50V CH 100PF	50V CH 100PF
CC604	*	*	50V X7R 8200PF	50V X7R 8200PF
CC617	*	*	50V X7R 0.01MF	50V X7R 0.01MF
CC631	*	*	50V X7R 8200PF	50V X7R 8200PF
I601	*	*	TDA9852	TDA9852
I602	1TDA7056	1TDA7056	*	*
I603	*	*	TDA7057Q	TDA7057Q
J050	*	*	INSERT	INSERT
J601	*	*	INSERT	INSERT
J602	*	*	INSERT	INSERT
J603	*	*	INSERT	INSERT
J604	*	*	INSERT	INSERT

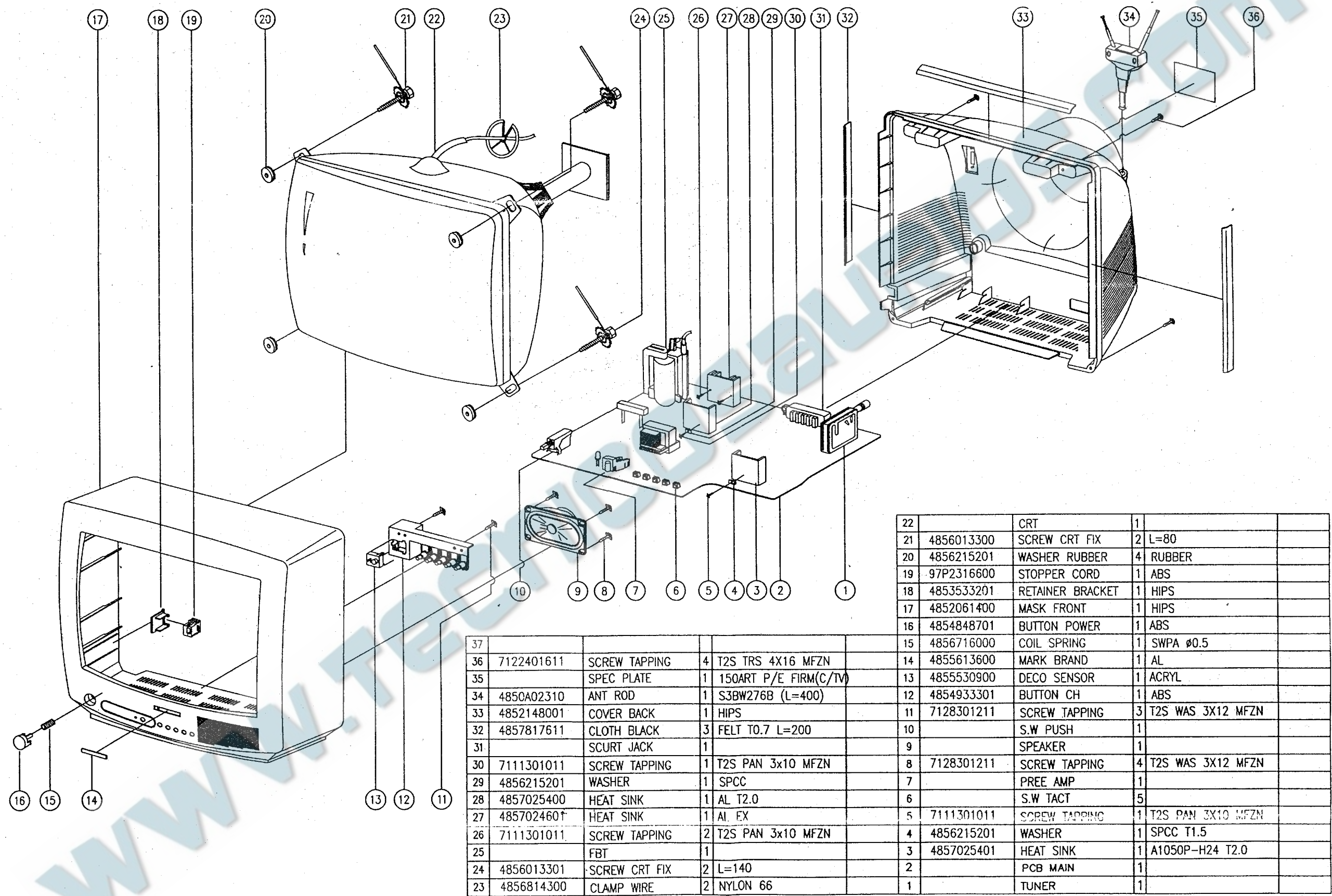
Loc.	14 Inch(Mono)	20 Inch(Mono)	20 Inch(Stereo)	21 Inch(Stereo)
J605	*	*	INSERT	INSERT
J606	*	*	INSERT	INSERT
J607	*	*	INSERT	INSERT
J608	*	*	INSERT	INSERT
J609	*	*	INSERT	INSERT
J610	*	*	INSERT	INSERT
J611	INSERT	INSERT	*	*
J614	INSERT	INSERT	*	*
JAC01	1/10 0 OHM	1/10 0 OHM	*	*
JAC02	1/10 0 OHM	1/10 0 OHM	*	*
JC601	*	*	1/10 0 OHM	1/10 0 OHM
JC602	*	*	1/10 0 OHM	1/10 0 OHM
JC703	*	*	1/10 0 OHM	1/10 0 OHM
L601	*	*	HC-3550	HC-3550
L602	*	*	HC-3550	HC-3550
L603	HC-3550	HC-3550	*	*
L604	*	*	56UH	56UH
QC601	*	*	2SC2412K	2SC2412K
QC602	2SC2412K	2SC2412K	*	*
QC603	*	*	2SC2412K	2SC2412K
QC604	*	*	2SC2412K	2SC2412K
RAC03	*	*	1/10 390 OHM	1/10 390 OHM
RAC04	*	*	1/10 100K OHM	1/10 100K OHM
RC601	1/10 10K OHM	1/10 10K OHM	*	*
RC603	*	*	1/10 2.2K OHM	1/10 2.2K OHM
RC604	*	*	1/10 20K OHM	1/10 20K OHM
RC605	*	*	1/10 8.2K OHM F	1/10 8.2K OHM F
RC606	*	*	1/10 160 OHM F	1/10 160 OHM F
RC607	*	*	1/10 1K OHM	1/10 1K OHM
RC608	*	*	1/10 1K OHM	1/10 1K OHM
RC610	*	*	1/10 1K OHM	1/10 1K OHM
RC611	*	*	1/10 1K OHM	1/10 1K OHM
RC612	*	*	1/10 2.2K OHM	1/10 2.2K OHM
RC613	*	*	1/10 20K OHM	1/10 20K OHM
RC614	*	*	1/10 2.2K OHM	1/10 2.2K OHM
RC615	*	*	1/10 15K OHM	1/10 15K OHM
RC616	*	*	1/10 1.5K OHM	1/10 1.5K OHM
RC617	*	*	1/10 5.1K OHM	1/10 5.1K OHM
RC618	*	*	1/10 15K OHM	1/10 15K OHM
RC619	*	*	1/10 1.5K OHM	1/10 1.5K OHM
RC620	*	*	1/10 5.1K OHM	1/10 5.1K OHM
RC621	1/10 13K OHM	1/10 13K OHM	*	*
RC622	1/10 5.1K OHM	1/10 5.1K OHM	*	*
RC623	1/10 6.2K OHM	1/10 6.2K OHM	*	*
RC643	1/10 10 OHM	1/10 10 OHM	*	*
RC645	*	*	1/10 1K OHM	1/10 1K OHM
RC646	*	*	1/10 10K OHM	1/10 10K OHM
RC647	*	*	1/10 1K OHM	1/10 1K OHM
RC648	*	*	1/10 10K OHM	1/10 10K OHM
RC739	1/10 1K OHM	1/10 1K OHM	*	*
Z601	*	*	CSB503F58	CSB503F58
D601	*	*	UZ-8.2B (8.2V)	UZ-8.2B (8.2V)

1. DTQ-14Q1FS

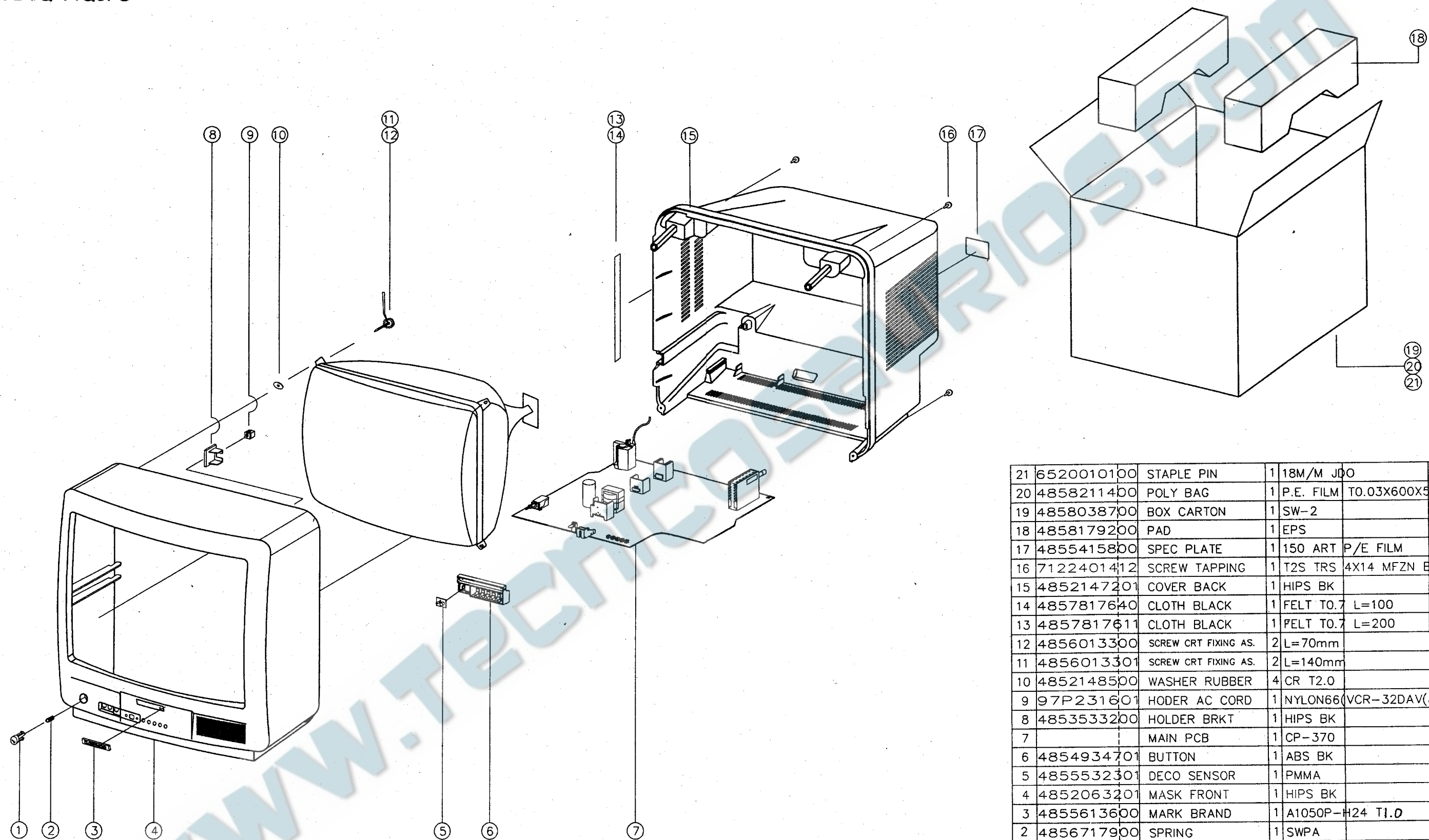


21	6520010100	STAPLE PIN	1	18M/M JDO
20	4858211400	POLY BAG	1	P.E. FILM T0.03X600X550
19	4858038700	BOX CARTON	1	SW-2
18	4858179200	PAD	1	EPS
17	4855415800	SPEC PLATE	1	150 ART P/E FILM
16	7122401412	SCREW TAPPING	1	T2S TRS 4X14 MFZN BK
15	4852147201	COVER BACK	1	HIPS BK
14	4857817640	CLOTH BLACK	1	FELT T0.7 L=100
13	4857817611	CLOTH BLACK	1	FELT T0.7 L=200
12	4856013300	SCREW CRT FIXING AS	2	L=70mm
11	4856013301	SCREW CRT FIXING AS	2	L=140mm
10	4852148500	WASHER RUBBER	4	CR T2.0
9	97P231601	HODER AC CORD	1	NYLON66(VCR-32DAV(JB))
8	4853533200	HOLDER BRKT	1	HIPS BK
7		MAIN PCB	1	CP-370
6	4854933000	BUTTON	1	ABS BK
5	4855530400	DECO SENSOR	1	PMMA
4	4852060502	MASK FRONT	1	HIPS BK
3	4855613600	MARK BRAND	1	A1050P-H24 T0.4
2	4856717900	SPRING	1	SWPA
1	4854848201	POWER BUTTON	1	ABS BK

2. DTQ-14Q2FS

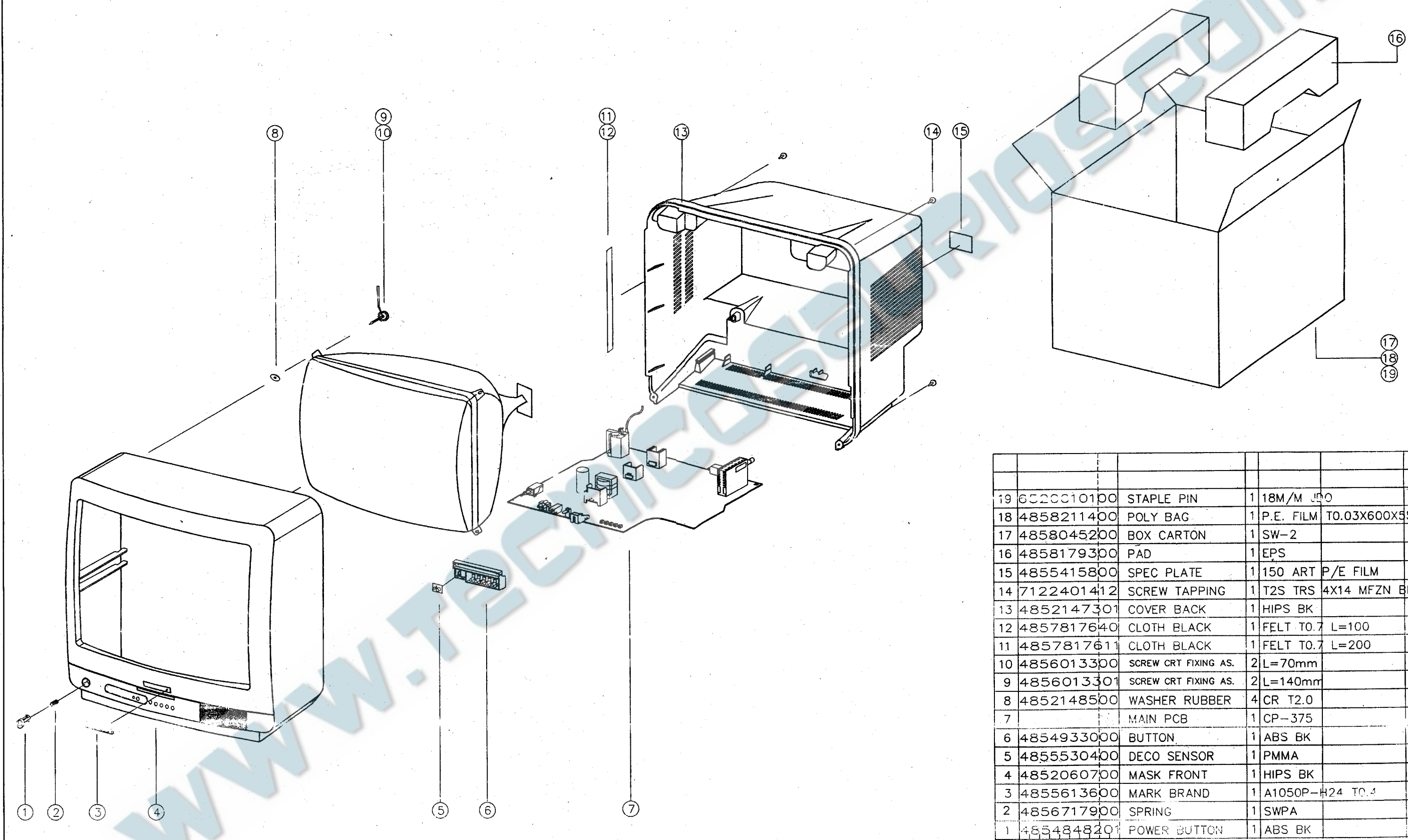


3. DTQ-14Q3FS



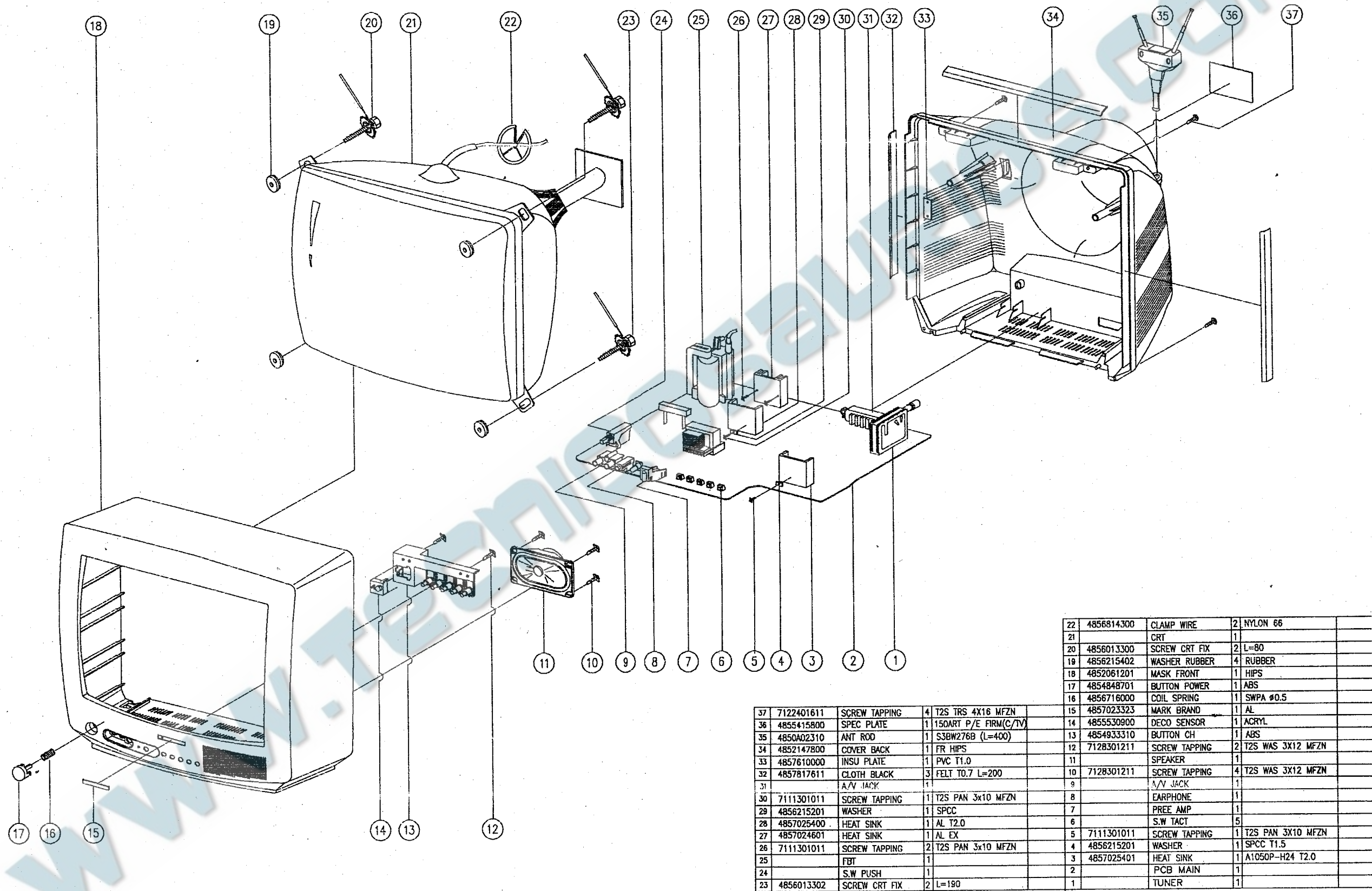
21	6520010100	STAPLE PIN	1	18M/M JDO	
20	4858211400	POLY BAG	1	P.E. FILM T0.03X600X550	
19	4858038700	BOX CARTON	1	SW-2	
18	4858179200	PAD	1	EPS	
17	4855415800	SPEC PLATE	1	150 ART P/E FILM	
16	7122401412	SCREW TAPPING	1	T2S TRS 4X14 MFZN BK	
15	4852147201	COVER BACK	1	HIPS BK	
14	4857817640	CLOTH BLACK	1	FELT T0.7 L=100	
13	4857817611	CLOTH BLACK	1	FELT T0.7 L=200	
12	4856013300	SCREW CRT FIXING AS.	2	L=70mm	
11	4856013301	SCREW CRT FIXING AS.	2	L=140mm	
10	4852148500	WASHER RUBBER	4	CR T2.0	
9	97P231601	HODER AC CORD	1	NYLON66(VCR-32DAV(JB))	
8	4853533200	HOLDER BRKT	1	HIPS BK	
7		MAIN PCB	1	CP-370	
6	4854934701	BUTTON	1	ABS BK	
5	4855532301	DECO SENSOR	1	PMMA	
4	4852063201	MASK FRONT	1	HIPS BK	
3	4855613600	MARK BRAND	1	A1050P-H24 T1.0	
2	4856717900	SPRING	1	SWPA	
1	4854850601	POWER BUTTON	1	ABS BK	

4. DTQ-20Q1FS



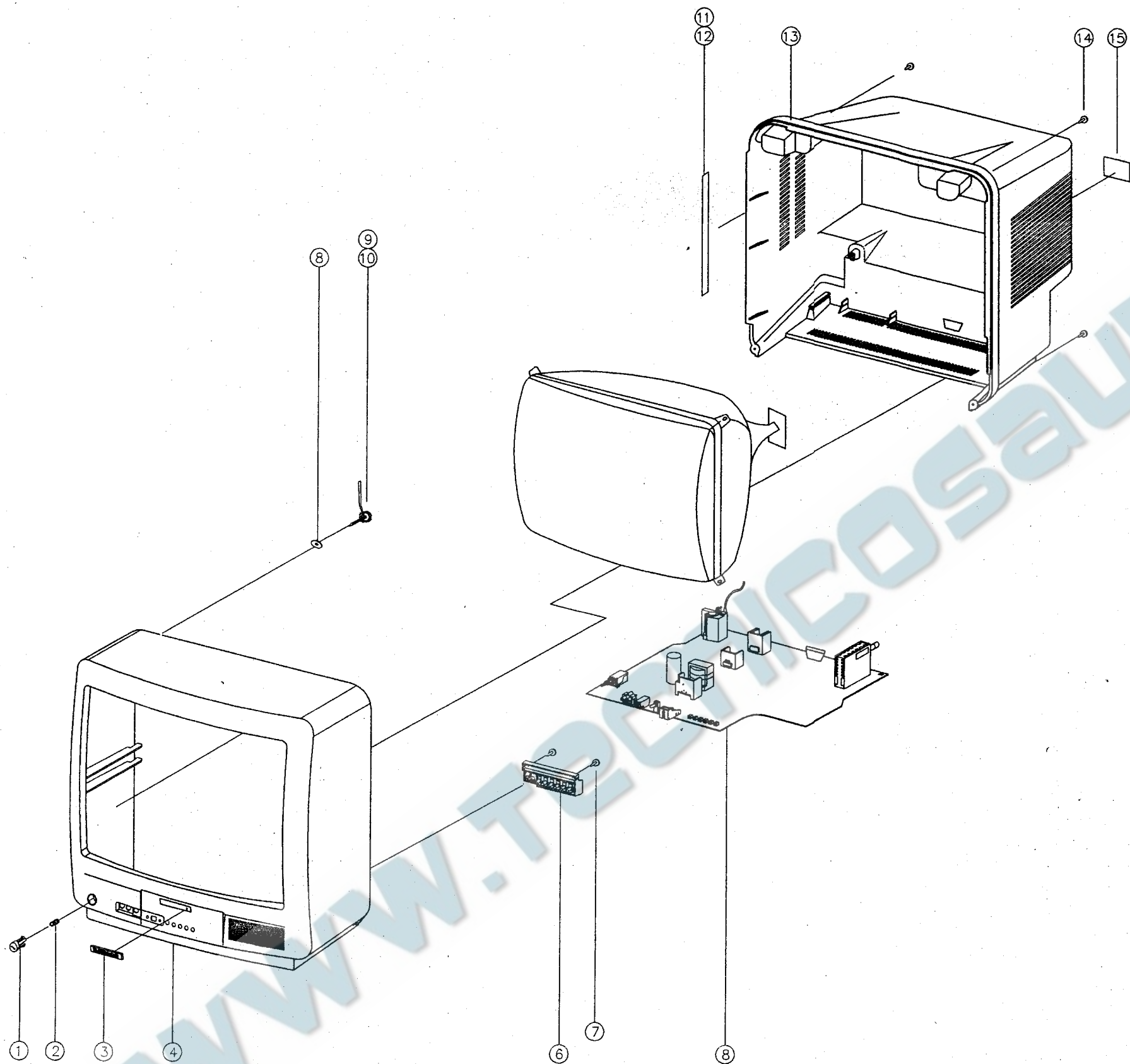
19	6520010100	STAPLE PIN	1	18M/M	UNO
18	4858211400	POLY BAG	1	P.E. FILM	T0.03X600X50
17	4858045200	BOX CARTON	1	SW-2	
16	4858179300	PAD	1	EPS	
15	4855415800	SPEC PLATE	1	150 ART	P/E FILM
14	7122401412	SCREW TAPPING	1	T2S TRS	4X14 MFZN BK
13	4852147301	COVER BACK	1	HIPS BK	
12	4857817640	CLOTH BLACK	1	FELT T0.7	L=100
11	4857817611	CLOTH BLACK	1	FELT T0.7	L=200
10	4856013300	SCREW CRT FIXING AS.	2	L=70mm	
9	4856013301	SCREW CRT FIXING AS.	2	L=140mm	
8	4852148500	WASHER RUBBER	4	CR T2.0	
7		MAIN PCB	1	CP-375	
6	4854933000	BUTTON	1	ABS BK	
5	4855530400	DECO SENSOR	1	PMMA	
4	4852060700	MASK FRONT	1	HIPS BK	
3	4855613600	MARK BRAND	1	A1050P-H24	T0.4
2	4856717900	SPRING	1	SWPA	
1	4854848201	POWER BUTTON	1	ABS BK	

5. DTQ-20Q2FS



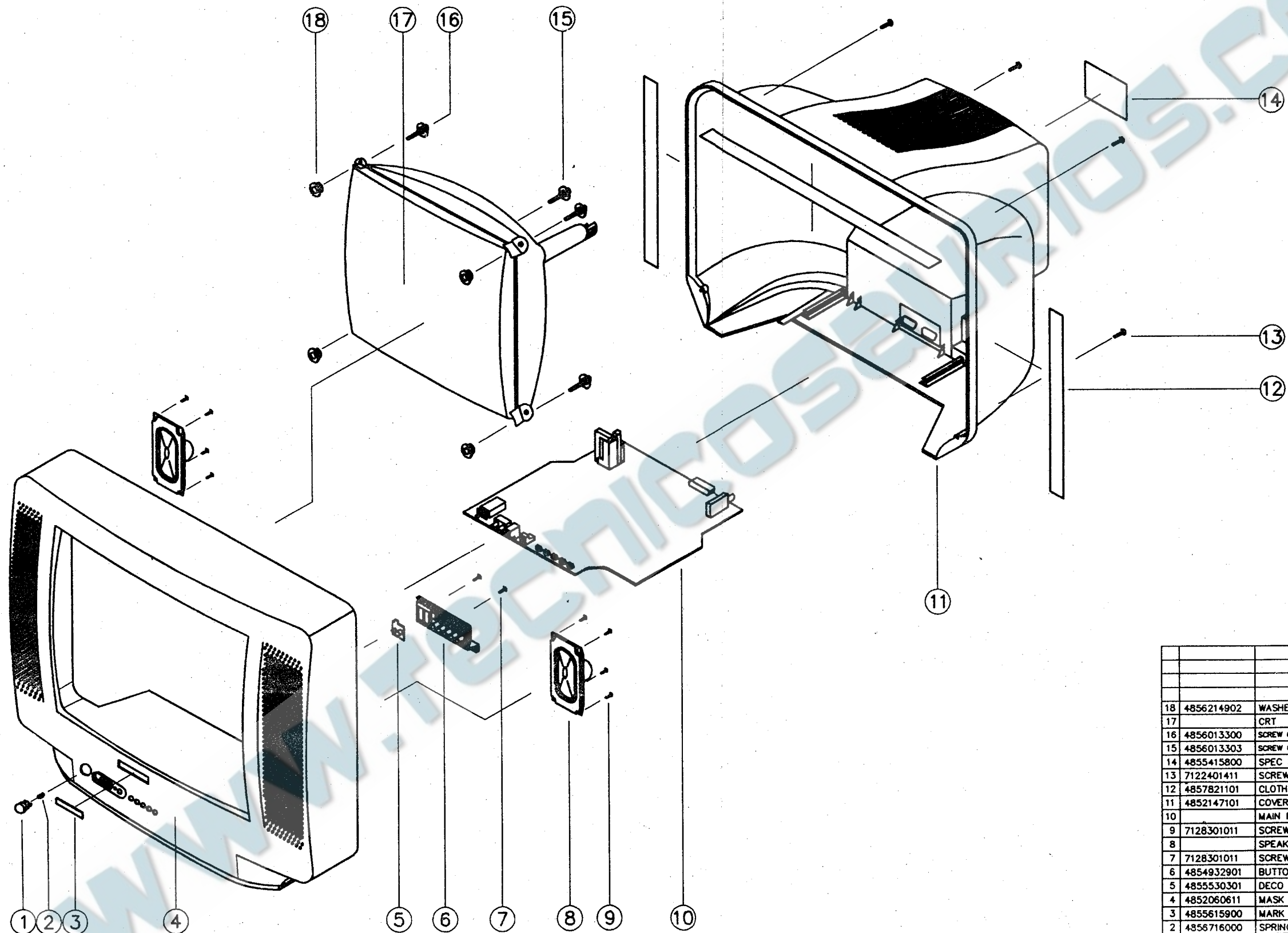
22	4856814300	CLAMP WIRE	2	NYLON 66	
21		CRT	1		
20	4856013300	SCREW CRT FIX	2	L=80	
19	4856215402	WASHER RUBBER	4	RUBBER	
18	4852061201	MASK FRONT	1	HIPS	
17	4854848701	BUTTON POWER	1	ABS	
16	4856716000	COIL SPRING	1	SWPA #0.5	
15	4857023323	MARK BRAND	1	AL	
14	4855530900	DECO SENSOR	1	ACRYL	
13	4854933310	BUTTON CH	1	ABS	
12	7128301211	SCREW TAPPING	2	T2S WAS 3X12 MFZN	
11		SPEAKER	1		
10	7128301211	SCREW TAPPING	4	T2S WAS 3X12 MFZN	
9		A/V JACK	1		
8		EARPHONE	1		
7		PREE AMP	1		
6		S.W TACT	5		
5	7111301011	SCREW TAPPING	1	T2S PAN 3X10 MFZN	
4	4856215201	WASHER	1	SPCC T1.5	
3	4857025401	HEAT SINK	1	A1050P-H24 T2.0	
2		PCB MAIN	1		
1		TUNER	1		
37	7122401611	SCREW TAPPING	4	T2S TRS 4X16 MFZN	
36	4855415800	SPEC PLATE	1	150ART P/E FIRM(C/TV)	
35	4850A02310	ANT ROD	1	S3BW276B (L=400)	
34	4852147800	COVER BACK	1	FR HIPS	
33	4857610000	INSU PLATE	1	PVC T1.0	
32	4857817611	CLOTH BLACK	3	FELT T0.7 L=200	
31		A/V JACK	1		
30	7111301011	SCREW TAPPING	1	T2S PAN 3x10 MFZN	
29	4856215201	WASHER	1	SPCC	
28	4857025400	HEAT SINK	1	AL T2.0	
27	4857024601	HEAT SINK	1	AL EX	
26	7111301011	SCREW TAPPING	2	T2S PAN 3x10 MFZN	
25		FBT	1		
24		S.W PUSH	1		
23	4856013302	SCREW CRT FIX	2	L=190	

6. DTQ-20Q3FS



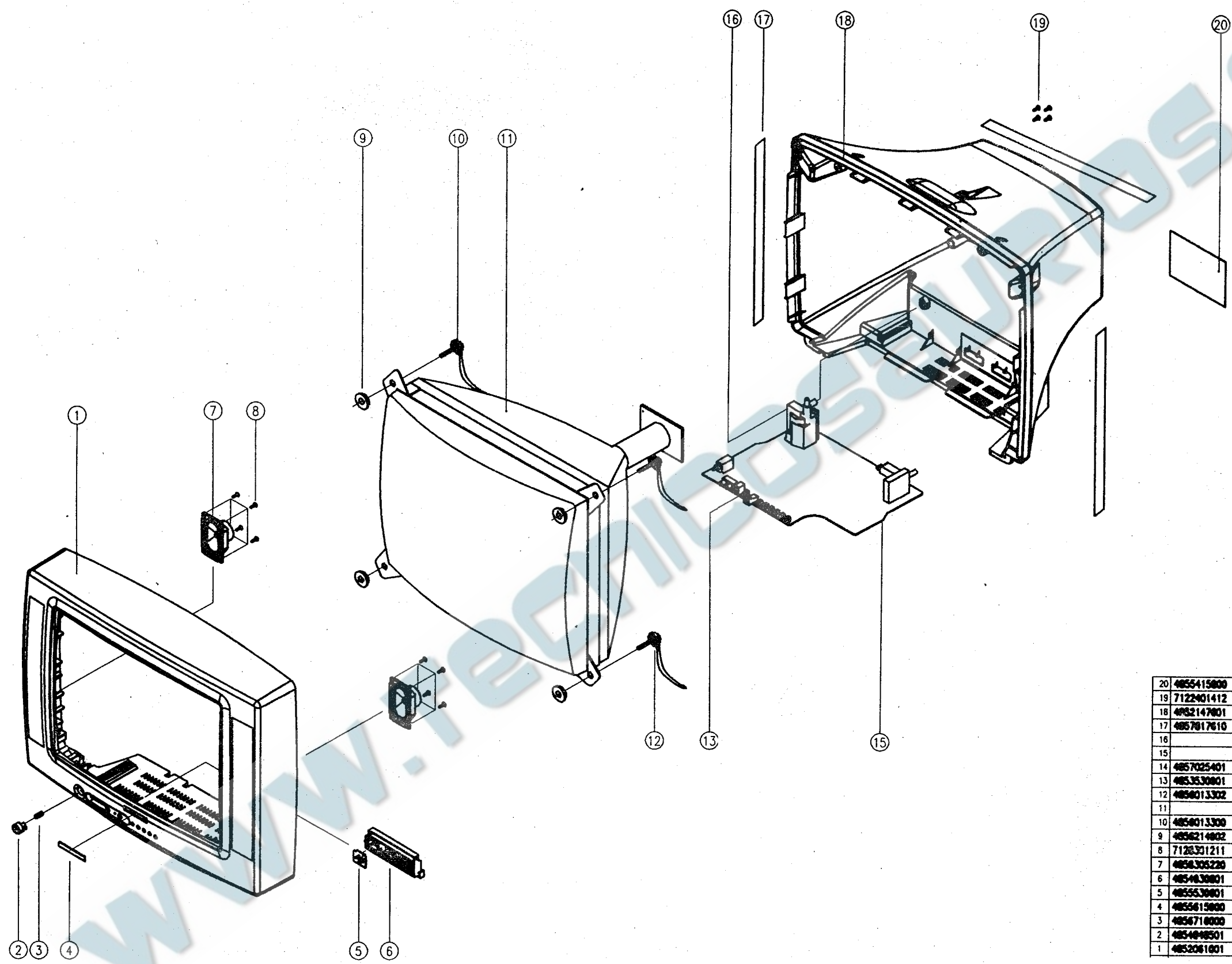
15	4855415800	SPEC PLATE	1	150 ART P/E FILM	
14	7122401412	SCREW TAPPING	5	T2S TRS 4X16 MFZN BK	
13	4852147300	COVER BACK	1	FR HIPS BK	
12	4857817610	CLOTH BLACK	2	FELT TO.7 L=300	
11	4857817610	CLOTH BLACK	1	FELT TO.7 L=300	
10	4856013300	SCREW CRT FIXING AS.	1	L=70mm	
9	4856013301	SCREW CRT FIXING AS.	1	L=140mm	
8	4852148500	WASHER RUBBER	1	CR T2.0	
7		MAIN PCB	1	CN-250	
6	7128301011	SCREW TAPPING	2	T2S WAS 3X10 MFZN	
5	4851925910	BUTTON CTRL AS	1	4934710-5532300	
4	4852063301	MASK FRONT	1	HIPS BK	
3	4855615900	MARK BRAND	1	A1050P-H24 TO.4	
2	4856717900	SPRING	1	SWPA	
1	4854850001	POWER BUTTON	1	ABS BK	

7. DTQ-20T1FS



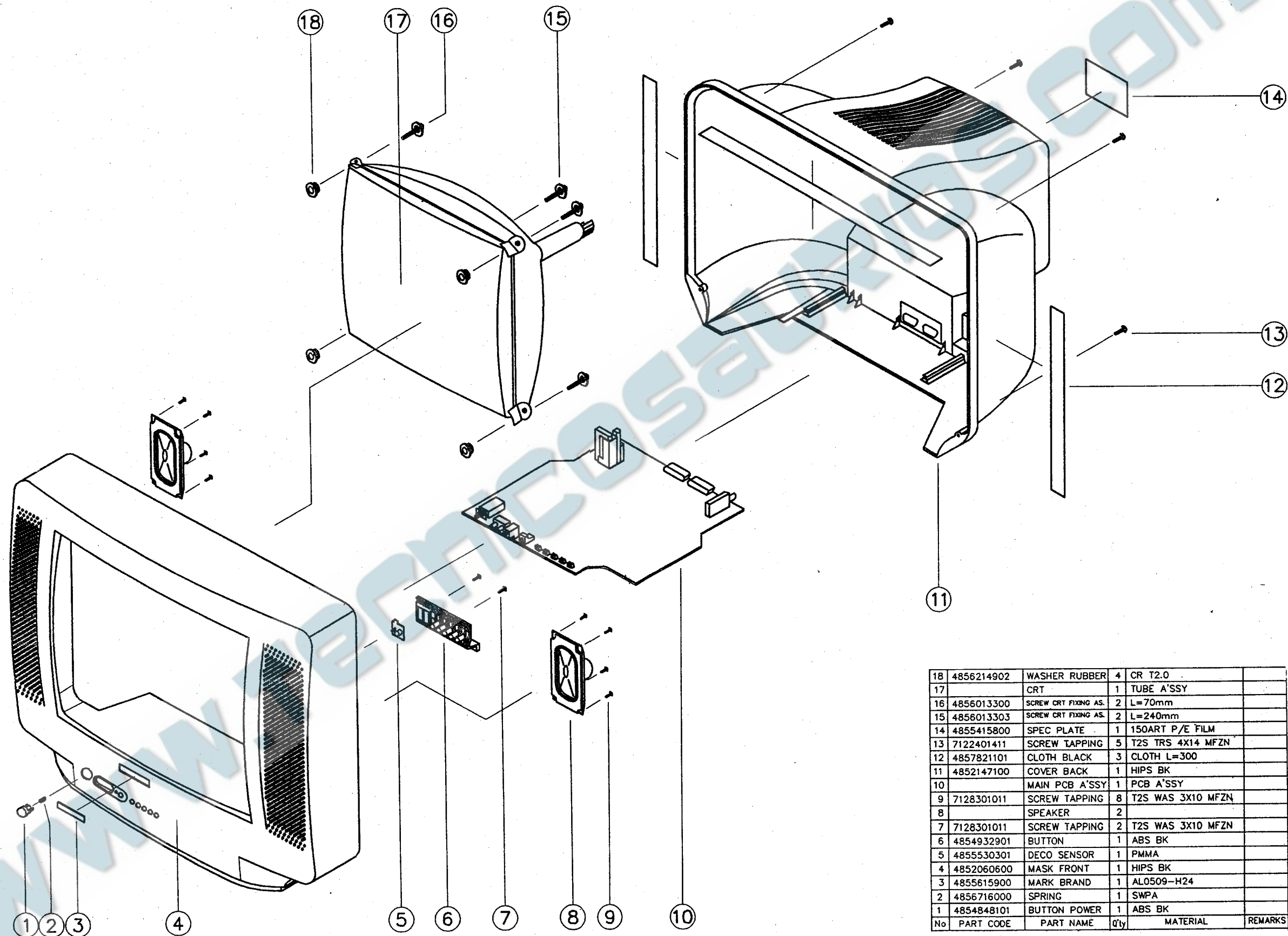
18	4856214902	WASHER RUBBER	4	CR T210
17		CRT	1	TUBE A'SSY
16	4856013300	SCREW CRT FIXING AS.	2	L=70mm
15	4856013303	SCREW CRT FIXING AS.	2	L=240mm
14	4855415800	SPEC PLATE	1	150ART P/E FILM
13	7122401411	SCREW TAPPING	5	T2S TRS 4X14 MFZN
12	4857821101	CLOTH BLACK	3	CLOTH L=300
11	4852147101	COVER BACK	1	HIPS BK
10		MAIN PCB A'SSY	1	PCB A'SSY
9	7128301011	SCREW TAPPING	8	T2S WAS 3X10 MFZN
8		SPEAKER	2	
7	7128301011	SCREW TAPPING	2	T2S WAS 3X10 MFZN
6	4854932901	BUTTON	1	ABS BK
5	4855530301	DECO SENSOR	1	PMMA
4	4852060611	MASK FRONT	1	HIPS BK
3	4855615900	MARK BRAND	1	AL0500-H24
2	4856716000	SPRING	1	SWPA
1	4854848101	BUTTON POWER	1	ABS BK

8. DTQ-20T2FS



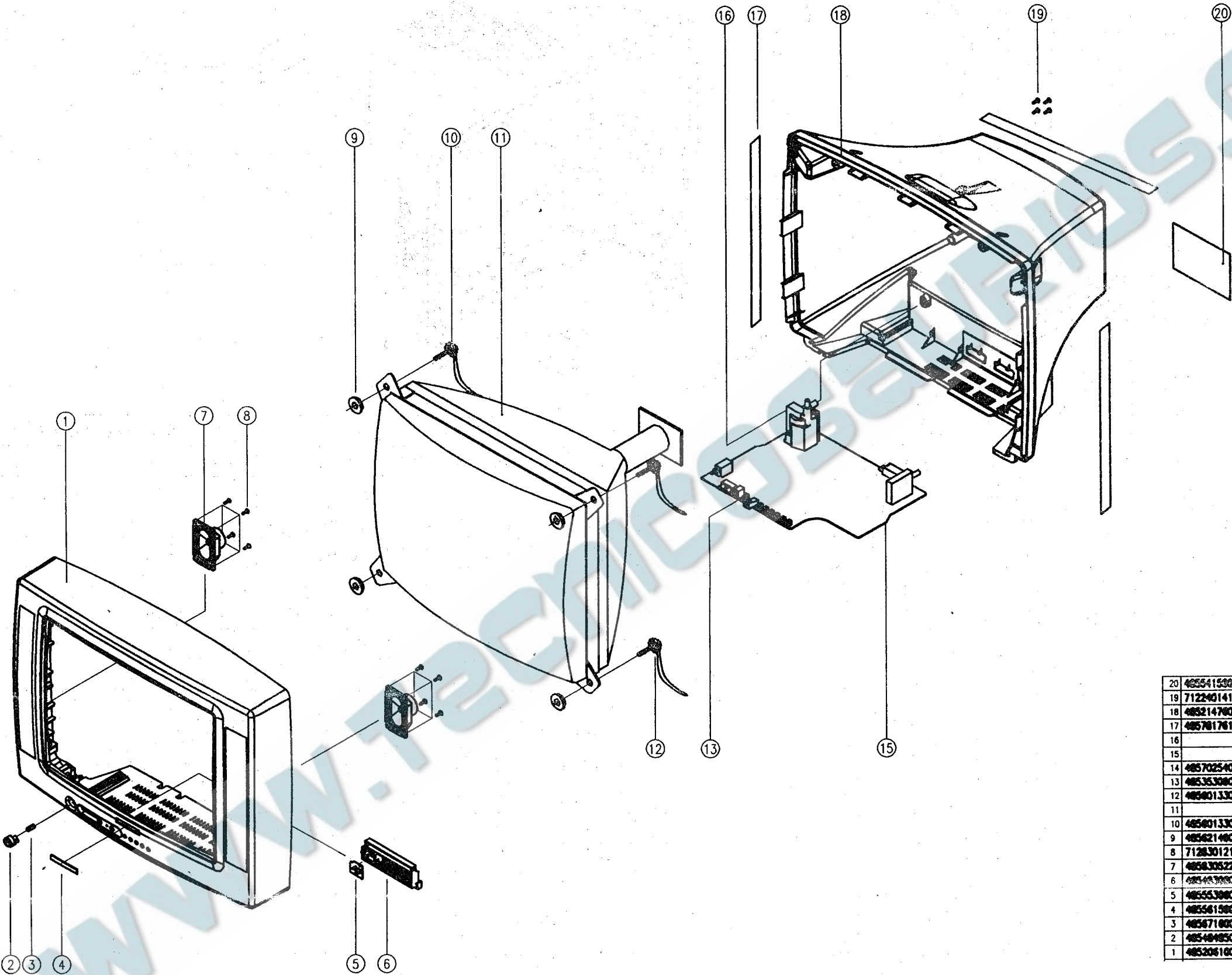
20	4855415800	SPEC PLATE	1	150ART P/E FILM(C/TM)	
19	7122401412	SCREW TAPPING	4	T25 TRS 4X14 MF2H BK	
18	4852147801	COVER BACK	1	HPS BK	
17	4857817610	CLOTH BLACK	3	FELT T0.7 L=300	
16		F. B. T			
15		MAIN PCB			CP-375
14	4857025401	HEAT SHK	1	A1050P-H24 T2	
13	4853530801	HOLDER LED	1	FR HPS BK	
12	4858013302	SCREW CRT FBING AS	2	L=180MM	
11		CRT	1		
10	4858013300	SCREW CRT FBING AS	2	L=70MM	
9	4856214802	WASHER RUBBER	4	CR T2.0	
8	7128321211	SCREW TAPPING	8	T25 WRS 3X12 MF2H	
7	4856305220	SPEAKER	2		
6	4854838801	BUTTON	1	ABS BK	
5	4855538801	DECO SENSOR	1	PMMA C.L	
4	4855415800	MARK BRAND	1	A1050P-H24 T0.4	
3	4856718800	SPRING	1	SNIPA PEG.5	
2	4854848501	BUTTON POWER	1	ABS BK	
1	4852061801	MASK FRONT	1	HPS BK	

9. DTQ-20T1AS



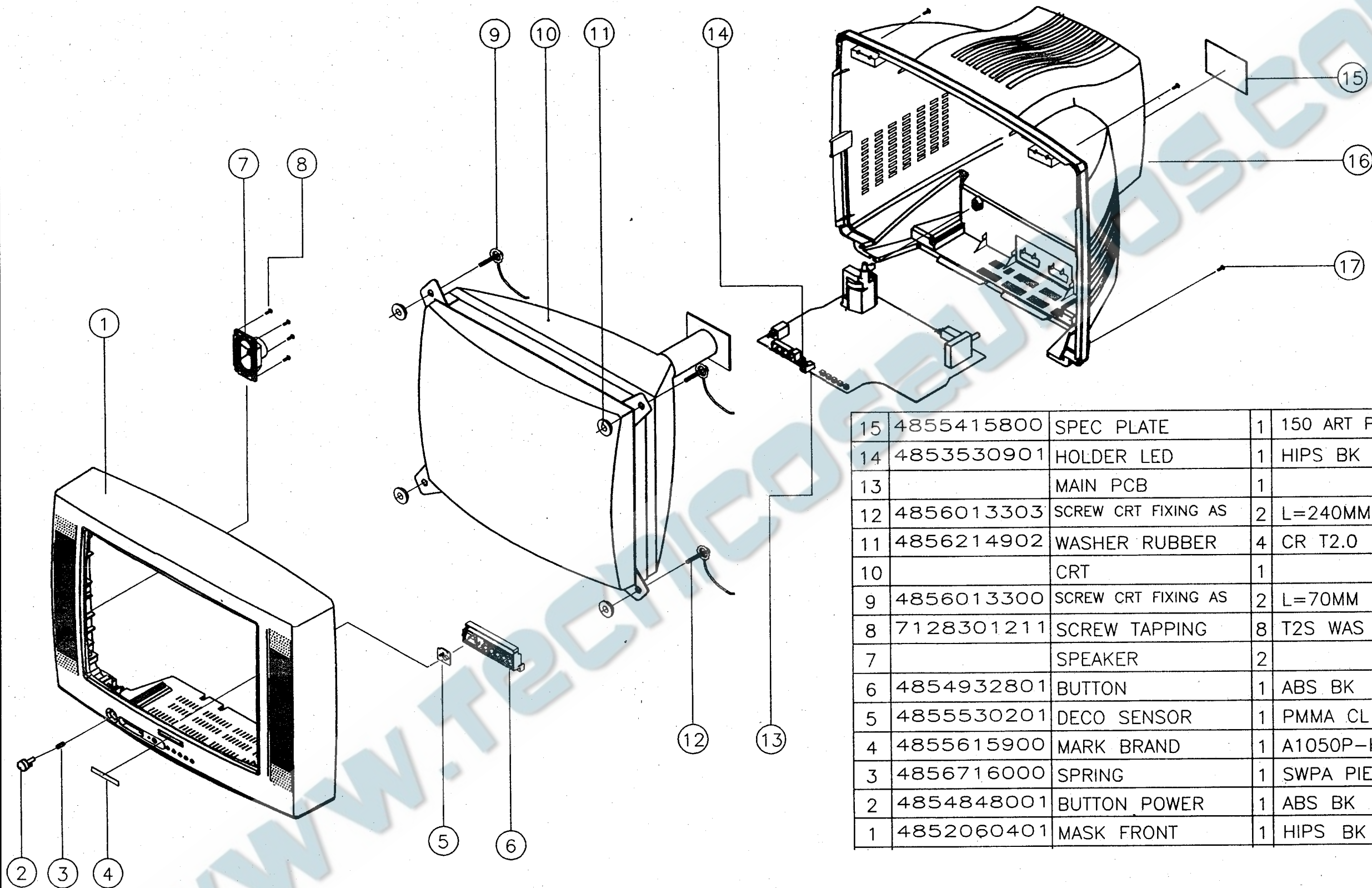
18	4856214902	WASHER RUBBER	4	CR T2.0	
17		CRT	1	TUBE A'SSY	
16	4856013300	SCREW CRT FIXING AS.	2	L=70mm	
15	4856013303	SCREW CRT FIXING AS.	2	L=240mm	
14	4855415800	SPEC PLATE	1	150ART P/E FILM	
13	7122401411	SCREW TAPPING	5	T2S TRS 4X14 MFZN	
12	4857821101	CLOTH BLACK	3	CLOTH L=300	
11	4852147100	COVER BACK	1	HIPS BK	
10		MAIN PCB A'SSY	1	PCB A'SSY	
9	7128301011	SCREW TAPPING	8	T2S WAS 3X10 MFZN	
8		SPEAKER	2		
7	7128301011	SCREW TAPPING	2	T2S WAS 3X10 MFZN	
6	4854932901	BUTTON	1	ABS BK	
5	4855530301	DECO SENSOR	1	PMMA	
4	4852060600	MASK FRONT	1	HIPS BK	
3	4855615900	MARK BRAND	1	AL0509-H24	
2	4856716000	SPRING	1	SWPA	
1	4854848101	BUTTON POWER	1	ABS BK	
No	PART CODE	PART NAME	Qty	MATERIAL	REMARKS

10. DTQ-20T2AS



20	4855415003	SPEC PLATE	1	150ART P/E FILM(C/TV)
19	7122401412	SCREW TAPPING	4	T25 TRS 4X14 MF2H BK
18	4852147801	COVER BACK	1	HPS BK
17	4857817610	CLOTH BLACK	3	FELT 10.7 L=300
16		F. B. T		
15		MAIN PCB		
14	4857025401	HEAT SINK	1	A1050P-H24 T2
13	4853530801	HOLDER LED	1	FR HPS BK
12	4854013302	SCREW CRT FBBS AS	2	L=190MM
11		CRT	1	
10	4854013300	SCREW CRT FBBS AS	2	L=70MM
9	4854214802	WASHER RUBBER	4	CR T2.0
8	7128301211	SCREW TAPPING	8	T25 WRS 3X12 MF2H
7	4854305220	SPEAKER	2	
6	4854430801	PLATE	1	ABS BK
5	4855530801	DECO SENSOR	1	PMMA C.L
4	4855415800	MARK BRAND	1	A1050P-H24 T0.4
3	4854718000	SPRING	1	SMFA PIE0.5
2	4854848501	BUTTON POWER	1	ABS BK
1	4853061801	MASK FRONT	1	HPS BK

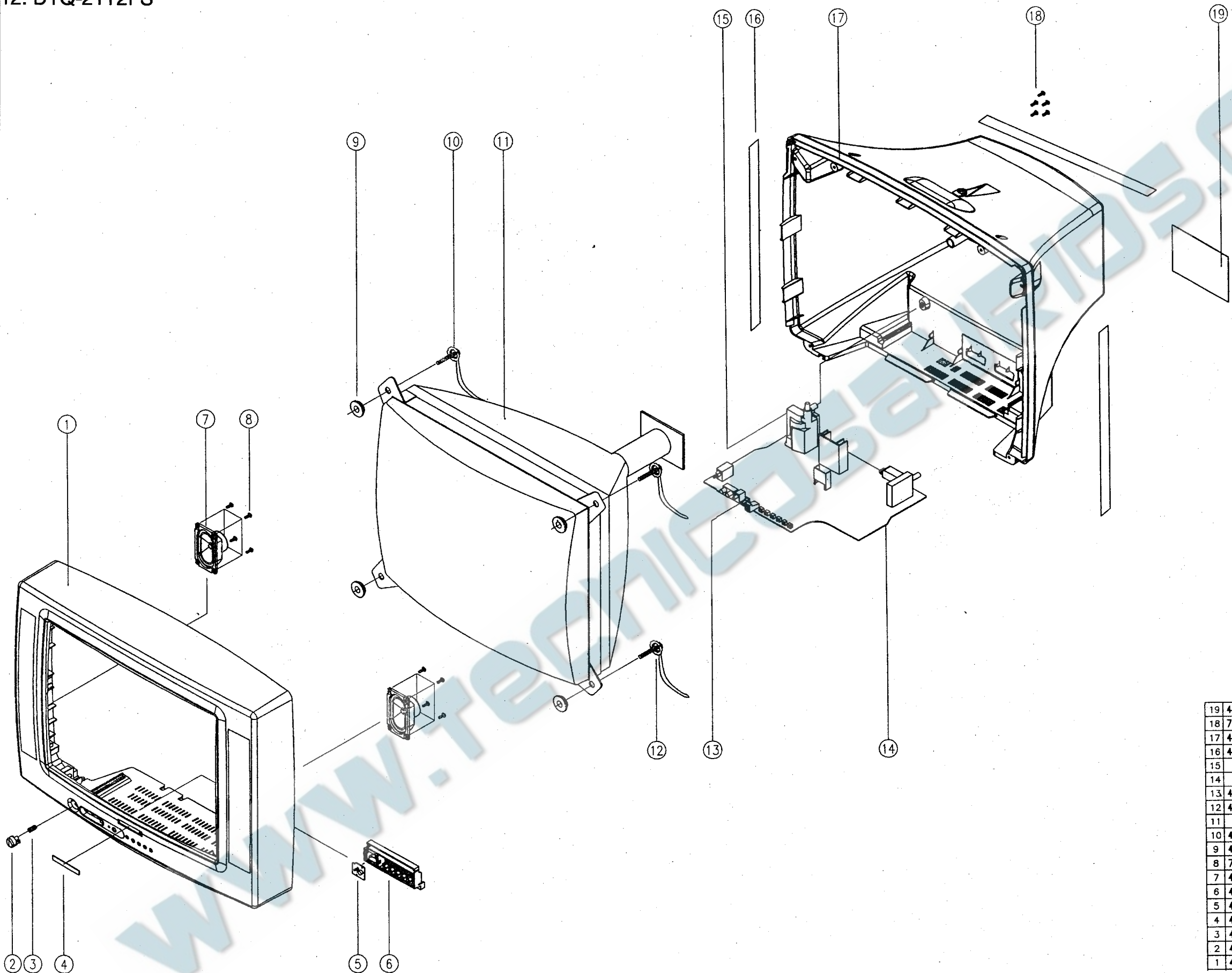
11. DTQ-21T1FS



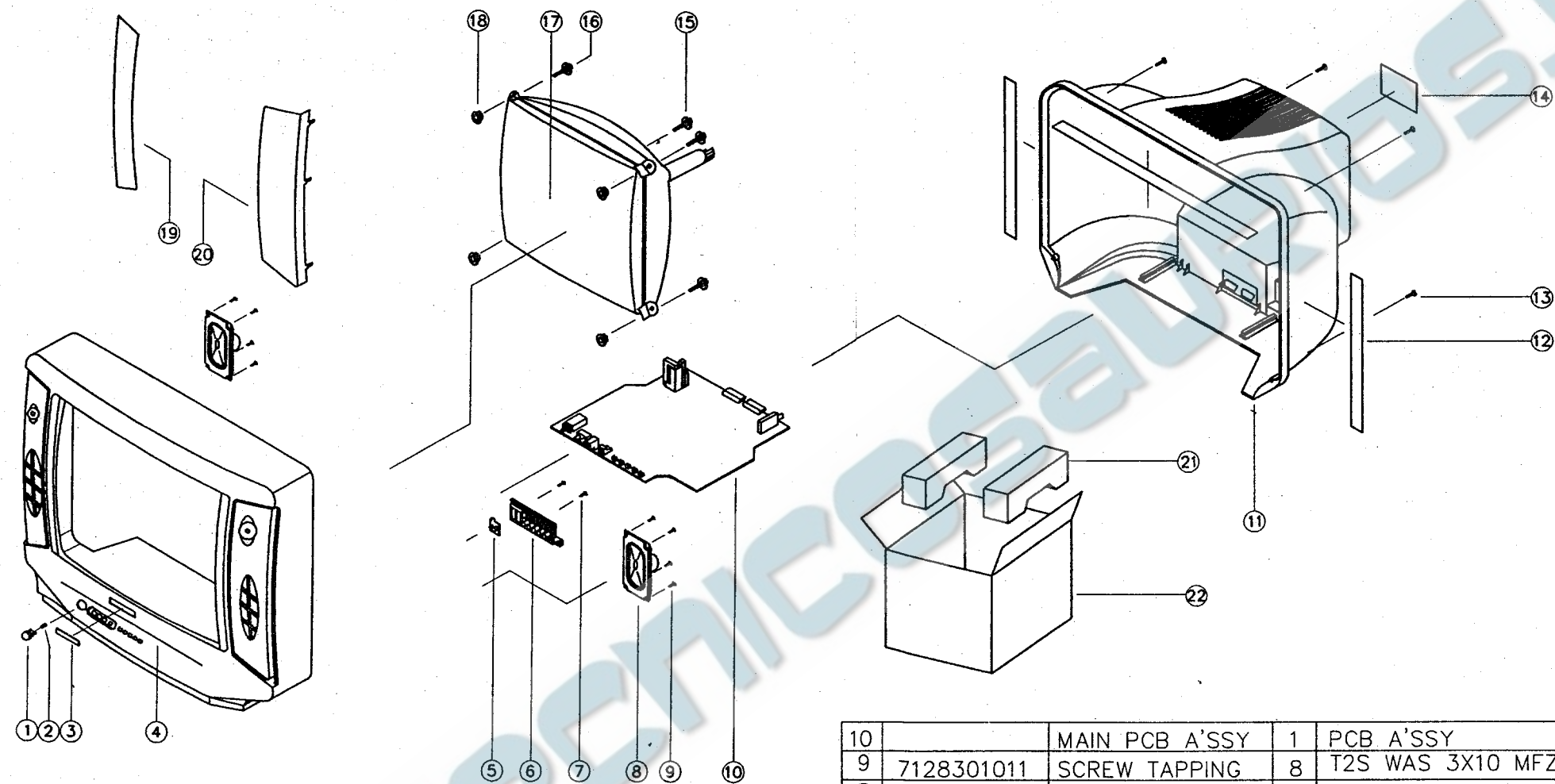
15	4855415800	SPEC PLATE	1	150 ART P/E FILM(C/TV)	
14	4853530901	HOLDER LED	1	HIPS BK	
13		MAIN PCB	1		CP-375
12	4856013303	SCREW CRT FIXING AS	2	L=240MM	
11	4856214902	WASHER RUBBER	4	CR T2.0	
10		CRT	1		
9	4856013300	SCREW CRT FIXING AS	2	L=70MM	
8	7128301211	SCREW TAPPING	8	T2S WAS 3X12 MFZN	
7		SPEAKER	2		
6	4854932801	BUTTON	1	ABS BK	
5	4855530201	DECO SENSOR	1	PMMA CL	
4	4855615900	MARK BRAND	1	A1050P-H24 T0.4	
3	4856716000	SPRING	1	SWPA PIE T0.5	
2	4854848001	BUTTON POWER	1	ABS BK	
1	4852060401	MASK FRONT	1	HIPS BK	

17	7122401412	SCREW TAPPING	4	T2S TRS 4X14 MFZN BK	
16	4852147002	COVER BACK	1	HIPS BK	

12. DTQ-21T2FS

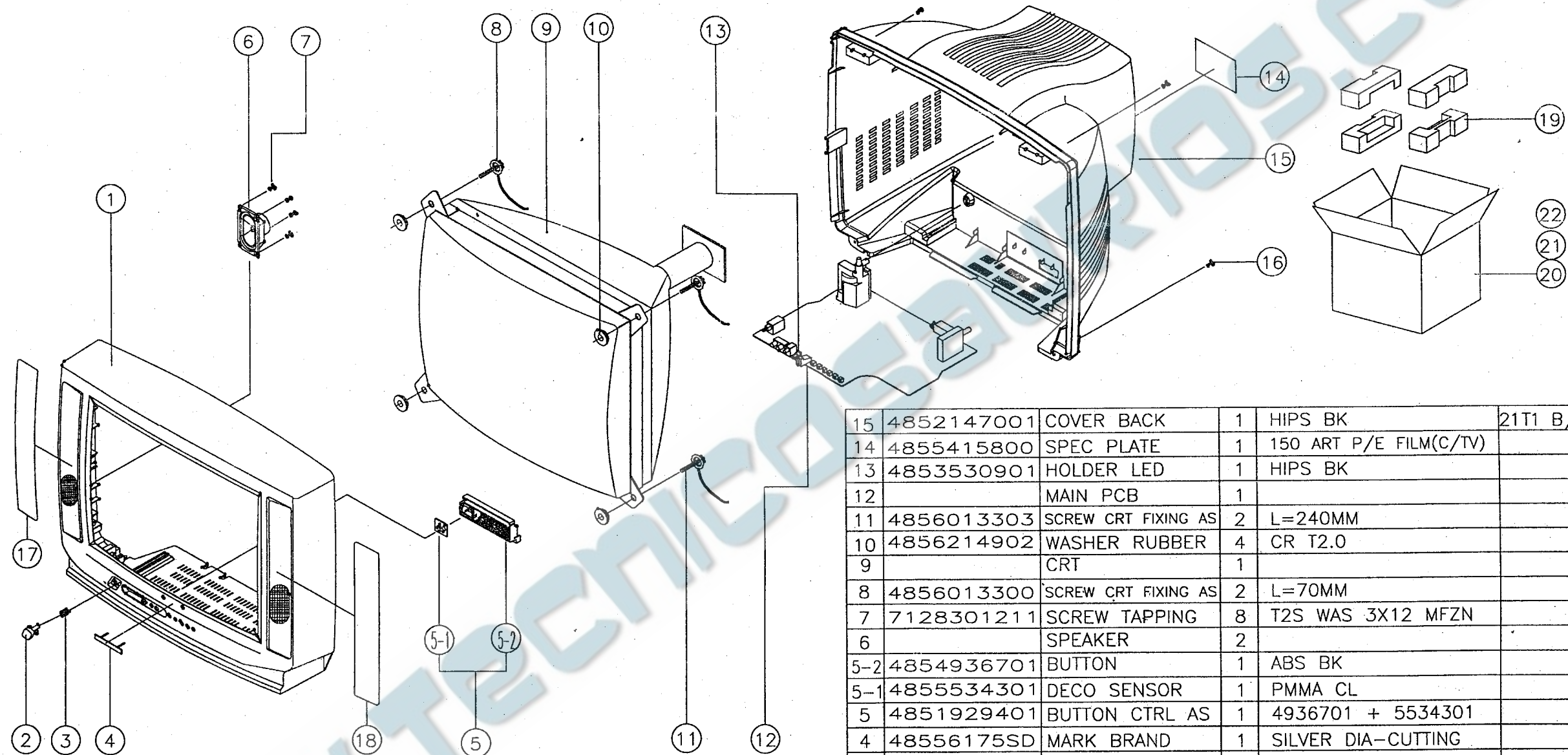


19	4855415800	SPEC PLATE	1	150ART P/E FILM(C/TV)
18	7122401612	SCREW TAPPING	5	T2S TRS 4X16 MFZN BK
17	4852147501	COVER BACK	1	HIPS BK
16	4857817610	CLOTH BLACK	3	FELT T0.7 L=300
15		F. B. T		
14		PCB		
13	4853530901	HOLDER LED	1	FR HIPS BK
12	4856013302	SCREW CRT FIXING AS	2	L=190MM
11		CRT	1	
10	4856013300	SCREW CRT FIXING AS	2	L=70MM
9	4856214901	WASHER RUBBER	4	CR T1.0
8	7128301211	SCREW TAPPING	8	T2S WAS 3X12 MFZN
7	4858305220	SPEAKER	2	
6	4854930701	BUTTON	1	ABS BK
5	4855530701	DECO SENSOR	1	PMMA C.L
4	4855615900	MARK BRAND	1	A1050P-H24 T0.4
3	4856716000	SPRING	1	SWPA PIE0.5
2	4854848401	BUTTON POWER	1	ABS BK
1	4852060901	MASK FRONT	1	HIPS BK



22	4858050700	BOX CARTON	1	DW-2	
21	4858182001	PAD	1	EPS	
20	4852535500	GRILL SPKR R	1	EGI T0.5	
19	4852535400	GRILL SPKR L	1	EGI T0.5	
18	4856214902	WASHER RUBBER	4	CR T2.0	
17		CRT	1	TUBE A'SSY	
16	4856013300	SCREW CRT FIXING AS.	2	L=70mm	
15	4856013303	SCREW CRT FIXING AS.	2	L=240mm	
14	4855415800	SPEC PLATE	1	150ART P/E FILM	
13	7122401411	SCREW TAPPING	5	T2S TRS 4X14 MFZN	
12	4857821101	CLOTH BLACK	3	CLOTH L=300	
11	4852147100	COVER BACK	1	HIPS BK	
No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS

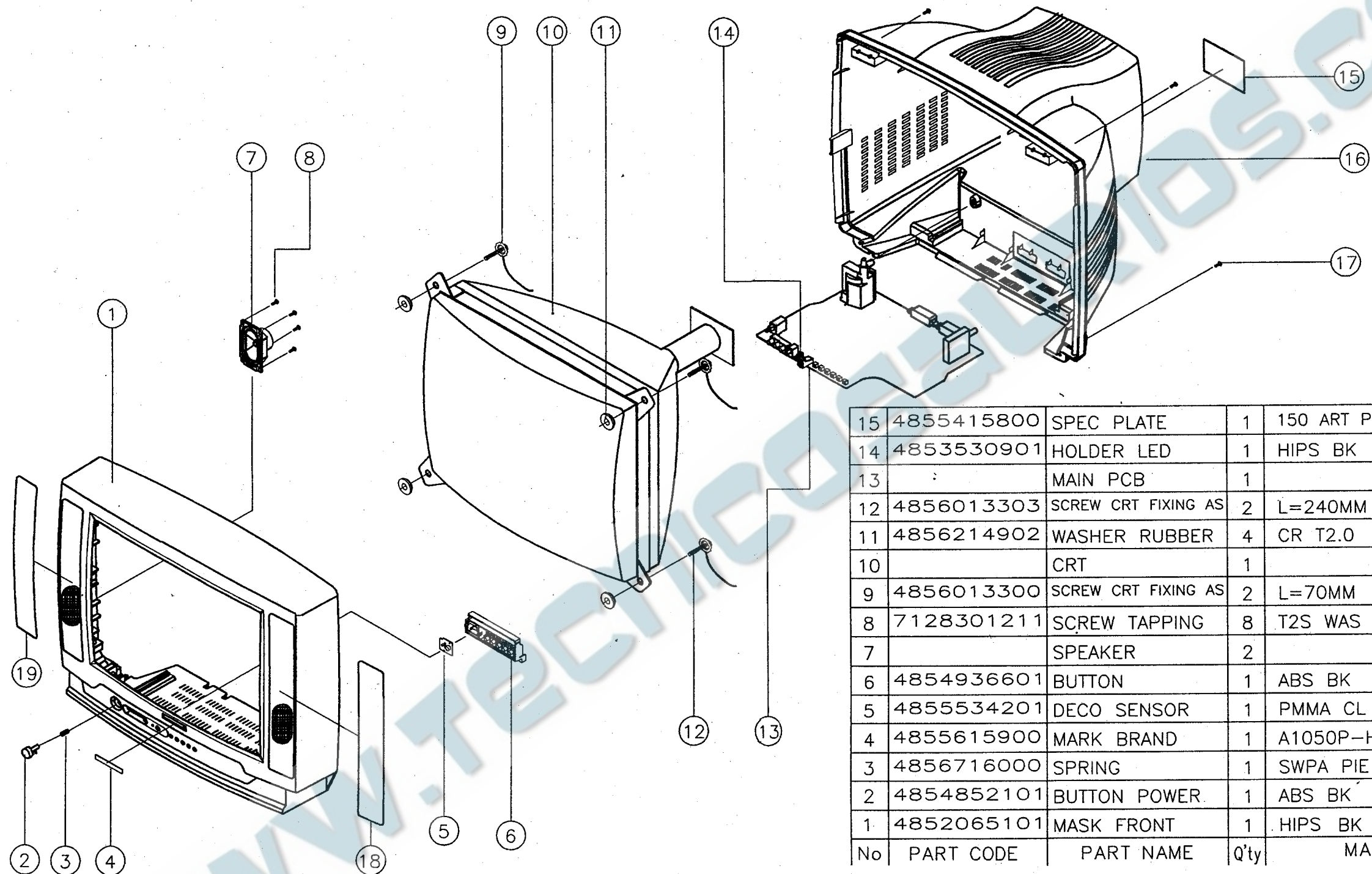
10		MAIN PCB A'SSY	1	PCB A'SSY	
9	7128301011	SCREW TAPPING	8	T2S WAS 3X10 MFZN	
8		SPEAKER	2		
7	7128301011	SCREW TAPPING	2	T2S WAS 3X10 MFZN	
6	4854934901	BUTTON	1	ABS BK	
5	4855532501	DECO SENSOR	1	PMMA CL	
4	4852063500	MASK FRONT	1	FR HIPS BK	
3	4855615900	MARK BRAND	1	AL0509-H24	
2	4856716000	SPRING	1	SWPA	
1	4854850301	BUTTON POWER	1	ABS BK	
No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS



22	6520010200	STAPLE PIN	12	18M/M JADONG
21	4858261300	BAG PE	1	LDPE T0.02X1-300X1000
20	4858047601	BOX CARTON	1	DW-3 21T1
19	4858184200	PAD	1	EPS
18	4852537400	GRILL SPKR R	1	PS T0.5
17	4852537300	GRILL SPKR L	1	PS T0.5
16	7122401412	SCREW TAPPING	4	T2S TRS 4X14 MFZN BK

15	4852147001	COVER BACK	1	HIPS BK	21T1 B/C
14	4855415800	SPEC PLATE	1	150 ART P/E FILM(C/TV)	
13	4853530901	HOLDER LED	1	HIPS BK	
12		MAIN PCB	1		
11	4856013303	SCREW CRT FIXING AS	2	L=240MM	
10	4856214902	WASHER RUBBER	4	CR T2.0	
9		CRT	1		
8	4856013300	SCREW CRT FIXING AS	2	L=70MM	
7	7128301211	SCREW TAPPING	8	T2S WAS 3X12 MFZN	
6		SPEAKER	2		
5-2	4854936701	BUTTON	1	ABS BK	
5-1	4855534301	DECO SENSOR	1	PMMA CL	
5	4851929401	BUTTON CTRL AS	1	4936701 + 5534301	
4	48556175SD	MARK BRAND	1	SILVER DIA-CUTTING	
3	4856716000	SPRING	1	SWPA PIE T0.5	
2	4854852301	BUTTON POWER	1	ABS BK	
1	4852065201	MASK FRONT	1	HIPS BK	

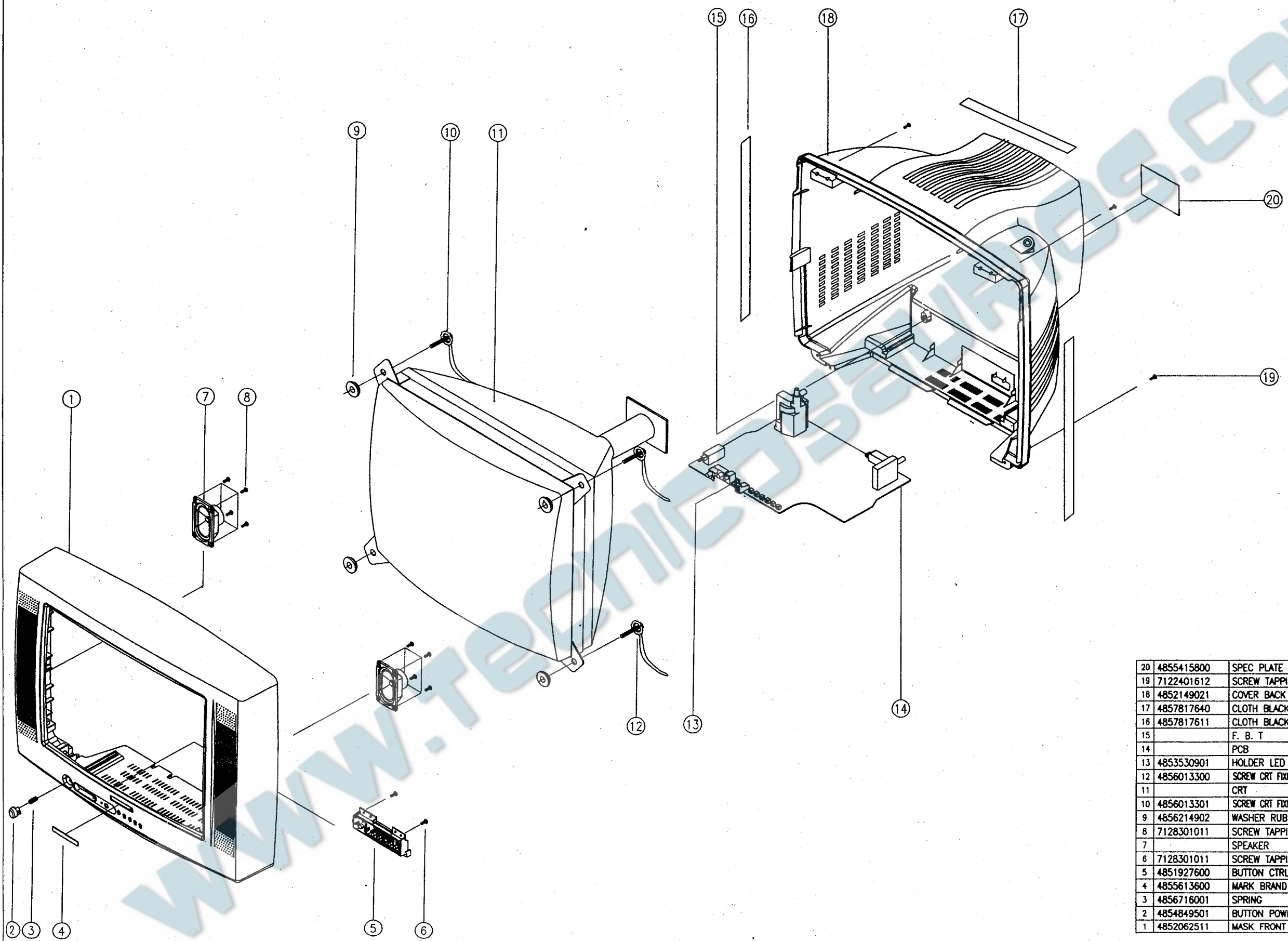
No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS
UNITS	m/m	Designed by	Checked by	Inspected by	Approved by
SCALE	1/1				
Daewoo Electronics CO.,LTD.		MODEL	PART NAME		
Mechanical Design Team, TV Research Center		REFERENCE	DEVELOPMENT DWG		
			D/N	485009B4	



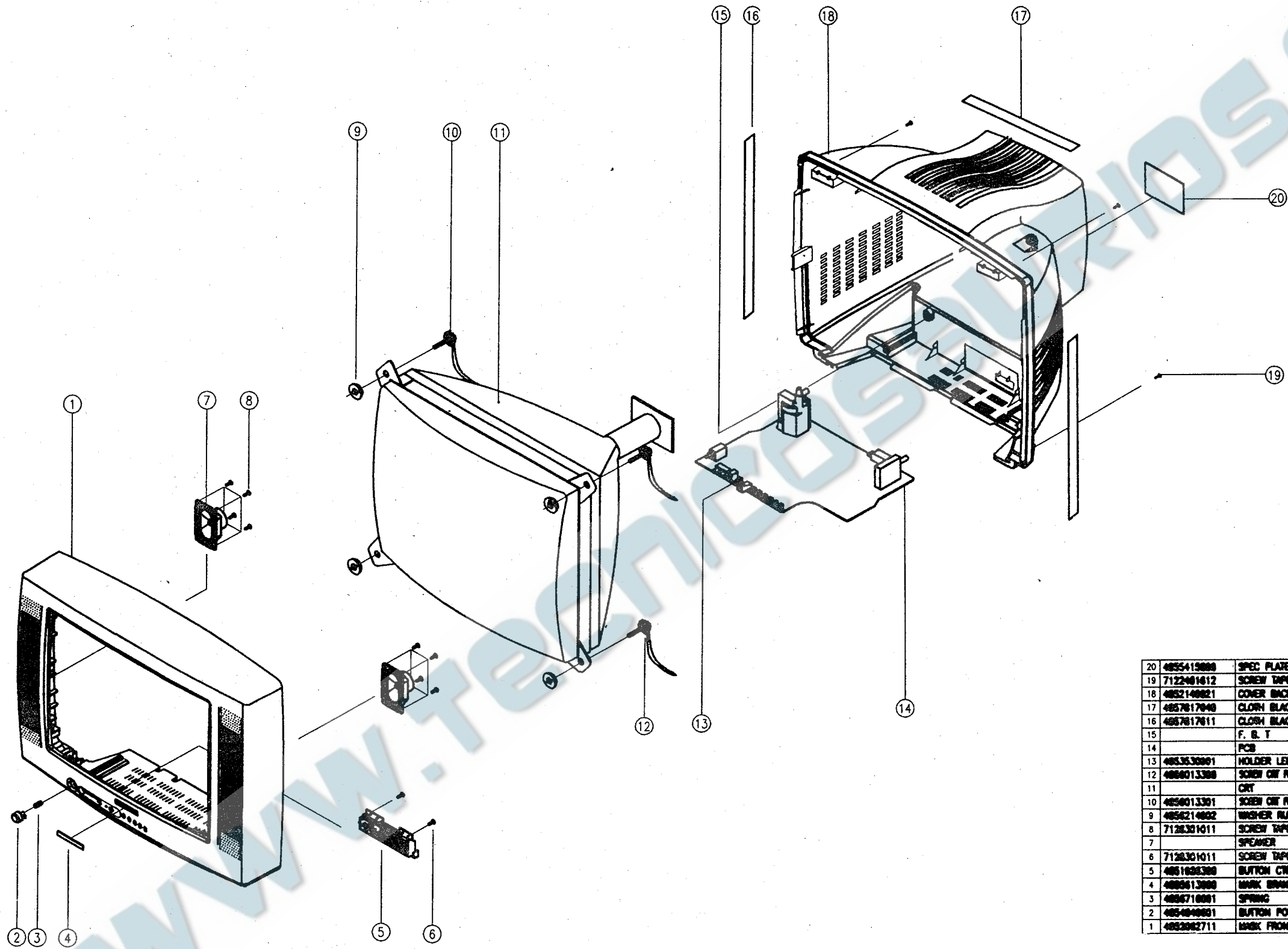
19	4852537201	GRILL SPKR L	1	PS SHEET T0.5	
18	4852537101	GRILL SPKR R	1	PS SHEET T0.5	
17	7122401412	SCREW TAPPING	4	T2S TRS 4X14 MFZN BK	
16	4852147001	COVER BACK	1	HIPS BK	

15	4855415800	SPEC PLATE	1	150 ART P/E FILM(C/TV)	
14	4853530901	HOLDER LED	1	HIPS BK	
13		MAIN PCB	1		CP-380
12	4856013303	SCREW CRT FIXING AS	2	L=240MM	
11	4856214902	WASHER RUBBER	4	CR T2.0	
10		CRT	1		
9	4856013300	SCREW CRT FIXING AS	2	L=70MM	
8	7128301211	SCREW TAPPING	8	T2S WAS 3X12 MFZN	
7		SPEAKER	2		
6	4854936601	BUTTON	1	ABS BK	
5	4855534201	DECO SENSOR	1	PMMA CL	
4	4855615900	MARK BRAND	1	A1050P-H24 T0.4	
3	4856716000	SPRING	1	SWPA PIE T0.5	
2	4854852101	BUTTON POWER	1	ABS BK	
1	4852065101	MASK FRONT	1	HIPS BK	
No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS

16. DTQ-14T1AS



20	4855415800	SPEC PLATE	1	150ART P/E FILM(C/TV)	
19	7122401612	SCREW TAPPING	5	T2S TRS 4X16 MFZN BK	
18	4852149021	COVER BACK	1	HIPS BK	CORE"A3"
17	4857817640	CLOTH BLACK	1	FELT T0.7 L=100	
16	4857817611	CLOTH BLACK	2	FELT T0.7 L=200	
15		F. B. T			
14		PCB			CP-375
13	4853530901	HOLDER LED	1	FR HIPS BK	
12	4856013300	SCREW CRT FIXING AS	2	L = 80MM	
11		CRT	1	A34JLL90X01	
10	4856013301	SCREW CRT FIXING AS	2	L = 140MM	
9	4856214902	WASHER RUBBER	4	CR T2.0	
8	7128301011	SCREW TAPPING	8	T2S WAS 3X10 MFZN	
7		SPEAKER	2		
6	7128301011	SCREW TAPPING	2	T2S WAS 3X10 MFZN	
5	4851927600	BUTTON CTRL AS	1	4934101+5531701	
4	4855613600	MARK BRAND	1	COPPER T0.4	
3	4856716001	SPRING	1	SWPA PIE0.5	
2	4854849501	BUTTON POWER	1	ABS BK	
1	4852062511	MASK FRONT	1	HIPS BK	CORE"A3"



20	4855419888	SPEC PLATE	1	150ART P/E FILM(C/T)	
19	7122401612	SCREW TAPPING	5	T25 WRS 4X16 MFZN BK	
18	4852148821	COVER BACK	1	HPS BK	CORE "A"
17	4857817948	CLOTH BLACK	1	FELT 70.7 L=180	
16	4857817611	CLOTH BLACK	2	FELT 70.7 L=280	
15		F. B. T			
14		PCB			CP-3PS
13	4853630801	HOLDER LED	1	FR HPS BK	
12	4856013388	SCREEN CRT RING AS	2	L = 80MM	
11		CRT	1	A34JLLS0M51	
10	4856013301	SCREEN CRT RING AS	2	L = 148MM	
9	4856214802	WASHER RUBBER	4	OR T2.0	
8	7128301011	SCREW TAPPING	8	T25 WRS 3X10 MFZN	
7		SPEAKER	2		
6	7128301011	SCREW TAPPING	2	T25 WRS 3X10 MFZN	
5	4851828388	BUTTON CTRL AS	1	4834281+5531801	
4	4850613888	MARK BRND	1	COPPER 70.4	
3	4856718801	SPRING	1	SWPA PEO.5	
2	4854848801	BUTTON POWER	1	ABS BK	
1	4852082711	MASK FRONT	1	HPS BK	CORE "B"

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W.TECHNICOSSAURIOSS

DAEWOO

DAEWOO ELECTRONICS CO., LTD.

686, AHYEON-DONG, MAPO-GU,
SEOUL, KOREA.

C.P.O. BOX 8003 SEOUL KOREA

TELEX : DWELEC K28177-8

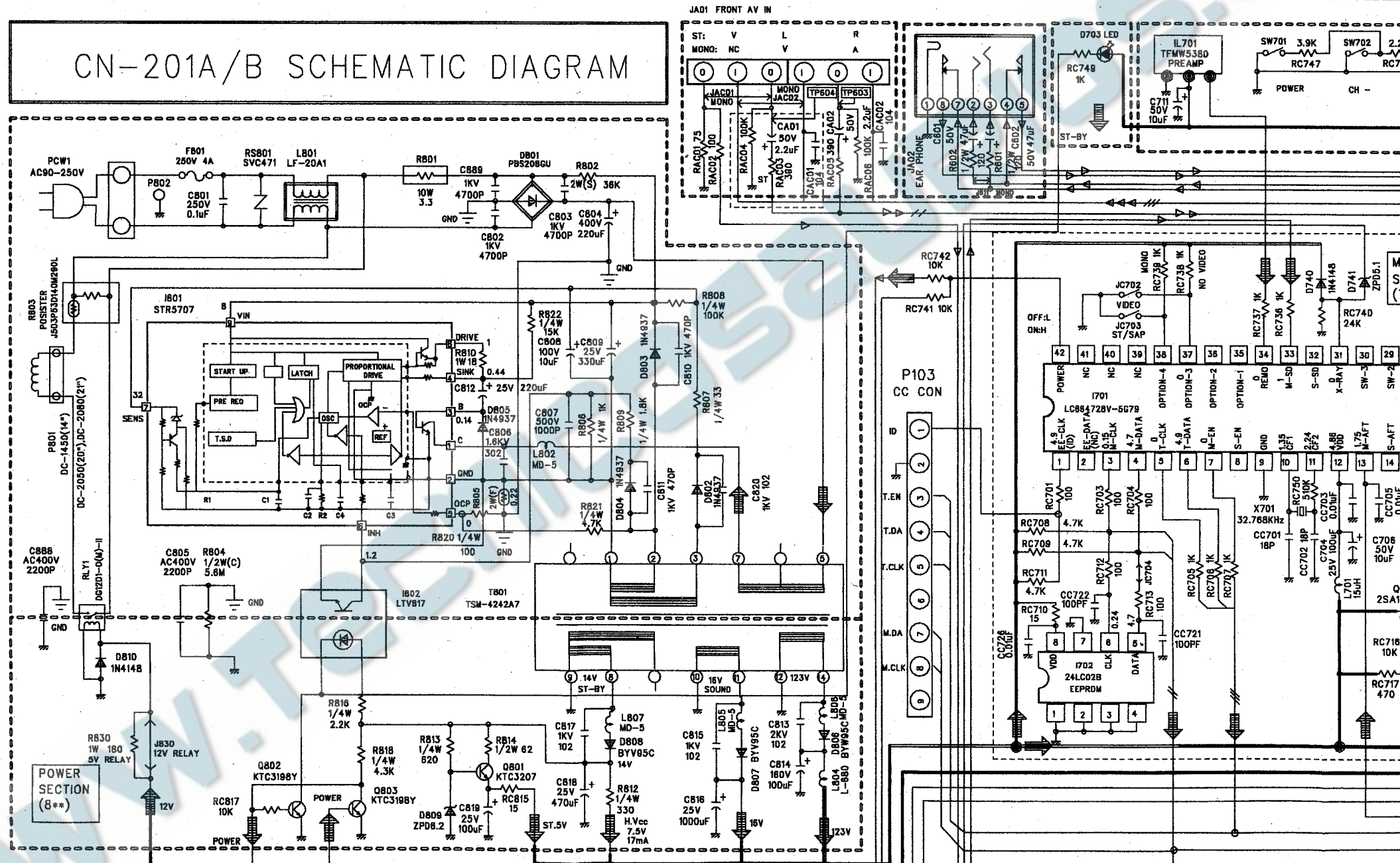
F A X : (02) 364-5588,5305

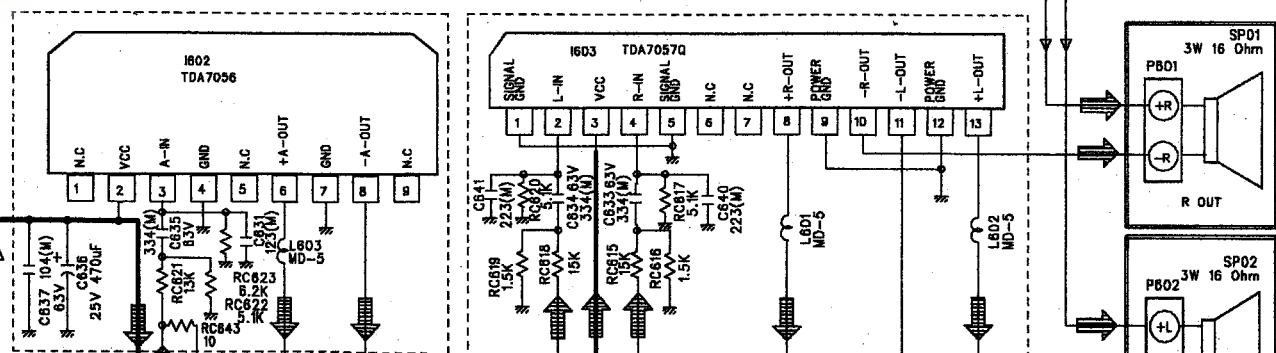
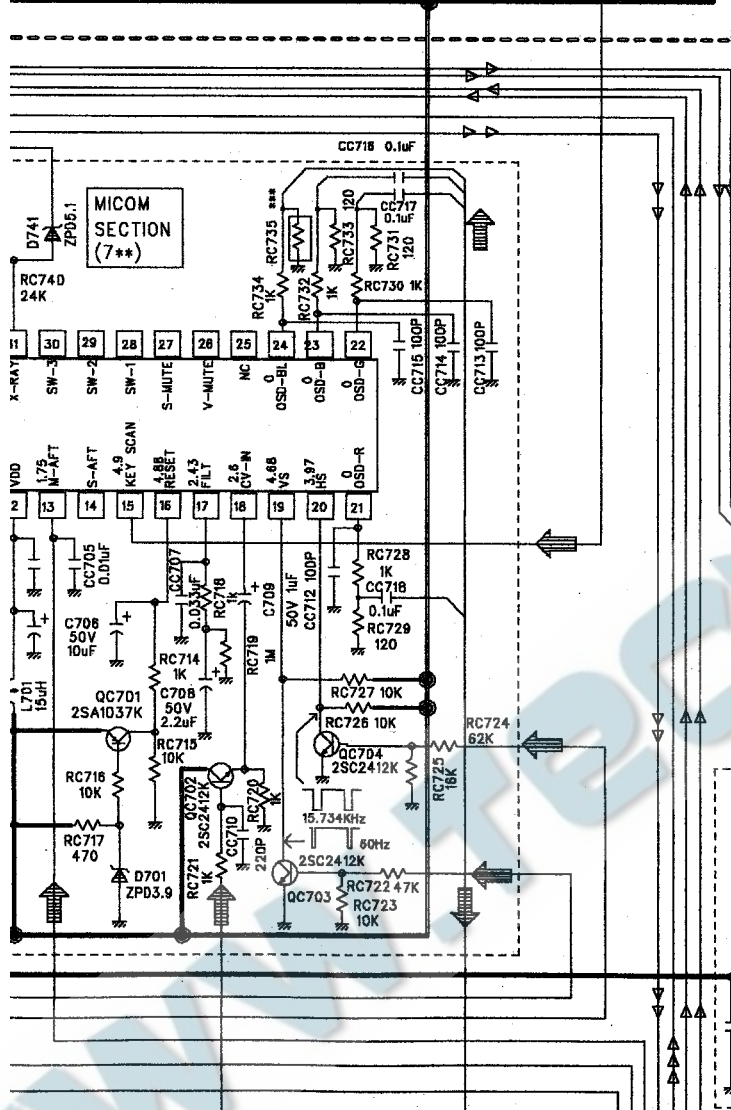
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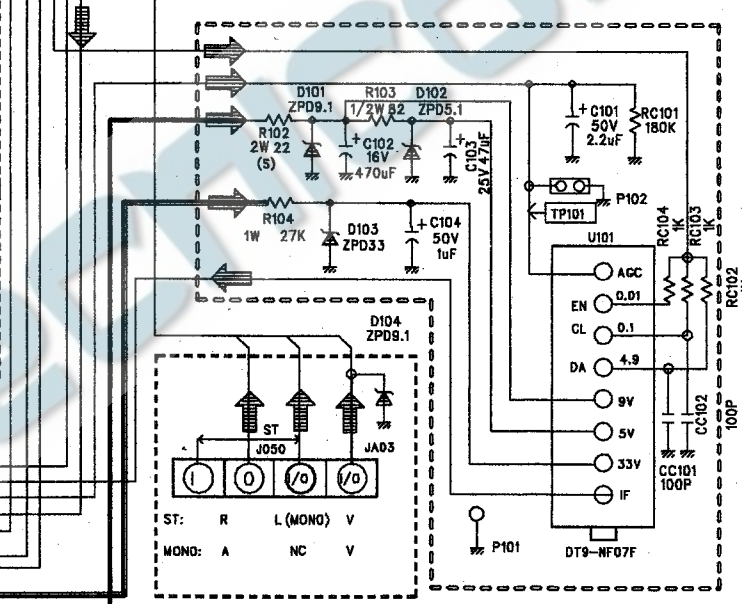
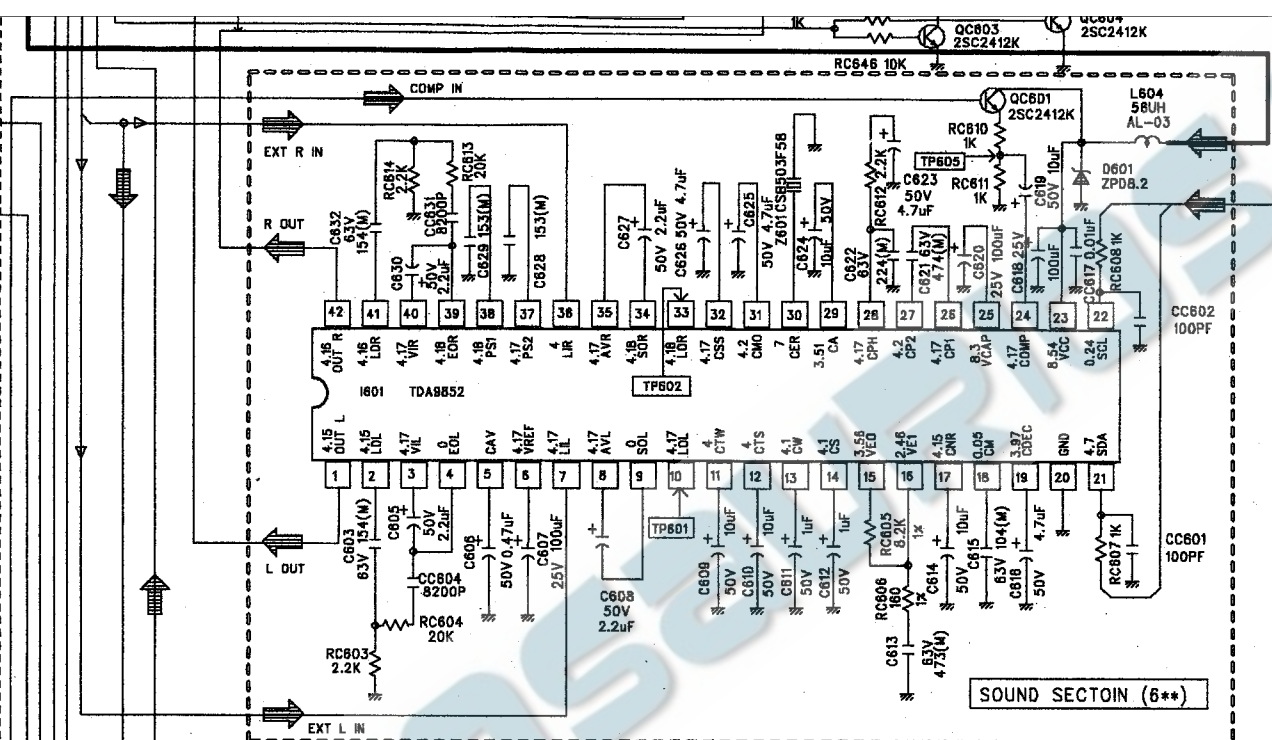
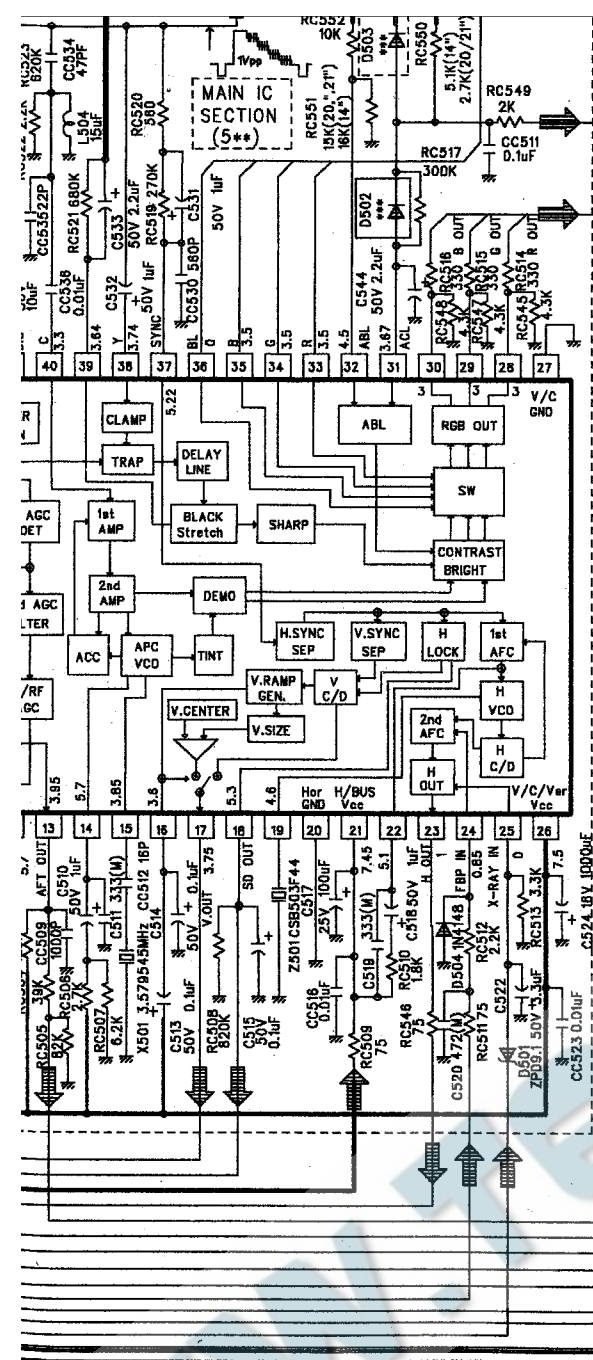
S/M NO :CN201N-010

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CN-201A/B SCHEMATIC DIAGRAM







DRAWN	DESIGNED	CHECKED	APPROVED
D.S. CHOI	D.S. CHOI	J.G. LEE	
CHASSIS	FILE NAME	ISSUED	REVISED
CN-201A/B	CN-201A/B	97.2.17	98.2.20
DESIGNER	REV NO.	SHEET	SCHEM NO.
D.S. CHOI	02	1/1	
DAEWOO ELECTRONICS TV RESEARCH CENTER			