

TOSHIBA

Toshiba 13A23W Service Manual

1

2

Table Of Contents

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43

•

[Table of Contents](#)

•

Bookmarks

[Download this manual](#)

Quick Links



FILE NO. 140-200312

SERVICE MANUAL

COLOR TELEVISION **TOSHIBA**

13A23W

DOCUMENT CREATED IN JAPAN, Apr., 2003

Table of Contents

[Next Page](#)

1
2
3
4
5

Related Manuals for Toshiba 13A23W

[CRT TV Toshiba 13A23 Owner's Manual](#)

Toshiba owner's manual color television 13a23,13a23w (18 pages)

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(15 pages)

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(43 pages)

[TV Toshiba 13A26 Service Manual](#)

(33 pages)

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(64 pages)

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(47 pages)

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(38 pages)

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19" bv series (36 pages)

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Digital series (44 pages)

Summary of Contents for Toshiba 13A23W

[Page 1](#) FILE NO. 140-200312 SERVICE MANUAL COLOR TELEVISION 13A23W DOCUMENT
CREATED IN JAPAN, Apr., 2003...

[Page 2: Servicing Notices On Checking](#)

SERVICING NOTICES ON CHECKING 1. KEEP THE NOTICES 6. AVOID AN X-RAY As for the places which need special attentions, Safety is secured against an X-ray by consider- they are indicated with the labels or seals on the ing about the cathode-ray tube and the high cabinet, chassis and parts.

[Page 3: Table Of Contents](#)

TABLE OF CONTENTS SERVICING NOTICES ON CHECKINGA1-1 A1-1 HOW TO ORDER PARTSIMPORTANTA1-1 TABLE OF CONTENTSA2-1 A3-1~A3-10 GENERAL SPECIFICATIONSDISASSEMBLY INSTRUCTIONS 1. REMOVAL OF ANODE CAPB1-1 2. REMOVAL AND INSTALLATION OF FLAT PACKAGE ICB2-1, B2-2 SERVICE MODE LIST

[Page 4: General Specifications](#)

GENERAL SPECIFICATIONS CRT Size / Visual Size 13 inch / 335.4mmV System CRT Type Normal Deflection degree Magnetic Field BV/BH +0.45G/0.18G Color System NTSC Speaker 1Speaker Position Bottom Size 3 Inch Impedance Sound Output 1.0 W 10%(Typical) 0.8 W NTSC3.58+4.43 /PAL60Hz Tuning Broadcasting System System M...

[Page 5](#) GENERAL SPECIFICATIONS On Screen Menu Display Menu Type Character Picture Contrast Brightness Color Tint Sharpness Audio Bass Treble Balance BBE On/Off Stable Sound On/Off CH Set Up TV/CABLE(CATV) Auto CH Memory Add/ Delete Language V-chip Lock On Timer CH Label Favorite CH Color Stream DVD/DTV Control Level...

[Page 6](#) GENERAL SPECIFICATIONS G-10 Remote Unit RC-EH Control Glow in Dark Remocon Format Toshiba Custom Code 40-BF h Power Source Voltage(D.C) UM size x pcs UM-4 x 2 pcs Total Keys Keys Keys Power CH Up CH Down Volume Up Volume Down...

[Page 7](#) GENERAL SPECIFICATIONS G-11 Features Auto Degauss Auto Shut Off Canal+ CATV Anti-theft Rental Memory(Last CH) Memory(Last Volume) V-Chip Type USA,ORION Type Auto Search CH Allocation Channel Lock Just Clock Function Game Position CH Label VM Circuit Full OSD Premiere Comb Filter Lines Auto CH Memory Hotel Lock...

[Page 8](#) GENERAL SPECIFICATIONS G-13 Interface Switch Front Power System Select Main Power SW Sub Power Channel Up/Reset Channel Down/Enter Volume Up/Set Up Volume Down/Set Down MENU=Volume Up+Volume Down Rear AC/DC TV/CATV Selector Degauss Main Power SW Indicator Power Stand-by On Timer Terminals Front Video Input...

[Page 9](#) GENERAL SPECIFICATIONS CRT Size / Visual Size 13 inch / 335.4mmV System CRT Type Normal Deflection degree Magnetic Field BV/BH +0.45G/0.18G Color System NTSC Speaker 1Speaker Position Bottom Size 3 Inch Impedance Sound Output 1.0 W 10%(Typical) 0.8 W NTSC3.58+4.43 /PAL60Hz Tuning Broadcasting System System M...

[Page 10](#) GENERAL SPECIFICATIONS On Screen Menu Display Menu Type Character Picture Contrast Brightness Color Tint Sharpness Audio Bass Treble Balance BBE On/Off Stable Sound On/Off CH Set Up TV/CATV Auto CH Memory Add/ Delete Language V-chip Lock On Timer CH Label Favorite CH Color Stream DVD/DTV Control Level...

[Page 11](#) GENERAL SPECIFICATIONS G-10 Remote Unit RC-EH Control Glow in Dark Remocon Format Toshiba Custom Code 40-BF h Power Source Voltage(D.C) UM size x pcs UM-4 x 2 pcs Total Keys Keys Keys Power CH Up CH Down Volume Up Volume Down...

[Page 12](#) GENERAL SPECIFICATIONS G-11 Features Auto Degauss Auto Shut Off Canal+ CATV Anti-theft Rental Memory(Last CH) Memory(Last Volume) V-Chip Type USA,ORION Type Auto Search CH Allocation Channel Lock Just Clock Function Game Position CH Label VM Circuit Full OSD Premiere Comb Filter Lines Auto CH Memory Hotel Lock...

[Page 13](#) GENERAL SPECIFICATIONS G-13 Interface Switch Front Power System Select Main Power SW Sub Power Channel Up/Reset Channel Down/Enter Volume Up/Set Up Volume Down/Set Down MENU=Volume Up+Volume Down Rear AC/DC TV/CATV Selector Degauss Main Power SW Indicator Power Stand-by On Timer Terminals Front Video Input...

[Page 14: Disassembly Instructions](#)

DISASSEMBLY INSTRUCTIONS 3. After one side is removed, pull in the opposite direction to 1. REMOVAL OF ANODE CAP remove the other. Read the following NOTED items before starting work. NOTE After turning the power off there might still be a potential Take care not to damage the Rubber Cap.

[Page 15: Removal And Installation Of Flat Package Ic](#)

DISASSEMBLY INSTRUCTIONS When IC starts moving back and forth easily after REMOVAL AND INSTALLATION OF desoldering completely, pickup the corner of the IC using a FLAT PACKAGE IC tweezers and remove the IC by moving with the IC desoldering machine. (Refer to Fig. 2-3.)
REMOVAL NOTE Put the Masking Tape (cotton tape) around the Flat...

[Page 16](#) DISASSEMBLY INSTRUCTIONS INSTALLATION When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Take care of the polarity of new IC and then install the new Soldering Iron. (Refer to Fig. 2-8.) IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily.

[Page 17: Service Mode List](#)

SERVICE MODE LIST This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily. To enter the Service Mode, press both set key and remote control key for more than 1 second. Set Key Remocon Key Operations Releasing of V-CHIP PASSWORD and LOCK PASSWORD.

[Page 18: Electrical Adjustments](#)

ELECTRICAL ADJUSTMENTS 1. ADJUSTMENT PROCEDURE 2. BASIC ADJUSTMENTS Read and perform these adjustments when repairing the 2-1: CUT OFF circuits or replacing electrical parts or PCB assemblies. Adjust the unit to the following settings. CAUTION R.DRIVE=10, B.DRIVE=10, R.BIAS=64, G.BIAS=64, • Use an isolation transformer when performing any service B.BIAS=64, BRI.CENT=120, CONT.MAX=40.

[Page 19](#) ELECTRICAL ADJUSTMENTS 2-6: VERTICAL SIZE Receive the monoscope pattern. Using the remote control, set the brightness and contrast to normal position. Activate the adjustment mode display of Fig. 1-1 and press the channel button (06) on the remote control to select "V".

[Page 20](#) ELECTRICAL ADJUSTMENTS 3. PURITY AND CONVERGENCE 3-3: STATIC CONVERGENCE ADJUSTMENTS NOTE Adjust after performing adjustments in section 3-2. NOTE Receive the crosshatch pattern from the color bar Turn the unit on and let it warm up for at least 30 generator.

[Page 21](#) ELECTRICAL ADJUSTMENTS 4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION) S101 CRT PCB CP806 TP022 TU001 CP803A TP023 FB401 CP802B CP801 DEGAUSS COIL T502 CP502 S501B CD501 AC IN S501A CD101B SPEAKER CD101A MAIN PCB...

[Page 22: Block Diagrams](#)

BLOCK DIAGRAM TU00 EAR PHONE JACK 11 12 J1001 CH. DOWN IC1001 AN7511 VOL. DOWN SPEAKER SOUND AMP SP1001 CH. UP RGB Proc.2 VOL. UP OSD SW Q801 CONTRAST BRIGHTNESS RED OUT RGB OUTPUT Stage POWER DRIVE Chroma Proc. Q802 CUT OFF ACC/C-BPF HV BLK OS101...

[Page 23: Printed Circuit Boards Main/Crt](#)

PRINTED CIRCUIT BOARDS MAIN/CRT (INSERTED PARTS) SOLDER SIDE C406 D408 R403 CP601 C435 W003 D410 CP803A S101A D405 W002 W008 R410 C403 W007 C448_1 FB401 C434 C440 C401 R421 R408 W001 W062 Q402 L401 R542 W011 HS402 W830 D509 H5501 R446 R503...

[Page 24](#) PRINTED CIRCUIT BOARDS MAIN (CHIP MOUNTED PARTS) SOLDER SIDE R703 R702 R704 R128 R101 C112 R610 R609 C627 C626 R627 C1004_2 R108 R105 C609 C104 C102 R129 R104 C501_2 R420 R003 R004 C001...

[Page 25](#) MICON/CHROMA/TUNER SCHEMATIC DIAGRAM (MAIN PCB) H.CTL Q607 KTC3198 R621 220 1/4W R618 FROM/TO DEFLECTION/CRT C118 R608 CLAMP 6.3V 1K 1/4W R110 P.CON+B C101 V_OUT R109 10K 1/4W 0.01 F 1/4W C630 V_FEEDBACK AT+5V ABCL R124_1 H_OUT X-RAY C629 1 CNVSS 41 NC R.OUT 0.01...

[Page 26](#) TV POWER SCHEMATIC DIAGRAM (MAIN PCB) 4A 125V CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 4A 125V (F501) FUSE. TO SOUND/AV ATTENTION :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE

N'UTILISER QUE DES FUSIBLE DE MEME TYPE 4A 125V (F501).

[Page 27](#) DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB) (CRT PCB) CP802A B2013H02-5P CP802B B2013H02-5P FROM MICON/CHROMA/TUNER CD802 CLAMP CLAMP CLAMP CLAMP CLAMP CLAMP G.OUT G.OUT G.OUT G.OUT G.OUT R.OUT R.OUT R.OUT R.OUT R.OUT B.OUT B.OUT B.OUT B.OUT V-OUT IC IC401 AN5522 CP803A B2013H02-4P CP803B B2013H02-4P CD803 HEATER...

[Page 28](#) SOUND/AV SCHEMATIC DIAGRAM (MAIN PCB) ACCESSORY RCA JACK WHITE TO MICON/CHROMA/TUNER J703 (FRONT) AV1-09D-4 R703 W811 AUDIO 2 UM-4 AUDIO_IN A_IN BT001 R03(AB)E_2P_G R704 V_IN VIDEO 2 TM101 VIDEO_IN RC-EH040 UM-4 RCA JACK YELLOW BT002 J702 R03(AB)E_2P_G AV1-09D-3 EAR PHONE JACK J1001 MSJ-035-12A_PC R1007...

[Page 29: Micon/Chroma/Tuner](#)

WAVEFORMS MICON/CHROMA/TUNER 1 0.5V 2ms/div 5 1V 20µs/div 9 20V 20µs/div 20V 20µs/div 6 1V 20µs/div 10 2V 20µs/div 200V 20µs/div 200mV 20µs/div 1V 20µs/div DEFLECTION/CRT 10V 5ms/div 0.5V 5ms/div 8 0.5V 5ms/div NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

[Page 30: Sound/Av](#)

WAVEFORMS SOUND/AV 0.5V 1ms/div 10V 5ms/div 50V 20µs/div 1V 1ms/div 200mV 500µs/div 15 50V 20µs/div 20 500mV 20µs/div 16 50V 20µs/div NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

[Page 31: Mechanical Exploded Views](#)

MECHANICAL EXPLODED VIEW PCB110 (CRT PCB ASS'Y) PCB010 101D (MAIN PCB ASS'Y) 101B 101C 101A...

[Page 32: Mechanical Replacement Parts List](#)

MECHANICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No. Description
AE000086 A3M120G720 CABINET,FRONT ASSY 101A AE000087 701WPJC186 CABINET,FRONT
101B AD302172 713WPAA052 GLASS,LED 101C AD302173 713WPAA053 GUIDE,REMOCON
101D AE000088 735WPBA668 BUTTON,FRAME AE000537 A3M120G740 CABINET,BACK ASSY
AE000090 722549A183 SHEET,RATING AD300132 7230006818 SHEET,CAUTION AD302177
735WPAA505...

[Page 33: Electrical Replacement Parts List](#)

ELECTRICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No. Description
RESISTORS ! R401 BZ210089 R4X5T6273F R,METAL 27K OHM 1/6W ! R408 BZ210092
R4X5T6103F R,METAL 10K OHM 1/6W ! R409 BZ210089 R4X5T6273F R,METAL 27K OHM 1/6W !
R429 AD301700 R635814R7J R,FUSE 4.7 OHM 1W R447...

[Page 34](#) ELECTRICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No.
Description DIODES D604 BZ410058 D97U08R21B DIODE,ZENER MTZJ8.2B T-77 D606
BZ410043 D2WT011E10 DIODE,SILICON 11E1-EIC IC101 AD302159 I56F07091A OEC7091A
IC199 AD302160 A3M105A015 IC (FOR USA) S-24C02BDP-1A IC199 AE000082 A3M106A015 IC
(FOR CANADA) S-24C02BDP-1A ! IC401 BZ611053...

[Page 35](#) ELECTRICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No.
Description MISCELLANEOUS FH502 BZ614005 06710T0006 HOLDER,FUSE EYF-52BC OS101
AD301048 0773071001 REMOTE RECEIVER RPM7138-H5 S101 AD302168 WBL6026038 FLAT
CABLE AWM2468 AWG26 4C BLACK 260MM S102 BZ614371 WCL6834038 FLAT CABLE
AWM2468 AWG26 5C GRAY 340MM SP1001 AD300689 070Y132018...

[Page 36](#) TOSHIBA CORPORATION 1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001,
JAPAN...

[Page 37](#) FILE NO. 140-200312A SUPPLEMENT SERVICE MANUAL COLOR TELEVISION 13A23W -
SUMMARY- This supplement serves as an update to the original Service Manual, file number
140-200312. Please refer to this Supplement in conjunction with the original Service Manual
when servicing this model.

[Page 38](#) TOSHIBA CORPORATION DIGITAL MEDIA NETWORK COMPANY VISUAL MEDIA NETWORK DIV. INTERNATIONAL CUSTOMER SERVICE & SUPPORT DEPT [11F-B] TOSHIBA BLDG. 1-1, SHIBAURA 1-CHOME, MINATOKU, TOKYO 105-8001, JAPAN FACSIMILE: (03)5444-9439 PONE: (03)3457-3536 SERVICE INSTRUCTION FILE NO. 140-200312A DATE:Nov.,2003 RANK: Product: COLOR TELEVISION...

[Page 39](#) ELECTRICAL REPLACEMENT PARTS LIST MFR'S VERSION A MFR'S VERSION B REF. NO. PART NO. DESCRIPTION TSB P/N PART NO. DESCRIPTION TSB P/N CAUSE TU001 0163100002 RF UNIT ENG36A01G AD302169 0163100007 RF UNIT ENG36A01GR AE001528 Improvement of over modulation. MAIN PCB ASS'Y (FOR USA) MAIN PCB ASS'Y (FOR USA) PCB010 A3M120G010 (VERSION A) TMC558A...

[Page 40](#) TOSHIBA CORPORATION DIGITAL MEDIA NETWORK COMPANY VISUAL MEDIA NETWORK DIV. INTERNATIONAL CUSTOMER SERVICE & SUPPORT DEPT [11F-B] TOSHIBA BLDG. 1-1, SHIBAURA 1-CHOME, MINATOKU, TOKYO 105-8001, JAPAN FACSIMILE: (03)5444-9439 PONE: (03)3457-3536 SERVICE INSTRUCTION FILE NO. 140-200312B DATE:Nov.,2003 RANK: Product: COLOR TELEVISION...

[Page 41](#) IC199 memory data Cause Address From Change of MICON IC. How to Change memory data Enter DATA SET mode by setting VOLUME to minimum. Press both VOL. DOWN button on the set and Channel button (6) on the remote control for more than 1 second. ADDRESS and DATA should appear as FIG 1.

[Page 42](#) ELECTRICAL REPLACEMENT PARTS LIST MFR'S VERSION B MFR'S VERSION C REF. NO. PART NO. DESCRIPTION TSB P/N PART NO. DESCRIPTION TSB P/N CAUSE IC101 I56F07091A OEC7091A AD302159 I56F07091B OEC7091B AE002802 MICON VERSION UP A3M120A010 MAIN PCB ASS'Y(VERSION B) A3M120A010 MAIN PCB ASS'Y (VERSION C) PCB010 AE002731 AE002731...

[Page 43](#) TOSHIBA CORPORATION 1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN...