



# **TOSHIBA**

Toshiba 13A25C Service Manual



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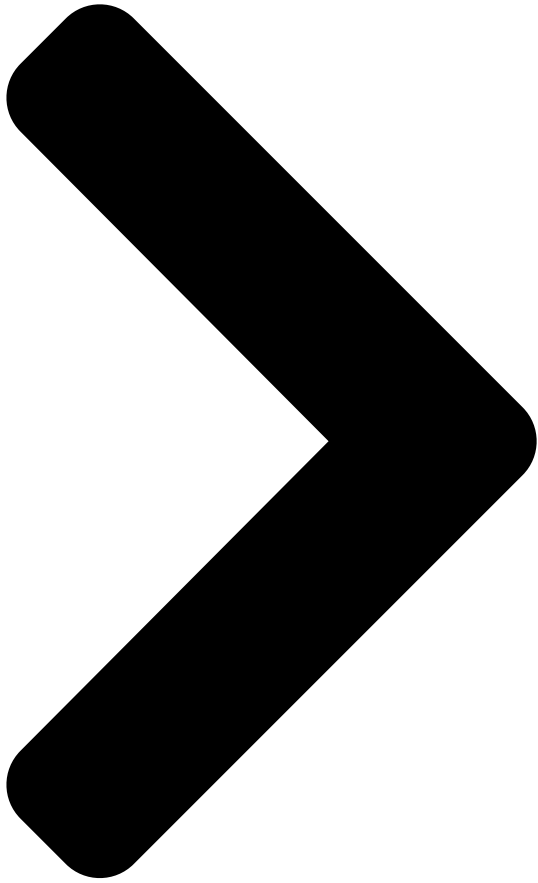
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FILE NO. 050-200503  
(MFR'S VERSION A)

SERVICE MANUAL  
**TOSHIBA**  
COLOR TELEVISION

# 13A25 **TOSHIBA**

# 13A25C

DOCUMENT CREATED IN JAPAN, February, 2005

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Toshiba color television owner's manual 13a25c (15 pages)

### [CRT TV Toshiba 13A25 Service Manual](#)

(10 pages)

### [TV Toshiba 13A25 Service Manual](#)

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13a21 user's guide (4 pages)

### [TV Toshiba 13A21 Service Manual](#)

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### [TV Toshiba 13A23W Service Manual](#)

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### [TV Toshiba 13A21C Service Manual](#)

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## Summary of Contents for Toshiba 13A25C

### [Page 1: Service Manual](#)

FILE NO. 050-200503 (MFR'S VERSION A) SERVICE MANUAL COLOR TELEVISION 13A25 13A25C  
DOCUMENT CREATED IN JAPAN, February, 2005...

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

When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Befor applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.) 13A25/13A25C A1-1...

### [Page 3: About Lead Free Solder \(Pbf\)](#)

When soldering or unsoldering, completely remove all of the solder from the pins or solder area, and be sure to heat the soldering points with the lead free solder until it melts sufficiently. Recommendations Recommended lead free solder composition is Sn-3.0Ag-0.5Cu. A1-2 13A25/13A25C...

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G-1, G-2 TV POWER ..... G-3, G-4 DEFLECTION/CRT .....G-5, G-6 SOUND/AV ..... G-7, G-8 WAVEFORMS ..... H-1, H-2 MECHANICAL EXPLODED VIEW .....I-1, I-2 MECHANICAL REPLACEMENT PARTS LIST .....J1-1, J1-2 ELECTRICAL REPLACEMENT PARTS LIST ..... J2-1~ J2-6 A2-1 13A25/13A25C...

### [Page 5: 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 6](#) 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 7](#) 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 8](#) 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 9](#) 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 10](#) 54 W at AC 120 V 60 Hz Stand by (at AC) W at AC 120 V 60 Hz Per Year kWh/Year Protector Power Fuse Regulation Safety Radiation X-Radiation Temperature Operation +5oC ~ +40oC Storage -20oC ~ +60oC Operating Humidity Less than 80% RH A3-6 13A25C...

[Page 11](#) Game Timer Sleep Timer Sound Mute V-chip Rating OSD Language English French Spanish Clock and Sleep Timer Max Time 120 Min Timer Step On Timer Program(On Timer ) Wake Up Timer Timer Back-up (at Power Off Mode) more than A3-7 13A25C...

[Page 12](#) Volume Up Volume Down TV/Caption/Text CH1/CH2 TV/Video(TV/AV) CH RTN/CH ENT(Quick View) Sleep RE Call(Call) Reset Menu Enter Mute Exit MTS(Audio Select) Set + Set - Multi Brand Keys CH Up(VCR) CH Down(VCR) Pause/Still TV/VCR(VCR) Code Play Stop Cable A3-8 13A25C...

[Page 13](#) Dew/AHC Caution Sheet AC Plug Adapter Quick Set-up Sheet Battery UM size x pcs UM-4 x 2 pcs OEM Brand AC Cord AV Cord (2Pin-1Pin) Registration Card (NDL Card) ESP Card 300 ohm to 75 ohm Antenna Adapter A3-9 13A25C...

[Page 14](#) Natural Dropping At 1 Corner / 3 Drop Test Edges / 6 Surfaces Height (cm) Container Stuffing Sets/40' container G-17 Cabinet Material Cabinet Cabinet Front PS 94V0 DECABROM Cabinet Rear PS 94V0 DECABROM Non-Halogen Demand Eyelet Demand G-18 Environment Pb-free Soldering Parts Specificat A3-10 13A25C...

### [Page 15: Disassembly Instructions](#)

Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. (Refer to Fig. 1-2.) Rubber Cap Support Fig. 1-5 Support Confirm that the Support is

securely connected. Fig. 1-2 Put on the Rubber Cap without moving any parts. B1-1  
13A25/13A25C...

## [Page 16: Removal And Installation Of Flat Package Ic](#)

NOTE Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.  
Blower type IC desoldering machine Braided Shield Wire Soldering Iron IC pattern Fig. 2-4 Fig.  
2-2 B2-1 13A25/13A25C...

[Page 17](#) Fig. 2-6 Absorb the solder left on the lead using the Braided Shield Wire. (Refer to  
Fig. 2-7.) NOTE Do not absorb the solder to excess. Soldering Iron Braided Shield Wire Fig. 2-7  
B2-2 13A25/13A25C...

## [Page 18: Service Mode List](#)

While holding down VOLUME button on front cabinet, press key (1) on remote control for more  
than 2 seconds. After the finishing of the initializing of shipping, the unit will turn off  
automatically. The unit will now have the correct DATA for the new MEMORY IC.  
13A25/13A25C...

## [Page 19: Electrical Adjustments](#)

Press the TV/VIDEO button on the remote control to set R.DRIVE TINT to the AV mode. Then  
perform the above adjustments B.DRIVE SHARPNESS 2~7. R.BIAS FM LEVEL G.BIAS LEVEL  
B.BIAS SEPARATION 1 BRIGHT CENT SEPARATION 2 BRIGHT MAX TEST MONO BRIGHT MIN TEST  
STEREO Fig. 1-2 13A25/13A25C...

[Page 20](#) Press the VOL.UP/DOWN button on the remote control until the horizontal  
line becomes fit to the until the contrast step No. becomes "52". notch of the shadow mask.  
(Refer to Fig. 2-3) Receive a broadcast and check if the picture is normal. 13A25/13A25C...

[Page 21](#) Please check if the fixed values of the each adjustment items are set correctly  
referring below. (RF/AV) STEP NO. NO. FUNCTION STEP NO. FUNCTION COLOR MIN H VCO  
SHARPNESS BRIGHT MAX FM LEVEL BRIGHT MIN LEVEL CONT CENT SEPARATION 1 CONT MIN  
SEPARATION 2 COLOR MAX 13A25/13A25C...

## [Page 22: Purity And Convergence](#)

Confirm red and blue colors. Adjust the slant of the deflection yoke while watching the WEDGE  
screen, then tighten the fixing screw. DEFLECTION YOKE WEDGE POSITION DEFLECTION YOKE  
SCREW Fig. 3-2-b MAGNET SCREW PURITY MAGNETS 6 POLE MAGNETS 4 POLE MAGNETS Fig.  
3-1 13A25/13A25C...

[Page 23](#) ELECTRICAL ADJUSTMENTS 4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE  
(WIRING CONNECTION) CRT PCB CP806 TP022 FB401 TU001 CP803A TP023 CP802B CP801  
DEGAUSS COIL CP502 S501B S501A CD501 AC IN CD101A SPEAKER CD101B MAIN PCB  
13A25/13A25C...

## [Page 24: Block Diagram](#)

P. FAIL V-OUT IC IC501 IC401 LA78040N-E LTV-817M-VB T502 Q507 MEMORY IC FEED BACK  
PUMP UP FEED BACK SDA SCL IC199 BR24L02F-WE2 Q502 DEGAUSS COIL L503 BUFFER  
D501~D504 Q501 FB401 RECTIFIER POWER AMP Q503 PROTECT DRV. L501 F501 AC IN  
13A25/13A25C...

## [Page 25: Printed Circuit Boards Main/Crt](#)

Q803 C810 R607 W061 R809 R814 R614 W032 R806 C1008 W031 R613 S102B Q105 R615  
W030 W813 CP802B C633 Q607 W812 W027 R1007 OS101 W808 C123 CD101A W026 J1001  
C118 CD101B J703 J702 C612 SW101 SW102 SW103 SW104 SW105 13A25/13A25C...

[Page 26](#) PRINTED CIRCUIT BOARDS MAIN (CHIP MOUNTED PARTS) SOLDER SIDE R702 R128  
R101 IC199\_1 R610 R609 R627 R108 R105 R129 R420 13A25/13A25C...

[Page 27](#) WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST DANGEREUSES AN POINT  
DE VUE SECURITE B.SIGNAL DESCRIBED IN PARTS LIST ONLY N'UTILISER QUE CELLS DECRIRES  
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL. DEFLECTION SIGNAL DANS LA



NOMENCLATURE DES PIECES TUNER VIDEO SIGNAL 13A25/13A25C...

[Page 28](#) WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL. DESCRIBED IN PARTS LIST ONLY N'UTILISER QUE CELLS DECRITES IS NON POLAR ONE. DANS LA NOMENCLATURE DES PIECES 13A25/13A25C...

[Page 29](#) THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP 560 1/2W R445 IS NON POLAR ONE. B.SIGNAL 180K 1/4W DEFLECTION SIGNAL PCB010 ATTENTION :LES PIECES REPArees PAR UN ETANT CMD009 DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES 13A25/13A25C...

[Page 30](#) OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST AUDIO SIGNAL DESCRIBED IN PARTS LIST ONLY N'UTILISER QUE CELLS DECRITES WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL. DANS LA NOMENCLATURE DES PIECES 13A25/13A25C...

### [Page 31: Micon/Chroma/Tuner](#)

WAVEFORMS MICON/CHROMA/TUNER 200V 20 $\mu$ s/div 1 0.5V 2ms/div 6 1V 20 $\mu$ s/div 10V 5ms/div 20V 20 $\mu$ s/div 1V 20 $\mu$ s/div DEFLECTION/CRT 200mV 20 $\mu$ s/div 8 0.5V 5ms/div 10V 5ms/div 50V 20 $\mu$ s/div 9 20V 20 $\mu$ s/div 0.5V 5ms/div 10 2V 20 $\mu$ s/div 5 1V 20 $\mu$ s/div 15 50V 20 $\mu$ s/div NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

### [Page 32: Sound/Av](#)

WAVEFORMS 16 50V 20 $\mu$ s/div SOUND/AV 0.5V 1ms/div 1V 1ms/div 200mV 500 $\mu$ s/div 20 500mV 20 $\mu$ s/div NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram. 13A25/31A25C...

### [Page 33: Mechanical Exploded View](#)

MECHANICAL EXPLODED VIEW PCB110 (CRT PCB ASS'Y) 101D PCB010 (MAIN PCB ASS'Y) 101B 101C 101A 13A25/13A25C...

[Page 34](#) MECHANICAL EXPLODED VIEW (PACKING DIAGRAM) 105, 118, 119, TM101 13A25/13A25C...

### [Page 35: Mechanical Replacement Parts List](#)

MECHANICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No. Description  
AE006001 7A701A312A FRONT CABI ASS'Y 101A AE005701 701WPJC918 CABINET,FRONT 101B  
AE005702 713WPAA203 GLASS,LED 101C AE005703 713WPAA202 GUIDE,REMOCON 101D  
AE005704 735WPBB315 BUTTON,FRAME AE006002 A3M131X740 CABINET,BACK ASS'Y  
BZ710260 899HV3T000 HOLDER,ANODE WIRE AE007109 726000A101 SHEET,CRT  
SERVICEMAN...

[Page 36](#) AE005716 8121J50B5U SCREW,TAP TITE(P) GW20 5x28 AE004847 8117540A6U  
SCREW,TAP TITE(B0) TRUSS 4x16 AE003531 810763080U SCREW,TAP TITE(S) BRAZIER  
AE005717 8109I3060U SCREW,TAP TITE(B) WH7 AE005659 8109I3080U SCREW,TAP TITE(B)  
WH7 AE003528 8110630A0U SCREW,TAP TITE(P) BRAZIER 3x10 AE003529 811063080U  
SCREW,TAP TITE(P) BRAZIER J1-2 13A25C...

### [Page 37: Electrical Replacement Parts List](#)

ELECTRICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No. Description  
RESISTORS ! R401 AE005733 R4K1T4273F R,METAL 2 27K OHM 1/4W ! R404 AE004065  
R615U2151J R,FUSE 150 OHM 1/2W ! R408 AE005732 R4K1T4103F R,METAL 2 10K OHM 1/4W !  
R409 AE005733 R4K1T4273F R,METAL...

[Page 38](#) ELECTRICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No.  
Description DIODES D521 BZ410022 D97U06R81B DIODE,ZENER MTZJ6.8B T-77 D522  
BZ410006 D1VT001330 DIODE,SILICON 1SS133T-77 D528 BZ410021 D97U05R61B  
DIODE,ZENER MTZJ5.6B T-77 D602 BZ410023 D97U09R11B DIODE,ZENER MTZJ9.1B T-77 D603  
BZ410006 D1VT001330 DIODE,SILICON 1SS133T-77 D604 BZ410058 D97U08R21B...

[Page 39](#) ELECTRICAL REPLACEMENT PARTS LIST Location No. TSB P/N Reference No.  
Description MISCELLANEOUS ! F501 AD302166 081PC04005 FUSE 51MS040L ! FB401 AE003330  
043214050F TRANSFORMER,FLYBACK FNI14B002\_M FH501 AE002634 06710T0009  
HOLDER,FUSE EYF-52BCY FH502 AE002634 06710T0009 HOLDER,FUSE EYF-52BCY OS101  
AD301048 0773071001 REMOTE RECEIVER RPM7138-WH5 S101 AD302168 WBL6026038...

[Page 40](#) ! D510 BZ410080 D2WXRU2AM0 DIODE,SILICON RU2AM-EIC D511 BZ410006  
D1VT001330 DIODE,SILICON 1SS133T-77 ! D512 BZ410006 D1VT001330 DIODE,SILICON  
1SS133T-77 ! D513 BZ410010 D28T21DQN9 DIODE,SCHOTTKY 21DQ09N-TA2B1 D514  
BZ410006 D1VT001330 DIODE,SILICON 1SS133T-77 D515 AD300731 D2WXN49370  
DIODE,SILICON 1N4937 ! D516 AD300731 D2WXN49370 DIODE,SILICON 1N4937 J2-4 13A25C...

[Page 41](#) CORD,CONNECTOR C3012005 CP802A BZ614276 067U005049 WIRE HOLDER  
B2013H02-5P CP802B BZ614276 067U005049 WIRE HOLDER B2013H02-5P CP803A BZ614334  
067U004029 WIRE HOLDER B2013H02-4P CP803B BZ614334 067U004029 WIRE HOLDER  
B2013H02-4P EL001 BZ614043 124116281A EYE LET XRY16X28BD EL002 BZ614044  
124120301A EYE LET XRY20X30BD J2-5 13A25C...

[Page 42](#) X601 BZ613004 100CT3R505 CRYSTAL HC-49/U RESISTOR RC....CARBON RESISTOR  
CAPACITORS CC....CERAMIC CAPACITOR CE....ALUMI ELECTROLYTIC CAPACITOR CP....POLYESTER  
CAPACITOR CPP....POLYPROPYLENE CAPACITOR CPL....PLASTIC CAPACITOR CMP....METAL  
POLYESTER CAPACITOR CMPL....METAL PLASTIC CAPACITOR CMPP....METAL POLYPROPYLENE  
CAPACITOR J2-6 13A25C...

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

This manual is also suitable for:

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