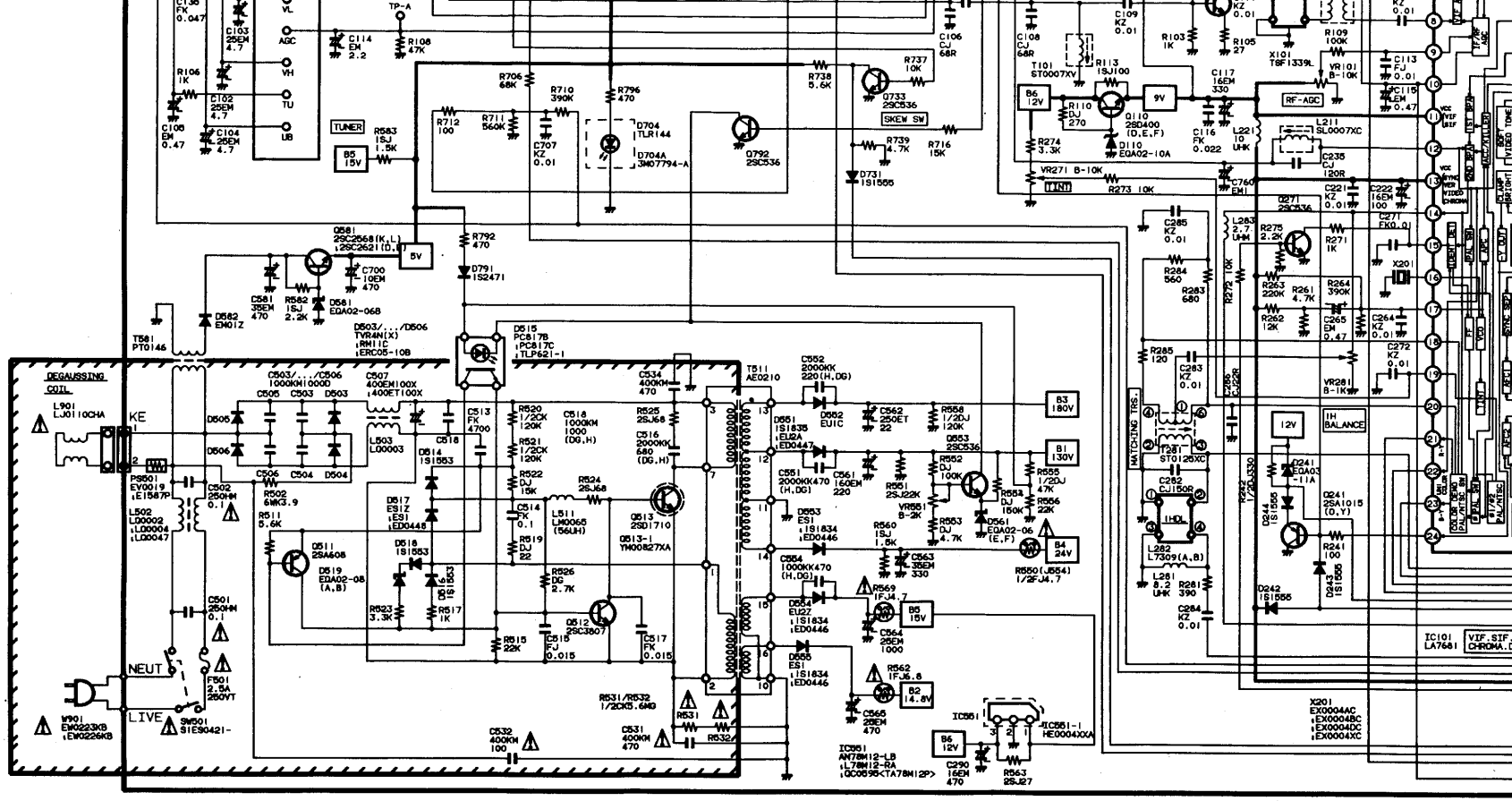


Q511	
	VOLT.
B	10V
C	-0.8V
E	10.8V

Q512		
	VOLT.	WAVEFORM
B	-2.7V	1.1VP-P
C	-1.5V	1.5VP-P
E	0V	------

Q513		
	VOLT.	WAVEFORM
B	-1.5V	5Vp-p
C	280V	560VP-P
E	0V	------

Q551	
	VOLT.
B	23.5V
C	24V
E	24V

Q552	
	VOLT.
B	0.7V
C	0.1V
E	0V

Q553	
	VOLT.
B	7V
C	40V
E	6.5V

Q110	
	VOLT.
B	10V
C	12V
E	9V

SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (▬▬) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE. WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

SANYO

COLOUR TELEVISION

A3 CHASSIS SERIES

SERVICE REF.NO. **CEM2140P-00**

Part No. 4AA6P200098--E2RZ(A3-C)

PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF A RECEIVER. COMPONENTS INDICATED BY A MARK ⚠ IN THIS CIRCUIT DIAGRAM SHOW COMPONENTS WHOSE VALUE HAVE SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE PARTS LIST OF SERVICE MANUAL BE USED FOR COMPONENTS REPLACEMENT POINTED OUT BY THE MARK ⚠.

CIRCUIT DIAGRAM NOTES:

1. ALL RESISTANCE VALUES ARE IN OHMS; K=1,000, M=1,000,000.
2. ALL RESISTANCE RATED WATTAGES ARE 1/4W UNLESS OTHERWISE NOTED.
3. EXCEPTING ELECTROLYTIC CAPACITORS, ALL CAPACITANCE VALUES OF LESS THAN 1 ARE EXPRESSED IN UF, AND MORE THAN 1 ARE IN PF. ELECTROLYTIC CAPACITANCE VALUES ARE IN UF.
4. ALL CAPACITANCE RATED VOLTAGES ARE 50V UNLESS OTHERWISE NOTED.
5. ALL INDUCTANCE VALUES ARE IN UH.
6. VOLTAGE READINGS TAKEN WITH A "VTVM" ARE FROM POINT INDICATED TO CHASSIS GROUND. VOLTAGE READINGS TAKEN BY USING A COLOUR BAR SIGNAL ARE WITH ALL CONTROLS AT NORMAL AND AFC SWITCH IN "OFF" POSITION. SOME VOLTAGES MAY VARY WITH SIGNAL STRENGTH.
7. WAVEFORMS WERE TAKEN WITH COLOUR BAR SIGNAL AND CONTROLS ADJUSTED FOR NORMAL PICTURE. WAVEFORMS WERE TAKEN BY USING A WIDE BAND OSCILLOSCOPE AND A LOW CAPACITY PROBE.
8. VOLTAGE AND WAVEFORM VALUES OF TRANSISTORS IN THE AREA ENCLOSED BY LINE (— — —) ARE MEASURED TO BASE THE ELECTRIC POTENTIAL AT PIN 3 OF T311.
9. THIS CIRCUIT DIAGRAM COVERS A BASIC OR REPRESENTATIVE CHASSIS ONLY. THERE MAY BE SOME COMPONENTS OR PARTIAL CIRCUIT DIFFERENCES BETWEEN THE ACTUAL CHASSIS AND THE CIRCUIT DIAGRAM.

10. EXPRESSION OF CAPACITANCE AND RESISTANCE IN CIRCUIT DI

CAPACITANCE (Example)

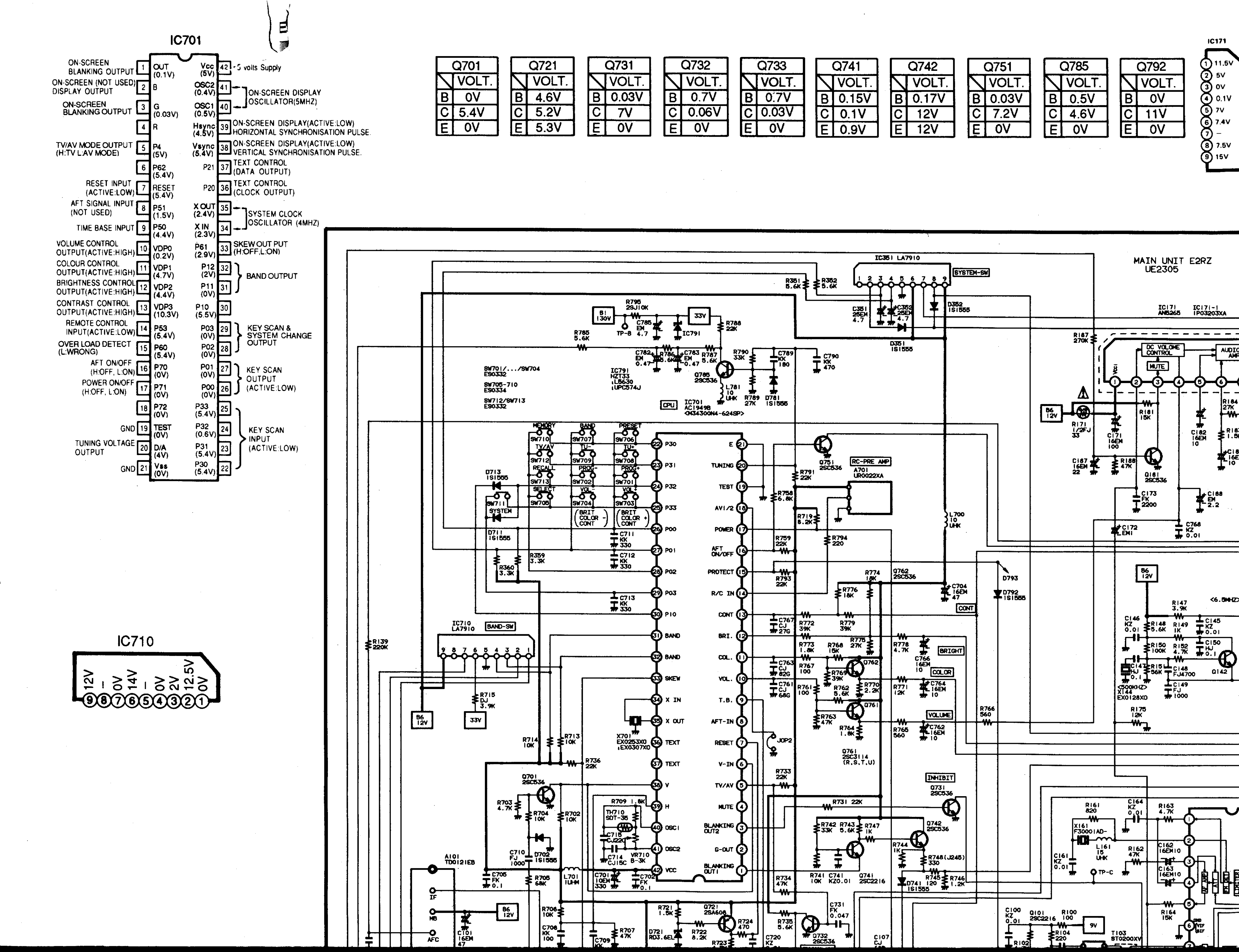
1000 C M 2200 D

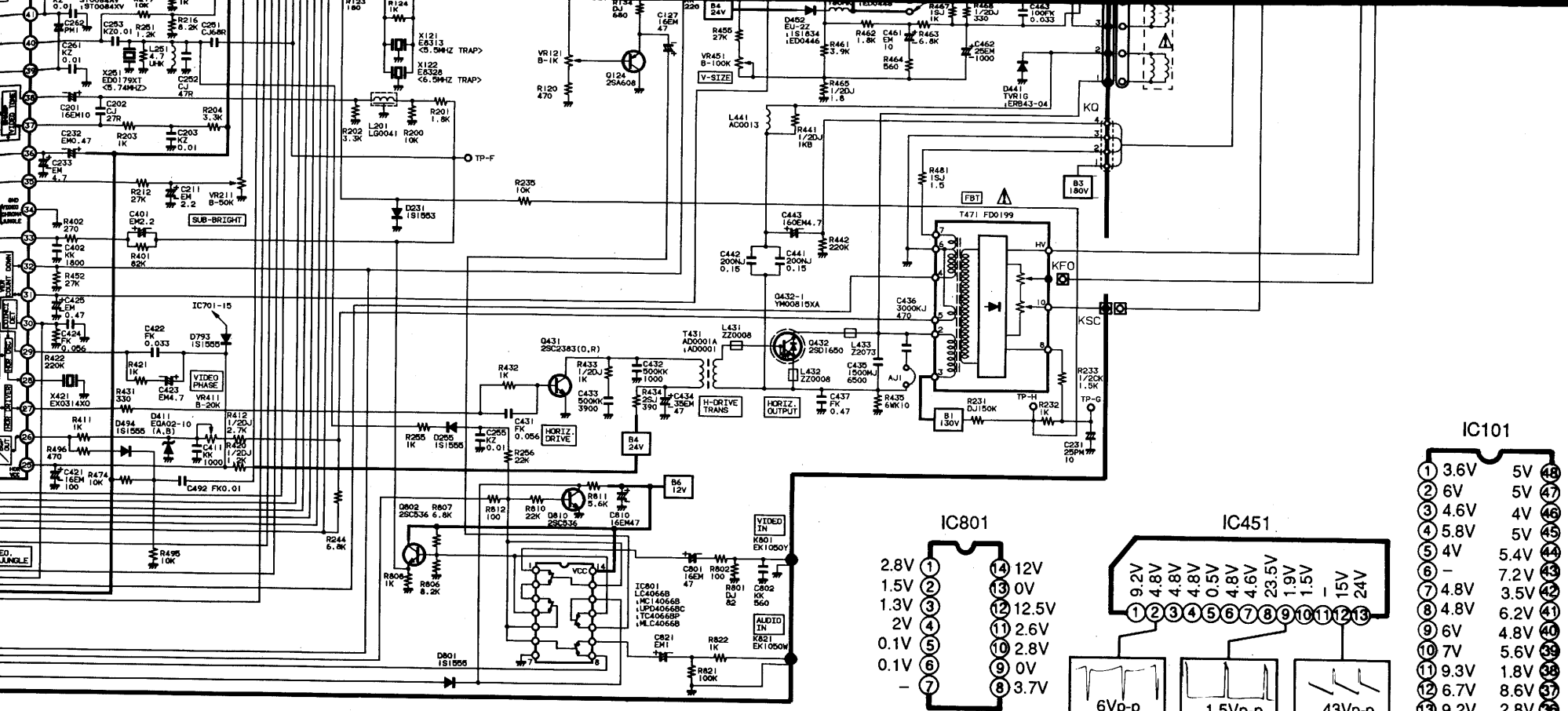
- Characteristic
- Capacitance value (2200pF)
- Allowable error (±20%)
- Kind (Ceramic)
- Rated voltage (1000V)

RESISTANCE (Example)

1/2 N J 1.2

- Resistance value (1.2Ω)
- Allowable error (±5%)
- Kind (Metalized carbon)
- Rated Wattage (1/2W)


IC701
ON-SCREEN BLANKING OUTPUT 1 OUT (0.1V)
ON-SCREEN (NOT USED) DISPLAY OUTPUT 2 B
ON-SCREEN BLANKING OUTPUT 3 G (0.03V)
4 R
TV/AV MODE OUTPUT (H:TV L:AV MODE) 5 P4 (5V)
6 P62 (5.4V)
RESET INPUT (ACTIVE:LOW) 7 RESET (5.4V)
AFT SIGNAL INPUT (NOT USED) 8 P51 (1.5V)
TIME BASE INPUT 9 P50 (4.4V)
VOLUME CONTROL OUTPUT(ACTIVE:HIGH) 10 VDP0 (0.2V)
COLOUR CONTROL OUTPUT(ACTIVE:HIGH) 11 VDP1 (4.7V)
BRIGHTNESS CONTROL OUTPUT(ACTIVE:HIGH) 12 VDP2 (4.4V)
CONTRAST CONTROL OUTPUT(ACTIVE:HIGH) 13 VDP3 (10.3V)
REMOTE CONTROL INPUT(ACTIVE:LOW) 14 P53 (5.4V)
OVER LOAD DETECT (L:WRONG) 15 P60 (5.4V)
AFT ON/OFF (H:OFF, L:ON) 16 P70 (0V)
POWER ON/OFF (H:OFF, L:ON) 17 P71 (0V)
18 P72 (0V)
GND 19 TEST (0V)
TUNING VOLTAGE OUTPUT 20 D/A (4V)
GND 21 Vss (0V)
42 Vcc (5V) -5 volts Supply
41 OSC2 (0.4V), 40 OSC1 (0.5V) ON-SCREEN DISPLAY OSCILLATOR(5MHZ)
39 Hsync (4.5V) ON-SCREEN DISPLAY(ACTIVE:LOW) HORIZONTAL SYNCHRONISATION PULSE.
38 Vsync (5.4V) ON-SCREEN DISPLAY(ACTIVE:LOW) VERTICAL SYNCHRONISATION PULSE.
37 P21 TEXT CONTROL (DATA OUTPUT)
36 P20 TEXT CONTROL (CLOCK OUTPUT)
35 X OUT (2.4V), 34 X IN (2.3V) SYSTEM CLOCK OSCILLATOR (4MHZ)
33 P61 (2.9V) SKEW OUT PUT (H:OFF,L:ON)
32 P12 (2V), 31 P11 (0V) BAND OUTPUT
30 P10 (5.5V)
29 P03 (0V), 28 P02 (0V) KEY SCAN & SYSTEM CHANGE OUTPUT
27 P01 (0V), 26 P00 (0V) KEY SCAN OUTPUT (ACTIVE:LOW)
25 P33 (5.4V), 24 P32 (0.6V), 23 P31 (5.4V), 22 P30 (5.4V) KEY SCAN INPUT (ACTIVE:LOW)
Q701 VOLT. B 0V C 5.4V E 0V
Q721 VOLT. B 4.6V C 5.2V E 5.3V
Q731 VOLT. B 0.03V C 7V E 0V
Q732 VOLT. B 0.7V C 0.06V E 0V
Q733 VOLT. B 0.7V C 0.03V E 0V
Q741 VOLT. B 0.15V C 0.1V E 0.9V
Q742 VOLT. B 0.17V C 12V E 12V
Q751 VOLT. B 0.03V C 7.2V E 0V
Q785 VOLT. B 0.5V C 4.6V E 0V
Q792 VOLT. B 0V C 11V E 0V
IC171
1 11.5V
2 5V
3 0V
4 0.1V
5 7V
6 7.4V
7 –
8 7.5V
9 15V
IC710
1 0V
2 12.5V
3 2V
4 0V
5 –
6 14V
7 0V
8 –
9 12V
MAIN UNIT E2RZ
UE2305
IC351 LA7910
SYSTEM-SW
IC710 LA7910
BAND-SW
IC701 AC1949B (H34300N4-624SP)
CPU
RC-PRE AMP
A701 UR0022XA
IC171 AN5265
IC171-1 IP03203XA
DC VOLUME CONTROL
MUTE
A101 TD0121EB
T103 ST0200XV
BRIGHT
COLOR
VOLUME
CONT
INHIBIT
SW701/.../SW704 ES0332
SW705-710 ES0334
SW712/SW713 ES0332



IC801

IC451

IC101

1	3.6V	5V	48
2	6V	5V	47
3	4.6V	4V	46
4	5.8V	5V	45
5	4V	5.4V	44
6	–	7.2V	43
7	4.8V	3.5V	42
8	4.8V	6.2V	41
9	6V	4.8V	40
10	7V	5.6V	39
11	9.3V	1.8V	38
12	6.7V	8.6V	37
13	9.2V	2.8V	36
14	5.7V	4.4V	35
15	7V	–	34
16	5.8V	7V	33
17	6.2V	4.8V	32
18	3.4V	0.4V	31
19	4.8V	7.4V	30
20	3.5V	5.8V	29
21	5.5V	5.2V	28
22	5.5V	0.8V	27
23	5.5V	0.6V	26
24	4.5V	7.7V	25

Q802	
	VOLT.
B	6.6V
C	12V
E	6V

Q810	
	VOLT.
B	0.06V
C	12.5V
E	0V

Q431

	VOLT.	WAVEFORM
B	0.08V	2.1VP-P HORIZ.
C	19V	40VP-P HORIZ.
E	0V	------

Q432

	VOLT.	WAVEFORM
B	2.3V	1.4VP-P HORIZ
C	80V	1000VP-P HORIZ
E	2.4V	1.2VP-P HORIZ

Q124	
	VOLT.
B	2V
C	0V
E	2.8V

Q241

	VOLT.	WAVEFORM
B	4.6V	8.5VP-P HORIZ
C	1.2V	------
E	5.3V	5.5VP-P HORIZ

11 DIODE 1SI555 MAY BE REPLACED WITH IS2473, IS2076 OR DS442 UNLESS OTHERWISE NOTED.
TRANSISTOR 2SC536 (E, F, G) MAY BE REPLACED WITH 2SCI740S (Q, R, S), 2SCI740 (Q, R, S), 2SC945A (Q, R, P) OR 2SCIBI5 (G, O, Y) UNLESS OTHERWISE NOTED.
TRANSISTOR 2SA608 (E, F) MAY BE REPLACED WITH 2SA933 (Q, R), 2SA564 (QA, RA) OR 2SAI0I5 (Q, Y) UNLESS OTHERWISE NOTED.

·5%
·10%
·20%

A, E, U, D Electrolytic
K, B Ceramic
Mylar film
N Polypropylene
Metalized paper

Carbon
Metalized carbon
Oxide metalized
Wire wounding
Solid

TRANSISTOR, DIODE & INTEGRATED CIRCUIT TERMINAL GUIDE

C: COLLECTOR
B: BASE
E: EMITTER

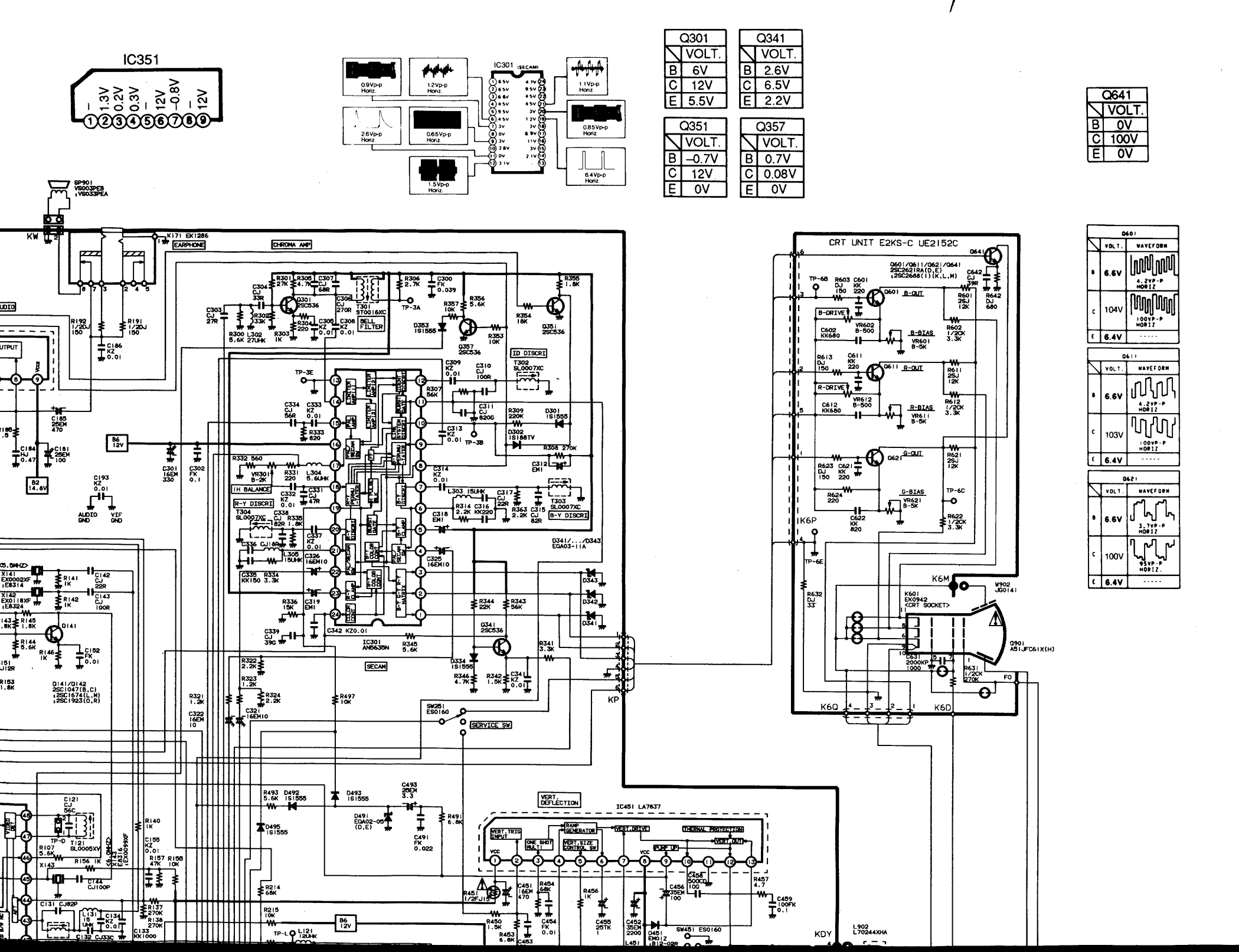
A: ANODE
K: CATHODE

PARTICULAR PARTS SYMBOL

FUSIBLE RESISTOR

NON-POLE ELECTROLYTIC CAPACITOR

POSISTER


IC351
– 1.3V 0.2V 0.3V – 12V 0.8V – 12V
1 2 3 4 5 6 7 8 9
IC301 (SECAM)
0.9Vp-p Horiz.
1.2Vp-p Horiz.
1.1Vp-p Horiz.
2.6Vp-p Horiz.
0.65Vp-p Horiz.
0.85Vp-p Horiz.
1.5Vp-p Horiz.
6.4Vp-p Horiz.
Q301
VOLT.
B 6V
C 12V
E 5.5V
Q341
VOLT.
B 2.6V
C 6.5V
E 2.2V
Q351
VOLT.
B –0.7V
C 12V
E 0V
Q357
VOLT.
B 0.7V
C 0.08V
E 0V
Q641
VOLT.
B 0V
C 100V
E 0V
SP901 VS003PEB VS033PEA
KW
K171 EK1286
EARPHONE
CHROMA AMP
AUDIO
OUTPUT
Vcc
B6 12V
B2 14.8V
AUDIO GND
VIF GND
IH BALANCE
R-Y DISCRI
B-Y DISCRI
ID DISCRI
BELL FILTER
SECAM
SERVICE SW
SW251 ES0160
IC301 AN5635N
T301 ST0016XC
T302 SL0007XC
T303 SL0007XC
T304 SL0007XC
D341/.../D343 EQA03-11A
D141/D142 2SC1047(B,C) 2SC1674(L,M) 2SC1923(D,R)
X141 EX0002XF
X142 EX0118XF
X143 EX0099XF
TP-D T121 SL0005XV
VERT. DEFLECTION
IC451 LA7837
VERT. TRIG INPUT
ONE SHOT MULTI
RAMP GENERATOR
VERT. SIZE CONTROL SW
VERT. DRIVE
THERMAL PROTECTION
PUMP UP
VERT. OUT
Vcc
SW451 ES0160
D451 EM01Z
L902 L70244XHA
KDY
CRT UNIT E2KS-C UE2152C
Q601/Q611/Q621/Q641 2SC2621RA(D,E) 2SC2688(1)(K,L,M)
B-DRIVE
R-DRIVE
G-OUT
B-BIAS
G-BIAS
K6P
K6M
K6Q
K6D
W902 JG0141
K601 EK0942 <CRT SOCKET>
Q901 A51JFC61X(H)
FO
D601
VOLT. WAVEFORM
B 6.6V 4.2VP-P HORIZ
C 104V 100VP-P HORIZ
E 6.4V
D611
VOLT. WAVEFORM
B 6.6V 4.2VP-P HORIZ
C 103V 100VP-P HORIZ
E 6.4V
D621
VOLT. WAVEFORM
B 6.6V 3.7VP-P HORIZ
C 100V 95VP-P HORIZ.
E 6.4V