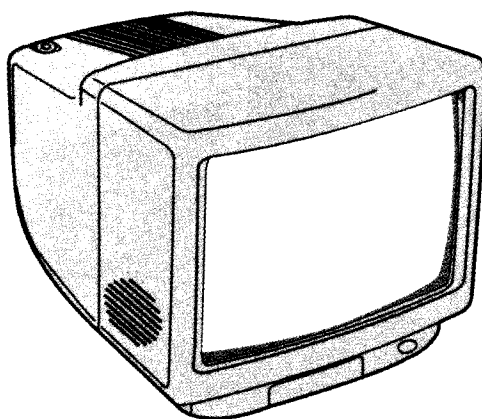




# SERVICE MANUAL

MODEL : TTB1340W      +TCD1341  
CHASSIS : CKA50ZM

## COLOR TELEVISION RECEIVER



### SPECIFICATIONS

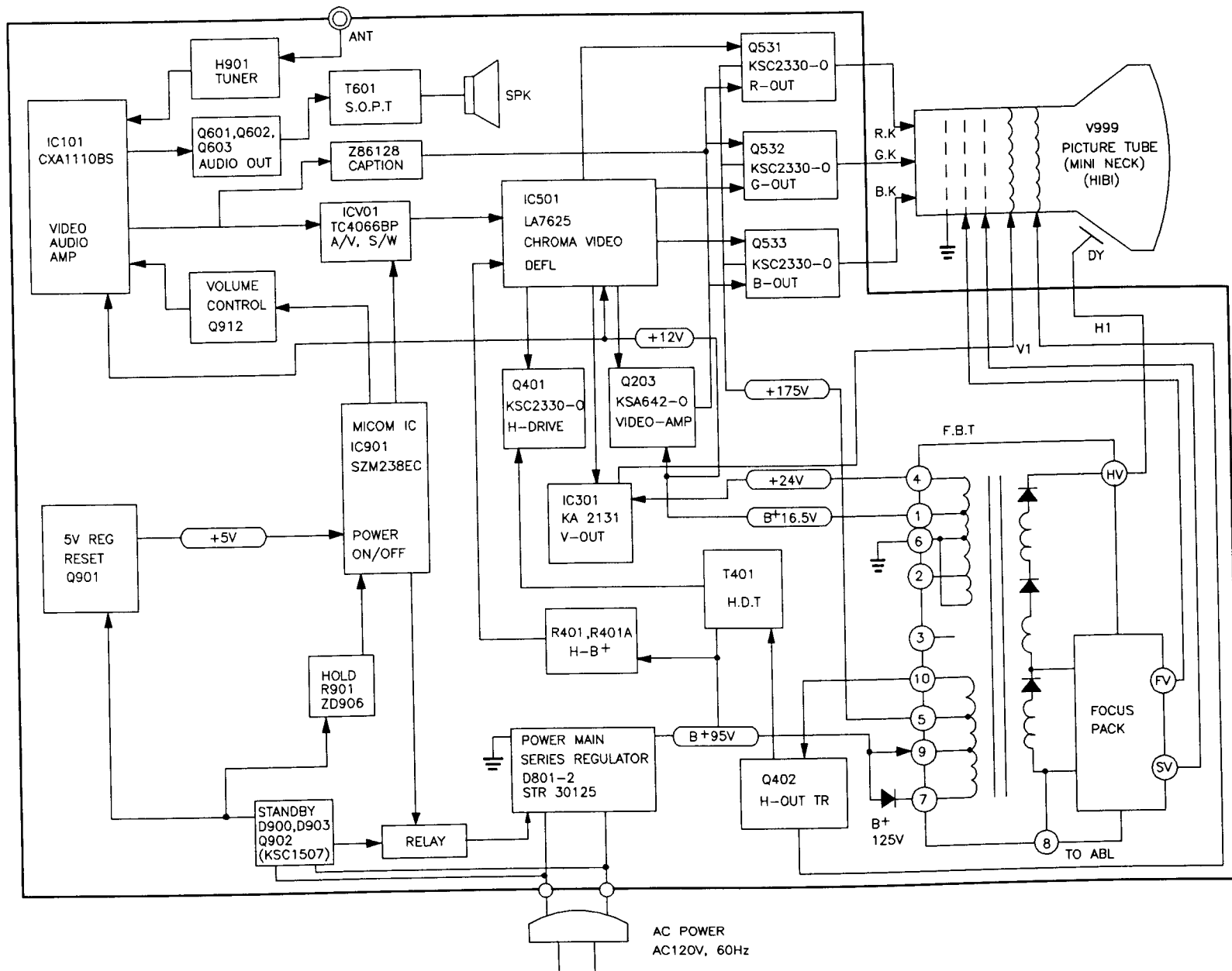
Television System	13" NTSC COLOR TV SIGNAL
Power Consumption	85 WATTS NOMINAL
Picture Tube	A34KQV42X
Power Requirement	AC 120V, 60Hz
Operating System	REMOCON SYSTEM (RM238EC)
Tuning Ranges	VHF CH : 2-13, UHF CH : 14-69, CABLE CH : 1,14-125
Antenna Input Impedance	75 Ohm UNBALANCE TYPE FOR VHF/UHF
Intermediate Frequency	PICTURE 45.75MHz, SOUND 41.25MHz, COLOR SUB CARRIER 42.17MHz
Speaker	IMPEDANCE : 8 Ohm 2W

#### SAFETY CAUTION :

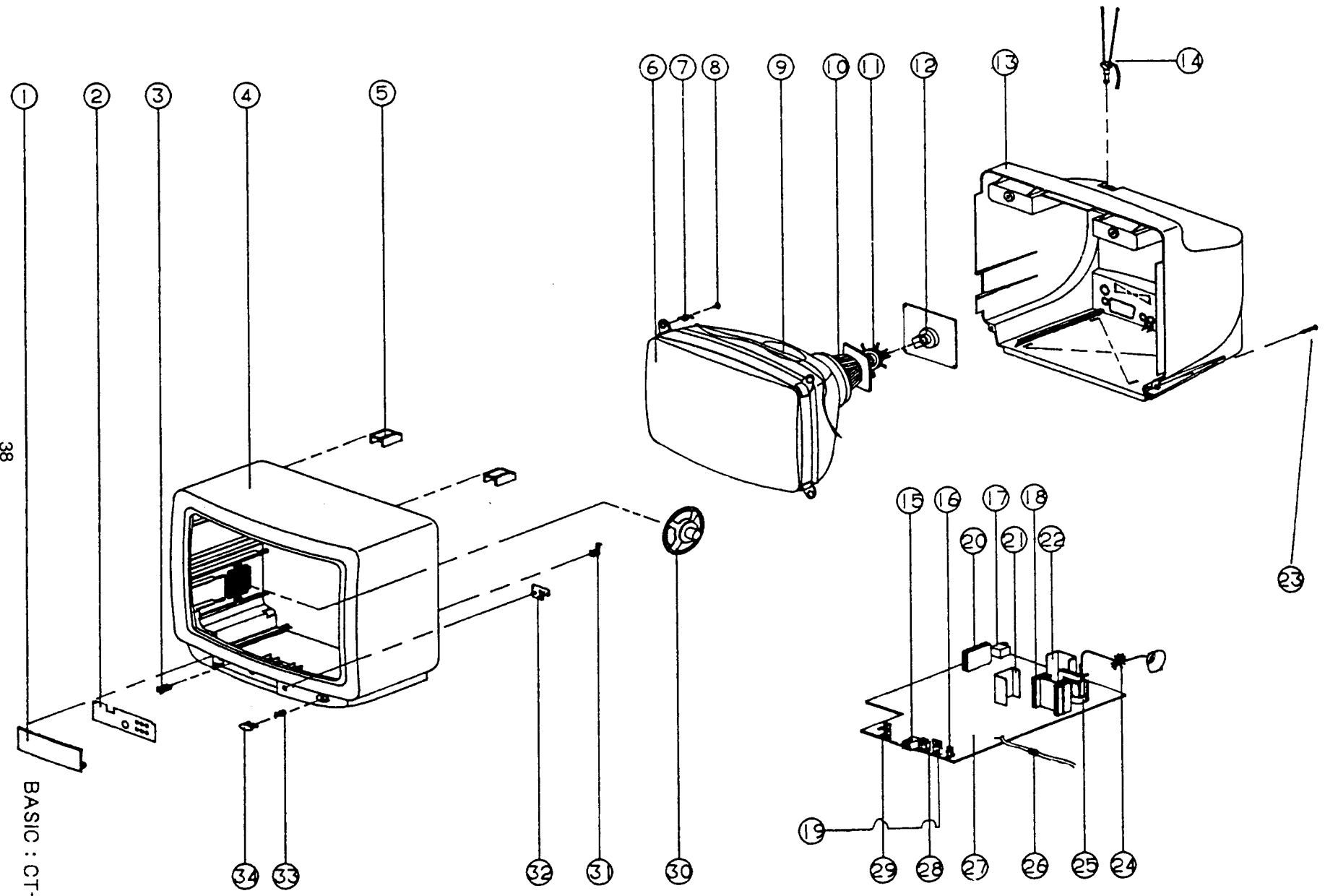
Before servicing this chassis, it is important that a service technician reads and follows the "Safety Precaution" and "Product Safety Notice" in this Service Manual.

- \* For continued X-radiation protection, replace the picture tube with original type.
- \* Design and specifications are subject to change without prior notice.
- \* WARNING-SHOCK HAZARDS - Use an isolation transformer when servicing.

**11. CHASSIS BLOCK DIAGRAM (CKA50ZM)**



# EXPLODED VIEW



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BASIC : CT-3371

# TTB1340W PARTS LIST

The items with \*\*\* are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items. \*\*\* S.N.A = SERVICE NOT AVAILABLE. \*\*\*

NO	CODE NO	DESCRIPTION	Q'TY
1	37643-171-250	DOOR-CONTROL	1
2	38093-118-930	PVC-CONTROL	1
3	36698-100-110	CATCH-PUSH,DOOR	1
4	*3Y90-33710-010	ASSY-CABINET,FRONT	1
	36001-703-070	CABINET-FRONT	1
5	36463-102-130	BOSS-CABINET	2
6	32019-400-083	CRT-COLOR	1
7	36635-001-910	CLAMPER-D,COIL	2
8	37124-100-810	SCREW-CRT	4
9	32479-027-710	COIL-DEGAUSSING	1
10	32439-210-090	DEFL-YOKE	1
11	34099-027-010	MAGNET-CONVERGENCE	1
12	33356-063-610	SOCKET-CRT	4
13	36001-704-030	CABINET-BACK	1
14	A1262D0002	ANTENNA-ROD	1
15	32199-411-060	MODULE-REMOCON	1
16	33606-101-011	SWITCH-TACT(SW901)	1
17	34544-200-002	SHIELD-BOX,ANT	1
18	35682-111-080	HEAT-SINK,L(Q801)	1
19	DELETE ITEM	SWITCH-TACT(SW902)	
20	34519-600-005	TUNER	1
21	35684-121-410	HEAT-SINK,AI100(IC301)	1
22	35684-121-410	HEAT-SINK,AI100(Q402)	1
23	37128-540-152	SCREW-TAP,RH(CF + CB)	4
24	36633-101-910	CLAMPER-FBT	1
25	32859-153-410	TRANS-FLYBACK	1
26	33323-0001-000	HOLDER-CORD	1
27	36029-0048-000	PWB-MAIN	S.N.A
28	36602-105-510	LED-GUIDE	1
29	33598-001-001	SWITCH-RUBBER(SW02)	1
30	34209-200-030	SPEAKER-GENERAL	1
31	36023-118-820	STOPPER-PCB	1
32	38013-119-310	INDICATOR-RMC	1
33	36674-136-910	SPRING-COIL(POWER)	1
34	37623-163-220	KNOB-POWER	1

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**CHASSIS REPLACEMENT PARTS LIST**

=====

ABBREVIATIONS: CC C-CERAMIC  
 CE C-ELECTROLYTIC  
 CFS C-M, POLYESTER  
 CK C-CERAMIC, HK  
 CQ C-POLYPROPYLENE, POLYESTER  
 CS C-TANTALIUM, SOLID

RC R-COMPOSITION  
 RD R-CARBON  
 RF R-FUSIBLE  
 RM R-METAL, FILM  
 RP R-CEMENT, WIRE  
 RS R-METAL, OXIDE

NOTE: Items marked "\*" are not stocked since they are seldom required for routine service.  
 There may be some anticipated delay when you order these items.  
 \*\*\* S.N.A. =service not available.\*\*\*

Loc No	Supplier Parts No	Description & Specification	Loc No	Supplier Parts No	Description & Specification
	<b>1 . A S S Y - P W B , M A I N</b>		R210	31018-177-623	RD 1/8T 62K-J
			R214	31018-177-391	RD 1/8T 390-J
00LOT	36029-0048-000	T1.6 W330 L245 (S.N.A)	R215	31018-377-471	RD 1/2T 470-J
			R224	31049-315-101	RS 2P 100-J
			R225	31048-527-220	RS 2P 22-J
	<b>R E S I S T O R S</b>		R301	31018-177-331	RD 1/8T 330-J/ERD-S2TJ 33
J019	31057-201-013	RF 1/2T 0.47-K/RF 50S 0.4	R302	31018-377-224	RD 1/2T 220K-J
PC801	30549-0001-000	3P T2.36 10-5MM PBT	R303	31018-177-472	RD 1/8T 4.7K-J/ERD-S2TJ 4
R101	31018-177-101	RD 1/8T 100-J/ERD-S2TJ 10	R304	31018-177-393	RD 1/8T 39K-J
R102	31018-177-562	RD 1/8T 5.6K-J/ERD-S2TJ 5	R305	31018-377-684	RD 1/2T 680K-J
R103	31018-177-122	RD 1/8T 1.2K-J	R307	31018-177-331	RD 1/8T 330-J/ERD-S2TJ 33
R104	31018-177-220	RD 1/8T 22-J	R308	31057-377-109	RF 1/2T 1.0-J/RF 50S 1.0-
R105	31018-177-561	RD 1/8T 560-J/ERD-S2TJ 56	R309	31048-168-202	RM 1/8T 82K-G
R106	31018-177-331	RD 1/8T 330-J/ERD-S2TJ 33	R310	31048-363-303	RM 1/2T 330K-G
R107	31018-177-122	RD 1/8T 1.2K-J	R311	31049-176-124	RM 1/8T 120K-G
R108	31018-177-470	RD 1/8T 47-J	R314	31047-176-152	RM 1/8T 1.5K-G
R109	31018-177-104	RD 1/8T 100K-J/ERD-S2TJ 1	R316	31018-177-682	RD 1/8T 6.8K-J
R110	31018-177-104	RD 1/8T 100K-J/ERD-S2TJ 1	R317	31018-377-399	RD 1/2T 3.9-J
R111	31018-177-221	RD 1/8T 220-J	R320	31018-177-333	RD 1/8T 33K-J/ERD-S2TJ 33
R112	31018-177-563	RD 1/8T 56K-J	R401	31049-527-562	RS 2P 5.6K-J
R113	31018-177-154	RD 1/8T 150K-J	R401A	31049-527-562	RS 2P 5.6K-J
R114	31018-177-223	RD 1/8T 22K-J/ERD-S2TJ 22	R402	31018-177-272	RD 1/8T 2.7K-J/ERD-S2TJ 2
R115	31018-177-333	RD 1/8T 33K-J/ERD-S2TJ 33	R403	31018-177-332	RD 1/8T 3.3K-J/ERD-S2TJ 3
R116	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R404	31018-177-331	RD 1/8T 330-J/ERD-S2TJ 33
R117	31018-177-391	RD 1/8T 390-J	R405	31018-177-681	RD 1/8T 680-J/ERD-S2TJ 68
R118	31018-177-221	RD 1/8T 220-J	R406	31049-315-280	RS 2P 4.7K-J
R120	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R407	31049-315-280	RS 2P 4.7K-J
R121	31018-177-271	RD 1/8T 270-J	R408	31018-377-392	RD 1/2T 3.9K-J
R122	31018-177-223	RD 1/8T 22K-J/ERD-S2TJ 22	R409	31018-177-153	RD 1/8T 15K-J
R123	31018-177-822	RD 1/8T 8.2K-J	R410	31049-175-682	RM 1/8T 6.8K-F
R124	31018-177-562	RD 1/8T 5.6K-J/ERD-S2TJ 5	R411	31047-351-273	RM 1/2T 127K-F
R201	31018-177-162	RD 1/8T 1.6K-J	R412	31018-377-104	RD 1/2T 100K-J
R202	31018-177-202	RD 1/8T 2K-J/ERD-S2TJ 202	R413	31018-377-474	RD 1/2T 470K-J
R203	31018-177-221	RD 1/8T 220-J	R414	31059-003-100	RF 1P 1-K
R206	31018-177-821	RD 1/8T 820-J	R415	31049-101-350	RS 1P 1K-J
R208	31018-177-562	RD 1/8T 5.6K-J/ERD-S2TJ 5	R416	31049-275-510	RM 1/4T 237K-F
R209	31018-177-273	RD 1/8T 27K-J			

Loc No	Supplier Parts No	Description & Specification	Loc No	Supplier Parts No	Description & Specification
R417	31059-003-100	RF 1P 1-K	R900B	31049-315-390	RS 2P 15K-J
R418	31049-276-102	RM 1/4T 1K-G	R901	31049-527-562	RS 2P 5.6K-J
R419	31049-315-280	RS 2P 4.7K-J	R902	31049-527-562	RS 2P 5.6K-J
R421	31018-377-103	RD 1/2T 10K-J	R903	31018-377-683	RD 1/2T 68K-J
R425	31049-315-150	RS 2P 150-J	R904	31018-377-360	RD 1/2P 36-J(S)
R500	31048-527-220	RS 2P 22-J	R905	31049-316-070	RS 2N 2.2K-J
R502	31018-177-101	RD 1/8T 100-J/ERD-S2TJ 10	R906	31018-177-153	RD 1/8T 15K-J
R508	31018-377-474	RD 1/2T 470K-J	R907	31018-377-101	RD 1/2T 100-J
R510	31018-177-561	RD 1/8T 560-J/ERD-S2TJ 56	R908	31018-377-682	RD 1/2T 6.8K-J
R511	31018-177-561	RD 1/8T 560-J/ERD-S2TJ 56	R909	31018-377-123	RD 1/2T 12K-J
R512	31018-177-561	RD 1/8T 560-J/ERD-S2TJ 56	R910	31018-377-123	RD 1/2T 12K-J
R513	31018-377-395	RD 1/2T 3.9M-J	R912	31018-177-682	RD 1/8T 6.8K-J
R516	31018-377-471	RD 1/2T 470-J	R913	31018-177-223	RD 1/8T 22K-J/ERD-S2TJ 22
R517	31018-177-222	RD 1/8T 2.2K-J/ERD-S2TJ 2	R914	31018-177-560	RD 1/8T 56-J
R518	31018-177-272	RD 1/8T 2.7K-J/ERD-S2TJ 2	R915	31018-177-823	RD 1/8T 82K-J
R530	31018-177-101	RD 1/8T 100-J/ERD-S2TJ 10	R916	31018-177-823	RD 1/8T 82K-J
R531	31018-177-151	RD 1/8T 150-J	R917	31018-177-823	RD 1/8T 82K-J
R532	31018-177-151	RD 1/8T 150-J	R918	31018-177-823	RD 1/8T 82K-J
R533	31018-177-151	RD 1/8T 150-J	R919	31018-177-823	RD 1/8T 82K-J
R534	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R920	31018-177-823	RD 1/8T 82K-J
R535	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R921	31018-177-103	RD 1/8T 10K-J/ERD-S2TJ 10
R536	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R924	31018-177-823	RD 1/8T 82K-J
R537	31049-101-409	RS 1P 15K-J	R925	31018-177-153	RD 1/8T 15K-J
R538	31049-101-409	RS 1P 15K-J	R926	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102
R539	31049-101-409	RS 1P 15K-J	R931	31018-177-223	RD 1/8T 22K-J/ERD-S2TJ 22
R540	31028-328-472	RC 1/2T 4.7K-K/ERC-12GL 4	R933	31018-177-682	RD 1/8T 6.8K-J
R541	31028-328-472	RC 1/2T 4.7K-K/ERC-12GL 4	R934	31018-177-682	RD 1/8T 6.8K-J
R542	31028-328-472	RC 1/2T 4.7K-K/ERC-12GL 4	R935	31018-177-223	RD 1/8T 22K-J/ERD-S2TJ 22
R543	31018-177-472	RD 1/8T 4.7K-J/ERD-S2TJ 4	R937	31018-177-132	RD 1/8T 1.3K-J
R545	31059-428-047	RF 1P 0.47-K	R939	31049-527-820	RS 2P 82-J
R546	31018-177-472	RD 1/8T 4.7K-J/ERD-S2TJ 4	R940	31018-177-472	RD 1/8T 4.7K-J/ERD-S2TJ 4
R547	31018-277-301	RD 1/4T 300-J	R941	31018-177-152	RD 1/8T 1.5K-J
R549	31018-177-472	RD 1/8T 4.7K-J/ERD-S2TJ 4	R942	31018-177-123	RD 1/8T 12K-J
R600	31057-577-561	RF 2T 560-J/RF 2S 560-J	R944	31018-177-183	RD 1/8T 18K-J
R601	31018-177-681	RD 1/8T 680-J/ERD-S2TJ 68	R946	31018-177-473	RD 1/8T 47K-J
R602	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R947	31018-177-393	RD 1/8T 39K-J
R603	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R949	31018-177-393	RD 1/8T 39K-J
R604	31018-177-392	RD 1/8T 3.9K-J	R951	31018-177-103	RD 1/8T 10K-J/ERD-S2TJ 10
R605	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	R952	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102
R606	31018-177-302	RD 1/8T 3K-J	R953	31018-177-103	RD 1/8T 10K-J/ERD-S2TJ 10
R607	31018-377-204	RD 1/2T 200K-J	R956	31018-177-562	RD 1/8T 5.6K-J/ERD-S2TJ 5
R608	31049-101-360	RS 1P 12K-J	R957	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102
R803	31039-687-109	RW 7H 1-J	R958	31018-177-331	RD 1/8T 330-J/ERD-S2TJ 33
R804	31039-687-569	RW 7H 5.6-J	R960	31018-177-472	RD 1/8T 4.7K-J/ERD-S2TJ 4
R805	31039-947-151	RW 20H 150-J(C.B)	R961	31018-177-681	RD 1/8T 680-J/ERD-S2TJ 68
R806	31049-103-820	RS 2P 12K-J	R962	31018-177-681	RD 1/8T 680-J/ERD-S2TJ 68
R807	31059-001-050	RF 1/4P 47-J	R964	31018-177-682	RD 1/8T 6.8K-J
R808	31018-377-224	RD 1/2T 220K-J	R965	31018-177-122	RD 1/8T 1.2K-J
R900A	31049-103-820	RS 2P 12K-J	R966	31018-177-183	RD 1/8T 18K-J

Loc No	Supplier Parts No	Description & Specification	Loc No	Supplier Parts No	Description & Specification
R967	31018-177-123	RD 1/8T 12K-J	C104	31417-104-290	CK45 TAPG B 50V 472-K
R968	31018-177-153	RD 1/8T 15K-J	C105	31417-109-140	CK45 TAPG F 50V 103-Z
R970	31018-177-821	RD 1/8T 820-J	C106	31417-104-290	CK45 TAPG B 50V 472-K
R971	31018-177-821	RD 1/8T 820-J	C107	31407-105-660	CC45(T) CH 50V 101-J
R972	31018-177-821	RD 1/8T 820-J	C108	31407-105-660	CC45(T) CH 50V 101-J
R973	31018-177-332	RD 1/8T 3.3K-J/ERD-S2TJ 3	C110	31417-109-140	CK45 TAPG F 50V 103-Z
R974	31018-177-332	RD 1/8T 3.3K-J/ERD-S2TJ 3	C111	31417-104-290	CK45 TAPG B 50V 472-K
R975	31018-177-332	RD 1/8T 3.3K-J/ERD-S2TJ 3	C112	31407-105-110	CC45 TAPG CH 50V 120-J
R981	31018-177-333	RD 1/8T 33K-J/ERD-S2TJ 33	C114	31417-109-140	CK45 TAPG F 50V 103-Z
R982	31018-177-152	RD 1/8T 1.5K-J	C151	31607-402-240	CE04W TAPG 50V 4.7M
R991	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C152	31607-402-240	CE04W TAPG 50V 4.7M
R992	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C153	31607-402-200	CE04W TAPG 50V 0.47M
R993	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C154	31607-401-510	CE04W TAPG 16V 1000U-M
R994	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C155	31607-402-240	CE04W TAPG 50V 4.7M
R995	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C156	31607-401-680	CE04W TAPG 25V 100U
RC03	31018-177-101	RD 1/8T 100-J/ERD-S2TJ 10	C201	31407-105-660	CC45(T) CH 50V 101-J
RC04	31018-177-101	RD 1/8T 100-J/ERD-S2TJ 10	C202	31407-105-090	CC45(T) CH 50V 100-C
RC05	31018-177-101	RD 1/8T 100-J/ERD-S2TJ 10	C251	31607-401-430	CE04W TAPG 25V 10M
RC07	31018-177-151	RD 1/8T 150-J	C252	31607-401-430	CE04W TAPG 25V 10M
RC08	31018-177-103	RD 1/8T 10K-J/ERD-S2TJ 10	C253	31607-401-430	CE04W TAPG 25V 10M
RC09	31018-177-103	RD 1/8T 10K-J/ERD-S2TJ 10	C254	31517-390-502	CFS922M TAPG 250V 104-J
RC10	31018-177-103	RD 1/8T 10K-J/ERD-S2TJ 10	C255	31607-402-070	CE04W TAPG 35V 22M
RC11	31018-177-682	RD 1/8T 6.8K-J	C301	31507-127-001	ECQ B1 H 152J F3
RC12	31018-177-822	RD 1/8T 8.2K-J	C302	31507-127-023	ECQ B1 H 122J F3
RC13	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C303	31507-127-016	ECQ B1 H 472J F3
RC15	31018-177-471	RD 1/8T 470-J	C304	31507-127-010	ECQ B1H 473J F3/2E 63V 47
RC16	31018-177-103	RD 1/8T 10K-J/ERD-S2TJ 10	C305	31507-127-022	ECQ B1 H 513J F3
RC17	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C307	31507-127-010	ECQ B1H 473J F3/2E 63V 47
RC18	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C309	31507-127-006	ECQ B1 H 103J F3
RC19	31018-177-102	RD 1/8T 1K-J/ERD-S2TJ 102	C311	31417-468-681	CK45 TAPG B500V 681-K
RC21	31018-177-201	RD 1/8T 200-J	C320	31507-127-011	ECQ B1H 683J F3/2E 63V 68
			C321	31507-127-012	EVQB1 H 104J-F3/2E 63V 10
			C351	31607-902-250	CE04W TAPG 50V 0.22M
			C352	31607-402-100	CE04W TAPG 35V 100M-M-VEN
			C353	31607-403-970	CE04W TAPG 25V 1000M-M(SG)
			C354	31607-402-250	CE04W TAPG 50V 10M
			C355	31607-402-130	CE04W TAPG 35V 470M-M
			C356	31607-402-570	CE04W TAPG 50V 1M(+10 -10)
			C357	31607-402-570	CE04W TAPG 50V 1M(+10 -10)
			C400	31417-468-561	CK45 TAPG B500V 561-K
			C401	31507-127-009	ECQ B1 H 333J F3
			C402	31507-127-010	ECQ B1H 473J F3/2E 63V 47
			C403	31507-127-005	ECQ B1 H 822J F3
			C404	31417-109-100	CK45 TAPG F 50V 102-Z
			C405	31507-126-001	36546223(3E250V 223-J)
			C406	31417-106-090	CK45 TAPG B 500V 471-K
			C407	31519-400-001	CFS 922M 1600V 0.0063-J
			C408	31417-901-180	CK45(T) B2KV 271-K
			C409	31607-401-670	CE04W TAPG 25V 47M
<b>VARIABLE RESISTORS</b>					
VR101	31249-128-005	EVN DJA A03 B53/EVN CYA A			
VR203	31249-128-008	EVN DJA A03 B54/EVN CYA A			
VR301	31249-128-006	EVN DJA A03 B22/EVN CYA A			
VR401	31249-128-006	EVN DJA A03 B22/EVN CYA A			
VR531	31249-128-006	EVN DJA A03 B22/EVN CYA A			
VR532	31249-128-006	EVN DJA A03 B22/EVN CYA A			
VR533	31249-128-005	EVN DJA A03 B53/EVN CYA A			
VR534	31249-128-005	EVN DJA A03 B53/EVN CYA A			
VR535	31249-128-005	EVN DJA A03 B53/EVN CYA A			
VRC01	31249-128-011	EVN DJA A03 B52/EVN CYA A			
VRC03	31249-128-011	EVN DJA A03 B52/EVN CYA A			
<b>CAPACITORS</b>					
C101	31417-109-140	CK45 TAPG F 50V 103-Z			
C102	31417-109-140	CK45 TAPG F 50V 103-Z			
C103	31417-109-140	CK45 TAPG F 50V 103-Z			

Loc No	Supplier Parts No	Description & Specification	Loc No	Supplier Parts No	Description & Specification
C410	31607-401-670	CEO4W TAPG 25V 47M	C900	31467-102-010	CK45P TAPG E250V 222-M(T2
C411	31417-109-140	CK45 TAPG F 50V 103-Z	C902	31417-109-100	CK45 TAPG F 50V 102-Z
C412	31517-390-502	CFS922M TAPG 250V 104-J	C905	31407-105-180	CC45(T) CH 50V 220-J
C413	31517-333-334	CFS 922M TAPG 200V 334-J	C906	31407-105-180	CC45(T) CH 50V 220-J
C414	31417-106-090	CK45 TAPG B 500V 471-K	C907	31407-105-270	CC45(T) CH 50V 300-J
C451	31607-401-460	CEO4W TAPG 16V 47M	C908	31417-109-100	CK45 TAPG F 50V 102-Z
C452	31607-402-210	CEO4W TAPG 50V 1M	C909	31407-105-150	CC45(T) CH 50V 160-J
C454	31607-401-450	CEO4W TAPG 16V 33M	C912	31407-105-660	CC45(T) CH 50V 101-J
C455	31607-403-490	CEO4W TAPG 250V 10M-M	C919	31417-109-140	CK45 TAPG F 50V 103-Z
C456	31607-401-710	CED4W TAPG 25V 470M-M	C950	31607-403-490	CEO4W TAPG 250V 10M-M
C457	31607-403-240	CEO4W TAPG 160V 47M-M	C951	31507-127-012	EVQB1 H 104J-F3/2E 63V 10
C458	31607-403-490	CEO4W TAPG 250V 10M-M	C952	31607-401-430	CEO4W TAPG 25V 10M
C501	31407-105-260	CC45(T) CH 50V 470-J	C953	31607-401-290	CEO4W TAPG 10V 220U
C502	31407-106-760	CC45(T) RH 50V 151-J	C954	31607-401-140	CEO4W TAPG 6.3V 1000M-M
C504	31417-109-140	CK45 TAPG F 50V 103-Z	C955	31607-401-460	CEO4W TAPG 16V 47M
C506	31407-105-180	CC45(T) CH 50V 220-J	C956	31607-402-200	CEO4W TAPG 50V 0.47M
C507	31507-127-007	ECQ B1 H 153J F3	C957	31607-401-430	CEO4W TAPG 25V 10M
C508	31417-104-070	CK45 TAPG B 50V 271-K	C958	31607-401-430	CEO4W TAPG 25V 10M
C509	31417-104-070	CK45 TAPG B 50V 271-K	C959	31607-401-430	CEO4W TAPG 25V 10M
C510	31417-104-070	CK45 TAPG B 50V 271-K	C960	31607-402-250	CEO4W TAPG 50V 10M
C531	31417-318-152	CK45 TAPG B 50V 152-K	C961	31607-402-240	CEO4W TAPG 50V 4.7M
C532	31417-318-152	CK45 TAPG B 50V 152-K	C962	31607-401-430	CEO4W TAPG 25V 10M
C533	31417-318-152	CK45 TAPG B 50V 152-K	C963	31607-401-430	CEO4W TAPG 25V 10M
C534	31417-767-102	CK45(T) B2KV 102-K	C964	31607-401-430	CEO4W TAPG 25V 10M
C535	31417-109-100	CK45 TAPG F 50V 102-Z	C965	31607-402-210	CEO4W TAPG 50V 1M
C536	31417-109-100	CK45 TAPG F 50V 102-Z	C966	31407-105-660	CC45(T) CH 50V 101-J
C537	31417-109-100	CK45 TAPG F 50V 102-Z	C970	31607-401-680	CEO4W TAPG 25V 100U
C551	31607-402-170	CEO4W TAPG 50V 0.1U-L,L	C971	31507-127-016	ECQ B1 H 472J F3
C553	31607-402-230	CEO4W TAPG 50V 3.3M	C972	31607-401-710	CED4W TAPG 25V 470M-M
C554	31607-402-220	CEO4W TAPG 50V 2.2M	C973	31507-127-012	EVQB1 H 104J-F3/2E 63V 10
C555	31607-401-670	CEO4W TAPG 25V 47M	C974	31607-401-430	CEO4W TAPG 25V 10M
C556	31607-402-210	CEO4W TAPG 50V 1M	CA101	31467-102-010	CK45P TAPG E250V 222-M(T2
C557	31607-402-210	CEO4W TAPG 50V 1M	CA102	31467-102-010	CK45P TAPG E250V 222-M(T2
C558	31417-109-140	CK45 TAPG F 50V 103-Z	CC01	31507-127-012	EVQB1 H 104J-F3/2E 63V 10
C560	31607-401-690	CEO4W TAPG 25V 220M-M(SG)	CC02	31507-127-012	EVQB1 H 104J-F3/2E 63V 10
C561	31607-401-430	CEO4W TAPG 25V 10M	CC04	31507-127-002	ECQ B1H 222J F3
C601	31407-106-150	CC45(T) RH 50V 150-J	CC06	31507-127-012	EVQB1 H 104J-F3/2E 63V 10
C602	31507-127-007	ECQ B1 H 153J F3	CC07	31607-402-210	CEO4W TAPG 50V 1M
C603	31407-047-221	CC45(T) RH 50V 221-J	CC08	31417-104-560	CK45 TAPG B 50V 561-K
C606	31417-106-010	CK45 TAPG B 500V 101-K	CC09	31607-401-460	CEO4W TAPG 16V 47M
C607	31417-104-330	CK45 TAPG B 50V 331-K	CC10	31417-104-560	CK45 TAPG B 50V 561-K
C651	31607-401-430	CEO4W TAPG 25V 10M	CN901	31497-009-440	EXF-FP5 331MDV(6P 331)
C655	31607-403-210	CEO4W TAPG 160V 10M-M	CN902	31497-009-350	EXF-FP7 331MDV(8P 331)
C656	31607-402-210	CEO4W TAPG 50V 1M	CN903	31497-009-430	EXF-FP3 331MDV(4P 331)
C657	31607-403-210	CEO4W TAPG 160V 10M-M	CN904	31497-009-360	EXF-FP8 331MDV(9P 331)
C801	31569-204-150	ECQ-U2A154MN (AC250V 0.15			
C802	31467-102-010	CK45P TAPG E250V 222-M(T2			
C851	31609-403-410	CEO4W 200V 470M(25X40)			
C852	31607-403-220	CEO4W TAPG 160V 22M-M			
					S E M I C O N D U C T O R S
			D201	32167-406-480	1N4148 TAPG
			D202	32167-406-480	1N4148 TAPG



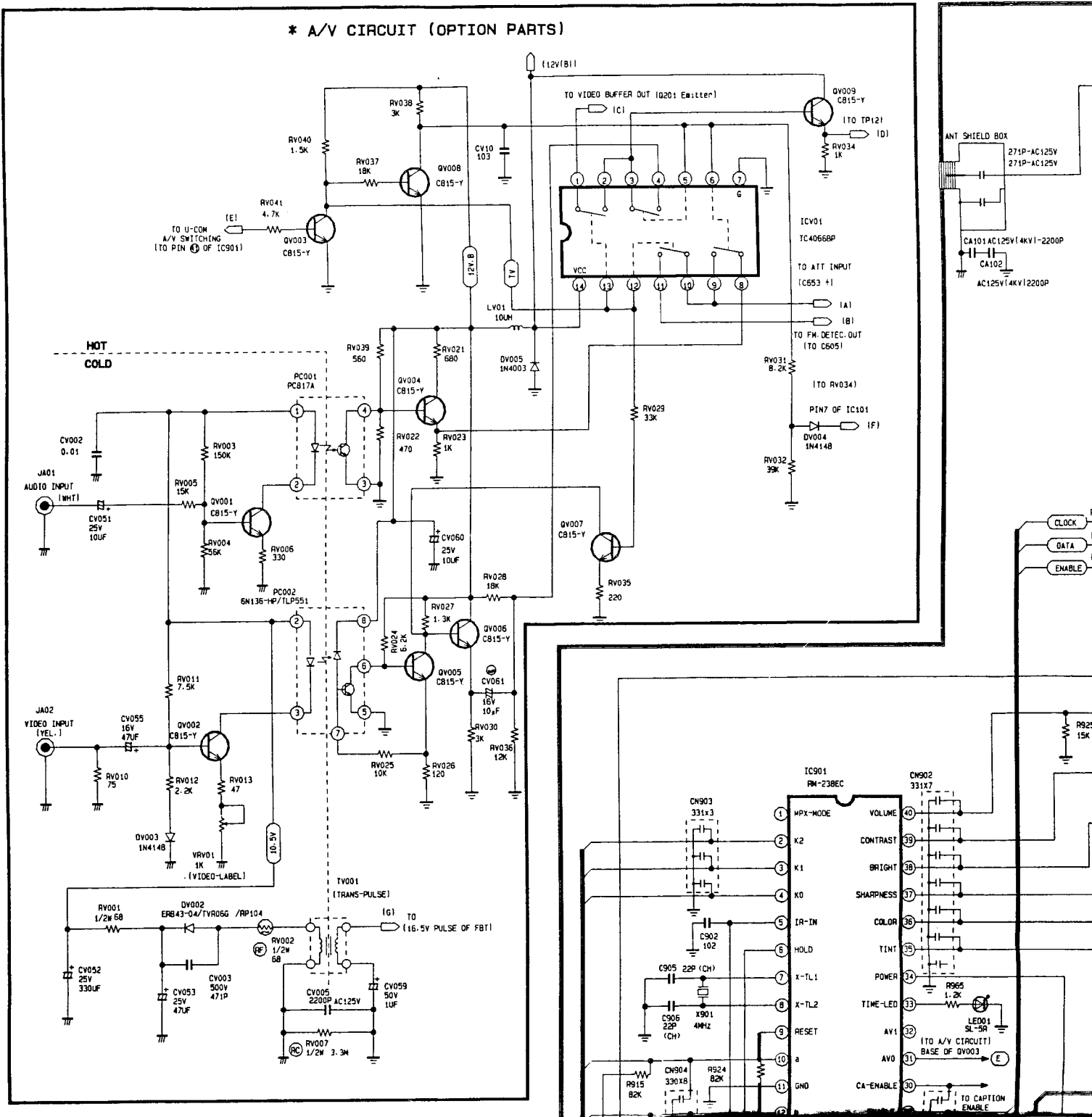


Loc No	Supplier Parts No	Description & Specification	Loc No	Supplier Parts No	Description & Specification
LC01	32429-014-010	1UH-K	X401	34539-300-006	CSB503F5
	<b>M I S C E L L A N E O U S</b>		X501	34537-001-002	3.579545MHZ
5DAN-L	38114-598-200	ART PAPER 90S	X901	34537-001-003	4.0MHZ
ANODE	36633-101-910	ABS VO GRAY ALL MODEL	Z101	34529-700-019	F52LM
ANT	34544-200-002	27OPFX2(100M/M)	Z102	34527-700-024	SAF41MC80Z-TF01
C-COIL	36634-111-120	NYLON66 V2 NTR 140MM	Z201	34527-460-001	TPS4.5MCTF21/EFCT4R5MW3
C/FRNT	38114-700-210	ART PAPER 120 CV6331W,UL	Z601	34527-460-000	SFE4.5MBTF21
C/FRNT	38114-598-100	ART PAPER 90S	Z602	34527-460-064	CDA4.5ME30 TF21
CABBAC	38114-708-210	ART PAPER 120(S)		<b>A S S Y - H E A T / S I N K</b>	
CABFRO	38114-699-710	ART PAPER 90(S)		*3H82-00360Y000	35684-121-410, KA2131
CABFRO	38114-684-200	WHT PAPER 100	IC301	32119-102-300	KA 2131
CN01	33058-372-014	B10XB10/F/350		*3H82-00360Y001	14INCH, 35684-121-410, 2SD1
CN81	33124-205-001	OM	Q402	32159-210-002	2SD1650 YD
CN81A	33124-205-001	OM		*3Y83-00009-010	35682-111-080, STR30125, LF
CN81A	33054-834-015	P1XP1/1015/400	Q801	32119-910-000	STR30125 LF501
CN89	33124-205-003	2P 10MM		<b>2 . A S S Y - A C C E S S O R Y</b>	
D. COIL	32479-027D710	4.ORT30L940		*3Y13-00092-010	TTB1340W/CX
EYE-P	33104-107-210	BST 2.8X2.0		32759-115D040	R300-R75(C.R-MULTIPLE)
F801	34709-087-140	T/L 250V 3A 20MM(U/C)		31499-009-080	EXN-G271P 155L/MD-CE
F801	33167-001-001	PFC 5000-0202		34709-0080-000	W/P120(G) TXB1940/CX
FBT1	36635-001-710	NYLON6.6 DATL-450-1 DONG-		38124-121-170	WHT PAPER 120(SEA)
FBT2	36635-112-010	NYLON 6.6 DONG-A DATL-600	S/N	38134-379-010	ART PAPER 100
GT13	33124-205-001	OM		38653-108-161	HDPE T0.015 400X230 NO
GT1314	33054-834-015	P1XP1/1015/400		<b>3 . A S S Y - C R T</b>	
GT14	33124-205-001	OM	C.Y	34099-027-010	JH-225, NY-225/PI22.5
H/SINK	36604-134-511	NYLON 66 VO NTR	CRT	32019-400-083	A34KQV42X
H/WIRE	37158-230-061	2S-3X6 FE FZY	D.Y	32439-210-090	DSE-1422FL
H901	34519-600-005	TECC1880PA08A	S.DY	36814-101-911	NEOPRENE VO BLK
IC901	34543-130-810	STPE T0.25		<b>4 . A S S Y - T R A N S M I T T E R</b>	
L105	32707-200-014	45.75MHZ/2(7m/m)		*3F14-00034-610	TM34, RM238, 33, E, WHITE, SS
L106	32707-200-013	45.75MHZ(7m/m)			
L404	34047-019-060	3.5X6X1.0			
PA05	33347-108-310	67094-003(AUTO)			
PA08	33124-205-007	4P 6-12.5-14MM			
PA11	33347-108-310	67094-003(AUTO)			
PC801	33053-817-090	MSP-10W/SPT-2/F, BLK-HOU			
RL91	34726-100-002	HR-CR7 DC12V TV-5(R)			
SERIAL	38114-597-900	ART PAPER 90S			
SPK	34209-200-030	TAF077A05508-045, 8R, 2W			
SW02	33598-001-001	JTR-1104			
SW201	33549-007-010	JRS1301/KLR1301			
SW901	33606-101-011	KPT-1112 ROBOT			
T401	32846-070-006	130MH/105UH(R-S)			
T444	32859-153-410	FCK-1415EL			
T601	32789-550-050	1.1K			
TBC	33124-205-001	OM			
V999	33359-063-610	HF-22.5A			
X201	32466-200-013	SDL401TN			

# SCHEMATIC DIAGRAM

## CHASSIS:CKA50ZM/ZH

### \* A/V CIRCUIT (OPTION PARTS)



ECB  
KTC 2482/2SC2482  
2SC 2229/KTC2229  
KSC 2310  
KSC 2330  
KSC 2331  
2SC2230

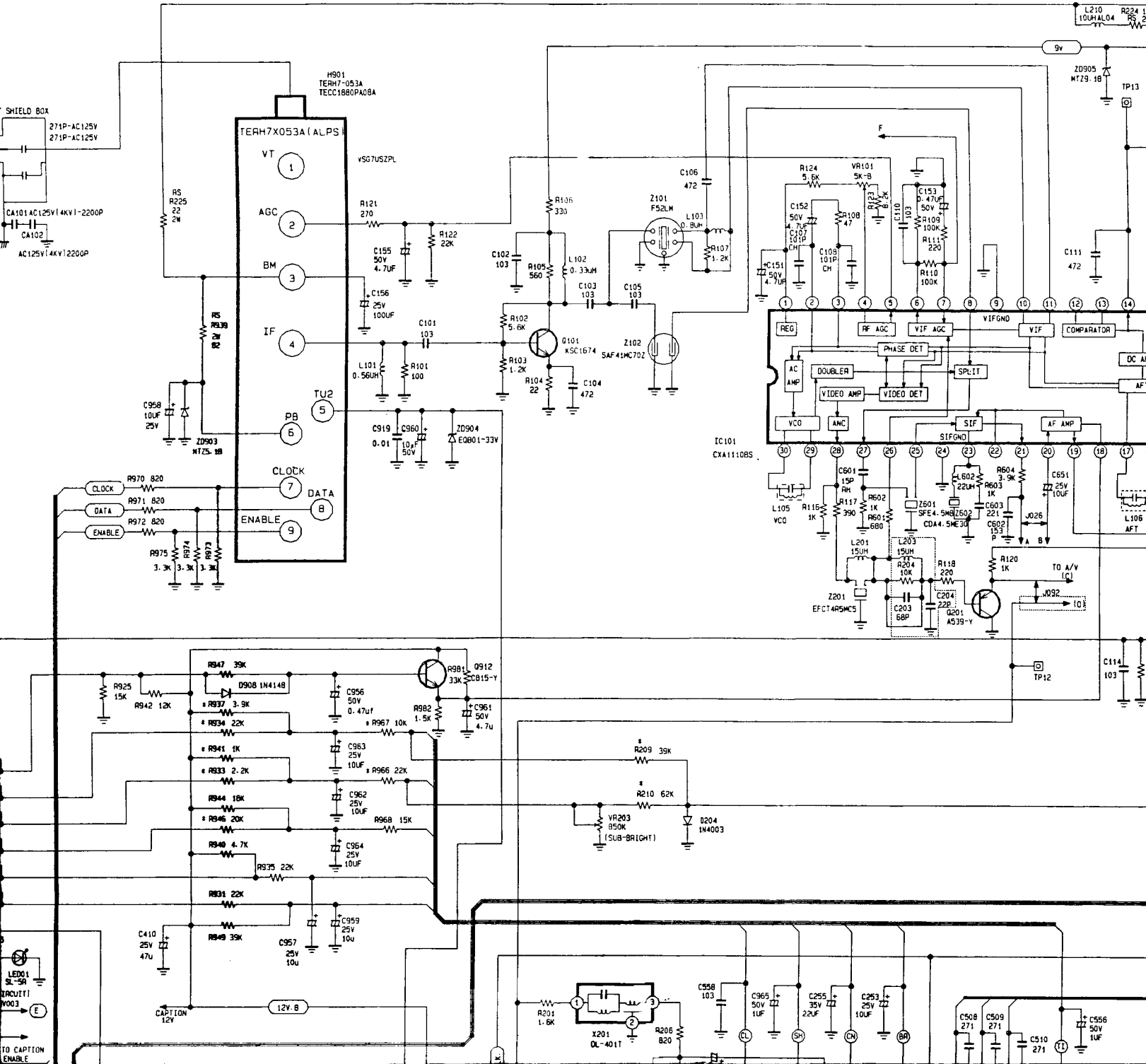
2SC1210  
KSD5011  
2SD 1554  
2SD 1650  
2SD1555  
2SD1651

KSA 642  
KSA 815  
KSA 539  
STR50103A

30 PIN LA7520 LA7625  
52PIN MM15151(PM2121)

WARNING: BEFORE SERVICING THIS CHASSIS READ PRECAUTION: SAFETY PRECAUTION AND IN MANUAL.  
CAUTION: The shaded Area in the schematic diagram should be replaced only with the original components of specified in the original circuit of specified in the of these components. Read carefully! In this manual. Do not degrade the Improper servicing.

WARNING: THIS RECEIVER CONTAINS SAFETY CRITICAL PARTS SHOWN IN THE SHADED AREAS OF THE SCHEMATIC FOR CONTINUED SAFETY. REPLACE SAFETY ONLY WITH MANUFACTURER'S RECOMMENDED PARTS. FOR EXACT REPLACEMENTS.



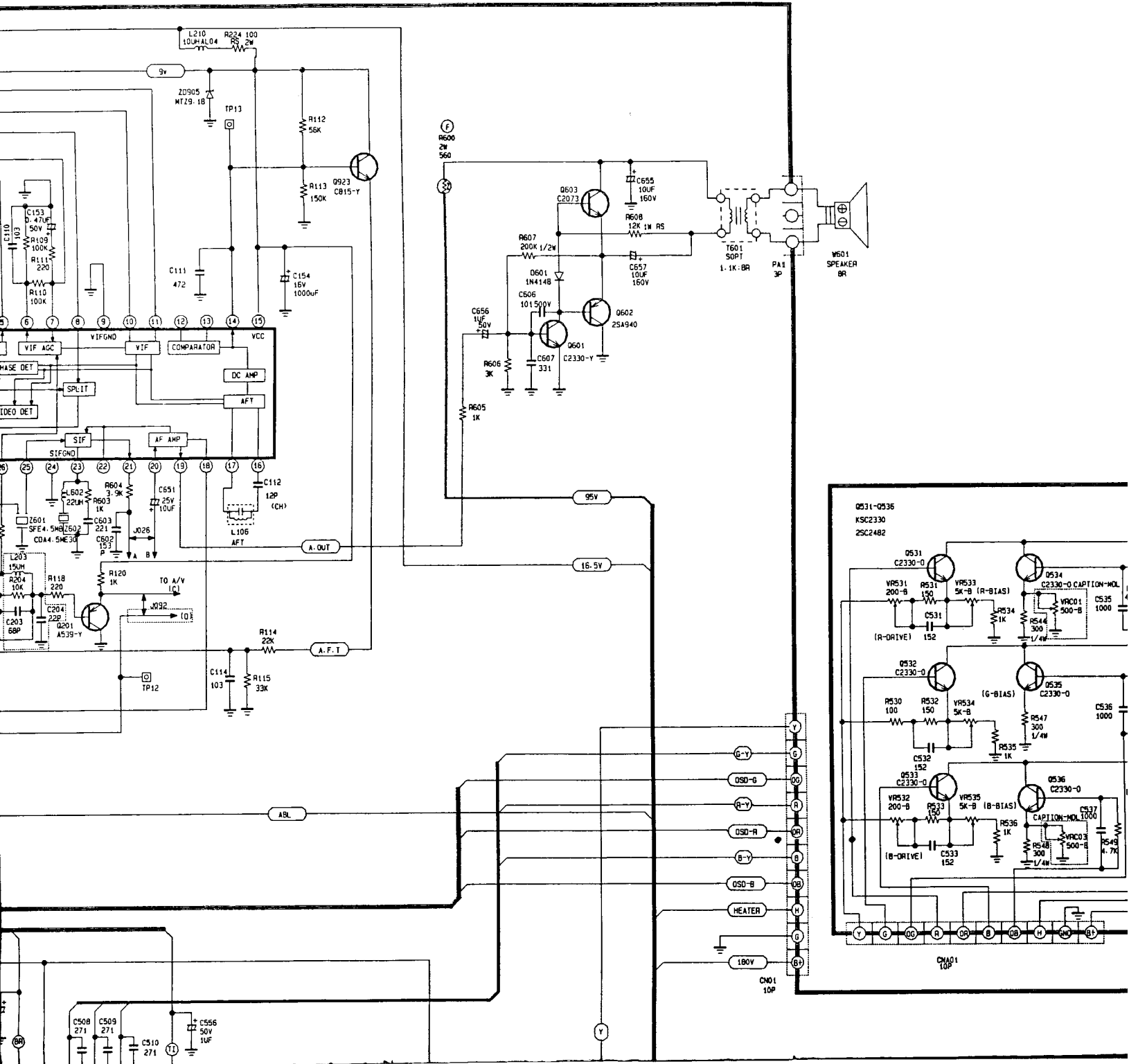
**WARNING** - BEFORE SERVICING THIS CHASSIS READ THE 'X-RAY RADIATION PRECAUTION', 'SAFETY PRECAUTION' AND 'PRODUCT SAFETY NOTICE' IN MANUAL.

**CAUTION** - The shaded area in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the 'PRODUCT SAFETY NOTICE' in this manual. Do not degrade the safety of the receiver through improper servicing.

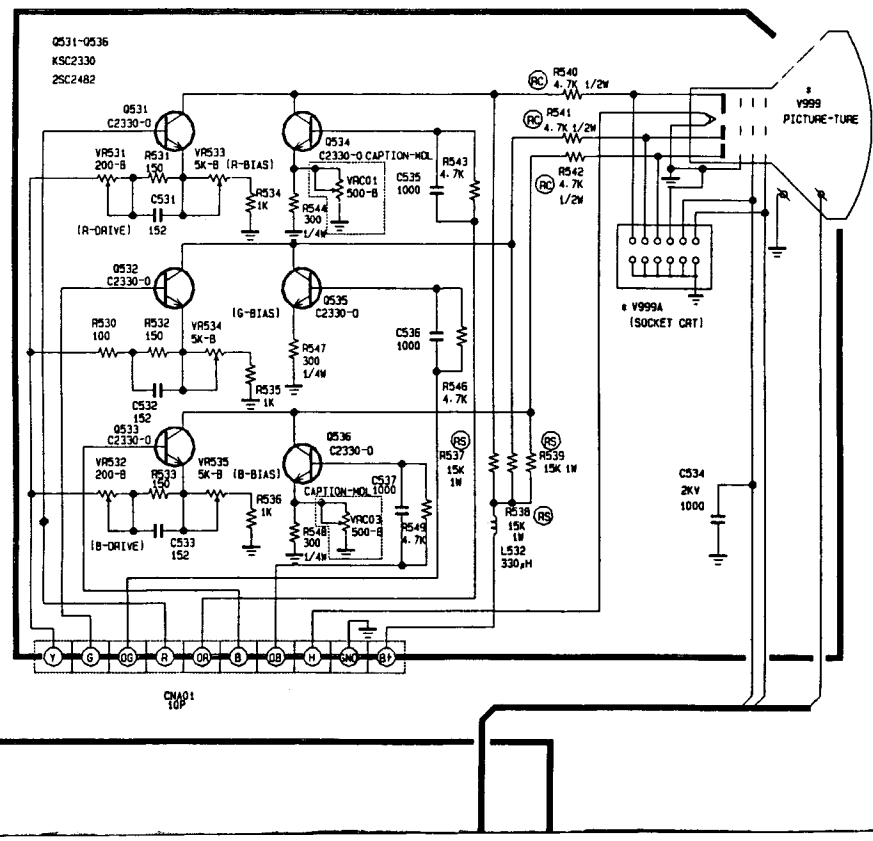
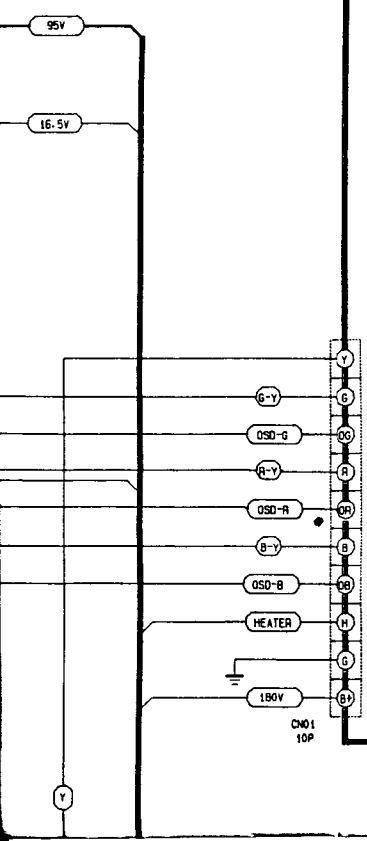
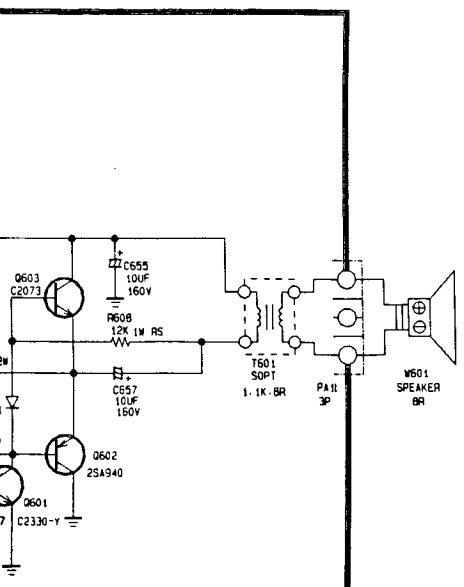
**WARNING** - THIS RECEIVER CONTAINS SAFETY CRITICAL COMPONENTS. ALL PARTS SHOWN IN THE SHADED AREAS OF THE SCHEMATIC ARE SAFETY CRITICAL FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS. REFER TO PARTS LIST FOR EXACT REPLACEMENTS.

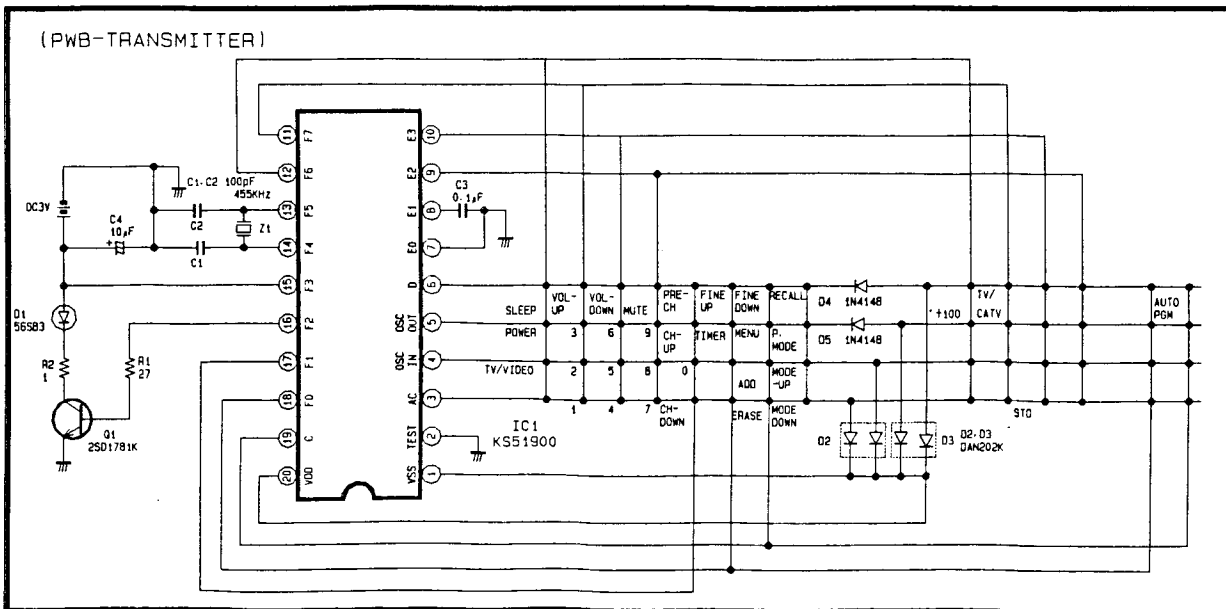
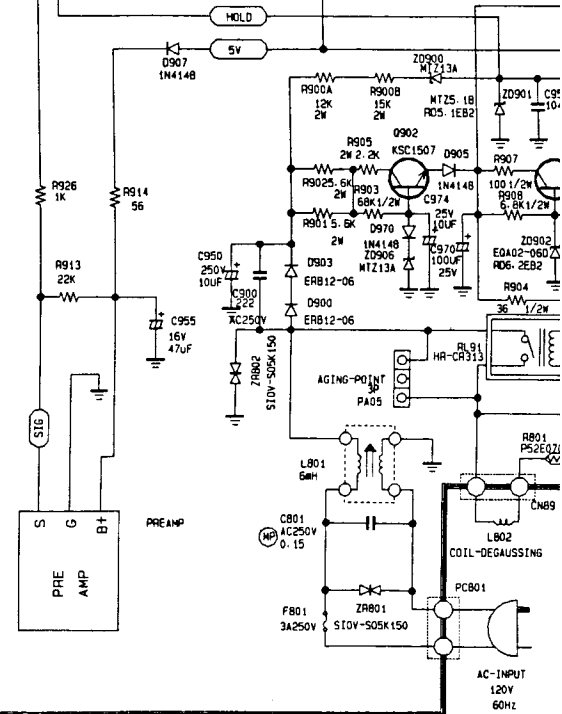
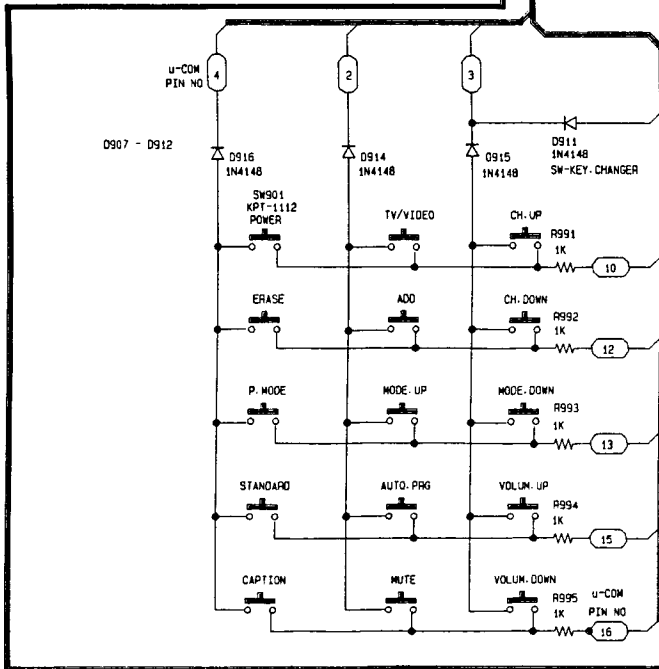
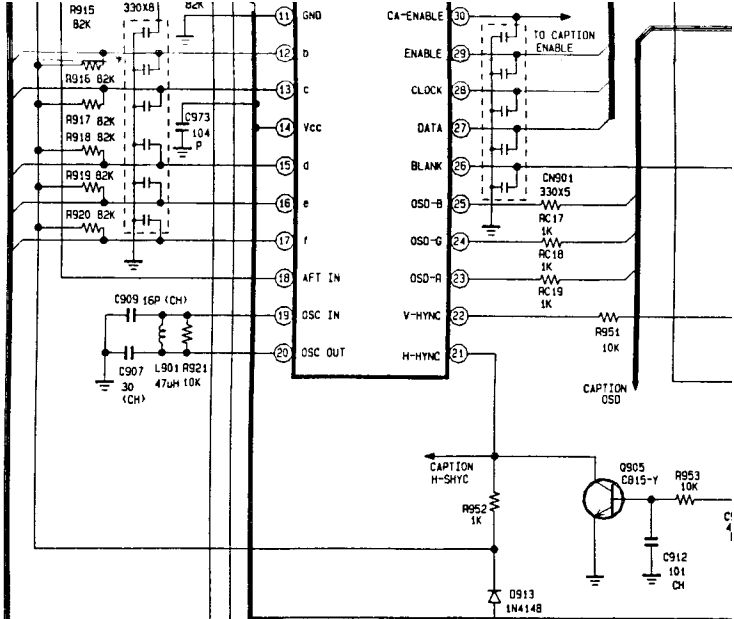
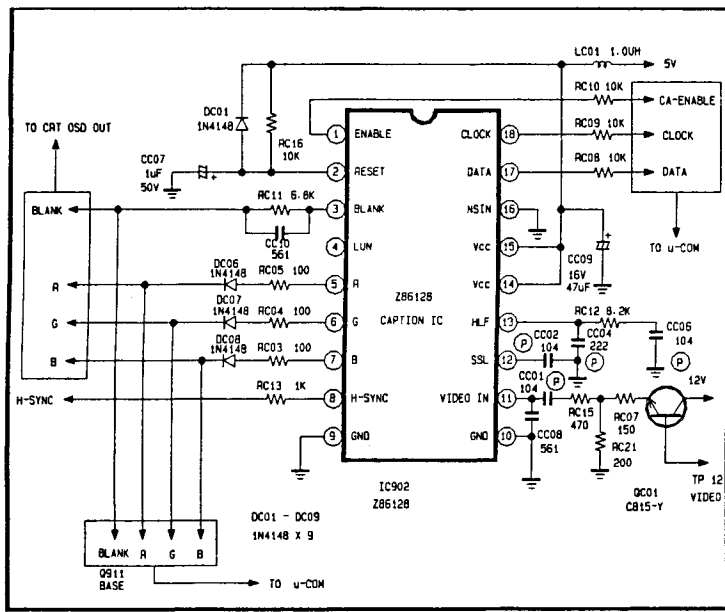
**NOTE**

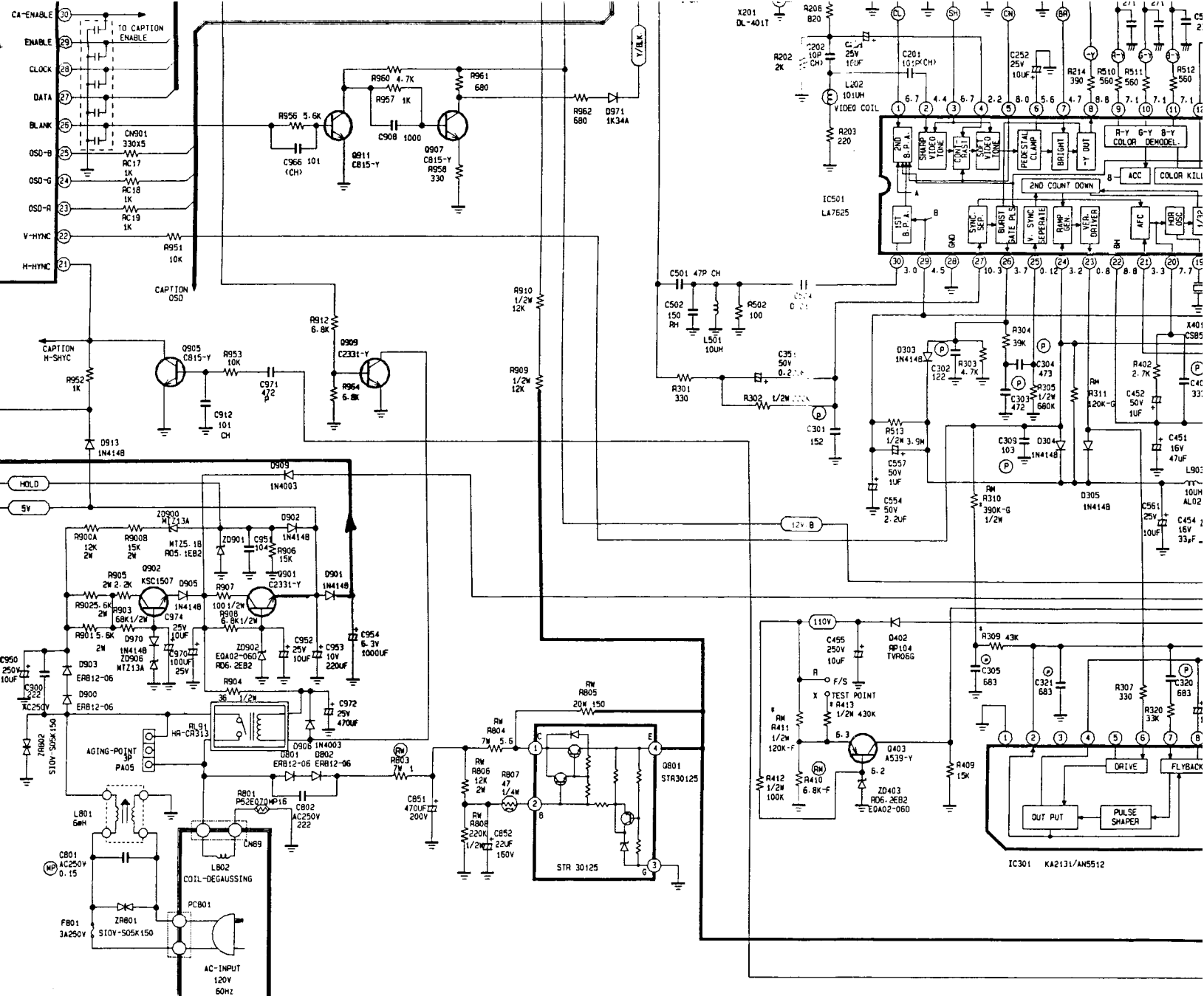
1. Resistance is shown in ohm K\*1,000 M\*1,000,000.
2. Unless otherwise noted in schematic all capacitor values less than one are expressed in uF, and the values more than 1 in pF.
3. Unless otherwise noted in schematic all inductor values more than 1 are expressed in uH.
4. Voltage read with V.T.V.M. (input impedance 21 M $\Omega$ /all range) from point indicated to chassis ground using a color bar signal with all control at normal line voltage 120 volts.
5. Waveforms in chrominance circuit are taken receiving a color bar signal with enough sensitivity.
6. Waveforms in other circuit are taken using a signal under normal receiving conditions.
7. Voltage readings shown are normal values and may vary 20% except H.V.
8. This is fundamental circuit diagram some production changes may be made without revision of the diagram.
9. The circuits enclosed in dotted lines are optional parts. (\*)



shown in ohm K=1 000 M=1 000 000  
 be noted in schematic all capacitor values less than 1 are  
 pF, and the values more than 1 in pF.  
 be noted in schematic all inductor values more than 1 are  
 mH.  
 with V.T.V.M (input impedance 21 Ma/all range) from  
 to chassis ground using a color bar  
 control at normal line voltage 120 volts.  
 prominence circuit are taken receiving a color bar  
 enough sensitivity.  
 other circuit are taken using a signal under normal  
 conditions.  
 values shown are normal values and may vary 20% except H.V  
 ental circuit diagram some production  
 made without revision of the diagram.  
 in dotted lines are optional parts. [#]



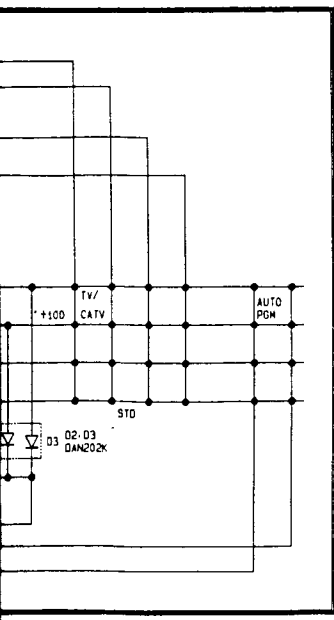




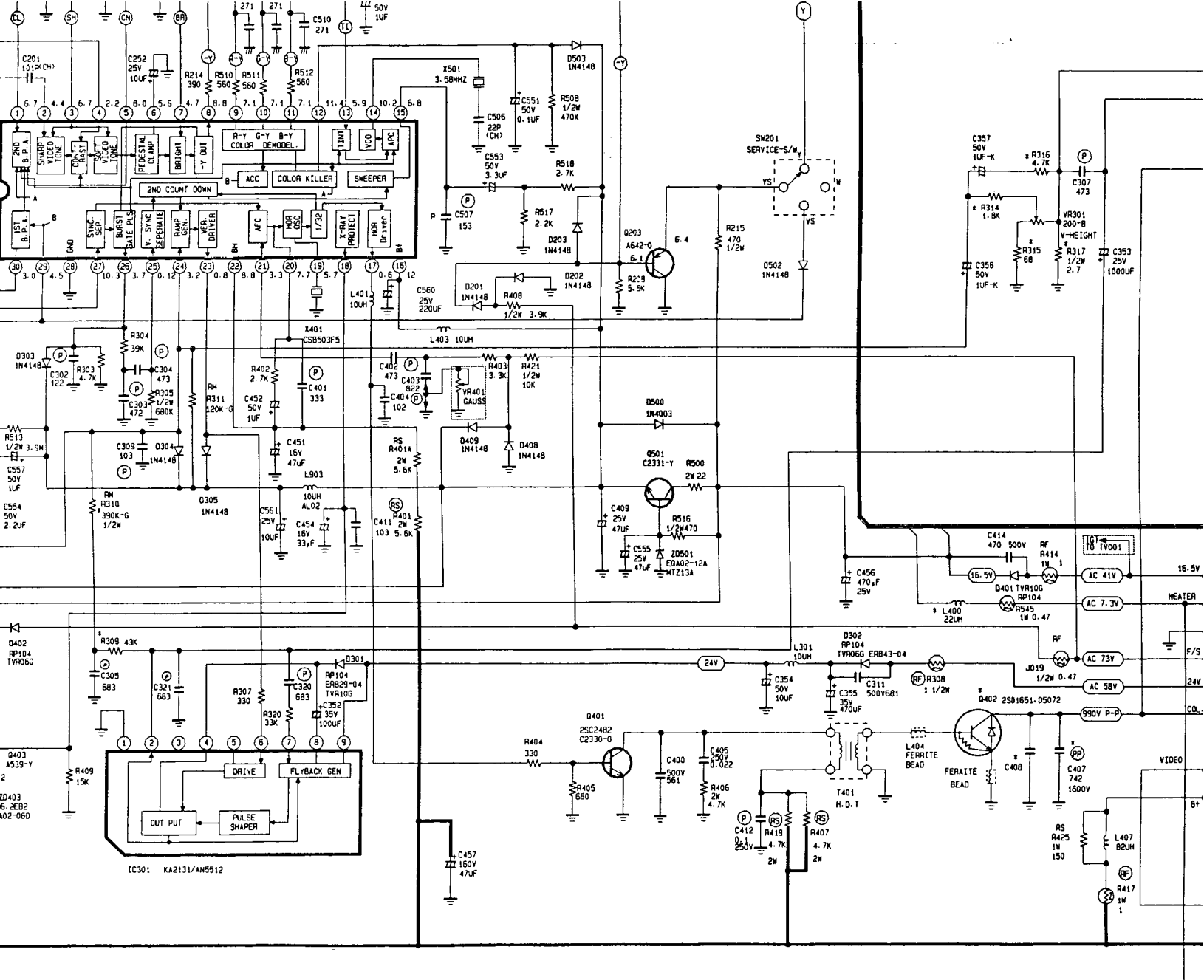
**\* MARK PARTS**

LOCATION	CKA502H		CHA502M
	20V (CT-5315V)	19V (CT-5071V)	13V (CT-3371V)
R209	1/8T 62K	1/8T 39K	1/8T 27K
R933	1/8T 3.9K	1/8T 2.2K	1/8T 6.8K
R934	1/8T 9.1K	1/8T 22K	1/8T 6.8K
R937	1/8T 3K	1/8T 3.9K	1/8T 1.3K
R941	1/8T 1.5K	1/8T 1K	1/8T 1.5K
R946	1/8T 20L	1/8T 20K	1/8T 47K
R966	1/8T 15K	1/8T 22K	1/8T 18K
R967	1/8T 15K	1/8T 10K	1/8T 12K
R309	1/8T 82K-G	1/8T 43K	1/8T 82K-G
R310	MF 1/2T 390K-G	MF 1/2T 390K-G	MF 1/2T 330K-G
R314	1/8T 1.5K-G	1/8T 1.8K	MF 1/8T 1.5K-C
R315	JUMPER	1/8T 68	JUMPER
R316	1/8T 9.1K	1/8T 4.7K	1/8T 6.8K
R317	1/2T 3.9	1/2T 2.7	1/2T 3.9-J
R416	MF 1/4T 196K-F	MF 1/2T 220K-F	MF 1/4T 237K-F
R411	MF 1/2T 120K-F	MF 1/2T 120K-F	MF 1/2T 127K-F
R413	1/2T 430K	1/2T 430K	1/2T 470K-F
C305	C-P 63V 683-J	C-P 63V 683-J	C-P 63V 513-J

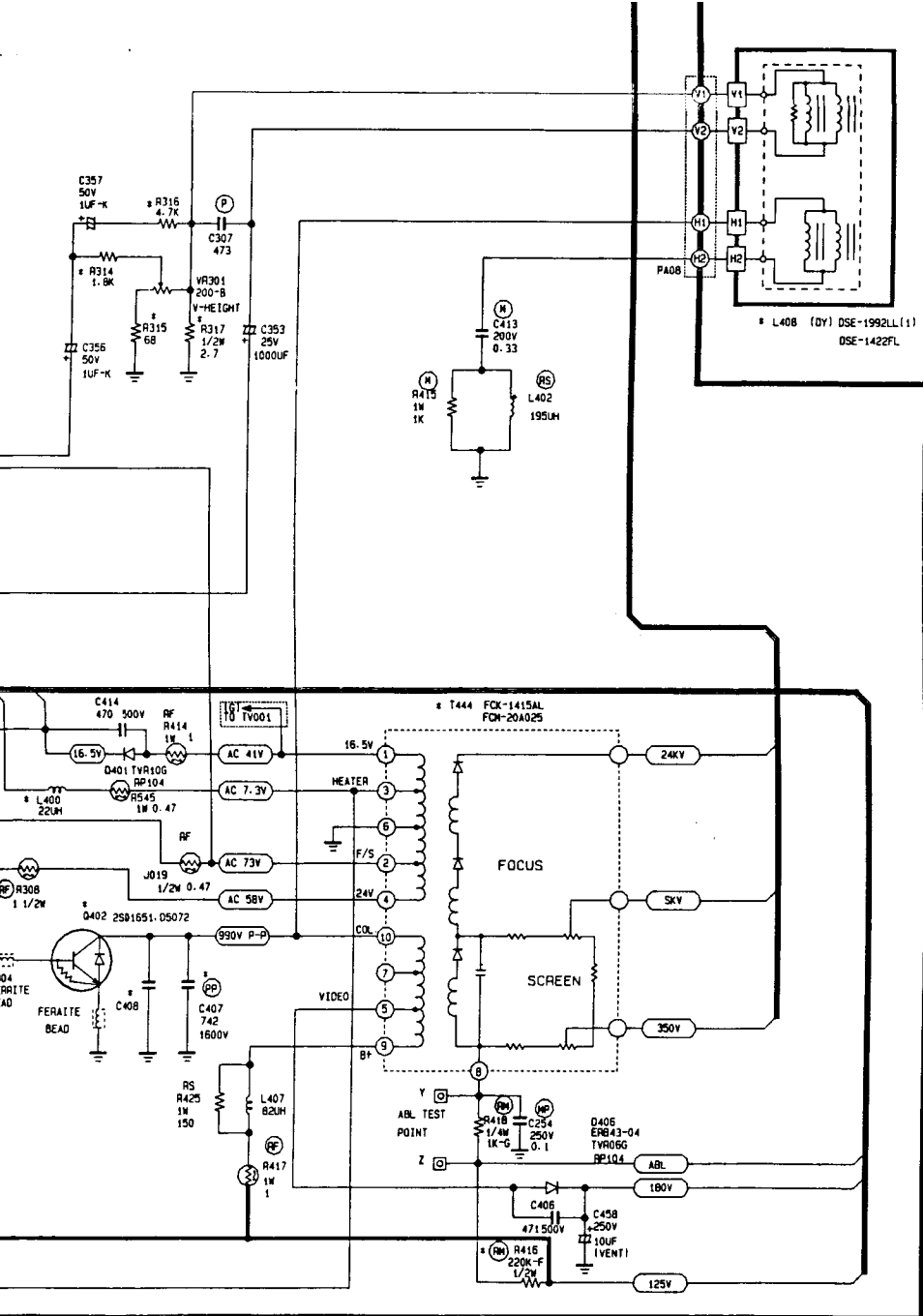
LOCATION	CKA502H		CKA502M
	20V (CT-5315V)	19V (CT-5071V)	13V (CT-3371V)
C321	C-P 63V 683-J	C-P 63V 683-J	C-P 63V 104J
C407	C-MP 1.6KV 632-H	C-MP 1.6KV 742-H	C-MP 1.6KV 632-H
C468	C-C 82KV 561-K	DELETE	C-C 82KV 271-K
L400	22UH	22UH	DELETE
Q402	KSD5072YD	KSD5072YD	2501E50
T444	FCM-20A025	FCM-20A025	FCM-1415EL
CRF	A51KRE83X	A48KRD82X	A34KQV42X
V999A	HF-29 1S1R-S1	HF-29 1S1R-S1	HF-22 5S1R-S1
D-Y	DSE2192GL	DSE1992LL	DSE1422FL
D-COIL	5.7R755L1410	4.0R135L1280	4.0R130L940
C-Y	JM8210	JM8210	JM-225







CKA502H		CKA502M	
20V (CT-5315V)	19V (CT-5071V)	13V (CT-3371V)	
C-P 63V 683-J	C-P 63V 683-J	C-P 63V 104J	
C-MP 1.6KV 632-H	C-MP 1.6KV 742-H	C-MP 1.6KV 632-H	
C-C 82KV 561-K	DELETE	C-C 82KV 271-K	
22U	22U	DELETE	
K505072YD	K505072YD	25D1650	
FCM-20A025	FCM-20A025	FCM-1415EL	
A51KRE83X	A48KRO82X	A34KQV42X	
HF-29.151R-S1	HF-29.151R-S1	HF-22.551R-S1	
DSE2192OL	DSE1992LL	DSE1422FL	
5.7R155LI1410	4.0RT35LI280	4.0RT30L940	
JM8210	JM8210	JH-225	

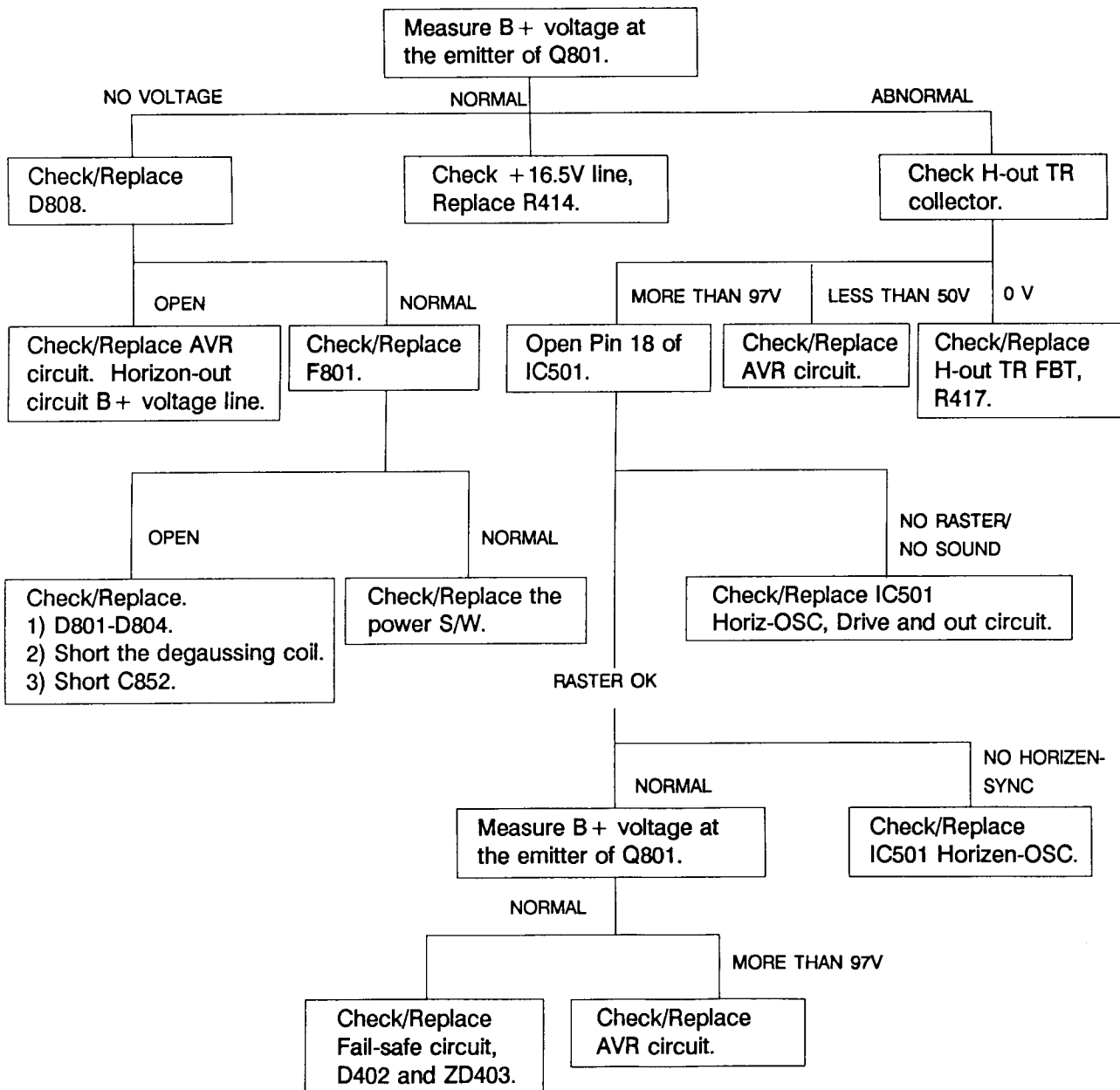


# TROUBLESHOOTING CHARTS

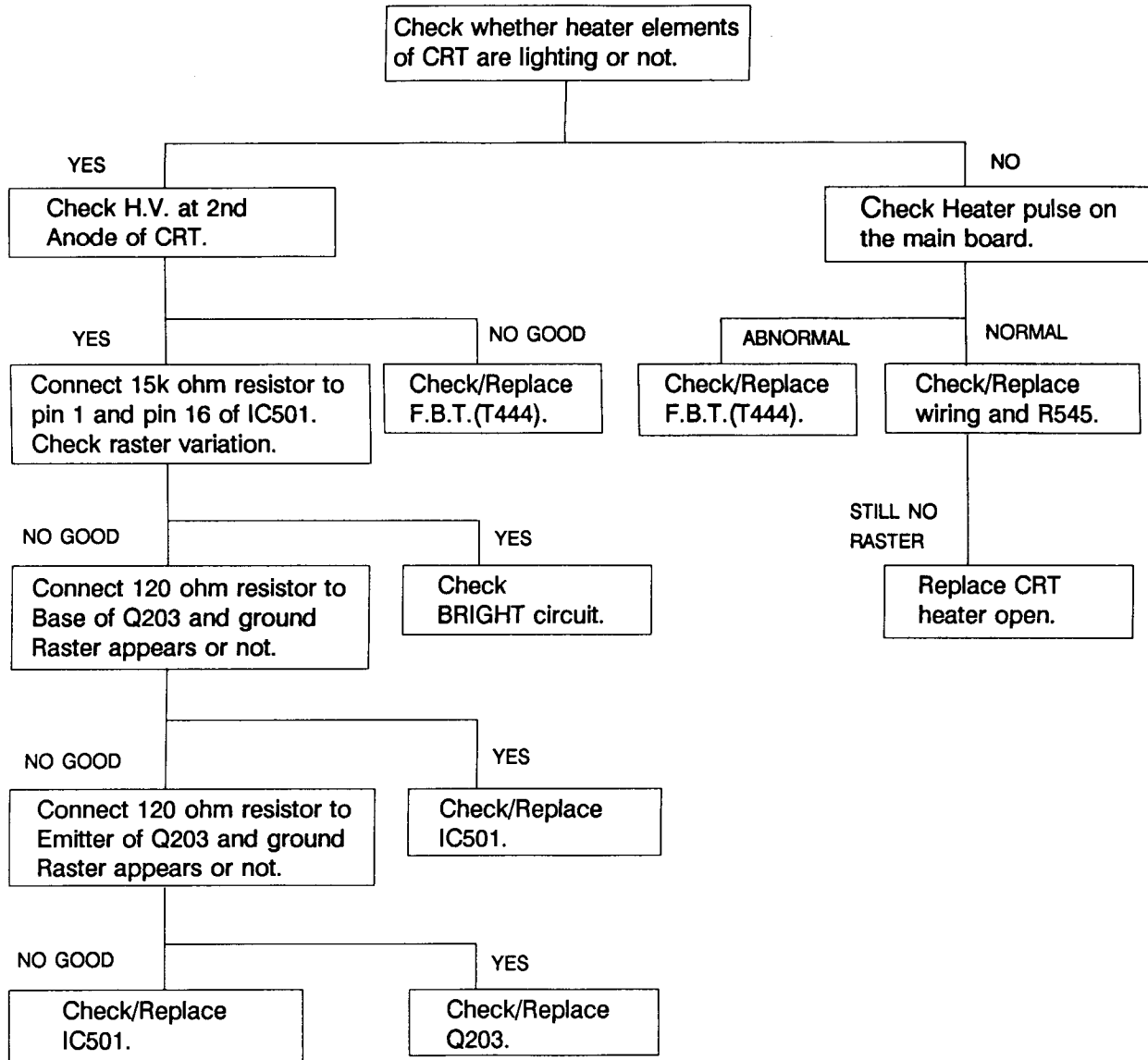
The following charts are devoted to troubleshooting which, if followed carefully, will assist you in tracking down a fault to the correct stage.

In order to utilize the charts (fault trees, first establish the complaints, i.e. – No Raster, No Sound), locate the chart applicable and then progress through the various alternatives until a final block indicates the offending components or stages.

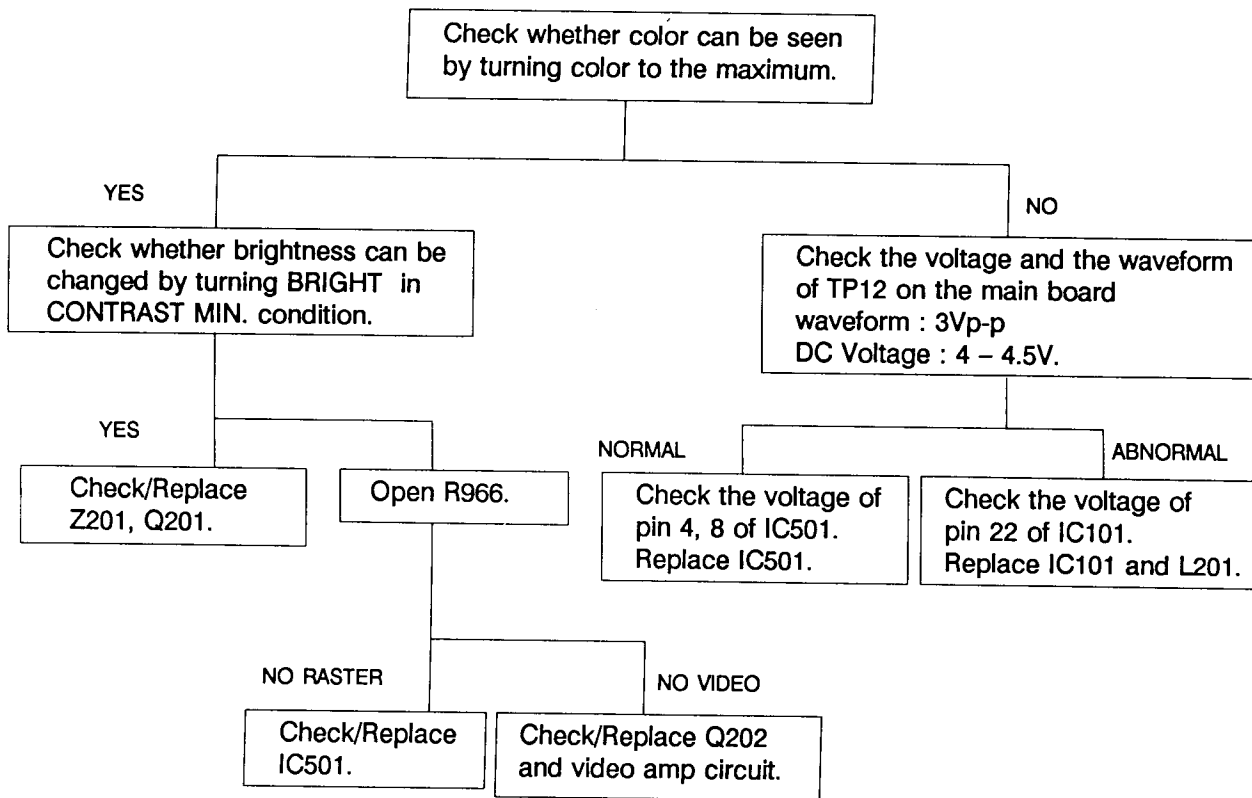
## NO RASTER AND NO SOUND



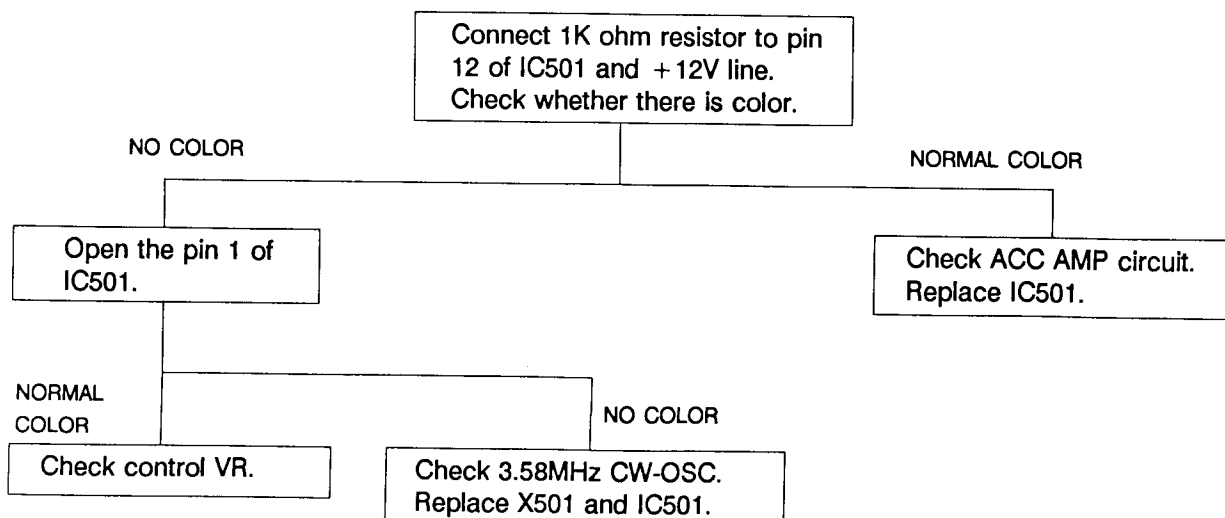
# NO RASTER (SOUND OK)



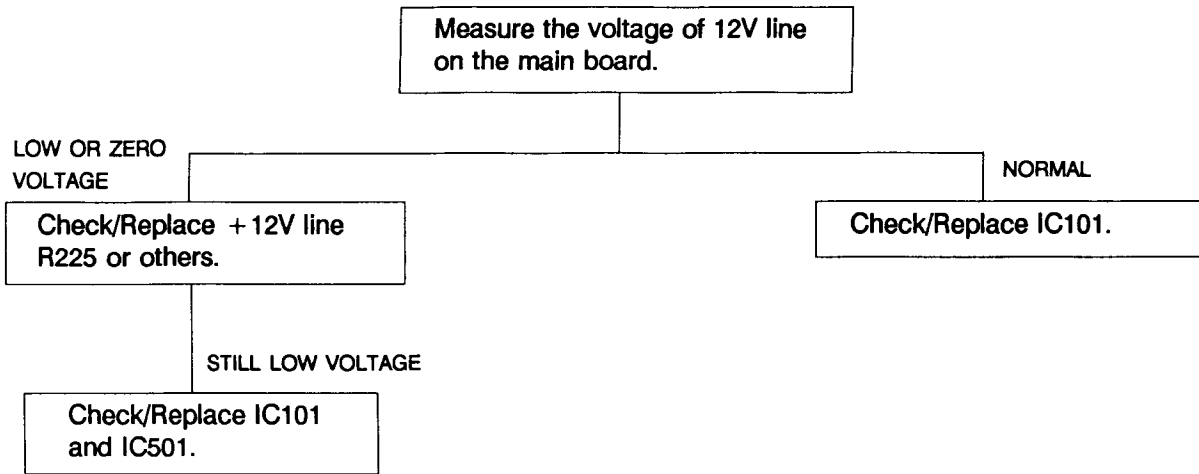
## NO PICTURE (RASTER AND SOUND OK)



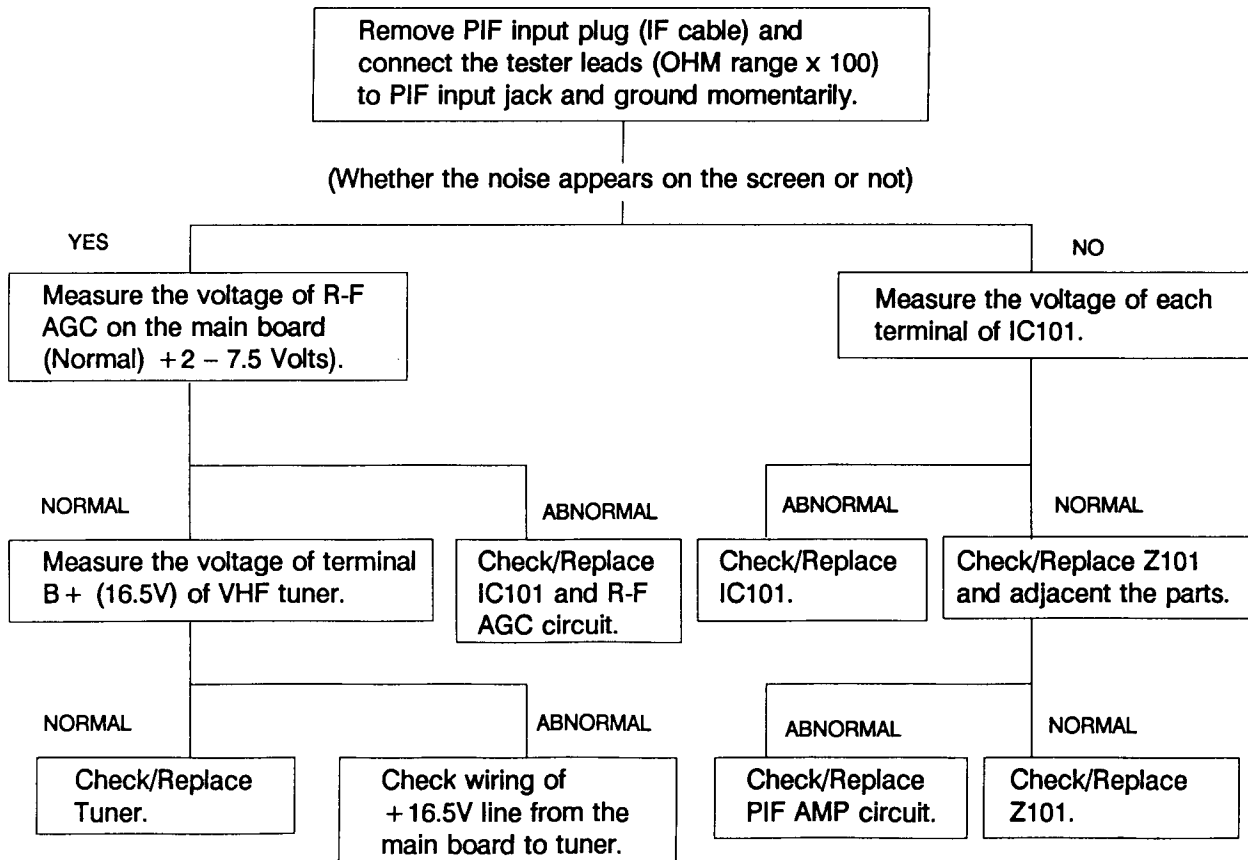
## NO COLOR



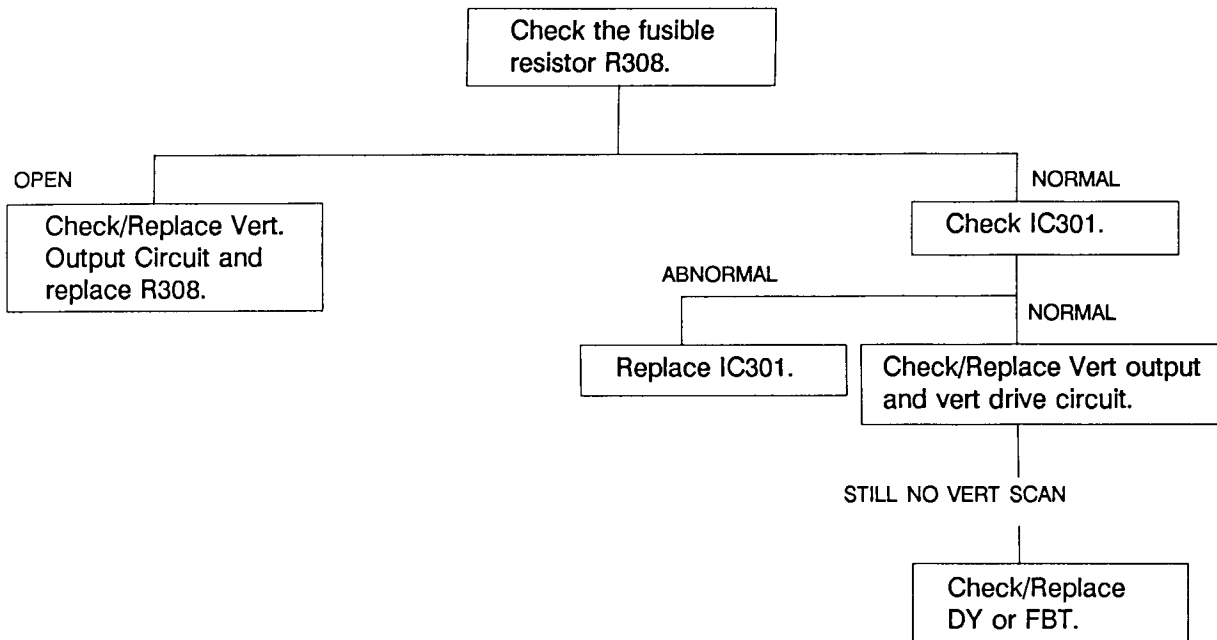
## NO RASTER (SOUND NOISE OR WEAK SOUND)



## NO PICTURE (RASTER ON) AND SOUND



## NO VERT SCAN (HORIZONTAL LINE)



## NO SOUND

