

SERVICE MANUAL **& PARTS LIST** (with price)

POCKET TELEVISION

TV-5100D

SEPTEMBER 1994

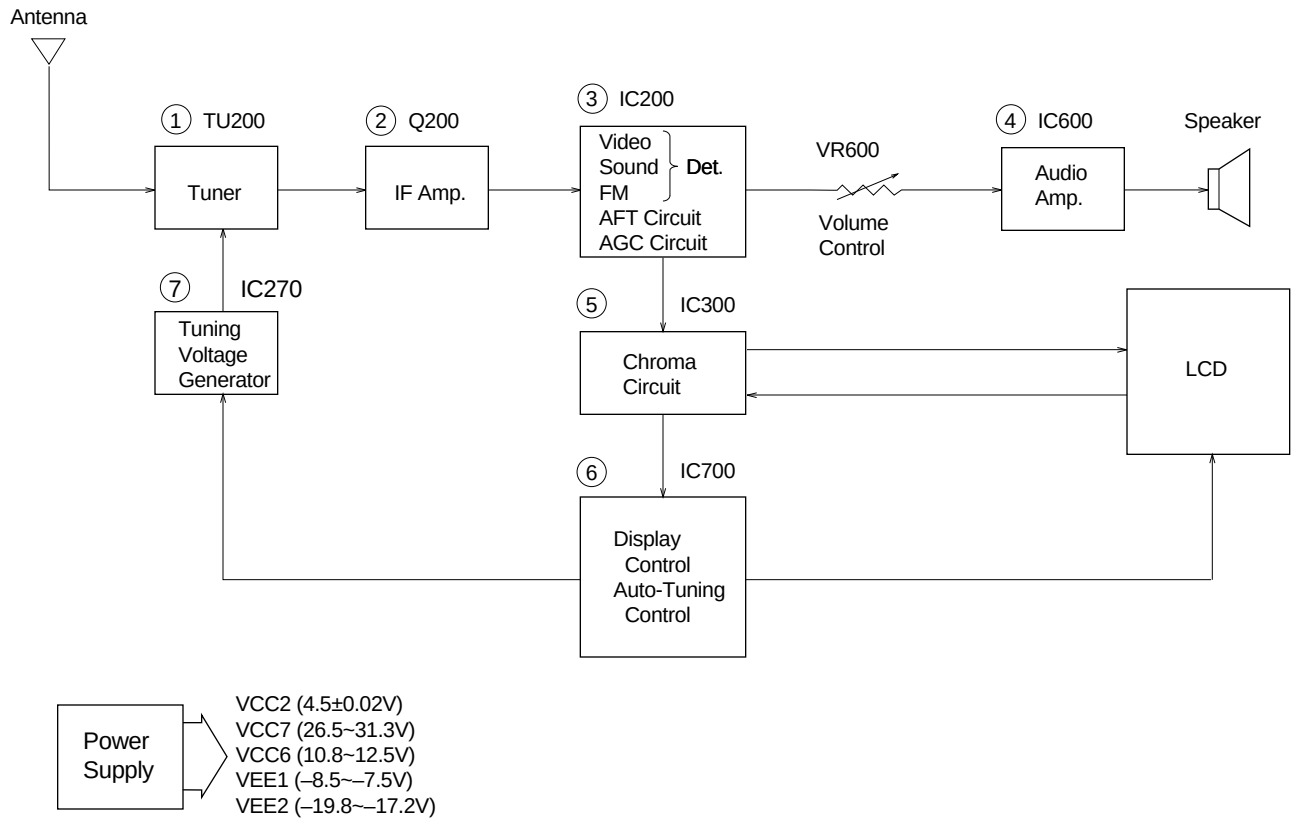
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CASIO®

SPECIFICATIONS

Item	Specification
1. Reception channels	VHF : — UHF : 21 ~ 68 ch
2. Power voltage	DC 6.0 V
3. Power consumption	Approx. 3.0 W
4. Current consumption	Approx. 500 mA
5. Battery life (with alkaline batteries)	Approx. 2.0 hours
6. Power supply	Batteries : 4 AA size batteries Car adaptor : CA-K65 AC adaptor : AD-K65
7. Connection terminals	Earphone jack : 3.5ø mini External power jack : 6.0 V DC IN External antenna jack : 3.5ø mini Audio / Video jack : 3.5ø
8. Screen size	1.8 inches
9. No. of Picture element	61,380 (220 × 279) dots
10. Dimensions	92 mm (H) × 105 mm (W) × 80 mm (D) 3-11/16" (H) × 4-1/5" (W) × 3-1/5" (D)
11. Weight	290 g excepting batteries 10.2 oz excepting batteries
12. Standard accessories	Test batteries (R6 x 4)
13. Options	AC adaptor : AD-K65 Car adaptor : CA-K65 RF connector : CF-13 Antenna matching device : AS-35S
14. Body color	Black

BLOCK DIAGRAM



- ① — Color Tuner: TU200 TEPB5-02
Selects a desired radio wave and changes it to the video IF signal.
- ② — Video IF Amp.: Q200 2SC4670
Amplifies the video IF signal output from the tuner TU by 10 times (20 dB).
- ③ — Video Det./Sound Det./FM Det./AFT/AGC: IC200 M51348FP
Eliminates the carrier wave in the video IF signal, and picks up the video signal and the sound IF signal. Also, the sound signal is picked up from the sound IF signal by FM detection.
- ④ — Audio Amp.: IC600 NJM2070M
Sound amplification.
- ⑤ — Chroma Circuit: IC300 IR3P96B
Generates the tricolor (red, green, and blue) from the video signal.
- ⑥ — Display Control/ Auto-Tuning Control : IC700 MSM6770GS
Controls the display.
- ⑦ — Tuning Voltage Generator: IC270 BA10358F
Generates the tuning voltage with the tuning pulse (TU) output from ⑥.

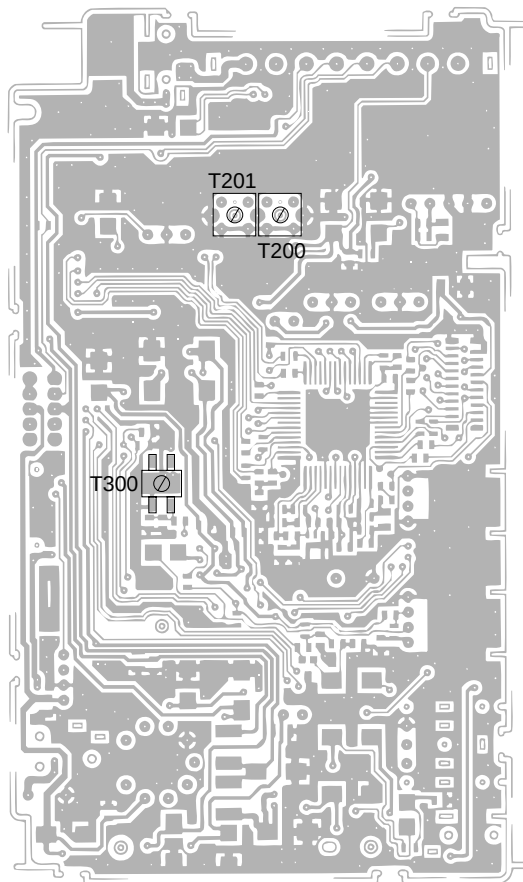
ADJUSTMENT

LINEAR PCB

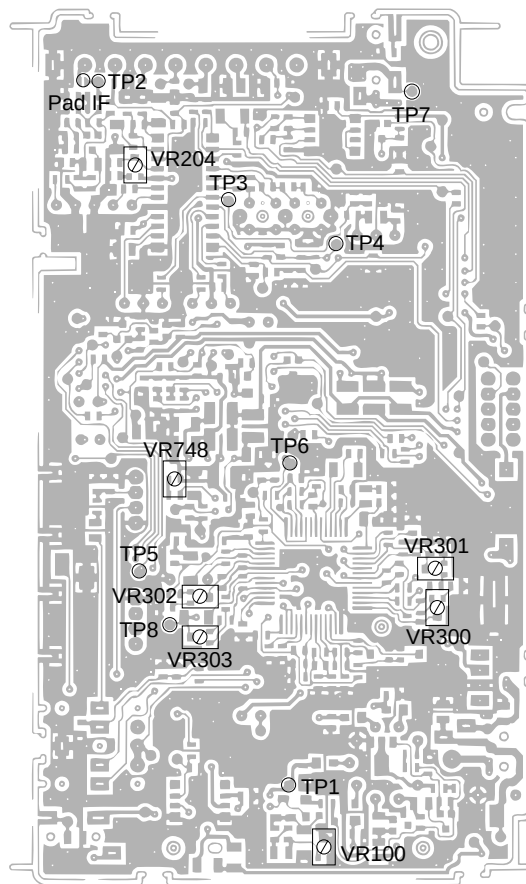
Items To Be Adjusted

Item	Measuring Instrument
VCC2-1 voltage setting	Voltmeter
Video detection coil adjustment	TV signal generator, pattern generator, oscilloscope, low-pass filter
AFT coil adjustment	Sweep generator, oscilloscope, voltmeter
Contrast adjustment	TV signal generator, pattern generator, oscilloscope
AGC adjustment	TV signal generator, pattern generator, IF levelmeter
Clock adjustment	Voltmeter

Adjustment And Test Point Locations

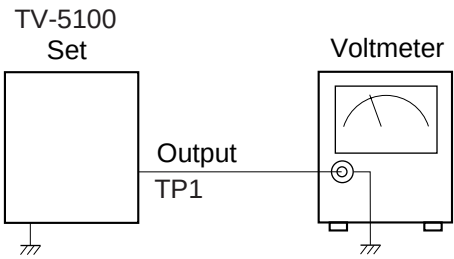


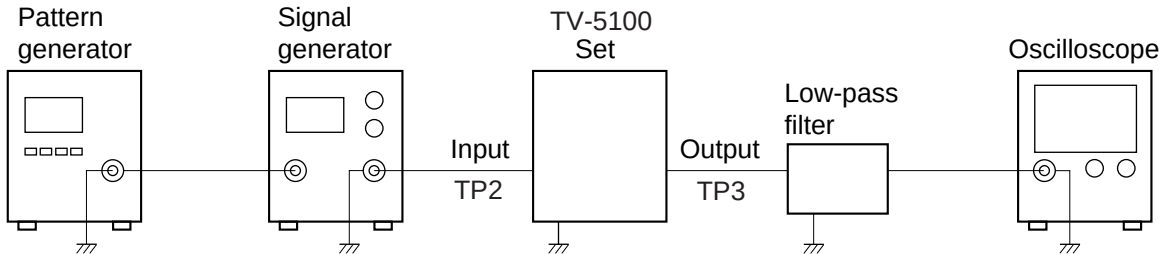
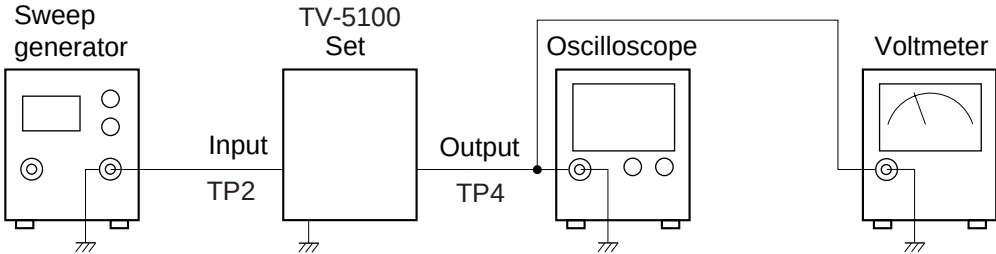
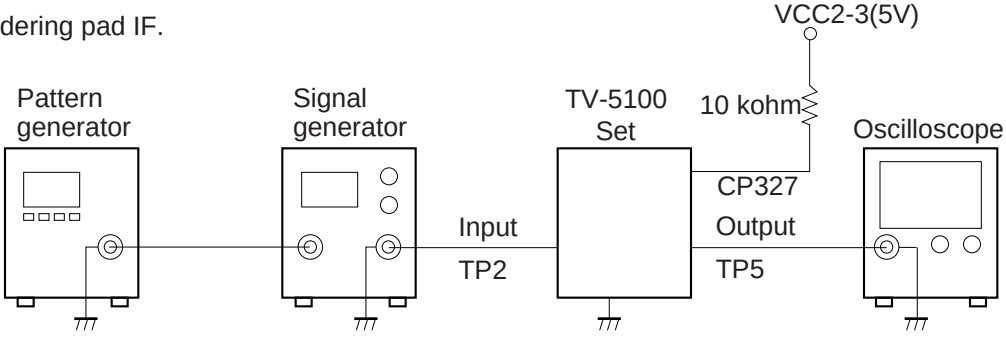
Top View

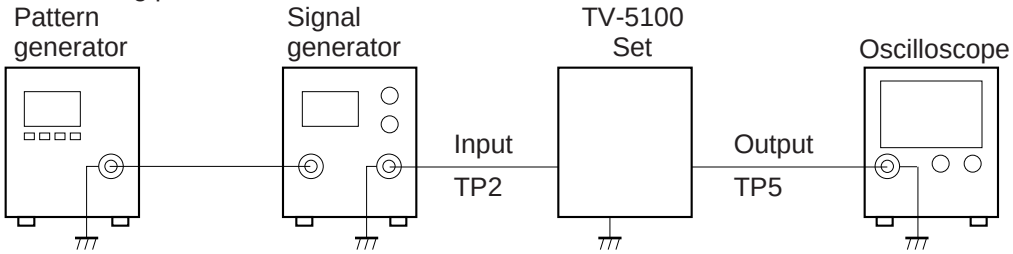
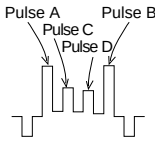
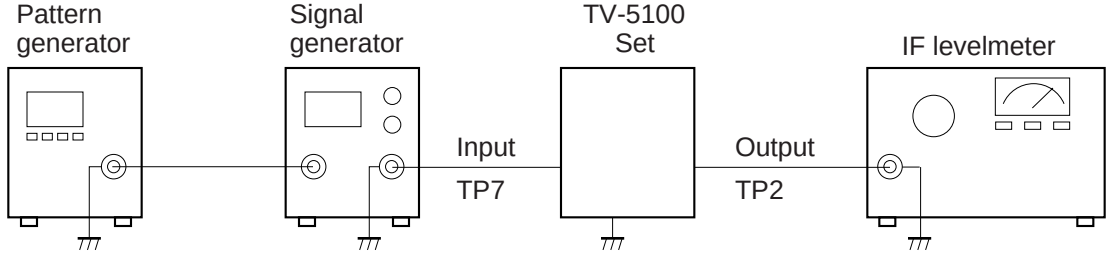


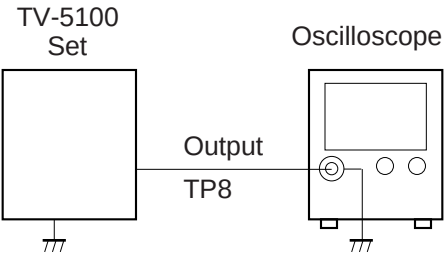
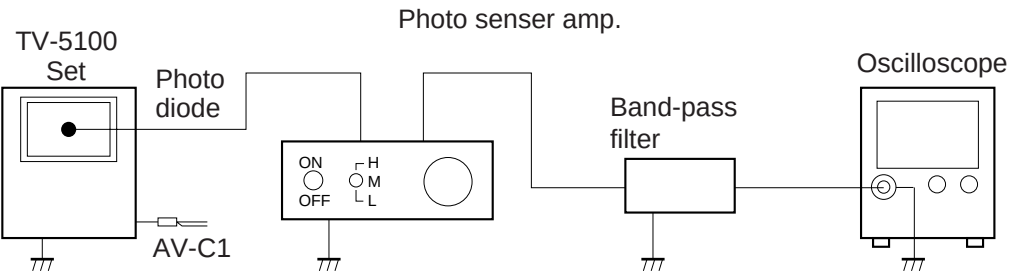
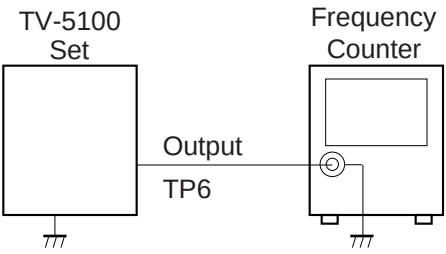
Bottom View

Equipment Connection / Adjustment Procedure

VCC2-1 Voltage Setting						
 The diagram illustrates the connection for voltage setting. A box labeled 'TV-5100 Set' is connected to a box labeled 'Voltmeter'. A line labeled 'Output TP1' connects the TV-5100 Set to the Voltmeter. Both the TV-5100 Set and the Voltmeter are grounded.						
Input Connection	Input Point	Input Signal	Adjust	Output Connection	Output Point	Result
_____	_____	_____	VR100	Voltmeter	TP1	Adjust for 4.50 ± 0.02 V reading on voltmeter.

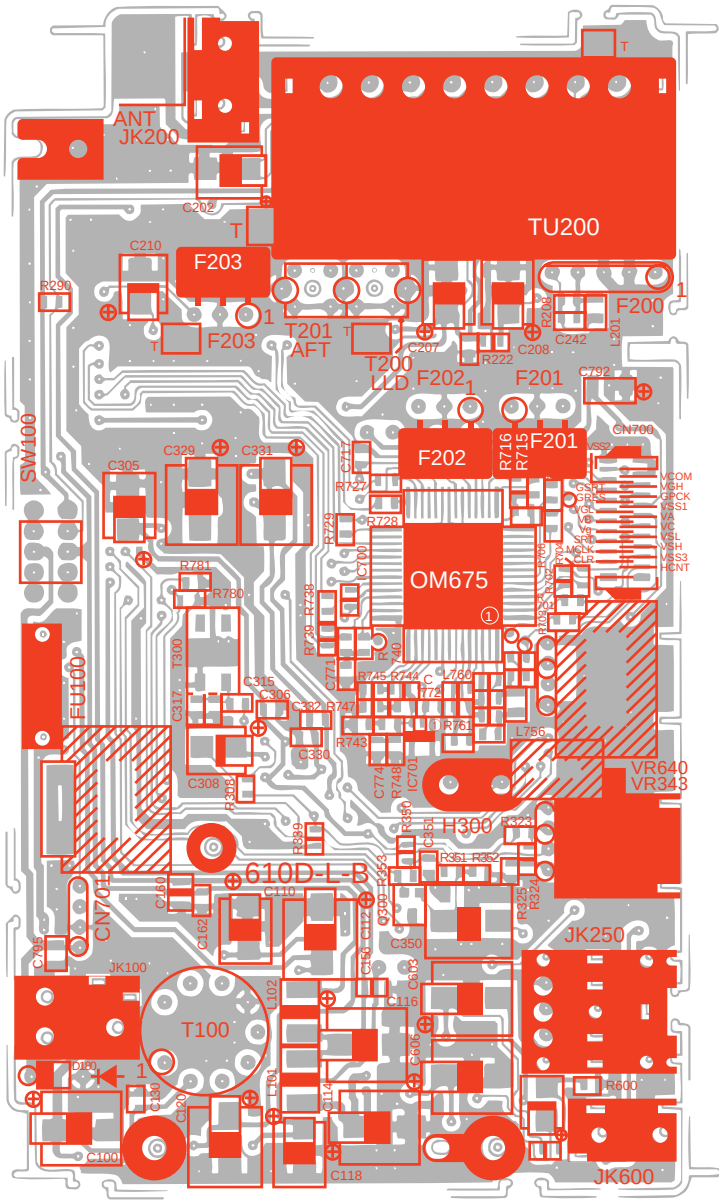
Video Detection Coil Adjustment						
* Open soldering pad IF. 						
Input Connection	Input Point	Input Signal	Adjust	Output Connection	Output Point	Result
Pattern generator Signal generator	TP2	Color bar 39.5 MHz $48 \pm 3 \text{ dB}\mu$	T200	Low-pass filter Oscilloscope	TP3	Adjust for DC level at mini-
AFT Coil Adjustment						
* Open soldering pad IF. 						
Sweep generator	TP2	$39.5 \pm 5 \text{ MHz}$ (Sweep) Marker: 39.5 MHz $70 \text{ dB}\mu$	T201	Voltmeter Oscilloscope	TP4	Adjust for $1.4 \pm 0.2 \text{ V}$ reading on voltmeter. Confirm that the marker is at the middle of S-curve on oscilloscope.
Contrast Adjustment						
* Open soldering pad IF. 						
Pattern generator Signal generator	TP2	Color bar 39.5 MHz $70 \text{ dB}\mu$	VR300	Oscilloscope	TP5	Adjust step form wave to read $2.6 \pm 0.1 \text{ Vp-p}$.

Color, BCC Adjustment						
* Open soldering pad IF. 						
Input Connection	Input Point	Input Signal	Adjust	Output Connection	Output Point	Result
Pattern generator Signal generator	TP2	Color bar 39.5 MHz 70 dBμ	VR301 T300	Oscilloscope	TP5	Adjust VR301 so that the difference between pulse A and B is less than $0.5 \pm 0.1V$. Adjust T300 so that the difference between pulse C and D is less than 0.1V. 
AGC Adjustment						
						
Pattern generator TV Signal generator	TP7	Color bar 65 ± 5 dBμ	VR204	IF levelmeter	TP2	Adjust for 84 ± 1 dBμ reading on the IF levelmeter

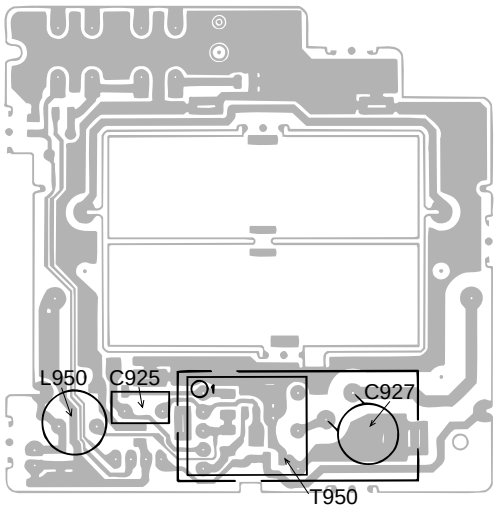
Vcom Adjustment						
 TV-5100 Set Oscilloscope Output TP8						
Input Connection	Input Point	Input Signal	Adjust	Output Connection	Output Point	Result
_____	_____	_____	VR302 VR303	Oscilloscope	TP8	Adjust VR302 so that square-wave to read $5.0 \pm 0.1V$. Adjust VR303 so that high level of the square-wave is at $0.5 \pm 0.1V$.
* Place a photo diode on the middle of the display plate.  TV-5100 Set Photo diode AV-C1 Photo sensor amp. Band-pass filter Oscilloscope						
_____	_____	_____	VR303	Photo sensor amp. Band pass filter Oscilloscope	_____	Adjust for ripple at minimum.
Free-running Frequency Adjustment						
 TV-5100 Set Frequency Counter Output TP6						
_____	_____	_____	VR748	Frequency Counter	TP6	Adjust for a reading of 15.625 ± 0.1 KHz.

PRINTED CIRCUIT BOARDS

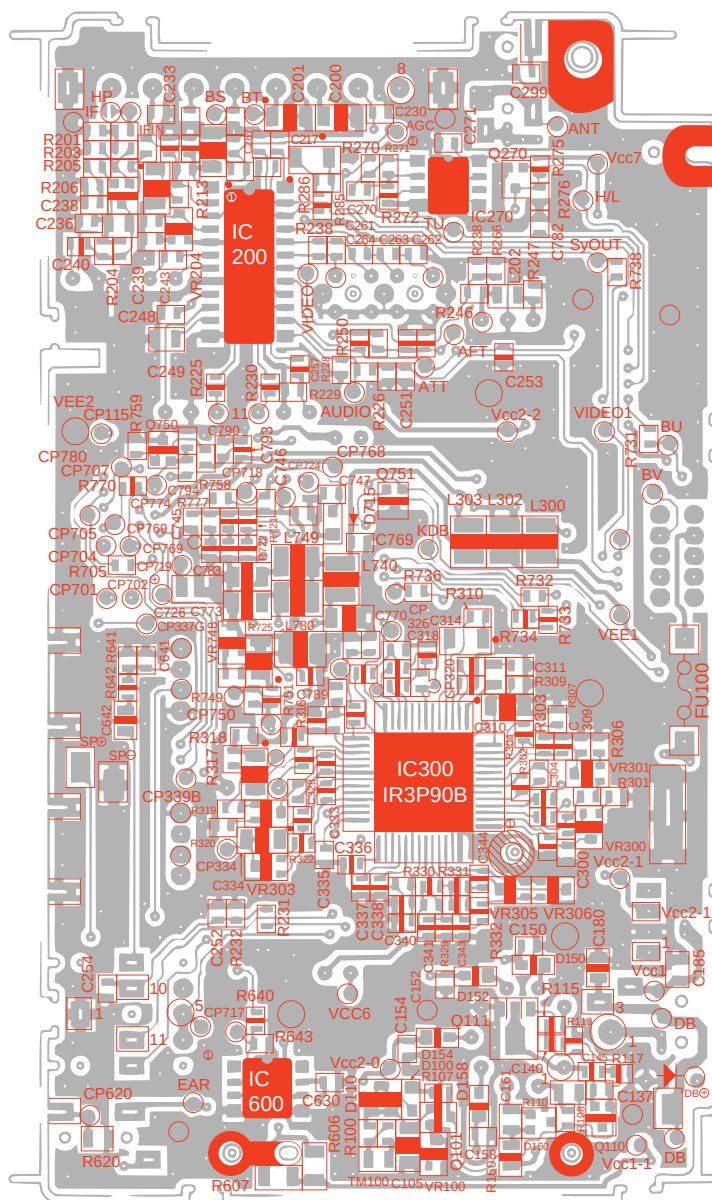
TOP VIEWS
Linear



BL



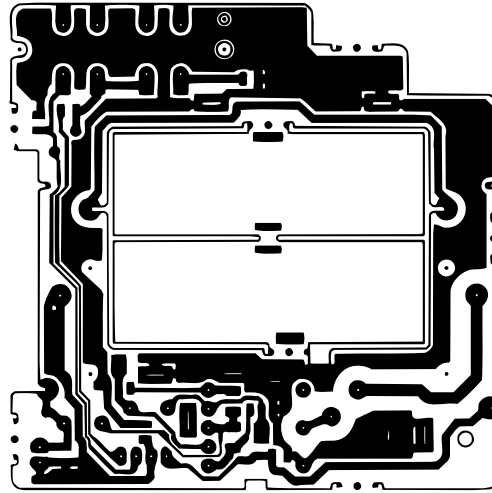
Linear



WIRING DIAGRAM

TOP VIEWS

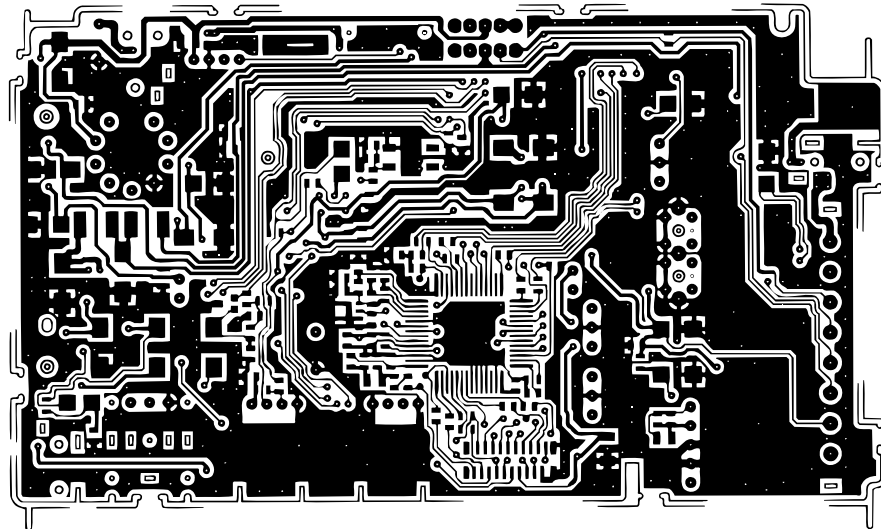
BL PCB



4 1

4 1

Linear PCB



ELECTRICAL PARTS LIST

Linear PCB No. 1

N	Item	Code No.	Parts Name	Specification	M	FOB Japan N.R.Yen Unit Price	R
Capacitors							
N	C100	2807 6595	Electrolytic	ECE-V0JV101Z-P	10	33	C
	C105	2895 0595	Tantalum	ECST0JY225R	10	30	C
N	C110	2803 6421	Electrolytic	ECE-V1CA220SR	20	20	C
N	C112	2807 6896	Electrolytic	ECE-V1CA470S-P	20	23	C
N	C114	2807 6595	Electrolytic	ECE-V0JV101Z-P	10	33	C
	C116	2807 6595	Electrolytic	ECE-V0JV101Z-P	10	33	C
N	C118	2803 6421	Electrolytic	ECE-V1CA220SR	20	20	C
N	C120	2807 7169	Electrolytic	ECE-V1VA220S-P	20	23	C
N	C130	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C137	2897 2135	Ceramic	UMK107B682K-T	20	4	C
N	C140	7103 5861	Ceramic	GR39CH471J50PT	10	10	C
	C145	2845 4053	Ceramic	10N1HB152K-T1	20	3	C
N	C150	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C152	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C154	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C156	2892 0059	Ceramic	GR40Y5V103Z50PT	10	9	C
N	C158	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C160	2892 0059	Ceramic	GR40Y5V103Z50PT	10	9	C
N	C162	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C180	2845 4473	Ceramic	UMK212F104Z-T	20	4	C
N	C200	2895 0630	Tantalum	SK-1V104M-R	20	22	C
N	C201	2895 0630	Tantalum	SK-1V104M-R	20	22	C
N	C202	2807 6791	Electrolytic	ECE-V0JA470S-R	20	20	C
N	C205	2895 0189	Tantalum	ECST0JY335R	10	30	C
	C207	2807 6791	Electrolytic	ECE-V0JA470S-R	20	20	C
N	C208	2807 6791	Electrolytic	ECE-V0JA470S-R	20	20	C
N	C210	2807 6609	Electrolytic	ECE-V1CA100S-R	1	19	C
	C217	2895 2030	Tantalum	SK-1V474M-R	20	22	C
N	C230	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C236	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C237	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C239	2845 4921	Ceramic	10N1HCH160J-T1	20	3	C
N	C240	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C243	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C245	2897 1134	Ceramic	GR39W5R103K50PT	10	5	C
	C246	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C247	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C248	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C249	2897 1057	Ceramic	GR40Y5V474Z16PT	10	16	C
	C252	2897 1141	Ceramic	GR39W5R223K25PT	20	7	C
N	C257	2845 4081	Ceramic	10N1HCH270J-T1	20	3	C
	C259	2897 1134	Ceramic	GR39W5R103K50PT	10	5	C
N	C261	2897 2065	Ceramic	GR39PH560G50PT	20	9	C
N	C262	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C263	2897 2065	Ceramic	GR39PH560G50PT	20	9	C
N	C264	2845 4165	Ceramic	10N1HCH0R5C-T1	20	3	C
N	C270	2897 1134	Ceramic	GR39W5R103K50PT	10	5	C
	C271	2897 1365	Ceramic	GR39Y5V473Z50PT	10	5	C
N	C287	2845 4935	Ceramic	10N1HB332K-T1	20	3	C
N	C299	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C300	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

Linear PCB No. 2

N	Item	Code No.	Parts Name	Specification	M	FOB Japan N.R.Yen Unit Price	R
	C301	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C302	2897 1358	Ceramic	GR39Y5V104Z25PT	10	7	C
	C303	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C304	2845 4998	Ceramic	10N1HB681K-T1	20	3	C
N	C305	2807 6896	Ceramic	ECE-V1CA470S-P	20	23	C
	C306	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C307	2897 1358	Ceramic	GR39Y5V104Z25PT	10	7	C
	C308	2807 6609	Electrolytic	ECE-V1CA100S-R	1	19	C
	C309	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C310	2895 0126	Tantalum	ECST1CY105R	10	27	C
N	C311	2845 4081	Ceramic	10N1HCH270J-T1	20	3	C
	C312	2897 1127	Ceramic	GR39W5R220K50PT	10	4	C
N	C313	2845 5012	Ceramic	10N1HF153Z-T1	20	4	C
N	C314	2807 6896	Electrolytic	ECE-V1CA470S-P	20	23	C
	C315	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C316	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C318	2897 1792	Ceramic	TMK107F104Z-T	10	4	C
N	C319	2897 1792	Ceramic	TMK107F104Z-T	10	4	C
	C320	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C321	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C322	2897 1365	Ceramic	GR39Y5V473Z50PT	10	5	C
N	C323	2897 1792	Ceramic	TMK107F104Z-T	10	4	C
	C324	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C325	2897 1337	Ceramic	GR39CH160J50PT	20	4	C
	C326	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C327	2895 0133	Tantalum	ECST1EY474R	10	27	C
	C328	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C329	2807 7176	Electrolytic	10RV2-47-T	20	23	C
	C330	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C331	2828 5553	Electrolytic	16RV2-47-T	20	23	C
	C332	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C334	2895 1596	Tantalum	ECST1CY475R	10	27	C
	C335	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C336	2897 1358	Ceramic	GR39Y5V104Z25PT	10	7	C
	C337	2897 1358	Ceramic	GR39Y5V104Z25PT	10	7	C
	C338	2897 1358	Ceramic	GR39Y5V104Z25PT	10	7	C
	C339	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C340	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C341	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C342	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C343	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C344	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C350	2807 6560	Electrolytic	6.3RV2BP-47-T	10	37	C
	C351	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C600	2807 6602	Electrolytic	ECE-V0JA220S-R	10	19	C
N	C603	2807 6742	Electrolytic	ECE-V0JA101S-P	20	23	C
N	C606	2807 6742	Electrolytic	ECE-V0JA101S-P	20	23	C
	C641	2897 1120	Ceramic	GR39W5R102K50PT	10	4	C
N	C642	2897 2128	Ceramic	TMK212B104K-T	20	9	C
	C717	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C725	2895 2023	Tantalum	SK-1V224M-R	20	22	C
N	C746	2897 1792	Ceramic	TMK107F104Z-T	20	4	C
	C751	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
	C769	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

Linear PCB No. 3

N	Item	Code No.	Parts Name	Specification	M	FOB Japan N.R.Yen Unit Price	R
N	C770	2845 4802	Ceramic	EMK316F225Z-T	20	16	C
N	C771	2845 3794	Ceramic	10N1HB222K-T1	20	3	C
	C772	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C773	2845 4802	Ceramic	EMK316F225Z-T	20	16	C
	C774	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C781	2897 1722	Ceramic	UMK107B562K-T	20	4	C
N	C783	2845 4802	Ceramic	EMK316F225Z-T	20	16	C
N	C786	2845 4081	Ceramic	10N1HCH270J-T1	20	3	C
N	C787	2897 2030	Ceramic	GR39UJ270J50PT	20	4	C
	C788	2897 1099	Ceramic	GR39Y5V103Z50PT	10	4	C
N	C789	2845 5005	Ceramic	10N1HF102Z-T1	20	4	C
N	C790	2897 1792	Ceramic	TMK107F104Z-T	20	4	C
N	C791	2897 1792	Ceramic	TMK107F104Z-T	20	4	C
	C792	2897 0273	Ceramic	GR42-6Y5V104Z25PT	10	12	C
N	C793	2897 1792	Ceramic	TMK107F104Z-T	20	4	C
N	C794	2897 1792	Ceramic	TMK107F104Z-T	20	4	C
Connector							
N	CN700	3501 8316	Connector	52559-2090	5	70	C
Diodes							
	D100	7101 1194	Chip	MA111(TX)	10	18	C
	D110	2315 0158	Chip, Zener	MA3051-L(TX)	10	30	C
	D150	7101 1194	Chip	MA111(TX)	10	18	C
	D152	2390 1379	Chip, Schottoky	MA729-(TX)	10	30	C
	D154	2390 1379	Chip, Schottoky	MA729-(TX)	10	30	C
	D158	7101 1194	Chip	MA111(TX)	10	18	C
	D160	2390 1470	Chip	MA143A-(TX)	10	16	C
	D180	2390 1190	Chip	ERA15-01Y	20	9	C
	D715	2390 1379	Chip, Schottoky	MA729-(TX)	10	30	C
Filters and Traps							
	F200	3025 0210	SAW Filter	SAF39.5MZ60Z	1	150	C
	F201	3025 0721	SIF Filter	SFSL6.0MDB12	1	33	C
	F202	3851 1141	Ceramic Discriminator	CDSL6.0MC30B12	1	48	C
	F203	3851 0553	SIF Trap	TPS6.0MB	1	30	C
Fuse							
N	FU100	3632 0469	Fuse	PI-251001(F10)1A	5	52	B
Oscillator							
	H300	2590 1239	Crystal	HC-49	1	110	C
ICs							
	IC200	2114 1827	Linear	M51348FP-T1	1	190	B
	IC270	2116 0119	OP AMP	BA10358F-T1	10	39	B
N	IC300	2114 3479	Linear	IR3P96-1	1	670	B
	IC600	2114 2464	Linear	NJM2070M-T1	1	65	B
	IC700	2011 7784	LSI	MSM6770GS-VK-675	1	300	B
	IC701	2114 3458	IC	S-81230SG-QB-T1	1	50	B
Jacks							
	JK100	3501 8281	Jack	HEC0811-010010	10	30	C
	JK200	3501 5439	Jack	HSJ1456-01-210	1	27	C
	JK250	3501 3773	Jack	HSJ6063-01-410	1	88	C
	JK600	3501 5439	Jack	HSJ1456-01-210	1	27	C
Inductors							
	L101	3013 1022	Chip	NLC453232-101K-TP	1	28	C
N	L102	3013 1638	Chip	NL453232-331K-TP	20	27	C
	L200	3013 1393	Chip	LK2125-R82K-TP	1	26	C
N	L202	3013 1400	Chip	LK2125-120K-TP	1	30	C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

Linear PCB No. 4

N	Item	Code No.	Parts Name	Specification	M	FOB Japan N.R.Yen Unit Price	R
	L300	3013 1092	Chip	NLC322522-470K-TP	1	28	C
	L301	3013 1204	Chip	MLF2012C330K-TP	1	29	C
	L302	3013 1092	Chip	NLC322522-470K-TP	1	28	C
	L303	3013 1092	Chip	NLC322522-470K-TP	1	28	C
	L740	3013 1043	Chip	NLC322522-101K-TP	1	28	C
	L749	3013 1043	Chip	NLC322522-101K-TP	1	28	C
	L753	3013 1043	Chip	NLC322522-101K-TP	1	28	C
	L756	3013 1204	Chip	MLF2012C330K-TP	1	29	C
	L780	3013 1043	Chip	NLC322522-101K-TP	1	28	C
Transistors							
	Q101	2253 0133	Chip	2SD1819A-R	10	12	B
	Q110	2253 0133	Chip	2SD1819A-R	10	12	B
	Q111	2253 0308	Chip	2SD1119-R(TX)	10	37	B
	Q200	2252 0994	Chip	2SC4670-(TX)	10	23	C
	Q300	2251 0189	Chip	2SB1218A-R(TX)	10	10	C
	Q750	2251 0189	Chip	2SB1218A-R(TX)	10	10	C
Resistors							
N	R100	2795 3360	Chip jumper	MCR03EZJH000	20	2	C
	R105	2797 1995	Chip resistor	ERJ-3GEYJ332V	20	10	C
	R107	2797 1827	Chip resistor	ERJ-3GEYJ333V	20	2	C
	R108	2797 2464	Chip resistor	ERJ-3GEYJ274V	20	2	C
	R110	2791 1131	Chip resistor	ERJ-6GEYJ271V	20	3	C
	R113	2797 2044	Chip resistor	ERJ-3GEYJ222V	20	2	C
	R115	2797 1813	Chip resistor	ERJ-3GEYJ101V	20	2	C
	R117	2795 3360	Chip jumper	MCR03EZJH000	20	2	C
	R160	2791 1692	Chip resistor	ERJ-6GEYJ680V	20	3	C
	R200	2797 3689	Chip resistor	ERJ-3GEYJ220V	20	2	C
	R201	2797 1813	Chip resistor	ERJ-3GEYJ101V	20	2	C
	R202	2797 2443	Chip resistor	ERJ-3GEYJ682V	20	2	C
	R203	2797 2422	Chip resistor	ERJ-3GEYJ272V	20	2	C
	R204	2797 2401	Chip resistor	ERJ-3GEYJ681V	20	2	C
	R205	2797 3689	Chip resistor	ERJ-3GEYJ220V	20	2	C
	R206	2795 3360	Chip jumper	MCR03EZJH000	20	2	C
	R207	2797 2674	Chip resistor	ERJ-3GEYJ151V	20	10	C
	R208	2797 2422	Chip resistor	ERJ-3GEYJ272V	20	2	C
	R209	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R210	2797 2065	Chip resistor	ERJ-3GEYJ472V	20	2	C
	R211	2797 1764	Chip resistor	MCR03EZJH104	20	2	C
	R212	2797 2044	Chip resistor	ERJ-3GEYJ222V	20	2	C
	R214	2797 1862	Chip resistor	ERJ-3GEYJ473V	20	2	C
	R222	2797 2373	Chip resistor	ERJ-3GEYJ470V	20	2	C
	R223	7102 2193	Chip resistor	ERJ-3GEYJ184V	20	2	C
	R225	2797 2408	Chip resistor	ERJ-3GEYJ821V	20	2	C
	R227	2795 3360	Chip jumper	MCR03EZJH000	20	2	C
N	R229	2797 2002	Chip resistor	ERJ-3GEYJ471V	20	2	C
	R230	2797 2093	Chip resistor	ERJ-3GEYJ271V	20	10	C
	R231	2797 2436	Chip resistor	ERJ-3GEYJ562V	20	2	C
	R236	2797 2464	Chip resistor	ERJ-3GEYJ274V	20	2	C
	R240	2797 2030	Chip resistor	ERJ-3GEYJ223V	20	2	C
	R241	2797 2457	Chip resistor	ERJ-3GEYJ124V	20	2	C
	R242	2795 3360	Chip jumper	MCR03EZJH000	20	2	C
	R246	2797 2380	Chip resistor	ERJ-3GEYJ331V	20	2	C
	R247	2797 2044	Chip resistor	ERJ-3GEYJ222V	20	2	C
	R250	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

Linear PCB No. 5

N	Item	Code No.	Parts Name	Specification	M	FOB Japan N.R.Yen Unit Price	R
N	R270	2797 1827	Chip resistor	ERJ-3GEYJ333V	20	2	C
	R271	2797 2884	Chip resistor	ERJ3GEYF333V	20	3	C
	R272	2797 2429	Chip resistor	ERJ3GEYF392V	20	2	C
	R285	2797 2093	Chip resistor	ERJ-3GEYJ271V	20	10	C
	R286	2797 1764	Chip resistor	MCR03EZHJ104	20	2	C
	R290	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R300	2797 2681	Chip resistor	ERJ-3GEYJ393V	20	2	C
	R301	2797 1827	Chip resistor	ERJ-3GEYJ333V	20	2	C
	R302	7720 1491	Chip resistor	ERJ-3GEYJ106V	20	2	C
	R303	2797 1820	Chip resistor	ERJ-3GEYJ105V	20	2	C
N	R305	2797 2856	Chip resistor	ERJ-3GEYJ823V	20	2	C
	R306	2797 2226	Chip resistor	ERJ-3GEYJ563V	20	2	C
	R307	2797 3787	Chip resistor	ERJ3GEYF272V	20	3	C
	R309	2797 1820	Chip resistor	ERJ-3GEYJ105V	20	2	C
	R310	2797 2093	Chip resistor	ERJ-3GEYJ271V	10	10	C
	R311	2797 2401	Chip resistor	ERJ-3GEYJ681V	10	2	C
	R312	2797 1827	Chip resistor	ERJ-3GEYJ333V	20	2	C
	R313	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R315	2797 3353	Chip resistor	ERJ-3GEYF393V	20	3	C
	R316	2797 2884	Chip resistor	ERJ-3GEYF333V	20	3	C
N	R317	2797 2436	Chip resistor	ERJ-3GEYJ562V	20	2	C
	R318	2797 2247	Chip resistor	ERJ-3GEYJ822V	20	2	C
	R319	2797 1827	Chip resistor	ERJ-3GEYJ333V	20	2	C
	R320	2797 1827	Chip resistor	ERJ-3GEYJ333V	20	2	C
	R321	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R322	2797 2681	Chip jumper	ERJ-3GYJY393V	20	2	C
	R323	2797 1827	Chip resistor	ERJ-3GEYJ333V	20	2	C
	R324	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R325	2797 3451	Chip resistor	ERJ-3GEYJ203V	20	2	C
	R326	2797 3682	Chip resistor	ERJ-3GEYF183V	20	3	C
N	R327	2797 3444	Chip resistor	ERJ-3GEYF203V	20	3	C
	R328	2797 2891	Chip resistor	ERJ-3GEYF363V	20	3	C
	R329	2797 2905	Chip resistor	ERJ-3GEYF513V	10	3	C
	R330	2797 2877	Chip resistor	ERJ-3GEYF243V	20	3	C
	R331	2797 3220	Chip resistor	ERJ-3GEYF273V	10	3	C
	R350	2797 1813	Chip resistor	ERJ-3GEYJ101V	20	2	C
	R351	2797 2030	Chip resistor	ERJ3GEYJ223V	10	2	C
	R352	2797 2436	Chip resistor	ERJ-3GEYJ562V	20	2	C
	R353	2797 2394	Chip resistor	ERJ-3GEYJ561V	20	2	C
	R600	2797 2674	Chip resistor	ERJ-3GEYJ151V	10	10	C
N	R601	2797 2527	Chip resistor	ERJ-3GEYJ512V	20	2	C
	R606	2795 0294	Chip jumper	MCR18EZHJ000	20	3	C
	R620	2791 0696	Chip resistor	ERJ-6GEYJ470	20	4	C
	R640	2797 1855	Chip resistor	ERJ-3GEYJ102V	20	2	C
	R642	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R643	2797 1988	Chip resistor	ERJ-3GEYJ183V	20	2	C
	R701	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R702	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R703	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R704	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
N	R705	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R706	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R707	2797 2303	Chip resistor	ERJ-3GEYJ103V	20	2	C
	R714	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

Linear PCB No. 6

N	Item	Code No.	Parts Name	Specification	M	FOB Japan N.R.Yen Unit Price	R
N	R716	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R719	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R721	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R724	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R727	2797 2065	Chip resistor	ERJ-3GEYJ472V	20	2	C
	R728	2797 3773	Chip resistor	ERJ-3GEYJ511V	20	2	C
	R731	2797 2065	Chip resistor	ERJ-3GEYJ472V	20	2	C
	R733	2797 1855	Chip resistor	ERJ-3GEYJ102V	20	2	C
	R734	2797 2065	Chip resistor	ERJ-3GEYJ472V	20	2	C
	R736	2797 2065	Chip resistor	ERJ-3GEYJ472V	20	2	C
N	R737	2797 2065	Chip resistor	ERJ-3GEYJ472V	20	2	C
	R738	2797 2065	Chip resistor	ERJ-3GEYJ472V	20	2	C
	R739	2797 2016	Chip resistor	ERJ-3GEYJ225V	20	2	C
	R740	2797 3766	Chip resistor	ERJ-3GEYF394V	20	3	C
	R741	2797 2527	Chip resistor	ERJ-3GEYJ512V	20	2	C
	R748	2797 2450	Chip resistor	ERJ-3GEYJ153V	20	2	C
	R749	2797 2436	Chip resistor	ERJ-3GEYJ562V	20	2	C
	R750	2797 1988	Chip resistor	ERJ-3GEYJ183V	20	2	C
	R751	2797 2443	Chip resistor	ERJ-3GEYJ682V	20	2	C
	R756	2797 1855	Chip resistor	ERJ-3GEYJ102V	20	2	C
N	R757	2797 1855	Chip resistor	ERJ-3GEYJ102V	20	2	C
	R758	2797 3353	Chip resistor	ERJ-3GEYF393V	20	3	C
	R759	2797 2898	Chip resistor	ERJ-3GEYF473V	20	3	C
	R760	2797 1876	Chip resistor	MCR03EZHJ224	20	2	C
	R761	2797 1876	Chip resistor	MCR03EZHJ224	20	2	C
	R770	2797 1764	Chip resistor	MCR03EZHJ104	20	2	C
	R777	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
	R780	2795 3360	Chip jumper	MCR03EZHJ000	20	2	C
Switch							
	SW100	3412 0938	Switch	ESD-11V231	1	45	C
Coils and Converter							
N	T100	3065 0476	DC-DC Converter	LC12U-32	5	73	C
N	T200	3841 1260	Coil	S5E-05	5	73	C
N	T201	3841 1253	Coil	S5E-04	5	73	C
N	T300	3841 1267	Coil	5CDM-01	1	110	C
Thermister							
	TM100	2775 1085	Chip	157-102-53031-TP	1	26	C
Tuner							
	TU200	1013 5525	Tuner	TEPB5-02	1	820	C
Variable Resistor							
N	VR100	2775 1645	Semi-Fixed Resistor	EVM-1XSX50B23	20	28	C
N	VR204	2775 1484	Semi-Fixed Resistor	EVM-1XSX50B24	20	28	C
N	VR300	2775 1484	Semi-Fixed Resistor	EVM-1XSX50B24	20	28	C
N	VR301	2775 1484	Semi-Fixed Resistor	EVM-1XSX50B24	20	28	C
N	VR302	2775 1484	Semi-Fixed Resistor	EVM-1XSX50B24	20	28	C
N	VR303	2775 1491	Semi-Fixed Resistor	EVM-1XSX50B54	20	28	C
N	VR304	2765 0632	Volume	RK09H11T20KB	5	64	C
	VR640	2765 0462	Volume	RK09H11T50KB	5	80	C
N	VR748	2775 1477	Semi-Fixed Resistor	EVM-1XSX50B14	20	28	C

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

BL PCB

N	Item	Code No.	Parts Name	Specification	M	FOB Japan N.R.Yen Unit Price	R
Capacitors							
N	C796	2892 0059	Chip	GR40Y5V103Z50PT	10	9	C
	C925	2825 0392	TF	ECQ-V1H154JL	10	19	C
	C927	2813 3472	Ceramic	DE0705SL820J2K	20	13	C
Connector							
	CN702	3501 7182	Connector	52287-0411	1	22	C
Fuses							
	FU900	3632 0308	Temperature	EYP-1BF102L	1	27	B
	FU901	3632 0308	Temperature	EYP-1BF102L	1	27	B
Coil							
	L950	3013 0756	Choke	RCH-875-101K	5	55	C
Lamp							
	LA900	3851 1337	Fluorescent	8.61AD1P2-CA4	1	340	B
Transistors							
	Q950	2253 0308	Transistor	2SD1119-R(TX)	10	37	B
	Q951	2253 0308	Transistor	2SD1119-R(TX)	10	37	B
Resistors							
	R795	2791 0305	Chip	ERJ-6GEYJ472V	20	3	C
	R796	2791 0305	Chip	ERJ-6GEYJ472V	20	3	C
	R950	2792 0500	Chip	MCR18EZHZ471	20	2	C
	R953	2792 0110	Chip	ERJ-6GEYOR00V	20	3	C
Switches							
N	SW700	3412 1239	Switch	SKHHAJ	20	12	C
N	SW701	3412 1239	Switch	SKHHAJ	20	12	C
Transformer							
N	T950	3012 1141	Inverter trans	EW12H-01-CU	1	120	B

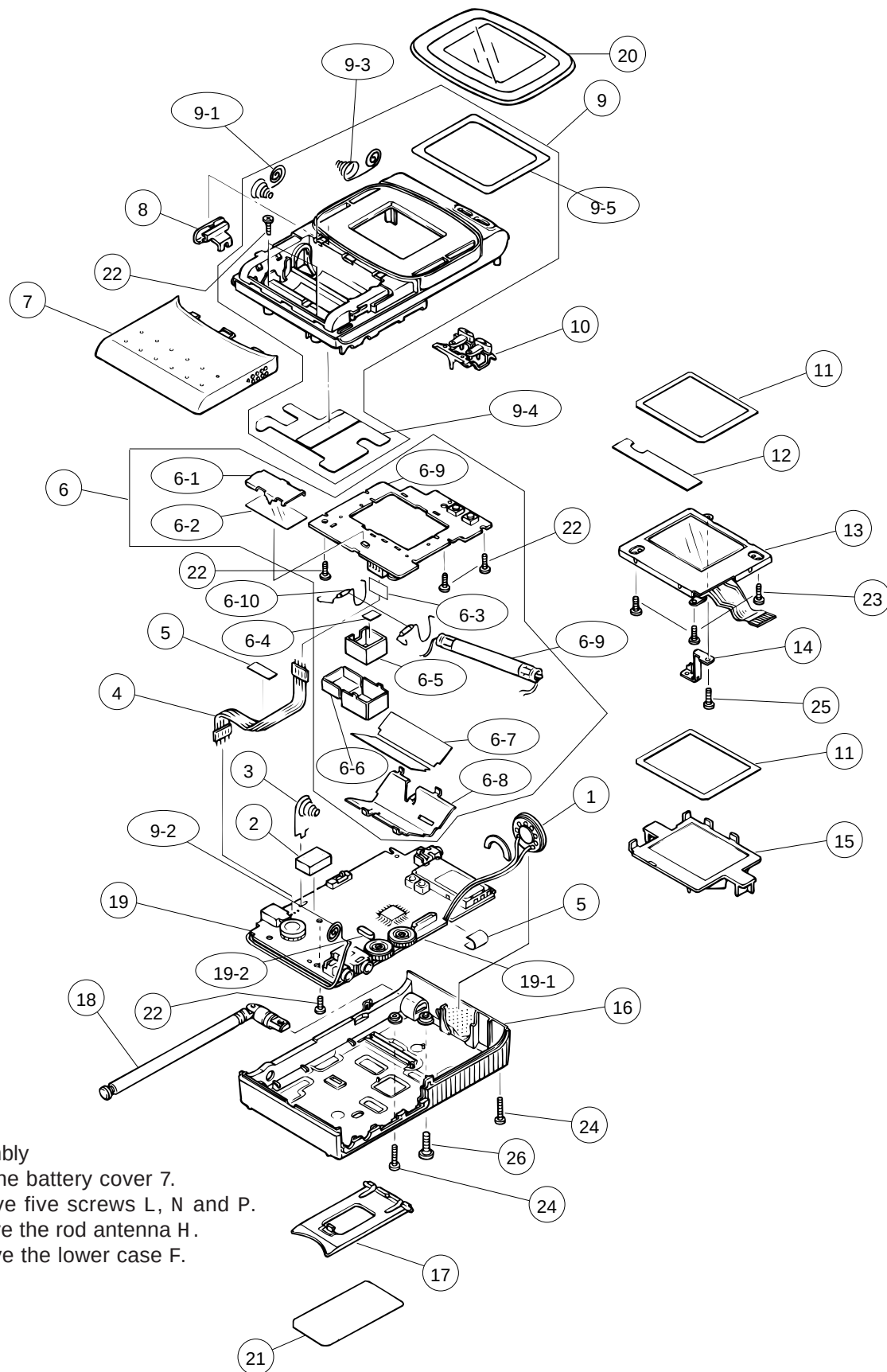
Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

MECHANICAL PARTS LIST

N	Item	Code No.	Parts Name	Specification	Q	FOB Japan N.R.Yen Unit Price	R
N	1	6609 2004	Speaker ass'y	K412107*1	1	100	C
	2	6607 4720	Cushion A-K614	K410316-7	1	7	C
N	3	6609 1530	Battery spring A-K610	K412012-1	10	35	C
N	4	6609 1520	Flat cable A-K610	K311586-1	1	29	C
	5	6601 1700	Insulation tape A-K60	K4117-3	2	3	C
N	6	6630 5552	BL ass'y	K211264*1	1	2,010	B
N	6-1	6609 2070	Shield case E-K610	K311634-1	1	28	C
N	6-2	6609 2080	Insulation plate B-K610	K41212-1	1	6	C
	6-3	6607 0690	Insulation plate D-K508	K410441-3	1	7	C
	6-4	6606 6201	Adhesive tape C-K502	K410903A-3	1	3	C
N	6-5	6609 2240	Shield case F-K610	K311674-1	1	26	C
N	6-6	6609 1330	Shield case C-K610	K311528-1	1	40	C
N	6-7	6609 1350	Reflection tape A-K610	K412014-1	1	13	C
N	6-8	6609 1340	Shield case D-K610	K311529-1	1	43	C
	6-9	3851 1337	Fluorescent lamp	8.61AD1P2-CA4	1	340	B
	6-10	3632 0308	Temperature fuse	EYP-1BF102L	2	27	B
N	7	6630 5683	Battery cover	K412106*1	1	520	C
	8	6609 1320	Switch knob A-K610	K311527-1	1	20	C
N	9	6630 5754	Upper case ass'y	K211263*3	1	630	C
N	9-1	6020 7658	Battery spring B1 G513	P408A-1	1	25	C
	9-2	6606 4920	Battery spring C-K603	K410883-1	1	14	C
	9-3	6020 7666	Battery spring B2 G513	P409A-1	1	23	C
N	9-4	6609 1400	Blind tape A-K610	K412066-1	1	16	C
N	9-5	6609 1390	Adhesive tape A-K610	K412015-1	1	18	C
	10	6609 1360	Tuning button A-K610	K311521-1	1	20	C
N	11	6609 1480	Adhesive tape B-K610	K412016-1	2	15	C
N	12	6609 1490	Insulation plate A-K610	K412018-1	1	8	C
N	13	2725 0966	Display Unit	TAD18T1001NB	1	4,000	B
N	14	6609 1370	Earth plate A-K610	K412013-1	1	30	C
N	15	6609 1410	Spacer for Display A-K610	K211183-1	1	55	C
N	16	6609 1270	Lower case A-K610	K110739-1	1	120	C
N	17	6606 2130	Stand A-K331	K310518-1	1	36	C
	18	3851 1470	Rod antenna	VR70100GA	1	180	C
N	19	6630 5685	PCB-K610D-L ass'y	K211312*1	1	10,880	B
	19-1	6604 7630	Insulation plate A-K332	K4670-17	1	3	C
N	19-2	6603 7100	Insulation plate B-K420	K4330-16	1	2	C
N	20	6609 2460	Display plate DAM-K610	K412011-3	1	160	C
N	21	6609 2470	Rating plate DAM-K610	K412010-3	1	32	C
	22	5112 0868	Tapping screw (+)	BT3, 1.7x5Bk	6	3	X
	23	5860 0301	Tapping screw (+)	BT3, 1.7x5Ni	3	3	X
	24	5860 0805	Tapping screw (+)	BT3,1.7x10Bk	2	3	X
	25	5860 1477	Tapping screw (+)	BT3,1.7x3.5Bk	1	1	X
N	26	6609 1290	Screw A-K610	K412031-1	1	3	X

Notes: N – New parts
M – Minimum order/supply quantity
R – Rank

EXPLODED VIEW / DISASSEMBLY

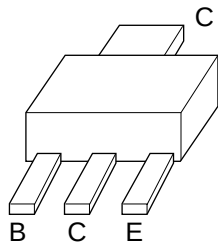


Disassembly

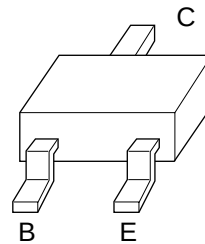
1. Slide the battery cover 7.
2. Remove five screws L, N and P.
3. Remove the rod antenna H.
4. Remove the lower case F.

IC AND TRANSISTOR LEAD IDENTIFICATION AND INTERNAL CIRCUITRY

TRANSISTORS

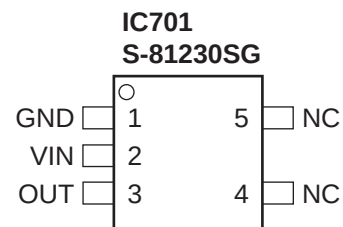
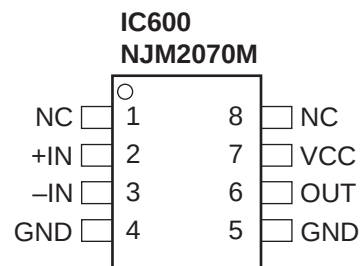
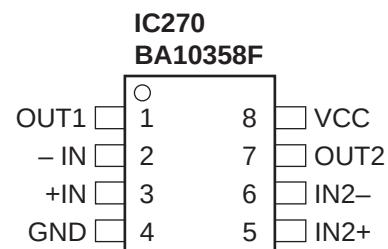
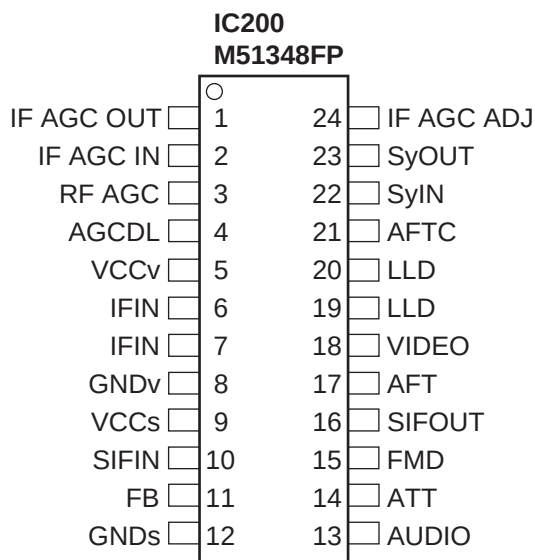


2SD1119

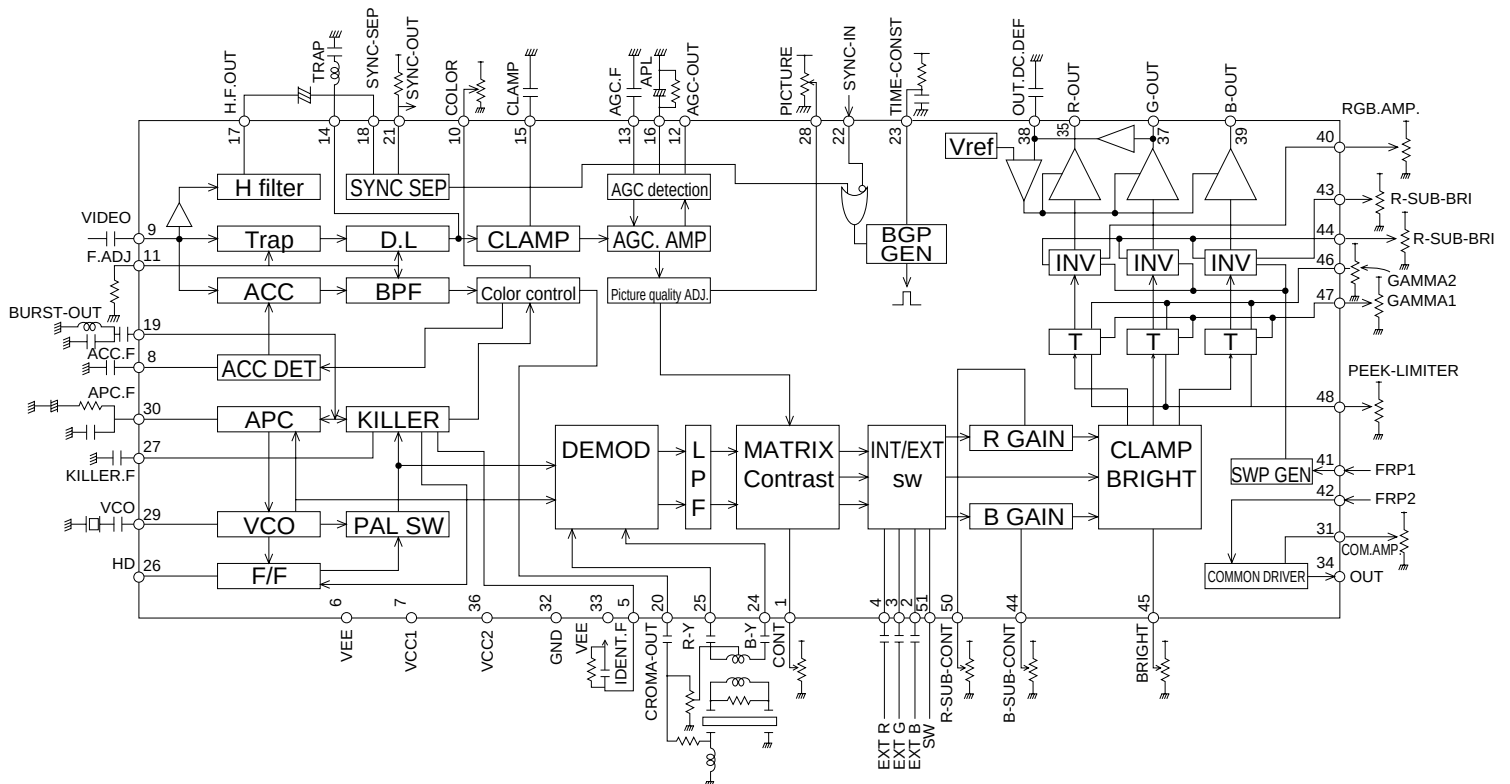
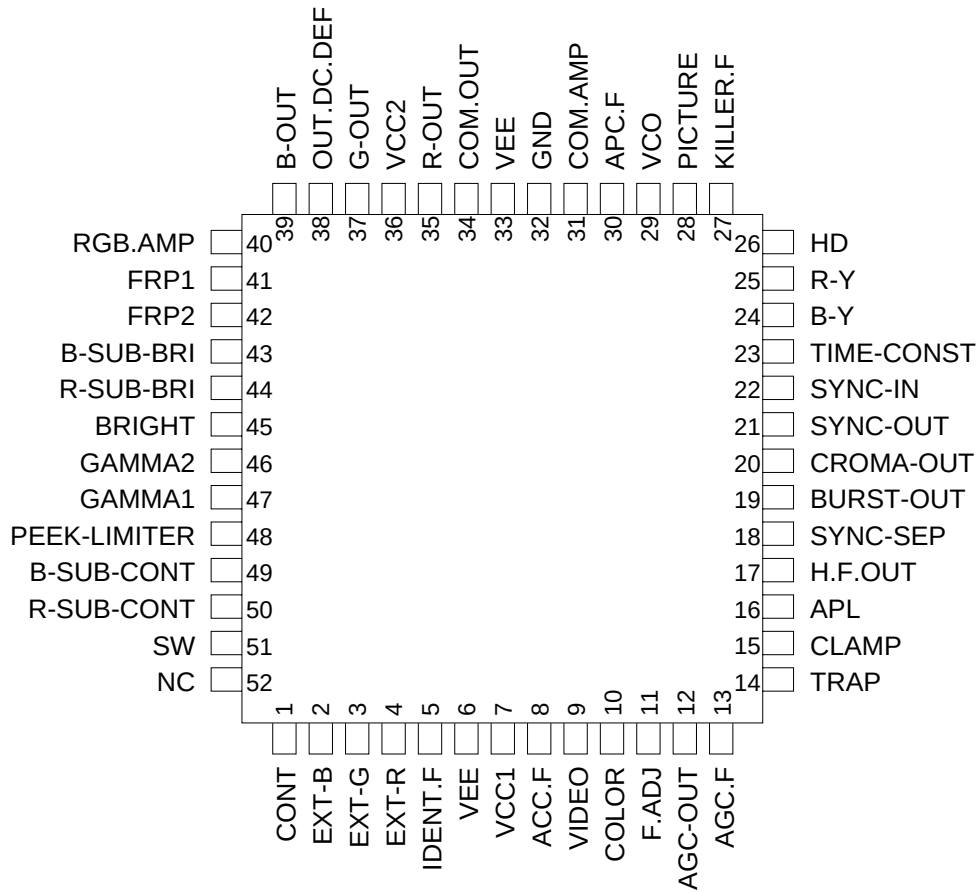


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2SD1819A DTA143TUW
DTC144EUW

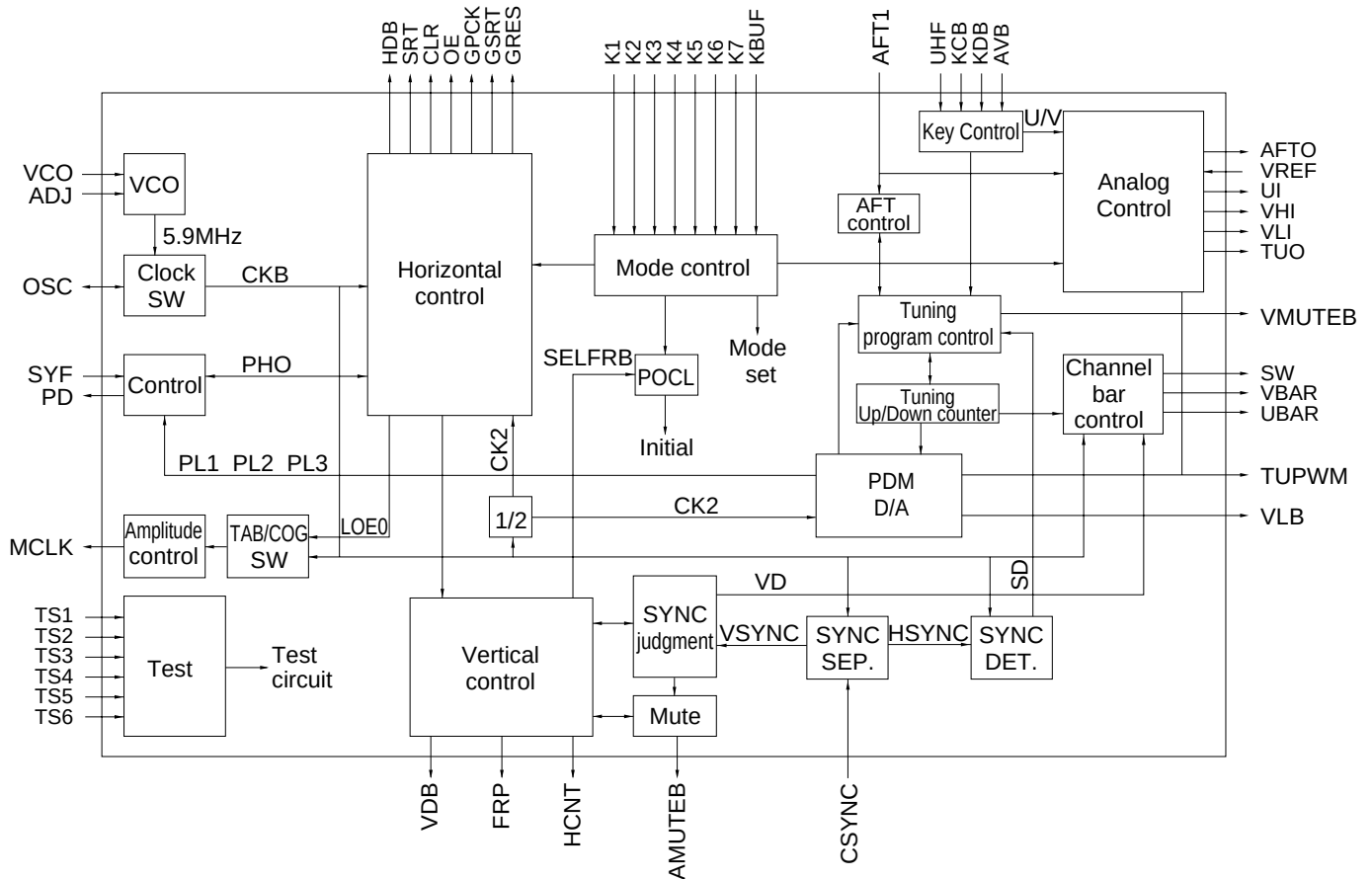
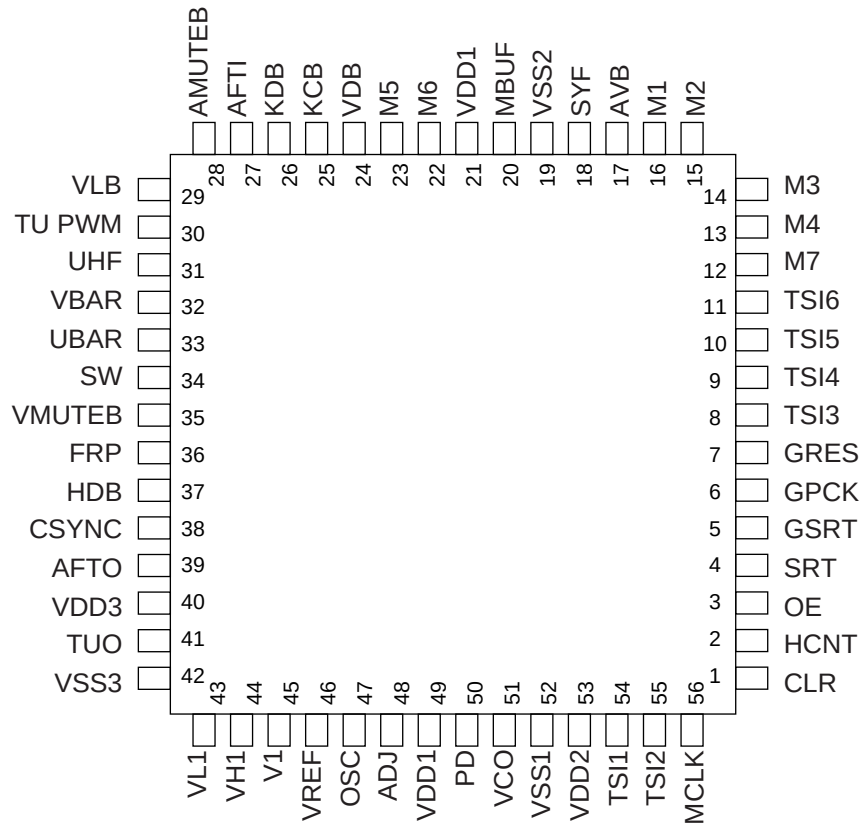
IC/LSI



IC300 IR3P96B



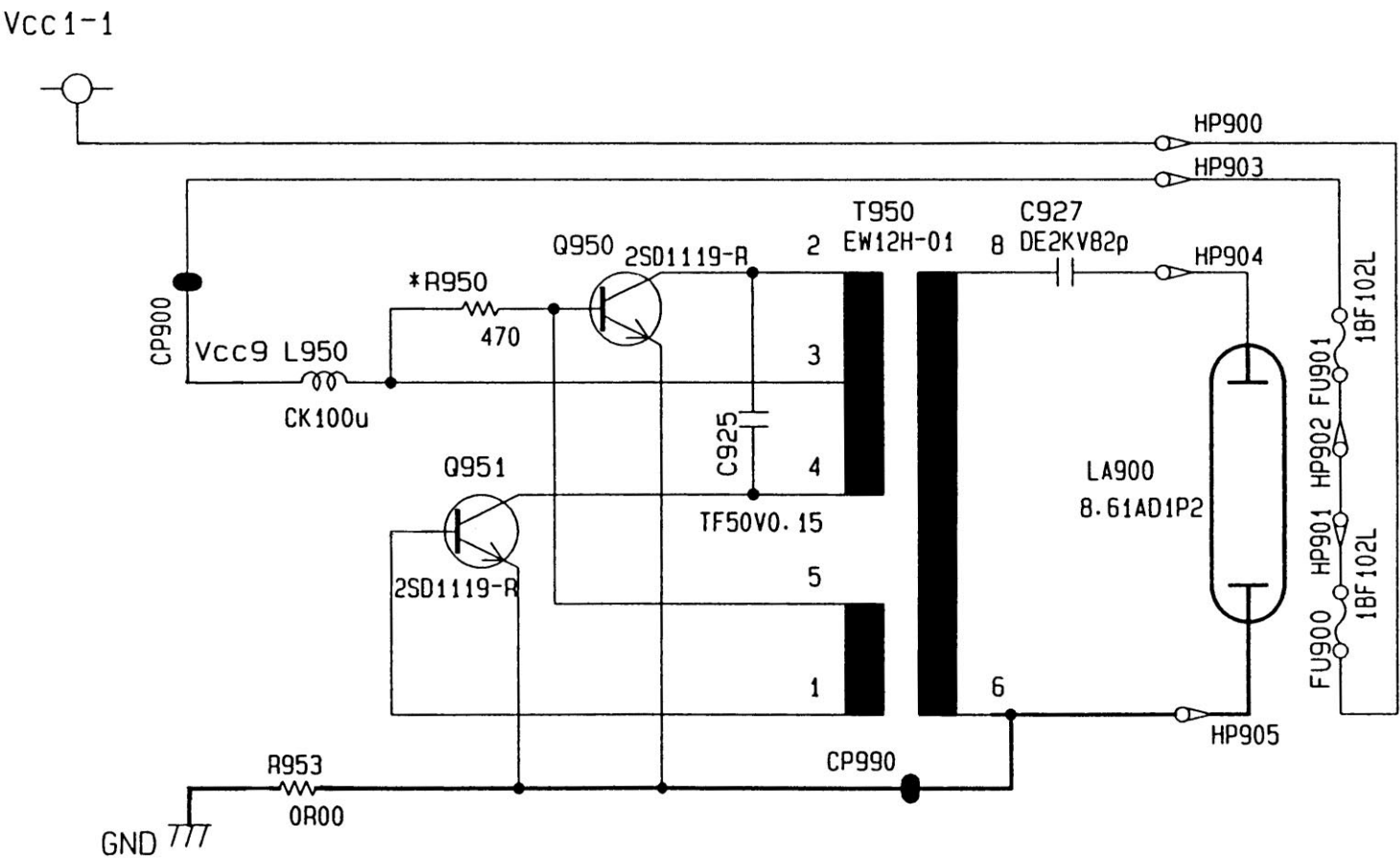
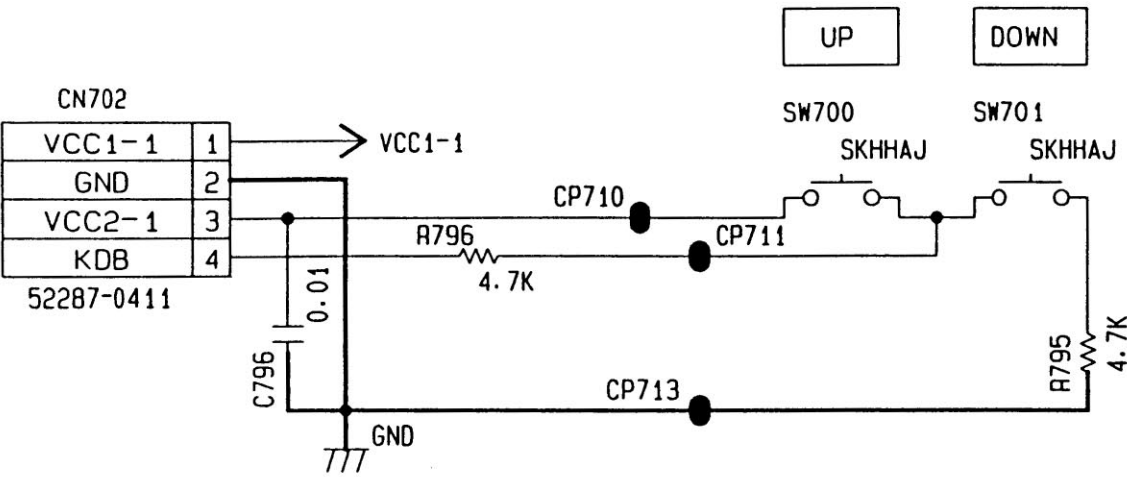
IC700
MSM6770GS



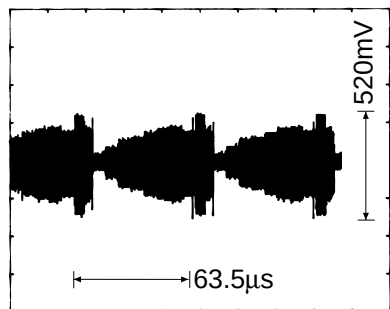
19

TP7

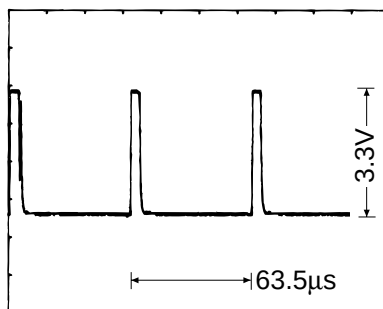




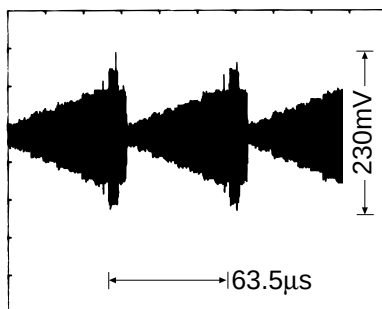
WAVEFORMS



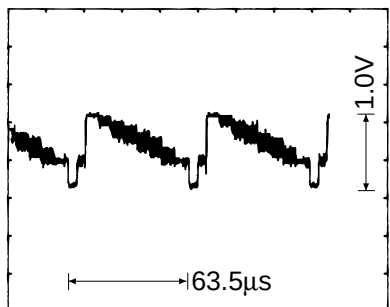
① Q200 Collector



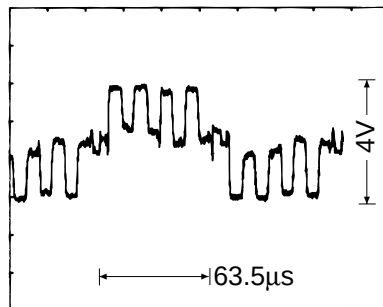
② IC200 Pin 23



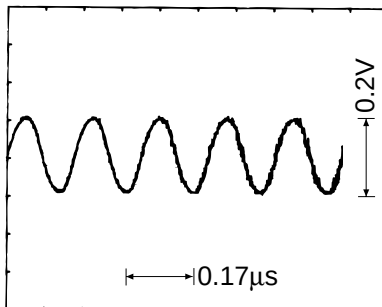
③ IC200 Pins 19,20



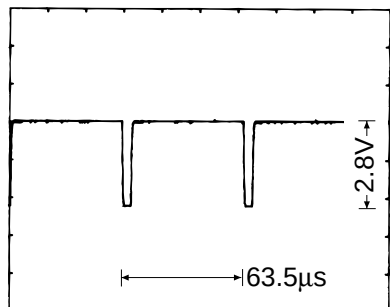
④ IC200 Pin 18



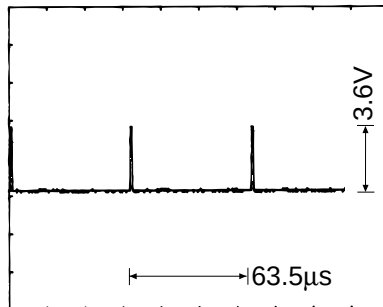
⑤ IC300 Pins 32,34,36



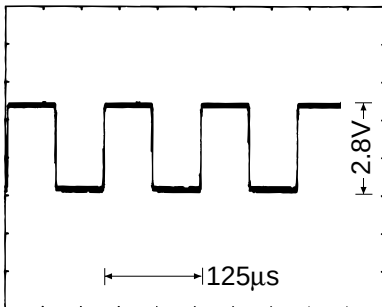
⑥ IC300 Pin 26



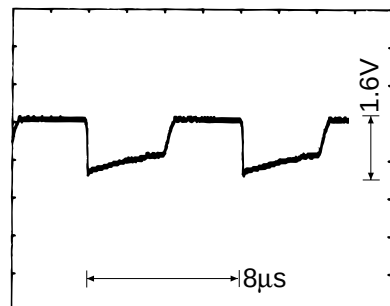
⑦ IC300 Pin 21



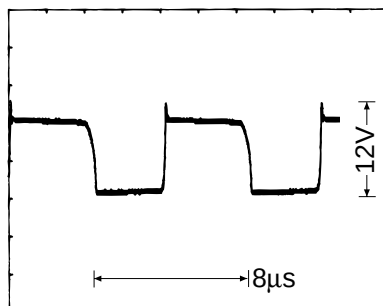
⑧ IC300 Pins 4,5



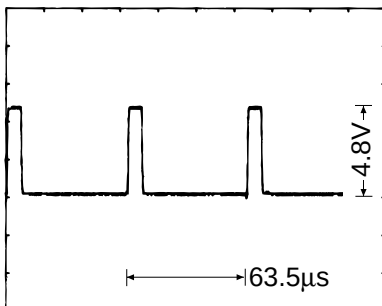
⑨ IC300 Pin 39



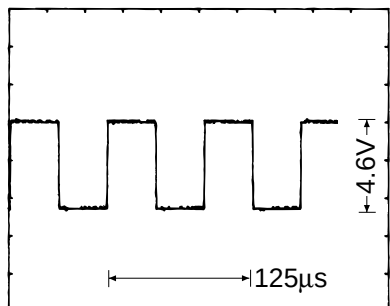
⑩ Q111 Base



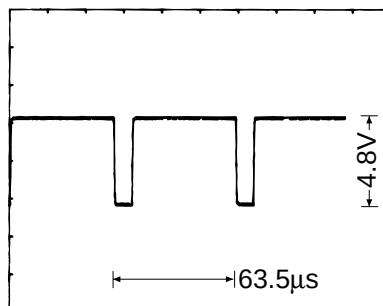
⑪ Q111 Collector



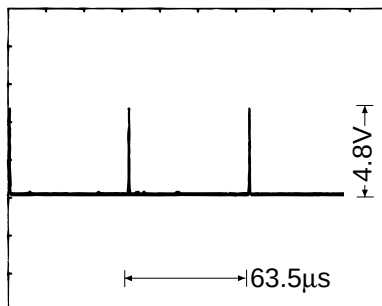
⑫ IC700 Pin 1



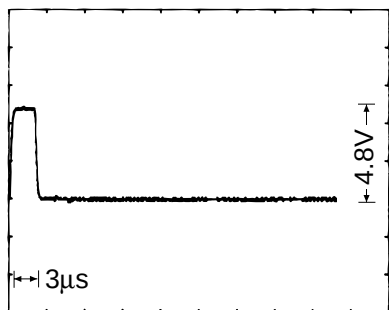
⑬ IC700 Pin 2



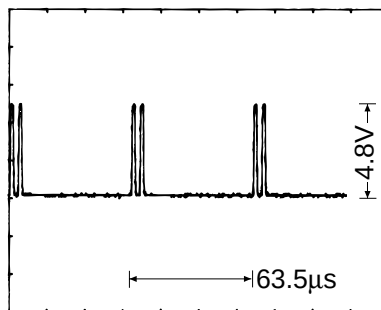
⑭ IC700 Pin 3



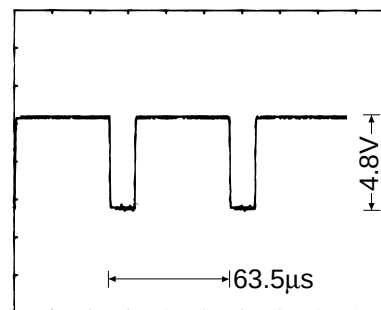
⑮ IC700 Pin 4



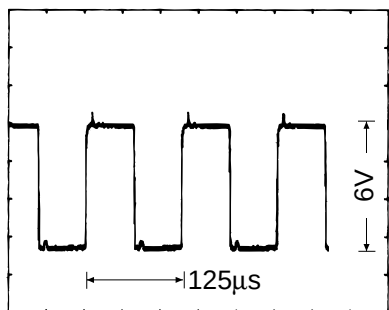
⑩ IC700 Pin 5



⑪ IC700 Pin 6



⑫ IC700 Pin 7



⑬ IC300 Pin 30

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