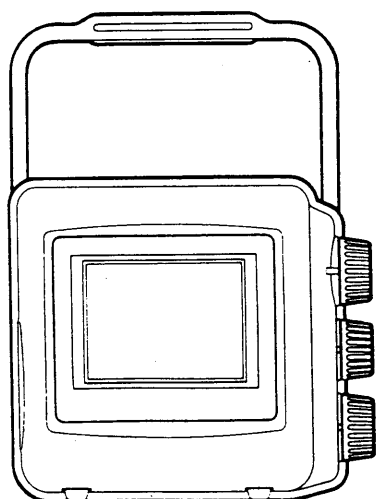


# TEAC<sup>®</sup>



## SERVICE MANUAL

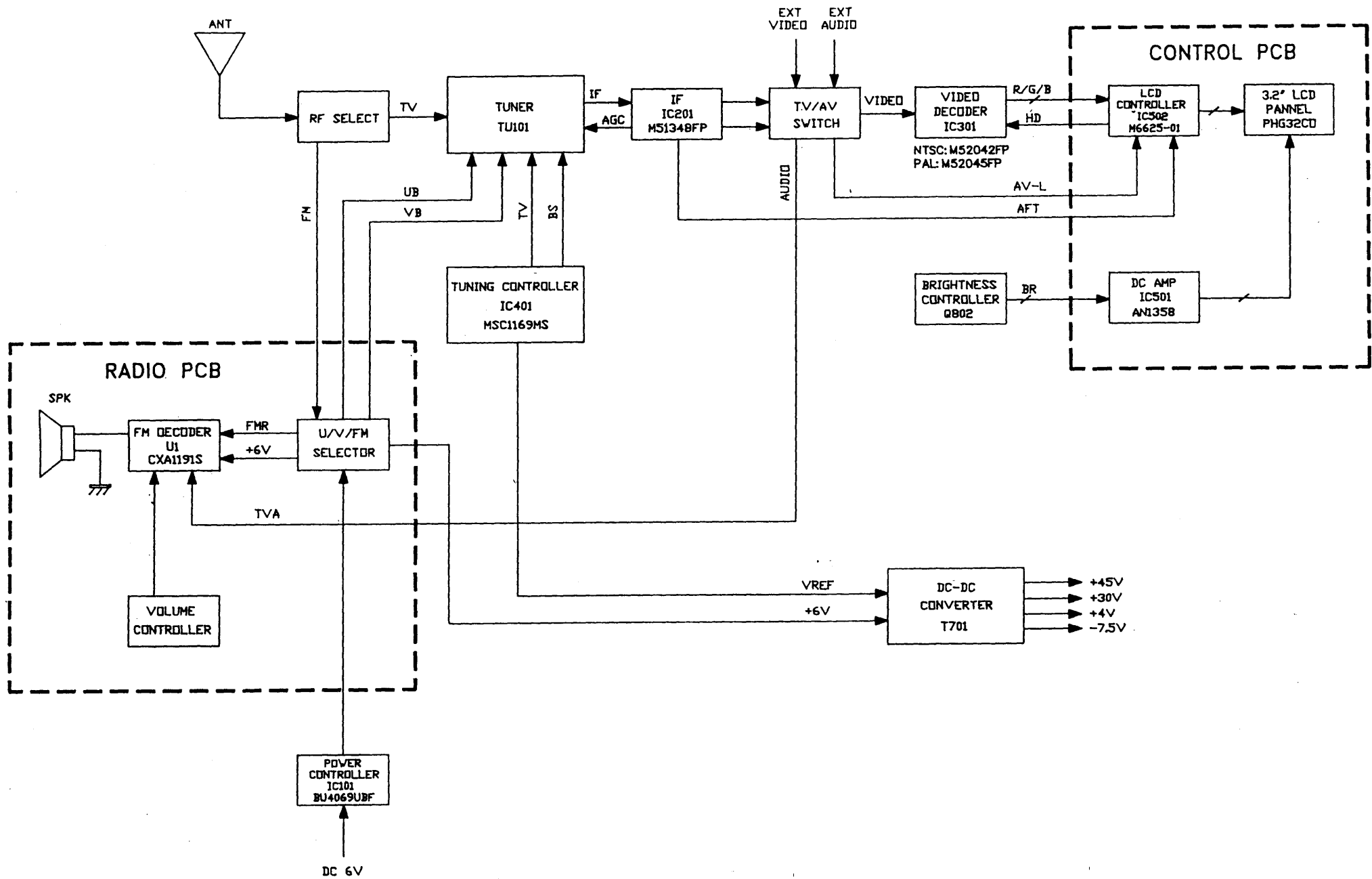
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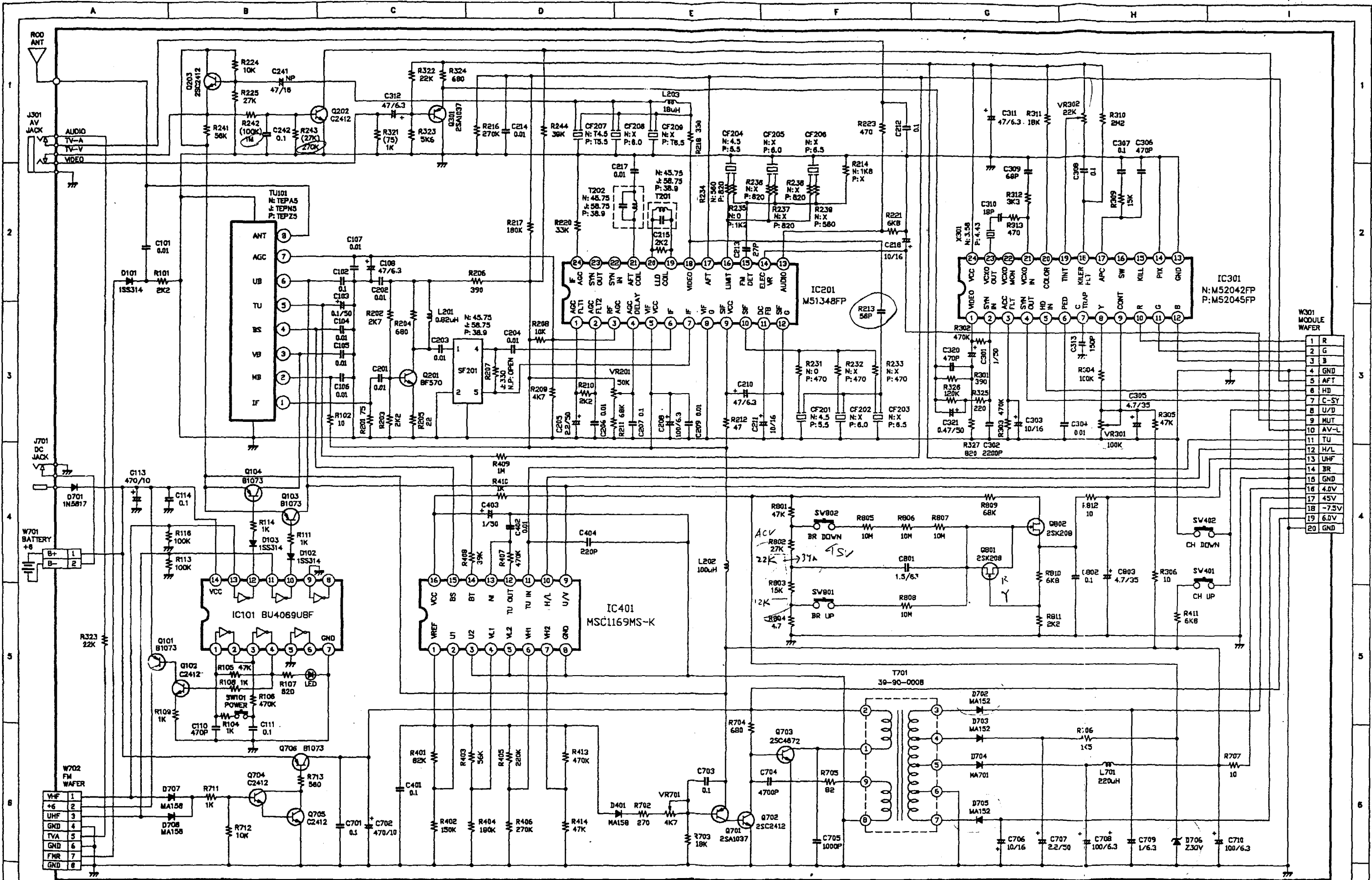
# LCD321

## 3.2" LCD TV WITH RADIO

---

# BLOCK DIAGRAM



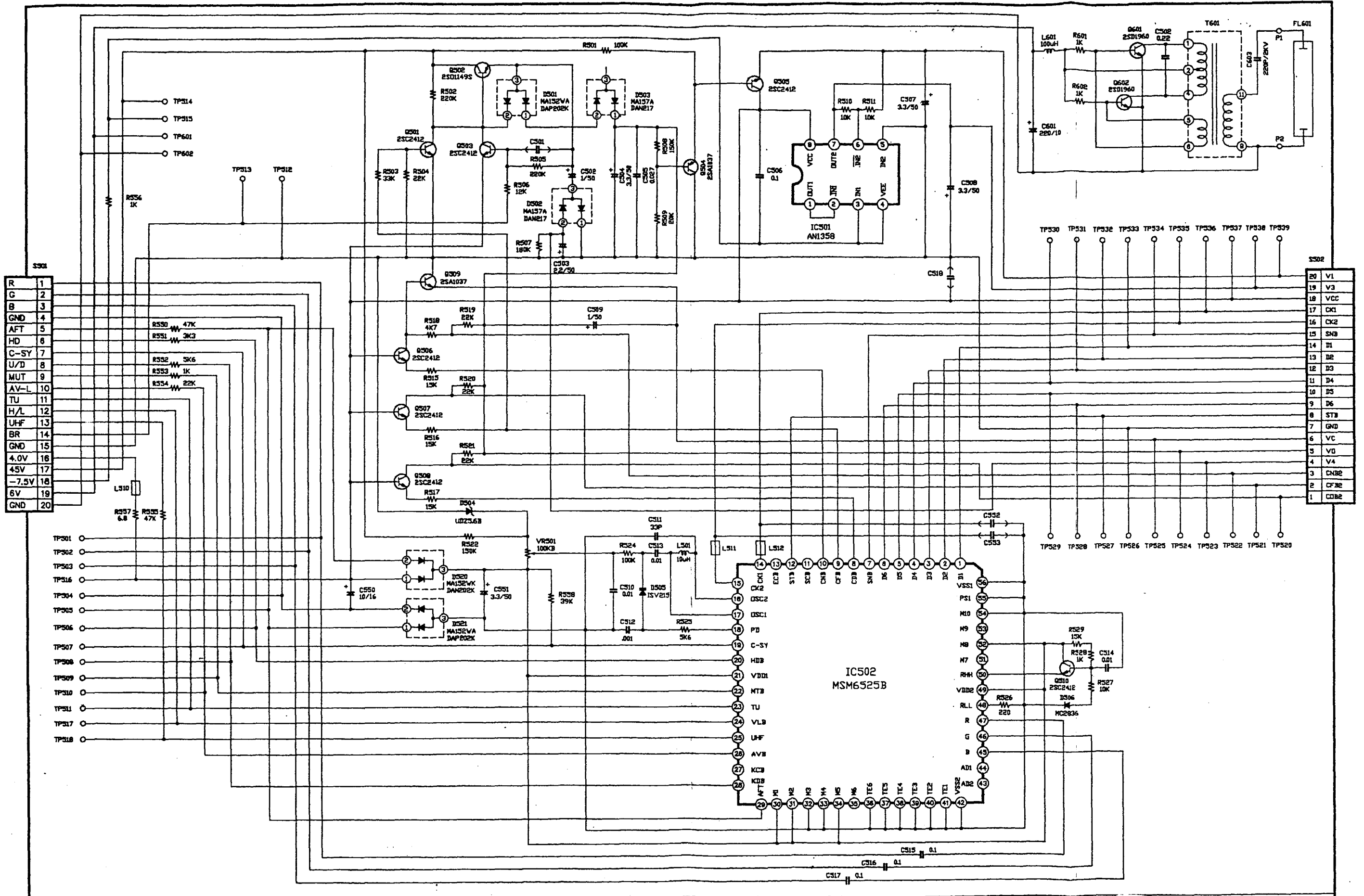


W001 MODULE WAFER

1	R
2	G
3	B
4	GND
5	AFT
6	HD
7	C-SY
8	U/D
9	MUT
10	AV-L
11	TU
12	H/L
13	UHF
14	BR
15	GND
16	4.0V
17	4.5V
18	-7.5V
19	6.0V
20	GND

TU101: N:15-01-0254 TEPA5    J:15-05-0252 TEPN5    P:15-03-0257 TEP25  
 CF201: N:18-01-4002 45A    J:18-05-5003 58H    P:18-03-5008 38.92C  
 T201: N:18-01-7001 45M (PIF)    J:18-05-7001 58M    P:18-03-7001 38.9M  
 T202: N:18-01-7061 45M (AFT)    J:18-05-7065 58M    P:18-03-7065 38.9M

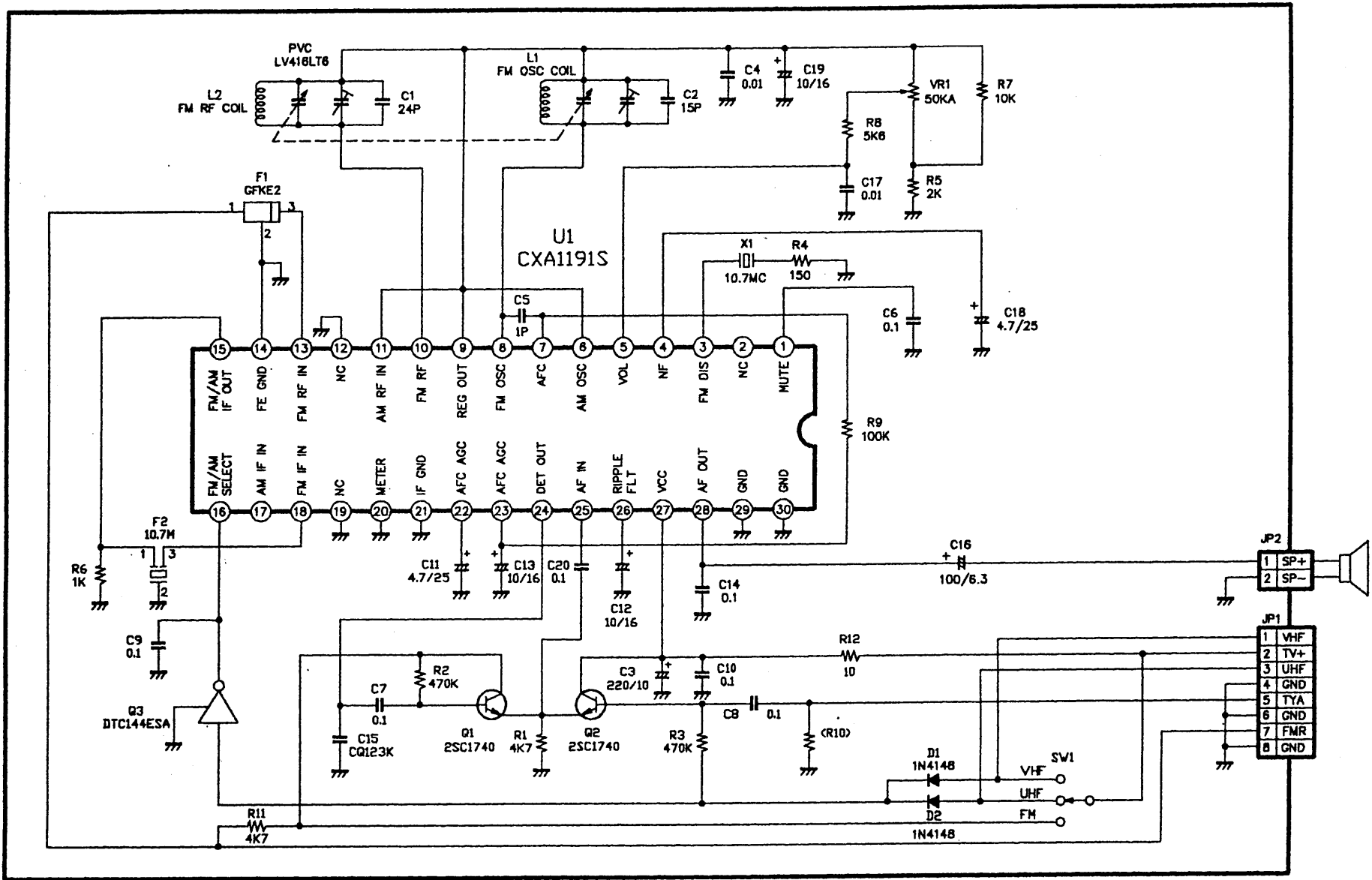
SUBFIX	MOD	REC/OPD	TITLE: LCD-321 SCHEMATIC DIAGRAM (MAIN)			
AA	1997/03/03		DRAWN	CHECK	APPROVED	DRAWING NO
AB			曾美華	李	李	05-T5-1101
AC						REV
AD						0
AE						SH2



R	1
G	2
B	3
GND	4
AFT	5
HD	6
C-SY	7
U/D	8
MUT	9
AV-L	10
TU	11
H/L	12
UHF	13
BR	14
GND	15
4.0V	16
4.5V	17
-7.5V	18
6V	19
GND	20

S302	20	V1
	19	V3
	18	VCC
	17	CK1
	16	CK2
	15	SNB
	14	DI
	13	DE
	12	D3
	11	D4
	10	D5
	9	D6
	8	STB
	7	GND
	6	VC
	5	VO
	4	V4
	3	CN2E
	2	CF2E
	1	CB2E

SUBFIX	MOD	RECORD				
AA	1996/12/17					
AB		TITLE: LCD-321	SCHEMATIC DIAGRAM (CONTROL)			
AC		DRAWN	CHECK	APPROVED	DRAWING NO	REV
AD		曾美華	澤野	Amis	05-T5-1101	0
AE						SH3



SUBFIX	MOD RECORD	TITLE: LCD-321 SCHEMATIC DIAGRAM (RADIO)			
AA	1996/12/16	DRAWN 曾美華	CHECK 李 3/5	APPROVED 李 2/10	DRAWING NO
AB					05-T5-1101
AC					REV
AD					0
AE					SH4

OUTPUT: 50mW SUPPLY VOLTAGE: DC 6V LOAD: 8ohm

PAGE1

DESCRIPTION		UNIT	LIMIT	NOMINAL	NO.1	NO.2	NO.3	NO.4
VHF BAND								
TUNING RANGE	HIGH	MHz	217.25	220.25				
	LOW	MHz	91.25	80.25				
COLOR/TUNING SENS.	CH.1	dB/uv	34/28	28/22				
	CH.2	dB/uv	34/28	28/22				
	CH.3	dB/uv	34/28	28/22				
	CH.4	dB/uv	34/28	28/22				
	CH.8	dB/uv	34/28	28/22				
	CH.12	dB/uv	34/28	28/22				
IF REJ.	CH.1	dB/uv	30	40				
IMAGE REJ.	CH.12	dB/uv	30	40				
DIAL CALIB.	CH.1	MHz	±6	0				
	CH.2	MHz	±6	0				
	CH.3	MHz	±6	0				
	CH.4	MHz	±6	0				
	CH.8	MHz	±6	0				
	CH.12	MHz	±6	0				
UHF BAND								
TUNING RANGE	HIGH	MHz	765.25	770.25				
	LOW	MHz	471.25	468.25				
COLOR/TUNING SENS.	CH.13	dB/uv	42/36	36/30				
	CH.30	dB/uv	42/36	36/30				
	CH.40	dB/uv	42/36	36/30				
	CH.50	dB/uv	42/36	36/30				
	CH.62	dB/uv	42/36	36/30				
IF REJ.	CH.13	dB/uv	30	40				
IMAGE REJ.	CH.62	dB/uv	30	40				
DIAL CALIB.	CH.13	MHz	±24	0				
	CH.30	MHz	±24	0				
	CH.40	MHz	±24	0				
	CH.50	MHz	±24	0				
	CH.62	MHz	±24	0				



# ALIGNMENT PROCEDURE

## 1. WORKING VOLTAGES CONFIRMATION

1) 4.0V voltage adjustment:

Adjust VR701 to make the voltage of the positive pole of C710 be  $4.0 \pm 0.1V$ .

2) Other working voltages confirmation:

D702  $\ominus$ :  $45.0 \pm 2.0V$

D706  $\ominus$ :  $30.0 \pm 1.0V$

D705  $\oplus$ :  $-7.5 \pm 0.5V$

## 2. PIF ADJUSTMENT

1) Input PIF\* signal of TV signal generator to PIN1 of TU101. And connect the probe of oscilloscope to PIN18 of IC201.

\* USA : 45.75 MHz

JPN : 58.75 MHz

PAL : 38.90 MHz

2) Adjust T201 to make the spike of the signal (color bar) on the scope be flat.

## AFC ADJUSTMENT

1) Input the same PIF signal as (2-1). And measure the voltage of PIN17 of IC201.

2) Adjust T202 to set the voltage be 2.5V.

## RF AGC ADJUSTMENT

Receive TV signal from rod antenna. Adjust VR201 to make the picture clearest.

## CONTRAST ADJUSTMENT

Receive TV signal of grey scale. Adjust VR301 to make the grey scale clearest.

## TINT ADJUSTMENT

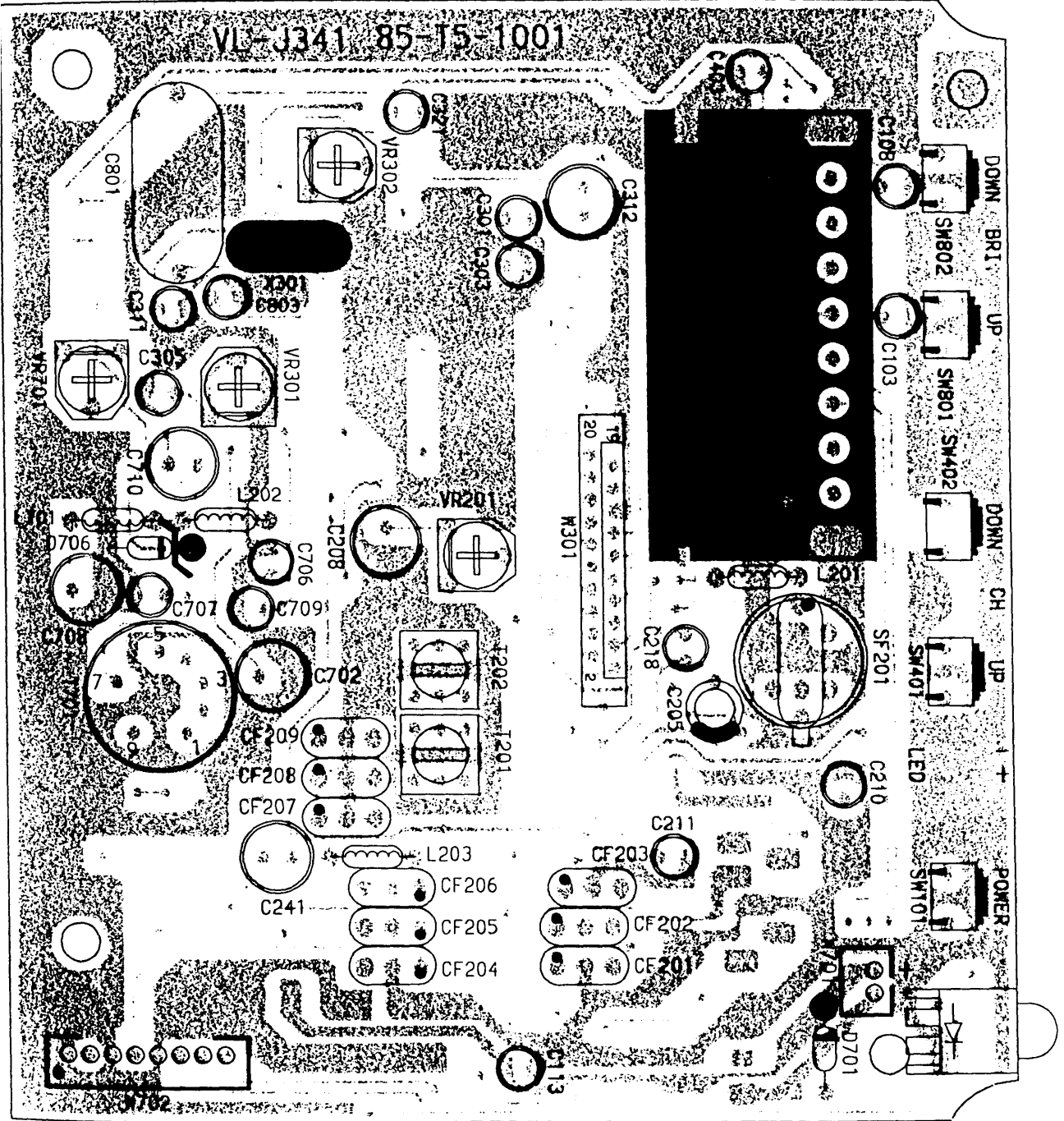
Receive TV signal of color bar. Adjust VR302 to make the tint correct.

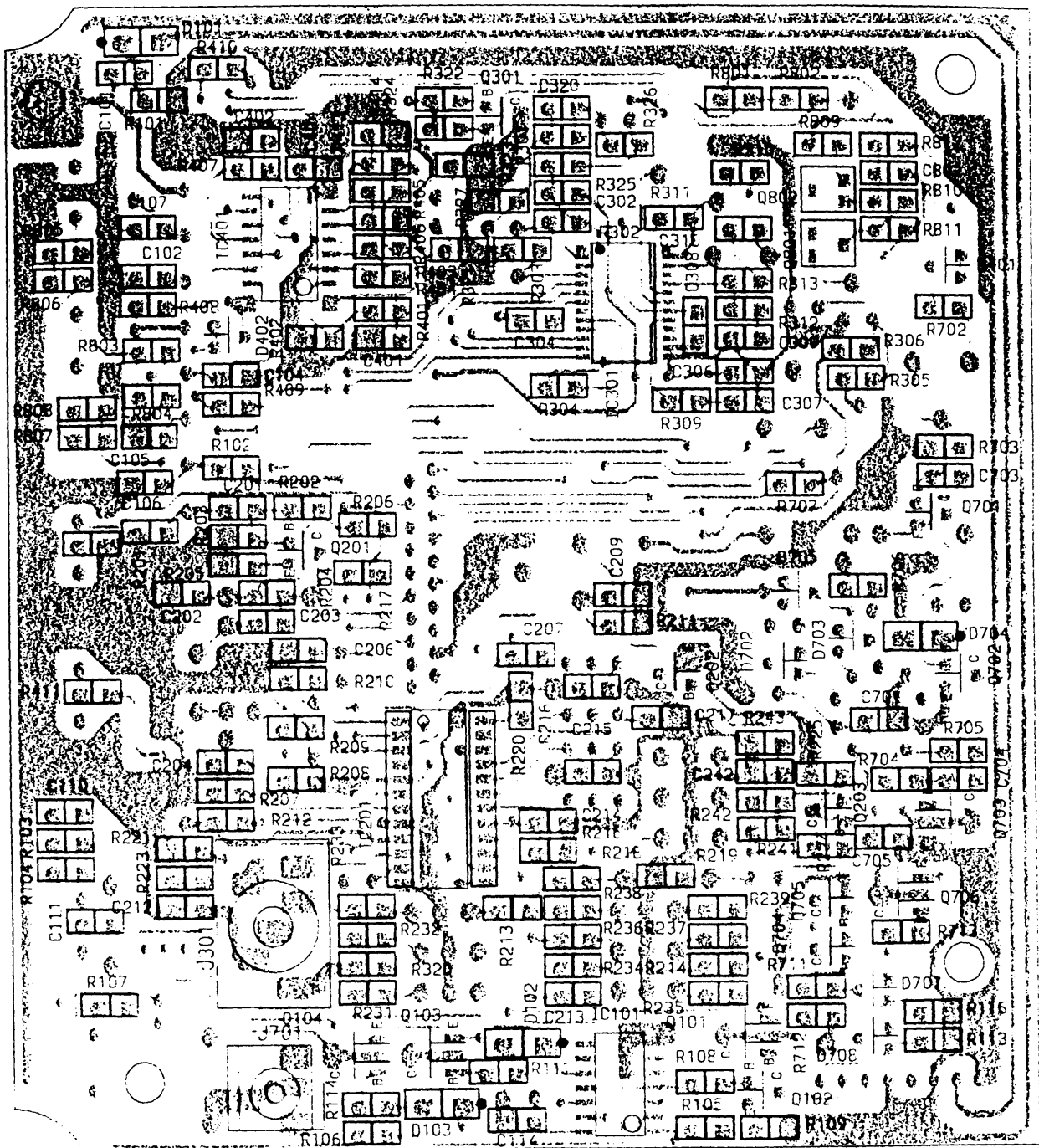
## H-POSITION ADJUSTMENT

Adjust VR501 to set the picture on the center of screen.



VL-J341 85-T5-1001

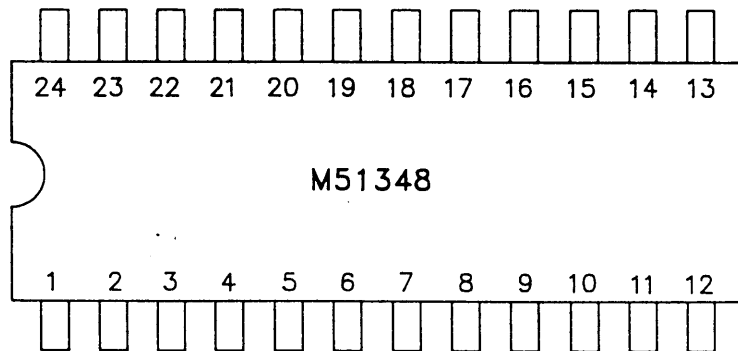
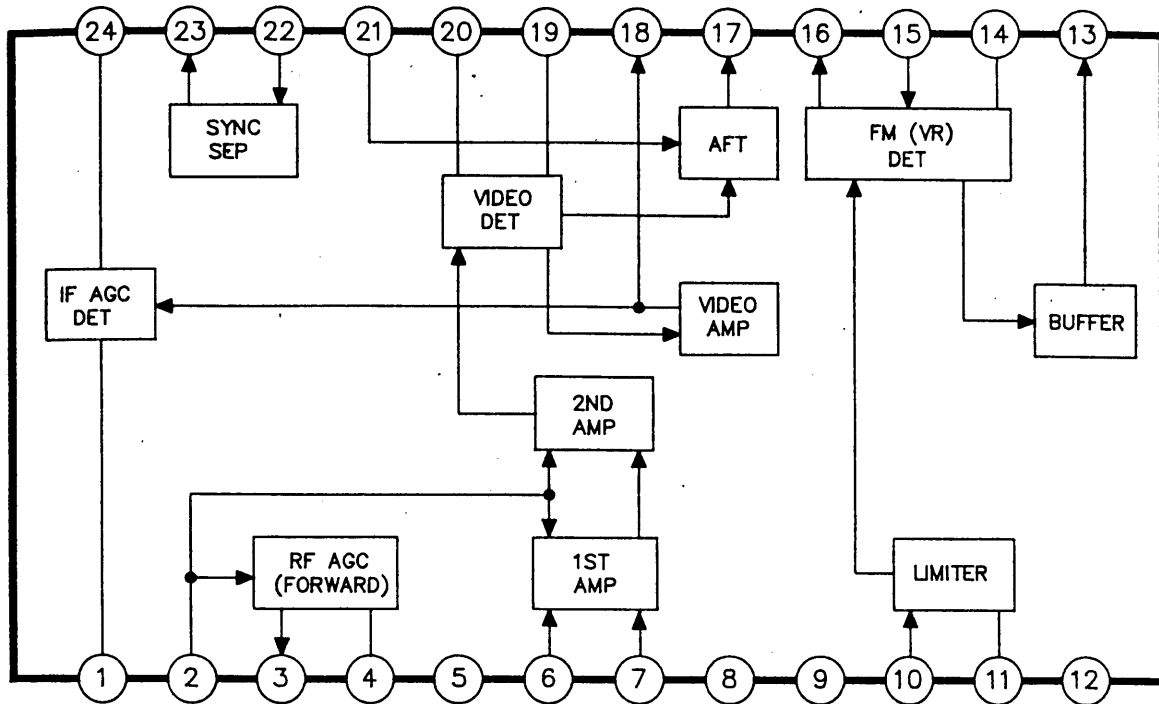




BOTTOM SIDE TEXT

# IC. BLOCK DESIGNATION

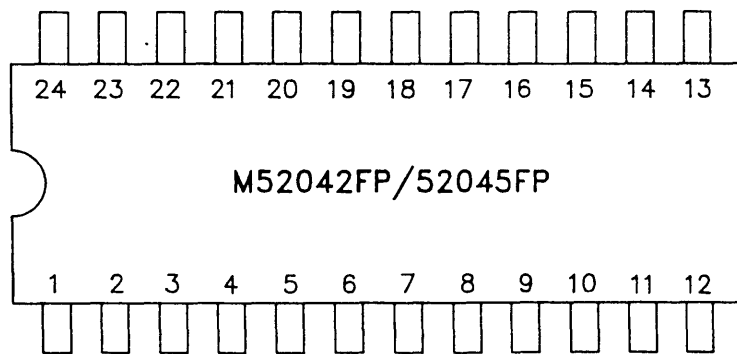
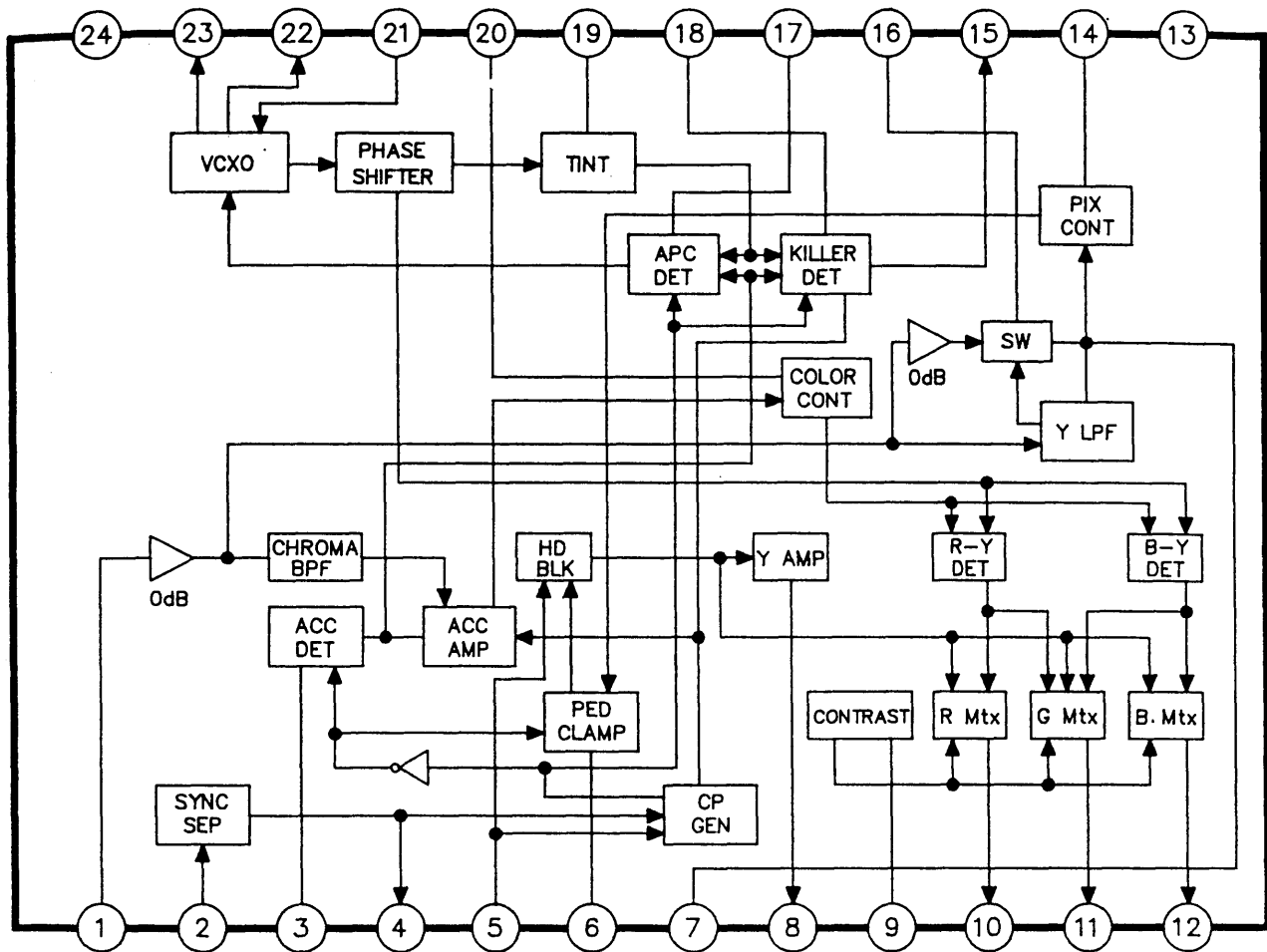
M51348



- |                  |                          |
|------------------|--------------------------|
| 1. AGC FILTER I  | 13. AUDIO OUTPUT         |
| 2. AGC FILTER II | 14. ELECTRONIC VOLUME VR |
| 3. RF AGC OUTPUT | 15. FM DETECTOR IN       |
| 4. RF AGC DELAY  | 16. LIMITER OUTPUT       |
| 5. VIF VCC       | 17. AFT OUTPUT           |
| 6. IF INPUT      | 18. VIDEO OUTPUT         |
| 7. IF INPUT      | 19. LLD COIL             |
| 8. VIF GND       | 20. LLD COIL             |
| 9. SIF VCC       | 21. AFT COIL             |
| 10. SIF INPUT    | 22. SYNC. SEP INPUT      |
| 11. DC F/B       | 23. SYNC. OUTPUT         |
| 12. SIF GND      | 24. IF AGC ADJUST        |

# IC BLOCK DESIGNATION

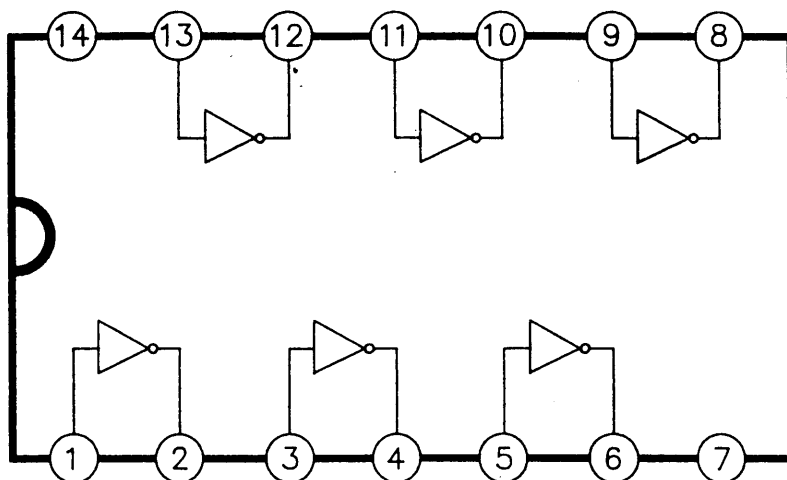
M52042FP/52045FP



- |                                 |                   |
|---------------------------------|-------------------|
| 1. VIDEO INPUT                  | 13. GND           |
| 2. SYNC SEPARATION INPUT        | 14. PIX CONT      |
| 3. ACC FILTER                   | 15. KILLER OUTPUT |
| 4. SYNC SEPARATION OUTPUT       | 16. S.W.          |
| 5. HD PULSE INPUT               | 17. APC FILTER    |
| 6. PEDESTAL-CLAMPED CAPACITANCE | 18. KILLER FILTER |
| 7. CHROMA TRAP                  | 19. TINT CONTROL  |
| 8. Y OUTPUT                     | 20. COLOR CONTROL |
| 9. CONTRAST CONTROL             | 21. VCXO INPUT    |
| 10. R OUTPUT                    | 22. VCXO MONITOR  |
| 11. G OUTPUT                    | 23. VCXO OUTPUT   |
| 12. B OUTPUT                    | 24. VCC +4V       |

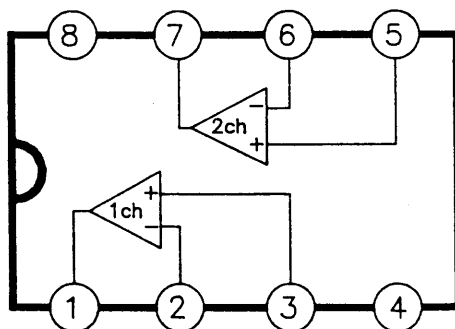
# IC BLOCK DIAGRAM

BU4069UBF



- |        |         |
|--------|---------|
| 1. I1  | 8. O4   |
| 2. O1  | 9. I4   |
| 3. I2  | 10. O5  |
| 4. O2  | 11. I5  |
| 5. I3  | 12. O6  |
| 6. O3  | 13. I6  |
| 7. VSS | 14. VDD |

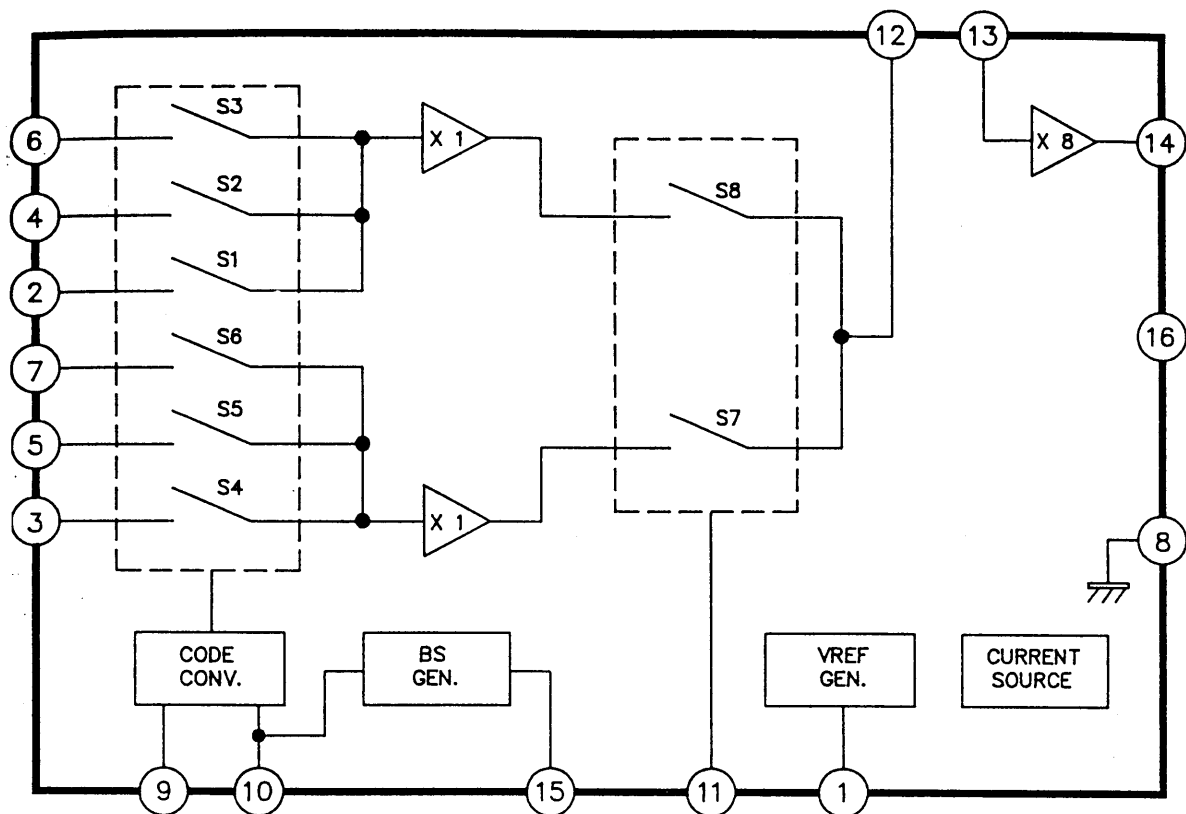
AN13582



1. OUT1
2. IN1 (-)
3. IN1 (+)
4. VEE
5. IN2 (+)
6. IN2 (-)
7. OUT2
8. VCC

# IC BLOCK DESIGNATION

MSC1169MS-K



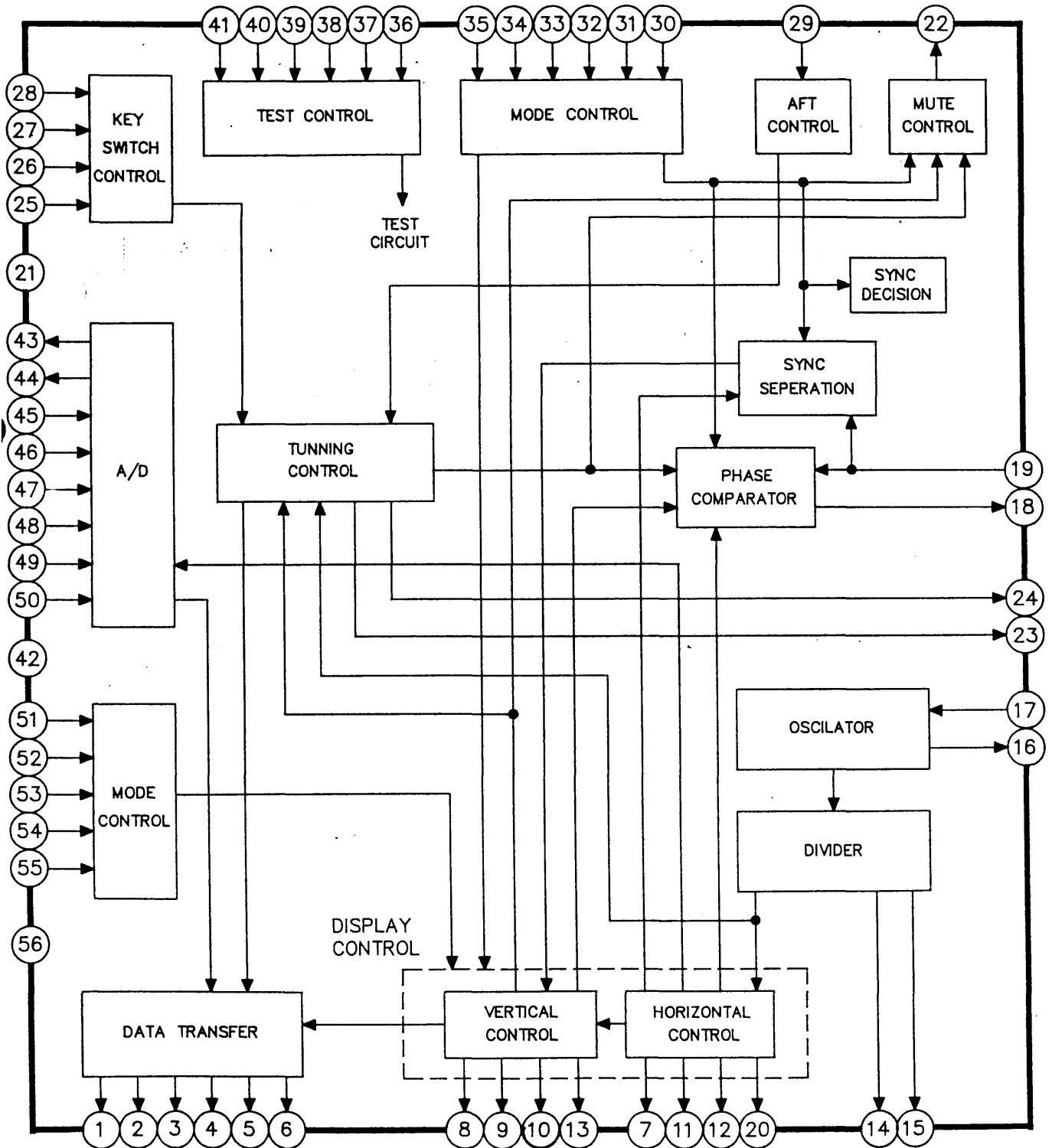
U/V	H/L	SWITCH
L	L	S2. S5
L	H	S3. S6
H	L	S1. S4
H	H	S1. S4

TU	SWITCH
L	S7
H	S8

- |         |         |
|---------|---------|
| 1. VREF | 9. U/V  |
| 2. U1   | 10. H/L |
| 3. U2   | 11. TU  |
| 4. VL1  | 12. TU0 |
| 5. VL2  | 13. NI  |
| 6. VH1  | 14. BT  |
| 7. VH2  | 15. BS  |
| 8. GND  | 16. VCC |

# IC BLOCK DESIGNATION

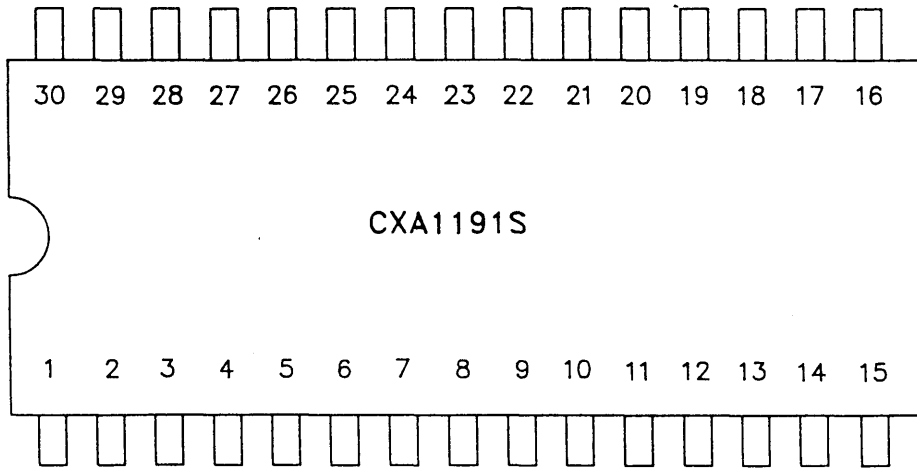
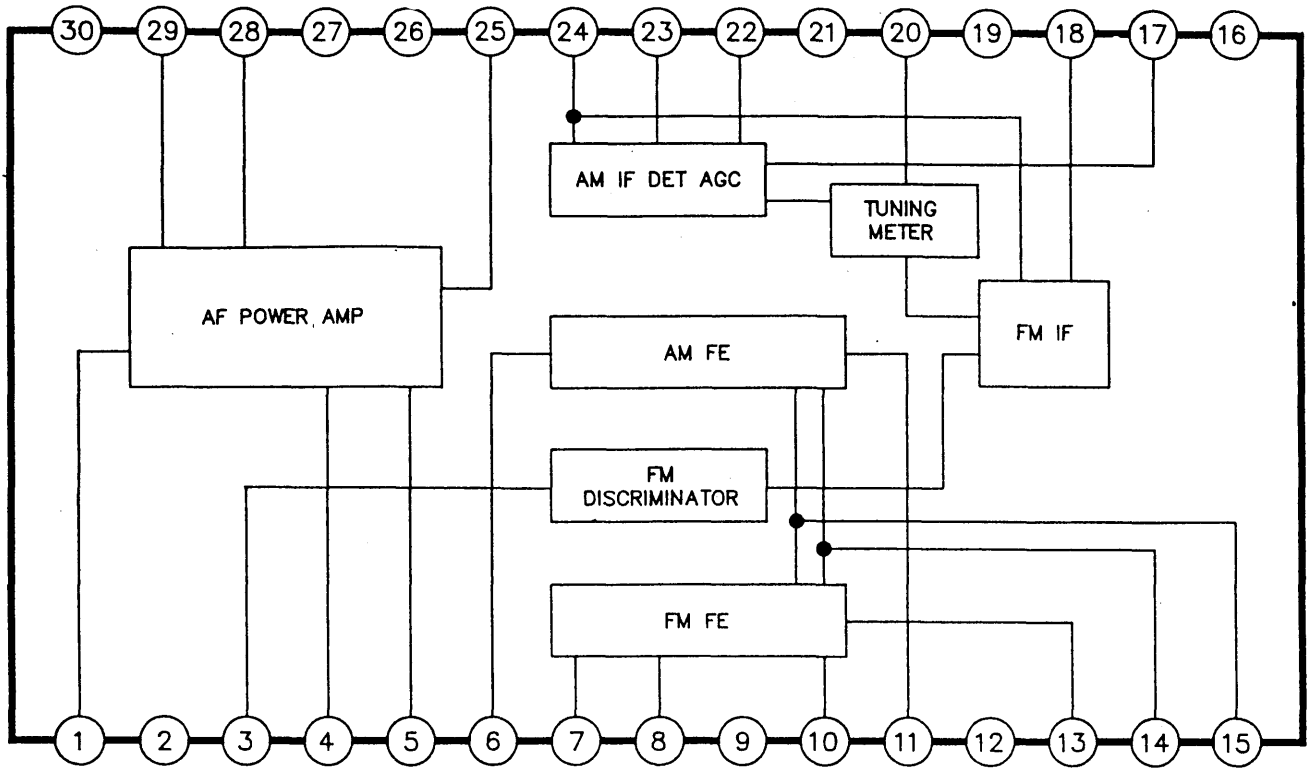
MSM6525B



- |        |          |          |         |         |          |          |
|--------|----------|----------|---------|---------|----------|----------|
| 1. D1  | 9. CFB   | 17. OSC1 | 25. UHF | 33. M4  | 41. TE1  | 49. VDD2 |
| 2. D2  | 10. CNB  | 18. PD   | 26. AVB | 34. M11 | 42. VSS2 | 50. RHH  |
| 3. D3  | 11. SCB  | 19. C-S  | 27. KCB | 35. M6  | 43. AD2  | 51. M7   |
| 4. D4  | 12. STB  | 20. HDB  | 28. KDB | 36. TE6 | 44. AD1  | 52. M8   |
| 5. D5  | 13. ECB  | 21. VDD1 | 29. AFT | 37. TE5 | 45. B    | 53. M9   |
| 6. D6  | 14. CK1  | 22. MTB  | 30. M1  | 38. TE4 | 46. G    | 54. M10  |
| 7. SNB | 15. CK2  | 23. TU   | 31. M2  | 39. TE3 | 47. R    | 55. PS1  |
| 8. CDB | 16. OSC2 | 24. VLB  | 32. M3  | 40. TE2 | 48. RLL  | 56. VSS1 |

# IC BLOCK DIAGRAM

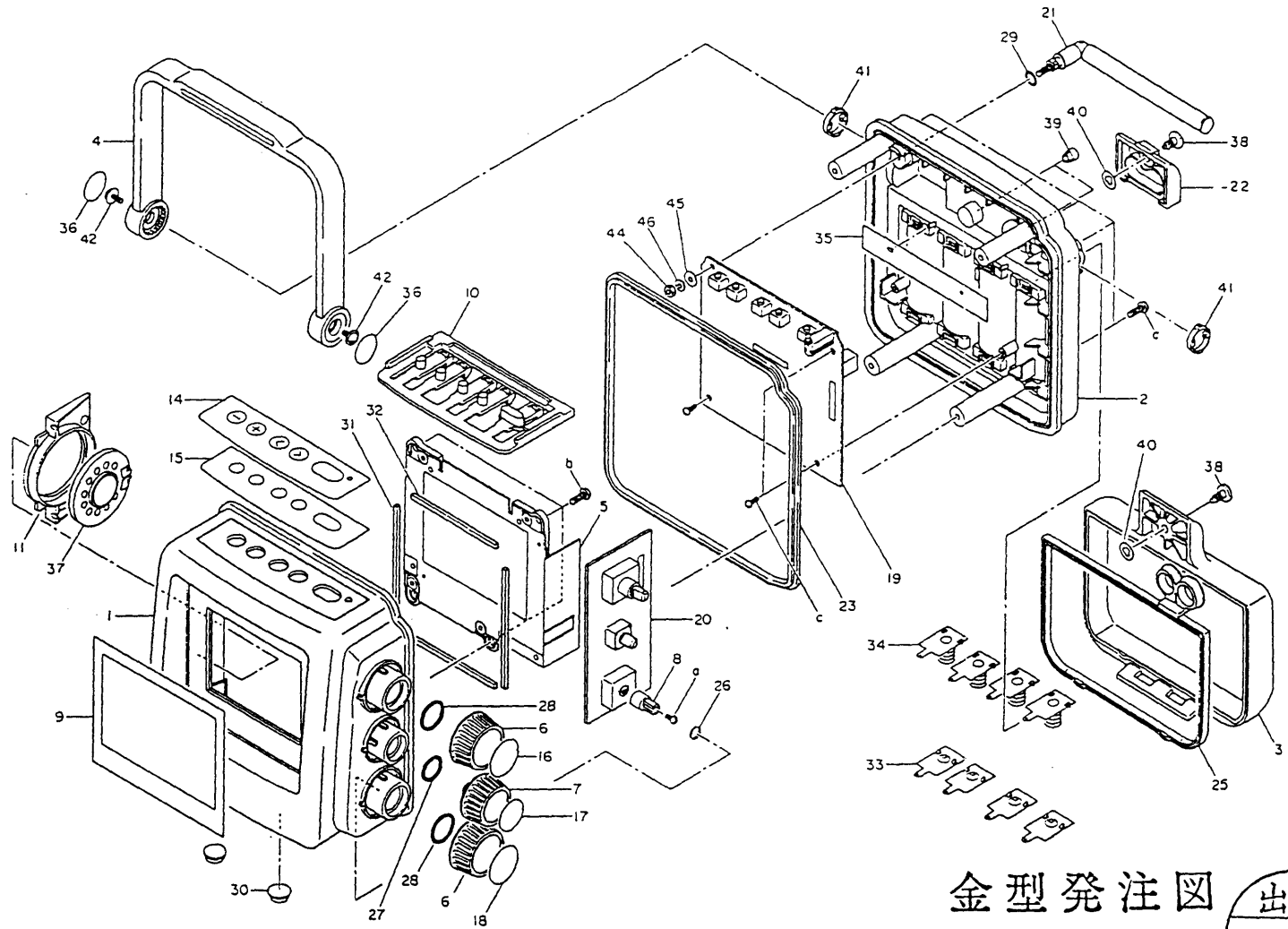
CXA1191S



- |                  |                       |
|------------------|-----------------------|
| 1. MUTE          | 16. FM/AM BAND SELECT |
| 2. NC            | 17. AM IF IN          |
| 3. FM DISCRI     | 18. FM IF IN          |
| 4. NF            | 19. NC                |
| 5. VOL           | 20. METER             |
| 6. AM OSC        | 21. IF GND            |
| 7. AFC           | 22. AFC AGC           |
| 8. FM OSC        | 23. AFC AGC           |
| 9. REG OUT       | 24. DET OUT           |
| 10. FM RF        | 25. AF IN             |
| 11. AM RF IN     | 26. RIPPLE FILTER     |
| 12. NC           | 27. VCC               |
| 13. FM RF IN     | 28. AF OUT            |
| 14. FE GND       | 29. GND               |
| 15. FM/AM IF OUT | 30. GND               |



符号	図面番号	品名
01	400-100050	前本体
02	400-100051	後本体
03	420-200016	電池蓋
04	410-300003	ハンドル
05	070-200021	TVモジュール
06	460-300027	ロータリーつまみ
07	460-300028	ボリュームつまみ
08	460-300029	ジョイントつまみ
09	950-300010	TVパネル
10	460-300030	SWつまみ
11	510-300013	スピーカーガイド
14	960-300011	機能SWパネル
15	970-300042	機能SWシール
16	970-400043	チェンジつまみシール
17	970-400044	ボリュームつまみシール
18	970-400045	チューニングつまみシール
19	220-300022	チューナー基板機略実装図
20	220-300019	ラジオ基板機略実装図
21	330-300004	ロッドアンテナASSY
22	420-200018	ジャックカバー
23	700-300018	本体パッキン
25	700-300019	電池パッキン
26	550-400014	スプリング
27	700-400020	リング(P10A)
28	700-400021	リング(P12.5)
29	VL-9331-37	リング(P5)
30	450-400008	ゴム足
31	VL-9331-97	TVラパークション(A)
32	VL-9331-98	TVラパークション(B)
33	VL-9331-45	電池接片 単2+
34	VL-9331-46	電池接片 単2-
35	980-400001	絶縁シート
36	970-400054	ハンドルシール
37	330-400009	スピーカー
38	740-400012	電池蓋ボルト
39	740-400013	ダッチインサートM4
40	750-400007	裏面ワッシャー(取付止め)
41	550-400025	ラチェッター
42	740-400014	TPねじ M3×6
44	750-400009	六角ナット M3
45	750-400010	平座金 呼び径3
46	750-400011	ばね座金 呼び径3
a		径 1.7×3 ISOねじ
b		径 2.0×6 89ねじ
c		径 3.0×6 89ねじ



金型発注図

出図  
96.12.17  
商品開発部

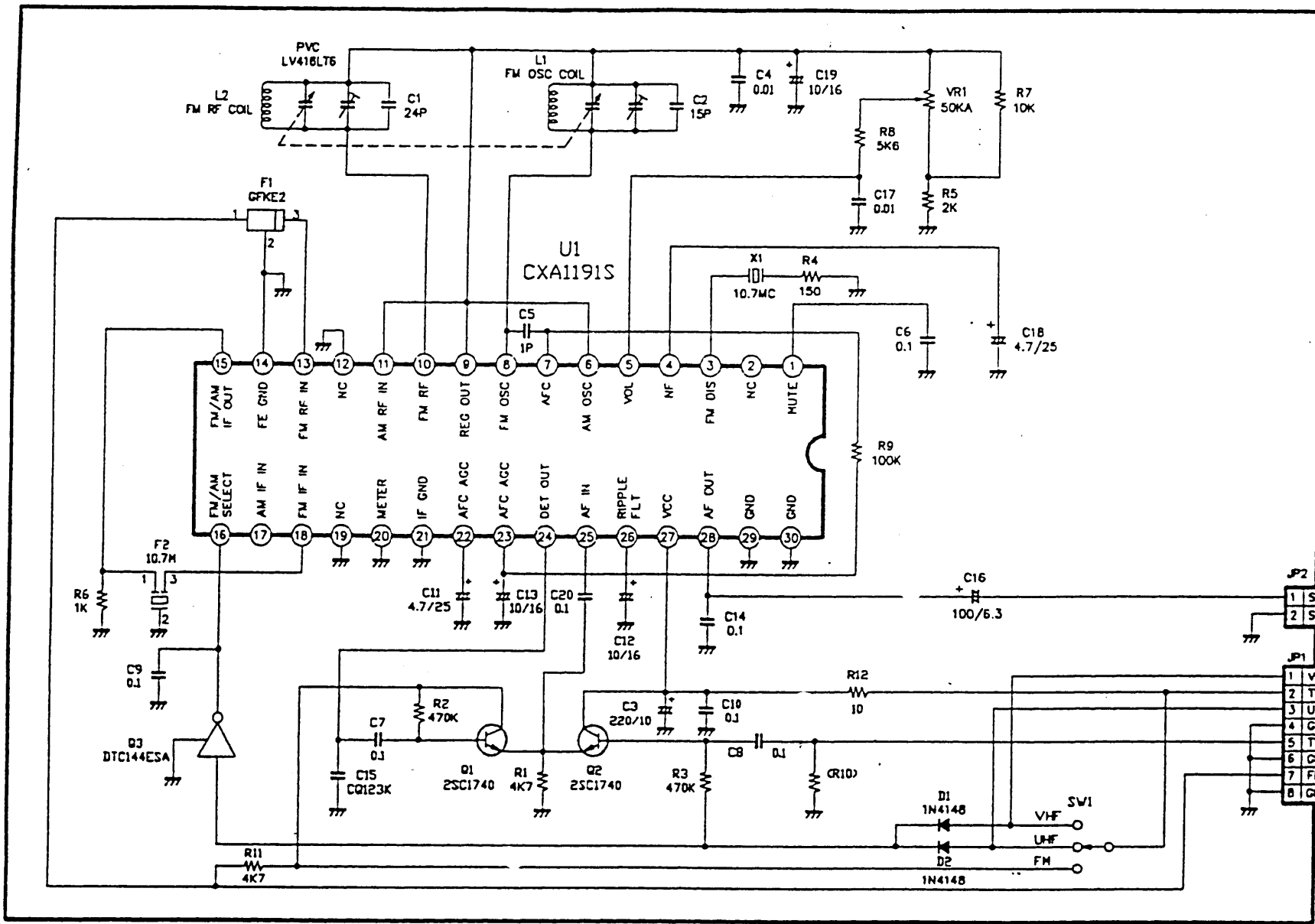
用済後返却の事

標準公差 ±1	図面名称 VL-J341 分解立体図
三角法	図面番号 060-300053-00
1/1( )	発行日 '96年 12月 17日
96.12.17	久保 久保
久保 久保	サインバー



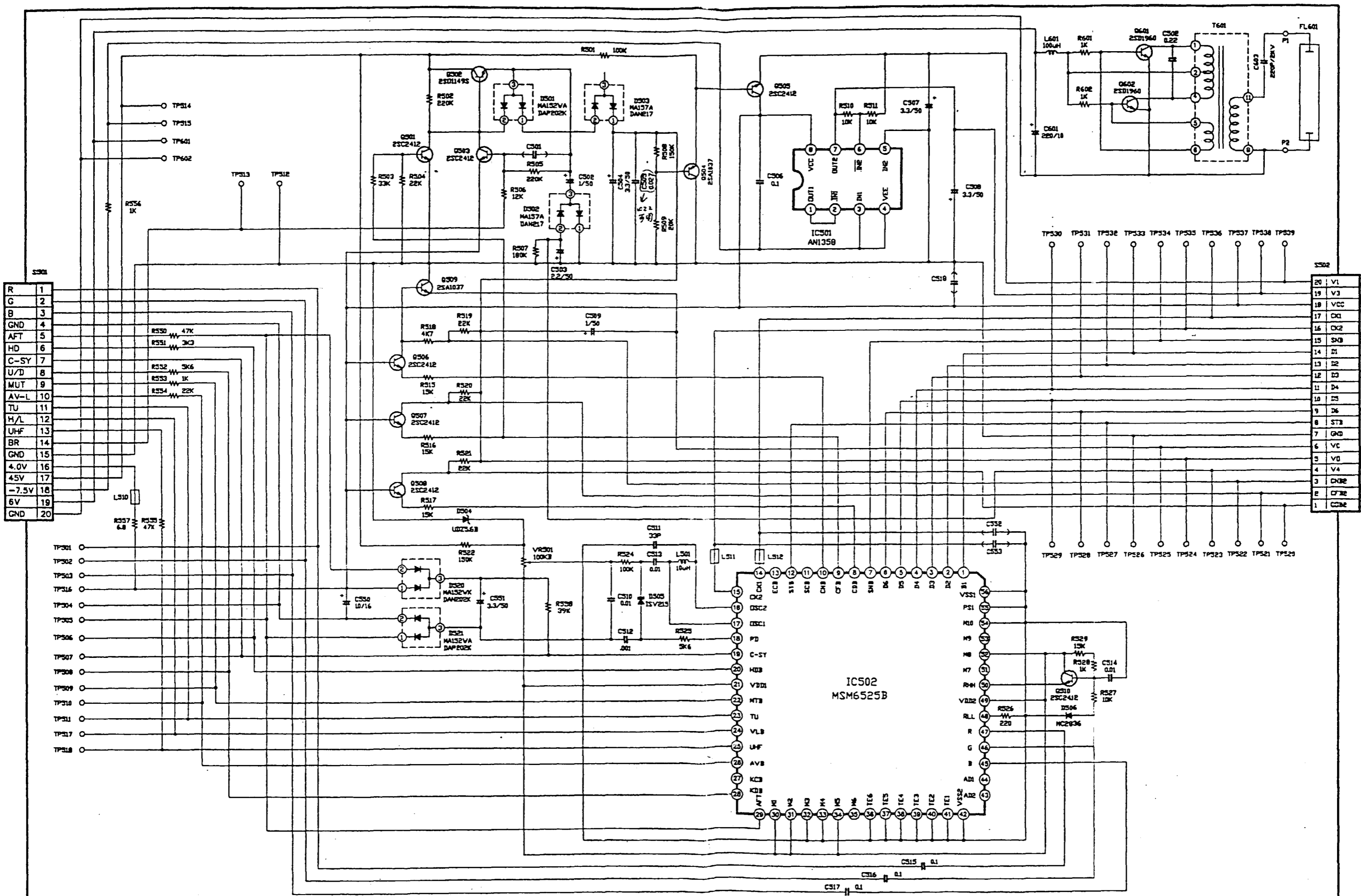






SUBFIX	MOD RECORD	TITLE: LCD-321 SCHEMATIC DIAGRAM (RADIO)			
AA	1996/12/16				
AB					
AC		DRAWN	CHECK	APPROVED	DRAWING NO
AD		首美華	廖 3/5	廖 3/5	05-T5-1101
AE					REV 0
					SH4

LCD-321  
FM RADIO

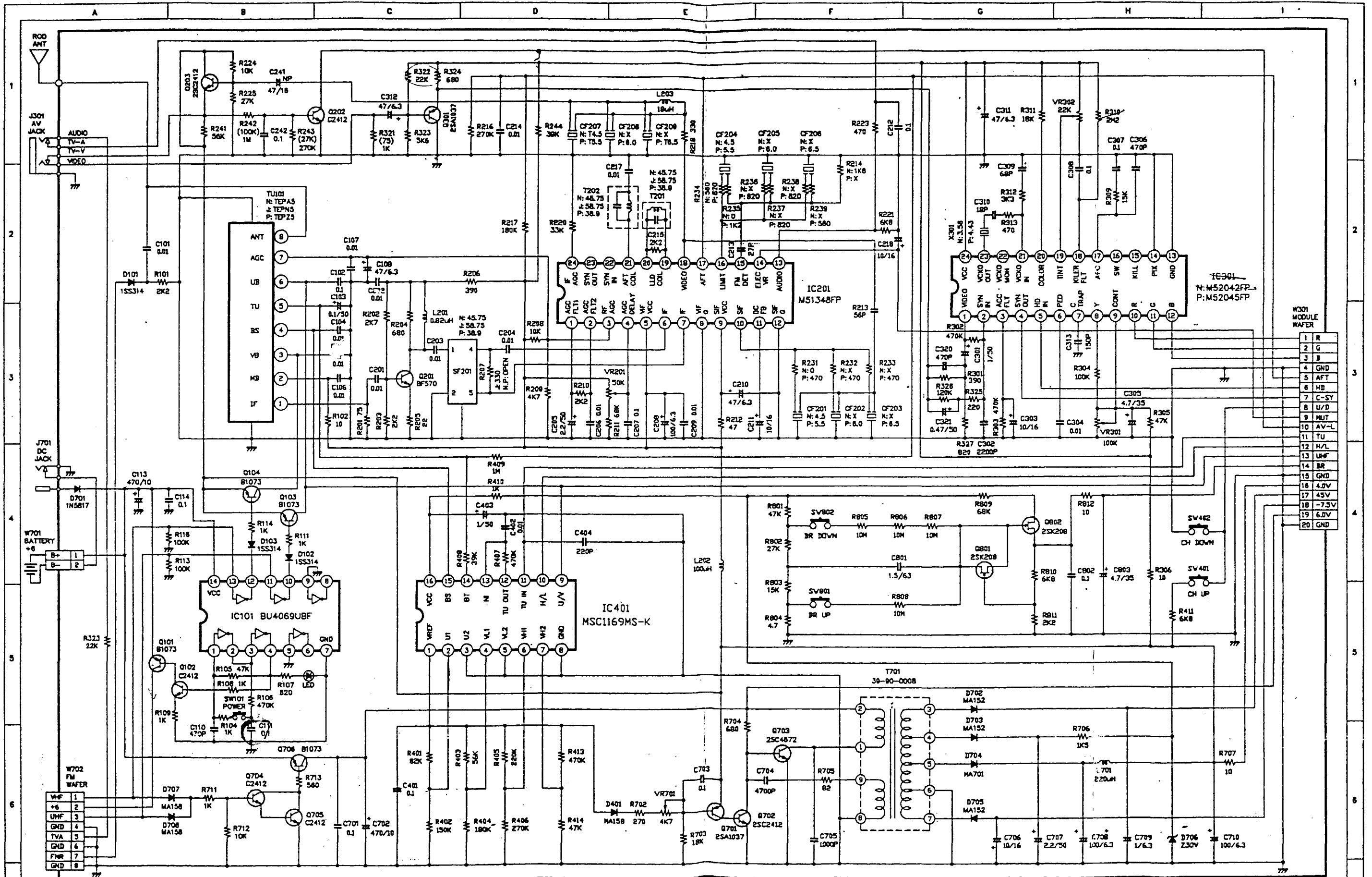


R	1
G	2
B	3
GND	4
AFT	5
HD	6
C-SY	7
U/D	8
MUT	9
AV-L	10
TU	11
H/L	12
UHF	13
BR	14
GND	15
4.0V	16
4.5V	17
-7.5V	18
6V	19
GND	20

20	V1
19	V3
18	VCC
17	CD
16	CD
15	SNG
14	BI
13	BI
12	BI
11	BI
10	BI
9	ST
8	ST
7	GB
6	V
5	V0
4	V4
3	DNR
2	OFR
1	GND

SUBFIX	MOD RECORD	TITLE: LCD-321	SCHEMATIC DIAGRAM (CONTROL)			
AA	1996/12/17		DRAWN	CHECK	APPROVED	DRAWING NO
AB						05-75-1101
AC						0
AD						SHJ
AE						

221 CONT



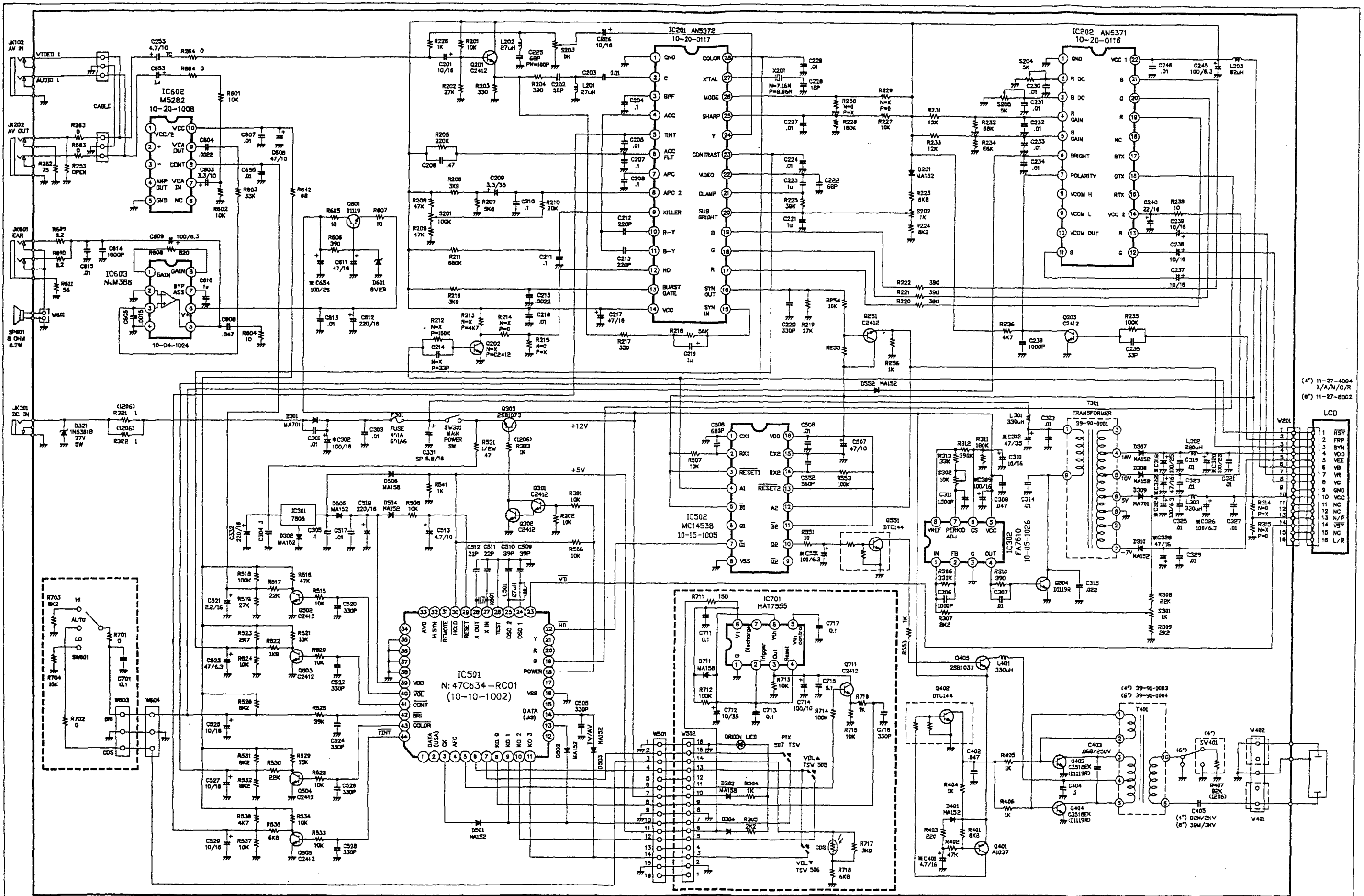
TU101: N:15-01-0254 TEPA5  
 J:15-05-0252 TEPN5  
 P:15-03-0257 TEPZ5

CF201: N:18-01-4002 45A  
 J:18-05-5003 58H  
 P:18-03-5008 38.92C

T201: N:18-01-7001 45M (PIF)  
 J:18-05-7001 58M  
 P:18-03-7001 38.9M

T202: N:18-01-7061 45M (AFT)  
 J:18-05-7065 58M  
 P:18-03-7065 38.9M

SUBFIX	MOD RECORD
AA	1997/03/03
AB	TITLE: LCD-321 (VL-J341) SCHEMATIC DIAGRAM (MAIN)
AC	DRAWN
AD	CHECK
AE	APPROVED
	DRAWING NO
	REV
	05-T5-1101
	SH2



(4\*) 11-27-4004  
X/A/N/G/R  
(6\*) 11-27-8002

LCD

1	HSY
2	FRP
3	SYN
4	VDD
5	VEE
6	VB
7	VC
8	GND
9	VCC
10	NC
11	NC
12	NC
13	N/R
14	VSY
15	NC
16	L/R

\* 105° EC

SUBFIX	MOD	RECORD	TITLE: CTM-5040/5060 SCHEMATIC DIAGRAM			
AA	1995/8/23		DRAWN	CHECK	APPROVED	DRAWING NO
AB	1997/3/3					REV
AC	1997/5/8					2
AD						SH2
AE						