

**PCB section Layout  
(PCB layout page)**

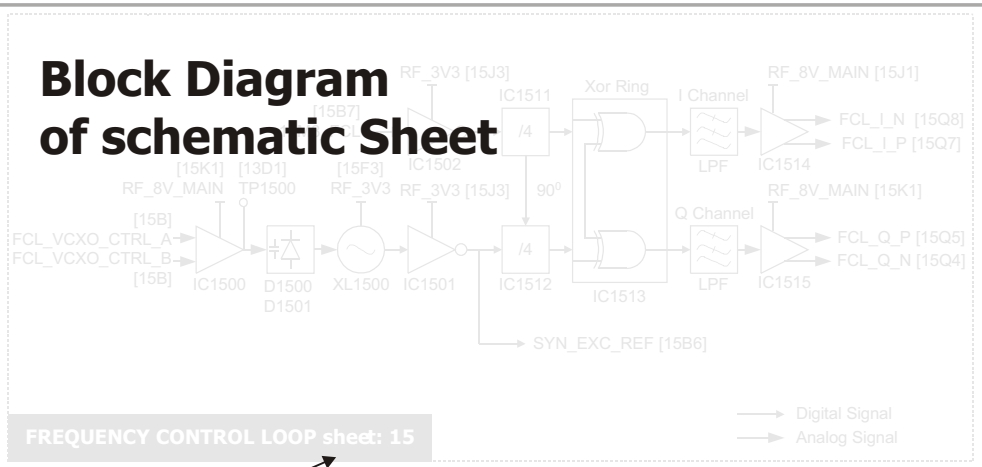
## PCB Layout Guide

- Block diagram showing function of the current block
- PCB Layout of schematic page.
- Schematic page.
- Inputs/Outputs of current schematic block.
- Test and measurement points with schematic grid indication.
- ▶ [15E3] = Schematic Sheet 15 Grid reference E3.
- ▶ TP1501 = Test Point:1 on Schematic Sheet 15

### Table

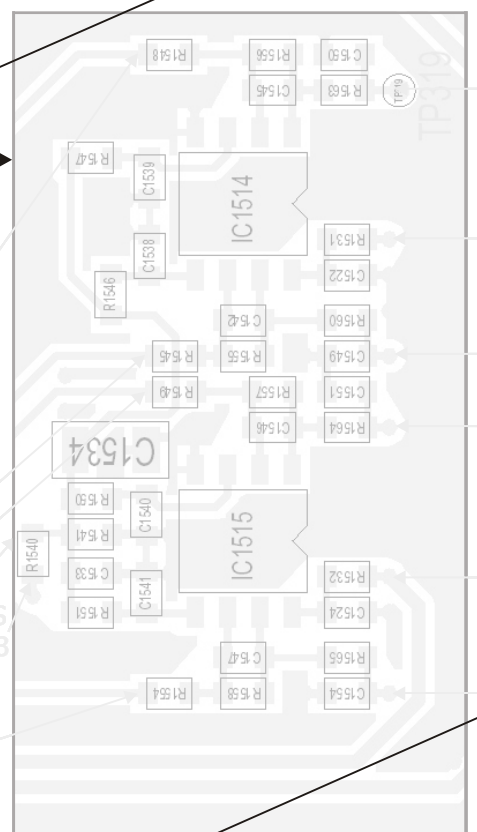
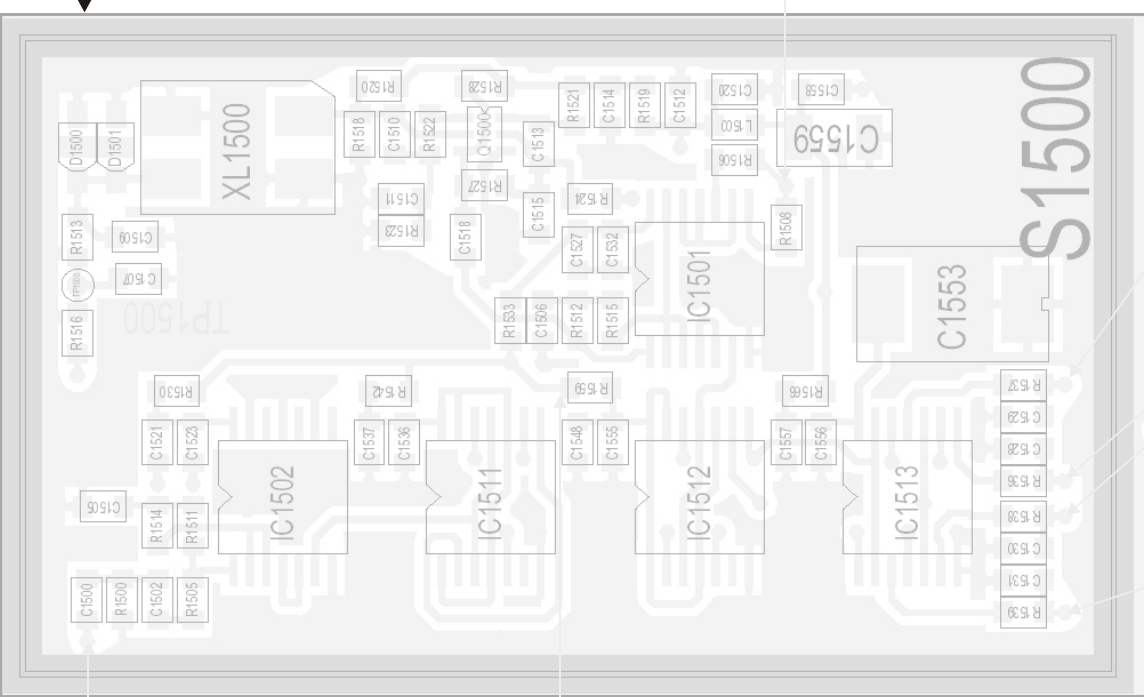
<b>Page 1</b> PCB Layout Locations	<b>Page 7</b> Schematic Sheet 2
<b>Page 2</b> Block Diagram	<b>Page 9</b> Schematic Sheet 3
<b>Page 3</b> Reciter PCB Outlay	<b>Page 11</b> Schematic Sheet 4
<b>Page 4</b> RF Top Assembly	<b>Page 13</b> Schematic Sheet 5
<b>Page 5</b> Reciter block break down: Schematic Sheet 1	<b>Page 15</b> Schematic Sheet 6
<b>Page 6</b> Power supply	<b>Page 17</b> Schematic Sheet 7
<b>Page 8</b> RF CONN	<b>Page 19</b> Schematic Sheet 8
<b>Page 10</b> Receiver	<b>Page 23</b> Schematic Sheet 10
<b>Page 12</b> Front End	<b>Page 25</b> Schematic Sheet 11
<b>Page 14</b> Mixer	<b>Page 27</b> Schematic Sheet 12
<b>Page 16</b> IF	<b>Page 29</b> Schematic Sheet 13
<b>Page 18</b> AGC	<b>Page 31</b> Schematic Sheet 14
<b>Page 21</b> Synth + VCO blocks Schematic Sheet 9	<b>Page 33</b> Schematic Sheet 15
<b>Page 22</b> Receiver Synth	
<b>Page 24</b> Exciter Synth	
<b>Page 26</b> Receiver VCO	
<b>Page 28</b> Exciter VCO	
<b>Page 30</b> External Reference	
<b>Page 32</b> FCL	

**Page Name** →

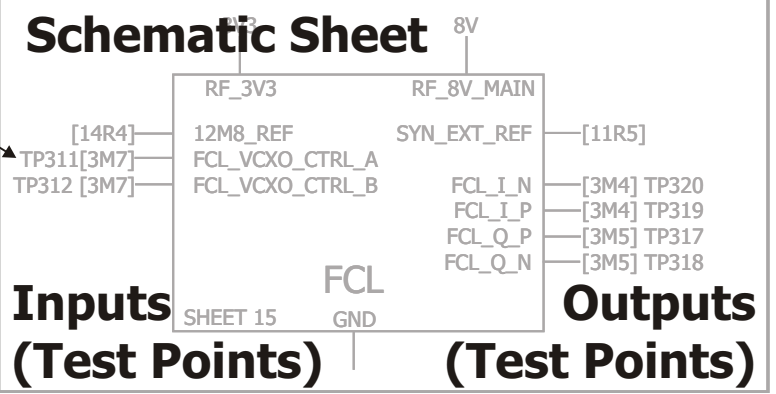


**PCB Layout of schematic**

**Schematic Sheet**



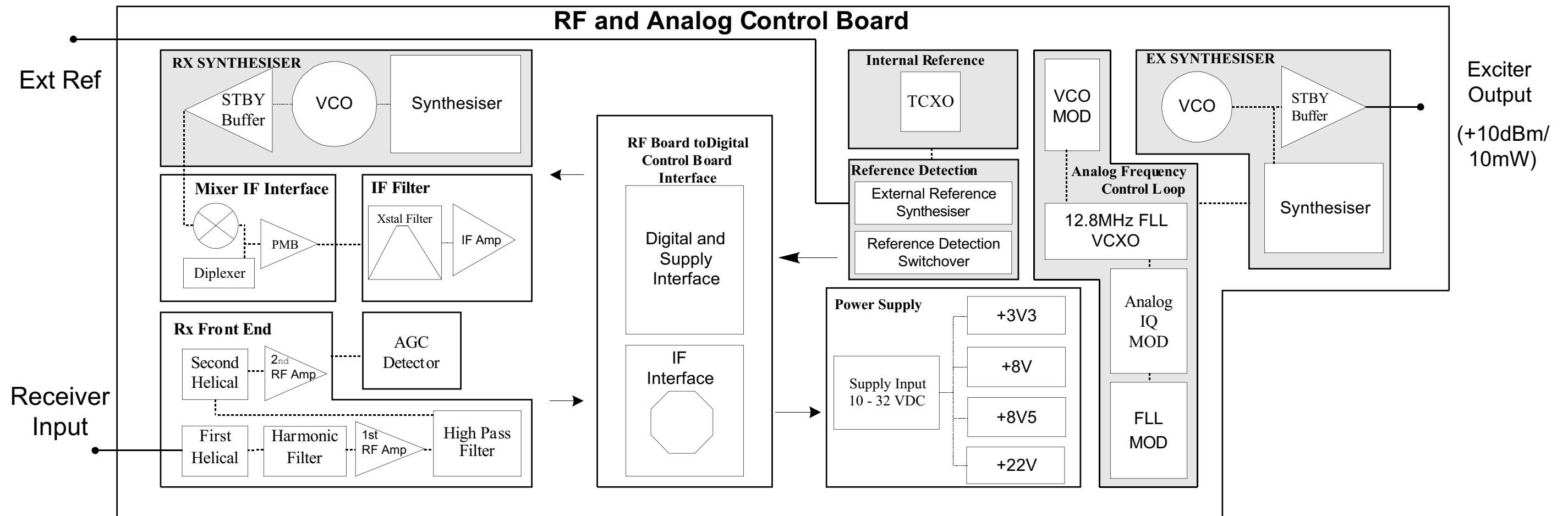
**Test Points**

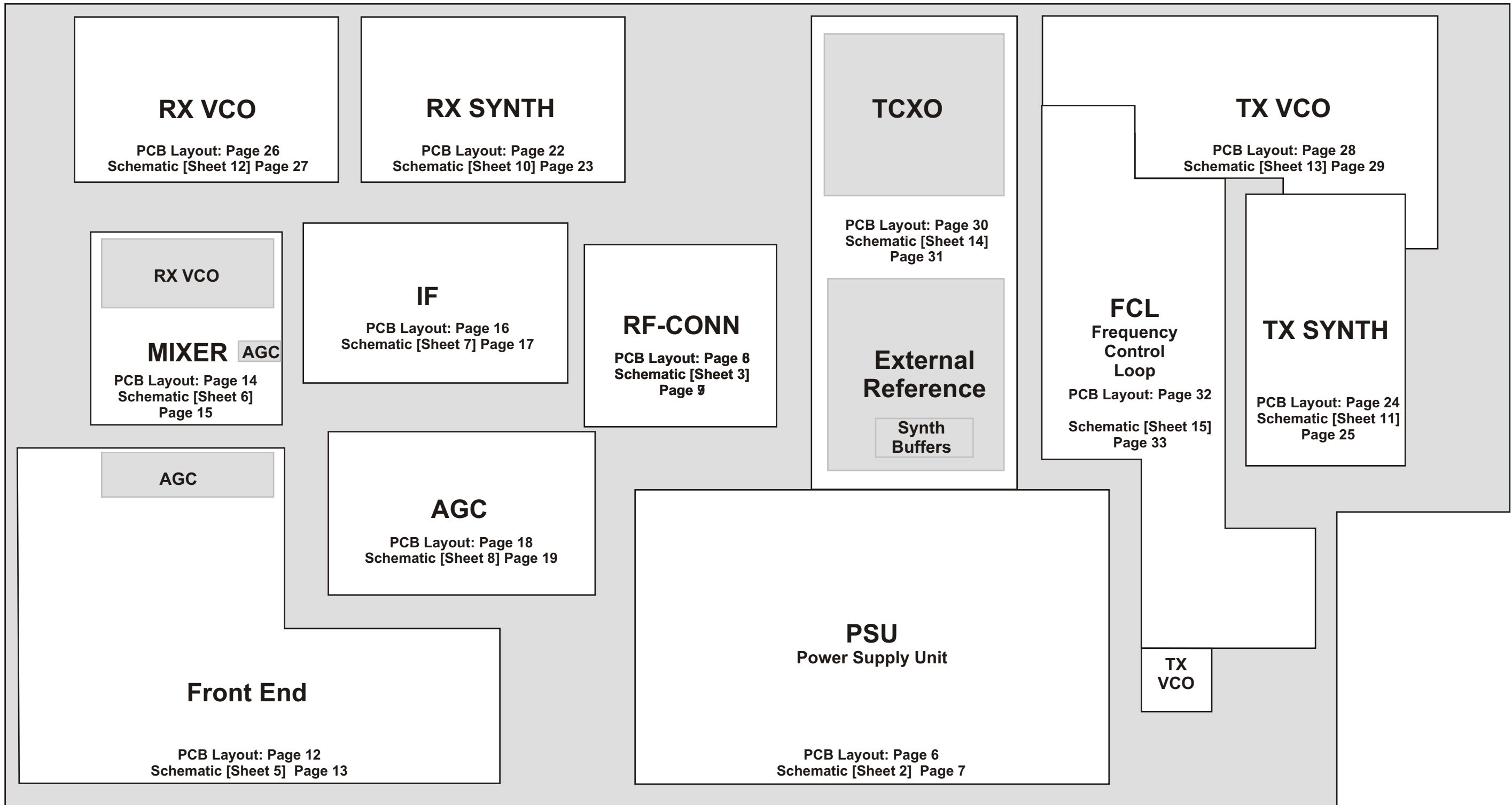


TB8000 UHF FCL Schematic Test points		
Schematic PG:15	Supplies	Signal
TP1500 [13D5] TCXO Modulation	RF_3V3 [15B3] = 3V3	12M8_FCL [15B7]
TP319 [3M4] FCL_I_P	RF_8V_MAIN [15B3] = 8V	FCL_VCXO_CTRL_A [15B1]
		FCL_VCXO_CTRL_B [15B1]
		FCL_I_N [15Q8]
		FCL_I_P [15Q7]
		FCL_Q_P [15Q5]
		FCL_Q_N [15Q4]

**Test and Measurement points.**

**Page Number** →

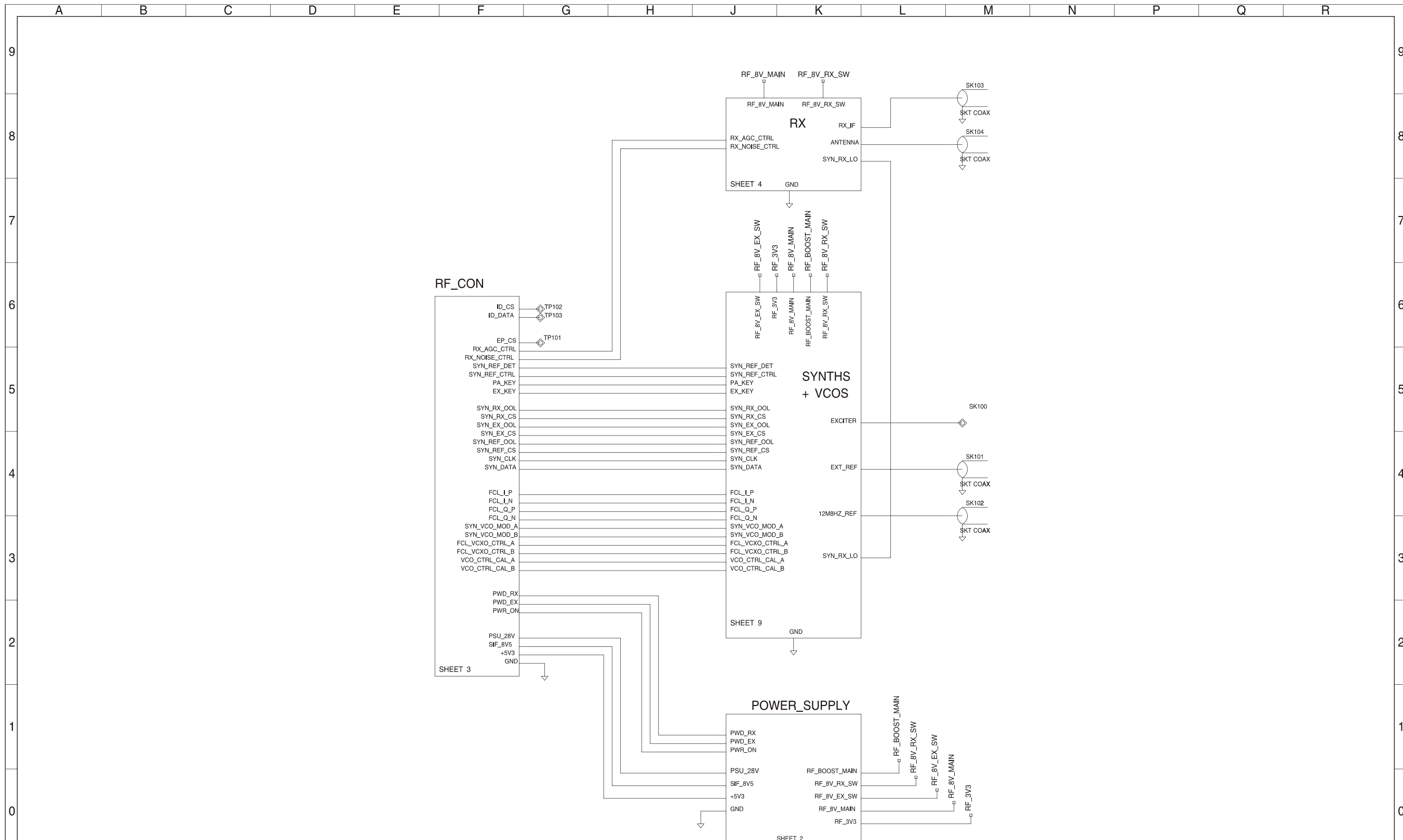




### PCB Layout Locations



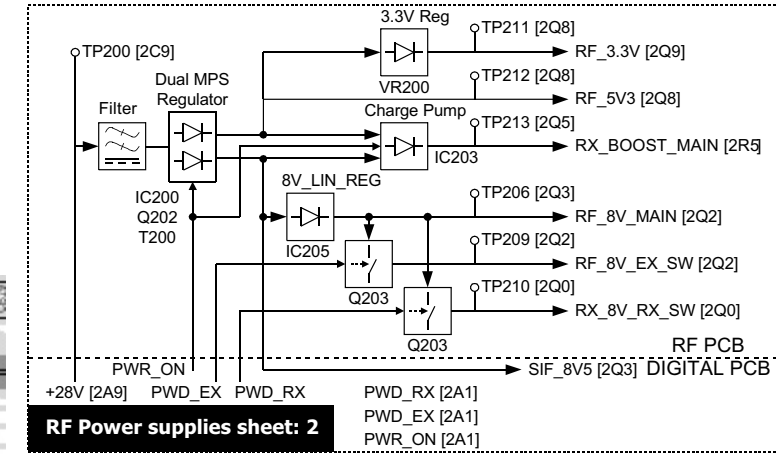
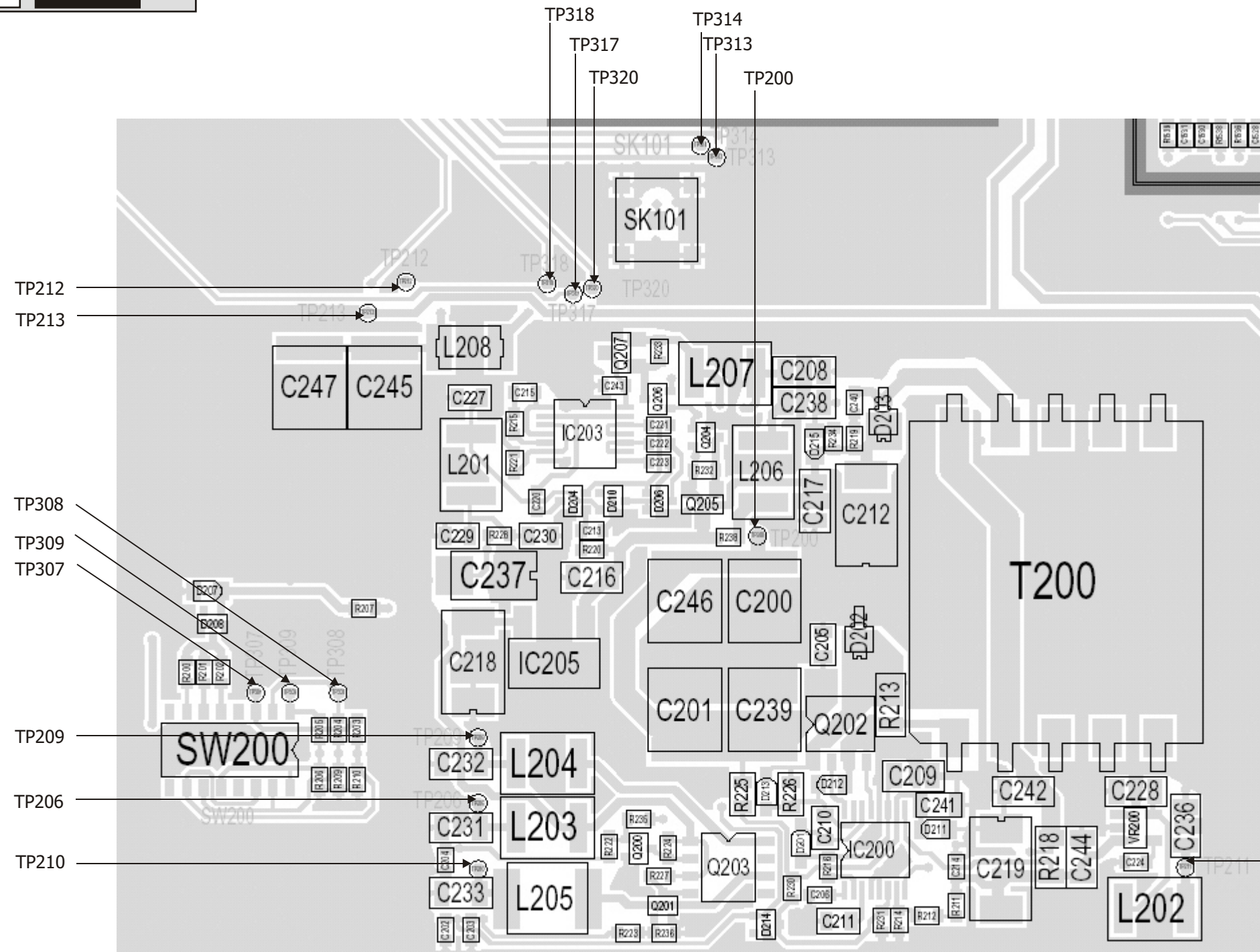
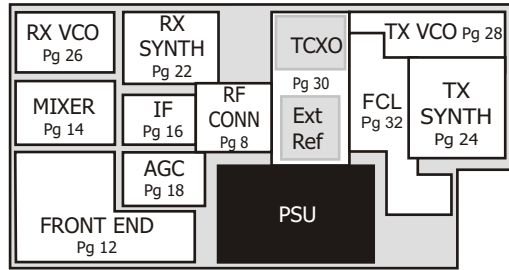




06A	ECO	101200257		CJK	SH			28/11/03
07A	ECO	101200240		CJK	SH			23/09/03
06A	ECO	101200068		CJK	SH			13/05/03
05A	DCO	02025-005		CJK	SH			06/03/03
04A	DCO	02025-004		CJK	SH			28/11/02
03A	DCO	02025-002 & 003		CJK	SH			17/10/02
02A	DCO	02025-001		CJK	SH			30/08/02
01B	SCHEMATICS	REDRAWN		PAUL G				20/6/02
01A	CLONED	FROM 226-00252-01		PAUL G				12/06/02
REVISS		AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE



© TAIT ELECTRONICS			
TB8100 RECITER TOP LEVEL			
IPN: 220-02025-08	ISSUE: A	2.SC.	ID: 1
PROJECT: TB8100	DESIGNER: SH	FILE NAME: 0202508a	FILE DATE: 16-Dec-03
			NO. SHEETS: 15



Service Manual  
 Block Diagram PG 44  
 Description PG 43

**TB8000 UHF RF Power Supply Schematic Test points**

**CCT Sheet 2**

TP200 [2C9] PSU\_28V (10-32V)  
 TP211 [2Q8] RF\_3V3  
 TP212 [2Q8] RF\_5V3  
 TP213 [2R5] RF\_BOOST\_MAIN

TP206 [2Q3] RF\_8V\_MAIN  
 TP209 [2Q2] RF\_8V\_EX\_SW  
 TP210 [2Q0] RF\_8V\_RX\_SW

**CCT sheet 3 Test Points**

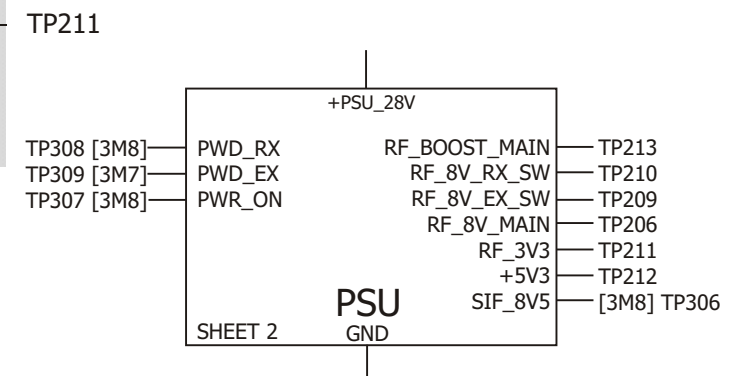
TP313 VCO\_CTRL\_CAL\_A  
 TP314 VCO\_CTRL\_CAL\_B  
 TP317 FCL\_Q\_P  
 TP318 FCL\_Q\_N  
 TP320 FCL\_I\_N

**Supplies**

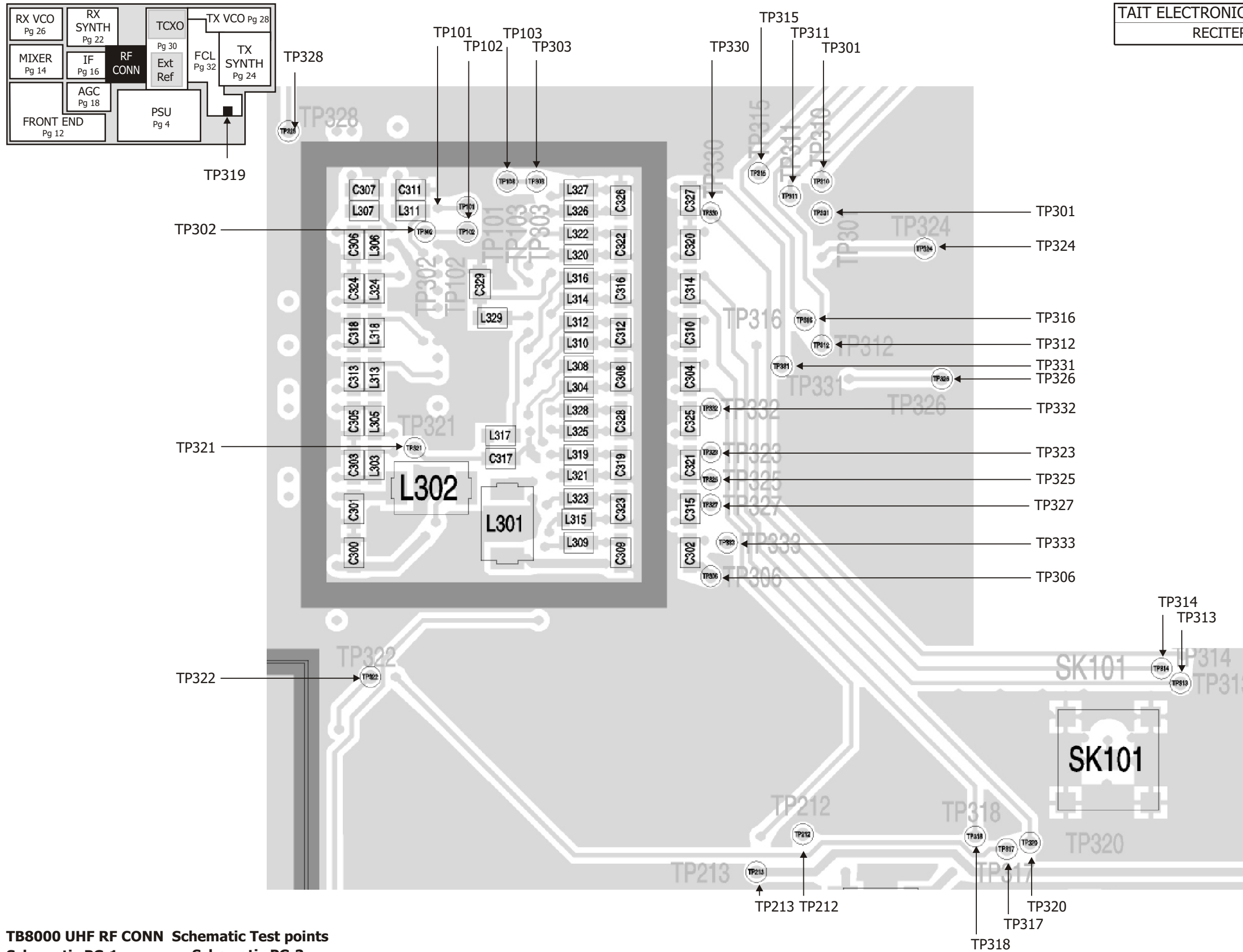
PSU\_28V = 28Nom (10-32V)  
 RF\_3V3 = 3.3V  
 RF\_5V3 = 5.3V  
 RF\_BOOST\_MAIN = ~23V  
 RF\_8V\_MAIN = 8V  
 RF\_8V\_EX\_SW = 8V  
 RF\_8V\_RX\_SW = 8V

**SW200 (Not Fitted)**

1: PWD\_EX  
 2: PWD\_RX  
 3: PWR\_ON  
 4: NC  
 5: BYPASS PWD\_EX  
 6: BYPASS PWD\_RX  
 7: BYPASS PWR\_ON  
 8: NC







**TB8000 UHF RF CONN Schematic Test points**

**Schematic PG:1**

- TP101 [1G6] ID\_CS
- TP102 [1G6] ID\_DATA
- TP103 [1G6] EP\_CS

**Schematic PG:2**

- TP212 [2Q8] +5V3
- TP213 [2Q5] RF\_BOOST\_MAIN

**Schematic PG:3**

- TP301 [3M0] EP\_CS
- TP302 [3M0] ID\_CS
- TP303 [3M0] ID\_DATA

**Schematic PG:4**

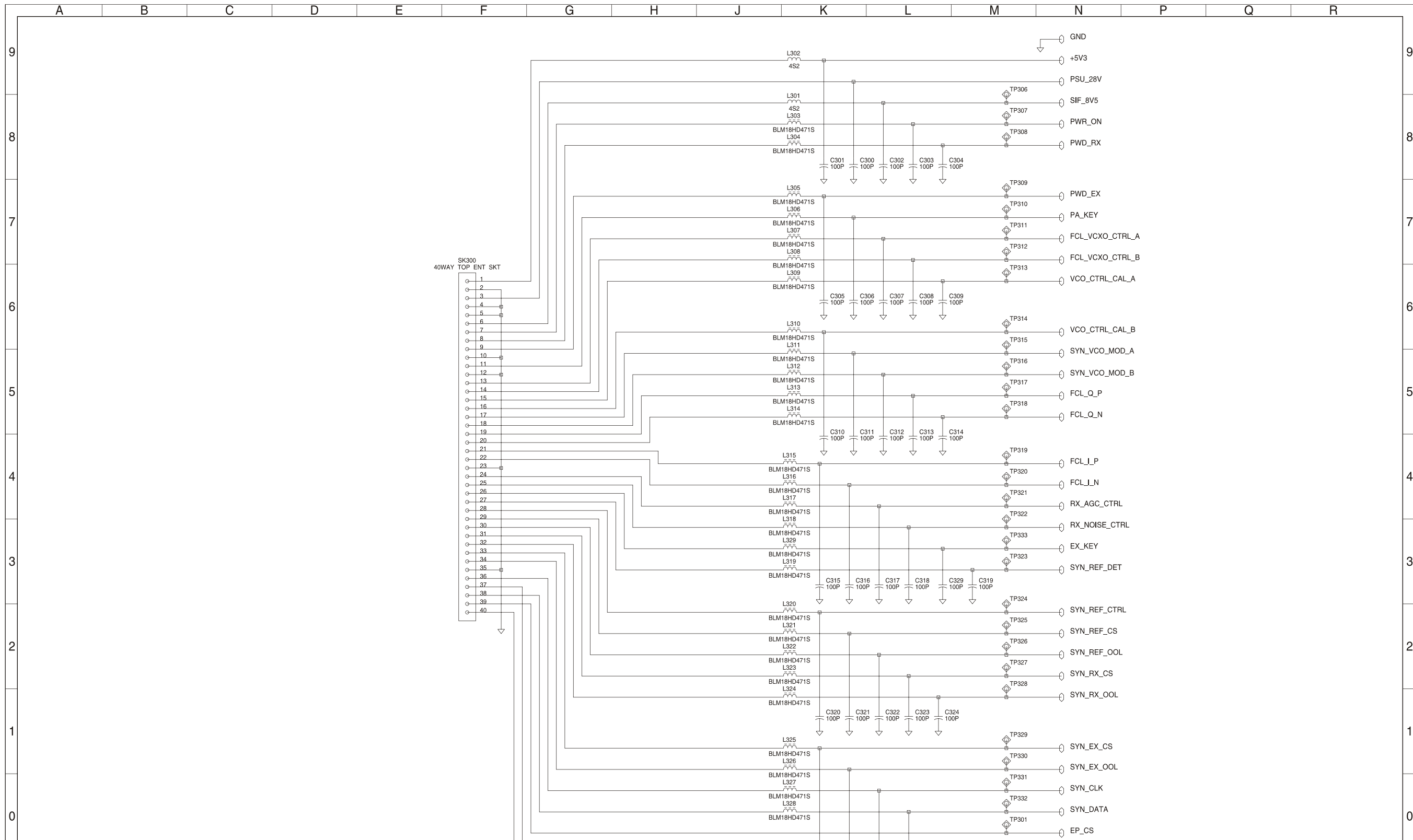
- TP306 [3M8] SIF\_8V5
- TP307 [3M8] PWR\_ON
- TP308 [3M8] PWD\_RX
- TP309 [3M7] PWD\_EX

- TP310 [3M7] PA\_KEY
- TP311 [3M7] FCL\_VCXO\_CTRL\_A
- TP312 [3M7] FCL\_VCXO\_CTRL\_B
- TP313 [3M6] VCO\_CTRL\_CAL\_A
- TP314 [3M6] VCO\_CTRL\_CAL\_B
- TP315 [3M6] SYN\_VCO\_MOD\_A
- TP316 [3M5] SYN\_VCO\_MOD\_B
- TP317 [3M5] FCL\_Q\_P

- TP318 [3M5] FCL\_Q\_N
- TP319 [3M4] FCL\_I\_P
- TP320 [3M4] FCL\_I\_N
- TP321 [3M4] RX\_AGC\_CTRL
- TP322 [3M3] RX\_NOISE\_CTRL
- TP323 [3M3] SYN\_REF\_DET
- TP324 [3M3] SYN\_REF\_CTRL
- TP325 [3M2] SYN\_REF\_CS

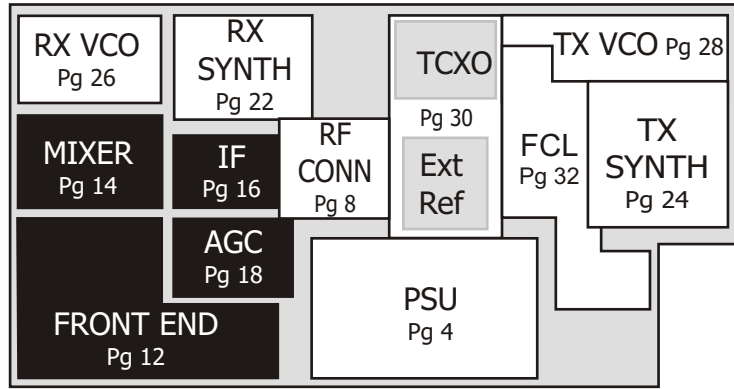
- TP326 [3M2] SYN\_REF\_OOL
- TP327 [3M2] SYN\_RX\_CS
- TP328 [3M2] SYN\_RX\_OOL
- TP329 [3M1] SYN\_EX\_CS
- TP330 [3M1] SYN\_EX\_OOL
- TP331 [3M0] SYN\_CLK
- TP332 [3M0] SYN\_DATA
- TP333 [3M3] EX\_KEY



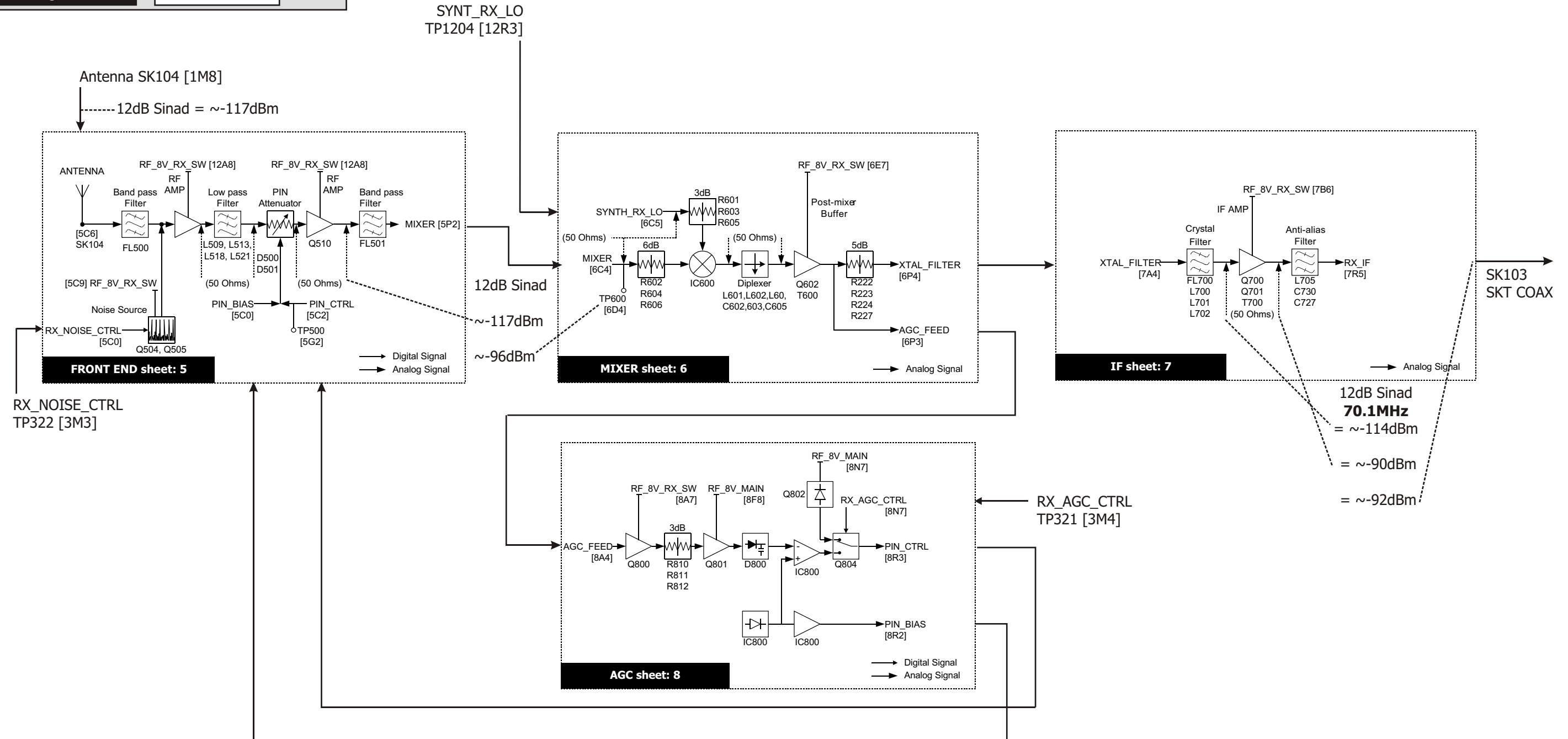


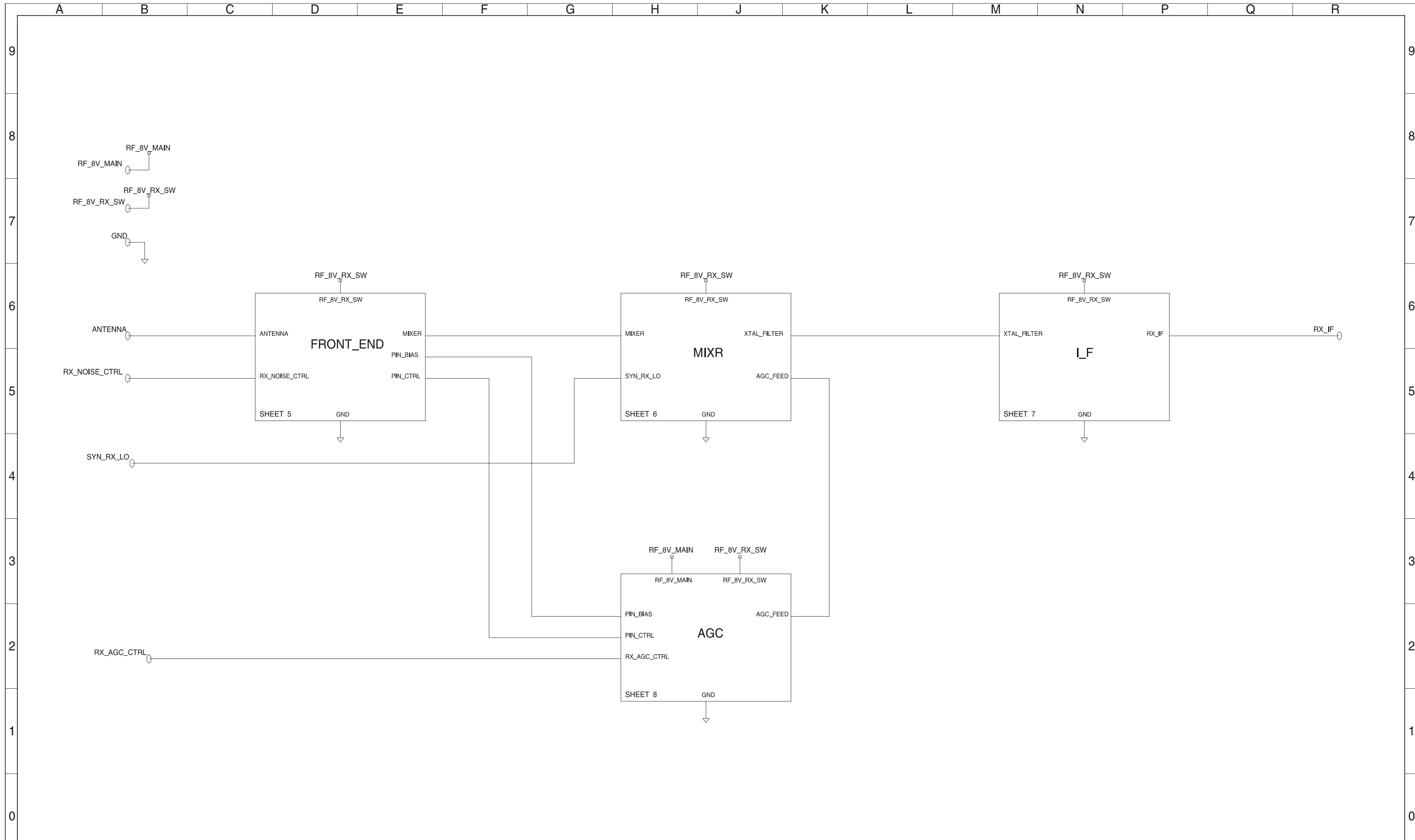
06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL G			20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL G			12/06/02	
REVISS		AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE

© TAIT ELECTRONICS			
TB8100 RF_CONN			
IPN:	ISSUE:	FILE:	NO. SHEETS:
220-02025-08	A	2.SC.	3
PROJECT:	DESIGNER:	FILE NAME:	DATE:
TB8100	SH	0202508a	16-Dec-03



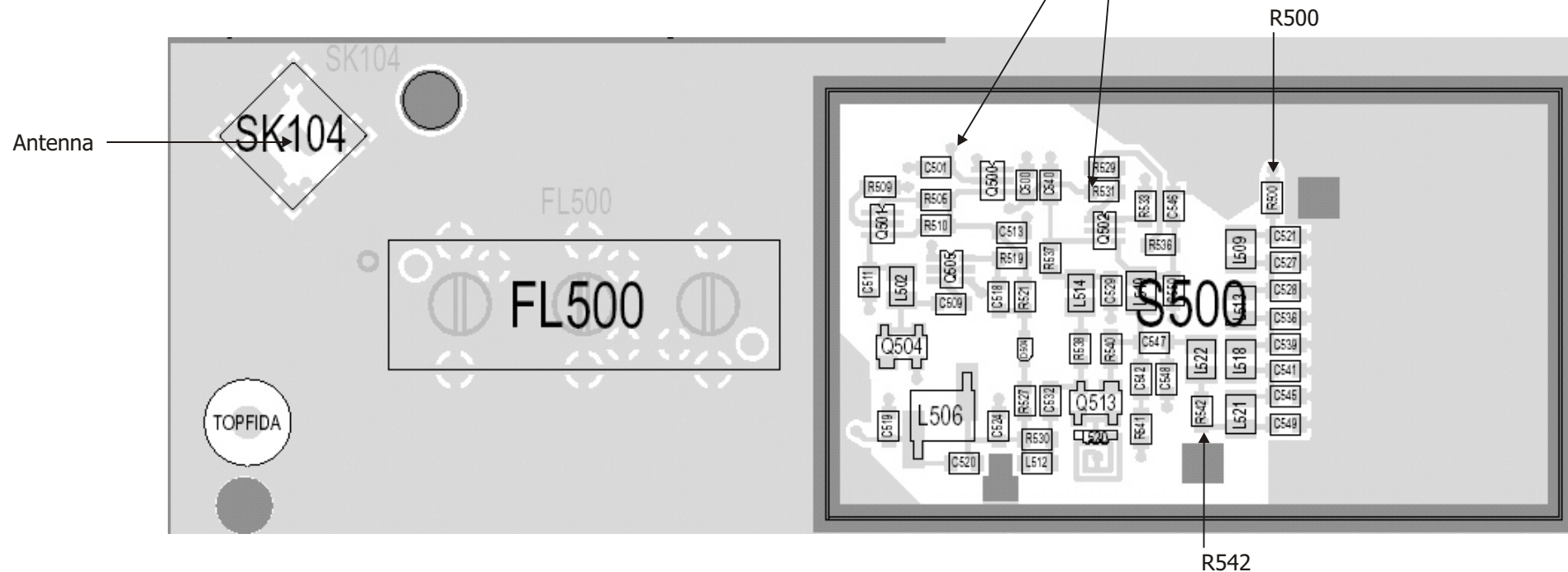
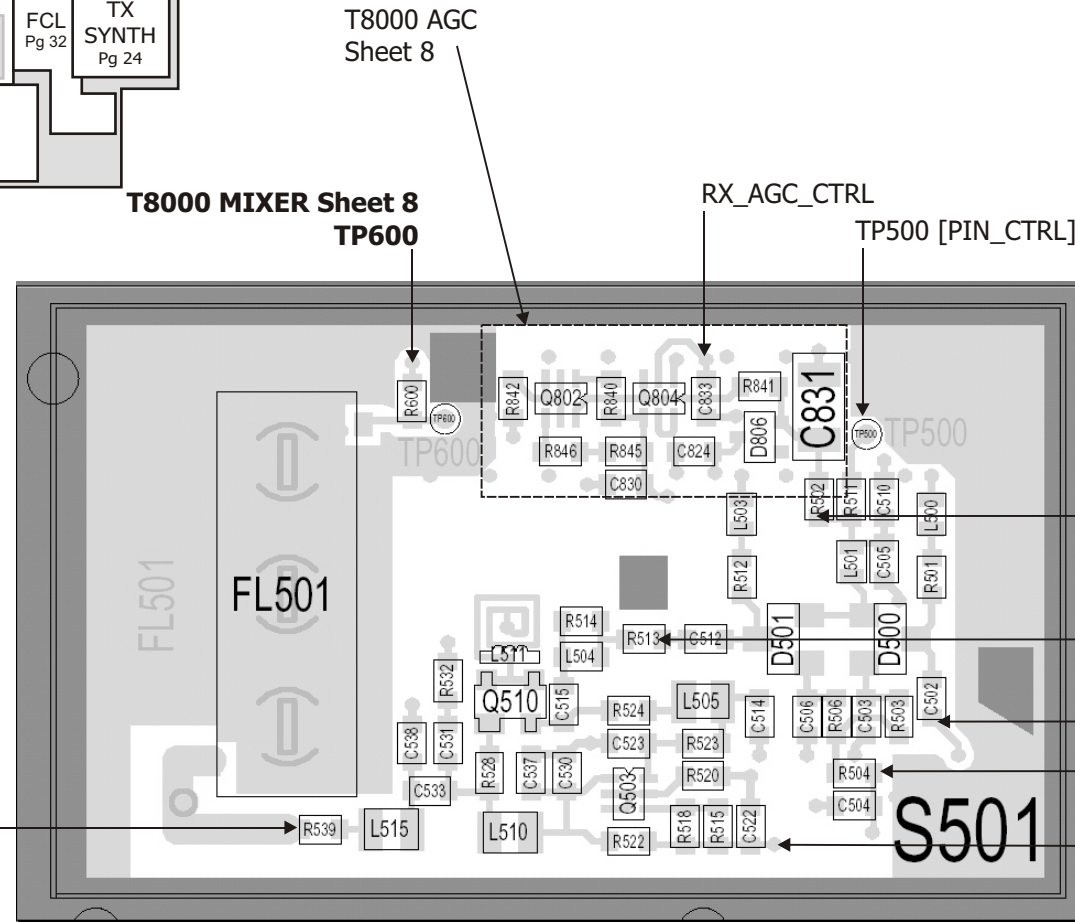
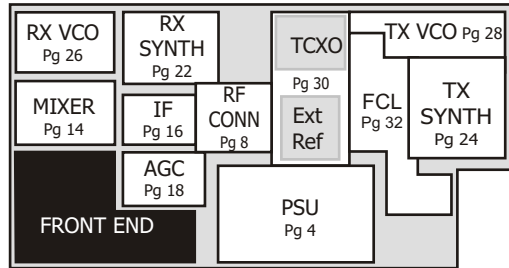
Service Manual  
 Block Diagram PG 44  
 Description PG 43





06A	ECO	101200257		CJK	SH			28/11/03
07A	ECO	101200240		CJK	SH			23/09/03
06A	ECO	101200068		CJK	SH			13/05/03
05A	DCO	02025-005		CJK	SH			06/03/03
04A	DCO	02025-004		CJK	SH			28/11/02
03A	DCO	02025-002 & 003		CJK	SH			17/10/02
02A	DCO	02025-001		CJK	SH			30/08/02
01B	SCHEMATICS	REDRAWN		PAUL G				20/6/02
01A	CLONED	FROM 226-00252-01		PAUL G				12/06/02
REVISS		AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE

© TAIT ELECTRONICS			
TB8100 RECEIVER			
IPN: 220-02025-08	ISSUE: A	ID: 4	2.SC: 4
PROJECT: TB8100	DESIGNER: SH	FILE NAME: 0202508a	FILE DATE: 16-Dec-03
			NO. SHEETS: 15



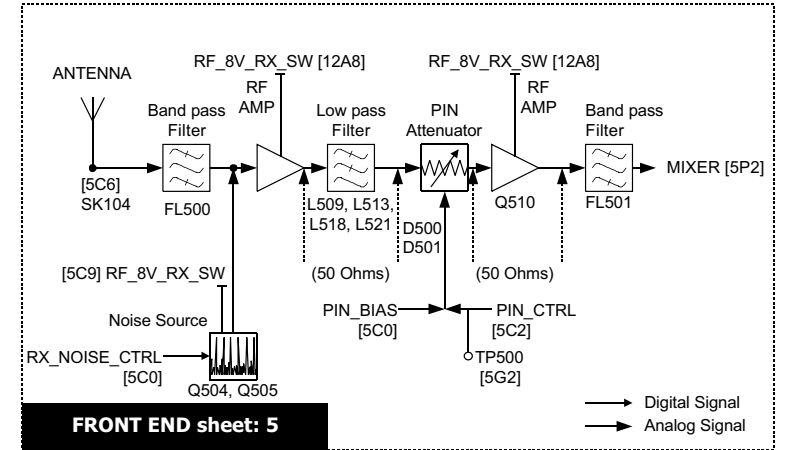
**TB8000 UHF RX Front End Schematic Test points**

**Schematic PG:5**  
TP500 [5G3] PIN\_CTRL

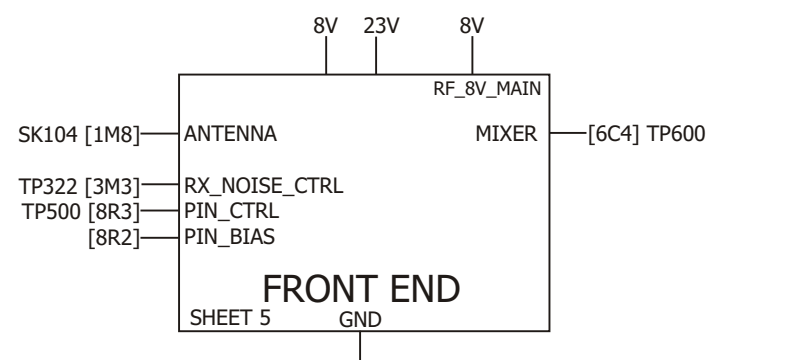
**50 Ohm Tap points**  
R500 [5D1] \_\_\_\_\_  
(C502 [5D1] = -102dBm (12dB SINAD))  
R513 [5H1] -105dBm (12dB SINAD)  
R539 [5M2] -100dBm (12dB SINAD)  
R542 [5N4] \_\_\_\_\_

**PIN CTRL Tap**  
R502 [5F2]

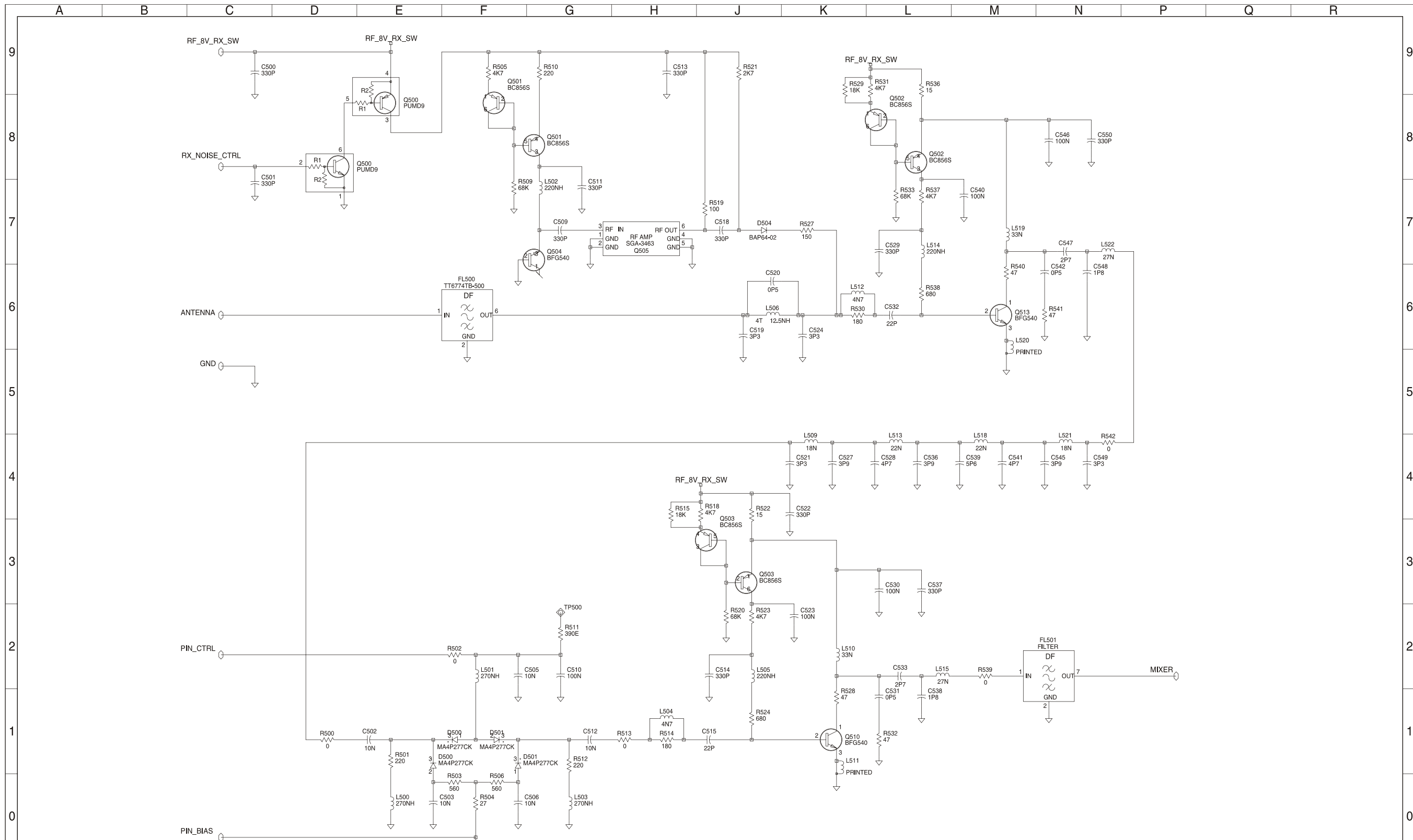
**Supplies**  
RF\_8V\_RX\_SW = 8V  
PIN\_BIAS = 1.0V  
PIN\_CTRL <-30dbm = 2V  
PIN\_CTRL @-25dbm = 1.12V  
PIN\_CTRL @-20dbm = 0.96V



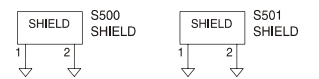
Service Manual  
Description PG 31



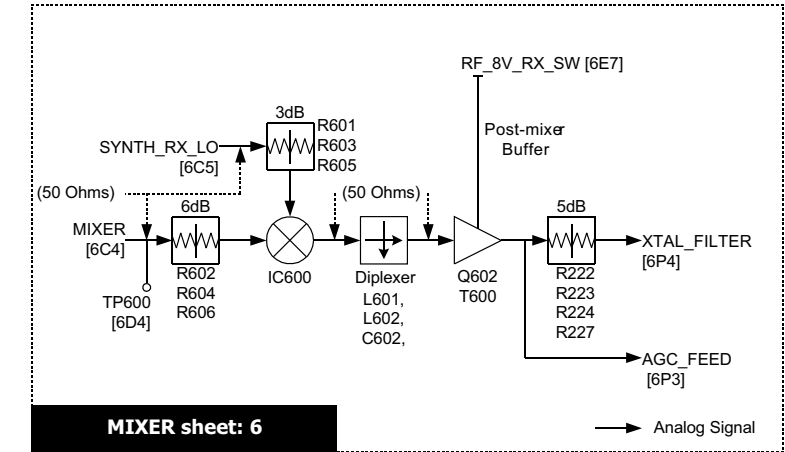
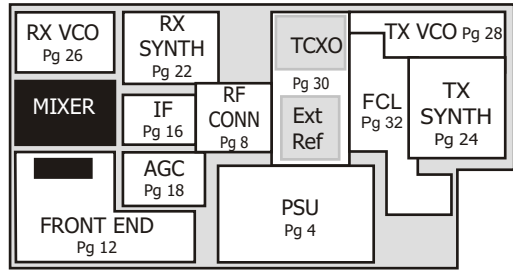




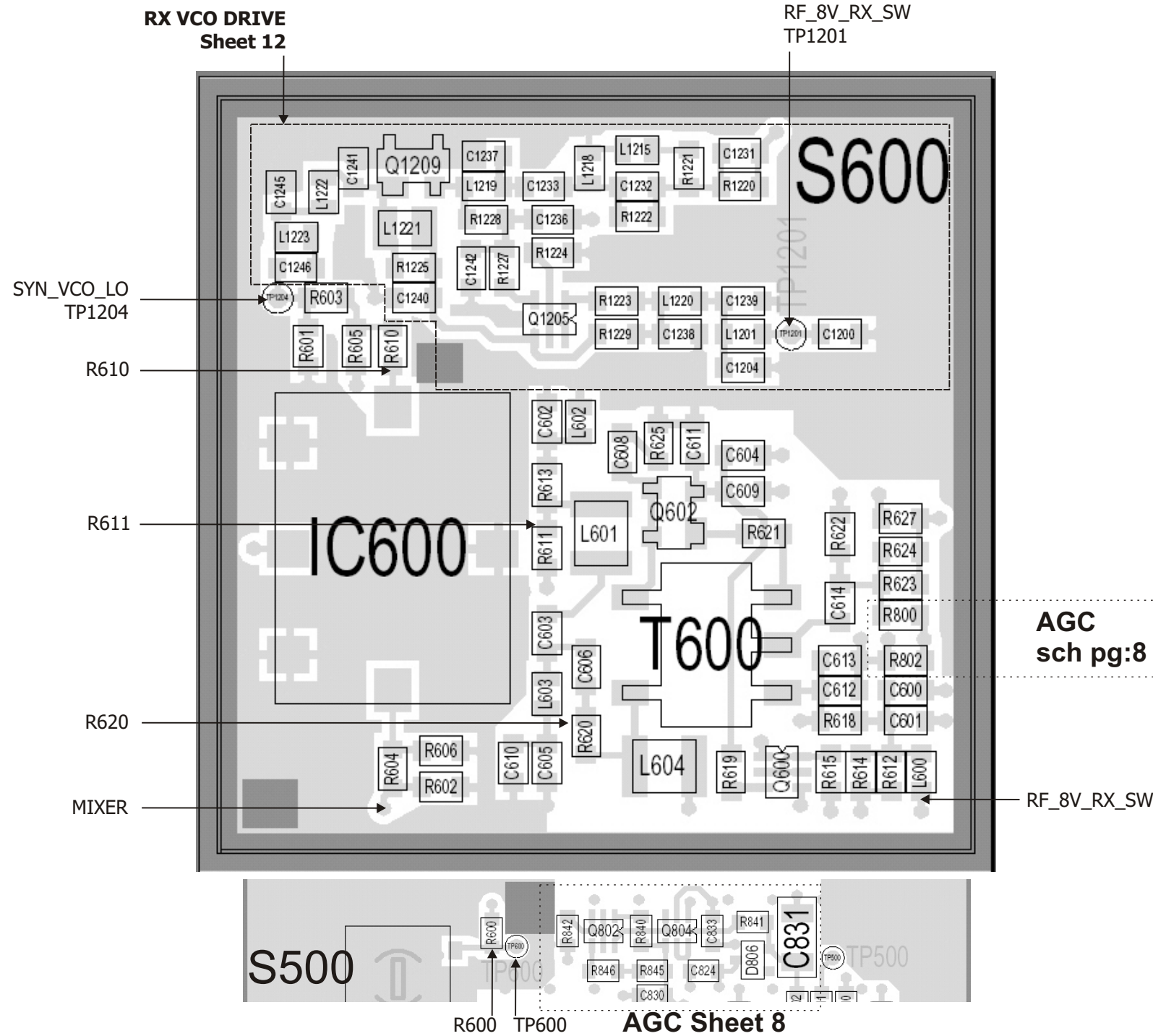
06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL G			20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL G			12/06/02	
REVISS	AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE



© TAIT ELECTRONICS				
TB8100 FRONT END				
IPN: 220-02025-08	ISSUE: A	2.S.C.	5	
PROJECT: TB8100	DESIGNER: SH	FILE NAME: 0202508a	FILE DATE: 16-Dec-03	NO. SHEETS: 15



MIXER sheet: 6  
 Service Manual Description PG 31



**TB8000 UHF MIXER Schematic Test points**

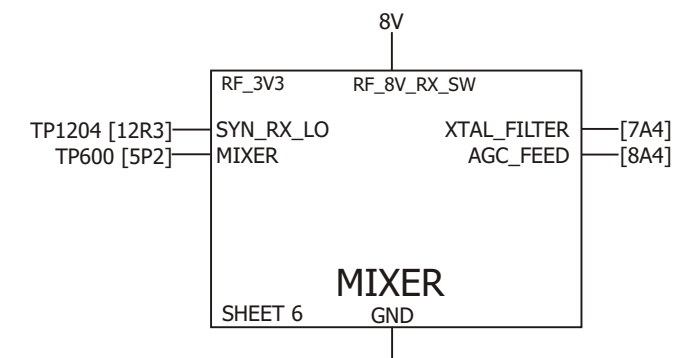
**Schematic PG:6**  
 TP600 [6D4] MIXER

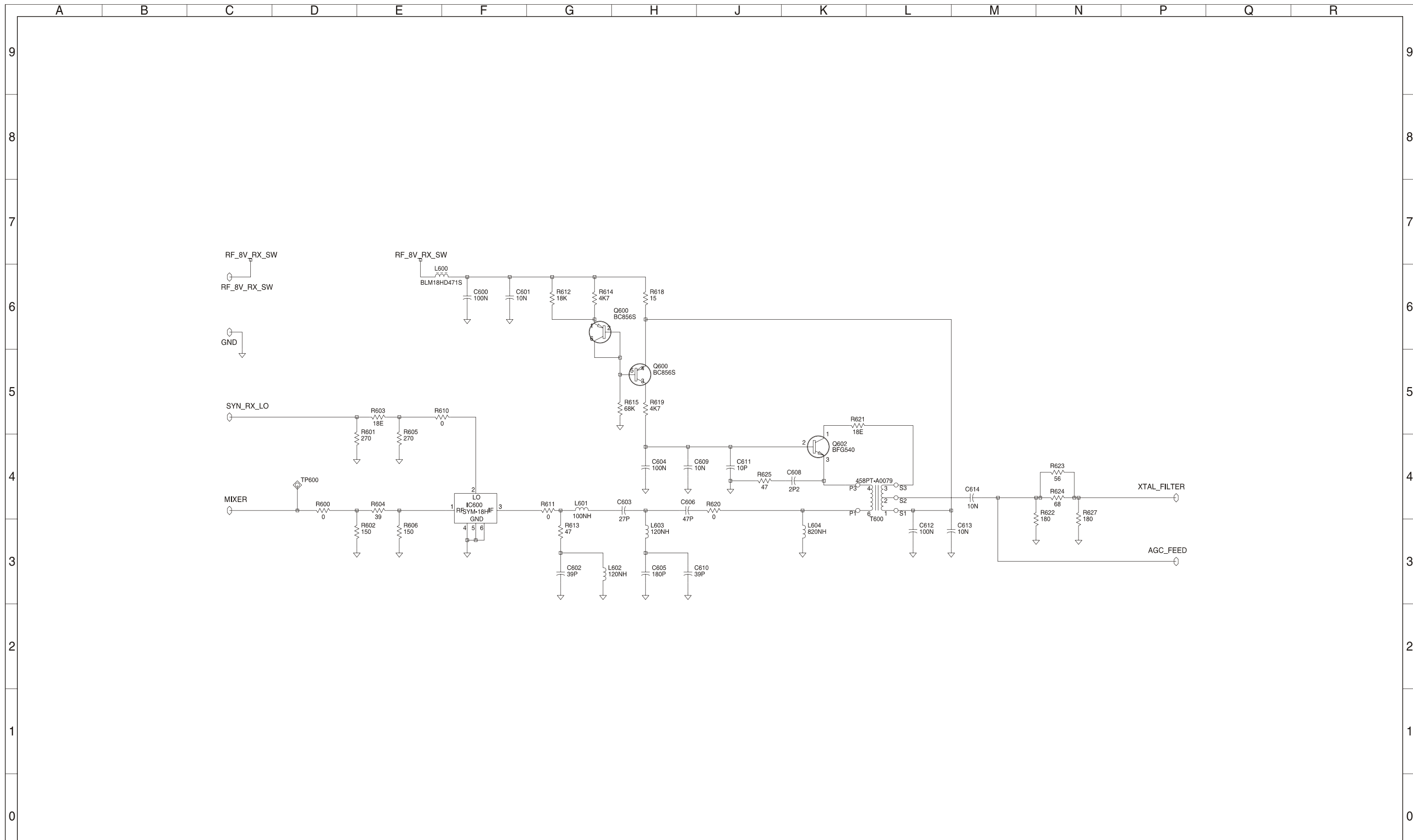
**50 Ohm Tap points**

- R600 [6D4] -96dBm (12dB Sinad)
- R610 [6E5]
- R611 [6G4]
- R620 [6J4]

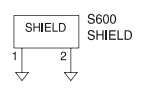
**Supplies**

RF\_8V\_RX\_SW = 8V

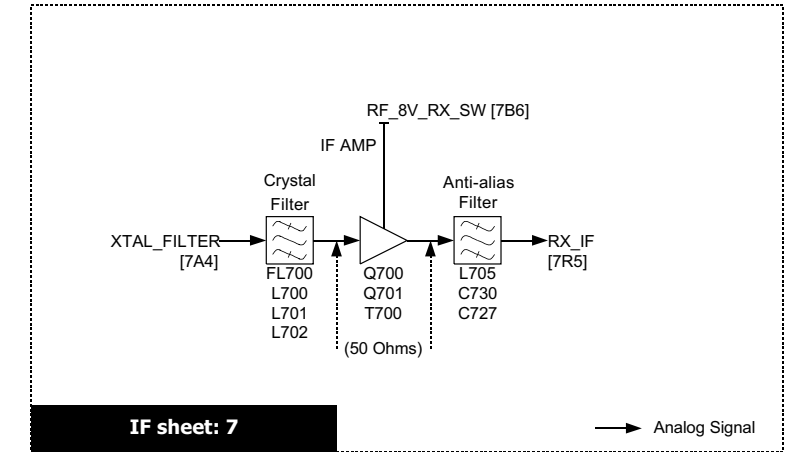
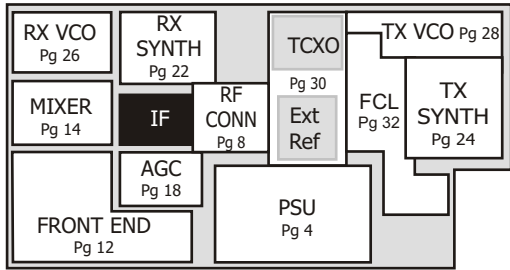




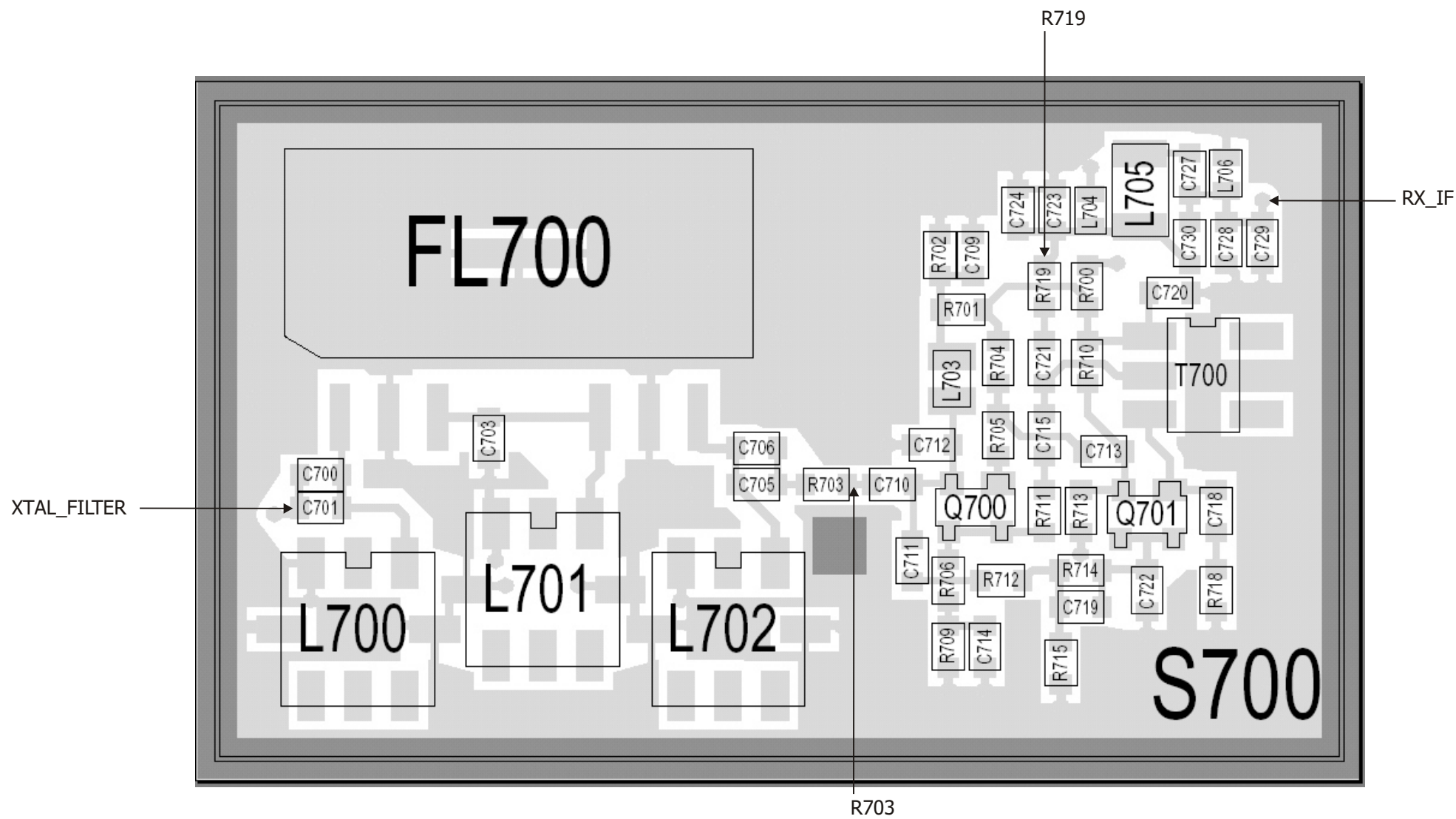
06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL G			20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL G			12/06/02	
REVISS	AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE



© TAIT ELECTRONICS					
TB8100 MIXER					
IPN:	220-02025-08	ISSUE:	A	2.SC.	6
PROJECT:	TB8100	DESIGNER:	SH	FILE DATE:	0202508a 16-Dec-03
				NO. SHEETS:	15



Service Manual  
 Description PG 33



**TB8000 UHF IF Schematic Test points**

**Schematic PG:7**

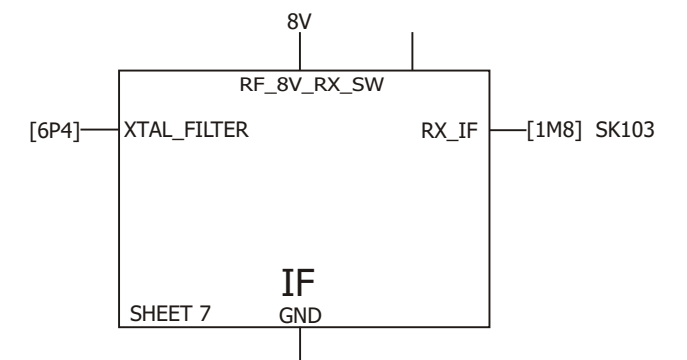
**Supplies**

RF\_8V\_RX\_SW = 8V

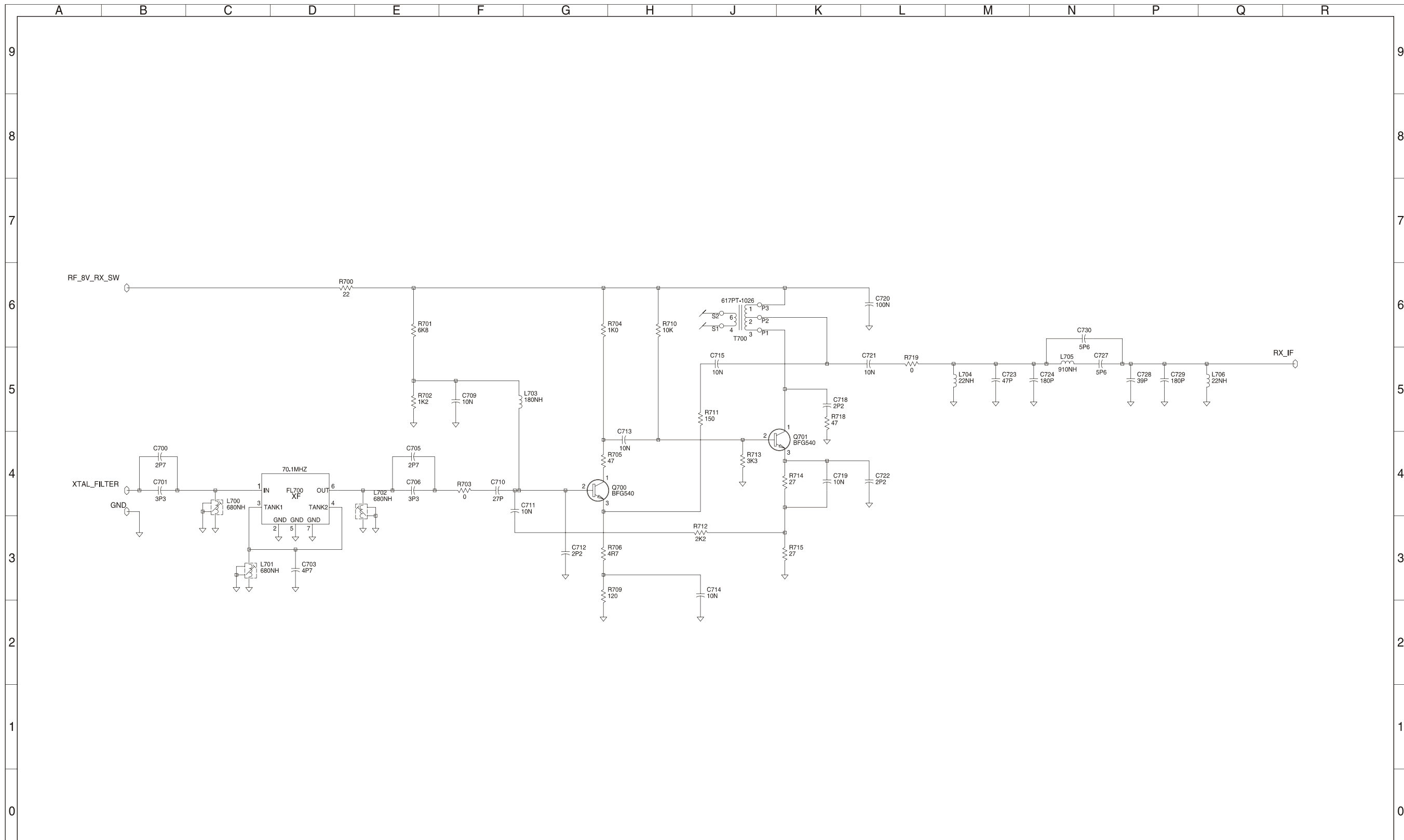
**50 Ohm Tap points**

R703 [7F4] ~-114dBm @ 70.1MHz (12dB Sinad)

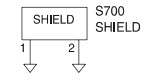
R719 [7L5] ~-90dBm @ 70.1MHz (12dB Sinad)



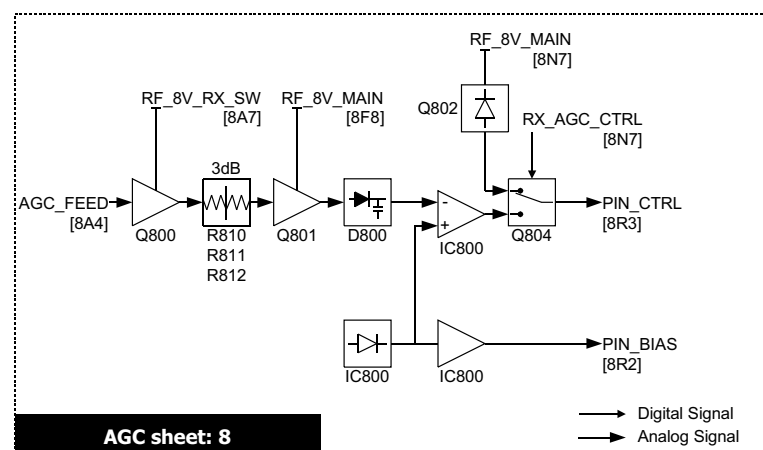
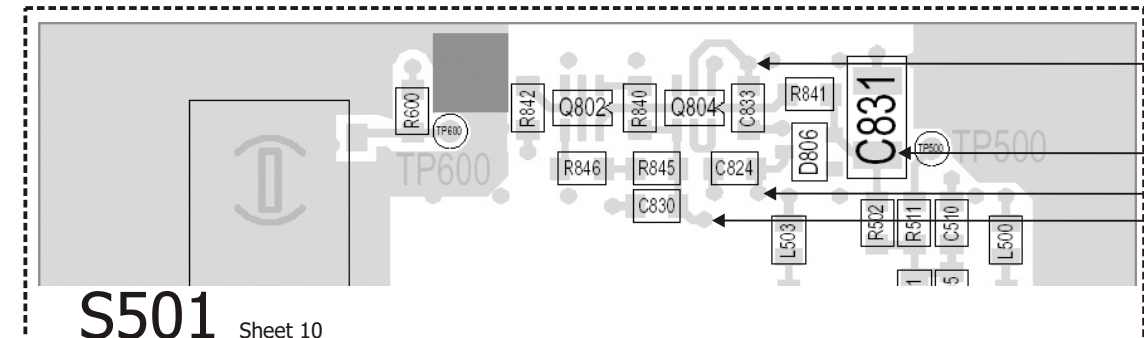
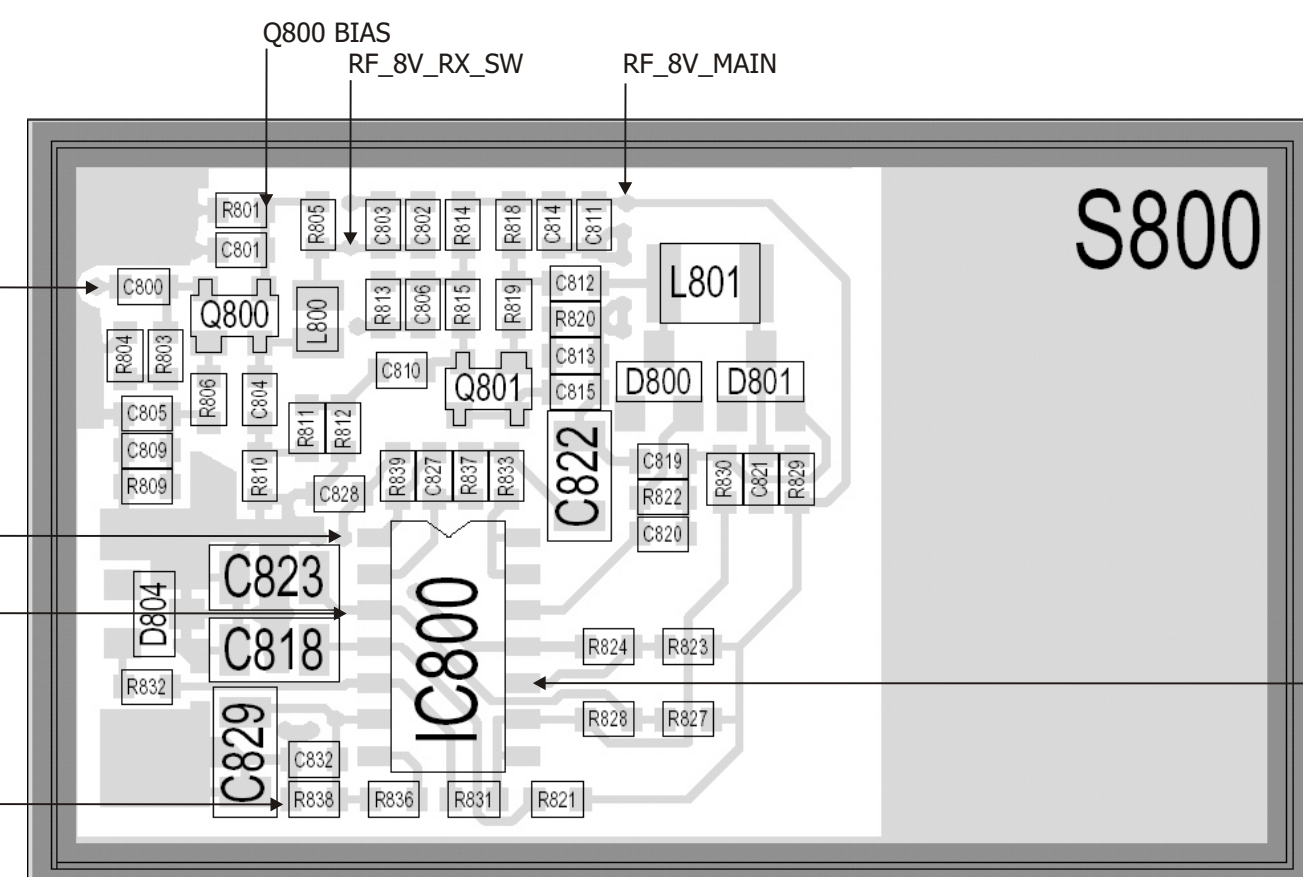
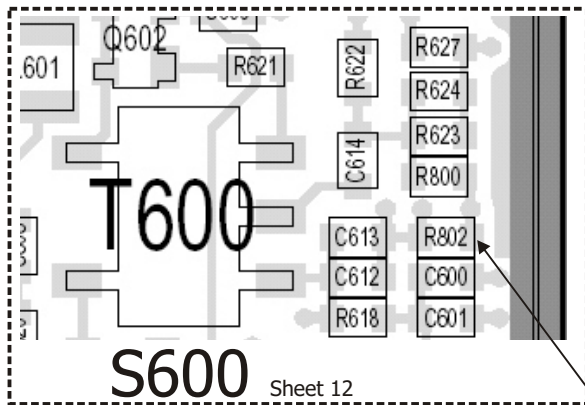
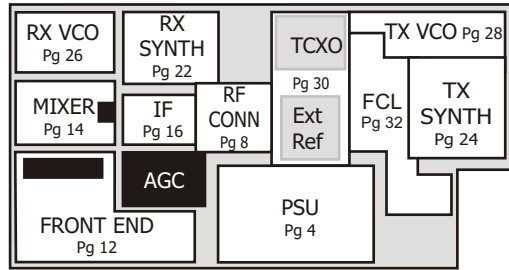




06A	ECO	101200257	CJK	SH		28/11/03
07A	ECO	101200240	CJK	SH		23/09/03
06A	ECO	101200068	CJK	SH		13/05/03
05A	DCO	02025-005	CJK	SH		06/03/03
04A	DCO	02025-004	CJK	SH		28/11/02
03A	DCO	02025-002 & 003	CJK	SH		17/10/02
02A	DCO	02025-001	CJK	SH		30/08/02
01B	SCHEMATICS	REDRAWN	PAUL G			20/6/02
01A	CLONED	FROM 226-00252-01	PAUL G			12/06/02
REVISS	AMENDMENTS		DRAWN	CHKD	D.O.	APVD
						DATE



© TAIT ELECTRONICS	
TB8100	
IF	
IPN: 220-02025-08	ISSUE: A
PROJECT: TB8100	DESIGNER: SH
FILE NAME: 0202508a	FILE DATE: 16-Dec-03
NO. SHEETS: 15	ID: 7
2.S.C. 7	



Service Manual Description PG 34

**TB8000 UHF AGC Schematic Test points**

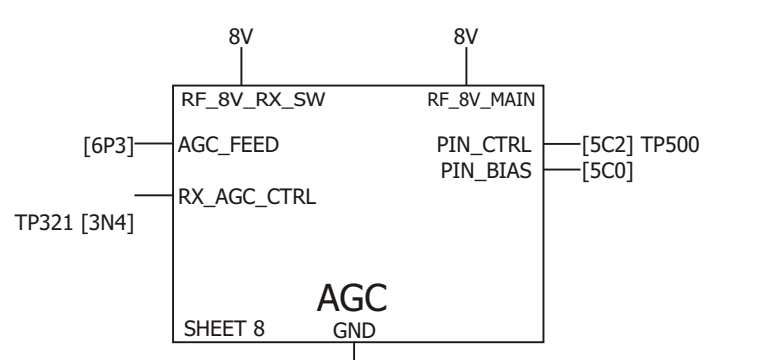
**Schematic PG:8**  
**DIGITAL 0-3V3**  
RX\_AGC\_CTRL [8R4]

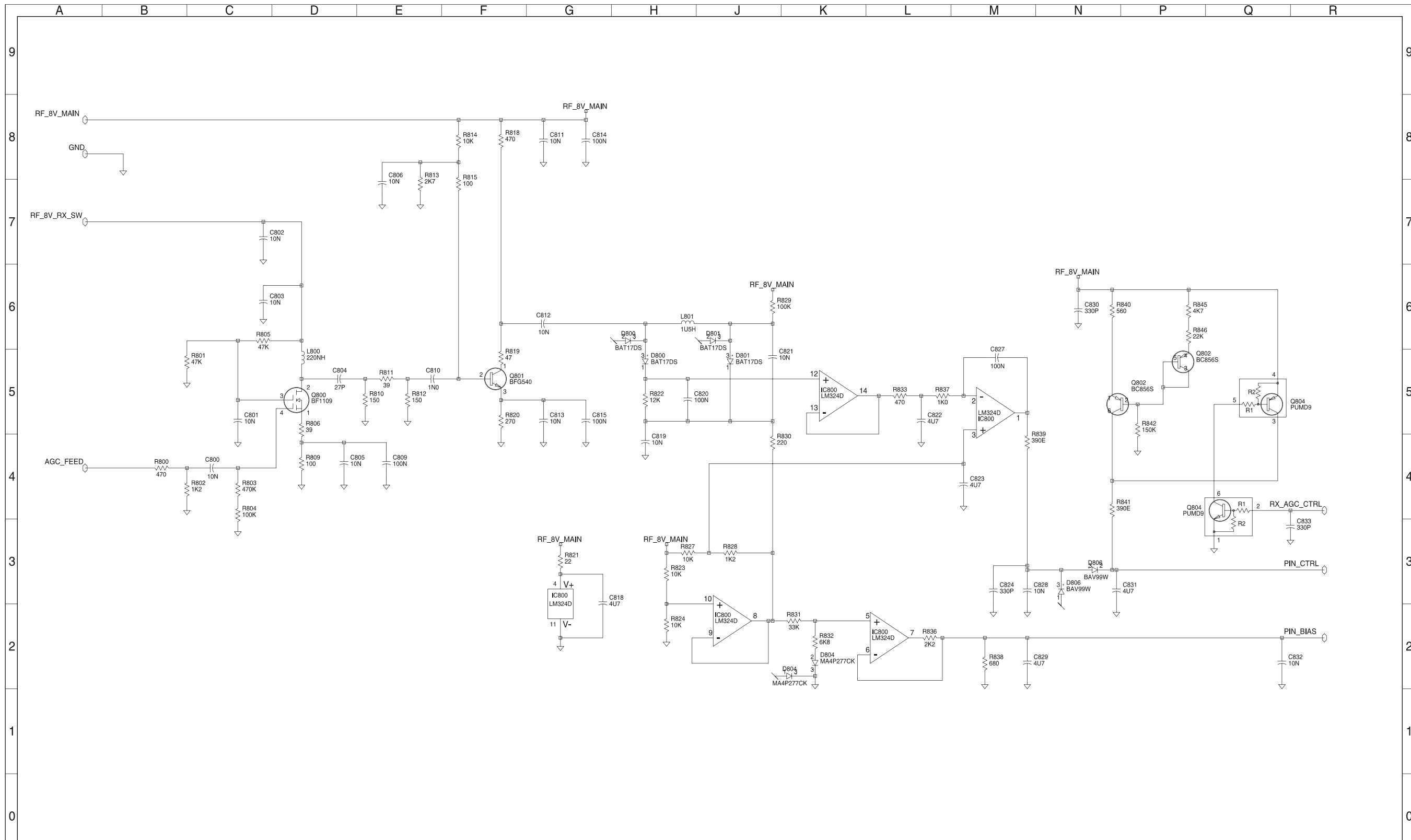
**Supplies**  
RF\_8V\_MAIN = 8V  
RF\_8V\_RX\_SW = 8V

**ANALOG**

PIN\_CTRL [8R3] = 2V (RF IP <-30dBm)  
PIN\_BIAS [8R2] = 1.04V

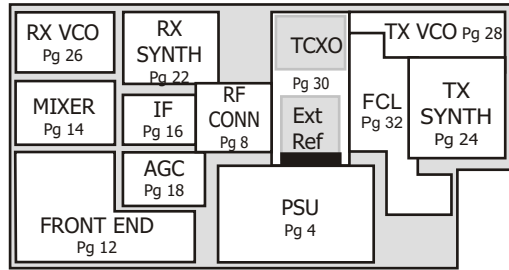
Q800 BIAS = 3.96V  
IC800:A BIAS = 4.4V  
IC800:C BIAS = 3.96V



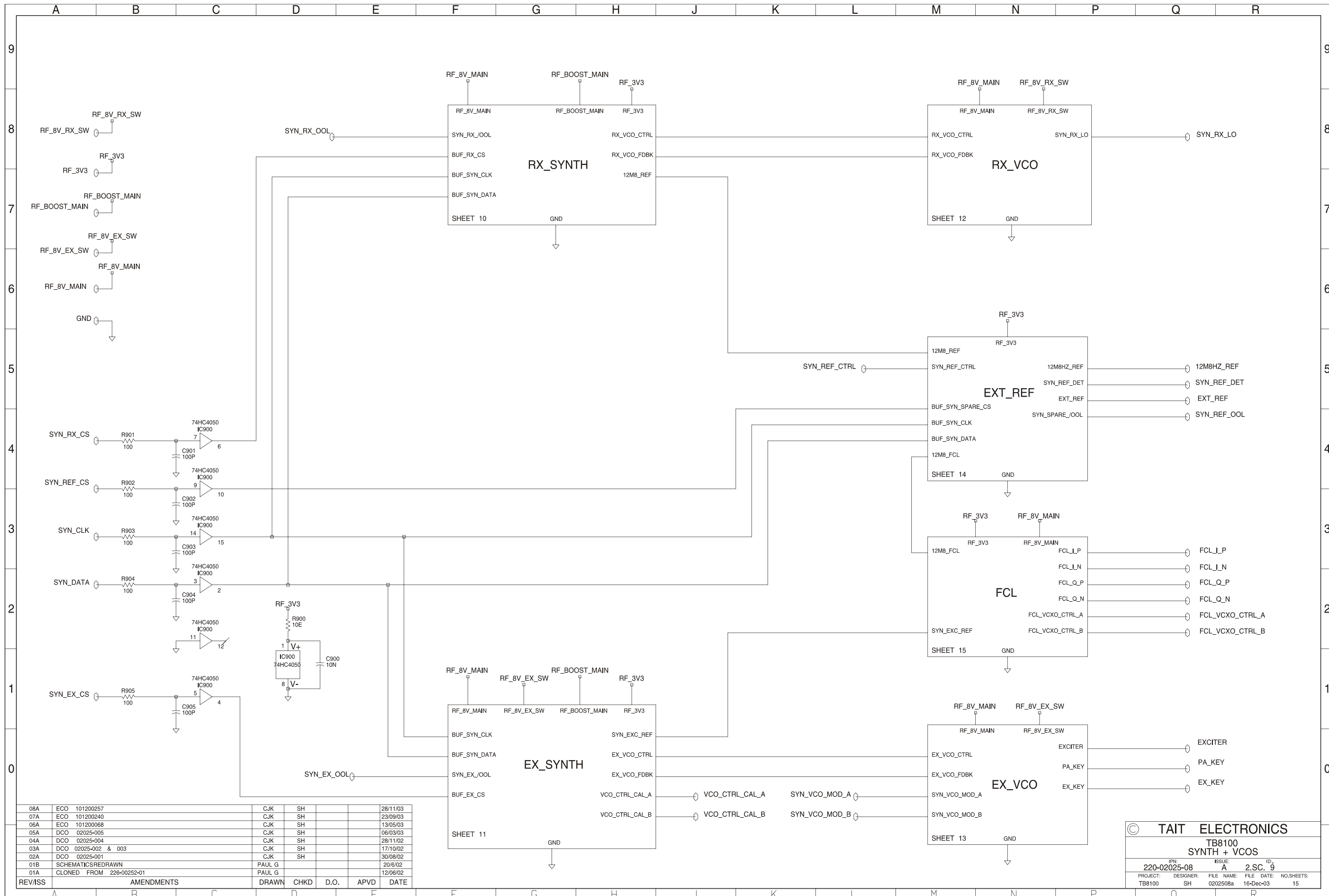


06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL G			20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL G			12/06/02	
REVISS		AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE

© TAIT ELECTRONICS  
 TB8100  
 AGC  
 IPN: 220-02025-08  
 ISSUE: A 2.SC. 8  
 PROJECT: TB8100 DESIGNER: SH FILE: 0202508a DATE: 16-Dec-03 NO.SHEETS: 15

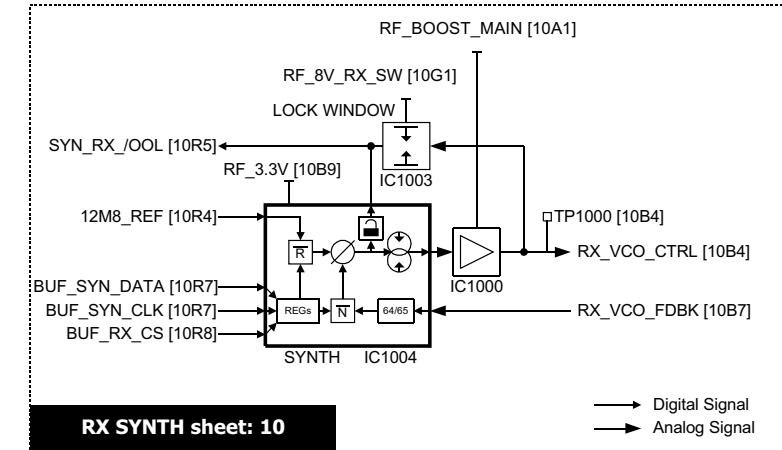
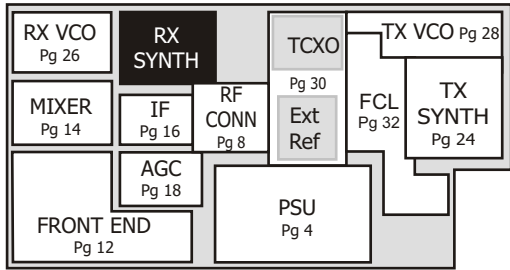






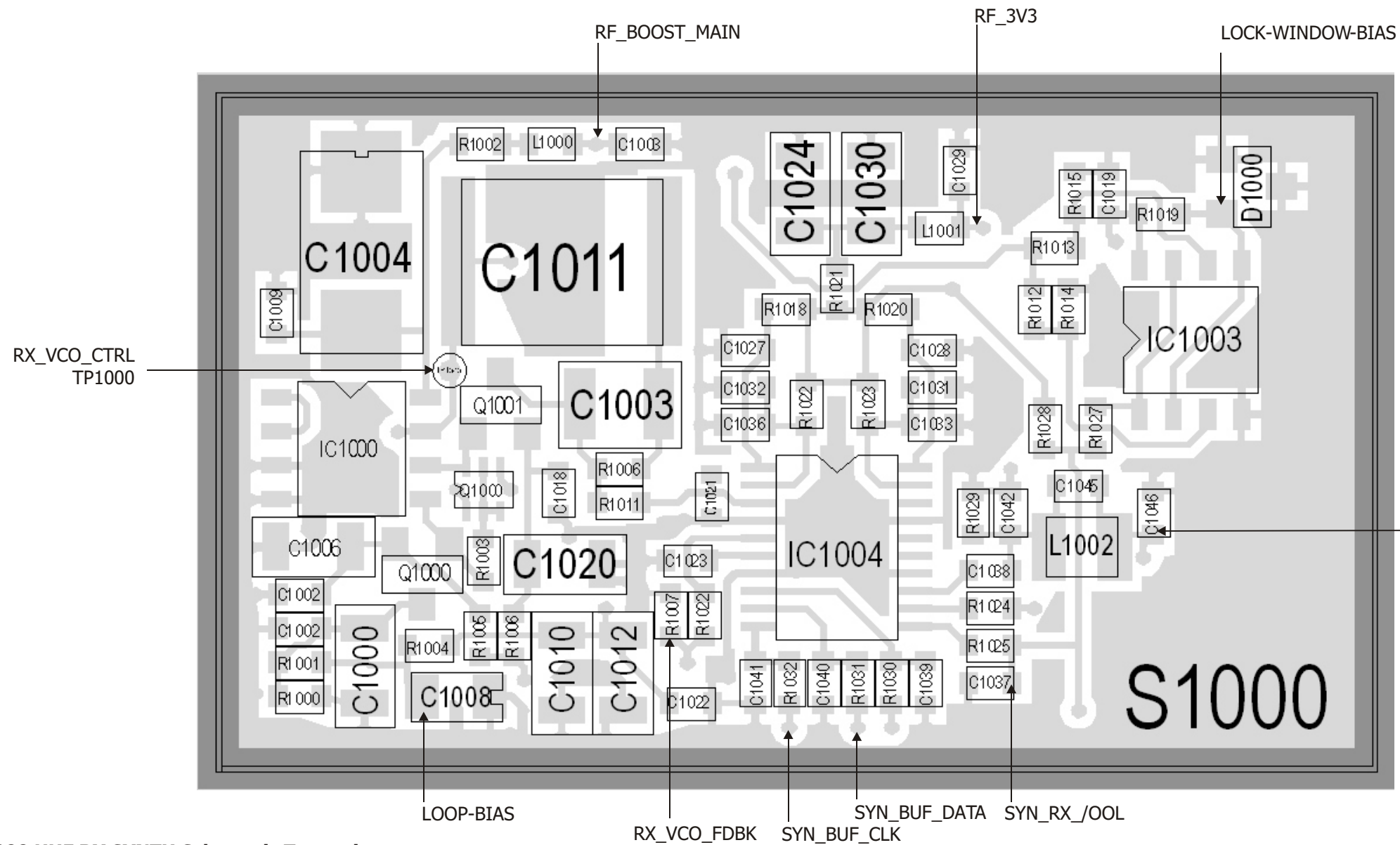
REV/ISS	AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE
08A	ECO 101200257	CJK	SH			28/11/03
07A	ECO 101200240	CJK	SH			23/09/03
06A	ECO 101200068	CJK	SH			13/05/03
05A	DCO 02025-005	CJK	SH			06/03/03
04A	DCO 02025-004	CJK	SH			28/11/02
03A	DCO 02025-002 & 003	CJK	SH			17/10/02
02A	DCO 02025-001	CJK	SH			30/08/02
01B	SCHEMATICS REDRAWN	PAUL G				20/6/02
01A	CLONED FROM 226-00252-01	PAUL G				12/06/02

© TAIT ELECTRONICS			
TB8100 SYNTH + VCOs			
IPN: 220-02025-08	ISSUE: A	2.S.C.	9
PROJECT: TB8100	DESIGNER: SH	FILE NAME: 0202508a	DATE: 16-Dec-03
			NO. SHEETS: 15



**RX SYNTH sheet: 10**

Service Manual  
 Description PG 33



**TB8000 UHF RX SYNTH Schematic Test points**

**Schematic PG:10**  
 TP1000 [10B4] 0 - 23V

**DIGITAL 0-3V3**

BUF\_RX\_CS [10R8]  
 BUF\_SYN\_DATA [10R8]  
 BUF\_SYN\_CLK [10R7]  
 SYN\_RX\_/OOL [10R5] [Lock Detect line]

**12MHz**

12M8\_REF [10R4] (500mVpp)

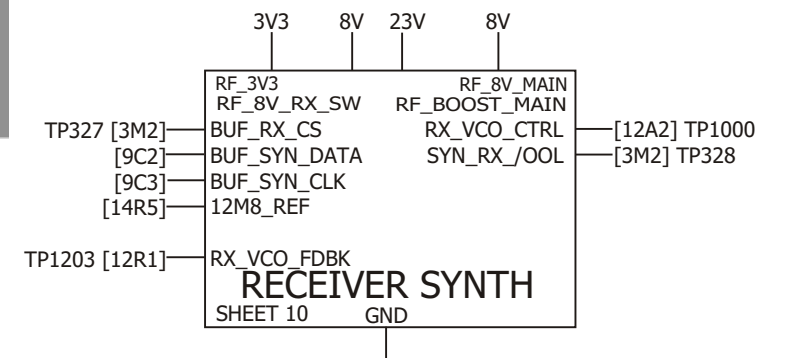
**Supplies**

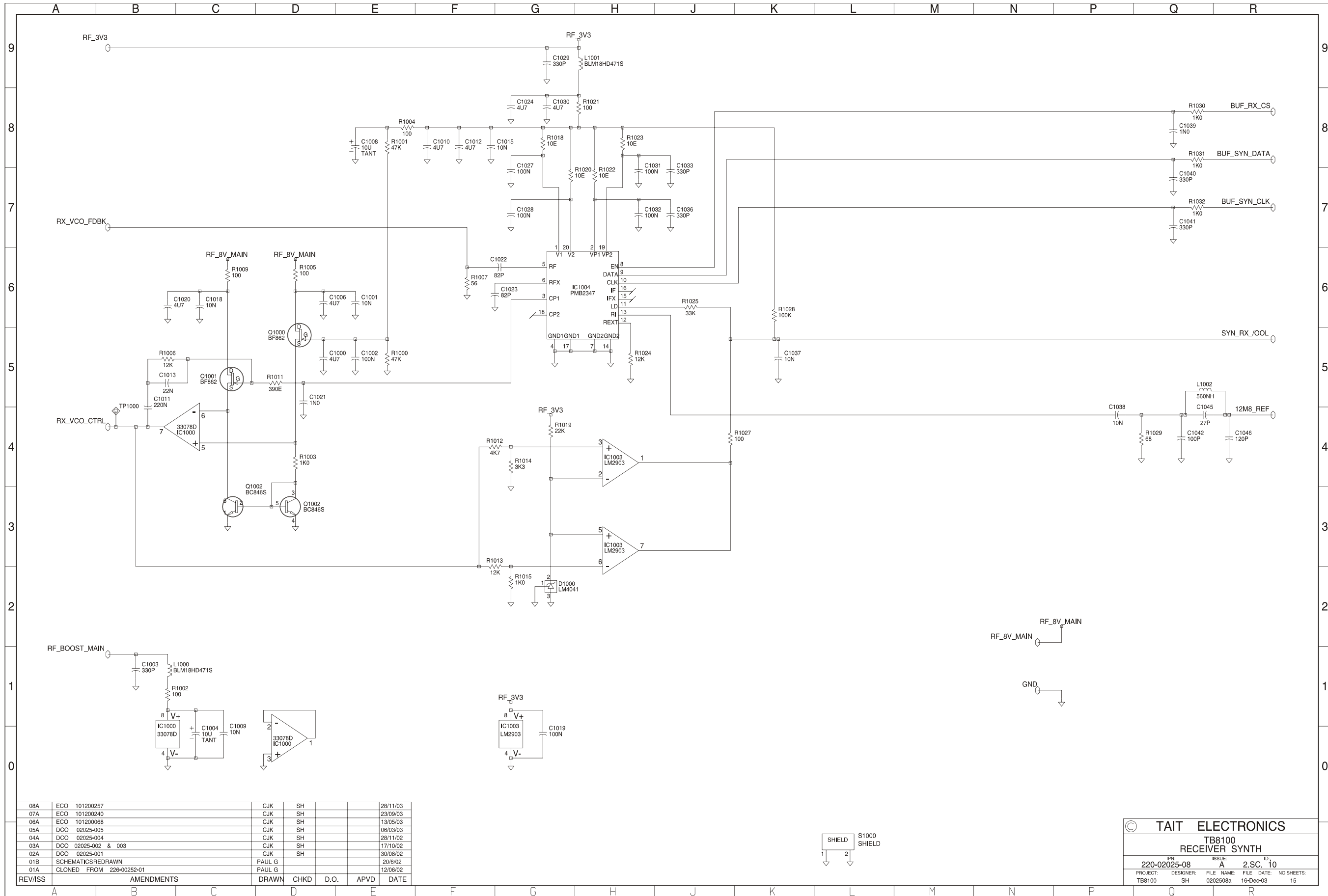
RF\_3V3 = 3V3  
 RF\_8V\_MAIN = 8V  
 RF\_8V\_RX\_SW = 8V  
 RF\_BOOST\_MAIN = ~23V

**ANALOG**

RX\_VCO\_CTRL [10B4] 0 - 23V (3-16 Lock Window)  
 RX\_VCO\_FDBK [10B7]

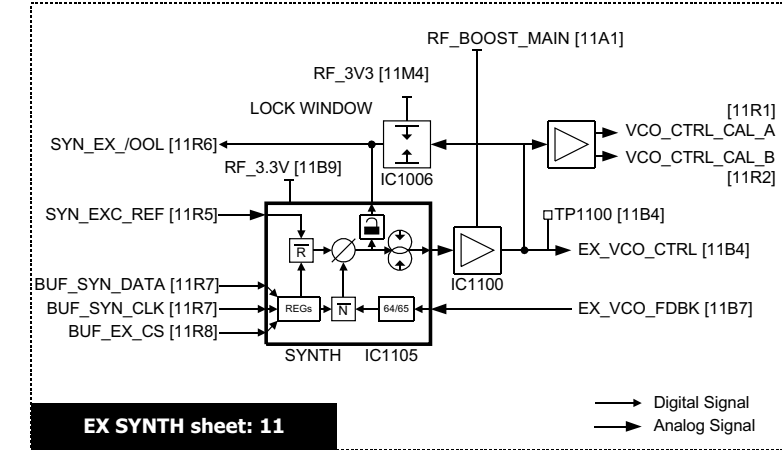
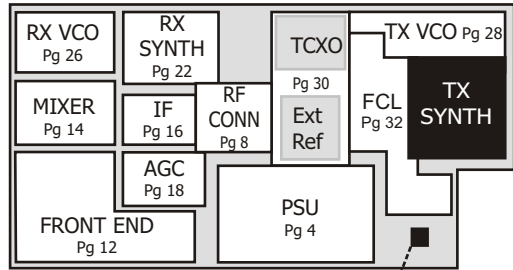
LOOP-BIAS \_\_\_V  
 LOCK-WINDOW-BIAS \_\_\_V





06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL	G		20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL	G		12/06/02	
REVISS		AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE

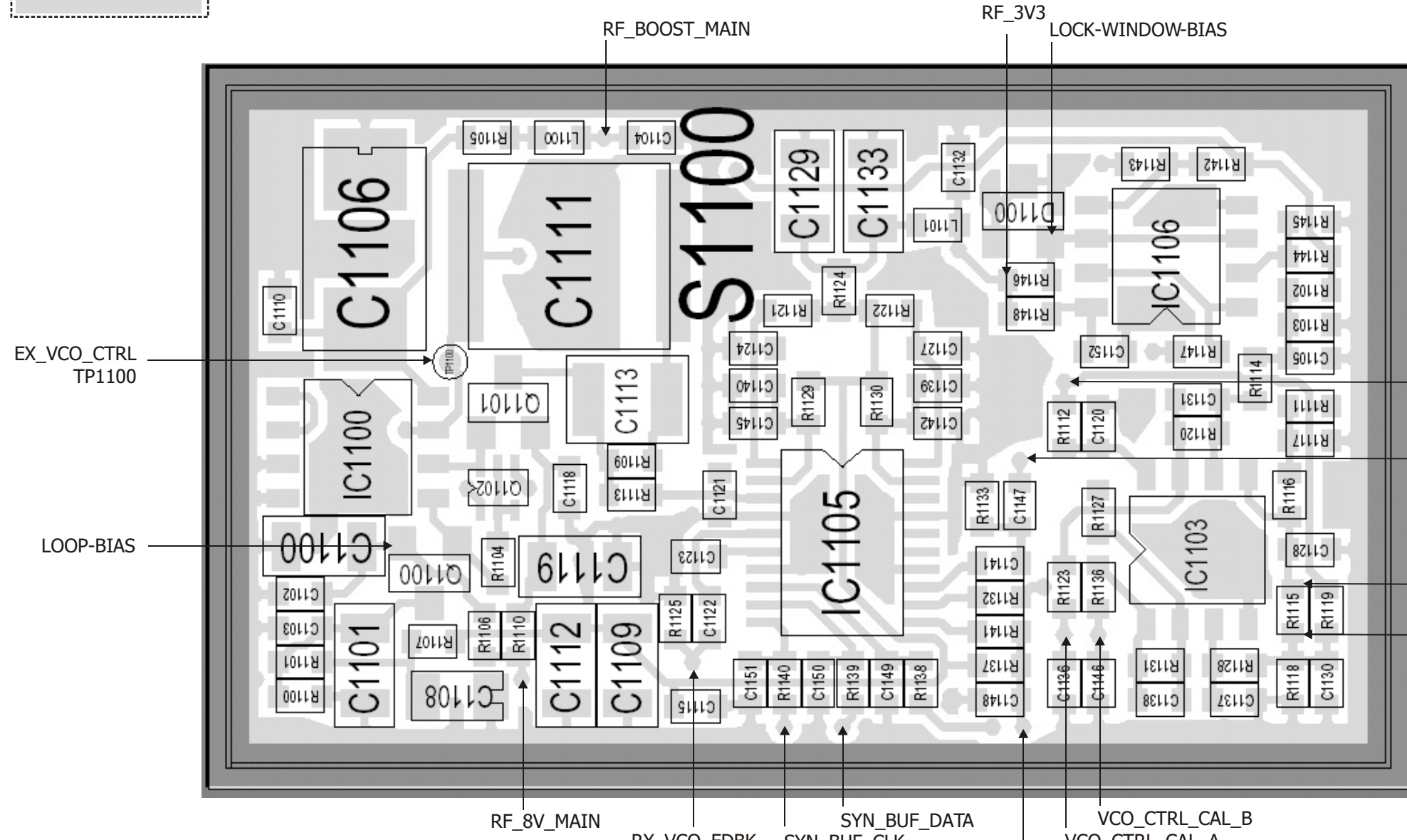
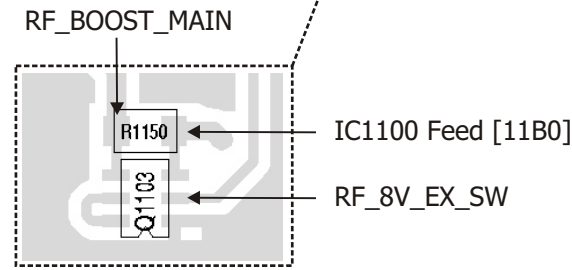
© TAIT ELECTRONICS  
 TB8100  
 RECEIVER SYNTH  
 IPN: 220-02025-08 ISSUE: A ID: 2.SC. 10  
 PROJECT: TB8100 DESIGNER: SH FILE NAME: 0202508a DATE: 16-Dec-03 NO. SHEETS: 15



Service Manual Description PG 38

EX SYNTH sheet: 11

→ Digital Signal  
 → Analog Signal



**TB8000 UHF EX SYNTH Schematic Test points**

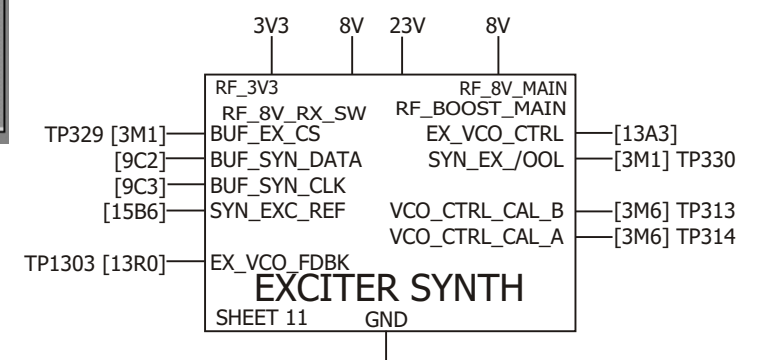
**Schematic PG:11**  
 TP1100 [11B4] 0 - 23V

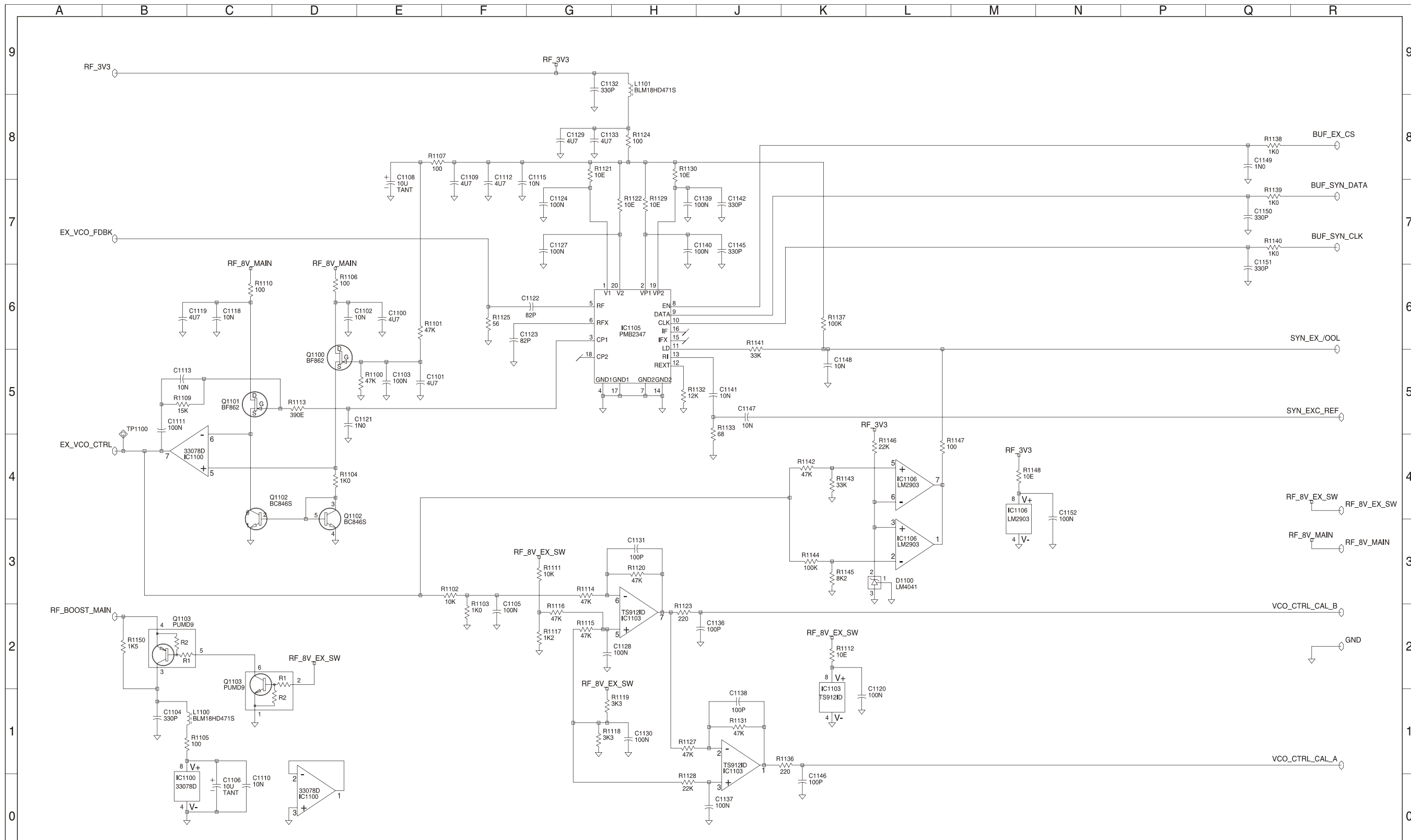
**DIGITAL 0-3V3**  
 BUF\_RX\_CS [11R8]  
 BUF\_SYN\_DATA [11R8]  
 BUF\_SYN\_CLK [11R8]  
 SYN\_RX\_/OOL [11R5] [Lock Detect line]

**12MHz**  
 SYN\_EXC\_REF [10R5] (500mVpp)  
  
 LOOP-BIAS \_\_\_V  
 LOCK-WINDOW-BIAS \_\_\_V

**Supplies**  
 RF\_3V3 [11B9] = 3V3  
 RF\_8V\_MAIN [11R3] = 8V  
 RF\_8V\_EX\_SW [11F1] = 8V  
 RF\_BOOST\_MAIN [11A1] = ~23V

**ANALOG**  
 RX\_VCO\_CTRL [11B4] 0 - 23V (3-16 Lock Window)  
 RX\_VCO\_FDBK [11B7]  
 VCO\_CTRL\_CAL\_A [11R1] \_\_\_Vpp  
 VCO\_CTRL\_CAL\_B [11R2] \_\_\_Vpp

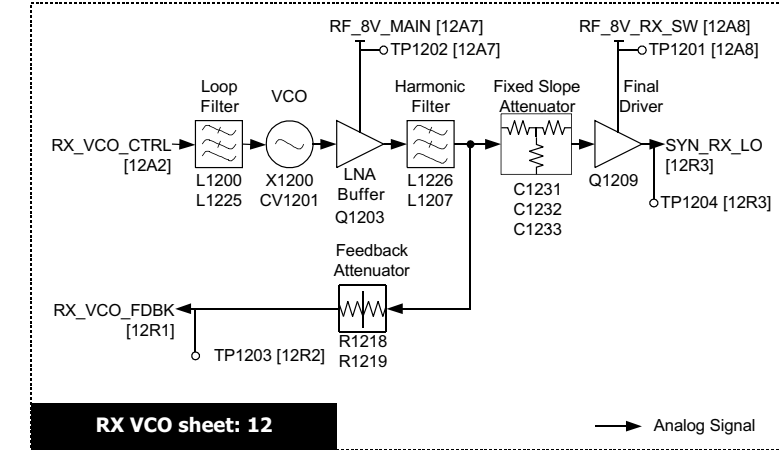
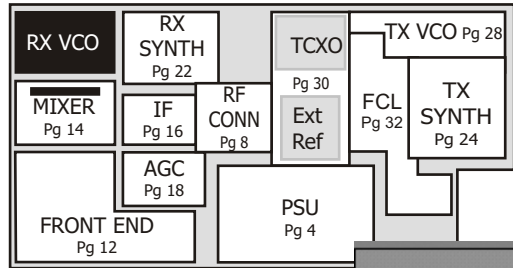




06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL	G		20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL	G		12/06/02	
REVISS	AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE

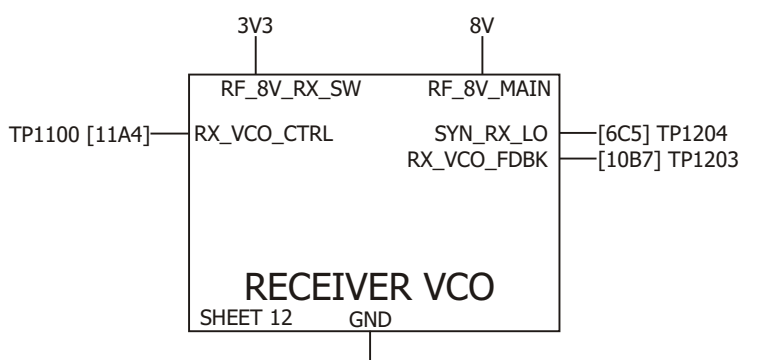
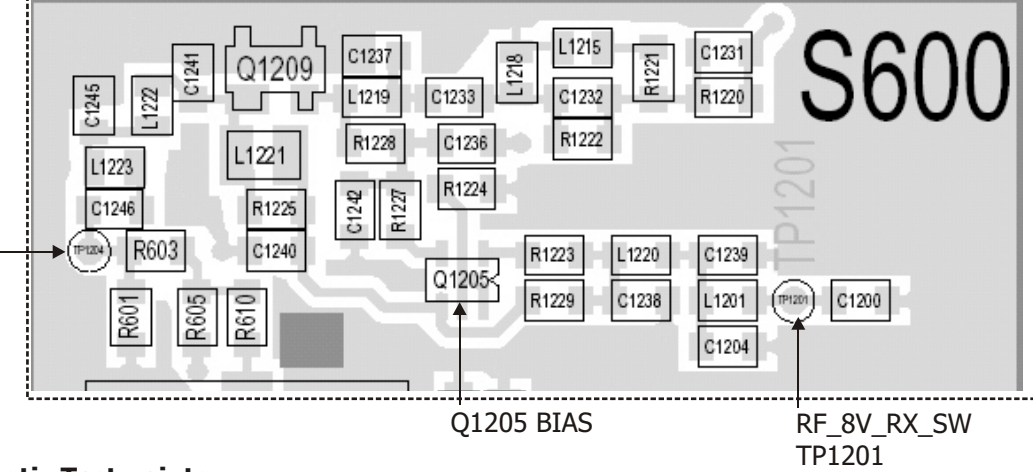
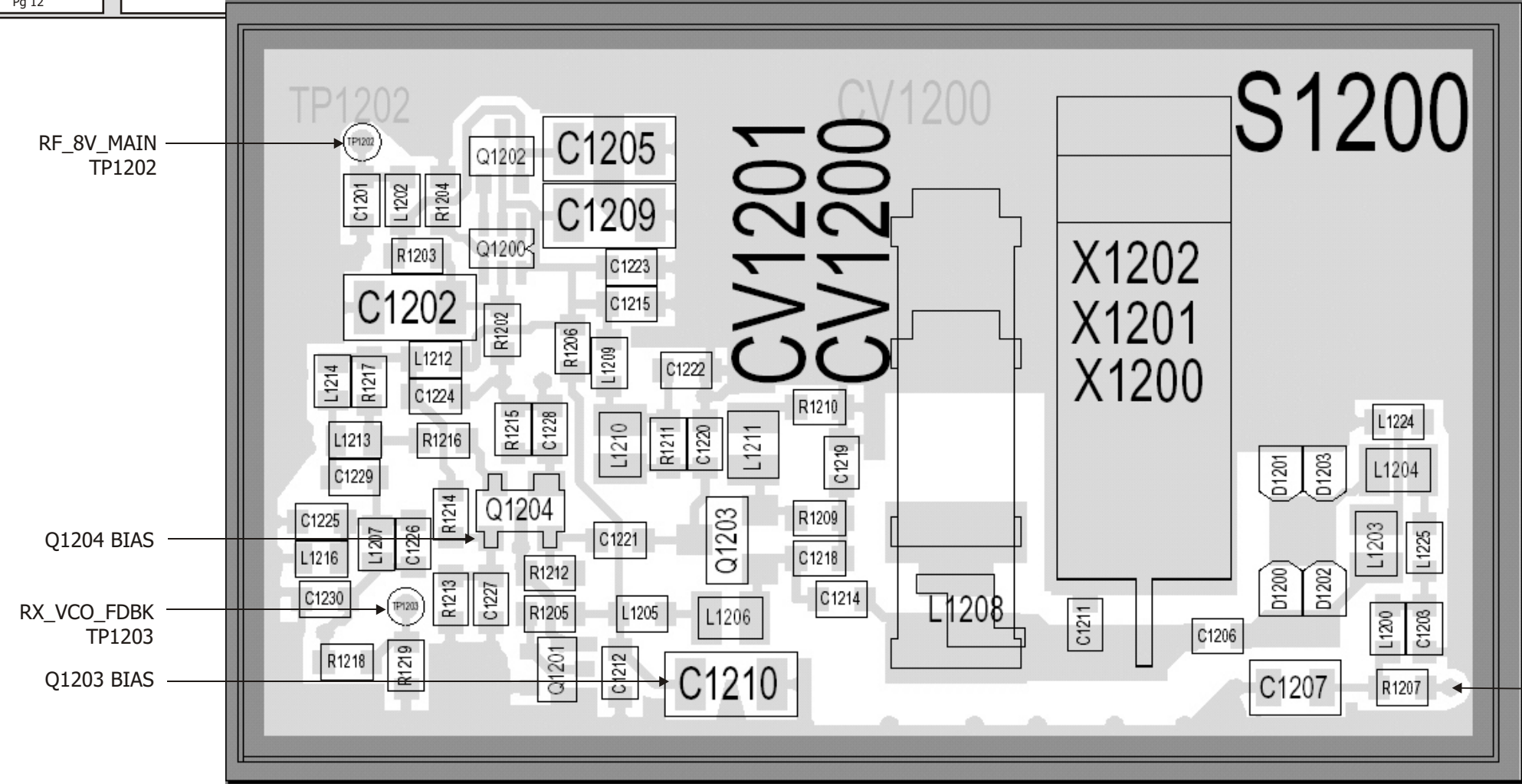
© TAIT ELECTRONICS  
 TB8100  
 EXCITER SYNTH  
 IPN: 220-02025-08 ISSUE: A 2.S.C. 11  
 PROJECT: TB8100 DESIGNER: SH FILE NAME: 0202508a FILE DATE: 16-Dec-03 NO. SHEETS: 15





RX VCO sheet: 12 Analog Signal

Service Manual Description PG 34



**TB8000 UHF RX VCO Schematic Test points**

**Schematic PG:12**

- TP1201 [12B8] 8V
- TP1202 [12B7] 8V
- TP1203 [12R2] RX\_LO fdbk
- TP1204 [12R3] +20dBm RX\_LO

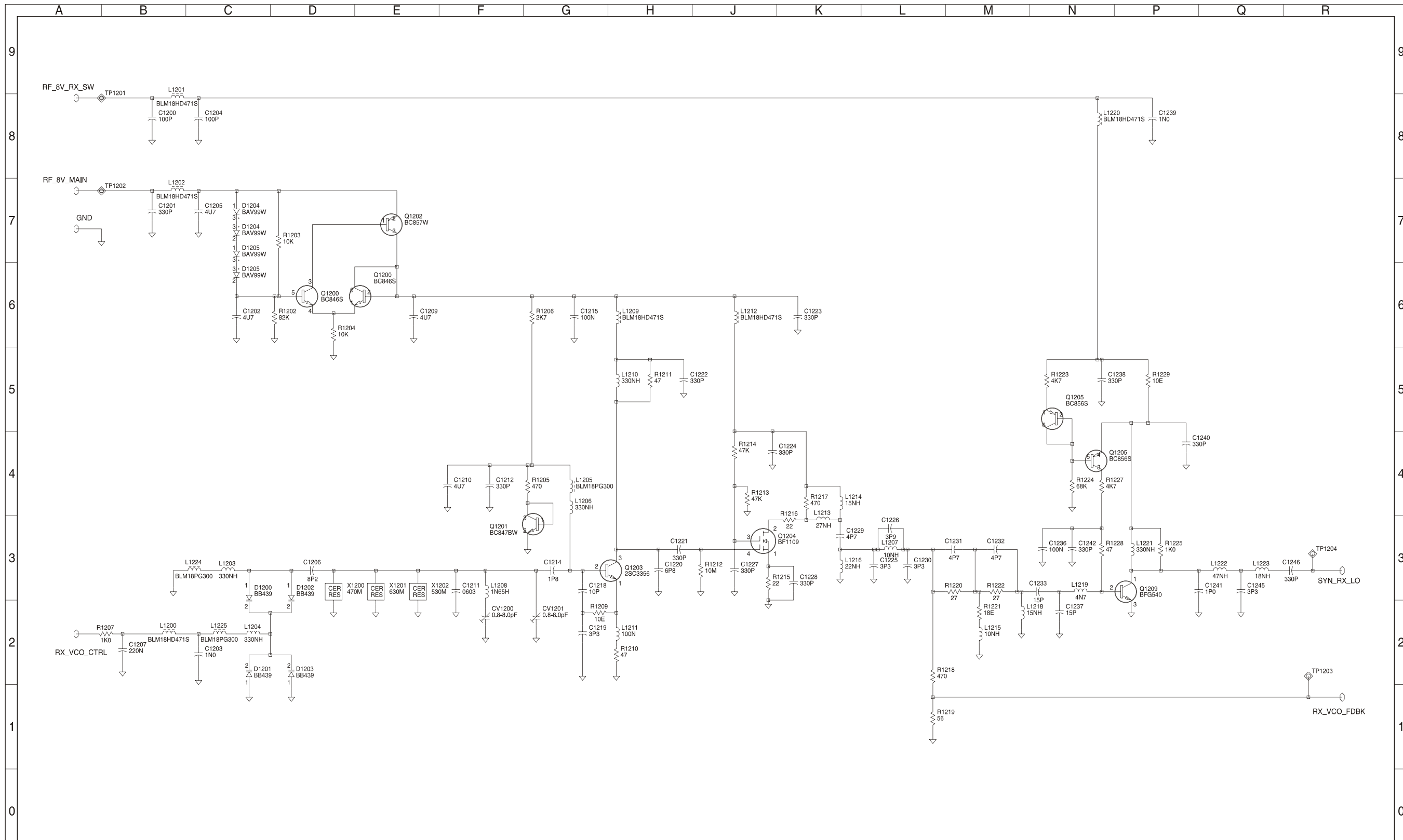
**Supplies**

- RF\_8V\_MAIN [12A7] = 8V
- RF\_8V\_RX\_SW [12A8] = 8V

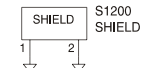
**ANALOG**

- RX\_VCO\_CTRL [12A2] 0 - 23V (3-16 Lock Window)
- RX\_VCO\_FDBK [12R1]
- STN\_RX\_LO [12R3] +20dBm RX\_LO

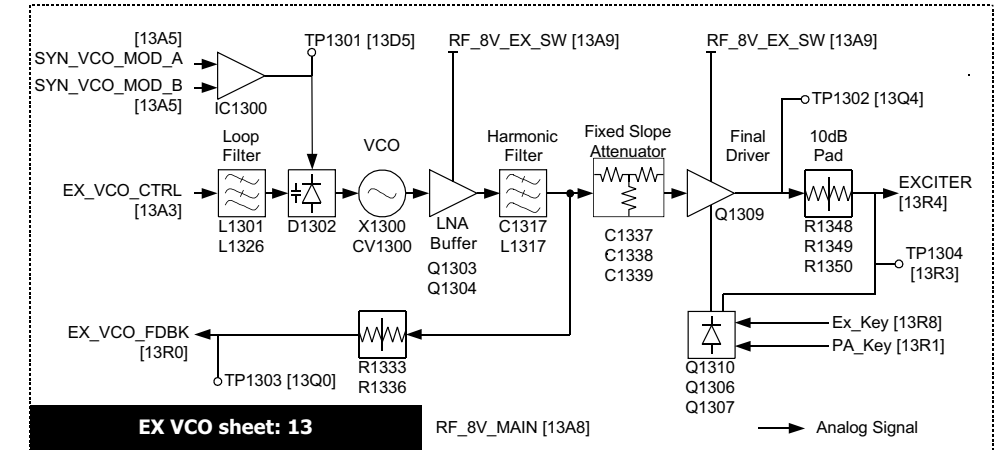
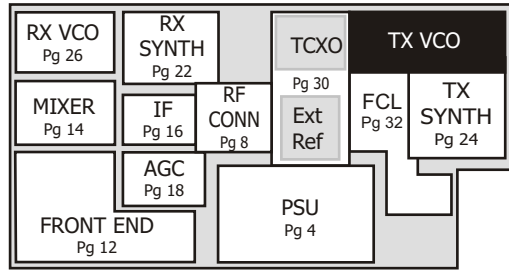




06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL	G		20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL	G		12/06/02	
REVISS	AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE

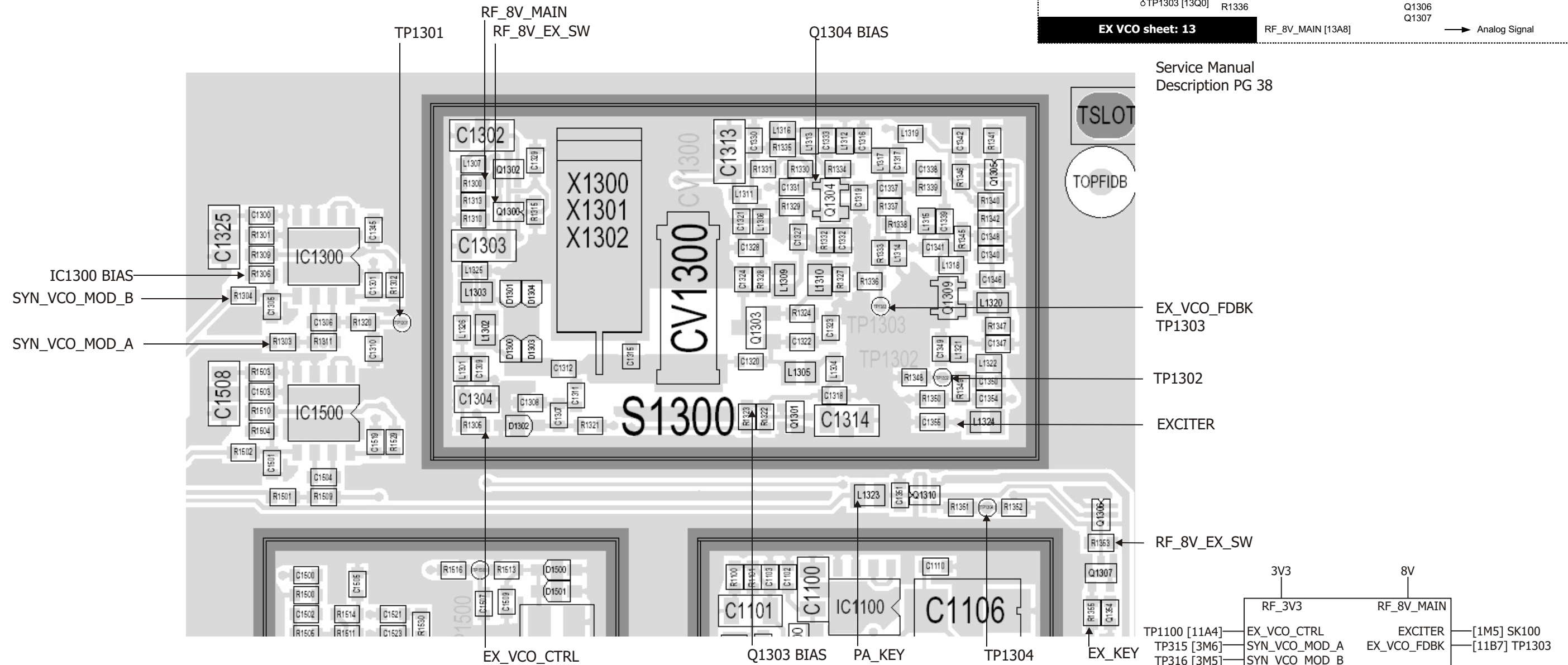


© TAIT ELECTRONICS  
 TB8100  
 RECEIVER VCO  
 IPN: 220-02025-08 ISSUE: A ID: 2.SC. 12  
 PROJECT: TB8100 DESIGNER: SH FILE NAME: 0202508a FILE DATE: 16-Dec-03 NO. SHEETS: 15



EX VCO sheet: 13

Service Manual Description PG 38



**TB8000 UHF EX VCO Schematic Test points**

**Schematic PG:13**

TP1301 [13D5] 8V  
TP1302 [13Q4] +20dBm Tx Freq  
TP1303 [13Q0] EX\_VOC\_FDBK  
TP1304 [13R3] EXCITER-PA\_KEY

**Supplies**

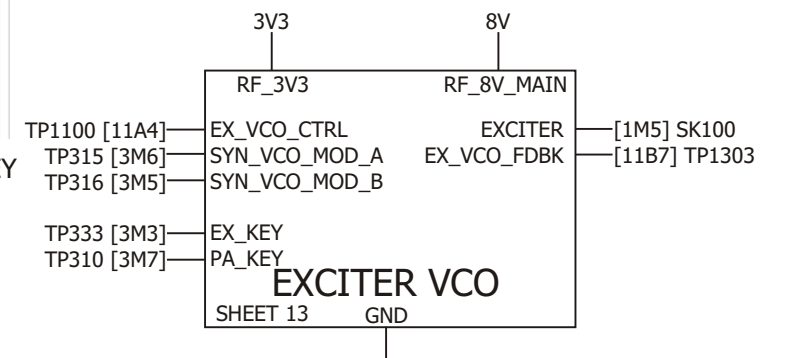
RF\_8V\_MAIN [13A8] = 8V  
RF\_8V\_EX\_SW [13A9] = 8V

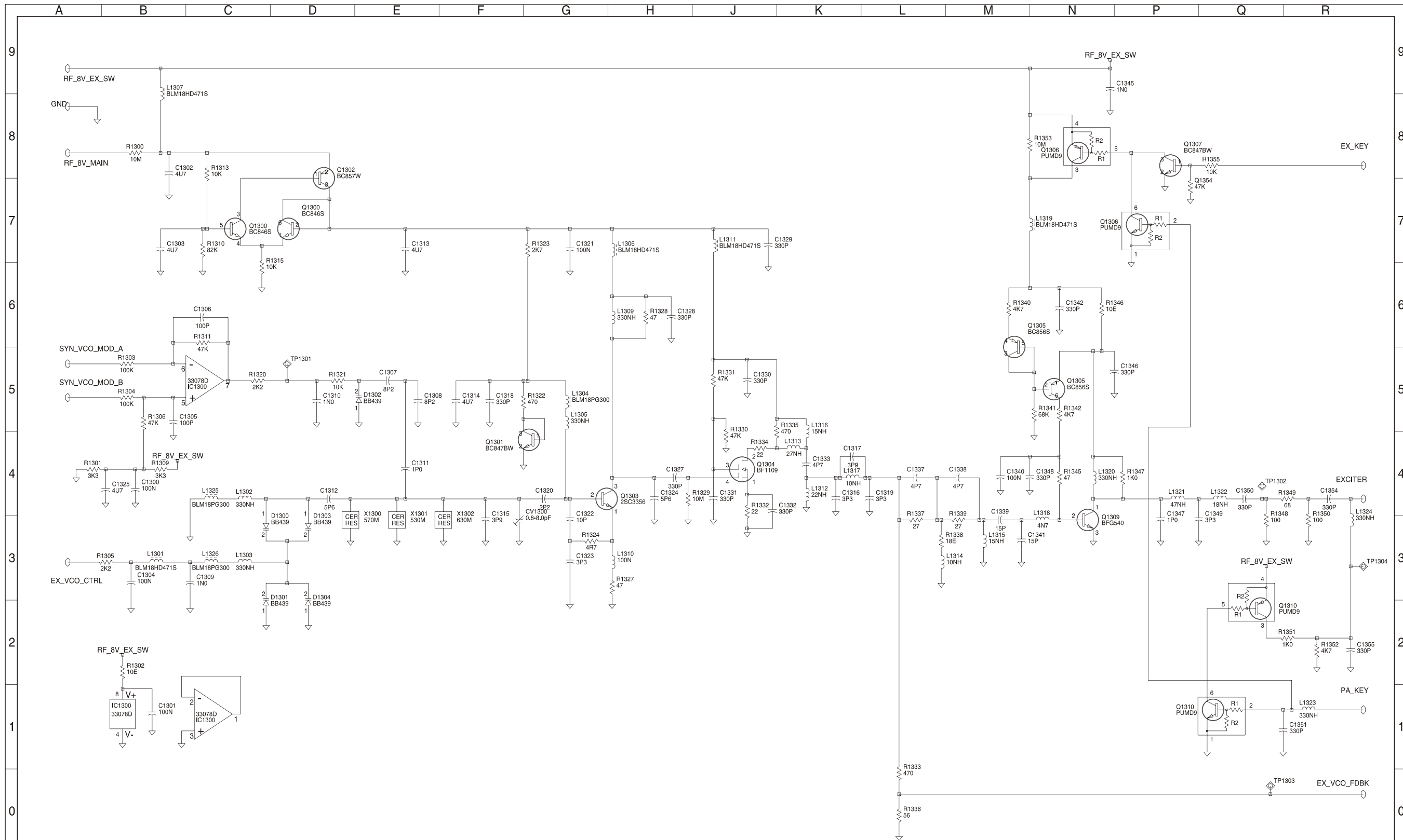
**ANALOG**

EXCITER [13R4] +10dBm Tx Freq  
EX\_VCO\_CTRL [13A3] 0 - 23V (3-16 Lock Window)  
EX\_VCO\_FDBK [13R0]  
SYN\_VCO\_MOD\_A [13A5]  
SYN\_VCO\_MOD\_B [13A5]

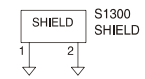
**Signal**

EX\_KEY [13R8]  
PA\_KEY [13R1]

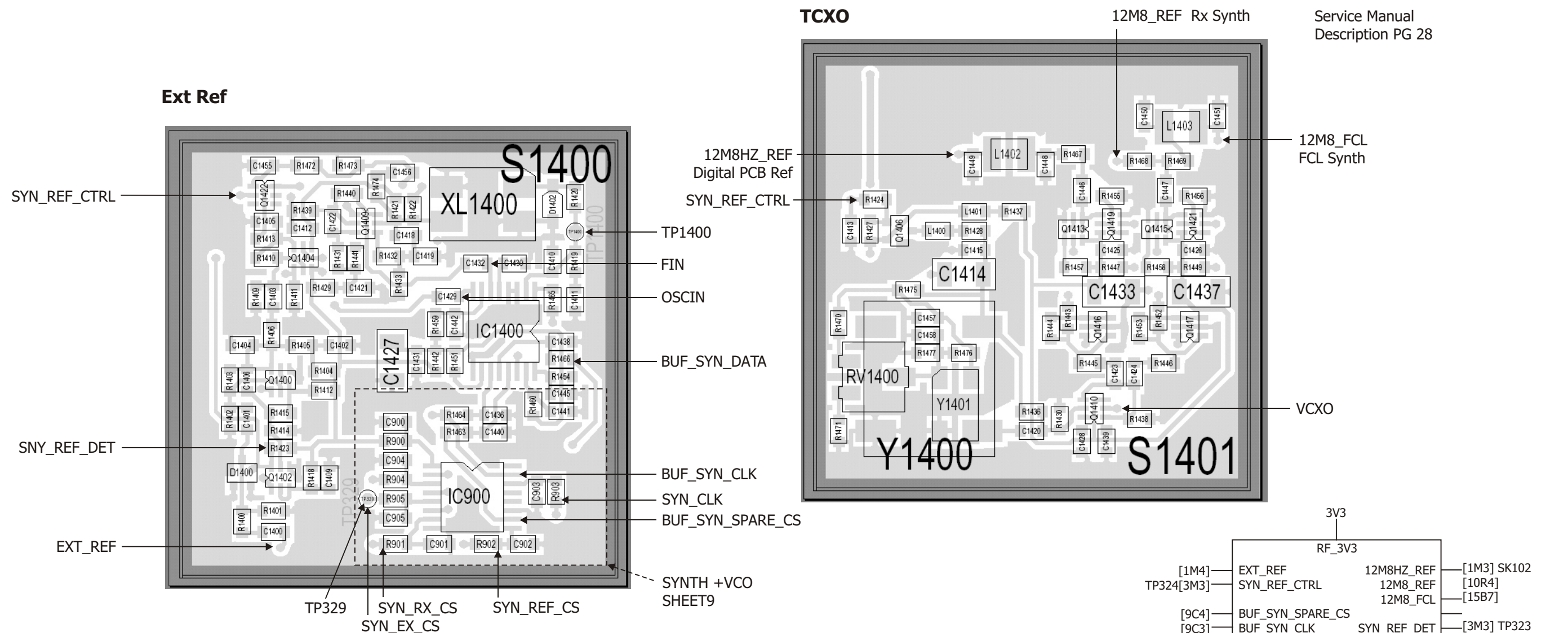
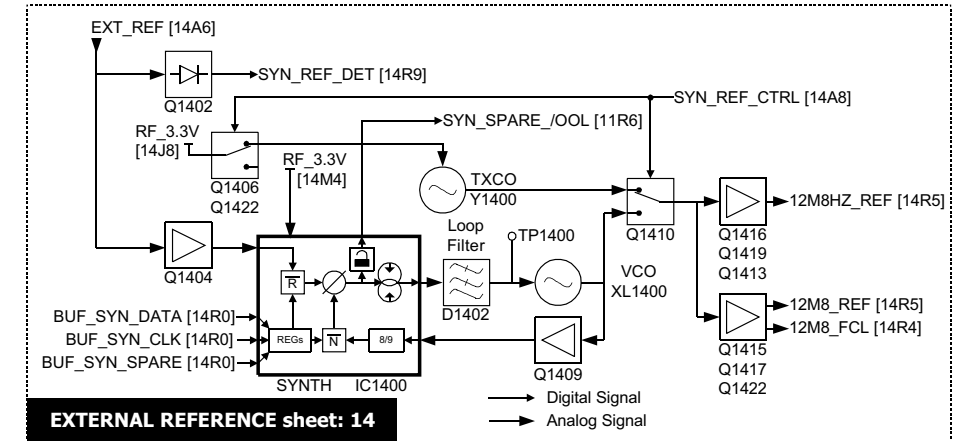
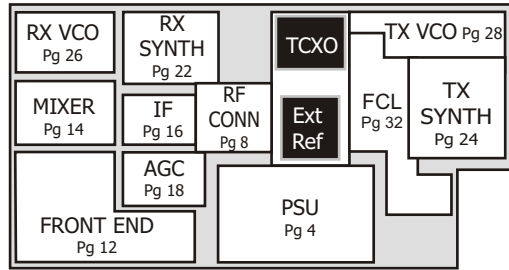




06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL	G		20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL	G		12/06/02	
REVISS		AMENDMENTS	DRAWN	CHKD	D.O.	APVD	DATE



© TAIT ELECTRONICS	
TB8100 EXCITER VCO	
IPN: 220-02025-08	ISSUE: A 2.S.C. 13
PROJECT: TB8100	DESIGNER: SH
FILE NAME: 0202508a	DATE: 16-Dec-03
	NO.SHEETS: 15



**TB8000 UHF EXT REF Schematic Test points**

**Schematic PG:15**

TP1500 [13D5] TCXO Modulation  
 TP319 [3M4] FCL\_I\_P

**Supplies**

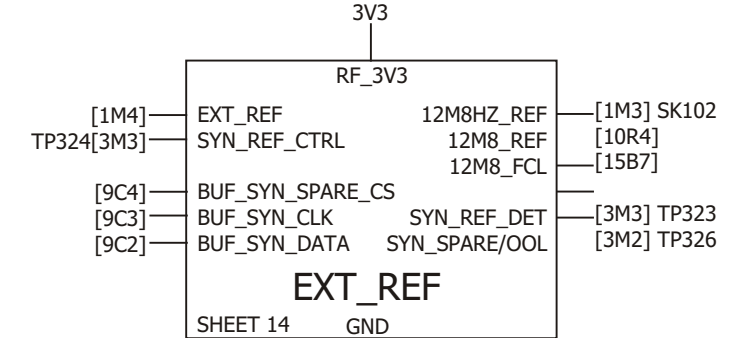
RF\_3V3 [15B3] = 3V3  
 RF\_8V\_MAIN [15B3] = 8V

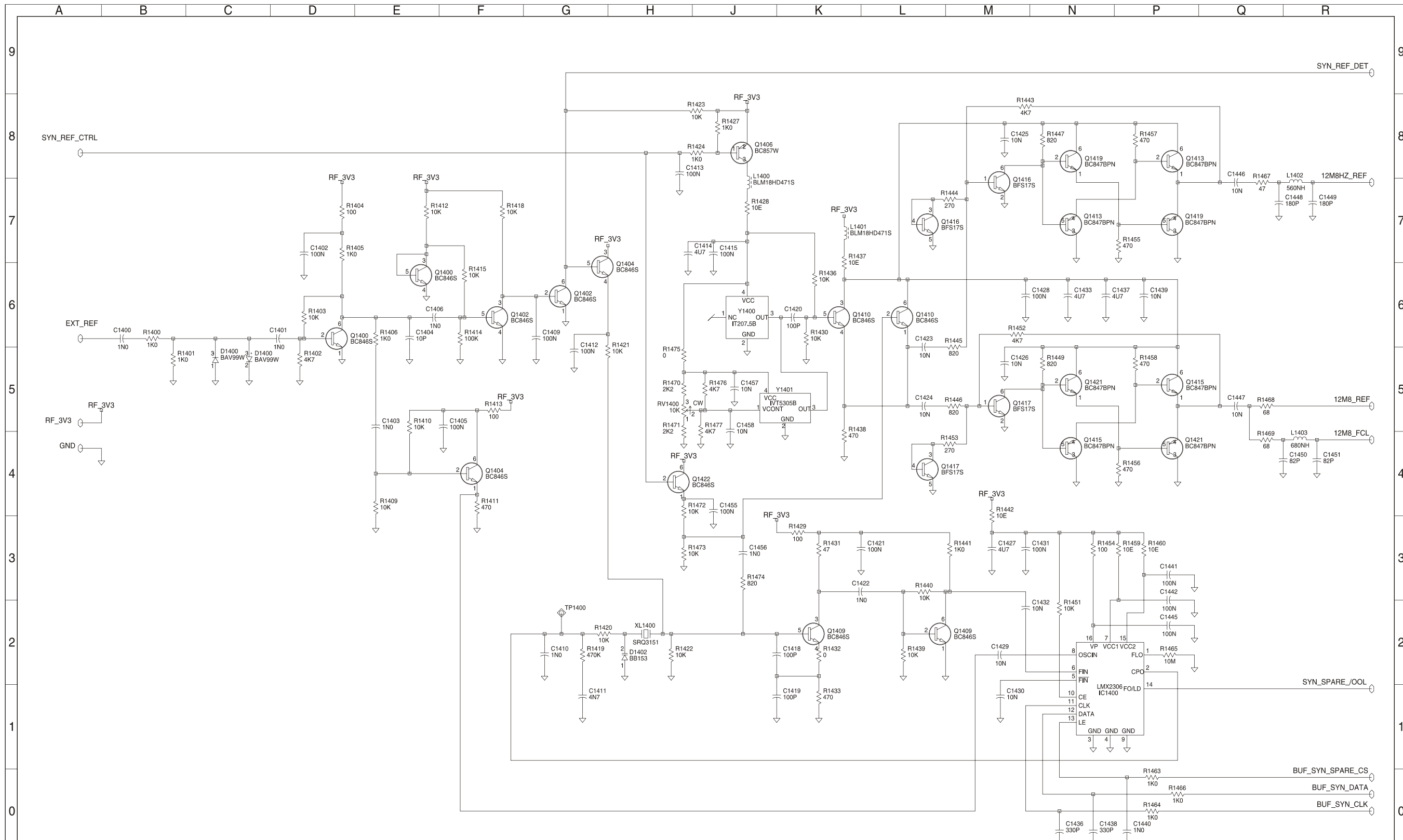
**Signal**

12M8\_FCL [15B7]  
 FCL\_VCXO\_CTRL\_A [15B1]  
 FCL\_VCXO\_CTRL\_B [15B1]

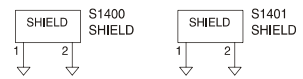
FCL\_I\_N [15Q8]  
 FCL\_I\_P [15Q7]  
 FCL\_Q\_P [15Q5]  
 FCL\_Q\_N [15Q4]

TP1400 Charge Pump Output



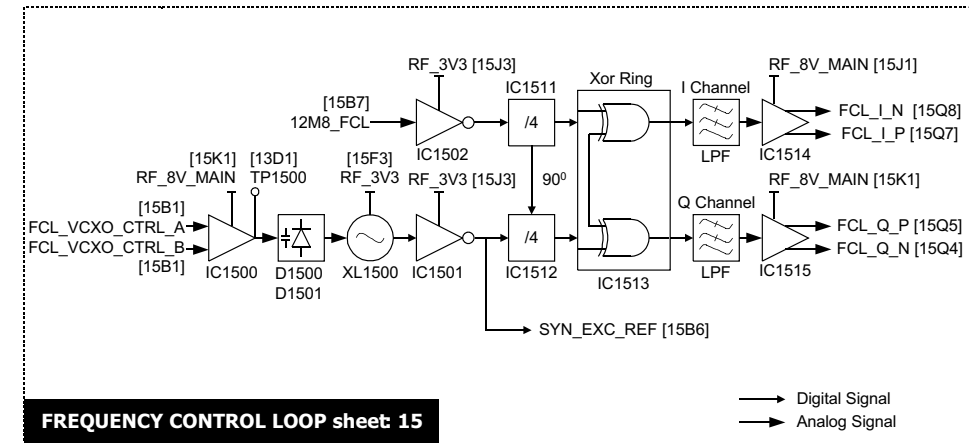
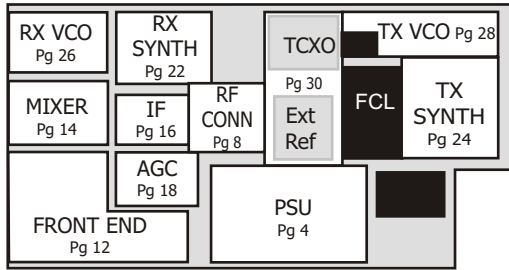


06A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL G			20/6/02	
01A	CLONED FROM	226-00252-01	PAUL G			12/06/02	
REVISS	AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE



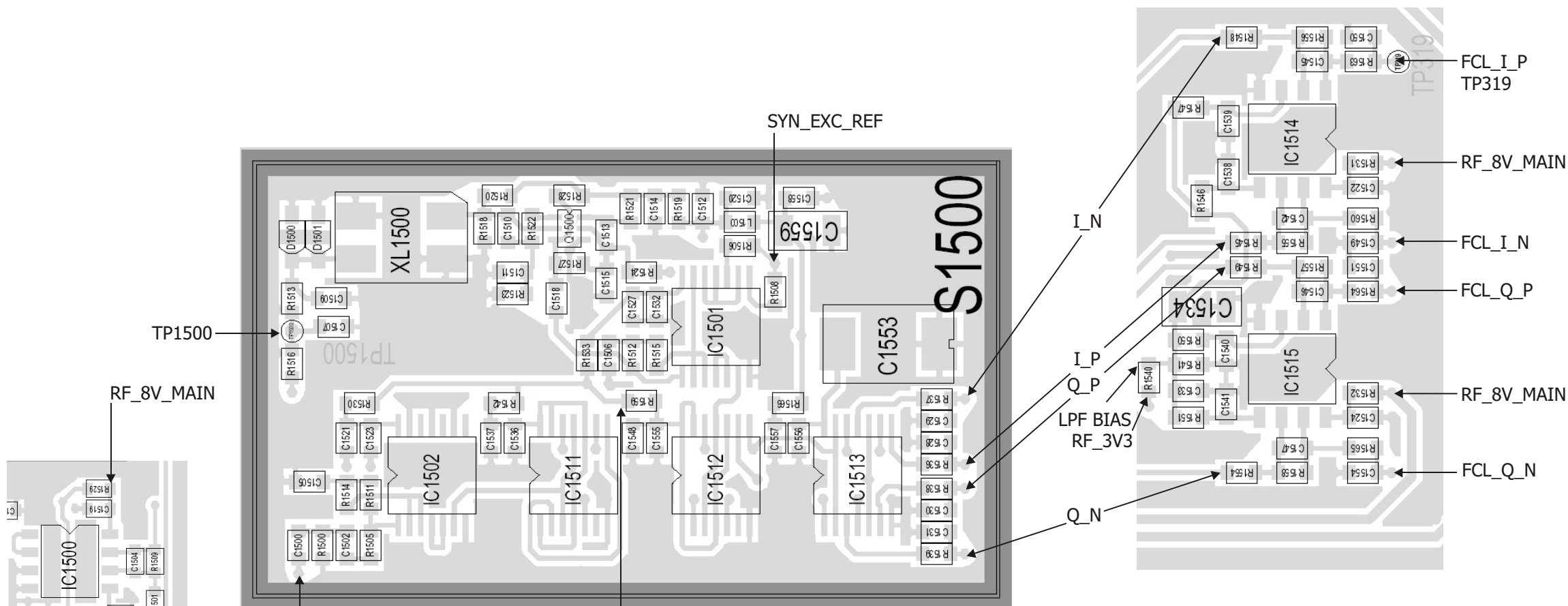
© TAIT ELECTRONICS  
 TB8100  
 EXTERNAL REFERENCE  
 IPN: 220-02025-08 ISSUE: A ID: 2.SC. 14  
 PROJECT: TB8100 DESIGNER: SH FILE NAME: 0202508a FILE DATE: 16-Dec-03 NO.SHEETS: 15



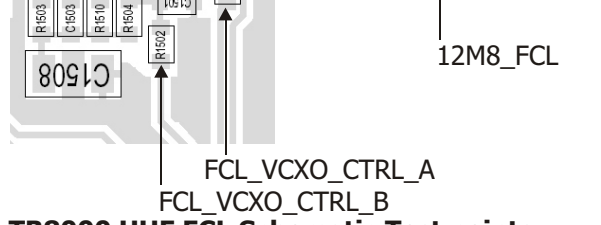


FREQUENCY CONTROL LOOP sheet 15

→ Digital Signal  
 → Analog Signal



Service Manual  
 Description PG 35



**TB8000 UHF FCL Schematic Test points**

**Schematic PG:15**

TP1500 [13D5] TCXO Modulation  
 TP319 [3M4] FCL\_I\_P

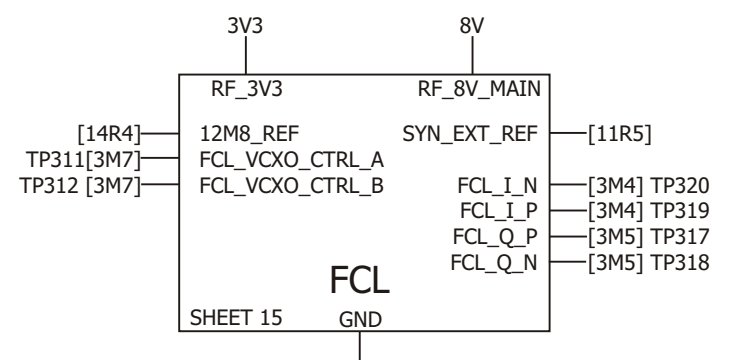
**Supplies**

RF\_3V3 [15B3] = 3V3  
 RF\_8V\_MAIN [15B3] = 8V

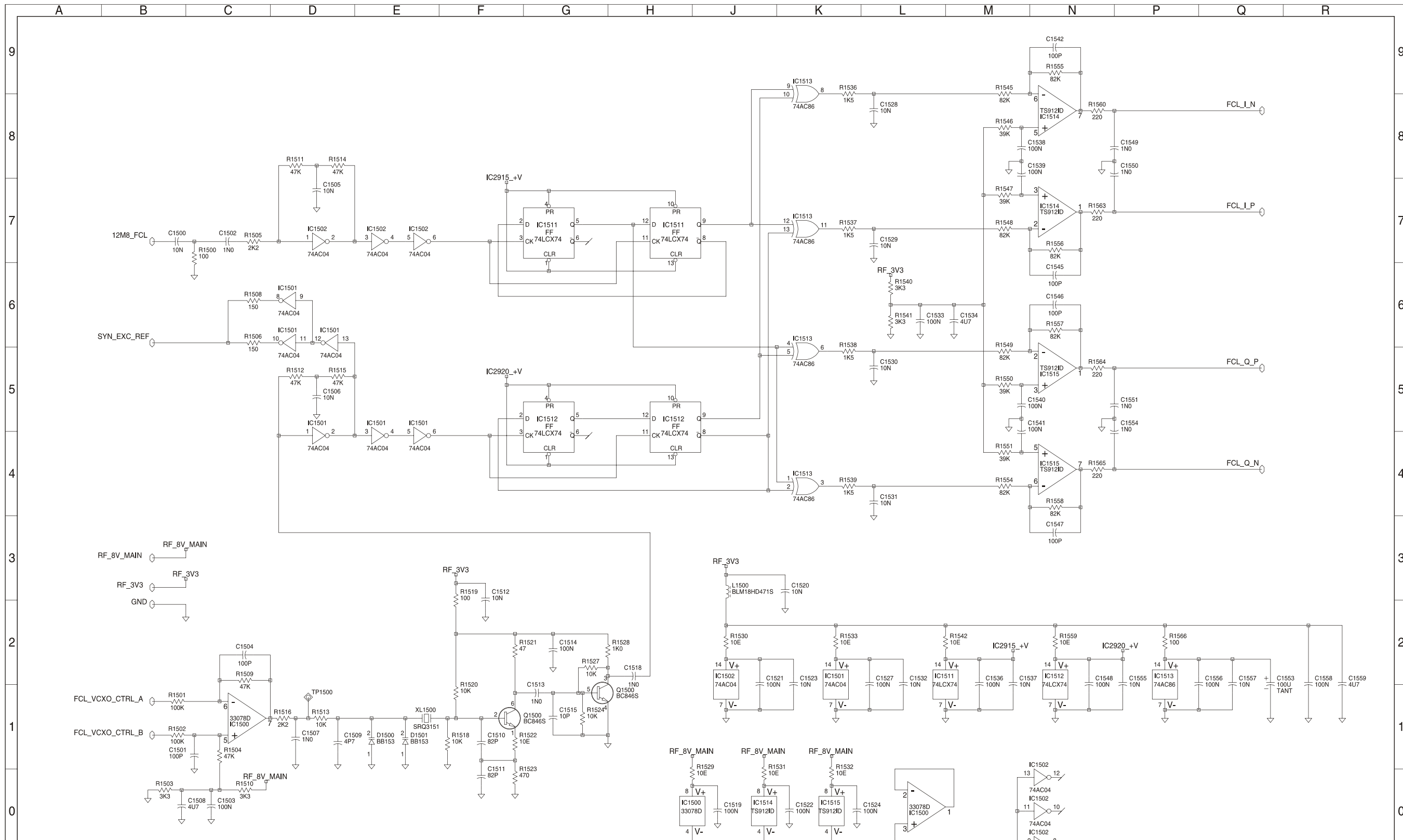
**Signal**

12M8\_FCL [15B7]  
 FCL\_VCXO\_CTRL\_A [15B1]  
 FCL\_VCXO\_CTRL\_B [15B1]

FCL\_I\_N [15Q8]  
 FCL\_I\_P [15Q7]  
 FCL\_Q\_P [15Q5]  
 FCL\_Q\_N [15Q4]







08A	ECO	101200257	CJK	SH		28/11/03	
07A	ECO	101200240	CJK	SH		23/09/03	
06A	ECO	101200068	CJK	SH		13/05/03	
05A	DCO	02025-005	CJK	SH		06/03/03	
04A	DCO	02025-004	CJK	SH		28/11/02	
03A	DCO	02025-002 & 003	CJK	SH		17/10/02	
02A	DCO	02025-001	CJK	SH		30/08/02	
01B	SCHEMATICS	REDRAWN	PAUL	G		20/6/02	
01A	CLONED	FROM 226-00252-01	PAUL	G		12/06/02	
REVISS	AMENDMENTS		DRAWN	CHKD	D.O.	APVD	DATE

© TAIT ELECTRONICS  
**TB8100**  
**FREQUENCY CONTROL LOOP**  
 IPN: 220-02025-08 ISSUE: A ID: 2.SC. 15  
 PROJECT: TB8100 DESIGNER: SH FILE NAME: 0202508a FILE DATE: 16-Dec-03 NO.SHEETS: 15