

**BLARH100
200-400MHz**

**TECHNICAL
MANUAL**

Version 003

Sadis BRUKER SPECTROSPIN

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P/N: Z31236
DWG-No: 907 003

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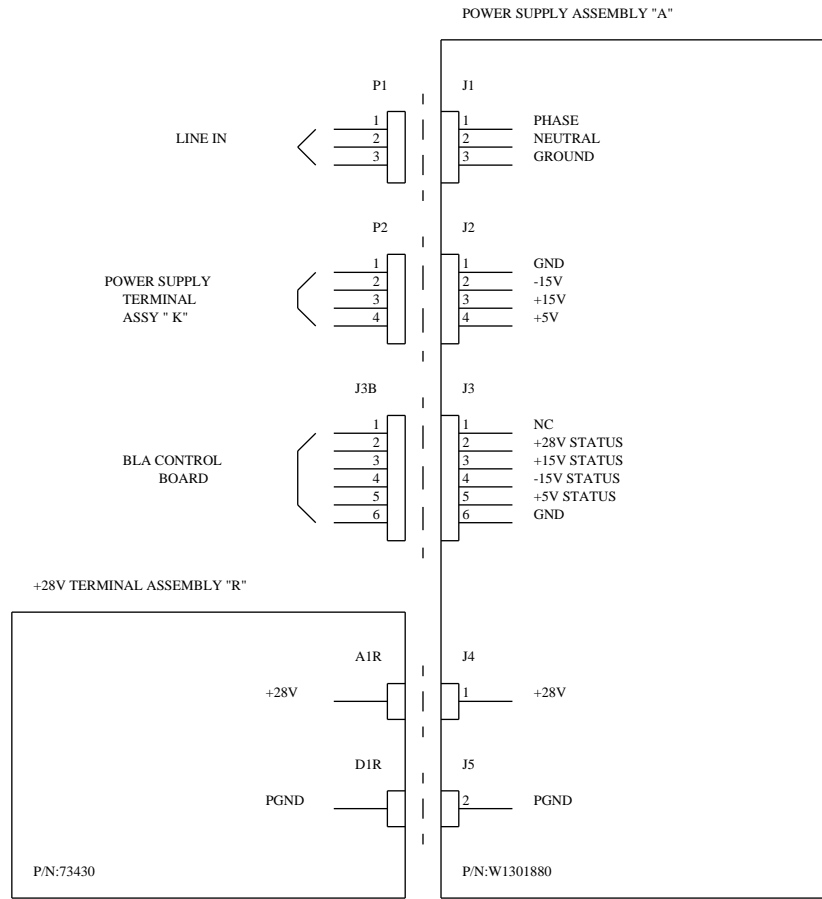
Block diagram

1

Power supply

2

Figure 2.1. Wiring diagram



ART: W1301880	EC:	DRAWN: DW	VISA:	S.a.d.i.s BRUKER
BLA POWER ASSEMBLY ASSY "A" INTERCONNECT DRAWING		DATE: 03/01/94		
		APPROV: CO	VISA:	
		DATE: 01/06/94		

Figure 2.2. Power supply diagram

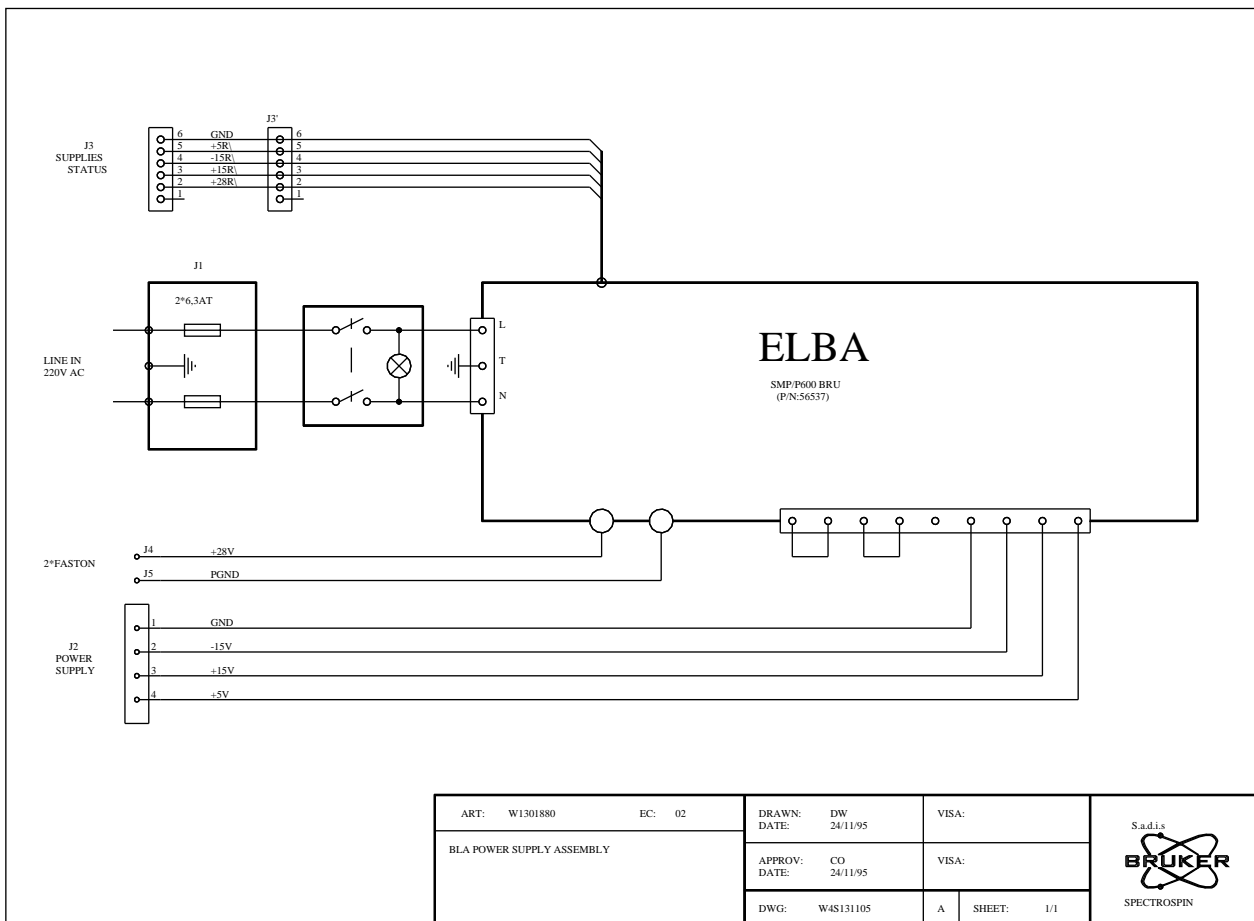
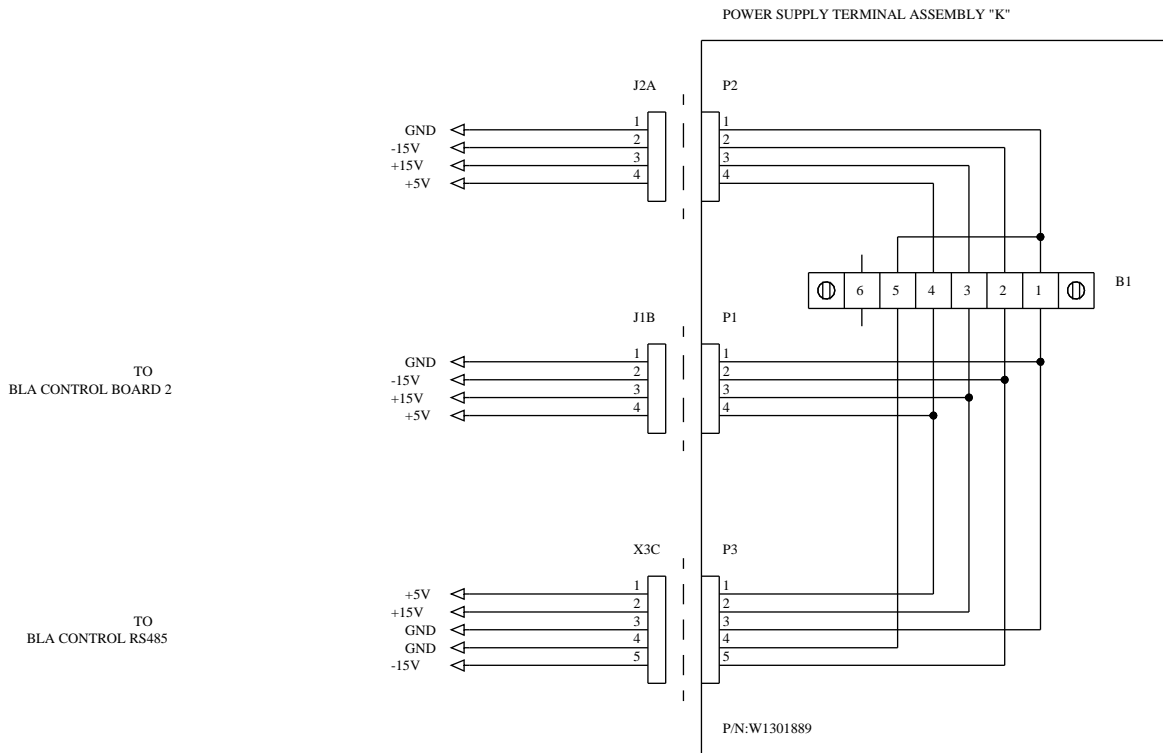



Figure 2.3. Power supply terminal



ART: W1301889	EC: 01	DRAWN: DW	VISA:	S.a.d.i.s 
BLA POWER SUPPLY TERMINAL ASSY "K" INTERCONNECT DRAWING		DATE: 06/05/93	VISA:	
		APPROV:	VISA:	
		DATE:		

Control board 2

Figure 4.1. Interconnect drawing sheet 1/3

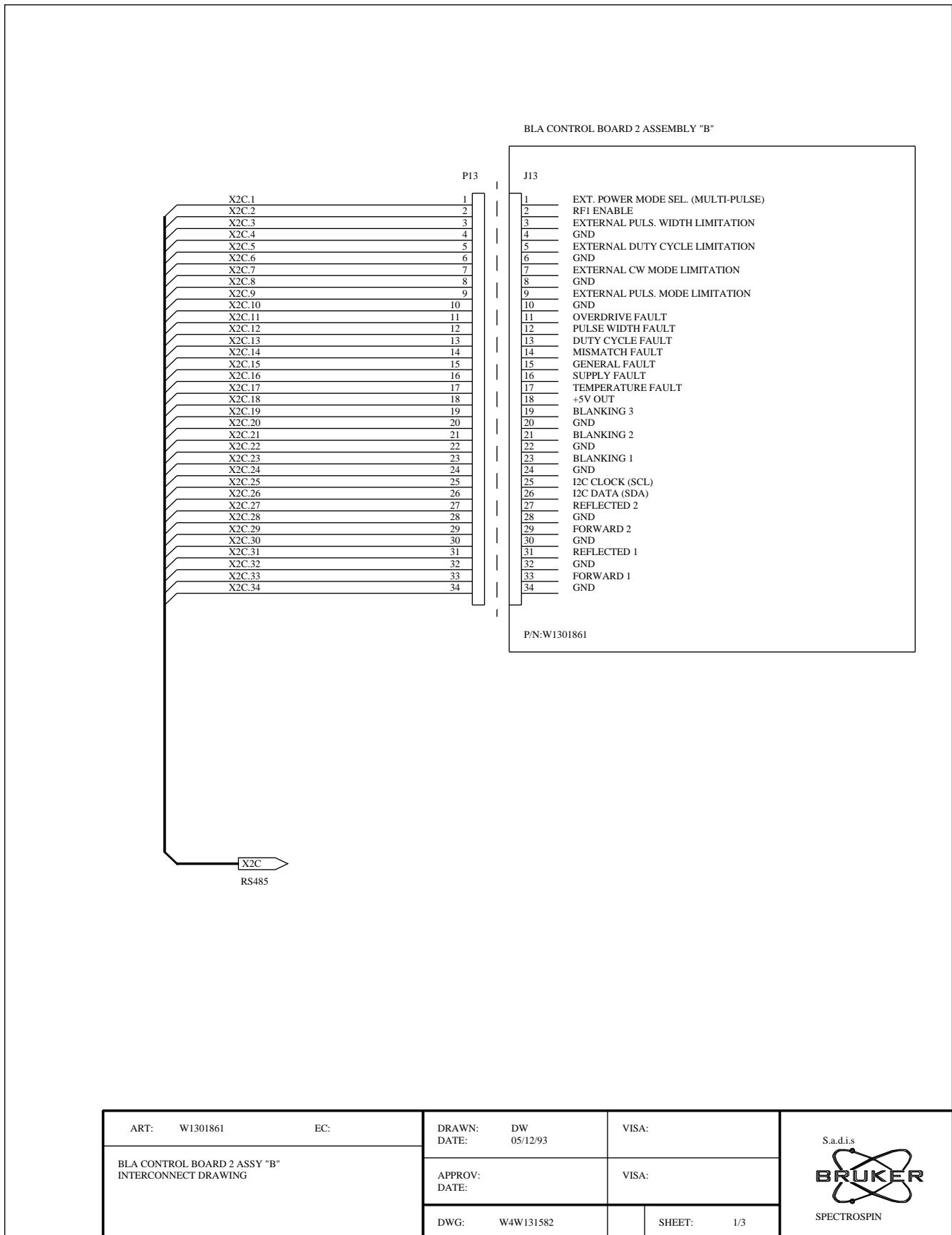
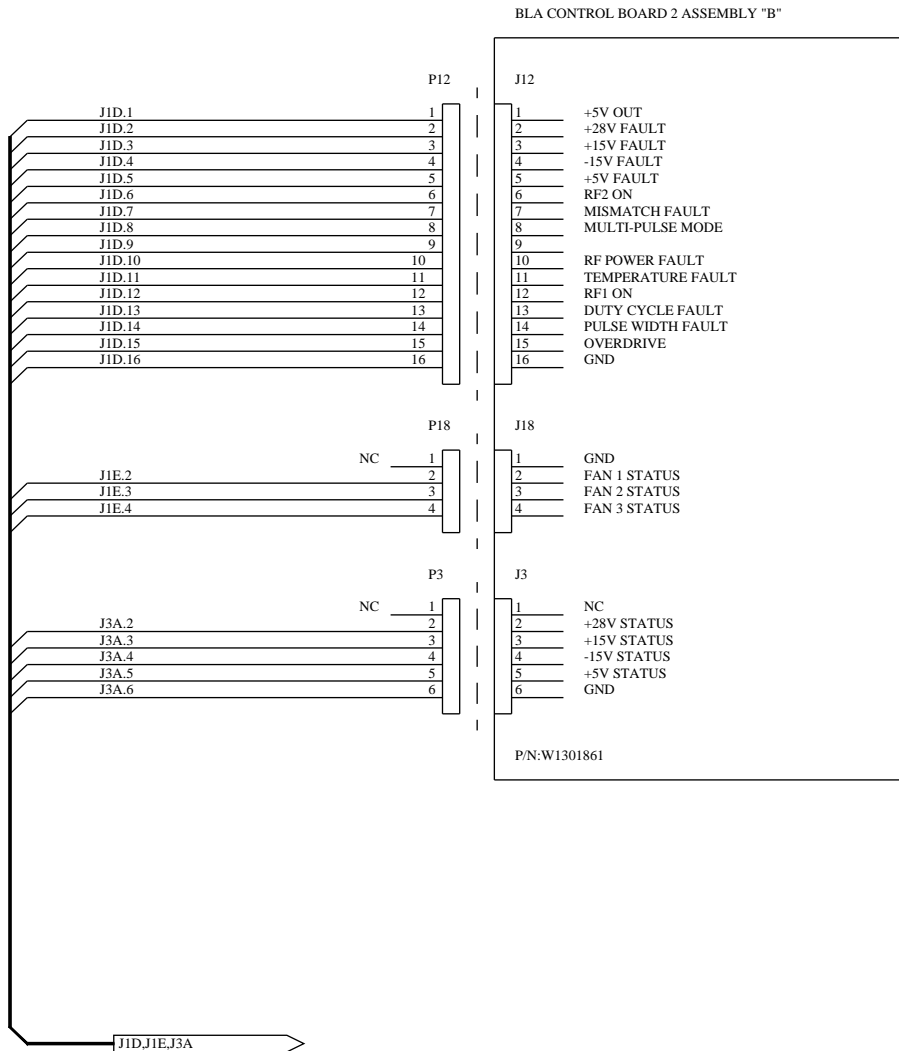


Figure 4.2. Interconnect drawing sheet 2/3



ART: W1301861	EC:	DRAWN: DW	DATE: 05/12/93	VISA:
BLA CONTROL BOARD 2 ASSY "B" INTERCONNECT DRAWING		APPROV:		VISA:
		DATE:		
DWG: W4W131583			SHEET: 2/3	

S.a.d.i.s

SPECTROSPIN

Figure 4.3. Interconnect drawing sheet 3/3

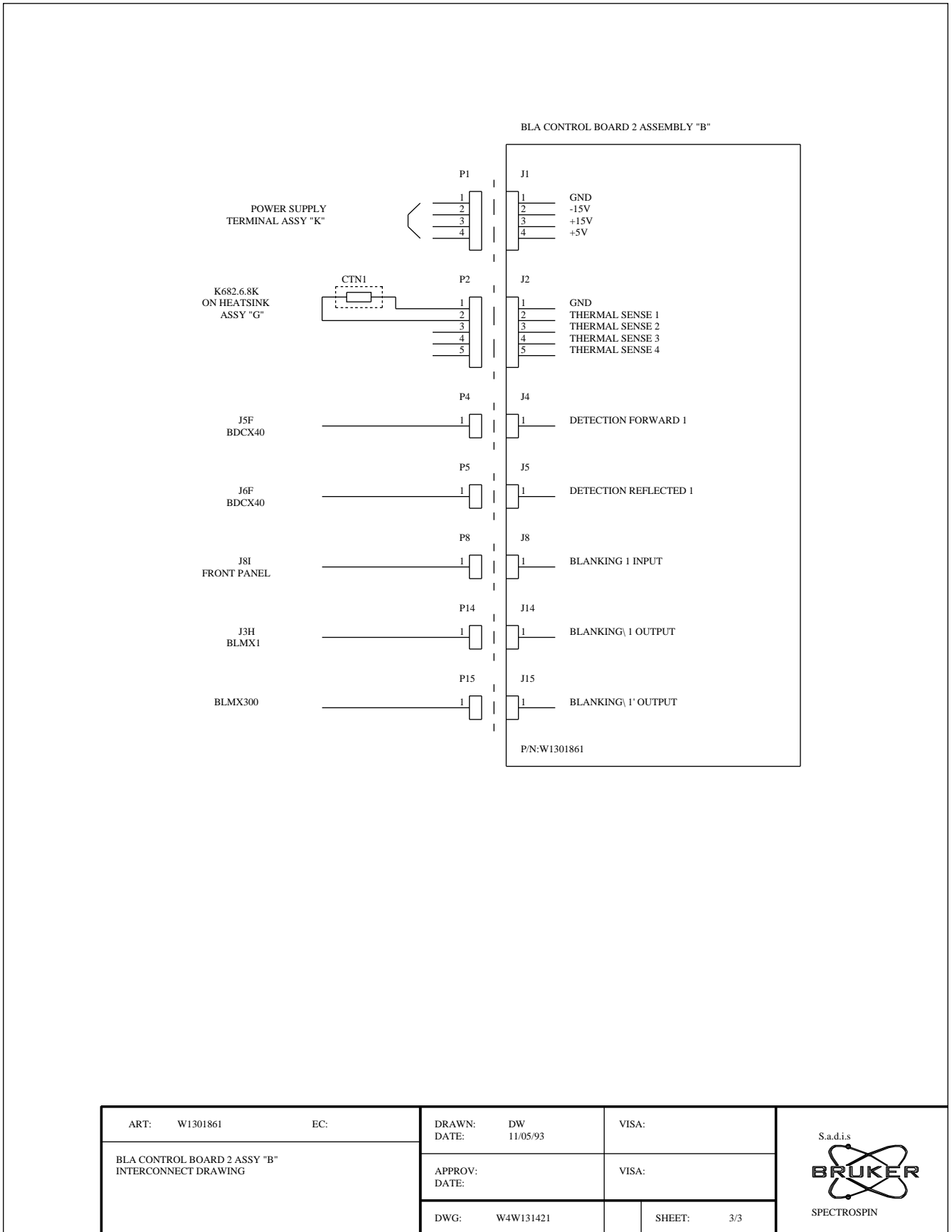


Figure 4.4. Control board top side

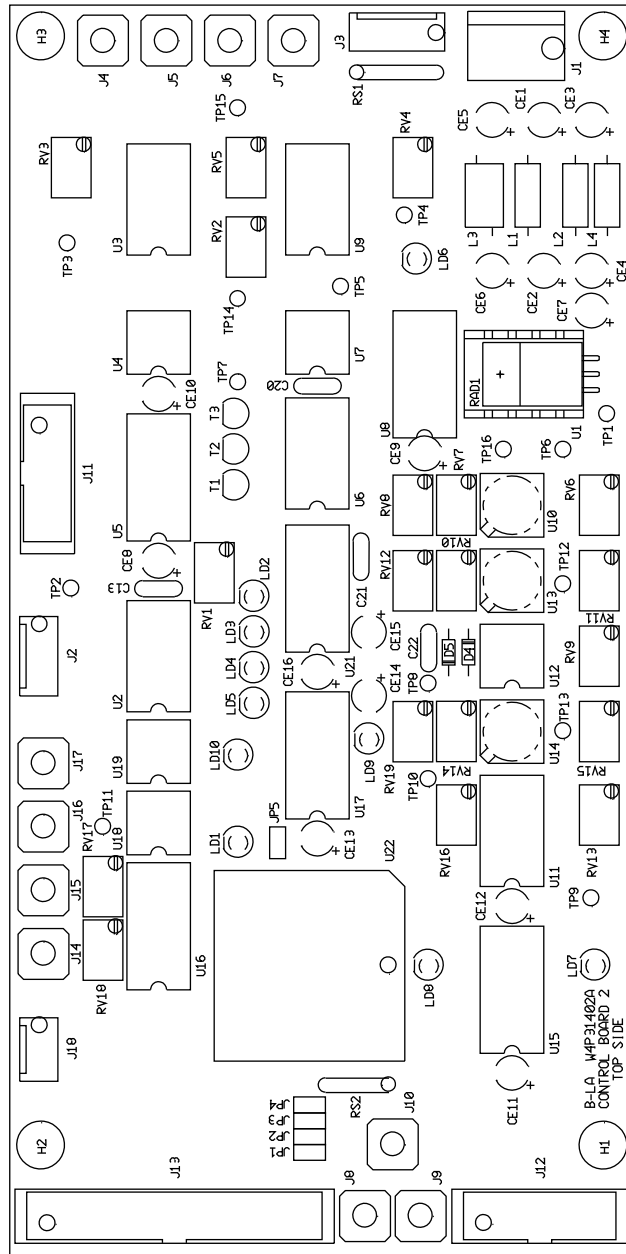


Figure 4.6. Control board 1/7 - power supply & reference

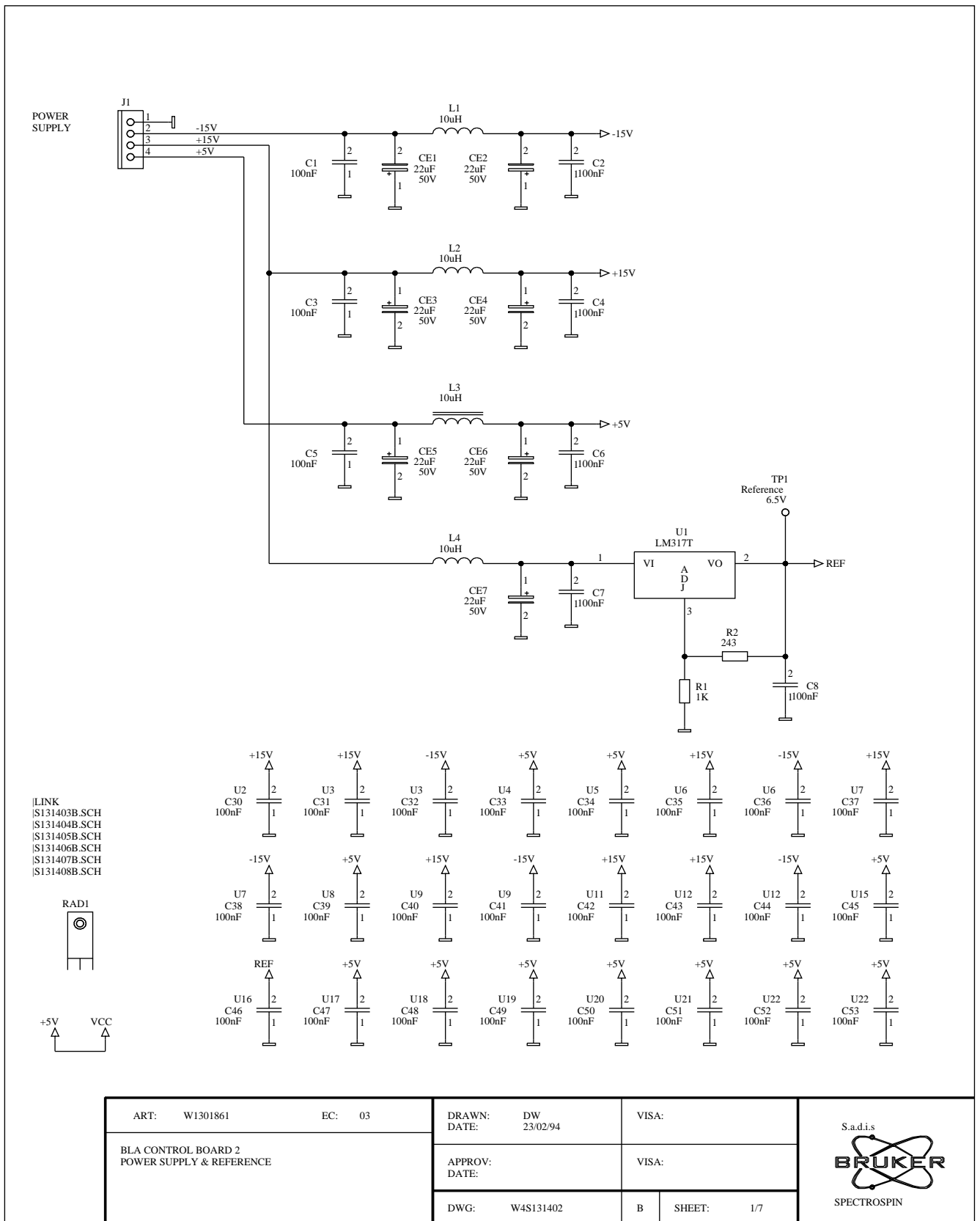
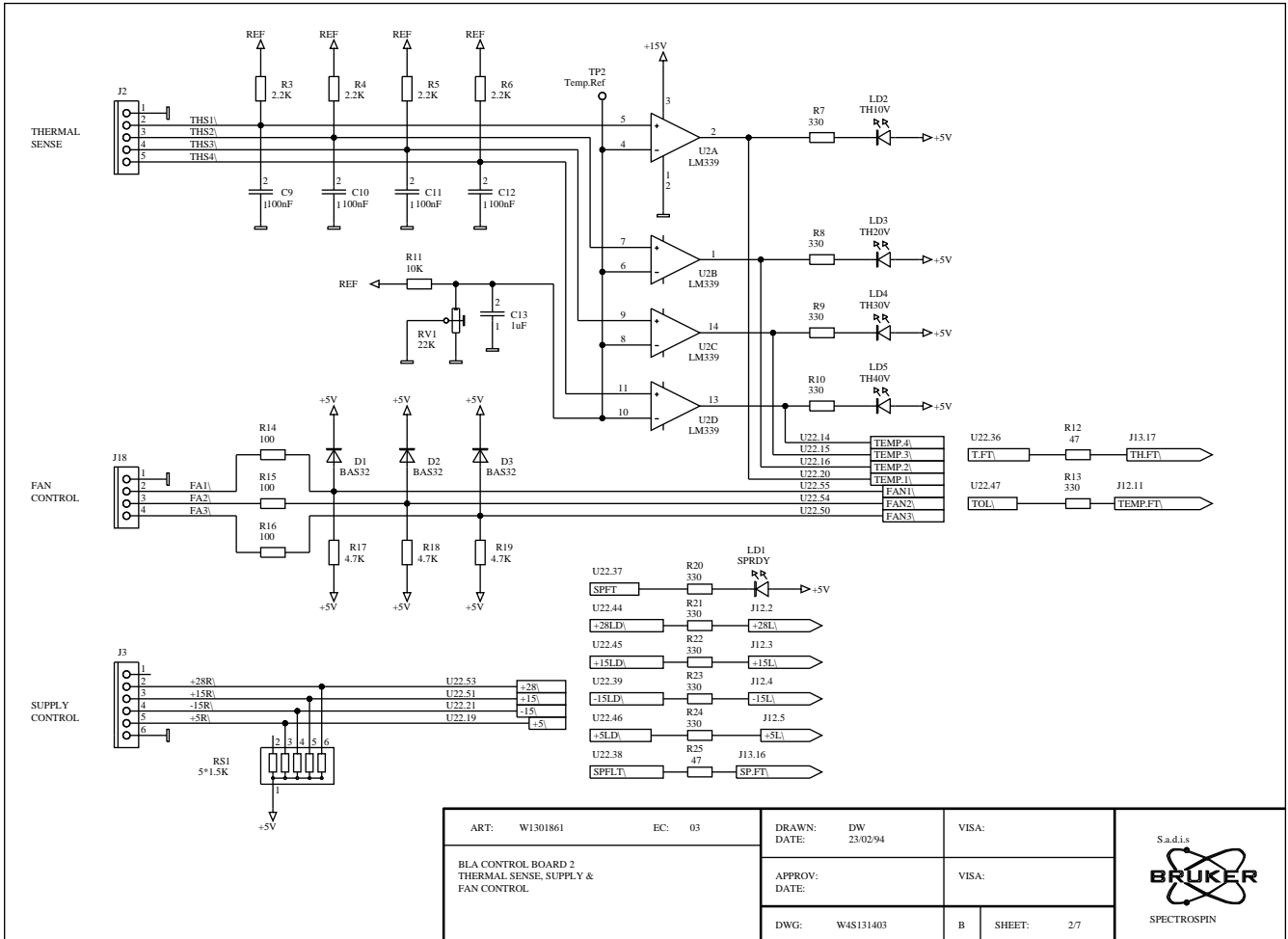


Figure 4.7. Control board 2/7 - Thermal sense, supply & fan control



ART: W1301861	EC: 03	DRAWN: DW 23/02/94	VISA:
BLA CONTROL BOARD 2 THERMAL SENSE, SUPPLY & FAN CONTROL		APPROV: DATE:	VISA:
DWG: W4S131403	B	SHEET: 2/7	SPECTROSPIN

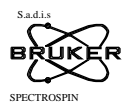
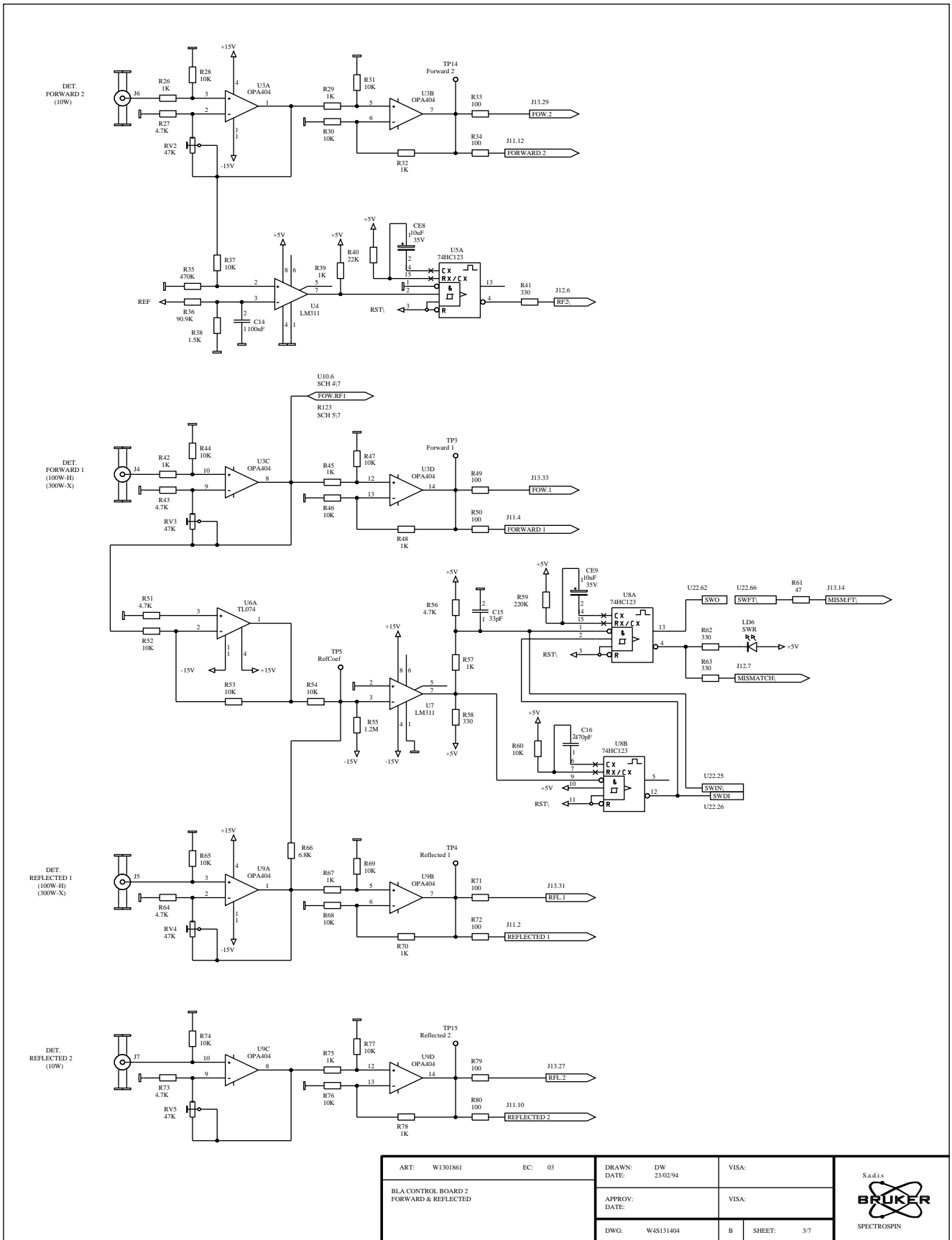


Figure 4.8. Control board 3/7 - Forward & reflected




ART: W1301861	EC: 03	DRAWN: DW DATE: 23/02/94	VISA:	S.a.d.i.s  SPECTROSPIN
BLA CONTROL BOARD 2 FORWARD & REFLECTED		APPROV:	VISA:	
		DWG: W4S131404	B SHEEF: 3/7	

Figure 4.9. Control board 4/7 - Duty cycle & pulse width limiter

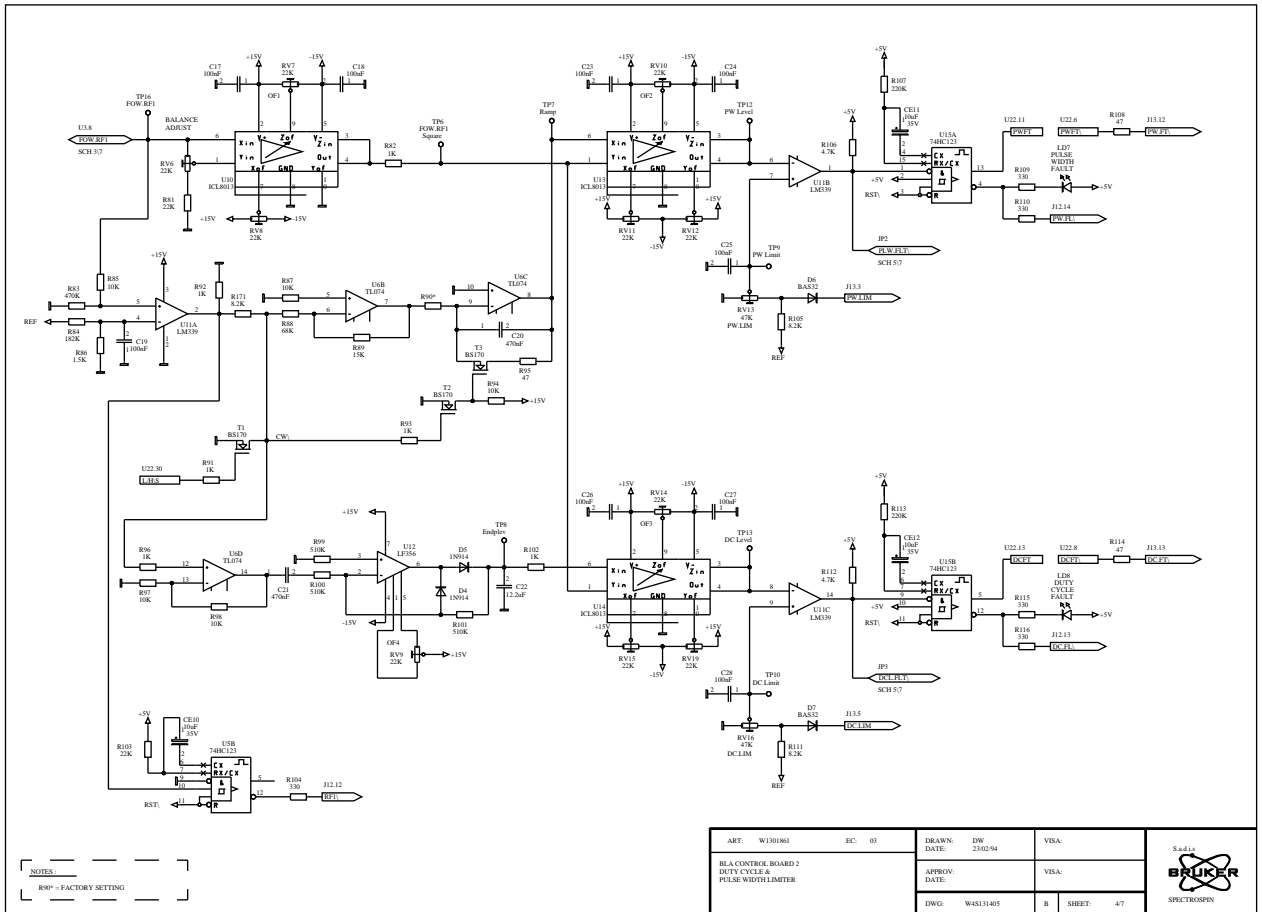


Figure 4.10. Control board 5/7 - Power limitation

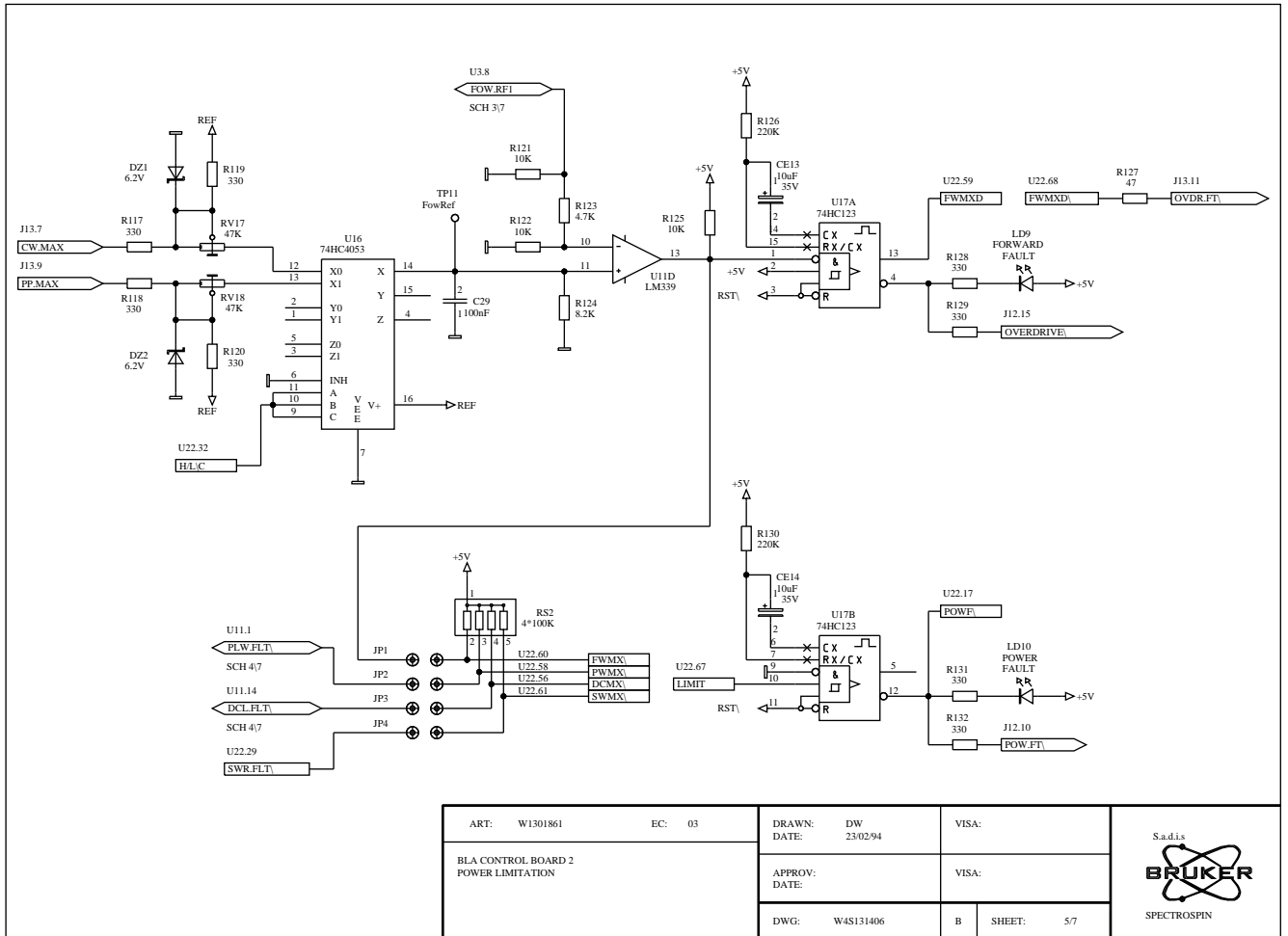


Figure 4.11. Control board 6/7 - Blanking circuit

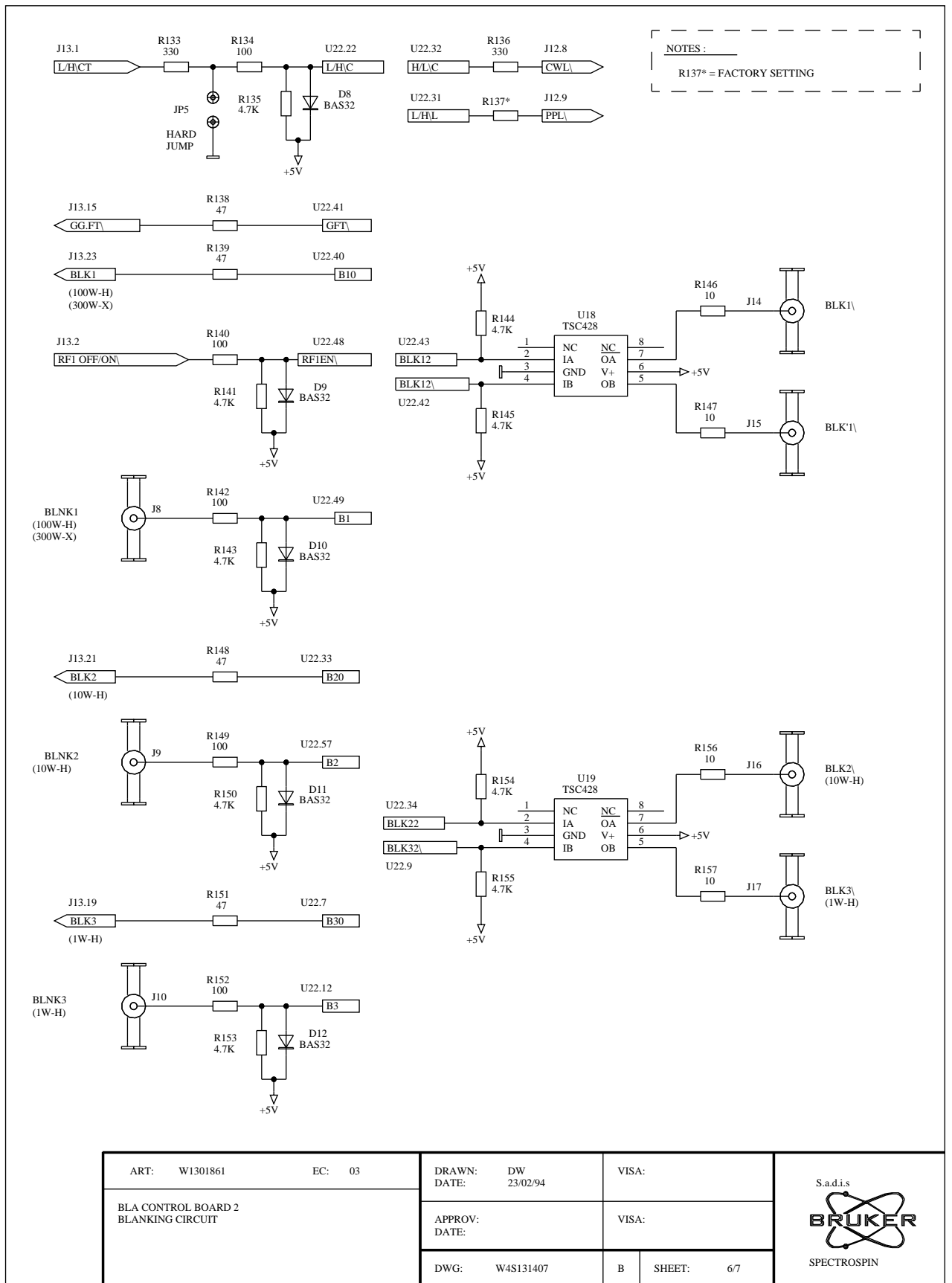
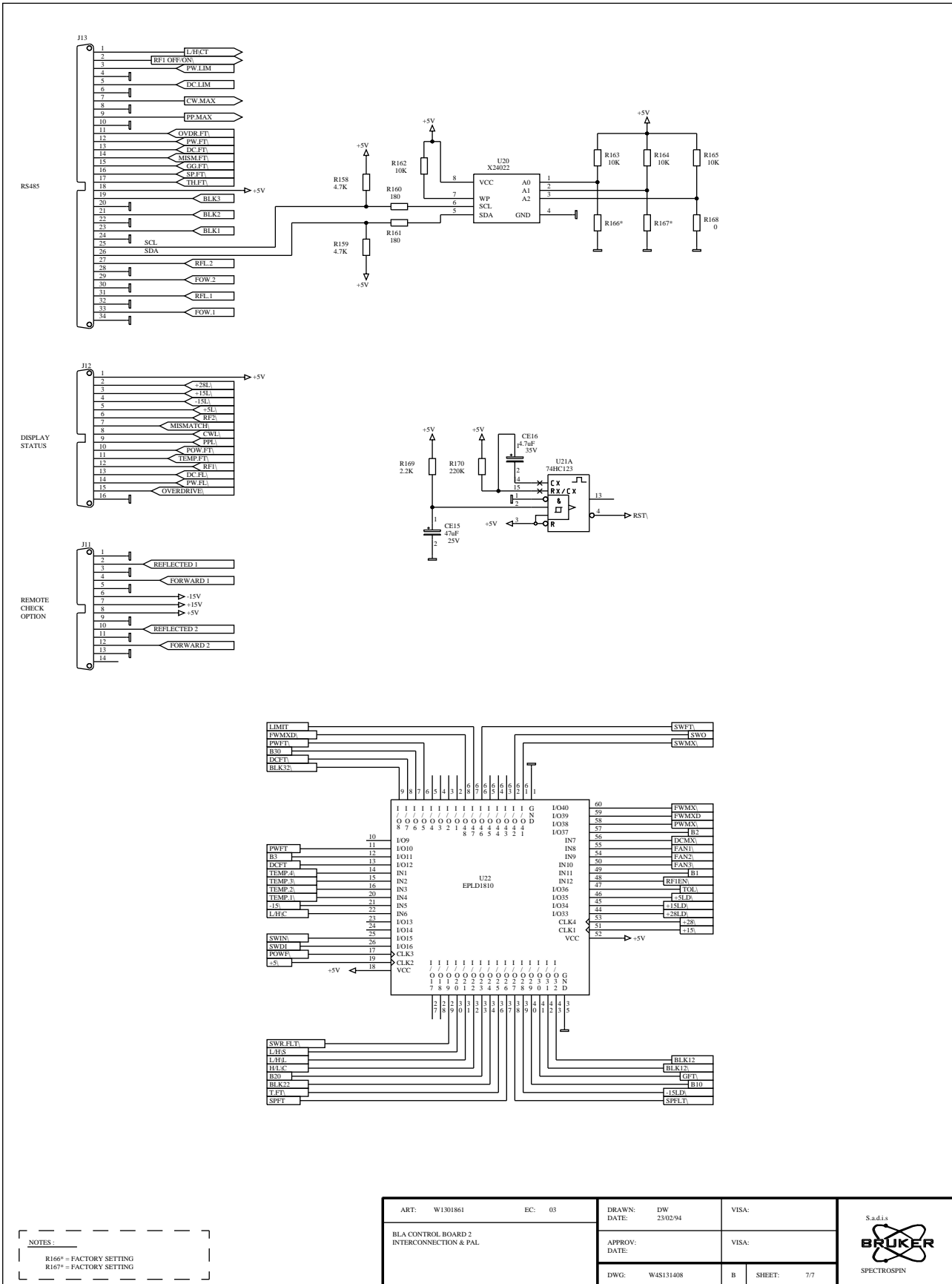


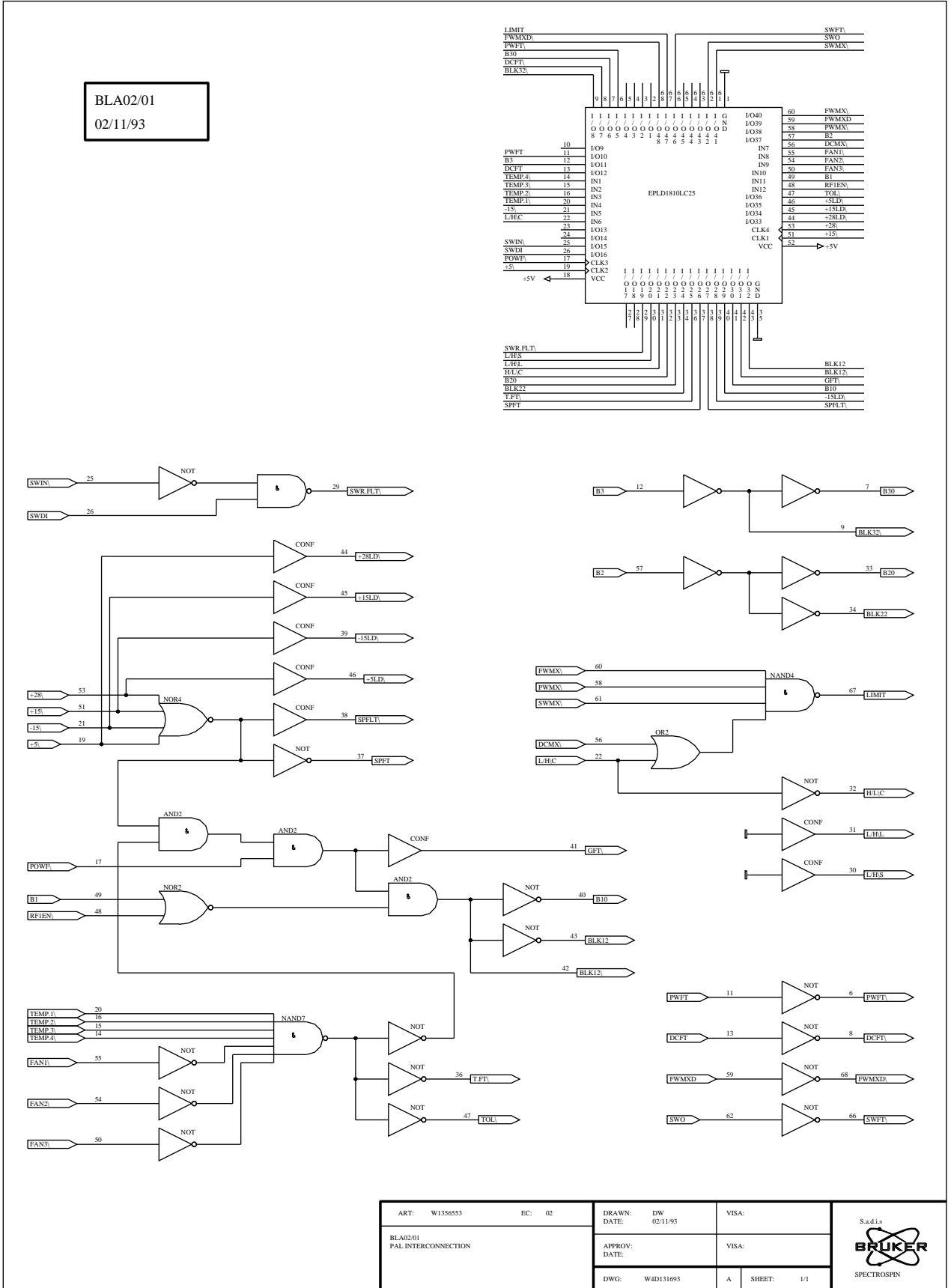
Figure 4.12. Control board 7/7 - Interconnection & pal




NOTES:
 R166* = FACTORY SETTING
 R167* = FACTORY SETTING

ART: W1301861	EC: 03	DRAWN: DW	VISA:	Sadis BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 INTERCONNECTION & PAL		DATE: 23/02/94	VISA:	
		DWG: W45131408	B SHEET: 7/7	

Figure 4.13. Pal interconnection

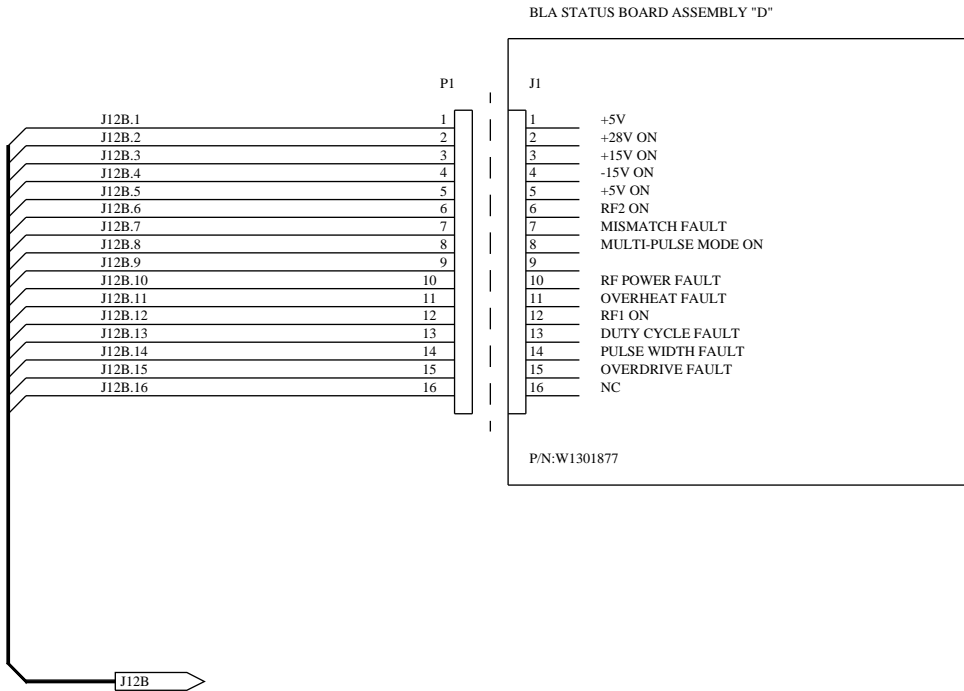


ART: W135653	EC: 02	DRAWN: DW	VISA:	
BLA02/01 PAL INTERCONNECTION		DATE: 02/11/93	VISA:	
		DWG: W4D131693	A SHEET: 1/1	

Status board

4

Figure 4.1. Interconnect drawing




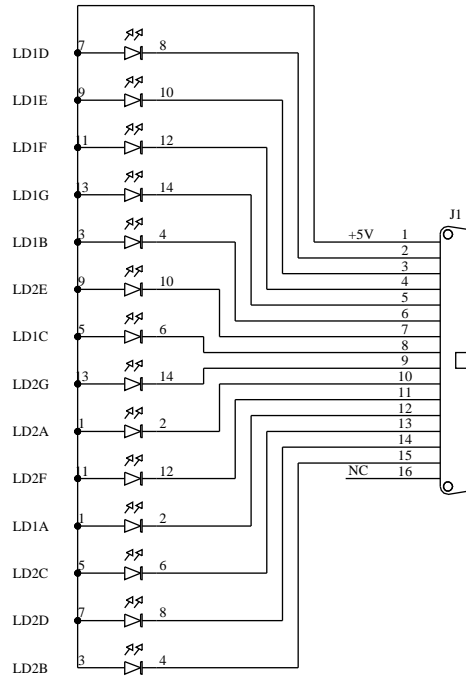
ART: W1301877	EC:	DRAWN: DW	VISA:	
BLA STATUS BOARD ASSY "D" INTERCONNECT DRAWING		DATE: 03/01/94		
		APPROV: DATE:	VISA:	
		DWG: W4W131580	SHEET: 1/1	

Figure 4.2. Status led board



ART: W1301877	EC: 01	DRAWN: DW	DATE: 03/05/93	VISA:
STATUS LED BOARD		APPROV:	DATE:	VISA:
DWG: W4S131378		SHEET: 1/1		

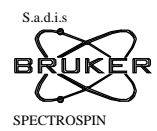
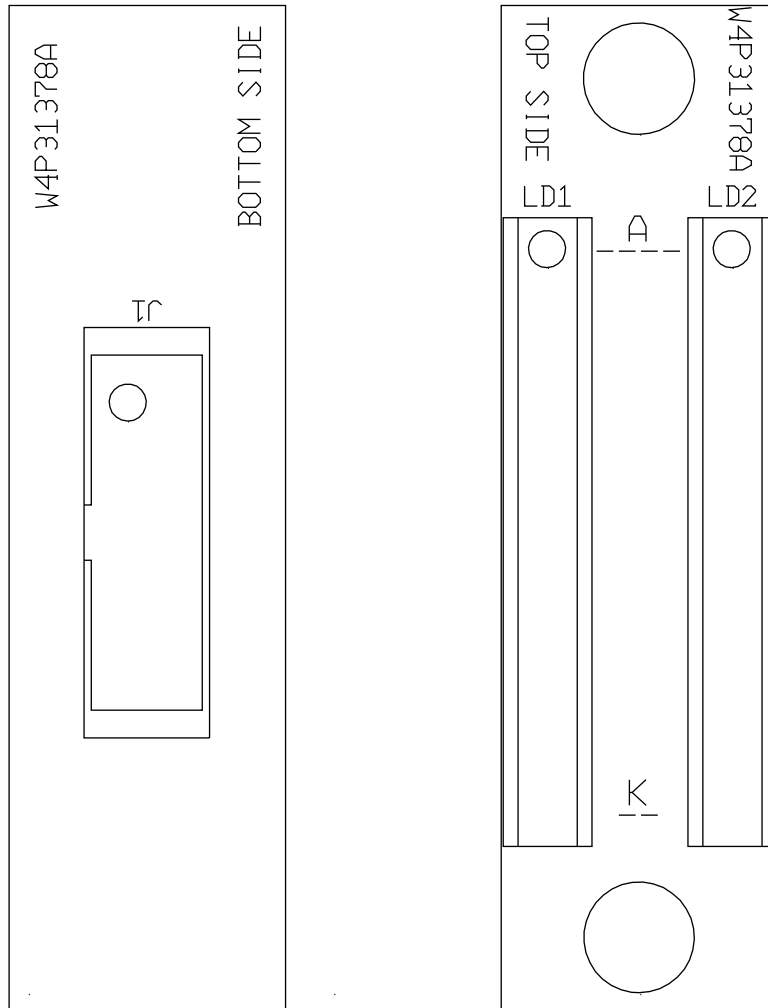


Figure 4.3. Status led board - location



Fan assembly

5

Figure 5.1. Interconnect drawing

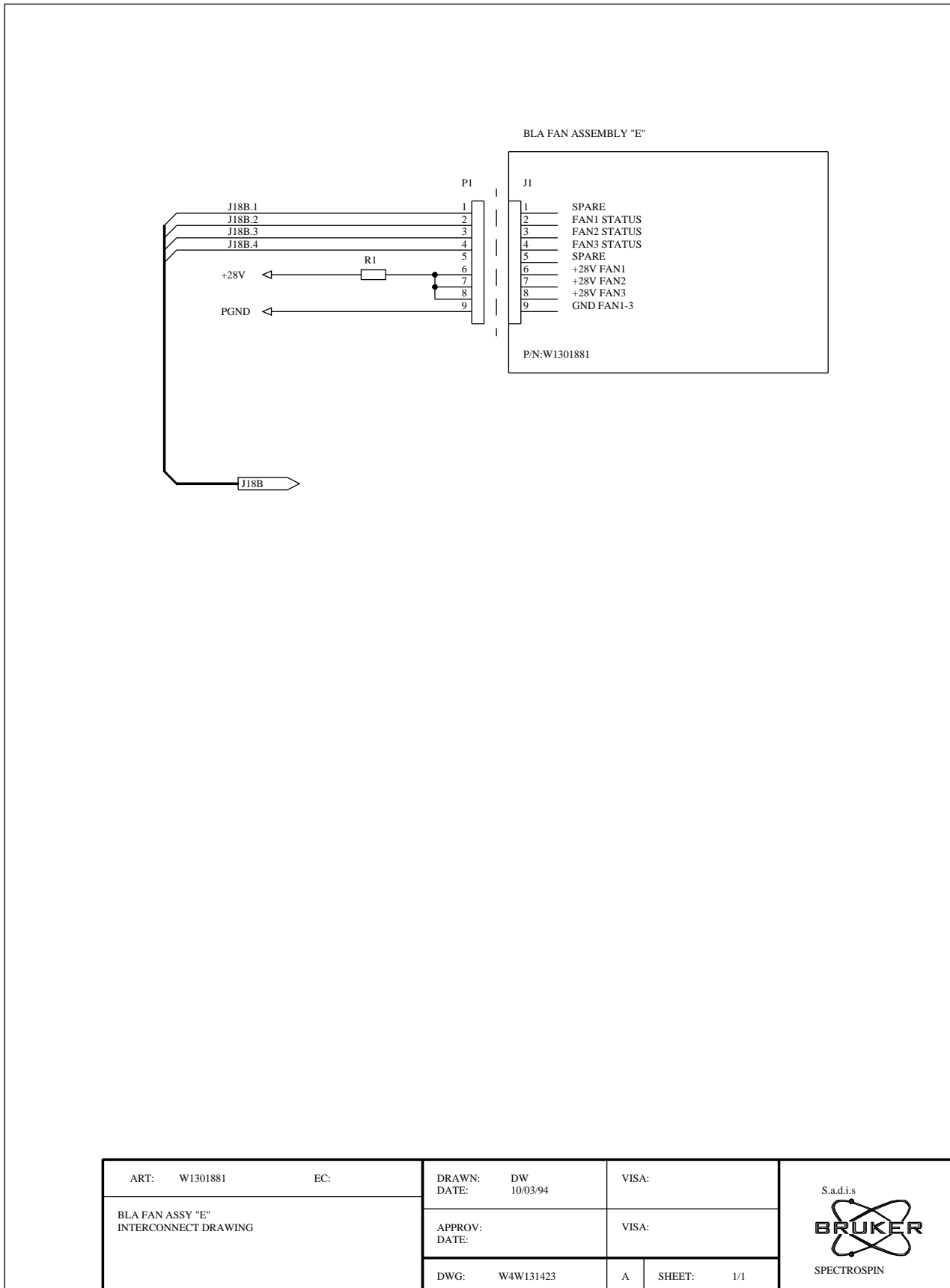
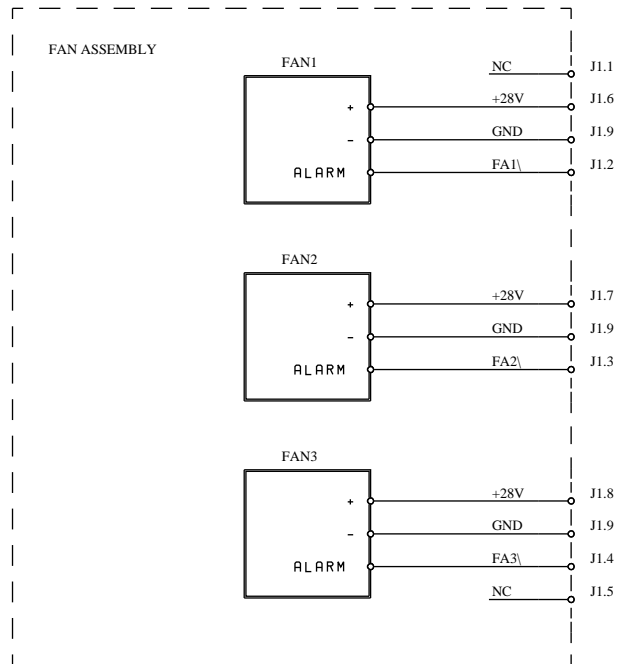



Figure 5.2. Fan assembly



ART: W1301881	EC: 01	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
FAN ASSEMBLY		DATE: 05/05/93	VISA:	
		APPROV: DATE:	VISA:	
		DWG: W4S131424	SHEET: 1/1	

BLMH1/5/10

6

Figure 6.1. Interconnect diagram

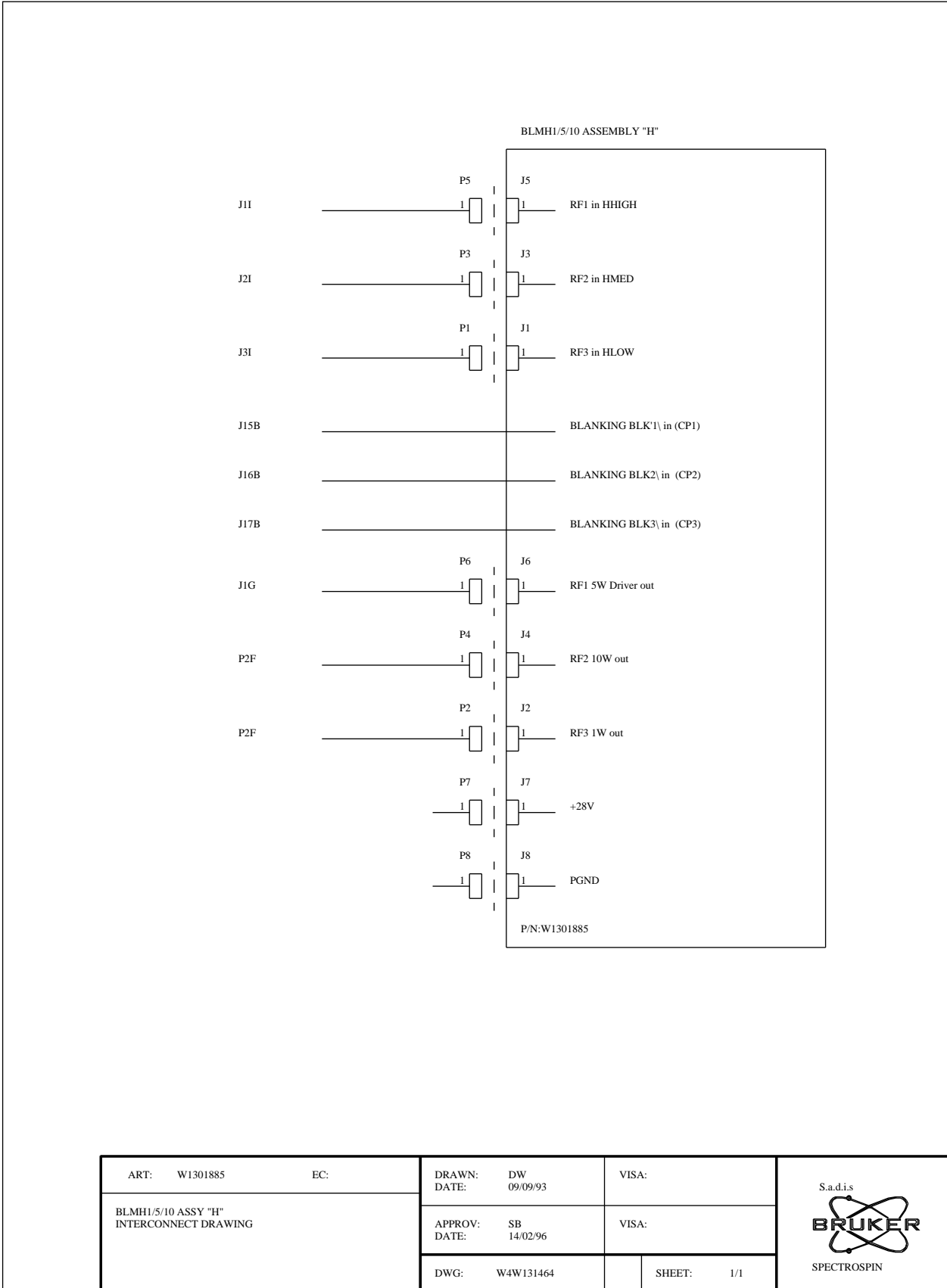


Figure 6.2. RF block diagram

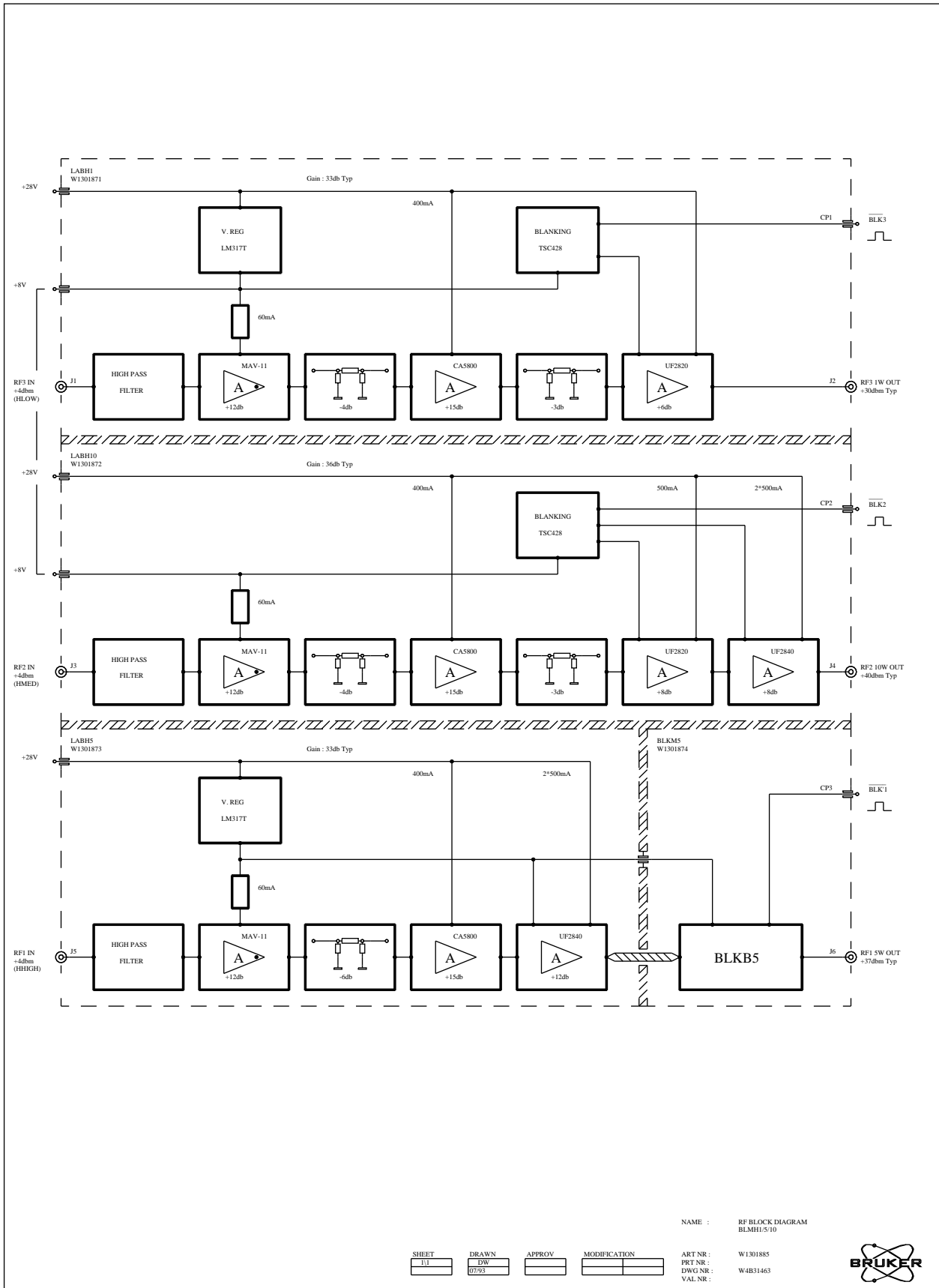
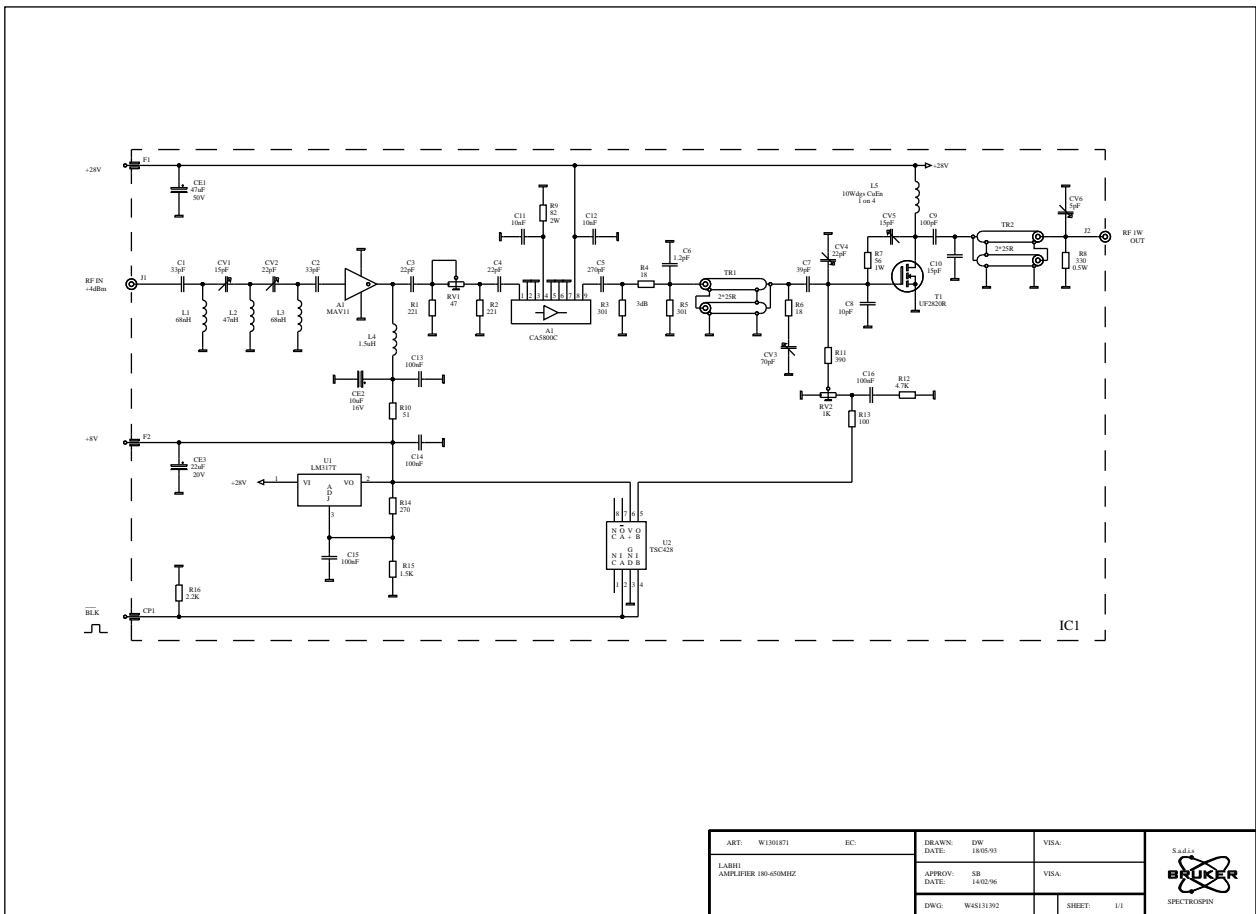


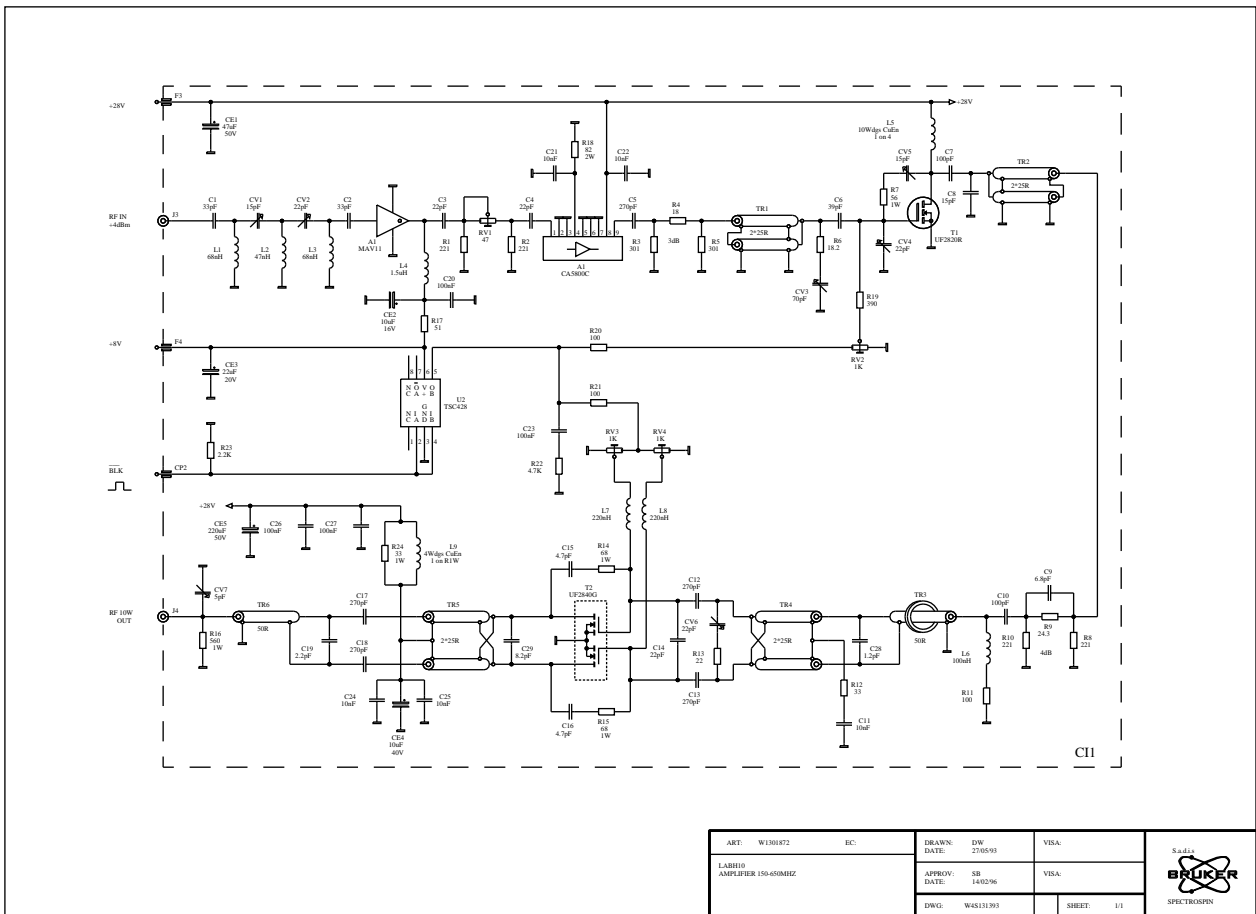
Figure 6.3. Amplifier 180-850 Mhz



ART: W1101871	EC:	DRAWN: DW	DATE: 18/05/93	VISA:
LABEL: AMPLIFIER 180-850MHZ		APPROV: SB	DATE: 14/02/96	VISA:
		DWG: W48131392		SHEET: 1/1



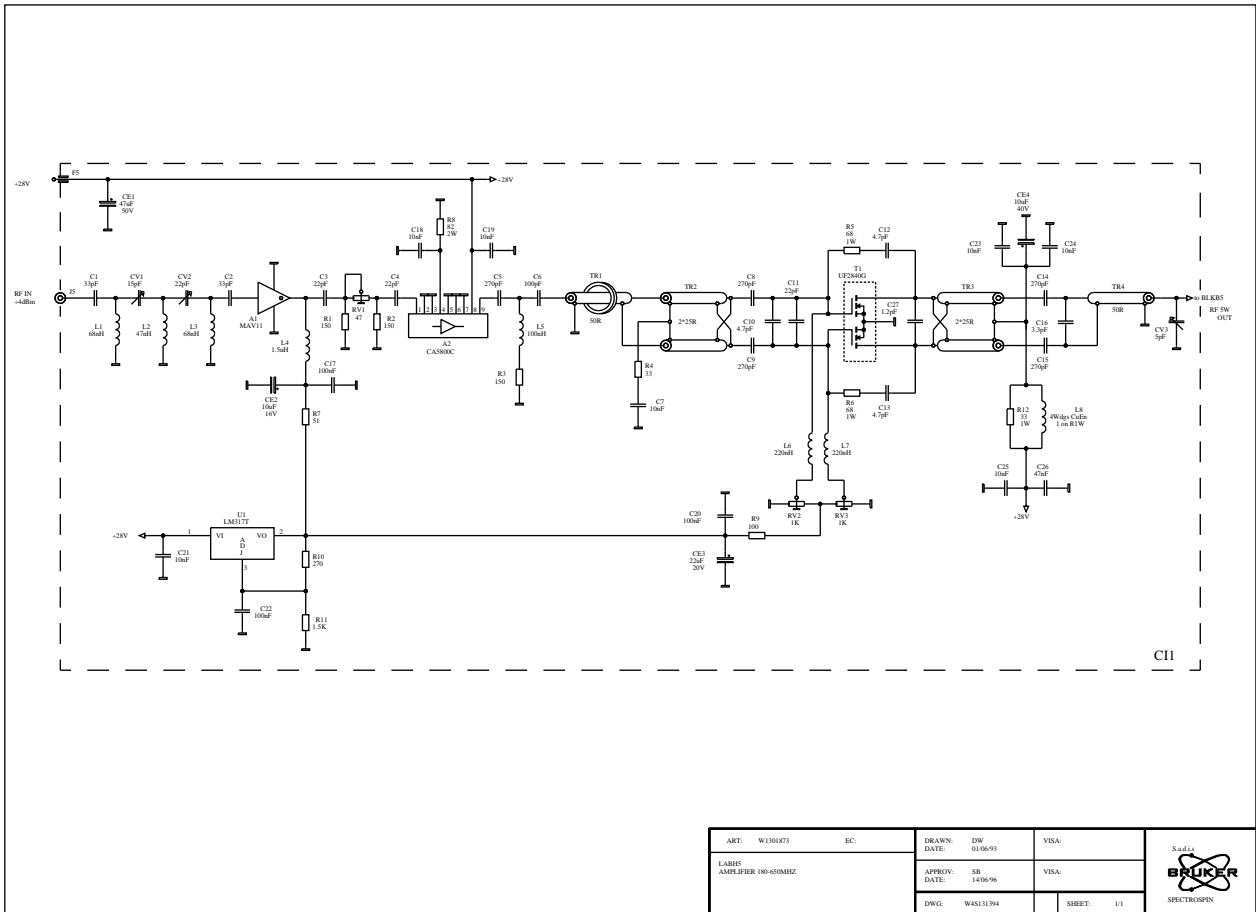
Figure 6.4. LABH10



ART: W1101872	EC:	DRAWN: DW	DATE: 27/05/93	VISA:
LABH10		APPROV: SB	DATE: 14/02/96	VISA:
AMPLIFIER 150.40MHZ		DWG: W48111/93		SHEET: 1/1

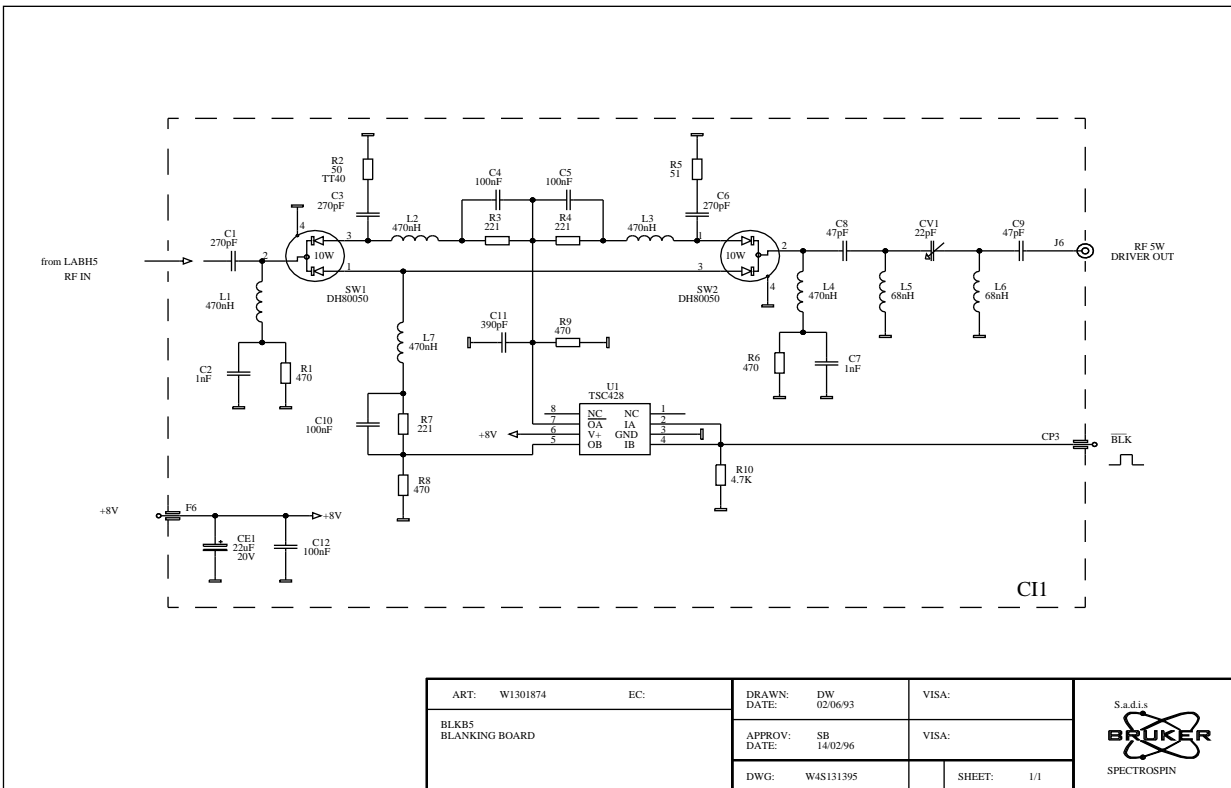


Figure 6.5. LABH5



ART: W1101873	EC:	DRAWN: DW	VISA:	
LABH5 AMPLIFIER 180-DEGREE		DATE: 01/06/93		
		APPROV: SB	VISA:	
		DATE: 14/06/96		
DWG: W48131/94			SHEET: 1/1	

Figure 6.6. Blanking board



BLMH100 amplifier module

Figure 7.1. Wiring diagram

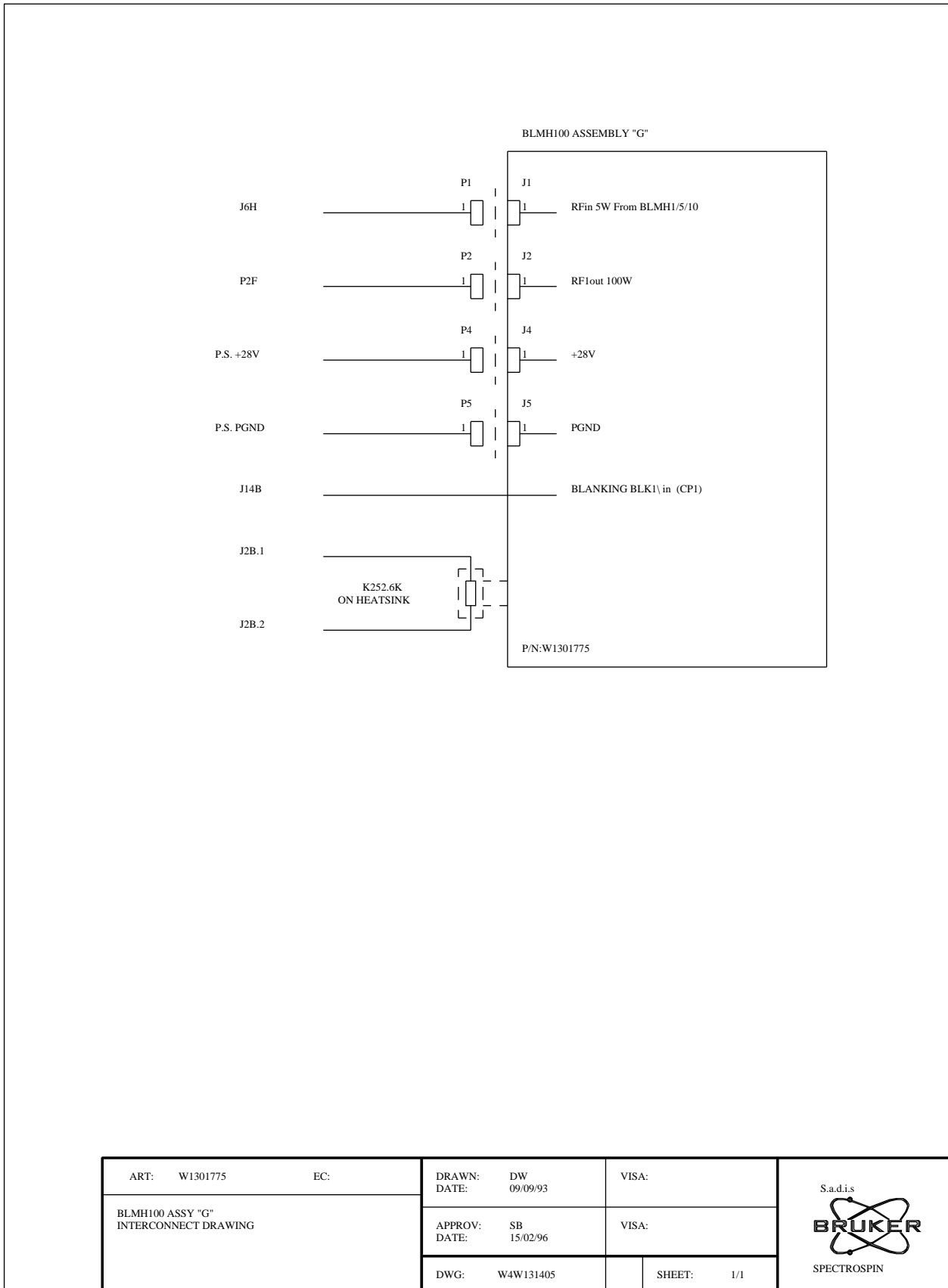


Figure 7.2. Block diagram

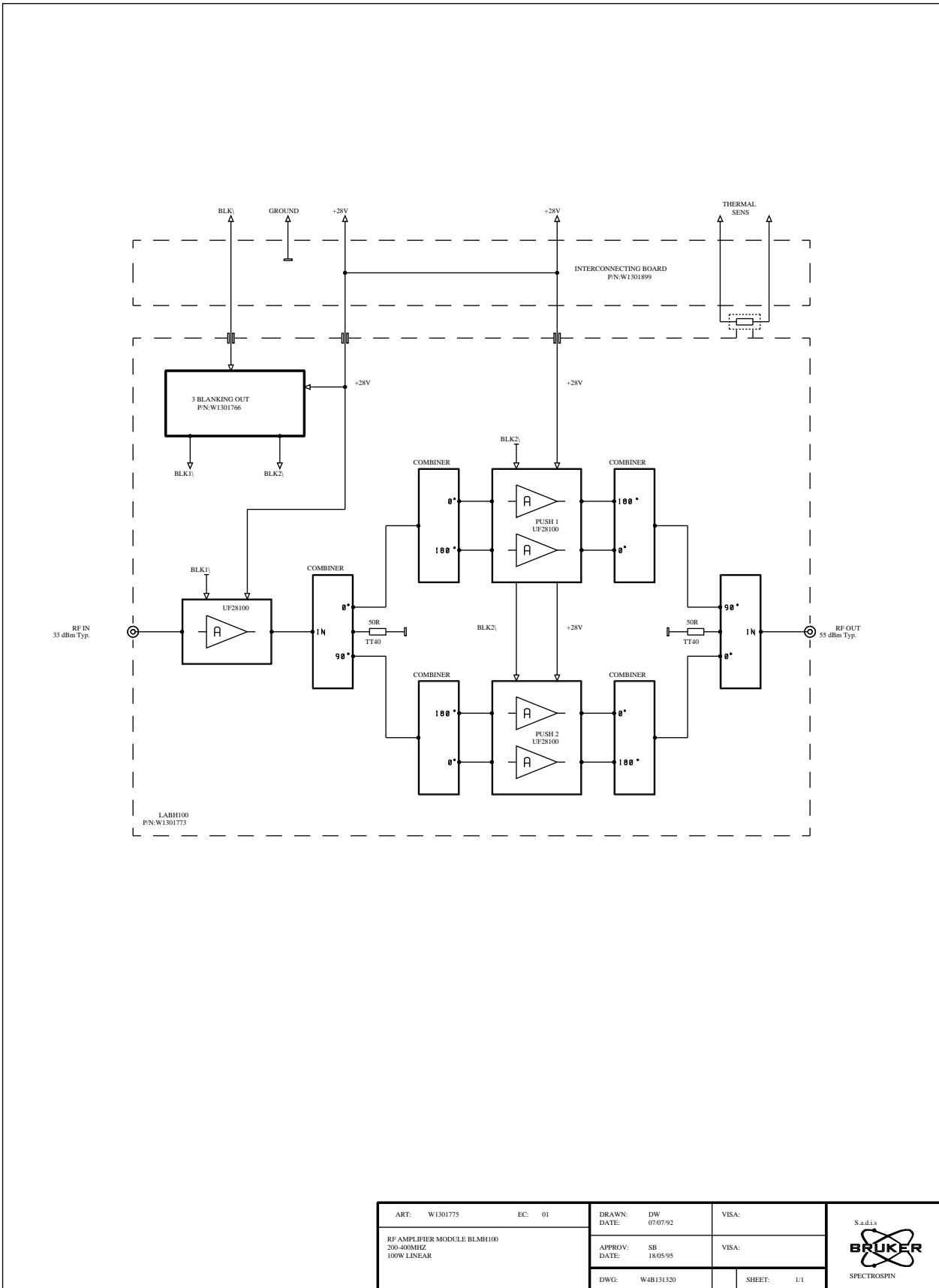


Figure 7.3. LABH100

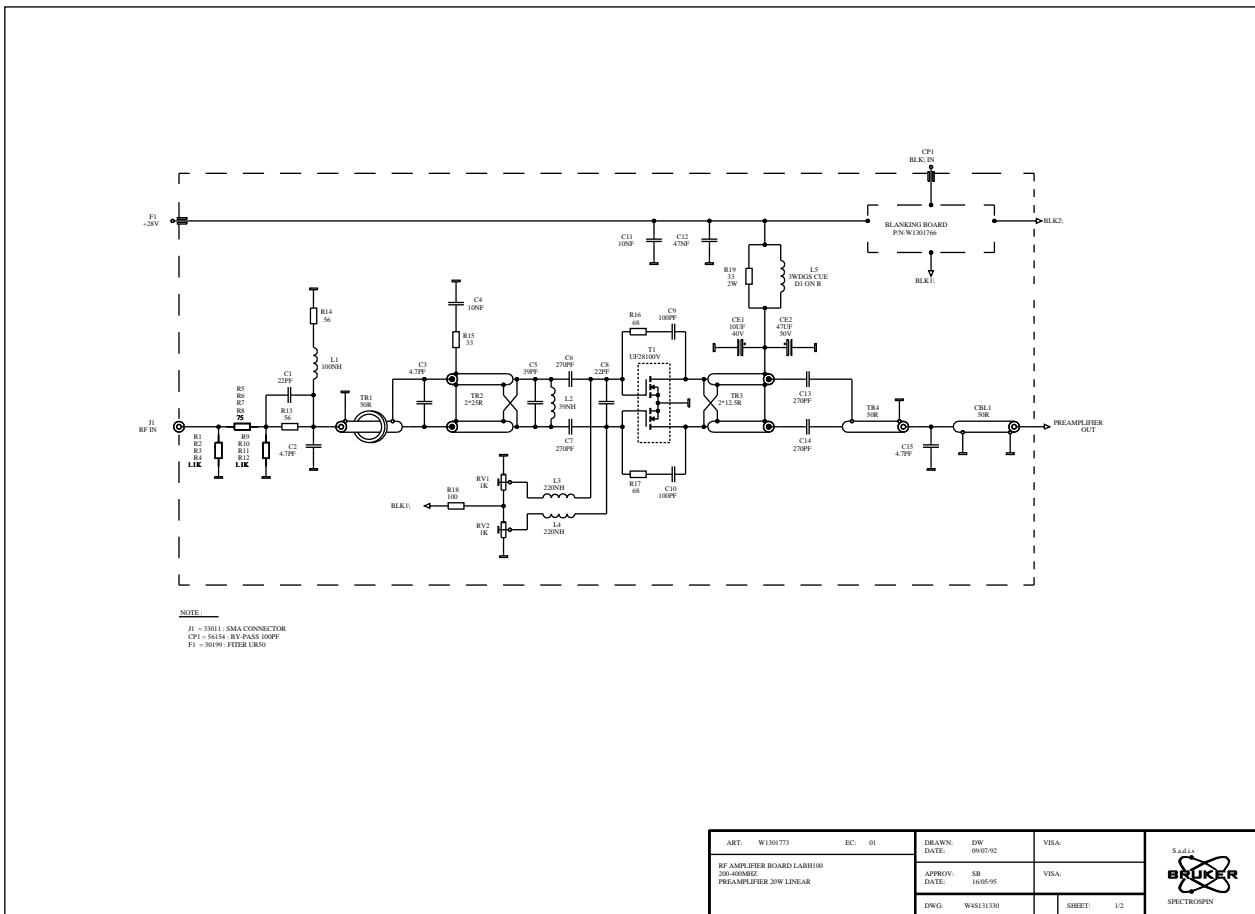


Figure 7.4. LABH100

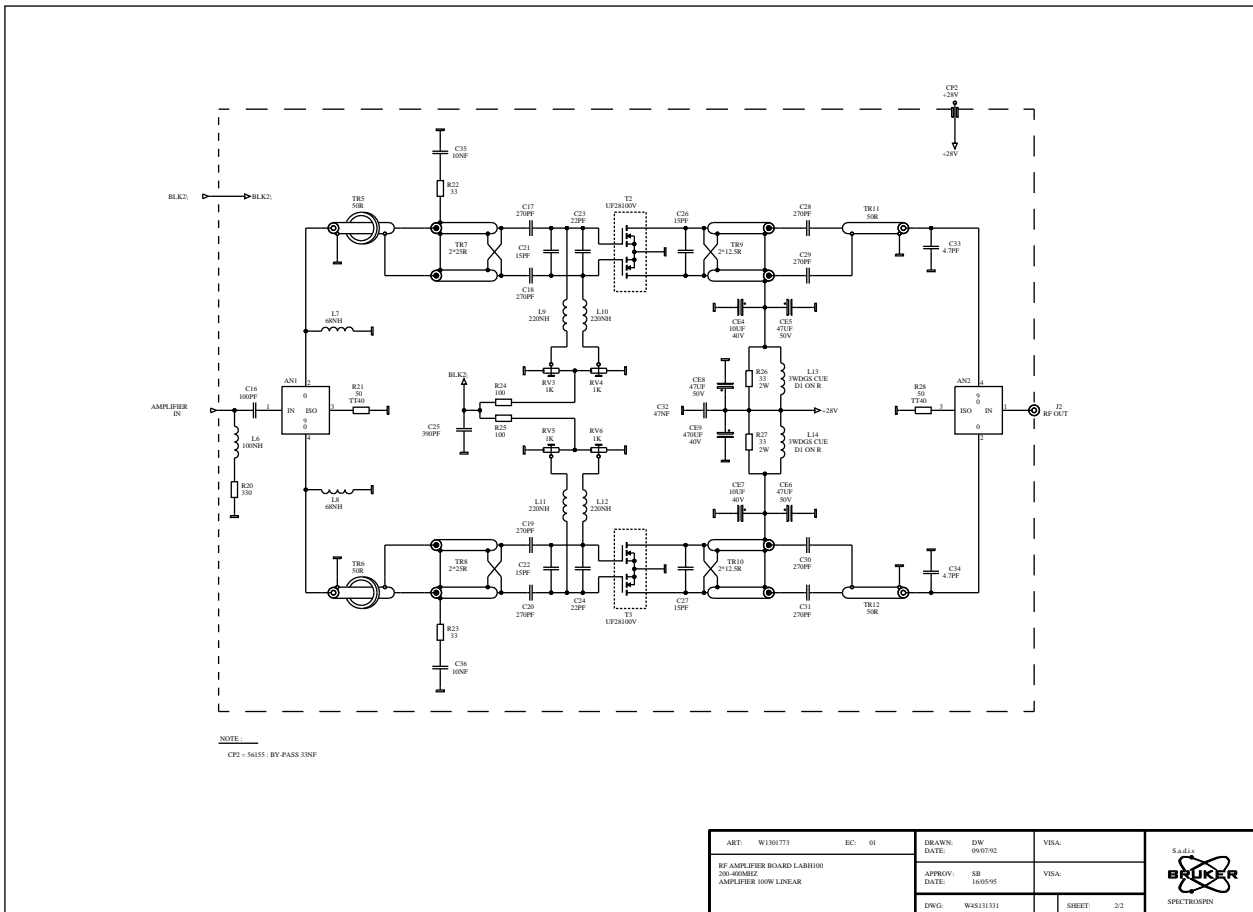


Figure 7.5. RF amplifier bias

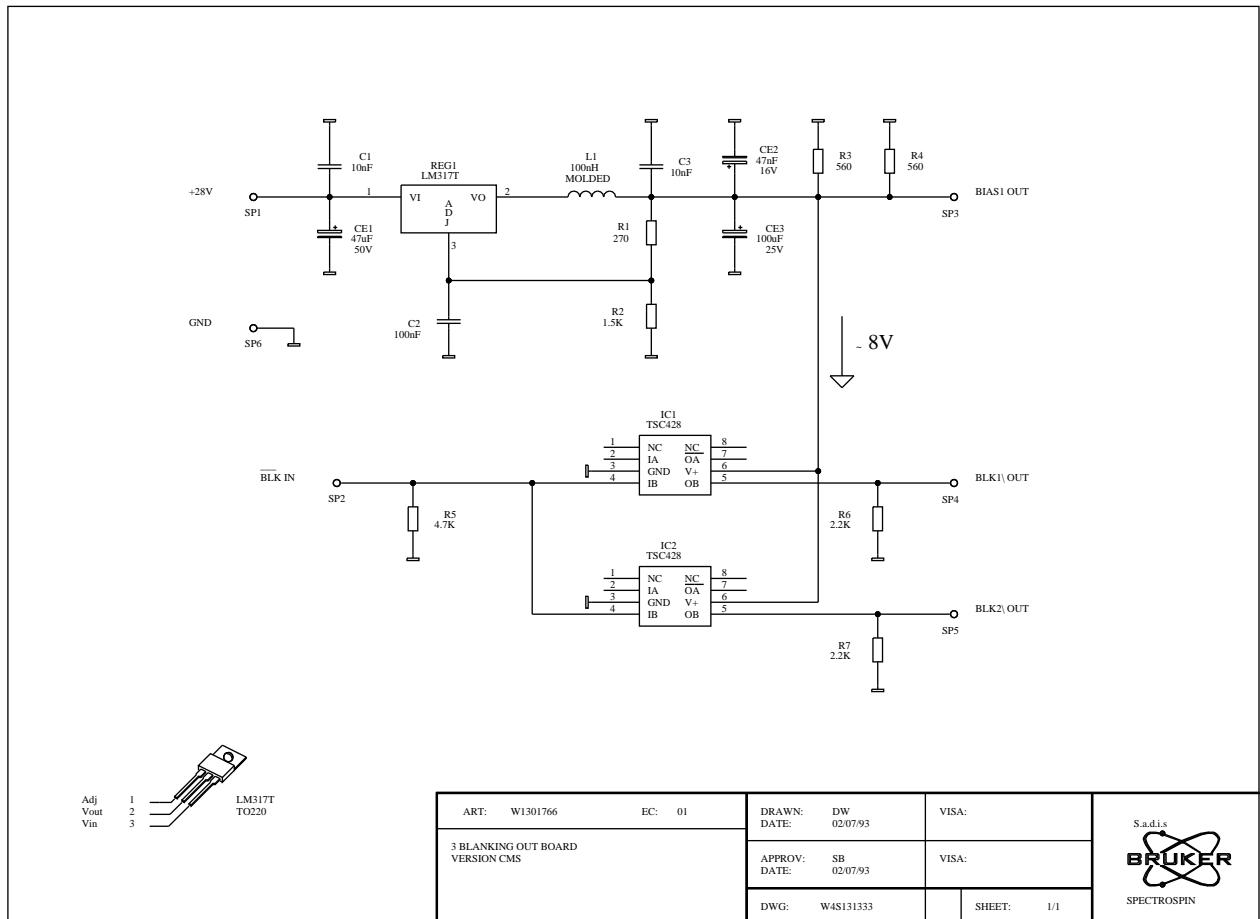


Figure 7.6. RF amplifier bias layout

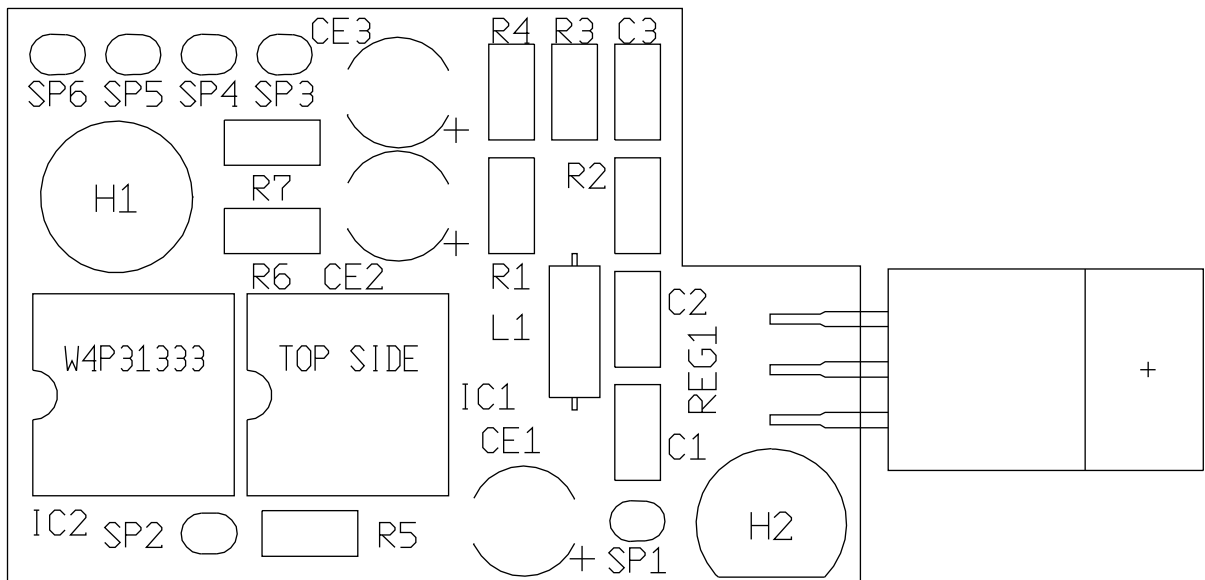
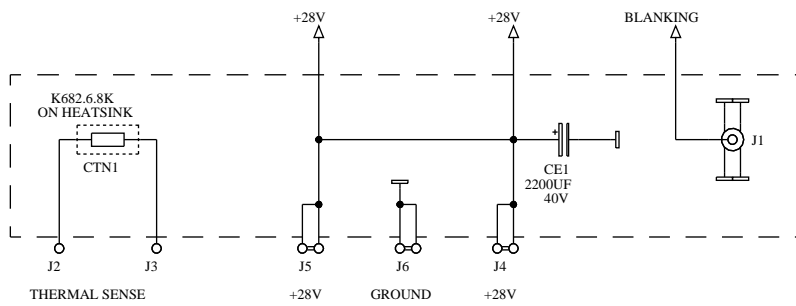



Figure 7.7. Interconnecting board



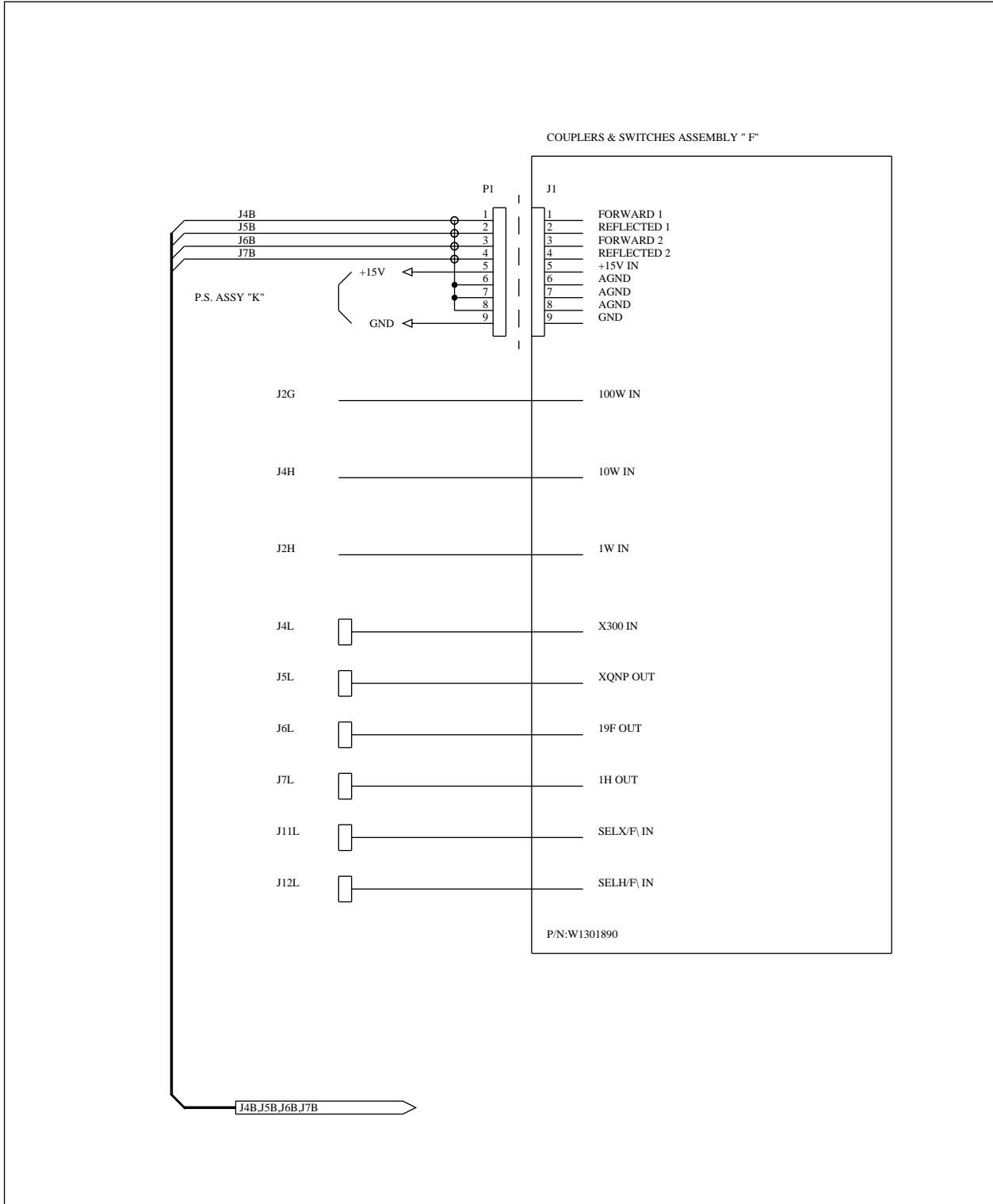
NOTE:

CTN1 = 56521 : CTN 6K8 K682

ART: W1301899	EC: 01	DRAWN: DW	DATE: 02/03/94	VISA:	S.a.d.i.s  SPECTROSPIN
INTERCONNECTING BOARD		APPROV: SB	DATE: 17/05/95	VISA:	
		DWG: W4S131703		SHEET: 1/1	


Couplers and switches

Figure 8.1. Couplers and switches assy "F"



ART: W1301890	EC:	DRAWN: DW DATE: 13/07/93	VISA:
COUPLERS & SWITCHES ASSY "F" INTERCONNECT DRAWING		APPROV: SB DATE: 15/02/96	VISA:
		DWG: W4W131461	SHEET: 1/1

S.a.d.i.s



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Figure 8.2. Couplers and switches assembly

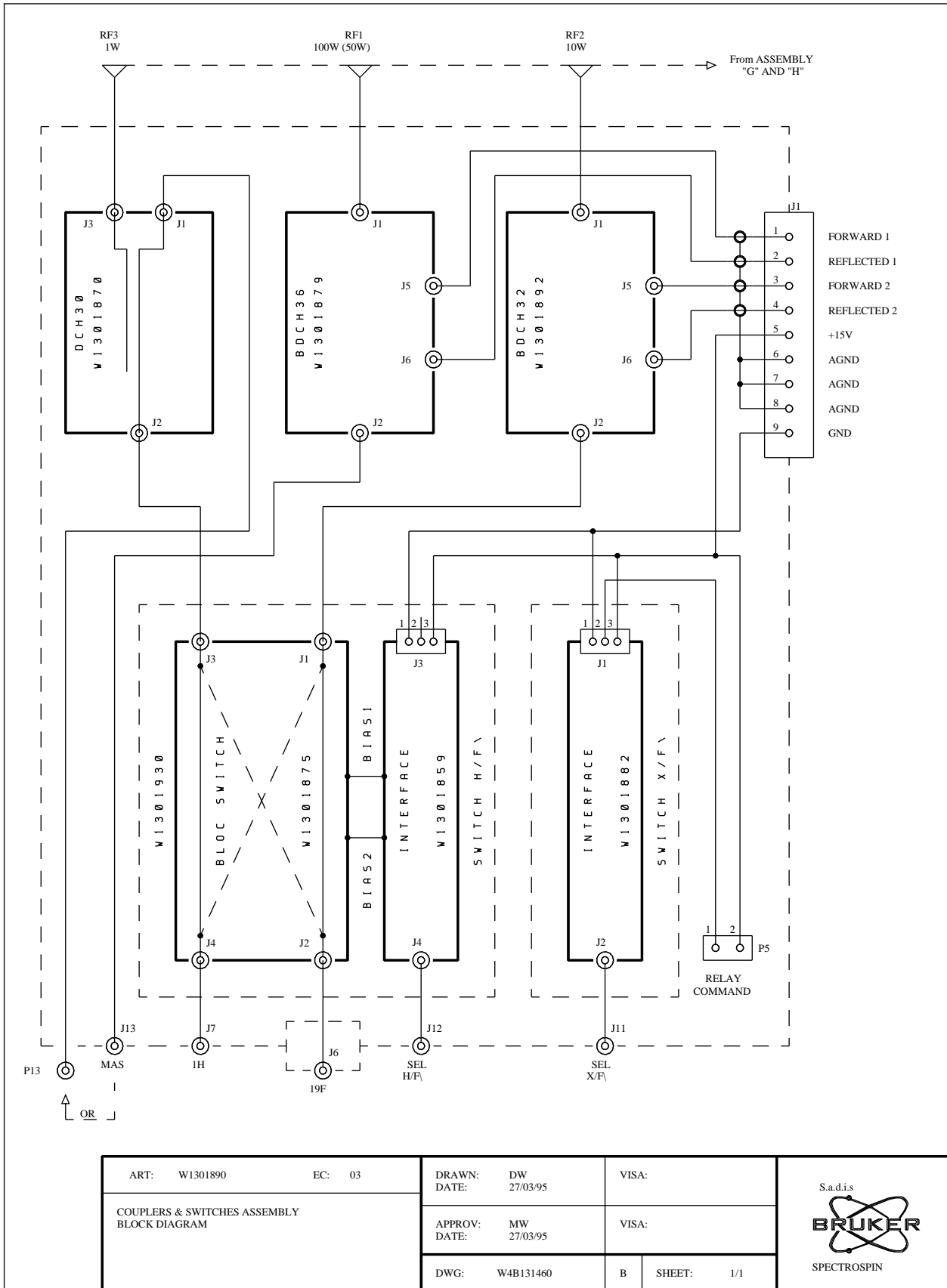
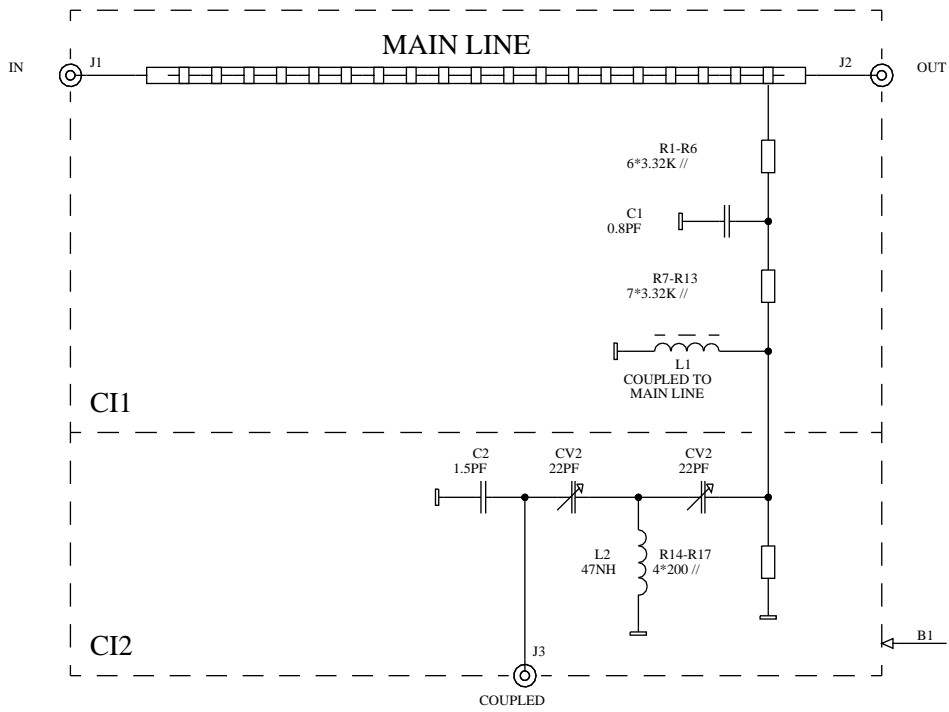


Figure 8.3. DCH30 coupler




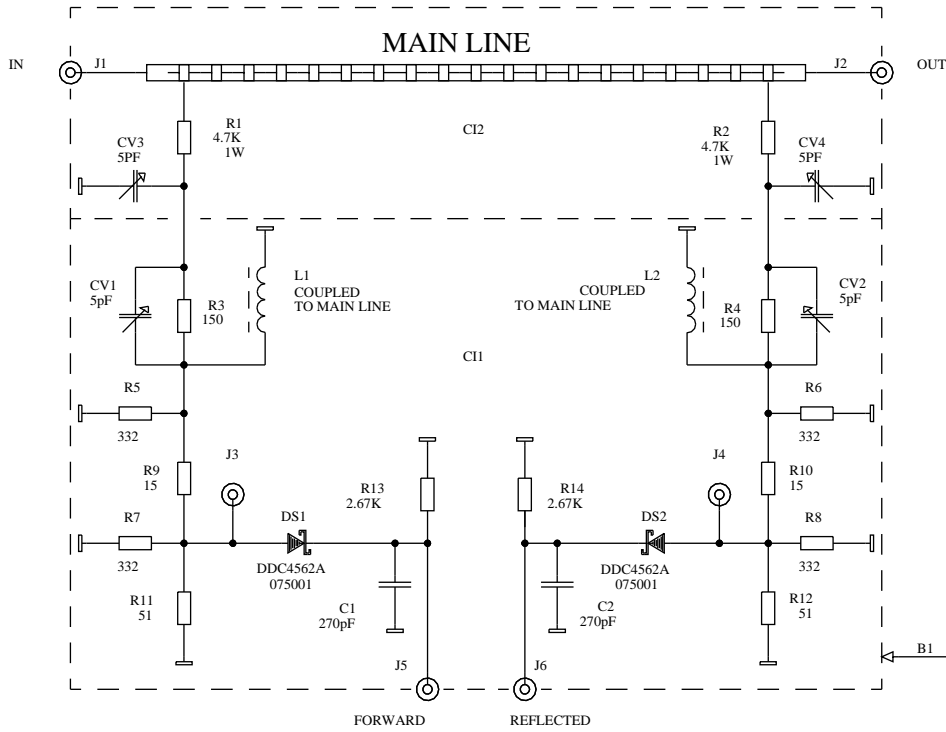
ART: W1301870	EC: 02	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
DCH30 DIRECTIONAL COUPLER		DATE: 16/03/94	VISA:	
(SMA.C-SMA)		APPROV: SB	VISA:	
		DATE: 02/11/94	A	SHEET: 1/1
		DWG: W4S131389		

Figure 8.4. BDCH36 coupler




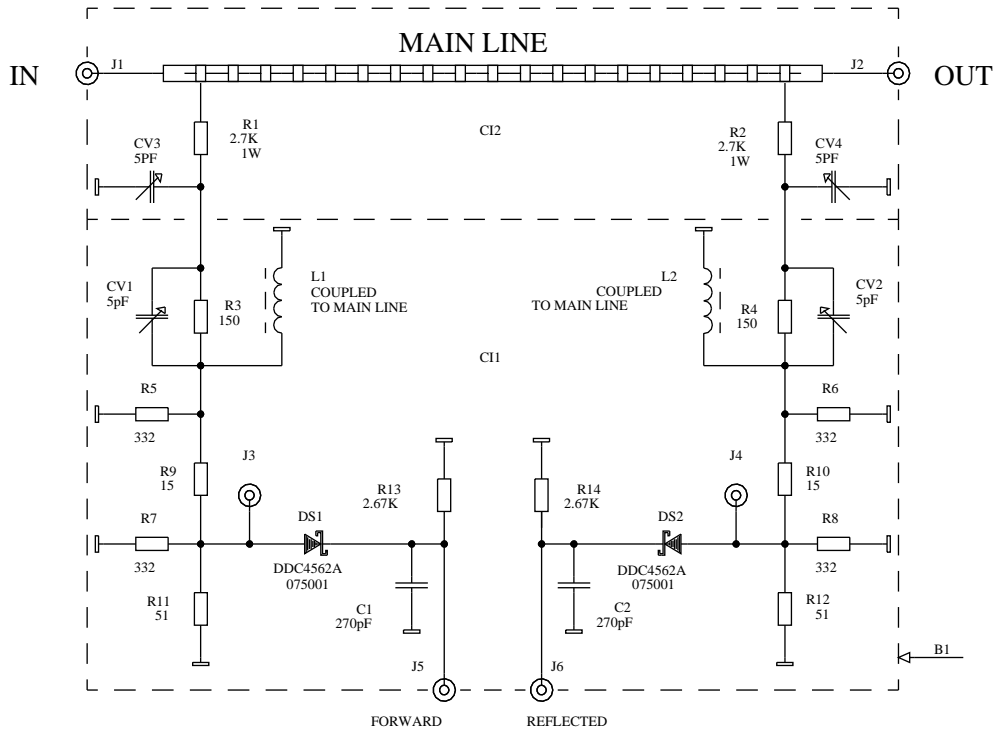
ART: W1301879	EC: 01	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
BDCH36 BI-DIRECTIONAL COUPLER		DATE: 07/06/93	VISA:	
(SMB-SMA)		APPROV: DATE:	SHEET: 1/1	
		DWG: W4S131444		

Figure 8.5. BDCH32 bidirectionnal coupler




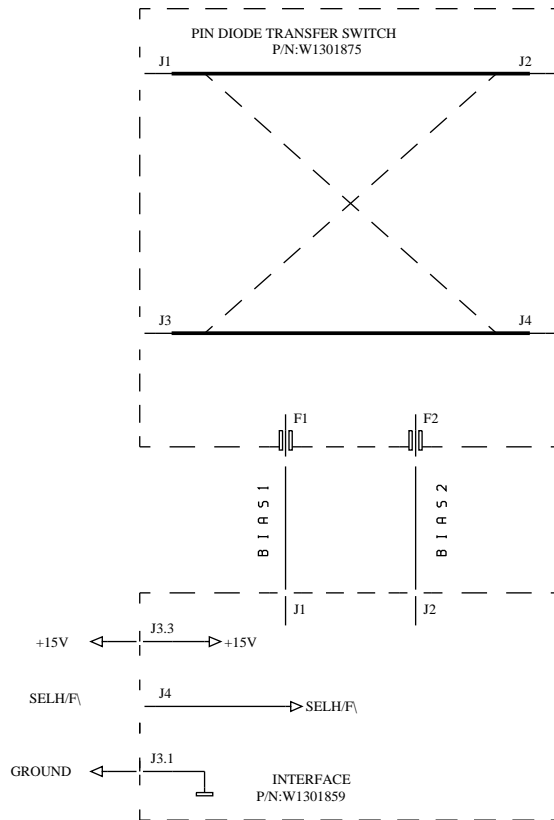
ART: W1301892	EC: 01	DRAWN: DW DATE: 07/06/93	VISA:	S.a.d.i.s  SPECTROSPIN
BDCH32 BI-DIRECTIONAL COUPLER		APPROV: CO DATE: 07/06/93	VISA:	
(SMB-SMA)		DWG: W4S131445	SHEET: 1/1	

Figure 8.6. Output switch for DMX system

TRUTH TABLE

SELH/F\	BIAS1	BIAS2	RF CONTINUITY
0	0V	50mA	J1 ↔ J4 ; J3 ↔ J2
1	50mA	0V	J1 ↔ J2 ; J3 ↔ J4



ART: W1301930	EC: 02	DRAWN: DW	VISA:	S.a.d.i.s SPECTROSPIN
PIN DIODE TRANSFER SWITCH BLOCK DIAGRAM		DATE: 09/10/95	VISA:	
		APPROV: CO	VISA:	
		DATE: 10/10/95	A	SHEET: 1/1
		DWG: W4B131458		

Figure 8.7. Pin diode transfer switch

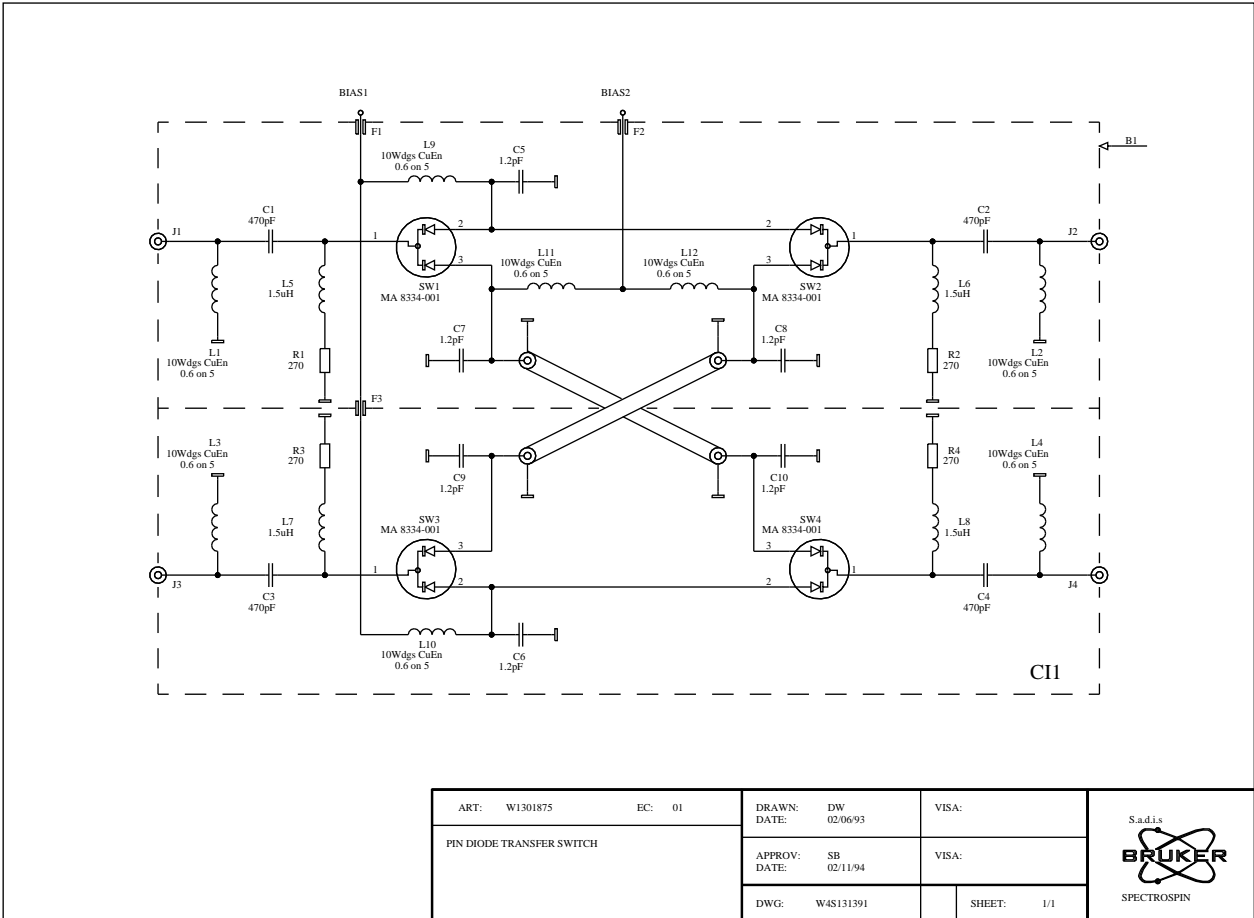
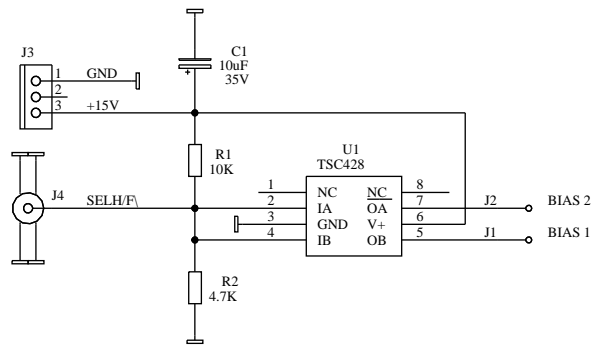


Figure 8.8. Interface switch H/F




ART: W1301859	EC: 01	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
INTERFACE SWITCH H/F		DATE: 22/04/93	VISA:	
		APPROV: CO	VISA:	
		DATE: 01/06/94		
		DWG: W4S131401	SHEET: 1/1	

Figure 8.9. Interface switch H/F layout

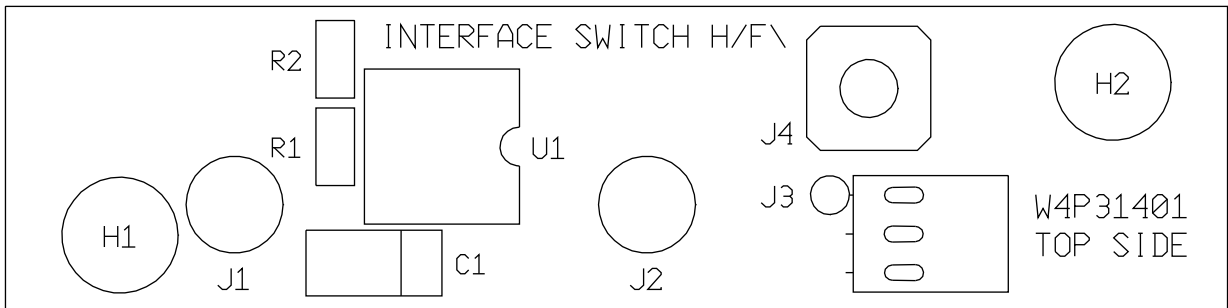
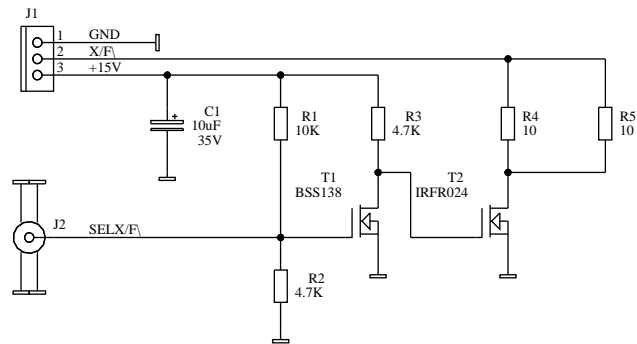


Figure 8.10. Interface relay switch




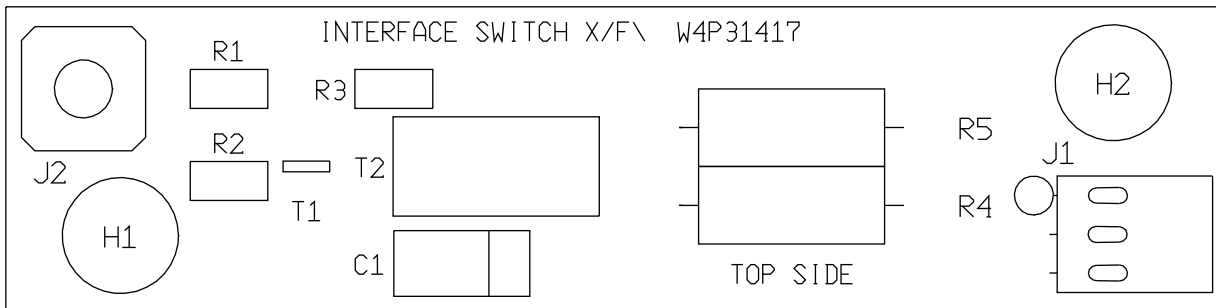
ART: W1301882	EC:	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
INTERFACE RELAY TRAFER SWITCH		DATE: 03/06/93		
		APPROV: CO	VISA:	
		DATE: 15/02/96		
		DWG: W4S131417	SHEET: 1/1	

Figure 8.11. Interface switch layout



SBS controller

9

Figure 9.1. interconnect diagram

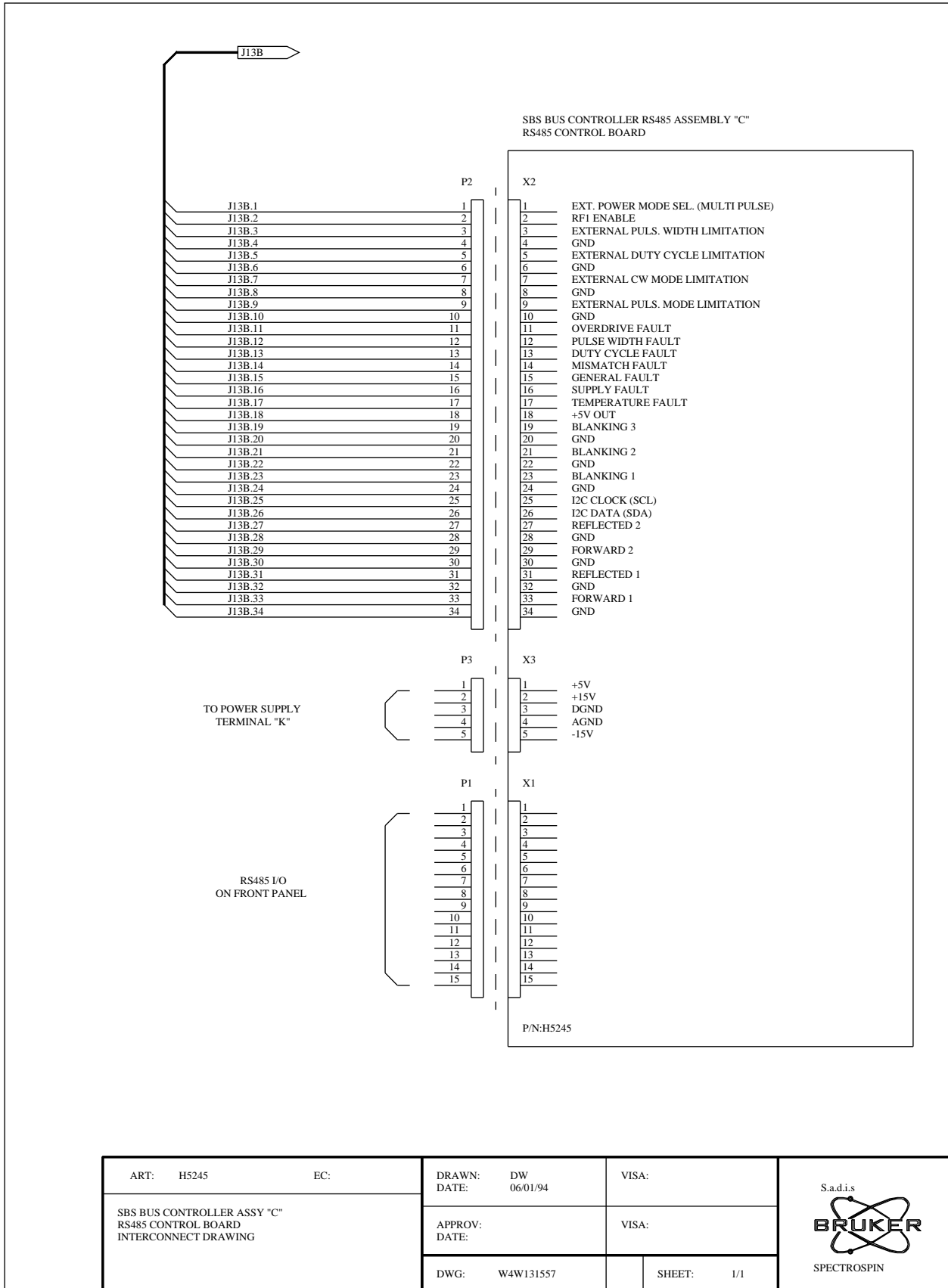
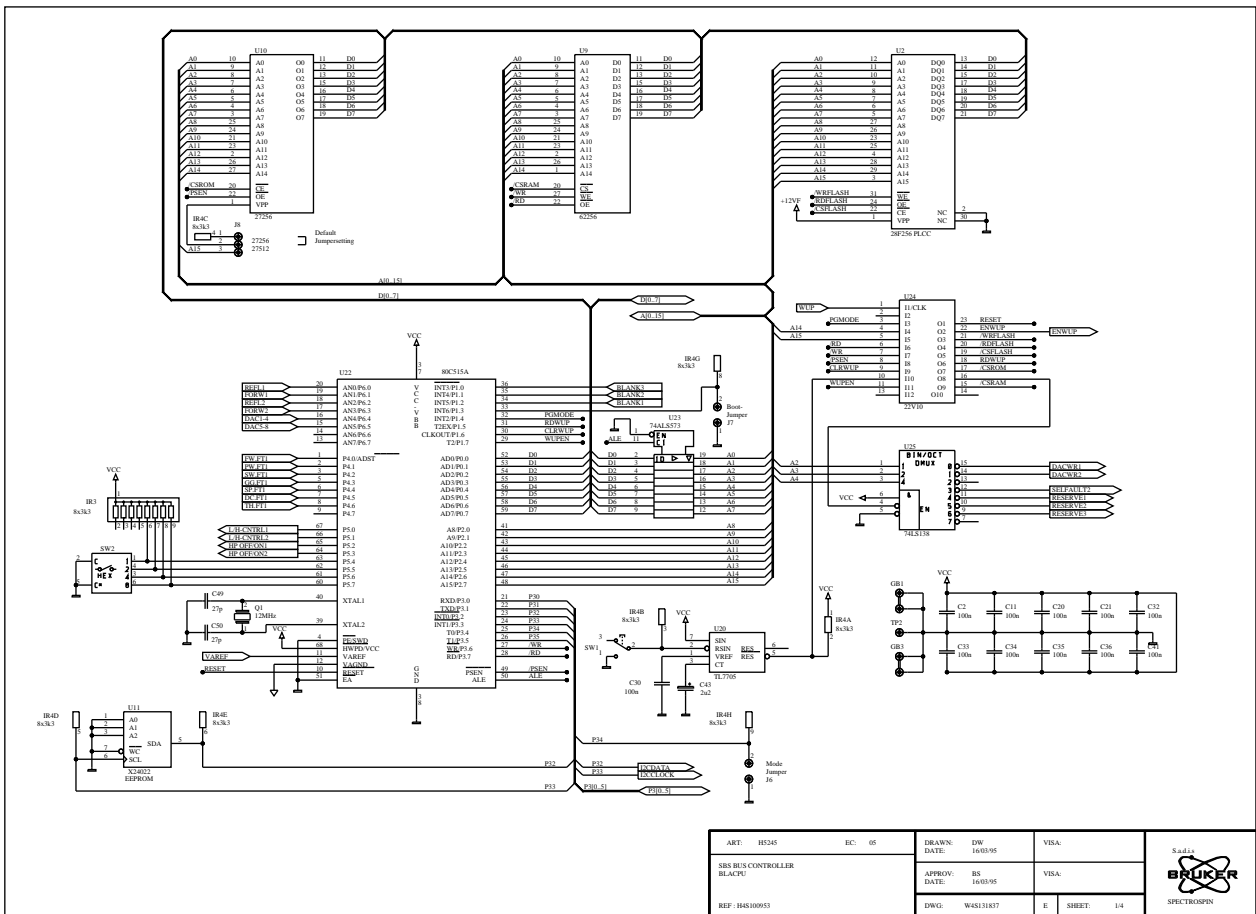


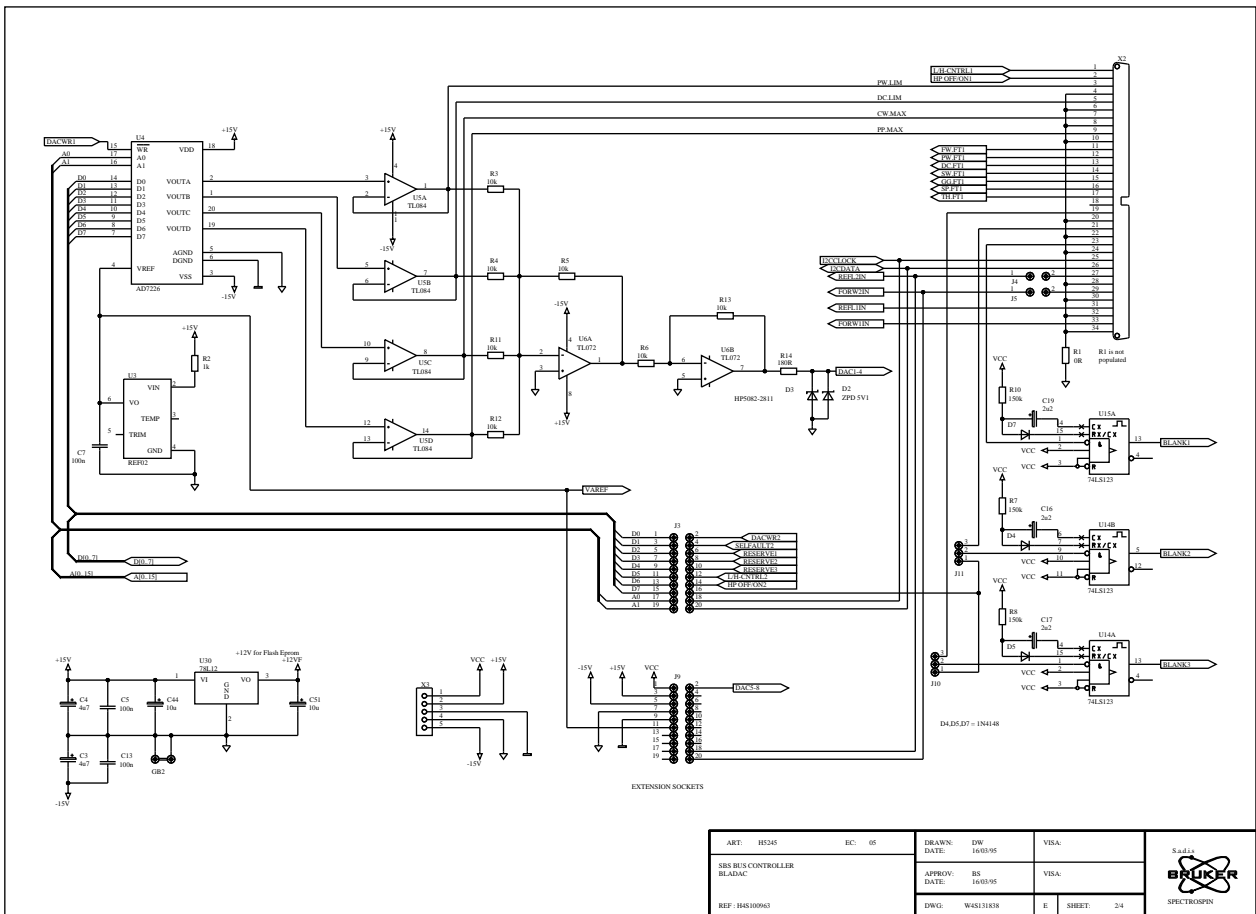
Figure 9.2. CPU board



ART: H3245	EC: 05	DRAWN: DW 16/03/95	VISA:
SBS BUS CONTROLLER BLACPU		APPROV: BS 16/03/95	VISA:
REF: H4810053		DWG: W4811817	E. SHEET 1/4



Figure 9.3. sbs controller dac



ART: H3245	EC: 05	DRAWN: DW	16/03/95	VISA:	
SBS BUS CONTROLLER BLADAC		APPROV: BS	16/03/95	VISA:	
REF: H4810963		DWG: W4813183		E. SHEET: 2/4	

Figure 9.4. sbs controller driver rs485

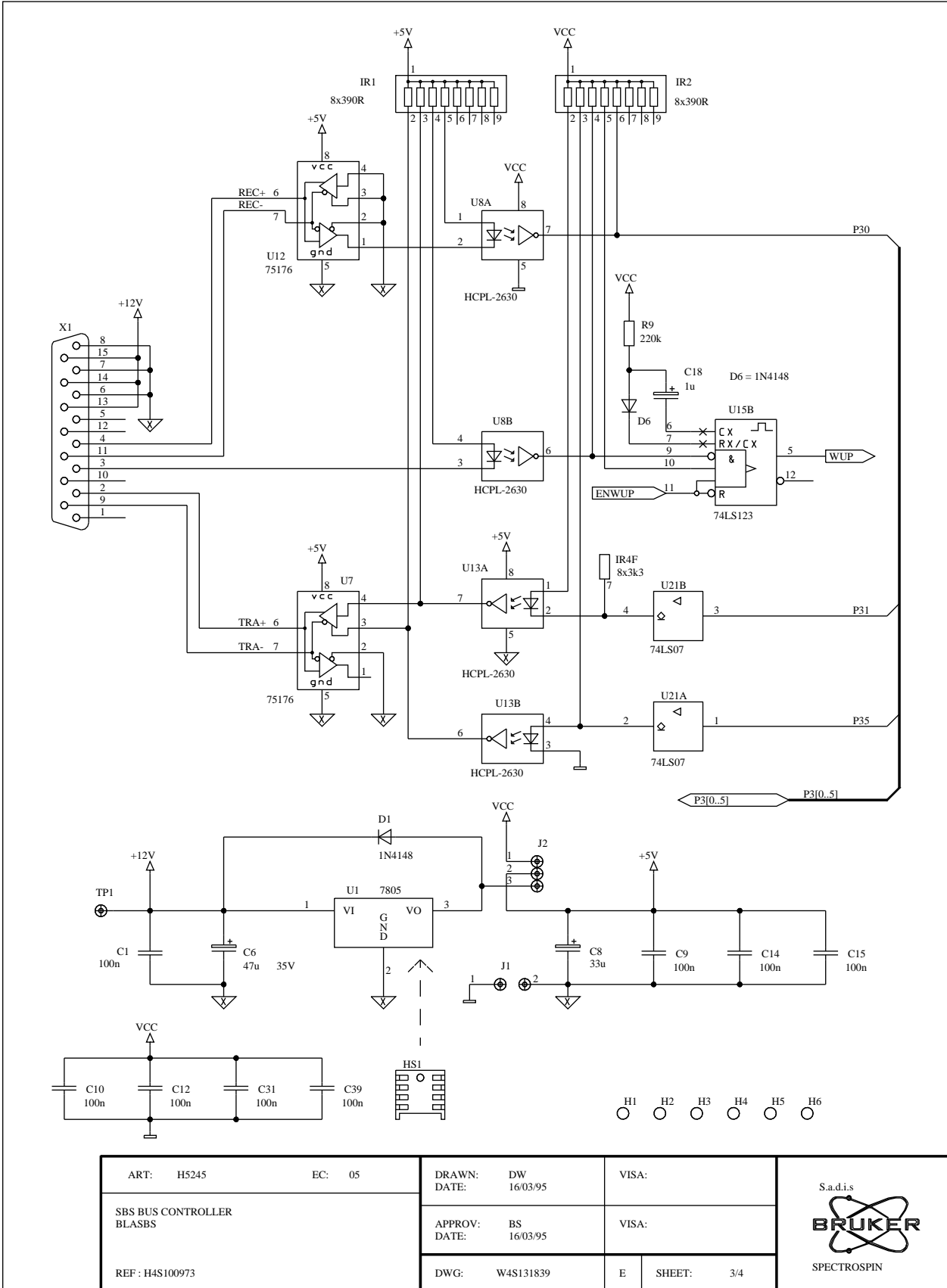
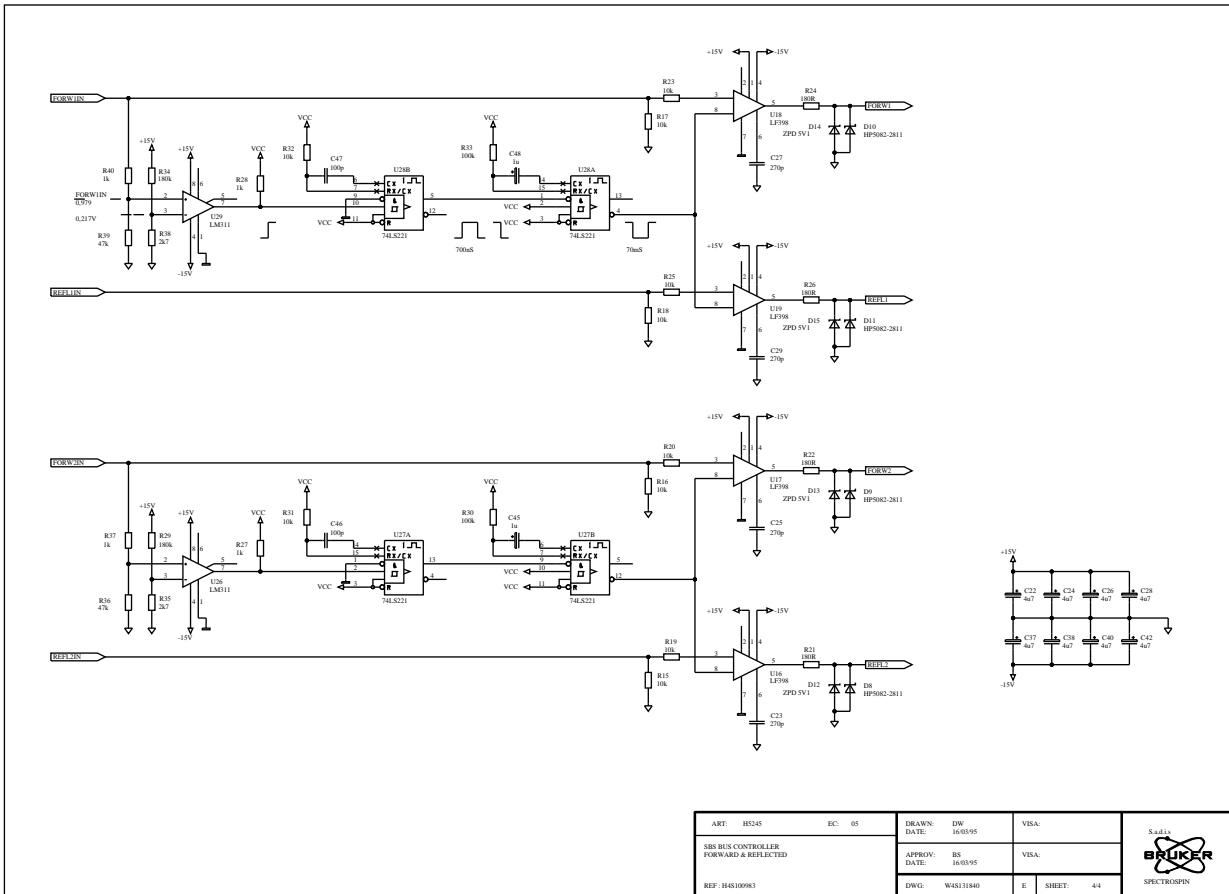


Figure 9.5. sbs controller sample/hold



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