

**BLAXH50  
200-400MHz**

**TECHNICAL  
MANUAL**

**Version 003**

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**Sadis BRUKER SPECTROSPIN**

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P/N: W1302172

Updated for BASH 2.0 by U. Roos - December 1996

Manual P/N: Z31267  
DWG-No: 980 003

# Contents

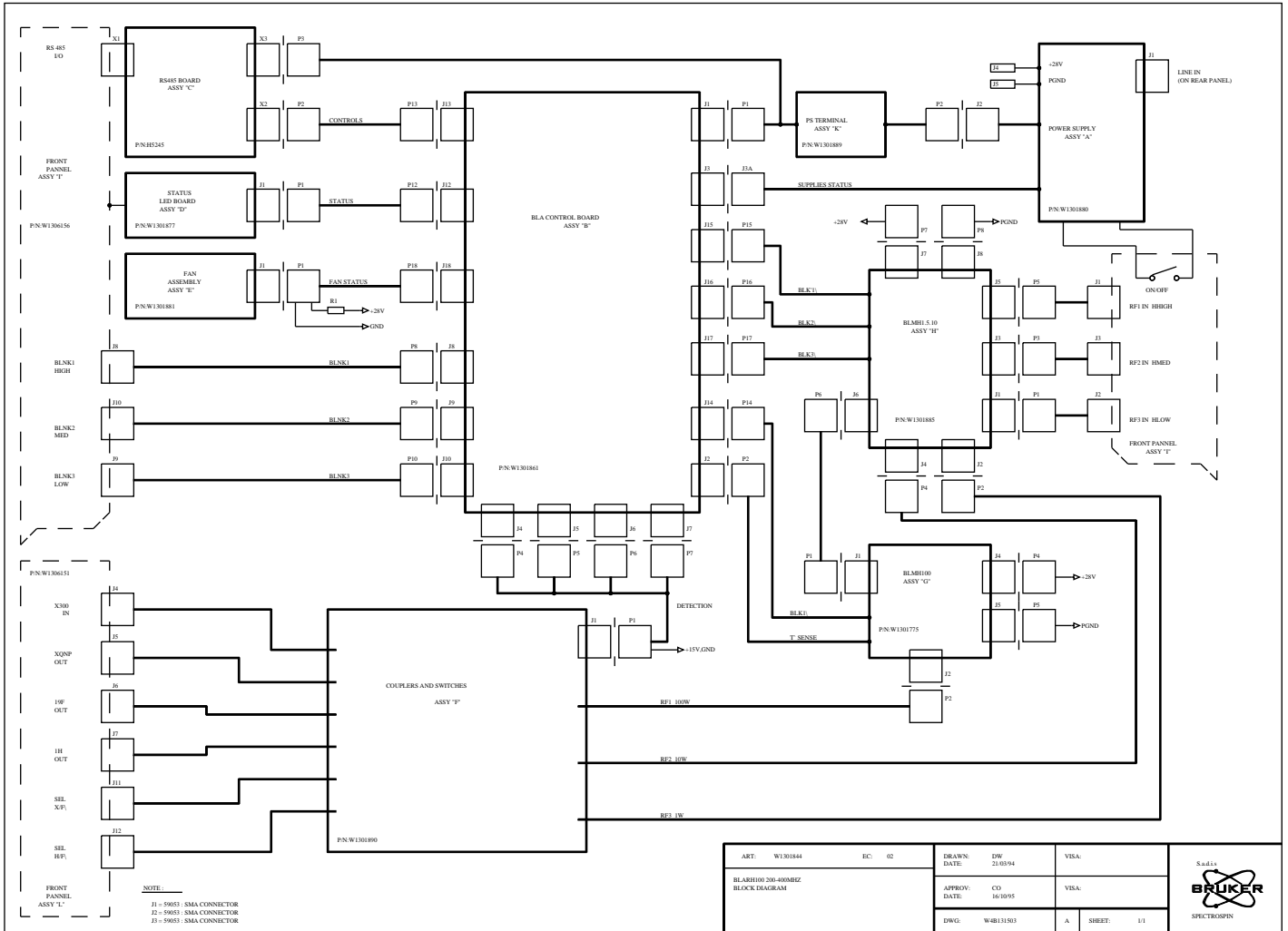
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# ***Block diagram***

# **1**

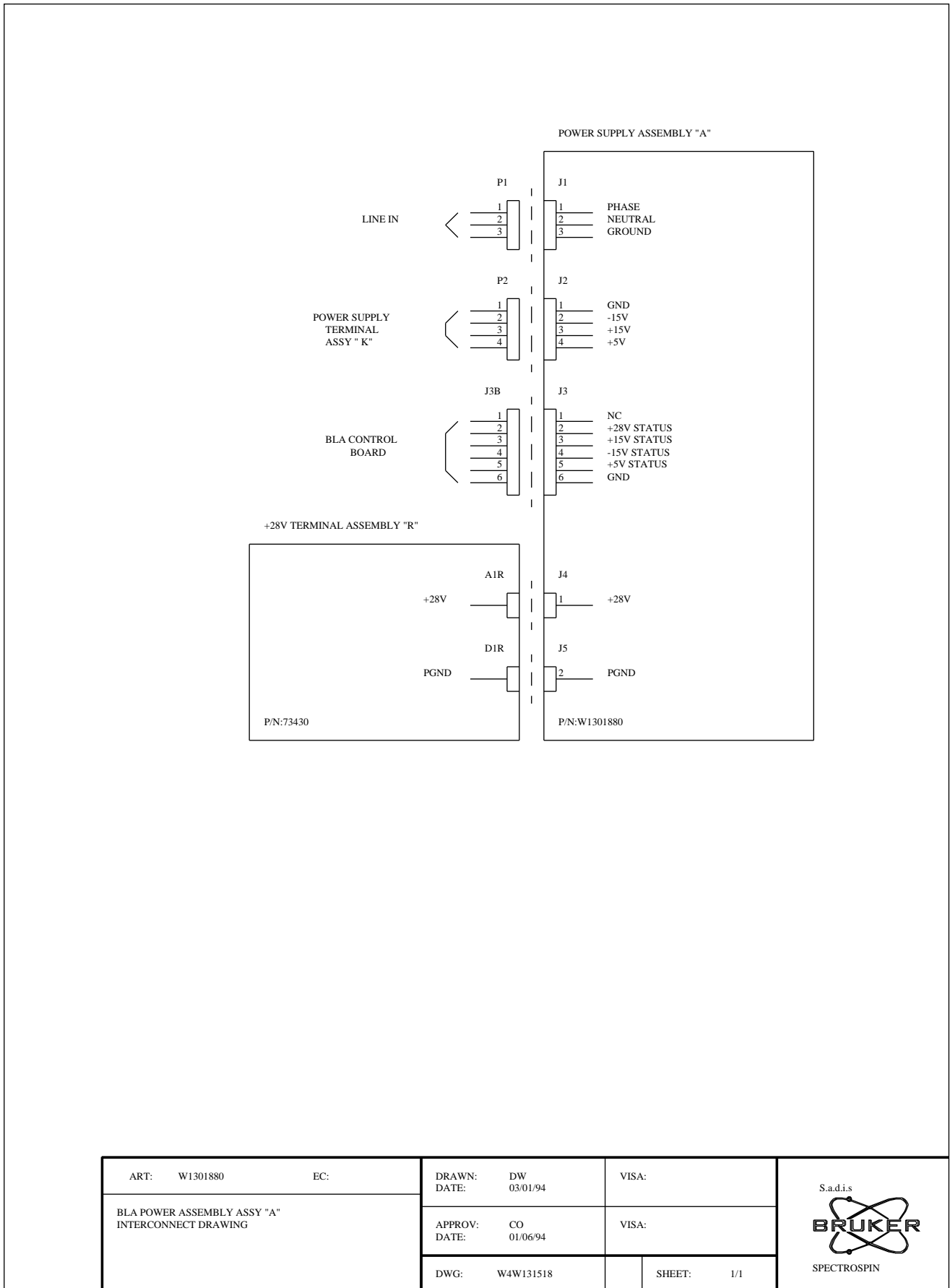
Figure 1.1. Block diagram



# *Power supply*

# 2

Figure 2.1. Wiring diagram



ART: W1301880	EC:	DRAWN: DW	DATE: 03/01/94	VISA:
BLA POWER ASSEMBLY ASSY "A" INTERCONNECT DRAWING		APPROV: CO	DATE: 01/06/94	VISA:
		DWG: W4W131518		SHEET: 1/1


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Figure 2.2. Power supply diagram

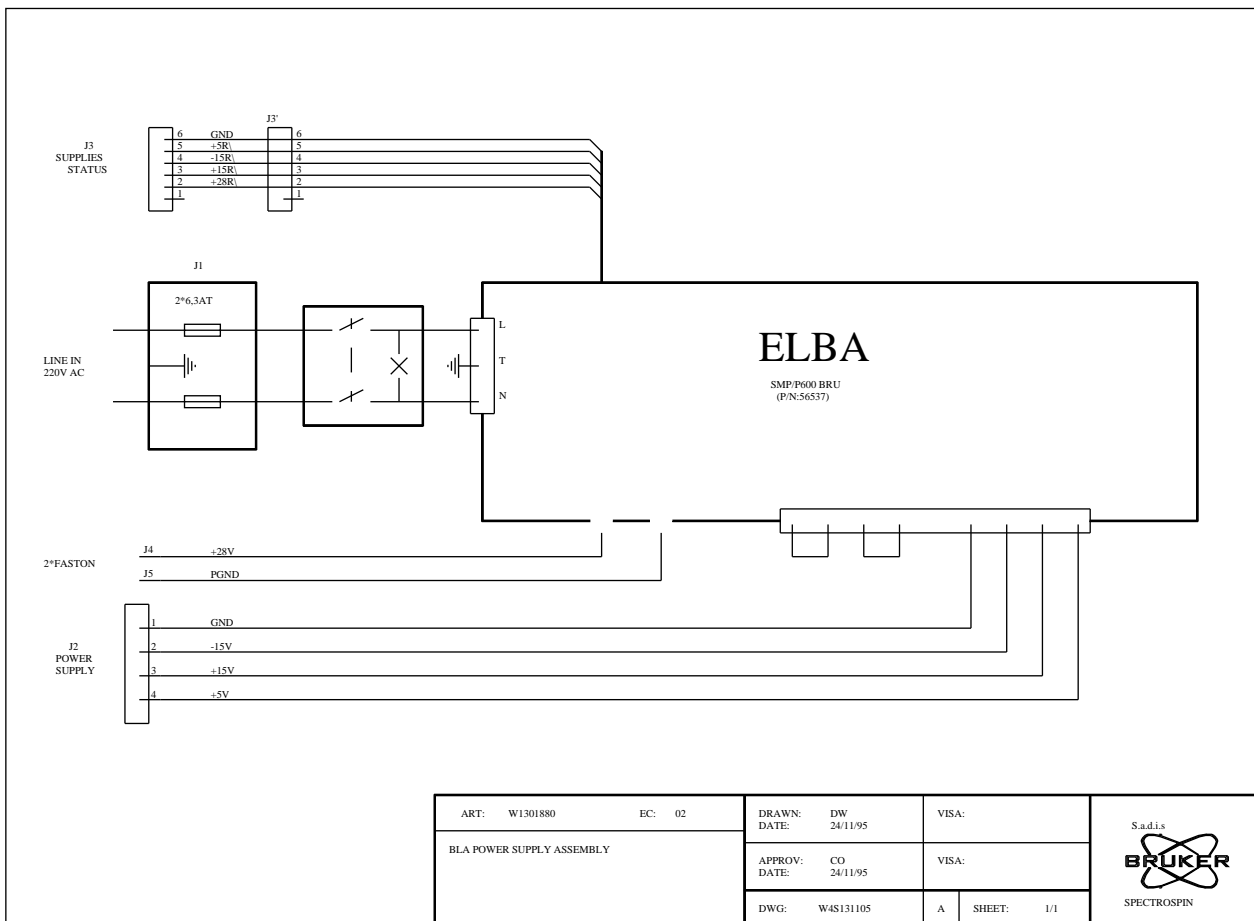


Figure 2.3. Power supply terminal

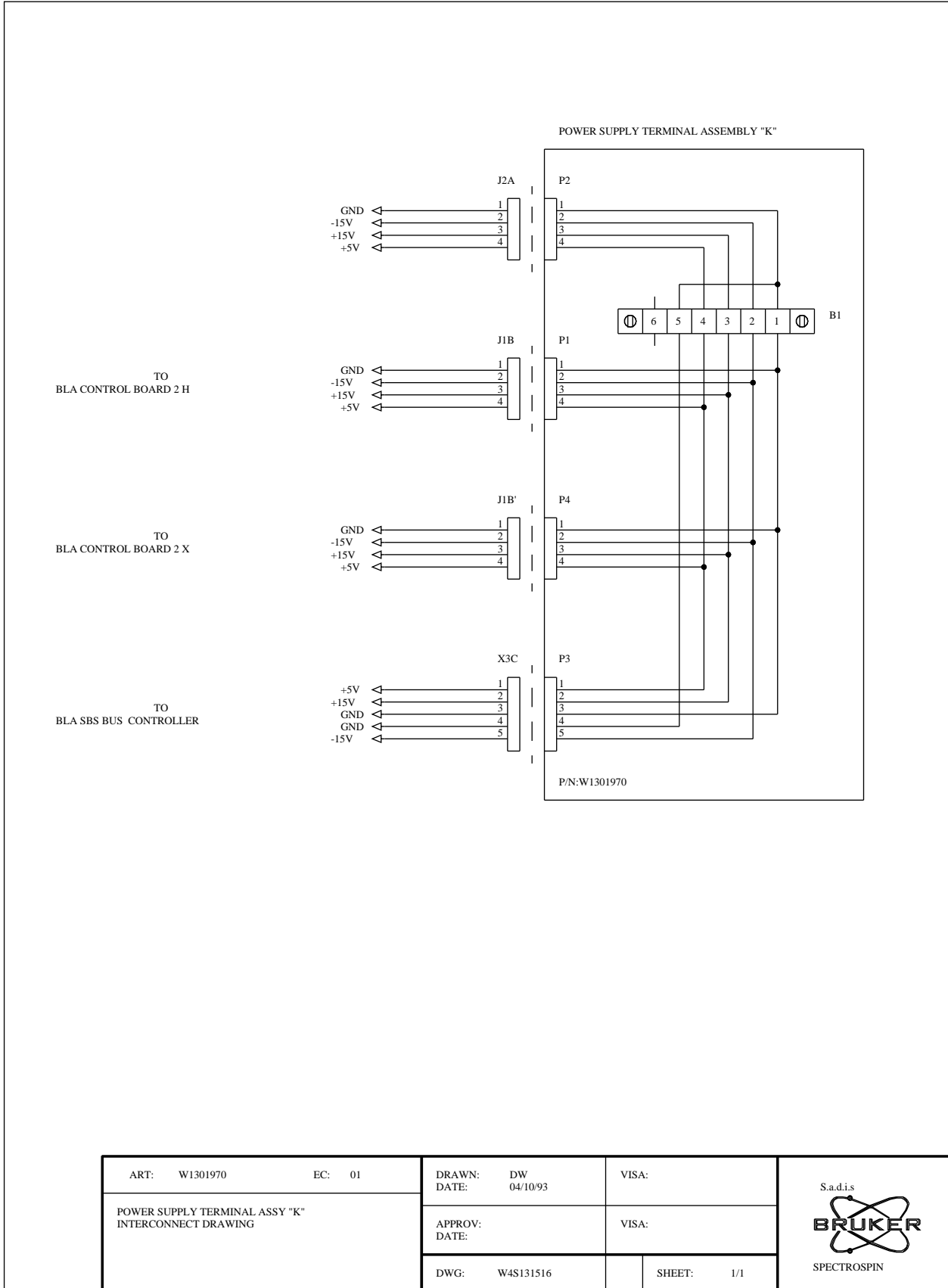
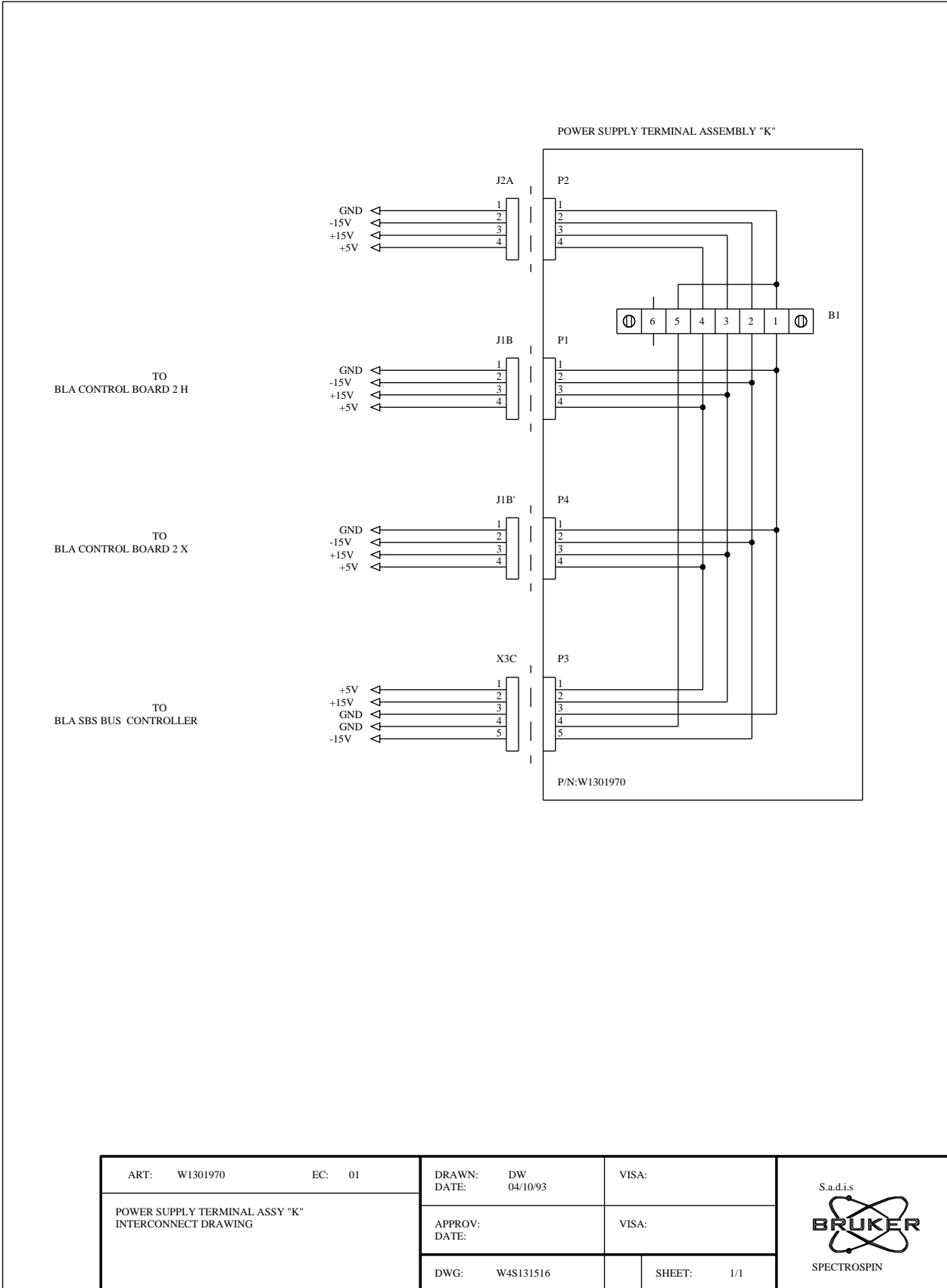


Figure 2.4. Power supply terminal





# ***Control board 2***

# **3**

Figure 3.1. Interconnect drawing sheet 1/3

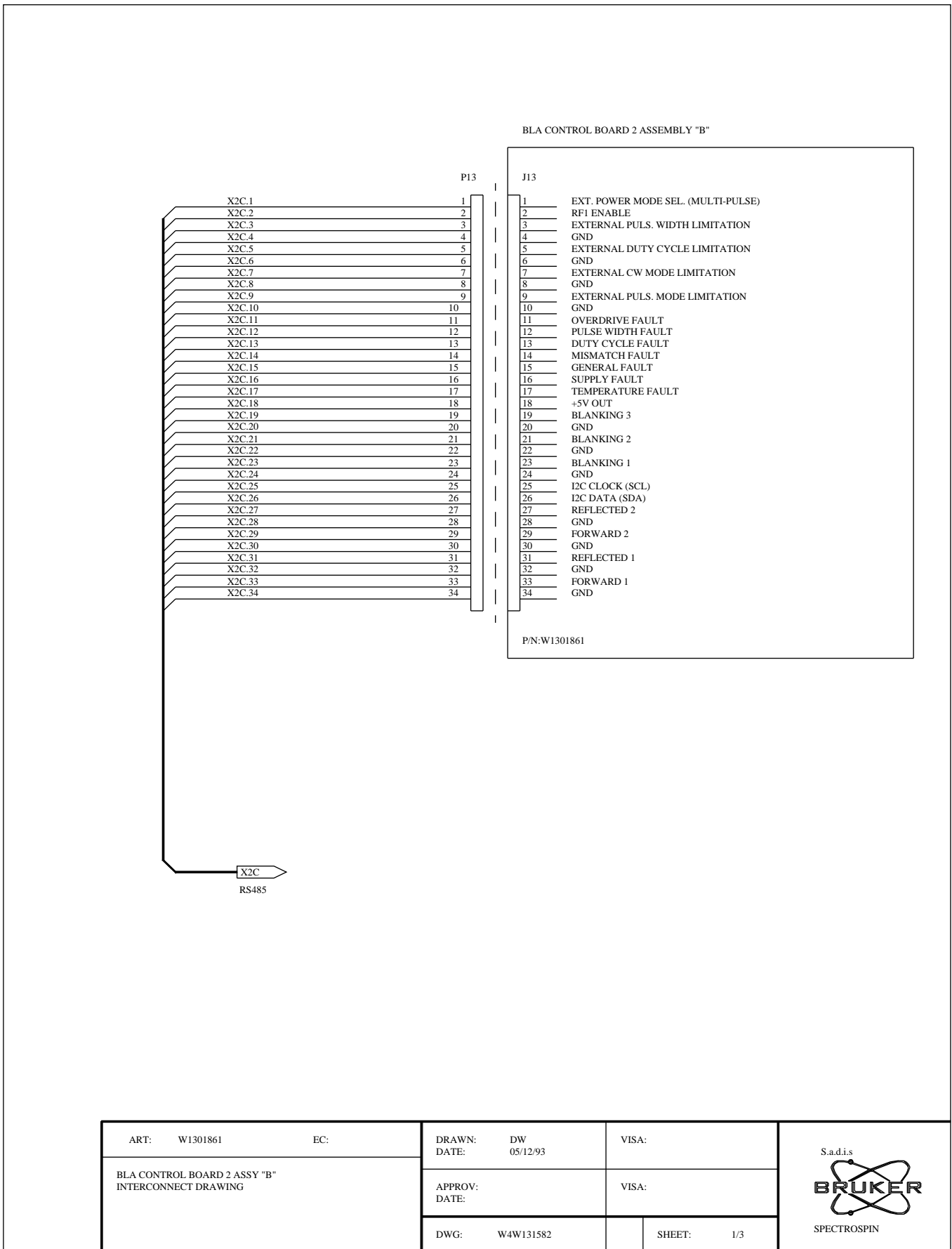


Figure 3.2. Interconnect drawing sheet 2/3

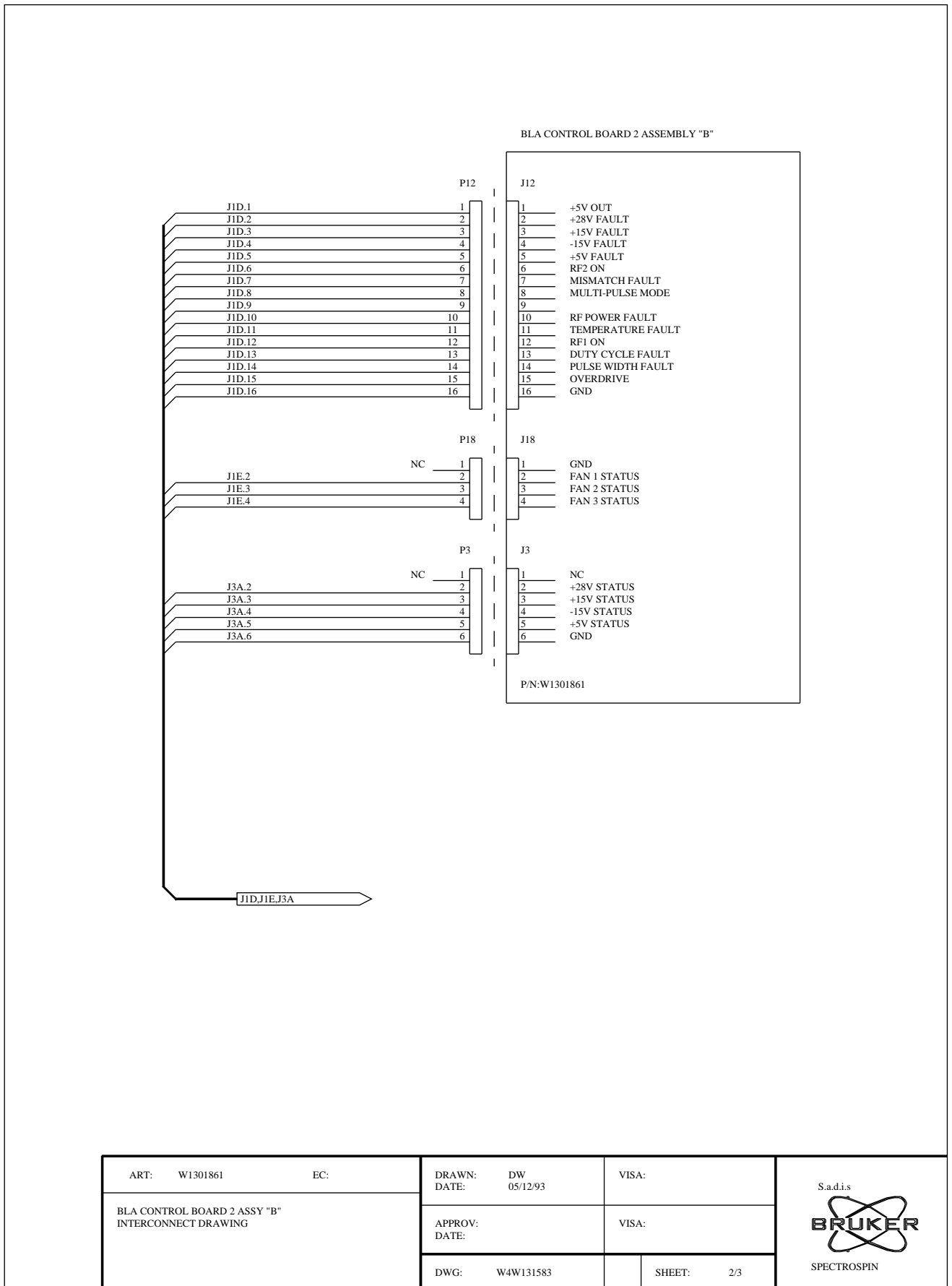
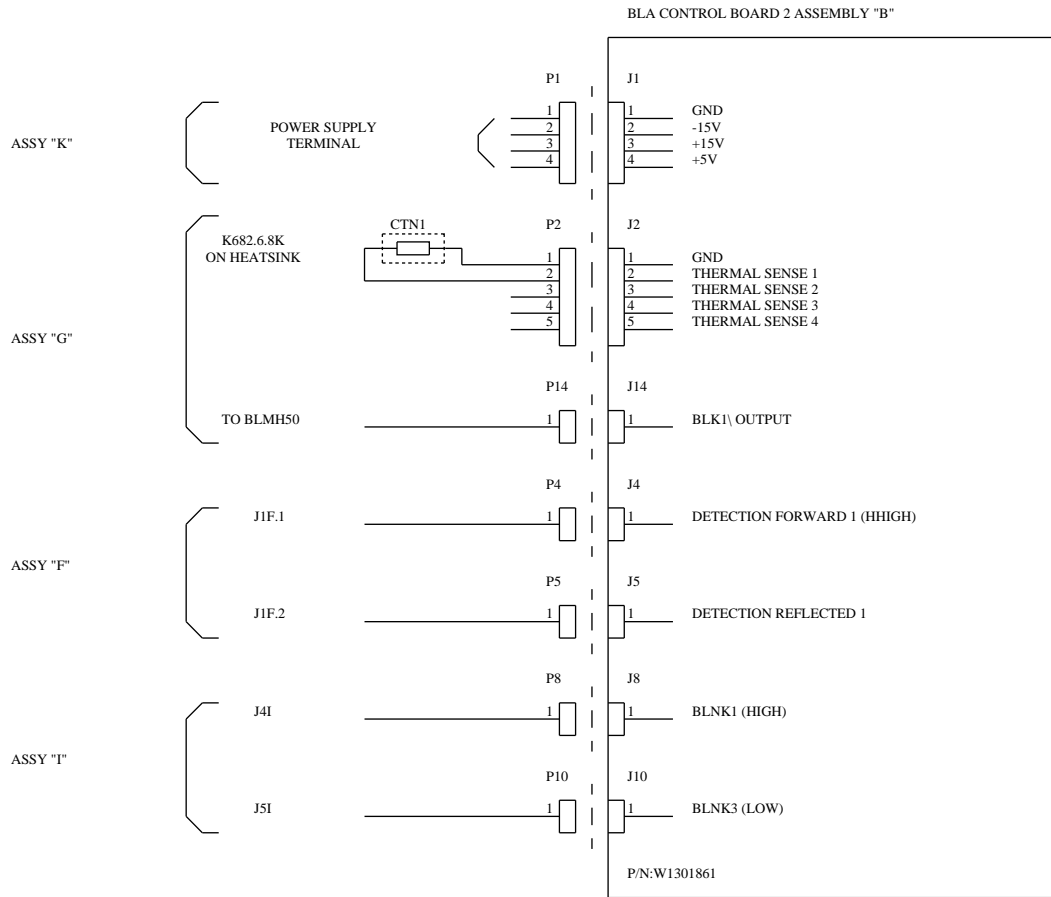


Figure 3.3. Interconnect drawing sheet 3/3




ART: W1301861	EC:	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B" INTERCONNECT DRAWING		DATE: 29/10/93	VISA:	
		APPROV:	VISA:	
		DATE:		
		DWG: W4W131522	SHEET: 3/3	



Figure 3.4. Control board top side

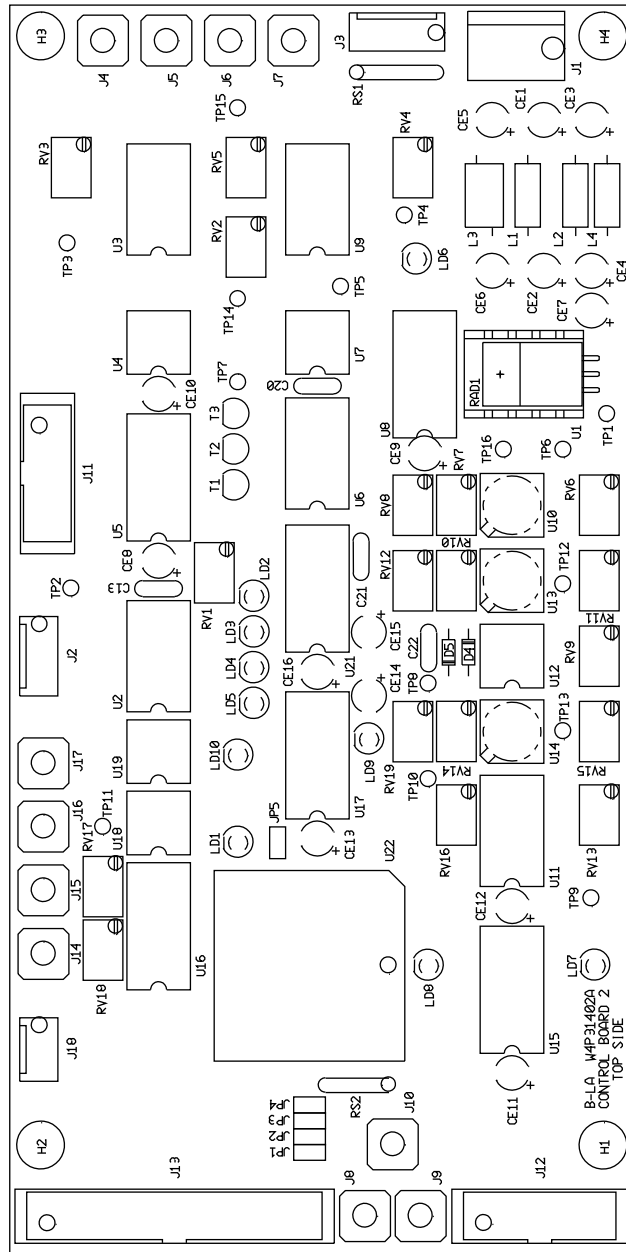


Figure 3.5. Control board bottom side

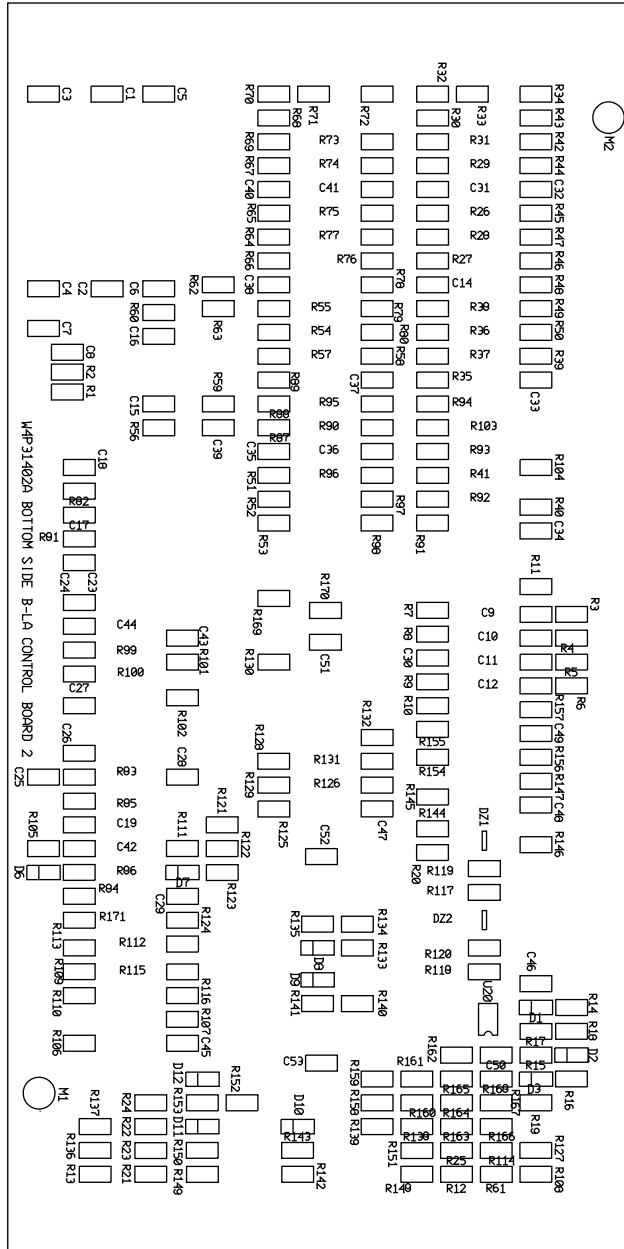


Figure 3.6. Control board 1/7 - power supply & reference

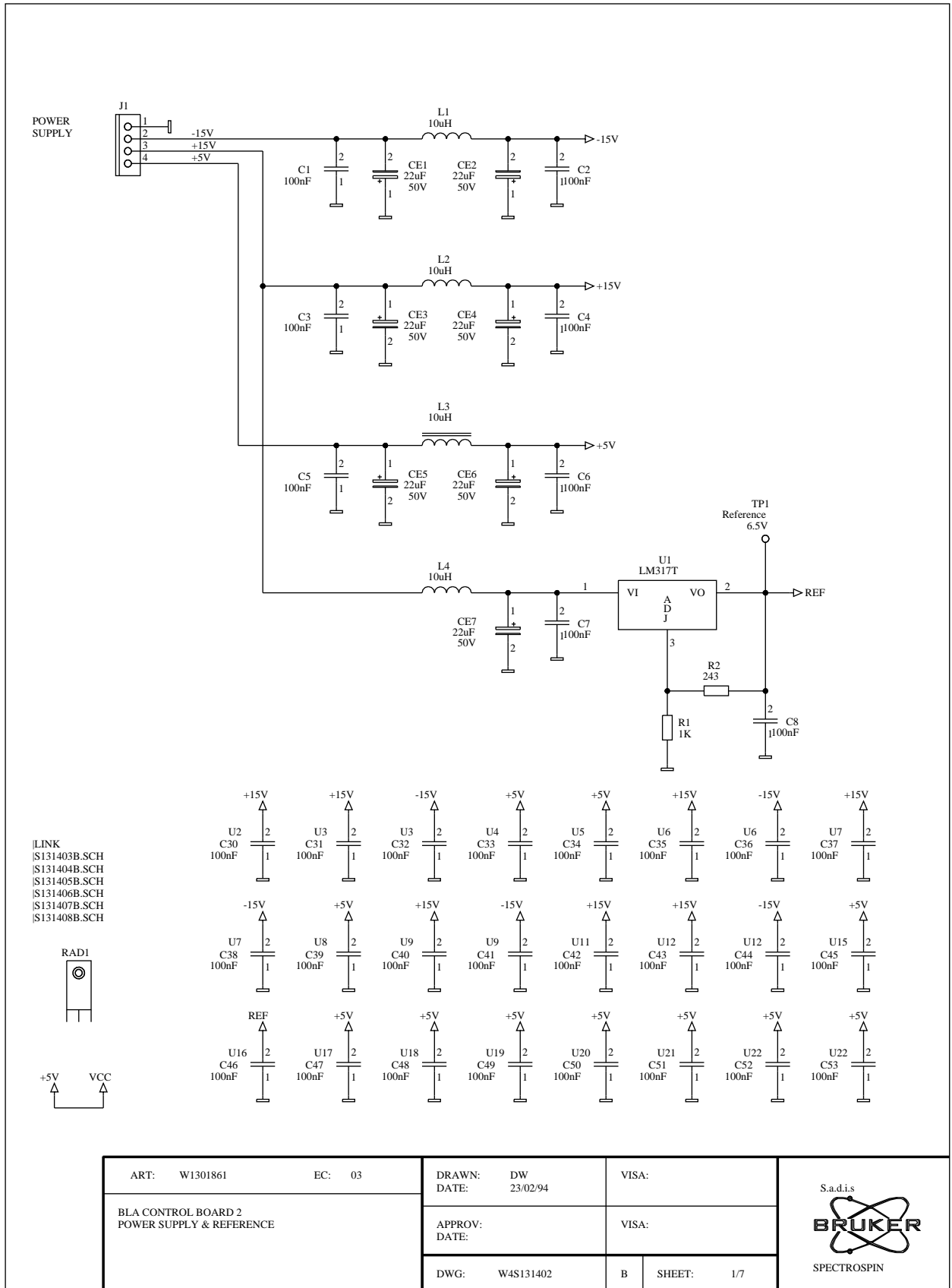


Figure 3.7. Control board 2/7 - Thermal sense, supply & fan control

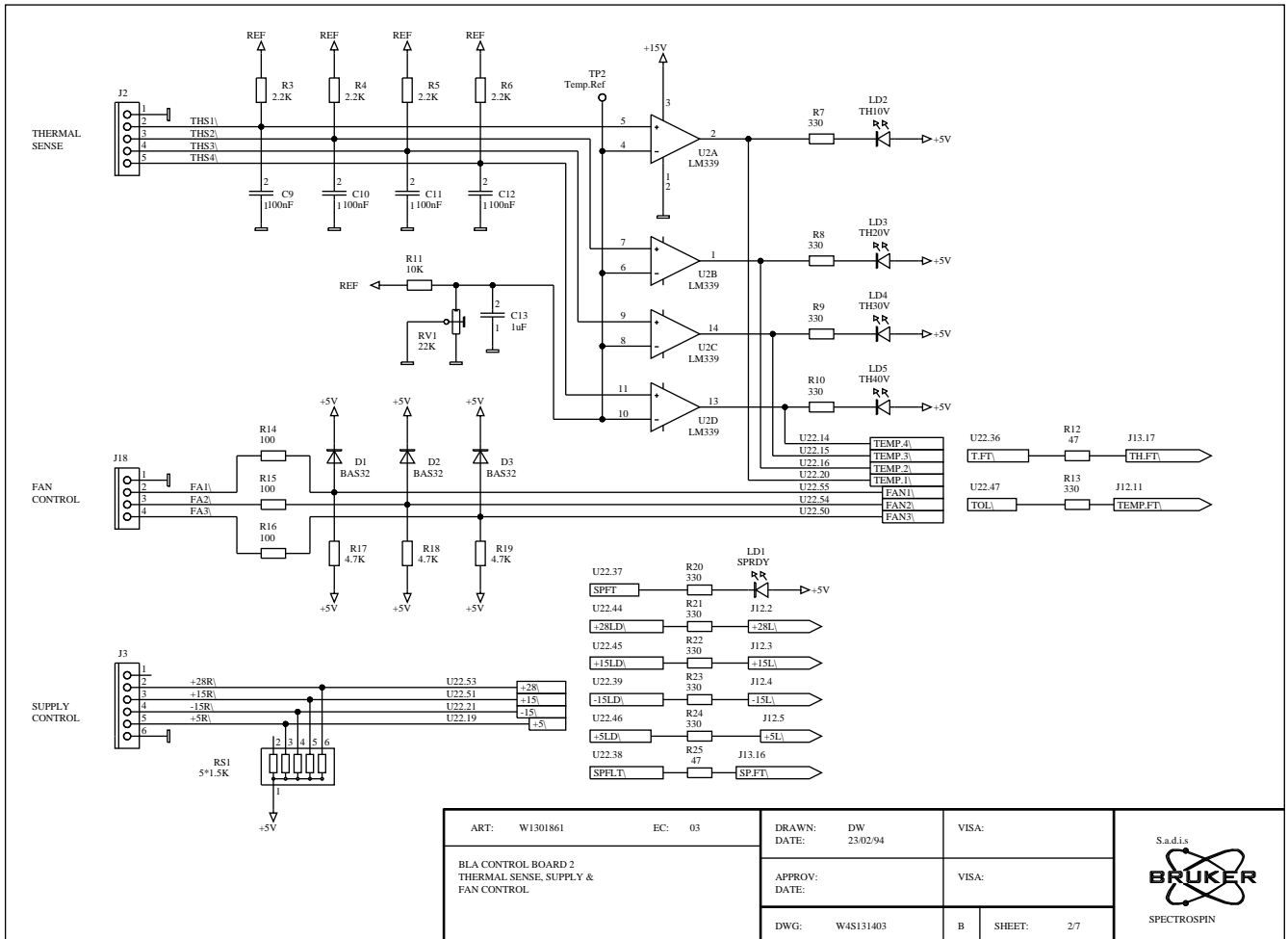


Figure 3.8. Control board 3/7 - Forward & reflected

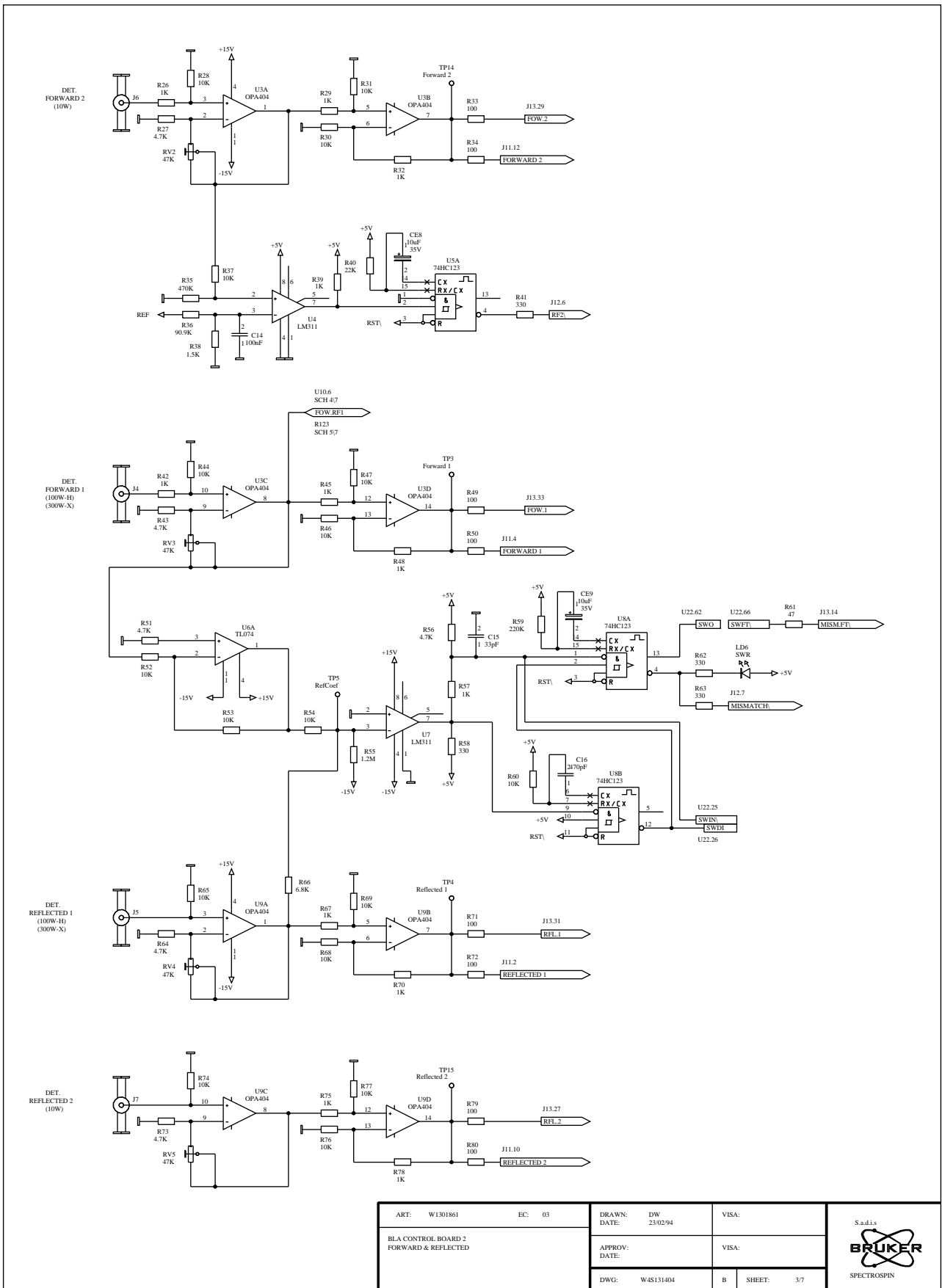


Figure 3.9. Control board 4/7 - Duty cycle & pulse width limiter

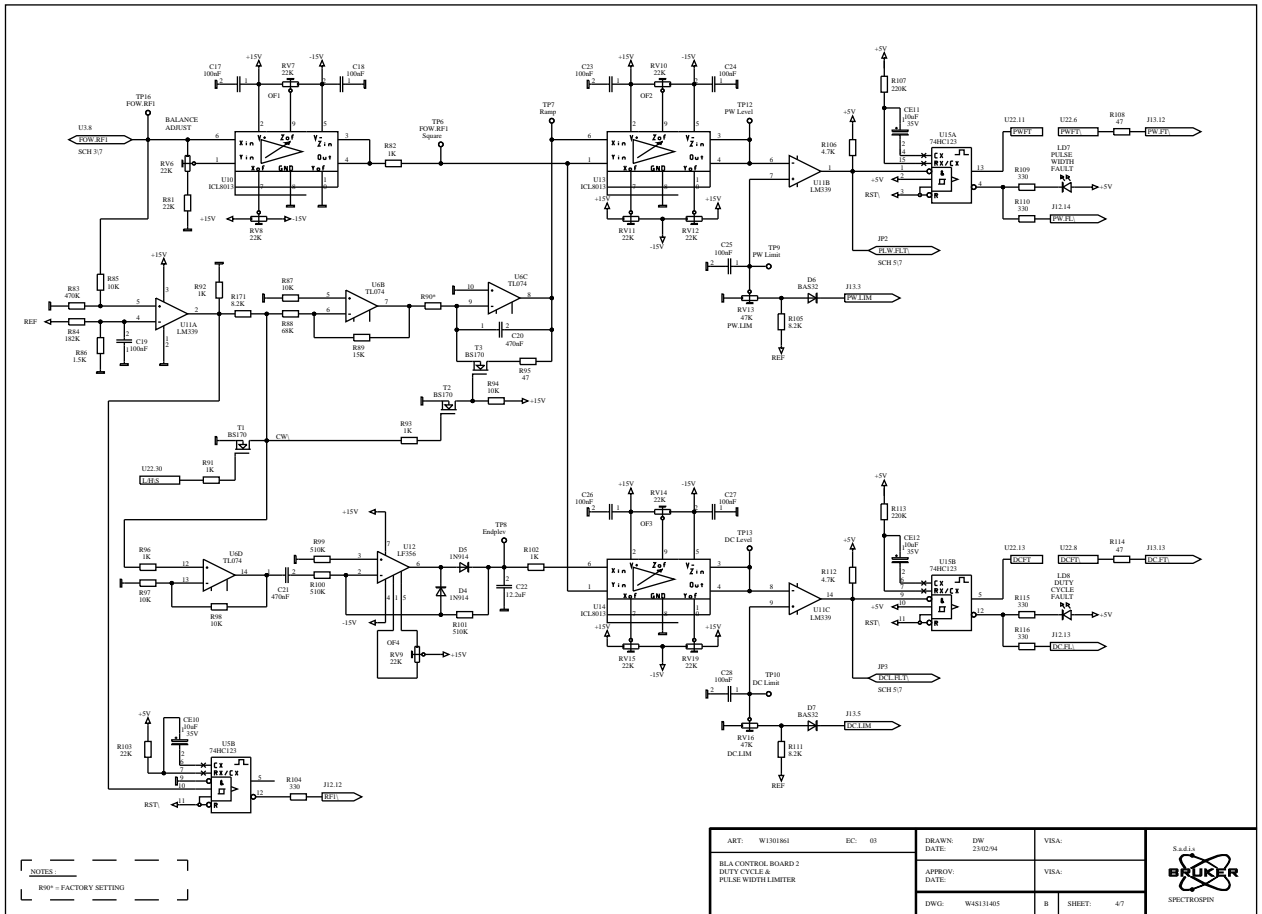


Figure 3.10. Control board 5/7 - Power limitation

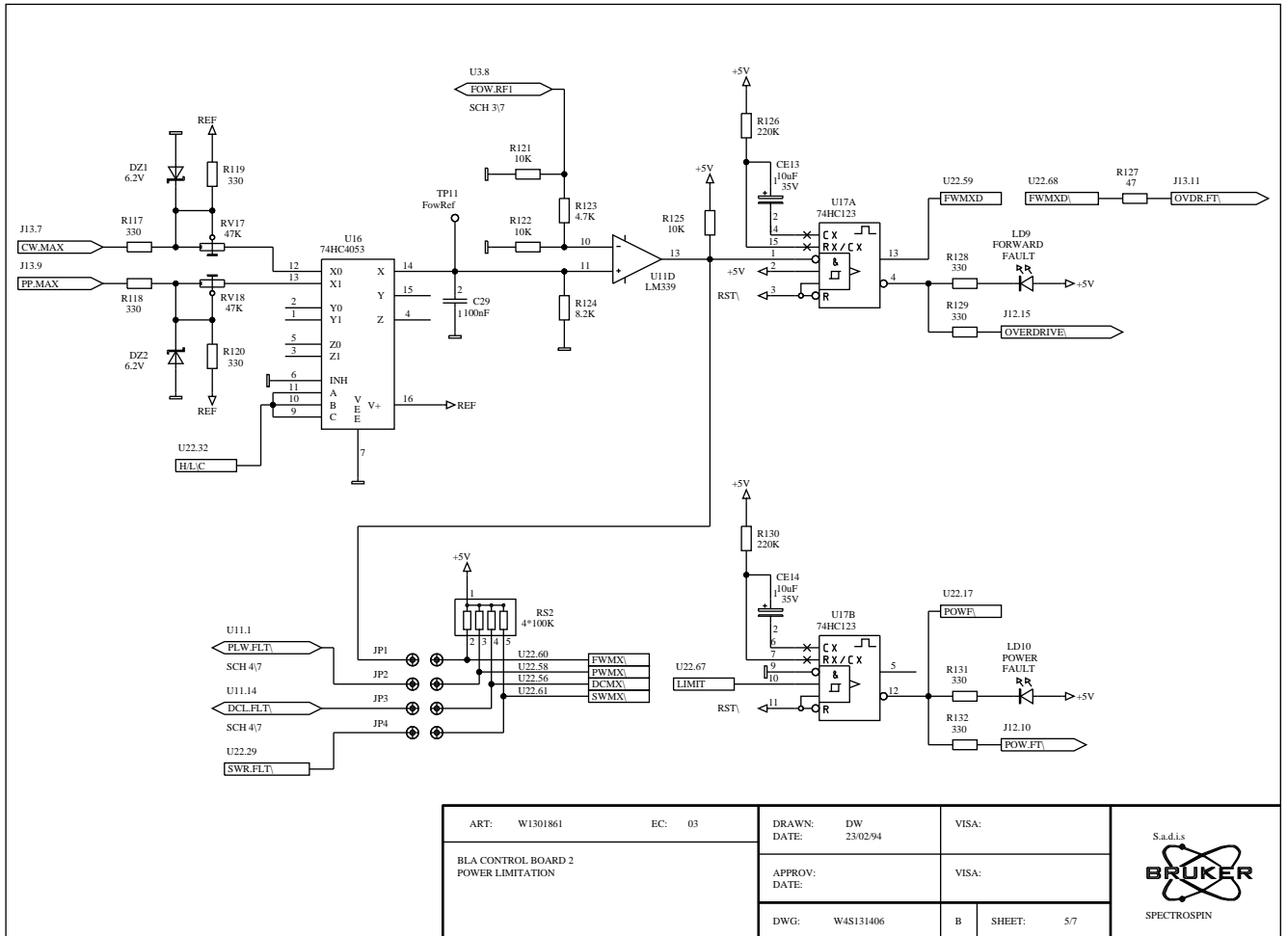


Figure 3.11. Control board 6/7 - Blanking circuit

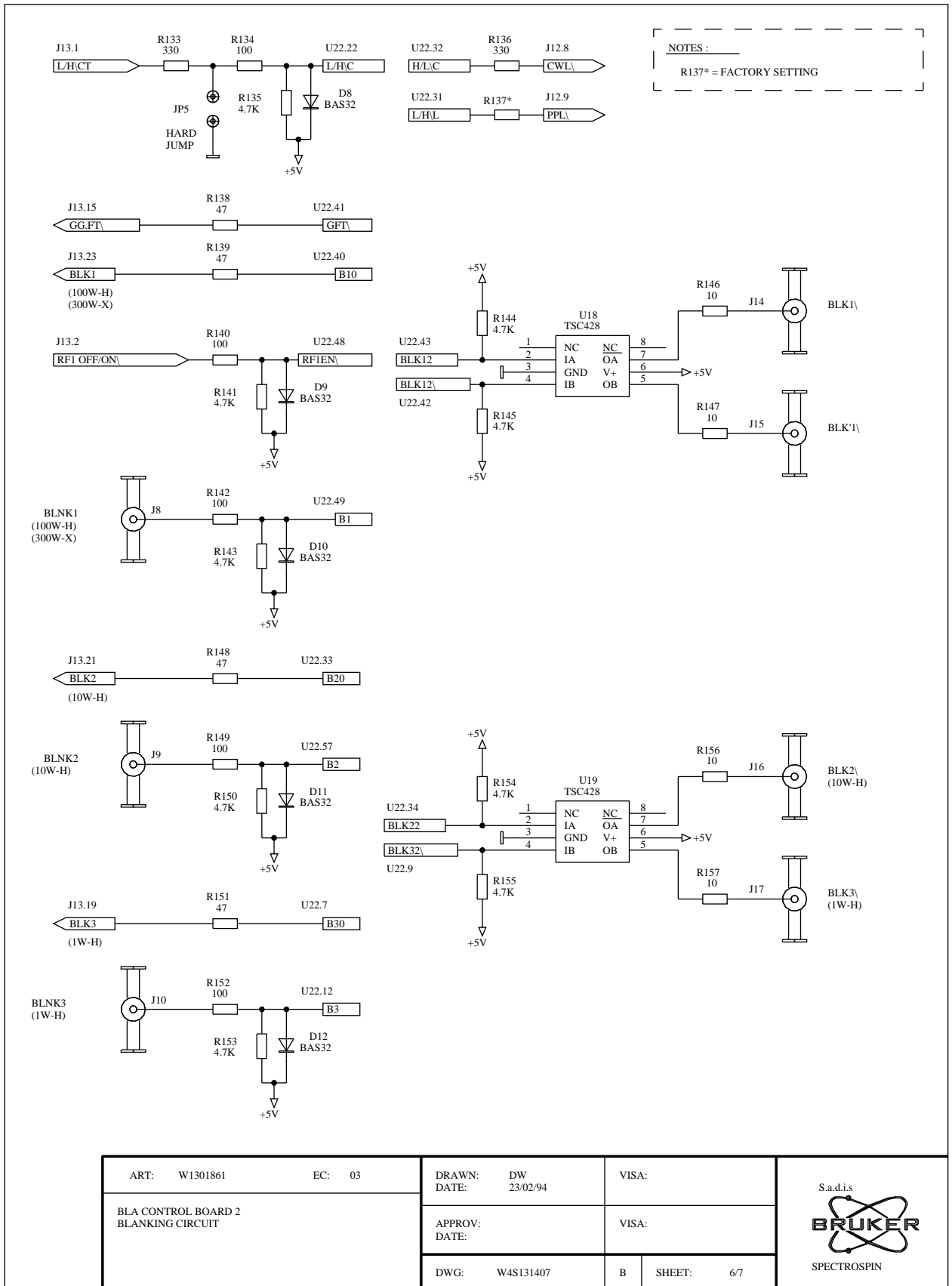




Figure 3.12. Control board 7/7 - Interconnection & pal

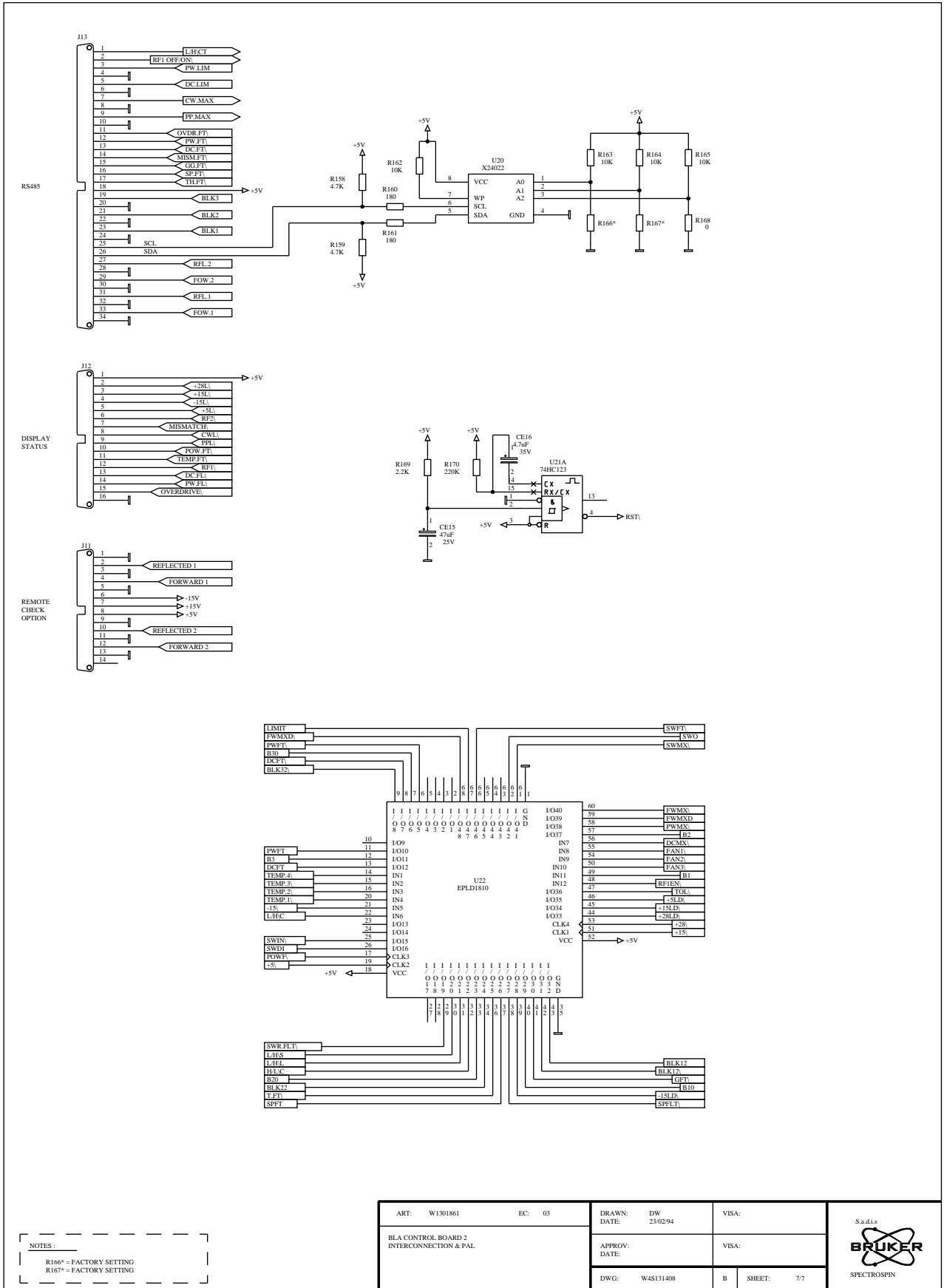
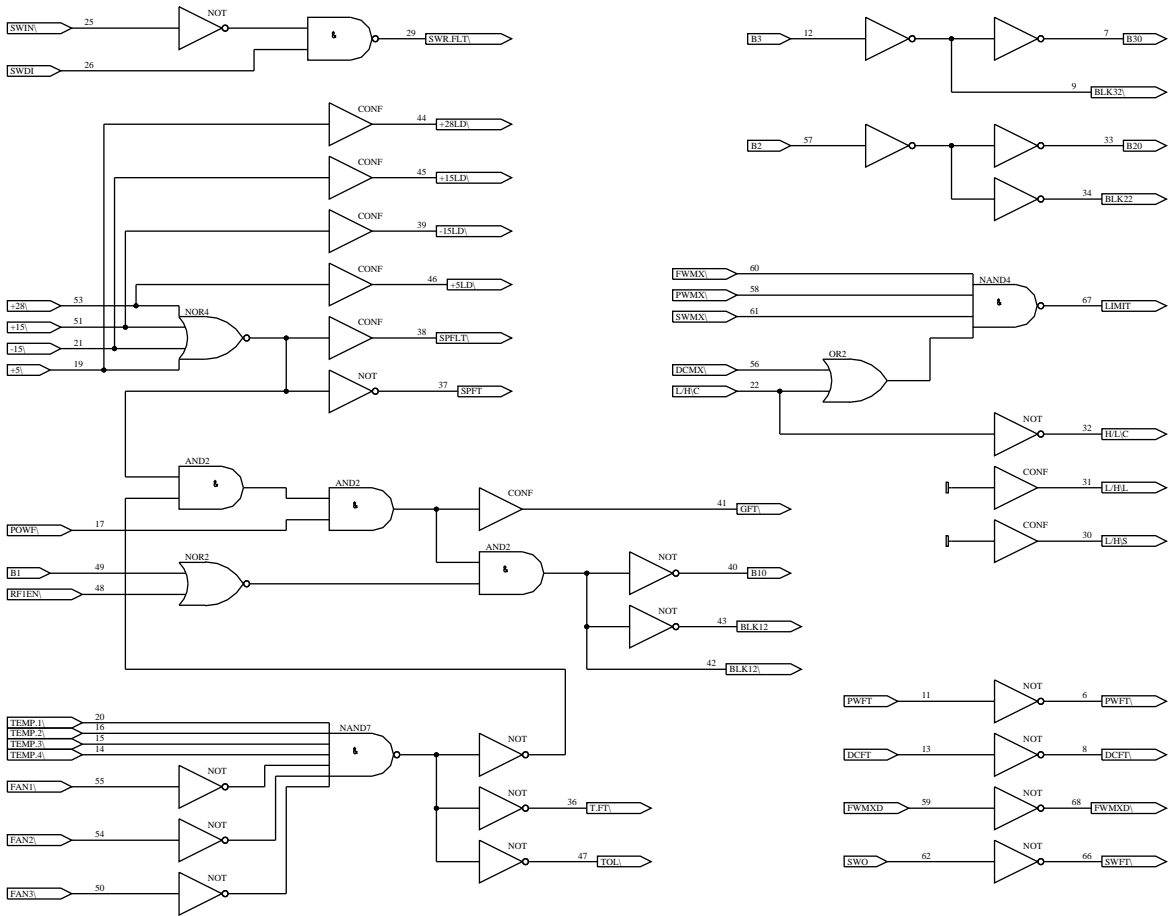
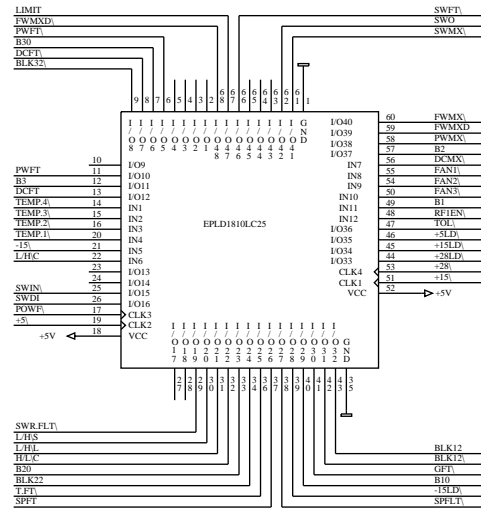


Figure 3.13. Pal interconnection

BLA02/01  
02/11/93



ART: W135653	EC: 02	DRAWN: DW	VISA:	S.a.d.i.s <b>BRUKER</b> SPECTROSPIN
BLA02/01 PAL INTERCONNECTION		DATE: 02/11/93	VISA:	
		APPROV: DWG: W4D131693	VISA: A	
			SHEET: 1/1	

Figure 3.14. Wiring diagram

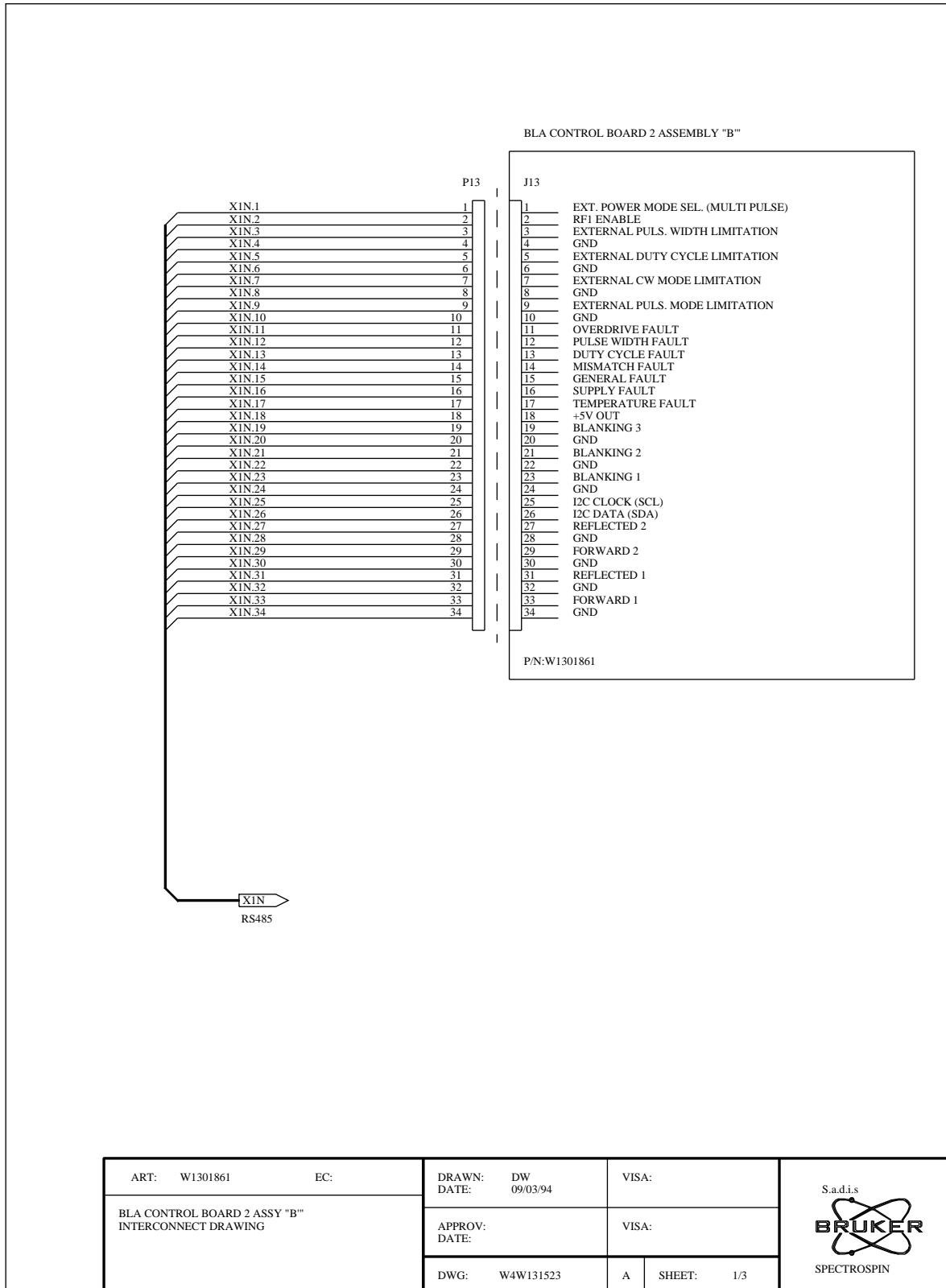


Figure 3.15. Wiring diagram

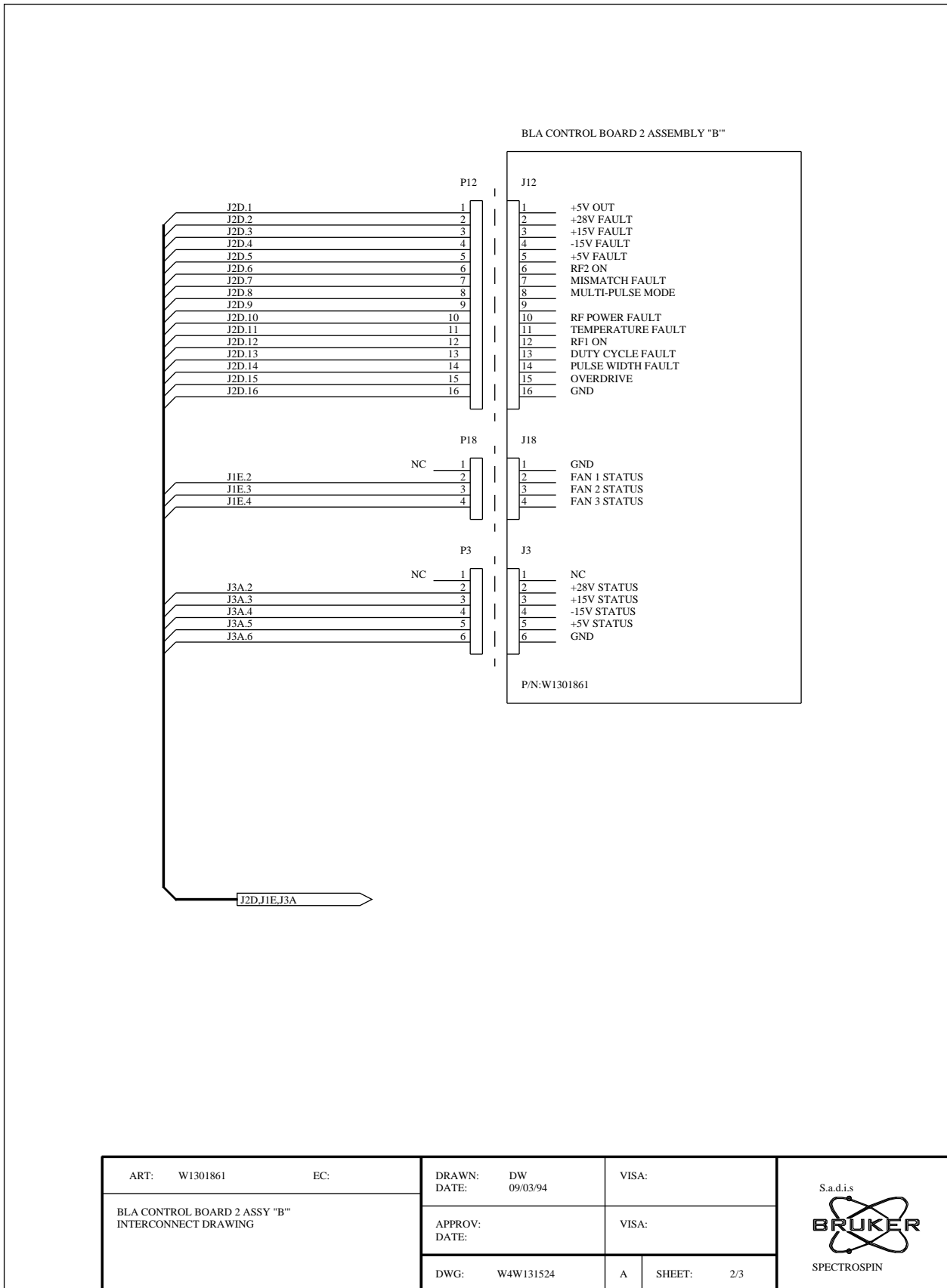
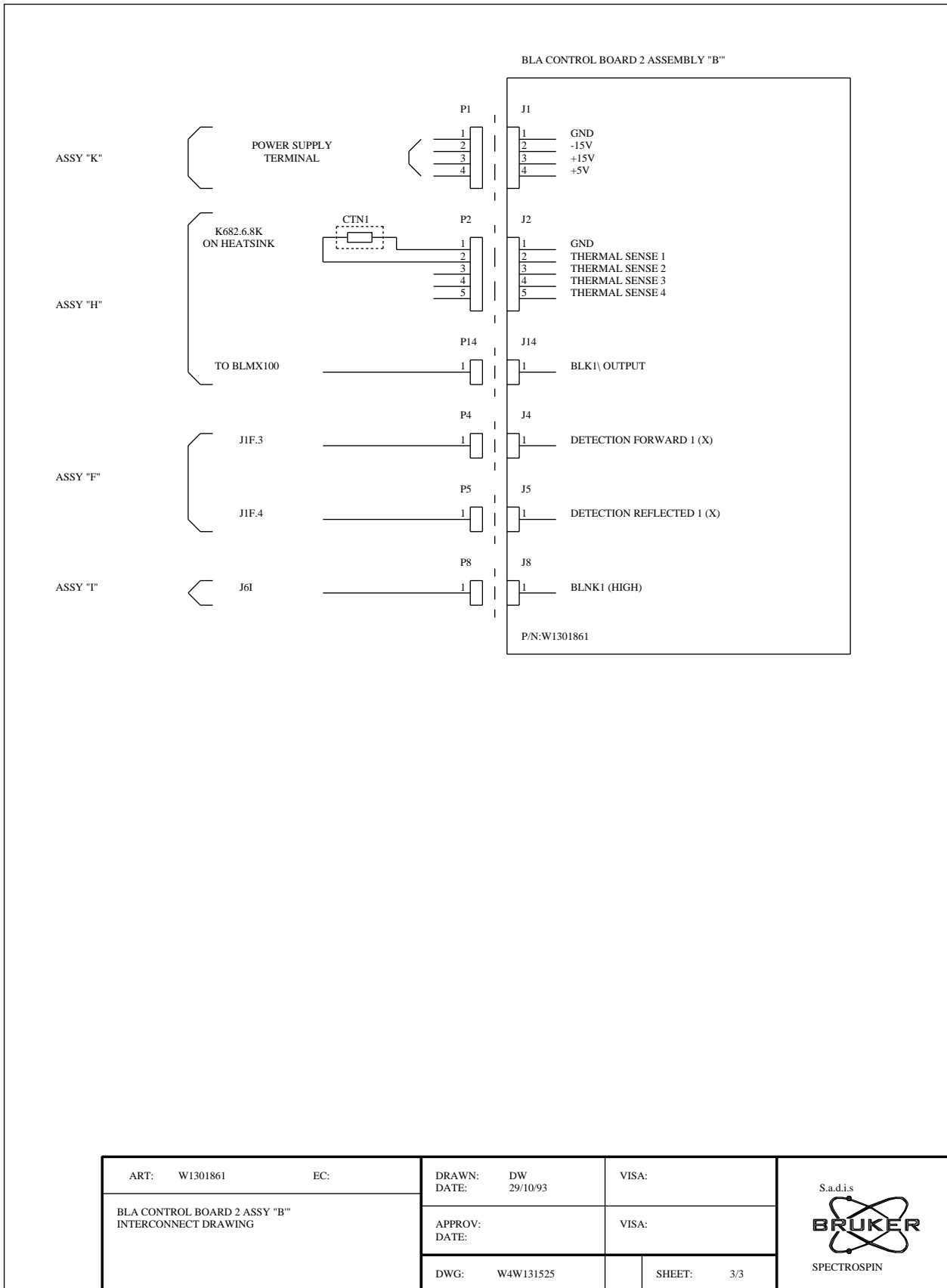


Figure 3.16. Wiring diagram





# ***Status board***

# **4**

Figure 4.17. Interconnect drawing

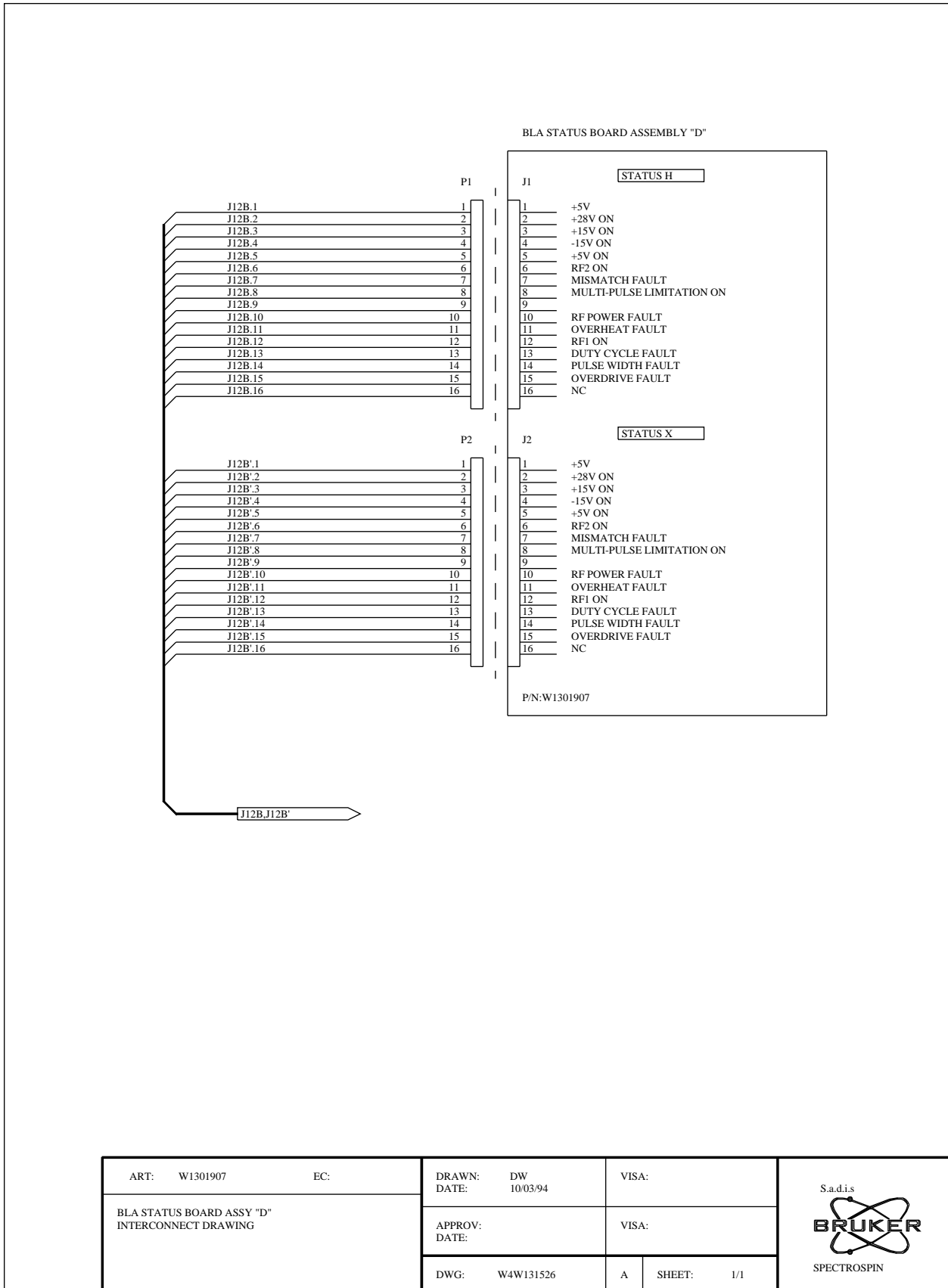
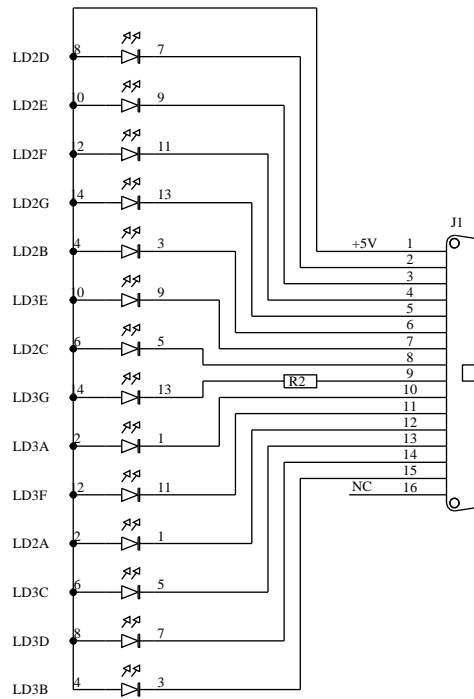
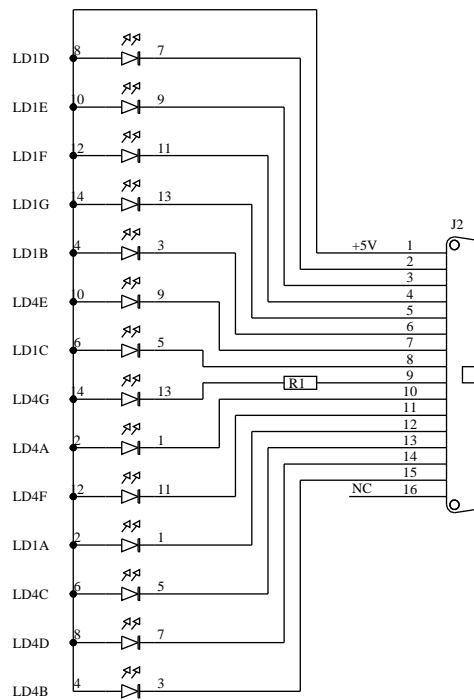




Figure 4.18. Status led board




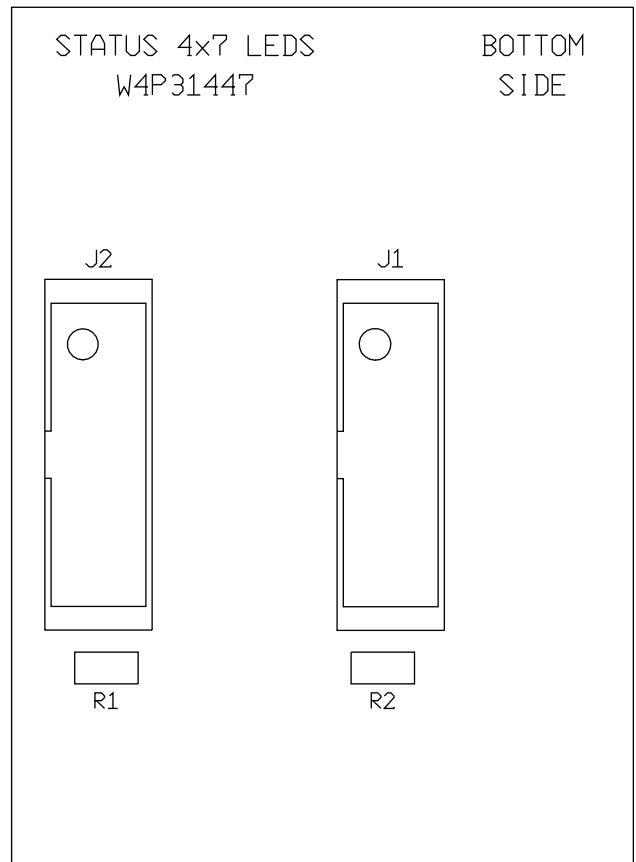
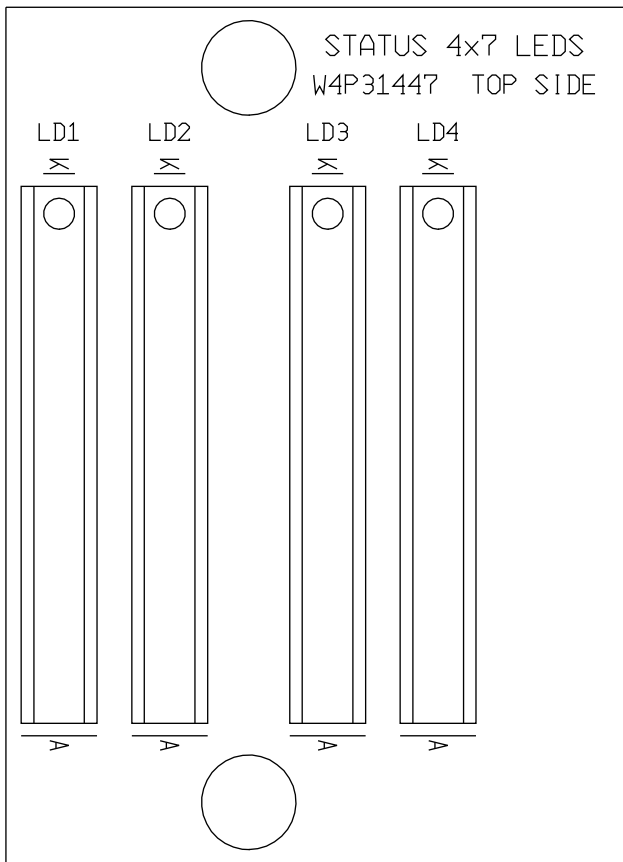
ART: W1301907	EC: 01	DRAWN: DW	VISA:	
STATUS LED BOARD 4*7 LED		DATE: 18/06/93	VISA:	
		APPROV: DATE:	VISA:	
		DWG: W4S131447	SHEET: 1/1	

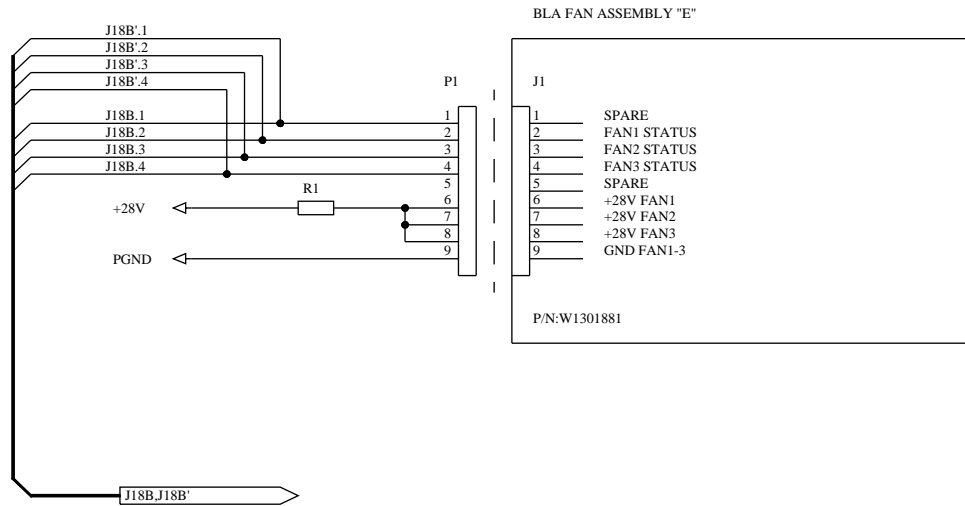
Figure 4.19. Status led board - location



# *Fan assembly*

# 5

Figure 5.1. Interconnect drawing




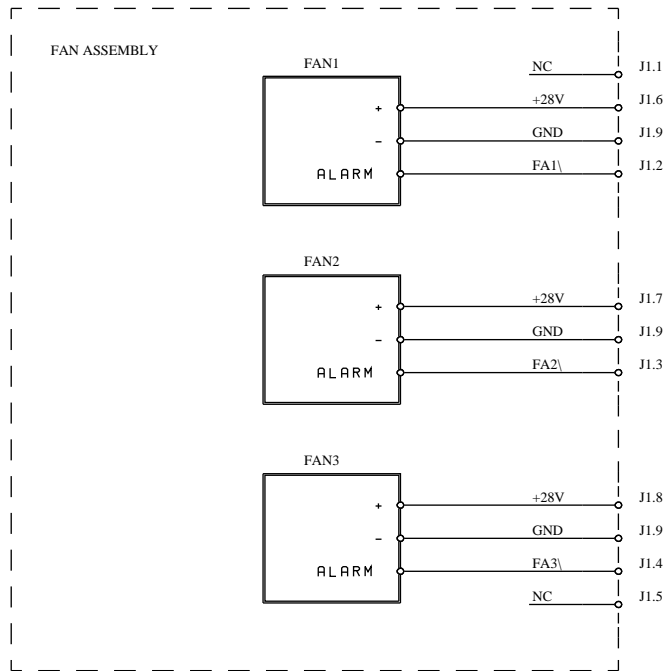

ART: W1301881	EC:	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
BLA FAN ASSEMBLY ASSY "E" INTERCONNECT DRAWING		DATE: 10/03/94	DATE:	
DWG: W4W131527	A	SHEET: 1/1		

Figure 5.2. Fan assembly



ART: W1301881	EC: 01	DRAWN: DW	DATE: 05/05/93	VISA:
FAN ASSEMBLY		APPROV:	DATE:	VISA:
		DWG: W4S131424		SHEET: 1/1

S.a.d.i.s



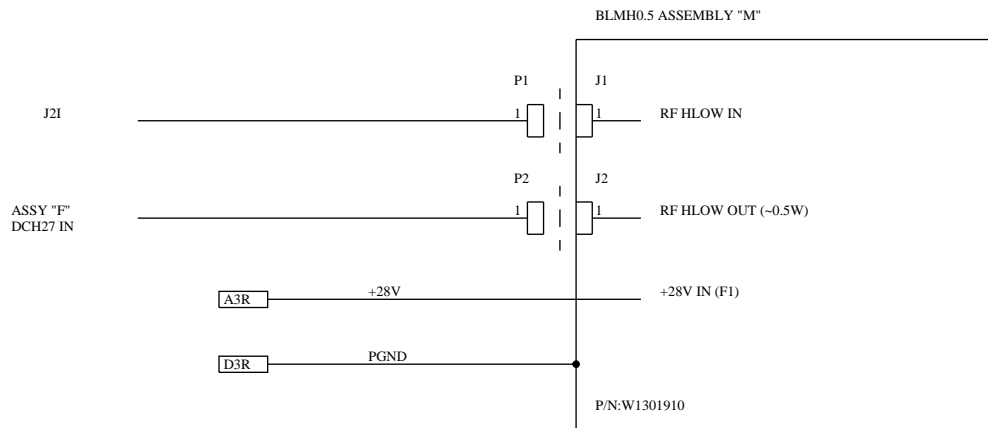
SPECTROSPIN



***BLMH0.5/50***

**6**

Figure 6.1. BLMH0.5 assy "M"




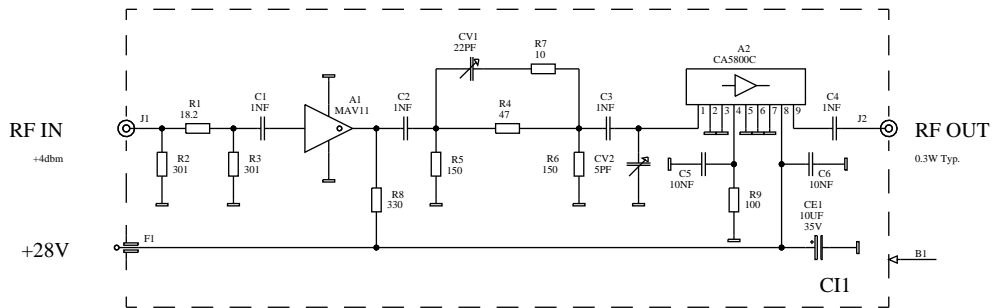
ART: W1301910	EC:	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
BLMH0.5 ASSY "M" INTERCONNECT DRAWING		DATE: 29/10/93	VISA:	
		APPROV:	VISA:	
		DATE:		
DWG: W4W131528			SHEET: 1/1	



Figure 6.2. BLMH0.5




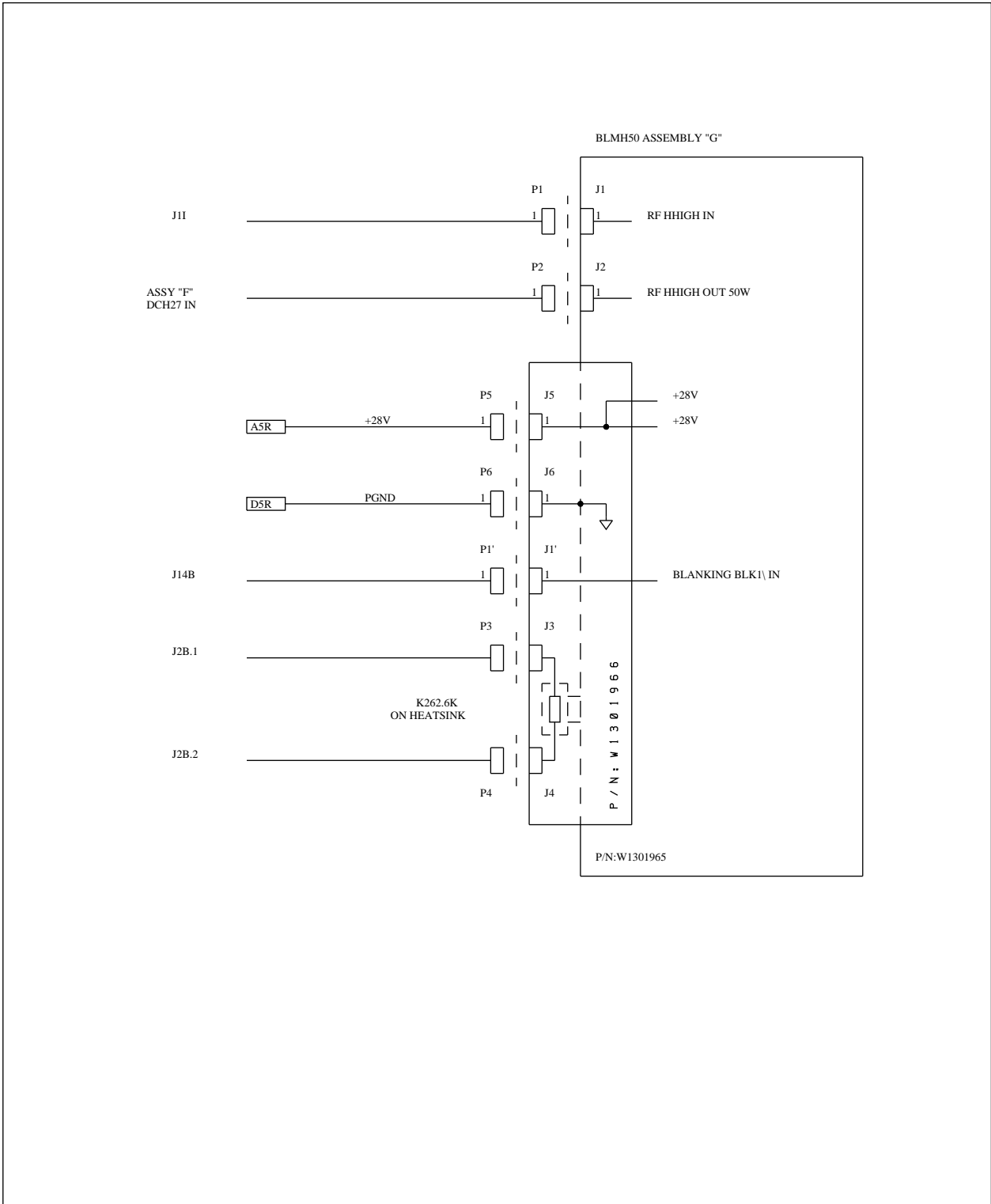
ART: W1301910	EC: 01	DRAWN: DW	VISA:	
BLMH0.5 AMPLIFIER 180-640MHZ 5W LINEAR / 21 db		DATE: 01/09/93	VISA:	
		APPROV: DATE:	VISA:	
		DWG: W48131438	SHEET: 1/1	

Figure 6.3. BLMH50 assy "G"




ART: W1301965	EC:	DRAWN: DW	VISA:	
BLMH50 ASSY "G" INTERCONNECT DRAWING		DATE: 29/10/93	DATE: 19/02/96	
		DWG: W4W131529	SHEET: 1/1	

Figure 6.4. BLMH50

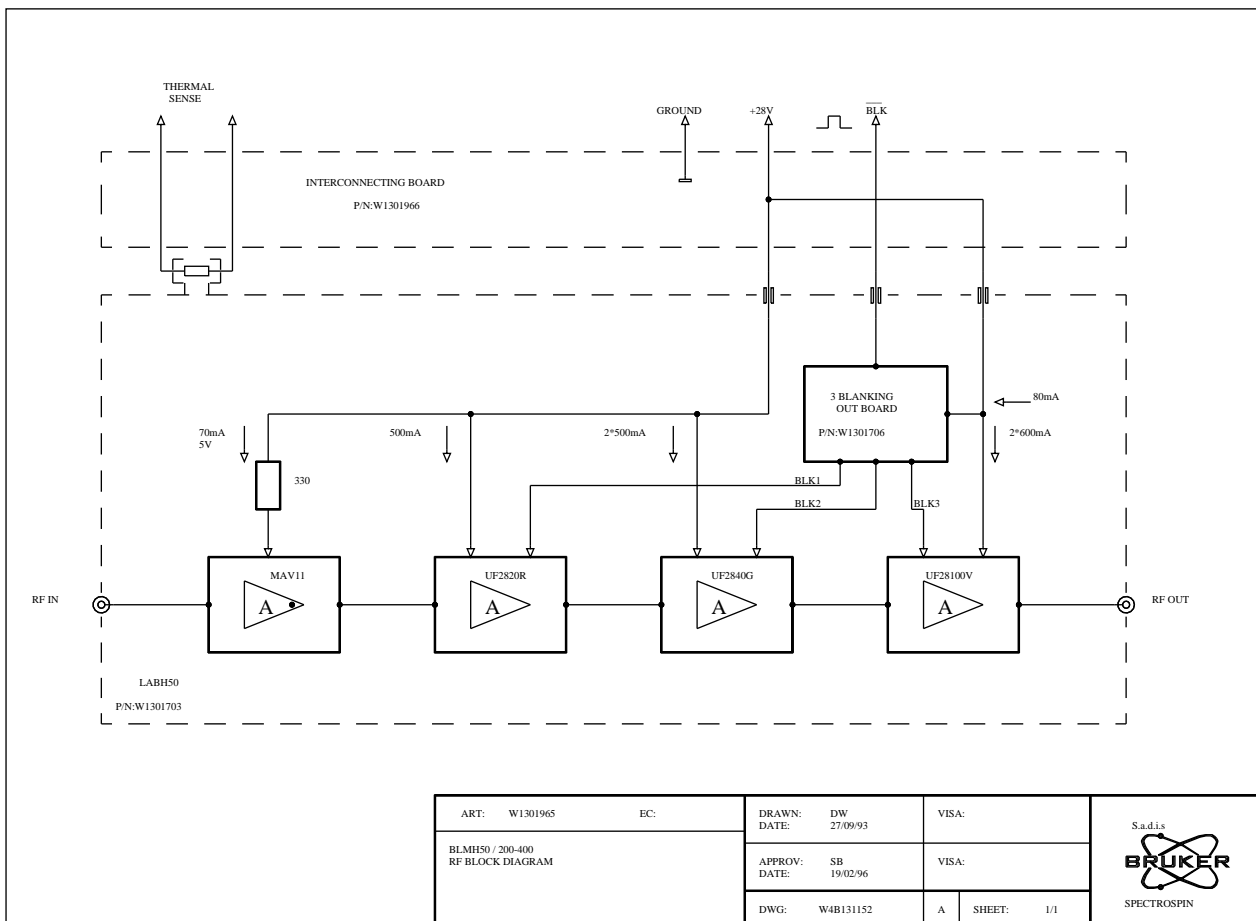
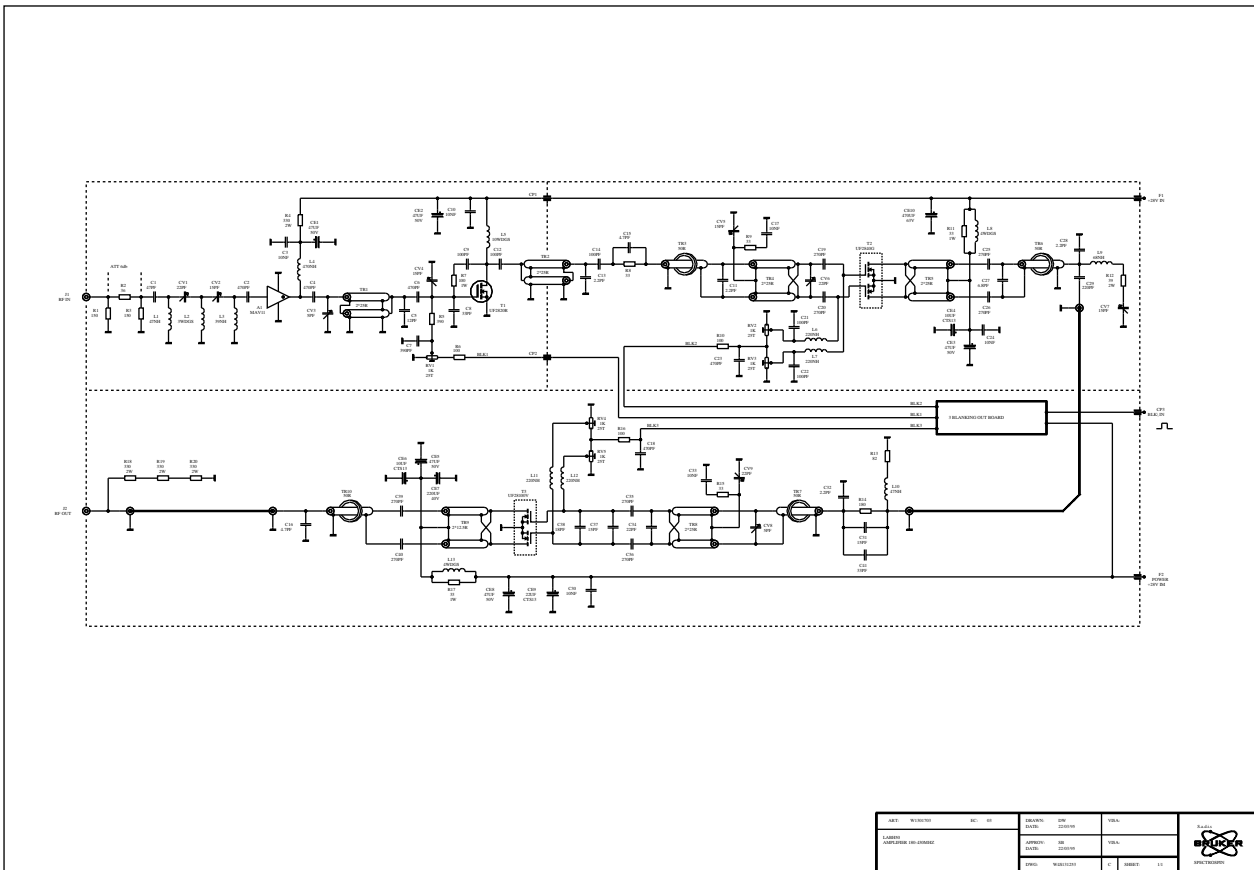


Figure 6.5. LABH50



REV	DESCRIPTION	BY	DATE	REVISED	DATE	BY	DATE
1	LABH50						
2	REVISION						
3	REVISION						
4	REVISION						
5	REVISION						
6	REVISION						
7	REVISION						
8	REVISION						
9	REVISION						
10	REVISION						



Figure 6.6. Blanking board

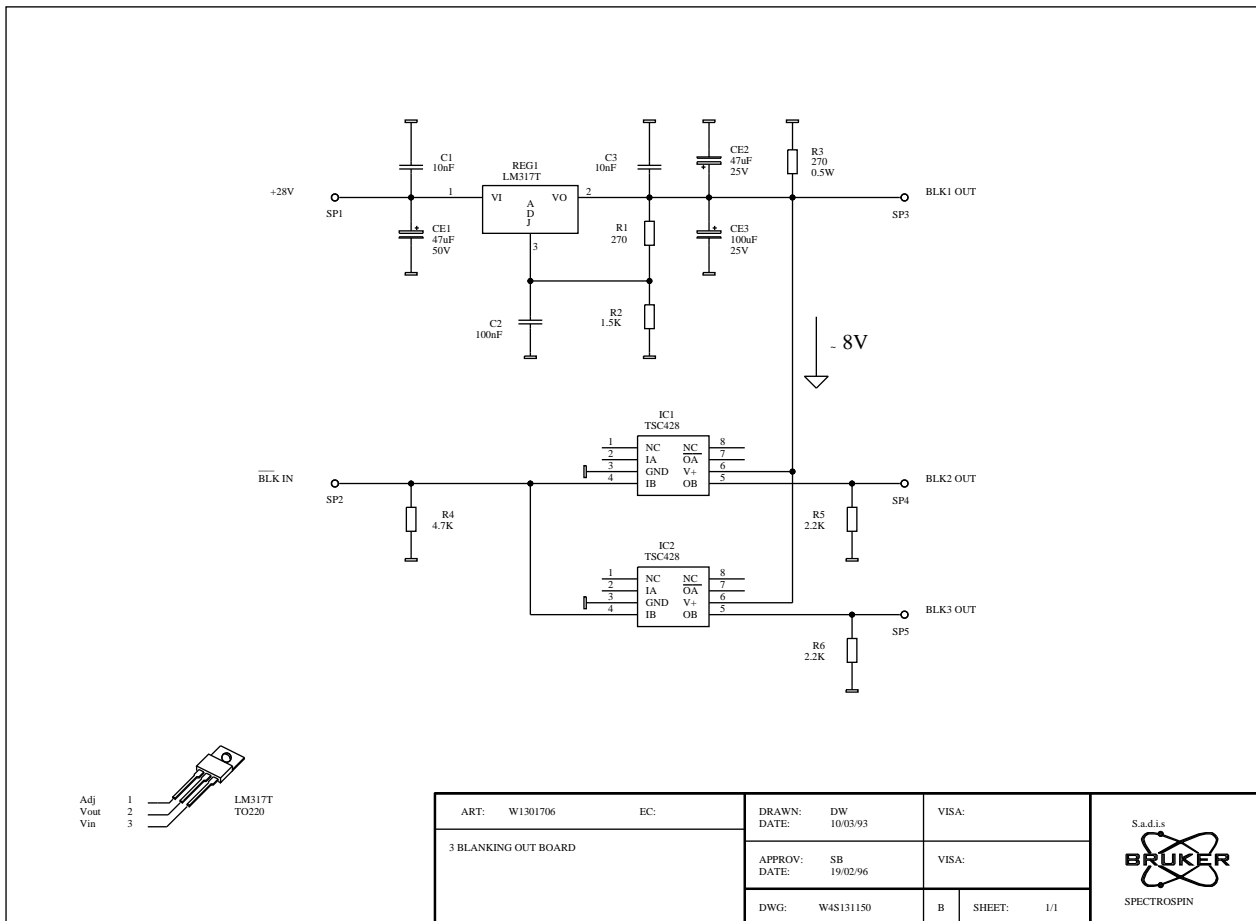


Figure 6.7. Blanking board layout

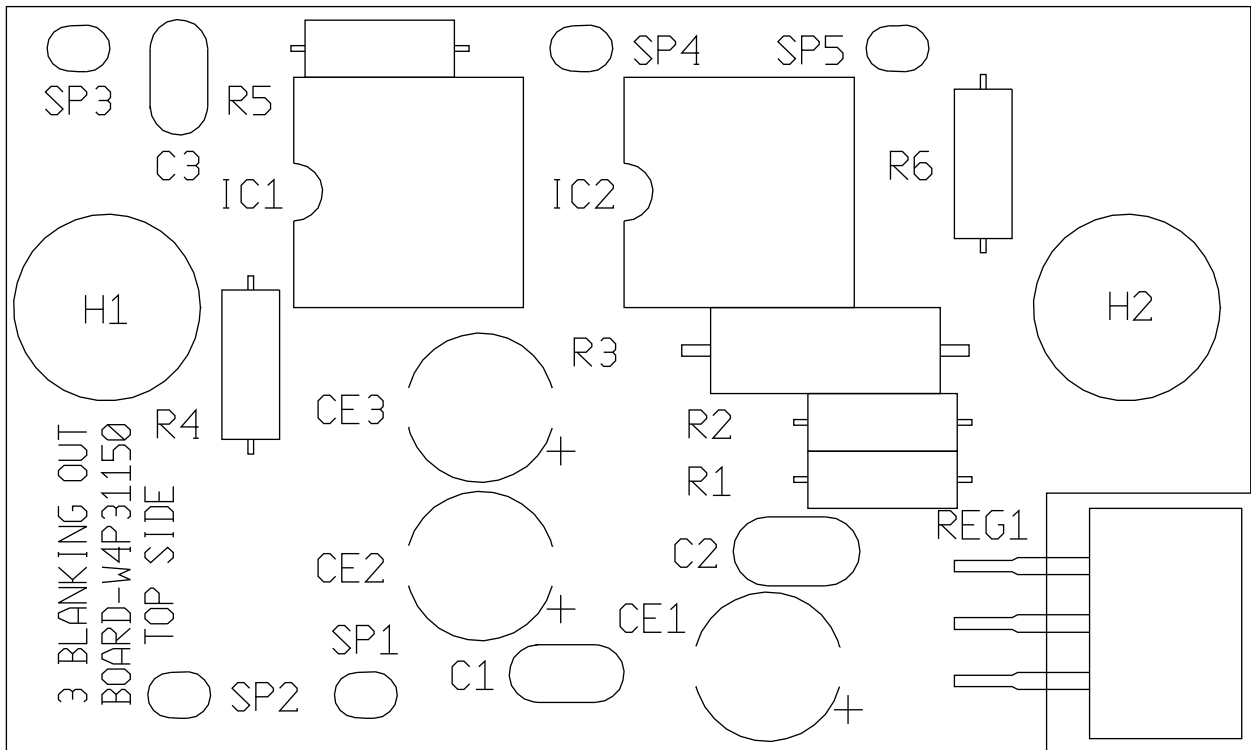
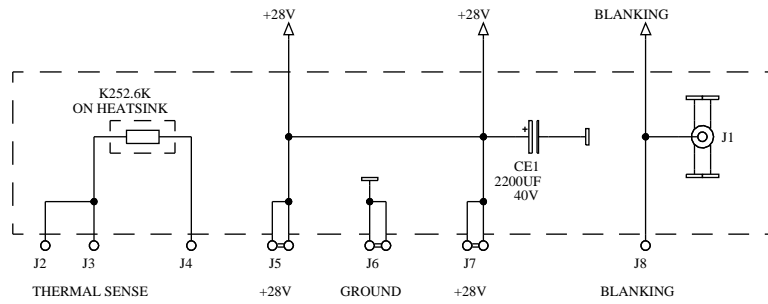



Figure 6.8. Interconnecting board



ART: W1301966	EC:	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
INTERCONNECTING BOARD		DATE: 01/10/93		
		APPROV: SB	VISA:	
		DATE: 19/02/96		
		DWG: W4S131514	SHEET: 1/1	





# ***BLMX100 amplifier module***

Figure 7.1. Wiring diagram

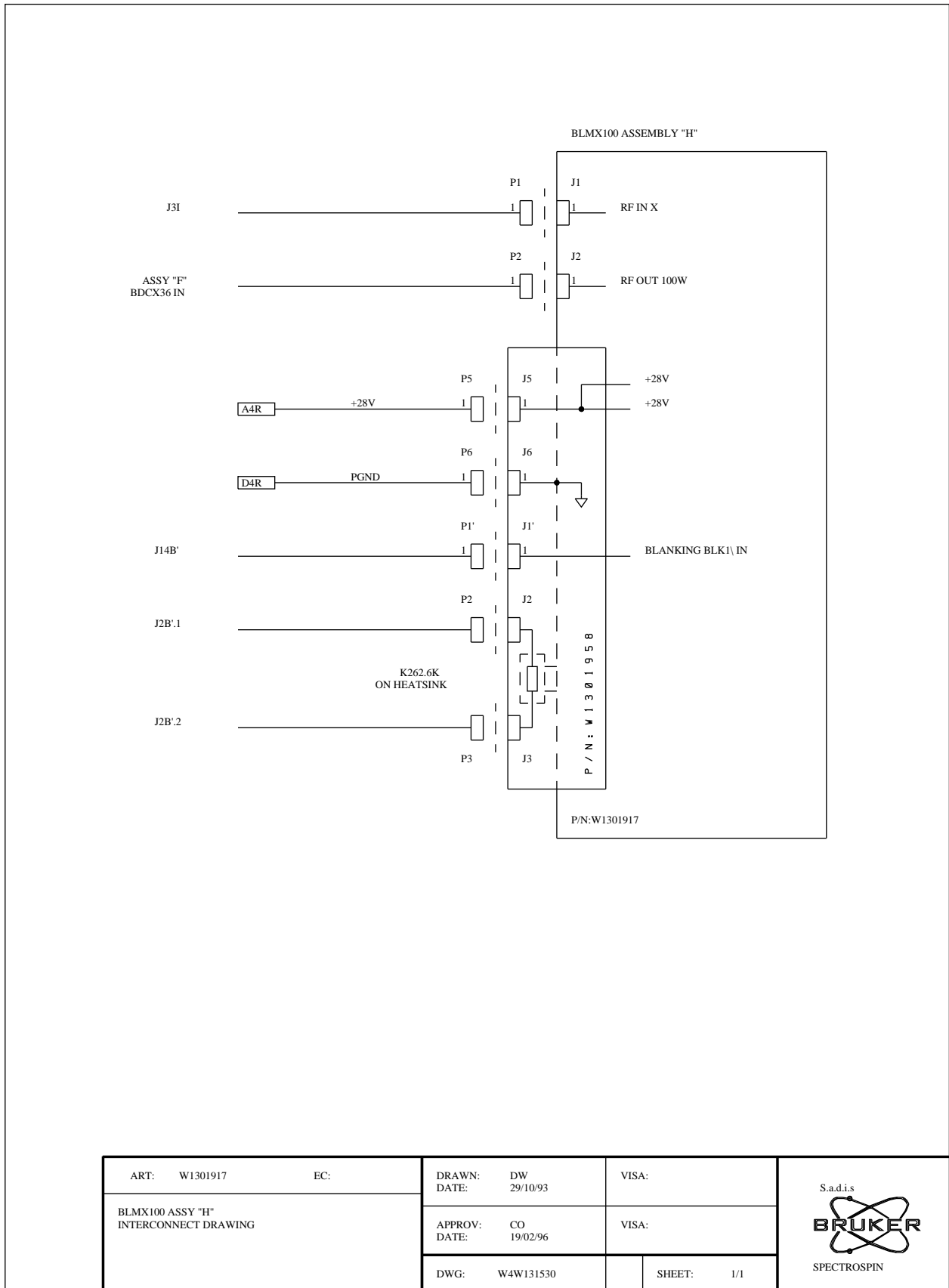


Figure 7.2. Block diagram

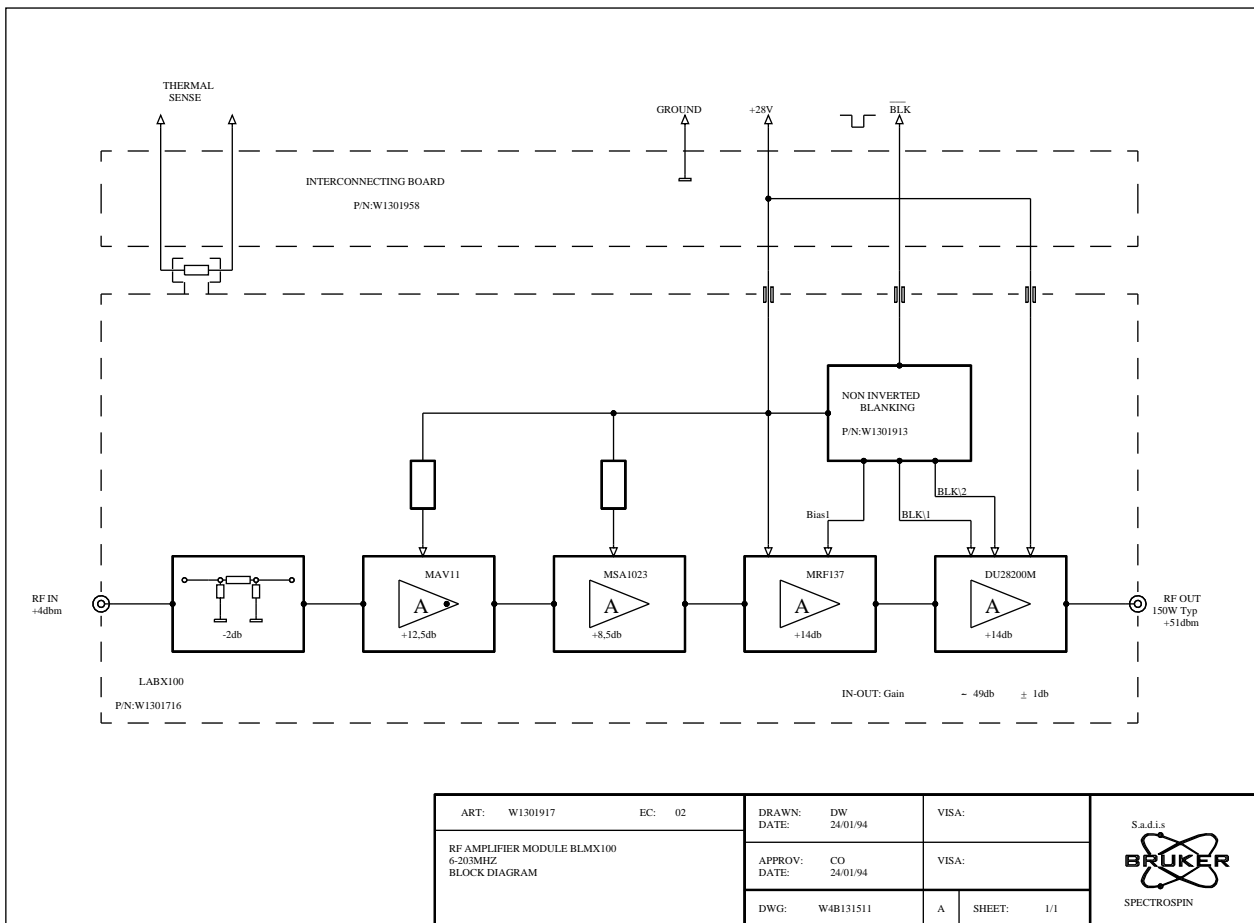


Figure 7.3. LABH100

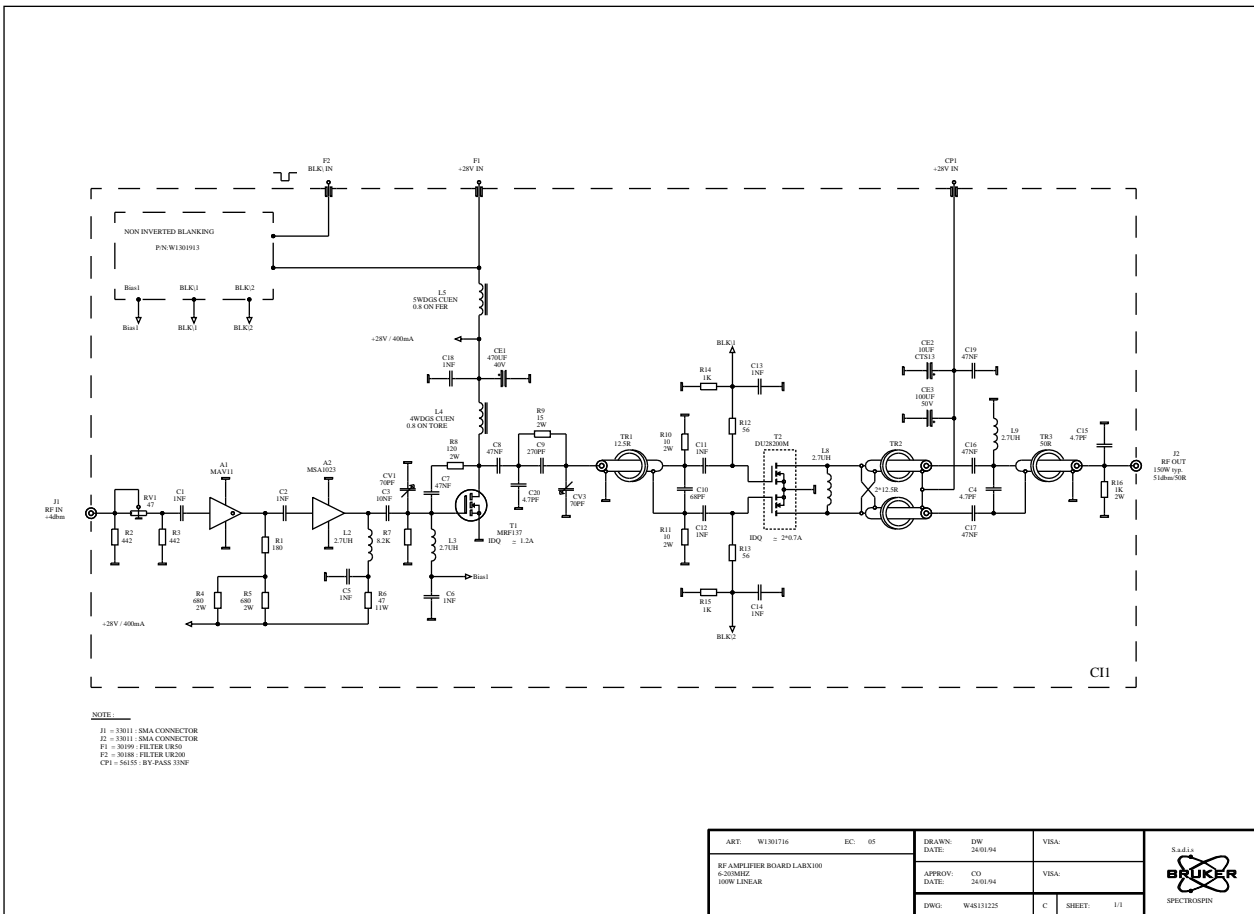
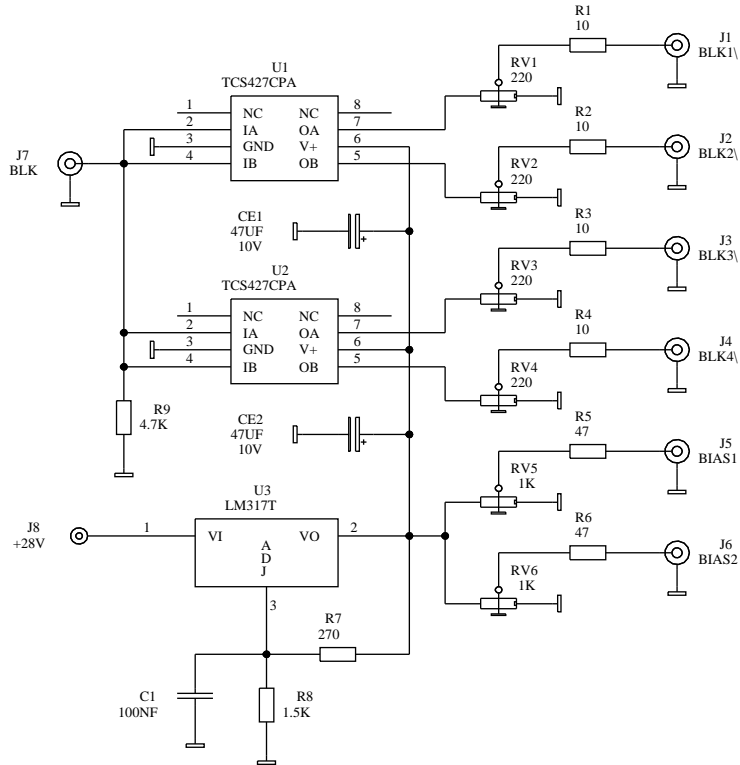


Figure 7.4. Non inverted blanking




ART: W1301913	EC: 01	DRAWN: DW	DATE: 13/09/93	VISA:	S.a.d.i.s  SPECTROSPIN
NON INVERTED BLANKING		APPROV: CO	DATE: 13/09/93	VISA:	
		DWG: W4S131508		SHEET: 1/1	

Figure 7.5. Blanking layout

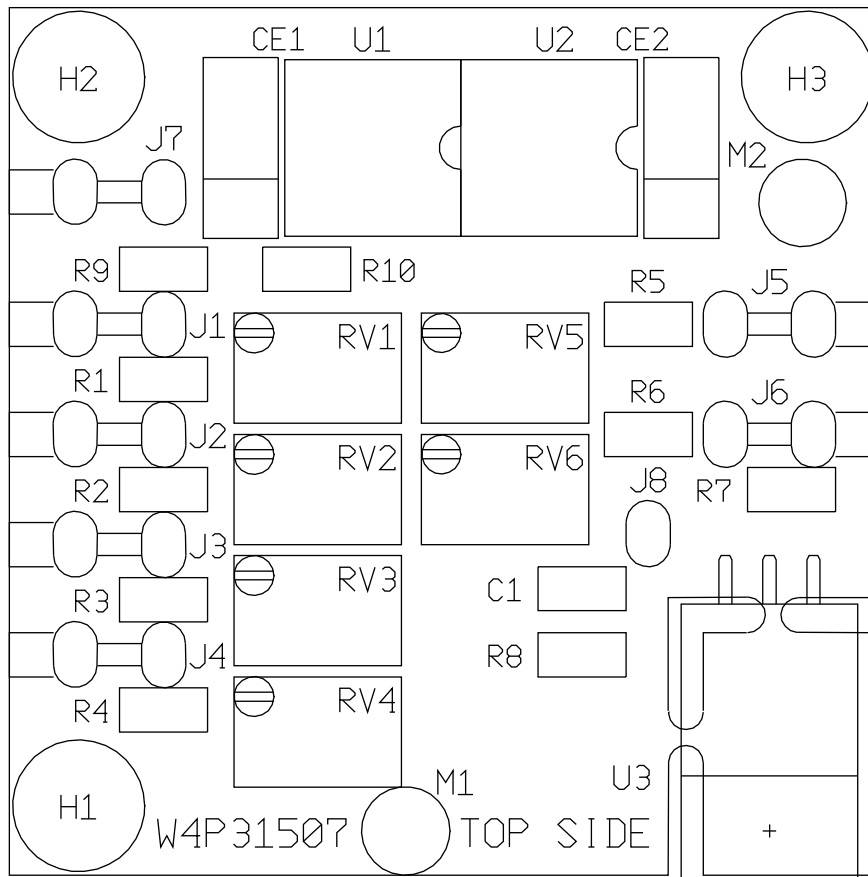
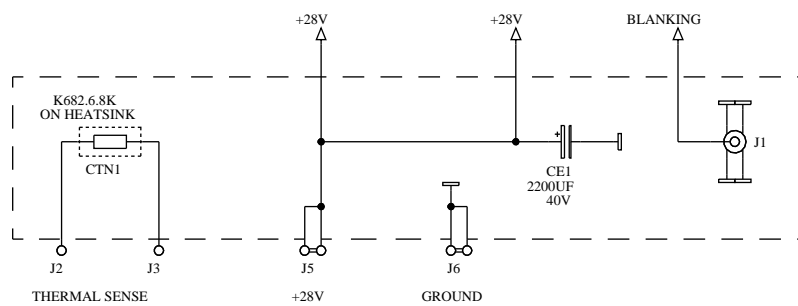



Figure 7.6. RF amplifier bias layout



**NOTE:**

CTN1 = 56521 : CTN 6K8 K682

ART: W1301958	EC: 01	DRAWN: DW	DATE: 25/11/93	VISA:	S.a.d.i.s  SPECTROSPIN
INTERCONNECTING BOARD		APPROV: CO	DATE: 25/11/93	VISA:	
		DWG: W4S131512		SHEET: 1/1	





# ***Couplers, switches***

Figure 8.7. Couplers and switches assy "F"

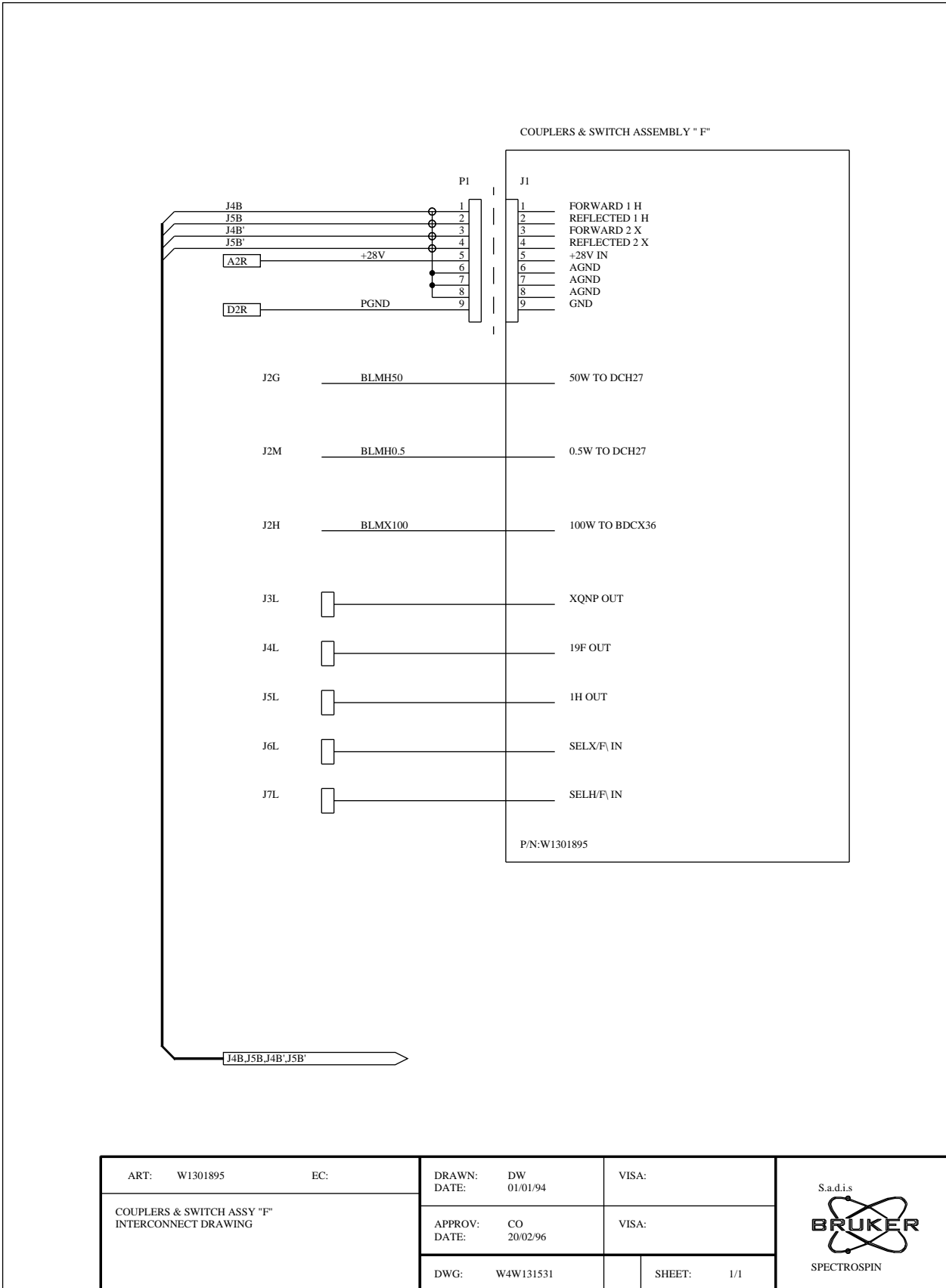


Figure 8.8. Block diagram

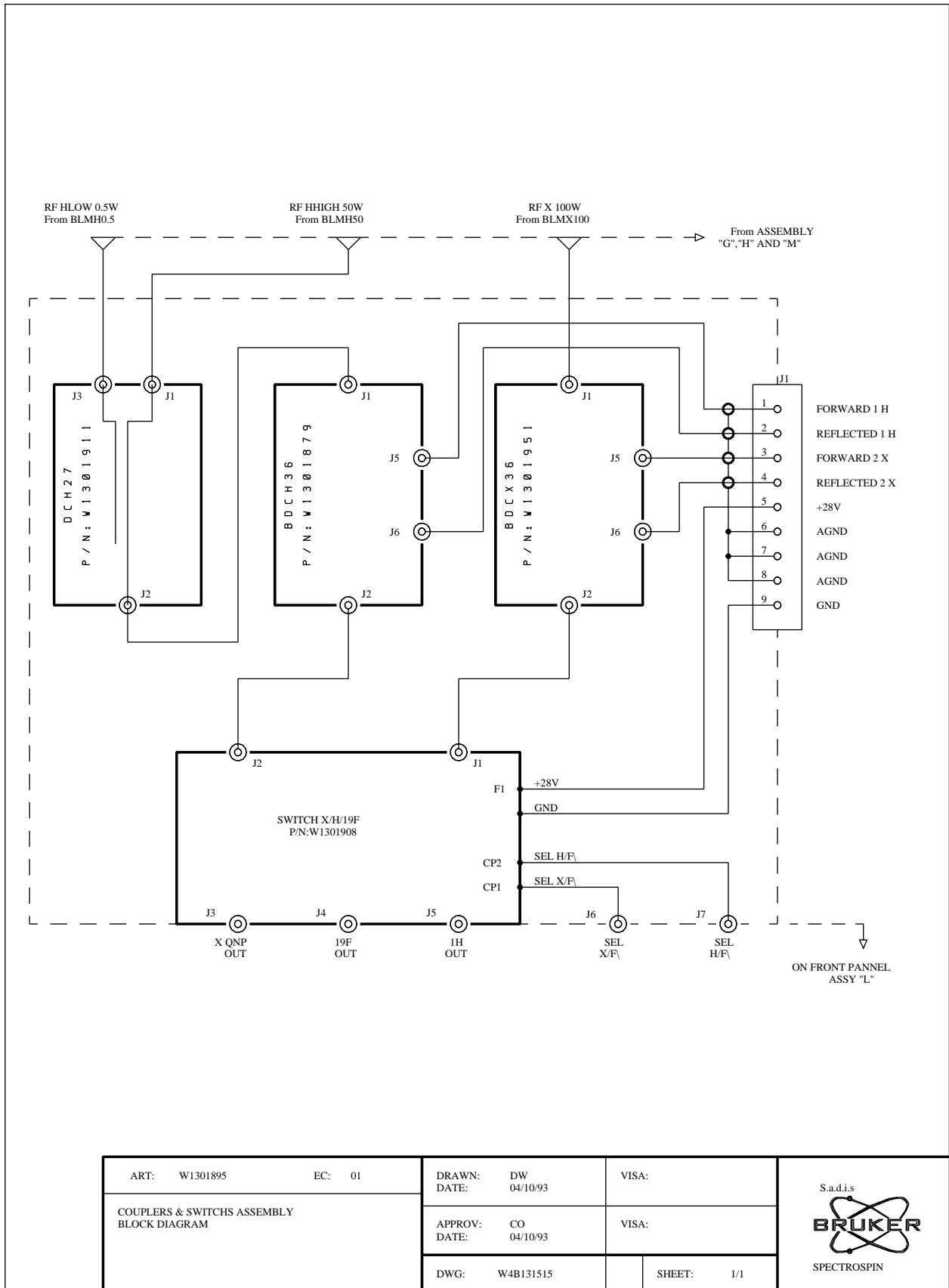
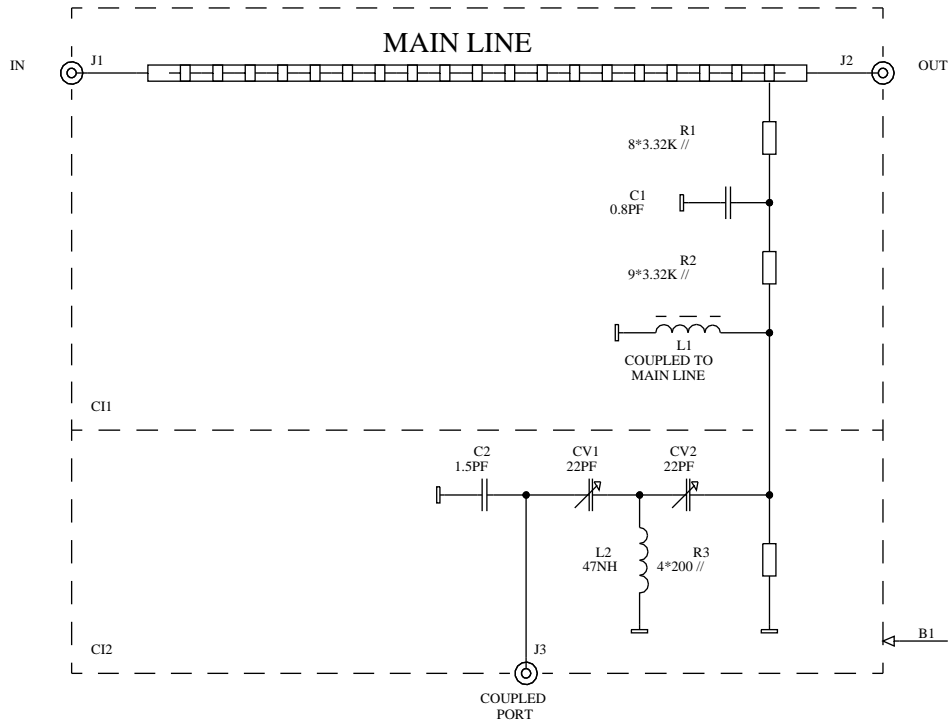


Figure 8.9. DCH27 bidirectionnal coupler




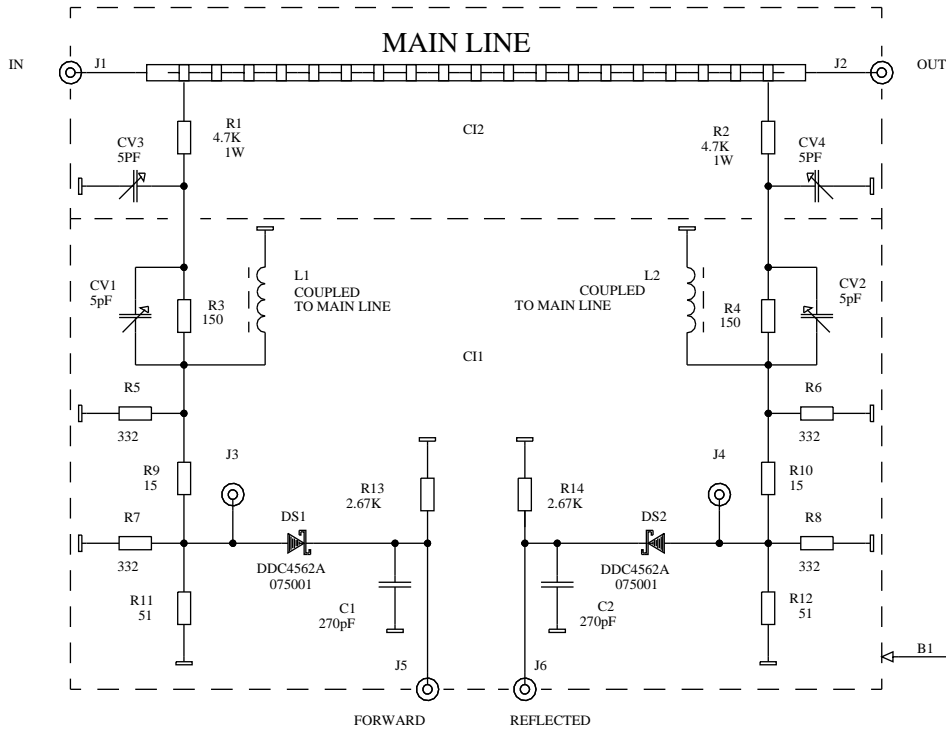
ART: W1301911	EC: 02	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
DCH27 DIRECTIONNAL COUPLER		DATE: 11/10/93		
(SMA.C-SMA)		APPROV: CO	VISA:	
		DATE: 01/06/94		
		DWG: W4S131439	A	SHEET: 1/1

Figure 8.10. BDCH36 bidirectionnal coupler




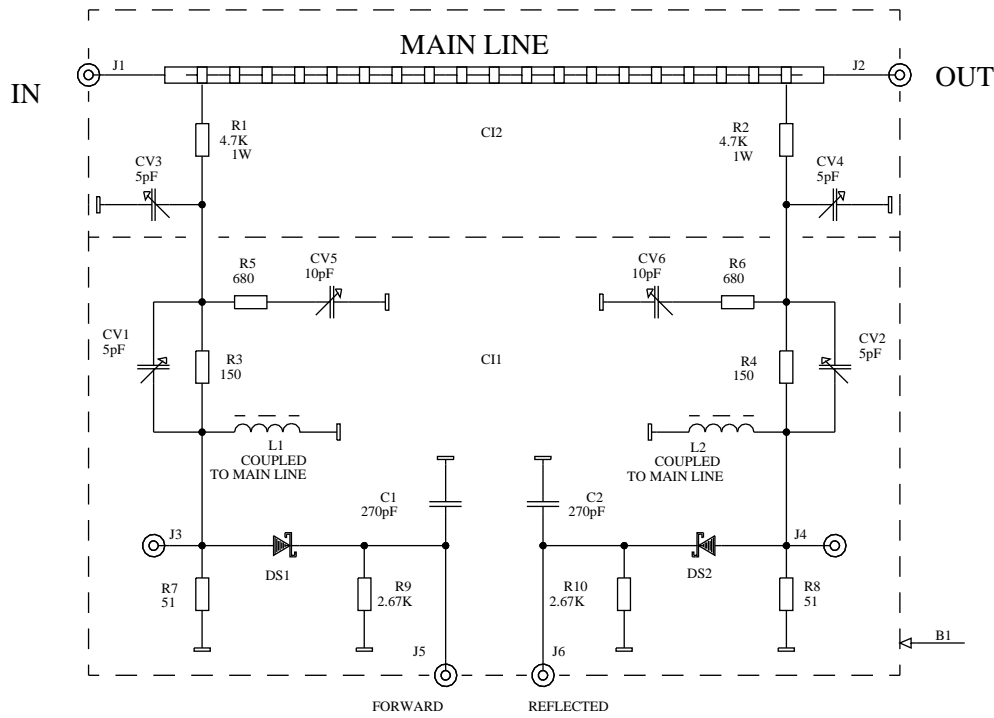
ART: W1301879	EC: 01	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
BDCH36 BI-DIRECTIONNAL COUPLER		DATE: 07/06/93	VISA:	
(SMB-SMA)		APPROV: DATE:	VISA:	
		DWG: W4S131444	SHEET: 1/1	

Figure 8.11. BDCX36 bidirectionnal coupler




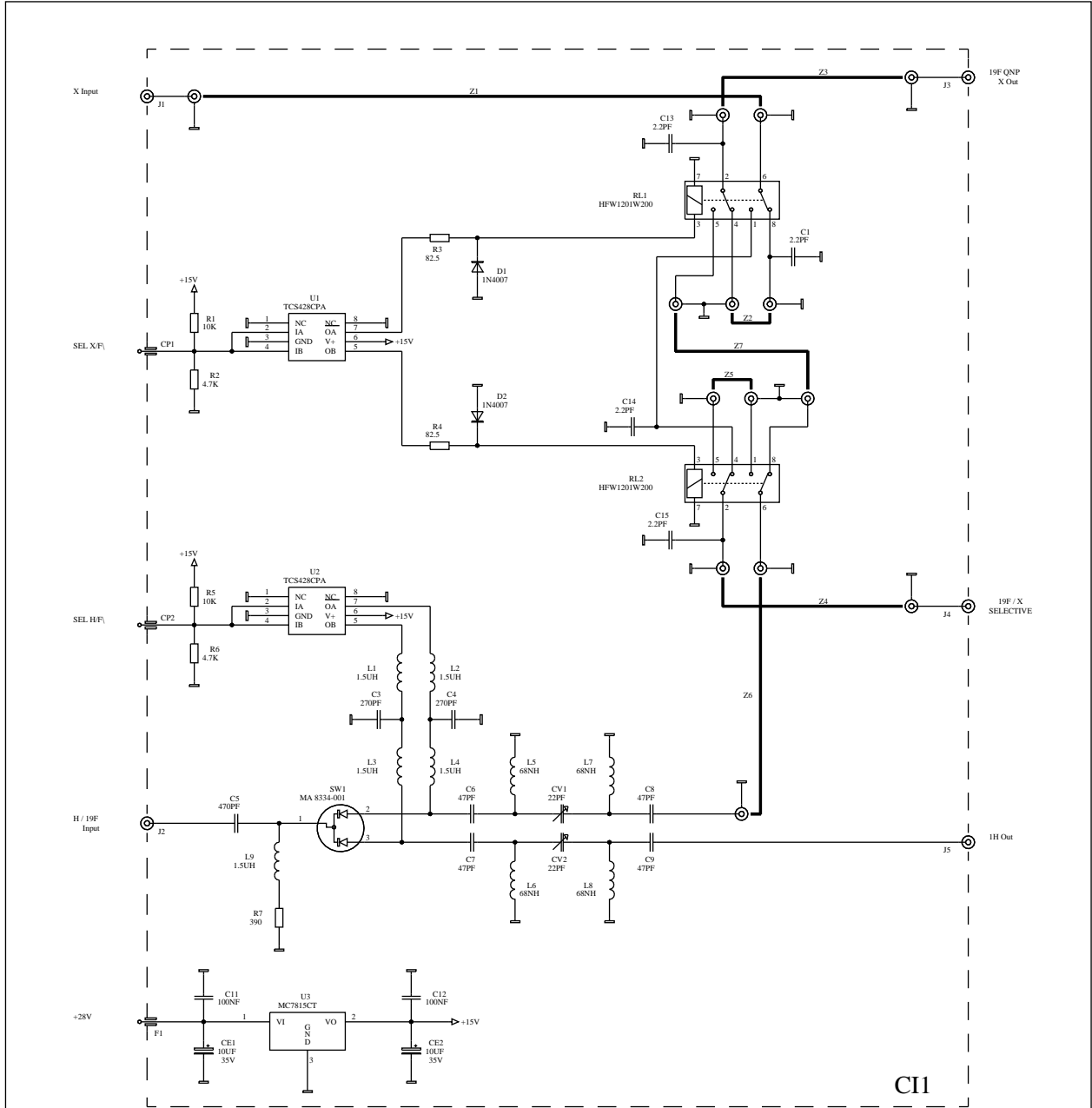
ART: W1301951	EC: 01	DRAWN: DW	VISA:	S.a.d.i.s  SPECTROSPIN
BDCX36 BI-DIRECTIONAL COUPLER		DATE: 03/09/93	APPROV: CO	
(SMB-SMA)		DATE: 08/06/95	VISA:	
		DWG: W4S131502	SHEET: 1/1	

Figure 8.12. Switch 1H/19F/X



NOTE :

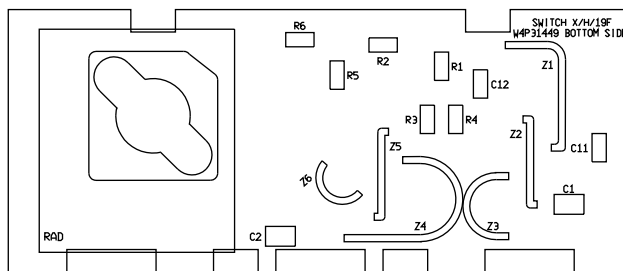
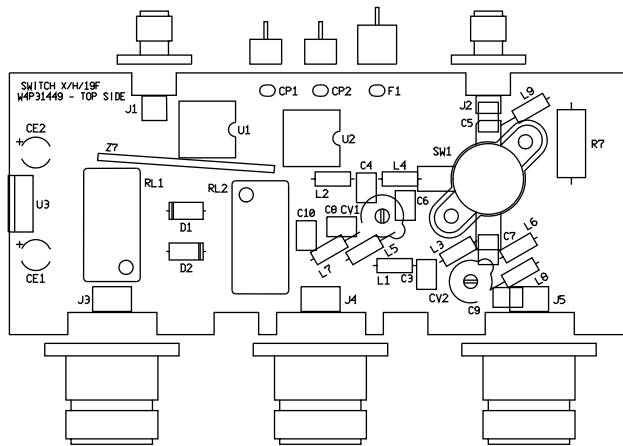
- J1 = 9848 : BNC CONNECTOR
- J2 = 9848 : BNC CONNECTOR
- J3 = 6194 : N CONNECTOR
- J4 = 6194 : N CONNECTOR
- J5 = 6194 : N CONNECTOR
- CP1 = 56154 : BY-PASS 100PF
- CP2 = 56154 : BY-PASS 100PF
- F1 = 30199 : FILTER UR50

SEL X/F	SEL H/F	19F QNP X Out	19F / X SELECTIVE	1H Out
0	0	H/19F In	X In	
0	1		X In	H/19F In
1	0	X In	H/19F In	
1	1	X In		H/19F In

ART: W1301908	EC: 01	DRAWN: DW 23/03/95	VISA:
SWITCH X/H/19F		APPROV: PHB 23/03/95	VISA:
		DWG: W4S131449	B SHEET: 1/1

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Figure 8.13. Switch layout





# ***SBS controller***

Figure 9.1. Wiring diagram

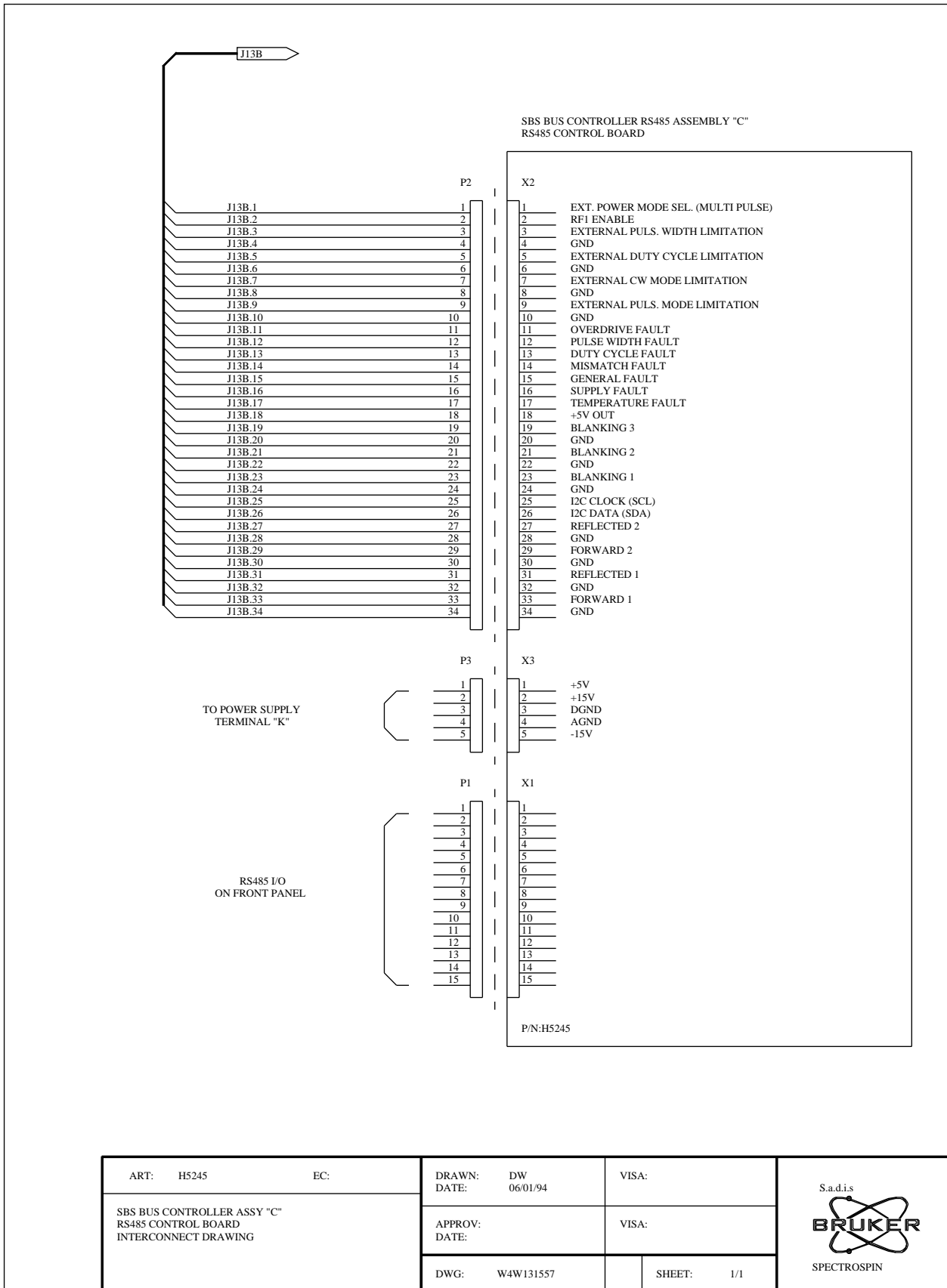


Figure 9.2. CPU board

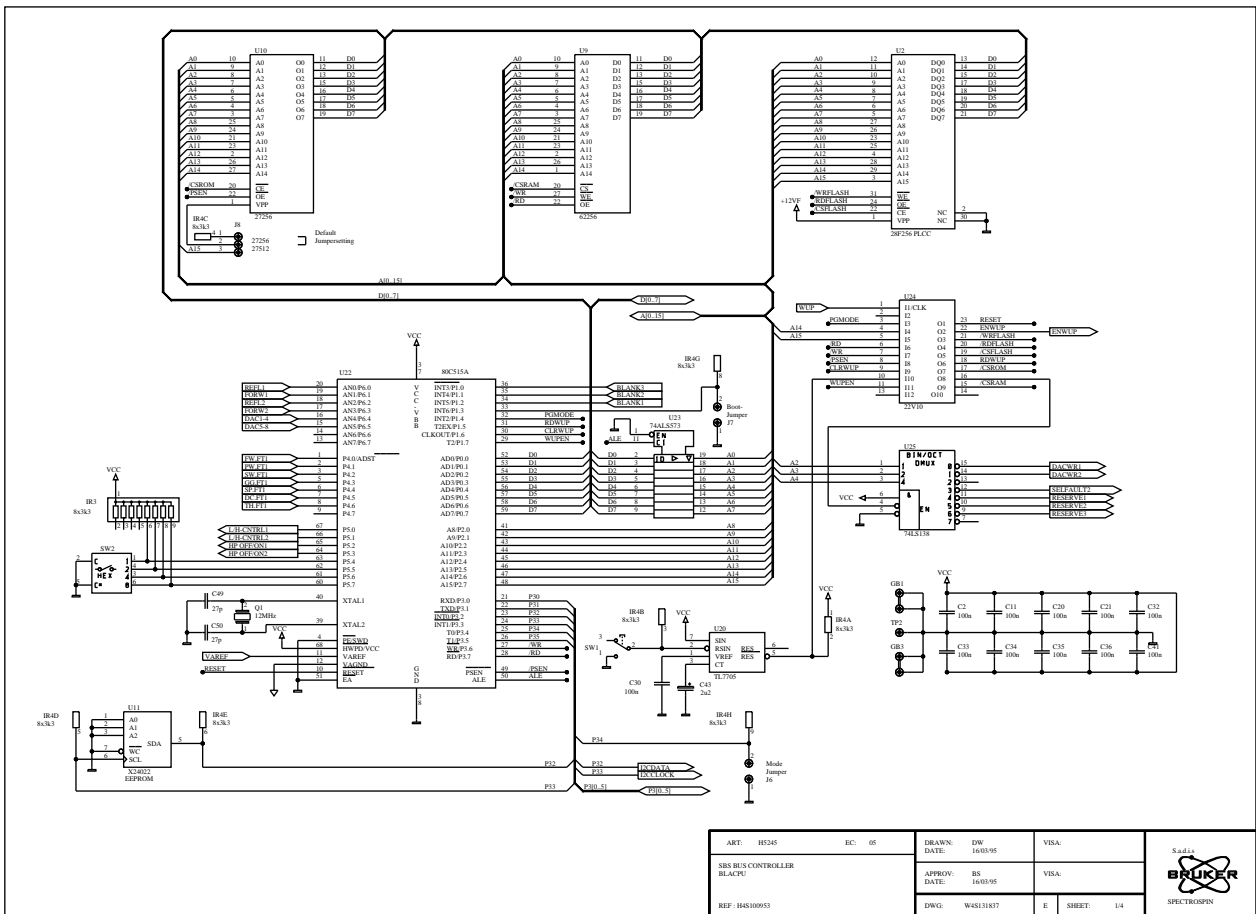


Figure 9.3. Sbs controller dac

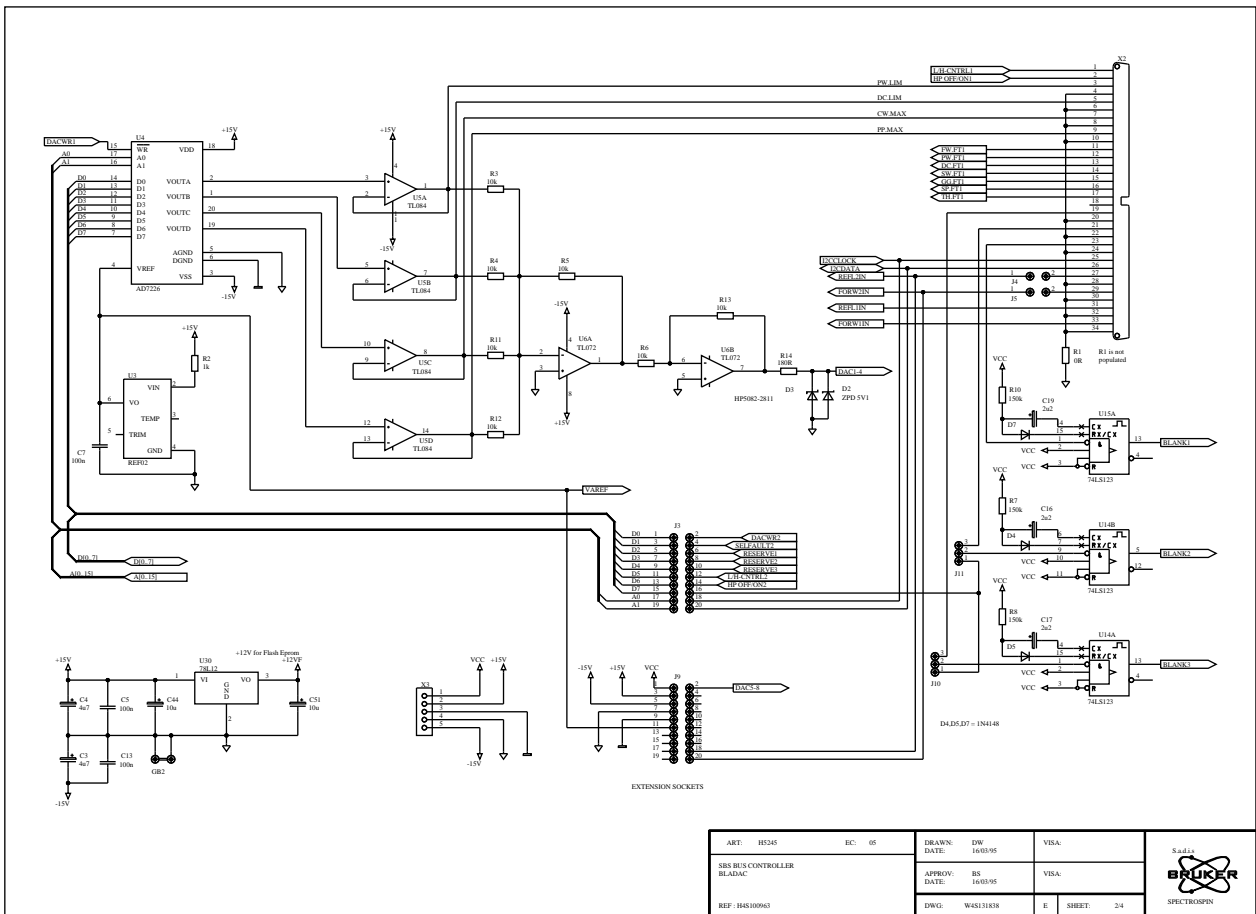
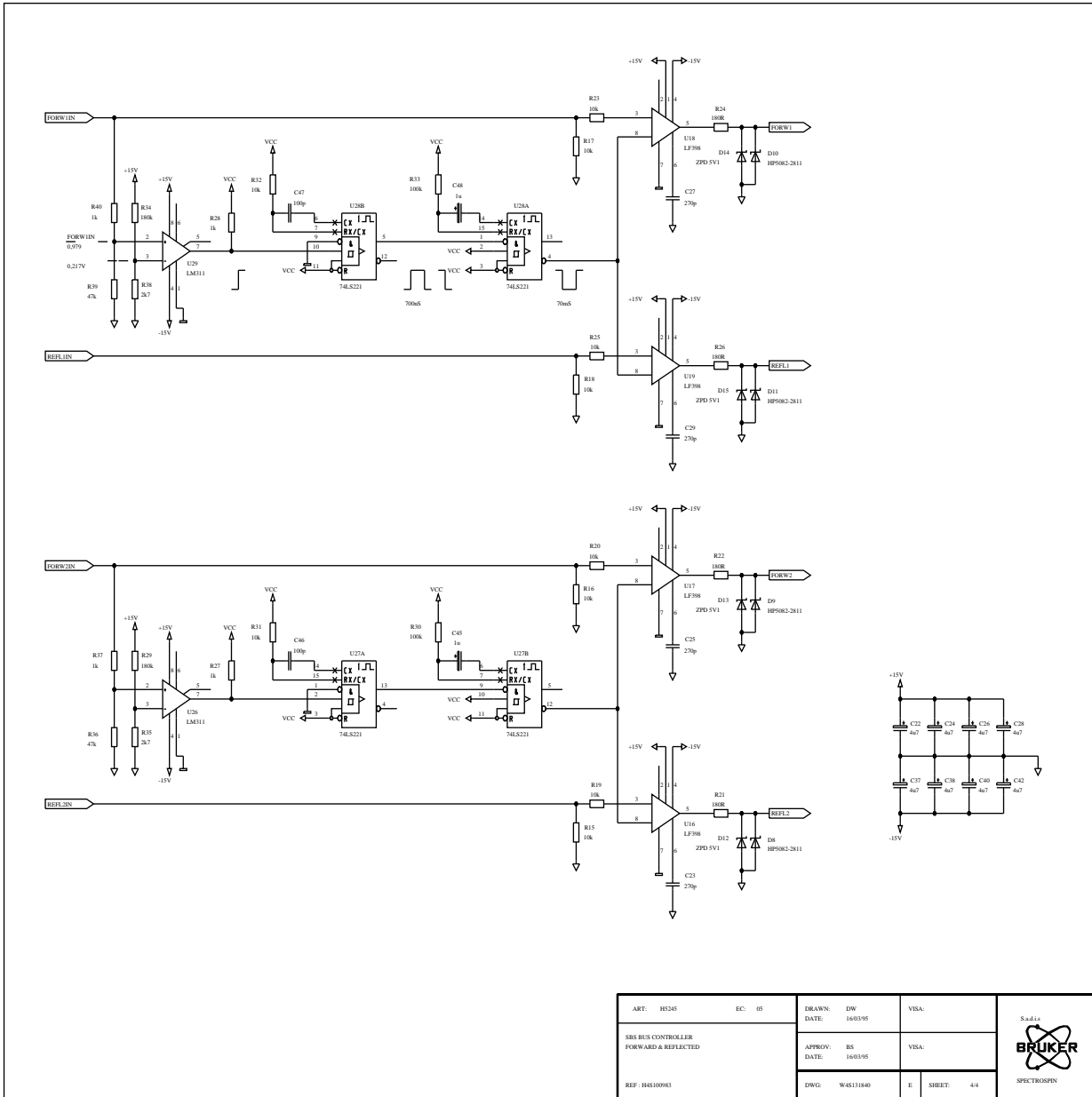




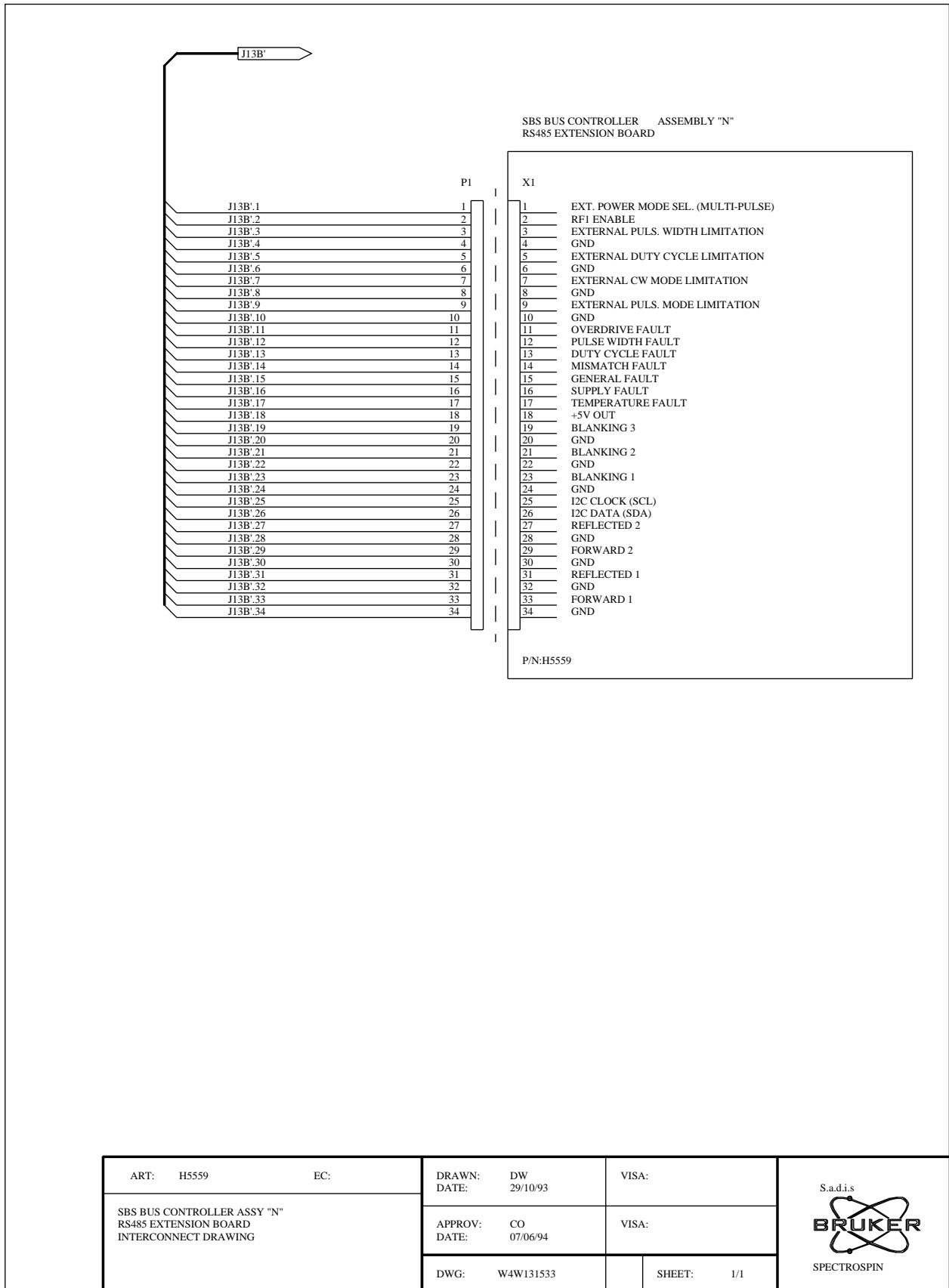
Figure 9.5. Sbs controller sample/hold



ART: H2545	EC: 05	DRAWN: DW	DATE: 16/03/95	VISA:
SBS BUS CONTROLLER		APPROV: BE	DATE: 16/03/95	VISA:
FORWARD & REFLECTED		DWG: W45131840	E	SHEET: 4/4
REF: H45100983				



Figure 9.6. RS485 extension board

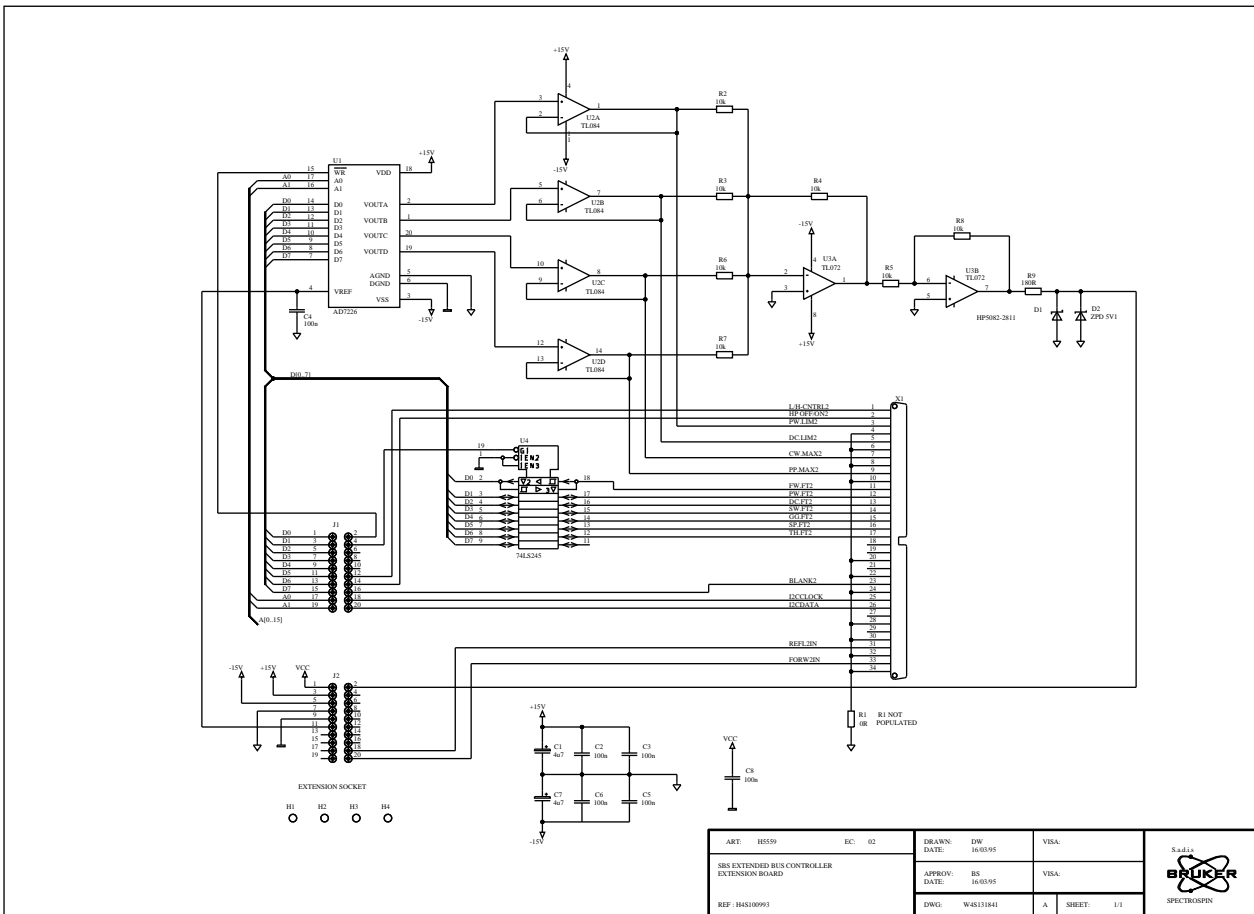


ART: H5559	EC:	DRAWN: DW	VISA:
SBS BUS CONTROLLER ASSY "N" RS485 EXTENSION BOARD INTERCONNECT DRAWING		DATE: 29/10/93	
		APPROV: CO	VISA:
		DATE: 07/06/94	
		DWG: W4W131533	SHEET: 1/1

S.a.d.i.s

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Figure 9.7. Extended bus controller





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