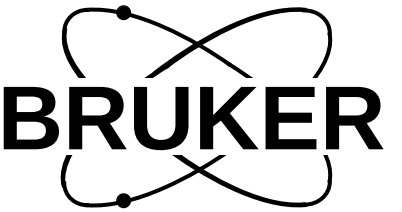

BLARH100
500-600MHz

TECHNICAL MANUAL

Version 003

Sadis BRUKER SPECTROSPIN

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Revised for BASH 2.0 by U. Roos - December 1996

Manual P/N: Z31238
DWG-No: 909 003

Contents

Contents 1

Block diagram 3

Power supply 5

Control board 2 9

Status board 23

Fan assembly 27

BLMH1/5/10 30

BLMH100 amplifier module 37

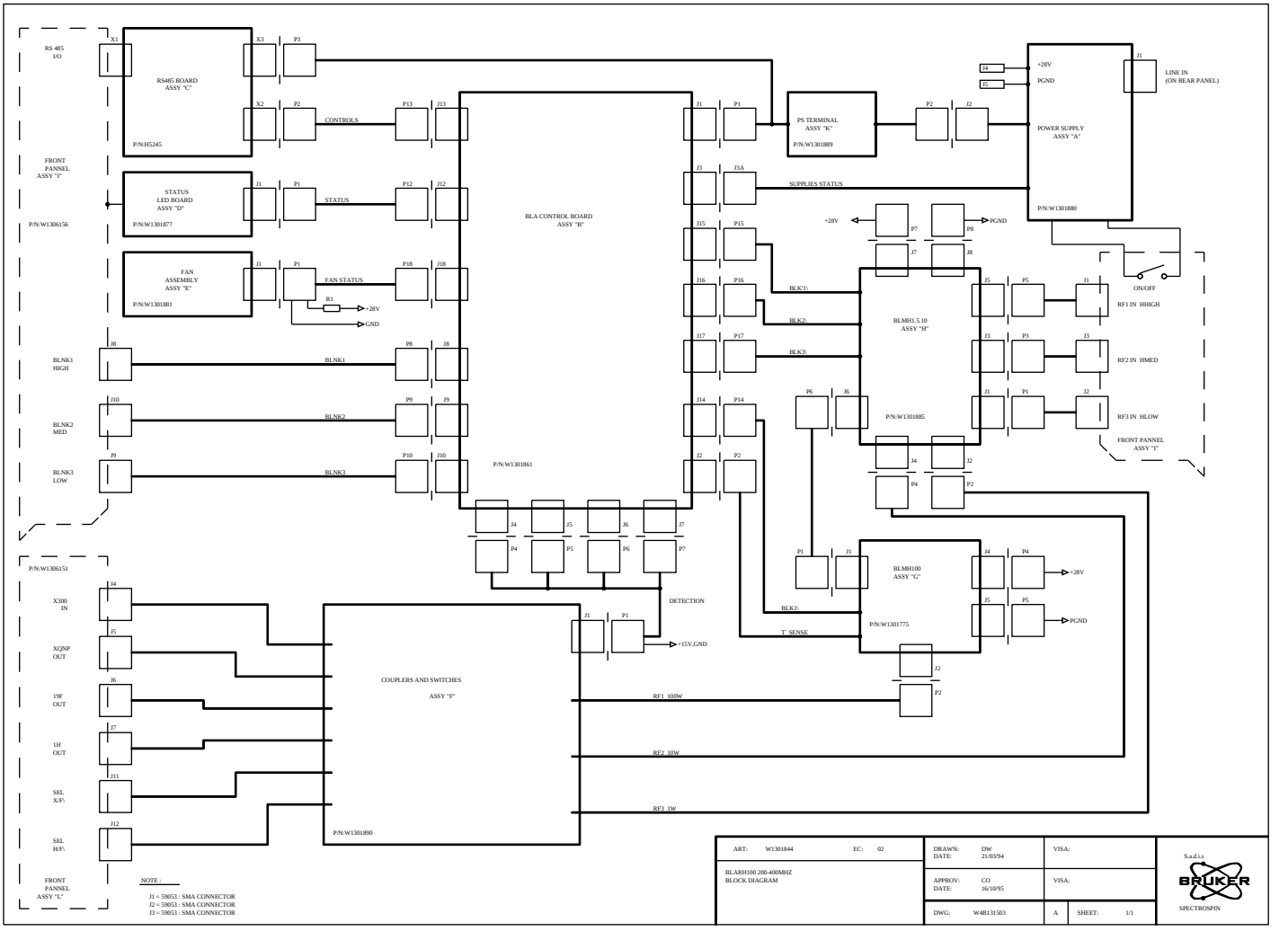
Couplers, switches 43

SBS controller 55

Block diagram

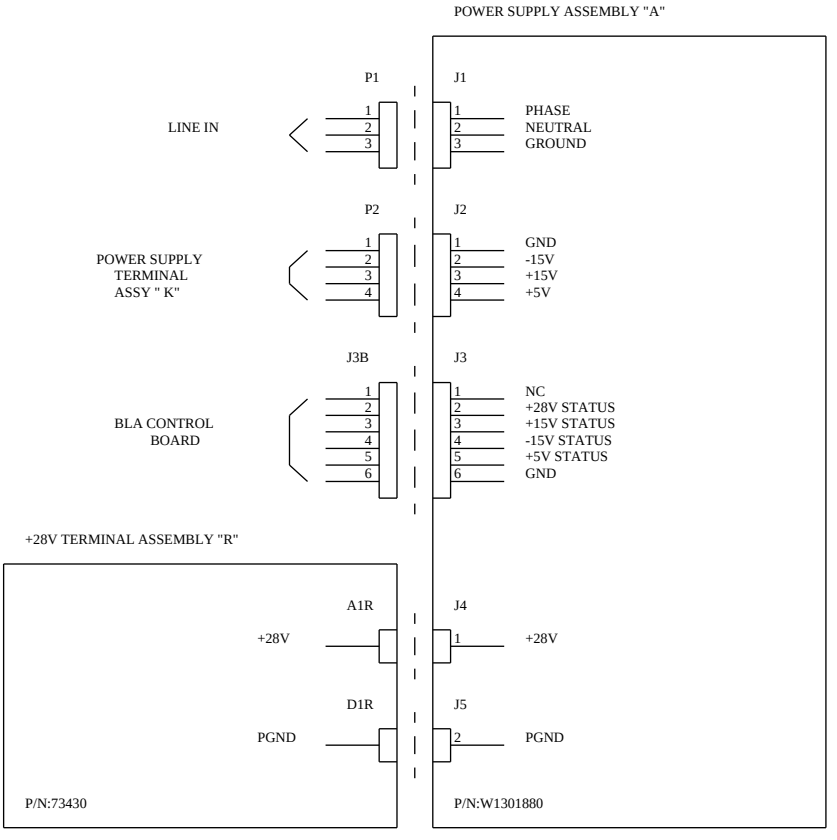
1

Figure 1.1. Block diagram



Power supply 2

Figure 2.1. Wiring diagram



ART: W1301880 EC:	DRAWN: DW DATE: 03/01/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA POWER ASSEMBLY ASSY "A" INTERCONNECT DRAWING	APPROV: CO DATE: 01/06/94	VISA:	
	DWG: W4W131518	SHEET: 1/1	

Figure 2.2. Power supply diagram

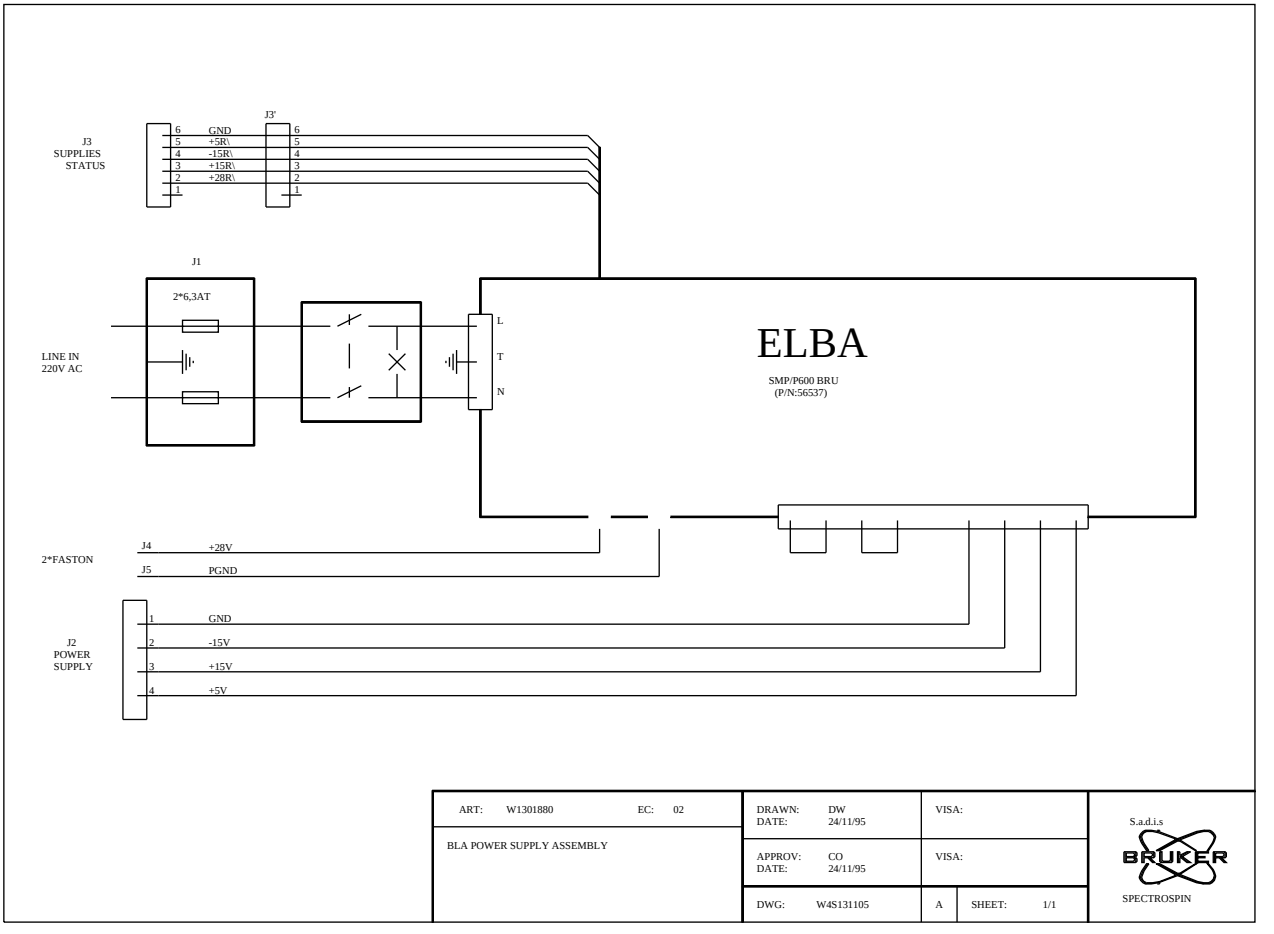
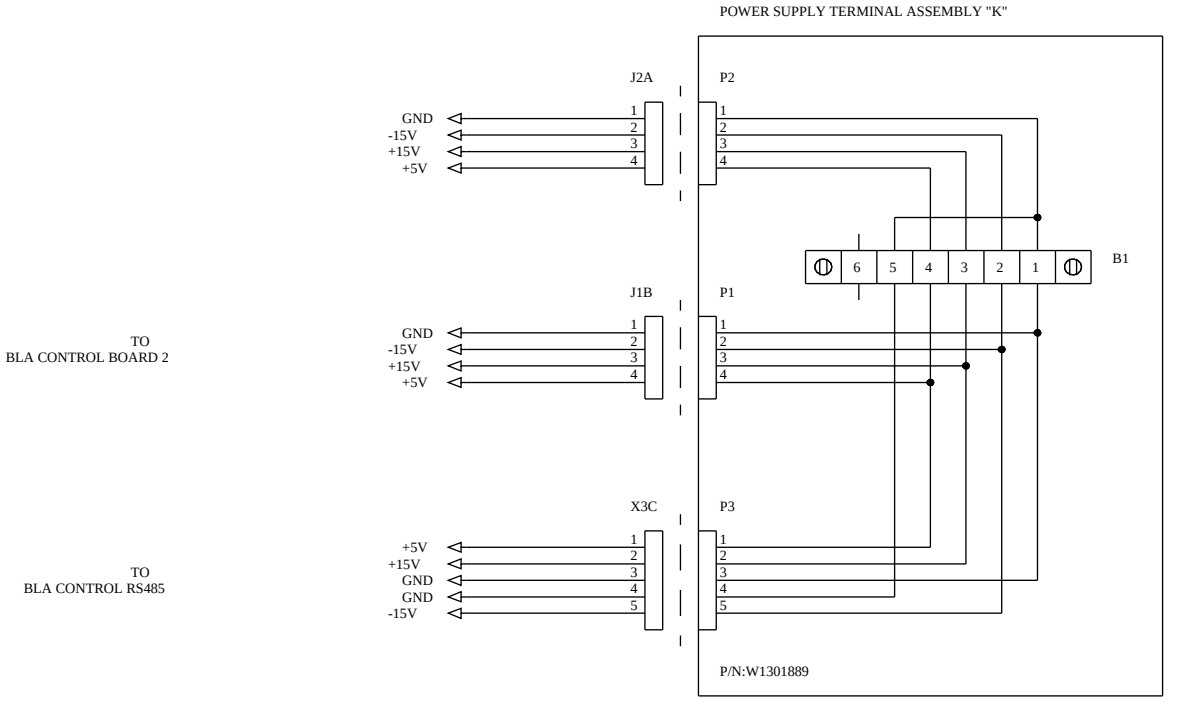


Figure 2.3. Power supply terminal

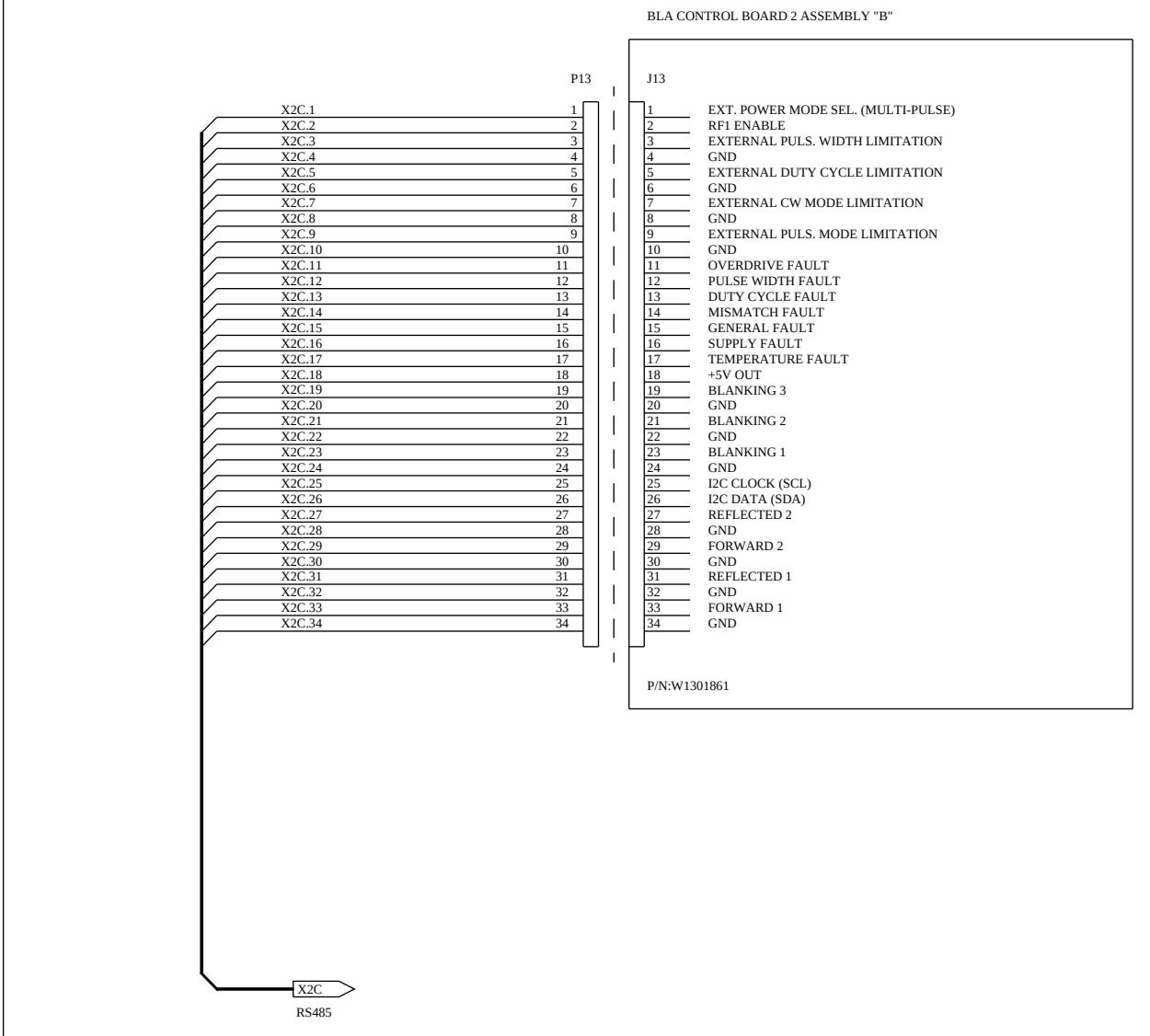


ART: W1301889 EC: 01	DRAWN: DW DATE: 06/05/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA POWER SUPPLY TERMINAL ASSY "K" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4S131418	SHEET: 1/1	

Control board 2

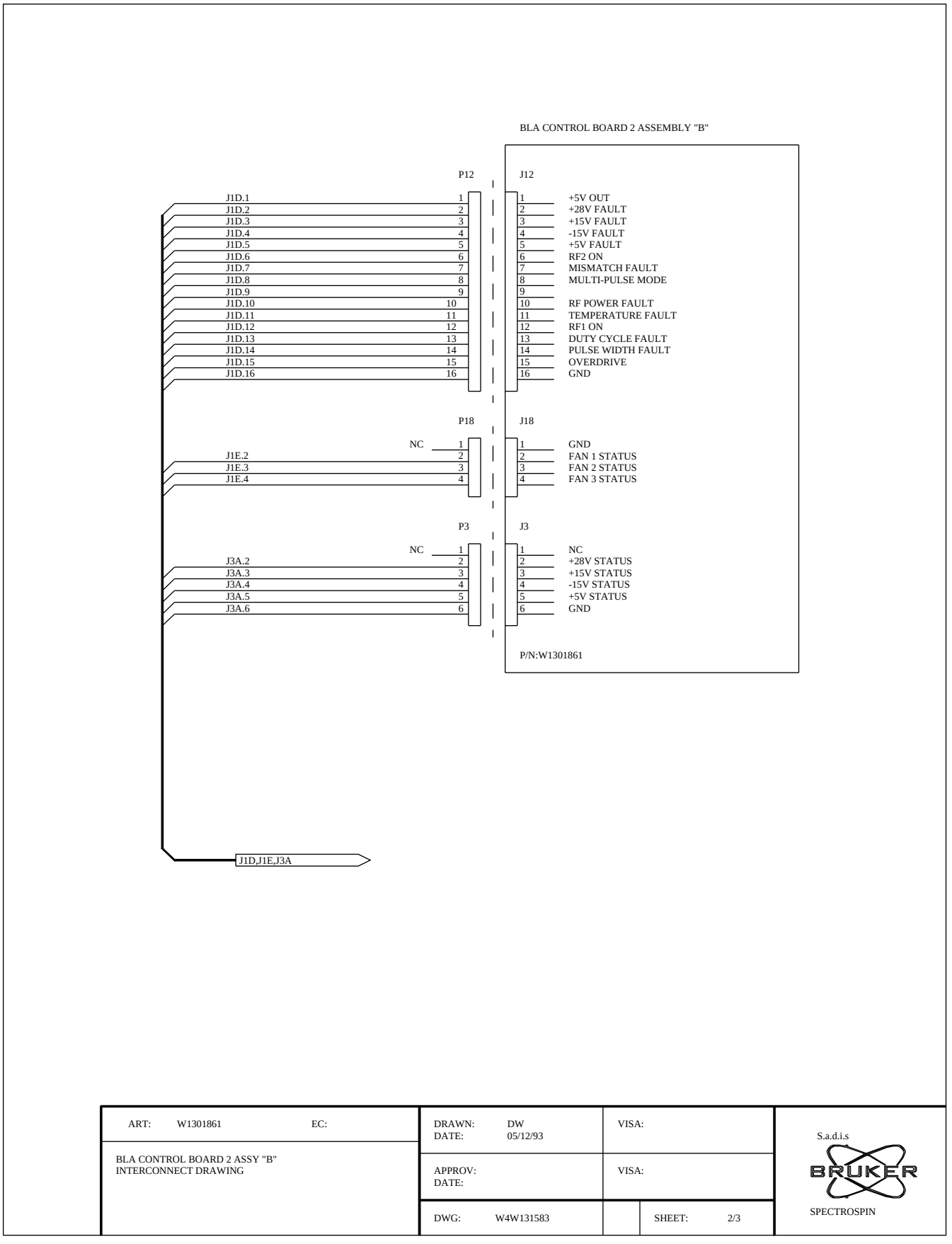
3

Figure 3.1. Interconnect drawing sheet 1/3



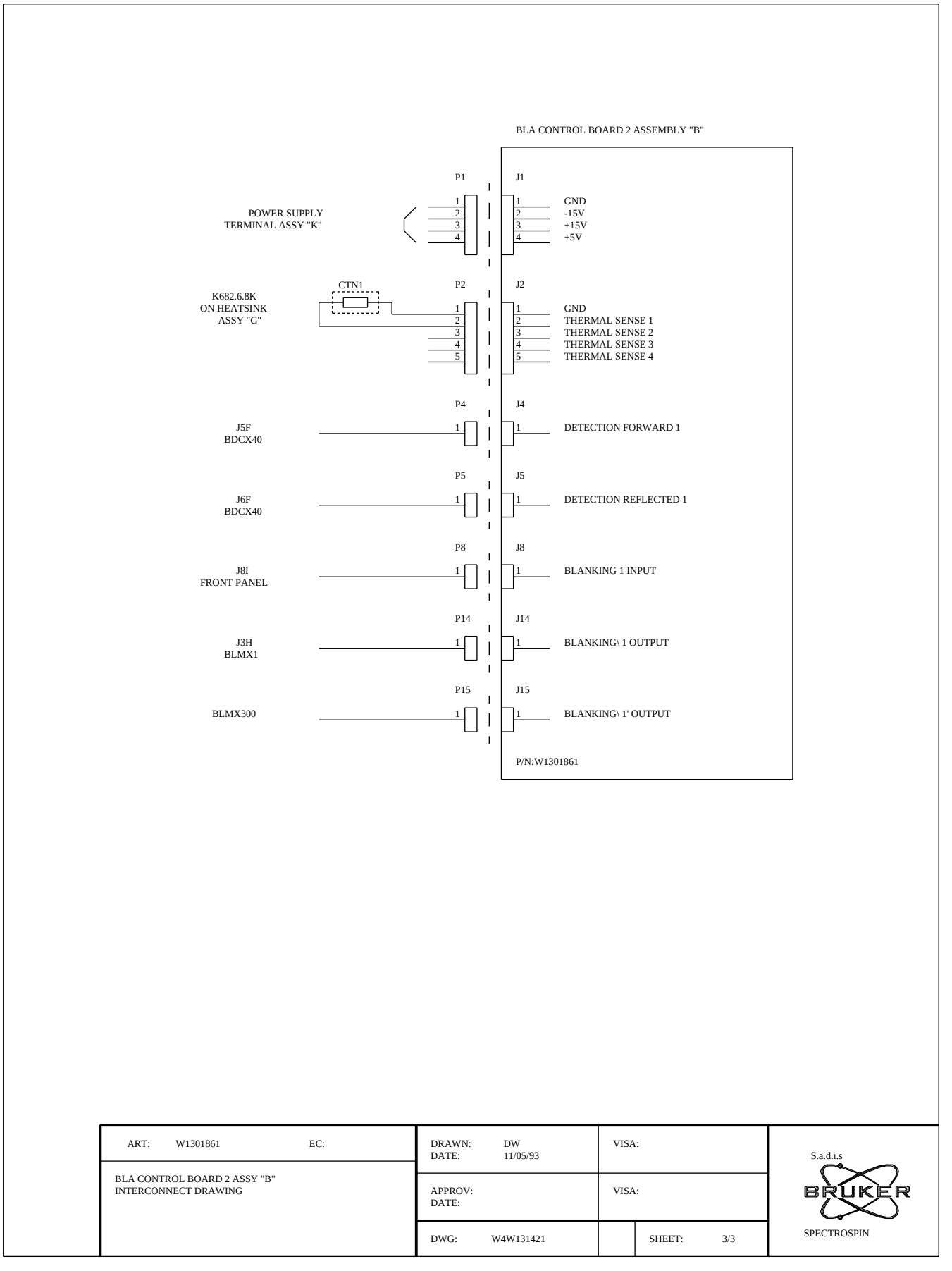
ART: W1301861 EC:	DRAWN: DW DATE: 05/12/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131582	SHEET: 1/3	

Figure 3.2. Interconnect drawing sheet 2/3



ART: W1301861 EC:	DRAWN: DW DATE: 05/12/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131583	SHEET: 2/3	

Figure 3.3. Interconnect drawing sheet 3/3



ART: W1301861 EC:	DRAWN: DW DATE: 11/05/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 ASSY "B" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131421	SHEET: 3/3	

Figure 3.4. Control board top side

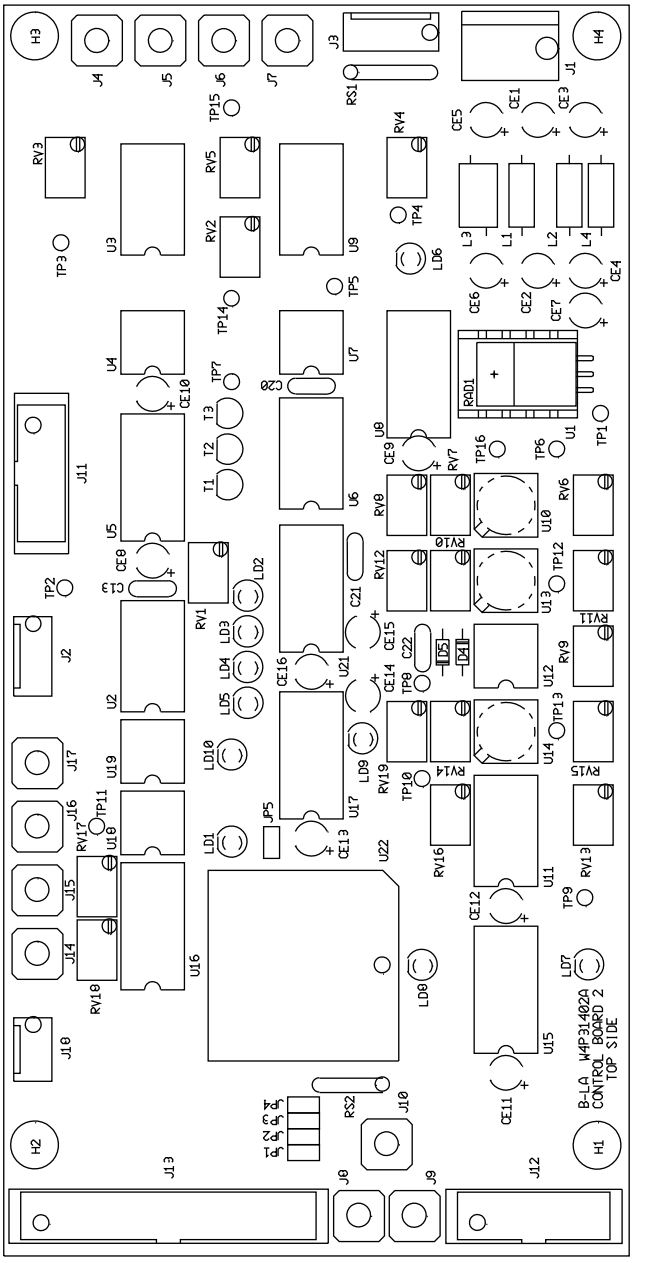


Figure 3.5. Control board bottom side

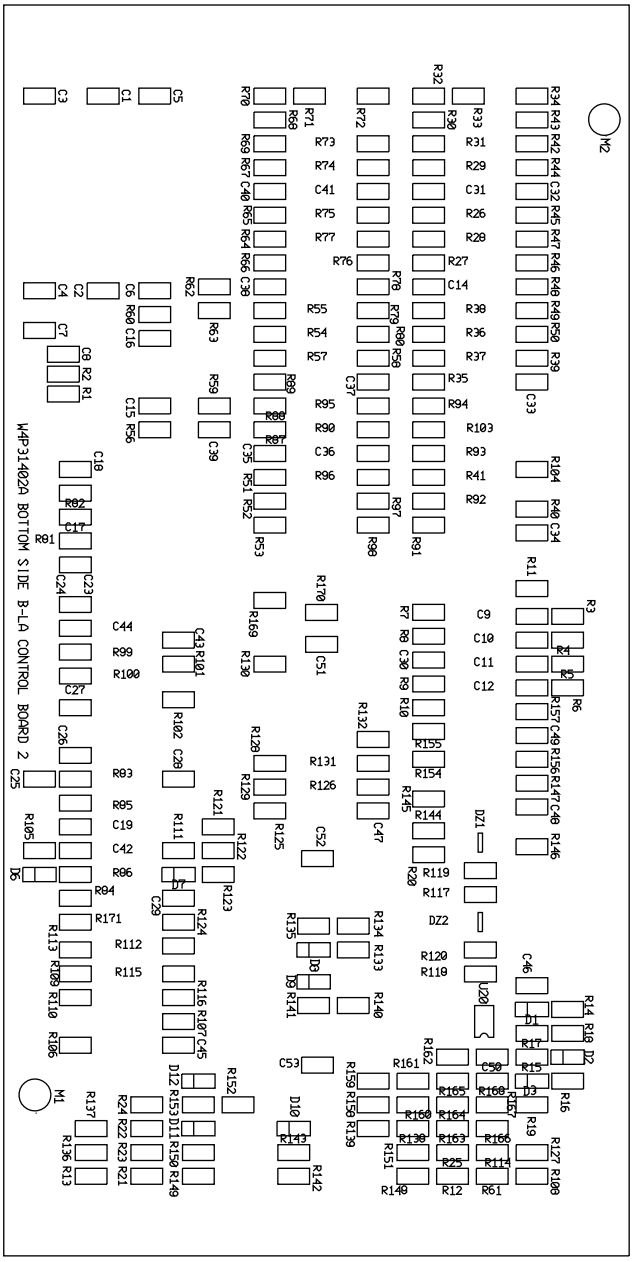
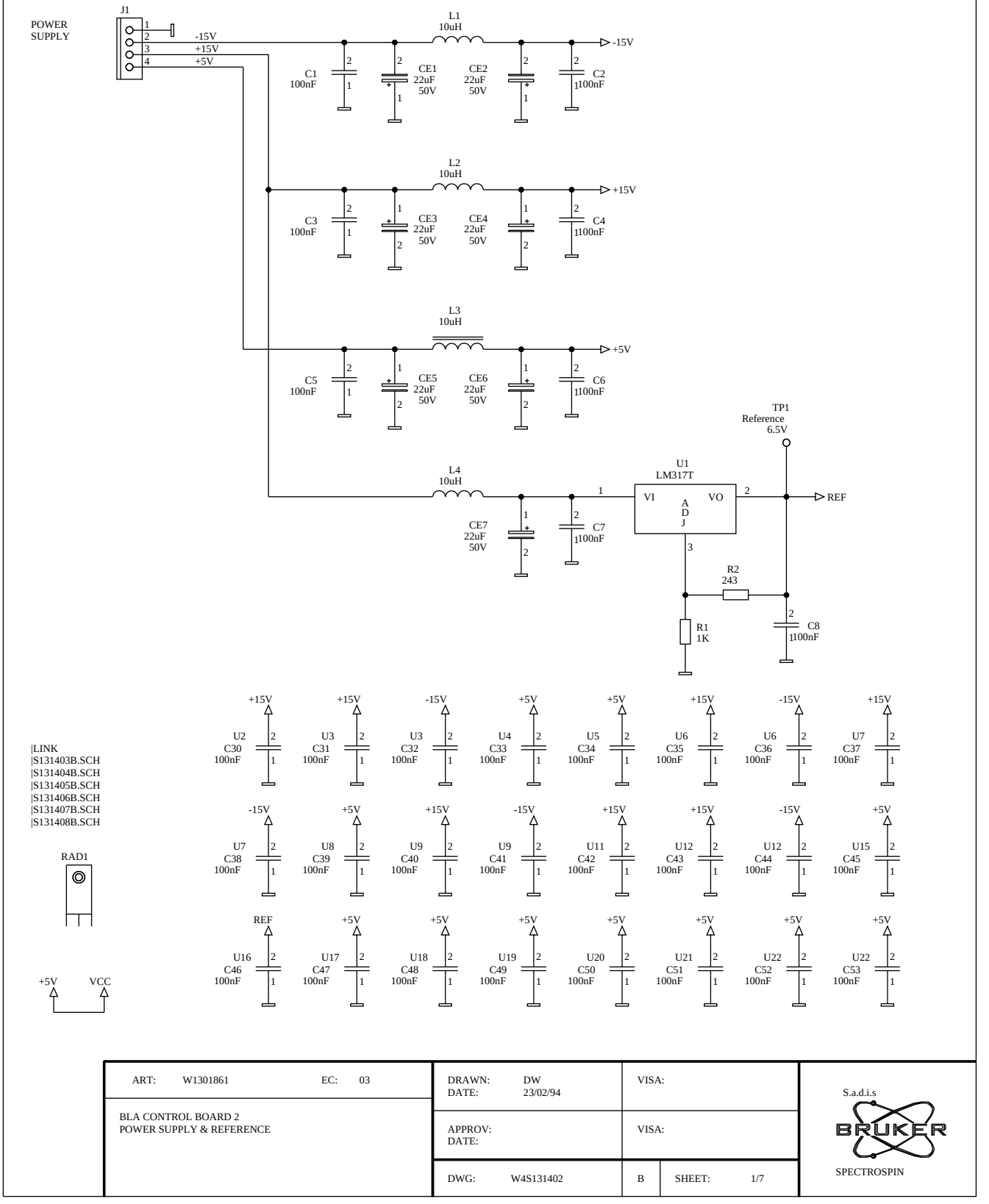


Figure 3.6. Control board 1/7 - power supply & reference



ART: W1301861 EC: 03	DRAWN: DW DATE: 23/02/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 POWER SUPPLY & REFERENCE	APPROV: DATE:	VISA:	
	DWG: W4S131402	B SHEET: 1/7	

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

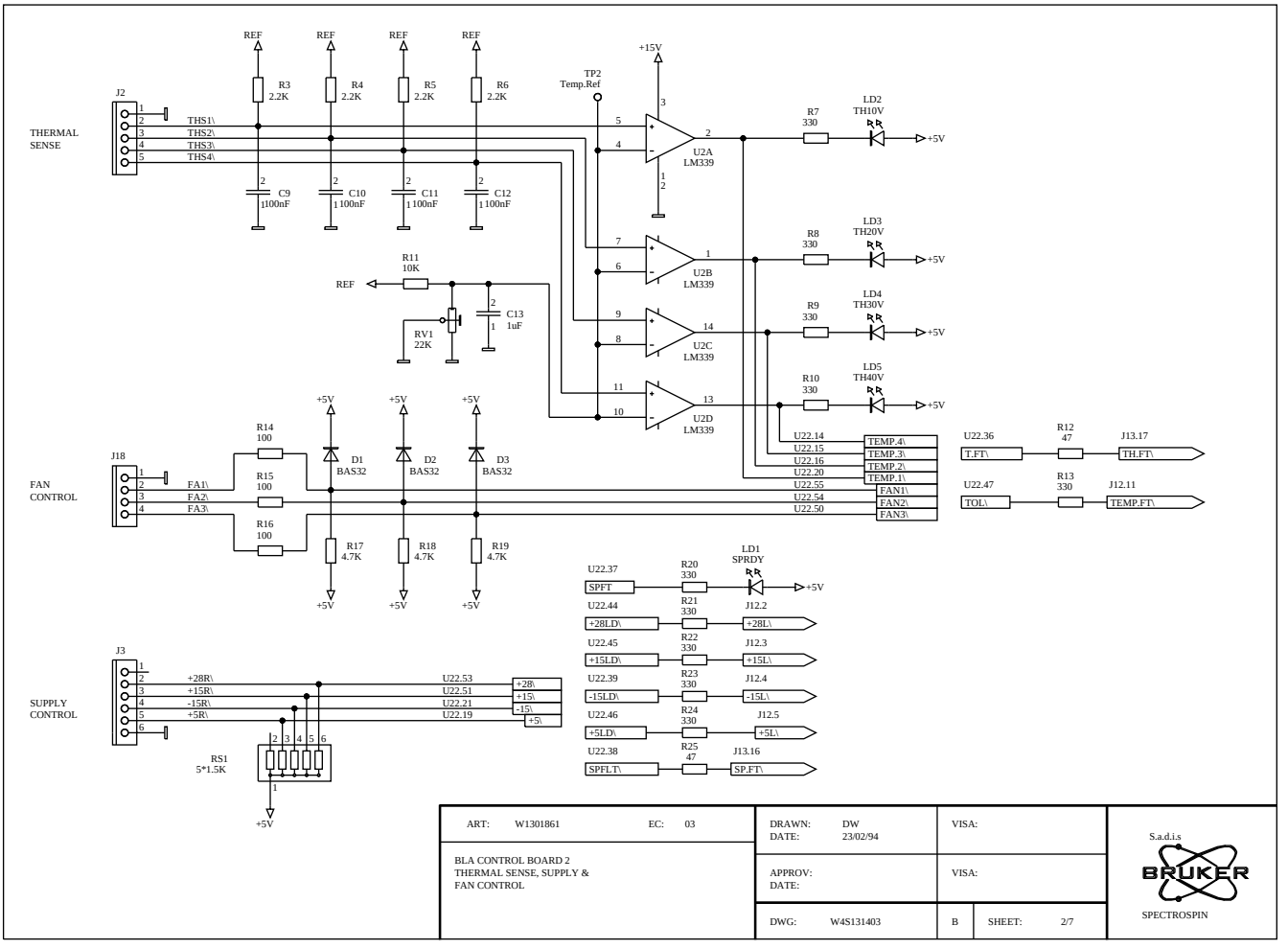
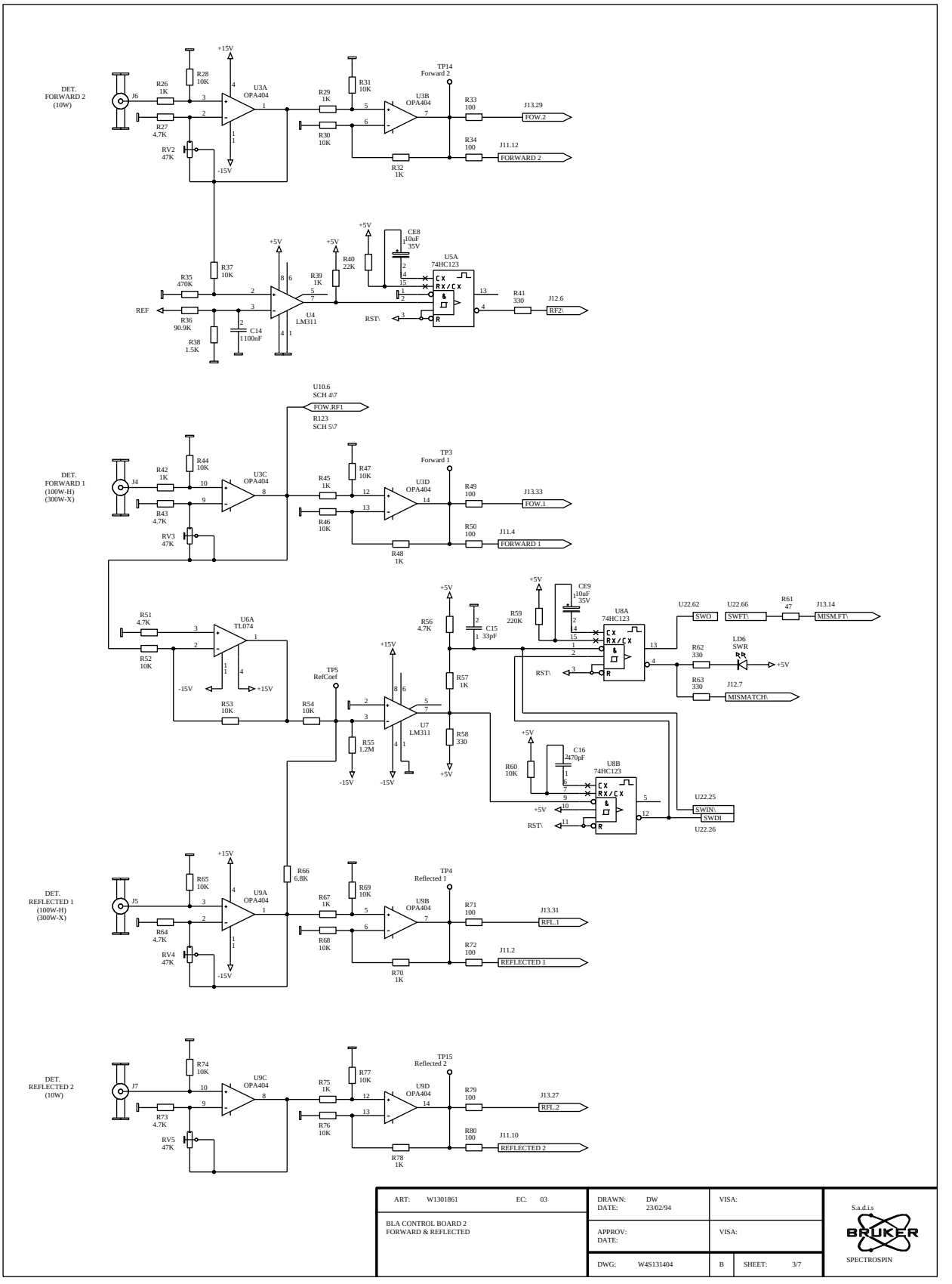


Figure 3.8. Control board 3/7 - Forward & reflected



ART: W1301861 EC: 03	DRAWN: DW DATE: 23/02/94	VISA:	Sadis BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 FORWARD & REFLECTED	APPROV: DATE:	VISA:	
	DWG: W4S131404	B	SHEET: 3/7

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

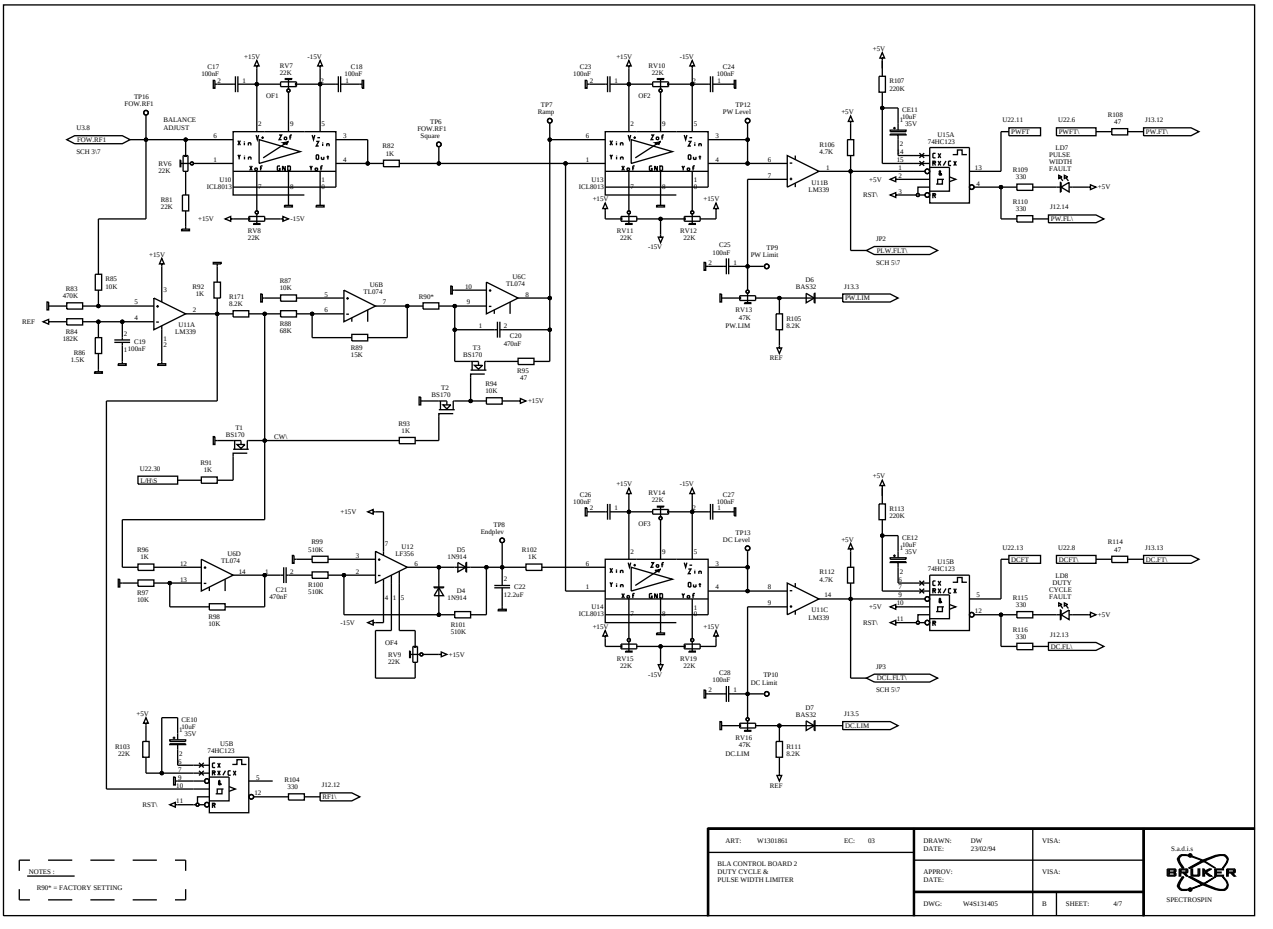


Figure 3.10. Control board 5/7 - Power limitation

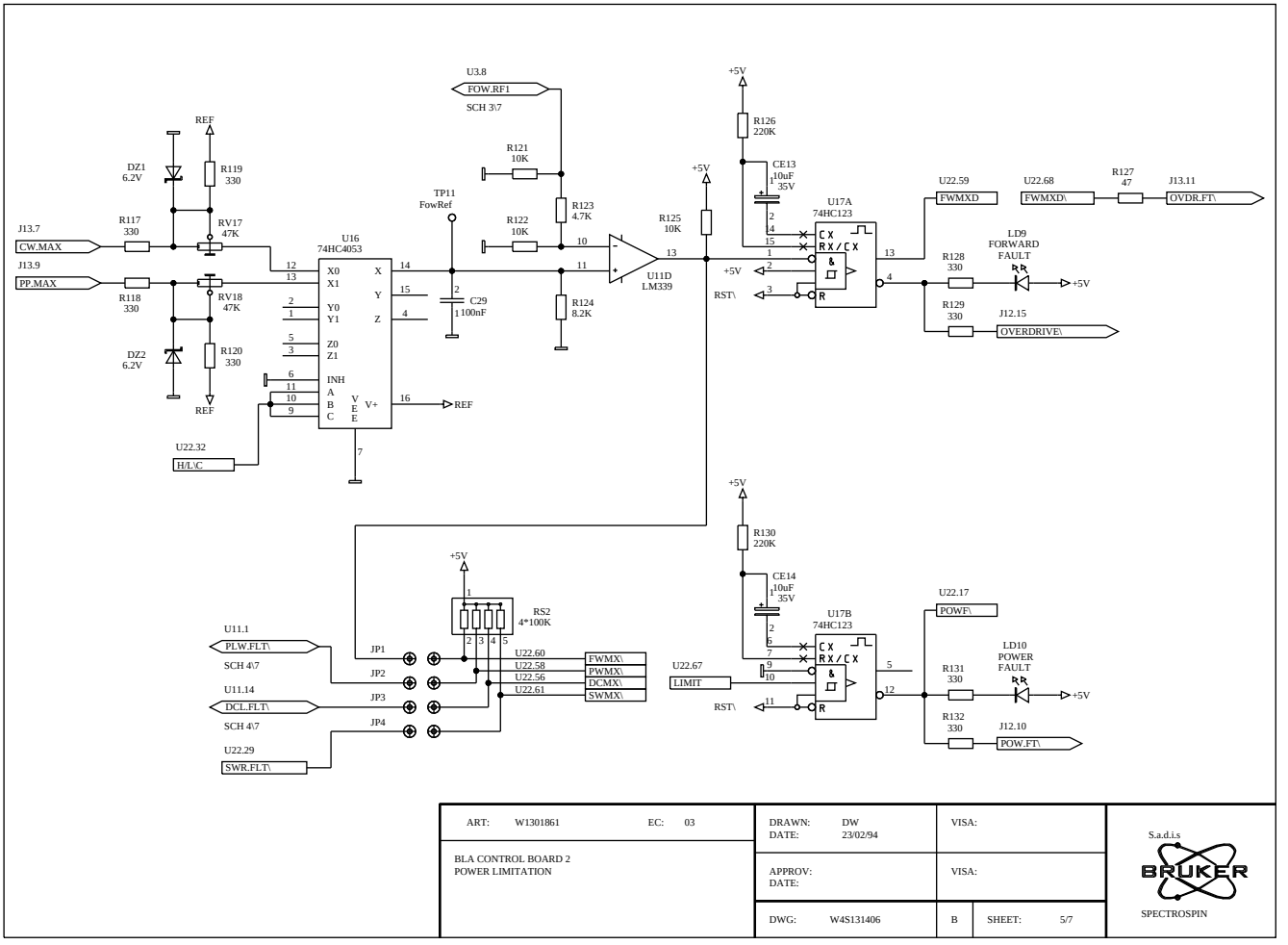


Figure 3.11. Control board 6/7 - Blanking circuit

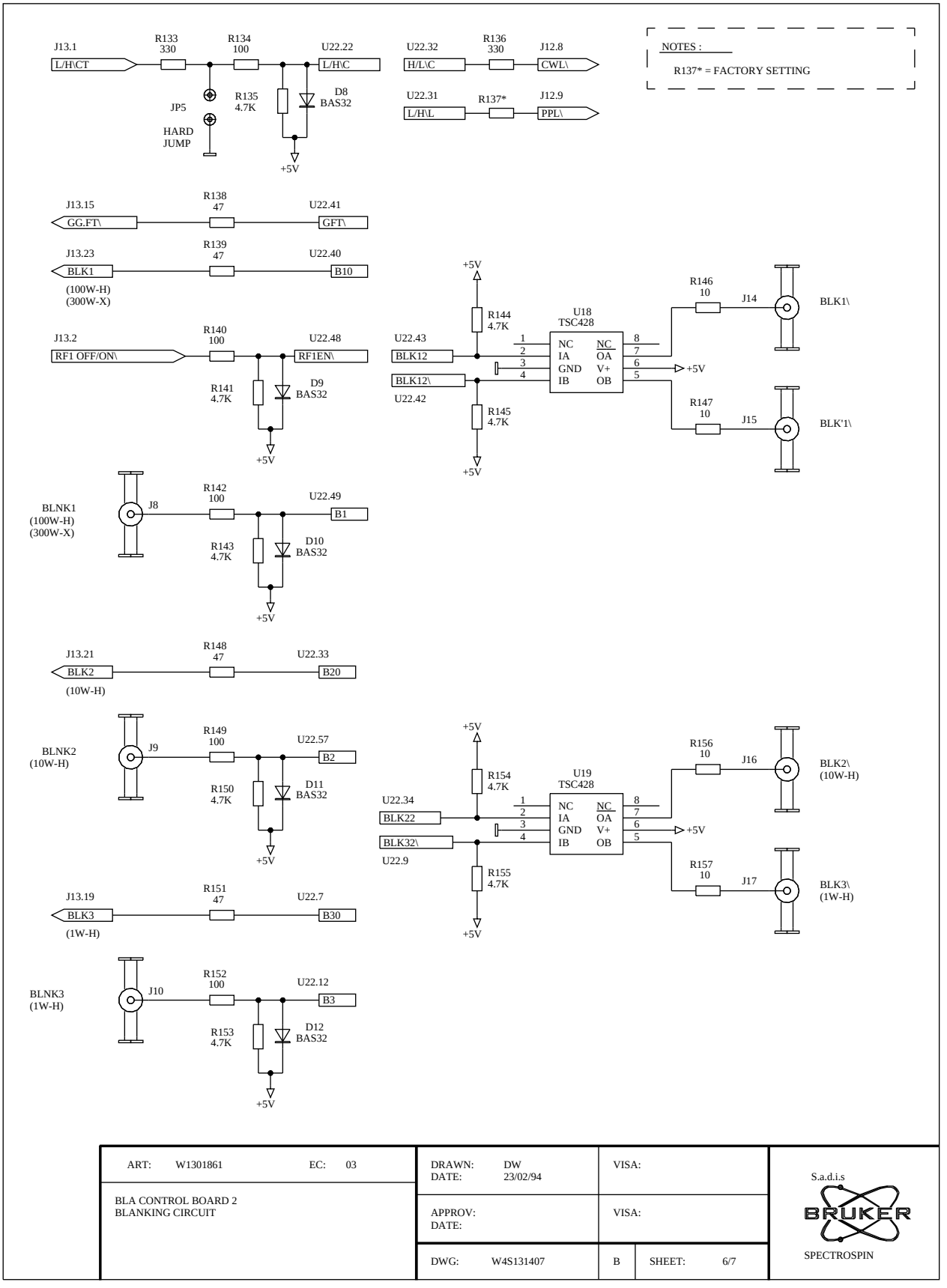
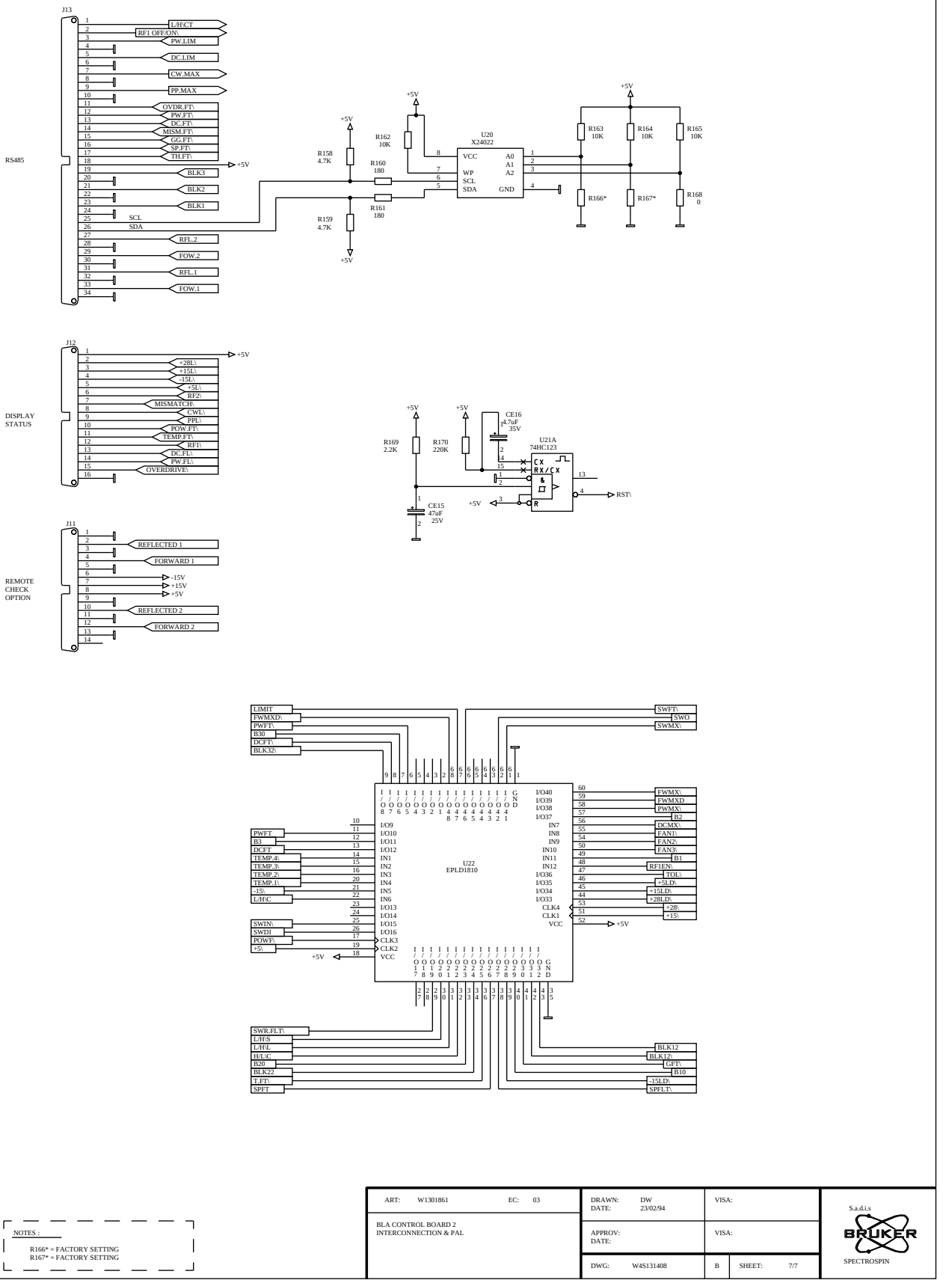


Figure 3.12. Control board 7/7 - Interconnection & pal

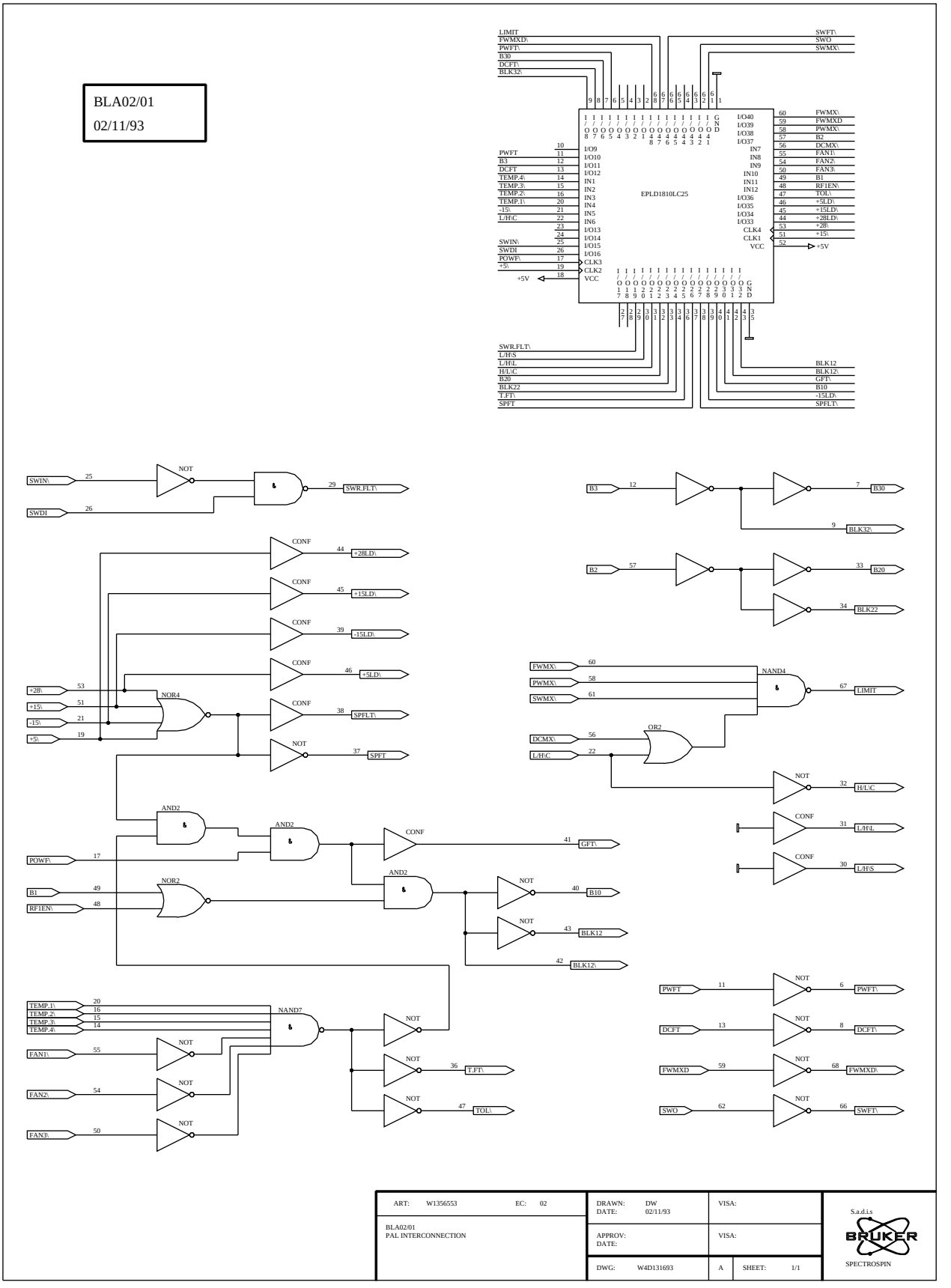


NOTES :

R166* = FACTORY SETTING
R167* = FACTORY SETTING

ART: W1301861 EC: 03	DRAWN: DW DATE: 23/02/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA CONTROL BOARD 2 INTERCONNECTION & PAL	APPROV: DATE:	VISA:	
	DWG: W4S131408	B	SHEET: 7/7

Figure 3.13. Pal interconnection



Status board

4

Figure 4.1. Interconnect drawing

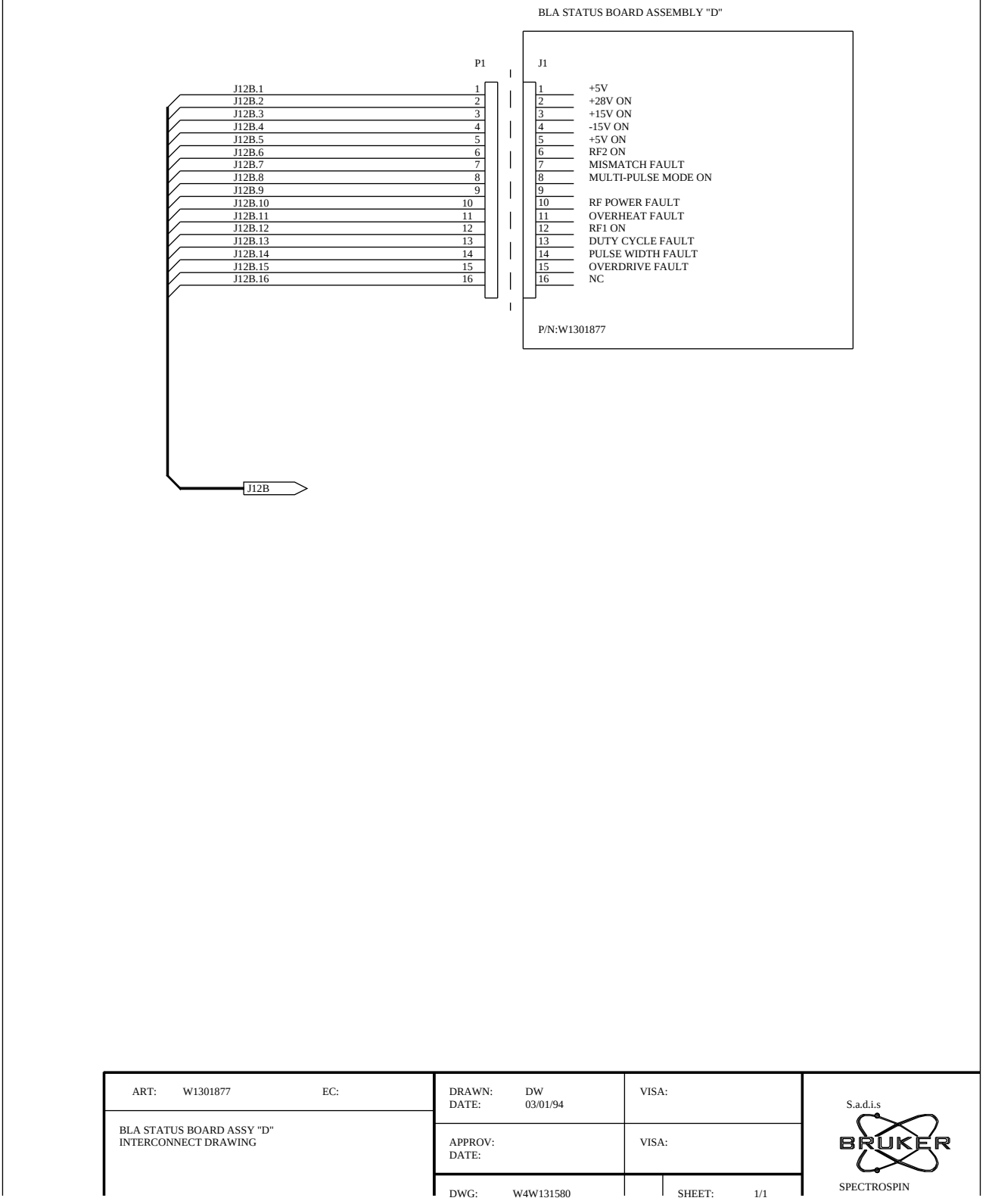
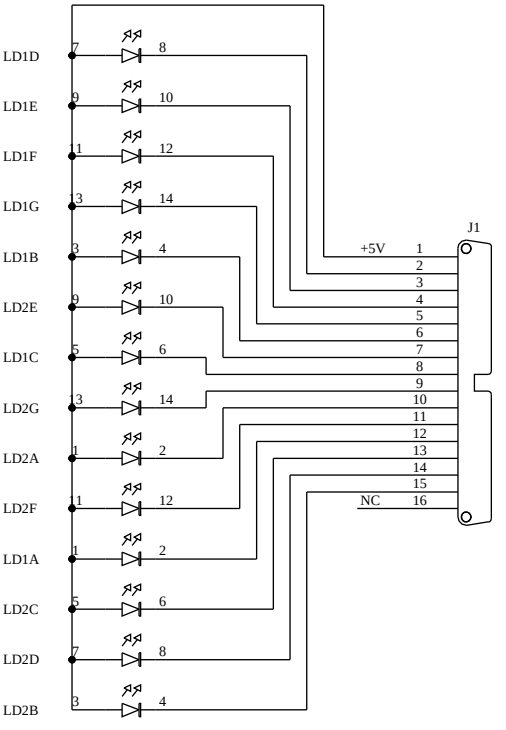
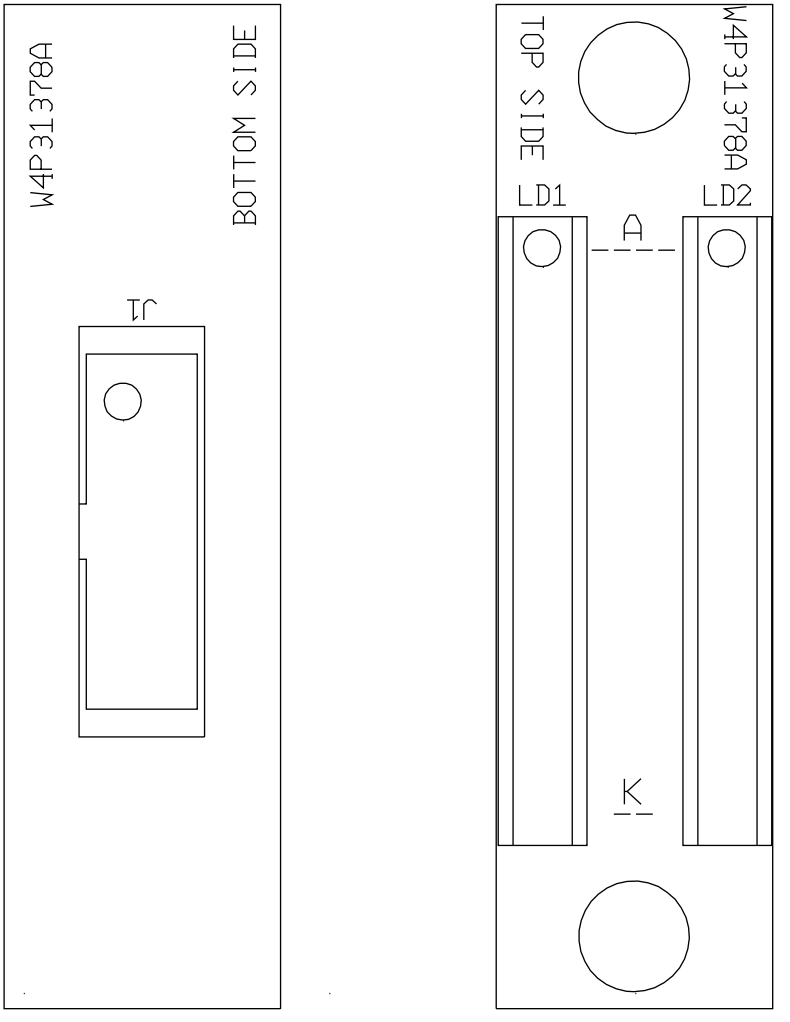


Figure 4.2. Status led board



ART: W1301877 EC: 01	DRAWN: DW DATE: 03/05/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
STATUS LED BOARD	APPROV: DATE:	VISA:	
	DWG: W4S131378	SHEET: 1/1	

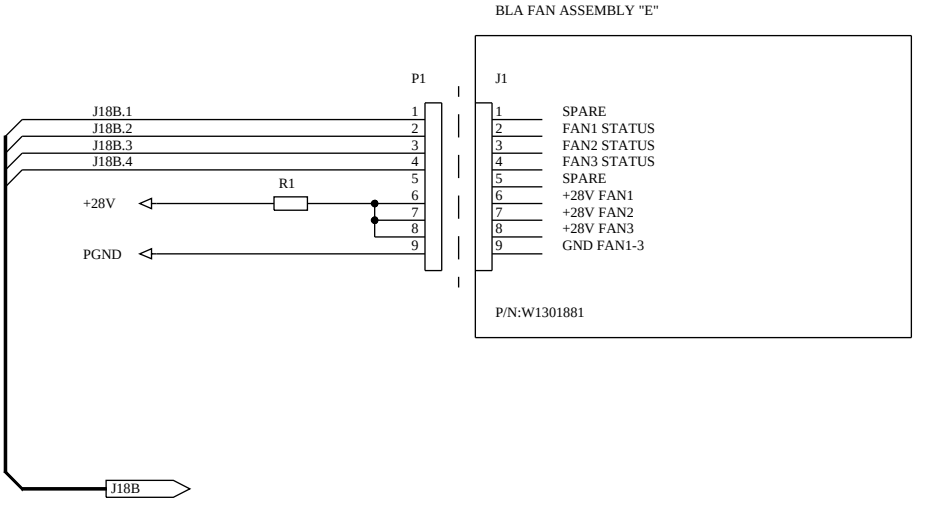
Figure 4.3. Status led board - location



Fan assembly

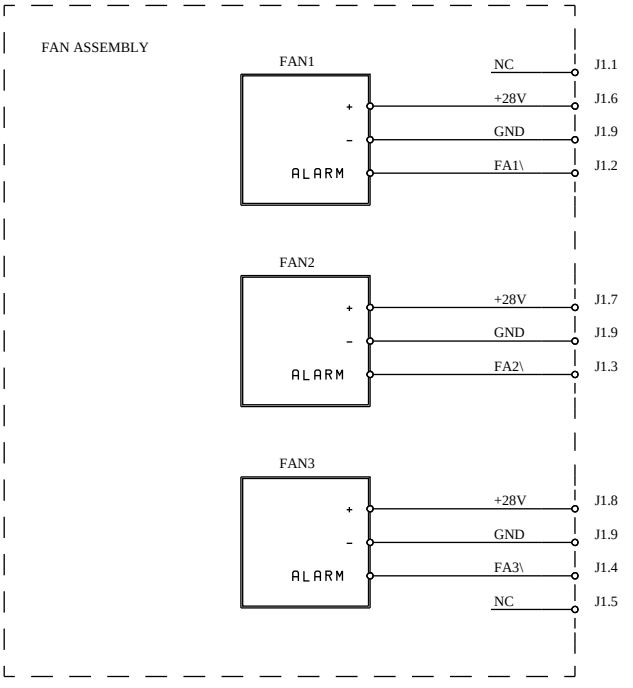
5

Figure 5.1. Interconnect drawing



ART: W1301881 EC:	DRAWN: DW DATE: 10/03/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BLA FAN ASSY "E" INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131423	A SHEET: 1/1	

Figure 5.2. Fan assembly



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

Figure 6.1. Interconnect diagram

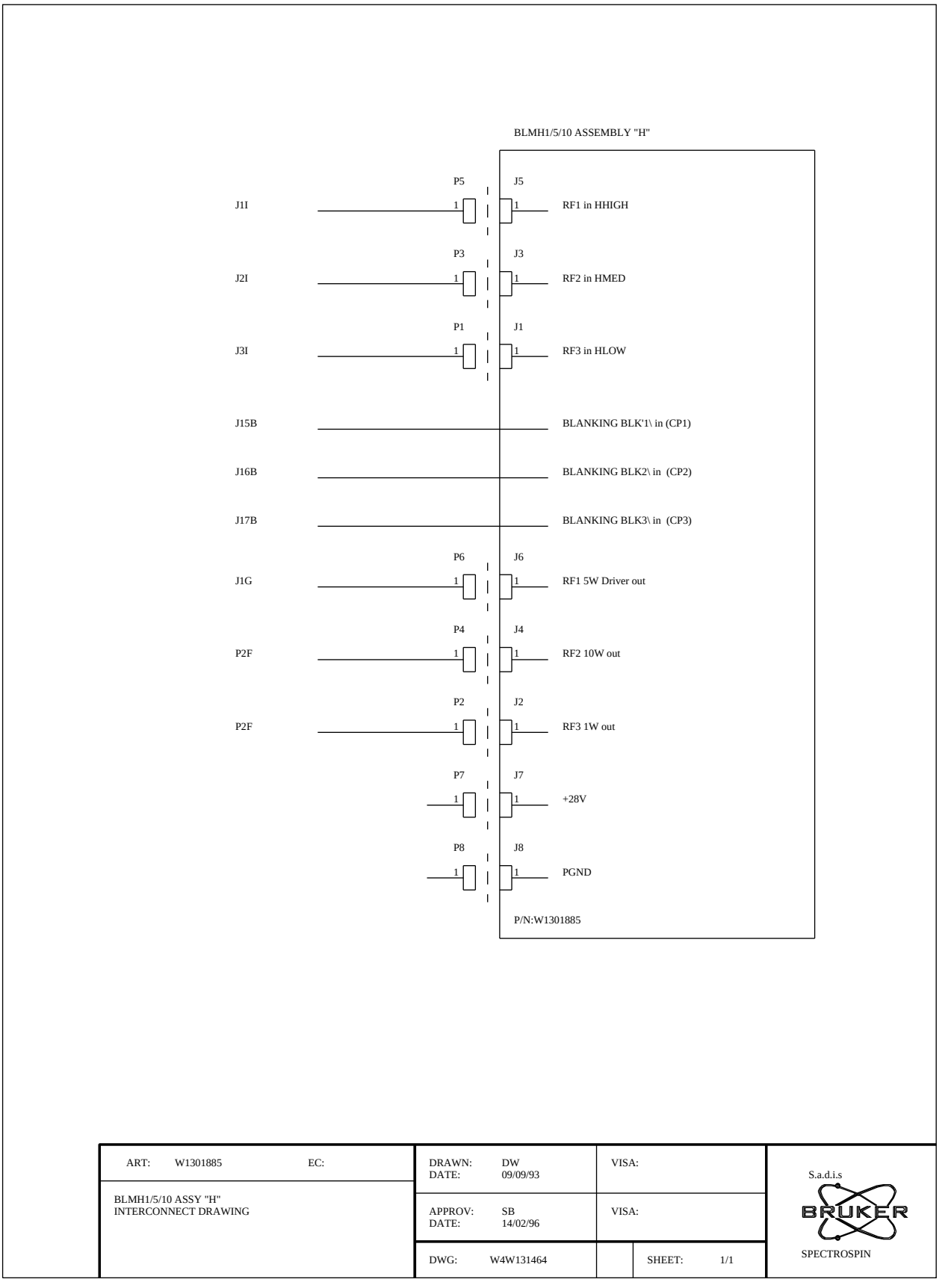


Figure 6.2. RF block diagram

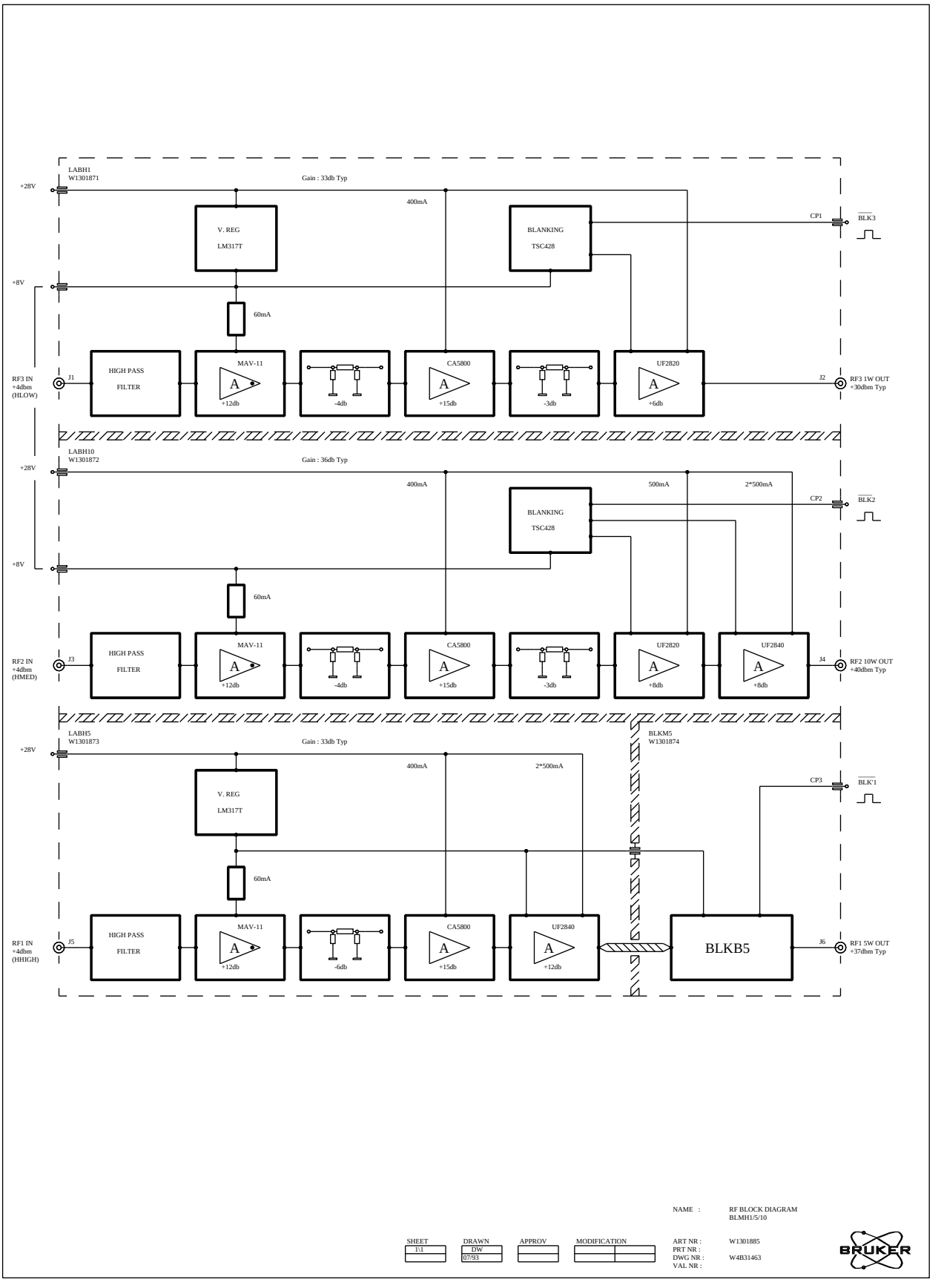


Figure 6.3. Amplifier 180-850 Mhz

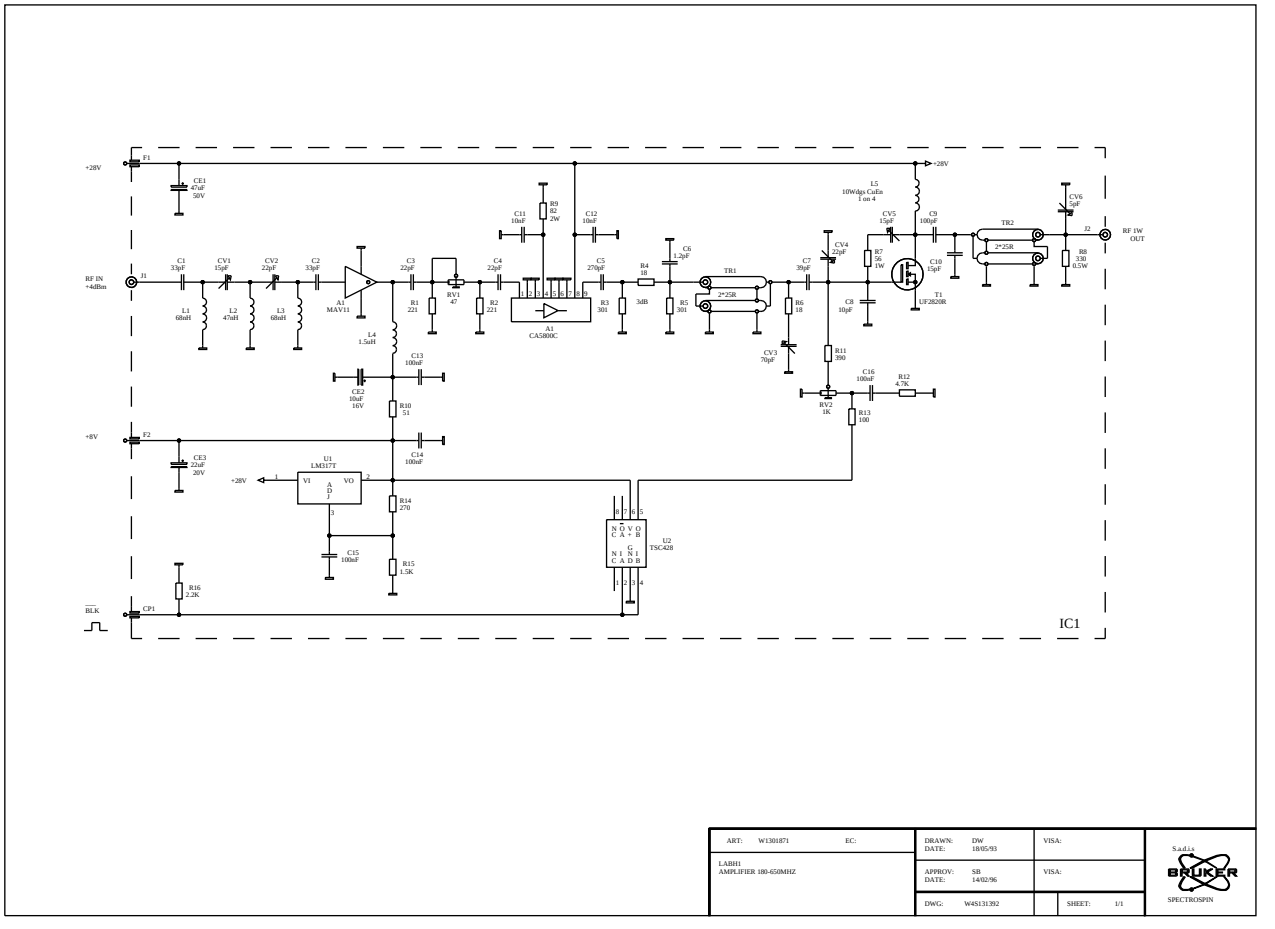


Figure 6.4. LABH10

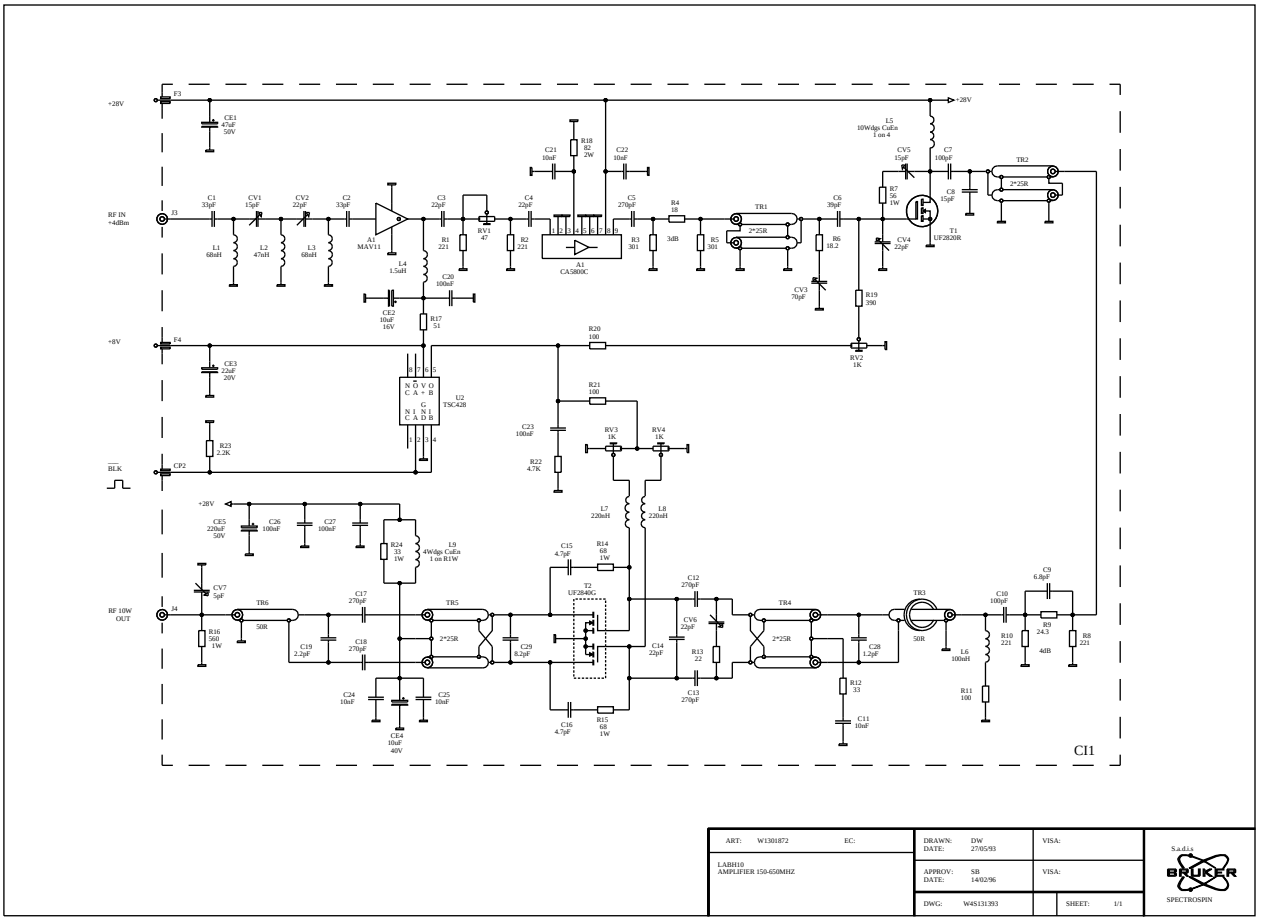


Figure 6.5. LABH5

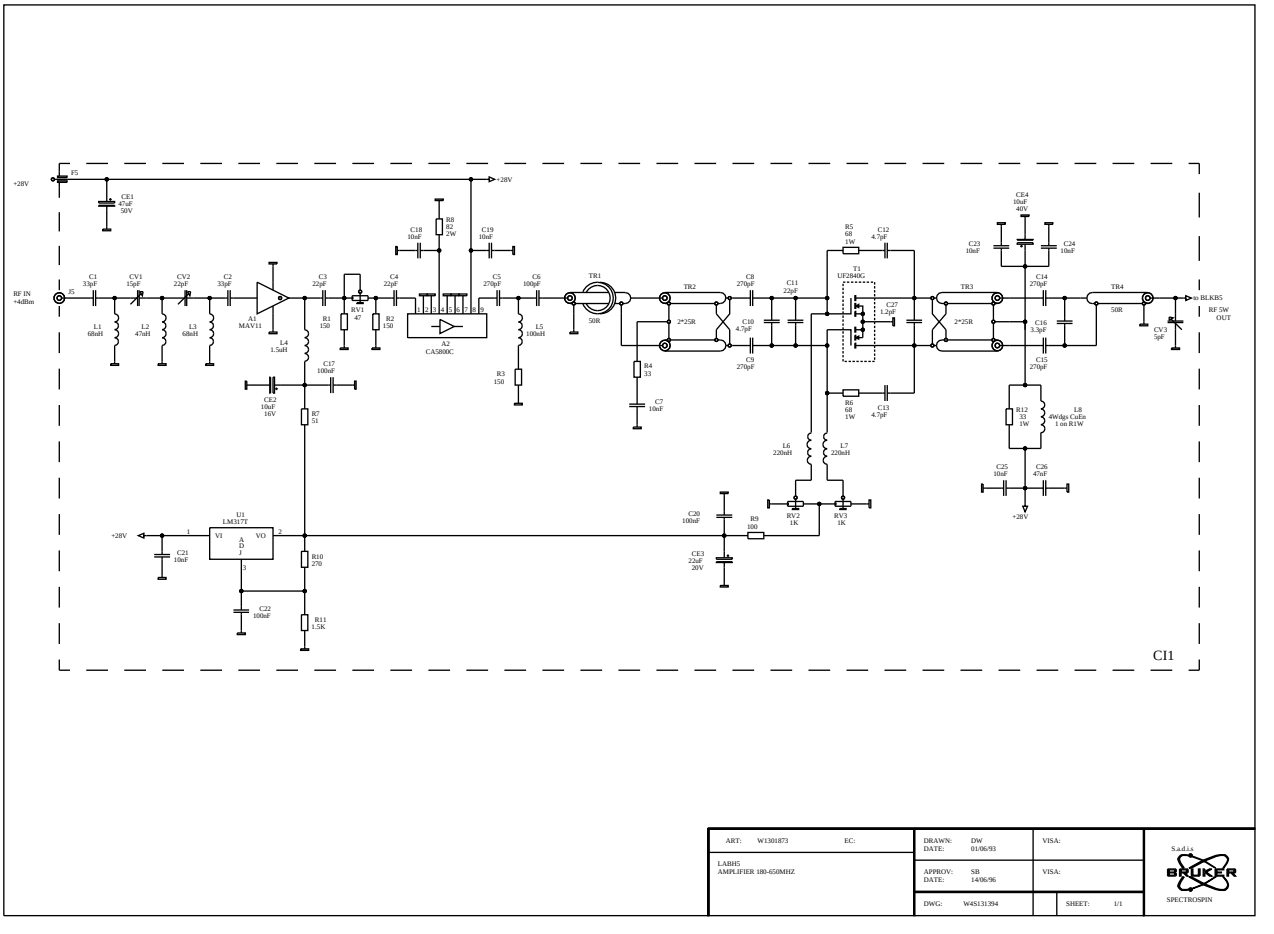
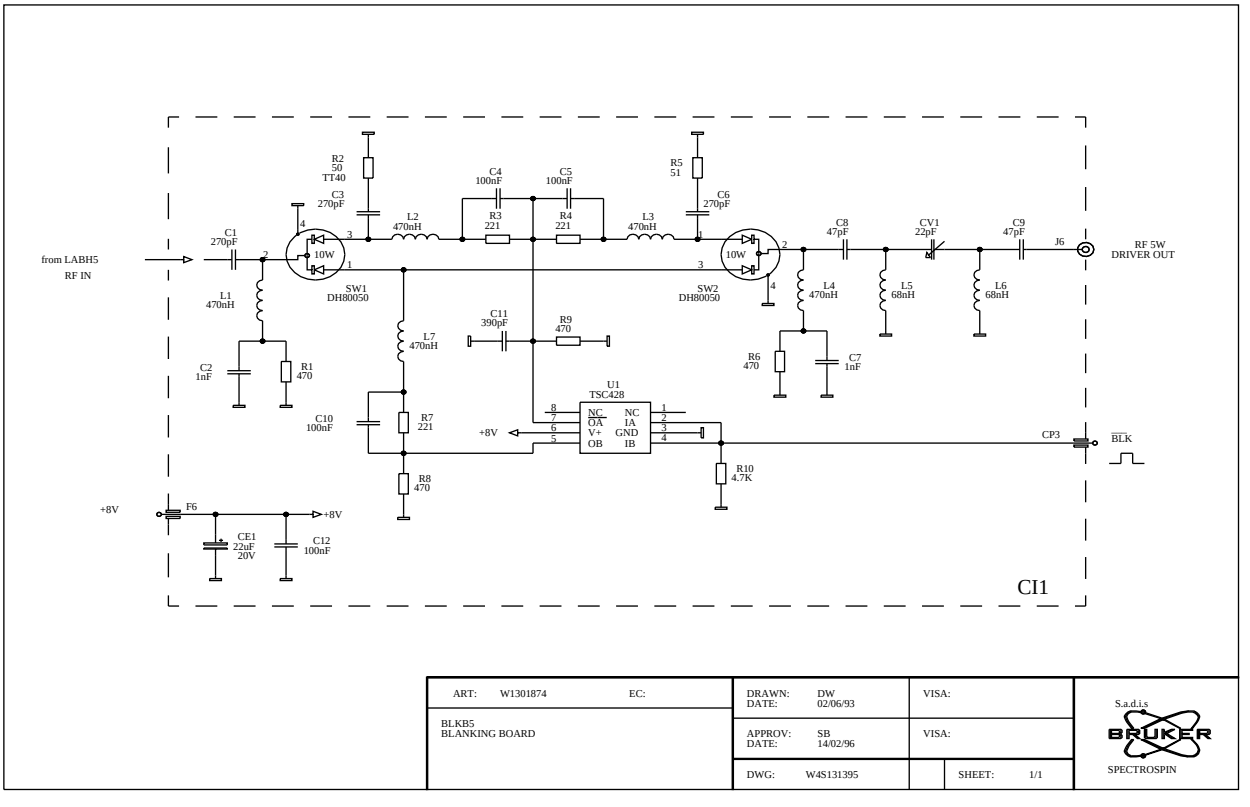


Figure 6.6. Blanking board



BLMH100 amplifier module

7

Figure 7.1. BLMH100 block diagram

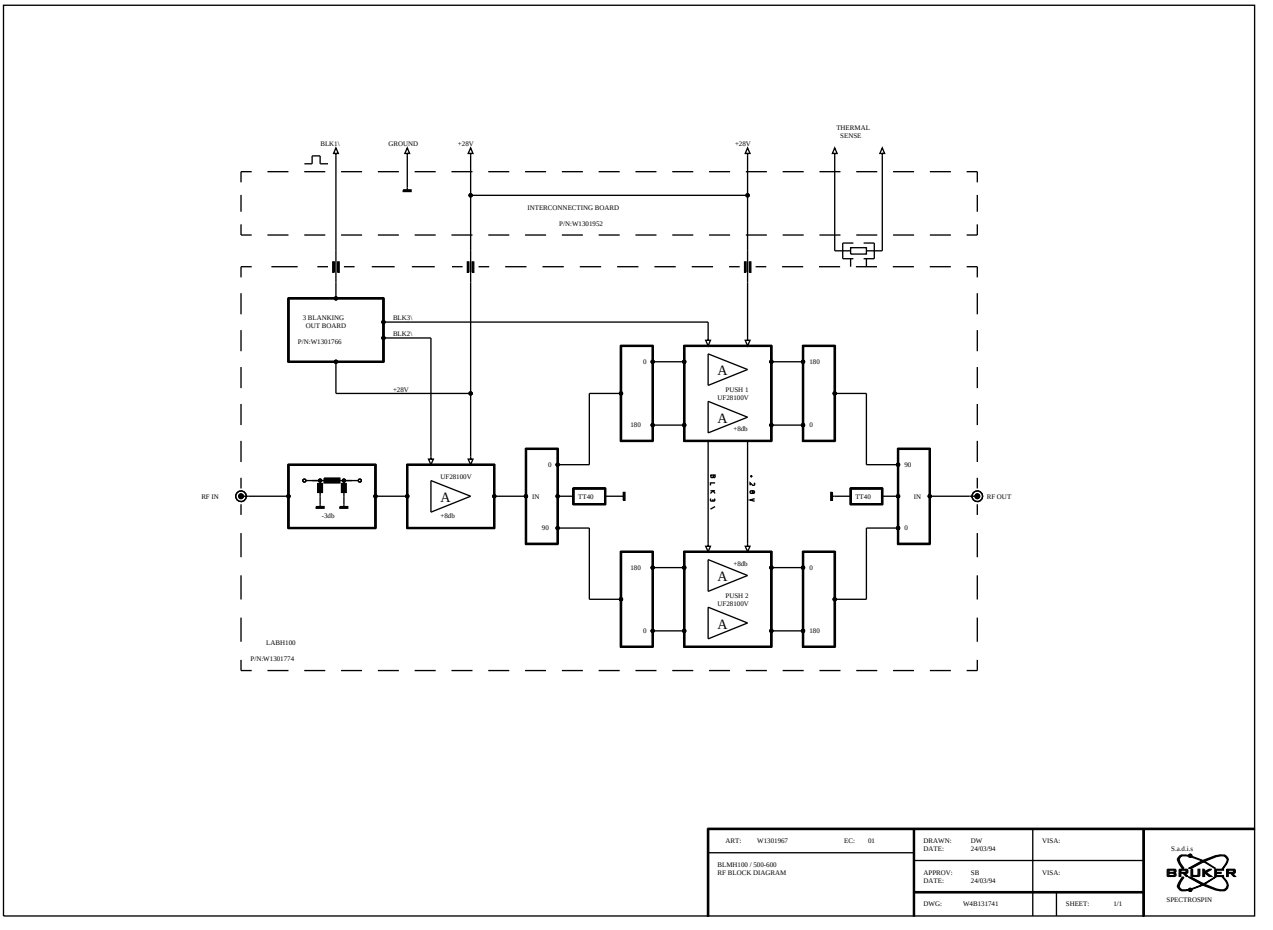


Figure 7.2. LABH100

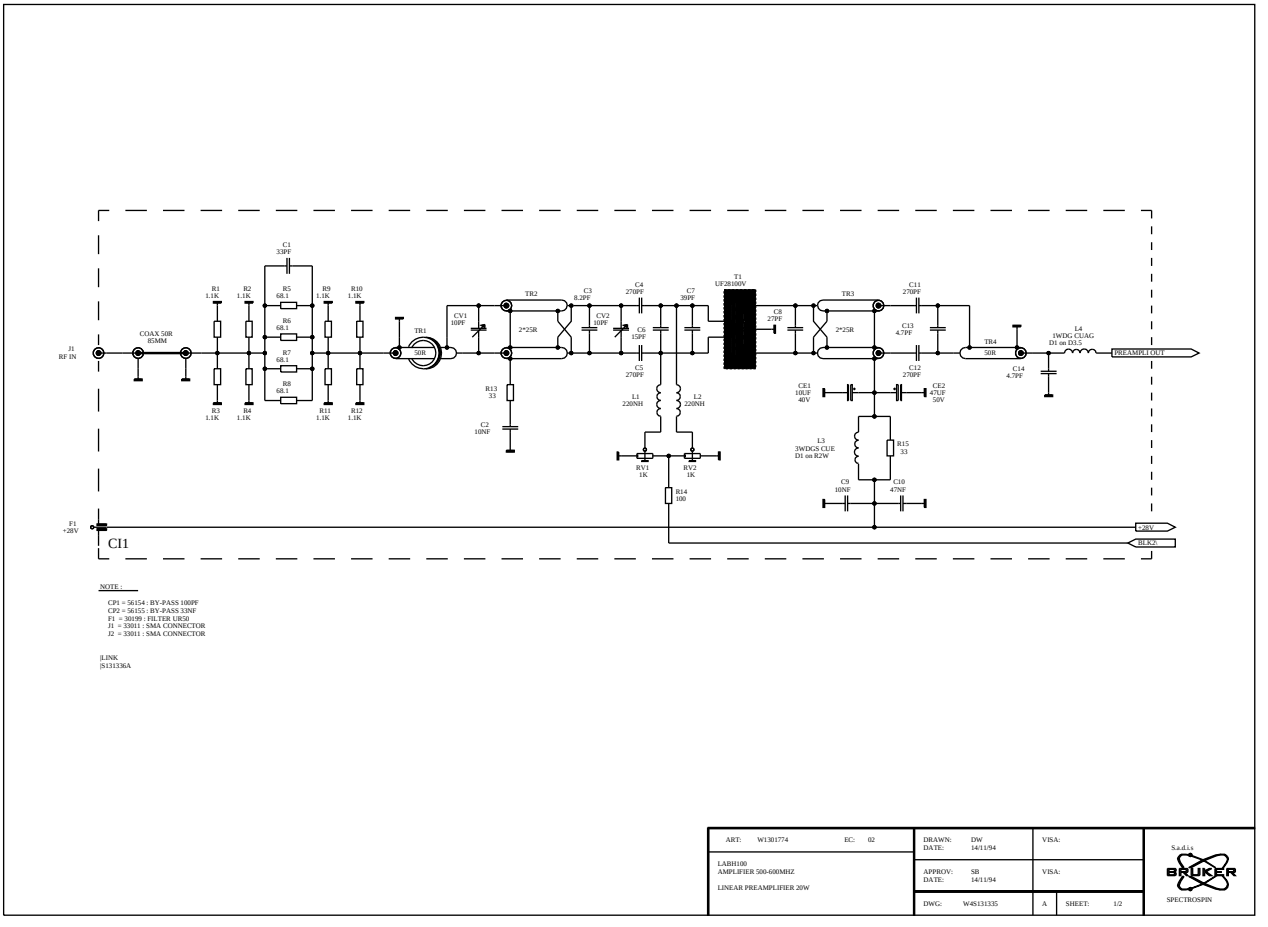


Figure 7.3. LABH100

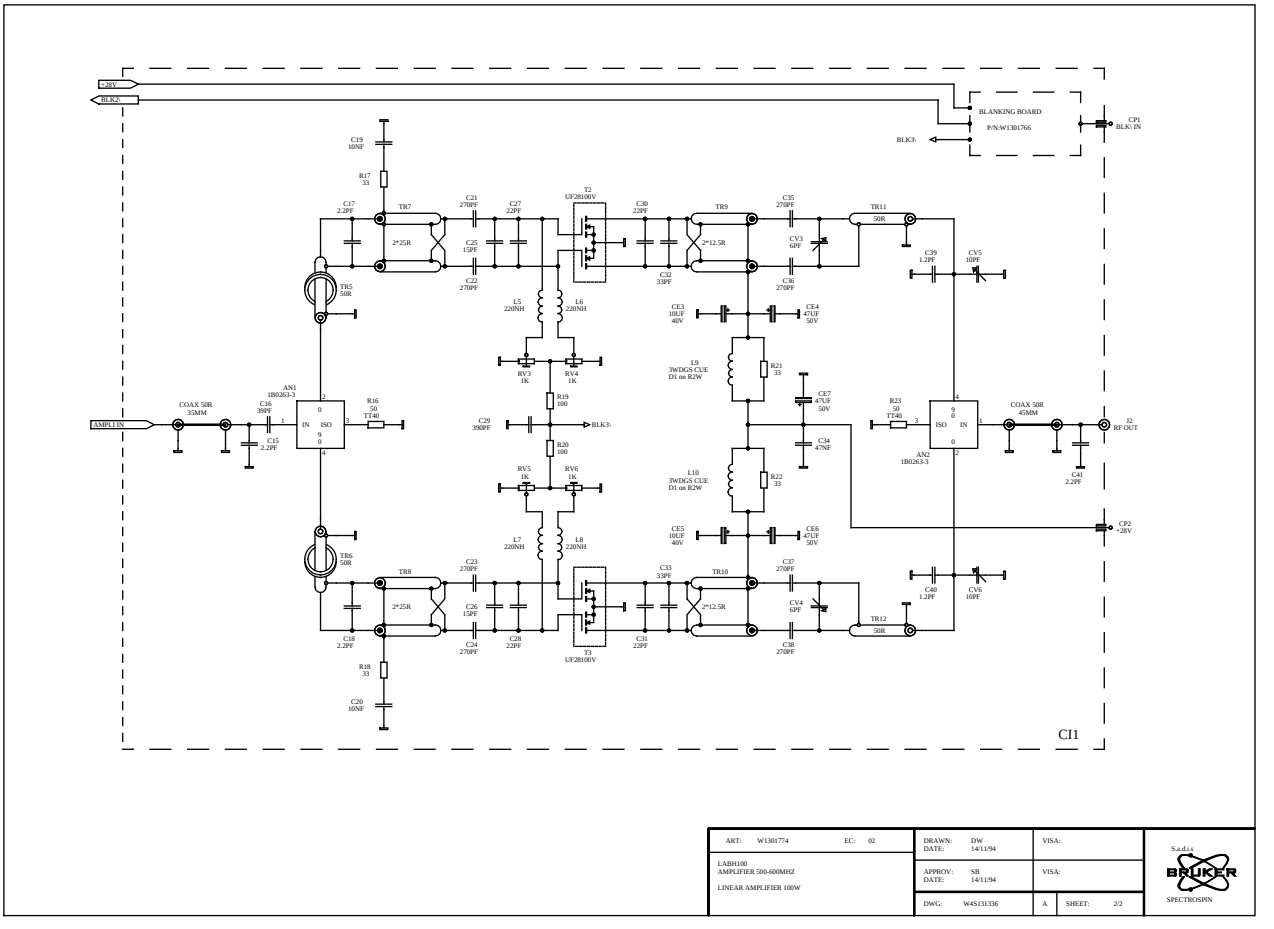


Figure 7.4. RF amplifier bias

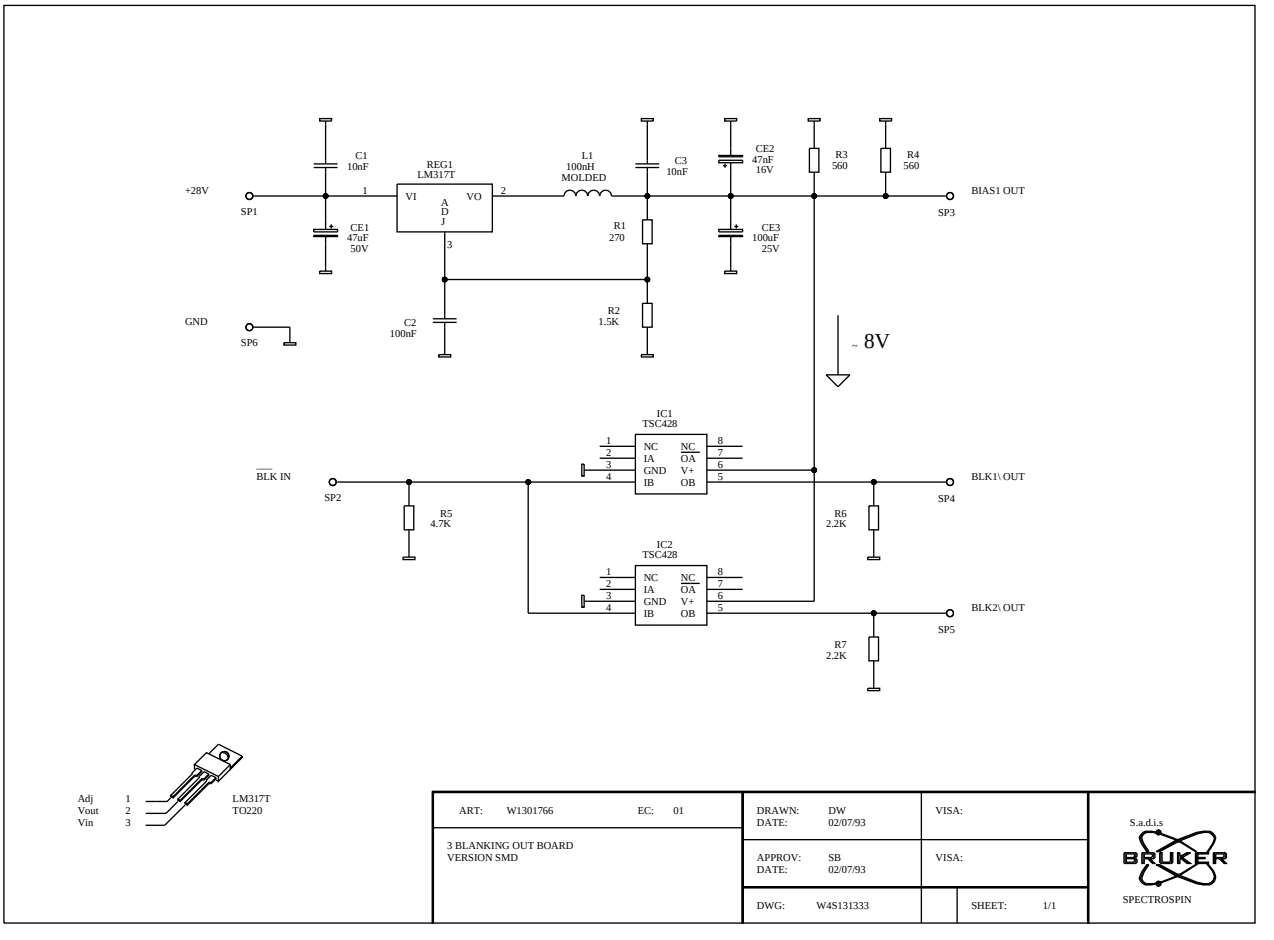
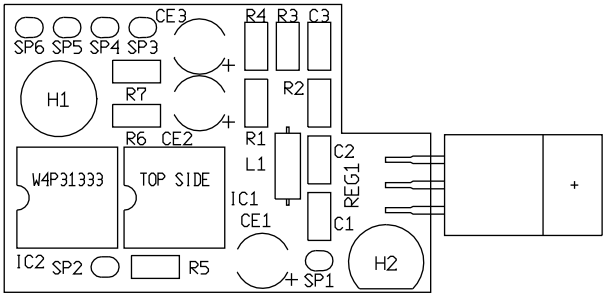
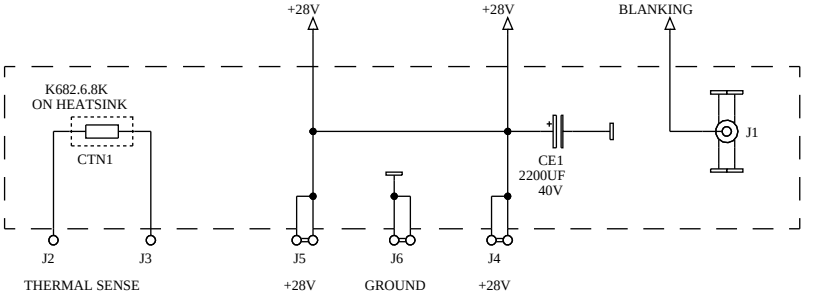


Figure 7.5. RF amplifier bias layout



Couplers, switches

Figure 8.1. Interconnecting board



NOTE :

CTN1 = 56521 : CTN 6K8 K682

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

Figure 8.2. Couplers and switch assy "F" interconnecting

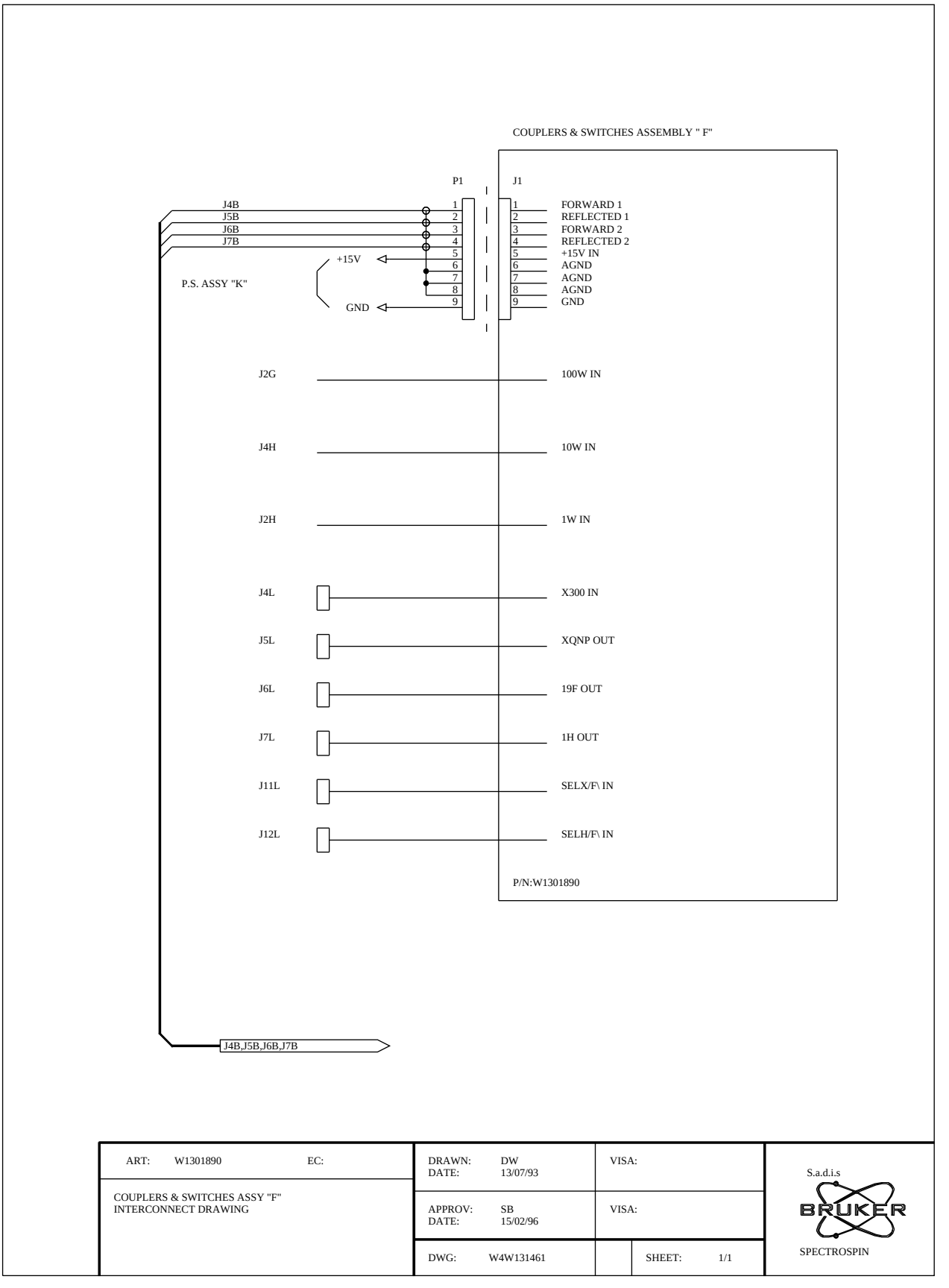
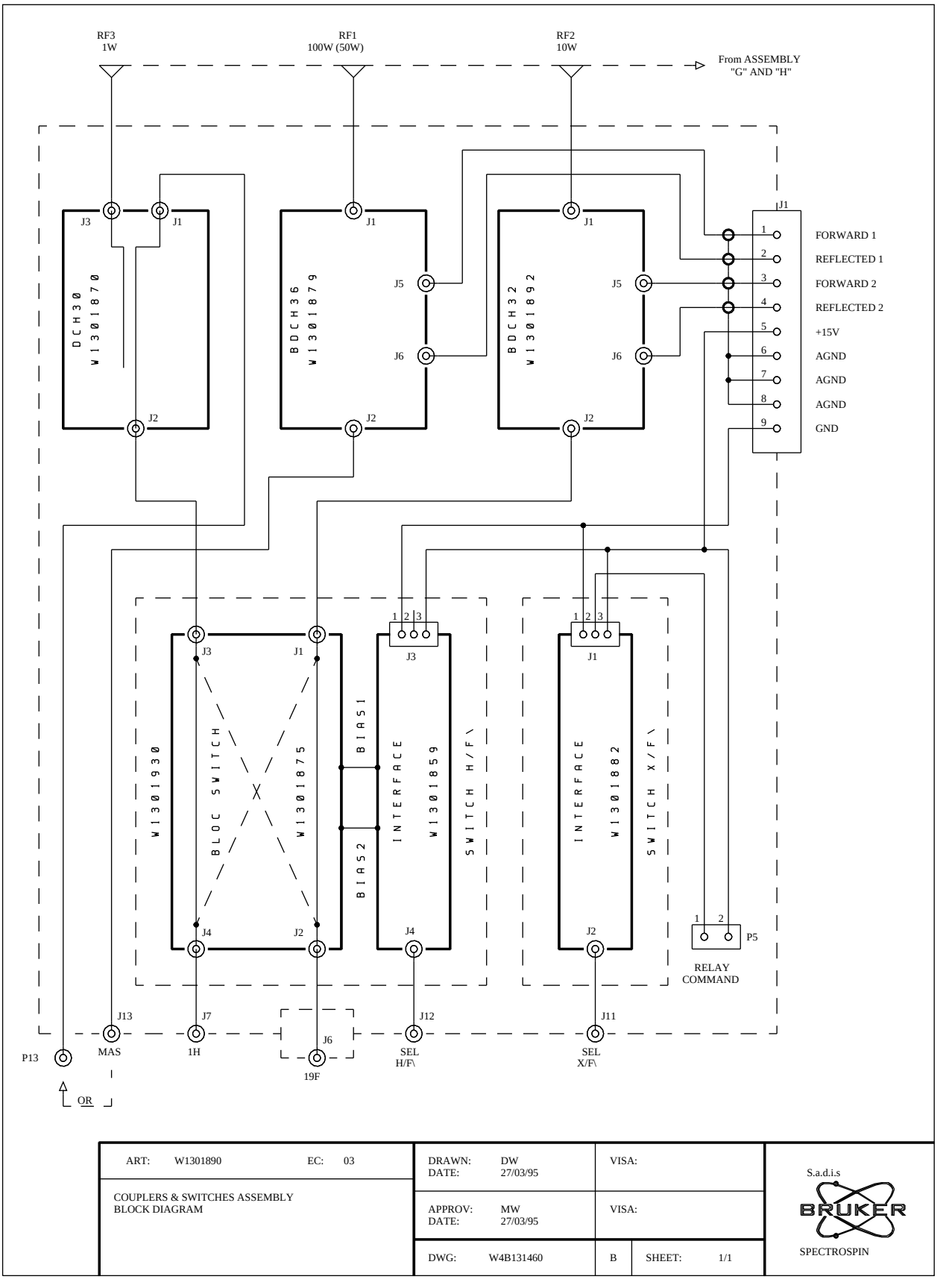
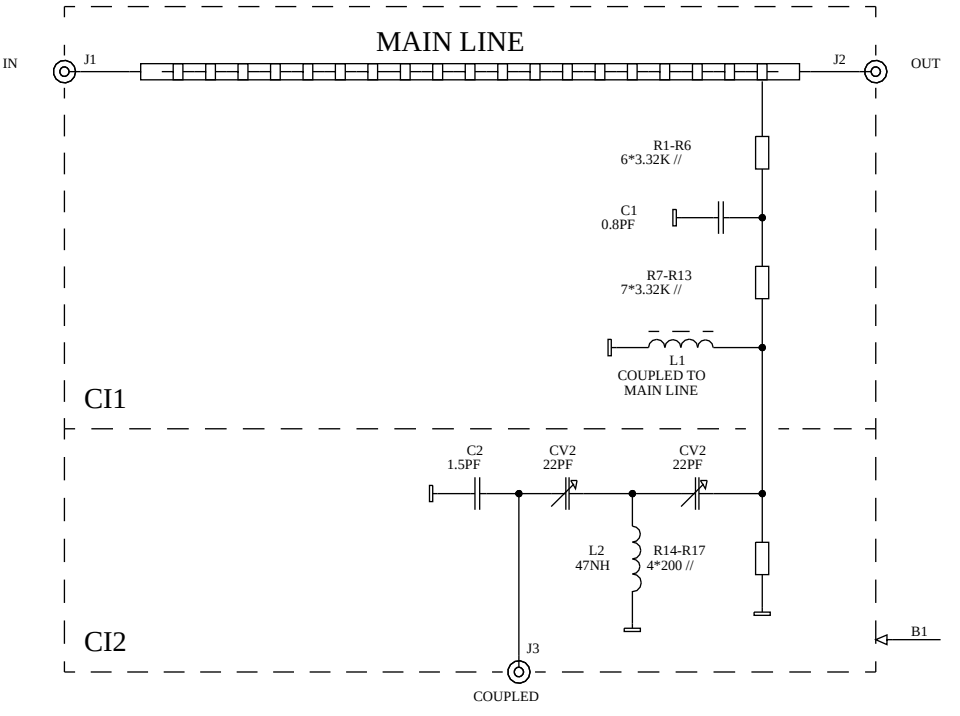


Figure 8.3. Couplers and switch block diagram



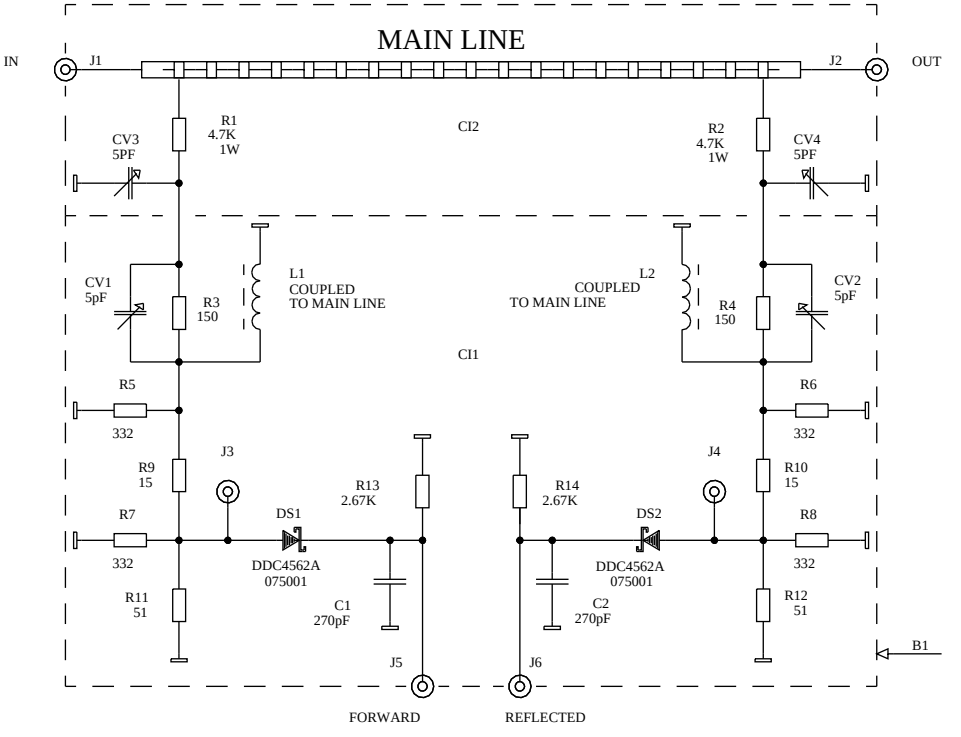
ART: W1301890 EC: 03	DRAWN: DW DATE: 27/03/95	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
COUPLERS & SWITCHES ASSEMBLY BLOCK DIAGRAM	APPROV: MW DATE: 27/03/95	VISA:	
	DWG: W4B131460	B SHEET: 1/1	

Figure 8.4. DCH30 bidirectionnal coupler



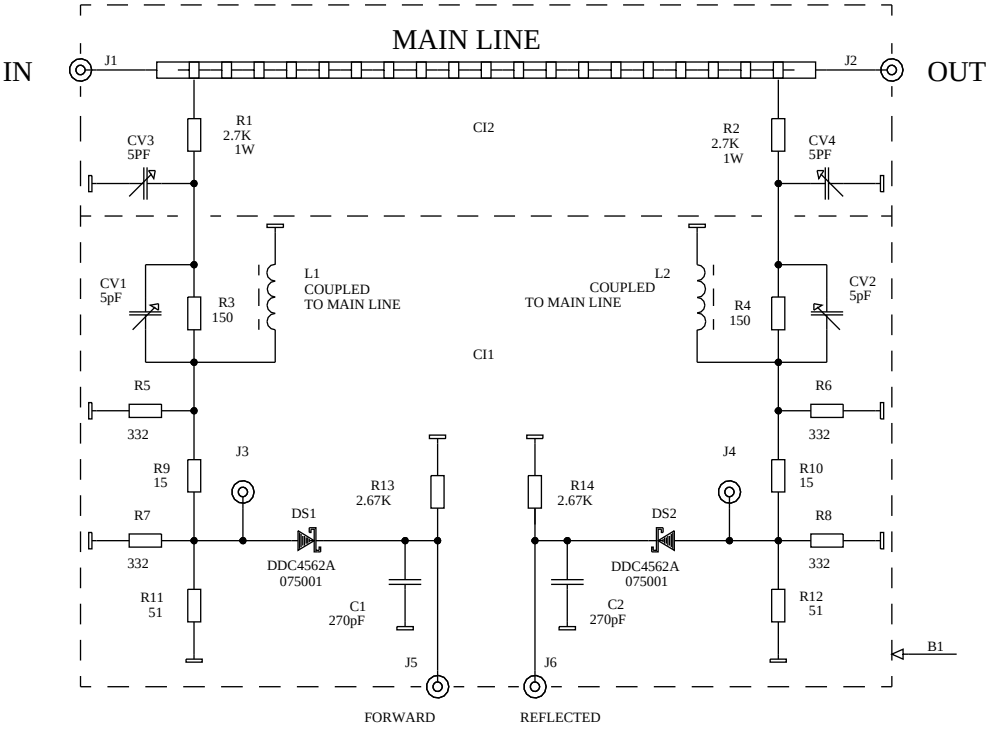
ART: W1301870 EC: 02	DRAWN: DW DATE: 16/03/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
DCH30 DIRECTIONNAL COUPLER	APPROV: SB DATE: 02/11/94	VISA:	
(SMA.C-SMA)	DWG: W4S131389	A SHEET: 1/1	

Figure 8.5. BDCH36 bidirectionnal coupler



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

Figure 8.6. BDCH32 bidirictionnal coupler

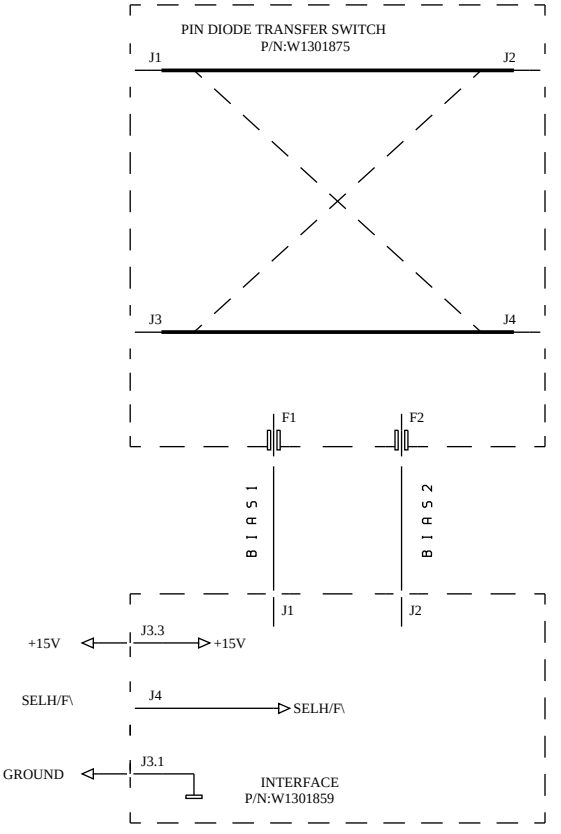


ART: W1301892 EC: 01	DRAWN: DW DATE: 07/06/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
BDCH32 BI-DIRECTIONAL COUPLER	APPROV: CO DATE: 07/06/93	VISA:	
(SMB-SMA)	DWG: W4S131445	SHEET: 1/1	

Figure 8.7. pin transfer switch block diagram

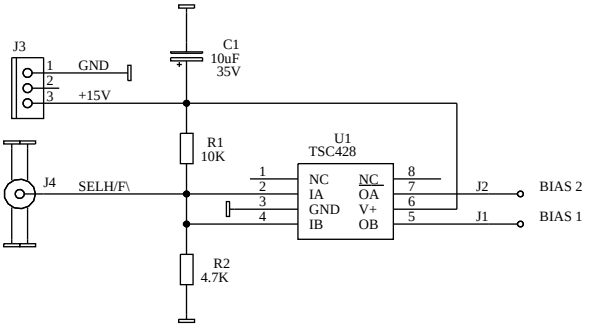
TRUTH TABLE

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 DATE: 09/10/95	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
PIN DIODE TRANSFER SWITCH BLOCK DIAGRAM	APPROV: CO DATE: 10/10/95	VISA:	
	DWG: W4B131458	A SHEET: 1/1	

Figure 8.8. interface switch H/F



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

Figure 8.9. interface transfer switch H/F layout

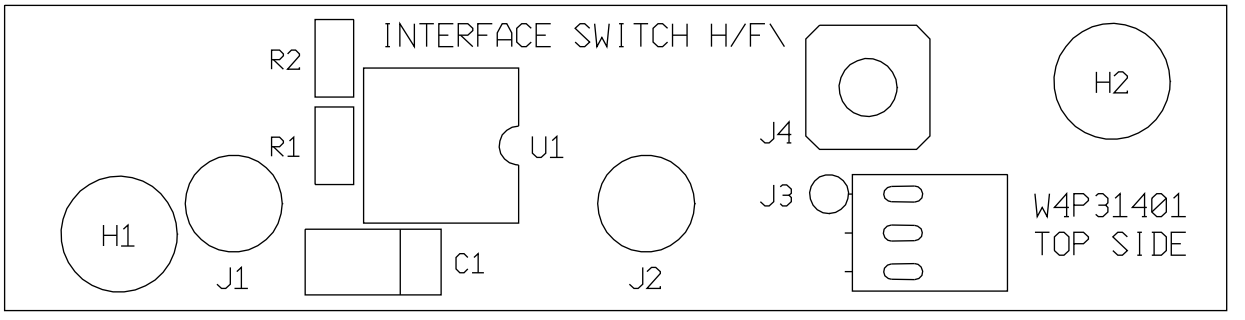
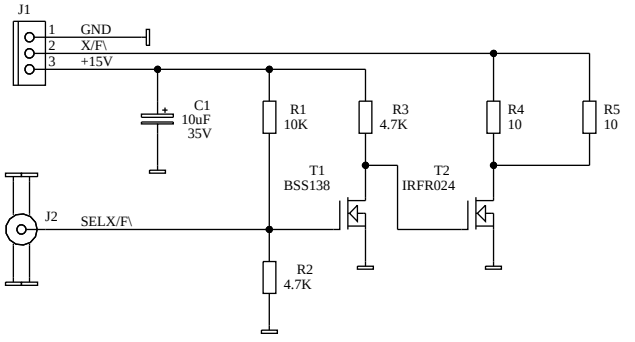


Figure 8.10. interface transfer switch

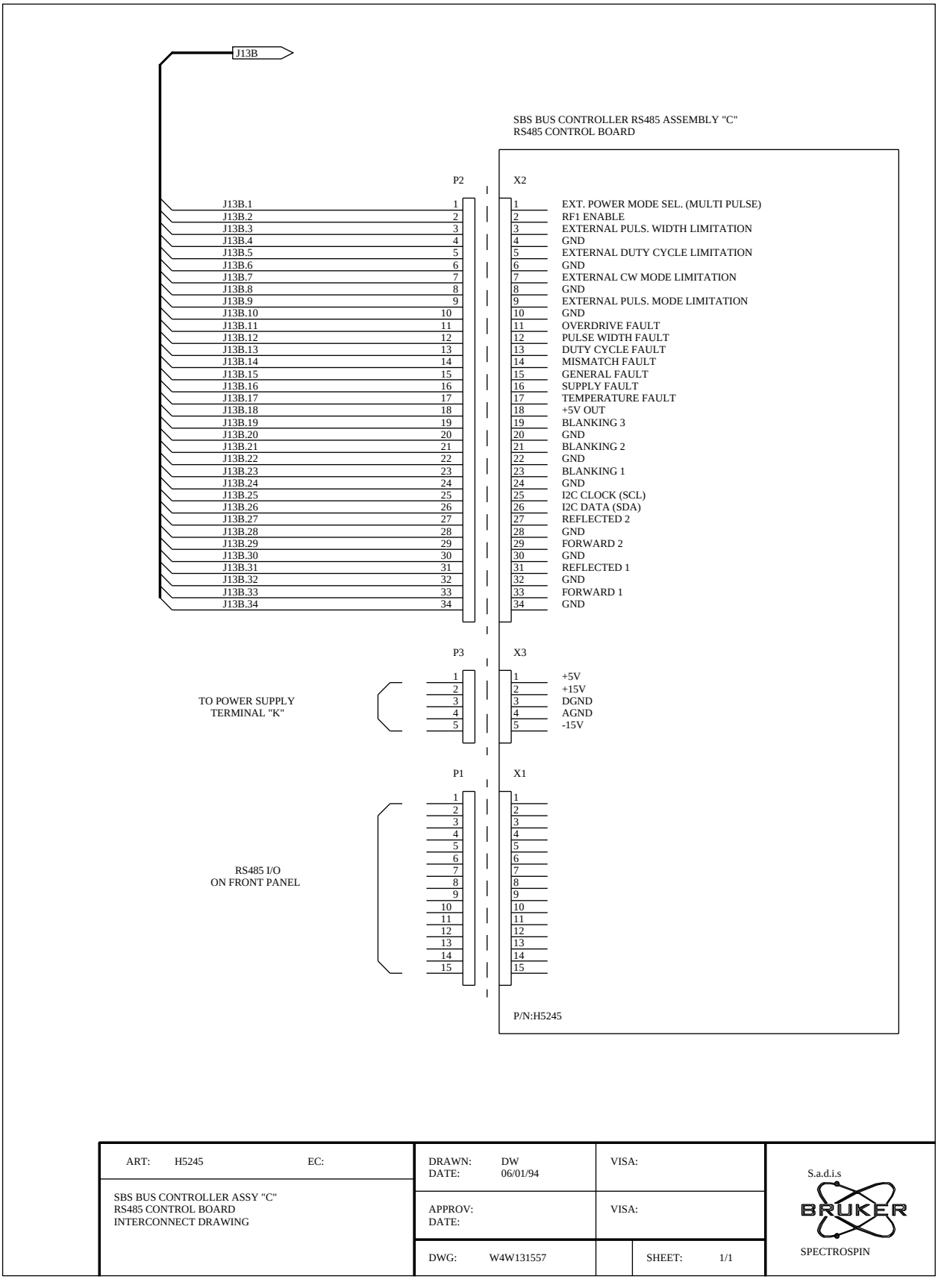


ART: W1301882 EC:	DRAWN: DW DATE: 03/06/93	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
INTERFACE RELAY TRANFER SWITCH	APPROV: CO DATE: 15/02/96	VISA:	
	DWG: W4S131417	SHEET: 1/1	

SBS controller

9

Figure 9.1. interconnect diagram



ART: H5245 EC:	DRAWN: DW DATE: 06/01/94	VISA:	S.a.d.i.s BRUKER SPECTROSPIN
SBS BUS CONTROLLER ASSY "C" RS485 CONTROL BOARD INTERCONNECT DRAWING	APPROV: DATE:	VISA:	
	DWG: W4W131557	SHEET: 1/1	

Figure 9.2. CPU board

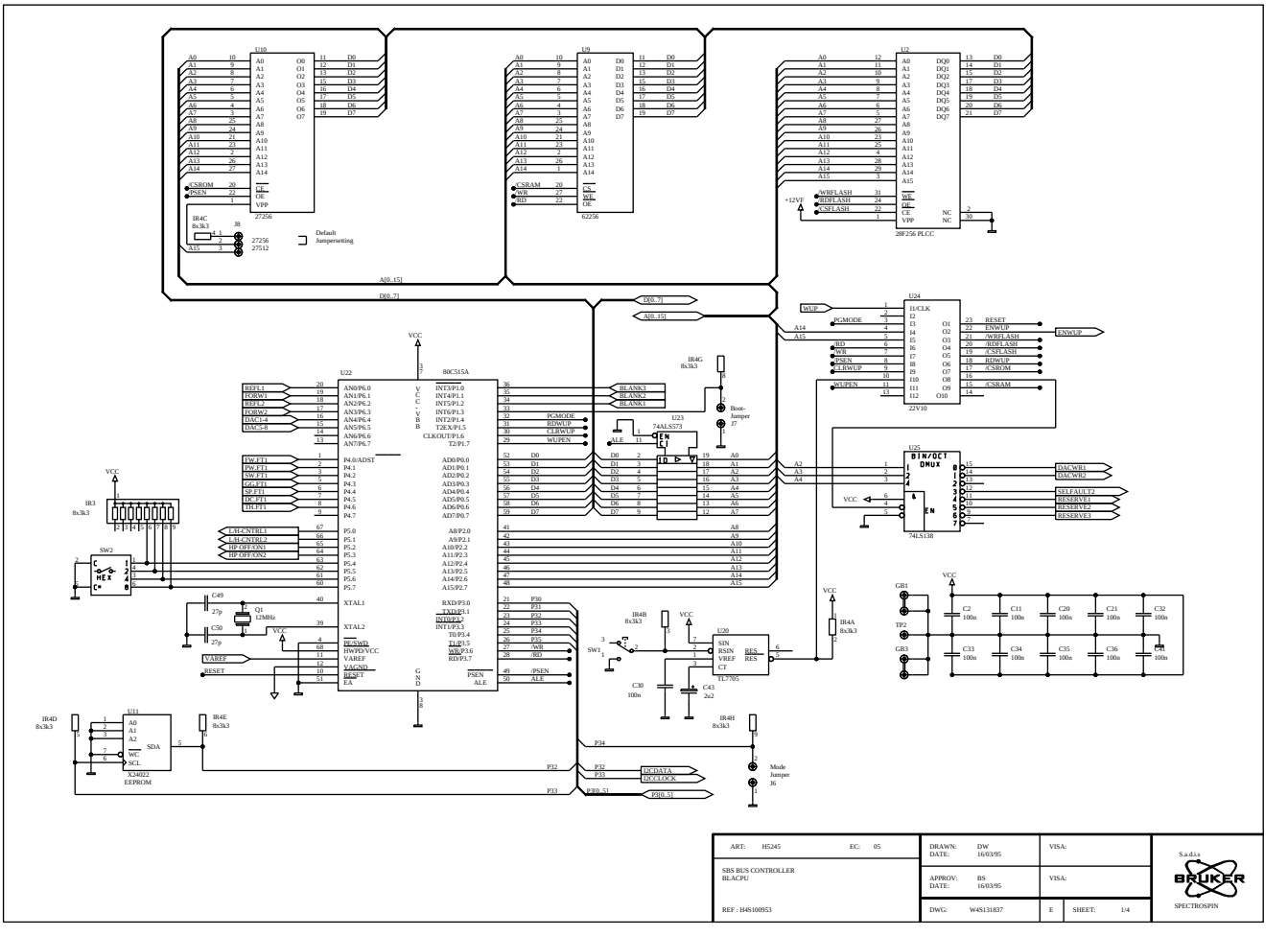


Figure 9.3. sbs controller dac

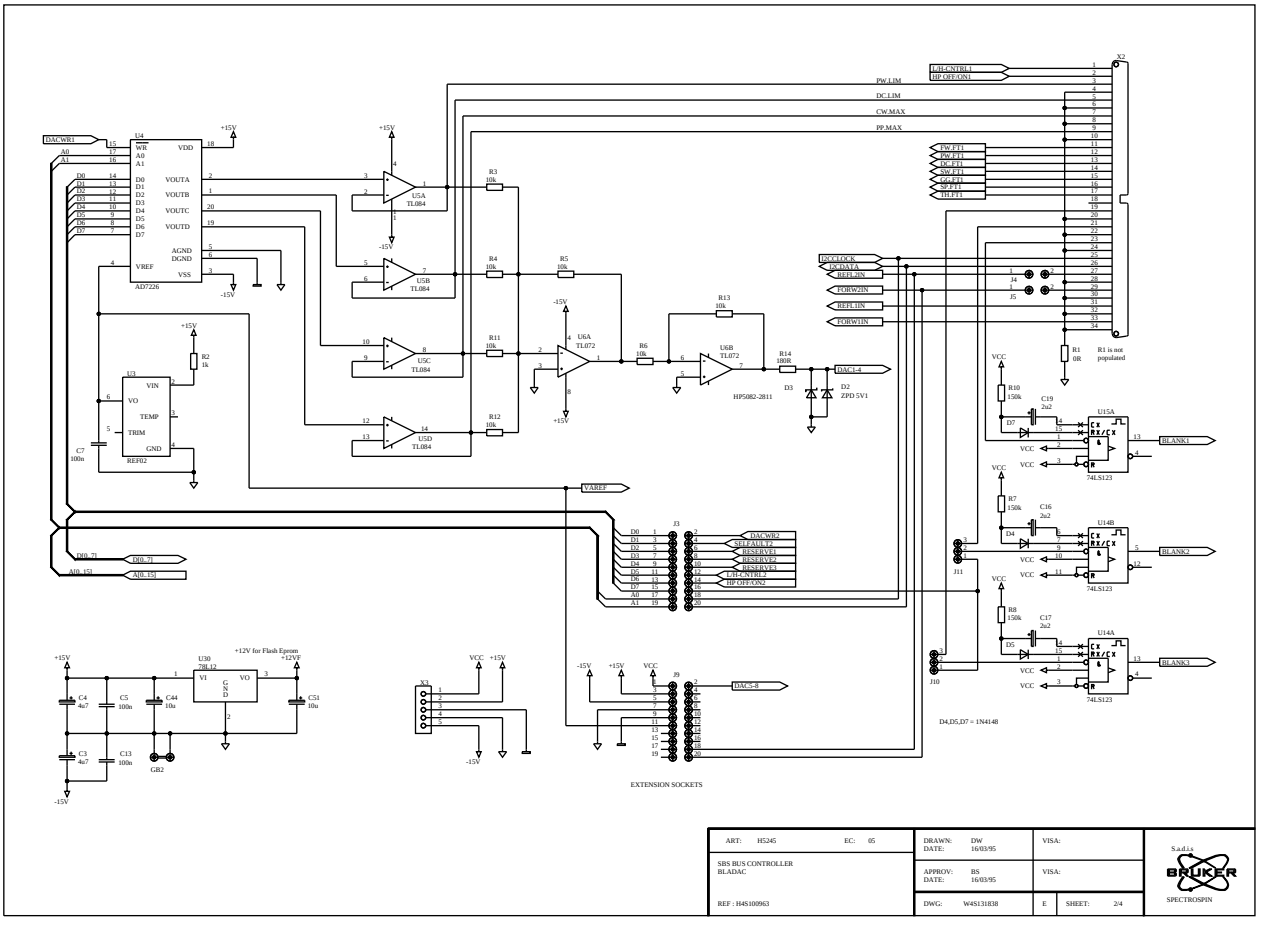


Figure 9.4. sbs controller driver rs485

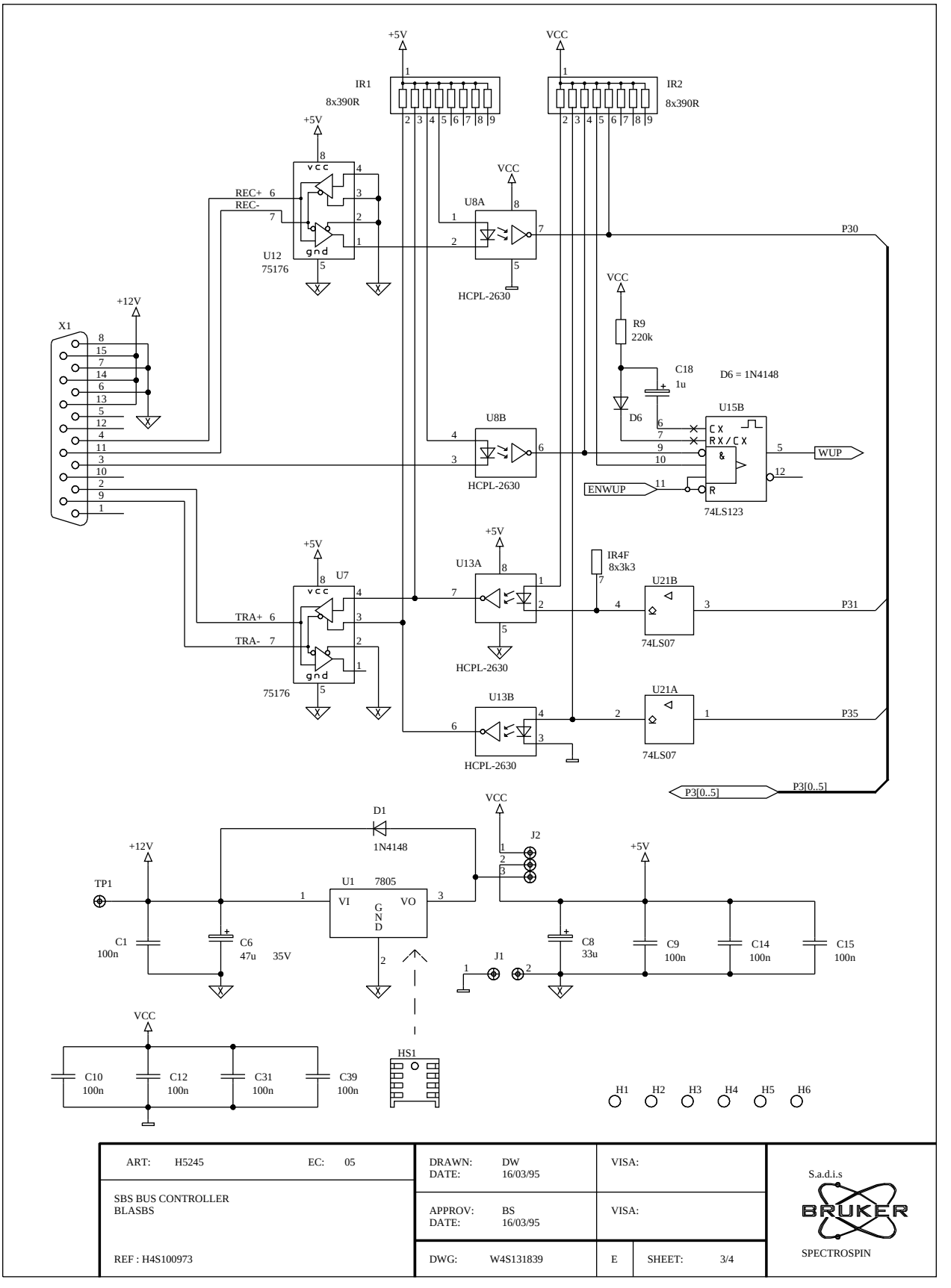
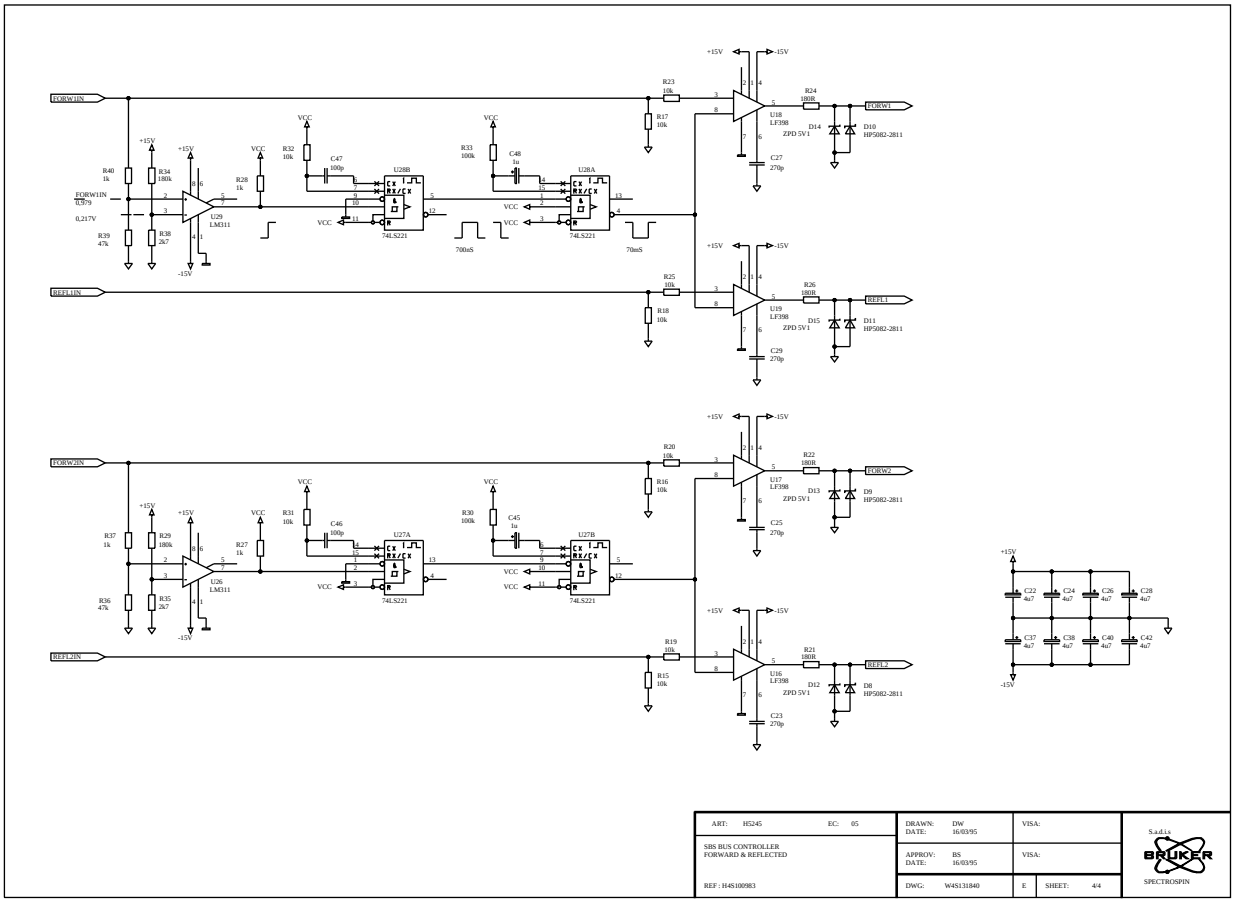


Figure 9.5. sbs controller sample/hold



Block diagram ***3***

Block diagram 4

Power supply ***5***

Wiring diagram 6
Power supply diagram 7
Power supply terminal 8

Control board 2 ***9***

Interconnect drawing sheet 1/3 10
Interconnect drawing sheet 2/3 11
Interconnect drawing sheet 3/3 12
Control board top side 13
Control board bottom side 14
Control board 1/7 - power supply & reference 15
Control board 2/7 - Thermal sense, supply & fan control 16
Control board 3/7 - Forward & reflected 17
Control board 4/7 - Duty cycle & pulse width limiter 18
Control board 5/7 - Power limitation 19
Control board 6/7 - Blanking circuit 20
Control board 7/7 - Interconnection & pal 21
Pal interconnection 22

Status board ***23***

Interconnect drawing 24
Status led board 25
Status led board - location 26

Fan assembly ***27***

Interconnect drawing 28
Fan assembly 29

BLMH1/5/10 ***30***

Interconnect diagram 31
RF block diagram 32
Amplifier 180-850 Mhz 33
LABH10 34
LABH5 35
Blanking board 36

BLMH100 amplifier module ***37***

BLMH100 block diagram 38
LABH100 39
LABH100 40
RF amplifier bias 41
RF amplifier bias layout 42

Couplers, switches ***43***

Interconnecting board 44
Couplers and switch assy "F" interconnecting 45
Couplers and switch block diagram 46
DCH30 bidirectionnal coupler 47
BDCH36 bidirectionnal coupler 48
BDCH32 bidirictionnal coupler 49
pin transfer switch block diagram 50
interface switch H/F 51
interface transfer switch H/F layout 52
interface transfer switch 53

SBS controller ***55***

interconnect diagram 56
CPU board 57
sbs controller dac 58
sbs controller driver rs485 59
sbs controller sample/hold 60