

ISDN PCI Card with HFC-S PCI A

January 2001

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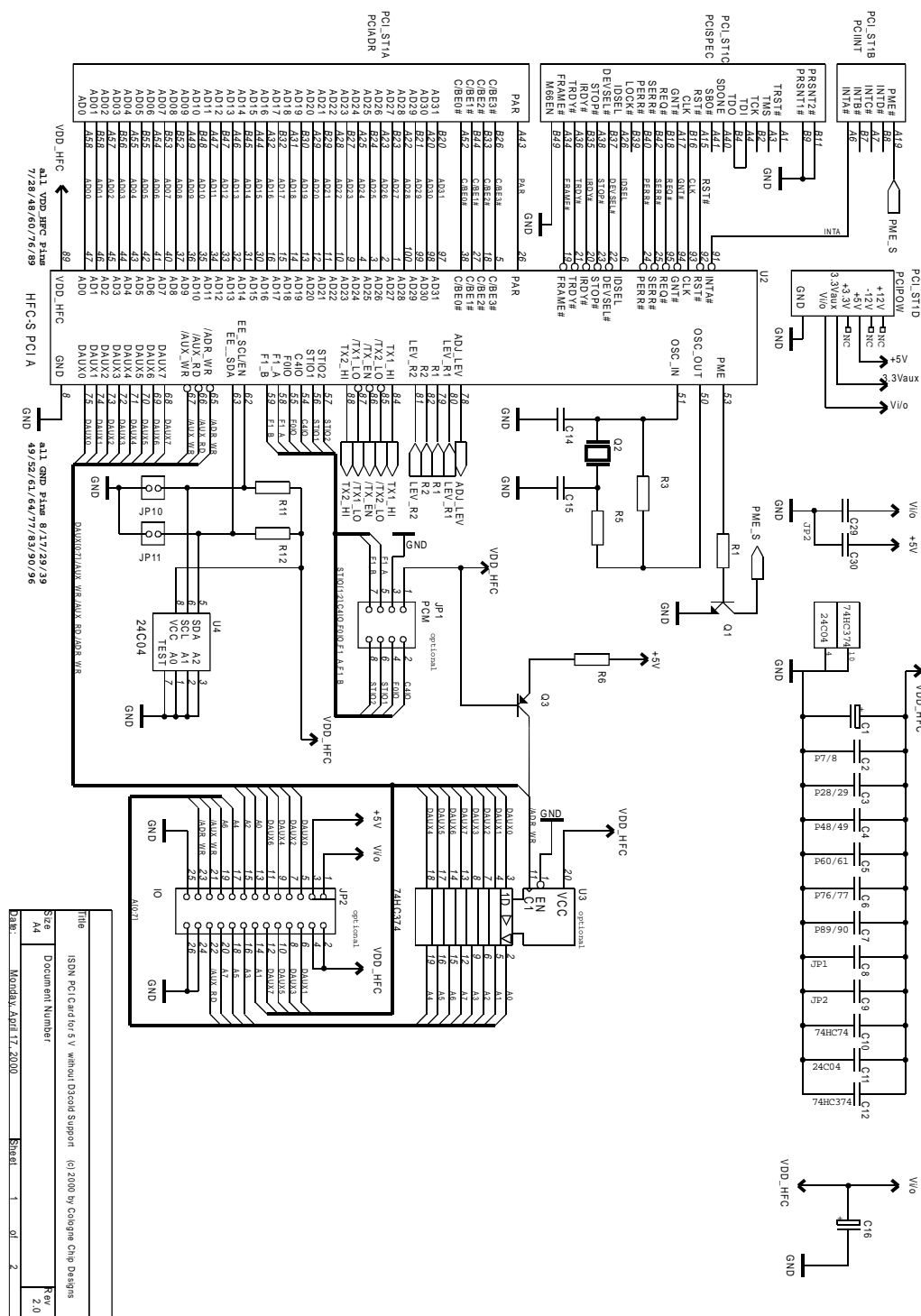
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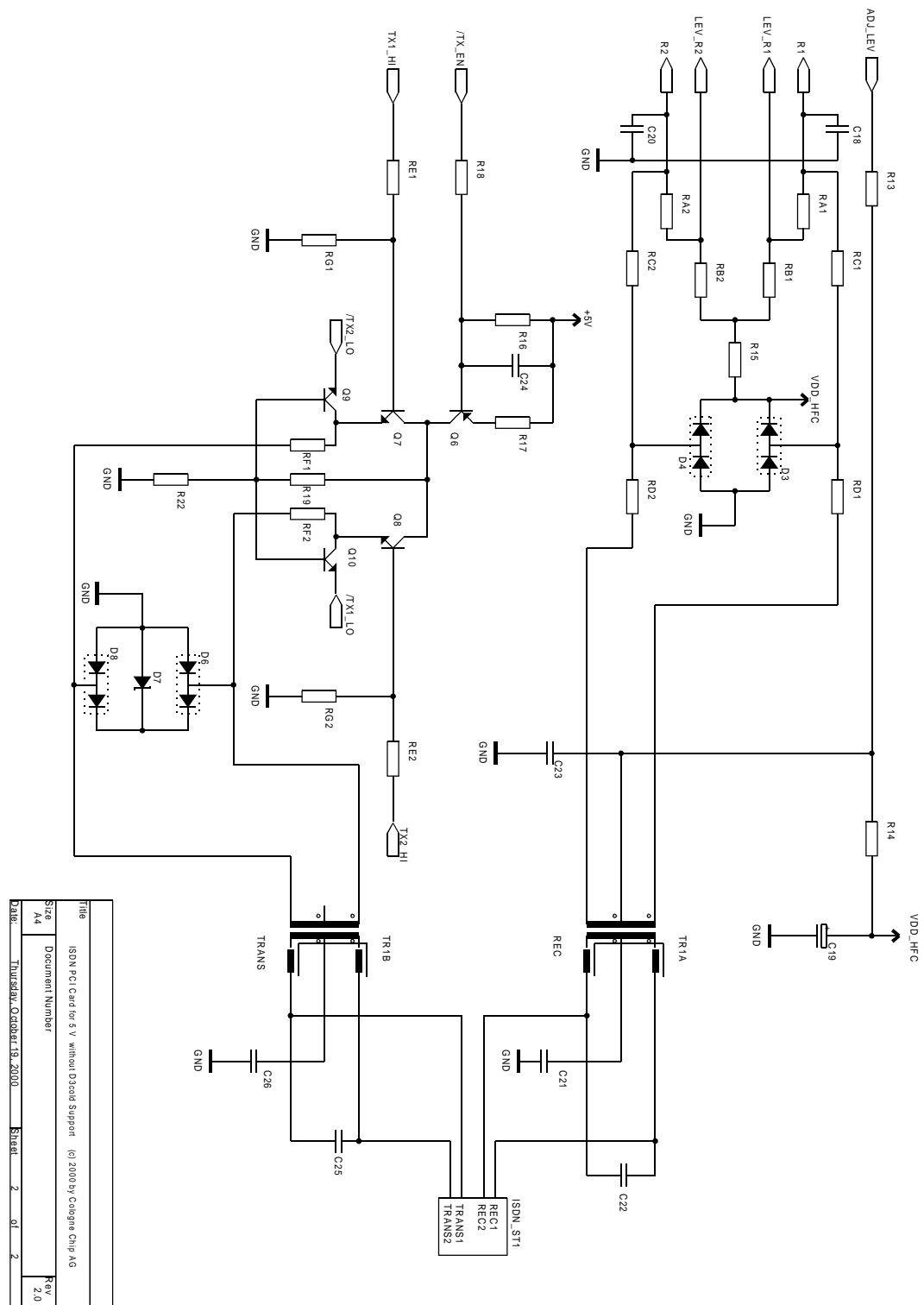
Introduction

Thank you for your interest in our ISDN controllers. The following pages are just an extract of the HFC-S PCI As' datasheet. They show how an ISDN PCI card can be built up with the HFC-S PCI A. Of course they can not give you detailed information about all the HFC-S PCI As' functions, but they can give you an idea about the potential of the HFC-S PCI A. If you want a more detailed description please download the datasheet.

1.1 ISDN PCI card for 5V power supply (no D3_{cold} support)

POL STIR	
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PCAOR	





ISDN PCI Card for 5 V without D3cold support

Capacitors

C01	33μ	
C02	33n	nearby U2
C03	33n	nearby U2
C04	33n	nearby U2
C05	33n	nearby U2
C06	33n	nearby U2
C07	33n	nearby U2
C08	33n	nearby JP1 <i>optional</i>
C09	33n	nearby JP2 <i>optional</i>
C10	33n	nearby U1
C11	33n	nearby U4
C12	33n	nearby U3 <i>optional</i>
C14	47p	depends on crystal
C15	47p	depends on crystal
C16	33μ	
C18	22p	nearby U2
C19	33μ	
C20	22p	nearby U2
C21	0	<i>optional</i>
C22	0	<i>optional</i>
C23	47n	
C24	470p	
C25	0	<i>optional</i>
C26	0	<i>optional</i>
C29	33n	nearby JP2 <i>optional</i>
C30	33n	nearby JP2 <i>optional</i>
C31	0R	Resistor or connect to GND
C32	0	<i>optional</i>

Resistors

R01	10k	
R03	1M	
R05	330	
R06	10k	
R11	10k	
R12	10k	
R13	3k9	
R14	680k	
R15	1M2	
R16	3k3	
R17	100	
R18	5k6	
R19	3k3	
R22	2k2	
RA1	100k	
RA2	100k	
RB1	33k	
RB2	33k	
RC1	4k7	
RC2	4k7	
RD1	4k7	
RD2	4k7	
RE1	2k2	1%
RE2	2k2	1%
RF1	15	
RF2	15	
RG1	3k	1%
RG2	3k	1%

IC's

U2	HFC-S PCI A	Cologne Chip AG
U3	74HC374	<i>optional</i>
U4	24C04	

Connectors

JP1	PCM	<i>optional</i>
JP2	IO	<i>optional</i>
JP10	EEPROM options	<i>optional</i>
JP11	EEPROM options	<i>optional</i>

Transistors / Crystals

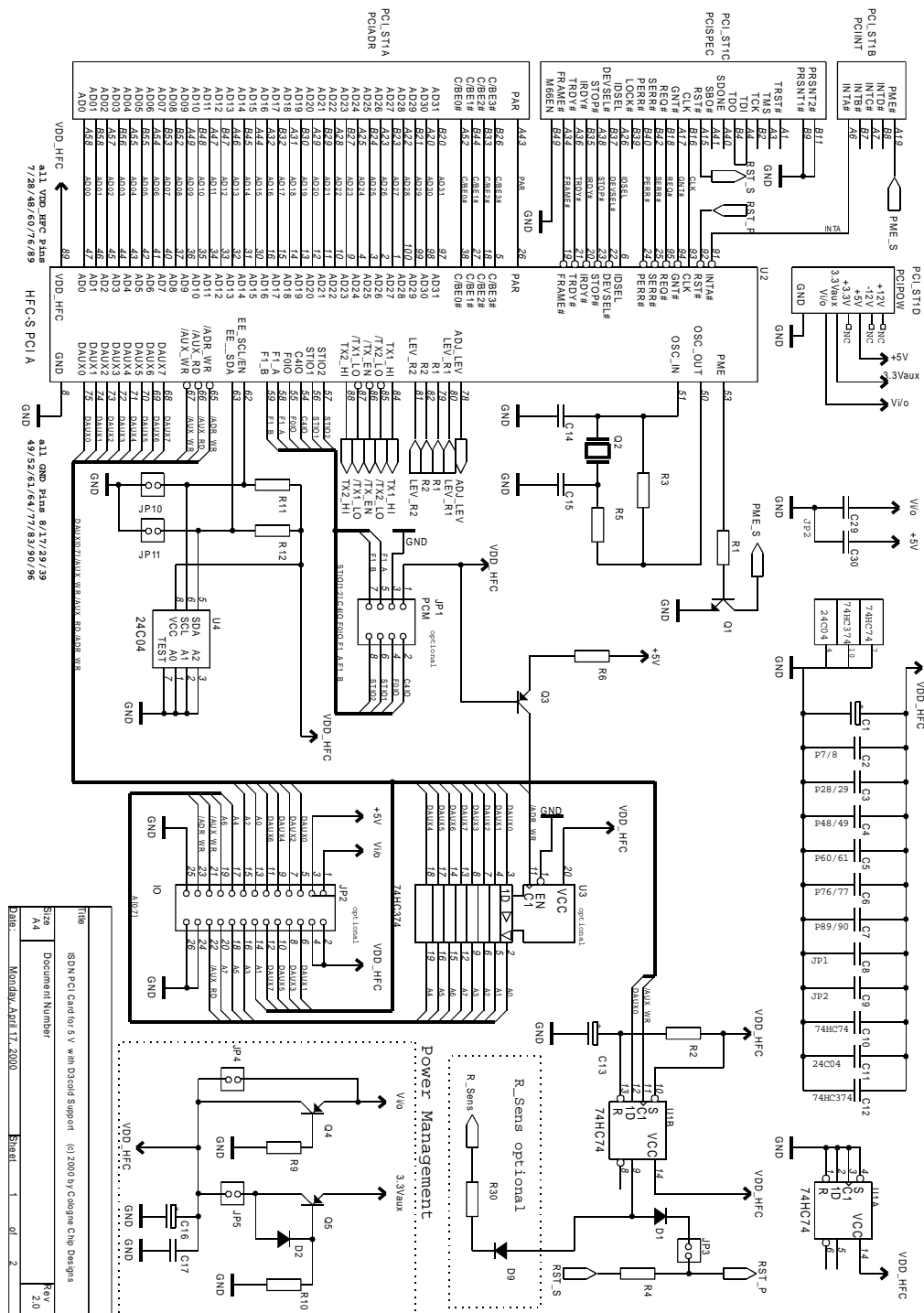
Q1	BC850C	CMPT5088 or similar
Q2	12.288M	
Q3	BC860C	CMPT5087 or similar
Q6	BC860C	CMPT5087 or similar
Q7	BC850C	CMPT5088 or similar
Q8	BC850C	CMPT5088 or similar
Q9	BC850C	CMPT5088 or similar
Q10	BC850C	CMPT5088 or similar

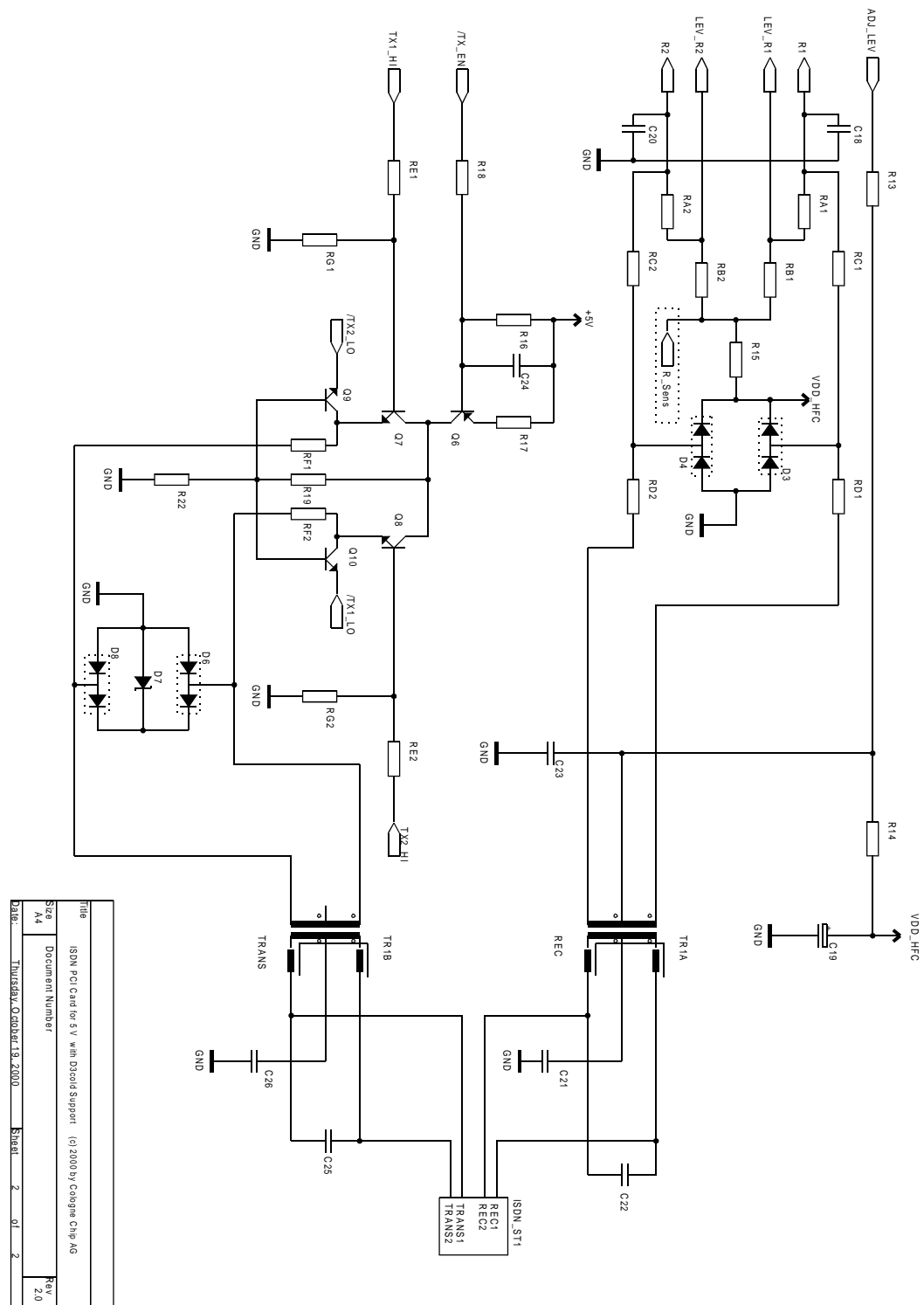
Diodes

D3	BAV99	can also be 2*4148
D4	BAV99	can also be 2*4148
D6	BAV99	can also be 2*4148
D7	2V7	
D8	BAV99	can also be 2*4148

1.2 ISDN PCI card for 5V power supply with D3_{cold} support

Please see chapter 3.3 of the HFC-S PCI A data sheet for details on power management support of HFC-S PCI A and special considerations for support of power management state D3_{cold}.





ISDN PCI Card for 5 V with D3cold support

Capacitors

C01	33μ	
C02	33n	nearby U2
C03	33n	nearby U2
C04	33n	nearby U2
C05	33n	nearby U2
C06	33n	nearby U2
C07	33n	nearby U2
C08	33n	nearby JP1 <i>optional</i>
C09	33n	nearby JP2 <i>optional</i>
C10	33n	nearby U1
C11	33n	nearby U4
C12	33n	nearby U3 <i>optional</i>
C13	1μ	
C14	47p	depends on crystal
C15	47p	depends on crystal
C16	33μ	
C17	33n	
C18	22p	nearby U2
C19	33μ	
C20	22p	nearby U2
C21	0	<i>optional</i>
C22	0	<i>optional</i>
C23	47n	
C24	470p	
C25	0	<i>optional</i>
C26	0	<i>optional</i>
C29	33n	nearby JP2 <i>optional</i>
C30	33n	nearby JP2 <i>optional</i>
C31	0R	Resistor or connect to GND
C32	0	<i>optional</i>

Diodes

D1	LL4148	or similar
D2	LL4148	or similar
D3	BAV99	can also be 2*4148
D4	BAV99	can also be 2*4148
D6	BAV99	can also be 2*4148
D7	2V7	
D8	BAV99	can also be 2*4148
D9	LL4148 *	or similar

Resistors

R01	10k	
R02	1M	
R03	1M	
R04	10k	
R05	330	
R06	10k	
R09	10k	
R10	10k	
R11	10k	
R12	10k	
R13	3k9	
R14	680k	
R15	1M2	
R16	3k3	
R17	100	
R18	5k6	
R19	3k3	
R22	2k2	
R30	680k *	
RA1	100k	
RA2	100k	
RB1	33k	
RB2	33k	
RC1	4k7	
RC2	4k7	
RD1	4k7	
RD2	4k7	
RE1	2k2	1%
RE2	2k2	1%
RF1	15	
RF2	15	
RG1	3k	1%
RG2	3k	1%

IC's

U1	74HC74	
U2	HFC-S PCI A	Cologne Chip AG
U3	74HC374	<i>optional</i>
U4	24C04	

Connectors

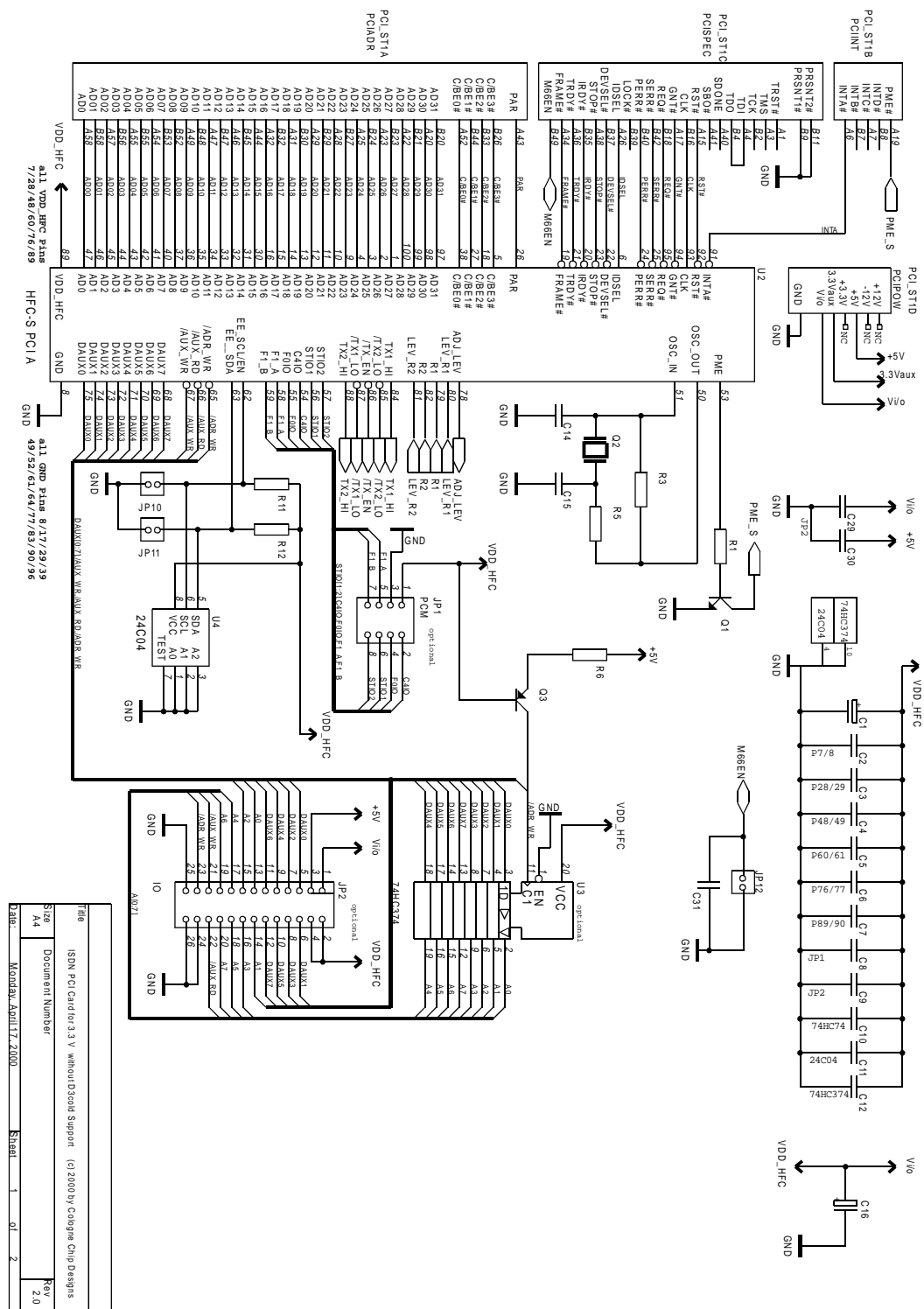
JP1	PCM	<i>optional</i>
JP2	IO	<i>optional</i>
JP3	Reset options	
JP4	Power options	
JP5	Power options	
JP10	EEPROM options	<i>optional</i>
JP11	EEPROM options	<i>optional</i>

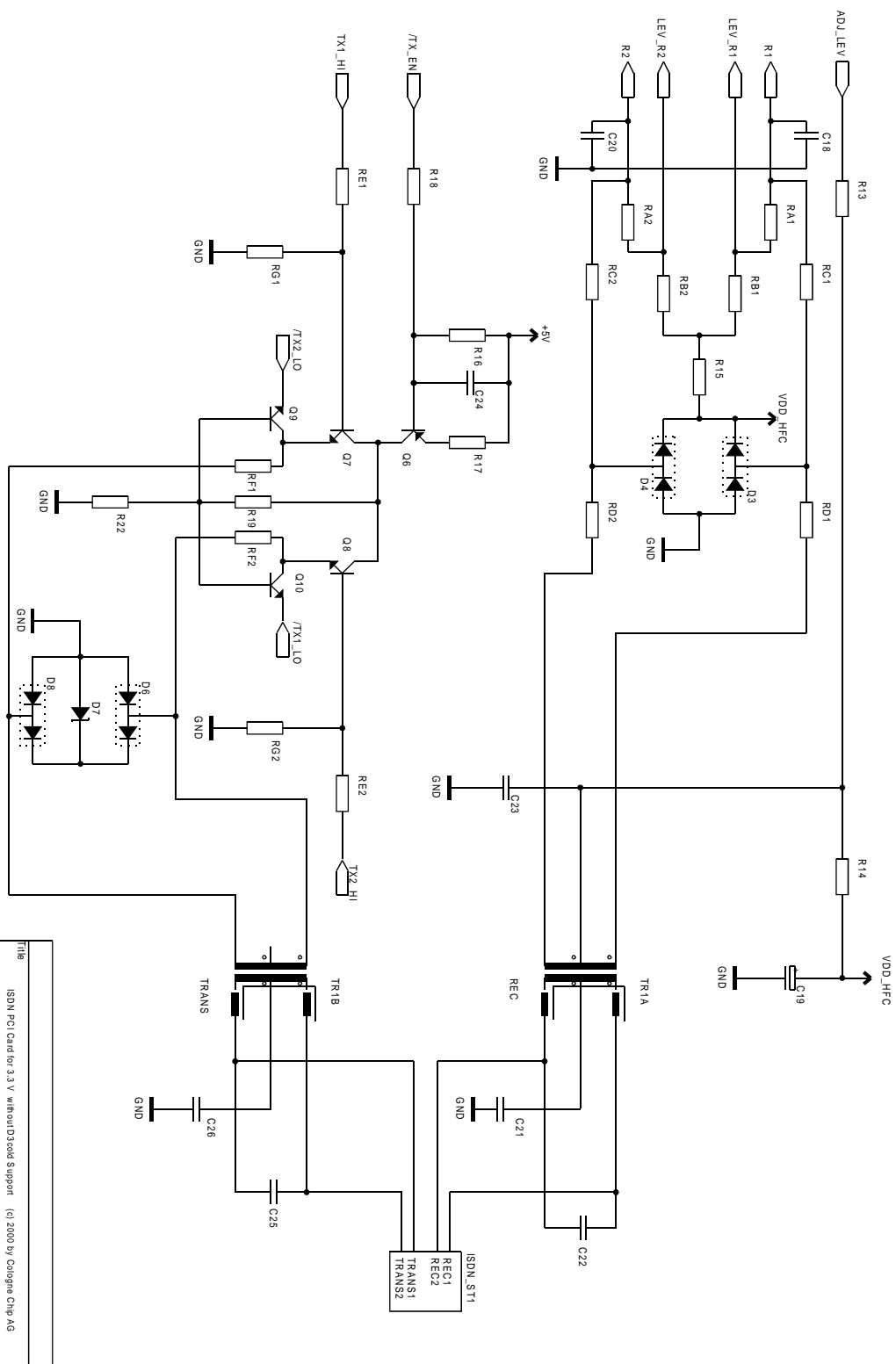
Transistors / Crystals

Q1	BC850C	CMPT5088 or similar
Q2	12.288M	
Q3	BC860C	CMPT5087 or similar
Q4	BC860C	CMPT5087 or similar
Q5	BC860C	CMPT5087 or similar
Q6	BC860C	CMPT5087 or similar
Q7	BC850C	CMPT5088 or similar
Q8	BC850C	CMPT5088 or similar
Q9	BC850C	CMPT5088 or similar
Q10	BC850C	CMPT5088 or similar

* optional, not on PCB Layout V 2.0

Please see chapter 3.3 of the HFC-S PCI A data sheet for details on power management support of HFC-S PCI A and special considerations for support of power management state D3_{cold}.





Title	
ISDN PCI Card for 3 V without D3 cold Support (c) 2000 by Cologne Chip AG	
Size	Document Number
A4	Rev 2.0
Date:	Thursday, October 19, 2000
Sheet	2 of 2

ISDN PCI Card for 3.3 V without D3cold support

Capacitors

C01	33μ	
C02	33n	nearby U2
C03	33n	nearby U2
C04	33n	nearby U2
C05	33n	nearby U2
C06	33n	nearby U2
C07	33n	nearby U2
C08	33n	nearby JP1 <i>optional</i>
C09	33n	nearby JP2 <i>optional</i>
C10	33n	nearby U1
C11	33n	nearby U4
C12	33n	nearby U3 <i>optional</i>
C14	47p	depends on crystal
C15	47p	depends on crystal
C16	33μ	
C18	22p	nearby U2
C19	33μ	
C20	22p	nearby U2
C21	0	<i>optional</i>
C22	0	<i>optional</i>
C23	47n	
C24	470p	
C25	0	<i>optional</i>
C26	0	<i>optional</i>
C29	33n	nearby JP2 <i>optional</i>
C30	33n	nearby JP2 <i>optional</i>
C31	10n	<i>optional</i>

Resistors

R01	10k	
R03	1M	
R05	330	
R06	10k	
R11	10k	
R12	10k	
R13	3k9	
R14	680k	
R15	1M2	
R16	3k3	
R17	100	
R18	5k6	
R19	3k3	
R22	2k2	
RA1	100k	
RA2	100k	
RB1	33k	
RB2	33k	
RC1	4k7	
RC2	4k7	
RD1	4k7	
RD2	4k7	
RE1	430	1%
RE2	430	1%
RF1	15	
RF2	15	
RG1	3k9	1%
RG2	3k9	1%

IC's

U2	HFC-S PCI A	Cologne Chip AG
U3	74HC374	<i>optional</i>
U4	24C04	

Connectors

JP1	PCM	<i>optional</i>
JP2	IO	<i>optional</i>
JP10	EEPROM options	<i>optional</i>
JP11	EEPROM options	<i>optional</i>
JP12	33/66 MHz	<i>optional</i>

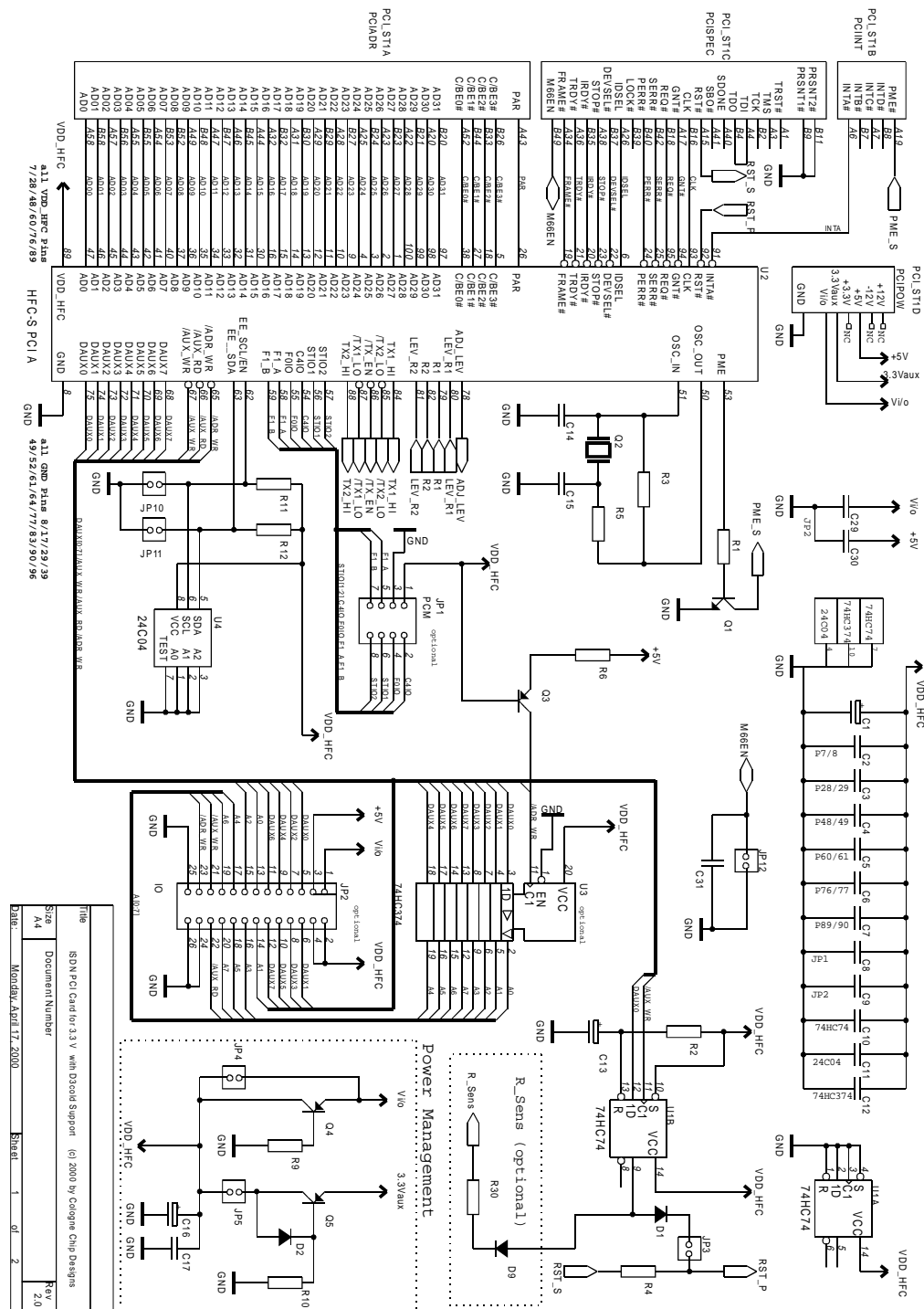
Transistors / Crystals

Q1	BC850C	CMPT5088 or similar
Q2	12.288M	
Q3	BC860C	CMPT5087 or similar
Q6	BC860C	CMPT5087 or similar
Q7	BC850C	CMPT5088 or similar
Q8	BC850C	CMPT5088 or similar
Q9	BC850C	CMPT5088 or similar
Q10	BC850C	CMPT5088 or similar

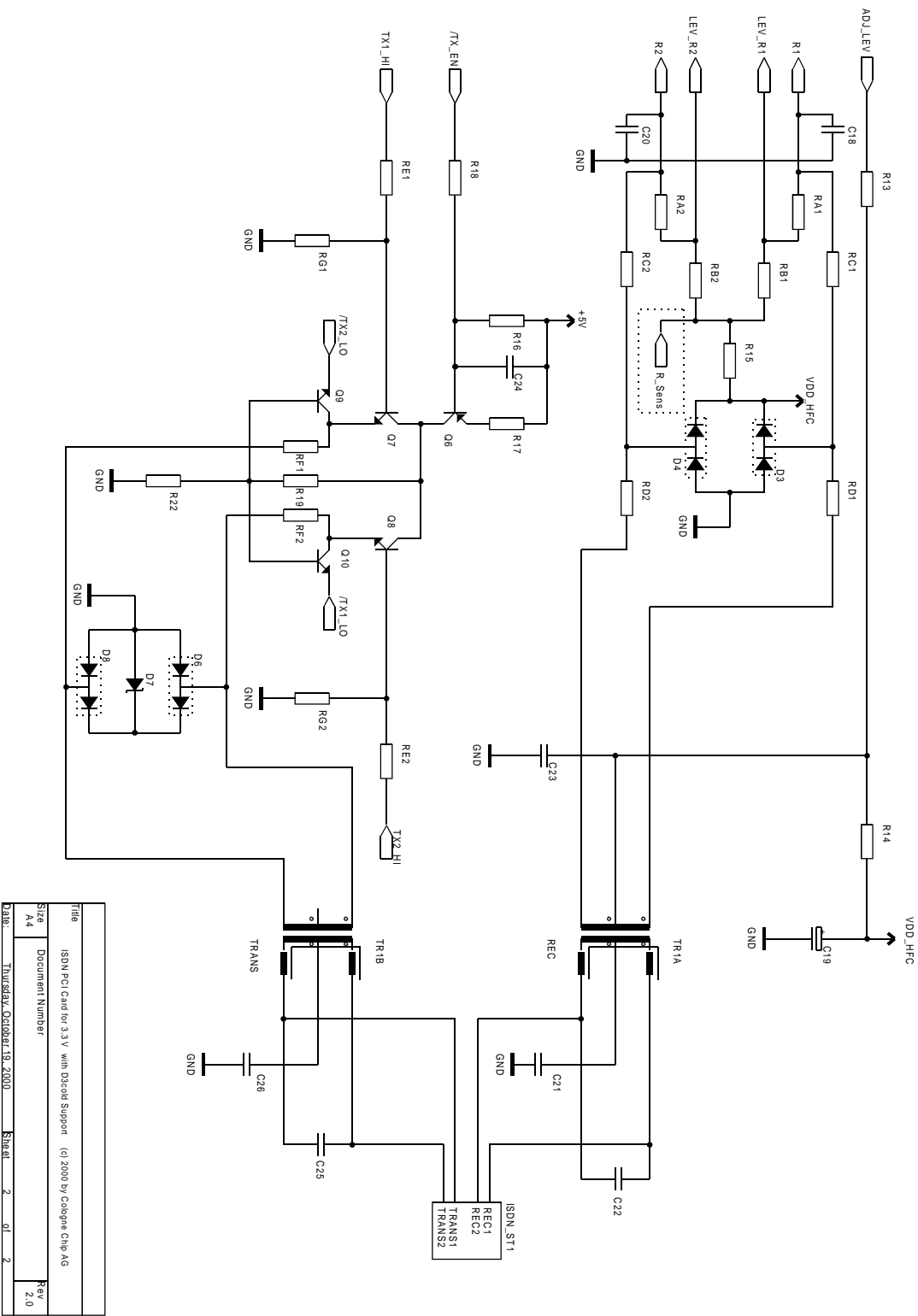
Diodes

D3	BAV99	can also be 2*4148
D4	BAV99	can also be 2*4148
D6	BAV99	can also be 2*4148
D7	2V7	
D8	BAV99	can also be 2*4148

Please see chapter 3.3 of the HFC-S PCI A data sheet for details on power management support of HFC-S PCI A and special considerations for support of power management state D3_{cold}.



January 2001



ISDN PCI Card for 3.3 V with D3cold support

Capacitors

C01	33μ	
C02	33n	nearby U2
C03	33n	nearby U2
C04	33n	nearby U2
C05	33n	nearby U2
C06	33n	nearby U2
C07	33n	nearby U2
C08	33n	nearby JP1 <i>optional</i>
C09	33n	nearby JP2 <i>optional</i>
C10	33n	nearby U1
C11	33n	nearby U4
C12	33n	nearby U3 <i>optional</i>
C13	1μ	
C14	47p	depends on crystal
C15	47p	depends on crystal
C16	33μ	
C17	33n	
C18	22p	nearby U2
C19	33μ	
C20	22p	nearby U2
C21	0	<i>optional</i>
C22	0	<i>optional</i>
C23	47n	
C24	470p	
C25	0	<i>optional</i>
C26	0	<i>optional</i>
C29	33n	nearby JP2 <i>optional</i>
C30	33n	nearby JP2 <i>optional</i>
C31	10n	<i>optional</i>

Resistors

R01	10k	
R02	1M	
R03	1M	
R04	10k	
R05	330	
R06	10k	
R09	10k	
R10	10k	
R11	10k	
R12	10k	
R13	3k9	
R14	680k	
R15	1M2	
R16	3k3	
R17	100	
R18	5k6	
R19	3k3	
R22	2k2	
R30	680k *	
RA1	100k	
RA2	100k	
RB1	33k	
RB2	33k	
RC1	4k7	
RC2	4k7	
RD1	4k7	
RD2	4k7	
RE1	430	1%
RE2	430	1%
RF1	15	
RF2	15	
RG1	3k9	1%
RG2	3k9	1%

IC's

U1	74HC74	
U2	HFC-S PCI A	Cologne Chip AG
U3	74HC374	<i>optional</i>
U4	24C04	

Connectors

JP1	PCM	<i>optional</i>
JP2	IO	<i>optional</i>
JP3	Reset options	
JP4	Power options	
JP5	Power options	
JP10	EEPROM options	<i>optional</i>
JP11	EEPROM options	<i>optional</i>
JP12	33/66 MHz	<i>optional</i>

Transistors / Crystals

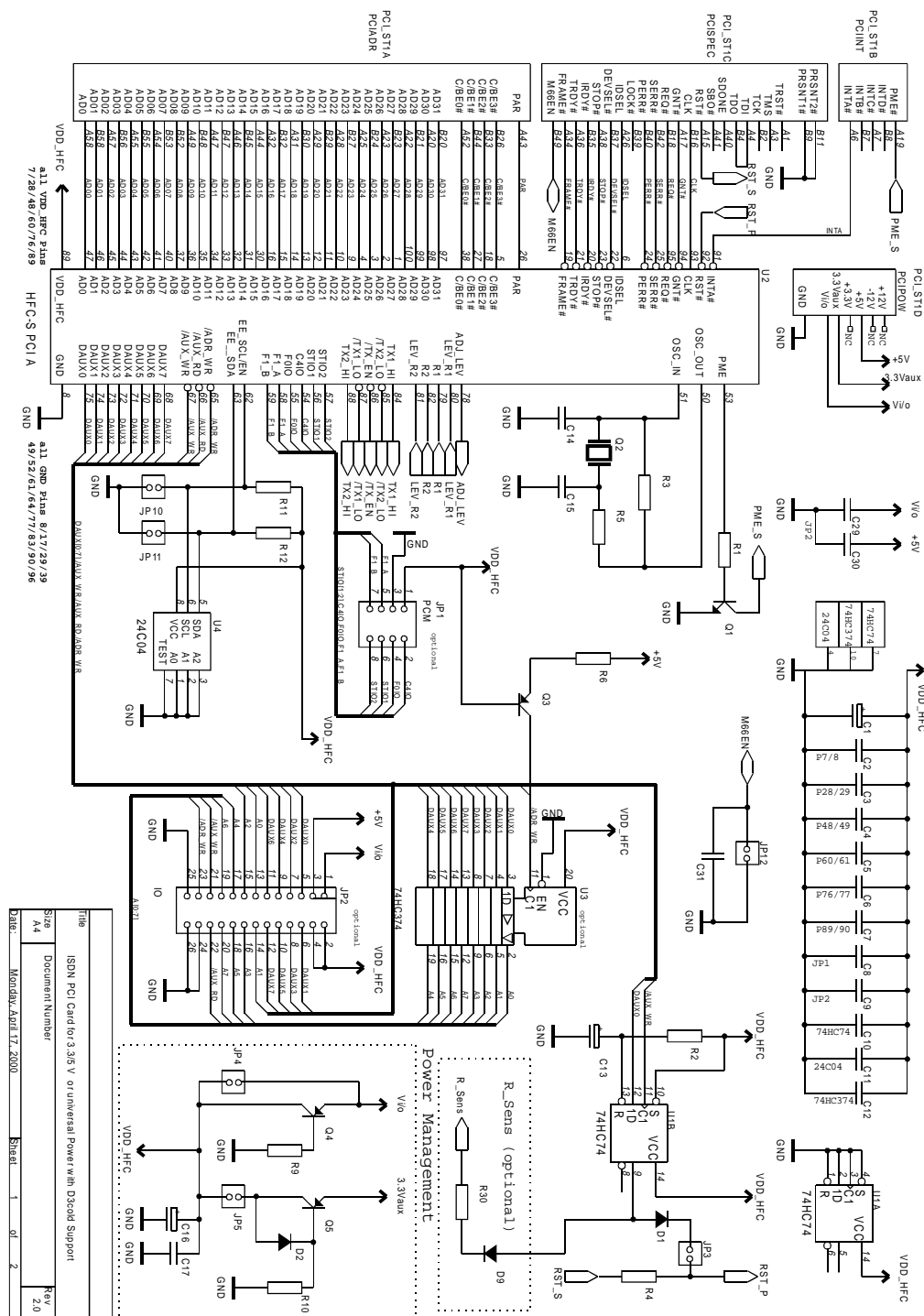
Q1	BC850C	CMPT5088 or similar
Q2	12.288M	
Q3	BC860C	CMPT5087 or similar
Q4	BC860C	CMPT5087 or similar
Q5	BC860C	CMPT5087 or similar
Q6	BC860C	CMPT5087 or similar
Q7	BC850C	CMPT5088 or similar
Q8	BC850C	CMPT5088 or similar
Q9	BC850C	CMPT5088 or similar
Q10	BC850C	CMPT5088 or similar

Diodes

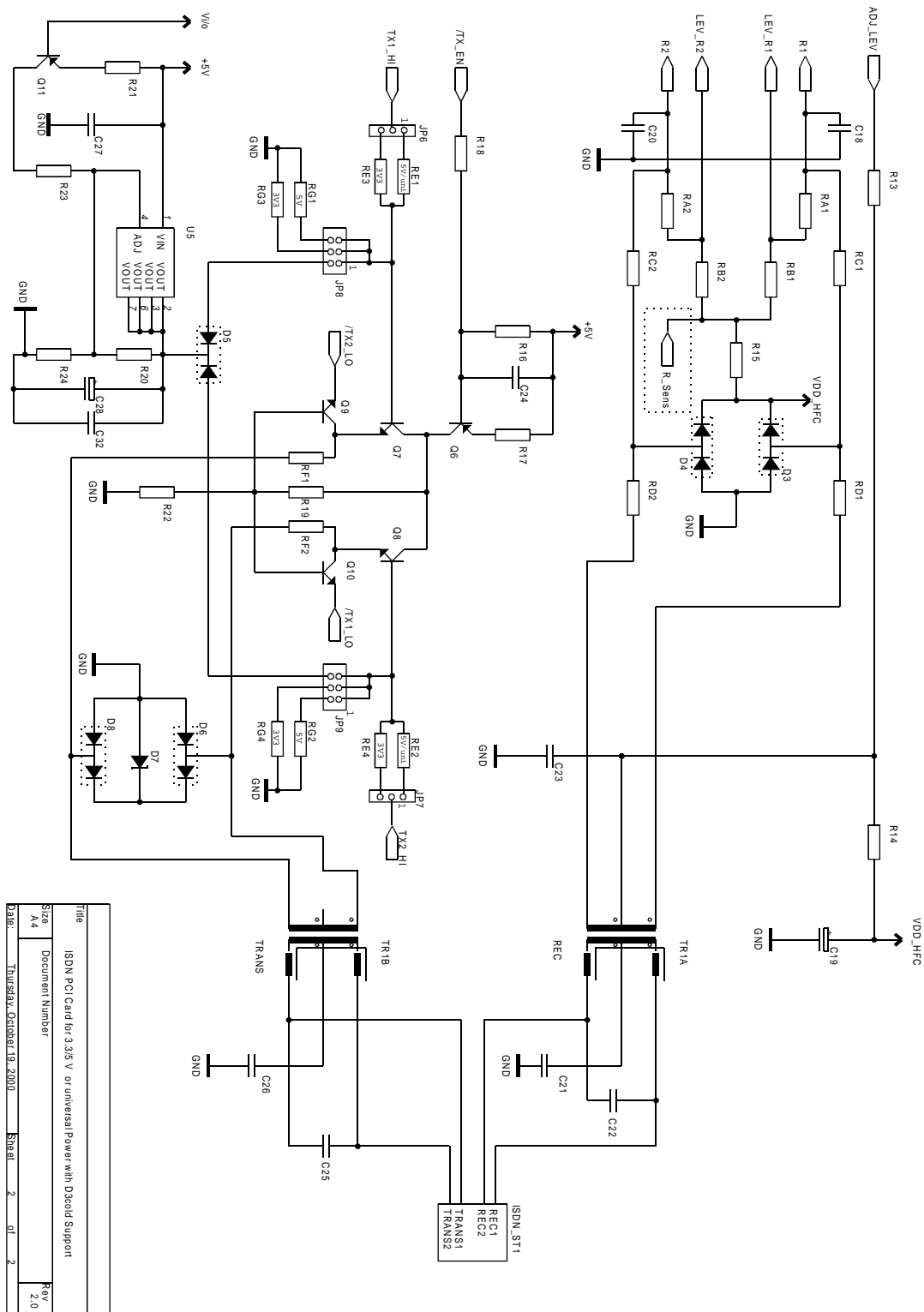
D1	LL4148	or similar
D2	LL4148	or similar
D3	BAV99	can also be 2*4148
D4	BAV99	can also be 2*4148
D6	BAV99	can also be 2*4148
D7	2V7	
D8	BAV99	can also be 2*4148
D9	LL4148 *	or similar

* optional, not on PCB Layout V 2.0

Please see chapter 3.3 of the HFC-S PCI A data sheet for details on power management support of HFC-S PCI A and special considerations for support of power management state D3_{cold}.



The R_Sens part is optional. It is used to decrease the receiver sensitivity for wake-up signals to avoid a wake-up caused by disturbance on the ISDN line.



ISDN PCI Card for 3.3/5 V or Universal Power with D3cold Support

Capacitors

C01	33μ	
C02	33n	nearby U2
C03	33n	nearby U2
C04	33n	nearby U2
C05	33n	nearby U2
C06	33n	nearby U2
C07	33n	nearby U2
C08	33n	nearby JP1 <i>optional</i>
C09	33n	nearby JP2 <i>optional</i>
C10	33n	nearby U1
C11	33n	nearby U4
C12	33n	nearby U3 <i>optional</i>
C13	1μ	
C14	47p	depends on crystal
C15	47p	depends on crystal
C16	22μ	
C17	33n	
C18	22p	nearby U2
C19	33μ	
C20	22p	nearby U2
C21	0	<i>optional</i>
C22	0	<i>optional</i>
C23	47n	
C24	470p	
C25	0	<i>optional</i>
C26	0	<i>optional</i>
C27	33n	
C28	1μ	
C29	33n	nearby JP2 <i>optional</i>
C30	33n	nearby JP2 <i>optional</i>
C31	10n	<i>only for 3.3V systems</i>
C32	0	<i>optional</i>

Diodes

D1	LL4148	or similar
D2	LL4148	or similar
D3	BAV99	can also be 2*4148 *
D4	BAV99	can also be 2*4148 *
D5	BAV70	can also be 2*4148 *
D6	BAV99	can also be 2*4148 *
D7	2V7	
D8	BAV99	can also be 2*4148 *
D9	LL4148 **	or similar

Resistors

R01	10k	
R02	1M	
R03	1M	
R04	10k	
R05	330	
R06	10k	
R09	10k	
R10	10k	
R11	10k	
R12	10k	
R13	3k9	
R14	680k	
R15	1M2	
R16	3k3	
R17	100	
R18	5k6	
R19	3k3	
R20	180	
R21	1k	
R22	2k2	
R23	2k7	
R24	150	
R30	680k **	
RA1	100k	
RA2	100k	
RB1	33k	
RB2	33k	
RC1	4k7	
RC2	4k7	
RD1	4k7	
RD2	4k7	
RE1	2k2	1%
RE2	2k2	1%
RE3	430	1%
RE4	430	1%
RF1	15	
RF2	15	
RG1	3k	1%
RG2	3k	1%
RG3	3k9	1%
RG4	3k9	1%

IC's

U1	74HC74	
U2	HFC-S PCI A	Cologne Chip AG
U3	74HC374	<i>optional</i>
U4	24C04	
U5	LM317L/SO	

Connectors

JP1	PCM	<i>optional</i>
JP2	IO	<i>optional</i>
JP3	Reset options	
JP4	Power options	
JP5	Power options	
JP6	Power options	
JP7	Power options	
JP8	Power options	
JP9	Power options	
JP10	EEPROM options	
JP11	EEPROM options	
JP12	66 MHz options	<i>only for 3.3V systems</i>

Transistors / Crystals

Q1	BC850C	CMPT5088 or similar
Q2	12.288M	
Q3	BC860C	CMPT5087 or similar
Q4	BC860C	CMPT5087 or similar
Q5	BC860C	CMPT5087 or similar
Q6	BC860C	CMPT5087 or similar
Q7	BC850C	CMPT5088 or similar
Q8	BC850C	CMPT5088 or similar
Q9	BC850C	CMPT5088 or similar
Q10	BC850C	CMPT5088 or similar
Q11	BC860C	CMPT5087 or similar

* alternative footprint required

** optional, not on PCB Layout V 2.0