SYSTRONIX TINI EVALUATION PLATFORM (STEP) – REVISIONS

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SCH REV	PCB REV	DATE	BY	DESCRIPTION
0.0		00 Jan 13	wsk	Start of schematic capture.
0.1		00 Jan 20	wsk	Initial schematic capture complete.
0.2		00 Jan 27	wsk	Changed name to Systronix TINI Evaluation Platform (STEP); Added descriptions to Notes page;

SCH REV	DATE	BY

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TO DO:

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Title	SYSTRONIX TINI EVALUATION PLATFORM (STEP) REVISIONS	
Size: B	Number:	Rev: 0.1
Date: Thu Jan 27, 2000		Drawn by: wsk
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JUMPERS JP1 - JP10

JP1		JUMPER INSTALLED USE EXTERNAL FLASH AS BOOT DEVICE.	SHEET 5
JP2		AUX LED HEADER	SHEET 5
JP3		WHEN INSTALLED, TERMINATES THE CAN DATA SIGNALS	SHEET 6
JP4	1-2	SIGNAL PCE3(L) (P5.7 CONFIGURED AS AN I/O PIN) DETERMINES WHETHER SERIAL PORT 1 USES THE EXTERNAL ONE WIRE BUS (P7) OR THE AUXILIARY RS232 PORT (J3). WHEN PCS3(L) IS HIGH, COMMUNICATION IS THROUGH THE EXTERNAL ONE WIRE BUS.	SHEET 7
	2-3	WHEN INSTALLED SERIAL PORT 1 USES THE AUXILIARY RS-232 PORT (J3). THE EXTERNAL ONE WIRE BUS (P7) IS NOT AVAILABLE.	
JP5		WHEN INSTALLED, A SPACE STATE ON THE DTR SIGNAL AT J? WILL CAUSE THE ASSERTION OF CPURST.	SHEET 7
JP6		FIRST BIRTHDAY JUMPER. NOT NORMALLY INSTALLED.	SHEET 7
JP7		THIS JUMPER IS 'NORMALLY CLOSED' AND CONNECTS MODULE SIGNAL PCE2(L) TO THE OPTION 1 PIN OF THE SBX HEADER. THIS JUMPER CAN BE OPENED BY CUTTING THE TRACE BETWEEN THE PINS ON THE BOTTOM OF THE PCB. TO RECLOSE INSTALL A JUMPER.	SHEET 8
JP8		EXTERNAL VPP INPUT	SHEET 9
JP9	1-2	SELECTS EXTERNAL SOURCE FOR VPP.	SHEET 9
	2-3	SELECTS SYSTEM POWER FOR VPP.	
JP10		WHEN INSTALLED CONNECTS THE CAN BUS POWER TO THE STEP POWER SUPPLY. THE STEP MAY EITHER POWER THE CAN NET (NOT RECOMMENDED) OR RECEIVE ITS POWER FROM THE NETWORK THROUGH THIS CONNECTION.	SHEET 9

CONNECTORS P1 - P13

P1	PUSHBUTTON HIGH	SHEET 5
P2	PUSHBUTTON LOW	SHEET 5
P3	CAN DEVICE NET - 1- SIGNAL GROUND 2- DOMINANT LOW 3- SHIELD 4- DOMINIANT HIGH 5- V+	SHEET 6
P4	CAN OPEN - 1- NC 2- SIGNAL GROUND 3- DOMINIANT LOW 4- DOMINANT HIGH 5- SIGNAL GROUND 6- NC 7- NC 8- V+ 9- SHIELD 10-VCC	SHEET 6
P5	CAN EARTH GROUND	SHEET 6
P6	10-base-T ETHERNET - 1- ETH1 (TX) 2- ETH2 (TX) 3- RTH3 (RX) 4- NC 5- NC 6- ETH6 (RX) 7-NC 8-NC	SHEET 7
P7	ONE-WIRE NET - 1- VCC 2- GROUND 3- OWIO 4- OWRTN 5- NC 6- VRAW	SHEET 7 SHEET 5 SHEET 6
P8	DIAGNOSTIC PORT - 1- NC 2- TxD 3- NC 4- GROUND 5- RxD 6- NC	SHEET 7
P9	GROUND TEST POINTS	SHEET 9
P10	VCC TEST POINTS	SHEET 9
P11	POWER IN - 8 TO 24 V DC/AC	SHEET 9
P12	GROUND TEST POINTS	SHEET 9
P13	GROUND TEST POINTS	SHEET 9

CONNECTORS J3 - J6

J1	SPARE 68/72 PIN SIMM	SHEET 3
J2	TINI STIK CONNECTOR	SHEET 3
J3	AUXILIARY RS232 (DCE) - 1- DCD (MARK) 2- RxD 3- TxD 4- NC 5- SIGNAL GROUND 6- DSR (MARK) 7- NC 8- CTS (MARK) 9- NC	SHEET 7
J4	PRIMARY RS232 (DCE) - 1- NC 2- TX232 (DCE RxD) 3- RX232 (DCE TxD) 4- DTR232 5- SIGNAL GROUND 6- NC 7- NC 8- NC 9- NC	SHEET 7
J5	SBX CONNECTOR 1- SBX +12 2- SBX -12 3- GROUND 4- VCC 5- SMCRST(H) 6- NC 7- A2 8- NC 9- A1 10- NC 11- A0 12- SBX INTERRUPT 1 13- WR(L) 14- SBX INTERRUPT0 15- RD(L) 16- NC 17- GROUND 18- VCC 19- D7 20- MCS1(L) 21- D6 22- MCS0(L) 23- D5 24- NC 25- D4 26- NC 27- D3 28- NC 29-D2 30- OWIO 31- D1 32- NC 33- D0 34- NC 35- GND 36- VCC	SHEET 8
J6	ANALOG INPUT - 1- AIN1 2- GROUND 3- AIN2 4- GROUND 5- AIN3 6- GROUND 7-AIN4 8-GROUND	SHEET 7

CONNECTORS J1 - J2

J1	J2		J1	J2	
1		NC	37	35	A8
2		NC	38	36	A9
3	1	GROUND	39	37	A10
4	2	GROUND	40	38	A11
5	3	GROUND	41	39	A12
6	4	GROUND	42	40	A13
7	5	OWRTN	43	41	A14
8	6	OWIO	44	42	A15
9	7	VPP	45	43	RCE0(L)
10	8	CTX	46	44	D7
11	9	CRX	47	45	D6
12	10	CE0(L)	48	46	D5
13	11	A19	49	47	D4
14	12	TX	50	48	D3
15	13	XRX1	51	49	D2
16	14	RD(L)	52	50	D1
17	15	INTOW	53	51	D0
18	16	SMCRST	54	52	A0
19	17	TX232	55	53	A1
20	18	RX232	56	54	A2
21	19	TX	57	55	A3
22	20	XRX0	58	56	WR(L)
23	21	EXTINT(L)	59	57	NC
24	22	CPURST	60	58	A16
25	23	DTR232	61	59	A17
26	24	EN2480	62	60	A18
27	25	PCE3(L)	63	61	ETH3 *
28	26	PCE2(L)	64	62	ETH6 *
29	27	PCE1(L)	65	63	ETH2 *
30	28	PCE0(L)	66	64	ETH1 *
31	29	CE3(L)	67	65	VCC
32	30	PSEN(L)	68	66	VCC
33	31	A7	69	67	VCC
34	32	A6	70	68	VCC
35	33	A5	71		NC
36	34	A4	72		NC

* THESE SIGNALS NOT PRESENT ON J1.

CONNECTORS J1 - J2

	J1	J2		J1	J2
A0	54	52	DTR232	25	23
A1	55	53	EN2480	26	24
A2	56	54	ETH1		64
A3	57	55	ETH2		63
A4	36	34	ETH3		61
A5	35	33	ETH6		62
A6	34	32	EXTINT(L)	23	21
A7	33	31	GROUND	3	1
A8	37	35	GROUND	4	2
A9	38	36	GROUND	5	3
A10	39	37	GROUND	6	4
A11	40	38	INTOW	17	15
A12	41	39	OWIO	8	6
A13	42	40	OWRTN	7	5
A14	43	41	PCE0(L)	30	28
A15	44	42	PCE1(L)	29	27
A16	60	58	PCE2(L)	28	26
A17	61	59	PCE3(L)	27	25
A18	62	60	PSEN(L)	32	30
A19	13	11	RCE0(L)	45	43
CE0(L)	12	10	RD(L)	16	14
CE3(L)	31	29	RX232	20	18
CPURST	24	22	SMCRST	18	16
CRX	11	9	TX	14	12
CTX	10	8	TX	21	19
D0	53	51	TX232	19	17
D1	52	50	VCC	67	65
D2	51	49	VCC	68	66
D3	50	48	VCC	69	67
D4	49	47	VCC	70	68
D5	48	46	VPP	9	7
D6	47	45	WR(L)	58	56
D7	46	44	XRX0	22	20
			XRX1	15	13

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Title	SYSTRONIX TINI EVALUATION PLATFORM (STEP) NOTES	
Size B	Number	Rev 0.1
Date Thu Jan 27, 2000		Drawn by wsk
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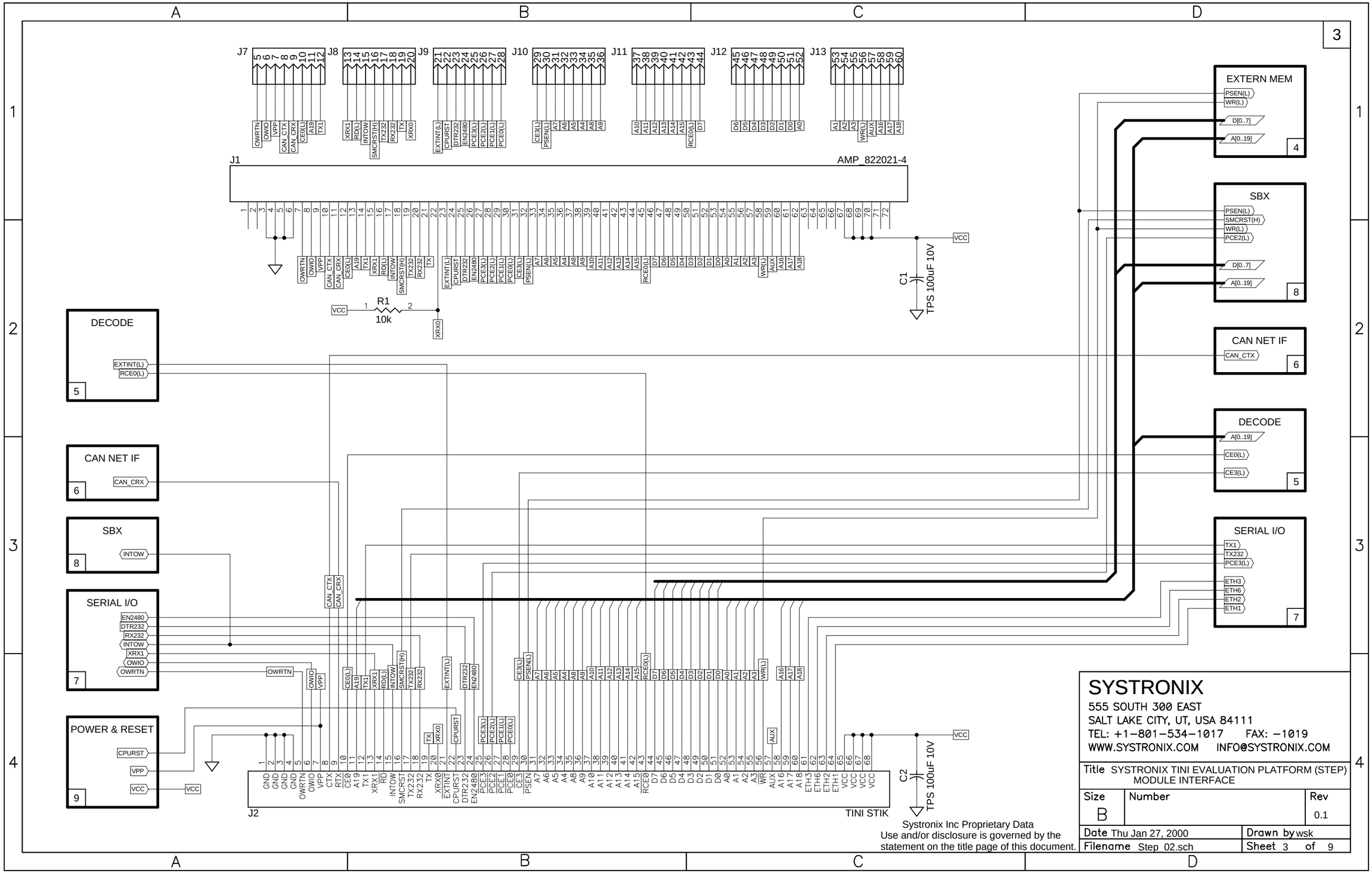

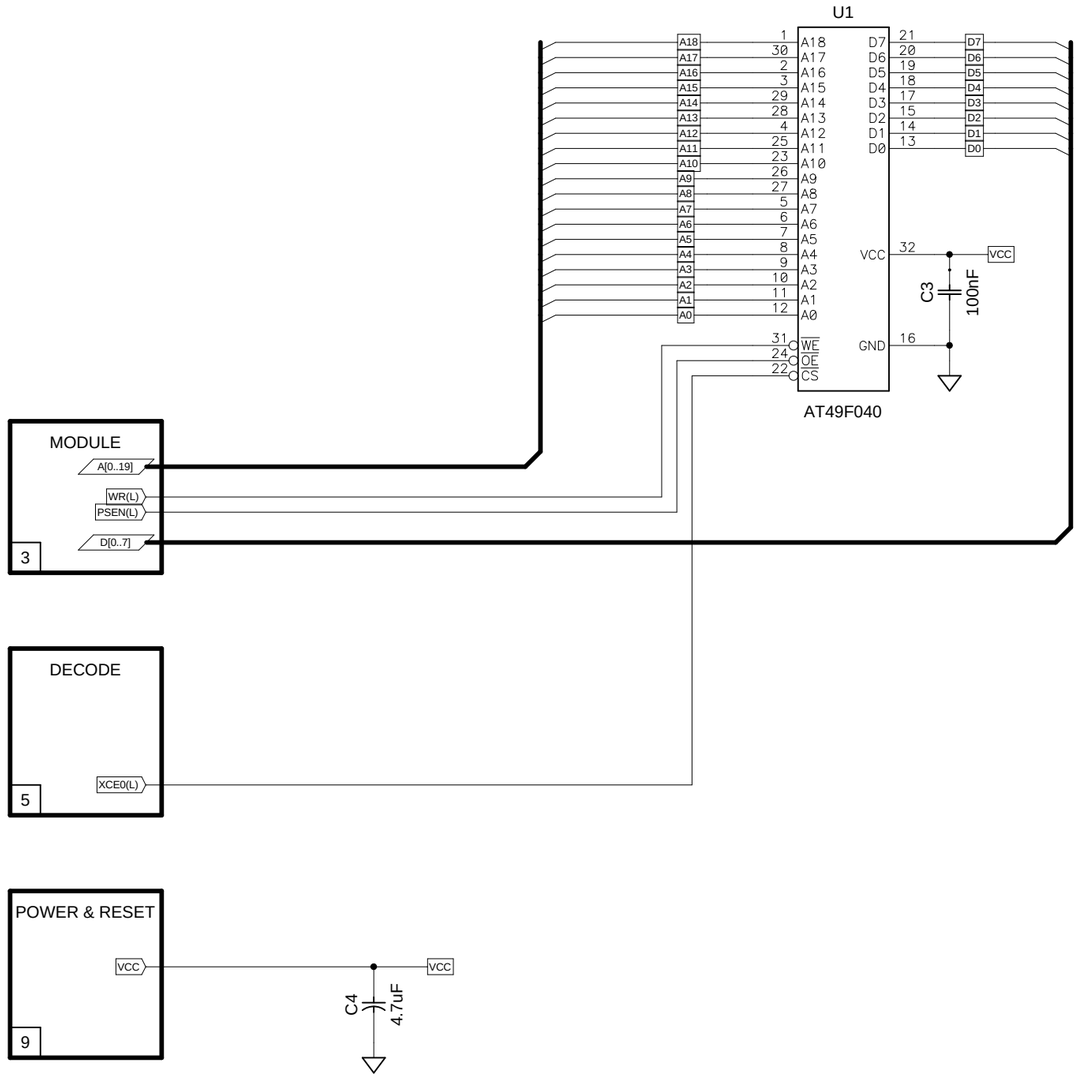

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EXTERNAL PROGRAM MEMORY

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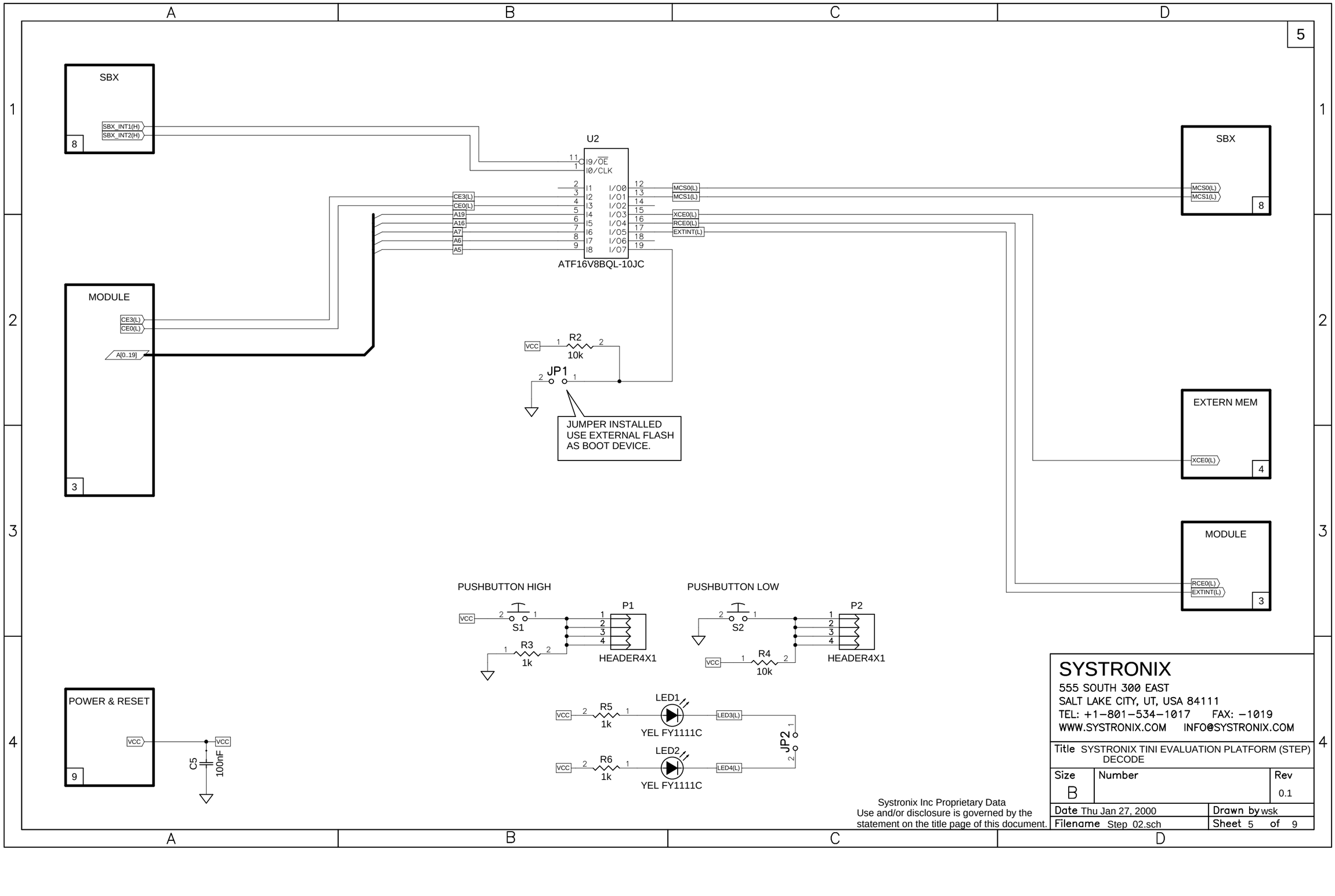

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DECODE

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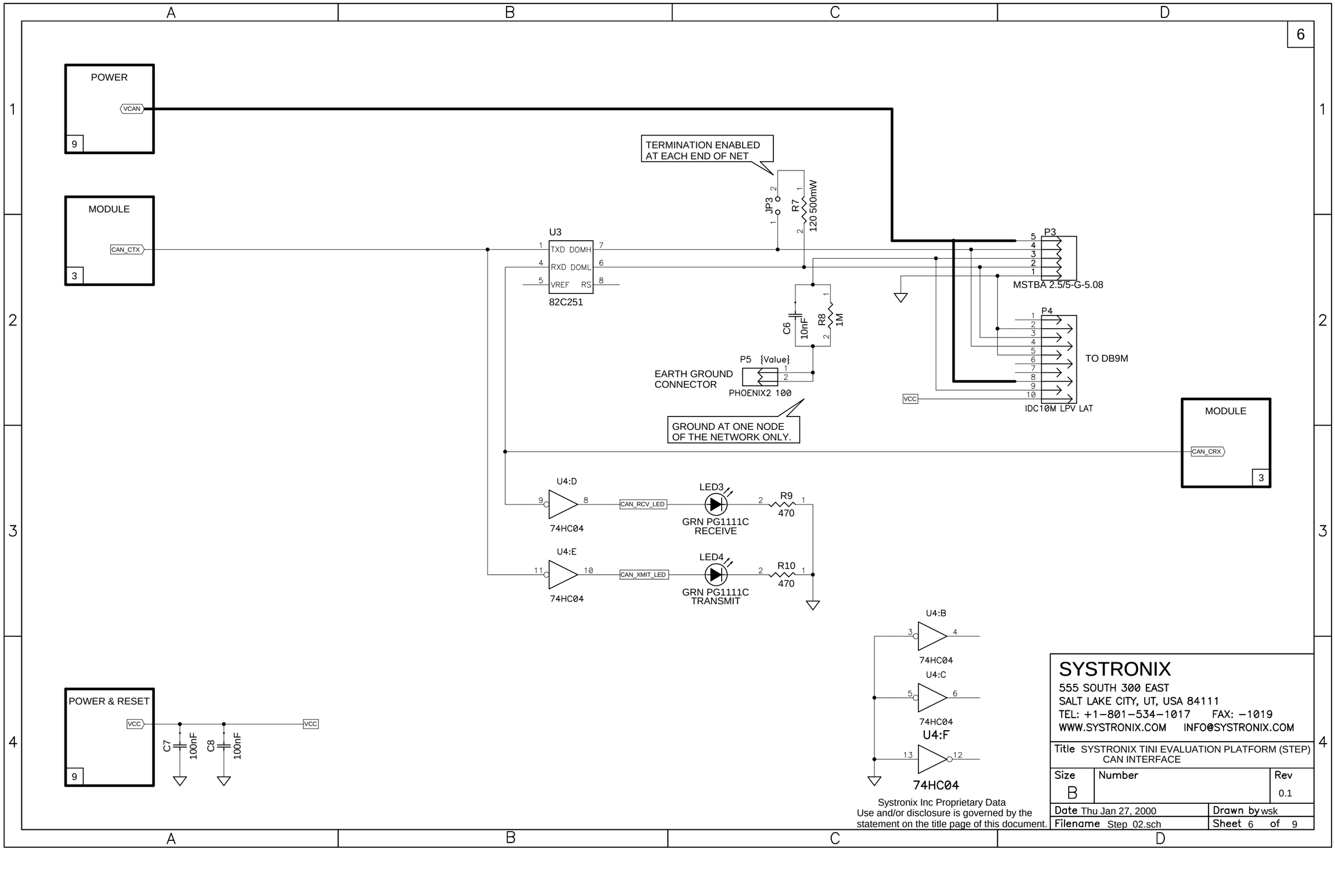

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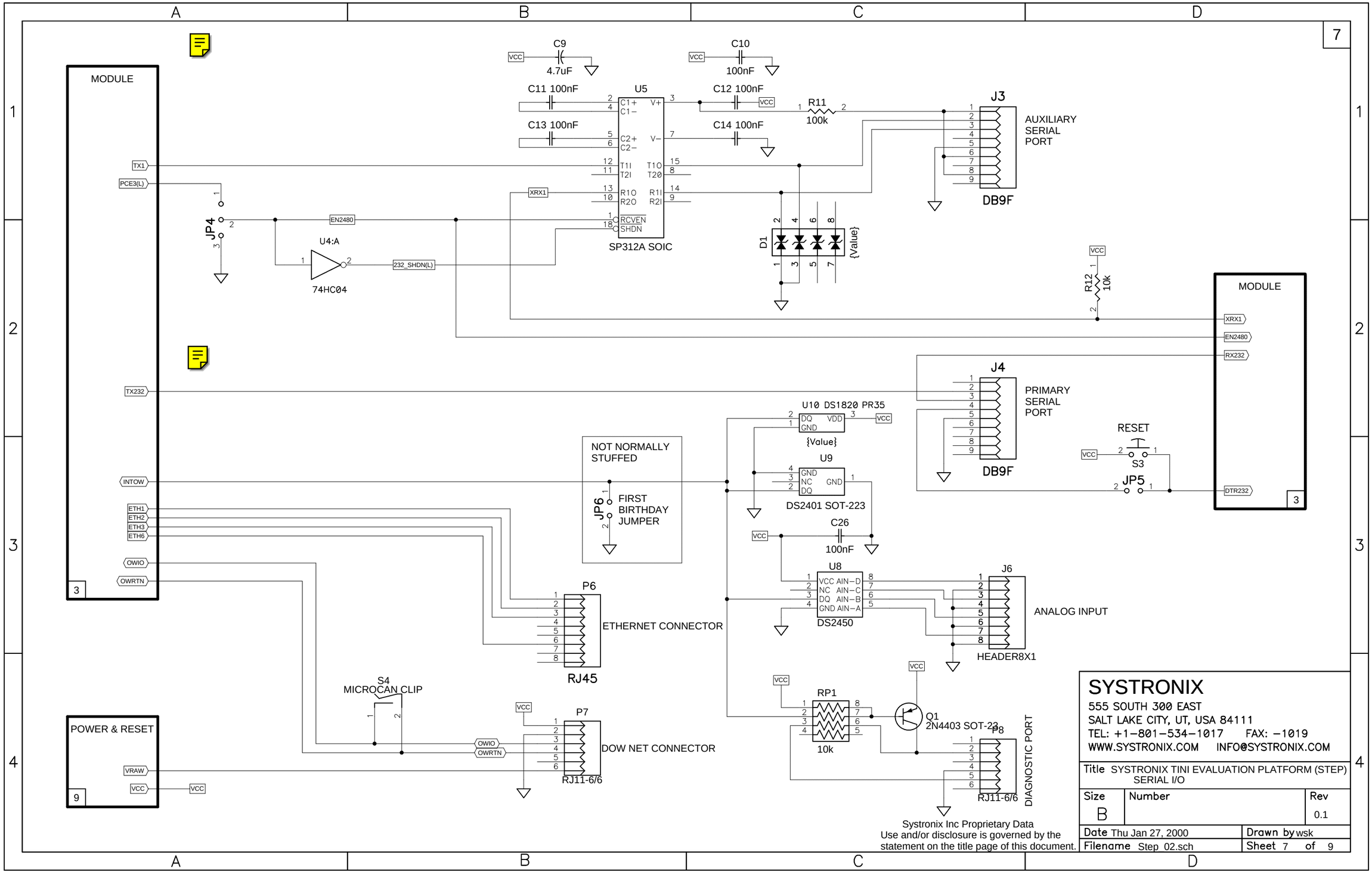
7
MODULE
TX1
PCE3(L)
JP4
EN2480
U4:A
74HC04
232_SHDN(L)
XRX1
C9
4.7uF
C10
100nF
C11 100nF
C13 100nF
C12 100nF
C14 100nF
U5
C1+
C1−
C2+
C2−
V+
V−
T1I
T2I
T1O
T2O
R1O
R2O
R1I
R2I
RCVEN
SHDN
SP312A SOIC
R11
100k
J3
AUXILIARY
SERIAL
PORT
DB9F
D1
{Value}
R12
10k
MODULE
XRX1
EN2480
RX232
TX232
J4
PRIMARY
SERIAL
PORT
DB9F
U10 DS1820 PR35
DQ
GND
VDD
{Value}
U9
GND
NC
DQ
DS2401 SOT-223
C26
100nF
RESET
S3
JP5
DTR232
3
NOT NORMALLY
STUFFED
JP6
FIRST
BIRTHDAY
JUMPER
INTOW
ETH1
ETH2
ETH3
ETH6
OWIO
OWRTN
3
P6
ETHERNET CONNECTOR
RJ45
U8
VCC
NC
DQ
GND
AIN−D
AIN−C
AIN−B
AIN−A
DS2450
J6
ANALOG INPUT
HEADER8X1
S4
MICROCAN CLIP
P7
DOW NET CONNECTOR
RJ11-6/6
RP1
10k
Q1
2N4403 SOT-23
P8
RJ11-6/6
DIAGNOSTIC PORT
POWER & RESET
VRAW
VCC
9
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SERIAL I/O
Size B
Number
Rev 0.1
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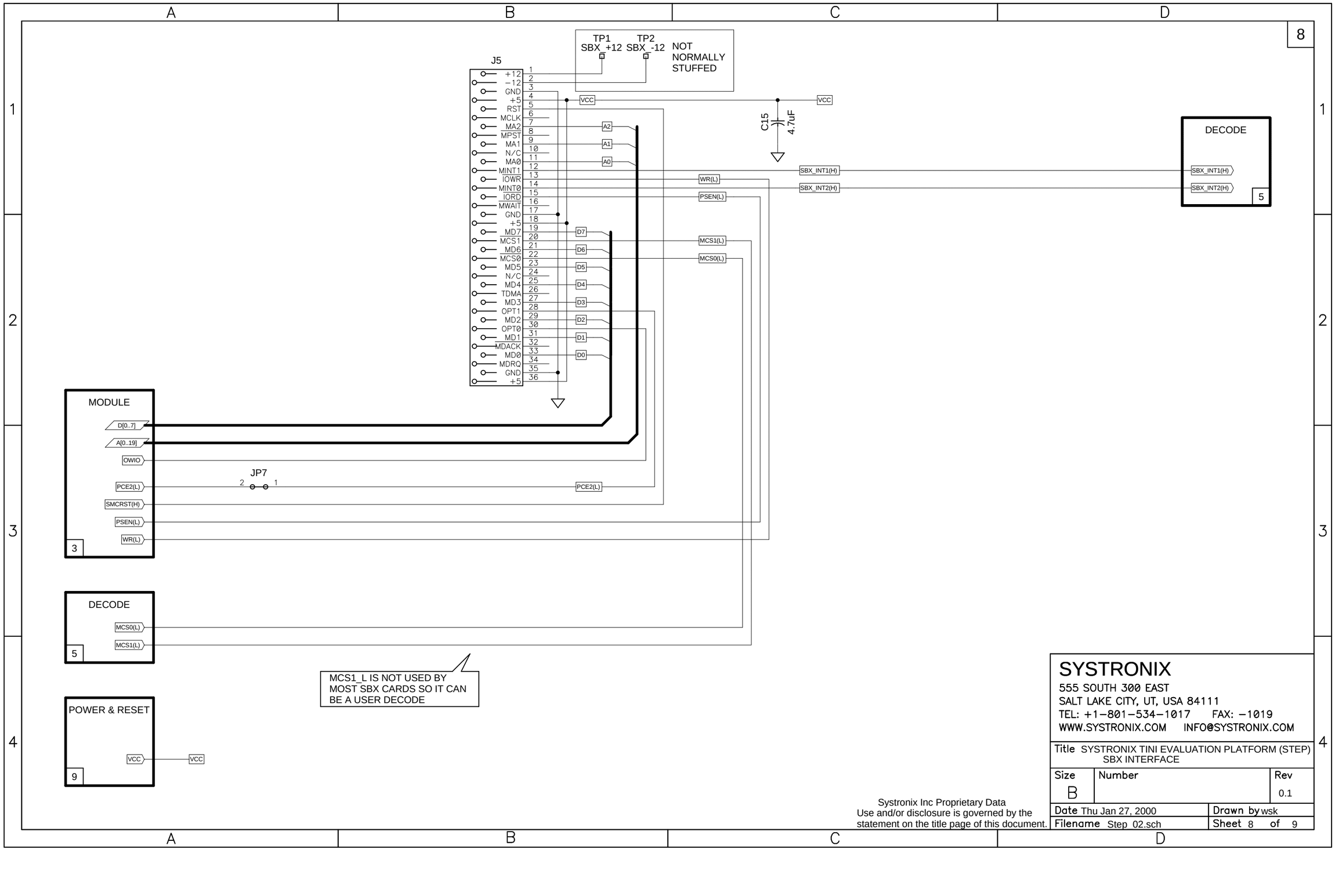

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SBX INTERFACE

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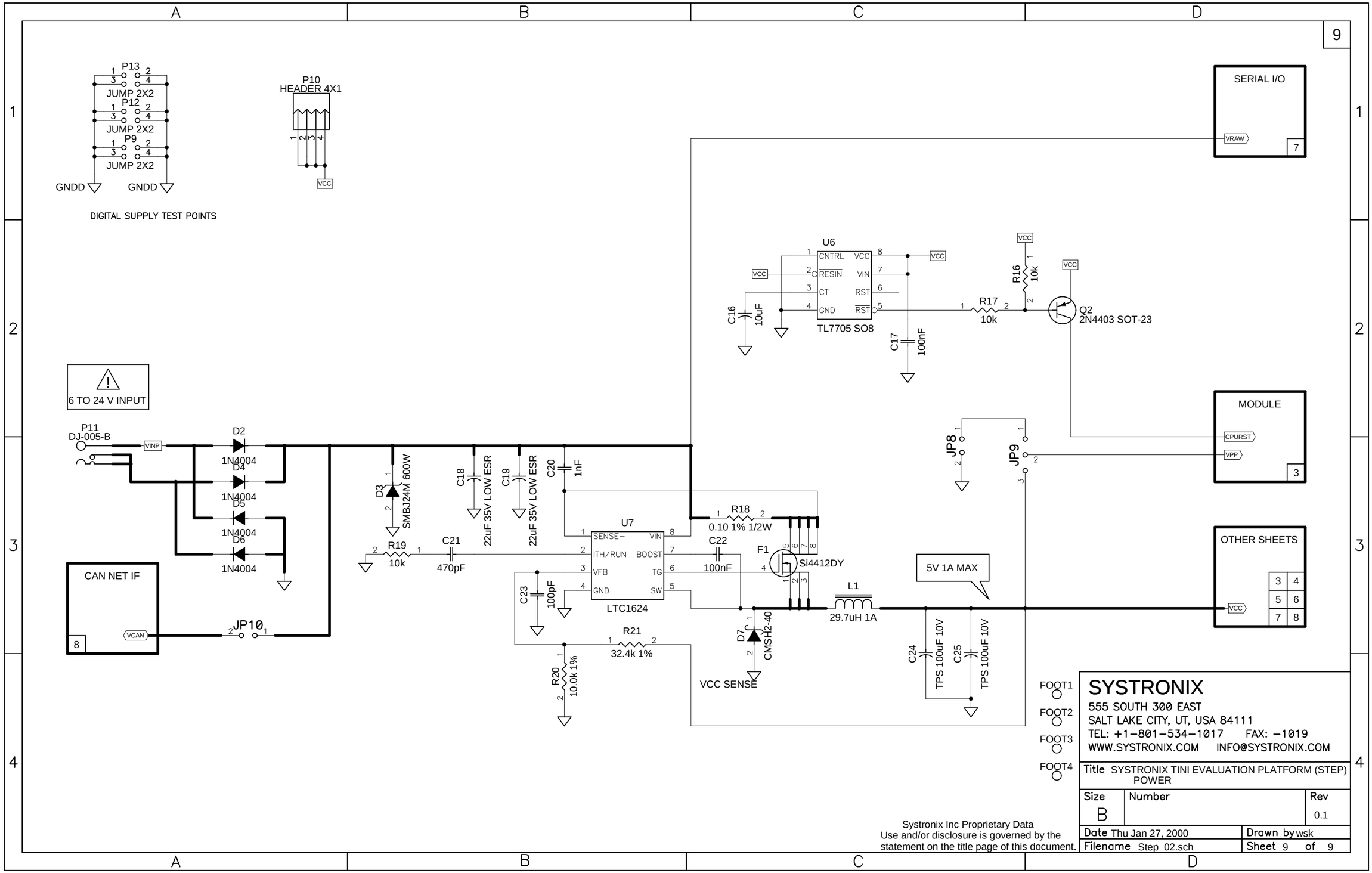
P13
JUMP 2X2
P12
JUMP 2X2
P9
JUMP 2X2
GNDD
GNDD
DIGITAL SUPPLY TEST POINTS
P10
HEADER 4X1
VCC
SERIAL I/O
VRAW
7
U6
CNTRL
RESIN
CT
GND
VCC
RST
RST
VIN
TL7705 SO8
C16
10uF
C17
100nF
R16
10k
R17
10k
Q2
2N4403 SOT-23
MODULE
CPURST
VPP
3
JP8
JP9
6 TO 24 V INPUT
P11
DJ-005-B
VINP
D2
1N4004
D4
1N4004
D5
1N4004
D6
1N4004
D3
SMBJ24M 600W
C18
22uF 35V LOW ESR
C19
22uF 35V LOW ESR
C20
1nF
U7
SENSE–
ITH/RUN
VFB
GND
VIN
BOOST
TG
SW
LTC1624
R18
0.10 1% 1/2W
F1
Si4412DY
C22
100nF
R19
10k
C21
470pF
C23
100pF
R21
32.4k 1%
R20
10.0k 1%
D7
CMSH2-40
VCC SENSE
L1
29.7uH 1A
5V 1A MAX
C24
TPS 100uF 10V
C25
TPS 100uF 10V
OTHER SHEETS
VCC
CAN NET IF
VCAN
8
JP10
FOOT1
FOOT2
FOOT3
FOOT4
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Title SYSTRONIX TINI EVALUATION PLATFORM (STEP)
POWER
Size B
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