

AMCC 405EP
PowerPC

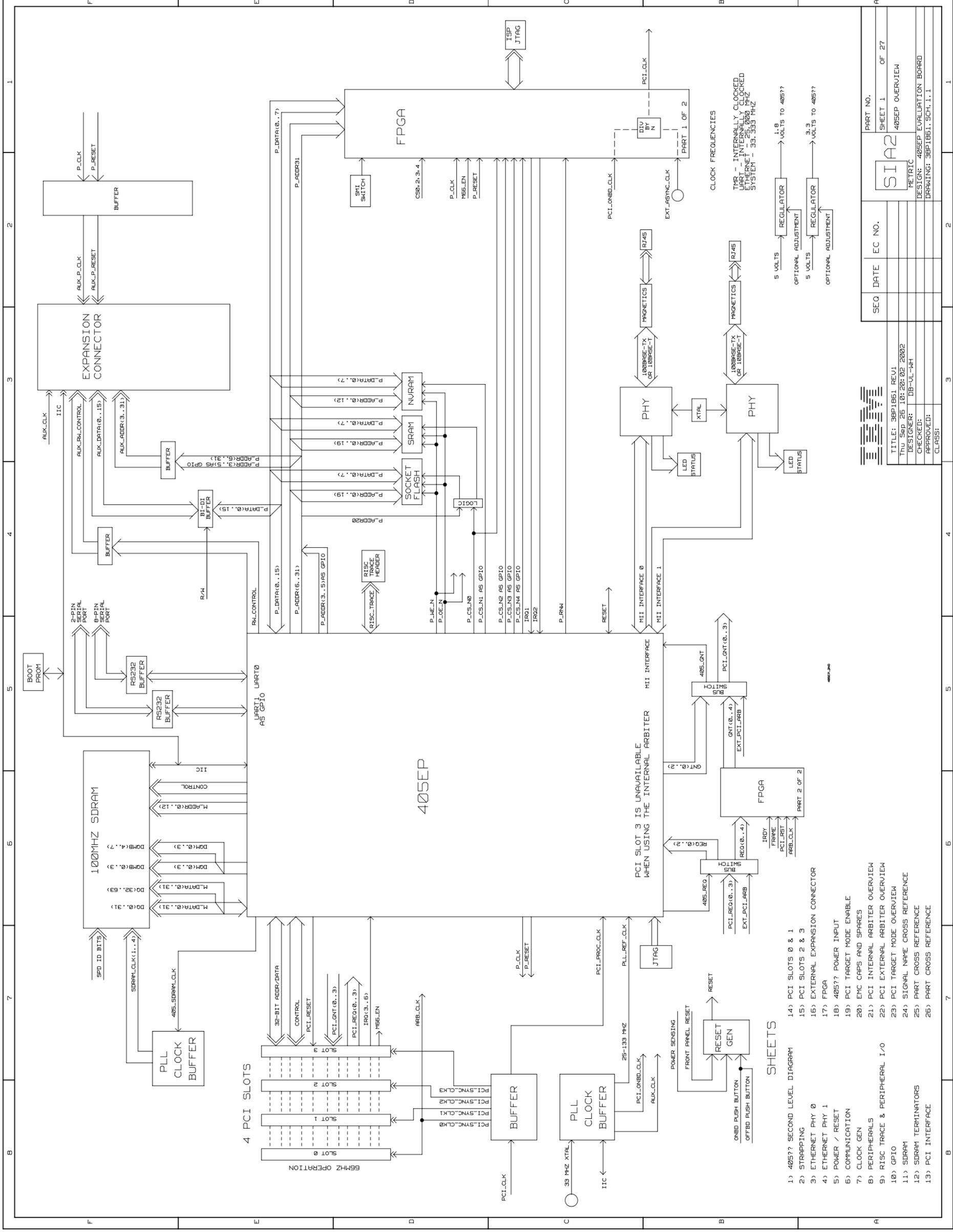
Document Issue 1.00
September 2004

**PowerPC 405EP Embedded
Processor Schematic**

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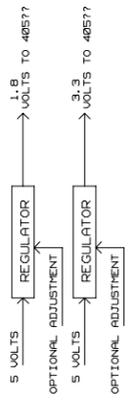
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SHEETS

- 1) 405?? SECOND LEVEL DIAGRAM
- 2) STRAPPING
- 3) ETHERNET PHY 0
- 4) ETHERNET PHY 1
- 5) POWER / RESET
- 6) COMMUNICATION
- 7) CLOCK GEN
- 8) PERIPHERALS
- 9) RISC TRACE & PERIPHERAL I/O
- 10) GPIO
- 11) SDRAM
- 12) SDRAM TERMINATORS
- 13) PCI INTERFACE
- 14) PCI SLOTS 0 & 1
- 15) PCI SLOTS 2 & 3
- 16) EXTERNAL EXPANSION CONNECTOR
- 17) FPGA
- 18) 405?? POWER INPUT
- 19) PCI TARGET MODE ENABLE
- 20) EMC CAPS AND SPARES
- 21) PCI INTERNAL ARBITER OVERVIEW
- 22) PCI EXTERNAL ARBITER OVERVIEW
- 23) PCI TARGET MODE OVERVIEW
- 24) SIGNAL NAME CROSS REFERENCE
- 25) PART CROSS REFERENCE
- 26) PART CROSS REFERENCE

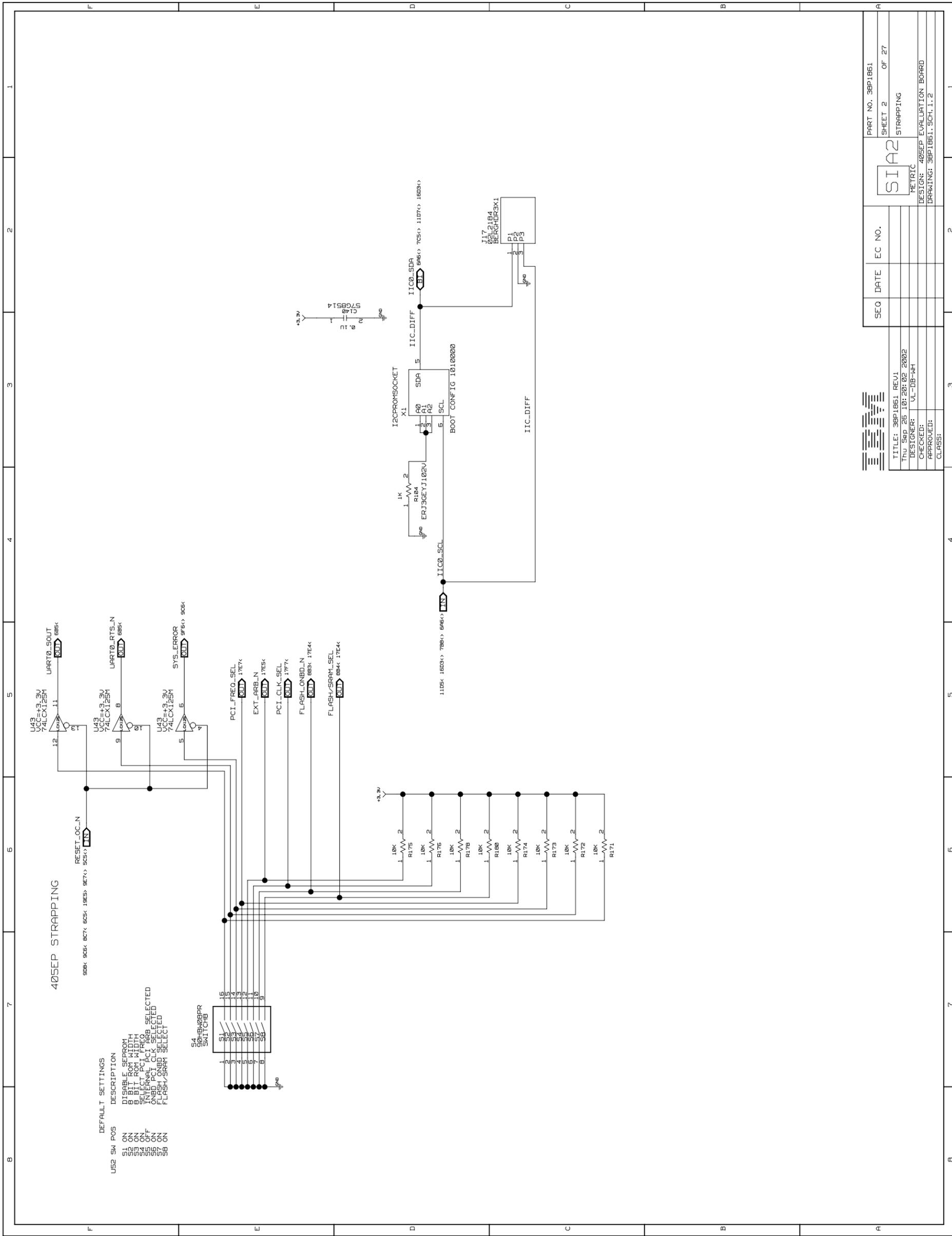
CLOCK FREQUENCIES
 THRU - INTERNALLY CLOCKED
 DIFFERENT INTERNALLY CLOCKED
 SYSTEM - 33.333 MHz



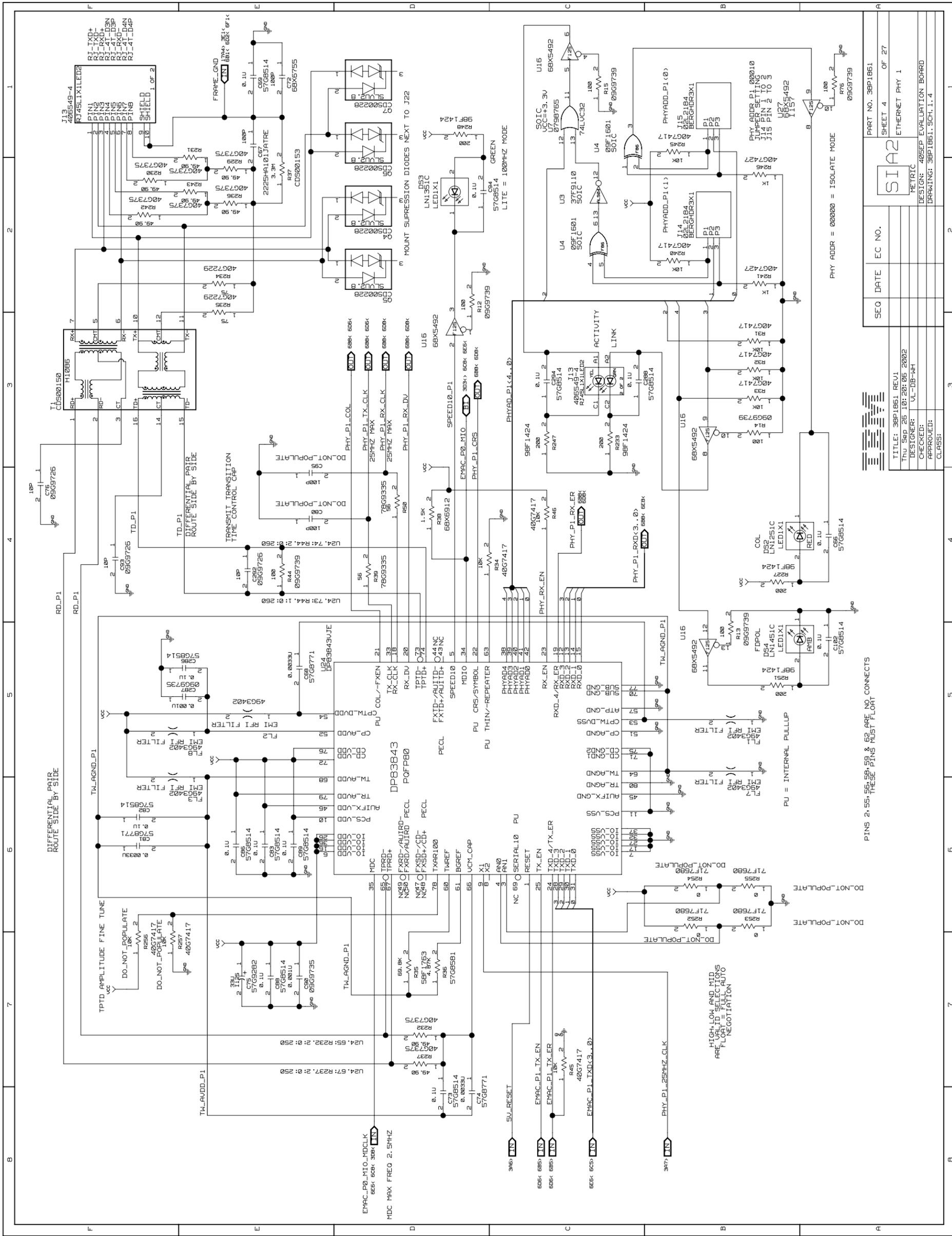
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			SHEET 1 OF 27
			405EP OVERVIEW
			METRIC
			DESIGN: 405EP EVALUATION BOARD
			DRAWING: 3BP1B61.SCH.1.1
			CLASS:



TITLE: 3BP1B61 REV1
 Thu Sep 26 10:20:02 2002
 DESIGNER: DB-UL-WH
 CHECKED:
 APPROVED:
 CLASS:

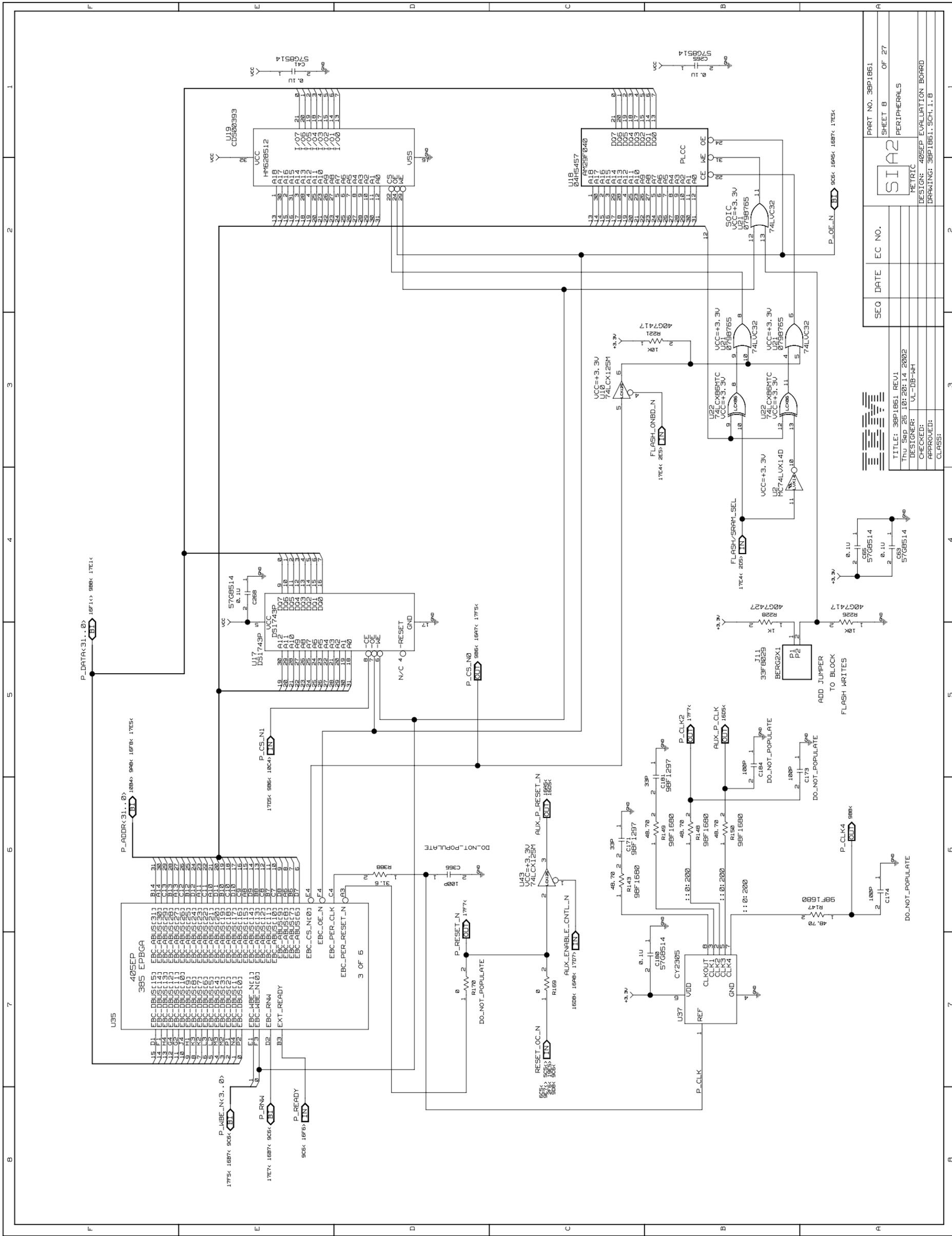


SEQ	DATE	EC NO.	EC NO.	PART NO.
				38P1861
				SHEET 2 OF 27
				STRAPPING
SI A2				
METRIC				
DESIGN: 40SEP EVALUATION BOARD				
DRAWING: 38P1861.SCH.1.2				
TITLE: 38P1861 REV1				
Thu Sep 26 10:20:02 2002				
DESIGNER: VL-DB-WH				
CHECKED:				
APPROVED:				
CLASS:				



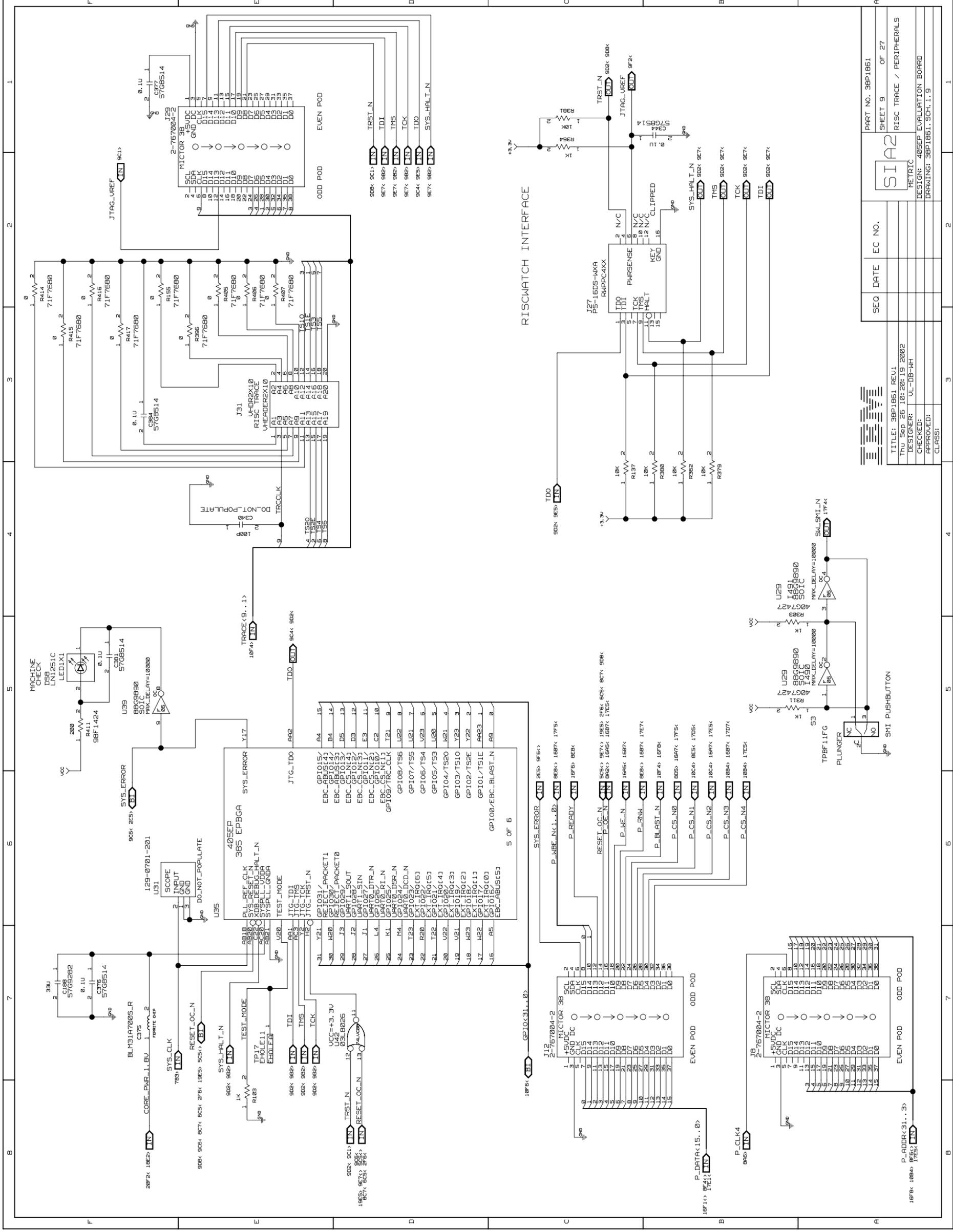
TITLE: 38P1B61 REV1		PART NO. 38P1B61	
Thu Sep 26 10:20:05 2002		SHEET 4 OF 27	
DESIGNER: VL-DB-WH		ETHERNET PHY 1	
CHECKED:		METRIC	
APPROVED:		DESIGN: 40SEP EVALUATION BOARD	
CLASS:		DRAWING: 38P1B61.SCH.1.4	

PINS 2, 55, 56, 59 & 60 ARE NO CONNECTS
 THESE PINS MUST FLATTEN

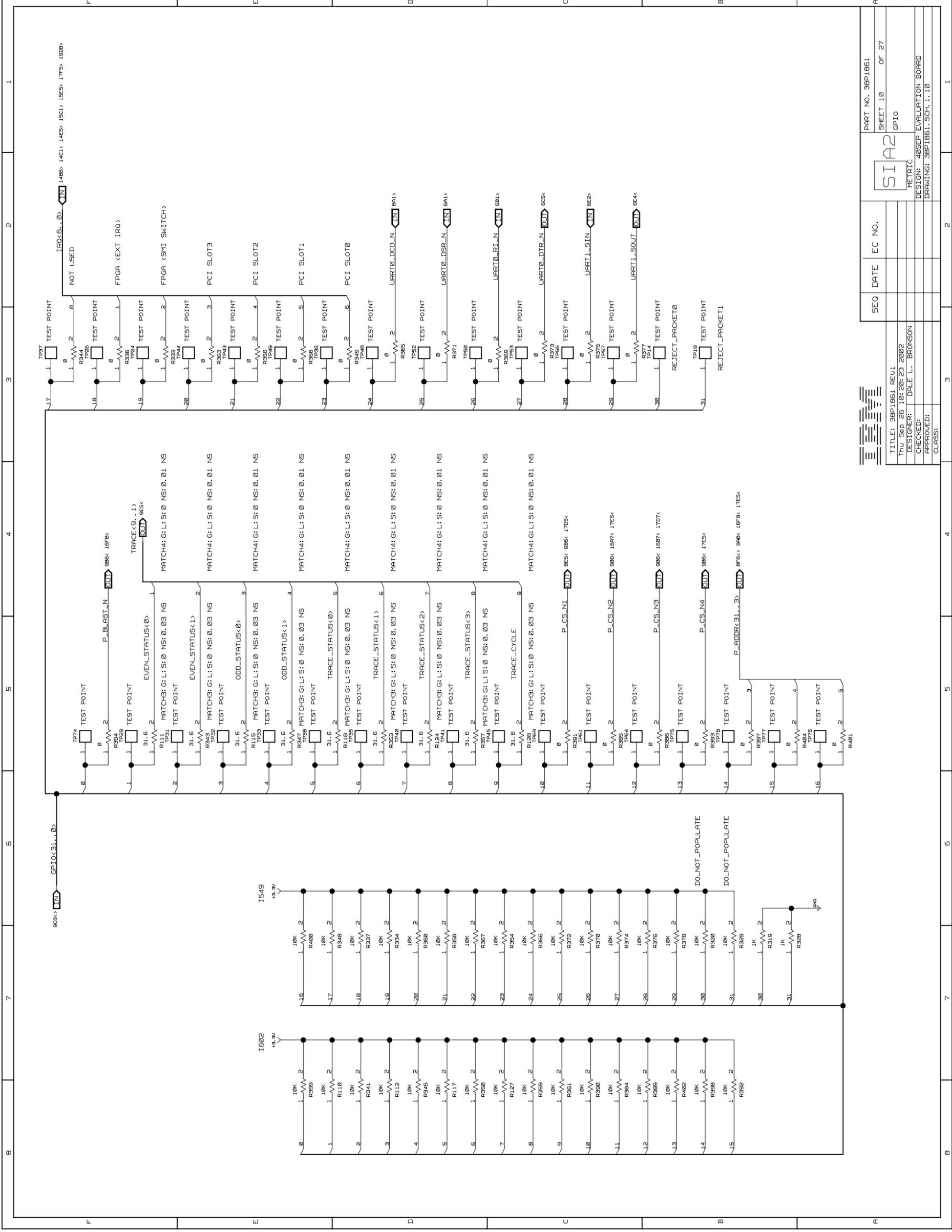


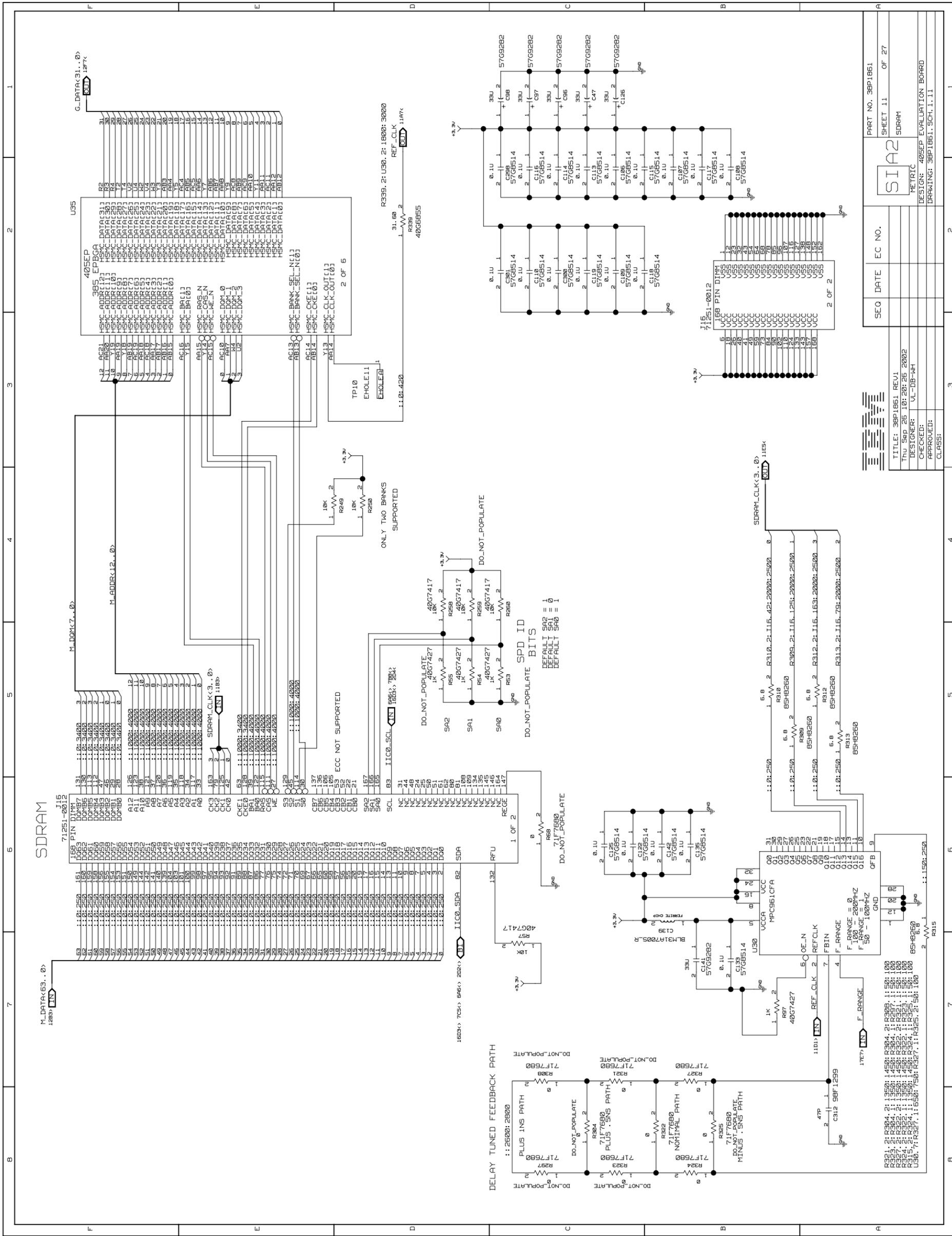
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1				INITIAL RELEASE
2				PERIPHERALS
3				METRIC
4				DESIGN: 405EP EVALUATION BOARD
5				DRAWING: 38P1861.SCH.1.B

TITLE: 38P1861 REV1	PART NO. 38P1861
THU Sep 26 10:20:14 2002	SHEET B OF 27
DESIGNER: VL-DB-WH	
CHECKED:	
APPROVED:	
CLASS:	



SEQ	DATE	EC NO.	
			PART NO. 3BP1861
			SHEET 9 OF 27
TITLE: 3BP1861 REV1 Thu Sep 26 10:20:19 2002 DESIGNER: VL-DB-WH CHECKED: APPROVED: CLASS:			RISC TRACE / PERIPHERALS
DESIGN: 405EP EVALUATION BOARD DRAWING: 3BP1861.SCH.1.9			

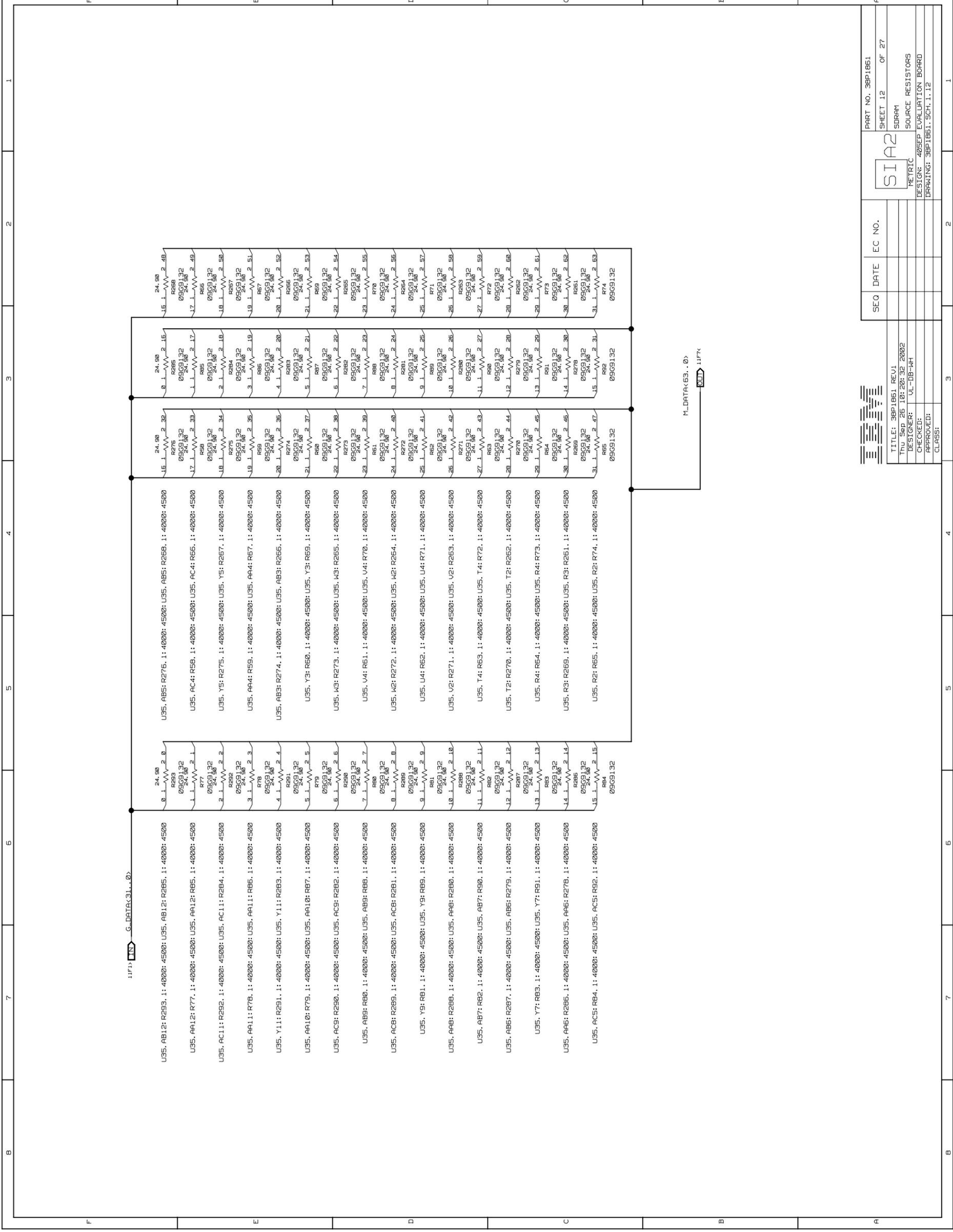




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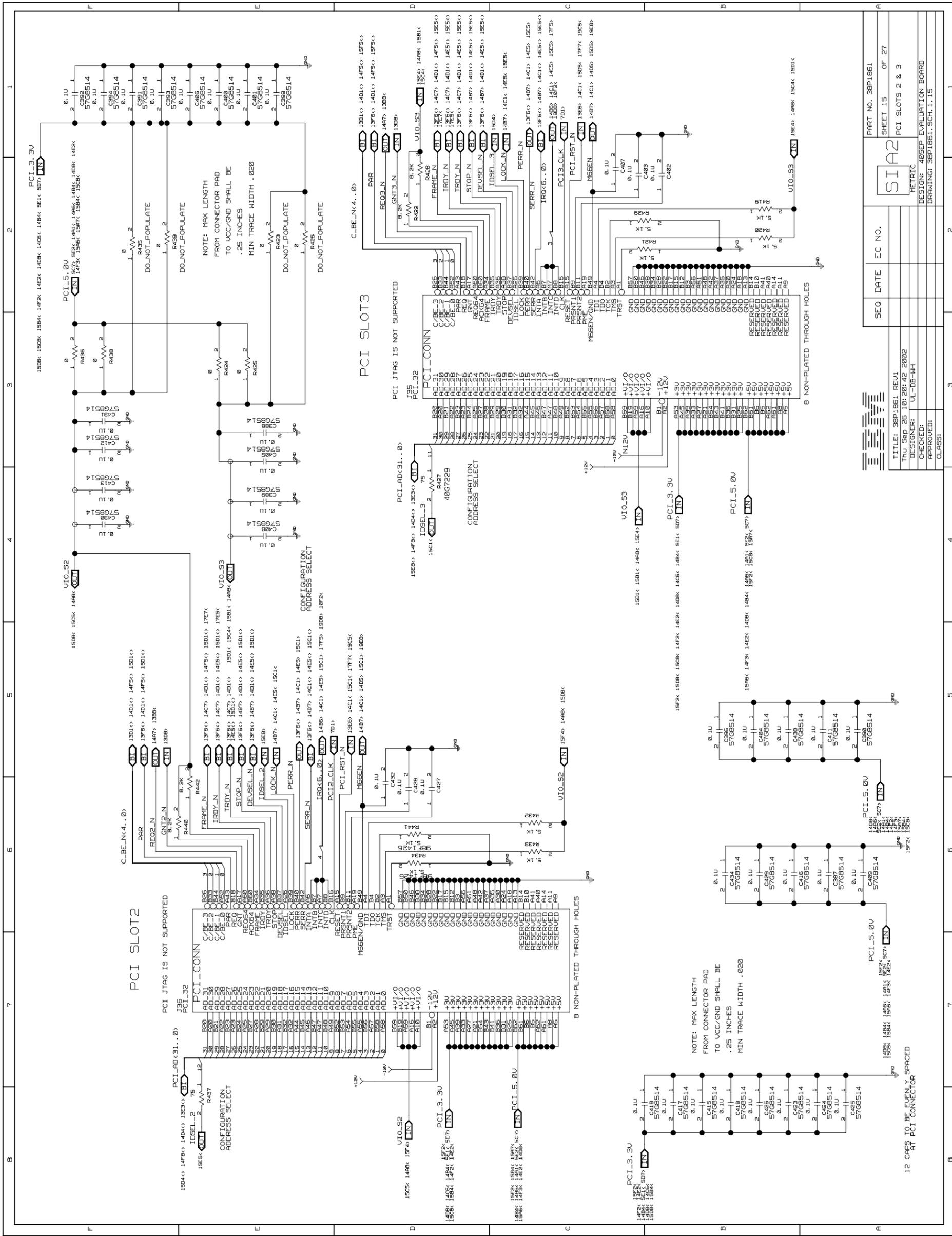
SI A2	
METRIC	
DESIGN: 40SEP EVALUATION BOARD	
DRAWING: 38P1861.SCH.1.11	

TITLE: 38P1861 REV1	Thu Sep 26 10:20:25 2002
DESIGNED: VL-DB-WH	CHECKED:
APPROVED:	CLASS:



SEQ	DATE	EC NO.	EC NO.	PART NO.	SHEET 12	OF 27
				38P1861		
					SURAM	
					SOURCE RESISTORS	
					DESIGN: 40SEP EVALUATION BOARD	
					DRAWING: 38P1861.SCH.1.12	

TITLE: 38P1861 REV1	
Thu Sep 26 10:20:32 2002	
DESIGNER:	VL-DB-WH
CHECKED:	
APPROVED:	
CLASS:	



SEQ	DATE	EC NO.	PART NO.
			3BP1861
			SHEET 15 OF 27

SI A2	
TITLE:	3BP1861 REV1
DESIGNED:	VL-DB-WH
CHECKED:	
APPROVED:	
CLASS:	

DESIGN:	DATE:
40SEP EVALUATION BOARD	2002
3BP1861.SCH.1.15	

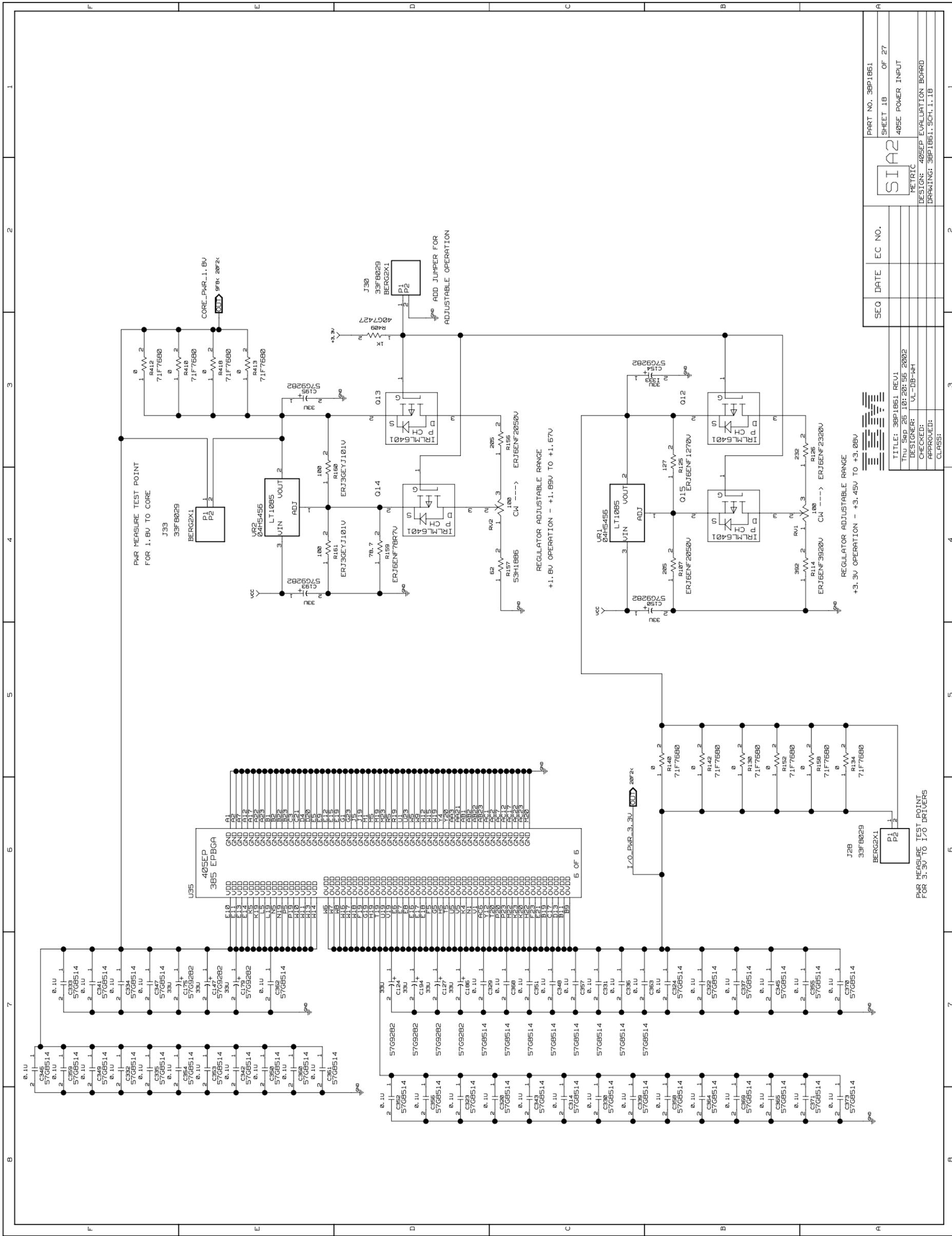
REV	DATE	DESCRIPTION
1	2002	INITIAL RELEASE
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REV	DATE	DESCRIPTION
1	2002	INITIAL RELEASE
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REV	DATE	DESCRIPTION
1	2002	INITIAL RELEASE
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REV	DATE	DESCRIPTION
1	2002	INITIAL RELEASE
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12 CAPS TO BE EVENLY SPACED AT PCI CONNECTOR



SEQ	DATE	EC NO.	PART NO.
			3BP1B61
			SHEET 1B
			OF 27

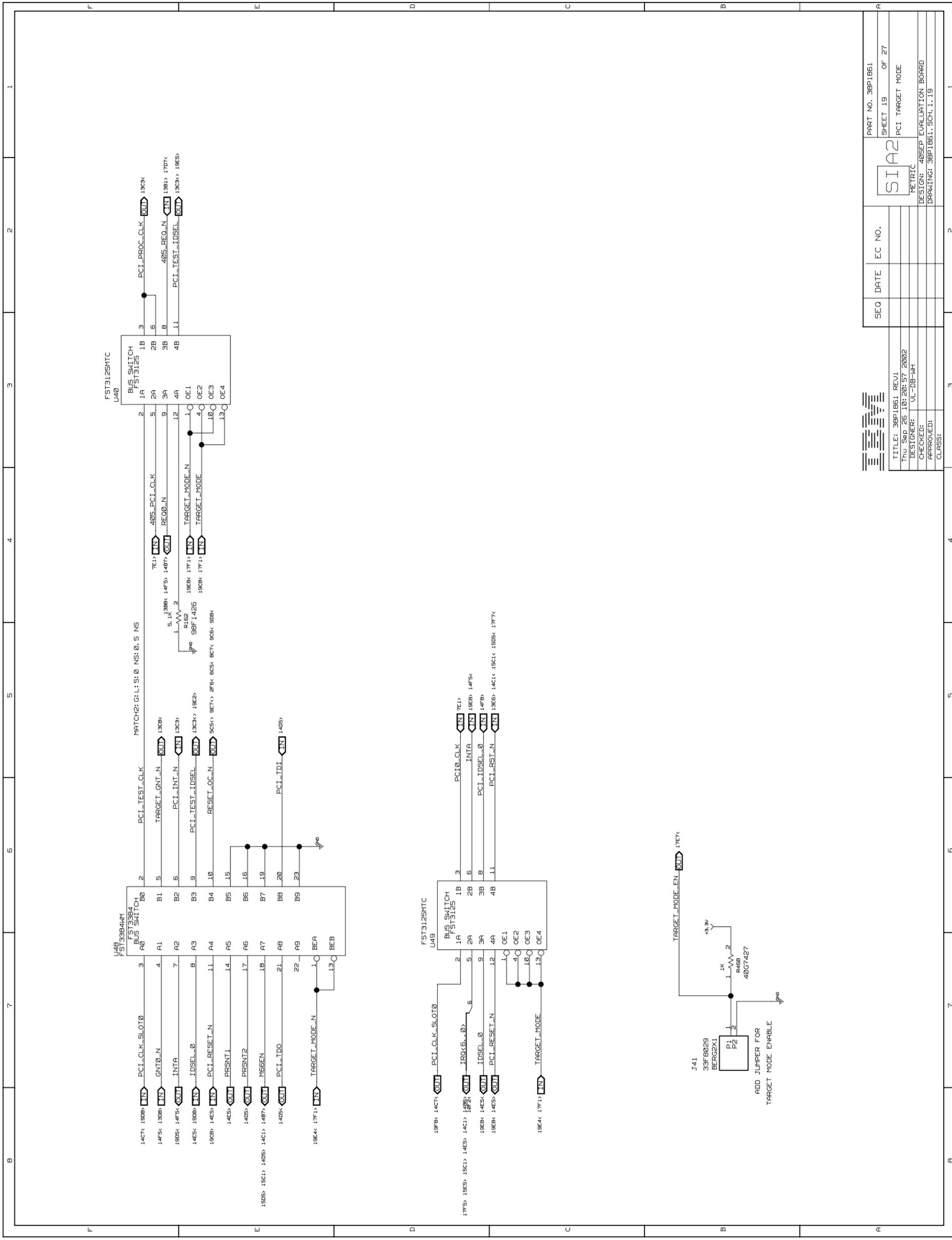
SI A2
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 DESIGN: 405EP EVALUATION BOARD
 DRAWING: 3BP1B61.SCH.1.1B

TITLE: 3BP1B61 REV1
 Thu Sep 26 10:20:56 2002
 DESIGNER: VL-DB-WH
 CHECKED:
 APPROVED:
 CLASS:

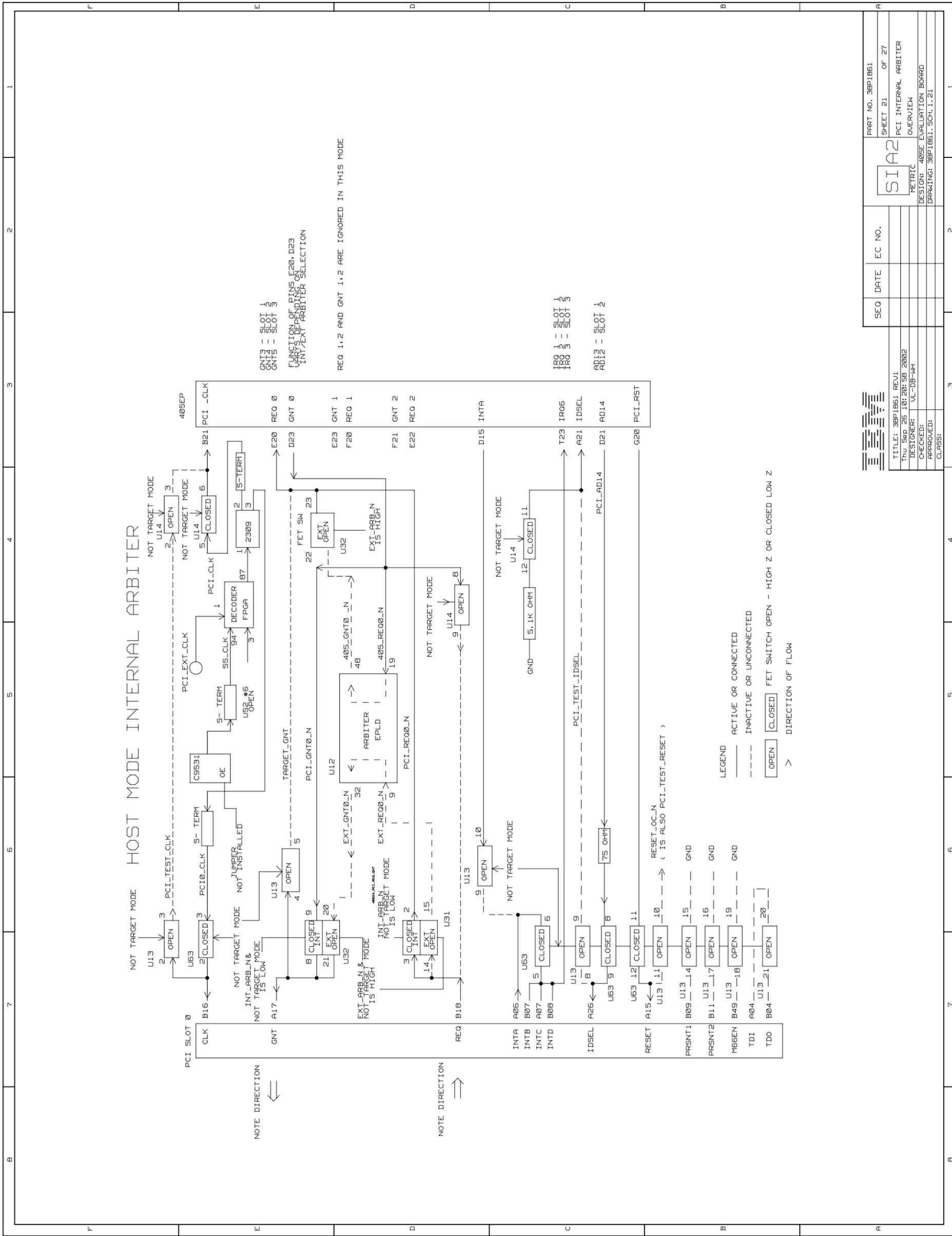
REGULATOR ADJUSTABLE RANGE
 +1.85V TO +1.67V

REGULATOR ADJUSTABLE RANGE
 +3.45V TO +3.08V

PMR MEASURE TEST POINT
 FOR 3.3V TO I/O DRIVERS



		SI A2 METRIC DESIGN: 40SEP EVALUATION BOARD DRAWING: 38P1861.SCH.1.19	
SEQ	DATE	EC NO.	PART NO. 38P1861
			SHEET 19 OF 27
			PCI TARGET MODE
TITLE: 38P1861 REV1 Thu Sep 26 10:20:57 2002 DESIGNER: VL-DB-WH CHECKED: APPROVED: CLASS:			



SI A2		PART NO. 3BP1B61		SHEET 21 OF 27					
METRIC		PCI INTERNAL ARBITER		DESIGN: 405E EVALUATION BOARD					
DRAWING: 3BP1B61.SCH.1.2.1		TITLE: 3BP1B61 REV1		Thu Sep 26 10:20:58 2002					
DESIGNER: VL-DB-WH		CHECKED:		APPROVED:					
CLASS:		CLASS:		CLASS:					

B		7		6		5		4		3		2		1	
R196	RESISTOR 1489	R224	RESISTOR 1604	R252	RESISTOR 1180	R482	RESISTOR 14E3	U1	HC74	U17	DS1743P	U30	40SEP		
R197	RESISTOR 1489	R225	RESISTOR 1604	R229	RESISTOR 1005	R483	RESISTOR 14E3	U2	HC74LUX14	U18	40SEP	U31	40SEP		
R198	RESISTOR 1489	R230	RESISTOR 1005	R236	RESISTOR 1007	R484	RESISTOR 14E3	U3	AL904	U19	40SEP	U32	40SEP		
R199	RESISTOR 1489	R231	RESISTOR 1007	R237	RESISTOR 1007	R485	RESISTOR 14E3	U4	F86	U20	40SEP	U33	40SEP		
R200	RESISTOR 14C9	R232	RESISTOR 1008	R238	RESISTOR 1008	R486	RESISTOR 14E3	U5	75LV04737A	U21	40SEP	U34	40SEP		
R201	RESISTOR 14C9	R233	RESISTOR 1008	R239	RESISTOR 1008	R487	RESISTOR 14E3	U6	75LV04737A	U22	40SEP	U35	40SEP		
R202	FERRITECHIP 1787	R234	RESISTOR 1008	R240	RESISTOR 1008	R488	RESISTOR 14E3	U7	74LVC02	U23	40SEP	U36	40SEP		
R203	FERRITECHIP 1787	R235	RESISTOR 1008	R241	RESISTOR 1008	R489	RESISTOR 14E3	U8	74LVC02	U24	40SEP	U37	40SEP		
R204	RESISTOR 14E8	R236	RESISTOR 1008	R242	RESISTOR 1008	R490	RESISTOR 14E3	U9	HC14	U25	40SEP	U38	40SEP		
R205	RESISTOR 14E8	R237	RESISTOR 1008	R243	RESISTOR 1008	R491	RESISTOR 14E3	U10	74LVC02	U26	40SEP	U39	40SEP		
R206	RESISTOR 16B3	R238	RESISTOR 1008	R244	RESISTOR 1008	R492	RESISTOR 14E3	U11	75LV04737A	U27	40SEP	U40	40SEP		
R207	RESISTOR 16B3	R239	RESISTOR 1008	R245	RESISTOR 1008	R493	RESISTOR 14E3	U12	DS1230DZ	U28	40SEP	U41	40SEP		
R208	RESISTOR 5E5	R240	RESISTOR 1008	R246	RESISTOR 1008	R494	RESISTOR 14E3	U13	DS1230DZ	U29	40SEP	U42	40SEP		
R210	RESISTOR 5E5	R241	RESISTOR 1008	R247	RESISTOR 1008	R495	RESISTOR 14E3	U14	SCOPE	U30	40SEP	U43	40SEP		
R211	RESISTOR 5E5	R242	RESISTOR 1008	R248	RESISTOR 1008	R496	RESISTOR 14E3	U15	74LVCH16245A	U31	40SEP	U44	40SEP		
R212	RESISTOR 20P7	R243	RESISTOR 1008	R249	RESISTOR 1008	R497	RESISTOR 14E3	U16	F125	U32	40SEP	U45	40SEP		
R213	RESISTOR 3F4	R244	RESISTOR 1008	R250	RESISTOR 11D4	R498	RESISTOR 14E3	U17	DS1743P	U33	40SEP	U46	40SEP		
R214	RESISTOR 5E5	R245	RESISTOR 1008	R251	RESISTOR 1008	R499	RESISTOR 14E3	U18	40SEP	U34	40SEP	U47	40SEP		
R215	RESISTOR 5E5	R246	RESISTOR 1008	R252	RESISTOR 1008	R500	RESISTOR 14E3	U19	40SEP	U35	40SEP	U48	40SEP		
R216	RESISTOR 5F7	R247	RESISTOR 1008	R253	RESISTOR 1008	R501	RESISTOR 14E3	U20	74LVCH02448	U36	40SEP	U49	40SEP		
R217	RESISTOR 5F7	R248	RESISTOR 1008	R254	RESISTOR 1008	R502	RESISTOR 14E3	U21	74LVCH02448	U37	40SEP	U50	40SEP		
R218	RESISTOR 5F7	R249	RESISTOR 1008	R255	RESISTOR 1008	R503	RESISTOR 14E3	U22	74LVCH02448	U38	40SEP	U51	40SEP		
R219	RESISTOR 5F7	R250	RESISTOR 1008	R256	RESISTOR 1008	R504	RESISTOR 14E3	U23	74LVCH02448	U39	40SEP	U52	40SEP		
R220	RESISTOR 5E5	R251	RESISTOR 1008	R257	RESISTOR 1008	R505	RESISTOR 14E3	U24	74LVCH02448	U40	40SEP	U53	40SEP		
R221	RESISTOR 5E5	R252	RESISTOR 1008	R258	RESISTOR 1008	R506	RESISTOR 14E3	U25	74LVCH02448	U41	40SEP	U54	40SEP		
R222	RESISTOR 5E5	R253	RESISTOR 1008	R259	RESISTOR 1008	R507	RESISTOR 14E3	U26	74LVCH02448	U42	40SEP	U55	40SEP		
R223	RESISTOR 5E5	R254	RESISTOR 1008	R260	RESISTOR 1008	R508	RESISTOR 14E3	U27	74LVCH02448	U43	40SEP	U56	40SEP		
R224	RESISTOR 16D4	R255	RESISTOR 1008	R261	RESISTOR 12C2	R509	RESISTOR 14E3	U28	74LVCH02448	U44	40SEP	U57	40SEP		
R225	RESISTOR 16D4	R256	RESISTOR 1008	R262	RESISTOR 12C2	R510	RESISTOR 14E3	U29	74LVCH02448	U45	40SEP	U58	40SEP		
R226	RESISTOR 9B4	R257	RESISTOR 1008	R263	RESISTOR 12C2	R511	RESISTOR 14E3	U30	74LVCH02448	U46	40SEP	U59	40SEP		
R227	RESISTOR 9B4	R258	RESISTOR 1008	R264	RESISTOR 12C2	R512	RESISTOR 14E3	U31	74LVCH02448	U47	40SEP	U60	40SEP		
R228	RESISTOR 9B4	R259	RESISTOR 1008	R265	RESISTOR 12C2	R513	RESISTOR 14E3	U32	74LVCH02448	U48	40SEP	U61	40SEP		
R229	RESISTOR 4E1	R260	RESISTOR 1008	R266	RESISTOR 12C2	R514	RESISTOR 14E3	U33	74LVCH02448	U49	40SEP	U62	40SEP		
R230	RESISTOR 4F2	R261	RESISTOR 1008	R267	RESISTOR 12C2	R515	RESISTOR 14E3	U34	74LVCH02448	U50	40SEP	U63	40SEP		
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R232	RESISTOR 4E1	R263	RESISTOR 1008	R269	RESISTOR 12C2	R517	RESISTOR 14E3	U36	74LVCH02448	U52	40SEP	U65	40SEP		
R233	RESISTOR 4E2	R264	RESISTOR 1008	R270	RESISTOR 12C2	R518	RESISTOR 14E3	U37	74LVCH02448	U53	40SEP	U66	40SEP		
R234	RESISTOR 4E2	R265	RESISTOR 1008	R271	RESISTOR 12C2	R519	RESISTOR 14E3	U38	74LVCH02448	U54	40SEP	U67	40SEP		
R235	RESISTOR 4E2	R266	RESISTOR 1008	R272	RESISTOR 12C2	R520	RESISTOR 14E3	U39	74LVCH02448	U55	40SEP	U68	40SEP		
R236	RESISTOR 4E2	R267	RESISTOR 1008	R273	RESISTOR 12C3	R521	RESISTOR 14E3	U40	74LVCH02448	U56	40SEP	U69	40SEP		
R237	RESISTOR 4D7	R268	RESISTOR 1008	R274	RESISTOR 12C3	R522	RESISTOR 14E3	U41	74LVCH02448	U57	40SEP	U70	40SEP		
R238	RESISTOR 5E5	R269	RESISTOR 1008	R275	RESISTOR 12C3	R523	RESISTOR 14E3	U42	74LVCH02448	U58	40SEP	U71	40SEP		
R239	RESISTOR 4E2	R270	RESISTOR 1008	R276	RESISTOR 12C3	R524	RESISTOR 14E3	U43	74LVCH02448	U59	40SEP	U72	40SEP		
R240	RESISTOR 4E2	R271	RESISTOR 1008	R277	RESISTOR 12C3	R525	RESISTOR 14E3	U44	74LVCH02448	U60	40SEP	U73	40SEP		
R241	RESISTOR 4E2	R272	RESISTOR 1008	R278	RESISTOR 12C3	R526	RESISTOR 14E3	U45	74LVCH02448	U61	40SEP	U74	40SEP		
R242	RESISTOR 4E2	R273	RESISTOR 1008	R279	RESISTOR 12C3	R527	RESISTOR 14E3	U46	74LVCH02448	U62	40SEP	U75	40SEP		
R243	RESISTOR 4E2	R274	RESISTOR 1008	R280	RESISTOR 12C3	R528	RESISTOR 14E3	U47	74LVCH02448	U63	40SEP	U76	40SEP		
R244	RESISTOR 5A4	R275	RESISTOR 1008	R281	RESISTOR 12C3	R529	RESISTOR 14E3	U48	74LVCH02448	U64	40SEP	U77	40SEP		
R245	RESISTOR 4E2	R276	RESISTOR 1008	R282	RESISTOR 12C3	R530	RESISTOR 14E3	U49	74LVCH02448	U65	40SEP	U78	40SEP		
R246	RESISTOR 4E2	R277	RESISTOR 1008	R283	RESISTOR 12C3	R531	RESISTOR 14E3	U50	74LVCH02448	U66	40SEP	U79	40SEP		
R247	RESISTOR 4C3	R278	RESISTOR 1008	R284	RESISTOR 12C3	R532	RESISTOR 14E3	U51	74LVCH02448	U67	40SEP	U80	40SEP		
R248	RESISTOR 4E2	R279	RESISTOR 1008	R285	RESISTOR 12C3	R533	RESISTOR 14E3	U52	74LVCH02448	U68	40SEP	U81	40SEP		
R249	RESISTOR 4D1	R280	RESISTOR 1008	R286	RESISTOR 12C3	R534	RESISTOR 14E3	U53	74LVCH02448	U69	40SEP	U82	40SEP		
R250	RESISTOR 11D4	R281	RESISTOR 1008	R287	RESISTOR 12C3	R535	RESISTOR 14E3	U54	74LVCH02448	U70	40SEP	U83	40SEP		
R251	RESISTOR 4E2	R282	RESISTOR 1008	R288	RESISTOR 12C3	R536	RESISTOR 14E3	U55	74LVCH02448	U71	40SEP	U84	40SEP		
R252	RESISTOR 4E2	R283	RESISTOR 1008	R289	RESISTOR 12C3	R537	RESISTOR 14E3	U56	74LVCH02448	U72	40SEP	U85	40SEP		
R253	RESISTOR 4E2	R284	RESISTOR 1008	R290	RESISTOR 12C3	R538	RESISTOR 14E3	U57	74LVCH02448	U73	40SEP	U86	40SEP		
R254	RESISTOR 4E2	R285	RESISTOR 1008	R291	RESISTOR 12C3	R539	RESISTOR 14E3	U58	74LVCH02448	U74	40SEP	U87	40SEP		
R255	RESISTOR 4E2	R286	RESISTOR 1008	R292	RESISTOR 12C3	R540	RESISTOR 14E3	U59	74LVCH02448	U75	40SEP	U88	40SEP		
R256	RESISTOR 4E2	R287	RESISTOR 1008	R293	RESISTOR 12C3	R541	RESISTOR 14E3	U60	74LVCH02448	U76	40SEP	U89	40SEP		
R257	RESISTOR 4E2	R288	RESISTOR 1008	R294	RESISTOR 12C3	R542	RESISTOR 14E3	U61	74LVCH02448	U77	40SEP	U90	40SEP		
R258	RESISTOR 11C4	R289	RESISTOR 1008	R295	RESISTOR 12C3	R543	RESISTOR 14E3	U62	74LVCH02448	U78	40SEP	U91	40SEP		
R259	RESISTOR 11C4	R290	RESISTOR 1008	R296	RESISTOR 12C3	R544	RESISTOR 14E3	U63	74LVCH02448	U79	40SEP	U92	40SEP		
R260	RESISTOR 11C4	R291	RESISTOR 1008	R297	RESISTOR 12C3	R545	RESISTOR 14E3	U64	74LVCH02448	U80	40SEP	U93	40SEP		
R261	RESISTOR 12C2	R292	RESISTOR 1008	R298	RESISTOR 12C3	R546	RESISTOR 14E3	U65	74LVCH02448	U81	40SEP	U94	40SEP		
R262	RESISTOR 12C2	R293	RESISTOR 1008	R299	RESISTOR 12C3	R547	RESISTOR 14E3	U66	74LVCH02448	U82	40SEP	U95	40SEP		
R263	RESISTOR 12C2	R294	RESISTOR 1008	R300	RESISTOR 12C3	R548	RESISTOR 14E3	U67	74LVCH02448	U83	40SEP	U96	40SEP		
R264	RESISTOR 12C2	R295	RESISTOR 1008	R301	RESISTOR 12C3	R549	RESISTOR 14E3	U68	74LVCH02448	U84	40SEP	U97	40SEP		
R265	RESISTOR 12C2	R296	RESISTOR 1008	R302	RESISTOR 12C3	R550	RESISTOR 14E3	U69	74LVCH02448	U85	40SEP	U98	40SEP		
R266	RESISTOR 12C2	R297	RESISTOR 1008	R303	RESISTOR 12C3	R551	RESISTOR 14E3	U70	74LVCH02448	U86	40SEP	U99	40SEP		
R267	RESISTOR 12C2	R298	RESISTOR 1008	R304	RESISTOR 12C3	R552	RESISTOR 14E3	U71	74LVCH02448	U87	40SEP	U100	40SEP		
R268	RESISTOR 12C2	R299	RESISTOR 1008	R305	RESISTOR 12C3	R553	RESISTOR 14E3	U72	74LVCH02448	U88	40SEP	U101	40SEP		
R269	RESISTOR 12C2	R300	RESISTOR 1008	R306	RESISTOR 12C3	R554	RESISTOR 14E3	U73	74LVCH02448	U89	40SEP	U102	40SEP		
R270	RESISTOR 12C3	R301	RESISTOR 1008	R307	RESISTOR 12C3	R555	RESISTOR 14E3	U74	74LVCH02448	U90	40SEP	U103	40SEP		
R271	RESISTOR 12C3	R302	RESISTOR 1008	R308	RESISTOR 12C3	R556	RESISTOR 14E3	U75	74LVCH02448	U91	40SEP	U104	40SEP		
R272	RESISTOR 12C3	R303	RESISTOR 1008	R309	RESISTOR 12C3	R557	RESISTOR 14E3	U76	74LVCH02448	U92	40SEP	U105	40SEP		
R273	RESISTOR 12C3	R304	RESISTOR 1008	R310	RESISTOR 12C3	R558	RESISTOR 14E3	U77							

