

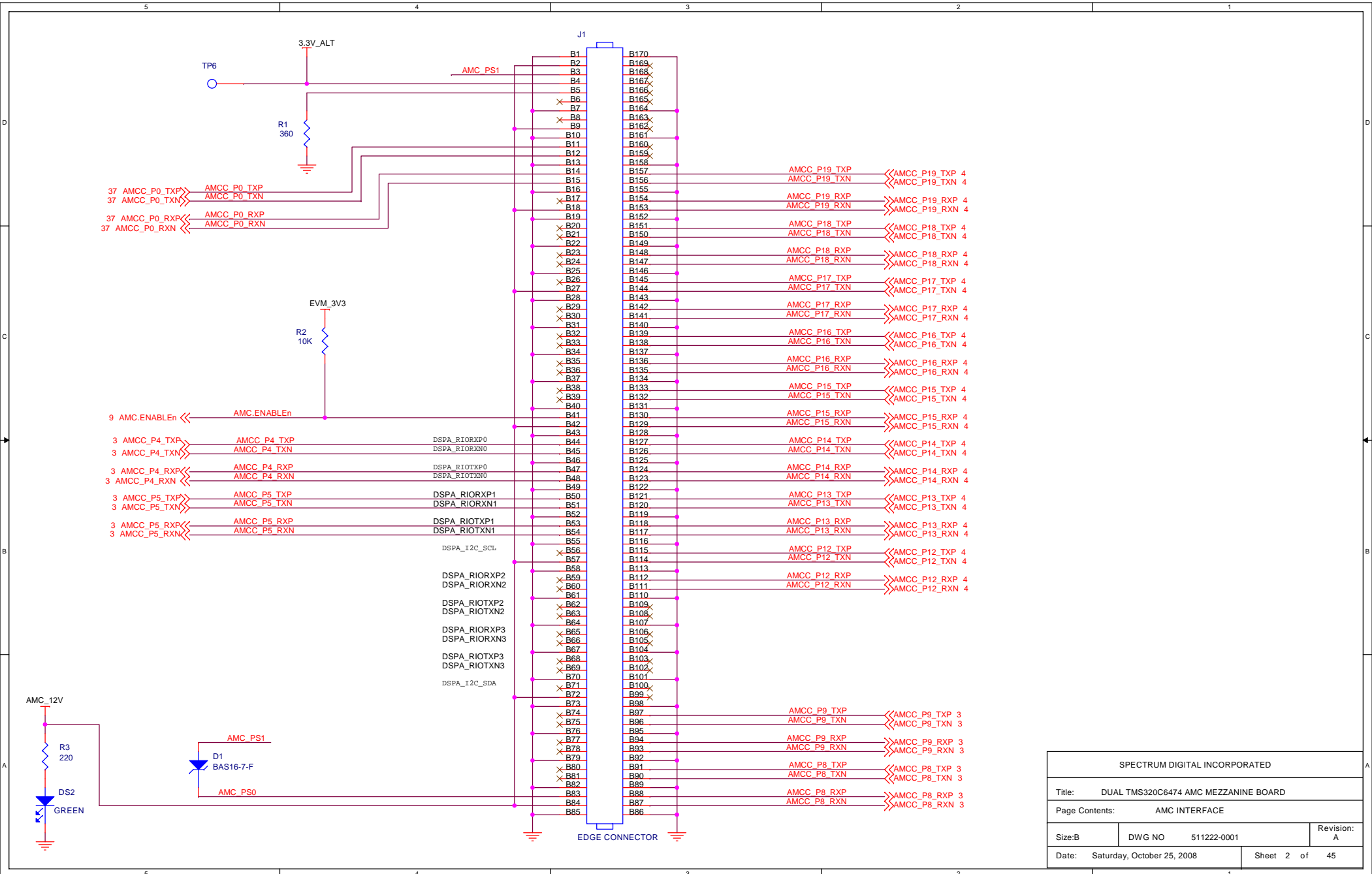
REV	DESCRIPTION	DATE	APPROVED
A	Initial schematic ready for layout.	08/15/08	RRP

- 01 EVM TITLE SHEET
- 02 AMC INTERFACE
- 03 SRIO ROUTING
- 04 AIF ROUTING
- 05 MASTER CLOCK DOMAIN
- 06 SRIO CLOCK DOMAIN
- 07 McBSP MICTOR/ FSYNC EXP CONN
- 08 HIERARCHIAL EMULATION BLOCK
- 09 CPLD1 - JTAG/ENABLES
- 10 CPLD2 - C6474 CPU-1 INTERFACE PINS
  
- 11 CPLD 3 - SWITCHES
- 12 CPLD 4 - C6474 CPU-2 INTERFACE PINS
- 13 CPLD 5 - POWER PINS
- 14 EMU0/1 ROUTING
- 15 C6474-CPU1 DDR2 MEMORY
- 16 C6474-CPU1 McBSP/GPIO/BOOT STRAPPING
- 17 C6474-CPU1 DDR2 INTERFACE CONTROLLER
- 18 C6474-CPU1 AIF/FSYNC INTERFACE
- 19 C6474-CPU1 EMU INTERFACE
  
- 20 C6474-CPU1 I2C/VCTL/MISC
- 21 C6474-CPU1 PLL
- 22 C6474-CPU1 SRIO/SGMII
- 23 C6474-CPU1 PWR PINS
- 24 C6474-CPU1 PWR PINS II
- 25 C6474-CPU1 PWR CAPS CORE
- 26 C6474-CPU2 DDR2 MEMORY
- 27 C6474-CPU2 McBSP/GPIO/BOOT STRAPPING
- 28 C6474-CPU2 DDR2 INTERFACE CONTROLLER
- 29 C6474-CPU2 AIF/FSYNC INTERFACE
- 30 C6474-CPU2 EMU INTERFACE
  
- 31 C6474-CPU2 I2C/VCTL/MISC
- 32 C6474-CPU2 PLL
- 33 C6474-CPU2 SRIO/SGMII
- 34 C6474-CPU2 PWR PINS
- 35 C6474-CPU2 PWR PINS II
- 36 C6474-CPU2 PWR CAPS CORE
- 37 88E6122 INTERFACE
- 38 88E6122 POWER
- 39 ETHERNET CONNECTOR
- 40 POWER
  
- 41 POWER MONITORS
- 42 C6474-CPU1 CORE POWER
- 43 C6474-CPU2 CORE POWER
- 44 POWER IN 12V TO 5 V CONVERTER
- 45 EMU TOPOLOGY DIAGRAM

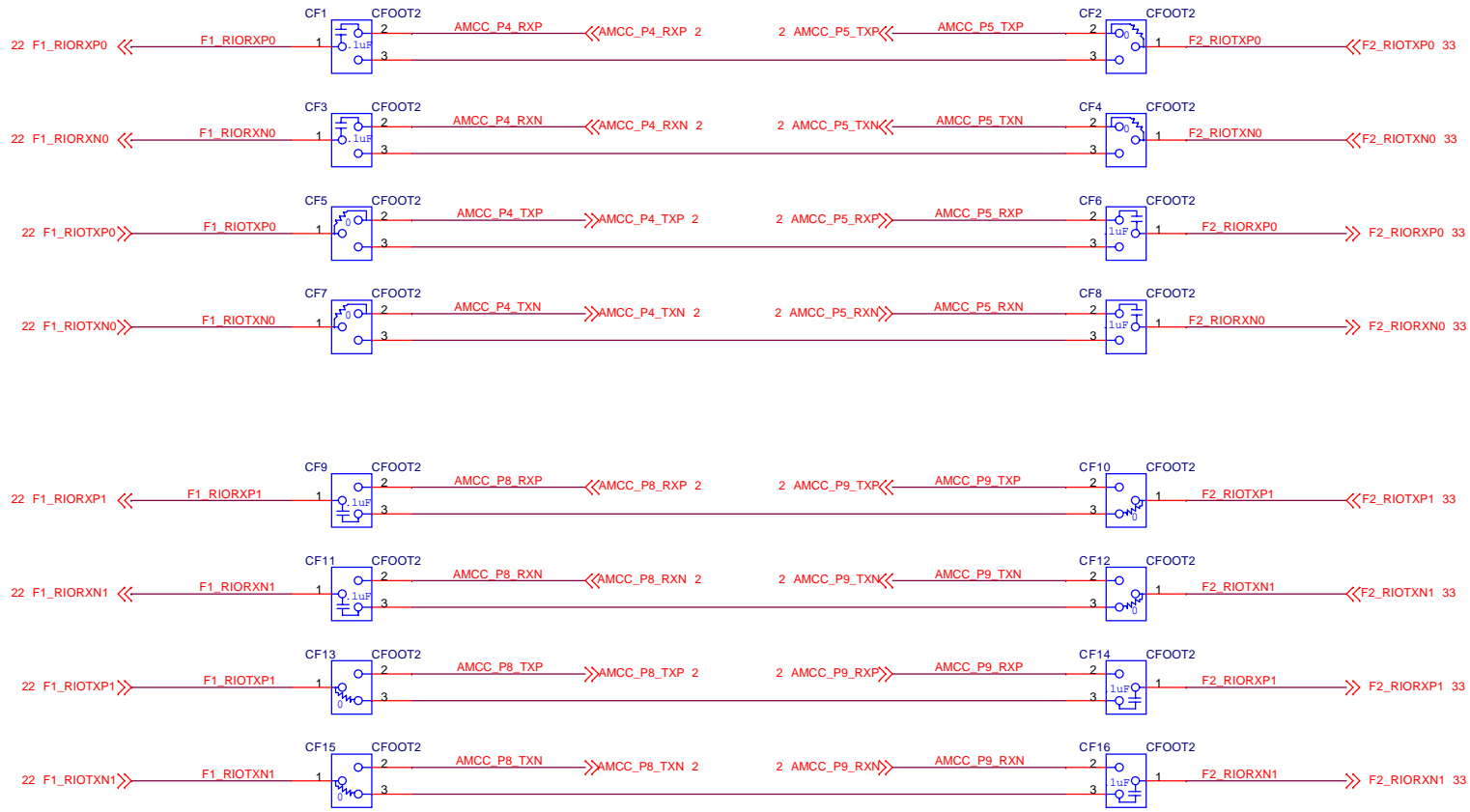
REVISION STATUS OF SHEETS

REV	SHEET	1	2	3	4	5	6	7	8	9	10	DATE	BY	DESCRIPTION
REV	A	A	A	A	A									
SHEET	41	42	43	44	45									
REV	A	A	A	A	A	A	A	A	A	A	A			
SHEET	31	32	33	34	35	36	37	38	39	40			DWN	R.R.P.
														08/15/2008
REV	A	A	A	B	A	A	A	A	A	A			CHK	T.W.K.
														08/15/2008
SHEET	21	22	23	24	25	26	27	28	29	30			ENGR	R.R.P.
														08/15/2008
REV	A	A	A	A	A	A	A	A	A	A			ENGR-MGR	R.R.P.
														08/15/2008
SHEET	11	12	13	14	15	16	17	18	19	20			QA	C.M.D.
														08/15/2008
REV	A	A	A	A	B	A	A	A	A	A			MFG	R.R.P.
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SHEET	1	2	3	4	5	6	7	8	9	10			RLSE	R.R.P.
														08/15/2008

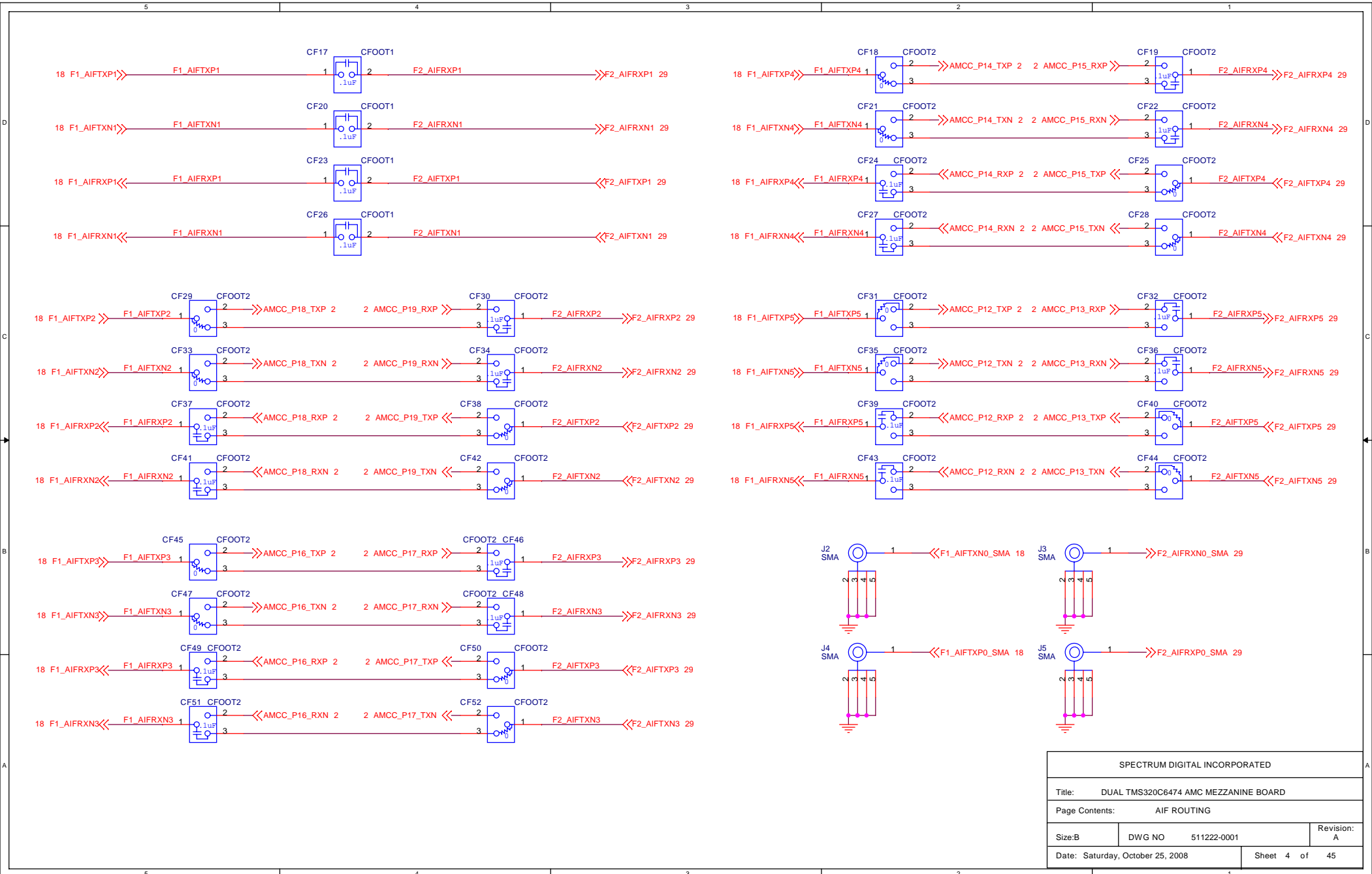
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents:		Title Page	
Size: B	DWG NO	511222-0001	Revision: B
Date: Saturday, October 25, 2008		Sheet 1 of 45	



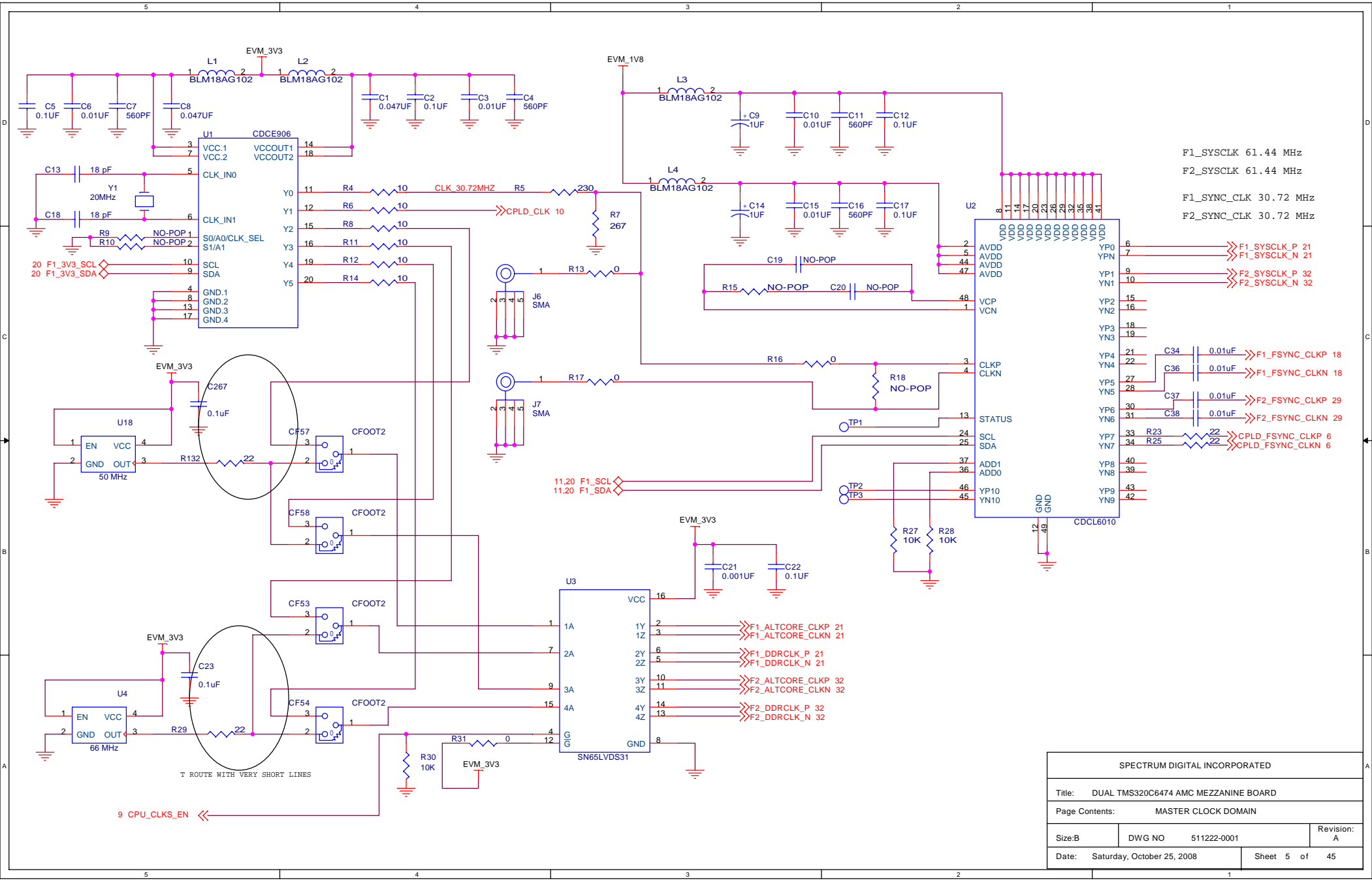
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: AMC INTERFACE			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008		Sheet 2 of 45



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: SRIO ROUTING			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 3 of 45



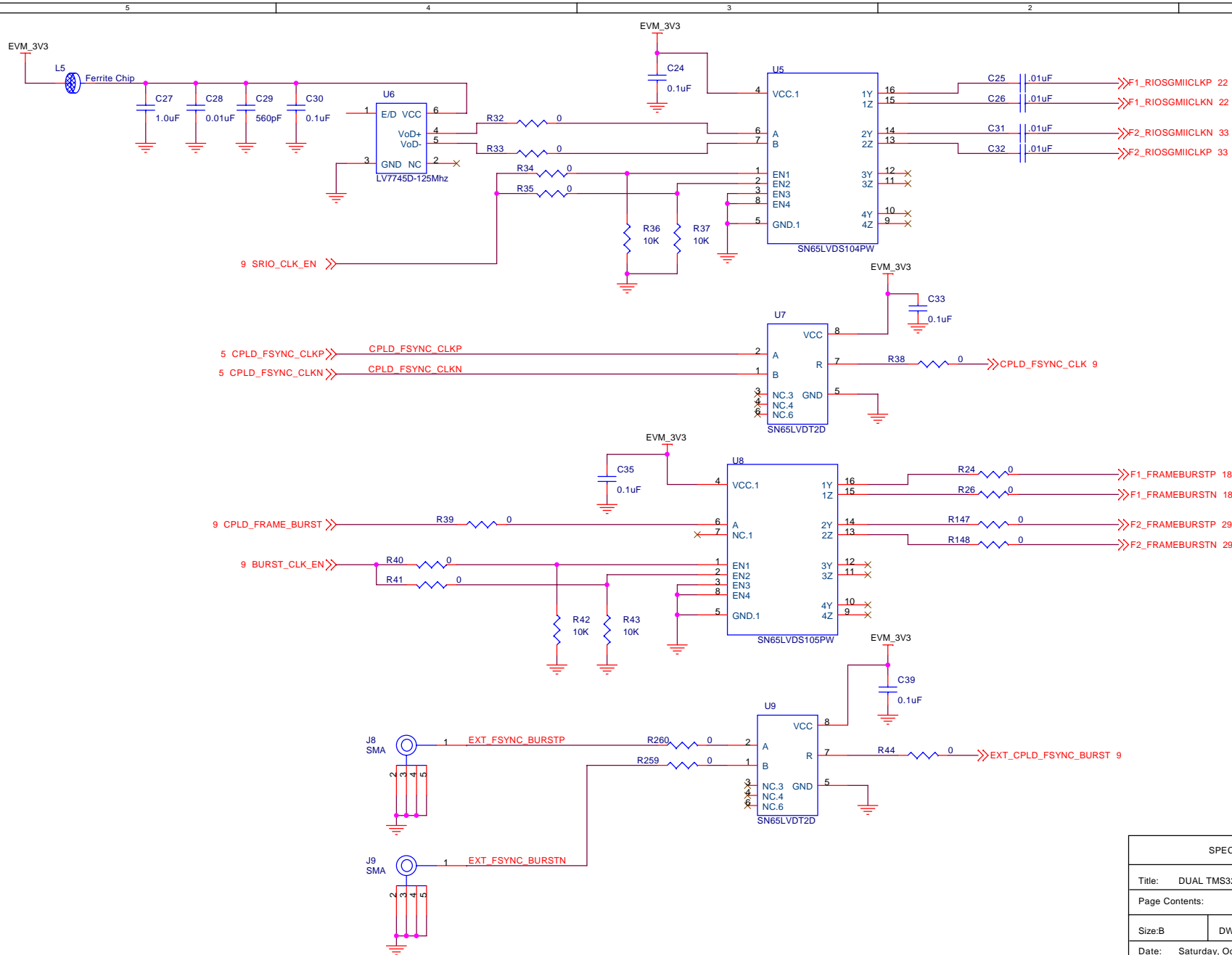
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: AIF ROUTING			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 4 of 45



F1\_SYSCLK 61.44 MHz  
 F2\_SYSCLK 61.44 MHz  
 F1\_SYNC\_CLK 30.72 MHz  
 F2\_SYNC\_CLK 30.72 MHz

F1\_SYSCLK\_P 21  
 F1\_SYSCLK\_N 21  
 F2\_SYSCLK\_P 32  
 F2\_SYSCLK\_N 32  
 F1\_SYNC\_CLKP 18  
 F1\_SYNC\_CLKN 18  
 F2\_SYNC\_CLKP 29  
 F2\_SYNC\_CLKN 29  
 CPLD\_FSYNC\_CLKP 6  
 CPLD\_FSYNC\_CLKN 6

SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: MASTER CLOCK DOMAIN			
Size: B	DWG NO: 511222-0001	Revision: A	
Date: Saturday, October 25, 2008	Sheet 5 of 45		

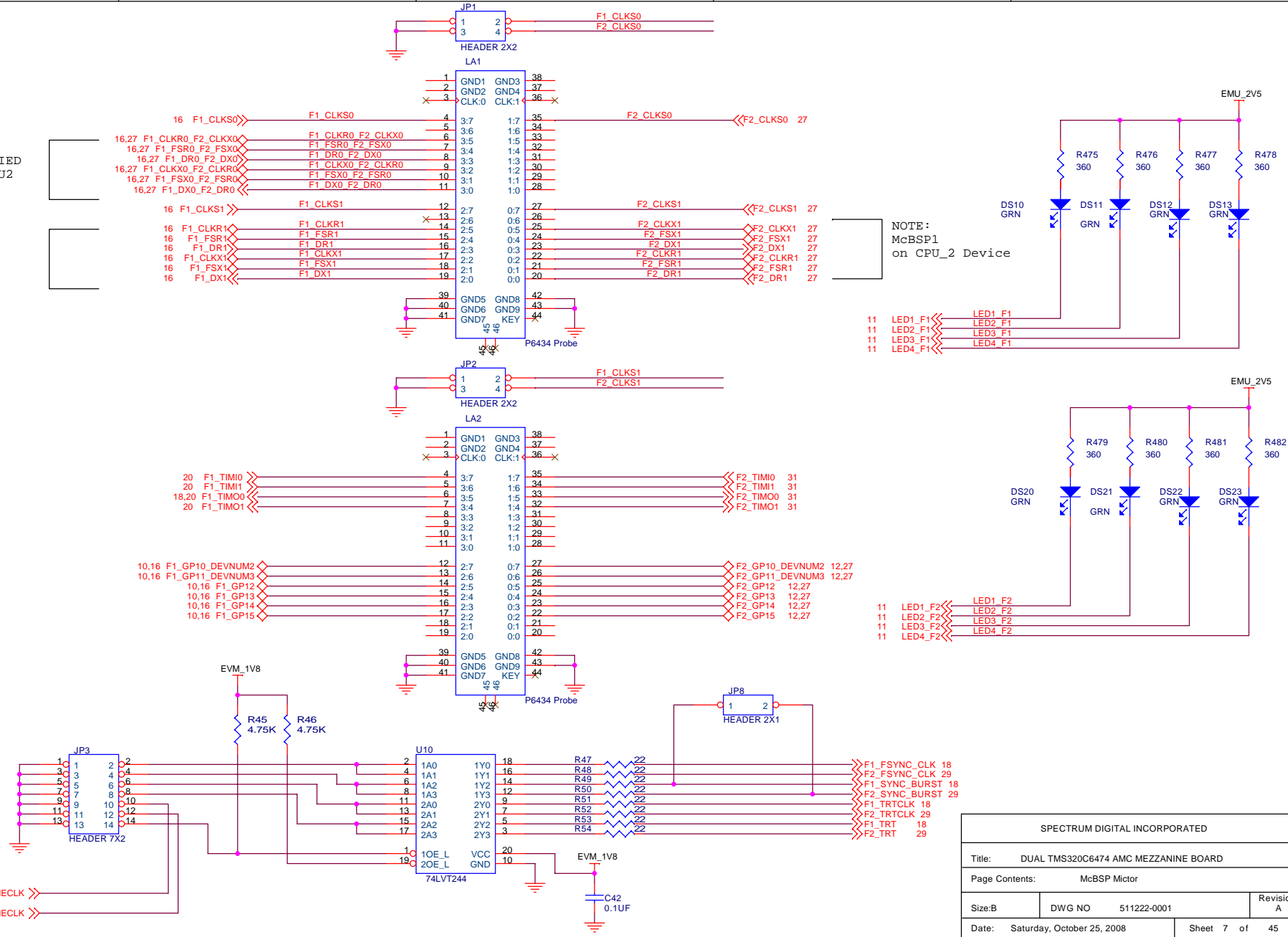


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Page Contents: SRIO CLOCK DOMAIN			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008	Sheet 6 of 45		

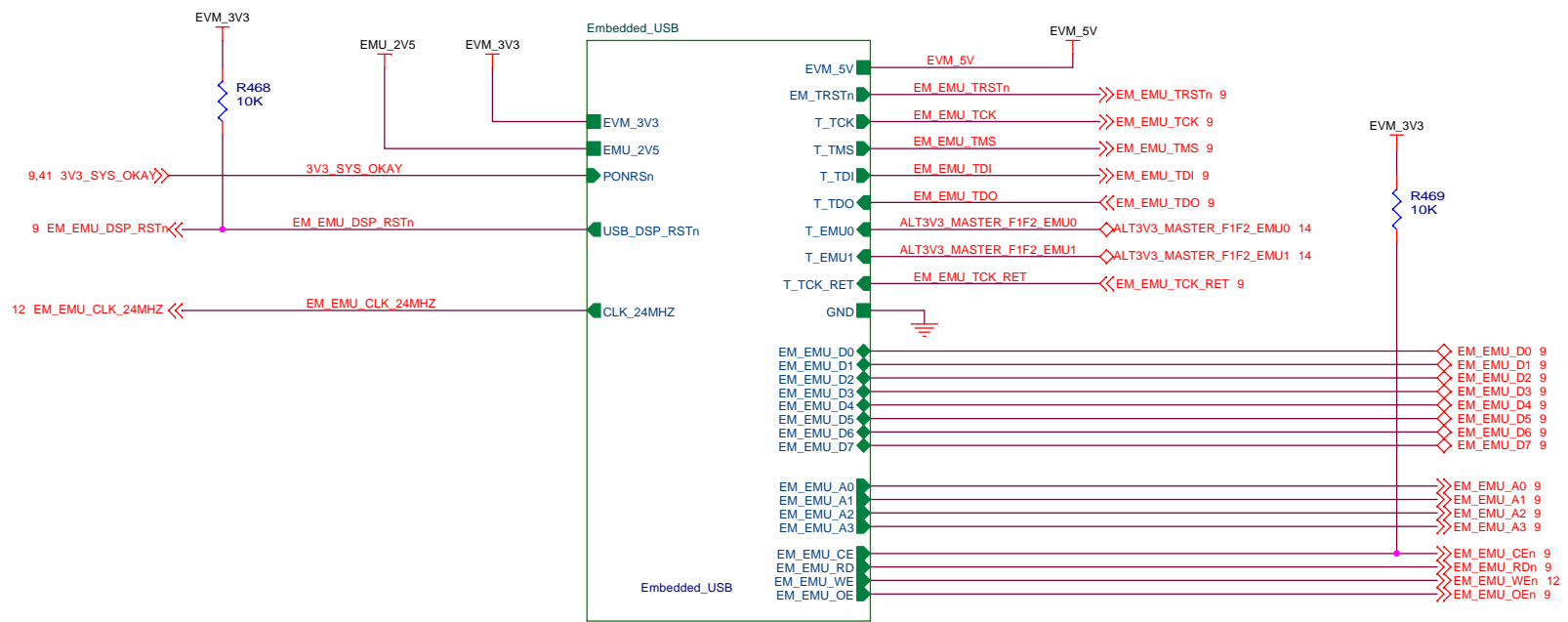
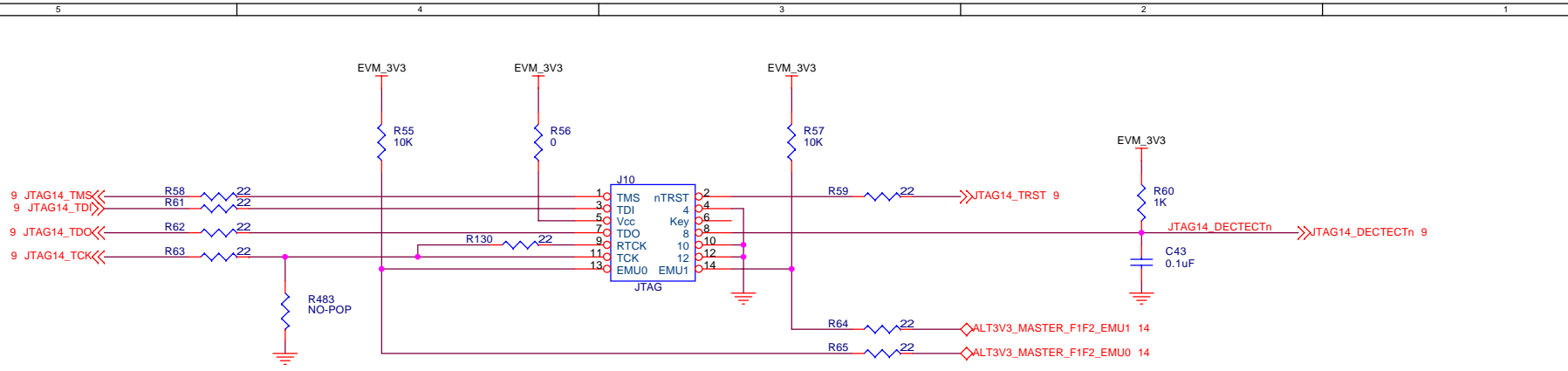
NOTE:  
McBSP0 on CPU1 TIED  
TO McBSP0 on CPU2

NOTE:  
McBSP1 on CPU1  
Device

NOTE:  
McBSP1  
on CPU\_2 Device



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: McBSP Mictor			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008	Sheet 7 of 45		

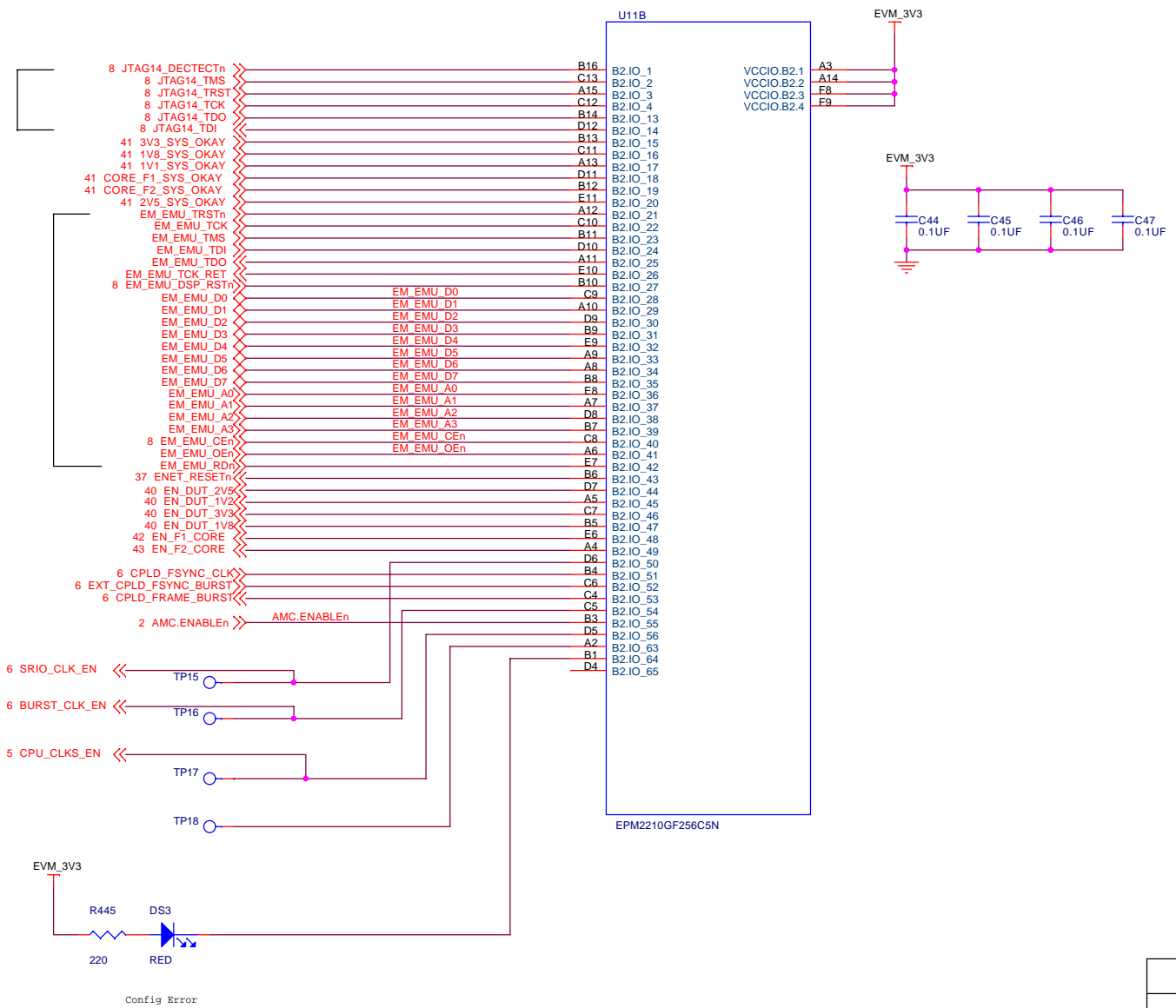


SPECTRUM DIGITAL INCORPORATED			
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Page Contents: McBSP Mictor			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008		Sheet 8 of 45

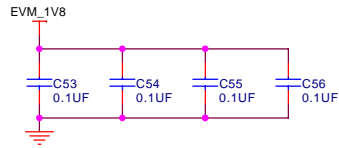
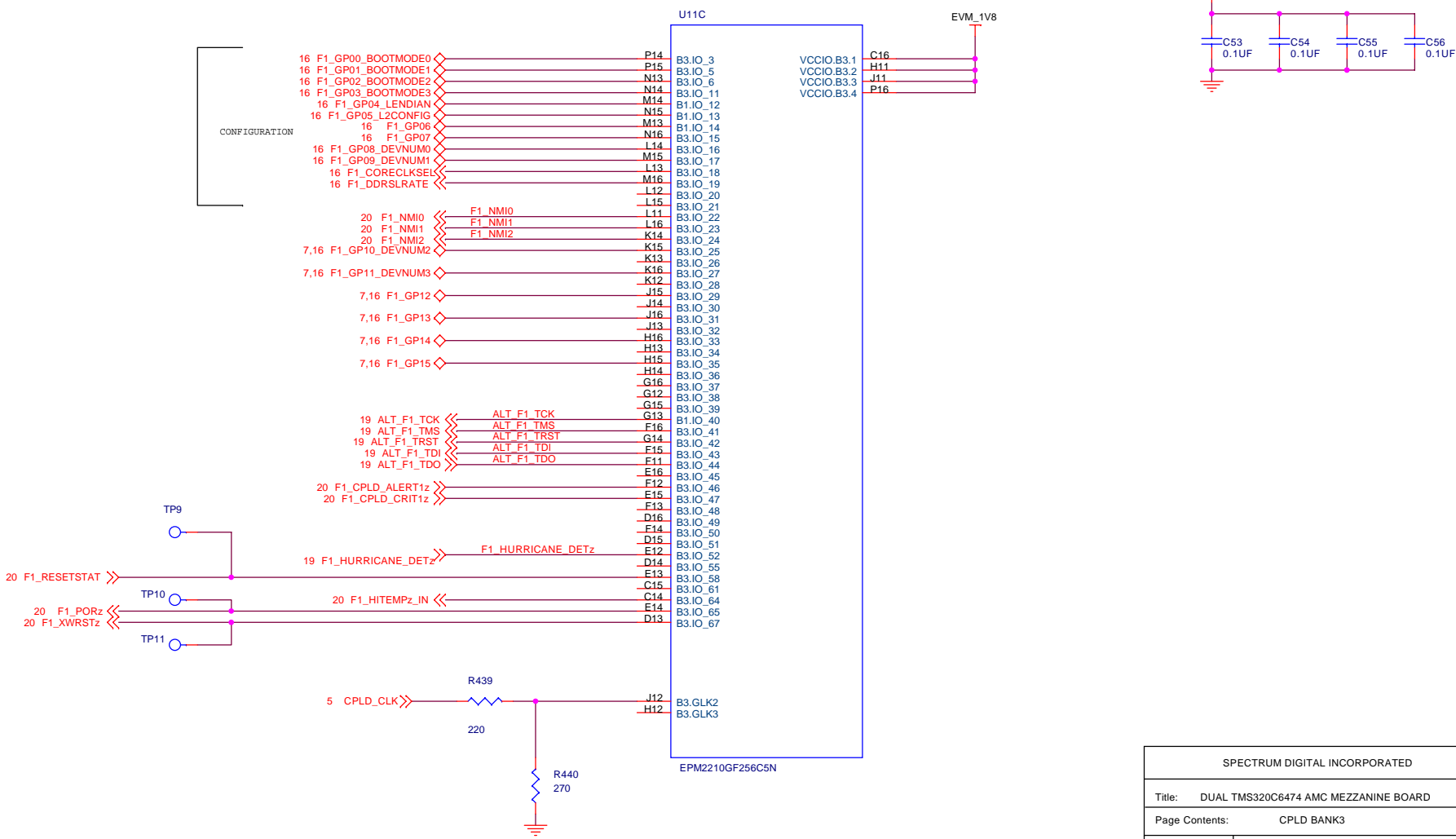


14 PIN JTAG

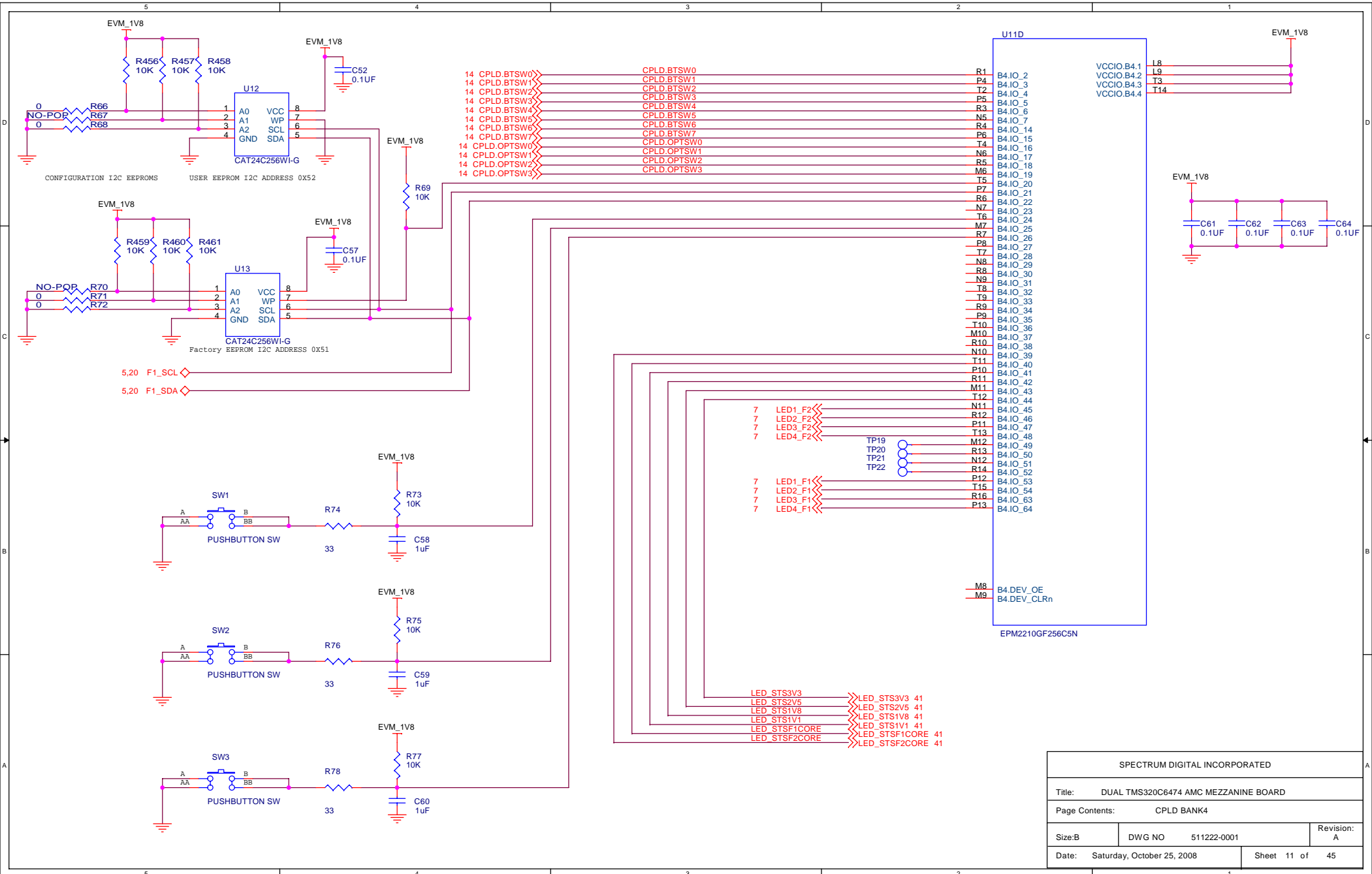
EMBEDDED EMU



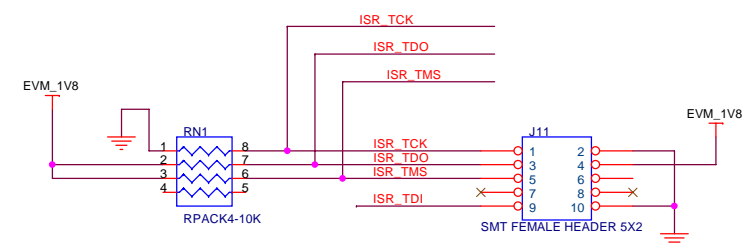
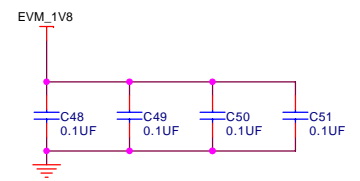
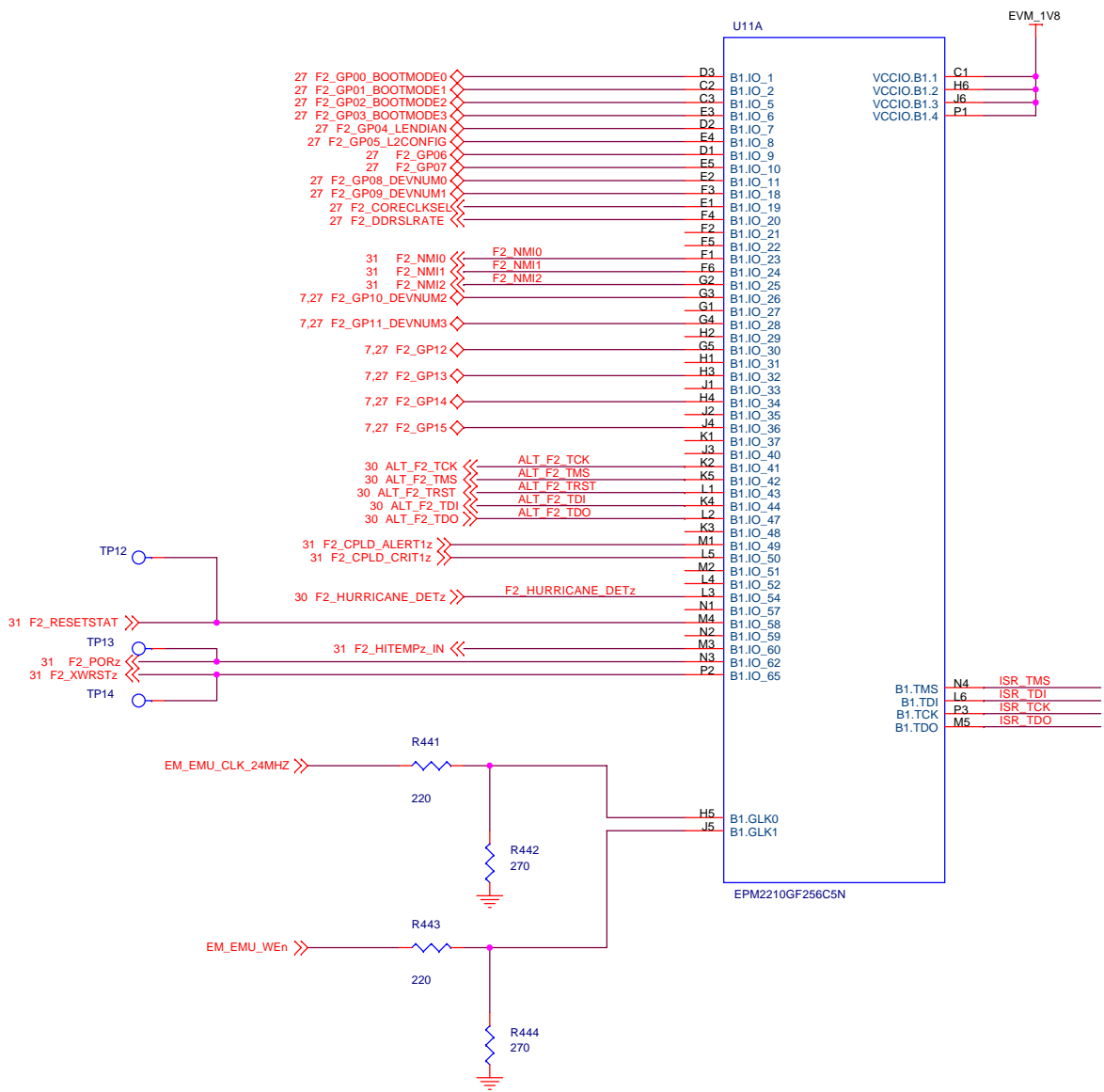
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: CPLD BANK2			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008		Sheet 9 of 45



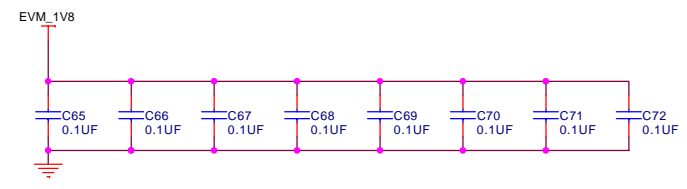
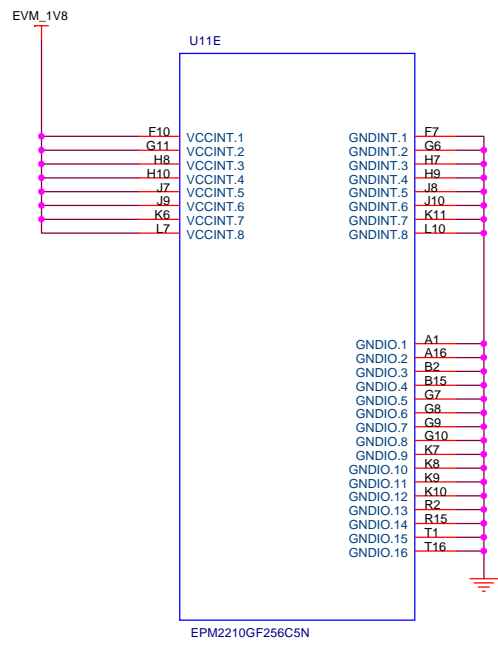
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: CPLD BANK3			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008	Sheet	10 of 45



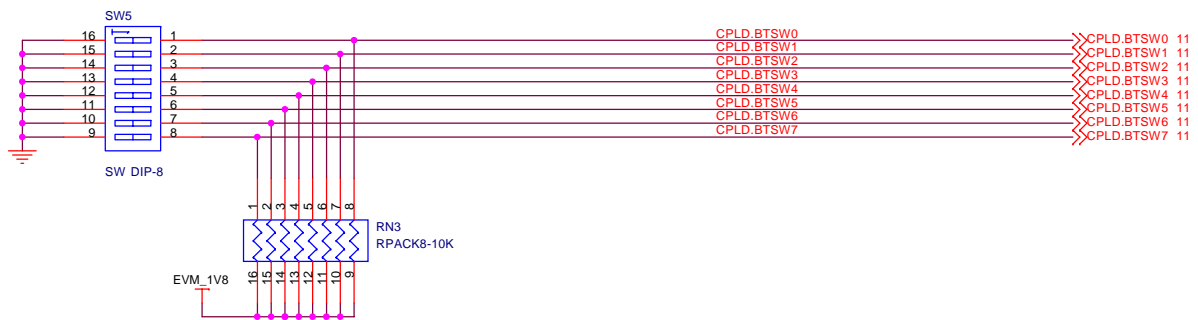
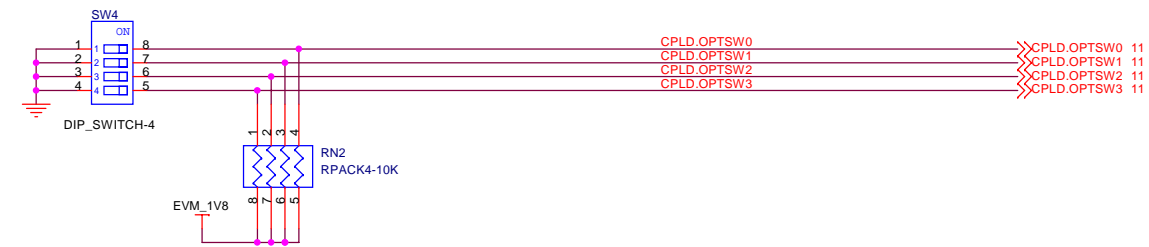
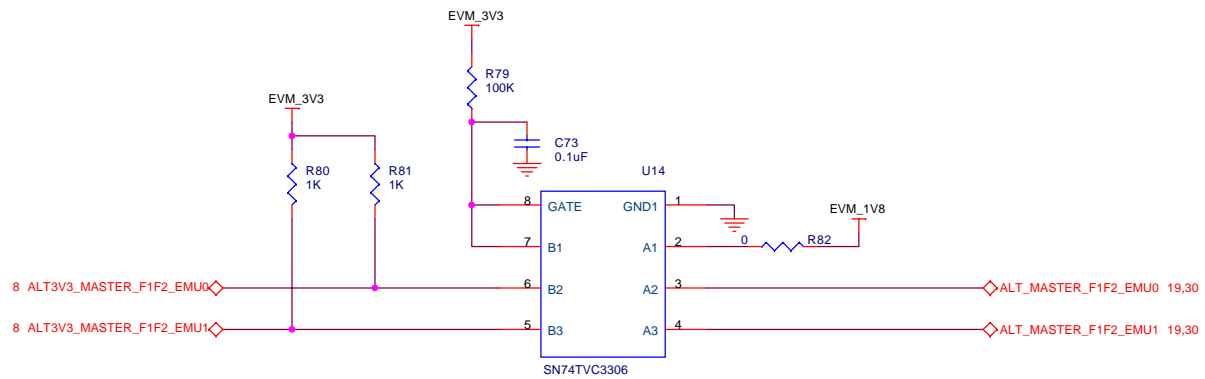
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: CPLD BANK4			
Size: B	DWG NO: 511222-0001	Revision: A	
Date: Saturday, October 25, 2008	Sheet 11 of 45		



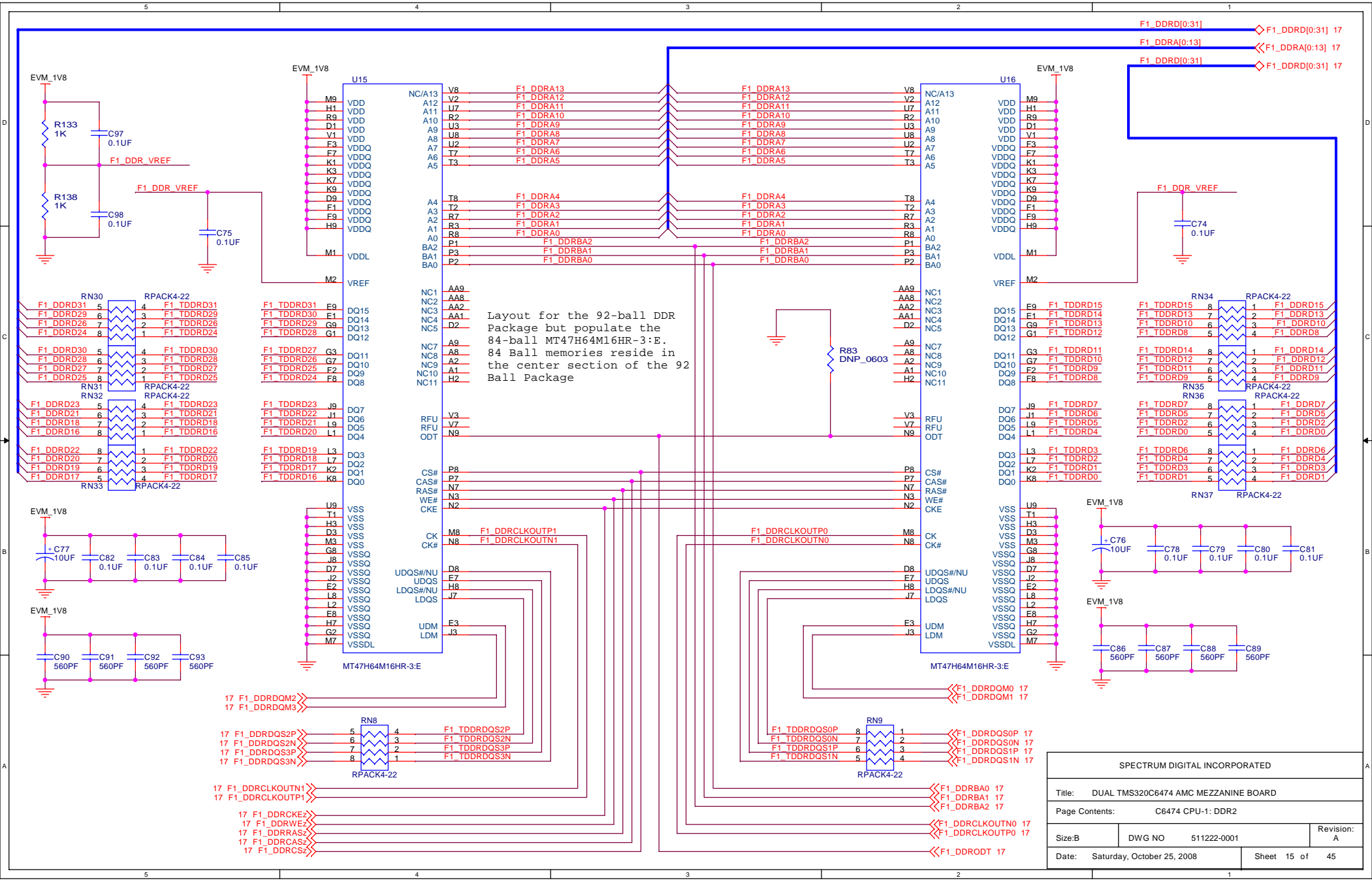
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: CPLD BANK1			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008	Sheet 12 of	45



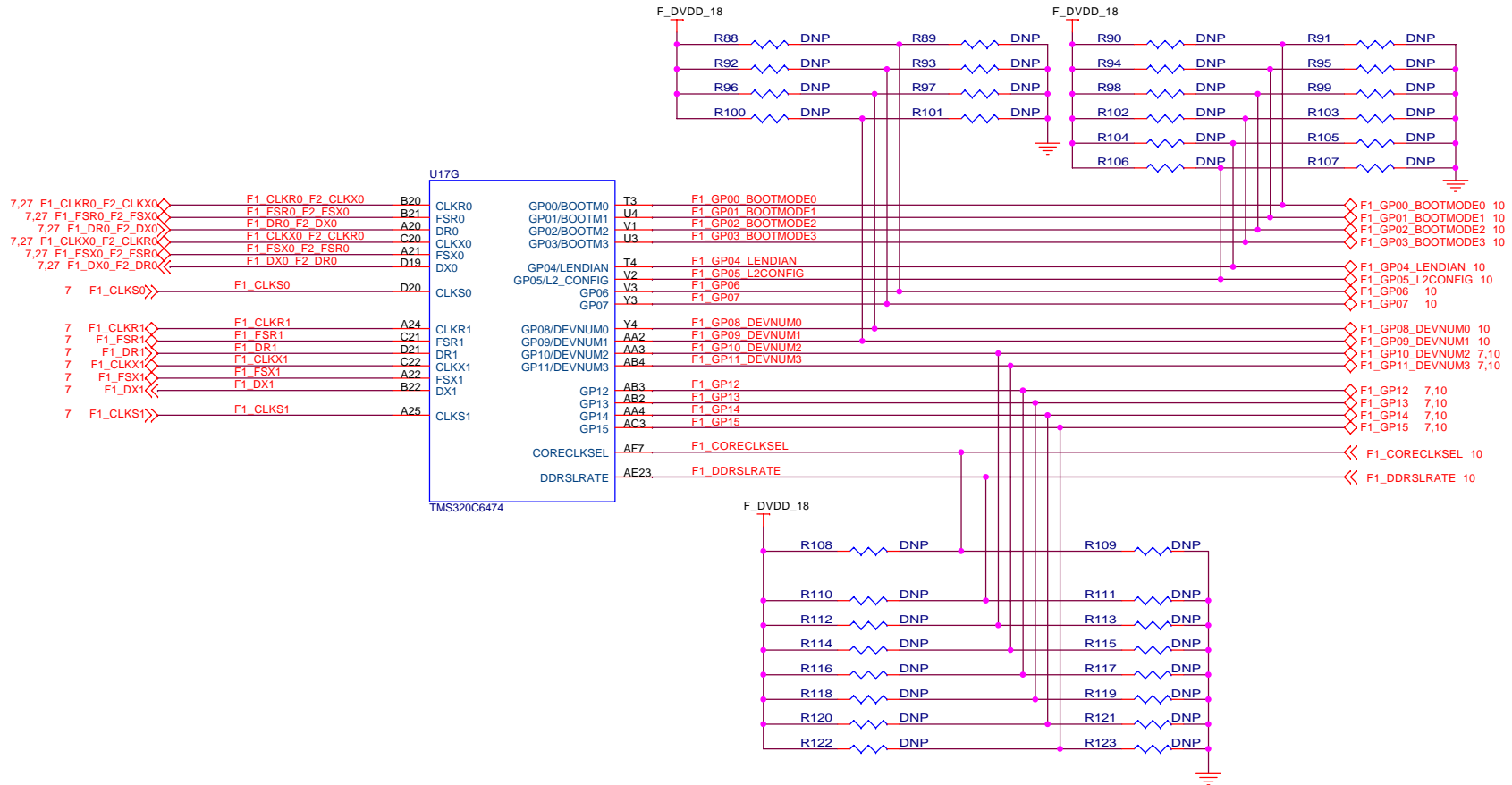
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: CPLD POWER PINS			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008	Sheet 13 of	45



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: BOOT SWITCHES/ EMU PINS VOLTAGE SHIFTER			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008	Sheet 14 of	45

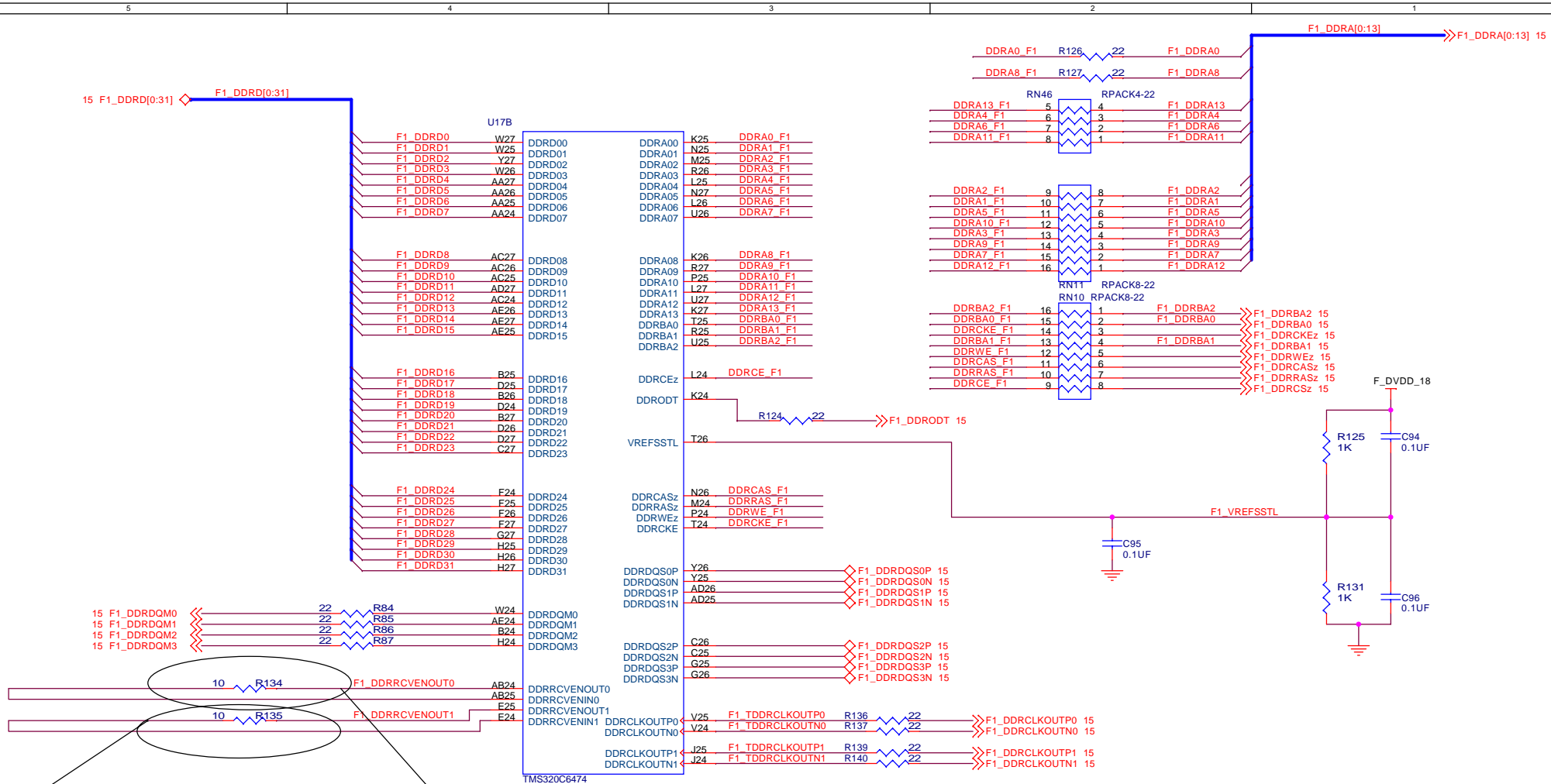


SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: DDR2			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 15 of 45



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: McBSP, GPIO, CONFIG			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008		Sheet 16 of 45

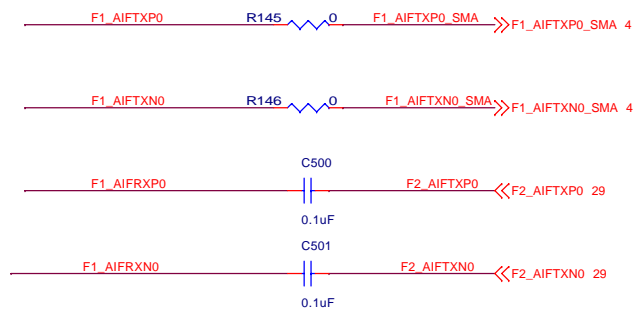
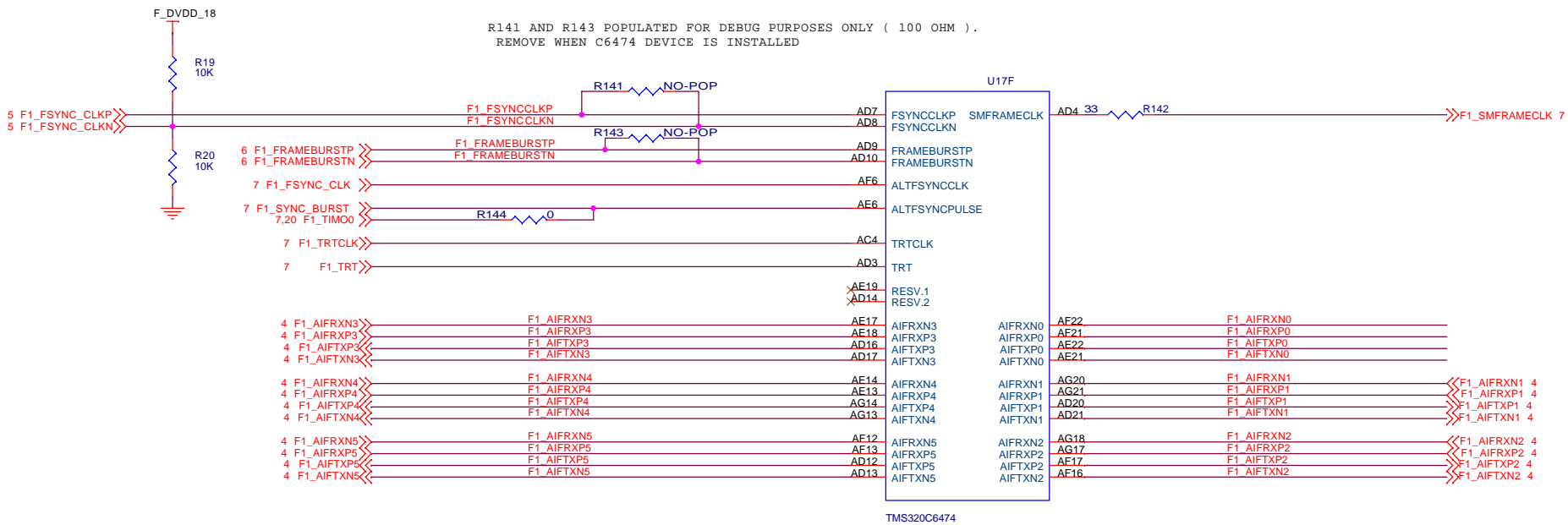




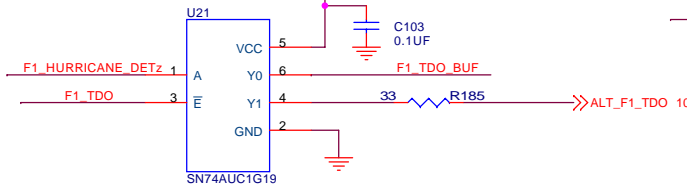
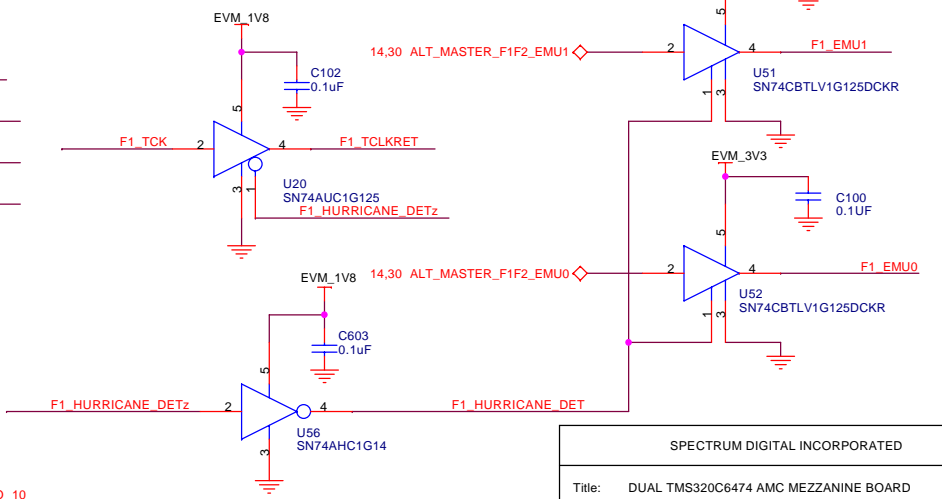
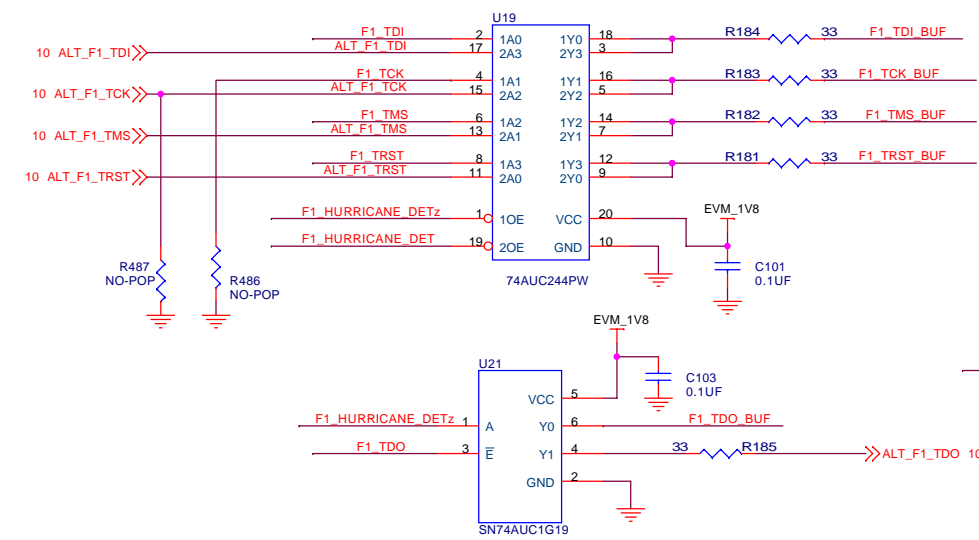
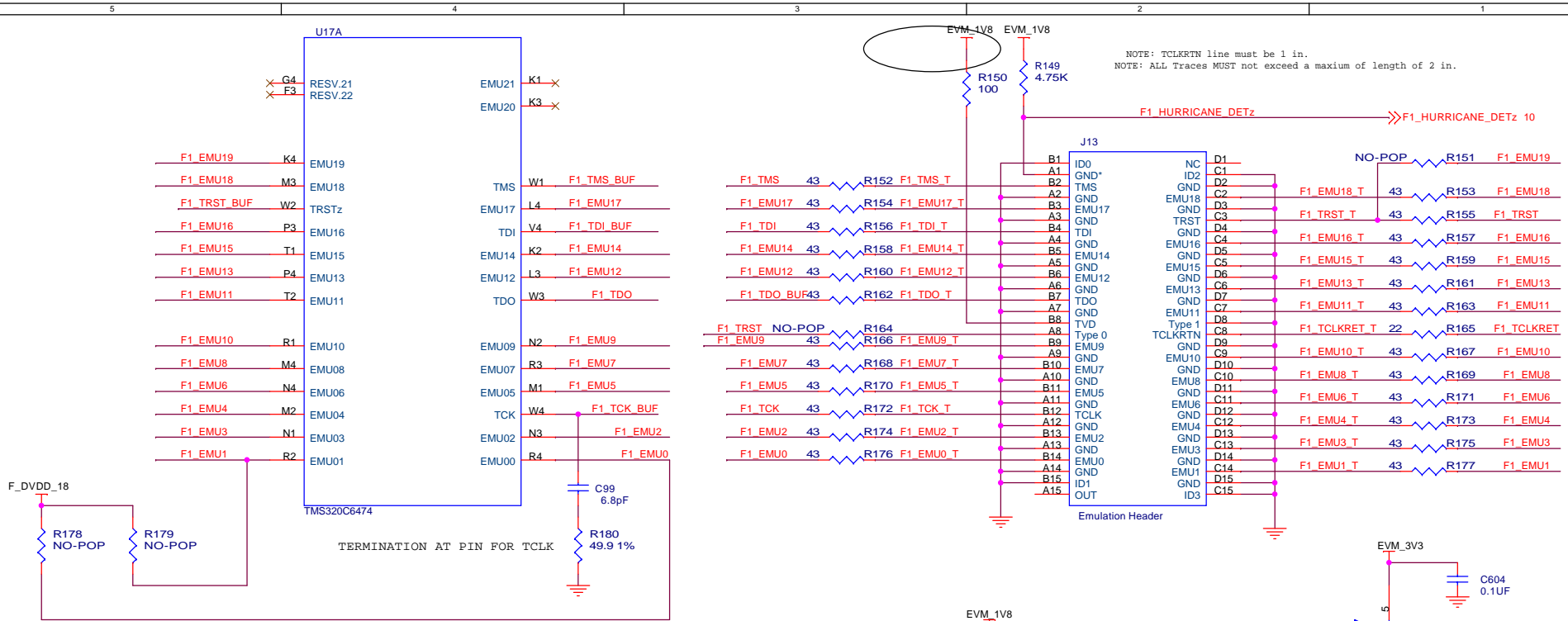
NOTE: Route DDRRCVENOUT0 signals needs to run to DDR memories near D31-D16 and back to DDRRCVENIN0

NOTE: Route DDRRCVENOUT0 signals needs to run to DDR memories near D15-D0 and back to DDRRCVENIN0

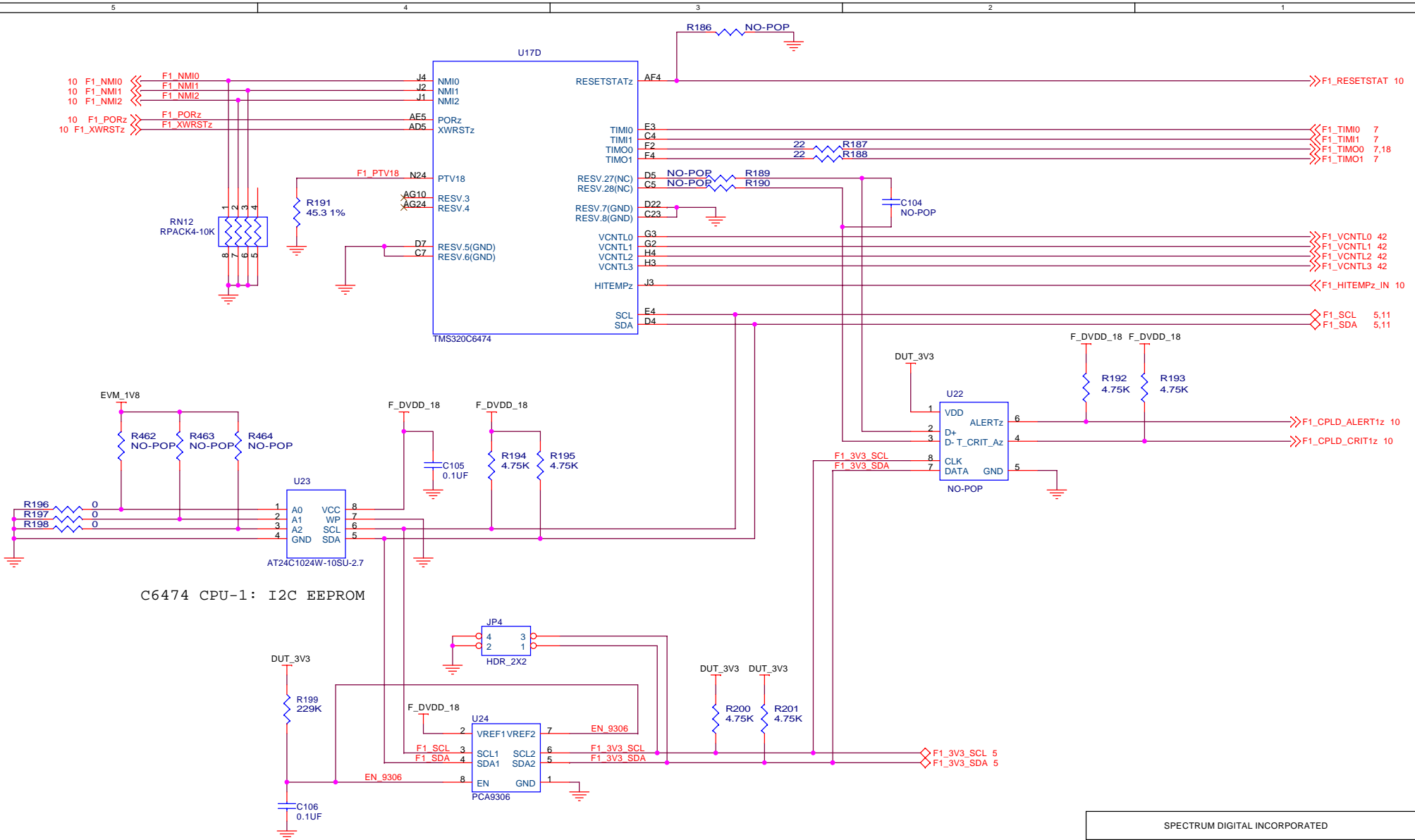
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Page Contents: C6474 CPU-1: DDR2 interface			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008	Sheet	17 of 45



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: AIF and FSYNC Interfaces			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008		Sheet 18 of 45



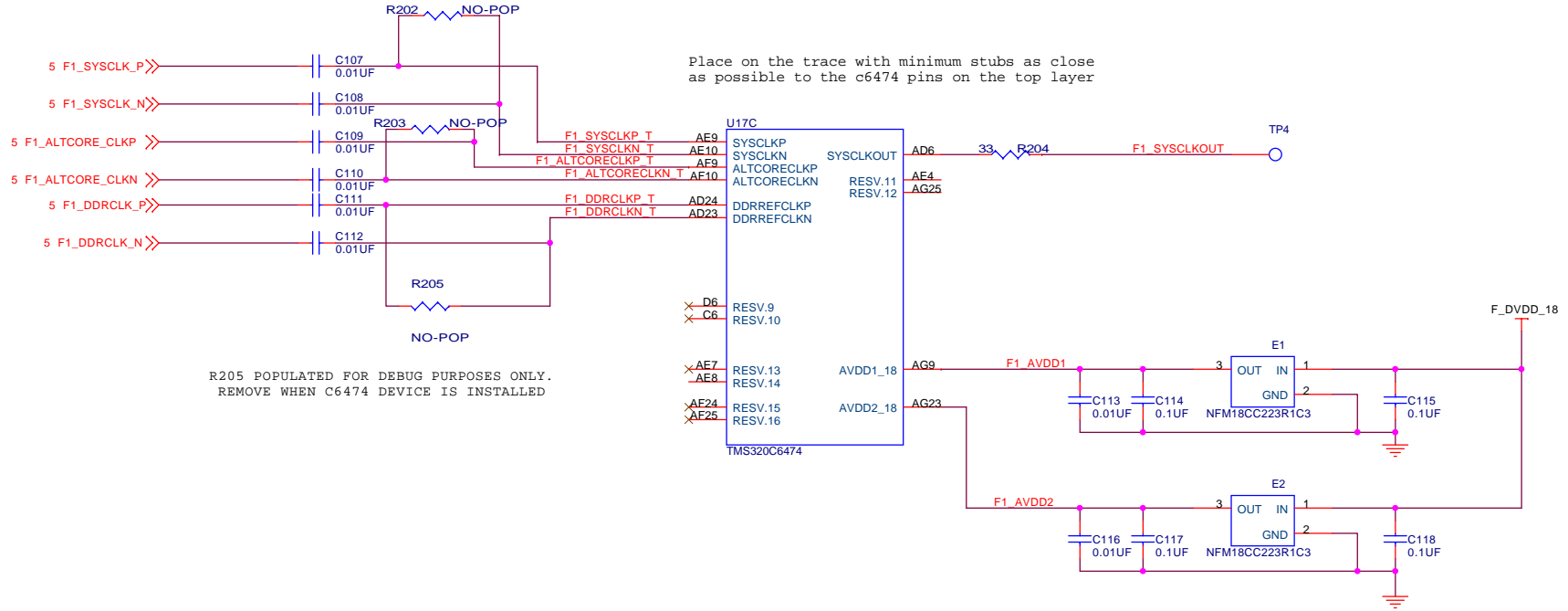
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Page Contents: C6474 CPU-1: Emulation Interface			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008	Sheet 19 of 45		



C6474 CPU-1: I2C EEPROM

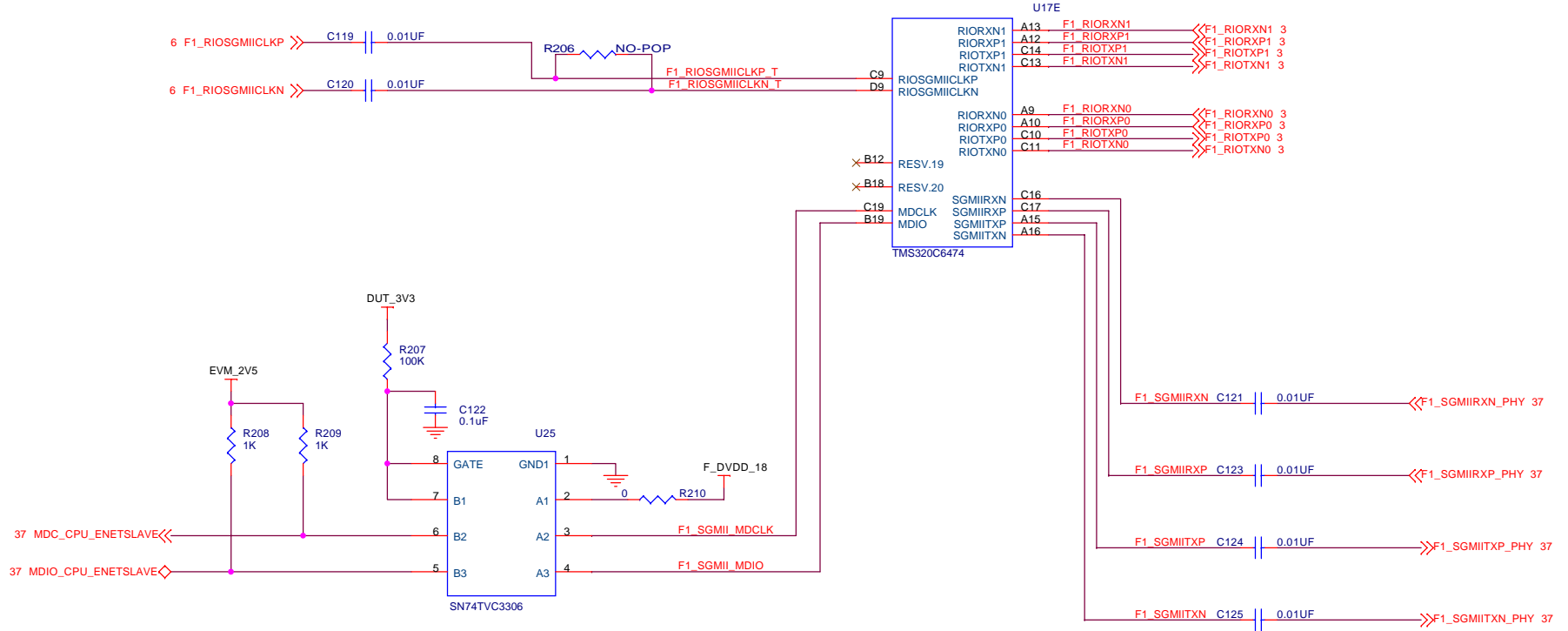
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: I2C,Timer,VCNTL,Reset/NMI,Misc Test			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 20 of 45	

R202 AND R203 POPULATED FOR DEBUG PURPOSES ONLY ( 100 OHM ).  
 REMOVE WHEN C6474 DEVICE IS INSTALLED



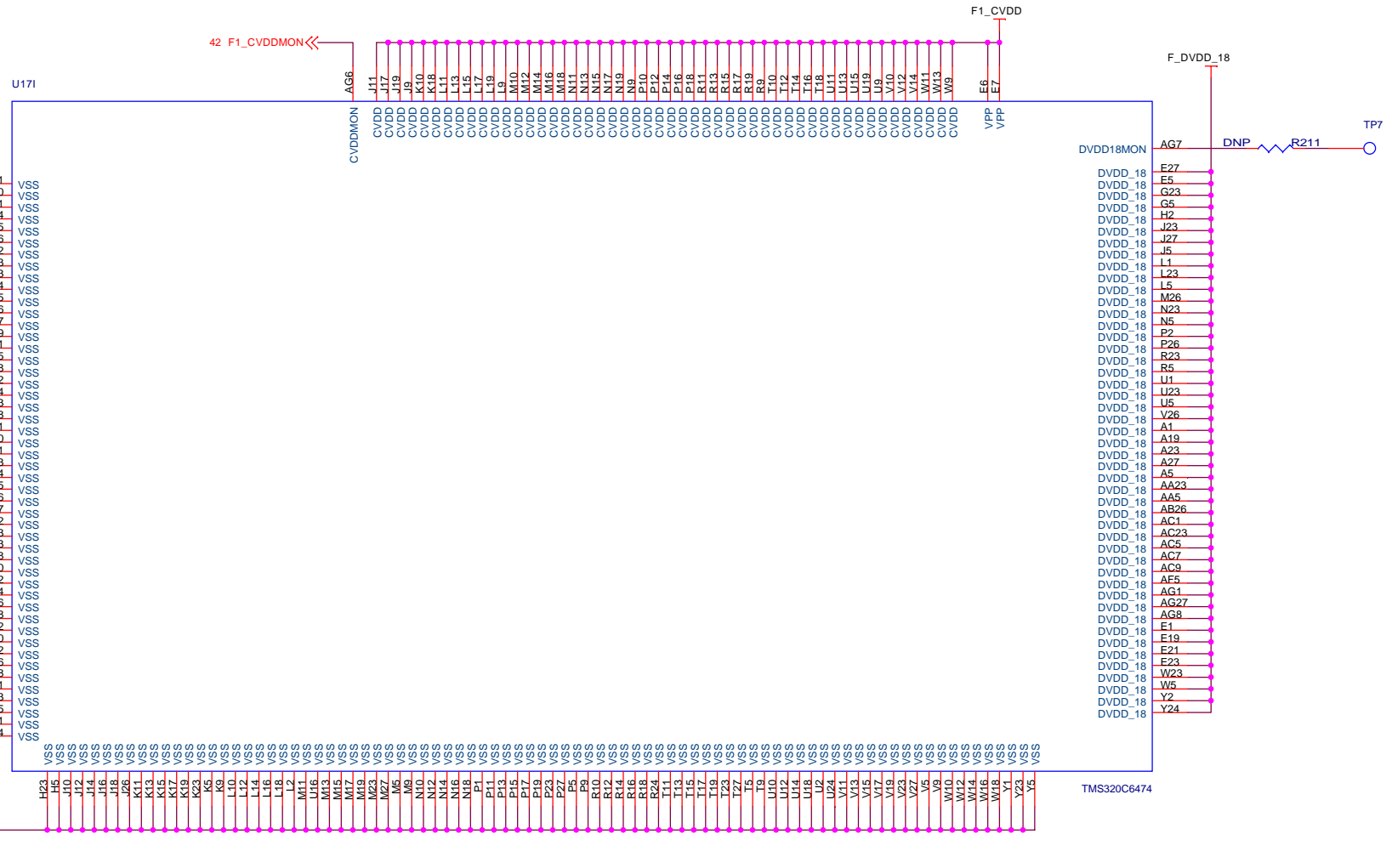
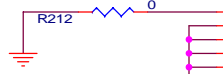
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: PLLs			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 21 of 45

R206 FOR POPULATE FOR DEBUG PURPOSES ONLY( 100 OHM ).  
REMOVE WHEN C6474 DEVICE IS INSTALLED

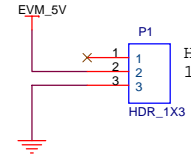
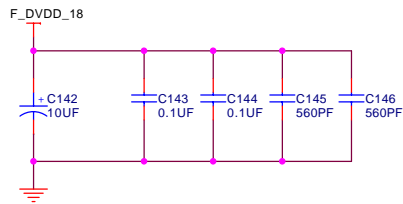
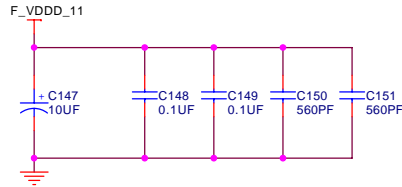
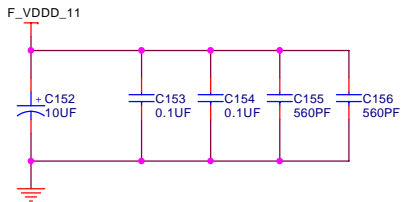
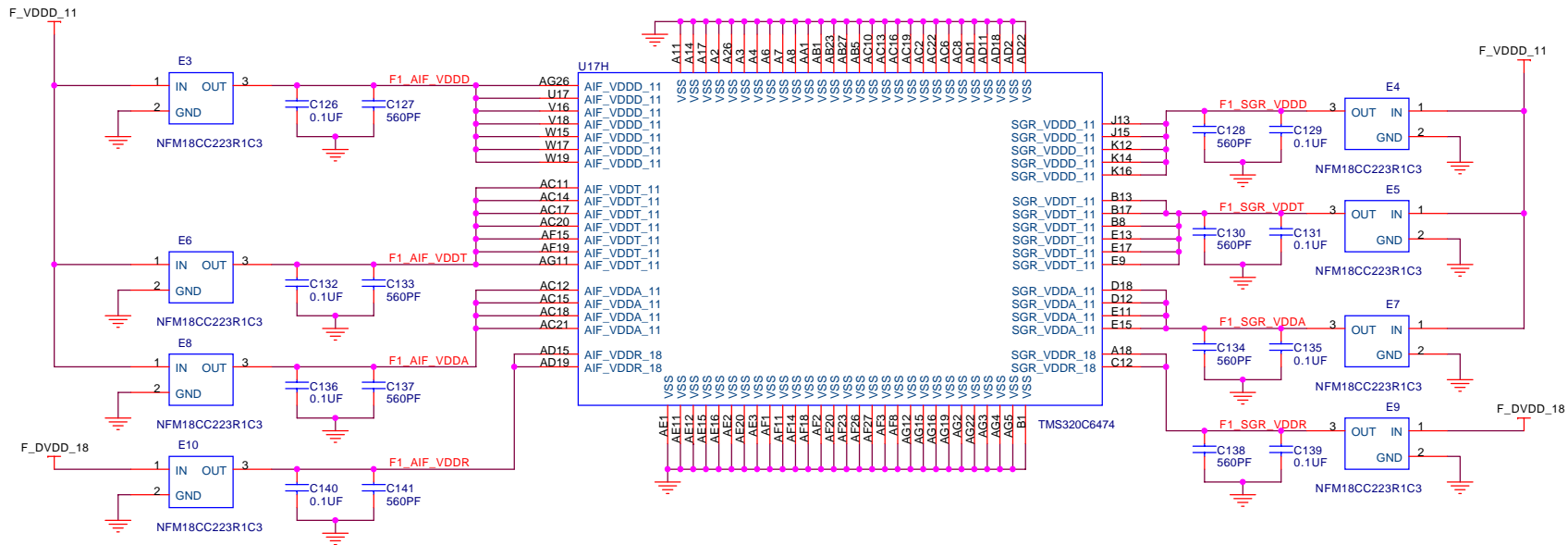


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Page Contents: C6474 CPU-1: SRIO, SGMII			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 22 of 45

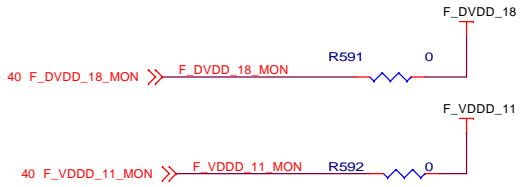
Resistor on top layer. Allows probing of internal VSS.



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: Power Pins; CVDD, DVDD_18, VSS			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 23 of 45	



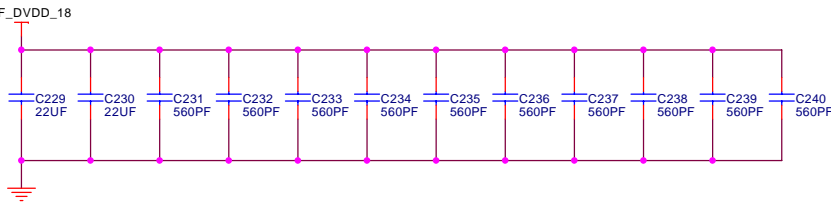
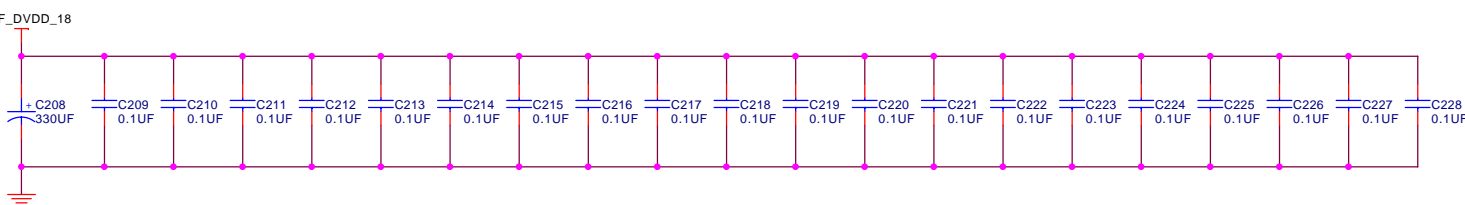
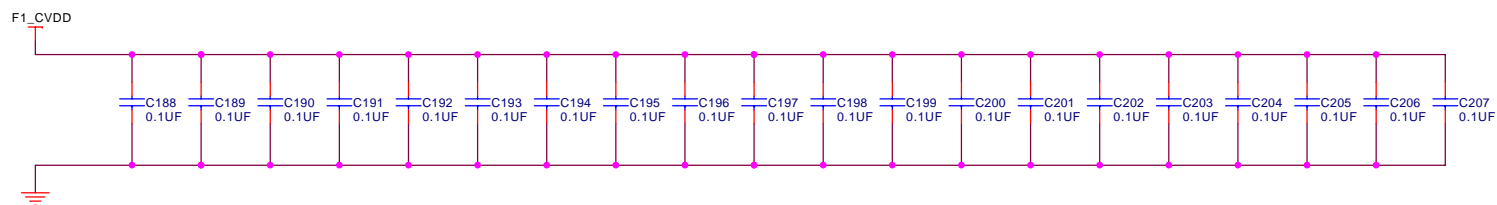
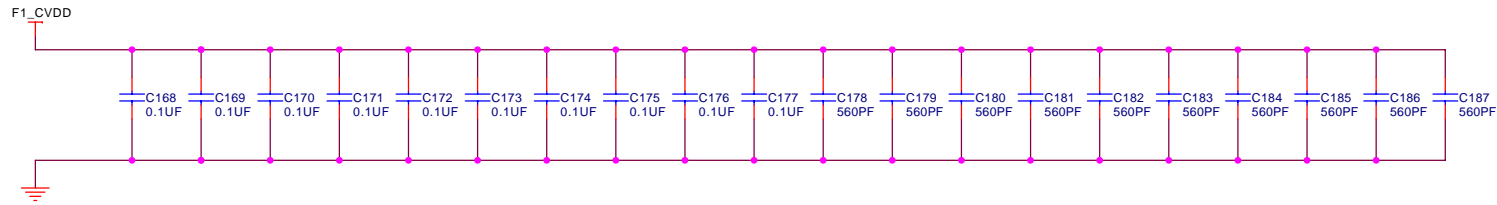
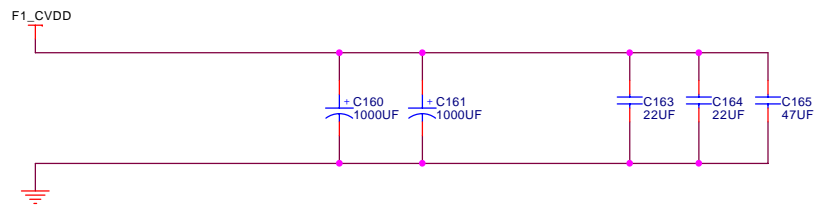
Header for Fan Power. Place within 1 inch of DSP.



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: Power pins; SERDES PWR, VSS			
Size: B	DWG NO	511222-0001	Revision: B
Date: Saturday, October 25, 2008		Sheet 24 of 45	

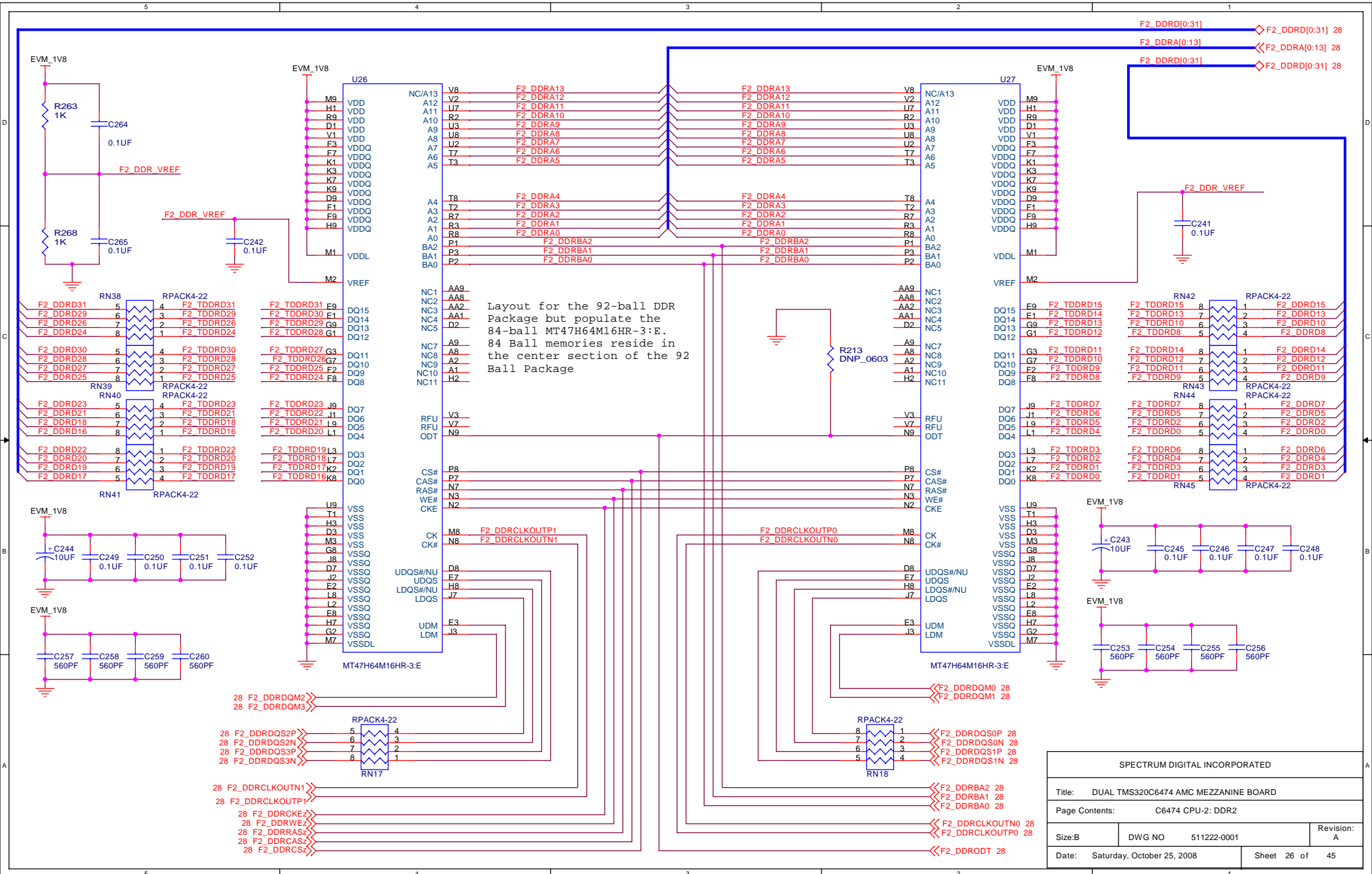


5 4 3 2 1



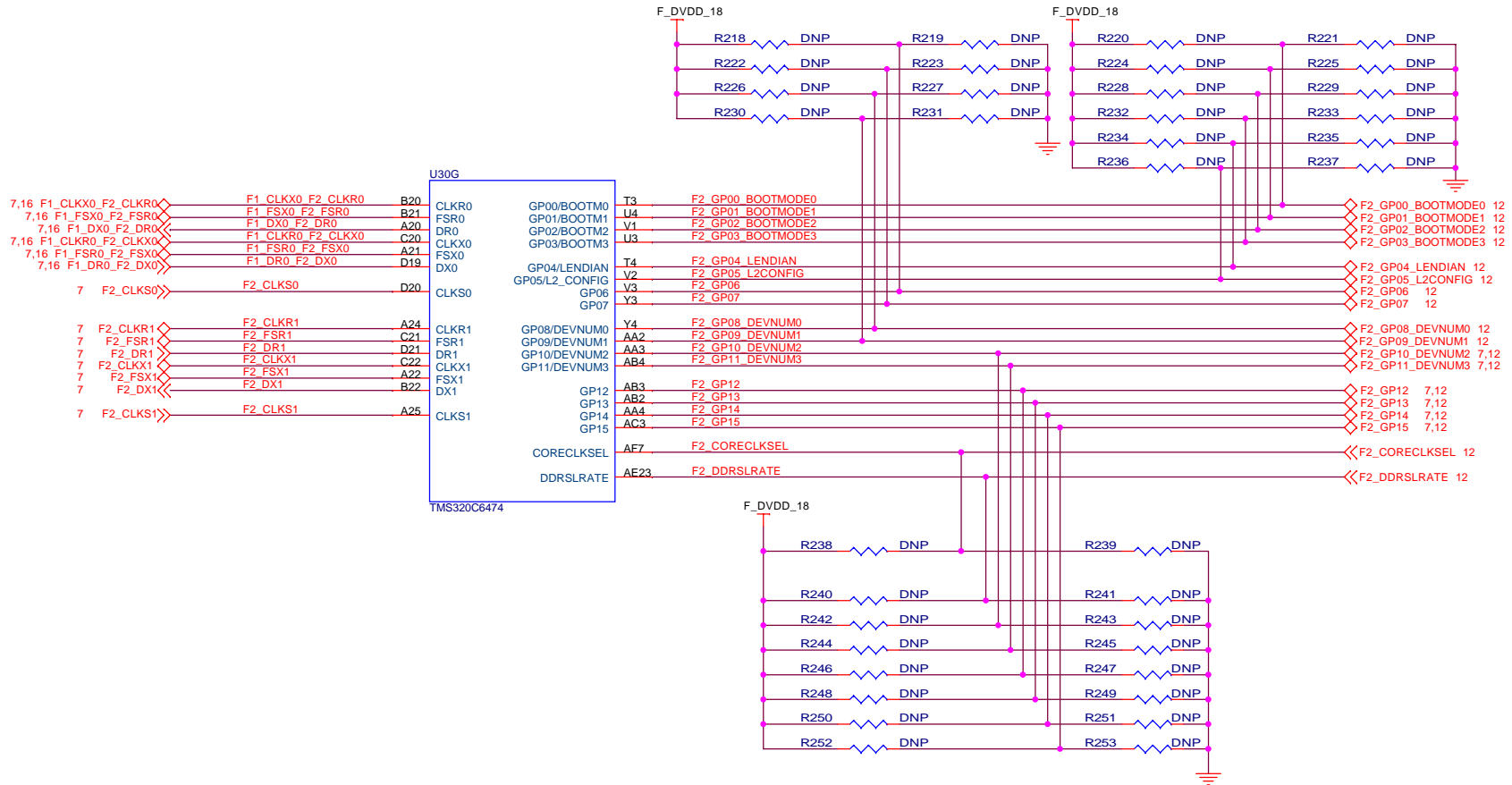
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Page Contents: C6474 CPU-1: Decoupling; CVDD and DVDD_18			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 25 of 45

5 4 3 2 1

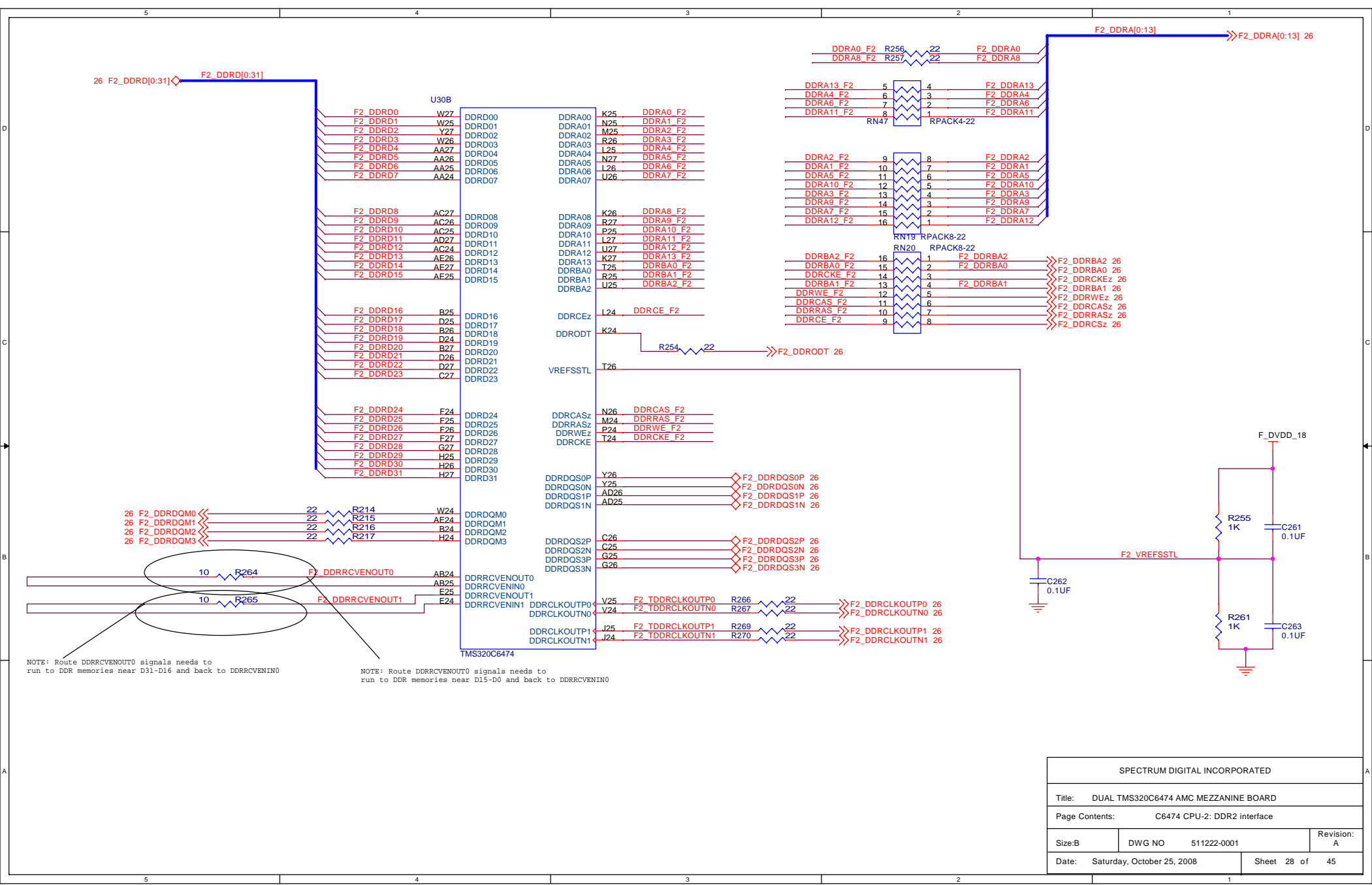


Layout for the 92-ball DDR Package but populate the 84-ball MT47H64M16HR-3:E. 84 Ball memories reside in the center section of the 92 Ball Package

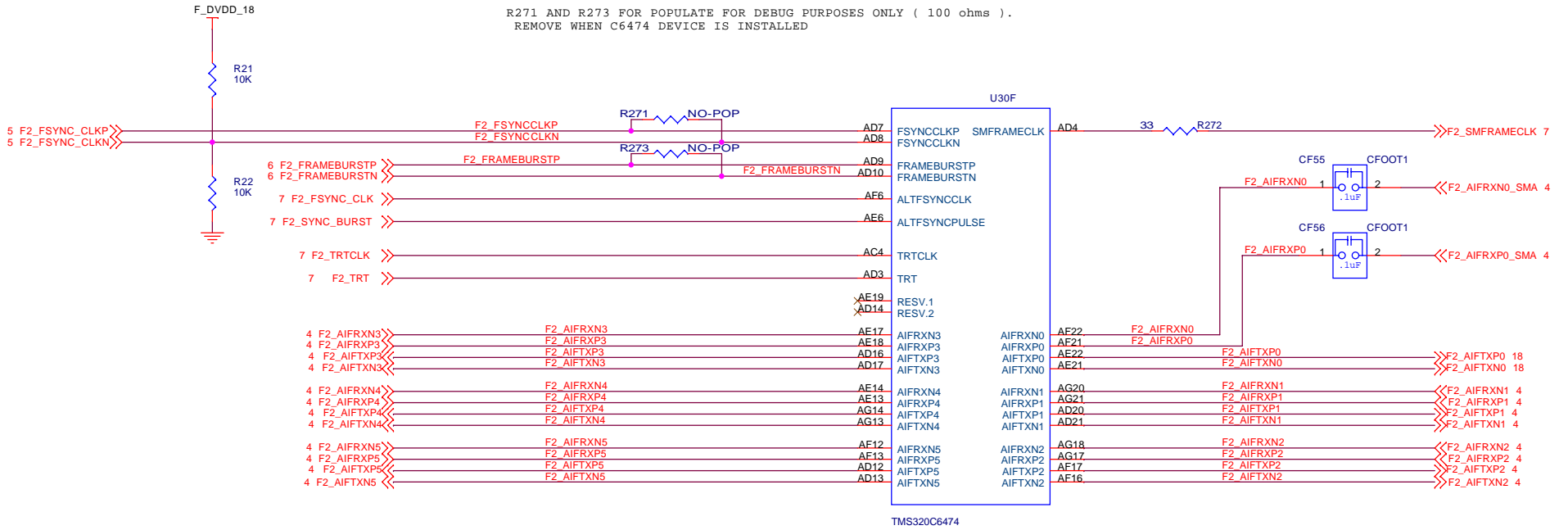
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Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 26 of 45



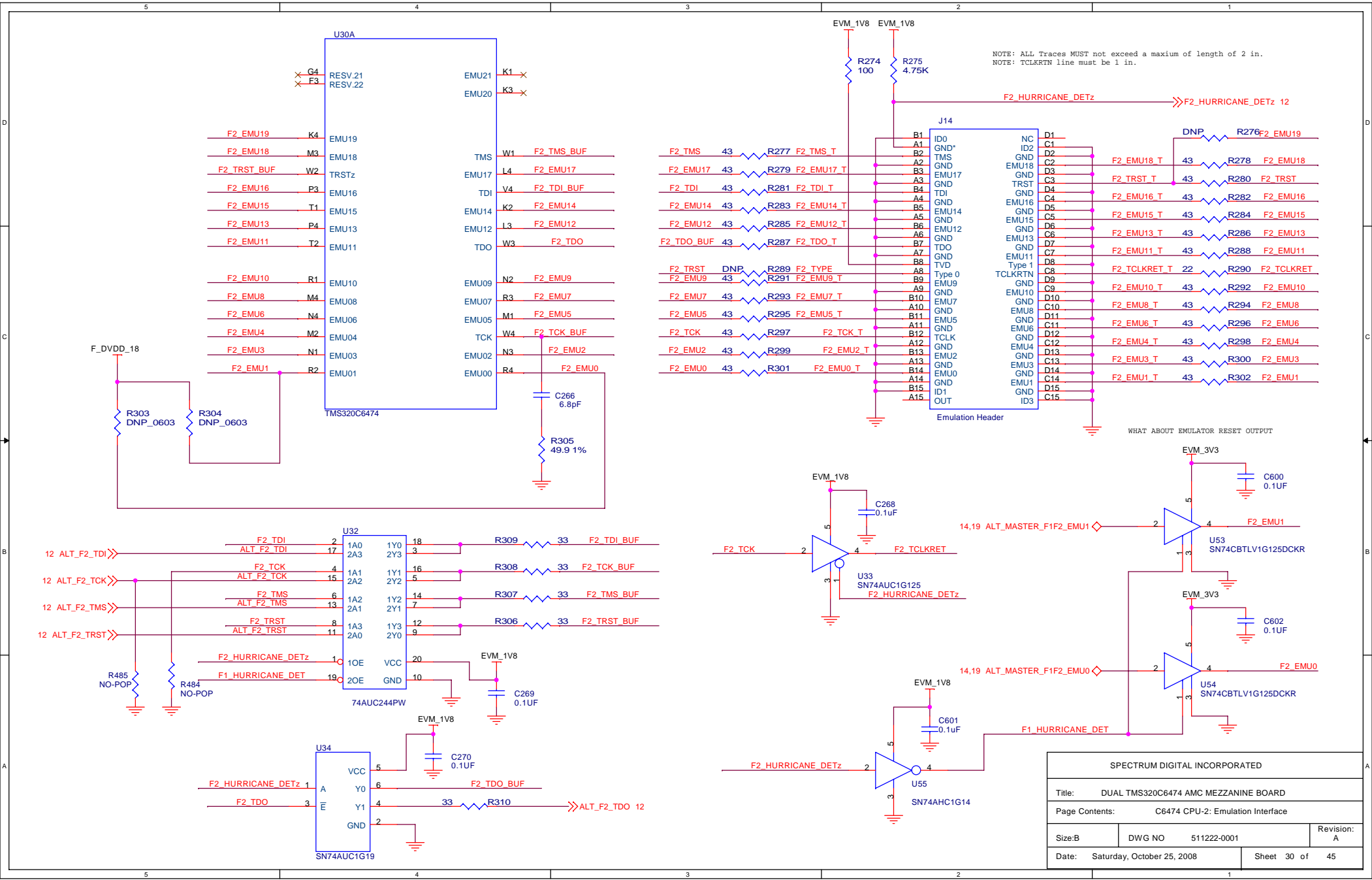
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: McBSP, GPIO, CONFIG			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008		Sheet 27 of 45



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: DDR2 interface			
Size: B	DWG NO	511222-0001	Revision: A
Date:	Saturday, October 25, 2008	Sheet 28 of	45

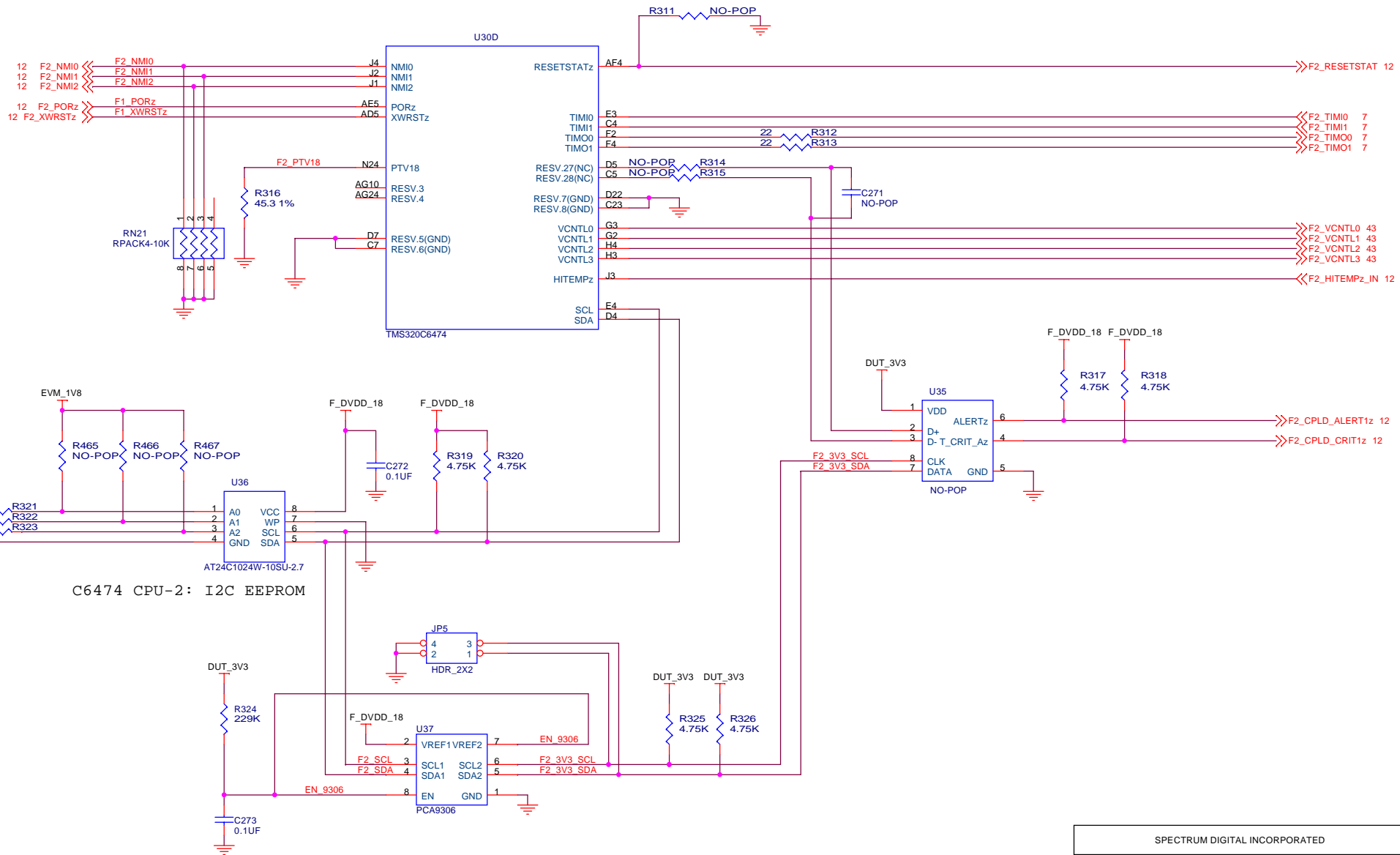


SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: AIF and FSYNC Interfaces			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 29 of 45	



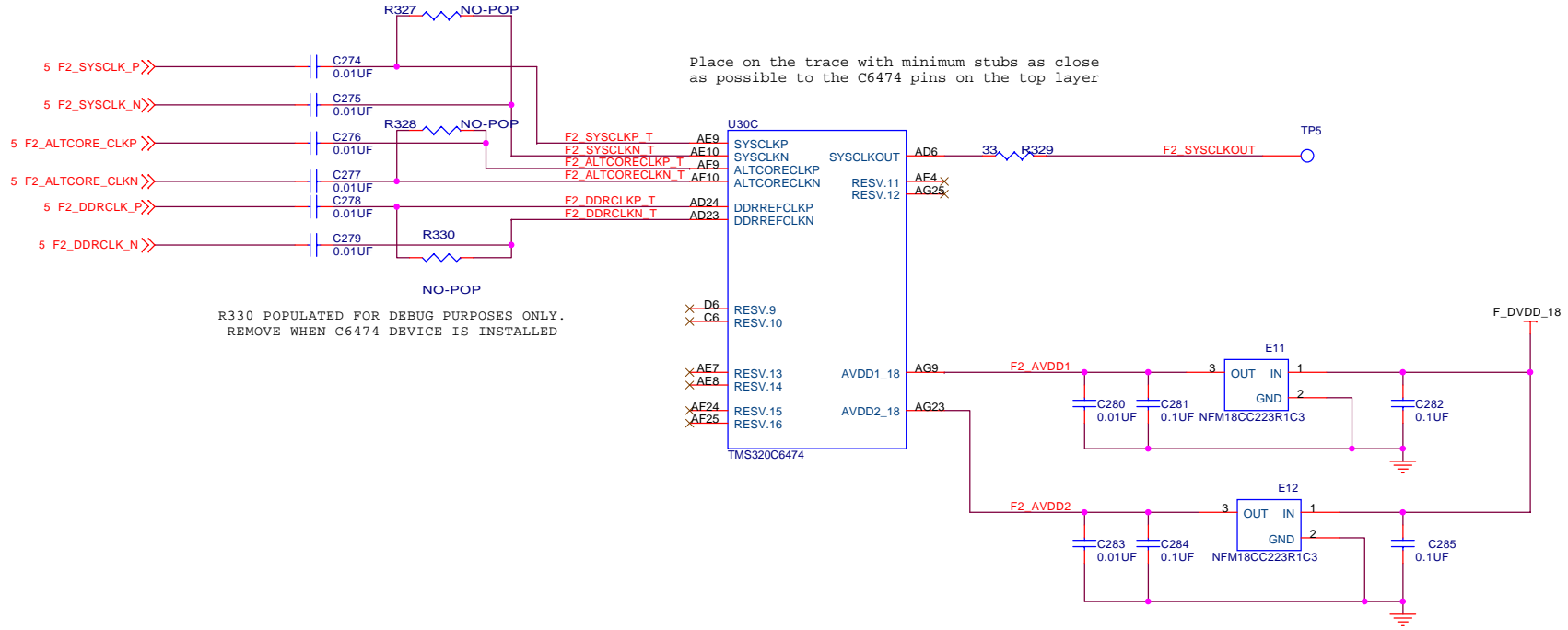
NOTE: ALL Traces MUST not exceed a maximum of length of 2 in.  
NOTE: TCLKRTN line must be 1 in.

SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: Emulation Interface			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008	Sheet 30 of 45		



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: I2C,Timer,VCNTL,Reset/NMI,Misc Test			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 31 of 45	

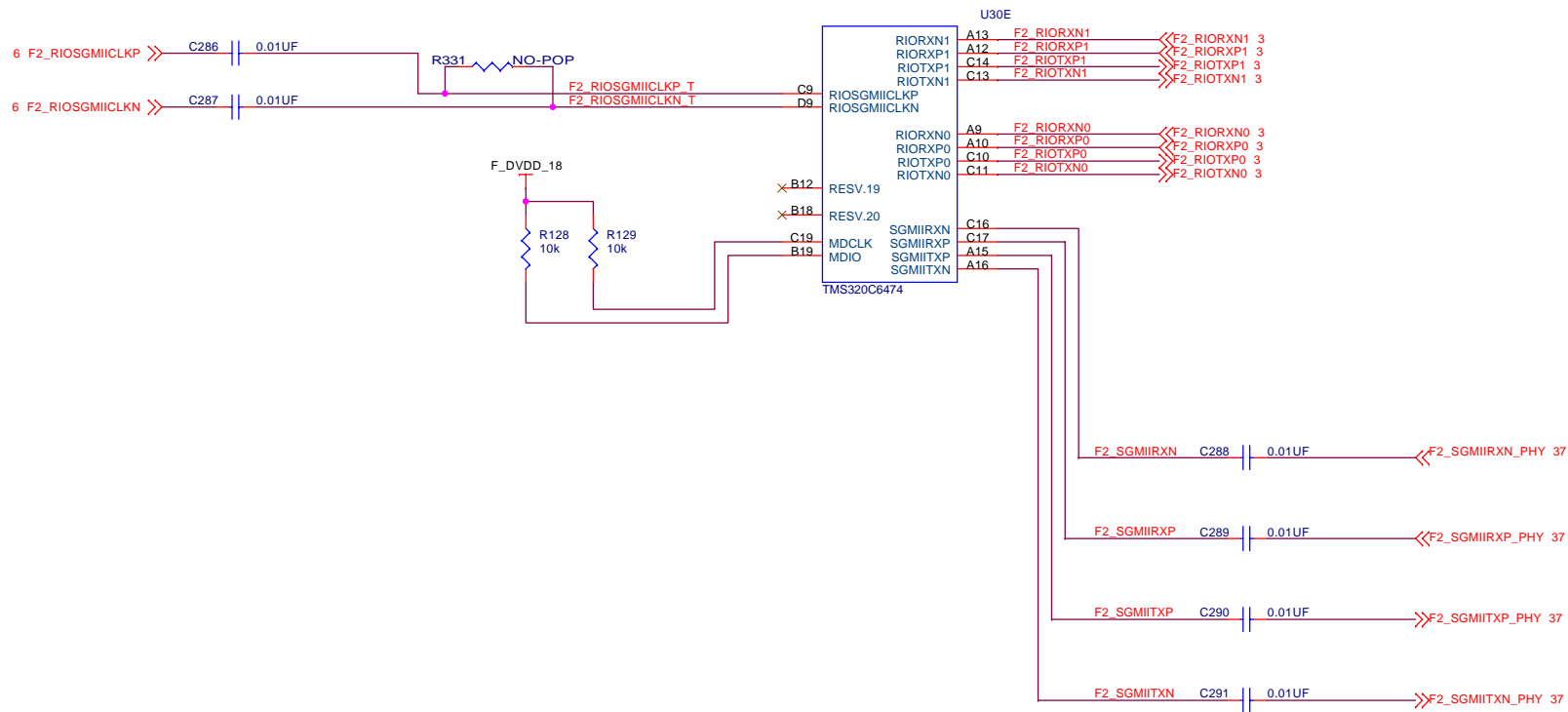
R327 AND R328 AND R330 POPULATED FOR DEBUG PURPOSES ONLY ( 100 OHM).  
 REMOVE WHEN C6474 DEVICE IS INSTALLED



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: PLLs			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 32 of 45	

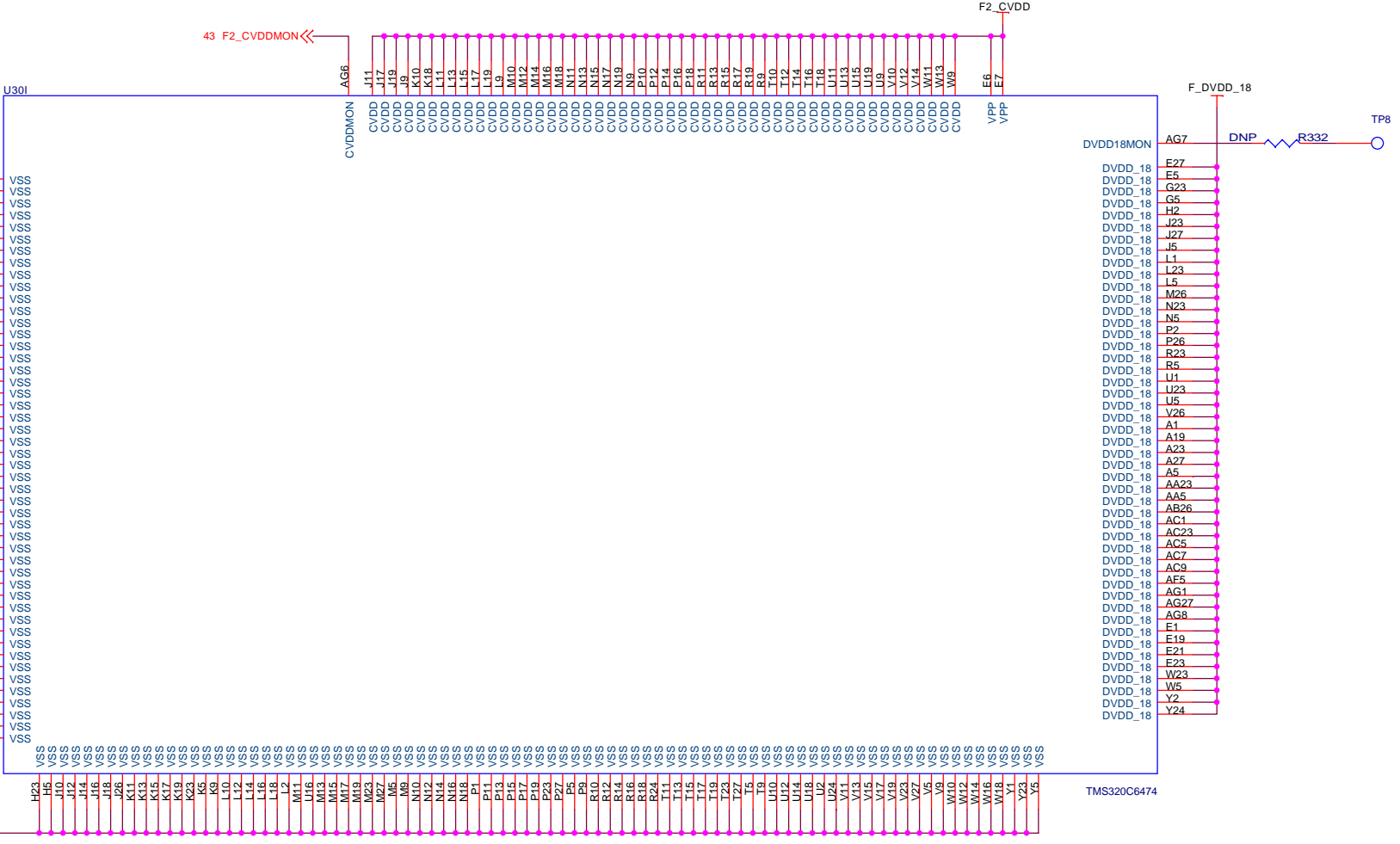
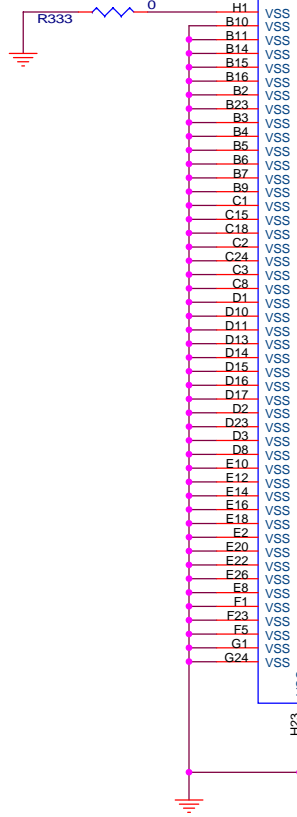


R331 POPULATED FOR DEBUG PURPOSES ONLY.  
 REMOVE WHEN C6474 DEVICE IS INSTALLED

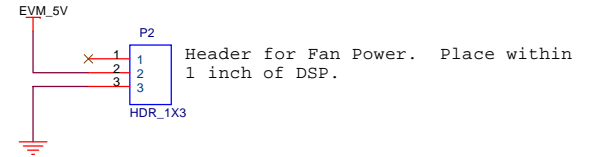
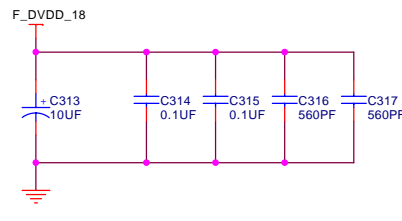
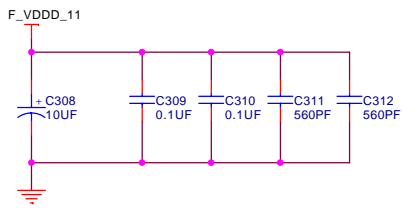
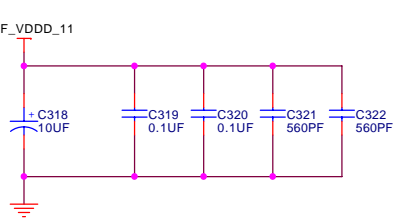
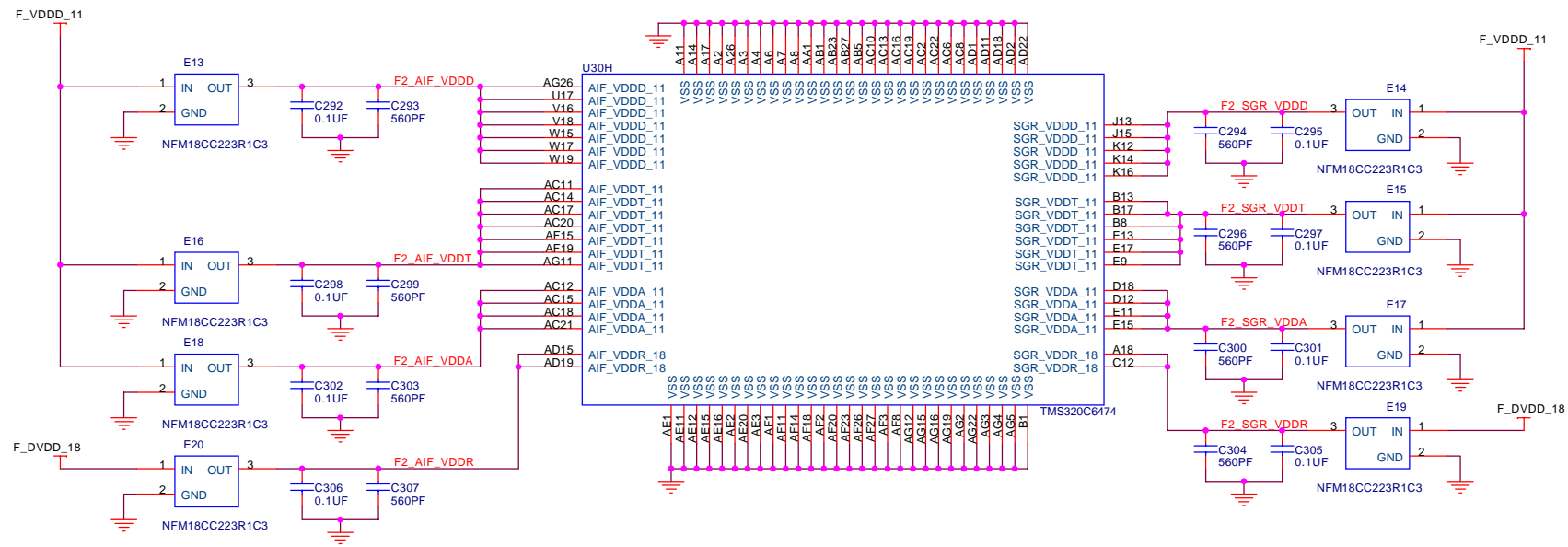


SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: SRIO, SGMII			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 33 of 45

Resistor on top layer. Allows probing of internal VSS.

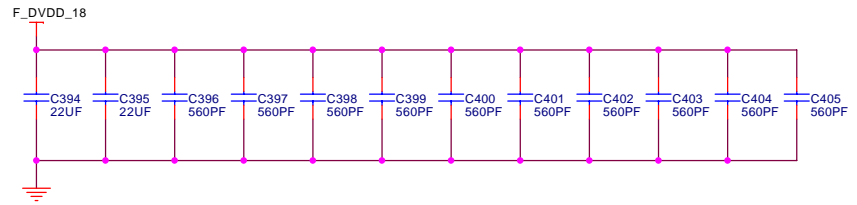
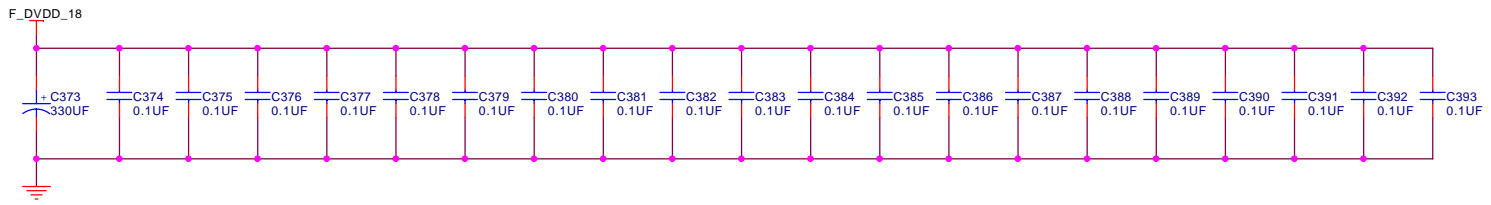
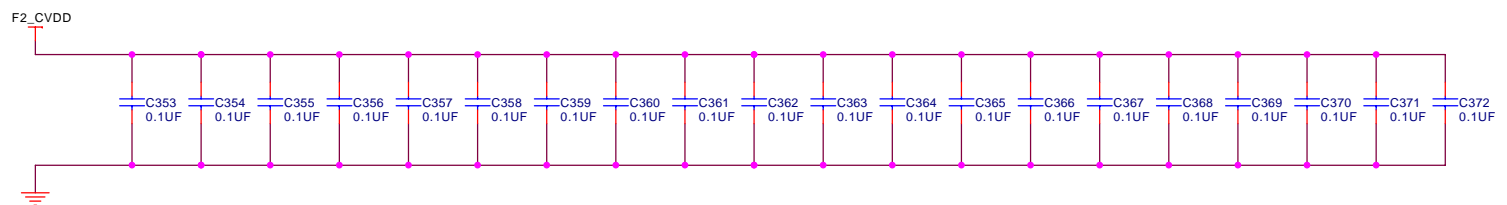
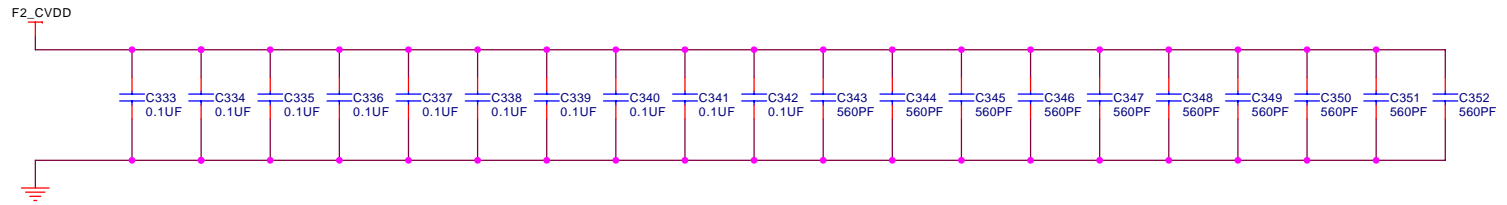
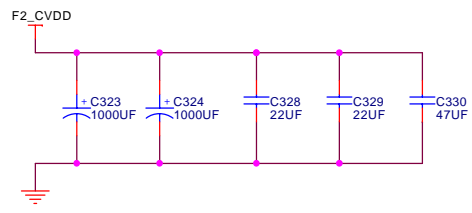


SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: Power Pins; CVDD, DVDD_18, VSS			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 34 of 45	



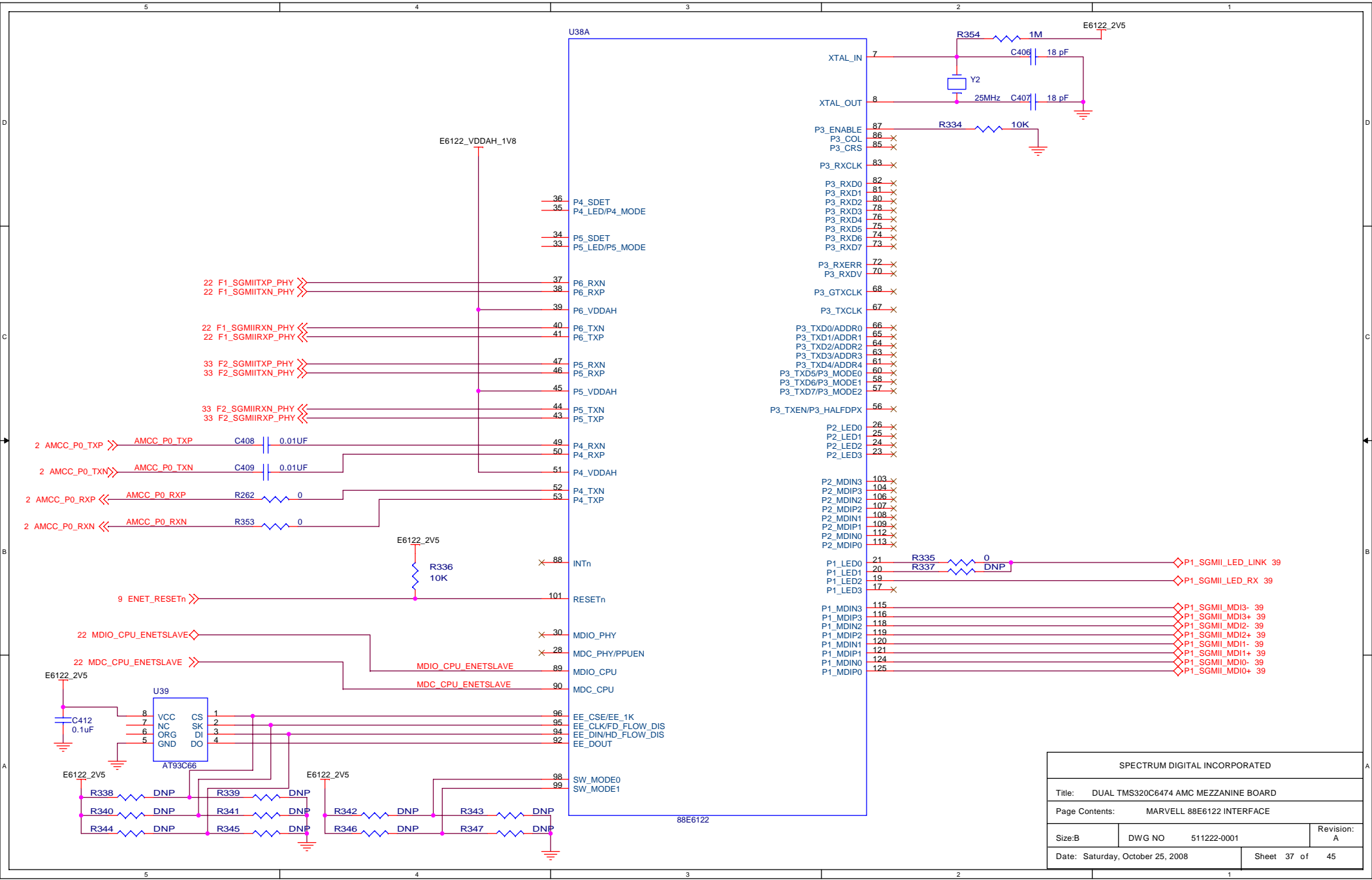
SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2:: Power pins; SERDES PWR, VSS			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 35 of 45	

5 4 3 2 1

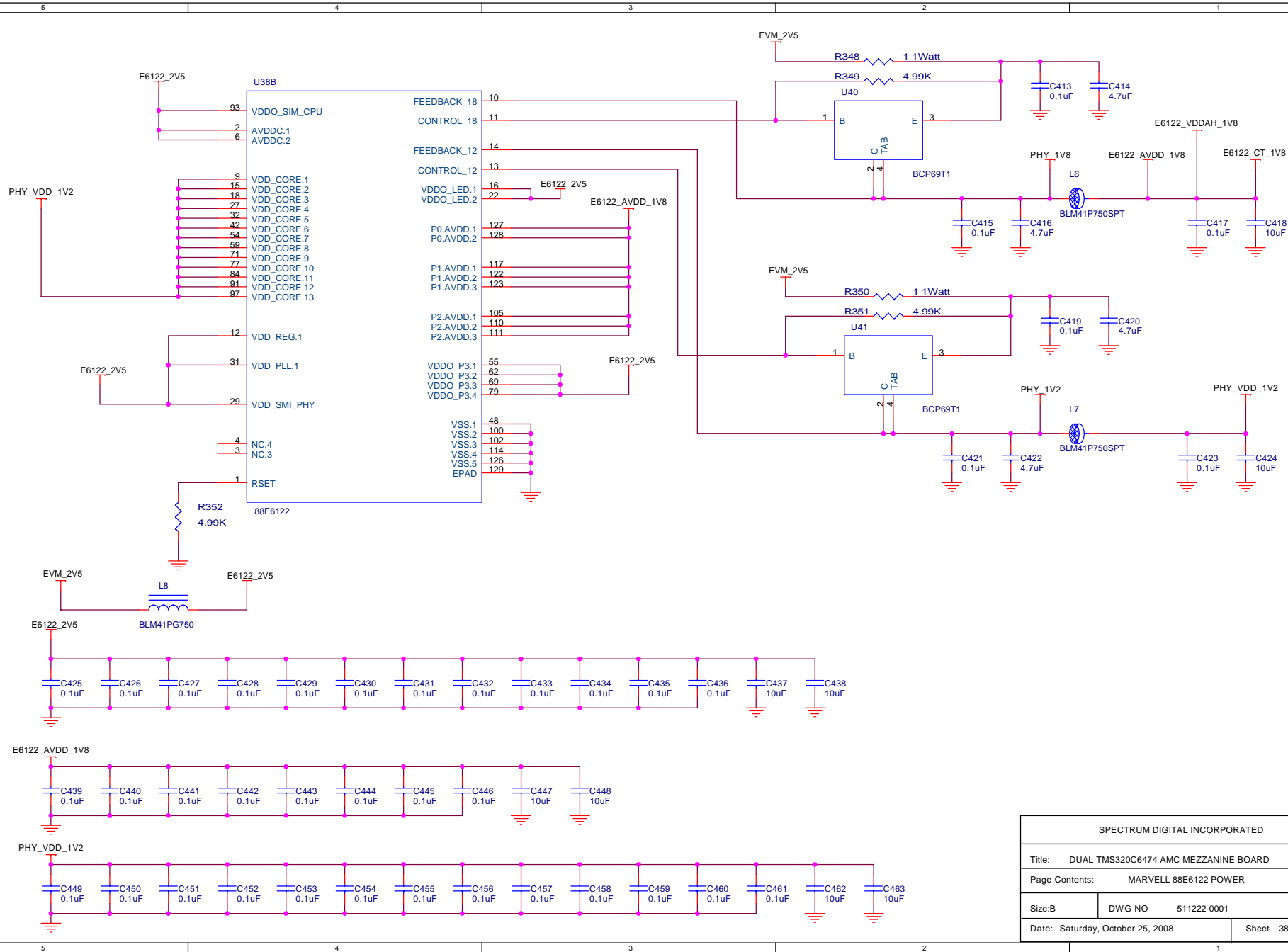


SPECTRUM DIGITAL INCORPORATED		
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD		
Page Contents: C6474 CPU-2: Decoupling; CVDD and DVDD_18		
Size: B	DWG NO: 511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 36 of 45

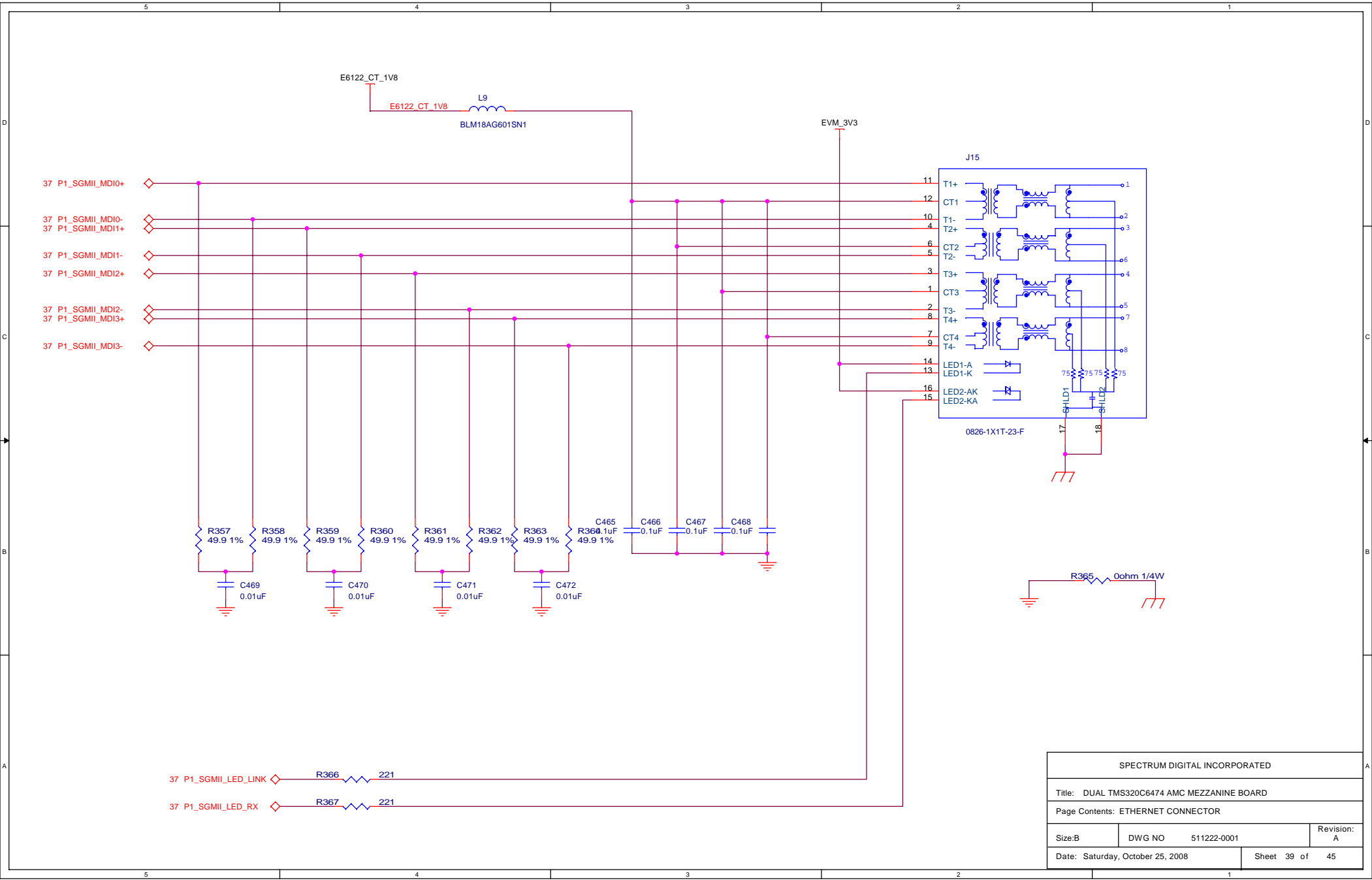
5 4 3 2 1



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: MARVELL 88E6122 INTERFACE			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 37 of 45	

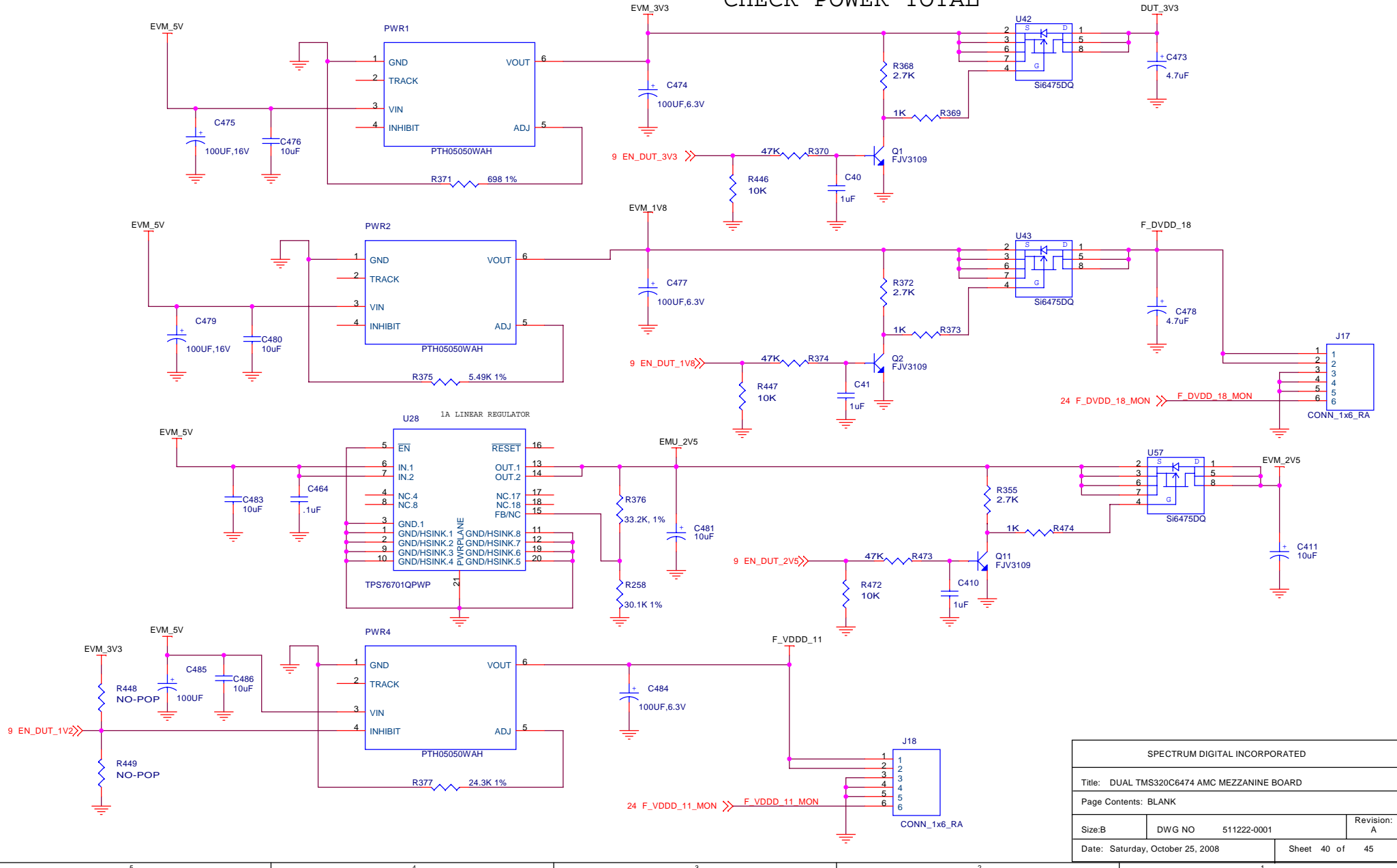


SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: MARVELL 88E6122 POWER			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 38 of 45	



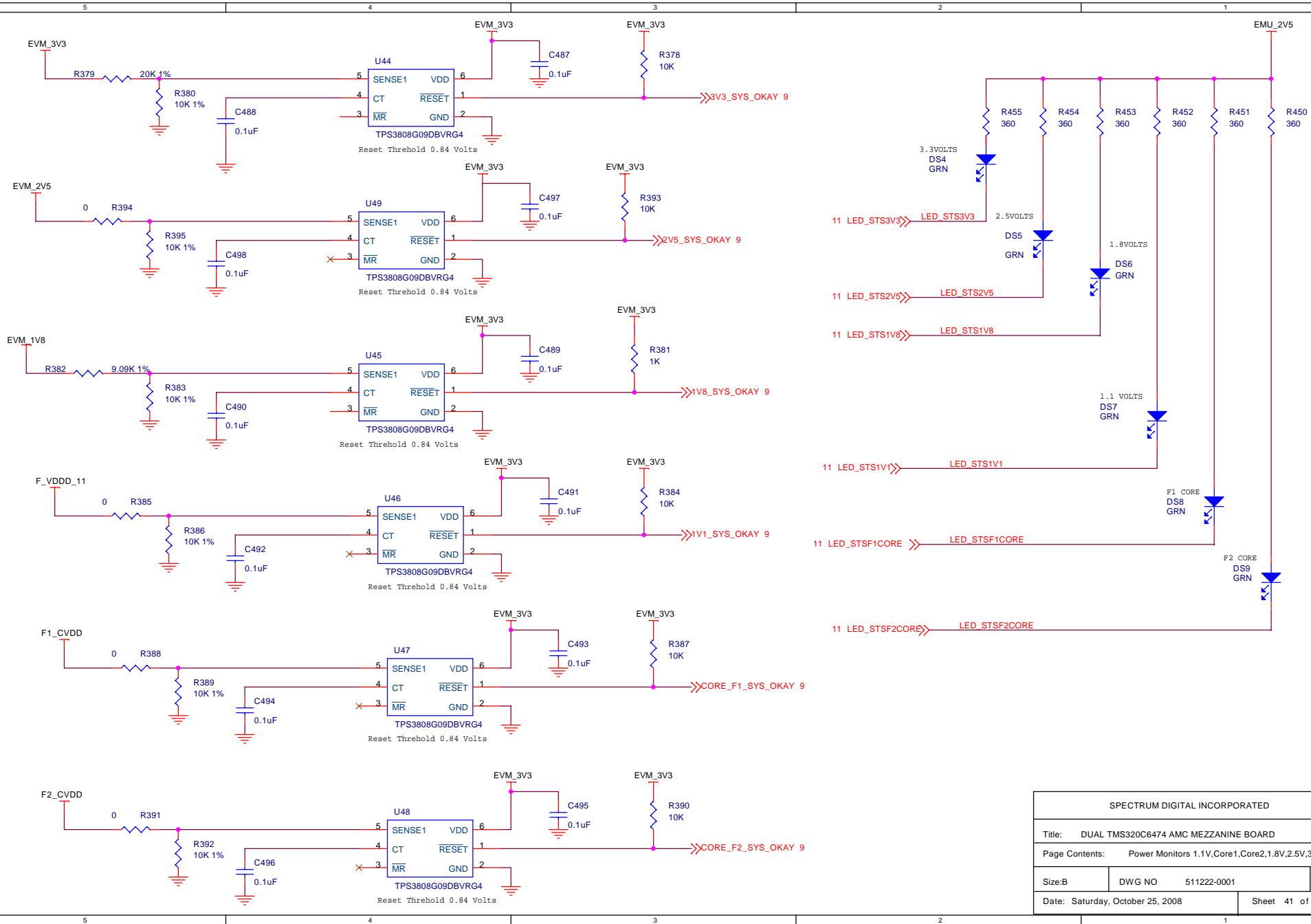
SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: ETHERNET CONNECTOR			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 39 of 45

# CHECK POWER TOTAL



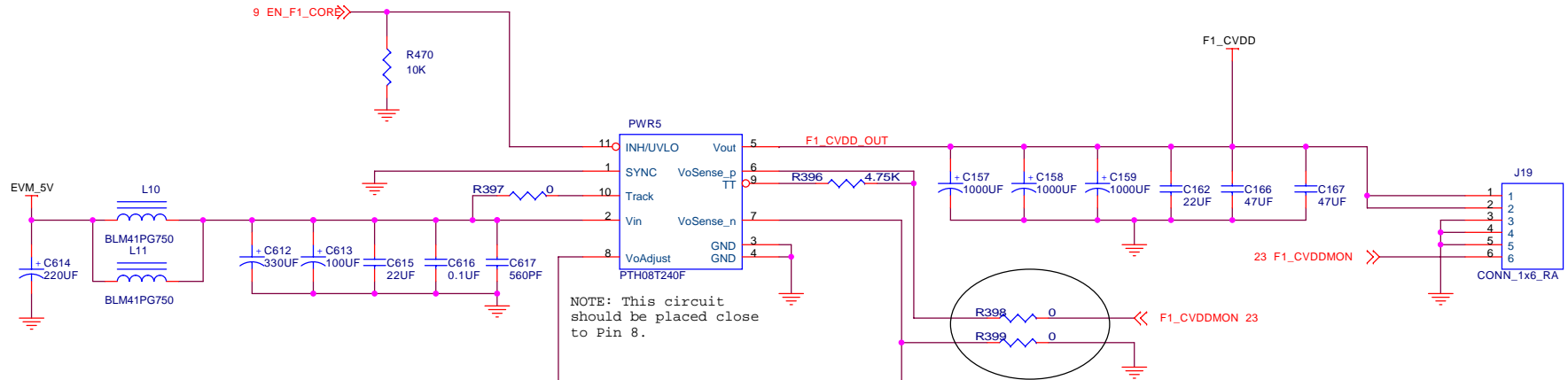
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Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: BLANK			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 40 of 45	





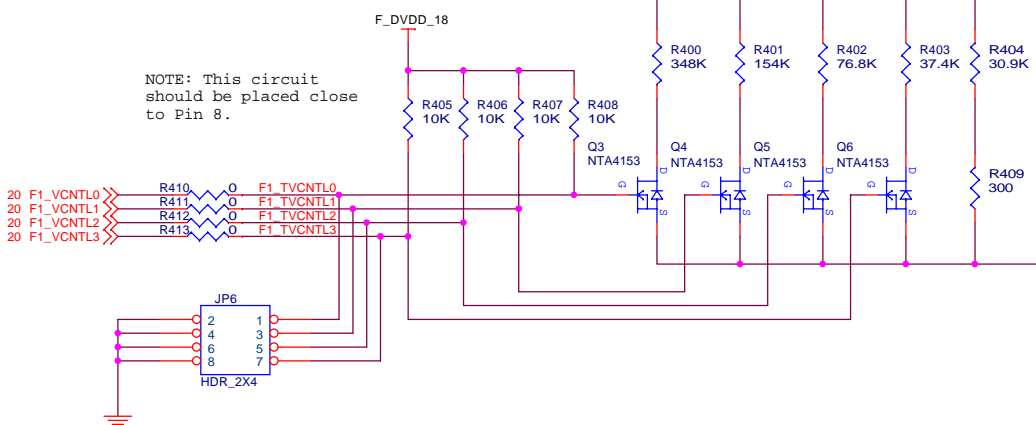
SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: Power Monitors 1.1V,Core1,Core2,1.8V,2.5V,3.3V			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 41 of 45	

5 4 3 2 1



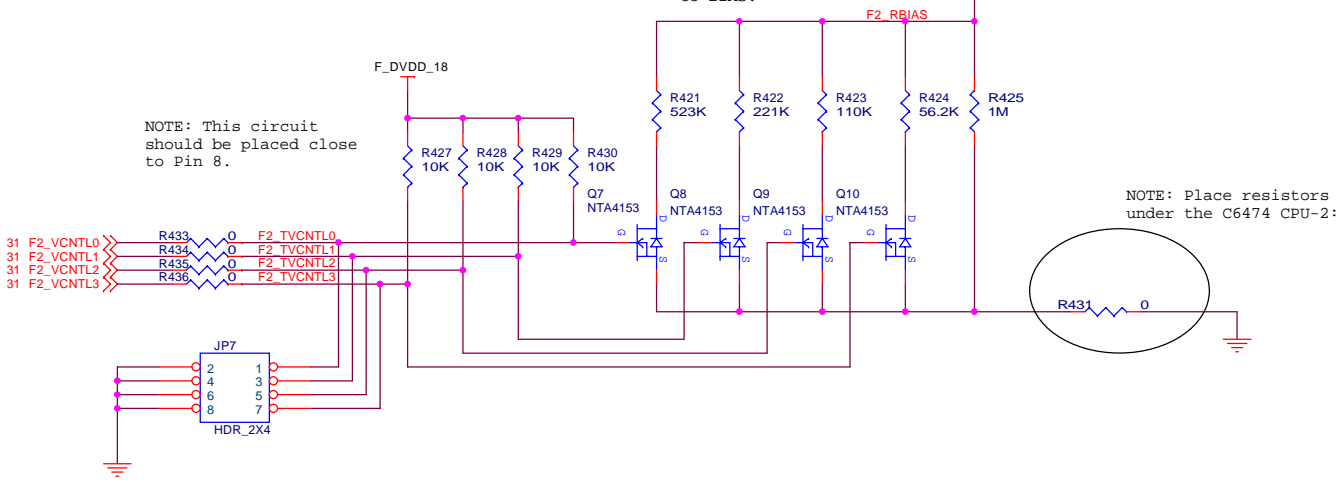
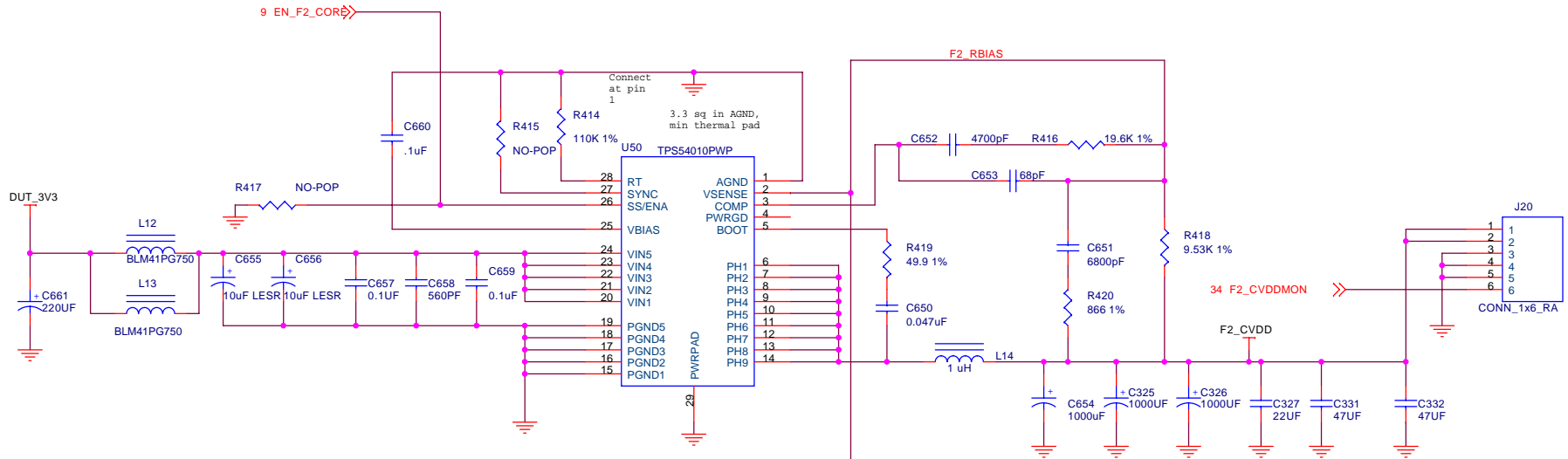
NOTE: This circuit should be placed close to Pin 8.

NOTE: Place resistors under the C6474 CPU-1:

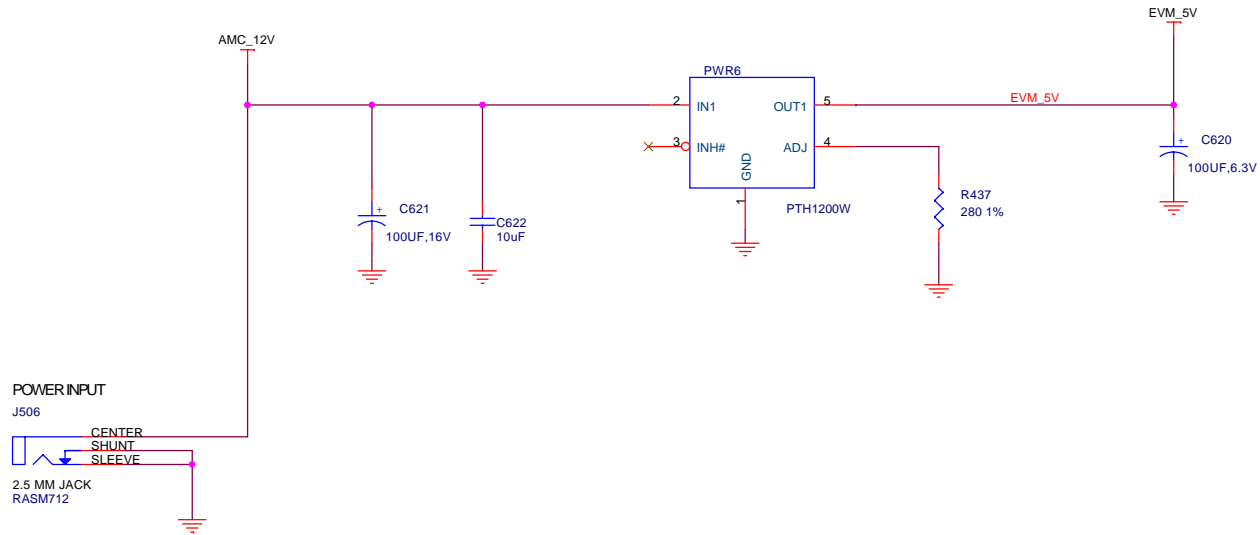


SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-1: CORE POWER			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 42 of 45	

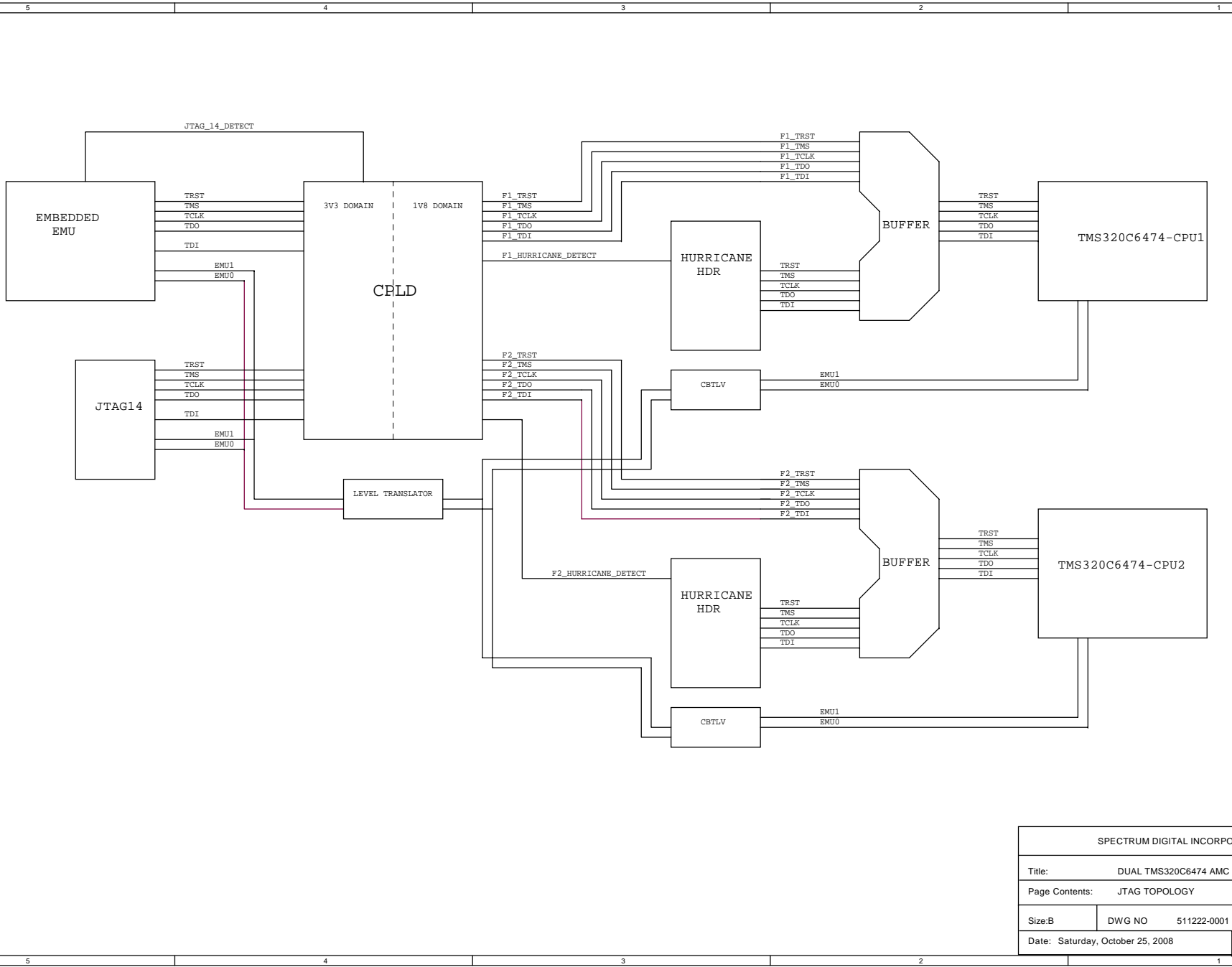
5 4 3 2 1



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: C6474 CPU-2: CORE POWER			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 43 of 45	



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: POWER 12 VOLT TO 5 VOLT			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008		Sheet 44 of 45	



SPECTRUM DIGITAL INCORPORATED			
Title: DUAL TMS320C6474 AMC MEZZANINE BOARD			
Page Contents: JTAG TOPOLOGY			
Size: B	DWG NO	511222-0001	Revision: A
Date: Saturday, October 25, 2008			Sheet 45 of 45