

01-November-2004

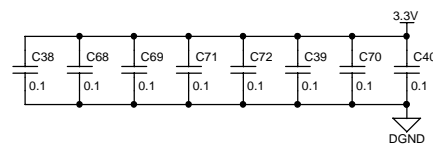
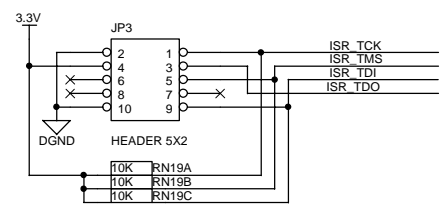
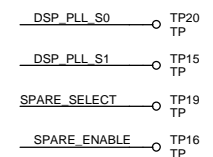
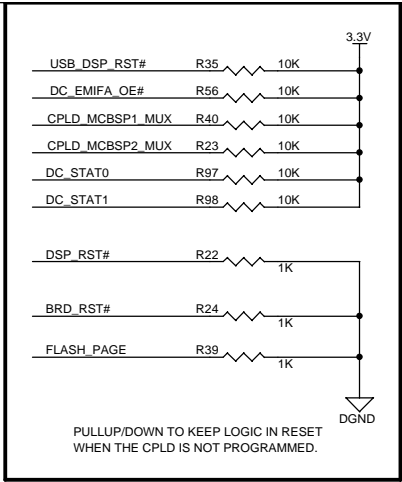
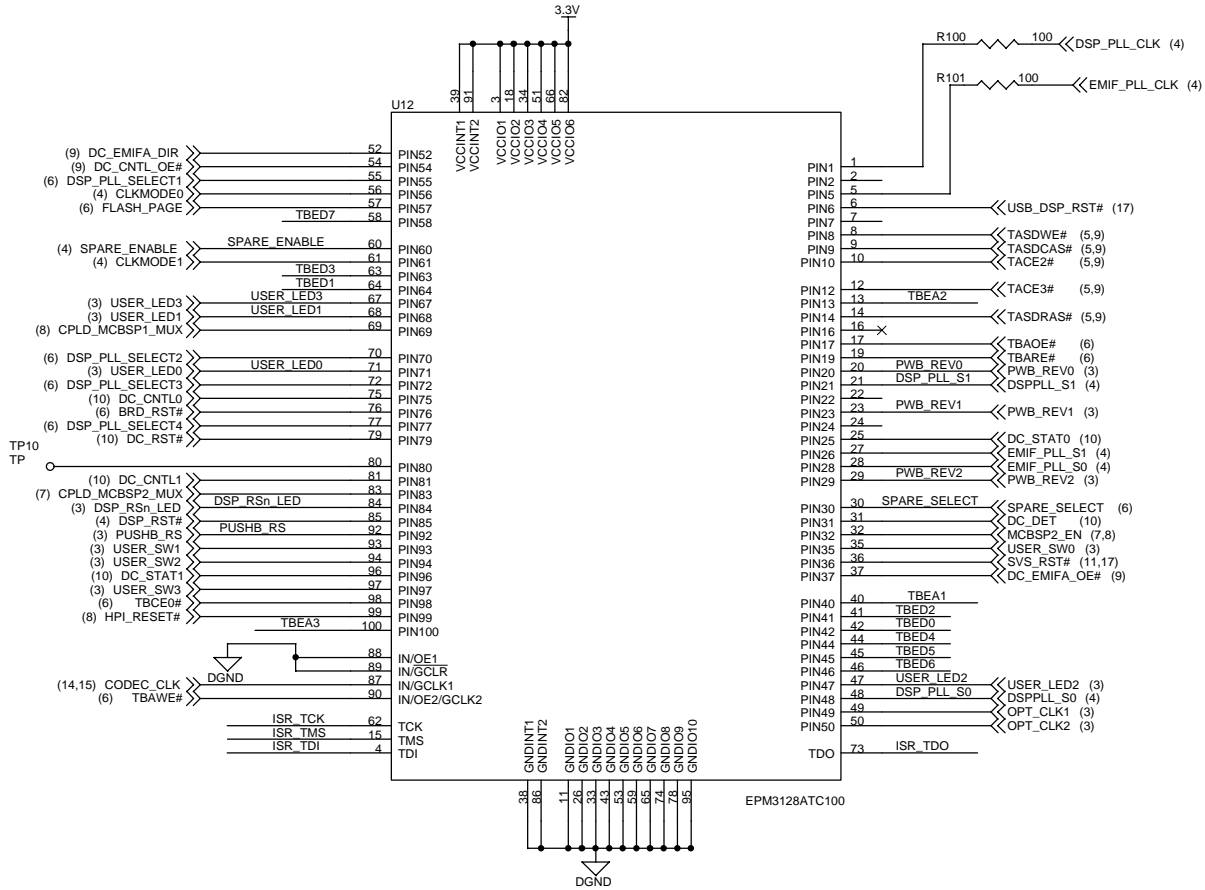
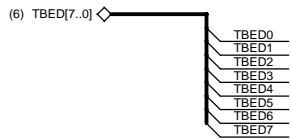
The TMS320C6416T DSK design is based on TMS320C6416T device data sheet SPRS226C. This schematic is subject to change without notification. Spectrum Digital Inc. assumes no liability for applications assistance, customer product design or infringement of patents described herein.

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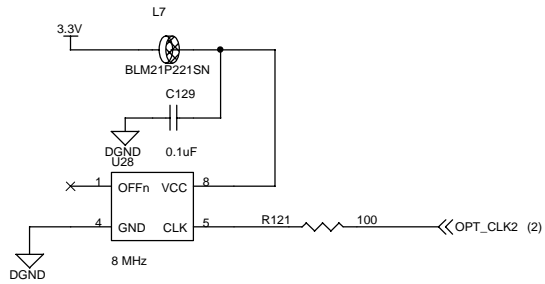
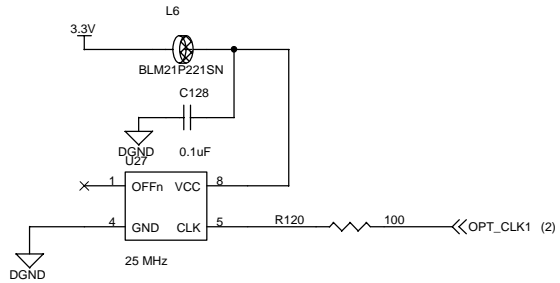
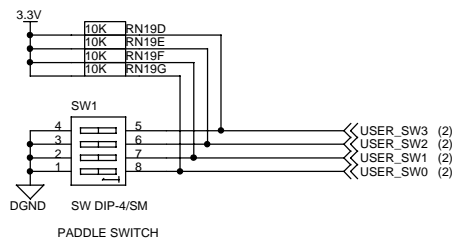
REVISION STATUS OF SHEETS								DWN	DATE
REV	A							R.R.P.	NOV 01,2004
SH	15							CHK	NOV 01,2004
REV	A	A	A	A	A	A	A	R.R.P.	NOV 01,2004
SH	8	9	10	11	12	13	14	ENGR	J.T.C.
REV	A	A	A	A	A	A	A	ENGR-MGR	NOV 01,2004
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REV	A	A	A	A	A	A	A	QA	C.M.D.
SH	1	2	3	4	5	6	7	MFG	NOV 01,2004
								RLSE	C.M.D.
								RLSE	NOV 01,2004
								RLSE	T.M.K.
								RLSE	NOV 01,2004

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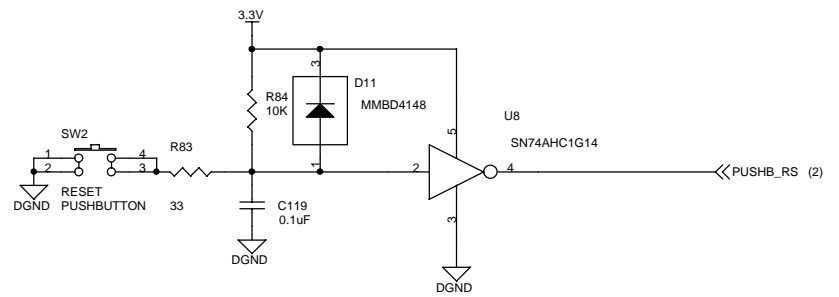
CPLD

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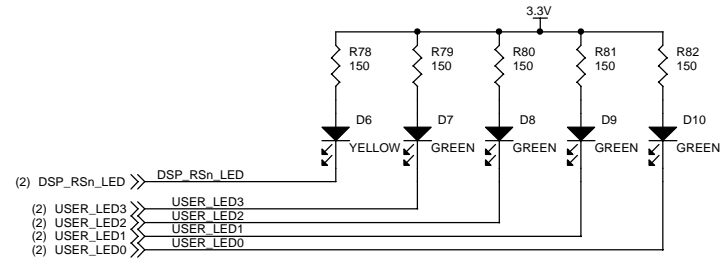
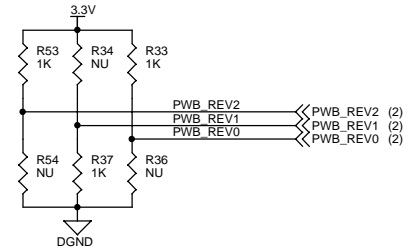


IC5512 FUNCTION TABLE

S1	S0	MULTIPLIER
0	0	4X
0	Z	5.33X
0	1	5X
Z	0	2.5X
Z	Z	2X
Z	1	3.33X
1	0	6X
1	Z	3X
1	1	8X

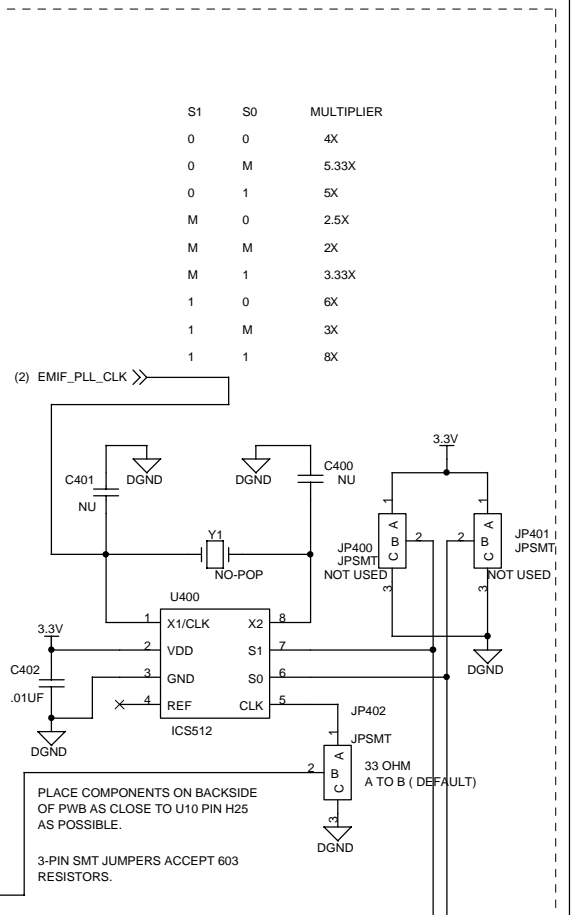
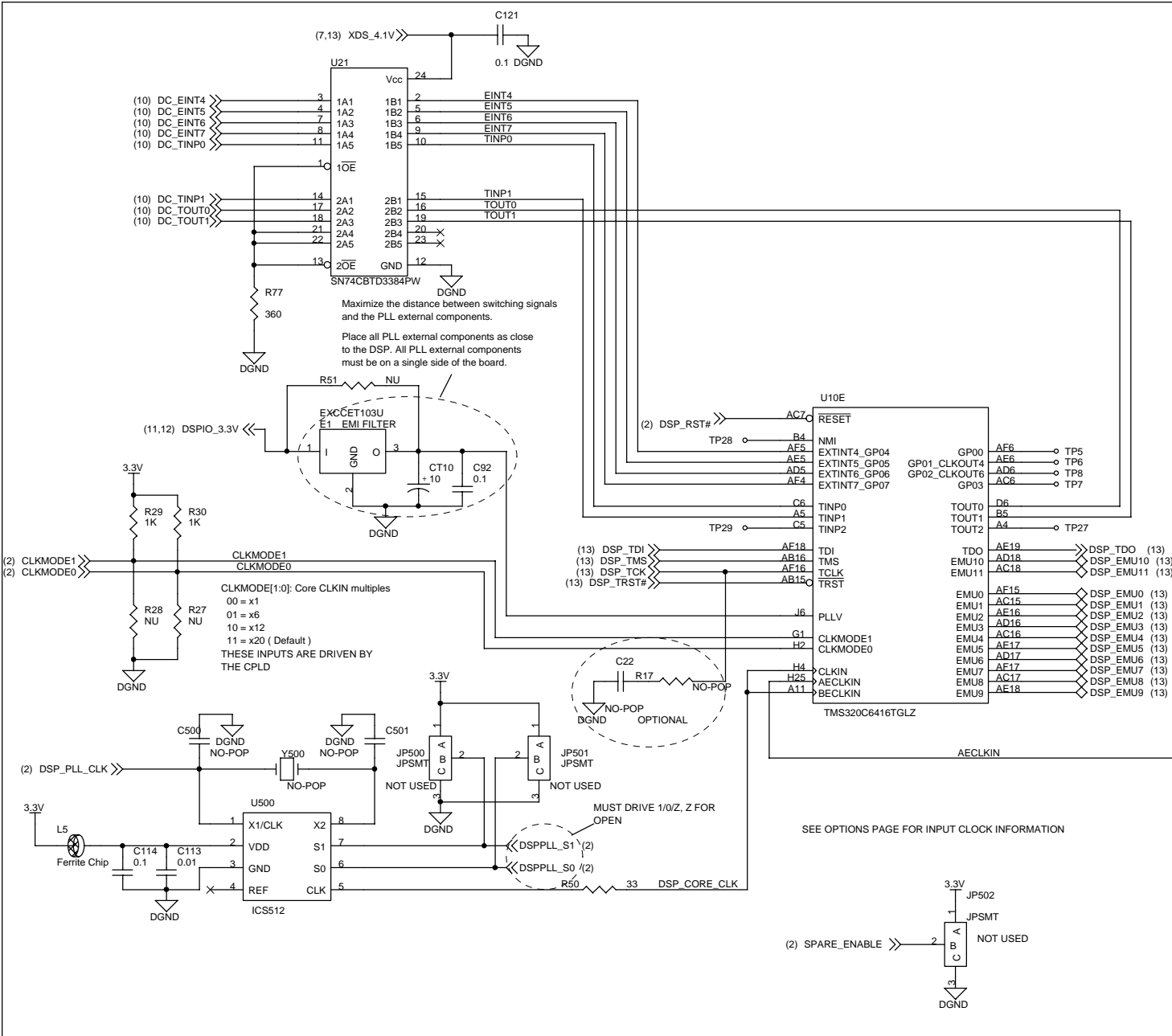


DUE TO PREVIOUS 6416 DSKS
STARTING BOARD REVISION
FOR 6416T IS 101binary



CPU FREQ	PLL IN-CLK	CPU MULT	PLL MULT	PLL CODE	EMIF FREQ	PLL IN-CLK	PLL MULT	PLL CODE	SW3-5	SW3-6	SW3-7	SW3-8
500 MHz	12.5 MHz	20	2	Z Z	100 MHz	25 MHz	4	0 0	ON	OFF	OFF	ON
600 MHz	12 MHz	20	2.5	Z 0	100 MHz	25 MHz	4	0 0	OFF	ON	OFF	ON
720 MHz	12 MHz	20	3	1 Z	125 MHz	25 MHz	5	0 1	ON	ON	OFF	OFF
850 MHz	8 MHz	20	5.33	0 Z	125 MHz	25 MHz	5	0 1	OFF	OFF	ON	OFF
1000 MHz	12.5 MHz	20	4	0 0	125 MHz	25 MHz	5	0 1	OFF	OFF	OFF	OFF
1200 MHz	12 MHz	20	5	0 1	125 MHz	25 MHz	5	0 1	ON	ON	ON	OFF

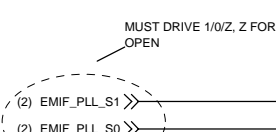
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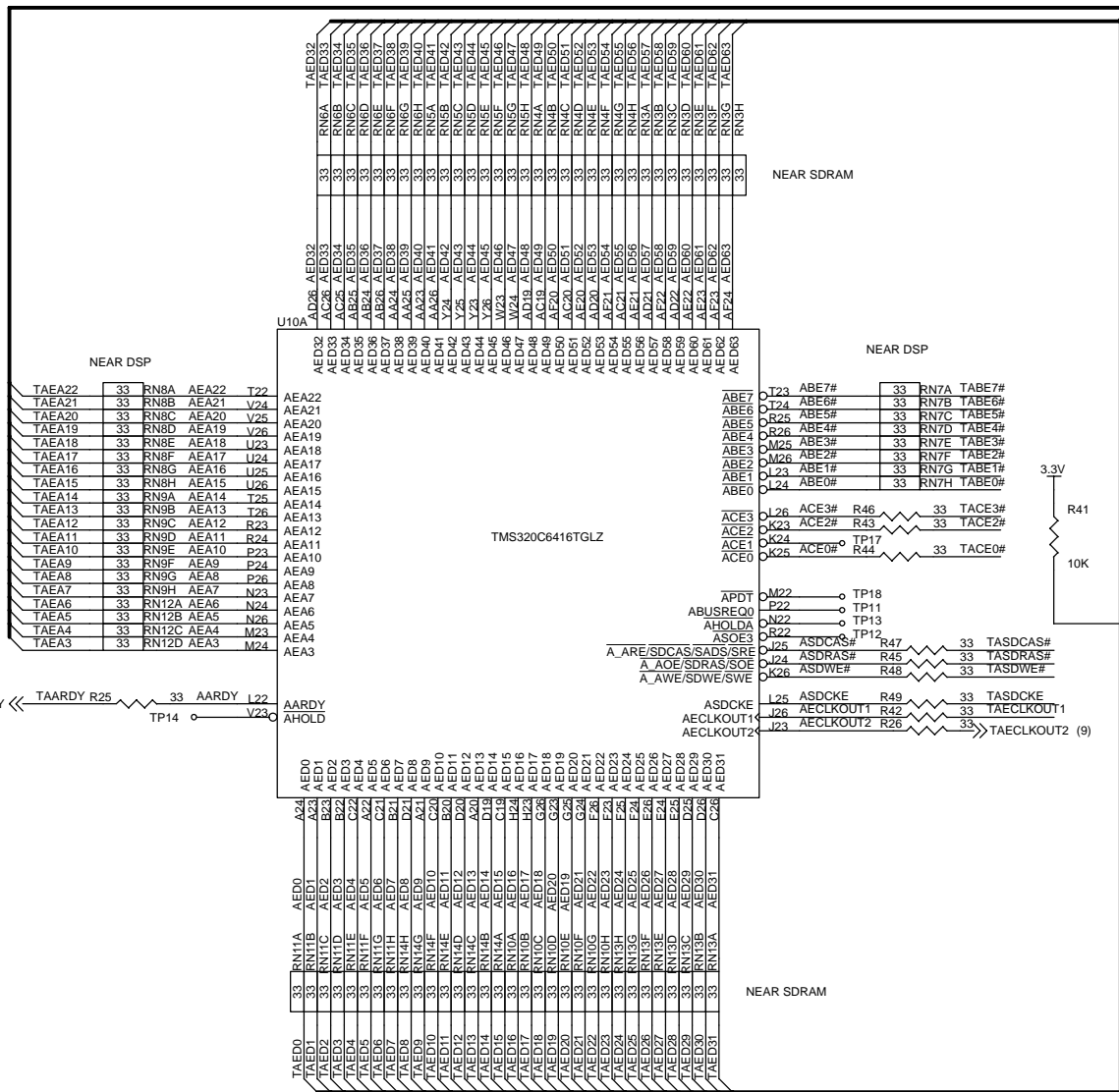
S1	S0	MULTIPLIER
0	0	4X
0	M	5.33X
0	1	5X
M	0	2.5X
M	M	2X
M	1	3.33X
1	0	6X
1	M	3X
1	1	8X

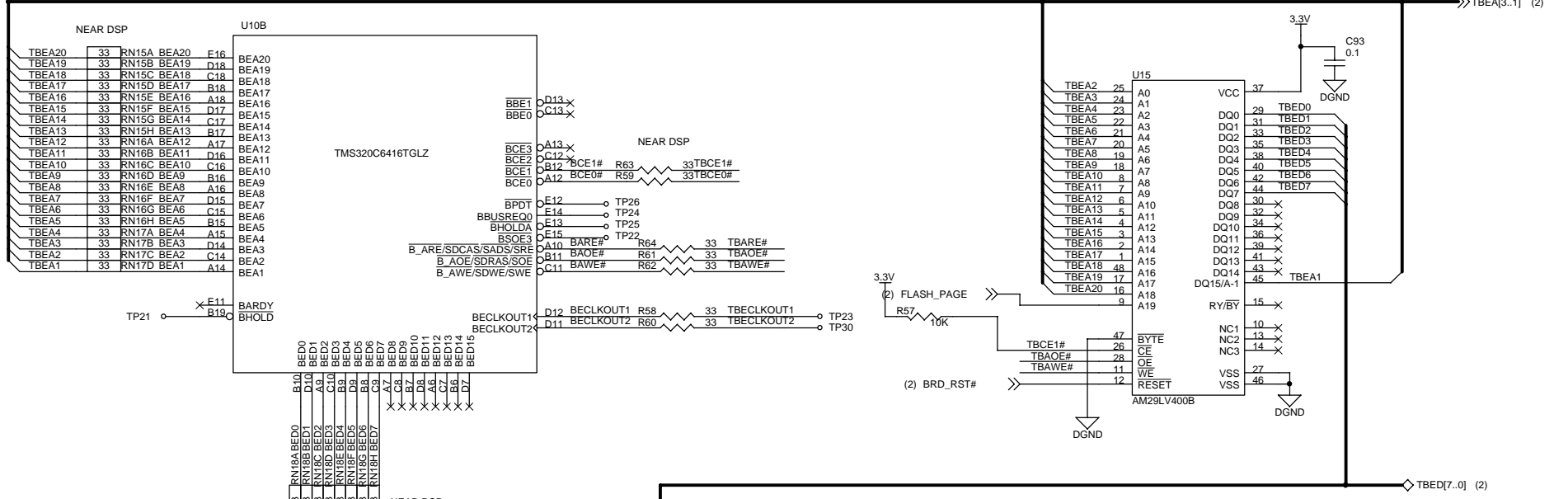
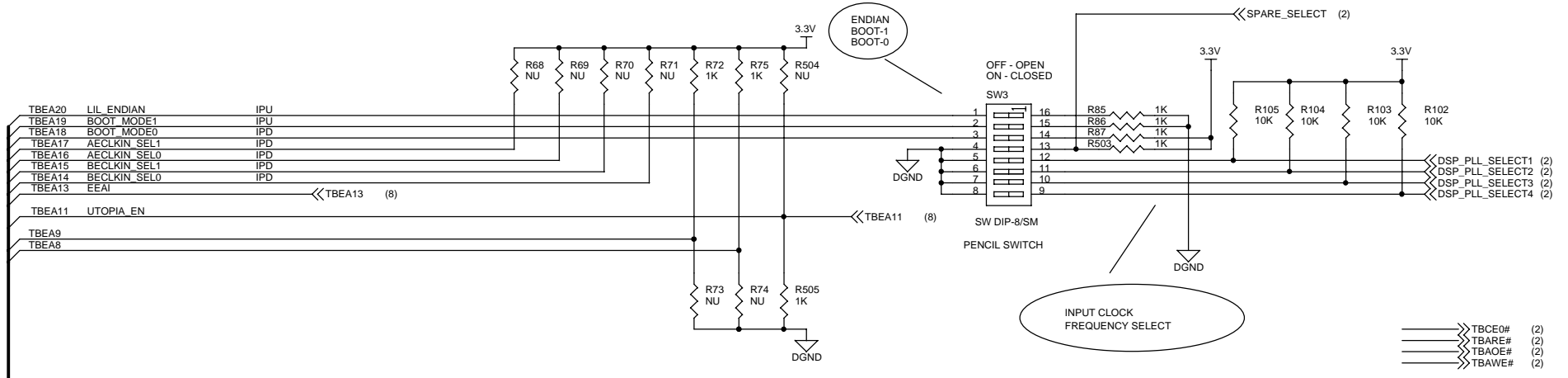
PLACE COMPONENTS ON BACKSIDE OF PWB AS CLOSE TO U10 PIN H25 AS POSSIBLE.

3-PIN SMT JUMPERS ACCEPT 603 RESISTORS.



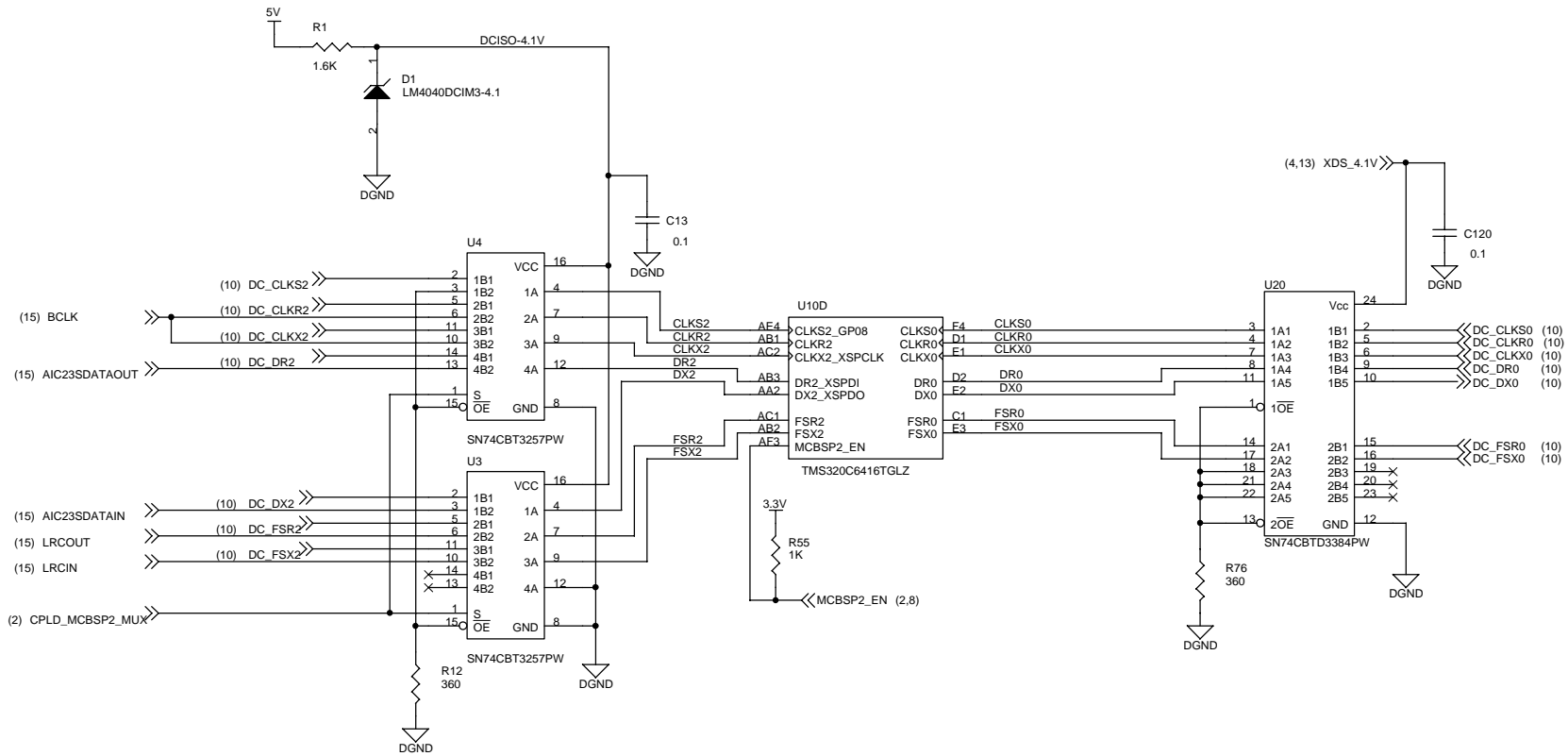
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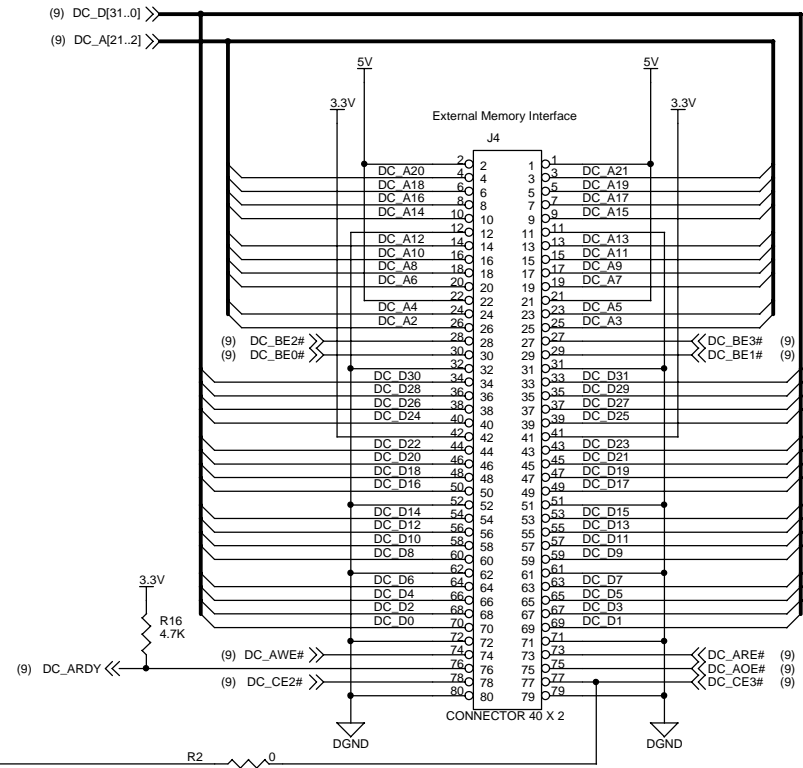
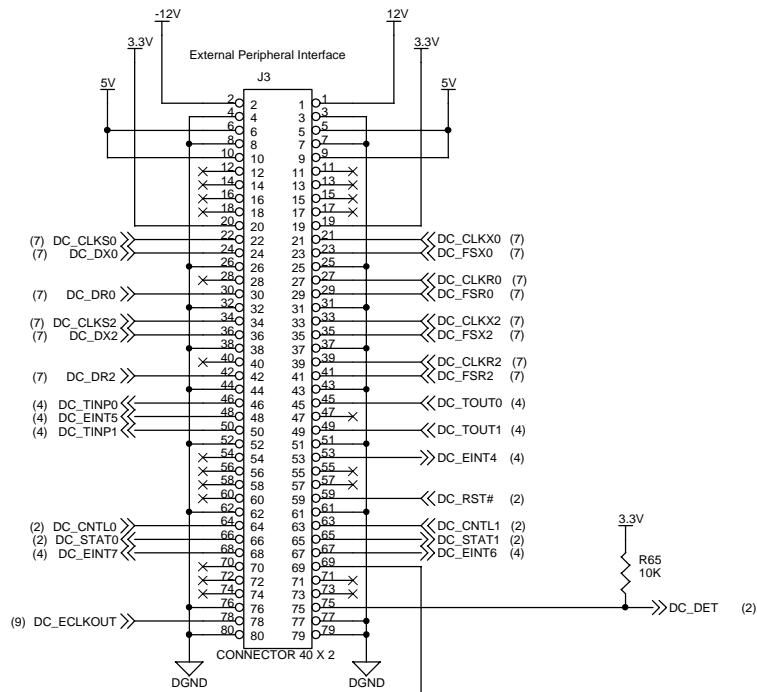
EMIFB & FLASH

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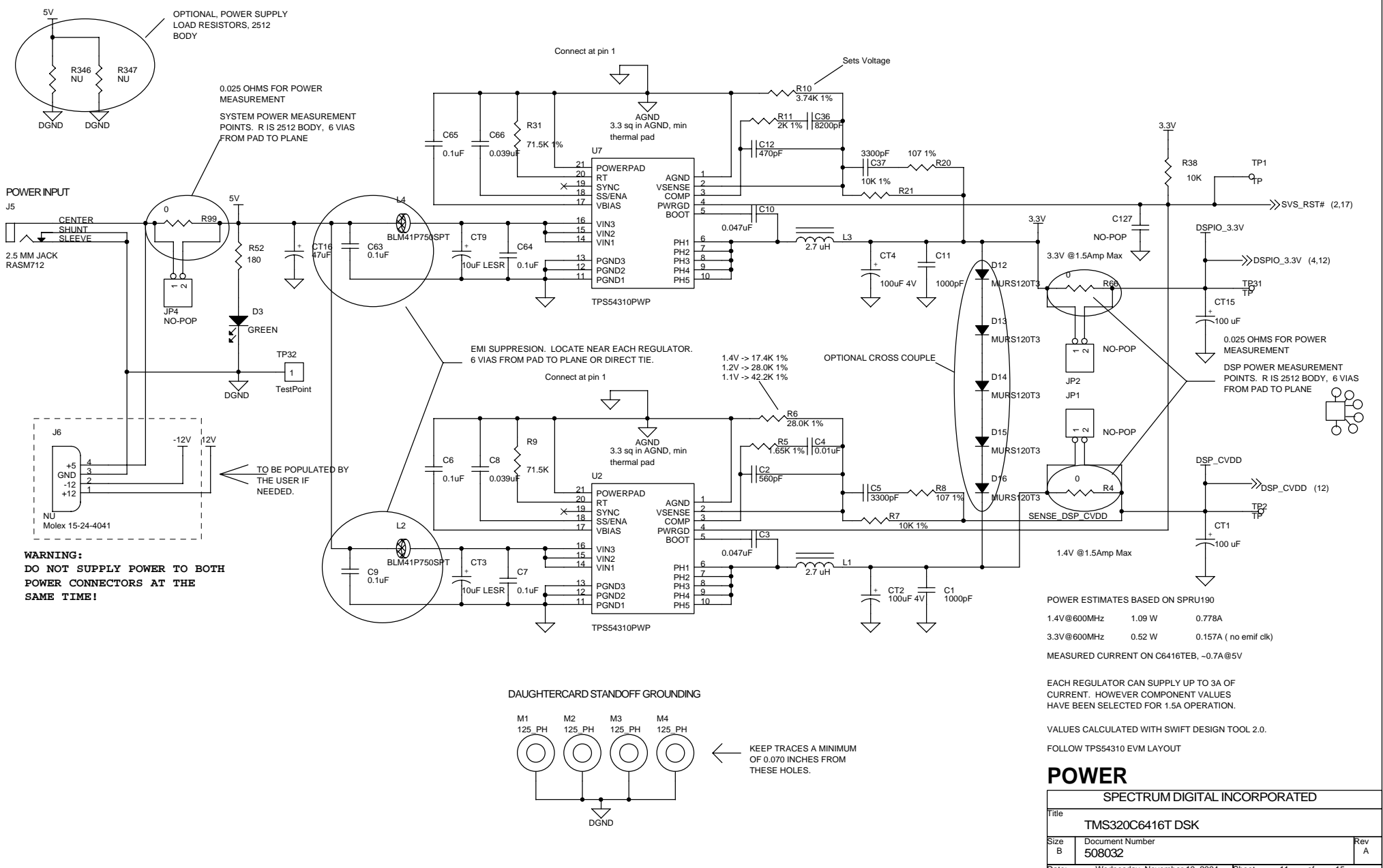
MCBSP

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DAUGHTERCARD I/F

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WARNING:
DO NOT SUPPLY POWER TO BOTH
POWER CONNECTORS AT THE
SAME TIME!

POWER ESTIMATES BASED ON SPRU190

1.4V@600MHz 1.09 W 0.778A
3.3V@600MHz 0.52 W 0.157A (no emif clk)

MEASURED CURRENT ON C6416TEB, -0.7A@5V

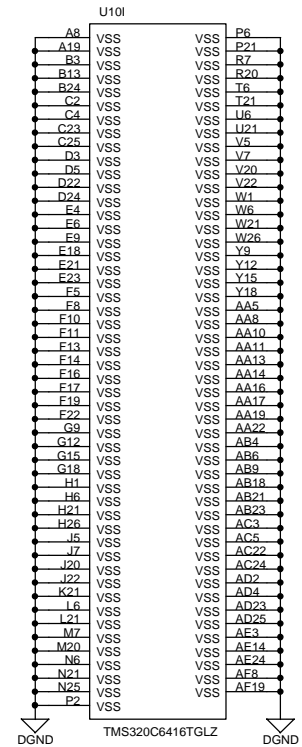
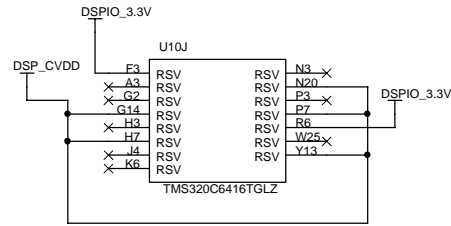
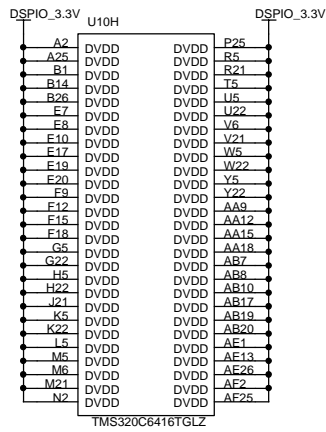
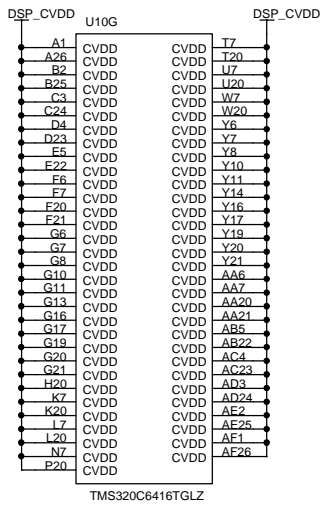
EACH REGULATOR CAN SUPPLY UP TO 3A OF
CURRENT. HOWEVER COMPONENT VALUES
HAVE BEEN SELECTED FOR 1.5A OPERATION.

VALUES CALCULATED WITH SWIFT DESIGN TOOL 2.0.

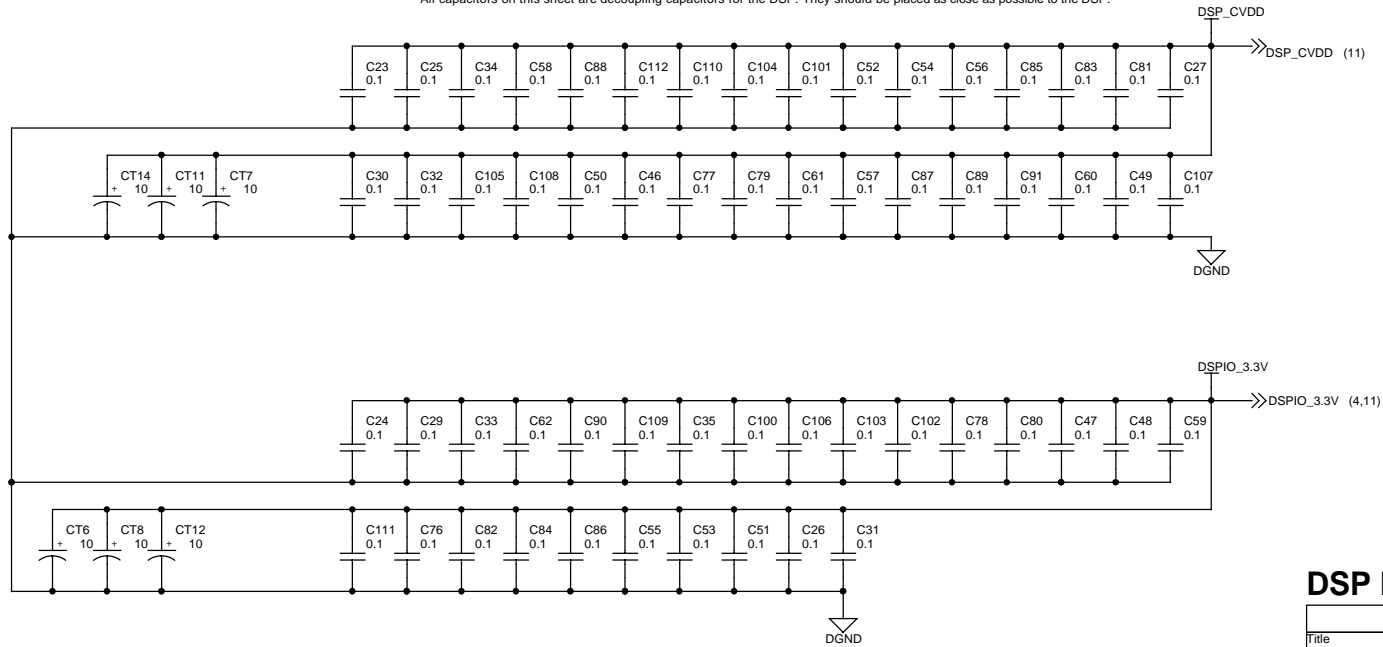
FOLLOW TPS54310 EVM LAYOUT

POWER

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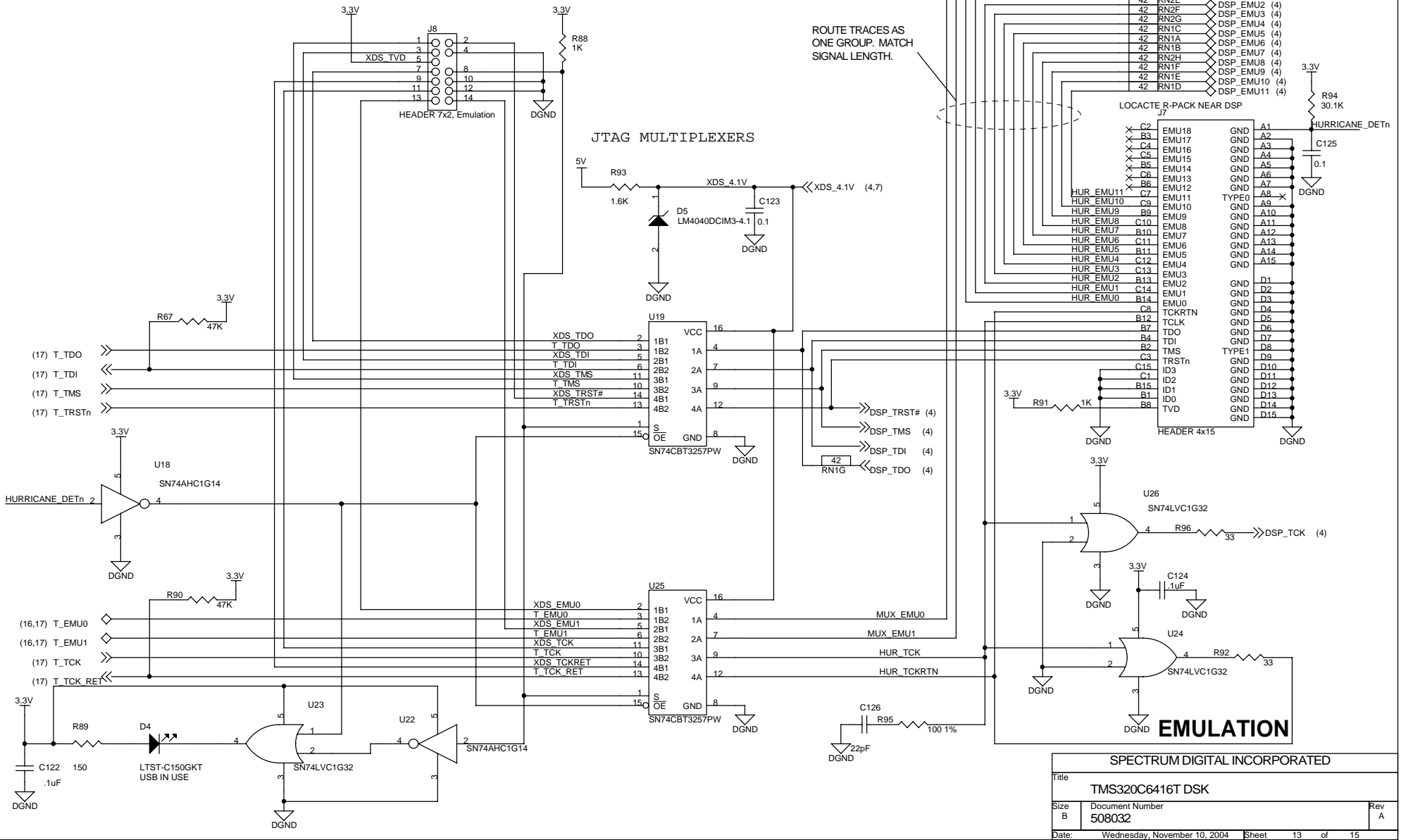
All capacitors on this sheet are decoupling capacitors for the DSP. They should be placed as close as possible to the DSP.



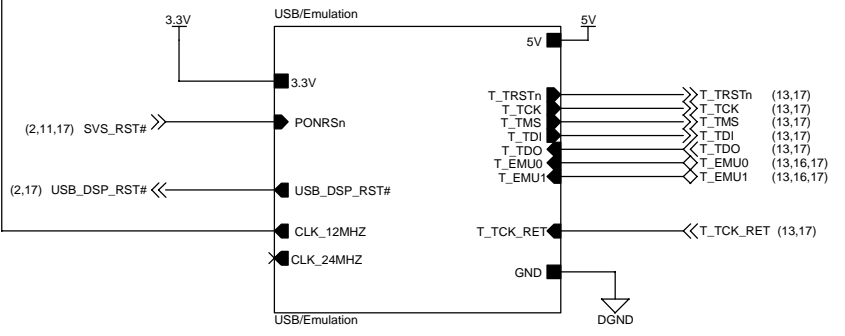
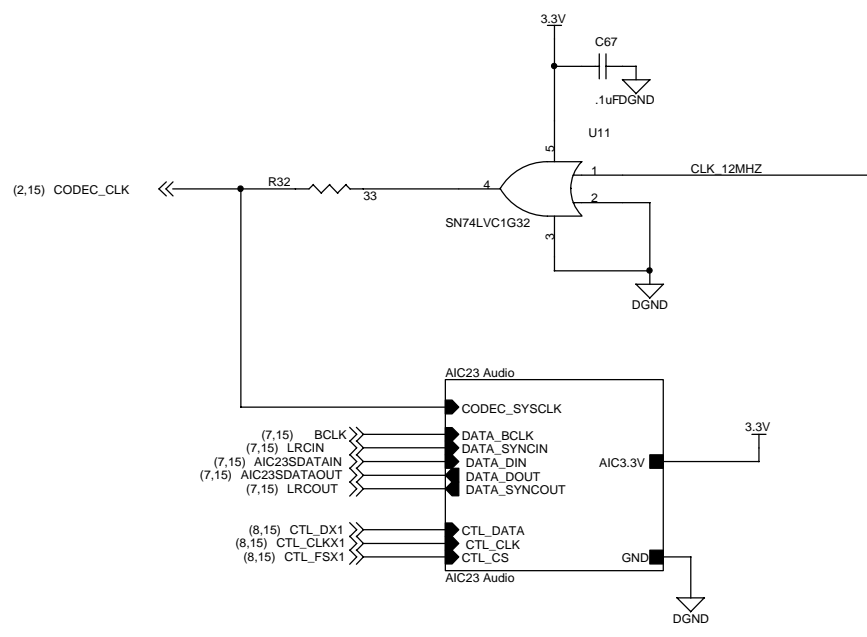
DSP POWER & DECOUPLING

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DSP JTAG HEADER

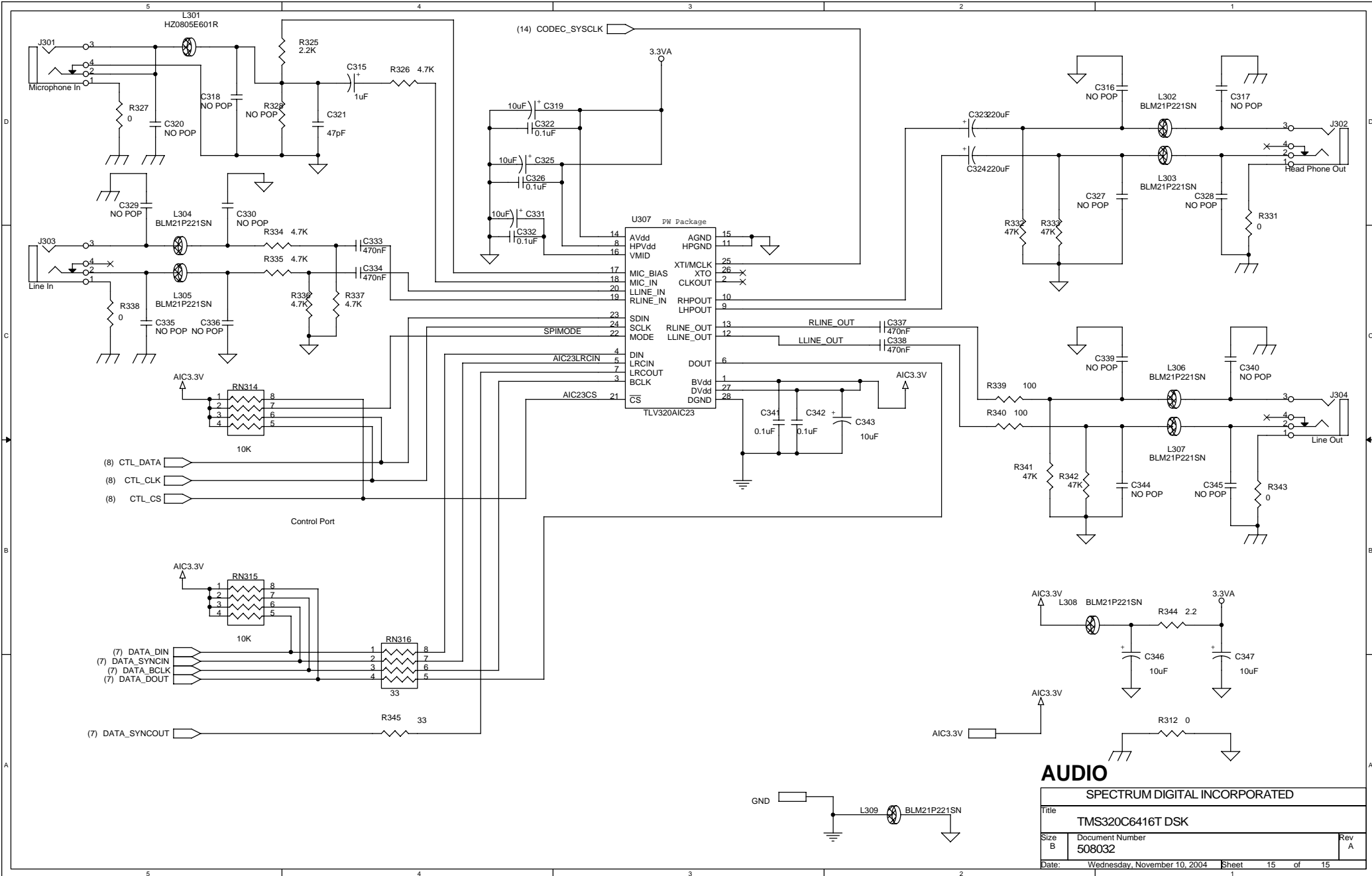


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Hierarchical Blocks

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AUDIO

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