

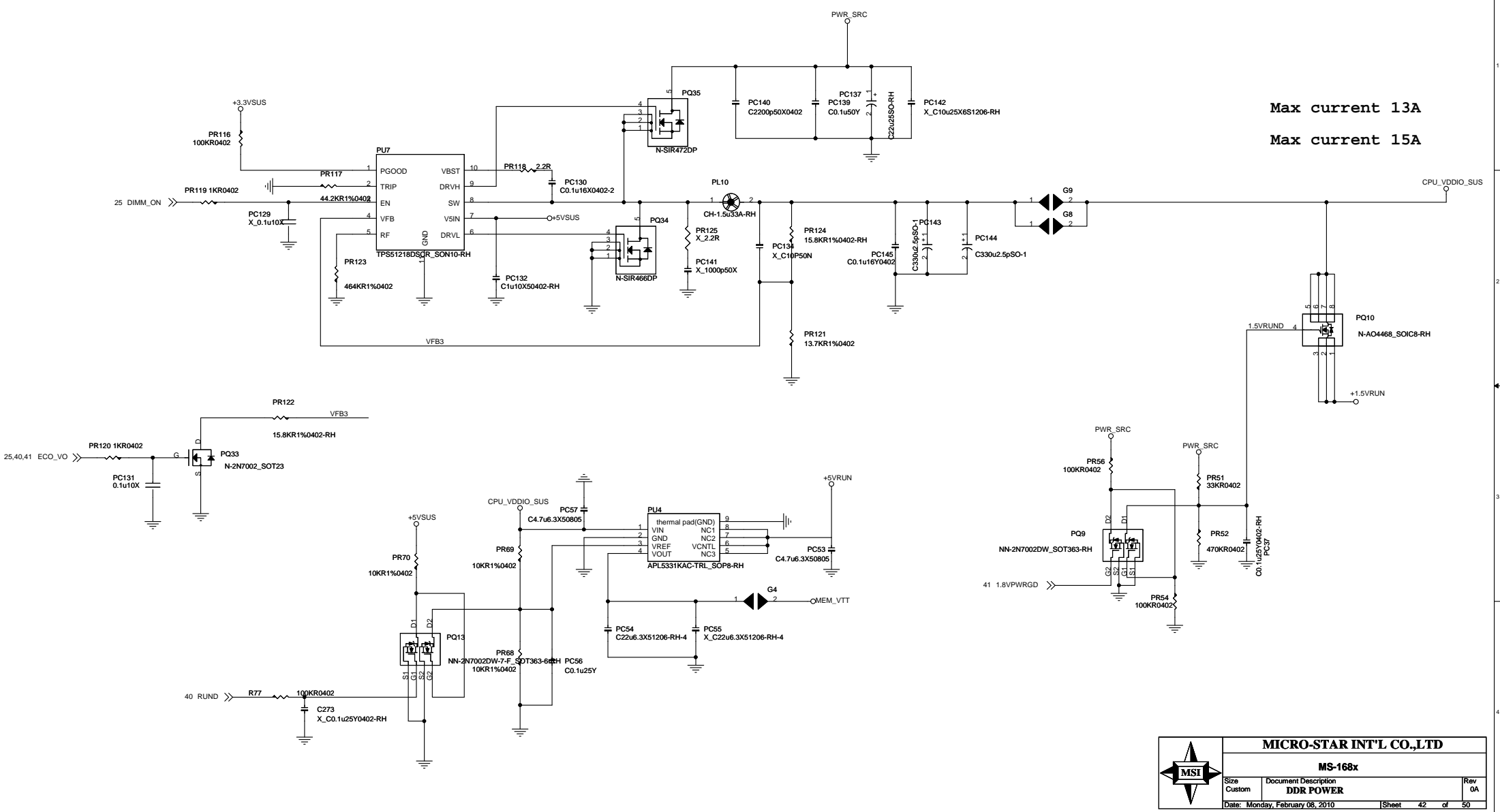
Max current 18A
current limit 20A

Max current 2A

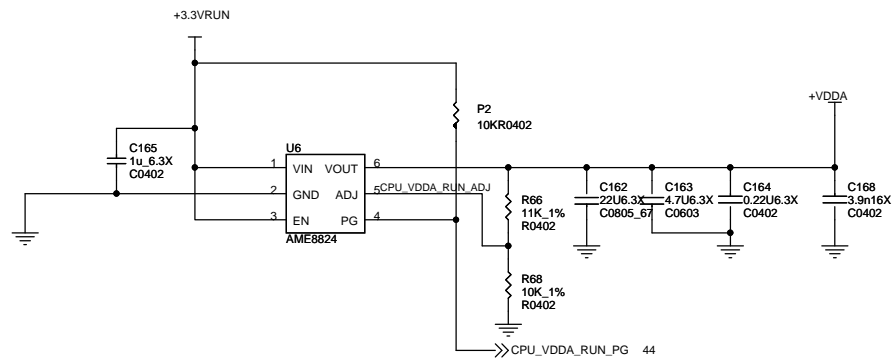
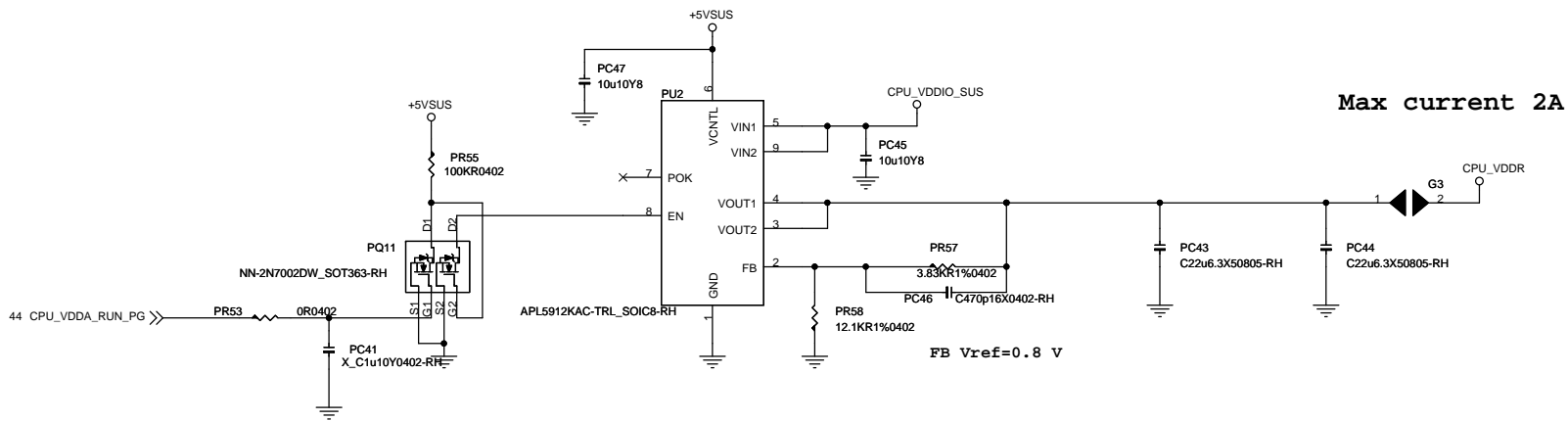
FB Vref=0.8 V


MSI		
MICRO-STAR INT'L CO.,LTD		
MS-168x		
Size B	Document Description 1.5V 2.5V VLDT	Rev 0A
Date: Monday, February 08, 2010	Sheet 41	of 50

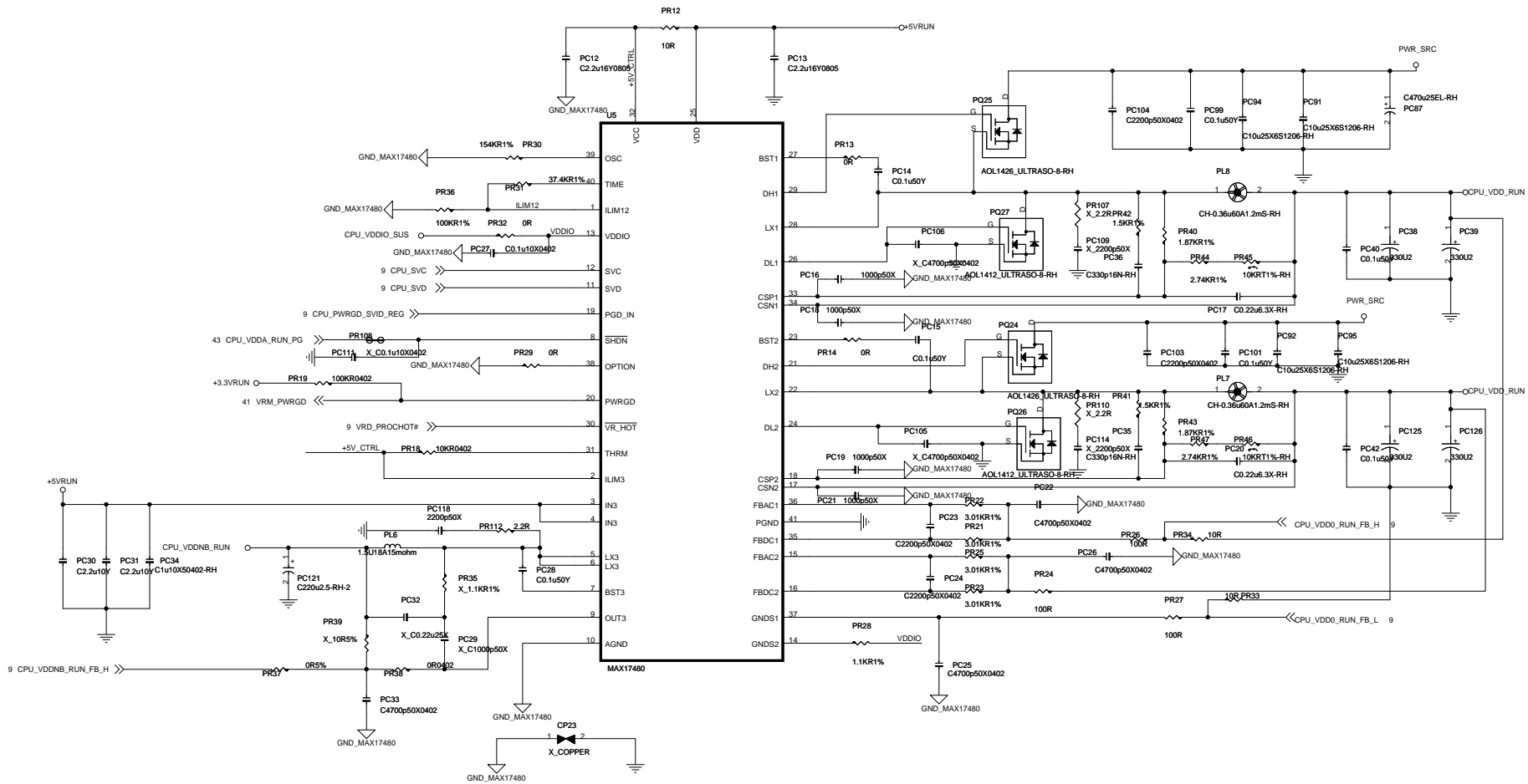
Max current 13A
Max current 15A

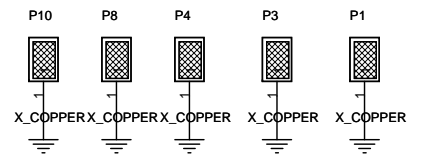
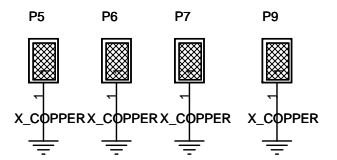
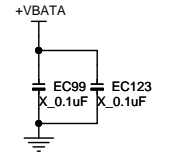
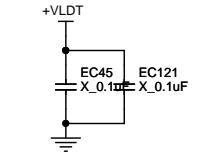
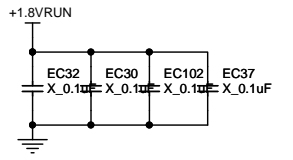
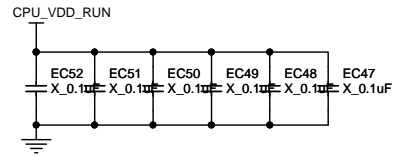
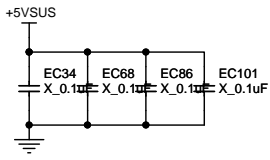
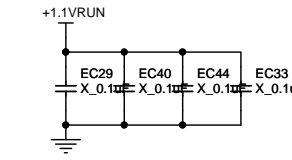
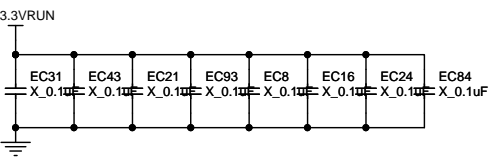
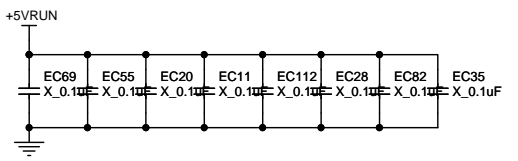
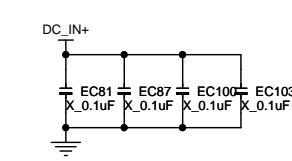
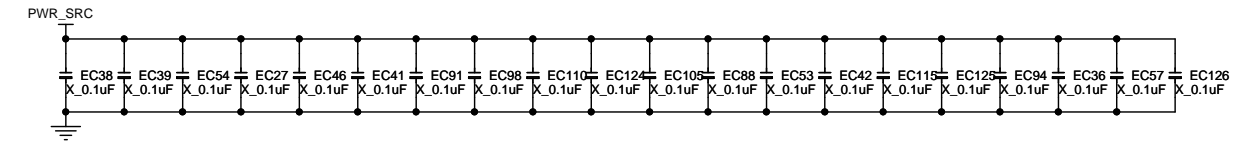
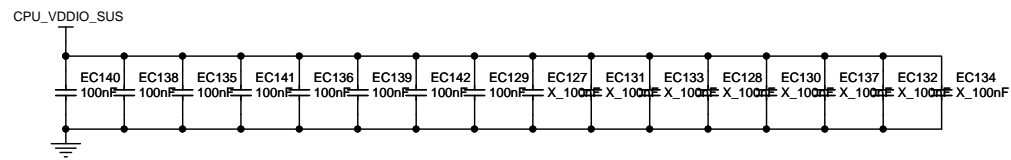



MICRO-STAR INT'L CO.,LTD		
MS-168x		
Size Custom	Document Description DDR POWER	Rev 0A
Date: Monday, February 08, 2010 Sheet 42 of 50		

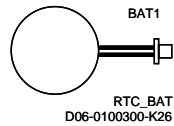
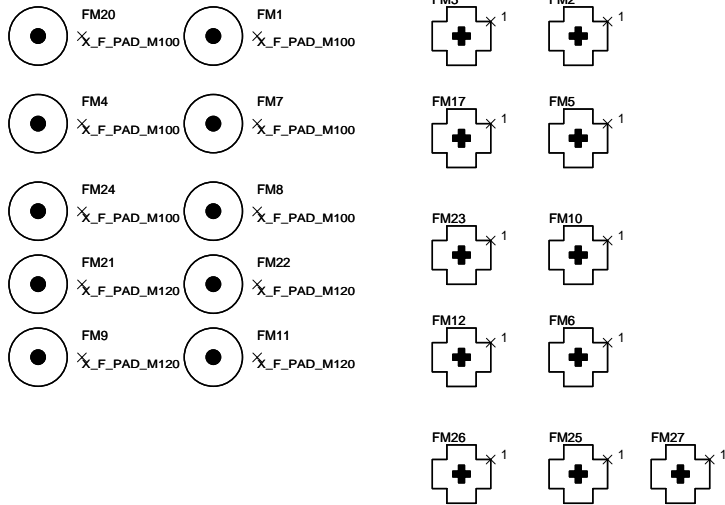
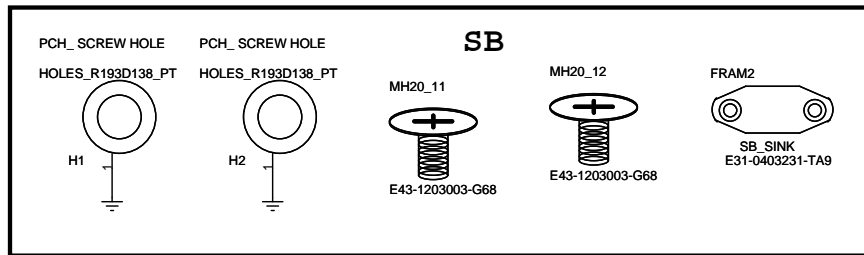
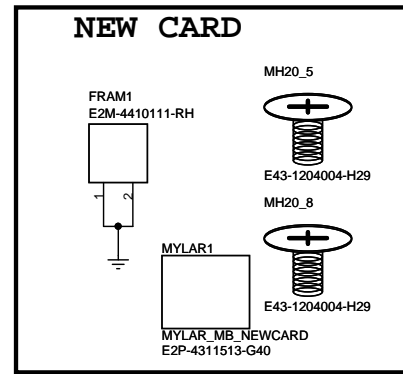
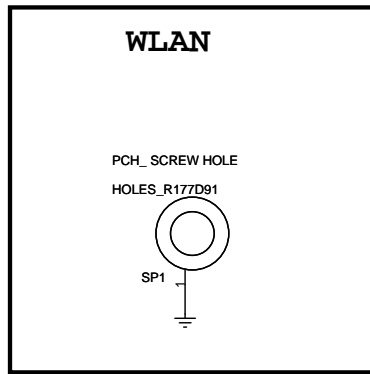
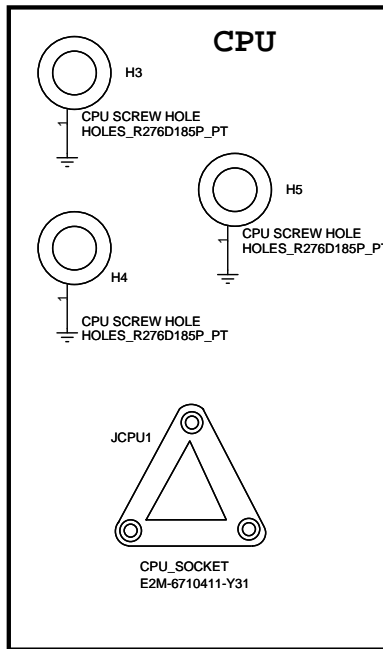
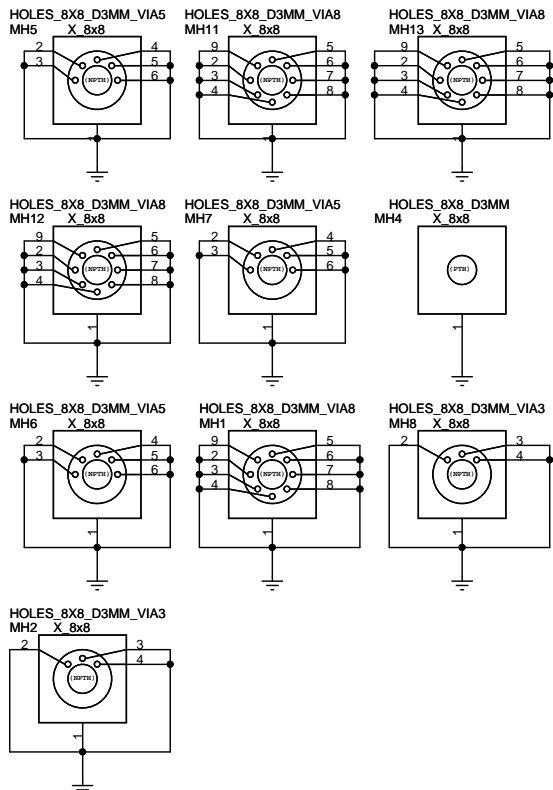


			MICRO-STAR INT'L CO.,LTD		
			MS-168x		
Size Custom	Document Description NB SB CORE PWR				Rev 0A
Date: Friday, February 05, 2010		Sheet 43		of 50	

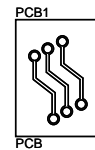
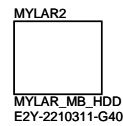




			MICRO-STAR INT'L CO.,LTD	
			MS-168x	
Size B	Document Description EMI			Rev 0A
Date: Friday, February 05, 2010		Sheet 47 of 52		

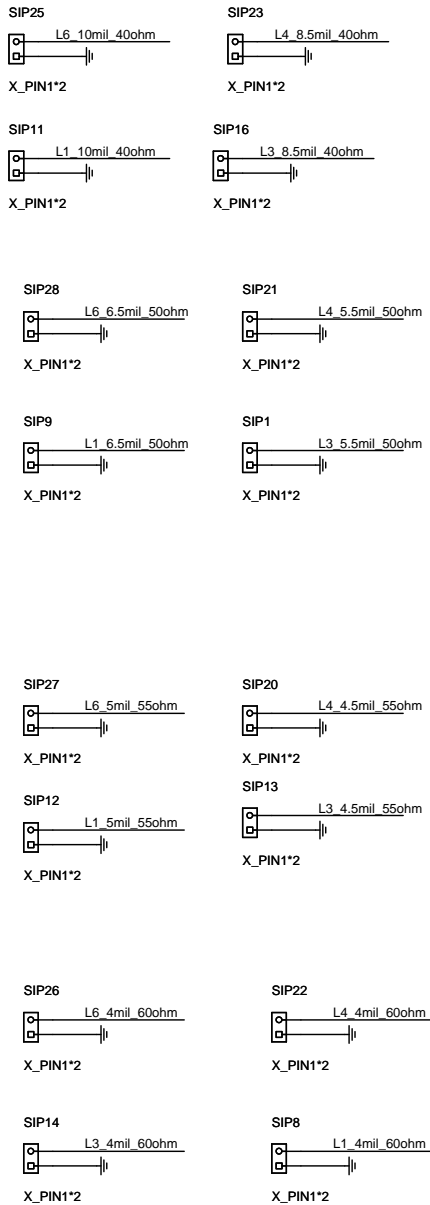


FOR HDD

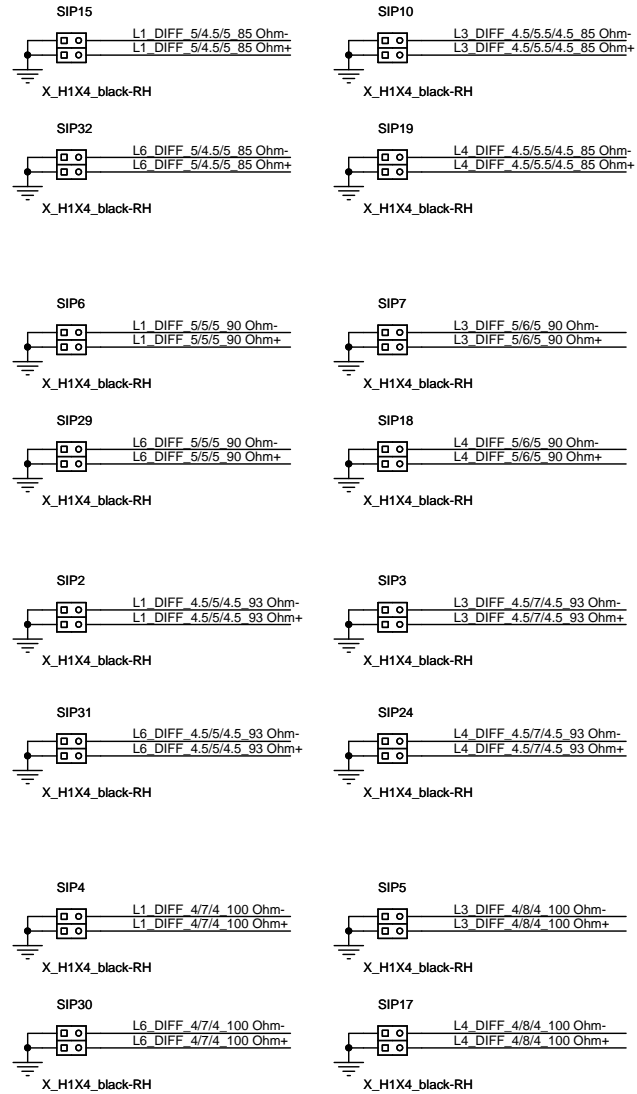


			MICRO-STAR INT'L CO.,LTD		
			MS-168x		
Size B	Document Description MB	Rev 0A			
Date: Tuesday, February 09, 2010		Sheet 48	of 52		

Single ended



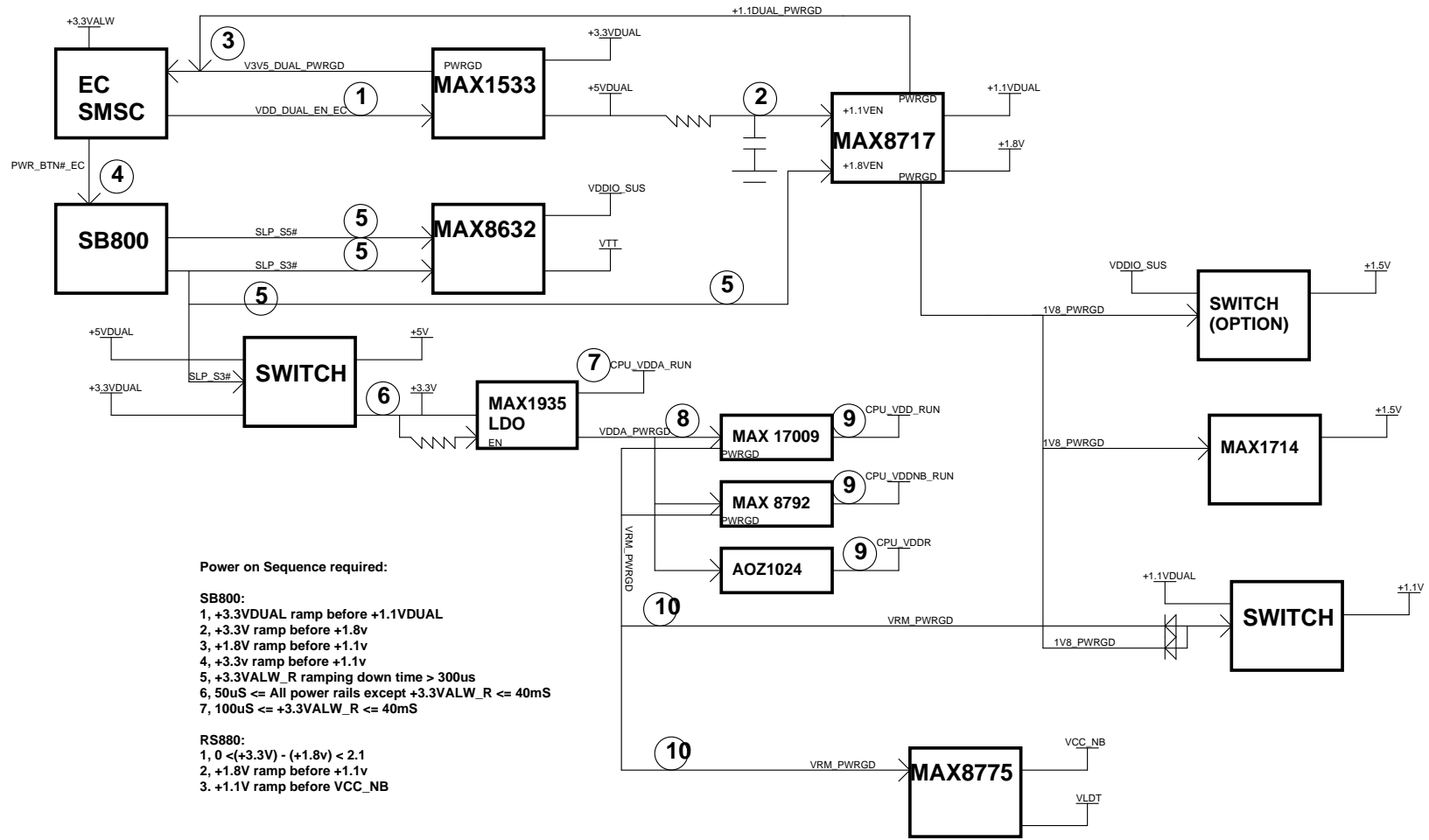
Differential signal



MICRO-STAR INT'L CO.,LTD

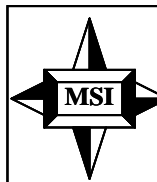
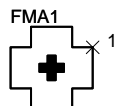
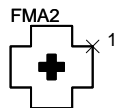
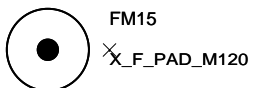
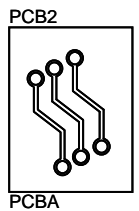
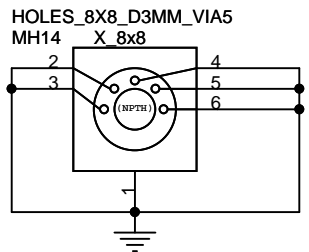
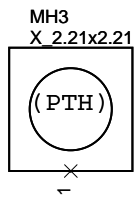
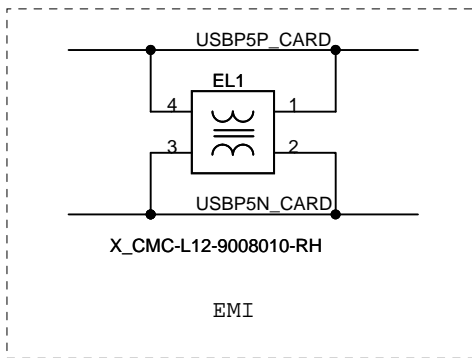
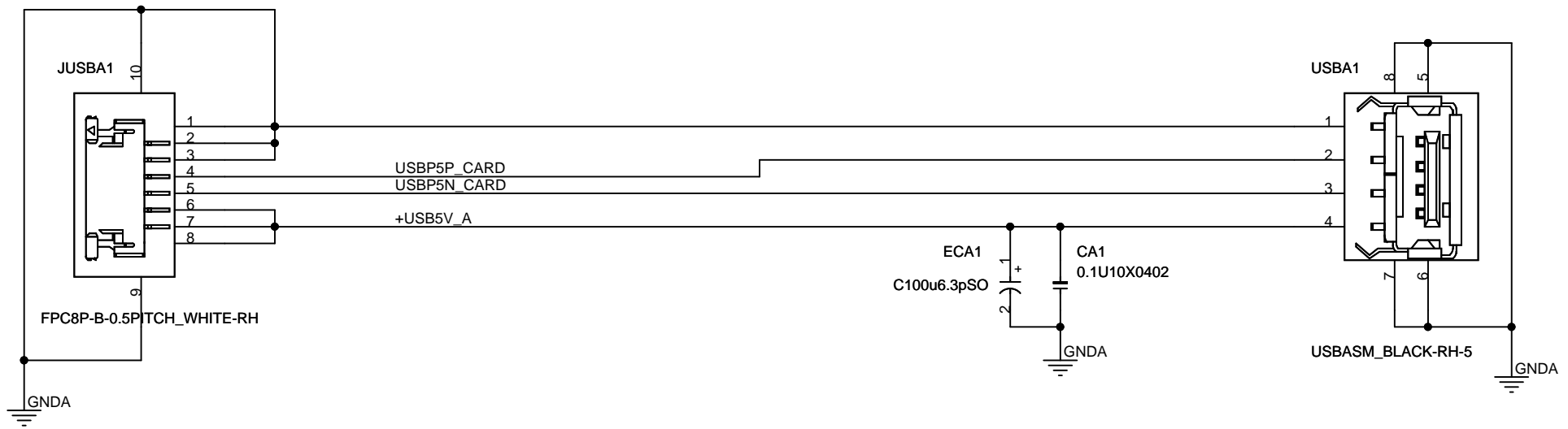
MS-168x

Size B	Document Description IMPEDANCE	Rev 0A
Date: Friday, February 05, 2010	Sheet 49 of 52	



Power on Sequence required:

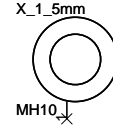
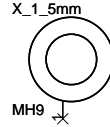
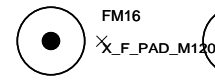
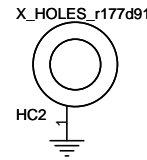
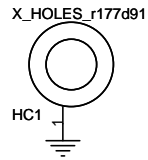
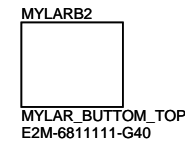
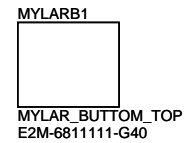
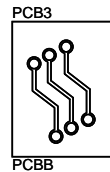
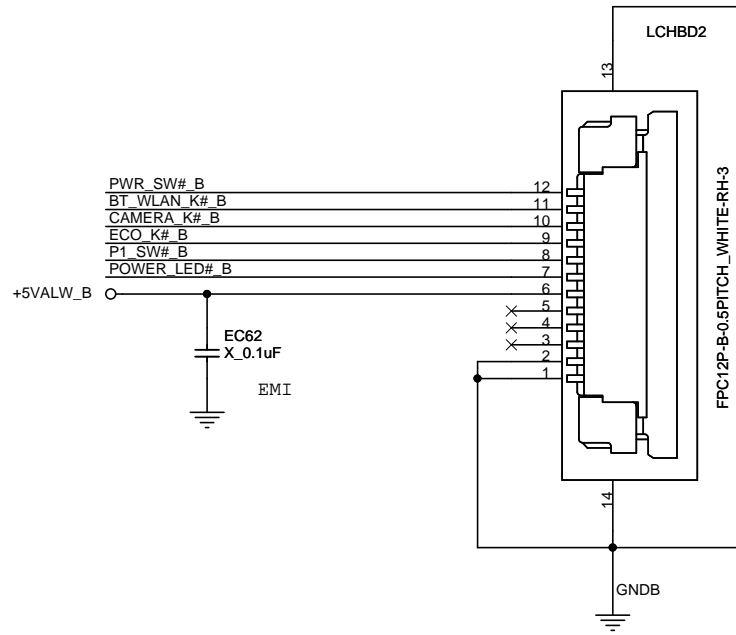
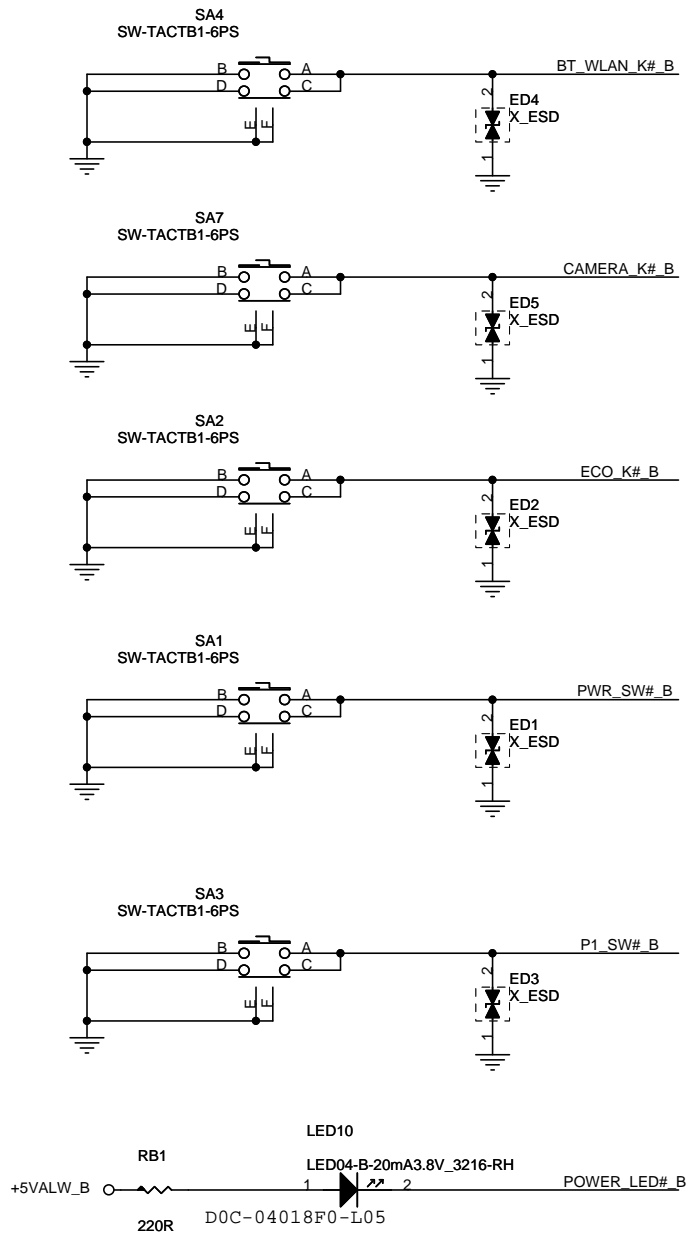
- SB800:**
- 1, +3.3VDUAL ramp before +1.1VDUAL
 - 2, +3.3V ramp before +1.8v
 - 3, +1.8V ramp before +1.1v
 - 4, +3.3v ramp before +1.1v
 - 5, +3.3VALW_R ramping down time > 300us
 - 6, 50uS <= All power rails except +3.3VALW_R <= 40mS
 - 7, 100uS <= +3.3VALW_R <= 40mS
- RS880:**
- 1, $0 < (+3.3V) - (+1.8v) < 2.1$
 - 2, +1.8V ramp before +1.1v
 - 3, +1.1V ramp before VCC_NB



MICRO-STAR INT'L CO.,LTD

MS-168x

Size Custom	Document Description MS-168xA	Rev 0A
Date: Friday, February 05, 2010		Sheet 51 of 52



	MICRO-STAR INT'L CO.,LTD		
	MS-168x		
Size Custom	Document Description MS-168xB	Rev 0A	
Date: Friday, February 05, 2010		Sheet	52 of 52