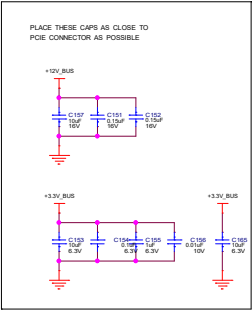
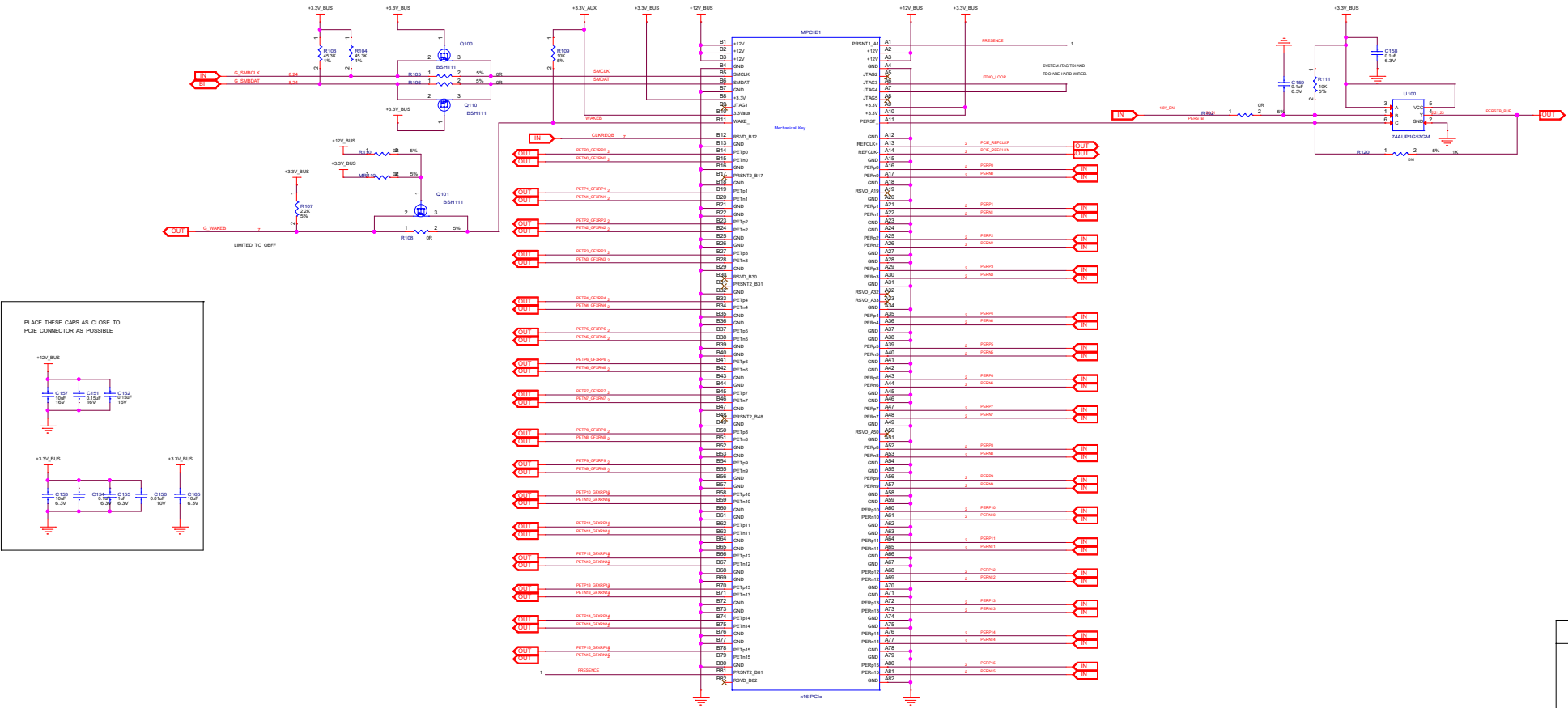



(1) PCI-EXPRESS EDGE CONNECTOR



SYMBOL LEGEND	
SW	SW NET
NET	NET
ACTIVE	ACTIVE
LOW	LOW
BRNG UP	BRNG UP
ONLY	ONLY
DIGITAL	DIGITAL
GROUND	GROUND
ANALOG	ANALOG
GROUND	GROUND

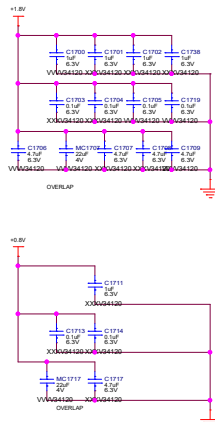


MICRO-STAR INT'L CO.,LTD

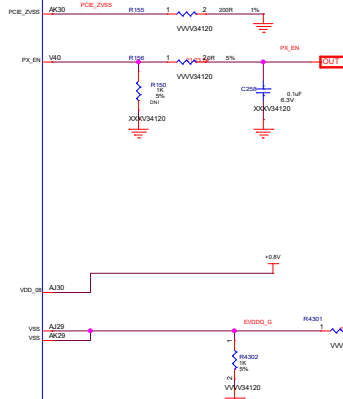
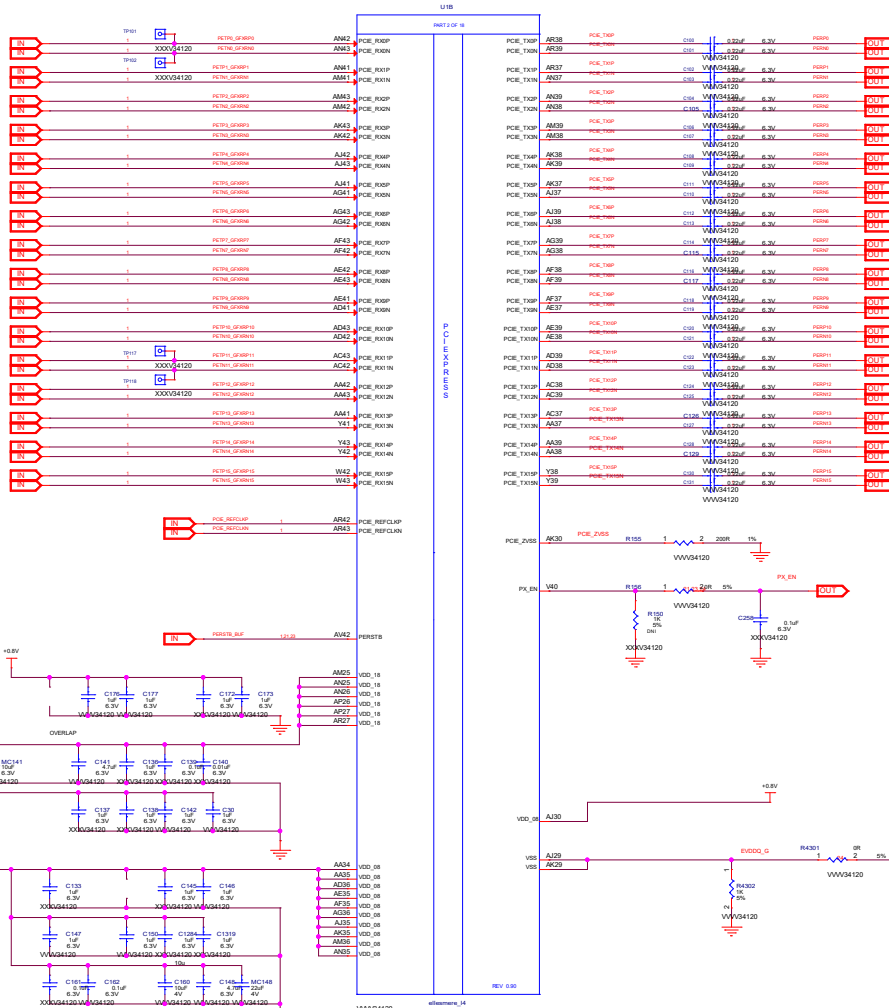
MS-V341

Size	Custom	Document Description	0001 PCIE EDGE CONNECTOR	Rev	2.1
Date:	Wednesday, August 03, 2016	Sheet	1	of	26

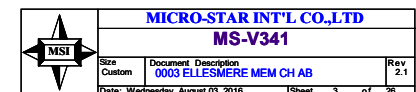
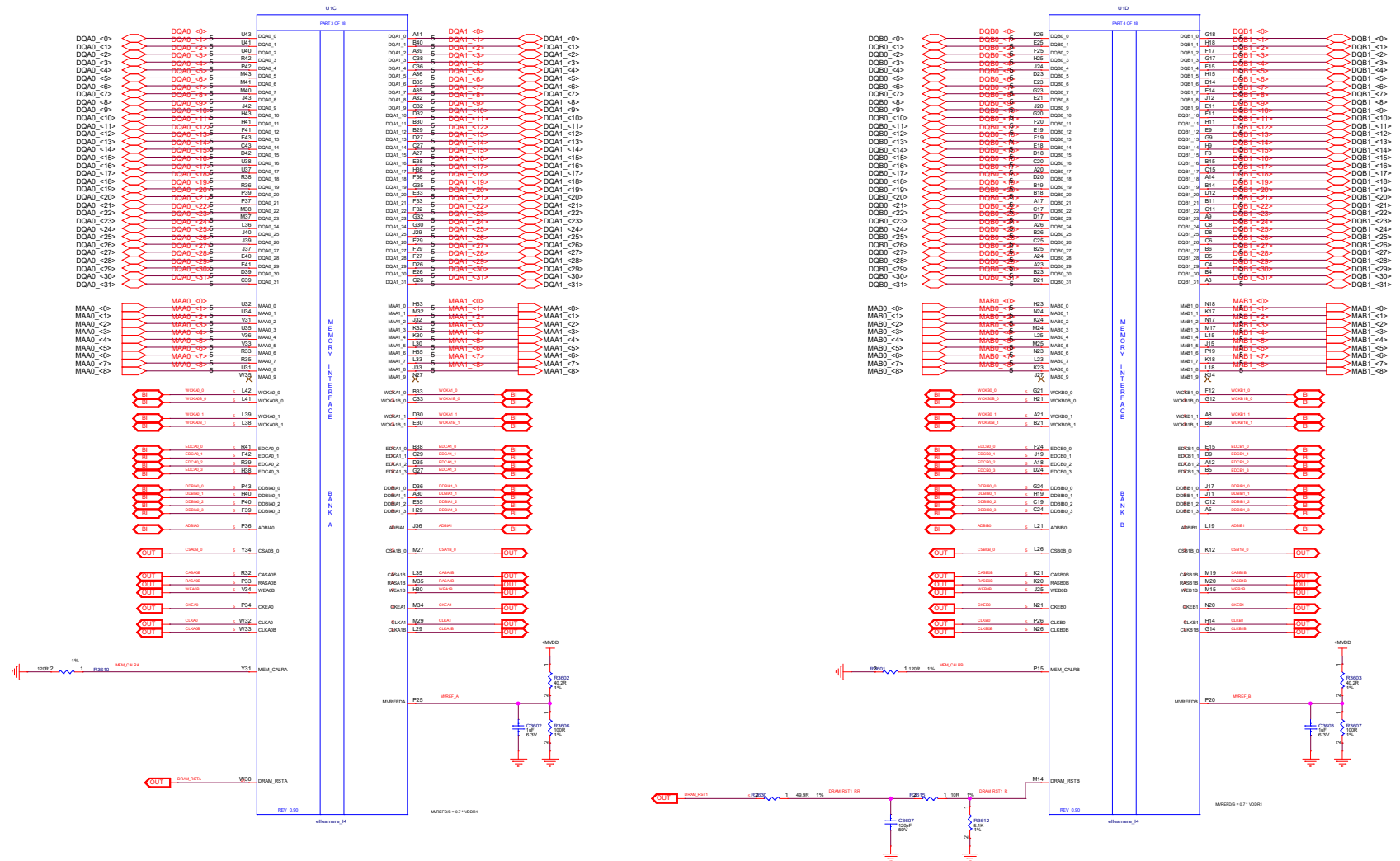
(2) ELLESMERE PCIE INTERFACE



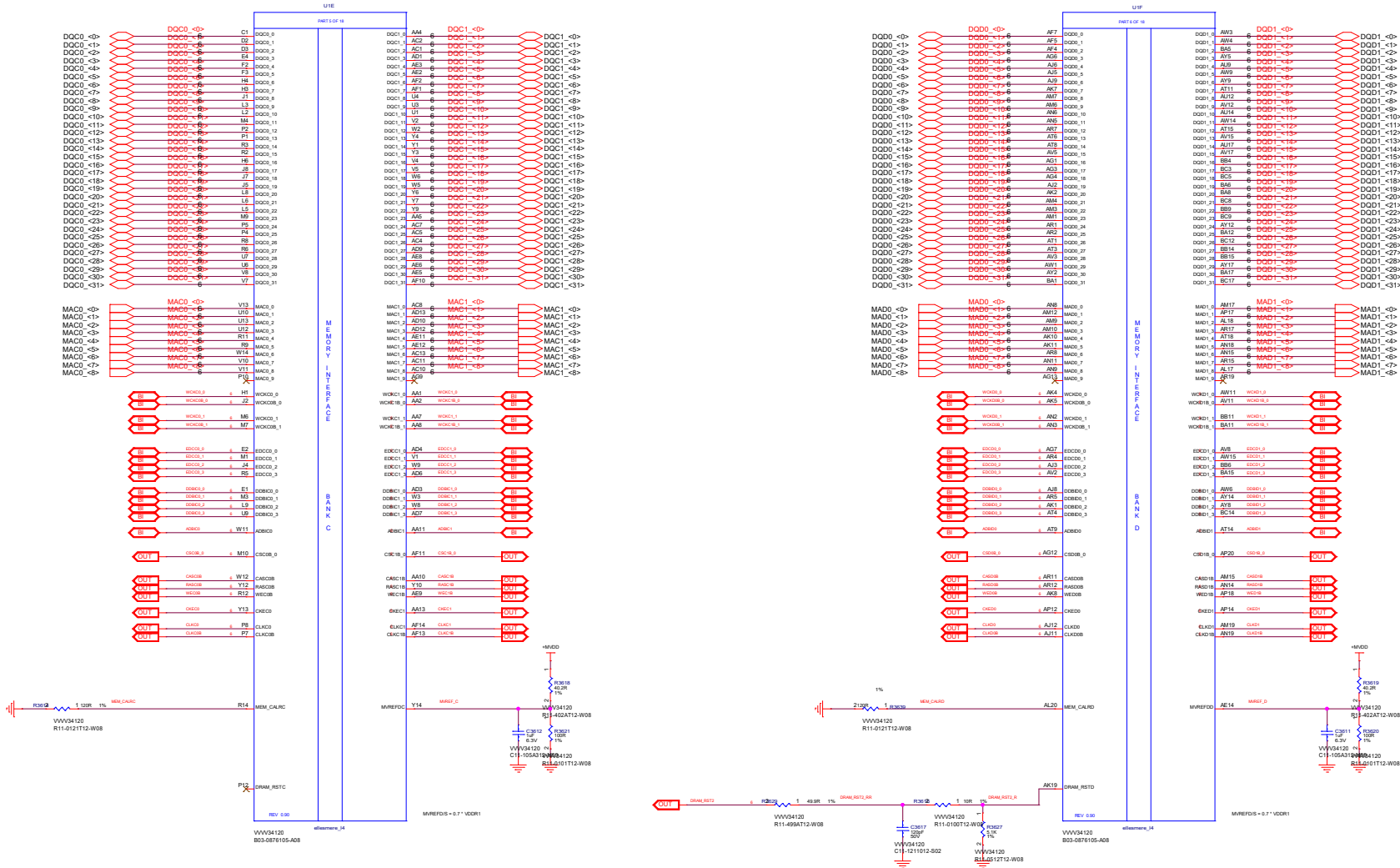
Check BOM for more detail



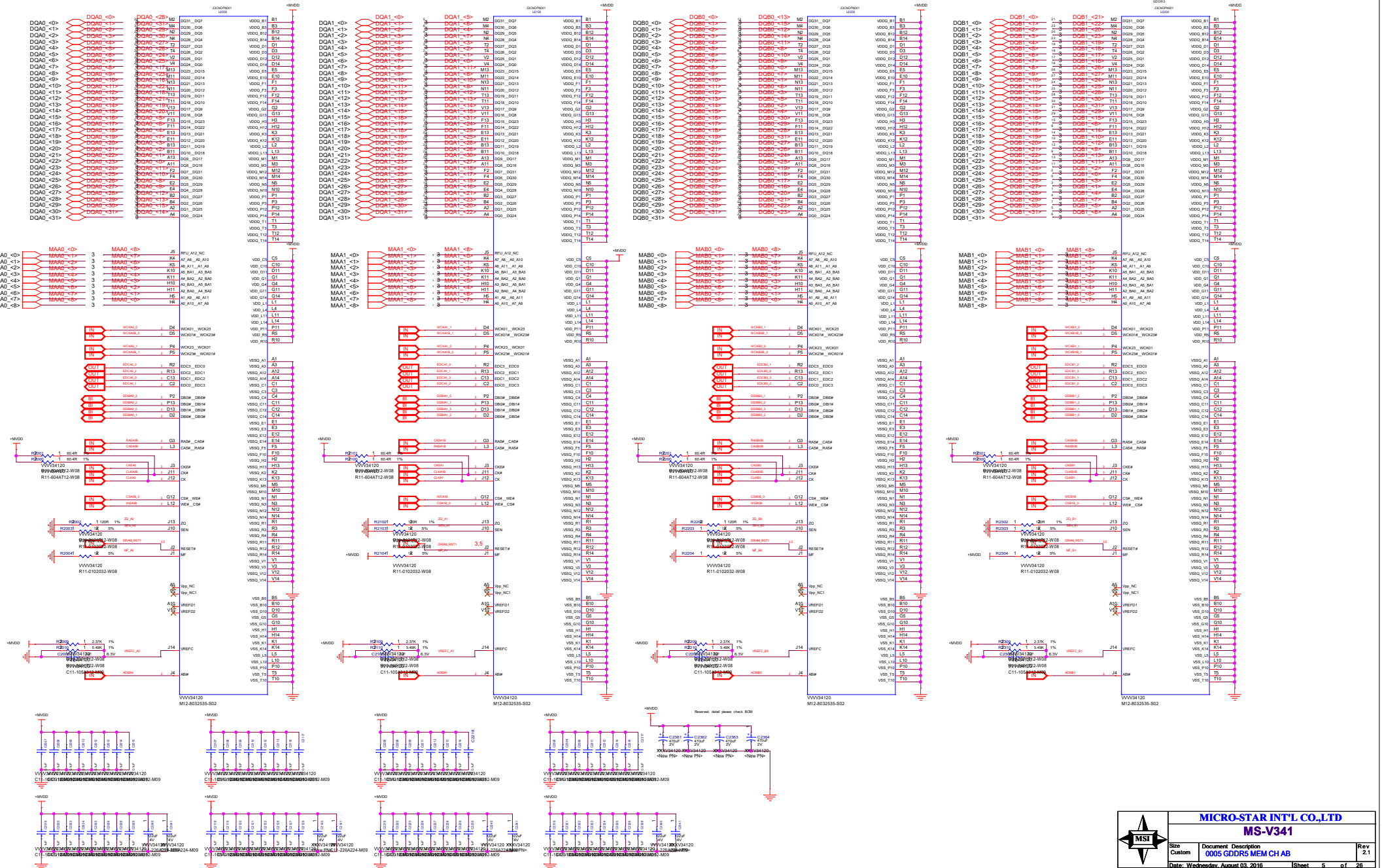
(3) ELLESMERE MEM INTERFACE CH A/B



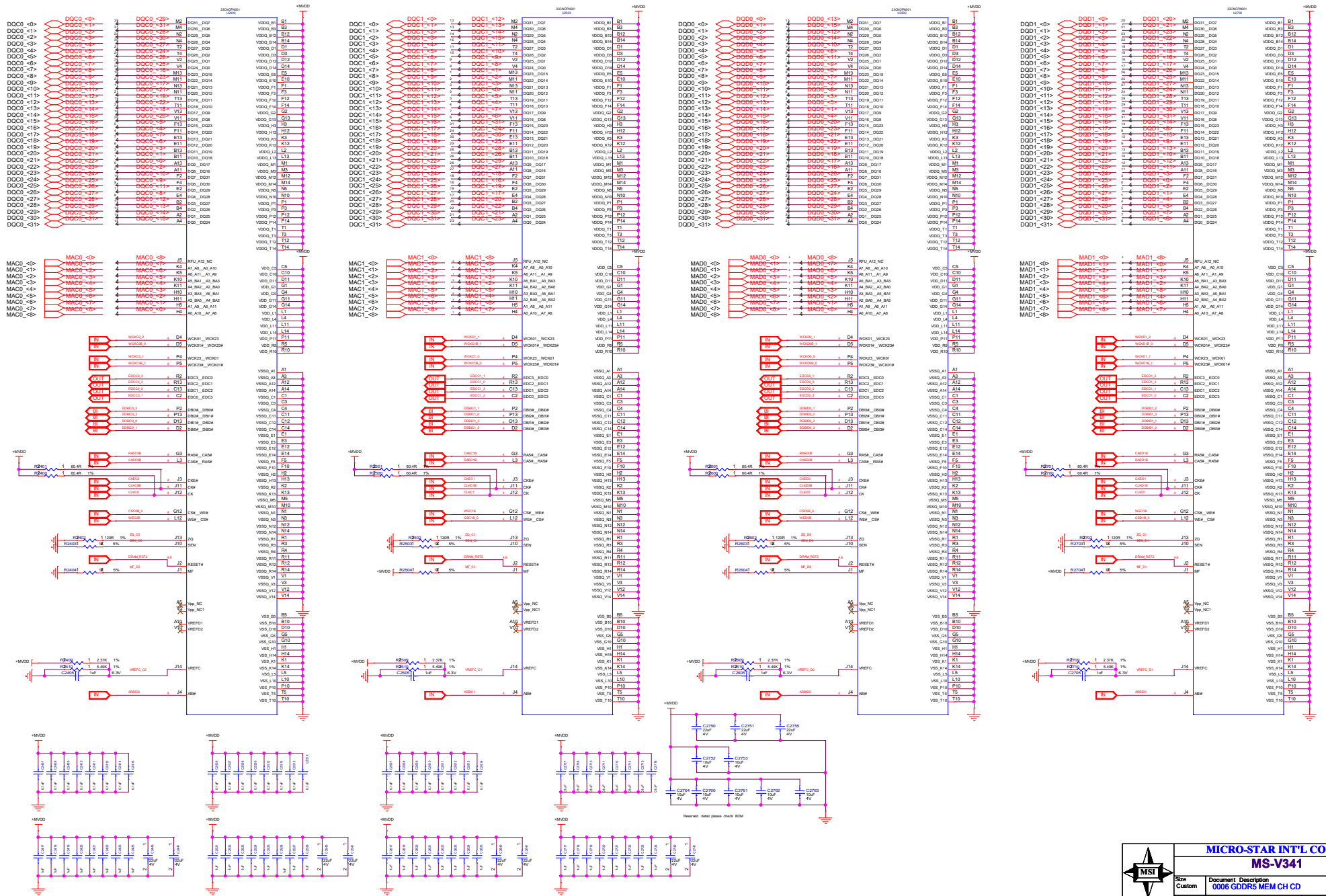
(4) ELLESMERE MEM INTERFACE CH C/D



(5) GDDR5 MEMORY CH A/B



(6) GDDR5 MEMORY CH C/D



MICRO-STAR INT'L CO.,LTD

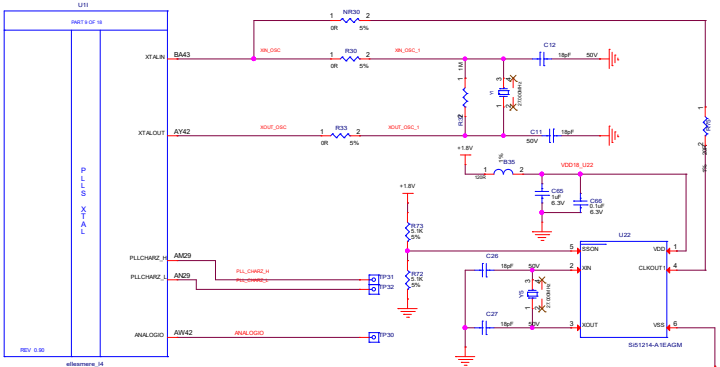
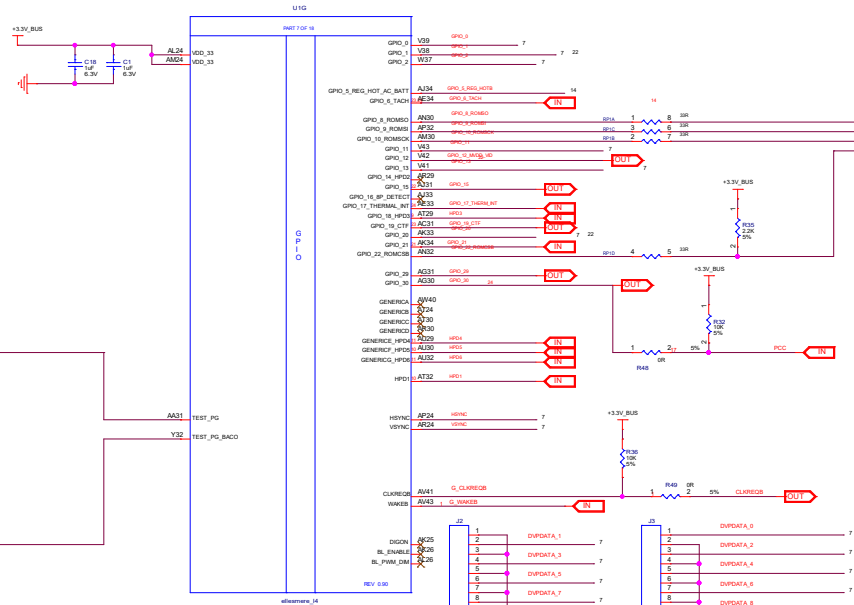
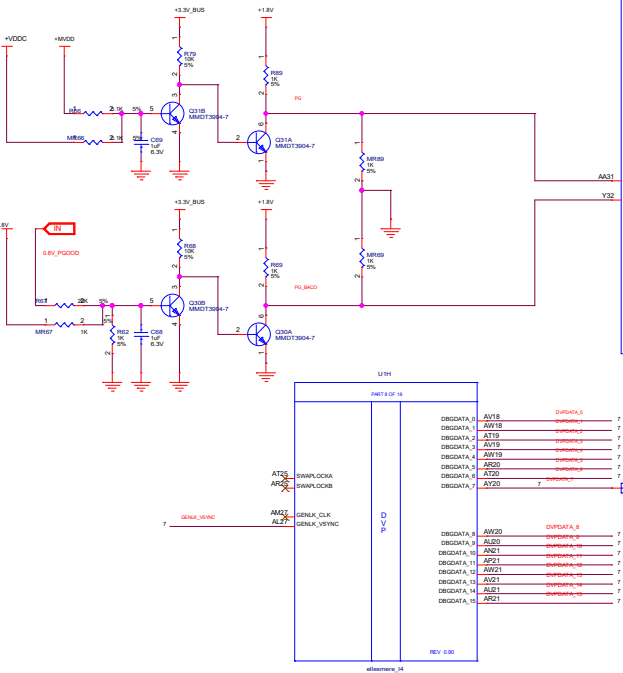
MS-V341

Size Custom	Document Description 0006 GDDR5 MEM CH CD	Rev 2.1
Date: Wednesday, August 03, 2016		Sheet 6 of 26

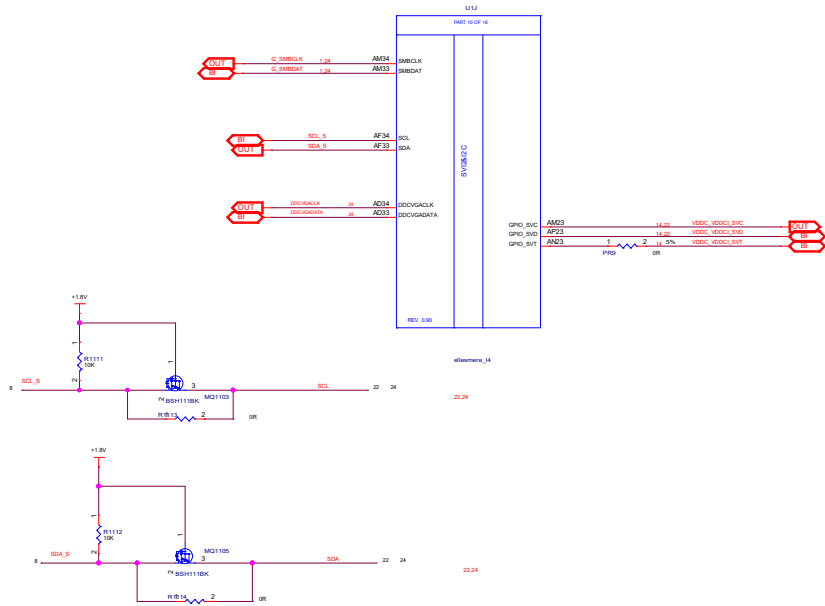
(7) ELLESMERE GPIO STRAP CF XTAL

I2C ADDRESS			FUNCTION	DEVICE

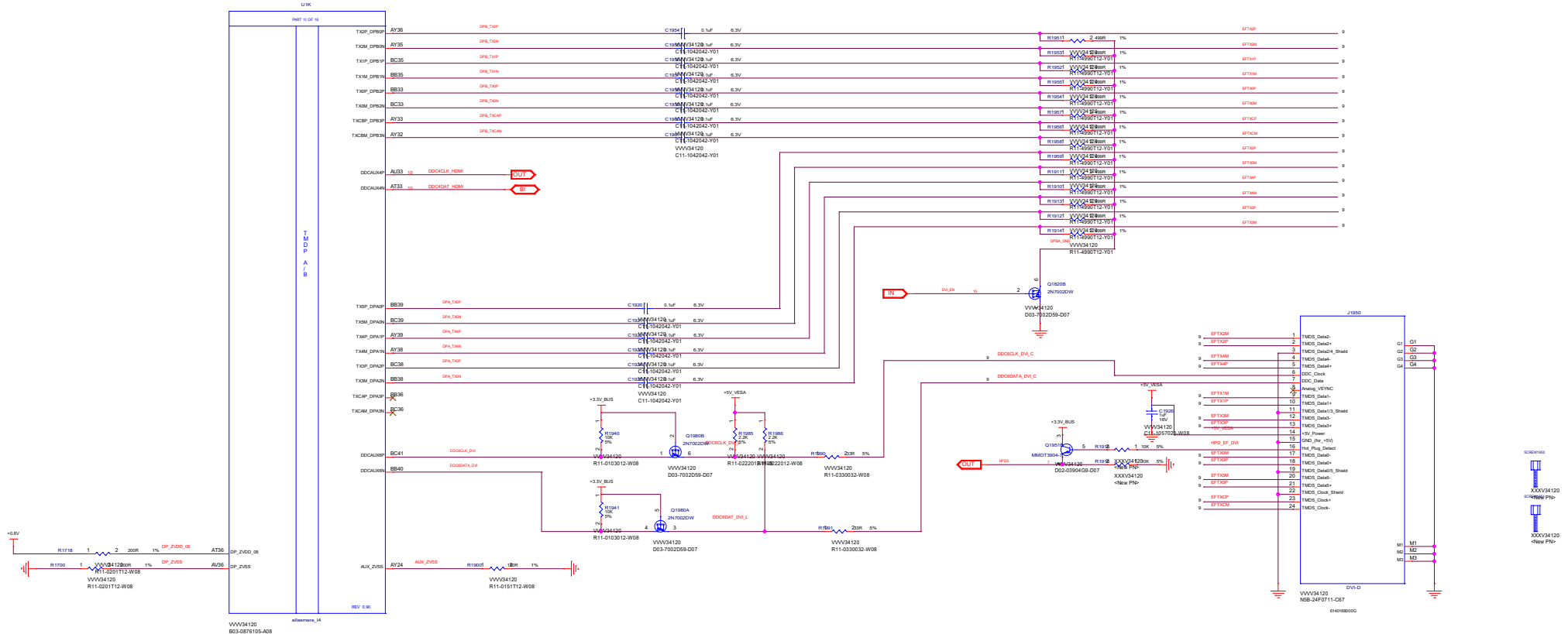
I2C ADDRESS			FUNCTION	DEVICE
0x48			EXT TEMP SENSOR	LM93C83



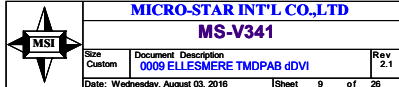
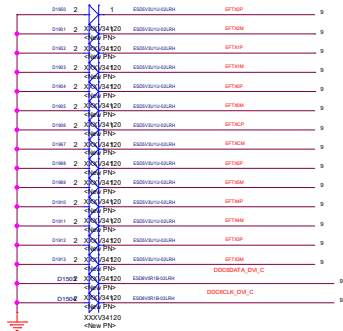
(8) ELLESMERE DAC1 LOCK

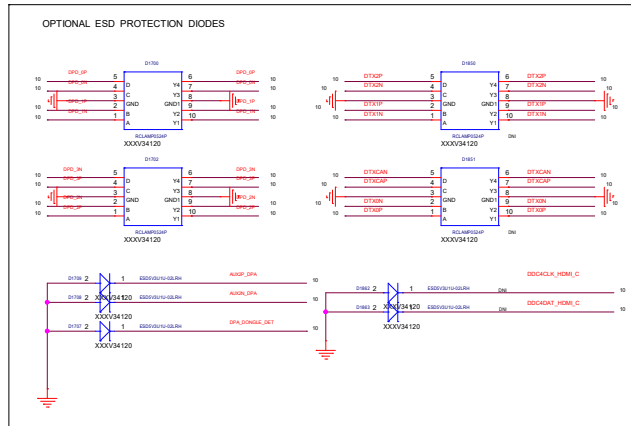
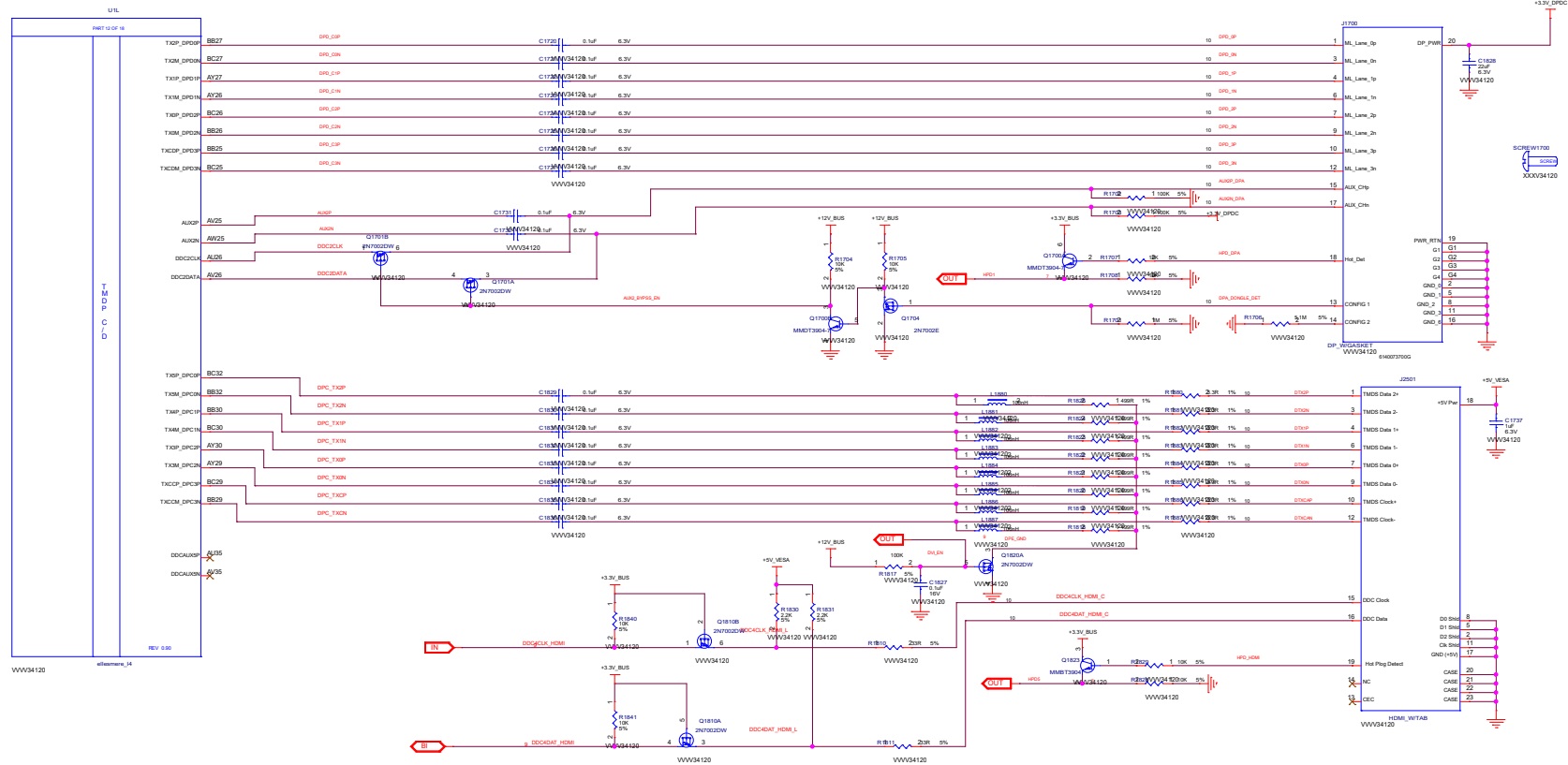


(9) ELLESMERE TMDP A/B



OPTIONAL ESD PROTECTION DIODES



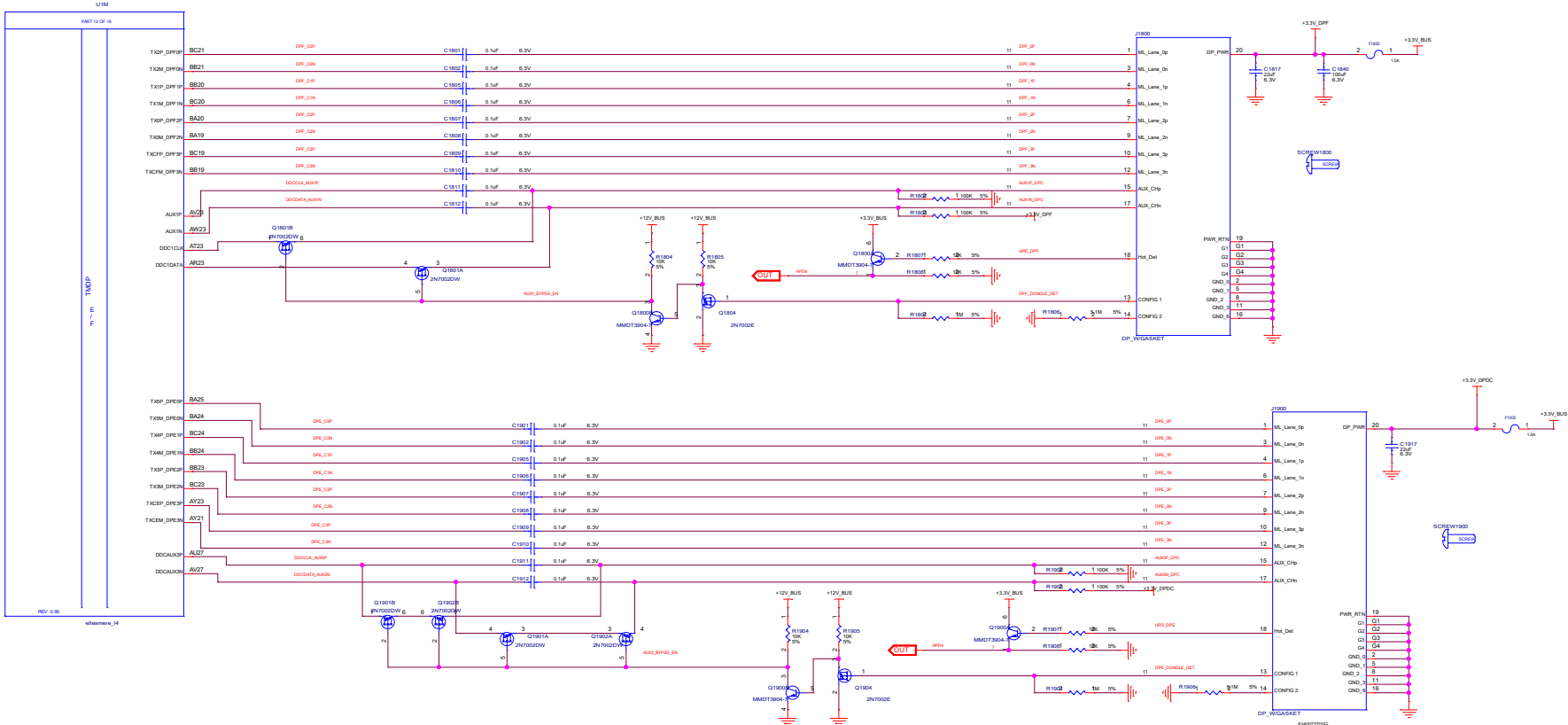


16ci203

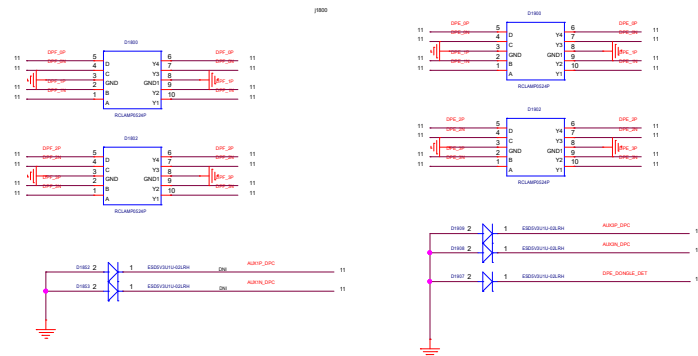
MICRO-STAR INT'L CO.,LTD
MS-V341




Size Custom	Document Description 0010 ELLESMERE TMDPCD DP HDMI	Rev 2
Date: Wednesday, August 03, 2016		Sheet 10 of 26



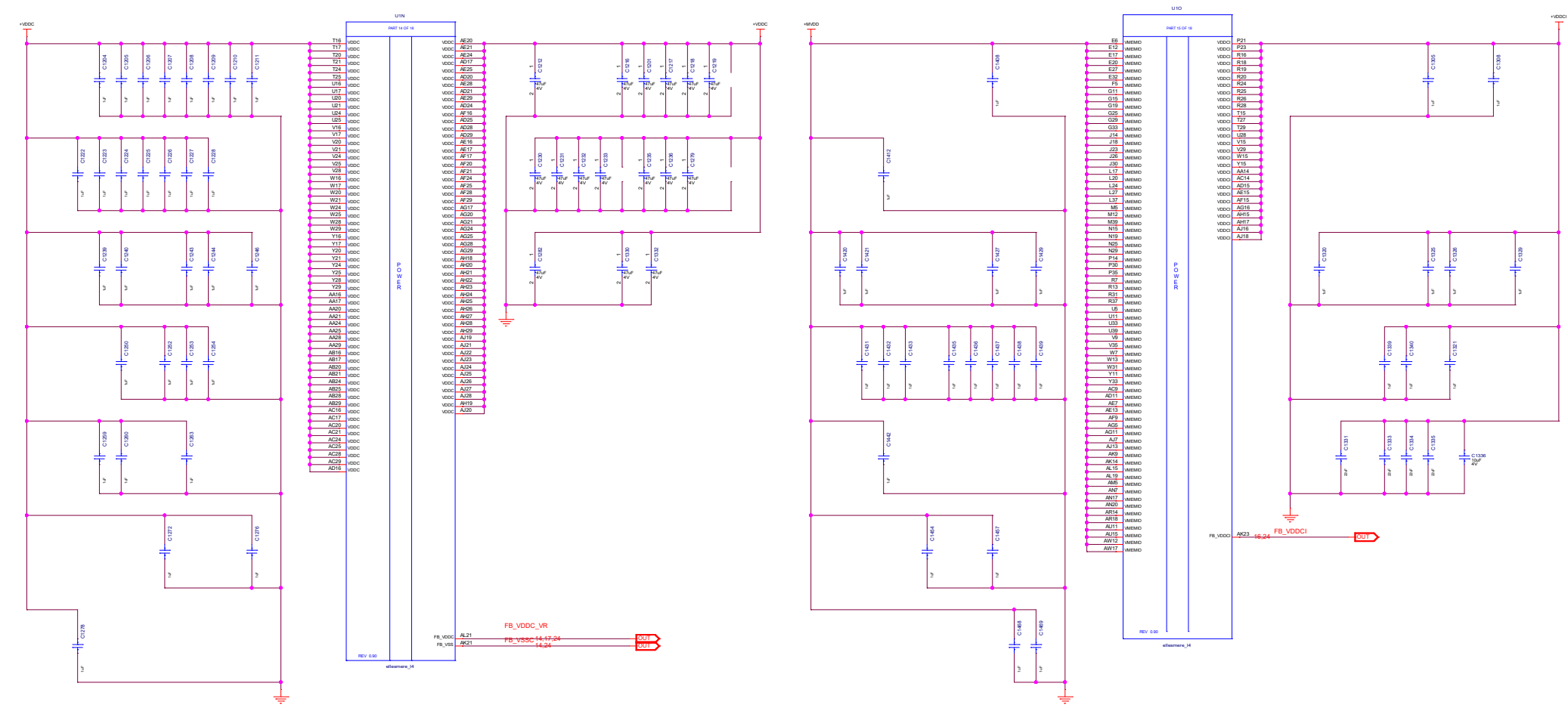
OPTIONAL ESD PROTECTION DIODES



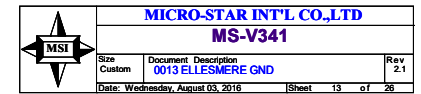
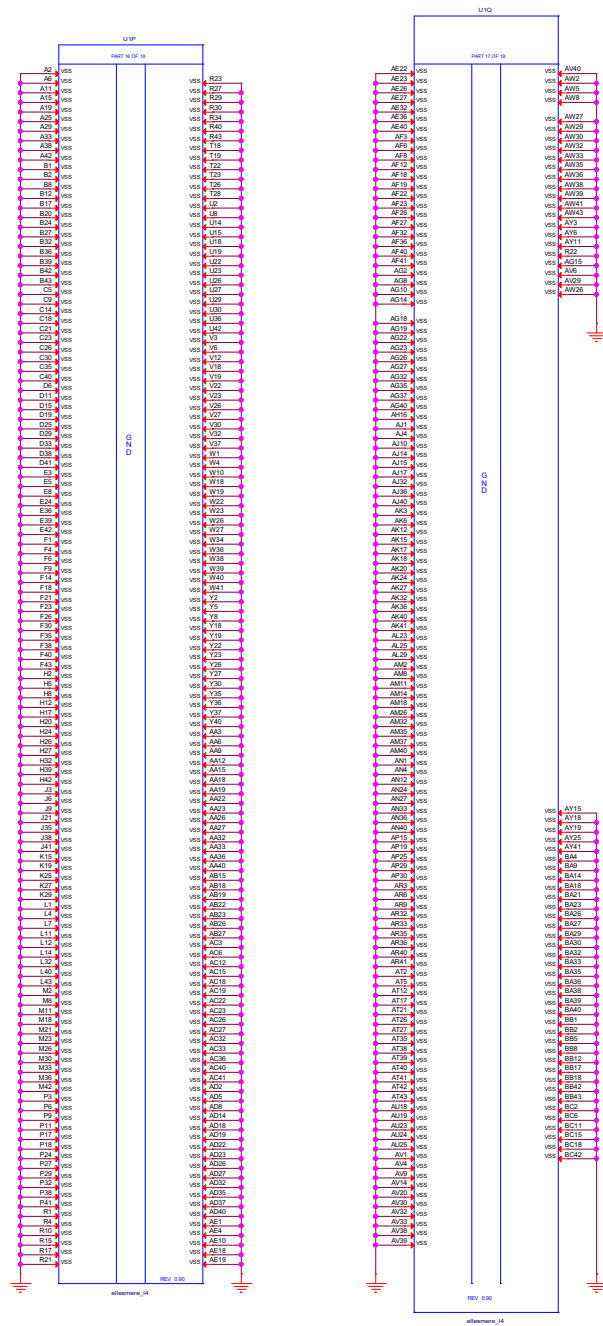
16ci203

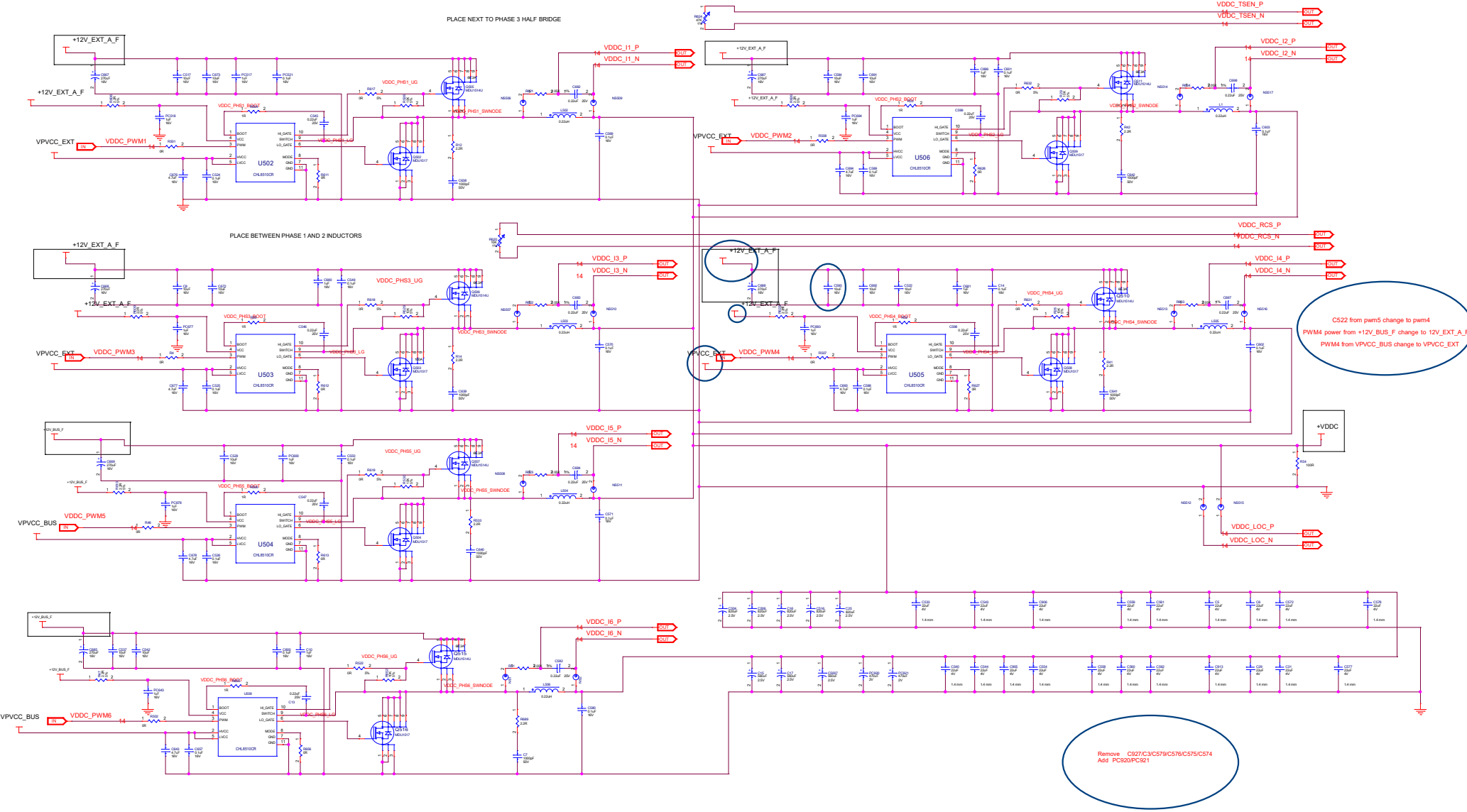
	MICRO-STAR INT'L CO.,LTD		
	MS-V341		
Size Custom	Document Description 0011 ELLESMERE TMDPEF DP DP	Rev 2.1	
Date: Wednesday, August 03, 2016		Sheet 11 of 26	

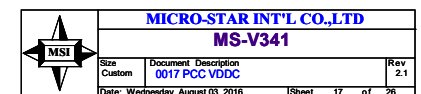
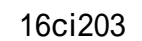
(12) ELLESMERE POWER

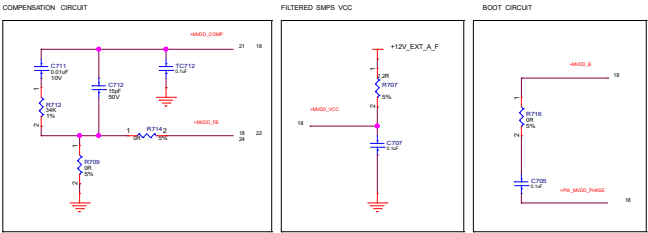


(13) ELLESMERE GROUND

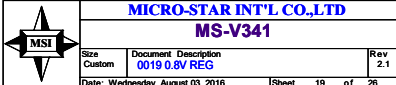
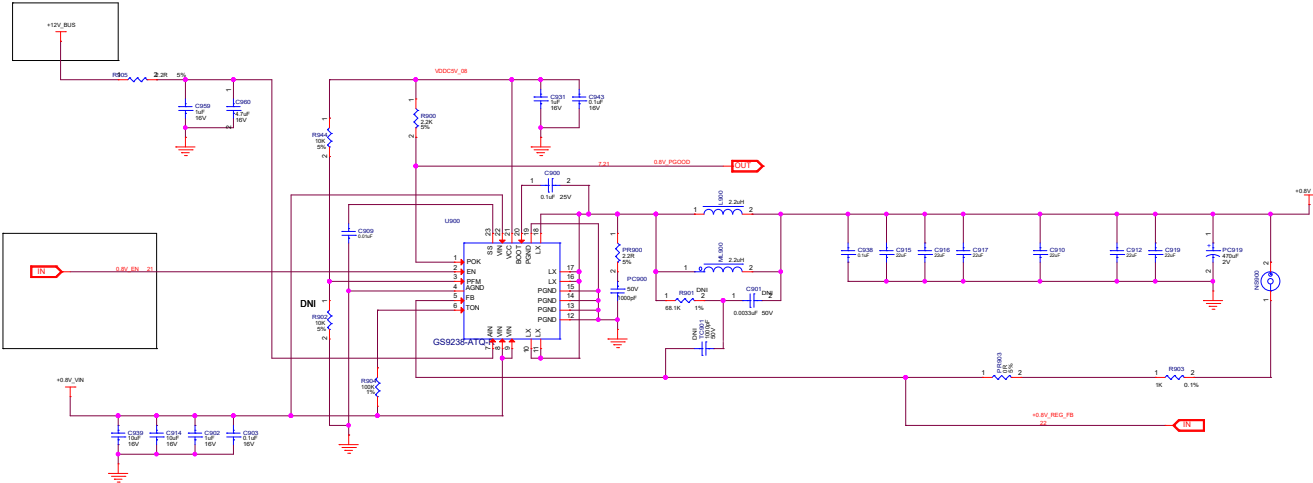








(17) 0.95V



(18) SMALL RAIL REGULATORS

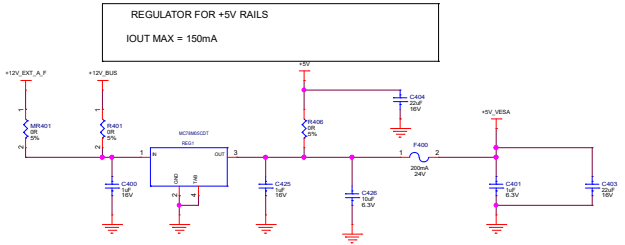
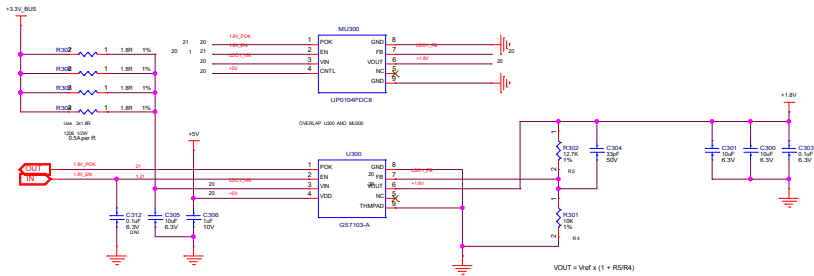
LDO #1:

VIN = 3.0V TO 3.6V MAX

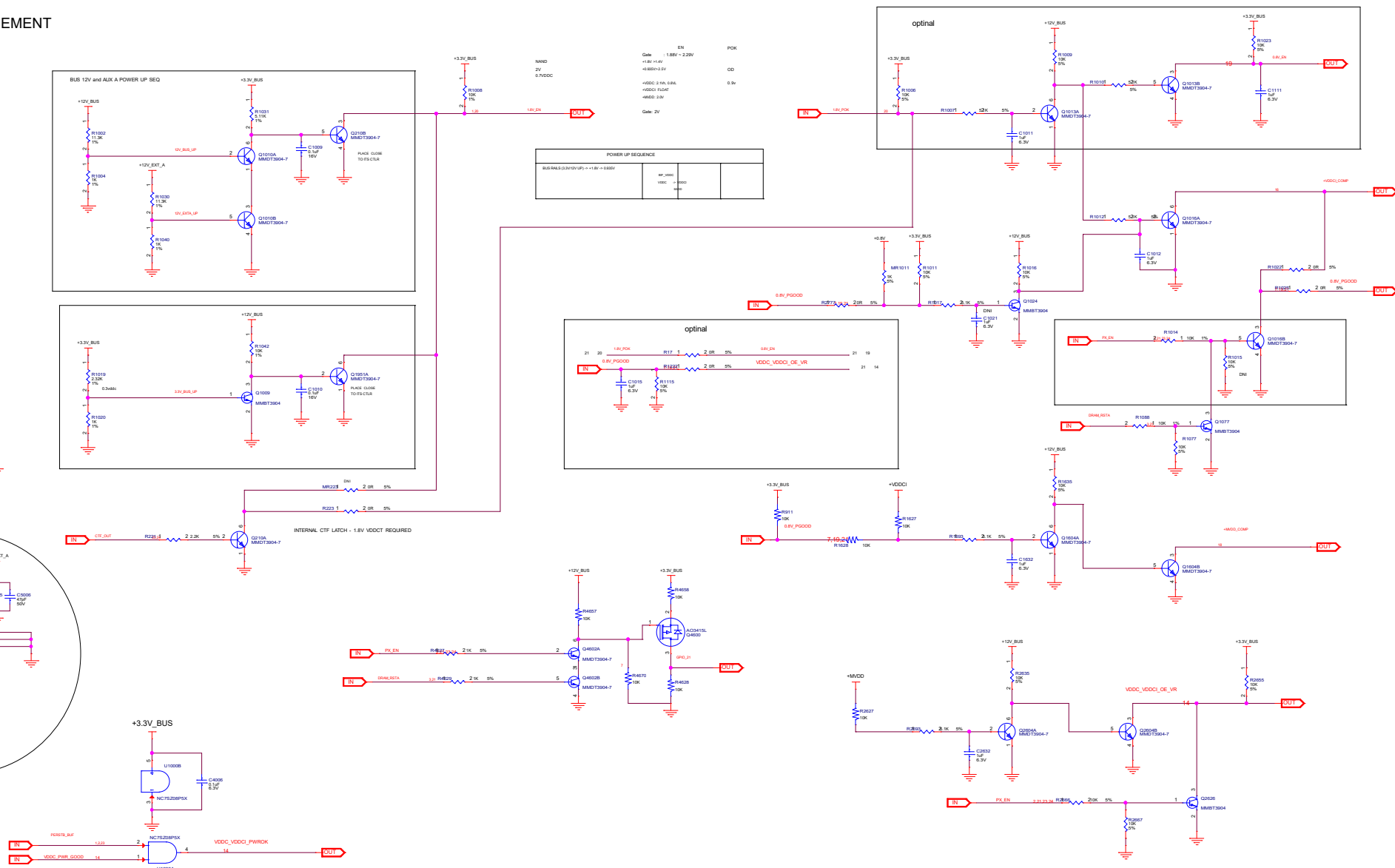
VOUT = +1.8V +/- 2%

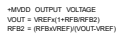
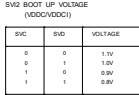
IOUT = 1.3A RMS MAX

PCB: 50 TO 70mm SQ. COPPER AREA FOR COOLING

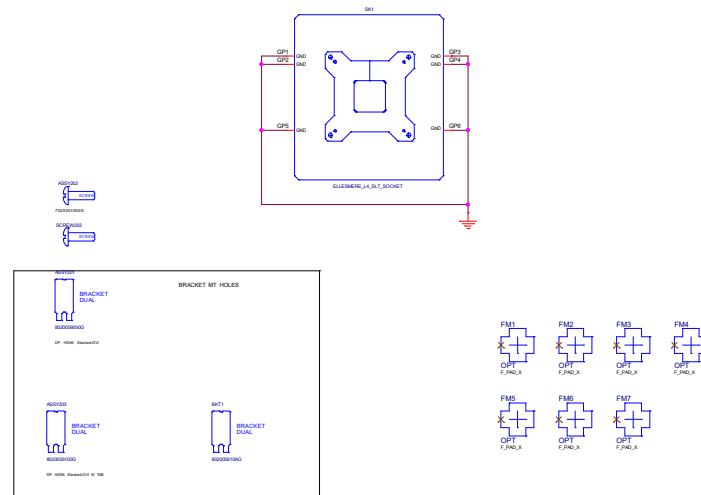
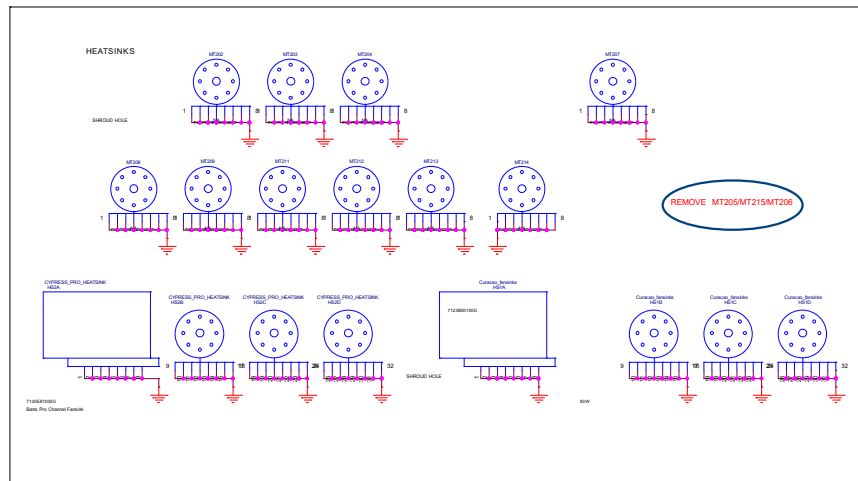
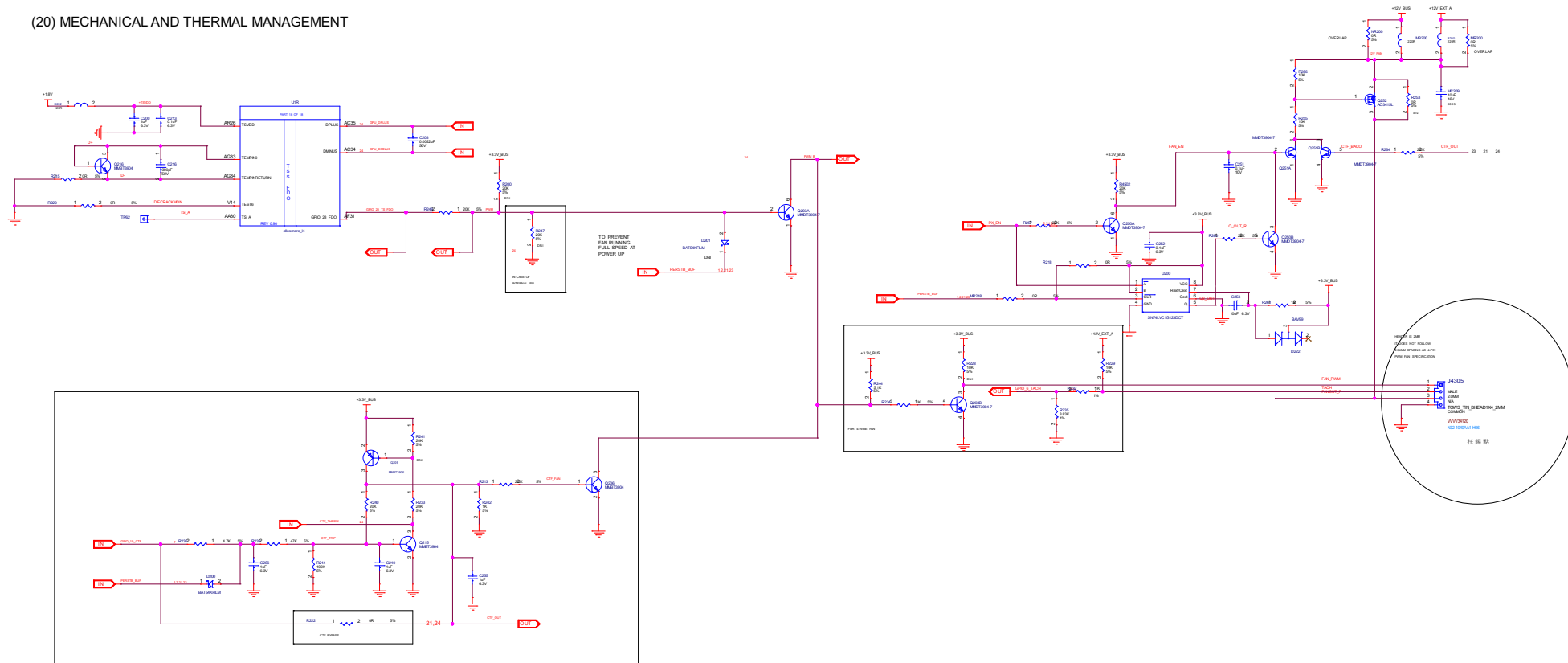


(19) POWER MANAGEMENT

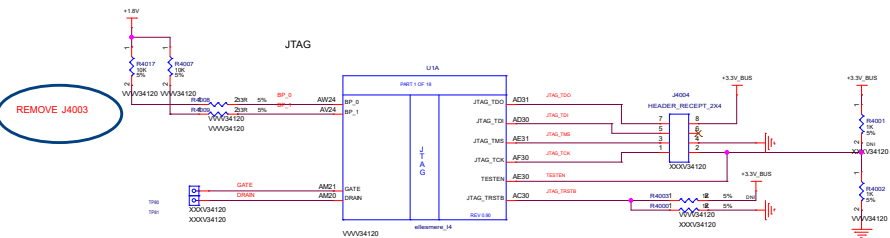




(20) MECHANICAL AND THERMAL MANAGEMENT



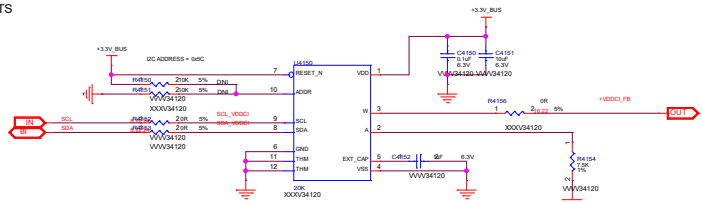
(21) DEBUG CIRCUITS



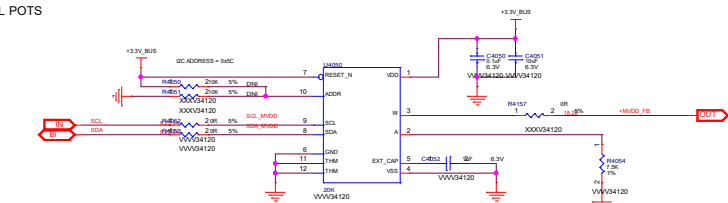
REMOVE

E-FUSE CAPABILITY
DEFAULT = GPIO-CONTROLLED
(MANUAL OPTION AS BACK-UP)

DIGITAL POTS



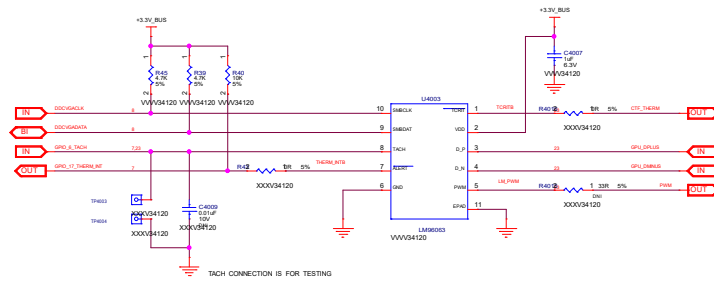
DIGITAL POTS



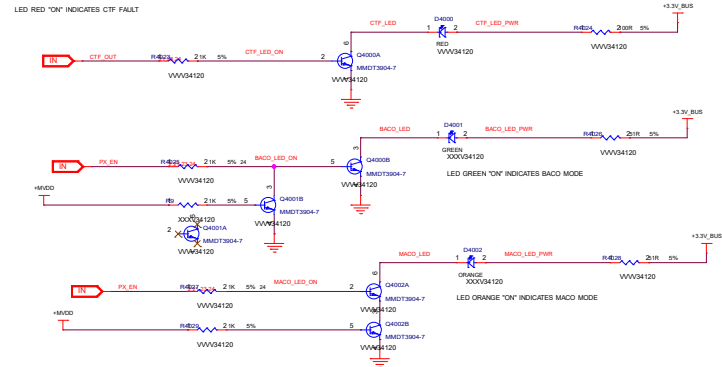
SWITCHES



LM96163 FOR BACKUP THERMAL CONTROL



LED LIGHTS



VTMM - TEST CONNECTOR FOR VOLTAGE MEASUREMENTS

