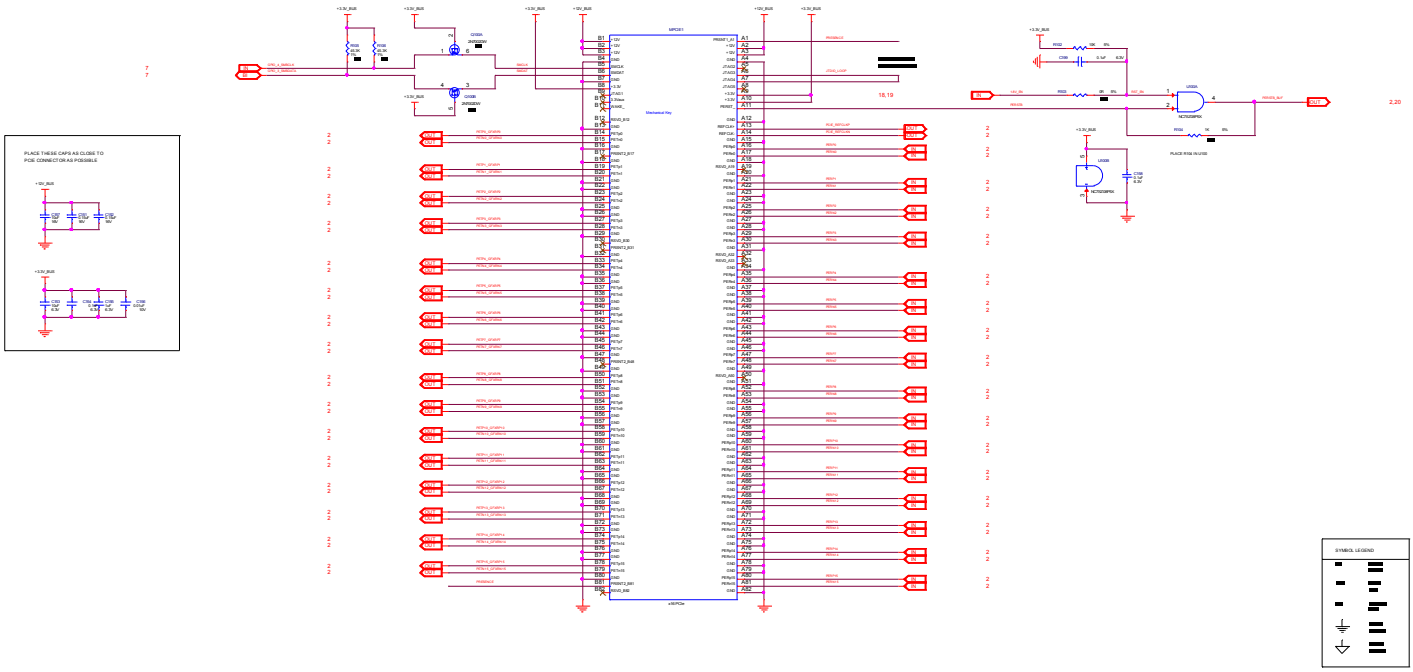
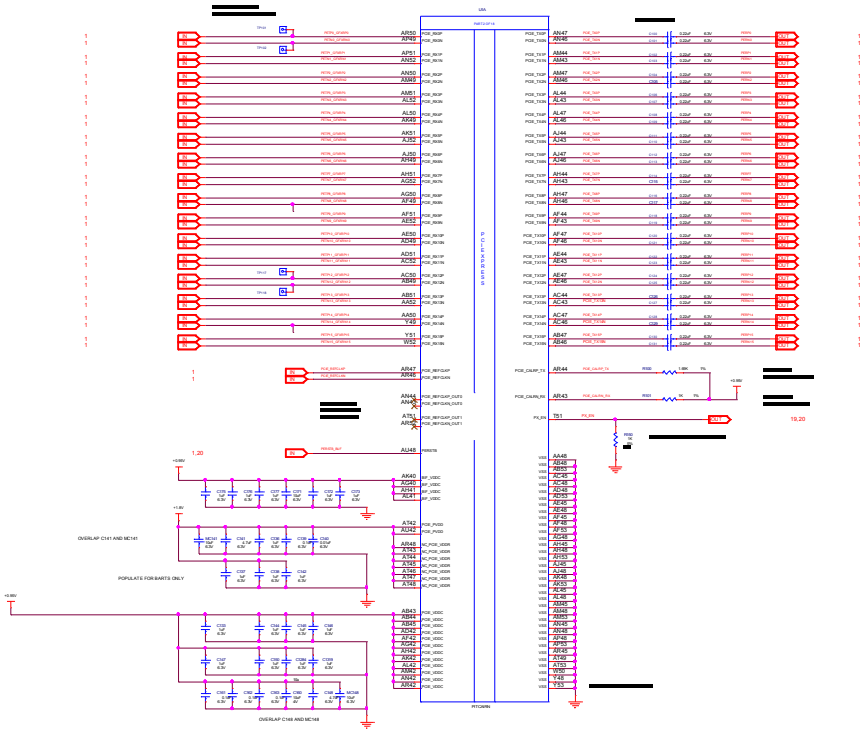
(1) PCI-EXPRESS EDGE CONNECTOR



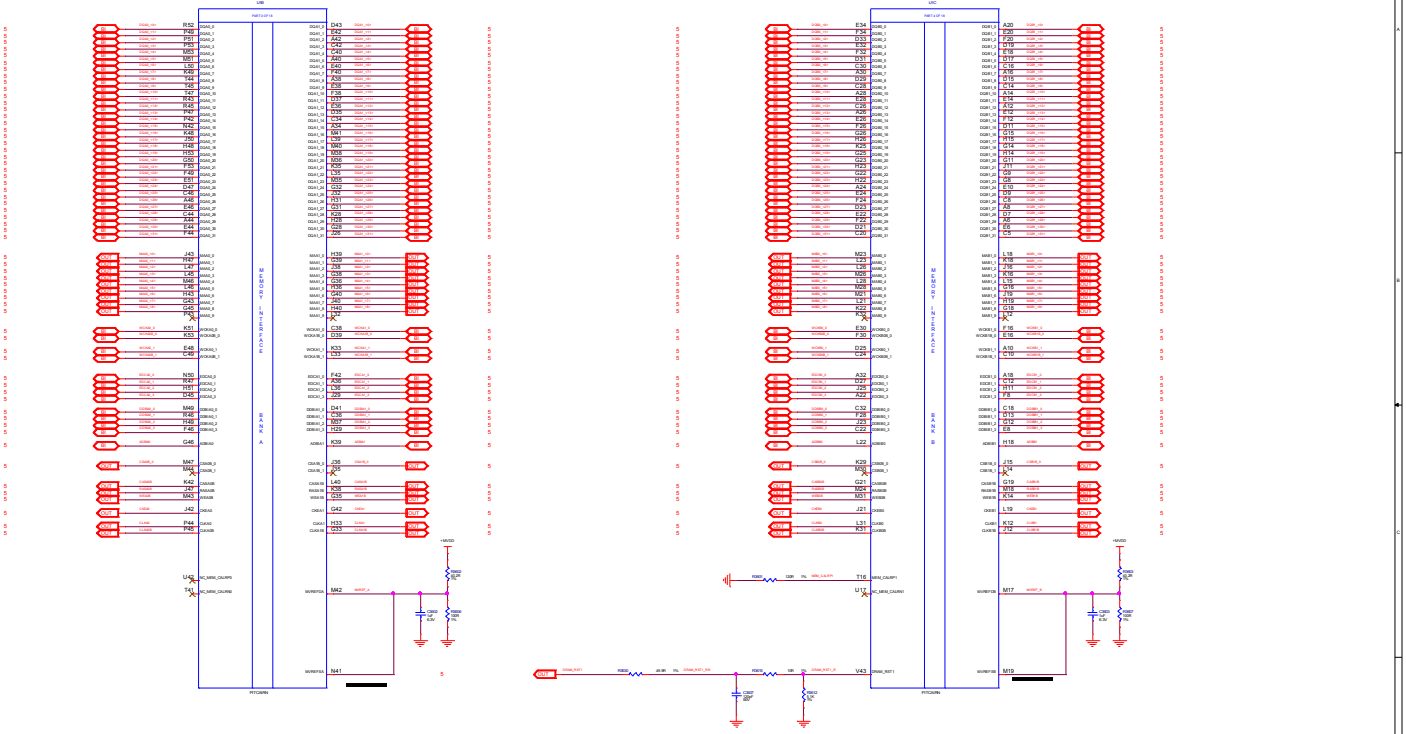
MICRO-STAR INT'L CO.,LTD			
MS-V305			
Size: Custom	Document Description: 01 PCI-EXPRESS EDGE CONNECTOR		Rev: 12
Date: Wednesday, April 08, 2015	Sheet 1 of 24		

(2) CURACAO PCIE INTERFACE



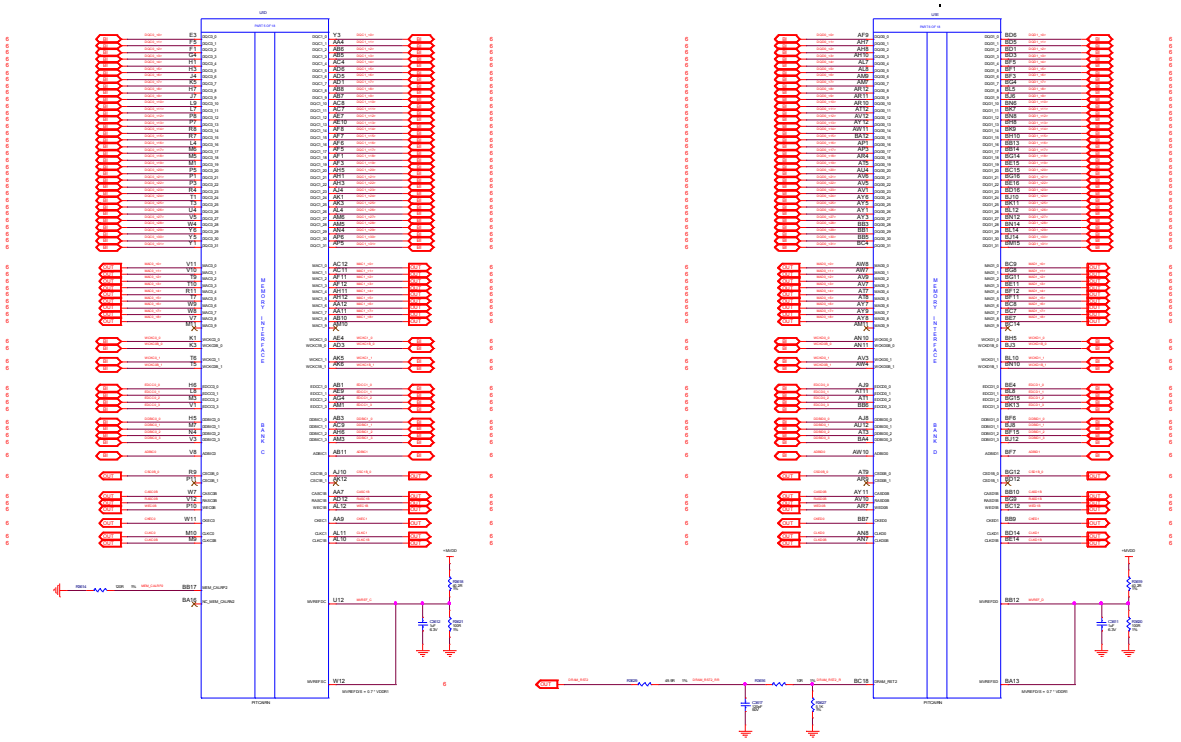
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 02 CURACAO PCIE INTERFACE	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 2 of 24	

(3) CURACAO MEM INTERFACE CH A/B



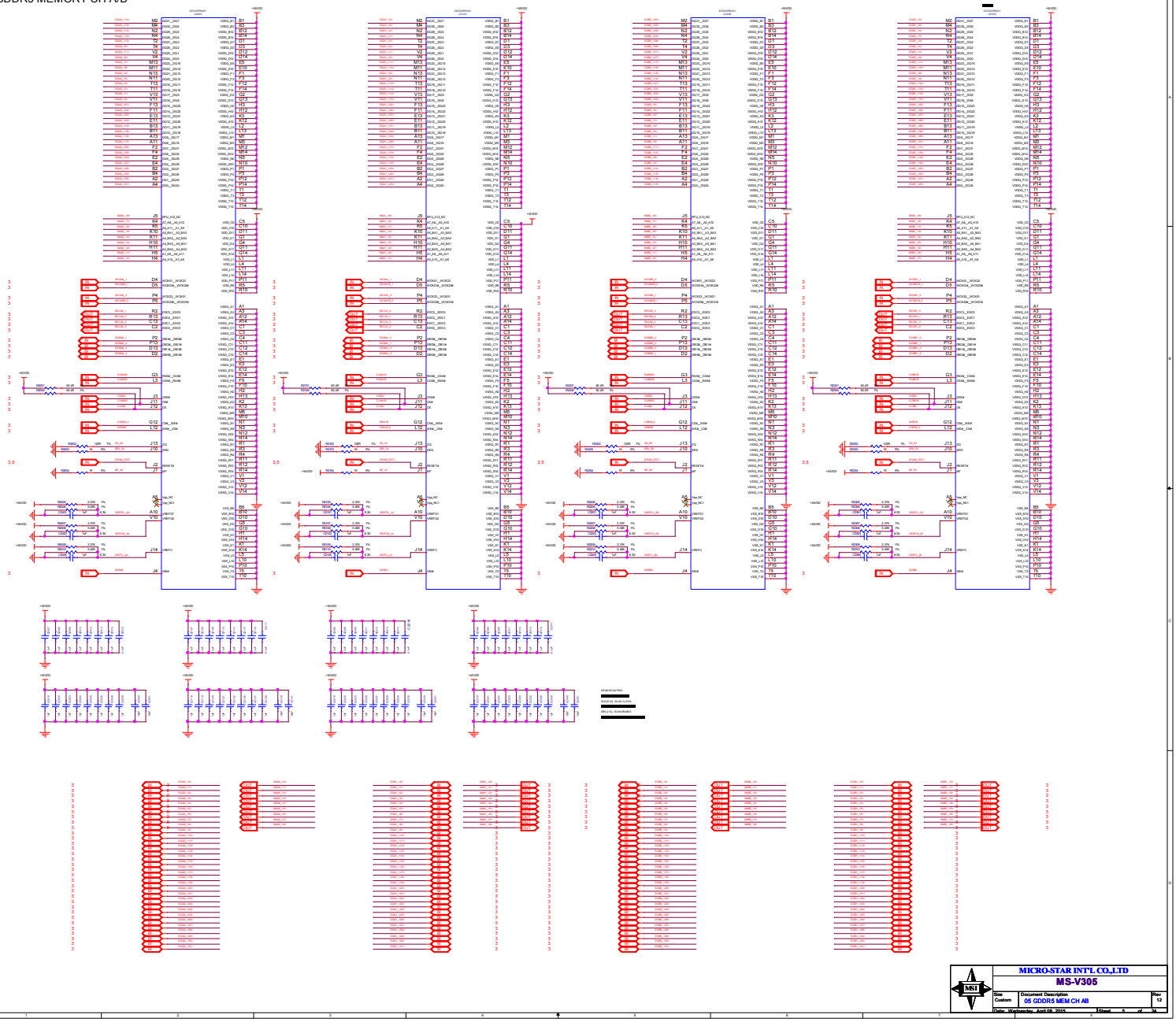
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 03 CURACAO MEM CH AB	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 3 of 24	

(4) CURACAO MEM INTERFACE CH C/D



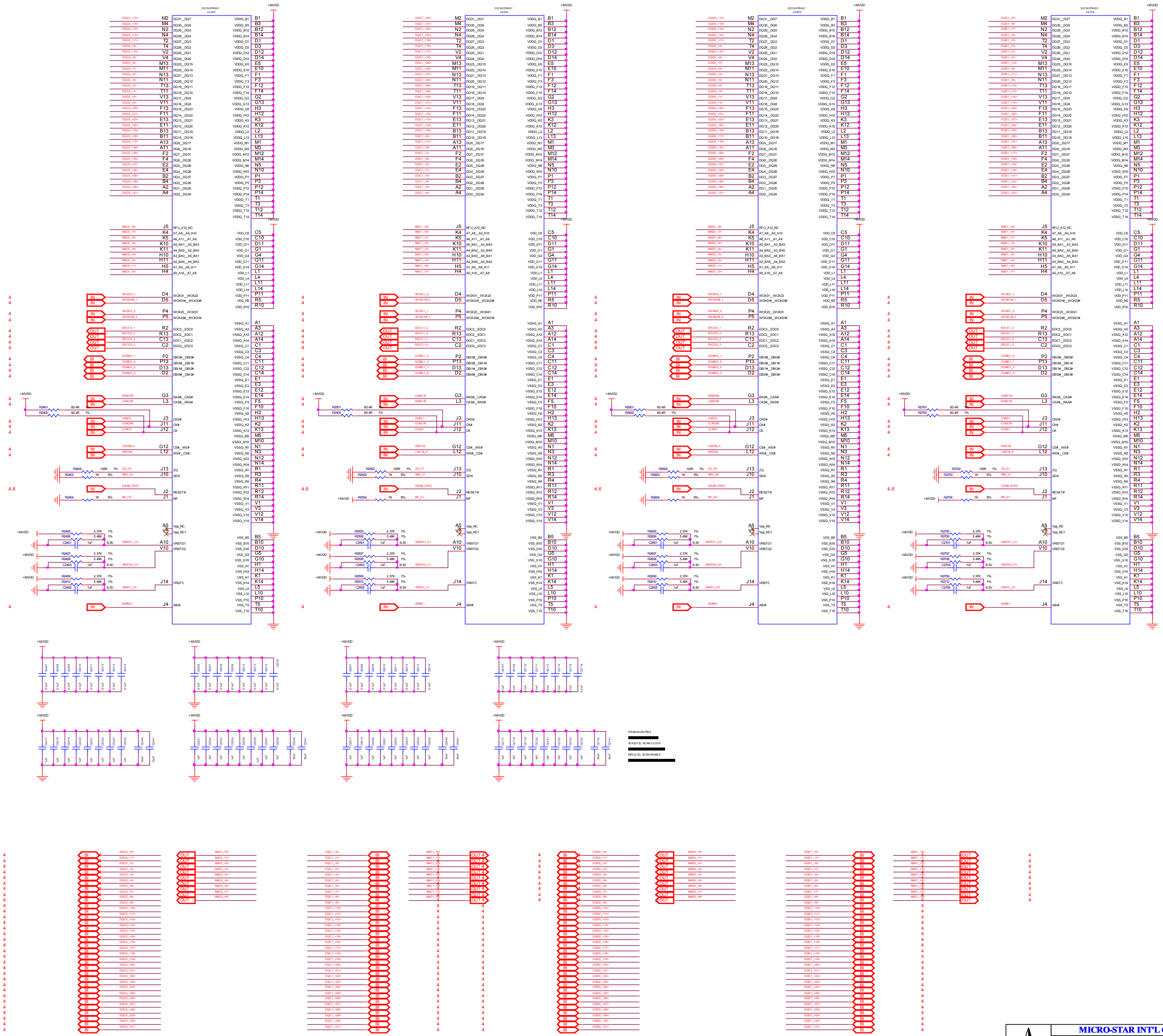
MSI	MICRO-STAR INT'L CO.,LTD	
	MS-V305	
Size: Custom	Document Description: 04 CURACAO MEM CH CD	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 4 of 24	

(5) GDDR5 MEMORY CH A/B



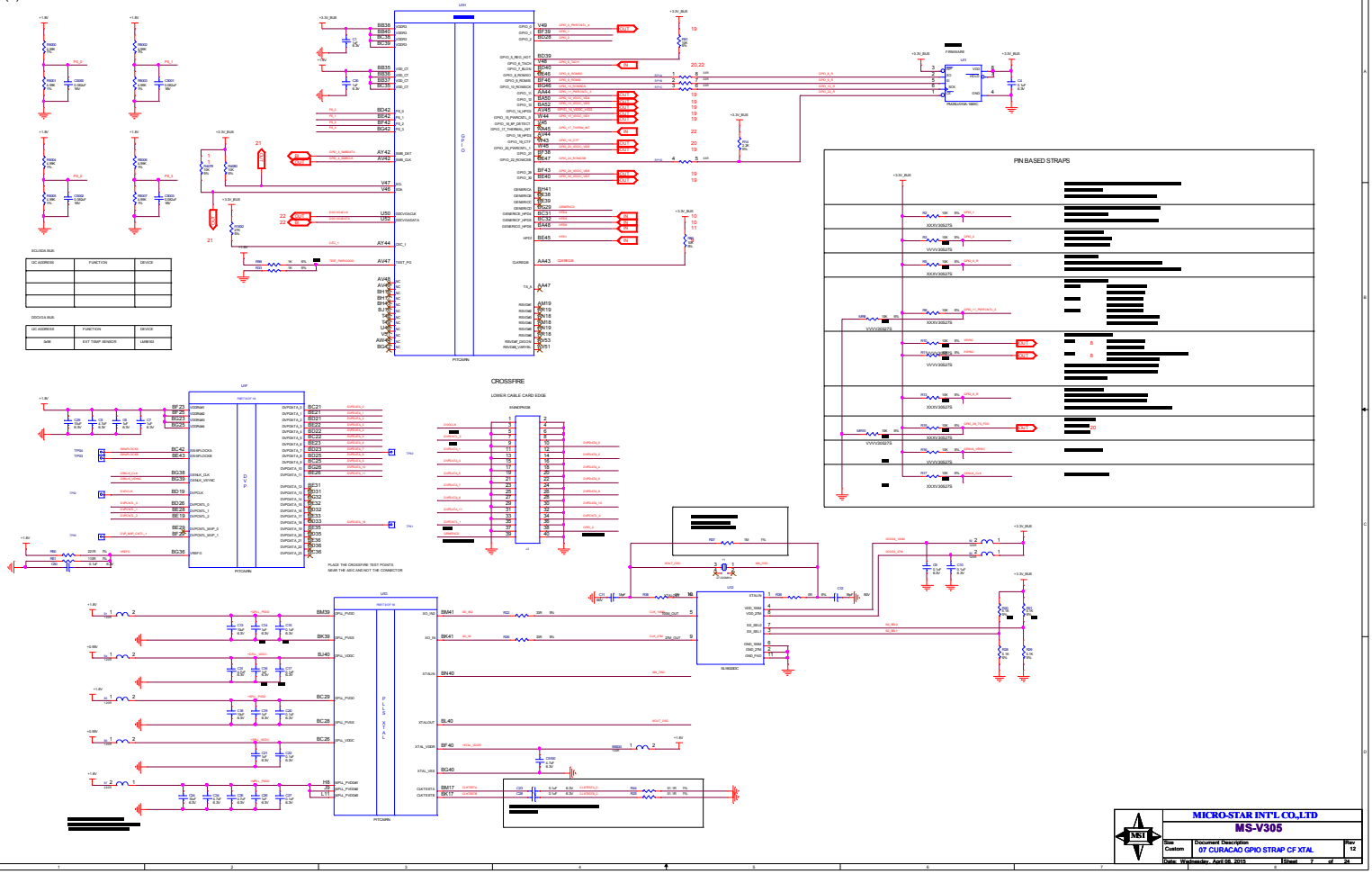
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 05 GDDR5 MEM CH AB	Rev: 1.2
Date: Wednesday, April 08, 2015	Sheet: 4 of 34	

(6) GDDR5 MEMORY CH C/D



MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 06 GDDR5 MEM CH CD	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 6 of 24	

(7) CURACAO GPIO STRAP CF XTAL

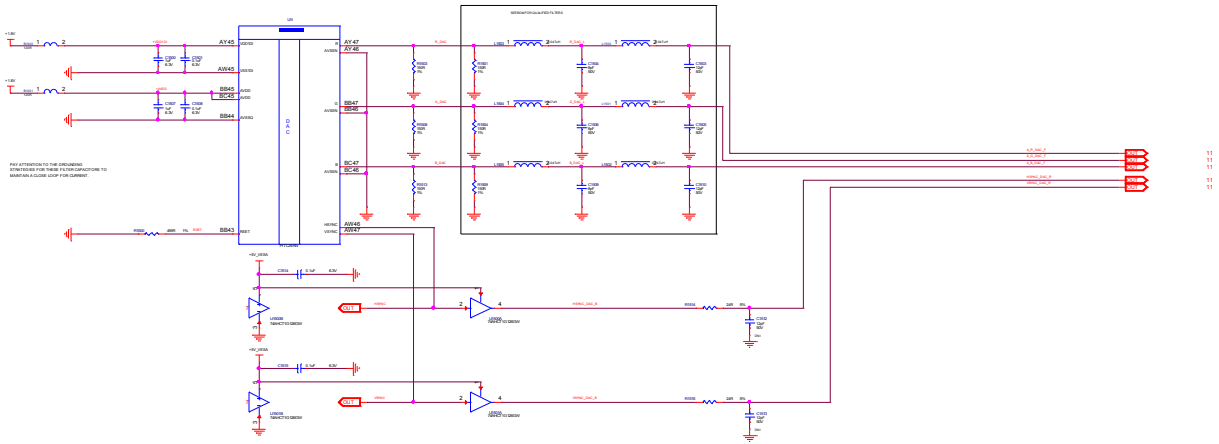


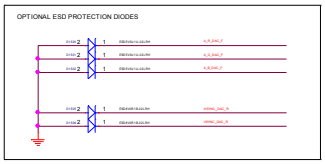
I2C ADDRESS	FUNCTION	DEVICE

I2C ADDRESS	FUNCTION	DEVICE
0x98	EXT STRAP SENSOR	LM8063

MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 07 CURACAO GPIO STRAP CF XTAL	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 7 of 24	

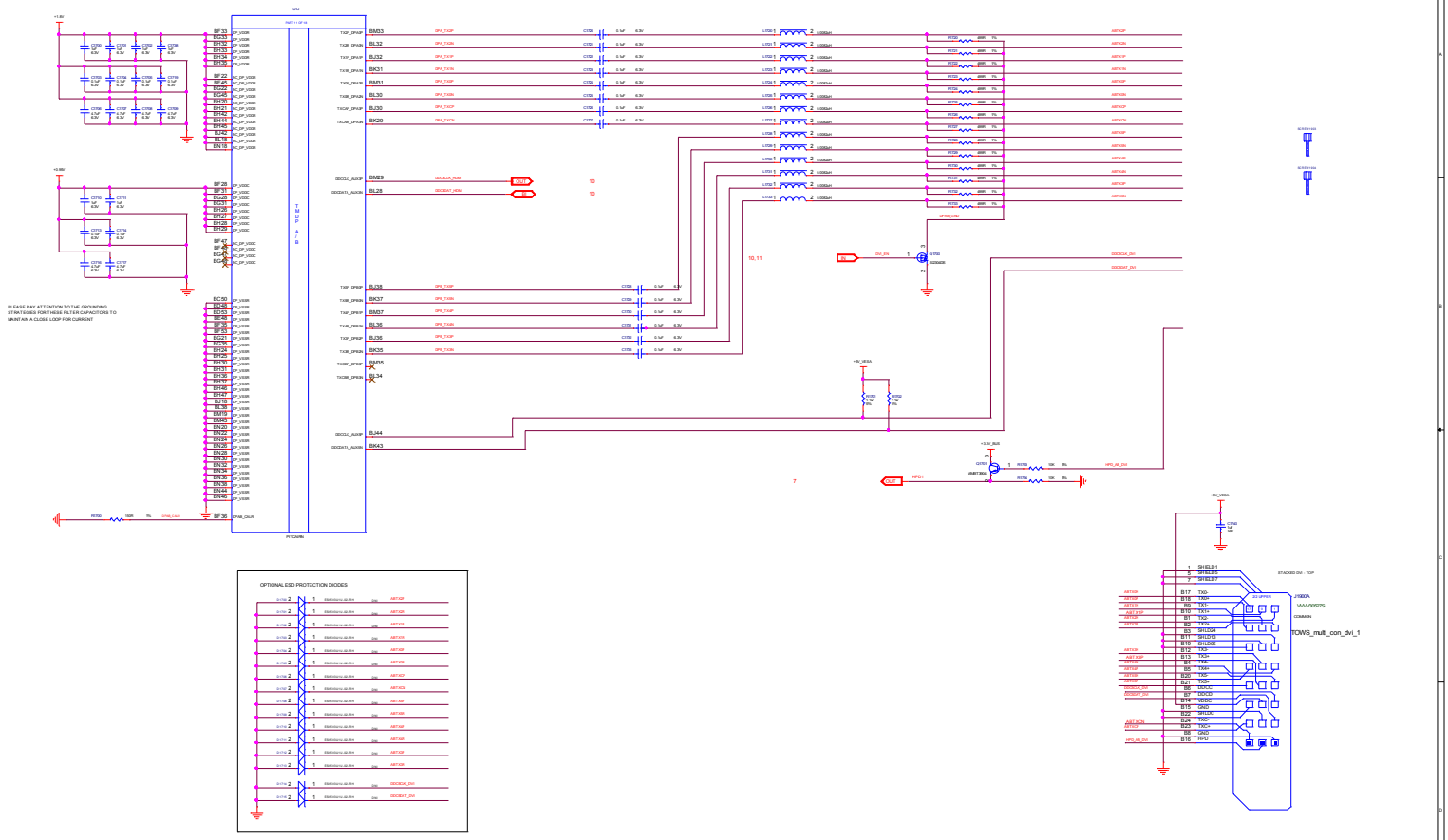
(8) CURACAO DAC1 LOCK



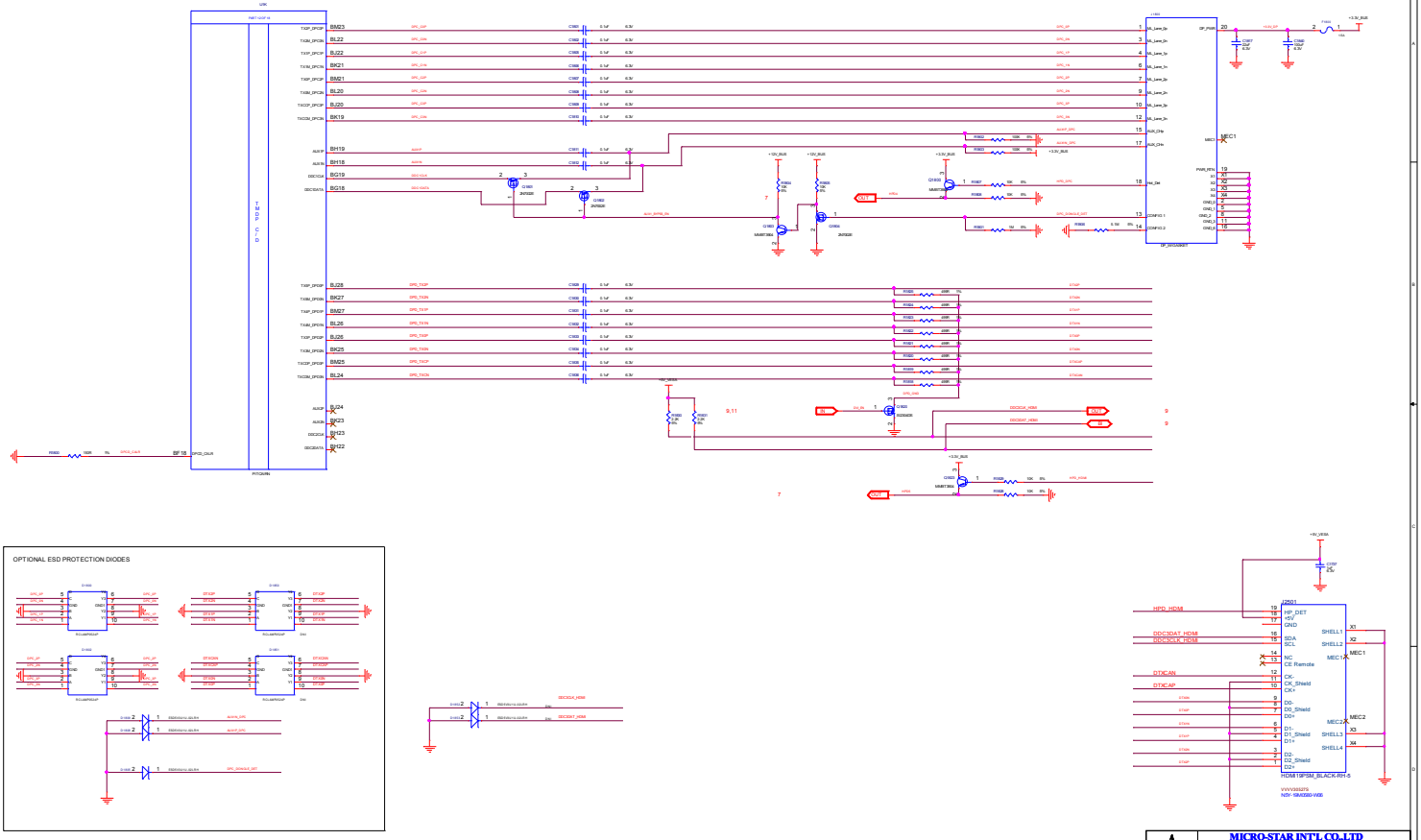


MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 08 CURACAO DAC	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 8 of 24	

(9) CURACAO TMDP A/B

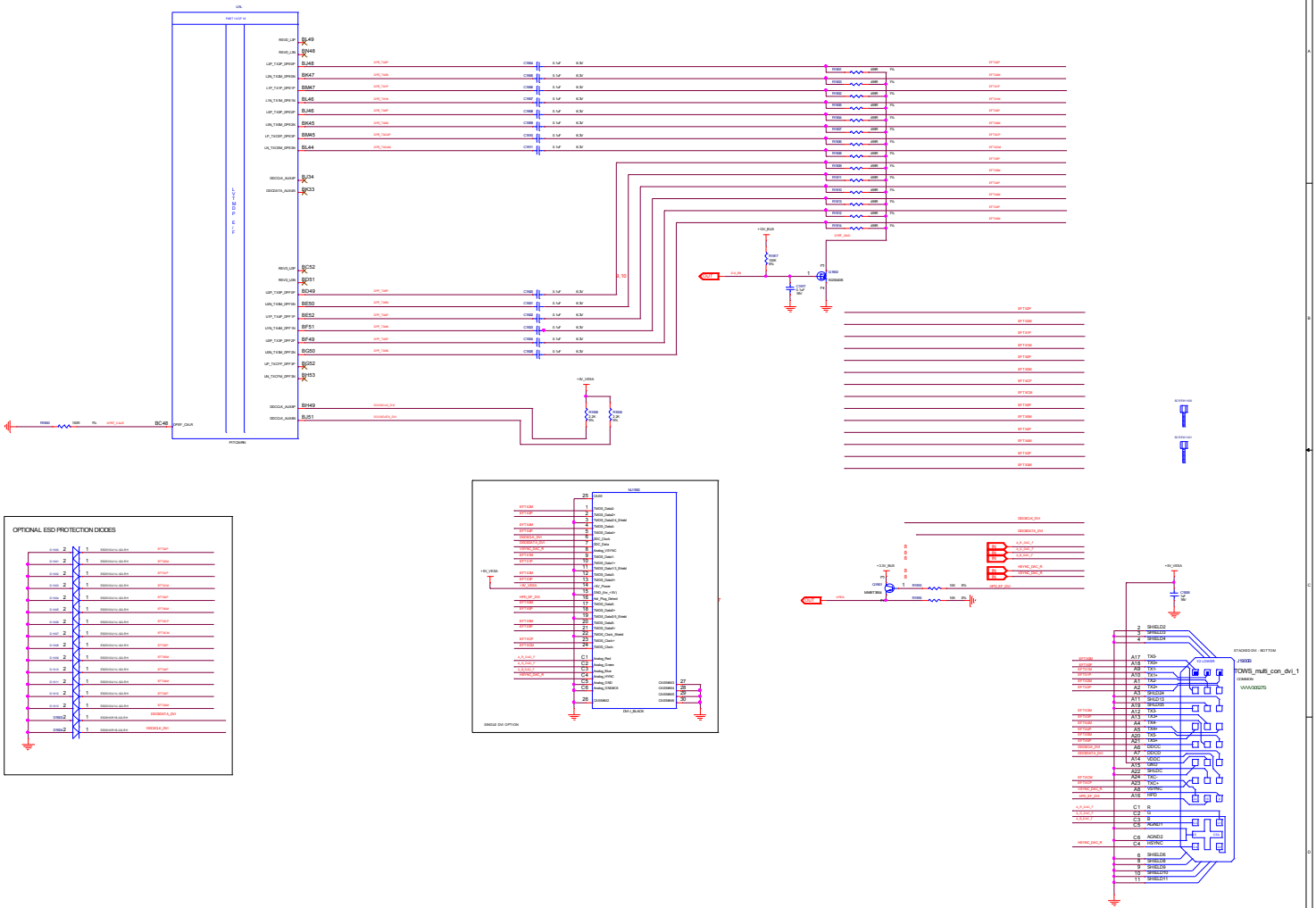


(10) CURACAO TMDP C/D



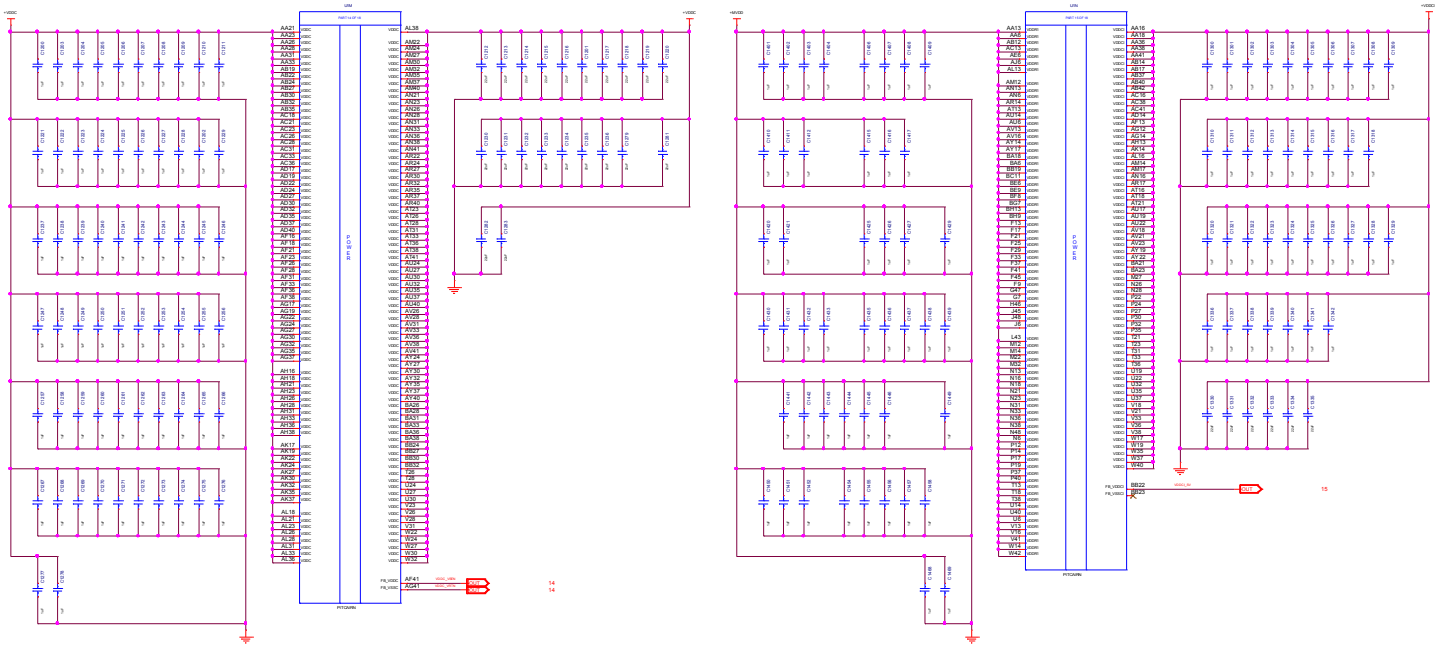
MSI	MICRO-STAR INT'L CO.,LTD	
	MS-V305	
Size: Custom	Document Description: 10 CURACAO TMDPCD DP HDMI	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 10 of 24	

(11) CURACAO LVTMDP E/F



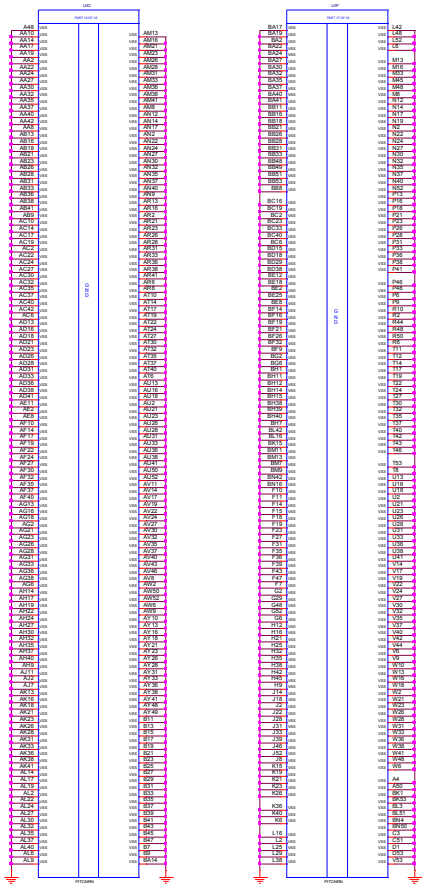
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 11 CURACAO LVTMDPEF dDVI Bolto	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 11 of 34	

(12) CURACAO POWER

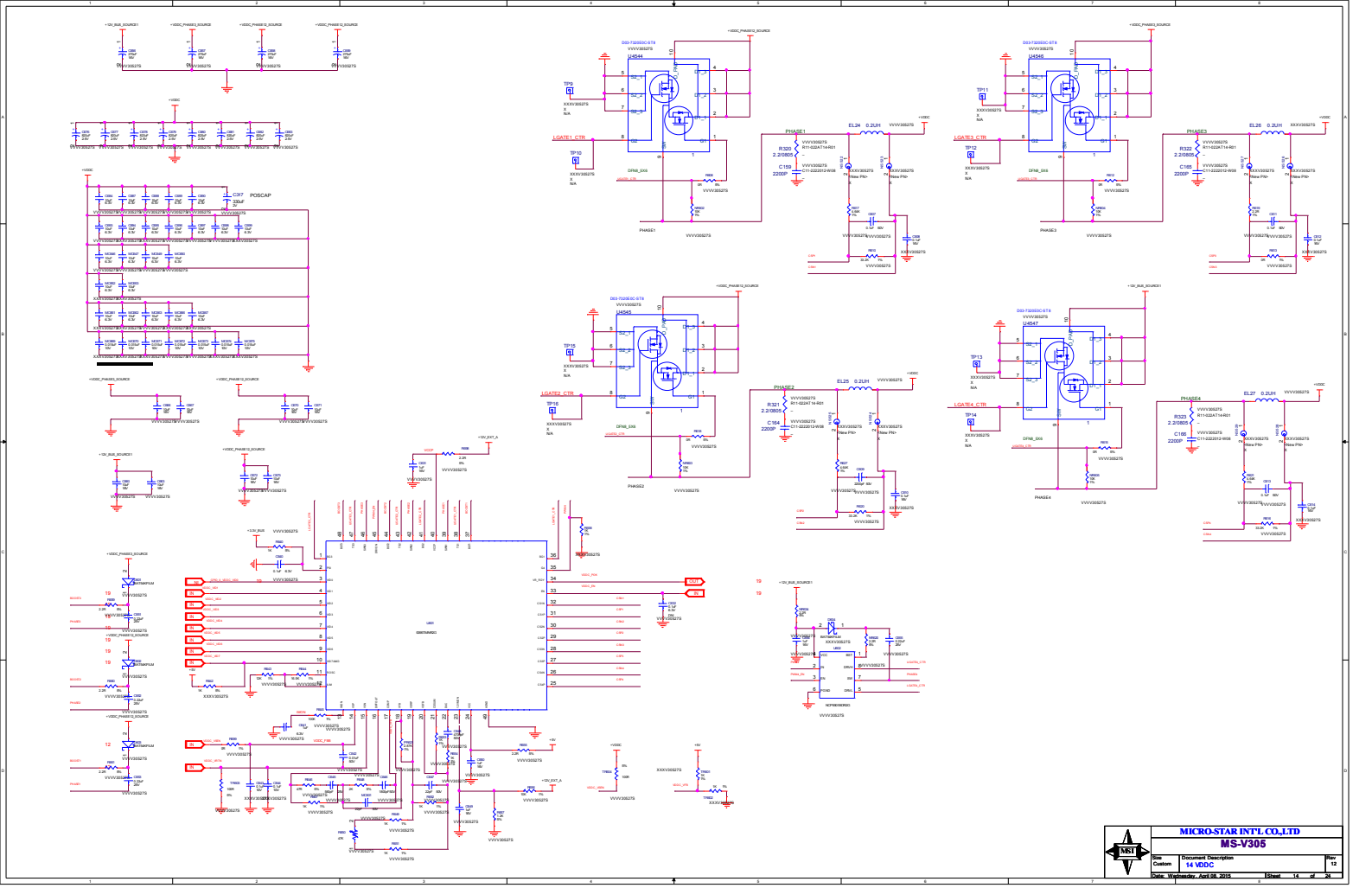


MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 12 CURACAO POWER	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 12 of 24	

(13) CURACAO GROUND

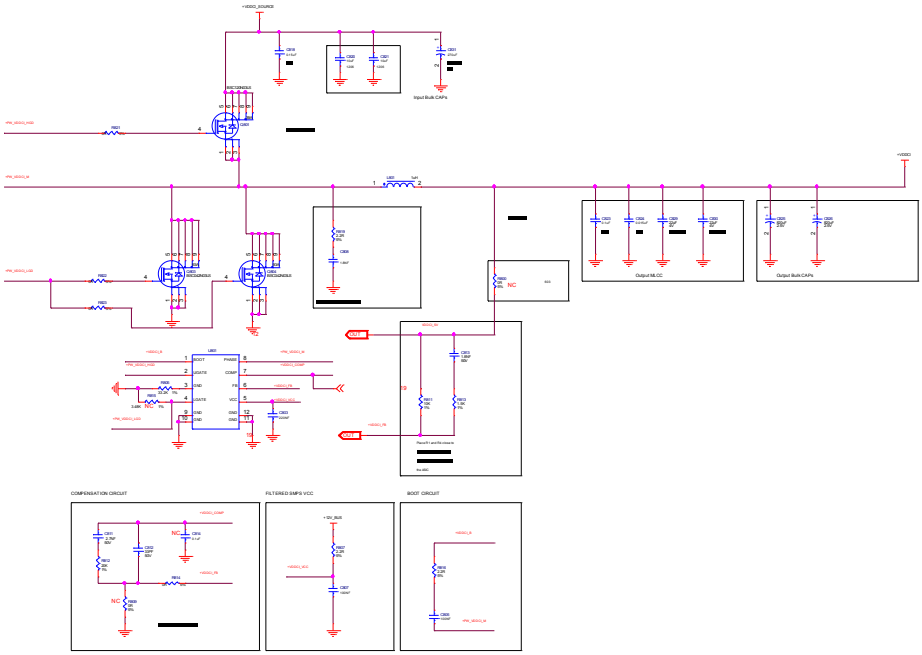


MICRO-STAR INT'L CO.,LTD			
MS-V305			
Size: Custom	Document Description: 13 CURACAO GND		Rev: 12
Date: Wednesday, April 08, 2015	Sheet 13 of 24		



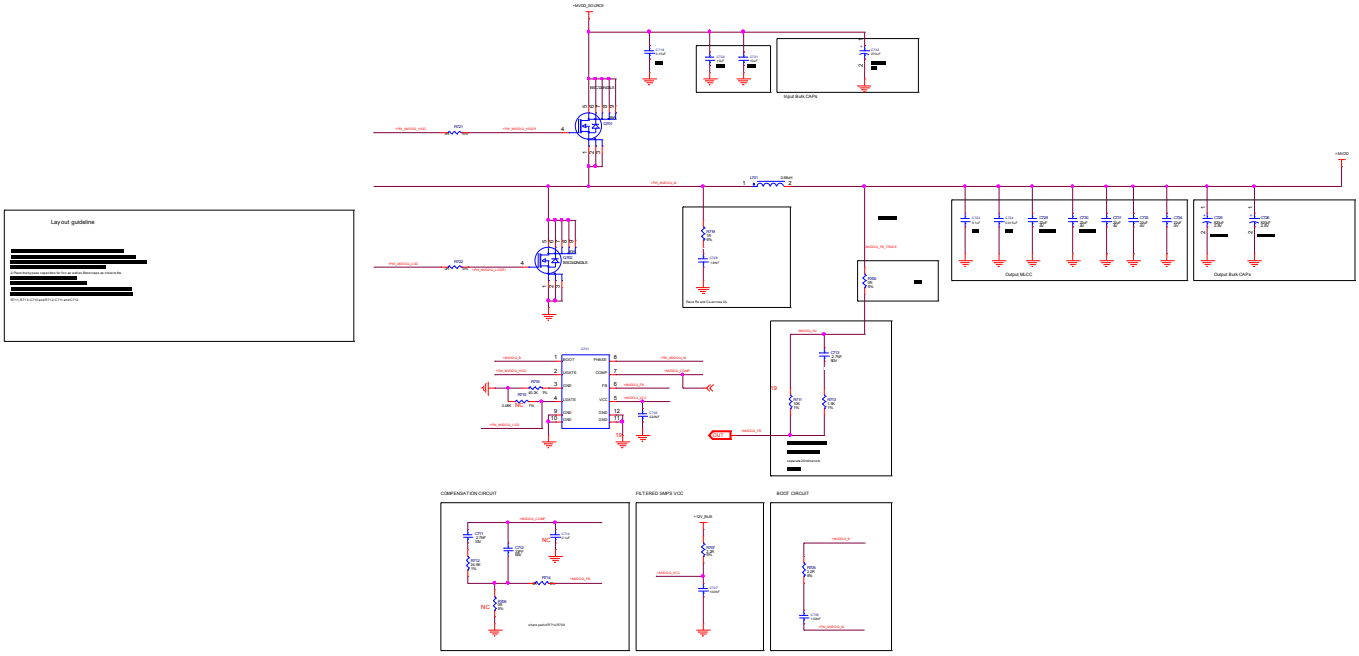
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 14 VDDC	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 14 of 24	

(15) VDDCI



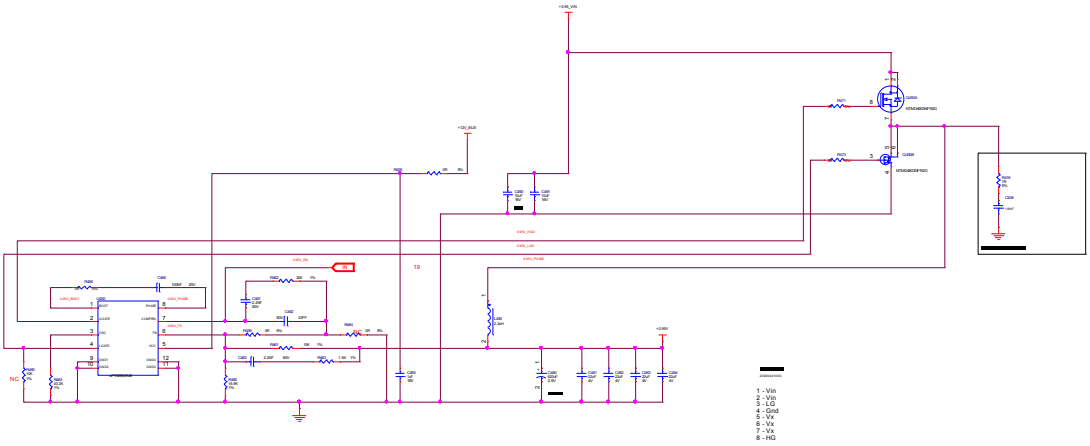
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 15 VDDCI	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 15 of 24	

(16) MVDD



MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 16 MVDD	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 16 of 24	

(17) 0.95V

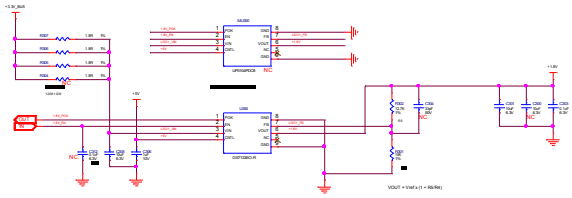


MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 17 0.95V REG	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 17 of 24	

(18) SMALL RAIL REGULATORS

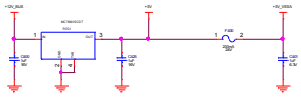
LDO #1: VIN = 3.0V TO 3.6V MAX VOUT = +1.8V +/- 2% IOUT = 1.3A RMS MAX

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



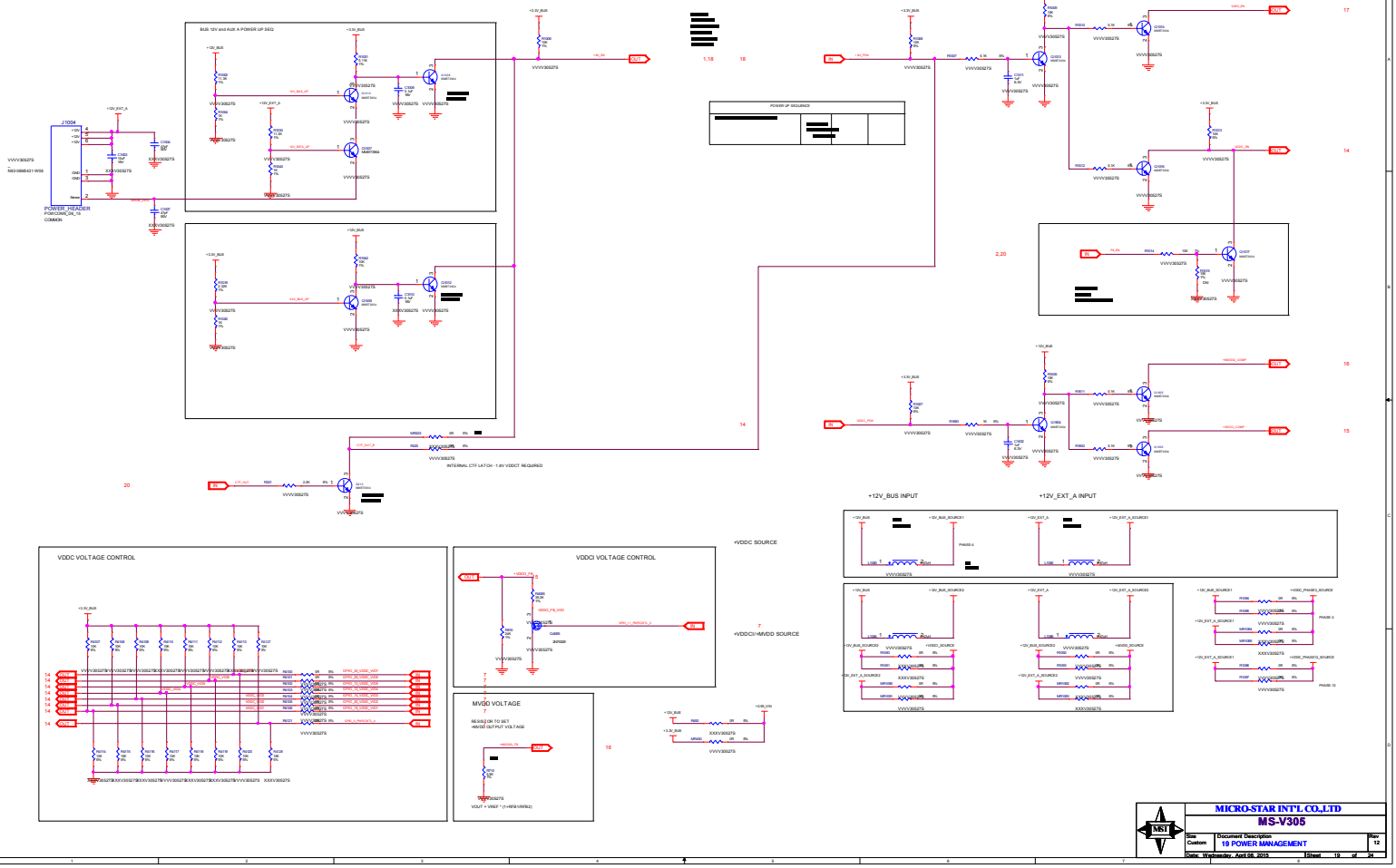
REGULATOR FOR +5V RAILS

IOUT MAX = 150mA



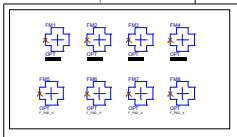
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 18 SMALL RAIL REGULATORS	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 18 of 24	

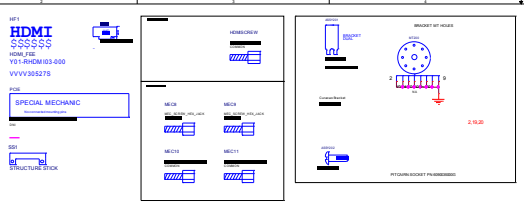
(19) POWER MANAGEMENT

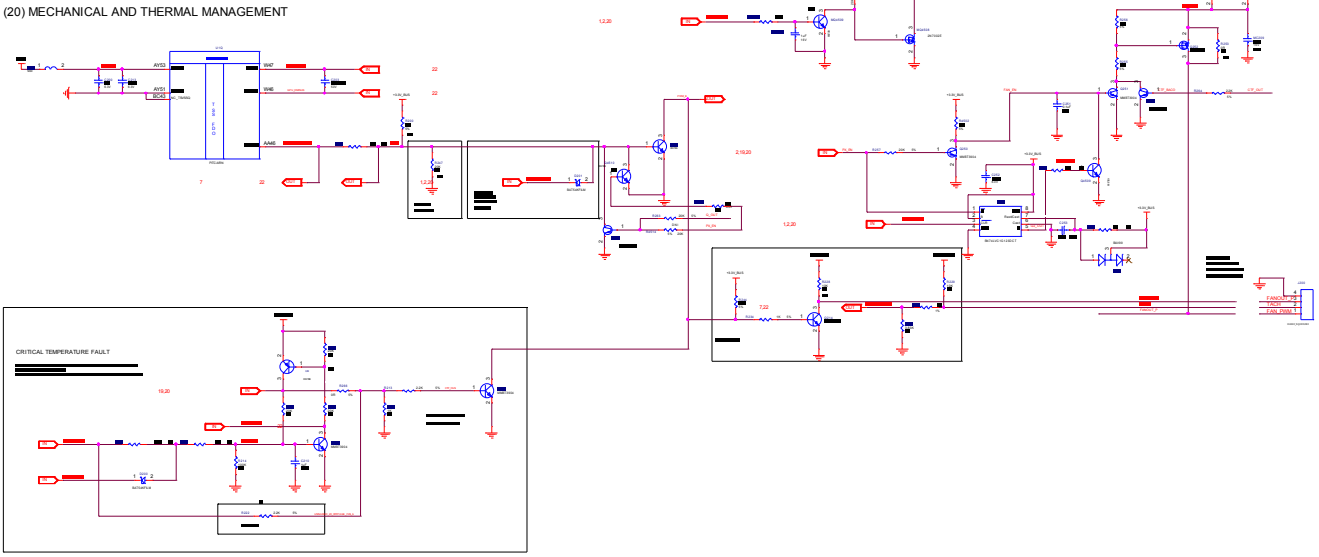


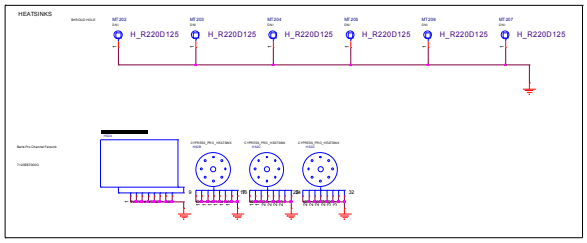
MSI	MICRO-STAR INT'L CO.,LTD		
	MS-V305		
Size: Custom	Document Description: 19 POWER MANAGEMENT		Rev: 12
Date: Wednesday, April 08, 2015	Sheet 19 of 24		

(20) MECHANICAL AND THERMAL MANAGEMENT









D1	DIFFERENTIAL IMPEDANCE
	85 ohms +/- 10%
Trace Width:	0.11 mm
Spacing:	0.14 mm
On Layers:	1,6
Referenced To:	2,5
Note: DP, PCIE	

D3	DIFFERENTIAL IMPEDANCE
	80 ohms+/-10%
Trace Width:	0.13 mm
Spacing:	0.18 mm
On Layers:	1,6
Referenced To:	2,5
Note: MEM_CLK	

M1	MICROSTRIP IMPEDANCE
	50 ohms +/- 10%
Trace Width:	0.102 mm
On Layers:	1,6
Referenced to:	2,5
Note: DVO,CLKTEST,RGB	

M2	MICROSTRIP IMPEDANCE
	45 ohms +/- 5 ohms
Trace Width:	0.13 mm
On Layers:	1,6
Referenced to:	2,5
Note: MEM	

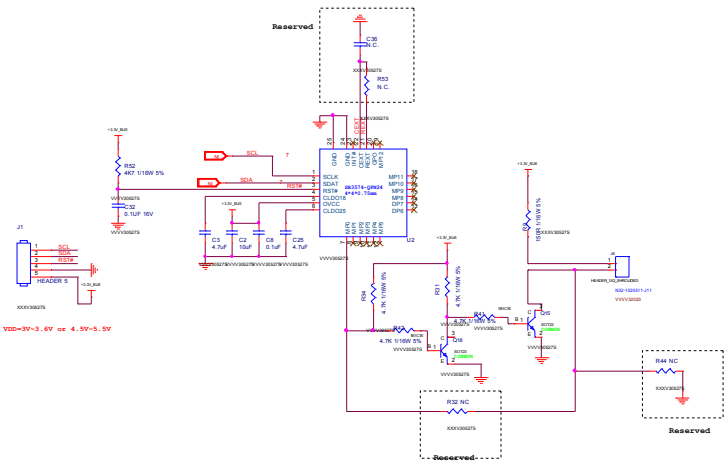
PCIE

MEM_CLK

RGB

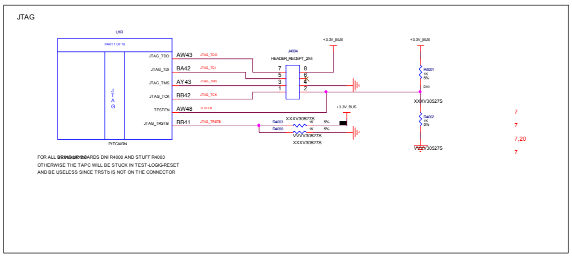
MEM DATA Signal end

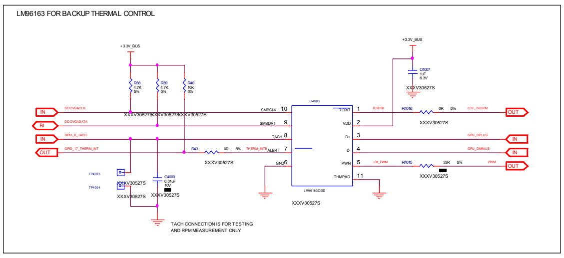
MICRO-STAR INT'L CO.,LTD	
MS-V305	
Size: Custom	Document Description: 20 MECHANICAL AND THERMAL
Rev: 1.0	
Date: Wednesday, April 09, 2008	Sheet 20 of 26



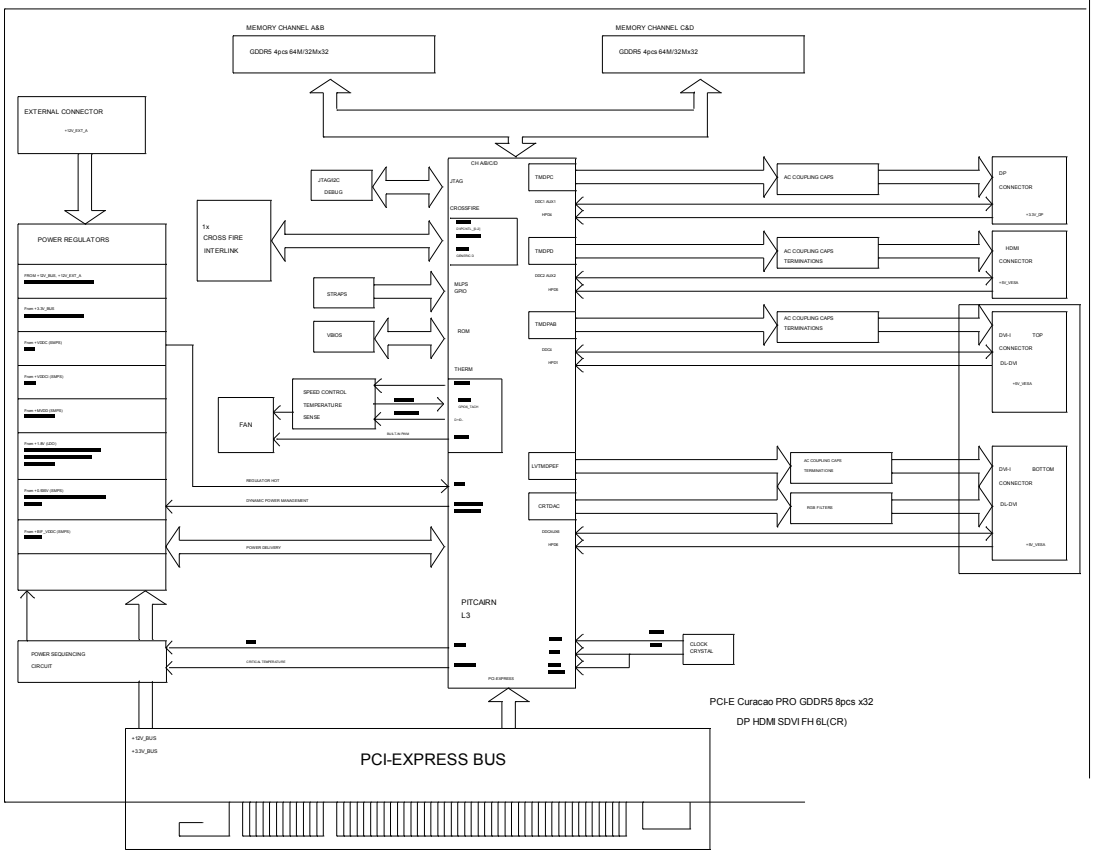
MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 21 LED	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 21 of 24	

(21) DEBUG CIRCUITS





MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 22 DEBUG CIRCUITS	Rev: 12
Date: Wednesday, April 08, 2015	Sheet 22 of 24	



PCI-E Curacao PRO GDDR5 8pcs x32

DP HDMI SDVI FH 6L(CR)

MICRO-STAR INT'L CO.,LTD		
MS-V305		
Size: Custom	Document Description: 23 DEBUG CIRCUITS	Rev: 1B
Date: Wednesday, April 08, 2015	Sheet 23 of 24	

Note:

2015/02/25	
page: 7	移除GPIO_0_PWRCNTL_4 / GPIO_13_VDDC_VID5 / GPIO_12_VDDC_VID4 預留線路
page:12	移除C317 poscap
page:14	移除VDDC out put cap*22pcs & add 330uFposcap*1 移除PWM VID0 pull low 電阻建立至page19做控制 MOS更換為dual N 物料
page:19	新增GPIO_0 High / LOW 控制 移除VDDCI VOLTAGE CONTROL GPIO_0 選擇線路 更換L1082 footprint 更換POWER_HEADER footprint
page:20	移除2 PIN風扇線路 / 增加螺絲孔*3
page:21	新增LED線路
page:22	移除CTF debug 線路 移除BACO MODE LED 線路 移除VDDC / VDDCI debug 測試點
2015/02/25	
page:20	修改4PIN FANCONNTER 接線
page:21	修改2PIN header 大小為2

MICRO-STAR INT'L CO.,LTD

MS-V305

Size: Custom | Document Description: 0024REVISION HISTORY | Rev: 12

Date: Wednesday, April 08, 2015 | Sheet 24 of 24