

- NOTES: (UNLESS OTHERWISE SPECIFIED)
THIS FAB SHOULD BE "RoHS COMPLIANT"

1. FABRICATE TO IPC-A-600, CURRENT REVISION
2. BOARD SHALL MEET THE INSPECTION CRITERIA OF
a- ACCEPTABILITY AS PER IPC-A-600 (LATEST REVISION) CLASS II
b- QUALIFICATION AND PERFORMANCE AS PER IPC-6012 (LATEST REVISION) CLASS II.

3. MATERIAL: MEGTRON 6 (ROHS COMPLIANT MATERIAL) OR EQUIVALENT. GLASS TRANSITION TEMPERATURE MUST MEET OR EXCEED THE TEMPERATURE EXHIBITED WITH HIGH TEMPERATURE PROCESSES ASSOCIATED WITH LEAD FREE ASSEMBLY.

4. APPLY SOLDER MASK OVER BARE COPPER (SMOBC) IAW IPC-SM-840, BOTH SIDES, USING I.P.I. COLOR GREEN.

5. LPI SOLDER MASK TAIYO PSR4000 (RoHS COMPLIANT MATERIAL) OR EQUIVALENT WILL BE USED ON BOTH SIDES

- 6 SOLDER MASK REQUIREMENTS FOR VIAS:

- a) ALL VIAS SHOWN IN DATA WITH SOLDER MASK RELIEF OF 6 MILS OVER VIA DRILL SIZE, SHALL HAVE SOLDER MASK ENCRATCHED (DRILL PLUS 6 MILS).
- b) VIA DRILLS LYING INSIDE BGA AREA AND U115, U159, U160, U161, U162 AND U163 ARE COVERED WITH SOLDER MASK FROM COMPONENT MOUNTING SIDE AND ENCRATCHED (DRILL PLUS 6 MILS) FROM OTHER SIDE.

7. SOLDER MASK REGISTRATION TO BE WITHIN DIAMETRICAL TRUE POSITION OF ± 0.002 " WITH APPLICABLE HOLE / PAD.

- 8, FINISH: GOLD IMMERSION.

9. SILKSCREEN USING WHITE - HAVEN PC421 (NON-CONDUCTIVE OR EQUIVALENT RoHS COMPLIANT MATERIAL) BOTH SIDES DISTORTION OF SILKSCREEN IS ACCEPTABLE OVER TRACES. EPOXY INK ON SOLDER LANDS IS NOT ACCEPTABLE.

10. VENDOR LOGO AND DATE CODE TO BE MARKED SOLDER SIDE IN SILKSCREEN. MAXIMUM HEIGHT 0.12 INCHES.

11. 100% ELECTRICAL TEST REQUIRED FOR CONTINUITY. BOARD SHALL HAVE A UL-RATING OF 94V-0. UL SYMBOL AND RATING SHALL BE MARKED SOLDER SIDE IN SILKSCREEN.

- (12). REMOVE ALL UNUSED PADS FROM INTERNAL LAYERS. EXCEPT GOLD FINGERS ON LAYER 13 AND BOTTOM LAYERS.

13. 274X GERBER/ODB++ USED FOR FAB MUST BE VERIFIED AGAINST THE PROVIDED IPC356 NETLIST. COPPER SLIVERS THAT ARE LESS THAN 0.003" IN WIDTH BETWEEN ANTI-PAD TO PLANE EDGE, ANTI-PAD TO SPLIT PLANE AND ANTI-PAD TO ANTI-PAD MUST BE REMOVED FROM THE MANUFACTURING ARTWORK. A NETLIST COMPARISON MUST BE PASSED WITH NO VIOLATION AFTER THE REMOVAL OF SLIVERS. ANY REQUIREMENT FOR SLIVER REMOVAL ABOVE OR EQUAL TO THE 0.003" COPPER WIDTH MUST BE ADDRESSED AND APPROVED IN WRITING BY SUPPLIER.

14. VIAS ARE SUPPOSED TO BE DIRECTLY CONNECTED TO RESPECTIVE PLANE.

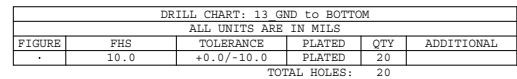
15. FOR IMPEDANCE CONTROL DETAILS REFER TO THE FILE "1280754_HW_U1_VCU108_REV_A_STACK_UP.PDF" PROVIDED WITH

16. INTENTIONAL SHORTS: REFER TO FILE 1280798 HW U1 VCU108 REV B SHORTLIST.docx; ADVISE IF ANY DIFFERENCES.

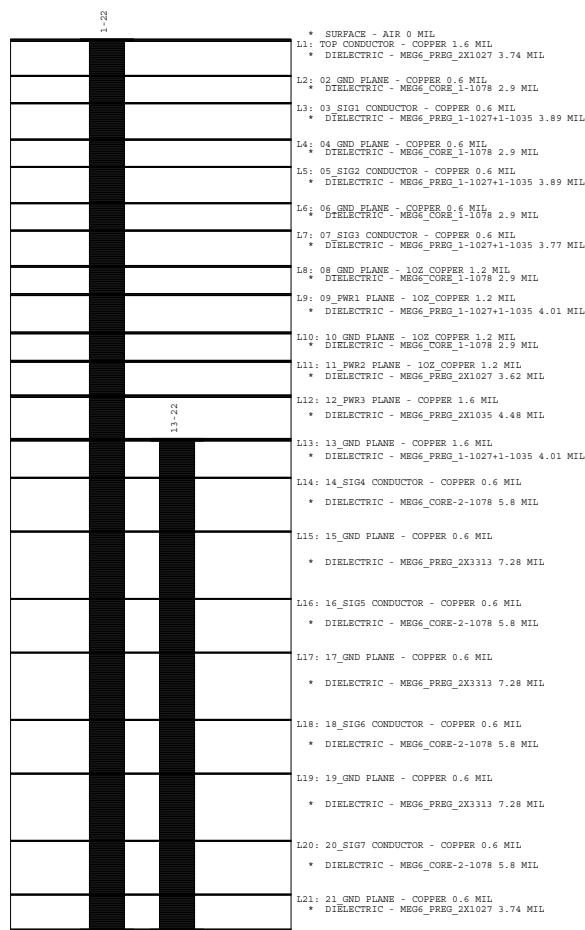
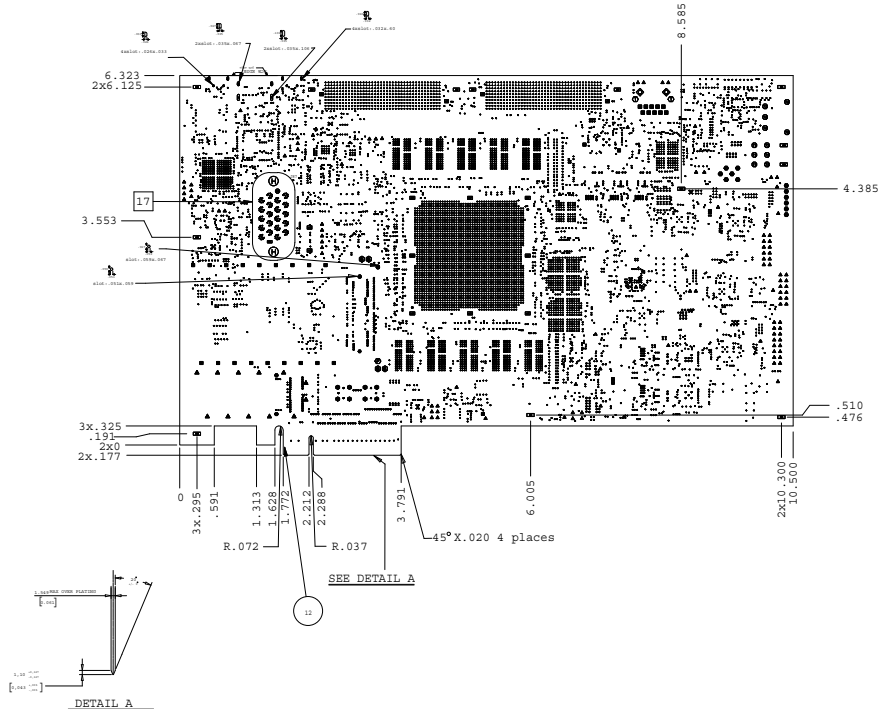
10. INTERNATIONAL MONITOR. REFER TO FILE 1200750 - AM - 01 - VEO100 - REV -

17. HARD GOLD ON FINGERS AND IN MARKED AREA, 30-50 MICRO INCHES OF GOLD OVER 150-200 MICRO INCHES OF COPPER.
18. BAKE BOARDS AT 250 DEGREES F FOR 4 HOURS PRIOR TO SHIPMENT.
19. ALL VIA-IN-PADS (10.X AND 12.0 DRILLS) TO BE COMPLETELY FILLED. PLANARIZED SMOOTH AND PLATED OVER ON SURFACE. USE SANI NON-CONDUCTIVE EPOXY OR EQUIVALENT FILL MATERIALS MINIMUM .0007 TO E PLATED ON SURFACE. VIA-IN-PAD MUST INCLUDE WRAP REQUIREMENTS PER IPC 612B.


	SINGLE ENDED		EOS-COUPLED DIFFERENTIAL		DIFFERENTIAL (NECK DOWN)	
	TRACE WIDTH 2 GONG	DAIRY INFECTION 2 GONG	TRACE WIDTH/AIRSD	DAIRY INFECTION 2 GONG	TRACE WIDTH/AIRSD	DAIRY INFECTION 2 GONG
LAYER 1 Poi1	11.0 MI1	36	5.2 MI1/4.6 MI1	76		
	9.5 MI1	39	4.4 MI1/3.8 MI1	85		
	6.0 MI1	50	3.0 MI1/2.4 MI1	95		
LAYER 3	6.5 MI1	36	3.5 MI1/3.0 MI1	76	5.5 MI1/3.7 MI1	76
	5.5 MI1	39	4.4 MI1/3.8 MI1	85	4.8 MI1/3.8 MI1	85
	4.0 MI1	40	3.0 MI1/2.4 MI1	95	3.5 MI1/2.9 MI1	95
LAYER 5	3.5 MI1	50	3.1 MI1/2.5 MI1	100	3.4 MI1/3.6 MI1	100
	6.2 MI1	36	5.5 MI1/4.5 MI1	76	5.5 MI1/4.5 MI1	76
	5.0 MI1	39	4.0 MI1/3.0 MI1	85	4.0 MI1/3.0 MI1	85
LAYER 7	5.0 MI1	40	4.0 MI1/3.0 MI1	90	3.1 MI1/2.0 MI1	90
	4.0 MI1	40	4.0 MI1/3.0 MI1	90	3.1 MI1/2.0 MI1	90
	3.5 MI1	50	3.5 MI1/2.5 MI1	100	3.5 MI1/2.5 MI1	100
LAYER 14	6.2 MI1	36	5.6 MI1/4.6 MI1	76	6.5 MI1/4.3 MI1	76
	5.5 MI1	39	4.9 MI1/3.9 MI1	85	4.4 MI1/3.8 MI1	85
	5.0 MI1	40	4.0 MI1/3.0 MI1	90	3.1 MI1/2.0 MI1	90
LAYER 16	5.0 MI1	40	4.0 MI1/3.0 MI1	90	3.1 MI1/2.0 MI1	90
	4.0 MI1	40	4.0 MI1/3.0 MI1	90	3.1 MI1/2.0 MI1	90
	3.5 MI1	50	3.5 MI1/2.5 MI1	100	3.5 MI1/2.5 MI1	100
LAYER 18	6.2 MI1	36	5.6 MI1/4.6 MI1	85		
	5.5 MI1	39	5.7 MI1/4.7 MI1	76	5.7 MI1/4.7 MI1	76
	5.0 MI1	40	4.9 MI1/3.9 MI1	85	4.4 MI1/3.8 MI1	85
LAYER 20	4.0 MI1	39	4.0 MI1/3.0 MI1	86	5.7 MI1/3.7 MI1	86
	3.5 MI1	50	3.5 MI1/2.5 MI1	100	3.5 MI1/2.5 MI1	100
	6.0 MI1	50	5.3 MI1/4.7 MI1	100	4.3 MI1/3.7 MI1	100
LAYER 22 Poi1	11.0 MI1	36	5.2 MI1/4.6 MI1	76		
	9.5 MI1	39	4.4 MI1/3.8 MI1	85		
	6.0 MI1	50	3.0 MI1/2.4 MI1	95		

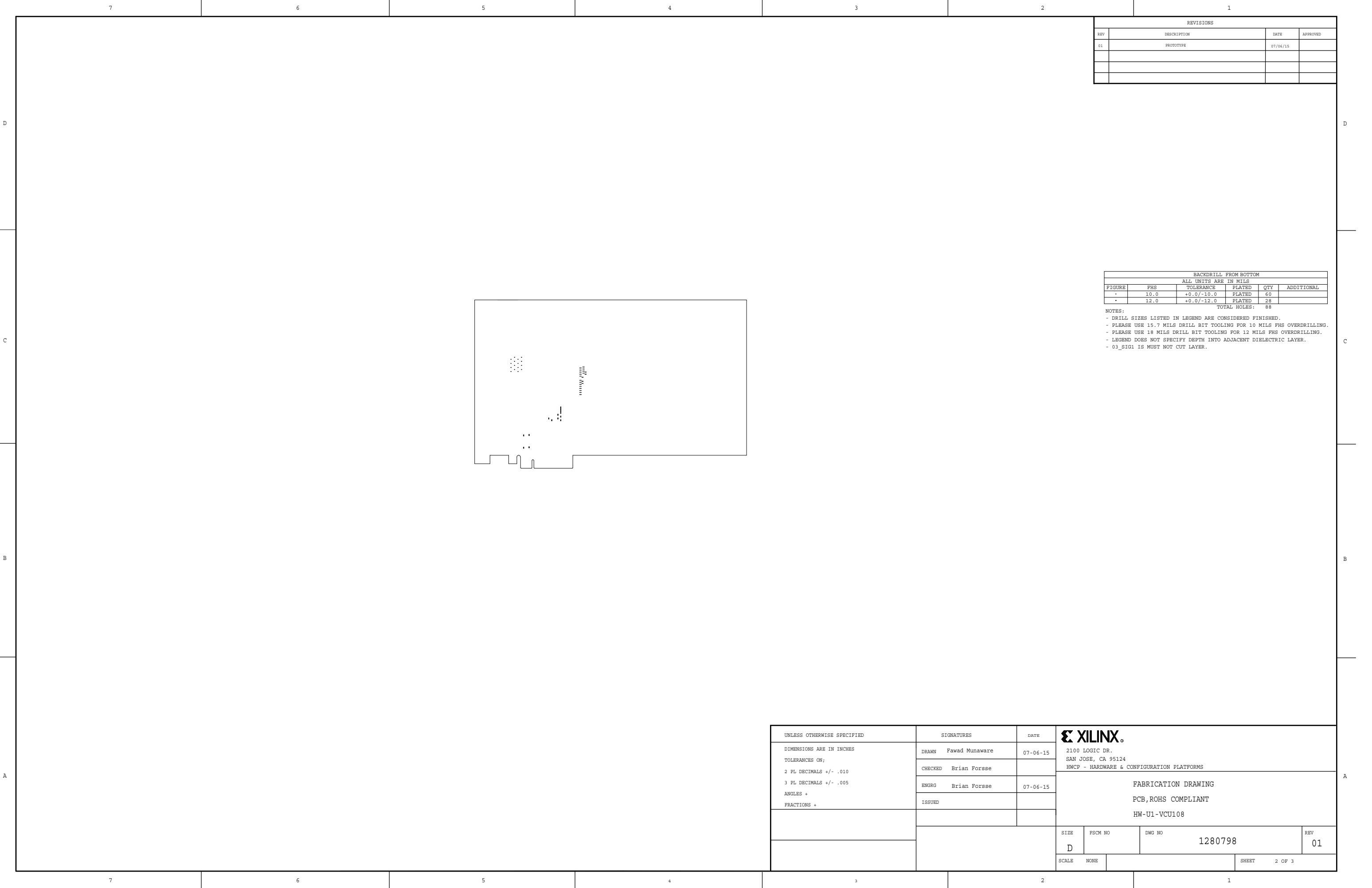


DRILL CHART: TOP TO BOTTOM					
ALL UNITS ARE IN MILS					
FIGURE	FHS	TOLERANCE	PLATED	QTY	ADDITIONAL
•	8.0	+0.0/-8.0	PLATED	1510	
•	10.0	+0.0/-10.0	PLATED	7796	
•	12.0	+0.0/-12.0	PLATED	351	
•	32.0	+3.0/-3.0	PLATED	2	
•	36.0	+3.0/-3.0	PLATED	10	
•	40.0	+3.0/-3.0	PLATED	103	
▲	41.0	+3.0/-3.0	PLATED	12	PRESS FIT
•	41.3	+2.0/-2.0	PLATED	18	PRESS FIT
•	46.0	+3.0/-3.0	PLATED	6	
•	48.0	+3.0/-3.0	PLATED	6	
•	60.0	+2.0/-2.0	PLATED	1	
•	63.0	+3.0/-3.0	PLATED	8	
•	64.0	+3.0/-3.0	PLATED	2	
•	68.0	+2.0/-2.0	PLATED	4	
•	71.0	+3.0/-3.0	PLATED	6	
•	73.0	+3.0/-3.0	PLATED	5	
•	106.0	+3.0/-3.0	PLATED	4	
•	125.0	+3.0/-3.0	PLATED	9	
⊕	166.0	+3.0/-0.0	PLATED	2	
•	34.0	+2.0/-2.0	NON-PLATED	2	
•	40.0	+2.0/-2.0	NON-PLATED	2	
•	50.0	+2.0/-2.0	NON-PLATED	4	
•	51.0	+2.0/-2.0	NON-PLATED	1	
•	52.0	+2.0/-2.0	NON-PLATED	1	
•	61.0	+2.0/-2.0	NON-PLATED	2	
•	77.0	+2.0/-2.0	NON-PLATED	1	
•	87.0	+2.0/-2.0	NON-PLATED	8	
◆	129.0	+3.0/-3.0	NON-PLATED	2	
•	33.0x26.0	+3.0/-3.0	PLATED	4	
•	60.0x32.0	+3.0/-3.0	PLATED	4	
•	67.0x35.0	+2.0/-2.0	PLATED	2	
•	67.0x59.0	+2.0/-2.0	PLATED	1	
•	106.0x35.0	+2.0/-2.0	PLATED	2	
•	59.0x51.0	+2.0/-2.0	NON-PLATED	1	
TOTAL HOLES:				8992	



DESIGN CROSS SECTION CHART
TOTAL THICKNESS 114.29 MIL

UNLESS OTHERWISE SPECIFIED	SIGNATURES	DATE				
DIMENSIONS ARE IN INCHES	DRAWN Pavad Munaware	07-06-15	2100 LOGIC DR. SAN JOSE, CA 95124 HWCP - HARDWARE & CONFIGURATION PLATFORMS			
TOLERANCES ON;	CHECKED Brian Forsee		FABRICATION DRAWING PCB,ROHS COMPLIANT HW-U1-VCU108			
2 PL DECIMALS +/- .010	ENGRG Brian Forsee	07-06-15				
3 PL DECIMALS +/- .005	ISSUED					
ANGLES +						
FRACTIONS +			SIZE	DWG NO	REV	
			D	1280798	01	
			SCALE NONE		SHEET 1 OF 3	




REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
01	PROTOTYPE	07/06/15	

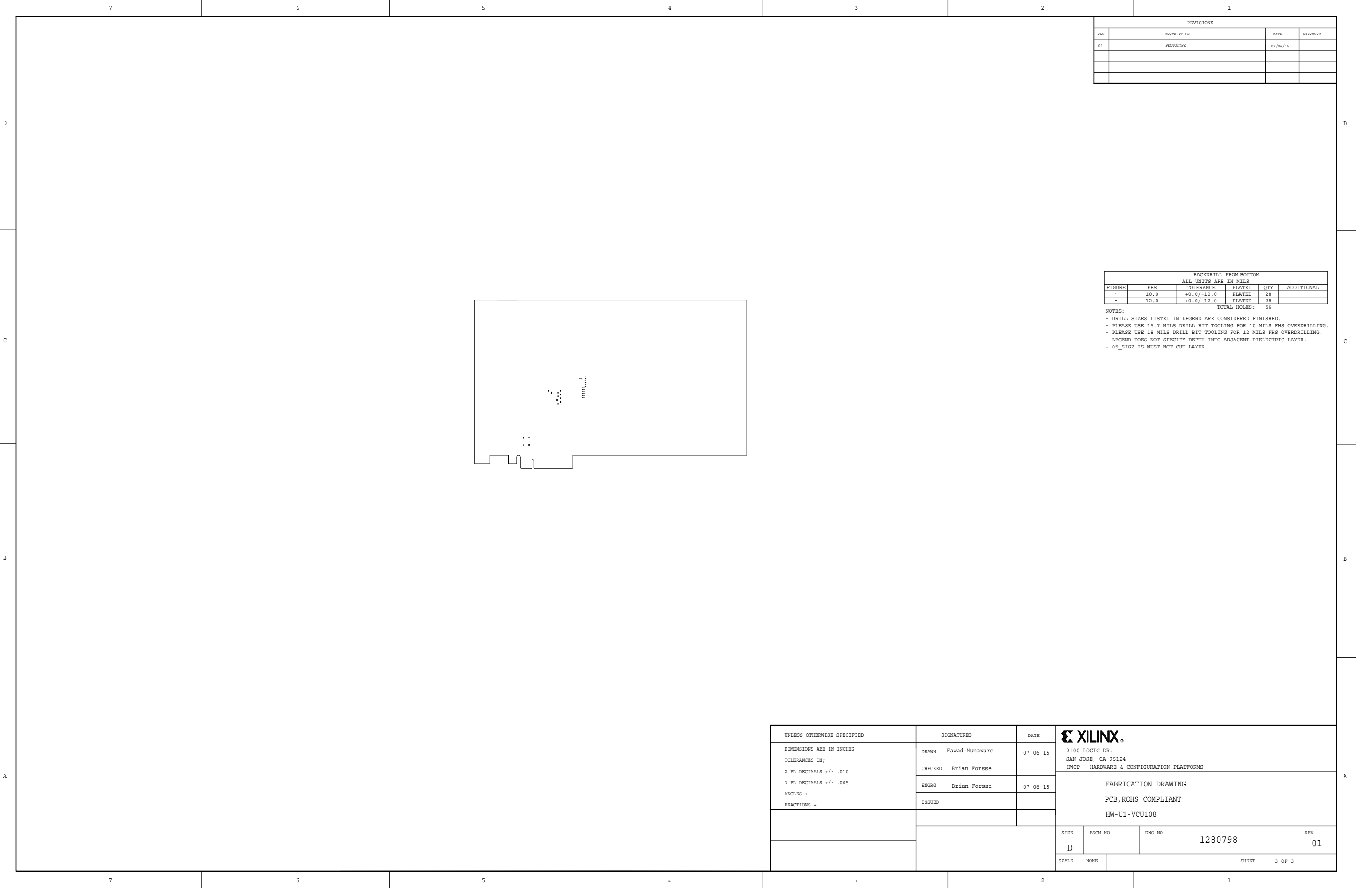
BACKDRILL FROM BOTTOM					
ALL UNITS ARE IN MILS					
FIGURE	FHS	TOLERANCE	PLATED	QTY	ADDITIONAL
.	10.0	+0.0/-10.0	PLATED	60	
.	12.0	+0.0/-12.0	PLATED	28	

TOTAL HOLES: 88

NOTES:

- DRILL SIZES LISTED IN LEGEND ARE CONSIDERED FINISHED.
- PLEASE USE 15.7 MILS DRILL BIT TOOLING FOR 10 MILS FHS OVERDRILLING.
- PLEASE USE 18 MILS DRILL BIT TOOLING FOR 12 MILS FHS OVERDRILLING.
- LEGEND DOES NOT SPECIFY DEPTH INTO ADJACENT DIELECTRIC LAYER.
- 03_SIG1 IS MUST NOT CUT LAYER.


UNLESS OTHERWISE SPECIFIED		SIGNATURES	DATE		
DIMENSIONS ARE IN INCHES TOLERANCES ON; 2 PL DECIMALS +/- .010 3 PL DECIMALS +/- .005 ANGLES + FRACTIONS +		DRAWN Fawad Munaware	07-06-15	2100 LOGIC DR. SAN JOSE, CA 95124 HWCP - HARDWARE & CONFIGURATION PLATFORMS	
		CHECKED Brian Forsse		FABRICATION DRAWING PCB,ROHS COMPLIANT HW-U1-VCU108	
		ENGRG Brian Forsse	07-06-15		
		ISSUED			
				SIZE D	REV 01
				PSCM NO	DWG NO 1280798
				SCALE NONE	SHEET 2 OF 3



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
01	PROTOTYPE	07/06/15	

BACKDRILL FROM BOTTOM					
ALL UNITS ARE IN MILS					
FIGURE	FHS	TOLERANCE	PLATED	QTY	ADDITIONAL
.	10.0	+0.0/-10.0	PLATED	28	
.	12.0	+0.0/-12.0	PLATED	28	

NOTES:
- DRILL SIZES LISTED IN LEGEND ARE CONSIDERED FINISHED.
- PLEASE USE 15.7 MILS DRILL BIT TOOLING FOR 10 MILS FHS OVERDRILLING.
- PLEASE USE 18 MILS DRILL BIT TOOLING FOR 12 MILS FHS OVERDRILLING.
- LEGEND DOES NOT SPECIFY DEPTH INTO ADJACENT DIELECTRIC LAYER.
- 05_SIG2 IS MUST NOT CUT LAYER.

UNLESS OTHERWISE SPECIFIED		SIGNATURES	DATE	 2100 LOGIC DR. SAN JOSE, CA 95124 HWCP - HARDWARE & CONFIGURATION PLATFORMS		
DIMENSIONS ARE IN INCHES TOLERANCES ON; 2 PL DECIMALS +/- .010 3 PL DECIMALS +/- .005 ANGLES + FRACTIONS +		DRAWN Fawad Munaware	07-06-15	FABRICATION DRAWING PCB,ROHS COMPLIANT HW-U1-VCU108		
		CHECKED Brian Forsse				
		ENGRG Brian Forsse	07-06-15			
		ISSUED				
				SIZE D	PSCM NO	DWG NO 1280798
				SCALE NONE	SHEET 3 OF 3	REV 01