

654321

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. BOARD FABRICATION METHODS MUST COMPLY WITH:
[] QORVO PCB FABRICATION SPECIFICATIONS PCB-21-101.
A COPY OF PCB-21-101 CAN BE OBTAINED FROM QORVO UPON REQUEST.
[x] FABRICATE IN ACCORDANCE WITH IPC-6018B, per IPC-6011, CLASS 3.

2. ARTWORK FORMAT: [x] GERBER 274X*
[] GERBER X2*
[] ODB++
*GERBER DATA SUPPLIED WITH DESIRED FINAL TRACE WIDTHS. PROCESS
COMPENSATION TRACE WIDTH ADJUSTMENTS TO BE DONE BY PCB FABRICATOR.

3. MATERIAL:
NUMBER OF LAYERS: [x] 2 LAYERS [] 4 LAYERS
METAL 1: [x] 0.5oz. [] 1.0oz. [] 1.5oz. [] 2.0oz.
CORE 1: [x] ROGERS 4300C, 0.008in. THICK
[] ROGERS 4350B, 0.020in. THICK
[] FR4, 0.010in. THICK

METAL 2: [x] 0.5oz. [] 1.0oz. [] 1.5oz. [] 2.0oz.
PREPREG 1: [] EPOXY COATED GLASS FABRIC.
METAL 3: [] 0.5oz. [] 1.0oz. [] 1.5oz. [] 2.0oz.
CORE 2: [] FR4, .020in. THICK
METAL 4: [] 0.5oz. [] 1.0oz. [] 1.5oz. [] 2.0oz.
SOLDERMASK TOP: [x] LPI (LIQUID PHOTO-IMAGEABLE), [x] GREEN [] BLACK [] BLUE.
OR (DI)LASED DIRECT IMAGEABLE), [x] GREEN [] BLACK [] BLUE.
MAX FINISH THICKNESS OF SOLDERMASK TO BE 0.001in.

SILKSCREEN TOP: HIGH TEMPERATURE, NON-CONDUCTIVE, WHITE EPOXY BASED INK.

4. FINISH PLATING:
METAL 1 AND METAL 2:
[x] ENIG (ELECTROLESS NICKEL/IMMERSION GOLD):
NICKEL PLATE per QQ-N-290, CLASS 1, GRADE G, 200µin. (5µm) MIN.
GOLD PLATE per ASTM B 488, TYPE III, CODE A, 3-10µin. (0.08-0.25µm)
[] IMMERSION SILVER per IPC-4553A, (6-18µin.)
[] HASL (HOT AIR SOLDER LEVEL)
[] OSP (ORGANIC SOLDER PERSERVITIVE)

METAL 1 SELECTIVE GOLD PLATING:
PLATING MUST BE FREE FROM CONTAMINATION, STAINS AND DEBRIS.
[x] GOLD PLATE per ASTM B 488, TYPE III, CODE A, CLASS 1, 50µin. (1.27µm)

5. FINISHED BOARD THICKNESS: 0.011 ±0.003in.

6. COPPER IS PULLED BACK 0.002in. FROM EDGE OF BOARD ON METAL 1 AND METAL 2.
AND PULLED BACK 0.003-0.005in. FROM EDGE OF BOARD ON INTERNAL LAYERS.
THESE VALUES ARE CRITICAL AND MUST BE INSPECTED.

7. TOLERANCE: PC BOARD OUTLINE: ±0.002in.

8. BURRS SHALL NOT EXCEED 0.002in.

9. VIA PLATING/FILLING:
A. ALL VIAS UNDER THE DUT ARE TO BE:
[x] COPPER-FILLED, OVER-PLATED AND PLANARIZED.
FINISHED COPPER THICKNESS TO BE 0.0014 ±0.0004in.
[] EPOXY-FILLED, (CB100) CONDUCTIVE EPOXY, PLANARIZED.
[] EPOXY-FILLED, (SAN-EI) KAGAKU PHP-900 NON-CONDUCTIVE EPOXY, PLANARIZED.
B. ALL OTHER PLATED THRU HOLES TO BE PLATED TO 0.0007in. MIN. THICKNESS.
C. VIA TYPES AND LAYER ASSOCIATION USED ON BOARD:
[x] THRU-HOLE VIAS: LAYER: 1-2
[] BLIND VIAS: LAYER: X-X, X-X
[] BURIED VIAS: LAYER: X-X, X-X

10. METAL 1 TOP AND METAL2 BOTTOM SHALL BE PLANARIZED AFTER PLATING HOLES SHUT.
MAX ALLOWABLE NEGATIVE FEATURE 0.0008in. MAX ALLOWABLE POSITIVE FEATURE 0.0003in.

11. CONDUCTOR WIDTHS AND SPACING TO BE WITHIN 0.001in. OF CAD DATABASE.

12. SOLDERMASK IN PLATED-THRU HOLES IS ACCEPTABLE AS LONG AS IT DOES NOT EXIST
ON BACKSIDE OF BOARD.

13. ALL HOLES TO BE LOCATED WITHIN ±0.003 OF CAD DATABASE.

14. NO VENDOR MARKING OR SERIALIZATION ALLOWED.

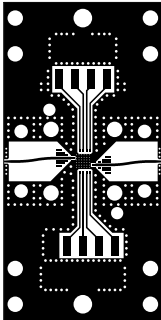
15. DELIVER BOARDS BAGGED AS: [x] SINGLES
[] PANEL/ARRAY

16. 100% ELECTRICAL TEST: [] GERBER EXTRACTED NETLIST
[] IPC-D-356 FORMAT
[x] NO ELECTRICAL TEST

17. STENCIL REQUIREMENTS:
SOLDER PASTE APPLICATION MACHINE: APS (SPR-20)
TOLERANCE TO BE ±0.001in.
SPACING OF CELLS TO BE 1.00in. APART.
MATERIAL: STAINLESS STEEL, 0.005in. THICK
MARK PART: TGP2109-SM_EHS, PCB


REVISION HISTORY

ECN	REV	DESCRIPTION	DATE	APPROVAL
ECN-0001255	A	INITIAL RELEASE	7-6-15	OMARRUFO
ECN-0001320	B	Corrected mounting holes	7-30-15	OMARRUFO



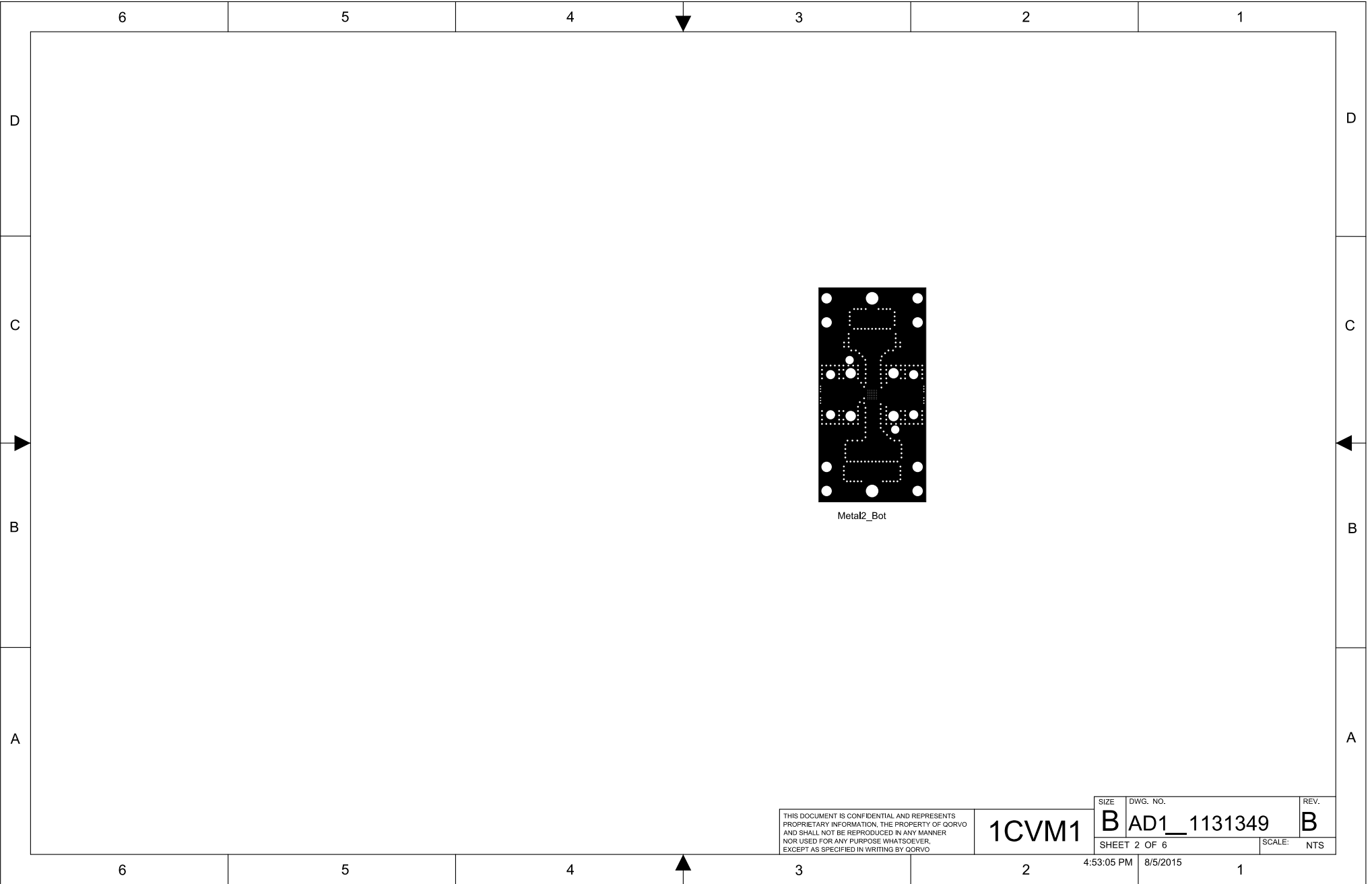
Metal1_Top

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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES (mm)	PRODUCT: TGP2109-SM		<div>QORVO™</div> <div>TITLE: PCB, 1.0X2.00X0.011T, TGP2109-SM (EHS 4X4)</div>			
TOLERANCES .XX = ±.01 .XXX = ±.005 .XXXX = ±.0010 ANGLES = ±0.5°	APPROVAL AND RELEASE RECORDS MAINTAINED IN PDM				DATE	
	DESIGNER	ABYRNE			6-15-15	
	ENGR.	DALLEN			6-15-15	
INTERPRET DRAWING PER ANSI/ASME Y14.5 - 2009	MANAGER	PDM CONTROLLED		SIZE	DWG. NO.	REV.
	CAGE CODE	1CVM1		B	AD1_1131349	B
DO NOT SCALE DRAWING				SHEET 1 OF 6		SCALE: NTS

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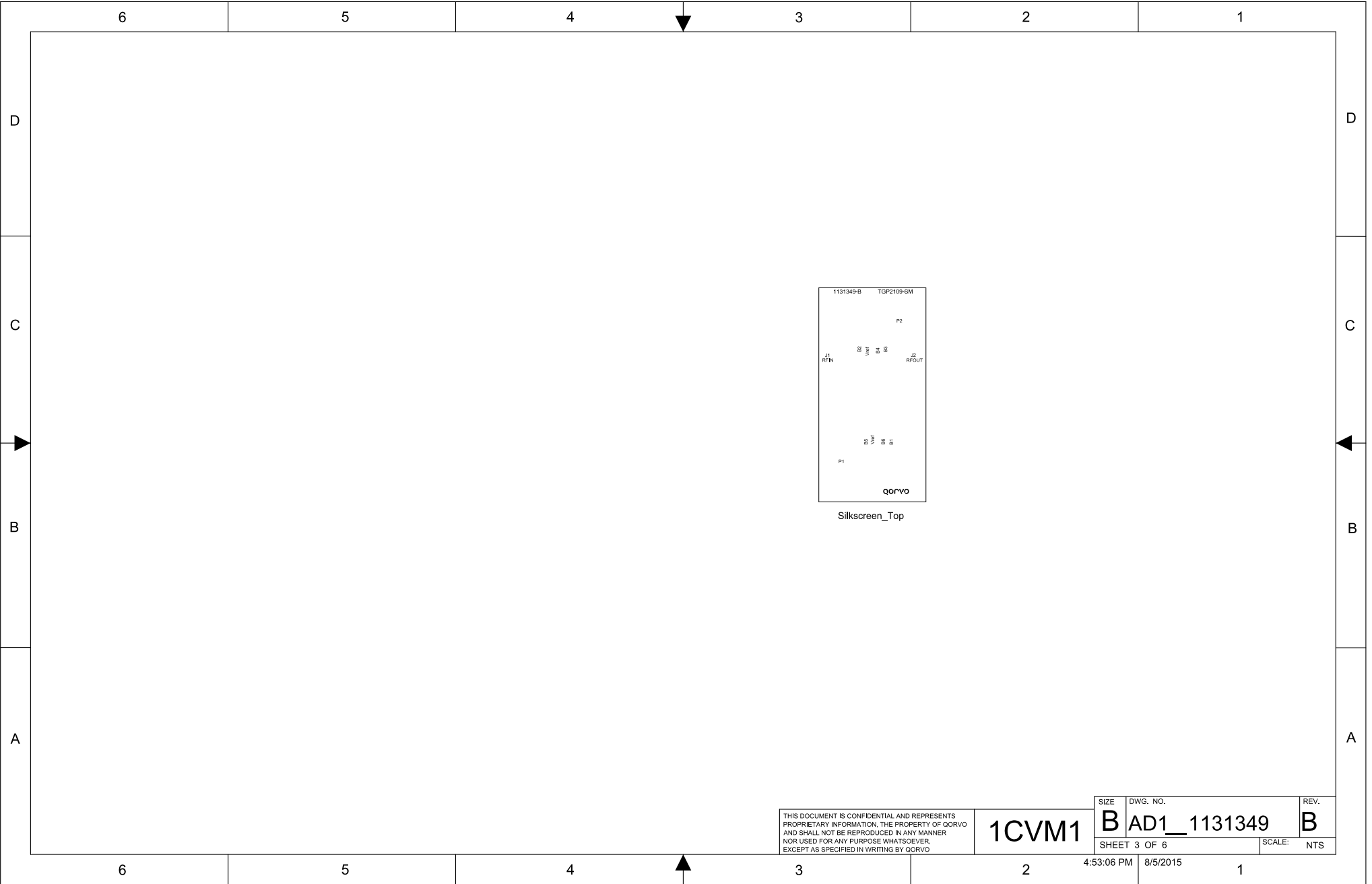
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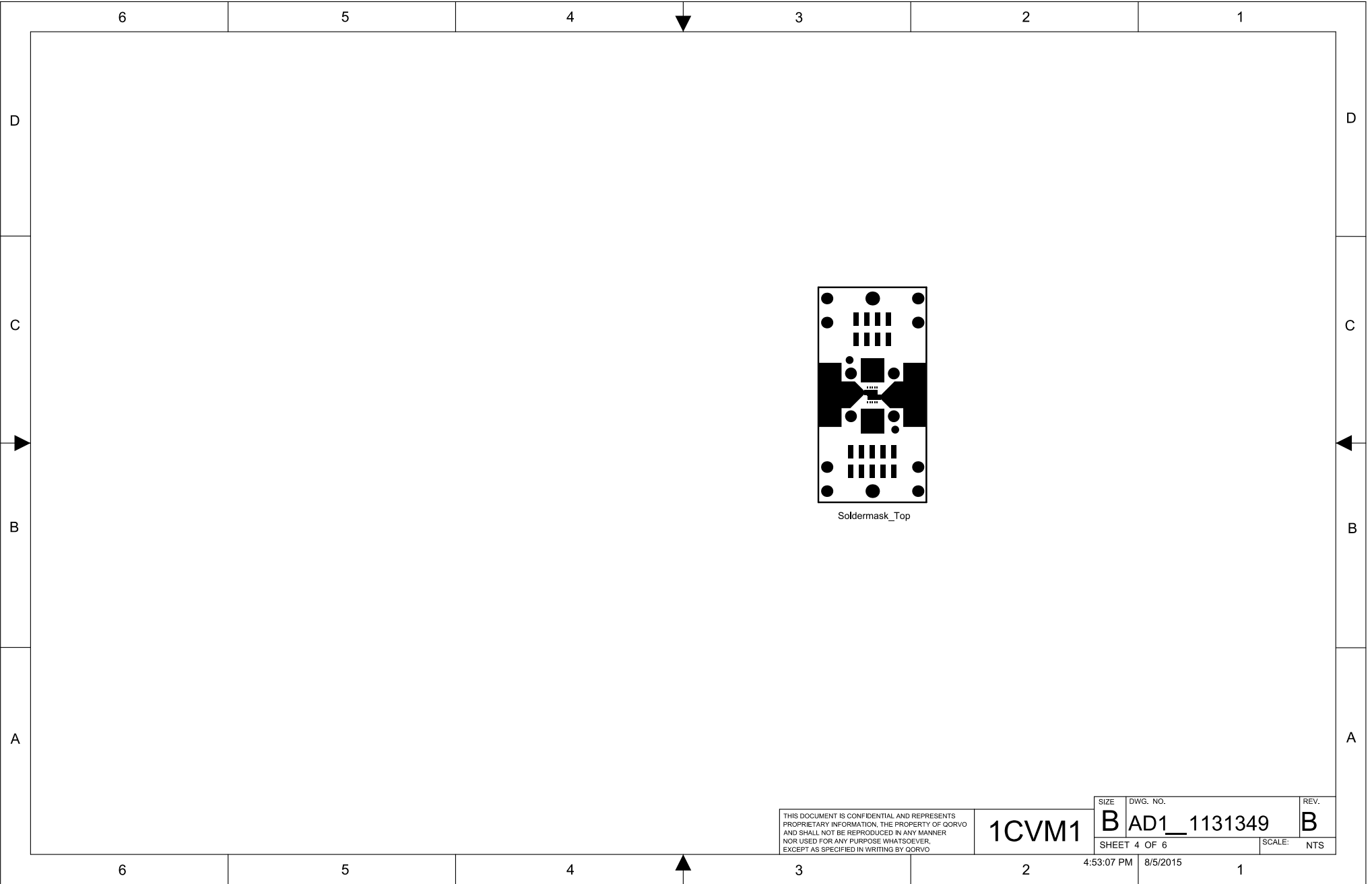
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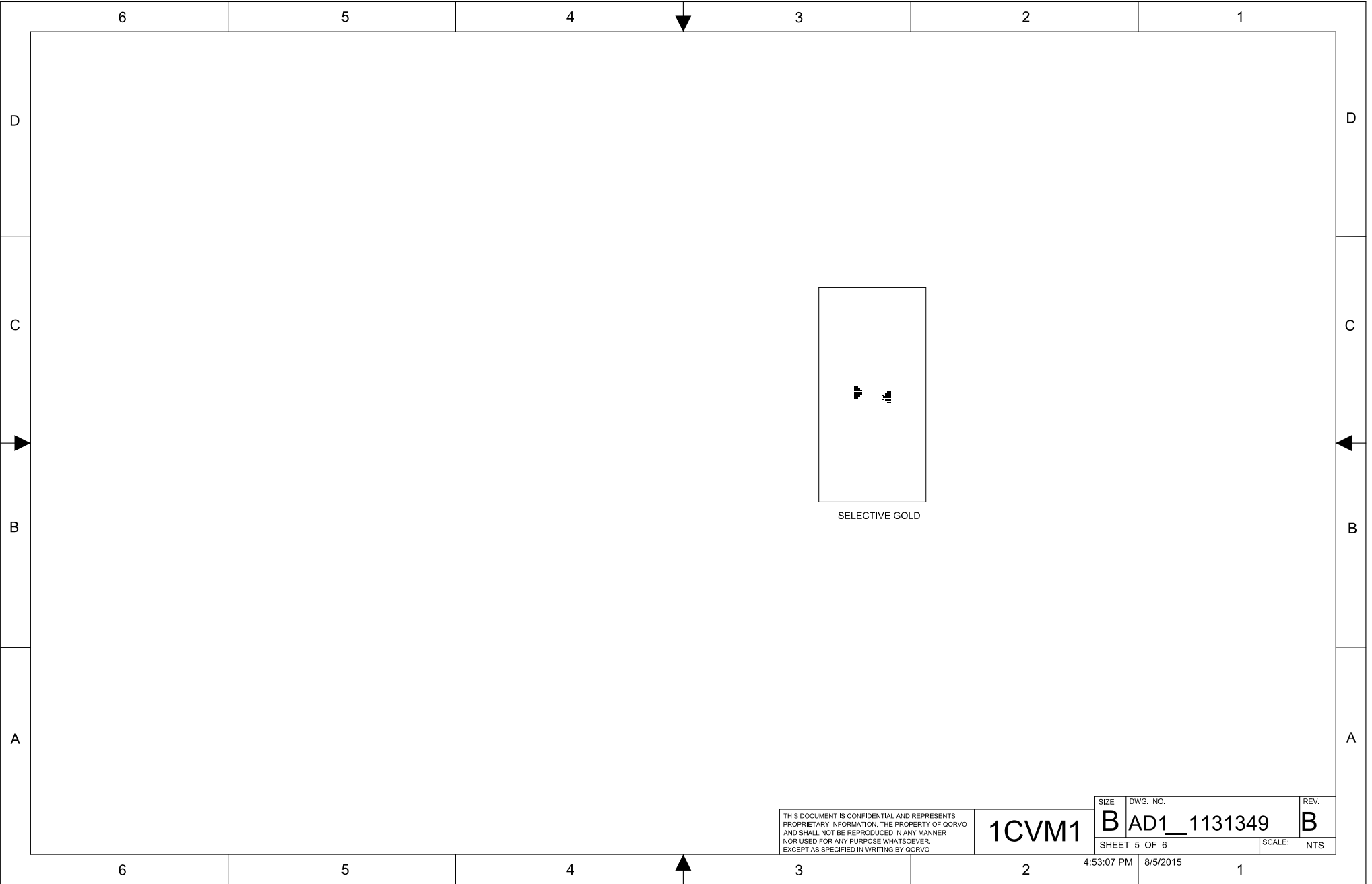
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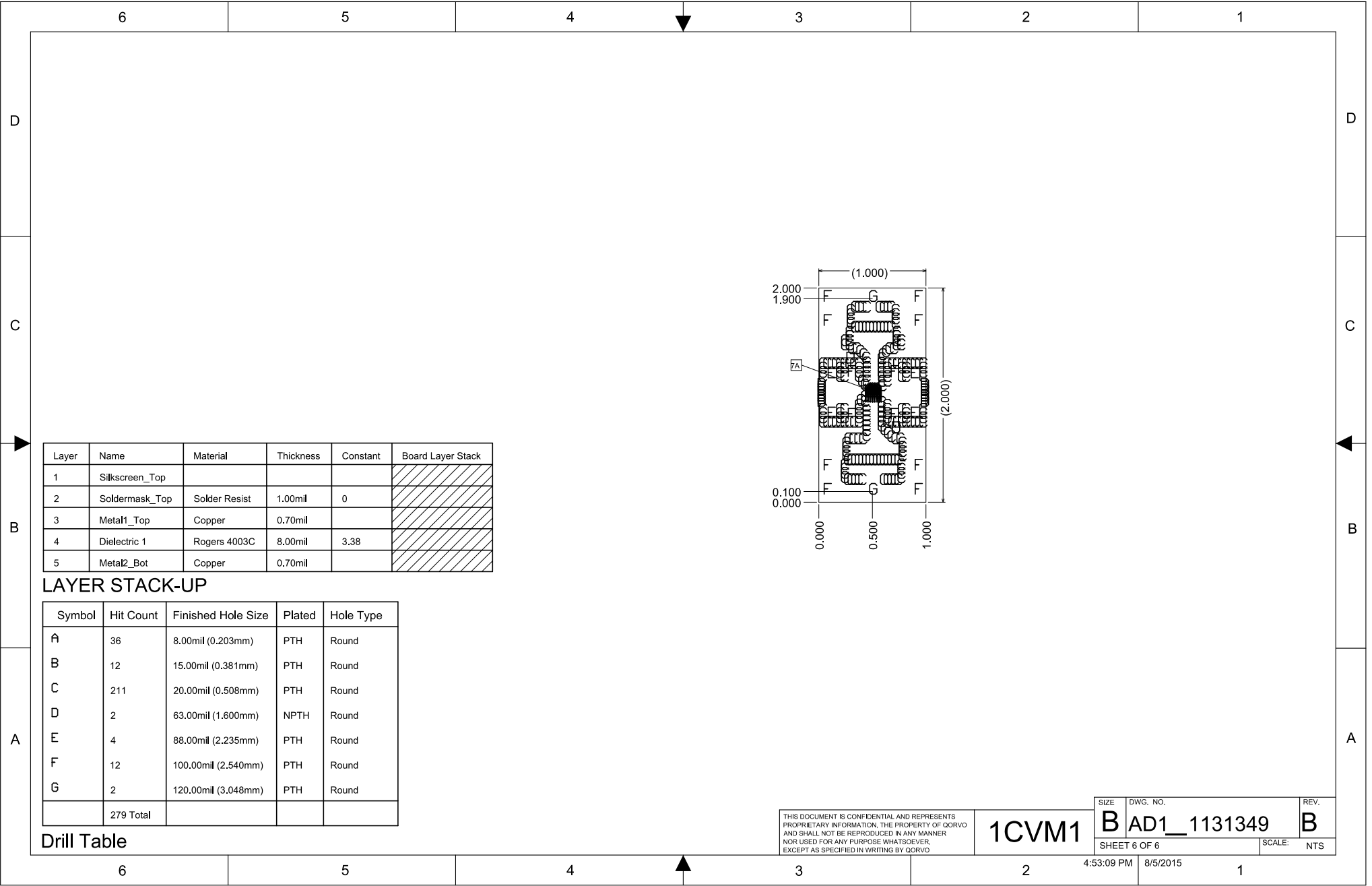
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Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Silkscreen_Top				
2	Soldermask_Top	Solder Resist	1.00mil	0	
3	Metal1_Top	Copper	0.70mil		
4	Dielectric 1	Rogers 4003C	8.00mil	3.38	
5	Metal2_Bot	Copper	0.70mil		

LAYER STACK-UP

Symbol	Hit Count	Finished Hole Size	Plated	Hole Type
A	36	8.00mil (0.203mm)	PTH	Round
B	12	15.00mil (0.381mm)	PTH	Round
C	211	20.00mil (0.508mm)	PTH	Round
D	2	63.00mil (1.600mm)	NPTH	Round
E	4	88.00mil (2.235mm)	PTH	Round
F	12	100.00mil (2.540mm)	PTH	Round
G	2	120.00mil (3.048mm)	PTH	Round
	279 Total			

Drill Table

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