

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	27MAR25	F. GONZALES

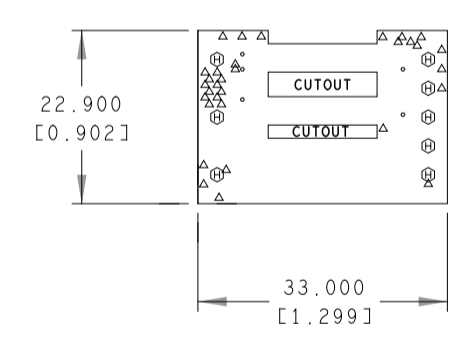
- NOTES : UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN INCHES (EXCEPT WHERE NOTED). ALL DOCUMENTS & SPECIFICATIONS REFERRED TO BELOW SHOULD BE THE LATEST REVISIONS.
 - MATERIAL : HOMOGENOUS MATERIALS IN THIS BOARD SHALL BE COMPLAINT WITH THE EU DIRECTIVE 2002/95/EC
 - BOARD MATERIAL:(USE CHECKED ITEMS)
 - () ISOLA 370HR OR S1000-2 OR IT180 OR EQUIVALENT
 - () ISOLA-FR408HR OR EQUIVALENT
 - () ISOLA 15410
 - () MEGTRON 6
 - () NELCO-4000-13
 - () ROGERS 4350B
 - () ROGERS 3003
 - () ARLON 85N
 - () EM370D
 - (X) OTHER NANYA NP-175 TL OR EQUIVALENT
 - ALL LAMINATES & BONDING MATERIALS SHOULD BE SELECTED FROM IPC-4101 OR IPC-4103.(Tg>170 DEGC Td>300 DEGC) UL FLAMMABILITY RATING 94V-0. BOARD MATERIAL & CONSTRUCTION SHALL MEET THE REQUIREMENTS OF UL796/UL796F.
 - REFER TO IPC-6010 SERIES, CLASS 2 FOR FABRICATION.WORKMANSHIP SHALL CONFORM TO IPC-A-600, CLASS 2.
 - REFER TO LAMINATION DIAGRAM FOR OVERALL BOARD THICKNESS. TOLERANCE APPLIES AFTER ALL LAMINATION AND PLATING PROCESSES. FINISHED THICKNESS MEASURED FROM TOP COPPER TO BOTTOM COPPER.
 - BOW & TWIST NOT TO EXCEED 0.0075 INCHES (0.75%) PER LINEAR INCH AND SHOULD BE MEASURED PER IPC-TM-650, METHOD 2.4.22.
 - ACCEPTABILITY PER ADI SPECIFICATION TST00115.

- TESTING :
- FINAL ELECTRICAL TEST TO BE PERFORMED USING PROVIDED IPC-D-356A NETLIST OR ODB++ FORMAT FILE. THE PCB SHALL HAVE A VERIFICATION STAMP.
 - A TIME DOMAIN REFLECTOMETER REPORT (TDR) FOR EACH IMPEDANCE CONTROLLED LAYER & A CERTIFICATE OF COMPLIANCE SHALL BE PROVIDED BY VENDOR AT TIME OF SHIPMENT. INSTANCES WHERE TDR TESTING CAN'T BE PERFORMED BECAUSE THE TRACE LENGTH IS TOO SHORT ON THE OUTER LAYERS AT THE PIN ESCAPES IS ACCEPTABLE, ALL OTHER INSTANCES MUST BE REPORTED.
- MISCELLANEOUS :
- IF PRESENT, ALL BLIND/BURIED VIAS WITH AN ASPECT RATIO <1:1 TO BE PLATED SHUT WITH COPPER WHEN USED AS VIA-IN-PAD OR AS A STACKED VIA. BLIND/BURIED VIAS WITH AN ASPECT RATIO >1:1 TO BE FILLED WITH NON-CONDUCTIVE EPOXY.
 - FOR VIA FILL INFORMATION REFER TO DRILL CHART:
 - (X) NON-CONDUCTIVE EPOXY FILL ALL 0.1524MM, 0.3048MM AND 0.2032MM DRILLED VIAS.
 - () COPPER FILL ALL 0.XXXX INCHES DRILLED VIAS
 - INTENTIONAL SHORTS: IF AN INTENTIONAL SHORT REPORT IS SUPPLIED AND DOES NOT MATCH THE FAB DATA THEN ADI APPROVAL IS REQUIRED.
 - PEMNUTS:
 - () PEMNUTS TO BE INSTALLED BY FABRICATOR
 - () PEMNUTS NOT TO BE INSTALLED BY FABRICATOR
 - (X) NOT APPLICABLE
 - MANUFACTURER TO ETCH/STAMP WITH PERMANENT NON-CONDUCTIVE INK ON SECONDARY SIDE UNLESS OTHERWISE SPECIFIED:
 - A. UL CODE-FLAMMABILITY RATING FOR THOSE APPROVED MATERIALS(IF APPLICABLE)
 - B. DATE CODE
 - C. LOT NUMBER
 - D. MANUFACTURER LOGO
 - PANELIZATION: BOARDS TO BE SHIPPED IN ARRAY AND KEPT INTACT PANEL TO BE SUBJECTED TO CUSTOMERS APPROVAL PANEL SOLDER PASTE STENCIL GERBER TO BE PROVIDED TO ANALOG
 - MINIMUM DESIGN LINE WIDTH IS .008 INCH.
 - MINIMUM DESIGN LINE SPACING IS .006 INCH.
- FAB NOTES REVISION: NOVEMBER 21 2022

LAMINATION DIAGRAM				
LAYER NUMBER	LAYER NAME	COPPER THICKNESS (OZ, INCH)	DIELECTRIC THICKNESS (INCH)	MATERIALS
1	TOP	1 OZ, 0.0014"	0.004	FINAL CU (THICKNESS AFTER PLATING) (REFER FAB NOTE#2)
2	L2	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
3	L3	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
4	L4	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
5	L5	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
6	L6	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
7	L7	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
8	L8	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
9	L9	3 OZ, 0.0042"	0.004	CU CLAD (REFER FAB NOTE#2)
10	BOTTOM	1 OZ, 0.0014"	0.004	FINAL CU (THICKNESS AFTER PLATING) (REFER FAB NOTE#2)

THE FINISHED PCB THICKNESS TO BE: 0.072" +/-10%

- TOOLING :
- IMPEDANCE REQUIREMENTS: IF NO STACKUP IS DEFINED, THE VENDOR IS ALLOWED TO ADJUST THE DIELECTRIC THICKNESS & TRACE WIDTHS TO MEET THE IMPEDANCE REQUIREMENT. IF SPECIFIED, THE VENDOR MUST MEET THE REQUIREMENTS LISTED IN THE IMPEDANCE TABLE. ANY ADJUSTMENT MADE TO THE DEFINED STACKUP, TRACE WIDTH & SPACING THAT IMPACT THE REQUIREMENTS MUST HAVE WRITTEN APPROVAL FROM ADI.
 - FILLET OPTIONS TO ENHANCE RELIABILITY AT PAD JUNCTIONS WHERE SPACING PERMITS.
 - () FILLETS ALLOWED
 - (X) FILLETS NOT ALLOWED
 - THIEVING:
 - () VENDOR MAY ADD THIEVING TO COMPENSATE FOR LOW COPPER DENSITY AREAS MAINTAINING A MINIMUM 0.100 INCH CLEARANCE FROM ALL COPPER FEATURES.
 - () VENDOR MAY NOT ADD THIEVING TO COMPENSATE FOR LOW COPPER DENSITY AREAS.
 - LAYER TO LAYER REGISTRATION SHALL BE WITHIN 0.003 INCHES.
- FINISH :
- DRILL SIZES ARE FINISHED HOLE SIZES. ALL HOLES SHALL BE LOCATED WITHIN 0.005 INCHES DTP,UNLESS SPECIFIED. MINIMUM BARREL PLATING OF 0.001 INCHES. PLATED HOLES SHALL NOT BE ROUGH OR IRREGULAR SO AS TO HINDER PROPER SOLDER WICKING. BARREL RELIEF ON SOLDERMASK ALLOWED IN UNFILLED VIA IN PAD HOLES.
 - PLATING SPECIFICATION:
 - (X) REFER TO LAMINATION DIAGRAM FOR FINISHED COPPER WEIGHT/THICKNESS REQUIRMENTS THE STARTING COPPER WEIGHT/THICKNESS CAN VARY AS LONG AS THE FINISHED COPPER WEIGHT/THICKNESS IS NOT LESS THAN THE SPECIFIED VALUE.
 - SURFACE FINISH:
 - (X) IMMERSION GOLD (ENIG) 1.58-3.94 MICRO INCHES OVER 118-236 MICRO INCHES MIN. OF ELECTROLESS NICKEL PER IPC-4552
 - () OSP (ORGANIC SOLDERABILITY PRESERVATIVE)
 - () IMMERSION SILVER
 - () SOFT WIRE BONDABLE GOLD 30-50 MICRO INCHES OF SOFT WIRE BONDABLE GOLD OVER 100-150 MICRO INCHES OF NICKEL
 - () EDGE CONNECTOR FINGERS ARE TO BE PLATED WITH 100 MICRO-INCHES(.0001") OF LOW STRESS NICKEL UNDER 30 MICRO-INCHES (.00003") OF GOLD
 - () OTHER_____
 - SOLDERMASK:
 - SOLDERMASK OVER BARE COPPER OR BARE GOLD (BOTH SIDES) TO MEET IPC-SM-840.
 - IF PRESENT,DO NOT MODIFY SOLDERMASK DEFINED PADS (MASK OPENINGS LESS THAN COPPER PAD) WITHOUT APPROVAL.
 - (X) LPI
 - () OTHER_____
 - COLOR
 - (X) GREEN
 - () OTHER_____
 - APPLY SILKSCREEN TO BOTH SIDES USING A NON-CONDUCTIVE, EPOXY BASED INK PER ARTWORK.
 - (X) WHITE
 - () OTHER

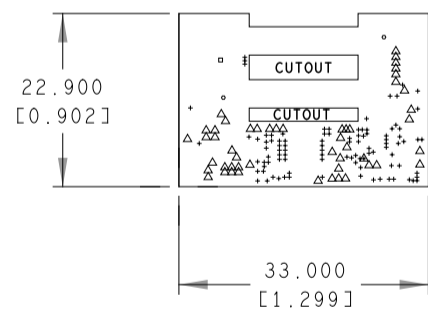
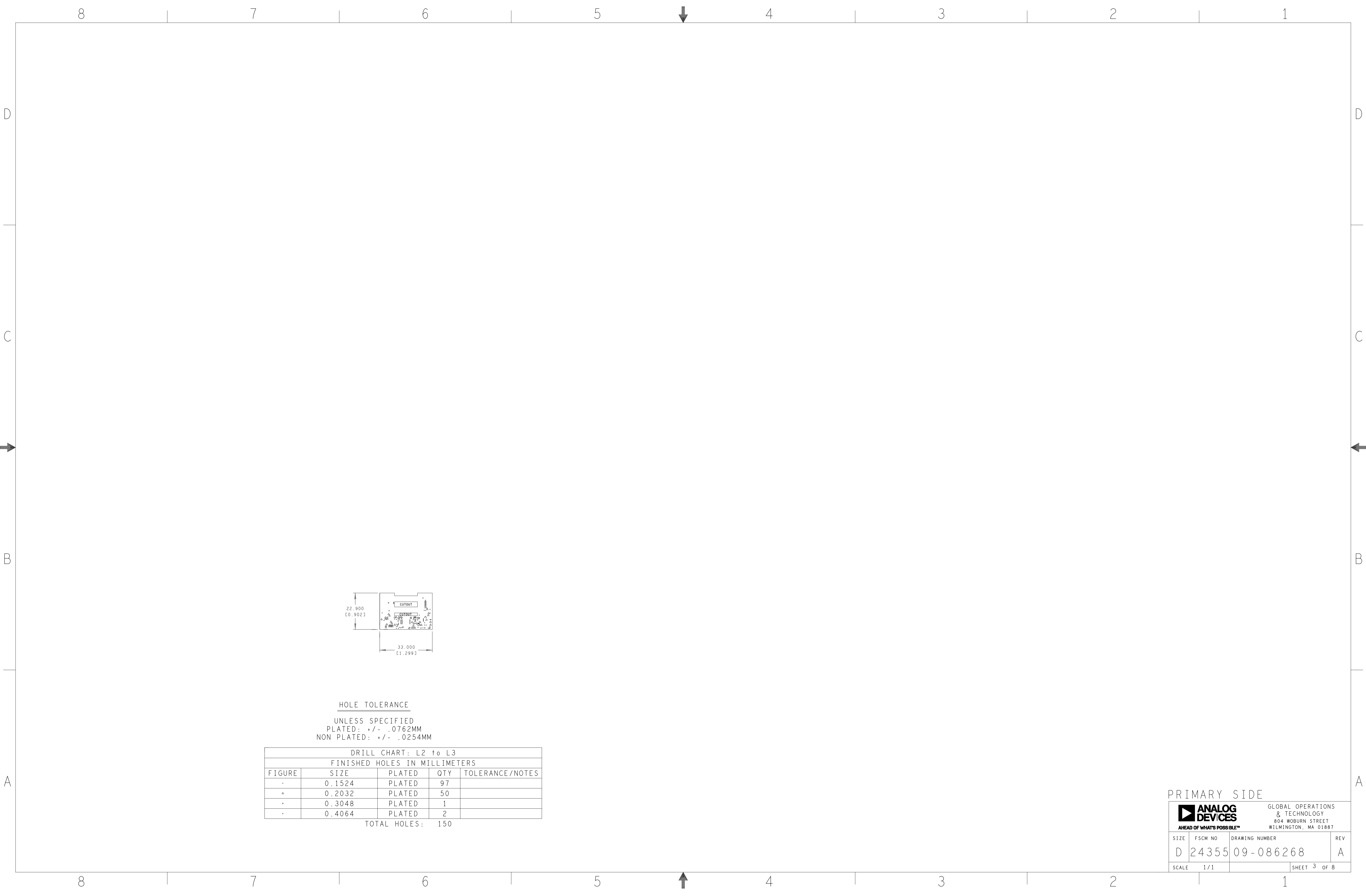


HOLE TOLERANCE
UNLESS SPECIFIED
PLATED: +/- .0762MM
NON PLATED: +/- .0254MM

DRILL CHART: TOP to BOTTOM				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
^	0.3048	PLATED	32	SEE FAB NOTES#20
.	0.4064	PLATED	5	SEE FAB NOTES#20
⊙	1.0922	PLATED	8	

TOTAL HOLES: 45


PRIMARY SIDE			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVAL	DATE	GLOBAL OPERATIONS & TECHNOLOGY 804 WOBURN STREET WILMINGTON, MA 01887
TOLERANCES	TEMPLATE ENGINEER BILLY PHILLIPS	14APR21	
DECIMALS FRACTIONS ANGLES	HARDWARE SERVICES BOB MACDONALD	14APR21	TITLE FABRICATION ADP1074 1/16TH BRICK
.XX -.010	HARDWARE SYSTEMS DAVE WILLIAMS	14APR21	
.XXX -.005	TEST ENGINEER N/A	ddMMyy	
.XXXX -.0050	COMPONENT ENGINEER ADGT LIBRARY	14APR21	SIZE FSCM NO DRAWING NUMBER REV D 24355 09-086268 A
	HARDWARE RELEASE X	ddMMyy	
FINISH	PCB DESIGNER J. BOMBITA	31MAR25	SCALE 1/1 SHEET 1 OF 8
	ENGINEER F. GONZALES	31MAR25	
	CHECKER X	ddMMyy	

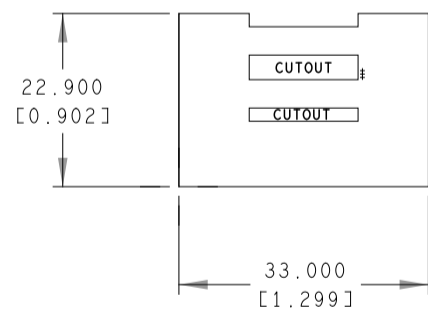
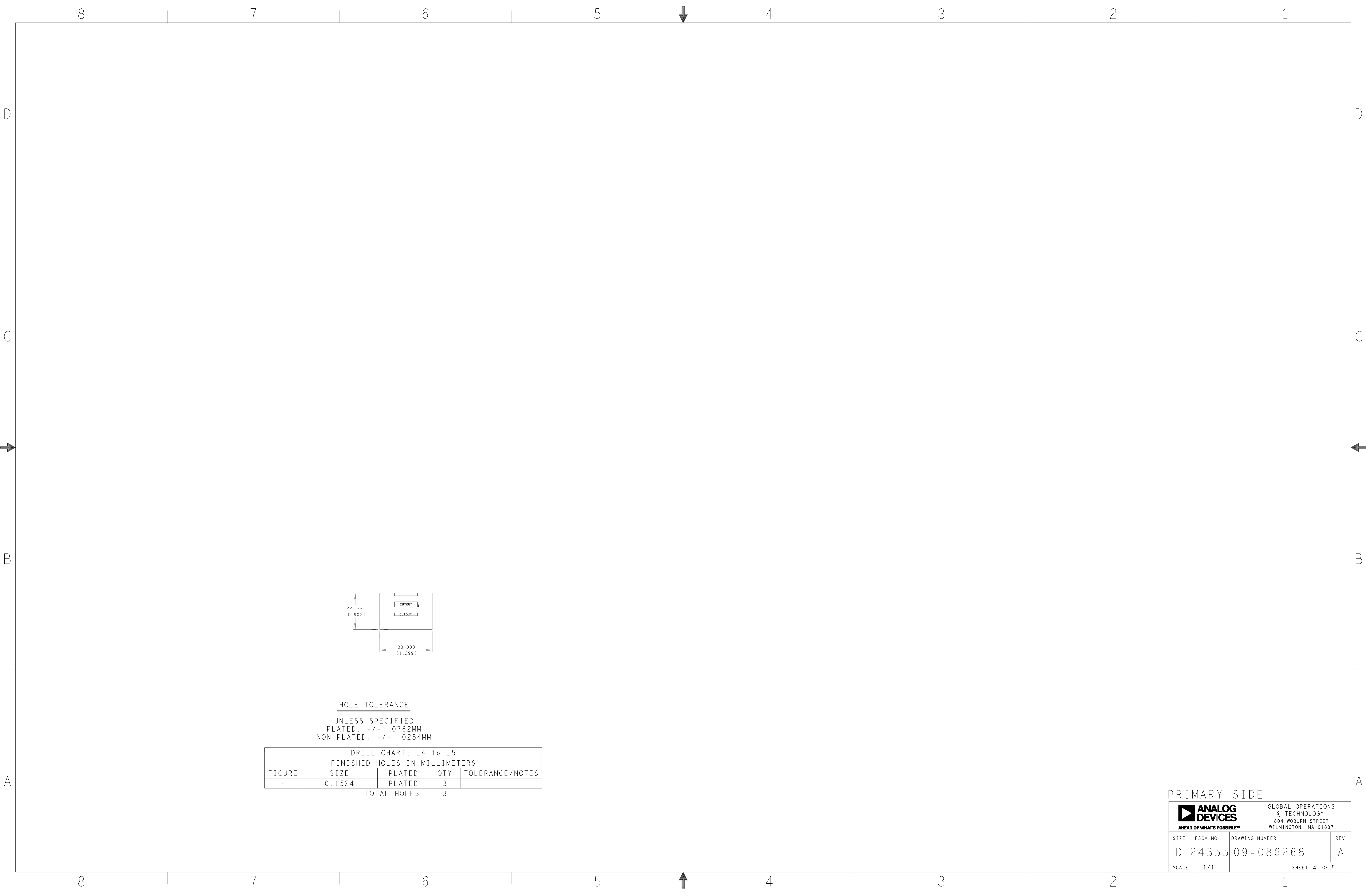


HOLE TOLERANCE
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 NON PLATED: +/- .0254MM

DRILL CHART: L2 to L3				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
.	0.1524	PLATED	97	
△	0.2032	PLATED	50	
*	0.3048	PLATED	1	
.	0.4064	PLATED	2	
TOTAL HOLES:			150	

PRIMARY SIDE

 <small>AHEAD OF WHAT'S POSSIBLE™</small>		<small>GLOBAL OPERATIONS & TECHNOLOGY</small> <small>804 WOBURN STREET</small> <small>WILMINGTON, MA 01887</small>	
		<small>SIZE</small> D <small>SCALE</small> 1/1	<small>FSCM NO</small> 24355 <small>DRAWING NUMBER</small> 09-086268

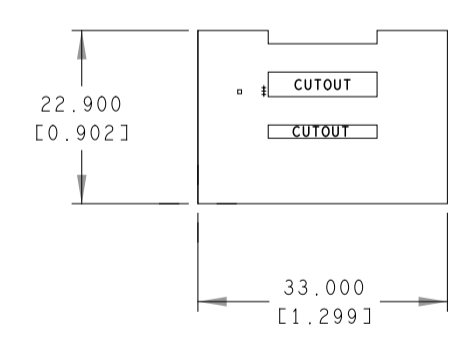
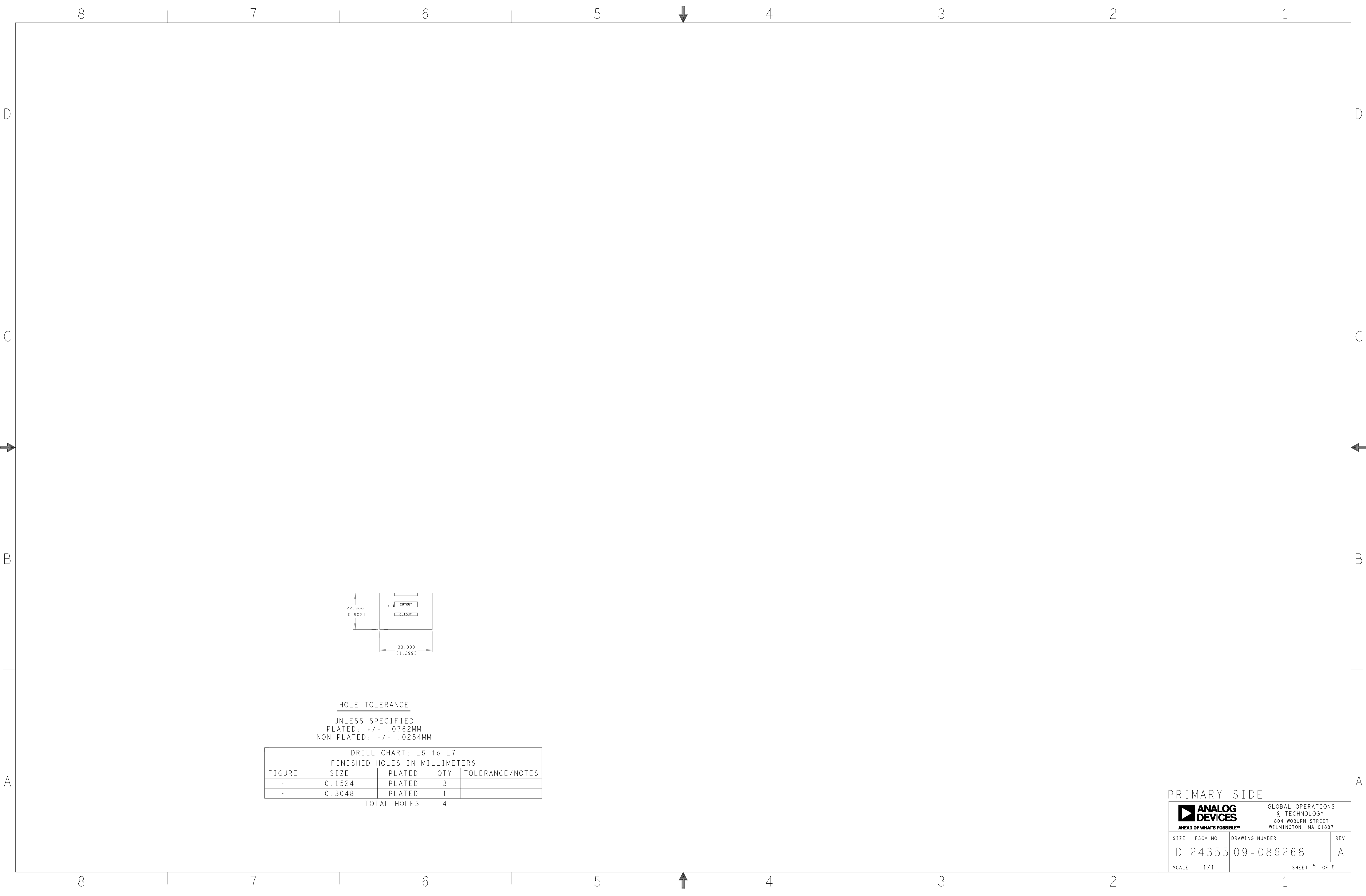


HOLE TOLERANCE
 UNLESS SPECIFIED
 PLATED: +/- .0762MM
 NON PLATED: +/- .0254MM

DRILL CHART: L4 to L5				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
-	0.1524	PLATED	3	
TOTAL HOLES:			3	

PRIMARY SIDE

		GLOBAL OPERATIONS & TECHNOLOGY 804 WOBURN STREET WILMINGTON, MA 01887	
SIZE	FSCM NO	DRAWING NUMBER	REV
D		09-086268	A
SCALE 1/1		SHEET 4 OF 8	




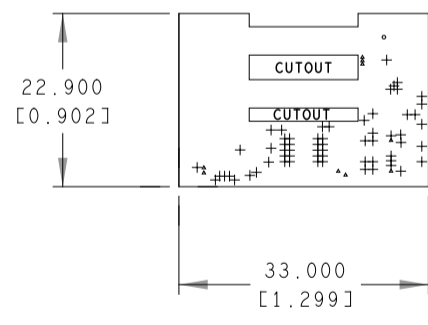
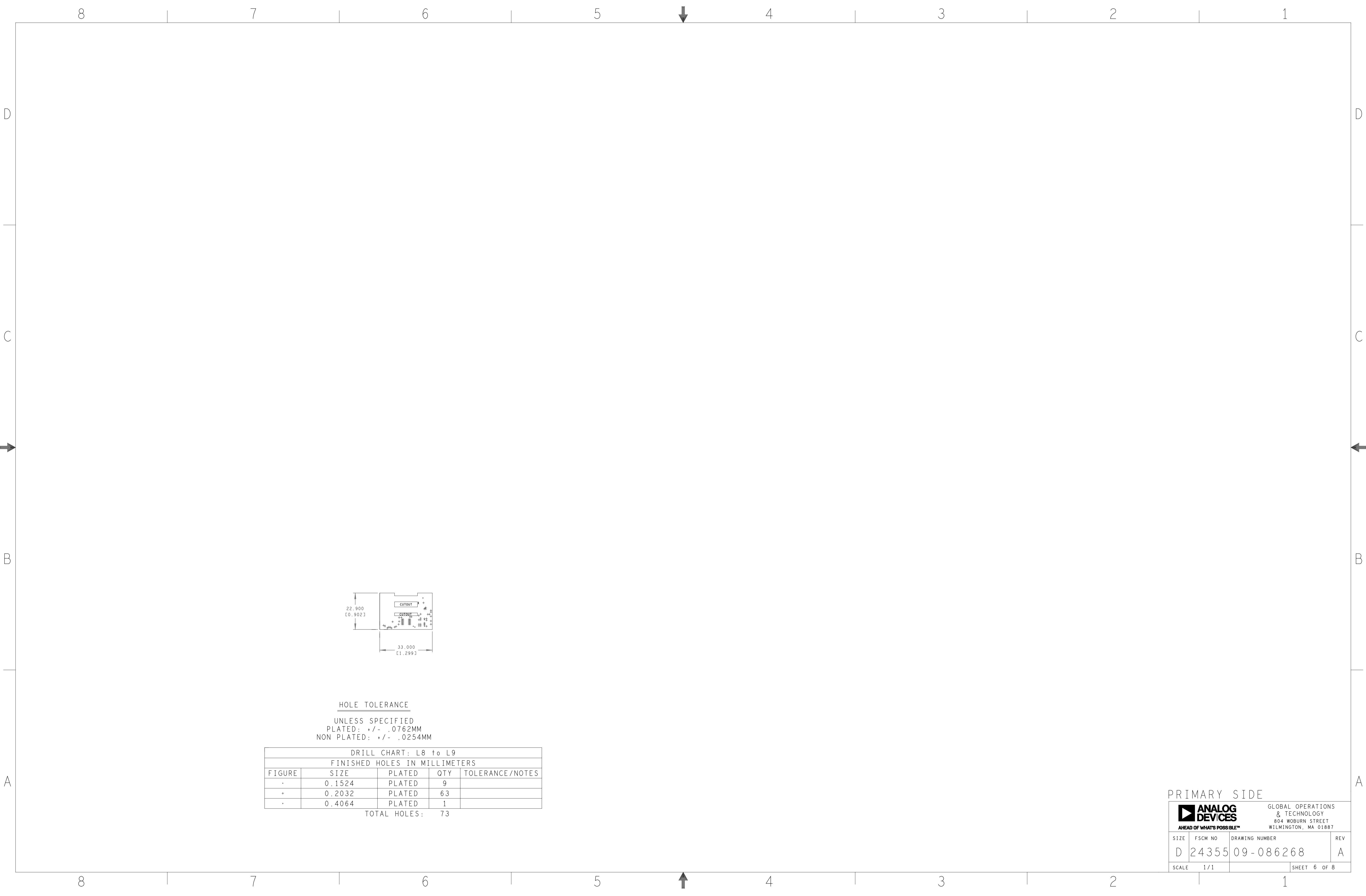
HOLE TOLERANCE
 UNLESS SPECIFIED
 PLATED: +/- .0762MM
 NON PLATED: +/- .0254MM

DRILL CHART: L6 to L7				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
-	0.1524	PLATED	3	
-	0.3048	PLATED	1	

TOTAL HOLES: 4

PRIMARY SIDE

		GLOBAL OPERATIONS & TECHNOLOGY 804 WOBURN STREET WILMINGTON, MA 01887	
SIZE	FSCM NO	DRAWING NUMBER	REV
D	24355	09-086268	A
SCALE 1/1		SHEET 5 OF 8	



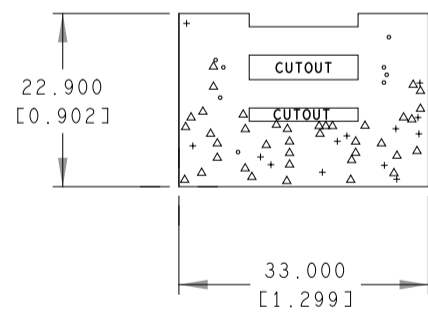
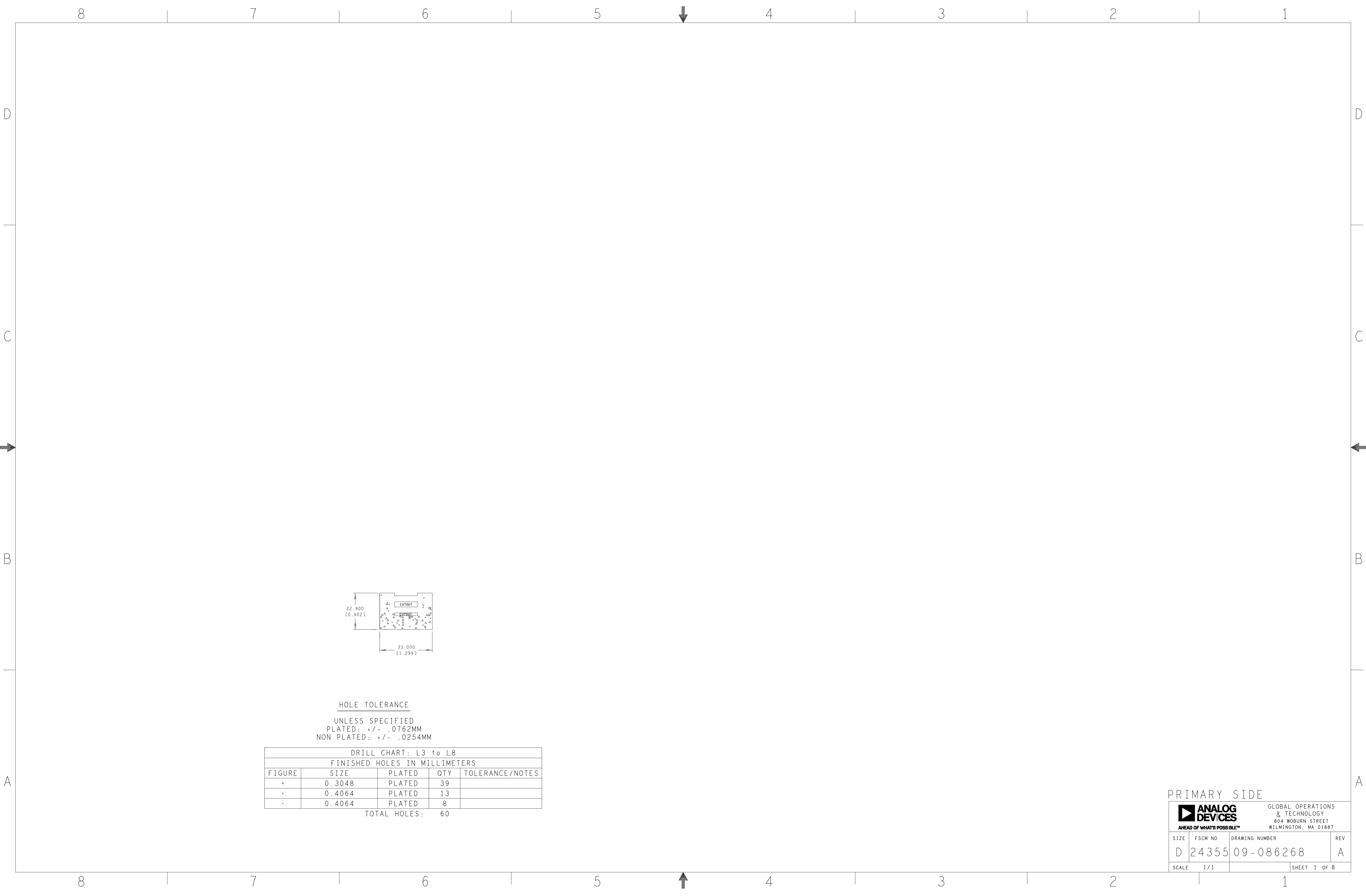
HOLE TOLERANCE
 UNLESS SPECIFIED
 PLATED: +/- .0762MM
 NON PLATED: +/- .0254MM

DRILL CHART: L8 to L9				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
-	0.1524	PLATED	9	
+	0.2032	PLATED	63	
·	0.4064	PLATED	1	

TOTAL HOLES: 73

PRIMARY SIDE

		GLOBAL OPERATIONS & TECHNOLOGY 804 WOBURN STREET WILMINGTON, MA 01887	
SIZE	FSCM NO	DRAWING NUMBER	REV
D	24355	09-086268	A
SCALE 1/1		SHEET 6 OF 8	




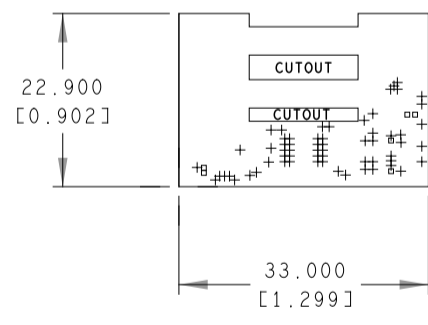
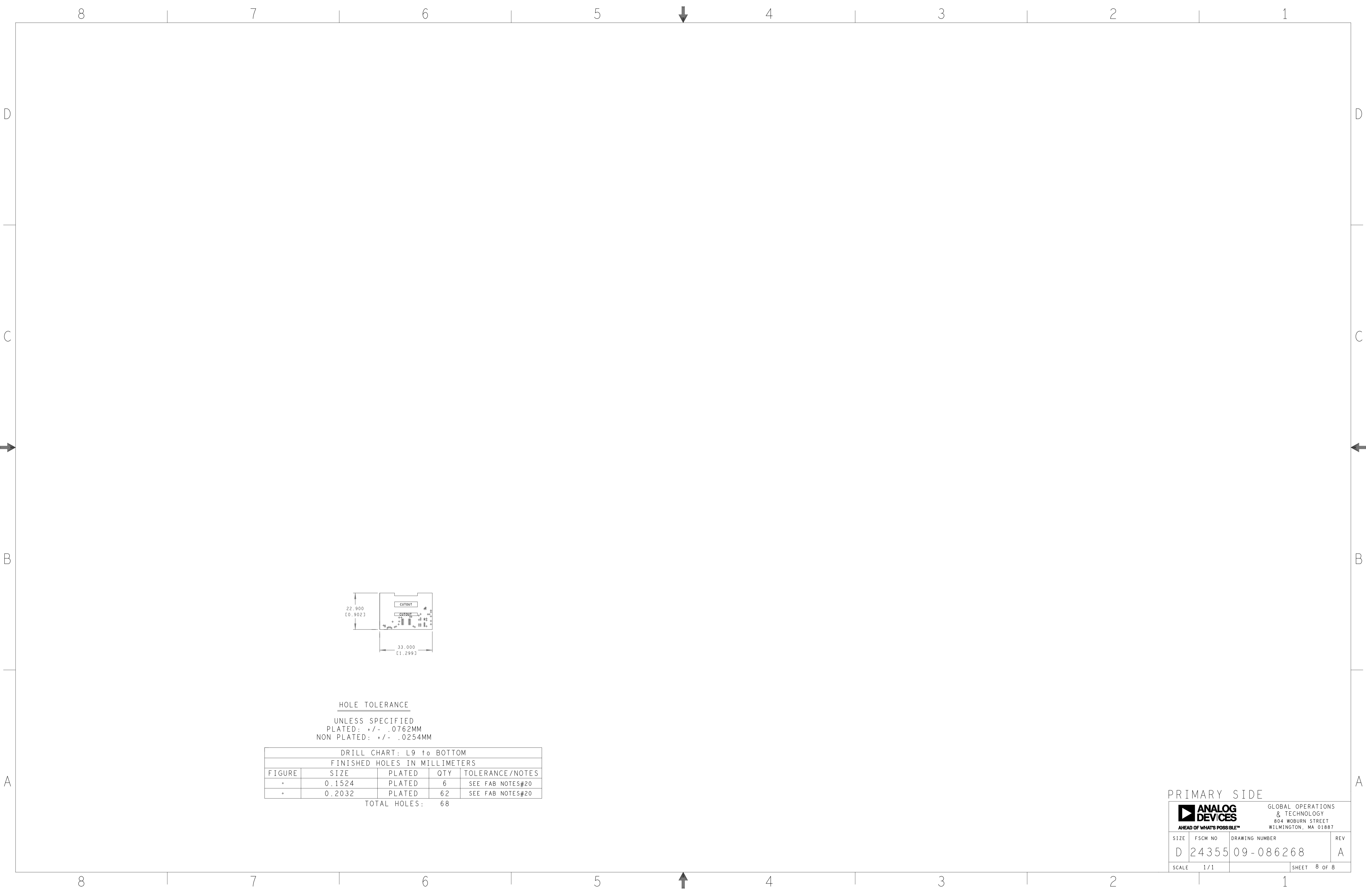
HOLE TOLERANCE
 UNLESS SPECIFIED
 PLATED: +/- .0762MM
 NON PLATED: +/- .0254MM

DRILL CHART: L3 to L8				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
△	0.3048	PLATED	39	
•	0.4064	PLATED	13	
•	0.4064	PLATED	8	

TOTAL HOLES: 60

PRIMARY SIDE

		GLOBAL OPERATIONS & TECHNOLOGY 804 WOBURN STREET WILMINGTON, MA 01887	
SIZE	FSCM NO	DRAWING NUMBER	REV
D		09-086268	A
SCALE 1/1		SHEET 7 OF 8	




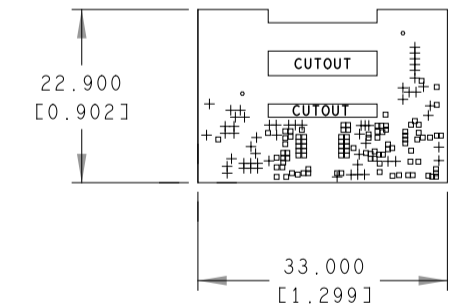
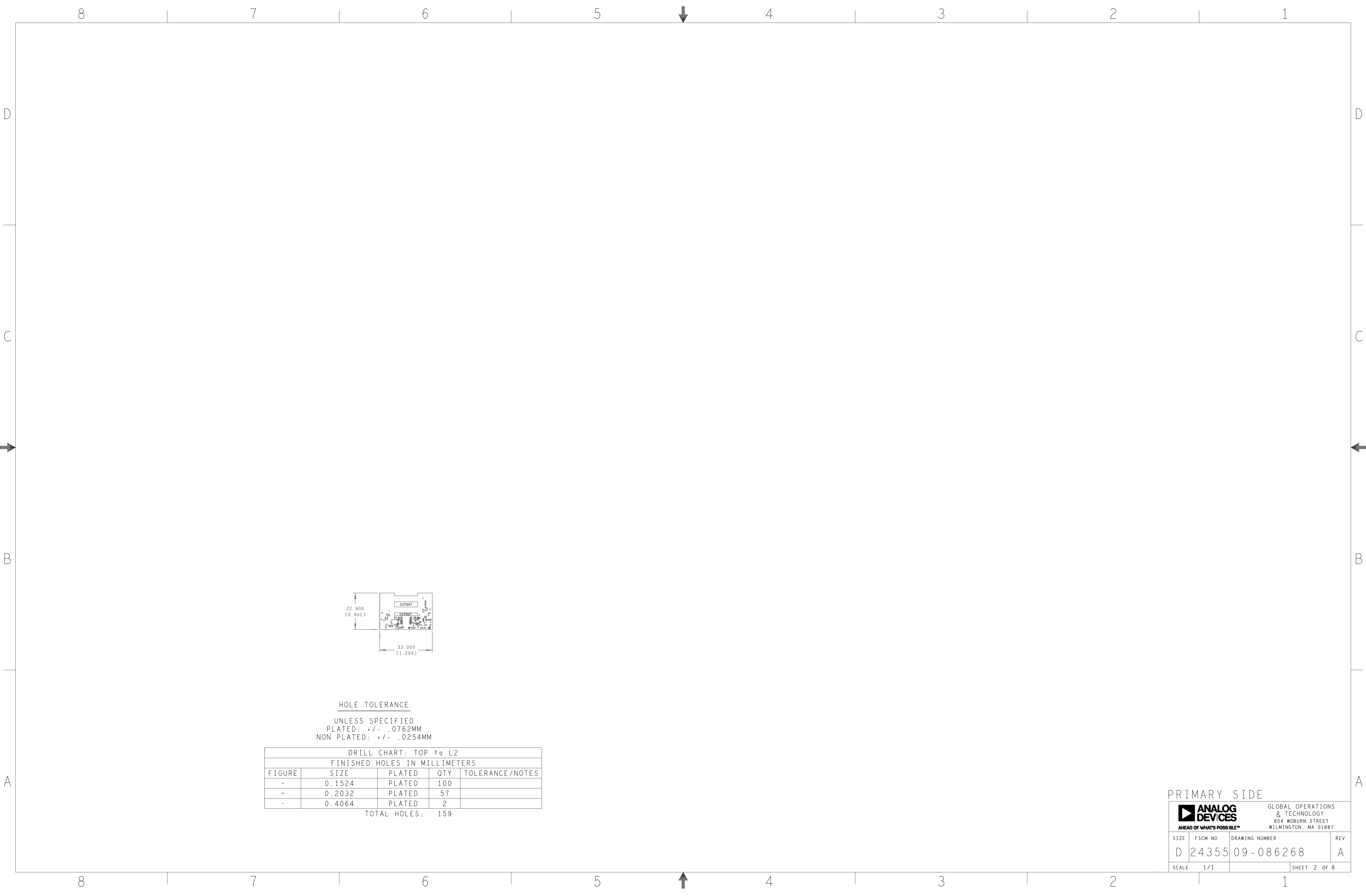
HOLE TOLERANCE
 UNLESS SPECIFIED
 PLATED: +/- .0762MM
 NON PLATED: +/- .0254MM

DRILL CHART: L9 to BOTTOM				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
-	0.1524	PLATED	6	SEE FAB NOTES#20
+	0.2032	PLATED	62	SEE FAB NOTES#20

TOTAL HOLES: 68

PRIMARY SIDE

		GLOBAL OPERATIONS & TECHNOLOGY 804 WOBURN STREET WILMINGTON, MA 01887	
SIZE	FSCM NO	DRAWING NUMBER	REV
D	24355	09-086268	A
SCALE 1/1		SHEET 8 OF 8	



HOLE TOLERANCE
 UNLESS SPECIFIED
 PLATED: +/- .0762MM
 NON PLATED: +/- .0254MM

DRILL CHART: TOP to L2				
FINISHED HOLES IN MILLIMETERS				
FIGURE	SIZE	PLATED	QTY	TOLERANCE/NOTES
o	0.1524	PLATED	100	
+	0.2032	PLATED	57	
.	0.4064	PLATED	2	

TOTAL HOLES: 159

PRIMARY SIDE

		GLOBAL OPERATIONS & TECHNOLOGY 804 WOBURN STREET WILMINGTON, MA 01887	
		SIZE D SCALE 1/1	FSCM NO 24355 DRAWING NUMBER 09-086268