

NOTES: UNLESS OTHERWISE SPECIFIED

1. THE FINISHED PRINTED WIRING BOARD SHALL MEET THE REQUIREMENTS OF IPC-A-600-X (LATEST REVISION).
2. THIS DOCUMENT AND RELATED ARTWORK ARE COMPUTER GENERATED. ALL MODIFICATIONS ARE TO BE PERFORMED TO THE ORIGINAL DATABASE.
3. THIS IS A REDUCED DIMENSION DRAWING. ADDITIONAL DIMENSIONS NEEDED TO DEFINE THE TRUE PROFILES OF THIS PART SHALL BE OBTAINED FROM THE MASTER CAD MODEL DATABASE NAMED 20019306_A.ZIP. DIMENSIONS AND TOLERANCES SHALL BE INTERPRETED PER ASME Y14.5M.
4. FABRICATE AND INSPECT PRINTED WIRING BOARD PER IPC-6013D, PERFORMANCE CLASS 2, TYPE 2 AND INSTALLATION USAGE B.
5. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.

- 6

MATERIAL: MATERIAL: 1/2 OZ ROLLED ANNEALED COPPER CLAD, DOUBLE SIDED, 12.5 um THICK POLYIMIDE FILM PER IPC-4204/11-E1EEZ CU-W7-HS/HS
- 7

MATERIAL: 12.5 um THICK POLYIMIDE FILM WITH 15 um THICK ACRYLIC ADHESIVE ONE SIDE PER IPC-4203/1-E1EEMF
- 8

MATERIAL: UNCLAD 0.8mm THICK FR-4 LAMINATE PER IPC-4101E/L 21-0800 O/O BA
- 9

MATERIAL: NON-SUPPORTED 25 um THICK ACRYLIC ADHESIVE PER IPC-4203/18-Z0Z0M1
10. SURFACE FINISH TO BE ELECTROLESS NICKEL / IMMERSION GOLD (ENIG) PLATING PER IPC-6013. ALL PLATED HOLES AND CONDUCTIVE SURFACES SHALL BE PLATED WITH 0.025 mm COPPER MINIMUM. ALL Ni/Au PLATED AREA SHOULD HAVE MINIMUM THICKNESS OF 0.0025 mm FOR Ni AND 0.051 um FOR Au.
11. ALL HOLES SPECIFIED IN THE DRILL CHART ARE FINISHED HOLE DIAMETERS. HOLE TOLERANCE +/- 0.051 mm FOR NON-PLATED HOLES AND +/- 0.076 mm FOR PLATED HOLES.
12. FABRICATION TOLERANCES: END PRODUCT TRACE WIDTHS AND LANDS SHALL NOT VARY MORE THAN THE SMALLER OF 0.051 mm OR 10% OF THE TRACE WIDTH FROM THE GERBER DATA.
- 13

LEGEND OVER COVERLAY ON TOP SIDE OF PWB USING WHITE NON-CONDUCTIVE EPOXY INK, ITEM 5. LEGEND MARKING SHALL NOT BE NEARER THAN 0.125 mm TO ANY PAD. CHARACTER HEIGHT SHALL BE 0.75 mm MINIMUM.
14. ELECTRICAL TEST: CONTINUITY SHORT AND OPEN TESTING ON ALL AVAILABLE EXPOSED TERMINAL PADS USING IPC-D-356A NETLIST DATA. CONTINUITY TEST SHALL BE AT 5 OHMS MAX. SHORTS TESTING SHALL BE PERFORMED AT 250V. MINIMUM ISOLATION OF 20M OHMS.
- 15

MARK IN LOCATION SHOWN WITH 1.0 mm MINIMUM HIGH CHARACTERS THE SERIAL NUMBER "NXXXXX" (WHERE N IS A VENDOR DESIGNATION LETTER AND XXXXX IS A UNIQUE 5 DIGIT SERIAL NUMBER FOR EACH PART. THE VENDOR DESIGNATION LETTER AND THE STARTING SERIAL NUMBER SHALL BE IN ACCORDANCE WITH THE VALUES PROVIDED IN THE PURCHASE ORDER).
16. THERE ARE NO TRACES (COPPER) ON THE BOTTOM LAYER IN THE FLEX SECTION. THE ESTIMATED MINIMUM BEND RADIUS IS 3 mm.
17. CROSS-REFERENCE: M1CS-400-01400 VOICE COIL AND SNUBBER FLEX PCB

REVISION HISTORY					
REV	DESCRIPTION	CAT	DWN	ENGR	SEE JPL DATA MANAGEMENT SYSTEM FOR APPROVAL SIGNATURES AND DATES
A	----- INITIAL RELEASE -----	II	-	-	

	AR	6			ETHONE 50-100R CATALYST 9	INK, WHITE EPOXY	IPC-4781	13 15
	AR	5						
	AR	4				ACRYLIC ADHESIVE	IPC-4203/18	9
	AR	3	STIFFENER			GLASS BASE EPOXY RESIN UNCLAD LAMINATE	IPC-4101/21	8
	AR	2				POLYIMIDE FILM ACRYLIC ADHESIVE ONE SIDE	IPC-4203/1	7
	AR	1				POLYIMIDE FILM CU CLAD 1/2 OZ. / 1/2 OZ.	IPC-4204/11	6
	-1	ITEM NO	REFDES	DAI	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	SPECIFICATION	MATERIAL OR NOTE
QTY REQD								

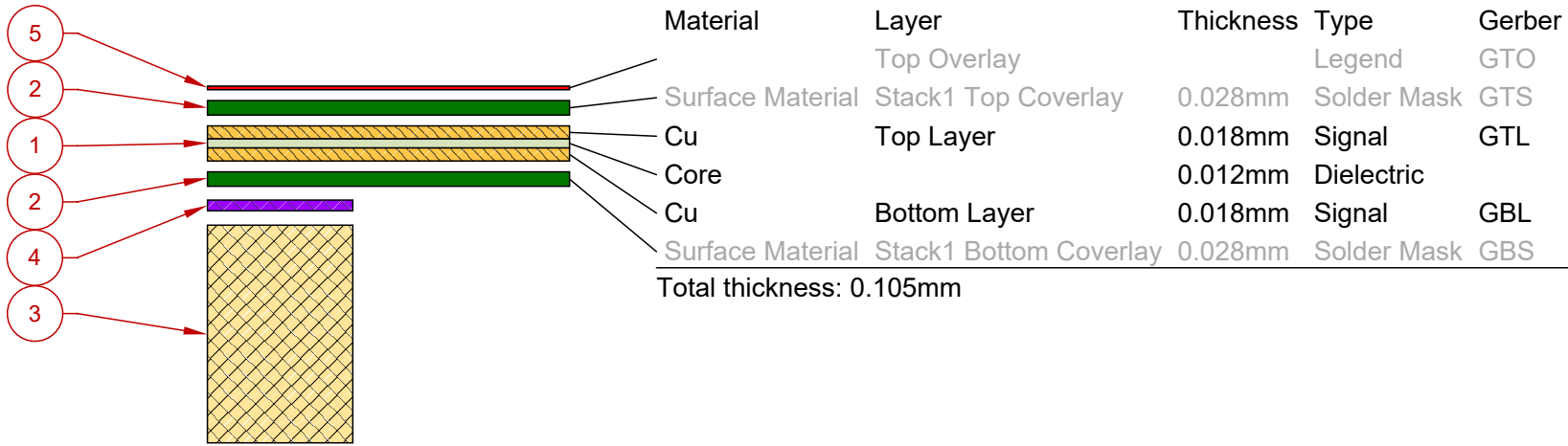
PARTS LIST									
						JET PROPULSION LABORATORY			
						CALIFORNIA INSTITUTE OF TECHNOLOGY PASADENA, CA 91109			
						TITLE PRINTED WIRING BOARD, VOICE-COIL FLEX			
						SIZE B	DAI 23835	DWG NO 20019306	REV A
						SCALE: 1/1		SHEET 1 OF 5	

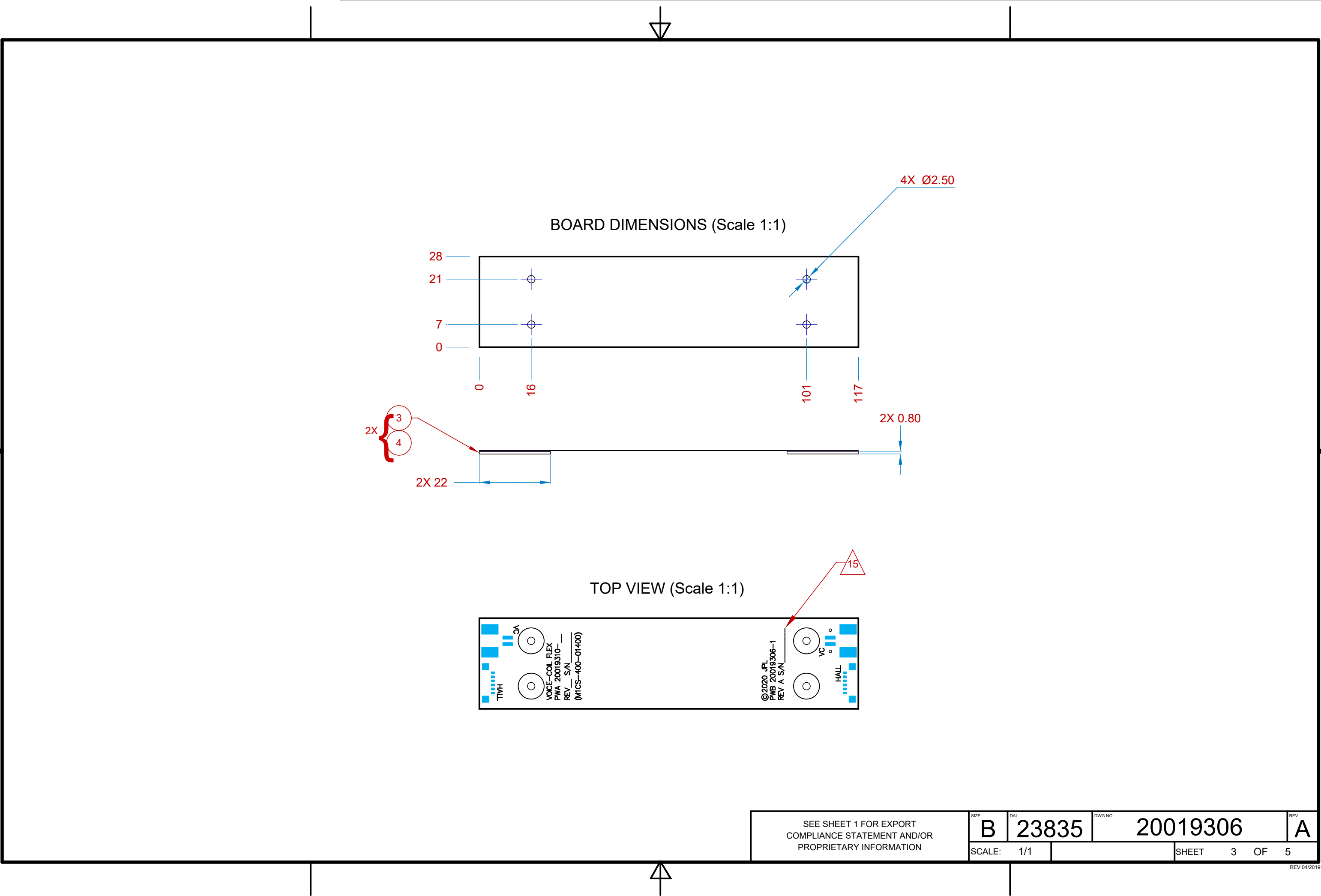
		CONTRACT NO	
		DWN	D. PALMER
		ENGR	D. PALMER
		SEE JPL DATA MANAGEMENT SYSTEM FOR APPROVAL SIGNATURES AND DATES	
20019307	TMT		
NEXT ASSEMBLY	USED ON		
APPLICATION			

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REV 04/2019

LAYER STACK LEGEND



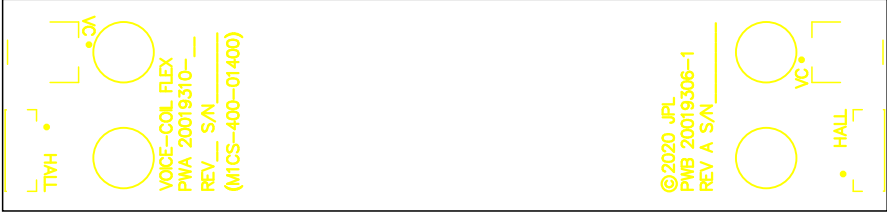


SEE SHEET 1 FOR EXPORT COMPLIANCE STATEMENT AND/OR PROPRIETARY INFORMATION	SIZE	DAI	DWG NO	REV
	B	23835	20019306	A
	SCALE: 1/1		SHEET 3 OF 5	

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Top Overlay (Scale 1:1)



Top Coverlay (Scale 1:1)



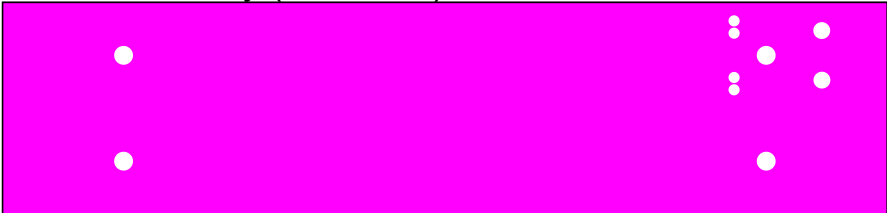
Top Layer (Scale 1:1)



Bottom Layer (Scale 1:1)



Bottom coverlay (Scale 1:1)



SEE SHEET 1 FOR EXPORT COMPLIANCE STATEMENT AND/OR PROPRIETARY INFORMATION	SIZE B	DAI 23835	DWG NO 20019306	REV A
	SCALE: 1/1	SHEET 4 OF 5		

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Drill Drawing View (Scale 1:1)



Drill Table

Symbol	Count	Hole Size	Plated
◇	4	0.711mm	Plated
○	2	1.016mm	Plated
□	4	2.500mm	Non-Plated
10 Total			

SEE SHEET 1 FOR EXPORT COMPLIANCE STATEMENT AND/OR PROPRIETARY INFORMATION	SIZE B	DAI 23835	DWG NO 20019306	REV A
	SCALE: 1/1	SHEET 5 OF 5		

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