



REVISIONS		
REV #	DESCRIPTION	DATE
REV #	CCN #	DDMMYY

FABRICATION NOTES:

- FABRICATE PCB IN ACCORDANCE WITH IPC-6012, CLASS 2; PER IPC-6011. PCB SHALL BE MANUFACTURED USING ITED 1784 OR EQUIVALENT MATERIALS.
 - LAMINATE AND PREPREG (8-STAGE) TO BE IN ACCORDANCE WITH IPC-4101/12E. (ENR-10 117)
 - COPPER FOIL TO BE IN ACCORDANCE WITH IPC-4101, UNLESS OTHERWISE SPECIFIED. ALL COPPER WEIGHT FOR INNER SIGNAL LAYERS AND INNER PLANE LAYERS TO BE 30µ (1 OZ.). FOR OUTER LAYERS AND 1/2 OZ. COPPER BEING 1.1 TO BE CONSIDERED "FINISHED". THE COPPER FOIL TOLERANCE THICKNESS SHALL BE AS PER THE DESIGN TABLE NO. 3.7 AND 3-8.
 - ALL HOLES SHALL BE LOCATED WITHIN 0.10MM DIAMETER OF TRUE POSITION. LAYERS TO LAYER REGISTRATION SHALL BE WITHIN 0.20MM.
 - HOW AND TRIST SHALL NOT EXCEED MORE THAN 0.175% OF THE DESIGN LENGTH.
 - CONDUCTOR PITCH SHALL BE NO LESS THAN 20% FROM ITS ORIGINAL DATA. ENCASE FOR MATCHING COMPLIANCE WITHIN. SHALL APPROXIMATE THE MODIFIED PITCHES AND SPACING. TRACE WIDTH SHALL BE MEASURED ON THE SURFACE IN CONTACT WITH THE LAMINATE.
 - BOARD FINISHED SHALL BE ACCORDING TO IPC-6012 CLASS 2.
 - AUTOMATED OPTICAL INSPECTION OF ALL THE LAYERS IS REQUIRED.
 - FINISH:
 - APPLY LIQUID PHOTO IMAGEABLE SOLDER MASK NOT COVERED WITH SOLDER MASK ON OTHER PLATING SHALL BE ENIG. ELECTROLESS NICKEL/IMMERSION GOLD. ELECTROLESS NICKEL SHALL BE 2-5 MICROMETER. TYPICAL IMMERSION GOLD THICKNESS SHALL BE 0.04-0.06 MICROMETER. IMMERSION GOLD SURFACE FINISH SHALL BE TYPE 1.
 - APPLY LIQUID PHOTO IMAGEABLE SOLDER MASK PER IPC-6012, CLASS 2 TO BOTH SIDES OF THE BOARD OVER BARE COPPER. FOR HOLES SHALL BE RECESSED AND COVERED WITH SOLDER MASK. ONLY SOLDER MASK FINISH SHALL BE TYPE 1. ALL OTHER SOLDER MASK FINISHES SHALL BE IN ACCORDANCE WITH IPC-6012, CLASS 2. CLIPPING OF SOLDER MASK SHALL BE OK.
 - ENCASEMENTS SHALL BE WHITE. FINISHMENT: ORGANIC NON-CONDUCTIVE EN. THERE SHALL BE NO SILKSCREEN ON ANY SOLDEABLE COMPONENT PAD. CLIPPING OF SILK SCREEN SHALL BE ALLOWED IF THE SILK SCREEN FALLS ON SOLDEABLE AREA.
 - SURFACE AND VIA HOLES FINISH SHALL NOT BE LESS THAN 20µ (0.00079"). IN CASE OF LASER VENTS, HOLE VENTS SHALL NOT BE LESS THAN 10µ (0.00039") AND DRILLED VENTS SHALL NOT BE LESS THAN 15µ (0.00059").
 - ALL HOLES SURROUNDED BY LAND $\ge 0.101^{\circ}$ SHALL BE COMPLIANCE TO IPC6012, CLASS 2.
- MANUFACTURE:
 - BOARD SHALL MEET THE REQUIREMENTS OF UL-796E WITH FLAMMABILITY RATING OF MINIMUM 94V-0. UL LOGO, MANUFACTURER'S IDENTIFICATION AND DATE CODE LETTER SHALL BE RENDERED IN SILKSCREEN.
 - 100% NET LIST ELECTRICAL VERIFICATION USING METER SUPPLIED SPEC-D-306 NET LIST FOR SPENS AND SHORTS.
 - TRACING IS ALLOWED ONLY IN THE PANEL FRAME, NOT IN THE CIRCUIT AREA.
 - TEAR STRIPS SHALL BE ADDED ON VIAS AND THROUGH HOLE PADS IN ALL INTERNAL AND OUTER LAYERS.
 - ALL UNCONNECTED VENTS SHALL BE SUPPRESSED IF REQUIRED.
 - FINISHED PCB THICKNESS SHALL BE 0.064" ± 0.002".
 - NEW TRACE REWORKING ON BOARD IS ALLOWED 0.00079".
 - DRINKING UL RESISTED E-FILE NUMBER SHALL BE PRINTED ON THE PCB SILKSCREEN.
 - VIA ON PAD SHALL BE RECESSED AND COP-PLATED.
 - FOR STACKUP DETAIL, METRAL-81-14-2-2022-(2022).PDF SHALL BE REFERRED.

DRILL CHART: TOP TO BOTTOM				
FIGURE	SIZE	TOLERANCE	PLATED	DEPTH
1	0.1	+0.002/-0.002	PLATED	0.125
2	0.2	+0.002/-0.002	PLATED	0.125
3	0.3	+0.002/-0.002	PLATED	0.125
4	0.4	+0.002/-0.002	PLATED	0.125
5	0.5	+0.002/-0.002	PLATED	0.125
6	0.6	+0.002/-0.002	PLATED	0.125
7	0.8	+0.002/-0.002	PLATED	0.125
8	1.0	+0.002/-0.002	PLATED	0.125
9	1.2	+0.002/-0.002	NON-PLATED	0.125
10	1.5	+0.002/-0.002	NON-PLATED	0.125
11	1.8	+0.002/-0.002	NON-PLATED	0.125
12	2.0	+0.002/-0.002	NON-PLATED	0.125
13	2.5	+0.002/-0.002	NON-PLATED	0.125
14	3.0	+0.002/-0.002	NON-PLATED	0.125
15	3.5	+0.002/-0.002	NON-PLATED	0.125
16	4.0	+0.002/-0.002	NON-PLATED	0.125
17	4.5	+0.002/-0.002	NON-PLATED	0.125
18	5.0	+0.002/-0.002	NON-PLATED	0.125
19	6.0	+0.002/-0.002	NON-PLATED	0.125
20	8.0	+0.002/-0.002	NON-PLATED	0.125
21	10.0	+0.002/-0.002	NON-PLATED	0.125
22	12.0	+0.002/-0.002	NON-PLATED	0.125
23	15.0	+0.002/-0.002	NON-PLATED	0.125
24	18.0	+0.002/-0.002	NON-PLATED	0.125
25	20.0	+0.002/-0.002	NON-PLATED	0.125
26	25.0	+0.002/-0.002	NON-PLATED	0.125
27	30.0	+0.002/-0.002	NON-PLATED	0.125
28	35.0	+0.002/-0.002	NON-PLATED	0.125
29	40.0	+0.002/-0.002	NON-PLATED	0.125
30	45.0	+0.002/-0.002	NON-PLATED	0.125
31	50.0	+0.002/-0.002	NON-PLATED	0.125
32	60.0	+0.002/-0.002	NON-PLATED	0.125
33	75.0	+0.002/-0.002	NON-PLATED	0.125
34	90.0	+0.002/-0.002	NON-PLATED	0.125
35	100.0	+0.002/-0.002	NON-PLATED	0.125

IMPEDANCE SPECIFICATIONS

SIG#	TYPE	LAYER	TRACEWIDTH(MILs)	SPACING(MILs)	IMPEDANCE(OHMS)	REF LAYER
01	DIFFERENTIAL STRIPLINE	L1, L4	3.0	7.5	100	0.2/0.4/1.0/1.7
02	DIFFERENTIAL STRIPLINE	L1, L4	4.0	10.0	100	0.2/0.4/1.0/1.7
03	DIFFERENTIAL STRIPLINE	L1, L4	5.0	12.5	100	0.2/0.4/1.0/1.7
04	DIFFERENTIAL STRIPLINE	L1, L4	6.0	15.0	100	0.2/0.4/1.0/1.7
05	DIFFERENTIAL STRIPLINE	L1, L4	7.5	18.75	100	0.2/0.4/1.0/1.7
06	DIFFERENTIAL STRIPLINE	L1, L4	9.0	22.5	100	0.2/0.4/1.0/1.7
07	DIFFERENTIAL STRIPLINE	L1, L4	10.0	25.0	100	0.2/0.4/1.0/1.7
08	DIFFERENTIAL STRIPLINE	L1, L4	12.0	30.0	100	0.2/0.4/1.0/1.7
09	DIFFERENTIAL STRIPLINE	L1, L4	15.0	37.5	100	0.2/0.4/1.0/1.7
10	DIFFERENTIAL STRIPLINE	L1, L4	18.0	45.0	100	0.2/0.4/1.0/1.7
11	DIFFERENTIAL STRIPLINE	L1, L4	20.0	50.0	100	0.2/0.4/1.0/1.7
12	DIFFERENTIAL STRIPLINE	L1, L4	24.0	60.0	100	0.2/0.4/1.0/1.7
13	DIFFERENTIAL STRIPLINE	L1, L4	30.0	75.0	100	0.2/0.4/1.0/1.7
14	DIFFERENTIAL STRIPLINE	L1, L4	36.0	90.0	100	0.2/0.4/1.0/1.7
15	DIFFERENTIAL STRIPLINE	L1, L4	45.0	112.5	100	0.2/0.4/1.0/1.7
16	DIFFERENTIAL STRIPLINE	L1, L4	54.0	135.0	100	0.2/0.4/1.0/1.7
17	DIFFERENTIAL STRIPLINE	L1, L4	60.0	150.0	100	0.2/0.4/1.0/1.7
18	DIFFERENTIAL STRIPLINE	L1, L4	72.0	180.0	100	0.2/0.4/1.0/1.7
19	DIFFERENTIAL STRIPLINE	L1, L4	90.0	225.0	100	0.2/0.4/1.0/1.7
20	DIFFERENTIAL STRIPLINE	L1, L4	108.0	270.0	100	0.2/0.4/1.0/1.7

LAYER STACKUP

LAYER NAME	FINISHED Cu	X-SECTION	DIELECTRIC THICKNESS
PRIMARY SIDE SILKSCREEN	—	—	—
PRIMARY SIDE SOLENERMARK	—	—	—
L01 PRIMARY SIDE	1.0	—	0.0034
L02 GROUND PLANE-1	1.0	—	0.004
L03 INNER SIGNAL-1	1.0	—	0.0191
L04 POWER PLANE-1	1.0	—	0.004
L05 INNER SIGNAL-2	1.0	—	0.0191
L06 POWER PLANE-2	1.0	—	0.004
L07 GROUND PLANE-2	1.0	—	0.0034
L08 SECONDARY SIDE	1.0	—	0.0034
SECONDARY SIDE SOLENERMARK	—	—	—
SECONDARY SIDE SILKSCREEN	—	—	—

SIGNATURES	DATE	TEXAS INSTRUMENTS	PROJ12462
LAYOUT BY RK	170223		
REVIEWED BY ZA	170223		
APPROVED BY RC	170223		
AM2x LP EVM BOARD			
SCALE: NONE		REV E2	SHEET 1 OF 15