

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ORIGINAL RELEASE	08-27-20	V. R.
	B	LAY UPDATES AND PROD RELEASE	02-09-21	V. R.

NOTES (UNLESS OTHERWISE SPECIFIED):

1. THIS DRAWING SPECIFIES THE REQUIREMENTS FOR A PRINTED WIRING BOARD IN ACCORDANCE WITH SPECIFICATION IPC-A-600 CLASS 2 (LATEST REVISION).

2. THE PWB MUST BE LEAD FREE ASSEMBLY PROCESS COMPATIBLE AND MUST BE ABLE TO HANDLE A MINIMUM OF 5 CYCLES AT 260 DEGREES CELSIUS FOR 10 SECONDS.

3. BASE MATERIAL - LAMINATE AND PREPREG SHALL MEET IPC-4101B-26, 83 or 98
T_g - MUST BE GREATER THAN OR EQUAL TO 150 DEGREES CELSIUS.
T_d - MUST BE GREATER THAN OR EQUAL TO 330 DEGREES CELSIUS.

4. COPPER FOIL WEIGHT - SEE STACKUP DETAIL 'A'

5. CHARACTERISTIC IMPEDANCE - NOT APPLICABLE

6. MINIMUM CONDUCTIVE WIDTH/SPACING TO BE .008"/.005"

7. PLATING FINISH - BOTH SIDES ENIG (ELECTROLESS NICKEL IMMERSION GOLD):
.05080-.232 MICRON (2-8 MICROINCH) OF GOLD OVER
2.540-6.350 MICRON (100-250 MICROINCH) OF NICKEL.

8. ALL THROUGH HOLE VIAS MAY BE PLATED SHUT.

9. SOLDERMASK - ORANGE COLOR (TAIYO OR EQUIVALENT), BOTH SIDES.
MODIFICATION OF SOLDERMASK IS NOT ALLOWED WITHOUT WRITTEN PERMISSION FROM NXP.

10. SILKSCREEN - WHITE EPOXY INK, BOTH SIDES. NO SILK ON PADS.

11. ELECTRICAL TEST - 100% IPCD356.PCB FABRICATOR TO PERFORM A NET COMPARE AGAINST THE IPCD356 NETLIST PROVIDED BY NXP.

12. PRINTED WIRING BOARD IS TO BE INDIVIDUALLY BAGGED.

13. DRC'S MUST BE RUN ON THE GERBER BEFORE BUILDING BOARDS, UNLESS PRIOR APPROVAL IS GIVEN IN WRITING BY FREESCALE.

14. TEARDROPS MAYBE ADDED AT THE FAB HOUSE TO ALL SIGNAL LAYERS.

15. TWO SOLDER SAMPLES TO BE PROVIDED.

16. BASIC GRID INCREMENT AT 1:1 IS .0001.

17. SUPPLIER MARKINGS - ON SOLDER SIDE ONLY, WHERE SHOWN.
- MUST BE UL RECOGNIZED AND MUST HAVE AN ID THAT CONFORMS TO UL94V-0

18. THE PWB WILL BE MARKED AS LEAD FREE BY USE OF AN INK STAMP (Pb)

19. THE PWB WILL BE MARKED AS LEAD FREE PROCESS COMPATIBLE BY USE OF AN INK STAMP (260°C)

20. ALL PLATED AND NON-PLATED THROUGH HOLES ARE TO BE DRILLED AT PRIMARY DRILL STEP.
ALL HOLE LOCATION TOLERANCES ARE TO BE $\pm .002$ IN REFERENCE TO THE PRIMARY DATUM.

21. FINISHED PCB MUST BE PANELIZED FOR ASSEMBLY ACCORDING TO CONTRACT MANUFACTURERS REQUIREMENTS. THE ADDITION OF RAILS AND .125"NON-PLATED TOOLING HOLES ARE AT THE DISCRETION OF CONTRACT MANUFACTURER. PANELIZATION MUST BE APPROVED BY CONTRACT MANUFACTURER.

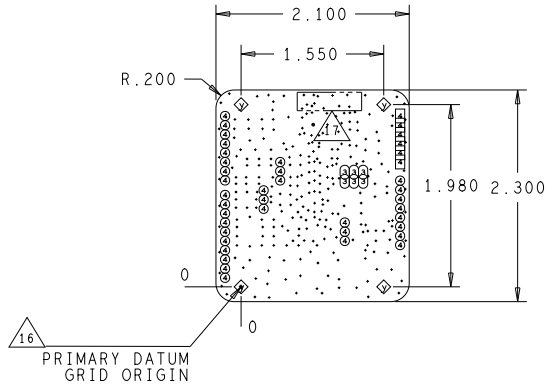
22. INTENTIONAL 9 SHORTS AT:

Location	RefDes	Net 1	Net 2
(- 42.50 598.00)	SH7	N16660985	MISO
(- 42.50 498.00)	SH8	N16661025	SCLK
(- 42.50 698.00)	SH6	N16660945	MOSI/WAKE_UP
(- 42.50 998.00)	SH4	N16670698	PS_EN0
(- 42.50 898.00)	SH5	N16670702	PS_EN1
(- 42.50 1156.01)	SH3	N16669684	INT1
(- 42.50 1356.01)	SH2	N16670795	INT0
(- 42.50 1656.01)	SH1	N16648755	SS_B
(1596.50 553.74)	SH9	VDD	N16645673

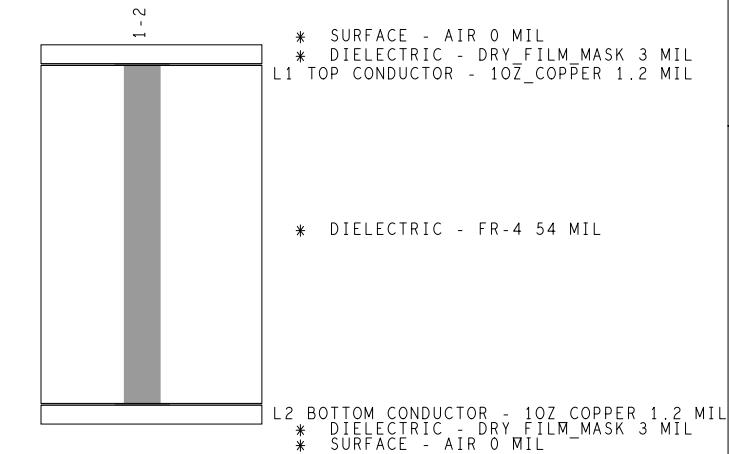
23. THIS BOARD USES VIA-IN-PAD: SEE FAB_VIAFILL.

- A. ALL VIAS USING X.1 DRILL SIZES ARE TO BE FILLED WITH NON-CONDUCTIVE VIA FILL. LACKWERKE-PETERS PP2795 OR EQUIVALENT AND MADE PLANAR TO THE PADS.

- B.OVERPLATE THE FILLED VIA AND APPLY FINISH METAL TREATMENT.
C.DIMPLE OR PROTRUSION ON VIA-IN-PAD MUST BE NO GREATER THAN .001".



DRILL CHART: TOP to BOTTOM					
ALL UNITS ARE IN MILS					
FIGURE	FINISHED SIZE	TOLERANCE DRILL	PLATED	QTY	
+	8.0	+0.0/-8.0	PLATED	270	
⊖	8.1	+0.0/-8.1	PLATED	1	
⊖	39.0	+3.0/-3.0	PLATED	6	
⊖	40.0	+3.0/-3.0	PLATED	35	
⊖	41.0	+3.0/-3.0	PLATED	6	
⊖	125.0	+2.0/-2.0	NON-PLATED	4	



DESIGN CROSS SECTION CHART
TOTAL THICKNESS 62.4 MIL

DETAIL 
LAYER STACKUP
SCALE NONE

PART NO. <div style="border: 1px solid black; padding: 5px; text-align: center;">170-47506</div>		<div style="text-align: center; font-size: 24px; font-weight: bold;">NXP SEMICONDUCTORS</div> <div style="text-align: center; margin-top: 10px;">6501 WILLIAM CANNON DRIVE WEST AUSTIN, TEXAS 78735 USA</div>			
THIS DOCUMENT CONTAINS INFORMATION PROPRIETARY TO NXP AND SHALL NOT BE USED FOR ENGINEERING DESIGN PROCUREMENT OR MANUFACTURE IN WHOLE OR IN PART WITHOUT THE CONSENT OF NXP.					
COMPANY TYPE ----- COMPANY PUBLIC <input checked="" type="checkbox"/> COMPANY INTERNAL ----- COMPANY CONFIDENTIAL		APPROVALS <div style="display: flex; justify-content: space-between;"> <div> DRAIN GABRIEL C. CHECKED VLADIMIR R. DESIGN ENGINEER EDOUARD G. </div> <div> DATE 02-09-21 02-09-21 02-09-21 </div> </div>		TITLE: <div style="text-align: center; font-size: 24px; font-weight: bold;">PRINTED WIRING BOARD</div> <div style="text-align: center; font-size: 24px; font-weight: bold;">FRDMSTBA-NBP8XD</div>	
ALL PARTS, MATERIALS AND FINISHED ASSEMBLY SHALL NOT BE USED IN THE ASSEMBLY OF THE PRODUCT UNLESS THE DIMENSIONS ARE:		TOLERANCES ARE: DECIMALS ANGLES .XX .01 .0-30" .XXX .005		SIZE CAD FILE NAME DWG. NO. REV <div style="display: flex; justify-content: space-between;"> <div> D LAY-47506 SCALE 1 / 1 </div> <div> FAB-47506 DO NOT SCALE DRAWING </div> <div> B SHEET 1 OF 2 </div> </div>	
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NOTES (UNLESS OTHERWISE SPECIFIED):

170-47506

COMPANY PUBLIC

☒ COMPANY INTERNAL

COMPANY CONFIDENTIAL

ALL PARTS, MATERIALS AND FINISHED ASSEMBLY SHALL MEET THE R&H COMMISSION DELEGATED DIRECTIVE (EU) 2015/493 OF 31 MARCH 2015 AMENDING ANNEX II TO DIRECTIVE 2011/65/EU. A CERTIFICATE OF COMPLIANCE IS REQUIRED UPON REQUEST.

ALL PARTS, MATERIALS AND FINISHED ASSEMBLY SHALL NOT CONTAIN ANY OF THE SUBSTANCES OF VERY HIGH CONCERN (SVHC) ABOVE THE THRESHOLD VALUE PER THE CURRENT ECHA LIST OF SVHC'S AND WITHIN ANNEX II OF DIRECTIVE 2011/65/EU. A CERTIFICATE OF COMPLIANCE IS REQUIRED UPON REQUEST.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCES ARE:

DECIMALS ANGLES

.XX .01 .0-90°

.XXX .005

✓ RMS ALL MACHINED SURFACES

BREAK ALL SHARP EDGES AND CORNERS. REMOVE BURRS.

UNDERLINED DIM. NOT TO SCALE.

THIRD ANGLE ORTHOGRAPHIC PROJECTION IS USED.

APPROVALS

DATE

DRAWN

GABRIEL C.

02-09-21

CHECKED

VLADIMIR R.

02-09-21

DESIGN ENGINEER

EDOUARD G.

02-09-21

TITLE

6501 WILLIAM CANNON DRIVE WEST AUSTIN, TEXAS 78735 USA

PRINTED WIRING BOARD

FRDMSTBA-NBP8XD

SIZE

CAD FILE NAME

DWG. NO.

REV

1/1

DO NOT SCALE DRAWING

SHEET 1 OF 2

REVISIONS				
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	A	ORIGINAL RELEASE	08-27-20	V. R.
	B	LAY UPDATES AND PROD RELEASE	02-09-21	V. R.

