REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ORIGINAL RELEASE	11-22-17	J.M.R.

NOTES (UNLESS OTHERWISE SPECIFIED):

1. THIS DRAWING SPECIFIES THE REQUIREMENTS FOR A PRINTED WIRING BOARD IN ACCORDANCE. WITH SPECIFICATION IPC-6012 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-4101D-26, 83 or 98
   Tg - MUST BE GREATER THAN OR EQUAL TO 150 DEGREES CELSIUS.
   Td - MUST BE GREATER THAN OR EQUAL TO 330 DEGREES CELSIUS.

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

5. CHARACTERISTIC IMPEDANCE - N/A

6. MINIMUM CONDUCTIVE WIDTH/SPACING TO BE .004"/.007"

7. PLATING FINISH: A. BOTH SIDES ENIG: TO MEET THE REQUIREMENTS OF IPC-4552 (LATEST REVISION).
   A. BOTH SIDES GOLD: 2-15 MICROINCHES OF GOLD OVER 100-350 MICROINCHES NICKEL.

△8 ALL THROUGH HOLE VIAS MAY BE PLATED SHUT.

9. SOLDERMASK - TO MEET THE REQUIREMENTS OF IPC-SM-840E (OR LATEST REVISION).
   GREEN COLOR, BOTH SIDES. MODIFICATION OF SOLDERMASK IS NOT ALLOWED WITHOUT WRITTEN PERMISSION FROM NXP.
   TYPE: LPI OR EQUIVALENT.
   A. LOCATION = +/-.002" OF PLATED PADS.
   B. DIAMETER OR SIZE = +/-.002 OF ORIGINAL DATA

10. SILKSCREEN - WHITE EPOXY OR ACRYLIC INK, BOTH SIDES. NO SILKSCREEN ON ANY EXPOSED COPPER FEATURE. UNLESS PRIOR APPROVAL IS GIVEN IN WRITING BY NXP.

11. ELECTRICAL TEST - 100% IPCD356.

12. PRINTED WIRING BOARD IS TO BE INDIVIDUALLY BAGGED.

13. DFM CHECK MUST BE RUN ON THE GERBER BEFORE BUILDING BOARDS.

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

15. TWO SOLDER SAMPLES TO BE PROVIDED.

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

17. THE PWB WILL BE MARKED AS LEAD FREE BY USE OF AN INK STAMP (P6)

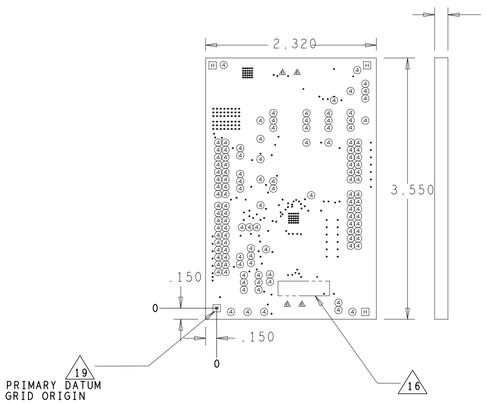
18. THE PWB WILL BE MARKED AS LEAD FREE PROCESS COMPATIBLE BY USE OF AN INK STAMP (260°C)

△19 ALL PLATED AND NON-PLATED THROUGH HOLES ARE TO BE DRILLED AT PRIMARY DRILL STEP. ALL HOLE LOCATION TOLERANCES ARE TO BE +/-.002 IN REFERENCE TO THE PRIMARY DATUM UNLESS OTHERWISE SPECIFIED.

20. 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.

△21 THIS BOARD USES VIA-IN-PAD:
   A. VIA-IN-PAD 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.

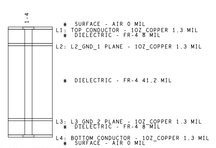
22. THE MANUFACTURE HAS THE OPTION TO ADD COPPER THIEVING ON OUTER AND INNER LAYERS, KEEP A MINIMUM DISTANCE OF .100" FROM ANY BOARD FEATURES.



VIEW FROM PRIMARY SIDE

DRILL CHART: TOP to BOTTOM				
ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
△8 ⓑ	8.0	+0.0/-8.0	PLATED	11
△8 ⓒ	10.0	+0.0/-10.0	PLATED	110
△21 ⓕ	10.1	+0.0/-10.0	PLATED	98
ⓓ	40.0	+3.0/-3.0	PLATED	122
ⓐ	63.0	+3.0/-3.0	PLATED	4
ⓗ	94.0	+2.0/-2.0	NON-PLATED	4

DETAIL A



DESIGN CROSS SECTION CHART
TOTAL THICKNESS 62.4 MIL

___ COMPANY PUBLIC
X COMPANY INTERNAL
___ COMPANY CONFIDENTIAL

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
DECIMALS ANGLES
.XX .01 .0-30'
.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.

PART NO. 170-30177

APPROVALS	DATE
DRAWN nPRO - B20387	11-22-17
CHECKED Jorge Manuel R.	11-22-17
DESIGN ENGINEER nPRO - B20387	11-22-17

NXP SEMICONDUCTORS

6501 WILLIAM CANNON DRIVE WEST AUSTIN, TEXAS 78735 USA

TITLE: PRINTED WIRING BOARD
FRDM-HB2002ESEVM

SIZE	CAD FILE NAME	DWG. NO.	REV
D	LAY-30177	FAB-30177	A

SCALE DO NOT SCALE DRAWING SHEET OF