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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  
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 - SEE DETAIL 'B'

6. MINIMUM CONDUCTIVE WIDTH/SPACING TO BE .0045"/.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 - RED COLOR BOTH SIDES.  
MODIFICATION OF SOLDERMASK IS NOT ALLOWED WITHOUT WRITTEN PERMISSION FROM FREESCALE.

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

11. ELECTRICAL TEST - 100% IPCD356.

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. 2 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 +/- .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 5 SHORTS AT:

Location	RefDes	Net 1	Net 2
(-7.00 854.00)	J17	P3V3	& P3V3_VREG
(-7.00 1070.00)	J10	P3V3_SDA	& SDA_VOUT33
(679.00 1014.50)	SH1	V_TGTMCU	& VDD
(680.00 1310.00)	J7	SDA_RST_TGTMCU_J_B	& SDA_RST_TGTMCU_B
(1800.00 805.00)	J13	PTC4/SWD_CLK	& SWD_CLK_TGTMCU

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ORIGINAL RELEASE	08-06-18	X.X.

DRILL CHART: TOP to BOTTOM

ALL UNITS ARE IN MILS

FIGURE	SIZE	TOLERANCE	PLATED	QTY
1	10.0	+0.0/-10.0	PLATED	432
2	20.0	+2.0/-2.0	PLATED	6
3	28.0	+2.0/-2.0	PLATED	20
4	40.0	+2.0/-2.0	PLATED	4
5	40.0	+3.0/-3.0	PLATED	81
6	41.0	+3.0/-3.0	PLATED	12
7	63.0	+2.0/-2.0	NON-PLATED	2
8	125.0	+3.0/-3.0	NON-PLATED	4
9	91.0x32.0	+3.0/-3.0	PLATED	1
10	111.0x32.0	+3.0/-3.0	PLATED	2

DETAIL B

IMPEDANCE REQUIREMENTS

IMPEDANCE TOLERANCE IS 10%

Layers	Single Ended		Differential		
	Trace Width (Mils)	Impedance (Ohms)	Trace Width (Mils)	Trace Spacing (Mils)	Impedance (Ohms)
L1_PS	5.00	50	4.50	6.30	90
L3_INT-1	5.50	50	4.70	7.00	90

PRIMARY DATUM

GRID ORIGIN

DETAIL A

LAYER STACKUP

SCALE: NONE

LAYER 1	TOP SIDE	1 oz.
LAYER 2	GROUND PLANE	1 oz.
LAYER 3	INTERNAL 1	1 oz.
LAYER 4	BOTTOM SIDE	1 oz.

FINISHED Cu WEIGHT

L1 SURFACE - AIR 0 MIL
L1 DIELECTRIC - FR-4 48 MIL
L2 SURFACE - AIR 0 MIL
L2 DIELECTRIC - FR-4 48 MIL
L3 SURFACE - AIR 0 MIL
L3 DIELECTRIC - FR-4 48 MIL
L4 SURFACE - AIR 0 MIL
L4 DIELECTRIC - FR-4 48 MIL

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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

CHECKED

DESIGN ENGINEER

170-34744

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6501 WILLIAM CANNON DRIVE WEST AUSTIN, TEXAS 78735 USA

TITLE

PRINTED WIRING BOARD

FRDM-KE16Z

SIZE

CAD FILE NAME

DWG. NO.

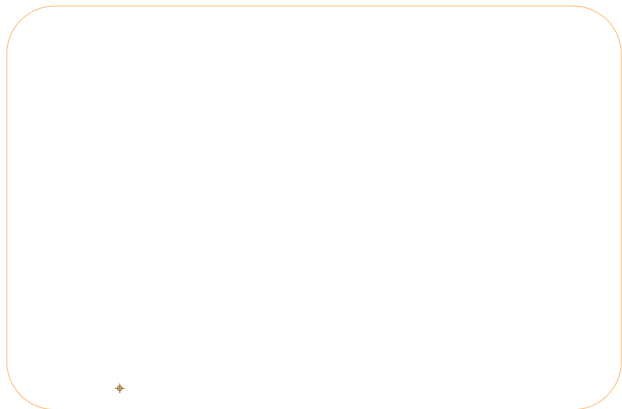
REV

SCALE

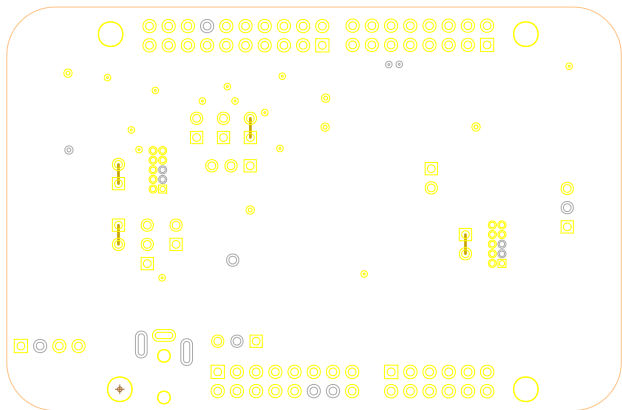
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DO NOT SCALE DRAWING

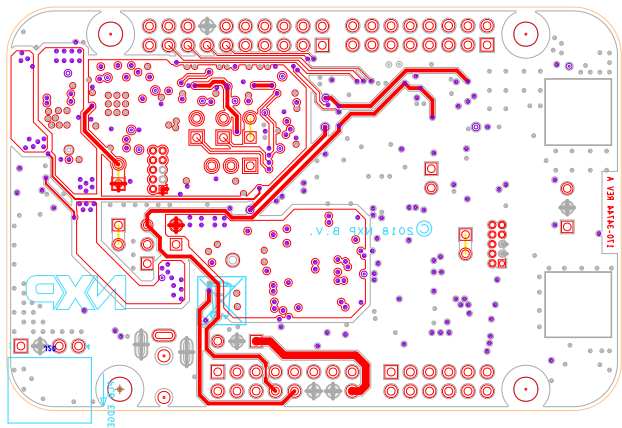
SHEET 1 OF 1



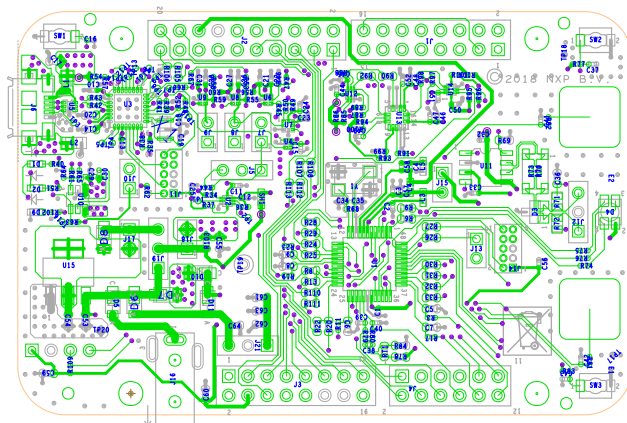
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SHEET 9 OF 10	FILM SECONDARY PASTEMAS	DATE 08-06-18	NUMBER 170-34744 REV A



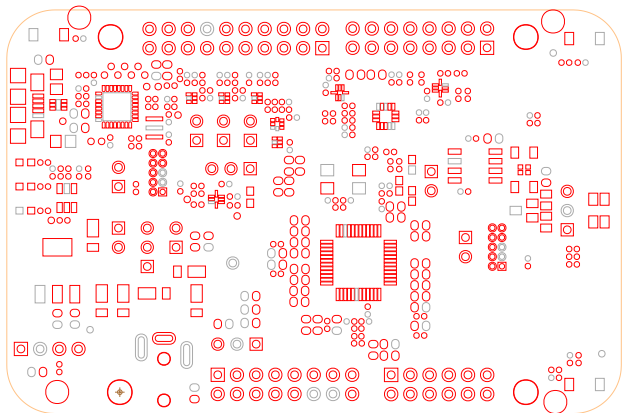
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SHEET 8 OF 10 SECONDARY SOLDERMASK	FILM	DATE 08-06-18	NUMBER 170-34744 REV A



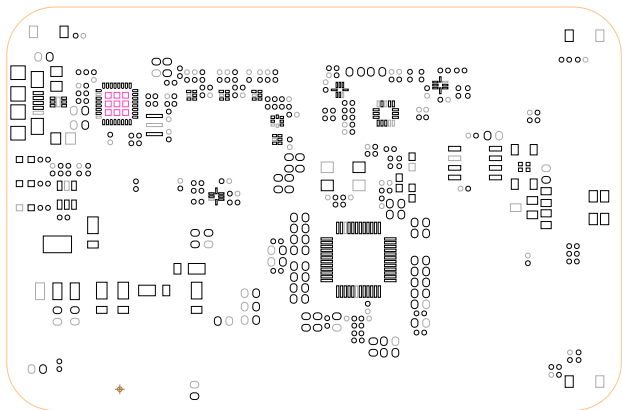
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SHEET 7 OF 10	FILM SECONDARY SIDE	DATE 08-06-18	NUMBER 170-34744 REV A



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SHEET 4 OF 10		FILM PRIMARY SIDE	
DATE 08-06-18		NUMBER 170-34744	
SHEET 4 OF 10		REV A	



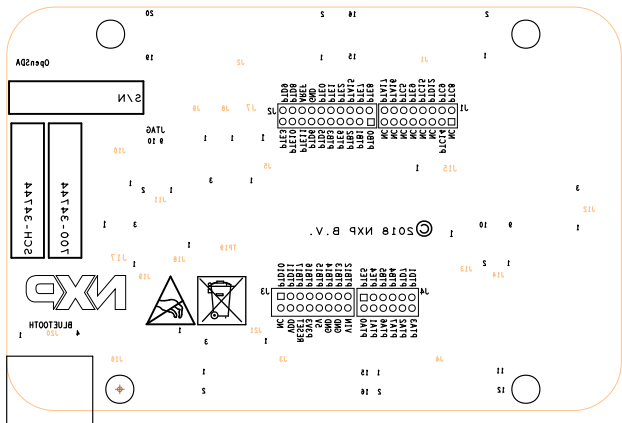
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SHEET 3 OF 10	FILM PRIMARY SOLDERMASK	DATE 08-06-18	NUMBER 170-34744 REV A



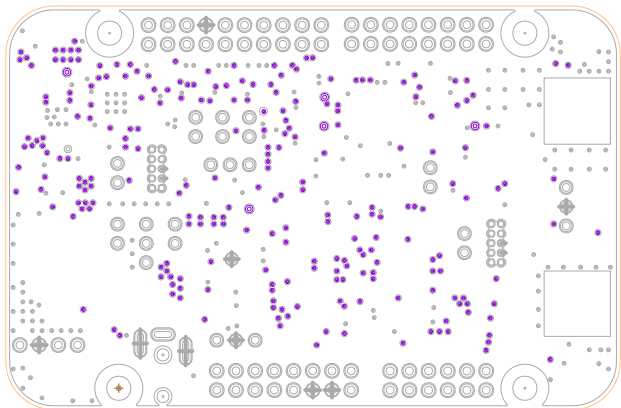
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SHEET 2 OF 10	FILM PASTEMASK TOP	DATE 08-06-18	NUMBER 170-34744 REV A

REV A

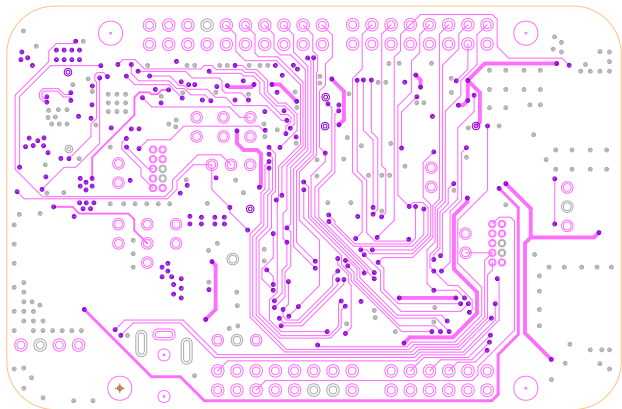




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SHEET 10 OF 10	FILM SECONDARY SILKSCREEN	DATE 08-06-18	NUMBER 170-34744 REV A



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SHEET 5 OF 10	FILM L2 GND	DATE 08-06-18	NUMBER 170-34744 REV A



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SHEET 6 OF 10 L3_INT_1	FILM	DATE 08-06-18	NUMBER 170-34744 REV A