

87654321

REVDESCRIPTIONAPPROVEDDATE

NOTES:

UNLESS OTHERWISE SPECIFIED

1. DIMENSIONS ARE IN INCHES (EXCEPT WHERE NOTED).

MATERIAL: [USE CHECKED ITEMS FOR MATERIAL]

2. BOARD MATERIAL:

(X) FR4 (RHS COMPLIANT) OR EQUIVALENT

( ) ISOLA-FR4DRHR

( ) NELCO-4000-13 OR EQUIVALENT

( ) 370HR (RHS COMPLIANT) OR EQUIVALENT

( ) ROGERS 4350B/FR40BHR

( ) ROGERS 4003C/FR40BHR

( ) OTHER -----

3. THE PCB SHALL BE FABRICATED TO IPC-6012, TYPE X, CLASS 2.

WORKMANSHIP SHALL CONFORM TO IPC-A-600, CLASS 2, CURRENT REVISIONS.

4. BOARD MATERIAL & CONSTRUCTION SHALL MEET THE REQUIREMENTS OF UL796 WITH FLAMMABILITY RATING OF 94V-0.

5. OVERALL BOARD THICKNESS REFER TO LAMINATION DIAGRAM. TOLERANCE APPLIES AFTER ALL LAMINATION AND PLATING PROCESSES. IT IS TO BE MEASURED FROM TOP PCB METAL TO BOTTOM PCB METAL UNLESS OTHERWISE SPECIFIED.

6. BOW & TWIST NOT TO EXCEED 0.005 IN. (0.75%) PER LINEAR INCH. BOW & TWIST SHOULD BE MEASURED PER IPC-TM-650, METHOD 2.4.22.

TOOLING: [USE CHECKED ITEMS FOR TOOLING]

7. PHOTO ETCH CIRCUITRY PER ENCLOSED GERBER RS274X OR ODB++ FORMAT FILE. DRILL LOCATION AND SIZE CONTROLLED BY EXCELLON CNC DRILL FILE.

8. IF STATED IN THE LAMINATION DIAGRAM, THE DIELECTRIC THICKNESS OF ANY CONTROLLED IMPEDANCE LAYER IS FOR REFERENCE ONLY. FINAL ACCEPTANCE SHALL BE DETERMINED BY THESE LAYERS HAVING A CHARACTERISTIC IMPEDANCE OF +/-10% OHMS AS STATED IN THE LAMINATION DIAGRAM. THE VENDOR CAN MAKE ADJUSTMENTS AS LONG AS THE STATED IMPEDANCE AND OVERALL BOARD THICKNESS IS MAINTAINED. ANY ADJUSTMENT MADE TO TRACE WIDTH OR SPACING MUST HAVE PRIOR WRITTEN APPROVAL FROM MAXIM.

9. ALL TRACES FILLETED OPTION TO ENHANCE RELIABILITY AT PAD JUNCTIONS WHERE SPACING PERMITS UNLESS OTHERWISE SPECIFIED:

( ) FILLETED

(X) NOT FILLETED

10. LAYER TO LAYER REGISTRATIONS SHALL BE WITHIN .003 INCHES. LEGEND TO LEGEND +/- 0.007 INCHES

FINISH: [USE CHECKED ITEMS FOR PLATING]

11. PLATING SPECIFICATION:

(X) STARTING COPPER WEIGHT FOR OUTER LAYERS TO BE (1 OZ), THE FINISH COPPER WEIGHT IS (1 OZ). FOR OUTER LAYERS WHERE SPACING PREVENTS THE USE OF (1 OZ) AS A STARTING WEIGHT THE STARTING WEIGHT CAN BE (0.5 OZ) AS LONG AS THE FINISH COPPER WEIGHT IS (1 OZ) UNLESS OTHERWISE SPECIFIED.

( ) STARTING COPPER WEIGHT FOR OUTER LAYERS TO BE (1 OZ), THE FINISH COPPER WEIGHT IS (2 OZ). FOR OUTER LAYERS WHERE SPACING PREVENTS THE USE OF (1 OZ) AS A STARTING WEIGHT, THE STARTING WEIGHT CAN BE (0.5 OZ) AS LONG AS THE FINISH COPPER WEIGHT IS (2 OZ). UNLESS OTHERWISE SPECIFIED.

( ) STARTING COPPER WEIGHT FOR OUTER LAYERS TO BE (2 OZ), THE FINISH COPPER WEIGHT IS (2 OZ) MINIMUM. FOR OUTER LAYERS WHERE SPACING PREVENTS THE USE OF (2 OZ) AS A STARTING WEIGHT, THE STARTING WEIGHT CAN BE (<2 OZ) AS LONG AS THE FINISH COPPER WEIGHT IS (2 OZ). UNLESS OTHERWISE SPECIFIED.

( ) OTHER -----

12. CHECK ALL THAT APPLY

( ) ELECTRODEPOSITED HARD GOLD PLATE, TYPE 1 (99.7% MIN GOLD), GRADE C (KNOCK HARDNESS (30-200), CLASS 1 (50-100 MICRO INCHES THICK) IN ACCORDANCE WITH MIL-G-45204C. GENERAL SURFACING REQUIREMENTS MUST MEET ANSI/IPC-A-600(CURRENT REV) SECTION 4.0, CLASS 3 (50-100 MICROINCHES THICK) OVER ELECTRODEPOSITED NICKEL PLATE IN ACCORDANCE WITH ANSI/IPC-A-600D, SECTION 4.0, CLASS 3 (200-600 MICROINCHES THICK).

( ) FINISH CONDUCTOR SURFACES: IMMERSION GOLD, 3-8 MICRO INCHES OVER 100 MICRO INCHES MINIMUM OF ELECTROLESS NICKEL.

( ) FINISH CONDUCTOR SURFACES: IMMERSION GOLD, 2-5 MICRO INCHES OVER 118-236 MICRO INCHES MINIMUM OF ELECTROLESS NICKEL.

( ) FINGERS TO BE GOLD PLATED.

(X) LEAD FREE AND RHS COMPLIANT PLATING.

( ) OTHER -----

13. DRILL SIZES ARE FINISHED HOLE SIZES. ALL HOLES SHALL BE LOCATED WITHIN .005 DTP. MINIMUM BARREL PLATING OF .001 IN. PLATED HOLES SHALL NOT BE ROUGH OR IRREGULAR SO AS TO HINDER PROPER SOLDER WICKING.

14. CHECK ALL THAT APPLY

(X) GREEN SOLDERMASK OVER BARE COPPER/BARE GOLD (BOTH SIDES) WITH LIQUID PHOTO IMAGEABLE INK (LPI) PER ARTWORK.

( ) GREEN TAIYO PSR-4000

( ) OTHER -----

15. CHECK ALL THAT APPLY

(X) APPLY SILKSCREEN USING A NON-CONDUCTIVE, WHITE EPOXY BASED INK PER ARTWORK.

( ) OTHER -----

16. VENDOR LOGO & DATE CODE REQUIRED IN [INK ON BOTTOM SIDE ONLY. DATE CODE FORMAT MUST BE YYYY ONLY

TESTING:

17. FINAL ELECTRICAL TEST TO BE PERFORMED USING PROVIDED IPC-D-356A NETLIST OR ODB++ FORMAT FILE. (REQUIRED UNLESS OTHERWISE SPECIFIED IN QUOTE)

THE PCB SHALL HAVE A VERIFICATION STAMP.

18. A TIME DOMAIN REFLECTOMETER REPORT FOR EACH IMPEDANCE CONTROLLED LAYER AND A CERTIFICATE OF COMPLIANCE SHALL BE PROVIDED BY VENDOR AT TIME OF SHIPMENT.

MISCELLANEOUS:

19. IF PRESENT, ALL BLIND/BURIED VIAS WITH AN ASPECT RATIO <1:1 TO BE PLATED SHUT WITH COPPER WHEN USED AS VIA-IN PAD OR AS A STACKED VIA. BLIND/BURIED VIAS WITH AN ASPECT RATIO >1:1 TO BE FILLED WITH NON-CONDUCTIVE EPOXY, UNLESS OTHERWISE SPECIFIED.

20. FOR ALL DRILL INFORMATION REFER TO DRILL CHART.

( ) NON-CONDUCTIVE EPOXY, FILL AND CAP ALL 0.0000 INCH DRILLED VIAS.

( ) SILVER, FILL AND CAP ALL 0.0000 INCH DRILLED VIAS.

21. FINISHED SURFACE CONTACTS AND FILLED VIAS TO BE FREE OF ANY PITS, SCRATCHES PROBE MARKS OR OTHER DEFORMITIES THAT COULD EFFECT THE APPEARANCE AND PERFORMANCE OF THE CONTACT SURFACE. CONTACTS ARE TO BE AS FLAT AS POSSIBLE. NOT TO EXCEED +/- 0.001" OF FLATNESS.

22. THIEVING:

( ) SUPPLIER MAY ADD THIEVING TO COMPENSATE FOR LOW COPPER DENSITY AREAS ON THIS DESIGN.

(X) SUPPLIER MAY NOT ADD THIEVING TO COMPENSATE FOR LOW COPPER DENSITY AREAS ON THIS DESIGN.

23. PEMNUT

( ) PEMNUTS TO BE INSTALLED BY SUPPLIER.

( ) PEMNUTS NOT TO BE INSTALLED BY SUPPLIER.

(X) NOT APPLICABLE

MAXIM INTEGRATED

MAXREFDES112\_APP1A

ENGINEER: GORDON LEE

DATE: 1/21/2016

DESIGNER: OLIVIA LIAO

ODB++ VERSION: 1

FAB NOTES

2.350

.800

45° X .050

x4 corners

LAMINATION DIAGRAM

LAYER NUMBER	LAYER NAME	FINISHED CU WEIGHT (oz)	DIELECTRIC THICKNESS (in.)	DIELECTRIC MATERIAL
1	TOP	1	0.008	FR4(RHS)/EQIV
2	LAYER2	1	0.0409	FR4(RHS)/EQIV CORE AS NEEDED
3	LAYER3	1	0.008	FR4(RHS)/EQIV
4	BOTTOM	1		FOIL

THE FINISHED PCB THICKNESS TO BE: 0.0625" +/- 0.010"

DRILL CHART: TOP to BOTTOM

ALL UNITS ARE IN MILS

FIGURE	SIZE	TOLERANCE	PLATED	QTY	NOTES
⌀	10.0	+3.0/-8.0	PLATED	1	
△	10.0	+3.0/-8.0	PLATED	4	
△	12.0	+3.0/-10.0	PLATED	71	
⊗	68.898	+3.0/-3.0	PLATED	4	

TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONSDECIMALSANGLES

+/-~~1/100~~.XX +/- .01 +/-~~1/50~~.XXX +/- .005

MATERIAL:

SEE NOTES

FINISH:

SEE NOTES

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DRAWN BY: OLIVIA LIAO

DATE: 1/21/16

CHECKED BY:

DATE:

APPR. BY:

DATE:

APPR. BY:

DATE:

MAXIM

maxim integrated™

HARDWARE NAME:

MAXREFDES112

24VIN 12VOUT 10W FLYBACK

HARDWARE NUMBER:

NOT TO SCALE

TEMPLATE REV B

SHEET 1 OF 1

REV

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