

REVISIONS			
REV	DESCRIPTION	APPROVED	DATE

NOTES: UNLESS OTHERWISE SPECIFIED

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

MATERIAL: (USE CHECKED ITEMS FOR MATERIAL)

2. BOARD MATERIAL

(X) ISOLA 370HR OR EQUIVALENT

( ) ISOLA FR408HR OR EQUIVALENT

( ) NEMCO 4000-13

( ) MEGTRON 6

( ) ROGERS 4350B

( ) ROGERS 4003C

( ) 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 UL96 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 0.0075 IN. (0.75%) PER LINEAR INCH.

BOW & TWIST SHOULD BE MEASURED PER IPC-TM 450, METHOD 2.4.2.2.

TOOLING: (USE CHECKED ITEMS FOR TOOLING)

7. PHOTO ETCH CIRCUITRY PER ENCLOSED GERBER R5724K OR ODB++ FORMAT FILE. DRILL LOCATION AND SIZE CONTROLLED BY EXCELLENCE CNR DRILL FILE.

8. IF STATED IN THE LAMINATION DIAGRAM, THE DIELECTRIC THICKNESS OF ANY CONTROLLED IMPEDANCE LAYERS IS FOR REFERENCE ONLY. FINAL ACCEPTANCE SHALL BE DETERMINED BY THESE LAYERS HAVING A CHARACTERISTIC IMPEDANCE OF  $\pm 10\%$  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 SPECIFICATIONS:

( ) STARTING COPPER WEIGHT FOR OUTER LAYERS TO BE 1 (2)Z, THE FINISH COPPER WEIGHT IS 1 (2)Z.

FOR OUTER LAYERS WHERE SPACING PREVENTS THE USE OF 1 (2)Z AS A STARTING WEIGHT, THE STARTING WEIGHT CAN BE (0.5-2.0)Z AS LONG AS THE FINISH COPPER WEIGHT IS 1 (2)Z UNLESS OTHERWISE SPECIFIED

( ) STARTING COPPER WEIGHT FOR OUTER LAYERS TO BE 1 (2)Z, THE FINISH COPPER WEIGHT IS 2 (2)Z.

FOR OUTER LAYERS WHERE SPACING PREVENTS THE USE OF 1 (2)Z AS A STARTING WEIGHT, THE STARTING WEIGHT CAN BE (0.5-2.0)Z AS LONG AS THE FINISH COPPER WEIGHT IS 2 (2)Z UNLESS OTHERWISE SPECIFIED

( ) STARTING COPPER WEIGHT FOR OUTER LAYERS TO BE 2 (2)Z, THE FINISH COPPER WEIGHT IS 2 (2)Z MINIMUM.

FOR OUTER LAYERS WHERE SPACING PREVENTS THE USE OF 2 (2)Z AS A STARTING WEIGHT, THE STARTING WEIGHT CAN BE  $\geq 2$  (2)Z AS LONG AS THE FINISH COPPER WEIGHT IS 2 (2)Z UNLESS OTHERWISE SPECIFIED

( ) OTHER \_\_\_\_\_

12. CHECK ALL THAT APPLY

( ) ELECTRODEPOSITED HARD GOLD PLATE, TYPE 1 (99.7% MIN GOLD), GRADE C (ENFOF HARDNESS 130-200), CLASS 1 (50-100 MICRO INCHES THICK) IN ACCORDANCE WITH MIL-G-45200

GENERAL SURFACING REQUIREMENTS MUST MEET ANSP/IPC-A 4000(CURRENT REV) SECTION 4.0, CLASS 3 (50-100 MICRONS THICK) OR EQUIVALENT ELECTROPOSITED NICKEL PLATE IN ACCORDANCE WITH ANSP/IPC-A 6000, SECTION 4.0, CLASS 3 (200-600 MICRONS 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.

( ) LEAD FREE AND ROHS COMPLIANT PLATING.

( ) OTHER \_\_\_\_\_

13. DRILL SIZES ARE FINISHED HOLE SIZES. ALL HOLES SHALL BE LOCATED WITHIN .005 IPT. MINIMUM BARREL FINISHING OF .003 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 PER PARTWORK.

( ) GREEN TAPES PSR-4000

( ) OTHER \_\_\_\_\_

15. CHECK ALL THAT APPLY

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

( ) OTHER \_\_\_\_\_

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

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. INSTANCES WHERE TDR TESTING CAN'T BE PERFORMED BECAUSE THE TRACE LENGTH IS TOO SHORT ON THE OUTER LAYERS AT THE PIN ESCAPE IS ACCEPTABLE. ALL OTHER INSTANCES MUST BE REPORTED.

MISCELLANEOUS:

19. IF PRESENT, ALL BURNED/BURIED WITH AN ASPECT RATIO  $\leq 1:1$  TO BE PLATED SHOT WITH COPPER WHEN USED AS VIA-IN-PAID OR AS A STACKED VIA. BURNED/BURIED WITH AN ASPECT RATIO  $\leq 1:1$  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 0.0XXX INCH DRILLED VIAS.

( ) SILVER. FILL AND CAP ALL 0.0XXX INCH DRILLED VIAS.

21. FINISHED SURFACE CONTACTS AND FILLED VIAS TO BE FREE OF ANY PITS. SCRATCHES PORE 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  $\pm 0.001"$  OF FLATNESS.

22. THEIVING:

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

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

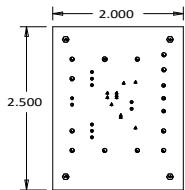
23. PENNUT


( ) PENNUTS TO BE INSTALLED BY SUPPLIER








( ) PENNUTS NOT TO BE INSTALLED BY SUPPLIER



(X) NOT APPLICABLE

		<small>         RAPID IMAGING          10000 WILLOW CREEK DRIVE          SUITE 100          FARMINGTON, CT 06030-3000          TEL: 860-676-1000 FAX: 860-676-1001          WWW.RAPIDIMAGING.COM       </small>	
HARDWARE NAME MAKU477SE_SWIT_A			
HARDWARE NUMBER:			
ENGINEER-SHASTA THOMAS		DESIGNER-BRIAN RILEY	
DATE: 10/06/2016		DOB+/GZXR: FAB_NOTES	



LAMINATION DIAGRAM				
LAYER NUMBER	LAYER NAME	FINISHED CU WEIGHT (OZ)	DIELECTRIC THICKNESS (in.)	DIELECTRIC MATERIAL
1	TOP	1		FOIL
2	BOTTOM	1		TBD
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
	18.0	+3.0/-16.0	PLATED 10	1	
	20.0	+3.0/-18.0	PLATED 1	1	
	43.31	+3.0/-3.0	PLATED 10	10	
	51.18	+3.0/-3.0	PLATED 3	3	
	62.99	+3.0/-3.0	PLATED 11	11	
	70.87	+3.0/-3.0	PLATED 1	1	
	125.0	+3.0/-3.0	PLATED 4	4	

TOLERANCES UNLESS OTHERWISE SPECIFIED		THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROPRIETARY TO MAXIM. THE INFORMATION IN THIS DOCUMENT IS NOT TO BE SHOWN, REPRODUCED, OR DISCLOSED TO ANYONE OUTSIDE OF MAXIM WITHOUT PRIOR WRITTEN PERMISSION FROM MAXIM.		<div><div></div><div>maxim integrated™</div></div>	
FRACTIONS      DECIMALS      ANGLES +/-  .XX +/- .01 					