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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><div>maxim integrated™</div></div></div>	
FRACTIONS +/-		DECIMALS .XX +/- .01 .XXX +/- .005		ANGLES +/-	
MATERIAL:  SEE NOTES		DRAWN BY:MS DATE:01/24/2017		HARDWARE NAME :  MAXREFDES128_APPS_A	
FINISH:  SEE NOTES		CHECKED BY: DATE: APPR. BY: DATE: APPR. BY: DATE:		HARDWARE NUMBER: XX-XXXX-XXX NOT TO SCALE	
				REV A SHEET 1 OF 1	

REVISIONS			
REV	DESCRIPTION	APPROVED	DATE

- NOTES:
1. 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  
( ) NELCO-4000-13  
( ) MEGTRON 6  
( ) ROGERS 4350R  
( ) 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 UL796 WITH FLAMMABILITY RATINGS 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 0.0015 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 CNG 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. FINISHED COPPER WEIGHT/THICKNESS:  
(X) REFER TO LAMINATION DIAGRAM FOR FINISHED COPPER WEIGHT/THICKNESS REQUIREMENTS.  
THE STARTING COPPER WEIGHT/THICKNESS CAN VARY AS LONG AS THE FINISHED COPPER WEIGHT/THICKNESS IS NOT LESS THAN THE SPECIFIED VALUE. UNLESS OTHERWISE SPECIFIED.  
( ) OTHER \_\_\_\_\_
12. CHECK ALL THAT APPLY  
( ) ELECTRODEPOSITED HARD GOLD PLATE, TYPE 1 (99.7% MIN GOLD), GRADE C (KNOOP HARDNESS 130-200), CLASS 3 (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).
- (X) 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 R&HS 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. INSTANCES WHERE TOR TESTING CAN'T BE PERFORMED BECAUSE THE TRACE LENGTH IS TOO SHORT ON THE OUTER LAYERS AT THE PIN ESCAPES IS ACCEPTABLE, ALL OTHER INSTANCES MUST BE REPORTED.
- 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-PAID 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 0.000X INCH DRILLED VIAS.  
( ) SILVER, FILL AND CAP ALL 0.000X 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

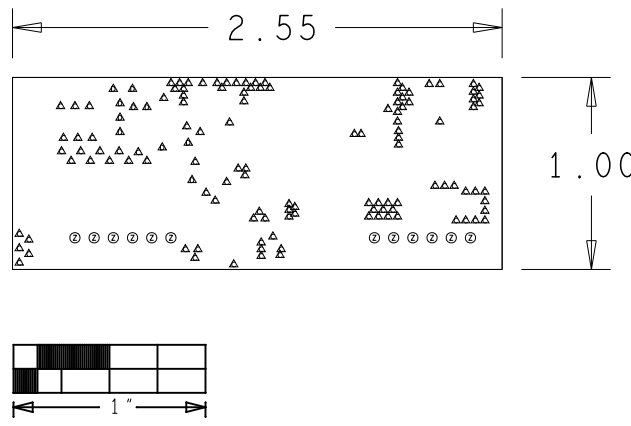
GERBER NAME: MAXREFDES128\_APPS\_A

GERBER NUMBER:

ENGINEER:DESIGNER:MS

DATE: 01/24/2017

ODB++/GERBER FILE NOTES



LAMINATION DIAGRAM				
LAYER NUMBER	LAYER NAME	COPPER THICKNESS (OZ. INCH)	DIELECTRIC THICKNESS (in.)	DIELECTRIC MATERIAL
1	TOP	1.0Z 0.0014" MIN	FOIL	
2	INTERNAL2	1.0Z 0.0014"	TBD	ISOLA 370HR/EQUIVALENT
3	INTERNAL3	1.0Z 0.0014"	TBD	ISOLA 370HR/EQUIVALENT
4	BOTTOM	1.0Z 0.0014" MIN	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
Δ	10.0	+3.0/-8.0	PLATED	119
Δ	12.0	+3.0/-10.0	PLATED	10
⊙	45.28	+3.0/-3.0	PLATED	12