NOTES

1. Place R's and C's shown on rigid PCB, with flex ribbons coming out of both ends of same length as flex ribbons for use with blocks.
2. Use Rogers 4350B material under the component layer of the rigid PCB.
3. Place vias from top to sense or drive flex signal layer at nodes marked "VIA", except
4. Place grounded copper pour on top layer. Copper pour will provide part of guard rings.
5. Place grounded guard ring around R1-3, thread guard trace under C3.
6. Place copper pour and will also form a guard around R6 and its via.
7. Where sense and drive traces coexist in the flex signal layer, place grounded, wide, guard traces or shapes between them.
8. Install odd numbered jumpers for capacitive divider.
9. Install even numbered jumpers for resistive divider.

Material:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES

LINEAR TOLERANCES:
XX ± 0.03
XXX ± 0.10
ANGULAR TOLERANCE: ± 0.5°

SURFACE ROUGHNESS (MICROMETERS)

DO NOT SCALE DRAWING
INTERPRET DIMENSIONING AND TOLERANCING PER ASME Y14.5-2009
INTERPRET DWG PER ASME Y14.100

Contract No.

Appr. Date

DWM C. Shelton

Engr. C. Shelton

See JPL Data Management System For Approval Signatures and Dates.
NOTES: UNLESS OTHERWISE SPECIFIED

2. THIS DOCUMENT AND RELATED ARTWORK ARE COMPUTER GENERATED. ALL MODIFICATIONS ARE TO BE PERFORMED TO THE ORIGINAL DATABASE ON FILE IN SECTION 383.
3. THIS IS A REDUCED DIMENSION DRAWING. ADDITIONAL DIMENSIONS NEEDED TO DEFINE THE TRUE PROFILES OF THIS PART SHALL BE OBTAINED FROM THE MASTER CAD MODEL DATABASE NAMED 10369692-A.ZIP. DIMENSIONS AND TOLERANCES SHALL BE INTERPRETED PER ASME Y14.5M.

**MATERIAL:**
- 1 OZ COPPER CLAD, DOUBLE SIDED, 0.422 mm THICK HYDROCARBON/CERAMIC/WOVEN GLASS LAMINATE PER IPC-4103A/L11A3/0422-C1/C1
- 1 OZ COPPER CLAD, DOUBLE SIDED, 0.38 mm THICK EPOXY/WOVEN GLASS LAMINATE PER IPC-4101/L 26-0450-C1/C1
- MATERIAL: 10398541

**ARTICLE:**
- MATERIAL: NON-SUPPORTED ADHESIVE FILM (THICKNESS AND QUANTITY AS REQUIRED) PER IPC-4203/18-0000MX
- MATERIAL: NON-SUPPORTED POLYIMIDE FILM, ADHESIVE ONE SIDE PER IPC-4203/1-E1E1M1/0
- MATERIAL: 1 OZ COPPER CLAD, DOUBLE SIDED, 0.003 IN. THICK POLYIMIDE LAMINATE PER IPC-4204/11-E1E3Z CU-W7-HS/HS
- MATERIAL: 0.135 mm THICK EPOXY/WOVEN GLASS PREPEG PER IPC-4104/11-E1E2 CU-W7-HS/HS
- MATERIAL: 1 OZ COPPER CLAD, SINGLE SIDED, .002 IN. THICK POLYIMIDE LAMINATE PER IPC-4204/11-E1E2 CU-W7-HS/0
- MATERIAL: NON-SUPPORTED POLYIMIDE FILM, ADHESIVE ONE SIDE PER IPC-4203/1-E1E1M1/0

11. FOIL LAMINATION MAY BE APPLIED AS AN ALTERNATE CONSTRUCTION ON OUTER LAYERS.
13. APPLY SOLDER MASK, ITEM 9, TO TOP AND BOTTOM OVER BARE COPPER, COMPONENT PADS TO BE FREE FROM BLEEDING OR MISREGISTRATION.

14. AFTER APPLICATION OF SOLDER MASK, PLATE ALL EXPOSED COPPER WITH ENIG PER IPC-6013.

**LEGEND OVER SOLDER MASK ON BOTH SIDES OF PWB USING HYDOSL M- SERIES/ CATALYST 20/A WHITE EPOXY INK, ITEM 10. LEGEND MARKING SHALL NOT BE NEARER THAN .003 INCH TO ANY PAD. CHARACTER HEIGHT SHALL BE .030 INCH MINIMUM.**

16. ELECTRICAL TEST: CONTINUITY SHORT AND OPEN TESTING ON ALL AVAILABLE EXPOSED TERMINAL PADS USING IPC-D-356A NETLIST DATA. CONTINUITY TEST SHALL BE AT 1 OHMS MAX. SHORTS TESTING SHALL BE PERFORMED AT 200V. MINIMUM ISOLATION OF 100 OHMS.
17. REGISTRATION OF ALL PRINTED WIRING ELEMENTS AFTER LAMINATION SHALL BE WITHIN 0.076 mm OF THE TRUE POSITION.
18. ALL COPPER FEATURE SIZES OF THE FINISHED PRINTED Wiring FLEXPRINT SHALL BE WITHIN ±10% OF THE SIZE INDICATED BY THE MASTER PATTERN ARTWORK.
19. ALL UNDIMENSIONED HOLES SHALL BE LOCATED WITHIN 0.12 RADIUS OF THE POSITION INDICATED BY THE MASTER PATTERN ARTWORK.
20. BOW AND TWIST OF RIGID SECTIONS SHALL NOT EXCEED 0.75% WHEN MEASURED DIAGONALLY.

MARK IN LOCATION SHOWN WITH 1.0 MINIMUM HIGH CHARACTERS THE DASH NUMBER AND SERIAL NUMBER "xxxxxx" (WHERE x IS A VENDOR DESIGNATION LETTER ASSIGNED BY TMT AND XXXXX IS A UNIQUE 5 DIGIT SERIAL NUMBER FOR EACH PART, THE VENDOR DESIGNATION AND THE STARTING SERIAL NUMBER SHALL BE IN ACCORDANCE WITH THE VALUES PROVIDED IN THE PURCHASE ORDER)

**PARTS LIST**

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**NOTES:**

- DIMENSIONS AND TOLERANCES SHALL BE INTERPRETED PER ASME Y14.5M.
- DIMENSIONS AND TOLERANCES SHALL BE INTERPRETED PER ASME Y14.5M.
- TOLERANCING PER ASME Y14.5-2009
- INTERPRET DWG PER ASME Y14.100
- DIMENSIONS ARE IN INCHES
- UNLESS OTHERWISE SPECIFIED

**SPECIFICATIONS:**

- MATERIAL: 1 OZ COPPER CLAD, DOUBLE SIDED, 0.422 mm THICK HYDROCARBON/CERAMIC/WOVEN GLASS LAMINATE PER IPC-4103A/L11A3/0422-C1/C1
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- MATERIAL: NON-SUPPORTED ADHESIVE FILM (THICKNESS AND QUANTITY AS REQUIRED) PER IPC-4203/18-0000MX

**REVISION HISTORY**

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**DRAWING SHEET:**

- SCALE: 21
- UNCLASSIFIED
- SHEET: 1
- 1 OF 3

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NOTES - UNLESS OTHERWISE SPECIFIED:
1. WORKMANSHIP STANDARDS AND ACCEPTABILITY REQUIREMENTS SHALL MEET IPC-A-610 (LATEST VERSION).
2. THIS DOCUMENT AND RELATED ARTWORK ARE COMPUTER GENERATED. CHANGES ARE TO BE PERFORMED ON THE ORIGINAL DATABASE IN SECTION 383.
3. CLEAN SOLDER FLUX FROM BOARD SO THAT THERE IS NO DISCERNABLE RESIDUE.
4. MARK OR INKSTAMP IN LOCATION SHOWN WITH 1.0 MINIMUM HIGH CHARACTERS, THE DASH NUMBER, REVISION LETTER, AND SERIAL NUMBER, "NXXXXX" (WHERE N IS A VENDOR DESIGNATION LETTER ASSIGNED BY TMT AND XXXXX IS A UNIQUE 5 DIGIT SERIAL NUMBER FOR EACH PART, THE VENDOR DESIGNATION AND THE STARTING SERIAL NUMBER SHALL BE IN ACCORDANCE WITH THE VALUES PROVIDED IN THE PURCHASE ORDER), USING INK, ITEM 2. CHARACTERS TO BE 1 mm HIGH MINIMUM.
6. FOR ELECTRONICS PARTS LIST SEE PL10398541.
7. FOR SCHEMATIC DIAGRAM SEE JPL DRAWING 10398539.
8. THIS PRINTED WIRING ASSEMBLY CONSISTS OF ONLY SURFACE MOUNT TECHNOLOGY.

SEE SEPARATE PARTS LIST

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