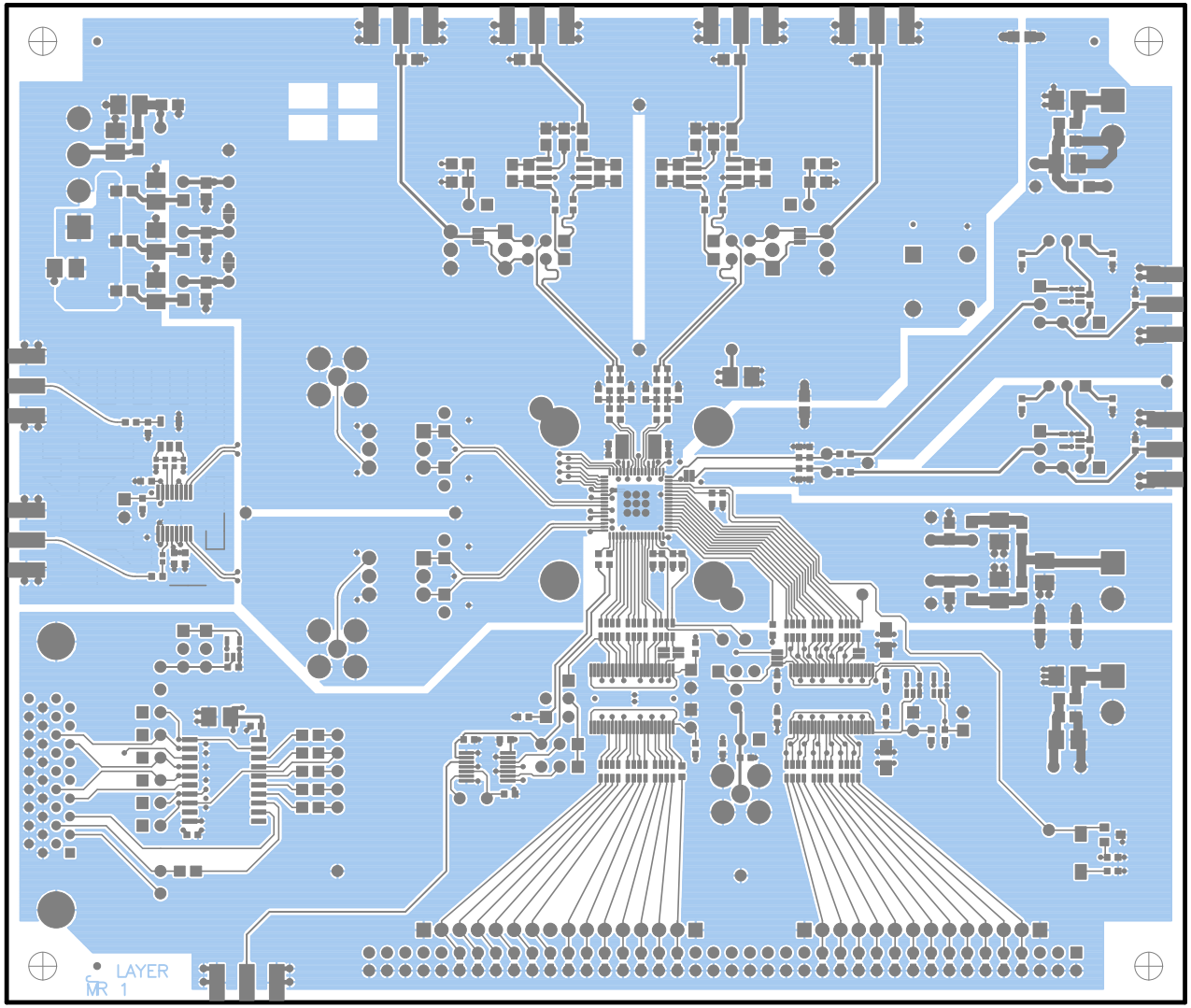
7.500 REF

7.000 REF

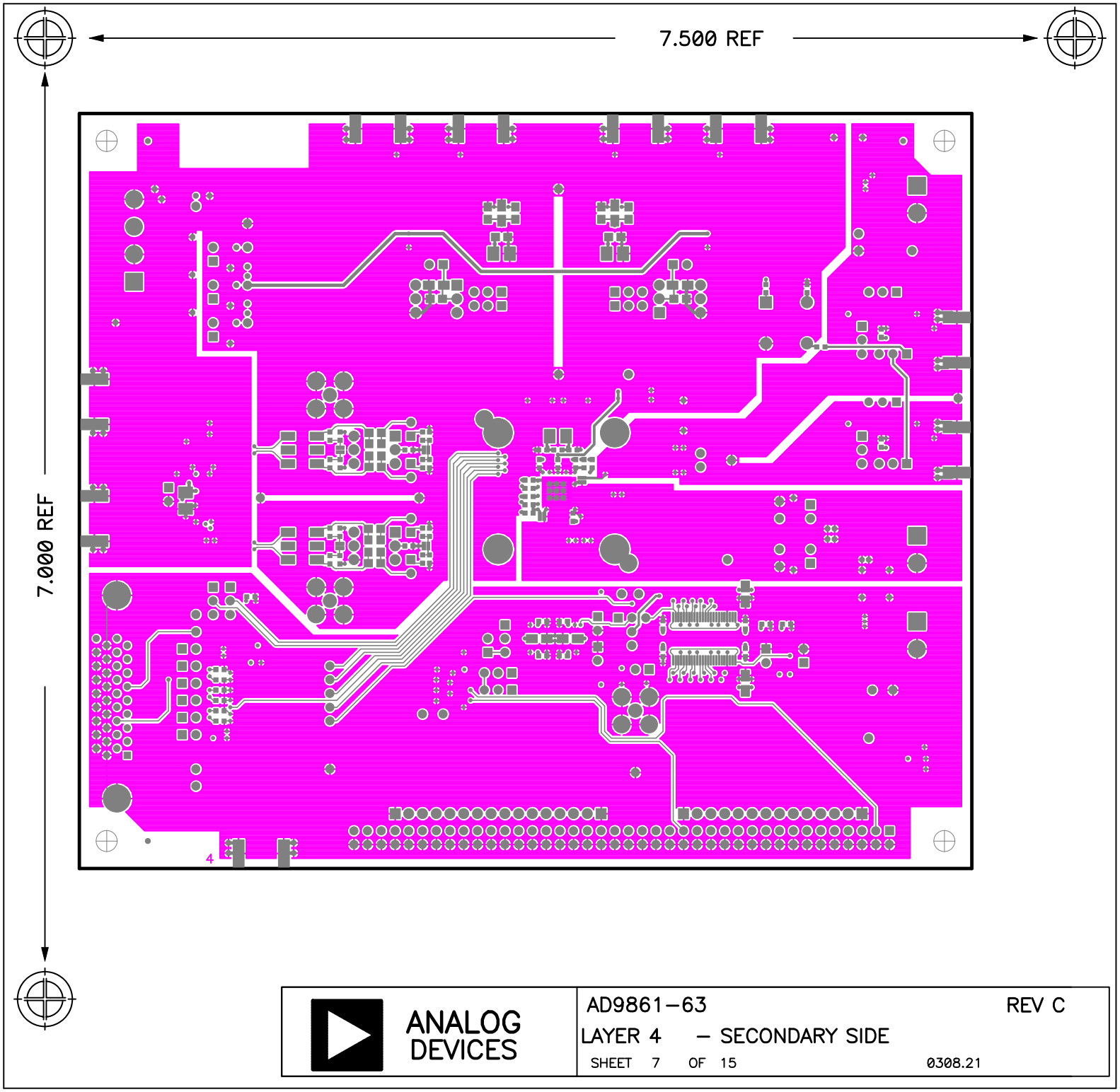


ANALOG DEVICES

AD9861–63 REV C

LAYER 1 – PRIMARY SIDE

SHEET 4 OF 15 0308.21

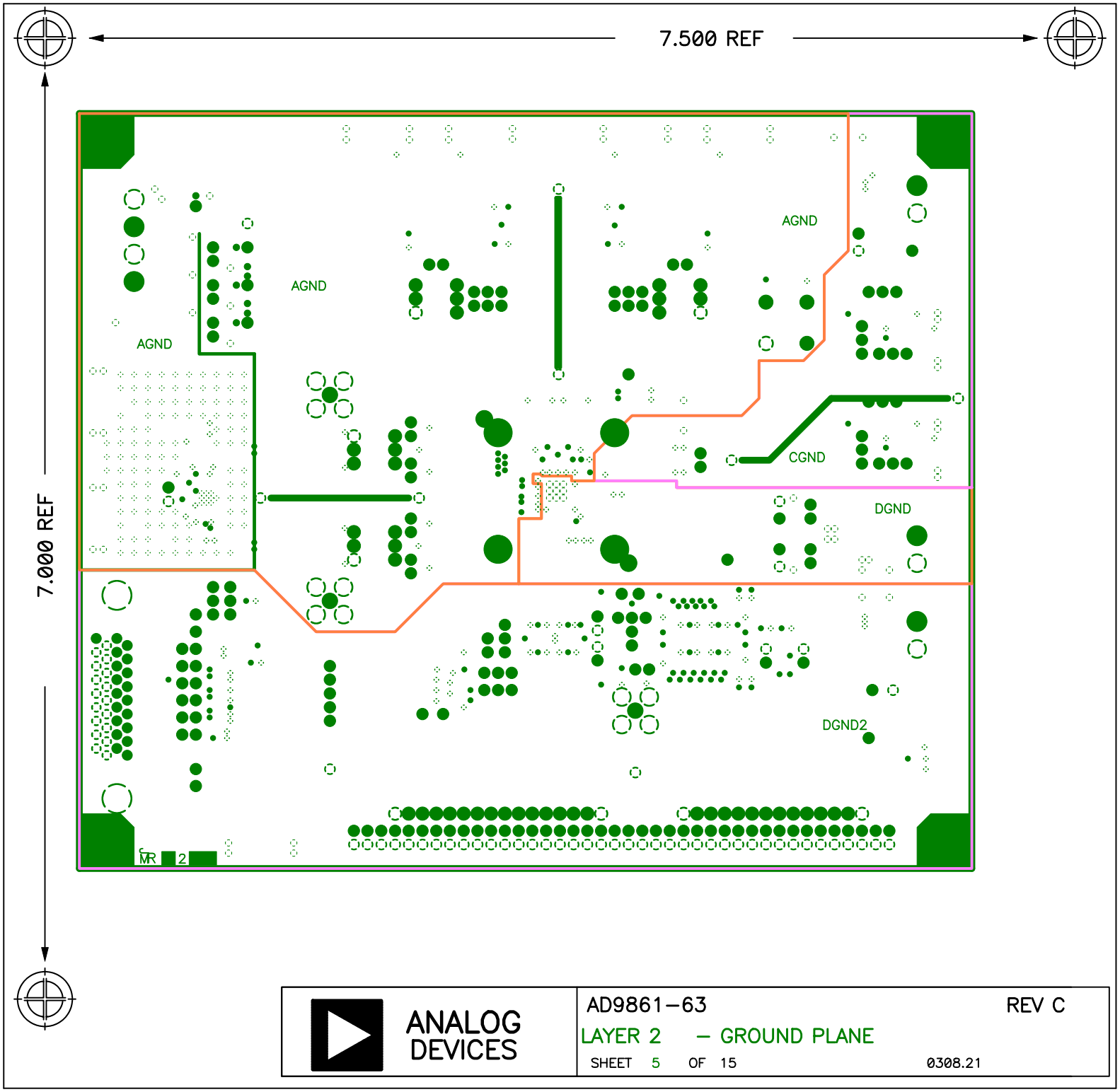


ANALOG DEVICES

AD9861–63 REV C

LAYER 4 – SECONDARY SIDE

SHEET 7 OF 15 0308.21

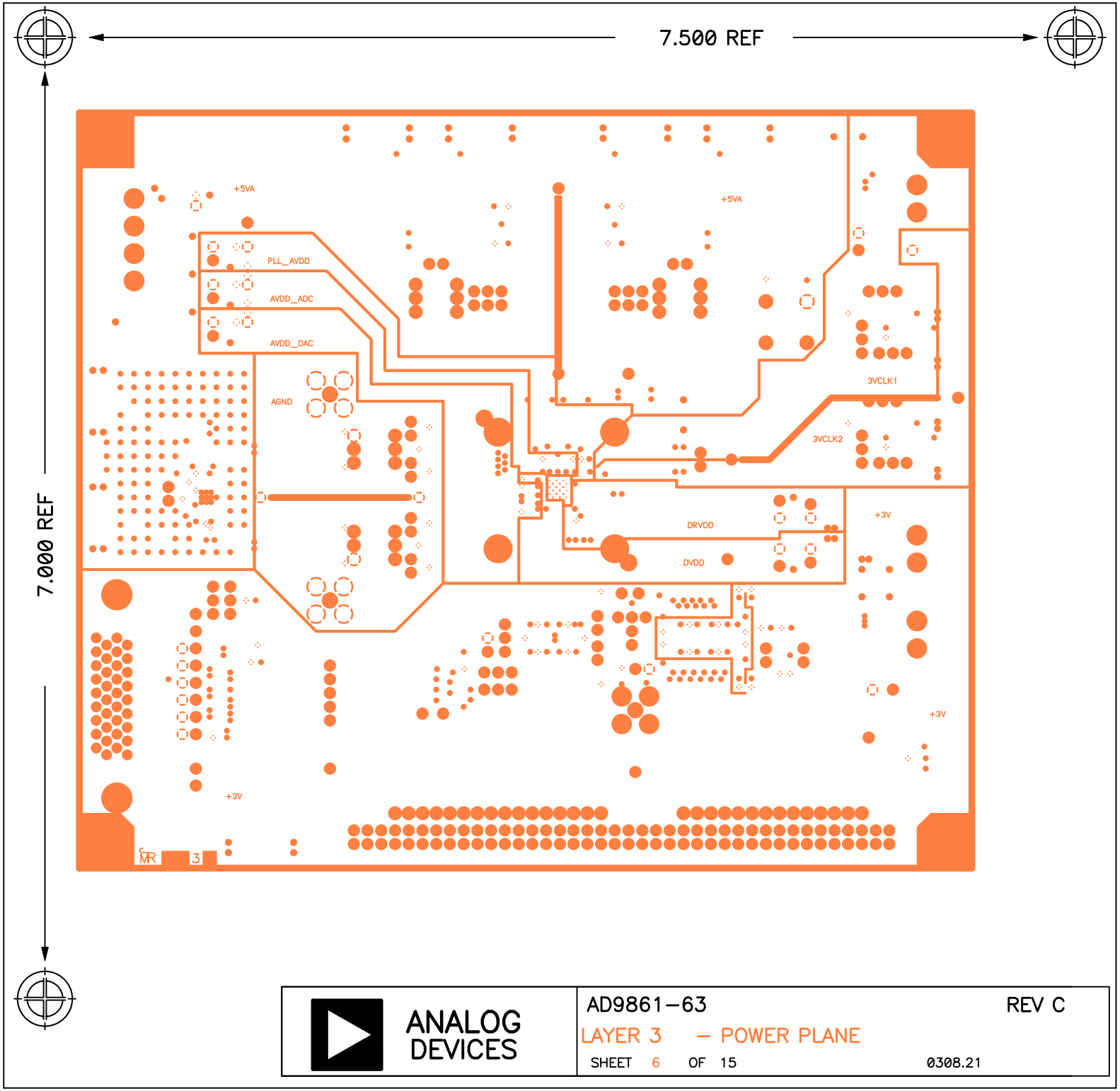


ANALOG DEVICES

AD9861–63 REV C

LAYER 2 – GROUND PLANE

SHEET 5 OF 15 0308.21

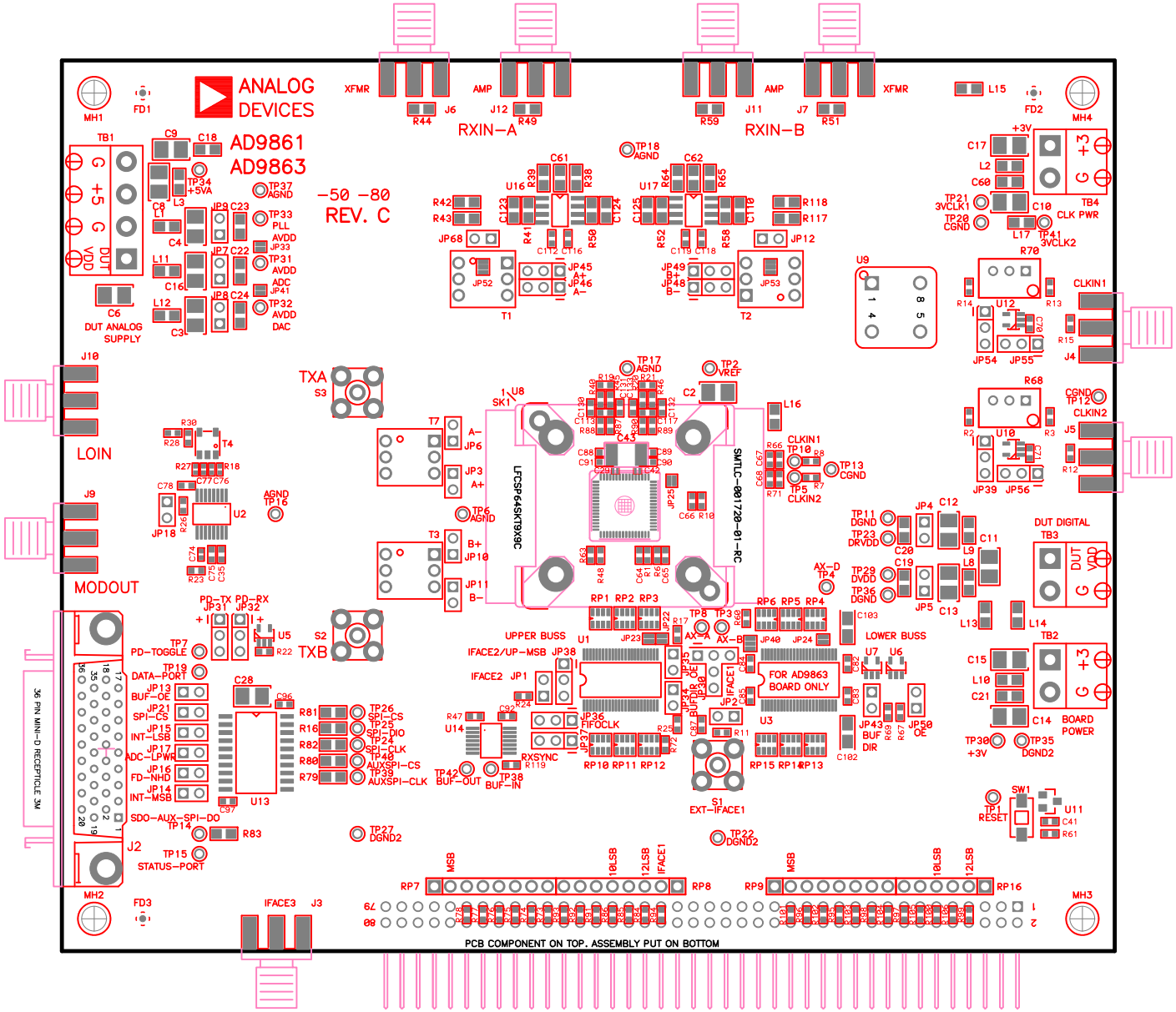


ANALOG DEVICES

AD9861-63 REV C

LAYER 3 – POWER PLANE

SHEET 6 OF 15 0308.21



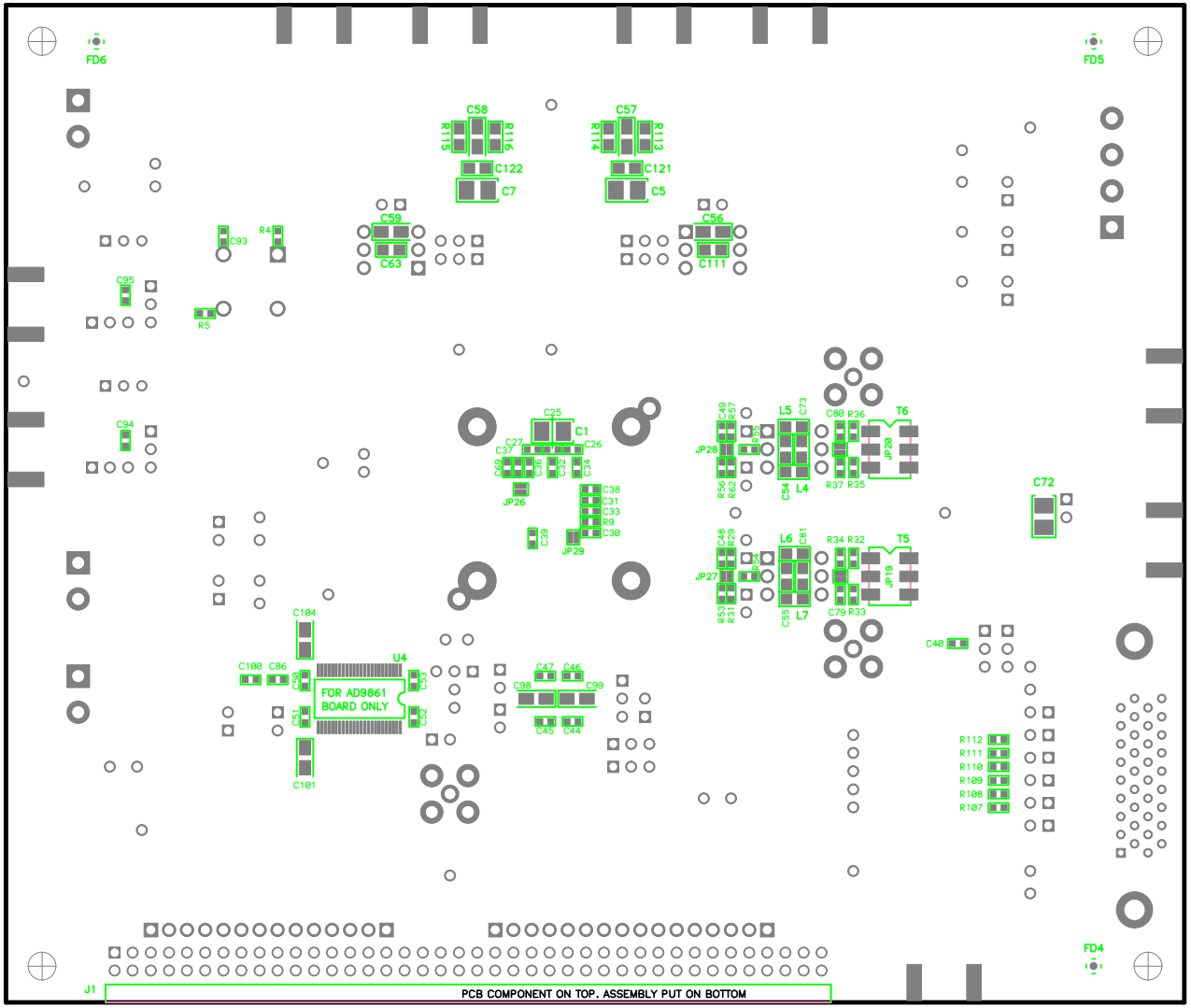
ANALOG DEVICES

AD9861–63

ASSEMBLY – PRIMARY SIDE

SHEET 1 OF 2

REV C

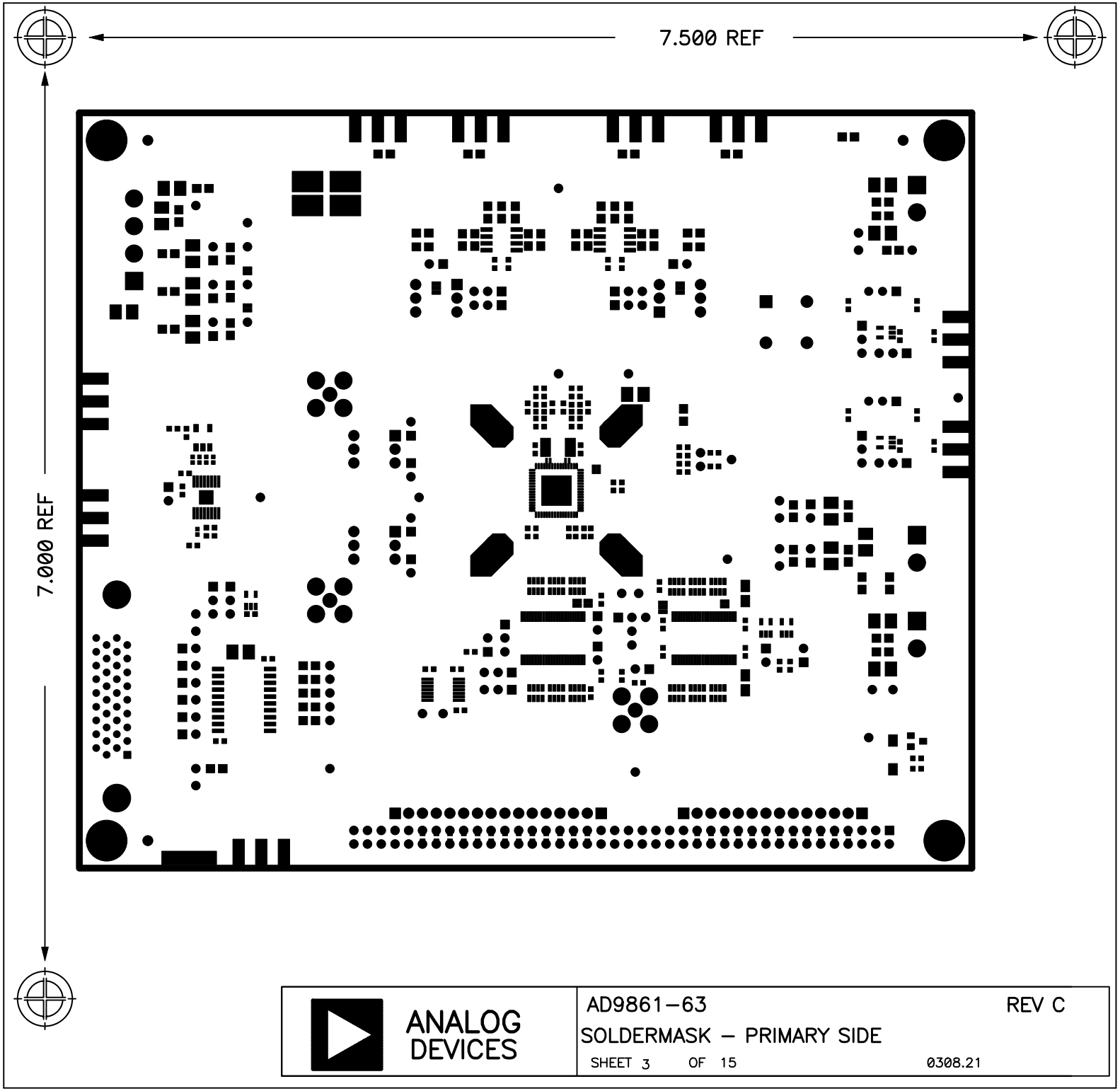


ANALOG DEVICES

AD9861–63 REV C

ASSEMBLY – SECONDARY SIDE

SHEET 2 OF 2

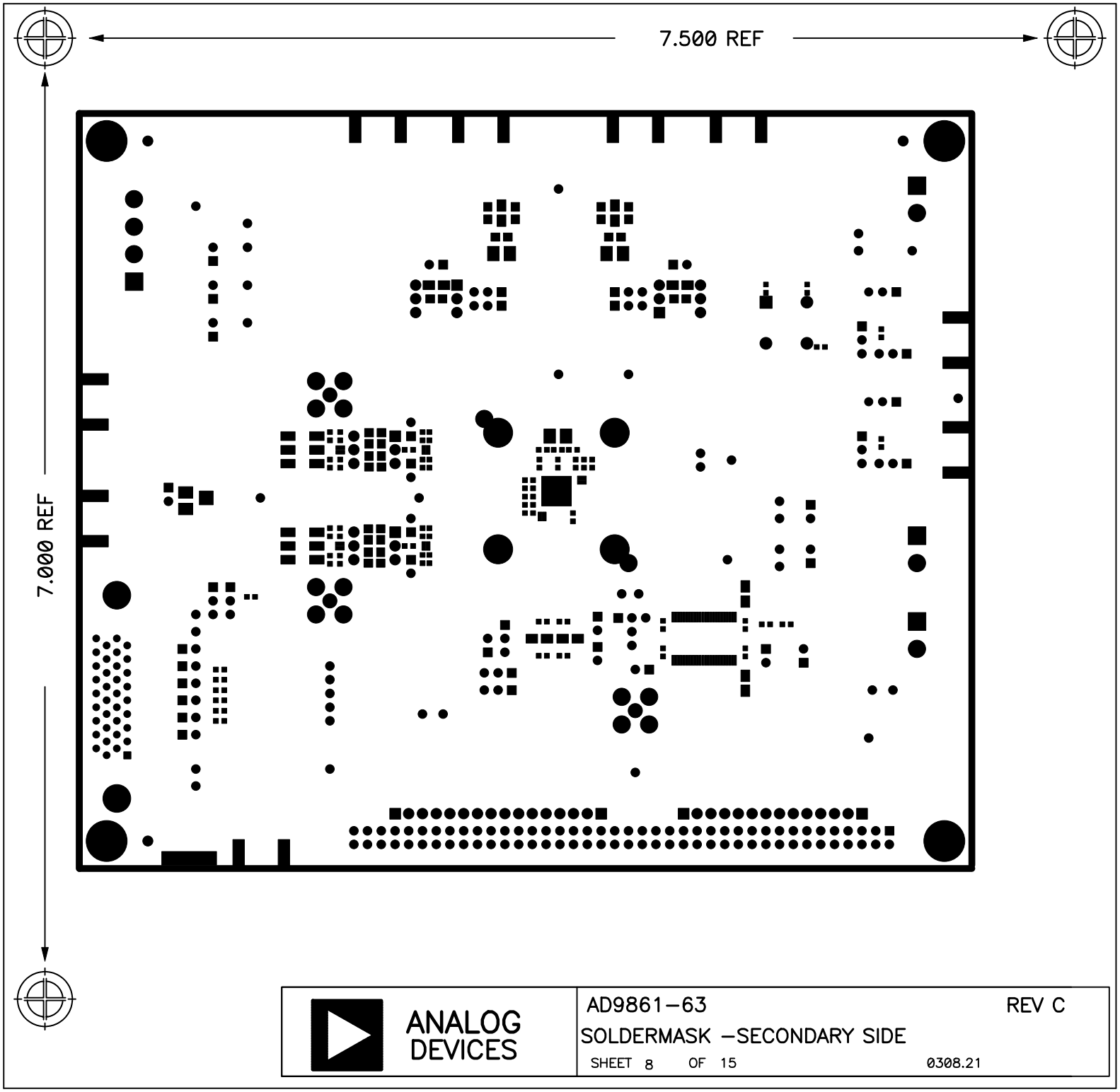


ANALOG DEVICES

AD9861–63 REV C

SOLDERMASK – PRIMARY SIDE

SHEET 3 OF 15 0308.21



ANALOG DEVICES

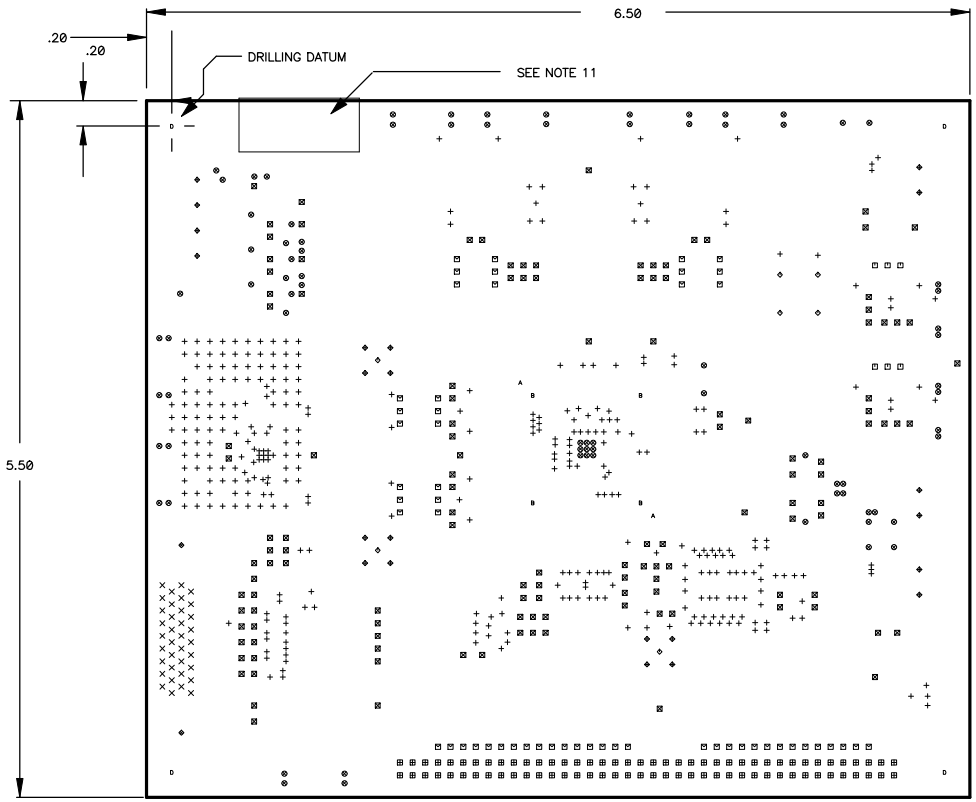
AD9861-63 REV C

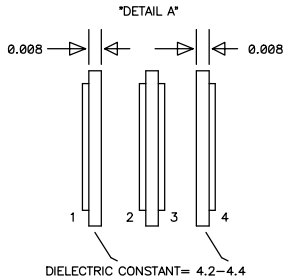
SOLDERMASK -SECONDARY SIDE

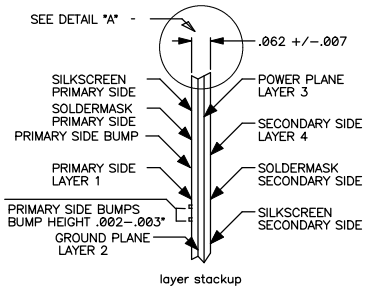
SHEET 8 OF 15 0308.21

REVISIONS					
REV	ECO	DESCRIPTION	DWN	APPLS	DATE

SIZE B AD9861-63 REV C







NOTES

1. MATERIAL: FOUR LAYER, FR4 GLASS–EPOXY LAMINATE, .062 +/–.007 TOTAL THICKNESS.
   1/2 OZ. COPPER CLAD PLATED TO 1 1/2 OUNCE – EXTERNAL LAYERS
   2 OZ. COPPER CLAD – INTERNAL LAYERS
2. PLATED THRU HOLES MINIMUM WALL THICKNESS = .001"
3. SURFACE FINISH (EXPOSED AREAS EXTERNAL LAYERS)
   PRIMARY SIDE 150–200 MICRO INCH Ni
   50–100 MICRO INCH Au HARD
   SECONDARY SIDE 150–200 MICRO INCH Ni
   50–100 MICRO INCH Au HARD
4. PROCESSING TOLERANCES:
   A. CONDUCTIVE PATTERN FRONT TO BACK REGISTRATION +/– .002 INCH TOTAL.
   B. MINIMUM ANNULAR RING SURROUNDING HOLES .002 INCH.
   C. FINISHED CONDUCTIVE PATTERN +/– .0005 INCH OF GERBER APERTURE SIZE.
5. WARP AND TWIST +/– .0005 INCH PER INCH.
6. DIMENSIONS: ARE FOR THE FINISHED PART.
7. SOLDER MASK: LIQUID PHOTO IMAGABLE SOLDER MASK COLOR GREEN, BOTH SIDES USING THE PATTERN(S) PROVIDED. NO MASK IS PERMITTED ON THE EXPOSED AREAS. SOLDER MASK TO ETCH REGISTRATION +/– .002 INCH TOTAL.
8. SCREENING: SCREEN COMPONENT OUTLINES AND NOMENCLATURE USING OPAQUE WHITE INK ON THE PRIMARY AND SECONDARY SIDES (AS REQUIRED). NOMENCLATURE SHALL BE LEGIBLE. SCREEN TO ETCH REGISTRATION +/– .005 INCH TOTAL.
9. SURFACES: PUNCHED OR MACHINED SURFACES 125 MICRO INCHES RMS MAX.
10. BREAK ALL SHARP EDGES .015 R MAX.
11. FABRICATION VENDOR TO ADD UL VENDOR ID NUMBER IN THIS AREA ON THE SECONDARY SIDE.
12. PRIMARY SIDE PAD CENTER COINCIDENCE WITH DRILL CENTER CRITICAL FOR SOCKET ALIGNMENT +/– .001 INCH.
13. CREATE PRIMARY SIDE BUMPS USING PRIMARY BUMP LAYER FOR BUMPED PADS. PLATE UP BUMPS .002–.003".

Drill Symbol Table

Hole Dia (inch)	Symbol	Quantity	Tolerance	Plated
0.014	+	361	+.000 –.009	yes **
0.022	⊗	79	+.003 –.003	yes **
0.028	×	36	+.003 –.003	yes
0.035	⊤	6	+.003 –.003	yes
0.038	⊠	132	+.003 –.003	yes
0.042	⊞	80	+.003 –.003	yes
0.046	⊻	54	+.003 –.003	yes
0.055	◇	7	+.003 –.003	yes
0.062	◈	22	+.003 –.003	yes
0.065	A	2	+.002 –.001	no ***
0.095	B	4	+.005 –.002	no
0.109	⊗	2	+.003 –.003	yes
0.156	D	4	+.005 –.003	optional *

** MAY BE PLUGGED WITH METAL AND OR MASK.

*** SEE NOTE 12

* MAY BE USED FOR TOOLING

NEXT ASSY	USED ON
APPLICATION	

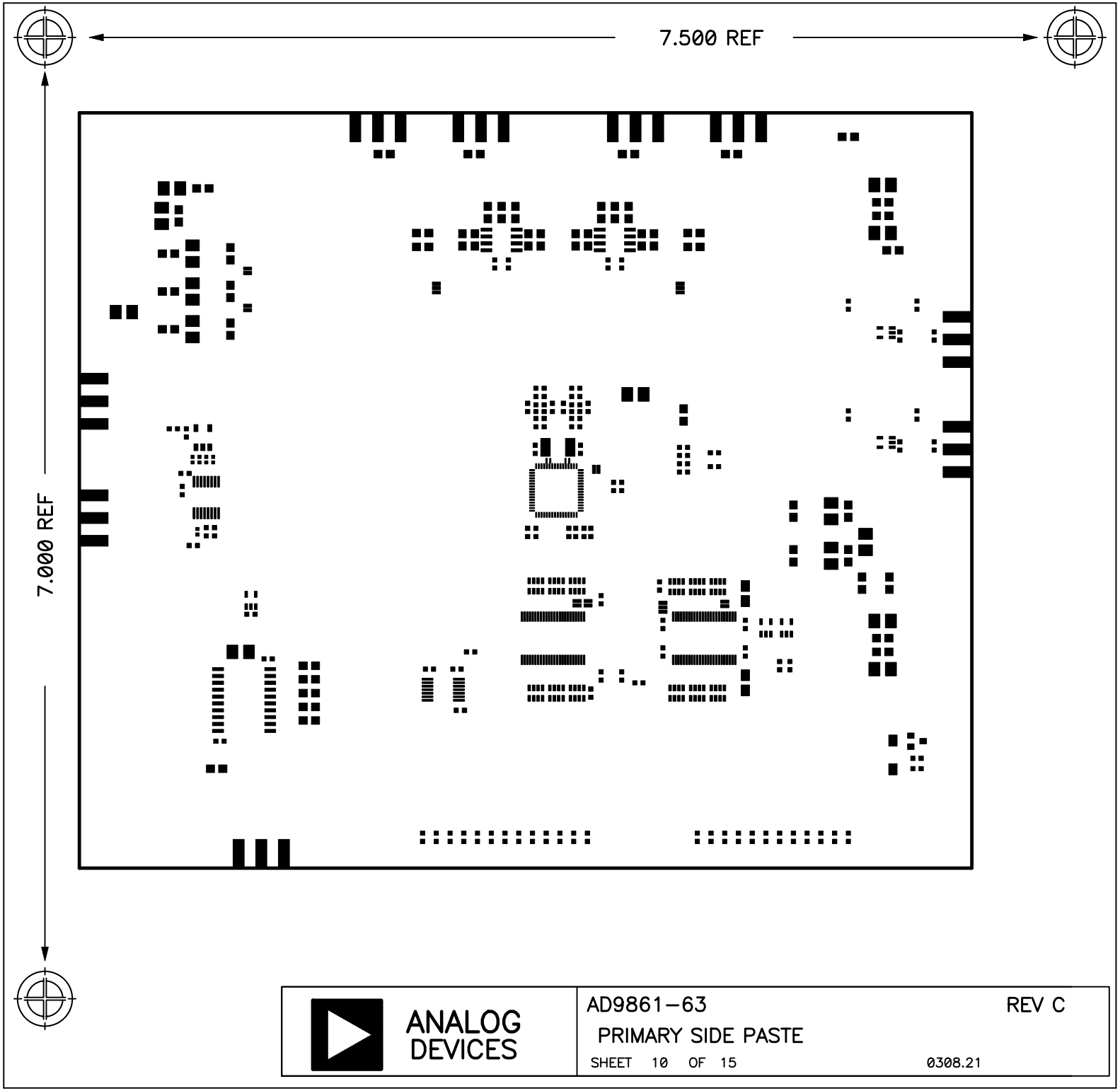
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON DECIMALS .X ± .XX ±.01 .XXX ± .005 ANGLES
MATERIAL SEE NOTES
FINISH SEE NOTES
APPLICABLE STANDARDS

DRAWN J.R. MARCIN	0308.20	
CHECKED J.R. MARCIN	0308.21	
ENGINEER		
ENGINEERING MGR J.R. MARCIN	0308.21	
QUALITY CONTROL J.R. MARCIN	0308.21	
PRODUCTION J.R. MARCIN	0308.21	
WEIGHT		

ANALOG DEVICES

FABRICATION
AD9861–63 EVAL BD.
GOLD PLATED BUMPED PAD SOCKETED VERSION

CODE IDENT NO. | SIZE B | AD9861–63 | REV C
SCALE * | FILE DATE 0308.21 | SHEET 1 OF 15

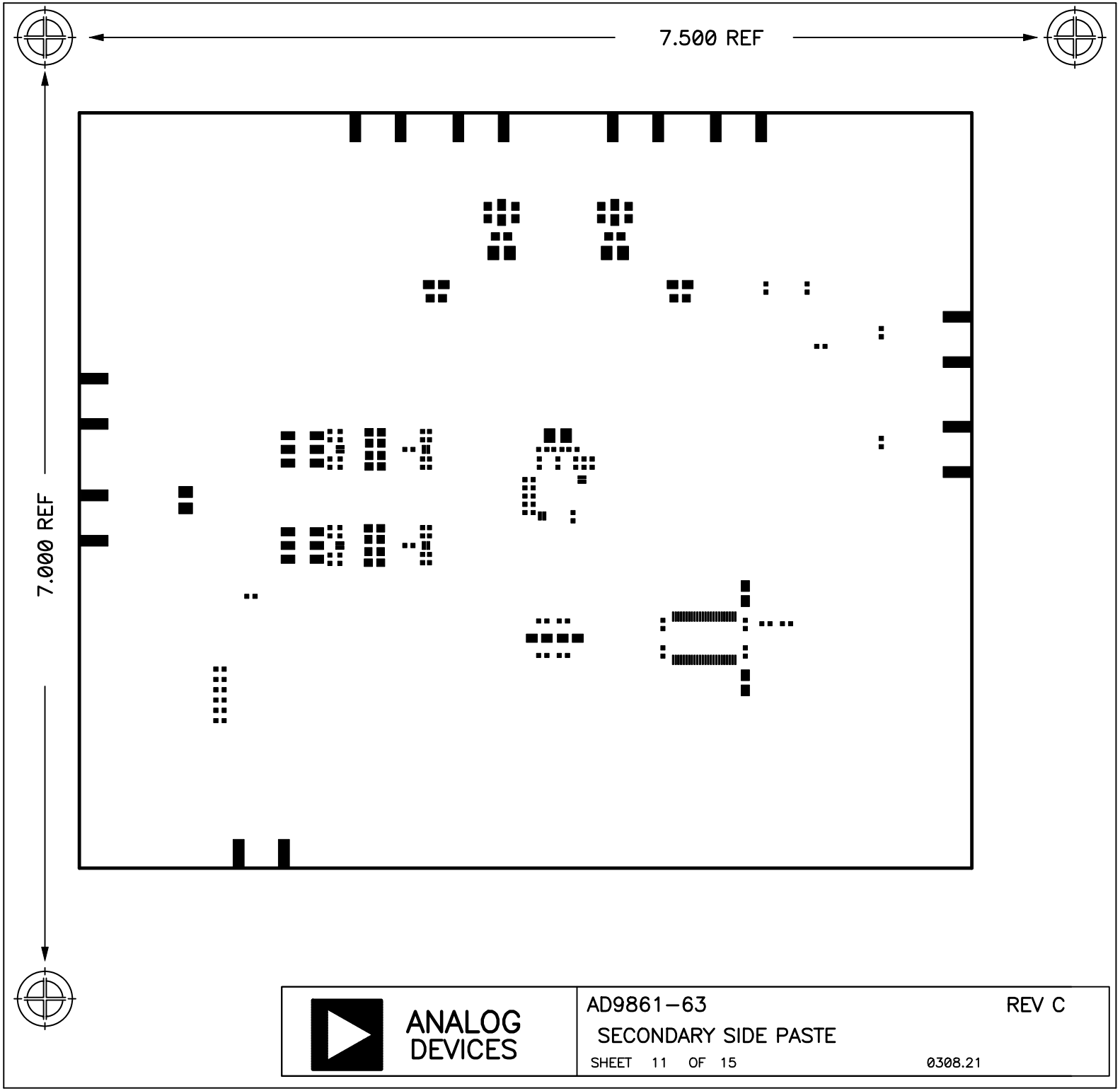


ANALOG DEVICES

AD9861-63 REV C

PRIMARY SIDE PASTE

SHEET 10 OF 15 0308.21



ANALOG DEVICES

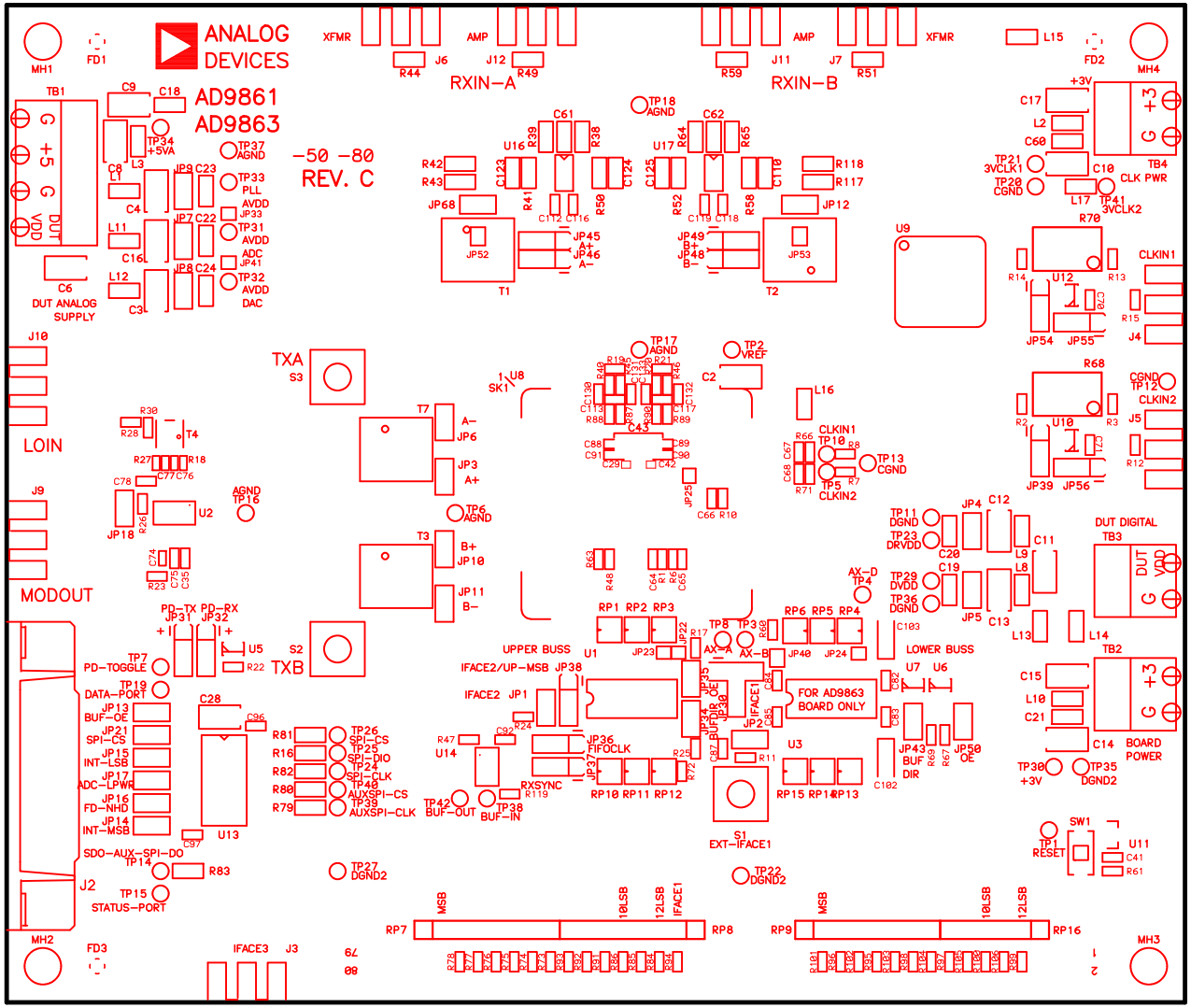
AD9861-63 REV C

SECONDARY SIDE PASTE

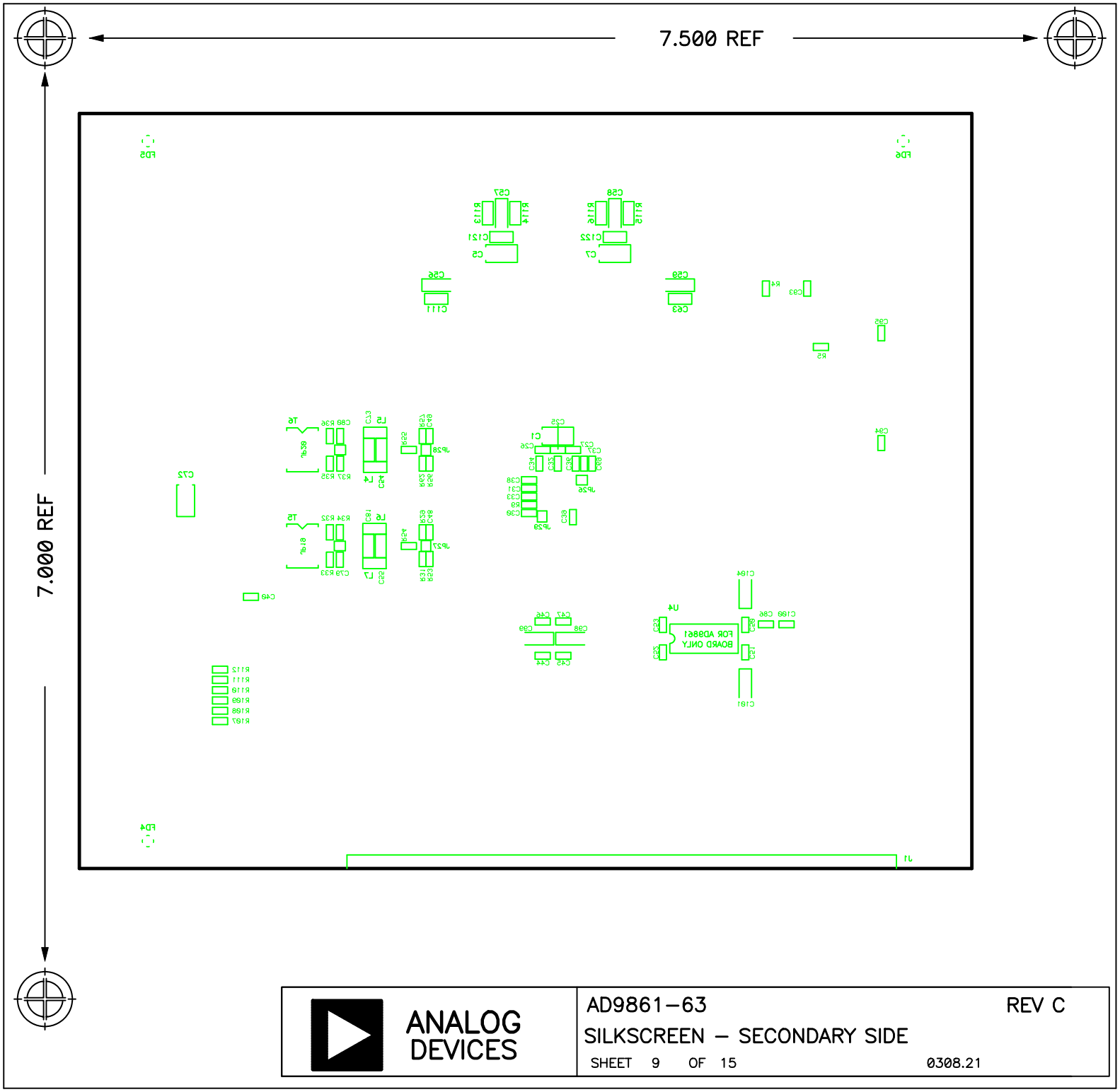
SHEET 11 OF 15 0308.21

7.500 REF

7.000 REF



ANALOG DEVICES	AD9861-63	REV C
	SILKSCREEN – PRIMARY SIDE	
	SHEET 2 OF 15	0308.21

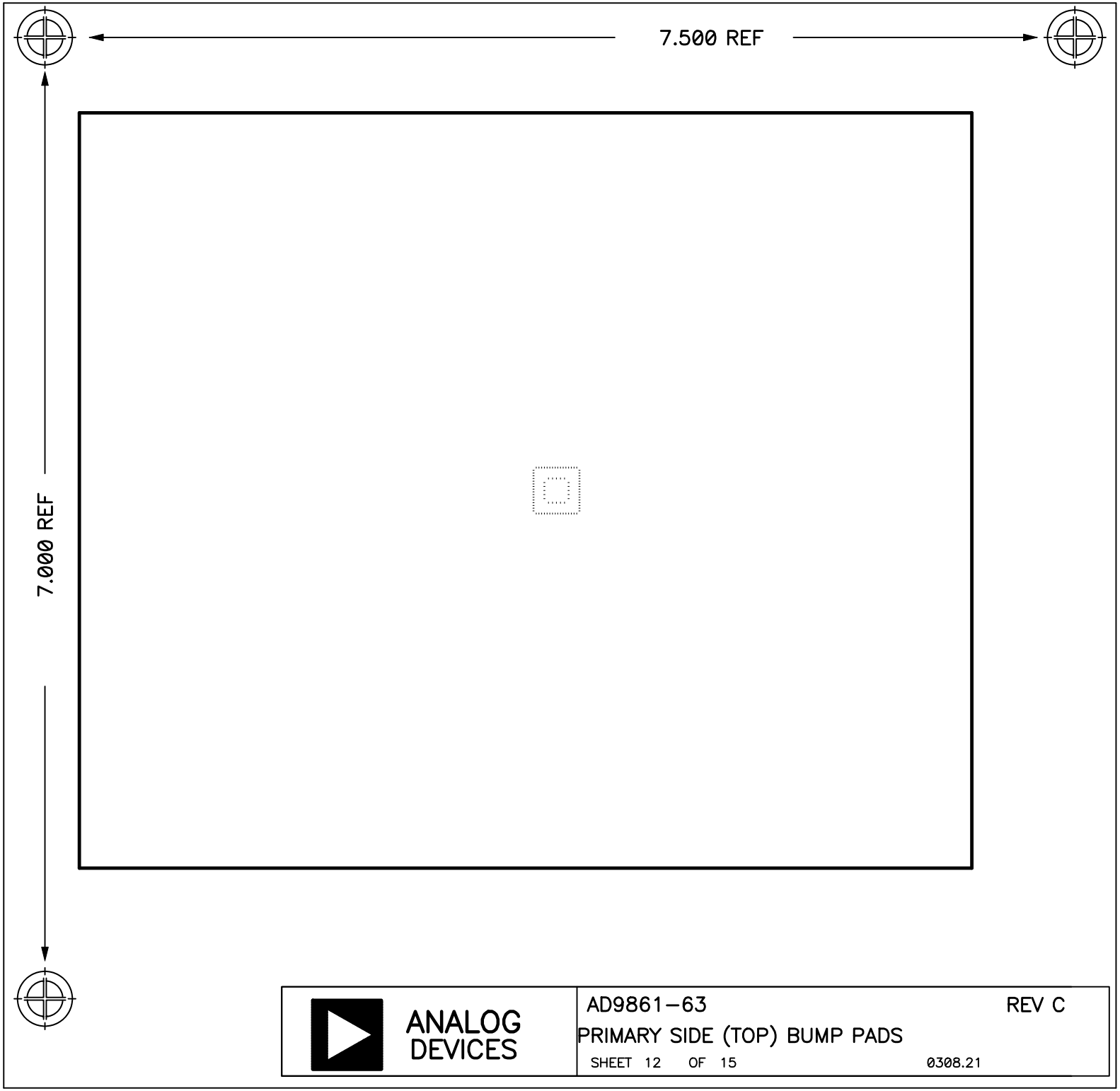


ANALOG DEVICES

AD9861–63 REV C

SILKSCREEN – SECONDARY SIDE

SHEET 9 OF 15 0308.21



ANALOG DEVICES

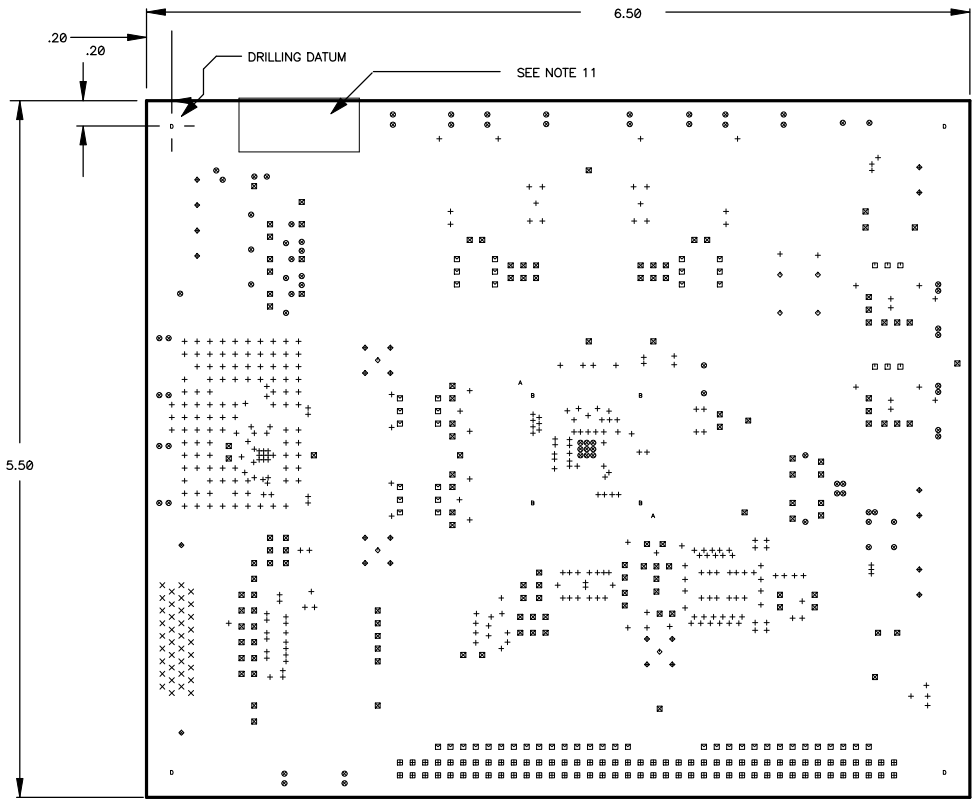
AD9861-63 REV C

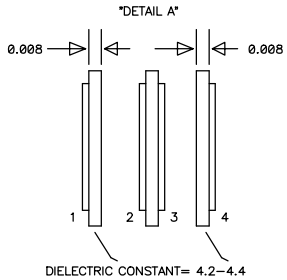
PRIMARY SIDE (TOP) BUMP PADS

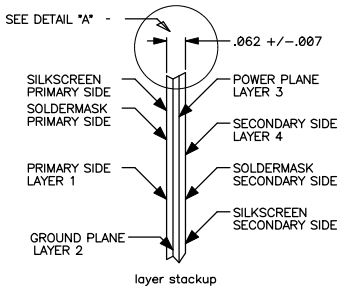
SHEET 12 OF 15 0308.21

REVISIONS					
REV	ECO	DESCRIPTION	DWN	APPLS	DATE

SIZE B AD9861-63 REV C







NOTES

1. MATERIAL: FOUR LAYER, FR4 GLASS–EPOXY LAMINATE, .062 +/–.007 THICK.
   1/2 OZ. COPPER CLAD – EXTERNAL LAYERS PLATED TO 1 1/2 OUNCE
   2 OZ. COPPER CLAD – INTERNAL LAYERS
2. PLATED THRU HOLES AND THE CONDUCTIVE PATTERN ELECTROPLATED WITH .001 INCH MIN. THICK COPPER. TERMINAL AREAS AND PLATED THRU HOLES TO BE COATED WITH SOLDER AND HOT AIR LEVELED. (SOLDER MASK OVER BARE COPPER)
4. PROCESSING TOLERANCES:
   A. CONDUCTIVE PATTERN FRONT TO BACK REGISTRATION +/– .002 INCH TOTAL.
   B. MINIMUM ANNULAR RING SURROUNDING HOLES .002 INCH.
   C. FINISHED CONDUCTIVE PATTERN +/– .0005 INCH OF GERBER APERTURE SIZE..
5. WARP AND TWIST +/–.0005 INCH PER INCH.
6. DIMENSIONS: ARE FOR THE FINISHED PART.
7. SOLDER MASK: LIQUID PHOTO IMAGABLE SOLDER MASK COLOR GREEN, BOTH SIDES USING THE PATTERN(S) PROVIDED. NO MASK IS PERMITTED ON THE EXPOSED AREAS. SOLDER MASK TO ETCH REGISTRATION +/– .002 INCH TOTAL.
8. SCREENING: SCREEN COMPONENT OUTLINES AND NOMENCLATURE USING OPAQUE WHITE INK ON THE PRIMARY AND SECONDARY SIDES (AS REQUIRED). NOMENCLATURE SHALL BE LEGIBLE. SCREEN TO ETCH REGISTRATION +/– .005 INCH TOTAL.
9. SURFACES: PUNCHED OR MACHINED SURFACES 125 MICRO INCHES RMS MAX.
10. BREAK ALL SHARP EDGES .015 R MAX.
11. FABRICATION VENDOR TO ADD UL VENDOR ID NUMBER IN THIS AREA ON THE SECONDARY SIDE.
12. DO NOT DRILL.. FOR GOLD SOCKETED VERSION ONLY.

Drill Symbol Table

Hole Dia (inch)	Symbol	Quantity	Tolerance	Plated
0.014	+	361	+.000 –.009	yes **
0.022	⊗	79	+.003 –.003	yes **
0.028	×	36	+.003 –.003	yes
0.035	⊤	6	+.003 –.003	yes
0.038	⊠	132	+.003 –.003	yes
0.042	⊞	80	+.003 –.003	yes
0.046	⊻	54	+.003 –.003	yes
0.055	◇	7	+.003 –.003	yes
0.062	◈	22	+.003 –.003	yes
0.065	A	2	+.002 –.001	no ***
0.095	B	4	+.005 –.002	no
0.109	⊗	2	+.003 –.003	yes
0.156	D	4	+.005 –.003	optional *

** MAY BE PLUGGED WITH METAL AND OR MASK.

*** SEE NOTE 12

* MAY BE USED FOR TOOLING

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ON DECIMALS .X ± .XX ±.01 .XXX ±.005 ANGLES ±.005

MATERIAL SEE NOTES

FINISH SEE NOTES

APPLICABLE STANDARDS

DRAWN J.R. MARCIN	0308.20	
CHECKED J.R. MARCIN	0308.21	
ENGINEER		
ENGINEERING MGR J.R. MARCIN	0308.21	
QUALITY CONTROL J.R. MARCIN	0308.21	
PRODUCTION J.R. MARCIN	0308.21	
WEIGHT		

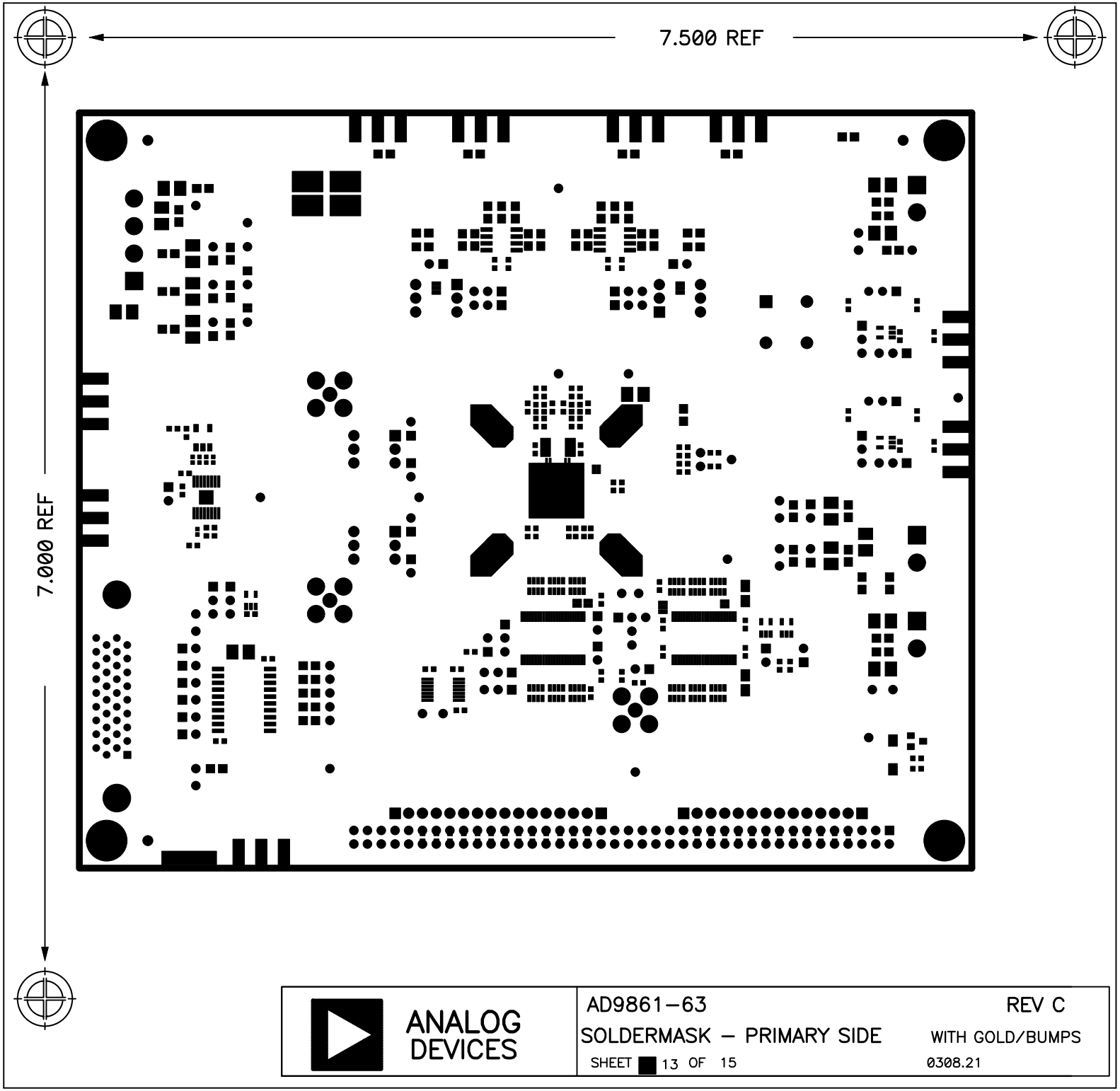
ANALOG DEVICES

FABRICATION
AD9861–63 EVAL BD.

NO SOCKET NO BUMPS NO GOLD VERSION

CODE IDENT NO. | SIZE B | AD9861–63 | REV C

SCALE * | FILE DATE 0308.21 | SHEET 15 OF 15

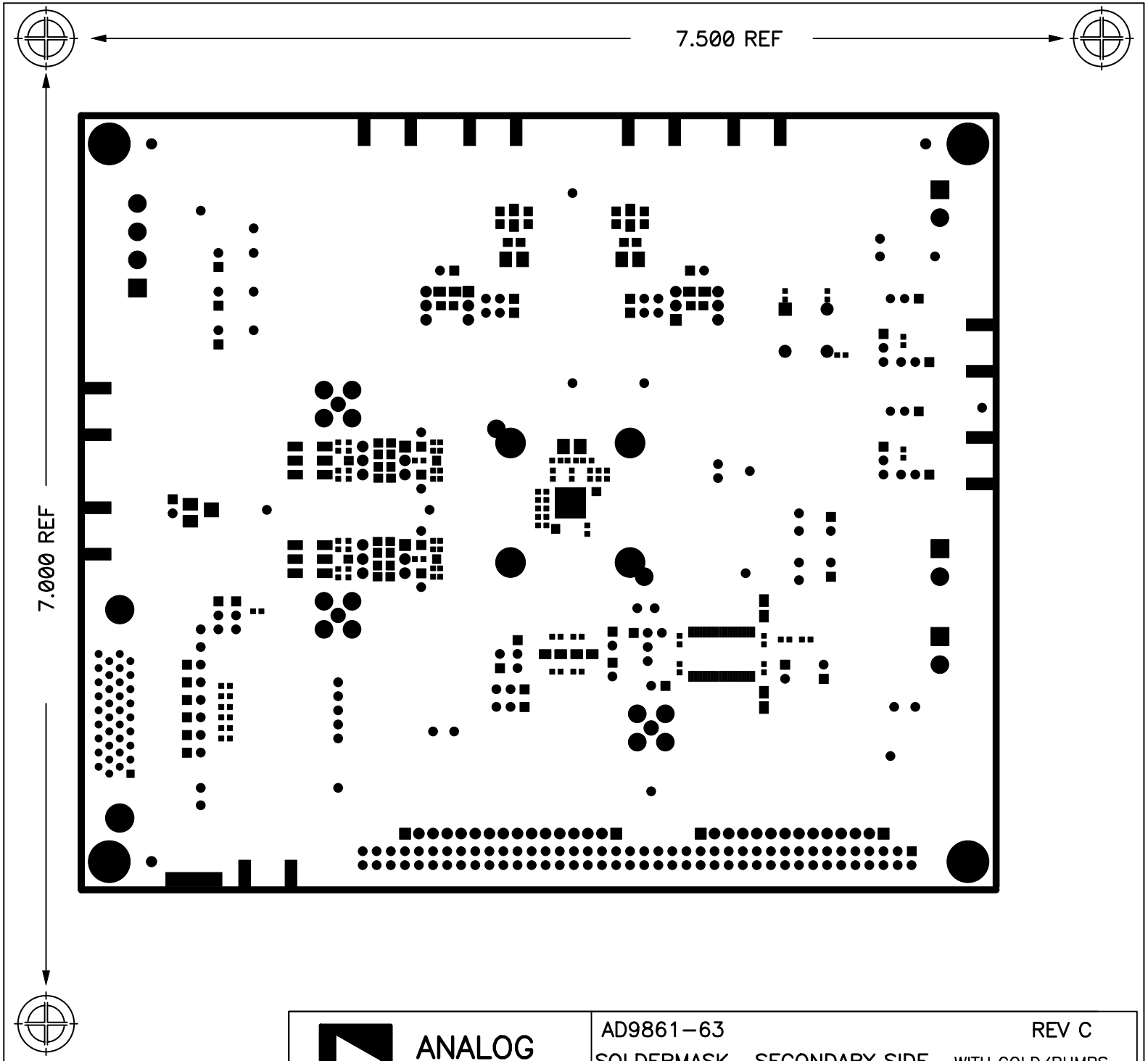


ANALOG DEVICES

AD9861–63 REV C

SOLDERMASK – PRIMARY SIDE WITH GOLD/BUMPS

SHEET 13 OF 15 0308.21



ANALOG DEVICES

AD9861-63 REV C

SOLDERMASK -SECONDARY SIDE WITH GOLD/BUMPS

SHEET 14 OF 15 0308.21