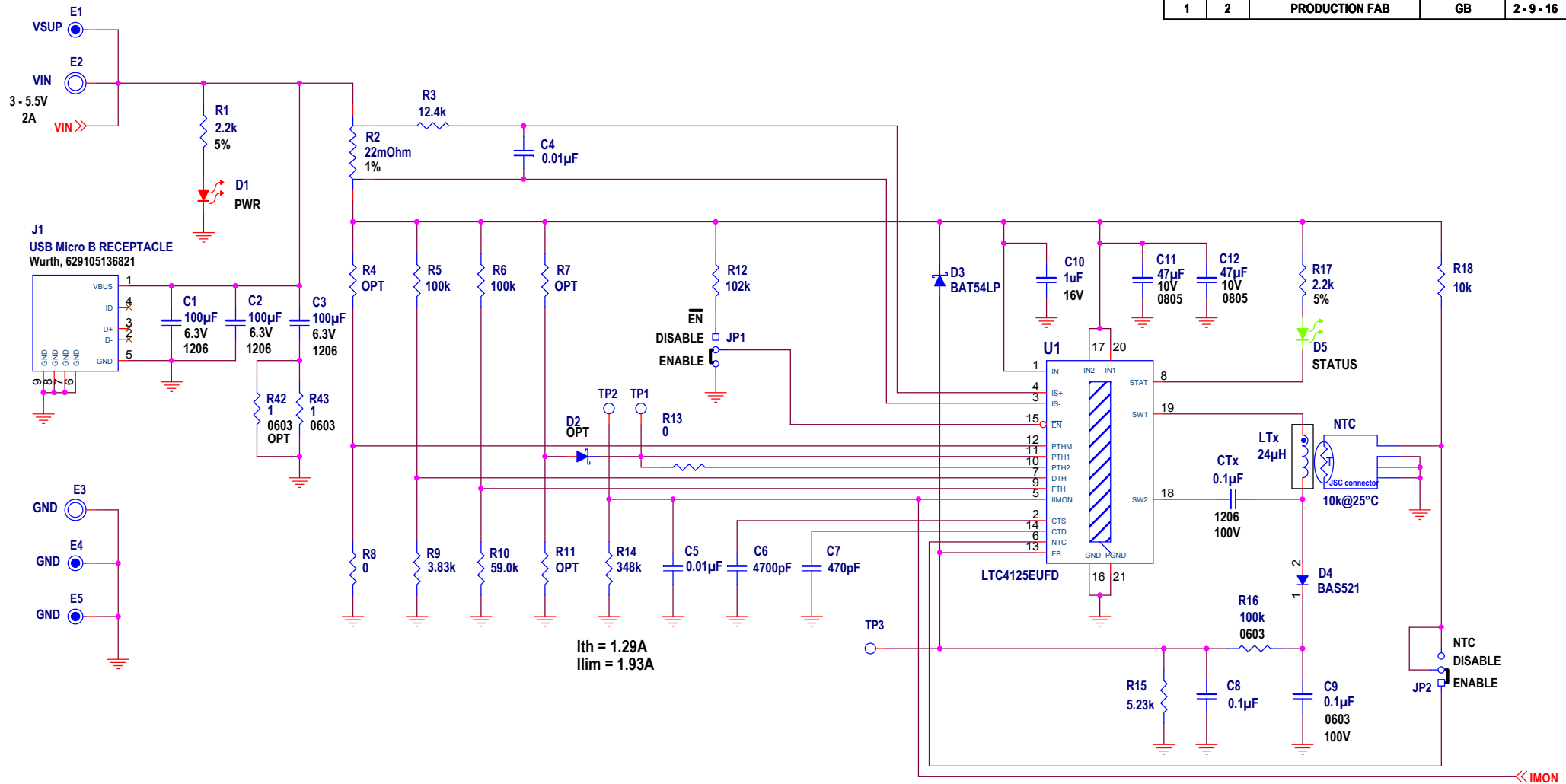


REVISION HISTORY				
ECO	REV	DESCRIPTION	APPROVED	DATE
1	2	PRODUCTION FAB	GB	2 - 9 - 16



UNLESS NOTED:  
 RESISTORS: OHMS, 0402, 1%, 1/16W  
 CAPACITORS: uF, 0402, 10%, 50V

## CUSTOMER NOTICE

LINEAR TECHNOLOGY HAS MADE A BEST EFFORT TO DESIGN A CIRCUIT THAT MEETS CUSTOMER-SUPPLIED SPECIFICATIONS; HOWEVER, IT REMAINS THE CUSTOMER'S RESPONSIBILITY TO VERIFY PROPER AND RELIABLE OPERATION IN THE ACTUAL APPLICATION. COMPONENT SUBSTITUTION AND PRINTED CIRCUIT BOARD LAYOUT MAY SIGNIFICANTLY AFFECT CIRCUIT PERFORMANCE OR RELIABILITY. CONTACT LINEAR TECHNOLOGY APPLICATIONS ENGINEERING FOR ASSISTANCE.

THIS CIRCUIT IS PROPRIETARY TO LINEAR TECHNOLOGY AND SUPPLIED FOR USE WITH LINEAR TECHNOLOGY PARTS.

## APPROVALS

PCB DES. NC

APP ENG. GB

SCALE = NONE



1630 McCarthy Blvd.  
 Milpitas, CA 95035  
 Phone: (408)432-1900 www.linear.com  
 Fax: (408)434-0507  
 LTC Confidential-For Customer Use Only

TITLE: SCHEMATIC

## AUTORESONANT WIRELESS TRANSMITTER

SIZE  
N/A

IC NO. LTC4125EUF  
 DEMO CIRCUIT 2330A

REV.  
2

DATE: 2 - 9 - 16

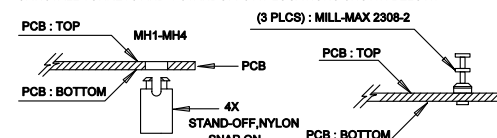
SHEET 1 OF 2



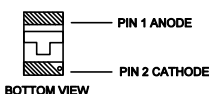
REVISION HISTORY			
ECO	REV	DESCRIPTION	DATE
-	2	PRODUCTION	GB

# NOTES: UNLESS OTHERWISE SPECIFIED

1. WORKMANSHIP SHALL BE IN ACCORDANCE WITH IPC-A-810, CLASS 2.
2. ASSEMBLY REFLOW PROFILE SHALL BE IN ACCORDANCE WITH J-STD-020 WITH MAXIMUM SOLDER TEMPERATURE OF 260 DEGREES CELSIUS.
3. PARTS TO OMIT WILL BE SPECIFIED ON THE BILL OF MATERIALS. LOCATIONS OF OMITTED PARTS SHALL BE FREE OF SOLDER. MASK THE SOLDER STENCIL WHERE SMT PARTS ARE OMITTED.
4. DEPANELIZE BOARDS AFTER ASSEMBLY AND ROUTE-OUT THE BREAKOUT TABS ON FOUR SIDES OF THE BOARD EDGE.
5. APPLY ASSEMBLY STAMP OR QA STAMP TO BOTTOM OF BOARD (UNSHOWY AREA).
6. INSTALL TURRETS AND 4 STANDOFFS AT LOCATIONS SHOWN BELOW:

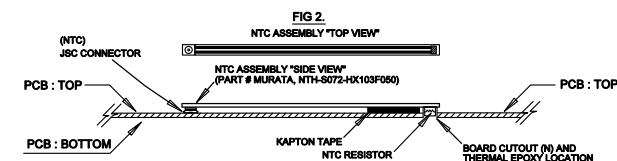
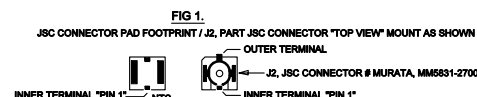


7. INSTALL 10 LED's AS SHOWN:



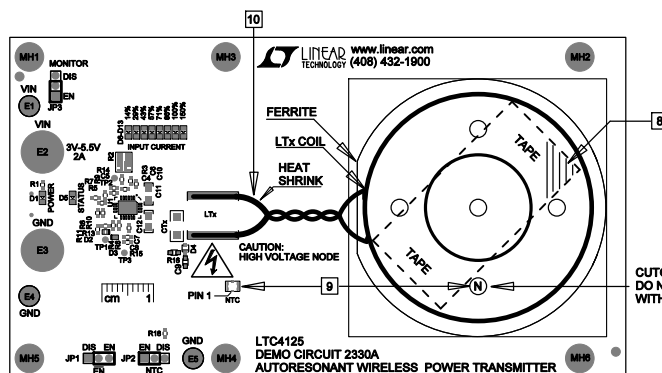
NOTE: ASSEMBLY STEPS 8-10 ARE POST ASSEMBLY. "WATER WASH ONLY"

8. CUT KAPTON TAPE TO LENGTH 0.75" in. x 1.50" in. AND PLACE AS SHOWN ON TOP OF BOARD. NOTE: DO NOT COVER HOLE (N) WITH TAPE.
9. CONNECT NTC ASSEMBLY TO JSC CONNECTOR AS SHOWN IN FIG1. (NOT TO SCALE) NOTE: NTC RESISTOR REQUIRES THERMAL EPOXY (DOW CORNING 3-6752) SEE FIG 2. AND STEPS LISTED BELOW FOR PROPER PROCEDURE.  
STEP 1: ATTACH LTx TO BOARD, USE SILK SCREEN FOR LOCATION AND ENSURE LEADS OVERLAP PADS. LAY BOARD WITH LTx DOWN, PUSH NTC AGAINST BOTTOM OF LTx THROUGH HOLE (N). DON'T DISLODGE LTx, VERIFY NTC IS IN CONTACT WITH THE FERRITE.  
STEP 2: FILL HOLE (N) WITH THERMAL EPOXY.  
STEP 3: CURE THERMAL EPOXY FOR 10 MINUTES, AT 125 DEG. C, BEFORE TURNING PCB OVER.
10. SOLDER LEADS OF LTx (WURTH, 780308100110) AS SHOWN. NOTE: LEADS OF LTx COIL NEED TO BE TWISTED PRIOR TO ASSEMBLY. TAKE BOTTOM TERMINAL WIRE AND PLACE OVER TOP TERMINAL WIRE. CONTINUE TO TWIST TO EDGE OF HEAT SHRINK AT THE END OF THE TERMINAL WIRES.

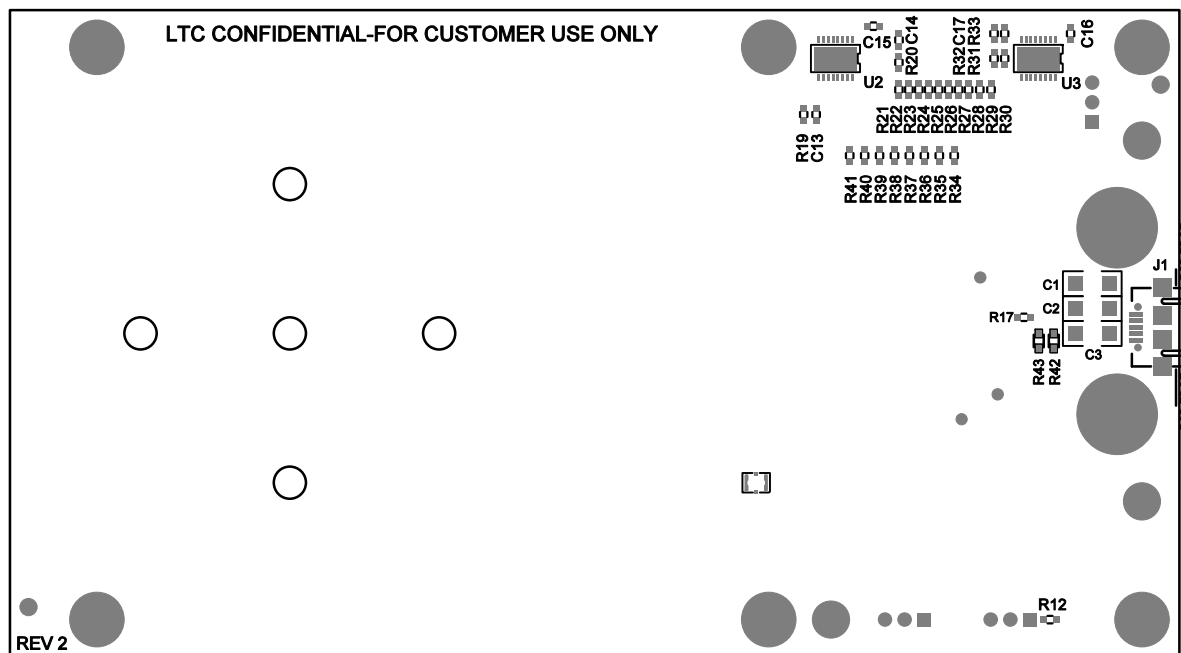



## MANUFACTURERS P/N AND INSTRUCTIONS FOR USE AND HANDLING

1. USE BERTECH PPTDE-3/4, 38yd, ROLL AVAILABLE FROM KAPTON TAPE.COM
2. USE 12mm3 (SEE NOTE 9) OF DOW CORNING 3-6752 THERMAL EPOXY DISPENSED FROM A 30cc TUBE, 30cc TUBE ORDERABLE FROM ELLSWORTH ADHESIVES AS 3-6752 TC ADHESIVE 75G.  
A. CURE THERMAL EPOXY BY PUTTING 125°C OVEN FOR 3 MINUTES.  
B. THERMAL EPOXY MUST BE STORED AT BELOW 5°C BEFORE AND AFTER EACH USE.  
C. ALWAYS USE PURPOSE MADE DISPENSING TOOL (ITEM I) AND TIP (II).  
I) ELLSWORTH ADHESIVES P/N FISNAR JD627  
II) ELLSWORTH ADHESIVES P/N 8001086, 12.7mm 16 GUAGE NEEDLE TIP



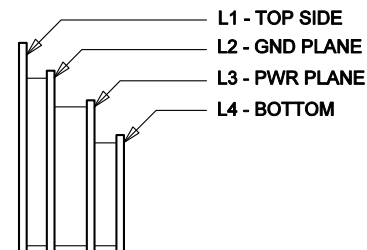
APPROVALS		LINEAR TECHNOLOGY	
PCB DES.	NC	TITLE: TOP ASSEMBLY DRAWING: AUTORESONANT WIRELESS POWER TRANSMITTER	
APP ENG.	GB		
		SIZE	IC NO.
		N/A	LTC4125
			REV.
			2
SCALE = NONE		FILENAME: DC2330A-2.PCB	SHT 1 of 2



APPROVALS		 <b>LINEAR TECHNOLOGY</b> 1630 MCCARTHY BLVD MILPITAS, CA 95035 PH: (408)432-1900 www.linear.com LTC CONFIDENTIAL-FOR CUSTOMER USE ONLY	
PCB DES.	NC		
APP ENG.	GB	<b>TITLE: BOTTOM ASSEMBLY DRAWING:</b> <b>AUTORESONANT WIRELESS POWER TRANSMITTER</b>	
		<b>SIZE</b> N/A	<b>IC NO.</b> LTC4125 <b>REV.</b> 2
SCALE = NONE		<b>FILENAME:</b> DC2330A-2.PCB	
		<b>SHT 2 of 2</b>	

REVISION HISTORY				
ECO	REV	DESCRIPTION	APPR	DATE
-	2	PRODUCTION	GB	12-9-15

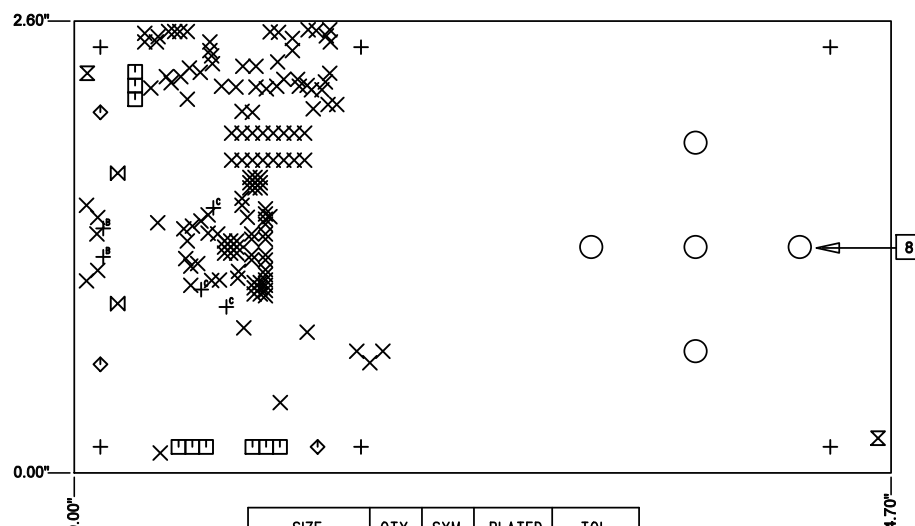
## LAYER STRUCTURE



## NOTES: UNLESS OTHERWISE SPECIFIED

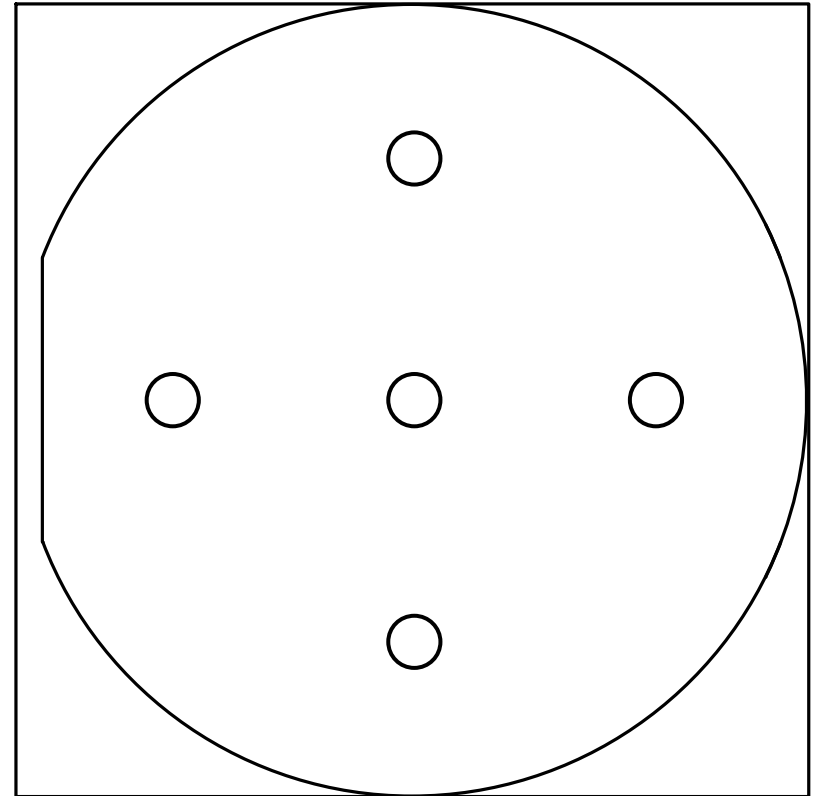
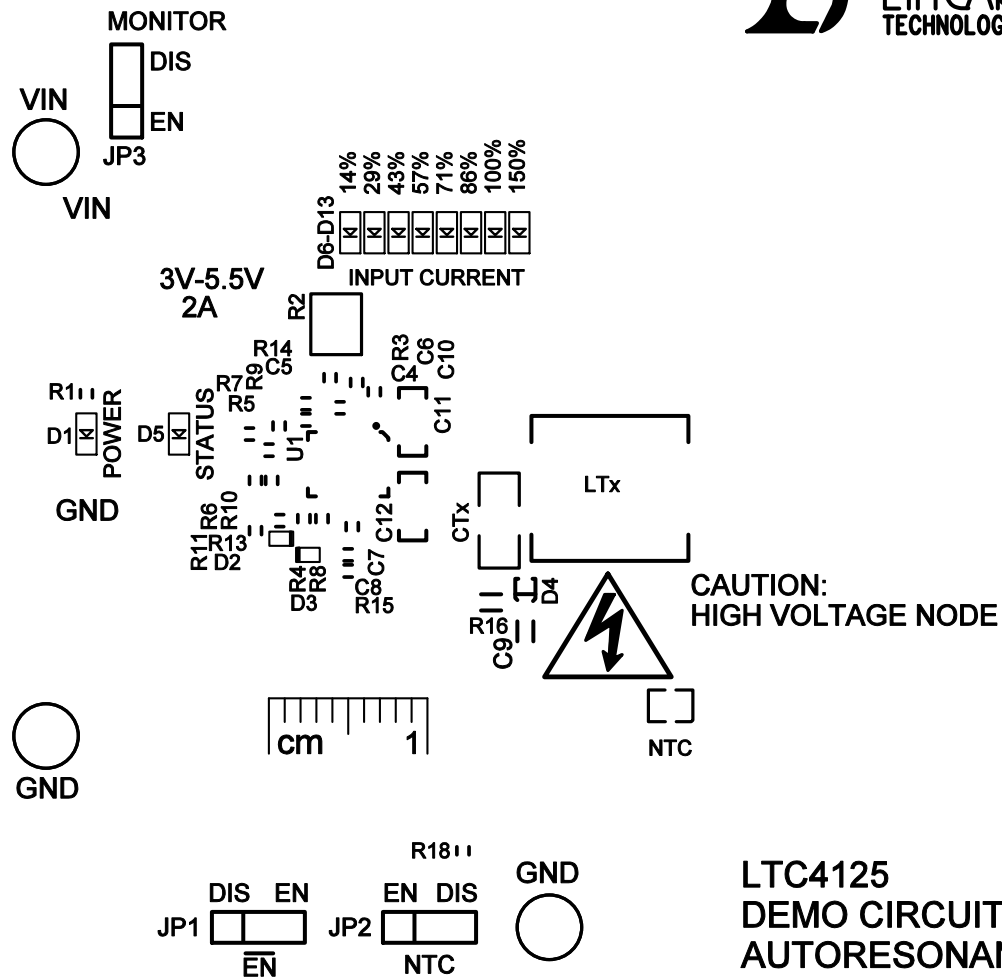
- FAB PER IPC-A-600.
- MATERIAL: -LEAD FREE ASSEMBLY COMPLIANT, ISOLA FR-370HR OR EQUIVALENT.  
-FINISHED THICKNESS TO BE 0.062" +/- .005"  
-TOTAL OF 4 LAYERS WITH 2 OZ. CU ON ALL LAYERS  
-FLAMMABILITY RATING: 94 V-0 MINIMUM.
- SIZE: CUT TO DIMENSIONS AND TOLERANCES SHOWN.  
0.00 ARE PRIMARY DATUMS.
- DRILLING: -DRILL HOLES PER SCHEDULE. PLATE THROUGH HOLES WITH COPPER, 0.001" THICK MIN.  
-ALL HOLE SIZES ARE SPECIFIED AFTER PLATING.  
-HOLE LOCATION TOLERANCES ARE +/-0.003" IN RELATION TO CENTER
- FINISH: -SMOBC USING LPI BOTH SIDES, COLOR GREEN, NO TENT.  
-GOLD IMMERSION BOTH SIDES.  
-FOR SILKSCREEN: BOTH SIDES USE WHITE NON-CONDUCTIVE INK.
- DO NOT ALTER ARTWORK e.g. TO ADD LOGO OR DATE CODE.  
PAD SIZE CAN BE MODIFIED TO MEET END FINISH.
- PCBS ARE TO BE RoHS COMPLIANT.  
-PLACE A Pbf STAMP ON BOTTOM OF BOARD (UNSHOWY AREA)

[8] LOCATIONS FOR BOARD CUTOUTS. (4X)

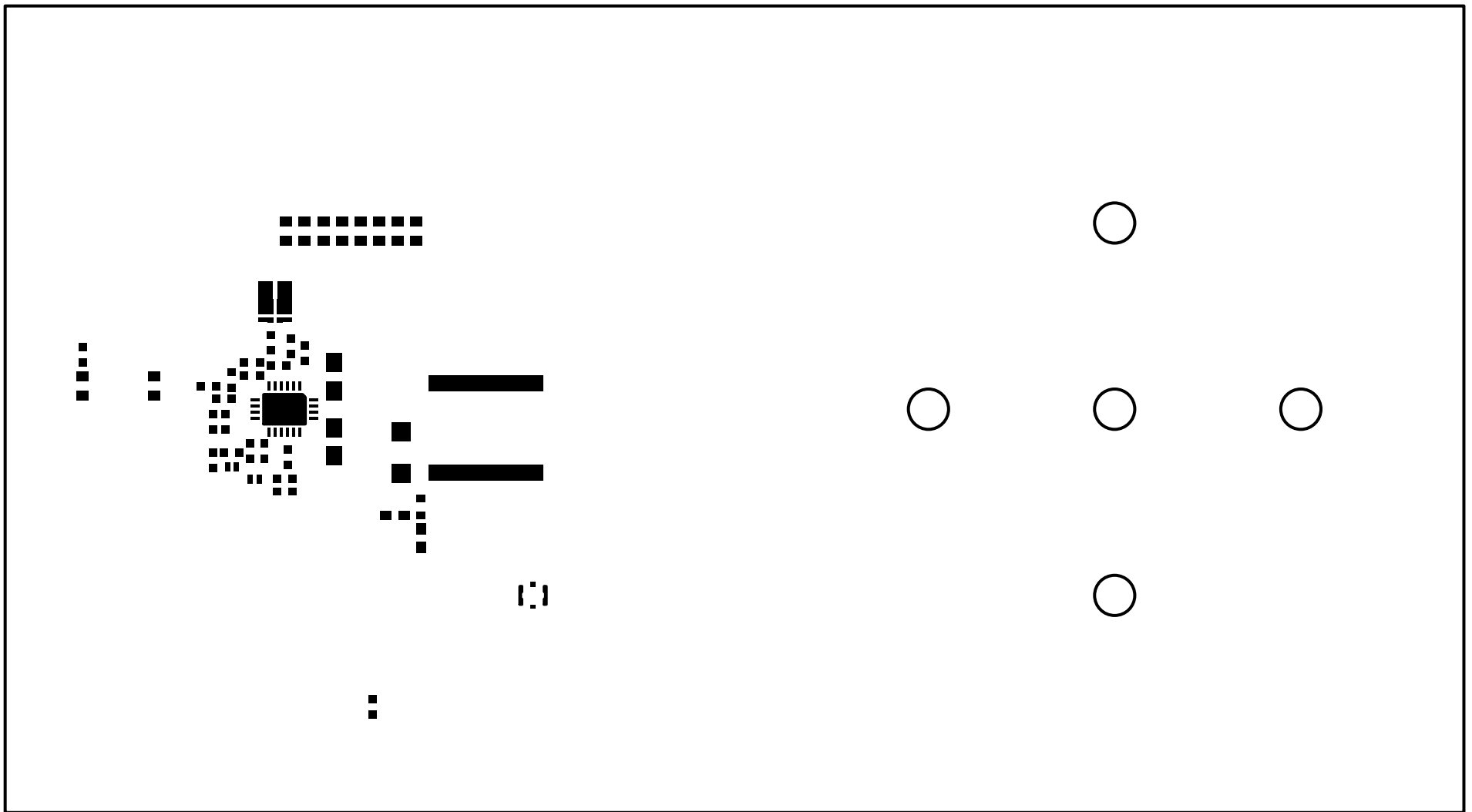


SIZE	QTY	SYM	PLATED	TOL
0.01	139	X	YES	+/-0.003
0.031	9	□	YES	+/-0.003
0.07	2	⊗	NO	+/-0.003
0.094	3	◇	YES	+/-0.003
0.187	6	+	YES	+/-0.003
0.205	2	⊗	YES	+/-0.003
0.02756	2	+ <sup>B</sup>	NO	+/-0.003
0.03	3	+ <sup>C</sup>	YES	+/-0.003

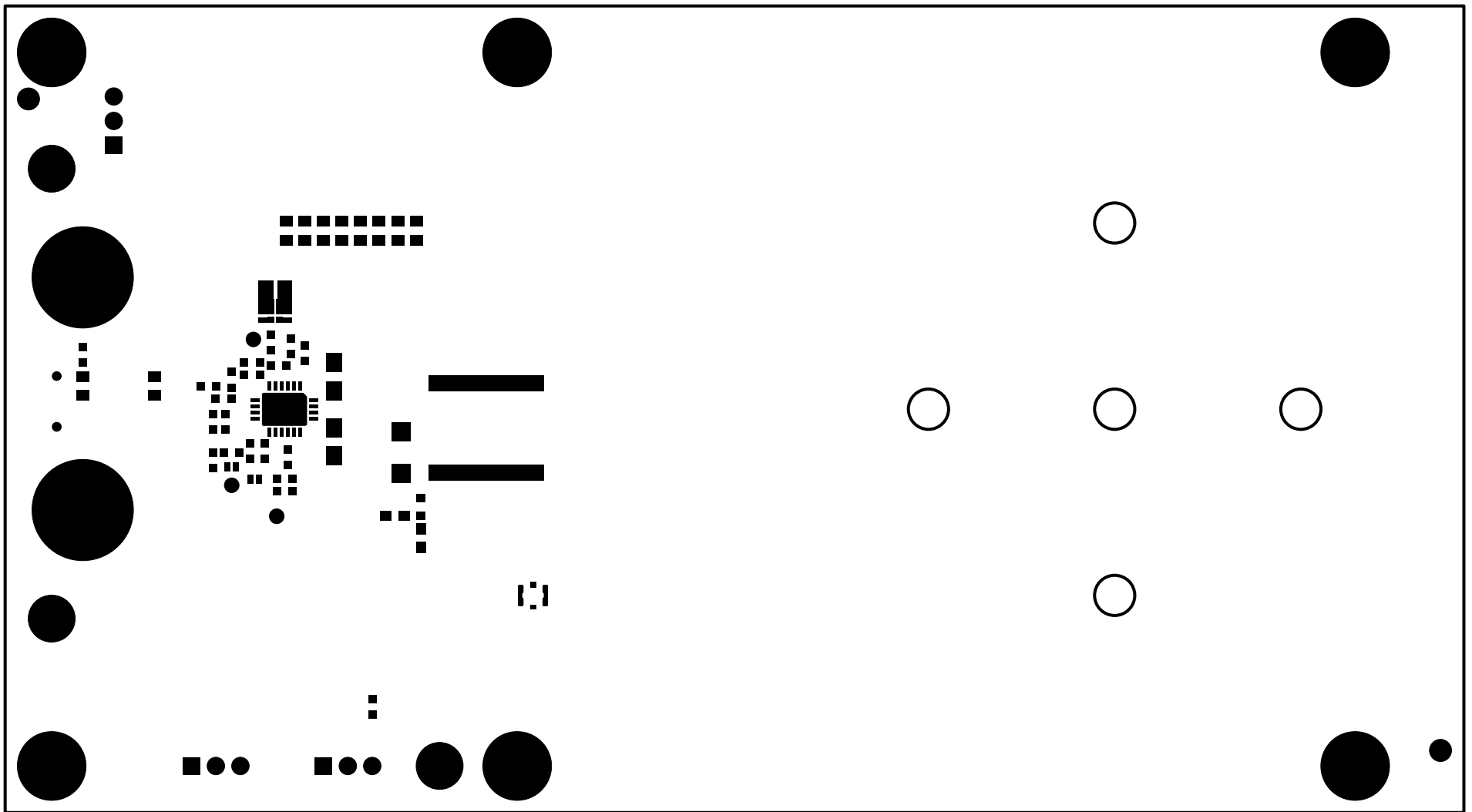
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON ANGLE ±1 0.XX" = ±0.01" 0.XXX" = ±0.005" INTERPRET DIM AND TOL PER ASME Y14.5M-1994 THIRD ANGLE PROJECTION 	APPROVALS		 1630 MCARTHUR BLVD MILPITAS, CA 95035 PH: (408)452-1000 www.linear.com LTC CONFIDENTIAL - FOR CUSTOMER USE ONLY
	PCB DES.	NC	
	APP ENG.	GB	
DO NOT SCALE DRAWING	SCALE: NONE		TITLE: FABRICATION DRAWING: AUTORESONANT WIRELESS POWER TRANSMITTER
	SIZE	IC NO. LTC4125	REV. 2
	N/A	DEMO CIRCUIT 2330A	
	FILENAME: DC2330A-2.PCB		SHT 1 of 1



**SILKSCREEN TOP**  
**LINEAR TECH CORP.**  
**DEMO CIRCUIT 2330A-2 \* LTC4125**  
**AUTORESONANT WIRELESS POWER TRANSMITTER**  
**DATE: 12-9-15**

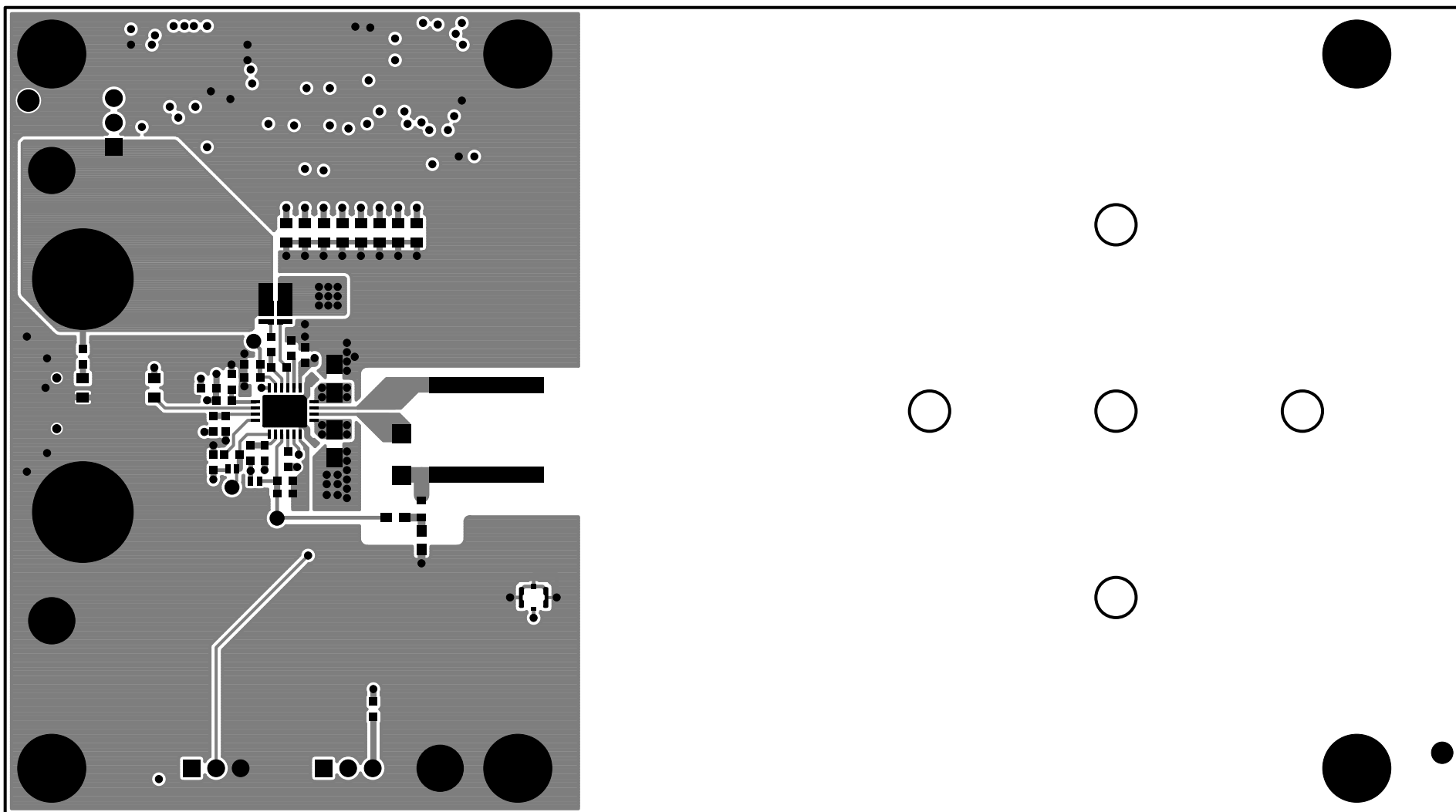


PASTEMASK TOP  
LINEAR TECH CORP.  
DEMO CIRCUIT 2330A-2 \* LTC4125  
AUTORESONANT WIRELESS POWER TRANSMITTER  
DATE: 12-9-15

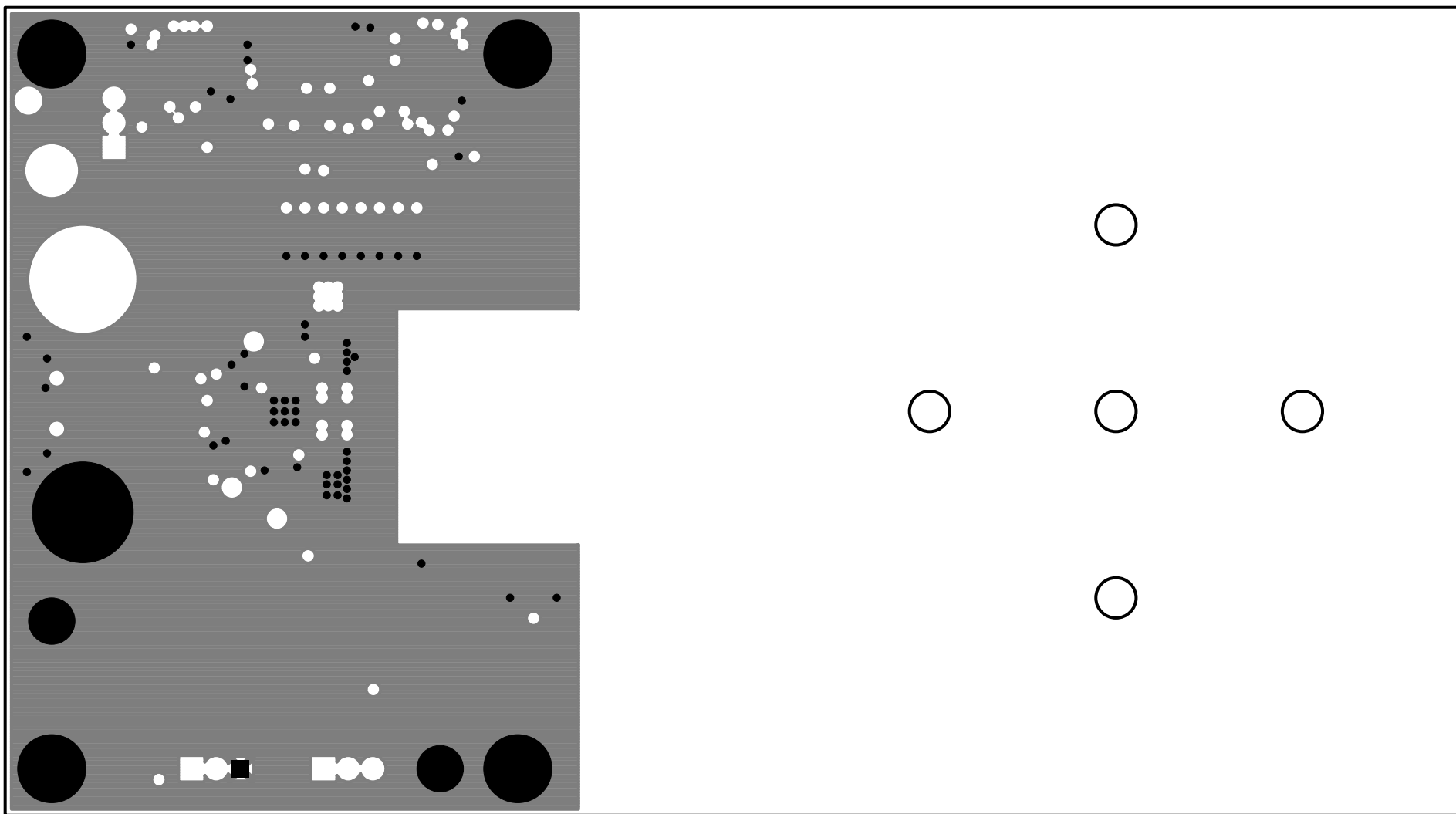


SOLDERMASK TOP  
LINEAR TECH CORP.  
DEMO CIRCUIT 2330A-2 \* LTC4125  
AUTORESONANT WIRELESS POWER TRANSMITTER  
DATE: 12-9-15

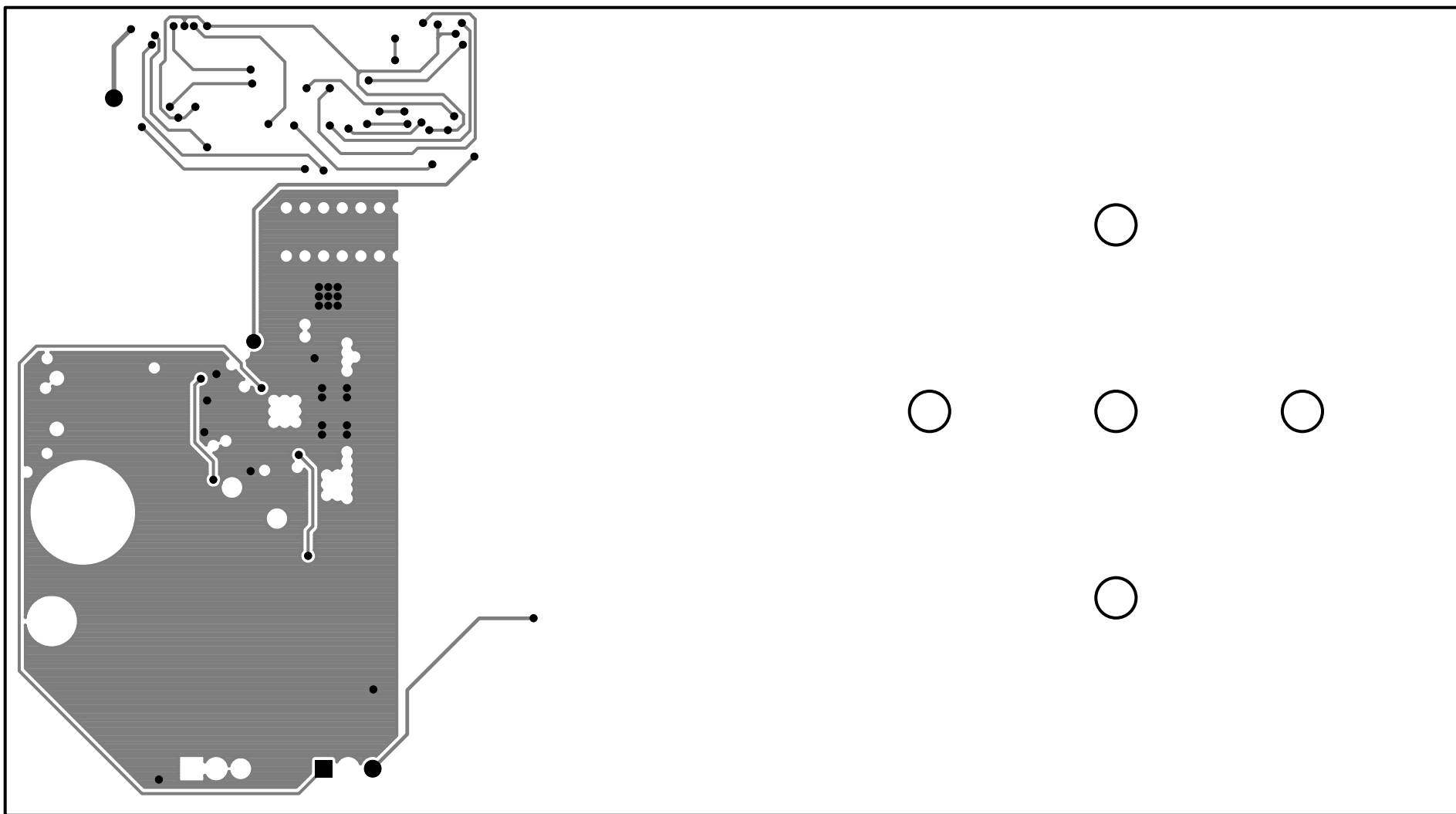




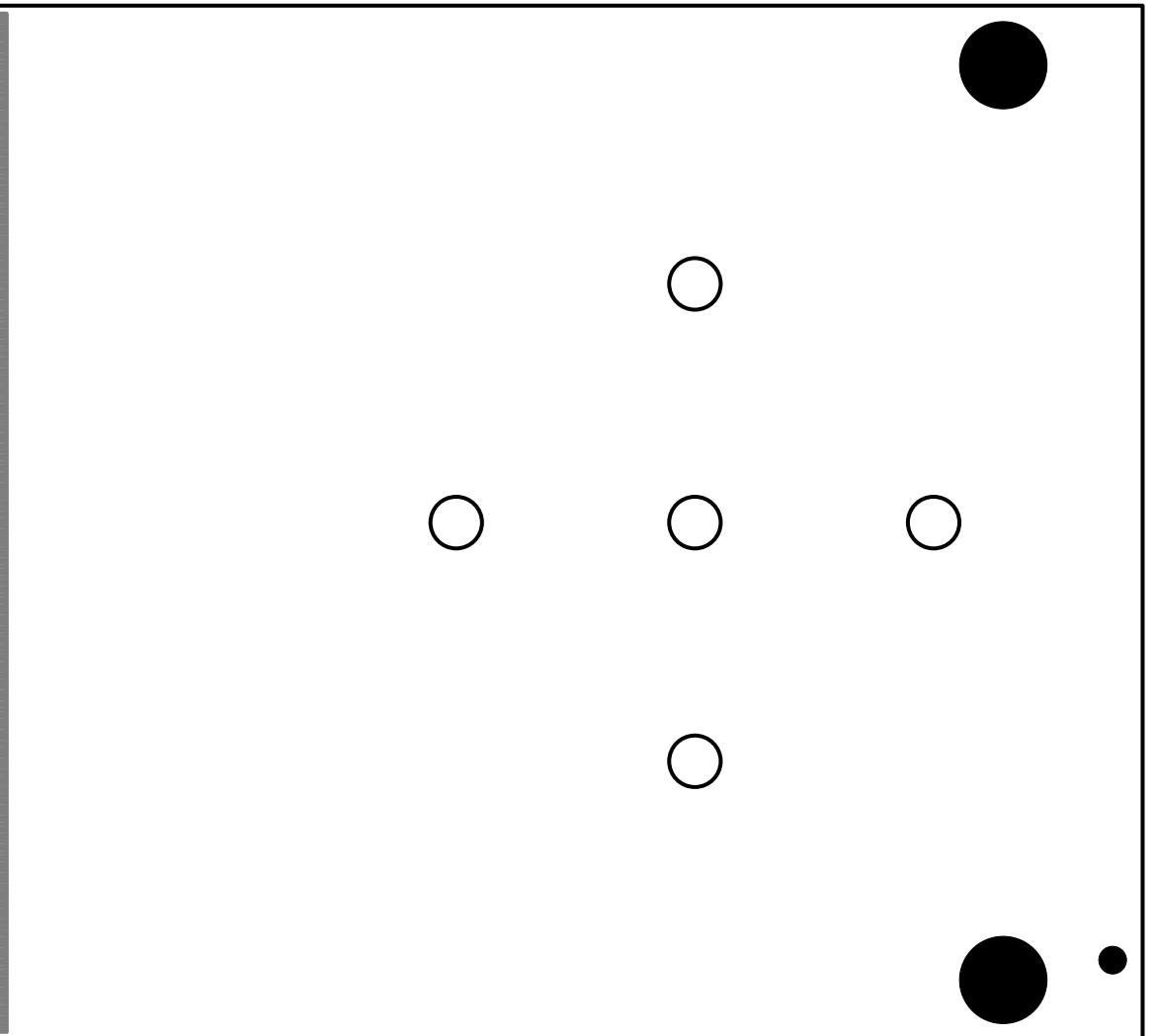
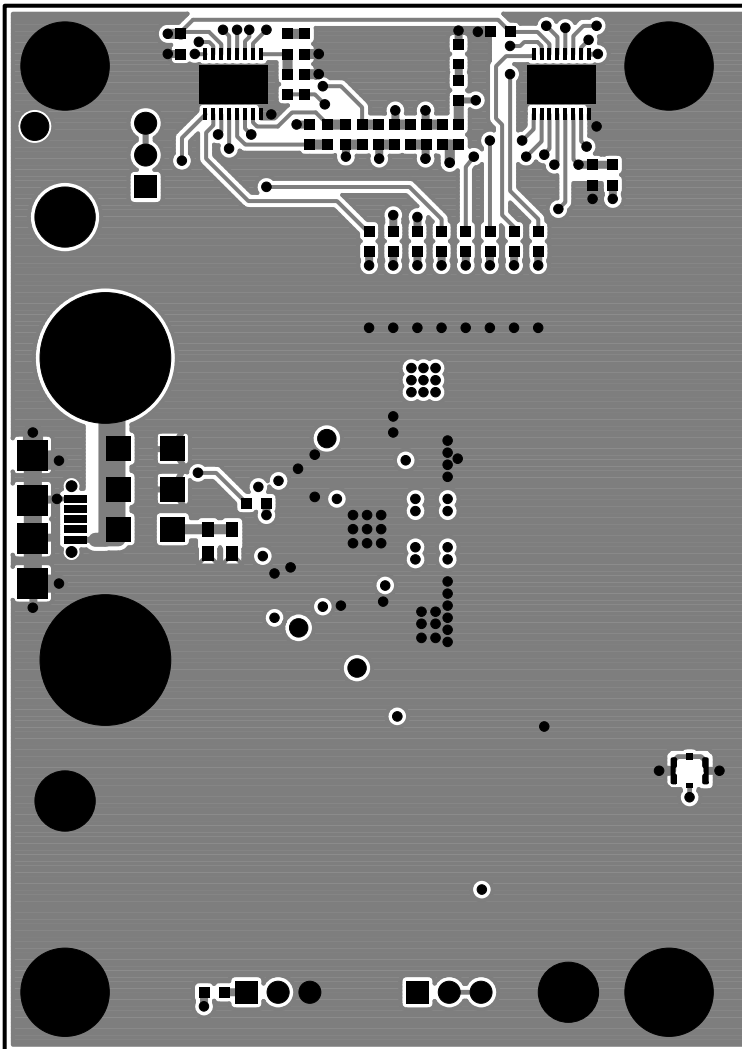
TOP LAYER  
LINEAR TECH CORP.  
DEMO CIRCUIT 2330A-2 \* LTC4125  
AUTORESONANT WIRELESS POWER TRANSMITTER  
DATE: 12-9-15



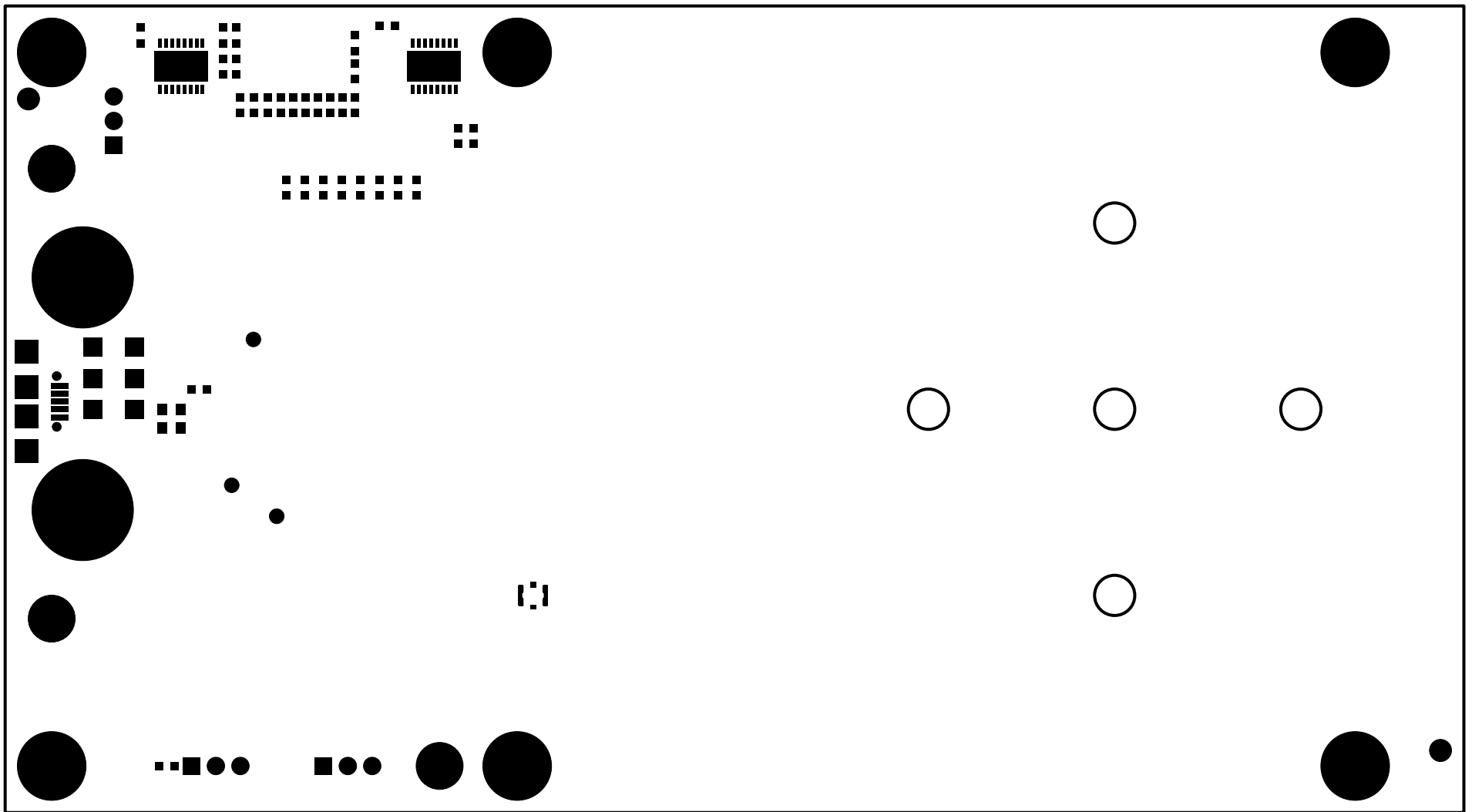
LAYER 2 GND PLANE  
LINEAR TECH CORP.  
DEMO CIRCUIT 2330A-2 \* LTC4125  
AUTORESONANT WIRELESS POWER TRANSMITTER  
DATE: 12-9-15



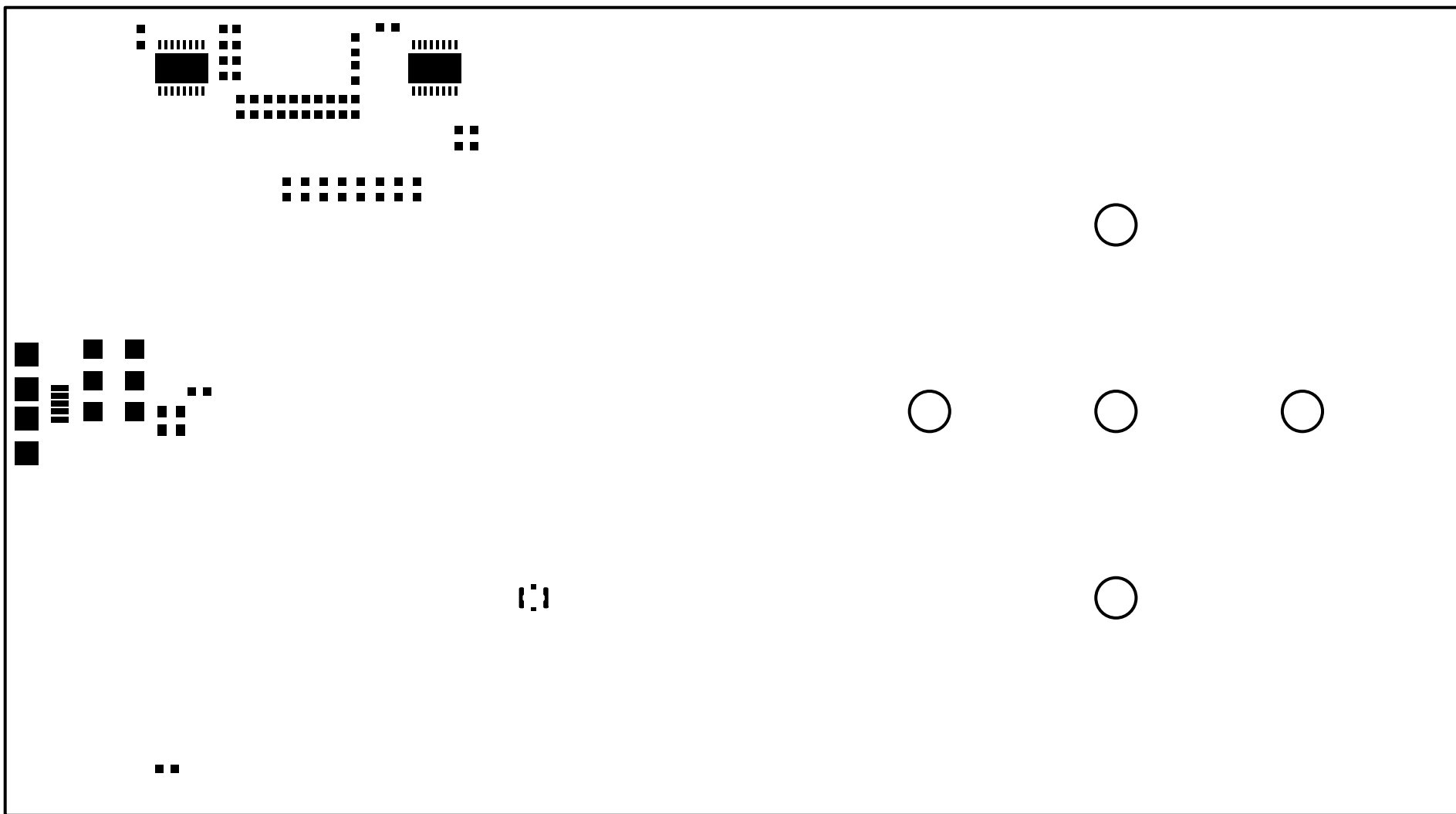
LAYER 3 POWER PLANE  
LINEAR TECH CORP.  
DEMO CIRCUIT 2330A-2 \* LTC4125  
AUTORESONANT WIRELESS POWER TRANSMITTER  
DATE: 12-9-15



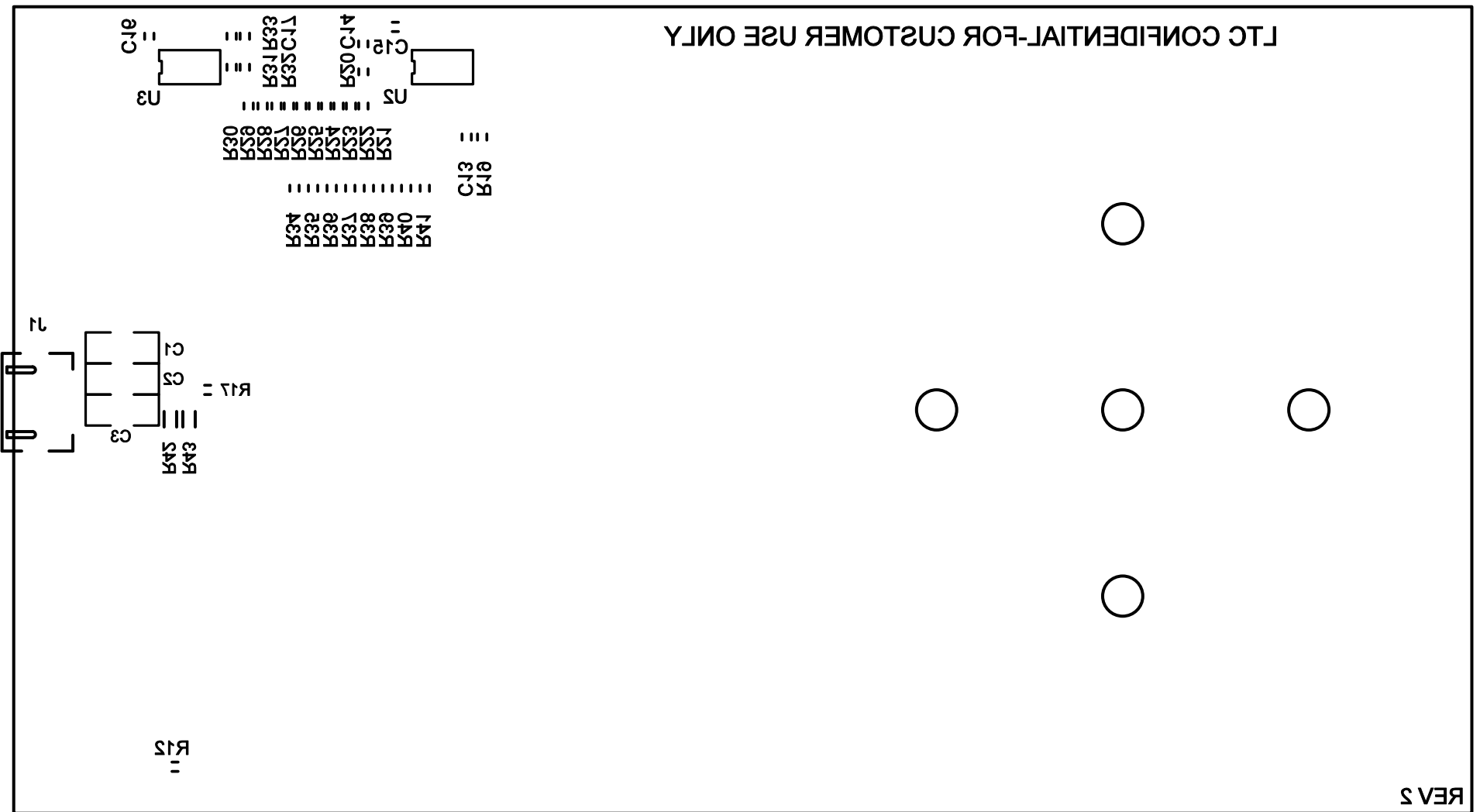
**BOTTOM SIDE**  
**LINEAR TECH CORP.**  
**DEMO CIRCUIT 2330A-2 \* LTC4125**  
**AUTORESONANT WIRELESS POWER TRANSMITTER**  
**DATE: 12-9-15**



SOLDERMASK BOTTOM  
LINEAR TECH CORP.  
DEMO CIRCUIT 2330A-2 \* LTC4125  
AUTORESONANT WIRELESS POWER TRANSMITTER  
DATE: 12-9-15



PASTEMASK BOTTOM  
LINEAR TECH CORP.  
DEMO CIRCUIT 2330A-2 \* LTC4125  
AUTORESONANT WIRELESS POWER TRANSMITTER  
DATE: 12-9-15



**SILKSCREEN BOTTOM**  
**LINEAR TECH CORP.**  
**DEMO CIRCUIT 2330A-2 \* LTC4125**  
**AUTORESONANT WIRELESS POWER TRANSMITTER**  
**DATE: 12-9-15**