LBEE5ZSTNC COM6M
User Guide

Texas Instruments WL1271L Chipset for WLAN/BT

Product Description : WLAN/BT Module and Daughter Card

Sample Part Number : LBEE5ZSTNC-TEMP-D

Revision Code	Date	Description	Comments
-	07.05.2011	First Issue	

1. Scope

This user guide describes hardware attributes for the COM6M board. The COM6M provides WLAN and Bluetooth wireless functions based on the Murata LBEE5ZSTNC module containing the Texas Instruments WL1271L integrated circuit. COM6M interfaces to the Texas Instruments Centaurus development platform, DM814x/AM387x. The Com6M board is preconfigured for operation on the Centaurus platform. Details contained herein are for customer information and documentation purposes.

2. Part Number

Sample Part Number	LBEE5ZSTNC-TEMP-D

3. Board Appearance

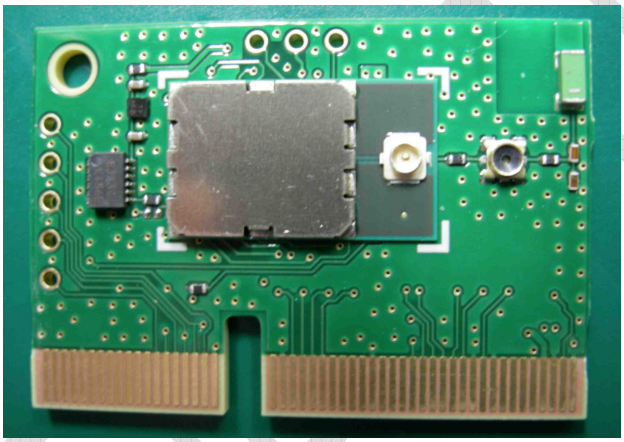


Fig.1 Appearance (Top side)

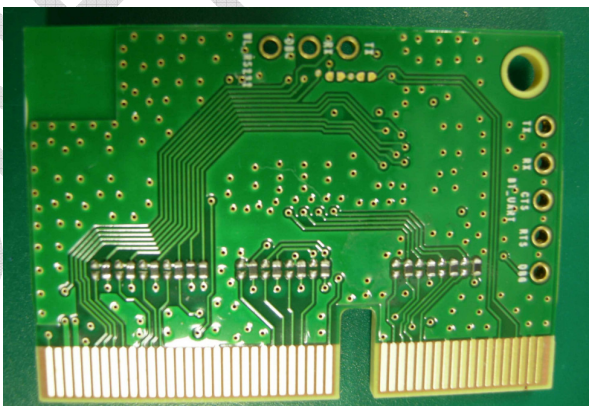


Fig.2 Appearance (Bottom side)

4. COM6M board configurations

4.1 Interfaces

4.1.1 WLAN Host Interface

COM6M supports SDIO/SPI as WLAN Host Interface. SDIO is the primary host interface. The host interface can be changed with 0ohm jumpers. The detail is shown Table.1 below. COM6M supports RS232 only for the debug purpose.

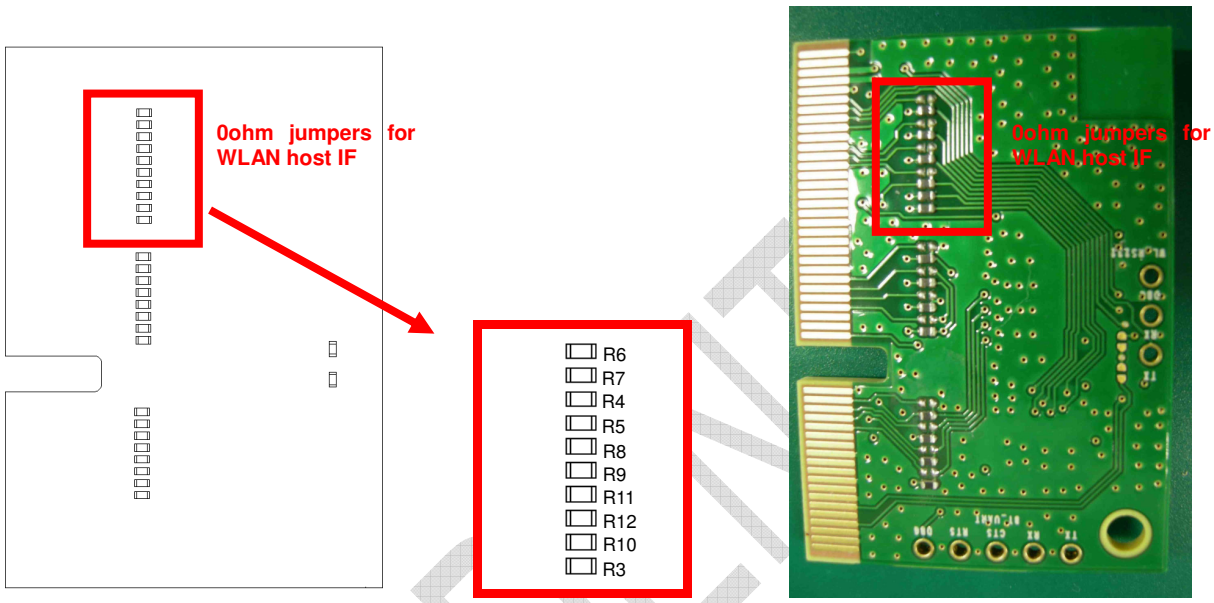


Fig.3 WLAN Host IF jumpers on COM6M

Table1. WLAN Host IF configurations

Host IF	R6	R7	R4	R5	R8	R9	R11	R12	R10	R3
SDIO (primary)	NC	0ohm	NC	0ohm	NC	0ohm	NC	0ohm	0ohm	0ohm
SPI	0ohm	NC	0ohm	NC	0ohm	NC	0ohm	NC	NC	NC

4.1.2 Bluetooth Host Interface

COM6M supports UART/SPI as Bluetooth Host Interface. UART is the primary host interface. The host interface can be changed with 0ohm jumpers. The detail is shown Table.2 below.

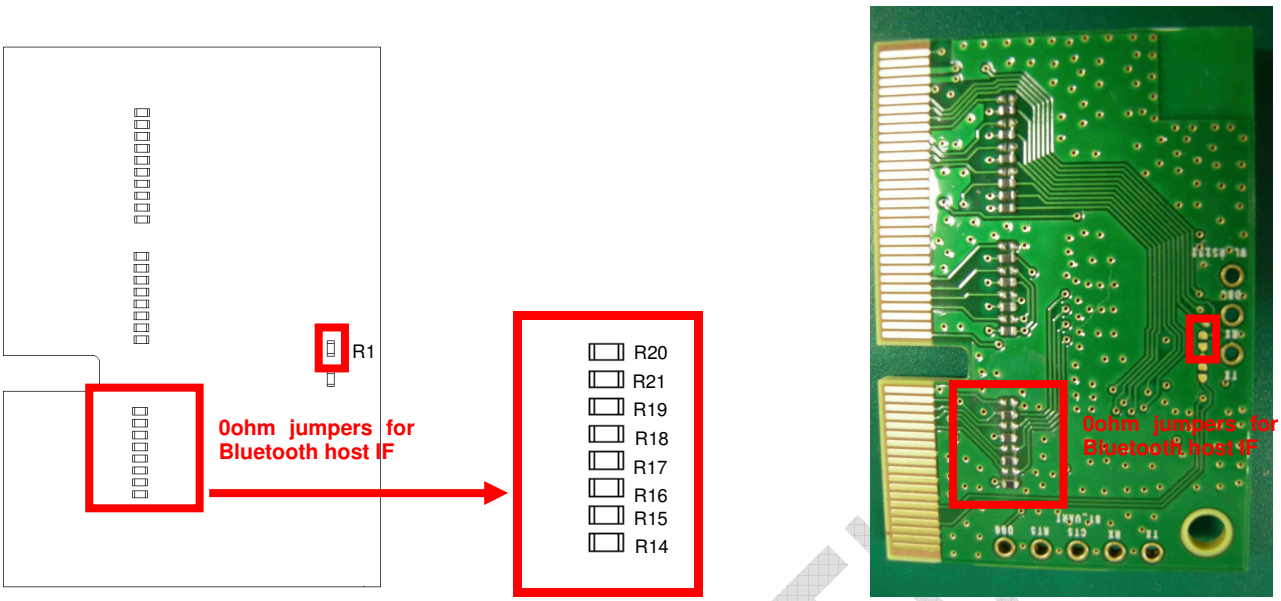


Fig.4 Bluetooth Host IF jumpers on COM6M

Table.2 Bluetooth Host IF configurations

Host IF	R20	R21	R19	R18	R17	R16	R15	R14	R1
UART (primary)	NC	0ohm	NC	0ohm	NC	0ohm	NC	0ohm	NC
SPI	0ohm	NC	0ohm	NC	0ohm	NC	0ohm	NC	0ohm

4.1.3 Bluetooth Voice Interface

COM6M supports PCM/I2S as Bluetooth Voice Interface. PCM is the primary interface. The interface can be changed with 0ohm jumpers. The detail is shown Table.3 below.

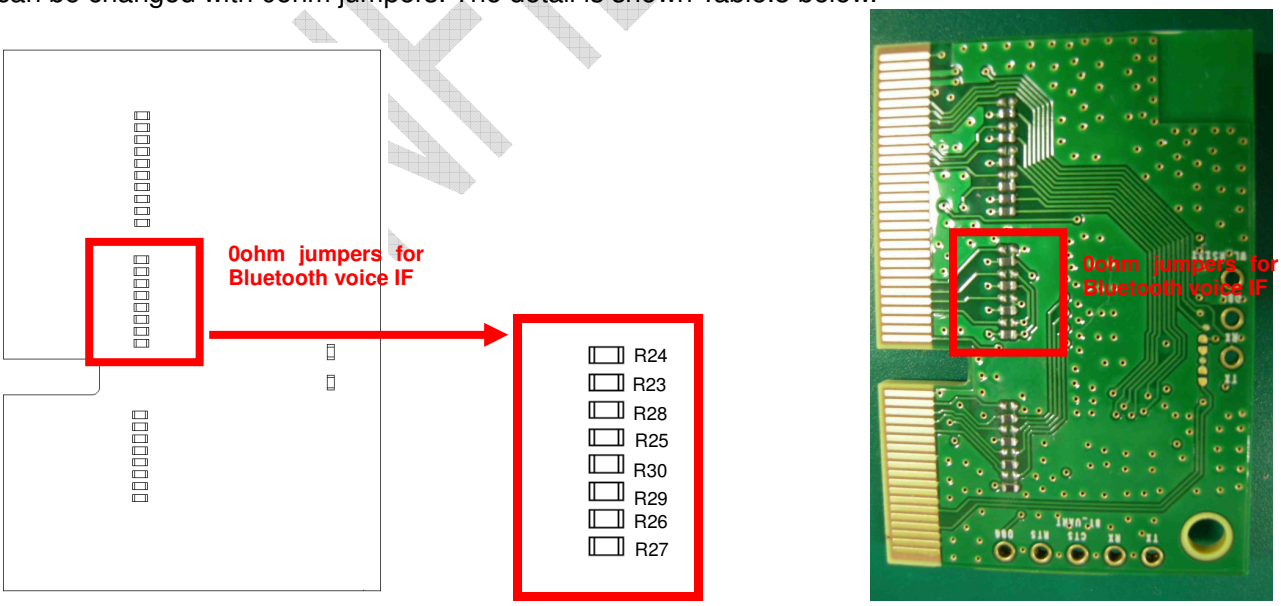


Fig.5 Bluetooth Voice IF jumpers on COM6M

Table.3 Bluetooth Voice IF configurations

Host IF	R24	R23	R28	R25	R30	R29	R26	R27
PCM (primary)	NC	0ohm	NC	0ohm	NC	0ohm	NC	0ohm
I2S	0ohm	NC	0ohm	NC	0ohm	NC	0ohm	NC

4.1.4 Edge Connector
COM6M interfaces to the Samtec MEC6-150-02 card socket connector.

4.2 Sleep Clock
32.768kHz XO on COM6M or 32kHz signal from the Host platform (i.e. Centaurus) can be used as Sleep Clock of the module. The primary source of the Slow Clock is on-board XO of COM6M. The clock source can be changed with 0ohm jumpers. The detail of the configuration is shown in Table.4 below.

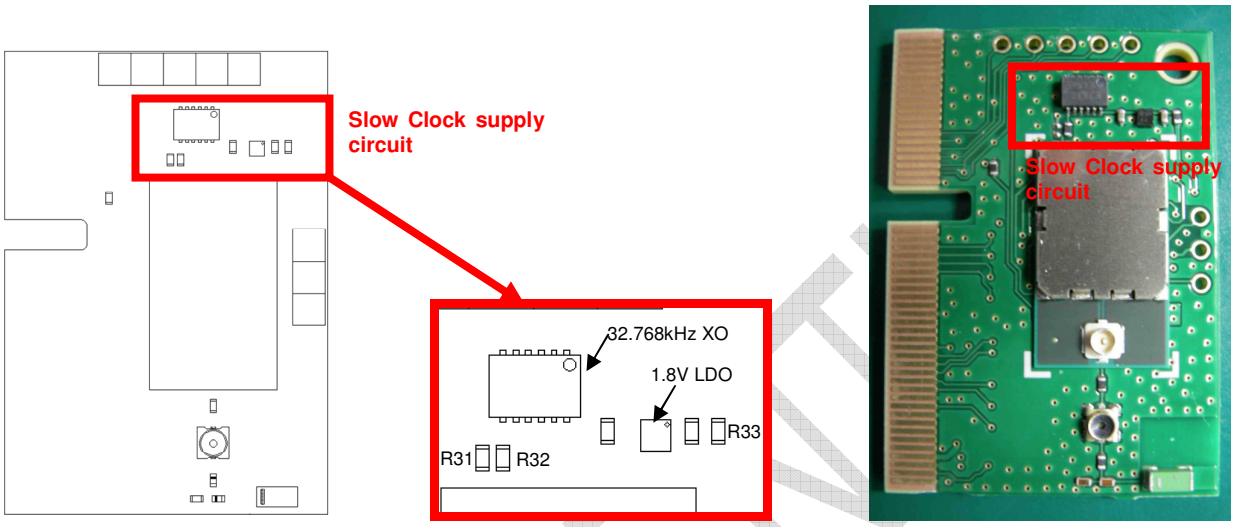


Fig.6 Slow Clock source jumpers on COM6M

Table.3 Slow Clock source configurations

clock source	R31	R32	R33
On-board XO (primary)	NC	0ohm	0ohm
From Host Platform	0ohm	NC	NC

4.3 RF antenna
The chip antenna or ANT connector on the module can be used for the RF connection. The primary antenna is the chip antenna on the board. If you would like to use ANT connector (CN3) on the board, please remove R22 and connect Hirose's U.FL RF probe or RF cable to ANT connector (CN3). COM6M board has one more RF SW connector (CN2) on the board. It is utilized for test purpose in Murata.

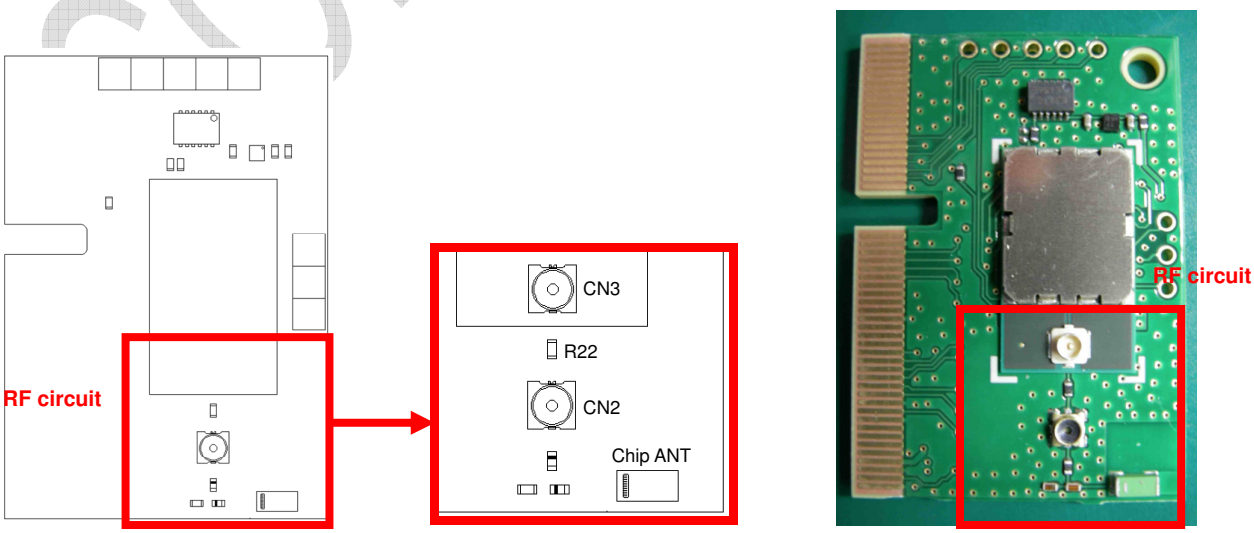


Fig.7 RF circuit on COM6M

4.2 Test Points
COM6M has test points for the debug purpose. Please refer to Fig.8 below.

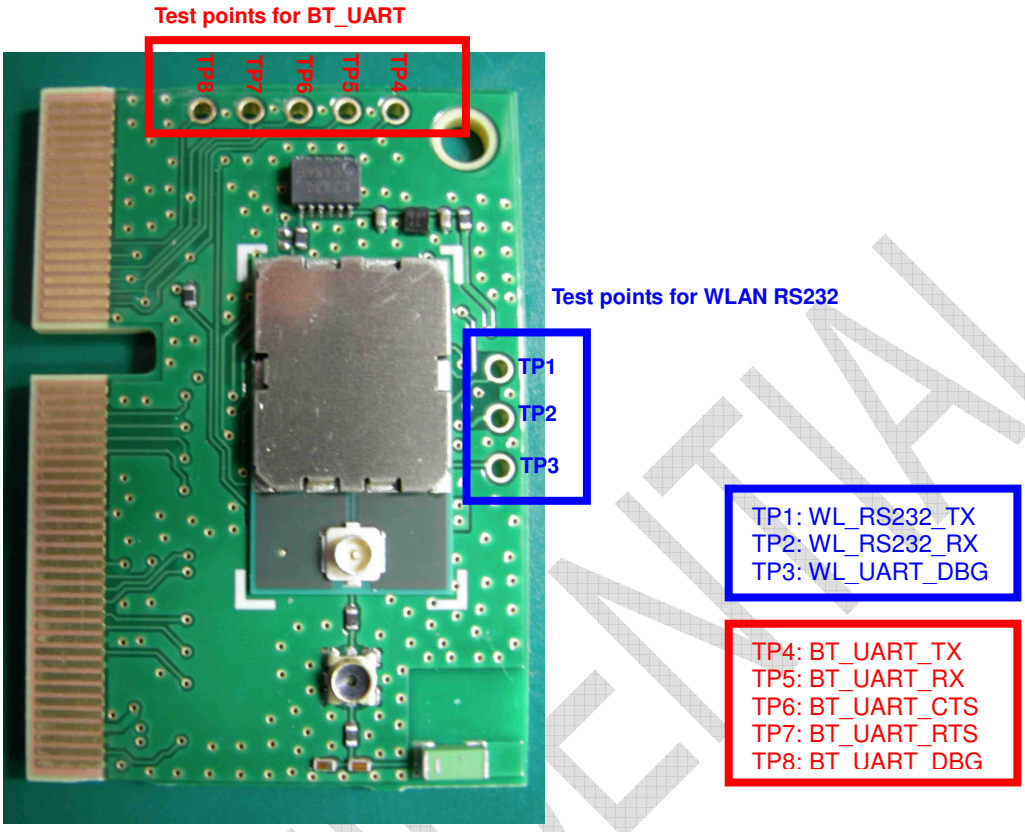
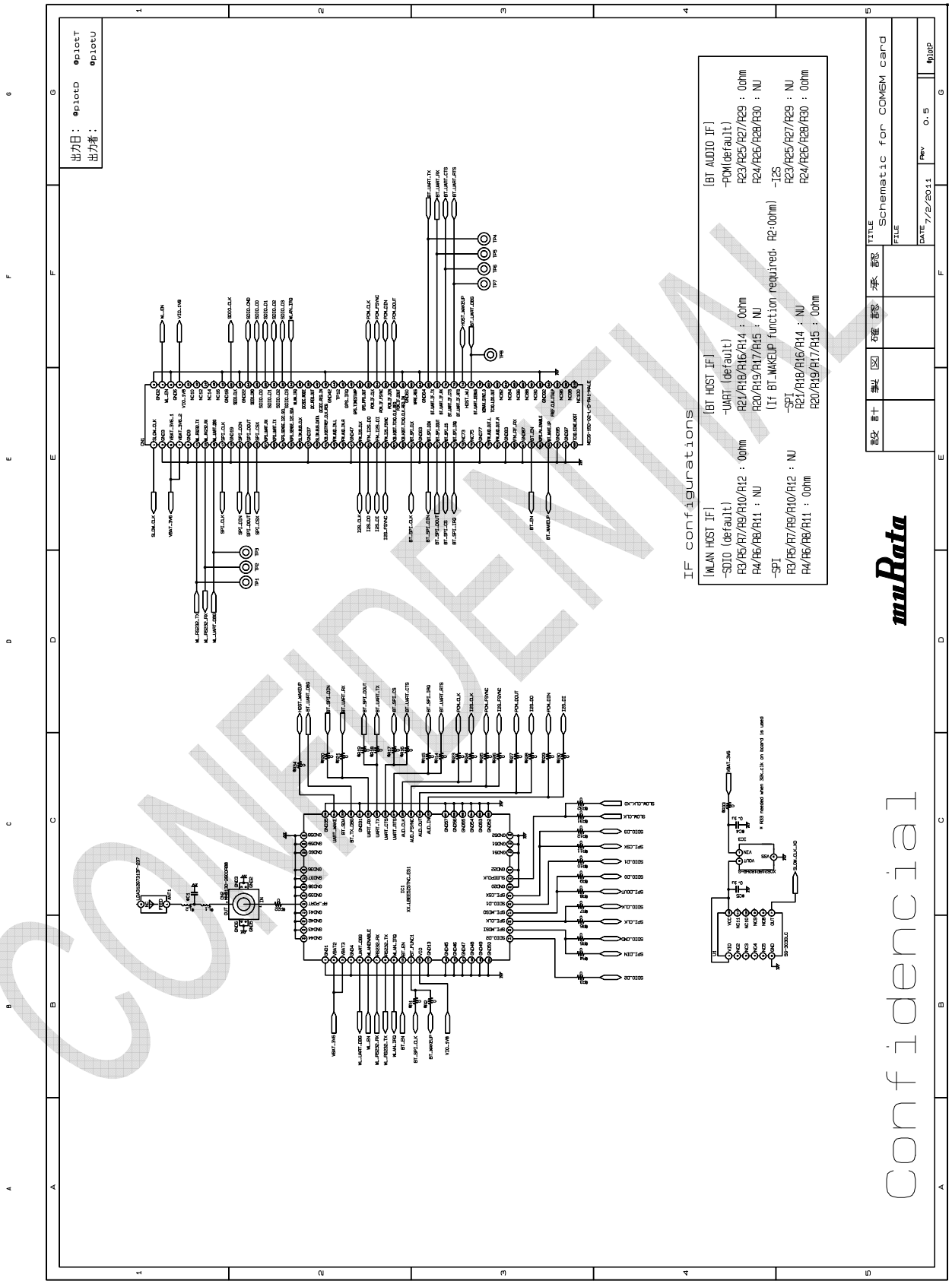


Fig.7 Test points on COM6M

Appendix

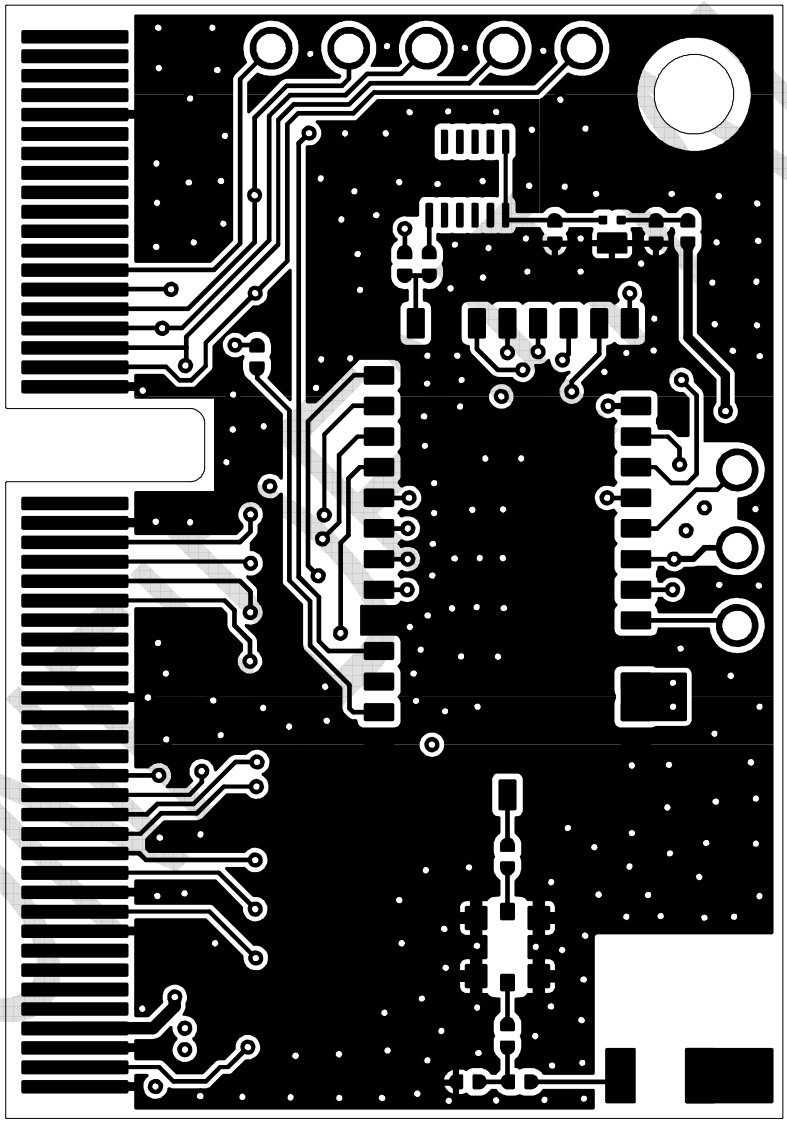
- COM6M board schematic
- COM6M board layout

COM6M rev.1 schematic



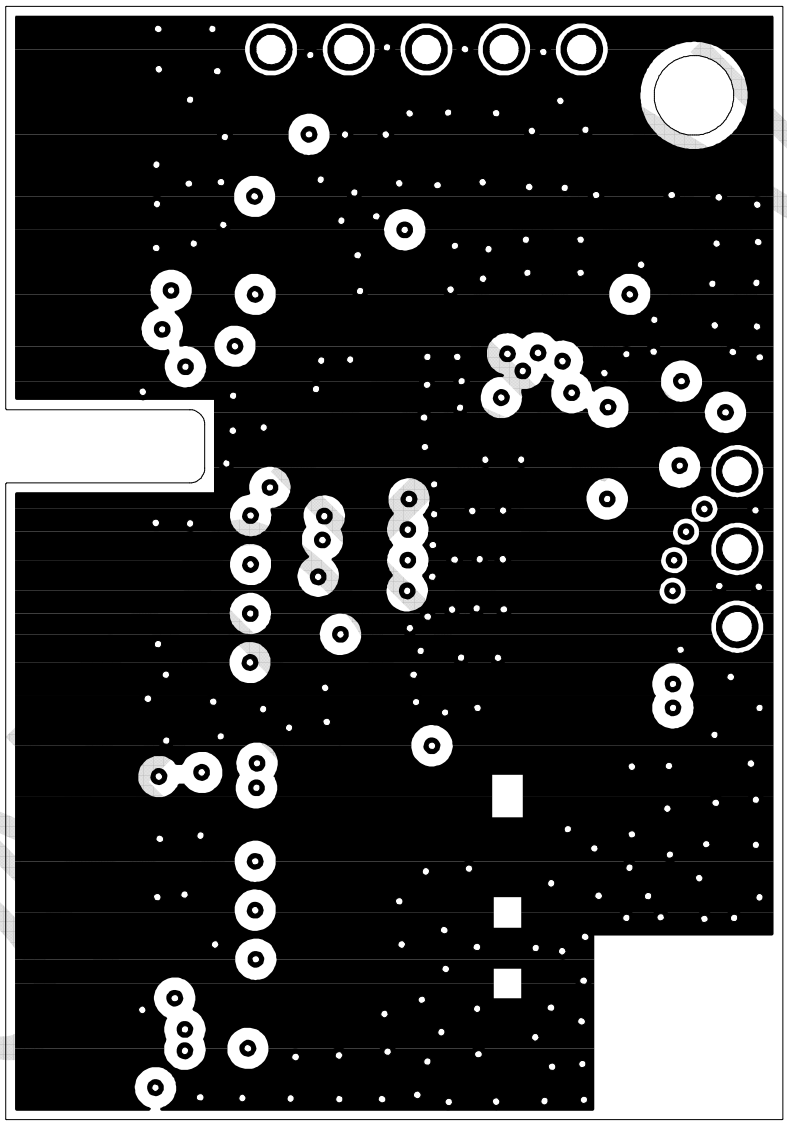
COM6M rev.1 Layout

Layer1



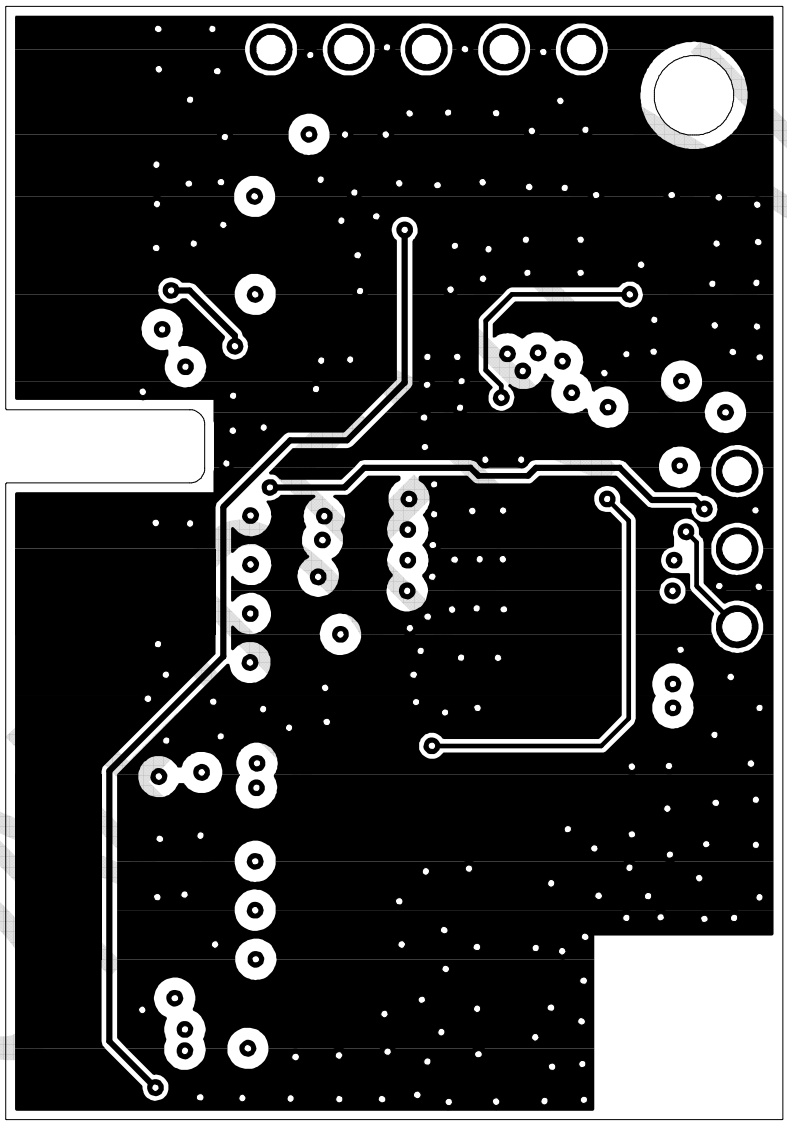
Confidencial

Layer2



Confidencial

Layer3



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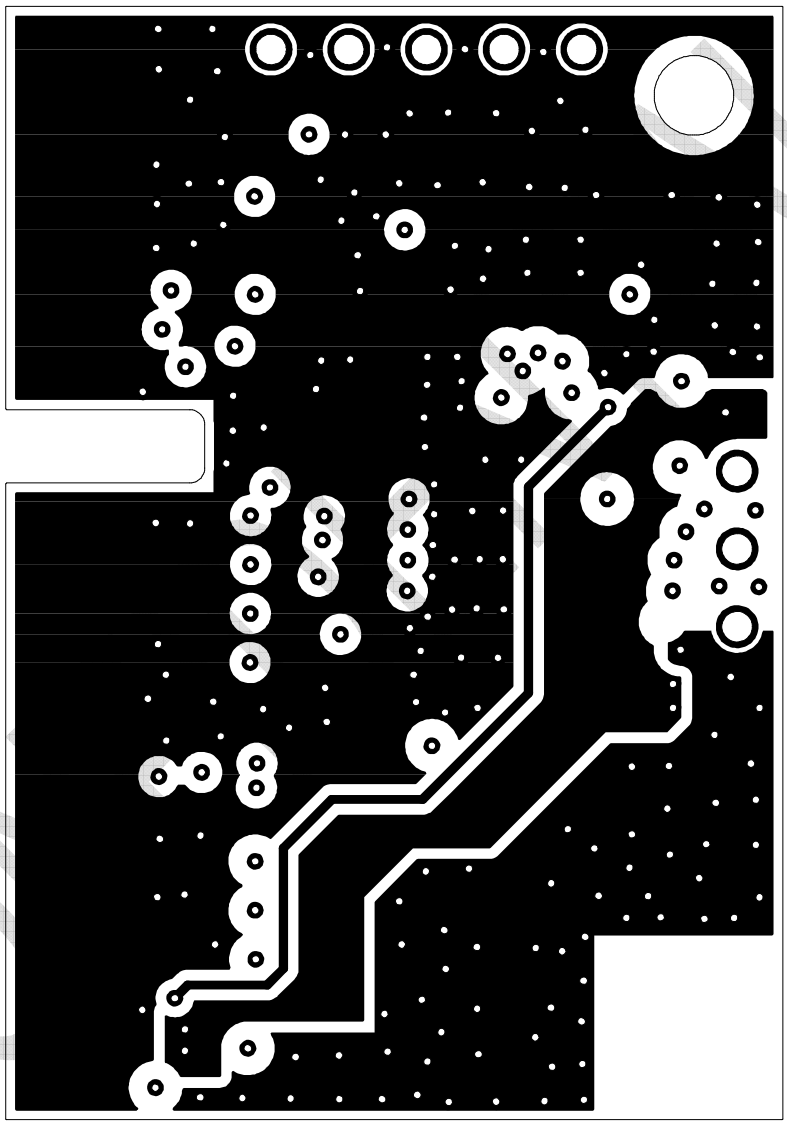
Layer4



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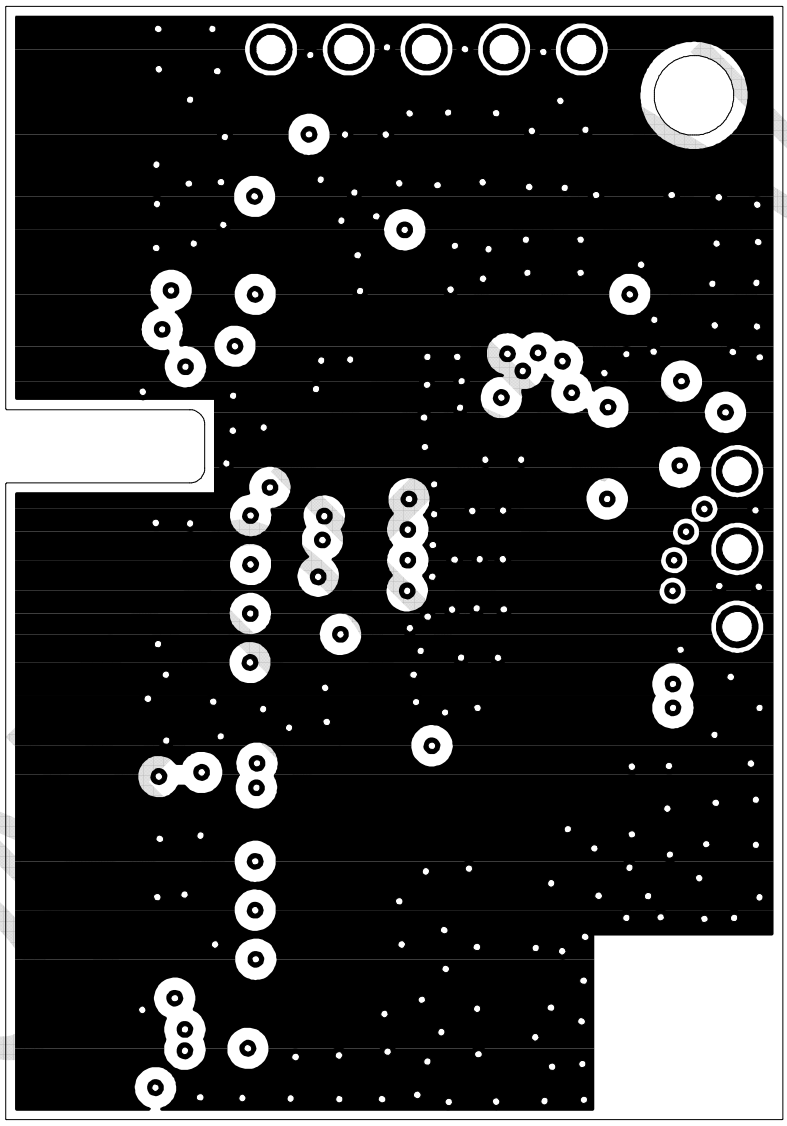
Layer5



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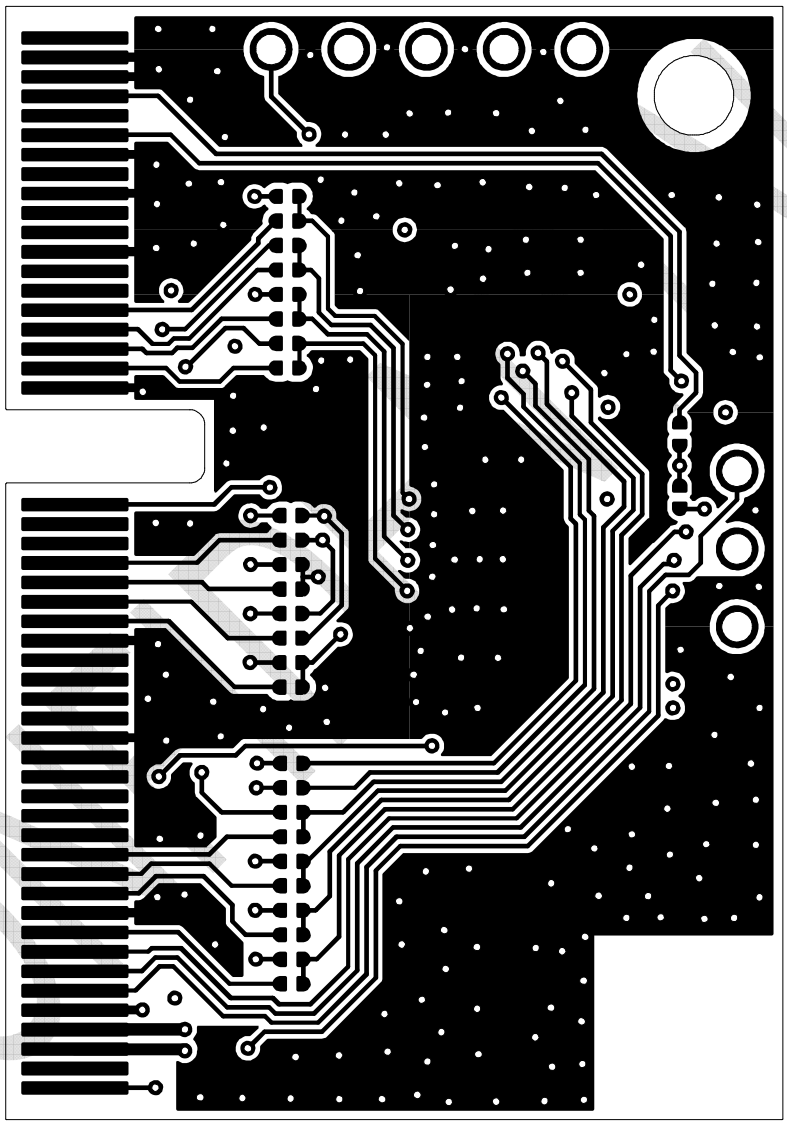
Layer6



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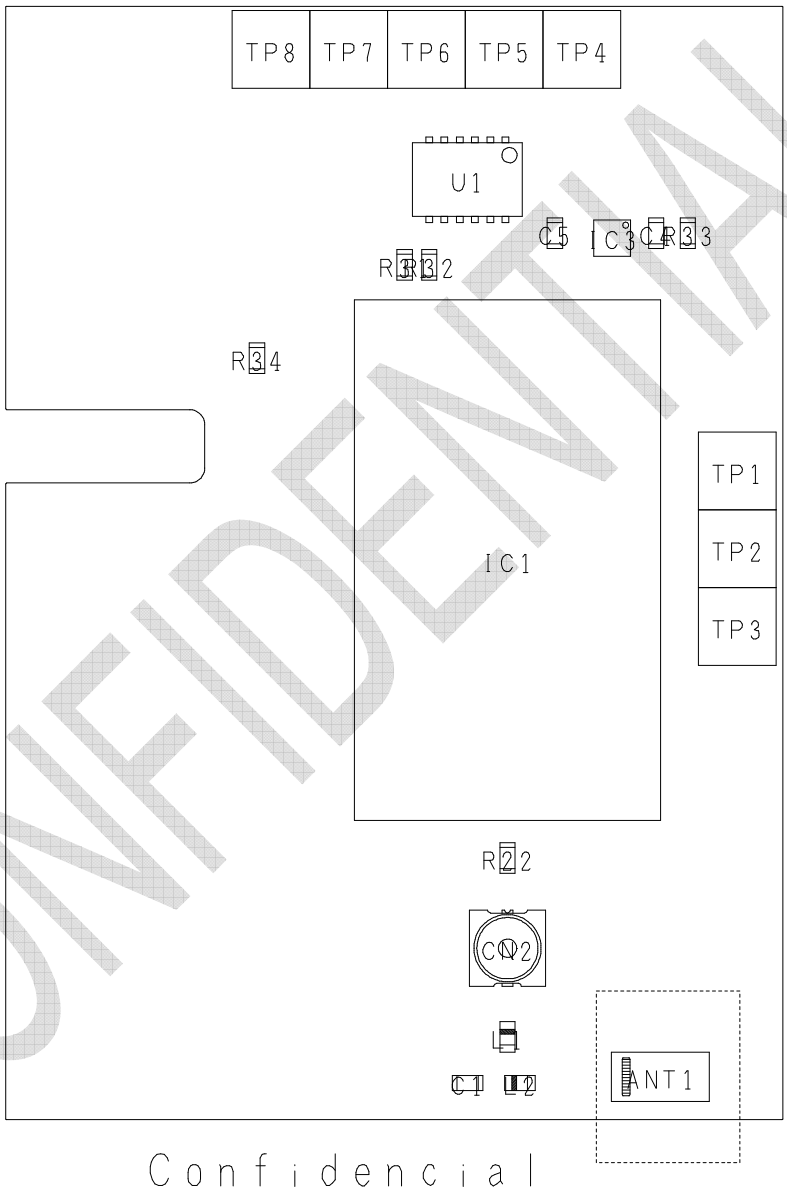
Part Placement (Top)



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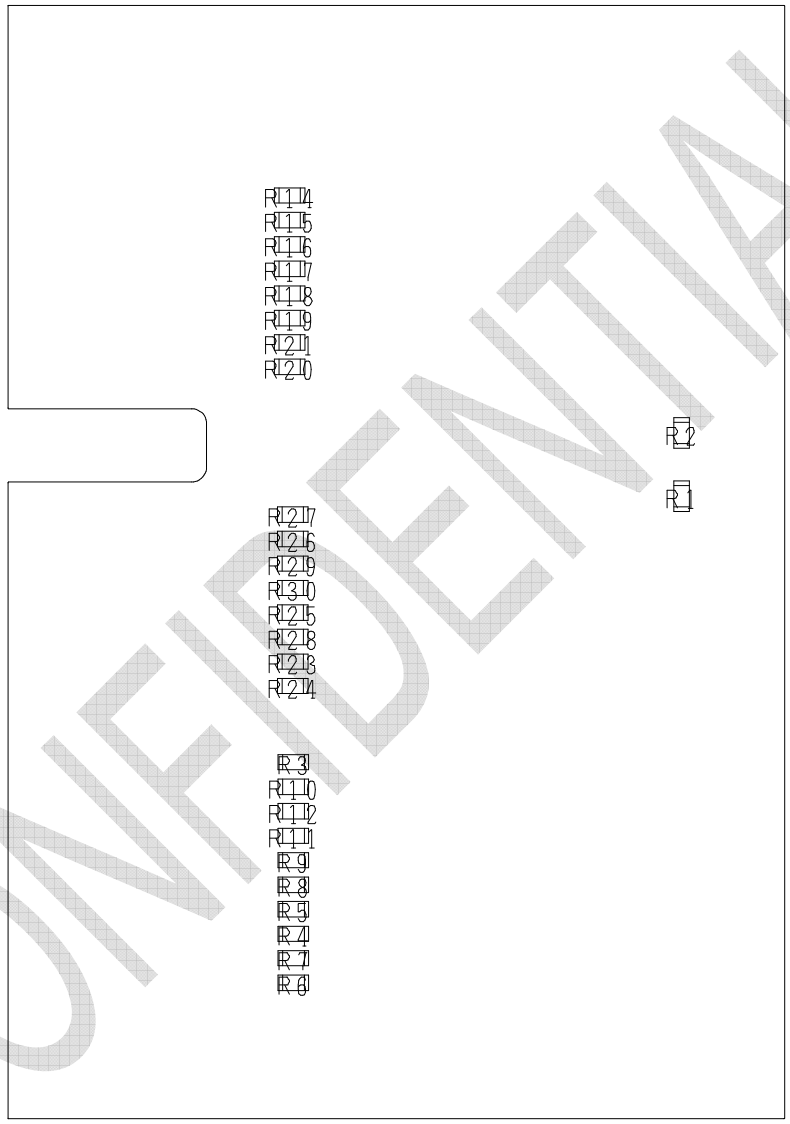
Part Placement (Bottom)



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