

Murata WLAN Module Application Note

P/N: LBWB1ZZYDZ-740

The revision history of the product specification

Issued Date	Revision Code	Revision Page	Changed Items	Change Reason
Apr.18.2015			First Issue	

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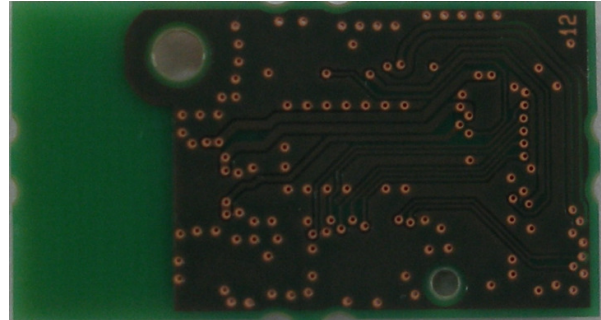
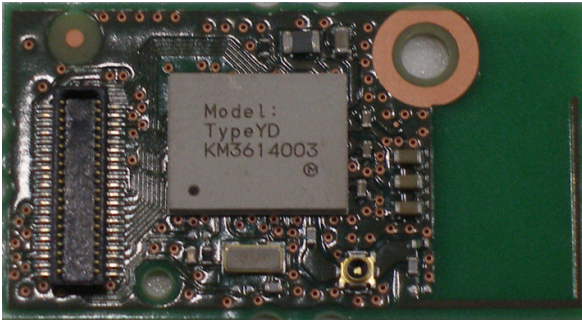
Please be aware that an important notice concerning availability, standard warranty and use in critical applications of Murata products and disclaimers thereto appears at the end of this specification sheet.

1. Introduction

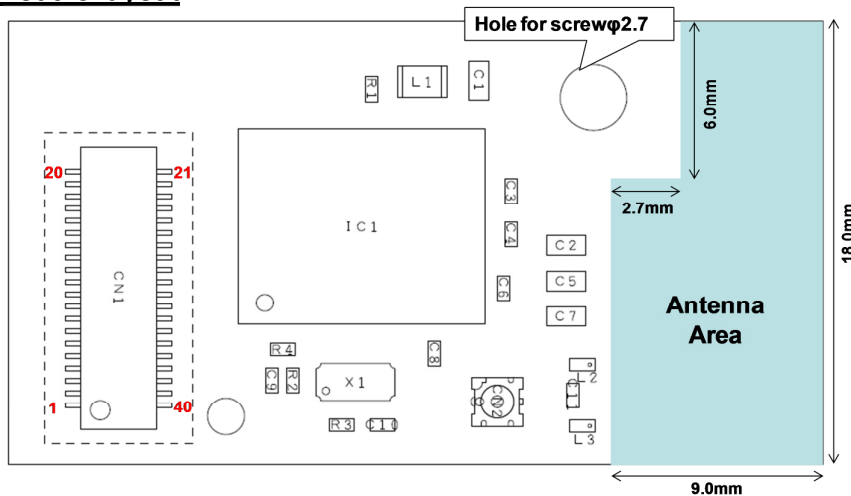
This document details the layout and design guidelines to be used by customers who selected the LBWB1ZZYDZ.

2. Module Structure

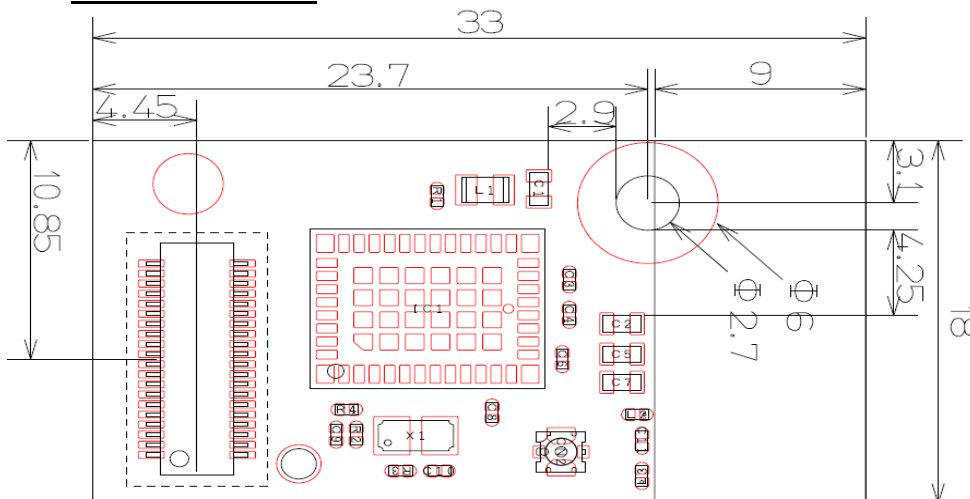
2.1. Module appearance



2.2. Module layout



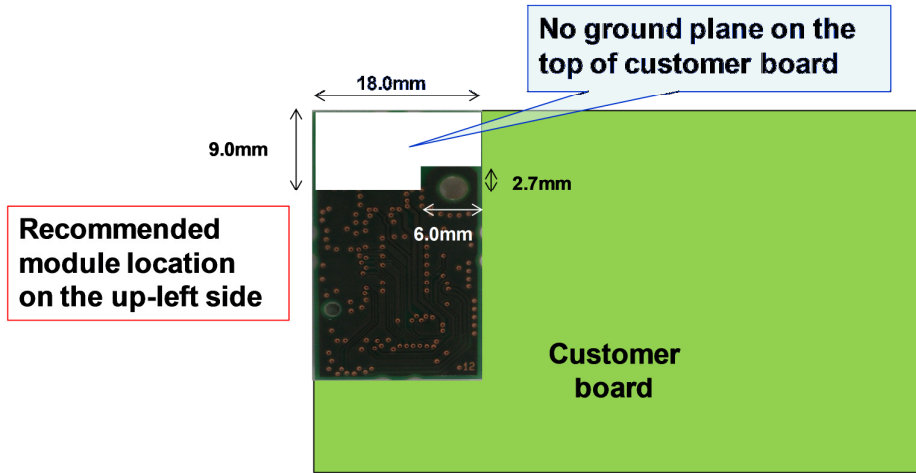
2.3. Module Dimension



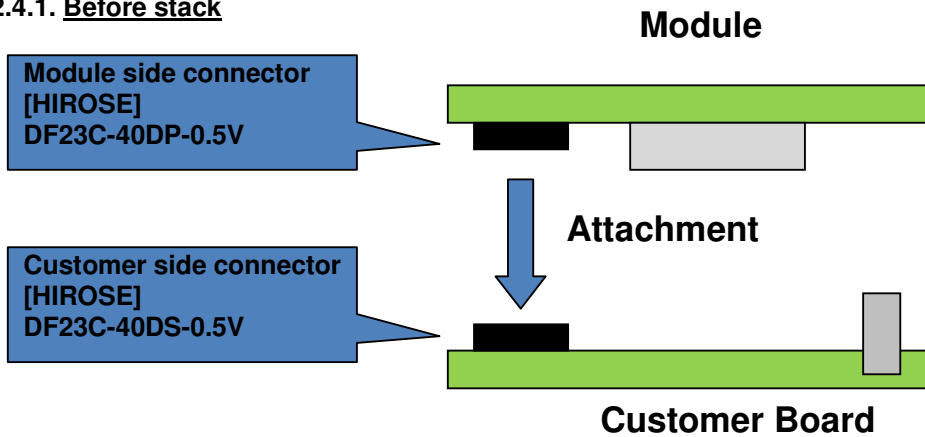
2.4. Module arrangement

We recommend the following for the layout.

- Place the module on the left-up side corner of board.
- Any components and traces should not be placed under the module area
- Do not place metal components around antenna.
- No pattern on the top of customer board side of module antenna as below picture.
- Keep more than 3mm between antenna and frame of your product, even it is plastic

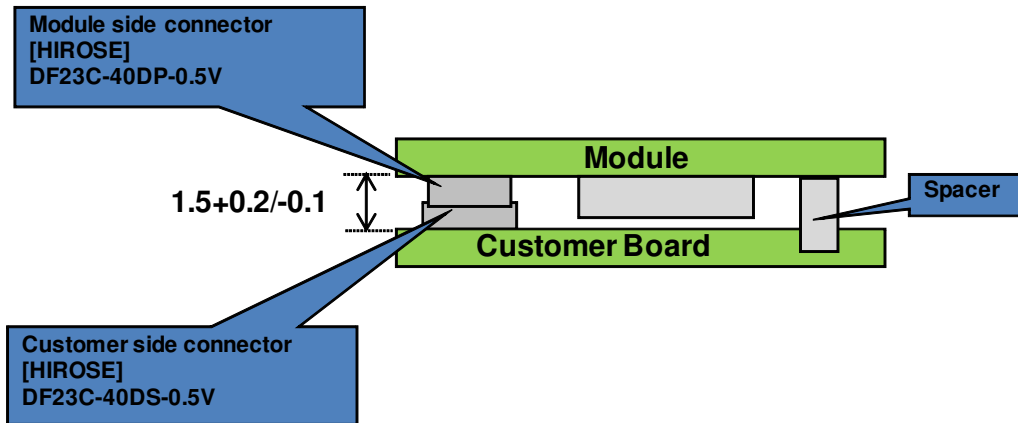


2.4.1. Before stack



2.4.2. After stack

Stacking height is 1.5mm typical.



2.4.3. Spacer Information

In the case of substrate thickness over 0.8mm

- P/N:TH-0.8-1.5-M2.
- <http://www.mac8sdk.co.jp/mac8/parts/TTT/th08.html>

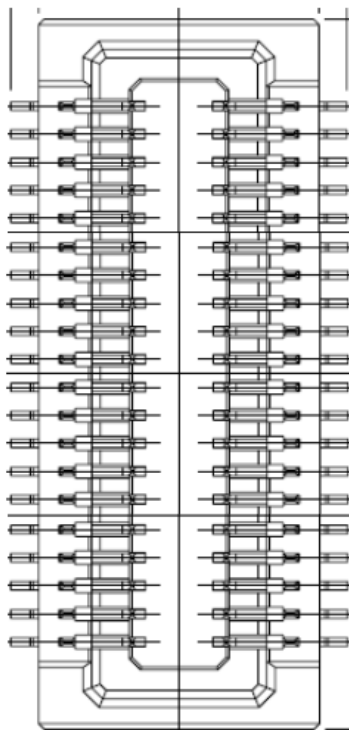
In the case of substrate thickness over 1.6mm

- P/N:TH-1.6-1.5-M2 or TH-1.6-1.5-M2.5
- <http://www.mac8sdk.co.jp/mac8/parts/TTT/th16.html>

If have no mac8 spacer, any 1.5mm height's spacer. is available to use

3. Connector pin assignment

Connector Pin No	Connector Pin Name
1	GND
2	NRST
3	RTC_AF1
4	OSC32_IN
5	OSC32_OUT
6	GND
7	GPIO11
8	GPIO10
9	GPIO9
10	GND
11	UART1_TX
12	UART1_RX
13	GND
14	GND
15	JTMS
16	NJTRST
17	JTDO
18	JTDI
19	JTCK
20	VDD_WLAN



Connector Pin No	Connector Pin Name
40	GND
39	GND
38	GPIO4
37	GPIO3
36	GPIO1
35	GPIO2
34	GPIO5
33	GPIO6
32	GPIO7
31	GPIO8
30	BOOT1
29	GND
28	GND
27	GND
26	UART1_RTS
25	UART1_CTS
24	BOOT0
23	VDD_3P3
22	VDD_PA
21	VDD_PA

4. Power Supply Design

To reduce noise, please keep below guide.

Pin No	Pin Name	Supply Voltage	Comment
23	VDD_3P3	3.3V	-Use short traces as soon as possible. -Keep power supply traces away from the Data Line and Clock line.
21, 22	VDD_PA	3.3V	
20	VDD_WLAN	3.3V	