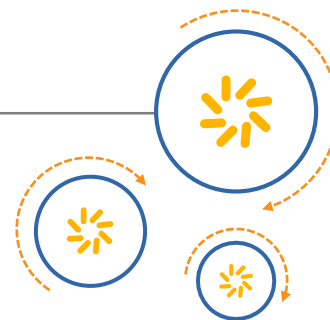




Qualcomm Technologies, Inc.



QM8626 Antenna Document

80-KA570-18 Rev. B

August 12, 2015

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Revision history

Revision	Date	Description
A	July 2015	Initial release
B	August 2015	Added antenna images, Figure 2-3 and Figure 3-3

Contents

1 Introduction	5
1.1 Acronyms and definitions	5
2 WWAN Antenna	6
2.1 Primary WWAN antenna - low band	6
2.2 Primary WWAN antenna - high band	8
3 WLAN/BT Antenna	11
3.1 WLAN/BT - 2402 to 2480 MHz	13
3.2 WLAN - 5180 to 5825 MHz	14

Figures

Figure 2-1 WWAN low band antenna pattern	7
Figure 2-2 WWAN high band antenna pattern	9
Figure 2-3 WWAN high band antenna	10
Figure 3-1 WLAN/BT low band antenna pattern	13
Figure 3-2 WLAN/BT high band antenna pattern	14
Figure 3-3 WLAN/BT antenna	15

Tables

Table 1-1 Acronyms and definitions	5
Table 2-1 Primary WWAN antenna - low band	6
Table 2-2 Primary WWAN antenna - high band	8
Table 3-1 WLAN/BT antenna	11

1 Introduction

The QM8626 module was tested with two monopole stamped metal transmit antennas: one antenna for Wireless Wide Area Network (WWAN) and the other antenna for Wireless Local Area Network (WLAN)/ Bluetooth (BT). The antenna performance data is listed in the following chapter.

1.1 Acronyms and definitions

[Table 1-1](#) lists terms that are used in this document.

Table 1-1 Acronyms and definitions

Term	Definition
BT	Bluetooth
WLAN	Wireless Local Area Network
WWAN	Wireless Wide Area Network

2 WWAN Antenna

This section details the WWAN antenna performance data.

2.1 Primary WWAN antenna - low band

- Gain: -0.3 dBi

Table 2-1 Primary WWAN antenna - low band

Primary antenna, WWAN - low band		
Frequency (MHz)	Peak gain (dB)	Efficiency (dB)
820	-1.8	-3.8
830	-1.3	-3.4
840	-1.4	-3.4
850	-1.1	-3.2
860	-0.9	-3.1
870	-0.6	-3.0
880	-0.3	-2.9
890	-0.3	-2.9
900	0.1	-2.6
910	0.0	-2.7
920	0.0	-2.7
930	-0.1	-2.9
940	-0.1	-3.1
950	-0.3	-3.3
960	-0.4	-3.4

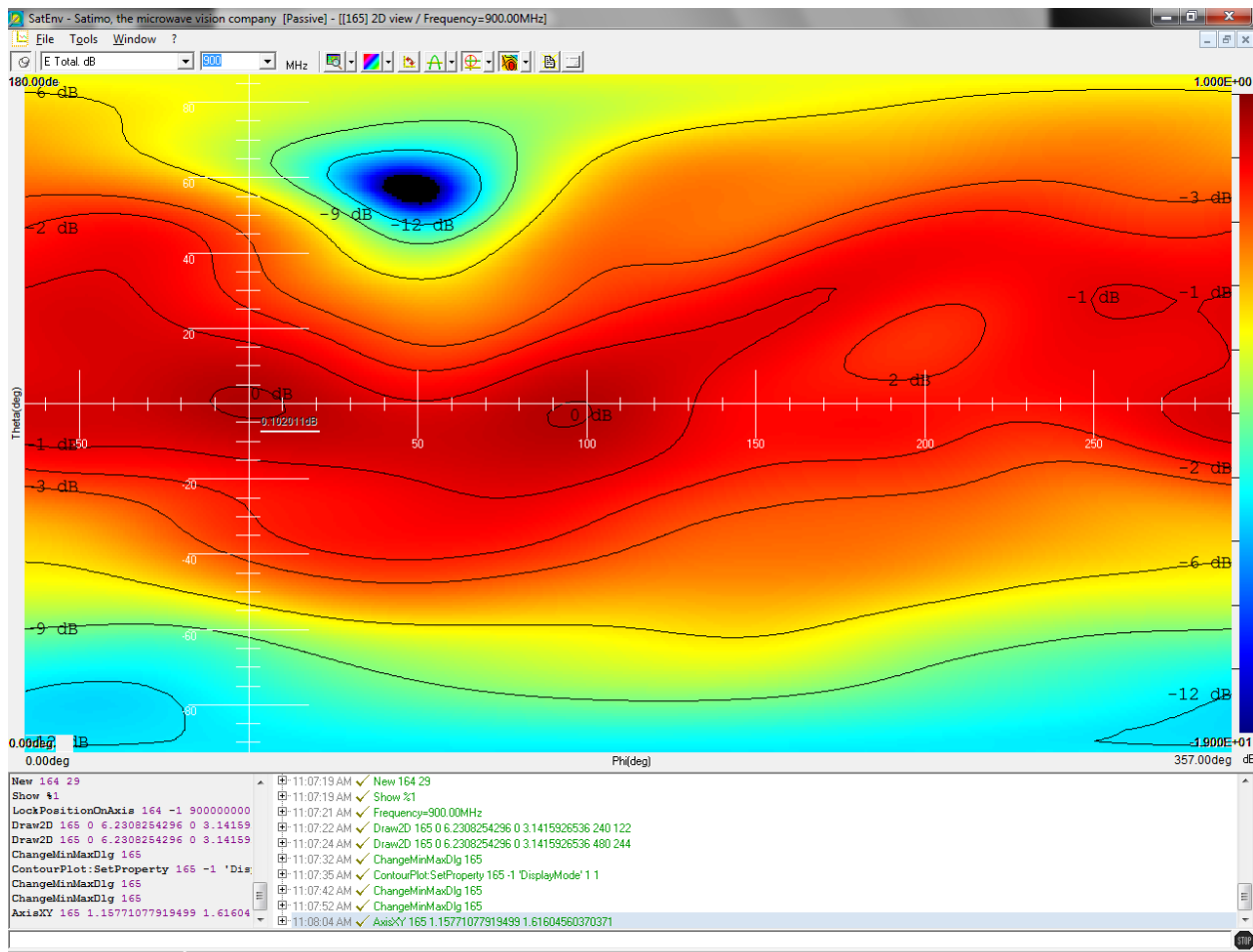


Figure 2-1 WWAN low band antenna pattern

2.2 Primary WWAN antenna - high band

- Gain: 0.9 dBi

Table 2-2 Primary WWAN antenna - high band

Primary antenna, WWAN – high band		
Frequency (MHz)	Peak gain (dB)	Efficiency (dB)
1700	-0.9	-4.2
1720	-0.3	-3.5
1740	-0.3	-3.3
1760	-0.4	-3.1
1780	-0.4	-3.1
1800	-0.3	-3.2
1820	-0.3	-3.1
1840	-0.2	-3.3
1860	-0.2	-3.3
1880	-0.2	-3.3
1900	-0.3	-3.5
1920	-0.3	-3.4
1940	-0.6	-3.7
1960	-0.7	-3.8
1980	-1.1	-4.1
2000	-1.7	-4.5
2020	-1.9	-4.6
2040	-2.5	-5.1
2060	-3.0	-5.4
2080	-2.7	-5.5
2100	-2.6	-5.9
2120	-2.5	-6.1
2140	-2.5	-6.3
2160	-2.6	-6.5
2180	-2.8	-6.6
2200	-2.8	-6.6

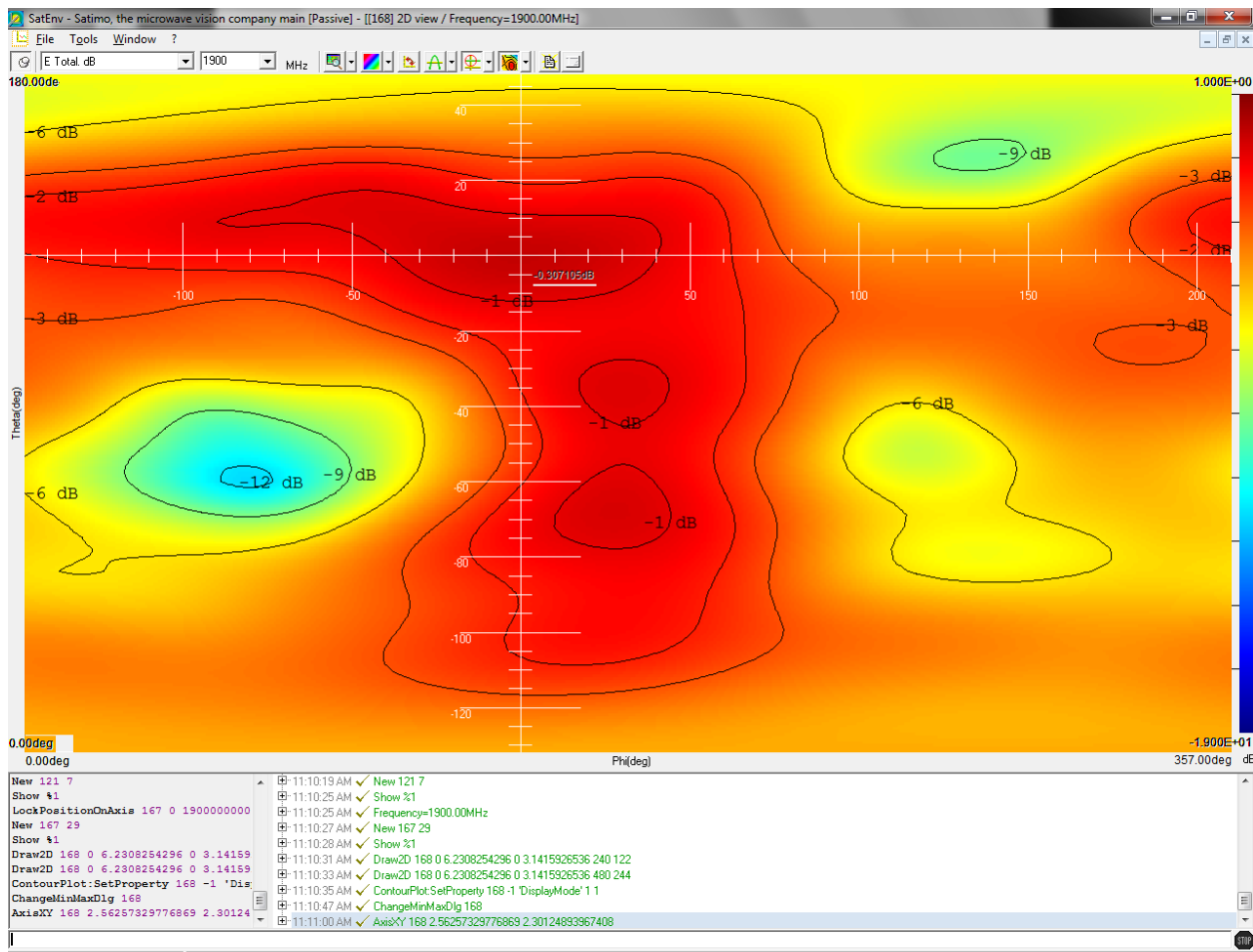


Figure 2-2 WWAN high band antenna pattern

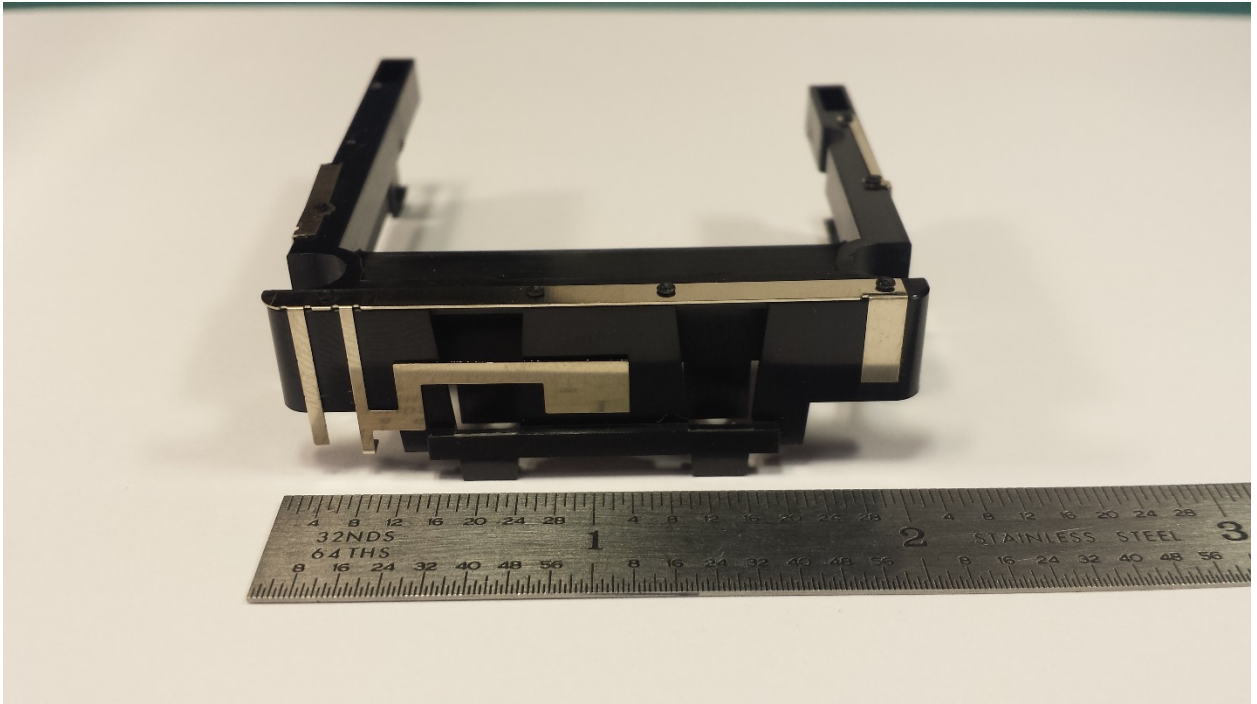


Figure 2-3 WWAN high band antenna

3 WLAN/BT Antenna

This section details the WLAN/BT antenna performance data.

Table 3-1 WLAN/BT antenna

WLAN		
Frequency (MHz)	Peak gain	Efficiency
2400	1.5	-3.2
2420	1.2	-2.9
2440	1.4	-2.6
2460	1.4	-2.5
2480	1.7	-2.6
2500	1.6	-2.8
4900	3.1	-1.7
4920	3.0	-1.8
4940	3.1	-1.8
4960	2.9	-1.9
4980	2.8	-2.0
5000	2.9	-2.0
5020	2.9	-2.1
5040	3.0	-2.0
5060	3.0	-2.1
5080	3.0	-2.1
5100	2.8	-2.2
5120	2.6	-2.1
5140	2.5	-2.3
5160	2.4	-2.3
5180	2.6	-2.4
5200	2.6	-2.6
5220	2.9	-2.5
5240	2.5	-2.6
5260	2.4	-2.7
5280	2.2	-2.6
5300	2.0	-2.8
5320	2.2	-2.7
5340	2.4	-2.8
5360	2.4	-2.9

WLAN		
Frequency (MHz)	Peak gain	Efficiency
5380	2.5	-2.8
5400	2.4	-2.8
5420	2.3	-2.9
5440	2.2	-2.9
5460	2.1	-2.9
5480	2.2	-2.9
5500	2.3	-2.9
5520	2.4	-2.8
5540	2.4	-2.8
5560	2.2	-2.8
5580	2.2	-2.7
5600	2.2	-2.6
5620	2.2	-2.7
5640	2.6	-2.4
5660	2.6	-2.5
5680	2.7	-2.4
5700	2.7	-2.4
5720	2.7	-2.6
5740	2.8	-2.5
5760	2.5	-2.6
5780	2.3	-2.6
5800	2.5	-2.6
5820	2.6	-2.6
5840	2.3	-2.6
5860	2.5	-2.5
5880	2.8	-2.4
5900	2.4	-2.5

3.1 WLAN/BT - 2402 to 2480 MHz

- Gain: 0.6 dBi, 2402 to 2480 MHz

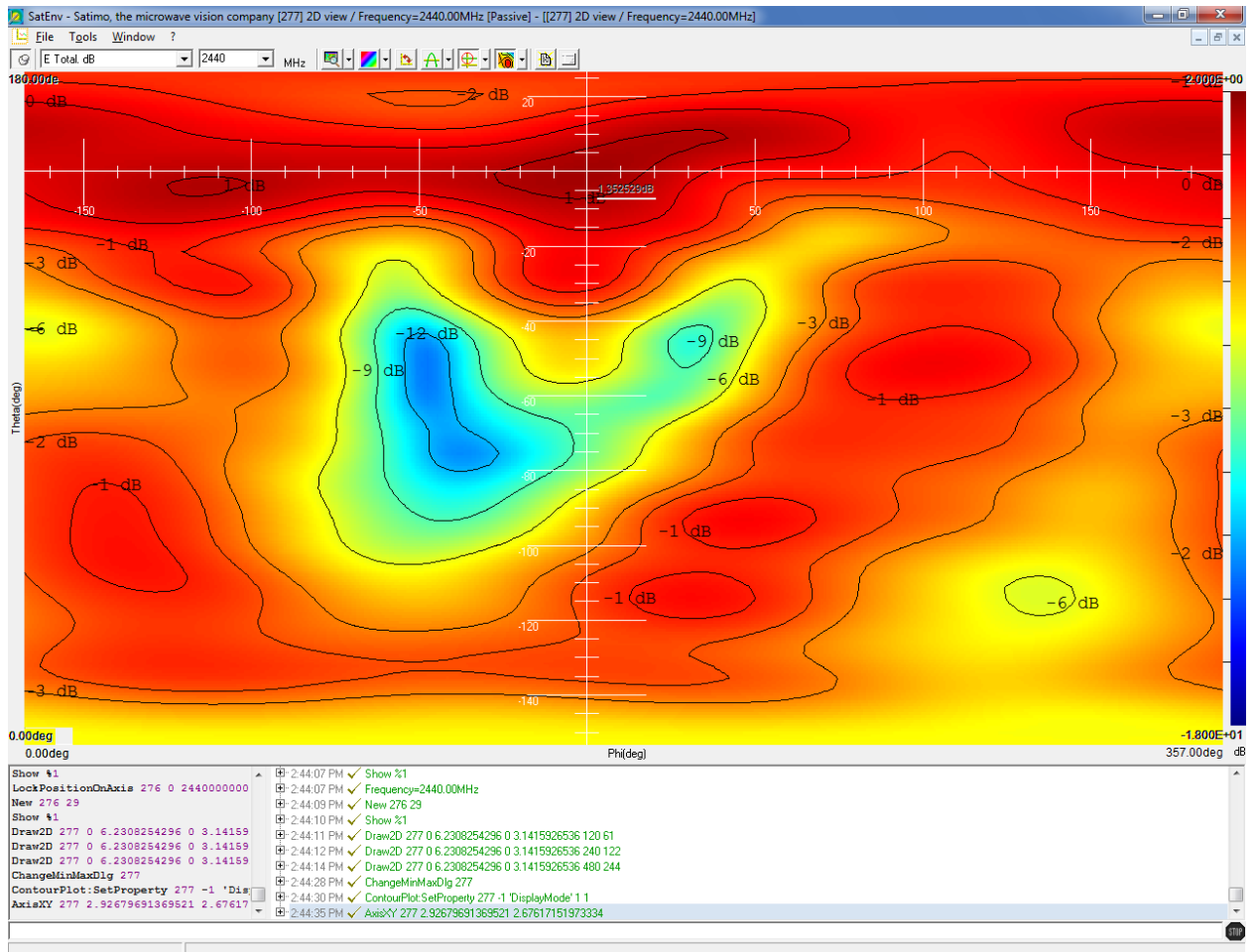


Figure 3-1 WLAN/BT low band antenna pattern

3.2 WLAN - 5180 to 5825 MHz

- Gain: 1.9 dBi, 5180 to 5825 MHz

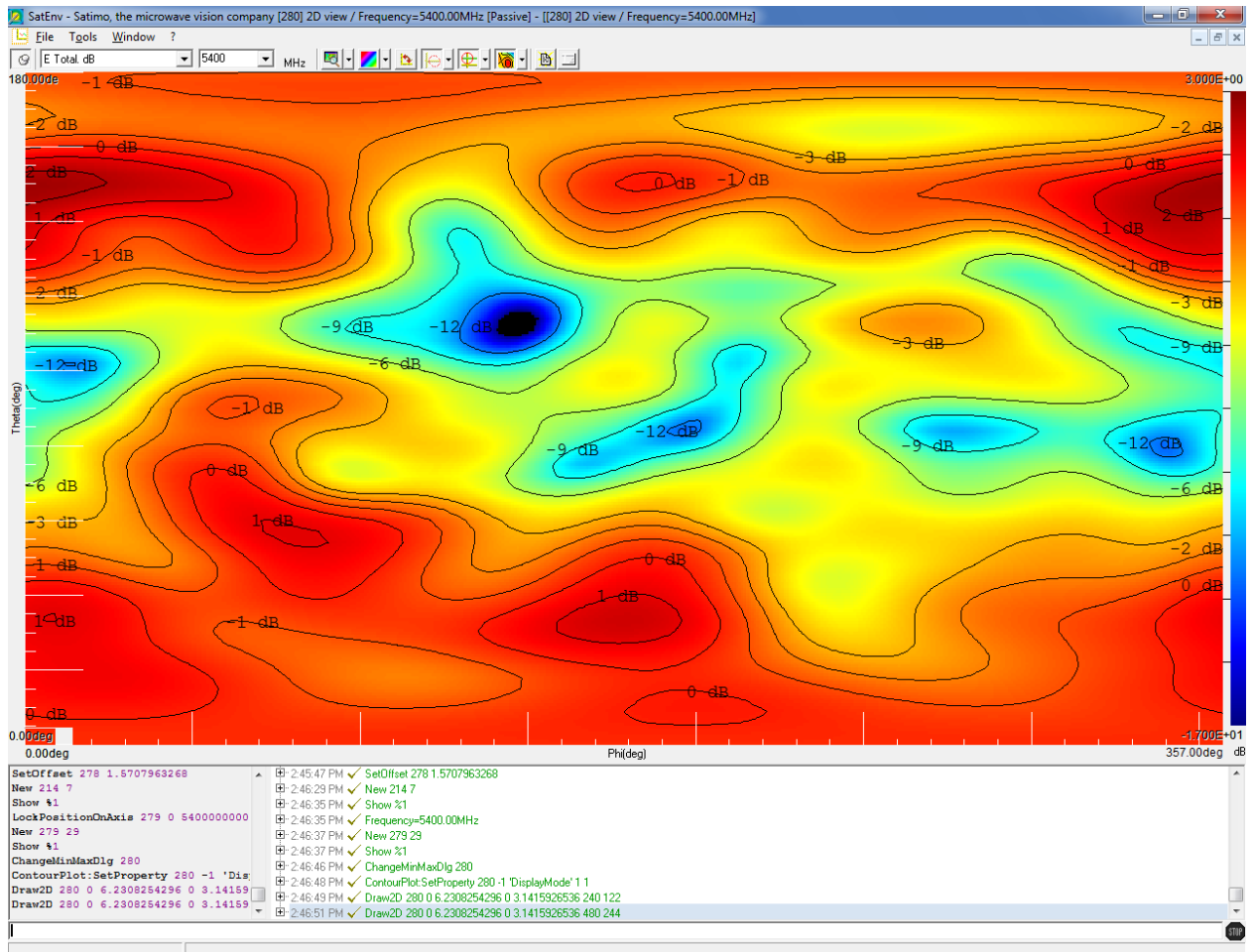


Figure 3-2 WLAN/BT high band antenna pattern

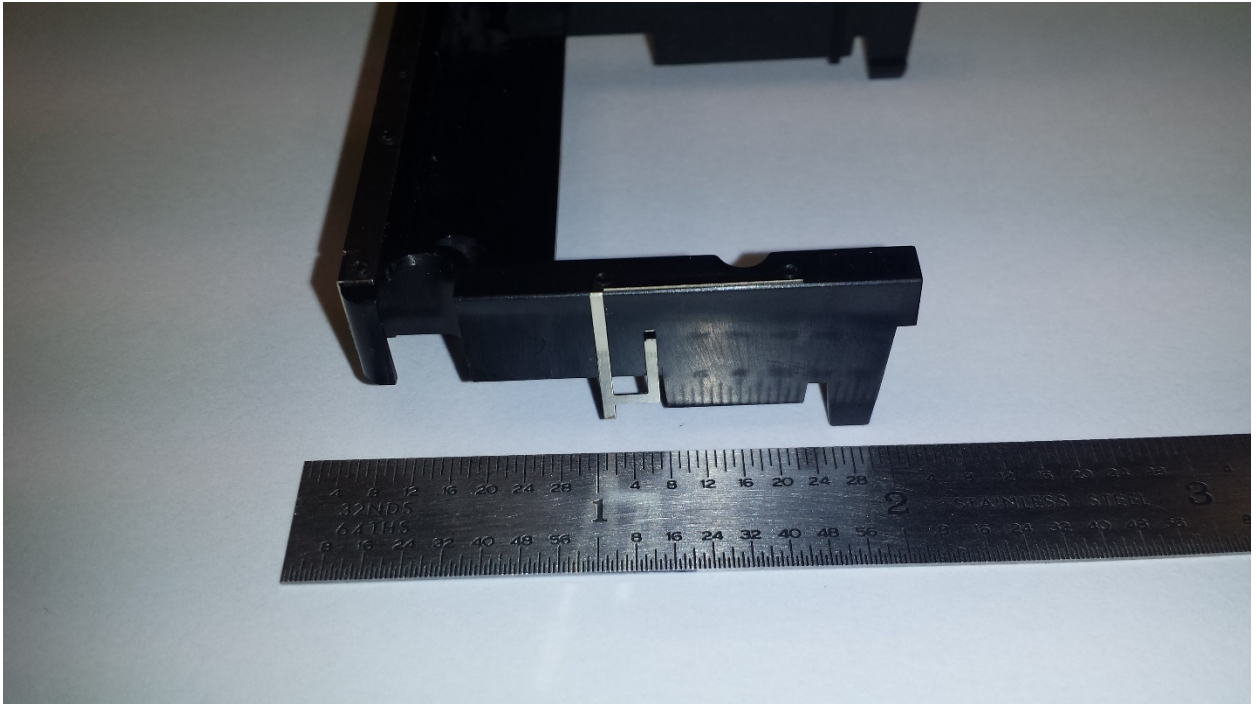


Figure 3-3 WLAN/BT antenna