

GHT21-0731 - *

Antenna Datasheet

TITLE : AN01DL25M00 SERIES
AN01DL25M00 シリーズ

1. 特徴 Features

- 無線 LAN 向け 2.4 – 2.5 GHz / 5.15 – 5.85 GHz アンテナ
 2.4 – 2.5 GHz / 5.15 – 5.85 GHz Antenna for WLAN
- 小型 Compact size
- 高効率 High efficiency
- 表面実装部品 Surface mount device
- エンボスリール梱包 Embossed reel package

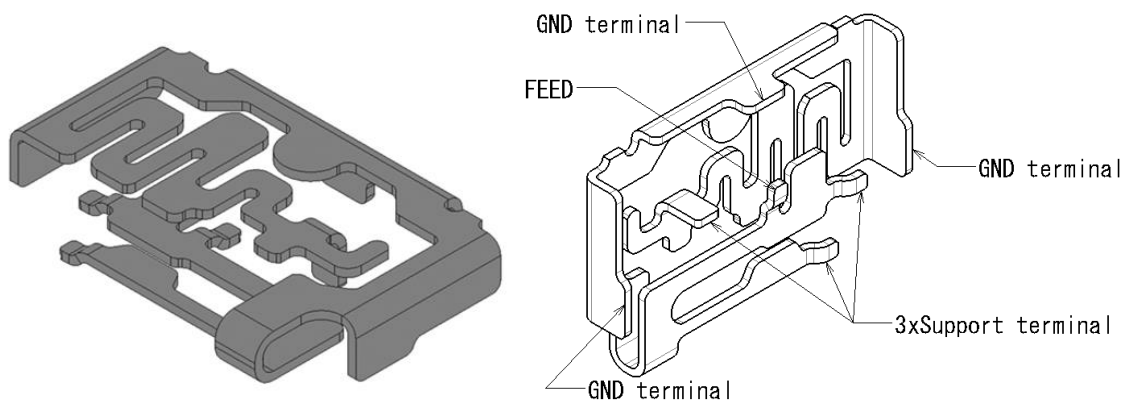
2. 品名 Product name

単品 Single unit: AN01DL25M00

3200 個パッケージ 3200-piece package: AN01DL25M00R3200

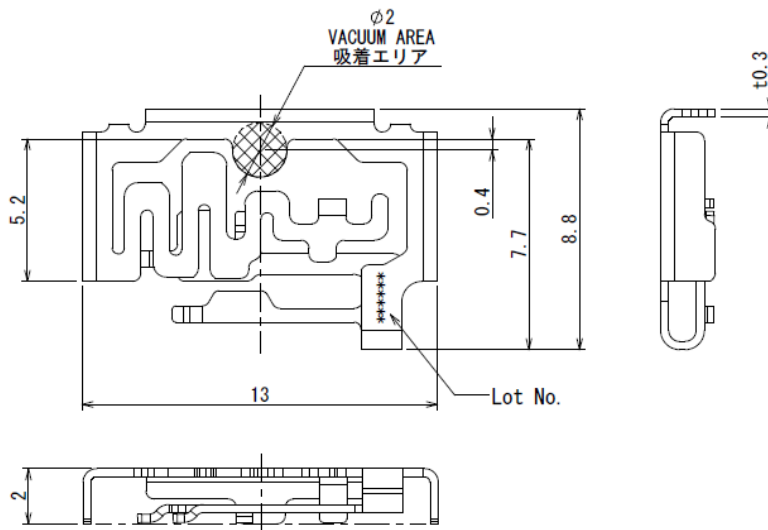
3. 形状、寸法と重量 Shape, dimensions and weight

3.1. 形状 Shape



3.2. 寸法 Dimensions

13 (width) × 8.8 (depth) × 2 (height) mm



3.3. 重量 Weight

0.26 g (typical)

3.4. めっき Plating

銀めっき Silver plating

3.5. 方式 Type

スプリットリング Split ring

3.6. 材料 Material

銅合金 Copper Alloy

4. 高周波特性 RF characteristics

4.1. 周波数帯域 Frequency range

2.4 – 2.5 GHz / 5.15 – 5.85 GHz

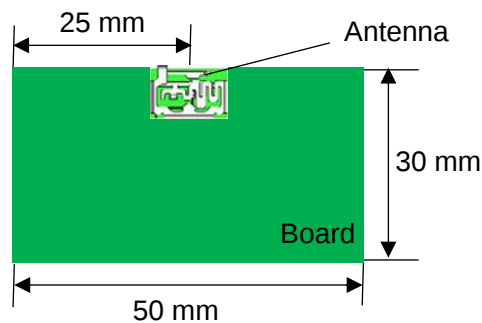
4.2. インピーダンス Impedance

50 Ω

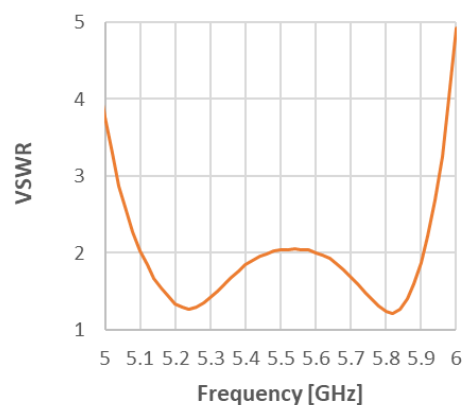
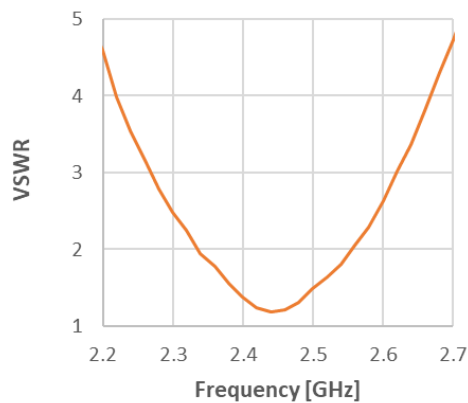
4.3. Voltage standing wave ratio (VSWR)

50 x 30 mm の標準基板実装時の VSWR 特性例

VSWR characteristics of the antenna on a 50 x 30-mm reference board



VSWR < 2.0 (Frequency range: 2.4 –2.5 GHz)、 < 2.5 (Frequency range: 5.15 – 5.85 GHz)

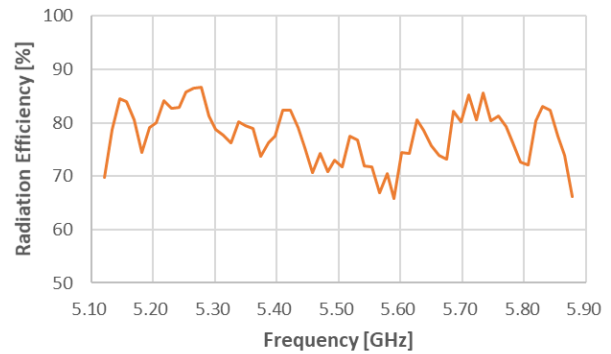
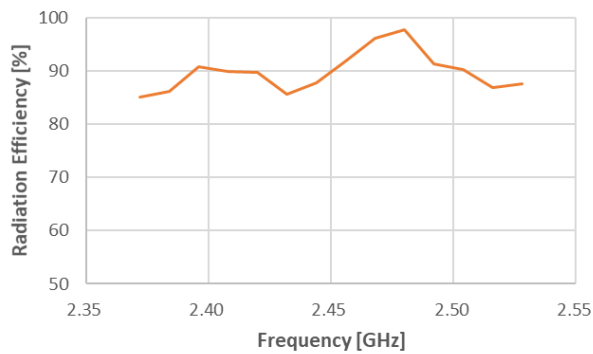


4.4 放射効率 Radiation efficiency):

50 x 30 mmの標準基板実装時の放射効率特性例、ケーブル・配線損を除く

Radiation efficiency of the antenna mounted on a 50 x 30-mm reference board (excluding cable and feeder-line loss)

Radiation efficiency > 85 % (Frequency range: 2.4 – 2.5 GHz), > 65 % (Frequency range: 5.15 – 5.85 GHz)



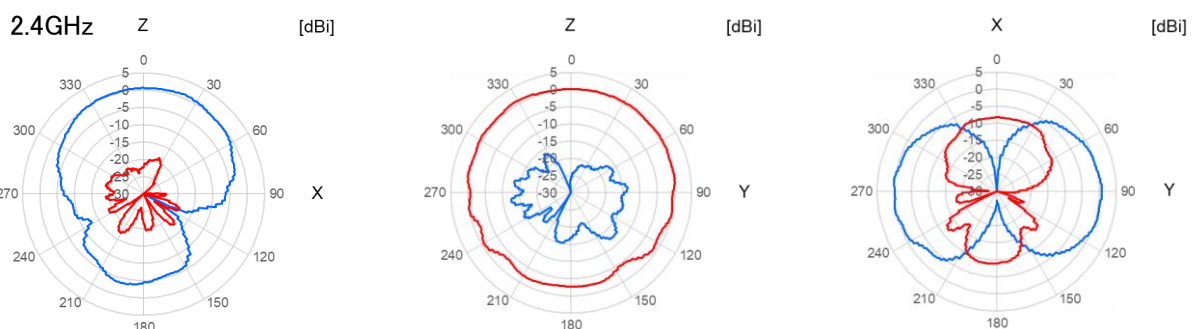
4.5 放射パターン Radiation pattern

50 x 30 mm の標準基板実装時の放射パターン特性例

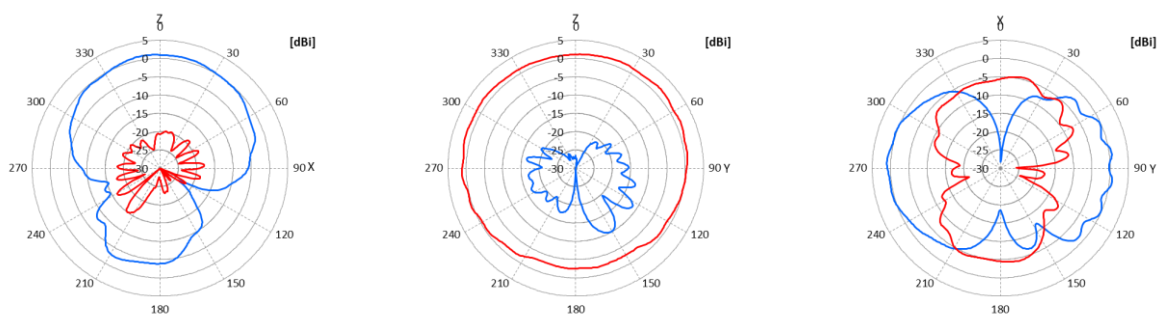
Radiation pattern of the antenna mounted on a 50 x 30-mm reference board



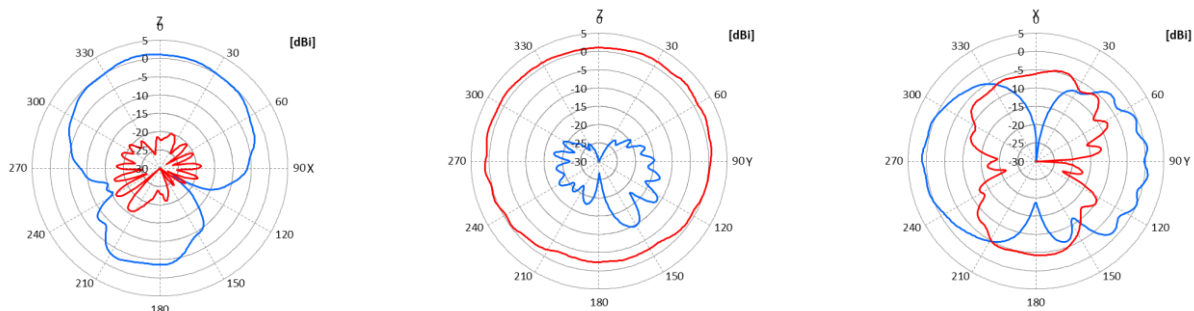
Radiation Pattern



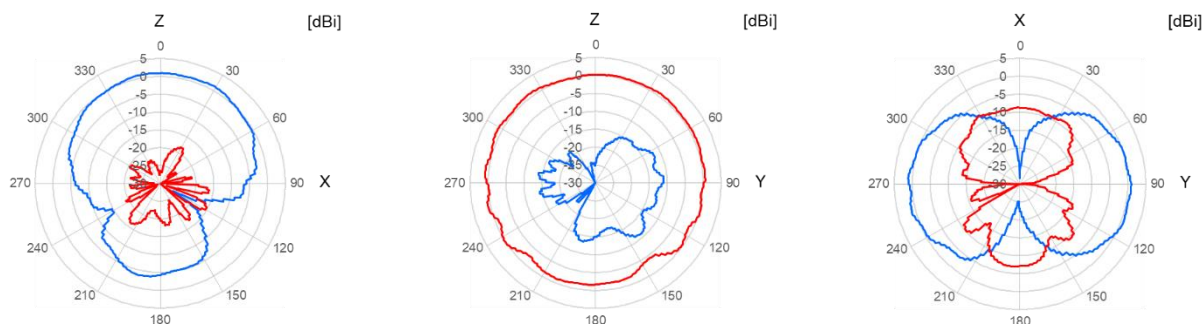
2.46GHz



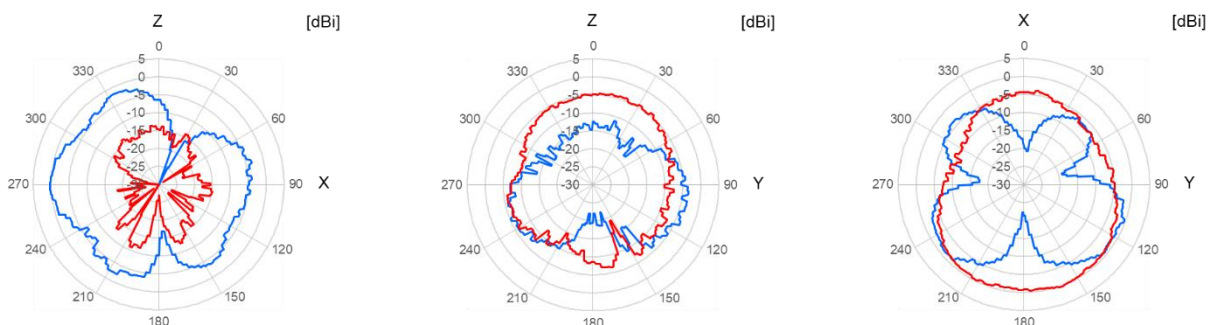
2.48GHz



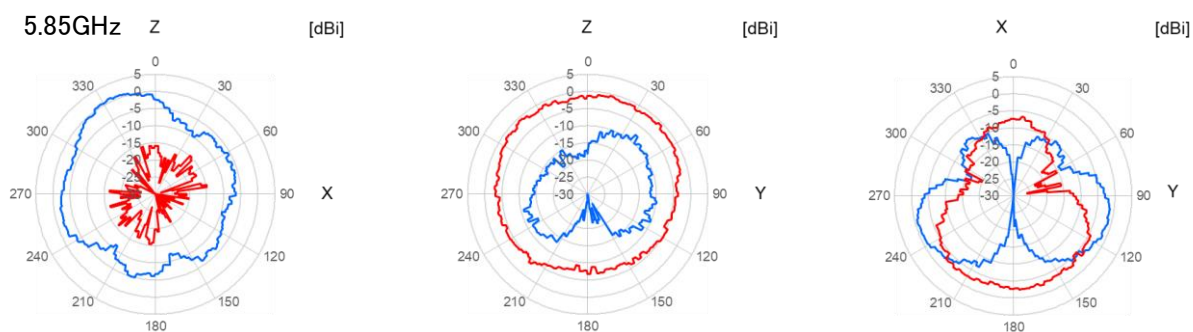
2.5GHz



5.15GHz



5.85GHz



青線 Blue line: 水平偏波 Horizontal polarization

赤線 Red line: 垂直偏波 Vertical polarization

Peak gain of the main polarization component in the ZX, ZY and XY planes

Frequency [GHz]	Peak Gain [dBi]
2.4	1.10
2.46	1.78
2.48	1.83
2.5	1.21
5.15	0.30
5.85	0.99

5. 環境条件・信頼性 Environmental conditions and reliability

5.1. 使用温度範囲 Operating temperature range

-40 °C to +125 °C

5.2. 保存条件 Storage conditions

IEC 61760-2

保存温度 Stock temperature range

+5 °C to +40 °C

相对湿度 Relative humidity

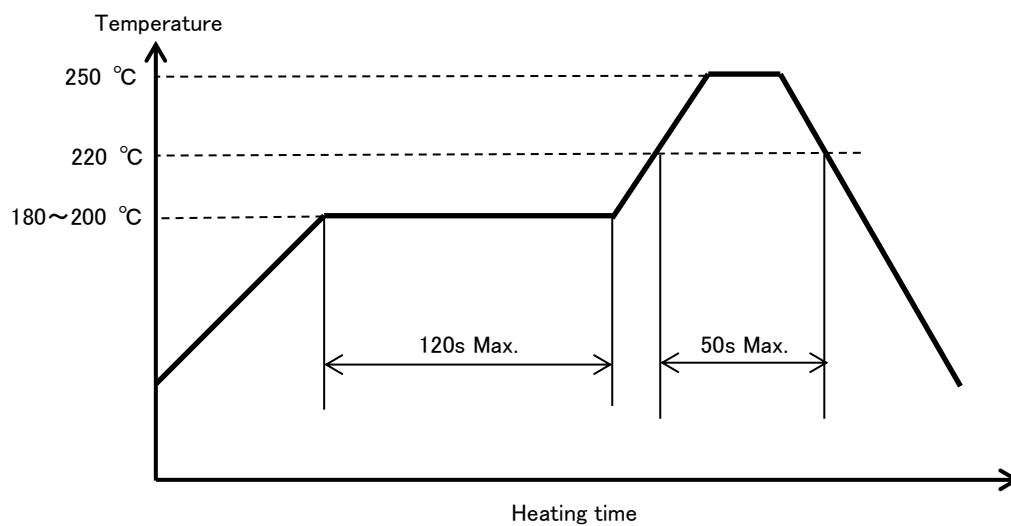
10 % to 75 %

Figure 1: Recommended land pattern. The diagram shows a square PCB layout with a total width of 13 mm and a total height of 13 mm. A dashed line represents the 'Reference line'. A 'FEED' point is located on the left side. A '50 Ω Line' is shown on the right side. A 'FEED Line' is indicated by an arrow. Dimensions include 6.2 mm for the left side, 5.5 mm for the bottom width, 0.15 mm for the feeder width, 4.5 mm for the right side, 7.9 mm for the right side, and 1.6 mm for the bottom right corner.

Reference board pattern (board thickness: 1.6 mm)

7. 推奨リフロー温度プロファイル Recommended reflow temperature profile

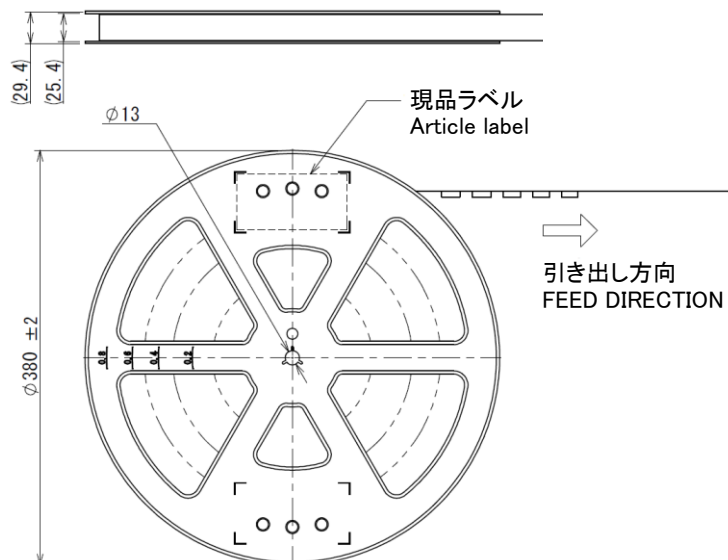
	温度 Temperature	加熱時間 Heating time
予備加熱 Preheating temperature	180 to 200 °C	120s (max.)
本加熱 Main heating temperature	Above 220 °C	50s (max.)
ピーク温度 Peak temperature	250 °C (max.)	–



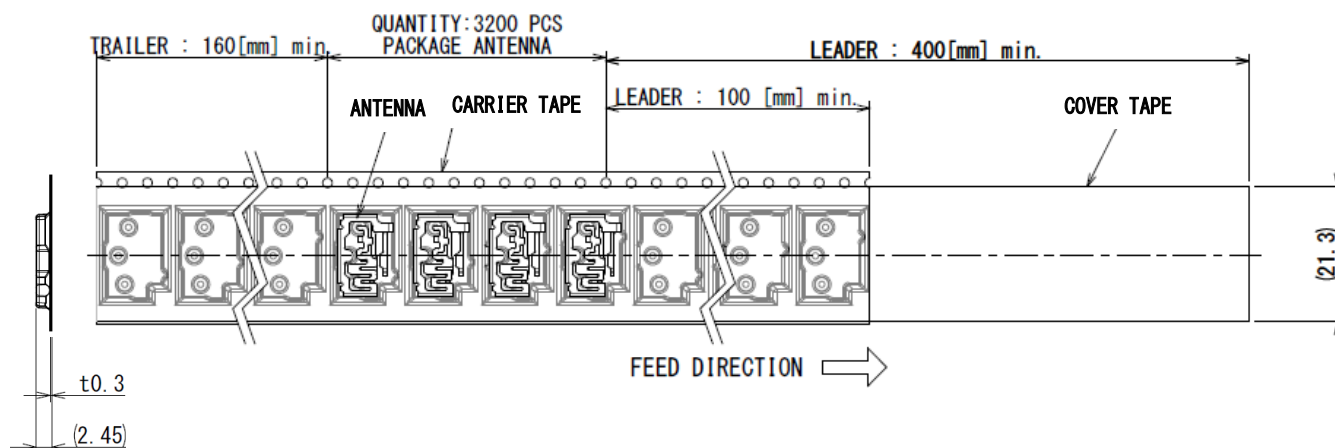
8. 梱包 Packaging

8.1. 梱包数量 Package quantity: 3,200 (pieces / reel)

8.2. エンボスリール寸法 Embossed reel dimensions



8.3. テープ寸法 Tape dimensions



9. 生産場所 Place of production

山形航空電子株式会社

JAE Yamagata, Ltd.

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4102-6 Aza Takadai-Shinden, Oaza Izumida, Shinjo City, Yamagata Prefecture

改版履歴 Revision history

文書番号 Document number	日付 Date	改版 Revision
GHT20-1213	01 Oct. 2020	初版 Initial version
GHT20-1592	03 Dec. 2020	2 版 Revision 2
GHT21-0731	04 Jun. 2021	3 版 Revision 3 - Sec. 3.6 材料を追加 Sec. 3.6: Added Material - Sec. 4.5 ピークゲインの値を追加 Sec. 4.5: Added value of peak gain - 表記の修正 Editorial changes
GHT21-0731-1	16 Jul. 2021	4 版 Revision 4 表記の修正 Editorial changes
GHT21-0731-2	08 Oct. 2021	5 版 Revision 5 表記の修正 Editorial changes
GHT21-0731-3	2 Aug. 2024	6 版 Revision 6 Sec. 9 生産場所を追加
GHT21-0731-4	11Nov 2024	7 版 Revision 7 Sec.4.5 ピークゲインの値を追加 Sec. 4.5: Added value of peak gain