

Antenna Datasheet

TITLE : AN02ML27C00 and AN02ML27M00 SERIES
AN02ML27C00 および AN02ML27M00 シリーズ

1. 特徴 Features

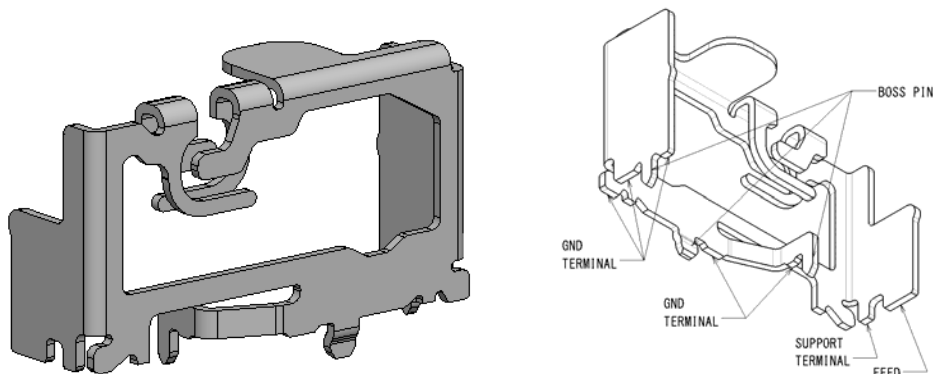
- 無線 LAN 向け 2.4 – 2.5 GHz / 4.6 – 4.9 GHz / 5.15 – 5.85 GHz / 5.925 – 7.125 GHz アンテナ
2.4 – 2.5 GHz / 4.6 – 4.9 GHz / 5.15 – 5.85 GHz / 5.925 – 7.125 GHz Antenna for WLAN
- 小型 Compact size
- 高効率 High efficiency
- 表面実装部品 Surface mount device
- エンボスリール梱包 Embossed reel package

2. 品名 Product name

- 一般用途品 General purpose products
単品 Single unit: AN02ML27C00
400 個パッケージ 400-piece package: AN02ML27C00R400
- 車載対応品 Automotive grade products)
単品 Single unit: AN02ML27M00
400 個パッケージ 400-piece package: AN02ML27M00R400

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

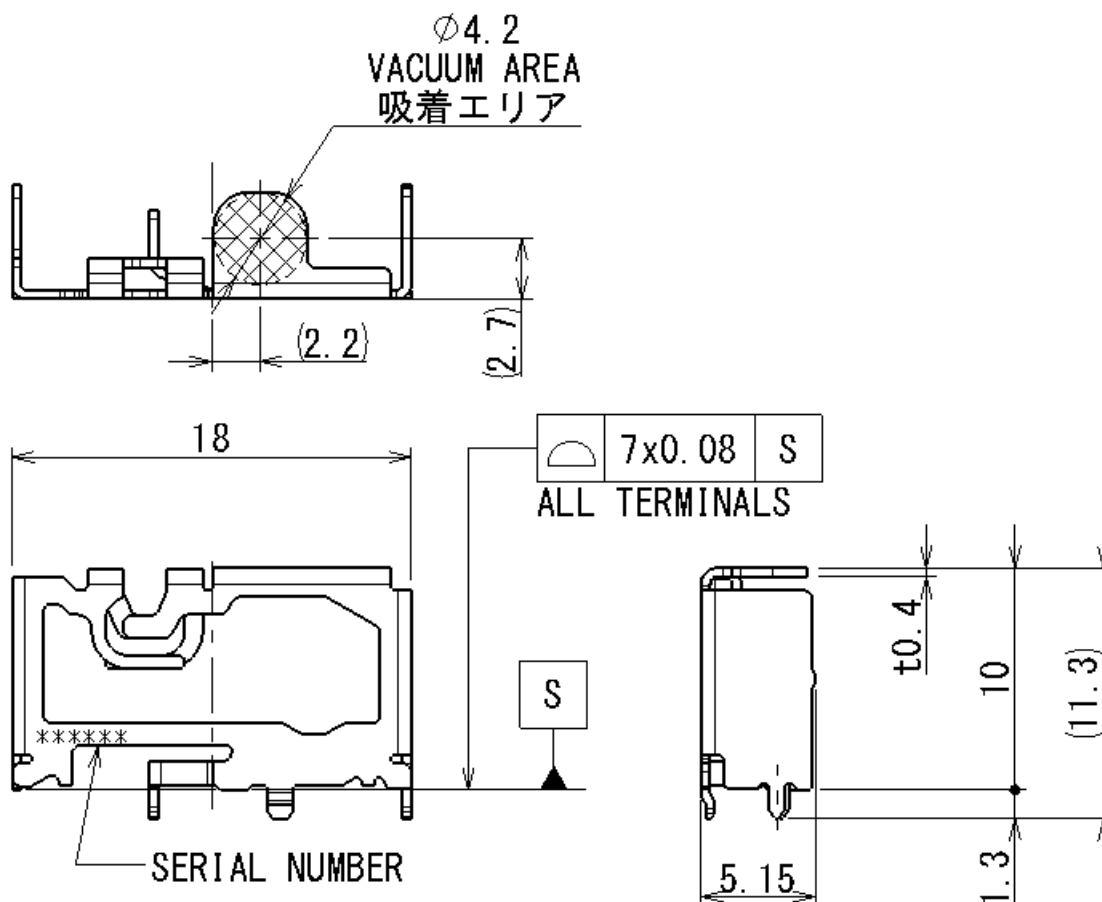
3.1. 形状 Shape



3.2. 寸法 Dimensions

18.0 (width) x 5.15 (depth) x 11.3 (*) (height) mm

(*) Height above the PCB: 10 mm



3.3. 重量 Weight

0.65 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 / 4.6 – 4.9 GHz / 5.15 – 5.85 GHz / 5.925 – 7.125 GHz

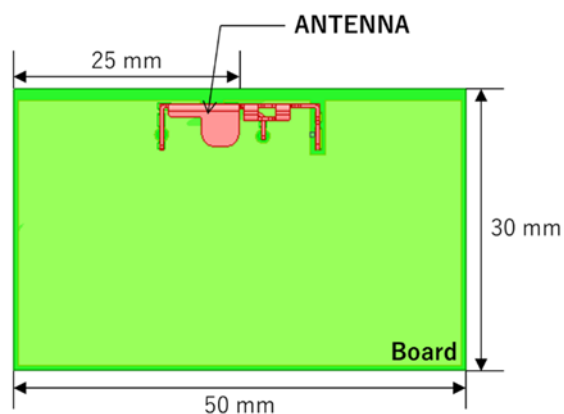
4.2. インピーダンス Impedance

50 Ω

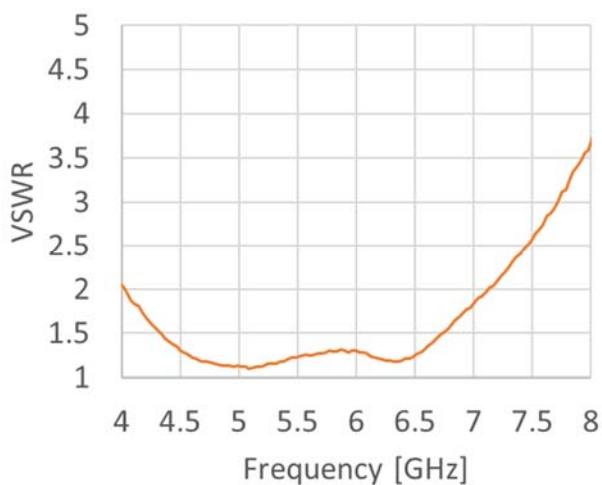
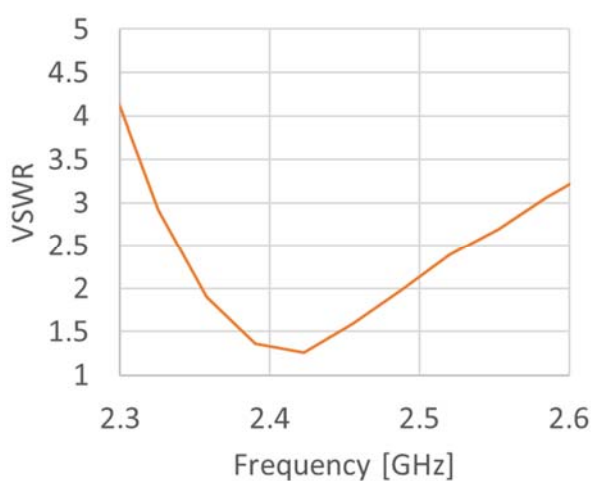
4.3. Voltage standing wave ratio (VSWR)

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 < 2.5 (Frequency range: 2.4 – 2.5 GHz / 4.6 – 4.9 GHz / 5.15 – 5.85 GHz / 5.925 – 7.125 GHz)



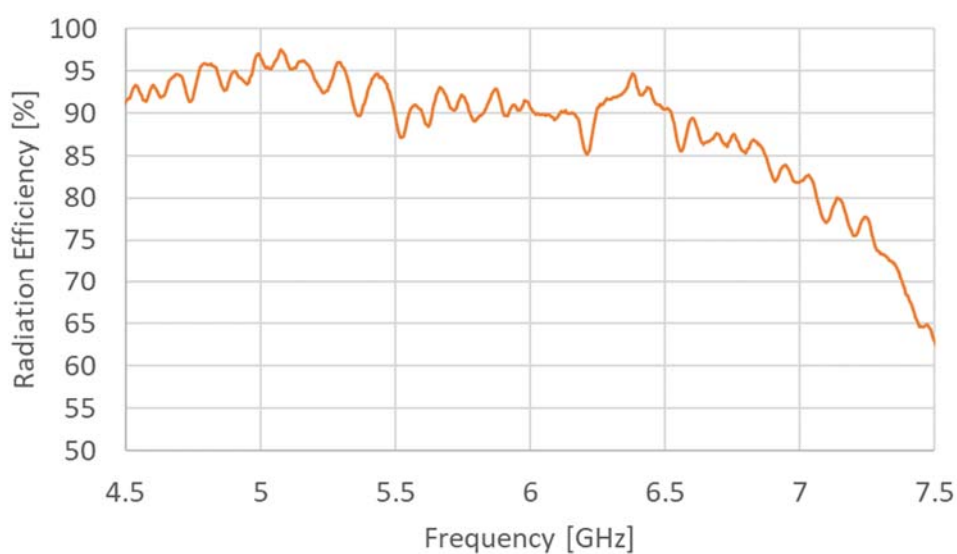
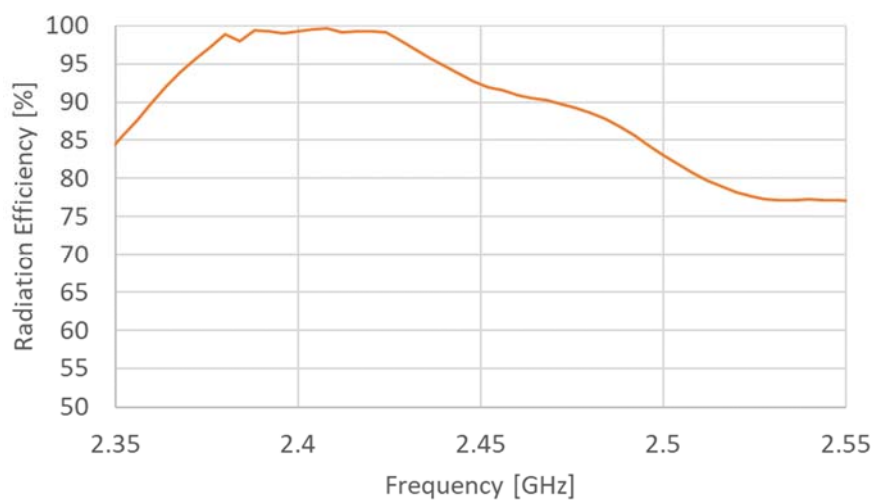
4.4 放射効率 Radiation efficiency:

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 > 80 % (Frequency range: 2.4 – 2.5 GHz / 4.6 – 4.9 GHz / 5.15 – 5.85 GHz),

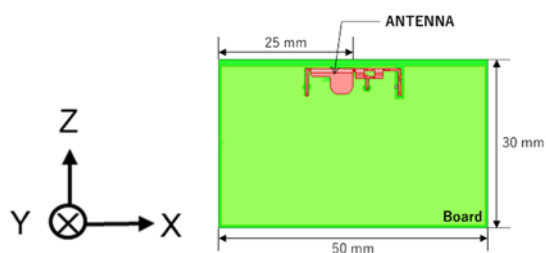
> 75 % (Frequency range: 5.915 – 7.125 GHz)



4.5 放射パターン Radiation pattern

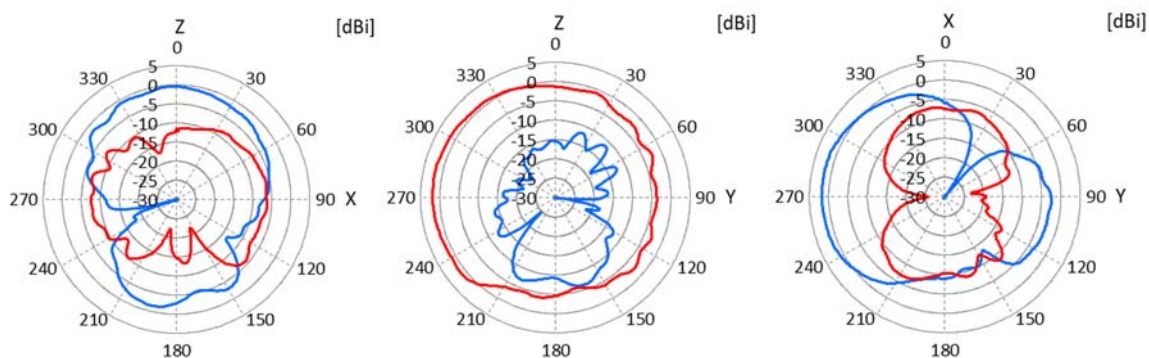
50 x 30 mm の標準基板実装時の放射パターン特性例

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

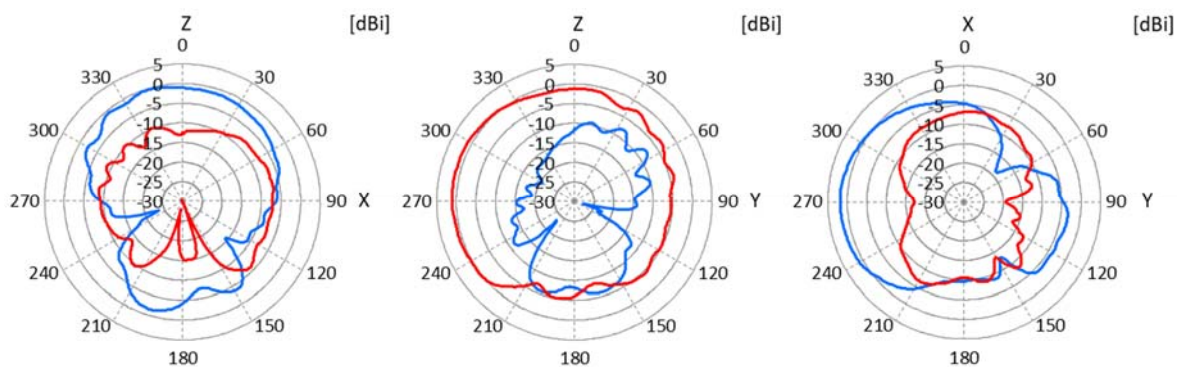


Radiation pattern

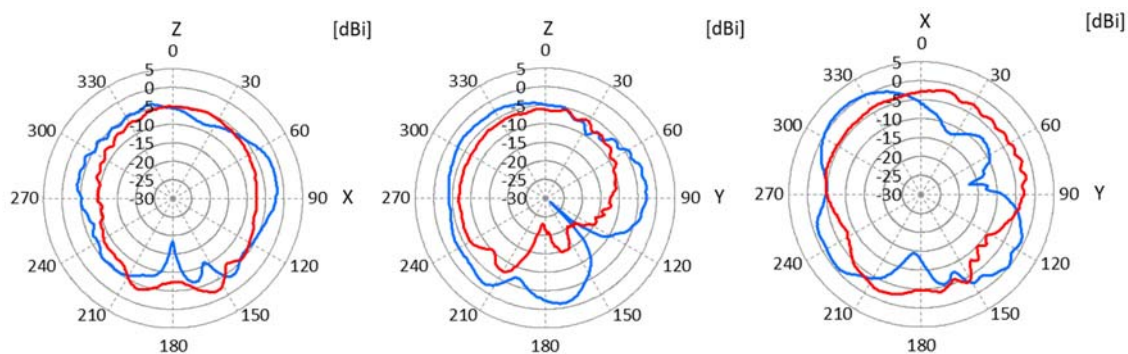
2.4 GHz



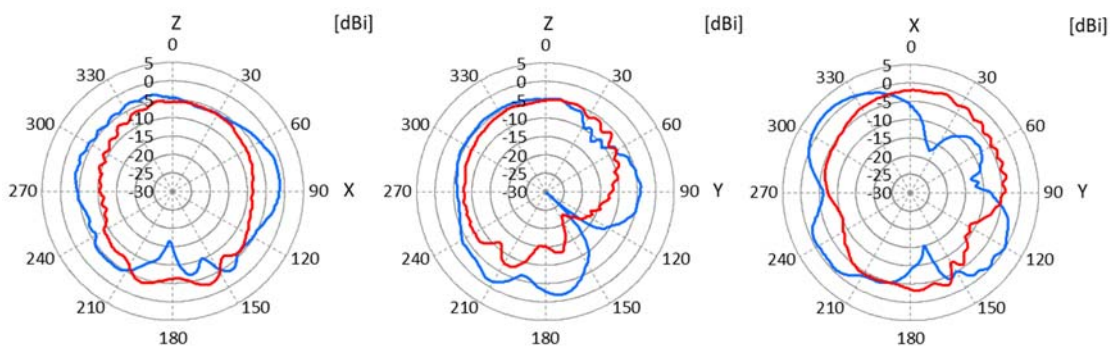
2.5 GHz



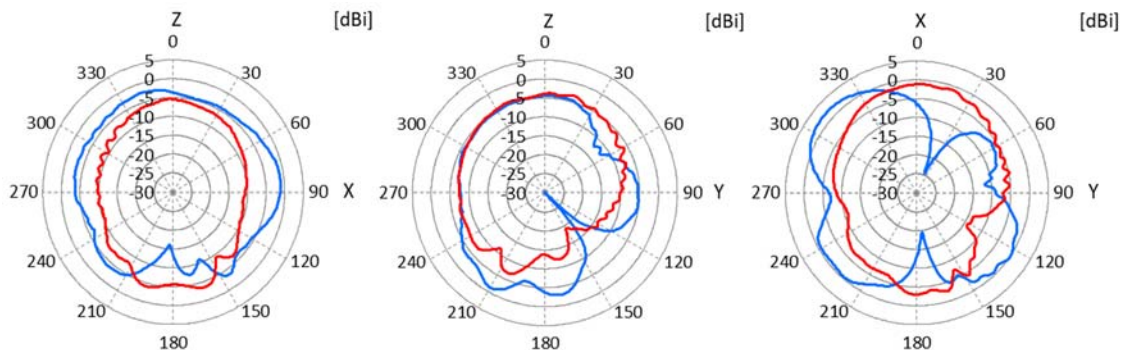
4.6 GHz



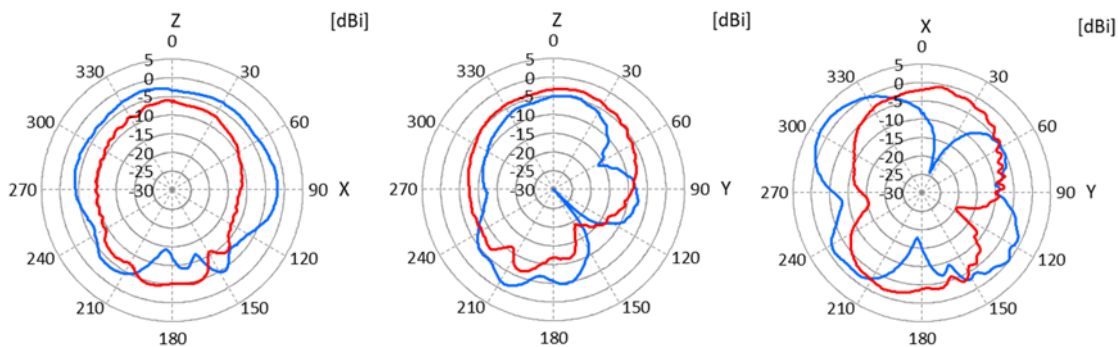
4.9 GHz



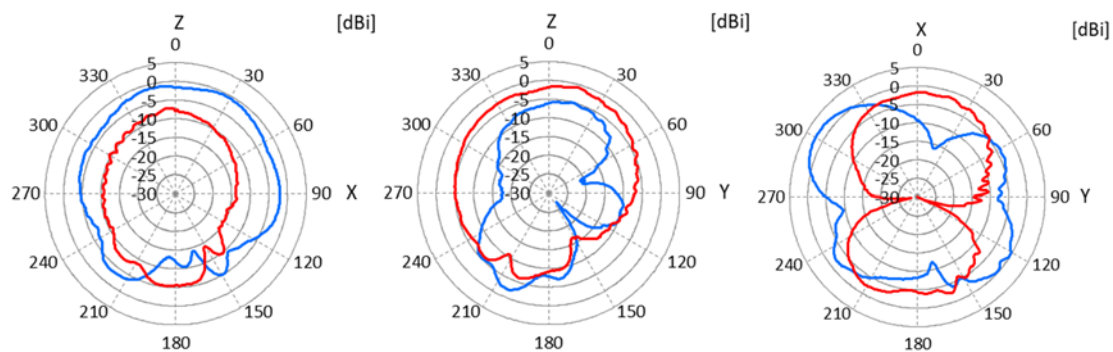
5.15 GHz



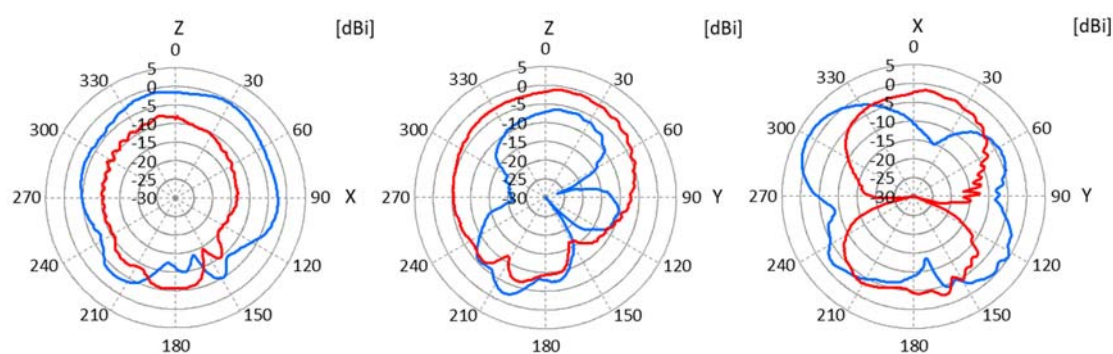
5.5GHz



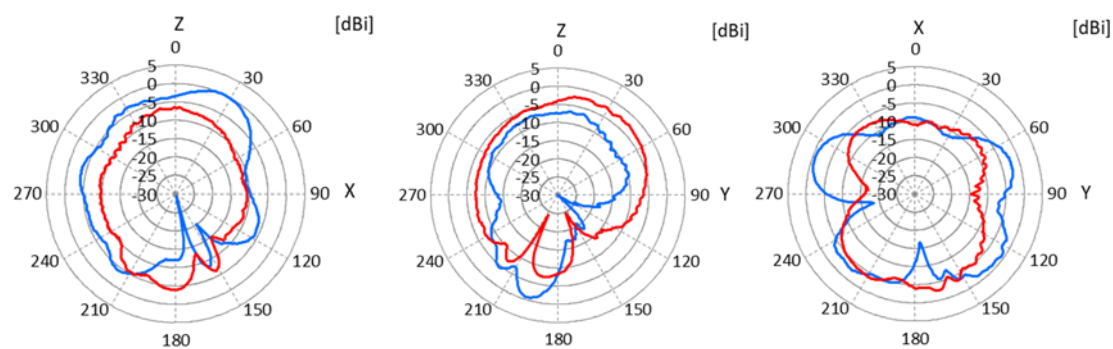
5.85 GHz



5.925 GHz



7.125 GHz



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	1.99
2.5	1.84
4.6	0.79
4.9	1.78
5.15	2.15
5.5	2.27
5.85	2.22
5.925	2.14
7.125	0.02

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

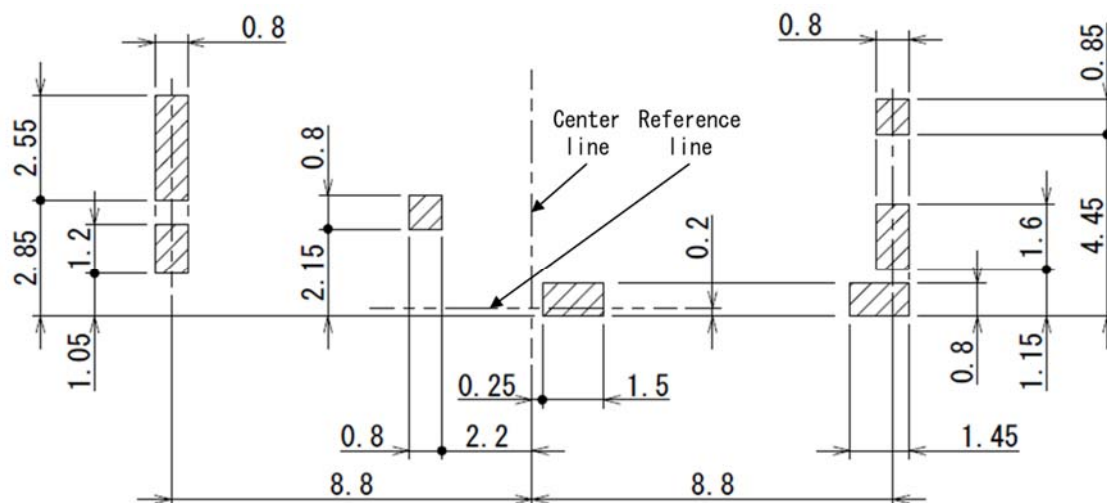
保存温度 Stock temperature range

+5 °C to +40 °C

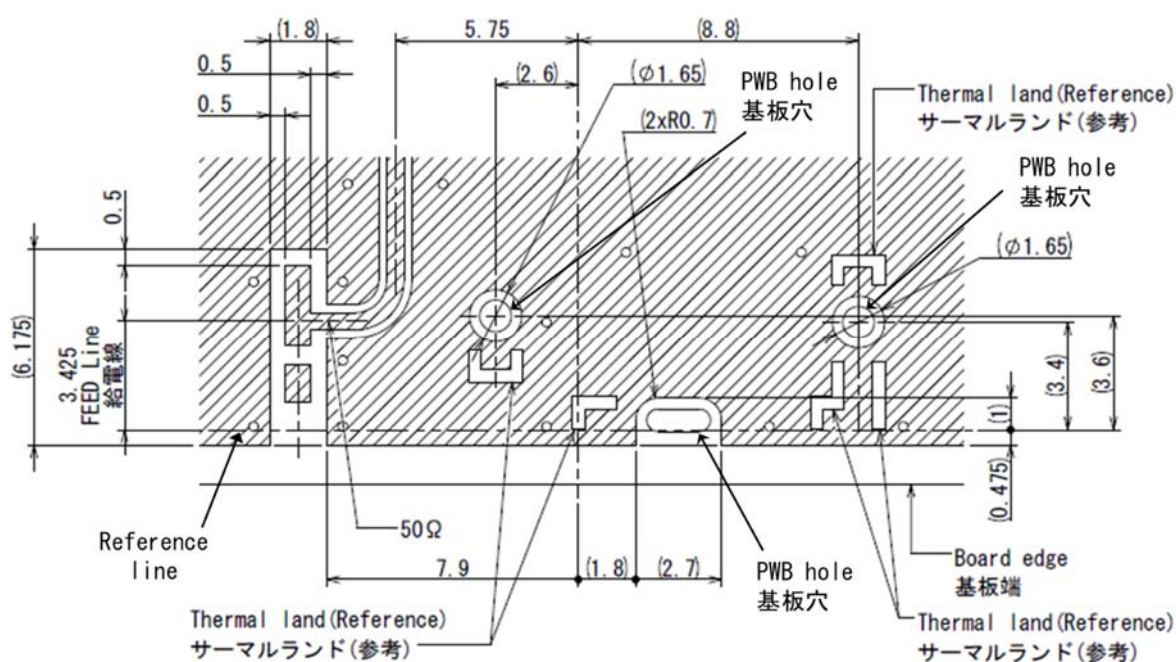
相対湿度 Relative humidity

10 % to 75 %

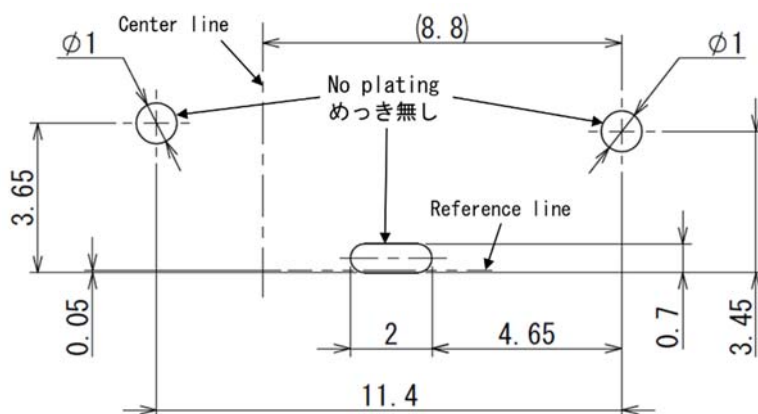
6. 推奨ランドパターンおよび推奨基板パターン Recommended land pattern and reference board pattern



Recommended land pattern



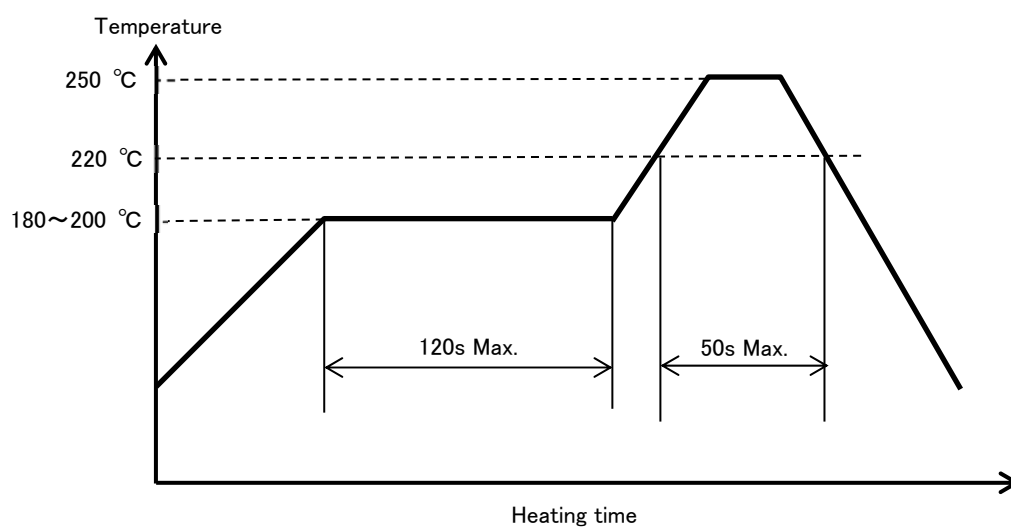
Reference board pattern (board thickness: 1.6 mm)



Recommended PWB holes

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

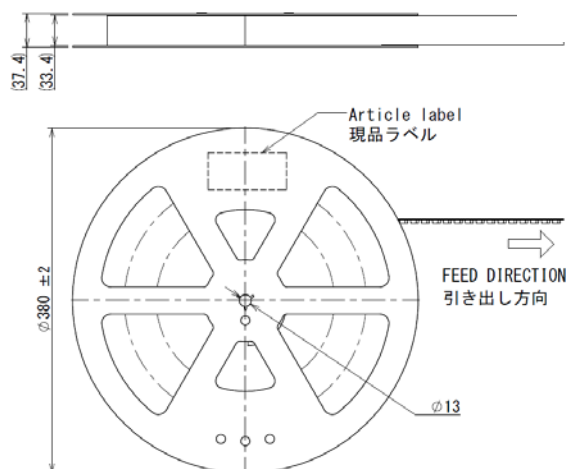
	温度 Temperature	加熱時間 Heating time
予備加熱 Preheating temperature	180 to 200 °C	120 s (max.)
本加熱 Main heating temperature	Above 220 °C	50 s (max.)
ピーク温度 Peak temperature	250 °C (max.)	–



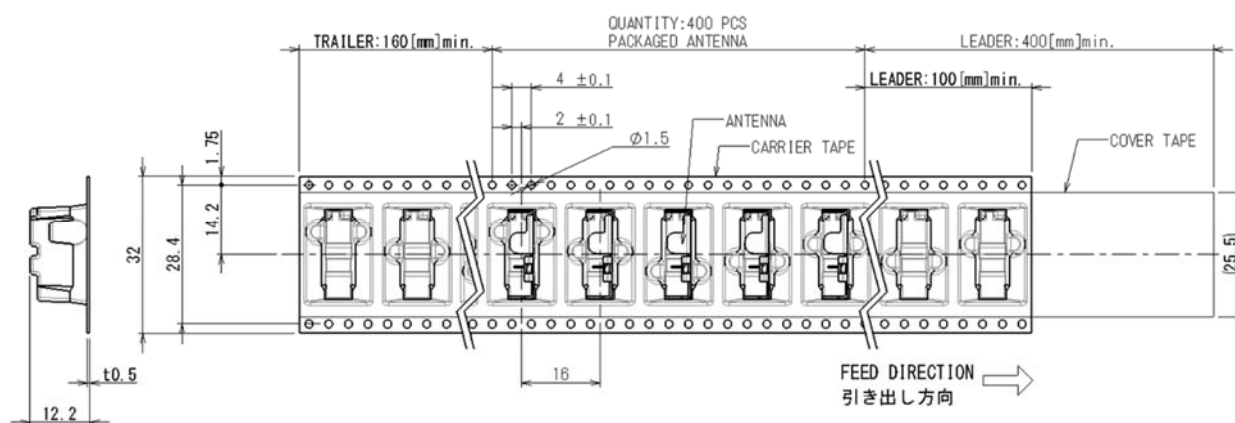
8. 梱包 Packaging

8.1. 捆包数量 Package quantity: 400 (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



改版履歷 Revision history

文書番号 Document number	日付 Date	改版 Revision
GHT23-0632	12 Apl. 2023	第一版 Initial version
GHT23-0632-1	27 Dec. 2023	第二版 Revision 2 -品名の併記 Concurrent use of product names