

## Tri Band Antenna for Wi-Fi 6E

### 1. Features

- LAN 2.4 – 2.5 GHz / 5.15 - 5.85 GHz / 5.925 - 7.125 GHz 2.4 – 2.5 GHz / 5.15 - 5.85 GHz / 5.925 – 7.125 GHz Antenna for WLAN
- Compact size
- High efficiency
- Surface mount device
- Embossed reel package

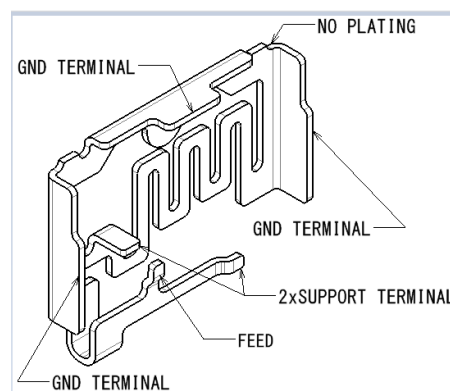
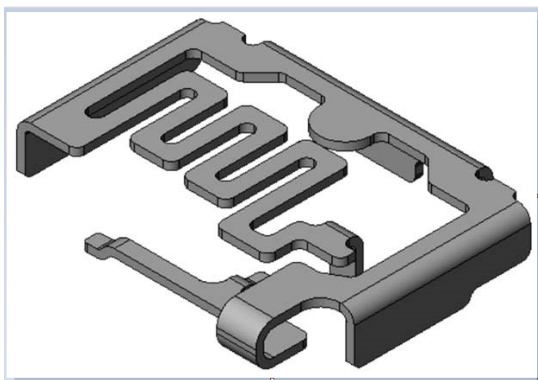
### 2. Part Number

RAC002456-R

2400 (2400-pieces/reel)

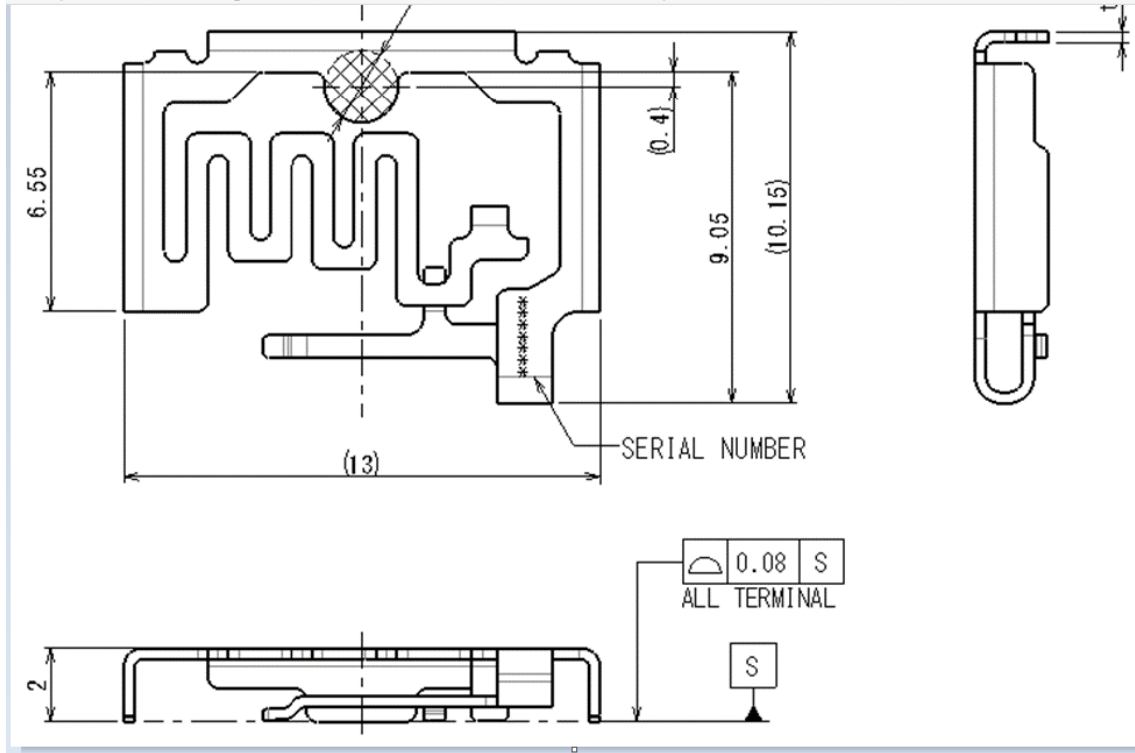
### 3. Shape dimensions and height

#### 3.1. Shape



**3.2. Dimensions**

13.0 (width) x 10.5 (depth) x 2 (height) mm



**3.3. Weight**

0.25 g (typical)

**3.4. Plating**

None

**3.5. Type**

Split ring

**3.6. Material**

Copper Alloy

## 4. RF Characteristics

### 4.1. Frequency Range

2.4 - 2.5 GHz / 5.15 - 5.85 GHz / 5.925 – 7.125 GHz

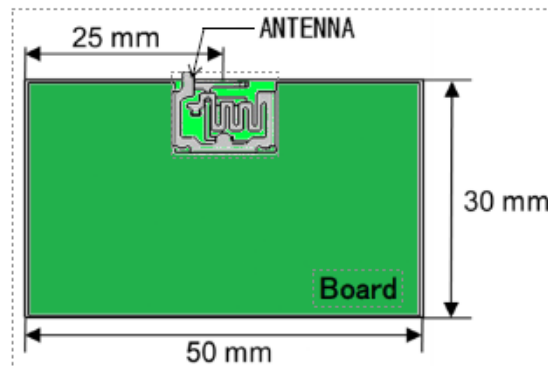
### 4.2. Impepedance

50

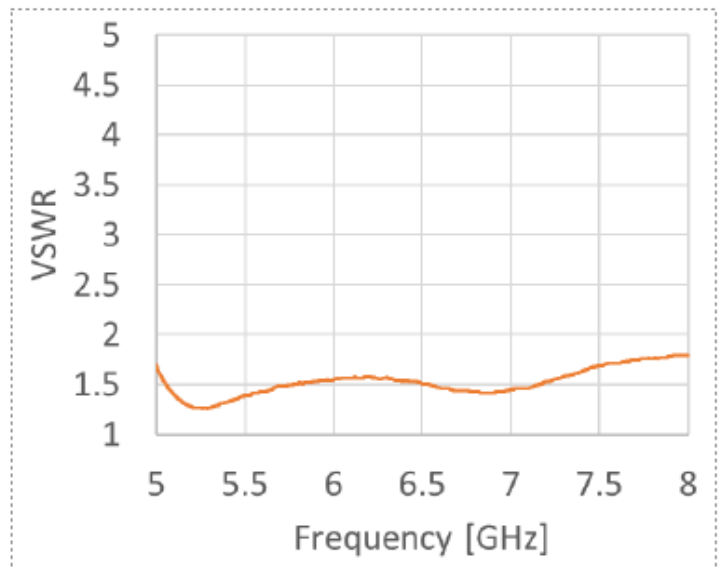
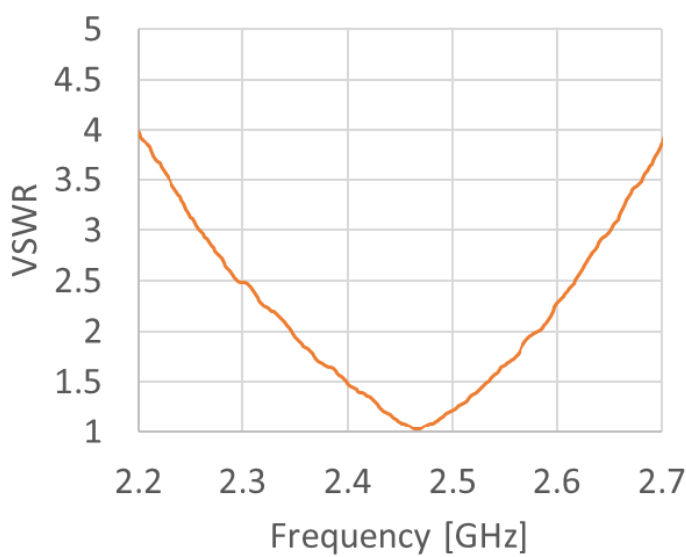
### 4.3. Voltage standing wave ratio (VSWR)

50 x 30 mm VSWR

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



VSWR < 2.0 (Frequency range: 2.4 -2.5 GHz / 5.15 - 5.85 GHz / 5.925 – 7.125 GHz)



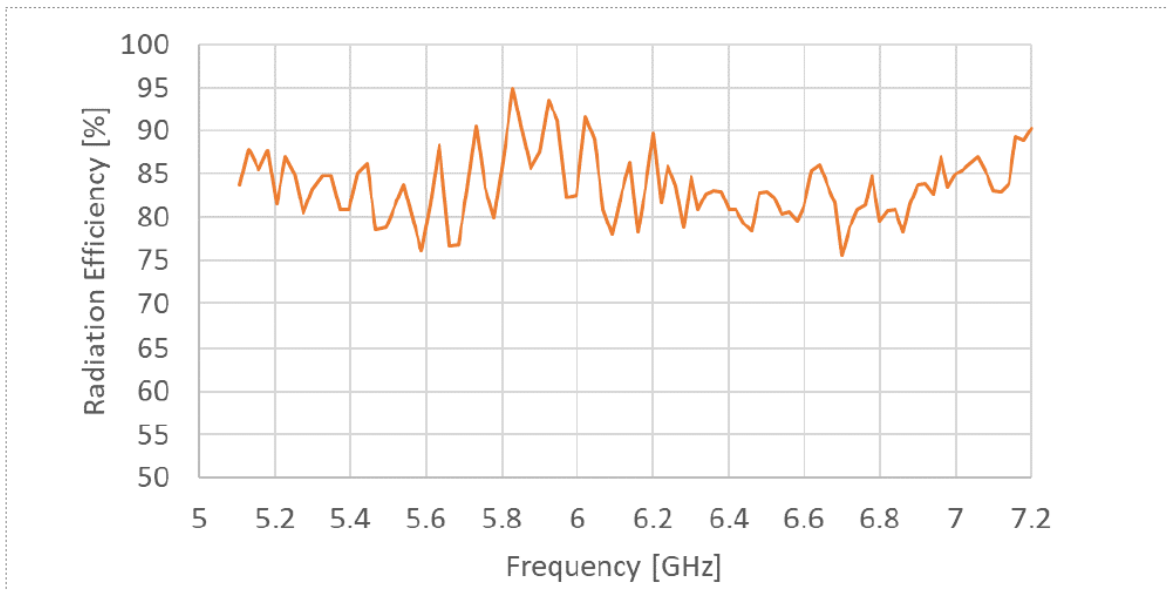
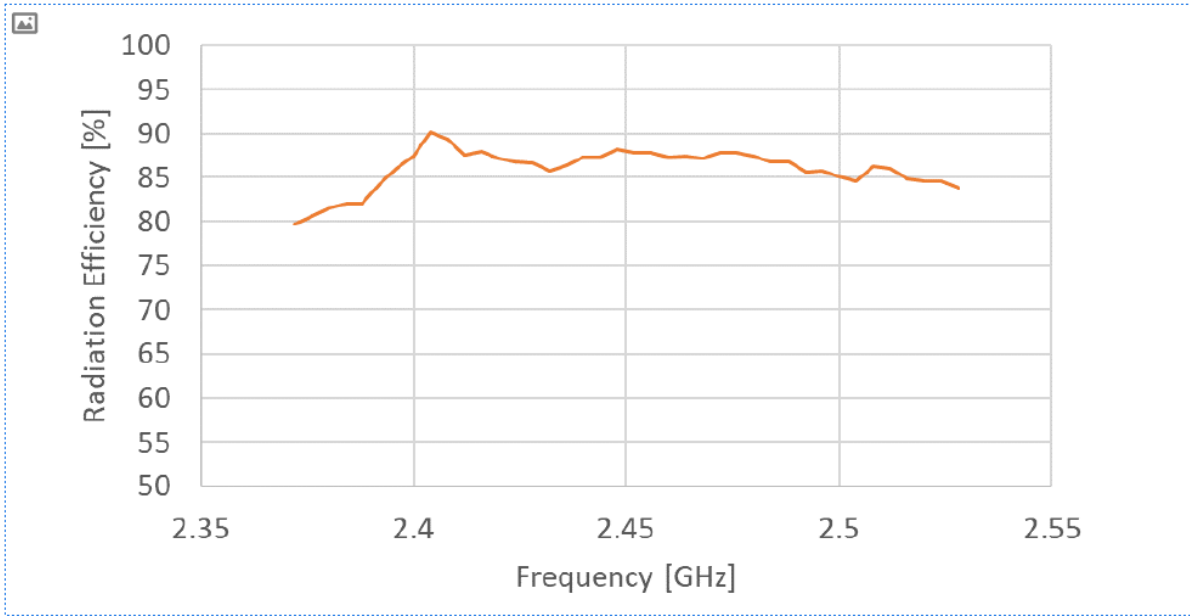
#### 4.4. Radiation efficiency:

50 x 30 mm

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),

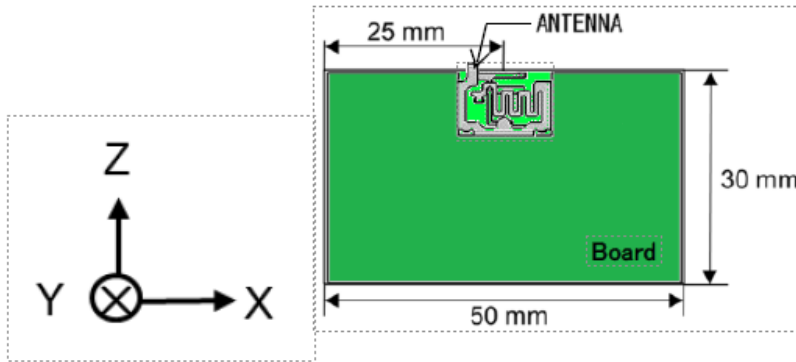
> 70 % (Frequency range: 5.15 - 5.85 GHz /  
5.915 – 7.125 GHz)



### 4.5. Radiation Pattern

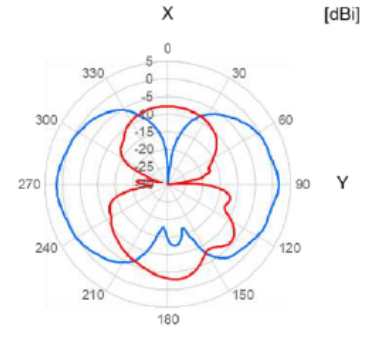
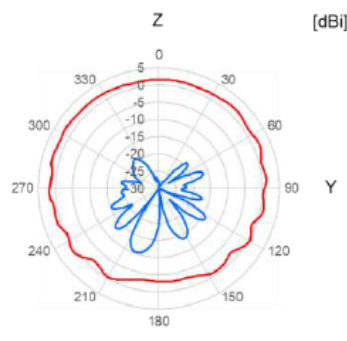
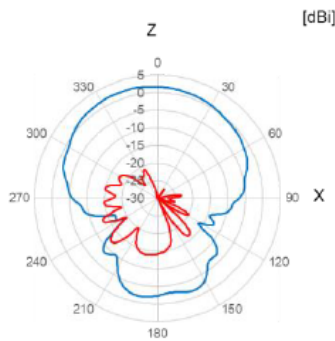
50 x 30 mm

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

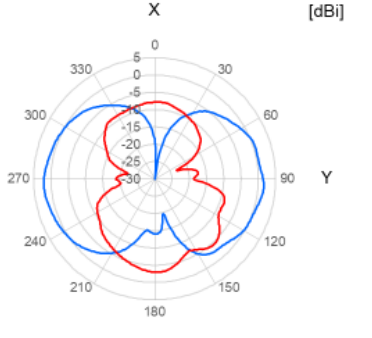
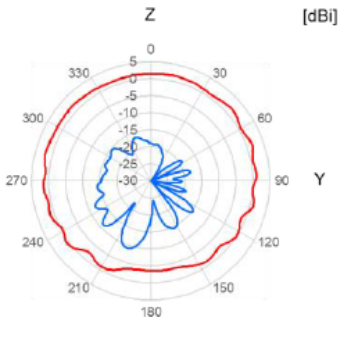
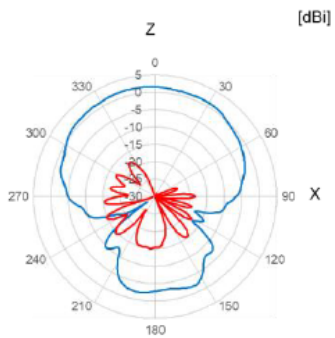


### Radiation pattern

2.4 GHz

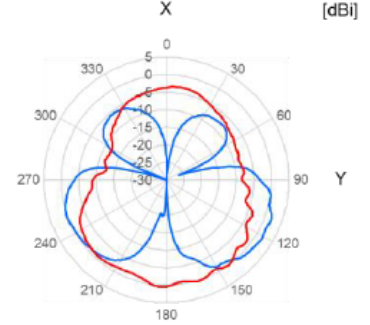
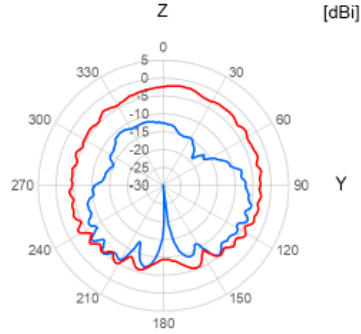
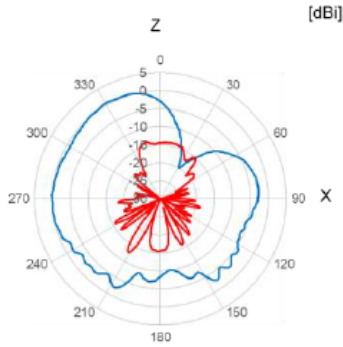


2.5 GHz

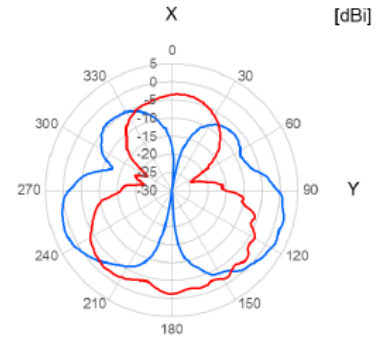
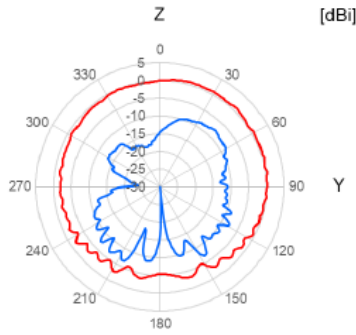
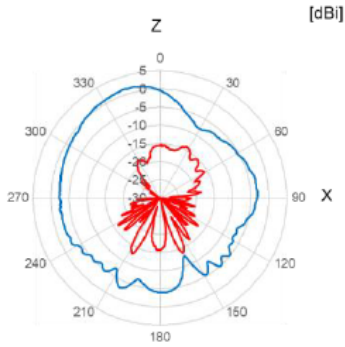


Radiation pattern

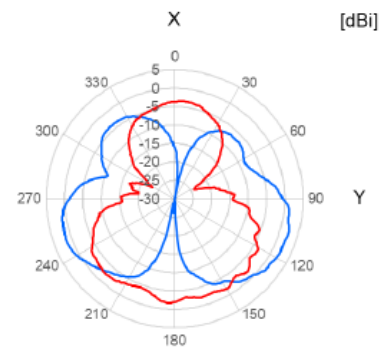
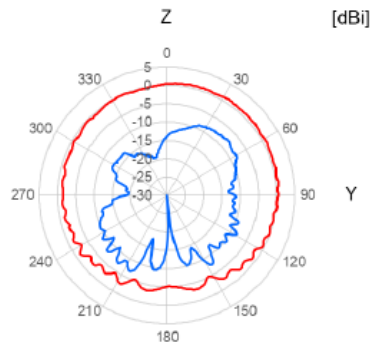
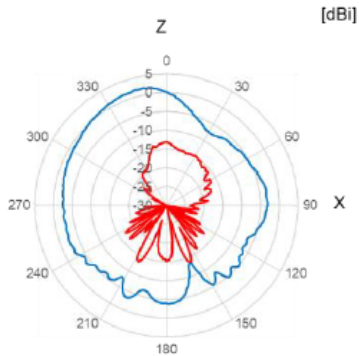
**5.15 GHz**



**5.85 GHz**

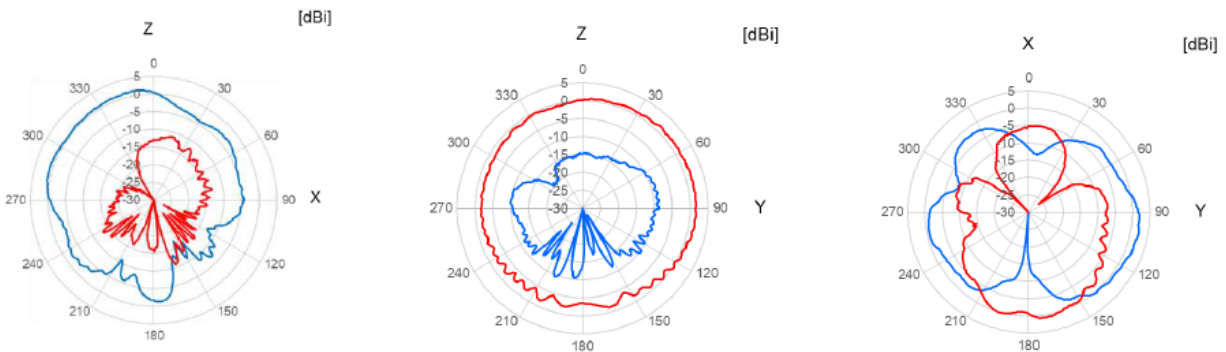


**5.925 GHz**



## Radiation pattern

7.125 GHz



Blue line: Horizontal polarization  
Red line: Vertical polarization

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

Frequency [GHz]	Peak gain [dBi]
2.4	1.96
2.5	2.14
5.15	1.97
5.85	2.23
5.925	2.38
7.125	2.35

## 5. Environmental conditions and reliability

5.1. Operating temperature range  
-40 °C to +125 °C

5.2. Storage conditions

IEC 61760-2

Stock temperature range

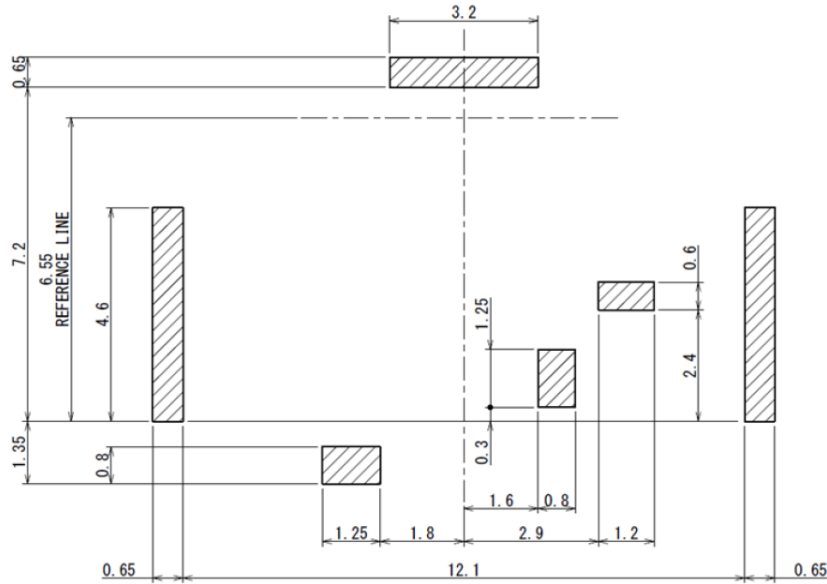
+5 °C to +40 °C

Relative humidity

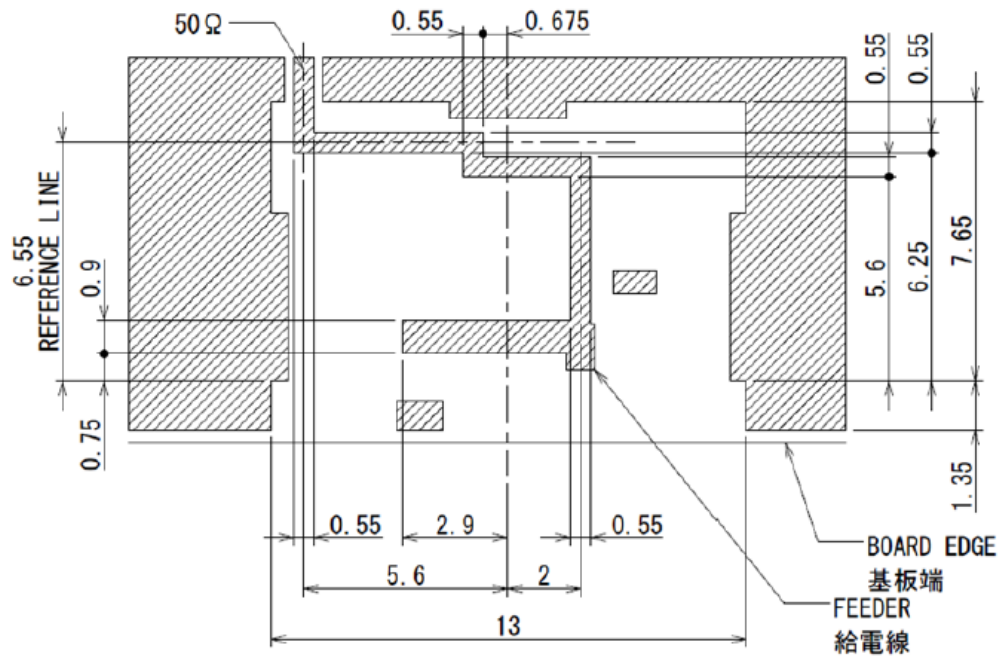
10 % to 75 %



## 6. Recommended land pattern and reference board pattern



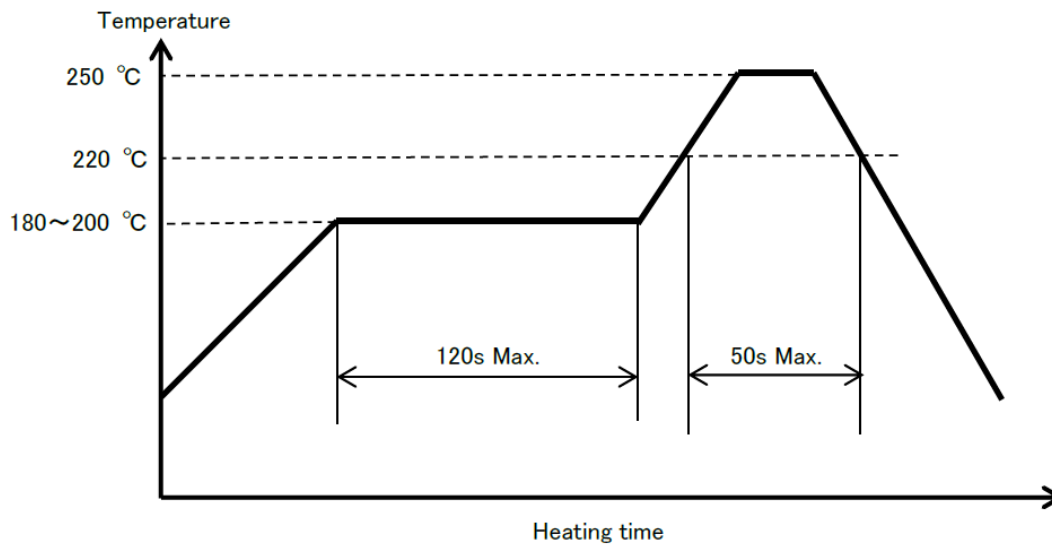
Recommended land pattern



Reference board pattern (board thickness: 1.6 mm)

## 7. Recommended reflow temperature profile

	Temperature	Heating time
Preheating temperature	180 to 200 °C	120 s (max.)
Main heating temperature	Above 220 °C	50 s (max.)
Peak temperature	250 °C (max.)	-





## REVISION HISTORY

Version	Change to current version	Page(s)
RAC002456 Issue A September 30, 2022	Initial datasheet	N/A

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