



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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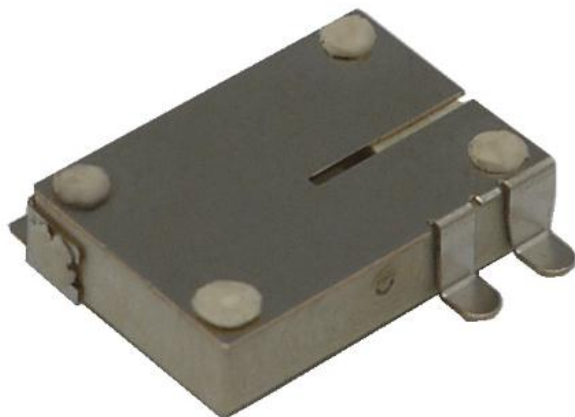
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Description: 2.4GHz SMT PIFA Antenna

Series: Embedded Antenna

**PART NUMBER: W3613**



### Features:

- Frequency: 2.4-2.5GHz
- Gain: 4dBi
- Size: 14.2 x 13.3 x 3.2 mm
- SMT compatible
- Packing: Tape&Reel
- RoHS compliant

### Applications:

- WiFi, ISM 2.4-2.5GHz
- Tablets, Notebooks
- IoT and M2M devices
- Portable Electronics
- Security, Transportation

All dimensions are in mm / inches

Issue: 1719

In the effort to improve our products, we reserve the right to make changes judged to be necessary.

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## ELECTRICAL SPECIFICATIONS

Frequency	2.4-2.5GHz
Nominal Impedance	50Ω
VSWR	2:1
Peak Gain	4dBi +/- 1 dB
Radiation Pattern	Omni
Polarization:	Linear
Power withstanding	5W

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### MECHANICAL SPECIFICATIONS

Plastic frame	LCP
Color	Gray
Weight	1 g
Size(LXWXT)	14.2(0.56)X13.3(0.52)X3.2(0.13) mm(inch)
Fixing system	SMT

### ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40/+85 ° C
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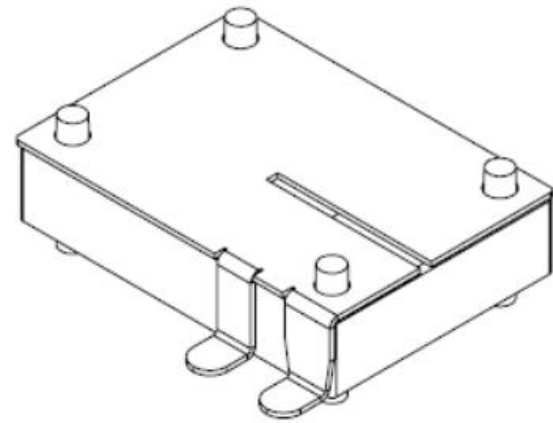
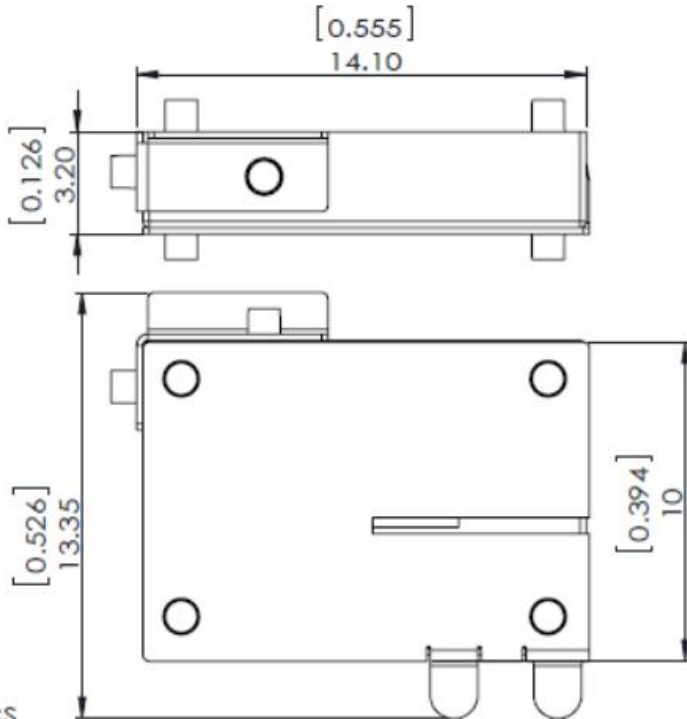
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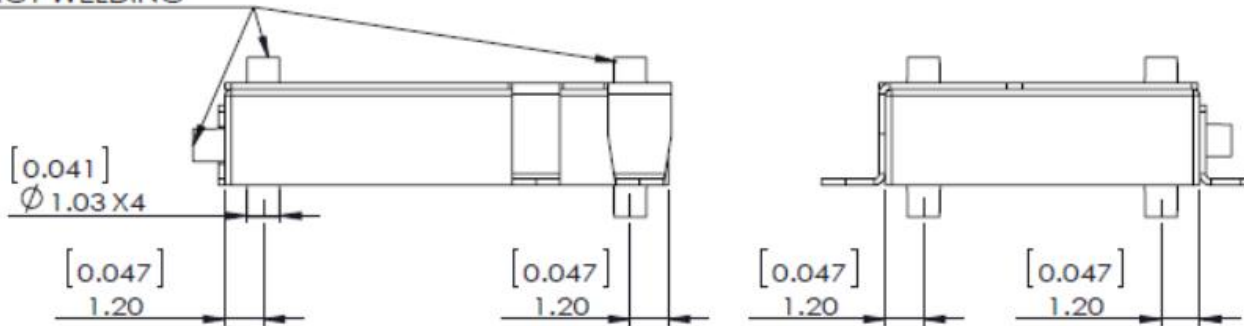
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**MECHANICAL DRAWING**



TOWER X 6PCS  
HEIGHT LESS THAN 0.5MM  
AFTER HOT WELDING



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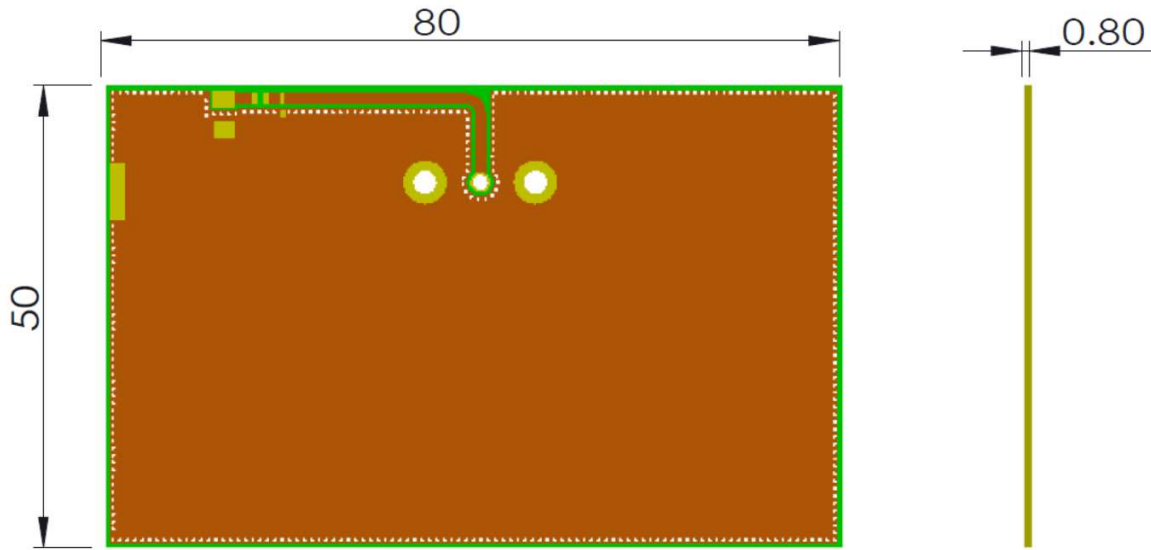
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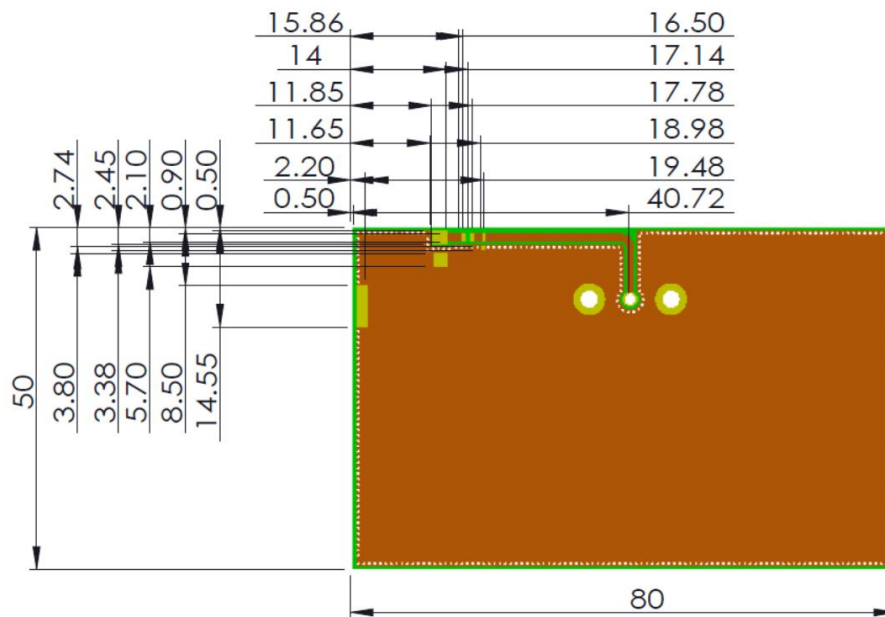
**OTHER SPECIFICATIONS**

**PCB LAYOUT:**

1, PCB material, FR4, size, 80X50X0.8mm



2, Clearance area (Top)



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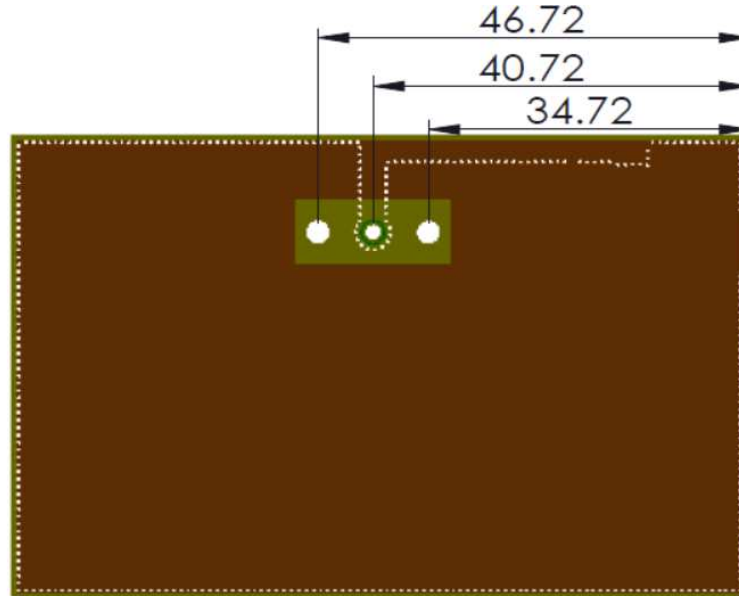
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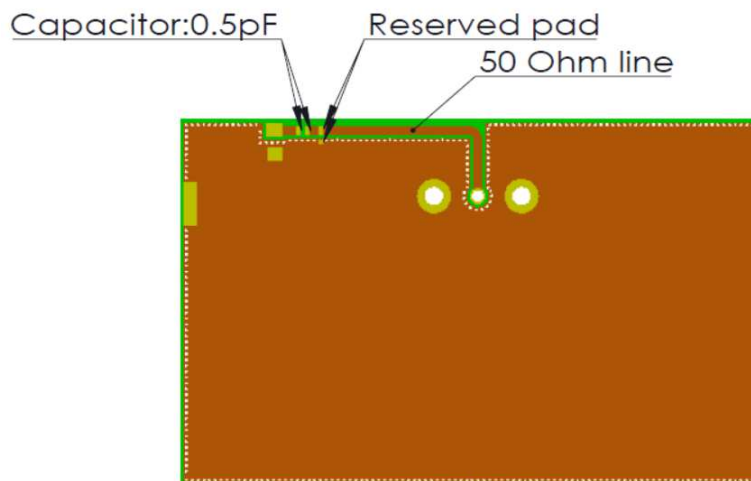
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### OTHER SPECIFICATIONS

#### 3, Clearance area (Bottom)



#### 4, PCB Features



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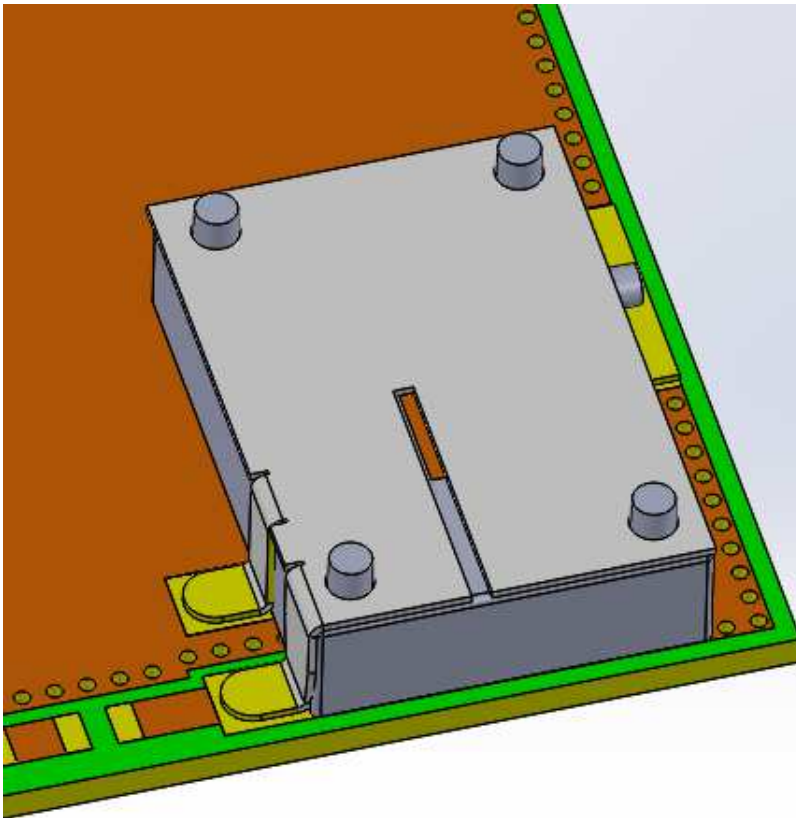
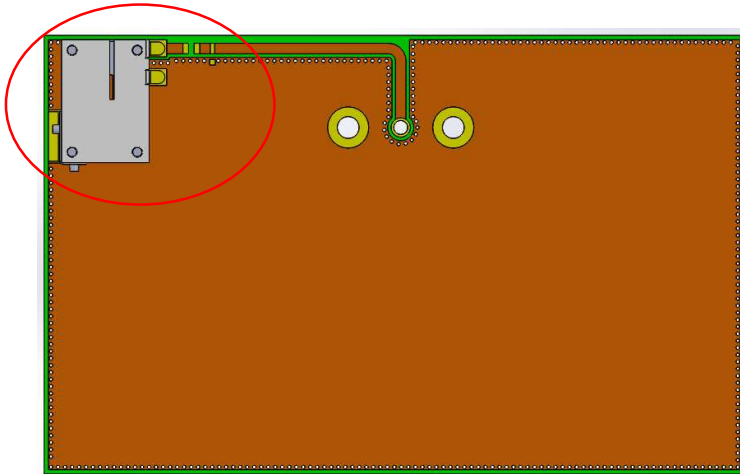
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## OTHER SPECIFICATIONS

### 5, Antenna on test board



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OTHER SPECIFICATIONS

Recommendation for reflow soldering process

Printing stencil thickness 0,15 - 0,25 mm is recommended for the solder paste. The maximum soldering temperature should not exceed 260°C. The temperature profile recommendations for reflow soldering process is presented in the Figures 1 and 2. The reflow profile

presented in figure 1 describes minimum reflow temperatures. The reflow profile presented in figure 2 describes maximum reflow temperatures. located at the center of the coverage area.

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 30 sec
5	Peak temperature in reflow	230 °C for 10 seconds
6	Temperature gradient in cooling	Max -5 °C/s

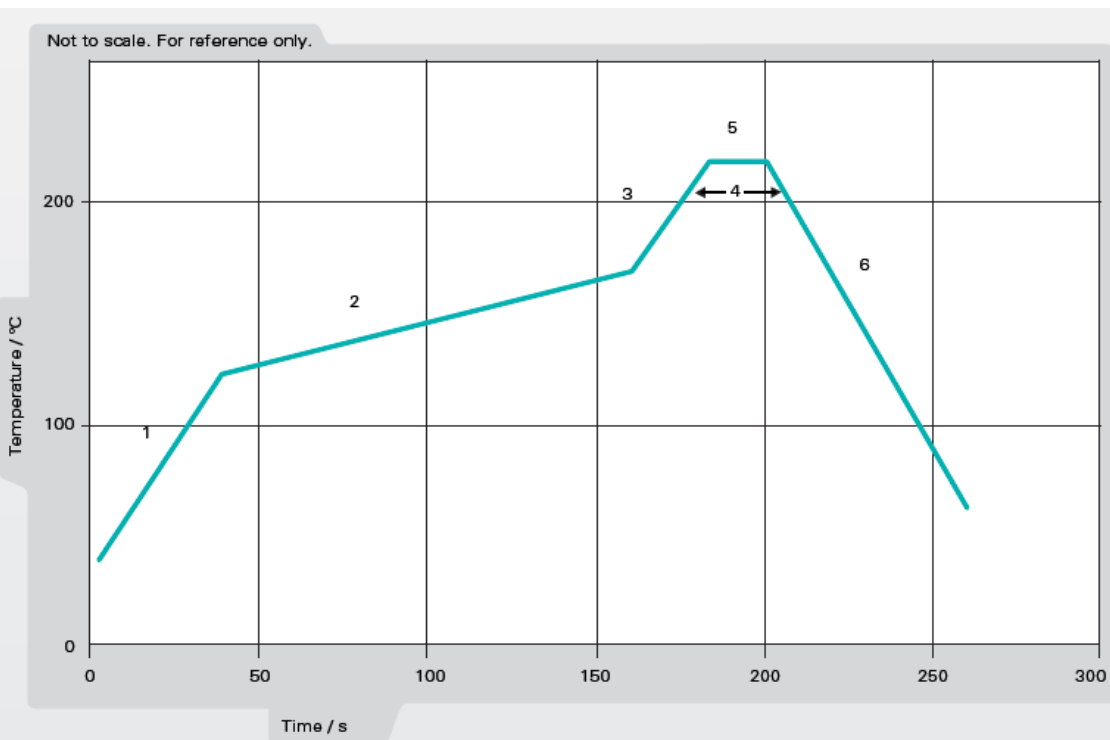


Figure 1. Minimum temperature profile recommendation for reflow soldering process

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**OTHER SPECIFICATIONS**

	Method of heat transfer	Controlled hot air convection
1	Average temperature gradient in preheating	2.5 °C/s
2	Soak time	2-3 minutes
3	Max temperature gradient in reflow	3 °C/s
4	Time above 217 °C	Max 60 sec
5	Time above 230 °C	Max 50 sec
6	Time above 250 °C	Max 10 sec
7	Peak temperature in reflow	260 °C for 5 seconds
8	Temperature gradient in cooling	Max -5 °C/s

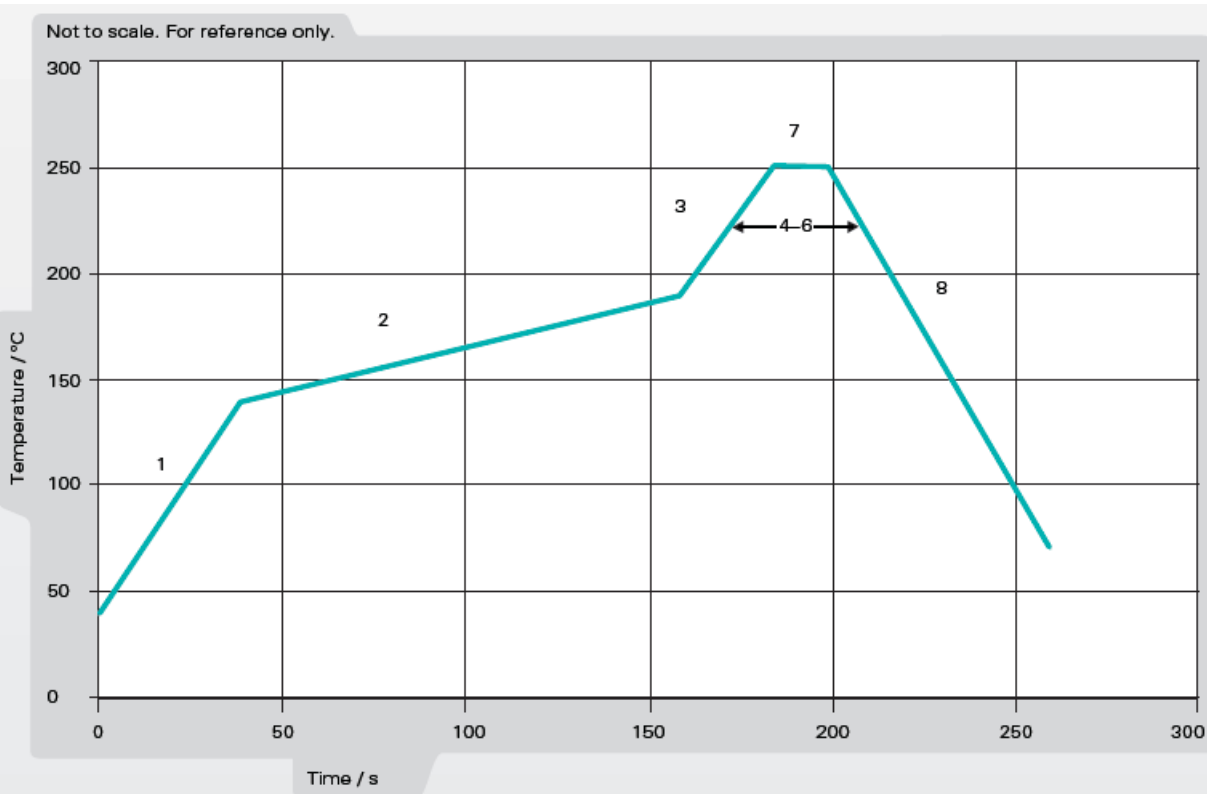


Figure 2. Maximum temperature profile recommendation for reflow soldering process

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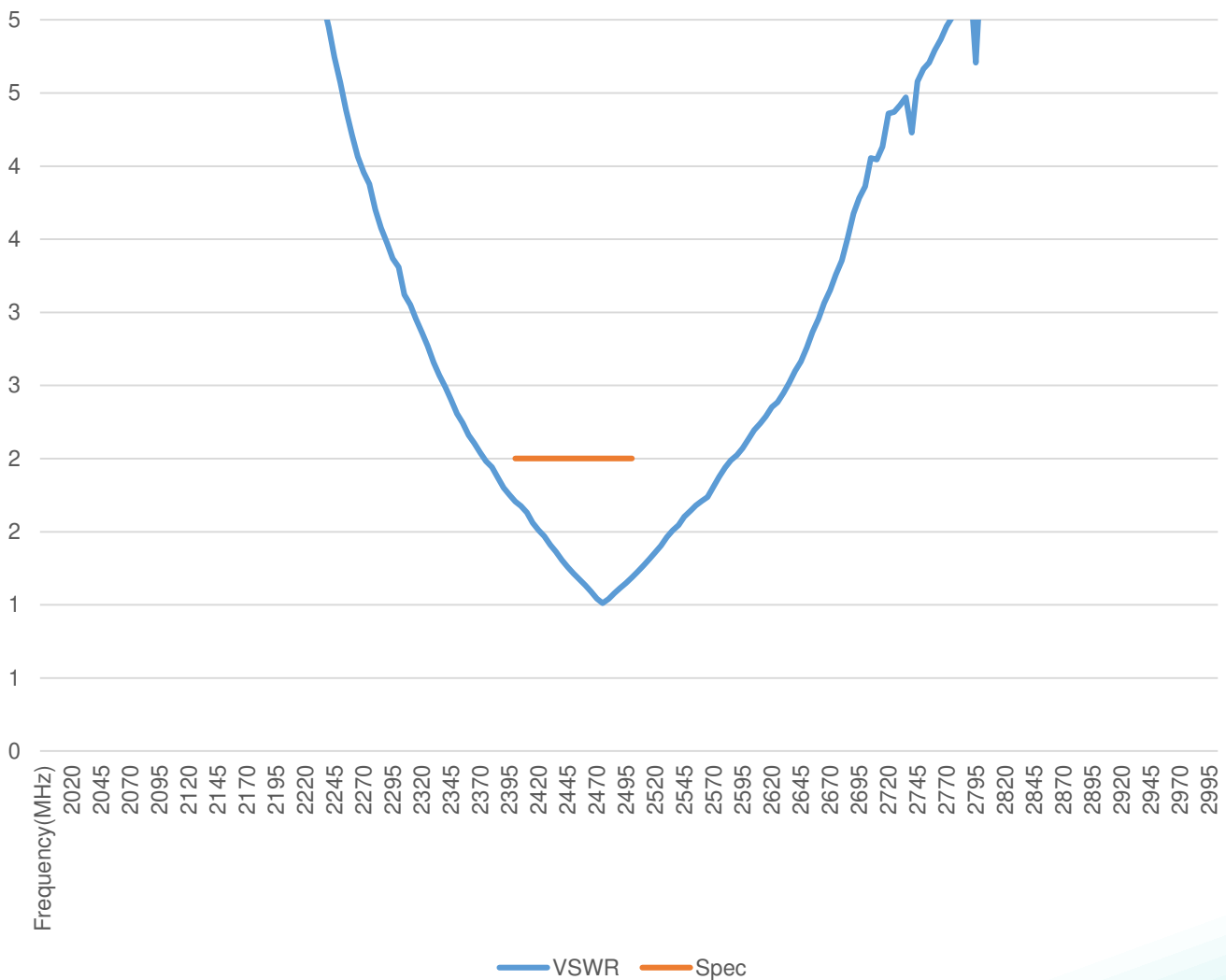
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CHARTS

VSWR

VSWR



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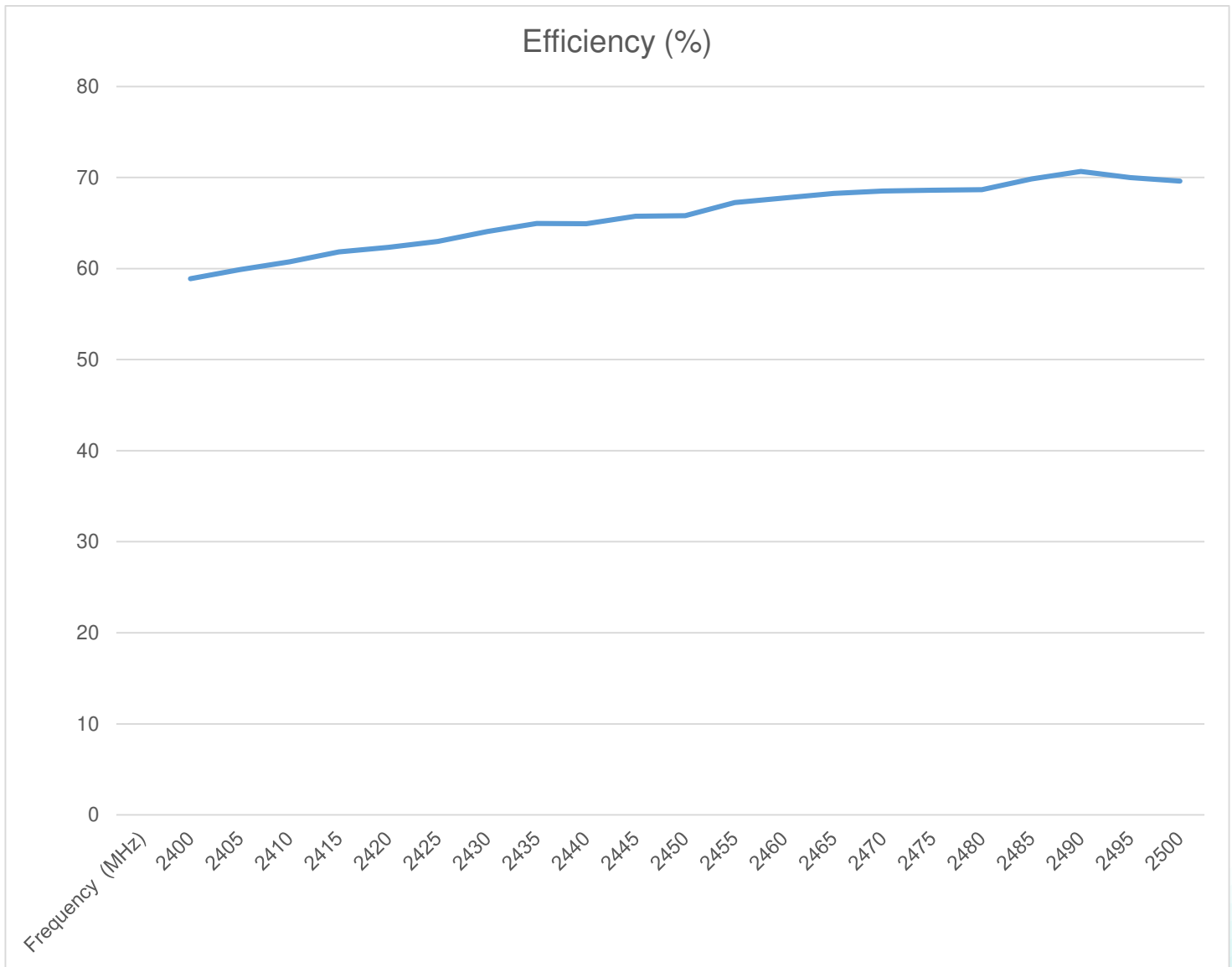
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**CHARTS**

Efficiency(%)



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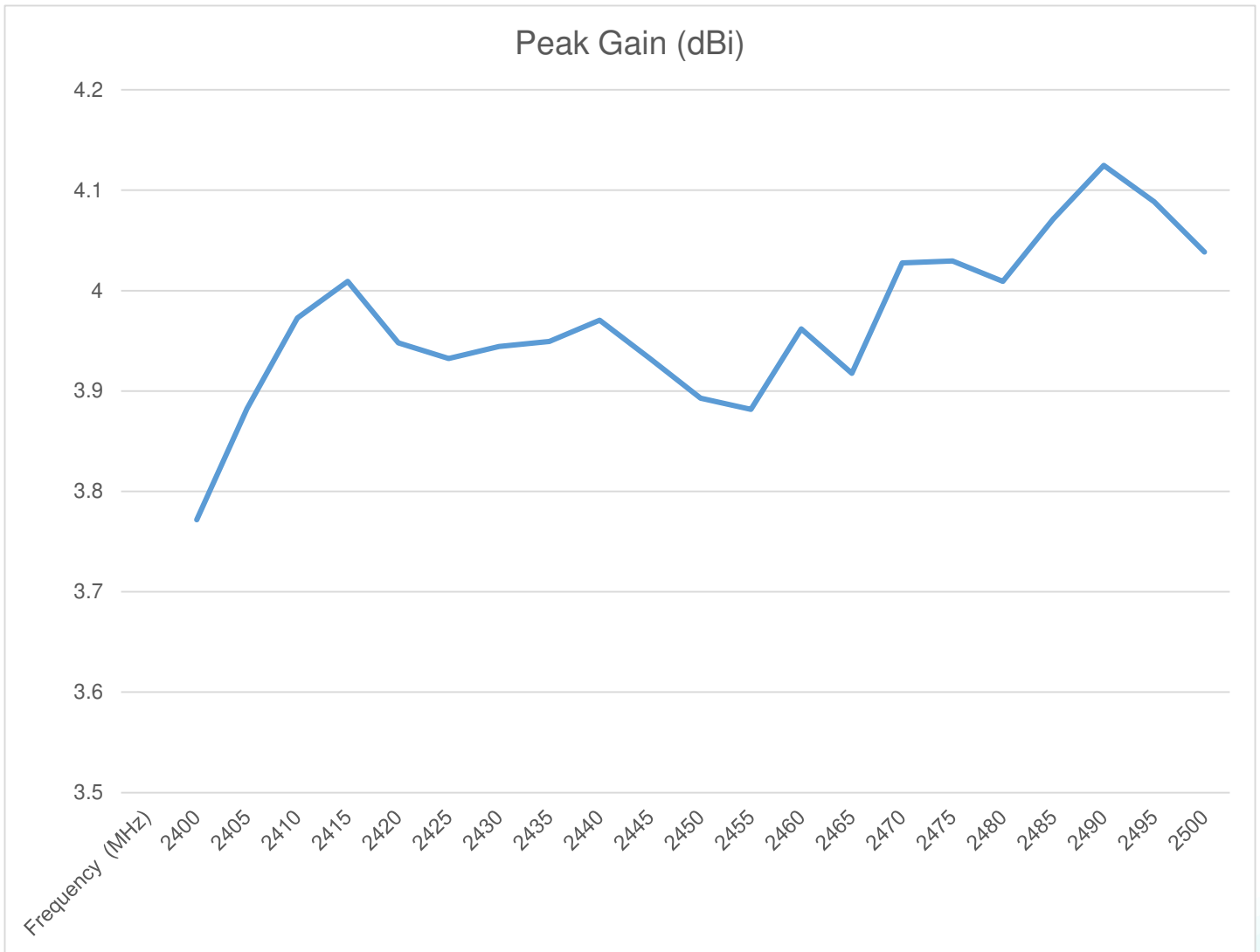
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**CHARTS**

**Peak Gain (dBi)**



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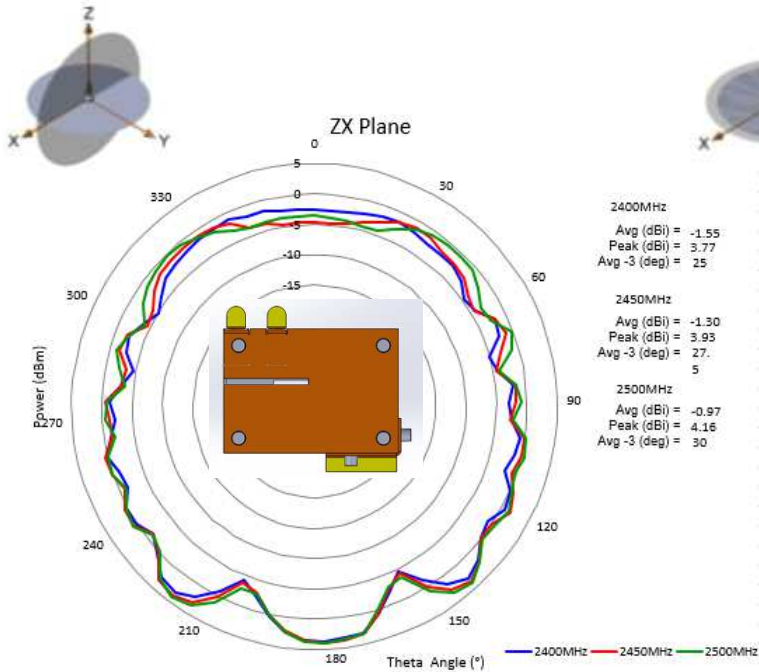
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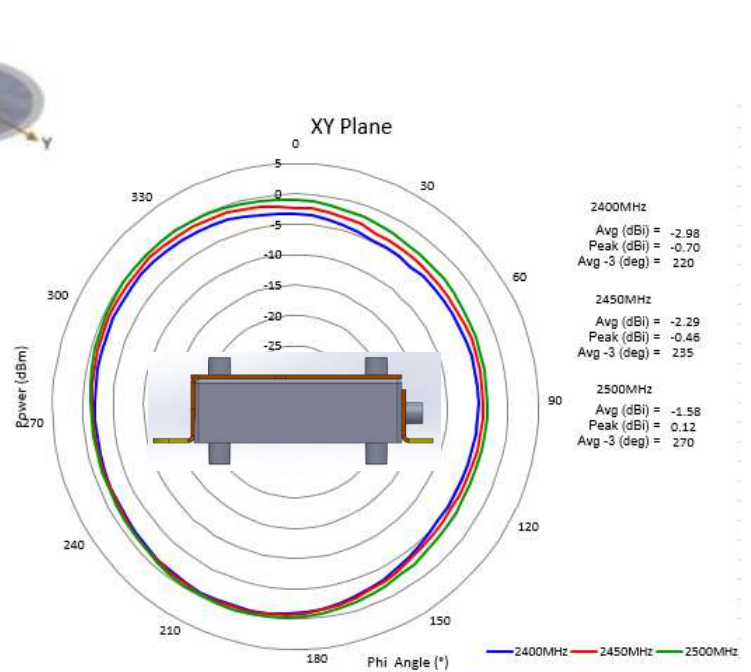
CHARTS

Free Space Radiation Pattern

Elevation Plane



Horizontal Plane



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