

# Korea Soundbar

***Version : V 1.1***  
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## Antenna Design history

| Released Date   | Version | Record                             |
|-----------------|---------|------------------------------------|
| Jul. 17th, 2020 | 0.0     | Antenna test report                |
| Oct. 08th,2020  | 0.1     | Mockup housing Antenna test report |
| Nov. 20th,2020  | 0.2     | Antenna location change            |
| Apr. 07th,2021  | 1.0     | New housing antenna test report    |
| Aug. 04th,2021  | 1.1     | New housing antenna test report    |
|                 |         |                                    |
|                 |         |                                    |

# Requirements of Antenna Design and Measurement

## Requirements of Antenna Design

| RF Function | Number of ANT | Frequency Band | Remark |
|-------------|---------------|----------------|--------|
| BT          | 1             | 2400 – 2500MHz |        |
|             |               |                |        |
|             |               |                |        |
|             |               |                |        |

## Requirements of Measurement

| Test Item   | Specification | Remark |
|-------------|---------------|--------|
| Return Loss | < -10dB       |        |
| Peak gain   | < 3dBi        |        |
| Efficiency  | > 50%         |        |

## Antenna Placement & Solution

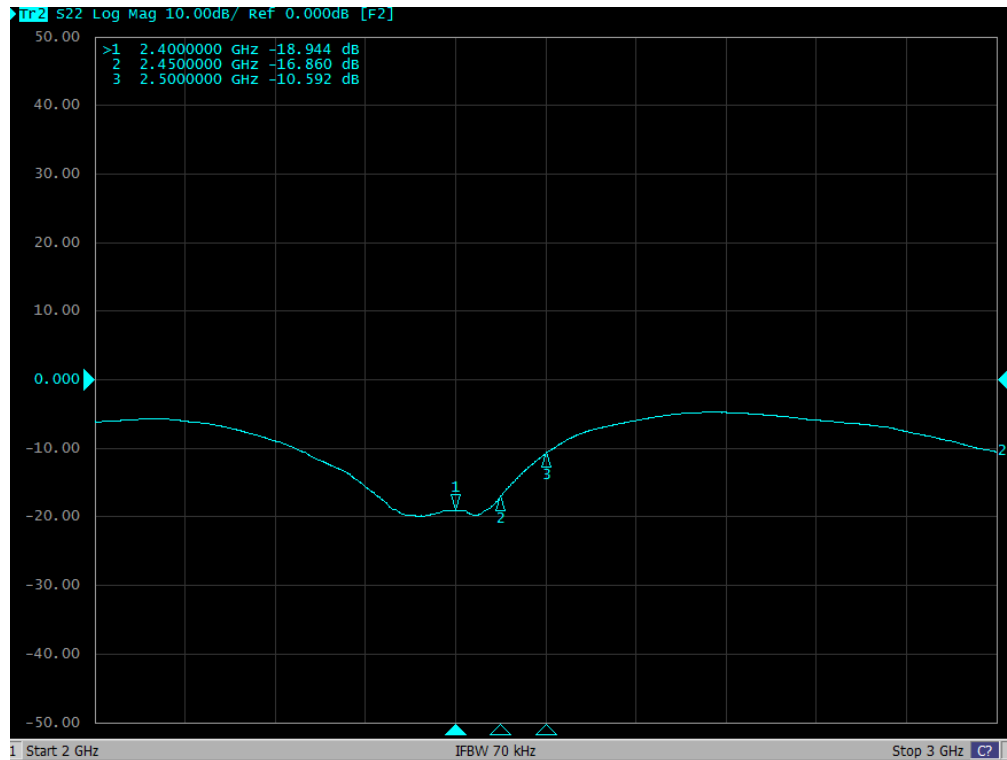


| Antenna | Size (L * W * H) | Cable Type  |
|---------|------------------|-------------|
| A1      | 30mm*15mm*0.4mm  | $\Phi=1.37$ |

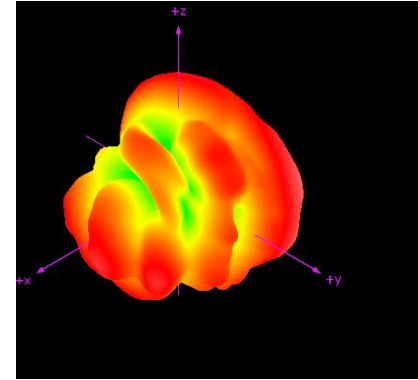
# Return Loss Results

A1

[2400 – 2500MHz]



## 3D Radiation Pattern Results



## Results Summary

### Peak gain & Efficiency

| Frequency (MHz) | Peak Gain (dBi) | Efficiency (%) |
|-----------------|-----------------|----------------|
| 2400            | 2.44            | 53.75          |
| 2450            | 2.37            | 52.38          |
| 2500            | 2.11            | 50.17          |

### 3. Conclusions

#### Antenna Performance Summary

1. The specifications as shown in the figure are up to the standard.

| Test Item   | Specification | Result |
|-------------|---------------|--------|
| Return Loss | < -10dB       | OK     |
| Peak gain   | < 3dBi        | OK     |
| Efficiency  | > 50%         | OK     |

# Thank you

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