

# Bumblebee Regulatory WLAN Antenna Information

| Platform information |         |                            |                                                           |                               |                        |                        |                        |
|----------------------|---------|----------------------------|-----------------------------------------------------------|-------------------------------|------------------------|------------------------|------------------------|
| Brand                | ODM     | *****Platform model name   | Platform type (ex: regular NB, convertible PC, AIO...etc) | SAR minimum separation (mm)   |                        |                        |                        |
| Vivint               | Chicony | Bumblebee                  | Door bell                                                 |                               |                        |                        |                        |
| Antenna information  |         |                            |                                                           | Peak gain w/ cable loss (dBi) |                        |                        |                        |
| Vendor               | Type    | Antenna Part number (Main) | Antenna Part number (Diversity)                           | 2.4GHz<br>2400-2500MHz        | 5.2GHz<br>5150-5350MHz | 5.5GHz<br>5470-5725MHz | 5.8GHz<br>5725-5850MHz |
| Amphenol             | PIFA    | CY5873-12-001-C            | CY5873-12-002-C                                           | 0.72                          | 1.08                   | 2.56                   | 0.53                   |

|                      |                                                    |
|----------------------|----------------------------------------------------|
| Antenna manufacturer | Amphenol Taiwan Corporation                        |
| Address              | No.71 , Lane 956 , Jungshan Rd. , Taoyuan City 330 |

# Antenna Information

## Section 1. Antenna Assembly Specifications

| 1A<br>Antenna Part Number                       | 1B Manufacturer             | 1C Antenna Type | 1D Cable Assembly Part Number and Information                       | Freq Range MHz | 1E *Peak Gain W/ Cable loss (dBi) | 1F Peak Gain w/o Cable Loss (dBi) | 1G Max VSWR | 1H Cable Loss (dB) |
|-------------------------------------------------|-----------------------------|-----------------|---------------------------------------------------------------------|----------------|-----------------------------------|-----------------------------------|-------------|--------------------|
| (P/N: CY5873-12-001-C)<br>Main Tx1/ Rx1 Antenna | Amphenol Taiwan Corporation | PIFA            | Connector: IPEX<br><br>Coaxial cable 50 ohm Coaxial length: 40.65mm | 2400-2500      | 0.72                              | 0.82                              | 2.0         | 0.1                |
|                                                 |                             |                 |                                                                     | 5150-5350      | 1.08                              | 1.48                              | 2.0         | 0.4                |
|                                                 |                             |                 |                                                                     | 5470-5725      | 2.33                              | 2.73                              | 2.0         | 0.4                |
|                                                 |                             |                 |                                                                     | 5725-5850      | 0.53                              | 0.94                              | 2.0         | 0.41               |
| (P/N: CY5873-12-002-C)<br>Aux Tx2/ Rx2 Antenna  | Amphenol Taiwan Corporation | PIFA            | Connector: IPEX<br><br>Coaxial cable 50 ohm Coaxial length: 40.65mm | 2400-2500      | 0.69                              | 0.79                              | 2.0         | 0.1                |
|                                                 |                             |                 |                                                                     | 5150-5350      | -0.24                             | 0.16                              | 2.0         | 0.4                |
|                                                 |                             |                 |                                                                     | 5470-5725      | 0.12                              | 0.52                              | 2.0         | 0.4                |
|                                                 |                             |                 |                                                                     | 5725-5850      | 2.56                              | 2.97                              | 2.0         | 0.41               |

- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/V

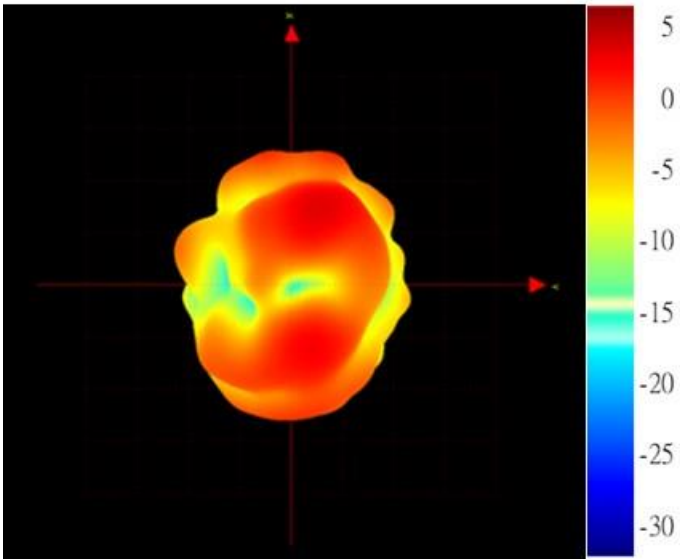
3D Antenna Peak Gain Table:

|                 | Main antenna | Diversity Antenna |
|-----------------|--------------|-------------------|
| Frequency (MHz) | (dBi)        | (dBi)             |
| 2400            | 0.22         | 0.20              |
| 2450            | 0.58         | 0.24              |
| 2500            | 0.72         | 0.69              |
| 5150            | -0.14        | -0.68             |
| 5250            | 1.08         | -1.75             |
| 5350            | 0.87         | -0.24             |
| 5470            | 2.33         | -0.34             |
| 5600            | 1.86         | -0.23             |
| 5725            | 0.53         | 0.12              |
| 5785            | 0.13         | 2.56              |
| 5850            | -0.25        | 1.26              |

Section 3. Radiation characteristics of antennae Loaded in Host Platform

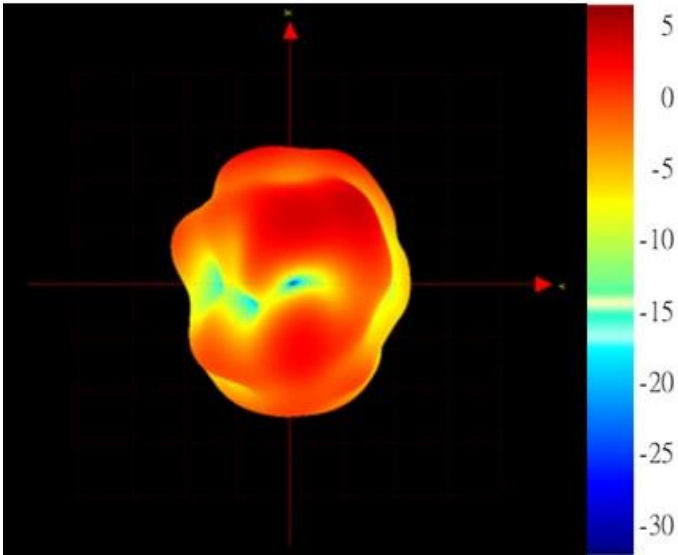
2400-2500 MHz radiation characteristic

Main antenna:2400 MHz



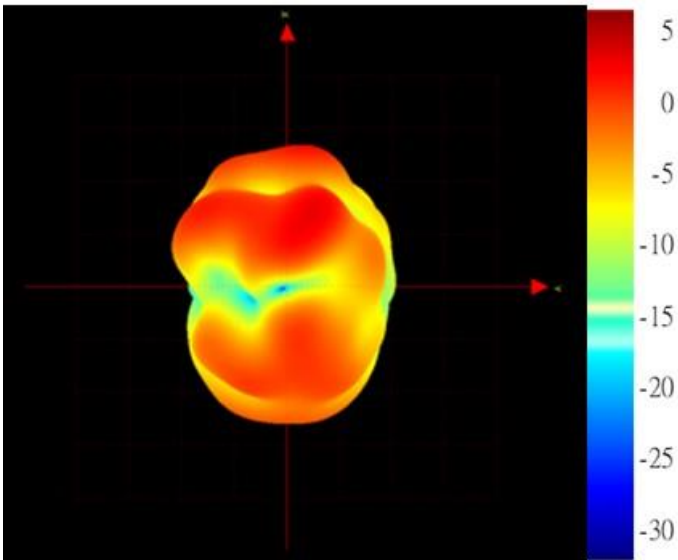
|                              |          |
|------------------------------|----------|
| Center Frequency             | 2400 MHz |
| Three-dimensional (dBi) peak | 0.22     |

Main antenna:2450 MHz



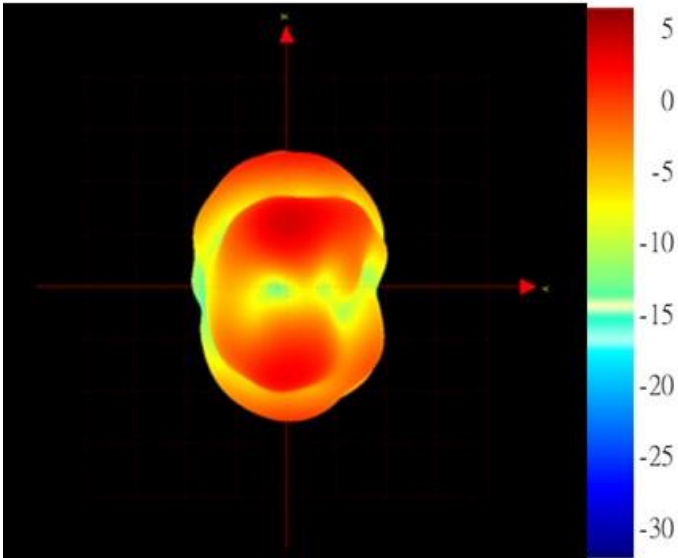
|                              |          |
|------------------------------|----------|
| Center Frequency             | 2450 MHz |
| Three-dimensional (dBi) peak | 0.58     |

Main antenna:2500 MHz



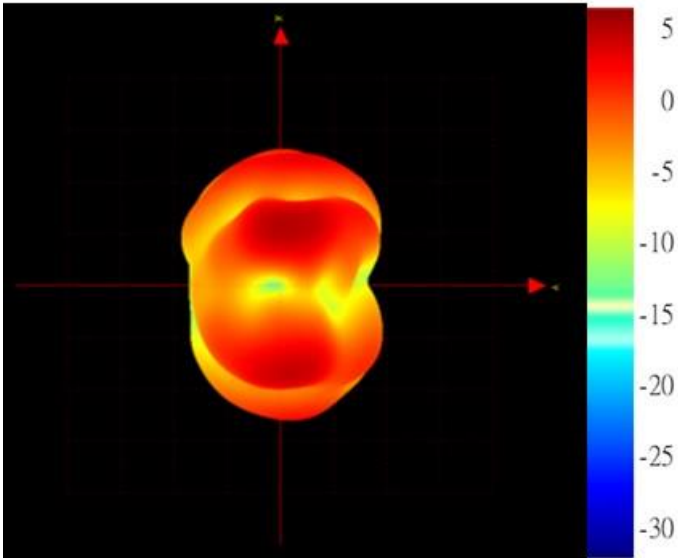
|                              |          |
|------------------------------|----------|
| Center Frequency             | 2500 MHz |
| Three-dimensional (dBi) peak | 0.72     |

Diversity antenna:2400 MHz



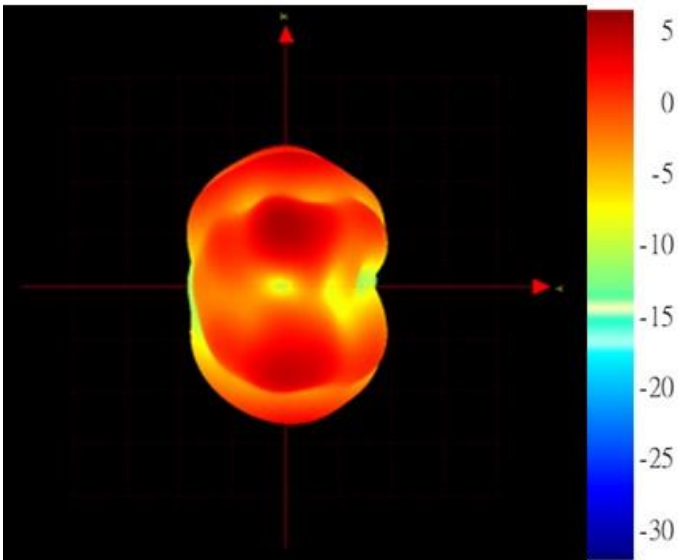
|                              |          |
|------------------------------|----------|
| Center Frequency             | 2400 MHz |
| Three-dimensional (dBi) peak | 0.20     |

Diversity antenna:2450 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 2450 MHz |
| Three-dimensional (dBi) peak | 0.24     |

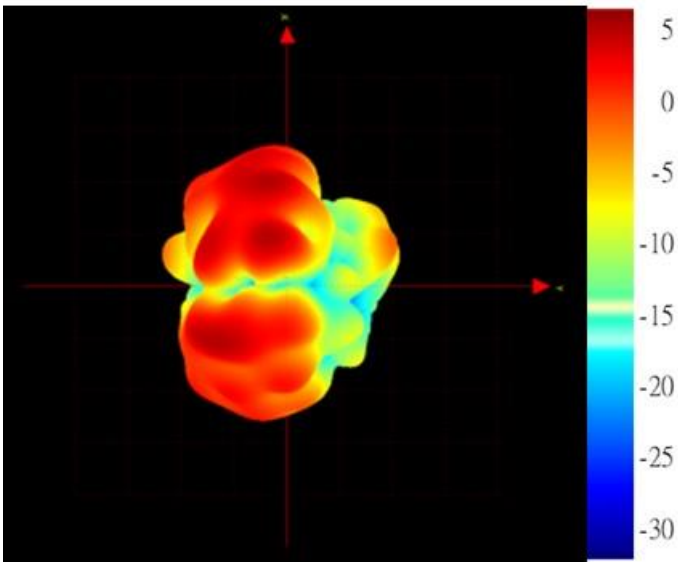
Diversity antenna:2500 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 2500 MHz |
| Three-dimensional (dBi) peak | 0.69     |

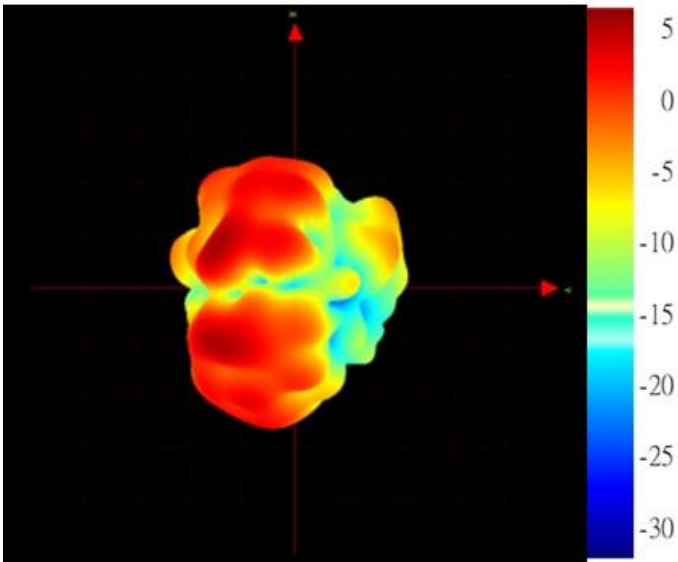
5150-5350 MHz radiation characteristic

Main antenna:5150 MHz



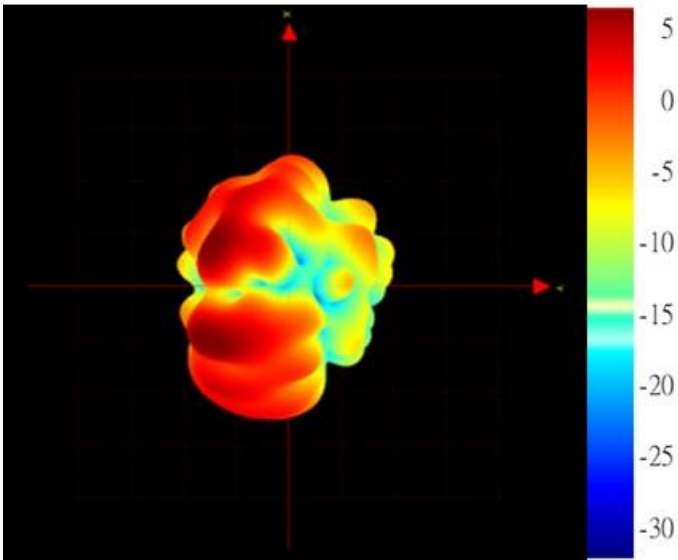
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5150 MHz |
| Three-dimensional (dBi) peak | -0.14    |

Main antenna:5250 MHz



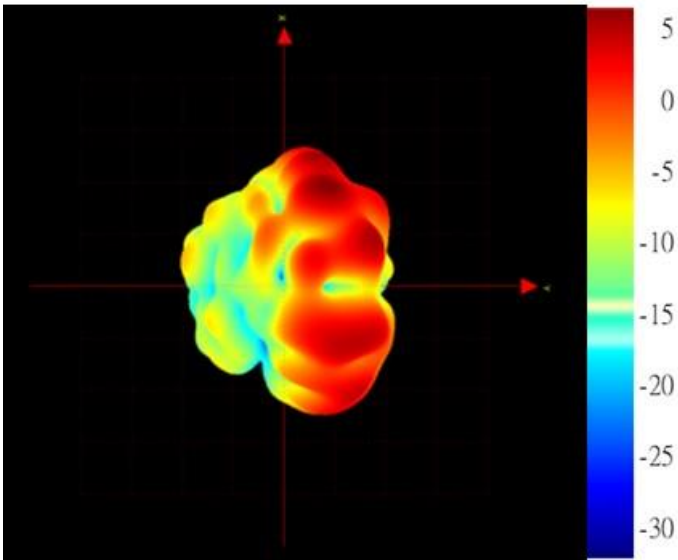
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5250 MHz |
| Three-dimensional (dBi) peak | 1.08     |

Main antenna:5350 MHz



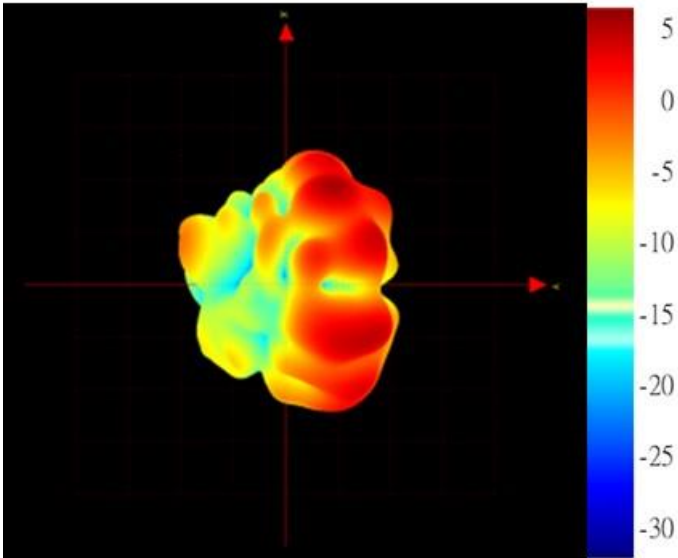
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5350 MHz |
| Three-dimensional (dBi) peak | 0.87     |

Diversity antenna:5150 MHz



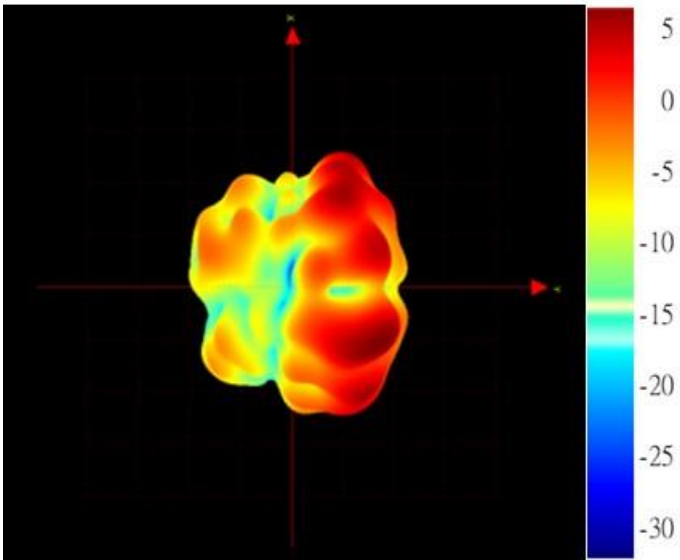
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5150 MHz |
| Three-dimensional (dBi) peak | -0.68    |

Diversity antenna:5250 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 5250 MHz |
| Three-dimensional (dBi) peak | -1.75    |

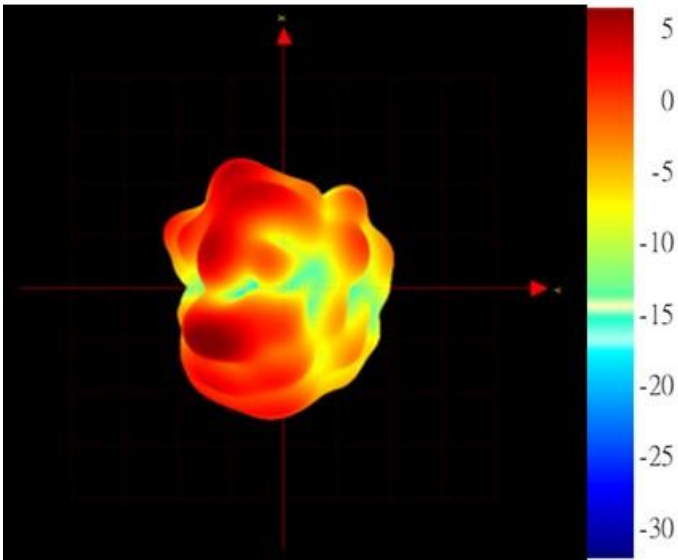
Diversity antenna:5350 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 5350 MHz |
| Three-dimensional (dBi) peak | -0.24    |

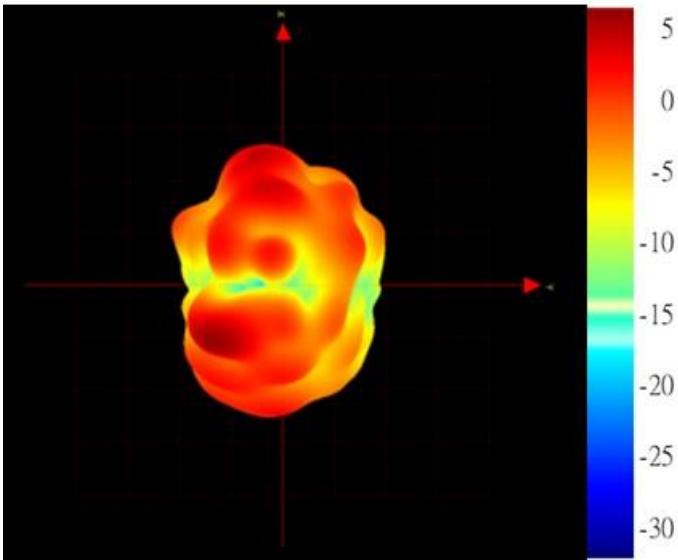
5470-5725 MHz radiation characteristic

Main antenna:5470 MHz



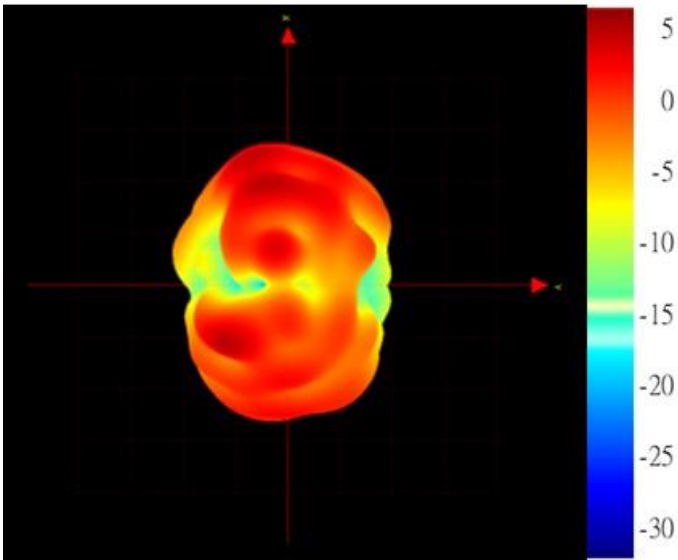
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5470 MHz |
| Three-dimensional (dBi) peak | 2.33     |

Main antenna:5600 MHz



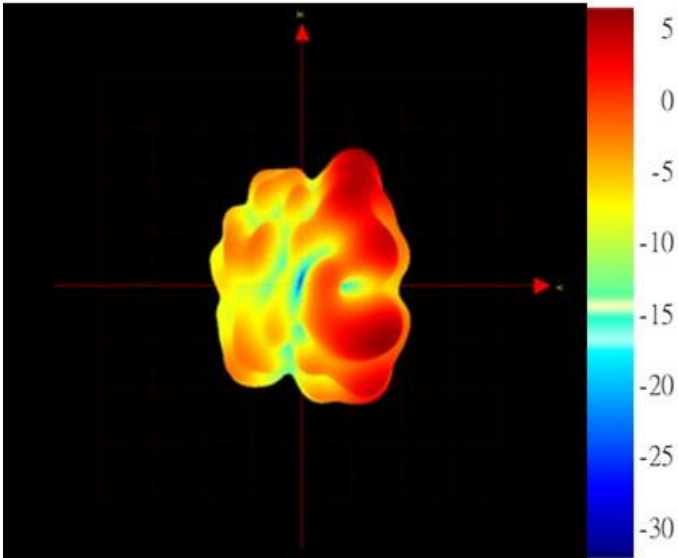
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5600 MHz |
| Three-dimensional (dBi) peak | 1.86     |

Main antenna:5725 MHz



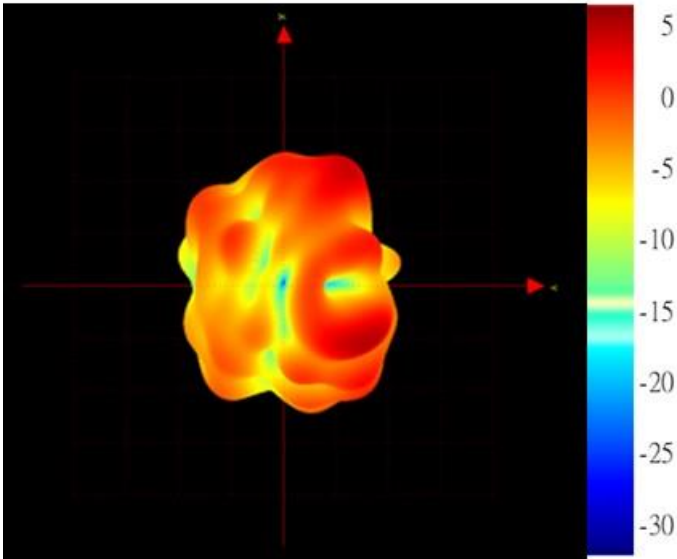
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5725 MHz |
| Three-dimensional (dBi) peak | 0.53     |

Diversity antenna:5470 MHz



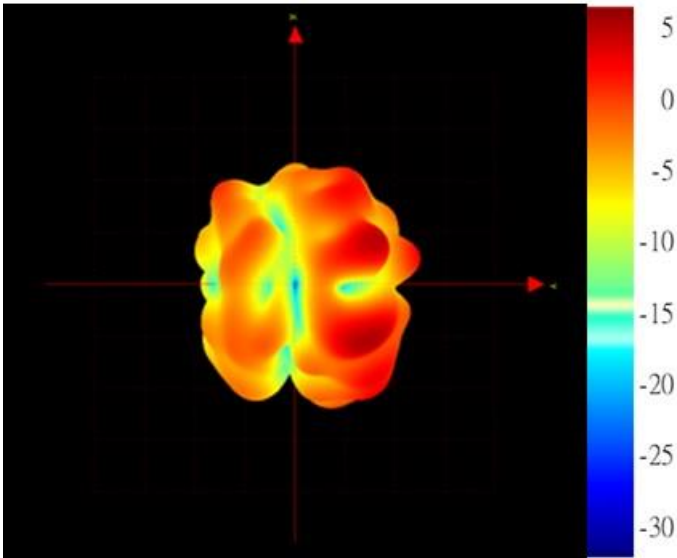
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5470 MHz |
| Three-dimensional (dBi) peak | -0.34    |

Diversity antenna:5600 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 5600 MHz |
| Three-dimensional (dBi) peak | -0.23    |

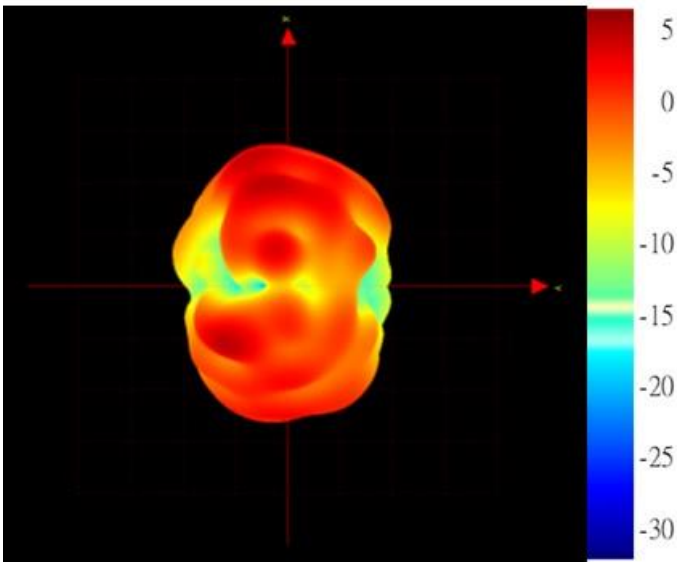
Diversity antenna:5725 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 5725 MHz |
| Three-dimensional (dBi) peak | 0.12     |

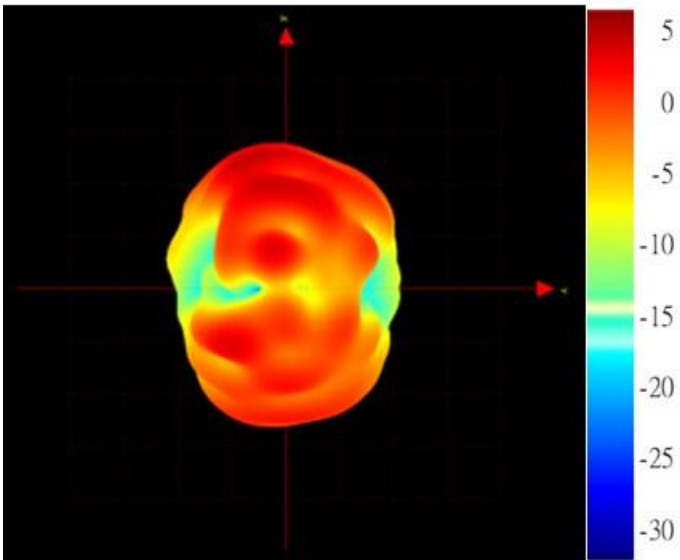
5725-5850 MHz radiation characteristic

Main antenna:5725 MHz



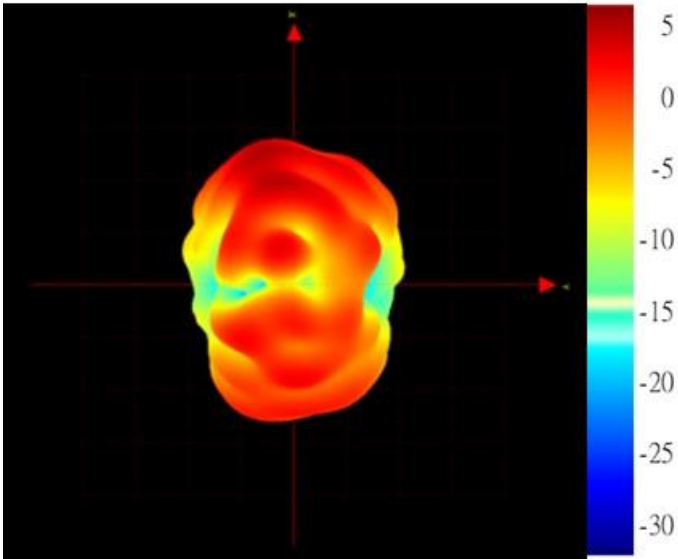
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5725 MHz |
| Three-dimensional (dBi) peak | 0.53     |

Main antenna:5785 MHz



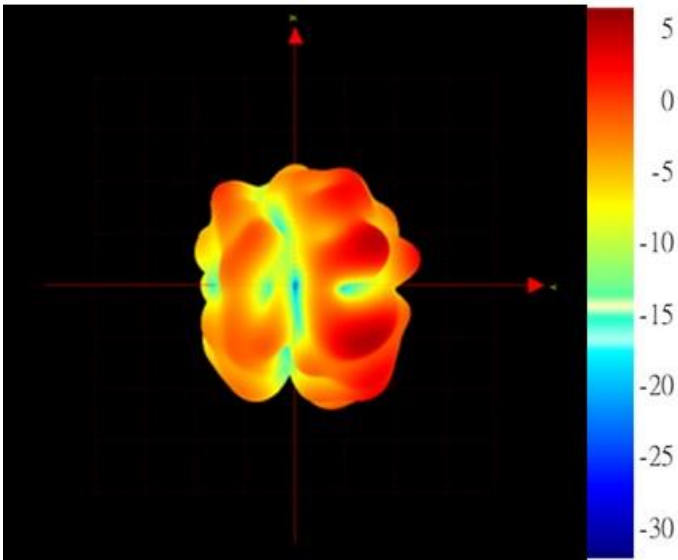
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5785 MHz |
| Three-dimensional (dBi) peak | 0.13     |

Main antenna:5850 MHz



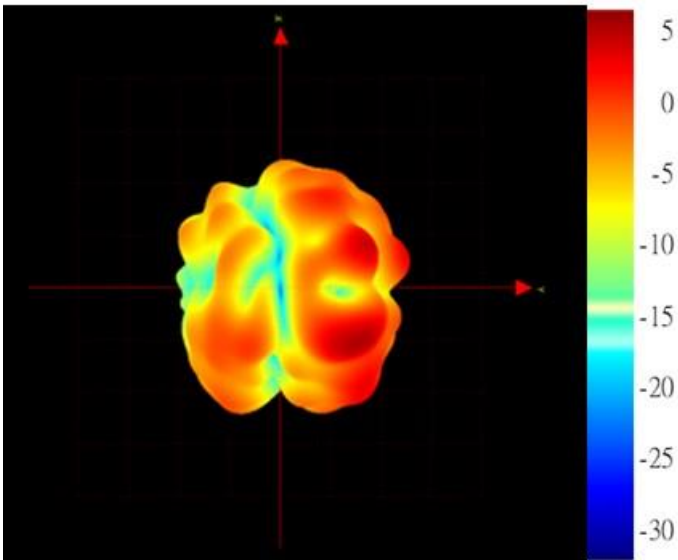
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5850 MHz |
| Three-dimensional (dBi) peak | -0.25    |

Diversity antenna:5725 MHz



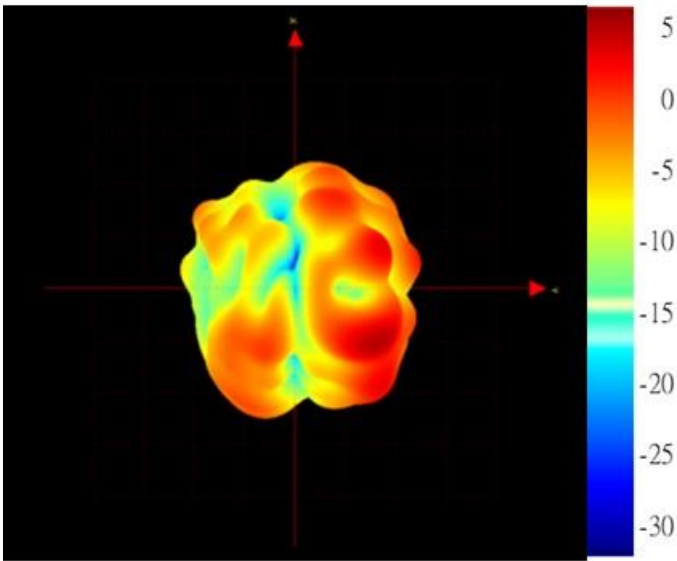
|                              |          |
|------------------------------|----------|
| Center Frequency             | 5725 MHz |
| Three-dimensional (dBi) peak | 0.12     |

Diversity antenna:5785 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 5785 MHz |
| Three-dimensional (dBi) peak | 2.56     |

Diversity antenna:5850 MHz



|                              |          |
|------------------------------|----------|
| Center Frequency             | 5850 MHz |
| Three-dimensional (dBi) peak | 1.26     |