

# Regulatory WLAN Antenna Information

| Platform information                                                                                                                                                 |                                                                             |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------|---------------------------------------|--------------------------------------------------------------|------------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|
| Brand                                                                                                                                                                | ODM                                                                         | RMN                               | Intel platform<br>(ex: Yes, No or NA) | Platform type<br>(ex: regular NB, convertible PC, AIO...etc) | *SAR minimum separation (mm) |                        |                        |                        |                        |                         |
| HP Inc.                                                                                                                                                              | Compal                                                                      | TPN-C164                          | Yes                                   | Notebook PC                                                  | 5.32mm                       |                        |                        |                        |                        |                         |
| *****Please fill in exact product model name and make sure the model name is visible on product cover or any parts for end users recognize for authority inspection. |                                                                             |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |
| Antenna information                                                                                                                                                  |                                                                             |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |
| Vendor                                                                                                                                                               | Type                                                                        | Antenna Part number<br>(Main/Tx1) | Antenna Part number<br>(Aux/Tx2)      |                                                              |                              |                        |                        |                        |                        |                         |
| High-Tek Electronics Co., Ltd                                                                                                                                        | PIFA                                                                        | DC33002SH00<br>(0ACCN022003N)     | DC33002SH10<br>(0ACCN022004N)         |                                                              |                              |                        |                        |                        |                        |                         |
| Peak gain w/ cable loss (dBi)*                                                                                                                                       |                                                                             |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |
|                                                                                                                                                                      | 2.4GHz<br>2400-2483.5 MHz                                                   | 5.2GHz<br>5150-5250MHz            | 5.3GHz<br>5250-5350MHz                | 5.6GHz<br>5470-5725MHz                                       | 5.8GHz<br>5725-5850MHz       | 5.9GHz<br>5850-5895MHz | 6.2GHz<br>5925-6425MHz | 6.5GHz<br>6425-6525MHz | 6.7GHz<br>6525-6875MHz | 7.0 GHz<br>6875-7125MHz |
| Main                                                                                                                                                                 | -0.84                                                                       | 2.78                              | 2.78                                  | 2.19                                                         | 2.07                         | -1.50                  | 2.76                   | -1.36                  | -0.40                  | -0.63                   |
| Aux                                                                                                                                                                  | -1.25                                                                       | 2.09                              | 2.77                                  | 1.95                                                         | 0.97                         | 0.97                   | 0.18                   | 1.64                   | 2.73                   | 2.84                    |
| Module Information                                                                                                                                                   |                                                                             |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |
| Model                                                                                                                                                                | Form factor and suffixes                                                    |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |
| RTL8852CE                                                                                                                                                            | Realtek Champagne 8852CE Wi-Fi 6E +Bluetooth 5.3 M.2 2230 PCI-e+USB WW WLAN |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |
|                                                                                                                                                                      |                                                                             |                                   |                                       |                                                              |                              |                        |                        |                        |                        |                         |

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 Tel: +886-2-26961996  
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<https://www.hightek.com.tw>

# Antenna Information

## Section 1. Antenna Assembly Specifications

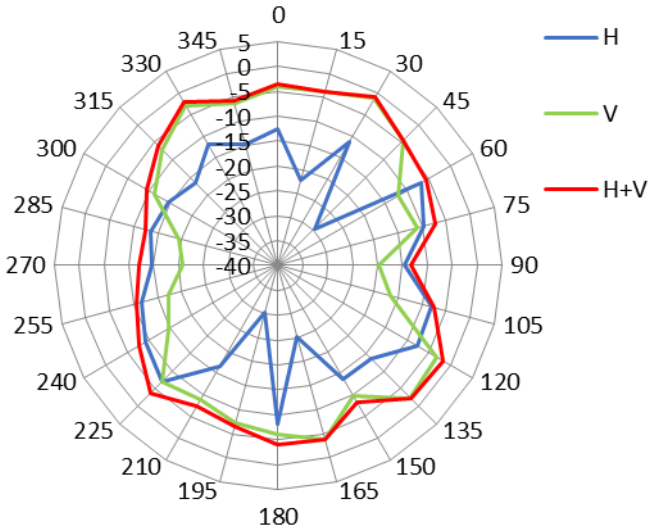
| 1A                                                                    | 1B                            | 1C           | 1D                                                                                                         |                | 1E                              | 1F                             | 1G       | 1H              |
|-----------------------------------------------------------------------|-------------------------------|--------------|------------------------------------------------------------------------------------------------------------|----------------|---------------------------------|--------------------------------|----------|-----------------|
| Antenna Part Number                                                   | Manufacturer                  | Antenna Type | Cable Assembly Part Number and Information                                                                 | Freq Range MHz | * Peak Gain W/ Cable loss (dBi) | Peak Gain w/o Cable Loss (dBi) | Max VSWR | Cable Loss (dB) |
| P/N:<br>DC33002SH00<br>(0ACCN022003N)<br><br>Main<br>Antenna<br>(TX1) | High-Tek Electronics Co., Ltd | PIFA         | Connector:SpeedTech<br><br>C87P115-00002-H<br><br>50 Ohm Coaxial<br>Length: 127 mm<br><br>Diameter:1.13 mm | 2400-2495      | -0.84                           | -0.46                          | 3.00     | 0.38            |
|                                                                       |                               |              |                                                                                                            | 5150-5250      | 2.78                            | 3.33                           | 3.00     | 0.55            |
|                                                                       |                               |              |                                                                                                            | 5250-5350      | 2.78                            | 3.33                           | 3.00     | 0.55            |
|                                                                       |                               |              |                                                                                                            | 5470-5725      | 2.19                            | 2.78                           | 3.00     | 0.59            |
|                                                                       |                               |              |                                                                                                            | 5725-5850      | 2.07                            | 2.67                           | 3.00     | 0.60            |
|                                                                       |                               |              |                                                                                                            | 5850-5895      | -1.50                           | -0.90                          | 3.00     | 0.60            |
|                                                                       |                               |              |                                                                                                            | 5925-6425      | 2.76                            | 3.38                           | 3.00     | 0.62            |
|                                                                       |                               |              |                                                                                                            | 6425-6525      | -1.36                           | -0.73                          | 3.00     | 0.63            |
|                                                                       |                               |              |                                                                                                            | 6525-6875      | -0.40                           | 0.24                           | 3.00     | 0.64            |
|                                                                       |                               |              |                                                                                                            | 6875-7125      | -0.63                           | 0.05                           | 3.00     | 0.68            |
| P/N:<br>DC33002SH10<br>(0ACCN022004N)<br><br>Aux<br>Antenna<br>(TX2)  | High-Tek Electronics Co., Ltd | PIFA         | Connector:SpeedTech<br><br>C87P115-00002-H<br><br>50 Ohm Coaxial<br>Length: 191 mm<br><br>Diameter:1.13 mm | 2400-2495      | -1.25                           | -0.67                          | 3.00     | 0.58            |
|                                                                       |                               |              |                                                                                                            | 5150-5250      | 2.09                            | 2.91                           | 3.00     | 0.82            |
|                                                                       |                               |              |                                                                                                            | 5250-5350      | 2.77                            | 3.59                           | 3.00     | 0.82            |
|                                                                       |                               |              |                                                                                                            | 5470-5725      | 1.95                            | 2.83                           | 3.00     | 0.88            |
|                                                                       |                               |              |                                                                                                            | 5725-5850      | 0.97                            | 1.87                           | 3.00     | 0.90            |
|                                                                       |                               |              |                                                                                                            | 5850-5895      | 0.97                            | 1.87                           | 3.00     | 0.90            |
|                                                                       |                               |              |                                                                                                            | 5925-6425      | 0.18                            | 1.11                           | 3.00     | 0.93            |
|                                                                       |                               |              |                                                                                                            | 6425-6525      | 1.64                            | 2.58                           | 3.00     | 0.94            |
|                                                                       |                               |              |                                                                                                            | 6525-6875      | 2.73                            | 3.70                           | 3.00     | 0.97            |
|                                                                       |                               |              |                                                                                                            | 6875-7125      | 2.84                            | 3.86                           | 3.00     | 1.02            |

Section 3. Radiation characteristics of antenna loaded in Host Platform

Main Antenna

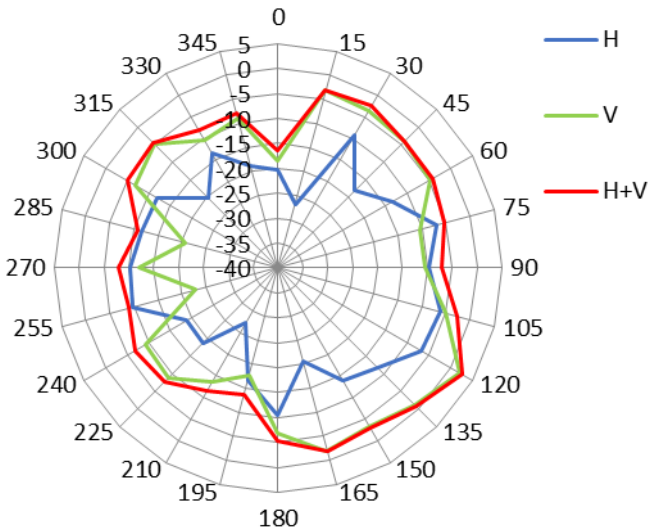
Max Antenna 2D Radiation Pattern 2400 – 2495 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 2400-2495       | -0.84                                 |



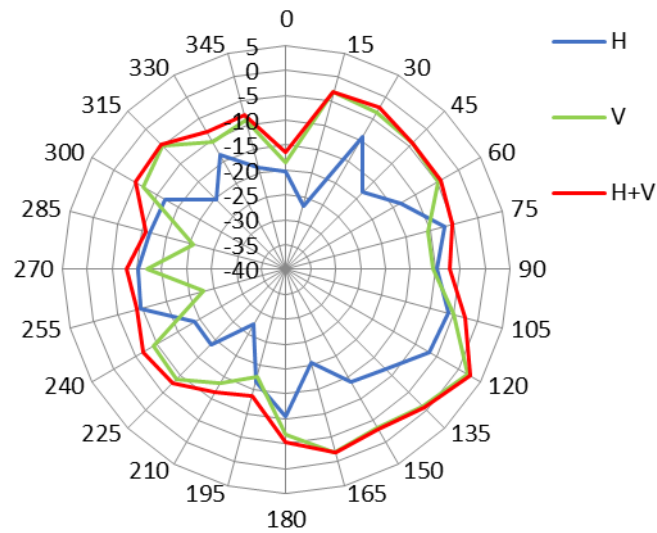
Max Antenna 2D Radiation Pattern 5150-5250 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5150-5250       | 2.78                                  |



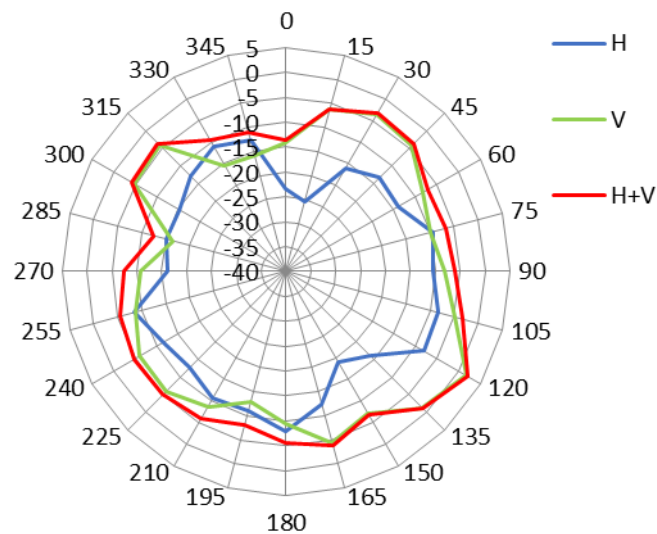
Max Antenna 2D Radiation Pattern 5250-5350 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5250-5350       | 2.78                                  |



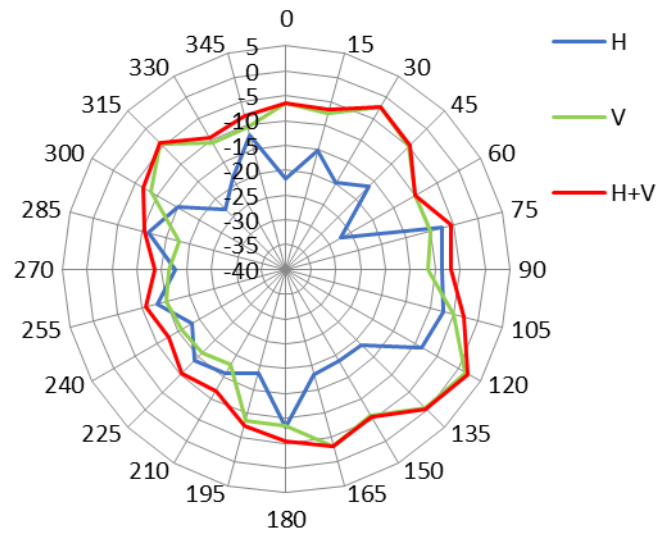
Max Antenna 2D Radiation Pattern 5470-5725 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5470-5725       | 2.19                                  |



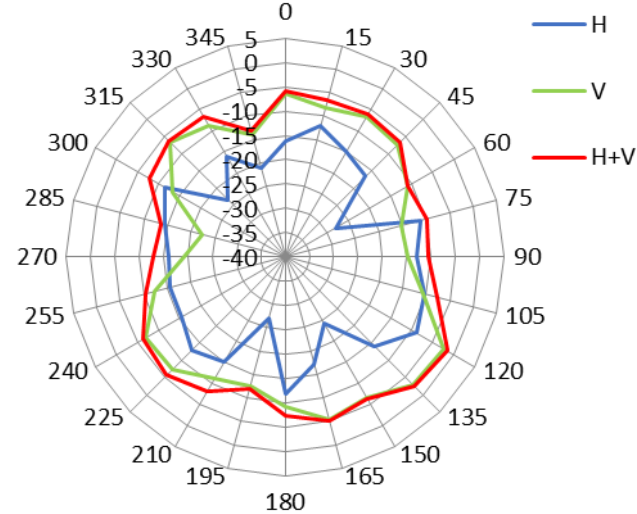
Max Antenna 2D Radiation Pattern 5725-5850 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5725-5850       | 2.07                                  |



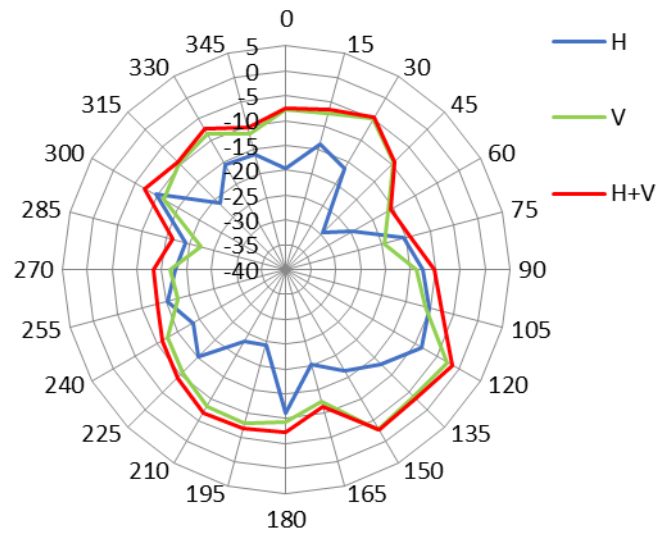
Max Antenna 2D Radiation Pattern 5850-5895 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5850-5895       | -1.50                                 |



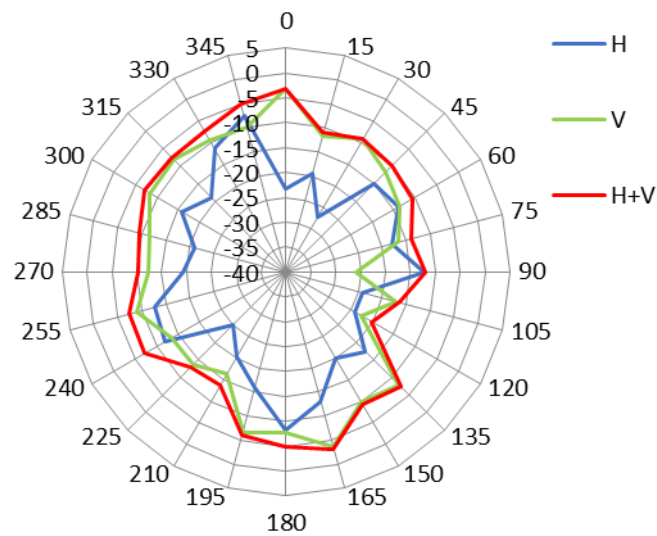
Max Antenna 2D Radiation Pattern 5925-6425 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5925-6425       | 2.76                                  |



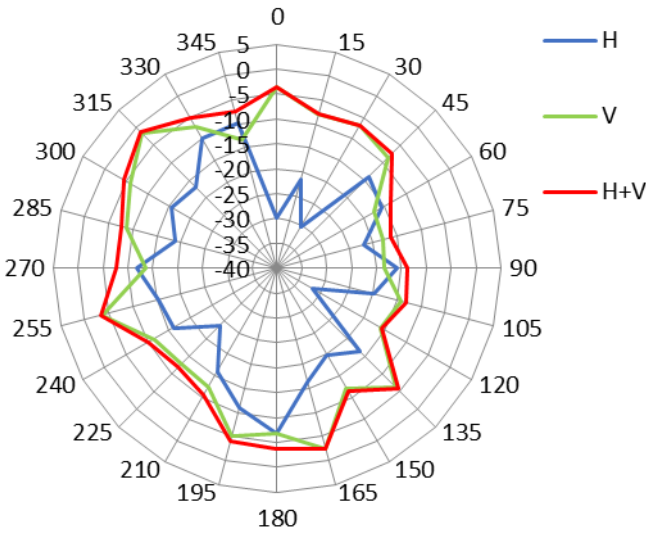
Max Antenna 2D Radiation Pattern 6425-6525 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 6425-6525       | -1.36                                 |



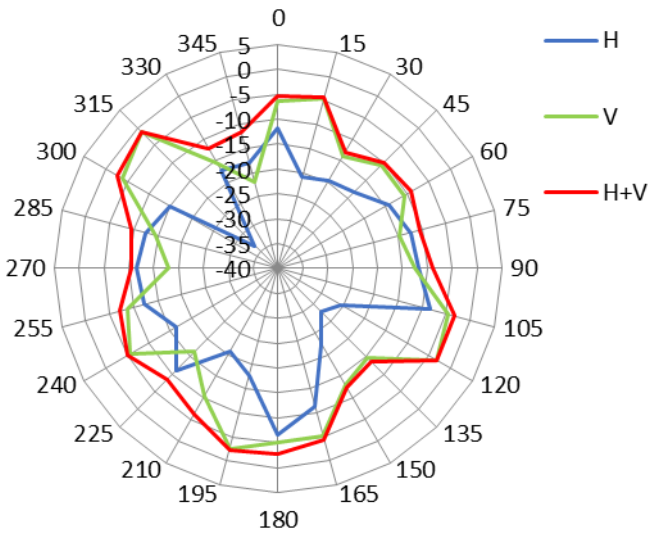
Max Antenna 2D Radiation Pattern 6525-6875 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 6525-6875       | -0.40                                 |



Max Antenna 2D Radiation Pattern 6875-7125 MHz

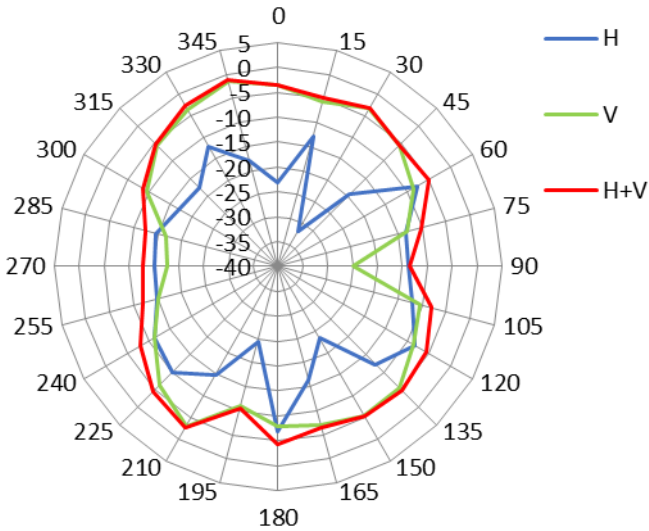
| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 6875-7125       | -0.63                                 |



Auxiliary Antenna

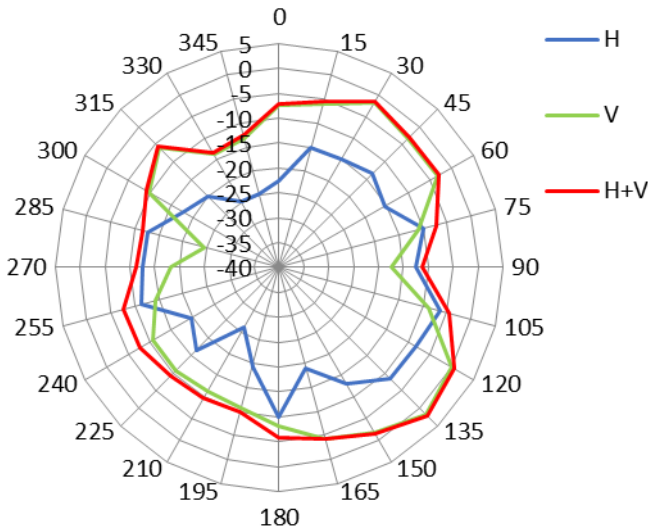
Max Antenna 2D Radiation Pattern 2400 – 2483.5 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 2400-2483.5     | -1.25                                 |



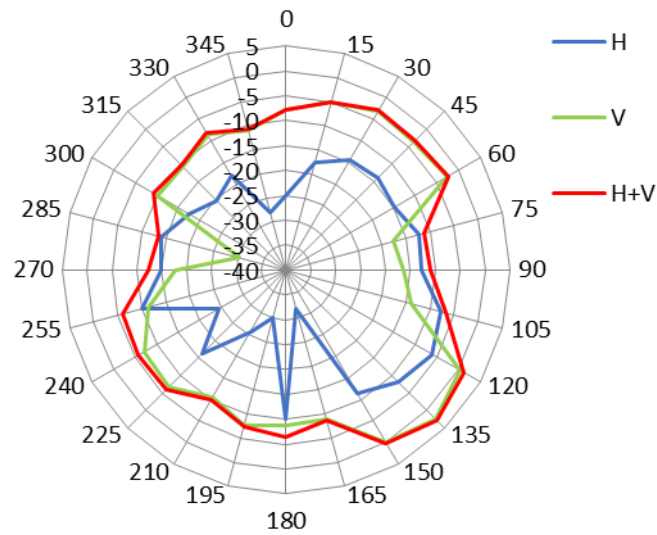
Max Antenna 2D Radiation Pattern 5150-5250 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5150-5250       | 2.09                                  |



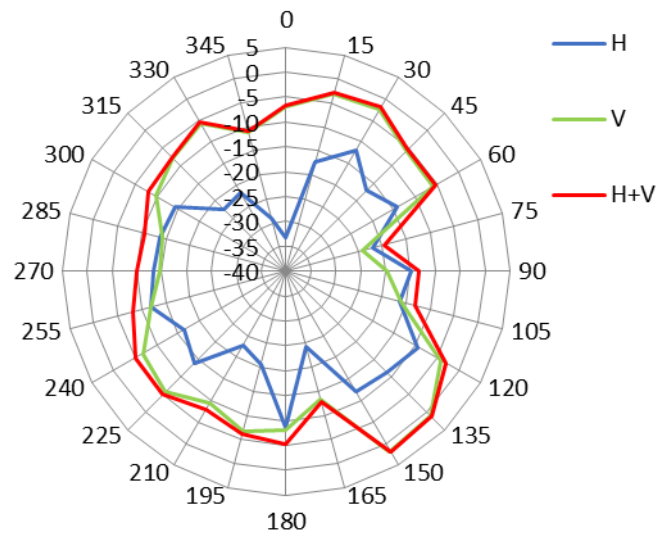
Max Antenna 2D Radiation Pattern 5250-5350 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5250-5350       | 2.77                                  |



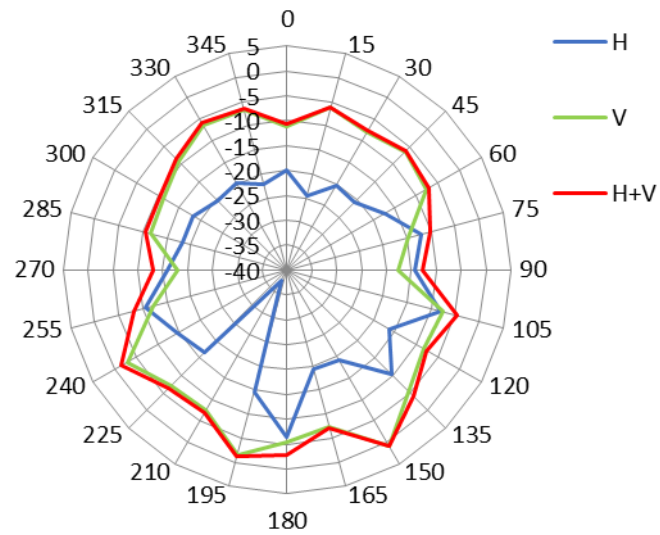
Max Antenna 2D Radiation Pattern 5470-5725 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5470-5725       | 1.95                                  |



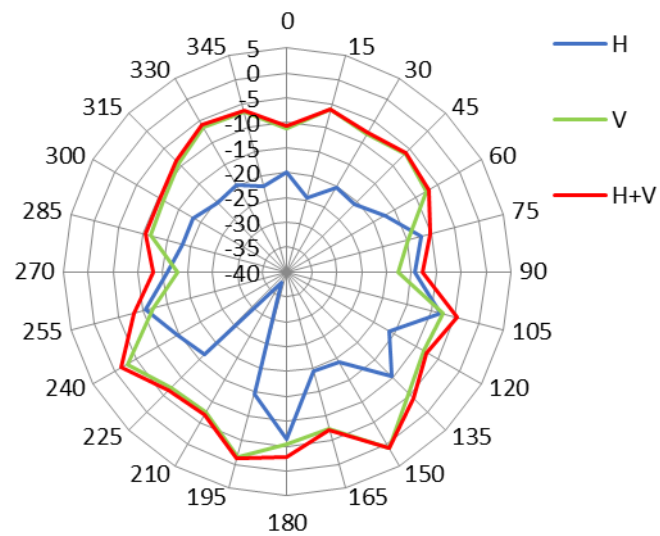
Max Antenna 2D Radiation Pattern 5725-5850 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5725-5850       | 0.97                                  |



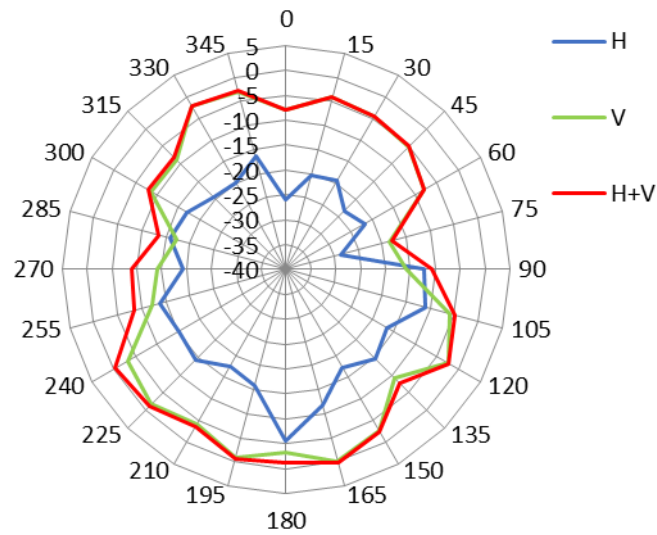
Max Antenna 2D Radiation Pattern 5850-5895 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5850-5895       | 0.97                                  |



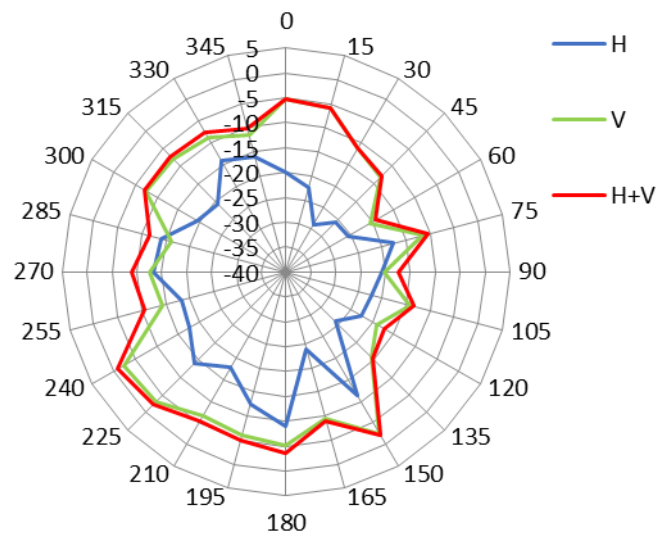
Max Antenna 2D Radiation Pattern 5925-6425 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 5925-6425       | 0.18                                  |



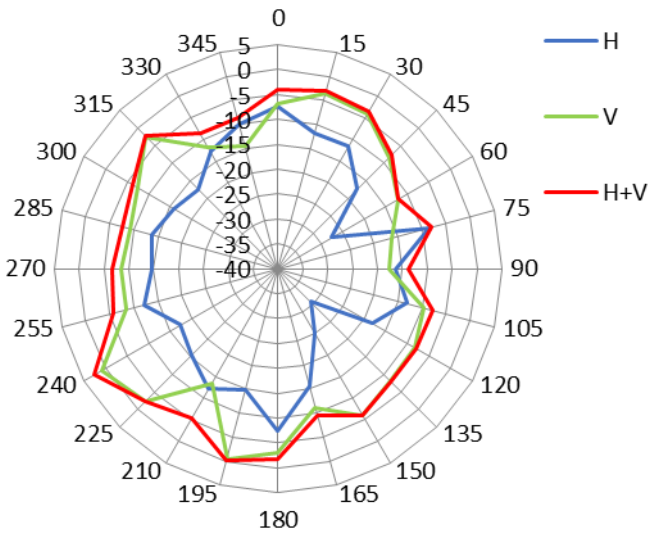
Max Antenna 2D Radiation Pattern 6425-6525 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 6425-6525       | 1.64                                  |



Max Antenna 2D Radiation Pattern 6525-6875 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 6525-6875       | 2.73                                  |



Max Antenna 2D Radiation Pattern 6875-7125 MHz

| Frequency (MHz) | Horizontal+ Vertical (dBi) peak (dBi) |
|-----------------|---------------------------------------|
| 6875-7125       | 2.84                                  |

