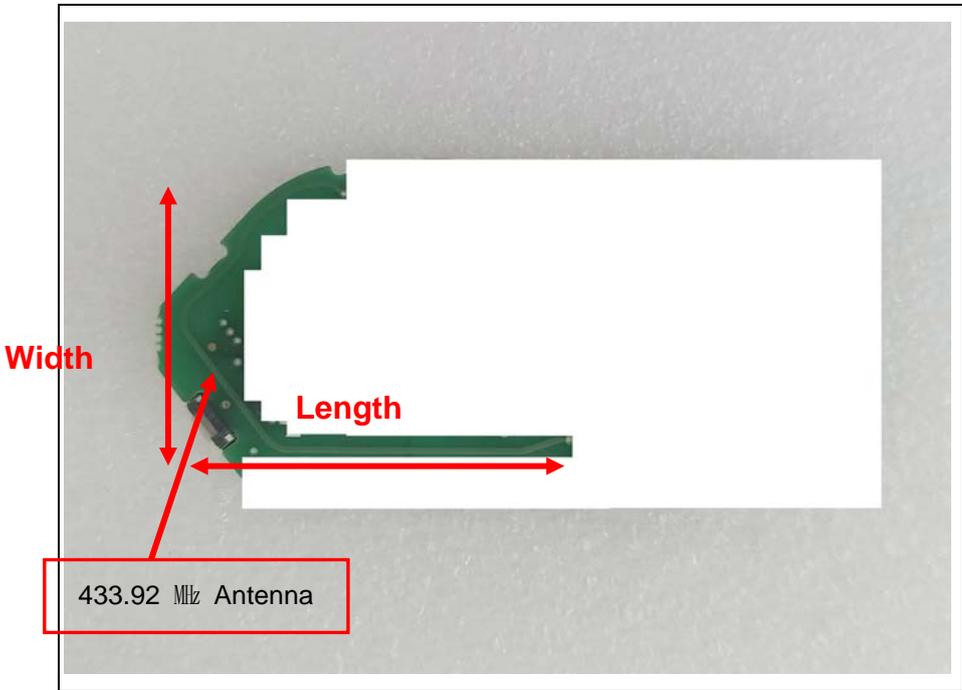
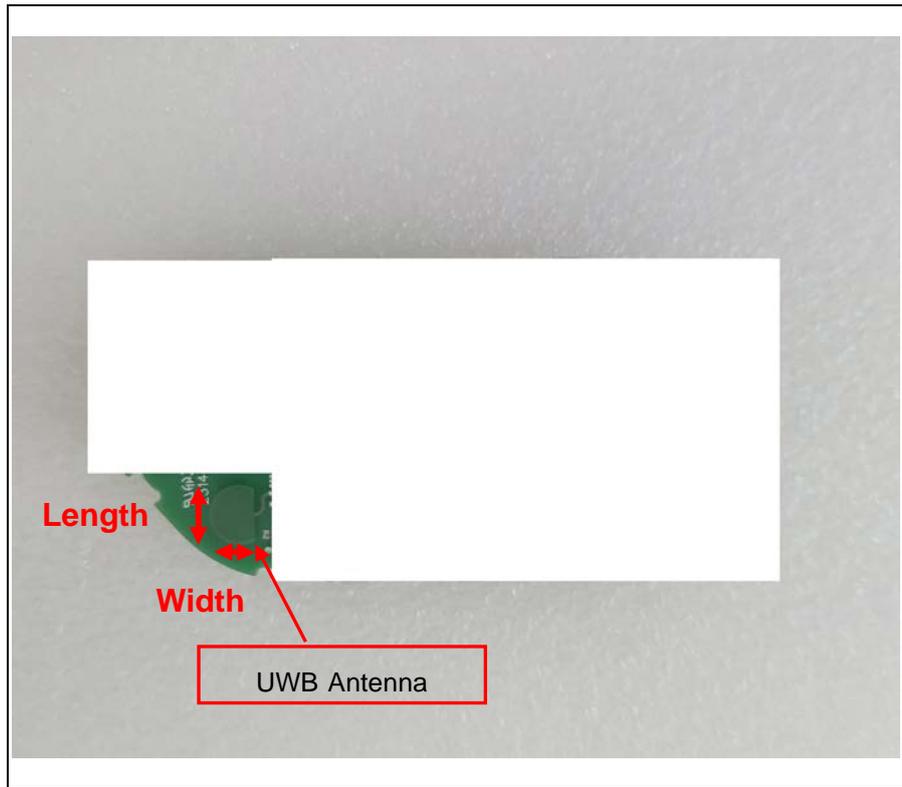


Antenna Information

| Item | Contents | |
|---------------------------|--|-------------|
| Frequency | 433.92 MHz | 7 987.2 MHz |
| Antenna Type | PCB Pattern Antenna | |
| Antenna peak gain | -11.61 dBi | -6.26 dBi |
| Manufacturer / Model name | Hyundai Mobis Co., Ltd. / - | |
| Address of manufacturer | 203, Teheran-ro, Gangnam-gu, Seoul, South Korea, 135-977 | |
| Test Laboratory | RadiAnt Co., Ltd | EMTI |
| Antenna Length | 32 mm | 5 mm |
| Antenna Width | 22 mm | 4 mm |



Model name: FOB-4FA1U44



Model name: FOB-4FA1U44

Test Result

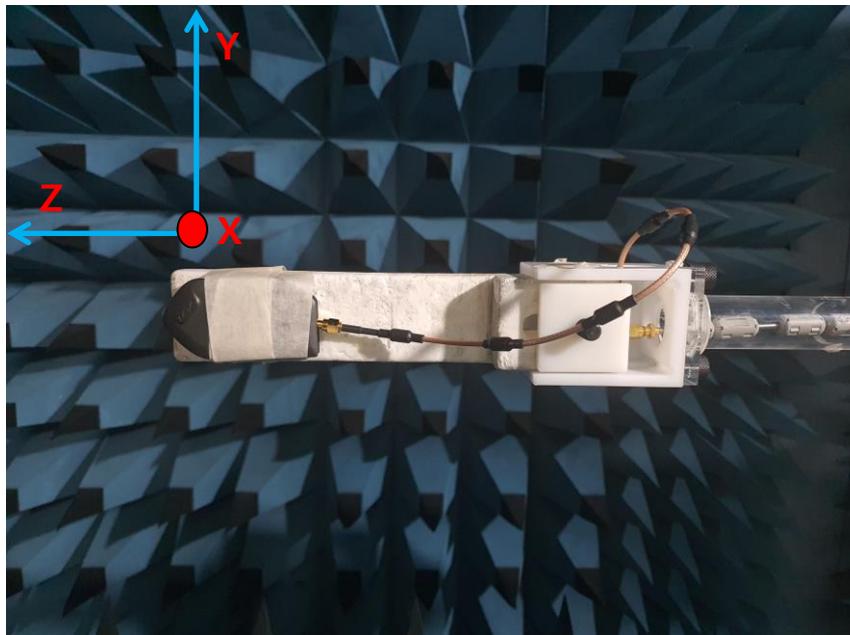
CUSTOMER : 현대모비스

스마트키Fob 433.92MHz Radiation Pattern data

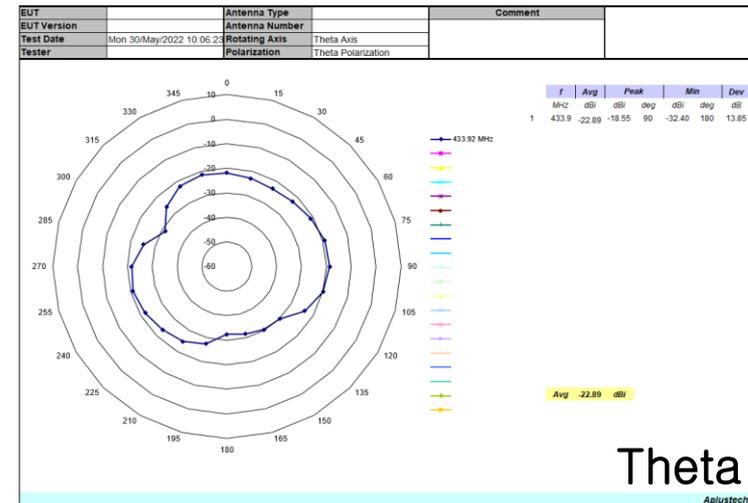
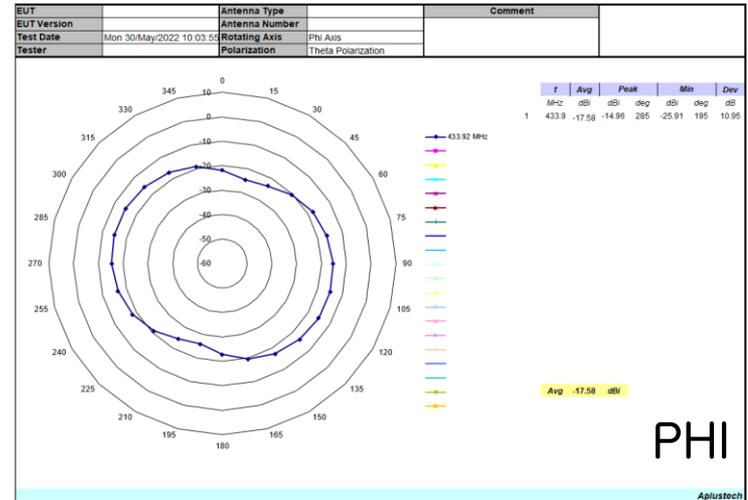
1. SET 구조 및 챔버 방향(Radiation 방향)
2. VSWR 및 2D-Radiation

2022.05.30
RadiAnt

1. SET 구조 및 챔버 거치 방향

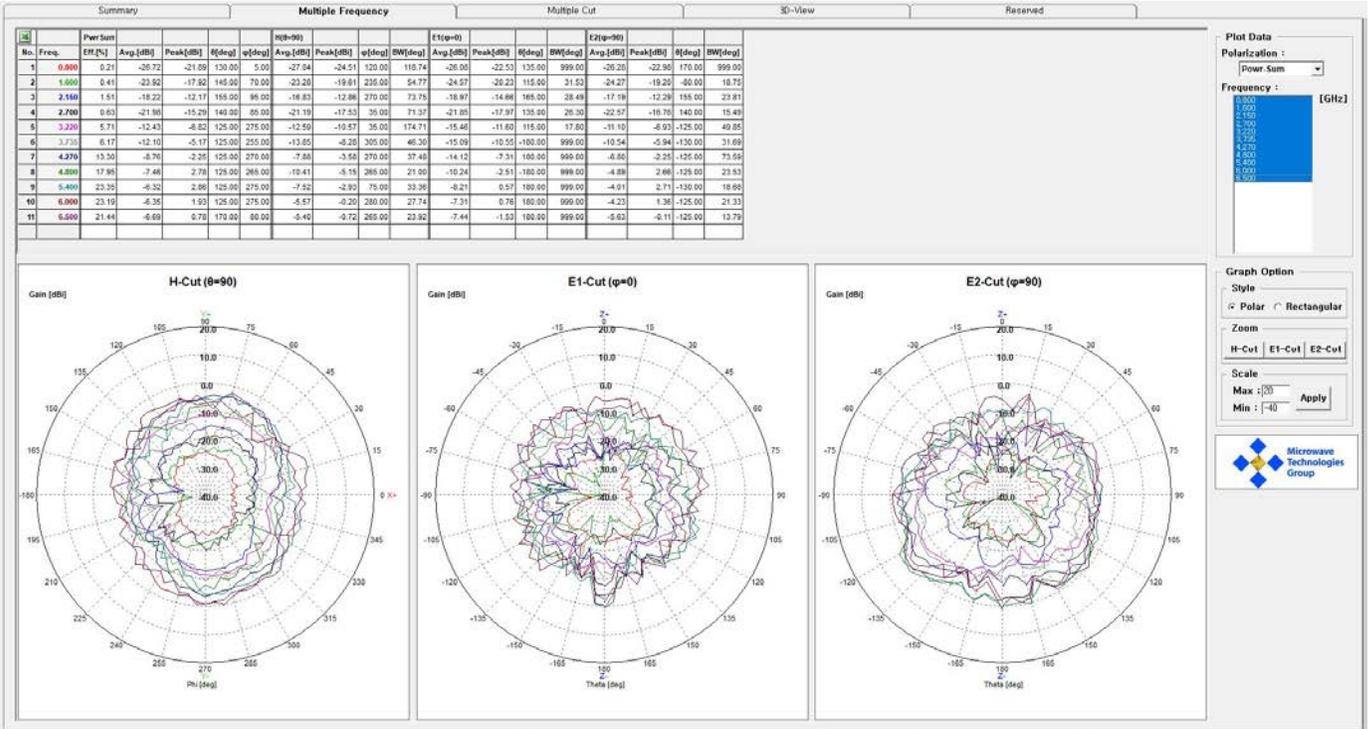


2. VSWR 및 2D-Radiation

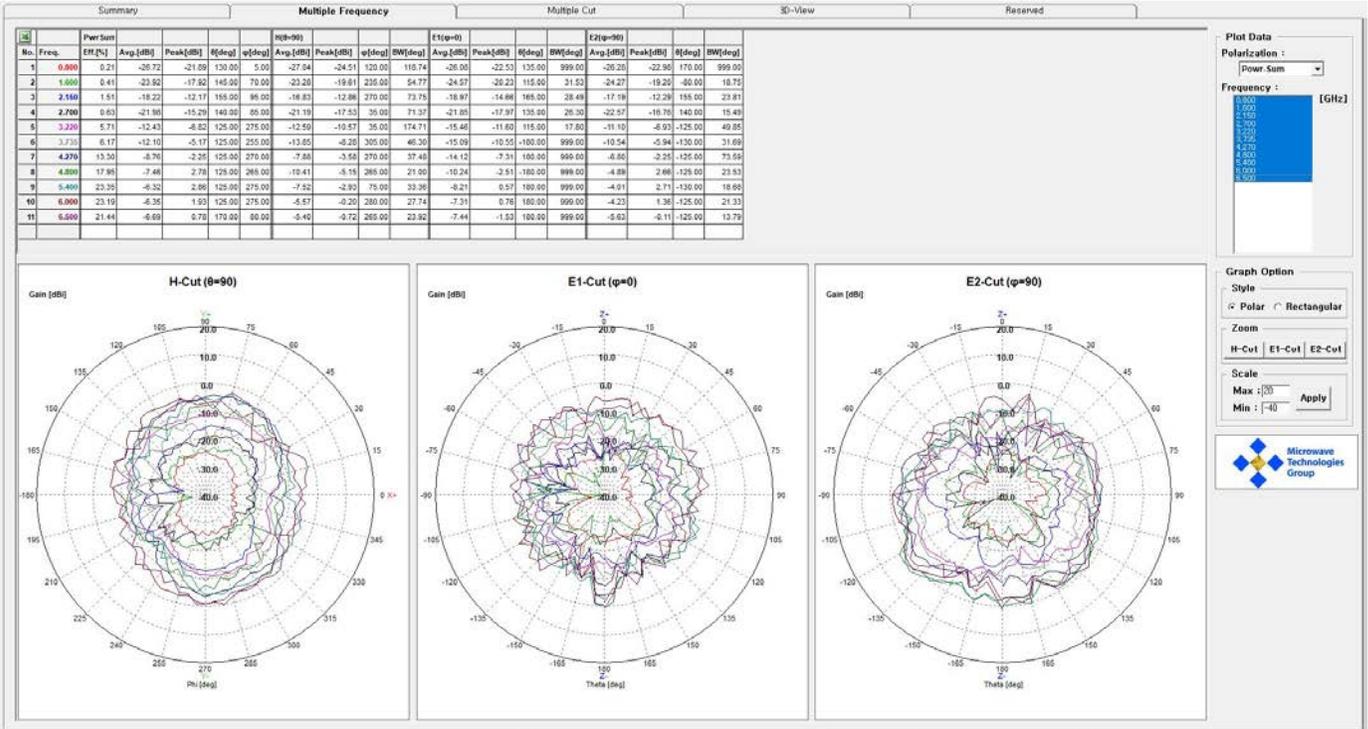


| | |
|------------------------|---------------|
| | 1 |
| Frequency [MHz] | 433.92 |
| Avg.Gain [dBi] | -16.45 |
| Efficiency [%] | 2.3 |
| Peak Gain [dBi] | -11.61 |

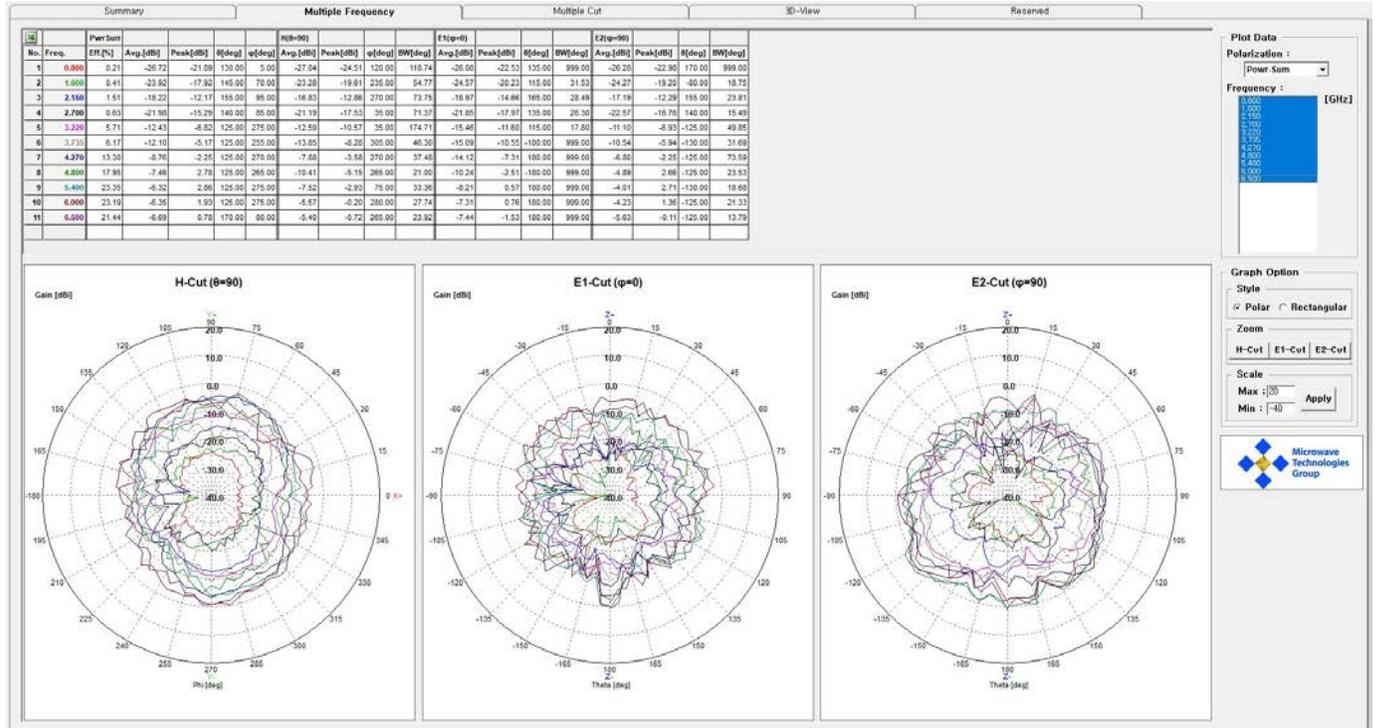
| No. | Freq.[GHz] | Eff.[%] | Avg.[dBi] | Peak[dBi] |
|-----|------------|---------|-----------|-----------|
| 1 | 0.8 | 0.21 | -26.72 | -21.89 |
| 2 | 1.6 | 0.41 | -23.92 | -17.92 |
| 3 | 2.15 | 1.51 | -18.22 | -12.17 |
| 4 | 2.7 | 0.63 | -21.98 | -15.29 |

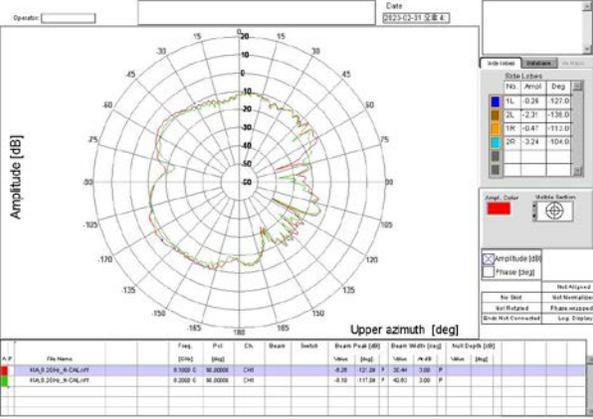
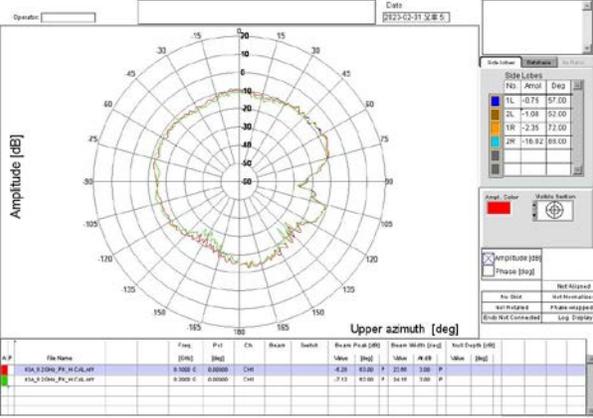
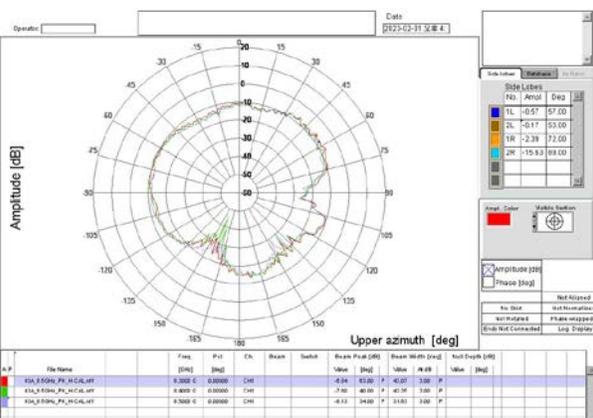


| No. | Freq.[GHz] | Eff.[%] | Avg.[dBi] | Peak[dBi] |
|-----|------------|---------|-----------|-----------|
| 5 | 3.22 | 5.71 | -12.43 | -6.82 |
| 6 | 3.735 | 6.17 | -12.10 | -5.17 |
| 7 | 4.27 | 13.30 | -8.76 | -2.25 |
| 8 | 4.8 | 17.95 | -7.46 | 2.78 |



| No. | Freq.[GHz] | Eff.[%] | Avg.[dBi] | Peak[dBi] |
|-----|------------|---------|-----------|-----------|
| 9 | 5.4 | 23.35 | -6.32 | 2.86 |
| 10 | 6.0 | 23.19 | -6.35 | 1.93 |
| 11 | 6.5 | 21.44 | -6.69 | 0.78 |



| No. | Freq.[GHz] | Peak[dBi] | | |
|-----|------------|-----------|---------------|--|
| 12 | 8.1 | -6.26 | |  |
| 13 | 8.2 | -7.12 | Hyundai Mobis |  |
| 14 | 8.3 | -6.84 | |  |

| No. | Freq.[GHz] | | Peak[dBi] | |
|-----|------------|--|-----------|--|
| 15 | 8.4 | | -7.6 | |
| 16 | 8.5 | | -8.13 | |
| 17 | 10.2 | | -2.55 | |