



Antenna PERFORMANCE TEST REPORT

| | |
|---------------------|---|
| Product Name | VVK20 |
| Applicant | InnoComm |
| Manufacturer | InnoComm |
| Test site | InnoComm |
| Model | Sylvie_VVK20 |
| Antenna type | Monopole |
| Address | 1F, No.6, Hsin Ann Rd., Hsinchu Science Park, Hsinchu 30078, Taiwan |

| | | |
|--------------------|--------------------|------------------|
| Approved by | Reviewed by | Issued by |
| Taka Wei | | Ella Lin |

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1. INTRODUCTION

1.1 TEST EQUIPMENT

Passive Test:

Network Analyzer: R/S ZNB8 (9KHz ~ 8.5GHz)

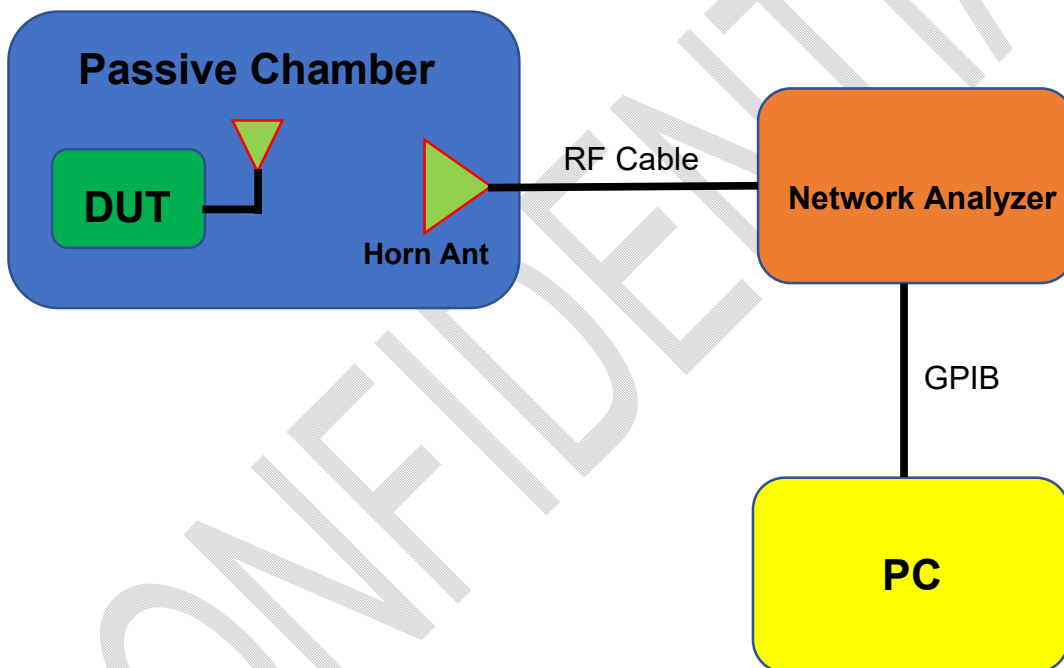
Passive Chamber: Atenlab OTA 200

1.2 TEST CONDITION

Support Band:Sub-G (850MHz~928MHz)

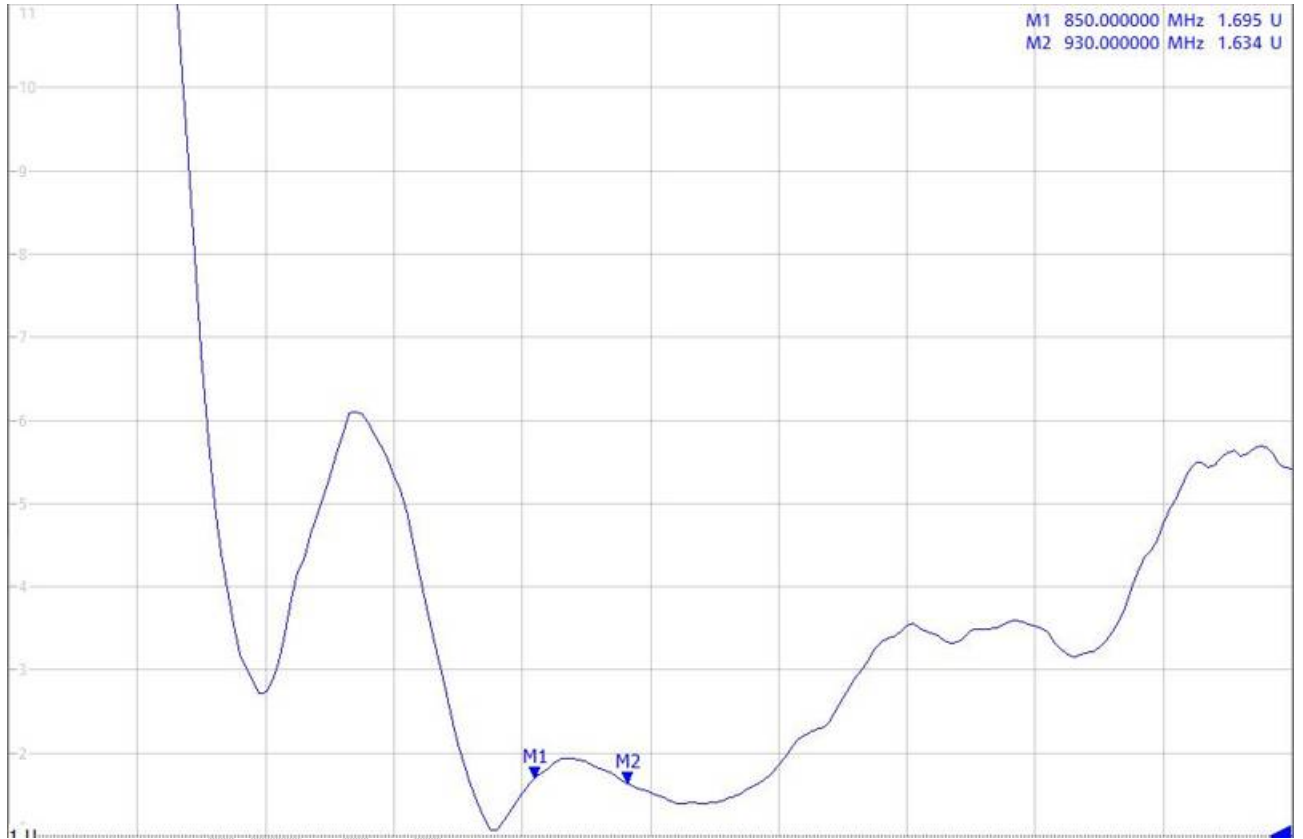
Temperature: 25°C

1.3 TEST SETUP AND ENVIRONMENTS



2. PASSIVE PERFORMANCE TEST

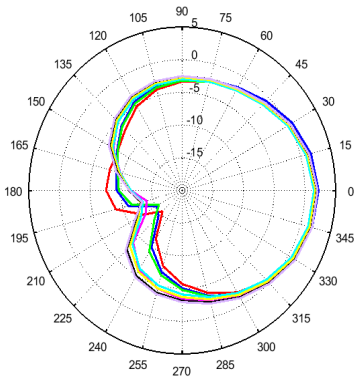
2.1 VSWR MEASUREMENT



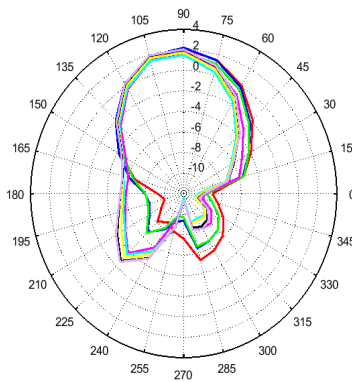
Sub-G (850MHz~928MHz)

2.2 RADIATION PATTERN

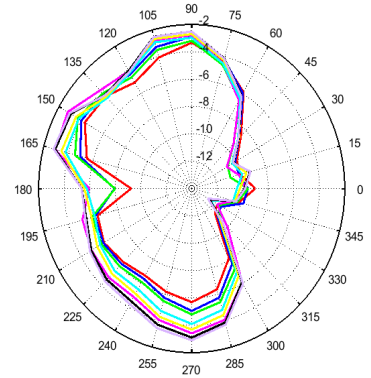
Total_Polar Graph_H_XY Plane



Total_Polar Graph_E1_XZ Plane



Total_Polar Graph_E2_YZ Plane



| | Color | Freq./Chan. |
|---|---------|-------------|
| 1 | Red | 850MHz |
| 2 | Blue | 863MHz |
| 3 | Green | 868MHz |
| 4 | Magenta | 902MHz |
| 5 | Cyan | 917MHz |
| 6 | Yellow | 920MHz |
| 7 | Black | 925MHz |
| 8 | Purple | 928MHz |

Sub-G (850MHz~928MHz)

2.3 AVERAGE EFFICIENCY PEAK GAIN

| | Average efficiency (%) | Average Gain (dBi) | Peak Gain (dBi) |
|-------|------------------------|--------------------|-----------------|
| Sub-G | 39.9 | -3.99 | 1.13 |

2.4 3D GAIN OF FREE SPACE(AVERAGE)

| | VVK20 | | |
|------------------------|-----------------|------------|--------------|
| | Frequency (MHz) | Gain (dBi) | Efficiency % |
| Sub-G 850MHz~928MHz | 850M | -4.11 | 38.8 |
| | 863M | -4 | 39.8 |
| | 868M | -4.22 | 37.8 |
| | 902M | -3.95 | 40.3 |
| | 917M | -4.3 | 37.2 |
| | 920M | -4.02 | 39.6 |
| | 925M | -3.72 | 42.5 |
| | 928M | -3.64 | 43.3 |