POINT MOBILE CO.,LTD

APPROVAL SHEET

| PM560 | | | | | |
|-------|----------------|------------------|------------------------------------|--|--|
| NO | MODEL | FREQUENCY | | | |
| 1 | HWI-ABGM-PM560 | BT& WIFI Dual | 2402 ~ 2484 MHz 5180 ~ 5825 MHz | | |

| SUPPLIER | | | CUSTOMER | | |
|----------|--------|----------|----------|--------|----------|
| Engineer | Review | Approved | Engineer | Review | Approved |
| 3/2 | | | | | |

HANWOOL TECHNOLOGY CO., LTD
#1002 IT303-DONG, PUCHONTECHNOPARK III 36-1
SAMJUNG-DONG, OHJUNG-GU, KYOUNG GI-DO, KOREA

TEL: 032) 624-2555 FAX: 032) 624-2559

HISTORY SHEET

| ITEM | CARRIER LPS ANTENNA | | Developed by | Hwan. Choi | 3/2 |
|-----------|---------------------|-----------------|--------------|------------|------|
| Part Name | HWI-ABG | M-PM560 | Director | | |
| Rev. No. | Date | | Description | | Etc. |
| 0 | 2022-09-22 | Initial Version | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | <u> </u> | l | | | |

ANTENNA SPECIFICATION

1. MODEL: HWI-ABGM-PM560

2. APPLICATION:

This specification is provided for BT and WIFI Dual Band ANTENNA.

3 ANTENNA used condition

■Portable ■Fixing ■Movement ■Out-door ■In-door ■Etc()

4. ANTENNA Drawing

#3. Attached: Drawing paper

5. Electrical specification and performance

Satisfied next data with real used or similar environment conditions.

| No. | ELECTRICAL DATA | SPECIFICATIONS | | REMARK | |
|------|-------------------|--------------------|-----------------|--------------|--|
| 5. 1 | FREQUENCY RANGE | BT&WiFi 2.4 | 2402 ~ 2484 MHz | | |
| | | WiFi 5.5 | 5180 ~ 5825 MHz | | |
| 5. 2 | IMPEDANCE | 50 Ω NOMINAL | | | |
| 5. 3 | V. S. W. R | BT&WiFi 2.4 | Less than 2.0:1 | #1. Attached | |
| | | WiFi 5.5 | Less than 2.0:1 | | |
| 5. 4 | PEAK GAIN(Min) | BT&WiFi 2.4 | 0.57 dBi | #2. Attached | |
| 0. 4 | I EAR GAIN(MIII) | WiFi 5.5 | 1.46 dBi | #2. Attached | |
| 5. 5 | RADIATION PATTERN | OMNI - DIRECTIONAL | | | |
| 5. 6 | POLARIZATION | LINEAR | | | |

6. Hardware specification and mechanical

| No. | MECHANICAL | SPECIFICATIONS | REMARK |
|------|-----------------------|----------------------------|---------------|
| 6. 1 | CARRIER | PC(Poly-Carbonate), LG1004 | Black |
| 6. 2 | Pattern | LPS | Laser Plating |
| 6. 3 | Dimension (D X W X H) | 22.5 X 17.7 X 16.0 [mm] | |

7. SINUSOIDAL VIBRATION

Vibration Frequencies : 5-55 Hz (1 cycle)

Measuring method

Antenna is combined in the test equipment.

The vibration is done X and Y direction (left, right, up and down) according to below image.

It continued for 2 hours each direction.

8. OPERATING TEMPERATURE

Temperature : -40° / $+70^{\circ}$

Demands : Set Antenna and Cable for 72 hours each temperature.

No visual and mechanical changes.

The fitting and mold will be unchanged mechanically during the test.

The antenna shall satisfy the electrical data

9. HUMIDITY

Condition : $90\% \sim 95\% / +70\%$

Measuring method

Antenna is placed in climatic chamber for 72 hours.

Antenna is taken out from the chamber and measured

after another 24 hours in room temperature

Demands : No visual and mechanical changes.

The fitting and mold will be unchanged mechanically during the test.

The antenna shall satisfy the electrical data.

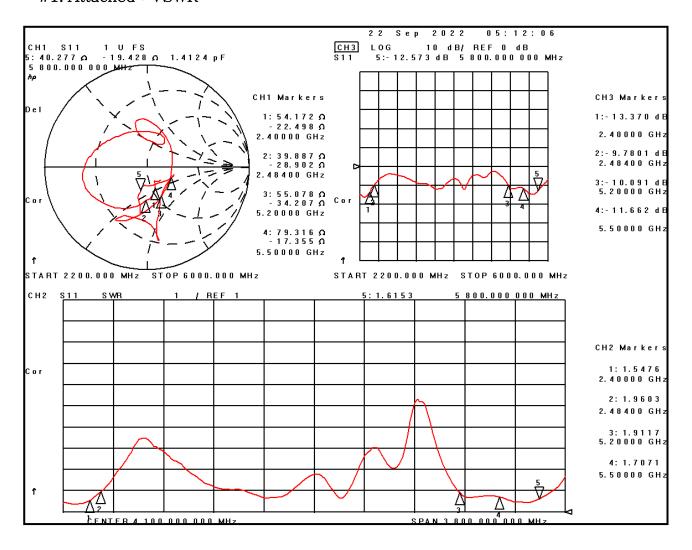
10. TEST and Q/C

This specification is according to fixed demands and suitable Hanwool technology Q/C provision.

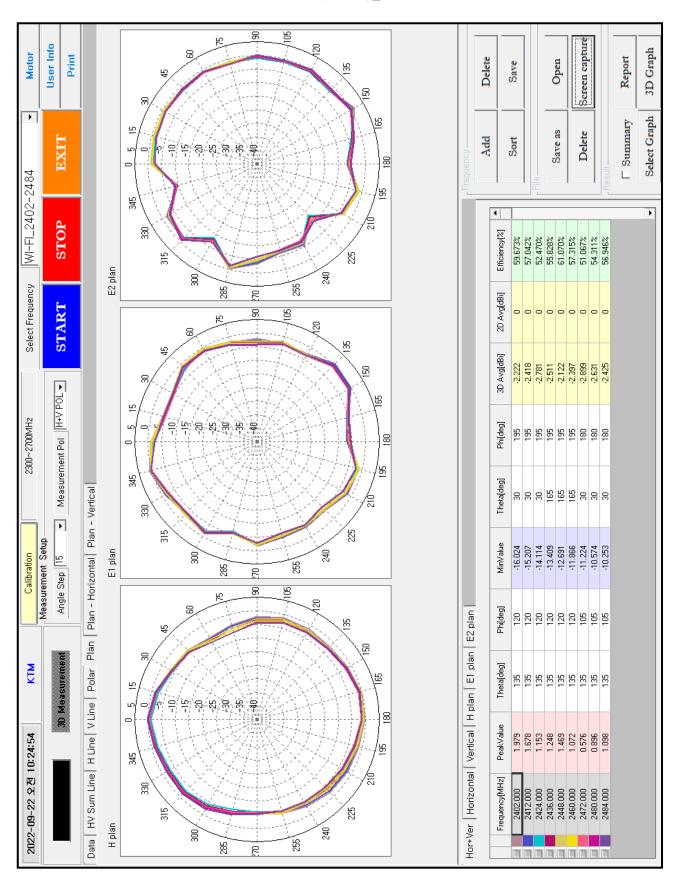
But it is possible to skip No. 7~9 demands, after consultation with buyer.

| DQ No. | HW-220922-20 | Modify No. | | Write | Hwan. Choi |
|-----------|--------------------------|------------|------------|----------|---------------|
| Supply to | POINT MOBILE CO., LTD | Date | 2022-09-22 | Approval | Chang-gi. Nam |

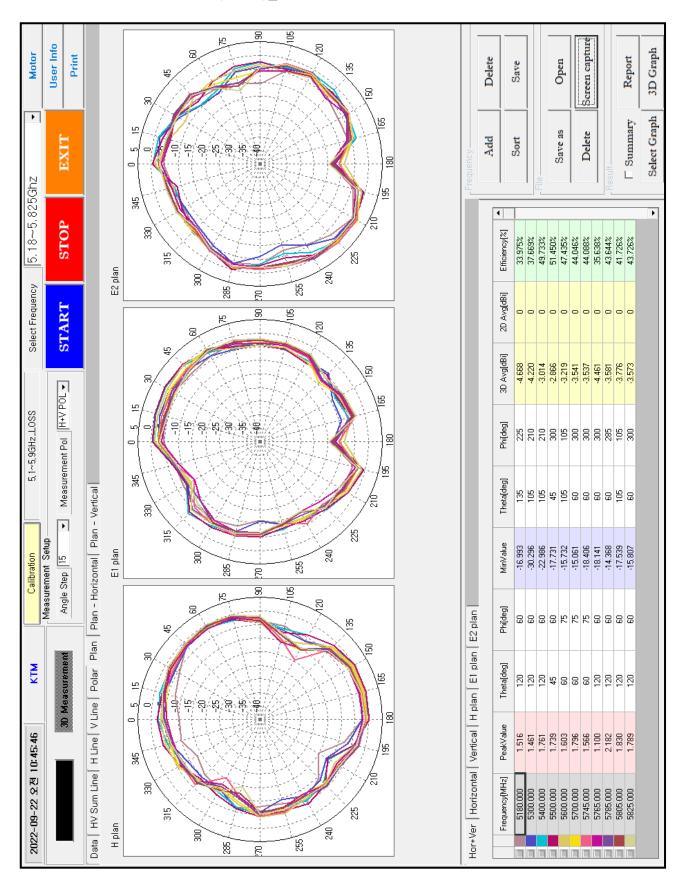
- #1. Attached: VSWR



- #2. Attached: RADIATION PATTERN(GAIN)_WIFI 2.4GHz



-. RADIATION PATTERN(GAIN)_WIFI 5.5GHz



- #3. Attached : Drawing paper Hanwool Technology Date Finish BLACK HWI- ABGM-PM560 Checked 포인트모바일 Q'ty 3D VIEW PC-LG화학 SC2202 Meterial Description Approved by File Name Model Revision Note н,сно ASSY Checked by Part Name CARRIER PATTERN Decimal Angle J.O.LIM

X ±0.15 N/A 220905-52 Drawn by Title Unit E Scale ŝ ≗|⊲ Ø *CARRIER PM550 공용입니다.