

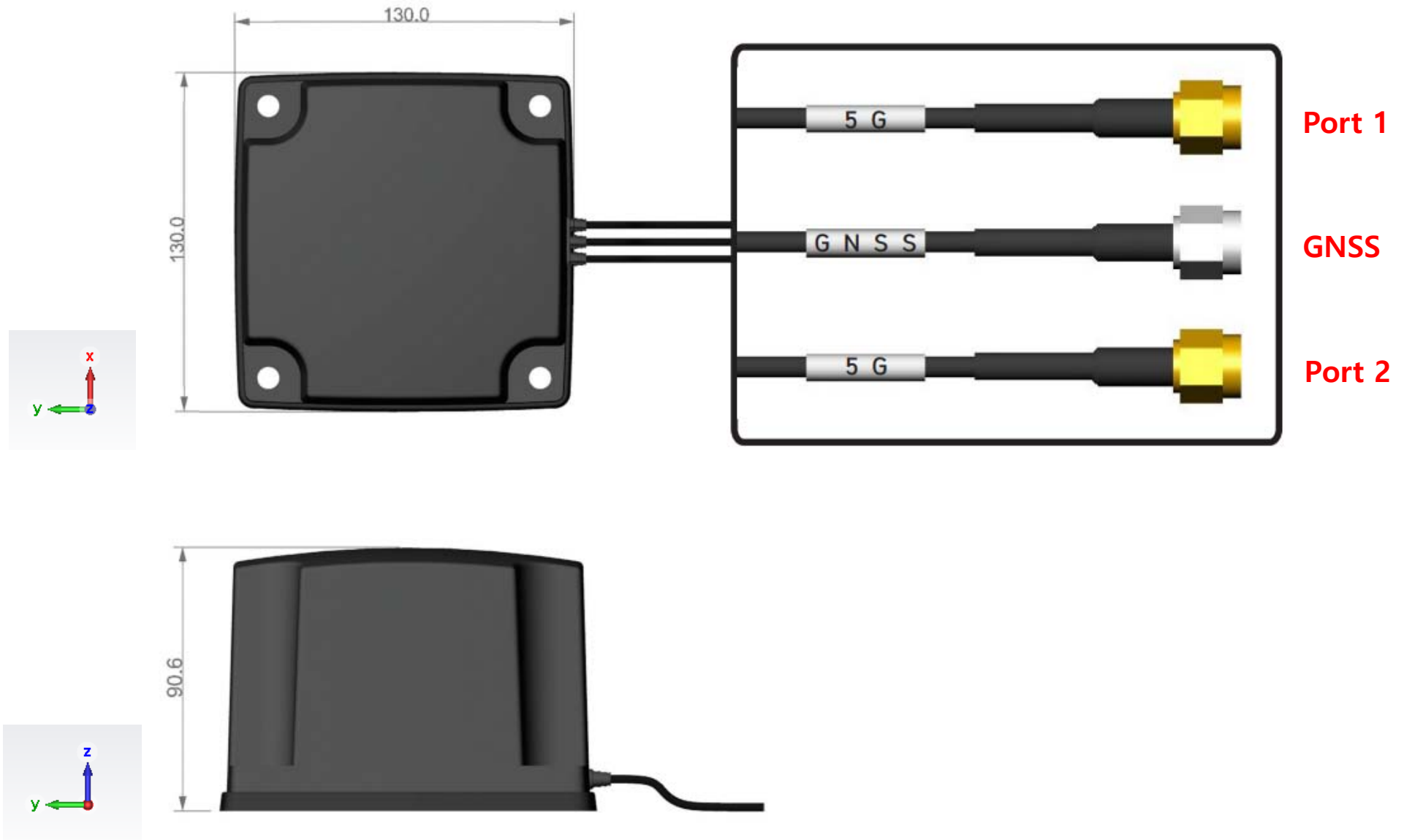
TGU-5G



HANKOOK ANTENNA CO.LTD.

2023. 12. 12

Port Location





- **Conditions**

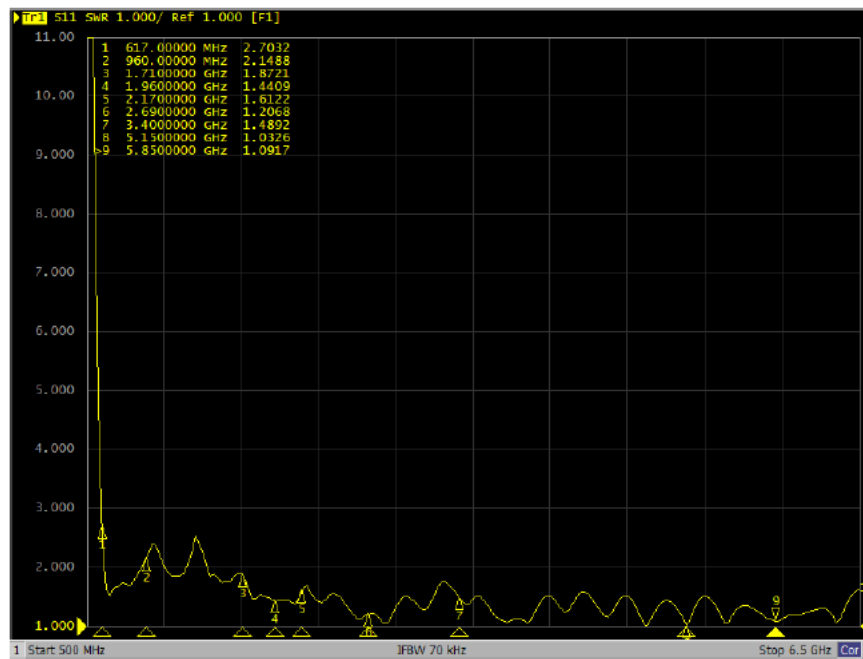
1. **G.P size = No GP**

2. **Cable length = 200 (mm)**

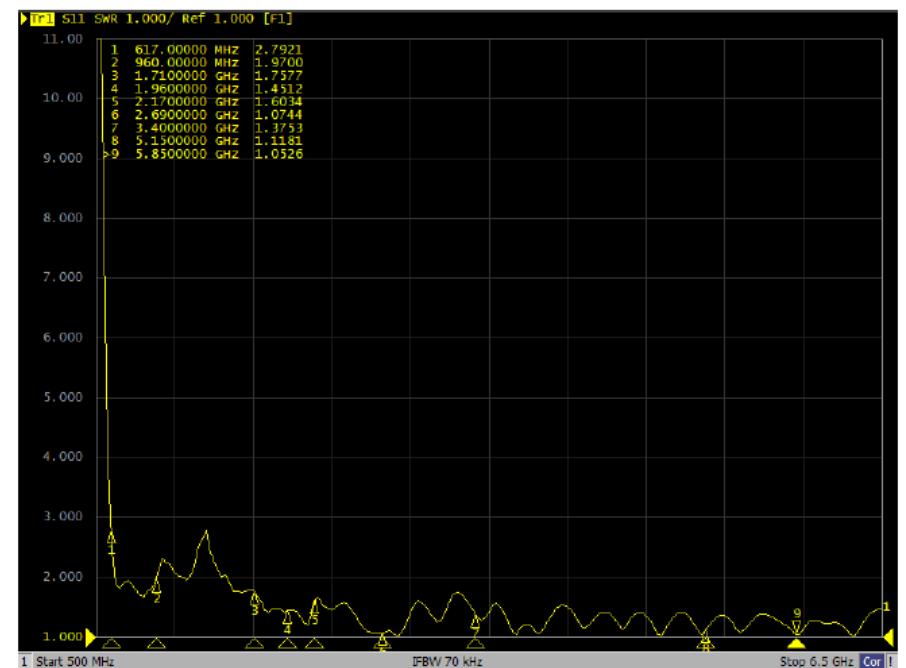
3. **Cable type: RG-316/D cable**

5G V.S.W.R

<Port1>



<Port2>



<617~960 MHz(Port1)>

[illegible]

<617~960 MHz(Port2)>

[illegible]

<1,710~2,700 MHz(Port1)>

[illegible]

<1,710~2,700 MHz(Port2)>

[illegible]

- <3,400~4,000 MHz(Port1)>

[illegible]

<3,400~4,000 MHz(Port2)>

[illegible]

- 5G Efficiency

<663~798 MHz (Port1)> B13, B14, B17, B71

	1	2	3	4	5	6	7	8	9	10	11	12
Frequency [MHz]	663	680	698	704	710	716	777	782	787	788	793	798
Efficiency [dB]	-1.61	-0.50	-0.23	-0.18	-0.08	-0.06	-1.41	-1.46	-1.39	-1.41	-1.38	-1.50
Efficiency [%]	69.0	89.0	94.9	96.0	98.2	98.6	72.3	71.5	72.7	72.3	72.7	70.8
TRG _θ [dB]	-3.78	-2.29	-2.00	-1.97	-1.91	-1.95	-3.26	-3.27	-3.18	-3.19	-3.14	-3.21
Gain _{θ Peak} [dBi]	1.48	3.35	3.61	3.65	3.73	3.72	1.74	1.65	1.65	1.62	1.59	1.41
Gain _{θ Min} [dBi]	-31.24	-37.94	-26.50	-25.99	-24.98	-35.37	-25.47	-26.47	-27.82	-27.73	-28.81	-30.71
TRG _φ [dB]	-5.67	-5.24	-4.97	-4.87	-4.71	-4.58	-5.99	-6.11	-6.10	-6.13	-6.17	-6.36
Gain _{φ Peak} [dBi]	-0.94	-0.27	-0.07	0.03	0.19	0.31	-0.89	-1.06	-1.07	-1.12	-1.18	-1.41
Gain _{φ Min} [dBi]	-38.96	-26.73	-26.37	-24.21	-24.47	-22.90	-28.59	-25.27	-25.15	-25.51	-26.84	-27.96
UHRG [dB]	-4.04	-2.95	-2.65	-2.56	-2.42	-2.37	-3.95	-4.06	-4.04	-4.07	-4.09	-4.25
UHRG/TRG [%]	57.11	56.99	57.25	57.71	58.28	58.82	55.64	54.94	54.29	54.18	53.59	53.03
H-Plane	-4.00	-2.31	-1.92	-1.81	-1.66	-1.58	-2.22	-2.25	-2.15	-2.17	-2.11	-2.16
E1-Plane, AVG [dB]	-8.61	-6.34	-5.71	-5.61	-5.53	-5.58	-6.78	-6.71	-6.55	-6.55	-6.42	-6.42
E2-Plane, AVG [dB]	-1.47	-0.40	-0.21	-0.17	-0.09	-0.11	-1.55	-1.60	-1.55	-1.58	-1.57	-1.71
Peak Gain [dBi]	1.49	3.37	3.65	3.70	3.80	3.80	2.17	2.07	2.06	2.03	2.00	1.79
Directivity [dB]	3.10	3.87	3.88	3.87	3.88	3.87	3.58	3.52	3.44	3.44	3.38	3.29
Minimum Gain [dBi]	-6.76	-11.49	-13.01	-13.04	-15.49	-18.00	-10.80	-10.57	-10.21	-10.24	-9.93	-9.95

<663~798 MHz (Port2)> B13, B14, B17, B71

[illegible]

- 5G Efficiency

<2305~2315 MHz(Port1)> B30

	1	2	3
Frequency [MHz]	2305	2310	2315
Efficiency [dB]	-0.35	-0.25	-0.32
Efficiency [%]	92.2	94.3	92.9
TRG _p [dB]	-1.17	-1.06	-1.12
Gain _{p Peak} [dBi]	4.36	4.39	4.28
Gain _{p dIn} [dBi]	-25.90	-23.39	-23.99
TRG _p [dB]	-7.99	-7.99	-8.03
Gain _{p Peak} [dBi]	-3.13	-3.14	-3.14
Gain _{p dIn} [dBi]	-27.21	-26.14	-26.84
UHRG [dB]	-2.65	-2.55	-2.60
UHRG/TRG [%]	58.91	58.99	59.07
H-Plane	0.18	0.27	0.13
E1-Plane, AVG [dB]	-2.46	-2.30	-2.36
E2-Plane, AVG [dB]	-1.89	-1.80	-1.88
Peak Gain [dBi]	4.55	4.57	4.50
Directivity [dB]	4.90	4.82	4.82
Minimum Gain [dBi]	-21.78	-21.16	-22.18

<2305~2315 MHz(Port2)> B30

	1	2	3
Frequency [MHz]	2305	2310	2315
Efficiency [dB]	-0.09	-0.04	-0.04
Efficiency [%]	98.1	99.2	99.0
TRG _p [dB]	-1.06	-0.99	-1.00
Gain _{p Peak} [dBi]	4.99	5.04	5.08
Gain _{p dIn} [dBi]	-33.10	-31.50	-34.32
TRG _p [dB]	-7.06	-7.08	-7.08
Gain _{p Peak} [dBi]	1.86	1.78	1.74
Gain _{p dIn} [dBi]	-32.35	-34.44	-45.02
UHRG [dB]	-2.58	-2.51	-2.51
UHRG/TRG [%]	56.33	56.55	56.65
H-Plane	0.28	0.33	0.31
E1-Plane, AVG [dB]	-2.04	-1.94	-1.91
E2-Plane, AVG [dB]	-2.03	-1.97	-2.01
Peak Gain [dBi]	5.97	5.94	5.96
Directivity [dB]	6.05	5.98	6.00
Minimum Gain [dBi]	-21.49	-19.30	-18.07