



Calibration Results

Certificate No : IC-2021-26368-R1

Calibration No : C-2021-031910

page : 4 of 4

2. Conversion Loss Data (cont.)

Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)	Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)
65.0	9.22	0.82	70.3	8.39	0.82
65.3	9.31	0.82	70.5	8.48	0.82
65.5	9.57	0.82	70.8	9.11	0.82
65.8	10.14	0.82	71.0	9.23	0.82
66.0	9.79	0.82	71.3	8.89	0.82
66.3	10.31	0.82	71.5	8.77	0.82
66.5	10.47	0.82	71.8	9.56	0.82
66.8	10.20	0.82	72.0	8.41	0.82
67.0	10.78	0.82	72.3	8.45	0.82
67.3	9.81	0.82	72.5	8.12	0.82
67.5	10.53	0.82	72.8	8.53	0.82
67.8	10.37	0.82	73.0	8.87	0.82
68.0	9.97	0.82	73.3	8.34	0.82
68.3	9.38	0.82	73.5	8.71	0.82
68.5	8.93	0.82	73.8	8.68	0.82
68.8	8.61	0.82	74.0	8.19	0.82
69.0	8.43	0.82	74.3	7.90	0.82
69.3	8.44	0.82	74.5	7.96	0.82
69.5	8.21	0.82	74.8	7.88	0.82
69.8	8.06	0.82	75.0	7.11	0.82
70.0	8.66	0.82	-	-	-

END.

F-02P-02-014 (Rev.00)

2.2. Model : N9029AV10, S/N : SAX388



CALIBRATION CERTIFICATE

74, SEOICHEON-RO 578BEON-GIL, MAJANG-MYEON,
 ICHEONSU, GYEONGGIDO, KOREA 17383
 TEL :82-31645-6900, FAX :82-31645-6969



- Certificate No : IC-2021-03540-R1 [Amendment to Report, Certificate No 'IC-2021-03540']
 - Calibration No : C-2021-005009

page : 1 of 4

1. Client

- Name : UL Korea, Ltd.
 - Address : Suwon Test Site: UL Korea, Ltd. Suwon Laboratory 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea

2. Calibration Subject

◇ Registration No : 376593
 - Description : SA EXTENSION MODULE
 - Manufacturer and Model Name : VDI / SAX WR10
 - Serial Number : SAX388

3. Date of Calibration

: 2021.01.19 The due date of next Calibration : 2022.01.19

4. Environment

- Temperature : (22.6 ± 0.1) °C - Humidity : (46 ± 1) % R.H.
 - Location : Permanent Calibration Lab
 (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea)

5. Traceability

Calibration method and/or brief description

This certifies that the equipment has been calibrated using applicable HCT procedure(HCT-CS-125-40641), in compliance with ISO/IEC 17025. Measurement are traceable to the International System of Unit (SI) via national metrology institutes.

List of used standards/specifications

Description	Manufacturer and Model Name	Serial Number	The due date of next Calibration	Calibration laboratory
EXG ANALOG SIGNAL GENERATOR	KEYSIGHT N5173B	MY53270544	2021/06/23	HCT CO., LTD.
EPM SERIES POWER METER	AGILENT E4419B	GB42420565	2021/11/02	HCT CO., LTD.
POWER SENSOR	KEYSIGHT W8486A	MY44420260	2021/04/17	Keysight Technologies
WR-12 MULTIPLIER SOURCE MODULE	OML S12MS-A	164019-1	2021/09/09	HCT CO., LTD.
WR-08 MULTIPLIER SOURCE MODULE	OML S08MS-A	164019-1	2021/09/09	HCT CO., LTD.

6. Calibration result

: Refer to attachment

7. Measurement uncertainty

: Refer to attachment

(Confidence level about 95 %, k = 2)

affirmation	Measurements performed by		Approved by	
	Name : Meenji Park		Title : Technical Cal. Manager Name : Seungchan Lee	

The above calibration certificate is the accredited calibration items by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

2021. 03. 31

Accredited by KOLAS, Republic of KOREA

HCT Co., Ltd.



(NOTE) If any significant instability or other adverse factor(overload, temperature, humidity etc.) manifests itself before, during or after calibration, and is likely to affect the validity of the calibration.

F-02P-02-014 (Rev.00)

■ Asset Number: SUW-E0175

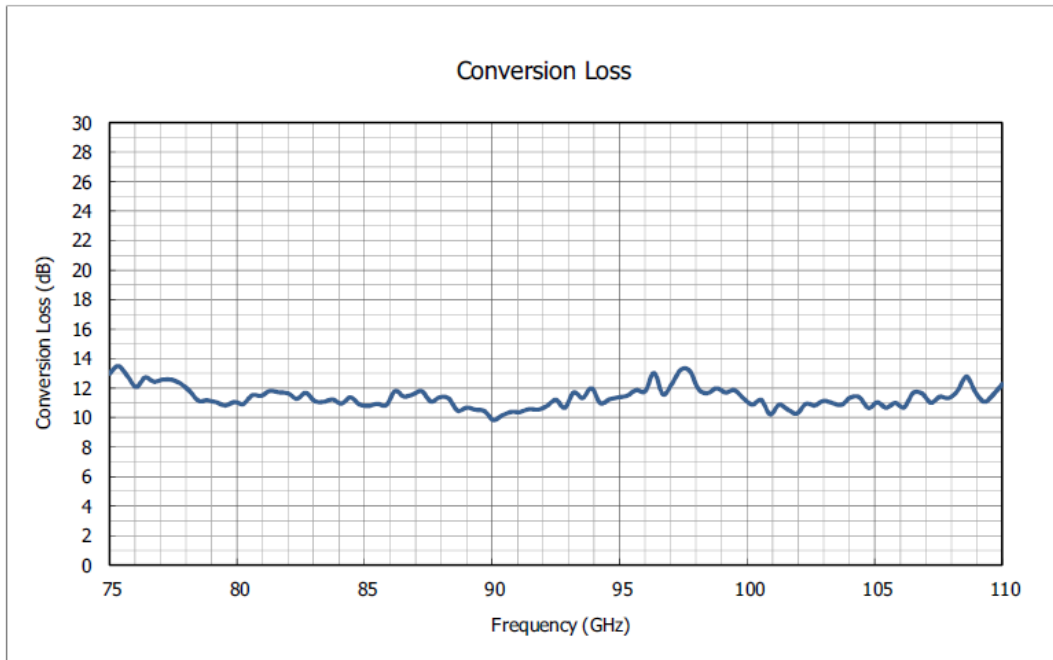
Calibration Results



Certificate No : IC-2021-03540-R1
Calibration No : C-2021-005009

page : 2 of 4

1. Conversion Loss Graph



Note 1) This is the result of measuring the requested equipment and Keysight N9040B (SN MY60080268) together.

F-02P-02-014 (Rev.00)



Calibration Results

Certificate No : IC-2021-03540-R1
 Calibration No : C-2021-005009

page : 3 of 4

2. Conversion Loss Data

Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)	Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)
75.0	12.96	0.89	85.5	10.93	0.82
75.4	13.50	0.89	85.9	10.84	0.82
75.7	12.84	0.89	86.2	11.80	0.82
76.1	12.07	0.89	86.6	11.42	0.82
76.4	12.72	0.89	86.9	11.57	0.82
76.8	12.43	0.89	87.3	11.78	0.82
77.1	12.58	0.89	87.6	11.08	0.82
77.5	12.56	0.89	88.0	11.37	0.82
77.8	12.29	0.89	88.3	11.30	0.82
78.2	11.79	0.89	88.7	10.47	0.82
78.5	11.14	0.89	89.0	10.67	0.82
78.9	11.17	0.89	89.4	10.54	0.82
79.2	11.02	0.89	89.7	10.44	0.82
79.6	10.82	0.89	90.1	9.84	0.82
79.9	11.05	0.89	90.4	10.15	0.82
80.3	10.92	0.89	90.8	10.38	0.82
80.6	11.51	0.89	91.1	10.38	0.82
81.0	11.48	0.89	91.5	10.58	0.82
81.3	11.81	0.89	91.8	10.54	0.82
81.7	11.70	0.89	92.2	10.78	0.82
82.0	11.65	0.89	92.5	11.21	0.82
82.4	11.27	0.89	92.9	10.67	0.82
82.7	11.68	0.89	93.2	11.70	0.82
83.1	11.12	0.89	93.6	11.33	0.82
83.4	11.07	0.89	93.9	11.99	0.82
83.8	11.23	0.82	94.3	10.97	0.82
84.1	10.94	0.82	94.6	11.24	0.82
84.5	11.37	0.82	95.0	11.37	0.82
84.8	10.89	0.82	95.3	11.48	0.82
85.2	10.79	0.82	95.7	11.86	0.82

F-02P-02-014 (Rev.00)



Calibration Results

Certificate No : IC-2021-03540-R1

Calibration No : C-2021-005009

page : 4 of 4

2. Conversion Loss Data (cont.)

Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)	Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)
96.0	11.78	0.82	103.4	10.98	0.82
96.4	13.03	0.82	103.7	10.86	0.82
96.7	11.57	0.82	104.1	11.37	0.82
97.1	12.29	0.82	104.4	11.37	0.82
97.4	13.25	0.82	104.8	10.65	0.82
97.8	13.16	0.82	105.1	11.03	0.82
98.1	11.91	0.82	105.5	10.67	0.82
98.5	11.66	0.82	105.8	11.00	0.82
98.8	11.99	0.82	106.2	10.69	0.82
99.2	11.69	0.82	106.5	11.66	0.82
99.5	11.86	0.82	106.9	11.65	0.82
99.9	11.32	0.82	107.2	11.01	0.82
100.2	10.88	0.82	107.6	11.41	0.82
100.6	11.19	0.82	107.9	11.32	0.82
100.9	10.22	0.82	108.3	11.83	0.82
101.3	10.87	0.82	108.6	12.77	0.82
101.6	10.53	0.82	109.0	11.70	0.82
102.0	10.27	0.82	109.3	11.06	0.82
102.3	10.93	0.82	109.7	11.57	0.82
102.7	10.82	0.82	110.0	12.28	0.82
103.0	11.14	0.82	-	-	-

END.

2.3. Model : N9029AV06, S/N : SAX483



Measurement Report

74, Seoicheon-ro 578beon-gil, Majang-myeon,
 Icheon-si, Gyeonggi-do, Korea 17383
 Tel :82-31-645-6900, www.hct.co.kr

보고서번호(Report No) : IC-2021-03526-R1 [Amendment to Report, Certificate No 'IC-2021-03526'] (page) : 1 of 4
 측정번호(Measurement No) : C-2021-004992

1. 의뢰자 (Client)
 - 기관명 (Name) : UL Korea, Ltd.
 - 주소 (Address) : Suwon Test Site: UL Korea, Ltd. Suwon Laboratory218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea
2. 대상품목 (Measurement Item) ◇ HCT 등록번호 : 376587
 - 기기명 (Description) : SA EXTENSION MODULE
 - 제작회사 및 형식(Manufacturer and Model Name) : VDI / SAX WR6.5
 - 기기번호 (Serial Number) : SAX483
3. 측정일자 (Measurement date) : 2021.01.20
4. 측정환경 (Environment)
 - 온도(Temperature) : (22.3 ± 0.3) °C - 습도(Humidity) : (45 ± 3) % R.H.

5. 측정방법 (Measurement method used)

This certifies that the equipment has been calibrated using applicable HCT procedure(HCT-CS-125-40641), in compliance with ISO/IEC 17025. Measurement are traceable to the International System of Unit (SI) via national metrology institutes.

측정에 사용한 표준장비 명세 (List of used standards/specifications)

기기명 (Description)	제작회사 및 형식 (Manufacturer and Model Name)	기기번호 (Serial Number)	차기교정예정일자 (The due date of next Calibration)	교정기관 (Calibration laboratory)
EXG ANALOG SIGNAL GENERATOR	KEYSIGHT N5173B	MY53270544	2021/06/23	HCT CO., LTD.
ERICKSON POWER METER	VDI PM5	394V	측정	HCT CO., LTD.
WR-05 MULTIPLIER SOURCE MODULE	OML S05MS-A	160419-1	측정	HCT CO., LTD.
WR-08 MULTIPLIER SOURCE MODULE	OML S08MS-A	160419-1	측정	HCT CO., LTD.

6. 측정결과 (Measurement result) : 측정결과 참조 (Refer to attachment)
 (주) 이 측정결과는 의뢰자가 제시한 시료 및 시료명에만 한정됩니다.
 The measurement results shown in this report refer only to the sample(s) measured unless otherwise stated.

확 인 (Affirmation)	작성자 (Tested by) 성명 (Name) : Meenji Park		승인자 (Approved by) 직위 (Title) : 기술책임자(Technical Manager) 성명 (Name) : Seungchan Lee	 (서명)
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이 성적서는 ILAC MRA 서명 기관인 KOLAS(Korea Laboratory Accreditation Scheme)와 A2LA (American Laboratory for Laboratory Accreditation)의 인정과 무관합니다. This calibration certificate is Not an accredited report by KOLAS(Korea Laboratory Accreditation Scheme) and A2LA(American Association for Laboratory Accreditation), a ILAC MRA signatory.

2021. 03. 31

(주)에이치시티 대표이사
 President, HCT Co., Ltd.



(주) 측정결과는 측정기의 정밀정확도에 영향을 미치는 요소(과부하, 온도, 습도 등)의 급격한 변화가 발생한 경우에는 무효가 됩니다. If any significant instability or other adverse factor(overload, temperature, humidity etc.) manifests itself before, during or after calibration, and is likely to affect the validity of the calibration.

F-02P-02-010 (Rev.01)

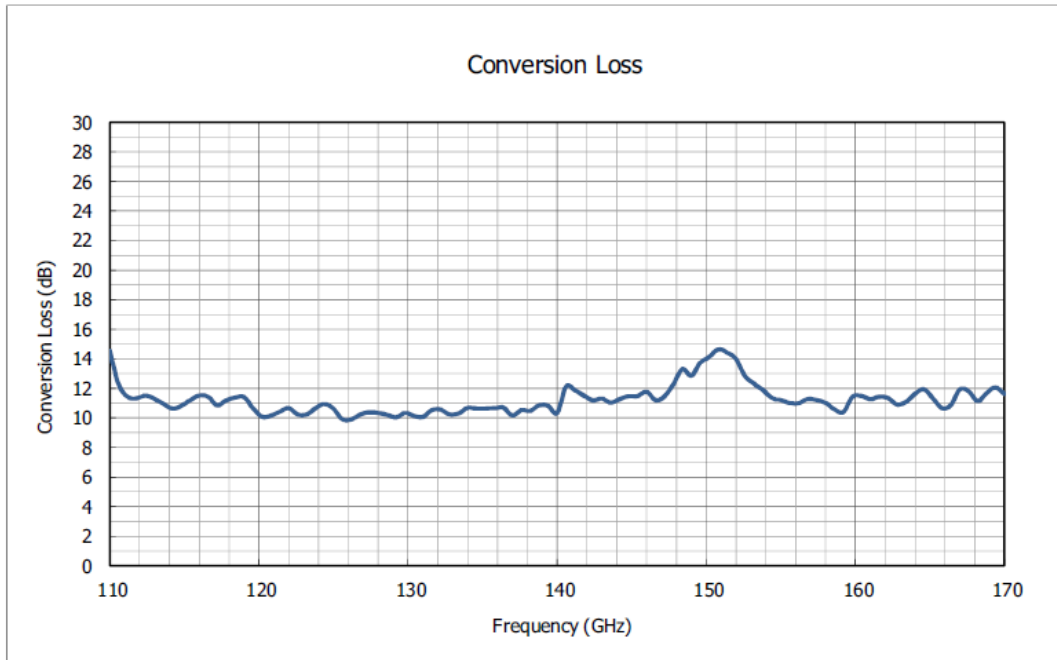
■Asset Number: SUW-E0176

Measurement Results

Certificate No : IC-2021-03526-R1
Measurement No : C-2021-004992

페이지(page) : 2 of 4

1. Conversion Loss Graph



Note 1) This is the result of measuring the requested equipment and Keysight N9040B (SN MY60080268) together.

Note 2)

- In the absence of power standards above 110 GHz, power measurements above 110 GHz are to confirm operation functionality and traceable only to HCT.

F-02P-02-010 (Rev.01)

Measurement Results

Certificate No : IC-2021-03526-R1
 Measurement No : C-2021-004992

페이지(page) : 3 of 4

2. Conversion Loss Data

Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)	Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)
110.0	14.5	0.82	128.0	10.3	0.82
110.6	12.3	0.82	128.6	10.2	0.82
111.2	11.4	0.82	129.2	10.0	0.82
111.8	11.3	0.82	129.8	10.3	0.82
112.4	11.5	0.82	130.4	10.1	0.82
113.0	11.3	0.82	131.0	10.1	0.82
113.6	10.9	0.82	131.6	10.5	0.82
114.2	10.6	0.82	132.2	10.6	0.82
114.8	10.8	0.82	132.8	10.2	0.82
115.4	11.2	0.82	133.4	10.3	0.82
116.0	11.5	0.82	134.0	10.7	0.82
116.6	11.4	0.82	134.6	10.6	0.82
117.2	10.8	0.82	135.2	10.6	0.82
117.8	11.2	0.82	135.8	10.7	0.82
118.4	11.4	0.82	136.4	10.7	0.82
119.0	11.4	0.82	137.0	10.2	0.82
119.6	10.7	0.82	137.6	10.5	0.82
120.2	10.1	0.82	138.2	10.5	0.82
120.8	10.2	0.82	138.8	10.9	0.82
121.4	10.4	0.82	139.4	10.8	0.82
122.0	10.7	0.82	140.0	10.3	0.82
122.6	10.2	0.82	140.6	12.1	0.82
123.2	10.2	0.82	141.2	11.9	0.82
123.8	10.7	0.82	141.8	11.5	0.82
124.4	10.9	0.82	142.4	11.2	0.82
125.0	10.6	0.82	143.0	11.3	0.82
125.6	9.9	0.82	143.6	11.0	0.82
126.2	9.9	0.82	144.2	11.3	0.82
126.8	10.2	0.82	144.8	11.5	0.82
127.4	10.4	0.82	145.4	11.5	0.82

F-02P-02-010 (Rev.01)

Measurement Results

Certificate No : IC-2021-03526-R1
 Measurement No : C-2021-004992

페이지(page) : 4 of 4

2. Conversion Loss Data (cont.)

Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)	Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)
146.0	11.8	0.82	158.6	10.6	0.82
146.6	11.2	0.82	159.2	10.4	0.82
147.2	11.5	0.82	159.8	11.4	0.82
147.8	12.3	0.82	160.4	11.5	0.82
148.4	13.3	0.82	161.0	11.3	0.82
149.0	12.9	0.82	161.6	11.4	0.82
149.6	13.7	0.82	162.2	11.3	0.82
150.2	14.1	0.82	162.8	10.9	0.82
150.8	14.6	0.82	163.4	11.1	0.82
151.4	14.4	0.82	164.0	11.6	0.82
152.0	14.0	0.82	164.6	11.9	0.82
152.6	12.8	0.82	165.2	11.3	0.82
153.2	12.3	0.82	165.8	10.7	0.82
153.8	11.9	0.82	166.4	10.9	0.82
154.4	11.4	0.82	167.0	11.9	0.82
155.0	11.2	0.82	167.6	11.8	0.82
155.6	11.0	0.82	168.2	11.1	0.82
156.2	11.0	0.82	168.8	11.7	0.82
156.8	11.3	0.82	169.4	12.1	0.82
157.4	11.2	0.82	170.0	11.6	0.82
158.0	11.0	0.82	-	-	-

END.

2.4. Model : N9029AV04, S/N : SAX487



Measurement Report

74, Seoicheon-ro 578beon-gil, Majang-myeon,
 Icheon-si, Gyeonggi-do, Korea 17383
 Tel : 82-31-645-6900, www.hct.co.kr

보고서번호(Report No) : IC-2021-03523-R2 [Amendment to Report, Certificate No 'IC-2021-03523'] (page) : 1 of 4
 측정번호(Measurement No) : C-2021-004989

1. 의뢰자 (Client)

- 기관명 (Name) : UL Korea, Ltd.
- 주소 (Address) : Suwon Test Site: UL Korea, Ltd. Suwon Laboratory 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea

2. 대상 품목 (Measurement Item)

◇ HCT 등록번호 : 376591

- 기기명 (Description) : SA EXTENSION MODULE
- 제작회사 및 형식 (Manufacturer and Model Name) : VDI / SAX WR4.3
- 기기번호 (Serial Number) : SAX487

3. 측정일자 (Measurement date) : 2021.01.20

4. 측정환경 (Environment)

- 온도(Temperature) : (22.4 ± 0.2) °C
- 습도(Humidity) : (45 ± 2) % R.H.

5. 측정방법 (Measurement method used)

This certifies that the equipment has been calibrated using applicable HCT procedure(HCT-CS-125-40641), in compliance with ISO/IEC 17025. Measurement are traceable to the International System of Unit (SI) via national metrology institutes.

측정에 사용한 표준장비 명세 (List of used standards/specifications)

기기명 (Description)	제작회사 및 형식 (Manufacturer and Model Name)	기기번호 (Serial Number)	차기교정예정일자 (The due date of next Calibration)	교정기관 (Calibration laboratory)
EXG ANALOG SIGNAL GENERATOR	KEYSIGHT N5173B	MY53270544	2021/06/23	HCT CO., LTD.
ERICKSON POWER METER	VDI PMS	394V	측정	HCT CO., LTD.
WR-03 MULTIPLIER SOURCE MODULE	OML S03MS-A	160419-1	측정	HCT CO., LTD.
WR-05 MULTIPLIER SOURCE MODULE	OML S05MS-A	160419-1	측정	HCT CO., LTD.

6. 측정결과 (Measurement result)

: 측정결과 참조 (Refer to attachment)

(주) 이 측정결과는 의뢰자가 제시한 시료 및 시료명에만 한정됩니다.

The measurement results shown in this report refer only to the sample(s) measured unless otherwise stated.

확 인 (Affirmation)	작성자 (Tested by)		승인자 (Approved by)	
	성명 (Name) : Meenji Park		직위 (Title) 기술책임자(Technical Manager) 성명 (Name) Seungchan Lee	

이 성적서는 ILAC MRA 서명 기관인 KOLAS(Korea Laboratory Accreditation Scheme)와 A2LA (American Laboratory for Laboratory Accreditation)의 인정과 무관합니다. This calibration certificate is Not an accredited report by KOLAS(Korea Laboratory Accreditation Scheme) and A2LA(American Association for Laboratory Accreditation), a ILAC MRA signatory.

2021. 03. 31



(주)에이치시티 대표이사
 President, HCT Co., Ltd.



(주) 측정결과는 측정기의 정밀정확도에 영향을 미치는 요소(과부하, 온도, 습도 등)의 급격한 변화가 발생한 경우에는 무효가 됩니다. If any significant instability or other adverse factor(overload, temperature, humidity etc.) manifests itself before, during or after calibration, and is likely to affect the validity of the calibration.

F-02P-02-010 (Rev.01)

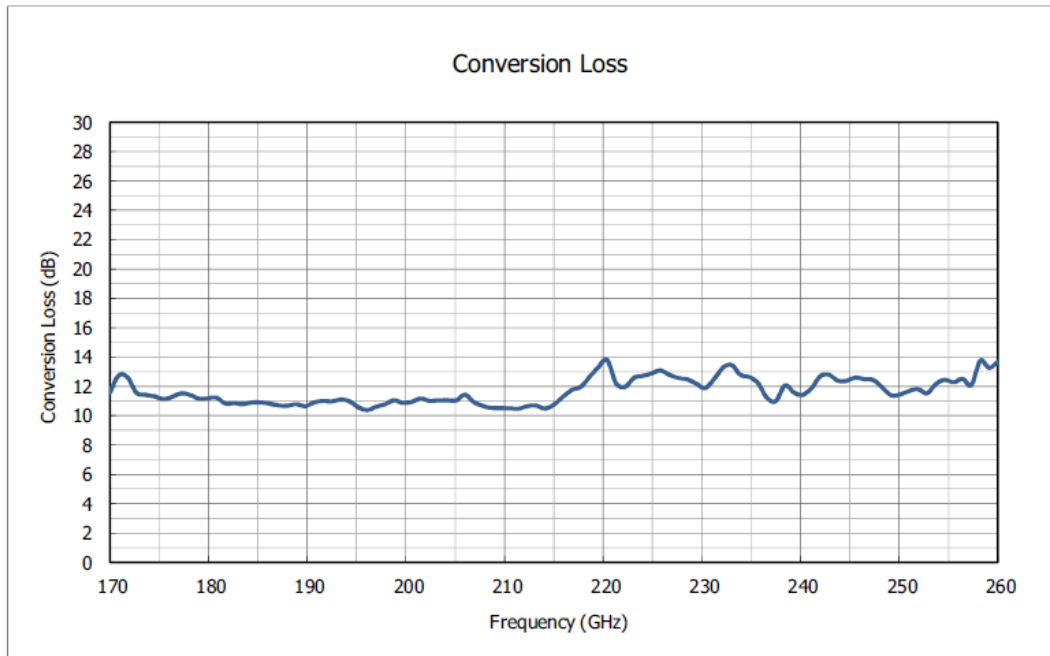
Asset Number: SUW-E0177

Measurement Results

Certificate No : IC-2021-03523-R2
Measurement No : C-2021-004989

페이지(page) : 2 of 4

1. Conversion Loss Graph



Note 1) This is the result of measuring the requested equipment and Keysight N9040B (SN MY60080268) together.

Note 2)

- In the absence of power standards above 110 GHz, power measurements above 110 GHz are to confirm operation functionality and traceable only to HCT.

F-02P-02-010 (Rev.01)

Measurement Results

Certificate No : IC-2021-03523-R2
 Measurement No : C-2021-004989

페이지(page) : 3 of 4

2. Conversion Loss Data

Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)	Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)
170.0	11.56	0.98	197.0	10.61	0.98
170.9	12.74	0.98	197.9	10.78	0.98
171.8	12.62	0.98	198.8	11.05	0.98
172.7	11.57	0.98	199.7	10.87	0.98
173.6	11.42	0.98	200.6	10.95	0.98
174.5	11.32	0.98	201.5	11.17	0.98
175.4	11.13	0.98	202.4	11.01	0.98
176.3	11.27	0.98	203.3	11.05	0.98
177.2	11.52	0.98	204.2	11.06	0.98
178.1	11.42	0.98	205.1	11.04	0.98
179.0	11.16	0.98	206.0	11.43	0.98
179.9	11.18	0.98	206.9	10.92	0.98
180.8	11.23	0.98	207.8	10.67	0.98
181.7	10.83	0.98	208.7	10.52	0.98
182.6	10.84	0.98	209.6	10.52	0.98
183.5	10.79	0.98	210.5	10.51	0.98
184.4	10.90	0.98	211.4	10.47	0.98
185.3	10.91	0.98	212.3	10.65	0.98
186.2	10.82	0.98	213.2	10.69	0.98
187.1	10.70	0.98	214.1	10.49	0.98
188.0	10.69	0.98	215.0	10.76	0.98
188.9	10.78	0.98	215.9	11.27	0.98
189.8	10.65	0.98	216.8	11.75	0.98
190.7	10.90	0.98	217.7	11.95	0.98
191.6	11.00	0.98	218.6	12.62	0.98
192.5	10.98	0.98	219.5	13.30	0.98
193.4	11.09	0.98	220.4	13.80	0.98
194.3	10.97	0.98	221.3	12.21	0.98
195.2	10.57	0.98	222.2	11.95	0.98
196.1	10.39	0.98	223.1	12.58	0.98

F-02P-02-010 (Rev.01)

Measurement Results

Certificate No : IC-2021-03523-R2
 Measurement No : C-2021-004989

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2. Conversion Loss Data (cont.)

Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)	Frequency (GHz)	Conversion Loss (dB)	Measurement Uncertainty (dB)
224.0	12.71	0.98	242.9	12.78	0.98
224.9	12.89	0.98	243.8	12.38	0.98
225.8	13.08	0.98	244.7	12.39	0.98
226.7	12.78	0.98	245.6	12.60	0.98
227.6	12.56	0.98	246.5	12.48	0.98
228.5	12.48	0.98	247.4	12.42	0.98
229.4	12.19	0.98	248.3	11.90	0.98
230.3	11.88	0.98	249.2	11.39	0.98
231.2	12.46	0.98	250.1	11.45	0.98
232.1	13.25	0.98	251.0	11.68	0.98
233.0	13.46	0.98	251.9	11.80	0.98
233.9	12.79	0.98	252.8	11.53	0.98
234.8	12.63	0.98	253.7	12.15	0.98
235.7	12.22	0.98	254.6	12.45	0.98
236.6	11.20	0.98	255.5	12.27	0.98
237.5	11.00	0.98	256.4	12.51	0.98
238.4	12.05	0.98	257.3	12.09	0.98
239.3	11.59	0.98	258.2	13.75	0.98
240.2	11.42	0.98	259.1	13.27	0.98
241.1	11.86	0.98	260.0	13.67	0.98
242.0	12.69	0.98	-	-	-

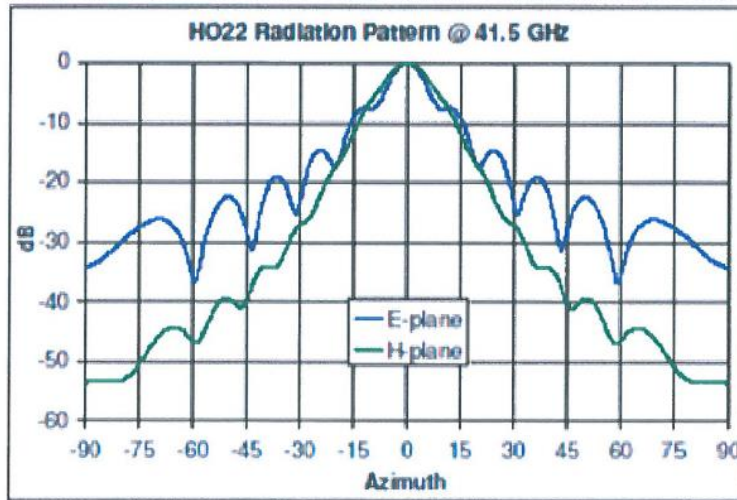
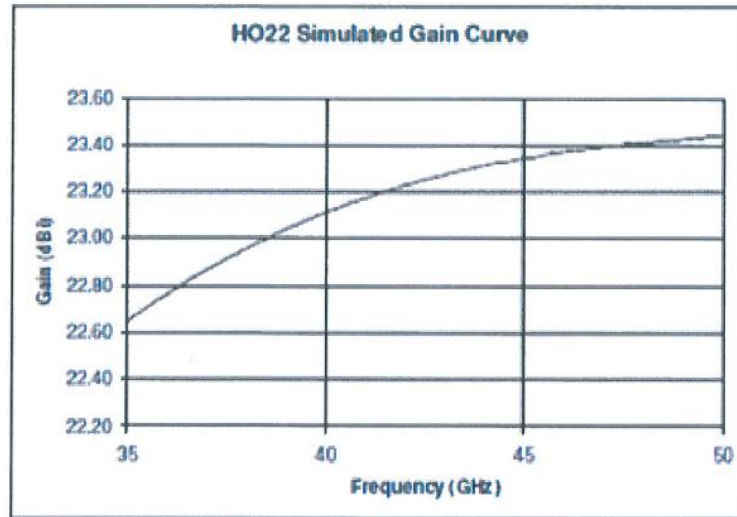
END.

3. CMI Horn Antenna gain

3.1. HO22R (33 GHz – 50 GHz)



24 Boston Court
Longmead, CO 01051
303.661.0707 (P)
303.661.0711 (F)
www.custommicrowaves.com





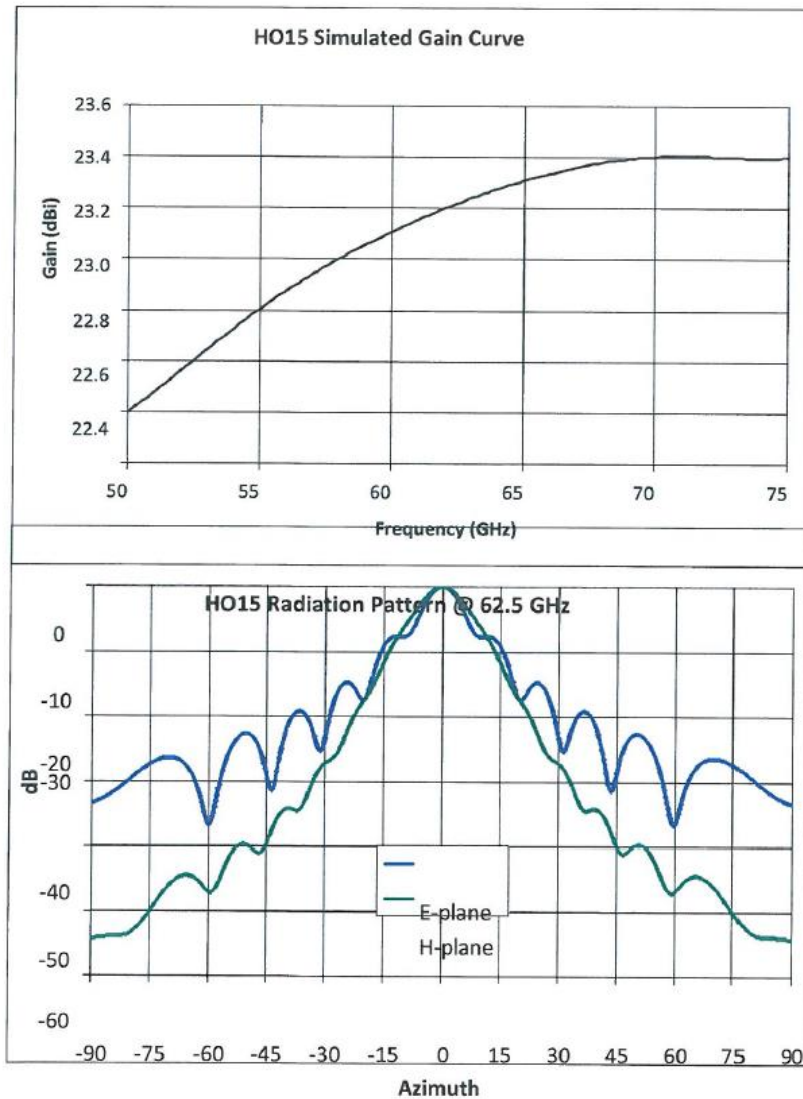
24 Boston Court
Longmont, CO 80501
303 651-0707(P)
303 651-0706(F)
www.custommicrowave.com

Model	HO22R
Frequency(GHz)	Gain(dBi)
33.00	22.40
33.85	22.50
34.70	22.60
35.55	22.70
36.40	22.80
37.25	22.90
38.10	23.00
38.95	23.05
39.80	23.10
40.65	23.15
41.50	23.20
42.35	23.25
43.20	23.27
44.05	23.30
44.90	23.35
45.75	23.37
46.60	23.39
47.45	23.41
48.30	23.42
49.15	23.43
50.00	23.44

3.1. HO15R (50 GHz – 75 GHz)



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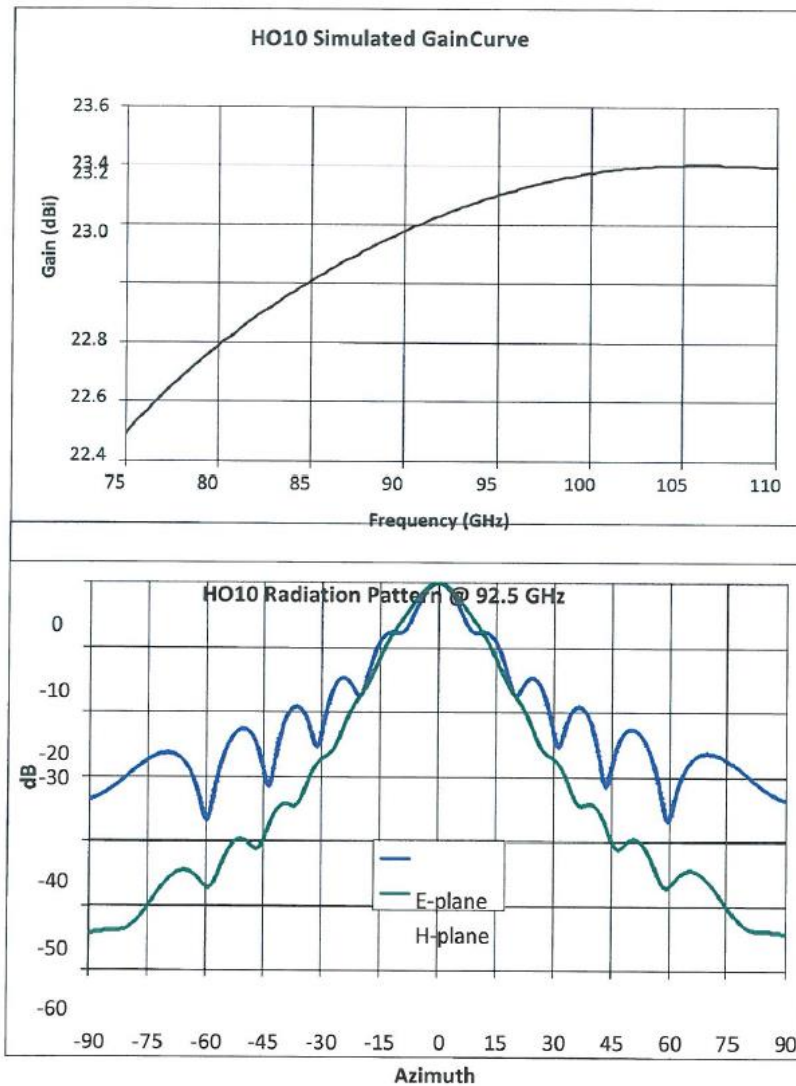
24 Boston Court
Longmont, CO 80501
303 651-0707(P)
303 651-0706(F)
www.custommicrowave.com

Model	HO15R
Frequency(GHz)	Gain(dBi)
50.00	22.4
51.25	22.5
52.50	22.6
53.75	22.7
55.00	22.8
56.25	22.9
57.50	23.0
58.75	23.0
60.00	23.1
61.25	23.2
62.50	23.2
63.75	23.3
65.00	23.3
66.25	23.3
67.50	23.4
68.75	23.4
70.00	23.4
71.25	23.4
72.50	23.4
73.75	23.4
75.00	23.4

3.2. HO10R (75 GHz – 110 GHz)



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303 651-0706(F)
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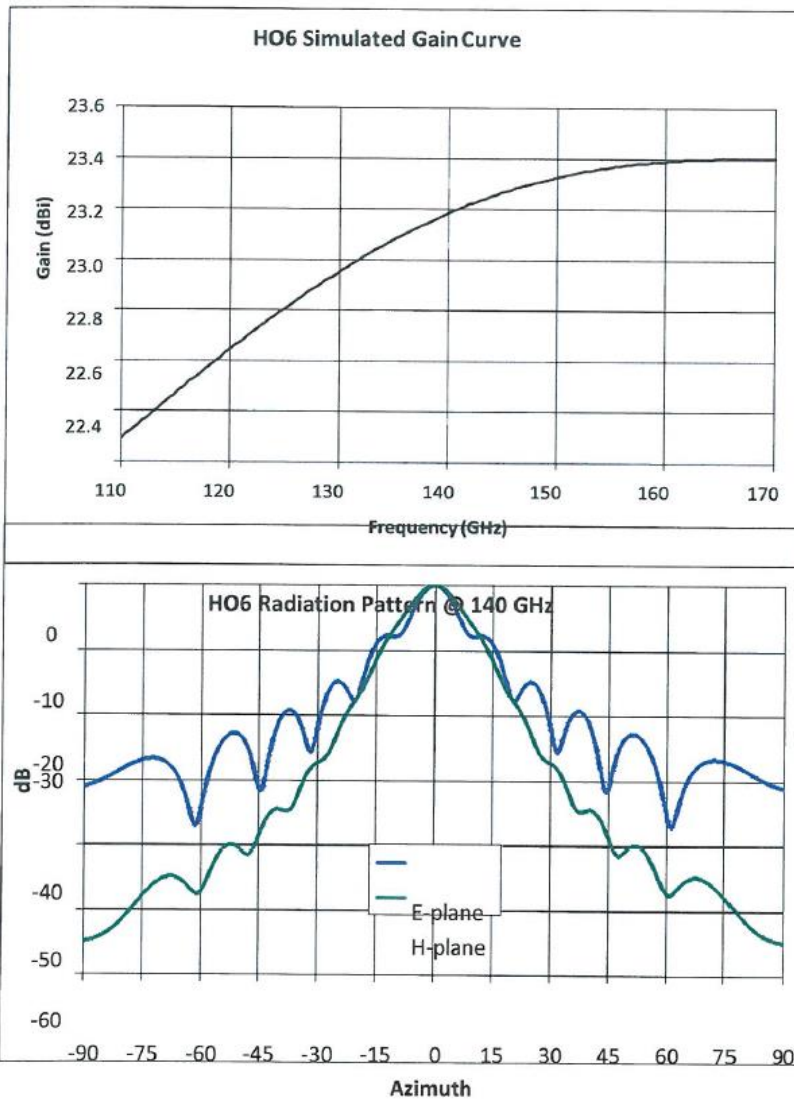
24 Boston Court
Longmont, CO 80501
303 651-0707(P)
303 651-0706(F)
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Model	HO10R
Frequency(GHz)	Gain(dBi)
75.00	22.5
76.75	22.6
78.50	22.7
80.25	22.8
82.00	22.9
83.75	23.0
85.50	23.0
87.25	23.1
89.00	23.1
90.75	23.2
92.50	23.3
94.25	23.3
96.00	23.3
97.75	23.3
99.50	23.4
101.25	23.4
103.00	23.4
104.75	23.4
106.50	23.4
108.25	23.4
110.00	23.4

3.3. HO06R (110 GHz – 170 GHz)



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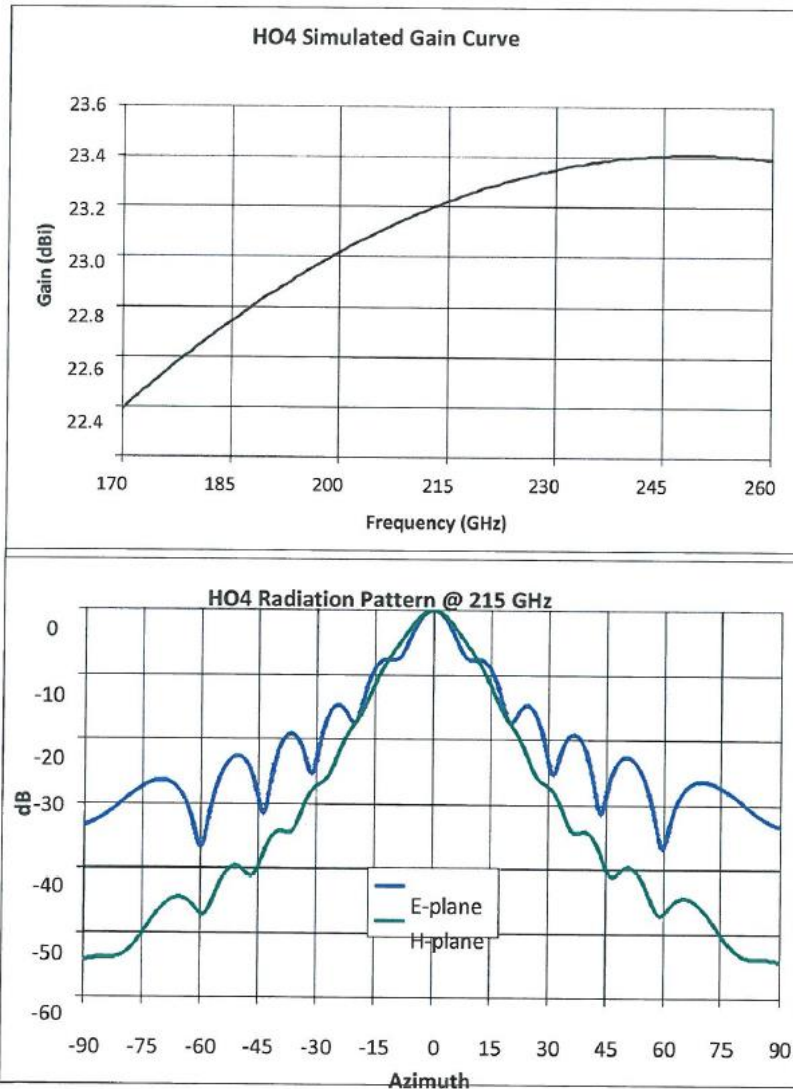
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Model	HO6R
Frequency(GHz)	Gain(dBi)
110.00	22.3
113.00	22.4
116.00	22.5
119.00	22.6
122.00	22.7
125.00	22.8
128.00	22.9
131.00	23.0
134.00	23.1
137.00	23.1
140.00	23.2
143.00	23.2
146.00	23.3
149.00	23.3
152.00	23.3
155.00	23.4
158.00	23.4
161.00	23.4
164.00	23.4
167.00	23.4
170.00	23.4

3.4. HO04R (170 GHz – 260 GHz)



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Model	HO4R
Frequency(GHz)	Gain(dBi)
170.00	22.4
174.50	22.5
179.00	22.6
183.50	22.7
188.00	22.8
192.50	22.9
197.00	23.0
201.50	23.0
206.00	23.1
210.50	23.2
215.00	23.2
219.50	23.3
224.00	23.3
228.50	23.3
233.00	23.4
237.50	23.4
242.00	23.4
246.50	23.4
251.00	23.4
255.50	23.4
260.00	23.4

END OF TEST REPORT