

Power Density Measurement Report

for Comparison with PD Simulation in Netgear Netgear 5G MHS Travel Router

RF Exposure Compliance Test Report - Part 0

FCC ID	: PY322300575
Equipment	: Netgear 5G MHS Travel Router
Brand Name	: Netgear
Model Name	: MR6550
Applicant	: Netgear, Inc. 350 E. Plumeria Drive, San Jose CA 95134, USA
Standard	: FCC 47 CFR Part 2 (2.1093)

We, SPORTON INTERNATIONAL INC have been evaluated in accordance with 47 CFR Part 2.1093 for the device and pass the limit.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Gua Unang.

Approved by: Cona Huang / Deputy Manager

Sporton International Inc. EMC & Wireless Communications Laboratory No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan



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Report No.	Version	Description	Issued Date
FA190614-06A	01	Initial issue of report	Nov. 01, 2022

History of this test report



SPORTON LAB. Power Density Measurement Report 1. Equipment Under Test (EUT) Information

1.1 General Information

	Product Feature & Specification
Equipment Name	Netgear 5G MHS Travel Router
Brand Name	Netgear
Model Name	MR6550
FCC ID	PY322300575
Wireless Technology and Frequency Range	TEE Band 2: 1850 MHz ~ 1910 MHz LTE Band 2: 1850 MHz ~ 1755 MHz LTE Band 3: 22500 MHz ~ 1755 MHz LTE Band 12: 699 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 13: 777 MHz ~ 788 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 66: 1710 MHz ~ 1780 MHz SG NR n11: 663 MHz ~ 698 MHz SG NR n12: 699 MHz ~ 1910 MHz SG NR n12: 699 MHz ~ 1910 MHz SG NR n12: 699 MHz ~ 1910 MHz SG NR n14: 788 MHz ~ 798 MHz SG NR n12: 699 MHz ~ 1915 MHz SG NR n14: 788 MHz ~ 290 MHz SG NR n14: 788 MHz ~ 290 MHz SG NR n25: 1850 MHz ~ 2115 MHz SG NR n41: 2496 MHz ~ 2690 MHz SG NR n41: 788 MHz ~ 2690 MHz SG NR n41: 2400 MHz ~ 2100 MHz SG NR n41: 2406 MHz ~ 2403 MHz SG NR n77: 3700 MHz ~ 1780 MHz SG NR n76: 37GHz ~ 40GHz SG NR n26: 37GHz ~ 40GHz SG NR
Mode	LTE: QPSK, 16QAM, 64QAM, 256QAM 5G FR1: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM 5G FR2: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160
Remark:	rais identical to DV222100520, and they share the identical codeback and input never limit for n260. The

 PY322300575 hardware is identical to PY322100529, and they share the identical codebook and input power limit for n260. The n260 Part 0 PD test results are referenced from PY322100529

Reviewed by: <u>Jason Wang</u> Report Producer: <u>Carlie Tsai</u>



2. Guidance Applied

The Power Density testing specification, method, and procedure for this device is in accordance with the following standard, below KDB may not include TAF scope:

- FCC 47 CFR Part 2.1091
- FCC 47 CFR Part 2.1093
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01
- TCBC workshop notes
- IEC Draft TR 63170

3. <u>RF Exposure Limits</u>

3.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

3.2 <u>Controlled Environment</u>

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure above 6GHz to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	ectric field strength Magnetic field strength (A/m)		Averaging time (minutes)
	(A) Limits for O	ccupational/Controlled Expos	sures	90
0.3-3.0	614	4 1.63	*(100)	6
3.0-30	1842/	f 4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
	(B) Limits for Gene	ral Population/Uncontrolled	xposure	
0.3- <mark>1</mark> .34	614	1.63	*(100)	30
1.34-30	824/	f 2.19/1	*(180/f2)	30
30-300	27.5	5 0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

General Population Basic restriction for power density for frequencies between 1.5GHz and 100 GHz is 1.0 mW/cm² = 10 W/m^2

Table 1



4. System Description and Setup

The system to be used for the near field power density measurement

- SPEAG DASY6 system
- SPEAG cDASY6 5G module software
- EUmmWVx probe
- 5G Phantom cover





4.1 <u>EUmmWave Probe / E-Field 5G Probe</u>

The probe design allows measurements at distances as small as 2 mm from the sensors to the surface of the device under test (DUT). The typical sensor to probe tip distance is 1.5 mm.

Frequency	750 MHz – 110 GHz
Probe Overall Length	320 mm
Probe Body Diameter	8.0 mm
Tip Length	23.0 mm
Tip Diameter	8.0 mm
Probe's two dipoles length	0.9 mm – Diode loaded
Dynamic Range	< 20 V/m - 10000 V/m with PRE-10 (min < 50 V/m - 3000 V/m)
Position Precision	< 0.2 mm
Distance between diode sensors and probe's tip	1.5 mm
Minimum Mechanical separation between probe tip and a Surface	0.5 mm
Applications	E-field measurements of 5G devices and other mm-wave transmitters operating above 10GHz in < 2 mm distance from device (free-space) Power density, H-field and far-field analysis using total field reconstruction.
Compatibility	cDASY6 + 5G-Module SW1.0 and higher
	sensor 1,5mm calibrated device



4.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.





4.3 Scan configuration

Fine-resolution scans on 2 different planes are performed to reconstruct the E- and H-fields as well as the power density; the z-distance between the 2 planes is set to $\lambda/4$.

The (x, y) grid step is also set $\lambda/4$, the grid extent is set to sufficiently large to identify the field pattern and the peak.

5. Test Equipment List

Monufacturar	Nome of Equipment	Tupe/Model	Sorial Number	Calibration		
Manufacturer	Name of Equipment	i ype/wouei	Serial Number	Last Cal.	Due Date	
SPEAG	5G Verification Source	30GHz	1007	Nov. 15, 2021	Nov. 14, 2022	
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9441	Nov. 24, 2021	Nov. 23, 2022	
SPEAG	Data Acquisition Electronics	DAE4	376	Nov. 22, 2021	Nov. 21, 2022	
TESTO	Hygro meter	608-H1	45256953	Oct. 29, 2021	Oct. 28, 2022	
Aglient	Spectrum Analyzer	E4408B	MY44211028	Aug. 19, 2021	Aug. 17, 2023	
Custom Microwave	Standard Horn antenna	M15RH	V91113-A	NCR	NCR	



6. System Verification Source

The System Verification sources at 30 GHz and above comprise horn-antennas and very stable signal generators.

nd horn antenna
Iz at 10mm from the case surface
) MHz
3c
m
В
00 x 100 mm





r. <u>I ower Density System Vermeation</u>

The system performance check verifies that the system operates within its specifications.

The EUT is replaced by a calibrated source, the same spatial resolution, measurement region and the test separation used in the calibration was applied to system check. Through visual inspection into the measured power density distribution, both spatially (shape) and numerically (level) have no noticeable difference. The measured results should be within 0.66dB of the calibrated targets.

Frequency [GHz]	Grid step	Grid extent X/Y [mm]	Measurement points
10	$0.25 \ (\frac{\lambda}{4})$	120/120	16×16
30	$0.25 \ (\frac{\bar{\lambda}}{4})$	60/60	24×24
60	$0.25 \ (\frac{\hat{\lambda}}{4})$	32.5/32.5	26×26
90	$0.25 \ (\frac{\lambda}{4})$	30/30	36 imes 36

Settings for measurement of verification sources





Verification Setup photo

8. System Verification Results

Frequency (GHz)	5G Verification Source	Probe S/N	DAE S/N	Distance (mm)	Measured 4 cm^2 (W/m^2)	Targeted 4 cm^2 (W/m^2)	Deviation (dB)	Date
30G	30GHz_1007	9441	376	10	32.1	35.9	-0.49	2022/9/17
30G	30GHz_1007	9441	376	10	32.2	35.9	-0.47	2022/10/1



8.1 Computation of the Electric Field Polarization Ellipse

For the numerical description of an arbitrarily oriented ellipse in three-dimensional space, five parameters are needed: the semi-major axis (a), the semi-minor axis (b), two angles describing the orientation of the normal vector of the ellipse (\emptyset , θ), and one angle describing the tilt of the semi-major axis (ψ). For the two extreme cases, i.e., circular and linear polarizations, three parameters only (a, \emptyset and θ) are sufficient for the description of the incident field.



Illustration of the angles used for the numerical description of the sensor and the orientation of an ellipse in 3-D space.

For the reconstruction of the ellipse parameters from measured data, the problem can be reformulated as a nonlinear search problem. The semi-major and semi-minor axes of an elliptical field can be expressed as functions of the three angles (\emptyset , θ and ψ). The parameters can be uniquely determined towards minimizing the error based on least-squares for the given set of angles and the measured data. In this way, the number of free parameters is reduced from five to three, which means that at least three sensor readings are necessary to gain sufficient information for the reconstruction of the ellipse parameters. However, to suppress the noise and increase the reconstruction accuracy, it is desirable that the system of equations be over determined. The solution to use a probe consisting of two sensors angled by r_1 and r_2 toward the probe axis and to perform measurements at three angular positions of the probe, i.e., at $\beta 1$, $\beta 2$ and $\beta 3$, results in over-determinations by a factor of two. If there is a need for more information or increased accuracy, more rotation angles can be added. The reconstruction of the ellipse parameters can be separated into linear and non-linear parts that are best solved by the Givens algorithm combined with a downhill simplex algorithm. To minimize the mutual coupling, sensor angles are set with a shift of 90 degree ($r_2 = r_1 + 90$ degree), and to simplify, the first rotation angle of the probe ($\beta 1$) can be set to 0 degree.

8.2 Total Field and Power Flux Density Reconstruction

Computation of the power density in general requires knowledge of the electric and magnetic field amplitudes and phases in the plane of incidence. Reconstruction of these quantities from pseudo-vector E-field measurements is feasible, as they are constrained by Maxwell's equations. SPEAG have developed a reconstruction approach based on the Gerchberg-Saxton algorithm, which benefits from the availability of the E-field polarization ellipse information obtained with the EUmmWV2 probe.

The average of the reconstructed power density is evaluated over a circular area in each measurement plane. Two average power density values can be computed, the average total power density and the average incident power density, and the average total power density is used to determine compliance.

- $|Re{S}|$ is the total Poynting vector
- $n \cdot Re\{S\}$ is the normal Poything vector

The software post-processing reports to values, "S avg tot" and "S avg inc". "S avg tot" represents average total power density (all three xyz components included), and "S avg inc" represents average normal power density. The average total power density "S avg tot" is reported to determine the device compliance.



8.3 Test Positions

Exposure Position	Measurement Position							
	Front 10mm	Back 10mm	Left Side 10mm	Right Side 10mm	Top Side 10mm	Bottom Side 10mm		
Antenna Module 0	Yes	Yes	Yes	Yes	Yes	Yes		
Antenna Module 1	Yes	Yes	Yes	Yes	Yes	Yes		

9. <u>RF Exposure Evaluation Results</u>

General Note:

- 1. The PD test was performed of a 10mm separation between sensor and EUT surface
- 2. According to TCBC Workshop in October 2018, 4 cm^2 averaging area are used.
- 3. The test duty cycle was 100 % and it was confirmed by the manufacturer that the device was driven at this test duty cycle. The power density results were use this duty cycle of 100 % to evaluate the final production.
- 4. Power density simulations of all beams and surfaces were performed by the manufacturer. Details of these simulations and modeling validation can be found in the Power Density Simulation Report. Following Table includes a summary of the validation results to support worst-case housing influence quantification in power density characterization for this model With an input power of 6 dBm for n261 band, PD measurements are conducted for at least one single beam per antenna type and per antenna module (0,1) on worst-surface(s). PD measurements are performed at mid channel of each mmW band and with CW modulation.
- 5. Following PD value will be used to determine worst-case housing influence ad correlate of PD distribution between simulation and measurement.

Test Number	Antenna Module	Beam ID 1	Beam ID 2	Band	Frequency (GHz)	Exposure Surface	Input Power limit	Test Separation (mm)	Modulation	Measured results Savg inc 4cm^2 (W/m2)	Measured results Savg tot 4cm^2 (W/m2)
1	Module 0	39	-	n261	27.925	Left Side	6	10	CW	7.57	7.92
2	Module 0	39	-	n261	27.925	Top (Front)	6	10	CW	4.22	4.28
3	Module 0	39	-	n261	27.925	Bottom (Back)	6	10	CW	3.11	3.21
4	Module 0	-	167	n261	27.925	Left Side	6	10	CW	7.55	8.01
5	Module 0	-	167	n261	27.925	Top (Front)	6	10	CW	3.38	3.48
6	Module 0	-	167	n261	27.925	Bottom (Back)	6	10	CW	3.33	3.42
7	Module 1	36	-	n261	27.925	Right Side	6	10	CW	8.34	8.75
8	Module 1	36	-	n261	27.925	Top (Front)	6	10	CW	4.31	4.38
9	Module 1	36	-	n261	27.925	Bottom (Back)	6	10	CW	4.02	4.18
10	Module 1	-	164	n261	27.925	Right Side	6	10	CW	7.49	8.28
11	Module 1	-	164	n261	27.925	Top (Front)	6	10	CW	3.1	3.14
12	Module 1	-	164	n261	27.925	Bottom (Back)	6	10	CW	3.45	3.67



- 6. Then prove all other surface(s) near-by the mmW module, i.e., surface(s) not selected in above, is not required for housing material loss quantification (in other words, these non-evaluated surfaces have no influence on the determined *input.power.limit*) by:
 - i. Scale the simulated 4cm²-averaged PD values for all single beams to correspond to their *sim.power*_{limit} was referred to PD simulation report, and identify the worst-PD beam per each non-selected surface.
 - ii. Measure 4cm²-averaged PD at *input.power.limit* for the identified worst-PD beam at each non-selected surface
 - iii. Demonstrate all measured 4cm²-averaged PD values are below *PD_design_target*.

4cm²-averaged PD for the selected beams on non-selected surfaces for Δ_{min} determination

Antenna Module	Beam ID 1	Beam ID 2	Band	Frequency (GHz)	Exposure Surface	Input Power limit	Test Separation (mm)	Modulation	Measured results Savg inc 4cm^2 (W/m2)	Measured results Savg tot 4cm^2 (W/m2)
Module 0	33	-	n261	27.925	Front (Top)	4.49	10	CW	0.06	0.066
Module 0	29	-	n261	27.925	Back(Bottom)	5.47	10	CW	0.045	0.048
Module 0	14	-	n261	27.925	Right Side	10.24	10	CW	0.035	0.041
Module 0	29	-	n261	27.925	Top (Front)	5.47	10	CW	1.47	1.54
Module 0	31	-	n261	27.925	Bottom (Back)	2.82	10	CW	1.04	1.11
Module 1	24	-	n261	27.925	Front (Top)	5.44	10	CW	0.066	0.072
Module 1	-	156	n261	27.925	Back(Bottom)	4.15	10	CW	0.026	0.031
Module 1	37	-	n261	27.925	Left Side	2.57	10	CW	0.027	0.03
Module 1	-	156	n261	27.925	Top (Front)	4.15	10	CW	0.882	0.899
Module 1	36	-	n261	27.925	Bottom (Back)	2.44	10	CW	1.32	1.4

7. Following PD test results will be used to determine combined PD at worst-case location for device with 2 QTMs verification, detail verification result refer to PD simulation report.

Antenna Module	Beam ID 1	Beam ID 2	Band	Frequency (GHz)	Exposure Surface	Input Power limit	Test Separation (mm)	Modulation	Measured results Savg inc 4cm^2 (W/m2)	Measured results Savg tot 4cm^2 (W/m2)
Module 0	29	-	n261	27.925	Left Side	5.47	10	CW	2.23	3.18
Module 1	28	-	n261	27.925	Right Side	3.03	10	CW	1.97	2.34

Test Engineer : Carter Jhuang and Ken Lin



10. Input Power limit

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n	2	σ		

Module ID	Pair ID	Beam ID	Input_Power_Limit(dBm)
0		1	12.16
0		3	11.59
0		5	11.53
0		7	11.46
0		9	11.43
0		14	10.24
0		15	7.12
0		16	7.75
0		17	8.36
0		21	8.37
0		22	6.82
0		23	7.85
0		29	5.47
0		30	2.88
0		31	2.00
0		32	2.02
0		33	2.00
0		38	4.49
0		39	3.68
0		40	2.89
0		40	3.04
0		120	3.47
0		123	12.13
0		131	11.56
0		133	11.42
0		135	11.11
0		142	11.29
0		142	8.12
0		143	6.82
0		144	6.76
0		145	8.69
0		149	8.04
0		150	6.71
0		151	7.85
0		157	3.76
0		158	2.89
0		159	2.7
0		160	2.89
0		161	4.51
0		166	2.99
0		167	2.82
0		168	2.81
0		169	3.51
0	129	1	8.17
0	131	3	8.17
0	133	5	8.02
0	135	7	8.08
0	137	9	8.11
0	142	14	5.55
0	143	15	3.73
0	144	16	4.3
0	145	17	6.39
0	149	21	5.31

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0	150	22	3 52
0	151	23	4.04
0	157	20	4.91
0	157	29	0.86
0	158	30	-0.59
0	159	31	-0.57
0	160	32	-0.36
0	161	33	1.39
0	166	38	-0.18
0	167	39	-0.59
0	168	40	-0.38
0	169	41	0.35
	103		0.35
1		0	11.11
1		2	11.11
1		4	11.03
1		6	11.19
1		8	11.37
1		10	8.17
1		11	7.38
1		12	6.62
1		13	9.62
1		18	8.54
1		10	8.4
1		19	6.41
1		20	7.11
1		24	5.44
1		25	3.19
1		26	2.38
1		27	2.54
1		28	3.03
1		34	4.46
1		25	4.46
1			2.56
1		36	2.44
1		37	2.57
1		128	11.05
1		130	10.73
1		132	10.82
1		134	11.12
1		136	11.4
1		138	8 24
1		139	0.24
1		140	0.0
		140	6.64
1		141	7.76
1		146	7.76
1		147	6.07
1		148	7.46
1		152	3.43
1		153	2.55
1		154	2.46
1		155	2 43
1		156	2.75 A 15
1		160	4.10
		102	2.92
1		163	2.44
1		164	2.32
1		165	2.61
1	128	0	7.79
1	130	2	7.61
1	132	4	7.58

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1	134	6	7.86
1	136	8	7.66
1	138	10	5
1	139	11	3.88
1	140	12	3.63
1	141	13	5.15
1	146	18	4.58
1	147	19	3.22
1	148	20	3.88
1	152	24	0.63
1	153	25	-0.62
1	154	26	-1.07
1	155	27	-0.75
1	156	28	0.24
1	162	34	0.03
1	163	35	-0.96
1	164	36	-1.01
1	165	37	-0.69



11. Uncertainty Assessment

The budget is valid for evaluation distances > $\lambda/2\pi$. For specific tests and configurations, the Uncertainty could be considerably smaller.

cDASY6 Mo dule mmWave Uncertainty Budget Evaluation Distances to the Antennas > $\lambda/2\pi$									
Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)				
Uncertainty terms dependent on the measurement system									
Probe Calibration	0.49	N	1	1	0.49				
Probe correction	0.00	R	1.732	1	0.00				
Frequency response (BW \leq 1 GHz)	0.20	R	1.732	1	0.12				
Sensor cross coupling	0.00	R	1.732	1	0.00				
Isotropy	0.50	R	1.732	1	0.29				
Linearity	0.20	R	1.732	1	0.12				
Probe scattering	0.00	R	1.732	1	0.00				
Probe positioning offset	0.30	R	1.732	1	0.17				
Probe positioning repeatability	0.04	R	1.732	1	0.02				
Sensor mechanical offset	0.00	R	1.732	1	0.00				
Probe spatial resolution	0.00	R	1.732	1	0.00				
Field impedance dependence	0.00	R	1.732	1	0.00				
Amplitude and phase drift	0.00	R	1.732	1	0.00				
Amplitude and phase noise	0.04	R	1.732	1	0.02				
Measurement area truncation	0.00	R	1.732	1	0.00				
Data acquisition	0.03	Ν	1	1	0.03				
Sampling	0.00	R	1.732	1	0.00				
Field reconstruction	0.60	R	1.732	1	0.35				
Forward transformation	0.00	R	1.732	1	0.00				
Power density scaling	0.00	R	1.732	1	0.00				
Spatial averaging	0.10	R	1.732	1	0.06				
System detection limit	0.04	R	1.732	1	0.02				
Uncertainty terms	dependent on the DU	T and environment	al factors						
Probe coupling with DUT	0.00	R	1.732	1	0.0				
Modulation response	0.40	R	1.732	1	0.2				
Integration time	0.00	R	1.732	1	0.0				
Response time	0.00	R	1.732	1	0.0				
Device holder influence	0.10	R	1.732	1	0.1				
DUT alignment	0.00	R	1.732	1	0.0				
RF ambient conditions	0.04	R	1.732	1	0.0				
Ambient reflections	0.04	R	1.732	1	0.0				
Immunity / secondary reception	0.00	R	1.732	1	0.0				
Drift of the DUT		R	1.732	1					
Combine	0.76 dB								
Expanded STD Uncertainty (95%)									
eclaration of Conformity: ne test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers									

Comments and Explanations: The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for

the accuracy of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



12. <u>References</u>

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [3] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [4] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.