POWER DENSITY EVALUATION REPORT

IEEE Std 1528-2013

For
PHONE

FCC ID: A4RGZC4K
Model Name: GZC4K/GQ57S

Report Number: 15107858 -S16V2
Issue Date: 5/14/2024

Prepared for
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CERT #0751.05

Revision History

Rev.	Date	Revisions	Revised By
V1	5/9/2024	Initial Issue	--
V2	5/14/2024	Section 9: Updated Notes	Coltyce Sanders

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1. Attestation of Test Results

Applicant Name	Google LLC	
FCC ID	A4RGZC4K	
Model Name	GZC4K/GQ57S	
Difference in Model Name	Model GQ57S is electrically identical to Model GZC4K. Two model numbers are allocated for marketing and logistic purposes. Model GZC4K was used for all final testing.	
Applicable Standards	Published RF exposure KDB procedures IEEE Std 1528-2013	
Exposure Category	Radiofrequency (RF) Radiation Exposure (above 6GHz)	
	Uncontrol (mW/cm^2 over 4 cm^2) 30 min average	Occupational/controlled (mW/cm^2 over 4 cm^2) 6 min average
General population / Uncontrolled exposure	1.0	5
PD Result (mW/cm^2 over $4cm^2$)	0.745	
Date Tested	4/19/2024 to 4/24/2024	
Test Results	Pass	

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report.

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not considered unless noted otherwise.

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Approved & Released By:	Prepared By:
	
Devin Chang Senior Laboratory Engineer UL Verification Services Inc.	AJ Newcomer Laboratory Test Engineer UL Verification Services Inc.

2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, the following FCC Published RF exposure KDB procedures:

- 447498 D01 General RF Exposure Guidance v06
- 865664 D02 RF Exposure Reporting v01r02
- 388624 D02 Pre-Approval Guidance List v18r05
- 248227 D01 802.11 Wi-Fi SAR v02r02
- SPEAG DASY8 System Handbook; part 4 DASY8 Module mmWave
- SPEAG DASY8 Application Note: SAR, APD & PD at 6 – 10 GHz (Version 5), April 2022
- IEC TR 63170: 2018

In addition to the above, TCB workshop information was used.

- TCB workshop November 2017; RF Exposure Procedures (Power Density Evaluation)
- TCB workshop October 2018; RF Exposure Procedures (Millimeter Wave Assessment)
- TCB workshop April 2019; RF Exposure Procedures (Millimeter Wave RF Exposure Evaluation)
- TCB workshop November 2019; RF Exposure Procedures (Millimeter Wave Scan Requirements)
- TCB workshop October 2020; RF Exposure Procedures (U NII 6-7 GHz RF Exposure)
- TCB workshop October 2022; RF Exposure Policies and Procedures (f-above-6 GHz Portable Devices)

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

47266 Benicia Street
SAR Lab 6

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05

The Test Lab Conformity Assessment Body Identifier (CABID)

Location	CABID	Company Number
47173 Benicia Street, Fremont, CA, 94538 UNITED STATES	US0104	2324A
47266 Benicia Street, Fremont, CA, 94538 UNITED STATES		

4. Measurement System & Test Equipment

4.1. EUmmWVx / E-Field 5G Probe

E-Field mm-Wave Probe for General Near-Field Measurements

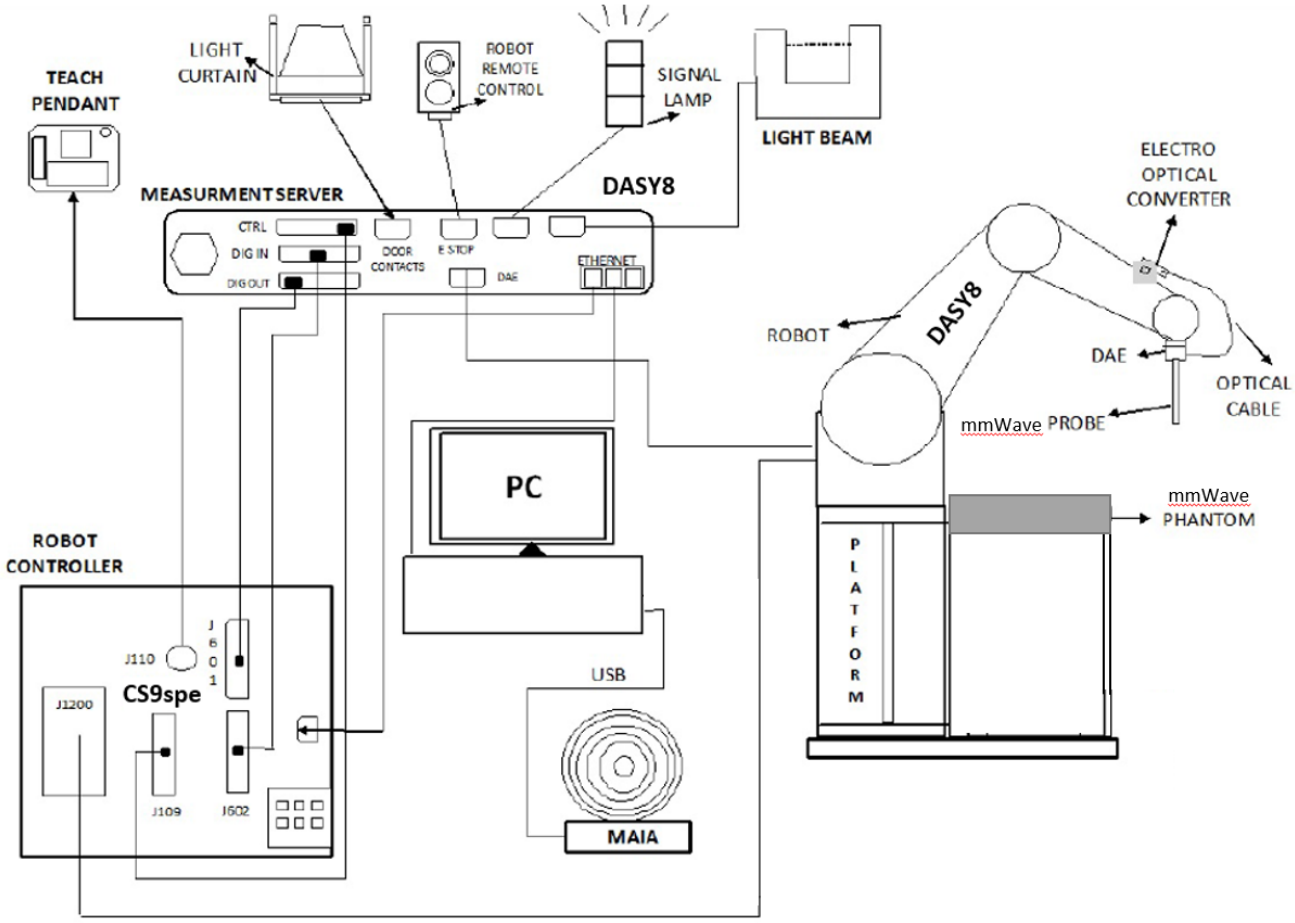
	Two dipoles optimally arranged to obtain pseudo-vector information Minimum 3 measurements/point, 120º rotated around probe axis Sensors (0.8mm length) printed on glass substrate protected by high density foam Low perturbation of the measured field Requires positioner which can do accurate probe rotation
Frequency Range	750 MHz – 110 GHz (EUmmWV4)
Dynamic Range	< 20 V/m - 10'000 V/m with PRE-10 (min < 50 V/m - 3000 V/m)
Position Precision	< 0.2 mm (DASY8)
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: encapsulation 8 mm (internal sensor < 1mm) Distance from probe tip to dipole centers: < 2 mm Sensor displacement to probe's calibration point: < 0.3 mm
Applications	E-field measurements of 5G devices and other mm-wave transmitters operating above 6GHz in < 2 mm distance from device (free-space) Power density, H-field and far-field analysis using total field reconstruction (DASY8 Module mmWave)
Compatibility	DASY8 Module mmWave V3.2.0.1840

4.2. Data Acquisition Electronics(DAE)

	Serial optical link for communication with DASY embedded system (fully remote controlled) Two-step probe touch detector for mechanical surface detection and emergency robsot stop
Measurement Range	−100 – +300 mV (16 bit resolution and two range settings: 4 mV, 400 mV)
Input Offset Voltage	<5 µV (with auto zero)
Input Resistance	200 Mohm
Input Bias Current	<50 fA
Battery Power	>10 hours of operation (with two 9.6 V NiMH batteries)
Dimensions (L × W × H)	60 × 60 × 68 mm

4.3. Measurement System

The DASY8 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- The EUmmWVx probe is based on the pseudo-vector probe design, which not only measures the field magnitude but also derives its polarization ellipse.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win10 and the DASY8[1] software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom which is specialized for 5G other accessories according to the targeted measurement.

[1] DASY8 software used: DASY8 mmWave V3.2.0.1840 and older generations.

4.4. Measurement Procedures

4.4.1. System Verification Scan Procedures

DASY8 Module mmWave supports “5G Scan”, a fine resolution scan performed on two different planes which is used to reconstruct the E- and H-fields as well as the power density; the average power density is derived from this measurement.

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to devise under test.

Step 2: 5G Scan

The steps in the X, Y, and Z directions are specified in terms of fractions of the signal wavelength, lambda. Area Scan Parameters extracted from SPEAG DASY8 System Handbook; part 4 DASY8 Module mmWave.

Recommended settings for measurement of verification sources

Frequency [GHz]	Grid step	Grid extent X/Y [mm]	Measurement points
10	$0.125\left(\frac{\lambda}{8}\right)$	60/60	18×18
30	$0.25\left(\frac{\lambda}{4}\right)$	60/60	26×26
45	$0.25\left(\frac{\lambda}{4}\right)$	42/42	28×28
60	$0.25\left(\frac{\lambda}{4}\right)$	32.5/32.5	28×28
90	$0.25\left(\frac{\lambda}{4}\right)$	30/30	38×38

The minimum distance of probe sensors to the verification source surface, horn antenna, is 10 mm for 10 GHz and 5.55mm for 30 GHz and above.

Step 3: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

When the drift is larger than ± 5 %, test is repeated from step1.

4.4.2. Scan Procedures

Step 1: Power Reference Measurement

Same as System Verification Scan Procedures step 1.

Step 2: 5G Scan

Same as System Verification Scan Procedures step 2. But measurement area is defined based on TCB work shop April 2019, “A sufficiently large measurement region and proper measurement spatial resolution are required to maintain field reconstruction accuracy”.

–Fields at the measurement region boundary should be ~20-30 dB below the peaks

Step 3: Power drift measurement

Same as System Verification Scan Procedures step 3.

When the drift is smaller than ± 5 %, it is considered in the uncertainty budget if drifts larger than 5%, uncertainty is re-calculated.

4.5. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers’ recommendations and is traceable to recognized national standards.

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Signal Genarator	R&S	SMB 100A	180970-zC	2/14/2025
Power Meter	HP	437B	3125U09516	1/23/2025
Power Sensor	HP	8481A	2237A31744	1/24/2025
Power Sensor	R&S	NRP18A	100995-hs	2/22/2025
Directional coupler	Mini Circuits	ZUDC10-83-S+	2026	N/A

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
E-Field Probe (SAR Lab 6)	SPEAG	EUmmWV4	9589	9/5/2024
Data Acquisition Electronics (SAR Lab 6)	SPEAG	DAE4	1257	9/12/2024
5G Verification Source	SPEAG	10 GHz	1015	9/5/2024

5. Measurement Uncertainty

a		b	c	d f(d,k)	e	f = b×e/d	g
Error Description		Unc.Value (±dB)	Probab. Distri.	Div.	*ci*	Std. Unc. (±dB)	vi
Uncertainty terms dependent on the measurement system							
CAL	Calibration Repeatability	0.49	Normal	1	1	0.49	∞
COR	Probe correction	0	Rectangular	1.732	1	0.00	∞
FRS	Frequency response (BW 1 GHz)	0.20	Rectangular	1.732	1	0.12	∞
SCC	Sensor cross coupling	0	Rectangular	1.732	1	0.00	∞
ISO	Isotropy	0.50	Rectangular	1.732	1	0.29	∞
LIN	Linearity	0.20	Rectangular	1.732	1	0.12	∞
PSC	Probe scattering	0	Rectangular	1.732	1	0.00	∞
PPO	Probe positioning o set	0.30	Rectangular	1.732	1	0.17	∞
PPR	Probe positioning repeatability	0.04	Rectangular	1.732	1	0.02	∞
SMO	Sensor mechanical o set	0	Rectangular	1.732	1	0.00	∞
PSR	Probe spatial resolution	0	Rectangular	1.732	1	0.00	∞
FLD	Field impedance dependance	0	Rectangular	1.732	1	0.00	∞
APD	Amplitude and phase drift	0	Rectangular	1.732	1	0.00	∞
APN	Amplitude and phase noise	0.04	Rectangular	1.732	1	0.02	∞
TR	Measurement area truncation	0	Rectangular	1.732	1	0.00	∞
DAQ	Data acquisition	0.03	Normal	1	1	0.03	∞
SMP	Sampling	0	Rectangular	1.732	1	0.00	∞
REC	Field reconstruction	0.60	Rectangular	1.732	1	0.35	∞
TRA	Forw ard transformation	0	Rectangular	1.732	1	0.00	∞
SCA	Pow er density scaling	-	Rectangular	1.732	1	-	∞
SAV	Spatial averaging	0.10	Rectangular	1.732	1	0.06	∞
SDL	System detection limit	0.04	Rectangular	1.732	1	0.02	∞
Uncertainty terms dependent on the DUT and environmental factors							
PC	Probe coupling w ith DUT	0	Rectangular	1.732	1	0	∞
MOD	Modulation response	0.40	Rectangular	1.732	1	0.23	∞
IT	Integration time	0	Rectangular	1.732	1	0	∞
RT	Response time	0	Rectangular	1.732	1	0	∞
DH	Device holder influence	0.10	Rectangular	1.732	1	0.06	∞
DAQ	DUT alignment	0	Rectangular	1.732	1	0	∞
AC	RF ambient conditions	0.04	Rectangular	1.732	1	0.02	∞
AR	Ambient reflections	0.04	Rectangular	1.732	1	0.02	∞
MSI	Immunity / secondary reception	0	Rectangular	1.732	1	0	∞
DRI	Drift of the DUT	0.21	Rectangular	1.732	1	0.12	∞
Combined Standard Uncertainty Uc(f) =			RSS			0.76	∞
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =						1.52	

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Overall (Length x Width): 162.75 mm x 76.59 mm Overall Diagonal: 176 mm Display Diagonal: 170.2 mm This is a Phablet Device (display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm)
Back Cover	The Back Cover is not removable
Battery Options	The rechargeable battery is not user accessible.
Accessory	Headset
Wireless Router (Hotspot)	Wi-Fi Hotspot mode permits the device to share its cellular data connection with other Wi-Fi-enabled devices. ☒ Mobile Hotspot (Wi-Fi 2.4 GHz) ☒ Mobile Hotspot Wi-Fi 5 GHz. UNII-1 and UNII-3
Bluetooth Tethering (Hotspot)	BT Tethering mode permits the device to share its cellular data connection with other devices. ☒ BT Tethering (Bluetooth 2.4 GHz)

6.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode
Wi-Fi	6 GHz SP: UNII-5/7 LPI: UNII-5/6/7/8	802.11a/ac/ax/be (20/40/80/160 MHz BW)

7. RF Exposure Conditions (Test Configurations)

Refer to Appendix A for the specific details of the antenna-to-antenna and antenna-to-edge(s) location.

Antenna	Band	Back	Front	Edge Top	Edge Right	Edge Bottom	Edge Left
WLAN/BT ANT 3	Wi-Fi 6GHz	Yes	Yes	Yes	Yes	No	Yes
WLAN/BT ANT 4	Wi-Fi 6GHz	Yes	Yes	Yes	Yes	No	Yes

8. System Performance Check

Per Nov 2017, TCB Workshop

System validation is required before a system is deployed for measurement.

System check is also required before each series of continuous measurement and, as applicable, repeated at least weekly.

Peak and spatially averaged power density at the peak location(s) must be compared to calibrated results according to the defined test conditions.

- the same spatial resolution and measurement region used in the waveguide calibration should be applied to system validation and system check.
- 1 cm^2 and 4 cm^2 spatial averaging have been recommended in the AHG10 draft TR with reference targets available for specific waveguide.
- power density distribution should also be verified, both spatially (shape) and numerically (level) through visual inspection for noticeable differences.
- the measured results should be within 16% (0.66 dB) of the calibrated targets.

The system components, software settings and other system parameters shall be the same as those used for the compliance tests. The system check shall be performed at closest probe calibration frequency point as in the compliance tests, e.g., if the EUT operates at 35 GHz, it is recommended to perform the validation at 30 GHz.

SAR Lab	Date	Frequency (GHz)	5G Verification Source SN	Source Cal. Due Date	Input Power (dBm)	Prad (mW)	Ohmic & Mismatch Loss (dB)	Measured psPDn (W/m²) over 4cm²	Normalized to 20 dBm W/m²	Target psPDn (W/m²) over 4cm²	Deviation (dB)	Measured psPDtot (W/m²) over 4cm²	Normalized to 20 dBm W/m²	Target psPDtot (W/m²) over 4cm²	Deviation (dB)	Measured psPDmod (W/m2) over 4cm2	Normalized to 20 dBm W/m²	Target psPDmod (W/m²) over 4cm²	Deviation (dB)	Plot
6	4/19/2024	10	1015	9/5/2024	19.30	93.30	0.30	51.5	60.5	54.1	0.48	51.9	61.0	54.6	0.48	52.2	61.3	55.0	0.48	1
6	4/24/2024	10	1015	9/5/2024	20.00	93.30	0.30	61.6	61.6	54.1	0.56	62.0	62.0	54.6	0.55	62.4	62.4	55.0	0.55	2

9. Conducted Output Power Measurements

Power measurements were performed in accordance with the device's four power modes, Index 1 to 4 for each antenna. Indexes 1 and 2 power is used when the device is used against the user's head or away from the body. Indexes 3 to 4 power is used when the device is used in a Body-worn configuration by the user.

The selection between antennas in the application is based on RSSI based antenna selection. The full details of power selections are described in the operational description. Refer to Sec. 7 and Sec. 10 for details of the testing. Test reductions have applied accordingly following the SAR KDB Procedure for the supported wireless technologies of the DUT. This is noted in detail for each technology in their respective Sections.

The Maximum Output Power already includes component uncertainty. KDB 447498 sec.4.1.(d) at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

Two different powers are being displayed in this section:

- Maximum Output Power (Tune-Up Limit) = Power of target + Tolerance.

9.1. Wi-Fi 6 GHz (U-NII 5-8 Bands)

When multiple channel bandwidth configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined by applying the following steps sequentially.

1) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same specified maximum output power.
2) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
3) If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
4) When multiple transmission modes (802.11a/ax/be) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected.

Maximum Output Power for Wi-Fi 6 GHz

The table below is the maximum power for this device. Power for Index 0 represent the highest limit per channel. SAR testing was performed using Indices 1 through 4 for the worst-case 802.11 transmission mode.

Standard Power (SP) & Low Power Indoor (LPI)

Bandwidth	Mode	Channel	Frequency (MHz)	Maximum Output Power (dBm)																	
				Stand Power (SP)			Low Power Indoor (LPI)			Head						Body/Extremity (Index 3-4)					
										Wi-Fi Wi-Fi + BT Wi-Fi (RSDB)			WWAN + Wi-Fi WWAN + Wi-Fi + BT WWAN + Wi-Fi (RSDB)			Wi-Fi Wi-Fi + BT Wi-Fi (RSDB)			WWAN + Wi-Fi WWAN + Wi-Fi 5G + BT WWAN + Wi-Fi (RSDB)		
				Index 0			Index 0			Index 1			Index 2			Index 3			Index 4		
				ANT 3	ANT 4	ANT 3 + ANT 4	ANT 3	ANT 4	ANT 3 + ANT 4	ANT 3	ANT 4	ANT 3 + ANT 4	ANT 3	ANT 4	ANT 3 + ANT 4	ANT 3	ANT 4	ANT 3 + ANT 4	ANT 3	ANT 4	ANT 3 + ANT 4
802.11ax 160 MHz (MIMO)	UNII-5	15	6025	20.0	19.5	22.8	15.5	15.0	18.3	13.5	13.5	16.5	13.0	13.0	16.0	10.5	10.5	13.5	10.5	10.5	13.5
		47	6185	21.5	21.0	24.3	15.5	15.0	18.3	13.5	13.5	16.5	13.0	13.0	16.0	10.0	10.0	13.0	10.0	10.0	13.0
	UNII-6	111	6505				18.5	17.0	20.8	15.5	15.5	18.5	13.0	13.0	16.0	13.5	13.5	16.5	13.5	13.5	16.5
	UNII-7	143	6665	22.0	22.0	25.0	17.0	16.0	19.5	16.0	16.0	19.0	13.0	13.0	16.0	13.0	13.0	16.0	13.0	13.0	16.0
	UNII-8	207	6985				15.5	15.0	18.3	15.0	15.0	18.0	13.0	13.0	16.0	12.5	12.5	15.5	12.5	12.5	15.5

Note(s):

Across each Index 1 to 4, SP and LPI Tune-Up Limits are the same.

Wi-Fi 6 GHz Standard Power(SP) & Low Power Indoor(LPI) Measured Results

Mode	Ch #	Freq. (MHz)	Index 1 Power (dBm)						Index 2 Power (dBm)					
			ANT 3		ANT 4		ANT 3 + ANT 4		ANT 3		ANT 4		ANT 3 + ANT 4	
			Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up
802.11ax MIMO (HE160)	15	6025	12.5	13.5	12.2	13.5	15.4	16.5	12.0	13.0	11.8	13.0	14.9	16.0
	47	6185	11.9	13.5	11.2	13.5	14.6	16.5	11.9	13.0	12.0	13.0	15.0	16.0
	111	6505	13.7	15.5	13.2	15.5	16.5	18.5	12.1	13.0	12.5	13.0	15.3	16.0
	143	6665	16.0	16.0	14.9	16.0	18.5	19.0	12.1	13.0	12.6	13.0	15.4	16.0
	207	6985	14.4	15.0	13.4	15.0	16.9	18.0	11.9	13.0	12.7	13.0	15.3	16.0

Mode	Ch #	Freq. (MHz)	Index 3 Power (dBm)						Index 4 Power (dBm)					
			ANT 3		ANT 4		ANT 3 + ANT 4		ANT 3		ANT 4		ANT 3 + ANT 4	
			Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up	Meas Pwr	Tune-up
802.11ax MIMO (HE160)	15	6025	10.0	10.5	9.4	10.5	12.7	13.5	10.2	10.5	10.0	10.5	13.1	13.5
	47	6185	10.1	10.5	9.3	10.5	12.8	13.5	10.2	10.5	9.5	10.5	12.9	13.5
	111	6505	13.6	13.5	12.9	13.5	16.3	16.5	13.5	13.5	12.9	13.5	16.2	16.5
	143	6665	13.8	13.0	12.1	13.0	16.0	16.0	13.0	13.0	12.1	13.0	15.6	16.0
	207	6985	12.5	12.5	11.4	12.5	15.0	15.5	12.5	12.5	11.6	12.5	15.1	15.5

10. Measured and Reported (Scaled) iPD Results

10.1. Wi-Fi 6 GHz (U-NII 5-8 Bands)

Per TCB workshop October 2018, 4 cm^2 averaging area is considered.

psPD value (mW/cm^2) used the $psPD_{tot+}$ avg value (W/m^2) of test result plot.

Wi-Fi 6GHz Test Rationale:

- Following KDB 388624 D02 Pre-Approval Guidance List v18r05, Appendix OVER6G Step 4:
  - The process of steps 3.1 to 3.4 shall be repeated for at least five channels, at the channel center frequency, selected to cover uniformly the largest frequency ranges used in the device, between 5925 MHz and 7125 MHz, and consistent with KDB Publication 248227 test configuration provisions.
- Following KDB 248227 D01 802.11 Wi-Fi SAR v02r02, §4:
  - When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/ /ax/be mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
- No channels that could transmit below 6GHz were selected for testing to use the ESR Test Methodology.
- The test position for iPD was determined using the worst-case 1-g SAR, please refer to 15107858-S1.
- As IPD evaluations used source reconstruction (SR) methods from Cuija et al[2].

ANT	RF Exposure Conditions	Power Mode	Dist. (mm)	U-NII Band	Mode	Duty Cycle (%)	Test Position	Ch No.	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	psPDn-Meas (W/m^2)	psPDtot-Meas (W/m^2)	psPDmod-Meas (W/m^2)	psPDn-Scaled (W/m^2)	psPDtot-Scaled (W/m^2)	psPDmod-Scaled (W/m^2)	Plot No.
ANT 3 & 4 (Chain 1& 0)	Head	Index 1	2	UNII-5	802.11ax (HE160)	94.16%	Front	15	6025.0	16.5	15.4	0.753	1.560	4.420	1.163	2.409	6.825	
				UNII-5	802.11ax (HE160)	94.16%		47	6185.0	16.5	14.6	0.951	2.270	5.770	1.759	4.198	10.670	
				UNII-6	802.11ax (HE160)	94.16%		111	6505.0	18.5	16.5	1.100	2.710	6.570	2.091	5.153	12.492	
				UNII-7	802.11ax (HE160)	94.16%		143	6665.0	19.0	18.5	2.500	5.590	11.300	3.334	**7.454**	15.068	1
				UNII-8	802.11ax (HE160)	94.16%		207	6985.0	18.0	16.9	0.731	1.640	3.850	1.109	2.489	5.843	
ANT 3 & 4 (Chain 1& 0)	Extremity	Index 3	2	UNII-5	802.11ax (HE160)	94.16%	Back	15	6025.0	16.5	12.7	0.759	2.040	2.680	2.167	5.824	7.651	
				UNII-5	802.11ax (HE160)	94.16%	Front	15	6025.0	16.5	12.7	0.867	1.650	3.020	2.475	4.711	8.622	
				UNII-5	802.11ax (HE160)	94.16%	Edge Top	15	6025.0	16.5	12.7	0.362	0.780	1.570	1.033	2.227	4.482	
				UNII-5	802.11ax (HE160)	94.16%	Edge Right	15	6025.0	16.5	12.7	0.195	0.458	0.818	0.557	1.308	2.335	
				UNII-5	802.11ax (HE160)	94.16%	Edge Bottom	15	6025.0	16.5	12.7	0.046	0.094	0.247	0.131	0.268	0.705	
				UNII-5	802.11ax (HE160)	94.16%	Edge Left	15	6025.0	13.5	12.7	1.990	4.420	6.690	2.847	6.324	9.572	
				UNII-5	802.11ax (HE160)	94.16%		47	6185.0	13.0	12.8	2.610	5.950	8.800	3.248	**7.405**	10.951	2
				UNII-6	802.11ax (HE160)	94.16%		111	6505.0	16.5	16.3	1.890	5.450	9.500	2.360	6.806	11.863	
				UNII-7	802.11ax (HE160)	94.16%		143	6665.0	16.0	16.0	2.000	5.870	8.940	2.360	6.927	10.549	
				UNII-8	802.11ax (HE160)	94.16%		207	6985.0	15.5	15.0	2.150	4.880	7.710	2.863	6.498	10.266	

Note(s):

MU scaling applied due to total uncertainty (1.52 dB, 41.9%) exceeds the 30% budget. Scaling applied for the amount exceeding the 30% budget (11.9%).

[2] K. S. Cuija, et al., "Experimental Exposure Evaluation From the Very Close Near-to the Far-Field Using a Multiple-Multipole Source Reconstruction Algorithm," *IEEE Trans. Ant. Propag.*, vol. 70, no. 9, pp. 8461-8472, Sep. 2022, doi: 10.1109/TAP.2022.3177564.

Appendixes

Refer to separated files for the following appendixes.

Appendix A: Setup Photos

Appendix B: System Check Plots

Appendix C: Highest Test Plots

Appendix E: Probe Certificates

Appendix F: Verification source Certificates

END OF REPORT