

# PART 0 SAR Characterization Report

## Test Report No. 14367173H-A

Customer	Panasonic Corporation of North America
Description of EUT	<b>Radio Module</b> (Tested inside of Panasonic Personal Computer FZ-G2)
Model Number of EUT	WW21A
FCC ID	ACJ9TGWW21A
Issue Date	December 26, 2022
Remarks	-

<b>Representative Test Engineer</b>   Tomohisa Nakagawa Engineer	<b>Approved By</b>   Takayuki Shimada Leader
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## 1 Introduction

This device uses Qualcomm® Smart Transmit feature and cannot operate without specific absorption ratio (SAR) and power density (PD) characterization at the device level, beforehand. The parameters obtained from SAR and PD characterization (char) is used as input for Smart Transmit. Both SAR char and PD char will be entered via the Embedded File System (EFS) to enable the Smart Transmit feature.

Part 0 report describes the results for the SAR char and PD char generation and evaluates them on the 5G milli wave (mmW) new radio (NR) enabled equipment under test (EUT).

This description is an overview for STx and test results may not include both sub6 (SAR) and mmW (PD).

## 2 Customer information

Company Name	Panasonic Corporation of North America
Address	Two Riverfront Plaza, 9th Floor Newark, NEW JERSEY, 07102-5940, USA
Telephone Number	+1-201-348-7760
Contact Person	Ben Botros

\*Remarks:

Panasonic Connect Co., Ltd. is on behalf of the applicant: Panasonic Corporation of North America (Company incorporated abroad).

The information provided from the customer is as follows.

- Customer, Description of EUT, Model No. FCC ID on the cover and other relevant pages
  - Operating / Test Mode(s) (Mode(s)) on all the relevant pages
  - SECTION 2: Customer information
  - SECTION 3: Equipment under test (EUT) other than the receipt date
  - SECTION 8: SAR device uncertainty, SAR design target, SAR char generation (Plimit and Pmax (Tune up limit))
- \* The laboratory is exempted from liability of any test results affected from the above information in section 3.

## 3 Equipment under test (EUT)

### 3.1 Identification of EUT

Description	Radio Module
Model Number	WW21A
Serial number	2CTSA00742 (1.75 GHz and 650 MHz band) 2CTSA00747 (Above 2 GHz) 2CTSA00763 (Other than the above)
Rating	DC 3.0 to 3.6 V
Condition	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab.
Receipt Date	June 13, 2022
Test Date	June 23, 2022 to July 25, 2022

<Information of Host device>

Type	Personal Computer FZ-G2 Intel Core i7-1185G7 (1.1 GHz Max 4.9 GHz) 10.1 inch LCD (1920 x 1200)
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### 3.2 Product description

Wireless technologies	Dup.	Band	Mode
WCDMA	FDD	2	UMTS Rel. 99 (Data) HSDPA (Rel. 5)
	FDD	4	HSUPA (Rel. 6), HSPA+ (Rel. 7), DC-HSDPA (Rel. 8)
	FDD	5	
LTE	FDD	2	QPSK, 16QAM, 64AQM, 256QAM
	FDD	4	
	FDD	5	Downlink MIMO Support: Yes(2x2, 4x4)
	FDD	7	Supported band : B2, B4, B7, B25, B38, B41, B42, B48, B66
	*B42: not used in US (FCC)	12	
	FDD	13	Uplink MIMO Support: No
	FDD	14	Uplink transmission is limited to a single output stream.
	FDD	17	
	FDD	25	
	FDD	26	
	FDD (Rx only)	29	
	TDD	38	
	TDD	41	
	TDD	42	
	TDD (Rx only)	46	
	TDD	48	
	FDD	66	
	FDD	71	
LTE CA	Downlink		
	Maximum 7 carriers		
5G NR (FR1)  *n78 is not used in US (FCC)	FDD	15 kHz	n2
	FDD	15 kHz	n5
	TDD	30 kHz	n41
	FDD	15 kHz	n66
	FDD	15 kHz	n71
	TDD	30 kHz	n77
	TDD	30 kHz	n78
	-	-	-
	-	-	-
EN-DC (LTE-FR1 Sub6) (NSA mode only)	Supported combination		
	LTE Anchor Bands for NR band n2		LTE Band 5/12/13/14/48
	LTE Anchor Bands for NR band n5		LTE Band 2/7/66
	LTE Anchor Bands for NR band n41		LTE Band 2/4/25/26/41/66
	LTE Anchor Bands for NR band n66		LTE Band 5/12/13/14/48/71
	LTE Anchor Bands for NR band n71		LTE Band 2/7/66
	LTE Anchor Bands for NR band n77		LTE Band 2/5/12/13/14/41/66
	LTE Anchor Bands for NR band n78*		LTE Band 2/4/5/7/12/13/38/41/66/71
	*n78: not used in US (FCC)		

Wireless module (Tested inside of Panasonic Tablet PC FZ-G2)

Model: WL22A (FCC ID ACJ9TGWL22A / ISED certification number 216H-CFWL22A)

Wireless technologies	Dup.	Band	Mode
WLAN	TDD	2.4 GHz	2412 - 2472 for US 2412 - 2462 for Canada
	TDD	5 GHz	5180 - 5240 5260 - 5320 5500 - 5720 5745 - 5825
	TDD	6 GHz	5955 - 6415 6435 - 6515 6535 - 6875 6875 - 7115
Bluetooth	TDD	2.4 GHz	BR/EDR/LE

## 4 Location

UL Japan, Inc. Ise EMC Lab.  
Shielded room for SAR testings  
A2LA Certificate Number: 5107.02 / FCC Test Firm Registration Number: 884919  
ISED SAR Lab Company Number: 2973C / CAB identifier: JP0002  
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN  
Telephone: +81-596-24-8999

## 5 References

Federal Communications Commission. (October 23, 2015). *447498 D01 General RF Exposure Guidance v06.*  
International Electrotechnical Commission. (2018). *IEC TR 63170:2018*.  
SPEAG. ( August 2018). 5G Module V1.2 Application Note: 5G Compliance Testing.

## 6 Time averaging for SAR and PD

The Qualcomm® Smart Transmit algorithm controls and manages the instantaneous Tx power to maintain the time-averaged Tx power (in turn, time-averaged RF exposure) is in compliance with regulatory limits.

## 7 Definitions, symbols, and abbreviations

### 7.1 Definitions

SAR_design_target	: Target value to use STx and also this shall be less than regulatory SAR limit (i.e., 1gSAR limit for FCC) after accounting for all device design related uncertainties.
SAR_design_target_extremity	: SAR_design_target for limbs
Tx_power_at_SAR_design_target	: Transmit level that matches SAR_design_target
$\Delta_{\min}$	: housing material influence
PD_design_target	: The design target for PD compliance. It should be less than regulatory power density limit to account for all device design related uncertainties
<i>input.power.limit</i>	: For a PD characterized wireless device, the input power level at antenna port(s) for each beam corresponding to PD_design_target.
PD char	: The table that contains input.power.limit fed to antenna port(s) for all supported beams.
N beams	: The mmW device supports total N beams, where M out of N are single beams and the rest of (N-M) are beam pairs (where 2 single beams are excited at the same time).
power density (PD) or $S_{av}$	: Energy per unit time and unit area crossing a surface of area $A$ characterized by the normal unit vector $\hat{\mathbf{n}}$ and averaging time.
$S_{av} = \frac{1}{AT} \iint (\mathbf{E} \times \mathbf{H}) \cdot \hat{\mathbf{n}} dA dT$	
Specific Absorption Rate (SAR):	: The time derivative (rate) of the incremental energy ( $dW$ ) absorbed by (dissipated in) an incremental mass ( $dm$ ) contained in a volume element ( $dV$ ) of a given density ( $\rho$ ), as shown in the following equation:
$SAR = \frac{d}{dt} \left( \frac{dW}{dm} \right) = \frac{d}{dt} \left( \frac{dW}{\rho dV} \right)$	

## 7.2 Symbols

Symbol	Quantity	Unit	Dimensions
E	Electric field	volt per meter	V / m
f	Frequency	hertz	Hz
H	Magnetic field	ampere per meter	A / m
$\lambda$	Wavelength	meter	m
S	Local power density	watt per square meter	W / m <sup>2</sup>
PD or S <sub>av</sub>	Spatial-average power density	watt per square meter	W / m <sup>2</sup> (mW / cm <sup>2</sup> )
SAR	Specific Absorption Rate	watt per kilo gram	W / kg

## 7.3 Abbreviations

DSI	: device state index
KDB	: knowledge data base from Federal communication committee (FCC)
BS or BSE	: base station or base station emulator
CW	: continuous wave
DUT	: device under test
NR	: new radio
PD	: power density
RF	: radio frequency
TER	: total exposure ratio
S <sub>n</sub>	: surface number
S <sub>tot</sub> or S <sub>total</sub>	: total propagating power flux density into the phantom
S <sub>n</sub> or S <sub>norm</sub>	: surface normal propagating power flux density into the phantom or in normed vector space
Ant	: antenna
nG	: n generation (e.g. 3G, 4G and 5G)
☒	: applicable.
☐	: NOT applicable.

## 8 SAR char generation

### 8.1 Usage scenarios in SAR evaluation and DSI determination

applicable	Scenario	Description	Position example
<input type="checkbox"/>	Head	Device positioned next to head	$SAR_{head} = \max\{SAR_{LC}, SAR_{LT}, SAR_{RC}, SAR_{RT}\}$
<input checked="" type="checkbox"/>	Body	Device positioned next to body with or without a body-worn accessory	$SAR_{body} = \max\{SAR_{s1}, SAR_{s2}, SAR_{s3}, SAR_{s4}, SAR_{s5}, SAR_{s6}\}$
<input type="checkbox"/>	Hotspot mode	Device transmitting in hotspot mode and assumed to be located next to human body	$SAR_{hotspot} = \max\{SAR_{s1}, SAR_{s2}, SAR_{s3}, SAR_{s4}, SAR_{s5}, SAR_{s6}\}$
<input type="checkbox"/>	Extremity SAR (10g)	10gSAR is evaluated for all applicable surfaces of the device against the flat phantom with 0 mm separation distance	$10gSAR_{extremity} = \max\{10gSAR_{s1}, 10gSAR_{s2}, 10gSAR_{s3}, 10gSAR_{s4}, 10gSAR_{s5}, 10gSAR_{s6}\}$

L/R: Left/Right, C/T: Cheek/Tilt, S: Surface

Table 8-A summary of Usage/Exposure Scenario for this EUT

DSI	State
0	Full power operation
1	Reduction power operation

### 8.2 SAR device uncertainty

Table 8-B device uncertainty

Item	Uncertainty dB
Total uncertainty	1.0 k=2

### 8.3 SAR design target

To account for the total uncertainty,  $SAR_{design\_target}$  needs to:

$$SAR_{design\_target} < SAR_{regulatory\_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

the  $SAR_{design\_target}$  for the EUT is determined as: < 1.27 W / kg

DSI	$SAR_{design\_target}$
0 and 1	0.7 W/kg All band excluding force peak(FP) mode, results for FP might be lower than 0.7 W/kg

## 8.4 SAR char generation

The position is based on KDB 447498.

Table 8-C Summary of Plimit

RAT	Force Peak	Band	Pmax	Plimit(DSI 0)	Plimit (DSI 1)
WCDMA		2	23.5	22.2	16.7
		4	22.7	21.8	17.6
		5	23.5	22.1	16.2
LTE		2	23.0	22.5	16.5
		4	23.0	21.5	17.0
		5	23.0	23.5	16.6
		7	23.0	22.1	16.8
		12	23.0	26.0	17.9
		13	23.0	23.7	17.1
		14	23.0	23.5	17.1
		17	23.0	26.1	18.2
		25	23.0	22.6	16.6
		26	23.0	22.3	16.6
		38	23.0	24.6	20.5
		41	23.0	25.5	19.1
	Y	42*	10.8	20.6	10.9
NR	Y	48*	9.9	21.1	11.3
		66	23.0	21.5	17.0
		71	23.0	24.4	18.1
		n2	23.5	22.4	17.4
		n5	23.5	23.2	17.0
		n41	20.5	20.8	11.2
		n66	22.5	20.8	17.0
		n71	23.5	25.3	18.4
		n77(FCC Block A)	23.5	19.1	8.0
		n77(FCC Block C)	23.5	19.1	8.0
	Y	n77(ISED)*	8.2	18.4	8.6
	Y	n78(ISED)*	8.2	18.4	8.6

If  $P_{max} < P_{limit}$  then,

The EUT operates at  $P_{max}$  for static SAR measurement  
else EUT transmit at  $P_{limit}$  for static SAR measurement  
Below bands Plimit is converted to Pmax by applying above condition.

RAT	Force Peak	Band	Pmax	Plimit(DSI 0)	Plimit (DSI 1)
LTE		5	23.0	<b>23.0</b>	16.6
		12	23.0	<b>23.0</b>	17.9
		13	23.0	<b>23.0</b>	17.1
		14	23.0	<b>23.0</b>	17.1
		17	23.0	<b>23.0</b>	18.2
		38	23.0	<b>23.0</b>	20.5
		41	23.0	<b>23.0</b>	19.1
	Y	42*	10.8	<b>10.8</b>	<b>10.8</b>
	Y	48*	9.9	<b>9.9</b>	<b>9.9</b>
		71	23.0	<b>23.0</b>	18.1
NR		n41	20.5	<b>20.5</b>	11.2
		n71	23.5	<b>23.5</b>	18.4
	Y	n77(ISED)*	8.2	<b>8.2</b>	<b>8.2</b>
	Y	n78(ISED)*	8.2	<b>8.2</b>	<b>8.2</b>

Note(s):

- LTE band 42 is only for ISED, LTE band 48 is only for FCC.
- FCC support only n77, ISED supports both n77/n78
- Plimit(DSI 0 / 1) has a tolerance ( $\pm 1$  dB).
- Tune up limit = Plimit

#### Additional information

##### For LTE B48 (FCC)

Uplink Downlink config (UDC)	Special sub frame (SSF)	Burst ave tune up DS1=0/1 [dBm]	P <sub>max</sub> burst ave [dBm]	Time ave DS1=0/1 [dBm]
0	0 to 7	9.9	9.9	7.5
1	0 to 7	11.3	11.3	7.5
2	0 to 7	14.2	14.2	7.5
3	0 to 7	12.8	12.8	7.5
4	0 to 7	14.4	14.4	7.5
5	0 to 7	17.3	17.3	7.5
6	0 to 7	10.4	10.4	7.5

LTE band 48 doesn't have a same burst tune up for UDC/SSF but has same time average tune up limit.

##### For LTE B42(ISED)

Uplink Downlink config (UDC)	Special sub frame (SSF)	Burst ave tune up DS1=0/1 [dBm]	Pmax burst ave [dBm]	Time ave DS1=0/1 [dBm]
0	0 to 7	10.8	10.8	8.5
1	0 to 7	12.0	12.0	8.5
2	0 to 7	14.9	14.9	8.5
3	0 to 7	13.4	13.4	8.5
4	0 to 7	15.1	15.1	8.5
5	0 to 7	18.0	18.0	8.5
6	0 to 7	11.2	11.2	8.5

LTE band 42 doesn't have a same burst tune up for UDC/SSF but has same time average tune up limit.

## Appendix A SAR result

Results include both FCC and ISED data, but the end product correctly controls the bands and plimit at firmware level. This only for purpose on submissions.

Calc. Plimit = rounded {measured power + 10log (target SAR / measured SAR value)}  
ex Plimit for WCDMA band 2 DSI0 =  $23.43 + 10 \log(0.700/0.923) = 22.2 \text{ dBm}$

The channel and position selection criteria:

- For WCDMA, tested at worst condition based on original condition.
- For LTE, test starts with worst power ch and if worst channel is not same as original condition, additional channel is conducted.
- [Original condition]

FCC ID: ACJ9TGW21A granted on 2021/12/20

ISED Certification Number: 216H-CFWW21A granted on 2022/01/06

### A.1 W-CDMA B2 DSI0

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)	1-g SAR (W/kg)	Calc. Plimit
					Meas.	Meas.	
Rear tilt (Edge1 side)	0	Rel 99 RMC 12.2 kbps	9262	1852.4	23.57		
			9400	1880.0	23.43	<b>0.923</b>	<b>22.2</b>
			9538	1907.6	23.30		

### A.2 W-CDMA B2 DSI1

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)	1-g SAR (W/kg)	Calc. Plimit
					Meas.	Meas.	
Edge4	0	Rel 99 RMC 12.2 kbps	9262	1852.4	23.57		
			9400	1880.0	23.43		
			9538	1907.6	23.30	<b>3.230</b>	<b>16.7</b>

### A.3 W-CDMA B4 DSI0

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)	1-g SAR (W/kg)	Calc. Plimit
					Meas.	Meas.	
Rear tilt (Edge4 side)	9	Rel 99 RMC 12.2 kbps	1312	1712.4	23.56	<b>1.050</b>	<b>21.8</b>
			1413	1732.6	23.48		
			1513	1752.6	23.42		

### A.4 W-CDMA B4 DSI1

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)	1-g SAR (W/kg)	Calc. Plimit
					Meas.	Meas.	
Edge4	0	Rel 99 RMC 12.2 kbps	1312	1712.4	23.56		
			1413	1732.6	23.48	<b>2.690</b>	<b>17.6</b>
			1513	1752.6	23.42		

### A.5 W-CDMA-B5 DSI0

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)	1-g SAR (W/kg)	Calc. Plimit
					Meas.	Meas.	
Rear tilt (Edge4 side)	9	Rel 99 RMC 12.2 kbps	4132	826.4	23.59		
			4183	836.6	23.38	<b>0.931</b>	<b>22.1</b>
			4233	846.6	23.15		

### A.6 W-CDMA-B5 DSI1

Test Position	Dist. (mm)	Mode	Ch #.	Freq. (MHz)	Power (dBm)	1-g SAR (W/kg)	Calc. Plimit
					Meas.	Meas.	
Edge4	0	Rel 99 RMC 12.2 kbps	4132	826.4	23.59	<b>3.540</b>	16.6
			4183	836.6	23.38		
			4233	846.6	23.15	3.490	<b>16.2</b>

On previous result, measurement and scaled channel is not same, so both channels are conducted.

#### A.7 LTE B2 DS10

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	18700	1860	1	0	22.76	<b>0.751</b>	<b>22.5</b>
			18900.0	1880.0	1	0	22.67		
			19100.0	1900.0	1	0	22.66		
			18700	1860	50	0	21.90	0.600	22.6
			18900	1880	50	50	21.75		
			19100	1900	50	24	21.68		
			18700	1860	100	0	21.89	0.583	22.7

#### A.8 LTE B2 DS11

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	18700	1860	1	0	22.76	<b>2.930</b>	<b>16.5</b>
			18900	1880	1	0	22.67		
			19100	1900	1	0	22.66		
			18700	1860	50	0	21.90	2.430	<b>16.5</b>
			18900	1880	50	50	21.75		
			19100	1900	50	24	21.68		
			18700	1860	100	0	21.89	2.420	<b>16.5</b>

#### A.9 LTE B4 DS10

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	QPSK	20175	1732.5	1	99	22.73	<b>0.878</b>	21.7
			20175	1732.5	1	0	22.68		
			20175	1732.5	1	49	22.66		
			20175	1732.5	50	50	21.85	0.728	21.7
			20175	1732.5	50	0	21.82		
			20175	1732.5	50	24	21.80		
			20175	1732.5	100	0	21.77	0.750	<b>21.5</b>

#### A.10 LTE B4 DS11

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	20175	1732.5	1	99	22.73	<b>2.620</b>	<b>17.0</b>
			20175	1732.5	1	0	22.68		
			20175	1732.5	1	49	22.66		
			20175	1732.5	50	50	21.85	2.150	<b>17.0</b>
			20175	1732.5	50	0	21.82		
			20175	1732.5	50	24	21.80		
			20175	1732.5	100	0	21.77	2.030	17.1

#### A.11 LTE B5 DS10

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	-	-	-	-	-		
			20525	836.5	1	0	22.79	<b>0.562</b>	23.7
			-	-	-	-	-		
			-	-	-	-	-		
			20525	836.5	25	0	21.80	0.449	23.7
			-	-	-	-	-		
			20525	836.5	50	0	21.78	0.473	<b>23.5</b>

#### A.12 LTE B5 DS11

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	-	-	-	-	-		
			20525	836.5	1	0	22.79	<b>2.790</b>	16.8
			-	-	-	-	-		
			-	-	-	-	-		
			20525	836.5	25	0	21.80	2.270	16.7
			-	-	-	-	-		
			20525	836.5	50	0	21.78	2.310	<b>16.6</b>

A.13 LTE B7 DSII

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	21100	2535	1	0	22.96	<b>0.842</b>	22.2
			21100	2535	1	49	22.94		
			21100	2535	1	99	22.92		
			21100	2535	50	50	21.99	0.689	<b>22.1</b>
			21100	2535	50	24	21.94		
			21100	2535	50	0	21.91		
			21350	2560	100	0	21.98	0.675	<b>22.1</b>
			20850	2510	100	0	21.93		
			21100	2535	100	0	21.91		

A.14 LTE B7 DSII

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	21100	2535	1	0	22.96	<b>2.690</b>	17.1
			21100	2535	1	49	22.94		
			21100	2535	1	99	22.92		
			21100	2535	50	50	21.99	2.320	<b>16.8</b>
			21100	2535	50	24	21.94		
			21100	2535	50	0	21.91		
			21350	2560	100	0	21.98	1.990	17.4
			20850	2510	100	0	21.93		
			21100	2535	100	0	21.91		

A.15 LTE B12 DSIO

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	-	-	-	-	-		
			23095	707.5	1	49	22.71	<b>0.309</b>	26.3
			-	-	-	-	-		
			-	-	-	-	-		
			23095	707.5	25	12	21.86	0.247	26.4
			-	-	-	-	-		
			23095	707.5	50	0	21.83	0.265	<b>26.0</b>

A.16 LTE B12 DSII

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	-	-	-	-	-		
			23095	707.5	1	49	22.71	<b>2.130</b>	<b>17.9</b>
			-	-	-	-	-		
			-	-	-	-	-		
			23095	707.5	25	12	21.86	1.720	18.0
			-	-	-	-	-		
			23095	707.5	50	0	21.83	1.730	<b>17.9</b>

#### A.17 LTE B13 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	-	-	-	-	-		
			23230	782	1	0	22.45	<b>0.459</b>	24.3
			-	-	-	-	-		
			-	-	-	-	-		
			23230	782	25	25	21.55	0.397	24.0
			-	-	-	-	-		
			23230	782	50	0	21.52	0.424	<b>23.7</b>

#### A.18 LTE B13 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	-	-	-	-	-		
			23230	782	1	0	22.45	<b>2.330</b>	17.2
			-	-	-	-	-		
			-	-	-	-	-		
			23230	782	25	25	21.55	1.910	17.2
			-	-	-	-	-		
			23230	782	50	0	21.52	1.920	<b>17.1</b>

#### A.19 LTE B14 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	-	-	-	-	-		
			23330	793	1	0	22.40	<b>0.512</b>	23.8
			-	-	-	-	-		
			-	-	-	-	-		
			23330	793	25	12	21.48	0.422	23.7
			-	-	-	-	-		
			23330	793	50	0	21.47	0.442	<b>23.5</b>

#### A.20 LTE B14 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	-	-	-	-	-		
			23330	793	1	0	22.40	<b>2.220</b>	17.4
			-	-	-	-	-		
			-	-	-	-	-		
			23330	793	25	12	21.48	1.910	<b>17.1</b>
			-	-	-	-	-		
			23330	793	50	0	21.47	1.930	<b>17.1</b>

#### A.21 LTE B17 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	-	-	-	-	-		
			23790	710	1	49	22.85	<b>0.314</b>	26.3
			-	-	-	-	-		
			-	-	-	-	-		
			23790	710	25	25	21.88	0.257	26.2
			-	-	-	-	-		
			23790	710	50	0	21.80	0.263	<b>26.1</b>

#### A.22 LTE B17 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	-	-	-	-	-		
			23790	710	1	49	22.85	<b>1.970</b>	18.4
			-	-	-	-	-		
			-	-	-	-	-		
			23790	710	25	25	21.88	1.630	<b>18.2</b>
			-	-	-	-	-		
			23790	710	50	0	21.80	1.560	18.3

### A.23 LTE B25 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	26140	1860	1	0	22.78	<b>0.730</b>	<b>22.6</b>
			26365	1882.5	1	0	22.70		
			26590	1905	1	0	22.68		
			26140	1860	50	24	21.90	0.585	22.7
			26365	1882.5	50	24	21.85		
			26590	1905	50	50	21.72		
			26140	1860	100	0	21.87	0.580	22.7

### A.24 LTE B25 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	26140	1860	1	0	22.78	<b>2.840</b>	16.7
			26365	1882.5	1	0	22.70		
			26590	1905	1	0	22.68		
			26140	1860	50	24	21.90	2.360	<b>16.6</b>
			26365	1882.5	50	24	21.85		
			26590	1905	50	50	21.72		
			26140	1860	100	0	21.87	2.350	<b>16.6</b>

### A.25 LTE B26 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	QPSK	-	-	-	-	-		
			26865	831.5	1	0	22.75	<b>0.780</b>	<b>22.3</b>
			-	-	-	-	-		
			-	-	-	-	-		
			26865	831.5	36	0	21.86	0.635	<b>22.3</b>
			-	-	-	-	-		
			26865	831.5	75	0	21.79	0.617	<b>22.3</b>

### A.26 LTE B26 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	-	-	-	-	-		
			26865	831.5	1	0	22.75	<b>2.760</b>	16.8
			-	-	-	-	-		
			-	-	-	-	-		
			26865	831.5	36	0	21.86	2.350	<b>16.6</b>
			-	-	-	-	-		
			26865	831.5	75	0	21.79	2.320	<b>16.6</b>

### A.27 LTE B38 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	QPSK	38000	2595	1	49	22.58	0.410	24.9
			38000	2595	1	0	22.57		
			38000	2595	1	99	22.55		
			38000	2595	50	50	21.76	0.365	<b>24.6</b>
			38000	2595	50	0	21.70		
			38000	2595	50	24	21.68		
			38000	2595	100	0	21.70	0.352	24.7

### A.28 LTE B38 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	38000	2595	1	49	22.58	<b>1.130</b>	<b>20.5</b>
			38000	2595	1	0	22.57		
			38000	2595	1	99	22.55		
			38000	2595	50	50	21.76	0.922	20.6
			38000	2595	50	0	21.70		
			38000	2595	50	24	21.68		
			38000	2595	100	0	21.70	0.913	<b>20.5</b>

A.29 LTE B41 DSI0 (FCC)

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	39750	2506	1	99	22.59		
			40185	2549.5	1	99	22.54		
			40620	2593	1	0	22.78	0.245	27.3
			41055	2636.5	1	0	22.74		
			41490	2680	1	0	22.66		
			39750	2506	50	24	21.82		
			40185	2549.5	50	50	21.78		
			40620	2593	50	24	21.80		
			41055	2636.5	50	0	21.83	0.233	26.6
			41490	2680	50	50	21.75		
			39750	2506	100	0	21.82	<b>0.303</b>	<b>25.5</b>

A.30 LTE B41 DSI1 (FCC)

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	39750	2506	1	99	22.59		
			40185	2549.5	1	99	22.54		
			40620	2593	1	0	22.78	1.030	21.1
			41055	2636.5	1	0	22.74		
			41490	2680	1	0	22.66		
			39750	2506	50	24	21.82		
			40185	2549.5	50	50	21.78	1.140	19.7
			40620	2593	50	24	21.80		
			41055	2636.5	50	0	21.83	1.130	19.8
			41490	2680	50	50	21.75		
			39750	2506	100	0	21.82	<b>1.260</b>	<b>19.3</b>

A.31 LTE B41 DSI0 (ISED)

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	QPSK	39790	2510	1	99	22.55		
			40185	2549.5	1	99	22.54		
			40620	2593	1	0	22.78	0.245	27.3
			41055	2636.5	1	0	22.74		
			41490	2680	1	0	22.66		
			39790	2510	50	50	21.82		
			40185	2549.5	50	50	21.78		
			40620	2593	50	50	21.80		
			41055	2636.5	50	0	21.83	0.233	26.6
			41490	2680	50	0	21.75		
			39790	2510	100	0	21.80	<b>0.300</b>	<b>25.5</b>

A.32 LTE B41 DSI1 (ISED)

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	39790	2510	1	99	22.55		
			40185	2549.5	1	99	22.54		
			40620	2593	1	0	22.78	1.030	21.1
			41055	2636.5	1	0	22.74		
			41490	2680	1	0	22.66		
			39790	2510	50	24	21.82	<b>1.320</b>	<b>19.1</b>
			40185	2549.5	50	50	21.78		
			40620	2593	50	24	21.80		
			41055	2636.5	50	0	21.83	1.130	19.8
			41490	2680	50	0	21.75		
			39790	2510	100	0	21.82	<b>1.320</b>	<b>19.1</b>

Band 41 does not have same channels between FCC and ISED, as per customer request, lower power setting condition is applied for reduction that is 19.1 dBm.

A.33 LTE B42 DS10 (ISED)

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	19	QPSK	43490	3590	1	0	10.51	0.062	21.0
			43490	3590	1	49	10.48		
			43490	3590	1	99	10.39		
			43490	3590	50	0	10.62	0.064	21.0
			43490	3590	50	24	10.56		
			43490	3590	50	50	10.52		
			43490	3590	100	0	10.44	<b>0.067</b>	<b>20.6</b>

A.34 LTE B42 DS11 (ISED)

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	43490	3590	1	0	10.51	0.600	11.2
			43490	3590	1	49	10.48		
			43490	3590	1	99	10.39		
			43490	3590	50	0	10.62	0.628	11.1
			43490	3590	50	24	10.56		
			43490	3590	50	50	10.52		
			43490	3590	100	0	10.44	<b>0.634</b>	<b>10.9</b>

A.35 LTE B48 DS10 (FCC)

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	19	QPSK	55340	3560	1	99	9.80	0.051	21.2
			55340	3560	1	0	9.78		
			55340	3560	1	49	9.68		
			55340	3560	50	50	9.83	0.049	21.3
			55340	3560	50	0	9.82		
			55340	3560	50	24	9.74		
			55340	3560	100	0	9.77	<b>0.051</b>	<b>21.1</b>

A.36 LTE B48 DS11 (FCC)

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	55340	3560	1	99	9.80	0.490	11.3
			55340	3560	1	0	9.78		
			55340	3560	1	49	9.68		
			55340	3560	50	50	9.83	0.492	11.4
			55340	3560	50	0	9.82		
			55340	3560	50	24	9.74		
			55340	3560	100	0	9.77	<b>0.497</b>	<b>11.3</b>

A.37 LTE B66 DSI0

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	QPSK	132072	1720	1	99	22.73	0.919	<b>21.5</b>
			132322	1745	1	99	22.84		
			132572	1770	1	0	22.95	<b>0.929</b>	21.7
			132072	1720	50	50	21.80		
			132322	1745	50	50	21.92		
			132572	1770	50	50	22.01	0.719	21.9
			132572	1770	100	0	21.91	0.707	21.9

A.38 LTE B66 DSI1

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	132072	1720	1	99	22.73		
			132322	1745	1	99	22.84		
			132572	1770	1	0	22.95	<b>2.670</b>	17.1
			132072	1720	50	50	21.80		
			132322	1745	50	50	21.92		
			132572	1770	50	50	22.01	2.220	<b>17.0</b>
			132572	1770	100	0	21.91	2.190	<b>17.0</b>

A.39 LTE B71 DSI0

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	QPSK	133297	680.5	1	99	22.62	<b>0.461</b>	<b>24.4</b>
			133297	680.5	1	0	22.59		
			133297	680.5	1	49	22.58		
			133297	680.5	50	24	21.73	0.375	<b>24.4</b>
			133297	680.5	50	50	21.68		
			133297	680.5	50	0	21.65		
			133297	680.5	100	0	21.72	0.336	24.9

A.40 LTE B71 DSI1

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	QPSK	133297	680.5	1	99	22.62	<b>1.990</b>	<b>18.1</b>
			133297	680.5	1	0	22.59		
			133297	680.5	1	49	22.58		
			133297	680.5	50	24	21.73	1.590	18.2
			133297	680.5	50	50	21.68		
			133297	680.5	50	0	21.65		
			133297	680.5	100	0	21.72	1.600	<b>18.1</b>

#### A.41 NR n2 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	BPSK	372000	1860	1	1	23.46	0.878	22.5
			376000	1880	1	1	23.47	<b>0.887</b>	<b>22.4</b>
			380000	1900	1	1	23.28		
			372000	1860	50	28	23.34	0.795	22.8
			376000	1880	50	28	23.36	0.835	22.6
			380000	1900	50	28	23.14		
			376000	1880	100	0	22.87	0.745	22.6

#### A.42 NR n2 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	BPSK	372000	1860	1	1	23.46		
			376000	1880	1	1	23.47	<b>2.780</b>	17.5
			380000	1900	1	1	23.28	2.630	17.5
			372000	1860	50	28	23.34		
			376000	1880	50	28	23.36	2.730	<b>17.4</b>
			380000	1900	50	28	23.14	2.610	<b>17.4</b>
			376000	1880	100	0	22.87	2.440	<b>17.4</b>

#### A.43 NR n5 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	BPSK	167300	836.5	1	1	23.21	<b>0.667</b>	23.4
			167300	836.5	50	28	23.01	0.666	<b>23.2</b>
			167300	836.5	100	0	22.50	0.589	<b>23.2</b>

#### A.44 NR n5 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	BPSK	167300	836.5	1	1	23.21	<b>2.810</b>	17.2
			167300	836.5	50	28	23.01	2.720	17.1
			167300	836.5	100	0	22.50	2.460	<b>17.0</b>

#### A.45 NR n41 DSI0

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge2 side)	9	BPSK	-	-	-	-	-		
			518600	2593	1	137	20.73	0.666	20.9
			-	-	-	-	-		
			-	-	-	-	-		
			518600	2593	135	69	20.70	<b>0.686</b>	<b>20.8</b>
			-	-	-	-	-		

#### A.46 NR n41 DSI1

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 2	0	BPSK	-	-	-	-	-		
			518600	2593	1	137	20.73	6.070	11.3
			-	-	-	-	-		
			-	-	-	-	-		
			518600	2593	135	69	20.70	<b>6.220</b>	<b>11.2</b>
			-	-	-	-	-		

A.47 NR n66 DS10

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	BPSK	344000	1720	1	104	22.89		
			349000	1745	1	104	22.90	0.892	21.8
			354000	1770	1	104	22.89		
			344000	1720	50	28	22.80	0.975	21.4
			349000	1745	50	28	22.82	<b>1.020</b>	21.2
			354000	1770	50	28	22.74		
			344000	1720	100	0	22.34	0.993	<b>20.8</b>

A.48 NR n66 DS11

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	BPSK	344000	1720	1	104	22.89		
			349000	1745	1	104	22.90	2.440	17.5
			354000	1770	1	104	22.89		
			344000	1720	50	28	22.80		
			349000	1745	50	28	22.82	2.450	17.4
			354000	1770	50	28	22.74	<b>2.550</b>	17.1
			344000	1720	100	0	22.34	2.380	<b>17.0</b>

A.49 NR n71 DS10

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge1 side)	0	BPSK	-	-	-	-	-		
			136100	680.5	1	1	22.75	0.366	25.6
			-	-	-	-	-		
			-	-	-	-	-		
			136100	680.5	50	28	22.53	<b>0.373</b>	<b>25.3</b>
			-	-	-	-	-		
			136100	680.5	100	0	22.16	0.331	25.4

A.50 NR n71 DS11

Test Position	Dist. (mm)	Modu-lation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	BPSK	-	-	-	-	-		
			136100	680.5	1	1	22.75	<b>1.860</b>	18.5
			-	-	-	-	-		
			-	-	-	-	-		
			136100	680.5	50	28	22.53	1.830	<b>18.4</b>
			-	-	-	-	-		
			136100	680.5	100	0	22.16	1.620	18.5

### A.51 NR n77 DSIO (FCC)

#### Block A

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	BPSK	633332	3499.98	1	1	22.91	<b>1.200</b>	<b>20.6</b>
			633332	3499.98	135	69	22.87	1.180	<b>20.6</b>
			633332	3499.98	270	0	22.37	1.050	<b>20.6</b>

#### Block C

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Rear tilt(Edge4 side)	9	BPSK	656000	3840	1	1	23.00	1.630	19.3
			656000	3840	135	69	22.94	<b>1.650</b>	19.2
			656000	3840	270	0	22.42	1.500	<b>19.1</b>

### A.52 NR n77 DSII (FCC)

#### Block A

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	BPSK	633332	3499.98	1	1	22.91	<b>19.800</b>	<b>8.4</b>
			633332	3499.98	135	69	22.87	18.100	8.7
			633332	3499.98	270	0	22.37	16.100	8.8

#### Block C

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	BPSK	656000	3840	1	1	23.00	20.500	8.3
			656000	3840	135	69	22.94	<b>21.400</b>	8.1
			656000	3840	270	0	22.42	19.400	<b>8.0</b>

Band 77 has two blocks but as per customer request, lower power setting condition is applied that is 19.1 dBm for DSIO and 8.0 dBm for ISED.

### A.53 NR n77/n78 DSIO (ISED)

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	19	BPSK	636666	3550	1	137	7.87	0.058	18.7
			636666	3550	1	271	7.74		
			636666	3550	1	1	7.65		
			636666	3550	135	138	7.81	<b>0.060</b>	18.5
			636666	3550	135	69	7.75		
			636666	3550	135	0	7.66		
			636666	3550	270	0	7.69	0.059	<b>18.4</b>

### A.54 NR n77/n78 DSII (ISED)

Test Position	Dist. (mm)	Modulation	UL CH #	Freq. (MHz)	UL RB Allocation	UL RB Start	Power (dBm) Meas. Avg	1-g SAR (W/kg) Meas.	Calc. Plimit
Edge 4	0	BPSK	636666	3550	1	137	7.87	0.555	8.9
			636666	3550	1	271	7.74		
			636666	3550	1	1	7.65		
			636666	3550	135	138	7.81	<b>0.584</b>	<b>8.6</b>
			636666	3550	135	69	7.75		
			636666	3550	135	0	7.66		
			636666	3550	270	0	7.69	0.564	<b>8.6</b>

## Appendix B Measurement uncertainty

### B.1 SAR measurement uncertainty

Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std. Unc. (1g)	Std.Unc. (10g)
<b>Measurement System Errors</b>							
Probe Calibration	± 14.0 %	N	2	1	1	±7.0%	±7.0%
Probe Calibration Drift	± 1.7 %	R	$\sqrt{3}$	1	1	±1.0%	±1.0%
Probe Linearity	± 4.7 %	R	$\sqrt{3}$	1	1	±2.7%	±2.7%
Broadband Signal	± 2.6 %	R	$\sqrt{3}$	1	1	±1.5%	±1.5%
Probe Isotropy	± 7.6 %	R	$\sqrt{3}$	1	1	±4.4%	±4.4%
Data Acquisition	± 0.3 %	N	1	1	1	±0.3%	±0.3%
RF Ambient	± 1.8 %	N	1	1	1	±1.8%	±1.8%
Probe Positioning	± 0.2 %	N	1	0.33	0.33	±0.1%	±0.1%
Data Processing	± 2.3 %	N	1	1	1	±2.3%	±2.3%
<b>Phantom and Device Errors</b>							
Conductivity (meas.)DAK	± 10.0 %	N	1	0.78	0.71	±7.8%	±7.1%
Conductivity (temp.)BB	± 3.4 %	R	$\sqrt{3}$	0.78	0.71	±1.5%	±1.4%
Phantom Permittivity	± 14.0 %	R	$\sqrt{3}$	0.25	0.25	±2.0%	±2.0%
Distance DUT - TSL	± 2.0 %	N	1	2	2	±4.0%	±4.0%
Device Positioning (+/- 0.5mm)	± 1.0 %	N	1	1	1	±1.0%	±1.0%
Device Holder	± 3.6 %	N	1	1	1	±3.6%	±3.6%
DUT Modulation	± 2.4 %	R	$\sqrt{3}$	1	1	±1.4%	±1.4%
Time-average SAR	± 2.6 %	R	$\sqrt{3}$	1	1	±1.5%	±1.5%
DUT drift	± 2.5 %	N	1	1	1	±2.5%	±2.5%
Val Antenna Unc.val	± 0.0 %	N	1	1	1	±0.0%	±0.0%
Unc. Input Powerval	± 0.0 %	N	1	1	1	±0.0%	±0.0%
<b>Correction to the SAR results</b>							
Deviation to Target	± 1.9 %	N	1	1	0.84	±1.9%	±1.6%
SAR scalingp	± 0.0 %	R	$\sqrt{3}$	1	1	±0.0%	±0.0%
Combined Std. Uncertainty						±14.1%	±13.7%
Expanded STD Uncertainty ( $\kappa =2$ )						±28.2%	±27.4%

## Appendix C Revision History

Original Test Report No.: 14367173H-A

Revision	Test Report No.	Date	Page Revised Contents
- (Original)	14367173H-A	December 26, 2022	-

End of Report