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RF EXPOSURE PART 0 TEST REPORT

Applicant Name:
Apple, Inc.
One Apple Park Way
Cupertino, CA 95014

Date of Testing:
06/05/2025 – 08/01/2025
Test Report Issue Date:
08/22/2025
Test Site/Location:
Element, Morgan Hill, CA, USA
Document Serial No.:
1C2503270029-27.BCG

FCC ID:	**BCG-A3281**
APPLICANT:	**APPLE, INC.**

Report Type: Part 0 SAR Characterization
DUT Type: Watch
Model(s): A3281, A3282

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Test results reported herein relate only to the item(s) tested.

RJ Ortanez
Executive Vice President

ACCREDITED
CERT #2041.02

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1 DEVICE UNDER TEST

1.1 Device Overview

This device uses MediaTek's time-averaged SAR (TAS) feature to control and manage transmitting power in real time and to ensure the time-averaged RF exposure is in compliance with the FCC requirement at all times for WWAN operations. Additionally, this device supports WLAN/BT/802.15.4 ab-NB/UWB, NFC technologies, but the output power of these modems is not controlled by the Smart Transmit algorithm.

Band & Mode	Operating Modes	Tx Frequency
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 17	Voice/Data	706.5 - 713.5 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	790.5 - 795.5 MHz
LTE Band 26 (Cell)	Voice/Data	814.7 - 848.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 53	Voice/Data	2488.5 - 2490 MHz
NR Band n71	Voice/Data	665.5 - 695.5 MHz
NR Band n12	Voice/Data	701.5 - 713.5 MHz
NR Band n14	Voice/Data	790.5 - 795.5 MHz
NR Band n26 (Cell)	Voice/Data	816.5 - 846.5 MHz
NR Band n5 (Cell)	Voice/Data	826.5 - 846.5 MHz
NR Band n66 (AWS)	Voice/Data	1712.5 - 1777.5 MHz
NR Band n25 (PCS)	Voice/Data	1852.5 - 1912.5 MHz
NR Band n2 (PCS)	Voice/Data	1852.5 - 1907.5 MHz
NR Band n7	Voice/Data	2502.5 - 2567.5 MHz
NR Band n41	Voice/Data	2501.01 - 2685.0 MHz
NR Band n53	Voice/Data	2488.5 - 2490MHz
NTN Band 254	Data	1610.2 - 1626 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2472 MHz
5 GHz WIFI	Voice/Data	U-NII-1: 5180 - 5240 MHz U-NII-2A: 5260 - 5320 MHz U-NII-2C: 5500 - 5720 MHz U-NII-3: 5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
802.15.4 ab-NB	Data	5728.75 - 5846.25 MHz
NFC	Data	13.56 MHz
UWB	Data	6489.6 - 7987.2 MHz

1.2 Time-Averaging for SAR

This device is enabled with MediaTek TAS algorithm to control and manage transmitting power in real time and to ensure that the time-averaged RF exposure from WWAN is in compliance with FCC requirements. This Part 0 report shows SAR characterization of WWAN sub-6 radios. Characterization is achieved by determining Psub6_limit for Sub-6 radio that corresponds to the exposure design targets after accounting for all device design related uncertainties, i.e., SAR_design_limit (< FCC SAR limit) for sub-6 radio. The SAR characterization is denoted as SAR Char in this report. Section 1.3 includes a nomenclature of the specific terms used in this report.

The compliance test under the static transmission scenario and simultaneous transmission analysis are reported in Part 1 report. The validation of the time-averaging algorithm and compliance under the dynamic (time- varying) transmission scenario for WWAN technologies are reported in Part 2 report (report SN could be found in Section 1.4 – Bibliography).

1.3 Nomenclature for Part 0 Report

Technology	Term	Description
WWAN	P_{sub6_limit}	Power level that corresponds to the exposure design target (*SAR_design_limit)* after accounting for all device design related uncertainties
	P_{UE_max}	Maximum tune up output power
	SAR_design_limit	Target SAR level < FCC SAR limit after accounting for all device design related uncertainties
	SAR Char	Table containing P_{sub6_limit} for all technologies and bands

1.4 Bibliography

Report Type	Report Serial Number
RF Exposure Part 1 Test Report	1C2503270029-28.BCG
RF Exposure Part 2 Test Report	1C2503270029-29.BCG

2 SAR MEASUREMENTS

2.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 2-1).

Equation 2-1
SAR Mathematical Equation

$$\boxed{SAR = \frac{d}{dt}\left(\frac{dU}{dm}\right) = \frac{d}{dt}\left(\frac{dU}{\rho dv}\right)}$$

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \frac{\sigma \cdot E^2}{\rho}$$

where:

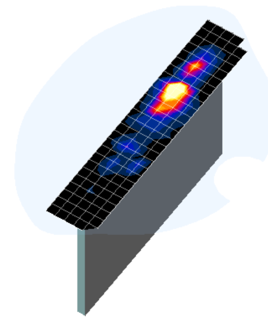
σ	=	conductivity of the tissue-simulating material (S/m)
ρ	=	mass density of the tissue-simulating material (kg/m^3)
E	=	Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relation to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.[6]

2.2 SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 2-1) and IEEE 1528-2013.
2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.



Sample SAR Area Scan

3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See Table 2-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):
    a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in Table . The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).
    b. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.
    c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

Table 2-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

Frequency	Maximum Area Scan Resolution (mm) (Δx_{area}, Δy_{area})	Maximum Zoom Scan Resolution (mm) (Δx_{zoom}, Δy_{zoom})	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			$\Delta z_{zoom}(n)$	$\Delta z_{zoom}(1)$*	$\Delta z_{zoom}(n>1)$*	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	$\leq 1.5*\Delta z_{zoom}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	$\leq 1.5*\Delta z_{zoom}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	$\leq 1.5*\Delta z_{zoom}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	$\leq 1.5*\Delta z_{zoom}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	$\leq 1.5*\Delta z_{zoom}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

3 SAR CHARACTERIZATION

3.1 ECI and SAR Determination

For WWAN operations, this device uses different Exposure Condition Index (ECI) via MediaTek TAS to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the watch, the worst-case SAR was determined by measurements for the relevant exposure conditions for that ECI. Detailed descriptions of the detection mechanisms are included in the operational description.

The exposure condition index (DSI) conditions used in Table 3-1 represent different exposure scenarios.

Table 3-1
DSI and Corresponding Exposure Scenarios

Scenario	Description	SAR Test Cases
(ECI = 1)	▪ Head (next-to-mouth use)	*Wristwatch SAR per KDB Publication 447498 D04*
(ECI = 0)	▪ Extremity (wrist exposure)	*Wristwatch SAR per KDB Publication 447498 D04*

3.2 SAR CHAR

SAR test results corresponding to P_{UE_max} for each antenna/technology/band/ECI can be found in FCC SAR Part 1 Report.

P_{limit} is calculated by linearly scaling with the measured SAR at the Part0/Part 1 to correspond to the SAR_design_target. When $P_{limit} < P_{max}$, Part 1 SAR was used as P_{limit} in the TAS. When $P_{limit} > P_{max}$ and Part0/Part 1=Pmax, calculated Plimit was used in the TAS. All reported SAR obtained from the Part0/Part 1 SAR tests was less than SAR_Design_target + corresponding device uncertainty. The SAR measured in Part 0 at a fixed power level was also used for Part 1 report. The final P_{limit} determination for each exposure scenario corresponding to SAR_design_target are shown in the table below.

Table 3-2
P_{limit} Determination for MTK TAS

Exposure Condition Index (ECI)	P_{limit} Determination Scenarios
1	The worst-case SAR exposure is determined as maximum SAR normalized to the limit based on 1g Head (next-to-mouth use) Wristwatch SAR at 10 mm.
0	The worst-case SAR exposure is determined as maximum SAR normalized to the limit based on 10g Extremity (wrist exposure) Wristwatch SAR at 0 mm.

Table 3-3
SAR Characterizations

Exposure Scenario:	Maximum Tune-up Output Power*	Head	Extremity
Averaging Volume:		1g	10g
Spacing:		10 mm	0 mm
ECI:		1	0
Technology/Band	Pmax		
LTE Band 71	24.50	50.10	31.50
LTE Band 12	24.50	46.20	30.30
LTE Band 17	24.50	N/A	N/A
LTE Band 13	24.50	48.90	30.90
LTE Band 14	24.50	50.10	30.50
LTE Band 26	24.50	54.20	32.60
LTE Band 5	24.50	52.10	32.80
LTE Band 4	24.00	N/A	N/A
LTE Band 66	24.00	28.90	37.00
LTE Band 2	24.00	N/A	N/A
LTE Band 25	24.00	27.90	35.30
LTE Band 7	24.00	18.40	36.50
LTE Band 41	22.00	19.20	36.40
LTE Band 53	20.00	41.90	29.00
NR Band n71	24.50	47.90	31.30
NR Band n12	24.50	48.30	30.10
NR Band n14	24.50	46.30	30.20
NR Band n26	24.50	50.70	32.10
NR Band n5	24.50	53.80	32.10
NR Band n66	24.00	29.30	37.70
NR Band n2	24.00	N/A	N/A
NR Band n25	24.00	26.90	38.30
NR Band n7	24.00	18.40	37.40
NR Band n41	24.00	18.60	37.90
NR Band n53	20.00	40.50	26.30

Notes:

1. All P_{limit} and maximum tune up output power Pmax levels entered in the above table correspond to average power levels after accounting for duty cycle in the case of LTE TDD modulation schemes.
2. When $P_{max} < P_{limit}$, the DUT will operate at a power level up to Pmax.
3. The SAR design limit is determined by accounting for device uncertainty, and the $P_{sub6\ limit}$ is defined as the time-averaged power corresponding to the SAR design limit.
4. Maximum tune up output power Pmax is used to configure EUT during RF tune up procedure. The maximum allowed output power is equal to maximum Tune up output power + 1.20 dB device design uncertainty.

5 EQUIPMENT LIST

For SAR measurements

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4404B	Spectrum Analyzer	N/A	N/A	N/A	MY45113242
Agilent	E4438C	ESG Vector Signal Generator	10/23/2024	Annual	10/23/2025	MY45093852
Agilent	E4438C	ESG Vector Signal Generator	11/15/2024	Annual	11/15/2025	MY45092078
Agilent	N5182A	MXG Vector Signal Generator	5/30/2025	Annual	5/30/2026	MY48180366
Agilent	N5182A	MXG Vector Signal Generator	12/5/2024	Annual	12/5/2025	US46240505
Agilent	8753ES	S-Parameter Vector Network Analyzer	1/6/2025	Annual	1/6/2026	MY40001472
Agilent	8753ES	S-Parameter Vector Network Analyzer	9/25/2024	Annual	9/25/2025	MY40003841
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	GB46310798
Agilent	E5515C	Wireless Communications Test Set	CBT	N/A	CBT	GB41450275
Agilent	N4010A	Wireless Connectivity Test Set	N/A	N/A	N/A	GB46170464
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433973
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433974
Amplifier Research	150A100C	Amplifier	CBT	N/A	CBT	350132
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Rhode & Shwarz	NRX	Power Meter	1/30/2025	Annual	1/30/2026	102583
Rhode & Shwarz	NRX	Power Meter	2/24/2025	Annual	2/24/2026	102582
Anritsu	MA2411B	Pulse Power Sensor	9/5/2024	Annual	9/5/2025	1726262
Anritsu	MA2411B	Pulse Power Sensor	10/21/2024	Annual	10/21/2025	1027293
Anritsu	MA24106A	USB Power Sensor	5/29/2025	Annual	5/29/2026	1344554
Anritsu	MA24106A	USB Power Sensor	10/29/2024	Annual	10/29/2025	1248508
Mini-Circuits	PWR-4GHS	9-KHz-4000MHz USB Power Sensor	6/20/2025	Annual	6/20/2026	12503270057
Insize	1108-150	Digital Caliper	2/25/2025	Annual	2/25/2026	711245294
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240174346
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240171096
Control Company	4052	Long Stem Thermometer	2/27/2024	Biennial	2/27/2026	240171059
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310280
Control Company	4040	Therm./ Clock/ Humidity Monitor	10/15/2024	Biennial	10/15/2026	240763503
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Keysight Technologies	N9020A	MXA Signal Analyzer	2/7/2025	Annual	2/7/2026	MY53421544
Keysight Technologies	N9020A	MXA Signal Analyzer	6/4/2025	Annual	6/4/2026	MY56470202
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Mini-Circuits	ZUDC10-83-S+	Directional Coupler	CBT	N/A	CBT	2050
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Narda	BW-S3W2	Attenuator (3dB)	CBT	N/A	CBT	120
Seekonk	NC-100	Torque Wrench	CBT	N/A	CBT	22217
Seekonk	NC-100	Torque Wrench	4/2/2024	Biennial	4/2/2026	1262
GW Instek	GPS-3030DD	D.C. Power Supply	N/A	N/A	N/A	GEX823589
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	120504
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	109366
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	155128
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	102060
Rohde & Schwarz	CMW500	Wideband Radio Communication Tester	CBT	N/A	CBT	167112
SPEAG	DAK-3.5	Dielectric Assessment Kit	11/5/2024	Annual	11/5/2025	1277
SPEAG	DAKS-3.5	Portable Dielectric Assessment Kit	8/7/2024	Annual	8/7/2025	1041
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1237
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1331
SPEAG	MAIA	Modulation and Audio Interference Analyzer	N/A	N/A	N/A	1390
SPEAG	DAK-12	Dielectric Assessment Kit (4MHz - 3GHz)	3/10/2025	Annual	3/10/2026	1102
SPEAG	CLA-13	Confined Loop Antenna	11/11/2024	Annual	11/11/2025	1004
SPEAG	D750V3	750 MHz SAR Dipole	5/9/2025	Annual	5/9/2026	1057
SPEAG	D750V3	750 MHz SAR Dipole	9/13/2023	Biennial	9/13/2025	1097
SPEAG	D835V2	835 MHz SAR Dipole	11/18/2022	Triennial	11/18/2025	4d108
SPEAG	D1640V2	1640 MHz SAR Dipole	12/13/2022	Biennial	10/6/2025	321
SPEAG	D1750V2	1750 MHz SAR Dipole	11/17/2022	Triennial	11/17/2025	1040
SPEAG	D1900V2	1900 MHz SAR Dipole	8/8/2023	Biennial	8/8/2025	5d180
SPEAG	D2450V2	2450 MHz SAR Dipole	10/23/2024	Annual	10/23/2025	921
SPEAG	D2450V2	2450 MHz SAR Dipole	5/13/2025	Annual	5/13/2026	750
SPEAG	D2450V2	2450 MHz SAR Dipole	11/15/2022	Triennial	11/15/2025	855
SPEAG	D2600V2	2600 MHz SAR Dipole	5/7/2025	Annual	5/7/2026	1042
SPEAG	D2600V2	2600 MHz SAR Dipole	9/12/2023	Biennial	9/12/2025	1069
SPEAG	D5GHzV2	5 GHz SAR Dipole	11/8/2024	Annual	11/8/2025	1066
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/10/2025	Annual	4/10/2026	1582
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/8/2025	Annual	1/8/2026	1465
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/15/2025	Annual	4/15/2026	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/10/2024	Annual	10/10/2025	1408
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/10/2024	Annual	10/10/2025	1237
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/6/2025	Annual	2/6/2026	467
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/9/2025	Annual	4/9/2026	501
SPEAG	EX3DV4	SAR Probe	4/11/2025	Annual	4/11/2026	7357
SPEAG	EX3DV4	SAR Probe	1/14/2025	Annual	1/14/2026	7499
SPEAG	EX3DV4	SAR Probe	4/16/2025	Annual	4/16/2026	7551
SPEAG	EX3DV4	SAR Probe	2/10/2025	Annual	2/10/2026	7427
SPEAG	EX3DV4	SAR Probe	10/15/2024	Annual	10/15/2025	3746
SPEAG	EX3DV4	SAR Probe	3/6/2025	Annual	3/6/2026	7638
SPEAG	EX3DV4	SAR Probe	4/16/2025	Annual	4/16/2026	7532

Note:

1. CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.
2. Each equipment item was used solely within its respective calibration period.

6 MEASUREMENT UNCERTAINTIES

Applicable for SAR measurements < 6 GHz:

a	b	c	d	e= f(d,k)	f	g	h = c x f/e	i = c x g/e	k
Uncertainty Component	IEEE 1528 Sec.	Tol. (± %)	Prob. Dist.	Div.	c_i 1gm	c_i 10 gms	1gm u_i (± %)	10gms u_i (± %)	v_i
Measurement System									
Probe Calibration	E2.1	7	N	1	1	1	7.0	7.0	∞
Axial Isotropy	E2.2	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	E2.2	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	E2.3	2	R	1.732	1	1	1.2	1.2	∞
Linearity	E2.4	0.3	N	1	1	1	0.3	0.3	∞
System Detection Limits	E2.4	0.25	R	1.732	1	1	0.1	0.1	∞
Modulation Response	E2.5	4.8	R	1.732	1	1	2.8	2.8	∞
Readout Electronics	E2.6	0.3	N	1	1	1	0.3	0.3	∞
Response Time	E2.7	0.8	R	1.732	1	1	0.5	0.5	∞
Integration Time	E2.8	2.6	R	1.732	1	1	1.5	1.5	∞
RF Ambient Conditions - Noise	E6.1	3	R	1.732	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E6.1	3	R	1.732	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E6.2	0.8	R	1.732	1	1	0.5	0.5	∞
Probe Positioning w/ respect to Phantom	E6.3	6.7	R	1.732	1	1	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	E5	4	R	1.732	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E4.2	3.12	N	1	1	1	3.1	3.1	35
Device Holder Uncertainty	E4.1	1.67	N	1	1	1	1.7	1.7	5
Output Power Variation - SAR drift measurement	E2.9	5	R	1.732	1	1	2.9	2.9	∞
SAR Scaling	E6.5	0	R	1.732	1	1	0.0	0.0	∞
Phantom & Tissue Parameters									
Phantom Uncertainty (Shape & Thickness tolerances)	E3.1	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	E3.3	4.3	N	1	0.78	0.71	3.3	3.0	76
Liquid Permittivity - measurement uncertainty	E3.3	4.2	N	1	0.23	0.26	1.0	1.1	75
Liquid Conductivity - Temperature Uncertainty	E3.4	3.4	R	1.732	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Unceritainty	E3.4	0.6	R	1.732	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	E3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	E3.2	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)			RSS				12.2	12.0	191
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				24.4	24.0	

The above measurement uncertainties are according to IEEE Std. 1528-2013