

**4. AD-Converter Values with inputs shorted**  
DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	15940	15900
Channel Y	16134	12789
Channel Z	15911	16844

**5. Input Offset Measurement**

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Input: 10MΩ

	Average (µV)	min. Offset (µV)	max. Offset (µV)	Std. Deviation (µV)
Channel X	1.16	0.11	3.01	0.45
Channel Y	0.12	-0.83	1.50	0.46
Channel Z	-0.42	-1.81	0.51	0.42

**6. Input Offset Current**

Nominal input circuitry offset current on all channels: <25fA

**7. Input Resistance** (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

**8. Low Battery Alarm Voltage** (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

**9. Power Consumption** (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	-0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

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## ES3DV3 Sn:3127

Calibration Laboratory of  
Schmid & Partner  
Engineering AG  
Zeughausstrasse 45, 8004 Zurich, Switzerland



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Multilateral Agreement for the recognition of calibration certificates

Client SRTC (Audem)

Accreditation No.: SCS 0108

Certificate No.: ES3-3127\_Aug19

### CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3127

Calibration procedure(s): QA CAL-01-v9, QA CAL-23.v5, QA CAL-25.v7  
Calibration procedure for dosimetric E-field probes

Calibration date: August 27, 2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closest laboratory facility, environment temperature ( $(22 \pm 3)^\circ\text{C}$ ) and humidity < 70%.

Calibration Equipment used (MATE critical for calibration):

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter HP 8411B	SN: 109776	23-Apr-19 (No. 217-02860/02863)	Apr-20
Power sensor NRP-291	SN: 103241	05-Apr-19 (No. 217-02861)	Apr-20
Power sensor NRP-291	SN: 103245	05-Apr-19 (No. 217-02860)	Apr-20
Reference 70 dB Attenuator	SN: 95277 (pzx)	04-Apr-19 (No. 217-02864)	Apr-20
DAB-I	SN: 602	19-Dec-18 (No. DAB-4-499, Dec19)	Dec-19
Reference Probe ED3DV2	SN: 3013	31-Dec-18 (No. ED3-3013, Dec18)	Dec-19
Network Analyzer ES358A	SN: US4-108047	31-Mar-19 (No. house check Oct-19)	In house check

Secondary Standards	ID	Check Date (In House)	Scheduled Check
Power meter E411B	SN: GB41210814	05-Apr-18 (In house check Jun-18)	In house check Jun-20
Power sensor DAB-4	SN: 70011259	05-Apr-18 (In house check Jun-17)	In house check Jun-20
Power sensor DAB-4	SN: 70011250	05-Apr-18 (In house check Jun-17)	In house check Jun-20
RF generator HP 8640C	SN: U53642010705	04-Aug-99 (In house check Jun-19)	In house check Jun-20
Network Analyzer ES358A	SN: US4-108047	31-Mar-19 (In house check Oct-19)	In house check Oct-19

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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Information used in DASY system to align probe sensor X to the robot coordinate system

### Glossary:

- TSL: tissue simulating liquid
- NORM<sub>x,y,z</sub>: sensitivity in free space
- ConvF: Convolutional Filter
- DCP: crest factor (10bury, cycle) of the RF signal
- A, B, C, D: numerical linearization parameters
- Polarization<sub>y</sub>: y rotation around an axis that is in the plane normal to probe axis
- Polarization<sub>z</sub>: z rotation around an axis that is in the plane normal to probe axis, i.e.,  $\beta = 0$  is normal to probe axis
- Connector Angle: information used in DASY system to align probe sensor X to the robot coordinate system

### Calibration is performed According to the Following Standards:

- a) IEC 62209-1, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Systems - Measurement Techniques", June 2013
- b) IEC 62209-1, "Measuring procedure for the average Specific Absorption Rate (SAR) from handheld mobile phones and devices used next to the ear (frequency range of 300 MHz to 6 GHz)", June 2016
- c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- d) KDB 685964, "SAR Measurement Requirements (100 MHz to 6 GHz)"

### Method Applied and Numerical Parameters:

- NORM<sub>x,y,z</sub> is only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM<sub>f(x,y,z)</sub> = NORM<sub>x,y,z</sub> \* frequency response (see Frequency Response Chart). This linearization is performed in DASY version 4.4 and versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signals. No frequency required. DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- Ax,y,z, Bx,y,z, Cx,y,z, Dx,y,z, VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep with CW signals. No frequency required. VR is the maximum calibration range expressed in RMS voltage across the clamps.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom, using E-field (or Transfer Function) or boundary compensation methods. The same set up is used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY 4.4 to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF. The same set up is used for Transfer Function. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from a 50 MHz to a 100 MHz.
- Spatial isotropy (2D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORM<sub>x,y,z</sub> no uncertainty required.

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ES3DV3 - SN:3127

August 27, 2019

### DASY/EASY - Parameters of Probe: ES3DV3 - SN:3127

#### Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (dV/V/m) <sup>2</sup>	1.26	1.23	1.19	± 10.1 %
DCP (mV)	103.2	103.9	103.8	

#### Calibration Results for Modulation Response

UID	Communication System Name	A	B	C	D	VR	Max dev	Unc <sup>1</sup> (k=2)
0	GW	X 0.0	0.0	1.0	0.00	216.9	± 3.5 %	± 4.7 %
		Y 0.0	0.0	1.0	0.00	214.8		
		Y 0.0	0.0	1.0	0.00	213.3		

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

<sup>1</sup> The uncertainties of Norm X,Y,Z on effect the E<sup>2</sup> field uncertainty inside TSL (see Page 5).

<sup>2</sup> Uncertainty determined using the true deviation from linear regression applying rectangular distribution and it is expressed for the square of the field value.

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ES3DV3 - SN:3127

August 27, 2019

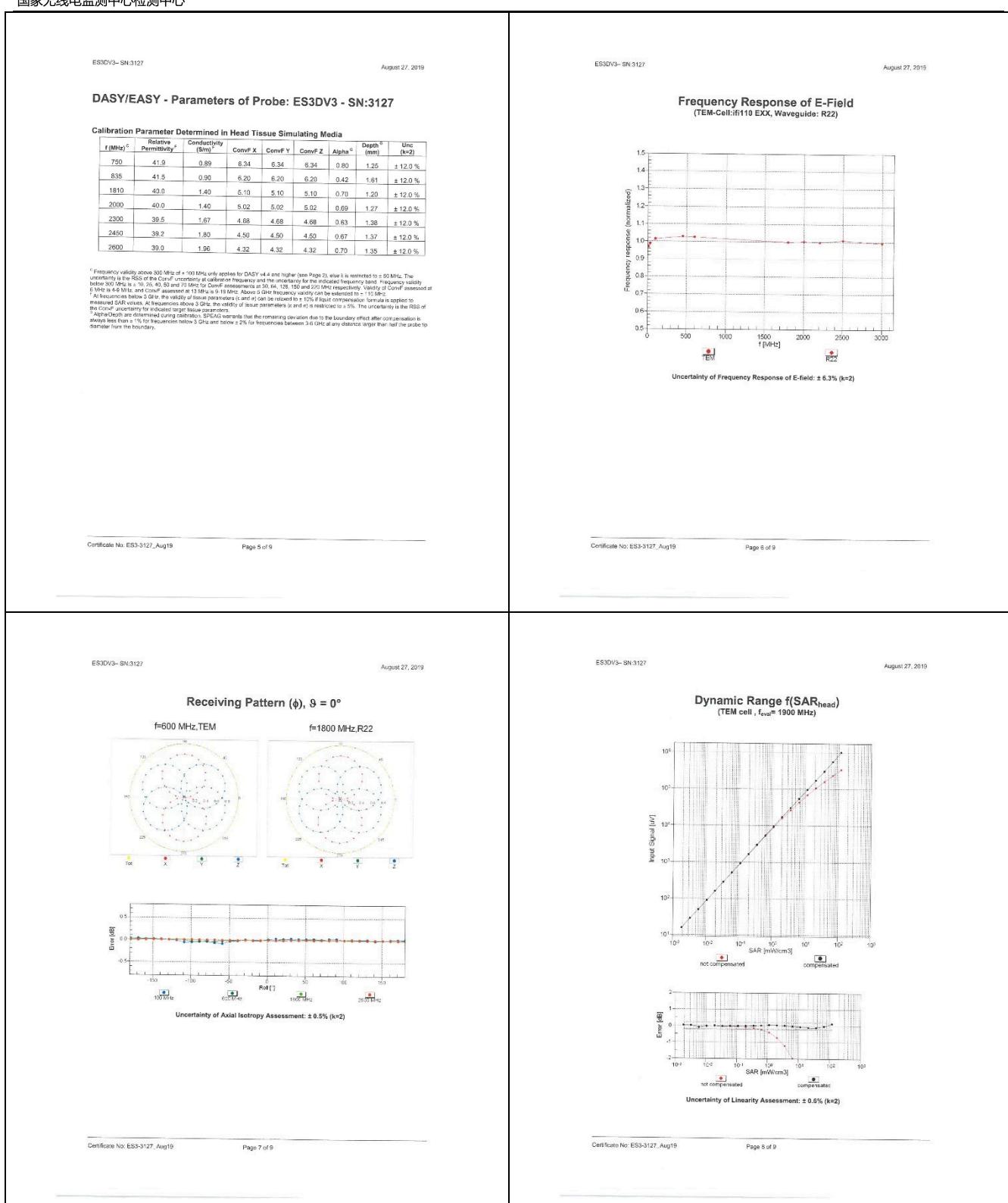
### DASY/EASY - Parameters of Probe: ES3DV3 - SN:3127

#### Other Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-19
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

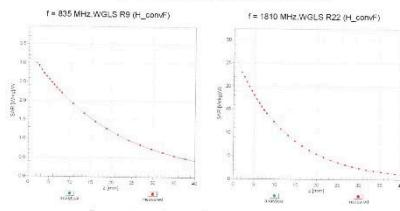
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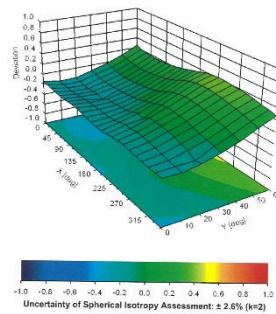
ES3DY3-SN 3127 August 27, 2019

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error ( $\theta, \phi$ ), f = 900 MHz



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FX3DV4 3708

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3708								September 26, 2019
Calibration Parameter Determined In Head Tissue Simulating Media								
t(Msec) <sup>a</sup>	Relative Penetrability <sup>b</sup>	Conductivity (S/m) <sup>c</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>d</sup>	Depth <sup>e</sup> (mm)	Units <sup>f</sup> (m <sup>-2</sup> )
450	43.5	0.87	10.04	10.04	10.04	0.15	1.20	+13.3%
750	41.9	0.89	9.63	9.63	9.63	0.67	0.80	+12.0%
835	41.5	0.90	9.48	9.48	9.48	0.60	0.80	+12.0%
1450	40.5	1.20	8.59	8.59	8.59	0.41	0.80	+12.0%
1750	40.1	1.37	8.41	8.41	8.41	0.36	0.87	+12.0%
1900	40.0	1.40	8.10	8.10	8.10	0.35	0.87	+12.0%
2000	40.0	1.43	8.09	8.09	8.09	0.35	0.87	+12.0%
2300	39.5	1.67	7.69	7.69	7.69	0.39	0.90	+12.0%
2450	39.2	1.80	7.50	7.50	7.50	0.28	0.90	+12.0%
2600	39.0	1.96	7.37	7.37	7.37	0.32	0.90	+12.0%
3300	36.2	2.71	8.91	6.91	6.91	0.40	1.35	+31.1%
3500	37.9	2.91	6.78	6.78	6.78	0.40	1.35	+31.1%
3700	37.7	3.12	6.50	6.50	6.50	0.40	1.35	+31.1%
3900	37.5	3.32	6.34	6.34	6.34	0.40	1.60	+31.1%
4100	37.2	3.03	6.23	6.23	6.23	0.35	1.60	+31.1%
4200	37.1	3.63	6.22	6.22	6.22	0.40	1.00	+31.1%
4400	36.9	3.84	5.82	5.82	5.82	0.40	1.70	+31.1%
4500	36.7	4.04	5.81	5.81	5.81	0.40	1.70	+31.1%
4800	36.4	4.25	5.80	5.80	5.80	0.40	1.80	+31.1%
4950	36.3	4.40	5.70	5.70	5.70	0.40	1.80	+31.1%
5200	36.0	4.66	5.63	5.63	5.63	0.40	1.80	+31.1%
5300	35.9	4.78	5.48	5.48	5.48	0.40	1.80	+31.1%
5500	35.6	4.96	5.20	5.20	5.20	0.40	1.80	+31.1%
5600	35.5	5.07	5.05	5.05	5.05	0.40	1.80	+31.1%
5800	35.2	5.07	5.17	5.17	5.17	0.40	1.80	+31.1%

Frequency validity above 300 MHz or  $\approx 10\%$  Mrad only applies for Delta- $\Delta$  and Energy Loss. G(r) is often not recorded at 100 eV. The uncertainty in the RGS of the energy loss function is often larger than the problem in the frequency range. Frequency validity below 300 MHz is often limited by the energy loss function. At 100 eV, 120, 150 and 220 eV respectively. Validity of Cernf is assessed at 100 eV, 120 eV, 150 eV and 220 eV. Above 1 GHz frequency validity is extended to  $\approx 110$  eV.

All frequencies (e.g. 50 eV, the validity of  $\langle B^2 \rangle$ , parameters (a) and (c)) can be used to  $\approx 10\%$  (RMS) wavelength.  $\lambda_{\text{RMS}} = 10 \text{ nm}$ .

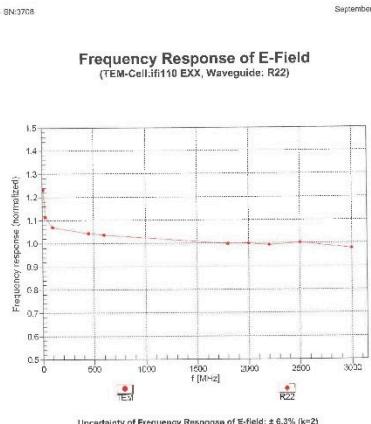
At higher frequencies, the validity of basis parameters (a) and (c) is reduced to  $\approx 5\%$ . The uncertainty in the RGS of the Cernf uncertainty is indicated to get robust parameters.

AlphaDep is a series limit during calculation. SFLA warns that the remaining deviation to the boundary for over-relaxation is about 10% of the current value. The series limit is set to 3.5% and 0.5% for  $\langle B^2 \rangle$  or for  $\langle \delta \rangle$  respectively. Deviations larger than the probe radius from the boundary are ignored.

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Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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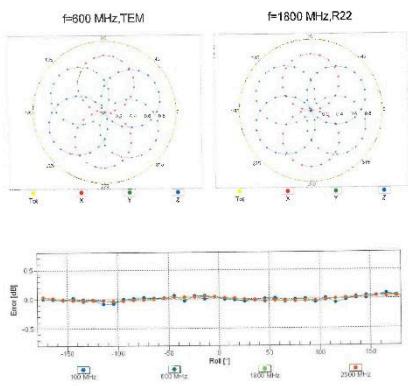
Certificate No: EX3-3708\_Sep19

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EX-2014-SN12709

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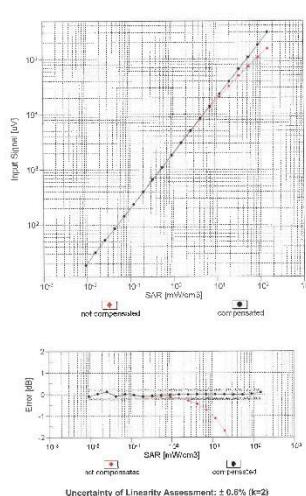
#### Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$



Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

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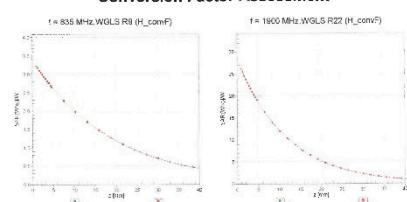
Classification No: EX3-5708\_Sep19

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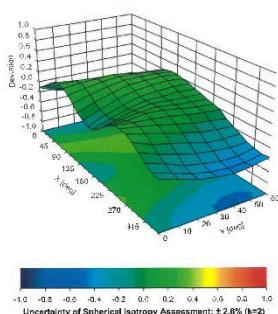
EX3DV4-SN3708

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### Conversion Factor Assessment



Deviation from Isotropy in Liquid  
Error ( $\theta$ ,  $\delta$ ),  $f = 900$  MHz



Uncertainty of Spherical Isotropy Assessment:  $\pm 0.6\%$  ( $k=2$ )

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### Appendix: Modulation Calibration Parameters

Unit	Rev	Communication System Name	Group	PAR (dB)	Unc. (k=2)
B	CW		CW	0.00	$\pm 0.6\%$
100101	CAC	IEEE 802.11n WiFi (Subrate, 10 Mbps)	WLAN	10.03	$\pm 0.6\%$
100112	CAC	UMTS-FDD (SC-FDMA, 10Mbps)	WCDMA	2.91	$\pm 0.6\%$
100121	CAC	IEEE 802.11a WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.45	$\pm 0.6\%$
100211	CAC	IEEE 802.11a WiFi 2.4 GHz (OFDM-OFDM, 6 Mbps)	WLAN	9.39	$\pm 0.6\%$
100221	DAC	GPRS-FDD (TDMA, CM3GK, TN 0)	GSM	0.57	$\pm 0.6\%$
100231	DAC	GPRS-FDD (TDMA, CM3GK, TN 1)	GSM	6.50	$\pm 0.6\%$
100240	DAC	GPRS-FDD (TDMA, CM3GK, TN 2)	GSM	12.87	$\pm 0.6\%$
100250	DAC	GPRS-FDD (TDMA, CM3GK, TN 3)	GSM	12.87	$\pm 0.6\%$
100260	DAC	GPRS-FDD (TDMA, CM3GK, TN 4)	GSM	12.87	$\pm 0.6\%$
100270	DAC	GPRS-FDD (TDMA, CM3GK, TN 5)	GSM	12.87	$\pm 0.6\%$
100281	DAC	GPRS-FDD (TDMA, CM3GK, TN 6)	GSM	4.80	$\pm 0.6\%$
100291	DAC	EDGE-FDD (TDMA, GPRS, TN 1-2)	GSM	3.55	$\pm 0.6\%$
100301	CAC	IEEE 802.11b WiFi (GPRS, DH1)	WLAN	5.30	$\pm 0.6\%$
100312	CAC	IEEE 802.15.1 Bluetooth (GPRS, LHE)	Bluetooth	1.67	$\pm 0.6\%$
100322	CAC	IEEE 802.15.1 Bluetooth (GPRS, DH1)	Bluetooth	7.74	$\pm 0.6\%$
100332	CAC	IEEE 802.15.1 Bluetooth (PWR-UDPSK, DH1)	Bluetooth	4.03	$\pm 0.6\%$
100342	CAC	IEEE 802.15.1 Bluetooth (PWR-UDPSK, DH1)	Bluetooth	1.30	$\pm 0.6\%$
100352	CAC	IEEE 802.15.1 Bluetooth (PWR-UDPSK, DH1)	Bluetooth	8.07	$\pm 0.6\%$
100362	CAC	IEEE 802.15.1 Bluetooth (PWR-UDPSK, DH1)	Bluetooth	4.77	$\pm 0.6\%$
100372	CAC	IEEE 802.15.1 WiFi (GPRS, DH1)	WLAN	1.20	$\pm 0.6\%$
100382	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 1.0 Mbps)	WLAN	2.12	$\pm 0.6\%$
100392	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 1.0 Mbps)	WLAN	3.00	$\pm 0.6\%$
100402	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 1.0 Mbps)	WLAN	9.68	$\pm 0.6\%$
100412	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 1.0 Mbps)	WLAN	9.11	$\pm 0.6\%$
100422	CAC	CDMA2000 (1xEV-DO, RC-FDD, R1)	CDMA2000	4.67	$\pm 0.6\%$
100432	CAC	IS-95 (EV-DO, 1xEV-DO, R2, TDMA, FDD, FA)	AMPS	2.79	$\pm 0.6\%$
100442	CAC	IEEE 802.11b WiFi (GPRS, Full Rate, 24)	WLAN	13.80	$\pm 0.6\%$
100452	CAC	UMTS-FDD (TDMA, SC-FDMA, 12 Mbps)	TD-SCDMA	10.79	$\pm 0.6\%$
100462	CAC	EDGE-TDD (TDMA, SC-FDMA, 12 Mbps)	GSM	6.02	$\pm 0.6\%$
100472	CAC	EDGE-TDD (TDMA, SC-FDMA, 12 Mbps)	TD-SCDMA	10.79	$\pm 0.6\%$
100482	CAC	IEEE 802.11b WiFi (GPRS, 1.0 Mbps)	WLAN	9.09	$\pm 0.6\%$
100492	CAC	IEEE 802.11b WiFi (GPRS, 24 Mbps)	WLAN	9.08	$\pm 0.6\%$
100502	CAC	IEEE 802.11b WiFi (GPRS, 36 Mbps)	WLAN	<0.12	$\pm 0.6\%$
100512	CAC	IEEE 802.11b WiFi (GPRS, 48 Mbps)	WLAN	10.54	$\pm 0.6\%$
100522	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 5 Mbps)	WLAN	9.85	$\pm 0.6\%$
100532	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 18 Mbps)	WLAN	9.84	$\pm 0.6\%$
100542	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 24 Mbps)	WLAN	10.39	$\pm 0.6\%$
100552	CAC	IEEE 802.11b WiFi 2.4 GHz (GPRS, 48 Mbps)	WLAN	10.94	$\pm 0.6\%$
100562	CAC	CDMA2000 (1xEV-DO, R4)	CDMA2000	11.00	$\pm 0.6\%$
100572	CAC	IS-95 (EV-DO, R4)	AMPS	4.77	$\pm 0.6\%$
100582	CAC	UMTS-FDD (TDMA, SC-FDMA, IS-95)	GSM	6.55	$\pm 0.6\%$
100592	CAC	UMTS-FDD (TDMA, SC-FDMA, Subrate 2)	WCDMA	3.58	$\pm 0.6\%$
100602	CAC	UMTS-FDD (TDMA, SC-FDMA, 12 Mbps)	TD-SCDMA	10.79	$\pm 0.6\%$
100612	CAC	UMTS-FDD (TDMA, SC-FDMA, 12 Mbps, DPSK)	TD-SCDMA	10.79	$\pm 0.6\%$
100622	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps)	TD-SCDMA	10.79	$\pm 0.6\%$
100632	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, DPSK)	TD-SCDMA	10.79	$\pm 0.6\%$
100642	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, QPSK)	TD-SCDMA	10.79	$\pm 0.6\%$
100652	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 16-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100662	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 25-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100672	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 32-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100682	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 48-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100692	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 64-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100702	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 84-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100712	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 108-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100722	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100732	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 192-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100742	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 256-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100752	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 324-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100762	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 432-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100772	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 576-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100782	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 768-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100792	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 1008-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100802	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 1344-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100812	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 1728-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100822	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 2160-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100832	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 2688-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100842	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 3312-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100852	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 4032-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100862	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 4896-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100872	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 5904-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100882	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 7104-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100892	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 8544-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100902	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 10240-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100912	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 12144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100922	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 14256-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100932	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 16512-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100942	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 19008-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100952	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 21712-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100962	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 24672-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100972	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 27808-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100982	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 31184-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
100992	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 34704-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101002	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 38432-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101012	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 42368-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101022	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 46400-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101032	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 50640-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101042	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 55040-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101052	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 60640-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101062	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 66544-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101072	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 73744-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101082	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 81344-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101092	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 89344-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101102	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 97744-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101112	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 106648-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101122	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 116144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101132	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 126448-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101142	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 137448-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101152	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 149144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101162	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 161848-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101172	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 175144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101182	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 189448-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101192	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 204144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101202	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 219848-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101212	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 236144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101222	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 253144-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101232	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 270848-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101242	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 289248-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101252	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 308448-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101262	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 328548-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101272	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 349548-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101282	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 371448-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101292	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 394248-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101302	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 417948-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101312	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 442548-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101322	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 468148-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101332	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 494648-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101342	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 522148-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101352	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 551148-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101362	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 581548-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101372	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 612848-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101382	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 644948-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101392	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 678048-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101402	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 712948-QAM)	TD-SCDMA	10.79	$\pm 0.6\%$
101412	CAC	TD-SCDMA (TDMA, TDMA, 12 Mbps, 75004			



国家无线电监测中心检测中心

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No.: SRTC2019-9004(F)-19101501(H)  
FCC ID:2ADOBHLTE220E

04923	AEE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe 3, 4.7.8)	LTE-TDD	8.41 ± 0.6%
04933	AEE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe 3, 4.8 (3,9))	LTE-TDD	8.55 ± 0.6%
04943	AEE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	7.74 ± 0.6%
04953	AEE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe 3, 4.8 (3,8))	LTE-TDD	8.37 ± 0.6%
04963	AEE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe 3, 4.8 (3,8))	LTE-TDD	8.54 ± 0.6%
04973	AEE	LTE-TDD (SC-FDMA, 100% RB, 14 MHz, QPSK, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	7.67 ± 0.6%
04983	AEE	LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.40 ± 0.6%
04993	AEE	LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.68 ± 0.6%
05003	AEE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe 3, 4.8 (3,8))	LTE-TDD	7.67 ± 0.6%
05013	AEE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.44 ± 0.6%
05023	AEE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.02 ± 0.6%
05033	AEE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	7.72 ± 0.6%
05043	AEE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.31 ± 0.6%
05053	AEE	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.54 ± 0.6%
05063	AEE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	7.74 ± 0.6%
05073	AEE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.36 ± 0.6%
05083	AEE	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.55 ± 0.6%
05093	AEE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	7.99 ± 0.6%
05103	AEE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.49 ± 0.6%
05113	AEE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.51 ± 0.6%
05123	AEE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	7.74 ± 0.6%
05133	AEE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.42 ± 0.6%
05143	AEE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe 3, 4.7 (3,4,7))	LTE-TDD	8.45 ± 0.6%
05153	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 5Mbps, 800ns duty cycle)	WLAN	1.58 ± 0.5%
05163	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 10Mbps, 800ns duty cycle)	WLAN	1.58 ± 0.5%
05173	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 20Mbps, 800ns duty cycle)	WLAN	1.58 ± 0.5%
05183	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 30Mbps, 800ns duty cycle)	WLAN	8.23 ± 0.5%
05193	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 40Mbps, 800ns duty cycle)	WLAN	8.17 ± 0.5%
05203	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 50Mbps, 800ns duty cycle)	WLAN	7.97 ± 0.5%
05213	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 60Mbps, 800ns duty cycle)	WLAN	1.08 ± 0.5%
05223	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 70Mbps, 800ns duty cycle)	WLAN	1.08 ± 0.5%
05233	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 80Mbps, 800ns duty cycle)	WLAN	2.27 ± 0.5%
05243	AEE	IEEE 802.11b Wi-Fi 2.4 GHz (802.11b, 90Mbps, 800ns duty cycle)	WLAN	2.42 ± 0.5%
05253	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 100Mbps, 800ns duty cycle)	WLAN	2.42 ± 0.5%
05263	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 110Mbps, 800ns duty cycle)	WLAN	2.91 ± 0.5%
05273	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 120Mbps, 800ns duty cycle)	WLAN	3.21 ± 0.5%
05283	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 130Mbps, 800ns duty cycle)	WLAN	3.96 ± 0.5%
05293	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 140Mbps, 800ns duty cycle)	WLAN	4.23 ± 0.5%
05303	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 150Mbps, 800ns duty cycle)	WLAN	4.53 ± 0.5%
05313	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 160Mbps, 800ns duty cycle)	WLAN	4.83 ± 0.5%
05323	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 170Mbps, 800ns duty cycle)	WLAN	4.88 ± 0.5%
05333	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 180Mbps, 800ns duty cycle)	WLAN	4.88 ± 0.5%
05343	AEE	IEEE 802.11b Wi-Fi 2.4GHz (802.11b, 190Mbps, 800ns duty cycle)	WLAN	4.85 ± 0.5%

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10451	AAB	W-COMA (BS-TD Model T, 14 MHz, Clipping: 44%)	WCDMA UL
10456	AAB	IIEEE P25 14MHz WTRU, 64-QAM, 9500 Byte (9x3)	WLAN WCDMA
10458	AAB	CDMA2000 (EV-DO Rev. B, 2 carriers)	CDMA2000
10459	AAB	CDMA2000 (EV-DO Rev. B, 3 carriers)	CDMA2000
10461	AAB	LTE TDD (SC-FDMA, 1.8 GHz, 14 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10462	AAB	LTE TDD (SC-FDMA, 1.8 GHz, 14 MHz, QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10463	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 14 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10464	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 14 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10465	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 14 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10466	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 14 MHz, QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10467	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 14 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10468	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 14 MHz, QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10469	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 14 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10470	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 10 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10711	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 10 MHz, 16-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10712	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 10 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10713	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 10 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10743	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 10 MHz, QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10745	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 5 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10747	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 20 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10748	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 20 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10749	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 50%, 14 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10460	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 50%, 14 MHz, QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10811	AAB	LTE-TDD (SC-FDMA, 1.8 GHz, 50%, 14 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10492	AAC	LTE-TIAU (SC-FDMA, 1.8 GHz, 64-QAM, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10483	AAC	LTE-TDD (SC-FDMA, 5 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10461	AAC	LTE-TDD (SC-FDMA, 5 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10485	AAC	LTE-TDD (SC-FDMA, 400%, 5 MHz, 14 MHz, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10486	AAC	LTE-TDD (SC-FDMA, 400%, 5 MHz, 14 MHz, QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10487	AAC	LTE-TDD (SC-FDMA, 50%, 10 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10488	AAC	LTE-TDD (SC-FDMA, 50%, 10 MHz, 64-QAM, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10489	AAC	LTE-TDD (SC-FDMA, 50%, 10 MHz, 64-QAM, UL Subframe<3,4,7,8>)	LTE-TDD
10490	AAC	LTE-TDD (SC-FDMA, 50%, 10 MHz, 64-QAM, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD
10491	AAC	LTE-TDD (SC-FDMA, 50%, 10 MHz, 64-QAM, QPSK, UL Subframe<3,4,7,8>)	LTE-TDD

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V3.0.0



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Test ID	Test Description	Test Type	Test Result
10055 AAAE	LTC-100 (LTC-100) - 20MHz, E-TM 3.1, Clipping 44%	LTC-TDD	7.21 ± 0.6%
10056 AAAE	EIEC 802.11ac (80MHz, MIMO, 2x2, 60GHz, 100mW)	Test	10.09 ± 0.6%
10059 AAAA	Pulse Waveform (20MHz, 20%)	Test	0.94 ± 0.0%
10060 AAAA	Pulse Waveform (20MHz, 40%)	Test	0.94 ± 0.0%
10062 AAAA	Pulse Waveform (20MHz, 60%)	Test	2.22 ± 0.0%
10070 AAAA	E-Bandwidth Low Energy	Bluetooth	2.15 ± 0.4%
10124 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.95 ± 0.6%
10073 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.78 ± 0.3%
10075 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.74 ± 0.3%
10076 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.90 ± 0.5%
10078 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	2.77 ± 0.7%
10079 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	5.73 ± 1.9%
10080 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	5.78 ± 0.9%
10081 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.80 ± 1.0%
10082 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.62 ± 0.9%
10083 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	1.37 ± 0.3%
10084 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.78 ± 0.8%
10085 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.79 ± 0.6%
10086 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	3.37 ± 0.3%
10087 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.82 ± 0.6%
10088 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.94 ± 0.6%
10089 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.90 ± 0.6%
10090 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.65 ± 0.6%
10091 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.29 ± 0.5%
10092 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.81 ± 0.6%
10093 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.79 ± 0.6%
10094 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	6.25 ± 0.5%
10095 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.74 ± 0.6%
10096 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.91 ± 0.6%
10097 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.74 ± 0.6%
10098 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.89 ± 0.6%
10099 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.81 ± 0.6%
10100 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.82 ± 0.6%
10101 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.81 ± 0.6%
10102 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.98 ± 0.6%
10103 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.70 ± 0.8%
10104 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.81 ± 0.6%
10105 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.96 ± 0.6%
10106 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	6.69 ± 0.6%
10107 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.81 ± 0.6%
10108 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.82 ± 0.6%
10109 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.55 ± 0.6%
10110 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.82 ± 0.6%
10111 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.80 ± 0.6%
10112 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.39 ± 0.6%
10113 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.33 ± 0.6%
10114 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.70 ± 0.6%
10115 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.80 ± 0.6%
10116 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.30 ± 0.6%
10117 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.48 ± 0.6%
10118 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.81 ± 0.6%
10119 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.81 ± 0.6%
10120 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.57 ± 0.6%
10121 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.73 ± 0.6%
10122 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.55 ± 0.6%
10123 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.70 ± 0.6%
10124 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	0.80 ± 0.6%
10125 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.74 ± 0.6%
10126 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.72 ± 0.6%
10127 AAAA	EIEC 802.11ac (20MHz, MIMO, 2x2, 60GHz, 100mW)	WLAN	8.88 ± 0.6%

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10728	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.61 ± 9.6%
10729	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.67 ± 9.5%
10730	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.62 ± 9.5%
10731	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.62 ± 9.5%
10732	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.60 ± 9.5%
10733	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.40 ± 9.5%
10734	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.25 ± 9.5%
10735	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.21 ± 9.5%
10736	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.27 ± 9.5%
10737	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.56 ± 9.5%
10738	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.24 ± 9.5%
10739	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	6.29 ± 9.5%
10740	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.48 ± 9.5%
10741	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.43 ± 9.5%
10742	AAA IEEE 802.11ax (80MHz, MCS-900 duty cycle)	WLAN	8.43 ± 9.5%
10743	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	7.16 ± 9.7%
10744	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.93 ± 9.5%
10745	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.93 ± 9.5%
10746	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.04 ± 9.5%
10747	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.93 ± 9.5%
10748	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.93 ± 9.5%
10749	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.93 ± 9.5%
10750	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.77 ± 9.5%
10751	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.72 ± 9.5%
10752	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.51 ± 9.5%
10753	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.03 ± 9.5%
10754	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.93 ± 9.5%
10755	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.55 ± 9.5%
10756	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.77 ± 9.5%
10757	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.77 ± 9.5%
10758	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.77 ± 9.5%
10759	AAA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.58 ± 9.5%
10760	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.40 ± 9.5%
10761	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.40 ± 9.5%
10762	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.41 ± 9.5%
10763	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.55 ± 9.5%
10764	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.24 ± 9.5%
10765	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.24 ± 9.5%
10766	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.24 ± 9.5%
10767	AIA IEEE 802.11ax (160MHz, MCS-900 duty cycle)	WLAN	8.24 ± 9.5%
10768	AAA 5G NR (CP-OFDMA, 1 RB, 16 MHz, QPSK, 15 kHz)	TDD	8.02 ± 9.6%
10769	AAA 5G NR (CP-OFDMA, 1 RB, 16 MHz, QPSK, 15 kHz)	NR FR1	8.01 ± 9.6%
10770	AAA 5G NR (CP-OFDMA, 1 RB, 16 MHz, QPSK, 15 kHz)	NR FR1	8.01 ± 9.6%
10771	AAA 5G NR (CP-OFDMA, 1 RB, 25 MHz, QPSK, 15 kHz)	TDD	8.02 ± 9.6%
10772	AAA 5G NR (CP-OFDMA, 1 RB, 30 MHz, QPSK, 15 kHz)	NR FR1	8.02 ± 9.6%
10773	AAA 5G NR (CP-OFDMA, 1 RB, 40 MHz, CQK, 15 kHz)	NR FR1	8.03 ± 9.6%
10774	AAA 5G NR (CP-OFDMA, 1 RB, 50 MHz, QPSK, 15 kHz)	TDD	8.02 ± 9.6%
10775	AAA 5G NR (CP-OFDMA, 1 RB, 50 MHz, QPSK, 15 kHz)	NR FR1	8.02 ± 9.6%
10776	AAA 5G NR (CP-OFDMA, 1 RB, 50 MHz, QPSK, 15 kHz)	TDD	8.02 ± 9.6%
10777	AAA 5G NR (CP-OFDMA, 1 RB, 50 MHz, QPSK, 15 kHz)	NR FR1	8.04 ± 9.6%
10778	AAA 5G NR (CP-OFDMA, 1 RB, 50 MHz, QPSK, 15 kHz)	TDD	8.04 ± 9.6%
10779	AAA 5G NR (CP-OFDMA, 10% RS, 35 MHz, QPSK, 15 kHz)	TDD	8.38 ± 9.6%
10780	AAA 5G NR (CP-OFDMA, 10% RS, 43 MHz, QPSK, 15 kHz)	NR FR1	8.38 ± 9.6%
10781	AAA 5G NR (CP-OFDMA, 10% RS, 50 MHz, QPSK, 15 kHz)	NR FR1	8.38 ± 9.6%
10782	AAA 5G NR (CP-OFDMA, 10% RS, 50 MHz, QPSK, 15 kHz)	TDD	8.43 ± 9.6%

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Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
10783	AAA	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1	TDD	8.31	± 9.6 %						
10784	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1	TDD	8.29	± 9.6 %						
10785	AAA	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1	TDD	8.46	± 9.6 %						
10786	AAA	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1	TDD	8.33	± 9.6 %						
10787	AAA	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1	TDD	8.44	± 9.6 %						
10788	AAA	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 18 kHz)	5G NR FR1	TDD	8.39	± 9.6 %						
10789	AAA	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1	TDD	8.37	± 9.6 %						
10790	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1	TDD	8.39	± 9.6 %						
10791	AAA	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.83	± 9.6 %						
10792	AAA	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.92	± 9.6 %						
10793	AAA	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 29 kHz)	5G NR FR1	TDD	7.95	± 9.6 %						
10794	AAA	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 29 kHz)	5G NR FR1	TDD	7.52	± 9.6 %						
10795	AAA	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.84	± 9.6 %						
10796	AAA	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.82	± 9.6 %						
10797	AAA	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.01	± 9.6 %						
10798	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.95	± 9.6 %						
10799	AAA	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.93	± 9.6 %						
10800	AAA	5G NR (CP-OFDM, 1 RB, 70 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.99	± 9.6 %						
10801	AAA	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.98	± 9.6 %						
10802	AAA	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.57	± 9.6 %						
10803	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	7.93	± 9.6 %						
10805	AAA	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.24	± 8.6 %						
10806	AAA	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.37	± 9.6 %						
10808	AAA	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.34	± 9.6 %						
10810	AAA	5G NR (CP-OFDM, 60% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.34	± 9.6 %						
10812	AAA	5G NR (CP-OFDM, 60% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.39	± 9.6 %						
10817	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.35	± 6.6 %						
10818	AAA	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.34	± 9.6 %						
10819	AAA	5G NR (CP-OFDM, 100% RB, 18 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.23	± 9.6 %						
10820	AAA	5G NR (CP-OFDM, 100% RB, 24 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.30	± 9.6 %						
10821	AAA	5G NR (CP-OFDM, 100% RB, 26 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.41	± 9.6 %						
10822	AAA	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.41	± 9.6 %						
10823	AAA	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.36	± 9.6 %						
10824	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1	TDD	8.39	± 9.6 %						

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**The State Radio\_monitoring\_centerTestingCenter (SRTC)**  
Tel:86-10-57996183  
Fax:86-10-57996388

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v3.0.0



The State Radio monitoring center Testing Center  
国家无线电监测中心检测中心

No.: SRTC2019-9004(F)-19101501(H)  
FCC ID:2ADOBHLTE220E

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10825	AAA	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 50 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10827	AAA	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1	8.42	$\pm 0.6\%$
10828	AAA	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1	8.43	$\pm 0.6\%$
10829	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1	8.40	$\pm 0.6\%$
10830	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1	7.63	$\pm 0.6\%$
10831	AAA	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1	7.73	$\pm 0.6\%$
10832	AAA	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1	7.74	$\pm 0.6\%$
10833	AAA	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1	7.70	$\pm 0.6\%$
10834	AAA	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1	7.75	$\pm 0.6\%$
10835	AAA	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1	7.70	$\pm 0.6\%$
10836	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1	7.68	$\pm 0.6\%$
10837	AAA	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1	7.68	$\pm 0.6\%$
10838	AAA	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1	7.70	$\pm 0.6\%$
10839	AAA	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1	7.67	$\pm 0.6\%$
10840	AAA	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1	7.70	$\pm 0.6\%$
10841	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1	7.71	$\pm 0.6\%$
10842	AAA	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1	5.10	$\pm 0.6\%$
10844	AAA	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1	8.34	$\pm 0.6\%$
10845	AAA	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10846	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1	0.31	$\pm 0.6\%$
10847	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1	0.31	$\pm 0.6\%$
10848	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1	0.31	$\pm 0.6\%$
10849	AAA	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1	0.31	$\pm 0.6\%$
10850	AAA	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1	8.36	$\pm 0.6\%$
10851	AAA	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1	8.37	$\pm 0.6\%$
10852	AAA	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1	8.33	$\pm 0.6\%$
10853	AAA	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1	8.38	$\pm 0.6\%$
10854	AAA	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10855	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10856	AAA	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10857	AAA	5G NR (CP-OFDM, 100% RB, 70 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10858	AAA	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10859	AAA	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10860	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10861	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1	8.40	$\pm 0.6\%$
10862	AAA	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10863	AAA	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1	8.41	$\pm 0.6\%$
10864	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1	8.37	$\pm 0.6\%$
10865	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1	8.37	$\pm 0.6\%$
10866	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1	8.31	$\pm 0.6\%$
10867	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1	6.68	$\pm 0.6\%$
10868	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1	5.75	$\pm 0.6\%$
10869	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR2	5.88	$\pm 0.6\%$
10870	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR2	5.88	$\pm 0.6\%$

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10871	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2	5.75	$\pm 0.6\%$
10872	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2	6.02	$\pm 0.6\%$
10873	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2	6.61	$\pm 0.6\%$
10874	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2	6.65	$\pm 0.6\%$
10875	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2	7.78	$\pm 0.6\%$
10876	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2	8.39	$\pm 0.6\%$
10877	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2	7.93	$\pm 0.6\%$
10878	AAA	5G NR (DFT+OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2	9.41	$\pm 0.6\%$
10879	AAA	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2	8.12	$\pm 0.6\%$
10880	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2	8.38	$\pm 0.6\%$
10881	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2	9.75	$\pm 0.6\%$
10882	AAA	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2	5.96	$\pm 0.6\%$
10883	AAA	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2	6.57	$\pm 0.6\%$
10884	AAA	5G NR (DFT+OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2	6.63	$\pm 0.6\%$
10885	AAA	5G NR (DFT+OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2	6.61	$\pm 0.6\%$
10886	AAA	5G NR (DFT+OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2	6.65	$\pm 0.6\%$
10887	AAA	5G NR (DFT+OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2	7.78	$\pm 0.6\%$
10888	AAA	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2	8.24	$\pm 0.6\%$
10889	AAA	5G NR (CP-OFDM, 1 RB, 60 MHz, 16QAM, 120 kHz)	5G NR FR2	8.02	$\pm 0.6\%$
10890	AAA	5G NR (CP-OFDM, 1 RB, 60 MHz, 16QAM, 120 kHz)	5G NR FR2	8.40	$\pm 0.6\%$
10891	AAA	5G NR (CP-OFDM, 1 RB, 60 MHz, 64QAM, 120 kHz)	5G NR FR2	8.13	$\pm 0.6\%$
10892	AAA	5G NR (CP-OFDM, 100% RB, 60 MHz, 64QAM, 120 kHz)	5G NR FR2	8.41	$\pm 0.6\%$

<sup>1</sup> Uncertainty = Estimated using the max deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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750V3 Sn:1101 (1/2)																																																																																							
<p>In Collaboration with <b>TTL</b> <b>s p e a g</b> CALIBRATION LABORATORY</p> <p>Add: No.51 Xueyan Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304613-3079 Fax: +86-10-62304613-2594 E-mail: cttl@chuanli.cn http://www.chuanli.cn</p> <p><b>Client:</b> SRTC <b>Certificate No:</b> Z17-97134</p> <p><b>CALIBRATION CERTIFICATE</b></p> <p><b>Object:</b> D750V3 - SN: 1101</p> <p><b>Calibration Procedure(s):</b> FF-Z11-003-01 Calibration Procedures for dipole validation kits</p> <p><b>Calibration date:</b> September 13, 2017</p> <p>This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.</p> <p>All calibrations have been conducted in the closed laboratory facility; environment: temperature(22±3)°C; and humidity&lt;70%.</p> <p>Calibration Equipment used (M&amp;TE critical for calibration)</p> <table border="1"> <thead> <tr> <th>Primary Standards</th> <th>ID #</th> <th>Cal Date(Calibrated by, Certificate No.)</th> <th>Scheduled Calibration</th> </tr> </thead> <tbody> <tr> <td>Power Meter NRVd</td> <td>02196</td> <td>02-Mar-17 (CTTL, No.J17X01254)</td> <td>Mar-18</td> </tr> <tr> <td>Power sensor NRV-Z5</td> <td>00596</td> <td>02-Mar-17 (CTTL, No.J17X01254)</td> <td>Mar-18</td> </tr> <tr> <td>Reference Probe EX3DV4</td> <td>SN 7433</td> <td>26-Sep-16(SPEAG, No.EK3-7433, Sep16)</td> <td>Sept-17</td> </tr> <tr> <td>DAE4</td> <td>SN 1331</td> <td>19-Jan-17(CTTL-SPEAG, No.Z17-97015)</td> <td>Jan-18</td> </tr> <tr> <td>Secondary Standards</td> <td>ID #</td> <td>Cal Date(Calibrated by, Certificate No.)</td> <td>Scheduled Calibration</td> </tr> <tr> <td>Signal Generator E4436C</td> <td>MY49071430</td> <td>13-Jan-17 (CTTL, No.J17X0226)</td> <td>Jan-18</td> </tr> <tr> <td>Network Analyzer E5071C</td> <td>MY46111013</td> <td>13-Jan-17 (CTTL, No.J17X02285)</td> <td>Jan-18</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Calibrated by:</th> <th>Name</th> <th>Function</th> <th>Signature</th> </tr> </thead> <tbody> <tr> <td>Zhao Jing</td> <td>SAR Test Engineer</td> <td></td> </tr> <tr> <td>Reviewed by:</td> <td>Yu Zongying</td> <td>SAR Test Engineer</td> <td></td> </tr> <tr> <td>Approved by:</td> <td>Qi Dianyuan</td> <td>SAR Project Leader</td> <td></td> </tr> </tbody> </table> <p>Issued: September 16, 2017 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.</p> <p>Certificate No: Z17-97134 Page 1 of 8</p>	Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration	Power Meter NRVd	02196	02-Mar-17 (CTTL, No.J17X01254)	Mar-18	Power sensor NRV-Z5	00596	02-Mar-17 (CTTL, No.J17X01254)	Mar-18	Reference Probe EX3DV4	SN 7433	26-Sep-16(SPEAG, No.EK3-7433, Sep16)	Sept-17	DAE4	SN 1331	19-Jan-17(CTTL-SPEAG, No.Z17-97015)	Jan-18	Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration	Signal Generator E4436C	MY49071430	13-Jan-17 (CTTL, No.J17X0226)	Jan-18	Network Analyzer E5071C	MY46111013	13-Jan-17 (CTTL, No.J17X02285)	Jan-18	Calibrated by:	Name	Function	Signature	Zhao Jing	SAR Test Engineer		Reviewed by:	Yu Zongying	SAR Test Engineer		Approved by:	Qi Dianyuan	SAR Project Leader		<p>In Collaboration with <b>TTL</b> <b>s p e a g</b> CALIBRATION LABORATORY</p> <p>Add: No.51 Xueyan Road, Haidian District, Beijing, 100191, China Tel: +86-10-62304613-3079 Fax: +86-10-62304613-2594 E-mail: cttl@chuanli.cn http://www.chuanli.cn</p> <p><b>Glossary:</b></p> <ul style="list-style-type: none"> <li>TSL tissue simulating liquid</li> <li>ConvF sensitivity in TSL / NORML<sub>x,y,z</sub></li> <li>N/A not applicable or not measured</li> </ul> <p><b>Calibration is Performed According to the Following Standards:</b></p> <ul style="list-style-type: none"> <li>a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013</li> <li>b) IEC 62209-1, "Measurement procedure for assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)"</li> <li>c) IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 60Hz)" March 2010</li> <li>d) KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz</li> </ul> <p><b>Additional Documentation:</b></p> <ul style="list-style-type: none"> <li>e) DASY4/5 System Handbook</li> </ul> <p><b>Methods Applied and Interpretation of Parameters:</b></p> <ul style="list-style-type: none"> <li>• <b>Measurement Conditions:</b> Further details are available from the Validation Report at the end of the certificate. All figures shown in the certificate are valid at the frequency indicated.</li> <li>• <b>Antenna Parameters with TSL:</b> The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.</li> <li>• <b>Feed Point Impedance and Return Loss:</b> These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.</li> <li>• <b>Electrical Delay:</b> One-way delay between the SMA connector and the antenna feed point.</li> <li>• <b>SAR uncertainty interval:</b> The uncertainty interval is determined by the following formula:  <math display="block">\text{SAR uncertainty} = \text{SAR measured} \times \sqrt{\frac{1}{\text{SAR measured}} + \frac{1}{\text{SAR normalized}}}^2</math> </li> <li>• <b>SAR measured:</b> SAR measured at the stated antenna input power.</li> <li>• <b>SAR normalized:</b> SAR as measured, normalized to an input power of 1 W at the antenna connector.</li> <li>• <b>SAR for nominal TSL parameters:</b> The measured TSL parameters are used to calculate the nominal SAR result.</li> </ul> <p>The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.</p> <p>Certificate No: Z17-97134 Page 2 of 8</p>																																							
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The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position and explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this. The overall gain range is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.</p> <p><b>Additional EUT Data</b></p> <table border="1"> <thead> <tr> <th>Manufactured by</th> <th>SPEAG</th> </tr> </thead> </table> <p>Certificate No: Z17-97134 Page 4 of 8</p>	Impedance, transformed to feed point	53.90+ 0.24jΩ	Return Loss	-28.4dB	Impedance, transformed to feed point	52.00- 2.22jΩ	Return Loss	-30.6dB	Electrical Delay (one direction)	1.136 ns	Manufactured by	SPEAG
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The State Radio monitoring center Testing Center

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FCC ID:2ADOBHLTE220E

## D835V2 Sn:4d023

<p><b>Client:</b> SRTC      <b>Certificate No.:</b> Z17-97135</p> <p><b>CALIBRATION CERTIFICATE</b></p> <p><b>Object:</b> D835V2 - SN. 4d023</p> <p><b>Calibration Procedure(s):</b> FF-Z11-003-01 Calibration Procedures for dipole validation kits</p> <p><b>Calibration date:</b> September 13, 2017</p> <p>This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). 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All figures stated in the certificate are valid at the frequency indicated.</li> <li><b>Antenna Parameters with TSL:</b> The dipole is mounted with the spine to point its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.</li> <li><b>Feed Point Impedance and Return Loss:</b> These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.</li> <li><b>Electrical Delay:</b> One-way delay between the SMA connector and the antenna feed point. No uncertainty required.</li> <li><b>SAR measured:</b> SAR measured at the stated antenna input power.</li> <li><b>SAR normalized:</b> SAR as measured, normalized to an input power of 1 W at the antenna connector.</li> <li><b>SAR for nominal TSL parameters:</b> The measured TSL parameters are used to calculate the nominal SAR result.</li> </ul> <p>The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.</p> <p>Certificate No: Z17-97135      Page 2 of 8</p>
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The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited at DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.</p> <p><b>Additional EUT Data</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Manufactured by</td> <td>SPEAG</td> </tr> </table> <p>Certificate No: Z17-97135      Page 2 of 8</p>	Impedance, transformed to feed point	51.0Ω-2.79jΩ	Return Loss	-30.7dB	Impedance, transformed to feed point	46.6Ω-3.61jΩ	Return Loss	-25.8dB	Electrical Delay (one direction)	1.495 ns	Manufactured by	SPEAG
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