TEST REPORT

Applicant Name :	Shenzhen Youmi Intelligent Technology Co., Ltd.
Address :	406-407 Jinqi Zhigu Building, 4/F, 1 Tangling Road, Nanshan District, Shenzhen City, China
Report Number :	SZNS220313-08568E-RF-00B
FCC ID:	2ATZ4-A1300

Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E

Sample Description

Product Type:	Smart phone
Model No.:	A13
Multiple Model(s) No.:	F3 SE (Please refer to DOS for Model difference)
Trade Mark:	UMIDIGI
Date Received:	2022/03/13
Report Date:	2022/06/07

Test Result:	Pass*

* In the configuration tested, the EUT complied with the standards above.

Prepared andChecked By:

Ting Lü
EMC Engineer

Approved By:

Robert Li
EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "★ ".
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 13: 777-787MHz(TX); 746-756MHz(RX) LTE Band 41: 2535-2655MHz(TX/RX)
Modulation Technique	2G: GMSK 3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	GSM850/WCDMA 850/LTE B5 : -2.28dBi WCDMA 1900/PCS1900/LTE B2 : 0.83dBi LTE B12/B13 : -1.01dBi LTE B41 : -1.33dBi (provided by the applicant)
Voltage Range	DC 3.85V from battery or DC 5V from adapter
Sample serial number	SZNS220313-08568E-RF-S1 (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: HJ-0502000W2-US Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5 V, 2A
Normal/Extreme Condition	L.V.: Low Voltage 3.45V_{DC} N.V.: Normal Voltage 3.85V_{DC} H.V.: High Voltage 4.4V_{DC}

Note: The series model F3 SE is electrical identical to the model A13, the difference between them is back cover shape, the material is same, so the difference will not affect the test result, only the model A13 was tested.

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H,Part24-Subpart E, and Subpart 27 of the Federal Communication Commission's rules.

The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous Wireless Communications Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.
Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5%
RF Frequency		$0.082*10^{-7}$
RF output power, conducted		0.73dB
Unwanted Emission, conducted		1.6dB
AC Power Lines Conducted Emissions		2.72dB
Emissions, Radiated	9kHz - 30MHz	2.66dB
	30MHz - 1GHz	4.28dB
	1GHz - 18GHz	4.98dB
	18GHz -26.5GHz	5.06dB
	26.5GHz -40GHz	4.72dB
Temperature		1℃
Humidity		6%
Supply voltages		0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358,the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

Listed by Innovation, Science and Economic Development Canada (ISEDC), the Registration Number is 5077A.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Frequency band	Bandwidth (MHz)	Test Frequency(MHz)		
		Low	Middle	High
GSM850	0.25	824.2	836.6	848.8
PCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704.0	707.5	711.0
LTE B13	5	779.5	782.0	784.5
	10	/	782.0	/
LTE B41	5	2537.5	2595	2652.5
	10	2540	2595	2650
	15	2542.5	2595	2647.5
	20	2545	2595	2645

Equipment Modifications

No modification was made to the EUT.

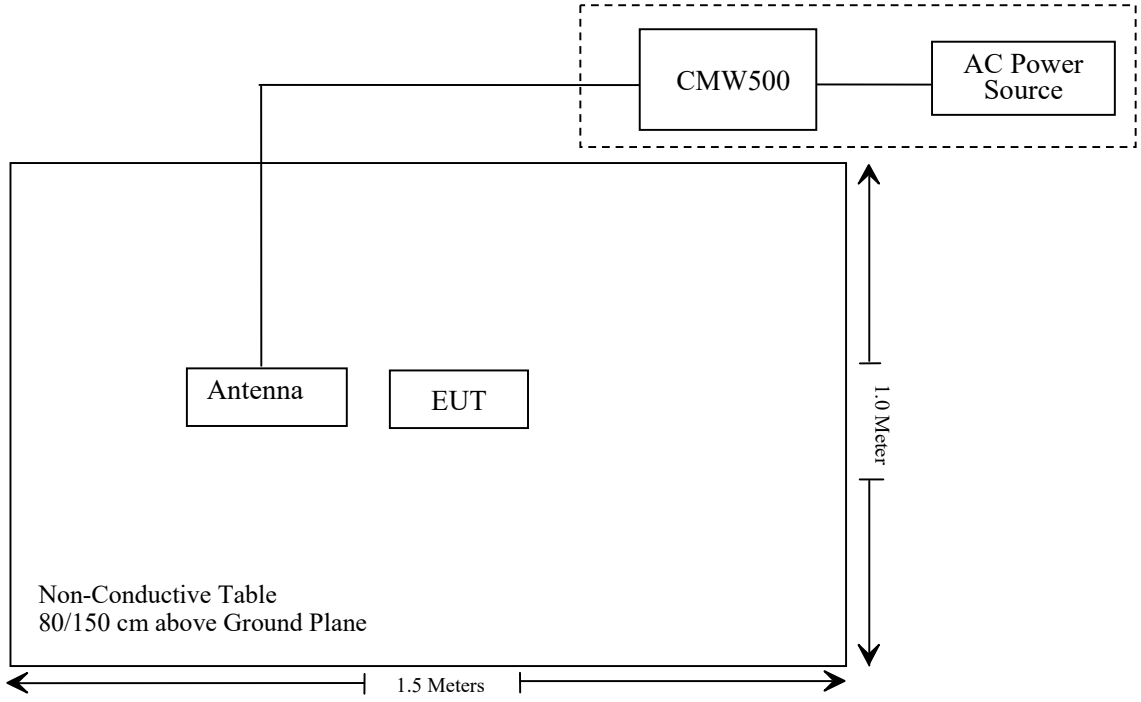
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-116218-UY

Support Cable Description

Cable Description	Length (m)	From / Port	To
Unshielded Un-detachable AC cable	1.2	AC Power	CMW500

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 1.1307 ,§2.1093	RF Exposure (SAR)	Compliant
§2.1046; § 22.913 (a); § 24.232 (c); §27.50 (b) (c) (d) (h);	RF Output Power	Compliant*
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliant*
§ 2.1051; §22.917 (a); § 24.238 (a); §27.53;	Spurious Emissions at Antenna Terminal	Compliant*
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53 (c) (h) (m)	Band Edge	Compliant*
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliant*

Compliant*: The EUT is identical with the certified device (model name: Smart phone, model number: A13 Pro, F3S, FCC ID: 2ATZ4-A13PF), Except for the NFC function was removed. The output power of EUT was tested and verified remain within the tune-up tolerance range, so the test data please refer to the report SZNS220313-08566E-RF-00C.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde& Schwarz	Test Receiver	ESR	102725	2021/12/13	2022/12/12
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2021/12/13	2022/12/12
SONOMA INSTRUMENT	Amplifier	310 N	186131	2021/11/09	2022/11/08
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2021/11/09	2022/11/08
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2021/11/11	2022/11/10
Unknown	RF Coaxial Cable	No.10	N050	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.11	N1000	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.12	N040	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.13	N300	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.14	N800	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.15	N600	2021/12/14	2022/12/13
Unknown	RF Coaxial Cable	No.16	N650	2021/12/14	2022/12/13
Schwarzbeck	Bilog Antenna	VULB9163	9163-194	2020/01/05	2023/01/04
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-655	2020/01/05	2023/01/04
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-024-1)	2020/01/05	2023/01/04
PASTERNACK	Horn Antenn	PE9852/2F-20	1120 (ATC-BA-025-1)	2020/01/05	2023/01/04
Agilent	Signal Generator	N5183A	MY51040755	2021/12/13	2022/12/12
Wainwright	High Pass Filter	WHKX3.6/18G-10SS	5	2021/12/14	2022/12/13
CD	High Pass Filter	HPM-1.2/18G-60	110	2021/12/14	2022/12/13

* Statement of Traceability: Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307(b)&§2.1093 - RF EXPOSURE INFORMATION

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: CR22040029-20A.

FCC§2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H,24E&27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1053; § 22.917 (a); § 24.238 (a); §27.53 - SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, §22.917(a)& § 24.238(a) &§ 27.53.

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	25.5 ℃
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Icey Huang from 2022-05-28 to 2022-05-30.

EUT operation mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case Y-axes of orientation was recorded)

The worst case is as below:

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM850								
Test frequency range: 30MHz-10GHz								
Low channel								
45.14	-73.9	82	1.8	H	6.6	-67.3	-13	-54.3
199.88	-63.2	15	1.8	V	-2	-65.2	-13	-52.2
1648.4	-60.4	283	1.7	H	3.5	-56.9	-13	-43.9
1648.4	-60.8	344	1.7	V	3.1	-57.7	-13	-44.7
2472.6	-48.1	253	1.8	H	6.6	-41.5	-13	-28.5
2472.6	-44.7	312	1.9	V	5.8	-38.9	-13	-25.9
3296.8	-53.6	94	2.1	H	6.4	-47.2	-13	-34.2
3296.8	-52.5	134	1.5	V	5.7	-46.8	-13	-33.8
Middle channel								
45.14	-75.1	319	1.8	H	6.6	-68.5	-13	-55.5
199.88	-63.4	65	2.0	V	-2	-65.4	-13	-52.4
1673.2	-56.3	288	1.9	H	3.8	-52.5	-13	-39.5
1673.2	-55.8	36	2.0	V	3.1	-52.7	-13	-39.7
2509.8	-48.3	333	2.0	H	6.2	-42.1	-13	-29.1
2509.8	-44.8	111	2.0	V	5.6	-39.2	-13	-26.2
3346.4	-52.2	37	1.8	H	6.6	-45.6	-13	-32.6
3346.4	-50.5	151	1.7	V	5.4	-45.1	-13	-32.1
High channel								
45.14	-75.2	80	1.7	H	6.6	-68.6	-13	-55.6
199.88	-62.3	351	1.5	V	-2	-64.3	-13	-51.3
1697.6	-57.5	134	1.5	H	4.1	-53.4	-13	-40.4
1697.6	-56.4	237	1.9	V	3.1	-53.3	-13	-40.3
2546.4	-47.6	3	2.1	H	6.1	-41.5	-13	-28.5
2546.4	-45.9	109	1.9	V	5.8	-40.1	-13	-27.1
3395.2	-52.2	85	2.0	H	6.2	-46.0	-13	-33.0
3395.2	-50.7	124	1.6	V	5.4	-45.3	-13	-32.3

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
GSM1900								
Test frequency range: 30MHz-20GHz								
Low channel								
45.14	-73.6	316	1.9	H	6.6	-67	-13	-54.0
199.88	-61.1	66	1.8	V	-2	-63.1	-13	-50.1
3700.4	-55.1	33	1.8	H	8.1	-47	-13	-34.0
3700.4	-54.4	239	1.7	V	7.6	-46.8	-13	-33.8
5550.6	-52.8	39	1.9	H	9.6	-43.2	-13	-30.2
5550.6	-49	101	1.6	V	9.1	-39.9	-13	-26.9
Middle channel								
45.14	-74	62	1.9	H	6.6	-67.4	-13	-54.4
199.88	-62.4	46	1.6	V	-2	-64.4	-13	-51.4
3760	-56	175	1.9	H	8.8	-47.2	-13	-34.2
3760	-54.7	80	1.8	V	8	-46.7	-13	-33.7
5640	-54.9	245	2.0	H	10.2	-44.7	-13	-31.7
5640	-50	337	1.9	V	9.4	-40.6	-13	-27.6
High channel								
45.14	-74.3	327	2.0	H	6.6	-67.7	-13	-54.7
199.88	-63.4	67	1.9	V	-2	-65.4	-13	-52.4
3819.6	-56.1	235	2.1	H	8.7	-47.4	-13	-34.4
3819.6	-54.9	22	1.6	V	8	-46.9	-13	-33.9
5729.4	-52.6	354	1.5	H	10.6	-42	-13	-29
5729.4	-49.4	105	1.5	V	10.2	-39.2	-13	-26.2

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band2								
Test frequency range: 30MHz-20GHz								
Low channel								
45.14	-74.6	19	2.1	H	6.6	-68	-13	-55
199.88	-63.1	309	1.8	V	-2	-65.1	-13	-52.1
3704.8	-55.6	254	2.1	H	8.2	-47.4	-13	-34.4
3704.8	-54.8	283	1.8	V	7.6	-47.2	-13	-34.2
5557.2	-54	25	1.5	H	9.7	-44.3	-13	-31.3
5557.2	-53.2	11	2.0	V	9.1	-44.1	-13	-31.1
Middle channel								
45.14	-75.1	255	1.6	H	6.6	-68.5	-13	-55.5
199.88	-62.9	263	1.5	V	-2	-64.9	-13	-51.9
3760	-57	63	2.0	H	8.8	-48.2	-13	-35.2
3760	-55.7	89	2.0	V	8	-47.7	-13	-34.7
5640	-56.3	326	2.0	H	10.2	-46.1	-13	-33.1
5640	-54.4	30	1.5	V	9.4	-45	-13	-32.0
High channel								
45.14	-74	222	1.7	H	6.6	-67.4	-13	-54.4
199.88	-62.3	25	2.0	V	-2	-64.3	-13	-51.3
3815.2	-56.4	168	1.7	H	8.7	-47.7	-13	-34.7
3815.2	-55.4	167	2.0	V	7.9	-47.5	-13	-34.5
5722.8	-55.3	191	1.6	H	10.6	-44.7	-13	-31.7
5722.8	-54.6	86	1.7	V	10.1	-44.5	-13	-31.5

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
WCDMA Band5								
Test frequency range: 30MHz-10GHz								
Low channel								
45.14	-74.4	92	1.8	H	6.6	-67.8	-13	-54.8
199.88	-63.3	330	1.5	V	-2	-65.3	-13	-52.3
1652.8	-54.5	98	1.9	H	3.5	-51	-13	-38
1652.8	-55	130	1.6	V	3.1	-51.9	-13	-38.9
2479.2	-51.4	185	2.0	H	6.5	-44.9	-13	-31.9
2479.2	-50.1	346	2.0	V	5.7	-44.4	-13	-31.4
3305.6	-52.5	130	1.8	H	6.4	-46.1	-13	-33.1
3305.6	-51.7	182	1.7	V	5.7	-46	-13	-33
Middle channel								
45.14	-74.4	233	2.0	H	6.6	-67.8	-13	-54.8
199.88	-63.2	206	1.6	V	-2	-65.2	-13	-52.2
1673.2	-50.8	129	1.6	H	3.8	-47	-13	-34
1673.2	-51.4	247	1.8	V	3.1	-48.3	-13	-35.3
2509.8	-51.9	232	1.6	H	6.2	-45.7	-13	-32.7
2509.8	-51.1	129	1.6	V	5.7	-45.4	-13	-32.4
3346.4	-52.6	257	1.8	H	6.6	-46	-13	-33
3346.4	-51.9	184	2.0	V	5.4	-46.5	-13	-33.5
High channel								
45.14	-74	241	1.9	H	6.6	-67.4	-13	-54.4
199.88	-63.6	71	1.7	V	-2	-65.6	-13	-52.6
1693.2	-55.9	279	1.6	H	4	-51.9	-13	-38.9
1693.2	-56.1	175	2.1	V	3.1	-53	-13	-40
2509.8	-57	135	2.0	H	6.1	-50.9	-13	-37.9
2509.8	-55.9	18	2.0	V	5.7	-50.2	-13	-37.2
3386.4	-52.3	215	2.1	H	6.3	-46.0	-13	-33.0
3386.4	-51.8	68	1.8	V	5.4	-46.4	-13	-33.4

LTE Bands: (pre-scan all bandwidths and modulation, the worst case as below)

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band2								
Test frequency range: 30MHz-20GHz								
QPSK, 1.4MHz, Low channel								
45.14	-74	254	1.8	H	6.6	-67.4	-13	-54.4
199.88	-62.6	357	1.8	V	-2	-64.6	-13	-51.6
3701.4	-55.5	201	1.6	H	8.1	-47.4	-13	-34.4
3701.4	-53.7	186	1.9	V	7.6	-46.1	-13	-33.1
5552.1	-52.2	84	1.6	H	9.6	-42.6	-13	-29.6
5552.1	-48.8	190	1.8	V	9.1	-39.7	-13	-26.7
QPSK, 1.4MHz, Middle channel								
45.14	-73.1	236	1.5	H	6.6	-66.5	-13	-53.5
199.88	-61.9	190	1.5	V	-2	-63.9	-13	-50.9
3760	-57	182	1.5	H	8.8	-48.2	-13	-35.2
3760	-55.3	149	1.6	V	8	-47.3	-13	-34.3
5640	-54.8	249	1.7	H	10.2	-44.6	-13	-31.6
5640	-49.8	357	2.0	V	9.4	-40.4	-13	-27.4
QPSK, 1.4MHz, High channel								
45.14	-74.7	67	1.7	H	6.6	-68.1	-13	-55.1
199.88	-61.5	54	2.0	V	-2	-63.5	-13	-50.5
3818.6	-56.4	124	1.6	H	8.7	-47.7	-13	-34.7
3818.6	-54.3	24	1.7	V	8	-46.3	-13	-33.3
5727.9	-54.6	294	1.9	H	10.6	-44.0	-13	-31.0
5727.9	-50.8	331	1.6	V	10.2	-40.6	-13	-27.6

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band 5								
Test frequency range: 30MHz-10GHz								
QPSK, 1.4MHz, Low channel								
45.14	-74.8	219	2.0	H	6.6	-68.2	-13	-55.2
199.88	-62.7	206	1.9	V	-2	-64.7	-13	-51.7
1649.4	-55	22	2.0	H	3.2	-51.8	-13	-38.8
1649.4	-56.6	208	1.9	V	3.1	-53.5	-13	-40.5
2474.1	-44.9	15	2.0	H	6.6	-38.3	-13	-25.3
2474.1	-43.3	127	1.7	V	5.8	-37.5	-13	-24.5
3298.8	-52.6	27	2.0	H	6.4	-46.2	-13	-33.2
3298.8	-51.2	316	1.9	V	5.7	-45.5	-13	-32.5
QPSK, 1.4MHz, Middle channel								
45.14	-73.2	183	1.7	H	6.6	-66.6	-13	-53.6
199.88	-61.8	355	2.0	V	-2	-63.8	-13	-50.8
1673	-50.7	291	1.8	H	3.8	-46.9	-13	-33.9
1673	-50.9	233	2.1	V	3.1	-47.8	-13	-34.8
2509.5	-43	29	2.1	H	6.2	-36.8	-13	-23.8
2509.5	-41.4	120	1.8	V	5.6	-35.8	-13	-22.8
3346	-52.1	140	1.7	H	6.6	-45.5	-13	-32.5
3346	-50.3	36	1.8	V	5.4	-44.9	-13	-31.9
QPSK, 1.4MHz, High channel								
45.14	-73.2	39	1.7	H	6.6	-66.6	-13	-53.6
199.88	-63.1	58	1.6	V	-2	-65.1	-13	-52.1
1696.6	-53.4	314	2.0	H	4.1	-49.3	-13	-36.3
1696.6	-53.4	149	1.5	V	3.1	-50.3	-13	-37.3
2544.9	-42.7	267	1.7	H	6.1	-36.6	-13	-23.6
2544.9	-29.9	318	1.9	V	5.8	-24.1	-13	-11.1
3393.2	-52.4	11	1.7	H	6.3	-46.1	-13	-33.1
3393.2	-50.5	303	1.7	V	5.4	-45.1	-13	-32.1

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band12								
Test frequency range: 30MHz-10GHz								
QPSK, 1.4MHz, Low channel								
45.14	-74.9	29	1.9	H	6.6	-68.3	-13	-55.3
199.88	-62.9	222	1.9	V	-2	-64.9	-13	-51.9
1399.4	-54.9	9	1.8	H	5.9	-49.0	-13	-36.0
1399.4	-58	240	1.8	V	5.9	-52.1	-13	-39.1
2099.1	-39.4	256	1.6	H	6.3	-33.1	-13	-20.1
2099.1	-40.9	309	1.8	V	5.1	-35.8	-13	-22.8
QPSK, 1.4MHz, Middle channel								
45.14	-74.9	314	1.6	H	6.6	-68.3	-13	-55.3
199.88	-62.3	244	2.1	V	-2	-64.3	-13	-51.3
1415	-60.3	78	1.9	H	5.7	-54.6	-13	-41.6
1415	-57.5	120	2.0	V	5.4	-52.1	-13	-39.1
2122.5	-43.4	24	1.7	H	6.7	-36.7	-13	-23.7
2122.5	-39.4	187	1.5	V	5.8	-33.6	-13	-20.6
QPSK, 1.4MHz, High channel								
45.14	-75.1	104	1.9	H	6.6	-68.5	-13	-55.5
199.88	-63.7	306	1.6	V	-2	-65.7	-13	-52.7
1430.6	-56.7	104	1.6	H	5.4	-51.3	-13	-38.3
1430.6	-54.8	122	1.5	V	4.8	-50.0	-13	-37.0
2145.9	-39.9	340	1.7	H	7	-32.9	-13	-19.9
2145.9	-43.8	225	2.1	V	6.6	-37.2	-13	-24.2

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band13								
Test frequency range: 30MHz-10GHz								
QPSK, 1.4MHz, Low channel								
45.14	-74.3	288	1.6	H	6.6	-67.7	-13	-54.7
199.88	-61.4	124	1.6	V	-2	-63.4	-13	-50.4
1559	-54.6	302	1.9	H	4.2	-50.4	-40	-10.4
1559	-55.1	38	1.9	V	3.3	-51.8	-40	-11.8
2338.5	-40.7	358	2.0	H	7.3	-33.4	-13	-20.4
2338.5	-39.3	114	1.8	V	6.5	-32.8	-13	-19.8
3118	-53.6	238	2.0	H	7.3	-46.3	-13	-33.3
3118	-52.5	275	1.7	V	6.5	-46.0	-13	-33.0
QPSK, 1.4MHz, Middle channel								
45.14	-74.5	351	2.0	H	6.6	-67.9	-13	-54.9
199.88	-61.1	289	1.9	V	-2	-63.1	-13	-50.1
1564	-56.8	3	1.7	H	4.2	-52.6	-40	-12.6
1564	-56.2	75	1.6	V	3.3	-52.9	-40	-12.9
2346	-44.1	227	1.6	H	7.3	-36.8	-13	-23.8
2346	-41.2	250	1.9	V	6.4	-34.8	-13	-21.8
3128	-54.1	8	2.0	H	7.3	-46.8	-13	-33.8
3128	-53	160	1.9	V	6.6	-46.4	-13	-33.4
QPSK, 1.4MHz, High channel								
45.14	-74.6	123	1.9	H	6.6	-68.0	-13	-55.0
199.88	-61.6	99	1.7	V	-2	-63.6	-13	-50.6
1569	-58.4	228	2.0	H	4.2	-54.2	-40	-14.2
1569	-55.6	201	2.1	V	3.3	-52.3	-40	-12.3
2353.5	-52.4	251	1.8	H	7.3	-45.1	-13	-32.1
2353.5	-44.5	39	2.0	V	6.4	-38.1	-13	-25.1
3138	-53.3	252	1.9	H	7.4	-45.9	-13	-32.9
3138	-52.5	215	2.0	V	6.6	-45.9	-13	-32.9

Frequency (MHz)	Receiver Reading (dBm)	Turntable Degree	Rx Antenna		Substituted Factor (dB)	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)				
LTE Band41								
Test frequency range: 30MHz-26.5GHz								
QPSK, 5MHz, Low channel								
45.14	-73.1	230	2.0	H	6.6	-66.5	-25	-41.5
199.88	-62.3	257	1.8	V	-2	-64.3	-25	-39.3
5075	-53.1	339	1.9	H	11.2	-41.9	-25	-16.9
5075	-53.9	351	1.7	V	10.8	-43.1	-25	-18.1
7612.5	-64.9	195	2.0	H	21.2	-43.7	-25	-18.7
7612.5	-65.9	47	1.8	V	20.2	-45.7	-25	-20.7
QPSK, 5MHz, Middle channel								
45.14	-74.9	39	1.9	H	6.6	-68.3	-25	-43.3
199.88	-61.9	232	2.1	V	-2	-63.9	-25	-38.9
5190	-55.72	111	2.0	H	10.52	-45.2	-25	-20.2
5190	-54.7	287	1.6	V	10	-44.7	-25	-19.7
7785	-61.9	169	1.9	H	18.3	-43.6	-25	-18.6
7785	-59.7	264	1.7	V	18	-41.7	-25	-16.7
QPSK, 5MHz, High channel								
45.14	-74.1	337	1.5	H	6.6	-67.5	-25	-42.5
199.88	-62.5	228	1.9	V	-2	-64.5	-25	-39.5
5305	-52.8	209	2.0	H	9.6	-43.2	-25	-18.2
5305	-50.6	321	1.8	V	8.8	-41.8	-25	-16.8
7957.5	-64.8	189	1.7	H	18.9	-45.9	-25	-20.9
7957.5	-63.5	323	1.8	V	18.5	-45.0	-25	-20.0

Note:
Absolute Level = Reading Level + Substituted Factor
Substituted Factor contains: SG Level - Cable loss+ Antenna Gain
Margin = Absolute Level - Limit

******* END OF REPORT *******