



RF TEST REPORT

Applicant	Hytera Communications Corporation Limited
FCC ID	YAMPNC380S
Product	PoC Radio
Brand	Hytera
Model	PNC380S
Report No.	R2004A0208-R2
Issue Date	June 18, 2020

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 2 (2019)/ FCC CFR 47 Part 24E (2019)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Performed by: Peng Tao

Approved by: Kai Xu

TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000



TABLE OF CONTENT

1. Test Laboratory	4
1.1. Notes of the test report.....	4
1.2. Test facility.....	4
1.3. Testing Location	4
2. General Description of Equipment under Test.....	5
2.3. Applicant and Manufacturer Information	5
2.4. General information	5
3. Applied Standards.....	7
4. Test Configuration.....	8
5. Test Case Results.....	9
5.1. RF Power Output and Effective Isotropic Radiated Power	9
5.2. Radiates Spurious Emission	25
6. Main Test Instruments	31

Summary of measurement results

No.	Test Case	Clause in FCC rules	Verdict
1	RF Power Output and Effective Isotropic Radiated Power	2.1046 24.232(c)	PASS
2	Radiates Spurious Emission	2.1053 / 24.238(a)	PASS
Date of Testing: April 25, 2020~ June 4, 2020			
Note: PASS: The EUT complies with the essential requirements in the standard. FAIL: The EUT does not comply with the essential requirements in the standard. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

There is only tested RF power output, Effective Radiated Power and Radiates Spurious Emission in this report. For other conducted test results please refers to the module report(Report No.: FG741007A) and (Report No.: FG741007B).



1. Test Laboratory

1.1. Notes of the test report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2. Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3. Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Xu Kai
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: xukai@ta-shanghai.com

2. General Description of Equipment under Test

2.3. Applicant and Manufacturer Information

Applicant	Hytera Communications Corporation Limited
Applicant address	Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, People's Republic of China
Manufacturer	Hytera Communications Corporation Limited
Manufacturer address	Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, People's Republic of China

2.4. General information

EUT Description			
Model	PNC380S		
IMEI	860046040051346		
Hardware Version	5001010053083		
Software Version	V1.0.02.000.01		
Power Supply	Battery/AC adapter		
Antenna Type	Internal Antenna		
Antenna Gain	0dBi		
Test Mode(s)	GSM1900; WCDMA Band II; LTE Band 2/25;		
Test Modulation	(GSM/GPRS)GMSK, (EGPRS) GMSK /8PSK; (WCDMA) BPSK, QPSK,16QAM; (LTE)QPSK,16QAM		
GPRS Multislot Class	33		
EGPRS Multislot Class	33		
HSDPA UE Category	24		
HSUPA UE Category	6		
DC-HSDPA UE Category	24		
HSPA+ UE Category	6		
LTE Category	4		
Maximum E.I.R.P	GSM 1900:	30.78dBm	
	WCDMA Band II:	22.88dBm	
	LTE Band 2:	22.99dBm	
	LTE Band 25:	23.02dBm	
Rated Power Supply Voltage	3.8V		
Extreme Voltage	Minimum: 3.3V Maximum: 4.4V		
Extreme Temperature	Lowest: -20°C Highest: +60°C		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM1900	1850 ~ 1910	1930 ~ 1990
	WCDMA Band II	1850 ~ 1910	1930 ~ 1990



	LTE Band 2	1850 ~ 1910	1930 ~ 1990
	LTE Band 25	1850 ~ 1915	1930 ~ 1995
EUT Accessory			
Adapter	Manufacturer: HUIZHOU GOLDEN LAKE INDUSTRIAL CO., LTD. Model: S010WU0500200		
Battery	Manufacturer: FPR Connectivity Technology Inc. Model: BP4006		
USB Cable	10cm Cable, Shielded		
Note: 1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.			

3. Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards:

FCC CFR 47 Part 24E (2019)

ANSI C63.26 (2015)

Reference standard:

FCC CFR47 Part 2 (2019)

KDB 971168 D01 Power Meas License Digital Systems v03r01

4. Test Configuration

Radiated measurements are performed by rotating the EUT in three different orthogonal test planes. EUT stand-up position (Z axis), lie-down position (X, Y axis). Receiver antenna polarization (horizontal and vertical), the worst emission was found in position (Z axis, horizontal polarization) and the worst case was recorded.

All mode and data rates and positions and RB size and modulations were investigated.

Subsequently, only the worst case emissions are reported.

The following testing in GSM/WCDMA/LTE is set based on the maximum RF Output Power.

Test modes are chosen to be reported as the worst case configuration below:

Test items	Modes/Modulation	
	GSM 1900	WCDMA Band II
RF Power Output and Effective Isotropic Radiated Power	GSM GPRS EGPRS	RMC HSDPA/HSUPA DC-HSDPA/HSPA+
Radiates Spurious Emission	GSM	RMC

Test modes are chosen to be reported as the worst case configuration below for LTE Band 2/25:

Test items	Bandwidth (MHz)						Modulation		RB			Test Channel		
	1.4	3	5	10	15	20	QPSK	16QAM	1	50%	100%	L	M	H
RF Power Output and Effective Isotropic Radiated Power	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Radiates Spurious Emission	O	-	O	-	-	O	O	-	O	-	-	-	O	-
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.													

5. Test Case Results

5.1.RF Power Output and Effective Isotropic Radiated Power

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

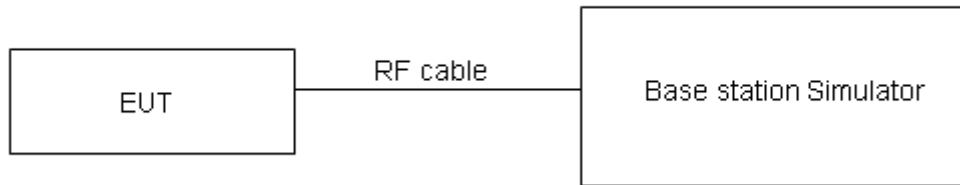
During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure max power transmission and proper modulation.

The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26 (2015).

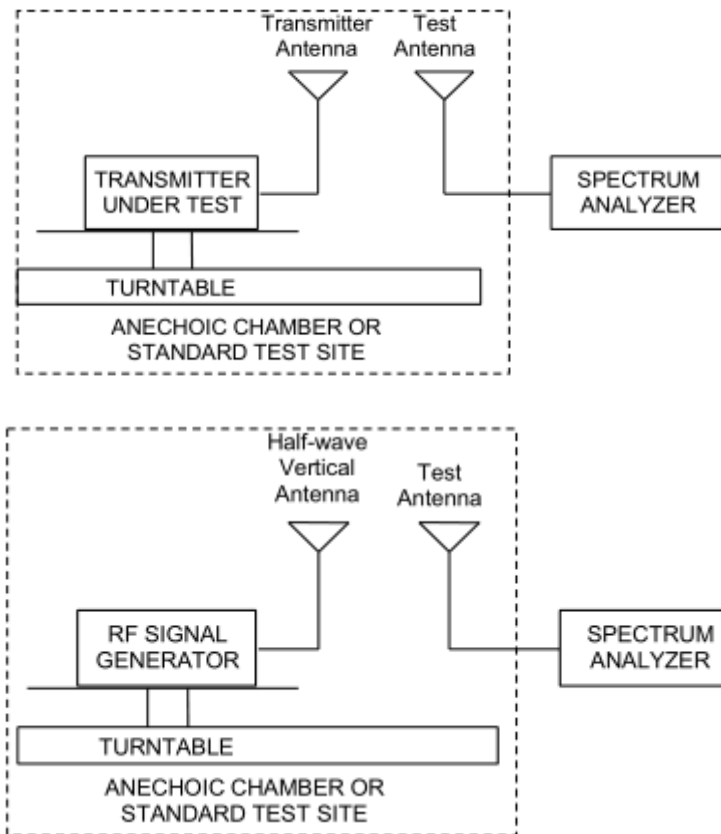
- Connect the equipment as illustrated. Mount the equipment with the manufacturer specified antenna in a vertical orientation on a manufacturer specified mounting surface located on a non-conducting rotating platform of a RF anechoic chamber (preferred) or a standard radiation site.
- Key the transmitter, then rotate the EUT 360° azimuthally and record spectrum analyzer power level (LVL) measurements at angular increments that are sufficiently small to permit resolution of all peaks. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading at each angular increment. (Note: several batteries may be needed to offset the effect of battery voltage droop, which should not exceed 5% of the manufactured specified battery voltage during transmission).
- Replace the transmitter under test with a vertically polarized half-wave dipole (or an antenna whose gain is known relative to an ideal half-wave dipole). The center of the antenna should be at the same location as the center of the antenna under test.
- Connect the antenna to a signal generator with a known output power and record the path loss (in dB) as LOSS. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading. $LOSS = \text{Generator Output Power (dBm)} - \text{Analyzer reading (dBm)}$
- Determine the effective radiated output power at each angular position from the readings in steps b) and d) using the following equation: $ERP \text{ (dBm)} = LVL \text{ (dBm)} + LOSS \text{ (dB)}$
- The maximum ERP is the maximum value determined in the preceding step.
- When calculating ERP, in addition to knowing the antenna radiation and matching characteristics, it is necessary to know the loss values of all elements (e.g.transmission line attenuation, mismatches, filters, combiners) interposed between the point where transmitter output power is measured, and the point where power is applied to the antenna. ERP can then be calculated as follows:
 $EIRP \text{ (dBm)} = \text{Output Power (dBm)} - \text{Losses (dB)} + \text{Antenna Gain (dBi)}$
where:dBd refers to gain relative to an ideal dipole.
 $EIRP \text{ (dBm)} = ERP \text{ (dBm)} + 2.15 \text{ (dB.)}$

The RB allocation refers to section 5.1, using the maximum output power configuration.

Test Setup



The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.



Limits

No specific RF power output requirements in part 2.1046.

Rule Part 24.232(c) Mobile and portable stations are limited to 2 watts EIRP.

Rule Part 24.232(e) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

Limit	$\leq 2 \text{ W}$ (33 dBm)
-------	-----------------------------

**Measurement Uncertainty**

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.4$ dB for RF power output, $k = 2$, $U = 1.19$ dB for EIRP.

Test Results

GSM 1900		Conducted Power (dBm)			EIRP (dBm)		
		Channel 512	Channel 661	Channel 810	Channel 512	Channel 661	Channel 810
		1850.2 (MHz)	1880 (MHz)	1909.8 (MHz)	1850.2 (MHz)	1880 (MHz)	1909.8 (MHz)
GPRS (GMSK)	1TXslot	30.78	30.63	30.63	30.78	30.63	30.63
	2TXslots	30.69	30.48	30.51	30.69	30.48	30.51
	3TXslots	30.41	30.27	30.34	30.41	30.27	30.34
	4TXslots	30.33	30.11	30.16	30.33	30.11	30.16
EGPRS (8PSK)	1TXslot	26.72	26.84	26.74	26.72	26.84	26.74
	2TXslots	26.27	26.32	26.28	26.27	26.32	26.28
	3TXslots	26.07	25.96	26.02	26.07	25.96	26.02
	4TXslots	25.92	25.76	25.72	25.92	25.76	25.72

WCDMA Band II		Conducted Power (dBm)			EIRP (dBm)		
		Channel 9262	Channel 9400	Channel 9538	Channel 9262	Channel 9400	Channel 9538
		1852.4 (MHz)	1880 (MHz)	1907.6 (MHz)	1852.4 (MHz)	1880 (MHz)	1907.6 (MHz)
RMC		22.88	22.86	22.66	22.88	22.86	22.66
HSDPA	Sub - Test 1	22.34	22.28	22.10	22.34	22.28	22.10
	Sub - Test 2	22.33	22.30	22.07	22.33	22.30	22.07
	Sub - Test 3	21.80	21.80	21.59	21.80	21.80	21.59
	Sub - Test 4	21.81	21.81	21.57	21.81	21.81	21.57
HSUPA	Sub - Test 1	22.30	22.27	22.05	22.30	22.27	22.05
	Sub - Test 2	21.29	21.25	21.04	21.29	21.25	21.04
	Sub - Test 3	21.76	21.73	21.53	21.76	21.73	21.53
	Sub - Test 4	21.22	21.22	21.01	21.22	21.22	21.01
	Sub - Test 5	22.23	22.20	21.99	22.23	22.20	21.99
DC-HSDPA	Sub - Test 1	22.22	22.22	22.00	22.22	22.22	22.00
	Sub - Test 2	22.21	22.21	21.99	22.21	22.21	21.99
	Sub - Test 3	21.79	21.70	21.50	21.79	21.70	21.50
	Sub - Test 4	21.78	21.69	21.49	21.78	21.69	21.49
HSPA+	16QAM	21.77	21.77	21.56	21.77	21.77	21.56



Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	EIRP (dBm)	Verdict
LTE Band2	1.4	18607	1	#0	QPSK	22.41	22.41	PASS
LTE Band2	1.4	18607	1	#Mid	QPSK	22.66	22.66	PASS
LTE Band2	1.4	18607	1	#Max	QPSK	22.53	22.53	PASS
LTE Band2	1.4	18607	3	#0	QPSK	22.63	22.63	PASS
LTE Band2	1.4	18607	3	#Mid	QPSK	22.64	22.64	PASS
LTE Band2	1.4	18607	3	#Max	QPSK	22.64	22.64	PASS
LTE Band2	1.4	18607	6	#0	QPSK	21.61	21.61	PASS
LTE Band2	1.4	18607	1	#0	QAM16	21.03	21.03	PASS
LTE Band2	1.4	18607	1	#Mid	QAM16	21.10	21.10	PASS
LTE Band2	1.4	18607	1	#Max	QAM16	20.96	20.96	PASS
LTE Band2	1.4	18607	3	#0	QAM16	21.13	21.13	PASS
LTE Band2	1.4	18607	3	#Mid	QAM16	21.23	21.23	PASS
LTE Band2	1.4	18607	3	#Max	QAM16	21.55	21.55	PASS
LTE Band2	1.4	18607	6	#0	QAM16	20.63	20.63	PASS
LTE Band2	1.4	18900	1	#0	QPSK	22.62	22.62	PASS
LTE Band2	1.4	18900	1	#Mid	QPSK	22.77	22.77	PASS
LTE Band2	1.4	18900	1	#Max	QPSK	22.67	22.67	PASS
LTE Band2	1.4	18900	3	#0	QPSK	22.51	22.51	PASS
LTE Band2	1.4	18900	3	#Mid	QPSK	22.49	22.49	PASS
LTE Band2	1.4	18900	3	#Max	QPSK	22.48	22.48	PASS
LTE Band2	1.4	18900	6	#0	QPSK	21.56	21.56	PASS
LTE Band2	1.4	18900	1	#0	QAM16	21.78	21.78	PASS
LTE Band2	1.4	18900	1	#Mid	QAM16	22.04	22.04	PASS
LTE Band2	1.4	18900	1	#Max	QAM16	21.86	21.86	PASS
LTE Band2	1.4	18900	3	#0	QAM16	21.88	21.88	PASS
LTE Band2	1.4	18900	3	#Mid	QAM16	21.87	21.87	PASS
LTE Band2	1.4	18900	3	#Max	QAM16	21.89	21.89	PASS
LTE Band2	1.4	18900	6	#0	QAM16	20.82	20.82	PASS
LTE Band2	1.4	19193	1	#0	QPSK	22.38	22.38	PASS
LTE Band2	1.4	19193	1	#Mid	QPSK	22.55	22.55	PASS
LTE Band2	1.4	19193	1	#Max	QPSK	22.41	22.41	PASS
LTE Band2	1.4	19193	3	#0	QPSK	22.46	22.46	PASS
LTE Band2	1.4	19193	3	#Mid	QPSK	22.35	22.35	PASS
LTE Band2	1.4	19193	3	#Max	QPSK	22.25	22.25	PASS
LTE Band2	1.4	19193	6	#0	QPSK	21.51	21.51	PASS
LTE Band2	1.4	19193	1	#0	QAM16	21.50	21.50	PASS
LTE Band2	1.4	19193	1	#Mid	QAM16	21.59	21.59	PASS
LTE Band2	1.4	19193	1	#Max	QAM16	21.49	21.49	PASS
LTE Band2	1.4	19193	3	#0	QAM16	21.38	21.38	PASS
LTE Band2	1.4	19193	3	#Mid	QAM16	21.38	21.38	PASS



LTE Band2	1.4	19193	3	#Max	QAM16	21.36	21.36	PASS
LTE Band2	1.4	19193	6	#0	QAM16	20.49	20.49	PASS
LTE Band2	3	18615	1	#0	QPSK	22.33	22.33	PASS
LTE Band2	3	18615	1	#Mid	QPSK	22.30	22.30	PASS
LTE Band2	3	18615	1	#Max	QPSK	22.73	22.73	PASS
LTE Band2	3	18615	8	#0	QPSK	21.64	21.64	PASS
LTE Band2	3	18615	8	#Mid	QPSK	21.70	21.70	PASS
LTE Band2	3	18615	8	#Max	QPSK	21.66	21.66	PASS
LTE Band2	3	18615	15	#0	QPSK	21.69	21.69	PASS
LTE Band2	3	18615	1	#0	QAM16	21.63	21.63	PASS
LTE Band2	3	18615	1	#Mid	QAM16	21.42	21.42	PASS
LTE Band2	3	18615	1	#Max	QAM16	21.77	21.77	PASS
LTE Band2	3	18615	8	#0	QAM16	20.45	20.45	PASS
LTE Band2	3	18615	8	#Mid	QAM16	20.48	20.48	PASS
LTE Band2	3	18615	8	#Max	QAM16	20.51	20.51	PASS
LTE Band2	3	18615	15	#0	QAM16	20.31	20.31	PASS
LTE Band2	3	18900	1	#0	QPSK	22.63	22.63	PASS
LTE Band2	3	18900	1	#Mid	QPSK	22.44	22.44	PASS
LTE Band2	3	18900	1	#Max	QPSK	22.62	22.62	PASS
LTE Band2	3	18900	8	#0	QPSK	21.67	21.67	PASS
LTE Band2	3	18900	8	#Mid	QPSK	21.67	21.67	PASS
LTE Band2	3	18900	8	#Max	QPSK	21.64	21.64	PASS
LTE Band2	3	18900	15	#0	QPSK	21.65	21.65	PASS
LTE Band2	3	18900	1	#0	QAM16	21.97	21.97	PASS
LTE Band2	3	18900	1	#Mid	QAM16	21.66	21.66	PASS
LTE Band2	3	18900	1	#Max	QAM16	21.92	21.92	PASS
LTE Band2	3	18900	8	#0	QAM16	20.61	20.61	PASS
LTE Band2	3	18900	8	#Mid	QAM16	20.62	20.62	PASS
LTE Band2	3	18900	8	#Max	QAM16	20.49	20.49	PASS
LTE Band2	3	18900	15	#0	QAM16	20.38	20.38	PASS
LTE Band2	3	19185	1	#0	QPSK	22.51	22.51	PASS
LTE Band2	3	19185	1	#Mid	QPSK	22.40	22.40	PASS
LTE Band2	3	19185	1	#Max	QPSK	22.51	22.51	PASS
LTE Band2	3	19185	8	#0	QPSK	21.48	21.48	PASS
LTE Band2	3	19185	8	#Mid	QPSK	21.48	21.48	PASS
LTE Band2	3	19185	8	#Max	QPSK	21.53	21.53	PASS
LTE Band2	3	19185	15	#0	QPSK	21.55	21.55	PASS
LTE Band2	3	19185	1	#0	QAM16	21.65	21.65	PASS
LTE Band2	3	19185	1	#Mid	QAM16	21.45	21.45	PASS
LTE Band2	3	19185	1	#Max	QAM16	21.56	21.56	PASS
LTE Band2	3	19185	8	#0	QAM16	20.76	20.76	PASS
LTE Band2	3	19185	8	#Mid	QAM16	20.44	20.44	PASS
LTE Band2	3	19185	8	#Max	QAM16	20.38	20.38	PASS



LTE Band2	3	19185	15	#0	QAM16	20.39	20.39	PASS
LTE Band2	5	18625	1	#0	QPSK	22.73	22.73	PASS
LTE Band2	5	18625	1	#Mid	QPSK	22.29	22.29	PASS
LTE Band2	5	18625	1	#Max	QPSK	22.60	22.60	PASS
LTE Band2	5	18625	12	#0	QPSK	21.65	21.65	PASS
LTE Band2	5	18625	12	#Mid	QPSK	21.64	21.64	PASS
LTE Band2	5	18625	12	#Max	QPSK	21.68	21.68	PASS
LTE Band2	5	18625	25	#0	QPSK	21.65	21.65	PASS
LTE Band2	5	18625	1	#0	QAM16	21.34	21.34	PASS
LTE Band2	5	18625	1	#Mid	QAM16	21.29	21.29	PASS
LTE Band2	5	18625	1	#Max	QAM16	21.04	21.04	PASS
LTE Band2	5	18625	12	#0	QAM16	20.41	20.41	PASS
LTE Band2	5	18625	12	#Mid	QAM16	20.41	20.41	PASS
LTE Band2	5	18625	12	#Max	QAM16	20.52	20.52	PASS
LTE Band2	5	18625	25	#0	QAM16	20.52	20.52	PASS
LTE Band2	5	18900	1	#0	QPSK	22.52	22.52	PASS
LTE Band2	5	18900	1	#Mid	QPSK	22.48	22.48	PASS
LTE Band2	5	18900	1	#Max	QPSK	22.90	22.90	PASS
LTE Band2	5	18900	12	#0	QPSK	21.67	21.67	PASS
LTE Band2	5	18900	12	#Mid	QPSK	21.66	21.66	PASS
LTE Band2	5	18900	12	#Max	QPSK	21.69	21.69	PASS
LTE Band2	5	18900	25	#0	QPSK	21.70	21.70	PASS
LTE Band2	5	18900	1	#0	QAM16	21.62	21.62	PASS
LTE Band2	5	18900	1	#Mid	QAM16	21.09	21.09	PASS
LTE Band2	5	18900	1	#Max	QAM16	21.38	21.38	PASS
LTE Band2	5	18900	12	#0	QAM16	20.48	20.48	PASS
LTE Band2	5	18900	12	#Mid	QAM16	20.48	20.48	PASS
LTE Band2	5	18900	12	#Max	QAM16	20.50	20.50	PASS
LTE Band2	5	18900	25	#0	QAM16	20.40	20.40	PASS
LTE Band2	5	19175	1	#0	QPSK	22.55	22.55	PASS
LTE Band2	5	19175	1	#Mid	QPSK	22.28	22.28	PASS
LTE Band2	5	19175	1	#Max	QPSK	22.42	22.42	PASS
LTE Band2	5	19175	12	#0	QPSK	21.59	21.59	PASS
LTE Band2	5	19175	12	#Mid	QPSK	21.59	21.59	PASS
LTE Band2	5	19175	12	#Max	QPSK	21.50	21.50	PASS
LTE Band2	5	19175	25	#0	QPSK	21.49	21.49	PASS
LTE Band2	5	19175	1	#0	QAM16	21.26	21.26	PASS
LTE Band2	5	19175	1	#Mid	QAM16	21.21	21.21	PASS
LTE Band2	5	19175	1	#Max	QAM16	21.24	21.24	PASS
LTE Band2	5	19175	12	#0	QAM16	20.38	20.38	PASS
LTE Band2	5	19175	12	#Mid	QAM16	20.37	20.37	PASS
LTE Band2	5	19175	12	#Max	QAM16	20.32	20.32	PASS
LTE Band2	5	19175	25	#0	QAM16	20.44	20.44	PASS



LTE Band2	10	18650	1	#0	QPSK	22.58	22.58	PASS
LTE Band2	10	18650	1	#Mid	QPSK	22.57	22.57	PASS
LTE Band2	10	18650	1	#Max	QPSK	22.85	22.85	PASS
LTE Band2	10	18650	25	#0	QPSK	21.69	21.69	PASS
LTE Band2	10	18650	25	#Mid	QPSK	21.69	21.69	PASS
LTE Band2	10	18650	25	#Max	QPSK	21.76	21.76	PASS
LTE Band2	10	18650	50	#0	QPSK	21.67	21.67	PASS
LTE Band2	10	18650	1	#0	QAM16	21.68	21.68	PASS
LTE Band2	10	18650	1	#Mid	QAM16	21.59	21.59	PASS
LTE Band2	10	18650	1	#Max	QAM16	21.95	21.95	PASS
LTE Band2	10	18650	25	#0	QAM16	20.70	20.70	PASS
LTE Band2	10	18650	25	#Mid	QAM16	20.70	20.70	PASS
LTE Band2	10	18650	25	#Max	QAM16	20.69	20.69	PASS
LTE Band2	10	18650	50	#0	QAM16	20.72	20.72	PASS
LTE Band2	10	18900	1	#0	QPSK	22.70	22.70	PASS
LTE Band2	10	18900	1	#Mid	QPSK	22.59	22.59	PASS
LTE Band2	10	18900	1	#Max	QPSK	22.64	22.64	PASS
LTE Band2	10	18900	25	#0	QPSK	21.71	21.71	PASS
LTE Band2	10	18900	25	#Mid	QPSK	21.70	21.70	PASS
LTE Band2	10	18900	25	#Max	QPSK	21.67	21.67	PASS
LTE Band2	10	18900	50	#0	QPSK	21.74	21.74	PASS
LTE Band2	10	18900	1	#0	QAM16	21.81	21.81	PASS
LTE Band2	10	18900	1	#Mid	QAM16	21.81	21.81	PASS
LTE Band2	10	18900	1	#Max	QAM16	21.85	21.85	PASS
LTE Band2	10	18900	25	#0	QAM16	20.69	20.69	PASS
LTE Band2	10	18900	25	#Mid	QAM16	20.70	20.70	PASS
LTE Band2	10	18900	25	#Max	QAM16	20.63	20.63	PASS
LTE Band2	10	18900	50	#0	QAM16	20.65	20.65	PASS
LTE Band2	10	19150	1	#0	QPSK	22.58	22.58	PASS
LTE Band2	10	19150	1	#Mid	QPSK	22.53	22.53	PASS
LTE Band2	10	19150	1	#Max	QPSK	22.47	22.47	PASS
LTE Band2	10	19150	25	#0	QPSK	21.67	21.67	PASS
LTE Band2	10	19150	25	#Mid	QPSK	21.67	21.67	PASS
LTE Band2	10	19150	25	#Max	QPSK	21.57	21.57	PASS
LTE Band2	10	19150	50	#0	QPSK	21.58	21.58	PASS
LTE Band2	10	19150	1	#0	QAM16	21.17	21.17	PASS
LTE Band2	10	19150	1	#Mid	QAM16	21.51	21.51	PASS
LTE Band2	10	19150	1	#Max	QAM16	21.28	21.28	PASS
LTE Band2	10	19150	25	#0	QAM16	20.61	20.61	PASS
LTE Band2	10	19150	25	#Mid	QAM16	20.60	20.60	PASS
LTE Band2	10	19150	25	#Max	QAM16	20.47	20.47	PASS
LTE Band2	10	19150	50	#0	QAM16	20.61	20.61	PASS
LTE Band2	15	18675	1	#0	QPSK	22.87	22.87	PASS



LTE Band2	15	18675	1	#Mid	QPSK	22.54	22.54	PASS
LTE Band2	15	18675	1	#Max	QPSK	22.77	22.77	PASS
LTE Band2	15	18675	36	#0	QPSK	21.78	21.78	PASS
LTE Band2	15	18675	36	#Mid	QPSK	21.78	21.78	PASS
LTE Band2	15	18675	36	#Max	QPSK	21.78	21.78	PASS
LTE Band2	15	18675	75	#0	QPSK	21.69	21.69	PASS
LTE Band2	15	18675	1	#0	QAM16	21.71	21.71	PASS
LTE Band2	15	18675	1	#Mid	QAM16	21.47	21.47	PASS
LTE Band2	15	18675	1	#Max	QAM16	21.72	21.72	PASS
LTE Band2	15	18675	36	#0	QAM16	20.76	20.76	PASS
LTE Band2	15	18675	36	#Mid	QAM16	20.76	20.76	PASS
LTE Band2	15	18675	36	#Max	QAM16	20.76	20.76	PASS
LTE Band2	15	18675	75	#0	QAM16	20.77	20.77	PASS
LTE Band2	15	18900	1	#0	QPSK	22.72	22.72	PASS
LTE Band2	15	18900	1	#Mid	QPSK	22.49	22.49	PASS
LTE Band2	15	18900	1	#Max	QPSK	22.70	22.70	PASS
LTE Band2	15	18900	36	#0	QPSK	21.76	21.76	PASS
LTE Band2	15	18900	36	#Mid	QPSK	21.75	21.75	PASS
LTE Band2	15	18900	36	#Max	QPSK	21.72	21.72	PASS
LTE Band2	15	18900	75	#0	QPSK	21.73	21.73	PASS
LTE Band2	15	18900	1	#0	QAM16	22.45	22.45	PASS
LTE Band2	15	18900	1	#Mid	QAM16	21.82	21.82	PASS
LTE Band2	15	18900	1	#Max	QAM16	22.46	22.46	PASS
LTE Band2	15	18900	36	#0	QAM16	20.71	20.71	PASS
LTE Band2	15	18900	36	#Mid	QAM16	20.72	20.72	PASS
LTE Band2	15	18900	36	#Max	QAM16	20.78	20.78	PASS
LTE Band2	15	18900	75	#0	QAM16	20.79	20.79	PASS
LTE Band2	15	19125	1	#0	QPSK	22.81	22.81	PASS
LTE Band2	15	19125	1	#Mid	QPSK	22.56	22.56	PASS
LTE Band2	15	19125	1	#Max	QPSK	22.78	22.78	PASS
LTE Band2	15	19125	36	#0	QPSK	21.60	21.60	PASS
LTE Band2	15	19125	36	#Mid	QPSK	21.61	21.61	PASS
LTE Band2	15	19125	36	#Max	QPSK	21.74	21.74	PASS
LTE Band2	15	19125	75	#0	QPSK	21.71	21.71	PASS
LTE Band2	15	19125	1	#0	QAM16	21.63	21.63	PASS
LTE Band2	15	19125	1	#Mid	QAM16	21.20	21.20	PASS
LTE Band2	15	19125	1	#Max	QAM16	21.92	21.92	PASS
LTE Band2	15	19125	36	#0	QAM16	20.55	20.55	PASS
LTE Band2	15	19125	36	#Mid	QAM16	20.55	20.55	PASS
LTE Band2	15	19125	36	#Max	QAM16	20.66	20.66	PASS
LTE Band2	15	19125	75	#0	QAM16	20.66	20.66	PASS
LTE Band2	20	18700	1	#0	QPSK	22.70	22.70	PASS
LTE Band2	20	18700	1	#Mid	QPSK	22.70	22.70	PASS



LTE Band2	20	18700	1	#Max	QPSK	22.68	22.68	PASS
LTE Band2	20	18700	50	#0	QPSK	21.72	21.72	PASS
LTE Band2	20	18700	50	#Mid	QPSK	21.77	21.77	PASS
LTE Band2	20	18700	50	#Max	QPSK	21.72	21.72	PASS
LTE Band2	20	18700	100	#0	QPSK	21.69	21.69	PASS
LTE Band2	20	18700	1	#0	QAM16	22.01	22.01	PASS
LTE Band2	20	18700	1	#Mid	QAM16	21.96	21.96	PASS
LTE Band2	20	18700	1	#Max	QAM16	21.92	21.92	PASS
LTE Band2	20	18700	50	#0	QAM16	20.78	20.78	PASS
LTE Band2	20	18700	50	#Mid	QAM16	20.79	20.79	PASS
LTE Band2	20	18700	50	#Max	QAM16	20.80	20.80	PASS
LTE Band2	20	18700	100	#0	QAM16	20.76	20.76	PASS
LTE Band2	20	18900	1	#0	QPSK	22.99	22.99	PASS
LTE Band2	20	18900	1	#Mid	QPSK	22.91	22.91	PASS
LTE Band2	20	18900	1	#Max	QPSK	22.97	22.97	PASS
LTE Band2	20	18900	50	#0	QPSK	21.78	21.78	PASS
LTE Band2	20	18900	50	#Mid	QPSK	21.78	21.78	PASS
LTE Band2	20	18900	50	#Max	QPSK	21.70	21.70	PASS
LTE Band2	20	18900	100	#0	QPSK	21.75	21.75	PASS
LTE Band2	20	18900	1	#0	QAM16	22.02	22.02	PASS
LTE Band2	20	18900	1	#Mid	QAM16	21.76	21.76	PASS
LTE Band2	20	18900	1	#Max	QAM16	21.56	21.56	PASS
LTE Band2	20	18900	50	#0	QAM16	20.71	20.71	PASS
LTE Band2	20	18900	50	#Mid	QAM16	20.71	20.71	PASS
LTE Band2	20	18900	50	#Max	QAM16	20.64	20.64	PASS
LTE Band2	20	18900	100	#0	QAM16	20.73	20.73	PASS
LTE Band2	20	19100	1	#0	QPSK	22.69	22.69	PASS
LTE Band2	20	19100	1	#Mid	QPSK	22.68	22.68	PASS
LTE Band2	20	19100	1	#Max	QPSK	22.73	22.73	PASS
LTE Band2	20	19100	50	#0	QPSK	21.65	21.65	PASS
LTE Band2	20	19100	50	#Mid	QPSK	21.64	21.64	PASS
LTE Band2	20	19100	50	#Max	QPSK	21.74	21.74	PASS
LTE Band2	20	19100	100	#0	QPSK	21.64	21.64	PASS
LTE Band2	20	19100	1	#0	QAM16	21.50	21.50	PASS
LTE Band2	20	19100	1	#Mid	QAM16	21.18	21.18	PASS
LTE Band2	20	19100	1	#Max	QAM16	21.38	21.38	PASS
LTE Band2	20	19100	50	#0	QAM16	20.53	20.53	PASS
LTE Band2	20	19100	50	#Mid	QAM16	20.54	20.54	PASS
LTE Band2	20	19100	50	#Max	QAM16	20.61	20.61	PASS
LTE Band2	20	19100	100	#0	QAM16	20.59	20.59	PASS



Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	EIRP (dBm)	Verdict
LTE Band25	1.4	26047	1	#0	QPSK	22.57	22.57	PASS
LTE Band25	1.4	26047	1	#Mid	QPSK	22.67	22.67	PASS
LTE Band25	1.4	26047	1	#Max	QPSK	22.63	22.63	PASS
LTE Band25	1.4	26047	3	#0	QPSK	22.58	22.58	PASS
LTE Band25	1.4	26047	3	#Mid	QPSK	22.57	22.57	PASS
LTE Band25	1.4	26047	3	#Max	QPSK	22.51	22.51	PASS
LTE Band25	1.4	26047	6	#0	QPSK	21.62	21.62	PASS
LTE Band25	1.4	26047	1	#0	QAM16	21.94	21.94	PASS
LTE Band25	1.4	26047	1	#Mid	QAM16	22.09	22.09	PASS
LTE Band25	1.4	26047	1	#Max	QAM16	21.90	21.90	PASS
LTE Band25	1.4	26047	3	#0	QAM16	21.82	21.82	PASS
LTE Band25	1.4	26047	3	#Mid	QAM16	21.85	21.85	PASS
LTE Band25	1.4	26047	3	#Max	QAM16	21.89	21.89	PASS
LTE Band25	1.4	26047	6	#0	QAM16	20.67	20.67	PASS
LTE Band25	1.4	26365	1	#0	QPSK	22.50	22.50	PASS
LTE Band25	1.4	26365	1	#Mid	QPSK	22.74	22.74	PASS
LTE Band25	1.4	26365	1	#Max	QPSK	22.54	22.54	PASS
LTE Band25	1.4	26365	3	#0	QPSK	22.66	22.66	PASS
LTE Band25	1.4	26365	3	#Mid	QPSK	22.64	22.64	PASS
LTE Band25	1.4	26365	3	#Max	QPSK	22.51	22.51	PASS
LTE Band25	1.4	26365	6	#0	QPSK	21.60	21.60	PASS
LTE Band25	1.4	26365	1	#0	QAM16	21.86	21.86	PASS
LTE Band25	1.4	26365	1	#Mid	QAM16	21.87	21.87	PASS
LTE Band25	1.4	26365	1	#Max	QAM16	21.81	21.81	PASS
LTE Band25	1.4	26365	3	#0	QAM16	21.51	21.51	PASS
LTE Band25	1.4	26365	3	#Mid	QAM16	21.52	21.52	PASS
LTE Band25	1.4	26365	3	#Max	QAM16	21.61	21.61	PASS
LTE Band25	1.4	26365	6	#0	QAM16	20.67	20.67	PASS
LTE Band25	1.4	26683	1	#0	QPSK	22.45	22.45	PASS
LTE Band25	1.4	26683	1	#Mid	QPSK	22.50	22.50	PASS
LTE Band25	1.4	26683	1	#Max	QPSK	22.41	22.41	PASS
LTE Band25	1.4	26683	3	#0	QPSK	22.32	22.32	PASS
LTE Band25	1.4	26683	3	#Mid	QPSK	22.31	22.31	PASS
LTE Band25	1.4	26683	3	#Max	QPSK	22.38	22.38	PASS
LTE Band25	1.4	26683	6	#0	QPSK	21.47	21.47	PASS
LTE Band25	1.4	26683	1	#0	QAM16	20.78	20.78	PASS
LTE Band25	1.4	26683	1	#Mid	QAM16	20.84	20.84	PASS
LTE Band25	1.4	26683	1	#Max	QAM16	20.52	20.52	PASS
LTE Band25	1.4	26683	3	#0	QAM16	21.07	21.07	PASS
LTE Band25	1.4	26683	3	#Mid	QAM16	21.07	21.07	PASS
LTE Band25	1.4	26683	3	#Max	QAM16	20.99	20.99	PASS



LTE Band25	1.4	26683	6	#0	QAM16	20.52	20.52	PASS
LTE Band25	3	26055	1	#0	QPSK	22.36	22.36	PASS
LTE Band25	3	26055	1	#Mid	QPSK	22.24	22.24	PASS
LTE Band25	3	26055	1	#Max	QPSK	22.21	22.21	PASS
LTE Band25	3	26055	8	#0	QPSK	21.64	21.64	PASS
LTE Band25	3	26055	8	#Mid	QPSK	21.63	21.63	PASS
LTE Band25	3	26055	8	#Max	QPSK	21.65	21.65	PASS
LTE Band25	3	26055	15	#0	QPSK	21.69	21.69	PASS
LTE Band25	3	26055	1	#0	QAM16	21.51	21.51	PASS
LTE Band25	3	26055	1	#Mid	QAM16	21.27	21.27	PASS
LTE Band25	3	26055	1	#Max	QAM16	21.05	21.05	PASS
LTE Band25	3	26055	8	#0	QAM16	20.58	20.58	PASS
LTE Band25	3	26055	8	#Mid	QAM16	20.59	20.59	PASS
LTE Band25	3	26055	8	#Max	QAM16	20.61	20.61	PASS
LTE Band25	3	26055	15	#0	QAM16	20.60	20.60	PASS
LTE Band25	3	26365	1	#0	QPSK	22.55	22.55	PASS
LTE Band25	3	26365	1	#Mid	QPSK	22.47	22.47	PASS
LTE Band25	3	26365	1	#Max	QPSK	22.52	22.52	PASS
LTE Band25	3	26365	8	#0	QPSK	21.74	21.74	PASS
LTE Band25	3	26365	8	#Mid	QPSK	21.74	21.74	PASS
LTE Band25	3	26365	8	#Max	QPSK	21.68	21.68	PASS
LTE Band25	3	26365	15	#0	QPSK	21.69	21.69	PASS
LTE Band25	3	26365	1	#0	QAM16	21.94	21.94	PASS
LTE Band25	3	26365	1	#Mid	QAM16	21.86	21.86	PASS
LTE Band25	3	26365	1	#Max	QAM16	21.91	21.91	PASS
LTE Band25	3	26365	8	#0	QAM16	20.96	20.96	PASS
LTE Band25	3	26365	8	#Mid	QAM16	20.88	20.88	PASS
LTE Band25	3	26365	8	#Max	QAM16	20.93	20.93	PASS
LTE Band25	3	26365	15	#0	QAM16	20.82	20.82	PASS
LTE Band25	3	26675	1	#0	QPSK	22.29	22.29	PASS
LTE Band25	3	26675	1	#Mid	QPSK	22.41	22.41	PASS
LTE Band25	3	26675	1	#Max	QPSK	22.41	22.41	PASS
LTE Band25	3	26675	8	#0	QPSK	21.55	21.55	PASS
LTE Band25	3	26675	8	#Mid	QPSK	21.56	21.56	PASS
LTE Band25	3	26675	8	#Max	QPSK	21.66	21.66	PASS
LTE Band25	3	26675	15	#0	QPSK	21.54	21.54	PASS
LTE Band25	3	26675	1	#0	QAM16	21.11	21.11	PASS
LTE Band25	3	26675	1	#Mid	QAM16	20.55	20.55	PASS
LTE Band25	3	26675	1	#Max	QAM16	20.62	20.62	PASS
LTE Band25	3	26675	8	#0	QAM16	20.62	20.62	PASS
LTE Band25	3	26675	8	#Mid	QAM16	20.69	20.69	PASS
LTE Band25	3	26675	8	#Max	QAM16	20.73	20.73	PASS
LTE Band25	3	26675	15	#0	QAM16	20.42	20.42	PASS



LTE Band25	5	26065	1	#0	QPSK	22.35	22.35	PASS
LTE Band25	5	26065	1	#Mid	QPSK	22.18	22.18	PASS
LTE Band25	5	26065	1	#Max	QPSK	22.38	22.38	PASS
LTE Band25	5	26065	12	#0	QPSK	21.62	21.62	PASS
LTE Band25	5	26065	12	#Mid	QPSK	21.62	21.62	PASS
LTE Band25	5	26065	12	#Max	QPSK	21.54	21.54	PASS
LTE Band25	5	26065	25	#0	QPSK	21.51	21.51	PASS
LTE Band25	5	26065	1	#0	QAM16	21.46	21.46	PASS
LTE Band25	5	26065	1	#Mid	QAM16	21.10	21.10	PASS
LTE Band25	5	26065	1	#Max	QAM16	21.11	21.11	PASS
LTE Band25	5	26065	12	#0	QAM16	20.34	20.34	PASS
LTE Band25	5	26065	12	#Mid	QAM16	20.43	20.43	PASS
LTE Band25	5	26065	12	#Max	QAM16	20.38	20.38	PASS
LTE Band25	5	26065	25	#0	QAM16	20.45	20.45	PASS
LTE Band25	5	26365	1	#0	QPSK	22.76	22.76	PASS
LTE Band25	5	26365	1	#Mid	QPSK	22.56	22.56	PASS
LTE Band25	5	26365	1	#Max	QPSK	22.61	22.61	PASS
LTE Band25	5	26365	12	#0	QPSK	21.70	21.70	PASS
LTE Band25	5	26365	12	#Mid	QPSK	21.70	21.70	PASS
LTE Band25	5	26365	12	#Max	QPSK	21.72	21.72	PASS
LTE Band25	5	26365	25	#0	QPSK	21.63	21.63	PASS
LTE Band25	5	26365	1	#0	QAM16	21.68	21.68	PASS
LTE Band25	5	26365	1	#Mid	QAM16	21.58	21.58	PASS
LTE Band25	5	26365	1	#Max	QAM16	21.65	21.65	PASS
LTE Band25	5	26365	12	#0	QAM16	20.51	20.51	PASS
LTE Band25	5	26365	12	#Mid	QAM16	20.51	20.51	PASS
LTE Band25	5	26365	12	#Max	QAM16	20.53	20.53	PASS
LTE Band25	5	26365	25	#0	QAM16	20.53	20.53	PASS
LTE Band25	5	26665	1	#0	QPSK	22.16	22.16	PASS
LTE Band25	5	26665	1	#Mid	QPSK	22.10	22.10	PASS
LTE Band25	5	26665	1	#Max	QPSK	22.30	22.30	PASS
LTE Band25	5	26665	12	#0	QPSK	21.43	21.43	PASS
LTE Band25	5	26665	12	#Mid	QPSK	21.44	21.44	PASS
LTE Band25	5	26665	12	#Max	QPSK	21.58	21.58	PASS
LTE Band25	5	26665	25	#0	QPSK	21.49	21.49	PASS
LTE Band25	5	26665	1	#0	QAM16	21.18	21.18	PASS
LTE Band25	5	26665	1	#Mid	QAM16	21.35	21.35	PASS
LTE Band25	5	26665	1	#Max	QAM16	21.67	21.67	PASS
LTE Band25	5	26665	12	#0	QAM16	20.62	20.62	PASS
LTE Band25	5	26665	12	#Mid	QAM16	20.63	20.63	PASS
LTE Band25	5	26665	12	#Max	QAM16	20.59	20.59	PASS
LTE Band25	5	26665	25	#0	QAM16	20.56	20.56	PASS
LTE Band25	10	26090	1	#0	QPSK	22.61	22.61	PASS



LTE Band25	10	26090	1	#Mid	QPSK	22.53	22.53	PASS
LTE Band25	10	26090	1	#Max	QPSK	22.67	22.67	PASS
LTE Band25	10	26090	25	#0	QPSK	21.58	21.58	PASS
LTE Band25	10	26090	25	#Mid	QPSK	21.57	21.57	PASS
LTE Band25	10	26090	25	#Max	QPSK	21.74	21.74	PASS
LTE Band25	10	26090	50	#0	QPSK	21.65	21.65	PASS
LTE Band25	10	26090	1	#0	QAM16	21.68	21.68	PASS
LTE Band25	10	26090	1	#Mid	QAM16	21.56	21.56	PASS
LTE Band25	10	26090	1	#Max	QAM16	21.71	21.71	PASS
LTE Band25	10	26090	25	#0	QAM16	20.48	20.48	PASS
LTE Band25	10	26090	25	#Mid	QAM16	20.48	20.48	PASS
LTE Band25	10	26090	25	#Max	QAM16	20.74	20.74	PASS
LTE Band25	10	26090	50	#0	QAM16	20.59	20.59	PASS
LTE Band25	10	26365	1	#0	QPSK	22.77	22.77	PASS
LTE Band25	10	26365	1	#Mid	QPSK	22.92	22.92	PASS
LTE Band25	10	26365	1	#Max	QPSK	22.64	22.64	PASS
LTE Band25	10	26365	25	#0	QPSK	21.77	21.77	PASS
LTE Band25	10	26365	25	#Mid	QPSK	21.77	21.77	PASS
LTE Band25	10	26365	25	#Max	QPSK	21.75	21.75	PASS
LTE Band25	10	26365	50	#0	QPSK	21.71	21.71	PASS
LTE Band25	10	26365	1	#0	QAM16	22.01	22.01	PASS
LTE Band25	10	26365	1	#Mid	QAM16	22.09	22.09	PASS
LTE Band25	10	26365	1	#Max	QAM16	21.83	21.83	PASS
LTE Band25	10	26365	25	#0	QAM16	20.84	20.84	PASS
LTE Band25	10	26365	25	#Mid	QAM16	20.83	20.83	PASS
LTE Band25	10	26365	25	#Max	QAM16	20.82	20.82	PASS
LTE Band25	10	26365	50	#0	QAM16	20.86	20.86	PASS
LTE Band25	10	26640	1	#0	QPSK	22.49	22.49	PASS
LTE Band25	10	26640	1	#Mid	QPSK	22.53	22.53	PASS
LTE Band25	10	26640	1	#Max	QPSK	22.63	22.63	PASS
LTE Band25	10	26640	25	#0	QPSK	21.57	21.57	PASS
LTE Band25	10	26640	25	#Mid	QPSK	21.58	21.58	PASS
LTE Band25	10	26640	25	#Max	QPSK	21.49	21.49	PASS
LTE Band25	10	26640	50	#0	QPSK	21.62	21.62	PASS
LTE Band25	10	26640	1	#0	QAM16	21.10	21.10	PASS
LTE Band25	10	26640	1	#Mid	QAM16	20.88	20.88	PASS
LTE Band25	10	26640	1	#Max	QAM16	20.85	20.85	PASS
LTE Band25	10	26640	25	#0	QAM16	20.61	20.61	PASS
LTE Band25	10	26640	25	#Mid	QAM16	20.50	20.50	PASS
LTE Band25	10	26640	25	#Max	QAM16	20.36	20.36	PASS
LTE Band25	10	26640	50	#0	QAM16	20.55	20.55	PASS
LTE Band25	15	26115	1	#0	QPSK	22.65	22.65	PASS
LTE Band25	15	26115	1	#Mid	QPSK	22.71	22.71	PASS



LTE Band25	15	26115	1	#Max	QPSK	22.63	22.63	PASS
LTE Band25	15	26115	36	#0	QPSK	21.62	21.62	PASS
LTE Band25	15	26115	36	#Mid	QPSK	21.61	21.61	PASS
LTE Band25	15	26115	36	#Max	QPSK	21.80	21.80	PASS
LTE Band25	15	26115	75	#0	QPSK	21.61	21.61	PASS
LTE Band25	15	26115	1	#0	QAM16	21.54	21.54	PASS
LTE Band25	15	26115	1	#Mid	QAM16	21.57	21.57	PASS
LTE Band25	15	26115	1	#Max	QAM16	21.48	21.48	PASS
LTE Band25	15	26115	36	#0	QAM16	20.57	20.57	PASS
LTE Band25	15	26115	36	#Mid	QAM16	20.57	20.57	PASS
LTE Band25	15	26115	36	#Max	QAM16	20.76	20.76	PASS
LTE Band25	15	26115	75	#0	QAM16	20.48	20.48	PASS
LTE Band25	15	26365	1	#0	QPSK	22.80	22.80	PASS
LTE Band25	15	26365	1	#Mid	QPSK	22.67	22.67	PASS
LTE Band25	15	26365	1	#Max	QPSK	22.63	22.63	PASS
LTE Band25	15	26365	36	#0	QPSK	21.77	21.77	PASS
LTE Band25	15	26365	36	#Mid	QPSK	21.79	21.79	PASS
LTE Band25	15	26365	36	#Max	QPSK	21.78	21.78	PASS
LTE Band25	15	26365	75	#0	QPSK	21.68	21.68	PASS
LTE Band25	15	26365	1	#0	QAM16	21.91	21.91	PASS
LTE Band25	15	26365	1	#Mid	QAM16	21.85	21.85	PASS
LTE Band25	15	26365	1	#Max	QAM16	22.23	22.23	PASS
LTE Band25	15	26365	36	#0	QAM16	20.82	20.82	PASS
LTE Band25	15	26365	36	#Mid	QAM16	20.82	20.82	PASS
LTE Band25	15	26365	36	#Max	QAM16	20.71	20.71	PASS
LTE Band25	15	26365	75	#0	QAM16	20.54	20.54	PASS
LTE Band25	15	26615	1	#0	QPSK	22.63	22.63	PASS
LTE Band25	15	26615	1	#Mid	QPSK	22.46	22.46	PASS
LTE Band25	15	26615	1	#Max	QPSK	22.32	22.32	PASS
LTE Band25	15	26615	36	#0	QPSK	21.55	21.55	PASS
LTE Band25	15	26615	36	#Mid	QPSK	21.55	21.55	PASS
LTE Band25	15	26615	36	#Max	QPSK	21.40	21.40	PASS
LTE Band25	15	26615	75	#0	QPSK	21.46	21.46	PASS
LTE Band25	15	26615	1	#0	QAM16	21.53	21.53	PASS
LTE Band25	15	26615	1	#Mid	QAM16	21.39	21.39	PASS
LTE Band25	15	26615	1	#Max	QAM16	21.26	21.26	PASS
LTE Band25	15	26615	36	#0	QAM16	20.55	20.55	PASS
LTE Band25	15	26615	36	#Mid	QAM16	20.56	20.56	PASS
LTE Band25	15	26615	36	#Max	QAM16	20.36	20.36	PASS
LTE Band25	15	26615	75	#0	QAM16	20.40	20.40	PASS
LTE Band25	20	26140	1	#0	QPSK	22.74	22.74	PASS
LTE Band25	20	26140	1	#Mid	QPSK	23.02	23.02	PASS
LTE Band25	20	26140	1	#Max	QPSK	22.66	22.66	PASS



LTE Band25	20	26140	50	#0	QPSK	21.54	21.54	PASS
LTE Band25	20	26140	50	#Mid	QPSK	21.64	21.64	PASS
LTE Band25	20	26140	50	#Max	QPSK	21.66	21.66	PASS
LTE Band25	20	26140	100	#0	QPSK	21.53	21.53	PASS
LTE Band25	20	26140	1	#0	QAM16	21.43	21.43	PASS
LTE Band25	20	26140	1	#Mid	QAM16	21.28	21.28	PASS
LTE Band25	20	26140	1	#Max	QAM16	21.02	21.02	PASS
LTE Band25	20	26140	50	#0	QAM16	20.61	20.61	PASS
LTE Band25	20	26140	50	#Mid	QAM16	20.62	20.62	PASS
LTE Band25	20	26140	50	#Max	QAM16	20.81	20.81	PASS
LTE Band25	20	26140	100	#0	QAM16	20.58	20.58	PASS
LTE Band25	20	26365	1	#0	QPSK	22.70	22.70	PASS
LTE Band25	20	26365	1	#Mid	QPSK	22.85	22.85	PASS
LTE Band25	20	26365	1	#Max	QPSK	22.66	22.66	PASS
LTE Band25	20	26365	50	#0	QPSK	21.74	21.74	PASS
LTE Band25	20	26365	50	#Mid	QPSK	21.74	21.74	PASS
LTE Band25	20	26365	50	#Max	QPSK	21.65	21.65	PASS
LTE Band25	20	26365	100	#0	QPSK	21.71	21.71	PASS
LTE Band25	20	26365	1	#0	QAM16	21.53	21.53	PASS
LTE Band25	20	26365	1	#Mid	QAM16	21.51	21.51	PASS
LTE Band25	20	26365	1	#Max	QAM16	21.49	21.49	PASS
LTE Band25	20	26365	50	#0	QAM16	20.76	20.76	PASS
LTE Band25	20	26365	50	#Mid	QAM16	20.76	20.76	PASS
LTE Band25	20	26365	50	#Max	QAM16	20.67	20.67	PASS
LTE Band25	20	26365	100	#0	QAM16	20.58	20.58	PASS
LTE Band25	20	26590	1	#0	QPSK	22.54	22.54	PASS
LTE Band25	20	26590	1	#Mid	QPSK	22.65	22.65	PASS
LTE Band25	20	26590	1	#Max	QPSK	22.23	22.23	PASS
LTE Band25	20	26590	50	#0	QPSK	21.49	21.49	PASS
LTE Band25	20	26590	50	#Mid	QPSK	21.49	21.49	PASS
LTE Band25	20	26590	50	#Max	QPSK	21.34	21.34	PASS
LTE Band25	20	26590	100	#0	QPSK	21.54	21.54	PASS
LTE Band25	20	26590	1	#0	QAM16	21.24	21.24	PASS
LTE Band25	20	26590	1	#Mid	QAM16	21.44	21.44	PASS
LTE Band25	20	26590	1	#Max	QAM16	21.20	21.20	PASS
LTE Band25	20	26590	50	#0	QAM16	20.55	20.55	PASS
LTE Band25	20	26590	50	#Mid	QAM16	20.55	20.55	PASS
LTE Band25	20	26590	50	#Max	QAM16	20.32	20.32	PASS
LTE Band25	20	26590	100	#0	QAM16	20.47	20.47	PASS

5.2.Radiates Spurious Emission

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26 (2015).
2. Below 1GHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A loop antenna, A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=200Hz,VBW=600Hz for 9kHz~150kHz , RBW=10kHz, VBW=30kHz 150kHz~30MHz , RBW=100kHz,VBW=300kHz for 30MHz to 1GHz and RBW=1MHz, VBW=3MHz for above 1GHz, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:

$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$
The measurement results are amend as described below:

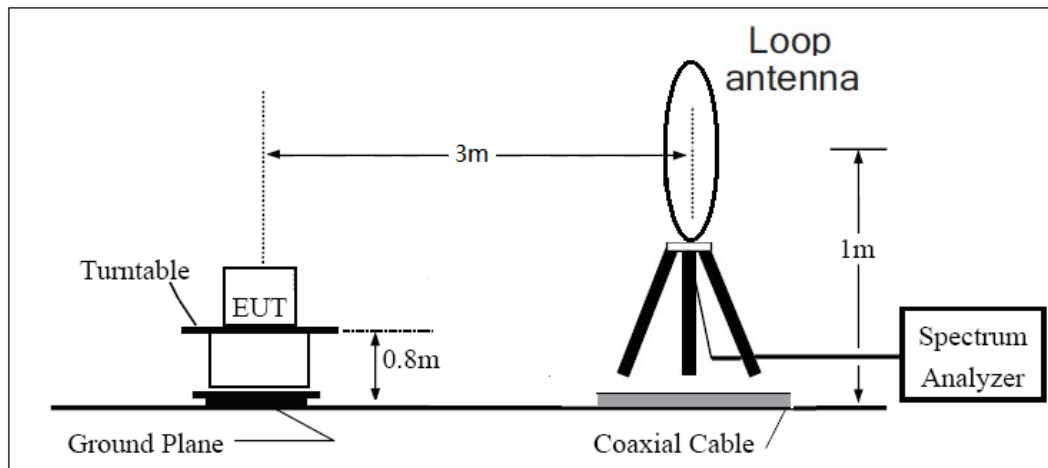
$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$
8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi)

and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

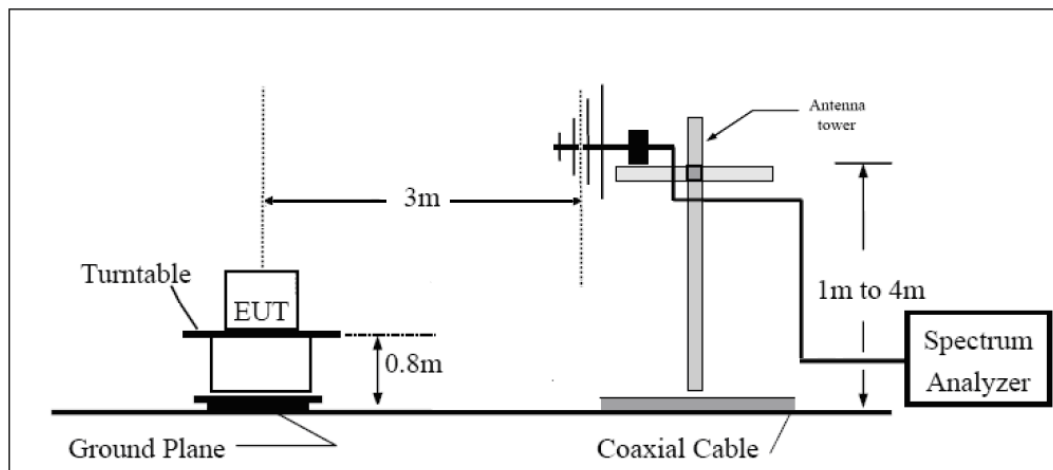
The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

Test setup

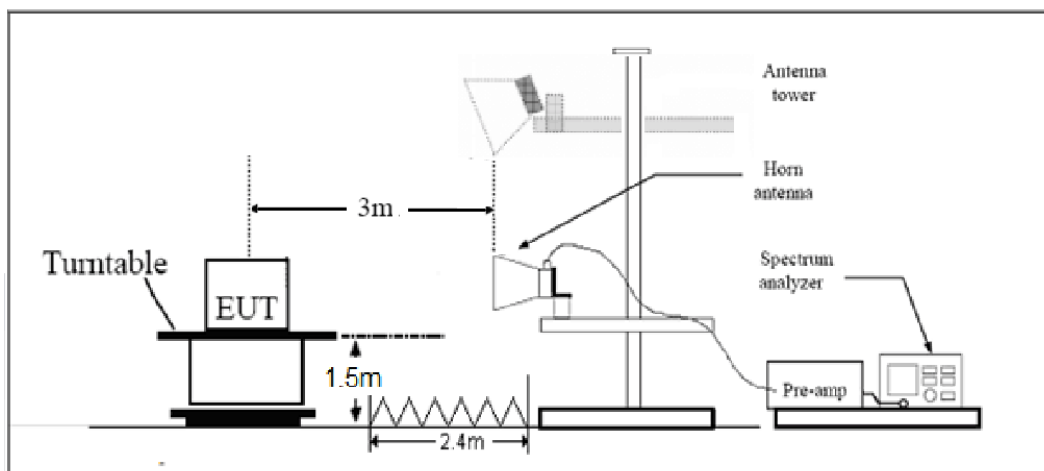
9KHz ~ 30MHz



30MHz ~ 1GHz



Above 1GHz





Note: Area side: 2.4mX3.6m

Limits

Rule Part 24.238(a) specifies that “on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10} (P)$ dB.”

Limit	-13 dBm
-------	---------

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$, $U = 3.55$ dB.

Test Result

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

GSM 1900 CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-34.45	5.10	11.05	Horizontal	-28.50	-13.00	15.50	135
3	5640.0	-44.43	5.42	12.65	Horizontal	-37.20	-13.00	24.20	270
4	7520.0	-52.45	6.70	13.85	Horizontal	-45.30	-13.00	32.30	225
5	9400.0	-54.24	7.01	14.75	Horizontal	-46.50	-13.00	33.50	45
6	11280.0	-51.57	7.48	15.95	Horizontal	-43.10	-13.00	30.10	0
7	13160.0	-49.14	7.51	16.55	Horizontal	-40.10	-13.00	27.10	90
8	15040.0	-48.31	8.24	15.35	Horizontal	-41.20	-13.00	28.20	180
9	16920.0	-43.14	8.41	14.95	Horizontal	-36.60	-13.00	23.60	270
10	18800.0	-	-	-	-	-	-	-	-

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

WCDMA Band II CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3760.0	-44.60	5.10	11.05	Horizontal	-38.65	-13.00	25.65	225
3	5640.0	-54.33	5.42	12.65	Horizontal	-47.10	-13.00	34.10	45
4	7520.0	-55.15	6.70	13.85	Horizontal	-48.00	-13.00	35.00	90
5	9400.0	-53.84	7.01	14.75	Horizontal	-46.10	-13.00	33.10	315
6	11280.0	-53.07	7.48	15.95	Horizontal	-44.60	-13.00	31.60	45
7	13160.0	-50.84	7.51	16.55	Horizontal	-41.80	-13.00	28.80	270
8	15040.0	-48.81	8.24	15.35	Horizontal	-41.70	-13.00	28.70	180
9	16920.0	-46.44	8.41	14.95	Horizontal	-39.90	-13.00	26.90	135
10	18800.0	-	-	-	-	-	-	-	-

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 2 1.4MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3759.0	-33.22	5.10	11.05	Horizontal	-27.27	-13.00	14.27	225
3	5638.9	-49.57	5.42	12.65	Horizontal	-42.34	-13.00	29.34	135
4	7520.0	-55.69	6.70	13.85	Horizontal	-48.54	-13.00	35.54	270
5	9400.0	-52.29	7.01	14.75	Horizontal	-44.55	-13.00	31.55	0
6	11280.0	-52.84	7.48	15.95	Horizontal	-44.37	-13.00	31.37	45
7	13160.0	-51.46	7.51	16.55	Horizontal	-42.42	-13.00	29.42	180
8	15040.0	-49.42	8.24	15.35	Horizontal	-42.31	-13.00	29.31	45
9	16920.0	-46.82	8.41	14.95	Horizontal	-40.28	-13.00	27.28	135
10	18800.0	-	-	-	-	-	-	-	-

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 2 5MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3755.6	-36.34	5.10	11.05	Horizontal	-30.39	-13.00	17.39	90
3	5633.6	-49.71	5.42	12.65	Horizontal	-42.48	-13.00	29.48	0
4	7520.0	-55.27	6.70	13.85	Horizontal	-48.12	-13.00	35.12	315
5	9400.0	-53.35	7.01	14.75	Horizontal	-45.61	-13.00	32.61	180
6	11280.0	-53.92	7.48	15.95	Horizontal	-45.45	-13.00	32.45	315
7	13160.0	-51.55	7.51	16.55	Horizontal	-42.51	-13.00	29.51	225
8	15040.0	-50.27	8.24	15.35	Horizontal	-43.16	-13.00	30.16	135
9	16920.0	-46.17	8.41	14.95	Horizontal	-39.63	-13.00	26.63	180
10	18800.0	-	-	-	-	-	-	-	-

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

LTE Band 2 20MHz CH-Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	EIRP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3742.1	-33.65	5.10	11.05	Horizontal	-27.70	-13.00	14.70	135
3	5613.4	-48.44	5.42	12.65	Horizontal	-41.21	-13.00	28.21	135
4	7484.6	-53.26	6.70	13.85	Horizontal	-46.11	-13.00	33.11	45
5	9400.0	-50.94	7.01	14.75	Horizontal	-43.20	-13.00	30.20	270
6	11280.0	-53.42	7.48	15.95	Horizontal	-44.95	-13.00	31.95	135
7	13160.0	-50.90	7.51	16.55	Horizontal	-41.86	-13.00	28.86	270
8	15040.0	-50.11	8.24	15.35	Horizontal	-43.00	-13.00	30.00	135
9	16920.0	-46.62	8.41	14.95	Horizontal	-40.08	-13.00	27.08	45
10	18800.0	-	-	-	-	-	-	-	-

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

2. The worst emission was found in the antenna is Horizontal position.

6. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Base Station Simulator	R&S	CMU200	118133	2019-05-19	2020-05-18
Base Station Simulator	R&S	CMU200	118133	2020-05-18	2021-05-17
Base Station Simulator	R&S	CMW500	113824	2019-05-19	2020-05-18
Base Station Simulator	R&S	CMW500	113824	2020-05-18	2021-05-17
Power Splitter	Hua Xiang	SHX-GF2-2-13	10120101	/	/
Spectrum Analyzer	Key sight	N9010A	MY50210259	2019-05-19	2020-05-18
Spectrum Analyzer	Key sight	N9010A	MY50210259	2020-05-18	2021-05-17
Universal Radio Communication Tester	Key sight	E5515C	MY48367192	2019-05-19	2020-05-18
Universal Radio Communication Tester	Key sight	E5515C	MY48367192	2020-05-18	2021-05-17
Signal Analyzer	R&S	FSV30	100815	2019-12-15	2020-12-14
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2017-09-26	2020-09-25
Trilog Antenna	SCHWARZBECK	VUBL 9163	9163-201	2017-11-18	2020-11-17
Horn Antenna	R&S	HF907	100126	2018-07-07	2020-07-06
Horn Antenna	ETS-Lindgren	3160-09	00102643	2018-06-20	2020-06-19
Signal generator	R&S	SMB 100A	102594	2019-05-19	2020-05-18
Signal generator	R&S	SMB 100A	102594	2020-05-18	2021-05-17
Climatic Chamber	ESPEC	SU-242	93000506	2017-12-17	2020-12-16
Preamplifier	R&S	SCU18	102327	2019-05-19	2020-05-18
Preamplifier	R&S	SCU18	102327	2020-05-18	2021-05-17
MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2019-05-19	2020-05-18



MOB COMMS DC SUPPLY	Keysight	66319D	MY43004105	2020-05-18	2021-05-17
RF Cable	Agilent	SMA 15cm	0001	2019-12-13	2020-06-12
Software	R&S	EMC32	9.26.0	/	/

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