

TEST REPORT FCC Part 27

Report Reference No......: HK2502080452-15E
FCC ID.....: **2BDI3-K**
Compiled by
(position+printedname+signature)....: RF Department Manager Len Liao
Supervised by
(position+printedname+signature)....: Technical Manager Sliver Wan
Approved by
(position+printedname+signature)....: General Manager Jason Zhou

Len Liao

Sliver Wan

Jason Zhou



Date of issue.....: Apr. 10, 2025
Testing Laboratory Name: **Shenzhen HUAKE Testing Technology Co., Ltd.**
Address: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park,
Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Applicant's name.....: **Shenzhen Haimeilan Technology Co., LTD.**
Address: 9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang
North Street, Futian District, Shenzhen, 518000 China

Test specification:
Standard: **FCC CFR Title 47 Part 2, Part 27**
TRF Originator.....: Shenzhen HUAKE Testing Technology Co., Ltd.
Shenzhen HUAKE Testing Technology Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen HUAKE Testing Technology Co., Ltd. as copyright owner and source of the material. Shenzhen HUAKE Testing Technology Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description: Smart Phone
Trade Mark: N/A
Manufacturer.....: **Shenzhen Haimeilan Technology Co., LTD.**
Model/Type reference.....: S25 Ultra
Listed Models: F5 Pro, M13, F50 Pro, M5S Pro, F5, Note12 Pro, X40 Pro, X40
Edge, Mate 14, Mate 16, Mate 17, Mate 18, Mate 19, Mate 20,
Mate 21, Mate 22, Mate 23, Mate 24, Mate 25, Mate 26, Mate 27,
Mate28, D14, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25,
D26, D27, D28, D29, R12 pro, P5 pro, E50 Ultra, I16 pro max, P6
pro, Sp20 Pro, OP12 pro, T3 Pro, P8 Pro
Modulation Type.....: QPSK, 16QAM
Rating: DC5V from Type-C or DC3.85V from battery
Hardware version: V2.0
Software version.....: V2.0
Result.....: **PASS**

TEST REPORT

Test Report No.:	HK2502080452-15E	Apr. 10, 2025 Date of issue
-------------------------	-------------------------	---------------------------------------

Equipment under Test : Smart Phone

Model /Type : S25 Ultra

Listed Models : F5 Pro, M13, F50 Pro, M5S Pro, F5, Note12 Pro, X40 Pro, X40 Edge, Mate 14, Mate 16, Mate 17, Mate 18, Mate 19, Mate 20, Mate 21, Mate 22, Mate 23, Mate 24, Mate 25, Mate 26, Mate 27, Mate28, D14, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, R12 pro, P5 pro, E50 Ultra, I16 pro max, P6 pro, Sp20 Pro, OP12 pro, T3 Pro, P8 Pro

Applicant : Shenzhen Haimeilan Technology Co., LTD.

Address : 9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang North Street, Futian District, Shenzhen, 518000 China

Manufacturer : Shenzhen Haimeilan Technology Co., LTD.

Address : 9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang North Street, Futian District, Shenzhen, 518000 China

Test Result:	PASS
---------------------	-------------

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

**** Modified History ****

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Apr. 10, 2025	Jason Zhou

Contents

1	<u>TEST STANDARDS.....</u>	5
2	<u>SUMMARY</u>	6
2.1	General Remarks	6
2.2	Product Description	6
2.3	Equipment under Test	6
2.4	Short description of the Equipment under Test (EUT)	7
2.5	Normal Accessory setting	7
2.6	EUT configuration	7
2.7	Related Submittal(s) / Grant (s)	7
2.8	Modifications	7
2.9	General Test Conditions/Configurations	7
3	<u>TEST ENVIRONMENT.....</u>	8
3.1	Information of the Test Laboratory	8
3.2	Test Description	8
3.3	Equipments Used during the Test	9
4	<u>TEST CONDITIONS AND RESULTS.....</u>	11
4.1	Output Power	11
4.2	Peak-to-Average Ratio (PAR)	17
4.3	Occupied Bandwidth and Emission Bandwidth	22
4.4	Band Edge compliance	27
4.5	Spurious Emission on Antenna Port	32
4.6	Radiated Spurious Emission	45
4.7	Frequency Stability	62
5	<u>TEST SETUP PHOTOS OF THE EUT</u>	64
6	<u>EXTERNAL AND INTERNAL PHOTOS OF THE EUT</u>	75

1 Test Standards

The tests were performed according to following standards:

[FCC Part 2](#): FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

[FCC Part 27](#): MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

[ANSI/TIA-603-E-2016](#): Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

[ANSI C63.26-2015](#): IEEE/ANSI Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

[FCCKDB971168D01](#) Power Meas License Digital Systems

2 Summary

2.1 General Remarks

Date of receipt of test sample	:	Feb. 08, 2025
Testing commenced on	:	Feb. 08, 2025
Testing concluded on	:	Apr. 10, 2025

2.2 Product Description

The **Shenzhen Haimeilan Technology Co., LTD.**'s Model: S25 Ultra or the "EUT" as referred to in this report; more general information as follows, for more details, refer to the user's manual of the EUT.

Name of EUT	Smart Phone
Model/Type reference:	S25 Ultra
Series Models:	F5 Pro, M13, F50 Pro, M5S Pro, F5, Note12 Pro, X40 Pro, X40 Edge, Mate 14, Mate 16, Mate 17, Mate 18, Mate 19, Mate 20, Mate 21, Mate 22, Mate 23, Mate 24, Mate 25, Mate 26, Mate 27, Mate28, D14, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, R12 pro, P5 pro, E50 Ultra, I16 pro max, P6 pro, Sp20 Pro, OP12 pro, T3 Pro, P8 Pro
Model Difference:	All model's the function, software and electric circuit are the same, only with appearance, product color and model named different. Test sample model: S25 Ultra.
Power supply:	DC5V from Type-C or DC3.85V from battery
Adapter Information	N/A
Modulation Type	QPSK, 16QAM
Antenna Type	FPC Antenna
Antenna Gain	0.4dBi
Operation Frequency Band	LTE Band 38
Operation frequency	LTE Band 38:2570~2620 MHz
LTE Release	R8
Extreme temp. Tolerance	-30°C to +50°C
Extreme vol. Limits	3.465VDC to 4.235VDC (nominal: 3.85VDC)

2.3 Equipment under Test

Power supply system utilised

Power supply voltage	:	☐ 120V/ 60 Hz	☐ 115V/60Hz
		☐ 12 V DC	☐ 24 V DC
		☒ Other (specified in blank below)	

DC5V from Type-C or DC3.85V from battery



2.4 Short description of the Equipment under Test (EUT)

2.4.1 GeneralDescription

S25 Ultrais subscriber equipment in the LTE system. LTE frequency band is band 38;TheSmart Phone implements such functions asRFsignal receiving/transmitting, LTE protocol processing, voice, video MMS service,etc.Externally it provides micro SD card interface, earphone port (to provide voice service) and SIM card interface.

2.5 Normal Accessory setting

Fully charged battery was used during the test.

2.6 EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

○	Power Cable	Length (m) :	/
		Shield :	/
		Detachable :	/
○	Multimeter	Manufacturer :	/
		Model No. :	/

2.7 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended forFCC ID: 2BDI3-K filing to comply with FCC Part 27, Rules.

2.8 Modifications

No modifications were implemented to meet testing criteria.

2.9 GeneralTest Conditions/Configurations

2.9.1 TestEnvironment

EnvironmentParameter	SelectedValuesDuringTests	
Relative Humidity	Ambient	
Temperature	TN	Ambient
Voltage	VL	3.465V
	VN	3.85V
	VH	4.235V

NOTE:VL=lowerextreme testvoltageVN=nominalvoltage
VH=upperextreme testvoltageTN=normaltemperature

3 TEST ENVIRONMENT

3.1 Information of the Test Laboratory

Shenzhen HUAKE Testing Technology Co., Ltd.
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping,
 Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization:

A2LA Accreditation Code is 4781.01.
 FCC Designation Number is CN1229.
 Canada IC CAB identifier is CN0045.
 CNAS Registration Number is L9589.

3.2 Test Description

Test Item	FCCRuleNo.	Verdict
Effective(Isotropic)RadiatedOutputPower	Part 2.1046 27.50(h)(2)	Pass
Peak-AverageRatio	Part 2.1046	Pass
ModulationCharacteristics	§2.1047	N/A
Bandwidth	Part 2.1049	Pass
BandEdgesCompliance	Part 2.1051 27.53(m)	Pass
SpuriousEmissionatAntennaTerminals	Part 2.1051 27.53(m)	Pass
Field Strengthof Spurious Radiation	Part 2.1053 27.53(m)	Pass
Frequency Stability	Part 2.1055 27.54	Pass
NOTE 1:For the verdict,the "N/A"denotes "not applicable",the "N/T"denotes "not tested".		

Remark:

1. The measurement uncertainty is not included in the test result.

3.3 Equipments Used during the Test

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
1	L.I.S.N.	R&S	ENV216	HKE-002	2024/02/20	2025/02/19
2	L.I.S.N.	R&S	ENV216	HKE-059	2024/02/20	2025/02/19
3	EMI Test Receiver	R&S	ESR	HKE-005	2024/02/20	2025/02/19
4	Spectrum analyzer	Agilent	N9020A	HKE-117	2024/02/20	2025/02/19
5	Spectrum analyzer	R&S	FSV3044	HKE-126	2024/02/20	2025/02/19
6	Preamplifier	EMCI	EMC051845S	HKE-006	2024/02/20	2025/02/19
7	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	2024/02/20	2025/02/19
8	Preamplifier	A.H. Systems	SAS-574	HKE-182	2024/02/20	2025/02/19
9	6dB Attenuator	Pasternack	6db	HKE-184	2024/02/20	2025/02/19
10	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	2024/02/20	2025/02/19
11	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2024/02/21	2026/02/20
12	Loop Antenna	COM-POWER	AL-130R	HKE-014	2024/02/21	2026/02/20
13	Horn Antenna	Schwarzbeck	9120D	HKE-013	2024/02/21	2026/02/20
14	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
15	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
16	RF Automatic control unit	Tonscend	JS0806-1	HKE-096	2024/02/20	2025/02/19
17	High pass filter unit	Tonscend	JS0806-F	HKE-055	2024/02/20	2025/02/19
18	Wireless Communication Test Set	R&S	CMU200	HKE-026	2024/02/20	2025/02/19
19	Wireless Communication Test Set	R&S	CMW500	HKE-027	2024/02/20	2025/02/19
20	High-low temperature chamber	Guangke	HT-80L	HKE-118	2024/06/10	2025/06/09
21	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2024/06/10	2025/06/09
22	RF Test Software	Tonscend	JS1120 Version 3.5.39	HKE-183	/	/
23	RSE Test Software	Tonscend	JS36-RSE 5.0.0	HKE-184	/	/

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
1	L.I.S.N.	R&S	ENV216	HKE-002	2025/02/19	2026/02/18
2	L.I.S.N.	R&S	ENV216	HKE-059	2025/02/19	2026/02/18
3	EMI Test Receiver	R&S	ESR	HKE-005	2025/02/19	2026/02/18
4	Spectrum analyzer	Agilent	N9020A	HKE-117	2025/02/19	2026/02/18
5	Spectrum analyzer	R&S	FSV3044	HKE-126	2025/02/19	2026/02/18
6	Preamplifier	EMCI	EMC051845S	HKE-006	2025/02/19	2026/02/18
7	Preamplifier	Schwarzbeck	BBV 9743	HKE-016	2025/02/19	2026/02/18
8	Preamplifier	A.H. Systems	SAS-574	HKE-182	2025/02/19	2026/02/18
9	6dB Attenuator	Pasternack	6db	HKE-184	2025/02/19	2026/02/18
10	EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	2024/02/20	2025/02/19
11	Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	2024/02/21	2026/02/20
12	Loop Antenna	COM-POWER	AL-130R	HKE-014	2024/02/21	2026/02/20
13	Horn Antenna	Schwarzbeck	9120D	HKE-013	2024/02/21	2026/02/20
14	EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
15	EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	/	/
16	RF Automatic control unit	Tonscend	JS0806-1	HKE-096	2025/02/19	2026/02/18
17	High pass filter unit	Tonscend	JS0806-F	HKE-055	2025/02/19	2026/02/18
18	Wireless Communication Test Set	R&S	CMU200	HKE-026	2025/02/19	2026/02/18
19	Wireless Communication Test Set	R&S	CMW500	HKE-027	2025/02/19	2026/02/18
20	High-low temperature chamber	Guangke	HT-80L	HKE-118	2024/06/10	2025/06/09
21	Temperature and humidity meter	Boyang	HTC-1	HKE-075	2024/06/10	2025/06/09
22	RF Test Software	Tonscend	JS1120 Version 3.5.39	HKE-183	/	/
23	RSE Test Software	Tonscend	JS36-RSE 5.0.0	HKE-184	/	/

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.



4 Test Conditions and Results

4.1 Output Power

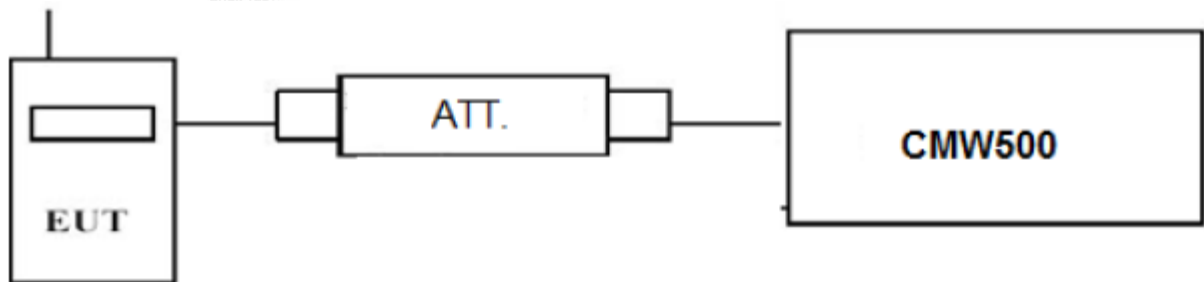
4.1.1 Conducted Output Power

TEST APPLICABLE

Part 27.50(h)(2), during the process of testing, the EUT was controlled via R&S Digital Radio Communication tester (CMW500) to ensure max power transmission and proper modulation. This result contains output power measurements for the EUT. In all cases, output power is within the specified limits.

TEST CONFIGURATION

ConductedPowerMeasurement:



TEST PROCEDURE

Conducted Power Measurement:

- Place the EUT on a bench and set it in transmitting mode.
- Connect a low loss RF cable from the antenna port to a CMW500 by an Att.
- EUT Communicate with CMW500 then selects a channel for testing.
- Add a correction factor to the display CMW500, and then test.

TEST RESULTS

Remark:

- We measured all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38;

LTE Band 38				
TX Channel Bandwidth	Frequency (MHz)	RB Size/Offset	Burst Average Power [dBm]	
			QPSK	16QAM
5 MHz	2572.5	1 RB low	20.10	19.21
		1 RB mid	20.24	19.29
		1 RB high	20.20	19.22
		50% RB low	19.20	18.11
		50% RB mid	19.22	18.10
		50% RB high	19.27	18.16
		100% RB	19.23	18.22
	2595.0	1 RB low	20.63	19.98
		1 RB mid	20.73	20.13
		1 RB high	20.68	20.10
		50% RB low	19.77	18.68
		50% RB mid	19.72	18.68
		50% RB high	19.78	18.76
		100% RB	19.78	18.78

	2617.5	1 RB low	20.68	19.88
		1 RB mid	20.85	20.03
		1 RB high	20.83	19.96
		50% RB low	19.87	18.91
		50% RB mid	19.85	18.90
		50% RB high	19.92	18.92
		100% RB	19.88	18.88
10 MHz	2575.0	1 RB low	20.19	19.42
		1 RB mid	20.40	19.58
		1 RB high	20.34	19.53
		50% RB low	19.19	18.26
		50% RB mid	19.19	18.29
		50% RB high	19.23	18.34
		100% RB	19.24	18.27
	2595.0	1 RB low	20.68	19.32
		1 RB mid	20.88	19.55
		1 RB high	20.83	19.52
		50% RB low	19.74	18.73
		50% RB mid	19.72	18.73
		50% RB high	19.83	18.79
		100% RB	19.81	18.83
	2615.0	1 RB low	20.82	19.79
		1 RB mid	20.98	19.95
		1 RB high	20.94	19.87
		50% RB low	19.83	18.82
		50% RB mid	19.81	18.83
		50% RB high	19.84	18.87
		100% RB	19.86	18.81
15 MHz	2577.5	1 RB low	20.13	19.37
		1 RB mid	20.29	19.47
		1 RB high	20.37	19.59
		50% RB low	20.32	19.35
		50% RB mid	20.30	19.32
		50% RB high	20.34	19.36
		100% RB	19.30	18.32
	2595.0	1 RB low	20.63	19.38
		1 RB mid	20.84	19.61
		1 RB high	20.84	19.60
		50% RB low	20.76	19.79
		50% RB mid	20.81	19.81
		50% RB high	20.77	19.79
		100% RB	19.78	18.80
	2612.5	1 RB low	20.79	19.76
		1 RB mid	20.82	19.78
		1 RB high	20.88	19.82
		50% RB low	19.85	19.82
		50% RB mid	20.85	19.86
		50% RB high	20.85	19.88
		100% RB	19.90	18.81

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

20 MHz	2580.0	1 RB low	20.03	19.06
		1 RB mid	20.51	19.56
		1 RB high	20.43	19.47
		50% RB low	19.29	18.26
		50% RB mid	19.25	18.30
		50% RB high	19.50	18.58
		100% RB	19.38	18.37
	2595.0	1 RB low	20.33	18.93
		1 RB mid	20.86	19.45
		1 RB high	20.60	19.19
		50% RB low	19.69	18.70
		50% RB mid	19.63	18.72
		50% RB high	19.87	18.91
		100% RB	19.80	18.78
	2610.0	1 RB low	20.71	19.38
		1 RB mid	20.99	19.70
		1 RB high	20.79	19.48
		50% RB low	19.91	18.84
		50% RB mid	19.84	18.85
		50% RB high	19.83	18.82
		100% RB	19.85	18.89

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

4.1.2. Radiated Output Power

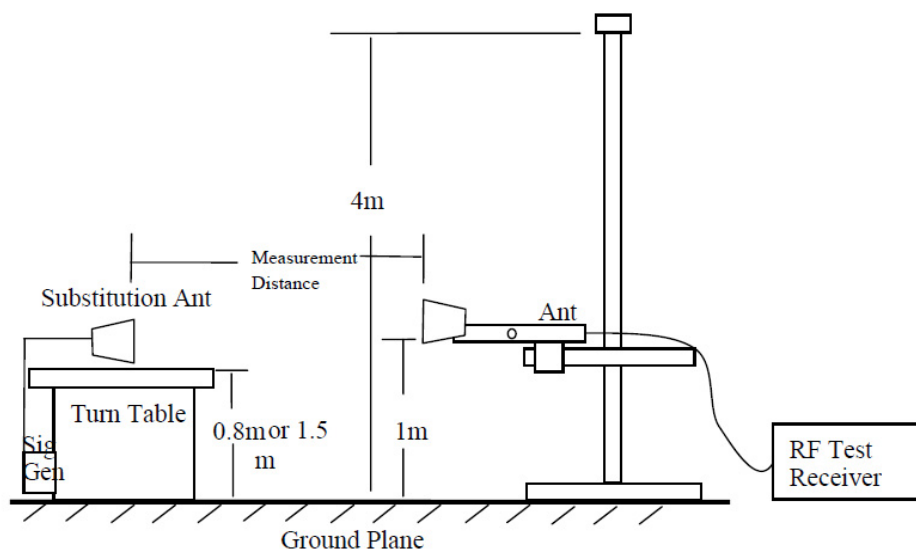
LIMIT

This is the test for the maximum radiated power from the EUT.

TEST CONFIGURATION

Radiated Power Measurement:

remark : 0.8m for below 1GHz, 1.5m for above 1GHz



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603D

- The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
- The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.
- The output of the test antenna shall be connected to the measuring receiver.
- The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
- The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
- The maximum signal level detected by the measuring receiver shall be noted.
- The transmitter shall be replaced by a substitution antenna.
- The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
- The substitution antenna shall be connected to a calibrated signal generator.
- If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
- The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.

- o. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
- p. The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
- q. Test site anechoic chamber refer to ANSI C63.4.

TEST RESULTS

Radiated Measurement:

Remark:

1. We measured all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38; recorded worst case for each Channel Bandwidth of LTE Band 38.
2. $EIRP = P_s(dBm) - P_{cl}(dB) + G_a(dBi)$
3. We measured both Horizontal and Vertical direction, recorded worst case direction.

LTE Band 38 Channel Bandwidth 5MHz QPSK 1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2572.5	6.87	3.41	15.12	18.58	33.01	14.43	V
2595.0	7.63	3.49	15.12	19.26	33.01	13.75	V
2617.5	6.66	3.55	15.12	18.23	33.01	14.78	V

LTE Band 38 Channel Bandwidth 10MHz QPSK 1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2575.0	6.99	3.41	15.12	18.70	33.01	14.31	V
2595.0	7.07	3.49	15.12	18.70	33.01	14.31	V
2615.0	6.81	3.55	15.12	18.38	33.01	14.63	V

LTE Band 38 Channel Bandwidth 15MHz QPSK 1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2577.5	7.47	3.41	15.12	19.18	33.01	13.83	V
2595.0	7.40	3.49	15.12	19.03	33.01	13.98	V
2612.5	6.85	3.55	15.12	18.42	33.01	14.59	V

LTE Band 38 Channel Bandwidth 20MHz QPSK 1RB#0

Frequency (MHz)	P_s (dBm)	P_{cl} (dB)	G_a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2580.0	8.03	3.41	15.12	19.74	33.01	13.27	V
2595.0	7.52	3.49	15.12	19.15	33.01	13.86	V
2610.0	6.61	3.55	15.12	18.18	33.01	14.83	V



HUAKE TESTING

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2572.5	7.27	3.41	15.12	18.98	33.01	14.03	V
2595.0	6.98	3.49	15.12	18.61	33.01	14.40	V
2617.5	7.08	3.55	15.12	18.65	33.01	14.36	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2575.0	7.14	3.41	15.12	18.85	33.01	14.16	V
2595.0	7.63	3.49	15.12	19.26	33.01	13.75	V
2615.0	6.82	3.55	15.12	18.39	33.01	14.62	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2577.5	6.93	3.41	15.12	18.64	33.01	14.37	V
2595.0	7.56	3.49	15.12	19.19	33.01	13.82	V
2612.5	7.57	3.55	15.12	19.14	33.01	13.87	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

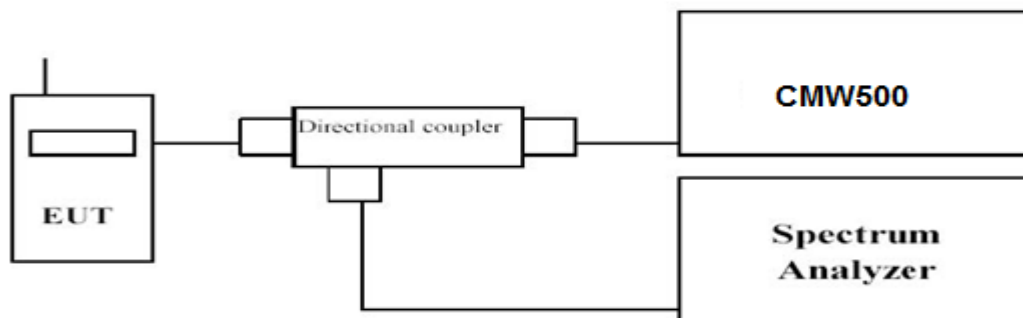
Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	G _a Antenna Gain(dB)	Burst Average EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
2580.0	7.67	3.41	15.12	19.38	33.01	13.63	V
2595.0	6.90	3.49	15.12	18.53	33.01	14.48	V
2610.0	7.27	3.55	15.12	18.84	33.01	14.17	V

4.2 Peak-to-Average Ratio (PAR)

LIMIT

The Peak-to-Average Ratio (PAR) of the transmission may not exceed 13 dB.

TEST CONFIGURATION



TEST PROCEDURE

1. Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
2. Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
3. Set the number of counts to a value that stabilizes the measured CCDF curve;
4. Set the measurement interval as follows:
 - 1). for continuous transmissions, set to 1 ms,
 - 2). for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
5. Record the maximum PAPR level associated with a probability of 0.1%.

TEST RESULTS

Remark:

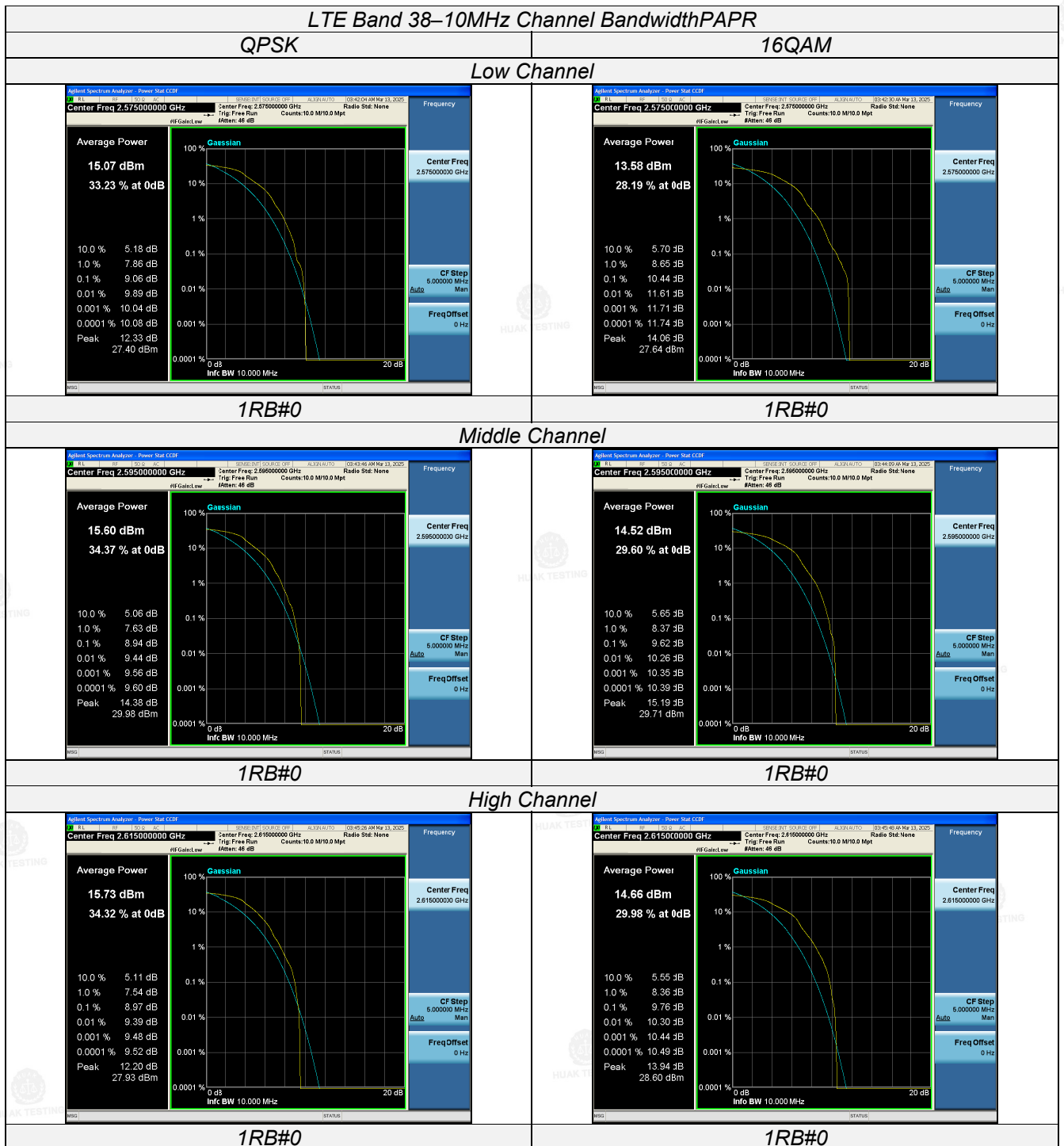
1. We measured all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38; recorded worst case for each Channel Bandwidth of LTE Band 38.

LTE Band 38				
TX Channel Bandwidth	Frequency (MHz)	RB Size/Offset	PAPR(dB)	
			QPSK	16QAM
5 MHz	2572.5	1RB#0	9.21	9.37
	2595.0		8.66	9.30
	2617.5		9.15	9.42
10 MHz	2575.0	1RB#0	9.06	10.44
	2595.0		8.94	9.62
	2615.0		8.97	9.76
15 MHz	2577.5	1RB#0	9.20	10.11
	2595.0		9.46	9.92
	2612.5		8.75	9.93
20 MHz	2580.0	1RB#0	9.25	10.15
	2595.0		8.96	9.72
	2610.0		9.06	10.22



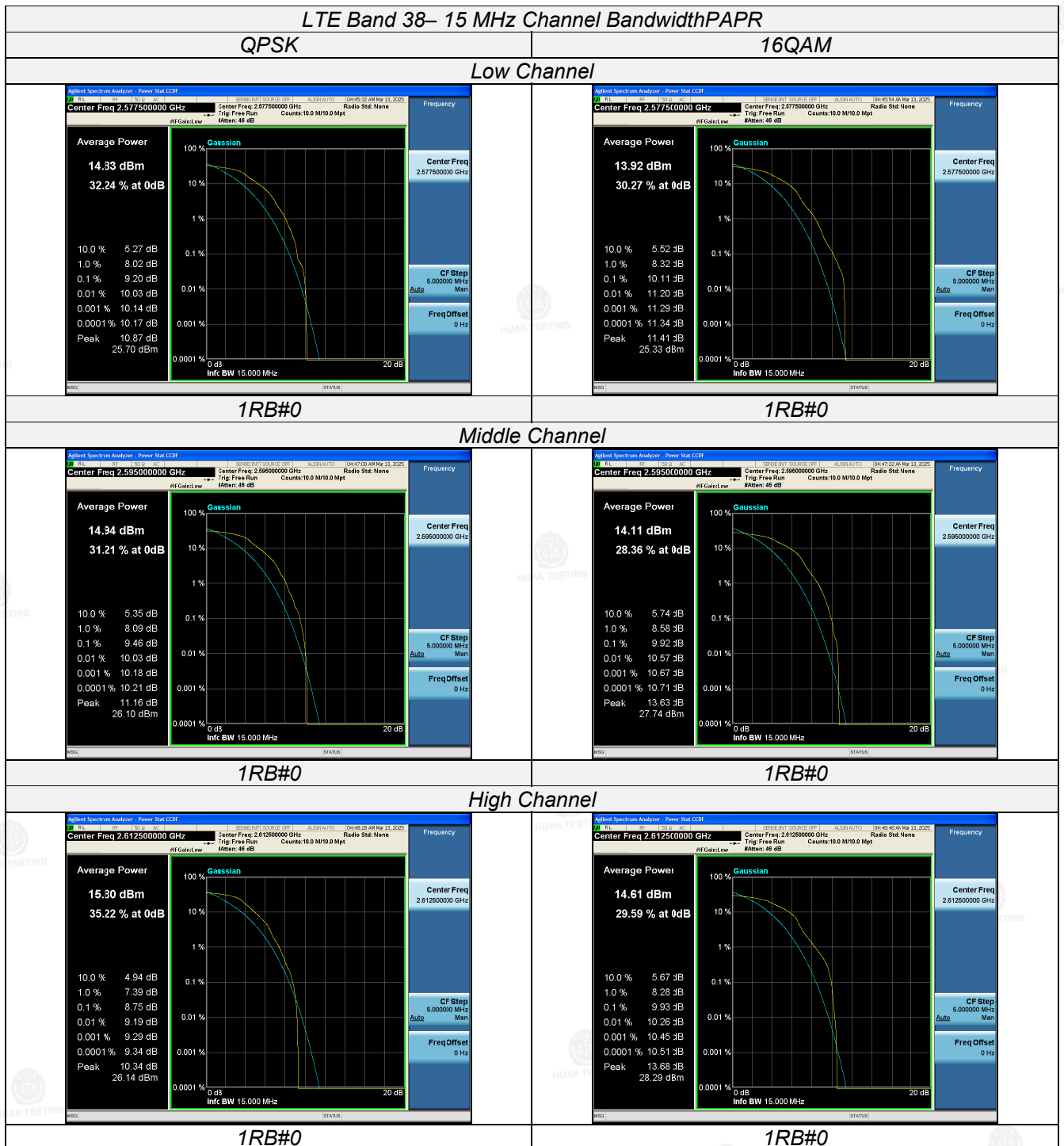
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



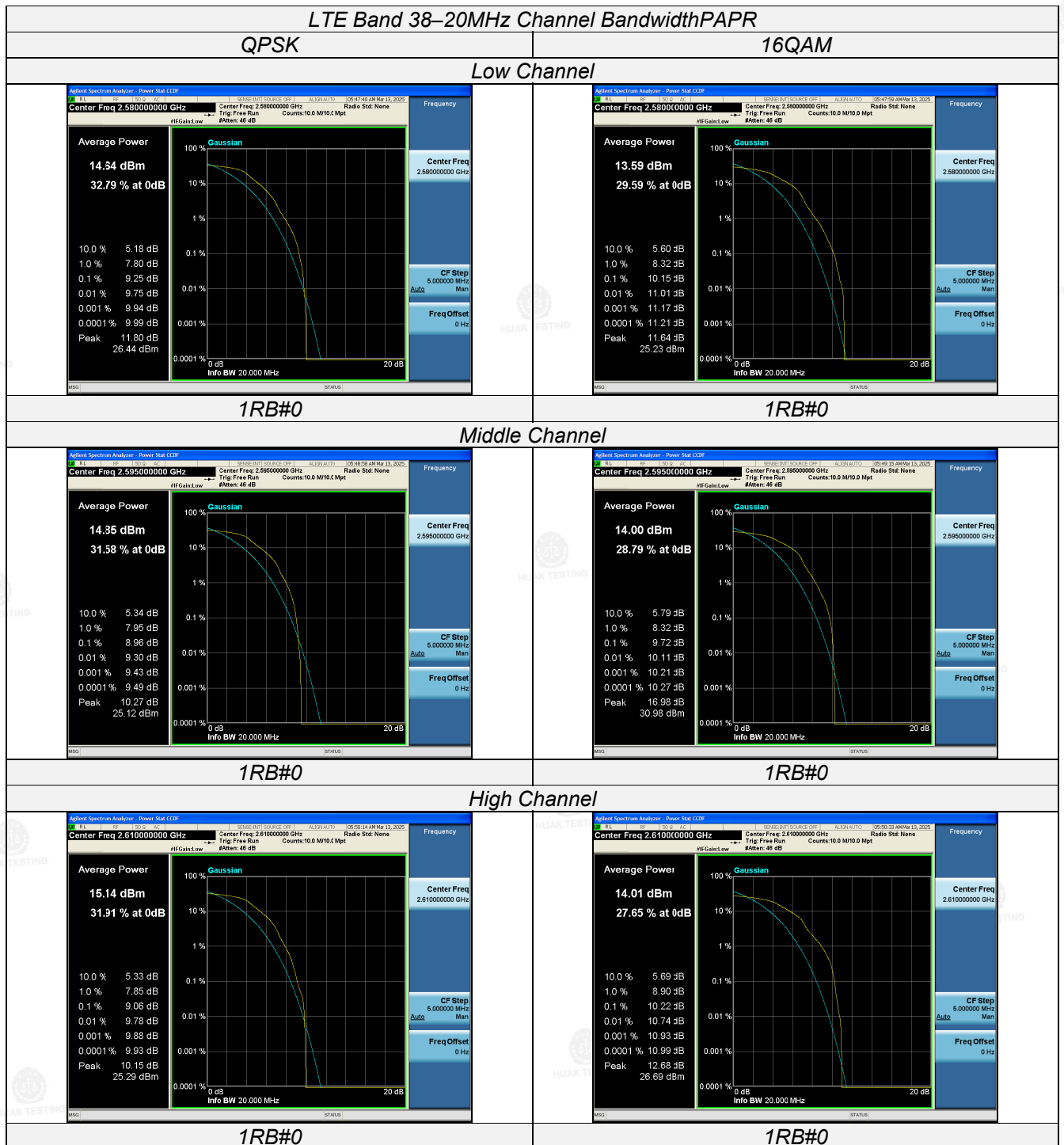
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

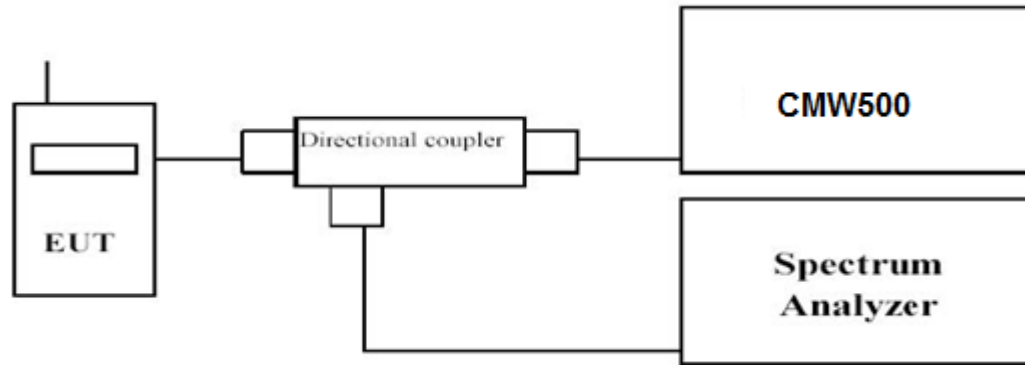
Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

4.3 Occupied Bandwidth and Emission Bandwidth

LIMIT

N/A

TEST CONFIGURATION



TEST PROCEDURE

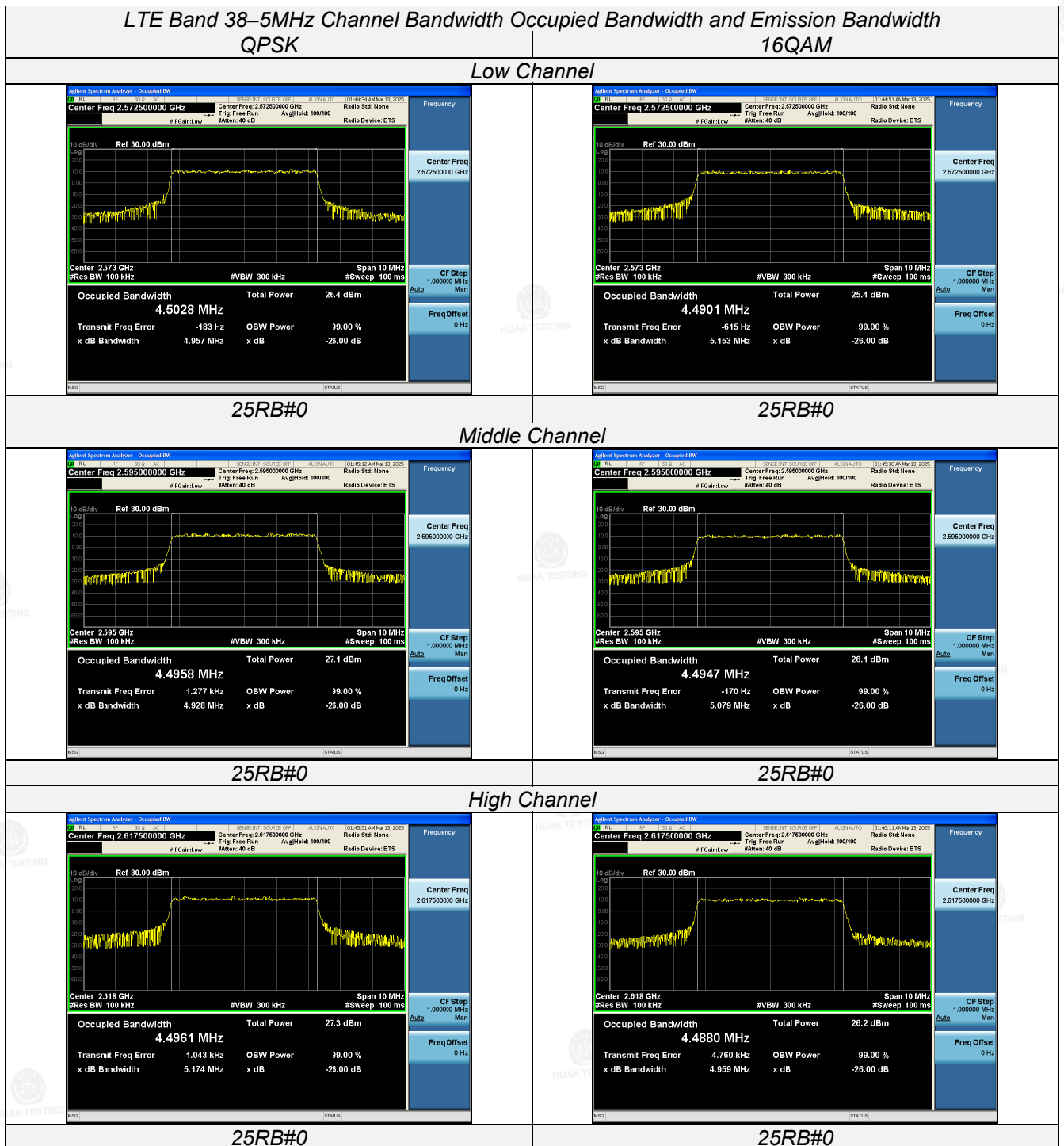
The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at low, middle and high channel in each band. The -26dBc Emission bandwidth was also measured and recorded. Set RBW was set to about 1% of emission BW, VBW ≥ 3 times RBW. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

TEST RESULTS

Remark:

1. We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38; recorded worst case for each Channel Bandwidth of LTE Band 38.

LTE Band 38						
TX Channel Bandwidth	RB Size/Offset	Frequency (MHz)	99% Occupied bandwidth (MHz)		-26dBc Emission bandwidth (MHz)	
			QPSK	16QAM	QPSK	16QAM
5 MHz	25RB#0	2572.5	4.5028	4.4901	4.957	5.153
		2595.0	4.4958	4.4947	4.928	5.079
		2617.5	4.4961	4.4880	5.174	4.959
10 MHz	50RB#0	2575.0	8.9835	8.9865	9.778	9.792
		2595.0	8.9969	8.9906	10.38	10.85
		2615.0	8.9845	8.9536	10.26	9.904
15 MHz	75RB#0	2577.5	13.503	13.479	14.57	15.58
		2595.0	13.461	13.516	14.86	15.41
		2612.5	13.447	13.484	14.88	15.06
20 MHz	100RB#0	2580.0	17.991	17.927	19.53	19.39
		2595.0	17.956	17.932	19.70	19.44
		2610.0	17.917	17.942	19.65	20.18



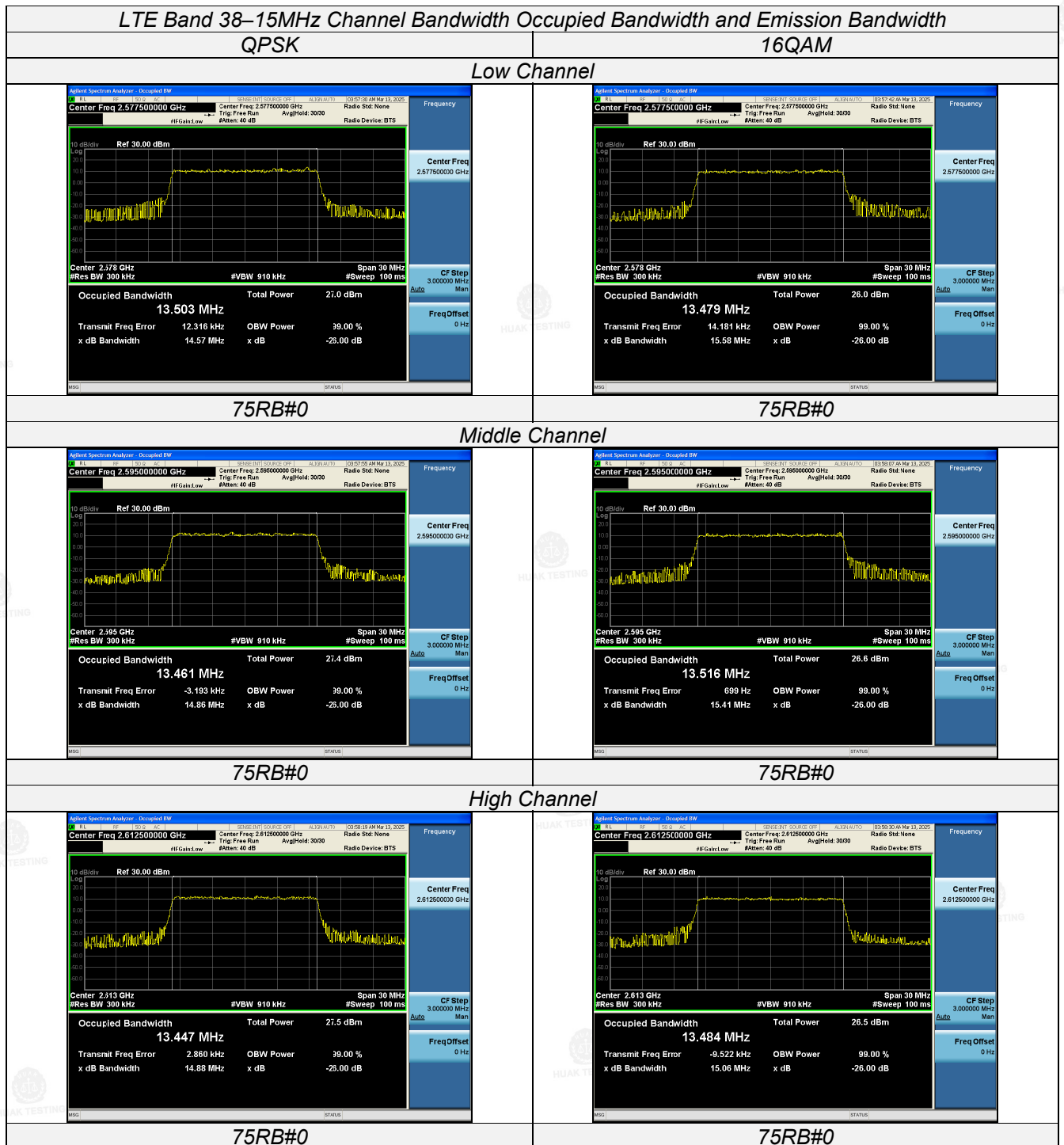
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

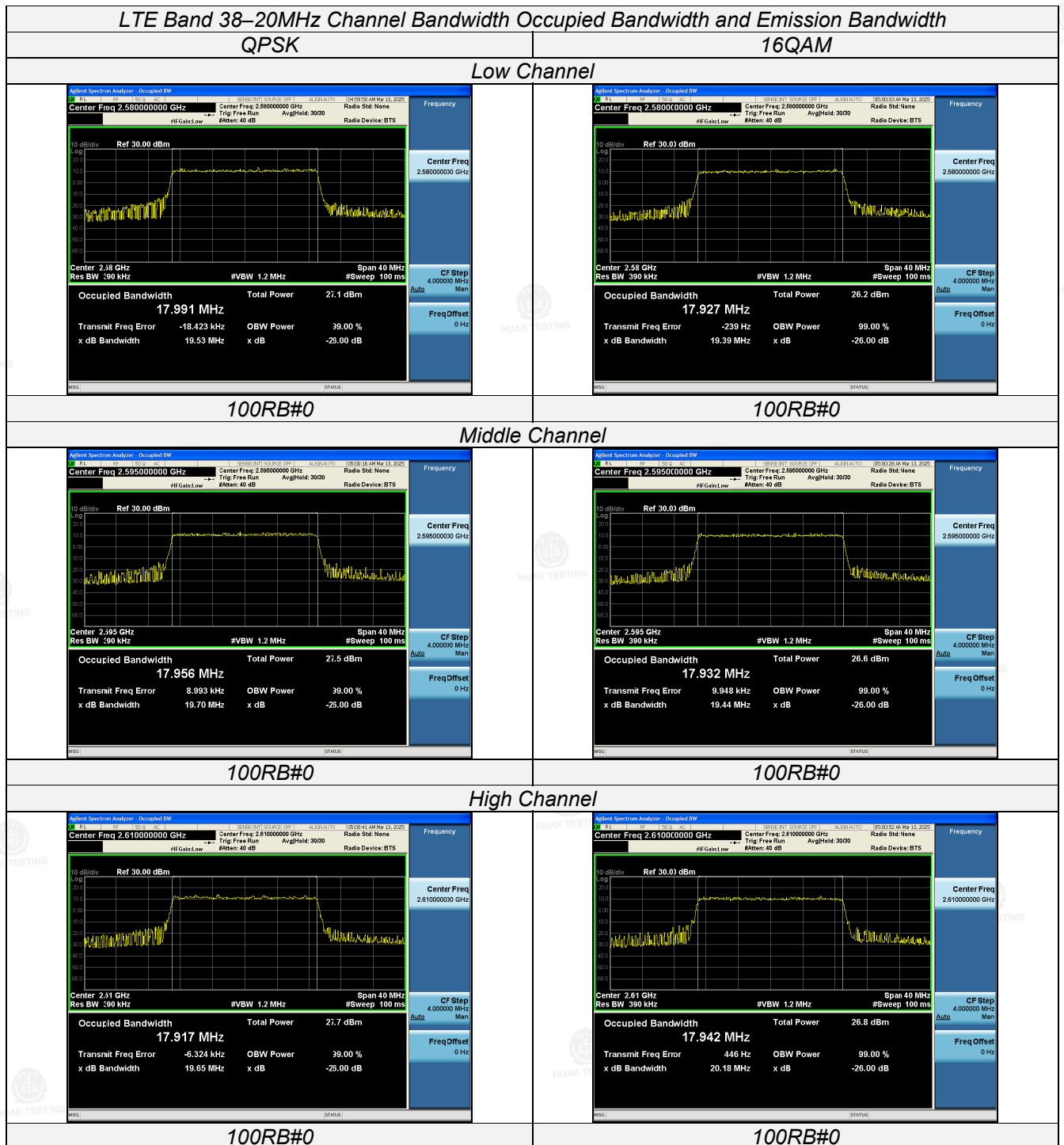


The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

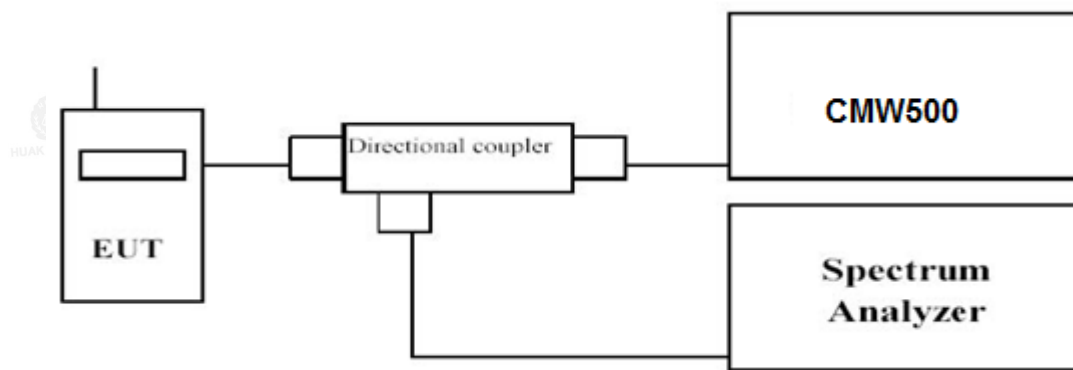
Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

4.4 Band Edge compliance

LIMIT

the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $40 + 10 \log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge, $43 + 10 \log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge, and $55 + 10 \log P$ dB (-25 dBm, 3 nW) on all frequencies more than 20 MHz from the channel edge, where XMHz is the greater of 6 MHz or the actual emission bandwidth (26 dB).

TEST CONFIGURATION



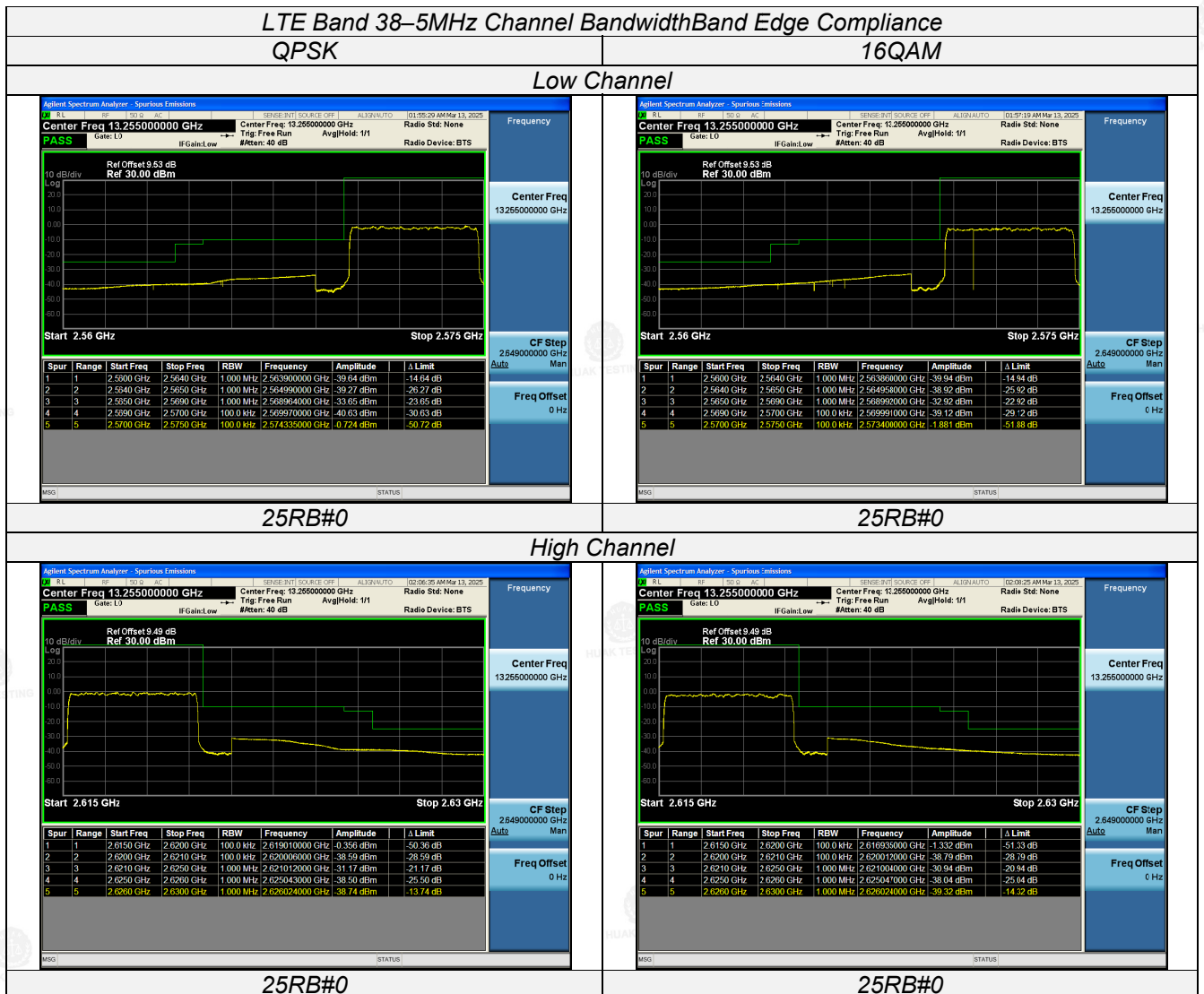
TEST PROCEDURE

1. The transmitter output port was connected to base station.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
3. Set EUT at maximum power through base station.
4. Select lowest and highest channels for each band and different modulation.
5. Measure Band edge using RMS (Average) detector by spectrum
6. Set RBW = 100 kHz, VBW=300 kHz, Span=50MHz Peak Detector.

TEST RESULTS

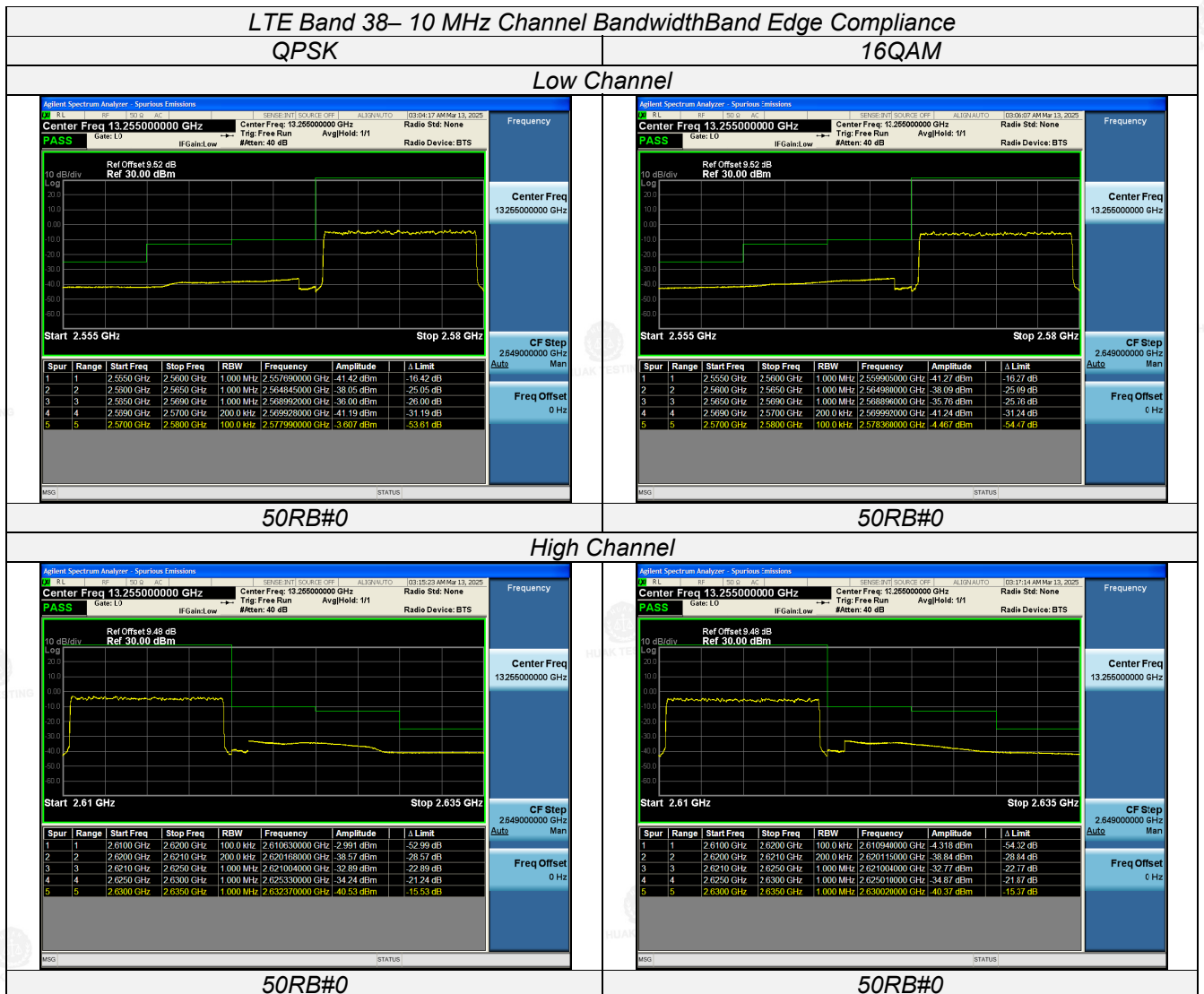
Remark:

1. We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38; recorded worst case for each Channel Bandwidth of LTE Band 38.



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

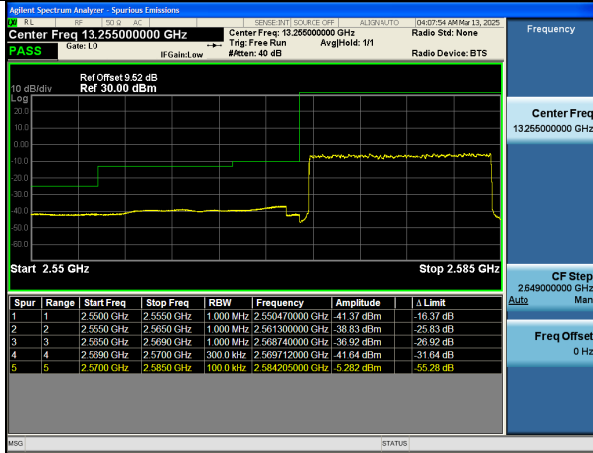
Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

LTE Band 38-15MHz Channel BandwidthBand Edge Compliance

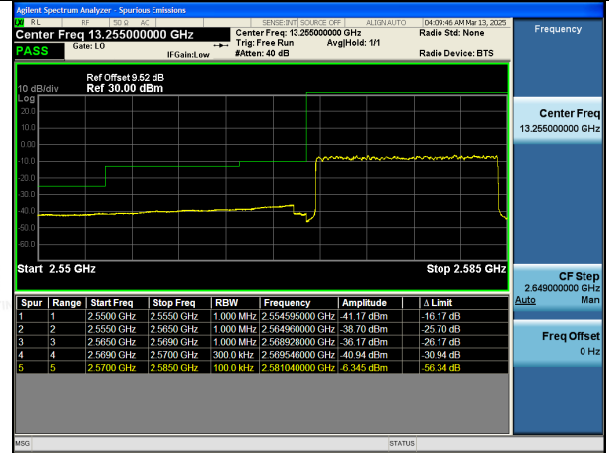
QPSK

16QAM

Low Channel

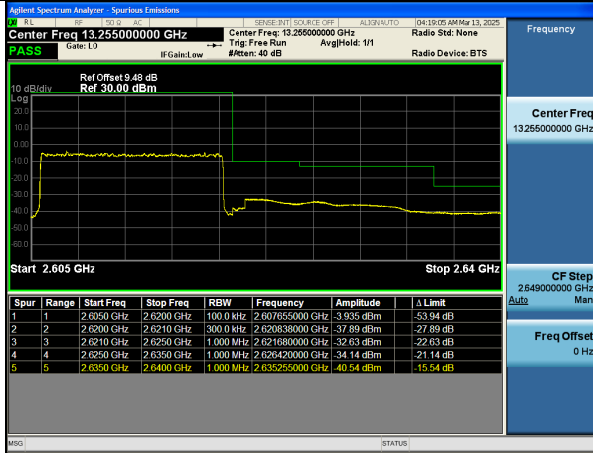


75RB#0

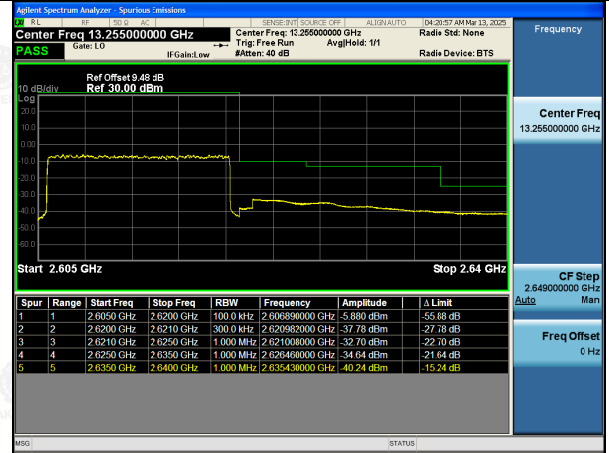


75RB#0

High Channel



75RB#0



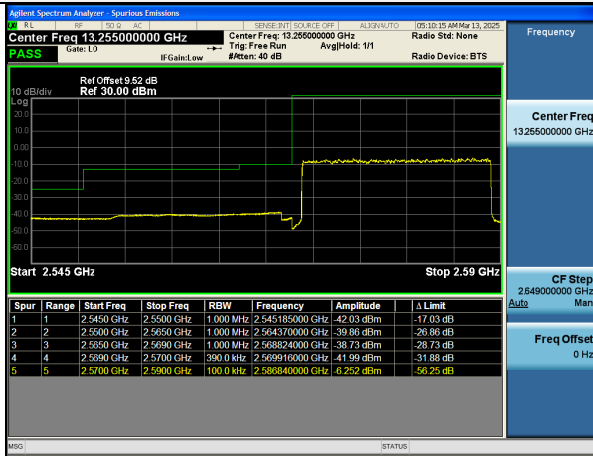
75RB#0

LTE Band 38-20MHz Channel BandwidthBand Edge Compliance

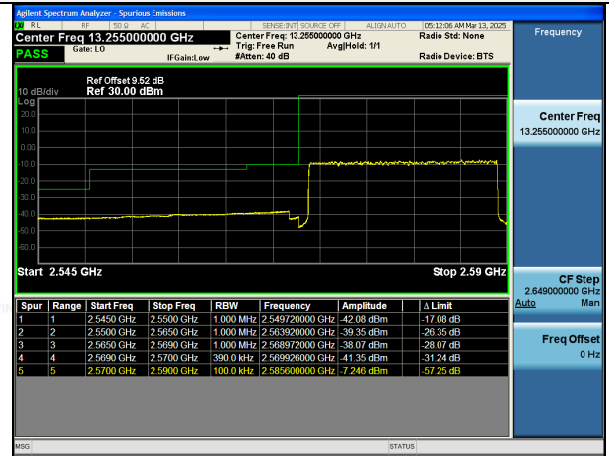
QPSK

16QAM

Low Channel

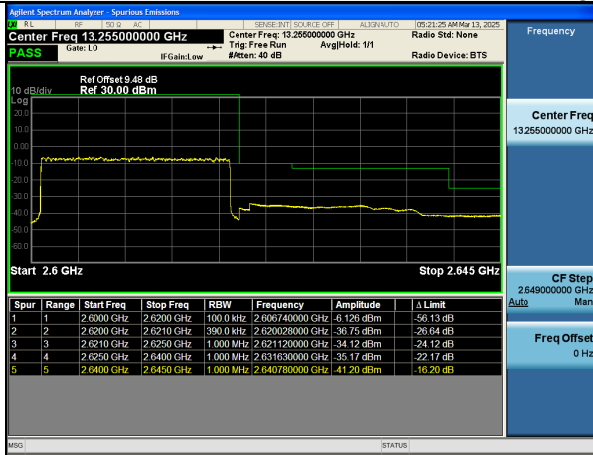


100RB#0

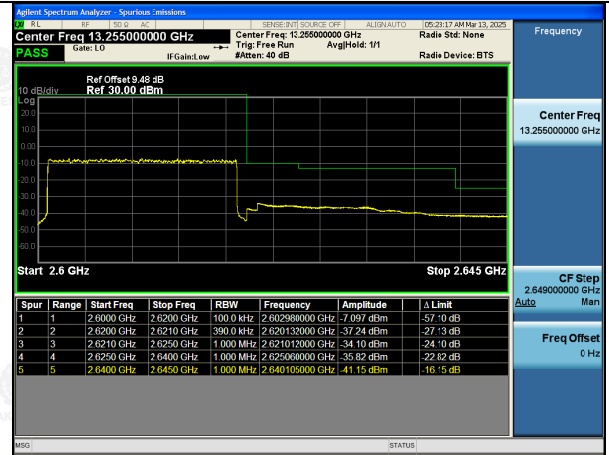


100RB#0

High Channel



100RB#0



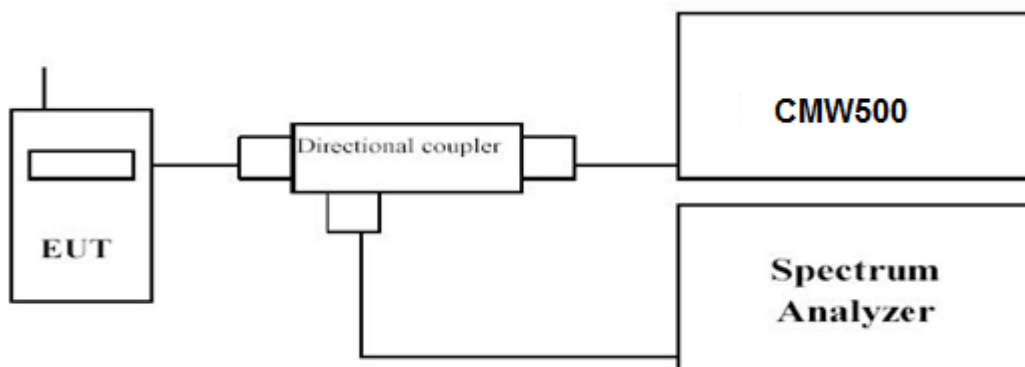
100RB#0

4.5 Spurious Emission on Antenna Port

LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $40 + 10 \log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge, $43 + 10 \log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge, and $55 + 10 \log P$ dB (-25 dBm, 3 nW) on all frequencies more than 20 MHz from the channel edge, where X MHz is the greater of 6 MHz or the actual emission bandwidth (26 dB).

TEST CONFIGURATION



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603D

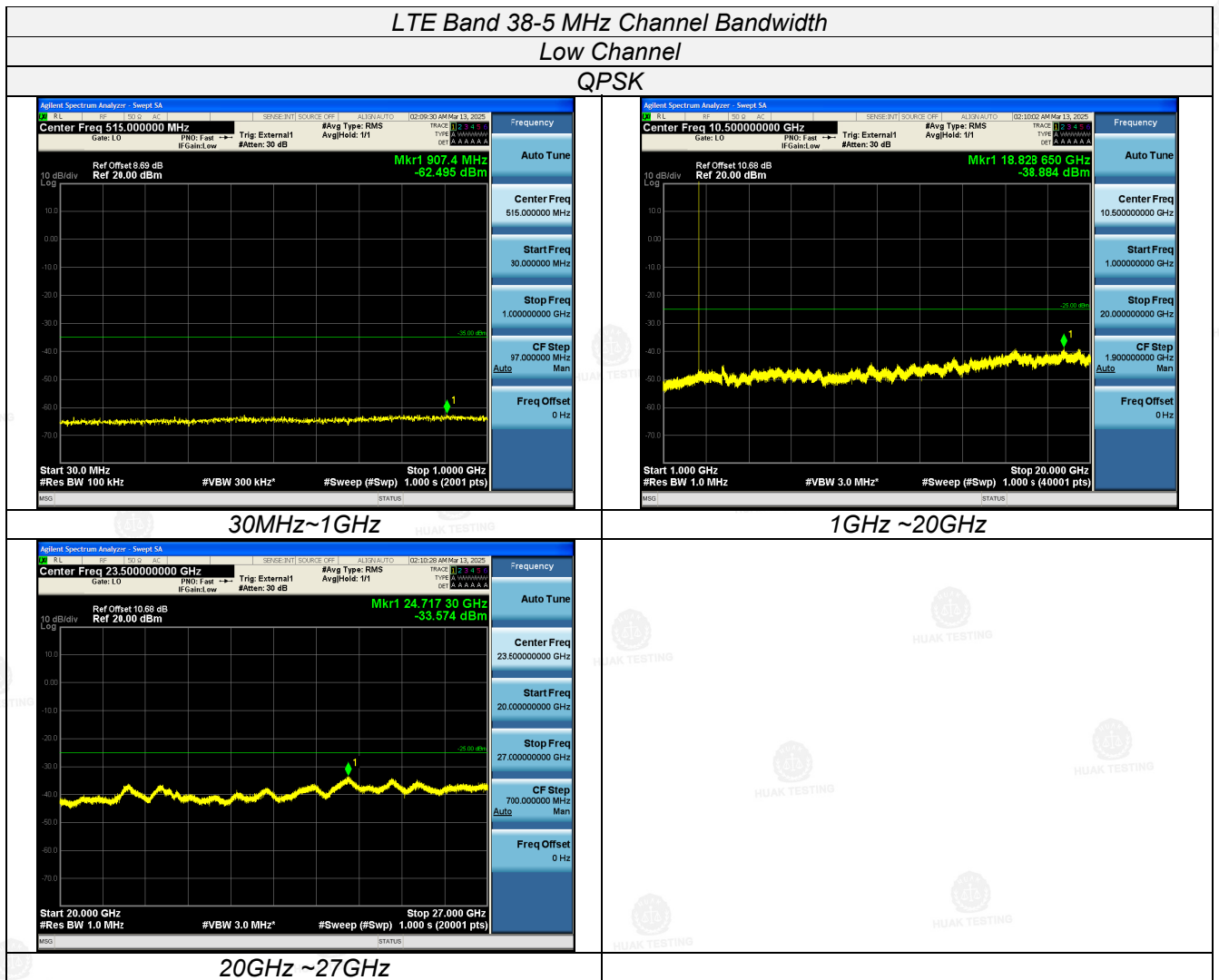
- Place the EUT on a bench and set it in transmitting mode.
- Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMW500 by a Directional Coupler.
- EUT Communicate with CMW500, then select a channel for testing.
- Add a correction factor to the display of spectrum, and then test.
- The resolution bandwidth of the spectrum analyzer was set sufficient scans were taken to show the out of band Emission if any up to 10^{th} harmonic.
- Please refer to following tables for test antenna conducted emissions.

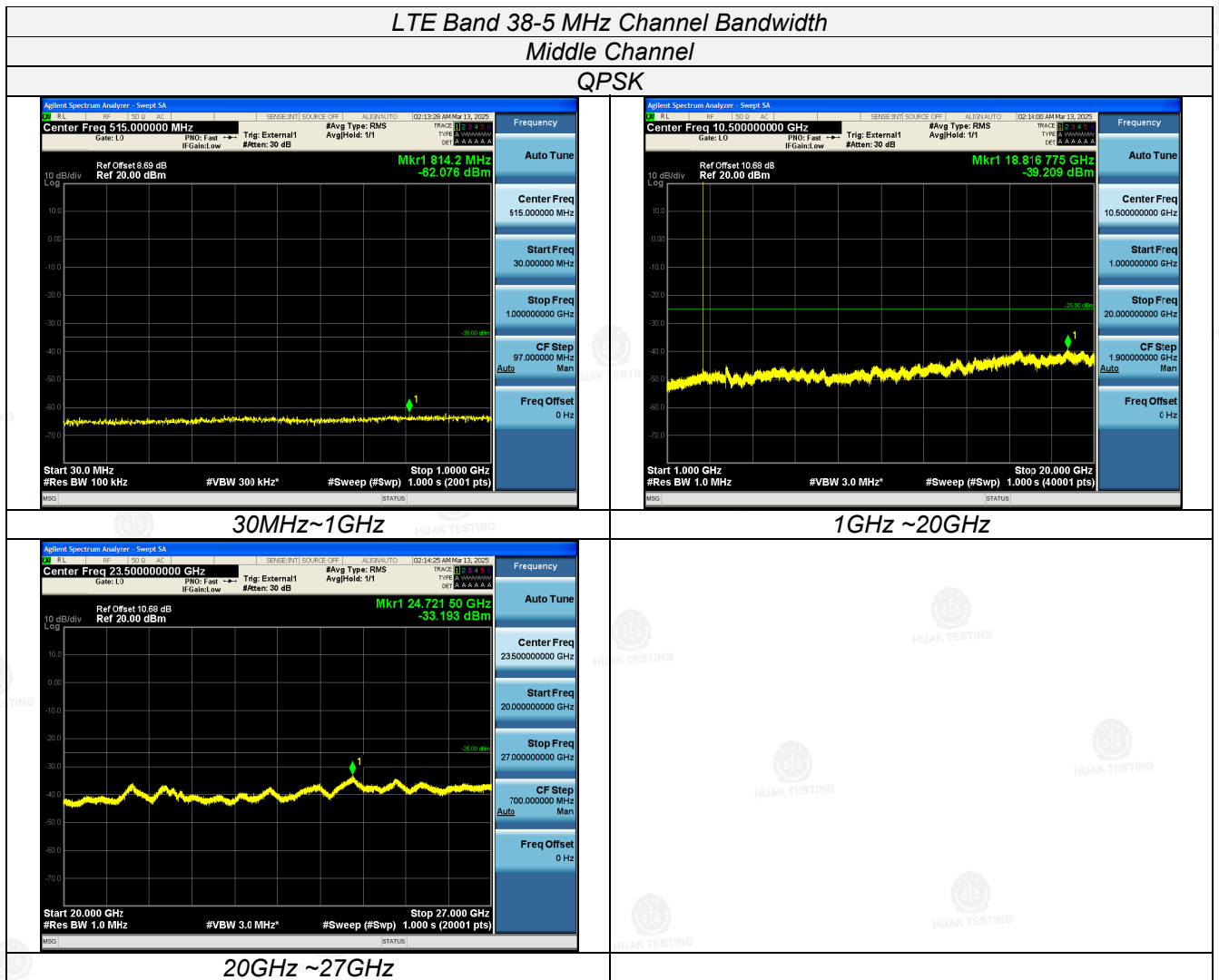
Working Frequency	Sub range (GHz)	RBW	VBW	Sweep time (s)
LTE Band 38	0.03~1	100 KHz	300 KHz	Auto
	1~27	1 MHz	3 MHz	Auto

TEST RESULTS

Remark:

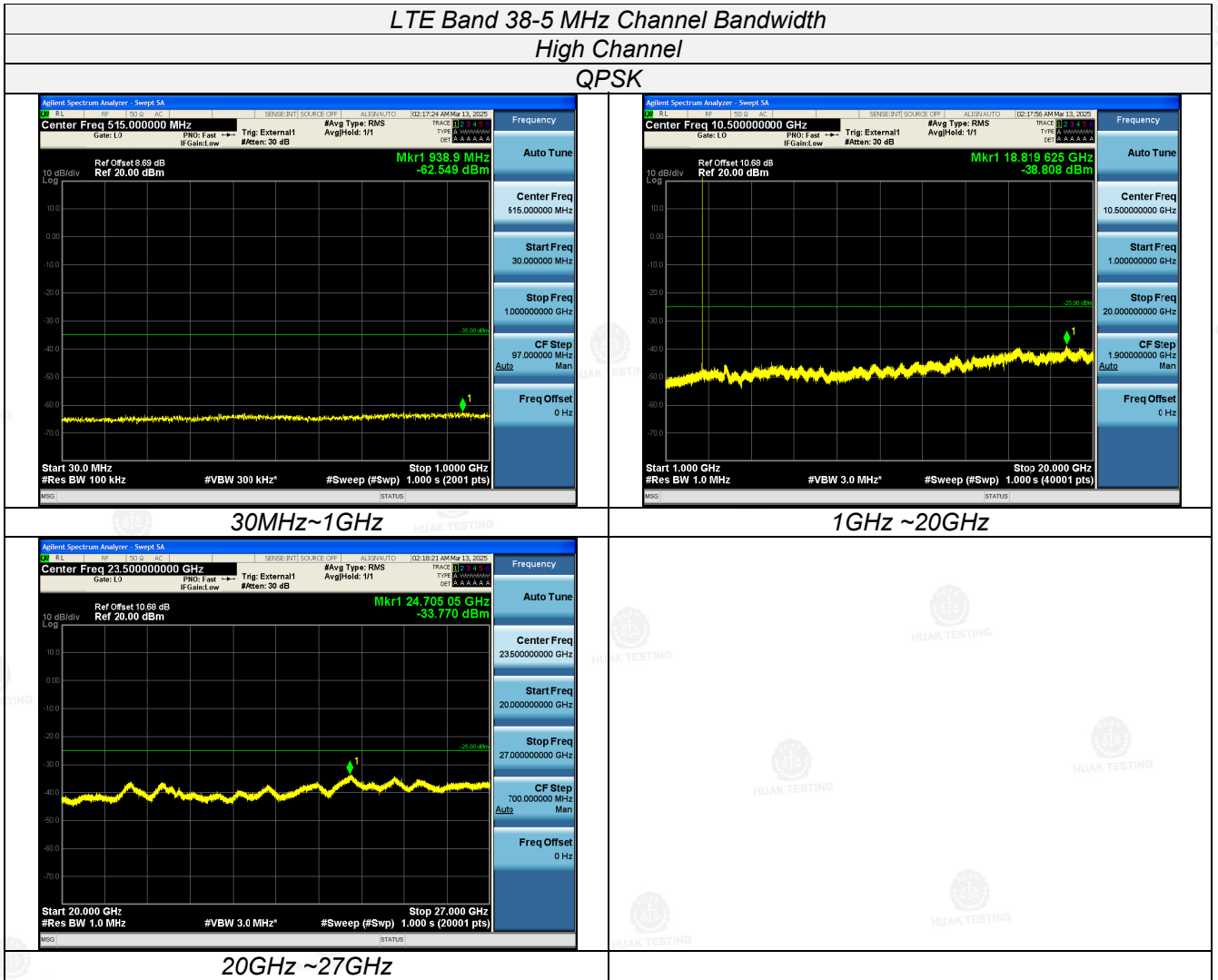
- We were tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38; recorded worst case at the QPSK Mode for each Channel Bandwidth of LTE Band 38





The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

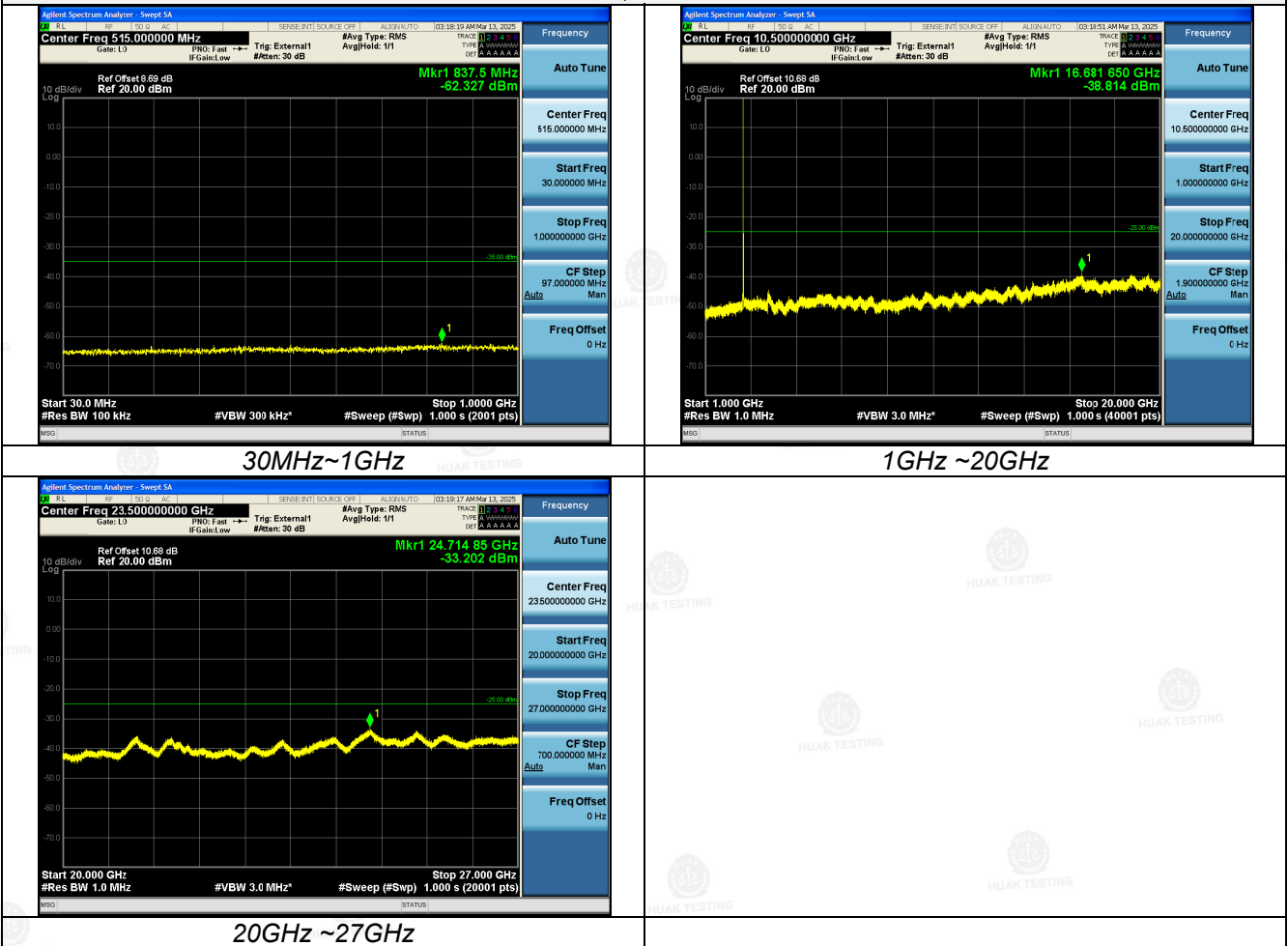
Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



LTE Band 38-10 MHz Channel Bandwidth

Low Channel

QPSK



20GHz ~27GHz

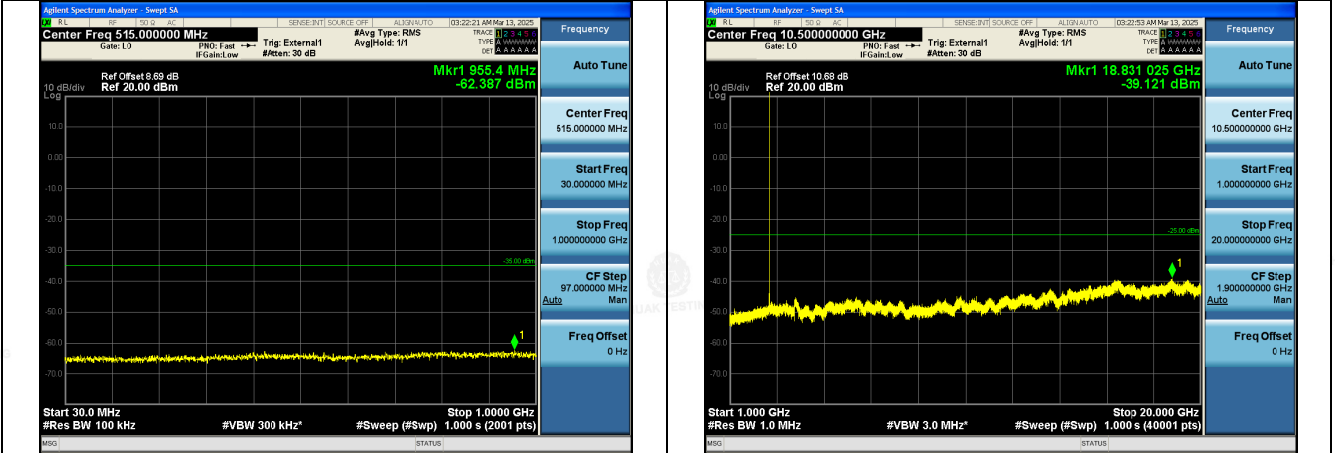
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

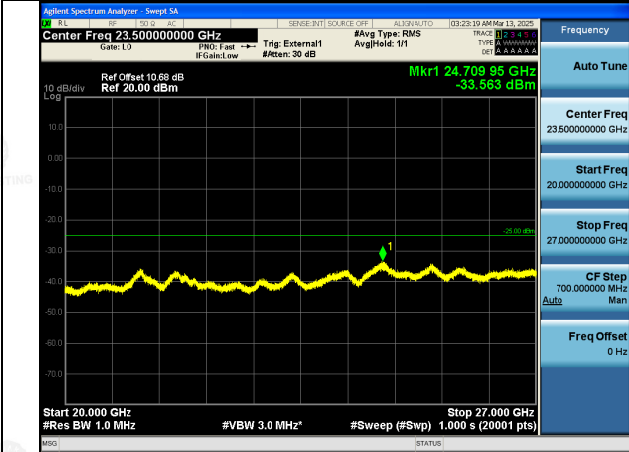
LTE Band 38-10 MHz Channel Bandwidth

Middle Channel

QPSK

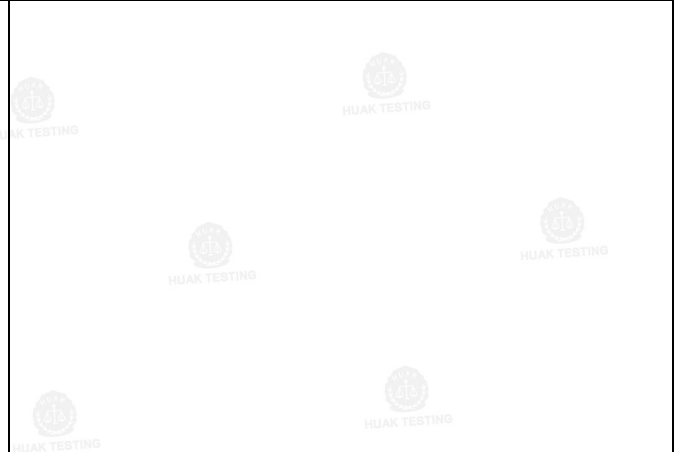


30MHz~1GHz



20GHz ~27GHz

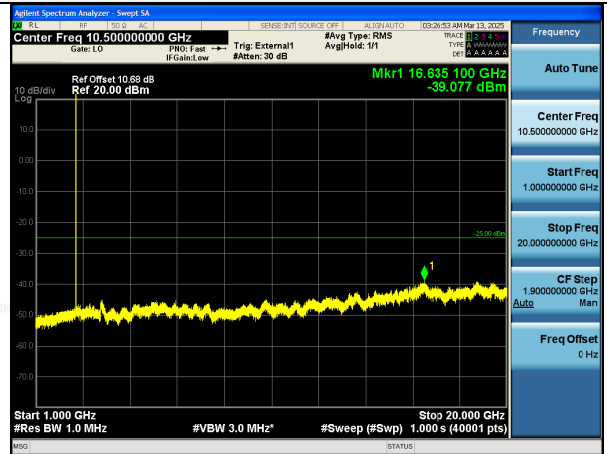
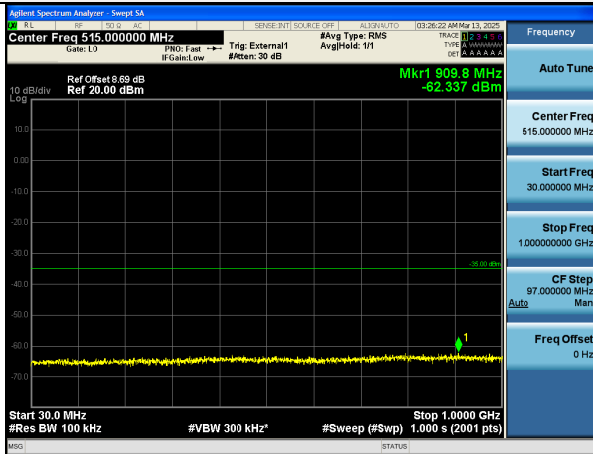
1GHz ~20GHz



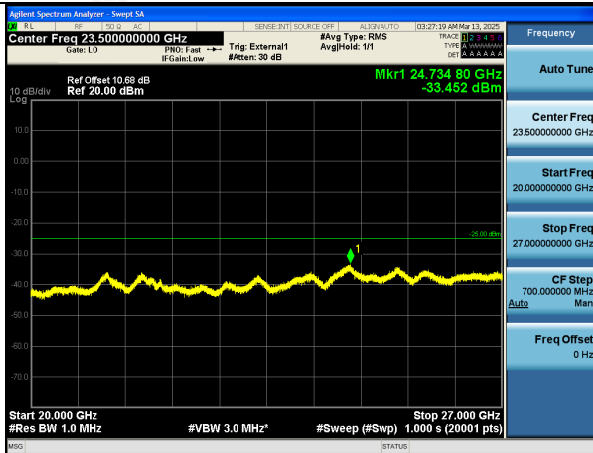
LTE Band 38-10 MHz Channel Bandwidth

High Channel

QPSK



30MHz~1GHz



1GHz ~20GHz

20GHz ~27GHz

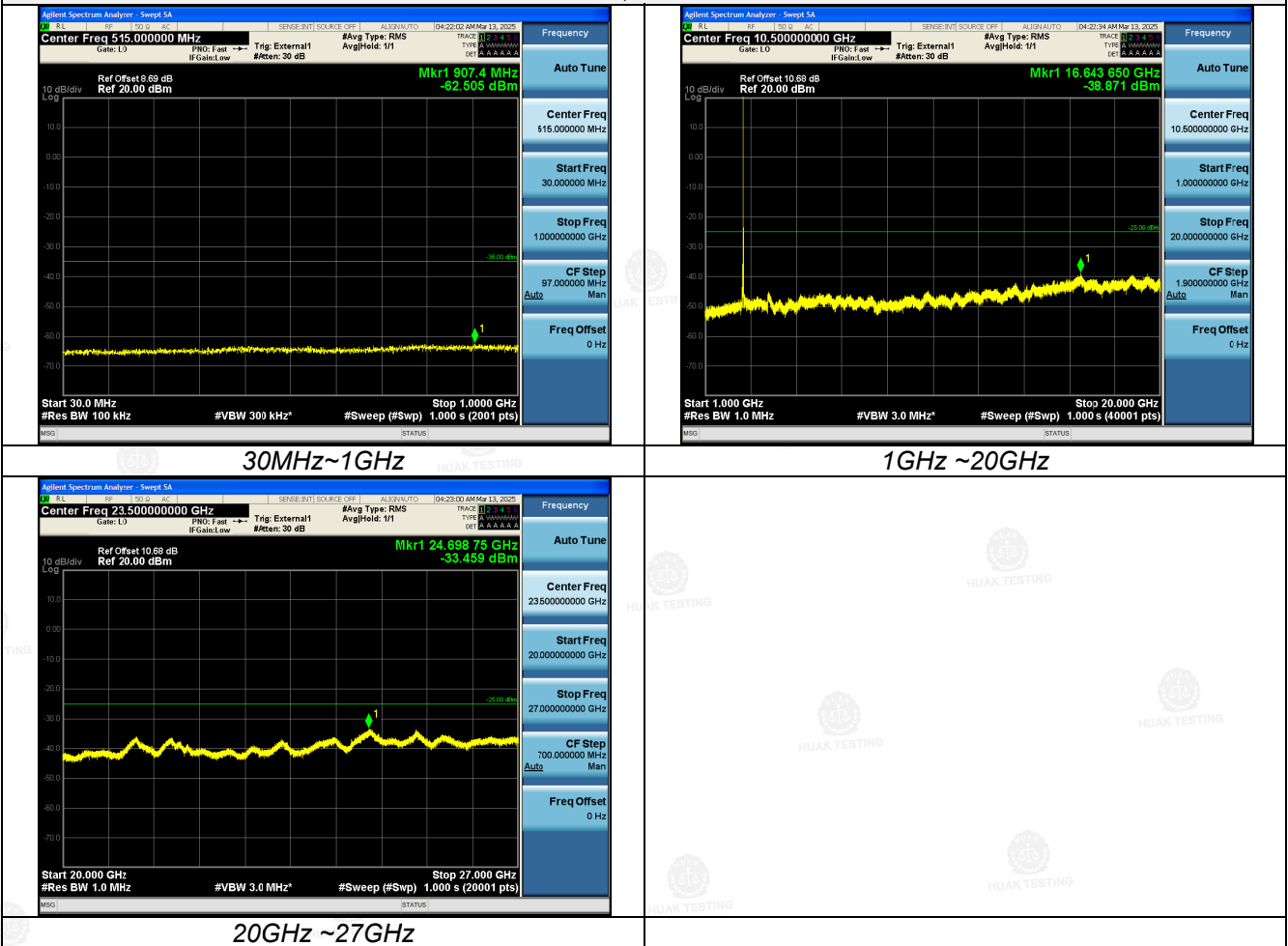
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

LTE Band 38-15 MHz Channel Bandwidth

Low Channel

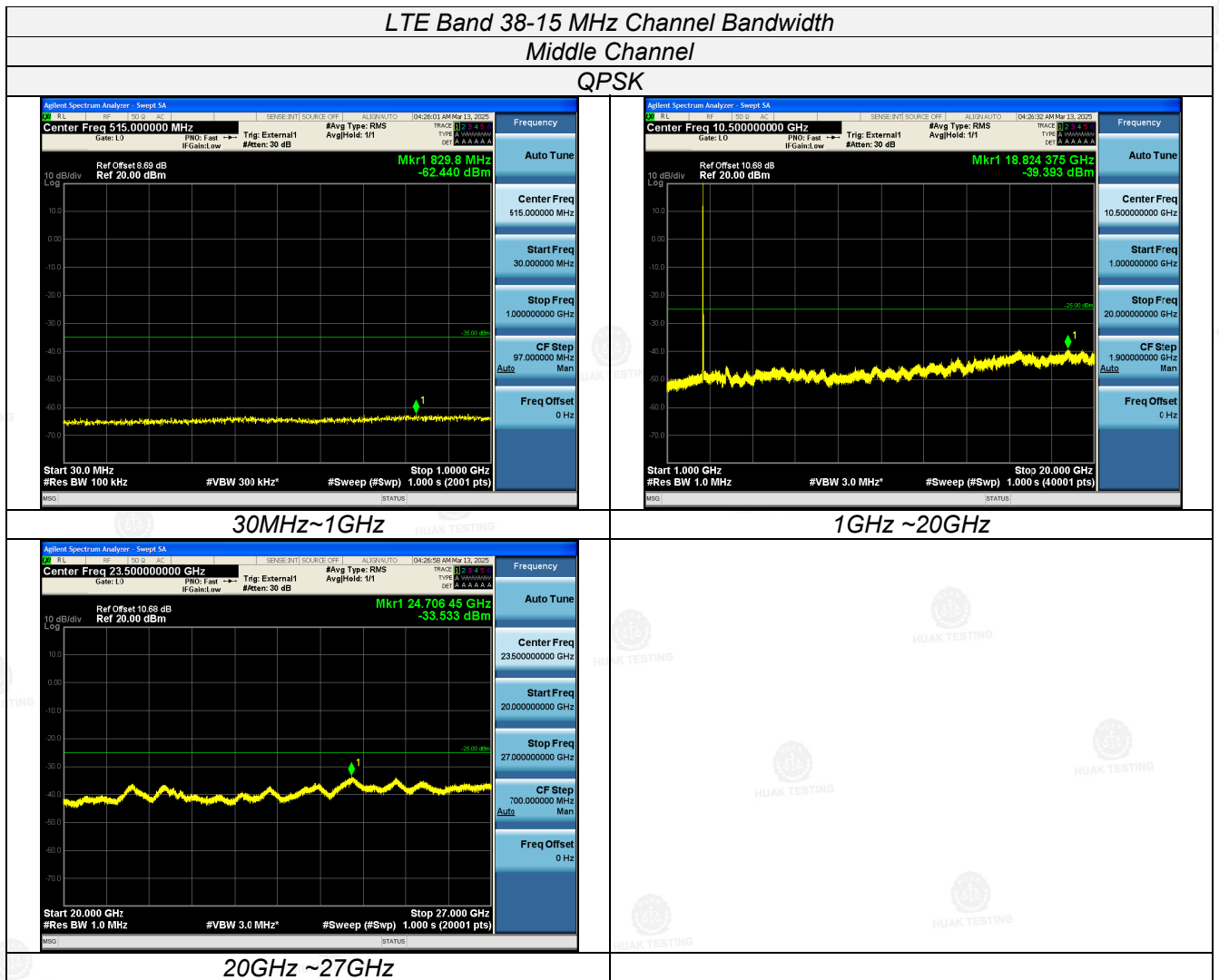
QPSK



20GHz ~27GHz

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



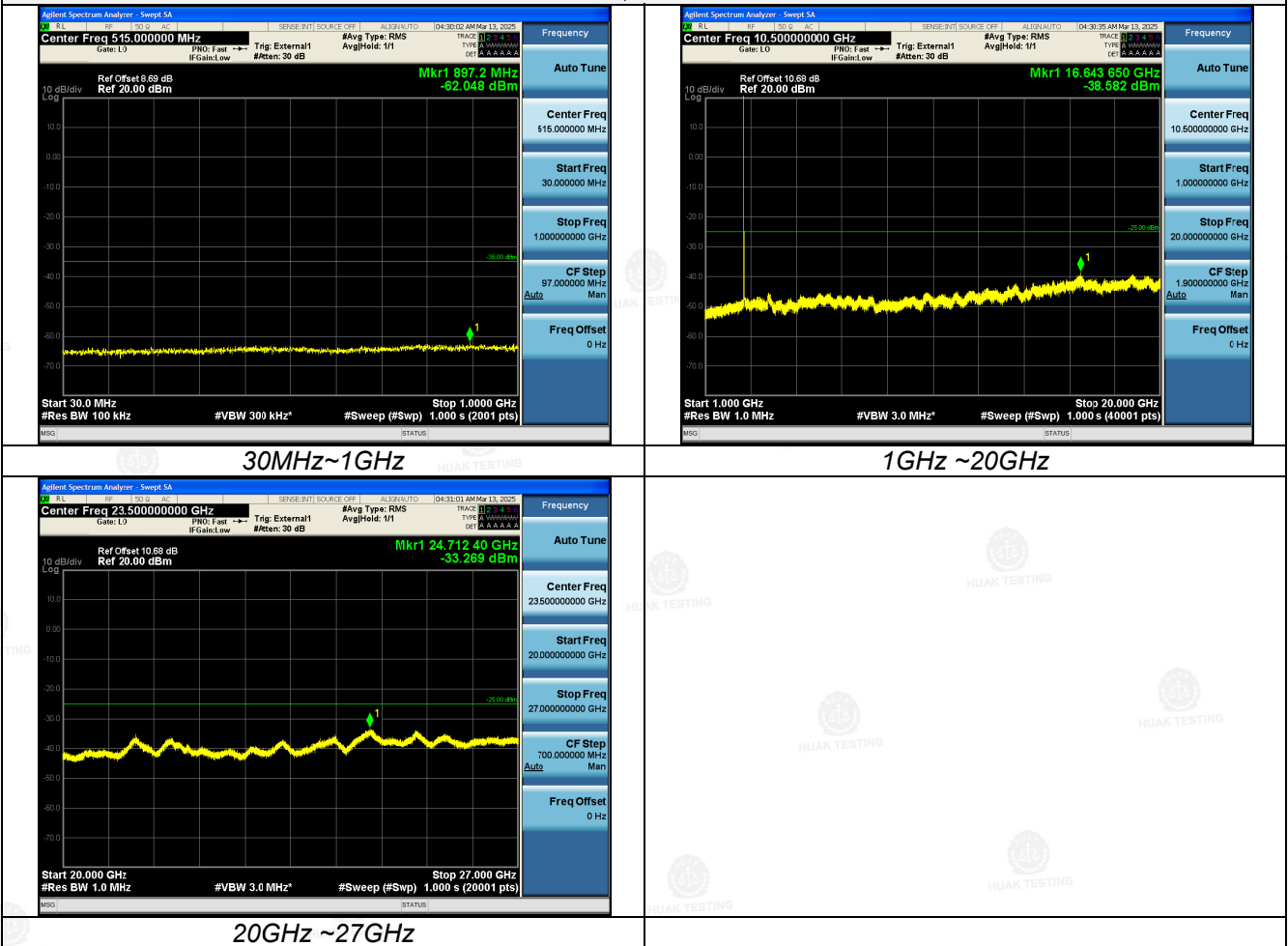
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

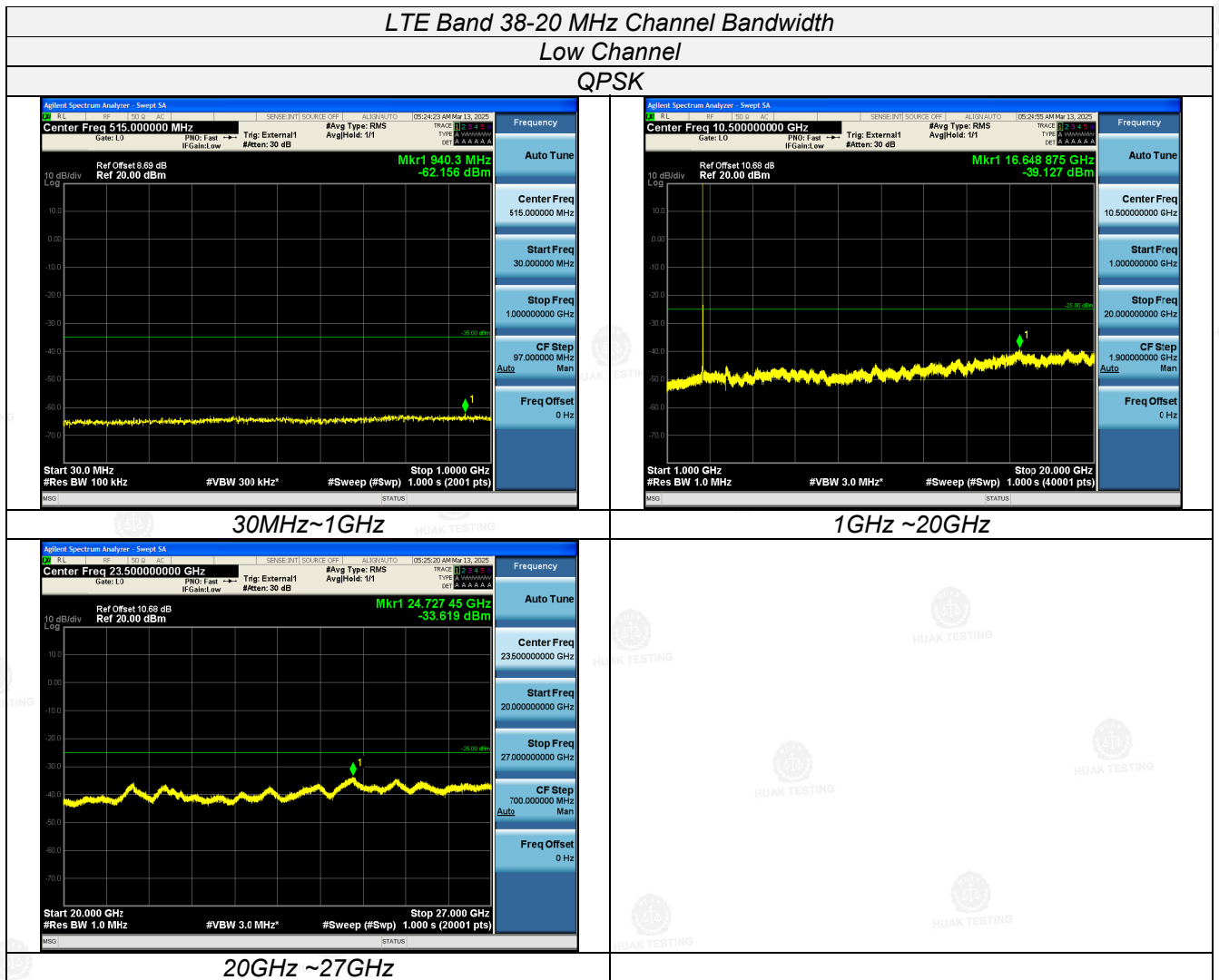
Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

LTE Band 38-15 MHz Channel Bandwidth

High Channel

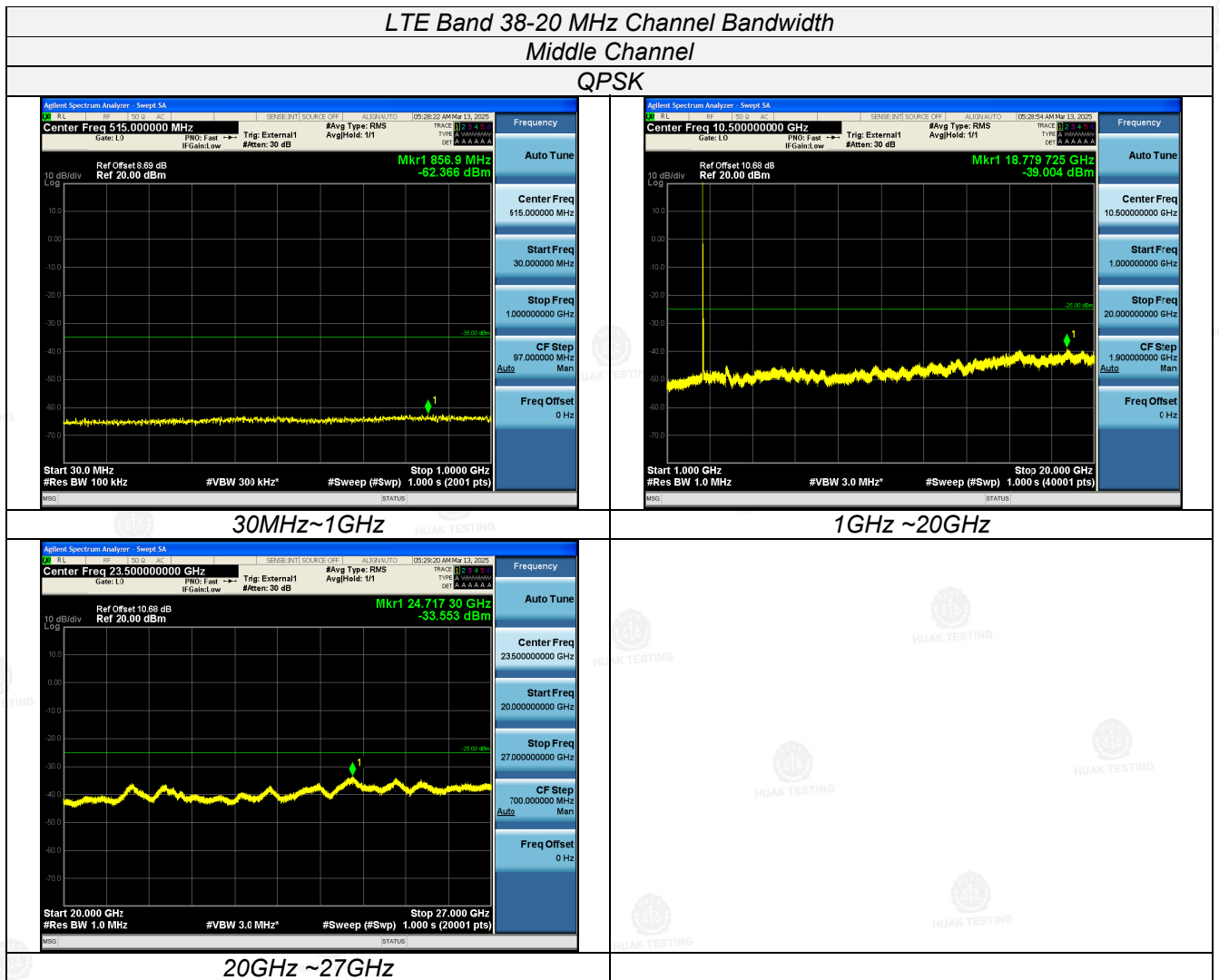
QPSK





The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



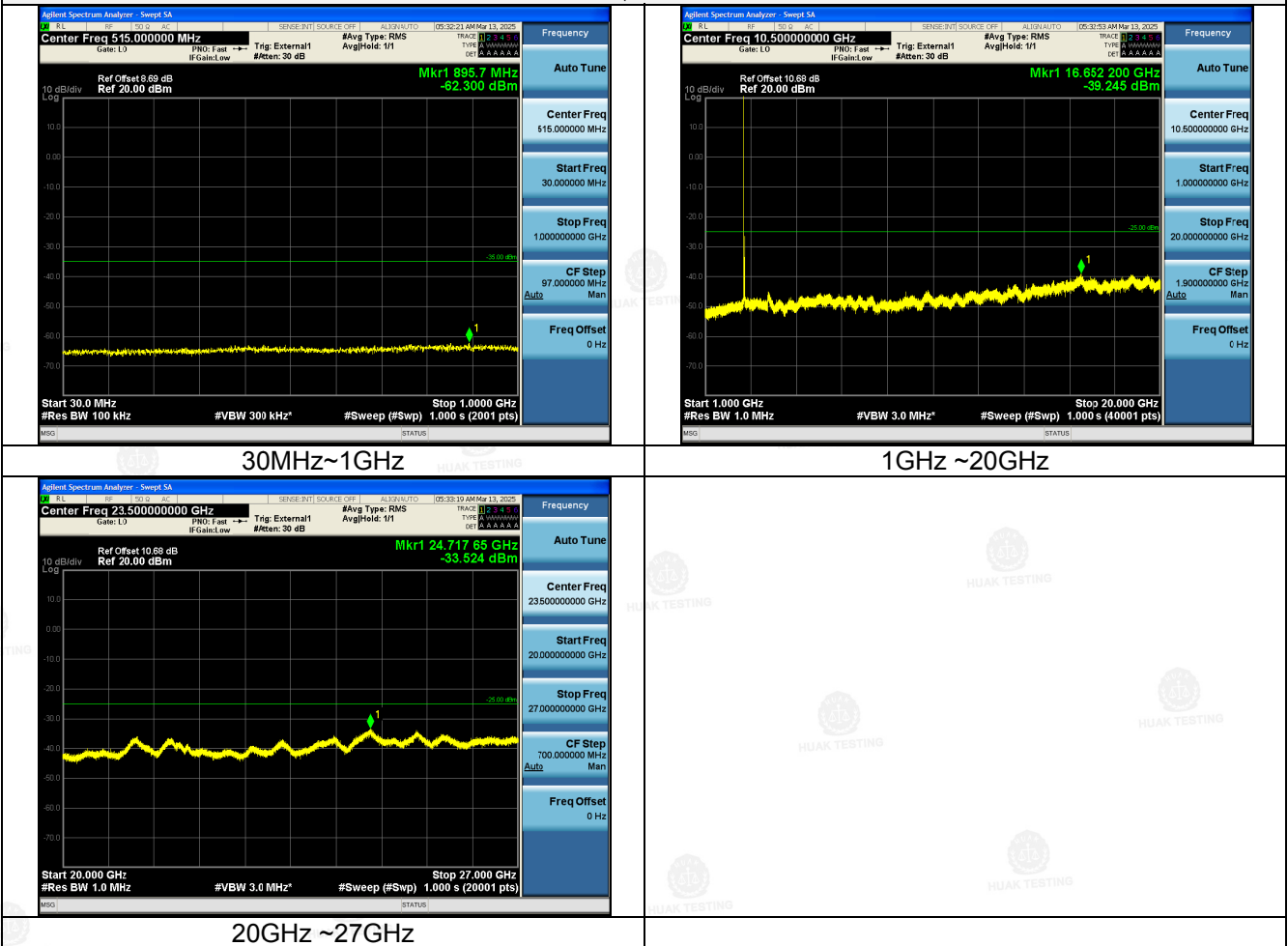
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
 Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

LTE Band 38-20 MHz Channel Bandwidth

High Channel

QPSK

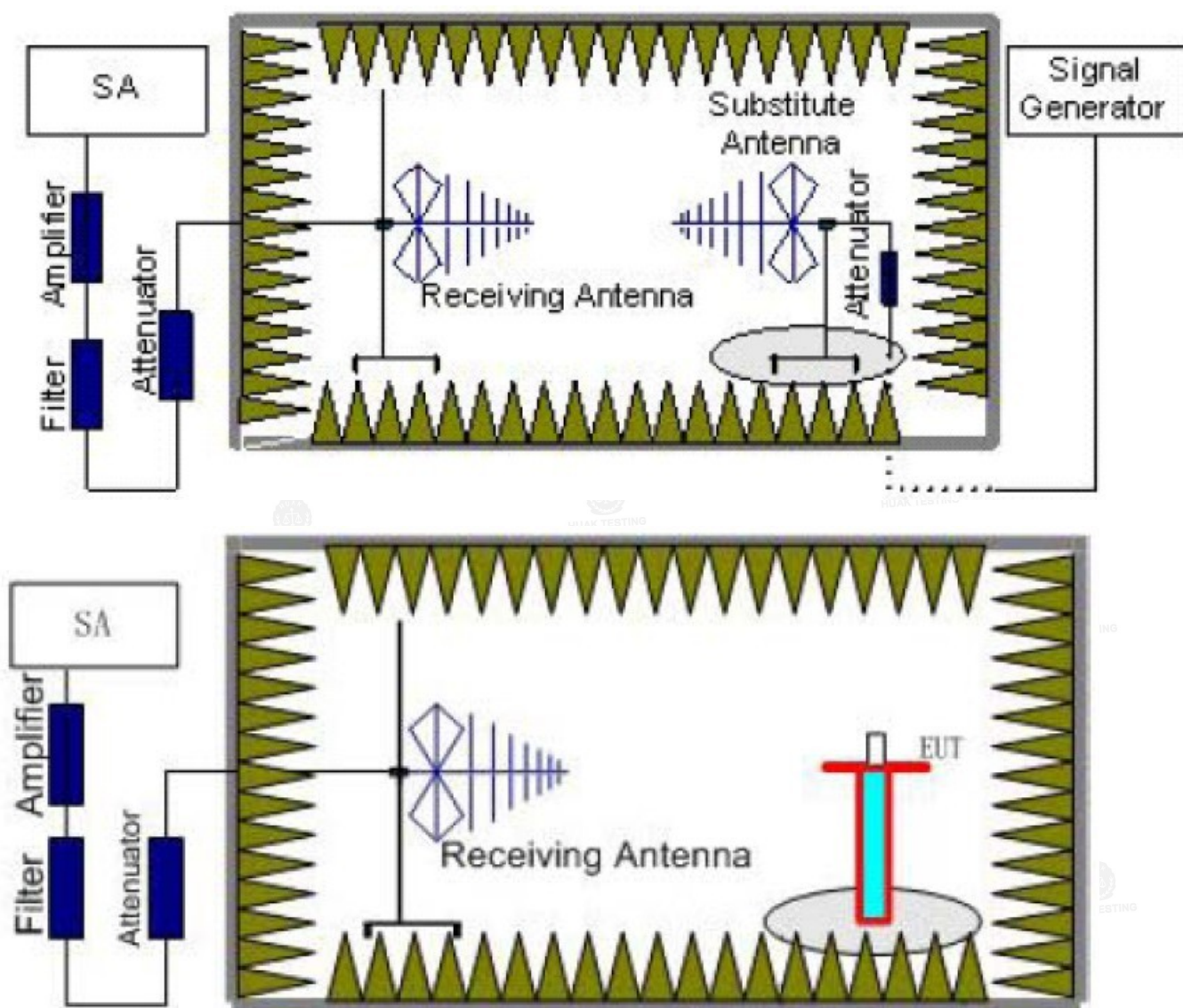


4.6 Radiated Spurious Emission

TEST APPLICABLE

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $40 + 10 \log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge, $43 + 10 \log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge, and $55 + 10 \log P$ dB (-25 dBm, 3 nW) on all frequencies more than 20 MHz from the channel edge, where X MHz is the greater of 6 MHz or the actual emission bandwidth (26 dB).

TEST CONFIGURATION



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603D

- The EUT shall be placed at the specified height on a support, and in the position closest to normal use as declared by provider.
- The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter
- The output of the test antenna shall be connected to the measuring receiver.
- The transmitter shall be switched on and the measuring receiver shall be tuned to the frequency of the transmitter under test.
- The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
- The transmitter shall then be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
- The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
- The maximum signal level detected by the measuring receiver shall be noted.
- The transmitter shall be replaced by a substitution antenna.
- The substitution antenna shall be orientated for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.
- The substitution antenna shall be connected to a calibrated signal generator.
- If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
- The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
- The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
- The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.
- The measure of the effective radiated power is the larger of the two levels recorded at the input to the substitution antenna, corrected for gain of the substitution antenna if necessary.
- Test site anechoic chamber refer to ANSI C63.4:2014.

Frequency	Channel	Frequency Range	Verdict
LTE Band 38	Low	30MHz -26.5GHz	PASS
	Middle	30MHz -26.5GHz	PASS
	High	30MHz -26.5GHz	PASS

Radiated Measurement:

Remark:

- We measured all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38; recorded worst case for each Channel Bandwidth of LTE Band 38.
- $EIRP = P_S(dBm) - P_o(dB) + G_a(dBi)$
- Not recorded other points means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Margin = Limit – EIRP



Test Model No.: S25 Ultra

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5145.0	-47.31	4.39	3.00	12.34	-39.36	-25.00	26.70	H
7717.5	-50.11	5.31	3.00	13.52	-41.9	-25.00	30.42	H
5145.0	-45.42	4.39	3.00	12.34	-37.47	-25.00	24.81	V
7717.5	-52.07	5.31	3.00	13.52	-43.86	-25.00	32.38	V

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-49.65	4.41	3.00	12.34	-41.72	-25.00	16.72	H
7785.0	-48.84	5.38	3.00	13.58	-40.64	-25.00	15.64	H
5190.0	-47.14	4.41	3.00	12.34	-39.21	-25.00	14.21	V
7785.0	-46.73	5.38	3.00	13.58	-38.53	-25.00	13.53	V

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-41.67	4.45	3.00	12.45	-33.67	-25.00	8.67	H
7852.5	-50.55	5.47	3.00	13.66	-42.36	-25.00	17.36	H
5235.0	-45.49	4.45	3.00	12.45	-37.49	-25.00	12.49	V
7852.5	-52.46	5.48	3.00	13.66	-44.28	-25.00	19.28	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5150.0	-44.4	4.39	3.00	12.34	-36.45	-25.00	23.79	H
7725.0	-49.57	5.31	3.00	13.52	-41.36	-25.00	29.88	H
5150.0	-43.21	4.39	3.00	12.34	-35.26	-25.00	22.60	V
7725.0	-52.47	5.31	3.00	13.52	-44.26	-25.00	32.78	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-47.28	4.41	3.00	12.34	-39.35	-25.00	14.35	H
7785.0	-50.18	5.38	3.00	13.58	-41.98	-25.00	16.98	H
5190.0	-45.88	4.41	3.00	12.34	-37.95	-25.00	12.95	V
7785.0	-44.36	5.38	3.00	13.58	-36.16	-25.00	11.16	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	P _s (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-43.44	4.45	3.00	12.45	-35.44	-25.00	10.44	H
7845.0	-51.11	5.47	3.00	13.66	-42.92	-25.00	17.92	H
5230.0	-44.34	4.45	3.00	12.45	-36.34	-25.00	11.34	V
7845.0	-51.55	5.48	3.00	13.66	-43.37	-25.00	18.37	V



LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5155.0	-47.09	4.39	3.00	12.34	-39.14	-25.00	26.48	H
7732.5	-50.11	5.31	3.00	13.52	-41.9	-25.00	30.42	H
5155.0	-42.87	4.39	3.00	12.34	-34.92	-25.00	22.26	V
7732.5	-54.5	5.31	3.00	13.52	-46.29	-25.00	34.81	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-46.87	4.41	3.00	12.34	-38.94	-25.00	13.94	H
7785.0	-50.04	5.38	3.00	13.58	-41.84	-25.00	16.84	H
5190.0	-46.56	4.41	3.00	12.34	-38.63	-25.00	13.63	V
7785.0	-45.84	5.38	3.00	13.58	-37.64	-25.00	12.64	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.74	4.45	3.00	12.45	-34.74	-25.00	9.74	H
7837.5	-51.44	5.47	3.00	13.66	-43.25	-25.00	18.25	H
5225.0	-45.48	4.45	3.00	12.45	-37.48	-25.00	12.48	V
7837.5	-51.66	5.48	3.00	13.66	-43.48	-25.00	18.48	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5160.0	-45.32	4.39	3.00	12.34	-37.37	-25.00	24.71	H
7740.0	-49.78	5.31	3.00	13.52	-41.57	-25.00	30.09	H
5160.0	-45.49	4.39	3.00	12.34	-37.54	-25.00	24.88	V
7740.0	-53.96	5.31	3.00	13.52	-45.75	-25.00	34.27	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-48.79	4.41	3.00	12.34	-40.86	-25.00	15.86	H
7785.0	-48.63	5.38	3.00	13.58	-40.43	-25.00	15.43	H
5190.0	-47.02	4.41	3.00	12.34	-39.09	-25.00	14.09	V
7785.0	-43.98	5.38	3.00	13.58	-35.78	-25.00	10.78	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-43.69	4.45	3.00	12.45	-35.69	-25.00	10.69	H
7830.0	-51.83	5.47	3.00	13.66	-43.64	-25.00	18.64	H
5220.0	-45.06	4.45	3.00	12.45	-37.06	-25.00	12.06	V
7830.0	-52.37	5.48	3.00	13.66	-44.19	-25.00	19.19	V

**LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5145.0	-47.19	4.39	3.00	12.34	-39.24	-25.00	26.58	H
7717.5	-50.04	5.31	3.00	13.52	-41.83	-25.00	30.35	H
5145.0	-42.76	4.39	3.00	12.34	-34.81	-25.00	22.15	V
7717.5	-52.97	5.31	3.00	13.52	-44.76	-25.00	33.28	V

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-47.81	4.41	3.00	12.34	-39.88	-25.00	14.88	H
7785.0	-48.49	5.38	3.00	13.58	-40.29	-25.00	15.29	H
5190.0	-46.97	4.41	3.00	12.34	-39.04	-25.00	14.04	V
7785.0	-45.31	5.38	3.00	13.58	-37.11	-25.00	12.11	V

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-41.53	4.45	3.00	12.45	-33.53	-25.00	8.53	H
7852.5	-50.82	5.47	3.00	13.66	-42.63	-25.00	17.63	H
5235.0	-44.68	4.45	3.00	12.45	-36.68	-25.00	11.68	V
7852.5	-51.46	5.48	3.00	13.66	-43.28	-25.00	18.28	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5150.0	-45.24	4.39	3.00	12.34	-37.29	-25.00	24.63	H
7725.0	-50.75	5.31	3.00	13.52	-42.54	-25.00	31.06	H
5150.0	-44.23	4.39	3.00	12.34	-36.28	-25.00	23.62	V
7725.0	-52.05	5.31	3.00	13.52	-43.84	-25.00	32.36	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-48.54	4.41	3.00	12.34	-40.61	-25.00	15.61	H
7785.0	-49.7	5.38	3.00	13.58	-41.5	-25.00	16.5	H
5190.0	-45.79	4.41	3.00	12.34	-37.86	-25.00	12.86	V
7785.0	-44.75	5.38	3.00	13.58	-36.55	-25.00	11.55	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-44.26	4.45	3.00	12.45	-36.26	-25.00	11.26	H
7845.0	-52.6	5.47	3.00	13.66	-44.41	-25.00	19.41	H
5230.0	-42.9	4.45	3.00	12.45	-34.9	-25.00	9.9	V
7845.0	-51.77	5.48	3.00	13.66	-43.59	-25.00	18.59	V

**LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5155.0	-46.62	4.39	3.00	12.34	-38.67	-25.00	26.01	H
7732.5	-49.38	5.31	3.00	13.52	-41.17	-25.00	29.69	H
5155.0	-45.41	4.39	3.00	12.34	-37.46	-25.00	24.80	V
7732.5	-52.62	5.31	3.00	13.52	-44.41	-25.00	32.93	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-49.07	4.41	3.00	12.34	-41.14	-25.00	16.14	H
7785.0	-51.22	5.38	3.00	13.58	-43.02	-25.00	18.02	H
5190.0	-45.69	4.41	3.00	12.34	-37.76	-25.00	12.76	V
7785.0	-44	5.38	3.00	13.58	-35.8	-25.00	10.8	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-44.38	4.45	3.00	12.45	-36.38	-25.00	11.38	H
7837.5	-52.9	5.47	3.00	13.66	-44.71	-25.00	19.71	H
5225.0	-44.2	4.45	3.00	12.45	-36.2	-25.00	11.2	V
7837.5	-51.34	5.48	3.00	13.66	-43.16	-25.00	18.16	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5160.0	-46.46	4.39	3.00	12.34	-38.51	-25.00	25.85	H
7740.0	-50.25	5.31	3.00	13.52	-42.04	-25.00	30.56	H
5160.0	-43.47	4.39	3.00	12.34	-35.52	-25.00	22.86	V
7740.0	-53.44	5.31	3.00	13.52	-45.23	-25.00	33.75	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5190.0	-49.02	4.41	3.00	12.34	-41.09	-25.00	16.09	H
7785.0	-50.39	5.38	3.00	13.58	-42.19	-25.00	17.19	H
5190.0	-45.7	4.41	3.00	12.34	-37.77	-25.00	12.77	V
7785.0	-46.14	5.38	3.00	13.58	-37.94	-25.00	12.94	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-44.05	4.45	3.00	12.45	-36.05	-25.00	11.05	H
7830.0	-50.22	5.47	3.00	13.66	-42.03	-25.00	17.03	H
5220.0	-44.88	4.45	3.00	12.45	-36.88	-25.00	11.88	V
7830.0	-51.95	5.48	3.00	13.66	-43.77	-25.00	18.77	V



All modes of operation were investigated and the worst-case emissions are reported.

Series Model No.: R12 pro

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-41.75	4.45	3.00	12.45	-33.75	-25.00	8.75	H
7852.5	-51.57	5.47	3.00	13.66	-43.38	-25.00	18.38	H
5235.0	-45.39	4.45	3.00	12.45	-37.39	-25.00	12.39	V
7852.5	-50.62	5.48	3.00	13.66	-42.44	-25.00	17.44	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-42.56	4.45	3.00	12.45	-34.56	-25.00	9.56	H
7845.0	-51.76	5.47	3.00	13.66	-43.57	-25.00	18.57	H
5230.0	-45.38	4.45	3.00	12.45	-37.38	-25.00	12.38	V
7845.0	-52.08	5.48	3.00	13.66	-43.9	-25.00	18.9	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-44.31	4.45	3.00	12.45	-36.31	-25.00	11.31	H
7837.5	-51.39	5.47	3.00	13.66	-43.2	-25.00	18.2	H
5225.0	-43.77	4.45	3.00	12.45	-35.77	-25.00	10.77	V
7837.5	-51.68	5.48	3.00	13.66	-43.5	-25.00	18.5	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-41.92	4.45	3.00	12.45	-33.92	-25.00	8.92	H
7830.0	-50.16	5.47	3.00	13.66	-41.97	-25.00	16.97	H
5220.0	-43.71	4.45	3.00	12.45	-35.71	-25.00	10.71	V
7830.0	-51.23	5.48	3.00	13.66	-43.05	-25.00	18.05	V

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-41.81	4.45	3.00	12.45	-33.81	-25.00	8.81	H
7852.5	-53	5.47	3.00	13.66	-44.81	-25.00	19.81	H
5235.0	-45.21	4.45	3.00	12.45	-37.21	-25.00	12.21	V
7852.5	-51.89	5.48	3.00	13.66	-43.71	-25.00	18.71	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-42.32	4.45	3.00	12.45	-34.32	-25.00	9.32	H
7845.0	-50.62	5.47	3.00	13.66	-42.43	-25.00	17.43	H
5230.0	-44.69	4.45	3.00	12.45	-36.69	-25.00	11.69	V
7845.0	-51.69	5.48	3.00	13.66	-43.51	-25.00	18.51	V

**LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-43.67	4.45	3.00	12.45	-35.67	-25.00	10.67	H
7837.5	-50.51	5.47	3.00	13.66	-42.32	-25.00	17.32	H
5225.0	-44.51	4.45	3.00	12.45	-36.51	-25.00	11.51	V
7837.5	-51.94	5.48	3.00	13.66	-43.76	-25.00	18.76	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-43.41	4.45	3.00	12.45	-35.41	-25.00	10.41	H
7830.0	-51.97	5.47	3.00	13.66	-43.78	-25.00	18.78	H
5220.0	-45.27	4.45	3.00	12.45	-37.27	-25.00	12.27	V
7830.0	-52.49	5.48	3.00	13.66	-44.31	-25.00	19.31	V

Series Model No.: P5 pro

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-42.53	4.45	3.00	12.45	-34.53	-25.00	9.53	H
7852.5	-52.6	5.47	3.00	13.66	-44.41	-25.00	19.41	H
5235.0	-45.09	4.45	3.00	12.45	-37.09	-25.00	12.09	V
7852.5	-53.14	5.48	3.00	13.66	-44.96	-25.00	19.96	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-42.89	4.45	3.00	12.45	-34.89	-25.00	9.89	H
7845.0	-52.08	5.47	3.00	13.66	-43.89	-25.00	18.89	H
5230.0	-43.11	4.45	3.00	12.45	-35.11	-25.00	10.11	V
7845.0	-50.58	5.48	3.00	13.66	-42.4	-25.00	17.4	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.45	4.45	3.00	12.45	-34.45	-25.00	9.45	H
7837.5	-50.52	5.47	3.00	13.66	-42.33	-25.00	17.33	H
5225.0	-44.98	4.45	3.00	12.45	-36.98	-25.00	11.98	V
7837.5	-51.79	5.48	3.00	13.66	-43.61	-25.00	18.61	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-44.17	4.45	3.00	12.45	-36.17	-25.00	11.17	H
7830.0	-51.25	5.47	3.00	13.66	-43.06	-25.00	18.06	H
5220.0	-43.8	4.45	3.00	12.45	-35.8	-25.00	10.8	V
7830.0	-52.53	5.48	3.00	13.66	-44.35	-25.00	19.35	V

**LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-42.58	4.45	3.00	12.45	-34.58	-25.00	9.58	H
7852.5	-52.14	5.47	3.00	13.66	-43.95	-25.00	18.95	H
5235.0	-44	4.45	3.00	12.45	-36	-25.00	11	V
7852.5	-50.71	5.48	3.00	13.66	-42.53	-25.00	17.53	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-42.35	4.45	3.00	12.45	-34.35	-25.00	9.35	H
7845.0	-50.97	5.47	3.00	13.66	-42.78	-25.00	17.78	H
5230.0	-43.37	4.45	3.00	12.45	-35.37	-25.00	10.37	V
7845.0	-50.58	5.48	3.00	13.66	-42.4	-25.00	17.4	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.57	4.45	3.00	12.45	-34.57	-25.00	9.57	H
7837.5	-50.22	5.47	3.00	13.66	-42.03	-25.00	17.03	H
5225.0	-43.1	4.45	3.00	12.45	-35.1	-25.00	10.1	V
7837.5	-53.12	5.48	3.00	13.66	-44.94	-25.00	19.94	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-42	4.45	3.00	12.45	-34	-25.00	9	H
7830.0	-50.42	5.47	3.00	13.66	-42.23	-25.00	17.23	H
5220.0	-45.13	4.45	3.00	12.45	-37.13	-25.00	12.13	V
7830.0	-52.35	5.48	3.00	13.66	-44.17	-25.00	19.17	V

Series Model No.: E50 Ultra

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-43.75	4.45	3.00	12.45	-35.75	-25.00	10.75	H
7852.5	-51.75	5.47	3.00	13.66	-43.56	-25.00	18.56	H
5235.0	-45.52	4.45	3.00	12.45	-37.52	-25.00	12.52	V
7852.5	-52.56	5.48	3.00	13.66	-44.38	-25.00	19.38	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-43.34	4.45	3.00	12.45	-35.34	-25.00	10.34	H
7845.0	-52.45	5.47	3.00	13.66	-44.26	-25.00	19.26	H
5230.0	-43.38	4.45	3.00	12.45	-35.38	-25.00	10.38	V
7845.0	-52.41	5.48	3.00	13.66	-44.23	-25.00	19.23	V

**LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-43.43	4.45	3.00	12.45	-35.43	-25.00	10.43	H
7837.5	-50.47	5.47	3.00	13.66	-42.28	-25.00	17.28	H
5225.0	-45.36	4.45	3.00	12.45	-37.36	-25.00	12.36	V
7837.5	-51.5	5.48	3.00	13.66	-43.32	-25.00	18.32	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-42.97	4.45	3.00	12.45	-34.97	-25.00	9.97	H
7830.0	-50.23	5.47	3.00	13.66	-42.04	-25.00	17.04	H
5220.0	-45.22	4.45	3.00	12.45	-37.22	-25.00	12.22	V
7830.0	-52.63	5.48	3.00	13.66	-44.45	-25.00	19.45	V

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-41.63	4.45	3.00	12.45	-33.63	-25.00	8.63	H
7852.5	-51.57	5.47	3.00	13.66	-43.38	-25.00	18.38	H
5235.0	-43.59	4.45	3.00	12.45	-35.59	-25.00	10.59	V
7852.5	-50.65	5.48	3.00	13.66	-42.47	-25.00	17.47	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-44.38	4.45	3.00	12.45	-36.38	-25.00	11.38	H
7845.0	-50.65	5.47	3.00	13.66	-42.46	-25.00	17.46	H
5230.0	-45.14	4.45	3.00	12.45	-37.14	-25.00	12.14	V
7845.0	-50.87	5.48	3.00	13.66	-42.69	-25.00	17.69	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.07	4.45	3.00	12.45	-34.07	-25.00	9.07	H
7837.5	-51.46	5.47	3.00	13.66	-43.27	-25.00	18.27	H
5225.0	-44.06	4.45	3.00	12.45	-36.06	-25.00	11.06	V
7837.5	-50.73	5.48	3.00	13.66	-42.55	-25.00	17.55	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-43.02	4.45	3.00	12.45	-35.02	-25.00	10.02	H
7830.0	-50.46	5.47	3.00	13.66	-42.27	-25.00	17.27	H
5220.0	-44.05	4.45	3.00	12.45	-36.05	-25.00	11.05	V
7830.0	-50.28	5.48	3.00	13.66	-42.1	-25.00	17.1	V



LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-43.81	4.45	3.00	12.45	-35.81	-25.00	10.81	H
7852.5	-50.87	5.47	3.00	13.66	-42.68	-25.00	17.68	H
5235.0	-44.26	4.45	3.00	12.45	-36.26	-25.00	11.26	V
7852.5	-51.54	5.48	3.00	13.66	-43.36	-25.00	18.36	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-42.56	4.45	3.00	12.45	-34.56	-25.00	9.56	H
7845.0	-50.94	5.47	3.00	13.66	-42.75	-25.00	17.75	H
5230.0	-44.12	4.45	3.00	12.45	-36.12	-25.00	11.12	V
7845.0	-51.5	5.48	3.00	13.66	-43.32	-25.00	18.32	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.37	4.45	3.00	12.45	-34.37	-25.00	9.37	H
7837.5	-51.25	5.47	3.00	13.66	-43.06	-25.00	18.06	H
5225.0	-45.57	4.45	3.00	12.45	-37.57	-25.00	12.57	V
7837.5	-52.03	5.48	3.00	13.66	-43.85	-25.00	18.85	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-43.88	4.45	3.00	12.45	-35.88	-25.00	10.88	H
7830.0	-51.21	5.47	3.00	13.66	-43.02	-25.00	18.02	H
5220.0	-45.45	4.45	3.00	12.45	-37.45	-25.00	12.45	V
7830.0	-51.41	5.48	3.00	13.66	-43.23	-25.00	18.23	V

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-43.21	4.45	3.00	12.45	-35.21	-25.00	10.21	H
7852.5	-52.24	5.47	3.00	13.66	-44.05	-25.00	19.05	H
5235.0	-45.04	4.45	3.00	12.45	-37.04	-25.00	12.04	V
7852.5	-51.34	5.48	3.00	13.66	-43.16	-25.00	18.16	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-41.96	4.45	3.00	12.45	-33.96	-25.00	8.96	H
7845.0	-50.14	5.47	3.00	13.66	-41.95	-25.00	16.95	H
5230.0	-43.44	4.45	3.00	12.45	-35.44	-25.00	10.44	V
7845.0	-52.08	5.48	3.00	13.66	-43.9	-25.00	18.9	V

**LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-43.05	4.45	3.00	12.45	-35.05	-25.00	10.05	H
7837.5	-51.72	5.47	3.00	13.66	-43.53	-25.00	18.53	H
5225.0	-45.45	4.45	3.00	12.45	-37.45	-25.00	12.45	V
7837.5	-51.42	5.48	3.00	13.66	-43.24	-25.00	18.24	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-43.95	4.45	3.00	12.45	-35.95	-25.00	10.95	H
7830.0	-52.24	5.47	3.00	13.66	-44.05	-25.00	19.05	H
5220.0	-45.08	4.45	3.00	12.45	-37.08	-25.00	12.08	V
7830.0	-52.07	5.48	3.00	13.66	-43.89	-25.00	18.89	V

Series Model No.: P6 pro

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-43.19	4.45	3.00	12.45	-35.19	-25.00	10.19	H
7852.5	-51.48	5.47	3.00	13.66	-43.29	-25.00	18.29	H
5235.0	-45.21	4.45	3.00	12.45	-37.21	-25.00	12.21	V
7852.5	-51.52	5.48	3.00	13.66	-43.34	-25.00	18.34	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-42.03	4.45	3.00	12.45	-34.03	-25.00	9.03	H
7845.0	-52.61	5.47	3.00	13.66	-44.42	-25.00	19.42	H
5230.0	-44.35	4.45	3.00	12.45	-36.35	-25.00	11.35	V
7845.0	-53.11	5.48	3.00	13.66	-44.93	-25.00	19.93	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-44.04	4.45	3.00	12.45	-36.04	-25.00	11.04	H
7837.5	-50.84	5.47	3.00	13.66	-42.65	-25.00	17.65	H
5225.0	-44.32	4.45	3.00	12.45	-36.32	-25.00	11.32	V
7837.5	-52.28	5.48	3.00	13.66	-44.1	-25.00	19.1	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-44.03	4.45	3.00	12.45	-36.03	-25.00	11.03	H
7830.0	-51.15	5.47	3.00	13.66	-42.96	-25.00	17.96	H
5220.0	-45.46	4.45	3.00	12.45	-37.46	-25.00	12.46	V
7830.0	-50.82	5.48	3.00	13.66	-42.64	-25.00	17.64	V

**LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-43.09	4.45	3.00	12.45	-35.09	-25.00	10.09	H
7852.5	-52.96	5.47	3.00	13.66	-44.77	-25.00	19.77	H
5235.0	-43.01	4.45	3.00	12.45	-35.01	-25.00	10.01	V
7852.5	-51.68	5.48	3.00	13.66	-43.5	-25.00	18.5	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-41.51	4.45	3.00	12.45	-33.51	-25.00	8.51	H
7845.0	-51.77	5.47	3.00	13.66	-43.58	-25.00	18.58	H
5230.0	-44.53	4.45	3.00	12.45	-36.53	-25.00	11.53	V
7845.0	-50.41	5.48	3.00	13.66	-42.23	-25.00	17.23	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-43.75	4.45	3.00	12.45	-35.75	-25.00	10.75	H
7837.5	-52.48	5.47	3.00	13.66	-44.29	-25.00	19.29	H
5225.0	-44.13	4.45	3.00	12.45	-36.13	-25.00	11.13	V
7837.5	-52.23	5.48	3.00	13.66	-44.05	-25.00	19.05	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-44.46	4.45	3.00	12.45	-36.46	-25.00	11.46	H
7830.0	-52.52	5.47	3.00	13.66	-44.33	-25.00	19.33	H
5220.0	-44.35	4.45	3.00	12.45	-36.35	-25.00	11.35	V
7830.0	-51.39	5.48	3.00	13.66	-43.21	-25.00	18.21	V

Series Model No.: Sp20 Pro

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-43.39	4.45	3.00	12.45	-35.39	-25.00	10.39	H
7852.5	-50.84	5.47	3.00	13.66	-42.65	-25.00	17.65	H
5235.0	-43.64	4.45	3.00	12.45	-35.64	-25.00	10.64	V
7852.5	-50.9	5.48	3.00	13.66	-42.72	-25.00	17.72	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-42.76	4.45	3.00	12.45	-34.76	-25.00	9.76	H
7845.0	-52.66	5.47	3.00	13.66	-44.47	-25.00	19.47	H
5230.0	-42.99	4.45	3.00	12.45	-34.99	-25.00	9.99	V
7845.0	-50.31	5.48	3.00	13.66	-42.13	-25.00	17.13	V



LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-43.58	4.45	3.00	12.45	-35.58	-25.00	10.58	H
7837.5	-51.11	5.47	3.00	13.66	-42.92	-25.00	17.92	H
5225.0	-45.21	4.45	3.00	12.45	-37.21	-25.00	12.21	V
7837.5	-50.83	5.48	3.00	13.66	-42.65	-25.00	17.65	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-41.68	4.45	3.00	12.45	-33.68	-25.00	8.68	H
7830.0	-52.07	5.47	3.00	13.66	-43.88	-25.00	18.88	H
5220.0	-42.95	4.45	3.00	12.45	-34.95	-25.00	9.95	V
7830.0	-52.57	5.48	3.00	13.66	-44.39	-25.00	19.39	V

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-41.77	4.45	3.00	12.45	-33.77	-25.00	8.77	H
7852.5	-51.15	5.47	3.00	13.66	-42.96	-25.00	17.96	H
5235.0	-44.64	4.45	3.00	12.45	-36.64	-25.00	11.64	V
7852.5	-52.74	5.48	3.00	13.66	-44.56	-25.00	19.56	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-41.65	4.45	3.00	12.45	-33.65	-25.00	8.65	H
7845.0	-53	5.47	3.00	13.66	-44.81	-25.00	19.81	H
5230.0	-42.88	4.45	3.00	12.45	-34.88	-25.00	9.88	V
7845.0	-52.72	5.48	3.00	13.66	-44.54	-25.00	19.54	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.84	4.45	3.00	12.45	-34.84	-25.00	9.84	H
7837.5	-52.87	5.47	3.00	13.66	-44.68	-25.00	19.68	H
5225.0	-44.09	4.45	3.00	12.45	-36.09	-25.00	11.09	V
7837.5	-51.48	5.48	3.00	13.66	-43.3	-25.00	18.3	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-42.36	4.45	3.00	12.45	-34.36	-25.00	9.36	H
7830.0	-50.97	5.47	3.00	13.66	-42.78	-25.00	17.78	H
5220.0	-44.29	4.45	3.00	12.45	-36.29	-25.00	11.29	V
7830.0	-51.83	5.48	3.00	13.66	-43.65	-25.00	18.65	V

**LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-42.86	4.45	3.00	12.45	-34.86	-25.00	9.86	H
7852.5	-52.23	5.47	3.00	13.66	-44.04	-25.00	19.04	H
5235.0	-45.02	4.45	3.00	12.45	-37.02	-25.00	12.02	V
7852.5	-52.15	5.48	3.00	13.66	-43.97	-25.00	18.97	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-44.05	4.45	3.00	12.45	-36.05	-25.00	11.05	H
7845.0	-52.09	5.47	3.00	13.66	-43.9	-25.00	18.9	H
5230.0	-45.51	4.45	3.00	12.45	-37.51	-25.00	12.51	V
7845.0	-51.34	5.48	3.00	13.66	-43.16	-25.00	18.16	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.61	4.45	3.00	12.45	-34.61	-25.00	9.61	H
7837.5	-51.77	5.47	3.00	13.66	-43.58	-25.00	18.58	H
5225.0	-43.05	4.45	3.00	12.45	-35.05	-25.00	10.05	V
7837.5	-51.64	5.48	3.00	13.66	-43.46	-25.00	18.46	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-42.08	4.45	3.00	12.45	-34.08	-25.00	9.08	H
7830.0	-51.17	5.47	3.00	13.66	-42.98	-25.00	17.98	H
5220.0	-44.78	4.45	3.00	12.45	-36.78	-25.00	11.78	V
7830.0	-50.9	5.48	3.00	13.66	-42.72	-25.00	17.72	V

LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-42.38	4.45	3.00	12.45	-34.38	-25.00	9.38	H
7852.5	-52.04	5.47	3.00	13.66	-43.85	-25.00	18.85	H
5235.0	-44.65	4.45	3.00	12.45	-36.65	-25.00	11.65	V
7852.5	-50.62	5.48	3.00	13.66	-42.44	-25.00	17.44	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-44.21	4.45	3.00	12.45	-36.21	-25.00	11.21	H
7845.0	-50.61	5.47	3.00	13.66	-42.42	-25.00	17.42	H
5230.0	-43.79	4.45	3.00	12.45	-35.79	-25.00	10.79	V
7845.0	-50.26	5.48	3.00	13.66	-42.08	-25.00	17.08	V

**LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.31	4.45	3.00	12.45	-34.31	-25.00	9.31	H
7837.5	-52.39	5.47	3.00	13.66	-44.2	-25.00	19.2	H
5225.0	-45.7	4.45	3.00	12.45	-37.7	-25.00	12.7	V
7837.5	-52.43	5.48	3.00	13.66	-44.25	-25.00	19.25	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-42.07	4.45	3.00	12.45	-34.07	-25.00	9.07	H
7830.0	-51.19	5.47	3.00	13.66	-43	-25.00	18	H
5220.0	-42.87	4.45	3.00	12.45	-34.87	-25.00	9.87	V
7830.0	-51.16	5.48	3.00	13.66	-42.98	-25.00	17.98	V

Series Model No.: P8 Pro

LTE Band 38_Channel Bandwidth 5MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-42.23	4.45	3.00	12.45	-34.23	-25.00	9.23	H
7852.5	-52.03	5.47	3.00	13.66	-43.84	-25.00	18.84	H
5235.0	-44.59	4.45	3.00	12.45	-36.59	-25.00	11.59	V
7852.5	-50.61	5.48	3.00	13.66	-42.43	-25.00	17.43	V

LTE Band 38_Channel Bandwidth 10MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-43.45	4.45	3.00	12.45	-35.45	-25.00	10.45	H
7845.0	-52.33	5.47	3.00	13.66	-44.14	-25.00	19.14	H
5230.0	-45.07	4.45	3.00	12.45	-37.07	-25.00	12.07	V
7845.0	-52.07	5.48	3.00	13.66	-43.89	-25.00	18.89	V

LTE Band 38_Channel Bandwidth 15MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-44.08	4.45	3.00	12.45	-36.08	-25.00	11.08	H
7837.5	-51.64	5.47	3.00	13.66	-43.45	-25.00	18.45	H
5225.0	-44.64	4.45	3.00	12.45	-36.64	-25.00	11.64	V
7837.5	-53.09	5.48	3.00	13.66	-44.91	-25.00	19.91	V

LTE Band 38_Channel Bandwidth 20MHz_QPSK_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-43.65	4.45	3.00	12.45	-35.65	-25.00	10.65	H
7830.0	-51.41	5.47	3.00	13.66	-43.22	-25.00	18.22	H
5220.0	-44.97	4.45	3.00	12.45	-36.97	-25.00	11.97	V
7830.0	-51.77	5.48	3.00	13.66	-43.59	-25.00	18.59	V

**LTE Band 38_Channel Bandwidth 5MHz_16QAM_1RB#0**

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5235.0	-42.67	4.45	3.00	12.45	-34.67	-25.00	9.67	H
7852.5	-52.4	5.47	3.00	13.66	-44.21	-25.00	19.21	H
5235.0	-44.32	4.45	3.00	12.45	-36.32	-25.00	11.32	V
7852.5	-50.63	5.48	3.00	13.66	-42.45	-25.00	17.45	V

LTE Band 38_Channel Bandwidth 10MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5230.0	-43.27	4.45	3.00	12.45	-35.27	-25.00	10.27	H
7845.0	-51.05	5.47	3.00	13.66	-42.86	-25.00	17.86	H
5230.0	-44.27	4.45	3.00	12.45	-36.27	-25.00	11.27	V
7845.0	-51.04	5.48	3.00	13.66	-42.86	-25.00	17.86	V

LTE Band 38_Channel Bandwidth 15MHz_16QAM_1RB#0

Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5225.0	-42.48	4.45	3.00	12.45	-34.48	-25.00	9.48	H
7837.5	-52.11	5.47	3.00	13.66	-43.92	-25.00	18.92	H
5225.0	-43.44	4.45	3.00	12.45	-35.44	-25.00	10.44	V
7837.5	-52.73	5.48	3.00	13.66	-44.55	-25.00	19.55	V

LTE Band 38_Channel Bandwidth 20MHz_16QAM_1RB#0

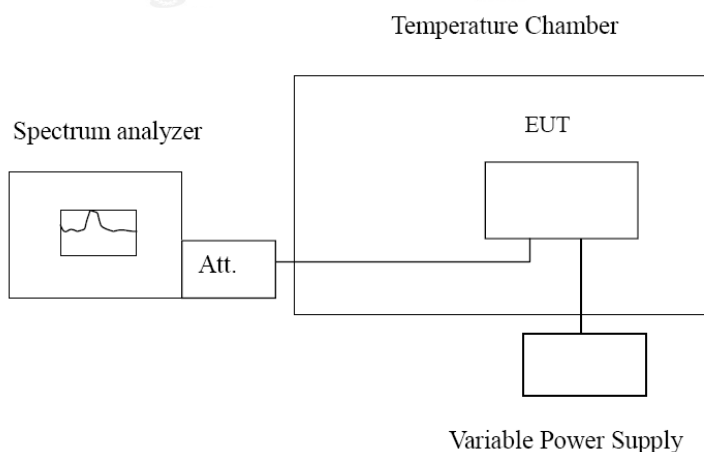
Frequency (MHz)	Ps (dBm)	P _{cl} (dB)	Diatance	G _a Antenna Gain(dB)	Peak EIRP (dBm)	Limit (dBm)	Margin (dB)	Polarization
5220.0	-42.72	4.45	3.00	12.45	-34.72	-25.00	9.72	H
7830.0	-52.4	5.47	3.00	13.66	-44.21	-25.00	19.21	H
5220.0	-43.09	4.45	3.00	12.45	-35.09	-25.00	10.09	V
7830.0	-52.8	5.48	3.00	13.66	-44.62	-25.00	19.62	V

4.7 Frequency Stability

LIMIT

According to §2.1055 requirement, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation and should not exceed 2.5ppm.

TEST CONFIGURATION



TEST PROCEDURE

The EUT was setup according to EIA/TIA 603D

Frequency Stability Under Temperature Variations:

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMW500 DIGITAL RADIO COMMUNICATION TESTER.

1. Measure the carrier frequency at room temperature.
2. Subject the EUT to overnight soak at -30°C.
3. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on middle channel for LTE band 38, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
4. Repeat the above measurements at 10°C increments from -30°C to +50°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements.
5. Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1.5 hours unpowered, to allow any self-heating to stabilize, before continuing.
6. Subject the EUT to overnight soak at +50°C.
7. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.
8. Repeat the above measurements at 10 °C increments from +50°C to -30°C. Allow at least 1.5 hours at each temperature, unpowered, before making measurements
9. At all temperature levels hold the temperature to +/- 0.5°C during the measurement procedure.

Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.



HUAKE TESTING TEST RESULTS

EUT :	Smart Phone	Test Date:	Mar. 13, 2025
Temperature:	25°C	Tested by:	Len Liao
Humidity:	55 % RH	Test Voltage	Normal Voltage
Operation Mode:	Normal Voltage- Tx Mode		

Remark:

1. We tested all RB Configuration refer 3GPP TS136 521 for each Channel Bandwidth of LTE Band 38; recorded worst case.

LTE Band 38_5MHz bandwidth_QPSK_1RB#0 (worst case of all bandwidths)

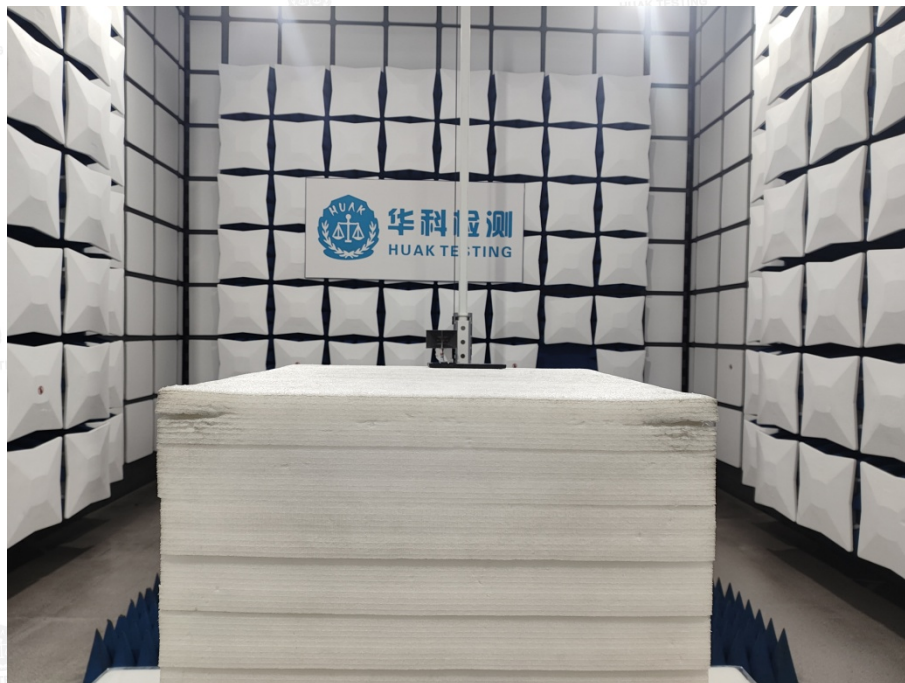
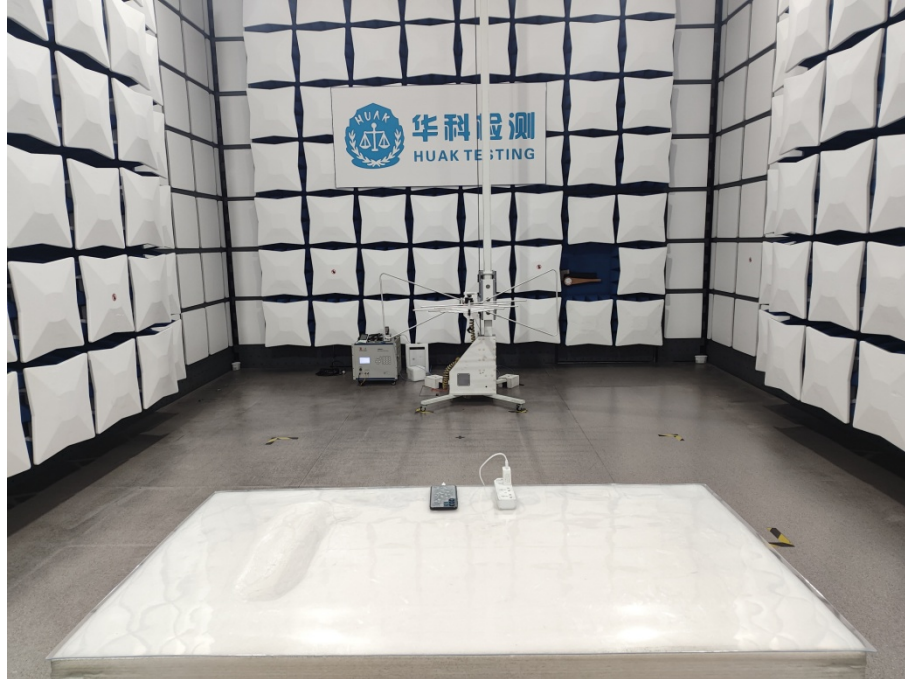
LTE Band 38					
DC Power	Temperature (°C)	Frequency error(Hz)	Frequency error(ppm)	Limit (ppm)	Verdict
4.25	20	-16.68	-0.006484	2.50	PASS
5.0	20	-19.50	-0.007580	2.50	PASS
5.75	20	3.26	0.001267	2.50	PASS
5.0	-30	-22.13	-0.008603	2.50	PASS
5.0	-20	-18.98	-0.007378	2.50	PASS
5.0	-10	-21.16	-0.008225	2.50	PASS
5.0	0	-21.01	-0.008167	2.50	PASS
5.0	10	-11.19	-0.004350	2.50	PASS
5.0	20	-6.98	-0.002713	2.50	PASS
5.0	30	7.14	0.002751	2.50	PASS
5.0	40	-12.47	-0.004805	2.50	PASS
5.0	50	-11.43	-0.004405	2.50	PASS

LTE Band 38_5MHz bandwidth_16QAM_1RB#0 (worst case of all bandwidths)

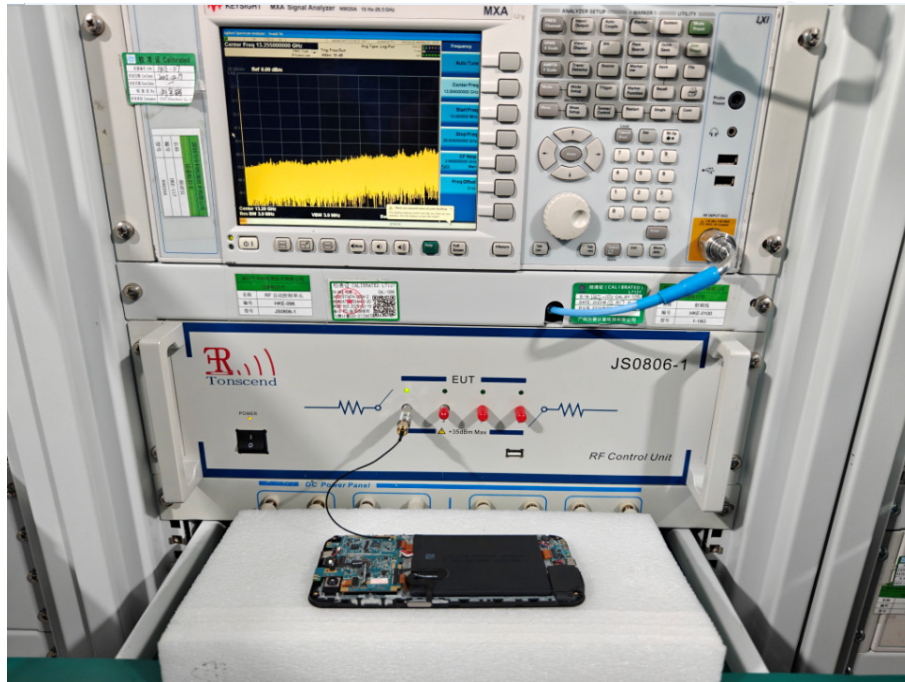
LTE Band 38					
DC Power	Temperature (°C)	Frequency error(Hz)	Frequency error(ppm)	Limit (ppm)	Verdict
4.25	20	-16.22	-0.006305	2.50	PASS
5.0	20	-6.32	-0.002457	2.50	PASS
5.75	20	-17.64	-0.006857	2.50	PASS
5.0	-30	-17.31	-0.006729	2.50	PASS
5.0	-20	-4.91	-0.001909	2.50	PASS
5.0	-10	-7.32	-0.002845	2.50	PASS
5.0	0	-19.97	-0.007763	2.50	PASS
5.0	10	3.65	0.001419	2.50	PASS
5.0	20	-12.93	-0.005026	2.50	PASS
5.0	30	8.01	0.003087	2.50	PASS
5.0	40	-4.75	-0.001830	2.50	PASS
5.0	50	-13.79	-0.005314	2.50	PASS

5 Test Setup Photos of the EUT

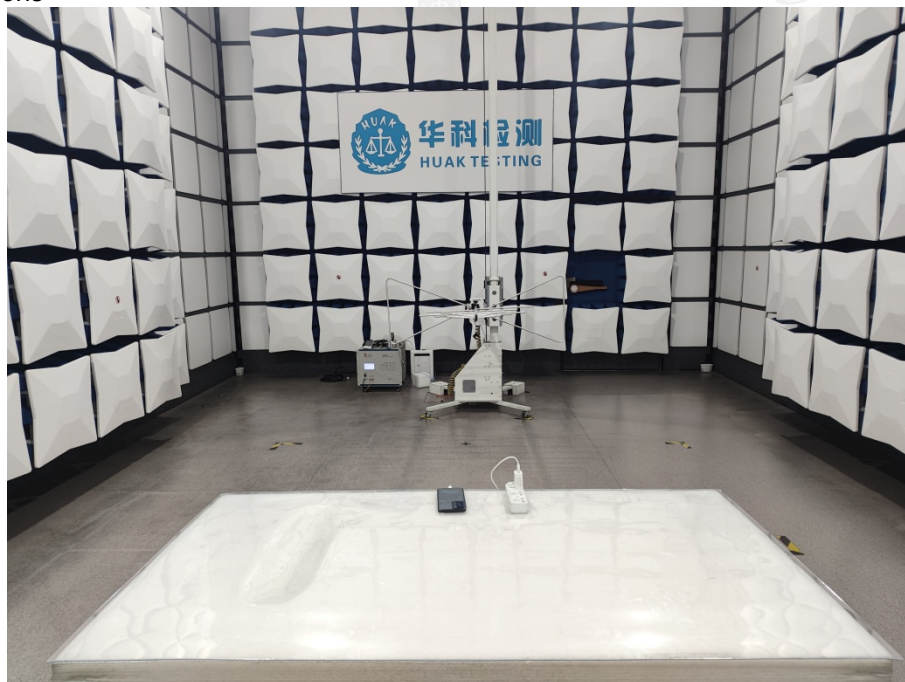
Test Model No.: S25 Ultra
Radiated Emissions



RF Conducted Emission



Series Model No.: R12 pro
Radiated Emissions



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAKE Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.

Shenzhen HUAKE Testing Technology Co., Ltd. Tel.: +86-0755-2302 9901 E-mail: info@huak.com Web.: www.huak.com
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China