

TEST REPORT

Product Name: Smart watch
FCC ID: 2A3MS-DM20
Trademark: N/A
Model Number: DM20, DM101, DM100, DM30, DM28, DM19
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Sample Received Date: Oct. 20, 2021
Sample tested Date: Oct. 20, 2021 to Nov. 3, 2021
Issue Date: Nov. 3, 2021
Report No.: CTB211103006RF
Test Standards: FCC Part 2, 22, 24E, 27
Test Results: PASS
Remark: This is LTE radio test report.

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(Note: N/A means not applicable)

1. VERSION

Report No.	Issue Date	Description	Approved
CTB211103006RF	Nov. 3, 2021	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Test Item	Test Requirement	Test method	Result
Conducted output power	Part 2.1046	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Effective Radiated Power of Transmitter(EIRP)	Part 22.913/ Part 24.232/Part 27.50	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
peak-to-average ratio	Part 24.232/Part 27.50	KDB 971168 D01v03r01	PASS
99% & 26dB Occupied Bandwidth	Part 2.1049(h)	KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	Part 2.1051/ Part 22.917/ Part 24.238/ Part 27.53	KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	Part 2.1051/ Part 22.917/Part 24.238/Part 27.53	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	Part 2.1053/ Part 22.917/Part 24.238/Part 27.53	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS
Frequency stability	Part 2.1055/Part 22.355/Part 24.235/Part 27.54	TIA-603-E-2016 & KDB 971168 D01v03r01	PASS

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Item	Uncertainty
Occupancy bandwidth	54.3kHz
Conducted output power Above 1G	0.9dB
Conducted output power below 1G	0.9dB
Power Spectral Density , Conduction	0.9dB
Conduction spurious emissions	2.0dB
Out of band emission	2.0dB
3m chamber Radiated spurious emission(30MHz-1GHz)	4.6dB
3m chamber Radiated spurious emission(1GHz-18GHz)	5.1dB
3m chamber Radiated spurious emission(18GHz-40GHz)	3.4dB
Receiver Reference Sensitivity level	1.9dB
humidity uncertainty	5.5%
Temperature uncertainty	0.63°C
frequency	1×10^{-7}

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model(s):	DM20, DM101, DM100, DM30, DM28, DM19
Model Description:	All the model are the same circuit and RF module, only for model name. Test sample model: DM20
Hardware Version:	C10-MB-V1.2
Software Version:	DM20A_C10_EN_V1.2_20210706
Operation Frequency:	FDD-LTE BAND 5:824-849MHz FDD-LTE BAND 12:699-716MHz FDD-LTE BAND 2:1850-1910MHz FDD-LTE BAND 7:2500-2570MHz TDD-LTE BAND 38: 2570-2620MHz TDD-LTE BAND 40: 2305-2315MHz 2350-2360MHz TDD-LTE BAND 41:2557.5-2652.5MHz
Max. RF output power:	FDD-LTE BAND 5: 22.49dBm FDD-LTE BAND 7:19.83dBm FDD-LTE BAND 12: 24.79dBm FDD-LTE BAND 2: 20.24dBm TDD -LTE BAND 38:18.04dBm TDD -LTE BAND 40:20.29dBm TDD -LTE BAND 41:20.87dBm
Type of Modulation:	QPSK, 16QAM
Antenna installation:	Internal antenna
Antenna Gain:	LTE Band 2: -7.26dBi LTE Band 5: -10.86dBi LTE Band7: -7.51 dBi LTE Band12: -11.17 dBi LTE Band38: -7.27 dBi LTE Band40:-7.21dBi LTE Band41: -7.03 dBi
Ratings:	DC 5V charging from adapter DC 3.8V from battery 1200mAh 3.8V 4.560Wh

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

No	Device Type	Brand	Model	Series No.	Note
	AC adapter	SHENZEHN ENGINE ELECTRONIC CO.,LTD	EE-0501000E	N/A	AE

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Test Mode

Test Mode List		
Test Mode	Description	Remark
TM1	FDD-LTE BAND 5	Low, Middle, High Channels
TM2	FDD-LTE BAND 7	Low, Middle, High Channels
TM3	FDD-LTE BAND 12	Low, Middle, High Channels
TM4	FDD-LTE BAND 2	Low, Middle, High Channels
TM5	TDD-LTE BAND 38	Low, Middle, High Channels
TM6	TDD-LTE BAND 40	Low, Middle, High Channels
TM7	TDD-LTE BAND 41	Low, Middle, High Channels

LTE BAND 2

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
LTE band 2	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Mid Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900

LTE BAND 5

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
LTE band 5	Low Range	1.4	20407	824.7
		3	20415	825.5
		5	20425	826.5
		10	20450	829
	Mid Range	1.4/3/5/10	20525	836.5
	High Range	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844

LTE BAND 7

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
LTE band 7	Low Range	5	20775	2502.5
		10	20800	2505
		15	20825	2507.5
		20	20850	2510
	Mid Range	5/10/15/20	21100	2535
	High Range	5	21425	2567.5
		10	21400	2565
		15	21375	2562.5
		20	21350	2560

LTE BAND 12

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
LTE band 12	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Mid Range	1.4/3/5/10	23095	707.5
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5
		10	23130	711

LTE BAND 38

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
LTE band 38	Low Range	5	37775	2572.5
		10	37800	2575
		15	37825	2577.5
		20	37850	2580
	Mid Range	5/10/15/20	38000	2595
	High Range	5	38225	2617.5
		10	38200	2615
		15	38175	2612.5
		20	38150	2610

LTE BAND 40 a

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
LTE band 40 a	Low Range	5	38725	2307.5
	Mid Range	5/10	38750	2310
	High Range	5	38775	2312.5

LTE BAND 40 b

Test Mode	Test Frequency ID	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
LTE band 40 b	Low Range	5	39175	2352.5
	Mid Range	5/10	39200	2355
	High Range	5	39200	2357.5

LTE BAND 41

Test Mode	Test Frequency	Bandwidth (MHz)	Number [UL]	Frequency of Uplink(MHz)
FDD band 41	Low Range	5	40265	2557.5
		10	40290	2560
		15	40315	2562.5
		20	40340	2565
	Mid Range	5/10/15/20	40740	2605
	High Range	5	41215	2652.5
		10	41190	2650
		15	41165	2647.5
		20	41140	2645

Test items	Modes	Bandwidth (MHz)						Modulation		RB			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	0	50%	100%	L	M	H
RF Power Output	LTE 2	0	0	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 12	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	0	0
Effective Isotropic Radiated power	LTE 2	0	0	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 12	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	0	0
Occupied Bandwidth	LTE 2	0	0	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 12	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	0	0
Band edge Compliance	LTE 2	0	0	0	0	0	0	0	0	0	-	0	0	-	0
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	0	-	0
	LTE 7	-	-	0	0	0	0	0	0	0		0	0	-	0
	LTE 12	0	0	0	0	-	-	0	0	0	-	0	0	-	0
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	-	0
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	0	-	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	-	0
Peak-to-Average Power Ratio	LTE 2	0	0	0	0	0	0	0	0	0	-	0	-	0	-
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	-	0	-
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	-	0	-
	LTE 12	0	0	0	0	-	-	0	0	0	-	0	-	0	-
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	-	0	-
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	-	0	-
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	-	0	-
Frequency Stability	LTE 2	0	0	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 12	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	0	0
Conducted Spurious Emissions	LTE 2	0	0	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 12							0	0	0	-	0	0	0	0

	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	0	0
Radiates Spurious Emission	LTE 2	0	0	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 5	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 7	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 12	0	0	0	0	-	-	0	0	0	-	0	0	0	0
	LTE 38	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 40	-	-	0	0	0	0	0	0	0	-	0	0	0	0
	LTE 41	-	-	0	0	0	0	0	0	0	-	0	0	0	0

Note:1.The mark o means that this configurations is chosen for testing

Note:1.The mark - means that this configurations is not testing

4.5 Test Environment

Humidity(%):	55
Atmospheric Pressure(kPa):	101.1
Normal Voltage(DC):	3.8V
Normal Temperature(°C)	25
Low Temperature(°C)	0
High Temperature(°C)	40

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Floor 1&2, Building A, No. 26 of Xinhe Road, Xinqiao Street, Baoan District, Shenzhen China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

5.2 Test Instrument Used

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibrated date	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	2021.09.27	2022.08.25
2	Power Sensor	Agilent	U2021XA	MY56120032	2021.09.27	2022.08.25
3	Power Sensor	Agilent	U2021XA	MY56120034	2021.09.27	2022.08.25
4	Communication test set	R&S	CMW500	108058	2021.09.27	2022.08.25
5	Spectrum Analyzer	R&S	FSP40	100550	2021.09.27	2022.08.25
6	Signal Generator	Agilent	N5181A	MY49060920	2021.09.27	2022.08.25
7	Signal Generator	Agilent	N5182A	MY47420195	2021.09.27	2022.08.25
8	Communication test set	Agilent	E5515C	MY50102567	2021.09.27	2022.08.25
9	band rejection filter	Shenxiang	MSF2400-2483.5MS-1154	20181015001	2021.09.27	2022.08.25
10	band rejection filter	Shenxiang	MSF5150-5850 MS-1155	20181015001	2021.09.27	2022.08.25
11	band rejection filter	Xingbo	XBLBQ-DZA120	190821-1-1	2021.09.27	2022.08.25
12	BT&WI-FI Automatic test software	Microwave	MTS8310	Ver. 2.0.0.0	2021.09.27	2022.08.25
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	2021.09.27	2022.08.25
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	2021.09.27	2022.08.25
15	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	2021.09.27	2022.08.25
16	966 chamber	C.R.T.	966 Room	966	2021.09.27	2022.08.25
17	Receiver	R&S	ESPI	100362	2021.09.27	2022.08.25
18	Amplifier	HP	8447E	2945A02747	2021.09.27	2022.08.25
19	Amplifier	Agilent	8449B	3008A01838	2021.09.27	2022.08.25
20	TRILOG Broadband	Schwarzbeck	VULB 9163	869	2021.09.27	2022.08.25

	Antenna					
21	Horn Antenna	Schwarzbeck	BBHA9120D	1911	2021.09.27	2022.08.25
22	Software	Fala	EZ-EMC	FA-03A2 RE	2021.09.27	2022.08.25
23	3-Loop Antenna	Daze	ZN30401	17014	2021.09.27	2022.08.25
24	loop antenna	ZHINAN	ZN30900A	/	2021.09.27	2022.08.25
25	Horn antenna	A/H/System	SAS-574	588	2021.09.27	2022.08.25
26	Amplifier	AEROFLEX	/	S/N/ 097	2021.09.27	2022.08.25

6. RF EXPOSURE

6.1 Standard Applicable

According to §1.1307 and §2.1093, the portable transmitter must comply the RF exposure requirements.

6.2 Test Result

This product complied with the requirement of the RF exposure, please see the RF Exposure report.

7. RF OUTPUT POWER

7.1 Standard Applicable

According to §22.913(a)(2), the ERP of mobile and portable stations transmitters and auxiliary test transmitters must not exceed 7 Watts.

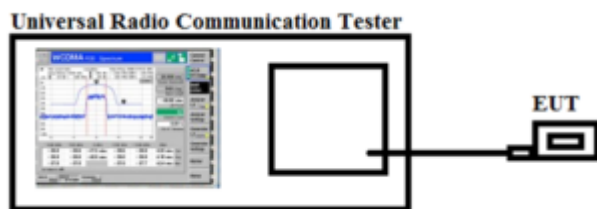
According to §24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to §27.50(d)(4), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

According to §27.50(c)(10), portable stations (hand-held devices) in the 698-746 MHz band are limited to 3 watts ERP.

7.2 Test Procedure

Conducted output power test method:



Radiated power test method:

1. The setup of EUT is according with per ANSI/TIA Standard 603E and ANSI C63.26 measurement procedure.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

7.3 Summary of Test Results/Plots

Max. Radiated Power:

FDD-LTE Band 5 (Full RB -the worst)

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	Antenna Polar	ERP [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	22.49	<38.45	PASS
		H	21.36		
	MCH	V	22.43		PASS
		H	21.54		
	HCH	V	21.53		PASS
		H	21.48		
16QAM	LCH	V	21.24	<38.45	PASS
		H	20.85		
	MCH	V	20.54		PASS
		H	21.17		
	HCH	V	20.95		PASS
		H	20.92		
Channel Bandwidth: 3 MHz					
Modulation	Channel	Antenna Polar	ERP [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	22.30	<38.45	PASS
		H	21.28		
	MCH	V	21.17		PASS
		H	20.32		
	HCH	V	21.35		PASS
		H	21.37		
16QAM	LCH	V	21.55	<38.45	PASS
		H	21.45		
	MCH	V	19.69		PASS
		H	20.49		
	HCH	V	20.92		PASS
		H	20.93		
Channel Bandwidth: 5 MHz					
Modulation	Channel	Antenna Polar	ERP [dBm]	Limit (dBm)	Verdict

QPSK	LCH	V	22.18	<38.45	PASS
		H	21.54		
	MCH	V	21.67		PASS
		H	21.59		
	HCH	V	21.62		PASS
		H	20.57		
16QAM	LCH	V	21.40	<38.45	PASS
		H	21.30		
	MCH	V	21.32		PASS
		H	21.25		
	HCH	V	21.15		PASS
		H	21.34		
Channel Bandwidth: 10 MHz					
Modulation	Channel	Antenna Polar	ERP [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	22.20	<38.45	PASS
		H	20.54		
	MCH	V	21.22		PASS
		H	21.32		
	HCH	V	21.45		PASS
		H	21.65		
16QAM	LCH	V	21.34	<38.45	PASS
		H	21.27		
	MCH	V	21.26		PASS
		H	21.21		
	HCH	V	20.93		PASS
		H	20.98		

FDD-LTE Band 7 (Full RB -the worst)

Channel Bandwidth: 5 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	19.83	<33.00	PASS
		H	18.77		
	MCH	V	18.71		PASS
		H	18.56		
	HCH	V	17.32		PASS
		H	17.45		

16QAM	LCH	V	19.08	<33.00	PASS
		H	18.59		
	MCH	V	17.80		PASS
		H	18.78		
	HCH	V	17.33		PASS
		H	17.41		
Channel Bandwidth: 10 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	19.81	<33.00	PASS
		H	18.61		
	MCH	V	18.62		PASS
		H	19.69		
	HCH	V	18.51		PASS
		H	18.38		
16QAM	LCH	V	19.07	<33.00	PASS
		H	18.71		
	MCH	V	18.72		PASS
		H	18.63		
	HCH	V	18.83		PASS
		H	18.35		
Channel Bandwidth: 15 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	19.65	<33.00	PASS
		H	18.43		
	MCH	V	18.45		PASS
		H	18.50		
	HCH	V	18.49		PASS
		H	18.65		
16QAM	LCH	V	18.90	<33.00	PASS
		H	18.61		
	MCH	V	18.42		PASS
		H	18.48		
	HCH	V	18.47		PASS
		H	18.39		
Channel Bandwidth: 20 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict

QPSK	LCH	V	19.54	<33.00	PASS
		H	19.46		
	MCH	V	19.47		PASS
		H	18.69		
	HCH	V	18.77		PASS
		H	18.59		
16QAM	LCH	V	18.69	<33.00	PASS
		H	18.46		
	MCH	V	18.47		PASS
		H	18.49		
	HCH	V	18.58		PASS
		H	18.31		

FDD-LTE Band 12 (Full RB -the worst)

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	Antenna Polar	E.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.79	<34.77	PASS
		H	20.77		
	MCH	V	20.71		PASS
		H	20.56		
	HCH	V	20.32		PASS
		H	20.45		
16QAM	LCH	V	20.61	<34.77	PASS
		H	20.59		
	MCH	V	20.80		PASS
		H	20.78		
	HCH	V	20.33		PASS
		H	20.41		
Channel Bandwidth: 3 MHz					
Modulation	Channel	Antenna Polar	E.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.70	<34.77	PASS
		H	20.61		
	MCH	V	20.62		PASS
		H	20.69		
	HCH	V	20.51		PASS
		H	20.38		

16QAM	LCH	V	20.92	<34.77	PASS
		H	20.71		
	MCH	V	20.72		PASS
		H	20.63		
	HCH	V	20.53		PASS
		H	20.57		
Channel Bandwidth: 5 MHz					
Modulation	Channel	Antenna Polar	E.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.43	<34.77	PASS
		H	20.43		
	MCH	V	20.45		PASS
		H	20.50		
	HCH	V	20.49		PASS
		H	20.55		
16QAM	LCH	V	20.66	<34.77	PASS
		H	20.61		
	MCH	V	20.42		PASS
		H	20.48		
	HCH	V	20.47		PASS
		H	20.39		
Channel Bandwidth: 10 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.97	<34.77	PASS
		H	20.46		
	MCH	V	20.47		PASS
		H	20.69		
	HCH	V	20.77		PASS
		H	20.59		
16QAM	LCH	V	20.88	<34.77	PASS
		H	20.46		
	MCH	V	20.47		PASS
		H	20.49		
	HCH	V	20.58		PASS
		H	20.59		

FDD-LTE Band 2 (Full RB -the worst)

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.04	<33.00	PASS
		H	20.10		
	MCH	V	20.11		PASS
		H	20.16		
	HCH	V	20.13		PASS
		H	19.99		
16QAM	LCH	V	19.42	<33.00	PASS
		H	18.59		
	MCH	V	18.80		PASS
		H	18.78		
	HCH	V	18.33		PASS
		H	18.55		
Channel Bandwidth: 3 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.14	<33.00	PASS
		H	19.61		
	MCH	V	19.62		PASS
		H	18.69		
	HCH	V	18.51		PASS
		H	19.38		
16QAM	LCH	V	19.47	<33.00	PASS
		H	18.71		
	MCH	V	17.72		PASS
		H	18.63		
	HCH	V	16.53		PASS
		H	16.35		
Channel Bandwidth: 5 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.06	<33.00	PASS
		H	19.43		
	MCH	V	18.45		PASS
		H	18.50		

	HCH	V	17.49		PASS
		H	18.55		
16QAM	LCH	V	19.39	<33.00	PASS
		H	19.61		
	MCH	V	19.42		PASS
		H	19.44		
	HCH	V	19.32		PASS
		H	18.39		
Channel Bandwidth: 10 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.20	<33.00	PASS
		H	20.10		
	MCH	V	19.63		PASS
		H	19.69		
	HCH	V	19.78		PASS
		H	19.59		
16QAM	LCH	V	19.44	<33.00	PASS
		H	18.43		
	MCH	V	18.47		PASS
		H	17.49		
	HCH	V	17.58		PASS
		H	18.31		
Channel Bandwidth: 15 MHz					
QPSK	LCH	V	20.01	<33.00	PASS
		H	19.46		
	MCH	V	19.47		
		H	19.69		
	HCH	V	18.77		
		H	18.59		
16QAM	LCH	V	19.30	<33.00	PASS
		H	19.20		
	MCH	V	19.21		
		H	18.49		
	HCH	V	18.58		
		H	18.27		
Channel Bandwidth: 20 MHz					

QPSK	LCH	V	20.54	<33.00	PASS
		H	19.46		
	MCH	V	17.47		
		H	17.69		
	HCH	V	18.77		
		H	18.59		
16QAM	LCH	V	18.81	<33.00	PASS
		H	20.46		
	MCH	V	19.47		
		H	18.49		
	HCH	V	17.58		
		H	17.31		

TDD-LTE Band 38 (Full RB -the worst)

Channel Bandwidth: 5 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	18.04	<33.00	PASS
		H	17.91		
	MCH	V	17.68		PASS
		H	17.63		
	HCH	V	17.45		PASS
		H	17.46		
16QAM	LCH	V	17.28	<33.00	PASS
		H	16.70		
	MCH	V	16.54		PASS
		H	16.56		
	HCH	V	17.11		PASS
		H	16.57		
Channel Bandwidth: 10 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	18.08	<33.00	PASS
		H	17.80		
	MCH	V	17.45		PASS
		H	17.60		
	HCH	V	17.58		PASS

		H	17.66		
16QAM	LCH	V	17.45	<33.00	PASS
		H	16.40		
	MCH	V	16.47		PASS
		H	15.72		
	HCH	V	16.56		PASS
		H	16.57		
Channel Bandwidth: 15 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	17.92	<33.00	PASS
		H	16.60		
	MCH	V	16.55		PASS
		H	16.40		
	HCH	V	14.56		PASS
		H	15.56		
16QAM	LCH	V	16.95	<33.00	PASS
		H	15.63		
	MCH	V	15.64		PASS
		H	14.59		
	HCH	V	16.35		PASS
		H	16.44		
Channel Bandwidth: 20 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	17.69	<33.00	PASS
		H	16.29		
	MCH	V	16.40		PASS
		H	16.53		
	HCH	V	16.71		PASS
		H	16.53		
16QAM	LCH	V	16.92	<33.00	PASS
		H	16.41		
	MCH	V	15.03		PASS
		H	16.61		
	HCH	V	16.57		PASS
		H	15.53		

TDD-LTE Band 40 a (Full RB -the worst)

Channel Bandwidth: 5.0 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.03	<23.98	PASS
		H	20.02		
	MCH	V	19.93		PASS
		H	18.78		
	HCH	V	18.88		PASS
		H	18.78		
16QAM	LCH	V	19.19	<23.98	PASS
		H	18.35		
	MCH	V	17.32		PASS
		H	18.85		
	HCH	V	18.08		PASS
		H	18.69		
Channel Bandwidth: 10MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	MCH	V	20.27	<23.98	PASS
		H	20.61		
16QAM	MCH	V	19.27	<23.98	PASS
		H	19.20		

TDD-LTE Band 40 b (Full RB -the worst)

Channel Bandwidth: 5.0 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	20.01	<23.98	PASS
		H	18.24		
	MCH	V	18.33		PASS
		H	18.16		
	HCH	V	19.69		PASS
		H	19.89		
16QAM	LCH	V	19.02	<23.98	PASS
		H	18.55		
	MCH	V	18.11		PASS
		H	18.96		
	HCH	V	18.88		PASS
		H	18.36		

Channel Bandwidth: 10MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	MCH	V	18.32	<23.98	PASS
		H	18.35		
16QAM	MCH	V	19.08	<23.98	PASS
		H	19.02		

TDD-LTE Band 41 (Full RB -the worst)

Channel Bandwidth: 5.0 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	17.70	<33.00	PASS
		H	17..34		
	MCH	V	16.46		PASS
		H	16.31		
	HCH	V	17.16		PASS
		H	16.19		
16QAM	LCH	V	17.05	<33.00	PASS
		H	16.64		
	MCH	V	16.46		PASS
		H	16.63		
	HCH	V	15.50		PASS
		H	15.58		
Channel Bandwidth: 10MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	17.99	<33.00	PASS
		H	17.81		
	MCH	V	17.33		PASS
		H	17.59		
	HCH	V	17.44		PASS
		H	17.13		
16QAM	LCH	V	17.37	<33.00	PASS
		H	16.25		
	MCH	V	16.22		PASS
		H	16.19		
	HCH	V	16.45		PASS
		H	16.19		
Channel Bandwidth: 15 MHz					

Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	17.66	<33.00	PASS
		H	17.55		
	MCH	V	17.82		PASS
		H	17.61		
	HCH	V	16.71		PASS
		H	16.70		
16QAM	LCH	V	16.92	<33.00	PASS
		H	16.20		
	MCH	V	16.19		PASS
		H	16.28		
	HCH	V	16.46		PASS
		H	16.38		
Channel Bandwidth: 20 MHz					
Modulation	Channel	Antenna Polar	E.i.r.p [dBm]	Limit (dBm)	Verdict
QPSK	LCH	V	17.83	<33.00	PASS
		H	16.21		
	MCH	V	16.09		PASS
		H	16.19		
	HCH	V	16.06		PASS
		H	16.20		
16QAM	LCH	V	20.87	<33.00	PASS
		H	19.05		
	MCH	V	20.52		PASS
		H	19.88		
	HCH	V	19.66		PASS
		H	19.81		

Max. Conducted Output Power

Please refer to Appendix : 1 Conducted output power

Test result: Pass

8. PEAK-TO-AVERAGE RATIO (PAR) OF TRANSMITTER

8.1 Standard Applicable

According to §24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51, in measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

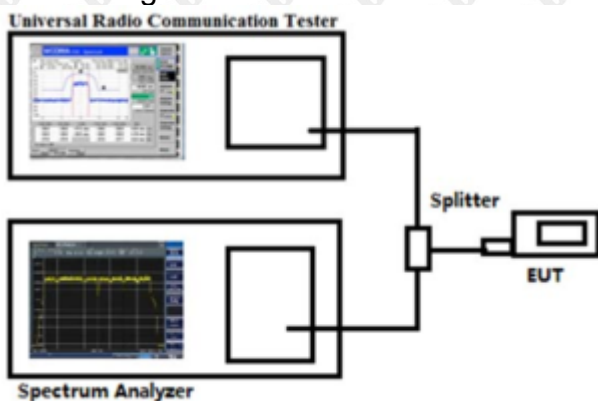
According to §27.50(B), the peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

8.2 Test Procedure

According with KDB 971168

1. The signal analyzer's CCDF measurement profile is enabled
2. Frequency = carrier center frequency
3. Measurement BW > Emission bandwidth of signal
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms. For burst transmissions, the spectrum analyzer is set to use an internal "RF Burst" trigger that is synced with an incoming pulse and the measurement interval is set to less than the duration of the "on time" of one burst to ensure that energy is only captured during a time in which the transmitter is operating at maximum power

Test Configuration for the emission bandwidth testing:



8.3 Summary of Test Results

Please refer to Appendix : 3 Peak-to-Average Ratio

Test result: Pass

9. EMISSION BANDWIDTH

9.1 Standard Applicable

According to §22.917(b), the emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

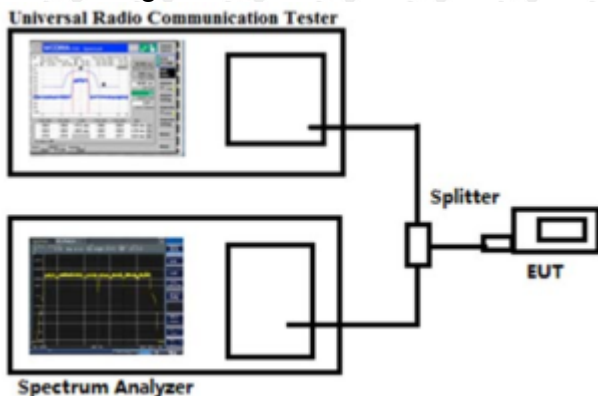
According to §24.238(b), the emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

According to §27.53, the emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

9.2 Test Procedure

According to § 22.917(b), the emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Test Configuration for the emission bandwidth testing:



9.3 Summary of Test Results/Plots

Please refer to Appendix : 4 Occupied bandwidth
Test result: Pass

10. OUT OF BAND EMISSIONS AT ANTENNA TERMINAL

10.1 Standard Applicable

According to §22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

According to §24.238(a), 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 $43 + 10 \log(P)$ dB.

According to §27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

According to §27.53 (f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

According to §27.53(h), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

According to §27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be

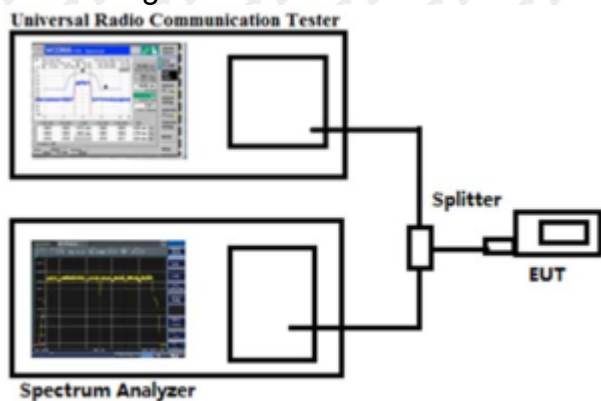
attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB.

According to §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz.

10.2 Test Procedure

The RF output terminal of the transmitter was connected to the input of the spectrum analyzer via a suitable attenuation. The RBW of the spectrum analyzer was set to 100kHz and 1MHz for the scan frequency from 30MHz to 1GHz and the scan frequency from 1GHz to up to 10 th harmonic.

Test Configuration for the out of band emissions testing:



10.3 Summary of Test Results/Plots

Please refer to Appendix: 5 Band edge & 6 Out-of-band emissions
Test result: Pass

11. SPURIOUS RADIATED EMISSIONS

11.1 Standard Applicable

According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

According to § 24.238(a), 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 $43 + 10 \log(P)$ dB.

According to § 27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log(P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log(P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

According to § 27.53 (f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

According to § 27.53(h), the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

According to § 27.53(g) the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB.

11.2 Test Procedure

1. The setup of EUT is according with per ANSI/TIA-603-E and ANSI C63.26-2015 measurement procedure.
 2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
 3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
 4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.
- Spurious attenuation limit in dB = $43 + 10 \log_{10}(\text{power out in Watts})$

11.3 Summary of Test Results/Plots

Note: 1. this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

2. All test modes (different bandwidth and different modulation) are performed, but only the worst case is recorded in this report.

Test Data:
QPSK

Band 5 20407 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1274.721	152	40	-55.41	-13	-42.41	Pass	H
1633.892	150	54	-48.55	-13	-35.55	Pass	H
3859.037	152	209	-47.63	-13	-34.63	Pass	H
5762.527	153	100	-44.13	-13	-31.13	Pass	H
6501.260	152	276	-43.77	-13	-30.77	Pass	H
7966.120	152	100	-43.62	-13	-30.62	Pass	H
1218.322	148	159	-54.93	-13	-41.93	Pass	V
1349.515	151	66	-62.22	-13	-49.22	Pass	V
3491.050	151	42	-52.59	-13	-39.59	Pass	V
3824.302	151	145	-49.72	-13	-36.72	Pass	V
5831.171	149	57	-45.63	-13	-32.63	Pass	V
6554.944	153	304	-55.41	-13	-42.41	Pass	V

Band 5 20525 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1285.754	148	28	-58.44	-13.00	-45.44	Pass	H
1592.179	153	40	-52.71	-13.00	-39.71	Pass	H
3863.718	150	91	-50.18	-13.00	-37.18	Pass	H
5772.008	150	24	-47.41	-13.00	-34.41	Pass	H
6508.712	150	64	-46.74	-13.00	-33.74	Pass	H
7987.524	151	158	-48.53	-13.00	-35.53	Pass	H
1187.078	149	257	-58.30	-13.00	-45.30	Pass	V
1444.228	152	217	-58.50	-13.00	-45.50	Pass	V
3491.005	152	166	-52.75	-13.00	-39.75	Pass	V
3828.463	150	321	-50.01	-13.00	-37.01	Pass	V
5819.595	149	256	-48.91	-13.00	-35.91	Pass	V
6517.992	152	119	-49.78	-13.00	-36.78	Pass	V

Band 5 20643 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1255.758	152	82	-59.10	-13.00	-46.10	Pass	H
1592.939	152	133	-53.93	-13.00	-40.93	Pass	H
3805.815	148	238	-52.28	-13.00	-39.28	Pass	H
5771.354	151	218	-45.76	-13.00	-32.76	Pass	H
6460.374	152	212	-46.76	-13.00	-33.76	Pass	H
7969.397	152	135	-46.17	-13.00	-33.17	Pass	H
1237.367	148	313	-58.65	-13.00	-45.65	Pass	V
1425.805	149	181	-60.49	-13.00	-47.49	Pass	V
3413.608	152	199	-54.46	-13.00	-41.46	Pass	V
3838.075	153	106	-50.97	-13.00	-37.97	Pass	V
5790.637	150	252	-47.67	-13.00	-34.67	Pass	V
6463.444	150	69	-47.33	-13.00	-34.33	Pass	V

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Band 5 20407 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1274.414	150	316	-60.26	-13.00	-47.26	Pass	H
1586.496	150	311	-52.73	-13.00	-39.73	Pass	H
3785.222	150	261	-49.40	-13.00	-36.40	Pass	H
5785.566	152	349	-48.24	-13.00	-35.24	Pass	H
6508.923	149	55	-46.06	-13.00	-33.06	Pass	H
8037.229	153	230	-49.02	-13.00	-36.02	Pass	H
1204.199	150	170	-60.00	-13.00	-47.00	Pass	V
1393.910	149	104	-59.53	-13.00	-46.53	Pass	V
3453.009	153	134	-53.28	-13.00	-40.28	Pass	V
3832.912	150	325	-51.50	-13.00	-38.50	Pass	V
5766.325	148	319	-46.38	-13.00	-33.38	Pass	V
6476.194	150	13	-48.25	-13.00	-35.25	Pass	V

Band 5 20525 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1280.766	149	13	-58.91	-13	-45.91	Pass	H
1623.596	148	27	-51.57	-13	-38.57	Pass	H
3825.338	151	290	-50.84	-13	-37.84	Pass	H
5852.068	149	241	-45.47	-13	-32.47	Pass	H
6500.431	149	72	-46.65	-13	-33.65	Pass	H
7960.070	151	192	-47.94	-13	-34.94	Pass	H
1235.840	152	310	-57.16	-13	-44.16	Pass	V
1363.961	150	155	-58.55	-13	-45.55	Pass	V
3443.031	153	298	-49.00	-13	-36.00	Pass	V
3878.058	150	279	-48.00	-13	-35.00	Pass	V
5775.252	150	80	-44.68	-13	-31.68	Pass	V
6526.687	153	148	-58.91	-13	-45.91	Pass	V

Band 5 20643 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1199.624	148	173	-59.70	-13.00	-46.70	Pass	H
1595.673	150	184	-52.86	-13.00	-39.86	Pass	H
3774.401	150	26	-49.98	-13.00	-36.98	Pass	H
5776.211	151	176	-47.82	-13.00	-34.82	Pass	H
6510.263	149	8	-47.82	-13.00	-34.82	Pass	H
7955.124	149	77	-49.00	-13.00	-36.00	Pass	H
1169.030	151	170	-59.48	-13.00	-46.48	Pass	V
1446.031	153	21	-60.27	-13.00	-47.27	Pass	V
3442.499	152	317	-53.39	-13.00	-40.39	Pass	V
3908.846	151	58	-51.82	-13.00	-38.82	Pass	V
5819.102	153	111	-48.39	-13.00	-35.39	Pass	V
6548.387	150	264	-48.30	-13.00	-35.30	Pass	V

Note:

- 1) Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) Tested with all kind of bandwidth, RB Size and RB Offset, Found the 1.4MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

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Band 2 20407 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1274.721	152	40	-60.68	-13.00	-47.68	Pass	H
1633.892	150	54	-51.97	-13.00	-38.97	Pass	H
3859.037	152	209	-50.32	-13.00	-37.32	Pass	H
5762.527	153	100	-47.32	-13.00	-34.32	Pass	H
6501.260	152	276	-46.04	-13.00	-33.04	Pass	H
7966.120	152	100	-46.46	-13.00	-33.46	Pass	H
1218.322	148	159	-58.06	-13.00	-45.06	Pass	V
1349.515	151	66	-59.48	-13.00	-46.48	Pass	V
3491.050	151	42	-54.52	-13.00	-41.52	Pass	V
3824.302	151	145	-52.47	-13.00	-39.47	Pass	V
5831.171	149	57	-48.67	-13.00	-35.67	Pass	V
6554.944	153	304	-48.22	-13.00	-35.22	Pass	V

Band 2 20525 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1285.754	148	28	-58.44	-13.00	-45.44	Pass	H
1592.179	153	40	-52.71	-13.00	-39.71	Pass	H
3863.718	150	91	-50.18	-13.00	-37.18	Pass	H
5772.008	150	24	-47.41	-13.00	-34.41	Pass	H
6508.712	150	64	-46.74	-13.00	-33.74	Pass	H
7987.524	151	158	-48.53	-13.00	-35.53	Pass	H
1187.078	149	257	-58.30	-13.00	-45.30	Pass	V
1444.228	152	217	-58.50	-13.00	-45.50	Pass	V
3491.005	152	166	-52.75	-13.00	-39.75	Pass	V
3828.463	150	321	-50.01	-13.00	-37.01	Pass	V
5819.595	149	256	-48.91	-13.00	-35.91	Pass	V
6517.992	152	119	-49.78	-13.00	-36.78	Pass	V

Band 2 20643 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1255.758	152	82	-54.96	-13	-41.96	Pass	H
1592.939	152	133	-48.74	-13	-35.74	Pass	H
3805.815	148	238	-48.90	-13	-35.90	Pass	H
5771.354	151	218	-42.98	-13	-29.98	Pass	H
6460.374	152	212	-43.81	-13	-30.81	Pass	H
7969.397	152	135	-44.04	-13	-31.04	Pass	H
1237.367	148	313	-54.93	-13	-41.93	Pass	V
1425.805	149	181	-62.33	-13	-49.33	Pass	V
3413.608	152	199	-53.74	-13	-40.74	Pass	V
3838.075	153	106	-49.82	-13	-36.82	Pass	V
5790.637	150	252	-46.34	-13	-33.34	Pass	V
6463.444	150	69	-54.96	-13	-41.96	Pass	V

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Band 7 20775 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1242.825	150	142	-60.51	-25	-35.51	Pass	H
1664.510	148	100	-51.99	-25	-26.99	Pass	H
3793.489	151	335	-50.29	-25	-25.29	Pass	H
5829.984	151	23	-47.94	-25	-22.94	Pass	H
6487.837	149	42	-48.03	-25	-23.03	Pass	H
7987.461	152	176	-46.82	-25	-21.82	Pass	H
1213.162	150	308	-58.47	-25	-33.47	Pass	V
1372.232	152	244	-58.36	-25	-33.36	Pass	V
3507.781	152	8	-54.25	-25	-29.25	Pass	V
3837.380	152	297	-50.96	-25	-25.96	Pass	V
5737.007	150	275	-46.50	-25	-21.5	Pass	V
6540.479	151	4	-49.01	-25	-24.01	Pass	V

Band 7 21100 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1260.747	150	158	-60.77	-25	-35.77	Pass	H
1579.946	153	320	-52.95	-25	-27.95	Pass	H
3805.355	152	130	-49.95	-25	-24.95	Pass	H
5847.537	148	59	-46.78	-25	-21.78	Pass	H
6495.263	153	158	-47.65	-25	-22.65	Pass	H
8019.626	150	234	-47.15	-25	-22.15	Pass	H
1214.194	148	30	-57.80	-25	-32.8	Pass	V
1372.369	152	47	-58.56	-25	-33.56	Pass	V
3505.945	152	309	-52.53	-25	-27.53	Pass	V
3871.903	150	282	-52.30	-25	-27.3	Pass	V
5802.199	150	357	-46.02	-25	-21.02	Pass	V
6534.315	151	2	-49.45	-25	-24.45	Pass	V

Band 7 21425 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1270.291	148	3	-58.85	-25	-33.85	Pass	H
1613.202	150	329	-51.73	-25	-26.73	Pass	H
3814.647	153	227	-52.26	-25	-27.26	Pass	H
5850.214	153	64	-48.40	-25	-23.4	Pass	H
6496.679	150	231	-47.59	-25	-22.59	Pass	H
8004.855	153	227	-48.94	-25	-23.94	Pass	H
1173.931	150	92	-60.06	-25	-35.06	Pass	V
1401.093	150	312	-58.63	-25	-33.63	Pass	V
3470.450	151	243	-52.61	-25	-27.61	Pass	V
3910.916	151	334	-49.81	-25	-24.81	Pass	V
5784.554	151	339	-48.06	-25	-23.06	Pass	V
6482.066	152	335	-50.06	-25	-25.06	Pass	V

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Band 7 20775 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1258.391	152	170	-60.27	-25	-35.27	Pass	H
1641.162	150	269	-53.59	-25	-28.59	Pass	H
3820.733	148	272	-50.78	-25	-25.78	Pass	H
5805.850	150	79	-47.47	-25	-22.47	Pass	H
6471.015	149	103	-45.85	-25	-20.85	Pass	H
7997.699	150	266	-46.24	-25	-21.24	Pass	H
1245.089	152	321	-57.44	-25	-32.44	Pass	V
1363.048	150	173	-59.13	-25	-34.13	Pass	V
3451.971	149	154	-52.74	-25	-27.74	Pass	V
3818.164	152	139	-52.57	-25	-27.57	Pass	V
5821.301	148	328	-47.70	-25	-22.7	Pass	V
6514.957	151	179	-50.08	-25	-25.08	Pass	V

Band 7 21100 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1288.932	149	355	-58.66	-25	-33.66	Pass	H
1621.184	149	70	-52.48	-25	-27.48	Pass	H
3823.855	151	166	-51.58	-25	-26.58	Pass	H
5829.359	150	53	-47.52	-25	-22.52	Pass	H
6447.951	149	223	-47.69	-25	-22.69	Pass	H
7946.524	150	106	-46.88	-25	-21.88	Pass	H
1215.380	152	206	-57.67	-25	-32.67	Pass	V
1428.360	151	217	-59.76	-25	-34.76	Pass	V
3499.883	152	122	-52.96	-25	-27.96	Pass	V
3854.579	151	341	-50.64	-25	-25.64	Pass	V
5754.563	153	331	-48.50	-25	-23.5	Pass	V
6542.138	148	331	-48.82	-25	-23.82	Pass	V

Band 7 21425 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1262.832	148	84	-59.95	-25	-34.95	Pass	H
1662.832	149	262	-52.55	-25	-27.55	Pass	H
3807.731	152	41	-50.48	-25	-25.48	Pass	H
5854.959	150	220	-46.87	-25	-21.87	Pass	H
6459.729	150	181	-47.48	-25	-22.48	Pass	H
7986.051	150	191	-47.35	-25	-22.35	Pass	H
1170.490	152	170	-57.83	-25	-32.83	Pass	V
1364.541	152	264	-60.53	-25	-35.53	Pass	V
3509.861	149	192	-52.99	-25	-27.99	Pass	V
3830.152	152	2	-52.29	-25	-27.29	Pass	V
5760.493	149	324	-48.53	-25	-23.53	Pass	V
6487.761	151	134	-48.70	-25	-23.7	Pass	V

Note:

- 1)Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2)Tested with all kind of bandwidth, RB Size and RB Offset, Found the 5.0MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

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Band 12 20407 channel/BW1.4(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1274.721	152	40	-60.68	-13.00	-47.68	Pass	H
1633.892	150	54	-51.97	-13.00	-38.97	Pass	H
3859.037	152	209	-50.32	-13.00	-37.32	Pass	H
5762.527	153	100	-47.32	-13.00	-34.32	Pass	H
6501.260	152	276	-46.04	-13.00	-33.04	Pass	H
7966.120	152	100	-46.46	-13.00	-33.46	Pass	H
1218.322	148	159	-58.06	-13.00	-45.06	Pass	V
1349.515	151	66	-59.48	-13.00	-46.48	Pass	V
3491.050	151	42	-54.52	-13.00	-41.52	Pass	V
3824.302	151	145	-52.47	-13.00	-39.47	Pass	V
5831.171	149	57	-48.67	-13.00	-35.67	Pass	V
6554.944	153	304	-48.22	-13.00	-35.22	Pass	V

Band 12 20525 channel/BW1.4(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1285.754	148	28	-58.44	-13.00	-45.44	Pass	H
1592.179	153	40	-52.71	-13.00	-39.71	Pass	H
3863.718	150	91	-50.18	-13.00	-37.18	Pass	H
5772.008	150	24	-47.41	-13.00	-34.41	Pass	H
6508.712	150	64	-46.74	-13.00	-33.74	Pass	H
7987.524	151	158	-48.53	-13.00	-35.53	Pass	H
1187.078	149	257	-58.30	-13.00	-45.30	Pass	V
1444.228	152	217	-58.50	-13.00	-45.50	Pass	V
3491.005	152	166	-52.75	-13.00	-39.75	Pass	V
3828.463	150	321	-50.01	-13.00	-37.01	Pass	V
5819.595	149	256	-48.91	-13.00	-35.91	Pass	V
6517.992	152	119	-49.78	-13.00	-36.78	Pass	V

Band 12 20643 channel/BW1.4(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1255.758	152	82	-59.10	-13.00	-46.10	Pass	H
1592.939	152	133	-53.93	-13.00	-40.93	Pass	H
3805.815	148	238	-52.28	-13.00	-39.28	Pass	H
5771.354	151	218	-45.76	-13.00	-32.76	Pass	H
6460.374	152	212	-46.76	-13.00	-33.76	Pass	H
7969.397	152	135	-46.17	-13.00	-33.17	Pass	H
1237.367	148	313	-58.65	-13.00	-45.65	Pass	V
1425.805	149	181	-60.49	-13.00	-47.49	Pass	V
3413.608	152	199	-54.46	-13.00	-41.46	Pass	V
3838.075	153	106	-50.97	-13.00	-37.97	Pass	V
5790.637	150	252	-47.67	-13.00	-34.67	Pass	V
6463.444	150	69	-47.33	-13.00	-34.33	Pass	V

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Band 38 37775 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1242.825	150	142	-60.51	-25.00	-35.51	Pass	H
1664.510	148	100	-51.99	-25.00	-26.99	Pass	H
3793.489	151	335	-50.29	-25.00	-25.29	Pass	H
5829.984	151	23	-47.94	-25.00	-22.94	Pass	H
6487.837	149	42	-48.03	-25.00	-23.03	Pass	H
7987.461	152	176	-46.82	-25.00	-21.82	Pass	H
1213.162	150	308	-58.47	-25.00	-33.47	Pass	V
1372.232	152	244	-58.36	-25.00	-33.36	Pass	V
3507.781	152	8	-54.25	-25.00	-29.25	Pass	V
3837.380	152	297	-50.96	-25.00	-25.96	Pass	V
5737.007	150	275	-46.50	-25.00	-21.5	Pass	V
6540.479	151	4	-49.01	-25.00	-24.01	Pass	V

Band 38 38000 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1260.747	150	158	-60.77	-25	-35.77	Pass	H
1579.946	153	320	-52.95	-25	-27.95	Pass	H
3805.355	152	130	-49.95	-25	-24.95	Pass	H

5847.537	148	59	-46.78	-25	-21.78	Pass	H
6495.263	153	158	-47.65	-25	-22.65	Pass	H
8019.626	150	234	-47.15	-25	-22.15	Pass	H
1214.194	148	30	-57.80	-25	-32.8	Pass	V
1372.369	152	47	-58.56	-25	-33.56	Pass	V
3505.945	152	309	-52.53	-25	-27.53	Pass	V
3871.903	150	282	-52.30	-25	-27.3	Pass	V
5802.199	150	357	-46.02	-25	-21.02	Pass	V
6534.315	151	2	-49.45	-25	-24.45	Pass	V

Band 38 38225 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1270.291	148	3	-58.85	-25	-33.85	Pass	H
1613.202	150	329	-51.73	-25	-26.73	Pass	H
3814.647	153	227	-52.26	-25	-27.26	Pass	H
5850.214	153	64	-48.40	-25	-23.4	Pass	H
6496.679	150	231	-47.59	-25	-22.59	Pass	H
8004.855	153	227	-48.94	-25	-23.94	Pass	H
1173.931	150	92	-60.06	-25	-35.06	Pass	V
1401.093	150	312	-58.63	-25	-33.63	Pass	V
3470.450	151	243	-52.61	-25	-27.61	Pass	V
3910.916	151	334	-49.81	-25	-24.81	Pass	V
5784.554	151	339	-48.06	-25	-23.06	Pass	V
6482.066	152	335	-50.06	-25	-25.06	Pass	V

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Band 38 37775 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1258.391	152	170	-60.27	-25	-35.27	Pass	H
1641.162	150	269	-53.59	-25	-28.59	Pass	H
3820.733	148	272	-50.78	-25	-25.78	Pass	H
5805.850	150	79	-47.47	-25	-22.47	Pass	H
6471.015	149	103	-45.85	-25	-20.85	Pass	H
7997.699	150	266	-46.24	-25	-21.24	Pass	H
1245.089	152	321	-57.44	-25	-32.44	Pass	V
1363.048	150	173	-59.13	-25	-34.13	Pass	V
3451.971	149	154	-52.74	-25	-27.74	Pass	V
3818.164	152	139	-52.57	-25	-27.57	Pass	V
5821.301	148	328	-47.70	-25	-22.7	Pass	V
6514.957	151	179	-50.08	-25	-25.08	Pass	V

Band 38 38000 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1288.932	149	355	-58.66	-25	-33.66	Pass	H
1621.184	149	70	-52.48	-25	-27.48	Pass	H
3823.855	151	166	-51.58	-25	-26.58	Pass	H
5829.359	150	53	-47.52	-25	-22.52	Pass	H
6447.951	149	223	-47.69	-25	-22.69	Pass	H
7946.524	150	106	-46.88	-25	-21.88	Pass	H
1215.380	152	206	-57.67	-25	-32.67	Pass	V
1428.360	151	217	-59.76	-25	-34.76	Pass	V
3499.883	152	122	-52.96	-25	-27.96	Pass	V
3854.579	151	341	-50.64	-25	-25.64	Pass	V
5754.563	153	331	-48.50	-25	-23.5	Pass	V
6542.138	148	331	-48.82	-25	-23.82	Pass	V

Band 38 38225 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1262.832	148	84	-59.95	-25	-34.95	Pass	H
1662.832	149	262	-52.55	-25	-27.55	Pass	H
3807.731	152	41	-50.48	-25	-25.48	Pass	H
5854.959	150	220	-46.87	-25	-21.87	Pass	H
6459.729	150	181	-47.48	-25	-22.48	Pass	H
7986.051	150	191	-47.35	-25	-22.35	Pass	H
1170.490	152	170	-57.83	-25	-32.83	Pass	V
1364.541	152	264	-60.53	-25	-35.53	Pass	V
3509.861	149	192	-52.99	-25	-27.99	Pass	V
3830.152	152	2	-52.29	-25	-27.29	Pass	V
5760.493	149	324	-48.53	-25	-23.53	Pass	V
6487.761	151	134	-48.70	-25	-23.7	Pass	V

Note:

- 1)Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2)Tested with all kind of bandwidth, RB Size and RB Offset, Found the 5.0MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

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Band 40A 38725 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1337.415	150	78	-57.59	-40	-17.59	Pass	H
1727.771	149	291	-50.20	-40	-10.20	Pass	H
3903.044	151	213	-48.44	-40	-8.44	Pass	H
5859.279	150	89	-46.08	-40	-6.08	Pass	H
6500.222	151	329	-47.05	-40	-7.05	Pass	H
7998.551	148	138	-45.56	-40	-5.56	Pass	H
1220.666	149	99	-57.82	-40	-17.82	Pass	V
1440.567	148	217	-57.64	-40	-17.64	Pass	V
3571.883	150	12	-50.28	-40	-10.28	Pass	V
3837.992	150	137	-50.38	-40	-10.38	Pass	V
5804.989	146	356	-45.57	-40	-5.57	Pass	V
6555.005	146	95	-49.48	-40	-9.48	Pass	V

Band 40A 38750 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1296.556	150	142	-57.10	-40	-17.10	Pass	H
1716.521	146	280	-51.12	-40	-11.12	Pass	H
3877.377	150	330	-48.75	-40	-8.75	Pass	H
5868.181	146	194	-44.62	-40	-4.62	Pass	H
6460.042	149	260	-47.62	-40	-7.62	Pass	H
8021.142	151	31	-46.33	-40	-6.33	Pass	H
1236.407	149	4	-56.71	-40	-16.71	Pass	V
1396.192	148	257	-61.35	-40	-21.35	Pass	V
3590.567	147	55	-53.04	-40	-13.04	Pass	V
3915.932	148	273	-53.21	-40	-13.21	Pass	V
5829.508	150	136	-49.12	-40	-9.12	Pass	V
6518.740	150	16	-49.10	-40	-9.10	Pass	V

Band 40A 38775 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1340.002	149	156	-60.46	-40	-20.46	Pass	H
1669.299	149	170	-52.60	-40	-12.60	Pass	H
3843.669	149	127	-49.44	-40	-9.44	Pass	H
5909.337	146	42	-43.94	-40	-3.94	Pass	H
6529.563	147	69	-45.62	-40	-5.62	Pass	H
7999.923	151	110	-47.50	-40	-7.50	Pass	H
1258.162	148	61	-57.84	-40	-17.84	Pass	V
1403.531	147	266	-57.66	-40	-17.66	Pass	V
3525.687	148	303	-53.11	-40	-13.11	Pass	V
3909.320	149	195	-50.34	-40	-10.34	Pass	V
5791.221	147	323	-45.82	-40	-5.82	Pass	V
6577.545	146	325	-49.70	-40	-9.70	Pass	V

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Band 40A 38725 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1335.834	147	256	-60.52	-40	-20.52	Pass	H
1684.855	147	243	-49.63	-40	-9.63	Pass	H
3869.283	148	259	-51.19	-40	-11.19	Pass	H
5924.417	149	28	-47.84	-40	-7.84	Pass	H
6558.576	148	108	-45.93	-40	-5.93	Pass	H
8000.244	147	328	-44.57	-40	-4.57	Pass	H
1179.461	150	16	-55.13	-40	-15.13	Pass	V
1426.755	148	117	-58.05	-40	-18.05	Pass	V
3596.858	147	325	-53.69	-40	-13.69	Pass	V
3901.898	149	302	-51.65	-40	-11.65	Pass	V
5852.683	147	15	-46.11	-40	-6.11	Pass	V
6581.280	147	280	-49.35	-40	-9.35	Pass	V

Band 40A 38750channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1336.096	151	14	-57.30	-40	-17.30	Pass	H
1727.555	147	71	-51.54	-40	-11.54	Pass	H
3855.934	150	318	-49.81	-40	-9.81	Pass	H
5929.906	147	56	-46.62	-40	-6.62	Pass	H
6507.272	147	216	-46.91	-40	-6.91	Pass	H
8060.567	151	79	-45.82	-40	-5.82	Pass	H
1194.201	151	65	-58.56	-40	-18.56	Pass	V
1385.199	146	225	-61.38	-40	-21.38	Pass	V
3538.747	149	47	-51.44	-40	-11.44	Pass	V
3857.367	150	73	-51.22	-40	-11.22	Pass	V
5822.752	147	168	-48.83	-40	-8.83	Pass	V
6522.327	150	28	-47.61	-40	-7.61	Pass	V

Band 40A 38875 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1335.775	149	165	-57.37	-40	-17.37	Pass	H
1704.495	146	208	-50.44	-40	-10.44	Pass	H
3903.379	146	4	-47.81	-40	-7.81	Pass	H
5890.759	150	198	-45.04	-40	-5.04	Pass	H
6511.347	146	341	-45.20	-40	-5.20	Pass	H
8081.157	150	235	-46.19	-40	-6.19	Pass	H
1207.394	146	292	-57.08	-40	-17.08	Pass	V
1462.188	150	158	-60.08	-40	-20.08	Pass	V
3544.604	149	55	-53.34	-40	-13.34	Pass	V
3831.353	150	319	-51.77	-40	-11.77	Pass	V
5803.131	146	118	-49.36	-40	-9.36	Pass	V
6559.020	150	155	-48.83	-40	-8.83	Pass	V

Note:

- 1)Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2)Tested with all kind of bandwidth, RB Size and RB Offset, Found the 5.0MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

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Band 40B 39175channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1335.415	150	78	-57.89	-40	-17.89	Pass	H
1727.348	149	291	-52.12	-40	-12.12	Pass	H
3900.325	151	213	-50.31	-40	-10.31	Pass	H
5859.090	150	89	-48.24	-40	-8.24	Pass	H
6499.857	151	329	-47.36	-40	-7.36	Pass	H
7998.300	148	138	-46.09	-40	-6.09	Pass	H
1218.107	149	99	-58.91	-40	-18.91	Pass	V
1439.986	148	217	-57.51	-40	-17.51	Pass	V
3569.638	150	12	-49.82	-40	-9.82	Pass	V
3836.351	150	137	-51.36	-40	-11.36	Pass	V
5804.752	146	356	-47.17	-40	-7.17	Pass	V
6554.797	146	95	-50.46	-40	-10.46	Pass	V

Band 40B 39200 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1294.387	150	142	-57.21	-40	-17.21	Pass	H
1714.900	146	280	-48.18	-40	-8.18	Pass	H
3876.054	150	330	-45.98	-40	-5.98	Pass	H
5866.896	146	194	-46.64	-40	-6.64	Pass	H
6459.138	149	260	-49.48	-40	-9.48	Pass	H
8021.058	151	31	-44.78	-40	-4.78	Pass	H
1235.653	149	4	-58.31	-40	-18.31	Pass	V
1394.394	148	257	-58.82	-40	-18.82	Pass	V
3589.835	147	55	-50.79	-40	-10.79	Pass	V
3914.550	148	273	-54.25	-40	-14.25	Pass	V
5827.903	150	136	-51.45	-40	-11.45	Pass	V
6516.969	150	16	-48.30	-40	-8.30	Pass	V

Band 40B 39225 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1337.190	149	156	-58.20	-40	-18.20	Pass	H
1671.851	149	170	-51.03	-40	-11.03	Pass	H
3842.987	149	127	-45.49	-40	-5.49	Pass	H
5910.797	146	42	-40.25	-40	-0.25	Pass	H
6531.879	147	69	-41.88	-40	-1.88	Pass	H
7997.308	151	110	-44.44	-40	-4.44	Pass	H
1256.420	148	61	-54.12	-40	-14.12	Pass	V
1406.341	147	266	-56.63	-40	-16.63	Pass	V
3523.813	148	303	-49.38	-40	-9.38	Pass	V
3909.515	149	195	-47.27	-40	-7.27	Pass	V
5791.835	147	323	-45.65	-40	-5.65	Pass	V
6577.463	146	325	-47.86	-40	-7.86	Pass	V

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Band 40B 39175 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1336.016	147	256	-59.78	-40	-19.78	Pass	H
1684.614	147	243	-49.04	-40	-9.04	Pass	H
3869.955	148	259	-50.81	-40	-10.81	Pass	H
5921.848	149	28	-46.36	-40	-6.36	Pass	H
6557.775	148	108	-45.85	-40	-5.85	Pass	H
8002.227	147	328	-42.54	-40	-2.54	Pass	H
1178.254	150	16	-54.11	-40	-14.11	Pass	V
1426.576	148	117	-55.78	-40	-15.78	Pass	V
3596.175	147	325	-51.18	-40	-11.18	Pass	V
3902.398	149	302	-50.35	-40	-10.35	Pass	V
5853.222	147	15	-46.09	-40	-6.09	Pass	V
6583.437	147	280	-46.39	-40	-6.39	Pass	V

Band 40B 39200channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1333.881	151	14	-55.24	-40	-15.24	Pass	H
1725.282	147	71	-48.96	-40	-8.96	Pass	H
3853.005	150	318	-45.39	-40	-5.39	Pass	H
5927.491	147	56	-46.15	-40	-6.15	Pass	H
6504.529	147	216	-45.62	-40	-5.62	Pass	H
8057.827	151	79	-45.36	-40	-5.36	Pass	H
1191.998	151	65	-54.82	-40	-14.82	Pass	V
1383.046	146	225	-57.57	-40	-17.57	Pass	V
3536.613	149	47	-46.84	-40	-6.84	Pass	V
3854.695	150	73	-48.08	-40	-8.08	Pass	V
5819.934	147	168	-46.74	-40	-6.74	Pass	V
6520.212	150	28	-46.88	-40	-6.88	Pass	V

Band 40B 39225 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1333.867	149	165	-54.878	-40	-14.88	Pass	H
1702.520	146	208	-48.682	-40	-8.68	Pass	H
3900.531	146	4	-45.223	-40	-5.22	Pass	H
5890.426	150	198	-44.661	-40	-4.66	Pass	H
6511.120	146	341	-44.263	-40	-4.26	Pass	H
8080.338	150	235	-44.527	-40	-4.53	Pass	H
1205.434	146	292	-53.380	-40	-13.38	Pass	V
1459.811	150	158	-59.599	-40	-19.60	Pass	V
3542.095	149	55	-51.587	-40	-11.59	Pass	V
3829.811	150	319	-48.436	-40	-8.44	Pass	V
5802.522	146	118	-45.496	-40	-5.50	Pass	V
6557.848	150	155	-48.365	-40	-8.37	Pass	V

Note:

- 1)Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2)Tested with all kind of bandwidth, RB Size and RB Offset, Found the 5.0MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

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Band 41 40265 channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1242.825	150	142	-60.51	-25	-35.51	Pass	H
1664.510	148	100	-51.99	-25	-26.99	Pass	H
3793.489	151	335	-50.29	-25	-25.29	Pass	H
5829.984	151	23	-47.94	-25	-22.94	Pass	H
6487.837	149	42	-48.03	-25	-23.03	Pass	H
7987.461	152	176	-46.82	-25	-21.82	Pass	H
1213.162	150	308	-58.47	-25	-33.47	Pass	V
1372.232	152	244	-58.36	-25	-33.36	Pass	V
3507.781	152	8	-54.25	-25	-29.25	Pass	V
3837.380	152	297	-50.96	-25	-25.96	Pass	V
5737.007	150	275	-46.50	-25	-21.5	Pass	V
6540.479	151	4	-49.01	-25	-35.51	Pass	V

Band 41 40740 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1260.747	150	158	-60.77	-25	-35.77	Pass	H
1579.946	153	320	-52.95	-25	-27.95	Pass	H
3805.355	152	130	-49.95	-25	-24.95	Pass	H
5847.537	148	59	-46.78	-25	-21.78	Pass	H
6495.263	153	158	-47.65	-25	-22.65	Pass	H
8019.626	150	234	-47.15	-25	-22.15	Pass	H
1214.194	148	30	-57.80	-25	-32.8	Pass	V
1372.369	152	47	-58.56	-25	-33.56	Pass	V
3505.945	152	309	-52.53	-25	-27.53	Pass	V
3871.903	150	282	-52.30	-25	-27.3	Pass	V
5802.199	150	357	-46.02	-25	-21.02	Pass	V
6534.315	151	2	-49.45	-25	-24.45	Pass	V

Band 41 41215 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1270.291	148	3	-58.85	-25	-33.85	Pass	H
1613.202	150	329	-51.73	-25	-26.73	Pass	H
3814.647	153	227	-52.26	-25	-27.26	Pass	H
5850.214	153	64	-48.40	-25	-23.4	Pass	H
6496.679	150	231	-47.59	-25	-22.59	Pass	H
8004.855	153	227	-48.94	-25	-23.94	Pass	H
1173.931	150	92	-60.06	-25	-35.06	Pass	V
1401.093	150	312	-58.63	-25	-33.63	Pass	V
3470.450	151	243	-52.61	-25	-27.61	Pass	V
3910.916	151	334	-49.81	-25	-24.81	Pass	V
5784.554	151	339	-48.06	-25	-23.06	Pass	V
6482.066	152	335	-50.06	-25	-25.06	Pass	V

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Band 41 40265channel/BW 5(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1258.391	152	170	-60.27	-25	-35.27	Pass	H
1641.162	150	269	-53.59	-25	-28.59	Pass	H
3820.733	148	272	-50.78	-25	-25.78	Pass	H
5805.850	150	79	-47.47	-25	-22.47	Pass	H
6471.015	149	103	-45.85	-25	-20.85	Pass	H
7997.699	150	266	-46.24	-25	-21.24	Pass	H
1245.089	152	321	-57.44	-25	-32.44	Pass	V
1363.048	150	173	-59.13	-25	-34.13	Pass	V
3451.971	149	154	-52.74	-25	-27.74	Pass	V
3818.164	152	139	-52.57	-25	-27.57	Pass	V
5821.301	148	328	-47.70	-25	-22.7	Pass	V
6514.957	151	179	-50.08	-25	-25.08	Pass	V

Band 41 40740 channel/BW 5(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1288.932	149	355	-58.66	-25	-33.66	Pass	H
1621.184	149	70	-52.48	-25	-27.48	Pass	H
3823.855	151	166	-51.58	-25	-26.58	Pass	H
5829.359	150	53	-47.52	-25	-22.52	Pass	H
6447.951	149	223	-47.69	-25	-22.69	Pass	H
7946.524	150	106	-46.88	-25	-21.88	Pass	H
1215.380	152	206	-57.67	-25	-32.67	Pass	V
1428.360	151	217	-59.76	-25	-34.76	Pass	V
3499.883	152	122	-52.96	-25	-27.96	Pass	V
3854.579	151	341	-50.64	-25	-25.64	Pass	V
5754.563	153	331	-48.50	-25	-23.5	Pass	V
6542.138	148	331	-48.82	-25	-23.82	Pass	V

Band 41 41215 channel/BW 5(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1262.832	148	84	-59.95	-25	-34.95	Pass	H
1662.832	149	262	-52.55	-25	-27.55	Pass	H
3807.731	152	41	-50.48	-25	-25.48	Pass	H
5854.959	150	220	-46.87	-25	-21.87	Pass	H
6459.729	150	181	-47.48	-25	-22.48	Pass	H
7986.051	150	191	-47.35	-25	-22.35	Pass	H
1170.490	152	170	-57.83	-25	-32.83	Pass	V
1364.541	152	264	-60.53	-25	-35.53	Pass	V
3509.861	149	192	-52.99	-25	-27.99	Pass	V
3830.152	152	2	-52.29	-25	-27.29	Pass	V
5760.493	149	324	-48.53	-25	-23.53	Pass	V
6487.761	151	134	-48.70	-25	-23.7	Pass	V

Note:

- 1)Scan from 9kHz to 40GHz, the disturbance above 13GHz and below 1GHz are attenuated more than 20 dB below the applicable limit and not required to be reported, the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2)Tested with all kind of bandwidth, RB Size and RB Offset, Found the 5.0MHz with full RB were the worst case; and then Only the worst case is recorded in the report.

12. FREQUENCY STABILITY

12.1 Standard Applicable

According to §22.355, §24.235, §27.54 the limit is 2.5ppm.

12.2 Test Procedure

According to §2.1055, the following test procedure was performed.

The Frequency Stability is measured directly with a Frequency Domain Analyzer. Frequency Deviation in ppm is calculated from the measured peak to peak value.

The Carrier Frequency Stability over Power Supply Voltage and over Temperature is measured with a

Frequency Domain Analyzer in histogram mode

12.3 Summary of Test Results/Plots

Note: 1.Normal Voltage NV=DC3.8V; Low Voltage LV=DC3.42V; High Voltage HV=DC4.18V

Please refer to Appendix F: Frequency Stability

Test result: Pass

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