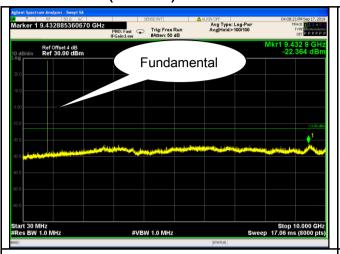
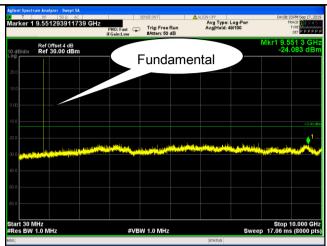


Test Report	Q190826S004 -FCC-R1	
Page	40 of 77	

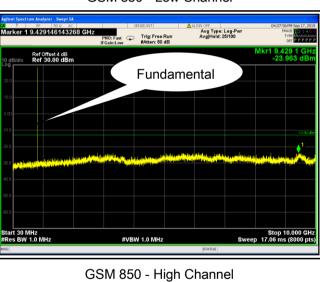
#### **GPRS**:

## Cellular Band (Part 22H) result





GSM 850 - Low Channel

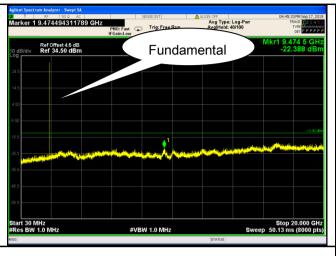


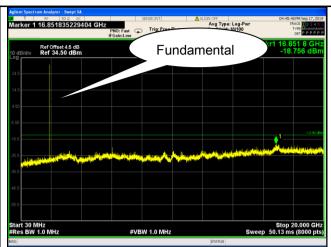
GSM 850 Middle Channel



Test Report	Q190826S004 -FCC-R1	
Page	41 of 77	

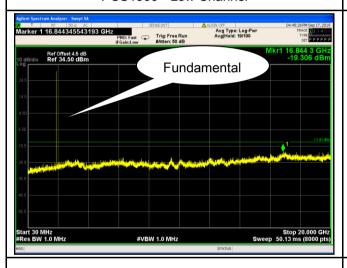
## PCS Band (Part24E) result





PCS1900 - Low Channel





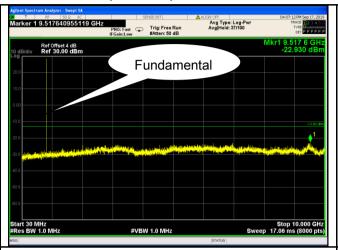
PCS1900 - High Channel

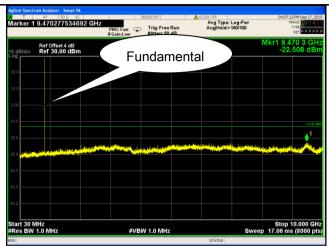


Test Report	Q190826S004 -FCC-R1	
Page	42 of 77	

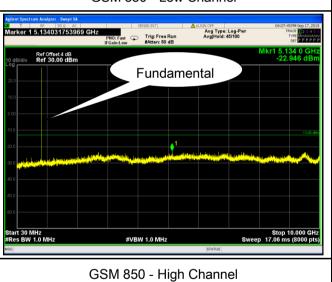
## EGPRS (MSC 1):

## Cellular Band (Part 22H) result





GSM 850 - Low Channel

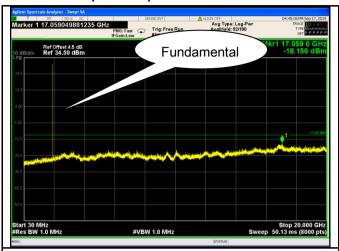


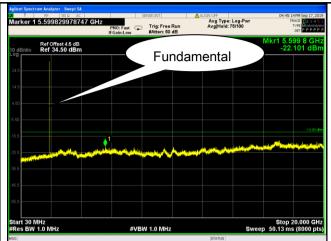
GSM 850 Middle Channel



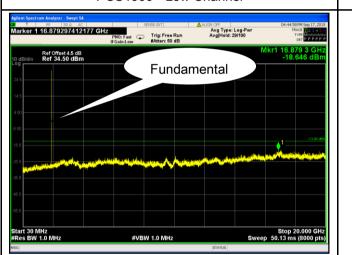
Test Report	Q190826S004 -FCC-R1	
Page	43 of 77	

## PCS Band (Part24E) result





PCS1900 - Low Channel



PCS1900 - High Channel

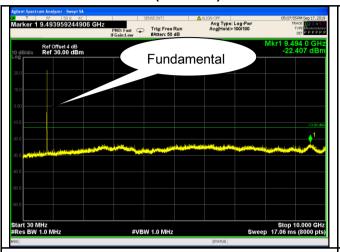
PCS1900 - Middle Channel

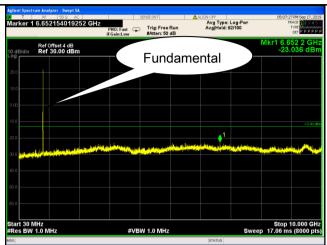


Test Report	Q190826S004 -FCC-R1	
Page	44 of 77	

## **RMC**

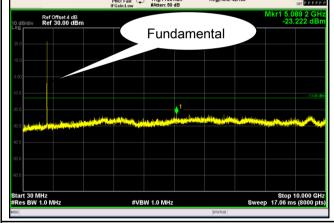
#### UMTS-FDD Band V (Part 22H)





Band V - Low Channel

Band V - Middle Channel Marker 1 5.089161145143 GHz Avg Type: Log-Pwr Avg|Hold: 42/100 Trig: Free Run

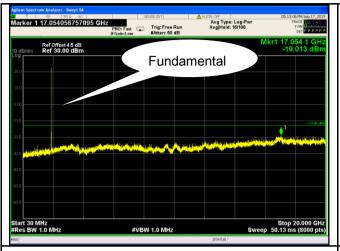


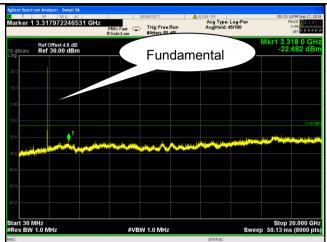
Band V - High Channel



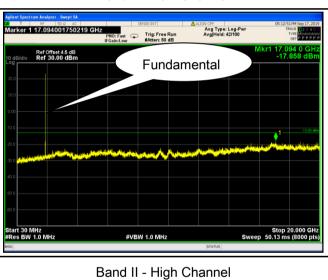
Test Report	Q190826S004 -FCC-R1	
Page	45 of 77	

## UMTS-FDD Band II (Part 24E)





Band II - Low Channel



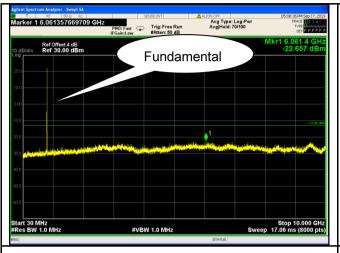
Band II - Middle Channel

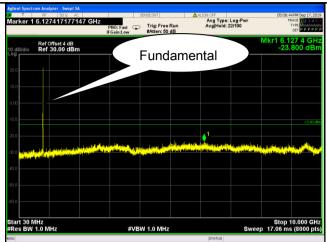


Test Report	Q190826S004 -FCC-R1	
Page	46 of 77	

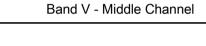
#### **HSDPA**:

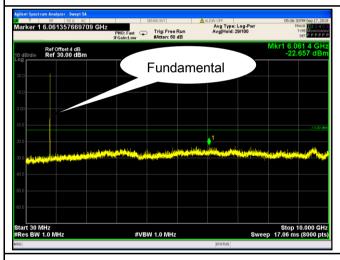
#### UMTS-FDD Band V (Part 22H)





Band V - Low Channel



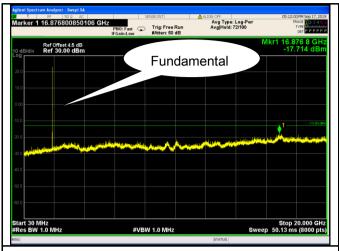


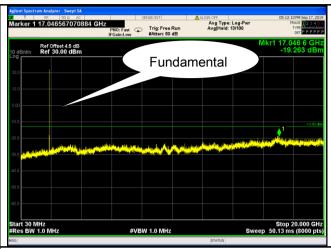
Band V - High Channel



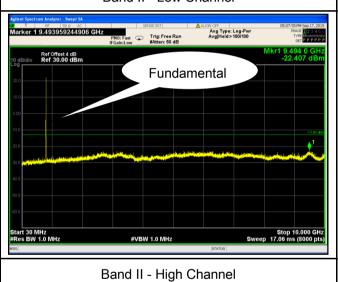
Test Report	Q190826S004 -FCC-R1	
Page	47 of 77	

## UMTS-FDD Band II (Part 24E)





Band II - Low Channel



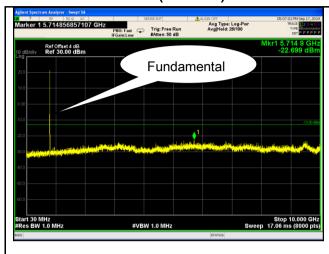
Band II - Middle Channel

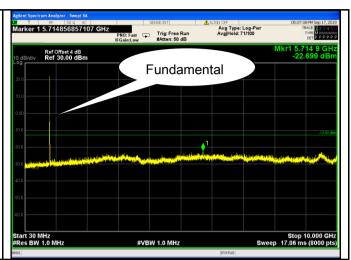


Test Report	Q190826S004 -FCC-R1	
Page	48 of 77	

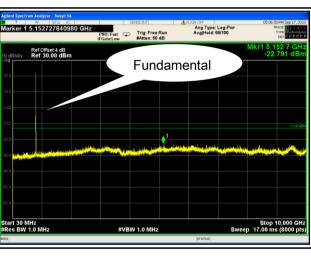
#### **HSUPA**:

## UMTS-FDD Band V (Part 22H)





Band V - Low Channel



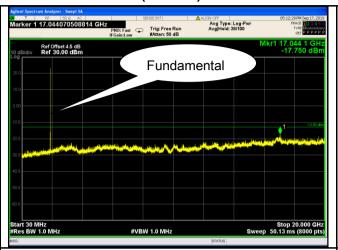
Band V - High Channel

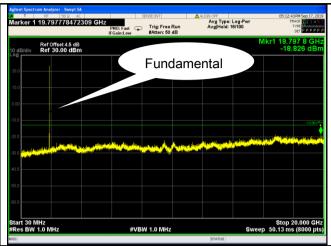
Band V - Middle Channel



Test Report	Q190826S004 -FCC-R1	
Page	49 of 77	

## UMTS-FDD Band II (Part 24E)





Band II - Low Channel



Band II - High Channel

Band II - Middle Channel



Test Report	Q190826S004 -FCC-R1	
Page	50 of 77	

# 6.6 Spurious Radiated Emissions

Temperature	23°C
Relative Humidity	66%
Atmospheric Pressure	1013mbar
Test date :	Sep 17,2019
Tested By:	Aaron Liang

#### Requirement(s):

Requirement(s):	1		
Spec	Item	Requirement	Applicable
§2.1053, §22.917 & §24.238	a)	The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.	<b>\</b>
Test setup	Ant. Tower  Support Units  Turn Table  Test Receiver		
Test Procedure	<ol> <li>The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.</li> <li>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.</li> <li>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.         Sample Calculation:         EUT Field Strength = Raw Amplitude (dBμV/m) – Amplifier Gain (dB) + Antenna Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used)     </li> </ol>		



Test Report	Q190826S004 -FCC-R1
Page	51 of 77

Remark		
Result	Pass	■ Fail

Test Data Yes

Test Plot Yes (See below) N/A



Test Report	Q190826S004 -FCC-R1
Page	52 of 77

## Cellular Band (Part 22H) result

## Low channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
1648.4	V	-37.59	-13	-24.59
1648.4	Н	-42.16	-13	-29.16
2472.6	V	-33.26	-13	-20.26
2472.6	Н	-32.31	-13	-19.31
165.4	V	-50.36	-13	-37.36
333.5	Н	-51.28	-13	-38.28

## Middle channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
1673.2	V	-38.29	-13	-25.29
1673.2	Н	-43.68	-13	-30.68
2509.8	V	-34.85	-13	-21.85
2509.8	Н	-32.4	-13	-19.4
145.6	V	-49.58	-13	-36.58
369.5	Н	-50.26	-13	-37.26



Test Report	Q190826S004 -FCC-R1
Page	53 of 77

## High channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
1697.6	V	-38.95	-13	-25.95
1697.6	Н	-43.77	-13	-30.77
2546.4	V	-35.16	-13	-22.16
2546.4	Н	-33.16	-13	-20.16
251.3	V	-49.89	-13	-36.89
421.6	Н	-50.56	-13	-37.56

- 1, The testing has been conformed to 10\*848.8MHz=8,488MHz
- 2, All other emissions more than 30 dB below the limit
- 3,GSM voice, GPRS and EGPRS mode were investigated. The results above show only the worse cases
- 4, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.



Test Report	Q190826S004 -FCC-R1
Page	54 of 77

## PCS Band (Part24E) result

## Low channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
3700.4	V	-35.14	-13	-22.14
3700.4	Н	-33.62	-13	-20.62
5550.6	V	-34.58	-13	-21.58
5550.6	Н	-31.69	-13	-18.69
452.6	V	-46.85	-13	-33.85
255.8	Н	-44.15	-13	-31.15

## Middle channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
3760	V	-35.93	-13	-22.93
3760	Н	-34	-13	-21
5640	V	-35.02	-13	-22.02
5640	Н	-32.12	-13	-19.12
331.2	V	-47.95	-13	-34.95
400.5	Н	-51.06	-13	-38.06



Test Report	Q190826S004 -FCC-R1
Page	55 of 77

## High channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
3819.6	V	-34.58	-13	-21.58
3819.6	Н	-33.26	-13	-20.26
5729.4	V	-34.18	-13	-21.18
5729.4	Н	-32.62	-13	-19.62
579.1	V	-45.69	-13	-32.69
356.5	Н	-48.95	-13	-35.95

- 1, The testing has been conformed to 10\*1909.8MHz=19,098MHz
- 2, All other emissions more than 30 dB below the limit
- 3,GSM voice, GPRS and EGPRS mode were investigated. The results above show only the worse cases
- 4, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.



Test Report	Q190826S004 -FCC-R1
Page	56 of 77

## UMTS-FDD Band V (Part 22H)

#### Low channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
1648.4	V	-43.16	-13	-30.16
1648.4	Н	-45.32	-13	-32.32
199.5	V	-53.62	-13	-40.62
426.3	Н	-55.85	-13	-42.85

#### Middle channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
1673.2	V	-45.06	-13	-32.06
1673.2	Н	-46.25	-13	-33.25
220.5	V	-56.41	-13	-43.41
418.9	Н	-55.82	-13	-42.82

## High channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
1697.6	V	-43.06	-13	-30.06
1697.6	Н	-42.58	-13	-29.58
284.6	V	-54.87	-13	-41.87
489.7	Н	-56.49	-13	-43.49

- 1, The testing has been conformed to 10\*846.6MHz=8,466MHz
- 2, All other emissions more than 30 dB below the limit
- 3,RMC, HSUPA and HSDPA mode were investigated. The results above show only the worse cases
- 4, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.



Test Report	Q190826S004 -FCC-R1
Page	57 of 77

## UMTS-FDD Band II (Part 24E)

#### Low channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
3700.4	V	-41.26	-13	-28.26
3700.4	Н	-42.58	-13	-29.58
199.5	V	-56.84	-13	-43.84
342.5	Н	-57.1	-13	-44.1

#### Middle channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
3760	V	-42.13	-13	-29.13
3760	Н	-42.77	-13	-29.77
289.5	V	-57.41	-13	-44.41
225.4	Н	-55.12	-13	-42.12

## High channel

Frequency	Antenna Polarization	Corrected Reading	Limit	Margin
(MHz)	(H/V)	(dBm)	(dBm)	(dB)
3819.6	V	-41.99	-13	-28.99
3819.6	Н	-42.63	-13	-29.63
615.2	V	-56.15	-13	-43.15
428.9	Н	-54.29	-13	-41.29

- 1, The testing has been conformed to 10\*1907.6MHz=19,076MHz
- 2, All other emissions more than 30 dB below the limit
- 3,RMC, HSUPA and HSDPA mode were investigated. The results above show only the worse cases
- 4, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case



Test Report	Q190826S004 -FCC-R1
Page	58 of 77

# 6.7 Band Edge

Temperature	23°C
Relative Humidity	66%
Atmospheric Pressure	1013mbar
Test date :	Sep 17,2019
Tested By:	Aaron Liang

## Requirement(s):

Spec	Item	Requirement	Applicable
§22.917(a) §24.238(a)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.	<b>\</b>
Test setup	Ba	EUT Spectrum Analyzer	
Procedure	-	The EUT was connected to Spectrum Analyzer and Base S power divider.  The Band Edges of low and high channels for the highest R were measured. Setting RBW as roughly BW/100.	
Remark			
Result	<b>☑</b> Pa	ss Fail	

Test Data	Yes	□ <sub>N/A</sub>
Test Plot	Yes (See below)	□ <sub>N/A</sub>



Test Report	Q190826S004 -FCC-R1
Page	59 of 77

#### **GSM Voice:**

## Cellular Band (Part 22H) result

Frequency (MHz)	Emission (dBm)	Limit (dBm)
823.996	-16.016	-13
849.027	-17.553	-13

## PCS Band (Part24E) result

Frequency (MHz)	Emission (dBm)	Limit (dBm)
1849.98	-15.152	-13
1910.013	-15.522	-13

## GPRS:

## Cellular Band (Part 22H) result

Frequency (MHz)	Emission (dBm)	Limit (dBm)
822.979	-19.137	-13
849.02	-15.966	-13

## PCS Band (Part24E) result

Frequency (MHz)	Emission (dBm)	Limit (dBm)
1849.979	-14.589	-13
1910.01	-14.741	-13



Test Report	Q190826S004 -FCC-R1
Page	60 of 77

# EGPRS (MSC1):

## Cellular Band (Part 22H) result

Frequency (MHz)	Emission (dBm)	Limit (dBm)
823.996	-18.428	-13
849.023	-14.833	-13

## PCS Band (Part24E) result

Frequency (MHz)	Emission (dBm)	Limit (dBm)
1849.88	-25.148	-13
1910.02	-25.335	-13

## RMC:

## UMTS-FDD Band V (Part 22H)

Frequency (MHz)	Emission (dBm)	Limit (dBm)
823.99	-16.219	-13
849.01	-21.876	-13

## UMTS-FDD Band II (Part 24E)

Frequency (MHz)	Emission (dBm)	Limit (dBm)
1848.43	-24.588	-13
1910.07	-25.069	-13



Test Report	Q190826S004 -FCC-R1
Page	61 of 77

## HSDPA:

# UMTS-FDD Band V (Part 22H)

Frequency (MHz)	Emission (dBm)	Limit (dBm)
823.98	-18.984	-13
849.01	-21.876	-13

## UMTS-FDD Band II (Part 24E)

Frequency (MHz)	Emission (dBm)	Limit (dBm)
1849.88	-25.148	-13
1910.02	-25.335	-13

## **HSUPA**:

## UMTS-FDD Band V (Part 22H)

Frequency (MHz)	Emission (dBm)	Limit (dBm)
823.98	-16.21	-13
849.12	-22.444	-13

## UMTS-FDD Band II (Part 24E)

Frequency (MHz)	Emission (dBm)	Limit (dBm)
1848.79	-21.439	-13
1910.05	-25.762	-13



Test Report	Q190826S004 -FCC-R1
Page	62 of 77

#### **GSM Voice:**

#### **Test Plots**





Cellular Band - Low Channel

Cellular Band - High Channel

Note: Offset=Cable loss (4.0) + 10log

(3.15/3)=4.0+0.2=4.2dB

Note: Offset=Cable loss (4.0) + 10log (3.12/3)=4.0+0.2=4.2dB





PCS Band - Low Channel

PCS Band - High Channel

Note: Offset=Cable loss (4.5) + 10log

Note: Offset=Cable loss (4.5) + 10log

(3.22/3)=4.5+0.3=4.8dB

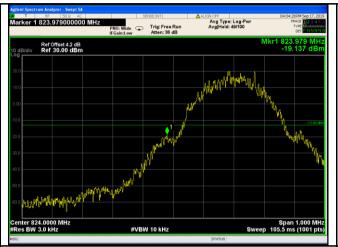
(3.15/3)=4.5+0.2=4.7dB



Test Report	Q190826S004 -FCC-R1
Page	63 of 77

#### **GPRS**:

#### **Test Plots**





Cellular Band - Low Channel

Cellular Band - High Channel

Note: Offset=Cable loss (4.0) + 10log

(3.15/3)=4.0+0.2=4.2dB

Note: Offset=Cable loss (4.0) + 10log (3.16/3)=4.0+0.2=4.2dB





PCS Band - Low Channel

PCS Band - High Channel

Note: Offset=Cable loss (4.5) + 10log

Note: Offset=Cable loss (4.5) + 10log

(3.22/3)=4.5+0.3=4.8dB

(3.15/3)=4.5+0.2=4.7dB



Test Report	Q190826S004 -FCC-R1
Page	64 of 77

## EGPRS (MSC1):

#### **Test Plots**





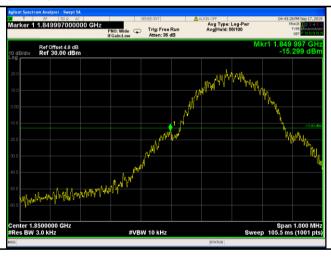
Cellular Band - Low Channel

Cellular Band - High Channel

Note: Offset=Cable loss (4.0) + 10log

(3.20/3)=4.0+0.3=4.3dB

Note: Offset=Cable loss (4.0) + 10log (3.16/3)=4.0+0.2=4.2dB





PCS Band - Low Channel

PCS Band - High Channel

Note: Offset=Cable loss (4.5) + 10log

Note: Offset=Cable loss (4.5) + 10log

(3.22/3)=4.5+0.3=4.8dB

(3.15/3)=4.5+0.2=4.7dB



Test Report	Q190826S004 -FCC-R1
Page	65 of 77

#### RMC:





UMTS-FDD Band V - Low Channel

UMTS-FDD Band V - High Channel

Note: Offset=Cable loss (4.0) + 10log (47.07/30)=4.0+2.0=6.0dB

Note: Offset=Cable loss (4.0) + 10log (47.00/30)=4.0+1.9 =5.9dB





UMTS-FDD Band II - Low Channel

UMTS-FDD Band II - High Channel

Note: Offset=Cable loss (4.5) + 10log (46.77/30)=4.5+1.9=6.4dB

Note: Offset=Cable loss (4.5) + 10log

(46.79/30)=4.5+1.9=6.4dB



Test Report	Q190826S004 -FCC-R1
Page	66 of 77

#### **HSDPA**:





UMTS-FDD Band V - High Channel

UMTS-FDD Band V - Low Channel

Note: Offset=Cable loss (4.0) + 10log

Note: Offset=Cable loss (4.0) + 10log

(46.91/30)=4.0+1.9=5.9dB

(46.98/30)=4.0+1.9=5.9dB





UMTS-FDD Band II - Low Channel

UMTS-FDD Band II - High Channel

Note: Offset=Cable loss (4.5) + 10log

Note: Offset=Cable loss (4.5) + 10log

(46.76/30)=4.5+1.9=6.4dB

(46.77/30)=4.5+1.9=6.4dB



Test Report	Q190826S004 -FCC-R1
Page	67 of 77

#### **HSUPA**:





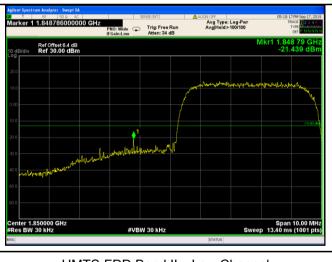
UMTS-FDD Band V - Low Channel

UMTS-FDD Band V - High Channel

Note: Offset=Cable loss (4.0) + 10log

Note: Offset=Cable loss (4.0) + 10log (46.81/30)=4.0+1.9=5.9 dB

(46.62/30)=4.0+1.9=5.9dB





UMTS-FDD Band II - Low Channel

UMTS-FDD Band II - High Channel

Note: Offset=Cable loss (4.5) + 10log

Note: Offset=Cable loss (4.5) + 10log

(46.88/30)=4.5+1.9=6.4dB

(46.87/30)=4.5+1.9=6.4dB



Test Report	Q190826S004 -FCC-R1
Page	68 of 77

# 6.8 Frequency Stability

Temperature	23°C
Relative Humidity	66%
Atmospheric Pressure	1013mbar
Test date :	Sep 17,2019
Tested By:	Aaron Liang

## Requirement(s):

Spec	Item	Requirement		Applicable		
		According to §22.3 the Public Mobile S tolerances given in Frequency Toleran Services				
		Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≥ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)	
§2.1055,	۵)	25 to 50	20.0	20.0	50.0	
§22.355 &	a)	50 to 450	5.0	5.0	50.0	<b>V</b>
§24.235		45 to 512	2.5	5.0	5.0	
		821 to 896	1.5	2.5	2.5	
		928 to 929	5.0	N/A	N/A	
		929 to 960.	1.5	N/A	N/A	
		2110 to 2220	10.0	N/A	N/A	
		According to §24.2	35, the frequ	iency stability sha	ll be sufficient to	
		ensure that the fun	damental en	nissions stay withi	n the authorized	
		frequency block.		1		
Test setup  Base Station						
				Thermal Cham	lber	



Test Report	Q190826S004 -FCC-R1
Page	69 of 77

Procedure	A communication link was established between EUT and base station. The frequency error was monitored and measured by base station under variation of ambient temperature and variation of primary supply voltage.  Limit: The frequency stability of the transmitter shall be maintained within				
	±0.00025% (±2.5ppm) of the center frequency.				
Remark					
Result	Pass Fail				
Test Data	Yes N/A				
Test Plot	Yes (See below) N/A				



Test Report	Q190826S004 -FCC-R1
Page	70 of 77

## GSM Voice:

# Cellular Band (Part 22H) result

	Middle Channel, f₀ = 836.6 MHz						
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)			
-10		18	0.0215	2.5			
0		16	0.0191	2.5			
10		16	0.0191	2.5			
20	3.7	13	0.0155	2.5			
30	3.7	17	0.0203	2.5			
40		14	0.0167	2.5			
50		22	0.0263	2.5			
55		18	0.0215	2.5			
25	4.2	19	0.0227	2.5			
25	3.5	19	0.0227	2.5			

# PCS Band (Part 24E) result

Middle Channel, f₀ = 1880 MHz						
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)		
-10		14	0.0074	2.5		
0		14	0.0074	2.5		
10		11	0.0059	2.5		
20	. –	15	0.0080	2.5		
30	3.7	17	0.0090	2.5		
40		18	0.0096	2.5		
50		17	0.0090	2.5		
55		17	0.0090	2.5		
25	4.2	19	0.0101	2.5		
25	3.5	22	0.0117	2.5		



Test Report	Q190826S004 -FCC-R1
Page	71 of 77

## RMC:

## UMTS-FDD Band V (Part 22H)

	Middle Channel, f₀ = 835 MHz						
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)			
-10		16	0.0192	2.5			
0		16	0.0192	2.5			
10		14	0.0168	2.5			
20	2.7	13	0.0156	2.5			
30	3.7	12	0.0144	2.5			
40		8	0.0096	2.5			
50		17	0.0204	2.5			
55		14	0.0168	2.5			
25	4.2	15	0.0180	2.5			
25	3.5	15	0.0180	2.5			

## UMTS-FDD Band II (Part 24E)

	OWIGIBS Balla II (Falt 2 TE)					
Middle Channel, f <sub>o</sub> = 1880 MHz						
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz) Frequency (ppm)		Limit (ppm)		
-10		20	0.0106	2.5		
0		15	0.0080	2.5		
10		15	0.0080	2.5		
20	0.7	16	0.0085	2.5		
30	3.7	14	0.0074	2.5		
40		16	0.0085	2.5		
50		19	0.0101	2.5		
55		17	0.0090	2.5		
25	4.2	18	0.0096	2.5		
25	3.5	17	0.0090	2.5		



Test Report	Q190826S004 -FCC-R1
Page	72 of 77

# Annex A. TEST INSTRUMENT

## **RE& RSE**

## Frequency Range Below 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESL6	1300.5001K06- 100262-eQ	Apr. 04, 19	Apr. 03, 20
Bilog Antenna	Sunol Sciences	JB6	A110712	Apr. 08, 19	Apr. 07, 20
Active Antenna	CMO-POWER	AL-130	121031	Mar. 27, 19	Mar. 26, 20
Signal Amplifier	HP	8447E	443008	Mar. 28, 19	Mar. 27, 20
3m Semi- anechoic Chamber	SAEMC	9m*6m*6m	N/A	Oct. 18,18	Oct. 17,21
Test Software	EZ-EMC	ICP-03A1	N/A	N/A	N/A

## **RE& RSE**

# Frequency Range Above 1GHz

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum	Agilent	E4446A	MY46180622	8-May-19	7-May-20
MXA signal	Agilent	N9020A	MY49100060	Mar. 28, 19	Mar. 27, 20
Horn Antenna	COM-POWER	HAH-118	71259	Mar. 22, 19	Mar. 21, 20
Horn Antenna	COM-POWER	HAH-118	71283	Mar. 20, 19	Mar. 19, 20



Test Report	Q190826S004 -FCC-R1
Page	73 of 77

SHF-EHF Horn	Schwarzbeck	BBHA9170	BBHA9170147	Jun. 30, 19	Jun. 29, 20
SHF-EHF Horn	Schwarzbeck	BBHA9170	BBHA9170242	Jun. 30, 19	Jun. 29, 20
AMPLIFIER	EM Electornic Corporation	EM01G26G	60613	Mar. 28, 19	Mar. 27, 20
AMPLIFIER	Emc Instruments Corporation	Emc012645	980077	Jan. 04, 19	Jan. 03,20
3m Semi- anechoic	SAEMC	9m*6m*6m	N/A	Oct. 18,18	Oct. 17,21
Test Software	EZ-EMC	ICP-03A1	N/A	N/A	N/A

## Antenna Port Conducted RF measurement

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Wireless Connectivity	R&S	CMW270	1201.0002K75	Nov. 29, 18	Nov. 28, 19
MXA VEXTOR SIGNAL	Agilent	n5182a	MY50140530	Mar. 28,19	Mar. 27,20
MXA signal analyzer	Agilent	n9020a	MY49100060	Mar. 28,19	Mar. 27,20
RF Control Unit	Tonscend	JS0806-2	188060112	Mar. 28,19	Mar. 27,20
Signal Generation	Agilent	E4421B	US40051152	Nov. 29, 18	Nov. 28, 19
DC Power Supply	Agilent	E3640A	MY40004013	Mar. 28,19	Mar. 27,20
Programmable Temperature &	Hongjin	HYC-TH- 225DH	DG-180746	Mar. 28,19	Mar. 27,20



Test Report	Q190826S004 -FCC-R1
Page	74 of 77

Test System	Tonscend	JS 1120-	N/A	N/A	N/A
Power Splitter	Weinschel	1580-1	TL177	Mar. 20,19	Mar. 19,20
Universal Radio Communication	ROHDE&SCHWARZ	CMU200	112012	Mar. 28,19	Mar. 27,20
Universal Radio Communication	ROHDE&SCHWARZ	CMU200	121393	Mar. 28,19	Mar. 27,20
Wireless Communication Test Set	ROHDE&SCHWARZ	CMW500	1201.0002K500- 155842-Gd	Aug. 06, 19	Aug. 05, 20

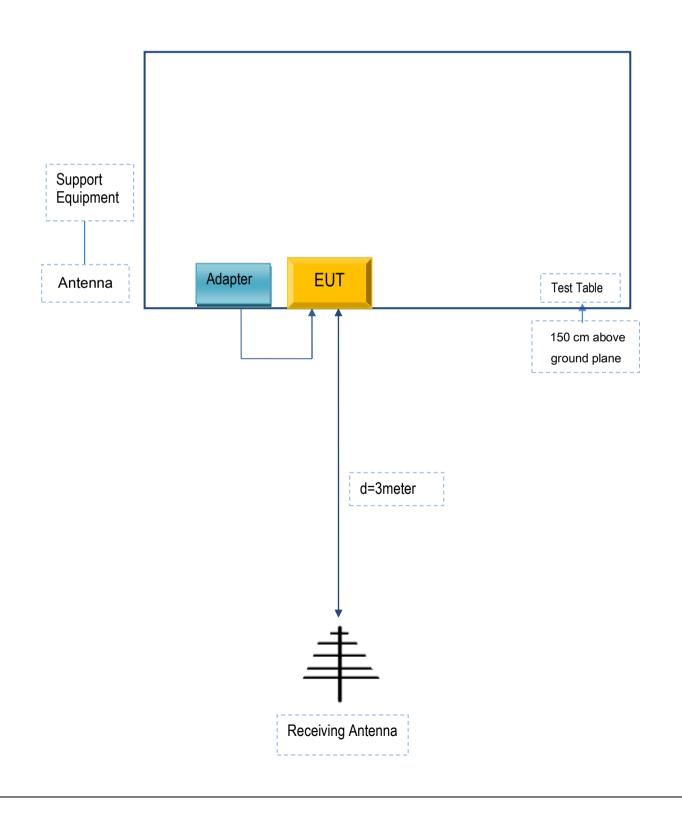


Test Report	Q190826S004 -FCC-R1
Page	75 of 77

# Annex B. TEST SETUP AND SUPPORTING EQUIPMENT

## Annex B.i. TEST SET UP BLOCK

**Block Configuration Diagram for Radiated Emissions** 





Test Report	Q190826S004 -FCC-R1
Page	76 of 77

## Annex C. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

## Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
N/A	N/A	N/A	N/A

## Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
N/A	N/A	N/A	N/A	N/A



Test Report	Q190826S004 -FCC-R1
Page	77 of 77

# Annex C. User Manual / Block Diagram / Schematics / Partlist/ DECLARATION OF SIMILARITY

Please see the attachment