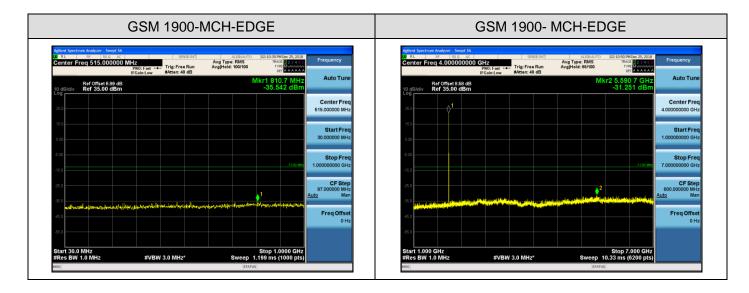


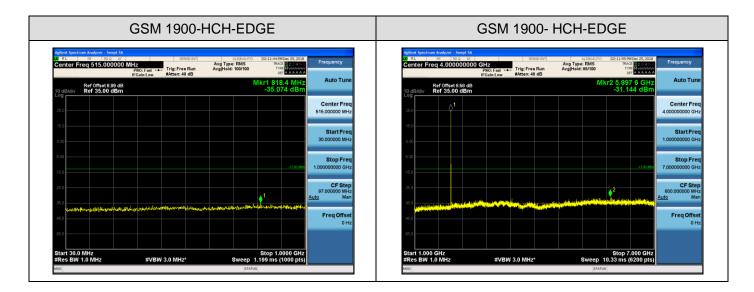
Center Fre	IFGai	Fast + Trig: Free Run #Atten: 40 dB	Avg Type: RMS Avg Hold: 90/100	02:09:56 PMDec 25, 2018 TRACE 23, 23,45 C TYPE A & A & A & A OET A & A & A & A r1 13, 128 2 GHz	Frequency Auto Tune	Aglent Spectrum Analyzer - Swept SA CR RL RF 50 AC C Center Freq 15.800000000	O GHZ PNO: Fast → Trig: Free Run IFGain:Low #Atten: 40 dB	ALIGNAUTO 02:10:05 PM Dec 25, 2018 Avg Type: RMS TRACE 1234 5 C Avg Hold: 62/100 Oct AAAAAA Mkr1 19,982 0 GHz	Frequency Auto Tur
10 dB/div	Ref Offset 10.48 dB Ref 35.00 dBm		WIK	-27.842 dBm		Ref Offset 11.01 dB 10 dB/div Ref 35.00 dBm		-22.701 dBm	
25.0					Center Freq 10.300000000 GHz	25.0			Center Fre 16.800000000 GH
5.00					Start Freq 7.000000000 GHz	5.00			Start Fre 13.600000000 GH
-5.00				-13.00 dBn	Stop Freq 13.60000000 GHz	-5.00		-13.00 dBn	Stop Fre 20.000000000 GH
-25.0	ووالمنافق والمحاوية	al analise dividue la satel la sua	والمتجنس وتتواطل وأقص	مانات المراجع الفات الديامي ومانات الماني جوانف الديامي	CF Step 660.000000 MHz Auto Man	-25 0 -26 0			CF Ste 640.000000 MH <u>Auto</u> Ma
-45.0					Freq Offset 0 Hz	-45.0			Freq Offse 0 H
-55.0						-55.0			





UN RL	RF 50 Q RF 50 Q Freq 10.3000		ast Trig: Fre	e Run Avg	ALIGNAUTO Type: RMS [Hold: 90/100	02:11:00 PMDec 25, 201 TRACE 2 3 4 5 TYPE MULTINE DET A A A A A	Frequency	Agilent Spectrum Analy CR RL RF Center Freq 16	50.9 AC	Trig: Free Run #Atten: 40 dB	ALIGNAUTO Avg Type: RMS Avg Hold: 62/100	02:11:10 PMDec 25, 2018 TRACE 2 3 4 5 6 TYPE 0 DET A A A A A A	Frequency
10 dB/div	Ref Offset 10 Ref 35.00 (.48 dB d B m			Mkr	1 13.202 0 GH -26.728 dBr	z Auto Tune n	10 dB/div Ref 3	ffset 11.01 dB 35.00 dBm		Mkr	1 19.975 0 GHz -22.655 dBm	Auto Tur
25.0							Center Freq 10.300000000 GHz	25.0					Center Fre 16.800000000 GH
5.00							Start Freq 7.000000000 GHz	5.00					Start Fre 13.600000000 GF
-5.00						-13.00 #8	Stop Freq 13.60000000 GHz	-5.00				-13.00 dBn	Stop Fre 20.00000000 GF
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-45.0							Freq Offset 0 Hz	-45.0					Freq Offs 0 F



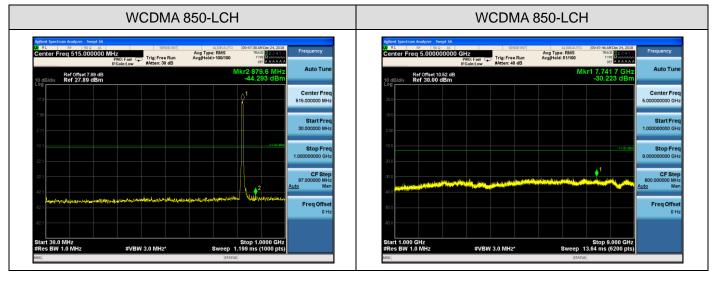


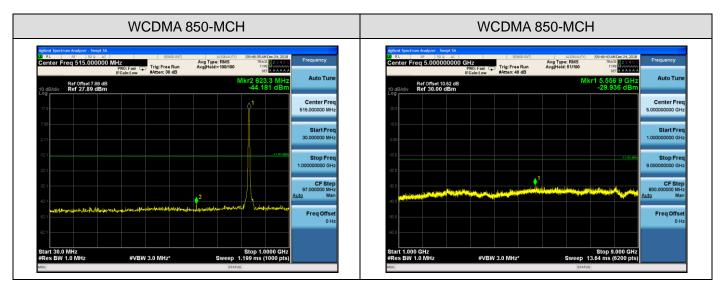
DI RL	RE 50 R AC	PNO: Fast T	rig: Free Run Atten: 40 dB	ALIGN Avg Type: RM Avg Hold: 90/10	S TR Mkr1 12.6		Frequency Auto Tune	Center Fre	n Analyzer - Swept SA RF 50 p AC eq 16.800000000 G P IFI Ref Offset 11.01 dB	ree Run Avgl	Type: RMS Iold: 62/100	02:12:15 PMDec 25, 2018 TRACE 1 2 3 4 5 6 TYPE MARKED 0 0ET A A A A A A 1 19.960 0 GHz	Frequency Auto Tur
25.0	Ref 35.00 dBm				-28.	117 dBm	Center Freq 10.30000000 GHz	10 dB/div Log	Ref 35.00 dBm			-22.976 dBm	Center Fre 16.80000000 GF
5.00							Start Freq 7.000000000 GHz Stop Freq	-5.00					Start Fre 13.600000000 GF Stop Fre
-15 0 -25 0 -35 0	التروية المروية المروية	less, maleriale d	la disebulit di _{terr} orenj	a state in a state		-13.00 dBn	13.60000000 GHz CF Step 660.00000 MHz <u>Auto</u> Man	-15 0 -25 0 -36 0	len andre see andre see		antes a constantina (20.00000000 GF CF Ste 640.000000 MH <u>Auto</u> Ma
-45.0							Freq Offset 0 Hz	-45.0					Freq Offse 0 H

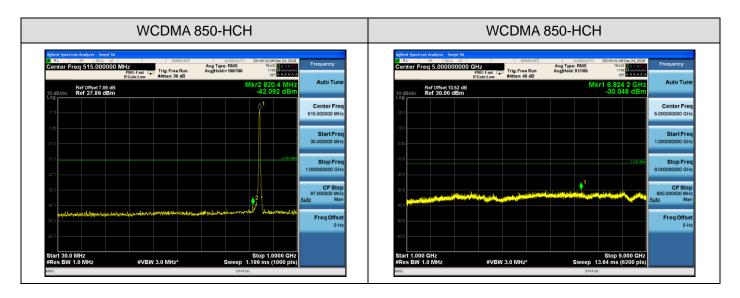


Test Band=WCDMA850/WCDMA1700/WCDMA1900

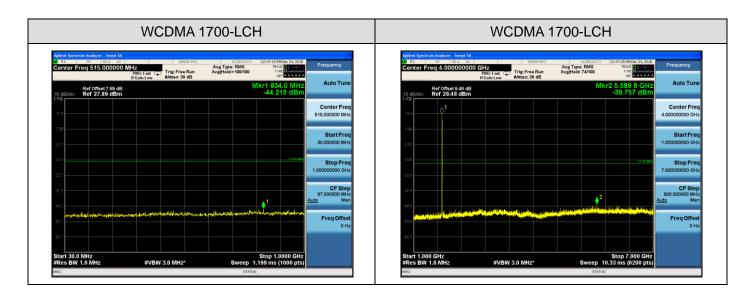
Test Mode=UMTS



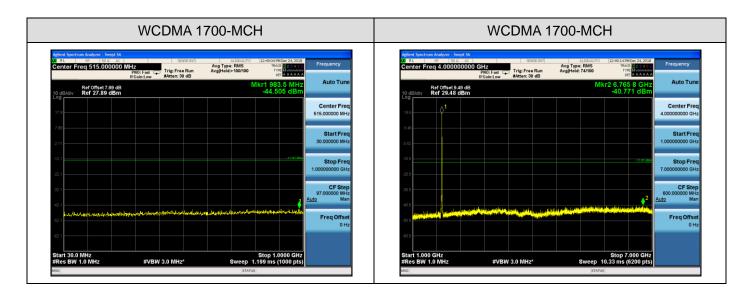






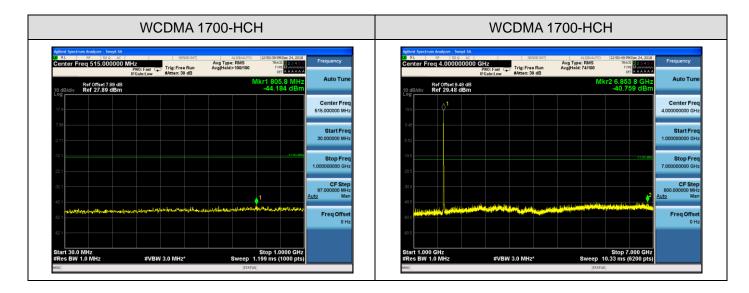


WCDMA 1700-LCH	WCDMA 1700-LCH
Added Spectrum Andycer Spectrum Andycer Spectrum Andycer File Spectrum Andycer File File	Action Spectrum Advance - Avery Marce - Avery Type: EMS Avery Type: EMS Marce - Avery Type: EMS Frequency Center Freq 16.8000000000 GHz Figure - Marce - Avery Type: EMS Avery Type: EMS Marce - Avery Type: EMS Trice - Frequency Ref of Souther - Avery Type: EMS Avery Type: EMS Avery Type: EMS Trice - Frequency Ref of Souther - Avery Type: EMS Avery Type: EMS Trice - Frequency Frequency Ref of Souther - Avery Type: EMS Avery Type: EMS Trice - Frequency Frequency Bit Galaxies Trice - Frequency Frequency Frequency Frequency Bit Galaxies Micro - Frequency Frequency Frequency Frequency
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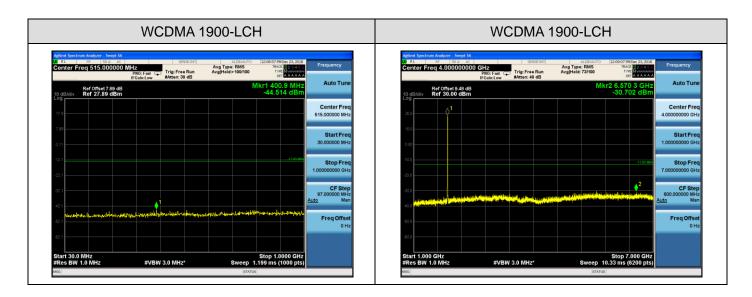
WCDMA 1700-MCH	WCDMA 1700-MCH
Appliet System Analyzer - Swyst XA Stote Skyl AUDIA/I/O 12-89-23 Mole 24,2038 Frequency Center Freq 10.300000000 GHz Firster 2000 Stote Skyl Aug Type: RMS Avg Type: RMS WayHold: 7/1/00 The provide Skyle Frequency Ref Offset 11.33 dB 20 Biolity Mkr1 13.273 8 GHz Auto Tune	Agence Spectra Makyper: Sengt SA Special XI Allow UP Allow UP Special XI Allow UP Allow UP Special XI Specia XI
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000 Start Freq 7.00000000 GHz	000 Start Freq 000 13 60000000 GHz
000 Stop Freq 200	300 Stop Free 20 0000000 CH
CON CF Step	20.0 CF Step 40.0 MH2 CF Step
The second secon	800 FreqOffset 0Hz
Start 7.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz' Sweep 11.33 ms (6800 GHz)	Star 13.000 CHz Stop 20.000 CHz #Res 15W 1.0 MHz #VBW 3.0 MHz* Sweep 16.21 ms (6400 pts)
#Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 11.33 ms (6800 pts)	#Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 16.21 ms (6400 pts)



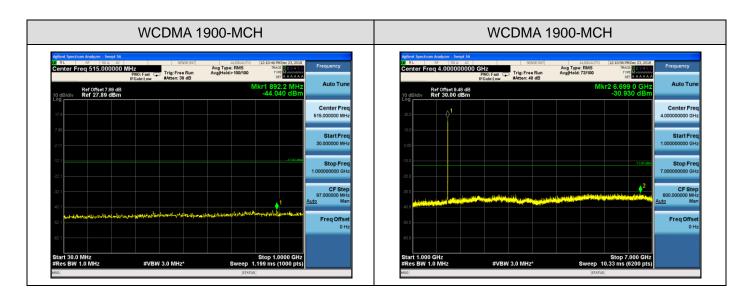


UN RL	Im Analyzer - Swept SA RF 50 P AC eq 10.300000000	GHZ PNO: Fast C Trig:		ALIGNAUTO Avg Type: RMS Avg Hold: 71/100	12:50:58 PMDec 24, 2018 TRACE 2 2 3 4 5 6 TYPE UNIT A A A A A A	Frequency	Agliont Spectrum Analyzer - Swept SA (# RL RF 50 P AC Center Freq 16:8000000	PNO: Fast 😱 Trig: Free Run	ALIGNAUTO 12:51:07 PMDec 24, 2018 Avg Type: RMS TRACE 12:0 LISE Avg Hold: 49/100 TYPE	Frequency
10 dB/div	Ref Offset 11.38 dB Ref 30.00 dBm	FGain:Low #Atte	n: 30 dB	Mk	r1 13.129 2 GHz -36.949 dBm	Auto Tune	Ref Offset 11.91 dB 10 dB/div Ref 30.00 dBm	IFGain:Low #Atten: 30 dB	Mkr1 19.925 0 GHz -31.627 dBm	Auto Tur
20.0						Center Freq 10.30000000 GHz	20.0			Center Free 16.800000000 GH
0.00						Start Freq 7.000000000 GHz	0.00			Start Free 13.600000000 GH
-10.0						Stop Freq 13.60000000 GHz	-10.0		-13.00 dbm	Stop Free 20.000000000 GH
-30.0		a sa guna talifaidas ka t			1	CF Step 660.000000 MHz <u>Auto</u> Man	-30.0	and the second secon	د. الاست. المانية من المانية عن المانية ال	CF Step 640.000000 MH Auto Mar
-50.0			anite a safari.			Freq Offset 0 Hz	-50.0			Freq Offse 0 H
-80.0 Start 7.000					Stop 13.600 GHz		-60.0 Start 13.600 GHz		Stop 20.000 GHz	



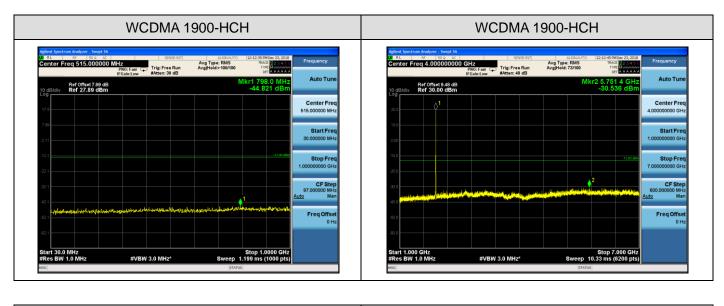


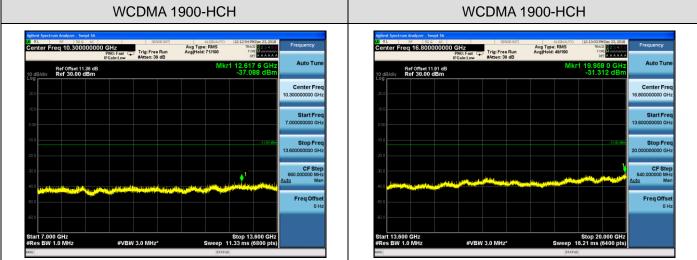
WCDMA 1900-LCH	WCDMA 1900-LCH
Agelost Spectrum Analyzer S and Section 2010 (2010) (2010	Agtiont Spectrum Analyser Swept 503 State All Social Spectrum Analyser Swept 503 Frequency 21 All on processing 100 mon 100 mon 100 mon 100 mon 100 mon Program Program <t< th=""></t<>
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201 Image: Start 7.000 GHz #VBW 3.0 MHz* Stop 13.600 GHz Image: Start 7.000	600 Freq Offset 600 Start 13.600 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Start 13.600 GHz Start 13.600 GHz



Ref Offset 11.38 dB	IZ Avg Or Fast Trig: Free Run Avg ain:Low #Atten: 30 dB	ALIMAJTO 12:11:05 Mile: 23, 2018 Type: RMS Two: IP Dates F Held: 71/100 Two: IP Dates F Held: 71/100 Two: IP Dates F Held: 71/100 Tune Auto Tune	Address Several Sole And Sole	Avg Type: RMS Avg Hold: 49/100 Mkr1 19.948 0 GHz Avg Hold: 49/100 Mkr1 19.948 0 GHz
200 A C C C C C C C C C C C C C C C C C C		-36,663 dBm Center Freq 10.3000000 GHz 10.30000000 GHz Start Freq 7.0000000 GHz Start Freq 7.0000000 GHz CF Step 66000000 MHz Auto Freq Offset 0 Hz	10 gBMdv Ref 30.00 dBm 200	-31,632 dBm Center Fr 10,5000000 G Start Fr 13,50000000 G Start Fr 13,50000000 G Start Fr 20,0000000 G Center Fr 13,5000000 G Start Fr 20,0000000 G Center Fr 13,5000000 G Start Fr 20,000000 G Start Fr 20,000000 G Start Fr 20,000000 G Start Fr 20,00000 G Start Fr 540,0000 M Start Fr 540,0000 M Start Fr 640,0000 M Start Fr 640,000 M Start Fr 640,0000 M Start Fr 640,000 M Start Fr 640,000M







Note:1. Below 30MHZ no Spurious found and Above is the worst mode data.

2. As no emission found in standby or receive mode, no recording in this report.



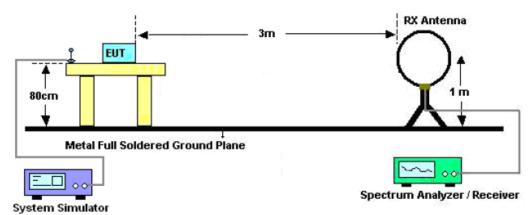
9.2 RADIATED SPURIOUS EMISSION

9.2.1MEASUREMENT METHOD

- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.

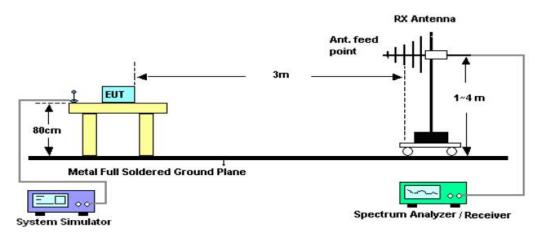


9.2.2 TEST SETUP

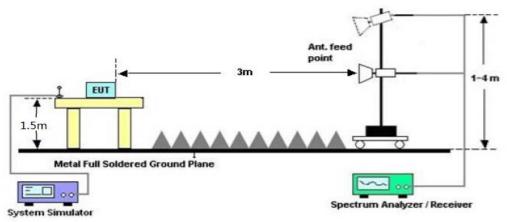


Radiated Emission Test-Setup Frequency Below 30MHz

RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz





9.2.3 PROVISIONS APPLICABLE

(a) On any frequency outside a licensee's frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out. **Note:** only result the worst condition of each test mode:



9.2.4 MEASUREMENT RESULT

GSM 850:

	The Worst Test	Results for Channel	251/848.8 MHz	
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	Comment
1967.60	-48.98	-13	-35.98	Horizontal
3456.47	-32.69	-13	-19.69	Horizontal
6722.25	-45.25	-13	-32.25	Horizontal
1967.60	-38.18	-13	-25.18	Vertical
3399.54	-49.66	-13	-36.66	Vertical
6749.64	-32.23	-13	-19.23	Vertical

GSM 850(EDGE 8):

	The Worst Test Results for Channel 251/848.8 MHz								
Frequency	Emission Level	Limits	Margin	Comment					
(MHz)	(dBm)	(dBm)	(dB)	Comment					
1967.60	-50.16	-13	-37.16	Horizontal					
3485.45	-39.55	-13	-26.55	Horizontal					
6799.64	-48.16	-13	-35.16	Horizontal					
1967.60	-36.23	-13	-23.23	Vertical					
3464.47	-50.59	-13	-37.59	Vertical					
6846.25	-31.44	-13	-18.44	Vertical					



PCS 1900:

	The Worst Test Results for Channel 810/1909.8MHz								
Frequency	Emission Level	Limits	Margin	Comment					
(MHz)	(dBm)	(dBm)	(dB)	Comment					
1847.52	-48.88	-13	-35.88	Horizontal					
3819.60	-35.64	-13	-22.64	Horizontal					
7569.22	-47.11	-13	-34.11	Horizontal					
1845.48	-36.33	-13	-23.33	Vertical					
3845.12	-47.42	-13	-34.42	Vertical					
7644.23	-35.18	-13	-22.18	Vertical					

PCS 1900(EDGE):

	The Worst Test Results for Channel 810/1909.8MHz								
Frequency	Emission Level	Limits	Margin	Comment					
(MHz)	(dBm)	(dBm)	(dB)	Comment					
1800.12	-51.44	-13	-38.44	Horizontal					
3819.60	-39.36	-13	-26.36	Horizontal					
7635.22	-49.49	-13	-36.49	Horizontal					
1814.21	-38.35	-13	-25.35	Vertical					
3819.60	-47.55	-13	-34.55	Vertical					
7631.47	-33.43	-13	-20.43	Vertical					



HSPA band II:

	The Worst Test	Results for Channel 9	9538/1907.6MHz	
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	Comment
1489.55	-45.44	-13	-32.44	Horizontal
3815.20	-30.27	-13	-17.27	Horizontal
7621.02	-49.14	-13	-36.14	Horizontal
1815.42	-31.62	-13	-18.62	Vertical
3815.20	-45.49	-13	-32.49	Vertical
7633.53	-30.2	-13	-17.2	Vertical

HSPA band IV:

	The Worst Test	Results for Channel 8	8763/1752.6MHz	
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	Comment
1854.15	-49.44	-13	-36.44	Horizontal
3505.20	-35.33	-13	-22.33	Horizontal
7833.46	-49.10	-13	-36.10	Horizontal
1486.22	-38.59	-13	-25.59	Vertical
3505.20	-48.42	-13	-35.42	Vertical
7641.36	-34.19	-13	-21.19	Vertical

HSPA band V:

	The Worst Test	Results for Channel	4233/846.6MHz	
Frequency	Emission Level	Limits	Margin	Comment
(MHz)	(dBm)	(dBm)	(dB)	Comment
1693.20	-48.33	-13	-35.33	Horizontal
3025.46	-32.85	-13	-19.85	Horizontal
6643.97	-47.48	-13	-34.48	Horizontal
1693.20	-30.16	-13	-17.16	Vertical
315.23	-44.52	-13	-31.52	Vertical
6513.18	-32.15	-13	-19.15	Vertical

RESULT: PASS

Note:

- 1. Margin = Emission Level -Limit
- 2. Below 30MHZ no Spurious found and Above is the worst mode data



10. FREQUENCY STABILITY

10.1 MEASUREMENT METHOD

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a "call mode". This is accomplished with the use of R&S CMU200 DIGITAL RADIO COMMUNICATION TESTER.

- 1 Measure the carrier frequency at room temperature.
- 2 Subject the EUT to overnight soak at -10° C.

3 With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on channel 661 for PCS 1900 band, channel 190 for GSM 850 band, channel 9400 for UMTS band II and channel 4175 for UMTS band V measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.

4 Repeat the above measurements at 10° C increments from -10° C to $+50^{\circ}$ C. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.

5 Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1 1/2 hours unpowered, to allow any self-heating to stabilize, before continuing.

6 Subject the EUT to overnight soak at +50℃.

7 With the EUT, powered via nominal voltage, connected to the CMU200 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.

8 Repeat the above measurements at 10° C increments from $+50^{\circ}$ C to -10° C. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.

9 At all temperature levels hold the temperature to +/- 0.5° during the measurement procedure.



10.2 PROVISIONS APPLICABLE

10.2.1 FOR HAND CARRIED BATTERY POWERED EQUIPMENT

According to the ANSI/TIA-603-E-2016, the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. As this transceiver is considered "Hand carried, battery powered equipment" Section 2.1055(d)(2) applies. This requires that the lower voltage for frequency stability testing be specified by the manufacturer. This transceiver is specified to operate with an input voltage of between 3.23VDC and 4.35VDC, with a nominal voltage of 3.8VDC. Operation above or below these voltage limits is prohibited by transceiver software in order to prevent improper operation as well as to protect components from overstress. These voltages represent a tolerance of -10 % and +12.5 %. For the purposes of measuring frequency stability these voltage limits are to be used.

10.2.2 FOR EQUIPMENT POWERED BY PRIMARY SUPPLY VOLTAGE

According to the ANSI/TIA-603-E-2016, the frequency stability of the carrier shall be accurate to within 0.1 ppm of the received frequency from the base station. This accuracy is sufficient to meet Sec. 24.235, Frequency Stability. The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. For this EUT section 2.1055(d)(1) applies. This requires varying primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment, the normal environment temperature is 20°C.



10.3 MEASUREMENT RESULT

Test Results

Frequency Error vs. Voltage:

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Limit	Vardiat
Band	Mode	Channel	Temp.	Volt.(V)	(Hz)	(ppm)	(ppm)	Verdict
			TN	3.23	10.72	0.013007	±2.5	PASS
		LCH	TN	3.80	8.20	0.009949	±2.5	PASS
			TN	4.35	12.66	0.015360	±2.5	PASS
		м мсн	TN	3.23	1.61	0.001924	±2.5	PASS
GSM850	GSM		TN	3.80	1.68	0.002008	±2.5	PASS
			TN	4.35	3.87	0.004626	±2.5	PASS
			TN	3.23	13.43	0.015822	±2.5	PASS
		HCH	TN	3.80	6.33	0.007458	±2.5	PASS
			TN	4.35	2.65	0.003122	±2.5	PASS

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Limit	Vardiat
Band	Mode	Channel	Temp.	Volt.(V)	(Hz)	(ppm)	(ppm)	Verdict
			TN	3.23	16.69	0.020250	±2.5	PASS
		LCH	TN	3.80	18.63	0.022604	±2.5	PASS
			TN	4.35	15.79	0.019158	±2.5	PASS
			TN	3.23	14.43	0.017248	±2.5	PASS
GSM850	EDGE	EDGE MCH	TN	3.80	13.08	0.015635	±2.5	PASS
			TN	4.35	11.69	0.013973	±2.5	PASS
			TN	3.23	18.37	0.021642	±2.5	PASS
			TN	3.80	16.66	0.019628	±2.5	PASS
			TN	4.35	16.50	0.019439	±2.5	PASS



Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Verdict
Band	Mode	Channel	Temp.	Volt. (V)	(Hz)	(ppm)	
			TN	3.23	10.14	0.005480	PASS
		LCH	TN	3.80	13.62	0.007361	PASS
			TN	4.35	11.69	0.006318	PASS
DOO		м мсн	TN	3.23	8.39	0.004463	PASS
PCS 1900	GSM		TN	3.80	13.43	0.007144	PASS
1900			TN	4.35	11.62	0.006181	PASS
			TN	3.23	-7.23	-0.003786	PASS
		HCH	TN	3.80	-8.14	-0.004262	PASS
			TN	4.35	-2.65	-0.001388	PASS

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Verdict
Band	Mode	Channel	Temp.	Volt. (V)	(Hz)	(ppm)	
			ΤN	3.23	-7.97	-0.004308	PASS
		LCH	TN	3.80	-3.68	-0.001989	PASS
			TN	4.35	-3.26	-0.001762	PASS
PCS			TN	3.23	0.16	0.000085	PASS
1900	EDGE	MCH	TN	3.80	-1.87	-0.000995	PASS
1900			TN	4.35	-0.94	-0.000500	PASS
		НСН	TN	3.23	-12.75	-0.006676	PASS
			TN	3.80	-9.78	-0.005121	PASS
			TN	4.35	-10.17	-0.005325	PASS



Frequency Error vs. Temperature:

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Limit	Vordict
Band	Mode	Channel	Volt.	Tem. (° ℃)	(Hz)	(ppm)	(ppm)	Verdict
			VN	-10	10.72	0.013007	±2.5	PASS
			VN	0	7.43	0.009015	±2.5	PASS
			VN	10	12.14	0.014729	±2.5	PASS
GSM850	GSM	LCH	VN	20	14.46	0.017544	±2.5	PASS
			VN	30	12.01	0.014572	±2.5	PASS
			VN	40	9.43	0.011441	±2.5	PASS
			VN	50	5.75	0.006976	±2.5	PASS
		SM МСН	VN	-10	3.81	0.004554	±2.5	PASS
			VN	0	2.45	0.002929	±2.5	PASS
			VN	10	7.49	0.008953	±2.5	PASS
GSM850	GSM		VN	20	13.95	0.016675	±2.5	PASS
			VN	30	6.39	0.007638	±2.5	PASS
			VN	40	9.04	0.010806	±2.5	PASS
			VN	50	8.07	0.009646	±2.5	PASS
			VN	-10	6.46	0.007611	±2.5	PASS
			VN	0	7.55	0.008895	±2.5	PASS
			VN	10	6.39	0.007528	±2.5	PASS
GSM850	GSM	НСН	VN	20	4.97	0.005855	±2.5	PASS
			VN	30	6.46	0.007611	±2.5	PASS
			VN	40	3.49	0.004112	±2.5	PASS
			VN	50	8.65	0.010191	±2.5	PASS



Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Limit	Verdict	
Band	Mode	Channel	Volt.	Tem. (℃)	(Hz)	(ppm)	(ppm)	verdict	
			VN	-10	17.85	0.021657	±2.5	PASS	
			VN	0	15.50	0.018806	±2.5	PASS	
	M850 EDGE		VN	10	15.17	0.018406	±2.5	PASS	
GSM850		LCH	VN	20	13.79	0.016731	±2.5	PASS	
			VN	30	14.30	0.017350	±2.5	PASS	
				VN	40	12.59	0.015275	±2.5	PASS
			VN	50	11.85	0.014378	±2.5	PASS	
		Е МСН	VN	-10	14.63	0.017751	±2.5	PASS	
			VN	0	14.14	0.017156	±2.5	PASS	
			VN	10	11.24	0.013435	±2.5	PASS	
GSM850	EDGE		VN	20	13.43	0.016053	±2.5	PASS	
			VN	30	12.72	0.015204	±2.5	PASS	
			VN	40	13.46	0.016089	±2.5	PASS	
			VN	50	11.07	0.013232	±2.5	PASS	
			VN	-10	11.43	0.013662	±2.5	PASS	
			VN	0	12.11	0.014475	±2.5	PASS	
			VN	10	14.79	0.017679	±2.5	PASS	
GSM850	EDGE	HCH	VN	20	12.66	0.015133	±2.5	PASS	
			VN	30	17.08	0.020123	±2.5	PASS	
			VN	40	17.21	0.020276	±2.5	PASS	
			VN	50	18.73	0.022066	±2.5	PASS	



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Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Verdiet
Band	Mode	Channel	Volt.	Tem. (° ℃)	(Hz)	(ppm)	Verdict
			VN	-10	12.66	0.006843	PASS
			VN	0	16.14	0.008723	PASS
PCS			VN	10	13.30	0.007188	PASS
1900	GSM	LCH	VN	20	12.07	0.006524	PASS
1900			VN	30	13.62	0.007361	PASS
			VN	40	12.40	0.006702	PASS
			VN	50	9.88	0.005340	PASS
			VN	-10	10.59	0.005724	PASS
			VN	0	12.01	0.006491	PASS
DOO		МСН	VN	10	12.46	0.006628	PASS
PCS 1900	GSM		VN	20	17.05	0.009069	PASS
1900			VN	30	16.27	0.008654	PASS
			VN	40	13.37	0.007112	PASS
			VN	50	15.11	0.008037	PASS
			VN	-10	14.40	0.007660	PASS
			VN	0	19.31	0.010271	PASS
DOO			VN	10	16.66	0.008862	PASS
PCS	GSM	HCH	VN	20	16.98	0.009032	PASS
1900	1900		VN	30	5.04	0.002639	PASS
			VN	40	4.84	0.002534	PASS
			VN	50	5.23	0.002739	PASS



Report No.: HK1901140097E

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Vordict
Band	Mode	Channel	Volt.	Tem. (℃)	(Hz)	(ppm)	Verdict
			VN	-30	-4.65	-0.002513	PASS
			VN	-20	-6.36	-0.003437	PASS
			VN	-10	-3.68	-0.001989	PASS
			VN	0	-7.01	-0.003789	PASS
GSM1900	GSM1900 EDGE	LCH	VN	10	-7.26	-0.003924	PASS
			VN	20	-6.39	-0.003454	PASS
			VN	30	-9.10	-0.004918	PASS
			VN	40	-8.52	-0.004605	PASS
			VN	50	-5.81	-0.003140	PASS
			VN	-30	1.61	0.000856	PASS
			VN	-20	3.87	0.002059	PASS
			VN	-10	-1.26	-0.000670	PASS
			VN	0	-1.58	-0.000840	PASS
GSM1900	EDGE	МСН	VN	10	-1.97	-0.001048	PASS
			VN	20	-2.52	-0.001340	PASS
			VN	30	1.13	0.000601	PASS
			VN	40	-2.49	-0.001324	PASS
			VN	50	-1.84	-0.000979	PASS
			VN	-30	-13.50	-0.007069	PASS
			VN	-20	-9.65	-0.005053	PASS
			VN	-10	-13.50	-0.007069	PASS
			VN	0	-9.40	-0.004922	PASS
GSM1900	EDGE	НСН	VN	10	-15.17	-0.007943	PASS
			VN	20	-10.62	-0.005561	PASS
			VN	30	-11.88	-0.006221	PASS
			VN	40	-13.59	-0.007116	PASS
			VN	50	-12.40	-0.006493	PASS



Frequency Error vs. Voltage:

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Limit	Vordiat
Band	Mode	Channel	Temp.	Volt.(V)	(Hz)	(ppm)	(ppm)	Verdict
			ΤN	3.23	4.49	0.005433	±2.5	PASS
		LCH	ΤN	3.80	2.75	0.003328	±2.5	PASS
			ΤN	4.35	2.44	0.002953	±2.5	PASS
		ITS MCH	ΤN	3.23	-0.18	-0.000215	±2.5	PASS
WCDMA850	UMTS		ΤN	3.80	2.11	0.002523	±2.5	PASS
			ΤN	4.35	0.96	0.001148	±2.5	PASS
			ΤN	3.23	-2.76	-0.003260	±2.5	PASS
		НСН	ΤN	3.80	0.52	0.000614	±2.5	PASS
			ΤN	4.35	-0.06	-0.000071	±2.5	PASS

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Verdict
Band	Mode	Channel	Temp.	Volt.(V)	(Hz)	(ppm)	verdici
WCDMA1700	UMTS	LCH	TN	3.23	16.07	0.009384	PASS
			TN	3.80	15.20	0.008876	PASS
			TN	4.35	16.75	0.009782	PASS
		МСН	TN	3.23	-5.81	-0.003354	PASS
			TN	3.80	-4.23	-0.002442	PASS
			TN	4.35	-3.91	-0.002257	PASS
		НСН	TN	3.23	93.43	0.053309	PASS
			TN	3.80	-18.86	-0.010761	PASS
			TN	4.35	-21.80	-0.012439	PASS



Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Vardiat
Band	Mode	Channel	Temp.	Volt.(V)	(Hz)	(ppm)	Verdict
WCDMA1900	UMTS	LCH	TN	3.23	0.40	0.000216	PASS
			TN	3.80	-1.22	-0.000659	PASS
			TN	4.35	3.57	0.001927	PASS
		МСН	TN	3.23	-2.38	-0.001266	PASS
			TN	3.80	-5.33	-0.002835	PASS
			TN	4.35	-6.59	-0.003505	PASS
		НСН	TN	3.23	305.33	0.160060	PASS
			TN	3.80	450.07	0.235935	PASS
			ΤN	4.35	111.10	0.058241	PASS



Frequency Error vs. Temperature:

Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated	Limit	Verdiet
Band	Mode	Channel	Volt.	Tem. (℃)	(Hz)	(ppm)	(ppm)	Verdict
			VN	-10	3.94	0.004768	±2.5	PASS
			VN	0	3.62	0.004380	±2.5	PASS
WCDMA850			VN	10	3.49	0.004223	±2.5	PASS
	UMTS	LCH	VN	20	-3.42	-0.004138	±2.5	PASS
			VN	30	3.48	0.004211	±2.5	PASS
			VN	40	6.06	0.007333	±2.5	PASS
			VN	50	4.78	0.005784	±2.5	PASS
	UMTS	МСН	VN	-10	4.75	0.005679	±2.5	PASS
			VN	0	0.87	0.001040	±2.5	PASS
			VN	10	1.24	0.001483	±2.5	PASS
WCDMA850			VN	20	2.38	0.002846	±2.5	PASS
			VN	30	4.00	0.004782	±2.5	PASS
			VN	40	1.65	0.001973	±2.5	PASS
			VN	50	3.62	0.004328	±2.5	PASS
	UMTS	S HCH	VN	-10	2.06	0.002433	±2.5	PASS
			VN	0	0.73	0.000862	±2.5	PASS
WCDMA850			VN	10	1.98	0.002339	±2.5	PASS
			VN	20	1.48	0.001748	±2.5	PASS
			VN	30	-4.44	-0.005245	±2.5	PASS
			VN	40	-1.31	-0.001547	±2.5	PASS
			VN	50	1.22	0.001441	±2.5	PASS



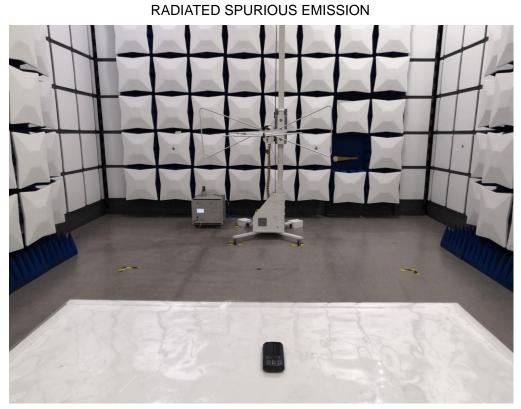
Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated) (a reliet
Band	Mode	Channel	Volt.	Temp. ℃	(Hz)	(ppm)	Verdict
			VN	-10	17.12	0.009998	PASS
			VN	0	18.08	0.010558	PASS
WCDMA1700			VN	10	19.81	0.011569	PASS
	UMTS	LCH	VN	20	15.01	0.008765	PASS
			VN	30	15.99	0.009338	PASS
			VN	40	15.63	0.009128	PASS
			VN	50	16.34	0.009542	PASS
	UMTS	6 MCH	VN	-10	16.85	0.009726	PASS
			VN	0	15.58	0.008993	PASS
			VN	10	-3.07	-0.001772	PASS
WCDMA1700			VN	20	-1.50	-0.000866	PASS
			VN	30	-3.51	-0.002026	PASS
			VN	40	-5.75	-0.003319	PASS
			VN	50	0.46	0.000266	PASS
	UMTS	6 НСН	VN	-10	1.79	0.001021	PASS
			VN	0	-0.15	-0.000086	PASS
WCDMA1700			VN	10	-0.96	-0.000548	PASS
			VN	20	-4.90	-0.002796	PASS
			VN	30	96.86	0.055266	PASS
			VN	40	96.79	0.055227	PASS
			VN	50	181.90	0.103789	PASS



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Test	Test	Test	Test	Test	Freq.Error	Freq.vs.rated) (a seli a t
Band	Mode	Channel	Volt.	Tem. (℃)	(Hz)	(ppm)	Verdict
WCDMA1900		LCH	VN	-10	2.81	0.001517	PASS
			VN	0	4.59	0.002478	PASS
			VN	10	0.99	0.000534	PASS
	UMTS		VN	20	5.49	0.002964	PASS
			VN	30	3.34	0.001803	PASS
			VN	40	2.59	0.001398	PASS
			VN	50	0.93	0.000502	PASS
	UMTS	6 MCH	VN	-10	2.73	0.001452	PASS
			VN	0	0.98	0.000521	PASS
			VN	10	-3.40	-0.001809	PASS
WCDMA1900			VN	20	-7.22	-0.003840	PASS
			VN	30	-3.75	-0.001995	PASS
			VN	40	-3.74	-0.001989	PASS
			VN	50	-4.73	-0.002516	PASS
	UMTS	6 НСН	VN	-10	-2.47	-0.001295	PASS
			VN	0	-2.38	-0.001248	PASS
WCDMA1900			VN	10	-2.72	-0.001426	PASS
			VN	20	-4.91	-0.002574	PASS
			VN	30	231.26	0.121231	PASS
			VN	40	106.92	0.056049	PASS
			VN	50	385.65	0.202165	PASS





APPENDIX A: PHOTOGRAPHS OF TEST SETUP

RADIATED SPURIOUS ABOVE 1G EMISSION



----END OF REPORT----