Fig.23 WCDMA Band II-CH9400 Occupied Bandwidth（HSUPA Subtest 5）

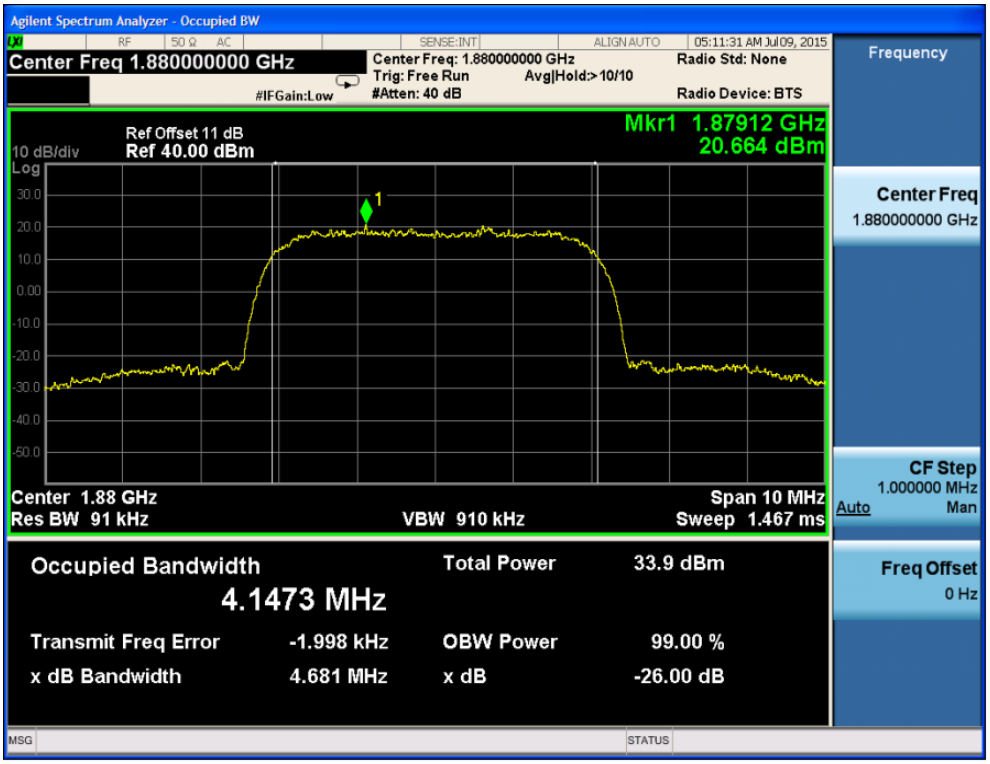
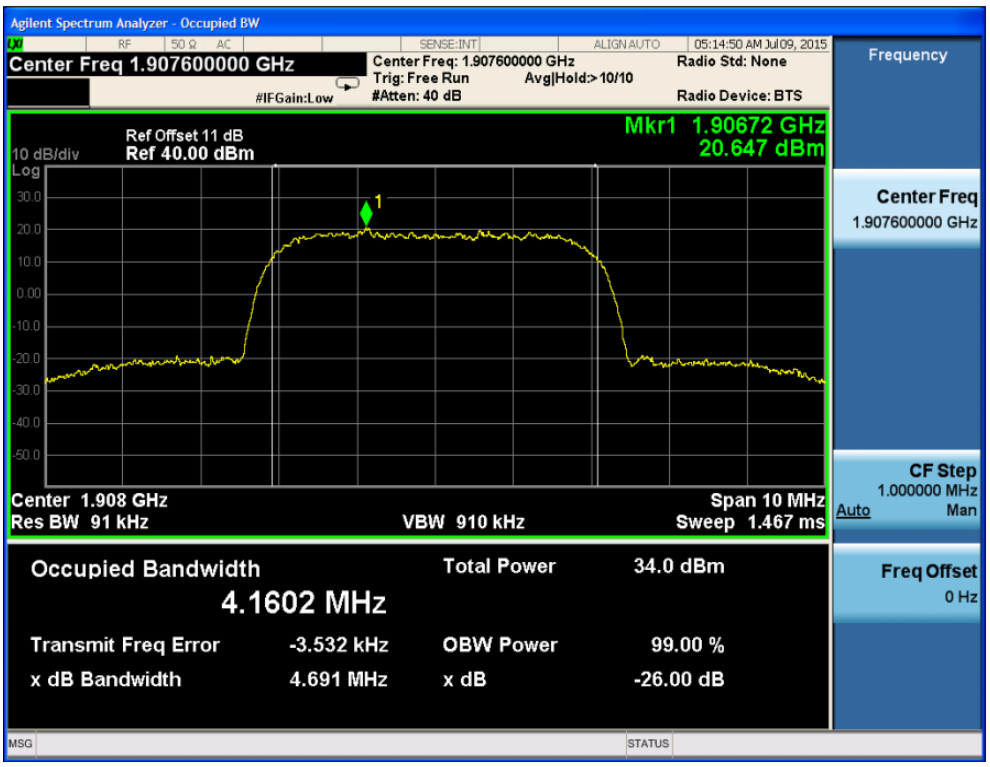


Fig.24 WCDMA Band II-CH9538 Occupied Bandwidth（HSUPA Subtest 5）



B.4 Emission Limit(22.917(b)/ 24.238(b))

B.4.1 Description

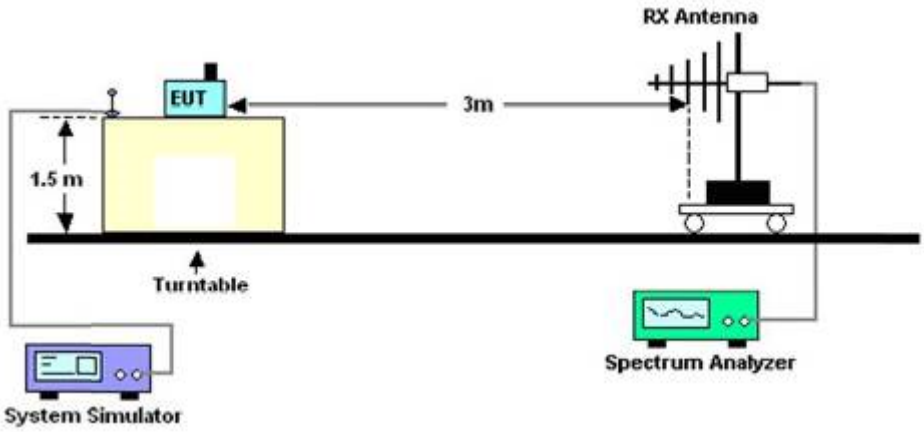
The radiated spurious emission was measured by substitution method according to TIA-603C-2004.The power of any emission outside of the authorized operating frequency ranges must be lower than transmitter power by a factor of at least 43+10log(P) dB. The spectrum is scanned from 30MHz up to a frequency including its 10th harmonic.

B.4.2Test Procedure

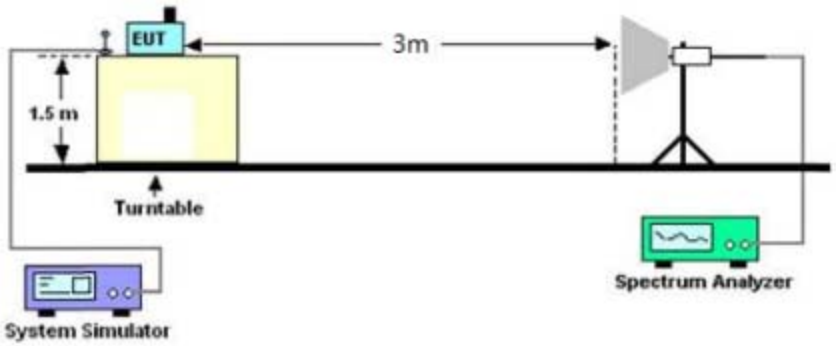
1. The EUT was placed on a 0.8 meter high rotatable wooden table.
2. The EUT was set 3 meters test distance from the receive antenna.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search maximum spurious emission for both horizontal and vertical polarizations.

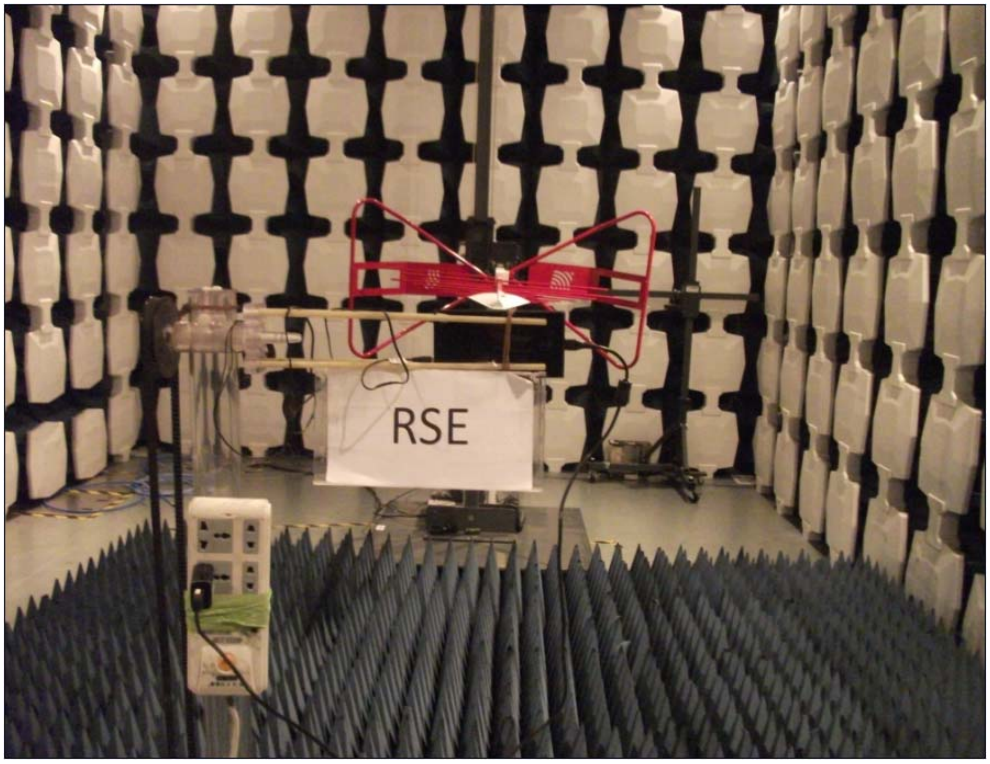
B.4.3 Test Setup

<Below 1GHz>



<Above 1GHz>





B.4.4 Measurement Uncertainty

RSE Uncertainty Evaluation (30MHz~1000MHz)	
Uncertainty for 95% Confidence	3.4dB
RSE Uncertainty Evaluation (1GHz~13GHz)	

Uncertainty for 95% Confidence	3.4dB

B.4.5Test Results

Band	CH	Frequency(MHz)	Result	Verdict
GSM850	189	836.6	Fig.25	Pass
			Fig.26	Pass
GSM1900	661	1880.0	Fig.27	Pass
			Fig.28	Pass
WCDMA Band V	4175	835	Fig.29	Pass
			Fig.30	Pass
WCDMA Band II	9400	1880.0	Fig.31	Pass
			Fig.32	Pass

Fig.25 GSM850 on Channel 189 30MHz~3GHz

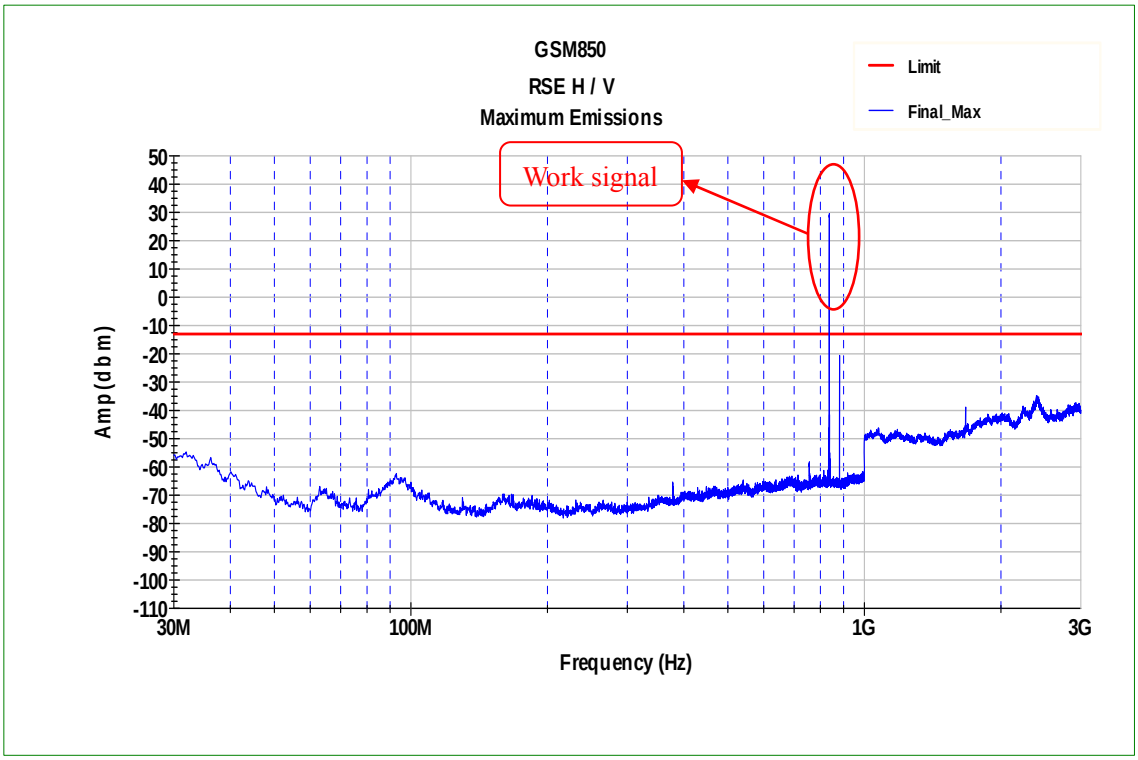
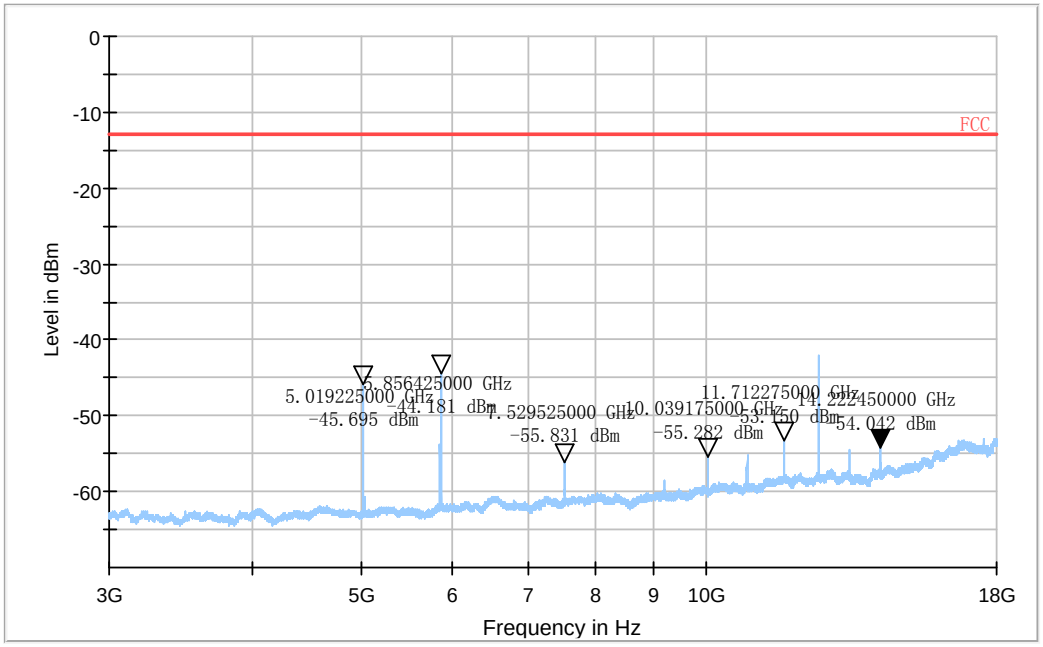


Fig.26 GSM850 on Channel 189 3GHz~9GHz



GSM 850

Fig.27 GSM1900 on Channel 661 30MHz~3GHz

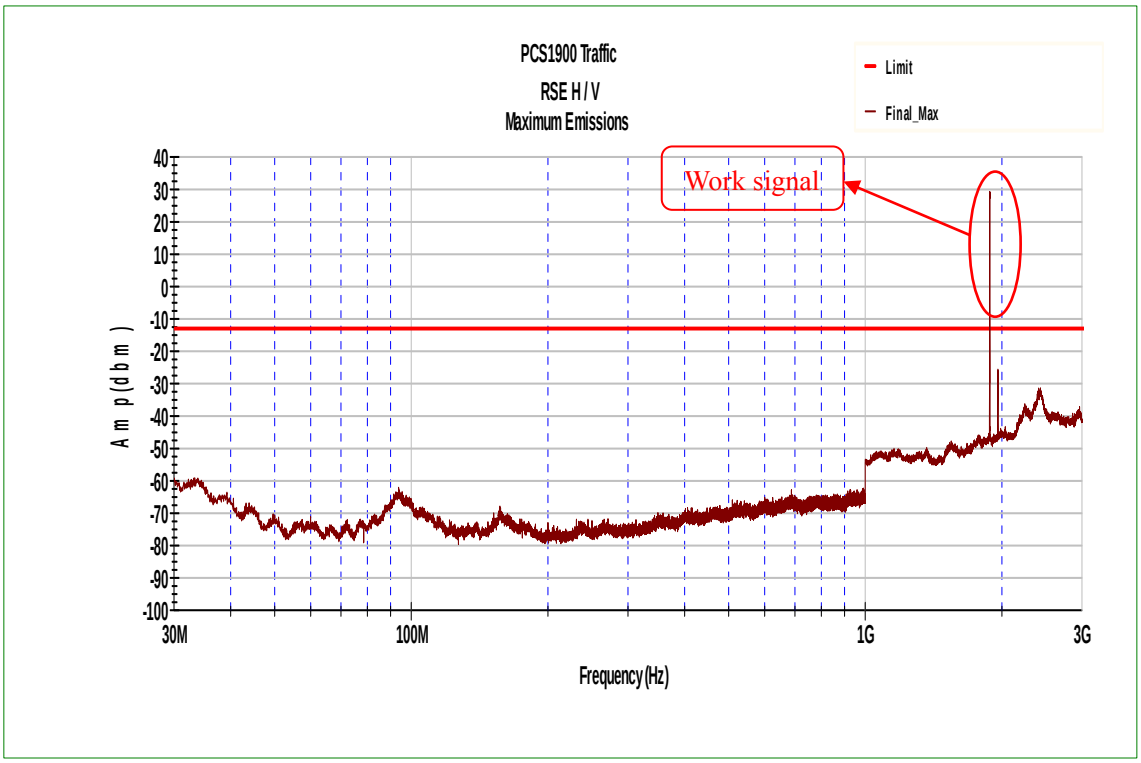
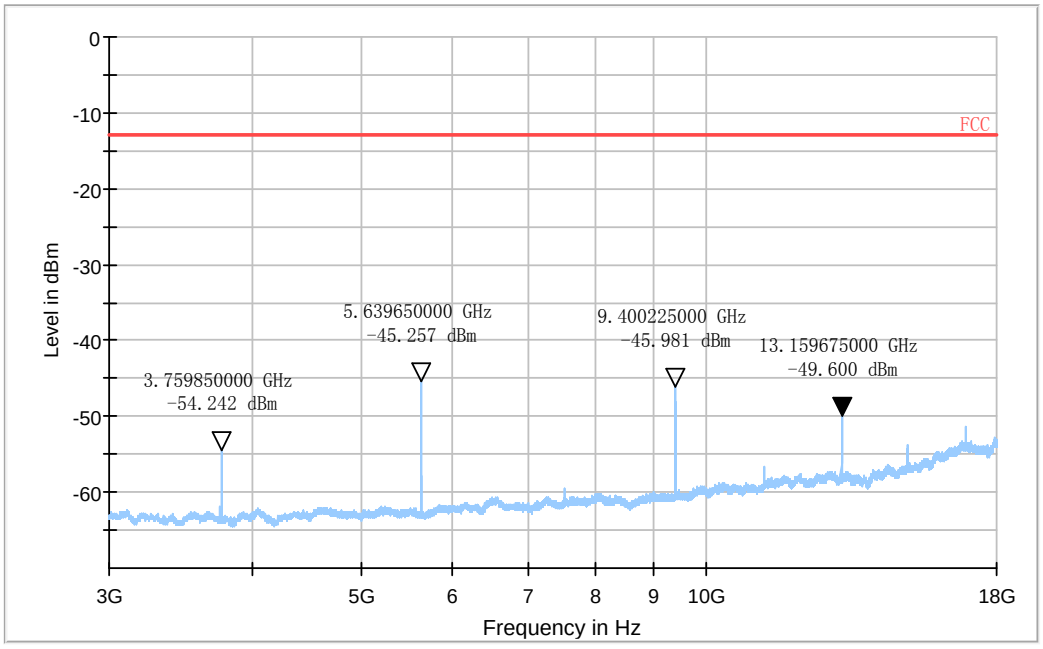


Fig.28 GSM1900 on Channel 661 3GHz~19.1GHz



PCS 1900

Fig.29 WCDMA Band V on Channel 4175 30MHz~3GHz

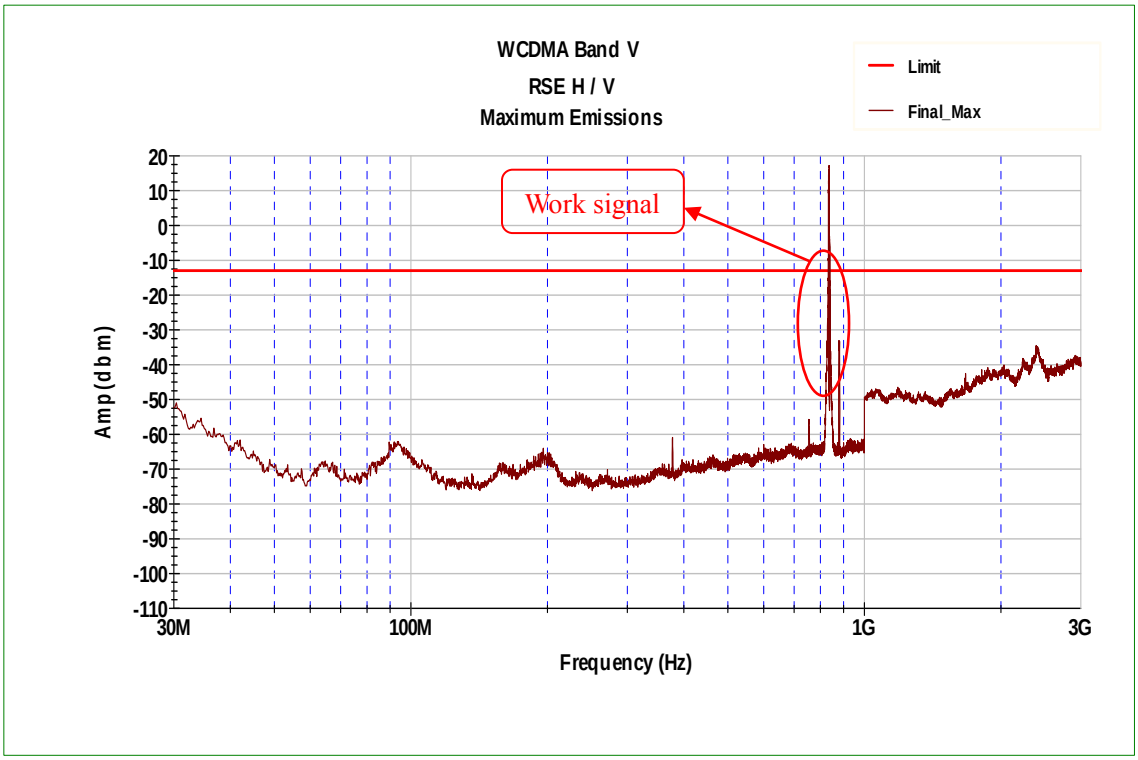
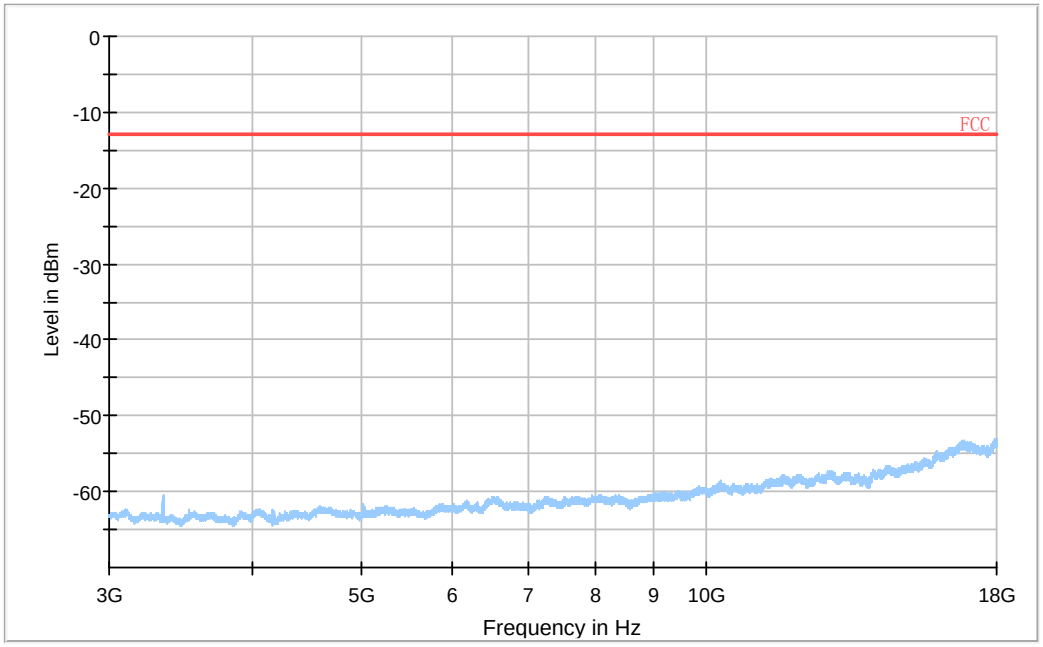


Fig.30 WCDMA Band V on Channel 4175 3GHz~9GHz



WCDMA B5

Fig.31 WCDMA Band II Channel 9400 30MHz~3GHz

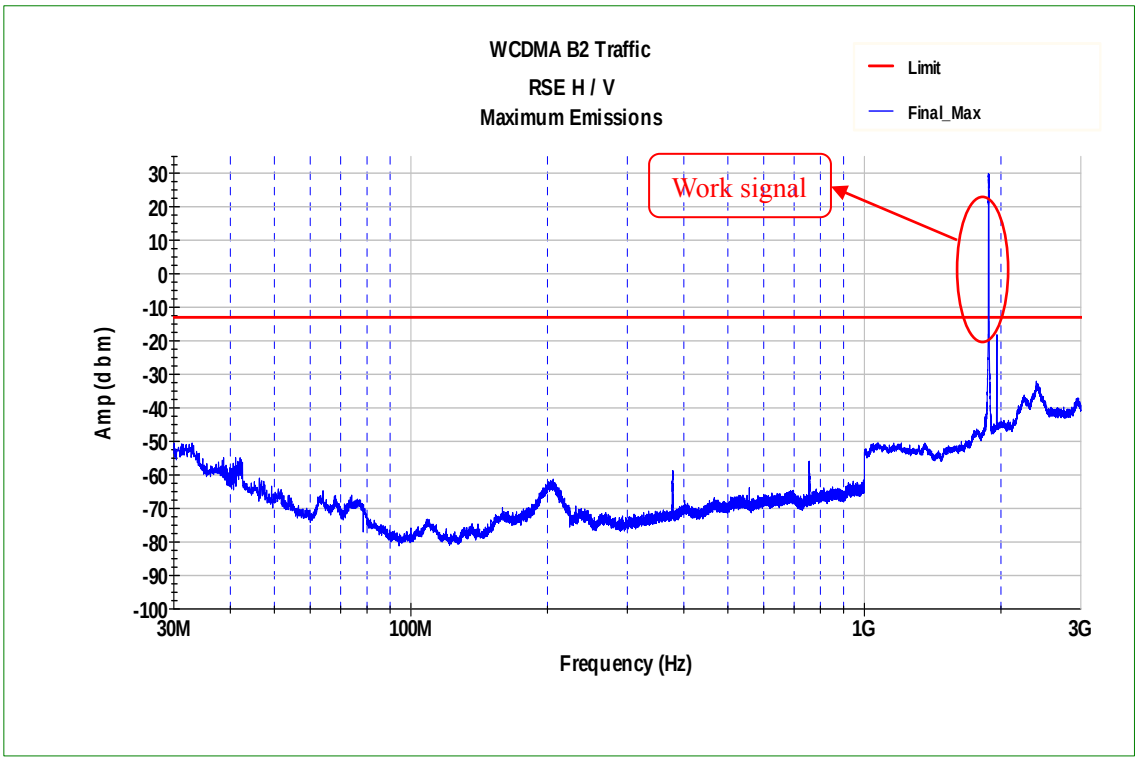
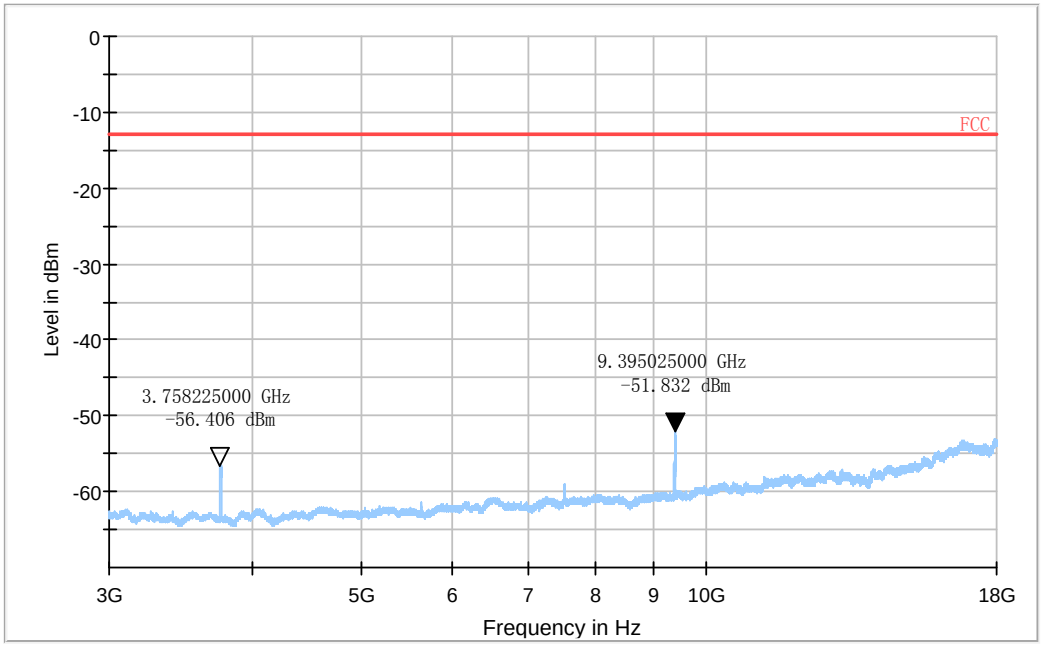


Fig.32 WCDMA Band II Channel 9400 3GHz~19.1GHz



WCDMA B2

B.5 Band Edge Compliance(22.917(b)/ 24.238)

B.5.1 Description

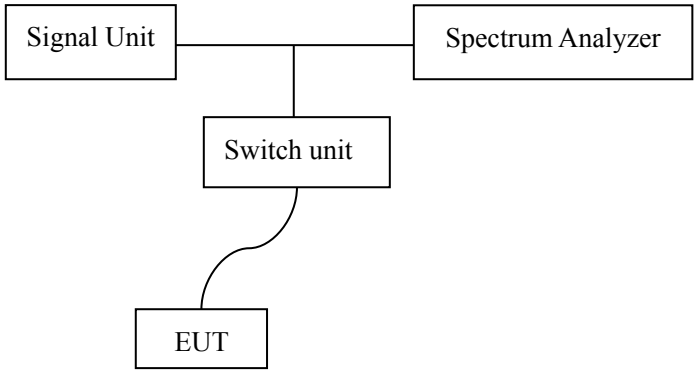
The power of any emission outside of the authorized operating frequency ranges must be lower than transmitter power by a factor of at least 43+10log(P) dB.

B.5.2 Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station.

2. The band edge of low and high channel for maximum RF power was measured. Setting RBW is as roughly BW/100.

B.5.3 Test Setup



B.5.4 Test Results

Band	CH	Frequency(MHz)	Result	Verdict
GSM850	128	824.2	Fig.33	Pass
	251	848.8	Fig.34	Pass
GSM1900	512	1850.2	Fig.35	Pass
	810	1909.8	Fig.36	Pass
WCDMA Band V	4133	824.2	Fig.37	Pass
	4232	848.8	Fig.38	Pass
WCDMA Band VHSDPA Subtest 1	4133	824.2	Fig.39	Pass
	4232	848.8	Fig.40	Pass
WCDMA Band VHSUPA Subtest 5	4133	824.2	Fig.41	Pass
	4232	848.8	Fig.42	Pass
WCDMA Band II	9263	1850.2	Fig.43	Pass
	9538	1909.8	Fig.44	Pass
WCDMA Band IIHSDPA Subtest 1	9263	1850.2	Fig.45	Pass
	9538	1909.8	Fig.46	Pass
WCDMA Band IIHSUPA Subtest 5	9263	1850.2	Fig.47	Pass
	9538	1909.8	Fig.48	Pass

Fig.33 GSM850-CH128 Band Edge Compliance

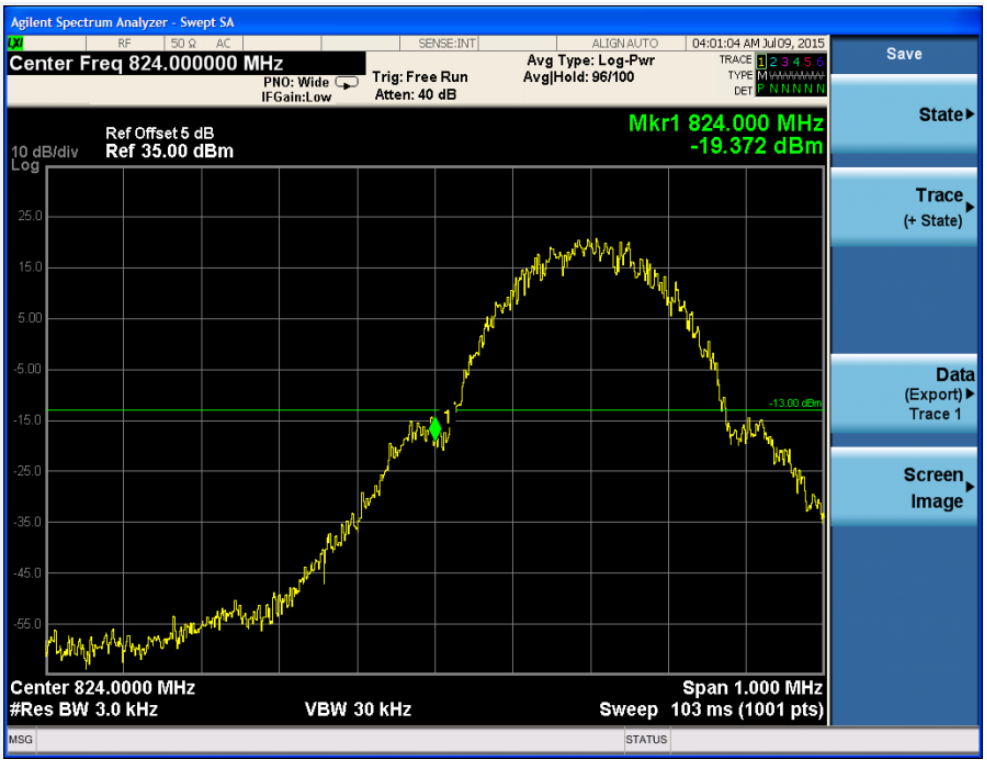


Fig.34 GSM850-CH251 Band Edge Compliance

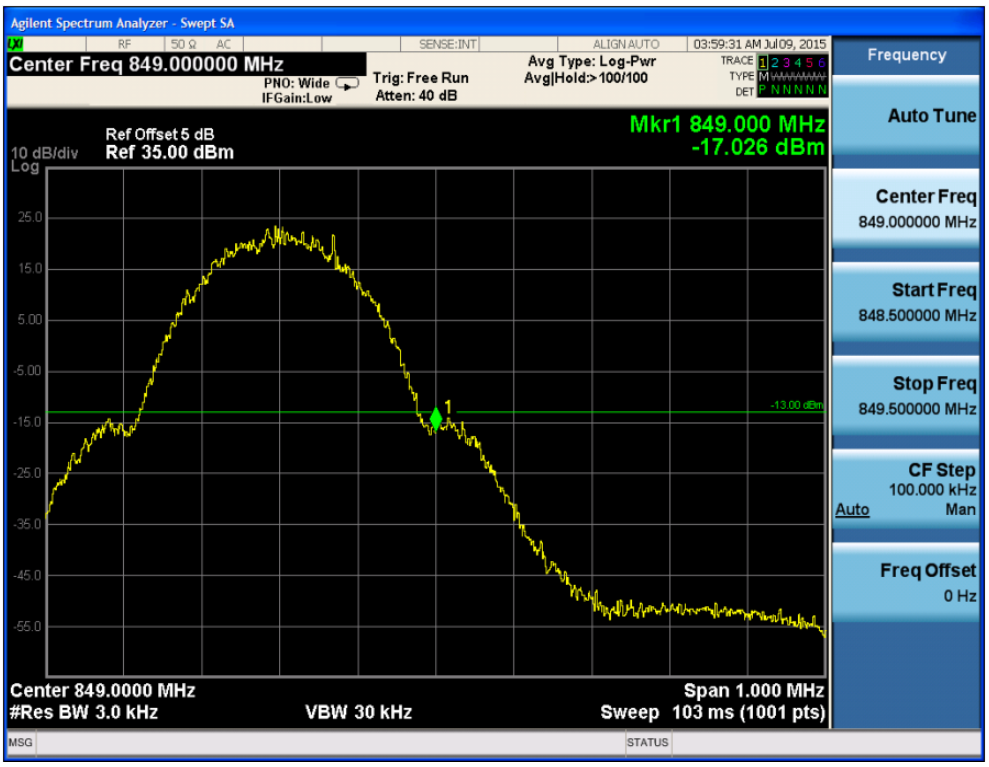


Fig.35 GSM1900-CH512 Band Edge Compliance

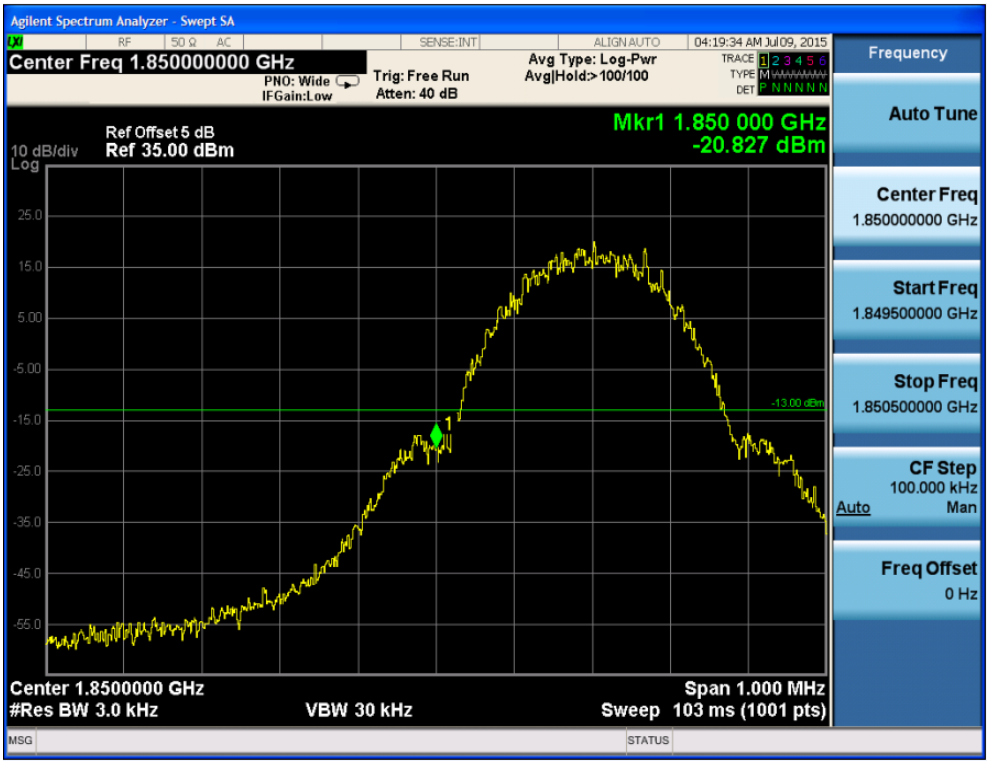


Fig.36 GSM1900-CH810 Band Edge Compliance

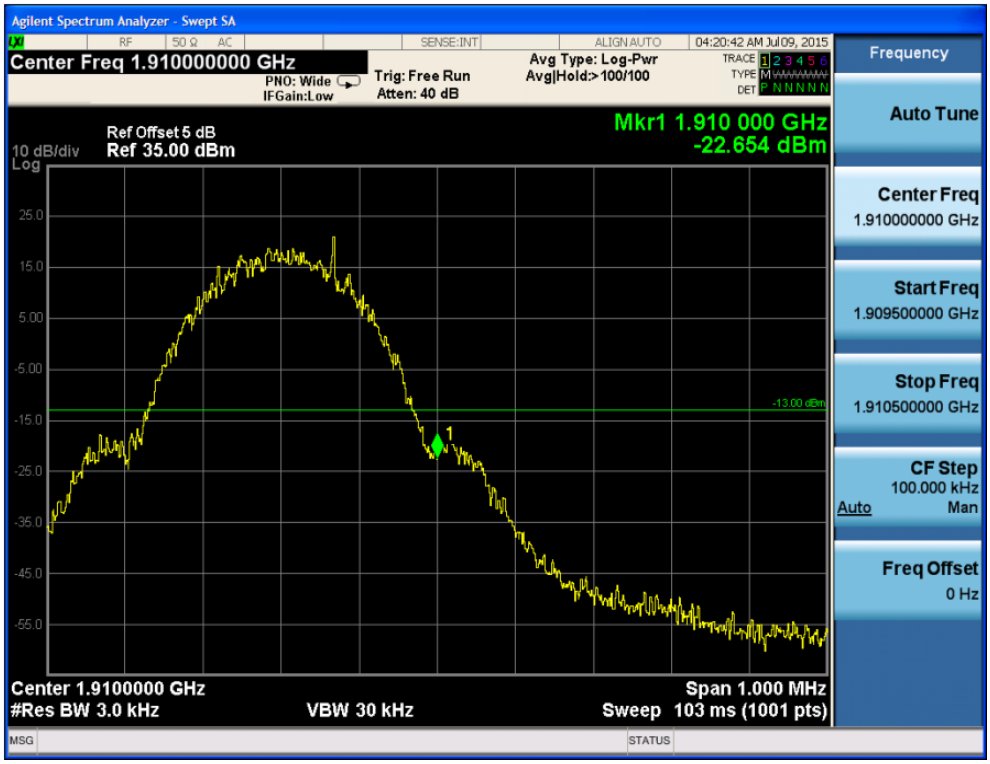


Fig.37 WCDMA Band V-CH4133 Band Edge Compliance

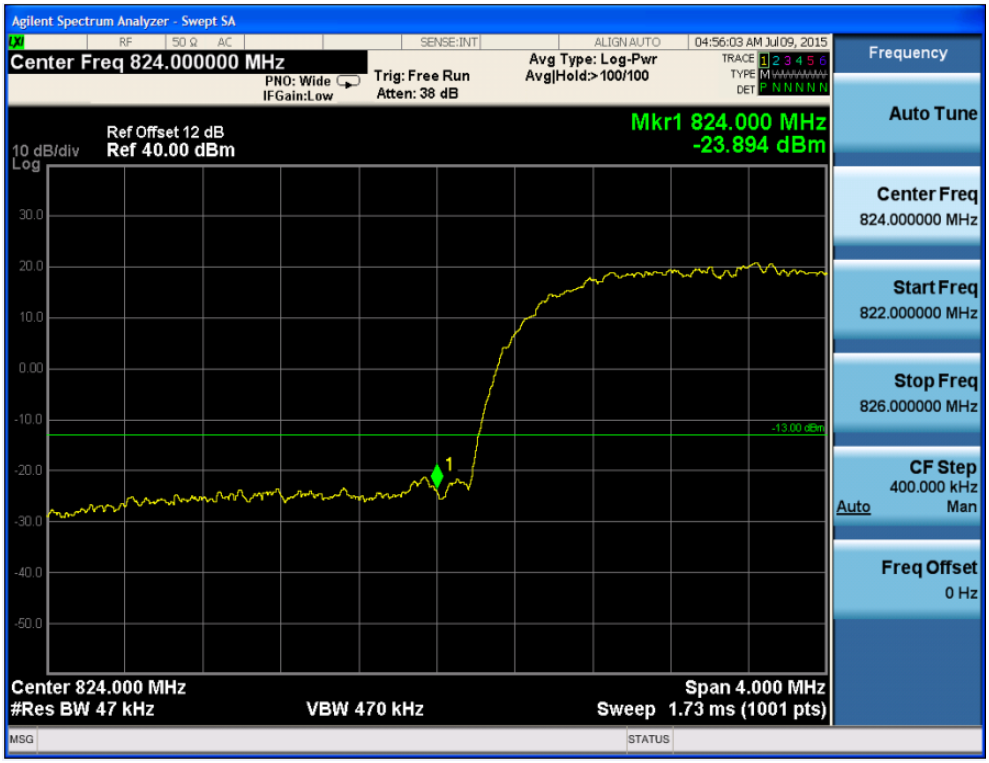


Fig.38 WCDMA Band V-CH4232Band Edge Compliance

Fig.39 WCDMA Band V-CH4133 Band Edge Compliance HSDPA Subtest 1

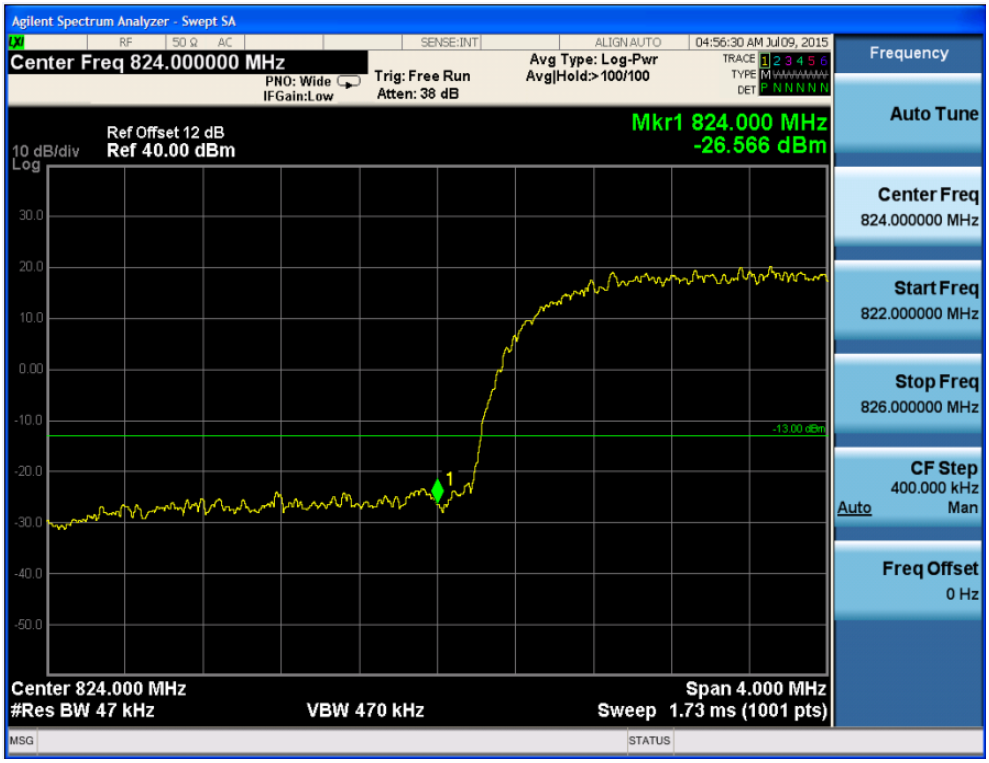


Fig.40 WCDMA Band V-CH4232Band Edge Compliance HSDPA Subtest 1

Fig.41 WCDMA Band V-CH4133 Band Edge Compliance HSUPA Subtest 5

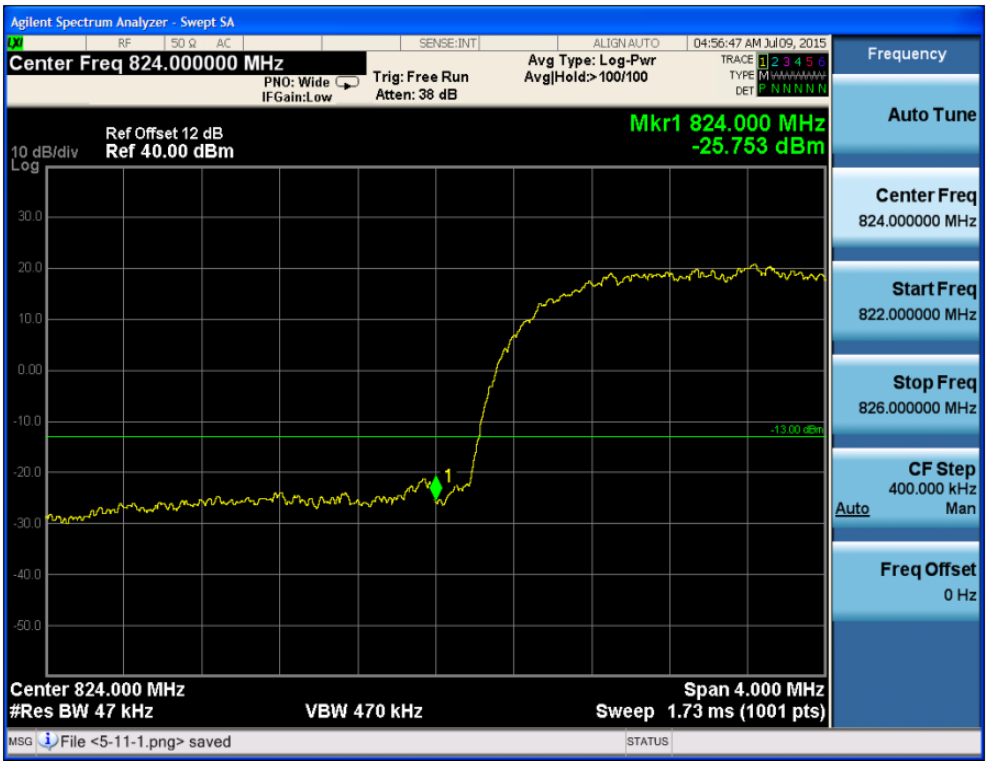


Fig.42 WCDMA Band V-CH4232Band Edge Compliance HSUPA Subtest 5

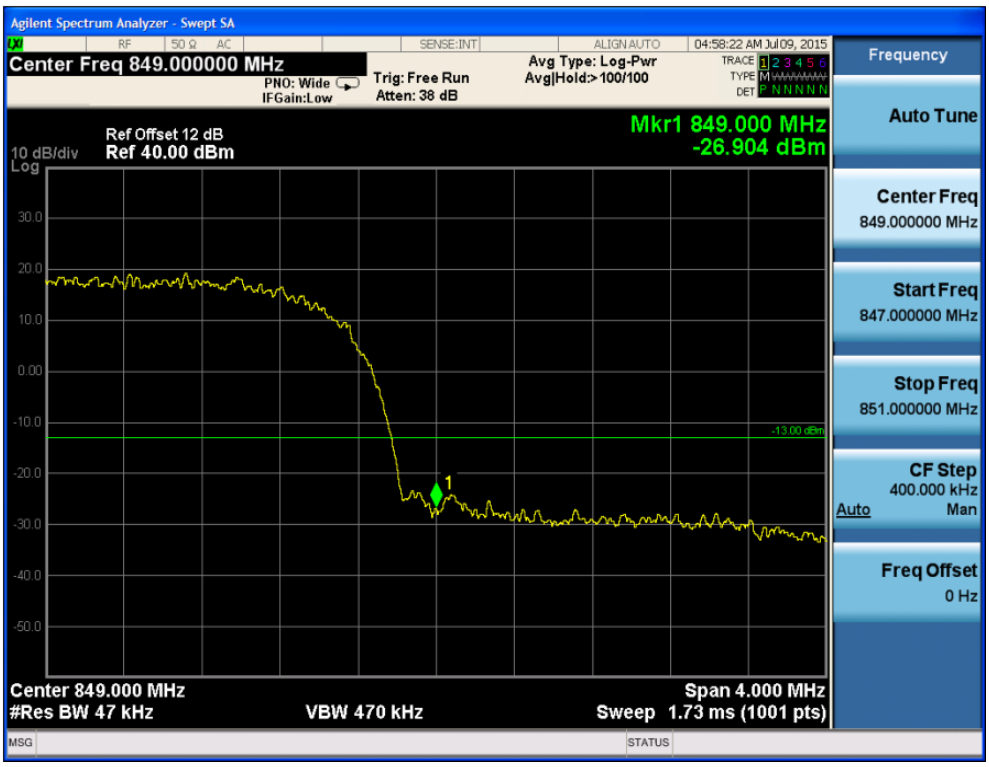


Fig.43 WCDMA Band II-CH9263Band Edge Compliance

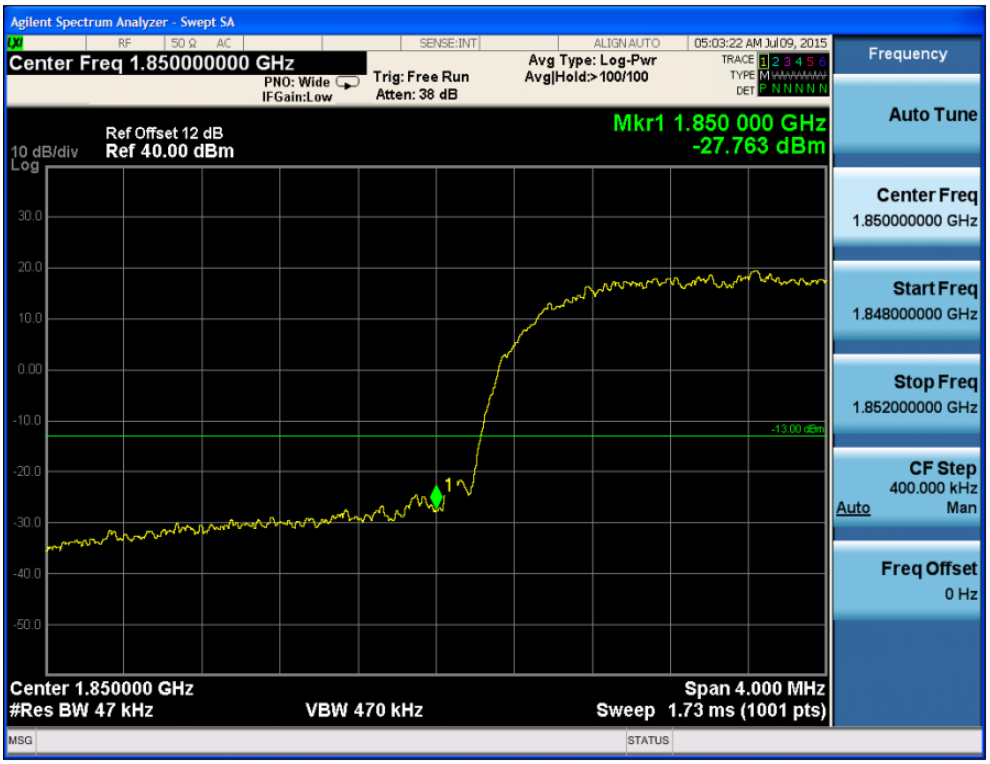


Fig.44 WCDMA Band II-CH9538Band Edge Compliance

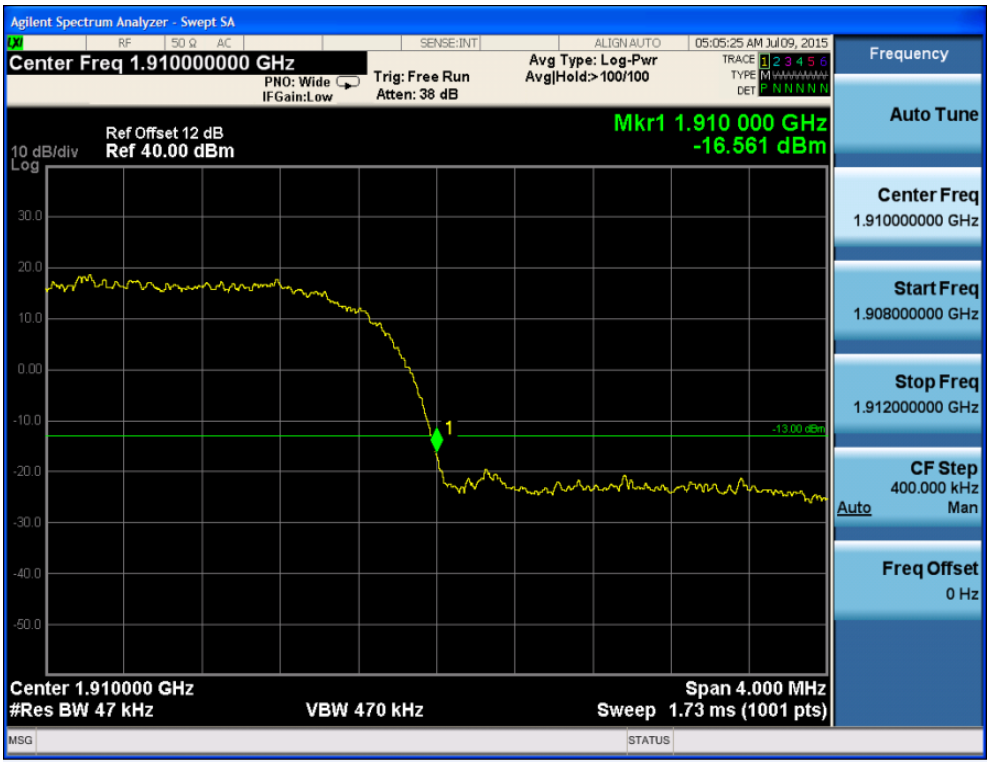


Fig.45 WCDMA Band II-CH9263Band Edge Compliance HSDPA Subtest 1

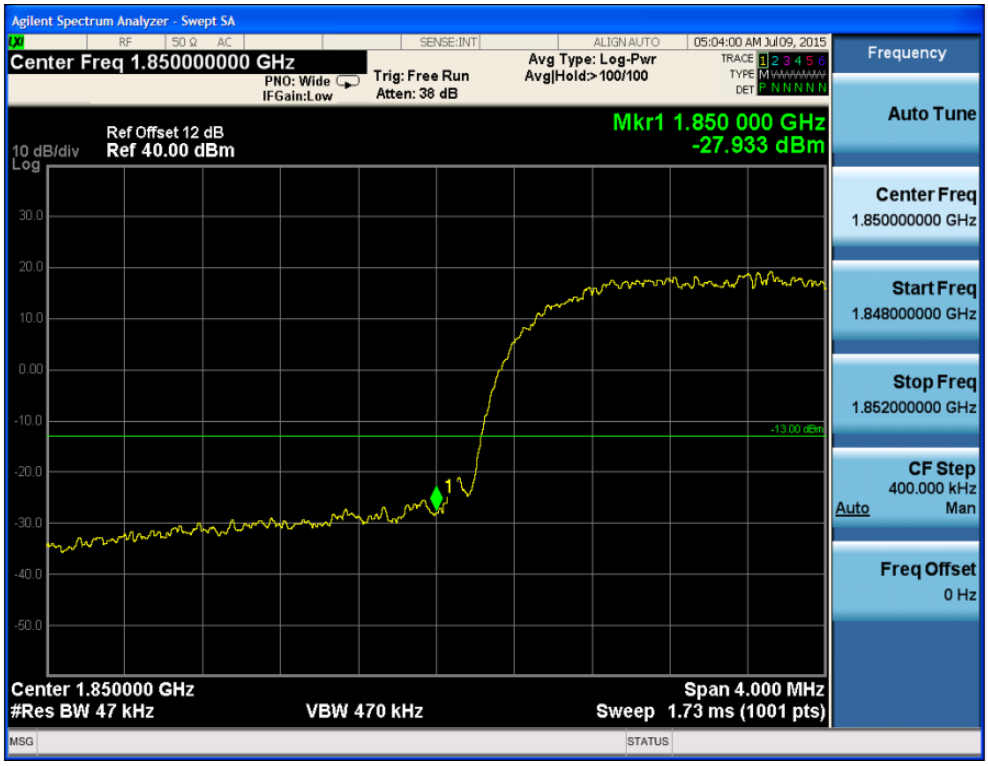


Fig.46 WCDMA Band II-CH9538 Band Edge Compliance HSDPA Subtest 1

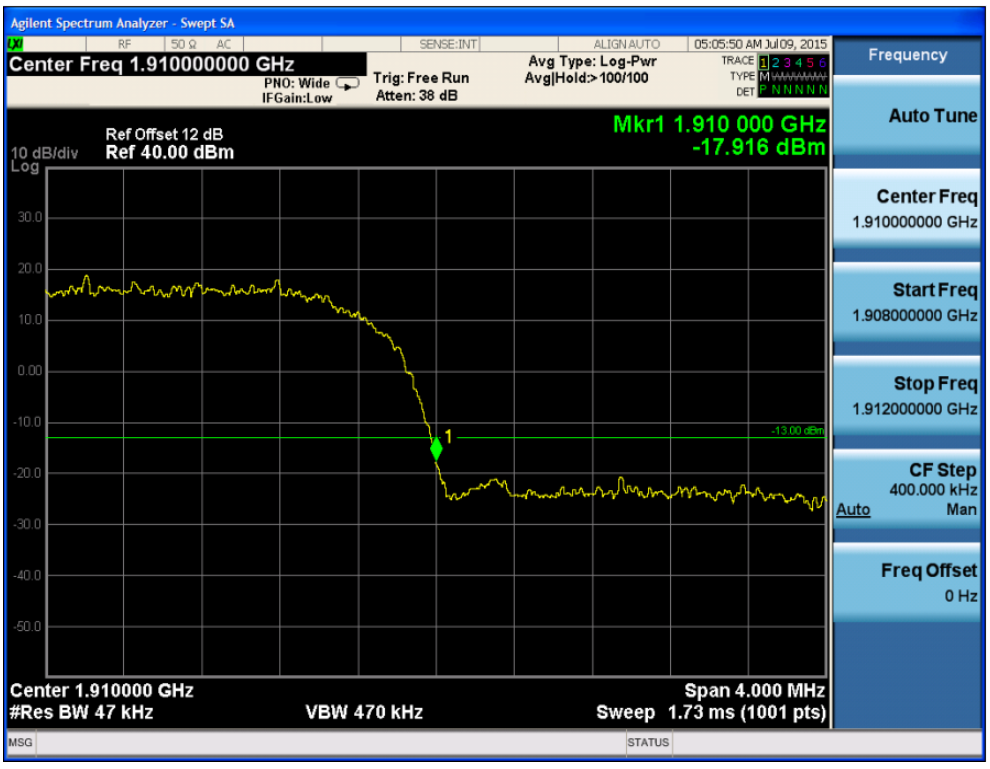
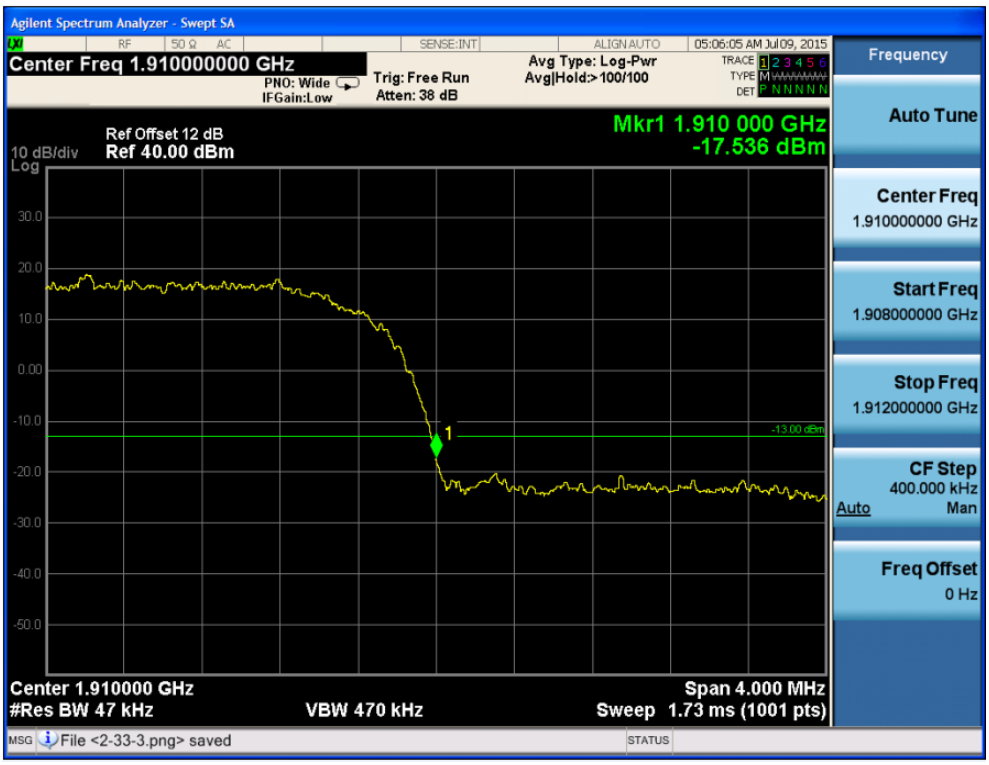


Fig.47 WCDMA Band II-CH9263Band Edge Compliance HSUPA Subtest 5

Fig.48 WCDMA Band II-CH9538 Band Edge Compliance HSUPA Subtest 5



B.6 Conducted Spurious Emission(22.917(a)/24.238(a))

B.6.1 Description

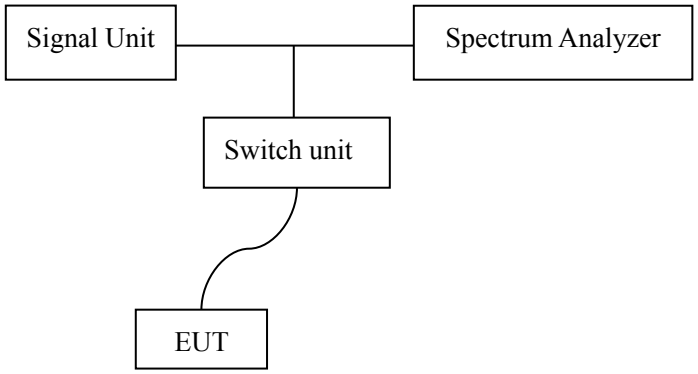
The power of any emission outside of the authorized operating frequency ranges must be lower than transmitter power by a factor of at least 43+10log(P) dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm. It is measured by means of spectrum analyzer and scanned from 30MHz up to a frequency including its 10^{th} harmonic.

For the equipment of PCS1900 band, this equates to a frequency range of 30MHz to 19.1GHz, data is taken from 30 MHz to 20 GHz. For GSM 850, data is taken from 30 MHz to 9 GHz.

B.6.2 Test Procedures

1. The EUT was connected to Spectrum Analyzer and Base Station.
2. The middle channel for maximum RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.

B.6.3 Test Setup



B.6.4 Test Results

Band	CH	Frequency(MHz)	Result	Verdict
GSM850	189	836.6	Fig.49	Pass
			Fig.50	Pass
GSM1900	661	1880.0	Fig.51	Pass
			Fig.52	Pass
WCDMA Band V	4175	835	Fig.53	Pass
			Fig.54	Pass
WCDMA Band II	9400	1880.0	Fig.55	Pass
			Fig.56	Pass

Fig.49 GSM850 on Channel 189 30MHz~3GHz

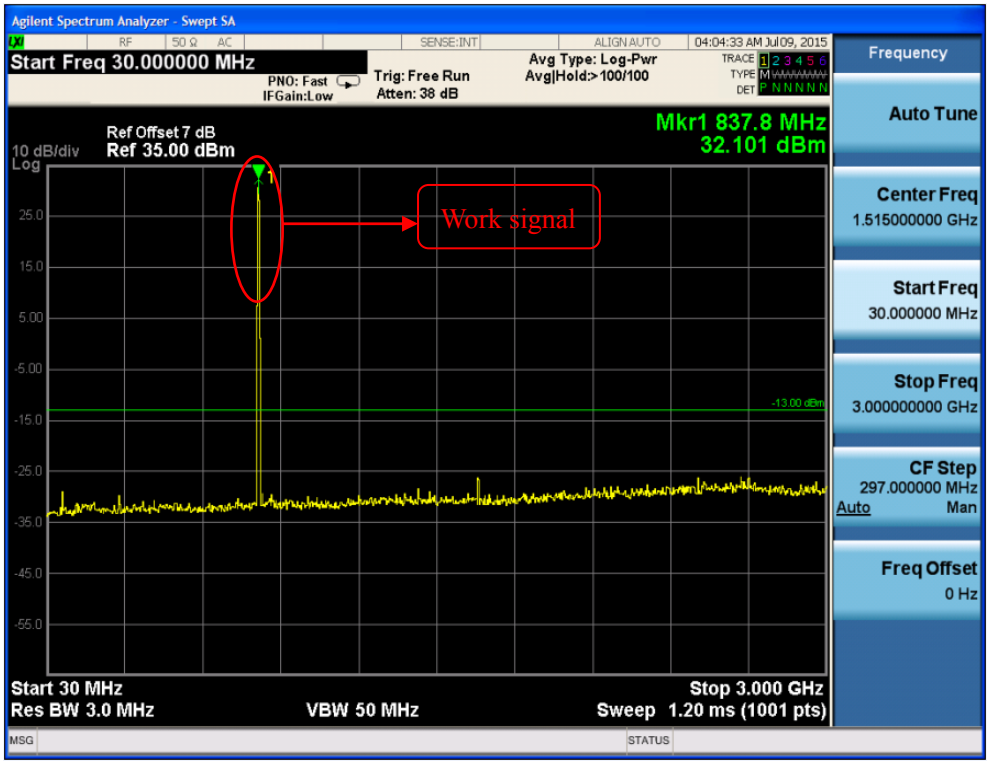


Fig.50 GSM850 on Channel 189 3GHz~9GHz

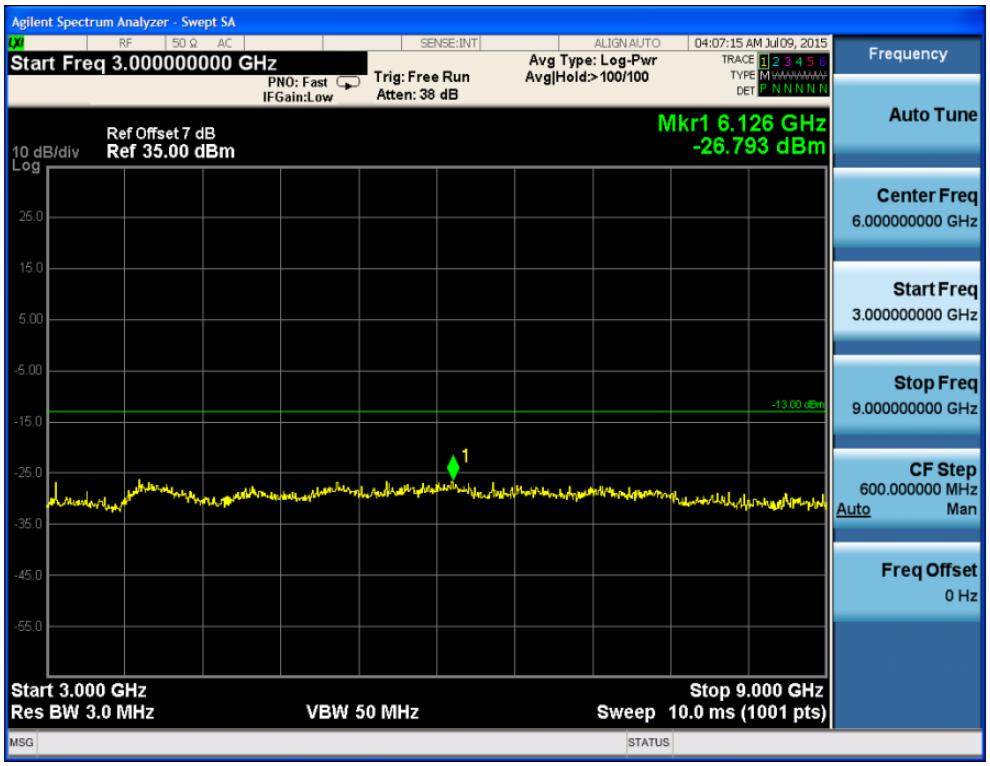


Fig.51 GSM1900 on Channel 661 30MHz~3GHz

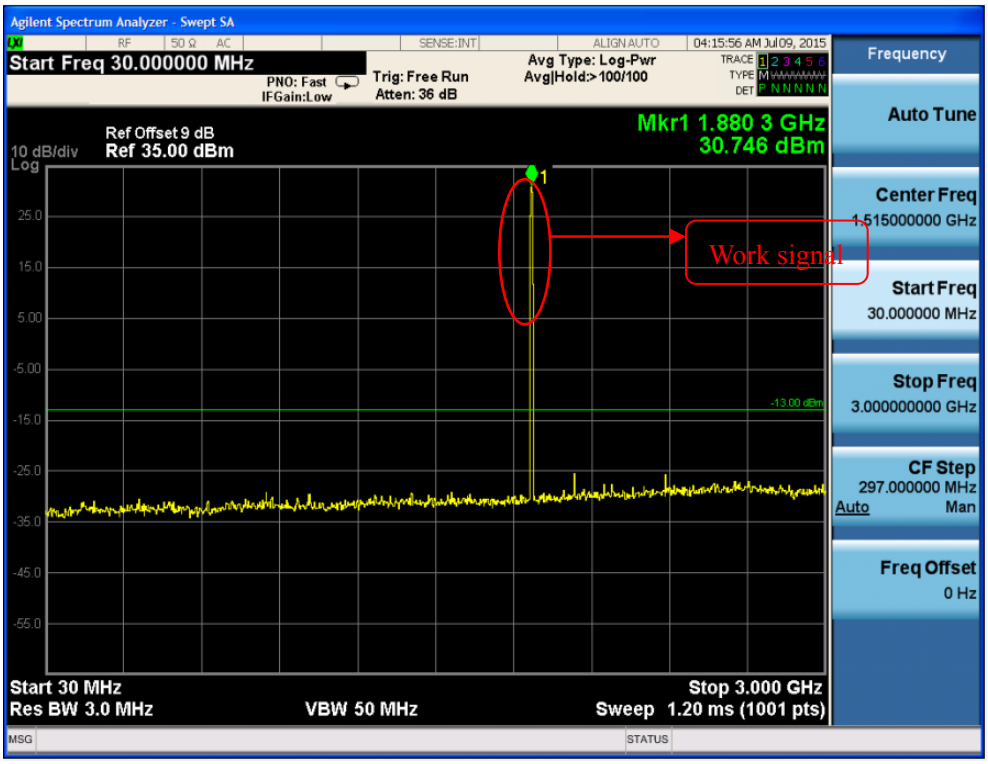


Fig.52 GSM1900 on Channel 661 3GHz~19.1GHz

The Conducted Spurious Emissions was checked. No emissions were found and only noise floor in13.8GHz~19.1GHz.

Fig.53 WCDMA Band V on Channel 4175 30MHz~3GHz

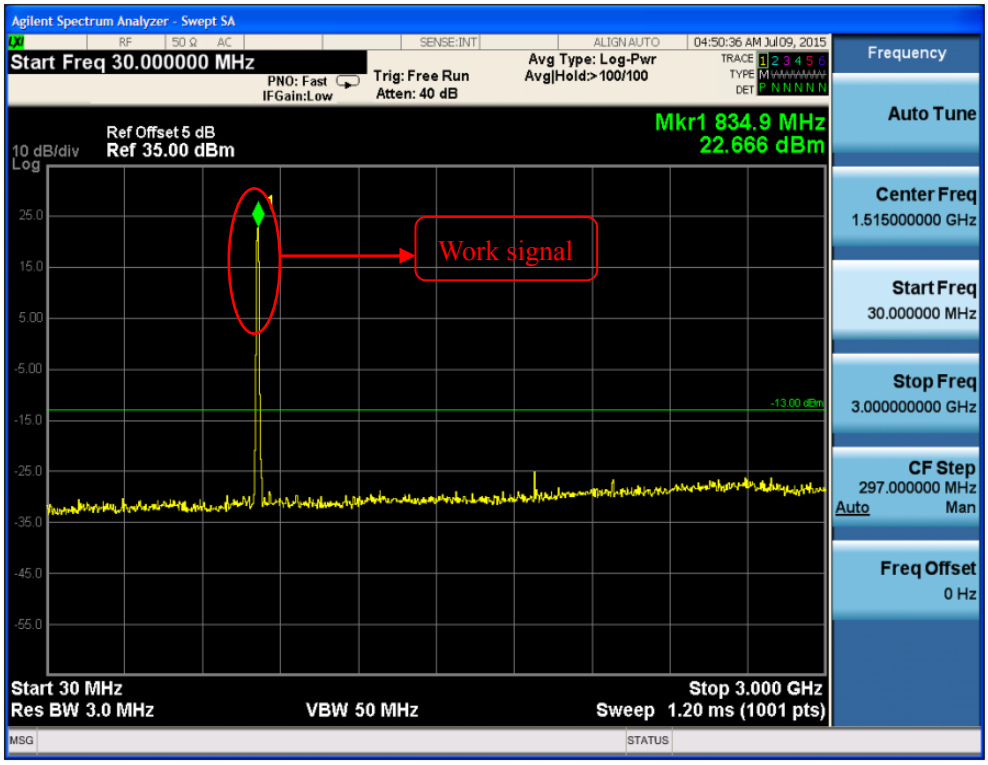


Fig.54 WCDMA Band V on Channel 4175 3GHz~9GHz

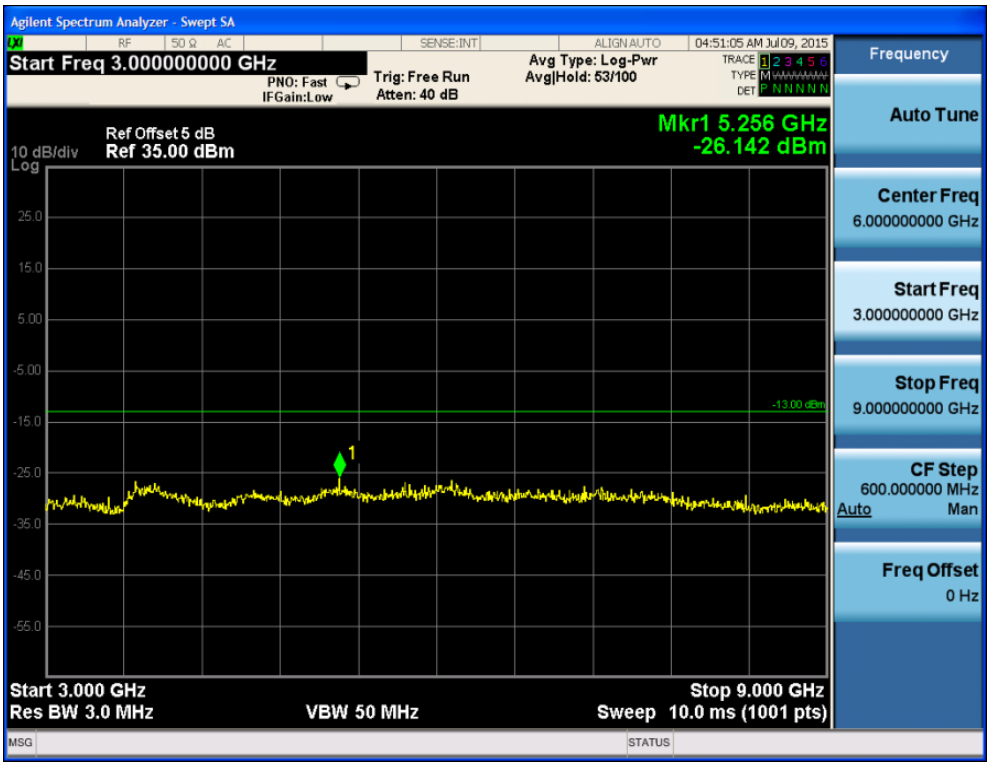


Fig.55 WCDMA Band II Channel 9400 30MHz~3GHz

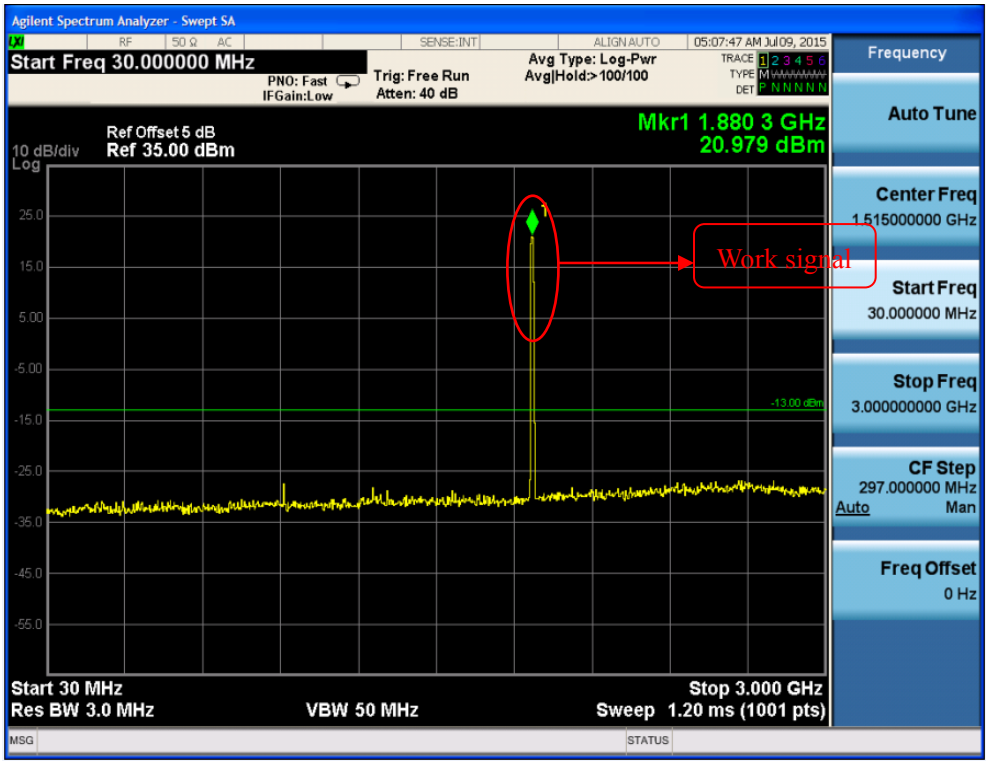
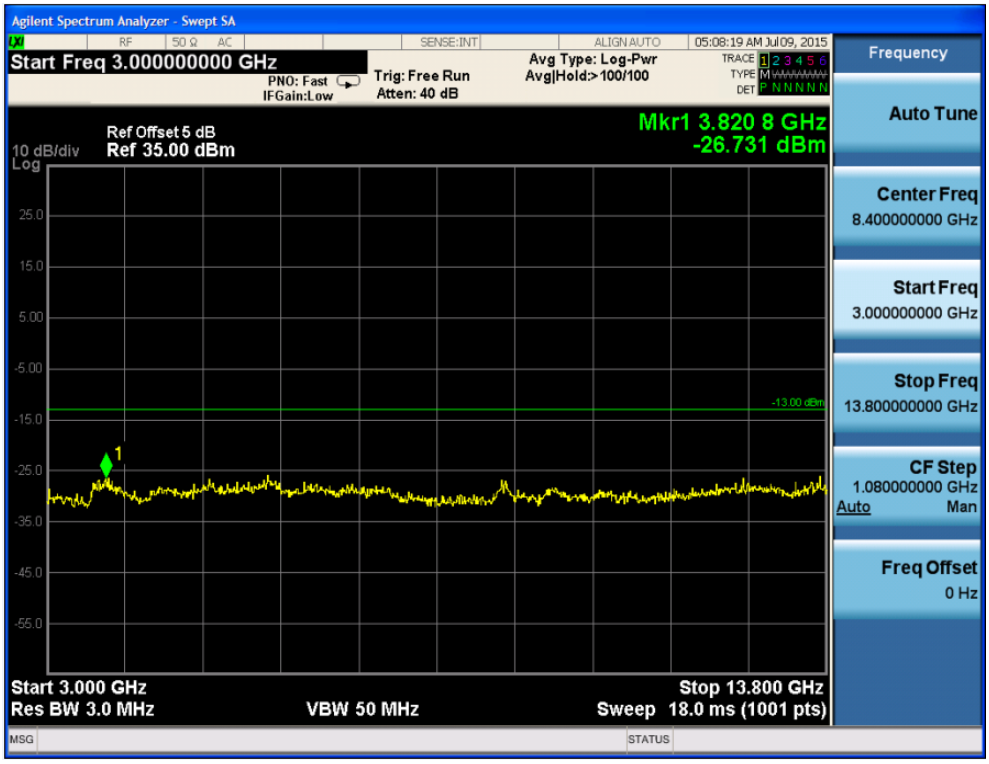


Fig.56 WCDMA Band II on Channel 9400 3GHz~19.1GHz



he Conducted Spurious Emissions was checked. No emissions were found and only noise floor in13.8GHz~19.1GHz

B.7Peak-to-average ratio(24.232(d))

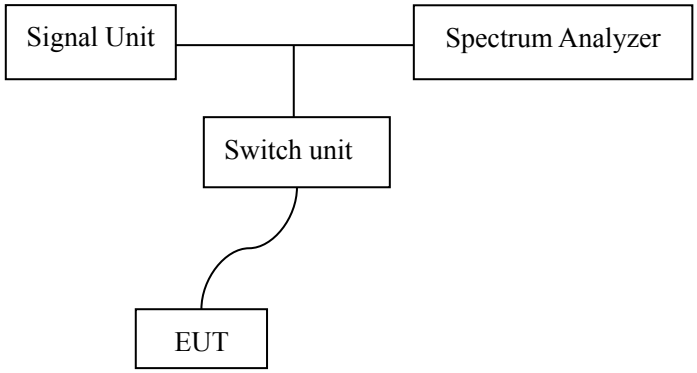
B.8.1 Description

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks f a digitally modulated signal on a statistical basic. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level.

B.8.2 Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station.
2. The CCDF of middle channel for the highest powers were measured.

B.8.3 Test Setup



B.7.4 Test Results

Limit

Peak-to-average ratio
≤13dBm

Band		CH	Frequency(MHz)	Result(dBm)	Verdict
GSM850	GSM	128	824.2	0.09	Pass
		189	836.6	0.09	Pass
		251	848.8	0.07	Pass
	GPRS	128	824.2	0.1	Pass
		189	836.6	0.14	Pass
		251	848.8	0.07	Pass
GSM1900	GSM	512	1850.2	0.11	Pass
		661	1880.0	0.1	Pass
		810	1909.8	0.12	Pass
	GPRS	512	1850.2	0.07	Pass
		661	1880.0	0.08	Pass
		810	1909.8	0.09	Pass
WCDMA Band V		4132	824.2	0.11	Pass
		4175	835	0.13	Pass
		4233	848.8	0.12	Pass

WCDMA Band V HSDPA Subtest 1	4132	824.2	0.09	Pass
	4175	835	0.14	Pass
	4233	848.8	0.09	Pass
WCDMA Band V HSUPA Subtest 5	4132	824.2	0.07	Pass
	4175	835	0.12	Pass
	4233	848.8	0.09	Pass
WCDMA Band II	9263	1850.2	0.11	Pass
	9400	1880.0	0.1	Pass
	9538	1909.8	0.12	Pass
WCDMA Band II HSDPA Subtest 1	9263	1850.2	0.13	Pass
	9400	1880.0	0.07	Pass
	9538	1909.8	0.07	Pass
WCDMA Band II HSUPA Subtest 5	9263	1850.2	0.09	Pass
	9400	1880.0	0.13	Pass
	9538	1909.8	0.09	Pass

ANNEX C: Report Revision History

Report No.	Report Version	Description	Issue Date
150701-GRF	None	Original	2015.07.10

*** END OF REPORT***