

7.7 CONDUCTED BAND EDGE

7.7.1 Applicable Standard

According to FCC Part 2.1051 and FCC Part 22.917(a) and 24.238(a) and FCC KDB 971168 D01 Section 6.0

7.7.2 Conformance Limit

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.

7.7.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.7.4 Test Setup

Please refer to Section 6.1 of this test report.

7.7.5 Test Procedure

The testing follows FCC KDB 971168 v03 Section 6.0.

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

The band edges of low and high channels for the highest RF powers were measured.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10 \log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10 \log(P)] \text{ (dB)}$$

$$= [30 + 10 \log(P)] \text{ (dBm)} - [43 + 10 \log(P)] \text{ (dB)}$$

$$= -13 \text{ dBm.}$$

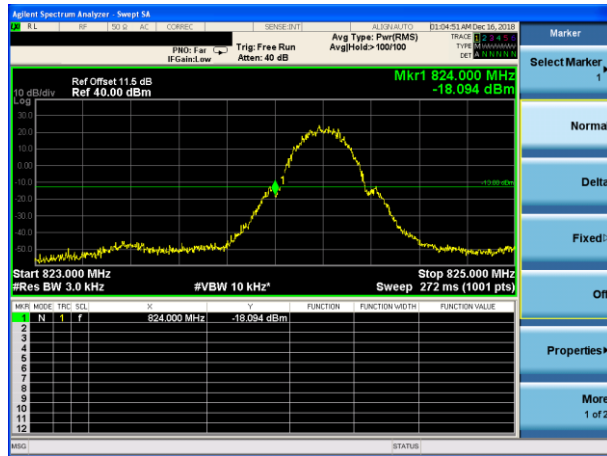
7.7.6 Test Results

EUT:	Smartphone	Model No.:	SMARTPHONE 3.4
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900/ UMTS band II/ UMTS band V/ UMTS band IV	Test By:	Cheng Jiawen
Results: PASS			

Test plot For

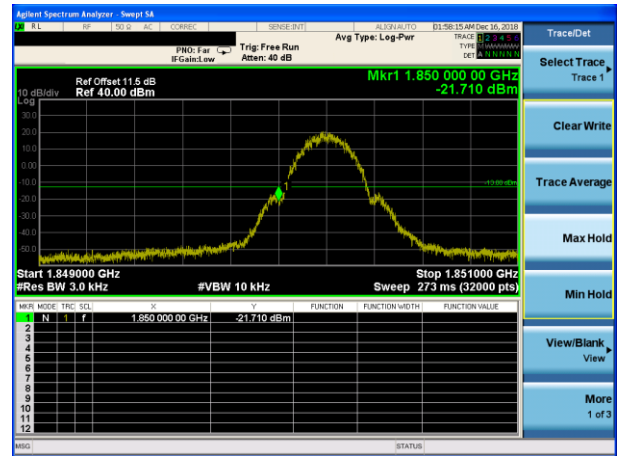
(GSM850)

Conducted Band Edge plot on channel 128

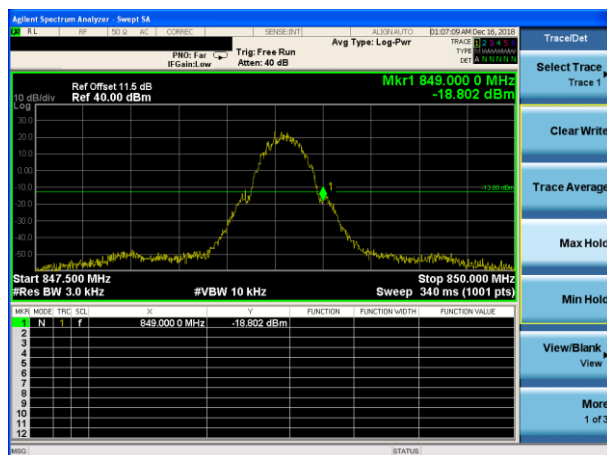


(GSM1900)

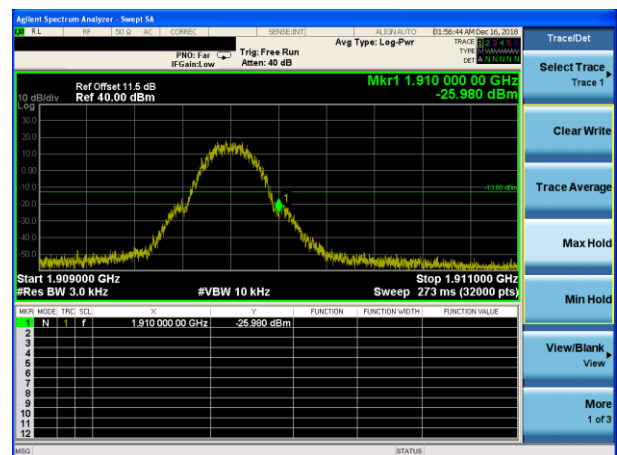
Conducted Band Edge plot on channel 512



Conducted Band Edge plot on channel 251



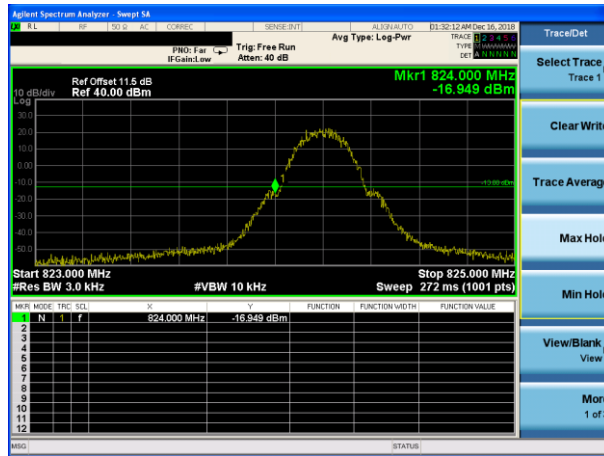
Conducted Band Edge plot on channel 810



Test plot For

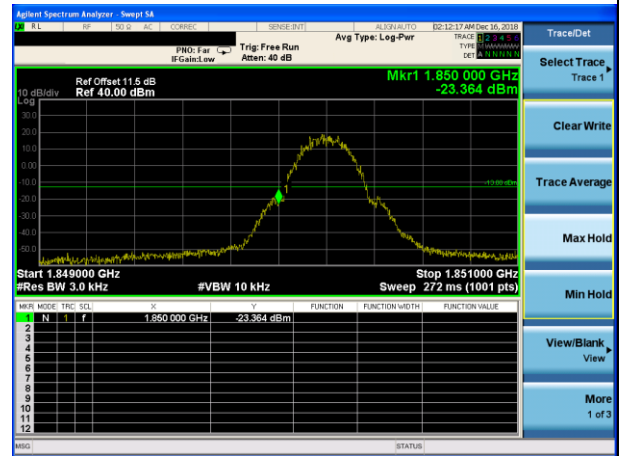
(GPRS850)

Conducted Band Edge plot on channel 128

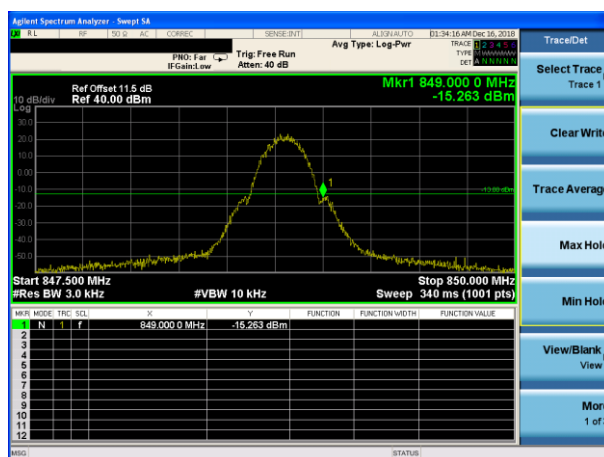


(GPRS1900)

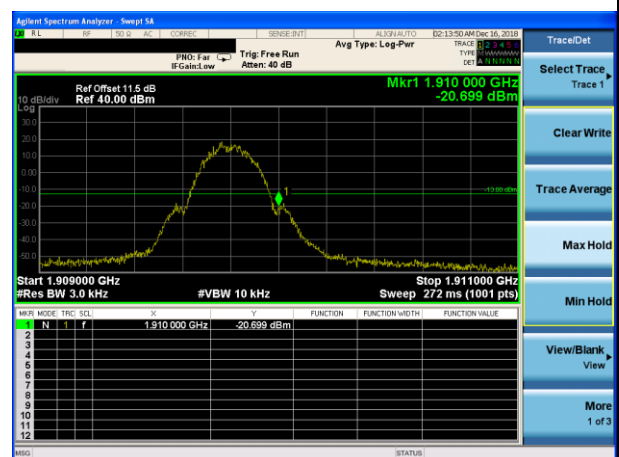
Conducted Band Edge plot on channel 512



Conducted Band Edge plot on channel 251



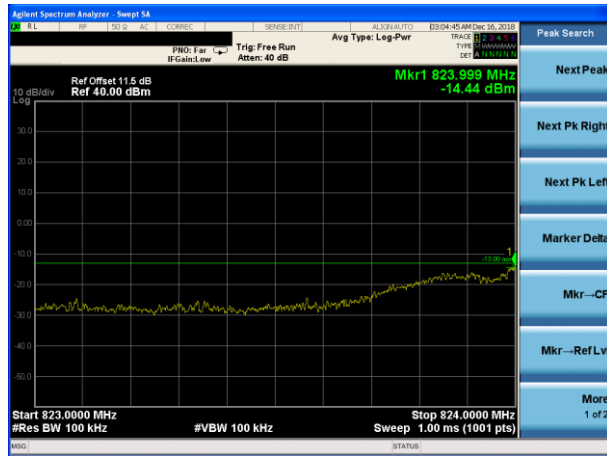
Conducted Band Edge plot on channel 810



Test plot For

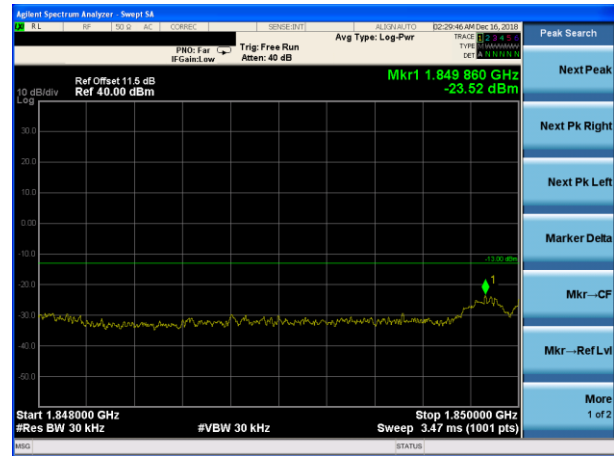
UMTS Band V

Conducted Band Edge plot on channel 4132

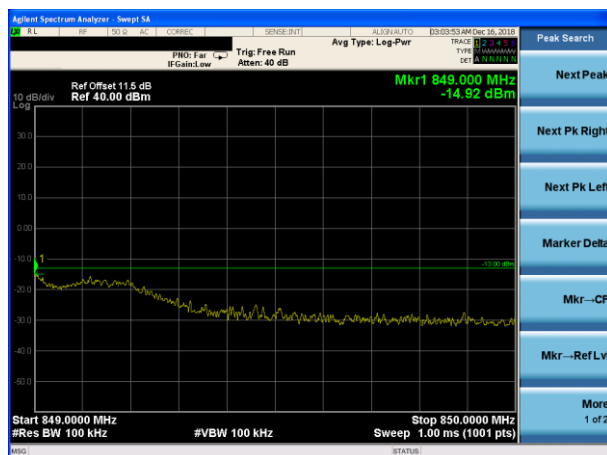


UMTS Band II

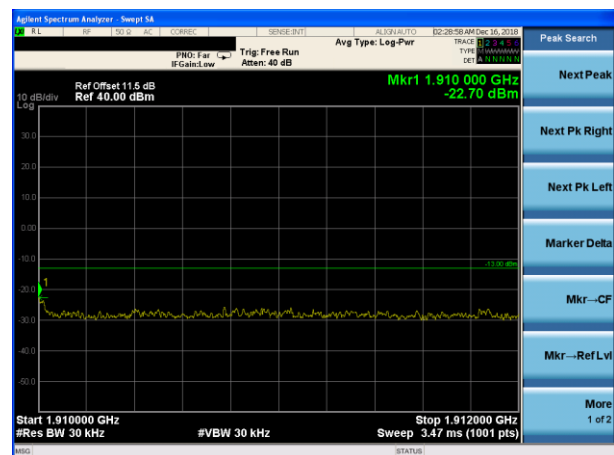
Conducted Band Edge plot on channel 9262



Conducted Band Edge plot on channel 4233



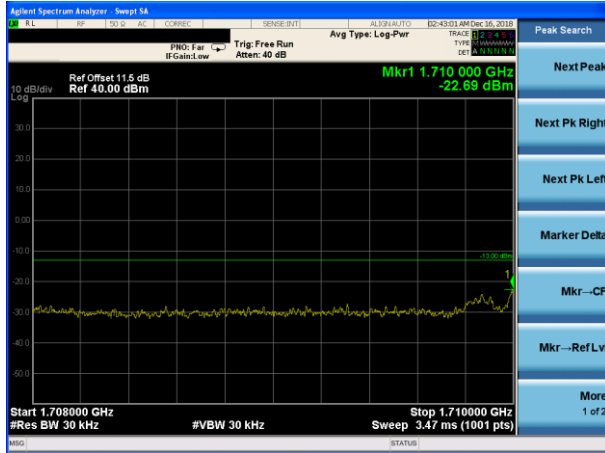
Conducted Band Edge plot on channel 9538



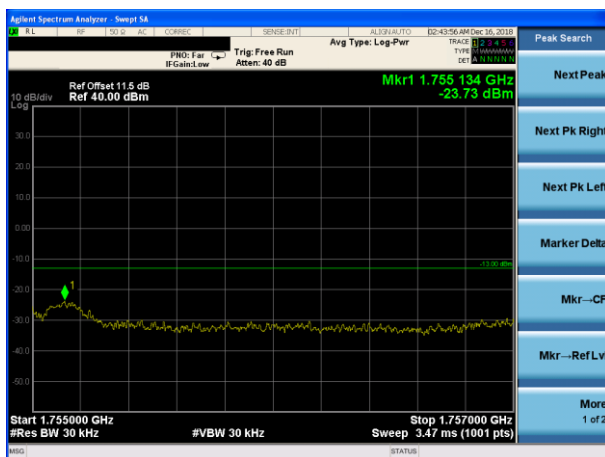
Test plot For

UMTS Band IV

Conducted Band Edge plot on channel 1312



Conducted Band Edge plot on channel 1513



7.8 CONDUCTED SPURIOUS EMISSION AT ANTENNA TERMINAL

7.8.1 Applicable Standard

According to FCC Part 2.1051 and FCC Part 22.917(a) and Part 24.238(a) and FCC KDB 971168 D01 Section 6.0

7.8.2 Conformance Limit

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.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

7.8.3 Measuring Instruments

The Measuring equipment is listed in the section 6.3 of this test report.

7.8.4 Test Setup

Please refer to Section 6.1 of this test report.

7.8.5 Test Procedure

The testing follows FCC KDB 971168 v03 Section 6.0.

The EUT was connected to Spectrum Analyzer and Base Station via power divider.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement.

The middle channel for the highest RF power within the transmitting frequency was measured.

The conducted spurious emission for the whole frequency range was taken.

The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}.$$

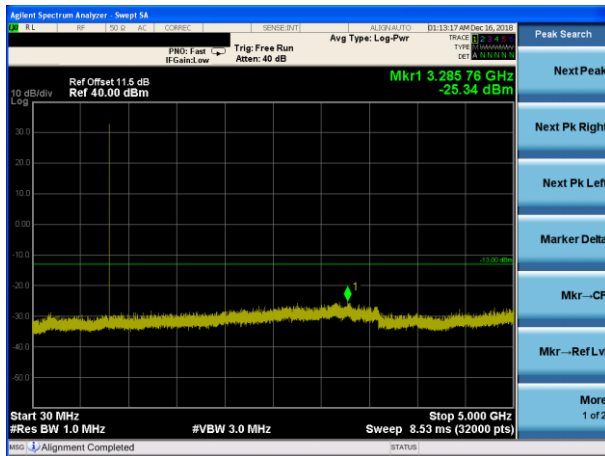
7.8.6 Test Results

EUT:	Smartphone	Model No.:	SMARTPHONE 3.4
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	GSM/GPRS 850/ GSM/GPRS 1900/ UMTS band II/ UMTS band V/ UMTS Band IV	Test By:	Cheng Jiawen
Results: PASS			

Test Plot

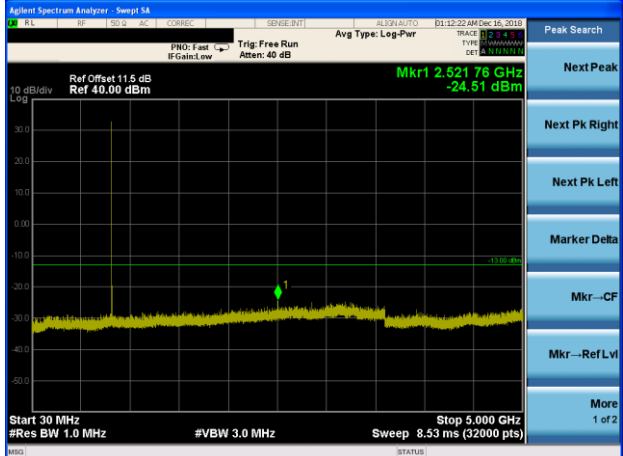
GSM850

Conducted Emission Transmitting Mode CH 128
30MHz – 5GHz

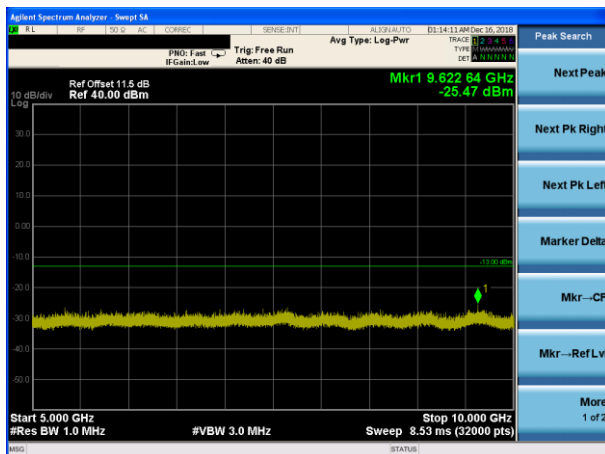


GSM850

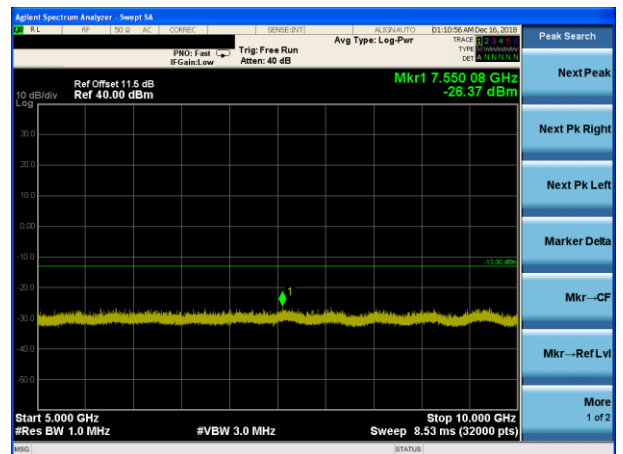
Conducted Emission Transmitting Mode CH 190
30MHz – 5GHz



Conducted Emission Transmitting Mode CH 128
5GHz – 10GHz



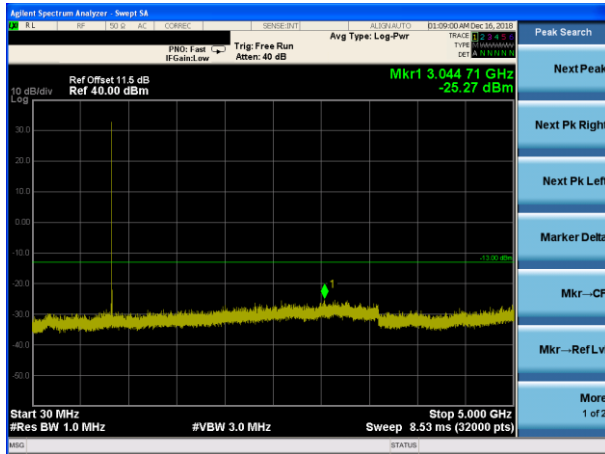
Conducted Emission Transmitting Mode CH 190
5GHz – 10GHz



Test Plot

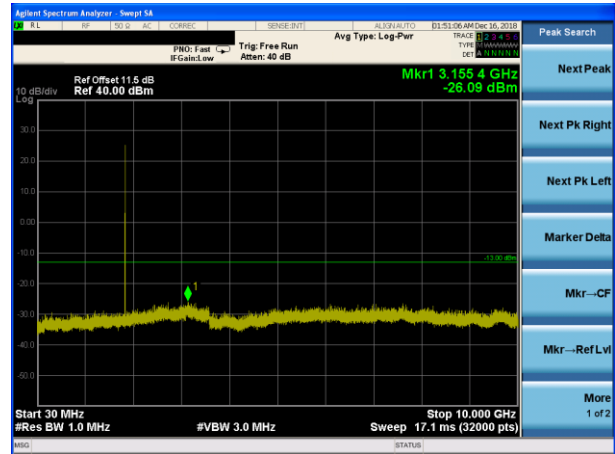
GSM850

Conducted Emission Transmitting Mode CH 251
30MHz – 5GHz

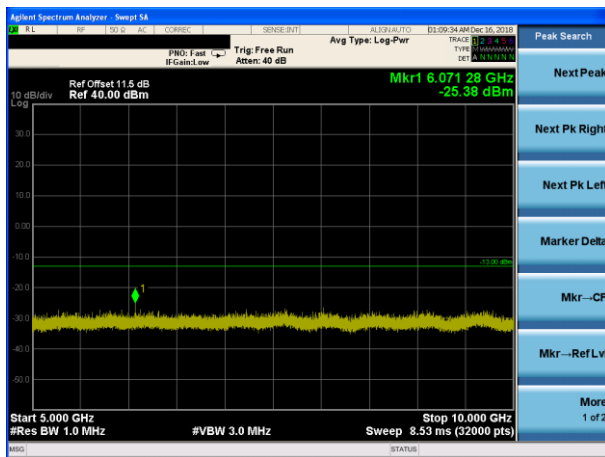


GSM1900

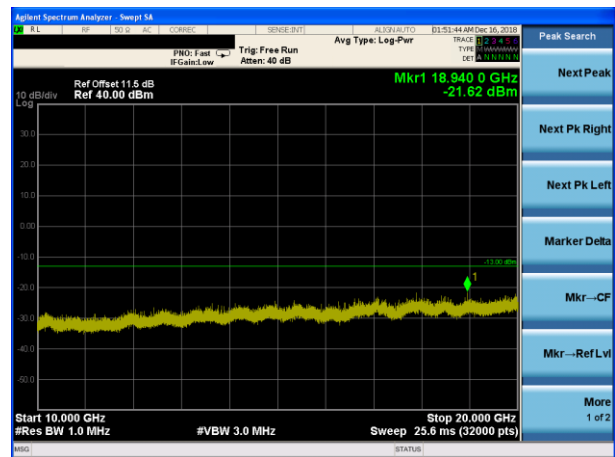
Conducted Emission Transmitting Mode CH 512
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 251
5GHz – 10GHz



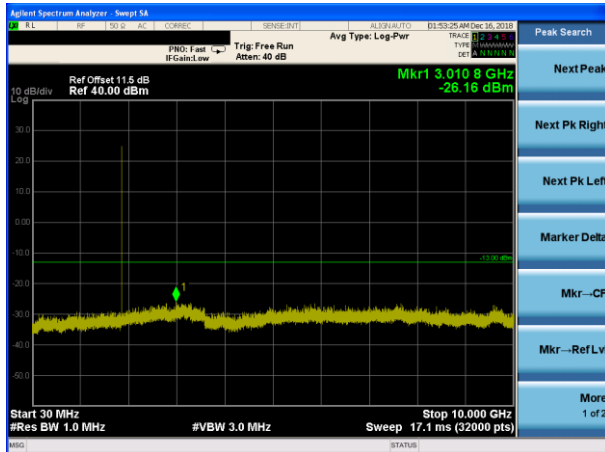
Conducted Emission Transmitting Mode CH 512
10GHz – 20GHz



Test Plot

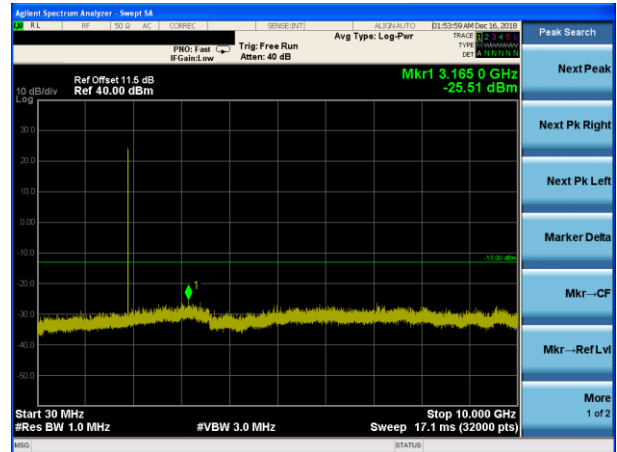
GSM1900

Conducted Emission Transmitting Mode CH 661
30MHz – 10GHz

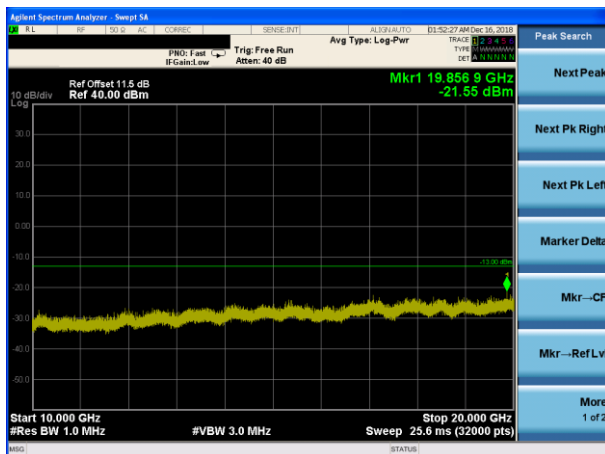


GSM1900

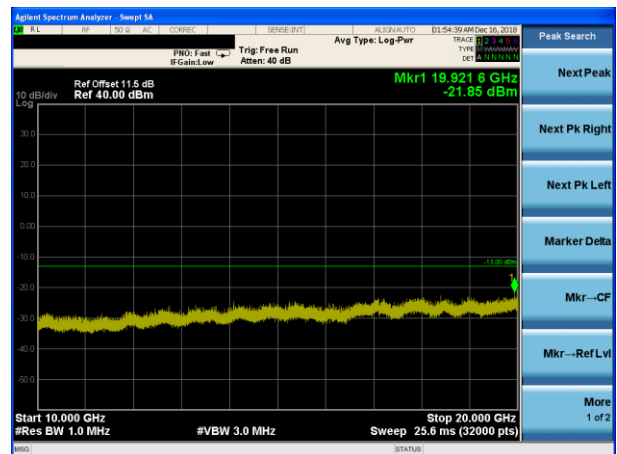
Conducted Emission Transmitting Mode CH 810
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 661
10GHz – 20GHz



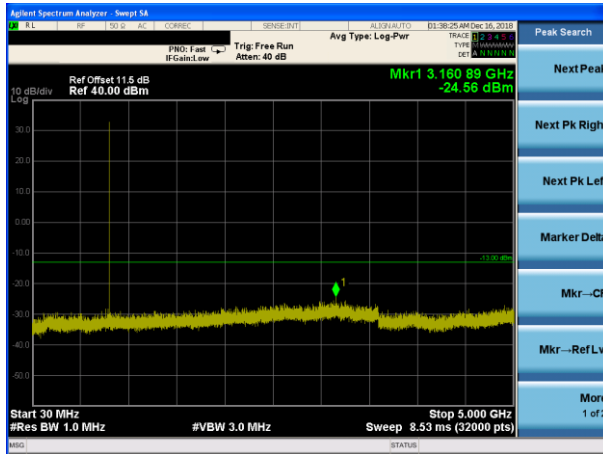
Conducted Emission Transmitting Mode CH 810
10GHz – 20GHz



Test Plot

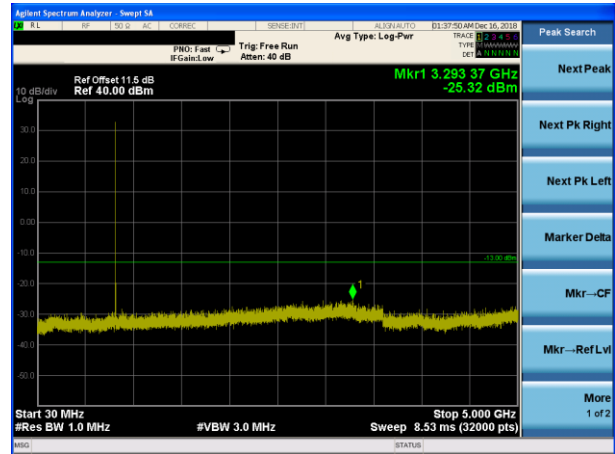
GPRS850

Conducted Emission Transmitting Mode CH 128
30MHz – 5GHz

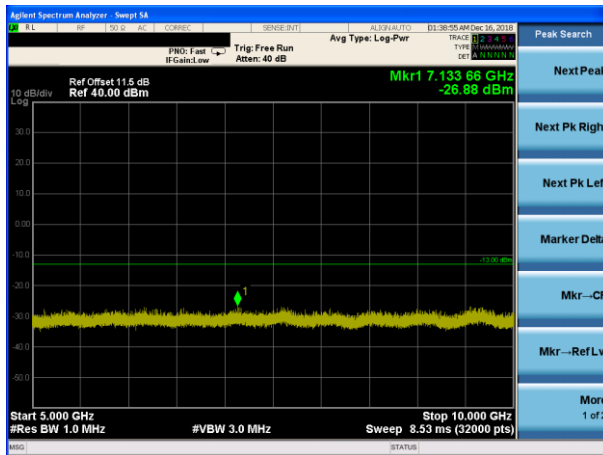


GPRS850

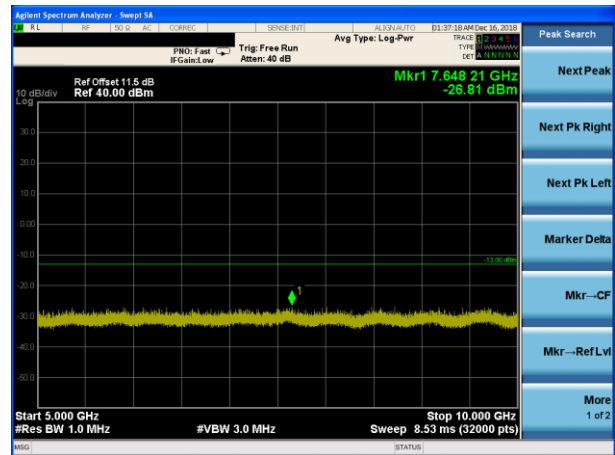
Conducted Emission Transmitting Mode CH 190
30MHz – 5GHz



Conducted Emission Transmitting Mode CH 128
5GHz – 10GHz



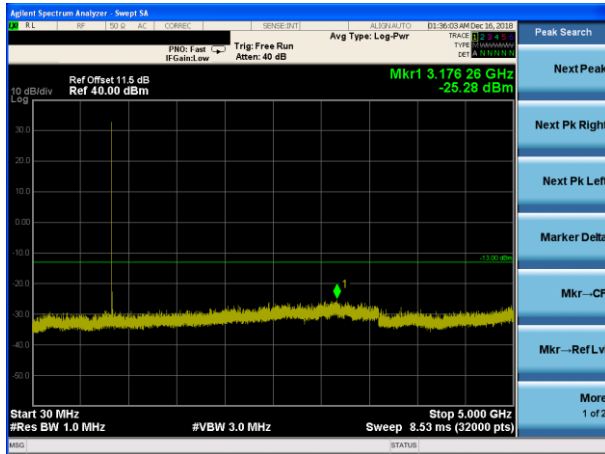
Conducted Emission Transmitting Mode CH 190
5GHz – 10GHz



Test Plot

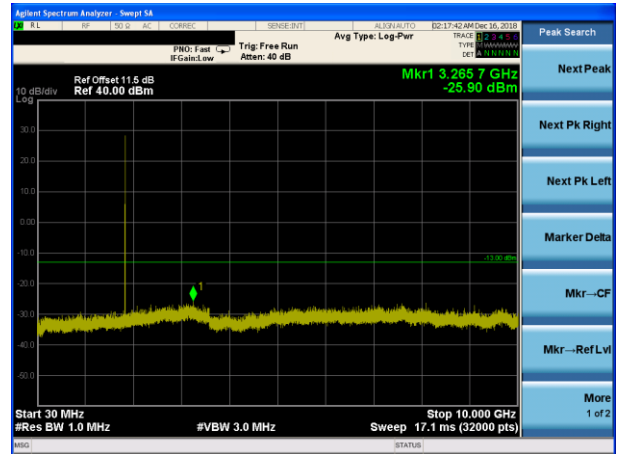
GPRS850

Conducted Emission Transmitting Mode CH 251
30MHz – 5GHz

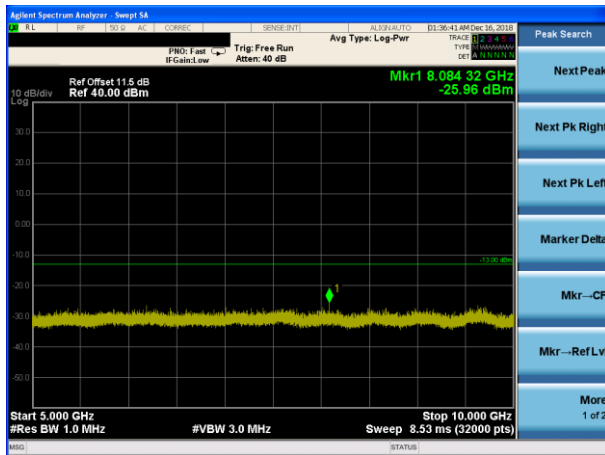


GPRS1900

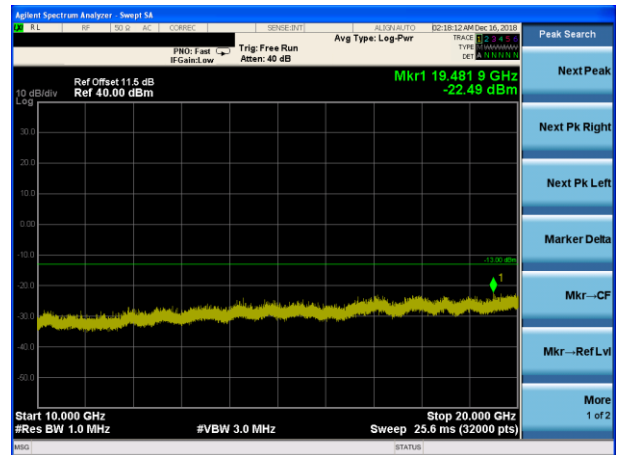
Conducted Emission Transmitting Mode CH 512
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 251
5GHz – 10GHz



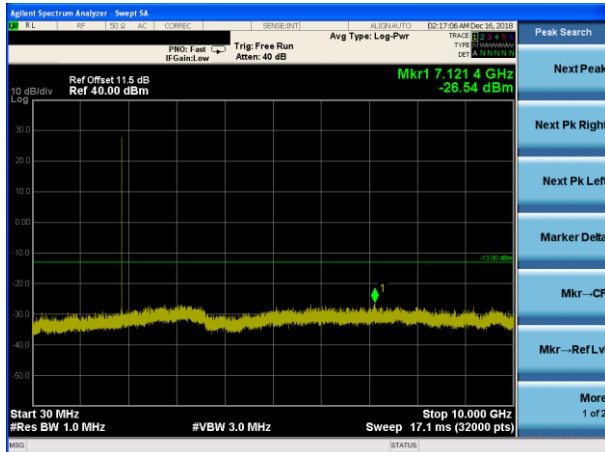
Conducted Emission Transmitting Mode CH 512
10GHz – 20GHz



Test Plot

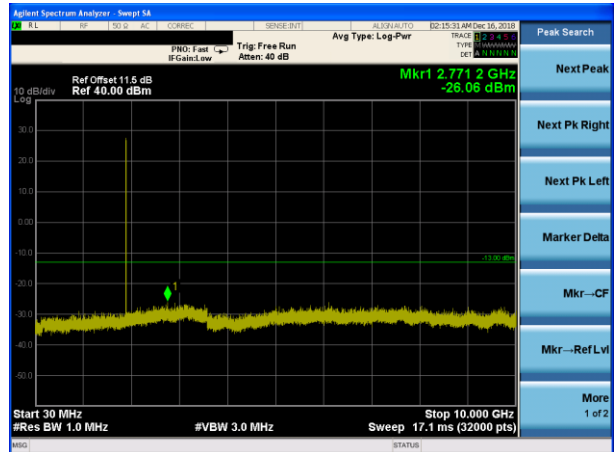
GPRS1900

Conducted Emission Transmitting Mode CH 661
30MHz – 10GHz

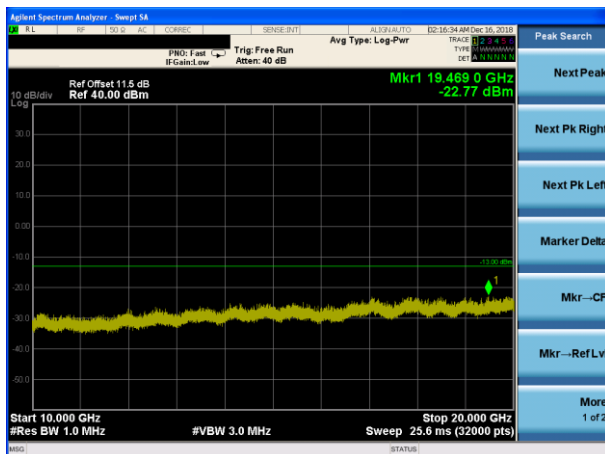


GPRS1900

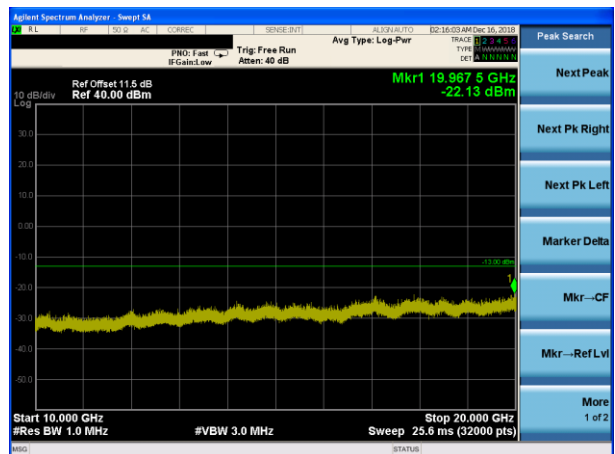
Conducted Emission Transmitting Mode CH 810
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 661
10GHz – 20GHz



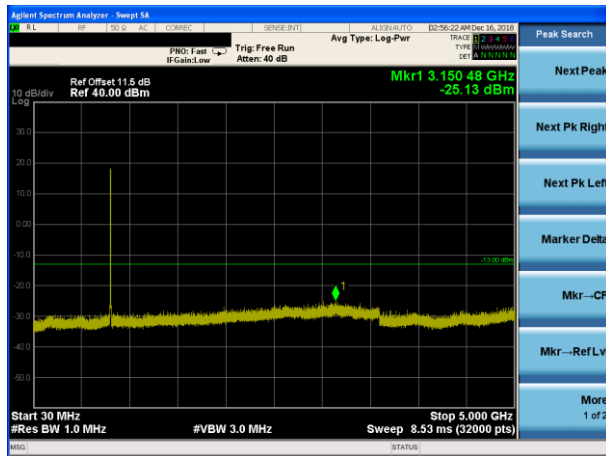
Conducted Emission Transmitting Mode CH 810
10GHz – 20GHz



Test Plot

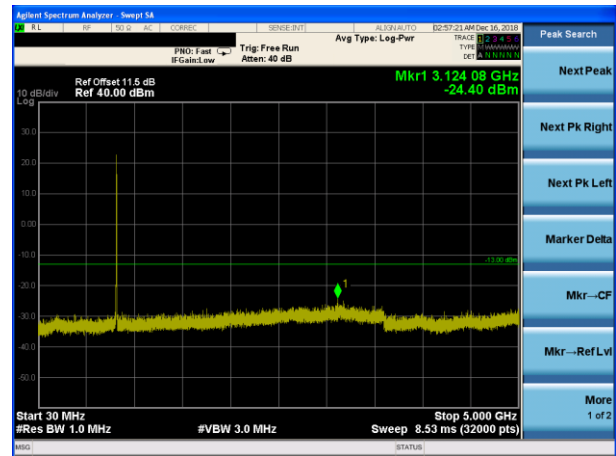
UMTS band V

Conducted Emission Transmitting Mode CH
4132 30MHz – 5GHz

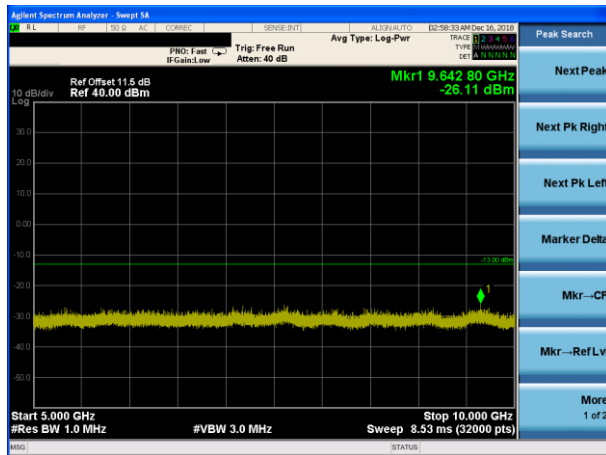


UMTS band V

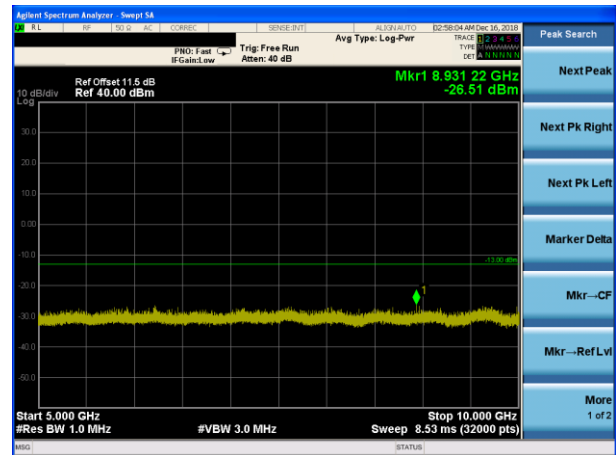
Conducted Emission Transmitting Mode CH 4183
30MHz – 5GHz



Conducted Emission Transmitting Mode CH
4132 5GHz – 10GHz



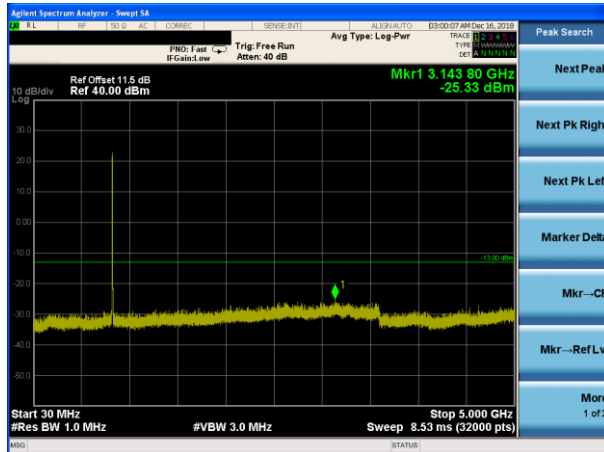
Conducted Emission Transmitting Mode CH 4183
5GHz – 10GHz



Test Plot

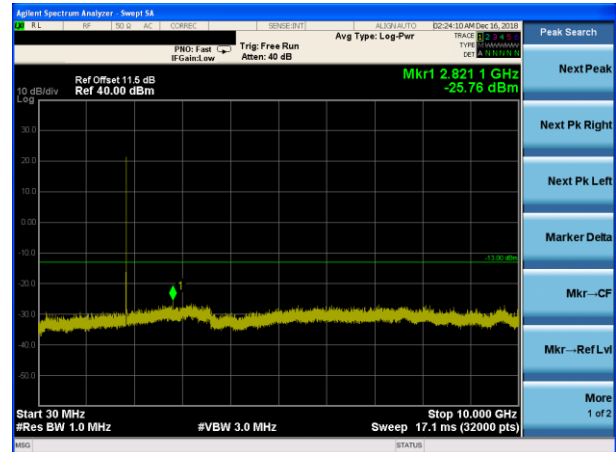
UMTS band V

Conducted Emission Transmitting Mode CH
4233 30MHz – 5GHz

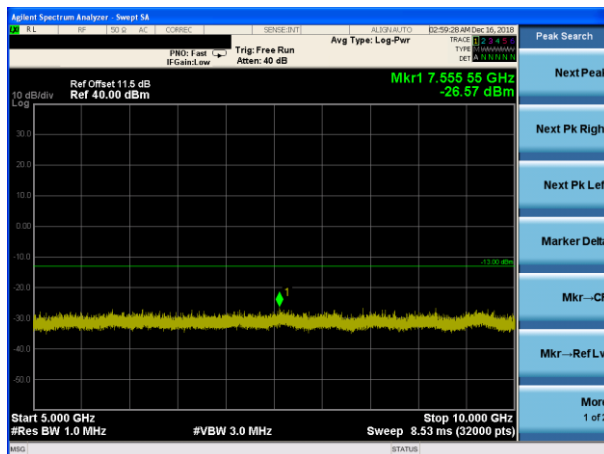


UMTS band II

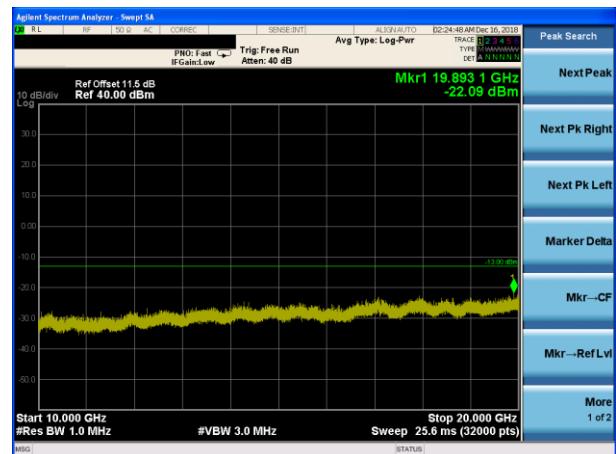
Conducted Emission Transmitting Mode CH 9262
30MHz – 10GHz



Conducted Emission Transmitting Mode CH
4233 5GHz – 10GHz



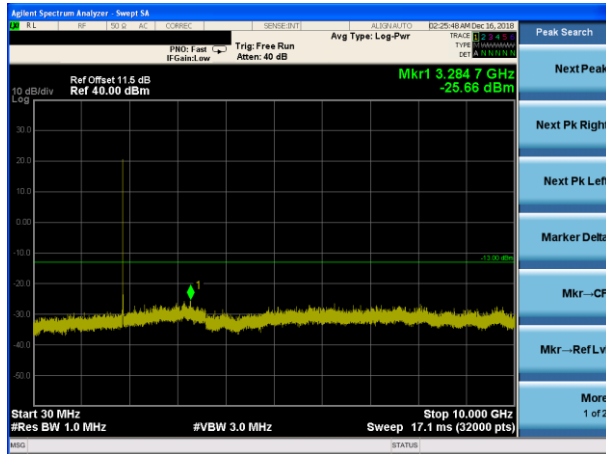
Conducted Emission Transmitting Mode CH 9262
10GHz – 20GHz



Test Plot

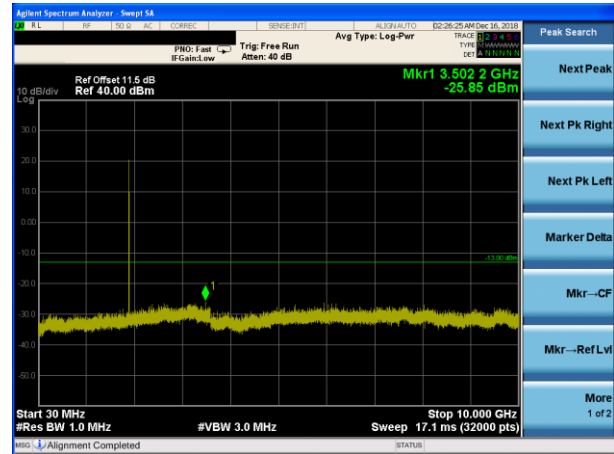
UMTS band II

Conducted Emission Transmitting Mode CH
9400 30MHz – 10GHz

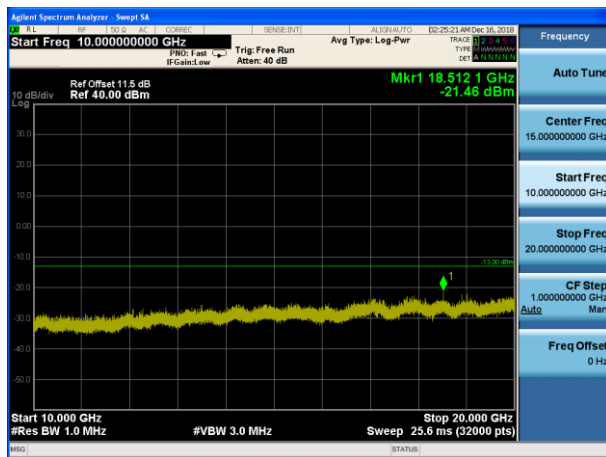


UMTS band II

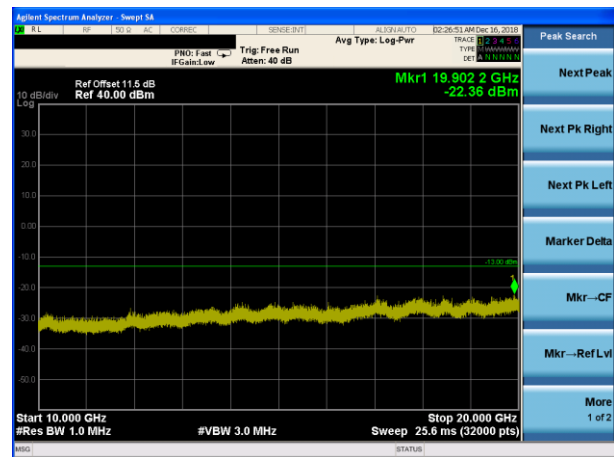
Conducted Emission Transmitting Mode CH 9538
30MHz – 10GHz



Conducted Emission Transmitting Mode CH
9400 10GHz – 20GHz



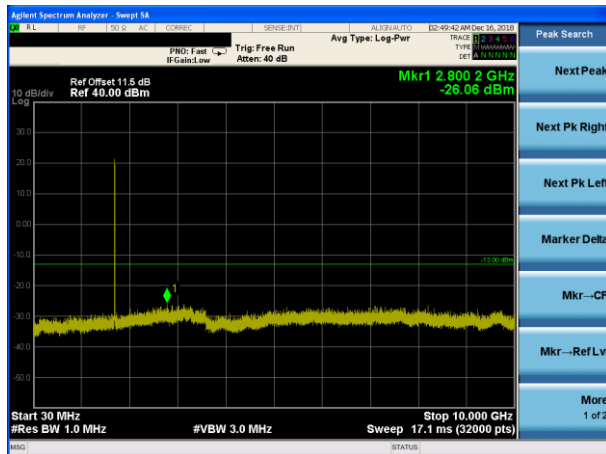
Conducted Emission Transmitting Mode CH 9538
10GHz – 20GHz



Test Plot

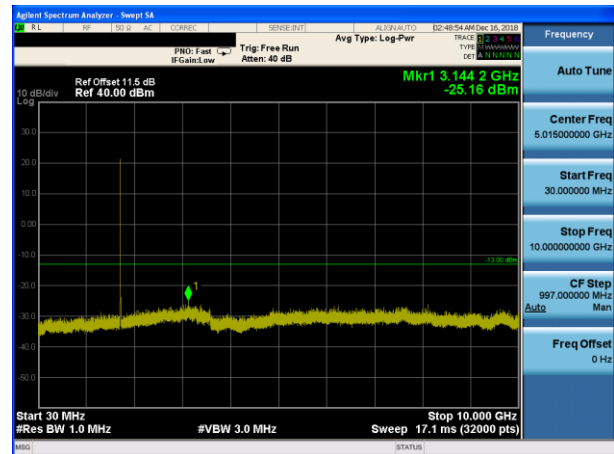
UMTS band IV

Conducted Emission Transmitting Mode CH
1312 30MHz – 10GHz

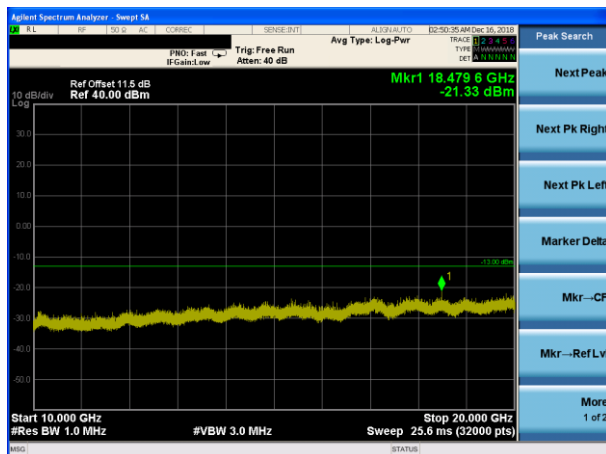


UMTS band IV

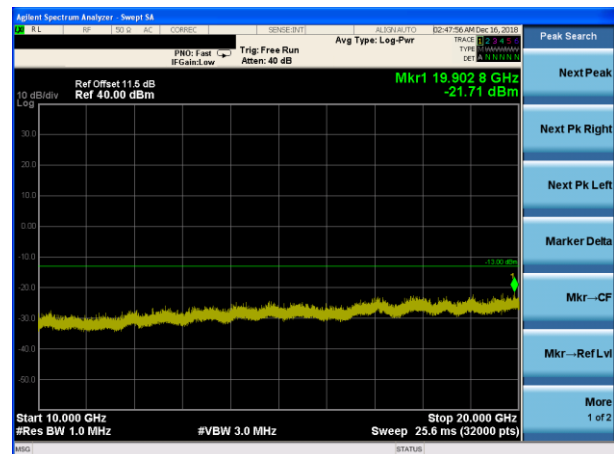
Conducted Emission Transmitting Mode CH 1412
30MHz – 10GHz



Conducted Emission Transmitting Mode CH
1312 10GHz – 20GHz



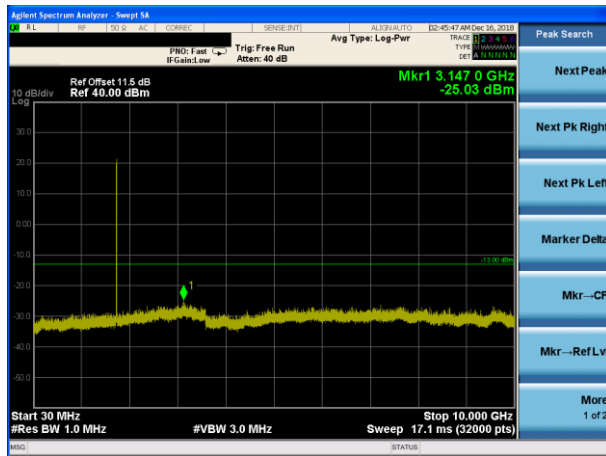
Conducted Emission Transmitting Mode CH 1412
10GHz – 20GHz



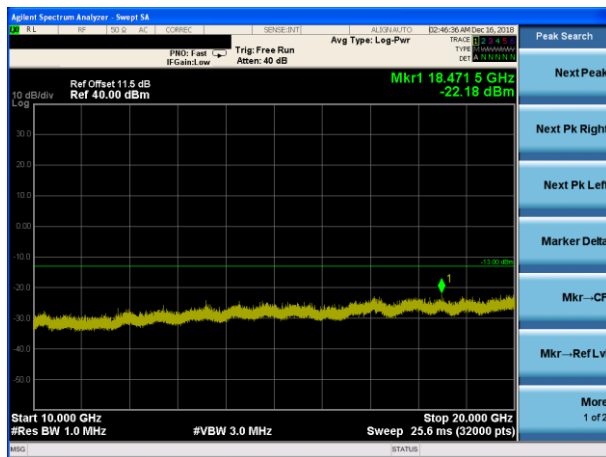
Test Plot

UMTS band IV

Conducted Emission Transmitting Mode CH
1513 30MHz – 10GHz



Conducted Emission Transmitting Mode CH
1513 10GHz – 20GHz



END OF REPORT