

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 v03 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)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.

7.7.6 Test Results

EUT:	Smart Phone	Model No.:	K12
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	GSM/GPRS/EGPRS 850/ GSM/GPRS/EGPRS 1900/ UMTS band II/ UMTS band V	Test By:	Allen Liu
Results: PASS			

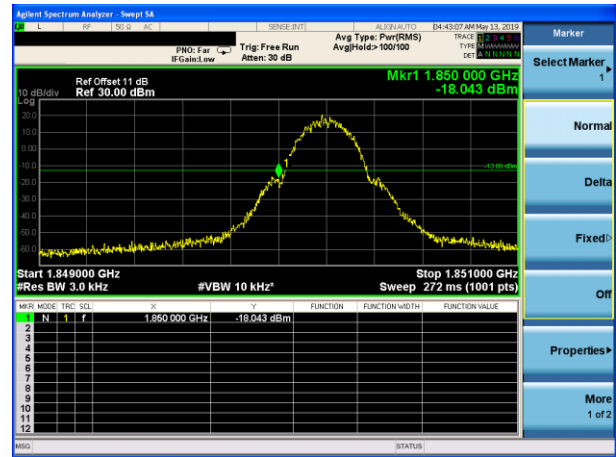
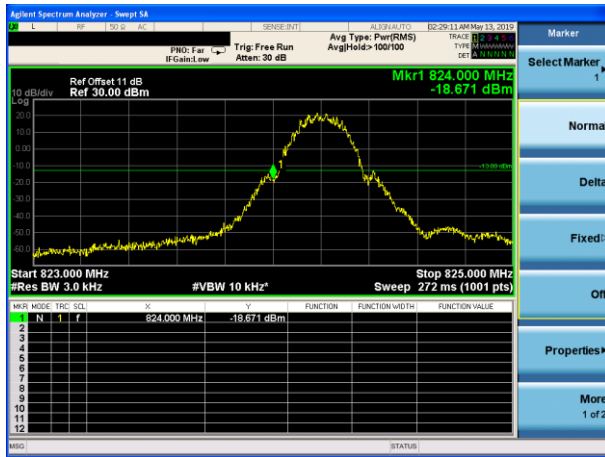
Test plot For

(GSM850)

(GSM1900)

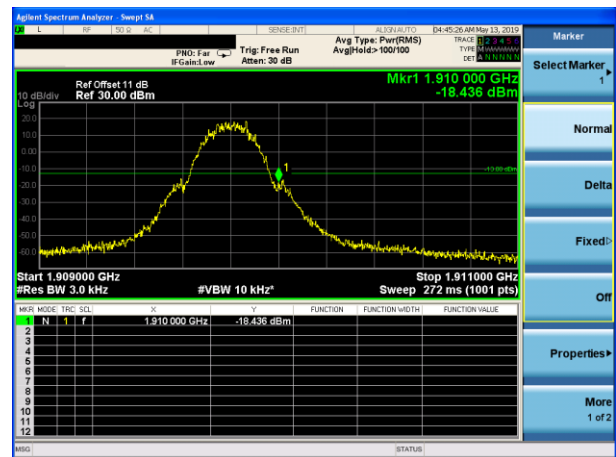
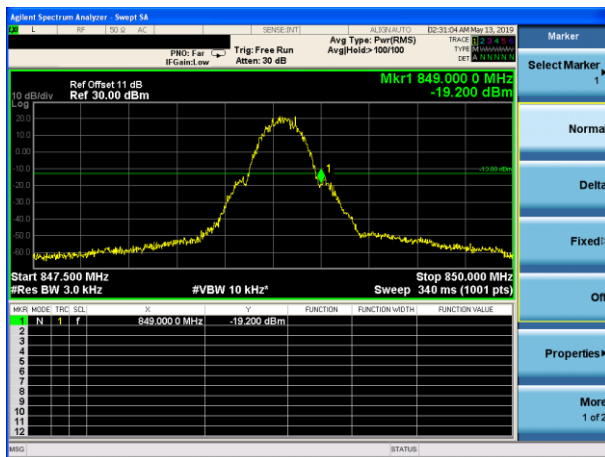
Conducted Band Edge plot on channel 128

Conducted Band Edge plot on channel 512



Conducted Band Edge plot on channel 251

Conducted Band Edge plot on channel 810



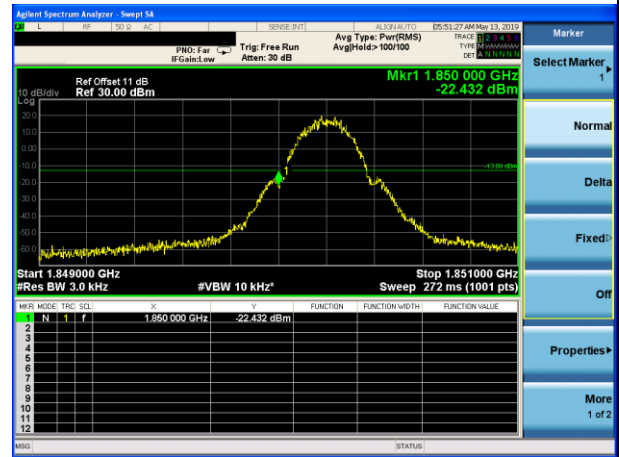
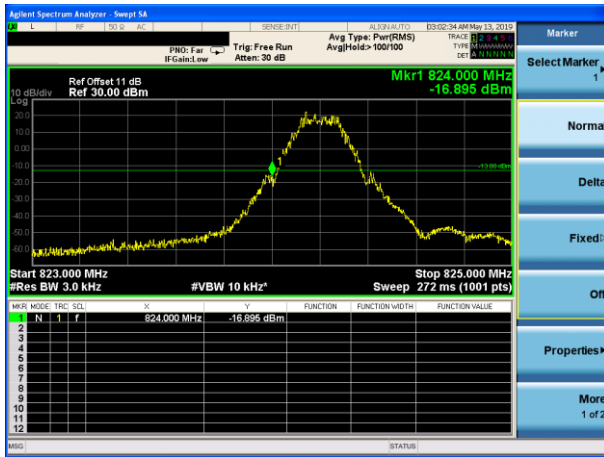
Test plot For

(GPRS850)

(GPRS1900)

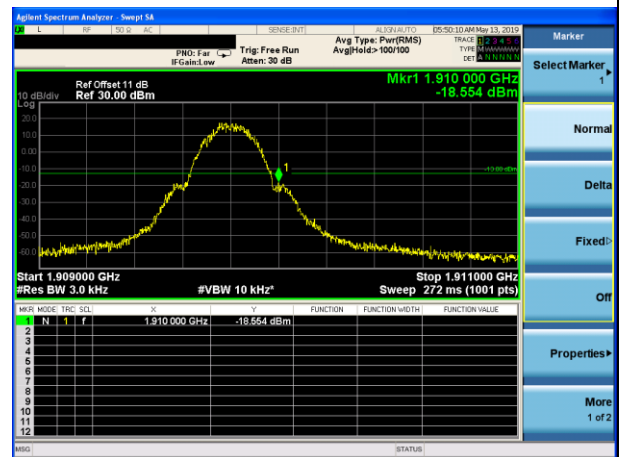
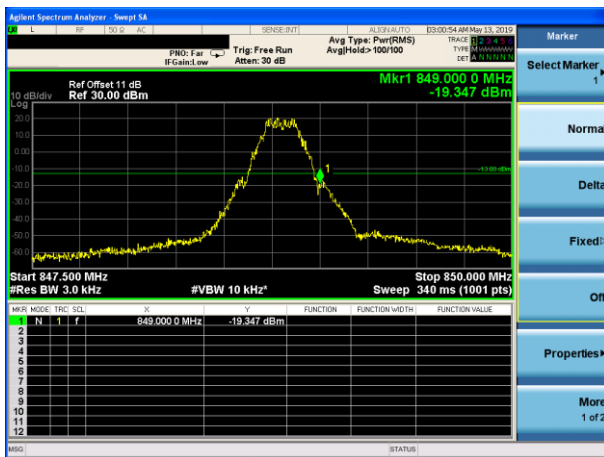
Conducted Band Edge plot on channel 128

Conducted Band Edge plot on channel 512



Conducted Band Edge plot on channel 251

Conducted Band Edge plot on channel 810



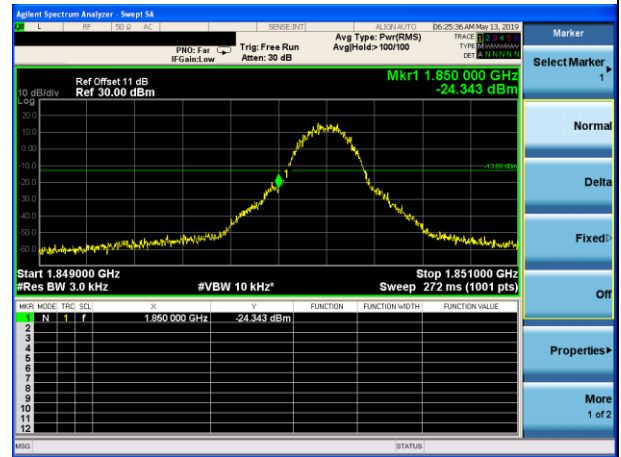
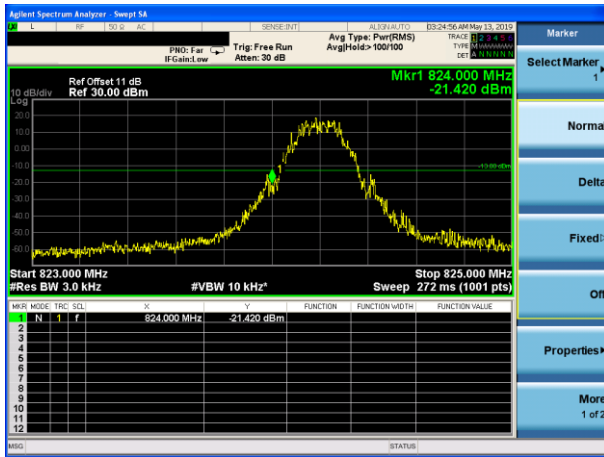
Test plot For

(EGPRS850)

(EGPRS1900)

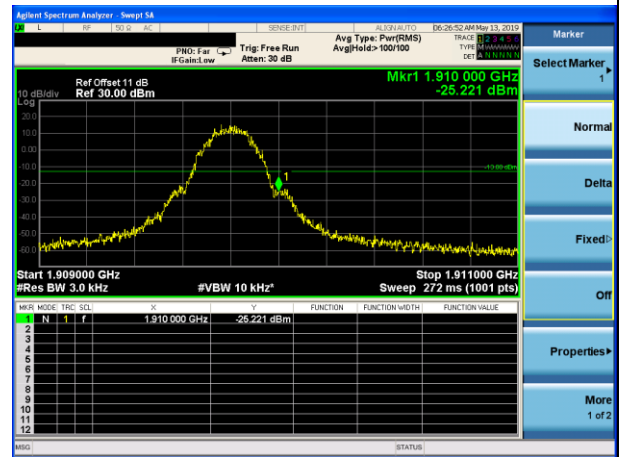
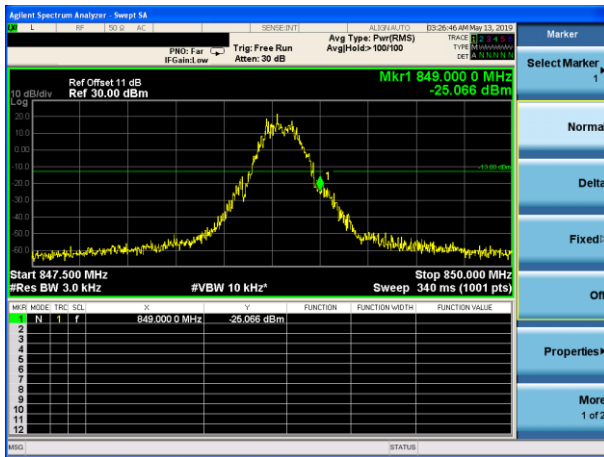
Conducted Band Edge plot on channel 128

Conducted Band Edge plot on channel 512



Conducted Band Edge plot on channel 251

Conducted Band Edge plot on channel 810



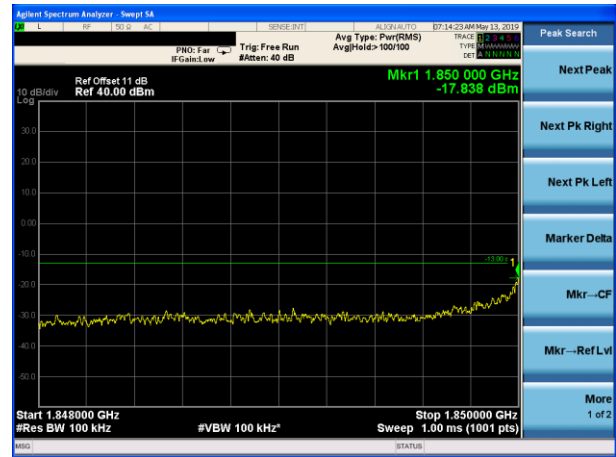
Test plot For

UMTS Band V

UMTS Band II

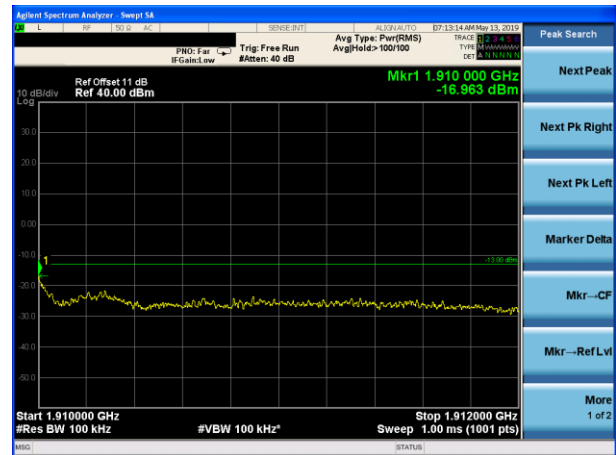
Conducted Band Edge plot on channel 4132

Conducted Band Edge plot on channel 9262



Conducted Band Edge plot on channel 4233

Conducted Band Edge plot on channel 9538



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 v03 Section6.0

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)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13\text{dBm}$.

7.8.6 Test Results

EUT:	Smart Phone	Model No.:	K12
Temperature:	20 °C	Relative Humidity:	48%
Test Mode:	GSM/GPRS/EGPRS 850/ GSM/GPRS/EGPRS 1900/ UMTS band II/ UMTS band V	Test By:	Allen Liu
Results: PASS			

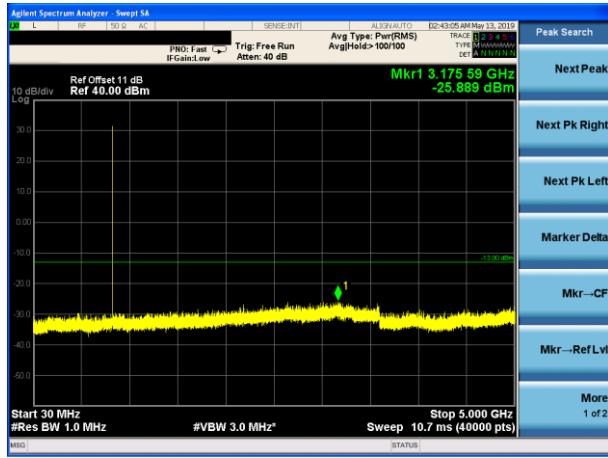
Test Plot

GSM850	GSM850
<p>Conducted Emission Transmitting Mode CH 128 30MHz – 5GHz</p>	<p>Conducted Emission Transmitting Mode CH 190 30MHz – 5GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.077 93 GHz -25.113 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 5.000 GHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.099 42 GHz -25.598 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 5.000 GHz</p>
<p>Conducted Emission Transmitting Mode CH 128 5GHz – 10GHz</p>	<p>Conducted Emission Transmitting Mode CH 190 5GHz – 10GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 7.753 44 GHz -26.241 dBm Start 5.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 10.000 GHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 9.615 99 GHz -26.687 dBm Start 5.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 10.000 GHz</p>

Test Plot

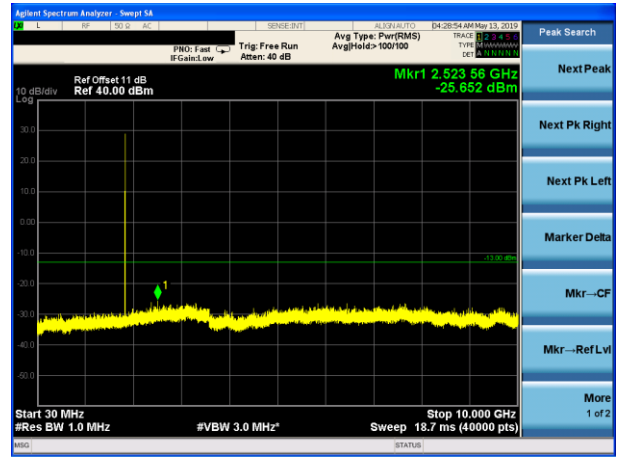
GSM850

Conducted Emission Transmitting Mode CH 251
30MHz – 5GHz

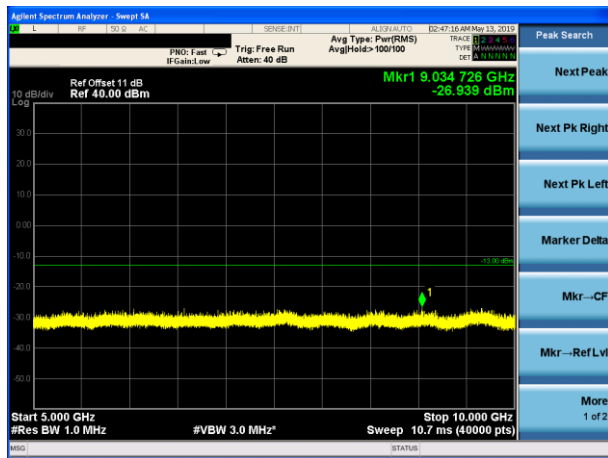


GSM1900

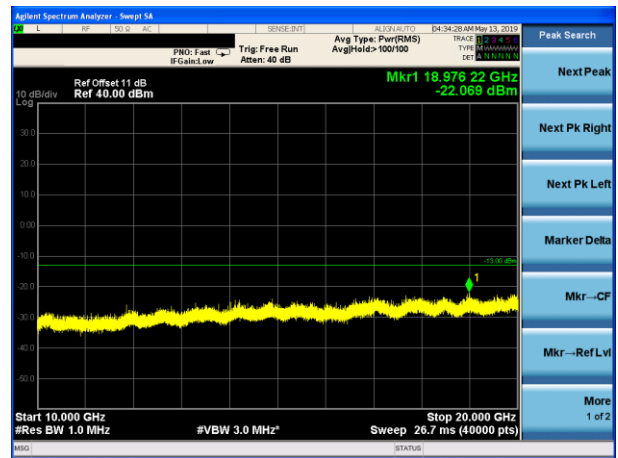
Conducted Emission Transmitting Mode CH 512
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 251
5GHz – 10GHz



Conducted Emission Transmitting Mode CH 512
10GHz – 20GHz



Test Plot

GSM1900	GSM1900
<p>Conducted Emission Transmitting Mode CH 661 30MHz – 10GHz</p>	<p>Conducted Emission Transmitting Mode CH 810 30MHz – 10GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.075 41 GHz -26.212 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 18.7 ms (40000 pts)</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.165 14 GHz -26.149 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 18.7 ms (40000 pts)</p>
<p>Conducted Emission Transmitting Mode CH 661 10GHz – 20GHz</p>	<p>Conducted Emission Transmitting Mode CH 810 10GHz – 20GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 19.888 50 GHz -21.839 dBm Start 10.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 26.7 ms (40000 pts)</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 19.897 50 GHz -21.687 dBm Start 10.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 26.7 ms (40000 pts)</p>

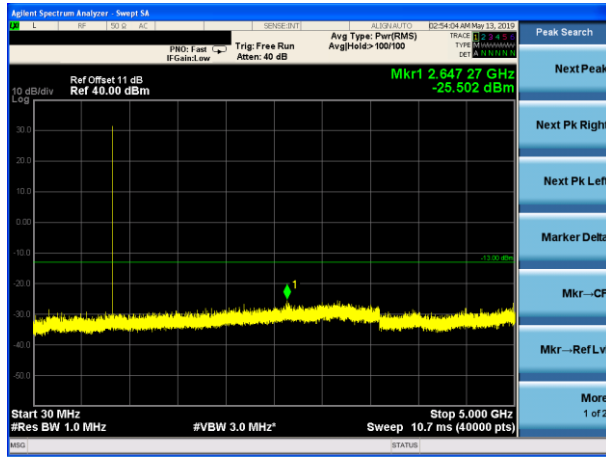
Test Plot

GPRS850	GPRS850
<p>Conducted Emission Transmitting Mode CH 128 30MHz – 5GHz</p>	<p>Conducted Emission Transmitting Mode CH 190 30MHz – 5GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.114 33 GHz -24.744 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 5.000 GHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.166 89 GHz -25.581 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 5.000 GHz</p>
<p>Conducted Emission Transmitting Mode CH 128 5GHz – 10GHz</p>	<p>Conducted Emission Transmitting Mode CH 190 5GHz – 10GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 7.350 434 GHz -26.124 dBm Start 5.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 10.000 GHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 5.798 770 GHz -26.777 dBm Start 5.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 10.000 GHz</p>

Test Plot

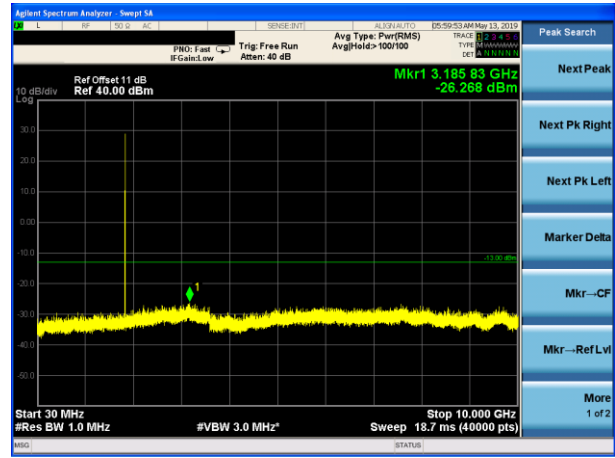
GPRS850

Conducted Emission Transmitting Mode CH 251
30MHz – 5GHz

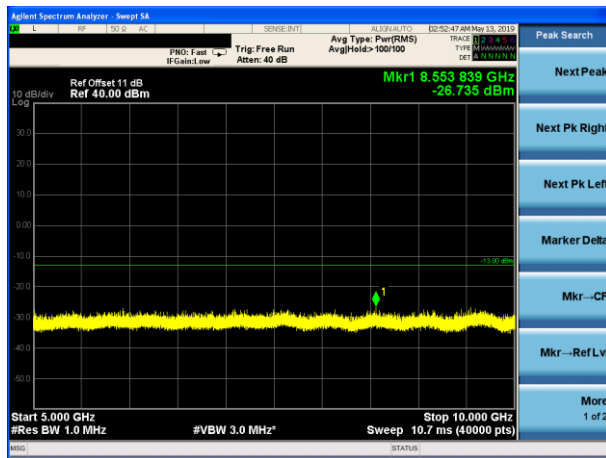


GPRS1900

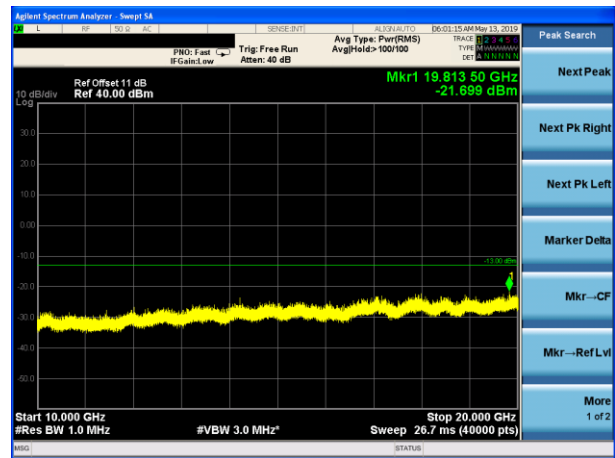
Conducted Emission Transmitting Mode CH 512
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 251
5GHz – 10GHz



Conducted Emission Transmitting Mode CH 512
10GHz – 20GHz



Test Plot

GPRS1900	GPRS1900
<p>Conducted Emission Transmitting Mode CH 661 30MHz – 10GHz</p>	<p>Conducted Emission Transmitting Mode CH 810 30MHz – 10GHz</p>
<p>Conducted Emission Transmitting Mode CH 661 10GHz – 20GHz</p>	<p>Conducted Emission Transmitting Mode CH 810 10GHz – 20GHz</p>

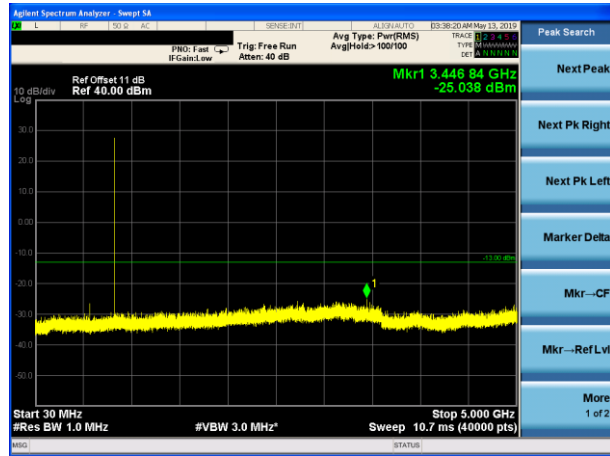
Test Plot

EGPRS850	EGPRS850
<p>Conducted Emission Transmitting Mode CH 128 30MHz – 5GHz</p>	<p>Conducted Emission Transmitting Mode CH 190 30MHz – 5GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.253 50 GHz -25.491 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 5.000 GHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 2.760 71 GHz -25.677 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 5.000 GHz</p>
<p>Conducted Emission Transmitting Mode CH 128 5GHz – 10GHz</p>	<p>Conducted Emission Transmitting Mode CH 190 5GHz – 10GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 9.752 619 GHz -27.034 dBm Start 5.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 10.000 GHz</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 6.072 152 GHz -26.691 dBm Start 5.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 10.7 ms (40000 pts) Stop 10.000 GHz</p>

Test Plot

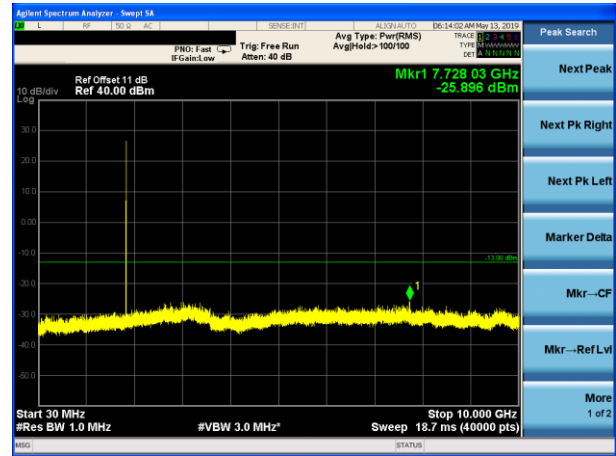
EGPRS850

Conducted Emission Transmitting Mode CH 251
30MHz – 5GHz

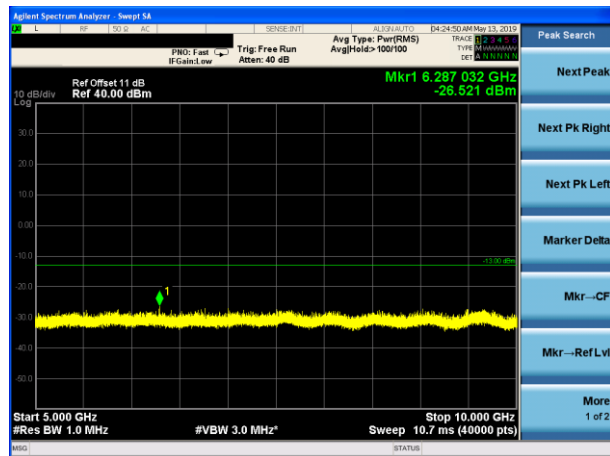


EGPRS1900

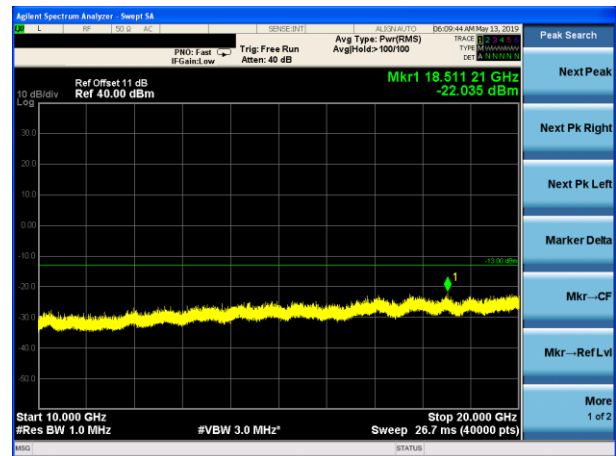
Conducted Emission Transmitting Mode CH 512
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 251
5GHz – 10GHz



Conducted Emission Transmitting Mode CH 512
10GHz – 20GHz



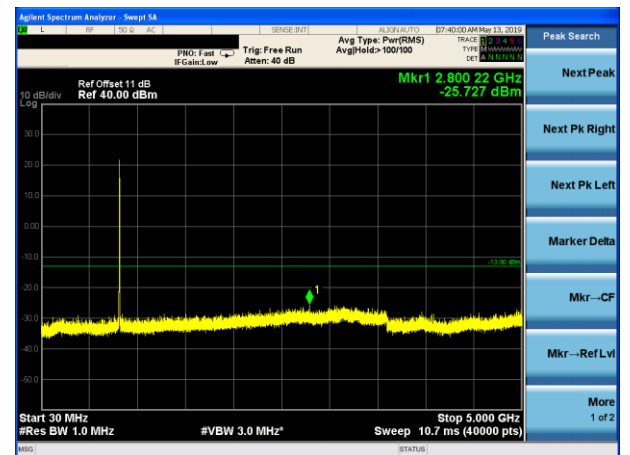
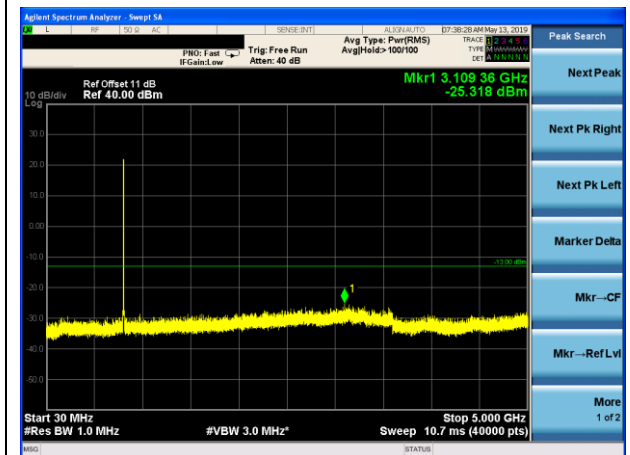
Test Plot

EGPRS1900	EGPRS1900
<p>Conducted Emission Transmitting Mode CH 661 30MHz – 10GHz</p>	<p>Conducted Emission Transmitting Mode CH 810 30MHz – 10GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.149 44 GHz -25.940 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 18.7 ms (40000 pts)</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 2.777 30 GHz -26.201 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 18.7 ms (40000 pts)</p>
<p>Conducted Emission Transmitting Mode CH 661 10GHz – 20GHz</p>	<p>Conducted Emission Transmitting Mode CH 810 10GHz – 20GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 19.946 00 GHz -22.075 dBm Start 10.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 26.7 ms (40000 pts)</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 19.841 25 GHz -22.614 dBm Start 10.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 26.7 ms (40000 pts)</p>

Test Plot

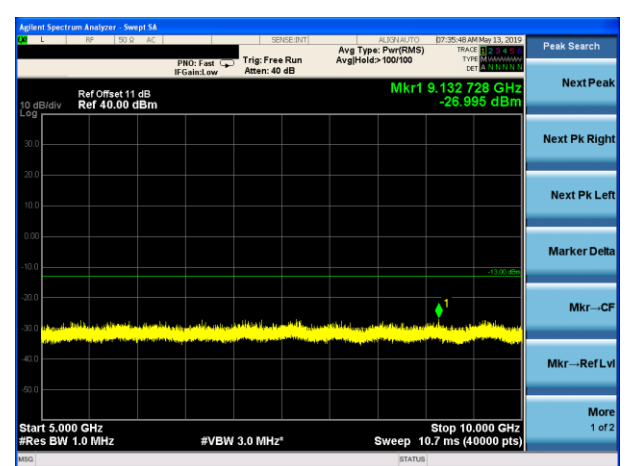
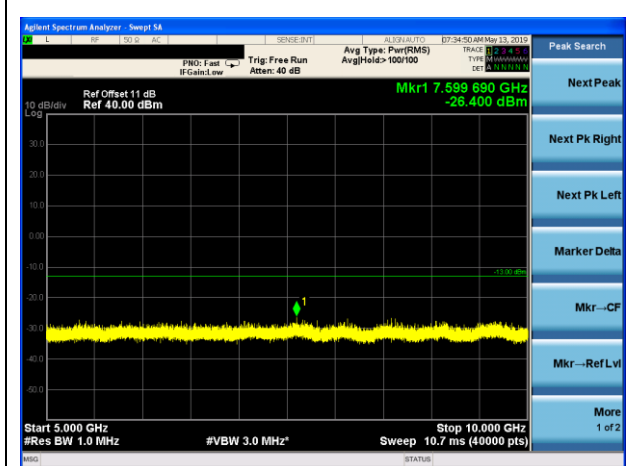
UMTS band V
Conducted Emission Transmitting Mode CH 4132
30MHz – 5GHz

UMTS band V
Conducted Emission Transmitting Mode CH 4183
30MHz – 5GHz



Conducted Emission Transmitting Mode CH 4132
5GHz – 10GHz

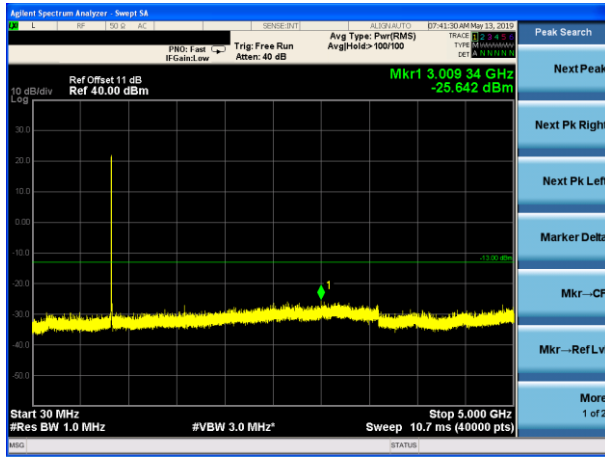
Conducted Emission Transmitting Mode CH 4183
5GHz – 10GHz



Test Plot

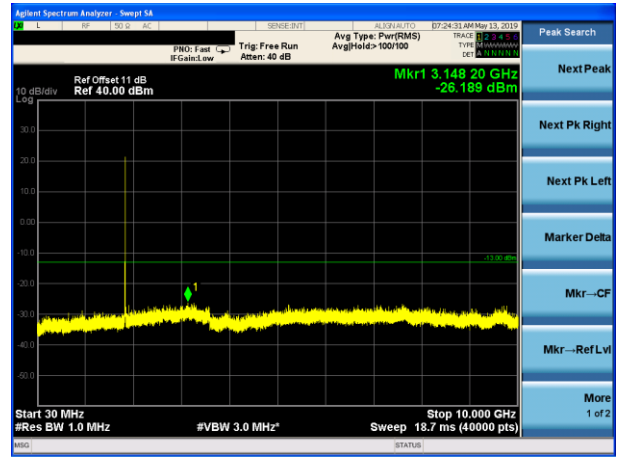
UMTS band V

Conducted Emission Transmitting Mode CH 4233
30MHz – 5GHz

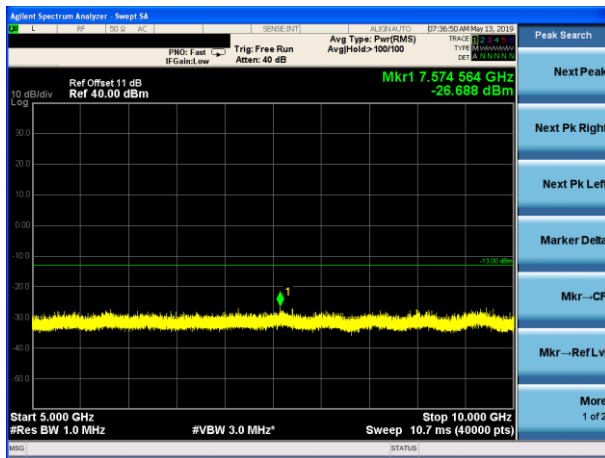


UMTS band II

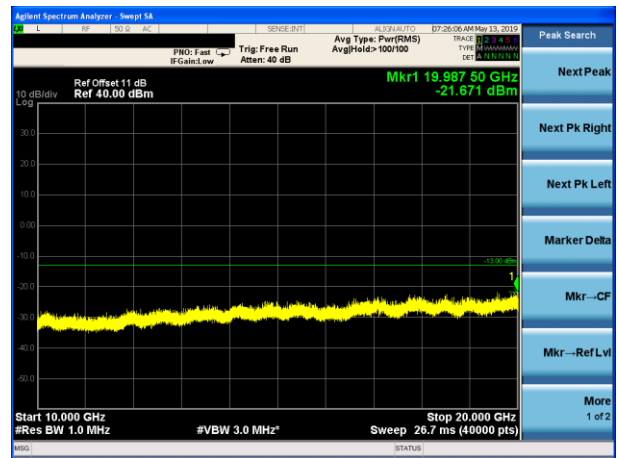
Conducted Emission Transmitting Mode CH 9262
30MHz – 10GHz



Conducted Emission Transmitting Mode CH 4233
5GHz – 10GHz



Conducted Emission Transmitting Mode CH 9262
10GHz – 20GHz



Test Plot

UMTS band II	UMTS band II
<p>Conducted Emission Transmitting Mode CH 9400 30MHz – 10GHz</p>	<p>Conducted Emission Transmitting Mode CH 9538 30MHz – 10GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 2.692 34 GHz -25.941 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 18.7 ms (40000 pts)</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 3.279 55 GHz -25.889 dBm Start 30 MHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 18.7 ms (40000 pts)</p>
<p>Conducted Emission Transmitting Mode CH 9400 10GHz – 20GHz</p>	<p>Conducted Emission Transmitting Mode CH 9538 10GHz – 20GHz</p>
<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 17.052 93 GHz -22.577 dBm Start 10.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 26.7 ms (40000 pts)</p>	<p>Agilent Spectrum Analyzer - Sweep 54 Ref Offset 11 dB Ref 40.00 dBm Mkr1 19.986 75 GHz -22.266 dBm Start 10.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 26.7 ms (40000 pts)</p>

END OF REPORT