

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.5.2. Test data

Test plots as follows:

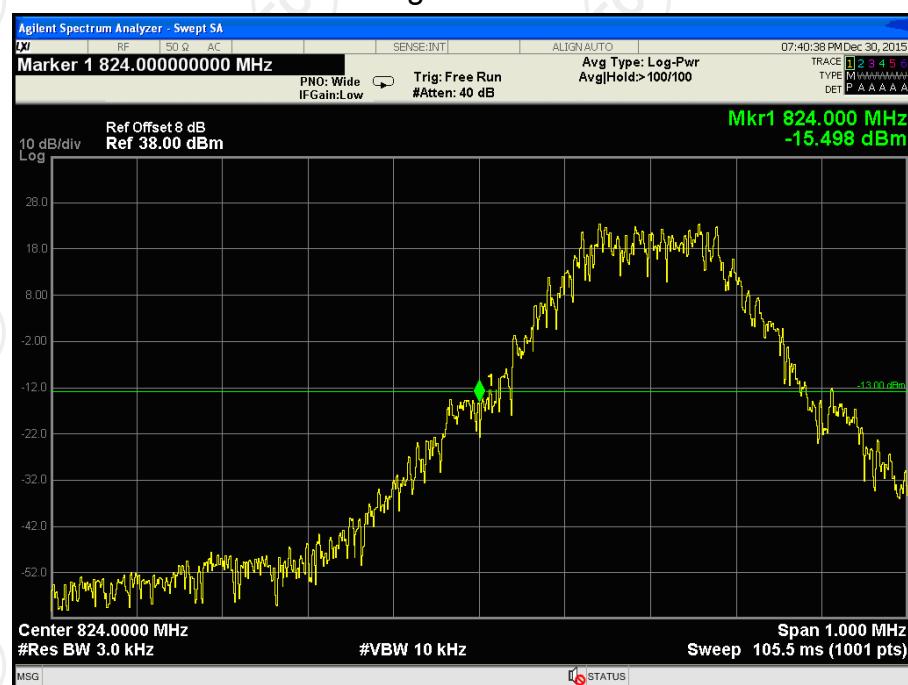
Band:

GPRS 850

Test Mode:

GPRS Class 8 Link
(GMSK)

Lower Band Edge Plot on Channel 128



Higher Band Edge Plot on Channel 251



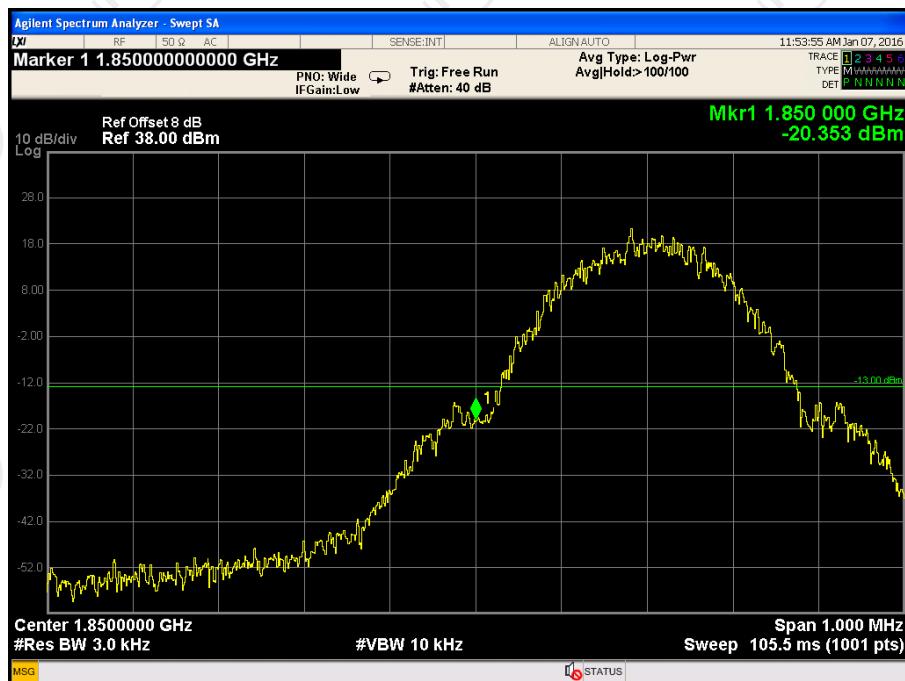
Band:

GPRS 1900

Test Mode:

 GPRS Class 8 Link
(GMSK)

Lower Band Edge Plot on Channel 512



Higher Band Edge Plot on Channel 810



Band:

EGPRS 850

Test Mode:

 EGPRS Class 8 Link
(8PSK)

Lower Band Edge Plot on Channel 128



Higher Band Edge Plot on Channel 251



Band:

EGPRS 1900

Test Mode:

 EGPRS Class 8 Link
(8PSK)

Lower Band Edge Plot on Channel 512



Higher Band Edge Plot on Channel 810



Band:

WCDMA Band V

Test Mode:

RMC 12.2Kbps Link
(QPSK)

Lower Band Edge Plot on Channel 4132



Higher Band Edge Plot on Channel 4233



Band:

WCDMA Band II

Test Mode:

 RMC 12.2Kbps Link
(QPSK)

Lower Band Edge Plot on Channel 9262



Higher Band Edge Plot on Channel 9538



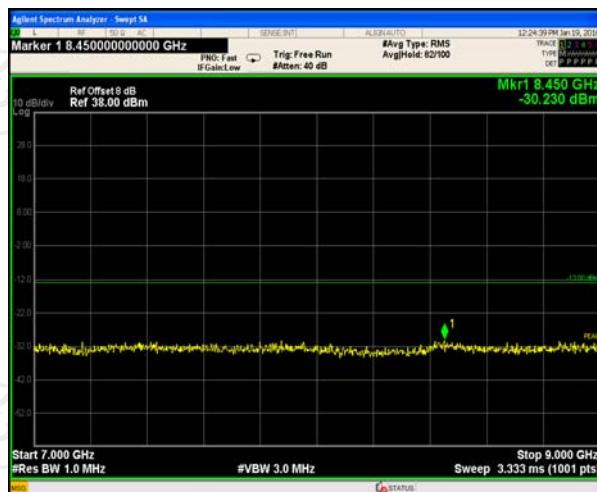
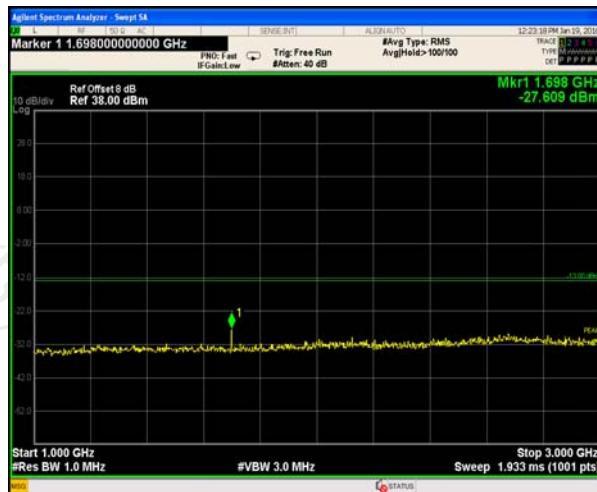
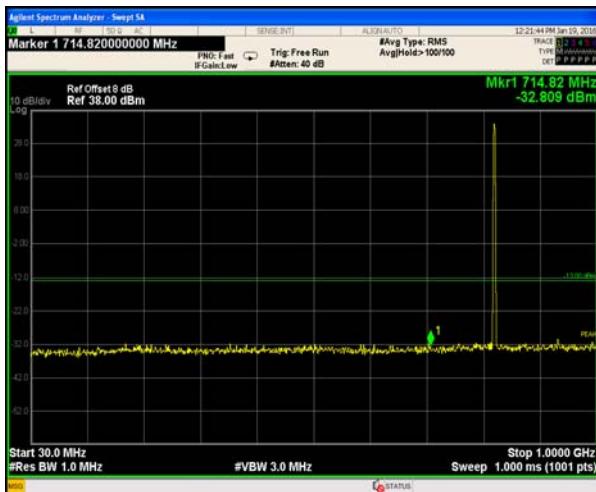
Band:

GPRS 850

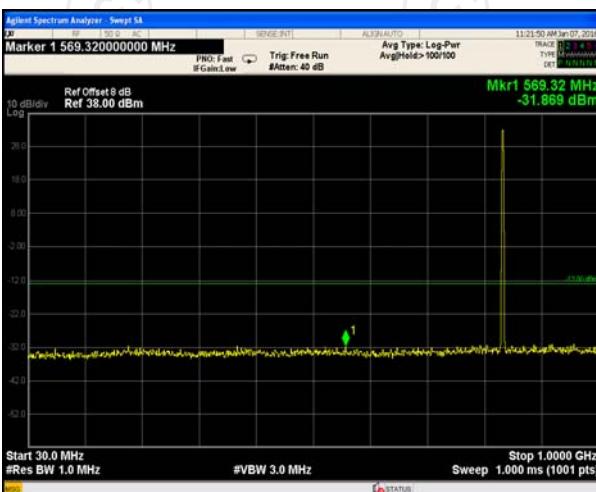
Test Mode:

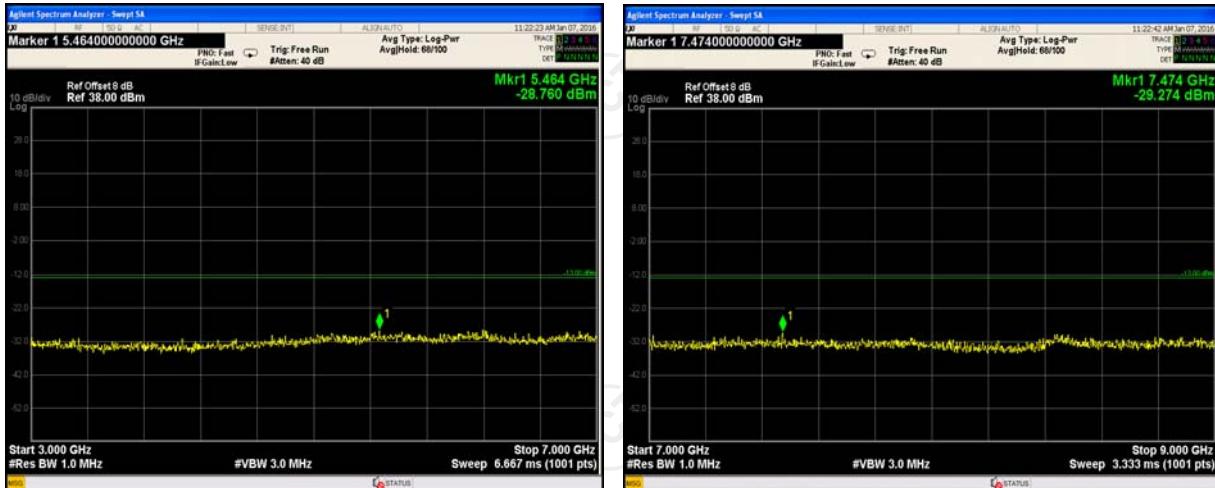
 GPRS Class 8 Link
(GMSK)

Conducted Spurious Emission on Channel 128

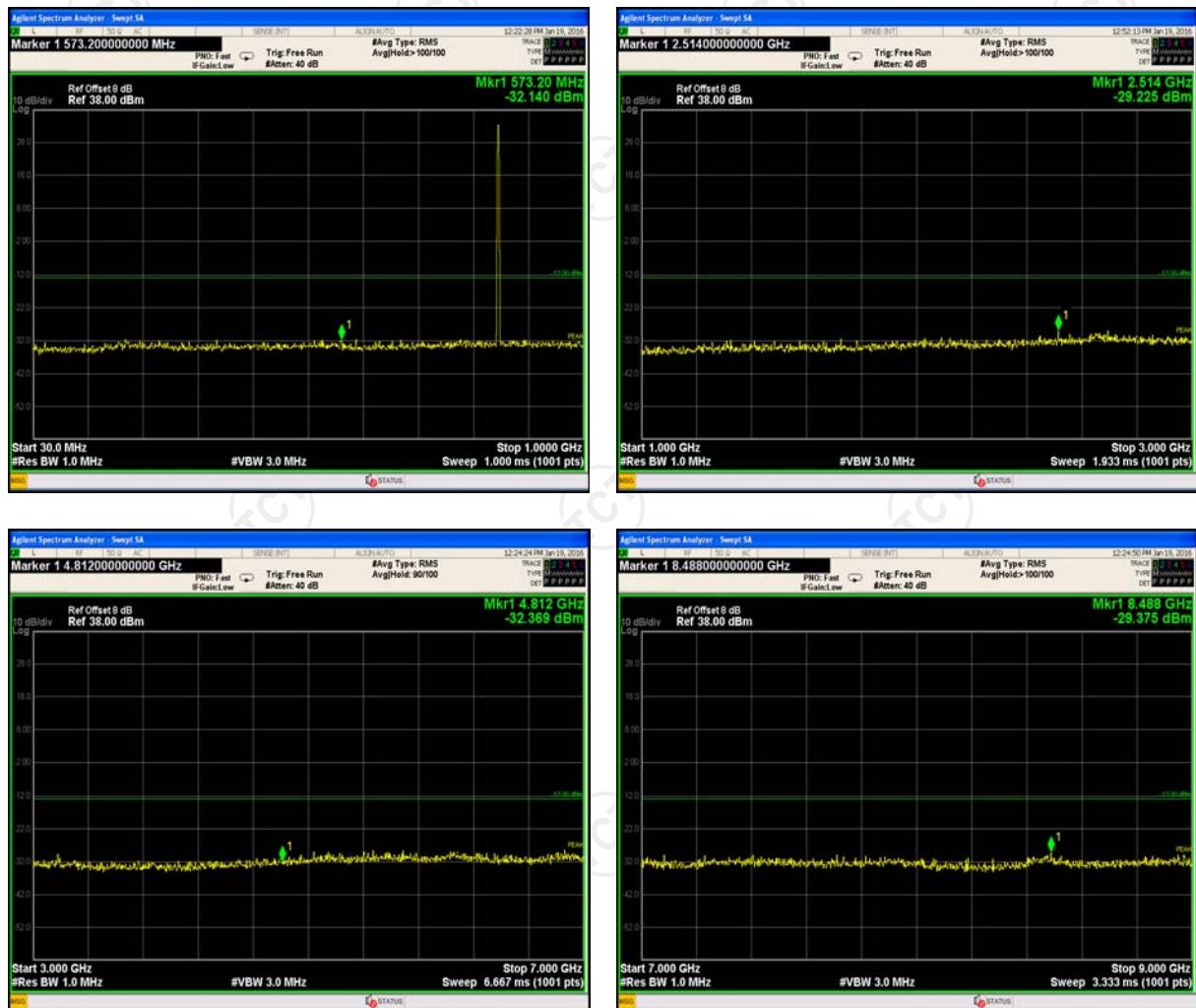


Conducted Spurious Emission on Channel 189





Conducted Spurious Emission on Channel 251



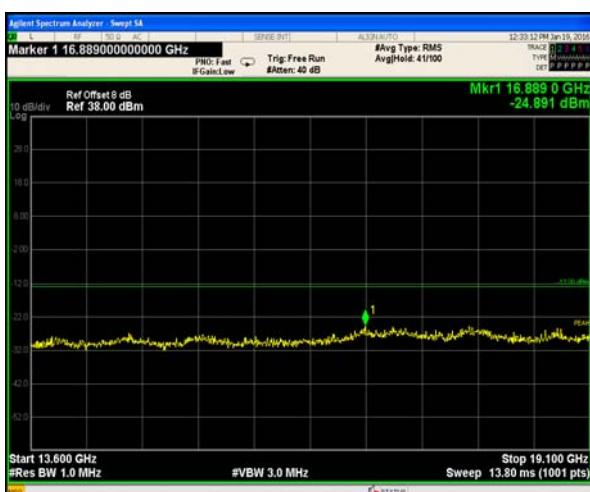
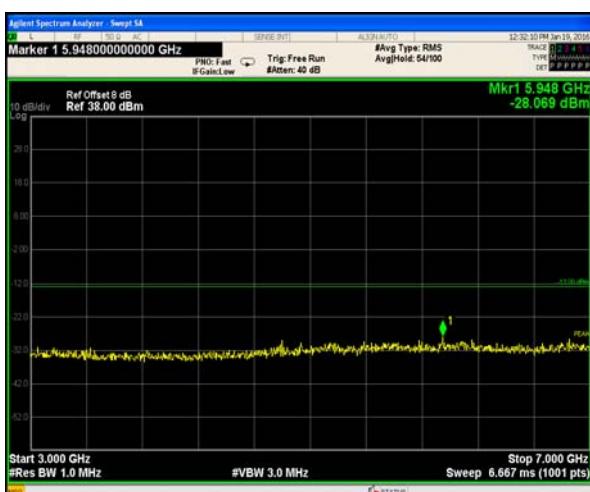
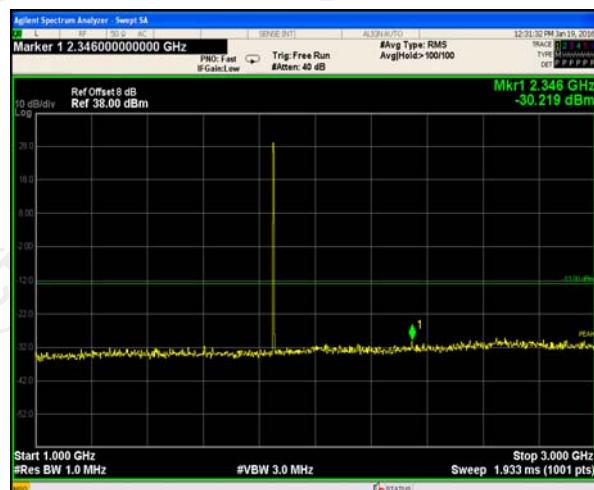
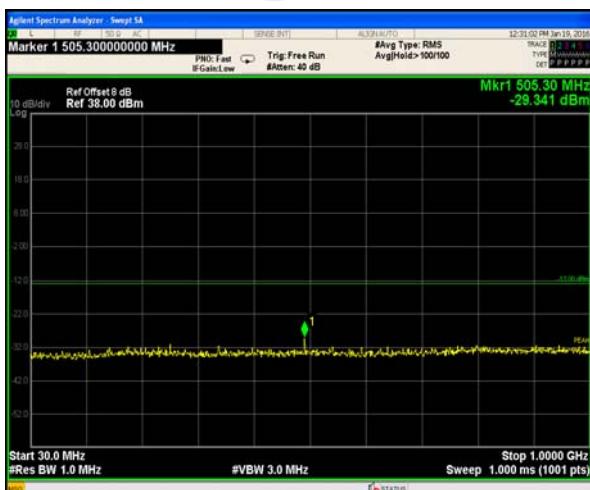
Band:

GPRS 1900

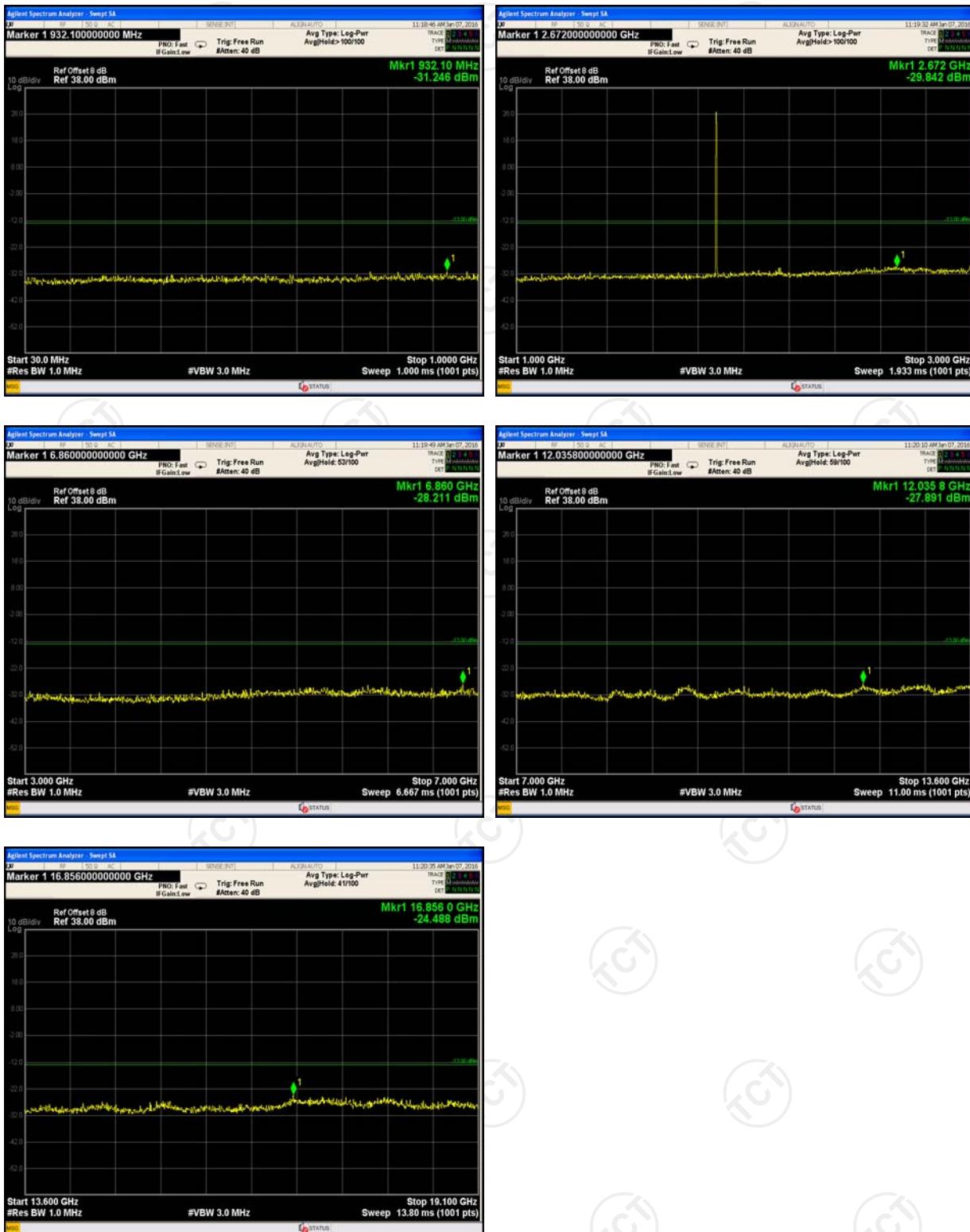
Test Mode:

 GPRS Class 8 Link
(GMSK)

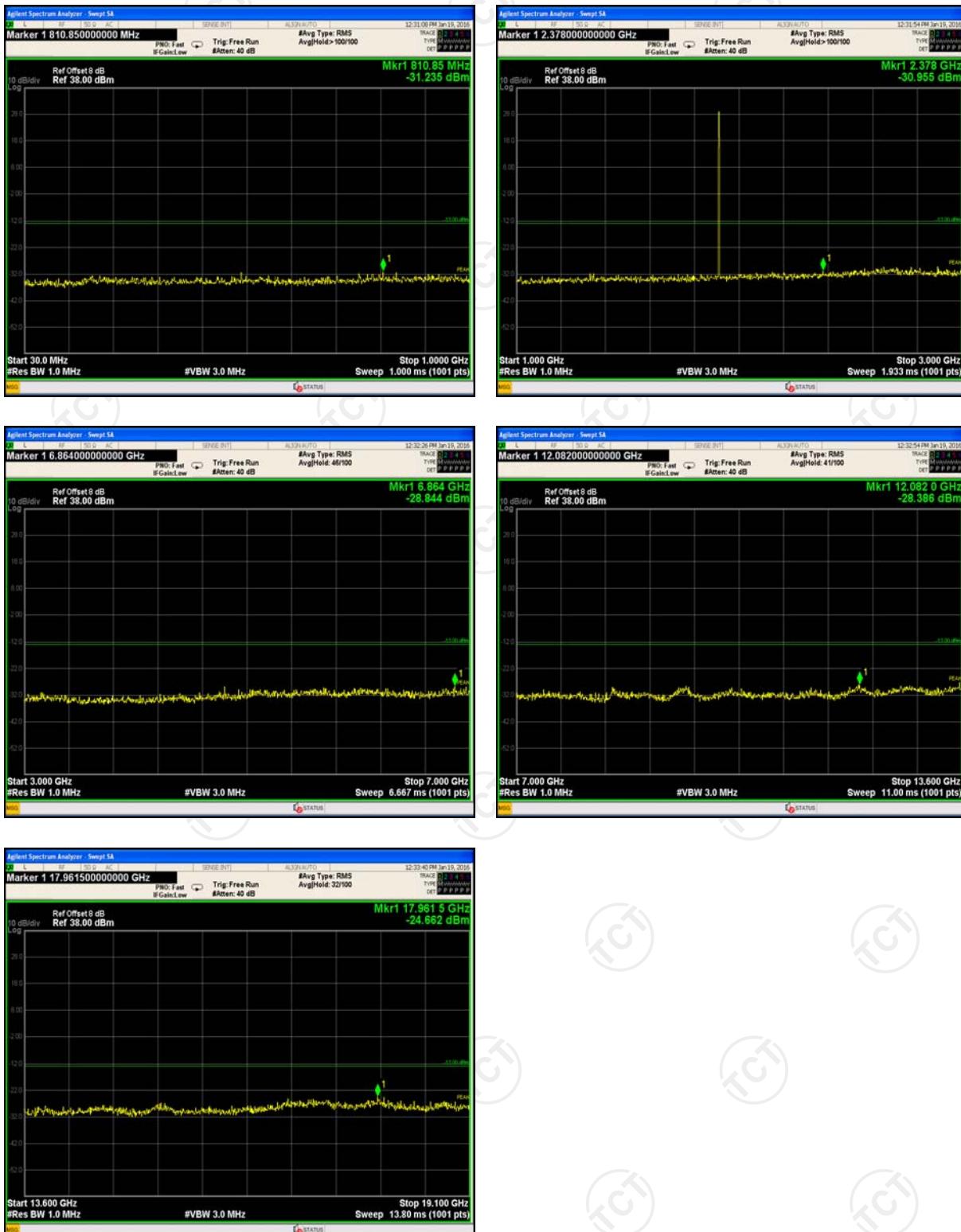
Conducted Spurious Emission on Channel 512



Conducted Spurious Emission on Channel 661



Conducted Spurious Emission on Channel 810



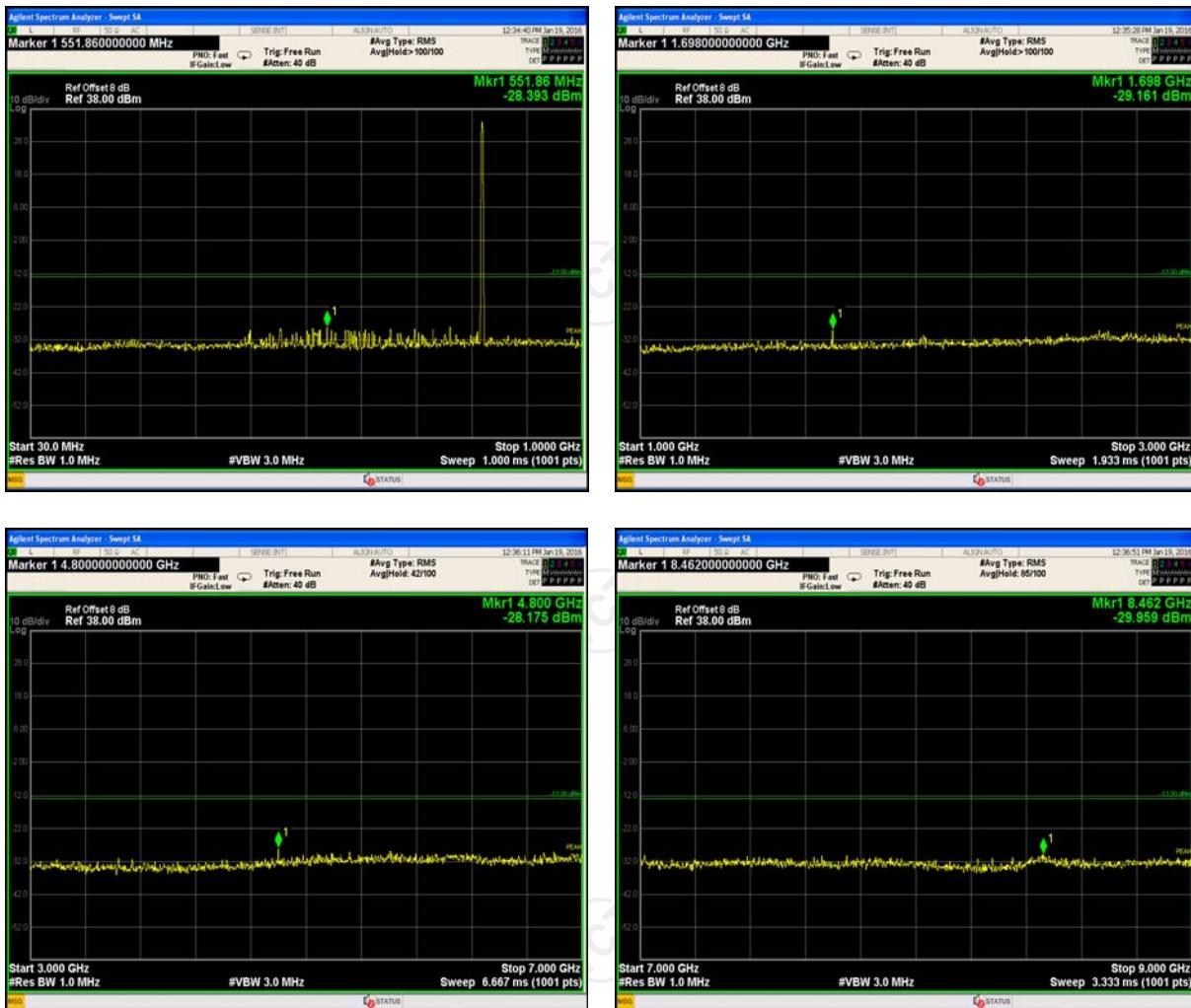
Band:

EGPRS 850

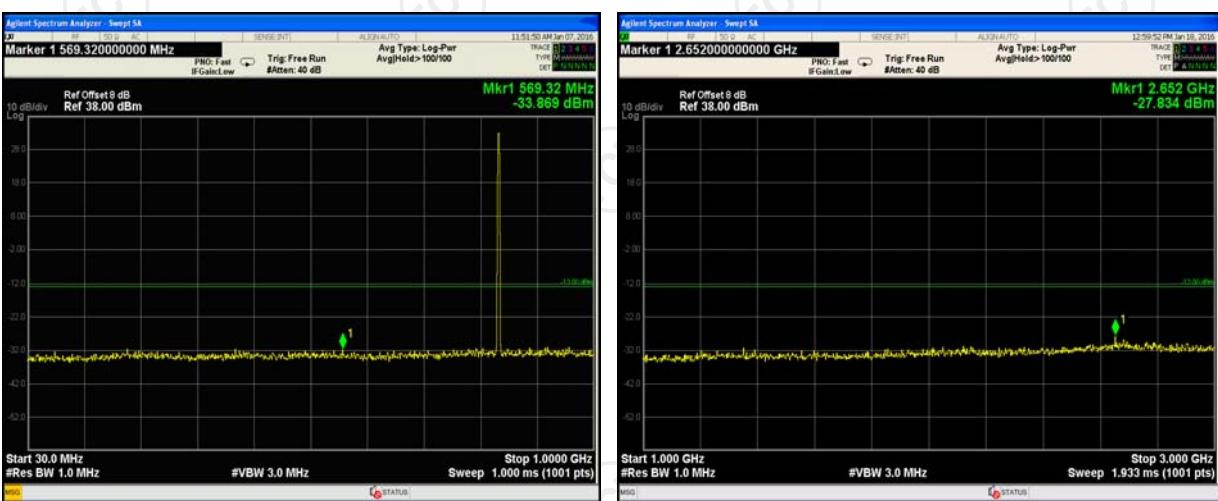
Test Mode:

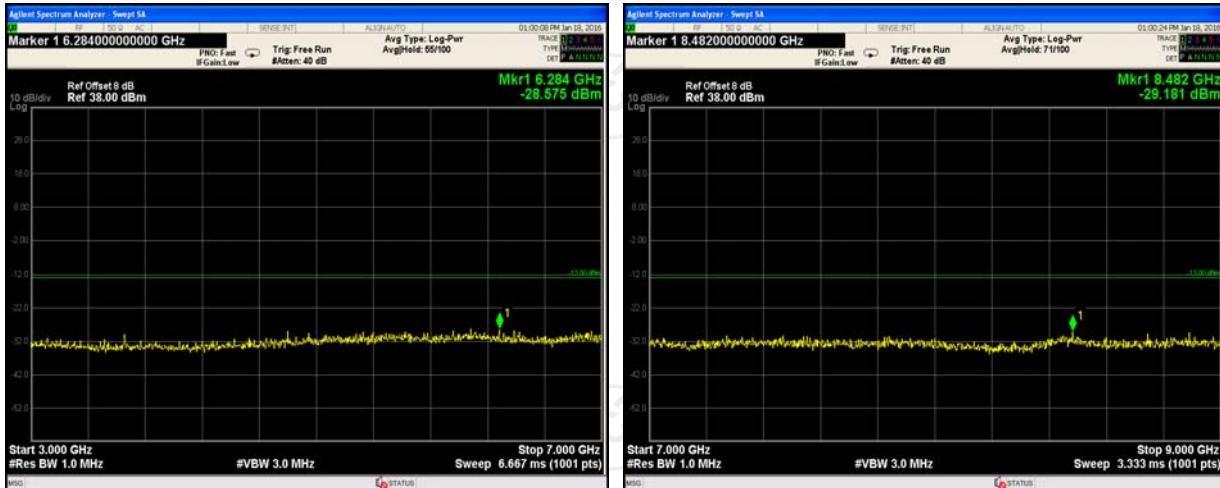
 EGPRS Class 8 Link
(8PSK)

Conducted Spurious Emission on Channel 128

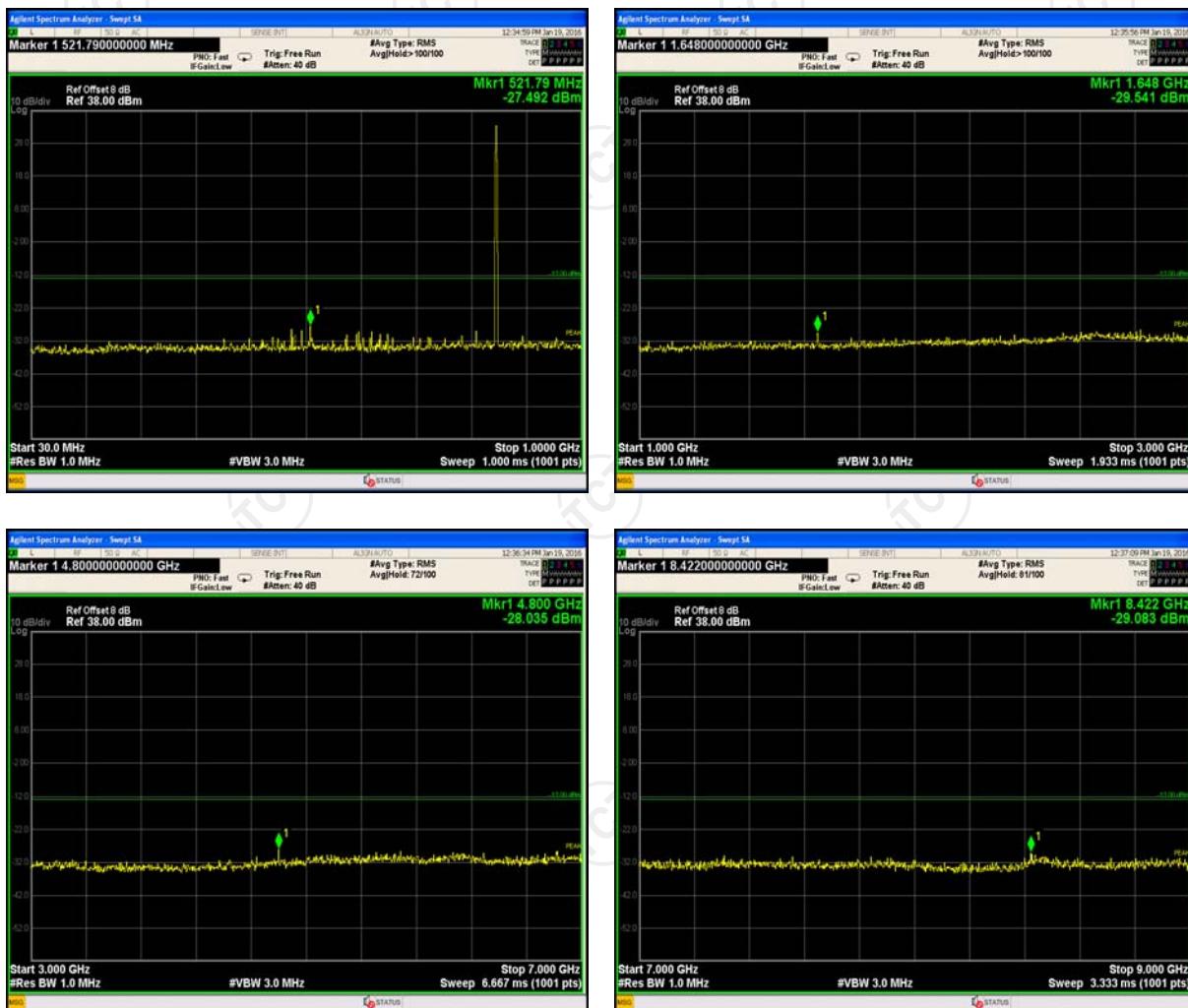


Conducted Spurious Emission on Channel 189





Conducted Spurious Emission on Channel 251



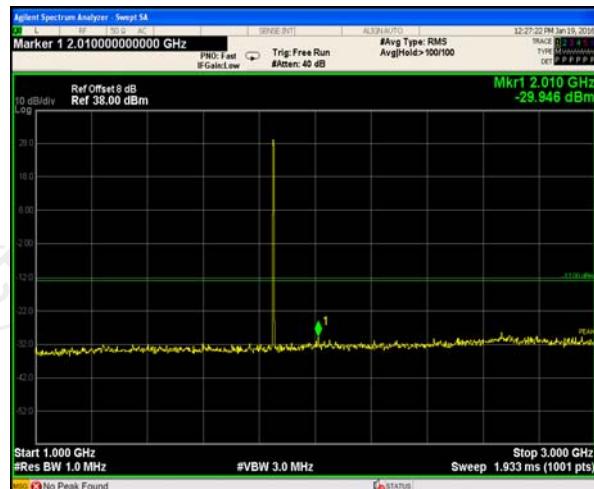
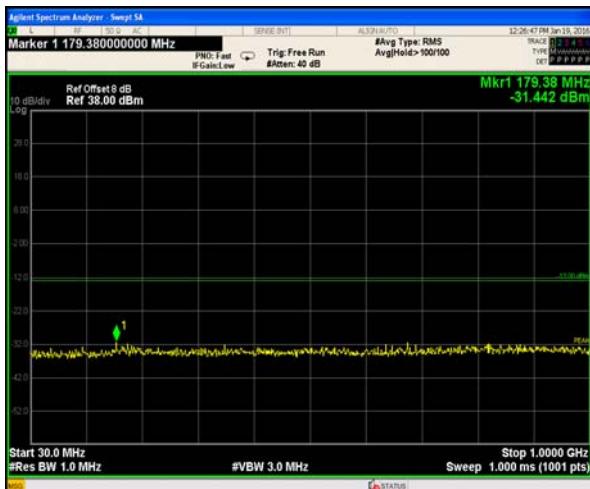
Band:

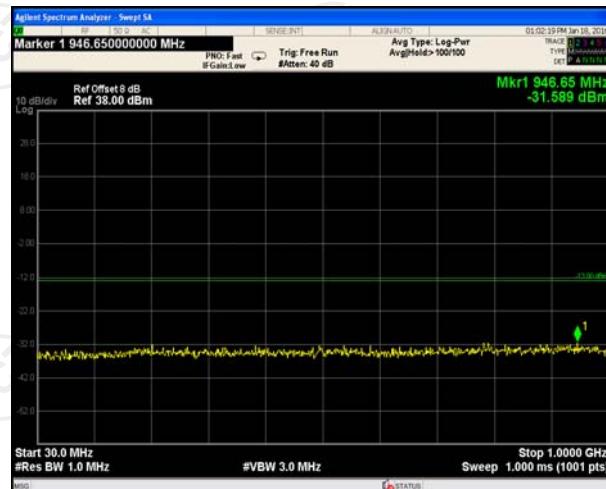
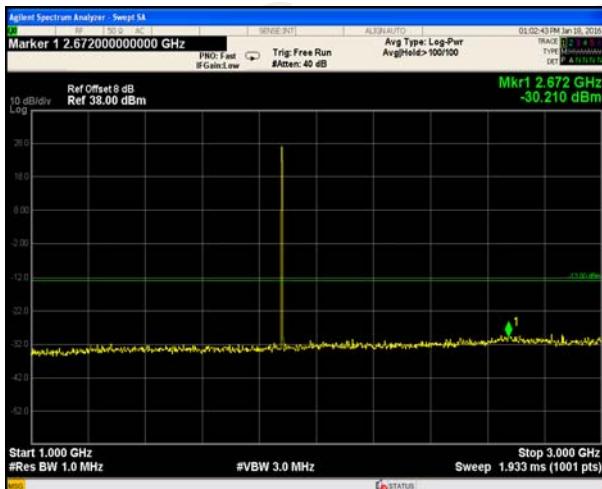
EGPRS 1900

Test Mode:

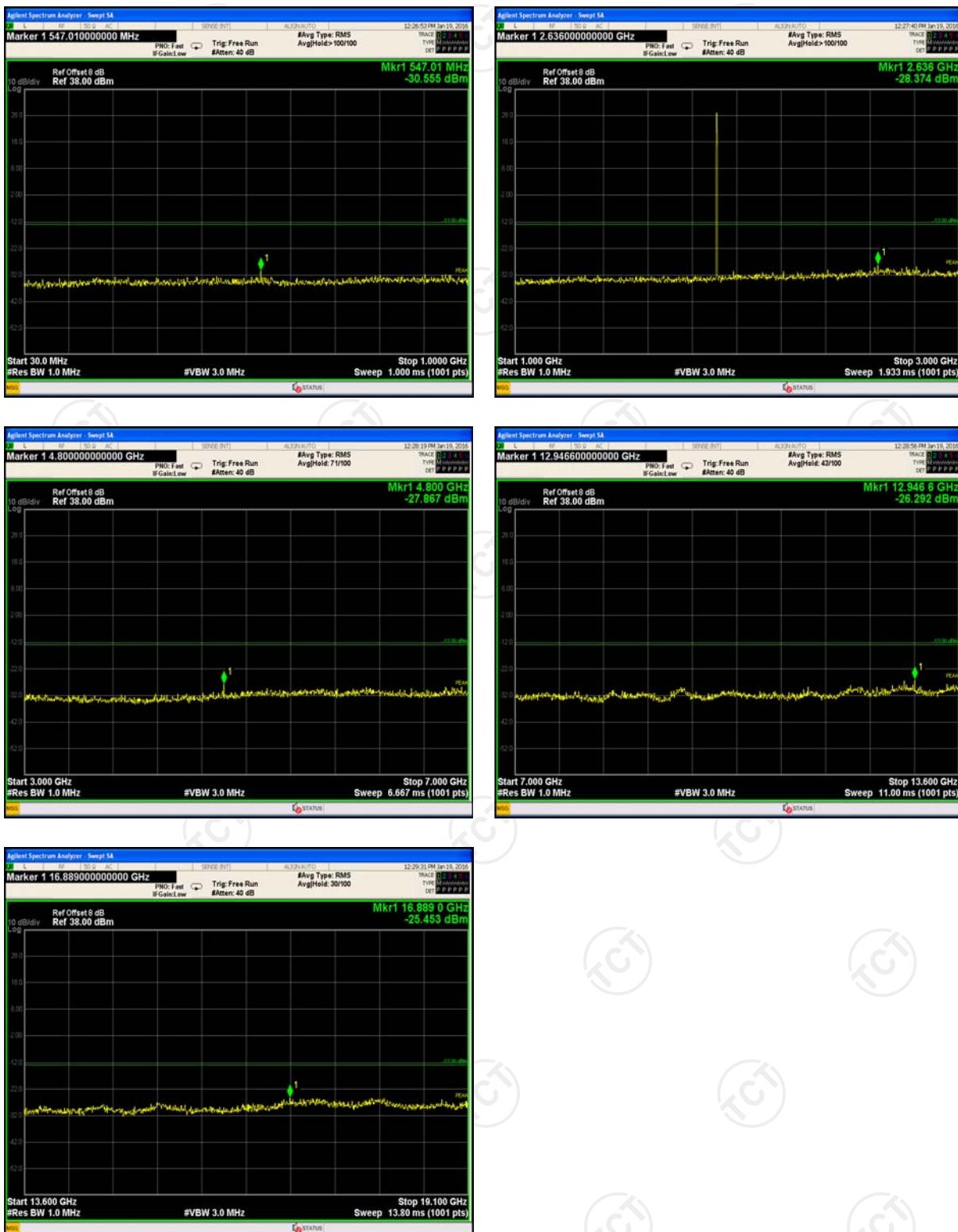
 EGPRS Class 8 Link
(8PSK)

Conducted Spurious Emission on Channel 512





Conducted Spurious Emission on Channel 810



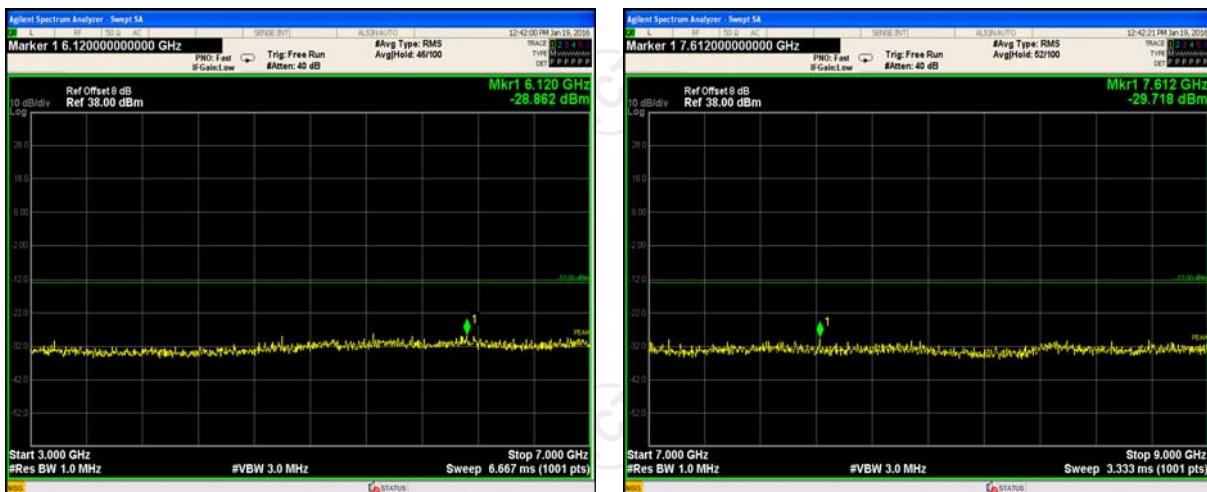
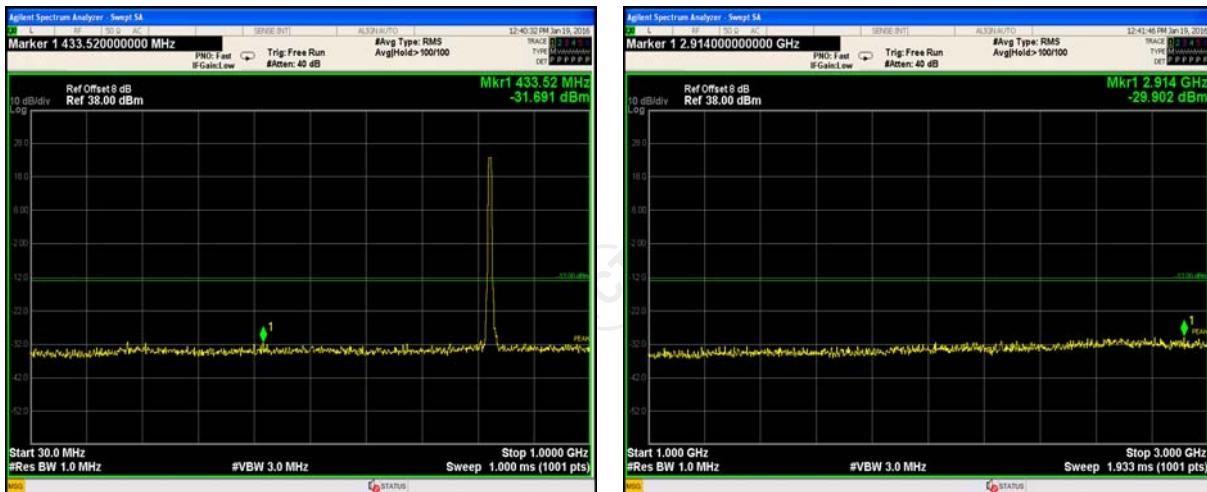
Band:

WCDMA Band V

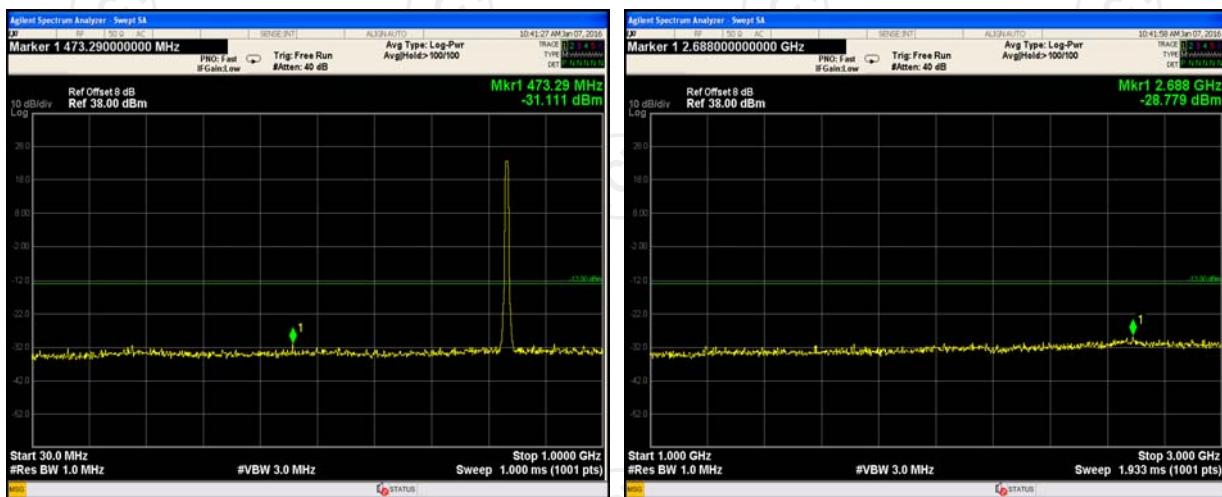
Test Mode:

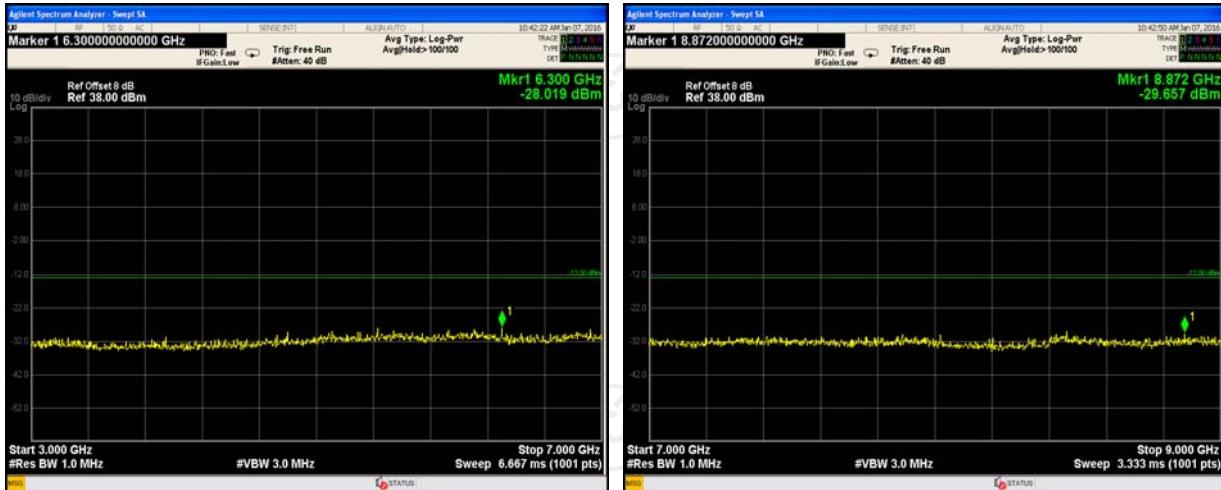
 RMC 12.2Kbps Link
(QPSK)

Conducted Spurious Emission on Channel 4132

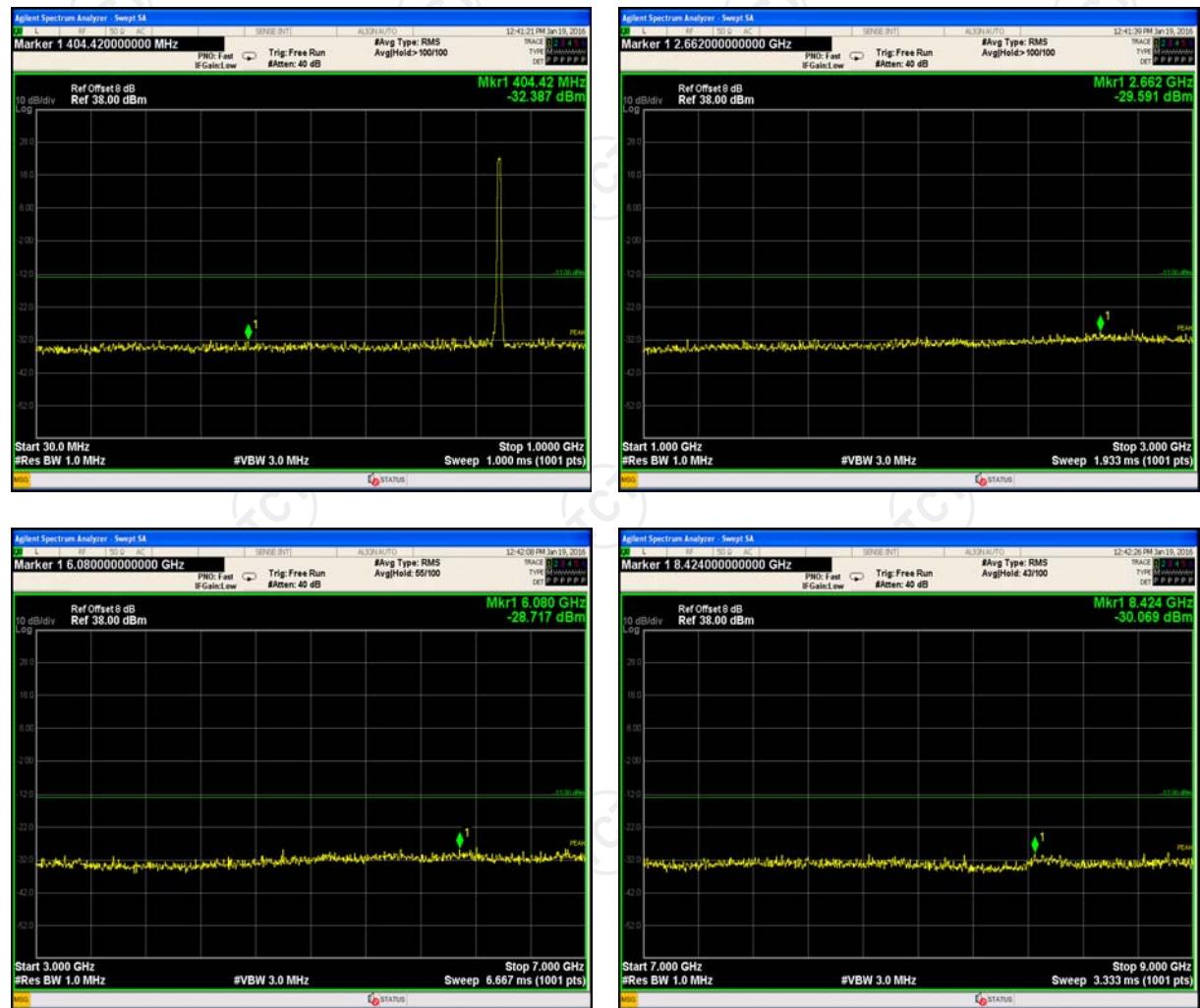


Conducted Spurious Emission on Channel 4183





Conducted Spurious Emission on Channel 4233



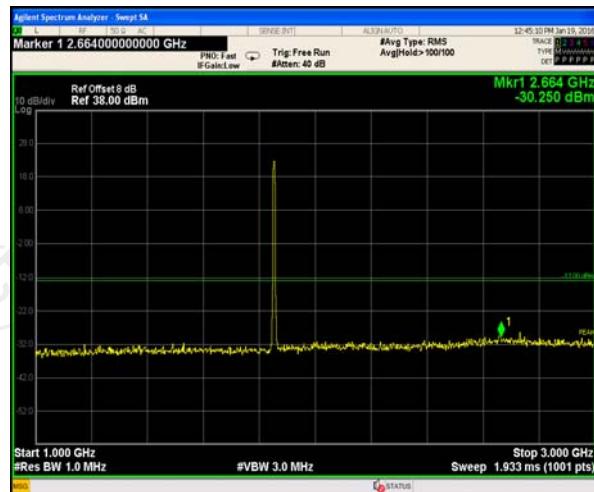
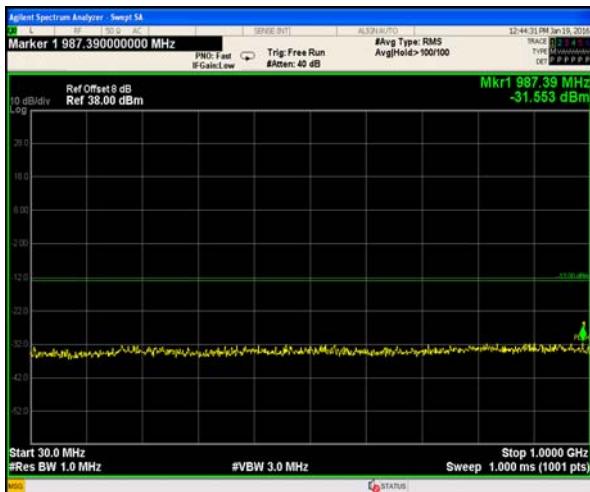
Band:

WCDMA Band II

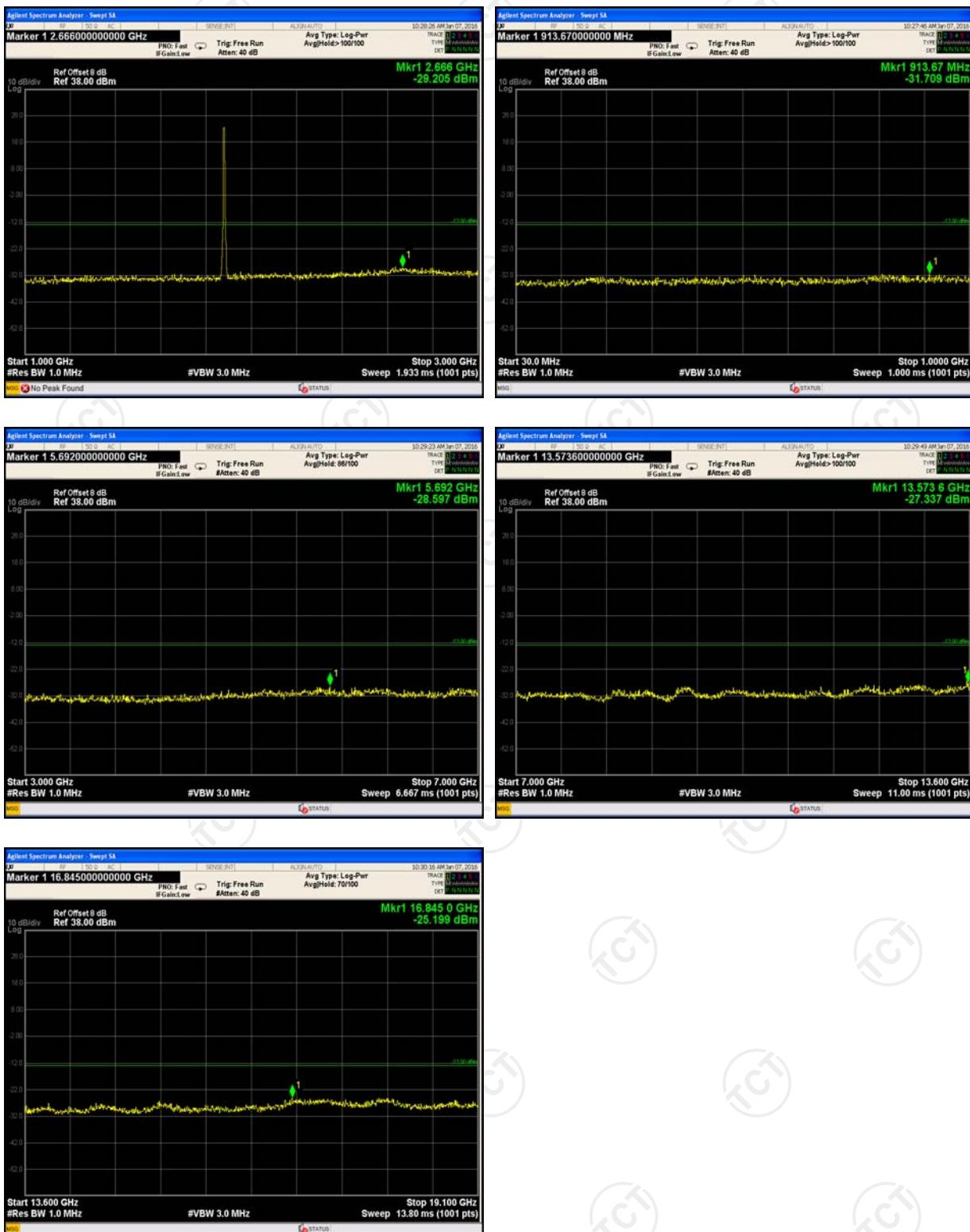
Test Mode:

 RMC 12.2Kbps Link
(QPSK)

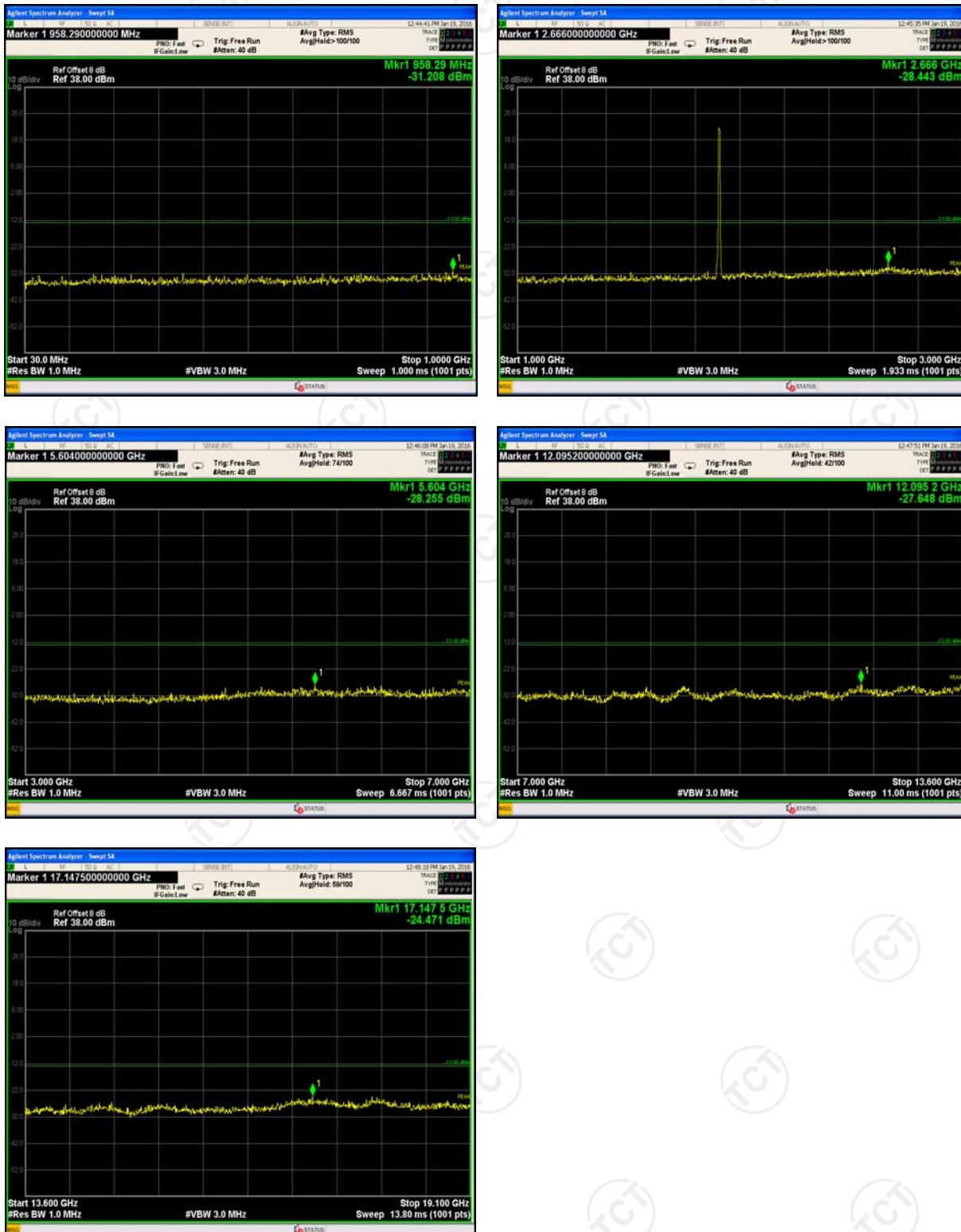
Conducted Spurious Emission on Channel 9262



Conducted Spurious Emission on Channel 9400

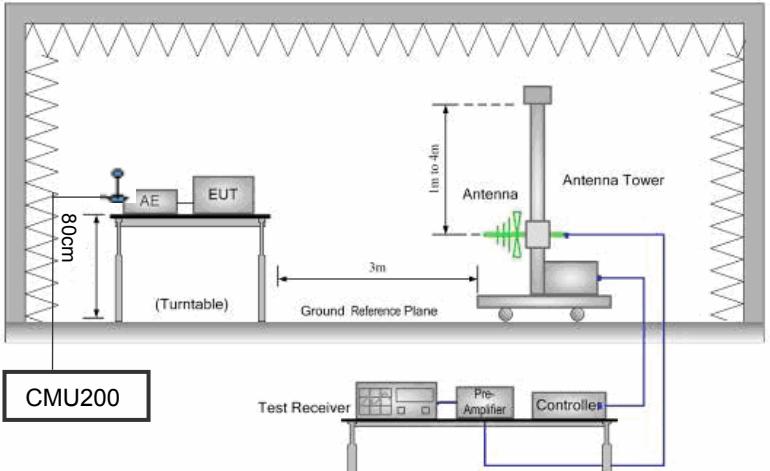


Conducted Spurious Emission on Channel 9538



6.6. Effective Radiated Power and Effective Isotropic Radiated Power Measurement

6.6.1. Test Specification

Test Requirement:	FCC part 22.913(a) and FCC part 24.232(b)																								
Test Method:	FCC part 2.1046																								
Receiver Setup:	<table border="1"> <thead> <tr> <th></th><th>GSM/GPRS/EDGE</th><th>WCDMA/HSPA</th></tr> </thead> <tbody> <tr> <td>SPAN</td><td>500kHz</td><td>10MHz</td></tr> <tr> <td>RBW</td><td>10kHz</td><td>100kHz</td></tr> <tr> <td>VBW</td><td>30kHz</td><td>300kHz</td></tr> <tr> <td>Detector</td><td>RMS</td><td>RMS</td></tr> <tr> <td>Trace</td><td>Average</td><td>Average</td></tr> <tr> <td>Average Type</td><td>Power</td><td>Power</td></tr> <tr> <td>Sweep Count</td><td>100</td><td>100</td></tr> </tbody> </table>		GSM/GPRS/EDGE	WCDMA/HSPA	SPAN	500kHz	10MHz	RBW	10kHz	100kHz	VBW	30kHz	300kHz	Detector	RMS	RMS	Trace	Average	Average	Average Type	Power	Power	Sweep Count	100	100
	GSM/GPRS/EDGE	WCDMA/HSPA																							
SPAN	500kHz	10MHz																							
RBW	10kHz	100kHz																							
VBW	30kHz	300kHz																							
Detector	RMS	RMS																							
Trace	Average	Average																							
Average Type	Power	Power																							
Sweep Count	100	100																							
Limit:	GSM850 7W ERP PCS1900 2W EIRP WCDMA Band V: 7W ERP WCDMA Band II: 2W EIRP																								
Test Setup:																									
Test Procedure:	<ol style="list-style-type: none"> The testing follows FCC KDB 971168 v02r02 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-C-2004 Section 2.2.17. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01. During the measurement, the system simulator parameters were set to force the EUT transmitting at 																								

	<p>maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.</p> <p>4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (substitution antenna) at the same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, $EIRP = LVL + \text{Correction factor}$ and $ERP = EIRP - 2.15$.</p>
Test results:	PASS

6.6.2. Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
ESPI Test Receiver	ROHDE&SCHW ARZ	ESVD	100008	Sep. 11, 2016
System simulator	R&S	CMU200	111382	Sep. 11, 2016
Spectrum Analyzer	ROHDE&SCHW ARZ	FSEM	848597/001	Sep. 11, 2016
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 12, 2016
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 11, 2016
Pre-amplifier	HP	8447D	2727A05017	Sep. 11, 2016
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 13, 2016
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 13, 2016
Broadband Antenna	Schwarzbeck	VULB9163	412	Sep. 13, 2016
Horn Antenna	Schwarzbeck	BBHA 9120D	813	Sep. 13, 2016
Dipole Antenna	TCT	TCT-RF	N/A	Sep. 13, 2016
Coax cable	TCT	RE-low-01	N/A	Sep. 11, 2016
Coax cable	TCT	RE-high-02	N/A	Sep. 11, 2016
Coax cable	TCT	RE-low-03	N/A	Sep. 11, 2016
Coax cable	TCT	RE-High-04	N/A	Sep. 11, 2016
Antenna Mast	CCS	CC-A-4M	N/A	Sep. 12, 2016
EMI Test Software	Shurples Technology	EZ-EMC	N/A	N/A
UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	R&S	Sep. 12, 2015	Sep. 11, 2016

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.6.3. Test Data

Test Result of ERP

GPRS850 (GPRS class 8) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.40	6.54	21.66	26.05	0.40
836.40	6.31	21.54	25.70	0.37
848.80	6.57	21.46	25.88	0.39
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.40	10.31	22.42	30.58	1.14
836.40	10.25	22.65	30.75	1.19
848.80	10.62	22.26	30.73	1.18

ERP = LVL (dBm) + Correction Factor (dB) - 2.15

Correction Factor= S.G. Power - Cable loss + Substitution Antenna Gain- SPA. Reading

EGPRS850 (EGPRS class 8) Radiated Power ERP

EGPRS850 (EGPRS class 8) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.40	0.54	21.66	20.05	0.10
836.40	0.34	21.54	19.73	0.09
848.80	0.65	21.46	19.96	0.10
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
824.40	3.97	22.42	24.24	0.27
836.40	3.89	22.65	24.39	0.27
848.80	4.01	22.26	24.12	0.26

ERP = LVL (dBm) + Correction Factor (dB) - 2.15

Correction Factor= S.G. Power - Cable loss + Substitution Antenna Gain- SPA. Reading

WCDMA Band V (RMC 12.2Kbps) Radiated Power ERP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
826.40	-2.32	21.54	17.07	0.05
836.40	-2.65	21.48	16.68	0.05
846.60	-3.03	21.62	16.44	0.04
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	ERP (dBm)	ERP (W)
826.40	1.25	22.74	21.84	0.15
836.40	1.03	22.62	21.5	0.14
846.60	1.18	22.56	21.59	0.14

* $ERP = LVL (dBm) + Correction Factor (dB) - 2.15$

Correction Factor= S.G. Power - Cable loss + Substitution Antenna Gain- SPA. Reading

Test Result of EIRP

GPRS1900 (class 8) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.20	-5.21	30.15	24.94	0.31
1880.00	-5.24	31.01	25.77	0.38
1909.80	-5.14	30.34	25.20	0.33
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.20	-4.21	30.52	26.31	0.43
1880.00	-4.37	31.47	27.10	0.51
1909.80	-4.20	30.67	26.47	0.44

EIRP = LVL (dBm) + Correction Factor (dB)

Correction Factor= S.G. Power - Cable loss + Substitution Antenna Gain- SPA. Reading

EGPRS1900 (class 8) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.20	-7.25	30.15	22.90	0.19
1880.00	-7.33	31.01	23.68	0.23
1909.80	-7.65	30.34	22.69	0.19
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1850.20	-6.14	30.52	24.38	0.27
1880.00	-6.35	31.47	25.12	0.33
1909.80	-6.01	30.67	24.66	0.29

EIRP = LVL (dBm) + Correction Factor (dB)

Correction Factor= S.G. Power - Cable loss + Substitution Antenna Gain- SPA. Reading

WCDMA Band II (RMC 12.2Kbps) Radiated Power EIRP				
Horizontal Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.40	-16.26	31.78	15.52	0.04
1880.00	-15.02	31.63	16.61	0.05
1907.60	-16.98	31.75	14.77	0.03
Vertical Polarization				
Frequency (MHz)	LVL (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (W)
1852.40	-10.54	31.85	21.31	0.14
1880.00	-9.05	31.39	22.34	0.17
1907.60	-10.32	31.67	21.35	0.14

* EIRP = LVL (dBm) + Correction Factor (dB)

Correction Factor= S.G. Power - Cable loss + Substitution Antenna Gain- SPA. Reading

6.7. Field Strength of Spurious Radiation Measurement

6.7.1. Test Specification

Test Requirement:	FCC part 22.917(a) and FCC part 24.238(a)
Test Method:	FCC part 2.1053
Operation mode:	Refer to item 4.1
Limit:	-13dBm
Test setup:	<p>For 30MHz~1GHz</p> <p>Above 1GHz</p>
Test Procedure:	<ol style="list-style-type: none"> The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-C-2004 Section 2.2.12. The EUT was placed on a rotatable wooden table 0.8 meters above the ground. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower. The table was rotated 360 degrees to determine the position of the highest spurious emission.

	<p>5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.</p> <p>6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.</p> <p>7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.</p> <p>8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.</p> <p>9. Taking the record of output power at antenna port.</p> <p>10. Repeat step 7 to step 8 for another polarization.</p> <p>11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain</p> <p>12. ERP (dBm) = EIRP - 2.15</p> <p>13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.</p> <p>14. 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.</p>
Test results:	PASS

6.7.2. Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
ESPI Test Receiver	ROHDE&SCHW ARZ	ESVD	100008	Sep. 11, 2016
System simulator	R&S	CMU200	111382	Sep. 11, 2016
Spectrum Analyzer	ROHDE&SCHW ARZ	FSEM	848597/001	Sep. 11, 2016
Spectrum Analyzer	Agilent	N9020A	MY49100060	Sep. 12, 2016
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 11, 2016
Pre-amplifier	HP	8447D	2727A05017	Sep. 11, 2016
Loop antenna	ZHINAN	ZN30900A	12024	Sep. 13, 2016
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 13, 2016
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 13, 2016
Horn Antenna	Schwarzbeck	BBHA 9170	373	Sep. 13, 2016
Dipole Antenna	TCT	TCT-RF	N/A	Sep. 13, 2016
Coax cable	TCT	RE-low-01	N/A	Sep. 11, 2016
Coax cable	TCT	RE-high-02	N/A	Sep. 11, 2016
Coax cable	TCT	RE-low-03	N/A	Sep. 11, 2016
Coax cable	TCT	RE-High-04	N/A	Sep. 11, 2016
Antenna Mast	CCS	CC-A-4M	N/A	Sep. 12, 2016
EMI Test Software	Shurples Technology	EZ-EMC	N/A	N/A

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.7.3. Test Data

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dB μ V/m)	Limit@3m (dB μ V/m)
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--	--	--
--	--	--
--	--	--

Note: 1. Emission Level=Reading+ Cable loss-Antenna factor-Amp factor

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement

Band	GSM 850		Test channel:	Lowest
Test mode:	GPRS Link (GPRS Class 8)		Temperature :	25°C
			Relative Humidity:	56%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
1648.40	Vertical	-42.72	-13.00	PASS
2472.60	V	-39.36		
3296.80	V	-51.81		
1648.40	Horizontal	-42.63		
2472.60	H	-38.44		
3296.80	H	-51.99		
Band	GSM 850		Test channel:	Middle
Test mode:	GPRS Link (GPRS Class 8)		Temperature :	25°C
			Relative Humidity:	56%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
1673.20	Vertical	-41.68	-13.00	PASS
2509.80	V	-44.77		
3346.40	V	-52.48		
1673.20	Horizontal	-41.67		
2509.80	H	-39.83		
3346.40	H	-52.23		
Band	GSM 850		Test channel:	Highest
Test mode:	GPRS Link (GPRS Class 8)		Temperature :	25°C
			Relative Humidity:	56%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
1697.60	Vertical	-40.85	-13.00	PASS
2546.40	V	-44.41		
3395.20	V	-52.52		
1697.60	Horizontal	-41.48		
2546.40	H	-40.92		
3395.20	H	-52.41		

Band	GSM 850		Test channel:	Lowest
Test mode:	EGPRS class 8 Link		Temperature :	23~24°C
			Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
1648.40	Polarization	Level (dBm)		
1648.40	Vertical	-43.51		
2472.60	V	-49.89		
3296.80	V	-49.38		
1648.40	Horizontal	-44.59		
2472.60	H	-49.43		
3296.80	H	-50.34		
Test mode:	GSM 850		Test channel:	Middle
Test mode:	EGPRS class 8 Link		Temperature :	23~24°C
			Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
1673.20	Polarization	Level (dBm)		
1673.20	Vertical	-43.89		
2509.80	V	-48.72		
3346.40	V	-48.53		
1673.20	Horizontal	-43.65		
2509.80	H	-46.63		
3346.40	H	-47.84		
Test mode:	GSM 850		Test channel:	Highest
Test mode:	EGPRS class 8 Link		Temperature :	23~24°C
			Relative Humidity:	46~48%
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.			
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
1697.60	Polarization	Level (dBm)		
1697.60	Vertical	-42.65		
2546.40	V	-46.87		
3395.20	V	-52.43		
1697.60	Horizontal	-43.63		
2546.40	H	-46.63		
3395.20	H	-56.84		

Band	PCS 1900		Test channel:	Lowest
Test mode:	GPRS Link (Class 8)		Temperature :	25°C
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		Relative Humidity:	56%
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
3700.40	Vertical	-49.63	-13.00	PASS
5550.60	V	-47.35		
7400.80	V	-52.99		
3700.40	Horizontal	-49.82		
5550.60	H	-50.81		
7400.80	H	-52.53		
Test mode:	PCS 1900		Test channel:	Middle
Test mode:	GPRS Link (Class 8)		Temperature :	25°C
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		Relative Humidity:	56%
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
3760.00	Vertical	-49.52	-13.00	PASS
5640.00	V	-53.48		
7520.00	V	-45.83		
3760.00	Horizontal	-47.18		
5640.00	H	-53.23		
7520.00	H	-53.41		
Test mode:	PCS 1900		Test channel:	Highest
Test mode:	GPRS Link (Class 8)		Temperature :	25°C
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		Relative Humidity:	56%
Frequency (MHz)	Spurious Emission		Limit (dBm)	Result
3819.60	Vertical	-47.40	-13.00	PASS
5729.40	V	-50.13		
7639.20	V	-53.19		
3819.60	Horizontal	-48.15		
5729.40	H	-52.36		
7639.20	H	-53.13		

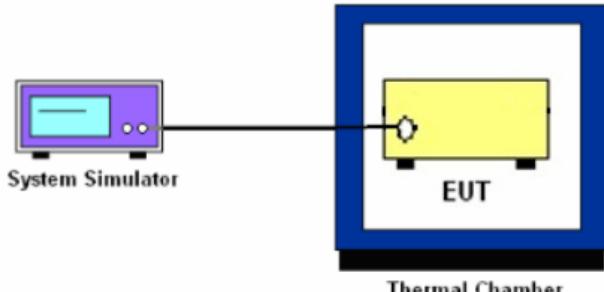
Band	PCS 1900		Test channel:	Lowest		
Test mode:	EGPRS Link (Class 8)		Temperature :	23~24°C		
			Relative Humidity:	46~48%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
3700.40	Vertical	-52.79				
5550.60	V	-54.82				
7400.80	V	-58.65				
3700.40	Horizontal	-52.65				
5550.60	H	-55.96				
7400.80	H	-56.26				
Test mode:	PCS 1900		Test channel:	Middle		
Test mode:	EGPRS Link (Class 8)		Temperature :	23~24°C		
			Relative Humidity:	46~48%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
3760.00	Vertical	-59.65				
5640.00	V	-53.45				
7520.00	V	-57.32				
3760.00	Horizontal	-55.62				
5640.00	H	-58.86				
7520.00	H	-58.84				
Test mode:	PCS 1900		Test channel:	Highest		
Test mode:	EGPRS Link (Class 8)		Temperature :	23~24°C		
			Relative Humidity:	46~48%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
3819.60	Vertical	-51.84				
5729.40	V	-54.75				
7639.20	V	-57.42				
3819.60	Horizontal	-51.22				
5729.40	H	-56.66				
7639.20	H	-57.74				

Band	WCDMA Band V		Test channel:	Lowest		
Test mode:	RMC 12.2Kbps Link (QPSK)		Temperature :	25°C		
			Relative Humidity:	56%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
1652.80	Vertical	-52.21				
2479.20	V	-53.12				
3305.60	V	-52.71				
1652.80	Horizontal	-53.48				
2479.20	H	-50.99				
3305.60	H	-52.93				
Test mode:	WCDMA Band V		Test channel:	Middle		
Test mode:	RMC 12.2Kbps Link (QPSK)		Temperature :	25°C		
			Relative Humidity:	56%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
1673.20	Vertical	-53.19				
2509.80	V	-52.82				
3346.40	V	-52.79				
1673.20	Horizontal	-54.78				
2509.80	H	-51.49				
3346.40	H	-53.86				
Test mode:	WCDMA Band V		Test channel:	Highest		
Test mode:	RMC 12.2Kbps Link (QPSK)		Temperature :	25°C		
			Relative Humidity:	56%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
1693.20	Vertical	-56.27				
2539.80	V	-51.21				
3386.40	V	-52.98				
1693.20	Horizontal	-52.96				
2539.80	H	-51.85				
3386.40	H	-54.09				

Band	WCDMA Band II		Test channel:	Lowest		
Test mode:	RMC 12.2Kbps Link (QPSK)		Temperature :	25°C		
			Relative Humidity:	56%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
3704.80	Vertical	-51.43				
5557.20	V	-53.06				
7409.60	V	-53.02				
3704.80	Horizontal	-53.28				
5557.20	H	-51.97				
7409.60	H	-53.23				
Test mode:	WCDMA Band II		Test channel:	Middle		
Test mode:	RMC 12.2Kbps Link (QPSK)		Temperature :	25°C		
			Relative Humidity:	56%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
3760.00	Vertical	-53.69				
5640.00	V	-52.35				
7520.00	V	-52.31				
3760.00	Horizontal	-54.09				
5640.00	H	-50.78				
7520.00	H	-53.51				
Test mode:	WCDMA Band II		Test channel:	Highest		
Test mode:	RMC 12.2Kbps Link (QPSK)		Temperature :	25°C		
			Relative Humidity:	56%		
Note:	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.					
Frequency (MHz)	Spurious Emission		Limit (dBm) -13.00	Result PASS		
	Polarization	Level (dBm)				
3815.20	Vertical	-55.99				
5722.80	V	-52.17				
7630.40	V	-52.26				
3815.20	Horizontal	-52.83				
5722.80	H	-51.87				
7630.40	H	-54.80				

6.8. Frequency Stability Measurement

6.8.1. Test Specification

Test Requirement:	FCC Part 2.1055(a)(1)(b)
Test Method:	FCC Part 2.1055(a)(1)(b)
Operation mode:	Refer to item 4.1
Limit:	±2.5 ppm
Test Setup:	
Test Procedure:	<p>Test Procedures for Temperature Variation</p> <ol style="list-style-type: none"> 1. The testing follows FCC KDB 971168 v02r02 Section 9.0. 2. The EUT was set up in the thermal chamber and connected with the system simulator. 3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute. 4. With power OFF, the temperature was raised in 10°C steps up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute. <p>Test Procedures for Voltage Variation</p> <ol style="list-style-type: none"> 1. The testing follows FCC KDB 971168 v02r02 Section 9.0. 2. The EUT was placed in a temperature chamber at $25\pm5^{\circ}\text{C}$ and connected with the system simulator. 3. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT. 4. The variation in frequency was measured for the worst case.
Test Result:	PASS

6.8.2. Test Instruments

Equipment	Manufacturer	Model	Serial Number	Calibration Due
System simulator	R&S	CMU200	111382	Sep. 11, 2016

RF cable	TCT	RE-06	N/A	Sep. 12, 2016
Antenna Connector	TCT	RFC-01	N/A	Sep. 12, 2016

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

6.8.3. Test Data

Test Result of Temperature Variation

Band :	GSM 850		Channel:	189
Limit (ppm) :	2.5		Frequency:	836.4MHz
Temperature (°C)	GPRS Class8 Deviation (ppm)		EGPRS Class8 Deviation (ppm)	
50	0.011	0.009		
40	0.013	0.013		
30	0.012	0.011		
20	0.009	0.011		
10	0.011	0.010		PASS
0	0.012	0.013		
-10	0.008	0.010		
-20	0.009	0.012		
-30	0.011	0.013		

Band :	GSM 1900		Channel:	661
Limit (ppm) :	Note		Frequency:	1880MHz
Temperature (°C)	GPRS Class8 Deviation (ppm)		EGPRS Class8 Deviation (ppm)	
50	0.023	0.012		
40	0.021	0.018		
30	0.019	0.015		
20	0.018	0.016		
10	0.022	0.013		PASS
0	0.023	0.016		
-10	0.018	0.016		
-20	0.017	0.014		
-30	0.022	0.018		

Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Band :	WCDMA Band V	Channel:	4183	
Limit (ppm) :	2.5ppm	Frequency:	836.6MHz	
Temperature (°C)	Frequency Deviation (ppm)		Result	
50	0.017		PASS	
40	0.014			
30	0.001			
20	0.007			
10	0.014			
0	0.012			
-10	0.011			
-20	0.012			
-30	0.014			

Band :	WCDMA Band II	Channel:	9400	
Limit (ppm) :	Note	Frequency:	1880MHz	
Temperature (°C)	Frequency Deviation (ppm)		Result	
50	0.017		PASS	
40	0.018			
30	0.014			
20	0.014			
10	0.016			
0	0.022			
-10	0.015			
-20	0.018			
-30	0.018			

Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Test Result of Voltage Variation

Band & Channel	Mode	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
GSM 850 CH189	GPRS Class 8	4.2	0.026	2.5	
		3.7	0.023		
		BEP	0.017		
GSM 850 CH189	EGPRS Class 8	4.2	0.024	2.5	
		3.7	0.022		
		BEP	0.019		
GSM 1900 CH661	GPRS Class 8	4.2	0.012	(Note 3.)	
		3.7	0.009		
		BEP	0.001		
GSM 1900 CH661	EGPRS Class 8	4.2	0.002	(Note 3.)	
		3.7	0.014		
		BEP	0.020		
WCDMA Band V CH4182	RMC 12.2Kbps	4.2	0.021	2.5	
		3.7	0.017		
		BEP	0.019		
WCDMA Band II CH9400	RMC 12.2Kbps	4.2	0.014	(Note 3.)	
		3.7	0.015		
		BEP	0.019		

Note:

1. Normal Voltage = 3.7V.
2. Battery End Point (BEP) = 3.5 V.
3. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

*****END OF REPORT*****