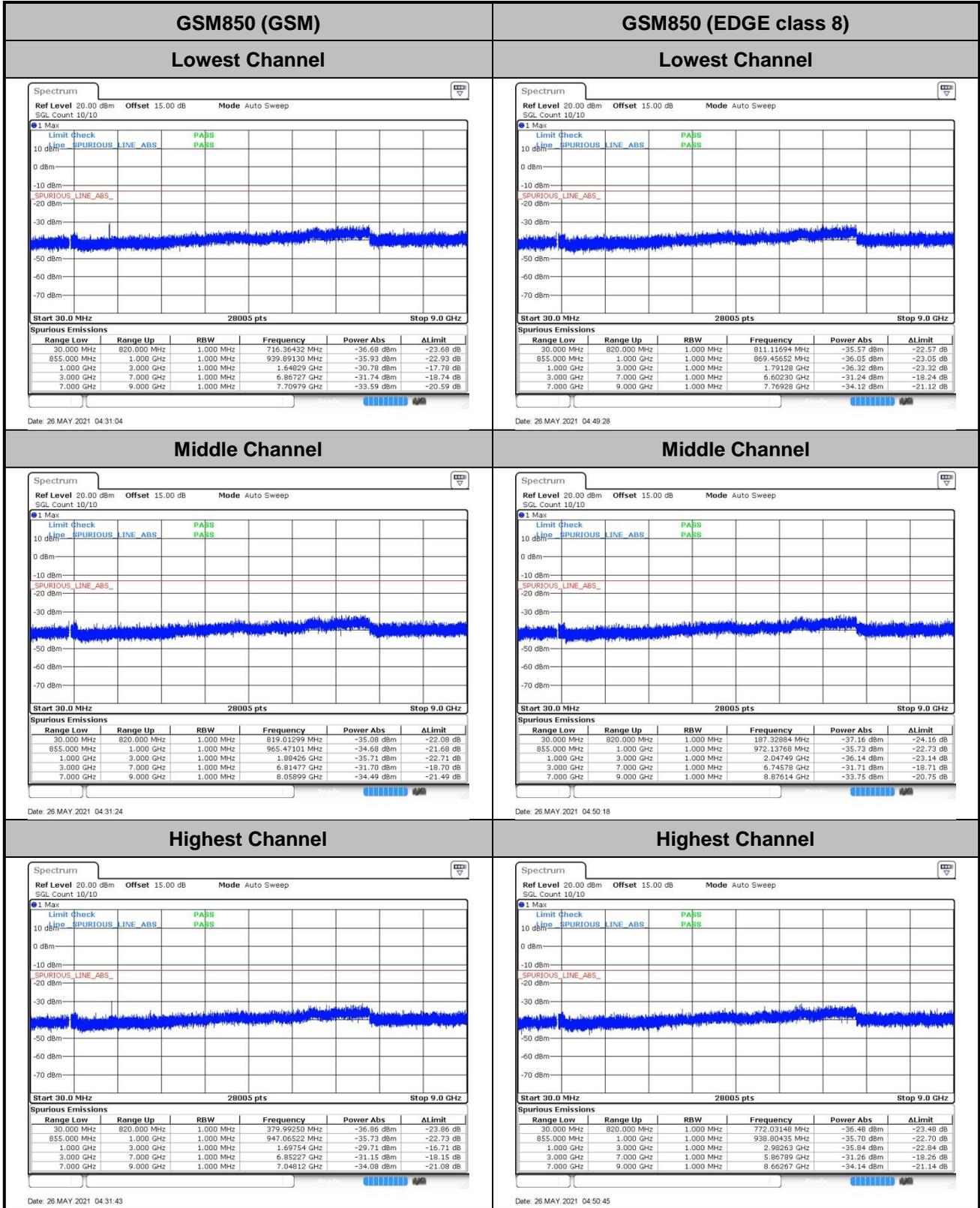




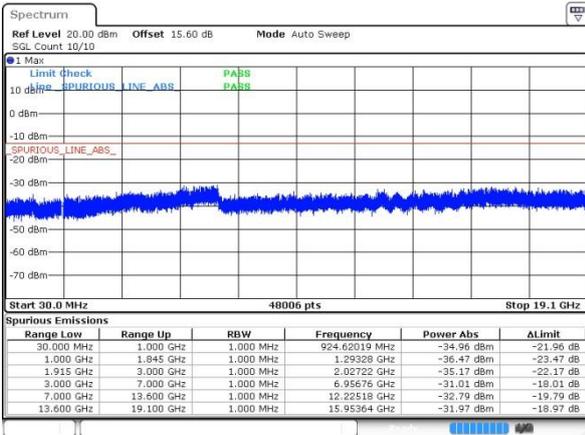
# Conducted Spurious Emission





GSM1900 (GSM)

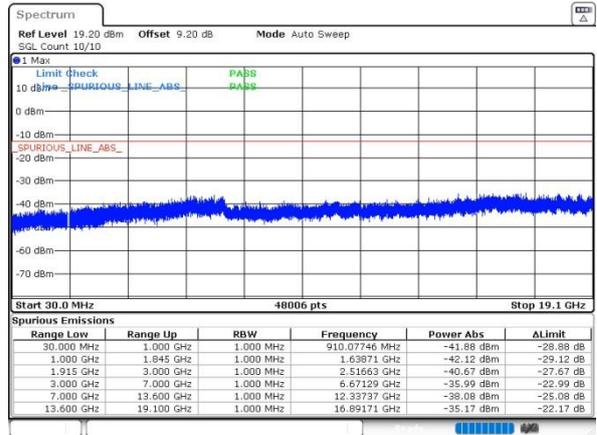
Lowest Channel



Date: 26 MAY 2021 02:47:12

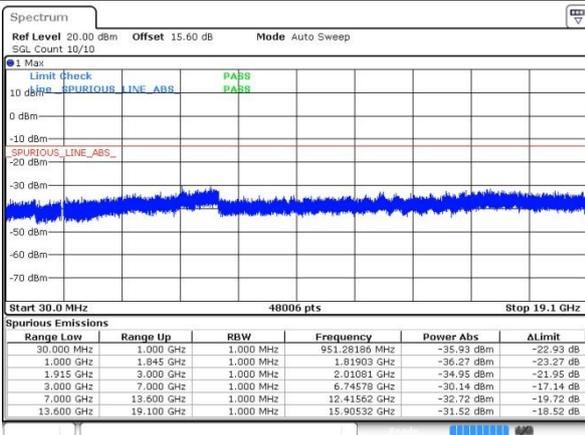
GSM1900 (EDGE class 8)

Lowest Channel



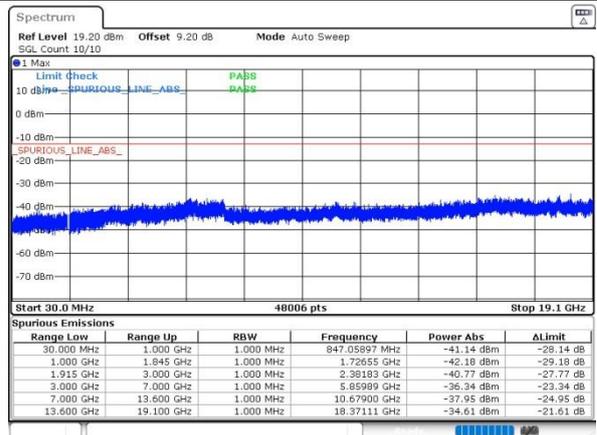
Date: 4 JUN 2021 08:44:42

Middle Channel



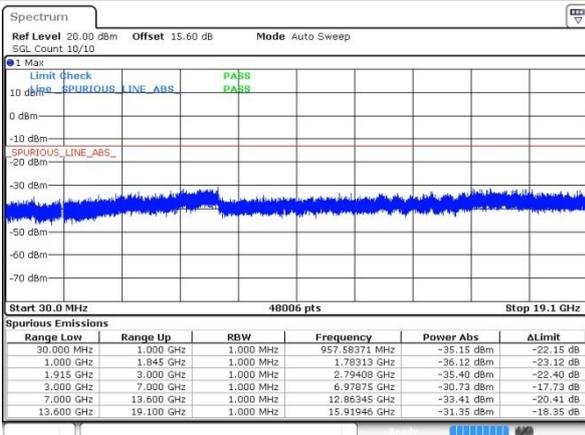
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Middle Channel



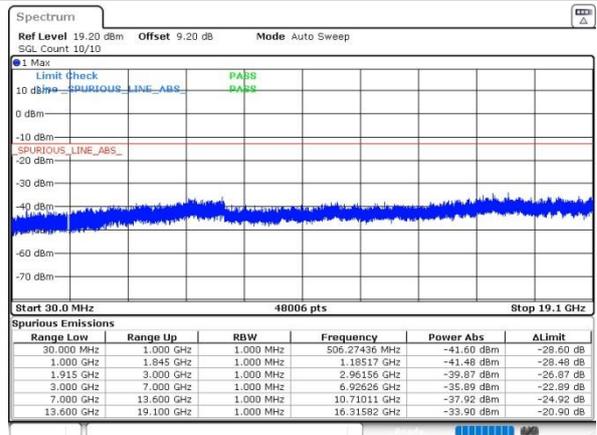
Date: 4 JUN 2021 08:45:01

Highest Channel



Date: 26 MAY 2021 02:47:55

Highest Channel



Date: 4 JUN 2021 08:45:22



**Frequency Stability**

Test Conditions	Middle Channel	GSM850 (GSM)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0042	0.0058	PASS
40	Normal Voltage	0.0517	0.0147	
30	Normal Voltage	0.0099	0.0562	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0563	0.0428	
0	Normal Voltage	0.0182	0.0536	
-10	Normal Voltage	0.0059	0.0447	
-20	Normal Voltage	0.0139	0.0144	
-30	Normal Voltage	0.0174	0.0458	
20	Maximum Voltage	0.0455	0.0556	
20	Normal Voltage	0.0169	0.0139	
20	Battery End Point	0.0328	0.0238	

Note: Normal Voltage = 7.74V. ; Battery End Point (BEP) =6.9V. ; Maximum Voltage =8.9 V

Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0044	0.0006	PASS
40	Normal Voltage	0.0058	0.0045	
30	Normal Voltage	0.0069	0.0078	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0164	0.0266	
0	Normal Voltage	0.0047	0.0161	
-10	Normal Voltage	0.0128	0.0033	
-20	Normal Voltage	0.0218	0.0039	
-30	Normal Voltage	0.0003	0.0274	
20	Maximum Voltage	0.0047	0.0182	
20	Normal Voltage	0.0044	0.0091	
20	Battery End Point	0.0169	0.0014	

Note:

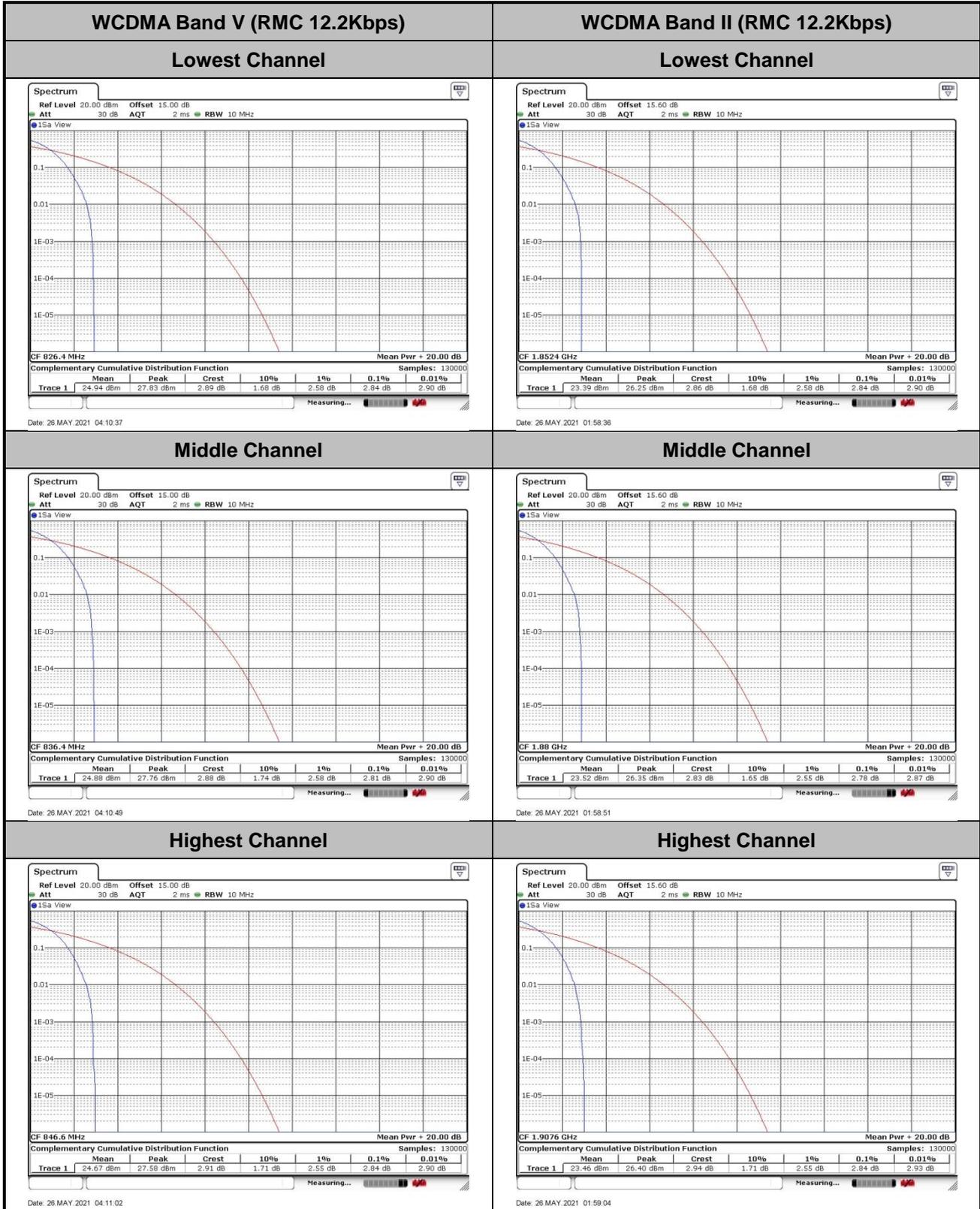
1. Normal Voltage = 7.74V. ; Battery End Point (BEP) =6.9V. ; Maximum Voltage =8.9 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

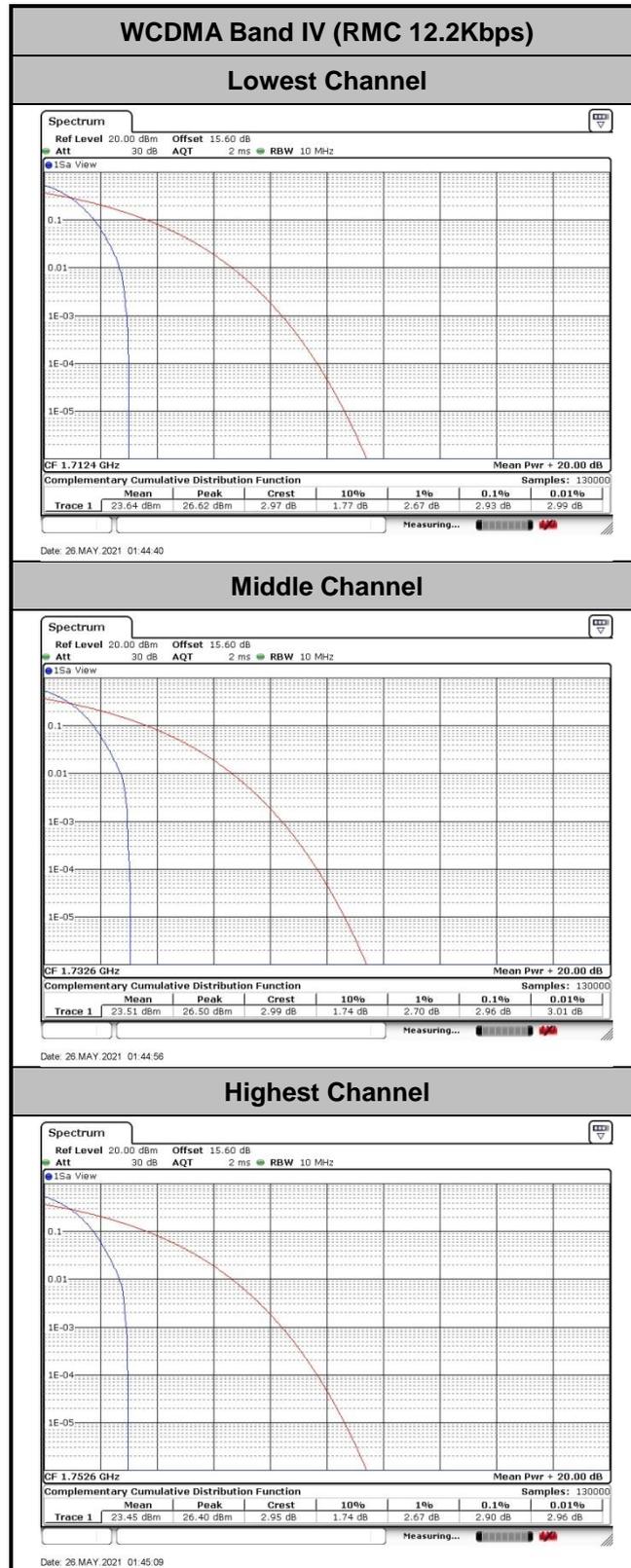


# WCDMA

## Peak-to-Average Ratio

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	2.84	2.84	2.93	<b>PASS</b>
Middle CH	2.81	2.78	2.96	
Highest CH	2.84	2.84	2.90	







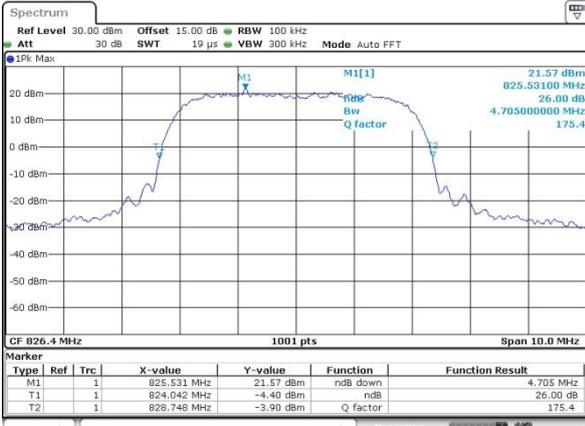
**26dB Bandwidth**

Mode	WCDMA Band V(MHz)	WCDMA Band II(MHz)	WCDMA Band IV(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.705	4.705	4.725
Middle CH	4.725	4.735	4.715
Highest CH	4.725	4.725	4.715



WCDMA Band V (RMC 12.2Kbps)

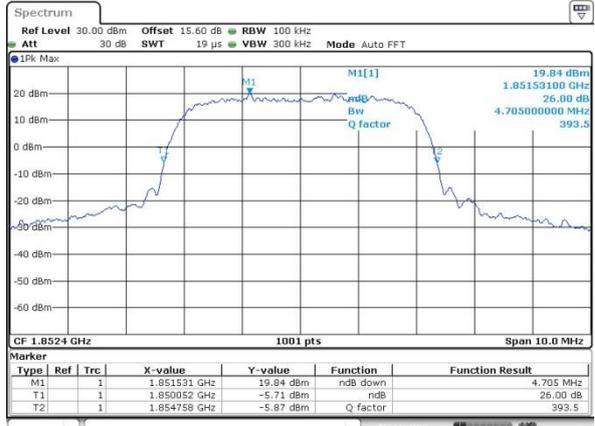
Lowest Channel



Date: 26 MAY 2021 04:04:42

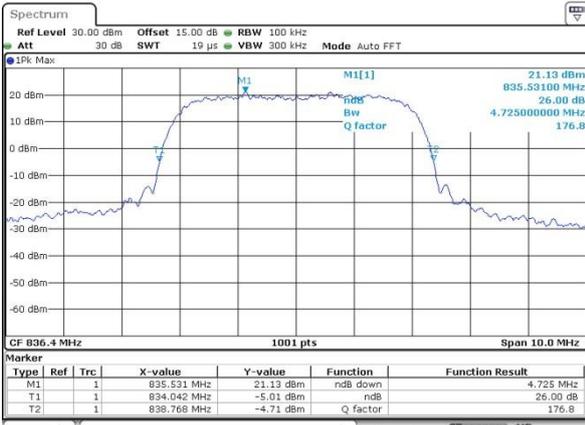
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



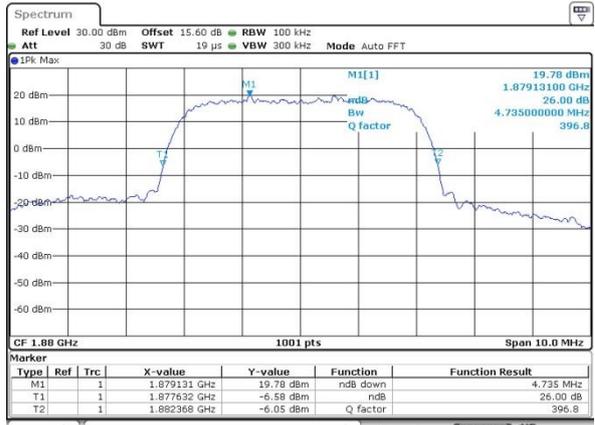
Date: 26 MAY 2021 01:51:57

Middle Channel



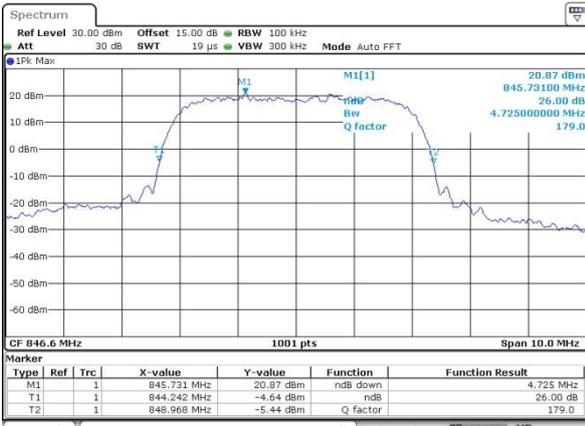
Date: 26 MAY 2021 04:05:07

Middle Channel



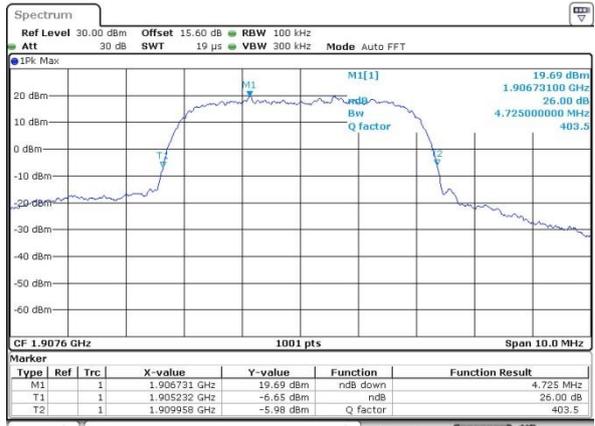
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Highest Channel

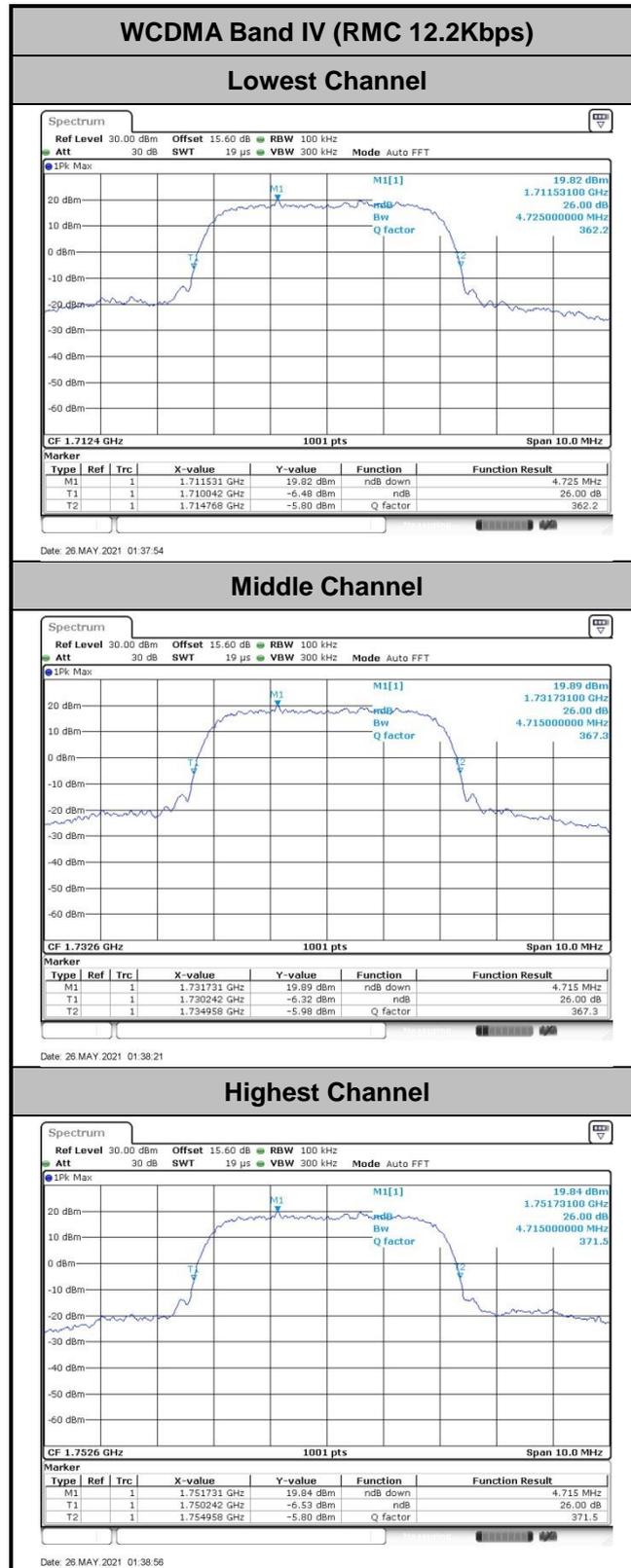


Date: 26 MAY 2021 04:05:34

Highest Channel



Date: 26 MAY 2021 01:52:48





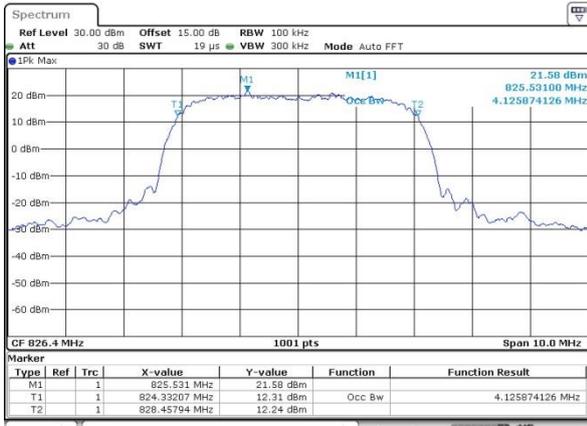
**Occupied Bandwidth**

Mode	WCDMA Band V(MHz)	WCDMA Band II(MHz)	WCDMA Band IV(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.13	4.14	4.14
Middle CH	4.14	4.14	4.14
Highest CH	4.16	4.14	4.15



WCDMA Band V (RMC 12.2Kbps)

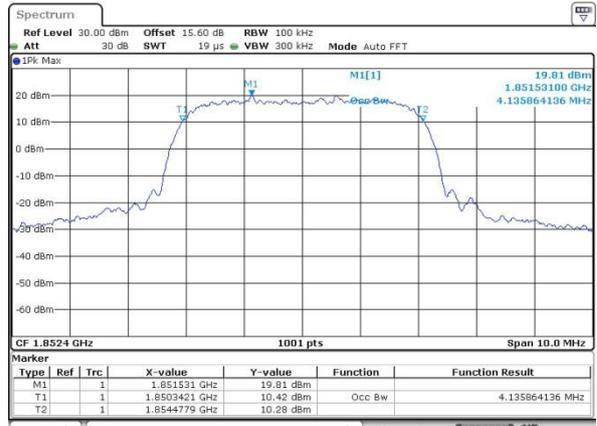
Lowest Channel



Date: 26 MAY 2021 04:06:06

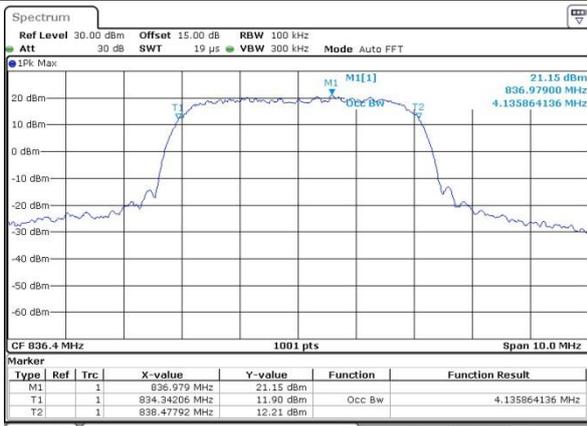
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



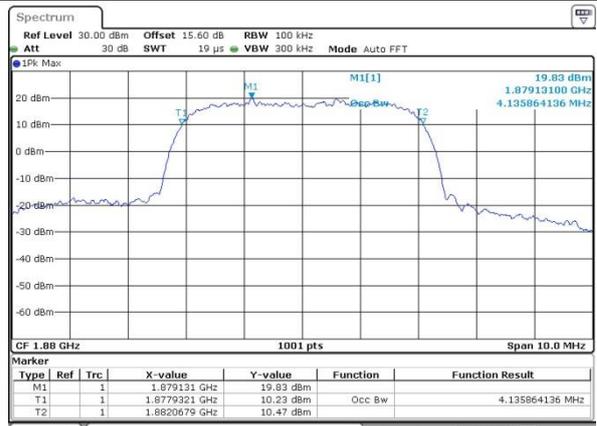
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Middle Channel



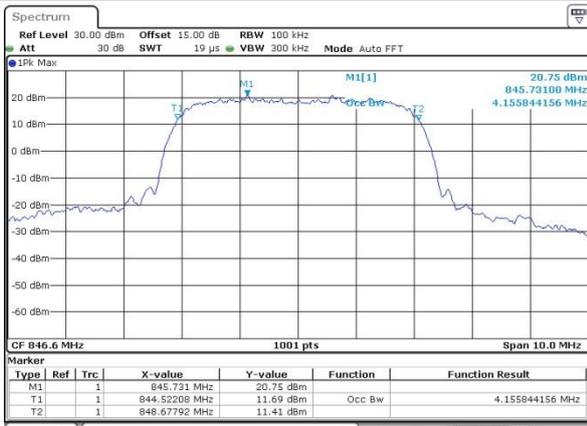
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Middle Channel



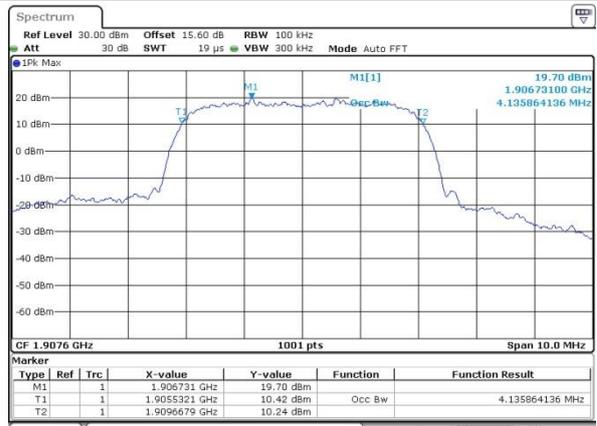
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Highest Channel

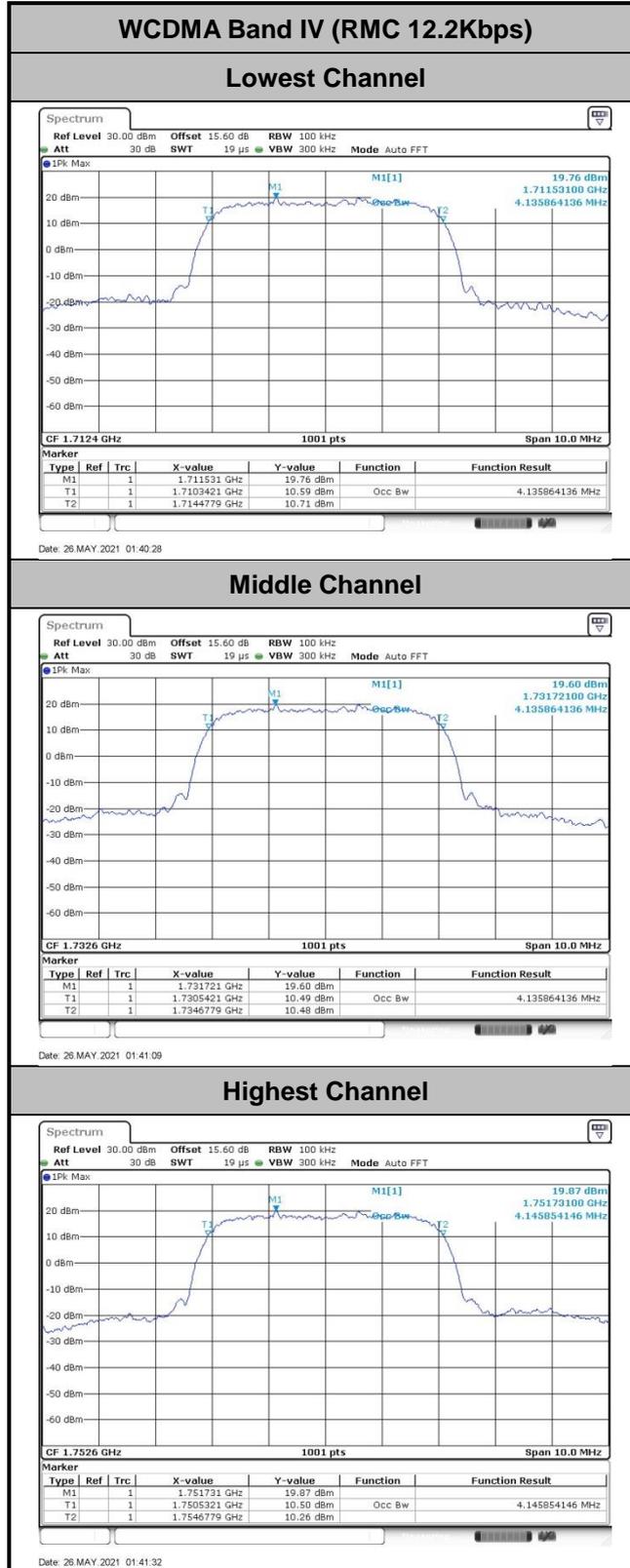


Date: 26 MAY 2021 04:06:54

Highest Channel

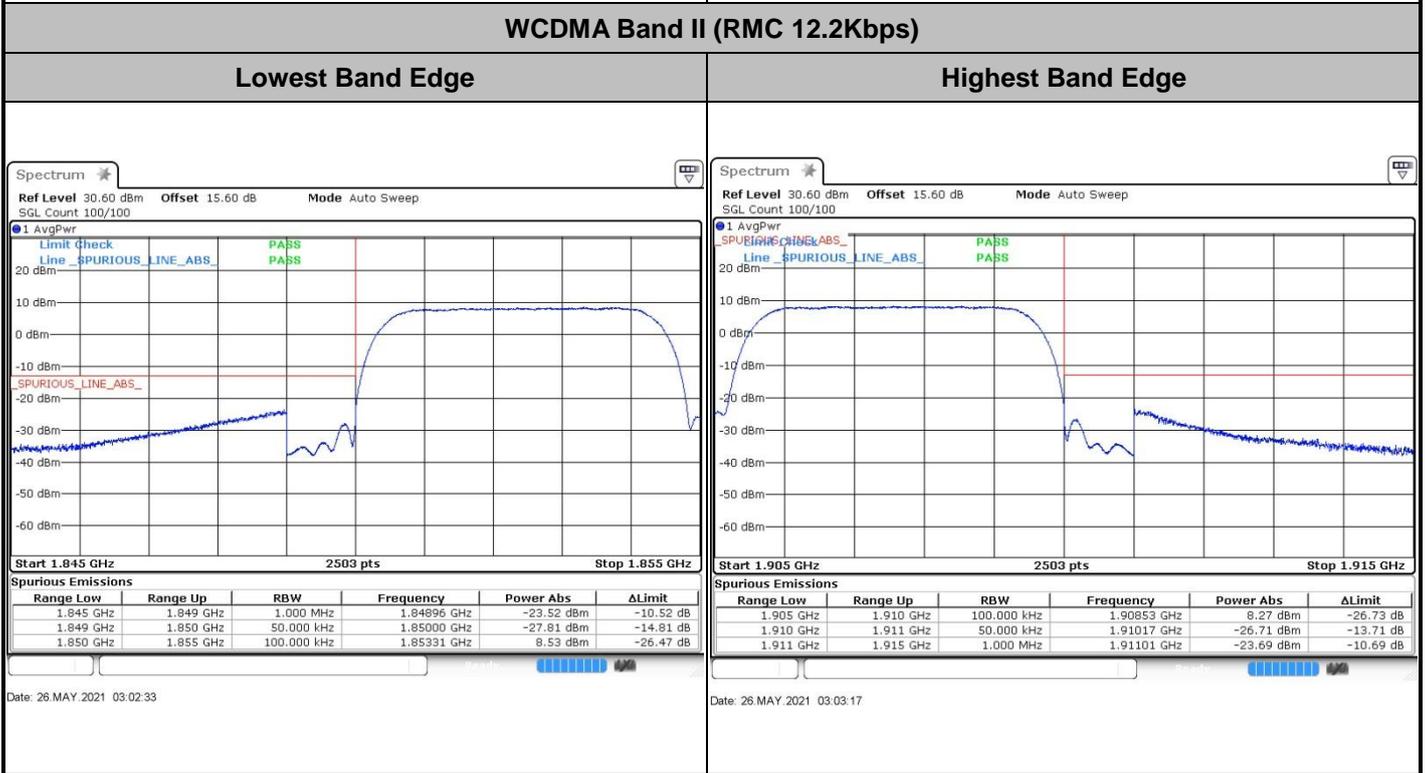
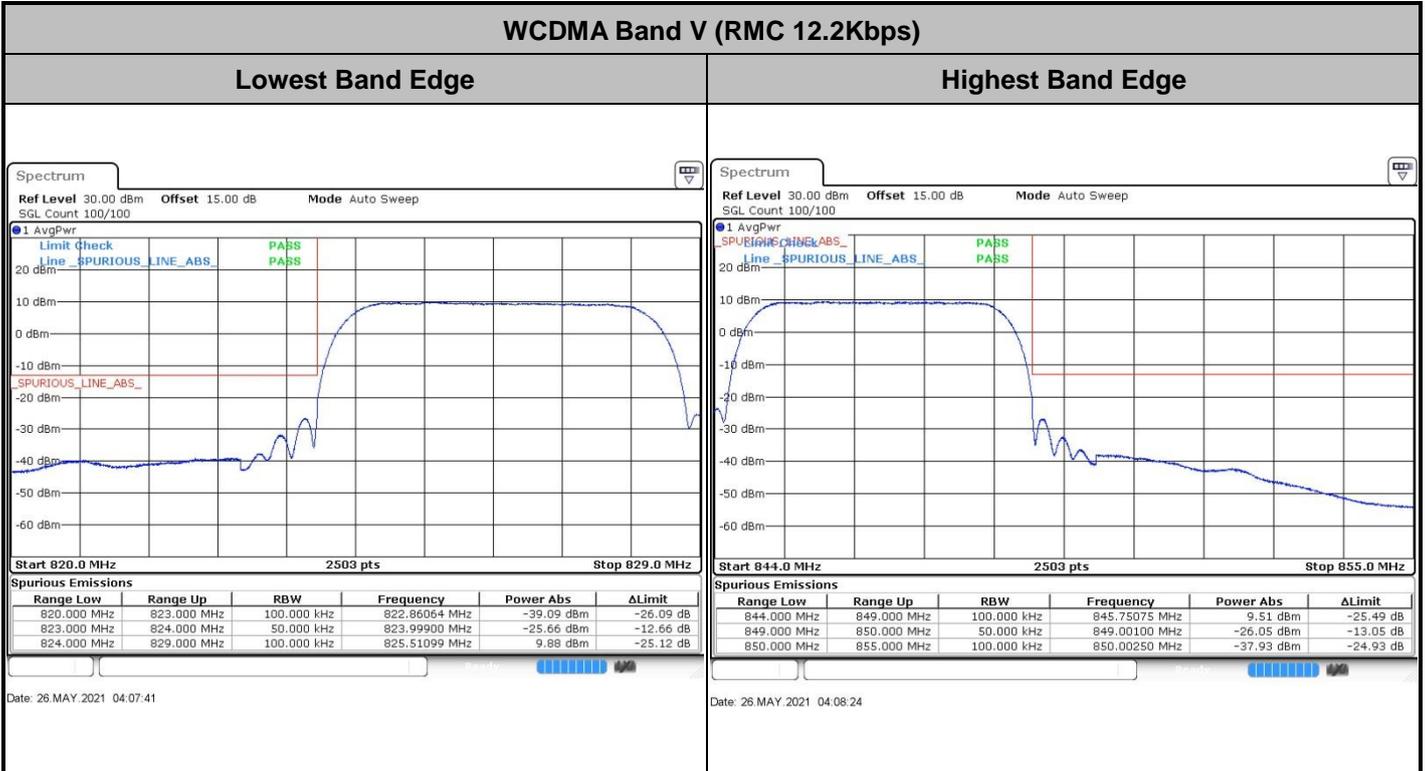


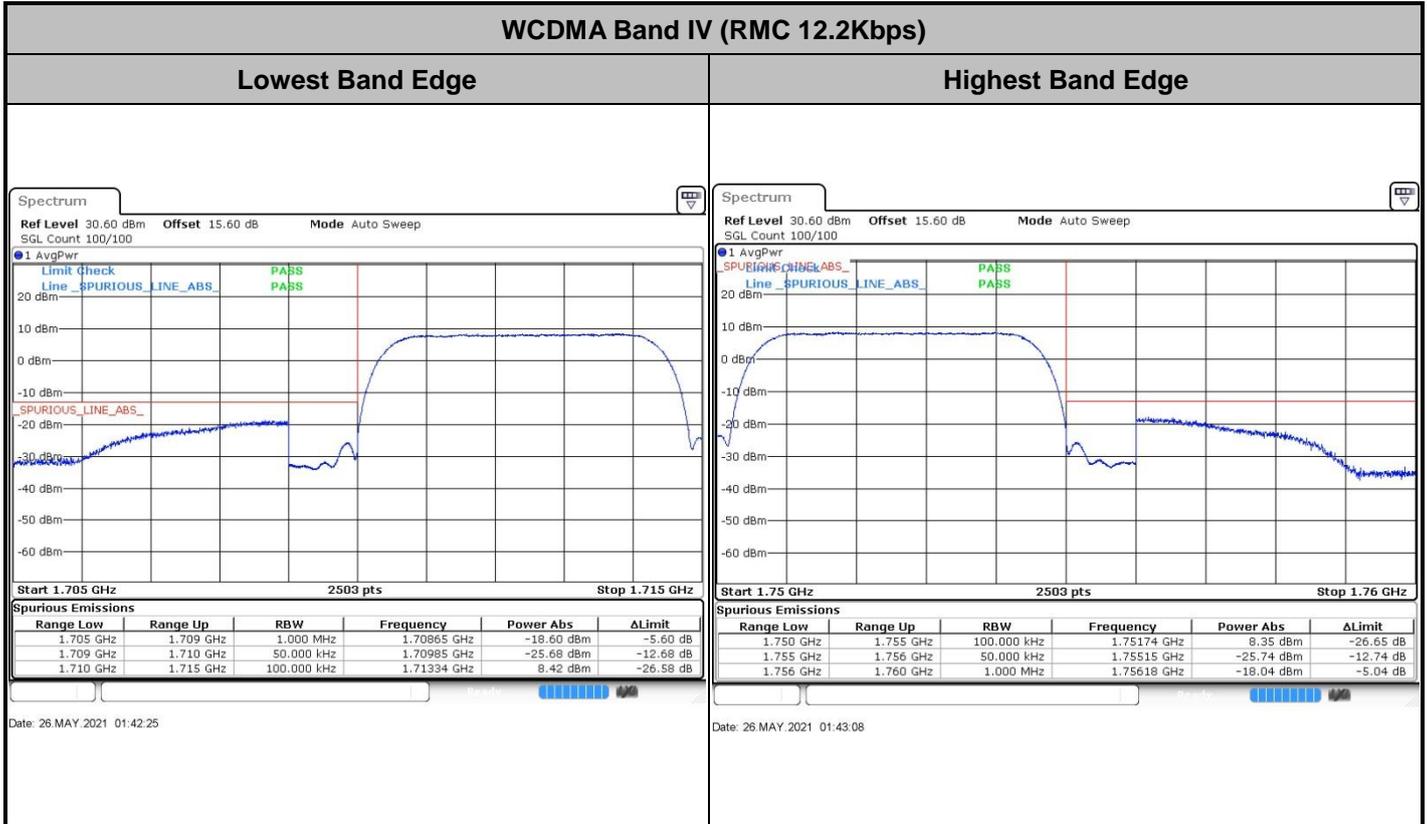
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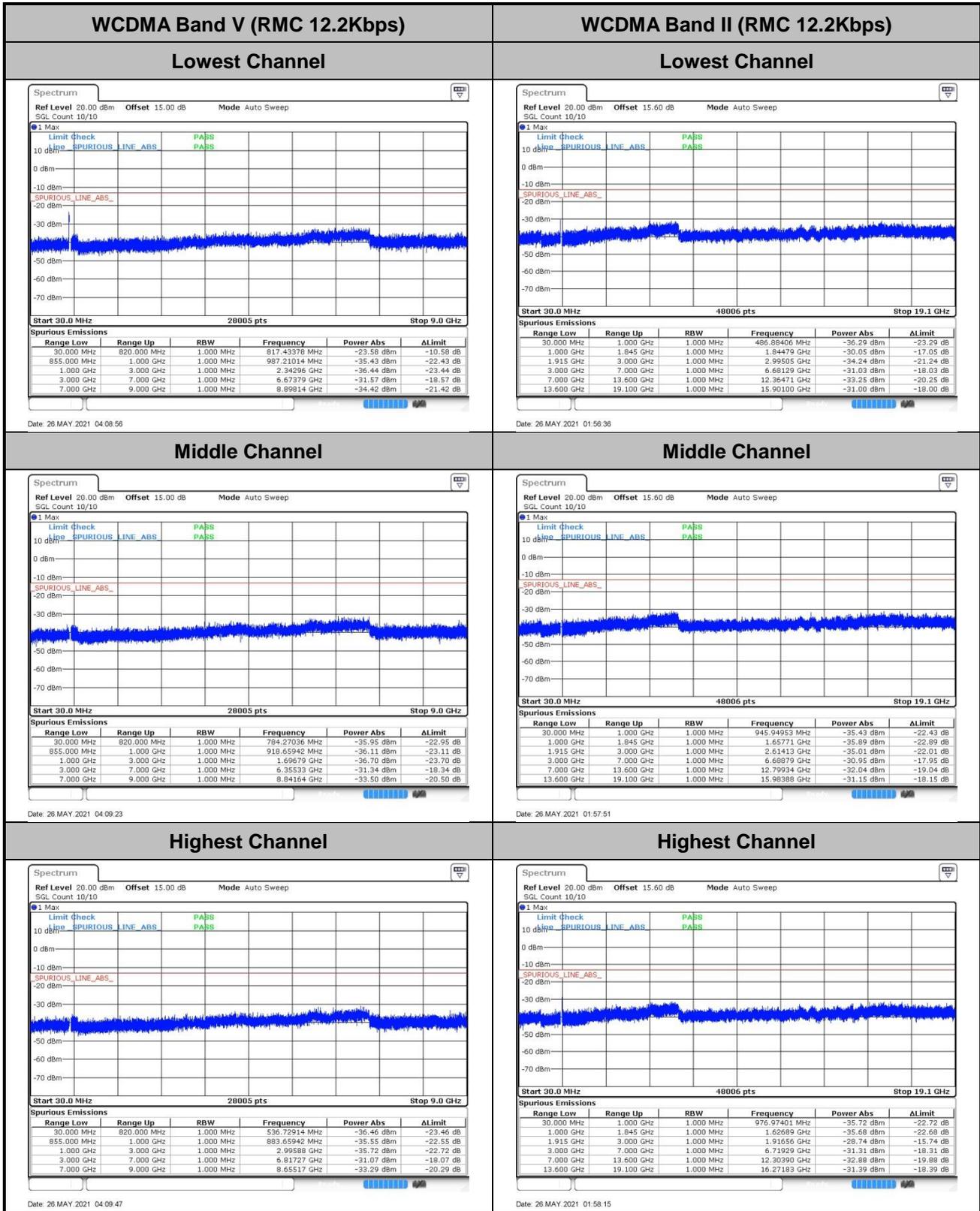
# Conducted Band Edge

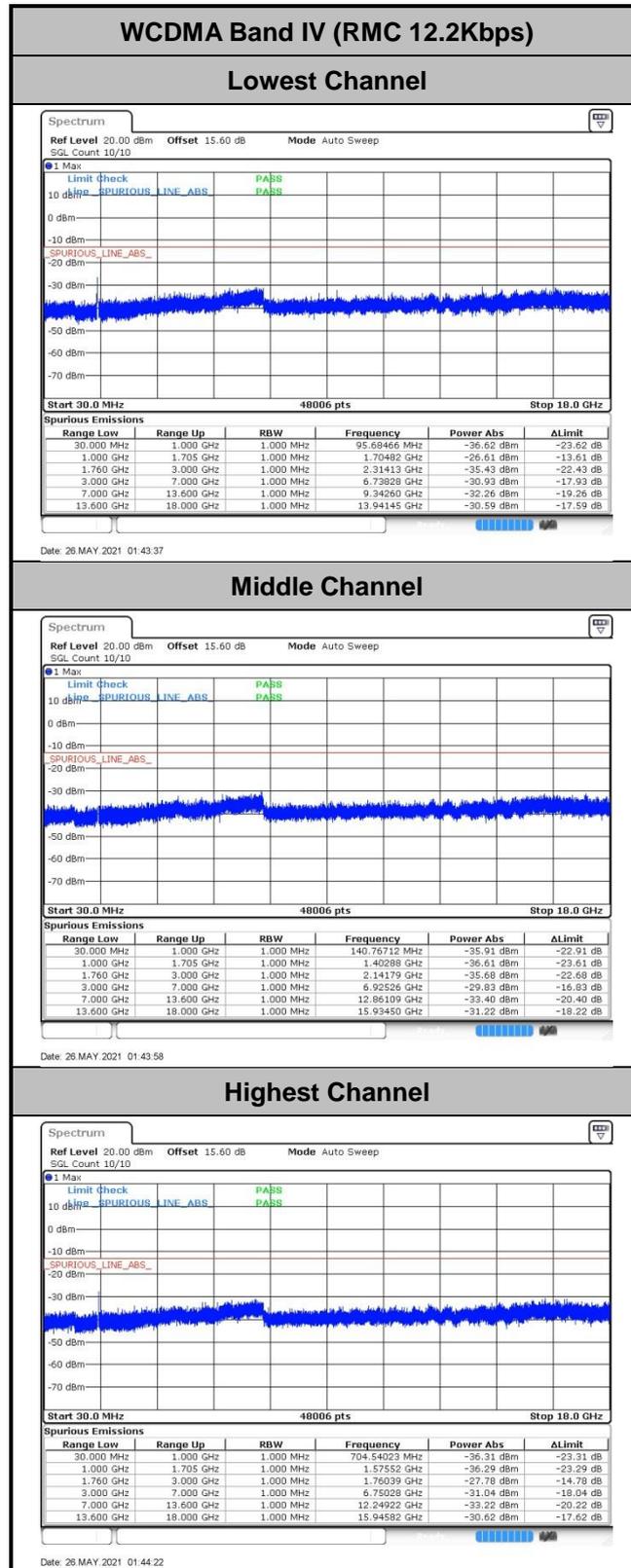






# Conducted Spurious Emission







**Frequency Stability**

Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2KbpsRMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0058	PASS
40	Normal Voltage	0.0377	
30	Normal Voltage	0.0485	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0069	
0	Normal Voltage	0.0344	
-10	Normal Voltage	0.0063	
-20	Normal Voltage	0.0141	
-30	Normal Voltage	0.0325	
20	Maximum Voltage	0.0418	
20	Normal Voltage	0.0176	
20	Battery End Point	0.0063	

**Note:** Normal Voltage = 7.74V. ; Battery End Point (BEP) =6.9 V. ; Maximum Voltage =8.9V

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0169	PASS
40	Normal Voltage	0.0136	
30	Normal Voltage	0.0144	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0155	
0	Normal Voltage	0.0136	
-10	Normal Voltage	0.0247	
-20	Normal Voltage	0.0072	
-30	Normal Voltage	0.0169	
20	Maximum Voltage	0.0162	
20	Normal Voltage	0.0128	
20	Battery End Point	0.0019	

**Note:**

1. Normal Voltage = 7.74V. ; Battery End Point (BEP) =6.9 V. ; Maximum Voltage =8.9V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0048	PASS
40	Normal Voltage	0.0146	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0017	
0	Normal Voltage	0.0044	
-10	Normal Voltage	0.0172	
-20	Normal Voltage	0.0163	
-30	Normal Voltage	0.0061	
20	Maximum Voltage	0.0028	
20	Normal Voltage	0.0029	
20	Battery End Point	0.0118	

**Note:**

1. Normal Voltage = 7.74V. ; Battery End Point (BEP) =6.9 V. ; Maximum Voltage =8.9V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



## Appendix B. Test Results of Radiated Test

### Radiated Spurious Emission

ANT 1:

Pre-scanned harmonic for RSE testing, we choice worse case of antenna combination to full test.

GSM850 (GSM)								
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-59.43	-13	-46.43	-66.40	1.58	10.70	H
	2510	-50.01	-13	-37.01	-58.26	2.10	12.50	H
	3348	-56.44	-13	-43.44	-65.33	2.86	13.90	H
	1672	-58.93	-13	-45.93	-65.90	1.58	10.70	V
	2510	-53.98	-13	-40.98	-62.23	2.10	12.50	V
	3348	-56.58	-13	-43.58	-65.47	2.86	13.90	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GSM850 (EDGE 1 Tx slots)								
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1672	-57.45	-13	-44.45	-64.42	1.58	10.70	H
	2510	-52.51	-13	-39.51	-60.76	2.10	12.50	H
	3348	-54.21	-13	-41.21	-63.10	2.86	13.90	H
	1672	-59.11	-13	-46.11	-66.08	1.58	10.70	V
	2510	-55.18	-13	-42.18	-63.43	2.10	12.50	V
	3348	-56.03	-13	-43.03	-64.92	2.86	13.90	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band V(RMC 12.2Kbps)								
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1674	-60.74	-13	-47.74	-67.71	1.58	10.70	H
	2510	-57.51	-13	-44.51	-65.76	2.10	12.50	H
	3348	-57.15	-13	-44.15	-66.04	2.86	13.90	H
	1674	-60.70	-13	-47.70	-67.67	1.58	10.70	V
	2510	-55.68	-13	-42.68	-63.93	2.10	12.50	V
	3348	-57.12	-13	-44.12	-66.01	2.86	13.90	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



ANT 2:

GSM1900 (GSM)								
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-57.19	-13	-44.19	-69.45	2.64	14.90	H
	5640	-54.34	-13	-41.34	-66.20	2.94	14.80	H
	7524	-53.39	-13	-40.39	-63.16	3.39	13.16	H
	3759	-56.97	-13	-43.97	-69.23	2.64	14.90	V
	5640	-55.02	-13	-42.02	-66.88	2.94	14.80	V
	7524	-53.29	-13	-40.29	-63.06	3.39	13.16	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GSM1900 (EDGE 1 Tx slots)								
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-57.15	-13	-44.15	-69.41	2.64	14.90	H
	5640	-54.89	-13	-41.89	-66.75	2.94	14.80	H
	7524	-53.27	-13	-40.27	-63.04	3.39	13.16	H
	3759	-56.52	-13	-43.52	-68.78	2.64	14.90	V
	5640	-54.93	-13	-41.93	-66.79	2.94	14.80	V
	7524	-53.10	-13	-40.10	-62.87	3.39	13.16	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band II(RMC 12.2Kbps)								
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3759	-56.71	-13	-43.71	-68.97	2.64	14.90	H
	5640	-55.32	-13	-42.32	-67.18	2.94	14.80	H
	7524	-53.50	-13	-40.50	-63.27	3.39	13.16	H
	3759	-56.55	-13	-43.55	-68.81	2.64	14.90	V
	5640	-56.03	-13	-43.03	-67.89	2.94	14.80	V
	7524	-53.19	-13	-40.19	-62.96	3.39	13.16	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



WCDMA Band IV(RMC 12.2Kbps)								
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Over Limit ( dB )	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	3468	-56.61	-13	-43.61	-67.35	2.604	13.34	H
	5199	-54.40	-13	-41.40	-64.91	3.011	13.52	H
	6936	-55.19	-13	-42.19	-65.39	3.271	13.47	H
	3465	-57.68	-13	-44.68	-68.42	2.604	13.34	V
	5196	-54.72	-13	-41.72	-65.23	3.011	13.52	V
	6936	-55.29	-13	-42.29	-65.49	3.271	13.47	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.