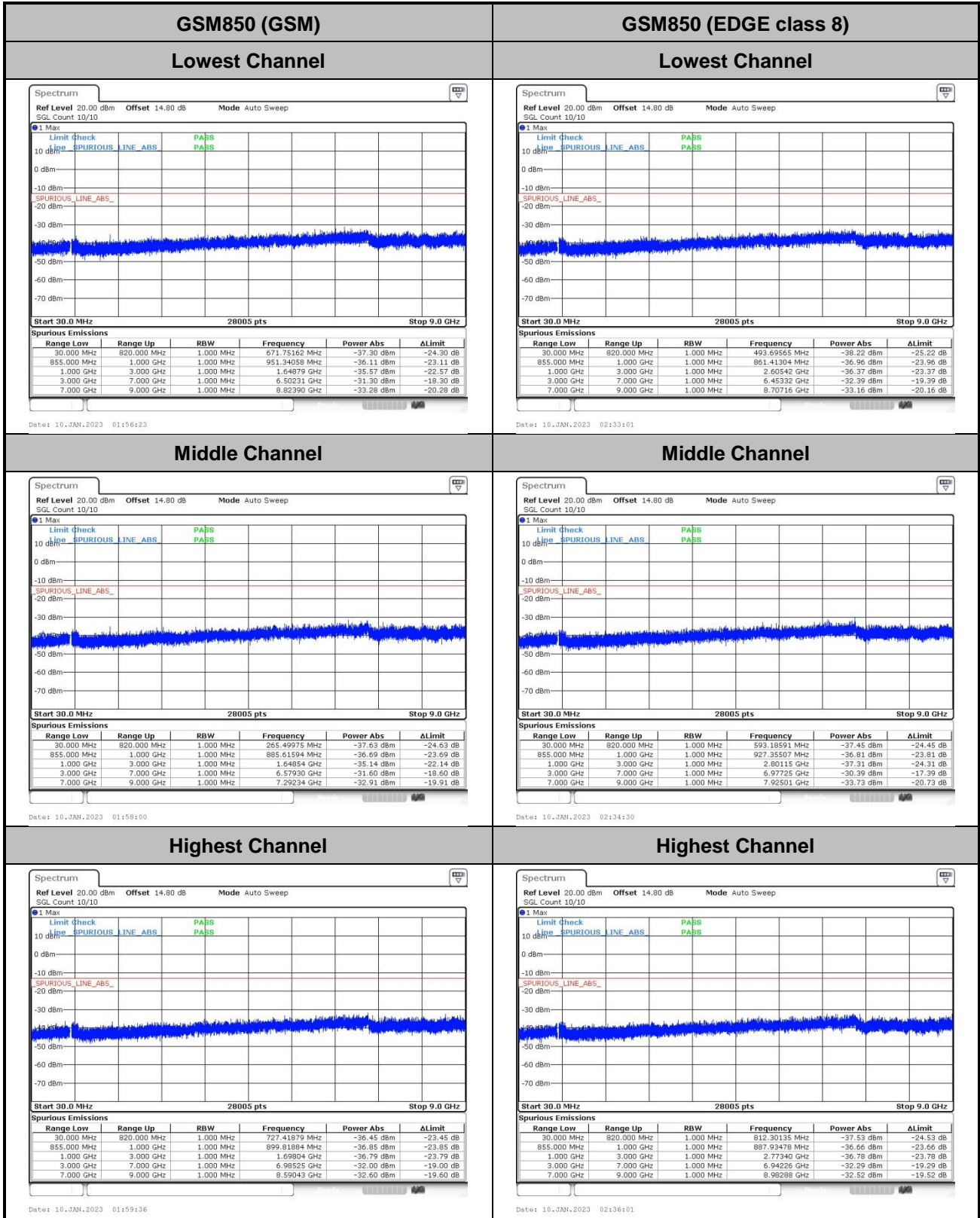




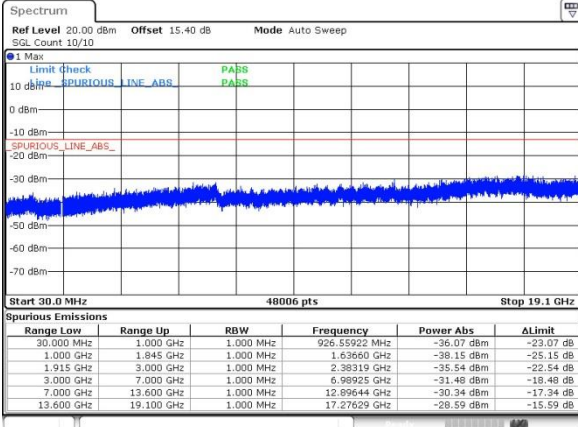
Conducted Spurious Emission





GSM1900 (GSM)

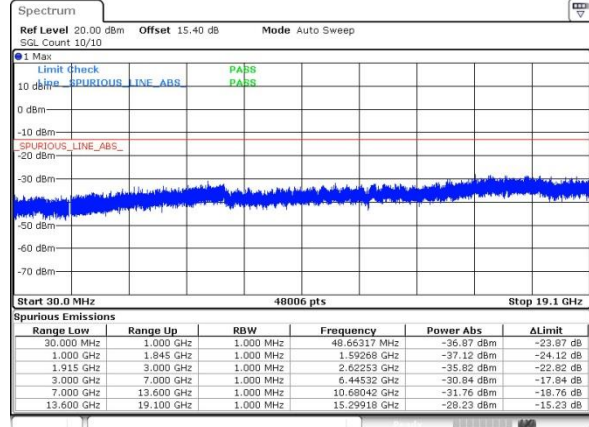
Lowest Channel



Date: 10. JAN. 2023 02:47:40

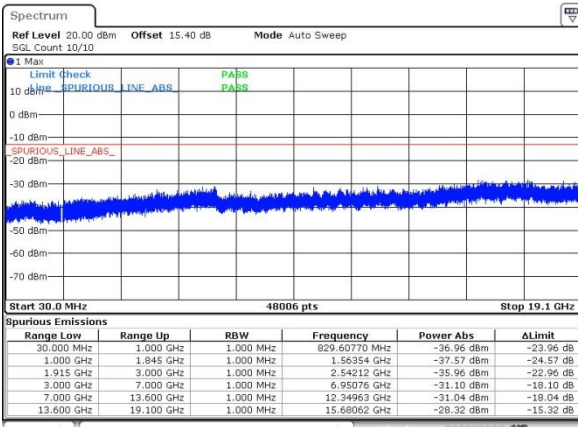
GSM1900 (EDGE class 8)

Lowest Channel



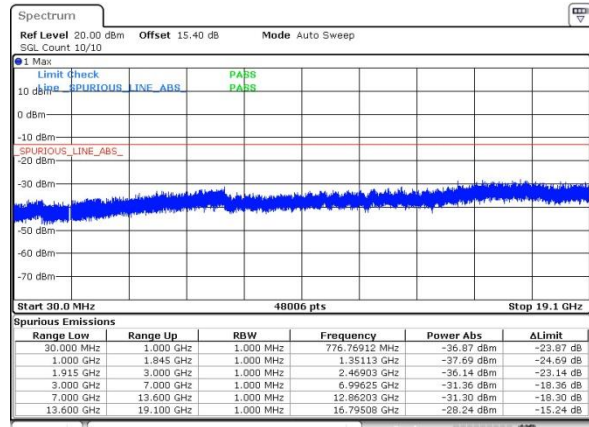
Date: 10. JAN. 2023 03:02:17

Middle Channel



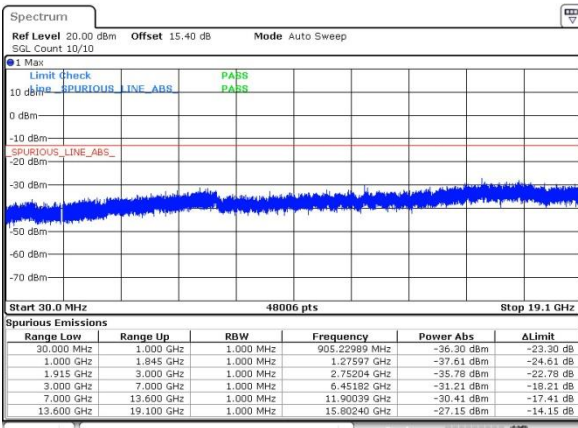
Date: 10. JAN. 2023 02:50:26

Middle Channel



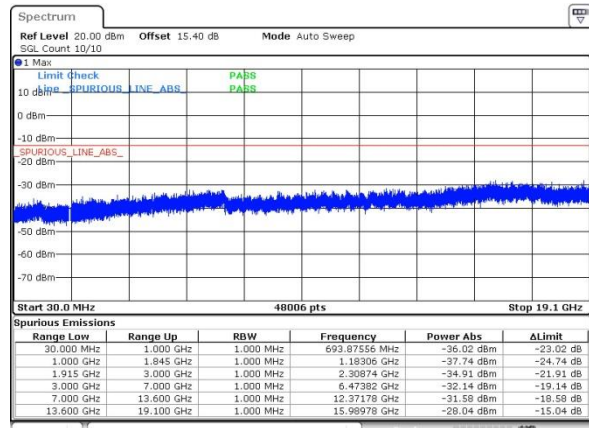
Date: 10. JAN. 2023 03:03:48

Highest Channel



Date: 10. JAN. 2023 02:51:56

Highest Channel



Date: 10. JAN. 2023 03:05:21



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:

1. Normal Voltage = 3.87V ; Battery End Point (BEP) =3.6V. ; Maximum Voltage =4.45V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



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	0.0002	PASS
40	Normal Voltage	0.0058	0.0044	
30	Normal Voltage	0.0069	0.0076	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0164	0.0269	
0	Normal Voltage	0.0047	0.0162	
-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:

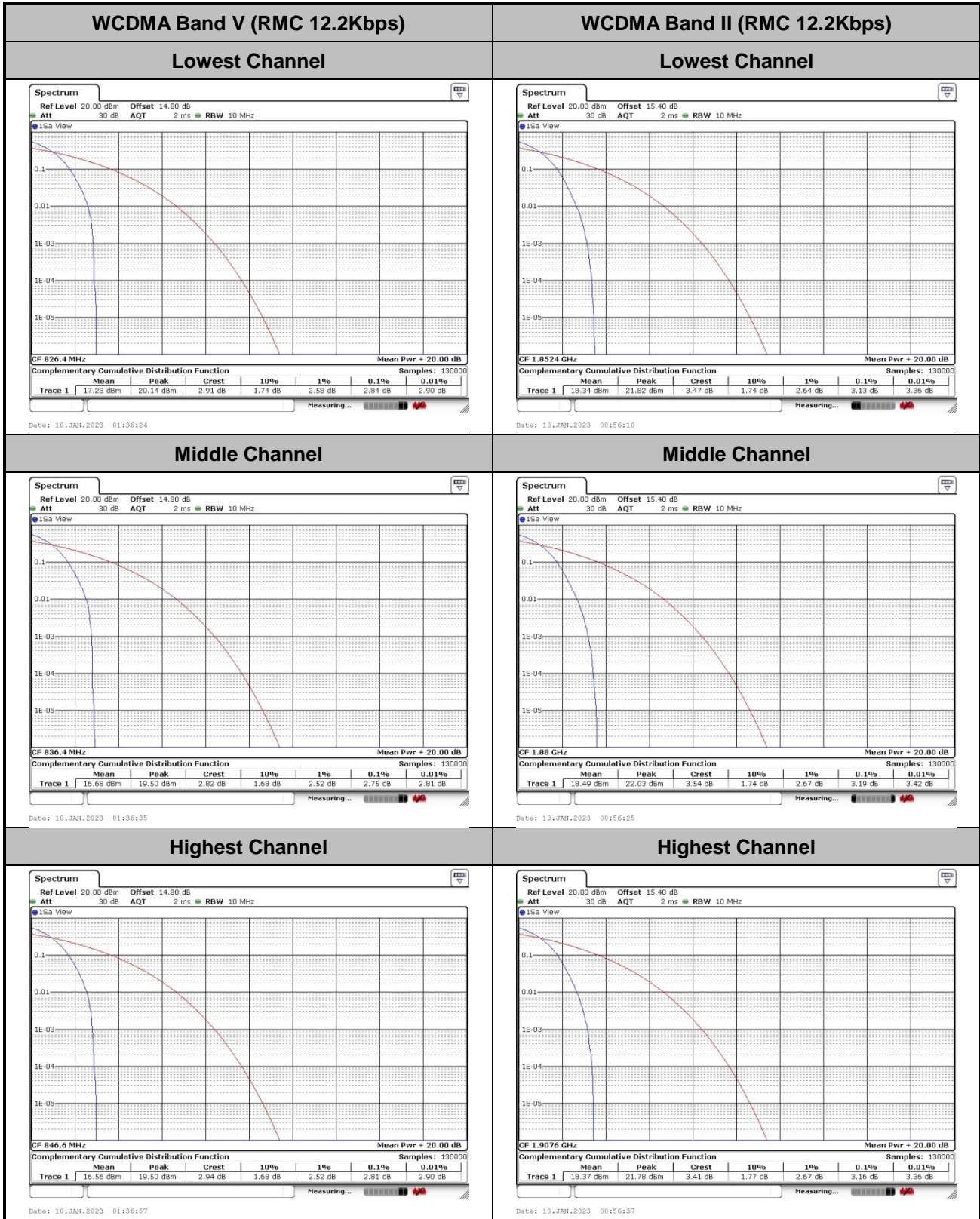
1. Normal Voltage = 3.87V ; Battery End Point (BEP) =3.6V. ; Maximum Voltage =4.45V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

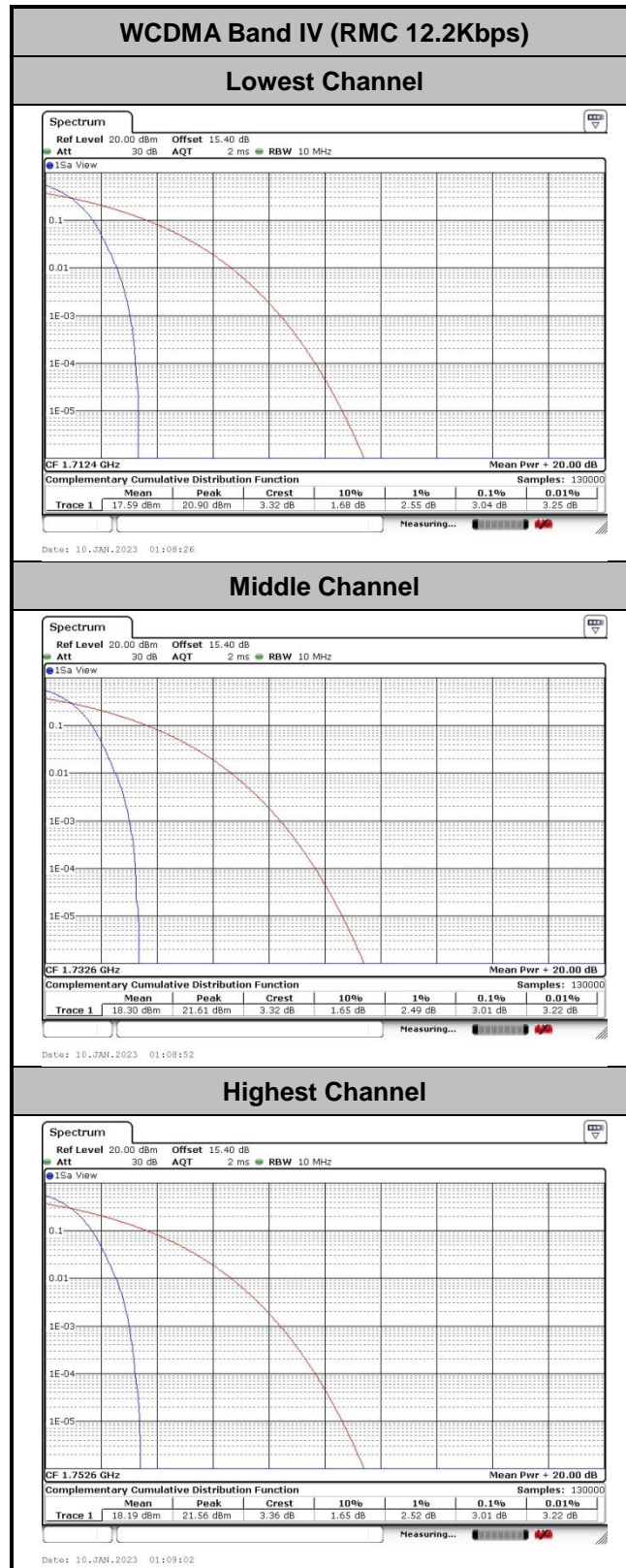


A2. WCDMA

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	3.13	3.04	PASS
Middle CH	2.75	3.19	3.01	
Highest CH	2.81	3.16	3.01	







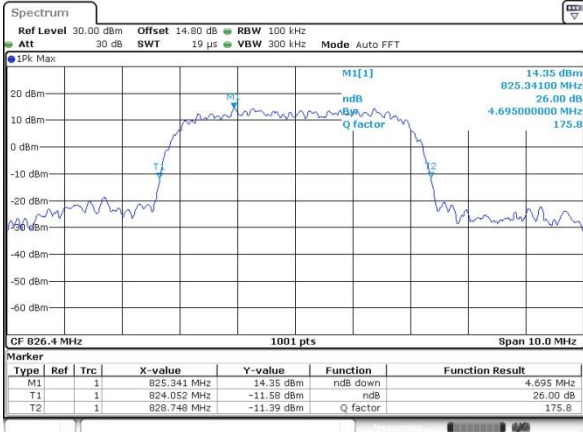
26dB Bandwidth

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.695	4.725	4.735
Middle CH	4.735	4.665	4.745
Highest CH	4.685	4.705	4.745



WCDMA Band V (RMC 12.2Kbps)

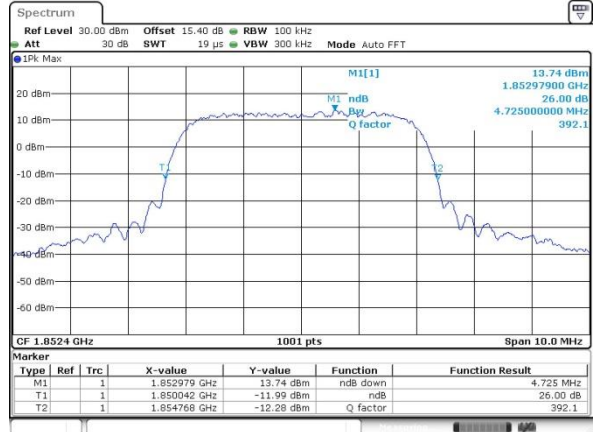
Lowest Channel



Date: 10_JAN_2023 01:22:41

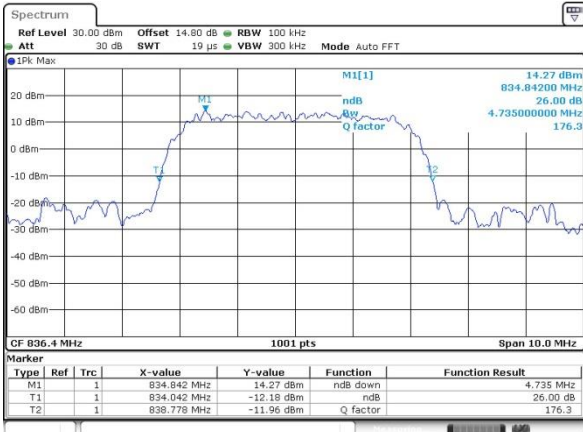
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



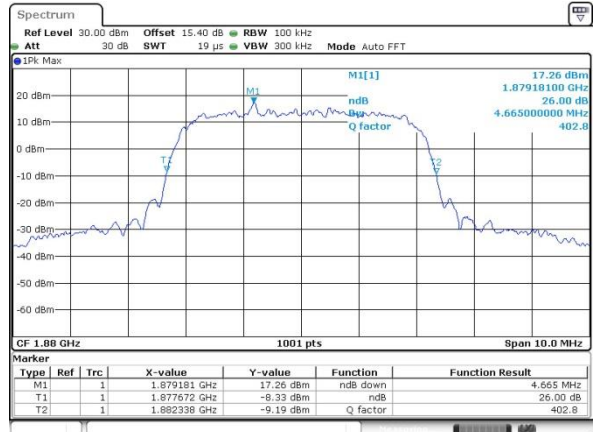
Date: 10_JAN_2023 00:43:34

Middle Channel



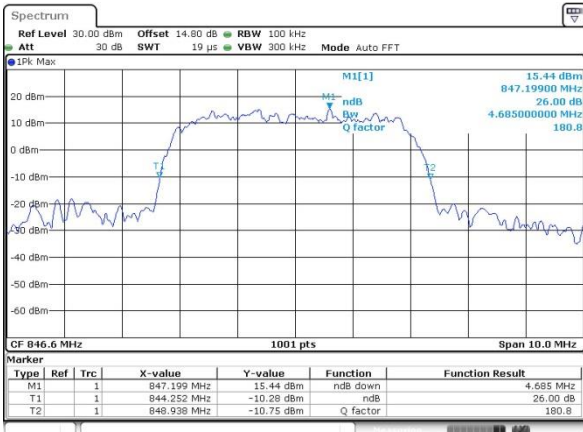
Date: 10_JAN_2023 01:23:12

Middle Channel



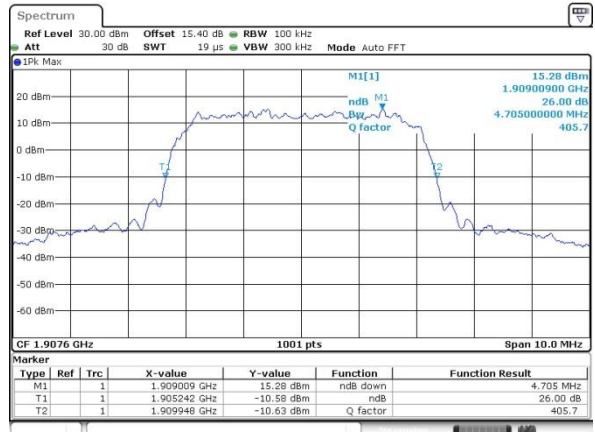
Date: 10_JAN_2023 00:44:01

Highest Channel

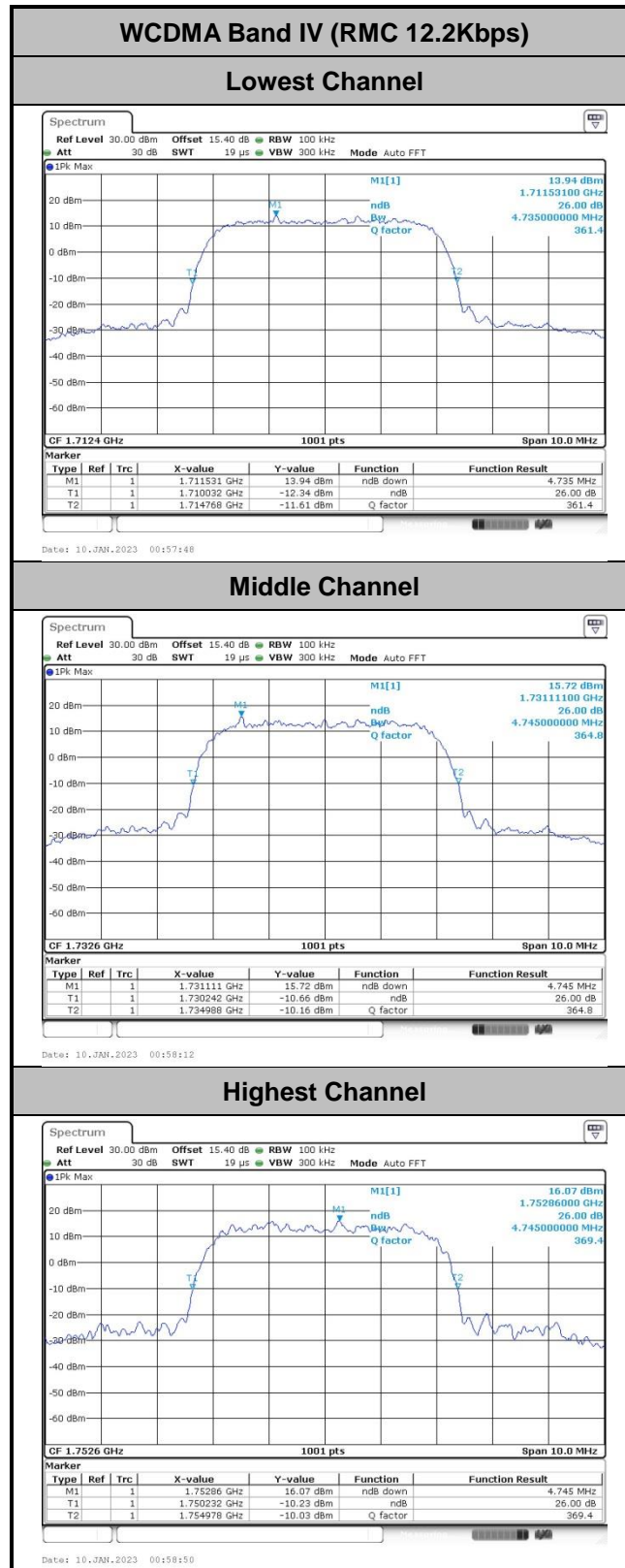


Date: 10_JAN_2023 01:23:42

Highest Channel



Date: 10_JAN_2023 00:44:23





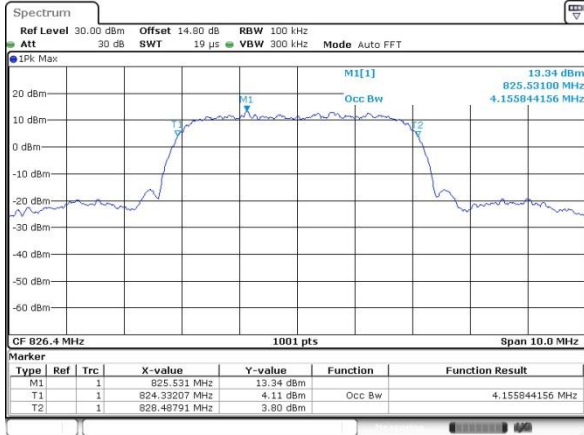
Occupied Bandwidth

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.156	4.146	4.126
Middle CH	4.216	4.146	4.136
Highest CH	4.166	4.156	4.166



WCDMA Band V (RMC 12.2Kbps)

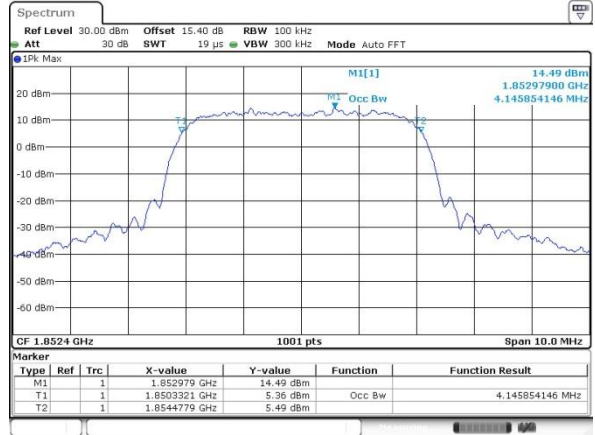
Lowest Channel



Date: 10_JAN_2023 01:21:28

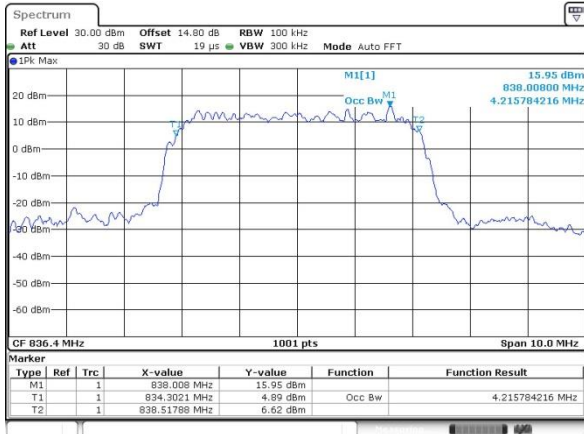
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



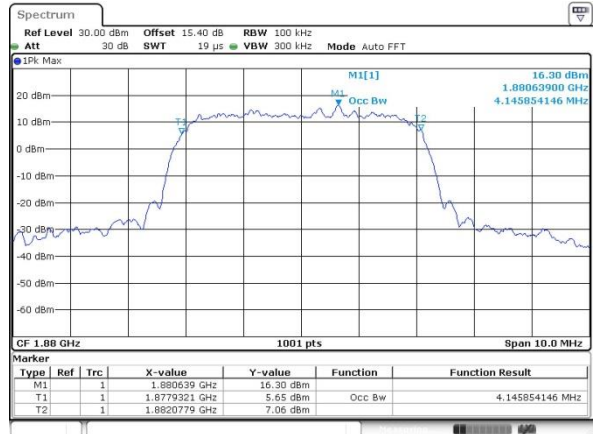
Date: 10_JAN_2023 00:46:32

Middle Channel



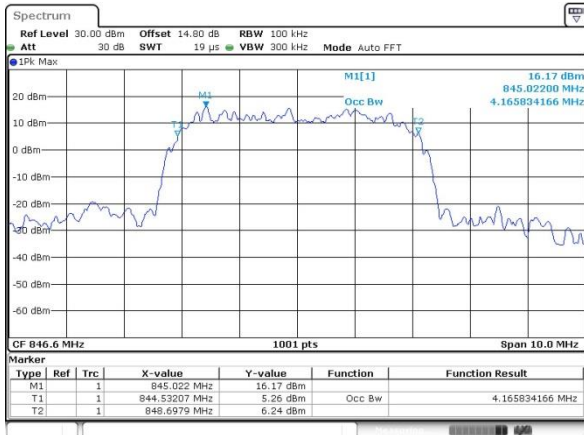
Date: 10_JAN_2023 01:21:50

Middle Channel



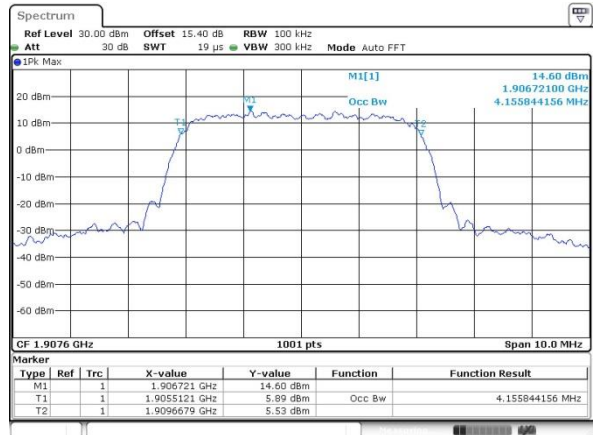
Date: 10_JAN_2023 00:46:55

Highest Channel

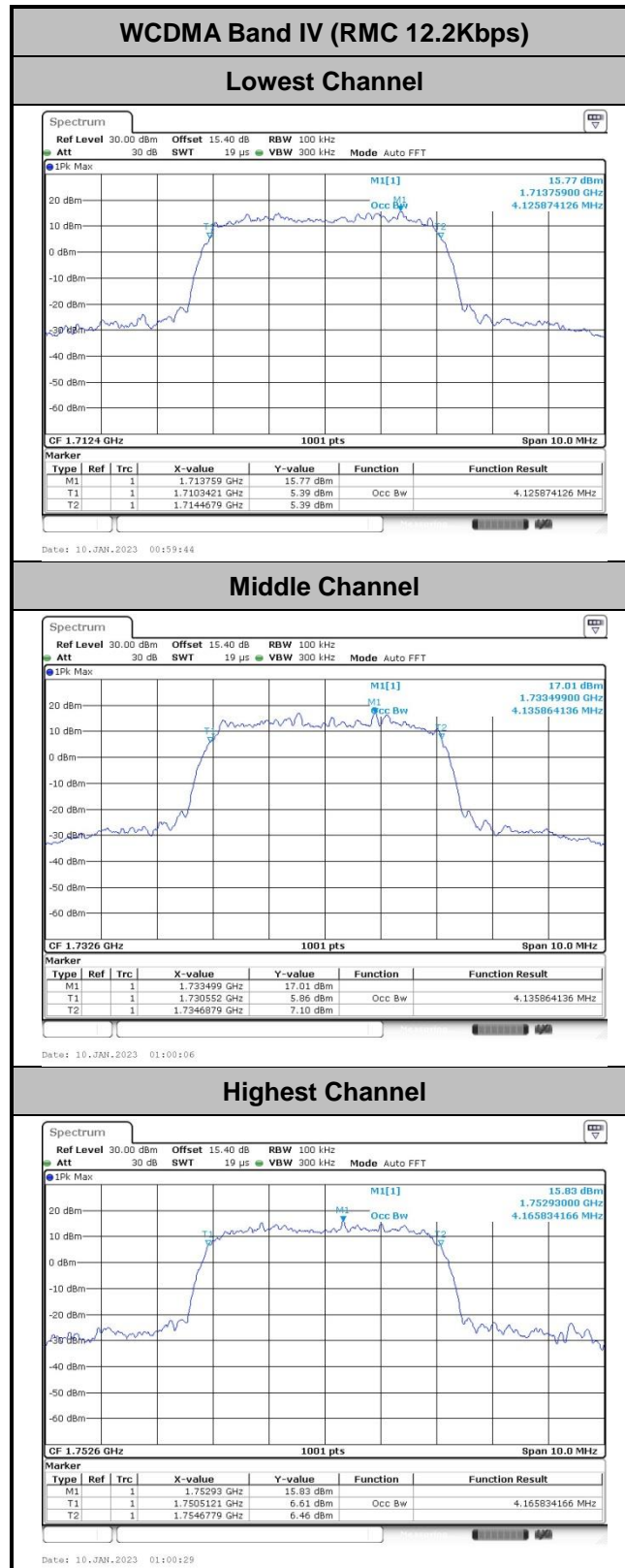


Date: 10_JAN_2023 01:22:11

Highest Channel



Date: 10_JAN_2023 00:47:16

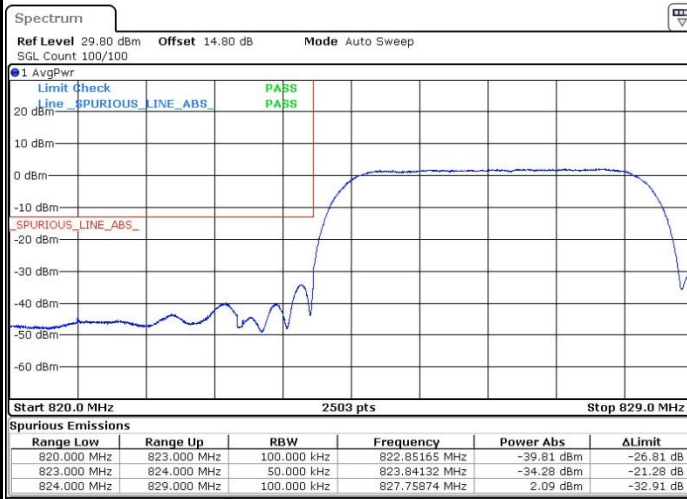




Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge

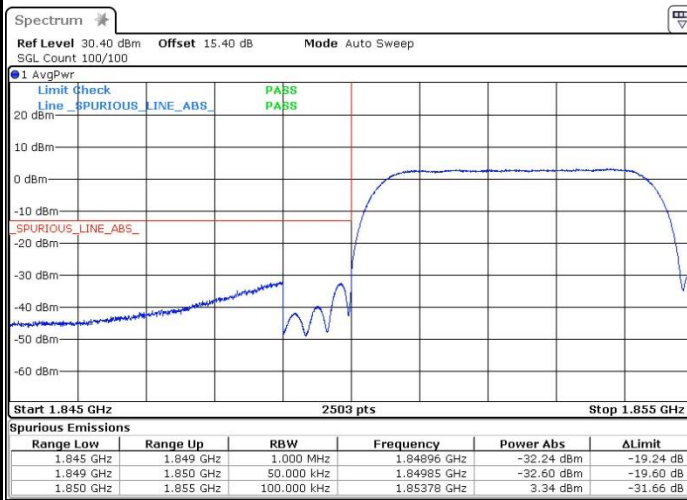


Highest Band Edge



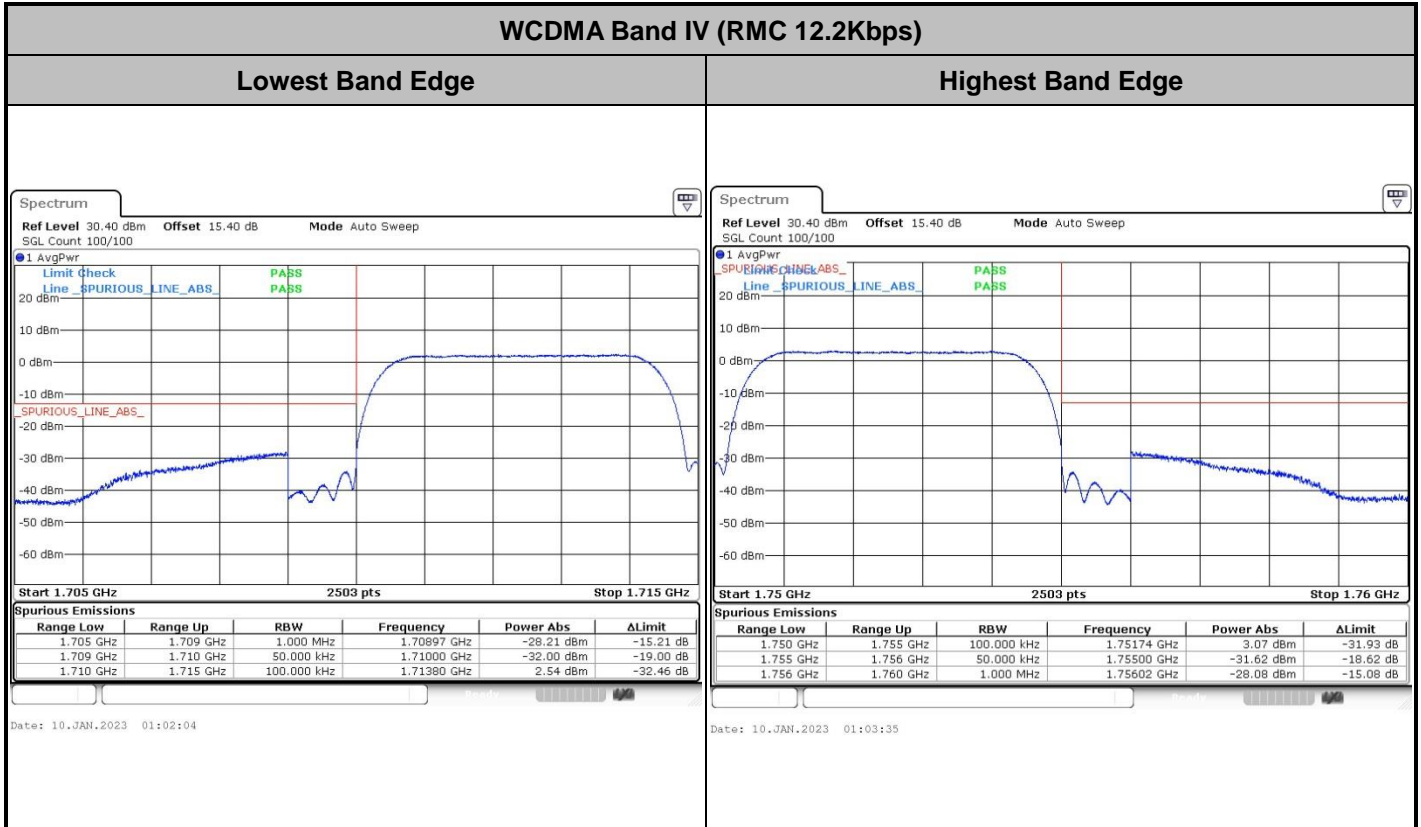
WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge



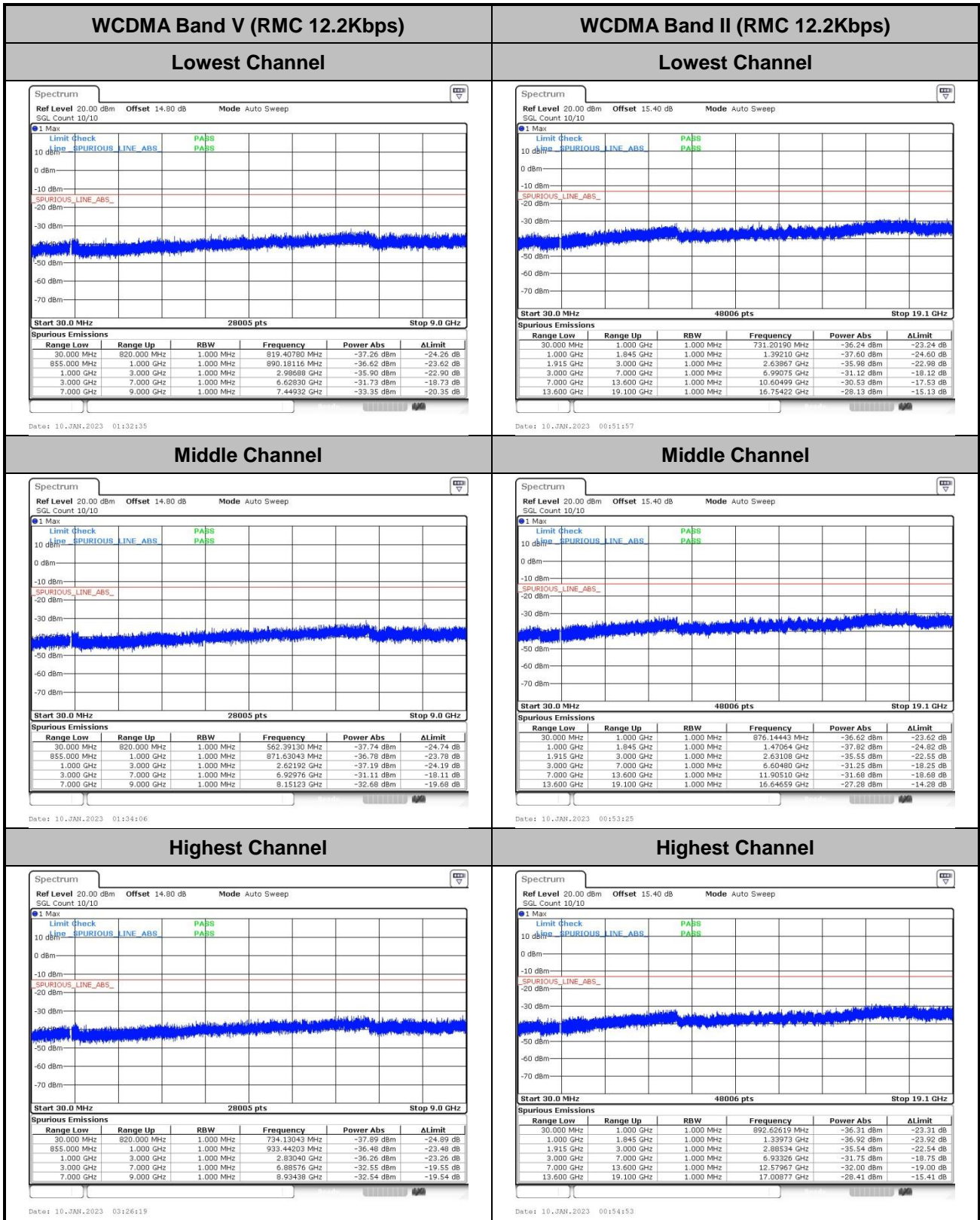
Highest Band Edge







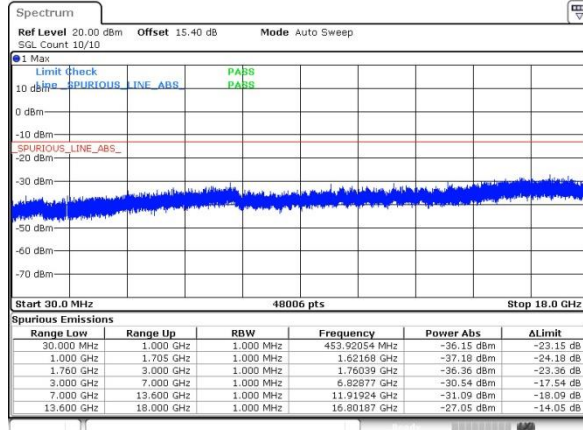
Conducted Spurious Emission





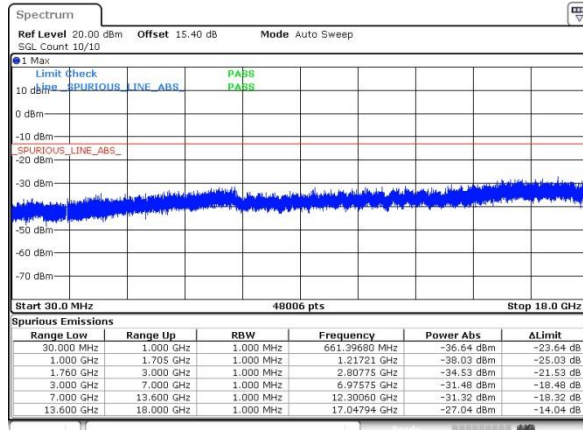
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



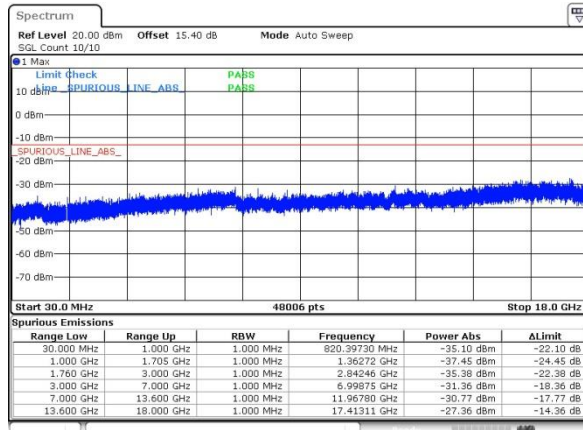
Date: 10. JAN. 2023 01:05:07

Middle Channel



Date: 10. JAN. 2023 01:06:38

Highest Channel



Date: 10. JAN. 2023 01:08:12



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	

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	



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 = 3.87V ; Battery End Point (BEP) =3.6V. ; Maximum Voltage =4.45V
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

Test Engineer :	Carry Xu	Temperature :	22~23°C
		Relative Humidity :	40~42%

RSE pretest all the supported antennas, only the worst antenna is shown in the report.

GSM850 (GSM) / Ant.0								
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	-61.04	-13	-48.04	-68.01	1.58	10.70	H
	2510	-41.94	-13	-28.94	-50.19	2.102	12.50	H
	3348	-61.58	-13	-48.58	-70.47	2.856	13.90	H
	1672	-51.23	-13	-38.23	-58.20	1.58	10.70	V
	2510	-31.90	-13	-18.90	-40.15	2.10	12.50	V
	3348	-61.24	-13	-48.24	-70.13	2.86	13.90	V

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

GSM850 (EDGE) / Ant.0								
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	-65.06	-13	-52.06	-72.03	1.58	10.70	H
	2512	-49.89	-13	-36.89	-58.14	2.102	12.50	H
	3344	-61.27	-13	-48.27	-70.16	2.856	13.90	H
	1672	-59.87	-13	-46.87	-66.84	1.58	10.70	V
	2512	-49.36	-13	-36.36	-57.61	2.10	12.50	V
	3344	-61.34	-13	-48.34	-70.23	2.86	13.90	V

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



GSM1900 (GSM) / Ant.2								
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	3765	-55.06	-13	-42.06	-67.32	2.64	14.90	H
	5640	-46.19	-13	-33.19	-58.05	2.94	14.80	H
	7515	-54.27	-13	-41.27	-64.04	3.39	13.16	H
	3765	-54.95	-13	-41.95	-67.21	2.64	14.90	V
	5640	-41.48	-13	-28.48	-53.34	2.94	14.80	V
	7515	-54.33	-13	-41.33	-64.10	3.39	13.16	V

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

GSM1900 (EDGE) / Ant.2								
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	3765	-58.55	-13	-45.55	-70.81	2.64	14.90	H
	5640	-56.76	-13	-43.76	-68.62	2.94	14.80	H
	7515	-54.59	-13	-41.59	-64.36	3.39	13.16	H
	3765	-54.51	-13	-41.51	-66.77	2.64	14.90	V
	5640	-49.59	-13	-36.59	-61.45	2.94	14.80	V
	7515	-54.29	-13	-41.29	-64.06	3.39	13.16	V

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

WCDMA Band V(RMC 12.2Kbps) / Ant.0								
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	-66.20	-13	-53.20	-73.17	1.58	10.70	H
	2512	-61.42	-13	-48.42	-69.67	2.102	12.50	H
	3344	-61.53	-13	-48.53	-70.42	2.856	13.90	H
	1672	-64.32	-13	-51.32	-71.29	1.58	10.70	V
	2512	-57.51	-13	-44.51	-65.76	2.10	12.50	V
	3344	-61.57	-13	-48.57	-70.46	2.86	13.90	V

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



WCDMA Band II(RMC 12.2Kbps) / Ant.2								
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	3759	-57.18	-13	-44.18	-69.44	2.64	14.90	H
	5640	-56.47	-13	-43.47	-68.33	2.94	14.80	H
	7524	-54.54	-13	-41.54	-64.31	3.39	13.16	H
	3759	-57.72	-13	-44.72	-69.98	2.64	14.90	V
	5640	-57.23	-13	-44.23	-69.09	2.94	14.80	V
	7524	-54.23	-13	-41.23	-64.00	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) / Ant.2								
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	3465	-61.29	-13	-48.29	-72.03	2.604	13.34	H
	5190	-59.03	-13	-46.03	-69.54	3.011	13.52	H
	6930	-58.27	-13	-45.27	-68.47	3.271	13.47	H
	3465	-61.25	-13	-48.25	-71.99	2.604	13.34	V
	5190	-59.25	-13	-46.25	-69.76	3.011	13.52	V
	6930	-58.18	-13	-45.18	-68.38	3.271	13.47	V

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