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5.6 BAND EDGE AT ANTENNA TERMINALS

FCC 47 CFR Part 2.1051.

FCC 47 CFR Part 22.917(a),

Test Requirement: FCC 47 CFR Part 24.238(a),

FCC 47 CFR Part 27.53(h)(1)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13 dBm.

Test Procedure:

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer.

For each band edge measurement:

- Set the spectrum analyzer span to include the block edge frequency.
- 2) Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth. 4)
- Set spectrum analyzer with RMS detector.
- Record the max trace plot into the test report

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

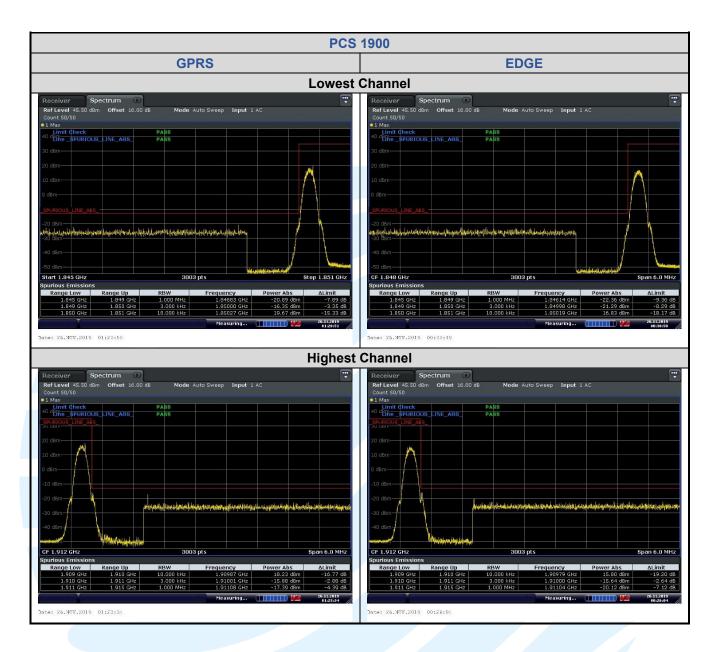
Test Setup: Refer to section 4.2.2 for details. Instruments Used: Refer to section 3 for details

Test Mode: Link mode Test Results: Pass

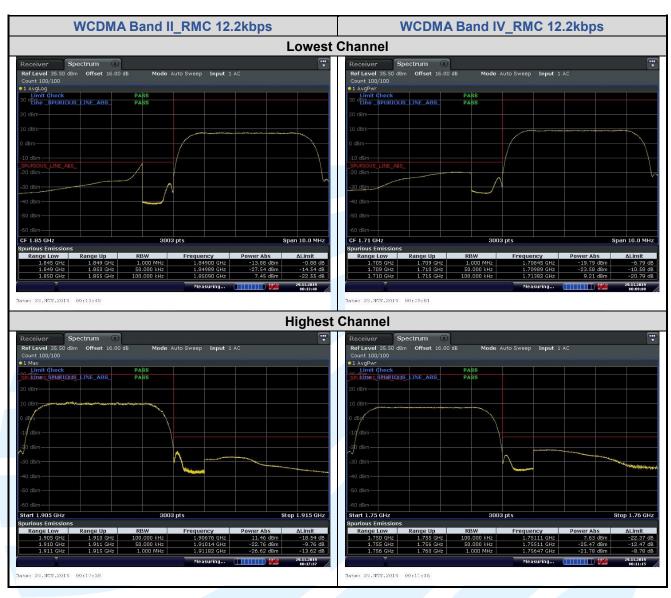


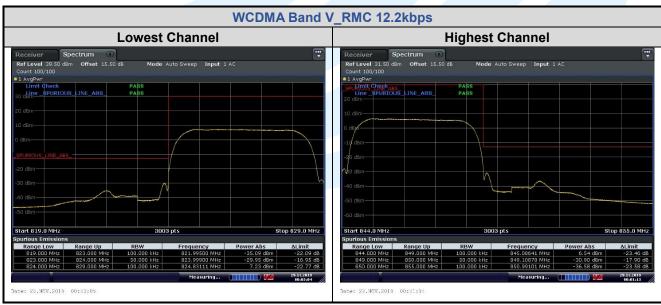
The test plots as follows: **GSM 850 GPRS EDGE Lowest Channel** Limit Check Line _SPURIOUS_LINE_ABS Date: 28,NOV,2019 01:12:58 Date: 28,NOV,2019 00:35:46 **Highest Channel** Spectrum Spectrum Offset 15.50 df neck SPURIOUS_LINE_ABS_ SPURIOUS_LINE_ABS Start 848.5 MHz Stop 855.0 MHz CF 851.75 MHz Date: 28.NOV.2019 01:09:41 Date: 25.NCV.2019 00:52:06











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5.7 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

FCC 47 CFR Part 2.1051,

FCC 47 CFR Part 22.917(a)(b),

FCC 47 CFR Part 24.238(a)(b), FCC 47 CFR Part 27.53(h)(1)

ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13 dBm.

Test Procedure:

Test Method:

Test Requirement:

The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range. b. Measuring frequency range is from 30 MHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower. Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

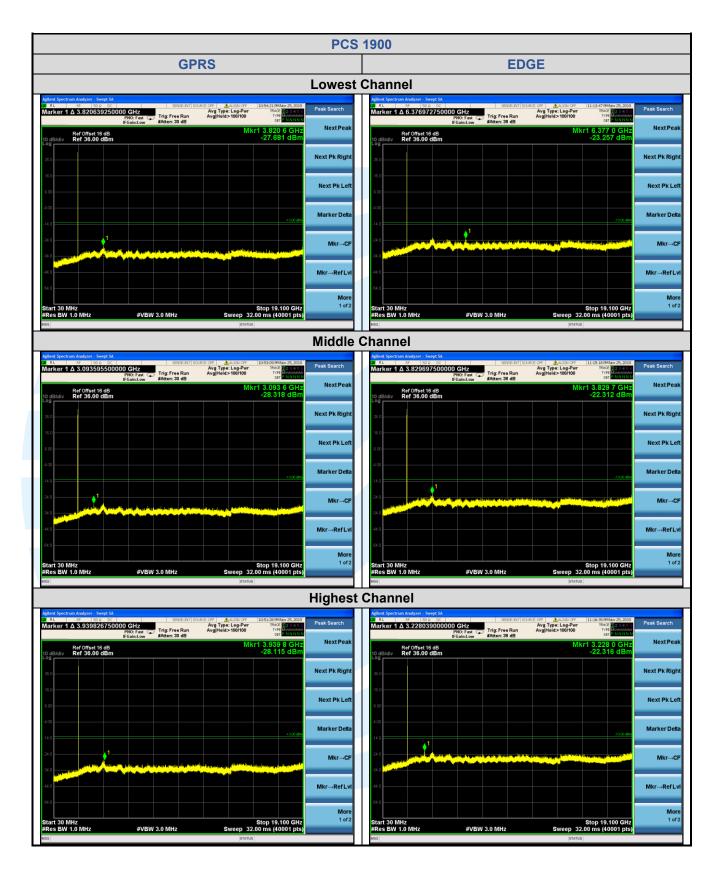
Test Setup: Refer to section 4.2.2 for details. **Instruments Used:** Refer to section 3 for details

Test Mode: Link mode
Test Results: Pass

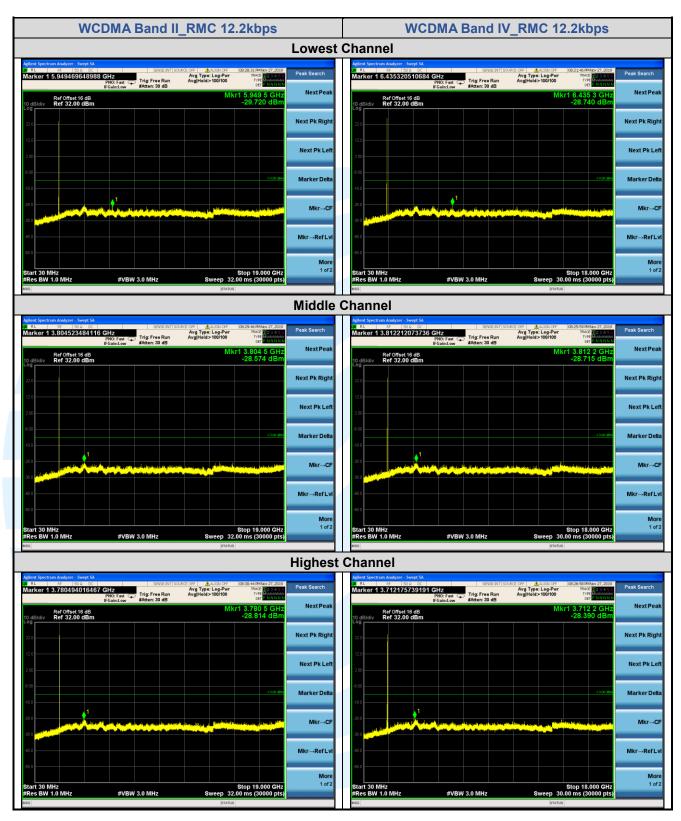


The test plots as follows: **GSM 850 GPRS EDGE Lowest Channel** RL RF 50 Ω DC arker 1 Δ 3.253369500000 GHz arker 1 \(\Delta \) 3.7776660000000 GHz Avg Type: Log-Pw Avg|Hold>100/100 Avg Type: Log-Pwr Avg|Hold>100/100 Ref Offset 15.5 dB Ref 38.50 dBm Ref Offset 15.5 dB Ref 38.50 dBm Next Pk Righ Next Pk Righ Mkr→CF Mkr→Ref L Mkr→Ref Lv More 1 of 2 Stop 9.000 GHz Sweep 16.00 ms (40001 pts Stop 9.000 G Sweep 16.00 ms (40001 p rt 30 MHz es BW 1.0 MHz #VBW 3.0 MHz **Middle Channel** | Section Alexander | Section | Sec PRO 1 A 2.213970750000 GHZ
PNO: Fast PRO: Fast Avg Type: Log-Pwr Avg|Hold>100/100 Avg Type: Log-Pwr Avg|Hold>100/100 Ref Offset 15.5 dB Ref 38.50 dBm Ref Offset 15.5 dB Ref 38.50 dBm Marker Delt Marker Delt Mkr→CF **Highest Channel** Avg Type: Log-Pwr Avg|Hold>100/100 Ref Offset 15.5 dB Ref 38.50 dBm Ref Offset 15.5 dB Ref 38.50 dBm Next Pk Rig Next Pk Le Next Pk Let Marker Delt Marker Delt More 1 of 2 More 1 of 2

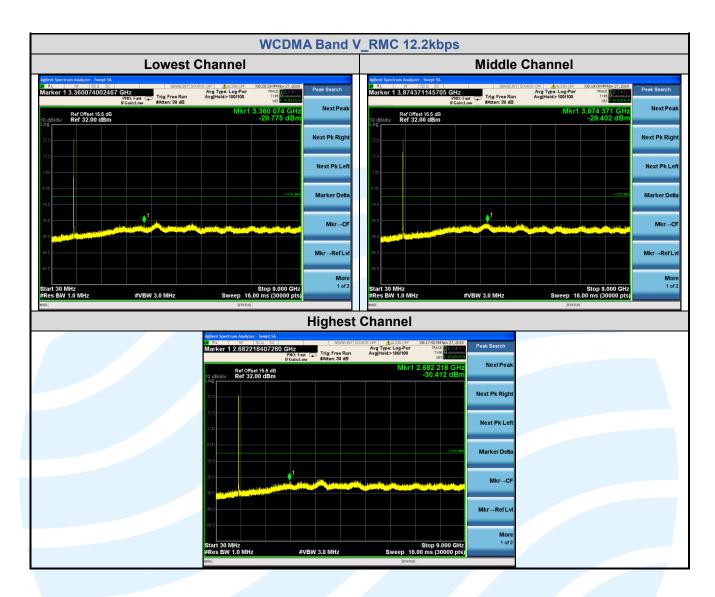












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5.8 FIELD STRENGTH OF SPURIOUS RADIATION

Test Requirement: FCC 47 CFR Part 2.1053,

FCC 47 CFR Part 22.917(a)(b), FCC 47 CFR Part 24.238(a)(b), FCC 47 CFR Part 27.53(h)(1)

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01 Section 7

Limits:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13 dBm.

Test Setup: Refer to section 4.2.1 for details. **Test Procedures:** KDB 971168 D01v03r01 Section 7

Equipment Used: Refer to section 3 for details.

Test Result: Pass

The measurement data as follows:

5.8.1 Radiated Emission Test Data (30 MHz to 1 GHz)

GSM 8	350						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(Bm)	(dB/m)	(dBm)	(dBm)	(dB)	
GSM_	Lowest Chan	nel					
1	97.002	-85.63	26.45	-59.18	-13.00	-46.18	Horizontal
2	264.971	-88.65	29.91	-58.74	-13.00	-45.74	Horizontal
3	979.139	-87.18	44.76	-42.42	-13.00	-29.42	Horizontal
4	32.640	-89.88	32.50	-57.38	-13.00	-44.38	Vertical
5	97.002	-84.74	26.45	-58.29	-13.00	-45.29	Vertical
6	979.139	-86.58	44.76	-41.82	-13.00	-28.82	Vertical
GSM_	Middle Chann	el					
1	32.184	-89.63	32.91	-56.72	-13.00	-43.72	Horizontal
2	182.578	-88.19	28.03	-60.16	-13.00	-47.16	Horizontal
3	986.044	-88.07	45.16	-42.91	-13.00	-29.91	Horizontal
4	30.425	-91.04	34.16	-56.88	-13.00	-43.88	Vertical
5	97.002	-85.37	26.45	-58.92	-13.00	-45.92	Vertical
6	952.000	-87.25	43.61	-43.64	-13.00	-30.64	Vertical
GSM_	Highest Chan	nel					
1	36.524	-88.91	29.76	-59.15	-13.00	-46.15	Horizontal
2	97.002	-86.32	26.45	-59.87	-13.00	-46.87	Horizontal
3	938.714	-86.59	43.40	-43.19	-13.00	-30.19	Horizontal
4	31.959	-90.57	33.10	-57.47	-13.00	-44.47	Vertical
5	97.002	-85.65	26.45	-59.20	-13.00	-46.20	Vertical
6	925.613	-85.90	42.95	-42.95	-13.00	-29.95	Vertical



PCS	1900						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
GSM	_ Lowest Ch	annel					
1	42.331	-75.00	-1.46	-76.46	-13.00	-63.46	Horizontal
2	54.135	-72.61	-4.21	-76.82	-13.00	-63.82	Horizontal
3	965.474	-81.11	15.50	-65.61	-13.00	-52.61	Horizontal
4	42.035	-76.43	-1.28	-77.71	-13.00	-64.71	Vertical
5	162.020	-78.86	-0.88	-79.74	-13.00	-66.74	Vertical
6	945.334	-81.22	14.62	-66.60	-13.00	-53.60	Vertical
GSM	_ Middle Cha	innel					
1	41.448	-77.49	-1.12	-78.61	-13.00	-65.61	Horizontal
2	54.135	-74.39	-4.21	-78.60	-13.00	-65.60	Horizontal
3	965.474	-82.18	15.50	-66.68	-13.00	-53.68	Horizontal
4	43.845	-76.51	-2.36	-78.87	-13.00	-65.87	Vertical
5	128.486	-78.46	-2.03	-80.49	-13.00	-67.49	Vertical
6	965.474	-82.65	15.50	-67.15	-13.00	-54.15	Vertical
GSM	_ Highest Cha	annel					
1	54.135	-73.44	-4.21	-77.65	-13.00	-64.65	Horizontal
2	214.606	-78.68	-0.60	-79.28	-13.00	-66.28	Horizontal
3	992.997	-82.07	16.77	-65.30	-13.00	-52.30	Horizontal
4	34.285	-78.38	2.26	-76.12	-13.00	-63.12	Vertical
5	127.586	-77.18	-2.00	-79.18	-13.00	-66.18	Vertical
6	952.000	-81.91	14.79	-67.12	-13.00	-54.12	Vertical



WCDN	IA Band II						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 1	12.2kbps_ Low	est Channel					
1	33.807	-78.65	2.61	-76.04	-13.00	-63.04	Horizontal
2	127.586	-77.60	-2.00	-79.60	-13.00	-66.60	Horizontal
3	684.226	-80.66	9.56	-71.10	-13.00	-58.10	Horizontal
4	34.045	-79.15	2.42	-76.73	-13.00	-63.73	Vertical
5	125.806	-78.06	-1.94	-80.00	-13.00	-67.00	Vertical
6	776.485	-81.18	10.83	-70.35	-13.00	-57.35	Vertical
RMC 1	12.2kbps_ Midd	lle Channel					
1	41.448	-76.64	-1.12	-77.76	-13.00	-64.76	Horizontal
2	54.135	-73.83	-4.21	-78.04	-13.00	-65.04	Horizontal
3	734.037	-80.41	10.03	-70.38	-13.00	-57.38	Horizontal
4	41.448	-77.62	-1.12	-78.74	-13.00	-65.74	Vertical
5	125.806	-78.45	-1.94	-80.39	-13.00	-67.39	Vertical
6	578.036	-81.57	7.44	-74.13	-13.00	-61.13	Vertical
RMC 1	12.2kbps_ High	est Channel					
1	51.900	-73.85	-3.73	-77.58	-13.00	-64.58	Horizontal
2	124.925	-77.47	-1.92	-79.39	-13.00	-66.39	Horizontal
3	754.963	-81.03	10.54	-70.49	-13.00	-57.49	Horizontal
4	42.035	-76.24	-1.28	-77.52	-13.00	-64.52	Vertical
5	54.135	-75.57	-4.21	-79.78	-13.00	-66.78	Vertical
6	538.811	-79.66	6.70	-72.96	-13.00	-59.96	Vertical



WCDN	/IA Band IV						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 1	12.2kbps_ Low	est Channel					
1	54.135	-73.71	-4.21	-77.92	-13.00	-64.92	Horizontal
2	250.486	-79.61	1.04	-78.57	-13.00	-65.57	Horizontal
3	693.910	-79.80	9.70	-70.10	-13.00	-57.10	Horizontal
4	31.959	-79.50	4.25	-75.25	-13.00	-62.25	Vertical
5	41.448	-75.52	-1.12	-76.64	-13.00	-63.64	Vertical
6	972.283	-82.10	15.70	-66.40	-13.00	-53.40	Vertical
RMC 1	12.2kbps_ Midd	lle Channel					
1	34.527	-79.16	2.11	-77.05	-13.00	-64.05	Horizontal
2	53.756	-73.23	-4.14	-77.37	-13.00	-64.37	Horizontal
3	815.635	-80.14	11.03	-69.11	-13.00	-56.11	Horizontal
4	30.425	-79.98	5.31	-74.67	-13.00	-61.67	Vertical
5	91.700	-78.07	-2.83	-80.90	-13.00	-67.90	Vertical
6	765.648	-80.41	10.76	-69.65	-13.00	-56.65	Vertical
RMC 1	12.2kbps_ High	est Channel					
1	42.931	-75.92	-1.82	-77.74	-13.00	-64.74	Horizontal
2	54.135	-73.85	-4.21	-78.06	-13.00	-65.06	Horizontal
3	693.910	-80.63	9.70	-70.93	-13.00	-57.93	Horizontal
4	40.299	-76.79	-0.84	-77.63	-13.00	-64.63	Vertical
5	124.925	-77.14	-1.92	-79.06	-13.00	-66.06	Vertical
6	919.132	-80.92	13.88	-67.04	-13.00	-54.04	Vertical



WCE	MA Band V						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC	12.2kbps_ L	owest Channel					
1	32.184	-88.69	32.91	-55.78	-13.00	-42.78	Horizontal
2	95.649	-86.10	26.34	-59.76	-13.00	-46.76	Horizontal
3	986.044	-86.40	45.16	-41.24	-13.00	-28.24	Horizontal
4	35.762	-88.66	30.17	-58.49	-13.00	-45.49	Vertical
5	97.002	-85.55	26.45	-59.10	-13.00	-46.10	Vertical
6	938.714	-87.00	43.40	-43.60	-13.00	-30.60	Vertical
RMC	12.2kbps_ M	liddle Channel					
1	32.184	-87.31	32.91	-54.40	-13.00	-41.40	Horizontal
2	97.002	-85.05	26.45	-58.60	-13.00	-45.60	Horizontal
3	965.474	-87.21	44.29	-42.92	-13.00	-29.92	Horizontal
4	36.524	-90.46	29.76	-60.70	-13.00	-47.70	Vertical
5	97.002	-86.74	26.45	-60.29	-13.00	-47.29	Vertical
6	986.044	-88.26	45.16	-43.10	-13.00	-30.10	Vertical
RMC	12.2kbps_ H	ighest Channel					
1	32.184	-92.19	32.91	-59.28	-13.00	-46.28	Horizontal
2	97.002	-85.66	26.45	-59.21	-13.00	-46.21	Horizontal
3	952.000	-87.22	43.61	-43.61	-13.00	-30.61	Horizontal
4	32.411	-90.62	32.71	-57.91	-13.00	-44.91	Vertical
5	97.002	-85.57	26.45	-59.12	-13.00	-46.12	Vertical
6	965.474	-87.59	44.29	-43.30	-13.00	-30.30	Vertical

Remark

- 1. Correct Factor = Antenna Factor + Cable Loss Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
- 2. Result = Reading + Correct Factor.
- 3. Margin = Result Limit



5.8.1 Radiated Emission Test Data (Above 1 GHz)

GSM 8	GSM 850											
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.					
	(MHz)	(Bm)	(dB/m)	(dBm)	(dBm)	(dB)						
GSM_	Lowest Chan	nel										
1	1648.400	-63.10	2.39	-60.71	-13.00	-47.71	Horizontal					
2	2472.600	-66.05	9.16	-56.89	-13.00	-43.89	Horizontal					
3	1648.400	-65.96	4.03	-61.93	-13.00	-48.93	Vertical					
4	2472.600	-69.30	11.49	-57.81	-13.00	-44.81	Vertical					
GSM_	Middle Chann	el										
1	1673.200	-66.35	2.59	-63.76	-13.00	-50.76	Horizontal					
2	2509.800	-62.81	9.17	-53.64	-13.00	-40.64	Horizontal					
3	1673.200	-64.99	4.31	-60.68	-13.00	-47.68	Vertical					
4	2509.800	-64.99	11.46	-53.53	-13.00	-40.53	Vertical					
GSM_	Highest Chani	nel										
1	1697.600	-65.80	2.78	-63.02	-13.00	-50.02	Horizontal					
2	2546.400	-61.09	9.22	-51.87	-13.00	-38.87	Horizontal					
3	1697.600	-66.33	4.59	-61.74	-13.00	-48.74	Vertical					
4	2546.400	-59.58	11.45	-48.13	-13.00	-35.13	Vertical					

PCS 1	900						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
GSM_	Lowest Chan	nel					
1	3700.400	-73.04	13.77	-59.27	-13.00	-46.27	Horizontal
2	5550.600	-70.52	16.02	-54.50	-13.00	-41.50	Horizontal
3	3700.400	-72.22	15.13	-57.09	-13.00	-44.09	Vertical
4	5550.600	-69.28	16.91	-52.37	-13.00	-39.37	Vertical
GSM_	Middle Chann	iel					
1	3760.000	-72.39	13.87	-58.52	-13.00	-45.52	Horizontal
2	5640.000	-69.35	16.10	-53.25	-13.00	-40.25	Horizontal
3	3760.000	-71.82	15.28	-56.54	-13.00	-43.54	Vertical
4	5640.000	-70.49	16.97	-53.52	-13.00	-40.52	Vertical
GSM_	Highest Chani	nel					
1	3819.600	-72.17	13.98	-58.19	-13.00	-45.19	Horizontal
2	5729.400	-68.76	16.37	-52.39	-13.00	-39.39	Horizontal
3	3819.600	-69.37	15.44	-53.93	-13.00	-40.93	Vertical
4	5729.400	-69.51	17.23	-52.28	-13.00	-39.28	Vertical



WCDN	/IA Band II						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 1	12.2kbps_ Low	est Channel					
1	3704.800	-70.64	13.78	-56.86	-13.00	-43.86	Horizontal
2	5557.200	-69.06	16.01	-53.05	-13.00	-40.05	Horizontal
3	3704.800	-71.06	15.14	-55.92	-13.00	-42.92	Vertical
4	5557.200	-69.72	16.90	-52.82	-13.00	-39.82	Vertical
RMC 1	12.2kbps_ Midd	dle Channel					
1	3760.000	-69.35	13.87	-55.48	-13.00	-42.48	Horizontal
2	5640.000	-69.46	16.10	-53.36	-13.00	-40.36	Horizontal
3	3760.000	-65.83	15.28	-50.55	-13.00	-37.55	Vertical
4	5640.000	-70.11	16.97	-53.14	-13.00	-40.14	Vertical
RMC 1	12.2kbps_ High	est Channel					
1	3815.200	-70.44	13.97	-56.47	-13.00	-43.47	Horizontal
2	5722.800	-68.59	16.35	-52.24	-13.00	-39.24	Horizontal
3	3815.200	-69.93	15.43	-54.50	-13.00	-41.50	Vertical
4	5722.800	-67.42	17.21	-50.21	-13.00	-37.21	Vertical

WCDN	IA Band IV						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 1	2.2kbps_ Low	est Channel					
1	3424.800	-69.64	12.45	-57.19	-13.00	-44.19	Horizontal
2	5137.200	-63.57	16.11	-47.46	-13.00	-34.46	Horizontal
3	3424.800	-67.32	13.70	-53.62	-13.00	-40.62	Vertical
4	5137.200	-64.65	17.08	-47.57	-13.00	-34.57	Vertical
RMC 1	2.2kbps_ Midd	lle Channel					
1	3464.800	-70.12	12.74	-57.38	-13.00	-44.38	Horizontal
2	5197.200	-64.86	16.21	-48.65	-13.00	-35.65	Horizontal
3	3464.800	-67.30	13.97	-53.33	-13.00	-40.33	Vertical
4	5197.200	-64.40	17.17	-47.23	-13.00	-34.23	Vertical
RMC 1	2.2kbps_ High	est Channel					
1	3505.200	-72.17	13.03	-59.14	-13.00	-46.14	Horizontal
2	5257.800	-69.55	16.20	-53.35	-13.00	-40.35	Horizontal
3	3505.200	-73.79	14.24	-59.55	-13.00	-46.55	Vertical
4	5257.800	-67.55	17.15	-50.40	-13.00	-37.40	Vertical



WCDN	IA Band V						
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 1	2.2kbps_ Low	est Channel					
1	1652.800	-66.71	2.43	-64.28	-13.00	-51.28	Horizontal
2	2479.200	-68.12	9.16	-58.96	-13.00	-45.96	Horizontal
3	1652.800	-66.94	4.08	-62.86	-13.00	-49.86	Vertical
4	2479.200	-65.97	11.48	-54.49	-13.00	-41.49	Vertical
RMC 1	2.2kbps_ Midd	dle Channel					
1	1672.800	-68.79	2.59	-66.20	-13.00	-53.20	Horizontal
2	2509.200	-68.36	9.17	-59.19	-13.00	-46.19	Horizontal
3	1672.800	-72.99	4.31	-68.68	-13.00	-55.68	Vertical
4	2509.200	-69.14	11.46	-57.68	-13.00	-44.68	Vertical
RMC 1	2.2kbps_ High	est Channel					
1	1693.200	-73.09	2.75	-70.34	-13.00	-57.34	Horizontal
2	2539.800	-68.59	9.22	-59.37	-13.00	-46.37	Horizontal
3	1693.200	-73.23	4.54	-68.69	-13.00	-55.69	Vertical
4	2539.800	-68.73	11.45	-57.28	-13.00	-44.28	Vertical

Remark:

- Correct Factor = Antenna Factor + Cable Loss Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
- Result = Reading + Correct Factor.
- Margin = Result Limi

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5.9 FREQUENCY STABILITY

Test Requirement: FCC 47 CFR Part 2.1055 &

FCC 47 CFR Part 22.355 & FCC 47 CFR Part 24.235 & FCC 47 CFR Part 27.54

Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limits:

FCC 47 CFR Part 22.355.

The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

FCC 47 CFR Part 24.235, FCC 47 CFR Part 27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Setup: Refer to section 4.2.2 for details.

Test Procedures:

Use CMW 500 with Frequency Error measurement capability.

a) Temp. = -30° to + 50° C

b) Voltage =low voltage, 3.45 Vdc, Normal, 3.85 Vdc and High voltage, 4.35 Vdc.

2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

Equipment Used: Refer to section 3 for details.

Test Result: Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Result		
	(MHz)	(Vdc)	(℃)	(Hz)	(ppm)	(ppm)			
			GSM	850					
		VL		8	0.0096	± 2.5	Pass		
		VN	TN	13	0.0155	± 2.5	Pass		
		VH		6	0.0072	± 2.5	Pass		
			50	4	0.0048	± 2.5	Pass		
					40	-8	-0.0096	± 2.5	Pass
GSM	190 / 836.6		30	2	0.0024	± 2.5	Pass		
GSIVI	190 / 636.6		20	7	0.0084	± 2.5	Pass		
		VN	10	-12	-0.0143	± 2.5	Pass		
			0	11	0.0131	± 2.5	Pass		
			-10	9	0.0108	± 2.5	Pass		
			-20	-5	-0.0060	± 2.5	Pass		
			-30	7	0.0084	± 2.5	Pass		



Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Result
	(MHz)	(Vdc)	(℃)	(Hz)	(ppm)	(ppm)	
			PCS ¹	1900			
		VL		-11	-0.0059		Pass
		VN	TN	-8	-0.0043		Pass
		VH		12	0.0064		Pass
			50	7	0.0037		Pass
				40	-5	-0.0027	
GSM	661 / 1880.0		30	-6	-0.0032	N/A	Pass
GSIVI	001 / 1000.0		20	10	0.0053		Pass
		VN	10	8	0.0043		Pass
			0	-11	-0.0059		Pass
			-10	-8	-0.0043		Pass
			-20	9	0.0048		Pass
			-30	13	0.0069		Pass

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Result	
	(MHz)	(Vdc)	(℃)	(Hz)	(ppm)	(ppm)		
WCDMA Band II								
	9400 / 1880.0	VL		-6	-0.0032		Pass	
			VN	TN	15	0.0080		Pass
		VH		2	0.0011	N/A	Pass	
		400 / 1880.0	50	13	0.0069		Pass	
			40	10	0.0053		Pass	
DMC 40 Okhan			30	-12	-0.0064		Pass	
RMC 12.2kbps			20	11	0.0059		Pass	
		VN	10	-8	-0.0043		Pass	
			0	7	0.0037		Pass	
			-10	6	0.0032		Pass	
			-20	15	0.0080		Pass	
			-30	20	0.0106		Pass	

Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Result	
	(MHz)	(Vdc)	(℃)	(Hz)	(ppm)	(ppm)		
WCDMA Band IV								
RMC 12.2kbps	1412 / 1732.4	VL	TN	5	0.0029	N/A	Pass	
		VN		-8	-0.0046		Pass	
		VH		13	0.0075		Pass	
		VN	50	4	0.0023		Pass	
			40	9	0.0052		Pass	
			30	-7	-0.0040		Pass	
			20	11	0.0063		Pass	
			10	-10	-0.0058		Pass	
			0	12	0.0069		Pass	
			-10	-7	-0.0040		Pass	
			-20	6	0.0035		Pass	
			-30	6	0.0035		Pass	

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Modulation	Channel/ Frequency	Voltage	Temperature	Deviation	Deviation	Limit	Result	
	(MHz)	(Vdc)	(℃)	(Hz)	(ppm)	(ppm)		
WCDMA Band V								
RMC 12.2kbps		VL	TN	7	0.0084	± 2.5	Pass	
		VN		-5	-0.0060	± 2.5	Pass	
		VH		11	0.0132	± 2.5	Pass	
	4182 / 836.4	VN	50	8	0.0096	± 2.5	Pass	
			40	-3	-0.0036	± 2.5	Pass	
			30	11	0.0132	± 2.5	Pass	
			20	15	0.0179	± 2.5	Pass	
			10	11	0.0132	± 2.5	Pass	
			0	5	0.0060	± 2.5	Pass	
			-10	-4	-0.0048	± 2.5	Pass	
			-20	9	0.0108	± 2.5	Pass	
			-30	9	0.0108	± 2.5	Pass	



APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

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APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

