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Appendix B



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1. Effective (Isotropic) Radiated Power Output Data

1.1.Test Result

Test Band	Test Mode	Test Channel	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
	WCDMA	9262	23.34	27.34	33.00	PASS
		9400	23.21	27.21	33.00	PASS
		9538	23.13	27.13	33.00	PASS
		9262	20.56	24.56	33.00	PASS
UMTS BAND II	HSUPA	9400	20.43	24.43	33.00	PASS
		9538	20.77	24.77	33.00	PASS
	HSDPA	9262	21.95	25.95	33.00	PASS
		9400	21.96	25.96	33.00	PASS
		9538	21.89	25.89	33.00	PASS

Test Band	Test Mode	Test Channel	Measured [dBm]	EIRP [dBm]	Limit [dBm]	Verdict
		1312	23.21	27.21	30.00	PASS
	WCDMA	1413	23.22	27.22	30.00	PASS
		1513	23.16	27.16	30.00	PASS
	HSUPA	1312	20.86	24.86	30.00	PASS
UMTS BAND IV		1413	20.53	24.53	30.00	PASS
		1513	20.57	24.57	30.00	PASS
	HSDPA	1312	22.25	26.25	30.00	PASS
		1413	22.16	26.16	30.00	PASS
		1513	22.21	26.21	30.00	PASS

Test Band	Test Mode	Test Channel	Measured [dBm]	ERP [dBm]	Limit [dBm]	Verdict
		4132	23.68	24.53	38.45	PASS
	WCDMA	4182	23.75	24.60	38.45	PASS
		4233	23.70	24.55	38.45	PASS
	HSUPA	4132	20.88	21.73	38.45	PASS
UMTS BAND V		4182	20.72	21.57	38.45	PASS
		4233	20.63	21.48	38.45	PASS PASS PASS PASS
	HSDPA	4132	21.72	22.57	38.45	PASS
		4182	21.88	22.73	38.45	PASS
		4233	21.79	22.64	38.45	PASS



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Note:

a: For getting the ERP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

EIRP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBi]

ERP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]

b: SGP=Signal Generator Level



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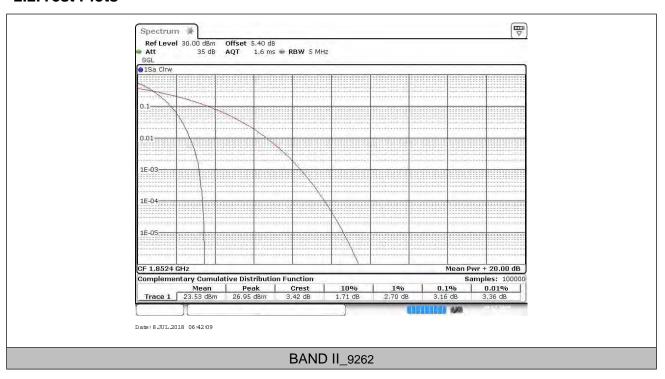
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2. Peak-to-Average Ratio

2.1. Test Result

BAND	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
	9262	3.16	13	PASS
BAND II	9400	3.16	13	PASS
	9538	3.16	13	PASS
	1312	2.99	13	PASS
BAND IV	1413	2.99	13	PASS
	1513	2.99	13	PASS
	4132	2.87	13	PASS
BAND V	4182	2.87	13	PASS
	4233	2.87	13	PASS

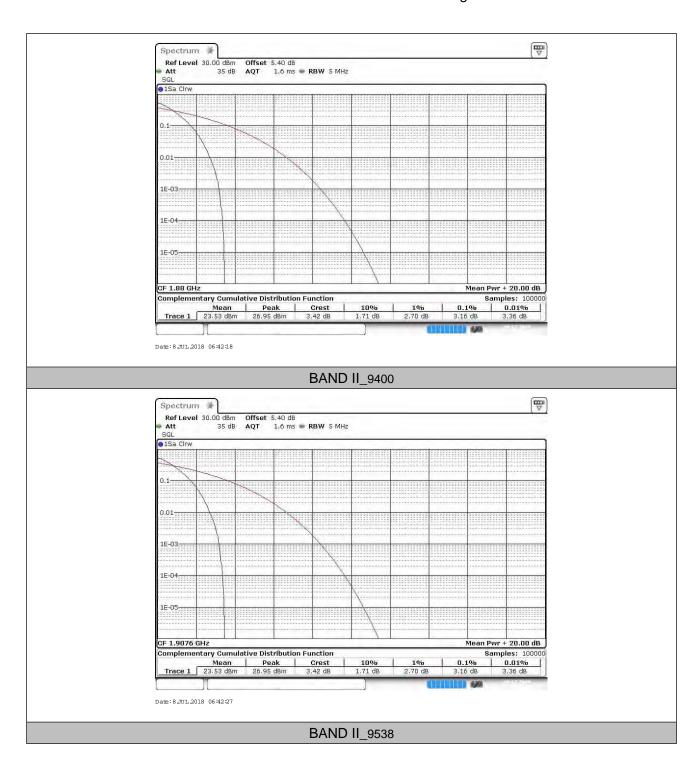
2.2. Test Plots





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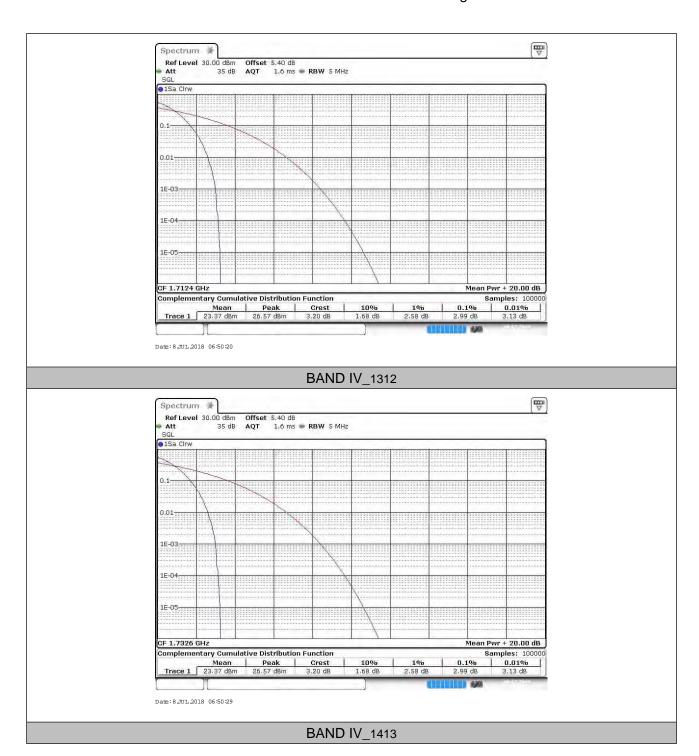
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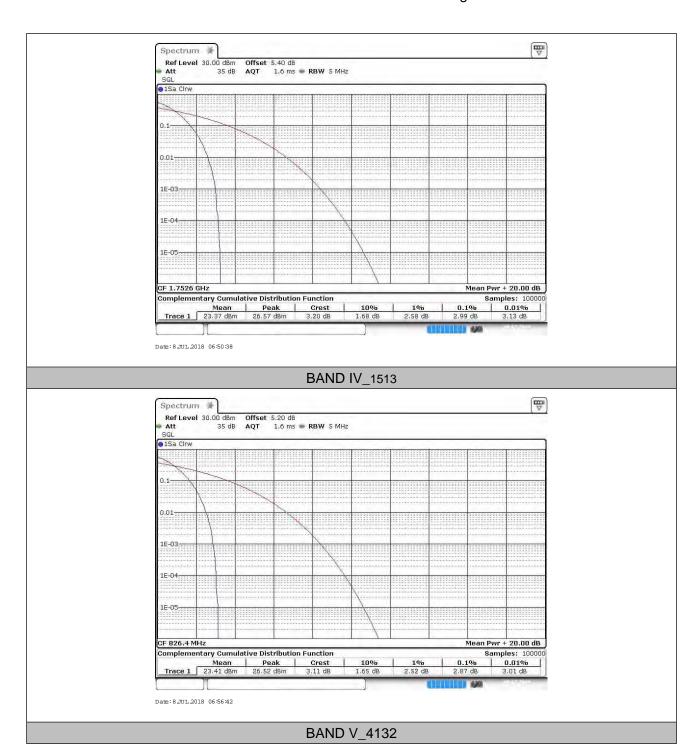
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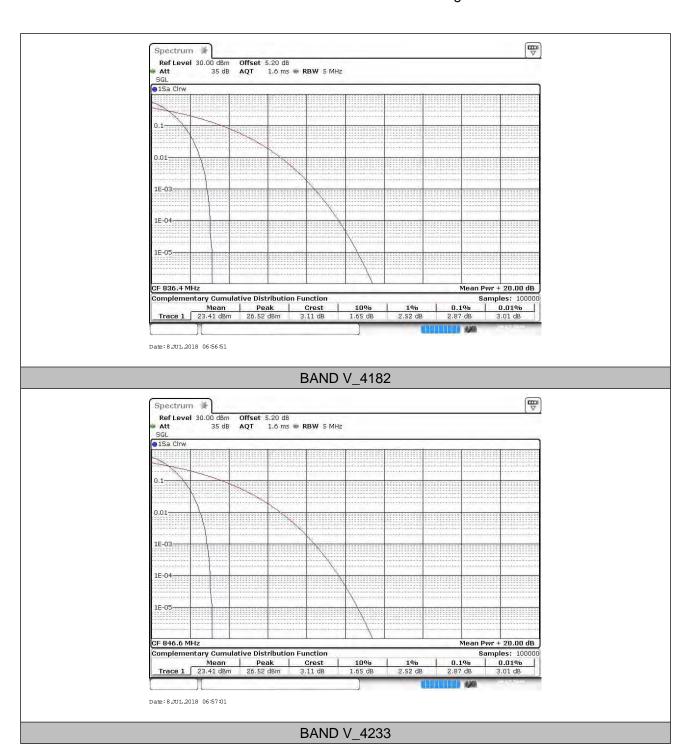
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3. Modulation Characteristics

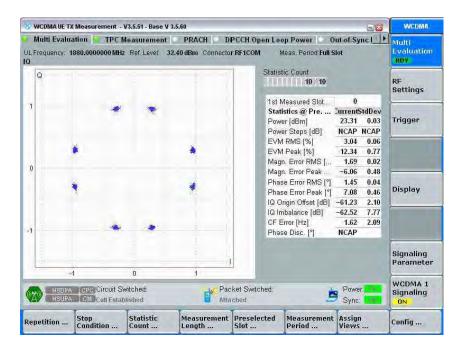
Part I - Test Plots

3.1. For WCDMA

3.1.1. Test BAND = WCDMA BAND II

3.1.1.1. Test Mode = UMTS/TM1

3.1.1.1.1. Test Channel = MCH





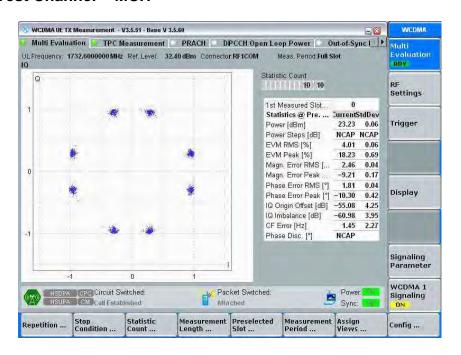
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3.1.2. Test BAND = WCDMA BAND IV

3.1.2.1. Test Mode = UMTS/TM1

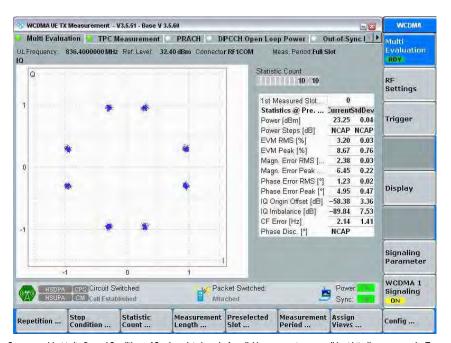
3.1.2.1.1. Test Channel = MCH



3.1.3. Test BAND = WCDMA BAND V

3.1.3.1. Test Mode = UMTS /TM1

3.1.3.1.1. Test Channel = MCH



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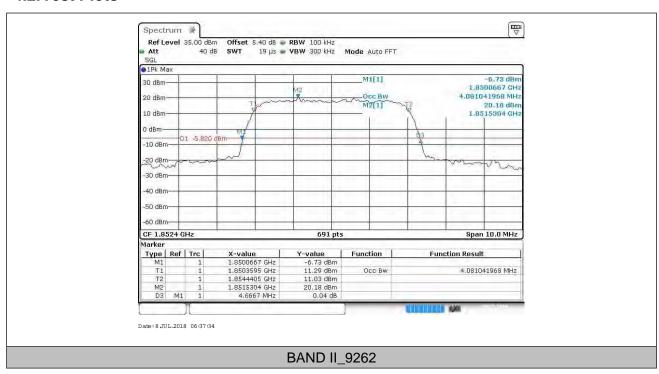
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4. 26dB Bandwidth and Occupied Bandwidth

4.1.Test Result

BAND	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
	9262	4081.0	4667		PASS
BAND II	9400	4066.6	4696		PASS
	9538	4081.0	4667		PASS
BAND IV	1312	4081.0	4681		PASS
	1413	4081.0	4681		PASS
	1513	4081.0	4681		PASS
	4132	4066.6	4667		PASS
BAND V	4182	4081.0	4681		PASS
	4233	4110.0	4768		PASS

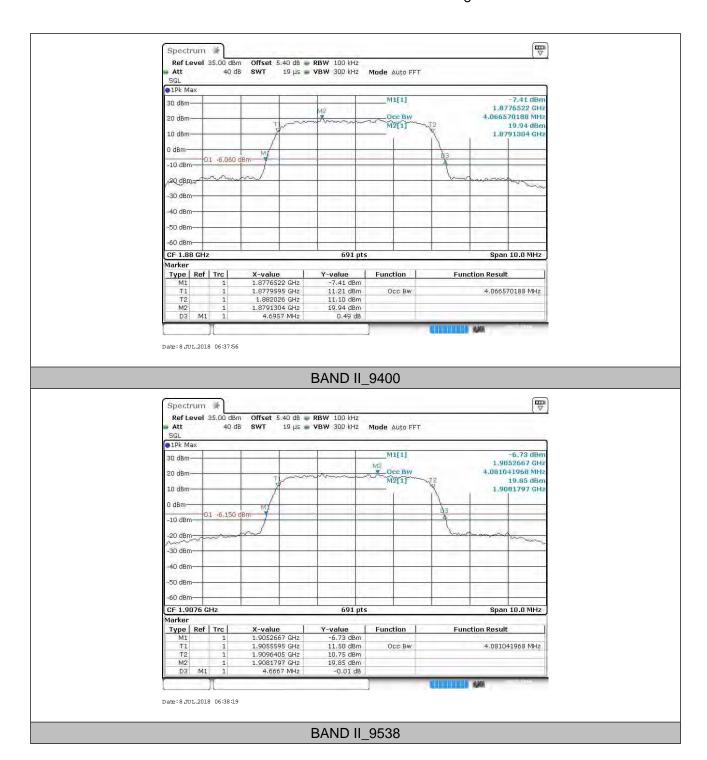
4.2. Test Plots





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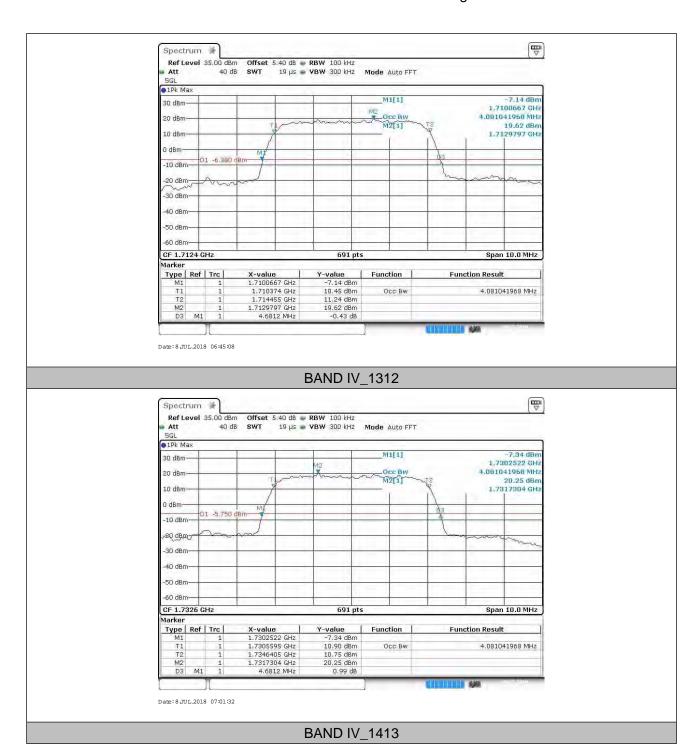
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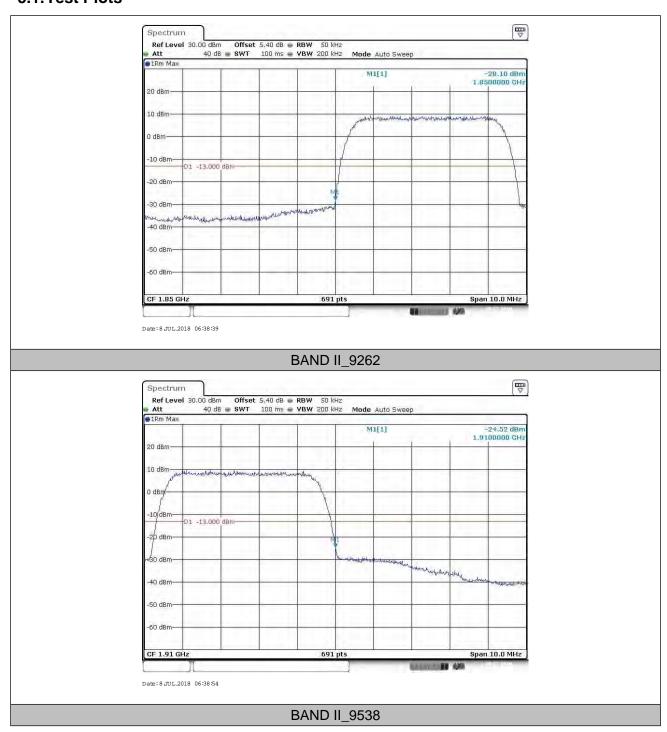


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5. Band Edge Compliance

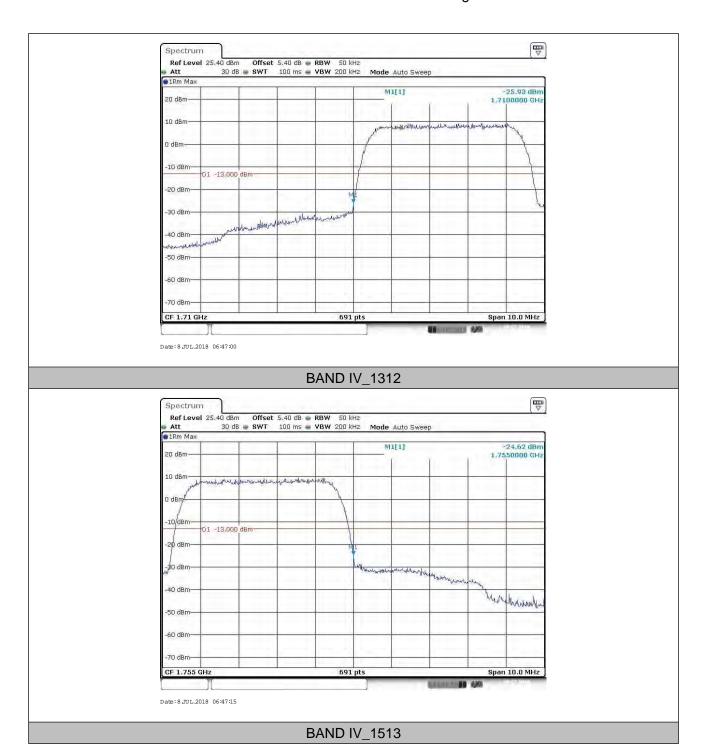
5.1. Test Plots





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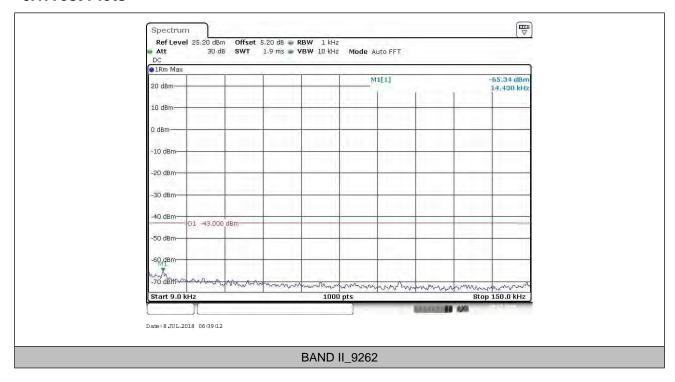
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6. Spurious Emission at Antenna Terminal

NOTE1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k* (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

NOTE2: only the worst case data displayed in this report.

6.1. Test Plots





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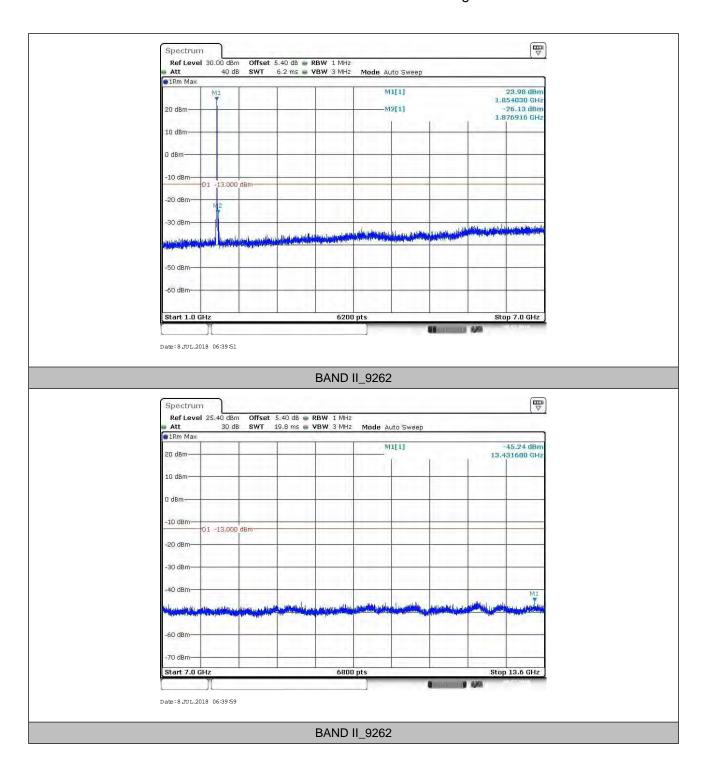
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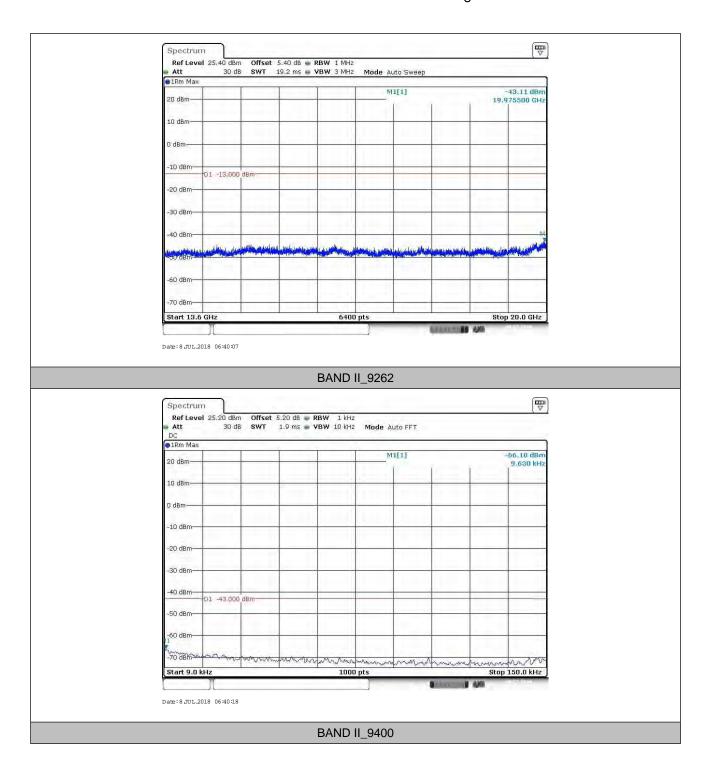
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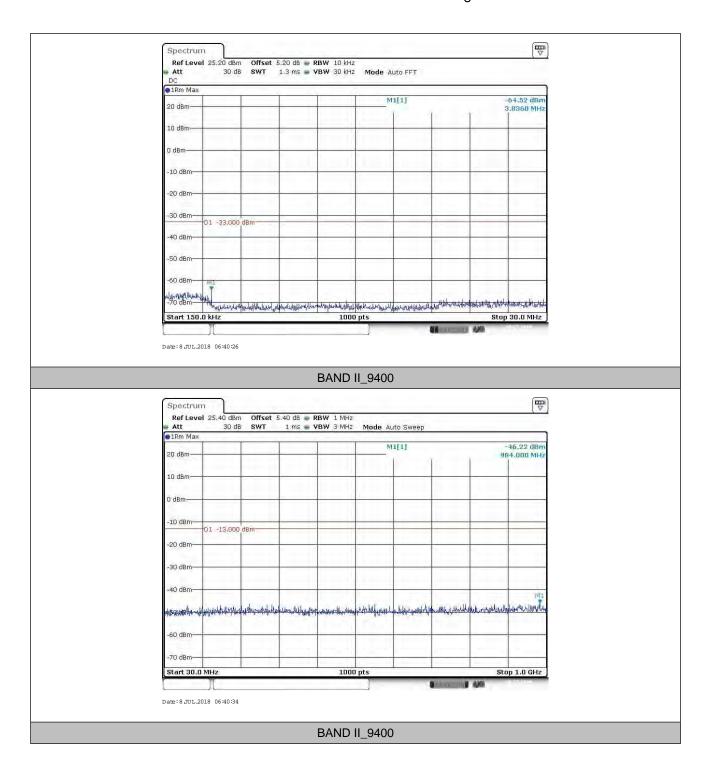
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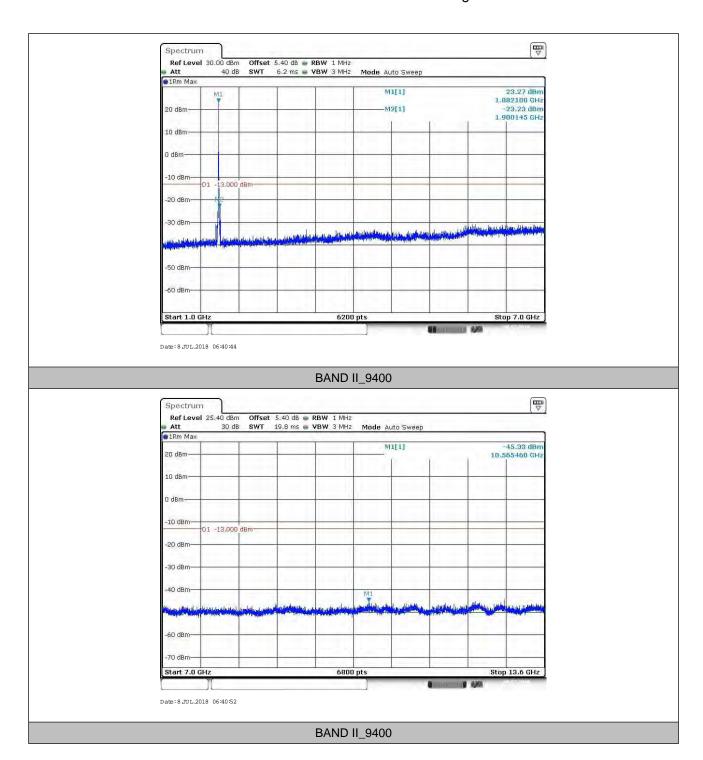
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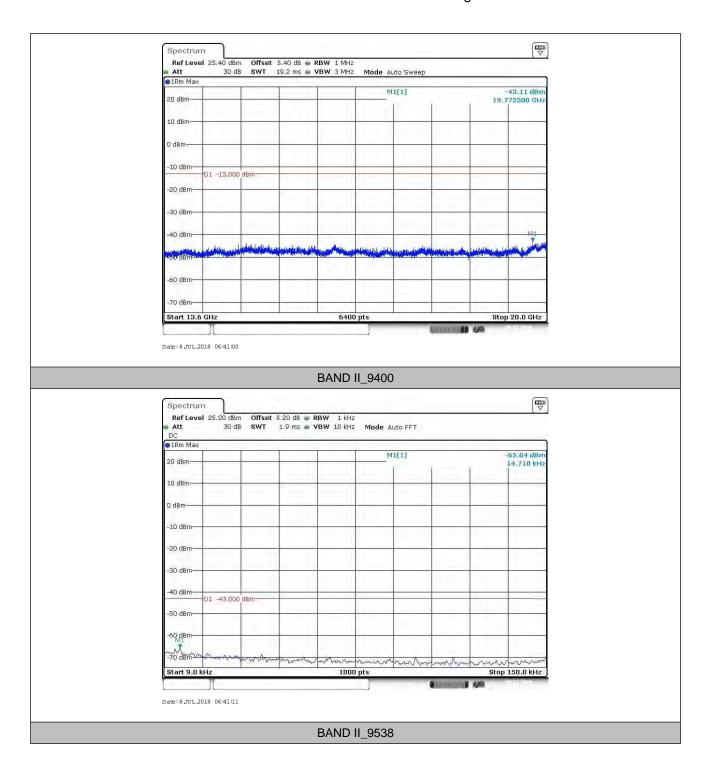
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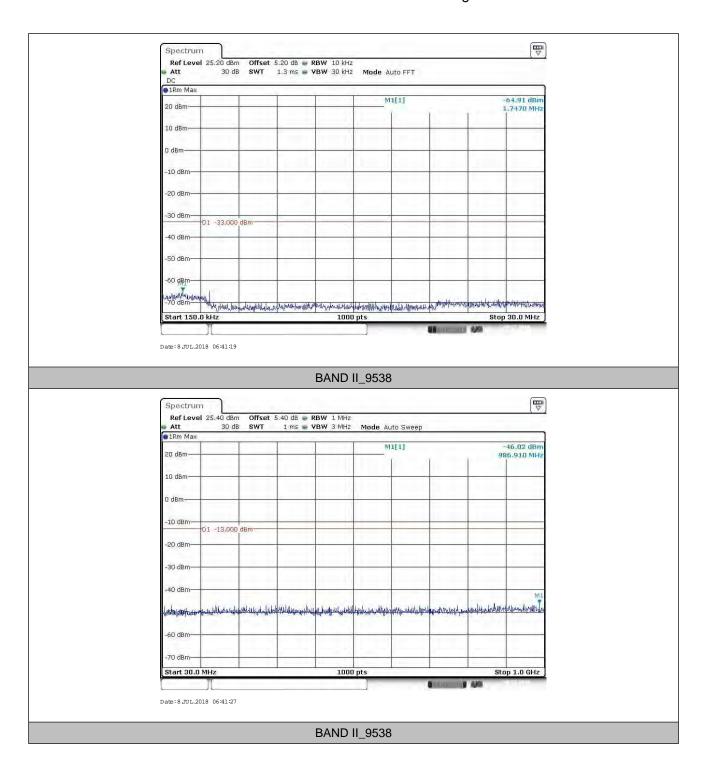
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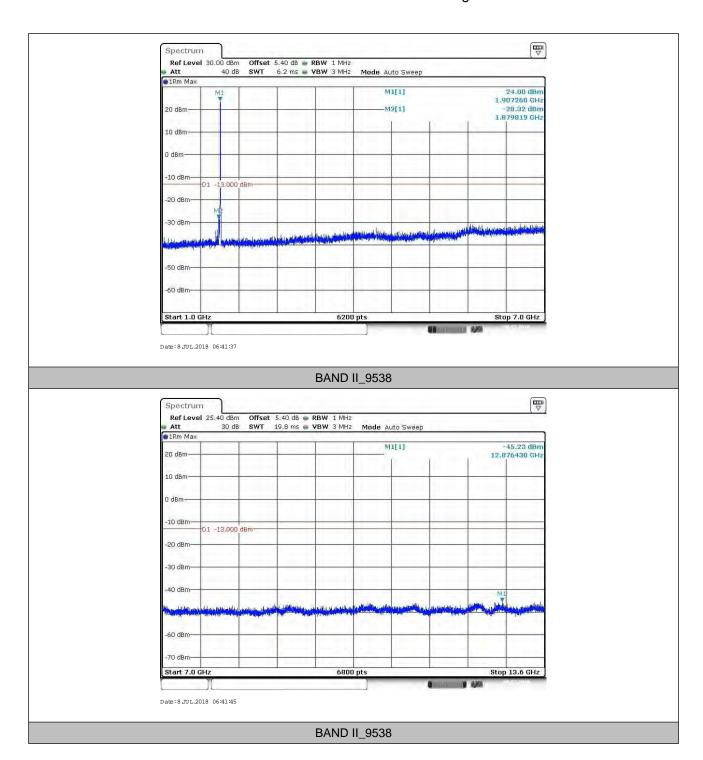
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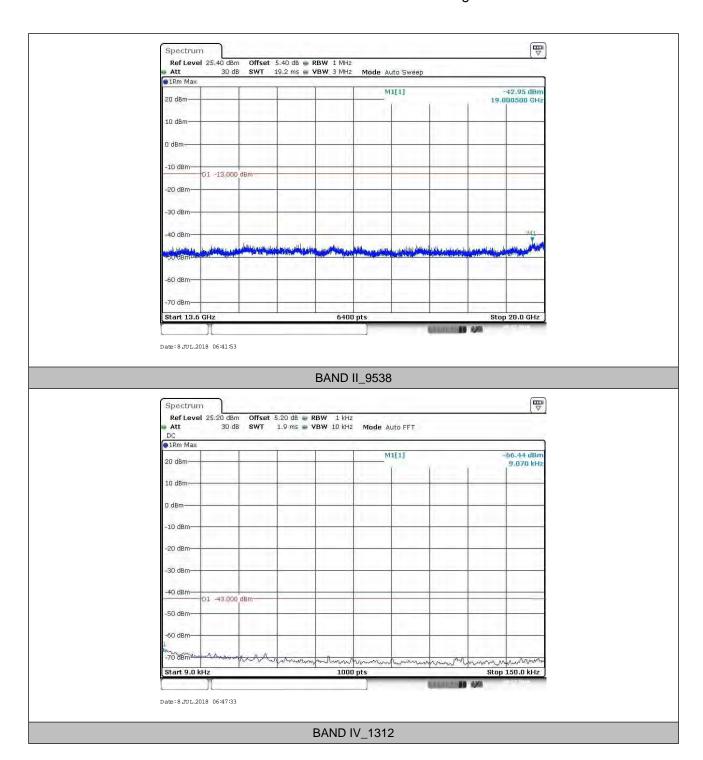
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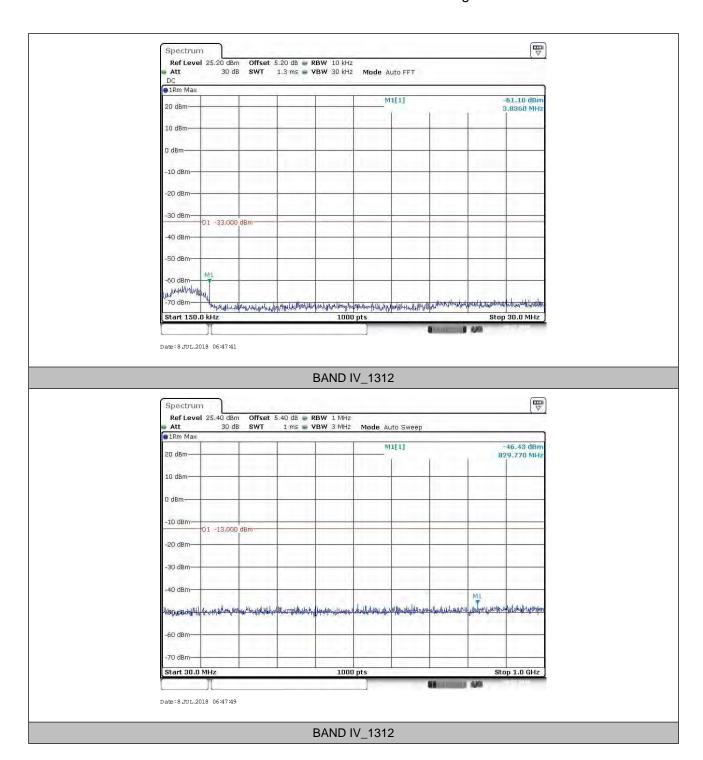
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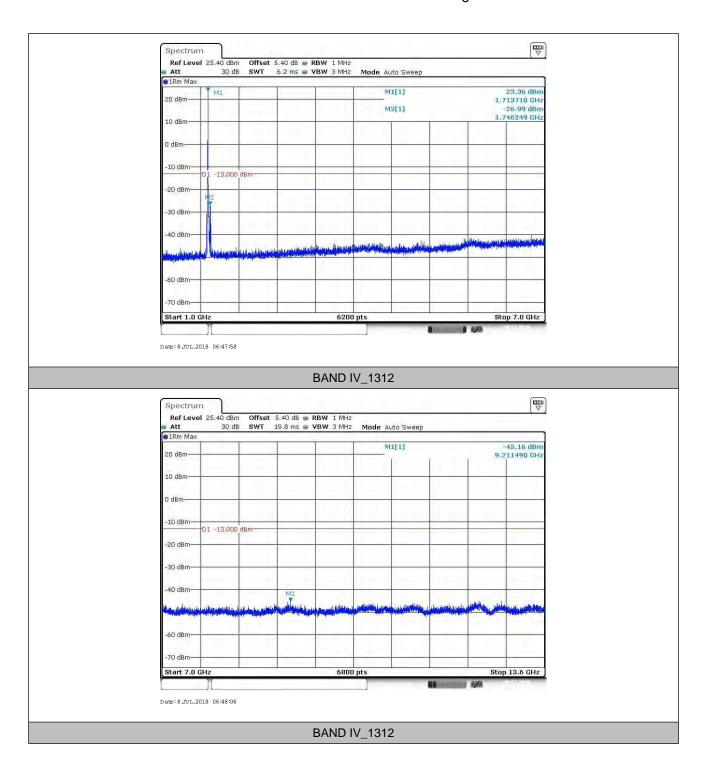
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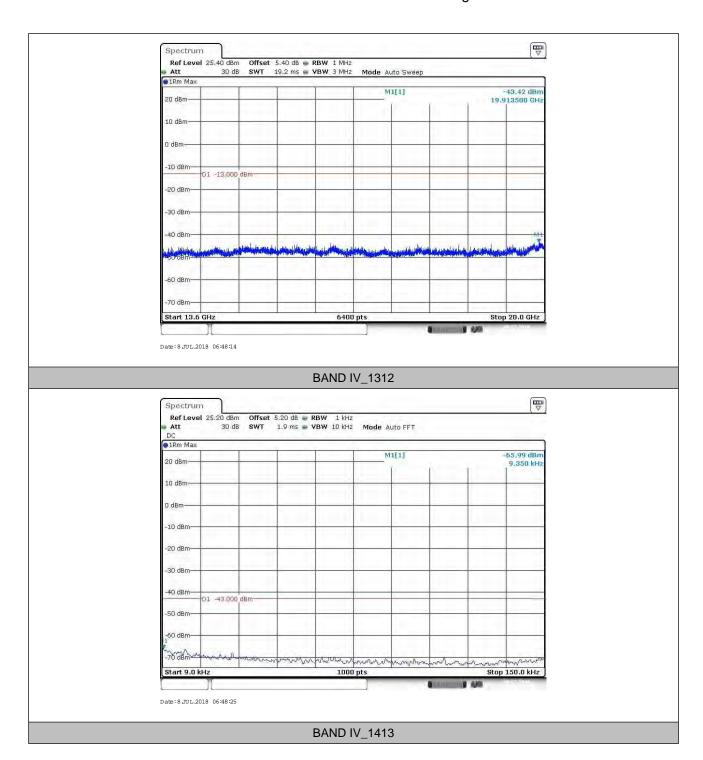
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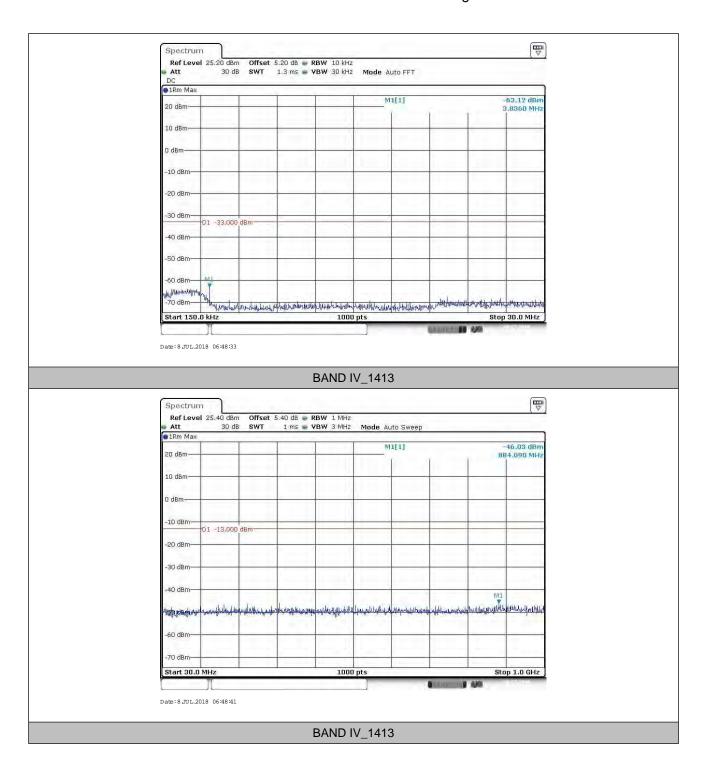
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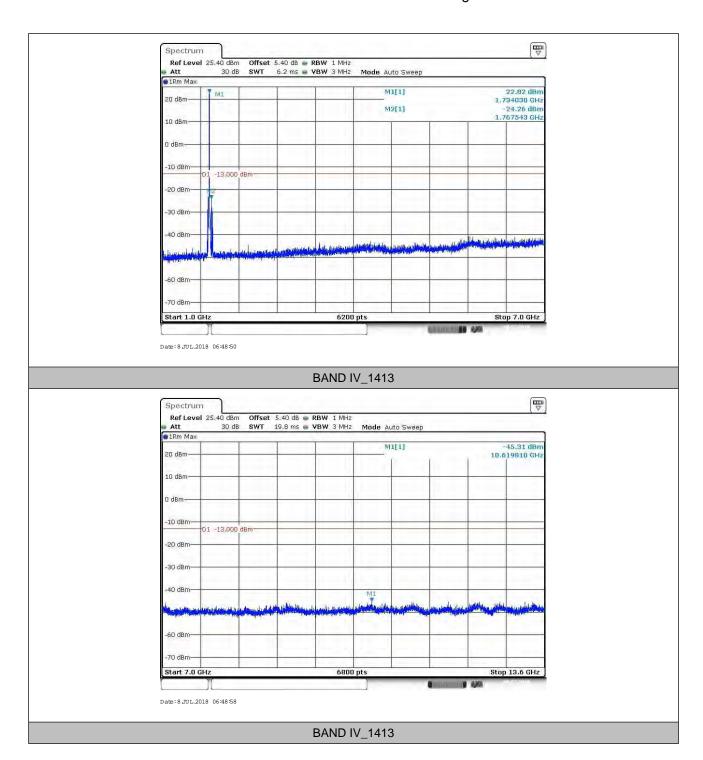
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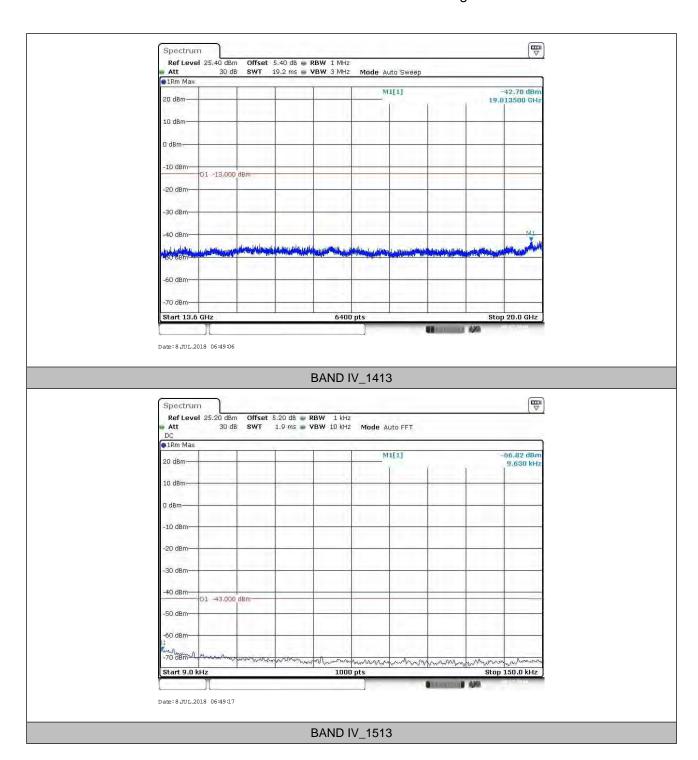
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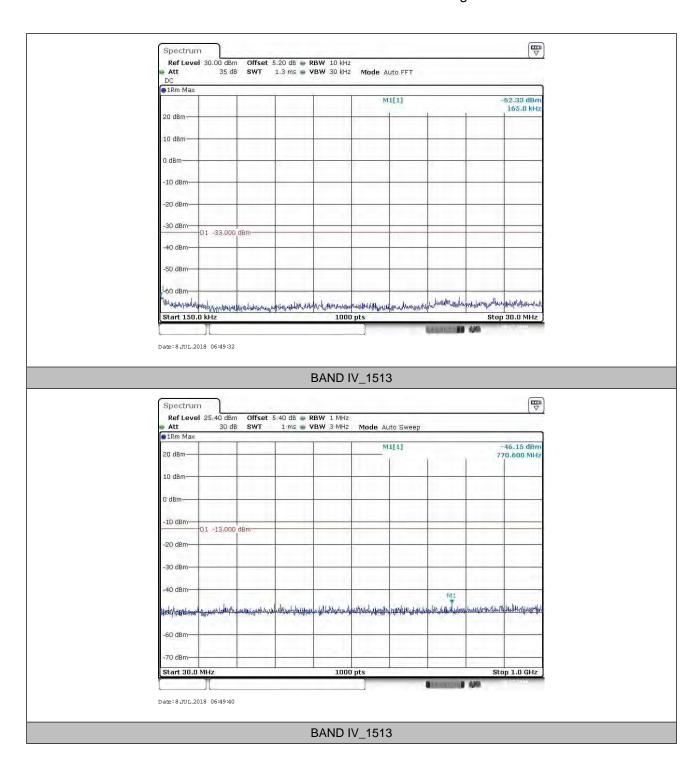
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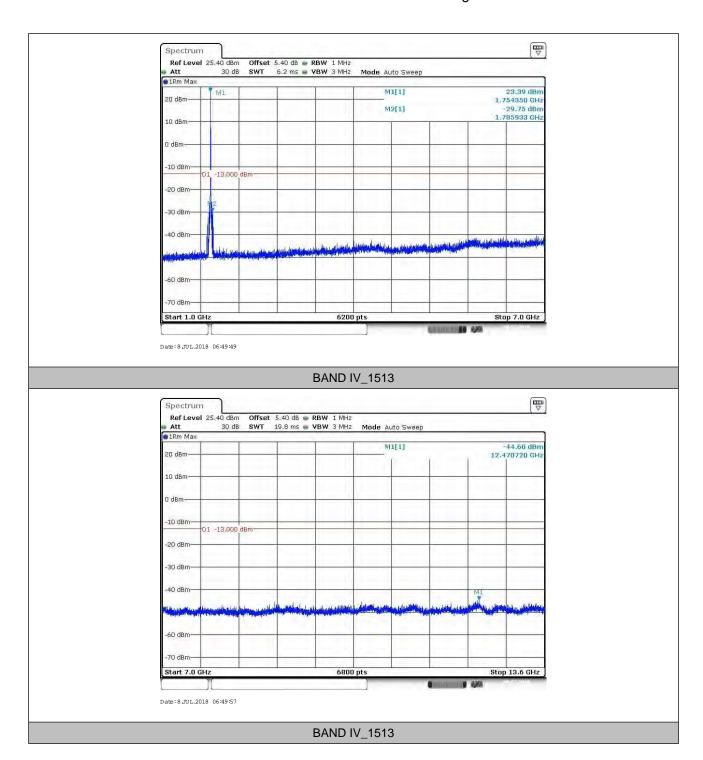
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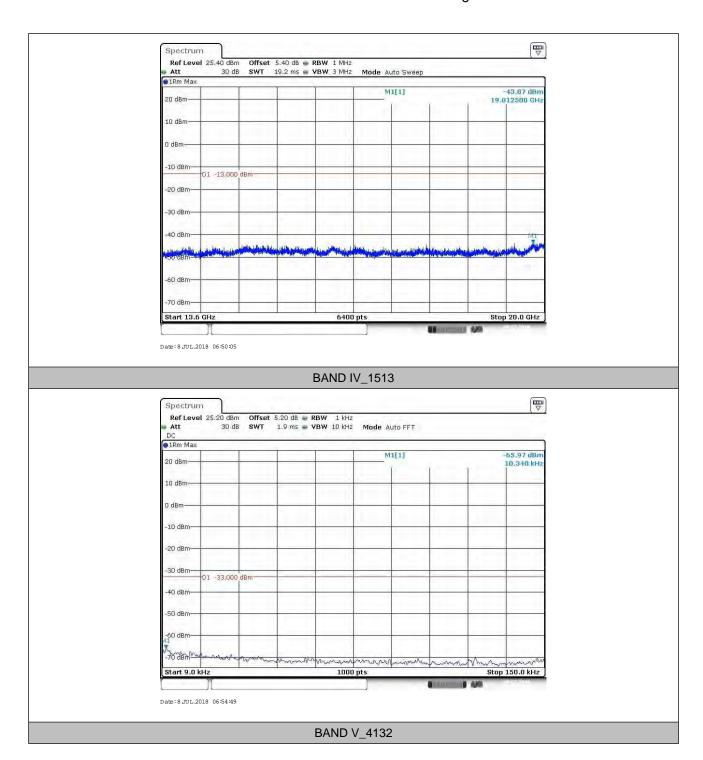
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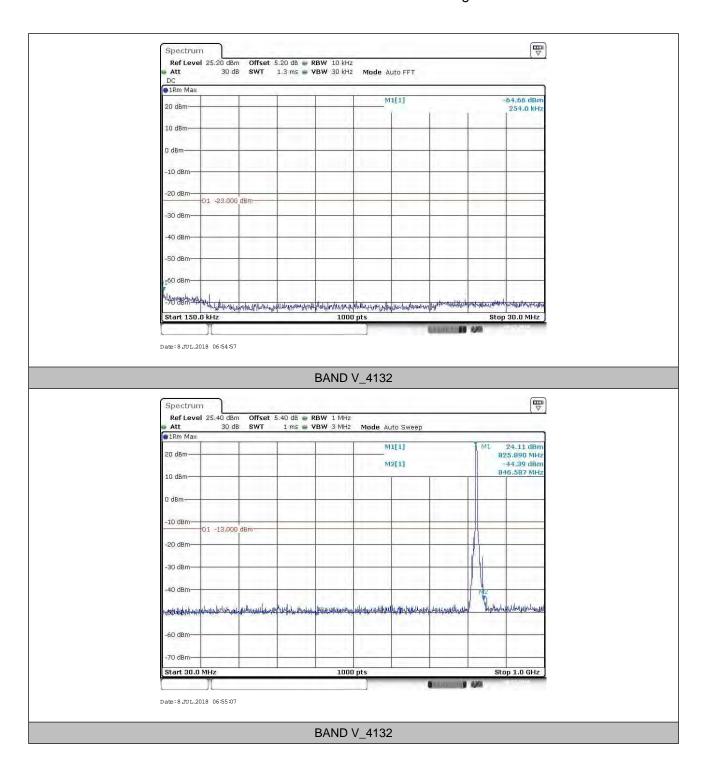
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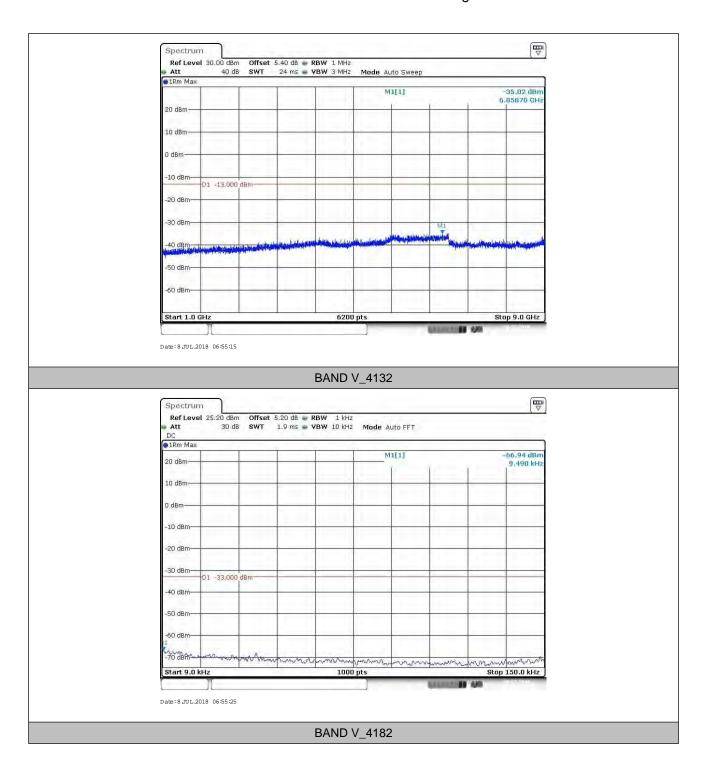
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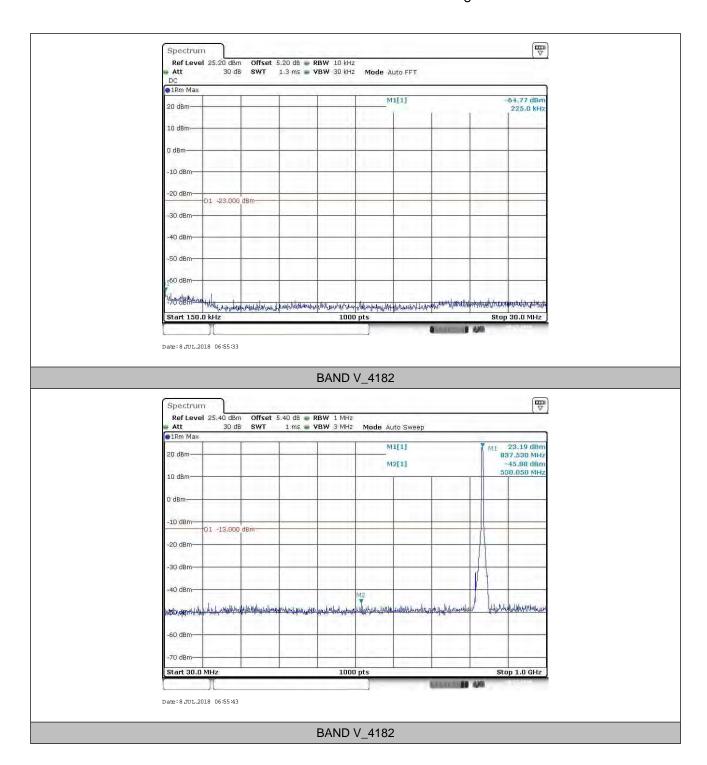
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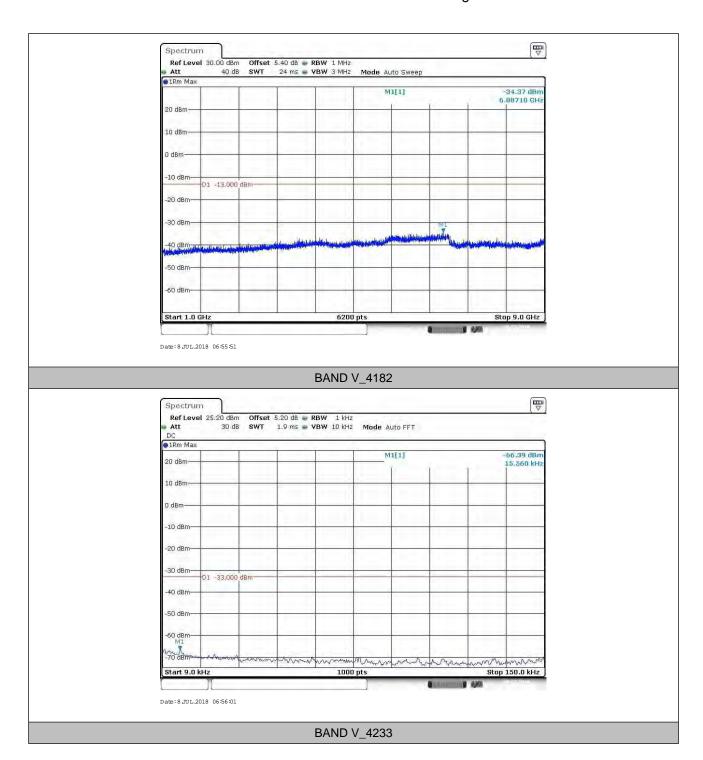
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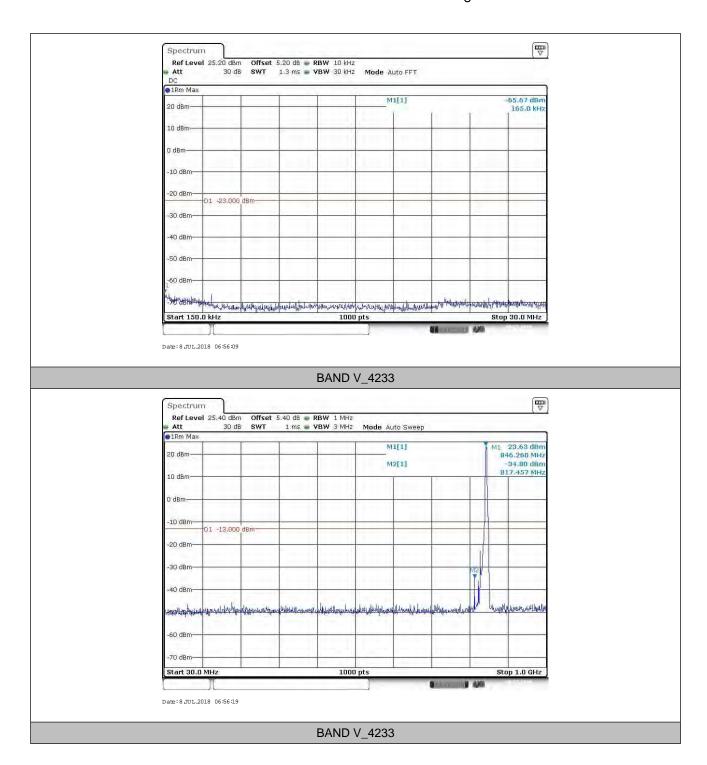
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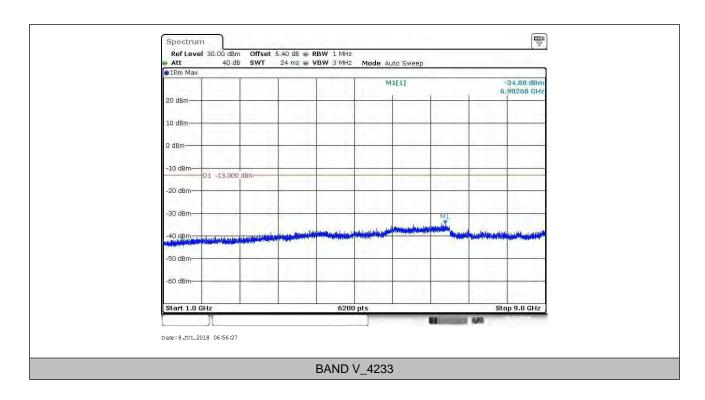
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7. Field Strength of Spurious Radiation

7.1. For WCDMA

7.1.1. Test Band = WCDMA BAND II

7.1.1.1. Test Mode = UMTS/TM1

7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.450000	-82.08	-13.00	69.08	Vertical
124.950000	-87.21	-13.00	74.21	Vertical
338.950000	-86.41	-13.00	73.41	Vertical
3882.862500	-68.29	-13.00	55.29	Vertical
5512.575000	-66.49	-13.00	53.49	Vertical
7918.387500	-63.96	-13.00	50.96	Vertical
63.150000	-77.58	-13.00	64.58	Horizontal
104.300000	-85.86	-13.00	72.86	Horizontal
271.400000	-87.87	-13.00	74.87	Horizontal
4022.287500	-67.81	-13.00	54.81	Horizontal
6048.337500	-65.01	-13.00	52.01	Horizontal
9266.325000	-62.79	-13.00	49.79	Horizontal

7.1.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization	
64.600000	-81.94	-13.00	68.94	Vertical	
124.950000	-87.68	-13.00	74.68	Vertical	
353.100000	-85.93	-13.00	72.93	Vertical	
4234.837500	-67.00	-13.00	54.00	Vertical	
6488.062500	-64.69	-13.00	51.69	Vertical	
10618.650000	-63.26	-13.00	50.26	Vertical	
62.550000	-76.98	-13.00	63.98	Horizontal	
146.450000	-90.66	-13.00	77.66	Horizontal	
455.316667	-85.73	-13.00	72.73	Horizontal	
3752.700000	-68.32	-13.00	55.32	Horizontal	
5507.700000	-66.44	-13.00	53.44	Horizontal	
7615.162500	-64.86	-13.00	51.86	Horizontal	

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7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization	
64.350000	-81.64	-13.00	68.64	Vertical	
104.300000	-82.10	-13.00	69.10	Vertical	
358.550000	-85.62	-13.00	72.62	Vertical	
4304.550000	-66.67	-13.00	53.67	Vertical	
6050.775000	-64.91	-13.00	51.91	Vertical	
9062.062500	-64.20	-13.00	51.20	Vertical	
61.250000	-79.91	-13.00	66.91	Horizontal	
104.250000	-86.60	-13.00	73.60	Horizontal	
272.750000	-87.84	-13.00	74.84	Horizontal	
4305.525000	-66.58	-13.00	53.58	Horizontal	
6053.212500	-65.11	-13.00	52.11	Horizontal	
9351.637500	-65.02	-13.00	52.02	Horizontal	

7.1.2. Test Band = WCDMA BAND IV

7.1.2.1. Test Mode = UMTS/TM1

7.1.2.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.250000	-81.70	-13.00	68.70	Vertical
104.300000	-81.88	-13.00	68.88	Vertical
343.000000	-86.29	-13.00	73.29	Vertical
4273.837500	-66.89	-13.00	53.89	Vertical
6049.800000	-65.04	-13.00	52.04	Vertical
9255.112500	-63.56	-13.00	50.56	Vertical
62.250000	-77.79	-13.00	64.79	Horizontal
104.300000	-86.62	-13.00	73.62	Horizontal
273.150000	-87.15	-13.00	74.15	Horizontal
4305.525000	-66.59	-13.00	53.59	Horizontal
6053.212500	-65.12	-13.00	52.12	Horizontal
9265.350000	-63.66	-13.00	50.66	Horizontal



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7.1.2.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization	
64.550000	-82.03	-13.00	69.03	Vertical	
104.300000	-80.54	-13.00	67.54	Vertical	
347.950000	-86.37	-13.00	73.37	Vertical	
4275.300000	-66.78	-13.00	53.78	Vertical	
9249.262500	-63.58	-13.00	50.58	Vertical	
63.250000	-77.87	-13.00	64.87	Horizontal	
104.250000	-86.38	-13.00	73.38	Horizontal	
263.200000	-89.10	-13.00	76.10	Horizontal	
4203.637500	-67.20	-13.00	54.20	Horizontal	
6911.212500	-65.11	-13.00	52.11	Horizontal	
9842.550000	-64.14	-13.00	51.14	Horizontal	

7.1.2.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization	
65.100000	-82.63	-13.00	69.63	Vertical	
104.300000	-80.09	-13.00	67.09	Vertical	
343.000000	-86.25	-13.00	73.25	Vertical	
4286.025000	-66.84	-13.00	53.84	Vertical	
6498.787500	-64.63	-13.00	51.63	Vertical	
9249.750000	-63.55	-13.00	50.55	Vertical	
62.350000	-78.02	-13.00	65.02	Horizontal	
104.300000	-85.63	-13.00	72.63	Horizontal	
271.950000	-87.60	-13.00	74.60	Horizontal	
4303.575000	-66.61	-13.00	53.61	Horizontal	
6049.800000	-65.10	-13.00	52.10	Horizontal	
9265.350000	-63.65	-13.00	50.65	Horizontal	

7.1.3. Test Band = WCDMA BAND V

7.1.3.1. Test Mode = UMTS/TM1

7.1.3.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.100000	-82.01	-13.00	69.01	Vertical
104.250000	-82.35	-13.00	69.35	Vertical



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1654.000000	-64.88	-13.00	51.88	Vertical	
3899.437500	-67.75	-13.00	54.75	Vertical	
5078.212500	-66.11	-13.00	53.11	Vertical	
7917.412500	-63.68	-13.00	50.68	Vertical	
62.150000	-77.05	-13.00	64.05	Horizontal	
104.300000	-85.48	-13.00	72.48	Horizontal	
1654.000000	-63.31	-13.00	50.31	Horizontal	
2482.500000	-56.48	-13.00	43.48	Horizontal	
4299.187500	-66.12	-13.00	53.12	Horizontal	
7990.537500	-63.39	-13.00	50.39	Horizontal	

7.1.3.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.050000	-81.70	-13.00	68.70	Vertical
104.300000	-83.54	-13.00	70.54	Vertical
1670.000000	-65.04	-13.00	52.04	Vertical
3717.600000	-68.33	-13.00	55.33	Vertical
5125.012500	-66.47	-13.00	53.47	Vertical
7863.300000	-63.70	-13.00	50.70	Vertical
63.250000	-77.93	-13.00	64.93	Horizontal
104.300000	-84.36	-13.00	71.36	Horizontal
1671.500000	-64.81	-13.00	51.81	Horizontal
3719.062500	-68.37	-13.00	55.37	Horizontal
5030.925000	-66.50	-13.00	53.50	Horizontal
7902.787500	-63.70	-13.00	50.70	Horizontal

7.1.3.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization	
64.050000	-81.61	-13.00	68.61	Vertical	
104.300000	-83.17	-13.00	70.17	Vertical	
1695.000000	-64.46	-13.00	51.46	Vertical	
4024.725000	-67.75	-13.00	54.75	Vertical	
6156.562500	-65.12	-13.00	52.12	Vertical	
9084.000000	-63.96	-13.00	50.96	Vertical	
61.950000	-77.62	-13.00	64.62	Horizontal	
104.250000	-85.44	-13.00	72.44	Horizontal	
1689.000000	-64.85	-13.00	51.85	Horizontal	

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4023.262500	-67.72	-13.00	54.72	Horizontal
6024.937500	-65.24	-13.00	52.24	Horizontal
7990.537500	-63.93	-13.00	50.93	Horizontal

NOTE:

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation and channels, but only the worst case data was displayed in this report.



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8. Frequency Stability

8.1. Frequency Vs Voltage

	Voltage						
BAND	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
		VL	TN	2.38	0.001286	2.5	PASS
	9262	VN	TN	-0.25	-0.000135	2.5	PASS
		VH	TN	-6.34	-0.003425	2.5	PASS
		VL	TN	-0.87	-0.000464	2.5	PASS
BAND II	9400	VN	TN	2.11	0.001122	2.5	PASS
		VH	TN	1.20	0.000639	2.5	PASS
		VL	TN	1.44	0.000757	2.5	PASS
	9538	VN	TN	2.01	0.001054	2.5	PASS
		VH	TN	-4.38	-0.002298	2.5	PASS
		VL	TN	-3.00	-0.001753	2.5	PASS
	1312	VN	TN	-3.72	-0.0021739	2.5	PASS
		VH	TN	2.48	0.0014476	2.5	PASS
		VL	TN	0.58	0.0003344	2.5	PASS
BAND IV	1413	VN	TN	-0.27	-0.0001531	2.5	PASS
		VH	TN	0.54	0.000313	2.5	PASS
		VL	TN	2.77	0.001578	2.5	PASS
	1513	VN	TN	-3.00	-0.001753	2.5	PASS
		VH	TN	-3.72	-0.002174	2.5	PASS
		VL	TN	0.81	0.000978	2.5	PASS
	4132	VN	TN	-0.77	-0.000926	2.5	PASS
		VH	TN	2.00	0.002423	2.5	PASS
		VL	TN	-0.85	-0.001018	2.5	PASS
BAND V	4182	VN	TN	1.02	0.001214	2.5	PASS
		VH	TN	-0.57	-0.000676	2.5	PASS
		VL	TN	1.14	0.001352	2.5	PASS
	4233	VN	TN	1.36	0.001605	2.5	PASS
		VH	TN	0.74	0.000879	2.5	PASS



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8.2. Frequency Vs Temperature

Temperature									
BAND	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdic t		
		VN	-30	0.71	0.000382	2.5	PAS S		
		VN	-20	1.28	0.000691	2.5	PAS S		
		VN	-10	-0.01	-0.00008	2.5	PAS S		
		VN	0	-1.62	-0.000877	2.5	PAS S		
	9262	VN	10	-0.21	-0.000112	2.5	PAS S		
		VN	20	-2.84	-0.001533	2.5	PAS S		
		VN	30	-1.71	-0.000923	2.5	PAS S		
		VN	40	0.00	0.000000	2.5	PAS S		
5		VN	50	-0.37	-0.000201	2.5	PAS S		
BAND II	9400	VN	-30	-0.82	-0.000434	2.5	PAS S		
			VN	-20	-3.05	-0.001625	2.5	PAS S	
			VN	-10	-2.86	-0.001522	2.5	PAS S	
		VN	0	-1.47	-0.000784	2.5	PAS S		
		VN	10	-2.00	-0.001065	2.5	PAS S		
		VN	20	-2.28	-0.001214	2.5	PAS S		
		VN	30	1.68	0.000894	2.5	PAS S		
		VN	40	2.93	0.001560	2.5	PAS S		
		VN	50	-2.00	-0.001061	2.5	PAS S		

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	9538	VN	-30	0.35	0.000184	2.5	PAS S
		VN	-20	-2.16	-0.001132	2.5	PAS S
		VN	-10	0.78	0.000409	2.5	PAS S
		VN	0	1.78	0.000934	2.5	PAS S
		VN	10	2.78	0.001455	2.5	PAS S
		VN	20	0.02	0.000011	2.5	PAS S
		VN	30	-1.48	-0.000776	2.5	PAS S
		VN	40	5.54	0.002902	2.5	PAS S
		VN	50	4.00	0.002096	2.5	PAS S
	1312	VN	-30	2.93	0.001710	2.5	PAS S
		VN	-20	2.76	0.001614	2.5	PAS S
		VN	-10	-2.36	-0.001379	2.5	PAS S
		VN	0	-1.41	-0.000826	2.5	PAS S
		VN	10	-2.30	-0.001342	2.5	PAS S
BAND		VN	20	0.12	0.000067	2.5	PAS S
IV		VN	30	1.54	0.000897	2.5	PAS S
		VN	40	2.05	0.001195	2.5	PAS S
		VN	50	-2.47	-0.001445	2.5	PAS S
	1413	VN	-30	3.25	0.001874	2.5	PAS S
		VN	-20	-0.54	-0.000313	2.5	PAS S
		VN	-10	-4.98	-0.002872	2.5	PAS

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							S
		VN	0	-1.46	-0.000844	2.5	PAS S
		VN	10	1.69	0.000974	2.5	PAS S
		VN	20	-1.26	-0.000728	2.5	PAS
		VN	30	-1.51	-0.000874	2.5	S PAS
		VN	40	-4.14	-0.002389	2.5	PAS
		VN	50	-0.95	-0.000549	2.5	S PAS
		VN	-30	-4.80	-0.002738	2.5	PAS
		VN	-20	1.31	0.000746	2.5	PAS
		VN	-10	0.10	0.000055	2.5	S PAS
		VN	0	-3.36	-0.001915	2.5	S PAS
	1513	VN	10	-1.00	-0.000569	2.5	S PAS
		VN	20	-3.91	-0.002230	2.5	S PAS
		VN	30	4.26	0.002432	2.5	S PAS
		VN	40	4.33	0.002470	2.5	PAS
		VN	50	-0.61	-0.000347	2.5	S PAS S
		VN	-30	0.91	0.001099	2.5	PAS S
BAND V	4132	VN	-20	0.84	0.001021	2.5	PAS
		VN	-10	0.24	0.000294	2.5	PAS S
		VN	0	0.36	0.000433	2.5	PAS S
		VN	10	2.06	0.002493	2.5	PAS S

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		\/\	00	-0.33	-0.000398	6.5	PAS
		VN	20			2.5	S
		VN	30	0.26	0.000312	2.5	PAS
							S
		VN	40	1.05	0.001272	2.5	PAS
				2.15	0.002605		S
		VN	50	2.13	0.002605	2.5	S
				2.57	0.003079		PAS
		VN	-30			2.5	s
		VN	-20	0.92	0.001103	2.5	PAS
		VIN	-20			2.5	S
		VN	-10	0.58	0.000693	2.5	PAS
				4 75	0.00007		S
		VN	0	1.75	0.002087	2.5	PAS S
	4182		10	-0.50	-0.000599	2.5	PAS
		VN					s
			00	0.11	0.000137	2.5	PAS
		VN	20				S
		VN	30	-0.35	-0.000419	2.5	PAS
							S
		VN	40	2.18	0.002608	2.5	PAS
		VN		0.04	0.004004	2.5	S
			50	0.84	0.001001		PAS S
				1.85	0.002180		PAS
	4233	VN	-30			2.5	S
		VN	20	1.80	0.002129	2.5	PAS
			-20			2.5	S
		VN	-10	0.63	0.000743	2.5	PAS
					0.0000		S
		VN	0	3.08	0.003633	2.5	PAS
		VN		3.53	0.004165	2.5	S
							PAS S
		VN	VN 20	1.04	0.001225	2.5	PAS
							S
		VN	30	3.00	0.003540	2.5	PAS
							S
		VN	40	2.95	0.003489	2.5	PAS

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						S
	VN	50	-0.42	-0.000498	2.5	PAS
	VIN	50			2.5	S

The End