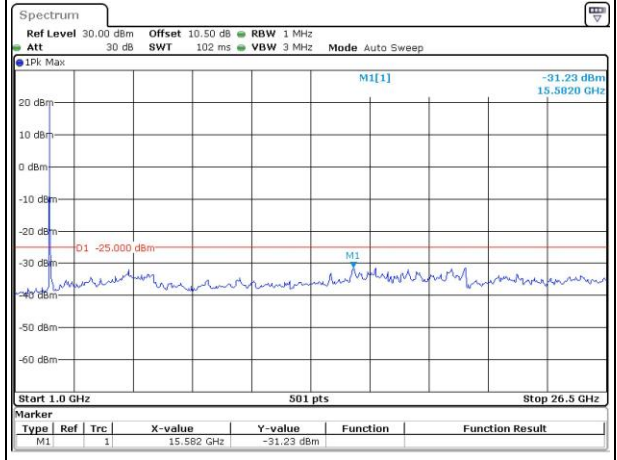
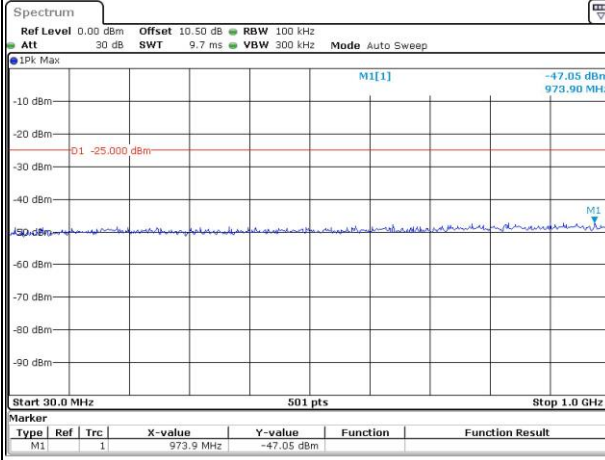


Spurious Emissions at Antenna Terminal

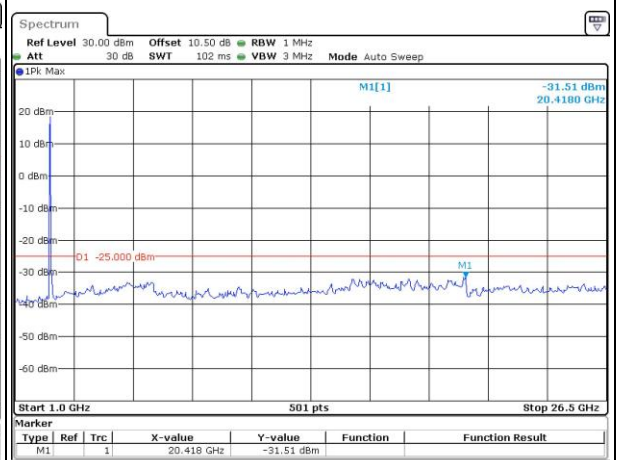
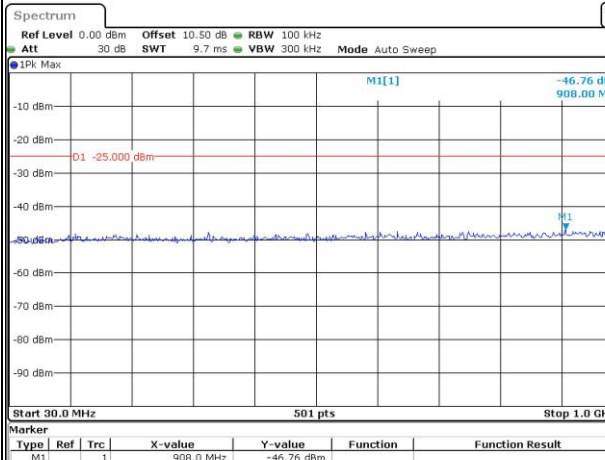
Channel

20MHz Bandwidth QPSK

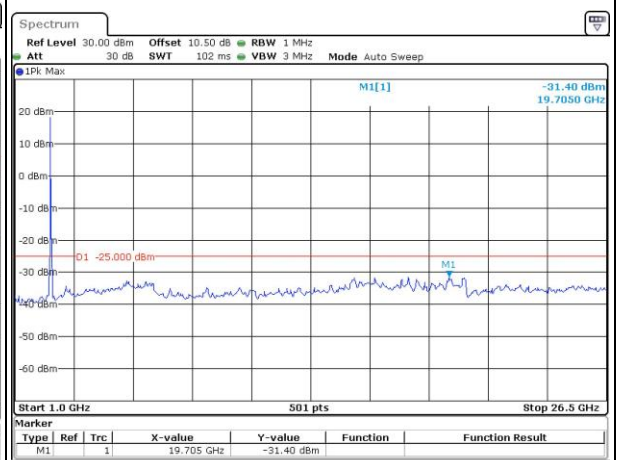
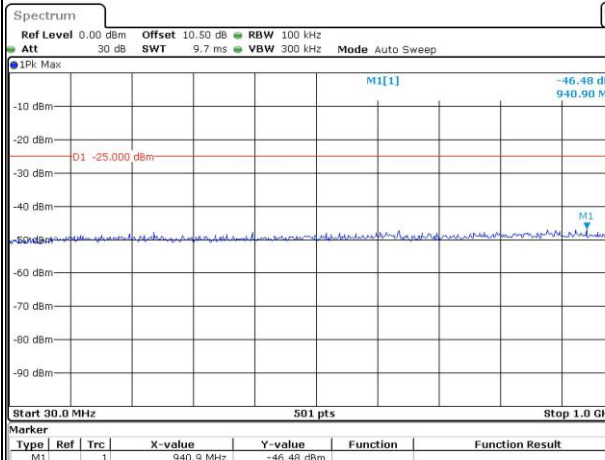
Lowest



Middle



Highest



Out of band emission, Band Edge

Mode	Lowest	Highest
QPSK 5MHz		
QPSK 10MHz		
QPSK 15MHz		

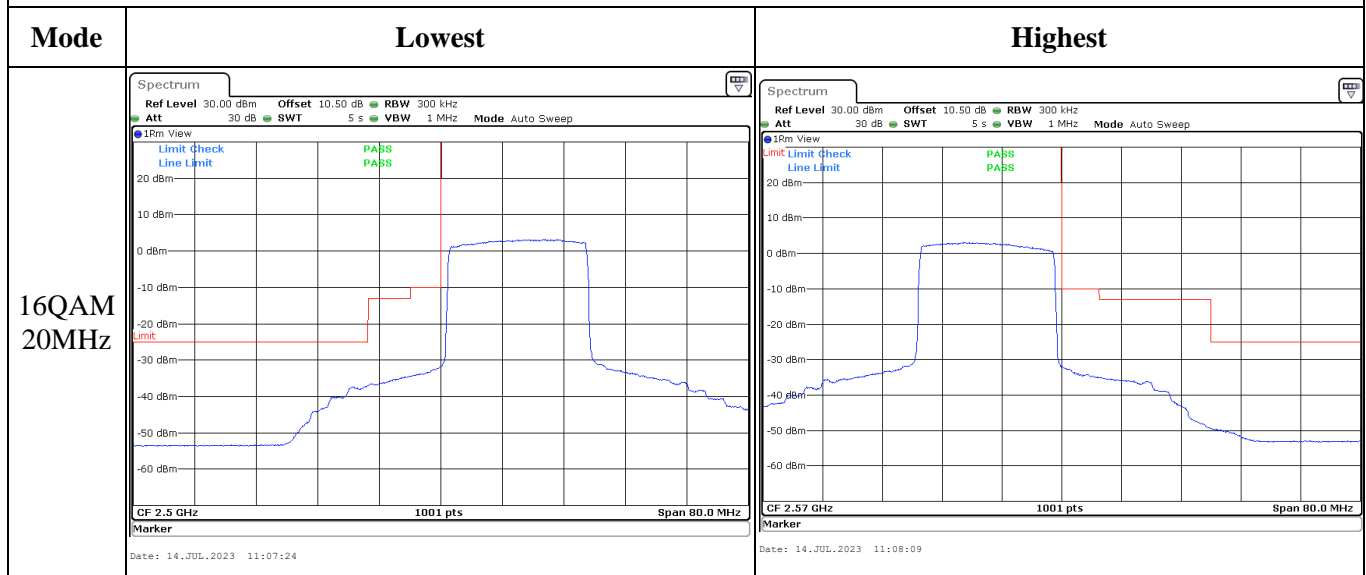
Out of band emission, Band Edge



Out of band emission, Band Edge

Mode	Lowest	Highest
16QAM 5MHz	<p>Spectrum Ref Level 30.00 dBm Offset 10.50 dB RBW 100 kHz Att 30 dB SWT 5 s VBW 300 kHz Mode Auto Sweep 1Rm View Limit Check Line Limit PASS PASS CF 2.5 GHz 1001 pts Span 20.0 MHz Marker Date: 14.JUL.2023 09:58:43</p>	<p>Spectrum Ref Level 30.00 dBm Offset 10.50 dB RBW 100 kHz Att 30 dB SWT 5 s VBW 300 kHz Mode Auto Sweep 1Rm View Limit Check Line Limit PASS PASS CF 2.57 GHz 1001 pts Span 20.0 MHz Marker Date: 14.JUL.2023 09:59:30</p>
16QAM 10MHz	<p>Spectrum Ref Level 30.00 dBm Offset 10.50 dB RBW 100 kHz Att 30 dB SWT 5 s VBW 300 kHz Mode Auto Sweep 1Rm View Limit Check Line Limit PASS PASS CF 2.5 GHz 1001 pts Span 40.0 MHz Marker Date: 14.JUL.2023 10:03:06</p>	<p>Spectrum Ref Level 30.00 dBm Offset 10.50 dB RBW 100 kHz Att 30 dB SWT 5 s VBW 300 kHz Mode Auto Sweep 1Rm View Limit Check Line Limit PASS PASS CF 2.57 GHz 1001 pts Span 40.0 MHz Marker Date: 14.JUL.2023 10:06:19</p>
16QAM 15MHz	<p>Spectrum Ref Level 30.00 dBm Offset 10.50 dB RBW 300 kHz Att 30 dB SWT 5 s VBW 1 MHz Mode Auto Sweep 1Rm View Limit Check Line Limit PASS PASS CF 2.5 GHz 1001 pts Span 60.0 MHz Marker Date: 14.JUL.2023 10:14:20</p>	<p>Spectrum Ref Level 30.00 dBm Offset 10.50 dB RBW 300 kHz Att 30 dB SWT 5 s VBW 1 MHz Mode Auto Sweep 1Rm AvgPwr Limit Check Line Limit PASS PASS CF 2.57 GHz 1001 pts Span 60.0 MHz Marker Date: 14.JUL.2023 10:15:01</p>

Out of band emission, Band Edge



4.10 Radiated Spurious Emissions

Serial Number:	27YJ-1	Test Date:	Below 1GHz: 2023/8/17 Above 1GHz: 2023/7/18
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Vic Du, Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.2~27.6	Relative Humidity: (%)	52~69	ATM Pressure: (kPa)	99.7~100
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020/10/19	2023/10/18
R&S	EMI Test Receiver	ESR3	102724	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
EMCO	Adjustable Dipole Antenna	3121C	9109-756	N/A	N/A
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022/7/16	2024/7/15
Agilent	Signal Generator	E8247C	MY43321352	2022/11/18	2023/11/17
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2022/8/7	2023/8/6
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2022/8/7	2023/8/6
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2022/11/9	2023/11/8
AH	Double Ridge Guide Horn Antenna	SAS-571	1396	2021/10/18	2024/10/17
MICRO-COAX	Coaxial Cable	UFA210B-0-0720-300300	99G1448	2022/7/16	2024/7/15
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021/2/5	2024/2/4
PASTERNAK	Horn Antenna	PE9852/2F-20	112001	2021/2/5	2024/2/4
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2022/9/16	2023/9/15
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2022/8/7	2023/8/6

* **Statement of Traceability:** China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data:

Please refer to the below tables.

After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

Cellular Band (PART 22H)**30 MHz-10 GHz:**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GPRS 850 Frequency:824.2MHz								
783.54	H	21.35	-50.28	0.00	0.55	-50.83	-13.00	37.83
884.23	V	21.45	-44.93	0.00	0.60	-45.53	-13.00	32.53
1648.400	H	38.14	-66.19	8.68	0.80	-58.31	-13.00	45.31
1648.400	V	37.02	-67.39	8.68	0.80	-59.51	-13.00	46.51
GPRS 850 Frequency:836.6MHz								
884.63	H	21.35	-47.81	0.00	0.60	-48.41	-13.00	35.41
894.11	V	20.99	-45.23	0.00	0.66	-45.89	-13.00	32.89
1673.200	H	38.60	-65.71	8.71	0.85	-57.85	-13.00	44.85
1673.200	V	38.29	-66.12	8.71	0.85	-58.26	-13.00	45.26
GPRS 850 Frequency:848.8MHz								
954.13	H	21.46	-45.98	0.00	0.60	-46.58	-13.00	33.58
834.36	V	21.53	-45.66	0.00	0.64	-46.30	-13.00	33.30
1697.600	H	37.06	-67.23	8.74	0.90	-59.39	-13.00	46.39
1697.600	V	36.47	-67.95	8.74	0.90	-60.11	-13.00	47.11

30 MHz-10 GHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band 5 Frequency:826.4 MHz								
274.35	H	19.35	-60.75	0.00	0.32	-61.07	-13.00	48.07
873.80	V	24.56	-42.00	0.00	0.60	-42.60	-13.00	29.60
1652.800	H	54.52	-49.81	8.68	0.81	-41.94	-13.00	28.94
1652.800	V	47.29	-57.12	8.68	0.81	-49.25	-13.00	36.25
WCDMA Band 5 Frequency:836.6MHz								
274.52	H	19.64	-60.46	0.00	0.32	-60.78	-13.00	47.78
873.16	V	24.37	-42.19	0.00	0.59	-42.78	-13.00	29.78
1673.200	H	54.30	-50.01	8.71	0.85	-42.15	-13.00	29.15
1673.200	V	46.58	-57.83	8.71	0.85	-49.97	-13.00	36.97
WCDMA Band 5 Frequency:846.6MHz								
273.54	H	19.64	-60.49	0.00	0.32	-60.81	-13.00	47.81
873.88	V	24.56	-41.99	0.00	0.60	-42.59	-13.00	29.59
1693.200	H	50.42	-53.88	8.73	0.89	-46.04	-13.00	33.04
1693.200	V	52.11	-52.31	8.73	0.89	-44.47	-13.00	31.47

PCS Band (PART 24E)

30 MHz-20 GHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
GPRS 1900 Frequency:1850.2MHz								
268.25	H	54.67	-56.80	0.00	0.31	-57.11	-13.00	44.11
68.11	V	45.37	-57.88	-6.00	0.15	-64.03	-13.00	51.03
3700.400	H	36.83	-60.49	10.60	1.25	-51.14	-13.00	38.14
3700.400	V	35.30	-62.00	10.60	1.25	-52.65	-13.00	39.65
GPRS 1900 Frequency:1880MHz								
268.33	H	50.37	-61.10	0.00	0.31	-61.41	-13.00	48.41
68.46	V	40.63	-62.50	-5.82	0.15	-68.47	-13.00	55.47
3760.000	H	34.14	-62.27	10.66	1.24	-52.85	-13.00	39.85
3760.000	V	33.55	-62.74	10.66	1.24	-53.32	-13.00	40.32
GPRS 1900 Frequency:1909.8MHz								
268.78	H	53.64	-57.82	0.00	0.31	-58.13	-13.00	45.13
68.94	V	40.15	-62.82	-5.56	0.15	-68.53	-13.00	55.53
3819.600	H	33.74	-62.12	10.72	1.29	-52.69	-13.00	39.69
3819.600	V	31.74	-63.98	10.72	1.29	-54.55	-13.00	41.55

30 MHz-20 GHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band II, Frequency:1852.4 MHz								
283.62	H	54.69	-56.42	0.00	0.32	-56.74	-13.00	43.74
83.64	V	40.78	-68.07	0.00	0.17	-68.24	-13.00	55.24
3704.800	H	36.87	-60.39	10.60	1.25	-51.04	-13.00	38.04
3704.800	V	40.56	-56.67	10.60	1.25	-47.32	-13.00	34.32
WCDMA Band II, Frequency:1880 MHz								
283.19	H	54.02	-57.10	0.00	0.32	-57.42	-13.00	44.42
83.47	V	46.11	-62.73	0.00	0.17	-62.90	-13.00	49.90
3760.000	H	34.35	-62.06	10.66	1.24	-52.64	-13.00	39.64
3760.000	V	38.75	-57.54	10.66	1.24	-48.12	-13.00	35.12
WCDMA Band II, Frequency:1907.6MHz								
283.63	H	51.67	-59.44	0.00	0.32	-59.76	-13.00	46.76
83.64	V	42.13	-66.72	0.00	0.17	-66.89	-13.00	53.89
3815.200	H	36.47	-59.38	10.72	1.29	-49.95	-13.00	36.95
3815.200	V	37.32	-58.37	10.72	1.29	-48.94	-13.00	35.94

30 MHz-20 GHz:

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
WCDMA Band VI , Frequency:1712.4 MHz								
292.34	H	51.34	-59.56	0.00	0.33	-59.89	-13.00	46.89
72.15	V	48.67	-55.22	-3.93	0.15	-59.30	-13.00	46.30
3424.800	H	38.62	-59.15	10.37	1.17	-49.95	-13.00	36.95
3424.800	V	39.60	-58.14	10.37	1.17	-48.94	-13.00	35.94
WCDMA Band VI, Frequency:1732.6 MHz								
292.16	H	52.13	-58.78	0.00	0.33	-59.11	-13.00	46.11
92.38	V	47.63	-61.15	0.00	0.18	-61.33	-13.00	48.33
3465.200	H	38.00	-59.81	10.39	1.15	-50.57	-13.00	37.57
3465.200	V	38.77	-59.00	10.39	1.15	-49.76	-13.00	36.76
WCDMA Band VI, Frequency:1752.6MHz								
292.43	H	52.00	-58.90	0.00	0.33	-59.23	-13.00	46.23
92.74	V	45.28	-63.42	0.00	0.18	-63.60	-13.00	50.60
3505.200	H	37.09	-60.74	10.41	1.18	-51.51	-13.00	38.51
3505.200	V	37.10	-60.67	10.41	1.18	-51.44	-13.00	38.44

LTE Bands:

(The Worst modulation and bandwidth was below)

LTE Band 2 (30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1850.7 MHz								
292.45	H	44.67	-66.23	0.00	0.33	-66.56	-13.00	53.56
87.26	V	48.52	-60.60	0.00	0.17	-60.77	-13.00	47.77
3701.400	H	41.62	-55.69	10.60	1.25	-46.34	-13.00	33.34
3701.400	V	42.25	-55.04	10.60	1.25	-45.69	-13.00	32.69
QPSK, Frequency: 1880 MHz								
292.19	H	45.64	-65.26	0.00	0.33	-65.59	-13.00	52.59
87.61	V	49.15	-60.00	0.00	0.17	-60.17	-13.00	47.17
3760.000	H	40.65	-55.76	10.66	1.24	-46.34	-13.00	33.34
3760.000	V	41.18	-55.11	10.66	1.24	-45.69	-13.00	32.69
QPSK, Frequency: 1909.3 MHz								
292.30	H	47.63	-63.27	0.00	0.33	-63.60	-13.00	50.60
87.62	V	48.22	-60.93	0.00	0.17	-61.10	-13.00	48.10
3818.600	H	38.02	-57.84	10.72	1.29	-48.41	-13.00	35.41
3818.600	V	40.19	-55.52	10.72	1.29	-46.09	-13.00	33.09

LTE Band 4 (30MHz-20GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 1710.7 MHz								
95.64	H	56.38	-56.28	0.00	0.19	-56.47	-13.00	43.47
78.64	V	48.67	-59.10	-0.68	0.16	-59.94	-13.00	46.94
3421.400	H	35.25	-62.51	10.37	1.17	-53.31	-13.00	40.31
3421.400	V	37.87	-59.86	10.37	1.17	-50.66	-13.00	37.66
QPSK, Frequency: 1732.5 MHz								
95.66	H	53.74	-58.92	0.00	0.19	-59.11	-13.00	46.11
76.98	V	49.51	-57.27	-1.51	0.16	-58.94	-13.00	45.94
3465.000	H	33.88	-63.93	10.39	1.15	-54.69	-13.00	41.69
3465.000	V	35.70	-62.07	10.39	1.15	-52.83	-13.00	39.83
QPSK, Frequency: 1754.3MHz								
95.11	H	52.64	-60.05	0.00	0.19	-60.24	-13.00	47.24
78.88	V	48.55	-59.36	-0.56	0.16	-60.08	-13.00	47.08
3508.600	H	33.13	-64.69	10.41	1.19	-55.47	-13.00	42.47
3508.600	V	35.39	-62.37	10.41	1.19	-53.15	-13.00	40.15

LTE Band 5(30MHz-10GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 824.7 MHz								
292.35	H	18.67	-60.94	0.00	0.33	-61.27	-13.00	48.27
64.75	V	18.58	-54.25	-7.78	0.14	-62.17	-13.00	49.17
1649.400	H	66.91	-37.42	8.68	0.80	-29.54	-13.00	16.54
1649.400	V	58.05	-46.36	8.68	0.80	-38.48	-13.00	25.48
QPSK, Frequency: 836.5 MHz								
292.73	H	18.54	-61.06	0.00	0.33	-61.39	-13.00	48.39
37.95	V	19.64	-37.41	-25.42	0.11	-62.94	-13.00	49.94
1673.000	H	66.13	-38.18	8.71	0.85	-30.32	-13.00	17.32
1673.000	V	56.42	-47.99	8.71	0.85	-40.13	-13.00	27.13
QPSK, Frequency: 848.3 MHz								
292.11	H	18.54	-61.08	0.00	0.33	-61.41	-13.00	48.41
64.39	V	16.99	-55.97	-7.97	0.14	-64.08	-13.00	51.08
1696.600	H	65.95	-38.34	8.74	0.89	-30.49	-13.00	17.49
1696.600	V	55.24	-49.18	8.74	0.89	-41.33	-13.00	28.33

LTE Band 7 (30MHz-26.5GHz):

Frequency (MHz)	Polar (H/V)	Receiver Reading (dB μ V)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK, Frequency: 2502.5 MHz								
284.67	H	45.67	-65.41	0.00	0.32	-65.73	-25.00	40.73
80.67	V	48.33	-60.30	0.00	0.16	-60.46	-25.00	35.46
5005.000	H	34.45	-58.51	11.20	1.47	-48.78	-25.00	23.78
5005.000	V	34.21	-58.61	11.20	1.47	-48.88	-25.00	23.88
QPSK, Frequency:2535 MHz								
283.52	H	46.39	-64.72	0.00	0.32	-65.04	-25.00	40.04
82.47	V	47.89	-60.88	0.00	0.16	-61.04	-25.00	36.04
5070.000	H	32.68	-60.51	11.24	1.47	-50.74	-25.00	25.74
5070.000	V	33.83	-59.26	11.24	1.47	-49.49	-25.00	24.49
QPSK, Frequency: 2567.5 MHz								
283.58	H	45.82	-65.29	0.00	0.32	-65.61	-25.00	40.61
84.53	V	48.92	-60.00	0.00	0.17	-60.17	-25.00	35.17
5135.000	H	32.15	-61.45	11.28	1.47	-51.64	-25.00	26.64
5135.000	V	33.31	-60.18	11.28	1.47	-50.37	-25.00	25.37

Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = Substituted Level - Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

==== END OF REPORT =====