



REPORT No.: SZ25040205W03

TEST REPORT

APPLICANT : Shenzhen Chainway Information
Technology Co., Ltd

PRODUCT NAME : Mobile Data Terminal

MODEL NAME : MC51

BRAND NAME : CHAINWAY

FCC ID : 2AC6AMC51

STANDARD(S) : 47 CFR Part 2
47 CFR Part 90, Subpart S

RECEIPT DATE : 2025-05-13

TEST DATE : 2025-05-24 to 2025-07-25

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Edited by:

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Change History		
Version	Date	Reason for change
1.0	2025-10-20	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Shenzhen Chainway Information Technology Co., Ltd
Applicant Address:	9F Building 2, Daqian Industrial Park, District 67, XingDong Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China
Manufacturer:	Shenzhen Chainway Information Technology Co., Ltd
Manufacturer Address:	9F Building 2, Daqian Industrial Park, District 67, XingDong Community, Xin'an Street, Bao'an District, Shenzhen, Guangdong, China

1.2. Equipment Under Test (EUT) Description

Product Name:	Mobile Data Terminal	
Sample No.:	10#, 12#	
Hardware Version:	MC51_Hardware_version	
Software Version:	MC51_Software_version	
Modulation Type:	QPSK, 16QAM, 64QAM	
Operation Band:	Band 26	
Frequency Range:	LTE Band 26	Tx: 814MHz-824MHz
		Rx: 859MHz-869MHz
Channel Bandwidth	LTE Band 26	1.4MHz, 3MHz, 5MHz, 10MHz
Antenna Type:	PIFA Antenna	
Antenna Gain:	LTE Band 26	-1.4dBi
Accessory Information:	Battery 1	
	Brand Name:	BOB
	Model No.:	MC51
	Serial No.:	N/A
	Capacity:	4800mAh
	Rated Voltage:	3.85V
	Charge Limit:	4.4V
	Manufacturer:	Dongguan Bob Electronics Co., Ltd

Accessory Information:	Battery 2	
	Brand Name:	UTILITY
	Model No.:	MC51
	Serial No.:	N/A
	Capacity:	4800mAh
	Rated Voltage:	3.85V
	Charge Limit:	4.4V
	Manufacturer:	SHEN ZHEN UTILITY ENERGY CO.,LTD.
	Battery 3	
	Brand Name:	BOB
	Model No.:	471120-50mAh
	Serial No.:	N/A
	Capacity:	50mAh
	Rated Voltage:	3.7V
	Charge Limit:	4.2V
	Manufacturer:	Dongguan Bob Electronics Co., Ltd
	AC Adapter	
	Brand Name:	YING YUAN
	Model No.:	DBS15Q
	Serial No.:	N/A
	Rated Output:	5V=3A; 9V=2A; 12V=1.5A;
	Rated Input:	100-240V~50/60Hz, 0.5A
	Manufacturer:	SHENZHEN SHI YING YUAN ELECTRONICS CO LTD
	USB Cable	
	Model No.:	K422-08251-H0
	Manufacturer:	Dongguan Chuantuo Electronics Co., Ltd

Note 1: SIM 1 and SIM 2 is a chipset unit and tested as a single chipset. The SIM 1 is chosen for test.

Note 2: The EUT description presented in the report are provided by applicant and/or manufacturer, and the test laboratory is not responsible for the accuracy of the information. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.3. Maximum E.R.P./E.I.R.P. and Emission Designator

LTE Band 26	Maximum E.R.P./E.I.R.P. (W)			Emission Designator (99%OBW)		
BW(MHz)	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10	0.077	0.070	0.052	8M98G7D	9M00W7D	8M99W7D
5	0.076	0.071	0.055	4M51G7D	4M51W7D	4M50W7D
3	0.078	0.071	0.056	2M72G7D	2M72W7D	2M72W7D
1.4	0.084	0.069	0.054	1M10G7D	1M11W7D	1M11W7D



1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2 and Part 90 for the EUT FCC ID Certification:

No	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 90	Miscellaneous Wireless Communications Services

Test detailed items/section required by FCC rules and results are as below:

Section	Description	Test Date	Test Engineer	Result	Remark
2.1046, 90.635(b)	Transmitter Conducted Output Power and ERP/EIRP	Jun. 21, 2025	Yu Xiaoming Liu Huiyan	PASS ^{Note3}	/
2.1049, 90.209	Occupied Bandwidth	Jun. 14 2025	Liu Huiyan	PASS	/
2.1055, 90.213	Frequency Stability	Jun. 21, 2025	Liu Huiyan	PASS	/
2.1051, 90.691	Conducted Spurious Emissions	Jun. 14 2025	Liu Huiyan	PASS	/
2.1051, 90.691	Band Edge	Jun. 14 2025	Liu Huiyan	PASS	/
2.1053, 90.691	Radiated Spurious Emissions	Jun. 04, 2025 to Jul. 25, 2025	Gao Jianrou	PASS	/

Note 1: The tests were performed according to the method of measurements prescribed in KDB 971168 D01 v03 and ANSI/TIA-603-E-2016.

Note 2: Any additions, deviation, or exclusions from the method shall be noted in the "Remark".

Note 3: The antenna gain presented in the report are provided by applicant and/or manufacturer, and the test laboratory is not responsible for the accuracy of the information.



1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2.47 CFR Part 2, Part 90S Requirements

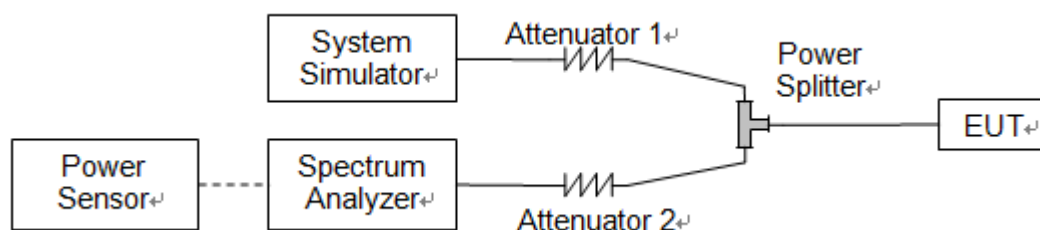
2.1. Transmitter Conducted Output Power and E.R.P./E.I.R.P.

2.1.1. Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

According to FCC section 90.635(b) for LTE Band 26, the maximum output power of the transmitter for mobile stations is 100 watts.

2.1.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.1.3. Test procedure

KDB 971168 D01v03 Section 5.2 and ANSI/TIA-603-E-2016.

$EIRP \text{ (dBm)} = \text{Conducted Output Power (dBm)} + \text{Antenna Gain (dBi)}$

$ERP \text{ (dBm)} = EIPR \text{ (dBm)} - 2.15$

**2.1.4. Result****Conducted Output Power**

LTE Band 26						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				/	26740	/
Frequency (MHz)				/	819.0	/
10	QPSK	1	0	/	22.25	/
10	QPSK	1	25	/	22.40	/
10	QPSK	1	49	/	22.08	/
10	QPSK	25	0	/	21.85	/
10	QPSK	25	12	/	21.79	/
10	QPSK	25	25	/	21.86	/
10	QPSK	50	0	/	21.90	/
10	16QAM	1	0	/	21.78	/
10	16QAM	1	25	/	21.98	/
10	16QAM	1	49	/	21.90	/
10	16QAM	25	0	/	20.88	/
10	16QAM	25	12	/	20.86	/
10	16QAM	25	25	/	20.75	/
10	16QAM	50	0	/	20.68	/
10	64QAM	1	0	/	20.70	/
10	64QAM	1	25	/	20.72	/
10	64QAM	1	49	/	20.61	/
10	64QAM	25	0	/	19.85	/
10	64QAM	25	12	/	19.95	/
10	64QAM	25	25	/	19.86	/
10	64QAM	50	0	/	19.93	/



LTE Band 26						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26715	26740	26765
Frequency (MHz)				816.5	819.0	821.5
5	QPSK	1	0	22.11	22.23	22.17
5	QPSK	1	12	22.16	22.22	22.20
5	QPSK	1	24	22.17	22.35	22.12
5	QPSK	12	0	21.78	21.84	21.72
5	QPSK	12	7	21.80	21.80	21.87
5	QPSK	12	13	21.83	21.73	21.81
5	QPSK	25	0	21.86	21.84	21.85
5	16QAM	1	0	21.96	21.99	21.85
5	16QAM	1	12	22.07	21.93	21.95
5	16QAM	1	24	21.78	21.82	21.74
5	16QAM	12	0	20.89	20.76	20.66
5	16QAM	12	7	20.85	20.83	20.94
5	16QAM	12	13	20.76	20.85	20.80
5	16QAM	25	0	20.63	20.76	20.85
5	64QAM	1	0	20.89	20.66	20.54
5	64QAM	1	12	20.96	20.54	20.43
5	64QAM	1	24	20.83	20.55	20.65
5	64QAM	12	0	19.87	19.83	19.85
5	64QAM	12	7	19.86	19.97	19.92
5	64QAM	12	13	19.90	19.85	19.86
5	64QAM	25	0	19.83	19.83	19.81



LTE Band 26						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26705	26740	26775
Frequency (MHz)				815.5	819.0	822.5
3	QPSK	1	0	22.31	22.18	22.44
3	QPSK	1	8	22.19	22.25	22.45
3	QPSK	1	14	22.03	22.29	22.31
3	QPSK	8	0	21.85	21.83	21.82
3	QPSK	8	4	21.88	21.85	21.79
3	QPSK	8	7	21.83	21.79	21.74
3	QPSK	15	0	21.81	21.84	21.78
3	16QAM	1	0	21.81	21.79	21.61
3	16QAM	1	8	22.04	21.94	22.00
3	16QAM	1	14	21.89	22.01	22.01
3	16QAM	8	0	20.97	20.88	20.84
3	16QAM	8	4	20.87	20.96	20.89
3	16QAM	8	7	20.90	20.85	20.85
3	16QAM	15	0	20.88	20.83	20.89
3	64QAM	1	0	21.05	20.66	20.89
3	64QAM	1	8	20.56	20.81	20.79
3	64QAM	1	14	20.59	20.69	20.71
3	64QAM	8	0	19.79	19.86	19.81
3	64QAM	8	4	19.93	19.90	19.79
3	64QAM	8	7	19.94	19.79	19.77
3	64QAM	15	0	19.86	19.88	19.81



LTE Band 26						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				26697	26740	26783
Frequency (MHz)				814.7	819.0	823.3
1.4	QPSK	1	0	22.12	22.19	22.48
1.4	QPSK	1	3	22.23	22.22	22.35
1.4	QPSK	1	5	22.19	22.24	22.44
1.4	QPSK	3	0	22.74	22.72	22.59
1.4	QPSK	3	1	22.79	22.68	22.69
1.4	QPSK	3	3	22.75	22.72	22.69
1.4	QPSK	6	0	21.81	21.79	21.80
1.4	16QAM	1	0	21.94	21.76	21.74
1.4	16QAM	1	3	21.79	21.86	21.66
1.4	16QAM	1	5	21.78	21.79	21.70
1.4	16QAM	3	0	21.77	21.80	21.67
1.4	16QAM	3	1	21.78	21.85	21.66
1.4	16QAM	3	3	21.84	21.70	21.75
1.4	16QAM	6	0	20.90	20.72	20.60
1.4	64QAM	1	0	20.65	20.82	20.74
1.4	64QAM	1	3	20.57	20.76	20.84
1.4	64QAM	1	5	20.78	20.70	20.70
1.4	64QAM	3	0	20.75	20.78	20.81
1.4	64QAM	3	1	20.87	20.76	20.71
1.4	64QAM	3	3	20.89	20.71	20.69
1.4	64QAM	6	0	19.84	19.79	19.74

**Effective Radiated Power and Effective Isotropic Radiated Power**

LTE Band 26				Measured E.R.P.			
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.		High Ch. / Freq.
Channel				/	26740		/
Frequency (MHz)				/	819		/
				/	dBm	W	/
10	QPSK	1	0	/	18.70	0.074	/
10	QPSK	1	25	/	18.85	0.077	/
10	QPSK	1	49	/	18.53	0.071	/
10	QPSK	25	0	/	18.30	0.068	/
10	QPSK	25	12	/	18.24	0.067	/
10	QPSK	25	25	/	18.31	0.068	/
10	QPSK	50	0	/	18.35	0.068	/
10	16QAM	1	0	/	18.23	0.067	/
10	16QAM	1	25	/	18.43	0.070	/
10	16QAM	1	49	/	18.35	0.068	/
10	16QAM	25	0	/	17.33	0.054	/
10	16QAM	25	12	/	17.31	0.054	/
10	16QAM	25	25	/	17.20	0.052	/
10	16QAM	50	0	/	17.13	0.052	/
10	64QAM	1	0	/	17.15	0.052	/
10	64QAM	1	25	/	17.17	0.052	/
10	64QAM	1	49	/	17.06	0.051	/
10	64QAM	25	0	/	16.30	0.043	/
10	64QAM	25	12	/	16.40	0.044	/
10	64QAM	25	25	/	16.31	0.043	/
10	64QAM	50	0	/	16.38	0.043	/



LTE Band 26				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26715		26740		26765	
Frequency (MHz)				816.5		819.0		821.5	
				dBm	W	dBm	W	dBm	W
5	QPSK	1	0	18.56	0.072	18.68	0.074	18.62	0.073
5	QPSK	1	12	18.61	0.073	18.67	0.074	18.65	0.073
5	QPSK	1	24	18.62	0.073	18.80	0.076	18.57	0.072
5	QPSK	12	0	18.23	0.067	18.29	0.067	18.17	0.066
5	QPSK	12	7	18.25	0.067	18.25	0.067	18.32	0.068
5	QPSK	12	13	18.28	0.067	18.18	0.066	18.26	0.067
5	QPSK	25	0	18.31	0.068	18.29	0.067	18.30	0.068
5	16QAM	1	0	18.41	0.069	18.44	0.070	18.30	0.068
5	16QAM	1	12	18.52	0.071	18.38	0.069	18.40	0.069
5	16QAM	1	24	18.23	0.067	18.27	0.067	18.19	0.066
5	16QAM	12	0	17.34	0.054	17.21	0.053	17.11	0.051
5	16QAM	12	7	17.30	0.054	17.28	0.053	17.39	0.055
5	16QAM	12	13	17.21	0.053	17.30	0.054	17.25	0.053
5	16QAM	25	0	17.08	0.051	17.21	0.053	17.30	0.054
5	64QAM	1	0	17.34	0.054	17.11	0.051	16.99	0.050
5	64QAM	1	12	17.41	0.055	16.99	0.050	16.88	0.049
5	64QAM	1	24	17.28	0.053	17.00	0.050	17.10	0.051
5	64QAM	12	0	16.32	0.043	16.28	0.042	16.30	0.043
5	64QAM	12	7	16.31	0.043	16.42	0.044	16.37	0.043
5	64QAM	12	13	16.35	0.043	16.30	0.043	16.31	0.043
5	64QAM	25	0	16.28	0.042	16.28	0.042	16.26	0.042



LTE Band 26				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26705		26740		26775	
Frequency (MHz)				815.5		819.0		822.5	
				dBm	W	dBm	W	dBm	W
3	QPSK	1	0	18.76	0.075	18.63	0.073	18.89	0.077
3	QPSK	1	8	18.64	0.073	18.70	0.074	18.90	0.078
3	QPSK	1	14	18.48	0.070	18.74	0.075	18.76	0.075
3	QPSK	8	0	18.30	0.068	18.28	0.067	18.27	0.067
3	QPSK	8	4	18.33	0.068	18.30	0.068	18.24	0.067
3	QPSK	8	7	18.28	0.067	18.24	0.067	18.19	0.066
3	QPSK	15	0	18.26	0.067	18.29	0.067	18.23	0.067
3	16QAM	1	0	18.26	0.067	18.24	0.067	18.06	0.064
3	16QAM	1	8	18.49	0.071	18.39	0.069	18.45	0.070
3	16QAM	1	14	18.34	0.068	18.46	0.070	18.46	0.070
3	16QAM	8	0	17.42	0.055	17.33	0.054	17.29	0.054
3	16QAM	8	4	17.32	0.054	17.41	0.055	17.34	0.054
3	16QAM	8	7	17.35	0.054	17.30	0.054	17.30	0.054
3	16QAM	15	0	17.33	0.054	17.28	0.053	17.34	0.054
3	64QAM	1	0	17.50	0.056	17.11	0.051	17.34	0.054
3	64QAM	1	8	17.01	0.050	17.26	0.053	17.24	0.053
3	64QAM	1	14	17.04	0.051	17.14	0.052	17.16	0.052
3	64QAM	8	0	16.24	0.042	16.31	0.043	16.26	0.042
3	64QAM	8	4	16.38	0.043	16.35	0.043	16.24	0.042
3	64QAM	8	7	16.39	0.044	16.24	0.042	16.22	0.042
3	64QAM	15	0	16.31	0.043	16.33	0.043	16.26	0.042



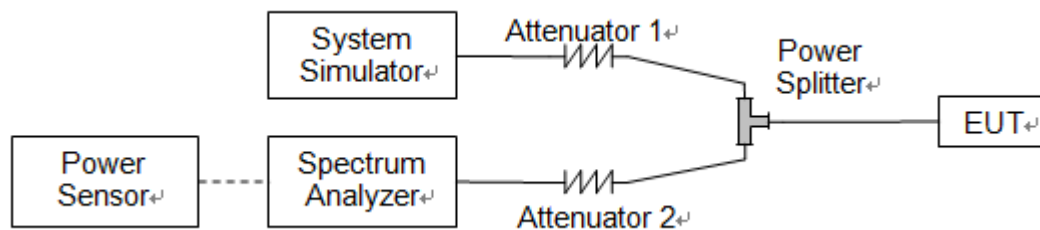
LTE Band 26				Measured E.R.P.					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				26697		26740		26783	
Frequency (MHz)				814.7		819.0		823.3	
				dBm	W	dBm	W	dBm	W
1.4	QPSK	1	0	18.57	0.072	18.64	0.073	18.93	0.078
1.4	QPSK	1	3	18.68	0.074	18.67	0.074	18.80	0.076
1.4	QPSK	1	5	18.64	0.073	18.69	0.074	18.89	0.077
1.4	QPSK	3	0	19.19	0.083	19.17	0.083	19.04	0.080
1.4	QPSK	3	1	19.24	0.084	19.13	0.082	19.14	0.082
1.4	QPSK	3	3	19.20	0.083	19.17	0.083	19.14	0.082
1.4	QPSK	6	0	18.26	0.067	18.24	0.067	18.25	0.067
1.4	16QAM	1	0	18.39	0.069	18.21	0.066	18.19	0.066
1.4	16QAM	1	3	18.24	0.067	18.31	0.068	18.11	0.065
1.4	16QAM	1	5	18.23	0.067	18.24	0.067	18.15	0.065
1.4	16QAM	3	0	18.22	0.066	18.25	0.067	18.12	0.065
1.4	16QAM	3	1	18.23	0.067	18.30	0.068	18.11	0.065
1.4	16QAM	3	3	18.29	0.067	18.15	0.065	18.20	0.066
1.4	16QAM	6	0	17.35	0.054	17.17	0.052	17.05	0.051
1.4	64QAM	1	0	17.10	0.051	17.27	0.053	17.19	0.052
1.4	64QAM	1	3	17.02	0.050	17.21	0.053	17.29	0.054
1.4	64QAM	1	5	17.23	0.053	17.15	0.052	17.15	0.052
1.4	64QAM	3	0	17.20	0.052	17.23	0.053	17.26	0.053
1.4	64QAM	3	1	17.32	0.054	17.21	0.053	17.16	0.052
1.4	64QAM	3	3	17.34	0.054	17.16	0.052	17.14	0.052
1.4	64QAM	6	0	16.29	0.043	16.24	0.042	16.19	0.042

2.2. Occupied Bandwidth

2.2.1. Requirement

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. Occupied bandwidth is also known as the 99% emission bandwidth.

2.2.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.2.3. Test procedure

KDB 971168 D01v03 Section 4.1 and ANSI/TIA-603-E-2016.

**2.2.4. Test Result**

LTE Band	BW (MHz)	Channel Level	Channel	Frequency (MHz)	Modulation	99% BW (MHz)	26dB BW (MHz)	Verdict
B26 Part90	1.4	Low	26697	814.7	QPSK	1.1022	1.3829	PASS
B26 Part90	1.4	Low	26697	814.7	16QAM	1.1039	1.3839	PASS
B26 Part90	1.4	Low	26697	814.7	64QAM	1.1068	1.3403	PASS
B26 Part90	1.4	Mid	26740	819	QPSK	1.1002	1.3568	PASS
B26 Part90	1.4	Mid	26740	819	16QAM	1.1021	1.3566	PASS
B26 Part90	1.4	Mid	26740	819	64QAM	1.1055	1.3665	PASS
B26 Part90	1.4	High	26783	823.3	QPSK	1.1007	1.3462	PASS
B26 Part90	1.4	High	26783	823.3	16QAM	1.1108	1.4085	PASS
B26 Part90	1.4	High	26783	823.3	64QAM	1.1055	1.3653	PASS
B26 Part90	3	Low	26705	815.5	QPSK	2.7157	3.0799	PASS
B26 Part90	3	Low	26705	815.5	16QAM	2.7134	3.0792	PASS
B26 Part90	3	Low	26705	815.5	64QAM	2.7175	3.0581	PASS
B26 Part90	3	Mid	26740	819	QPSK	2.7145	3.0637	PASS
B26 Part90	3	Mid	26740	819	16QAM	2.7164	3.0878	PASS
B26 Part90	3	Mid	26740	819	64QAM	2.7085	3.0229	PASS
B26 Part90	3	High	26775	822.5	QPSK	2.7086	3.0258	PASS

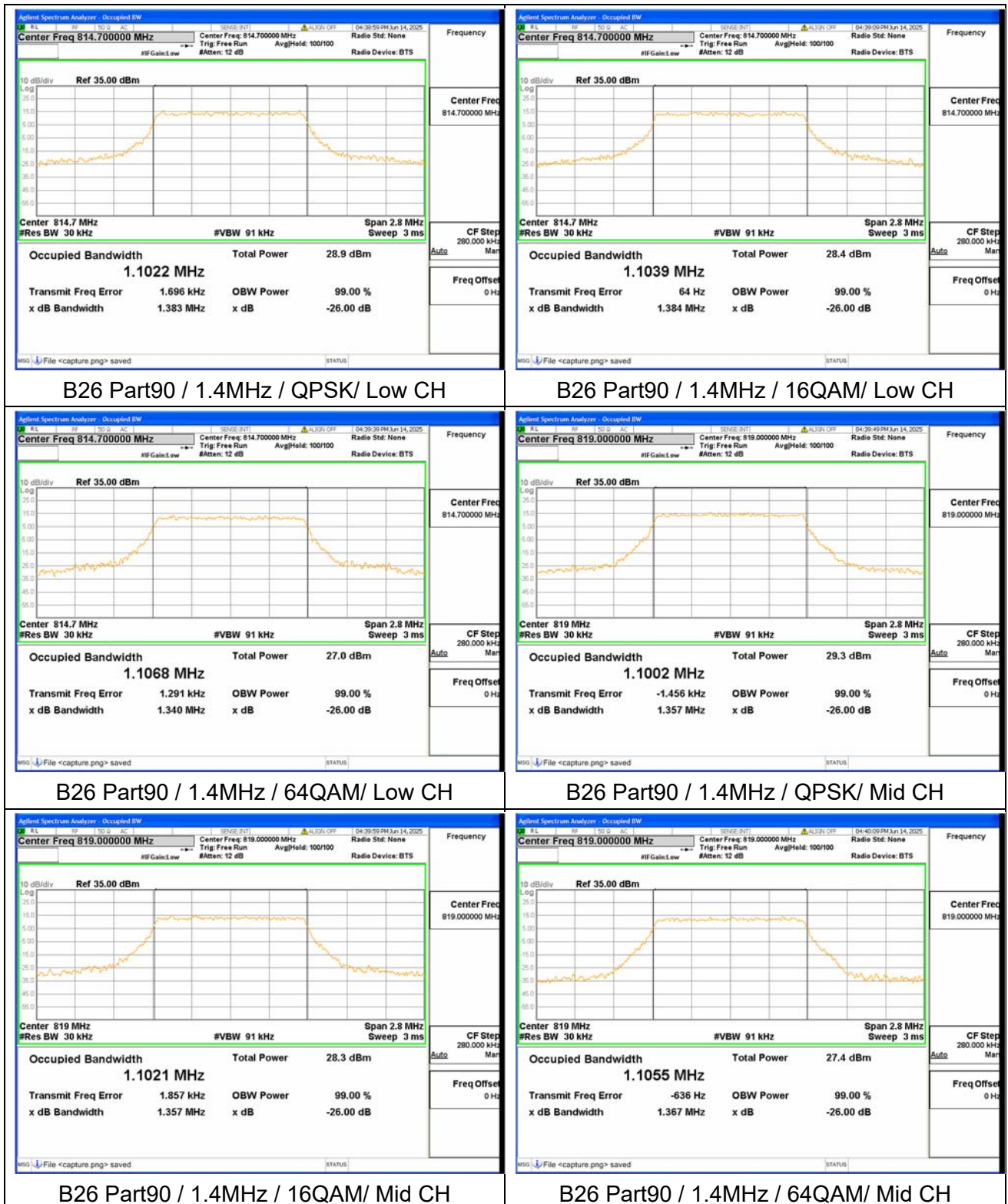


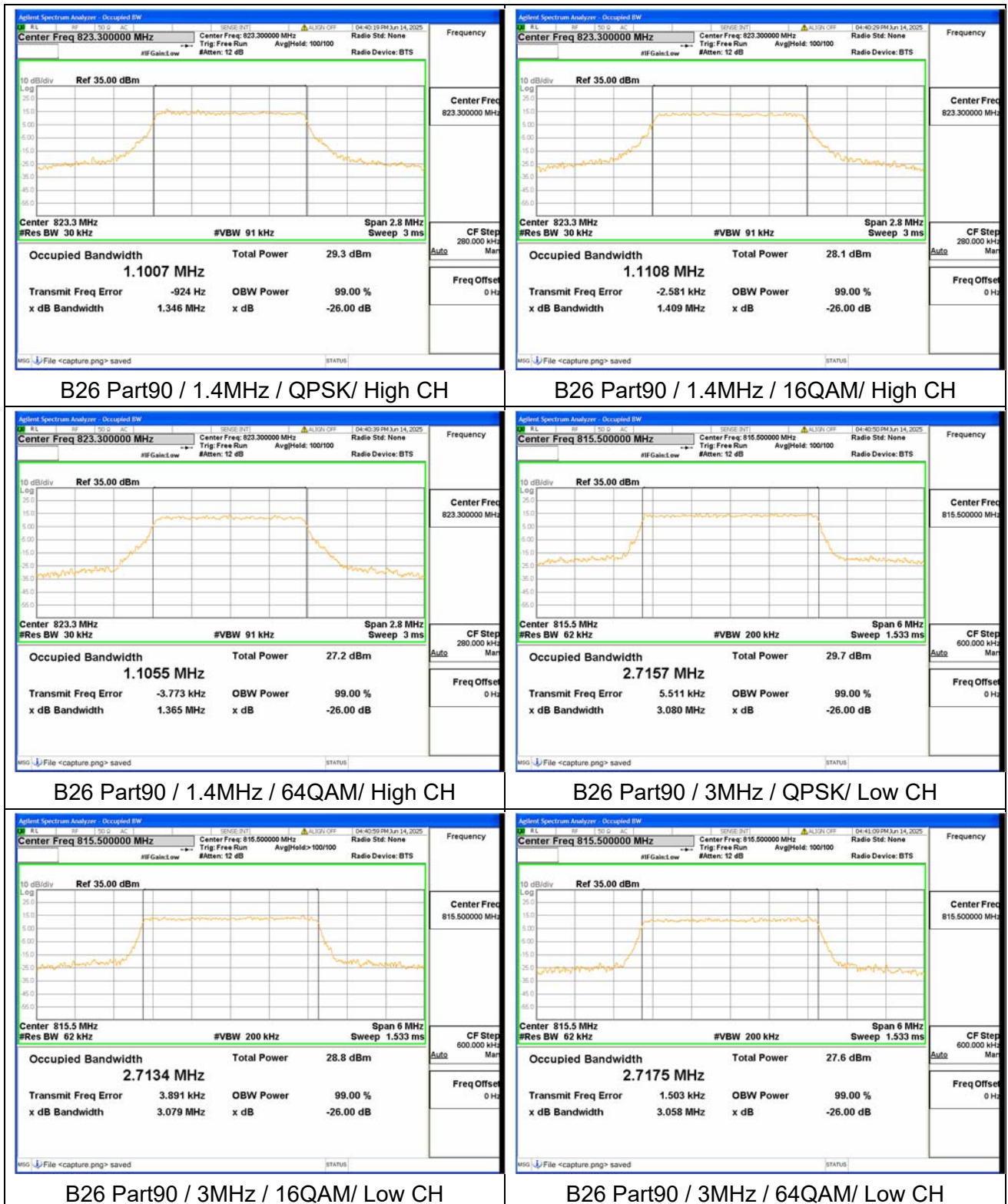
B26 Part90	3	High	26775	822.5	16QAM	2.7113	3.0690	PASS
B26 Part90	3	High	26775	822.5	64QAM	2.7126	3.0447	PASS
B26 Part90	5	Low	26715	816.5	QPSK	4.5034	5.0968	PASS
B26 Part90	5	Low	26715	816.5	16QAM	4.5103	5.0309	PASS
B26 Part90	5	Low	26715	816.5	64QAM	4.5004	5.0415	PASS
B26 Part90	5	Mid	26740	819	QPSK	4.4917	5.0963	PASS
B26 Part90	5	Mid	26740	819	16QAM	4.5130	5.0805	PASS
B26 Part90	5	Mid	26740	819	64QAM	4.4968	5.0224	PASS
B26 Part90	5	High	26765	821.5	QPSK	4.5071	5.0878	PASS
B26 Part90	5	High	26765	821.5	16QAM	4.4956	5.0912	PASS
B26 Part90	5	High	26765	821.5	64QAM	4.4860	5.0783	PASS
B26 Part90	10	Low	26740	819	QPSK	8.9708	9.8837	PASS
B26 Part90	10	Low	26740	819	16QAM	8.9997	9.9343	PASS
B26 Part90	10	Low	26740	819	64QAM	8.9677	9.8888	PASS
B26 Part90	10	Mid	26740	819	QPSK	8.9641	9.8411	PASS
B26 Part90	10	Mid	26740	819	16QAM	8.9536	9.8627	PASS
B26 Part90	10	Mid	26740	819	64QAM	8.9676	9.9380	PASS
B26 Part90	10	High	26740	819	QPSK	8.9817	9.9011	PASS
B26 Part90	10	High	26740	819	16QAM	8.9691	9.9701	PASS



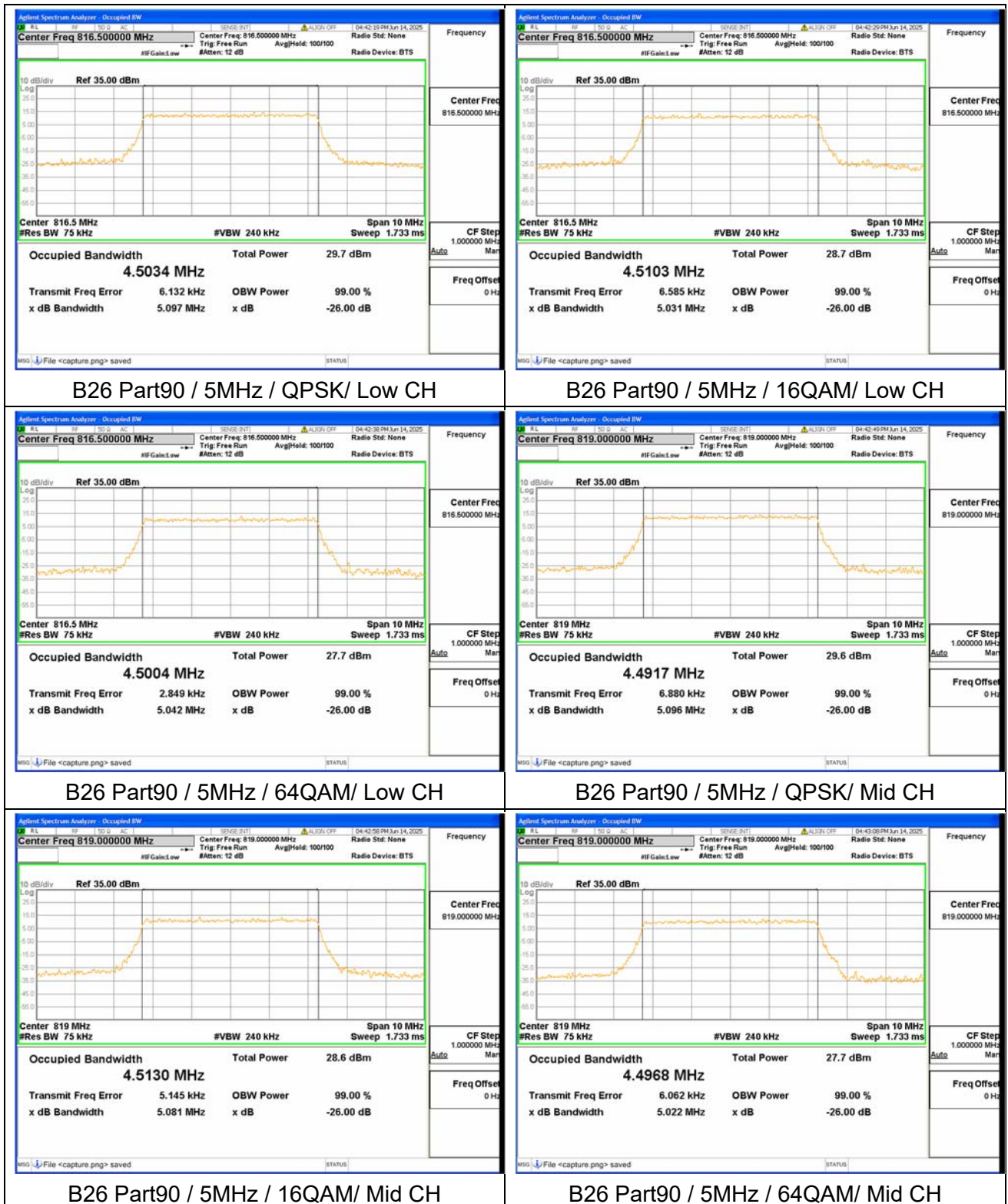
REPORT No.: SZ25040205W03

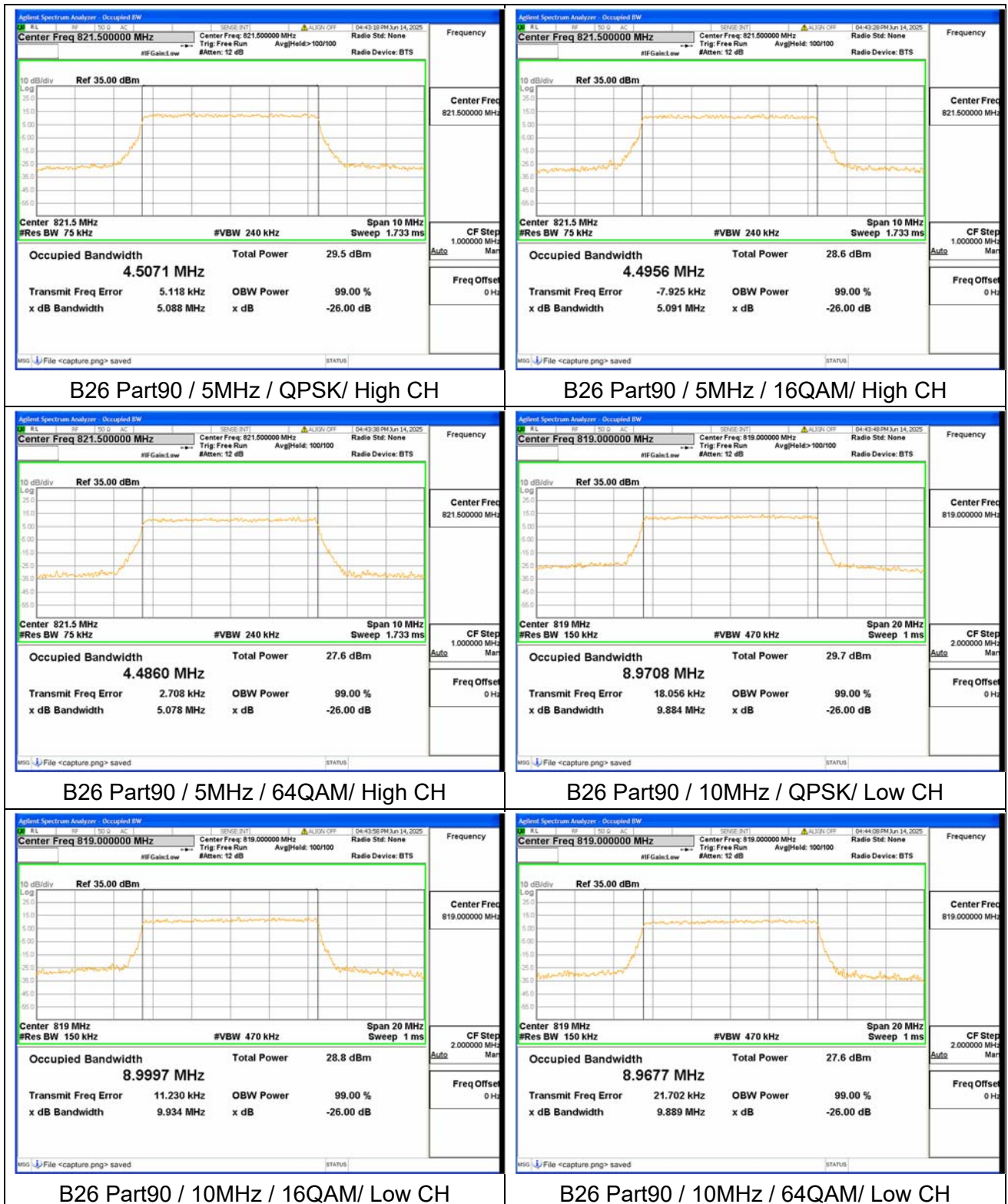
B26 Part90	10	High	26740	819	64QAM	8.9887	9.8505	PASS
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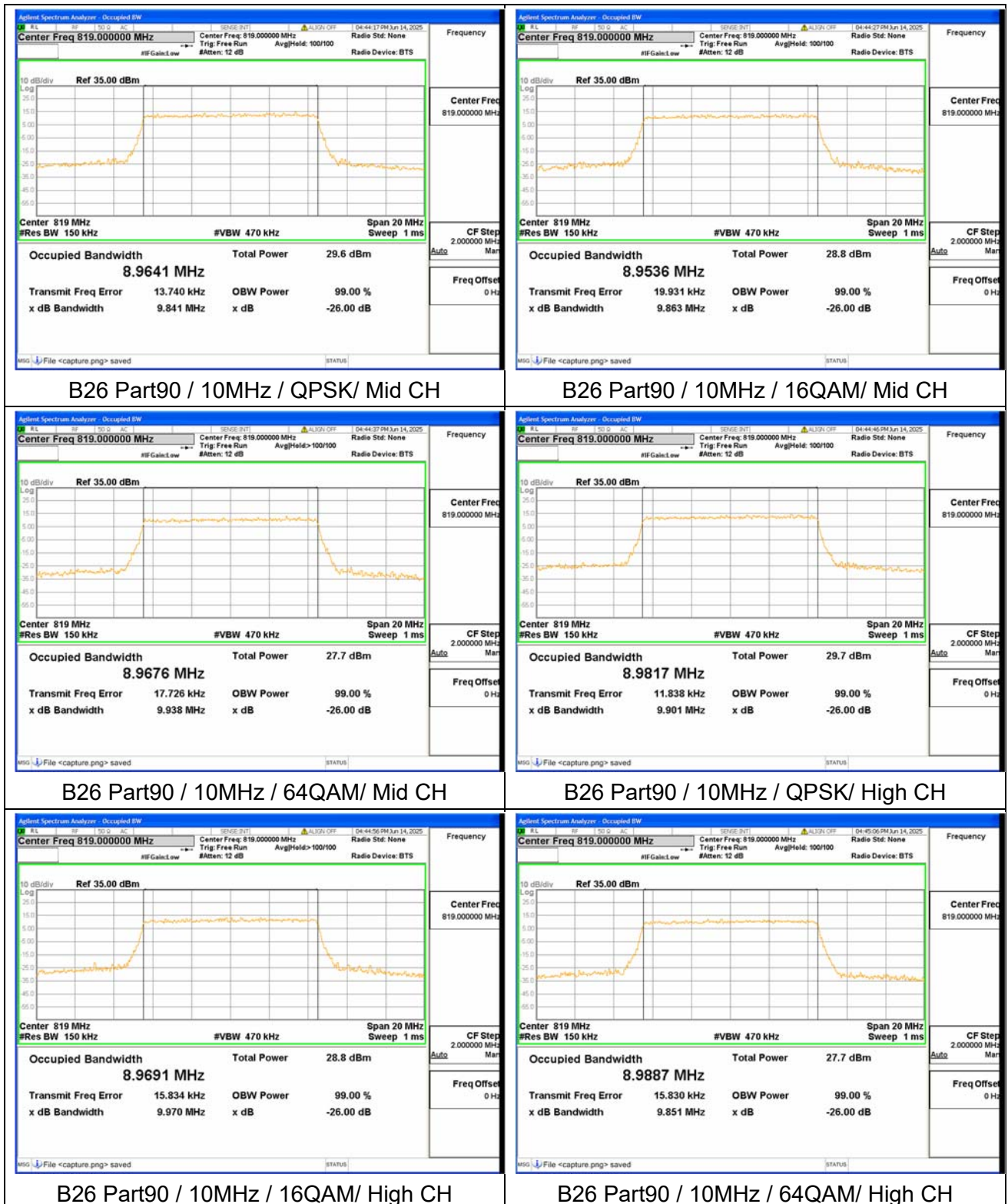












2.3. Frequency Stability

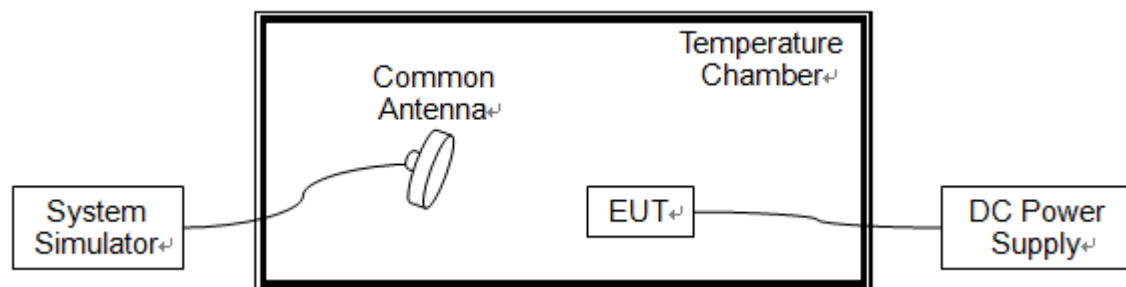
2.3.1. Requirement

According to FCC section 2.1055 & 90.213, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

Note: The operating temperature of EUT is from -20°C to 50°C, which are specified by the applicant.

2.3.2. Test Description



The EUT which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

2.3.3. Test procedure

KDB 971168 D01v03 Section 9.0 and ANSI/TIA-603-E-2016.



2.3.4. Test Result

The nominal, highest and lowest extreme voltages are separately 3.85V, 4.40V and 3.00V, which are specified by the applicant; the normal temperature here used is 20°C.

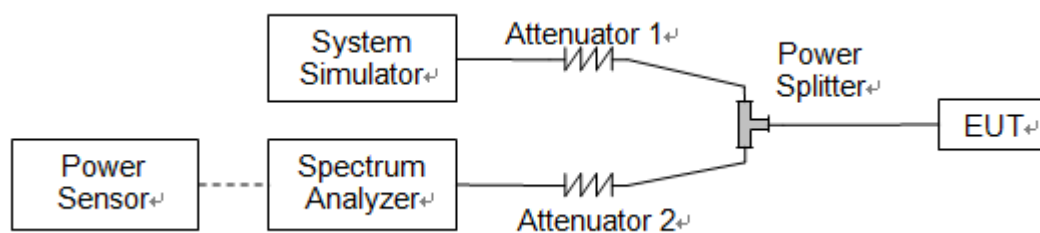
LTE Band 26, 64QAM, Channel 26740, Frequency 819MHz					
Limit =±2.5ppm					
Voltage (%)	Power (VDC)	Temp(°C)	Fre. Dev.(Hz)	Deviation (ppm)	Result
Normal	3.85	+20(Ref)	14	0.017	PASS
Normal		-20	20	0.024	
Normal		-10	18	0.022	
Normal		0	19	0.023	
Normal		+10	14	0.017	
Normal		+20	17	0.021	
Normal		+30	4	0.005	
Normal		+40	14	0.017	
Normal		+50	17	0.021	
High	4.40	+20	-8	-0.010	
BATT.ENDPOINT	3.00	+20	14	0.017	

2.4. Conducted Spurious Emissions

2.4.1. Requirement

According to FCC section 2.1051, 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. This calculated to be -13dBm.

2.4.2. Test Description



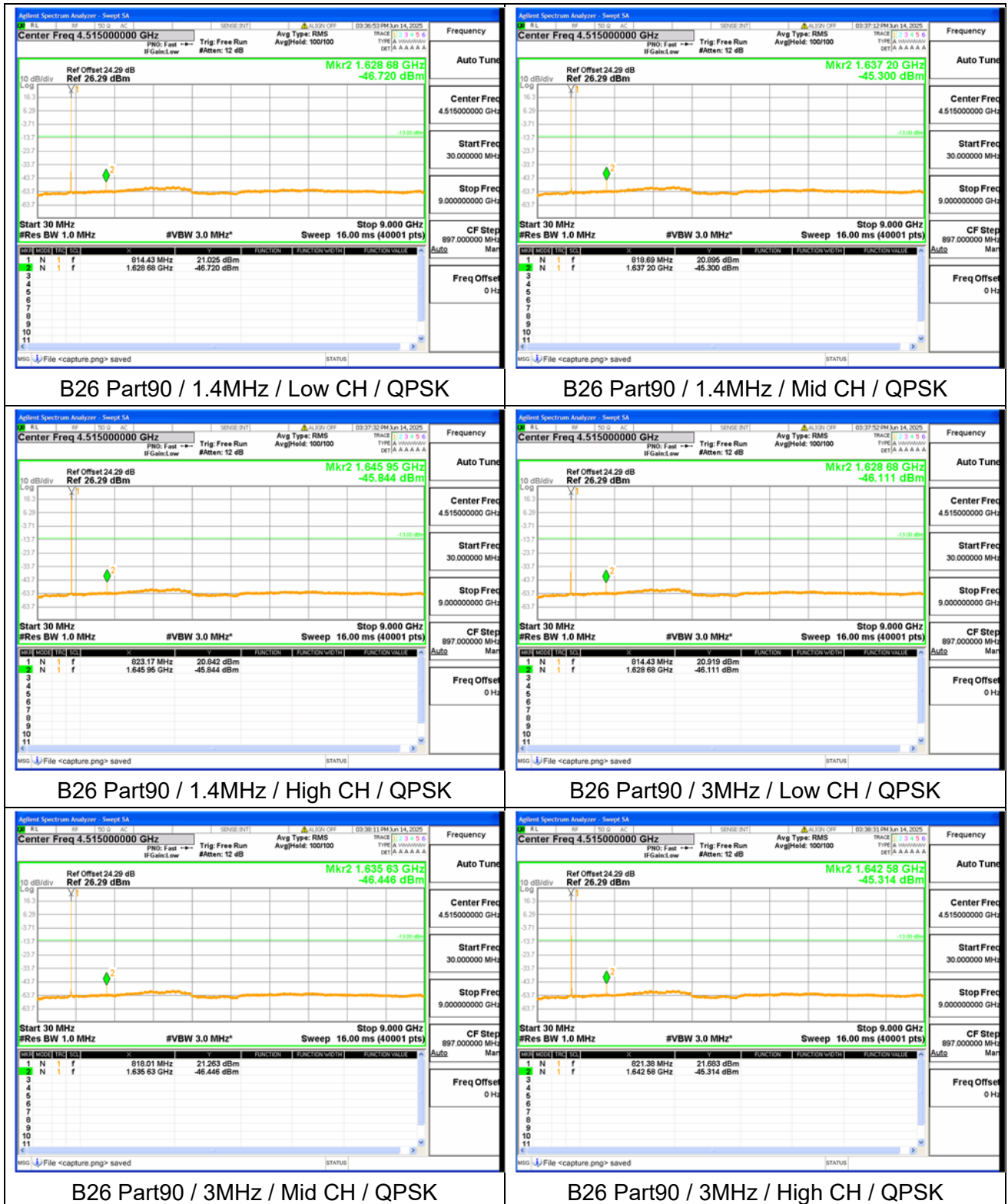
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

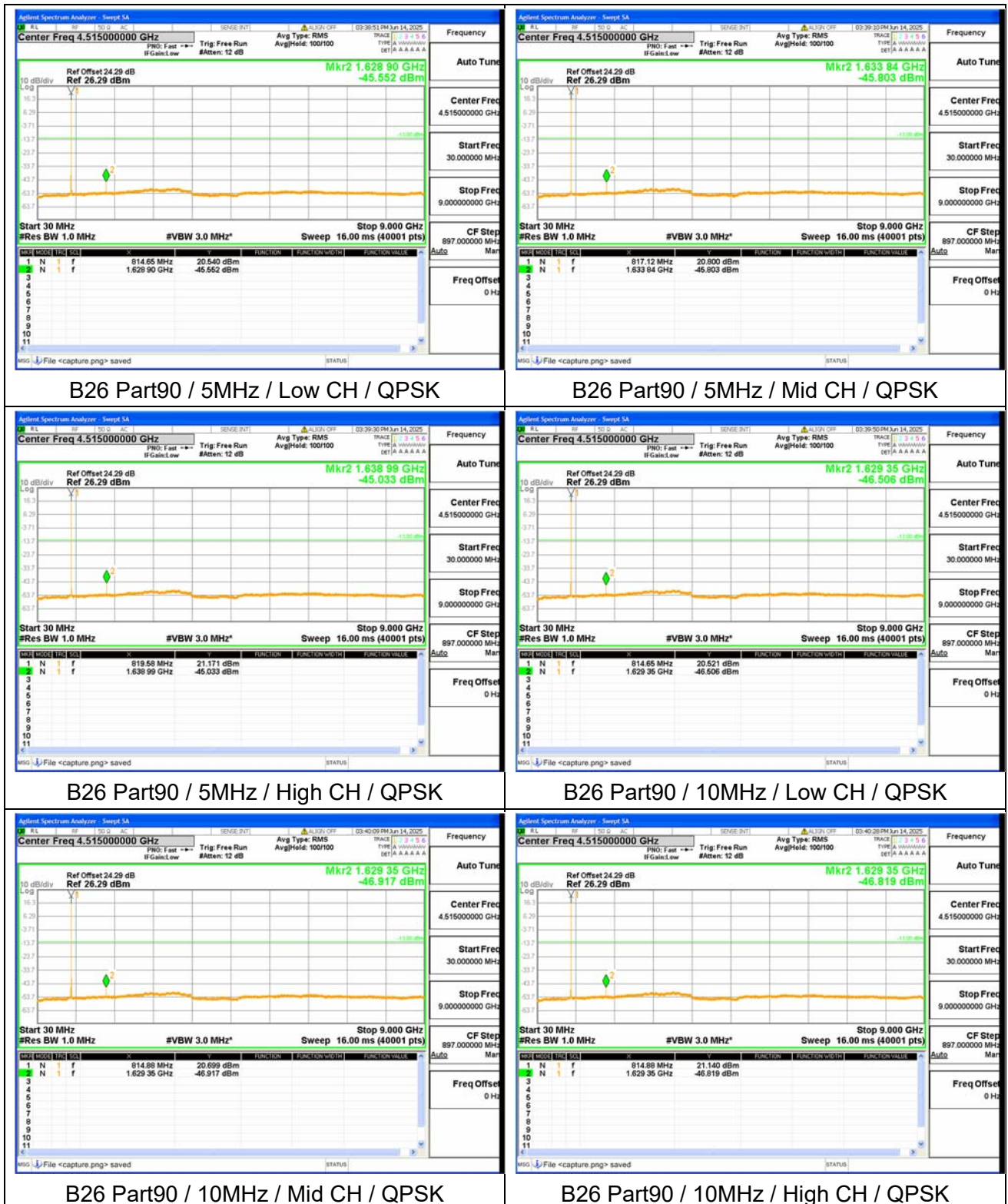
2.4.3. Test procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.



2.4.4. Test Result





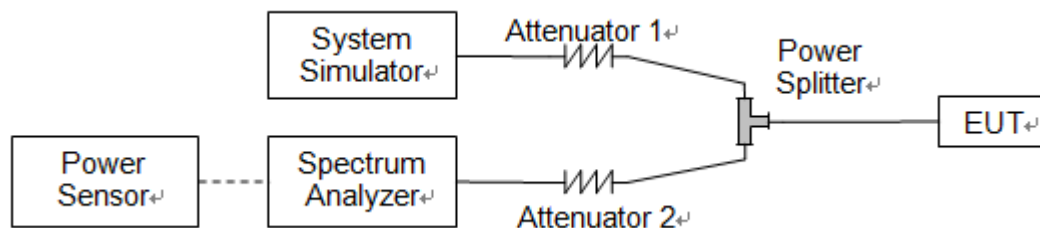
2.5. Band Edge

2.5.1. Requirement

Band26

According to FCC section 90.961(a), 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.

2.5.2. Test Description



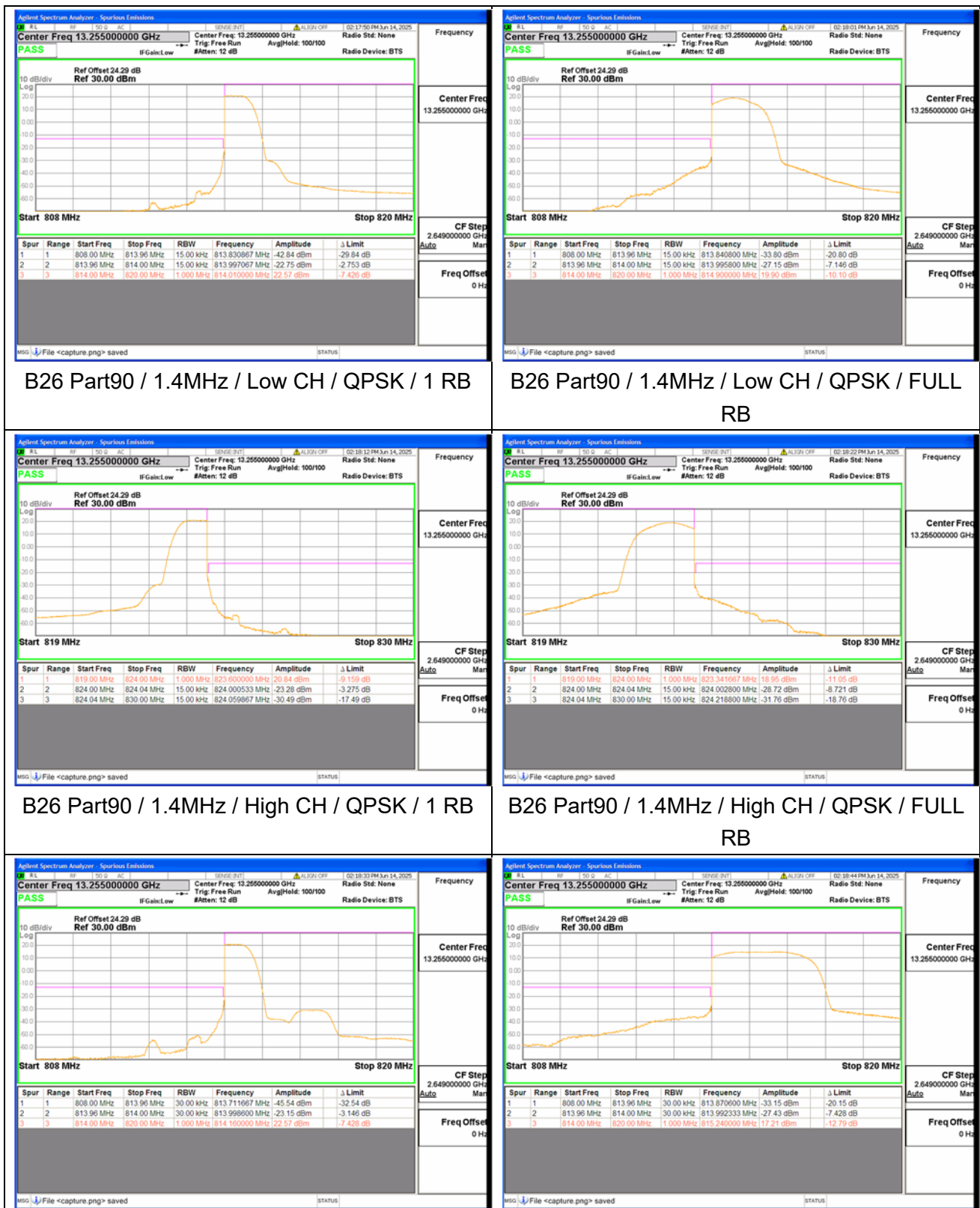
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.5.3. Test procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

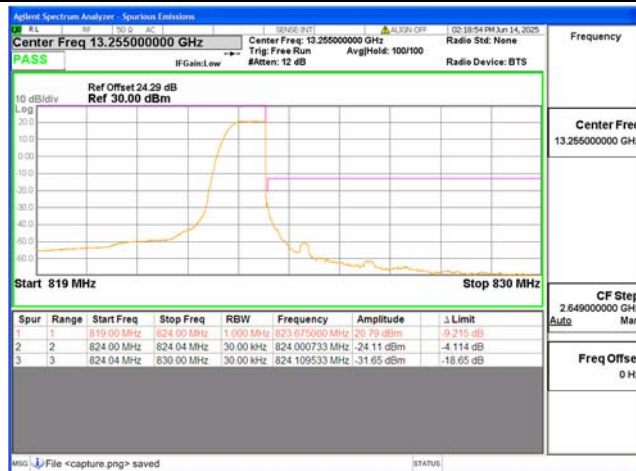


2.5.4. Test Result

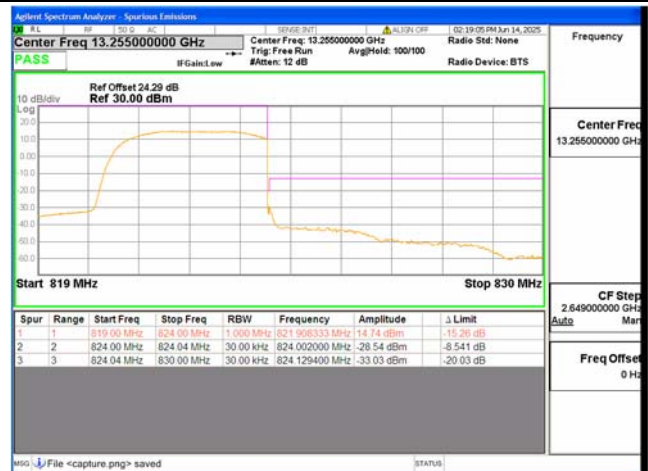




B26 Part90 / 3MHz / Low CH / QPSK / 1 RB



B26 Part90 / 3MHz / Low CH / QPSK / FULL RB



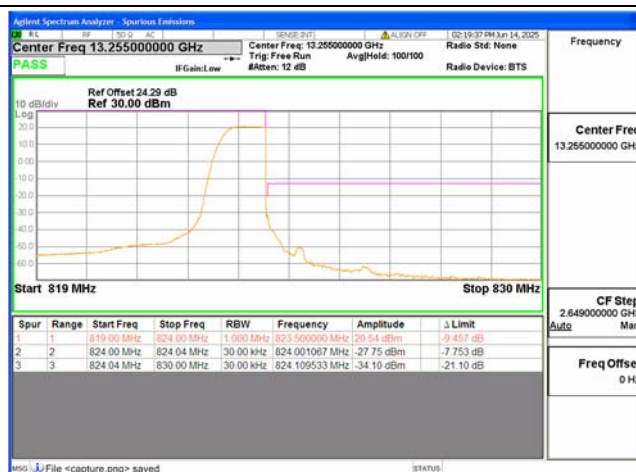
B26 Part90 / 3MHz / High CH / QPSK / 1 RB



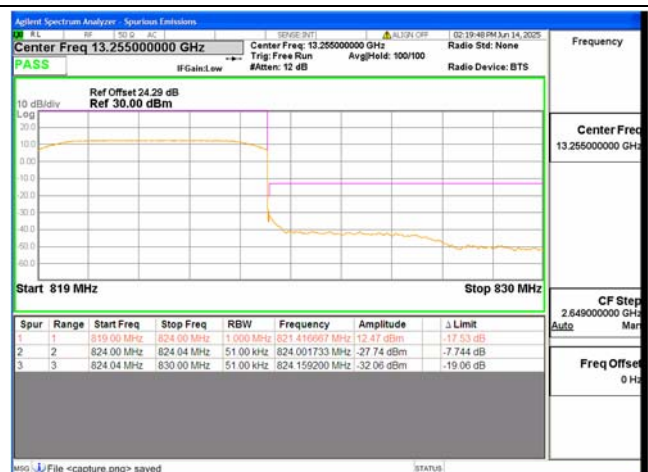
B26 Part90 / 3MHz / High CH / QPSK / FULL RB



B26 Part90 / 5MHz / Low CH / QPSK / 1 RB



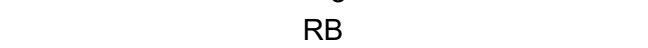
B26 Part90 / 5MHz / Low CH / QPSK / FULL RB

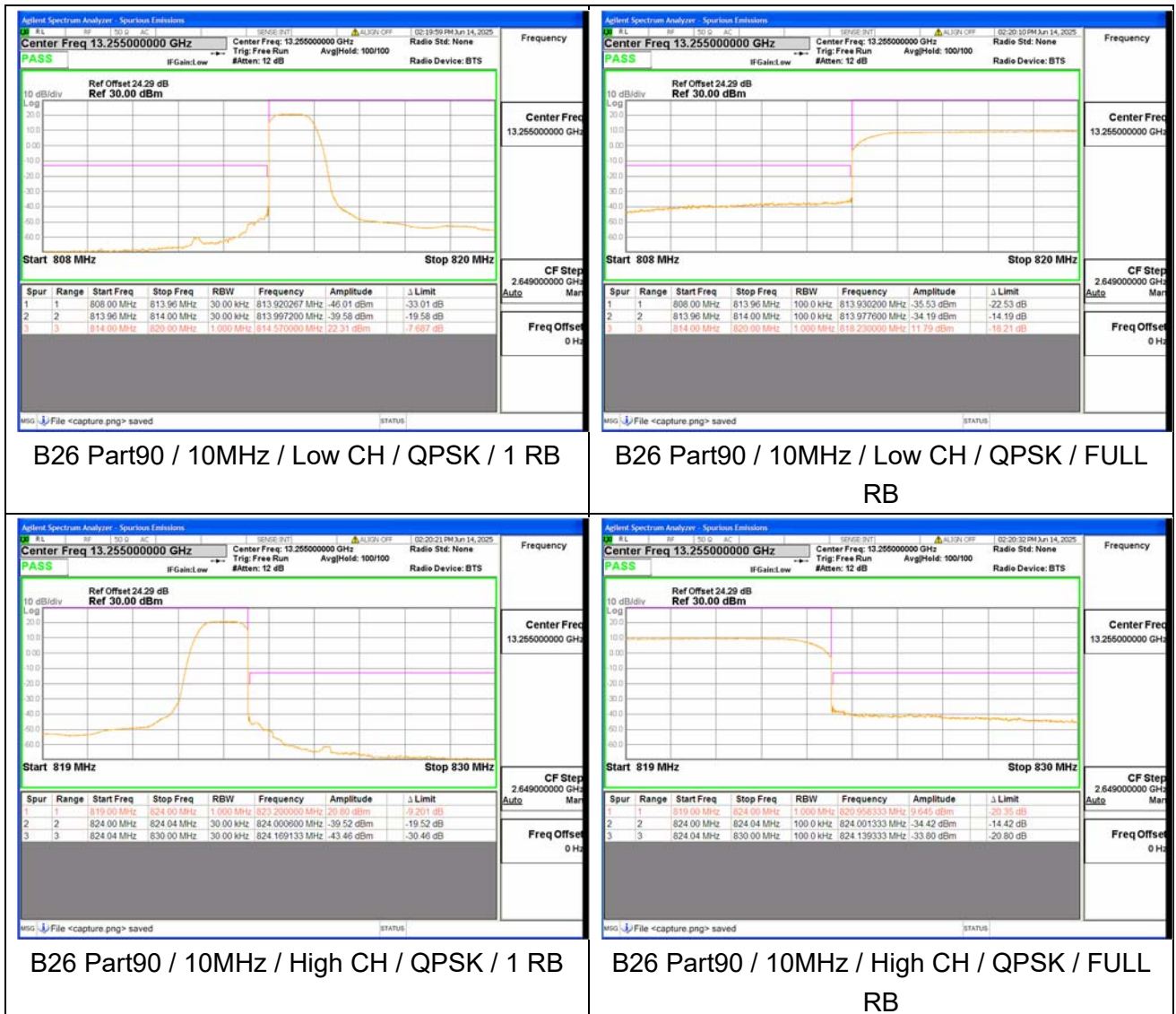


B26 Part90 / 5MHz / High CH / QPSK / 1 RB



B26 Part90 / 5MHz / High CH / QPSK / FULL RB



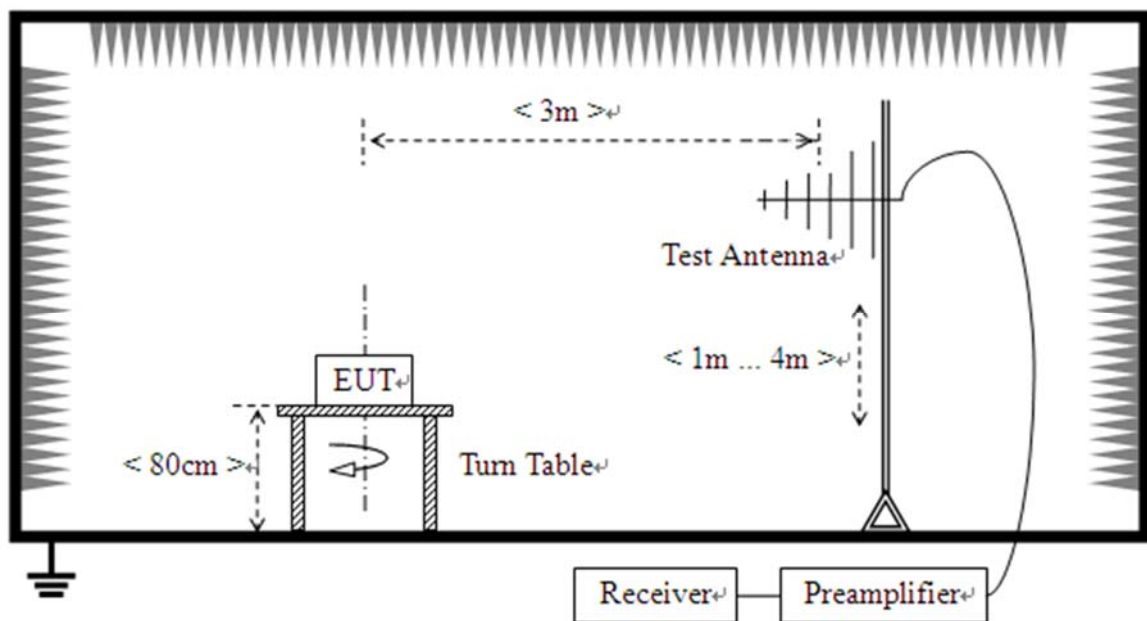


2.6. Radiated Spurious Emissions

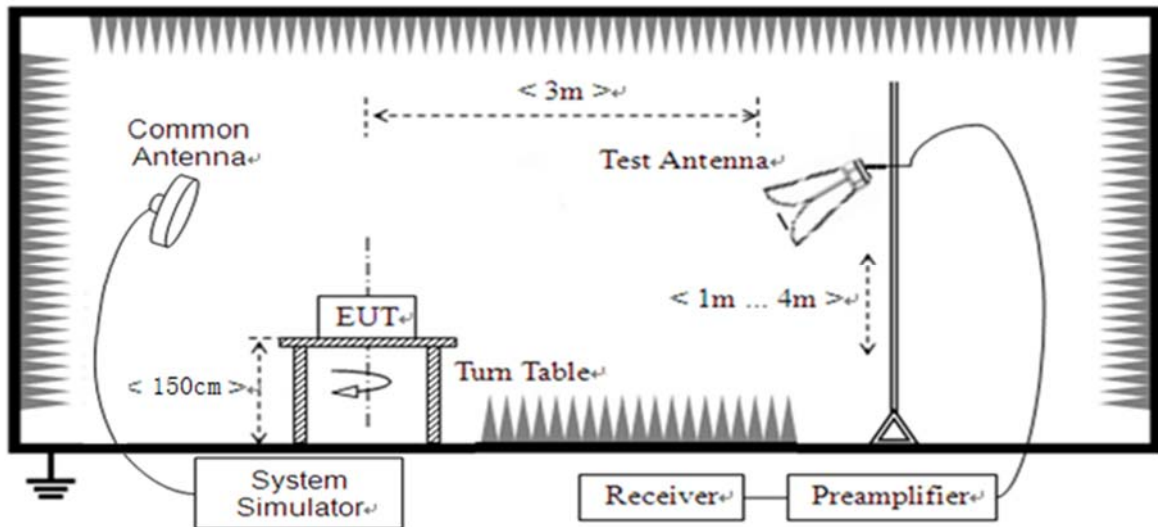
2.6.1. Requirement

According to FCC section 2.1051, 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. This calculated to be -13dBm.

2.6.2. Test Description



(For the test frequency from 30MHz to 1GHz)



(For the test frequency above 1GHz)

The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading. A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360° to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.6.3. Test procedure

KDB 971168 D01v03 Section 5.8 and ANSI/TIA-603-E-2016.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements.



2.6.4. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

The substitution corrections are obtained as described below:

$$A_{\text{SUBST}} = P_{\text{SUBST_TX}} - P_{\text{SUBST_RX}} - L_{\text{SUBST_CABLES}} + G_{\text{SUBST_TX_ANT}}$$

$$A_{\text{TOT}} = L_{\text{CABLES}} + A_{\text{SUBST}}$$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the test spectrum analyze, so spectrum analyze reading is the final values which contain the data of A_{TOT} .

Note1: The power of the EUT transmitting frequency should be ignored.

Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band, only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

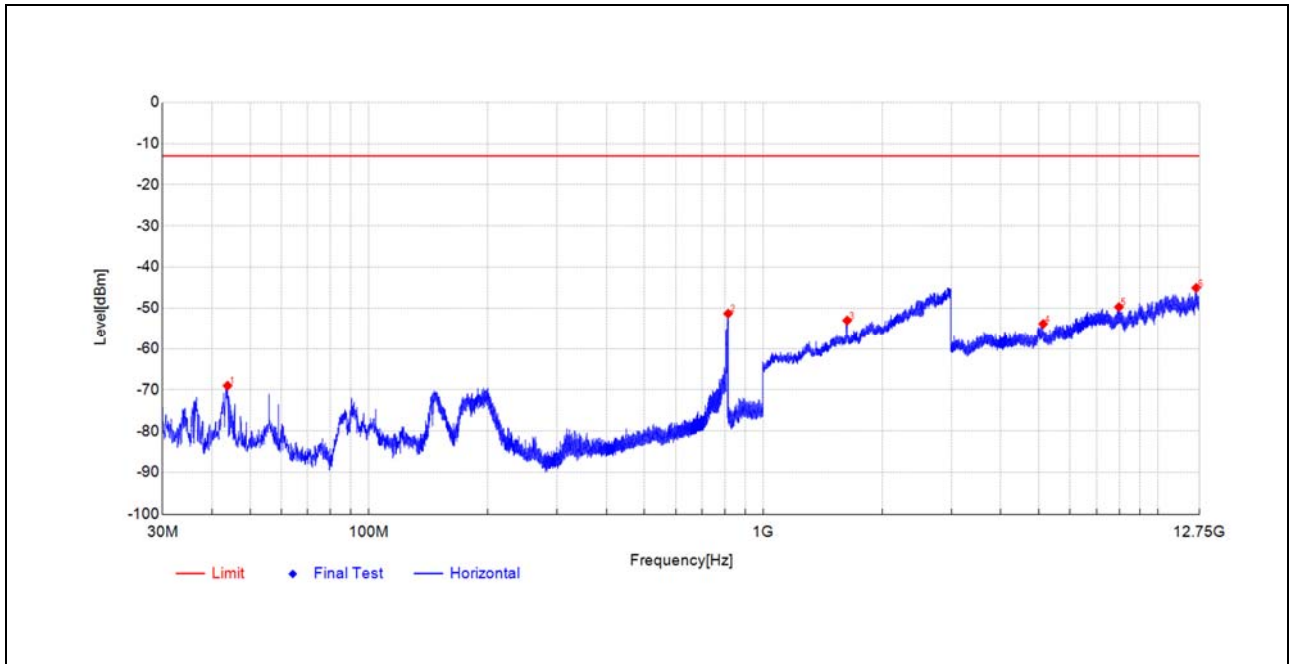
Note 4: N/A means the frequency is the basic frequency or the base station frequency, they are no need to verdict.

Note 5: The amplitude of emissions (18GHz to 10th harmonics) which are attenuated more than 20 dB below the limit are not be reported.

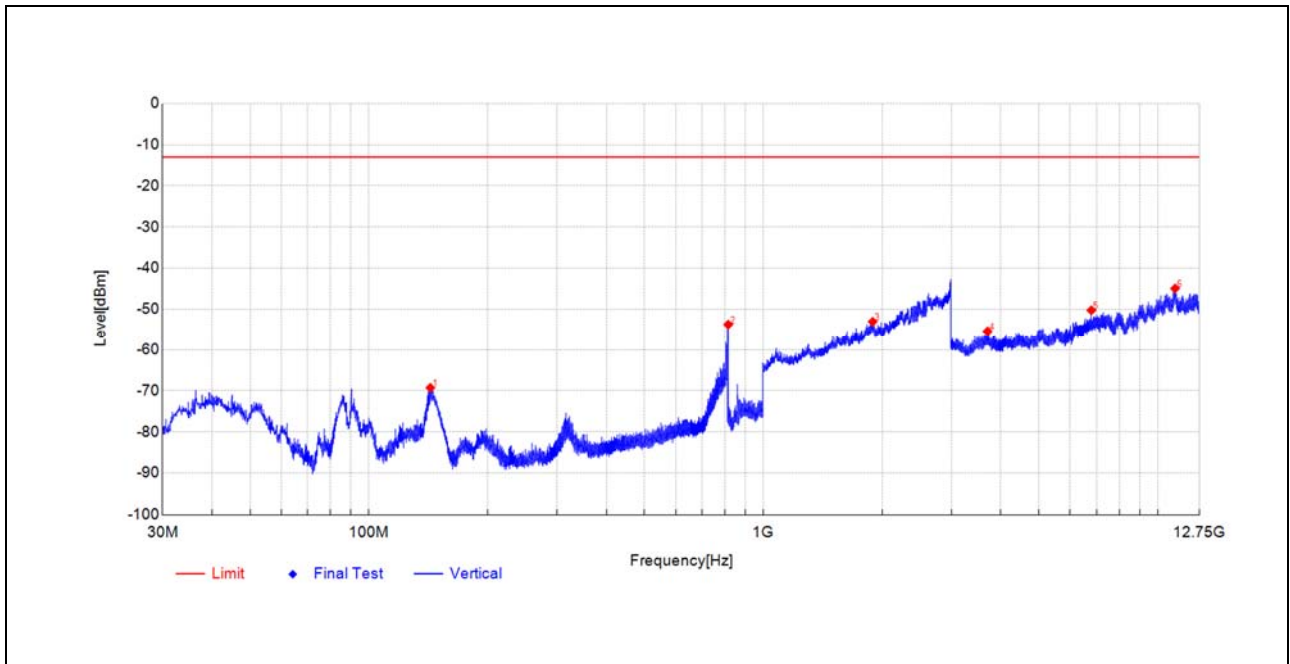


LTE Band 26

Plot for Low Channel

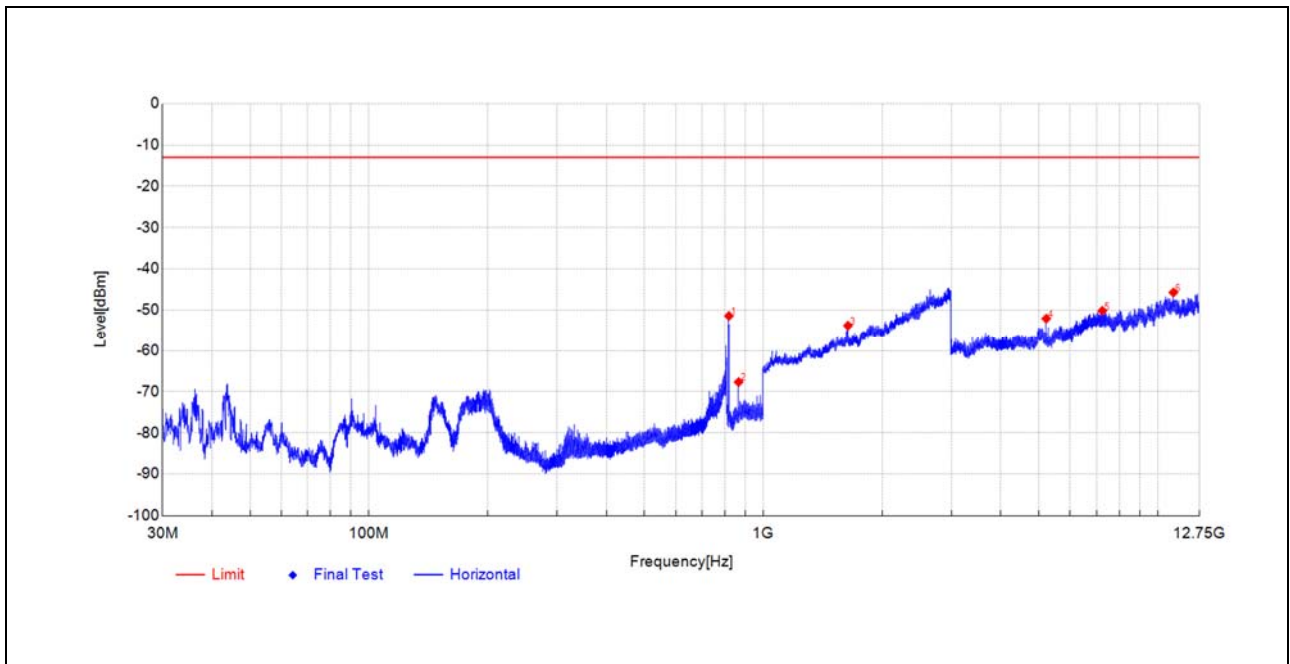


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
43.8232	-53.73	-69.01	-15.3	-13.0	56.0	Horizontal	PK	PASS
814.5752	-45.35	-51.31	-6.0	-	-	Horizontal	PK	NA
1631.7263	-55.97	-53.00	3.0	-13.0	40.0	Horizontal	PK	PASS
5124.1437	-59.65	-53.82	5.8	-13.0	40.8	Horizontal	PK	PASS
7975.1863	-63.03	-49.71	13.3	-13.0	36.7	Horizontal	PK	PASS
12524.276	-68.42	-45.04	23.4	-13.0	32.0	Horizontal	PK	PASS

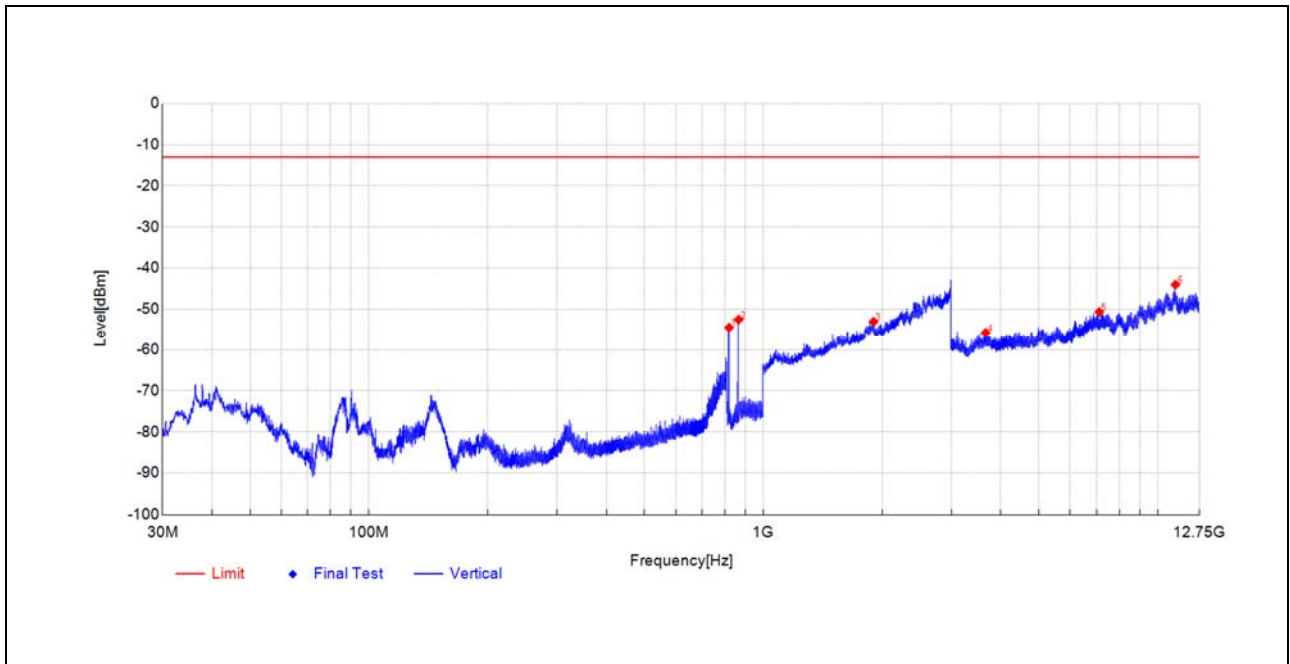


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
143.2047	-48.28	-69.29	-21.0	-13.0	56.3	Vertical	PK	PASS
814.9147	-47.96	-53.71	-5.8	-	-	Vertical	PK	NA
1893.7788	-58.90	-53.01	5.9	-13.0	40.0	Vertical	PK	PASS
3703.0102	-57.11	-55.38	1.7	-13.0	42.4	Vertical	PK	PASS
6789.0395	-61.13	-50.22	10.9	-13.0	37.2	Vertical	PK	PASS
11065.115	-67.20	-44.94	22.3	-13.0	31.9	Vertical	PK	PASS

Plot for Mid Channel

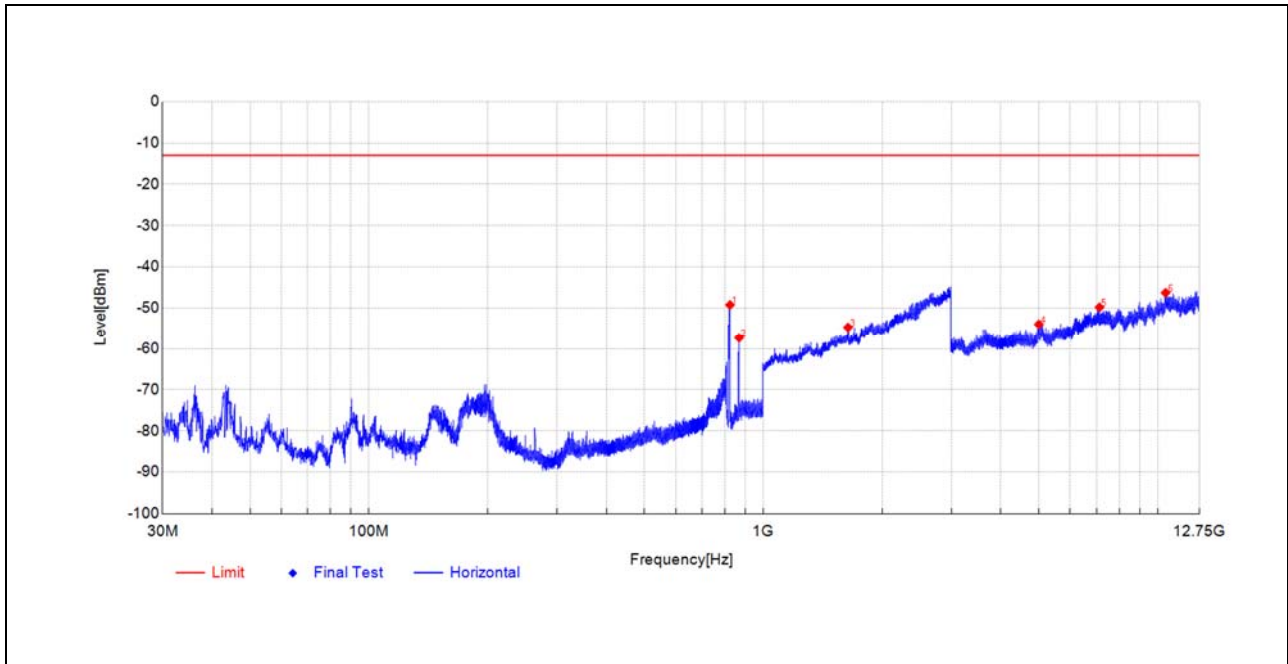


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
818.4554	-45.48	-51.38	-5.9	-	-	Horizontal	PK	NA
866.0848	-62.74	-67.64	-4.9	-	-	Horizontal	PK	NA
1639.3279	-56.57	-53.75	2.8	-13.0	40.8	Horizontal	PK	PASS
5217.7484	-57.21	-52.04	5.2	-13.0	39.0	Horizontal	PK	PASS
7236.0993	-62.42	-50.13	12.3	-13.0	37.1	Horizontal	PK	PASS
10962.735	-66.66	-45.69	21.0	-13.0	32.7	Horizontal	PK	PASS

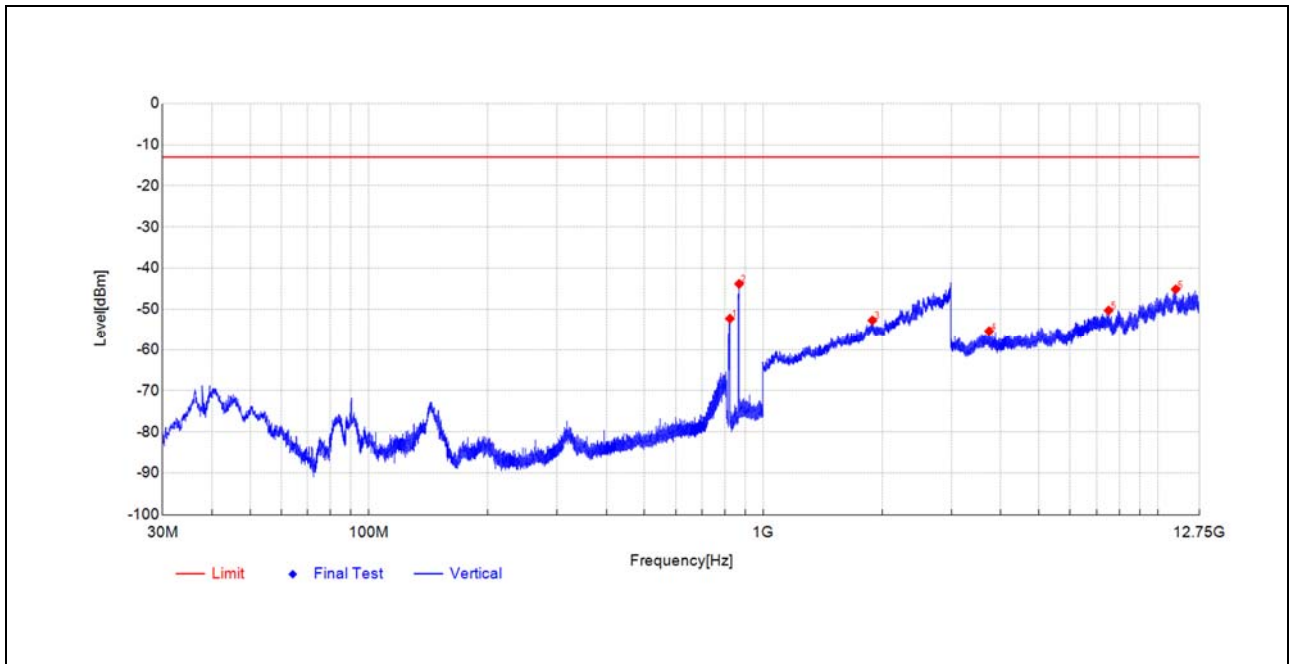


Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
818.9889	-48.63	-54.45	-5.8	-	-	Vertical	PK	NA
866.1818	-47.52	-52.50	-5.0	-	-	Vertical	PK	NA
1903.3807	-58.90	-53.01	5.9	-13.0	40.0	Vertical	PK	PASS
3662.5456	-57.39	-55.72	1.7	-13.0	42.7	Vertical	PK	PASS
7108.3679	-61.68	-50.64	11.0	-13.0	37.6	Vertical	PK	PASS
11093.392	-66.35	-43.97	22.4	-13.0	31.0	Vertical	PK	PASS

Plot for High Channel



Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
823.4027	-43.40	-49.21	-5.8	-	-	Horizontal	PK	NA
868.7039	-52.44	-57.31	-4.9	-	-	Horizontal	PK	NA
1640.128	-57.48	-54.68	2.8	-13.0	41.7	Horizontal	PK	PASS
4996.4123	-59.97	-53.95	6.0	-13.0	41.0	Horizontal	PK	PASS
7120.556	-61.89	-49.78	12.1	-13.0	36.8	Horizontal	PK	PASS
10477.161	-66.00	-46.26	19.7	-13.0	33.3	Horizontal	PK	PASS



Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
823.0632	-46.37	-52.24	-5.9	-	-	Vertical	PK	NA
868.6069	-38.92	-43.81	-4.9	-	-	Vertical	PK	NA
1890.9782	-58.58	-52.68	5.9	-13.0	39.7	Vertical	PK	PASS
3738.1119	-56.67	-55.34	1.3	-13.0	42.3	Vertical	PK	PASS
7510.088	-62.22	-50.26	12.0	-13.0	37.3	Vertical	PK	PASS
11108.017	-67.42	-45.12	22.3	-13.0	32.1	Vertical	PK	PASS



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test items	Uncertainty
Output Power	± 2.22 dB
Bandwidth	$\pm 5\%$
Conducted Spurious Emission	± 2.77 dB
Band Edge	± 2.77 dB
Equivalent Isotropic Radiated Power	± 2.22 dB
Radiated Spurious Emissions	± 6 dB

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2020 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.



REPORT No.: SZ25040205W03

4. Test Equipment Utilized

4.1 Conducted Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
EXA Signal Analyzer	MY51511149	N9020A	Agilent	2024.06.19	2025.06.18
Communication Test Station	6200995016	MT8820C	Anritsu	2024.09.11	2025.09.10
Temperature Chamber	S022177101 00089002	KMT-36LF 1A0	KOMEG	2024.09.11	2025.09.10

4.2 List of Software Used

Description	Manufacturer	Software Version
MOR-2023E Test System	MORLAB	V7.99
JS36-RSE	Tonscend	5.0.0

**4.3 Radiated Test Equipment**

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
System Simulator	152038	CMW500	R&S	2024.09.11	2025.09.10
Signal Analyzer	MY56060145	N9020A	Agilent	2025.05.13	2026.05.12
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.07.26	2025.07.25
				2025.06.28	2026.06.27
Test Antenna - Horn	9120D-963	BBHA 9120D	Schwarzbeck	2025.05.16	2026.05.15
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2025.05.13	2026.05.12
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK- 0.5	Qualwave	2024.09.11	2025.09.10
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KK F-2	Qualwave	2024.09.11	2025.09.10
Preamplifier (10MHz-6GHz)	46732	S10M100L380 2	LUCIX CORP.	2025.05.13	2026.05.12
Preamplifier (2GHz-18GHz)	61171/61172	S020180L320 3	LUCIX CORP.	2025.05.13	2026.05.12
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-4 0C-S	Decentest	2025.05.13	2026.05.12
Notch Filter	N/A	WRCGV -LTE 26	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2025.04.19	2028.04.18
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.11.30	2025.11.29

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