



REPORT No.: SZ24050224W07

TEST REPORT

APPLICANT : Horizon Powered USA Inc.

PRODUCT NAME : 5G Wi-Fi6 AX5400 CPE

MODEL NAME : HZ51

BRAND NAME : Horizon

FCC ID : 2BE94HZ51

STANDARD(S) : 47 CFR Part 2
47 CFR Part 22
47 CFR Part 24
47 CFR Part 27
47 CFR Part 96

RECEIPT DATE : 2024-06-28

TEST DATE : 2024-07-15 to 2024-10-29

ISSUE DATE : 2024-11-22



Edited by:

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Change History		
Version	Date	Reason for change
1.0	2024-11-22	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Horizon Powered USA Inc.
Applicant Address:	8350 NW 52nd Terrace, Suite 301 Miami, Florida 33166 United States
Manufacturer:	Horizon Powered USA Inc.
Manufacturer Address:	8350 NW 52nd Terrace, Suite 301 Miami, Florida 33166 United States

1.2. Equipment Under Test (EUT) Description

Product Name:	5G Wi-Fi6 AX5400 CPE	
Sample No.:	3#	
Hardware Version:	V10C	
Software Version:	V1.0.1	
Modulation Type:	QPSK, 16QAM, 64QAM, 256QAM	
Operation Band:	Uplink: 2C; 5B; 7C; 38C; 41C; 48C; 66B; 66C	
Channel Bandwidth:	2C	5MHz+20MHz, 10MHz+15MHz, 10MHz+20MHz, 15MHz+15MHz, 15MHz+20MHz, 20MHz+20MHz
	5B	3MHz+5MHz, 5MHz+3MHz, 5MHz+10MHz, 10MHz+5MHz, 10MHz+10MHz
	7C	15MHz+10MHz, 10MHz+15MHz, 10MHz+20MHz, 20MHz+10MHz, 15MHz+15MHz, 15MHz+20MHz, 20MHz+15MHz, 20MHz+20MHz
	38C	15MHz+15MHz, 20MHz+20MHz
	LTE 41C	5MHz+20MHz, 20MHz+5MHz, 10MHz+15MHz, 15MHz+10MHz, 10MHz+20MHz, 20MHz+10MHz, 15MHz+15MHz, 15MHz+20MHz, 20MHz+15MHz, 20MHz+20MHz
	LTE 48C	5MHz+20MHz, 20MHz+5MHz, 10MHz+20MHz, 20MHz+10MHz, 15MHz+20MHz, 20MHz+15MHz, 20MHz+20MHz



	LTE 66B	5MHz+5MHz, 5MHz+10MHz, 10MHz+5MHz, 5MHz+15MHz, 15MHz+5MHz, 10MHz+10MHz
	LTE 66C	5MHz+20MHz, 20MHz+5MHz, 10MHz+15MHz, 15MHz+10MHz, 10MHz+20MHz, 20MHz+10MHz, 15MHz+15MHz, 15MHz+20MHz, 20MHz+15MHz, 20MHz+20MHz
Antenna Type:	ANT1: Fixed Internal Antenna ANT2: Fixed External Antenna	
Antenna Gain:	Band 2	ANT1: 3.16dBi, ANT2: 0.31dBi
	Band 5	ANT1: 0.80dBi, ANT2: 0.74dBi
	Band 7	ANT1: 2.86dBi, ANT2: -1.46dBi
	Band 38	ANT1: 2.64dBi, ANT2: -0.16dBi
	Band 41	ANT1: 3.46dBi, ANT2: -0.35dBi
	Band 48	ANT1: 3.38dBi
	Band 66	ANT1: 3.17dBi, ANT2: 1.10dBi
Accessory Information:	AC Adapter	
	Brand Name:	N/A
	Model No.:	KA36B-1203000US
	Serial No.:	N/A
	Rated Output:	100-240V~50/60HZ, 1A
	Rated Input:	12V=3A
	Manufacturer:	Shenzhen Keyu Power Supply Technology Co., Ltd.

Note1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

Note 2: The test results of all conducted test items please refer to the module FCC test report (Report No.: 2204RSU037-U1 / 2204RSU037-U2 / 2204RSU037-U3 / 2204RSU037-U4 / 2204RSU037-U5), which issued on Aug. 07, 2022 by MRT Technology (Suzhou) Co., Ltd.

This report have updated the output power (only for LTE 48C), and recording the radiation test results for each frequency band.



1.3. Maximum ERP/EIRP and Emission Designator

EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

ERP (dBm) = EIPR (dBm) - 2.15

Test Band	Channel Bandwidth (MHz)	Modulation	Output Power (dBm)	EIRP (dBm)	EIRP (W)	Limit (dBm)
CA_2C	20+20	QPSK	23.36	26.52	0.449	<33.01
CA_2C	20+15	QPSK	23.34	26.5	0.447	<33.01
CA_2C	15+20	QPSK	23.47	26.63	0.460	<33.01
CA_2C	20+10	QPSK	23.41	26.57	0.454	<33.01
CA_2C	10+20	QPSK	23.58	26.74	0.472	<33.01
CA_2C	20+5	QPSK	23.51	26.67	0.465	<33.01
CA_2C	5+20	QPSK	23.56	26.72	0.470	<33.01
CA_2C	15+15	QPSK	23.37	26.53	0.450	<33.01
CA_2C	10+15	QPSK	23.49	26.65	0.462	<33.01
CA_2C	15+10	QPSK	23.41	26.57	0.454	<33.01
CA_2C	20+20	16QAM	22.78	25.94	0.393	<33.01
CA_2C	20+15	16QAM	22.77	25.93	0.392	<33.01
CA_2C	15+20	16QAM	22.65	25.81	0.381	<33.01
CA_2C	20+10	16QAM	22.73	25.89	0.388	<33.01
CA_2C	10+20	16QAM	22.79	25.95	0.394	<33.01
CA_2C	20+5	16QAM	22.81	25.97	0.395	<33.01
CA_2C	5+20	16QAM	22.88	26.04	0.402	<33.01
CA_2C	15+15	16QAM	22.59	25.75	0.376	<33.01
CA_2C	10+15	16QAM	22.75	25.91	0.390	<33.01
CA_2C	15+10	16QAM	22.75	25.91	0.390	<33.01
CA_2C	20+20	64QAM	21.68	24.84	0.305	<33.01
CA_2C	20+15	64QAM	21.63	24.79	0.301	<33.01
CA_2C	15+20	64QAM	21.78	24.94	0.312	<33.01
CA_2C	20+10	64QAM	21.81	24.97	0.314	<33.01
CA_2C	10+20	64QAM	21.90	25.06	0.321	<33.01
CA_2C	20+5	64QAM	21.81	24.97	0.314	<33.01
CA_2C	5+20	64QAM	22.82	25.98	0.396	<33.01
CA_2C	15+15	64QAM	21.68	24.84	0.305	<33.01
CA_2C	10+15	64QAM	21.78	24.94	0.312	<33.01
CA_2C	15+10	64QAM	21.84	25	0.316	<33.01
CA_2C	20+20	256QAM	19.30	22.46	0.176	<33.01



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CA_2C	20+15	256QAM	19.28	22.44	0.175	<33.01
CA_2C	15+20	256QAM	19.34	22.5	0.178	<33.01
CA_2C	20+10	256QAM	19.34	22.5	0.178	<33.01
CA_2C	10+20	256QAM	19.34	22.5	0.178	<33.01
CA_2C	20+5	256QAM	19.36	22.52	0.179	<33.01
CA_2C	5+20	256QAM	19.37	22.53	0.179	<33.01
CA_2C	15+15	256QAM	19.24	22.4	0.174	<33.01
CA_2C	10+15	256QAM	19.31	22.47	0.177	<33.01
CA_2C	15+10	256QAM	19.33	22.49	0.177	<33.01
CA_5B	5+10	QPSK	23.41	22.06	0.161	<38.45
CA_5B	10+5	QPSK	23.45	22.10	0.162	<38.45
CA_5B	10+10	QPSK	23.44	22.09	0.162	<38.45
CA_5B	5+10	16QAM	22.56	21.21	0.132	<38.45
CA_5B	10+5	16QAM	22.68	21.33	0.136	<38.45
CA_5B	10+10	16QAM	22.62	21.27	0.134	<38.45
CA_5B	5+10	64QAM	21.90	20.55	0.114	<38.45
CA_5B	10+5	64QAM	21.78	20.43	0.110	<38.45
CA_5B	10+10	64QAM	21.64	20.29	0.107	<38.45
CA_5B	5+10	256QAM	19.16	17.81	0.060	<38.45
CA_5B	10+5	256QAM	19.13	17.78	0.060	<38.45
CA_5B	10+10	256QAM	19.12	17.77	0.060	<38.45
CA_7C	20+20	QPSK	23.61	26.47	0.444	<33.01
CA_7C	20+15	QPSK	23.69	26.55	0.452	<33.01
CA_7C	15+20	QPSK	23.64	26.5	0.447	<33.01
CA_7C	15+15	QPSK	23.61	26.47	0.444	<33.01
CA_7C	10+20	QPSK	23.75	26.61	0.458	<33.01
CA_7C	20+10	QPSK	23.79	26.65	0.462	<33.01
CA_7C	15+10	QPSK	23.73	26.59	0.456	<33.01
CA_7C	20+20	16QAM	22.99	25.85	0.385	<33.01
CA_7C	20+15	16QAM	22.92	25.78	0.378	<33.01
CA_7C	15+20	16QAM	22.83	25.69	0.371	<33.01
CA_7C	15+15	16QAM	22.86	25.72	0.373	<33.01
CA_7C	10+20	16QAM	23.01	25.87	0.386	<33.01
CA_7C	20+10	16QAM	22.97	25.83	0.383	<33.01
CA_7C	15+10	16QAM	23.03	25.89	0.388	<33.01
CA_7C	20+20	64QAM	20.96	23.82	0.241	<33.01
CA_7C	20+15	64QAM	21.13	23.99	0.251	<33.01
CA_7C	15+20	64QAM	21.41	24.27	0.267	<33.01



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CA_7C	15+15	64QAM	21.42	24.28	0.268	<33.01
CA_7C	10+20	64QAM	21.17	24.03	0.253	<33.01
CA_7C	20+10	64QAM	21.55	24.41	0.276	<33.01
CA_7C	15+10	64QAM	21.57	24.43	0.277	<33.01
CA_7C	20+20	256QAM	17.91	20.77	0.119	<33.01
CA_7C	20+15	256QAM	17.95	20.81	0.121	<33.01
CA_7C	15+20	256QAM	18.83	21.69	0.148	<33.01
CA_7C	15+15	256QAM	18.21	21.07	0.128	<33.01
CA_7C	10+20	256QAM	18.14	21	0.126	<33.01
CA_7C	20+10	256QAM	18.19	21.05	0.127	<33.01
CA_7C	15+10	256QAM	18.28	21.14	0.130	<33.01
CA_38C	15+15	QPSK	24.30	26.94	0.494	<33.01
CA_38C	20+20	QPSK	24.51	27.15	0.519	<33.01
CA_38C	15+15	16QAM	23.56	26.2	0.417	<33.01
CA_38C	20+20	16QAM	23.62	26.26	0.423	<33.01
CA_38C	15+15	64QAM	22.66	25.3	0.339	<33.01
CA_38C	20+20	64QAM	22.83	25.47	0.352	<33.01
CA_38C	15+15	256QAM	20.14	22.78	0.190	<33.01
CA_38C	20+20	256QAM	20.15	22.79	0.190	<33.01
CA_41C	20+20	QPSK	24.29	27.75	0.596	<33.01
CA_41C	20+15	QPSK	24.29	27.75	0.596	<33.01
CA_41C	15+20	QPSK	23.78	27.24	0.530	<33.01
CA_41C	20+10	QPSK	24.31	27.77	0.598	<33.01
CA_41C	10+20	QPSK	23.72	27.18	0.522	<33.01
CA_41C	20+5	QPSK	24.46	27.92	0.619	<33.01
CA_41C	5+20	QPSK	24.34	27.8	0.603	<33.01
CA_41C	15+15	QPSK	23.71	27.17	0.521	<33.01
CA_41C	10+15	QPSK	23.74	27.2	0.525	<33.01
CA_41C	15+10	QPSK	23.88	27.34	0.542	<33.01
CA_41C	20+20	16QAM	23.46	26.92	0.492	<33.01
CA_41C	20+15	16QAM	23.56	27.02	0.504	<33.01
CA_41C	15+20	16QAM	22.96	26.42	0.439	<33.01
CA_41C	20+10	16QAM	23.62	27.08	0.511	<33.01
CA_41C	10+20	16QAM	22.94	26.4	0.437	<33.01
CA_41C	20+5	16QAM	23.76	27.22	0.527	<33.01
CA_41C	5+20	16QAM	23.22	26.68	0.466	<33.01
CA_41C	15+15	16QAM	22.93	26.39	0.436	<33.01
CA_41C	10+15	16QAM	22.99	26.45	0.442	<33.01



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CA_41C	15+10	16QAM	23.19	26.65	0.462	<33.01
CA_41C	20+20	64QAM	22.54	26	0.398	<33.01
CA_41C	20+15	64QAM	22.72	26.18	0.415	<33.01
CA_41C	15+20	64QAM	22.06	25.52	0.356	<33.01
CA_41C	20+10	64QAM	22.78	26.24	0.421	<33.01
CA_41C	10+20	64QAM	22.08	25.54	0.358	<33.01
CA_41C	20+5	64QAM	22.78	26.24	0.421	<33.01
CA_41C	5+20	64QAM	22.28	25.74	0.375	<33.01
CA_41C	15+15	64QAM	22.07	25.53	0.357	<33.01
CA_41C	10+15	64QAM	22.04	25.5	0.355	<33.01
CA_41C	15+10	64QAM	22.25	25.71	0.372	<33.01
CA_41C	20+20	256QAM	20.08	23.54	0.226	<33.01
CA_41C	20+15	256QAM	20.11	23.57	0.228	<33.01
CA_41C	15+20	256QAM	19.78	23.24	0.211	<33.01
CA_41C	20+10	256QAM	20.14	23.6	0.229	<33.01
CA_41C	10+20	256QAM	19.63	23.09	0.204	<33.01
CA_41C	20+5	256QAM	20.25	23.71	0.235	<33.01
CA_41C	5+20	256QAM	19.85	23.31	0.214	<33.01
CA_41C	15+15	256QAM	19.66	23.12	0.205	<33.01
CA_41C	10+15	256QAM	19.62	23.08	0.203	<33.01
CA_41C	15+10	256QAM	19.68	23.14	0.206	<33.01
CA_66B	5+5	QPSK	23.57	26.74	0.472	<30
CA_66B	5+10	QPSK	23.52	26.69	0.467	<30
CA_66B	10+5	QPSK	23.35	26.52	0.449	<30
CA_66B	5+15	QPSK	23.65	26.82	0.481	<30
CA_66B	15+5	QPSK	23.55	26.72	0.470	<30
CA_66B	10+10	QPSK	23.65	26.82	0.481	<30
CA_66B	5+5	16QAM	22.98	26.15	0.412	<30
CA_66B	5+10	16QAM	22.77	25.94	0.393	<30
CA_66B	10+5	16QAM	22.65	25.82	0.382	<30
CA_66B	5+15	16QAM	22.81	25.98	0.396	<30
CA_66B	15+5	16QAM	22.88	26.05	0.403	<30
CA_66B	10+10	16QAM	22.82	25.99	0.397	<30
CA_66B	5+5	64QAM	21.92	25.09	0.323	<30
CA_66B	5+10	64QAM	21.76	24.93	0.311	<30
CA_66B	10+5	64QAM	21.68	24.85	0.305	<30
CA_66B	5+15	64QAM	21.83	25	0.316	<30
CA_66B	15+5	64QAM	21.94	25.11	0.324	<30



CA_66B	10+10	64QAM	21.96	25.13	0.326	<30
CA_66B	5+5	256QAM	19.33	22.5	0.178	<30
CA_66B	5+10	256QAM	19.22	22.39	0.173	<30
CA_66B	10+5	256QAM	19.21	22.38	0.173	<30
CA_66B	5+15	256QAM	19.23	22.4	0.174	<30
CA_66B	15+5	256QAM	19.32	22.49	0.177	<30
CA_66B	10+10	256QAM	19.30	22.47	0.177	<30
CA_66C	10+15	QPSK	23.39	26.56	0.453	<30
CA_66C	15+10	QPSK	23.31	26.48	0.445	<30
CA_66C	10+20	QPSK	23.46	26.63	0.460	<30
CA_66C	20+10	QPSK	23.21	26.38	0.435	<30
CA_66C	15+20	QPSK	23.22	26.39	0.436	<30
CA_66C	20+15	QPSK	23.28	26.45	0.442	<30
CA_66C	20+5	QPSK	23.29	26.46	0.443	<30
CA_66C	5+20	QPSK	23.32	26.49	0.446	<30
CA_66C	15+15	QPSK	23.27	26.44	0.441	<30
CA_66C	20+20	QPSK	23.31	26.48	0.445	<30
CA_66C	10+15	16QAM	22.52	25.69	0.371	<30
CA_66C	15+10	16QAM	22.56	25.73	0.374	<30
CA_66C	10+20	16QAM	22.66	25.83	0.383	<30
CA_66C	20+10	16QAM	22.68	25.85	0.385	<30
CA_66C	15+20	16QAM	22.54	25.71	0.372	<30
CA_66C	20+15	16QAM	22.51	25.68	0.370	<30
CA_66C	20+5	16QAM	22.57	25.74	0.375	<30
CA_66C	5+20	16QAM	22.56	25.73	0.374	<30
CA_66C	15+15	16QAM	22.56	25.73	0.374	<30
CA_66C	20+20	16QAM	22.64	25.81	0.381	<30
CA_66C	10+15	64QAM	21.63	24.8	0.302	<30
CA_66C	15+10	64QAM	21.55	24.72	0.296	<30
CA_66C	10+20	64QAM	21.69	24.86	0.306	<30
CA_66C	20+10	64QAM	21.56	24.73	0.297	<30
CA_66C	15+20	64QAM	21.83	25	0.316	<30
CA_66C	20+15	64QAM	21.62	24.79	0.301	<30
CA_66C	20+5	64QAM	21.45	24.62	0.290	<30
CA_66C	5+20	64QAM	21.54	24.71	0.296	<30
CA_66C	15+15	64QAM	21.66	24.83	0.304	<30
CA_66C	20+20	64QAM	21.62	24.79	0.301	<30
CA_66C	10+15	256QAM	19.03	22.2	0.166	<30



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CA_66C	15+10	256QAM	18.96	22.13	0.163	<30
CA_66C	10+20	256QAM	19.11	22.28	0.169	<30
CA_66C	20+10	256QAM	19.52	22.69	0.186	<30
CA_66C	15+20	256QAM	19.16	22.33	0.171	<30
CA_66C	20+15	256QAM	19.01	22.18	0.165	<30
CA_66C	20+5	256QAM	18.96	22.13	0.163	<30
CA_66C	5+20	256QAM	19.06	22.23	0.167	<30
CA_66C	15+15	256QAM	19.09	22.26	0.168	<30
CA_66C	20+20	256QAM	19.09	22.26	0.168	<30

Channel bandwidth	Maximum ERP/EIRP (W)			
CA_48C	QPSK	16QAM	64QAM	256QAM
20+20	0.150	/	/	/



1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2, Part 22, Part 24, Part 27, Part 90 and Part 96 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 22	Public Mobile Services
3	47 CFR Part 24	Personal Communications Services
4	47 CFR Part 27	Miscellaneous Wireless Communications Services
6	47 CFR Part 96	CITIZENS BROADBAND RADIO SERVICE

B2			
Item	FCC Rule No.	Requirements	Result
Effective (Isotropic) Radiated Power Output Data	§2.1046, §24.232(c)	$EIRP \leq 2\text{ W}$	PASS
Peak-Average Ratio	§24.232(d)	Limit $\leq 13\text{ dB}$	PASS
Bandwidth	§2.1049	OBW: No limit EBW: No limit	PASS
Band Edges Compliance	§2.1051, §24.238(a)(b)	Refer to section 2.6	PASS
Spurious Emission at Antenna Terminals	§2.1051, §24.238(a)(b)	$\leq -13\text{ dBm/1MHz}$	PASS
Field Strength of Spurious Radiation	§2.1053, §24.238(a)	$\leq -13\text{ dBm/1MHz}$	PASS
Frequency Stability	§2.1055, §24.235	No limit	N/A



B4 & B66			
Item	FCC Rule No.	Requirements	Result
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(d)(4)	EIRP ≤ 1 W	PASS
Peak-Average Ratio	§27.50(d) (5)	Limit ≤ 13 dB	PASS
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	PASS
Band Edges Compliance	§2.1051, §27.53(h)(1) §27.53(h)(3)(i)	Refer to section 2.6	PASS
Spurious Emission at Antenna Terminals	§2.1051, §27.53(h)(1)	≤ -13 dBm/1MHz	PASS
Field Strength of Spurious Radiation	§2.1053, §27.53(h)(1)	≤ -13 dBm/1MHz.	PASS
Frequency Stability	§2.1055, §27.54	No limit	N/A

B5			
Item	FCC Rule No.	Requirements	Result
Effective (Isotropic) Radiated Power Output Data	§2.1046, §22.913(a)(5)	ERP ≤ 7 W	PASS
Peak-Average Ratio	N/A	N/A	N/A
Bandwidth	§2.1049	OBW: No limit EBW: No limit	PASS
Band Edges Compliance	§2.1051, §22.917(a)(b)	Refer to section 2.6	PASS
Spurious Emission at Antenna Terminals	§2.1051, §22.917(a)	≤ -13 dBm/1MHz	PASS
Field Strength of Spurious Radiation	§2.1053, §22.355	≤ -13 dBm/1MHz	PASS
Frequency Stability	§2.1055, §22.355	$\leq \pm 2.5$ ppm	PASS



B7 & 38 & B41			
Item	FCC Rule No.	Requirements	Result
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(h)(2)	EIRP ≤2W	PASS
Peak-Average Ratio	N/A	N/A	N/A
Bandwidth	§2.1049	OBW: No limit EBW: No limit	PASS
Band Edges Compliance	§2.1051, §27.53(m)(4)	Refer to section 2.6	PASS
Spurious Emission at Antenna Terminals	§2.1051, §27.53(m)(4)	≤ -25 dBm/1MHz	PASS
Field Strength of Spurious Radiation	§2.1053, §27.53(m)(4)	≤ -25 dBm/1MHz	PASS
Frequency Stability	§2.1055, §27.54	No limit	N/A

B48			
Item	FCC Rule No.	Requirements	Result
Effective (Isotropic) Radiated Power Output Data	§2.1046, §96.41(b)	Refer to section 2.1	PASS
Peak-Average Ratio	N/A	N/A	N/A
Bandwidth	§2.1049	OBW: No limit EBW: No limit	PASS
Band Edges Compliance	§2.1051, §96.41(e)	Refer to section 2.6	PASS
Spurious Emission at Antenna Terminals	§2.1051, §96.41(e)	≤ -40 dBm/1MHz	PASS
Field Strength of Spurious Radiation	§2.1053, §96.41(e)	≤ -40 dBm/1MHz	PASS
Frequency Stability	§2.1055, §27.54	No limit	N/A



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

Test Item	Test Date	Test Engineer	Result	Method Determination /Remark
Radiated Spurious Emissions	Jul.15.2024 Oct.29.2024	Gao Jianrou	PASS	No deviation
Note 1: The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 and ANSI/TIA-603-E-2016. Note 2: The path loss during the RF test is calibrated to correct the results by the offset setting in the test equipment. The ref offset 23.5dB contains two parts that cable loss 13.5dB and Attenuator 10dB.				



1.5. Environmental Conditions

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

Temperature (°C):	15-35
Relative Humidity (%):	30-60

2. Summary Test Results and Description

2.1. Transmitter Conducted Output Power

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 24.232 (c) for LTE Band 2, Mobile and portable stations are limited to 2 watts E.I.R.P. and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to FCC section 27.50 (d)(4) for LTE Band 4/66, Fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat E.I.R.P.

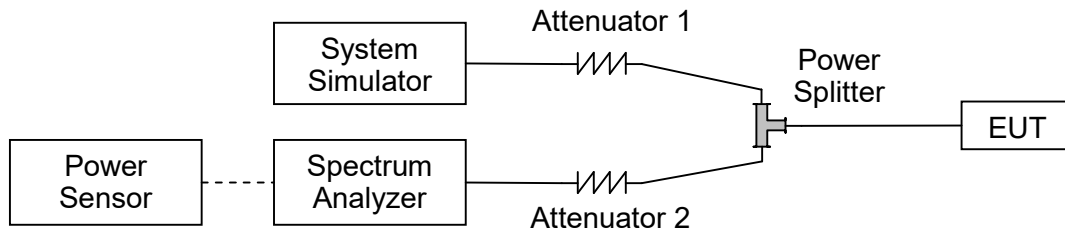
According to FCC section 27.50 (h)(2) for LTE Band 7/38/41, Mobile and other user stations. Mobile stations are limited to 2 watts E.I.R.P. All user stations are limited to 2 watts transmitter output power.

According to FCC section 22.913 (a)(2) for LTE Band 5, the E.R.P. of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 96.41(b) for LTE Band 48, the maximum effective isotropic radiated power (EIRP) and maximum Power Spectral Density (PSD) of any CBSD and End User Device must comply with the limits shown in the table in this paragraph (b):

Device	Maximum EIRP (dBm/10 megahertz)	Maximum PSD (dBm/MHz)
End User Device	23	n/a
Category A CBSD	30	20
Category B CBSD ¹	47	37

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.

2.1.4. Result

CA_48C								
Combination:20MHz+20MHz(100RB+100RB)								
PCC Channel	SCC Channel	Modulation	PCC		SCC		Total RB Size	Measured Power(dBm)
			RB Size	RB Offset	RB Size	RB Offset		
55340	55538	QPSK	1	0	0	0	1	15.75
55891	56089	QPSK	1	0	0	0	1	15.89
56442	56640	QPSK	1	0	0	0	1	16.31
55340	55538	16QAM	1	0	0	0	1	16.25
55891	56089	16QAM	1	0	0	0	1	16.46
56442	56640	16QAM	1	0	0	0	1	16.94
55340	55538	64QAM	1	0	0	0	1	16.27
55891	56089	64QAM	1	0	0	0	1	16.37
56442	56640	64QAM	1	0	0	0	1	16.24
55340	55538	256QAM	1	0	0	0	1	14.18
55891	56089	256QAM	1	0	0	0	1	14.36
56442	56640	256QAM	1	0	0	0	1	14.81
55340	55538	QPSK	50	0	0	0	1	17.95



55891	56089	QPSK	50	0	0	0	1	18.17
56442	56640	QPSK	50	0	0	0	1	18.39

Effective Radiated Power and Effective Isotropic Radiated Power

LTE CA_48C											
Combination:20MHz+20MHz(100RB+100RB)											
PCC Chan nel	PCC UL Fre. (MH z)	SCC Chan nel	SCC UL Fre. (MH z)	Modula tion	PCC		SCC		Tot al RB Siz e	Measure d Power(d Bm)	Measu red EIRP(W)
					RB Size	RB Offset	RB Size	RB Offset			
5534 0	356 0.0	5553 8	357 9.8	QPSK	1	0	100	0	1	19.13	0.082
5589 1	361 5.1	5608 9	363 4.9	QPSK	1	0	100	0	1	19.27	0.085
5644 2	367 0.2	5664 0	369 0.0	QPSK	1	0	100	0	1	19.69	0.093
5534 0	356 0.0	5553 8	357 9.8	16QAM	1	0	0	0	1	19.63	0.092
5589 1	361 5.1	5608 9	363 4.9	16QAM	1	0	0	0	1	19.84	0.096
5644 2	367 0.2	5664 0	369 0.0	16QAM	1	0	0	0	1	20.32	0.108
5534 0	356 0.0	5553 8	357 9.8	64QAM	1	0	0	0	1	19.65	0.092
5589 1	361 5.1	5608 9	363 4.9	64QAM	1	0	0	0	1	19.75	0.094
5644 2	367 0.2	5664 0	369 0.0	64QAM	1	0	0	0	1	19.62	0.092
5534 0	356 0.0	5553 8	357 9.8	256QA M	1	0	0	0	1	17.56	0.057
5589 1	361 5.1	5608 9	363 4.9	256QA M	1	0	0	0	1	17.74	0.059
5644 2	367 0.2	5664 0	369 0.0	256QA M	1	0	0	0	1	18.19	0.066
5534 0	356 0.0	5553 8	553 40	QPSK	50	0	0	0	1	21.33	0.136
5589	361	5608	558	QPSK	50	0	0	0	1	21.55	0.143



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1	5.1	9	91								
5644	367	5664	564	QPSK	50	0	0	0	1	21.77	0.150
2	0.2	0	42								



2.2. Radiated Spurious Emissions

2.2.1. 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.

Additional requirement for LTE Band 2:

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.

Additional requirement for LTE Band 4/66:

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB. This calculated to be -13dBm.

Additional requirement for LTE Band 5:

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.

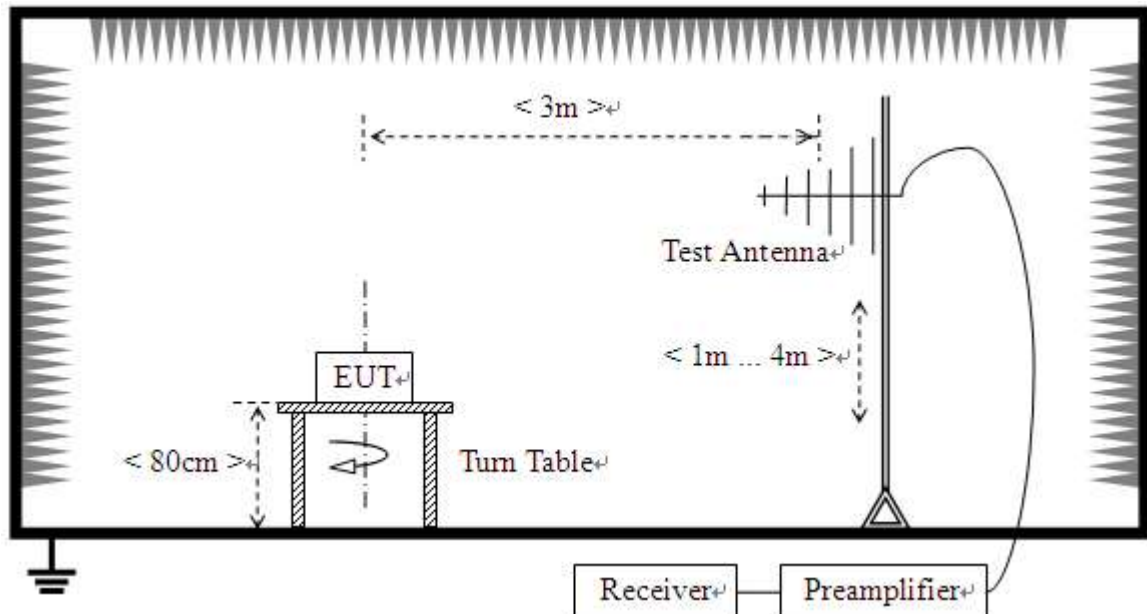
Additional requirement for LTE Band 7/38/41:

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 $55 + 10 \log(P)$ dB. This calculated to be -25dBm.

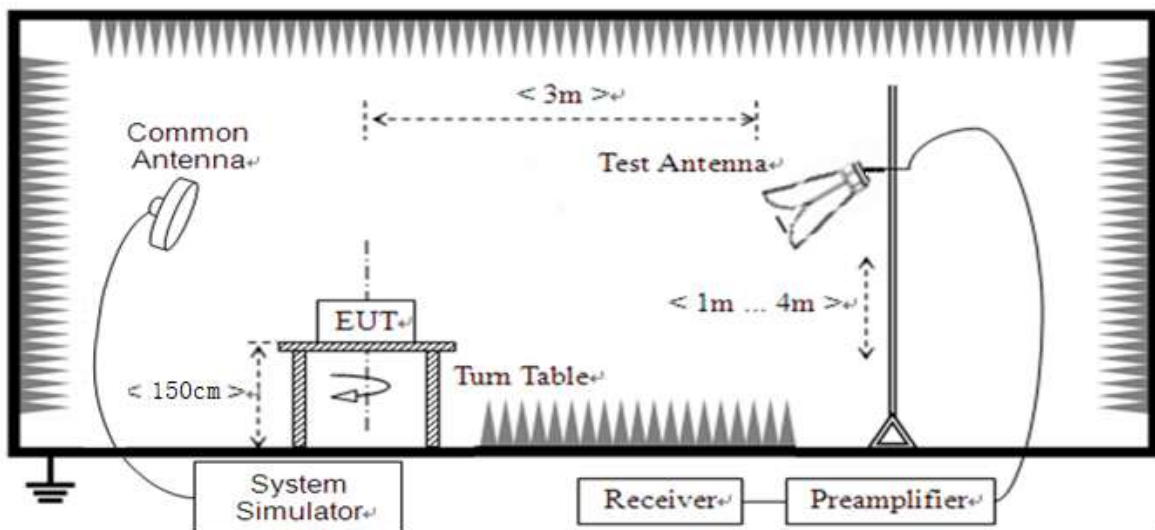
Additional requirement for LTE Band 48:

According to FCC section 96.41(e), the conducted power of emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

2.2.2. 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.

2.2.3. Test Procedure

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

2.2.4. 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.

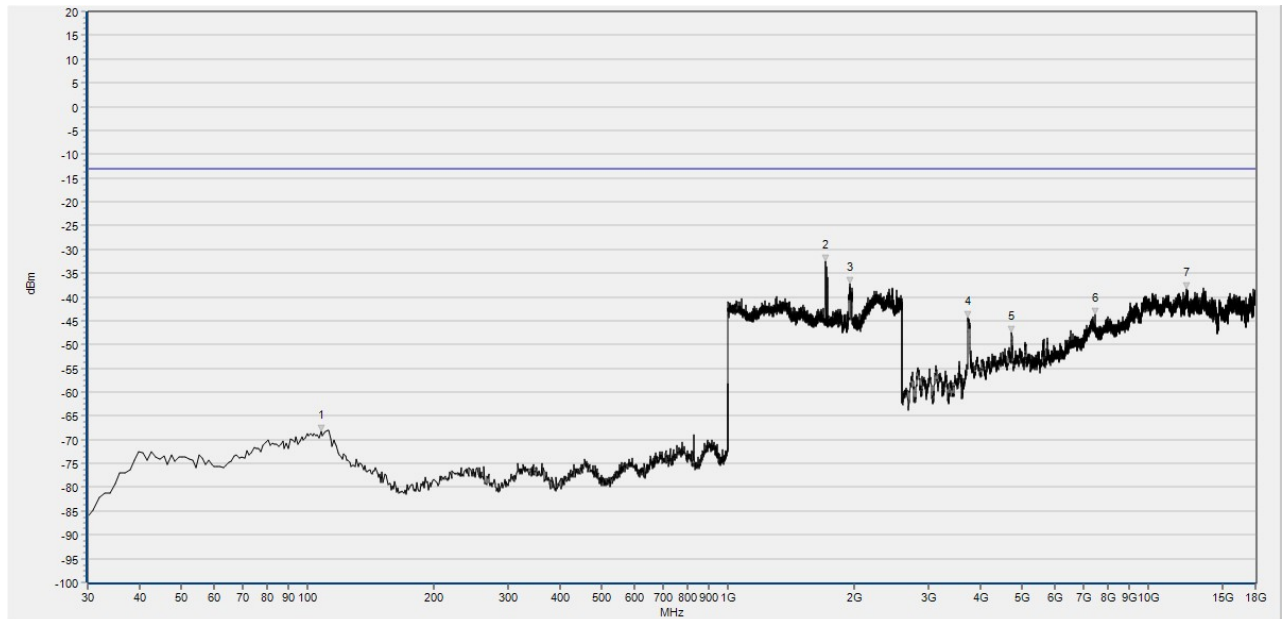
Note3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band; only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

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



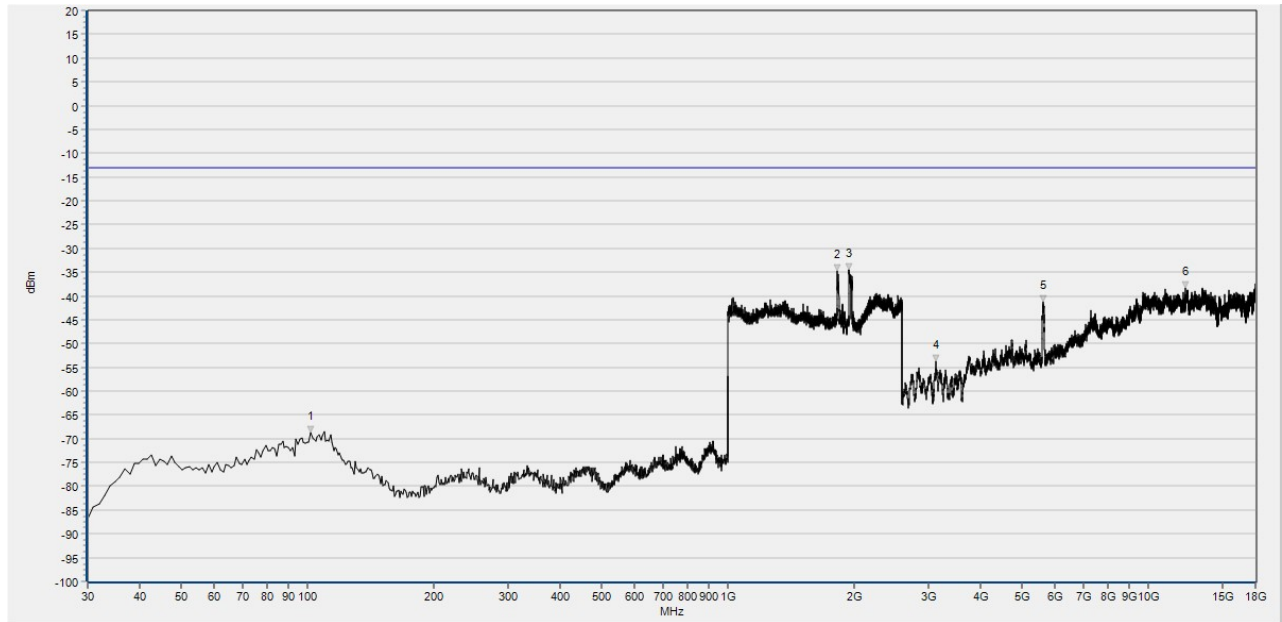
Internal Antenna

CA_2C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	107.600	-68.37	-13.00	360.0	H	PASS
2	1710.684	-32.52	-13.00	360.0	H	N/A
3	1953.341	-37.12	-13.00	360.0	H	N/A
4	3728.605	-44.40	-13.00	150.6	H	N/A
5	4736.789	-47.45	-13.00	0.0	H	PASS
6	7481.288	-43.74	-13.00	83.7	H	PASS

CA_2C Mid 30M-18G H

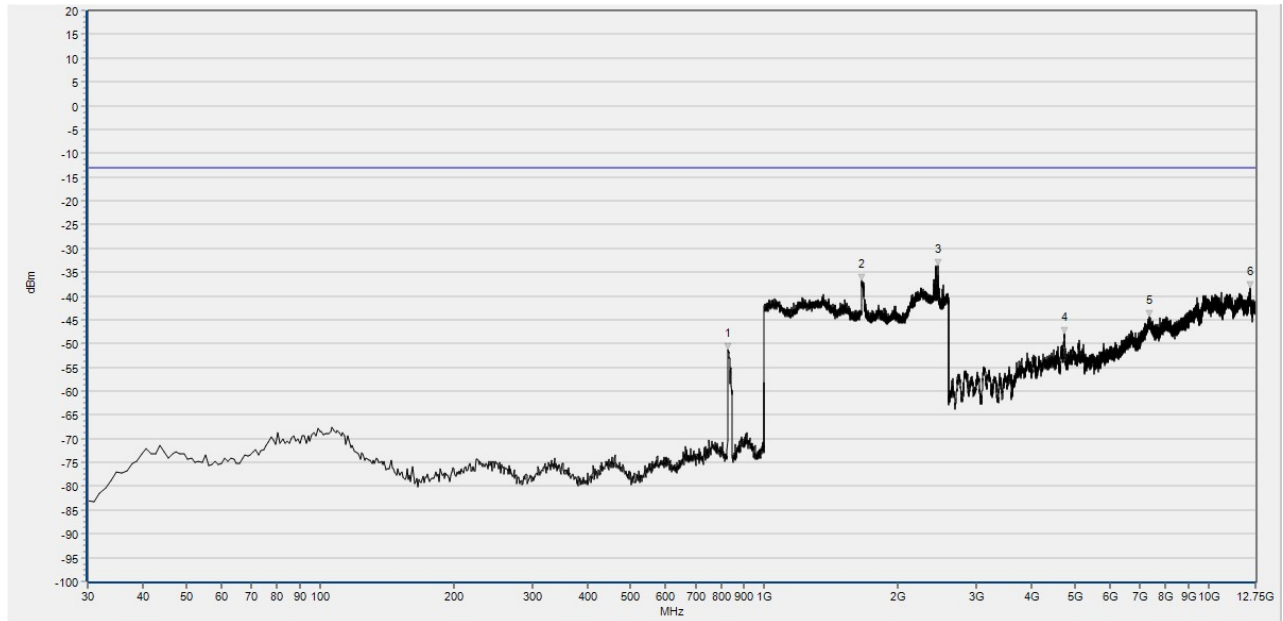


Num	Freq (MHz)	PK	limit PK	Degree	Antenna	Verdict
1	101.780	-68.64	-13.00	360.0	V	PASS
2	1824.010	-34.79	-13.00	360.0	V	NA
3	1941.817	-34.62	-13.00	360.0	V	NA
4	3126.496	-53.77	-13.00	349.9	V	PASS
5	5638.552	-41.20	-13.00	58.8	V	PASS
6	12292.562	-38.37	-13.00	335.1	V	PASS

CA_2C Mid 30M-18G V

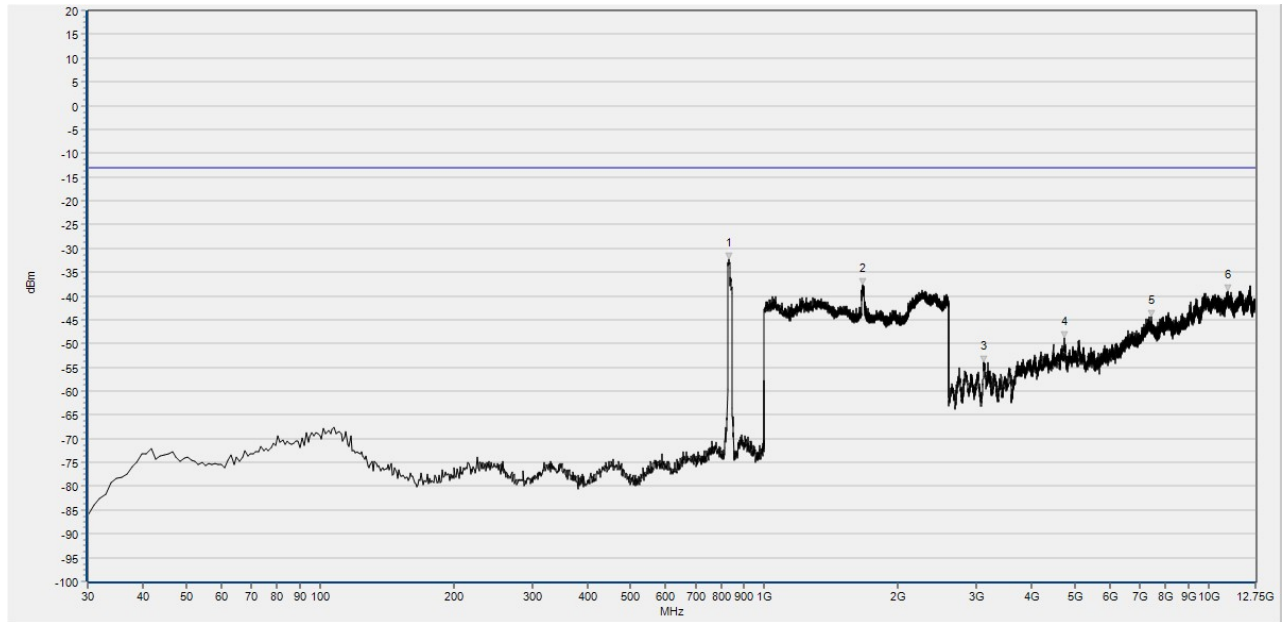


CA_5B



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	829.280	-51.38	-13.00	0.0	H	NA
2	1658.824	-36.80	-13.00	131.6	H	PASS
3	2465.546	-33.65	-13.00	1.4	H	PASS
4	4731.888	-48.04	-13.00	145.6	H	PASS
5	7351.064	-44.44	-13.00	202.2	H	PASS
6	12408.529	-38.41	-13.00	119.0	H	PASS

CA_5B Mid 30M-12.75G H

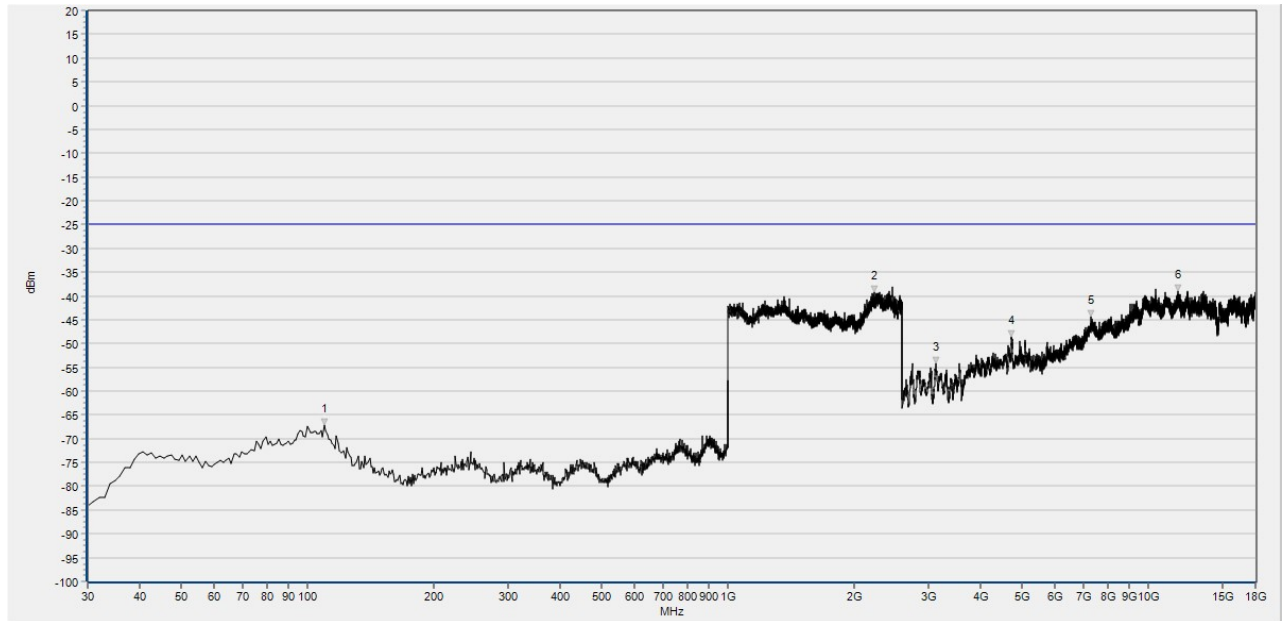


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	832.190	-32.28	-13.00	0.0	V	NA
2	1667.147	-37.57	-13.00	139.4	V	PASS
3	3116.821	-53.98	-13.00	323.7	V	PASS
4	4739.271	-48.87	-13.00	31.0	V	PASS
5	7443.353	-44.38	-13.00	136.2	V	PASS
6	11072.177	-38.89	-13.00	31.0	V	PASS

CA_5B Mid 30M-12.75G V

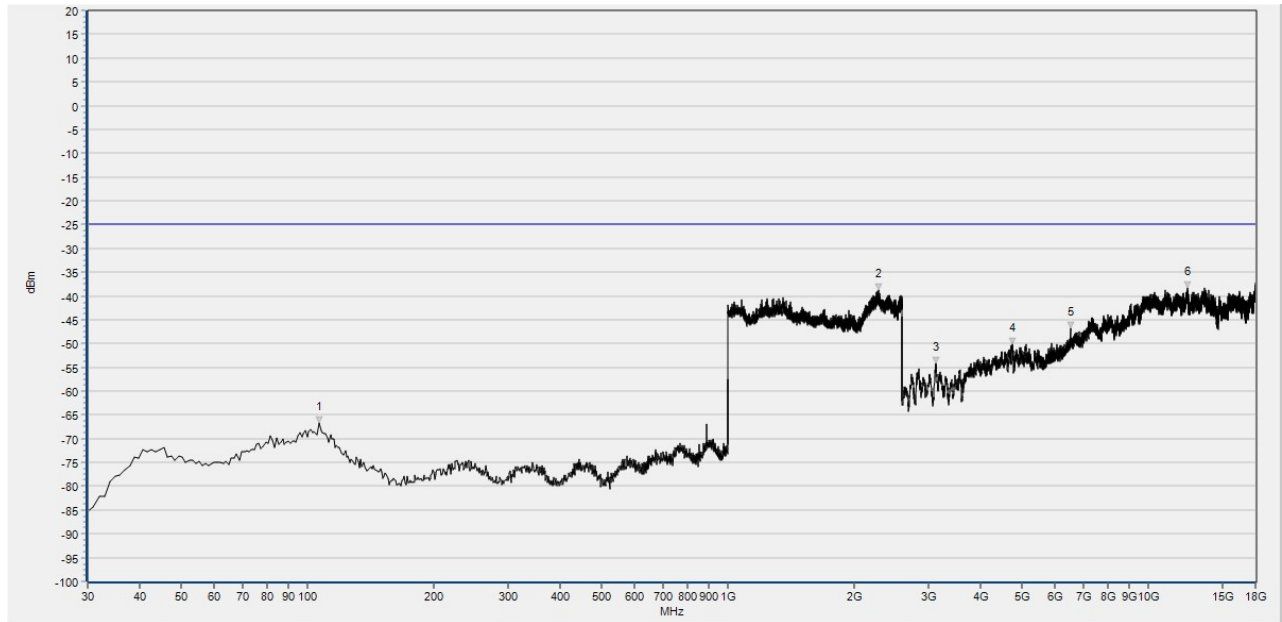


CA_7C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	109.540	-67.23	-25.00	0.0	H	PASS
2	2234.414	-39.21	-25.00	0.0	H	PASS
3	3123.695	-54.22	-25.00	291.6	H	PASS
4	4736.789	-48.60	-25.00	171.5	H	PASS
5	7299.254	-44.46	-25.00	145.1	H	PASS
6	11780.069	-39.07	-25.00	355.2	H	PASS

CA_7C Mid 30M-18G H

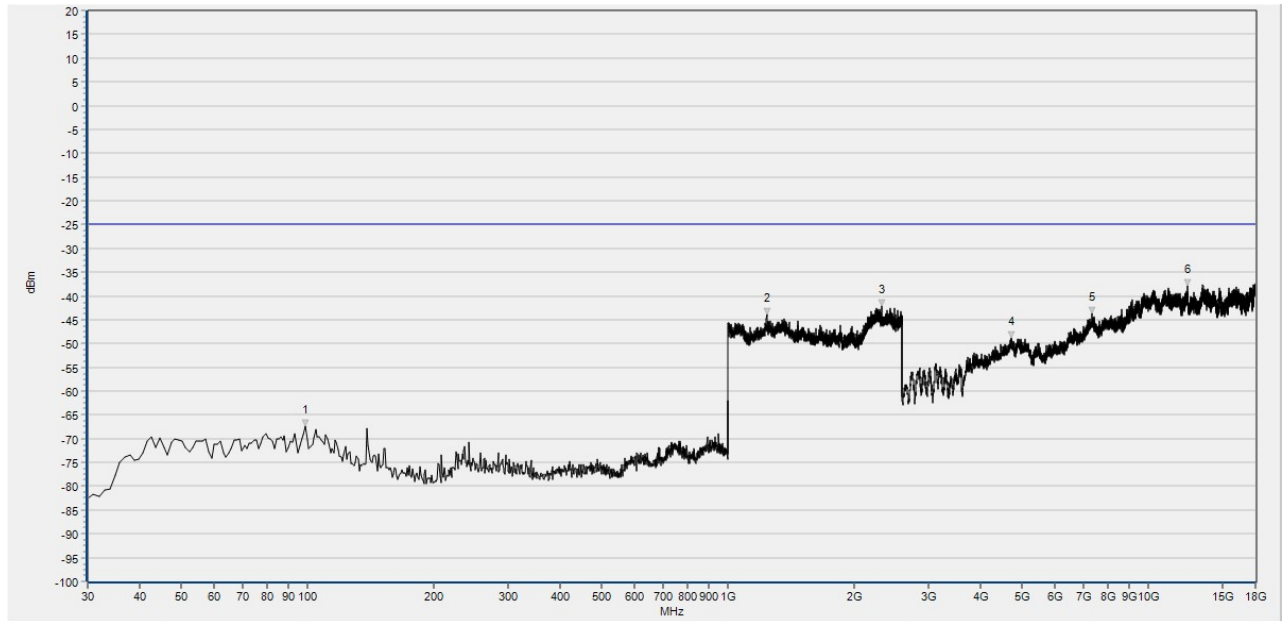


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	106.630	-66.78	-25.00	0.0	V	PASS
2	2283.073	-38.83	-25.00	0.0	V	PASS
3	3129.296	-54.25	-25.00	181.6	V	PASS
4	4745.190	-50.27	-25.00	181.6	V	PASS
5	6526.314	-46.83	-25.00	355.2	V	PASS
6	12376.578	-38.33	-25.00	115.8	V	PASS

CA_7C Mid 30M-18G V

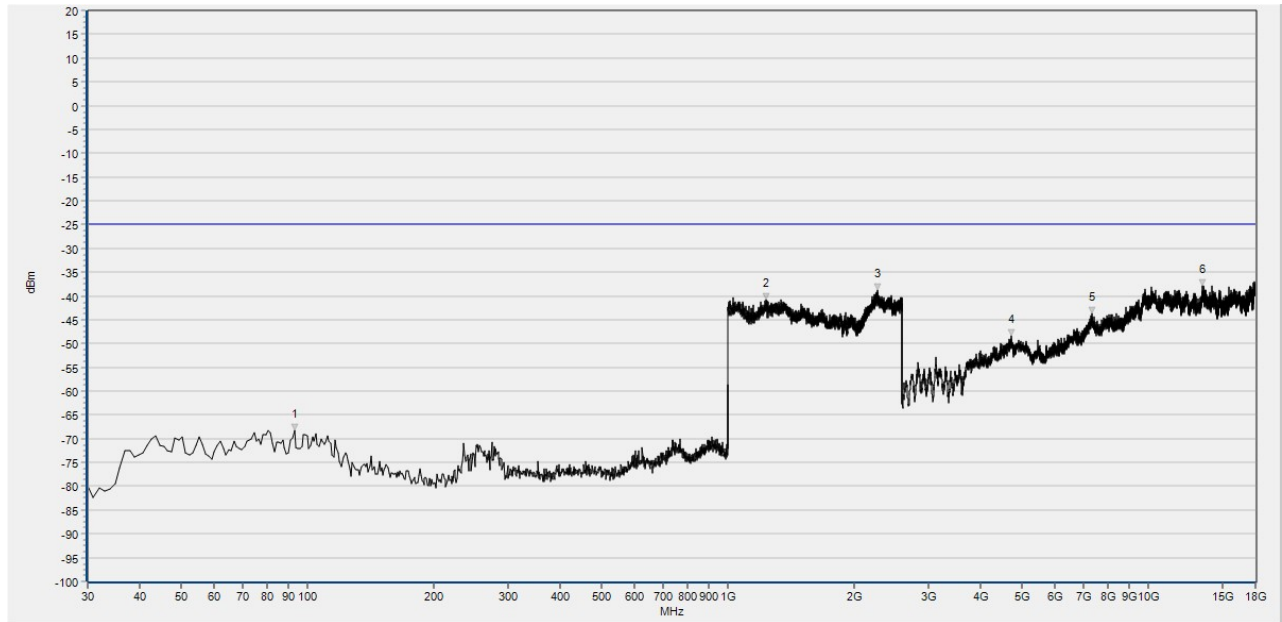


CA_38C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	98.870	-67.31	-25.00	360.0	H	PASS
2	1236.895	-43.97	-25.00	360.0	H	PASS
3	2325.970	-42.09	-25.00	360.0	H	PASS
4	4728.387	-48.75	-25.00	303.3	H	PASS
5	7332.861	-43.66	-25.00	234.3	H	PASS
6	12407.383	-37.98	-25.00	111.3	H	PASS

CA_38C Mid 30M-18G H

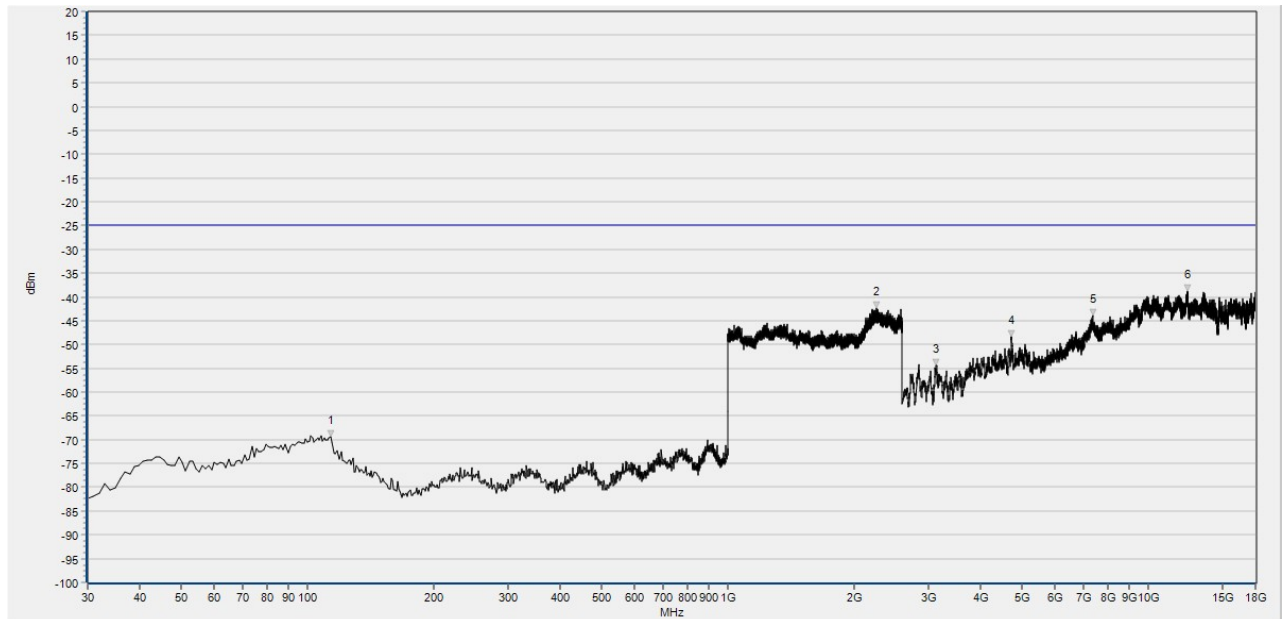


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	93.050	-68.20	-25.00	0.0	V	PASS
2	1235.614	-40.74	-25.00	0.0	V	PASS
3	2267.707	-38.78	-25.00	0.0	V	PASS
4	4714.384	-48.37	-25.00	9.6	V	PASS
5	7335.661	-43.59	-25.00	139.6	V	PASS
6	13491.180	-37.87	-25.00	64.6	V	PASS

CA_38C Mid 30M-18G V



CA_41C

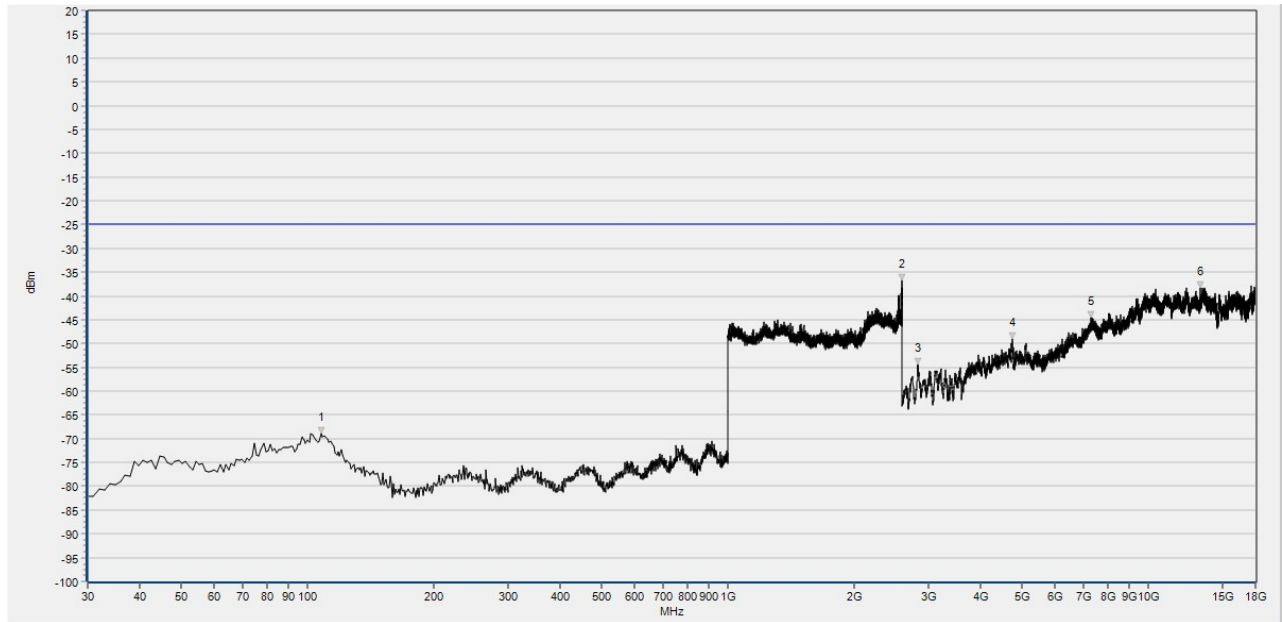


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	113.504	-69.36	-25.00	360.0	H	PASS
2	2254.818	-42.30	-25.00	360.0	H	PASS
3	3132.947	-54.35	-25.00	135.3	H	PASS
4	4728.706	-48.48	-25.00	264.7	H	PASS
5	7374.955	-43.91	-25.00	351.2	H	PASS
6	12390.198	-38.77	-25.00	110.0	H	PASS

CA_41C Mid 30M-18G H



REPORT No.: SZ24050224W07



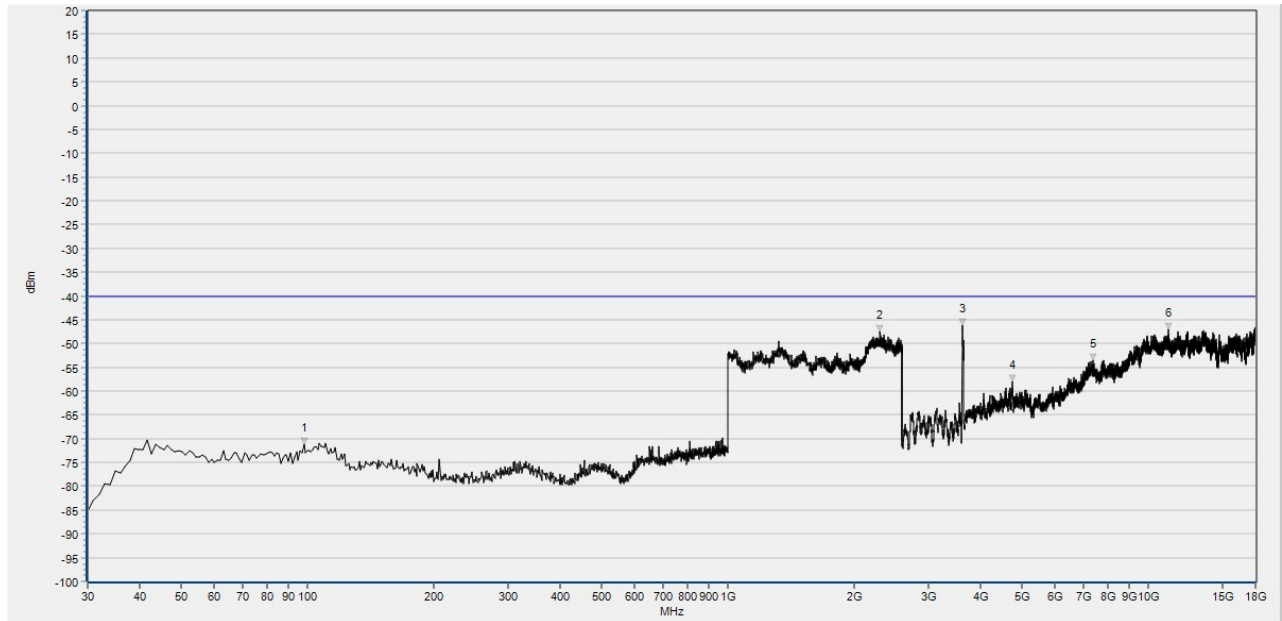
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	107.678	-68.85	-25.00	360.0	V	PASS
2	2590.930	-36.84	-25.00	360.0	V	NA
3	2827.966	-54.43	-25.00	98.0	V	PASS
4	4747.189	-49.03	-25.00	253.9	V	PASS
5	7316.423	-44.51	-25.00	203.3	V	PASS
6	13280.496	-38.40	-25.00	228.6	V	PASS

CA_41C Mid 30M-18G V



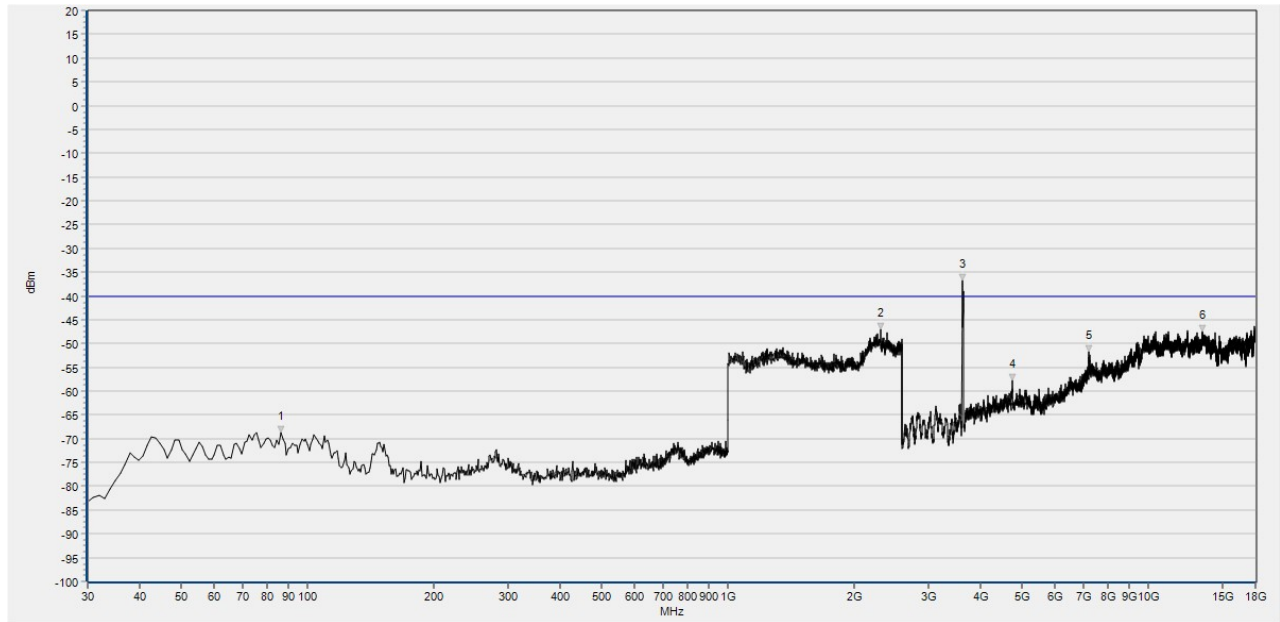
REPORT No.: SZ24050224W07

CA_48C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	97.968	-71.27	-40.00	0.0	H	PASS
2	2303.704	-47.54	-40.00	0.0	H	PASS
3	3616.603	-46.15	-40.00	1.9	H	NA
4	4744.109	-58.06	-40.00	109.8	H	PASS
5	7408.842	-53.52	-40.00	132.7	H	PASS
6	11167.193	-47.12	-40.00	101.6	H	PASS

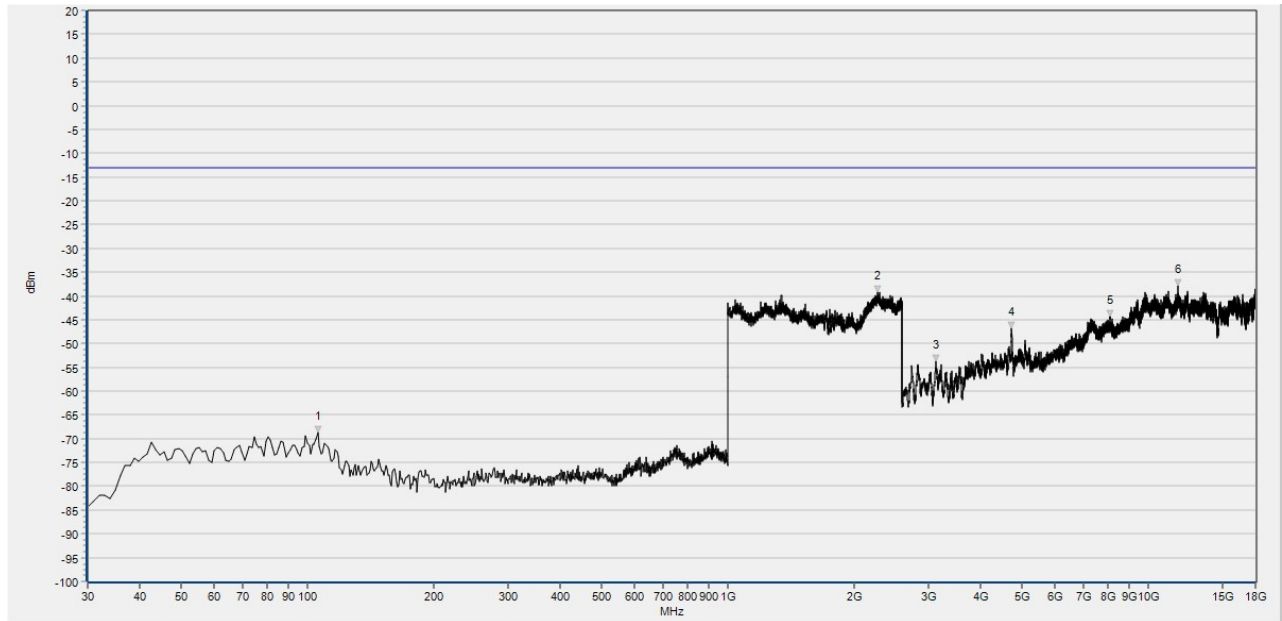
CA_48C Mid 30M-18G H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	86.316	-68.82	-40.00	360.0	V	PASS
2	2306.907	-47.04	-40.00	360.0	V	PASS
3	3613.523	-36.73	-40.00	135.1	V	NA
4	4747.189	-57.77	-40.00	167.9	V	PASS
5	7236.327	-51.73	-40.00	151.6	V	PASS
6	13493.059	-47.40	-40.00	15.5	V	PASS

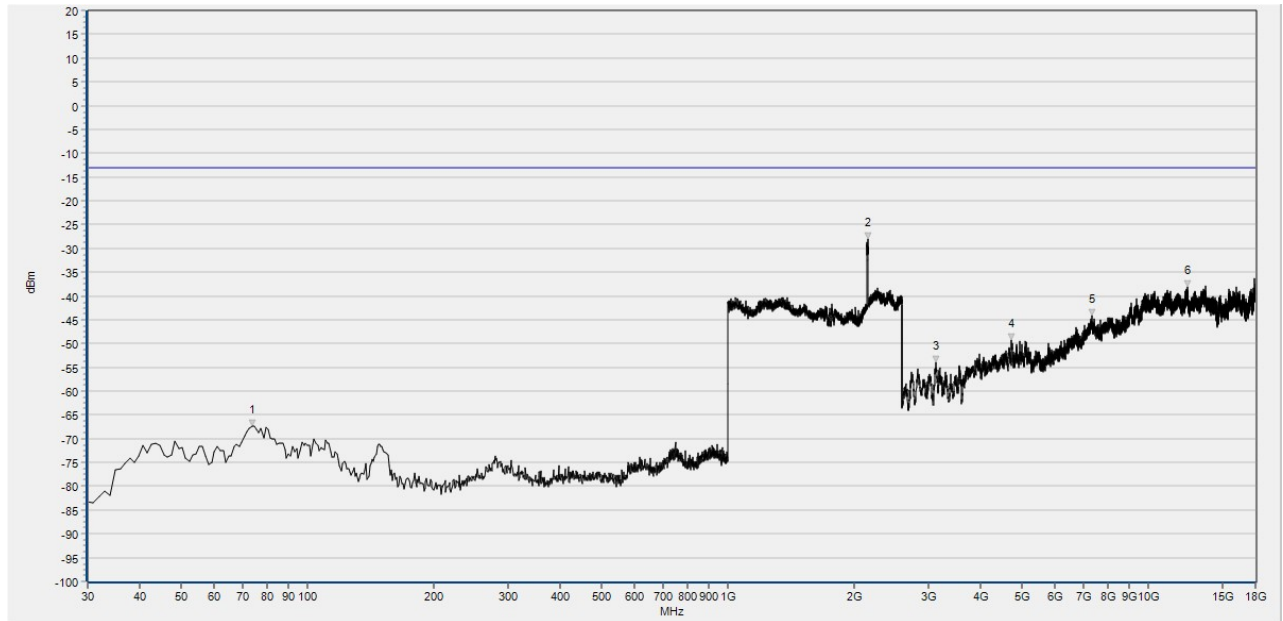
CA_48C Mid 30M-18G V

CA_66B



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	105.736	-68.79	-13.00	0.0	H	PASS
2	2271.836	-39.30	-13.00	0.0	H	PASS
3	3121.120	-53.75	-13.00	346.7	H	PASS
4	4738.390	-46.88	-13.00	123.9	H	PASS
5	8114.119	-44.33	-13.00	11.2	H	PASS
6	11764.527	-37.97	-13.00	292.0	H	PASS

CA_66B Mid 30M-18G H

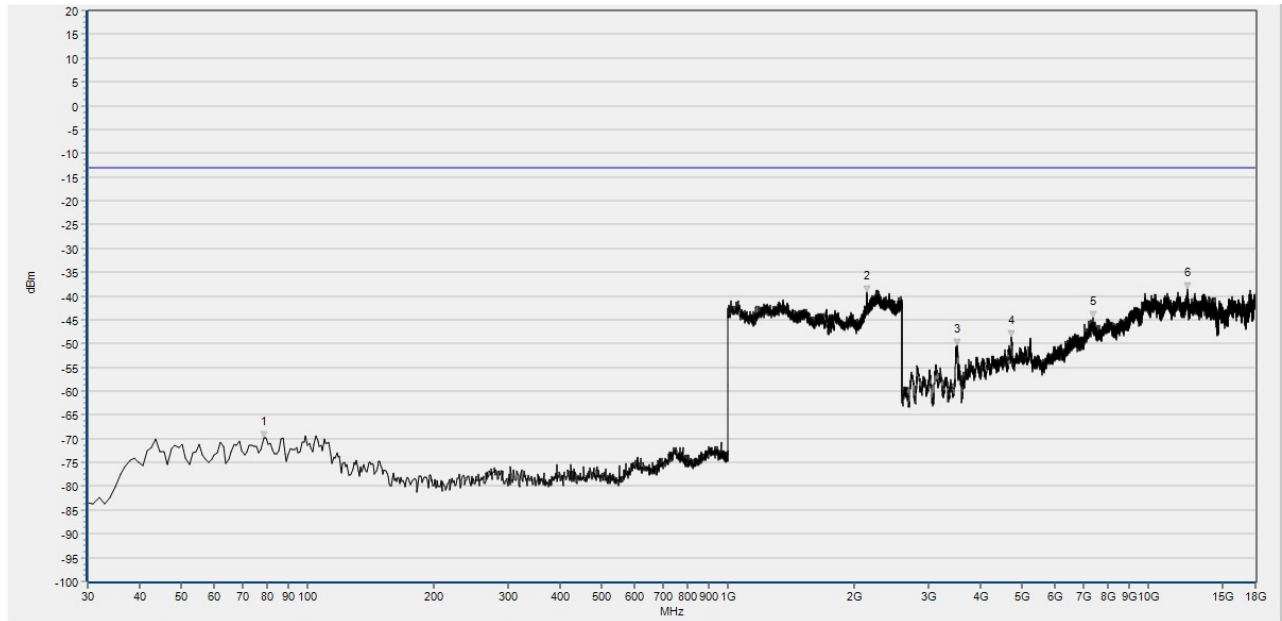


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	73.694	-67.46	-13.00	360.0	V	PASS
2	2153.377	-27.98	-13.00	79.8	V	NA
3	3121.120	-54.00	-13.00	99.4	V	PASS
4	4733.256	-49.34	-13.00	99.4	V	PASS
5	7367.095	-44.03	-13.00	329.4	V	PASS
6	12380.630	-38.15	-13.00	156.2	V	PASS

CA_66B Mid 30M-18G V

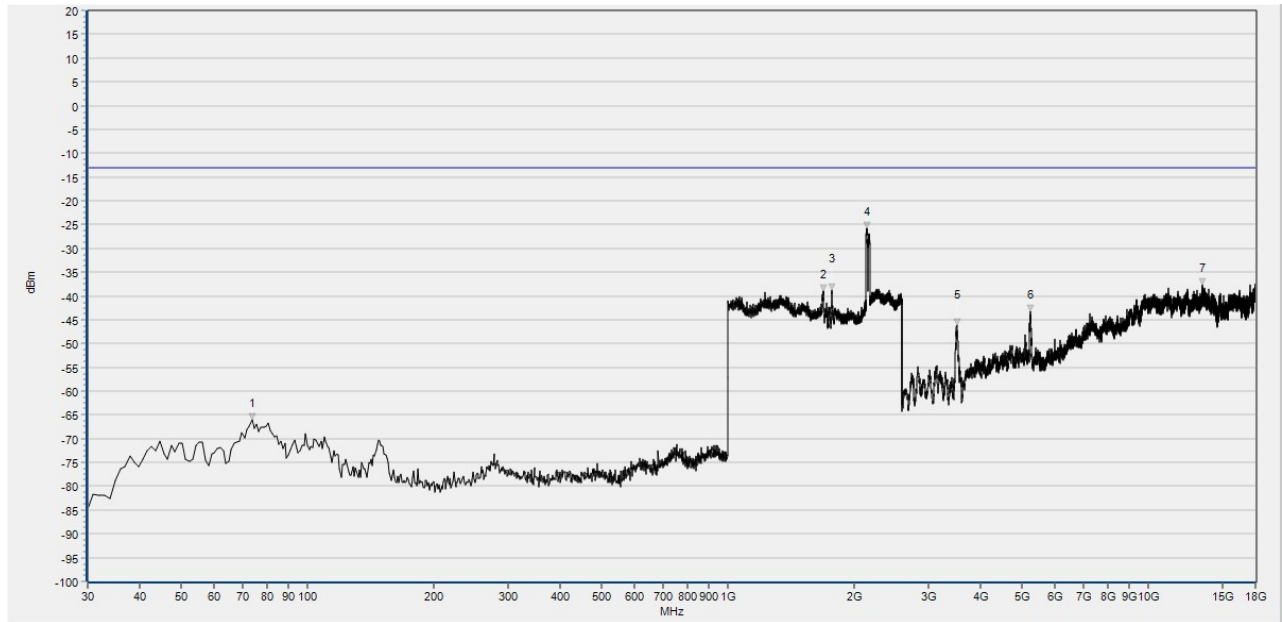


CA_66C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	78.549	-69.88	-13.00	360.0	H	PASS
2	2138.169	-39.30	-13.00	360.0	H	NA
3	3521.587	-50.48	-13.00	162.0	H	PASS
4	4733.256	-48.57	-13.00	63.8	H	PASS
5	7403.034	-44.68	-13.00	288.5	H	PASS
6	12406.301	-38.52	-13.00	316.8	H	PASS

CA_66C Mid 30M-18G H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	73.694	-65.95	-13.00	360.0	V	PASS
2	1684.342	-38.91	-13.00	343.6	V	PASS
3	1768.384	-38.85	-13.00	47.2	V	NA
4	2136.568	-25.80	-13.00	83.7	V	NA
5	3503.617	-46.24	-13.00	2.2	V	PASS
6	5249.242	-43.27	-13.00	89.7	V	PASS

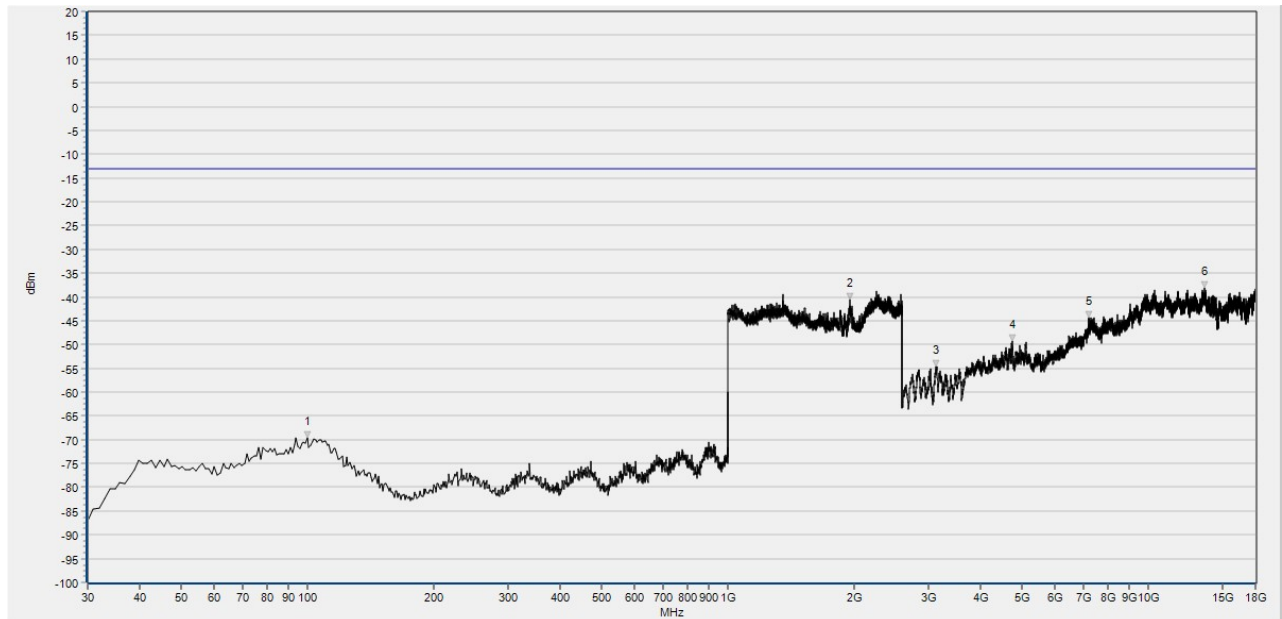
CA_66C Mid 30M-18G V



REPORT No.: SZ24050224W07

external antenna

CA_2C

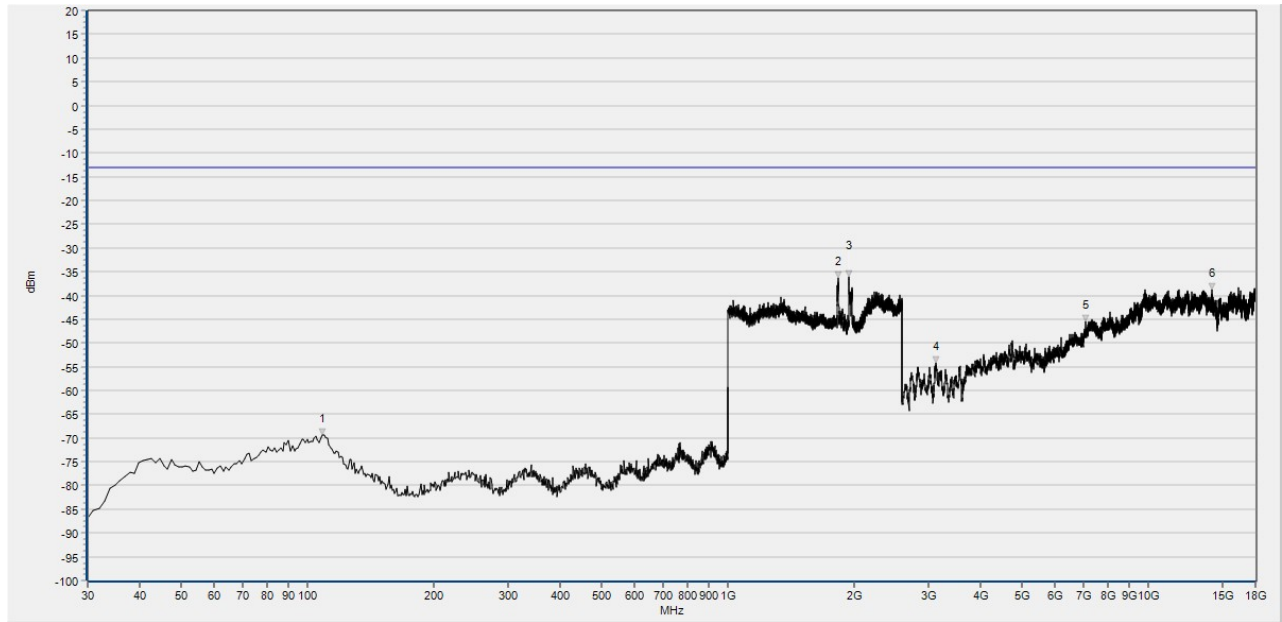


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	99.840	-69.50	-13.00	0.0	H	PASS
2	1955.262	-40.46	-13.00	0.0	H	NA
3	3129.296	-54.62	-13.00	212.7	H	PASS
4	4742.390	-49.32	-13.00	298.2	H	PASS
5	7234.843	-44.35	-13.00	221.6	H	PASS
6	13586.398	-38.08	-13.00	124.6	H	PASS

CA_2C Mid 30M-18G H



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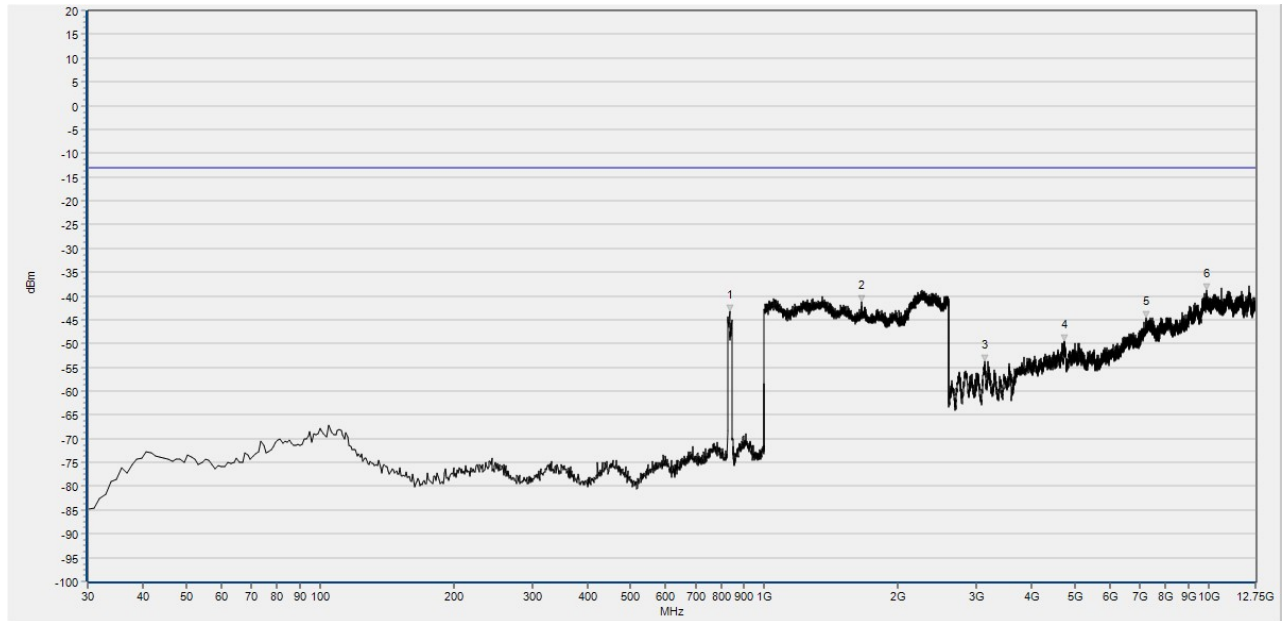
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	108.570	-69.41	-13.00	360.0	V	PASS
2	1833.613	-36.32	-13.00	360.0	V	NA
3	1942.457	-36.17	-13.00	360.0	V	NA
4	3120.895	-54.18	-13.00	169.8	V	PASS
5	7108.820	-45.47	-13.00	161.2	V	PASS
6	14188.507	-38.87	-13.00	284.2	V	PASS

CA_2C Mid 30M-18G V



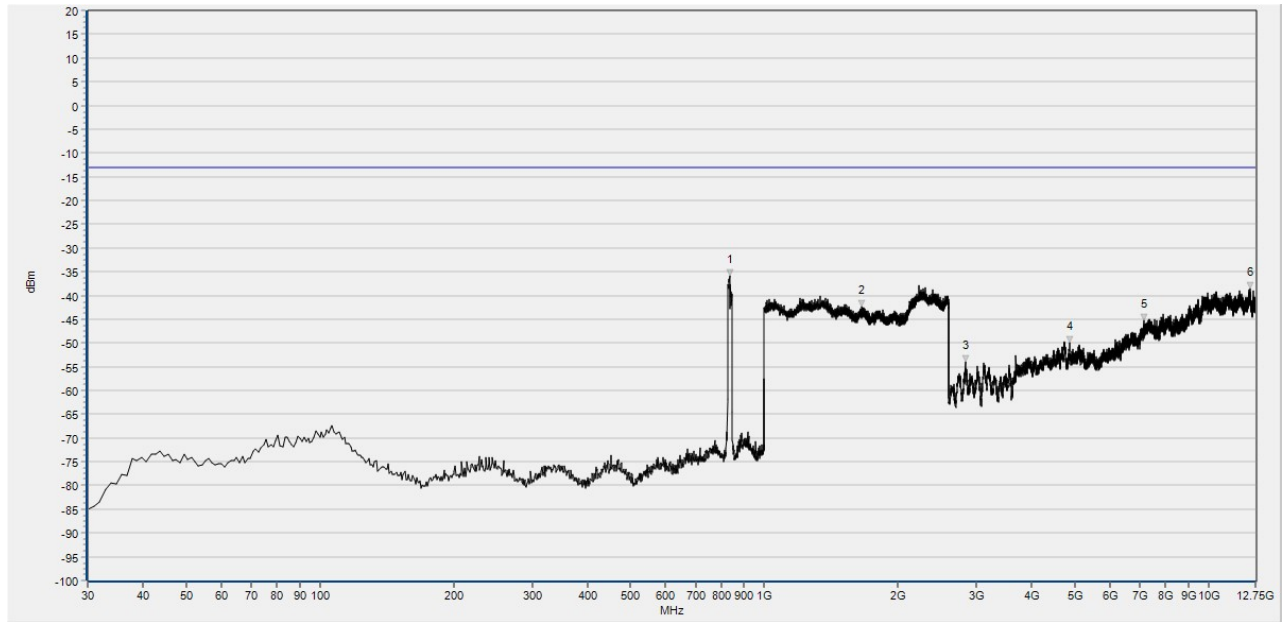
REPORT No.: SZ24050224W07

CA_5B



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	835.100	-43.16	-13.00	360.0	H	NA
2	1656.263	-41.12	-13.00	315.9	H	PASS
3	3135.279	-53.74	-13.00	329.8	H	PASS
4	4746.654	-49.47	-13.00	60.9	H	PASS
5	7232.933	-44.49	-13.00	329.8	H	PASS
6	9890.871	-38.86	-13.00	60.9	H	PASS

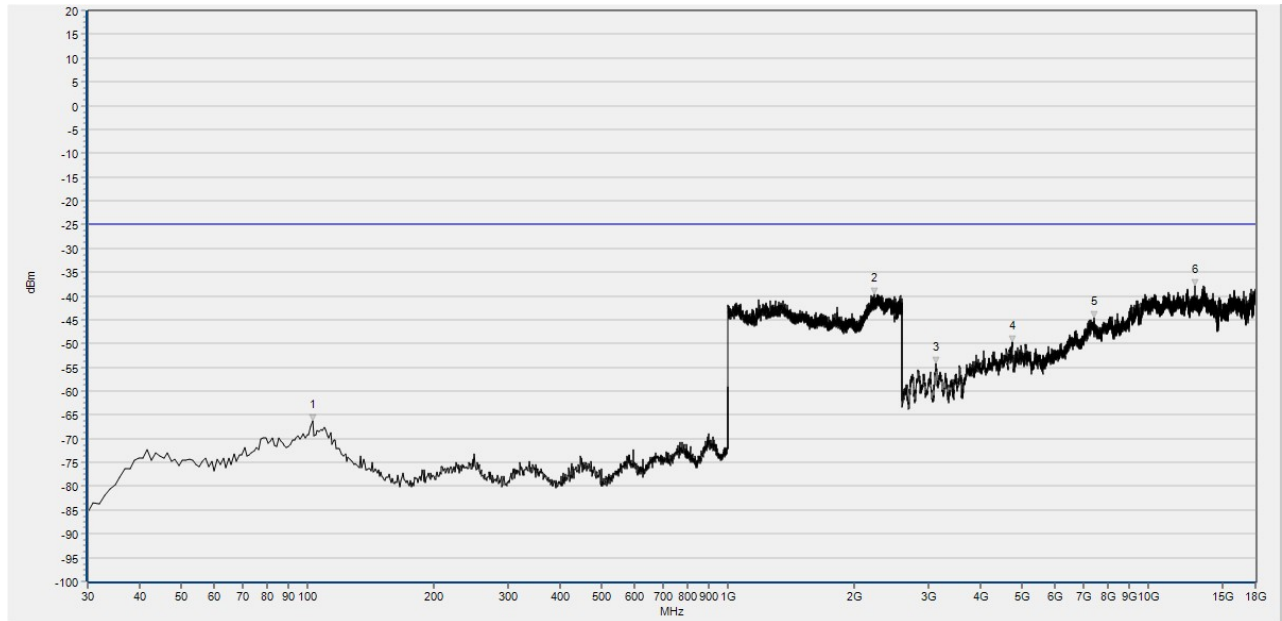
CA_5B Mid 30M-12.75G H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	835.100	-35.90	-13.00	360.0	V	NA
2	1660.104	-42.25	-13.00	131.1	V	PASS
3	2832.570	-54.08	-13.00	331.5	V	PASS
4	4857.401	-49.88	-13.00	26.6	V	PASS
5	7136.952	-45.25	-13.00	348.7	V	PASS
6	12371.613	-38.49	-13.00	9.3	V	PASS

CA_5B Mid 30M-12.75G V

CA_7C

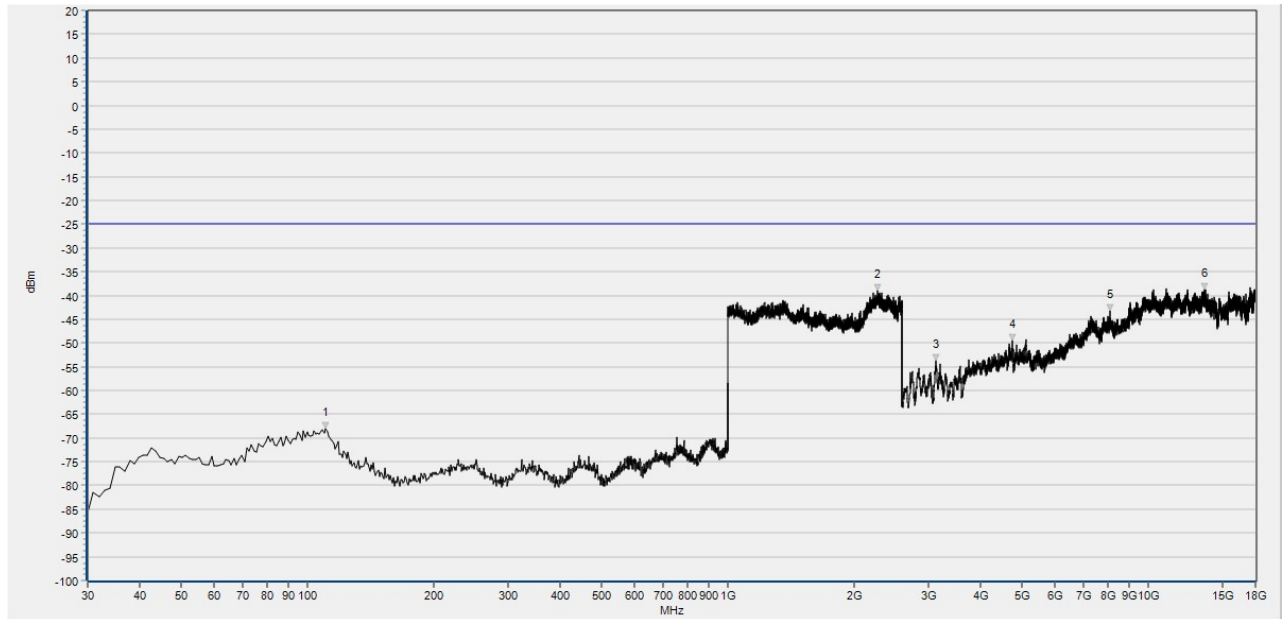


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	102.750	-66.36	-25.00	0.0	H	PASS
2	2228.651	-39.74	-25.00	0.0	H	PASS
3	3123.695	-54.25	-25.00	206.8	H	PASS
4	4745.190	-49.68	-25.00	311.3	H	PASS
5	7447.681	-44.49	-25.00	8.8	H	PASS
6	12925.477	-37.79	-25.00	35.8	H	PASS

CA_7C Mid 30M-18G H



REPORT No.: SZ24050224W07



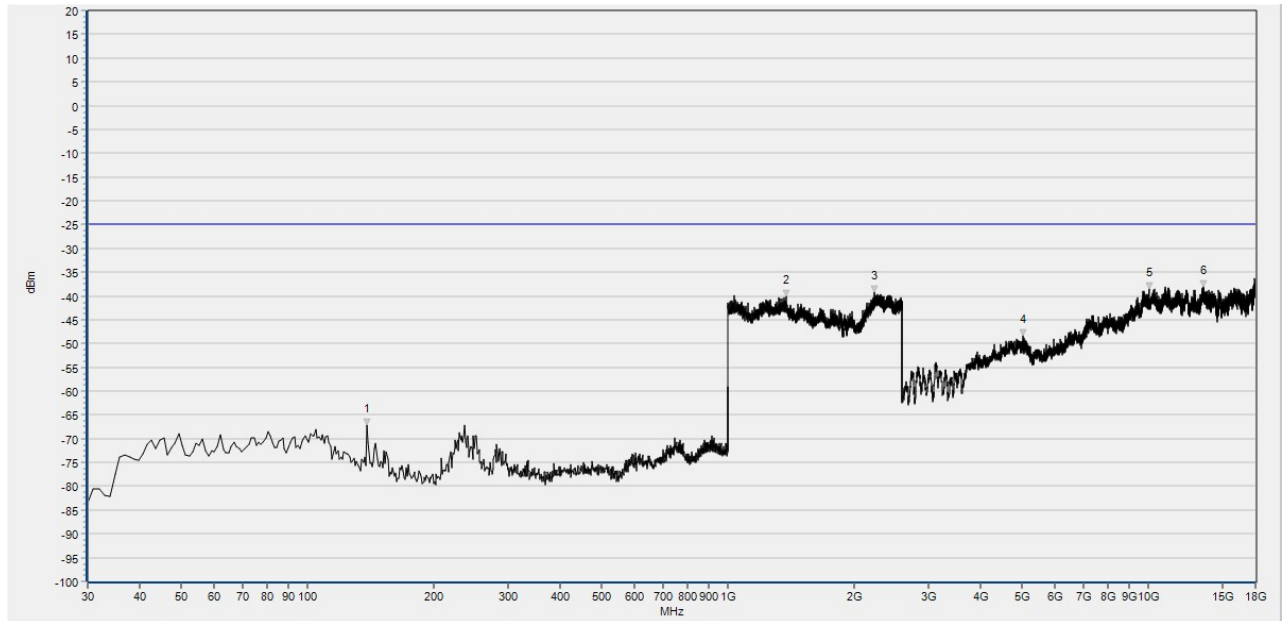
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	110.510	-67.98	-25.00	360.0	V	PASS
2	2265.146	-38.98	-25.00	360.0	V	PASS
3	3126.496	-53.80	-25.00	337.2	V	PASS
4	4747.991	-49.53	-25.00	337.2	V	PASS
5	8114.203	-43.20	-25.00	36.4	V	PASS
6	13597.600	-38.86	-25.00	284.4	V	PASS

CA_7C Mid 30M-18G V



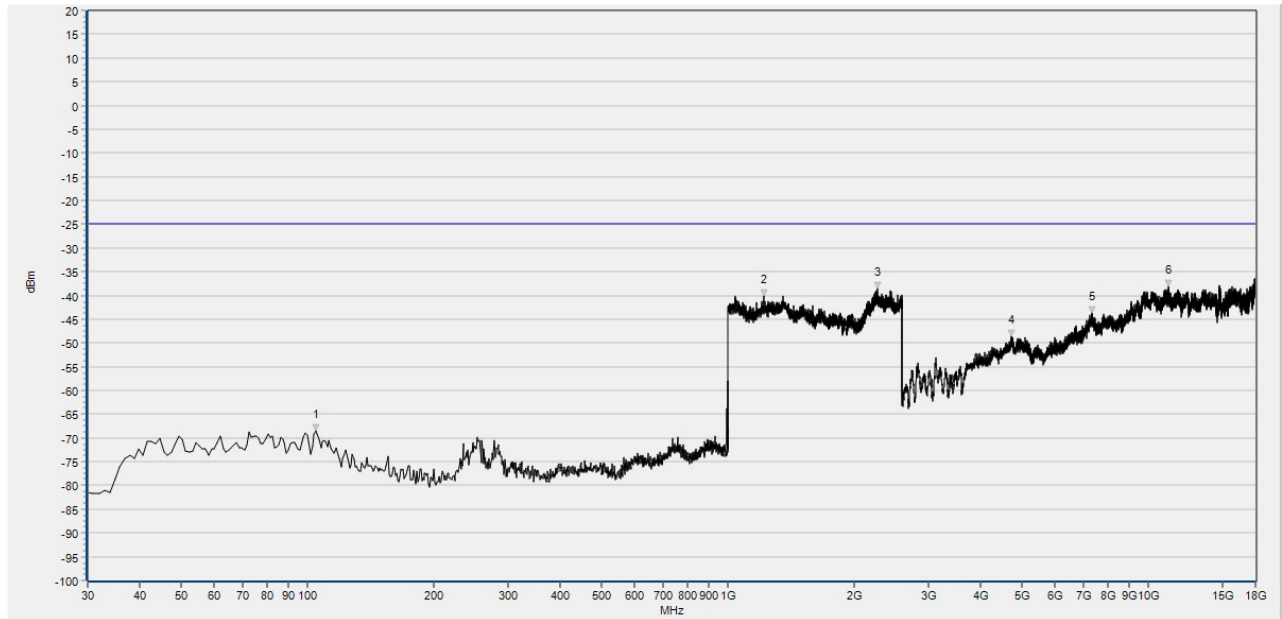
REPORT No.: SZ24050224W07

CA_38C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	138.640	-67.17	-25.00	0.0	H	PASS
2	1376.471	-40.08	-25.00	0.0	H	PASS
3	2229.932	-39.24	-25.00	0.0	H	PASS
4	5047.645	-48.35	-25.00	220.8	H	PASS
5	10035.352	-38.48	-25.00	43.4	H	PASS
6	13502.382	-38.09	-25.00	87.3	H	PASS

CA_38C Mid 30M-18G H



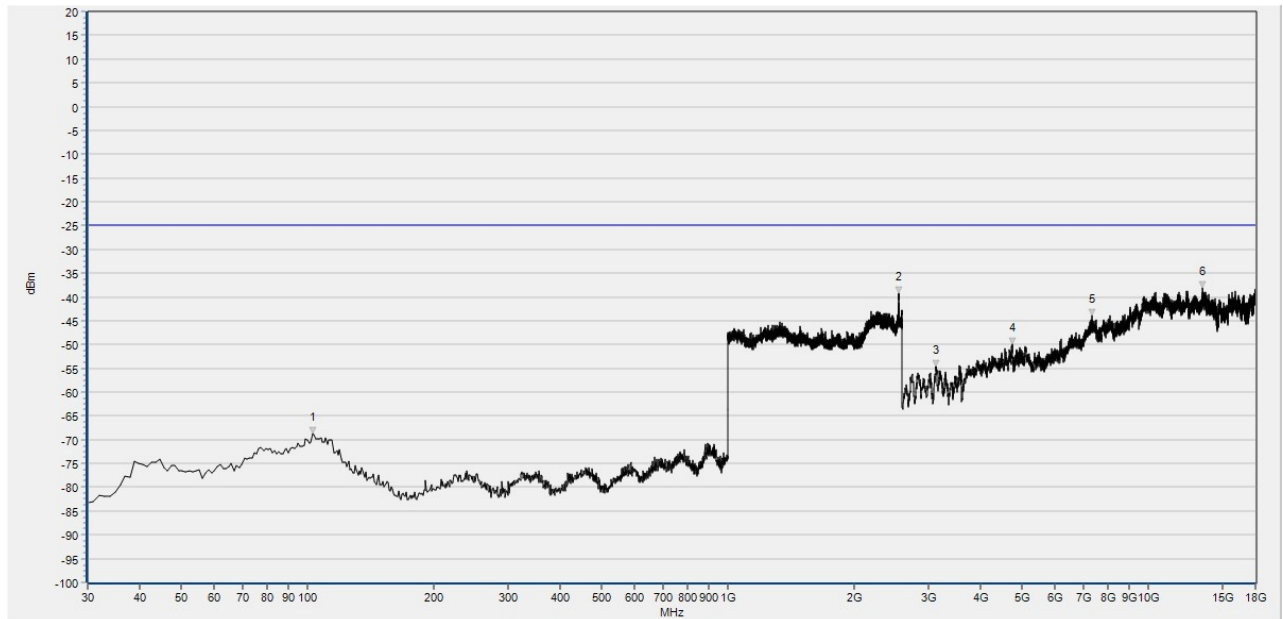
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	104.690	-68.41	-25.00	360.0	V	PASS
2	1215.766	-40.20	-25.00	360.0	V	PASS
3	2269.628	-38.45	-25.00	360.0	V	PASS
4	4722.786	-48.61	-25.00	255.8	V	PASS
5	7366.467	-43.72	-25.00	264.4	V	PASS
6	11203.164	-38.08	-25.00	275.3	V	PASS

CA_38C Mid 30M-18G V



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CA_41C

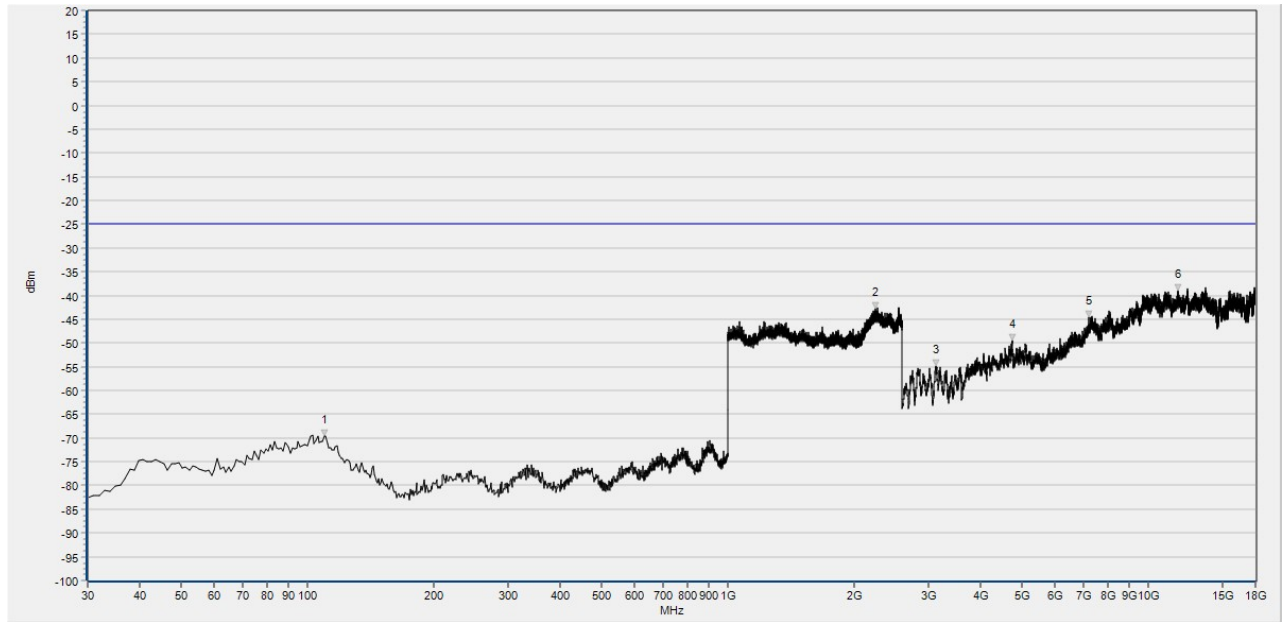


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	102.823	-68.71	-25.00	0.0	H	PASS
2	2553.585	-39.31	-25.00	0.0	H	NA
3	3126.785	-54.68	-25.00	143.7	H	PASS
4	4747.189	-49.92	-25.00	94.6	H	PASS
5	7344.149	-43.89	-25.00	304.6	H	PASS
6	13496.139	-38.21	-25.00	155.9	H	PASS

CA_41C Mid 30M-18G H



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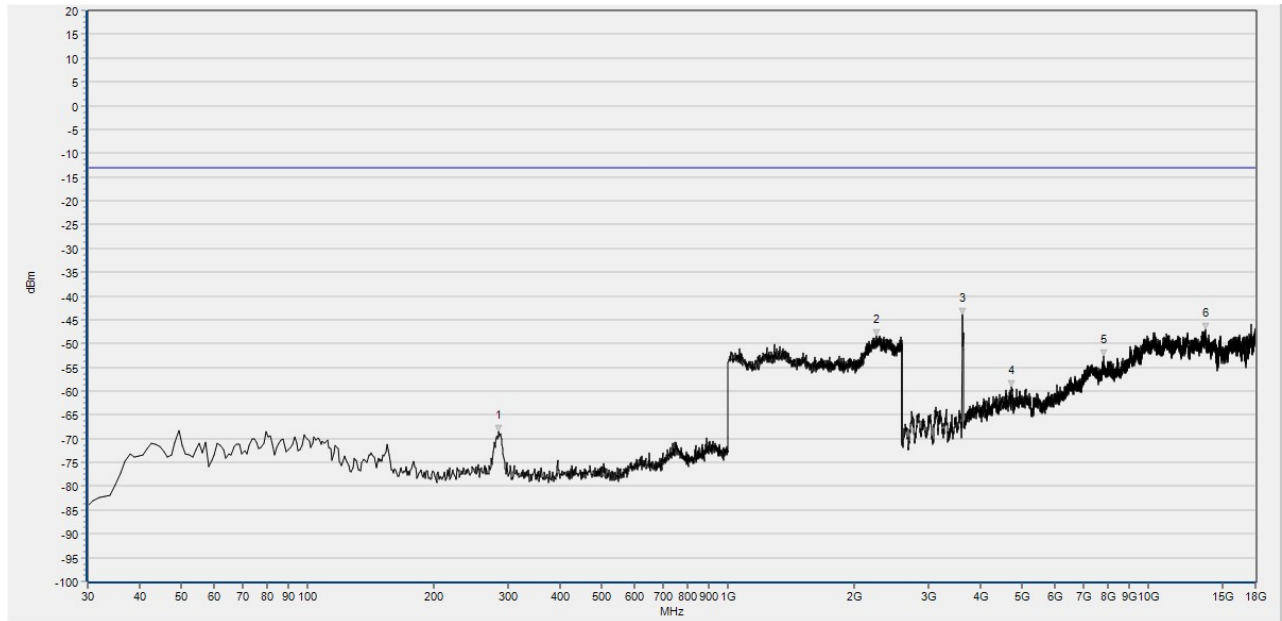
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	109.620	-69.69	-25.00	360.0	V	PASS
2	2246.816	-42.90	-25.00	360.0	V	PASS
3	3126.785	-54.89	-25.00	339.5	V	PASS
4	4747.189	-49.49	-25.00	54.2	V	PASS
5	7224.005	-44.53	-25.00	141.2	V	PASS
6	11783.317	-38.89	-25.00	215.3	V	PASS

CA_41C Mid 30M-18G V



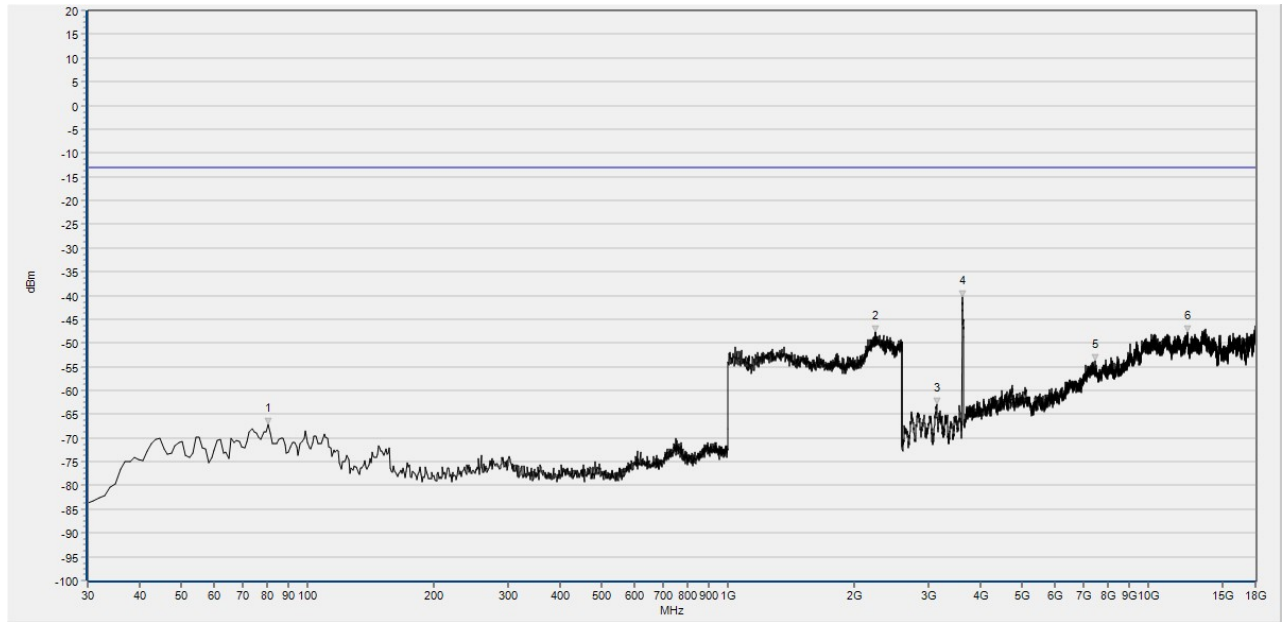
REPORT No.: SZ24050224W07

CA_48C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	285.365	-68.40	-13.00	360.0	H	PASS
2	2260.460	-48.40	-13.00	360.0	H	PASS
3	3610.442	-43.83	-13.00	89.9	H	NA
4	4737.948	-59.05	-13.00	358.2	H	PASS
5	7843.209	-52.69	-13.00	42.0	H	PASS
6	13687.137	-47.08	-13.00	178.0	H	PASS

CA_48C Mid 30M-18G H

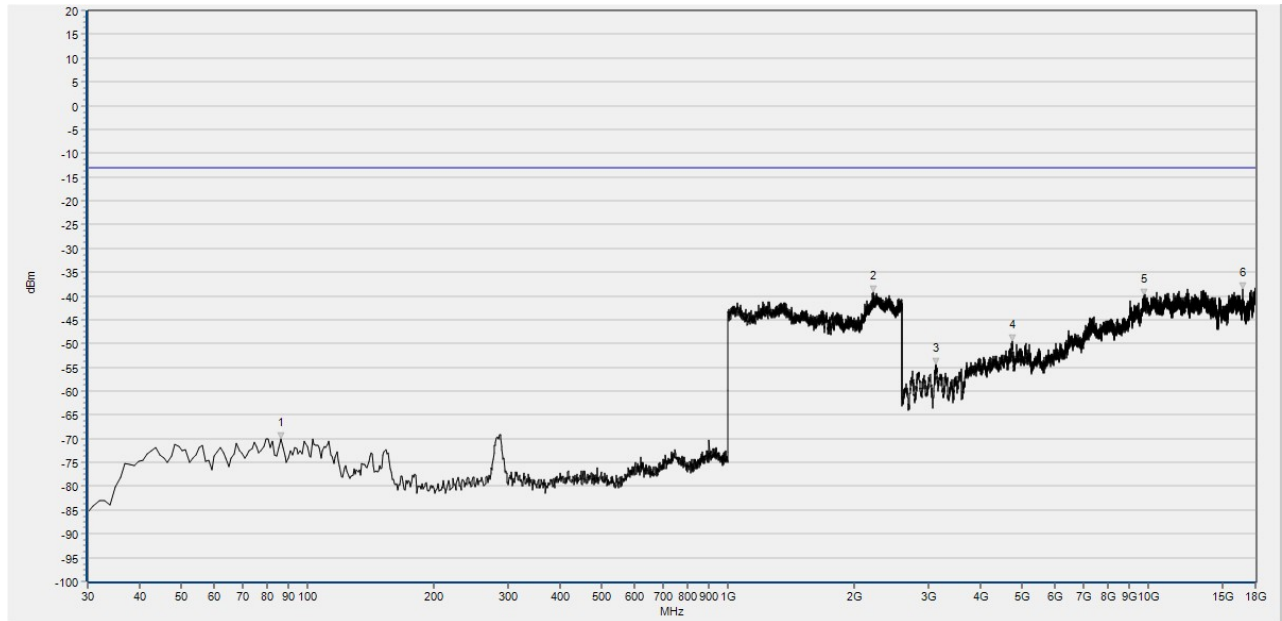


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	80.490	-67.22	-13.00	0.0	V	PASS
2	2238.038	-47.65	-13.00	0.0	V	PASS
3	3136.027	-62.92	-13.00	15.5	V	PASS
4	3616.603	-40.42	-13.00	319.3	V	NA
5	7488.938	-53.76	-13.00	128.6	V	PASS
6	12399.440	-47.71	-13.00	311.4	V	PASS

CA_48C Mid 30M-18G V

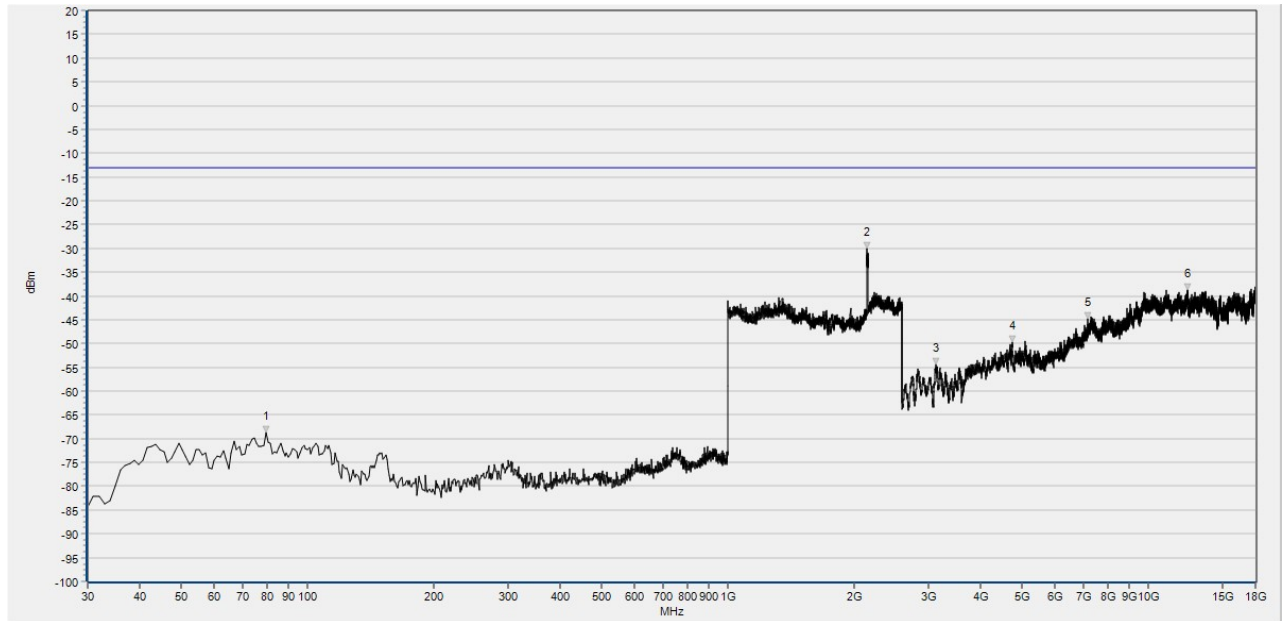


CA_66B



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	86.316	-70.15	-13.00	360.0	H	PASS
2	2224.612	-39.30	-13.00	360.0	H	PASS
3	3118.553	-54.36	-13.00	100.3	H	PASS
4	4748.658	-49.60	-13.00	211.6	H	PASS
5	9746.791	-39.95	-13.00	309.3	H	PASS
6	16824.271	-38.52	-13.00	157.2	H	PASS

CA_66B Mid 30M-18G H

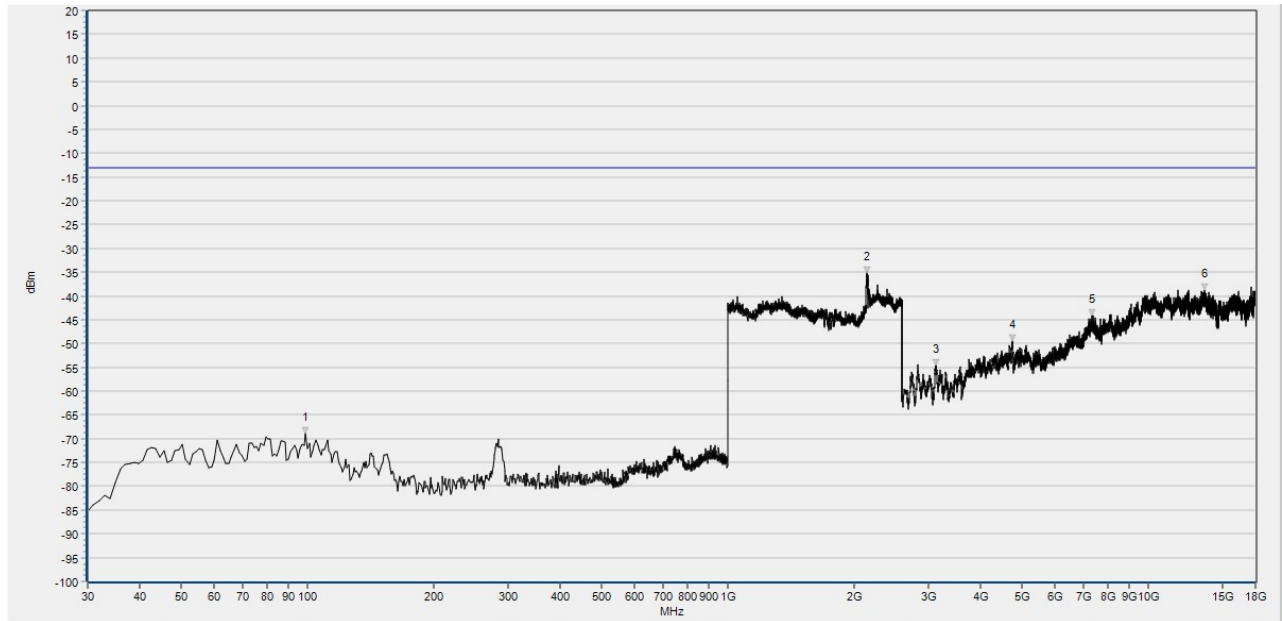


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	79.520	-68.68	-13.00	360.0	V	PASS
2	2141.371	-30.03	-13.00	360.0	V	NA
3	3131.389	-54.40	-13.00	349.9	V	PASS
4	4751.225	-49.74	-13.00	152.7	V	PASS
5	7166.861	-44.83	-13.00	349.9	V	PASS
6	12383.197	-38.81	-13.00	209.0	V	PASS

CA_66B Mid 30M-18G V

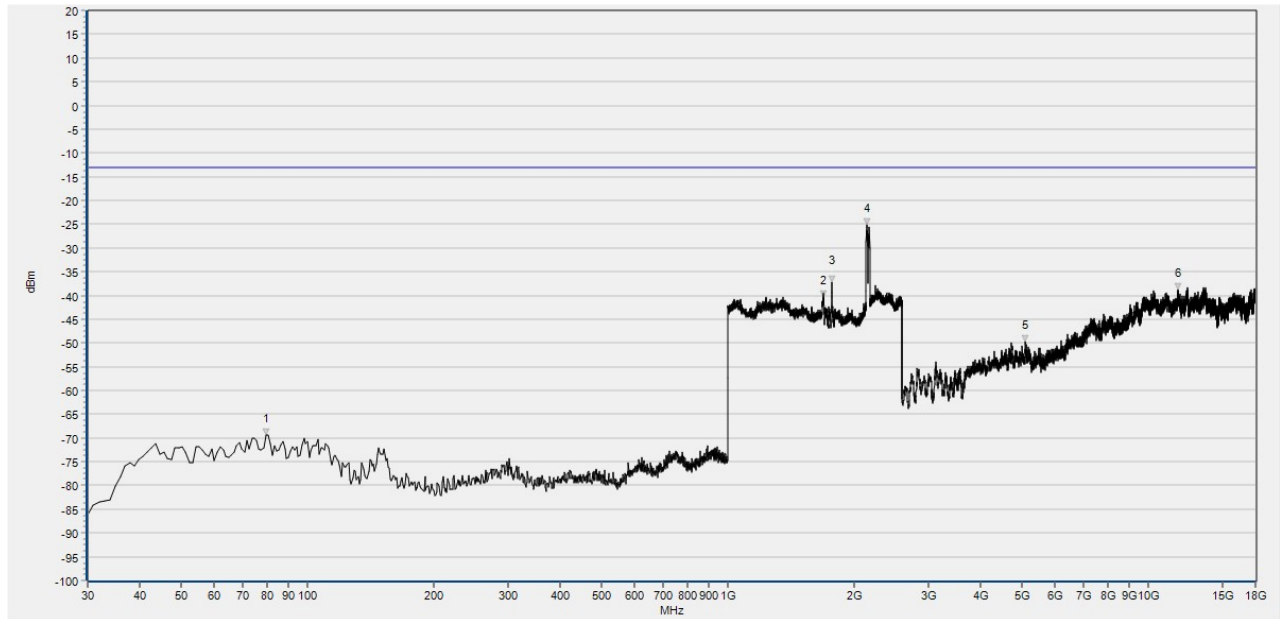


CA_66C



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	98.939	-68.99	-13.00	360.0	H	PASS
2	2147.774	-35.28	-13.00	178.7	H	NA
3	3126.254	-54.62	-13.00	290.9	H	PASS
4	4743.524	-49.59	-13.00	360.0	H	PASS
5	7346.558	-44.14	-13.00	108.3	H	PASS
6	13582.030	-38.74	-13.00	38.4	H	PASS

CA_66C Mid 30M-18G H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	79.520	-69.46	-13.00	360.0	V	PASS
2	1685.143	-40.28	-13.00	244.9	V	PASS
3	1765.983	-37.20	-13.00	276.2	V	NA
4	2137.369	-25.10	-13.00	50.4	V	NA
5	5110.618	-49.70	-13.00	52.1	V	PASS
6	11764.527	-38.67	-13.00	192.2	V	PASS

CA_66C Mid 30M-18G V

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	±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%



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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 C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.



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4. Test Equipment Utilized

4.1 Radiated Test Equipment

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
System Simulator	152038	CMW500	R&S	2023.10.17	2024.10.16
				2024.09.11	2025.09.10
Receiver	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Horn	9120D-963	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KK F-2	Qualwave	2024.07.03	2025.07.02
Preamplifier (10MHz-6GHz)	46732	S10M100L380 2	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L320 3	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-4 0C-S	Decentest	2024.05.30	2025.05.29
Notch Filter	N/A	WRCGV -LTE B2	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B4	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B5	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B7	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B12	Wainwright	N/A	N/A



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Notch Filter	N/A	WRCGV -LTE 13	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE 14	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B17	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B25	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE 26	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B30	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B38	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B41	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B42	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B43	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B48	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE B66	Wainwright	N/A	N/A
Notch Filter	N/A	WRCGV -LTE 71	Wainwright	N/A	N/A
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09

_____ END OF REPORT _____