

RADIO TEST REPORT

FCC ID: 2AOGIZWA060

Product : Z-Stick 10 Pro/Z-Stick 10

Trade Mark : AEOTEC

Model Name : ZWA060-A

Family Model : ZWA061-A

Report No. : S24102107105002

Prepared for

AEOTEC LIMITED

OFFICE 4 10/F KWAN CHART TOWER, NO. 6 TONNOCHY ROAD,
WANCHAI, HK

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

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TEST RESULT CERTIFICATION**Applicant's name** : AEOTEC LIMITEDAddress : OFFICE 4 10/F KWAN CHART TOWER, NO. 6 TONNOCHY ROAD,
WANCHAI, HK**Manufacturer's Name** : DONGGUAN HE CHANG SHUO TECHNOLOGY CO.,LTDAddress : 4th Floor, Building 1, No. 1, Longtan Road, Tiandaping, Tangxia,
Dongguan, Guang Dong.**Product description**

Product name : Z-Stick 10 Pro/Z-Stick 10

Trademark : AEOTEC

Model and/or type reference : ZWA060-A

Family Model : ZWA061-A

Standards : FCC Part15.249

Test procedure ANSI C63.10-2013

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Sample Number : S241021071003**Date of Test** :

Date (s) of performance of tests : Oct. 29, 2024 ~ Dec. 02, 2024

Date of Issue : Dec. 02, 2024

Test Result : **Pass**Prepared By : Gavan Zhang
Gavan Zhang
(Project Engineer)Reviewed By : Aaron Cheng
Aaron Cheng
(Supervisor)Approved By : Alex Li
Alex Li
(Manager)

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249)			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.249 15.209	Radiated Spurious Emission	Pass	
15.249(2)	Frequency Tolerance	N/A	
15.249(a)	Fundamental Measurement	Pass	
15.205	Band Edge Emission	Pass	
15.215	Occupied Bandwidth	Pass	

1.1 TEST FACILITY

Shenzhen NTEK Testing Technology Co., Ltd

Add. : No. 24 Xinfa East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong, People's Republic of China.

FCC FRN Registration No.:463705; IC Registration No.:9270A-1

CNAS Registration No.:L5516

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 1.38\text{dB}$
2	RF power,conducted	$\pm 0.16\text{dB}$
3	Spurious emissions,conducted	$\pm 0.21\text{dB}$
4	All emissions,radiated(<1G)	$\pm 4.68\text{dB}$
5	All emissions,radiated(>1G)	$\pm 4.89\text{dB}$
6	Temperature	$\pm 0.5^{\circ}\text{C}$
7	Humidity	$\pm 2\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Z-Stick 10 Pro/Z-Stick 10	
Trade Mark	AEOTEC	
Model Name	ZWA060-A	
Family Model	ZWA061-A	
Model Difference	All models are the same circuit and RF module, except for the shell nameplate.	
Product Description	The EUT is a Z-Stick 10 Pro/Z-Stick 10	
	Operation Frequency:	908.4-920MHz
	Modulation Type:	GFSK
	Antenna Designation:	Built-in Antenna
	Antenna Gain(Peak)	1.57 dBi
	Based on the application, features, or specification exhibited in User's Manual. More details of EUT technical specification, please refer to the User's Manual.	
Channel List	Please refer to the Note 2.	
Adapter	N/A	
Battery	N/A	
Power Rating	5VDC, 0.5W	
Hardware Version	AC 20240823	
Firmware Version	1.0.0	
Software Version	N/A	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

Channel	Frequency(MHz)
01	908.4
02	912
03	916
04	920

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Built-in Antenna	N/A	1.57	Antenna

4.

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	CH01/02/03/04
Mode 2	Normal link

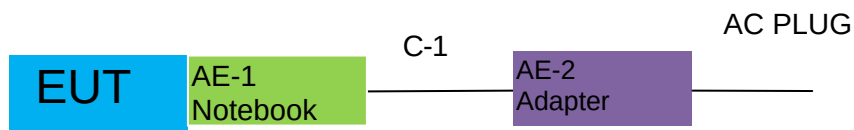
AC Conducted Emission	
Pretest Mode	Description
Mode 1	CH01/02/03/04

For Radiated Spurious Emission	
Pretest Mode	Description
Mode 1	CH01/02/03/04

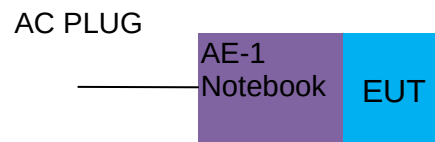
For Conducted Emission	
Final Test Mode	Description
Mode 1	CH01/02/03/04
Mode 2	Normal link

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

For AC Conducted Emission Mode



Radiated Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Model/Type No.	Series No.	Note
AE-1	Notebook	N/A	N/A	Peripherals
AE-2	Adapter	N/A	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length	Note

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4440A	MY41000130	2024.04.26	2025.04.25	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024.04.25	2025.04.24	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2024.04.25	2025.04.24	1 year
4	Test Receiver	R&S	ESPI7	101318	2024.04.26	2025.04.25	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2024.05.12	2025.05.11	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
7	Horn Antenna	EM	EM-AH-10180	2011071402	2024.05.12	2027.05.11	3 year
8	Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	803	2024.05.12	2027.05.11	3 year
9	Amplifier	EMC	EMC051835SE	980246	2024.04.25	2025.04.24	1 year
10	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	055	2024.05.17	2027.05.16	3 year
11	Power Meter	DARE	RPR3006W	15I00041SN084	2024.04.25	2025.04.24	1 year
12	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2023.05.06	2026.05.05	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2023.05.06	2026.05.05	3 year
14	High Test Cable(1G-40G Hz)	N/A	R-03	N/A	2023.03.26	2026.03.25	3 year
15	High Test Cable(1G-40G Hz)	N/A	R-04	N/A	2023.03.26	2026.03.25	3 year
16	Filter	TRILTHIC	2400MHz	29	2024.04.26	2027.04.25	3 year
17	temporary antenna connector (Note)	NTS	R001	N/A	N/A	N/A	N/A

Note:

We will use the temporary antenna connector (soldered on the PC B board) When conducted test
And this temporary antenna connector is listed within the instrument list

Conduction Test equipmnt

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2024.04.26	2025.04.25	1 year
2	LISN	R&S	ENV216	101313	2024.04.25	2025.04.24	1 year
3	LISN	SCHWARZBECK	NNLK 8129	8129245	2024.04.25	2025.04.24	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2024.04.26	2027.04.25	3 year
5	Test Cable (9KHz-30MHz)	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
6	Test Cable (9KHz-30MHz)	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
7	Test Cable (9KHz-30MHz)	N/A	C03	N/A	2023.05.06	2026.05.05	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable which is scheduled for calibration every 3 years.

3. ANTENNA REQUIREMENT

3.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

3.2 EUT ANTENNA

The EUT antenna is Built-in Antenna (Gain: 1.57dBi). It comply with the standard requirement.

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

According to FCC Part 15.207(a)

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56*	56-46*
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. *Decreases with the logarithm of the frequency
2. The lower limit shall apply at the transition frequencies
3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

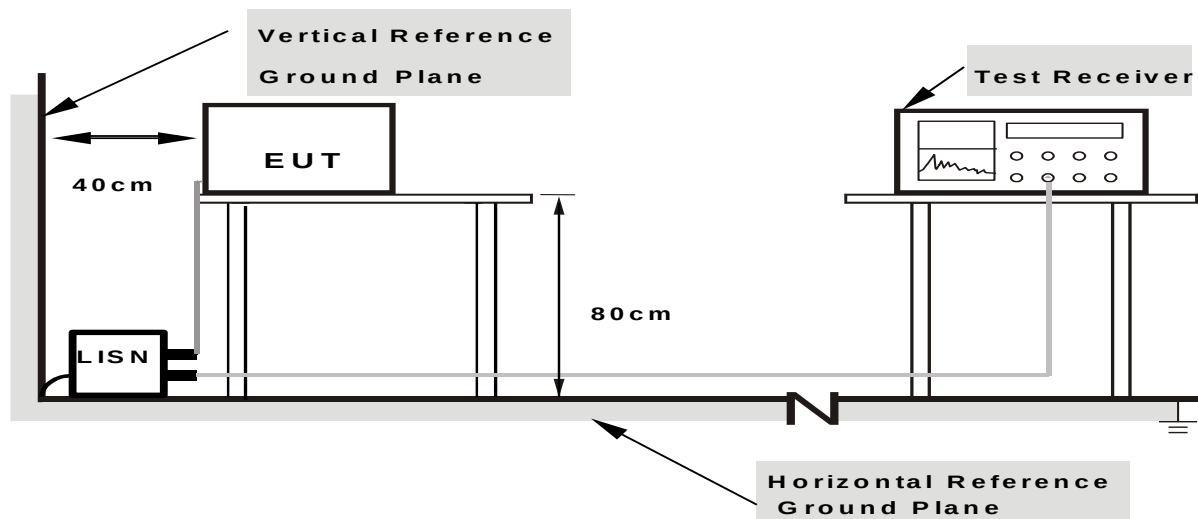
3.3.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.2.5 TEST RESULT

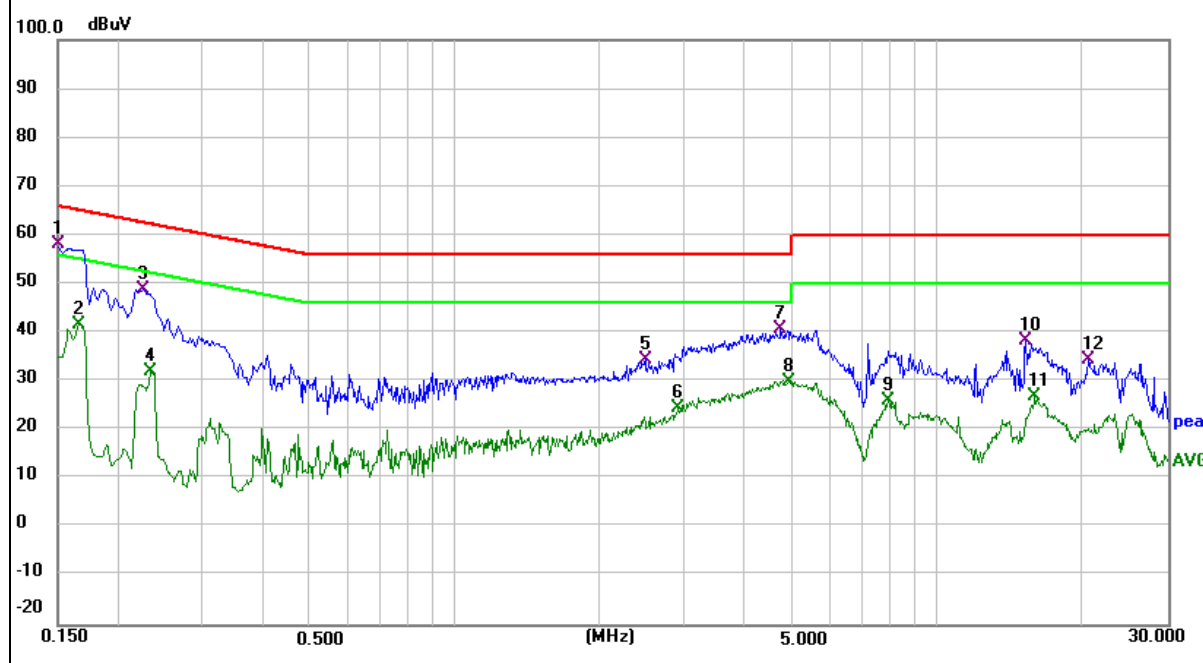
EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name. :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	55%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 5V from PC AC 120V/60Hz	Test Mode :	Mode 1 920MHz

All the modulation modes have been tested, and the worst result was report as below:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.1500	48.04	10.00	58.04	66.00	-7.96	QP
0.1660	31.68	10.04	41.72	55.16	-13.44	AVG
0.2260	38.56	10.16	48.72	62.60	-13.88	QP
0.2340	21.82	10.16	31.98	52.31	-20.33	AVG
2.4860	24.76	9.84	34.60	56.00	-21.40	QP
2.9020	14.74	9.87	24.61	46.00	-21.39	AVG
4.7380	30.71	10.07	40.78	56.00	-15.22	QP
4.9460	19.78	10.09	29.87	46.00	-16.13	AVG
7.9260	15.45	10.53	25.98	50.00	-24.02	AVG
15.2460	26.33	11.89	38.22	60.00	-21.78	QP
15.9460	14.95	12.02	26.97	50.00	-23.03	AVG
20.4980	21.51	12.83	34.34	60.00	-25.66	QP

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

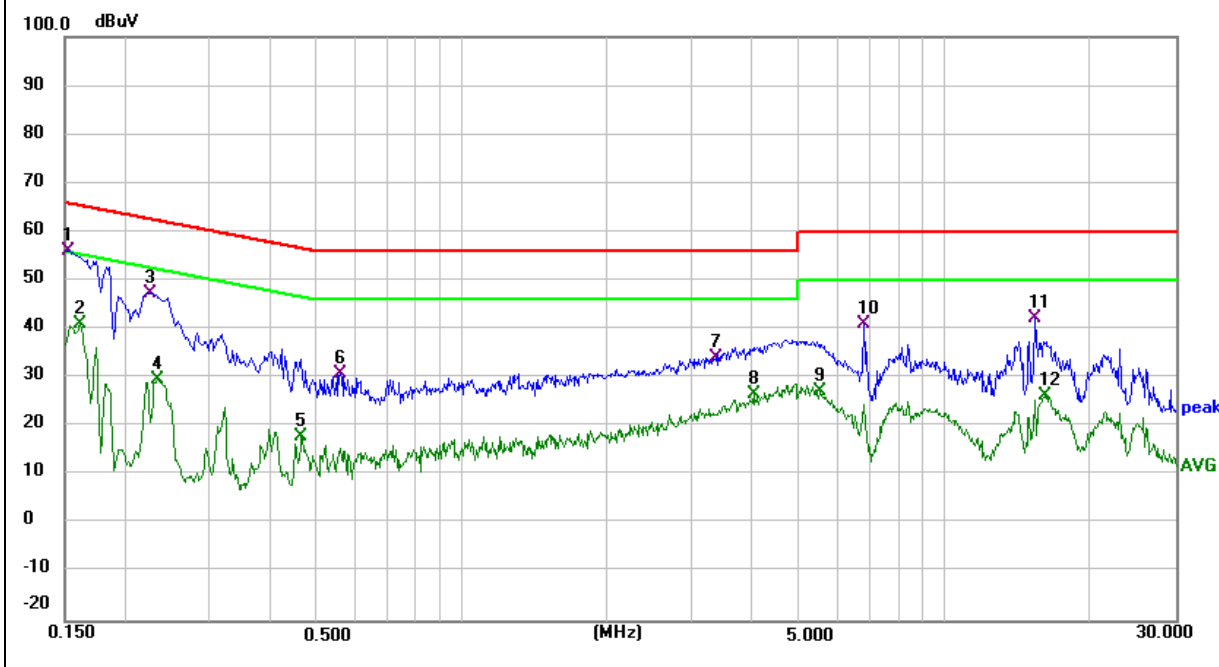


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name. :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	55%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 5V from PC AC 120V/60Hz	Test Mode :	Mode 1 920MHz

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.1539	46.67	9.44	56.11	65.79	-9.68	QP
0.1620	31.48	9.45	40.93	55.36	-14.43	AVG
0.2260	37.91	9.57	47.48	62.60	-15.12	QP
0.2340	19.95	9.57	29.52	52.31	-22.79	AVG
0.4660	7.89	9.95	17.84	46.58	-28.74	AVG
0.5581	20.74	10.09	30.83	56.00	-25.17	QP
3.3580	24.93	9.17	34.10	56.00	-21.90	QP
4.0140	17.27	9.24	26.51	46.00	-19.49	AVG
5.5020	17.95	9.39	27.34	50.00	-22.66	AVG
6.7820	31.58	9.56	41.14	60.00	-18.86	QP
15.3500	31.16	11.11	42.27	60.00	-17.73	QP
16.0940	14.98	11.24	26.22	50.00	-23.78	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.3.5 RADIATED EMISSION MEASUREMENT

3.3.6 Radiated Emission Limits (FCC 15.209)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
Frequency (MHz)	Limit (dBuV)	
30~88	40	3
88~216	43.5	3
216~960	46	3
960 -10000	54.00	3
*902 - 928	94.00	3

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).
- (3) *Note: This is the limit for the fundamental frequency.

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
902-928	50	500

Notes:

- (1) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.3.7 TEST PROCEDURE

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

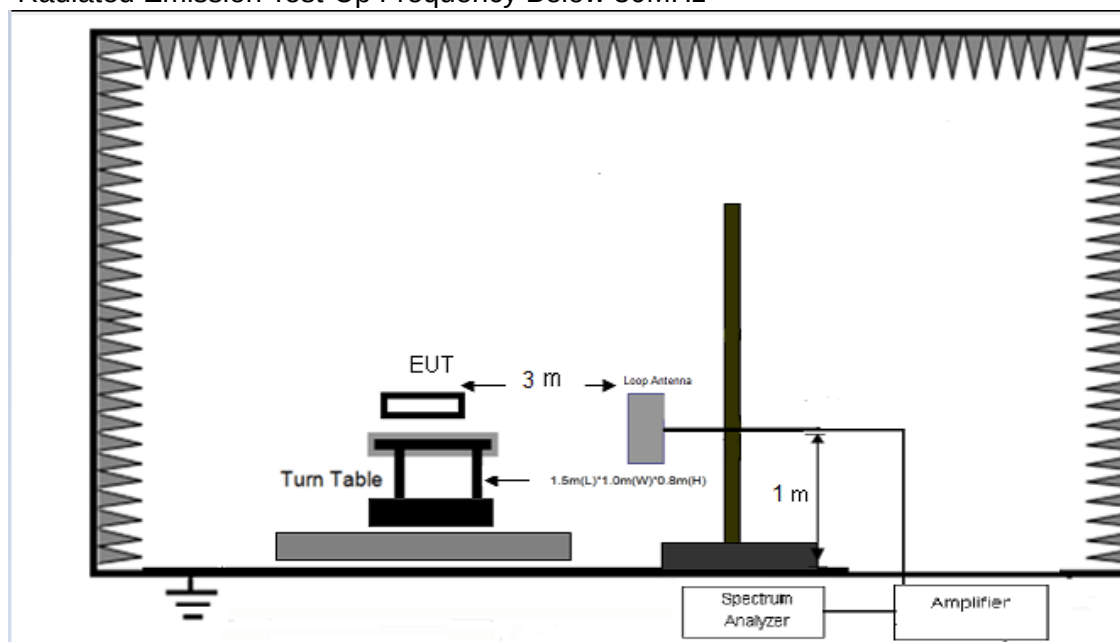
Note:

Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

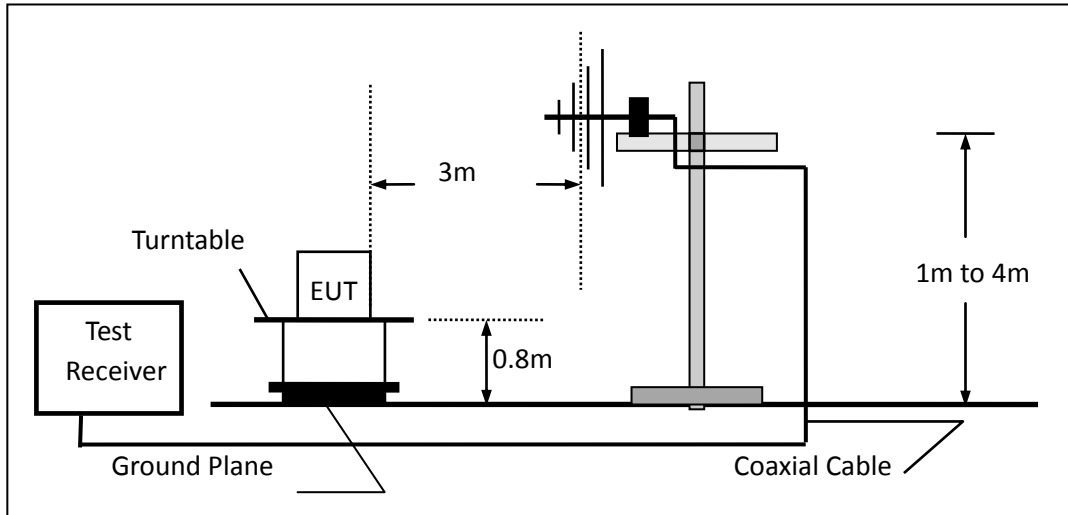
3.3.8 DEVIATION FROM TEST STANDARD

No deviation

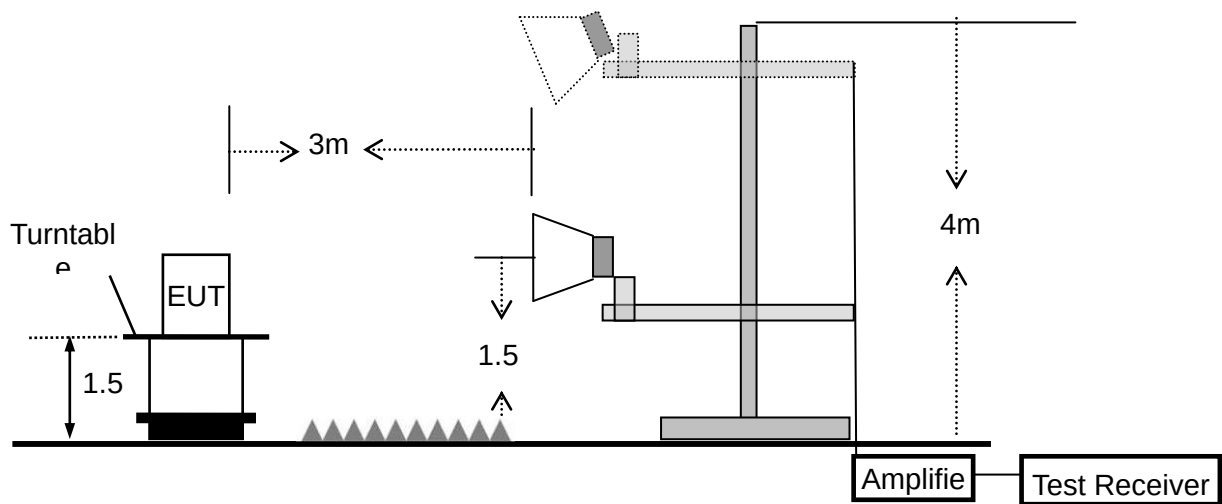
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.3.9 TEST RESULTS (BELOW 30MHz)

EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name. :	ZWA060-A
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Remark :1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. For Frequency 9kHz~30MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

For Frequency above 30MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);

Limit line=Specific limits(dBuV) + distance extrapolation factor.

3.3.10 TEST RESULTS (BELOW 1000 MHz)

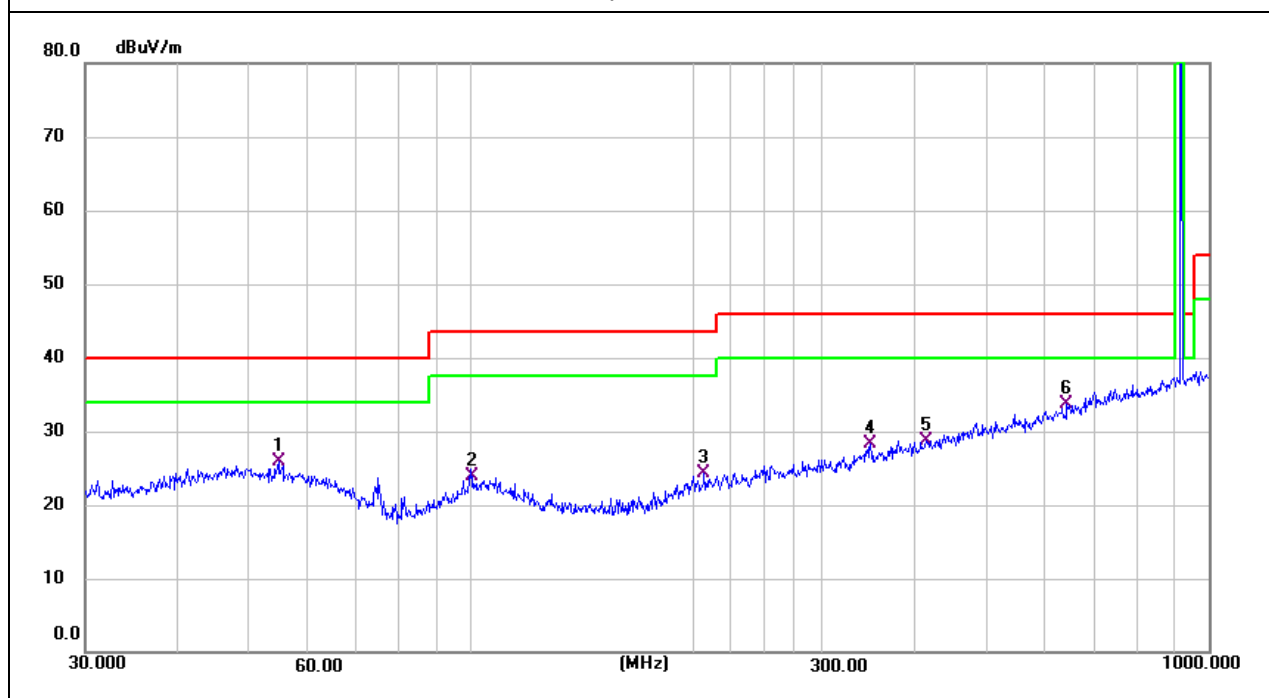
EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	53%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	920MHz	Polarization :	Vertical

All the modulation modes have been tested, and the worst result was report as below:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
54.8348	6.46	19.51	25.97	40.00	-14.03	QP
100.5806	5.95	17.89	23.84	43.50	-19.66	QP
207.1225	6.15	18.17	24.32	43.50	-19.18	QP
348.0274	6.43	21.81	28.24	46.00	-17.76	QP
414.7223	5.51	23.19	28.70	46.00	-17.30	QP
642.8612	6.75	26.98	33.73	46.00	-12.27	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

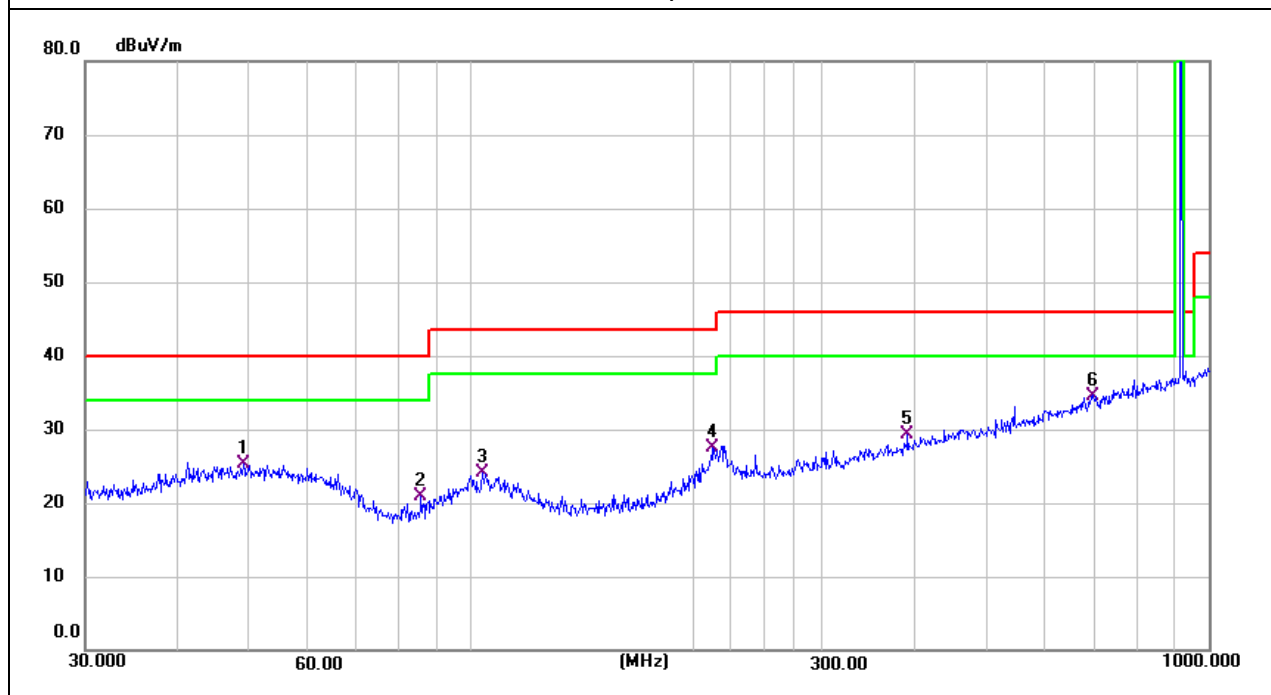


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	920MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
49.1865	5.64	19.76	25.40	40.00	-14.60	QP
85.5974	6.26	14.62	20.88	40.00	-19.12	QP
103.8054	6.07	18.10	24.17	43.50	-19.33	QP
213.0150	9.30	18.24	27.54	43.50	-15.96	QP
390.7225	6.50	22.75	29.25	46.00	-16.75	QP
696.8567	6.25	28.35	34.60	46.00	-11.40	QP

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



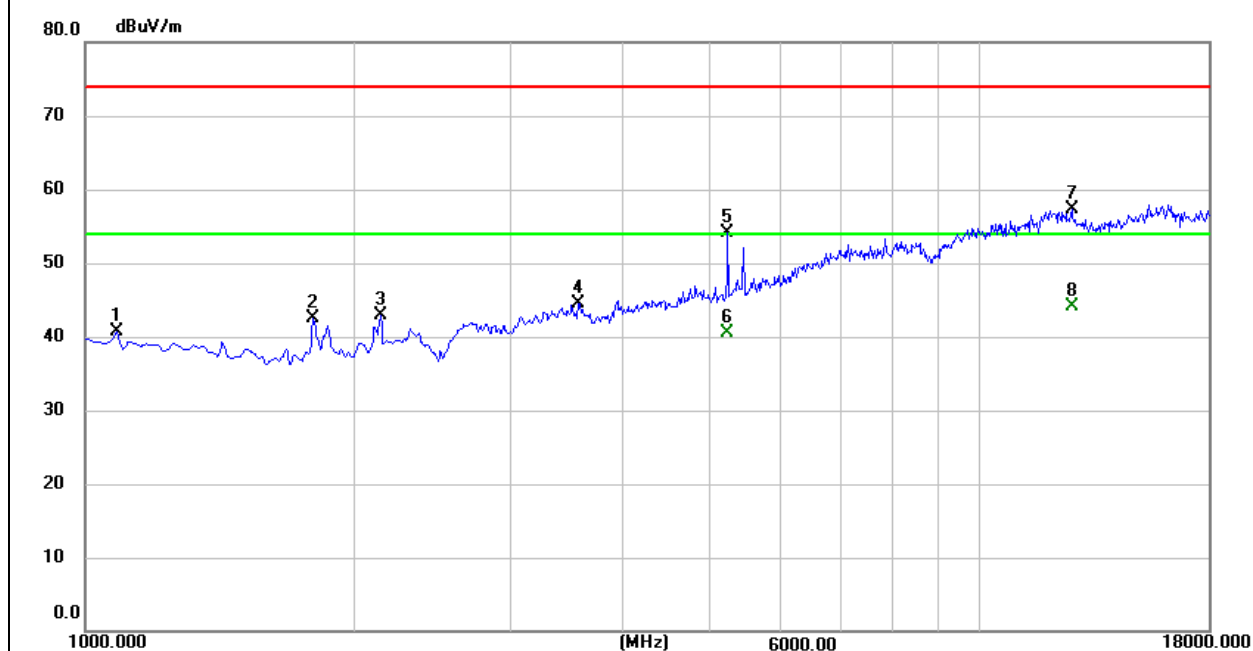
3.3.11 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	920MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1085.000	48.65	-8.03	40.62	74.00	-33.38	peak
1799.000	50.38	-7.86	42.52	74.00	-31.48	peak
2139.000	48.76	-5.86	42.90	74.00	-31.10	peak
3567.000	46.64	-2.08	44.56	74.00	-29.44	peak
5233.000	52.00	2.14	54.14	74.00	-19.86	peak
5233.000	38.38	2.14	40.52	54.00	-13.48	AVG
12679.000	45.12	12.15	57.27	74.00	-16.73	peak
12679.000	32.04	12.15	44.19	54.00	-9.81	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

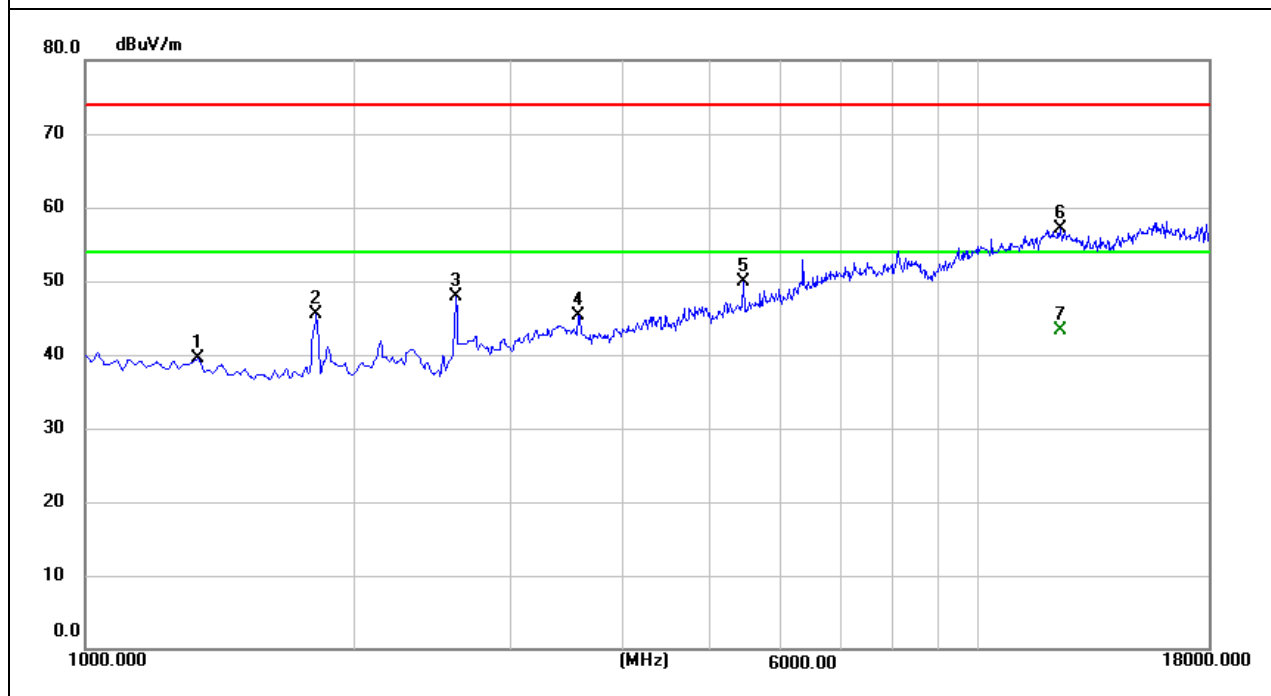


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	920MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
1340.000	47.83	-8.25	39.58	74.00	-34.42	peak
1816.000	53.30	-7.79	45.51	74.00	-28.49	peak
2598.000	52.24	-4.30	47.94	74.00	-26.06	peak
3567.000	47.38	-2.08	45.30	74.00	-28.70	peak
5454.000	47.47	2.38	49.85	74.00	-24.15	peak
12322.000	45.90	11.23	57.13	74.00	-16.87	peak
12322.000	32.03	11.23	43.26	54.00	-10.74	AVG

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Note:

- 1) EUT Pre-scan X/Y/Z orientation, only worst case is presented in the report(X orientation).
- 2) Since the PEAK test results are below the AV limit, according to 15.31, the amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

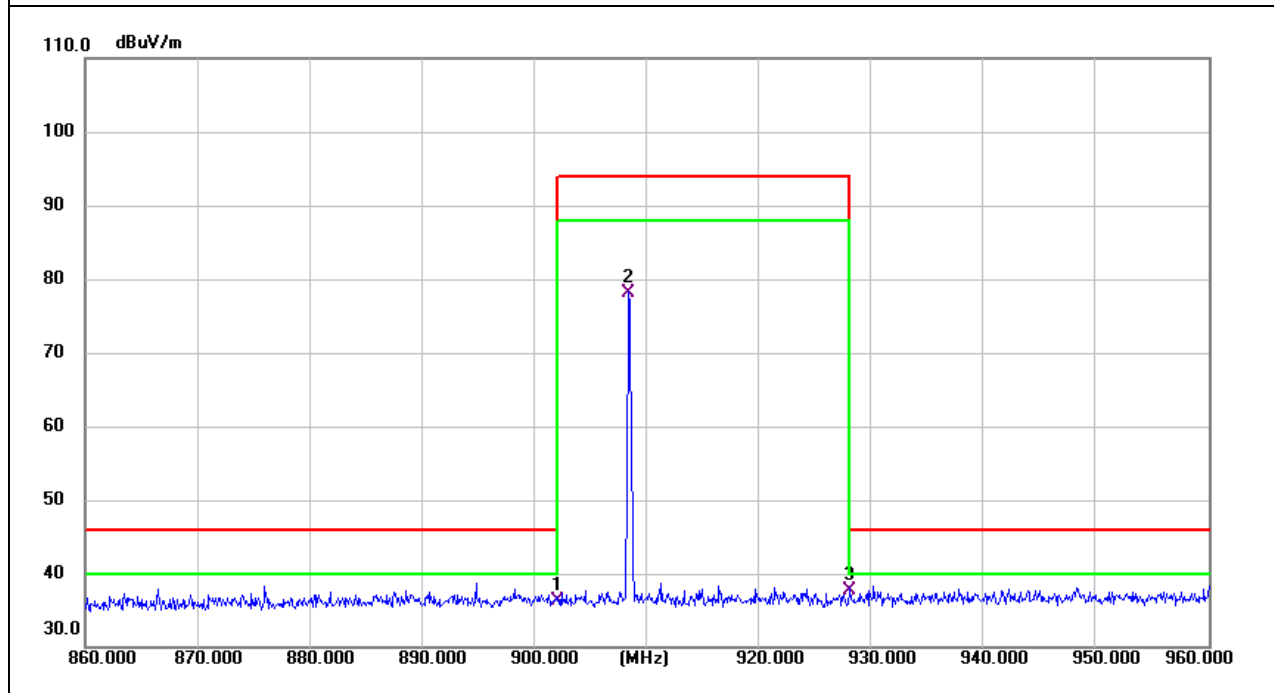
3.3.12 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-908.4MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	5.28	31.01	36.29	46.00	-9.71	QP
908.4000	47.19	31.01	78.20	94.00	-15.80	QP
928.0000	6.63	31.14	37.77	46.00	-8.23	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

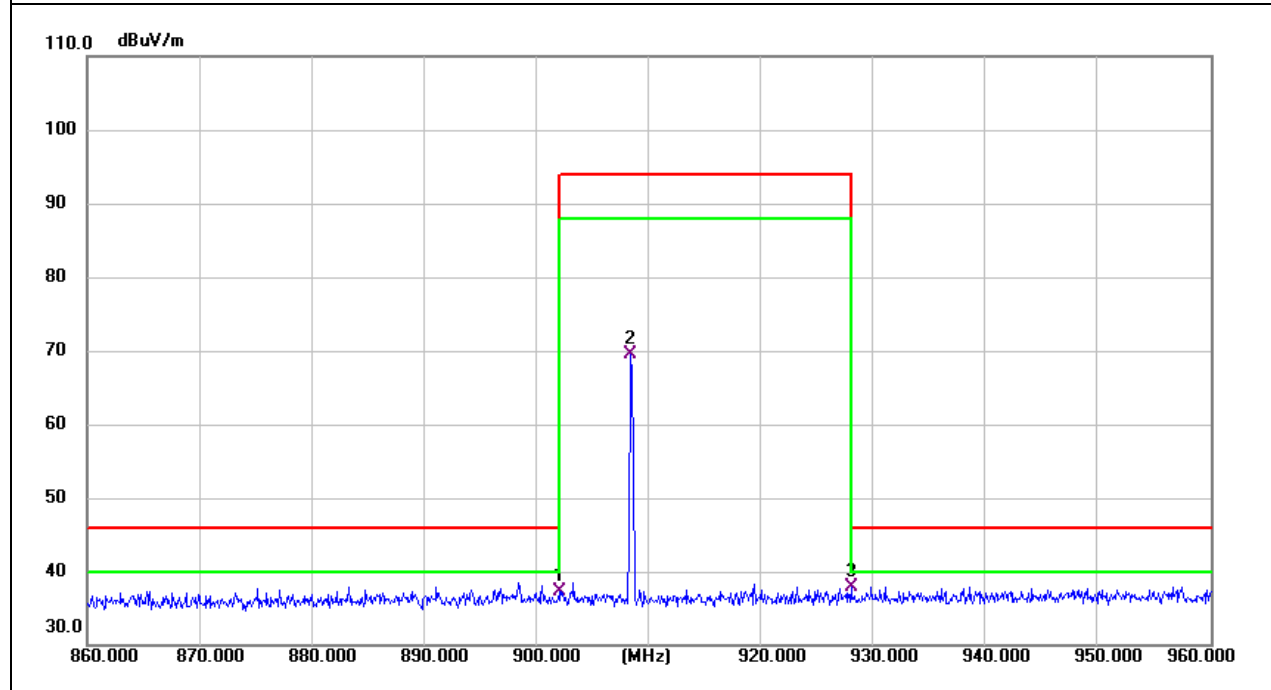


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-908.4MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	6.29	31.01	37.30	46.00	-8.70	QP
908.4000	38.39	31.01	69.40	94.00	-24.60	QP
928.0000	6.71	31.14	37.85	46.00	-8.15	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

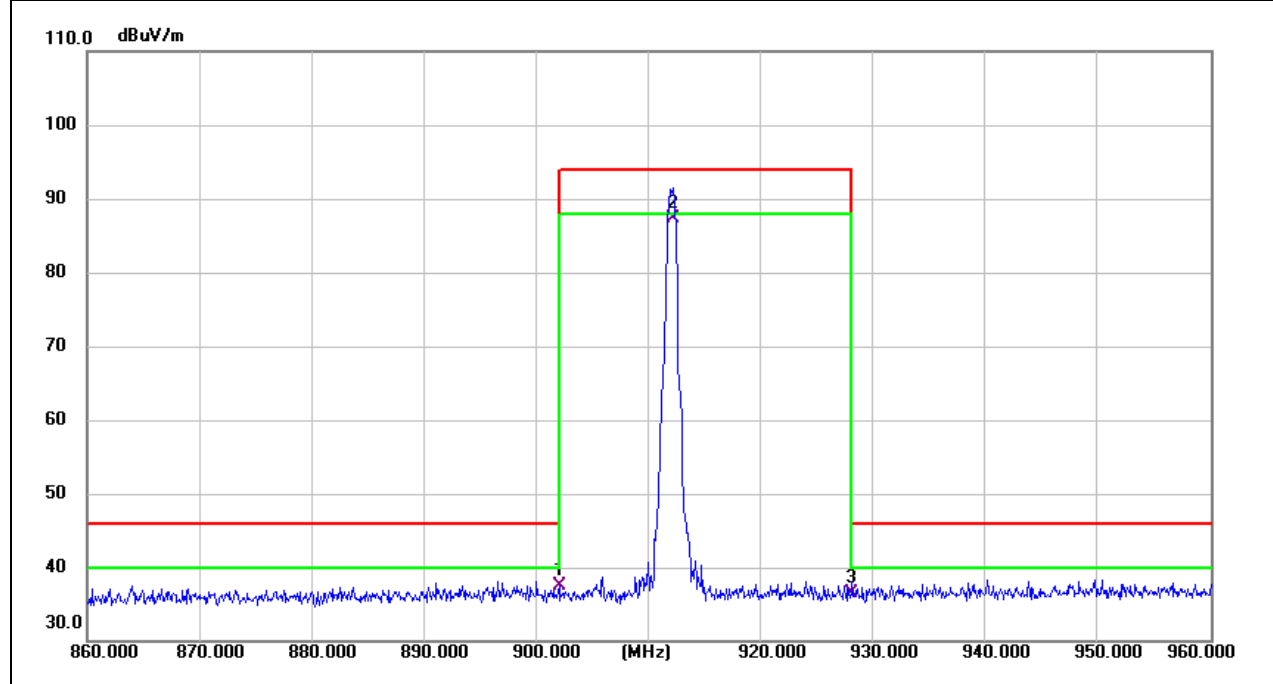


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-912MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	6.40	31.01	37.41	46.00	-8.59	QP
912.1000	56.22	31.02	87.24	94.00	-6.76	QP
928.0000	5.30	31.14	36.44	46.00	-9.56	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

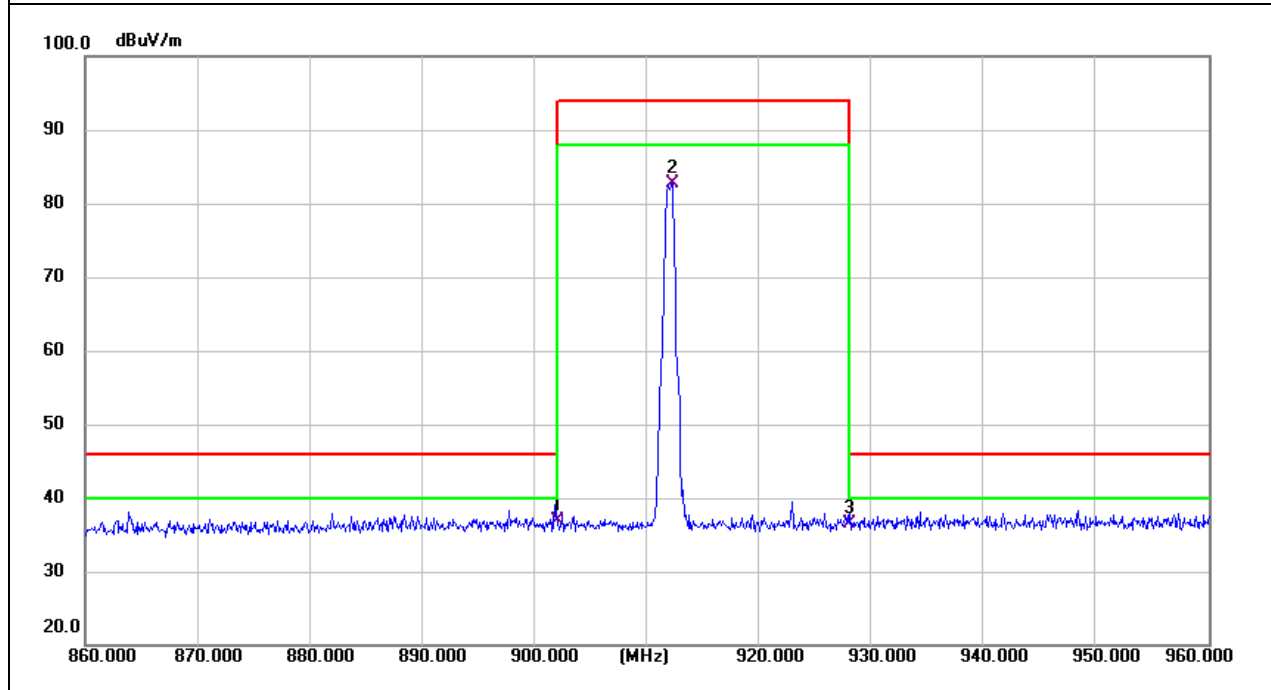


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-912MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	5.98	31.01	36.99	46.00	-9.01	QP
912.3000	51.68	31.02	82.70	94.00	-11.30	QP
928.0000	5.41	31.14	36.55	46.00	-9.45	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

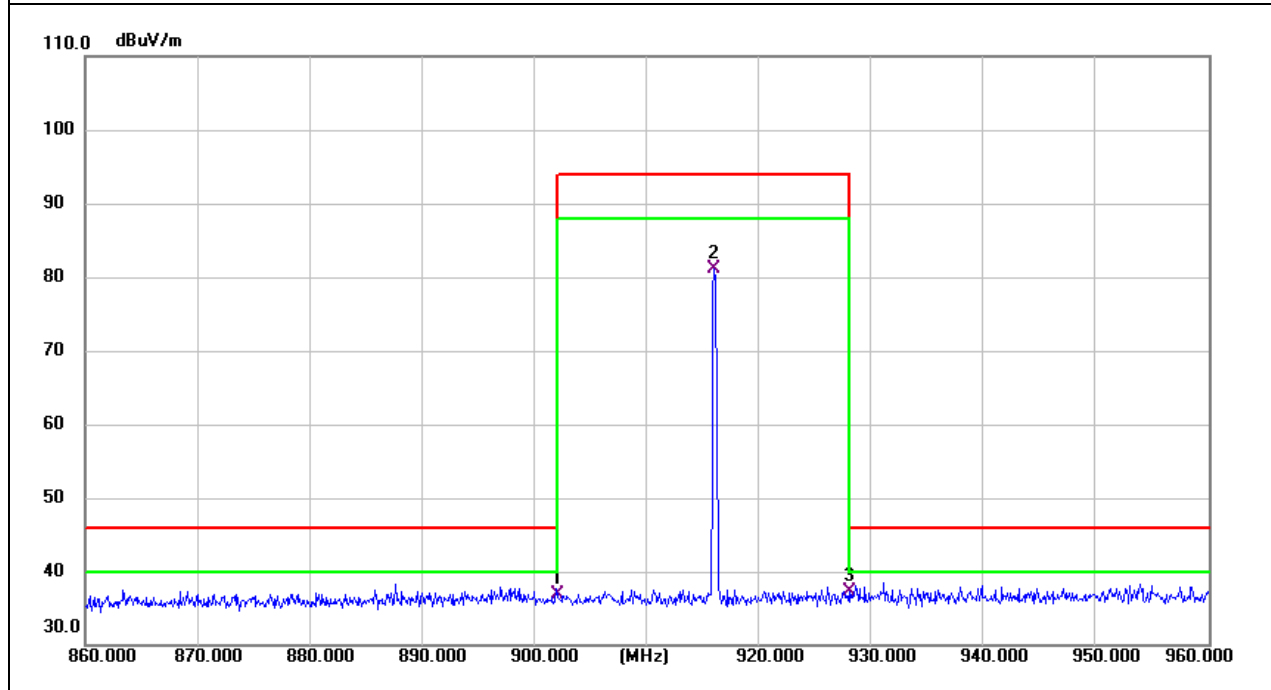


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-916MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	5.93	31.01	36.94	46.00	-9.06	QP
916.0000	50.11	31.02	81.13	94.00	-12.87	QP
928.0000	6.08	31.14	37.22	46.00	-8.78	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

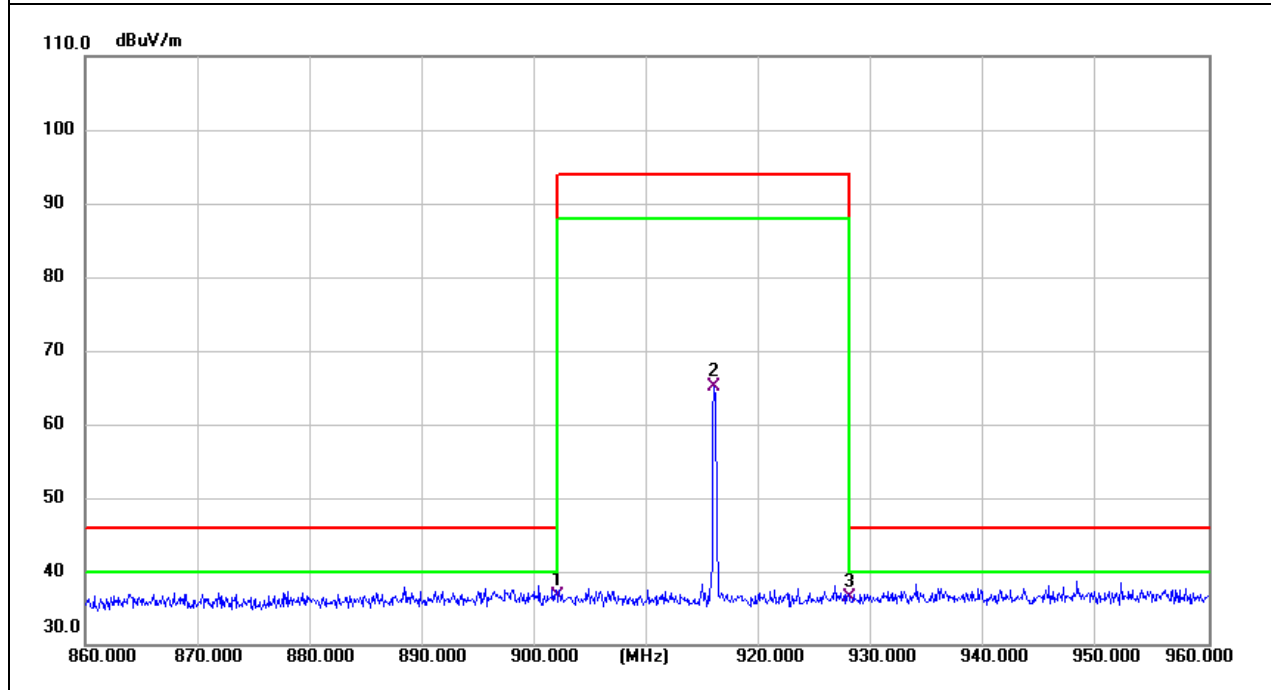


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-916MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	5.76	31.01	36.77	46.00	-9.23	QP
916.0000	34.00	31.03	65.03	94.00	-28.97	QP
928.0000	5.27	31.14	36.41	46.00	-9.59	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

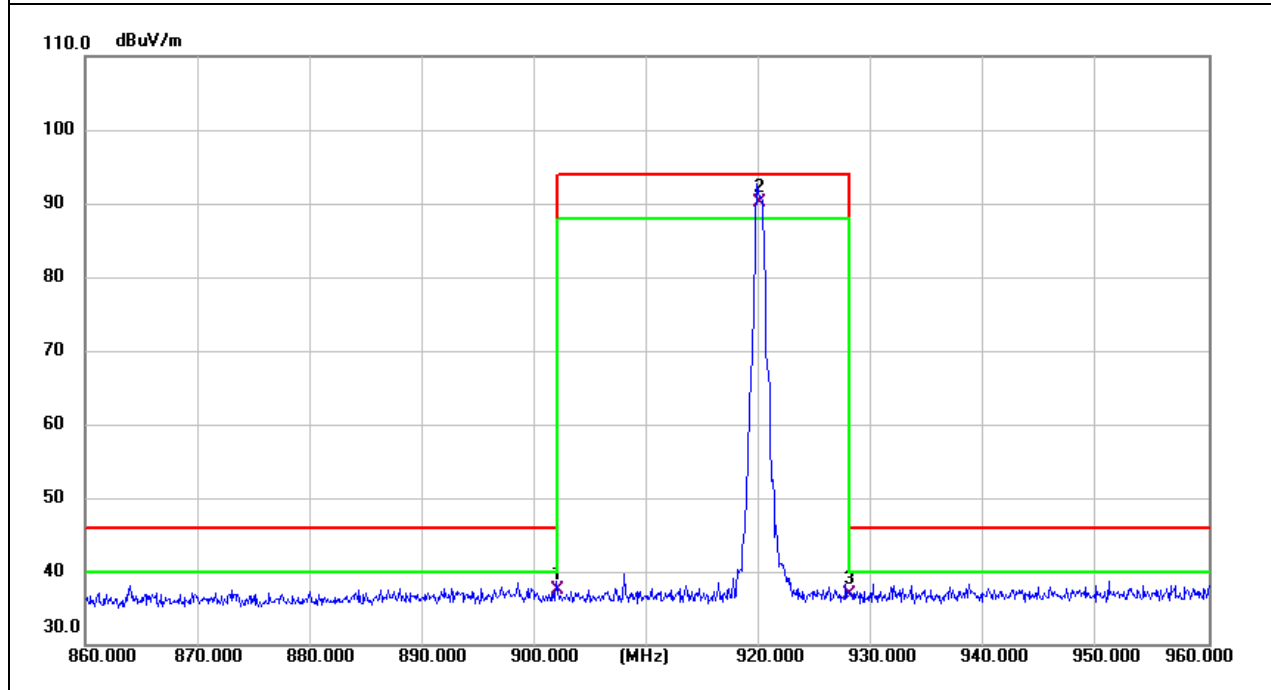


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-920MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	6.50	31.01	37.51	46.00	-8.49	QP
920.1850	59.00	31.03	90.03	94.00	-3.97	QP
928.0000	5.75	31.14	36.89	46.00	-9.11	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

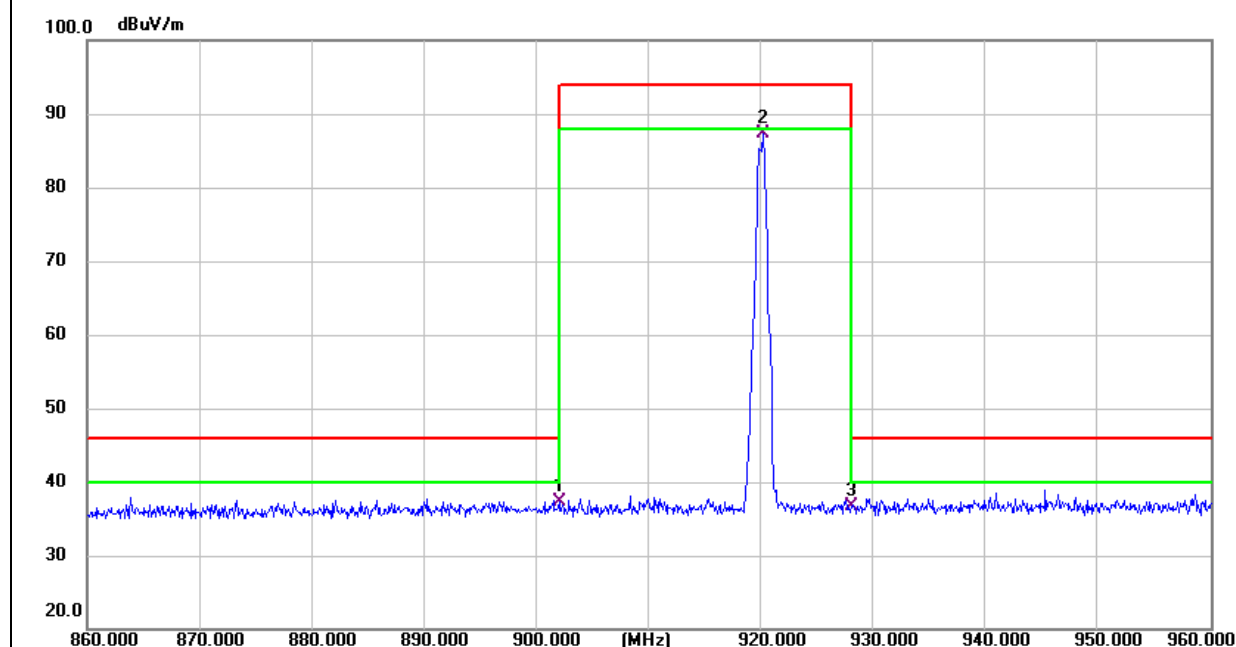


EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	25 °C	Relative Humidity :	54%
Pressure :	1010 hPa	Test Voltage :	DC 5V
Test Mode :	TX-920MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	6.35	31.01	37.36	46.00	-8.64	QP
920.2000	56.22	31.03	87.25	94.00	-6.75	QP
928.0000	5.66	31.14	36.80	46.00	-9.20	QP

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



4. BANDWIDTH TEST

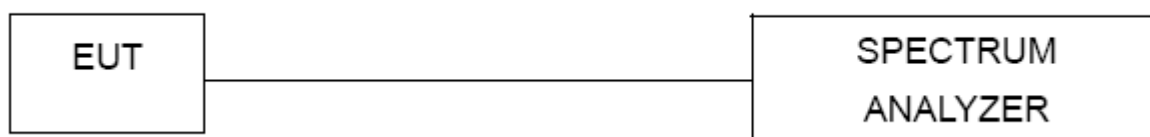
4.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value., Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP



6. TEST RESULTS

EUT :	Z-Stick 10 Pro/Z-Stick 10	Model Name :	ZWA060-A
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 5V
Test Mode :	Mode 1		

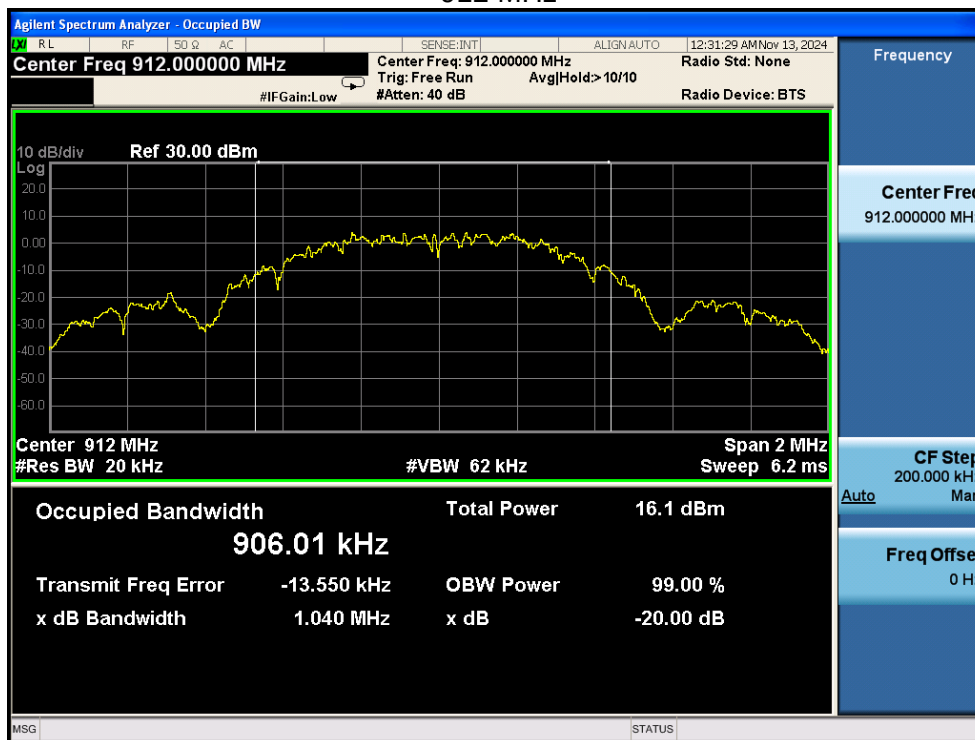
Test Channel	Frequency (MHz)	20 dBc Bandwidth (kHz)
CH01	908.4	83.68

908.4 MHz



Test Channel	Frequency (MHz)	20 dBc Bandwidth (kHz)
CH02	912	1040

912 MHz



Test Channel	Frequency (MHz)	20 dBc Bandwidth (KHz)
CH03	916	108.5

916 MHz



Test Channel	Frequency (MHz)	20 dBc Bandwidth (KHz)
CH04	920	1001

920 MHz



END OF REPORT