

RADIO TEST REPORT

FCC ID: UVIBM31A

Product: Bridgemate III scoring device
Trade Mark: Bridgemate
Model No.: BM3-1A
Family Model: N/A
Report No.: S24053003103002

Prepared for

Bridge Systems B.V.
Nijverheidsstraat 118, Rijswijk, 2288 BB, Netherlands

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name : Bridge Systems B.V.
Address : Nijverheidsstraat 118, Rijswijk, 2288 BB, Netherlands
Manufacturer's Name : Mecca Electronics Co. Ltd.
Address : Gangyang Industrial Area, Zhangmutou Town, Dongguan, China

Product description

Product name : Bridgemate III scoring device
Model and/or type reference : BM3-1A
Family Model : N/A
Test Sample Number..... : S240530031004

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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Date of Test :

Date (s) of performance of tests : May 31, 2024 ~ Aug. 30, 2024

Date of Issue..... : Aug. 30, 2024

Test Result..... : **Pass**

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 (Manager)

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Revision History

Report No.	Version	Description	Issued Date
S24053003103002	Rev.01	Initial issue of report	Aug. 30, 2024

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	N/A	
15.203	Antenna Requirement	Pass	
15.249 15.209	Radiated Spurious Emission	Pass	
15.249(2)	Frequency Tolerance	Pass	
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. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. 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

Product Feature and Specification	
Equipment	Bridgemate III scoring device
Trade Mark	Bridgemate
FCC ID	UVIBM31A
Model No.	BM3-1A
Family Model	N/A
Model Difference	N/A
Operating Frequency	908.7-921.3MHz
Modulation	GFSK
Number of Channels	64 Channels
Antenna Type	FPCB Antenna
Antenna Gain	1.2 dBi
Battery	DC 3.6V, 11600mAh, 41.76 Wh
Power supply	DC 5V from USB port or DC 3.6V from battery
HW Version	4.13
FW version	50244
SW Version	647

Note:

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

2. Channel list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	908.7	23	913.1	45	917.5
2	908.9	24	913.3	46	917.7
3	909.1	25	913.5	47	917.9
4	909.3	26	913.7	48	918.1
5	909.5	27	913.9	49	918.3
6	909.7	28	914.1	50	918.5
7	909.9	29	914.3	51	918.7
8	910.1	30	914.5	52	918.9
9	910.3	31	914.7	53	919.1
10	910.5	32	914.9	54	919.3
11	910.7	33	915.1	55	919.5
12	910.9	34	915.3	56	919.7
13	911.1	35	915.5	57	919.9
14	911.3	36	915.7	58	920.1
15	911.5	37	915.9	59	920.3
16	911.7	38	916.1	60	920.5
17	911.9	39	916.3	61	920.7
18	912.1	40	916.5	62	920.9
19	912.3	41	916.7	63	921.1
20	912.5	42	916.9	64	921.3
21	912.7	43	917.1		
22	912.9	44	917.3		

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(908.7MHz)
Mode 2	CH33(915.1MHz)
Mode 3	CH64(921.3MHz)

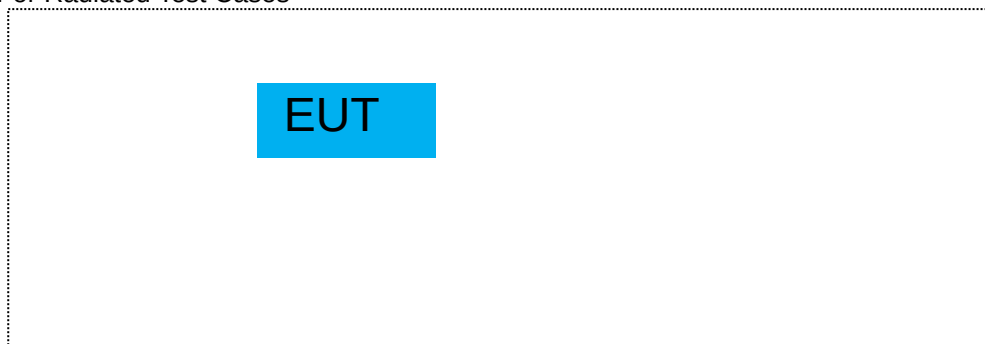
For AC Conducted Emission	
Pretest Mode	Description
Mode 1	CH01(908.7MHz)
Mode 2	CH33(915.1MHz)
Mode 3	CH64(921.3MHz)

For Radiated Spurious Emission	
Pretest Mode	Description
Mode 1	CH01(908.7MHz)
Mode 2	CH33(915.1MHz)
Mode 3	CH64(921.3MHz)

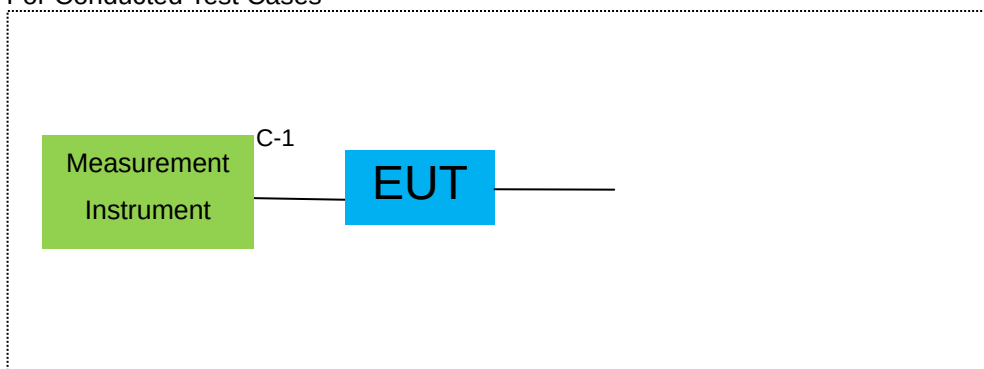
For Conducted Emission	
Final Test Mode	Description
Mode 1	CH01(908.7MHz)
Mode 2	CH33(915.1MHz)
Mode 3	CH64(921.3MHz)

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

For Radiated Test Cases



For Conducted Test Cases



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
EUT	Bridgemate III scoring device	BM3-1A	N/A	

Item	Cable Type	Shielded Type	Ferrite Core	Length	Note
C-1	RF Cable	NO	NO	0.1m	

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& Conducted Test equipment

	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4440A	MY41000130	2024.03.12	2025.03.11	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024.04.26	2025.04.25	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2024.04.26	2025.04.25	1 year
4	Test Receiver	R&S	ESPI7	101318	2024.03.12	2025.03.11	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2024.03.11	2025.03.10	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2023.05.06	2026.05.05	3 year
7	Horn Antenna	SCHWARZBECK	BBHA 9120D	2816	2023.01.12	2026.01.11	3 year
8	Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	803	2022.11.07	2025.11.06	3 year
9	Amplifier	EMC	EMC051835SE	980246	2024.01.23	2025.01.22	1 year
10	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	055	2023.11.03	2026.11.02	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	2022.06.17	2025.06.16	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
14	High Test Cable(1G-40GHz)	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
15	Filter	TRILTHIC	2400MHz	29	2023.03.26	2026.03.25	3 year
16	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 PCB board) When conducted test
And this temporary antenna connector is listed within the instrument list

AC Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2024.03.12	2025.03.11	1 year
2	LISN	R&S	ENV216	101313	2024.03.12	2025.03.11	1 year
3	LISN	SCHWARZBECK	NNLK 8129	8129245	2024.03.12	2025.03.11	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2023.05.06	2026.05.05	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 Aux Equipment & Test Cable which is scheduled for calibration every 2 or 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 permanent attached . It comply with the standard requirement.

3.3 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Conducted Emission Limit		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	part 15.207
0.50 -5.0	56.00	46.00	part 15.207
5.0 -30.0	60.00	50.00	part 15.207

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

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

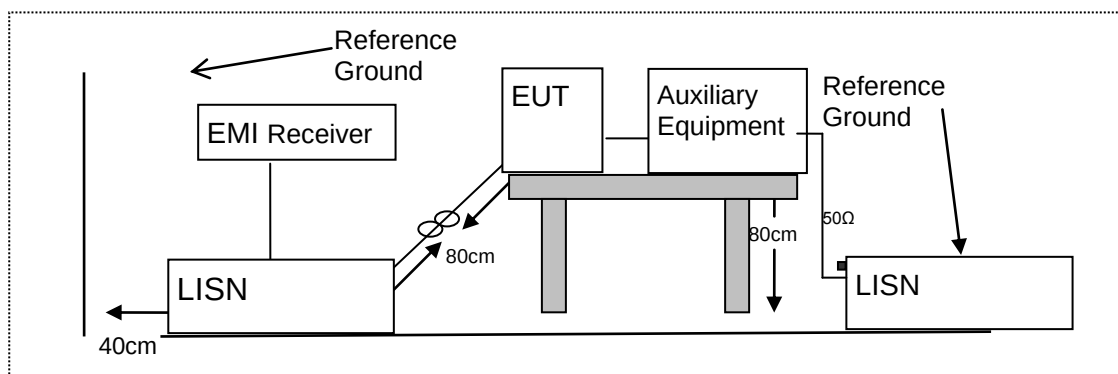
3.3.2 TEST PROCEDURE

- 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



3.3.5 TEST RESULT

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	22 °C	Relative Humidity :	57%
Pressure :	1010hPa	Phase :	N/A
Test Voltage :	N/A	Test Mode :	N/A

Not applicable, The product is only used in connection with a computer.

3.4 RADIATED EMISSION MEASUREMENT

3.4.1 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

3.4.2 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.

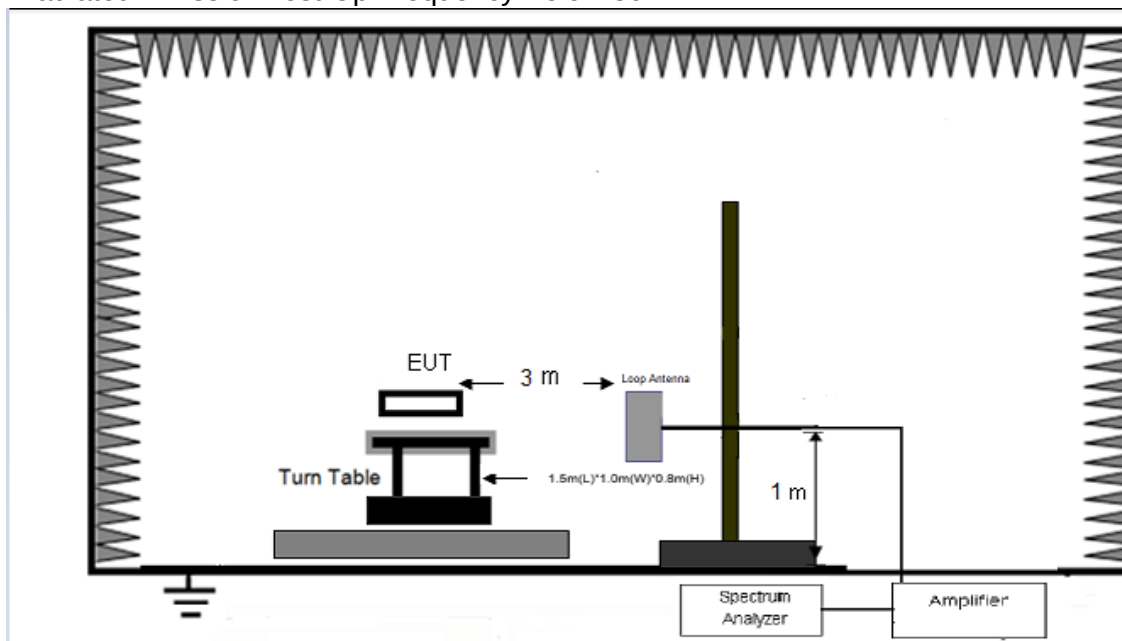
Note:

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

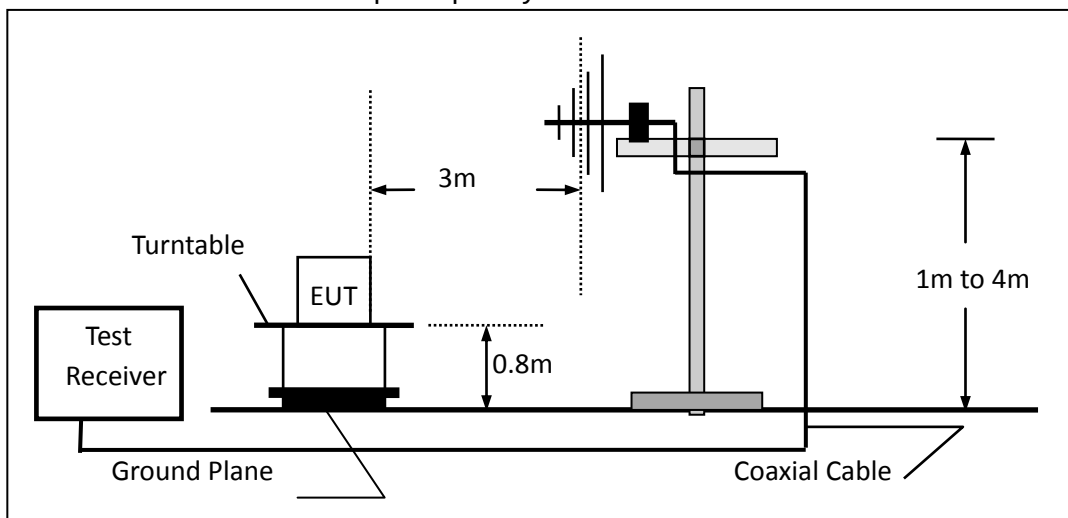
3.4.3 DEVIATION FROM TEST STANDARD

No deviation

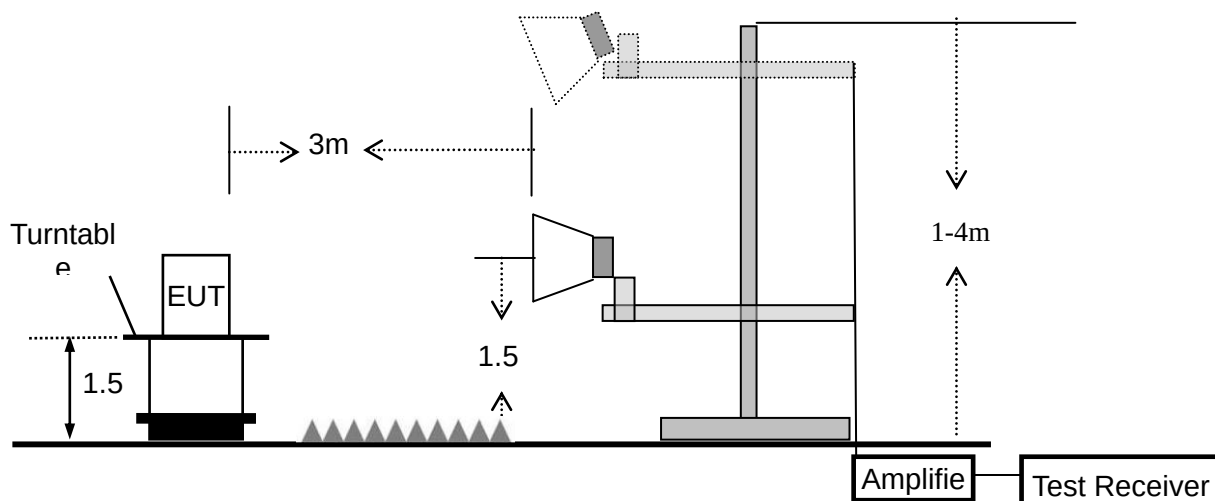
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.4.4 TEST RESULTS (BELOW 30MHZ)

EUT :	Bridgemate III scoring device	Model Name. :	BM3-1A
Temperature :	20 °C	Relative Humidity :	48%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
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 = $40\log(\text{Specific distance/ test distance})$ (dB);

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

For Frequency above 30MHz:

Distance extrapolation factor = $20\log(\text{Specific distance/ test distance})$ (dB);

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

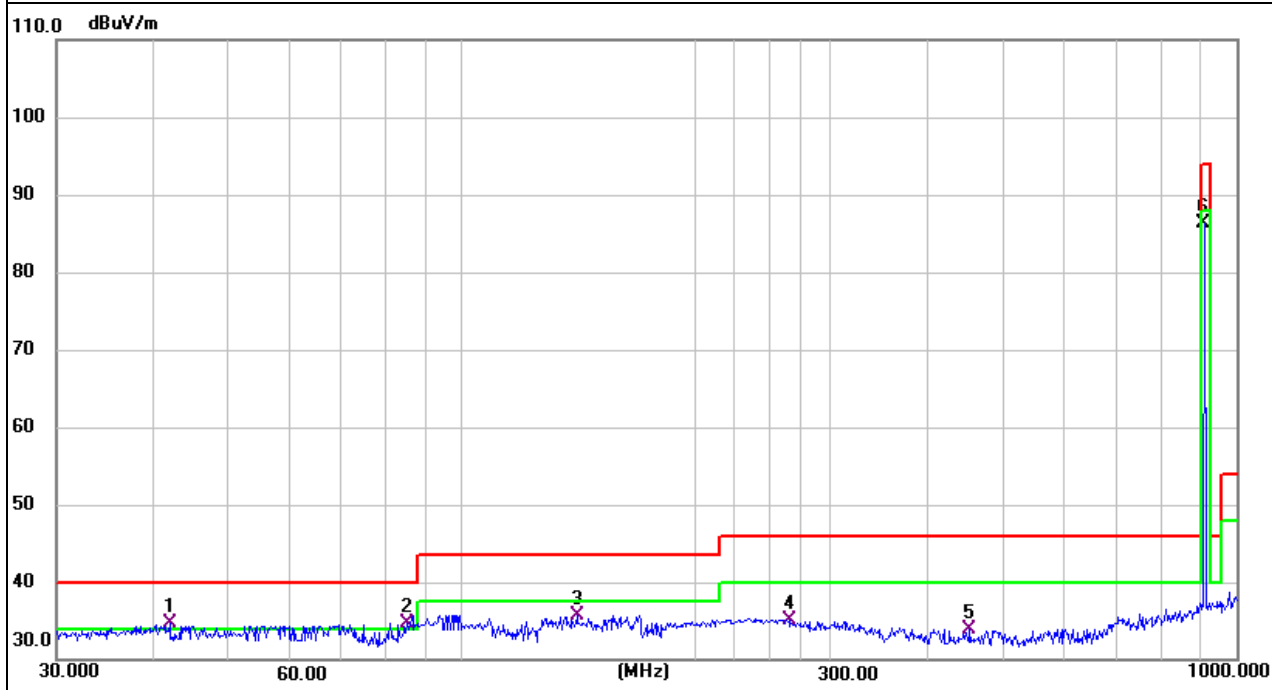
3.4.5 TEST RESULTS (BELOW 1000 MHZ)

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 1-TX-908.7MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
42.0065	15.71	18.94	34.65	40.00	-5.35	QP
84.9993	20.22	14.49	34.71	40.00	-5.29	QP
140.8350	21.39	14.40	35.79	43.50	-7.71	QP
264.7456	15.41	19.75	35.16	46.00	-10.84	QP
452.7196	10.15	23.84	33.99	46.00	-12.01	QP
908.7000	55.23	31.02	86.25	114	-7.75	peak
908.7000	-	-	70.00	94	-24.00	AVG

Remark:

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



Note: The average value of fundamental frequency is:

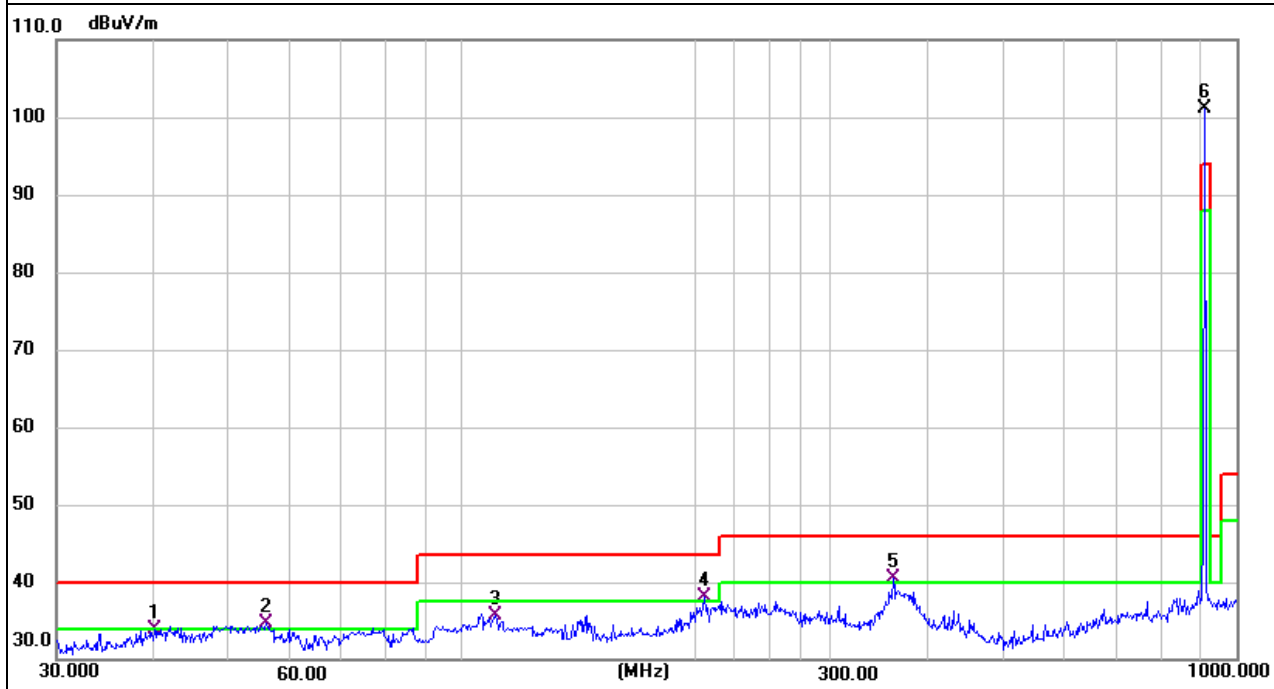
Average= Peak Value+ 20log(Duty cycle), Final Average= Peak-16.25

EUT :	Bridgmate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 1-TX-908.7MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
40.1347	15.31	18.64	33.95	40.00	-6.05	QP
56.0007	15.27	19.42	34.69	40.00	-5.31	QP
110.5686	17.93	17.75	35.68	43.50	-7.82	QP
205.6750	19.93	18.13	38.06	43.50	-5.44	QP
360.4476	18.33	22.08	40.41	46.00	-5.59	QP
908.7000	70.12	31.02	101.14	114.00	-12.86	Peak
908.7000	-	-	84.89	94.00	-9.11	AVG

Remark:

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



Note: The average value of fundamental frequency is:

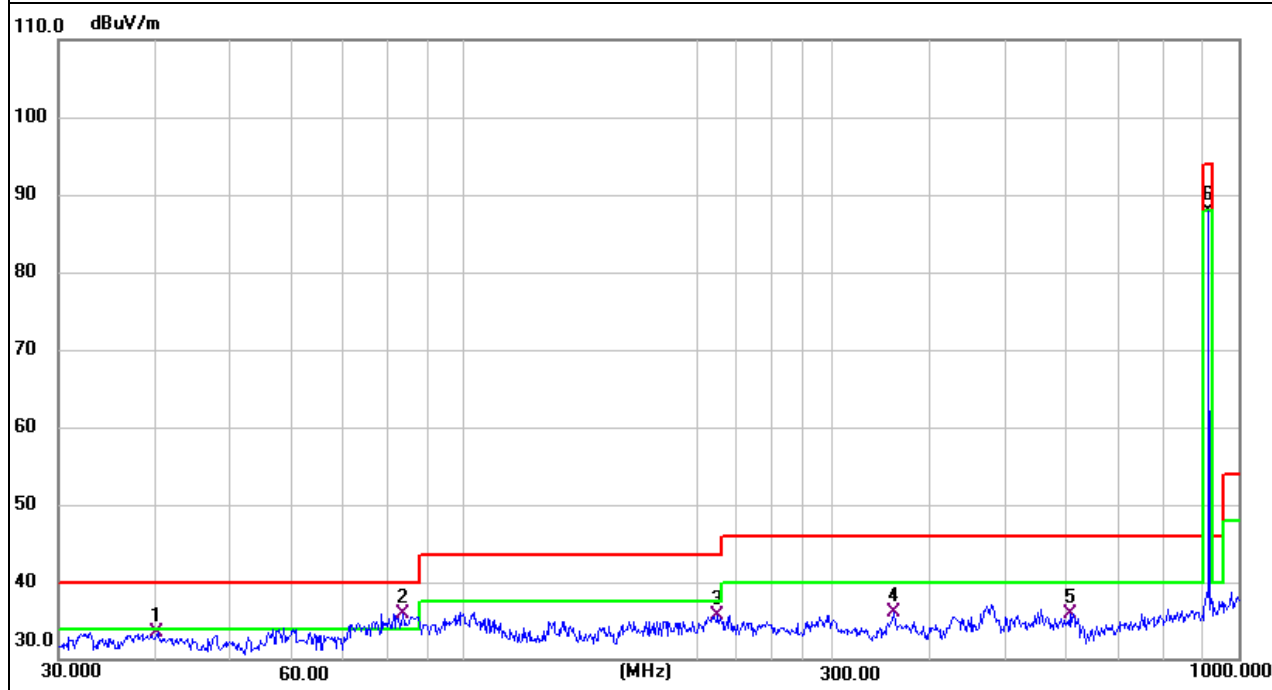
Average= Peak Value+ 20log(Duty cycle), Final Average= Peak-16.25

EUT :	Bridgmate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 2-TX-915.1MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
40.2754	14.79	18.66	33.45	40.00	-6.55	QP
83.5220	21.91	14.08	35.99	40.00	-4.01	QP
213.0150	17.56	18.24	35.80	43.50	-7.70	QP
359.1860	14.03	22.05	36.08	46.00	-9.92	QP
605.6592	9.63	26.37	36.00	46.00	-10.00	QP
915.0683	56.85	31.02	87.87	114.00	-26.13	Peak
915.0683	-	-	71.62	94.00	-22.38	AVG

Remark:

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



Note: The average value of fundamental frequency is:

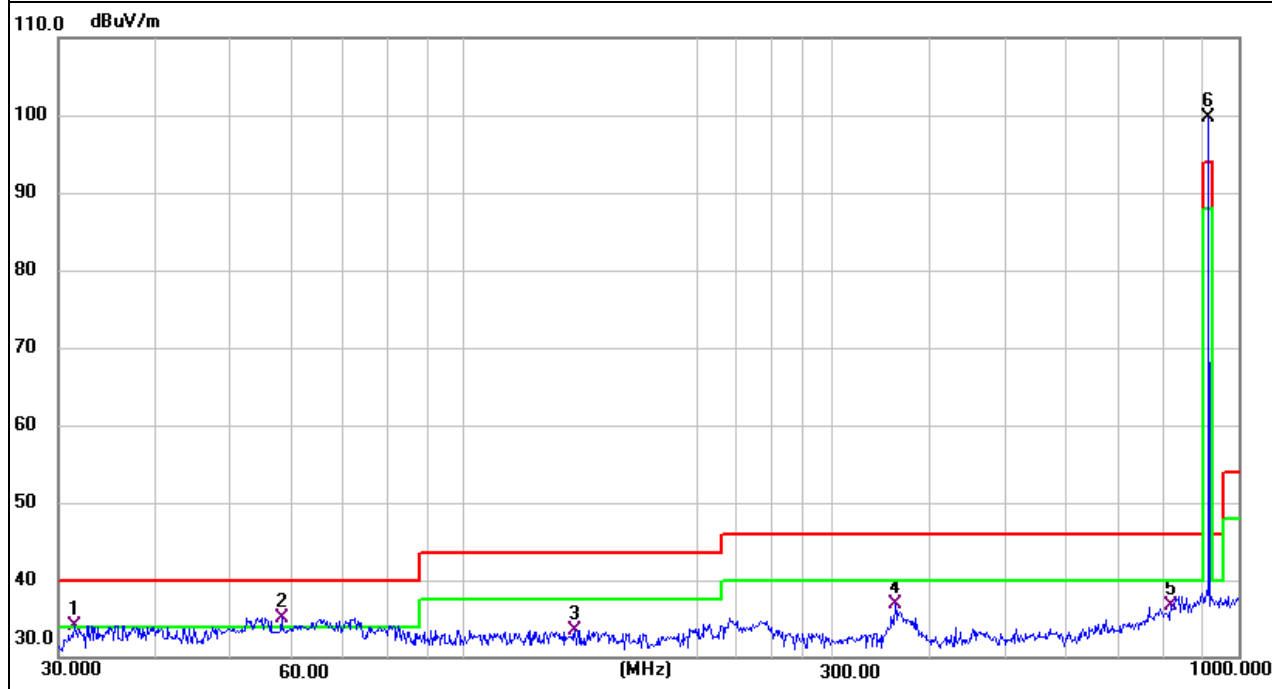
Average= Peak Value+ 20log(Duty cycle), Final Average= Peak-16.25

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 2-TX-915.1MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
31.5091	17.31	16.84	34.15	40.00	-5.85	QP
58.2030	16.09	19.01	35.10	40.00	-4.90	QP
139.3610	19.05	14.48	33.53	43.50	-9.97	QP
360.4476	14.83	22.08	36.91	46.00	-9.09	QP
818.8340	6.92	29.88	36.80	46.00	-9.20	QP
915.1000	68.77	31.02	99.79	114.00	-14.21	Peak
915.1000	-	-	83.54	94.00	-10.46	AVG

Remark:

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



Note: The average value of fundamental frequency is:

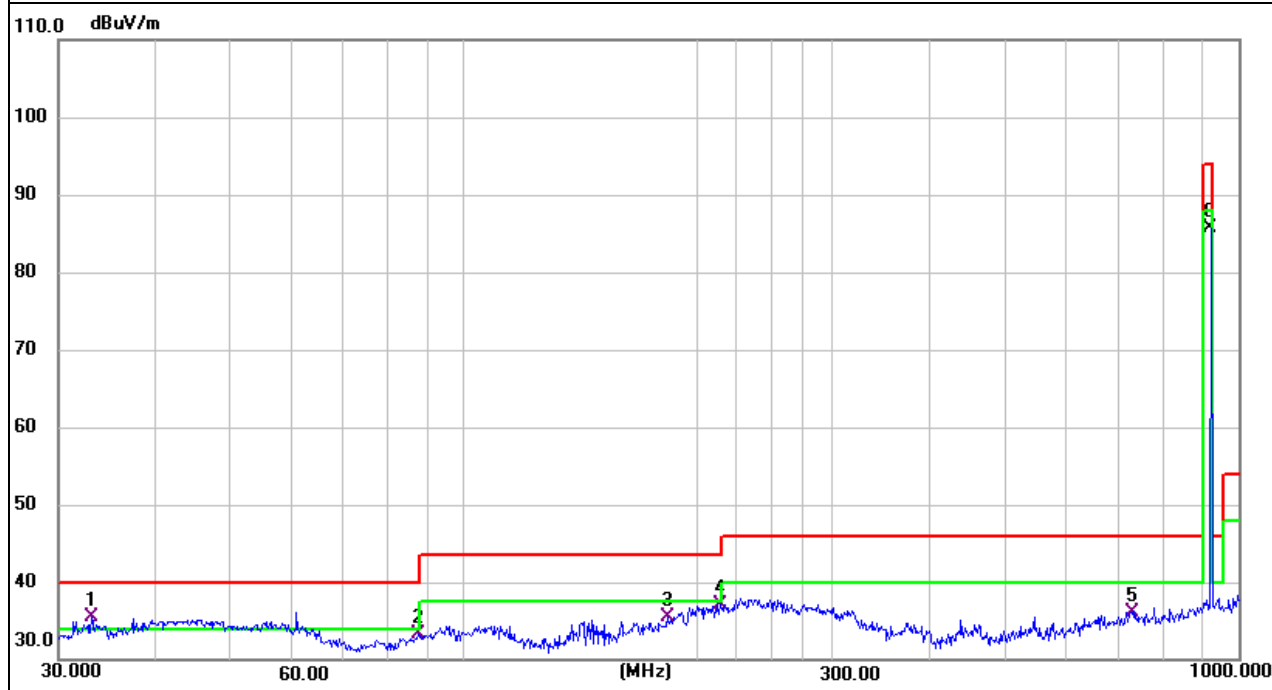
Average= Peak Value+ 20log(Duty cycle), Final Average= Peak-16.25

EUT :	Bridgmate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 3-TX-921.3MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
33.0950	18.46	17.01	35.47	40.00	-4.53	QP
87.4175	18.15	15.09	33.24	40.00	-6.76	QP
183.2005	18.98	16.51	35.49	43.50	-8.01	QP
214.5141	18.90	18.24	37.14	43.50	-6.36	QP
729.3582	7.29	28.86	36.15	46.00	-9.85	QP
921.3000	54.61	31.06	85.67	114.00	-28.33	Peak
921.3000	-	-	69.42	94.00	-24.58	AVG

Remark:

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



Note: The average value of fundamental frequency is:

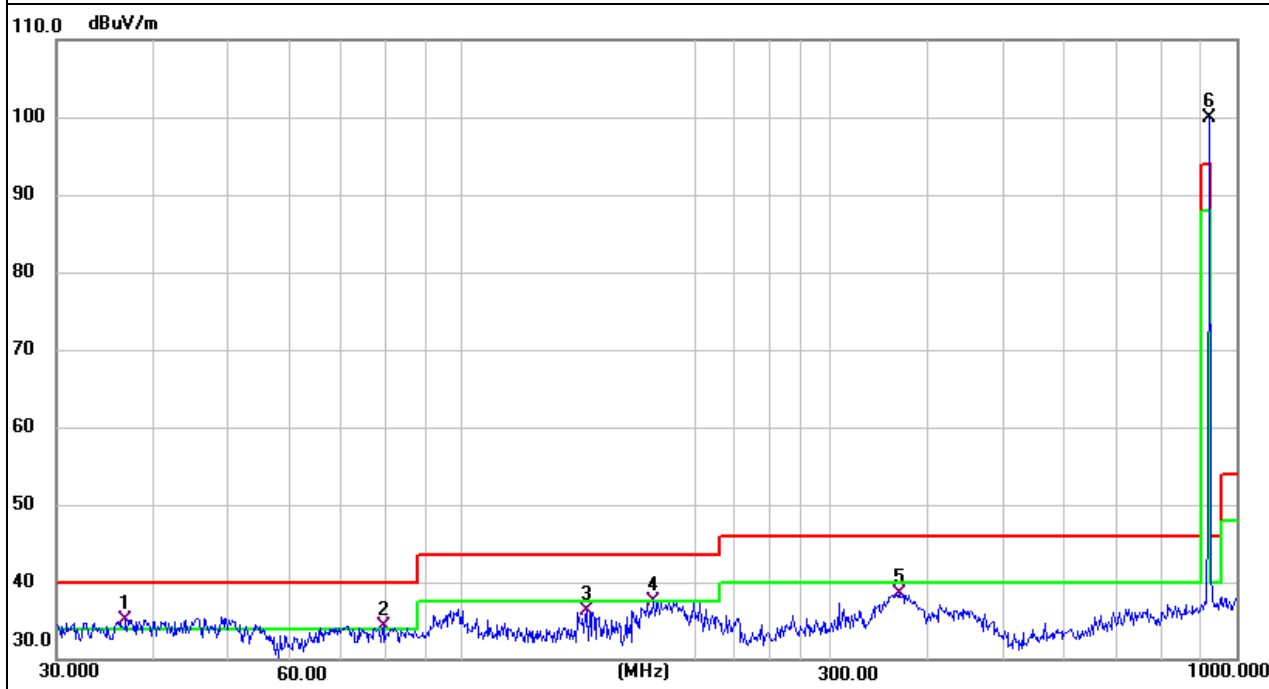
Average= Peak Value+ 20log(Duty cycle), Final Average= Peak-16.25

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 3-TX-921.3MHz	Polarization :	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
36.8952	17.36	17.79	35.15	40.00	-4.85	QP
79.2425	20.29	13.91	34.20	40.00	-5.80	QP
145.3505	21.91	14.49	36.40	43.50	-7.10	QP
176.8875	21.57	15.86	37.43	43.50	-6.07	QP
366.8231	16.27	22.23	38.50	46.00	-7.50	QP
921.5157	68.8	31.08	99.88	114.00	-14.12	Peak
921.5157	-	-	83.63	94.00	-10.37	AVG

Remark:

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



Note: The average value of fundamental frequency is:

Average= Peak Value+ 20log(Duty cycle), Final Average= Peak-16.25

3.4.6 TEST RESULTS (ABOVE 1000 MHZ)

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 1-TX-908.7MHz	Polarization :	Horizontal

No.	Frequency	Reading	Correct Factor	Dutycycle Factor	Result	Limit	Over Limit	Remark
	(MHz)	(dBuV/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	1817.400	61.28	-7.42	-	53.86	74	-20.14	Peak
2	2726.100	71.23	-4.2	-	67.03	74	-6.97	Peak
3	3634.800	59.62	-2.02	-	57.60	74	-16.40	Peak
4	4543.500	67.35	0.47	-	67.82	74	-6.18	Peak
5	1817.400	-	-	-16.25	37.61	54	-16.39	AVG
6	2726.100	-	-	-16.25	50.78	54	-3.22	AVG
7	3634.800	-	-	-16.25	41.35	54	-12.65	AVG
8	4543.500	-	-	-16.25	51.57	54	-2.43	AVG

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 1-TX-908.7MHz	Polarization :	Vertical

No.	Frequency	Reading	Correct Factor	Dutycycle Factor	Result	Limit	Over Limit	Remark
	(MHz)	(dBuV/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	1817.400	62.85	-7.42	-	55.43	74	-18.57	Peak
2	2726.100	58.96	-4.2	-	54.76	74	-19.24	Peak
3	3634.800	57.58	-2.02	-	55.56	74	-18.44	Peak
4	4543.500	65.29	0.47	-	65.76	74	-8.24	Peak
5	1817.400	-	-	-16.25	39.18	54	-14.82	AVG
6	2726.100	-	-	-16.25	38.51	54	-15.49	AVG
7	3634.800	-	-	-16.25	39.31	54	-14.69	AVG
8	4543.500	-	-	-16.25	49.51	54	-4.49	AVG

Note:that all other emissions above 1GHz are attenuated 30dB below the limit, so it does not record.

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 2-TX-915.1MHz	Polarization :	Horizontal

No.	Frequency	Reading	Correct Factor	Dutycycle Factor	Result	Limit	Over Limit	Remark
	(MHz)	(dBuV/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	1830.200	60.29	-7.35	-	52.94	74	-21.06	Peak
2	2745.300	68.45	-4.15	-	64.30	74	-9.70	Peak
3	3660.400	55.48	-1.94	-	53.54	74	-20.46	Peak
4	4575.500	66.96	0.54	-	67.50	74	-6.50	Peak
5	1830.200	-	-	-16.25	36.69	54	-17.31	AVG
6	2745.300	-	-	-16.25	48.05	54	-5.95	AVG
7	3660.400	-	-	-16.25	37.29	54	-16.71	AVG
8	4575.500	-	-	-16.25	51.25	54	-2.75	AVG

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 2-TX-915.1MHz	Polarization :	Vertical

No.	Frequency	Reading	Correct Factor	Dutycycle Factor	Result	Limit	Over Limit	Remark
	(MHz)	(dBuV/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	1830.200	62.85	-7.35	-	55.50	74	-18.50	Peak
2	2745.300	57.81	-4.15	-	53.66	74	-20.34	Peak
3	3660.400	54.97	-1.94	-	53.03	74	-20.97	Peak
4	4575.500	64.48	0.54	-	65.02	74	-8.98	Peak
5	1830.200	-	-	-16.25	39.25	54	-14.75	AVG
6	2745.300	-	-	-16.25	37.41	54	-16.59	AVG
7	3660.400	-	-	-16.25	36.78	54	-17.22	AVG
8	4575.500	-	-	-16.25	48.77	54	-5.23	AVG

Note:that all other emissions above 1GHz are attenuated 30dB below the limit, so it does not record.

EUT :	Bridgmate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 3-TX-921.3MHz	Polarization :	Horizontal

No.	Frequency	Reading	Correct Factor	Dutycycle Factor	Result	Limit	Over Limit	Remark
	(MHz)	(dBuV/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	1842.600	61.67	-7.26	-	54.41	74	-19.59	Peak
2	2763.900	71.7	-4.09	-	67.61	74	-6.39	Peak
3	3685.200	58.41	-1.87	-	56.54	74	-17.46	Peak
4	4606.500	67.55	0.62	-	68.17	74	-5.83	Peak
5	1842.600	-	-	-16.25	38.16	54	-15.84	AVG
6	2763.900	-	-	-16.25	51.36	54	-2.64	AVG
7	3685.200	-	-	-16.25	40.29	54	-13.71	AVG
8	4606.500	-	-	-16.25	51.92	54	-2.08	AVG

EUT :	Bridgmate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 3-TX-921.3MHz	Polarization :	Vertical

No.	Frequency	Reading	Correct Factor	Dutycycle Factor	Result	Limit	Over Limit	Remark
	(MHz)	(dBuV/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
1	1842.600	62.17	-7.26	-	54.91	74	-19.09	Peak
2	2763.900	58.42	-4.09	-	54.33	74	-19.67	Peak
3	3685.200	56.27	-1.87	-	54.40	74	-19.60	Peak
4	4606.500	66.62	0.62	-	67.24	74	-6.76	Peak
5	1842.600	-	-	-16.25	38.66	54	-15.34	AVG
6	2763.900	-	-	-16.25	38.08	54	-15.92	AVG
7	3685.200	-	-	-16.25	38.15	54	-15.85	AVG
8	4606.500	-	-	-16.25	50.99	54	-3.01	AVG

Note:that all other emissions above 1GHz are attenuated 30dB below the limit, so it does not record.

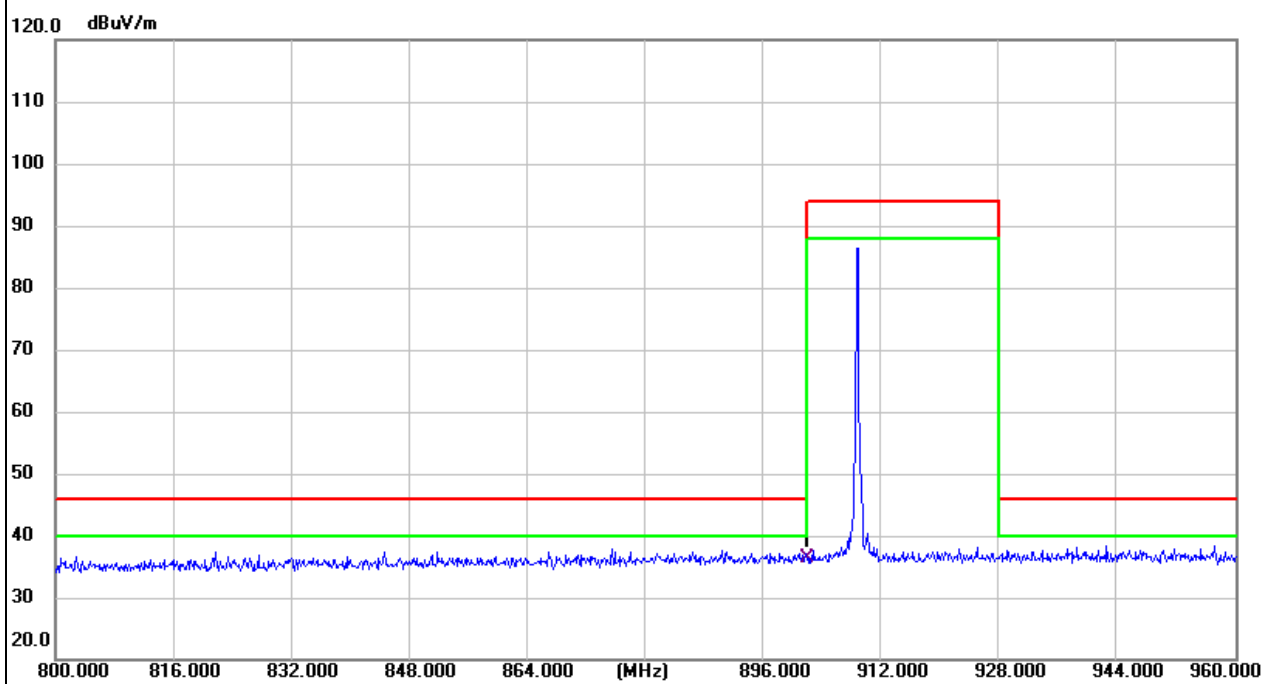
3.4.7 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 1-TX-908.7MHz	Polarization :	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
902.0000	5.40	31.01	36.41	46.00	-9.59	QP

Remark:

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

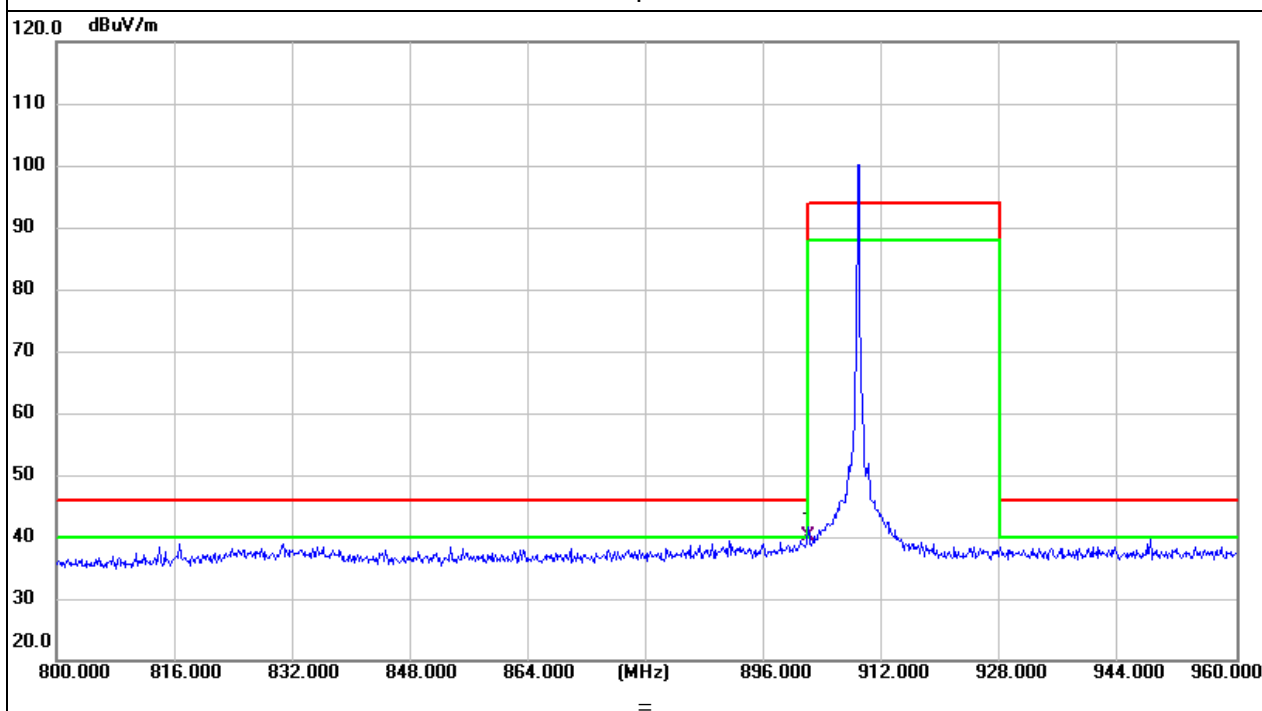


EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 1-TX-908.7MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
902.0000	9.01	31.01	40.02	46.00	-5.98	QP

Remark:

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

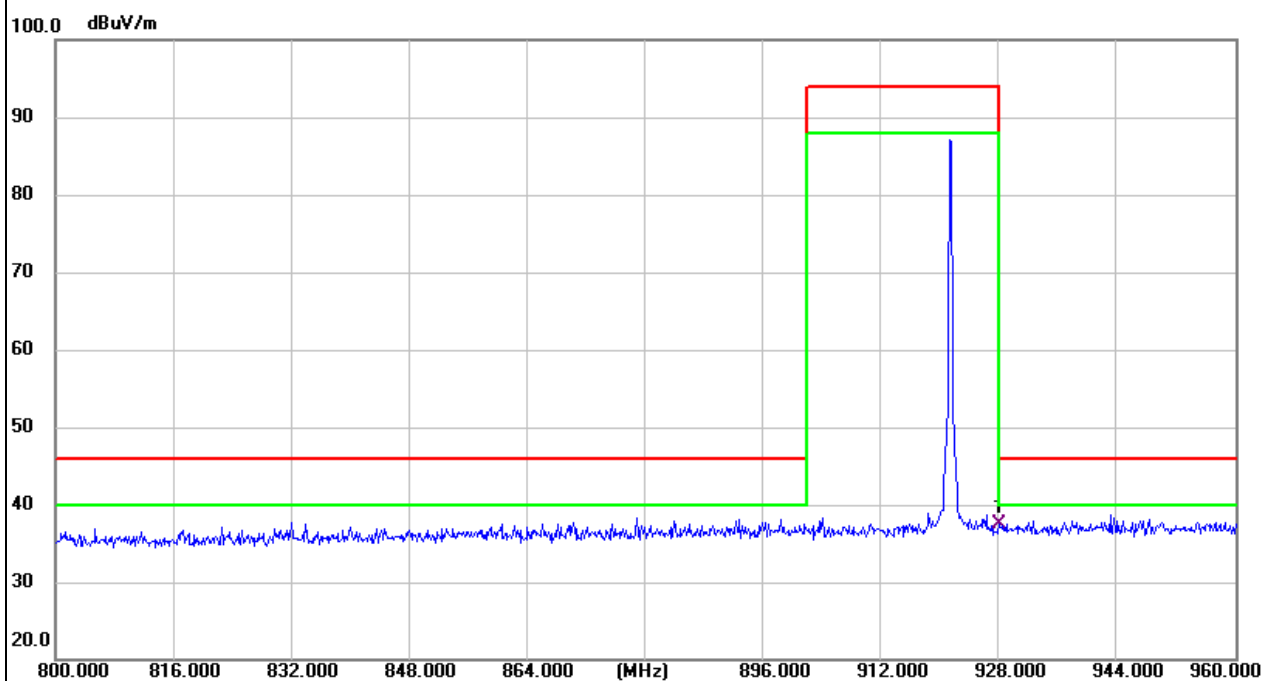


EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 3-TX-921.3MHz	Polarization :	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
928.0000	6.45	31.14	37.59	46.00	-8.41	QP

Remark:

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

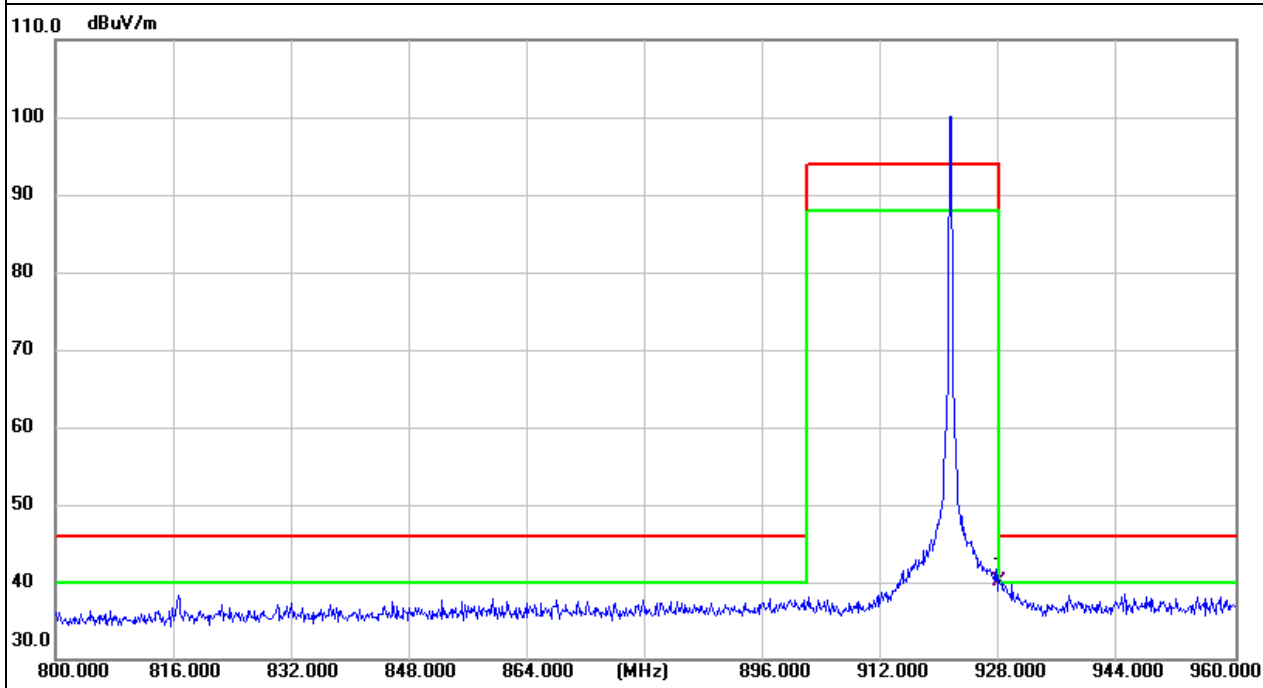


EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	25 °C	Relative Humidity :	51%
Pressure :	1010 hPa	Test Voltage :	DC 3.6V
Test Mode :	Mode 3-TX-921.3MHz	Polarization :	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
928.0000	9.00	31.14	40.14	46.00	-5.86	QP

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(Y orientation).

2. *Calculate Average value based on Duty Cycle correction factor:

$T_{on1} = 15.35\text{ms}$

$\text{Duty Cycle} = T_{on}/(T_{on} + T_{off}) = 15.35/100 = 0.154 = 15.4\%$

$\text{Duty Cycle factor} = 20\log(\text{Duty Cycle}) = 20\log(0.154) = -16.25$

$\text{Average} = \text{Peak} + \text{Duty Cycle factor}$

Pulse Desensitization Correction Factor

Pulse Width(PW)= 100ms

$2/PW = 2/100\text{ms} = 0.02\text{kHz}$

$RBW(100\text{kHz}) > 2/PW (0.02\text{kHz})$

Therefore PDCF is not needed.

Duty Cycle:

The duty cycle is simply the on time divided by the period:

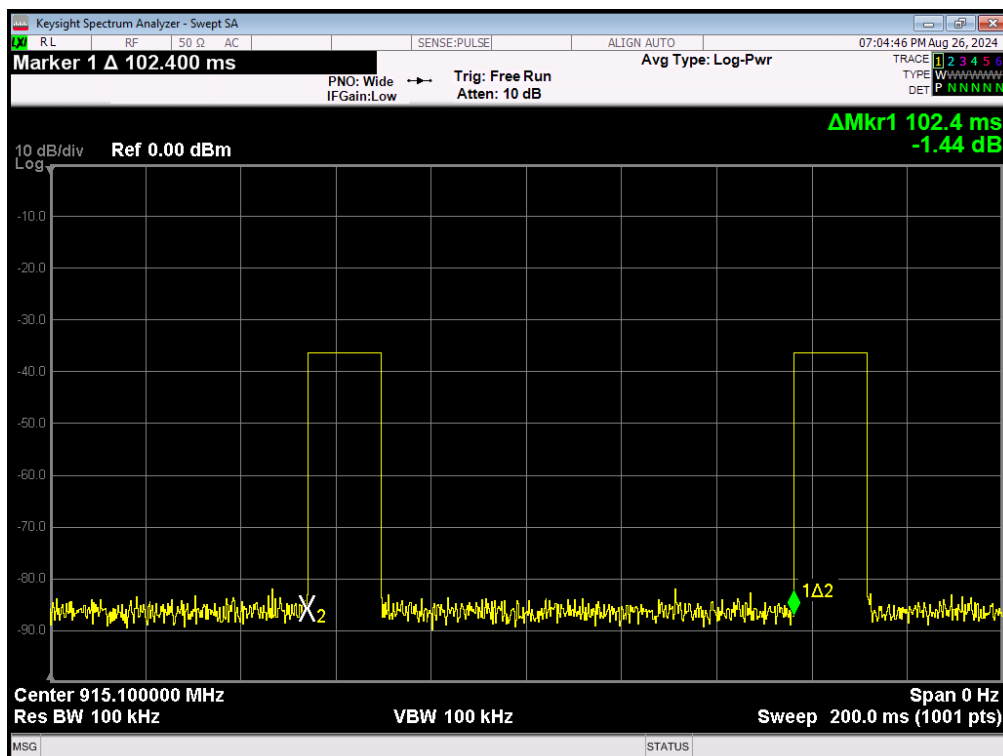
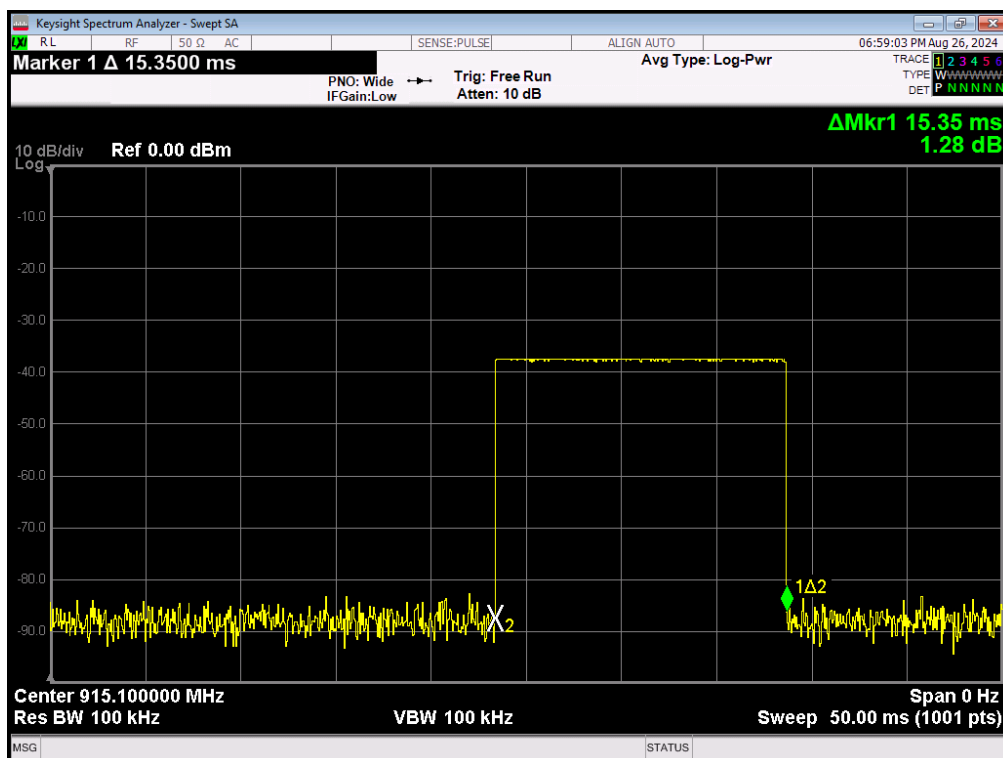
The duration of one cycle = 100ms

Effective period of the cycle = 15.35ms

$\text{Duty Cycle} = 15.35/100 = 0.154 = 15.4\%$

Average pulsed signal over one complete pulse train or 100 ms time frame if pulse train exceeds 100 ms.

Test Plot For Duty cycle



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.

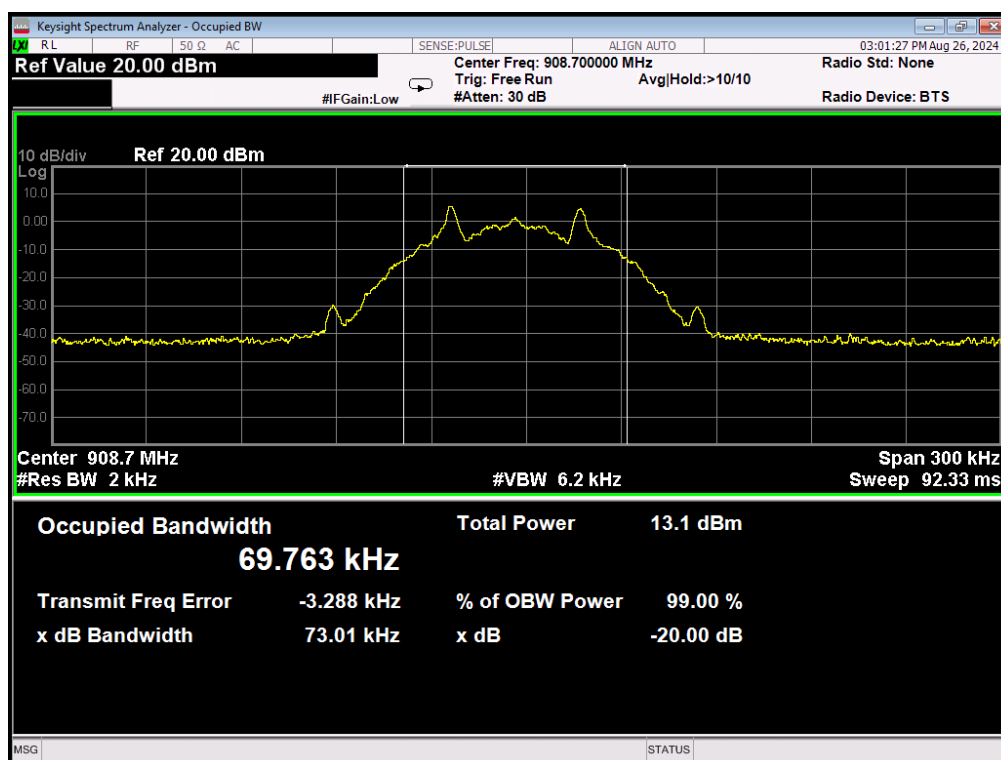
4.3 TEST SETUP



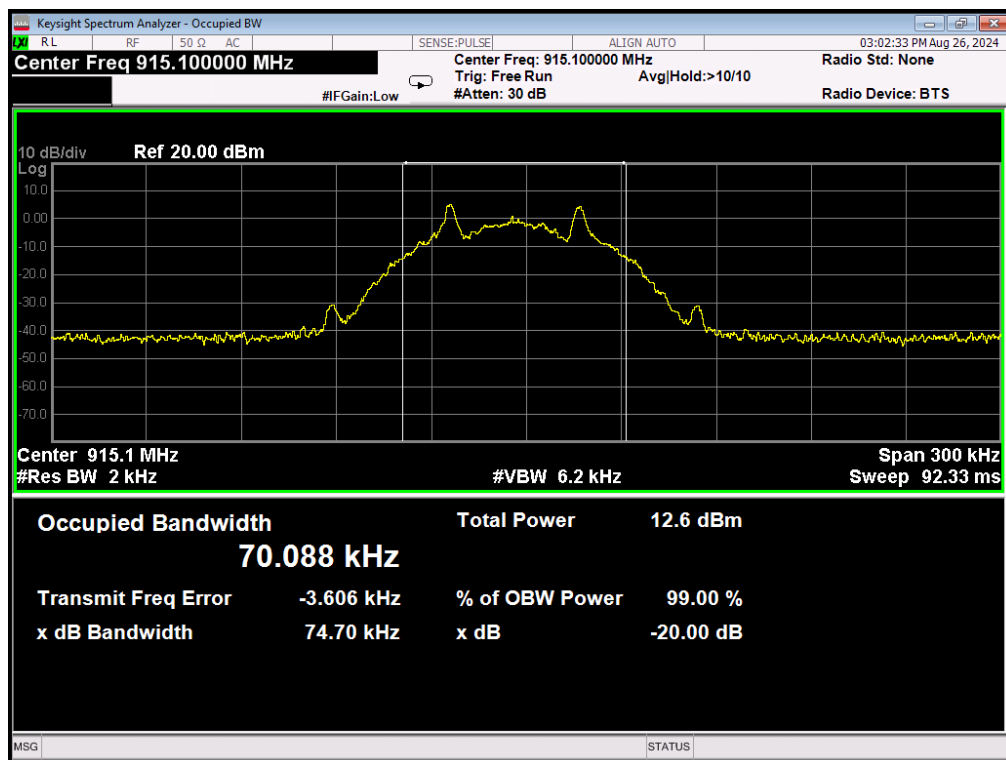
4.4. TEST RESULTS

EUT :	Bridgemate III scoring device	Model Name :	BM3-1A
Temperature :	26 °C	Relative Humidity :	53%
Pressure :	1020 hPa	Test Power :	DC 3.6V
Test Mode :	Mode 1/2/3		

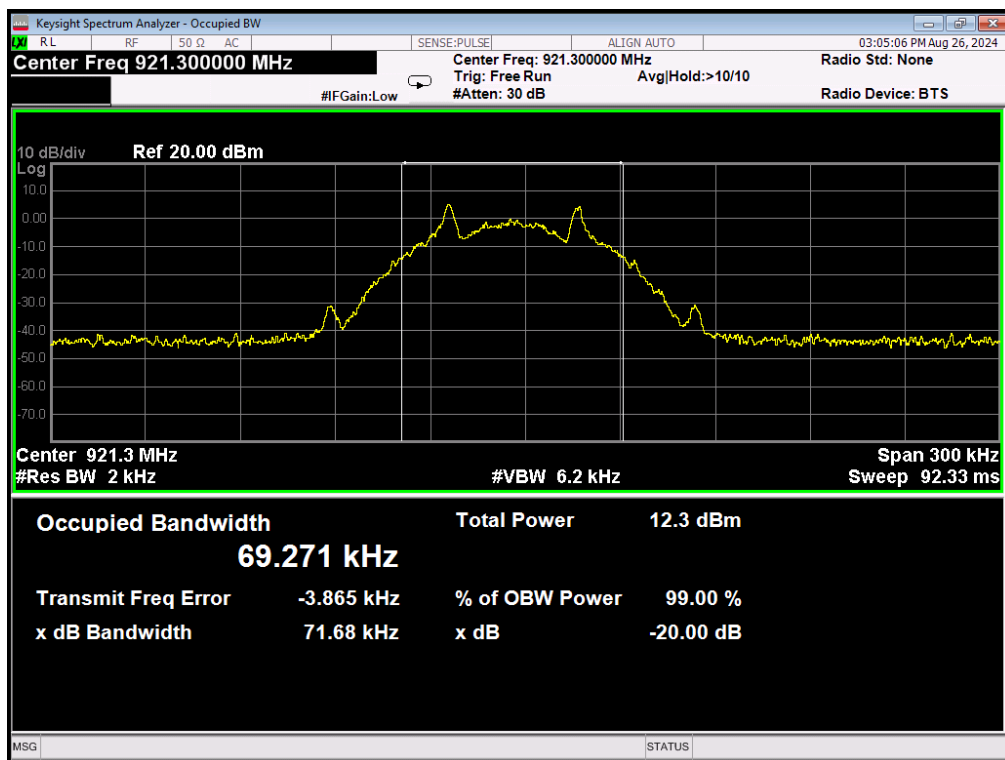
Test Channel	Frequency (MHz)	20 dB Bandwidth (KHz)
CH01	908.7	73.01



Test Channel	Frequency (MHz)	20 dB Bandwidth (KHz)
CH33	915.1	74.70



Test Channel	Frequency (MHz)	20 dB Bandwidth (KHz)
CH64	921.3	71.68



END OF REPORT