

Report No.: AAEMT/RF/250311-01

FCC Test Report

(Part 96)

FCC ID: 2BNMP-AMPU-MPRU

Client Information:

*Applicant: AmpliTech Group
*Applicant add.: 155 Plant Avenue Hauppauge NY 11788

Product Information:

Sampling Details: The below Test Item provided by applicant
*EUT Name: Mid Power Radio Unit
*Model No.: AMPU-MPRU-Gen 2-3537-AI-BI
*Brand Name:



Standards: FCC PART 96

AA Electro Magnetic Test Laboratory Private Limited

Add.: Plot No 174, Udyog Vihar - Phase 4, Sector 18,
Gurgaon, Haryana, India

Date of Receipt: Mar. 11, 2025

Date of Test: Mar. 11, 2025~ Apr 10, 2025

Date of Issue: May.22,2025

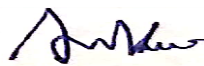
Test Result: Pass

Declaration of Conformity: Declaration of conformity of the results is based as per the standard limits

Disclaimer: The * Information are provided by Manufacturer and it is verified through the Request form and Marking Label, AA Electro Magnetic Test Laboratory is not responsible for the above information accuracy This device described above has been tested by AA Electro Magnetic Test Laboratory Private Limited, 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.

*This test report must not be used by the client to claim product endorsement by any agency of the U.S. government.

Prepared By: (+ signature) Ankur Kumar



Reviewed & Approved by: (+ signature)

Dr. Lenin Raja (Authorized Representative) (/ lenin83/)



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Test Summary

1.1 Compliance with FCC Part 96

TEST	TEST REQUIREMENT	LIMIT	RESULT	REMARK
Equivalent Isotropic Radiated Power	2.1046; 96.41(b)	< 37dBm/MHz	PASS	Meet the requirement of limit.
Frequency Stability	2.1055	N/A	PASS	Meet the requirement of limit.
Occupied Bandwidth	2.1049	See 5.3.1	PASS	Meet the requirement of limit.
Peak to average ratio	2.1046; 96.41(g)	< 13 dB	PASS	Meet the requirement of limit.
Conducted Spurious Emissions	2.1051; 96.41(e)	< -19.02 dBm	PASS	Meet the requirement of limit.
Radiated Spurious Emissions	2.1053; 96.41(e)	< -13 dBm	PASS	Meet the requirement of limit.

1.2 Measurement Uncertainty

All measurements involve certain levels of uncertainties, the following measurements uncertainty Levels have estimated based on standards, the maximum value of the uncertainty as below:

No.	Item	Uncertainty
1	Conducted Emission Test	2.82dB
2	Radiated Emission Test	2.79dB
3	Spurious Emissions, Conducted	0.76dB
4	Output Power	1.16dB

1.3 Test Location

All tests were performed at:

AA Electro Magnetic Test Laboratory Private Limited

Plot No 174, Udyog Vihar - Phase 4, Sector 18, Gurgaon, Haryana, India

Tel.: +91-0124-4235350

Test Facility

The test facility is recognized, certified or accredited by the following organizations:

ILAC / NABL Accreditation No.: TC-8597

Three 3m Semi-Anechoic Chamber, 1 full-Anechoic chamber and 2 Shielding Rooms of AA Electro Magnetic Test Laboratory Private Limited have been registered by National Accreditation Board for Testing and Calibration Laboratories (NABL).

ILAC –A2LA Accreditation No.: 5593.01

Three 3m Semi-Anechoic Chamber, 1 full-Anechoic chamber and 2 Shielding Rooms of AA Electro Magnetic Test Laboratory Private Limited have been registered American Association of Laboratory Accreditation (A2LA.)

FCC- Recognition No.: 137777

Three 3m Semi-Anechoic Chamber, 1 full-Anechoic chamber and 2 Shielding Rooms of AA Electro Magnetic Test Laboratory Private Limited have been registered by Federal Communications Commission (FCC).

ISED Recognition No.: 26046

Three 3m Semi-Anechoic Chamber, 1 full-Anechoic chamber and 2 Shielding Rooms of AA Electro Magnetic Test Laboratory Private Limited have been registered by Institute for Social and Economic Development.(ISED)

VCCI- Registration No: 4053

Three 3m Semi-Anechoic Chamber, 1 full-Anechoic chamber and 2 Shielding Rooms of AA Electro Magnetic Test Laboratory Private Limited have been registered by Voluntary Control Council for Interference.(VCCI)

TEC Designation No.: IND063

Three 3m Semi-Anechoic Chamber, 1 full-Anechoic chamber and 2 Shielding Rooms of AA Electro Magnetic Test Laboratory Private Limited have been registered by Telecommunication Engineering (TEC) Center

BIS Recognition No: 816586

BIS recognized as per CRS scheme for IT electronics, LED control gears, Lamp, Inverter / UPS are recognized as per LRS 2020

1.4 Deviation from standard

None

1.5 Abnormalities from standard conditions

None

General Information

1.6 General Description of EUT

*Manufacturer:	AmpliTech Group	
*Manufacturer Address:	155 Plant Avenue Hauppauge NY 11788	
*Applicant:	AmpliTech Group	
*Applicant add:	155 Plant Avenue Hauppauge NY 11788	
*EUT Name:	Mid Power Radio Unit	
*Model No:	AMPU-MPRU-Gen 2-3537-AI-BI	
*Brand Name:		
*Derivative model No.:	N/A	
Frequency Range:	NR Band n48 Channel Bandwidth: 10MHz, 20MHz, 40MHz, 80MHz, 100MHz	3550 MHz ~ 3700 MHz
Modulation Technology:	QPSK, 16QAM, 64QAM, 256QAM	
Antenna Gain(dBi):	13dBi	
*H/W No.:	B1	
*S/W No.:	v1.0.5	
Power Supply Range:	Input of EUT: -48VDC	
Note:1	For a more detailed features description, please refer to the manufacturer's Specifications or the User's Manual. Disclaimer: Antenna type and Antenna gain is provided by manufacturer. AAEMT Labs is not responsible for the antenna accuracy.	
Condition of Sample on receipt:	Good / Satisfactory / Fit for Testing	
Opinions and Interpretations:	See the specific Note / Annexure if any in the whole /full report/NA	

1.7 EUT channels and frequencies list:

Test Item	Tested Channel frequency	Channel Bandwidth	Modulation
Equivalent Isotropic Radiated Power	3556.150MHz, 3625.005MHz, 3693.720MHz	10MHz	QPSK, 16QAM, 64QAM, 256QAM
Occupied Bandwidth			
Peak to average ratio	3556.150MHz, 3625.005MHz, 3693.720MHz		QPSK
Frequency Stability	3625.005MHz		
Radiated Spurious Emissions	3556.150MHz, 3625.005MHz, 3693.720MHz		
Conducted Spurious Emissions	3556.150MHz, 3625.005MHz, 3693.720MHz		

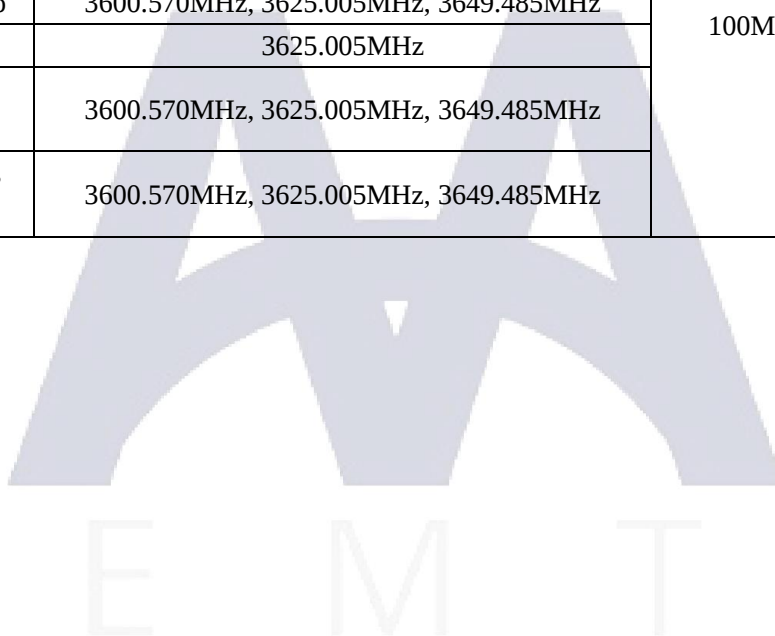
Test Item	Tested Channel frequency	Channel Bandwidth	Modulation
Equivalent Isotropic Radiated Power	3560.760MHz, 3625.005MHz, 3689.220MHz	20MHz	QPSK, 16QAM, 64QAM, 256QAM
Occupied Bandwidth			
Peak to average ratio	3560.760MHz, 3625.005MHz, 3689.220MHz		QPSK
Frequency Stability	3625.005MHz		
Radiated Spurious Emissions	3560.760MHz, 3625.005MHz, 3689.220MHz		
Conducted Spurious Emissions	3560.760MHz, 3625.005MHz, 3689.220MHz		

Test Item	Tested Channel frequency	Channel Bandwidth	Modulation
Equivalent Isotropic Radiated Power	3570.765MHz, 3625.005MHz, 3679.245MHz	40MHz	QPSK, 16QAM, 64QAM, 256QAM
Occupied Bandwidth			
Peak to average ratio	3570.765MHz, 3625.005MHz, 3679.245MHz		QPSK
Frequency Stability	3625.005MHz		
Radiated Spurious Emissions	3570.765MHz, 3625.005MHz, 3679.245MHz		
Conducted Spurious Emissions	3570.765MHz, 3625.005MHz, 3679.245MHz		

Test Item	Tested Channel frequency	Channel Bandwidth	Modulation
Equivalent Isotropic Radiated Power	3590.565MHz, 3625.005MHz, 3659.430MHz	80MHz	QPSK, 16QAM, 64QAM, 256QAM
Occupied Bandwidth			
Peak to average ratio	3590.565MHz, 3625.005MHz, 3659.430MHz		QPSK
Frequency Stability	3625.005MHz		
Radiated Spurious Emissions	3590.565MHz, 3625.005MHz, 3659.430MHz		
Conducted Spurious Emissions	3590.565MHz, 3625.005MHz, 3659.430MHz		

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Test Item	Tested Channel frequency	Channel Bandwidth	Modulation
Equivalent Isotropic Radiated Power	3600.570MHz, 3625.005MHz, 3649.485MHz	100MHz	QPSK, 16QAM, 64QAM, 256QAM
Occupied Bandwidth			
Peak to average ratio	3600.570MHz, 3625.005MHz, 3649.485MHz		QPSK
Frequency Stability	3625.005MHz		
Radiated Spurious Emissions	3600.570MHz, 3625.005MHz, 3649.485MHz		
Conducted Spurious Emissions	3600.570MHz, 3625.005MHz, 3649.485MHz		



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1.8 EUT Peripheral List

No.	Equipment	Manufacturer	FCC ID	Model No.	Serial No.	Power cord	Remark
1.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1.9 Test Peripheral List

No.	Equipment	Manufacturer	EMC Compliance	Model No.	Serial No.	Power cord	signal cable
1	DC POWER SUPPLY	ANIVO	N/A	N/A	N/A	N/A	N/A
2.	LAPTOP	DELL	N/A	LATITUDE E7240	6SJ2T02	2M UNSHIELDED	N/A

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Equipments List for All Test Items

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	Rohde and Schwarz	FSP	101163	2024/10/01	2026/10/01
2	Loop antenna	DAZE Beijing	ZN30900C	18052	2023/09/15	2026/09/15
3	Hi power horn antenna	DAZE Beijing	ZN30700	18012	2023/09/11	2026/09/10
4	MXA Signal Analyzer	Keysight	N9020A	6272323218	2023/07/27	2025/07/27
5	Horn antenna	DAZE Beijing	ZN30703	18005	2023/09/11	2026/09/10
6	Pre amplifier	KELIANDA	LNA-0009295	-	2024/01/10	2026/01/10
7	Pre amplifier	KELIANDA	CF-00218	-	2024/01/10	2026/01/10
8	Biconical Antenna	DAZE Beijing	ZN30505C	17038	2023/09/11	2026/09/10
9	EMI-Receiver	Rohde and Schwarz	FCKL	1528194	2023/07/21	2025/07/21
10	LISN	Kyoritsu	KNW-407	8-1789-5	2024/01/10	2026/01/10
11	Network-LISN	SCHWAR ZBECK	NNBM8125	81251314	2024/01/10	2026/01/10
12	Network-LISN	SCHWAR ZBECK	NNBM8125	81251315	2024/01/10	2026/01/10
13	PULSELIMITER	Rohde and Schwarz	ESH3-Z2	100681	-	-
14	50Ω Coaxial Switch	DAIWA	1565157	-	-	-
15	50Ω Coaxial Switch	-	-	-	-	-
16	Wireless signal power meter	DARE!!	RPR3006W	RFSW190220	2025/01/13	2026/01/13
17	Signal Generator	KEYSIGHT	N5181A	512071	2024/01/10	2026/01/10
18	RF Vector Signal Generator	Keysight	N5182B	512094	2024/01/10	2026/01/10

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19	Spectrum analyzer	R&S	FSV-40N	101385	2023/04/28	2025/04/28
20	Radio Communication Tester	R&S	CMW 500	124589	2023/09/08	2025/09/08
21	Signal Generator	R&S	SMP02	837017/004 836593/005	2023/09/08	2025/09/08
22	DC Regulated Power	Metravi	RPS-3005	669076	2023/12/12	2025/12/11
23	Climatic Chamber	Sunrise Scientific Instruments	-	-	2024/11/06	2025/11/05
24	Attenuators	AGILENT	8494B	-	-	-
25	Attenuators	AGILENT	8495B	-	-	-
26	Vector Signal Analyzer	Anritsu	MS2850A	6272323218	28/09/24	27/09/25
27	Vector Signal Generator	Anritsu	MG3710E	6262251278	28/09/24	27/09/25
28	MXA Signal Analyzer	Keysight	N9020A	MY53290443	27/07/23	27/07/25

1.10 EQUIVALENT ISOTROPICALLY RADIATED POWER MEASUREMENT

1.10.1 LIMITS OF OUTPUT POWER MEASUREMENT

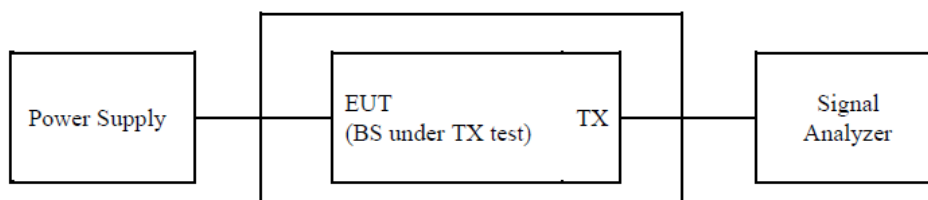
THE RADIATED EQUIVALENT ISOTROPICALLY POWER SHALL BE ACCORDING TO THE SPECIFIC RULE PART 96) THAT ARE LIMITED TO EIRP OF 37DBM/MHZ WHEN TRANSMITTING WITH AN EMISSION BANDWIDTH GREATER THAN 1 MHZ.

1.10.2 TEST PROCEDURES

1. Span to $2 \times$ to $3 \times$ the OBW
2. RBW $\geq$ 1% to 5% of the OBW
3. VBW $\geq 3 \times$ RBW
4. Sweep time $\geq 10 \times$ (number of points in sweep) $\times$ (transmission symbol period)
5. Detector = power averaging (rms)
6. Set sweep trigger to "free run"
7. If the EUT can be configured to transmit continuously, then set the trigger to free run
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple.
9. The trace was allowed to stabilize
10. Compute the power by integrating the spectrum across the OBW of the signal using the Instrument's band power measurement function, with the band/channel limits set equal to the OBW band edges.

1.10.3 TEST SETUP

CONDUCTED POWER MEASUREMENT



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1.10.4 Test results

Frequency (MHz)	Channel BW (MHz)	Power Density (dBm/MHz)				EIRP Density (dBm/MHz)	Limit (dBm/MHz)
		Ant 1	Ant 2	Ant 3	Ant 4		
QPSK							
3556.150	10	17.17	17.19	17.31	17.89	36.42	≤37
3625.005	10	17.52	17.17	17.82	17.15	36.44	≤37
3693.720	10	17.18	17.18	17.18	17.27	36.22	≤37
16QAM							
3556.150	10	17.11	17.11	17.32	17.43	36.27	≤37
3625.005	10	17.17	17.19	17.18	17.21	36.21	≤37
3693.720	10	17.51	17.29	17.19	17.24	36.33	≤37
64QAM							
3556.150	10	17.23	17.19	17.32	17.49	36.33	≤37
3625.005	10	17.19	17.19	17.18	17.31	36.24	≤37
3693.720	10	17.45	17.27	17.19	17.28	36.32	≤37
256QAM							
3556.150	10	17.41	17.26	17.34	17.36	36.36	≤37
3625.005	10	17.12	17.06	17.19	17.33	36.20	≤37
3693.720	10	17.22	17.32	17.16	17.21	36.25	≤37

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Frequency (MHz)	Channel BW (MHz)	Power Density (dBm/MHz)				EIRP Density (dBm/MHz)	Limit (dBm/MHz)
		Ant 1	Ant 2	Ant 3	Ant 4		
QPSK							
3560.760	20	17.11	17.40	17.13	17.07	36.20	≤37
3625.005	20	17.44	17.18	17.15	17.80	36.42	≤37
3689.220	20	17.18	17.20	17.08	17.23	36.19	≤37
16QAM							
3560.760	20	17.18	17.41	17.40	17.14	36.30	≤37
3625.005	20	17.42	17.21	17.18	17.61	36.38	≤37
3689.220	20	17.17	17.31	17.41	17.54	36.38	≤37
64QAM							
3560.760	20	17.40	17.59	17.18	17.02	36.32	≤37
3625.005	20	17.16	17.32	17.16	17.21	36.23	≤37
3689.220	20	17.18	17.30	17.54	17.50	36.40	≤37
256QAM							
3560.760	20	17.10	17.41	17.40	17.18	36.29	≤37
3625.005	20	17.42	17.21	17.28	17.61	36.40	≤37
3689.220	20	17.17	17.33	17.41	17.54	36.38	≤37

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Frequency (MHz)	Channel BW (MHz)	Power Density (dBm/MHz)				EIRP Density (dBm/MHz)	Limit (dBm/MHz)
		Ant 1	Ant 2	Ant 3	Ant 4		
QPSK							
3570.765	40	17.10	17.39	17.12	17.06	36.19	≤37
3625.005	40	17.43	17.17	17.14	17.79	36.41	≤37
3679.245	40	17.17	17.19	17.07	17.22	36.18	≤37
16QAM							
3570.765	40	17.17	17.40	17.39	17.13	36.29	≤37
3625.005	40	17.39	17.17	17.17	17.01	36.21	≤37
3679.245	40	17.16	17.30	17.40	17.53	36.37	≤37
64QAM							
3570.765	40	17.39	17.17	17.17	17.01	36.21	≤37
3625.005	40	17.15	17.31	17.15	17.20	36.22	≤37
3679.245	40	17.17	17.15	17.53	17.49	36.36	≤37
256QAM							
3570.765	40	17.09	17.40	17.39	17.17	36.28	≤37
3625.005	40	17.41	17.20	17.27	17.60	36.39	≤37
3679.245	40	17.19	17.32	17.40	17.53	36.38	≤37

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Frequency (MHz)	Channel BW (MHz)	Power Density (dBm/MHz)				EIRP Density (dBm/MHz)	Limit (dBm/MHz)
		Ant 1	Ant 2	Ant 3	Ant 4		
QPSK							
3590.565	80	17.97	17.47	17.67	17.97	36.79	≤37
3625.005	80	17.47	17.97	17.67	17.67	36.72	≤37
3659.430	80	17.47	17.67	17.47	17.67	36.59	≤37
16QAM							
3590.565	80	17.97	17.47	17.67	17.97	36.79	≤37
3625.005	80	17.47	17.97	17.67	17.67	36.72	≤37
3659.430	80	17.47	17.67	17.47	17.67	36.59	≤37
64QAM							
3590.565	80	17.97	17.47	17.67	17.97	36.79	≤37
3625.005	80	17.47	17.97	17.67	17.67	36.72	≤37
3659.430	80	17.47	17.67	17.47	17.67	36.59	≤37
256QAM							
3590.565	80	17.97	17.47	17.67	17.97	36.79	≤37
3625.005	80	17.47	17.97	17.67	17.67	36.72	≤37
3659.430	80	17.47	17.67	17.47	17.67	36.59	≤37

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Frequency (MHz)	Channel BW (MHz)	Power Density (dBm/MHz)				EIRP Density (dBm/MHz)	Limit (dBm/MHz)
		Ant 1	Ant 2	Ant 3	Ant 4		
QPSK							
3600.570	100	17.00	16.50	16.70	17.00	35.83	≤37
3625.005	100	16.50	17.00	16.70	16.70	35.75	≤37
3649.485	100	16.50	16.70	16.50	16.70	35.62	≤37
16QAM							
3600.570	100	16.50	17.40	16.80	17.00	35.96	≤37
3625.005	100	16.40	17.00	16.50	17.00	35.75	≤37
3649.485	100	16.50	16.80	16.70	16.40	35.62	≤37
64QAM							
3600.570	100	17.00	16.50	16.70	16.70	35.75	≤37
3625.005	100	16.50	17.00	16.80	17.00	35.85	≤37
3649.485	100	16.50	16.70	16.50	16.70	35.62	≤37
256QAM							
3600.570	100	16.50	17.00	17.00	16.70	35.83	≤37
3625.005	100	16.70	17.00	16.70	17.00	35.87	≤37
3649.485	100	17.00	16.50	17.00	16.50	35.78	≤37

Note 1: Total Power Density (dBm/MHz) = $10 \cdot \log \{ 10^{[\text{ANT 1 Power (dBm/MHz)} / 10]} + 10^{[\text{ANT 2 Power (dBm/MHz)} / 10]} + 10^{[\text{ANT 3 Power (dBm/MHz)} / 10]} + 10^{[\text{ANT 4 Power (dBm/MHz)} / 10]} \}$ (dBm/MHz).

Note 2: EIRP Density (dBm/MHz) = Total Power Density (dBm/MHz) + Antenna Gain (dBi).

Observations:- Observed EIRP of the submitted devices are within the limits. As per the observations the device meets the FCC requirements.

1.11 FREQUENCY STABILITY MEASUREMENT

1.11.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

1.11.2 TEST PROCEDURE

Frequency Stability Under Temperature Variations:

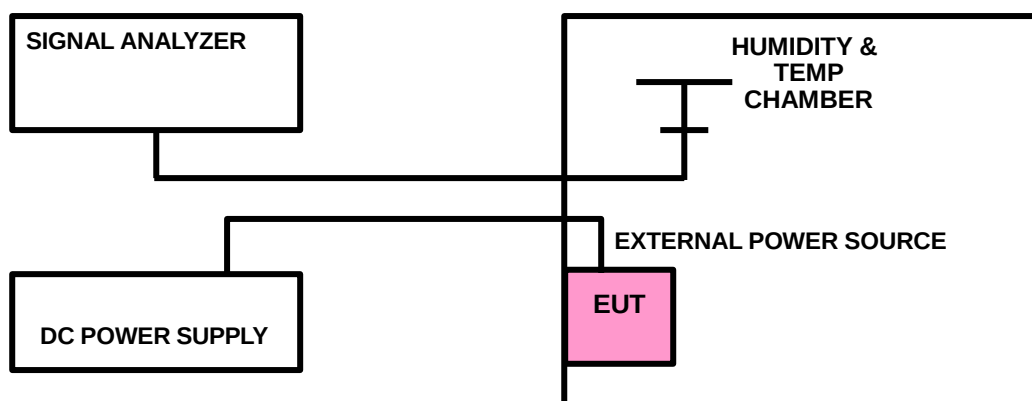
The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to highest. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C decreased per stage until the lowest temperature reached.

1.11.3 Frequency Stability Under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation ($\pm 20\%$) and endpoint (If a product is specified to Operate over a range of input voltage then the -20% variation is applied to the lowermost voltage And the $+20\%$ is applied to the uppermost voltage), record the maximum frequency change.
NOTE: The frequency error was recorded frequency error from the communication simulator.

1.11.4 TEST SETUP



1.11.5 TEST RESULTS

Frequency Error vs. Temperature

Temperature	Channel_1			Channel_2			Channel_3			Channel_4		
	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-	DC I/P :-
	-40.5V	-48V	-55.5V	-40.5V	-48V	-55.5V	-40.5V	-48V	-55.5V	-40.5V	-48V	-55.5V
-20	-1.1	2.41	-11.68	-7.93	1.75	-2.87	0.4736	-2.02	-13.26	-1.73	-11.16	1.69
-10	-5.84	-4.97	-2.33	-4.64	-8.63	-6.8	-3.02	-2.96	-4.71	-3.18	-11.59	-9.45
10	-0.316	0.68	-0.988	-3.02	0.262	-1.82	-6.85	-7.85	-2.08	-1.49	-1.57	-6.38
20	-7.89	-0.607	-1.99	-5.62	-0.582	-5.66	1.91	-2	0.1177	-8.5	-5.28	-5.16
30	-8.49	-6.4	-5.16	-11.51	-1.04	-7.71	-7.58	-5.19	-1.81	-3.95	3.1	0.14
40	-2.19	-8.67	-8	-1.73	5.55	4.6	-5.17	2.47	0.1768	-2.76	-7.23	-9.11
50	-1.92	9.65	-4.19	-1.22	-5.04	-2.98	-5.21	-6.21	0.1969	-6.92	-2.97	-5.59
55	-0.385	-0.428	-4.23	-7.82	-3.92	3.25	-16.4	-2.3	-2.15	-5.27	-7.01	-7.74
All the mentioned values in this table are in Hz only. As per spec Freq Error should be +/- 0.1ppm . It is equal to +/-362Hz.All the values are within the range only.												

Note:- Testing is carried out in all possible configuration , only worst case data reported. This unit meets the FCC requirement.

1.12 OCCUPIED BANDWIDTH MEASUREMENT

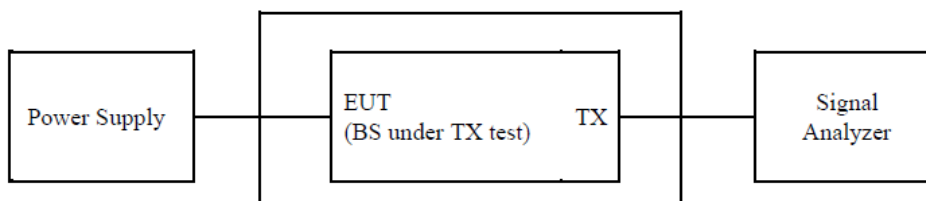
1.12.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

1.12.2 TEST PROCEDURE

1. Set center frequency to the nominal EUT channel center frequency;
2. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW;
3. $VBW \geq 3 \times RBW$;
4. Detector = Peak;
5. Trace mode = max hold;
6. Sweep = auto couple;
7. Allow the trace to stabilize;
8. The dynamic range of the spectrum analyzer at the selected RBW shall be more than 10 dB below the target “-X dB” requirement, i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 26 dB below the reference level

1.12.3 TEST SETUP



1.12.4 TEST RESULTS

Bandwidth: 10MHz

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
ANT1			
3556.150	10	10.87	9.37
3625.005	10	10.89	9.38
3693.720	10	10.91	9.38
ANT2			
3556.150	10	10.87	9.37
3625.005	10	10.89	9.38
3693.720	10	10.89	9.37
ANT3			
3556.150	10	10.89	9.38
3625.005	10	10.89	9.37
3693.720	10	10.89	9.38
ANT4			
3556.150	10	10.89	9.38
3625.005	10	10.89	9.38
3693.720	10	10.89	9.37
Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
16QAM			
ANT1			
3556.150	10	10.77	9.2
3625.005	10	10.75	9.21
3693.720	10	10.75	9.2
ANT2			
3556.150	10	10.75	9.21
3625.005	10	10.75	9.21
3693.720	10	10.75	9.2
ANT3			
3556.150	10	10.75	9.21
3625.005	10	10.75	9.21
3693.720	10	10.76	9.2
ANT4			
3556.150	10	10.74	9.21
3625.005	10	10.75	9.21
3693.720	10	10.75	9.2

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Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
64QAM			
ANT1			
3556.150	10	10.87	9.37
3625.005	10	10.89	9.37
3693.720	10	10.89	9.37
ANT2			
3556.150	10	10.89	9.37
3625.005	10	10.89	9.37
3693.720	10	10.88	9.37
ANT3			
3556.150	10	10.89	9.37
3625.005	10	10.89	9.37
3693.720	10	10.88	9.37
ANT4			
3556.150	10	10.88	9.37
3625.005	10	10.89	9.37
3693.720	10	10.88	9.37

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
256QAM			
ANT1			
3556.150	10	10.87	9.37
3625.005	10	10.89	9.38
3693.720	10	10.89	9.37
ANT2			
3556.150	10	10.89	9.37
3625.005	10	10.89	9.37
3693.720	10	10.88	9.37
ANT3			
3556.150	10	10.89	9.37
3625.005	10	10.89	9.37
3693.720	10	10.88	9.37
ANT4			
3556.150	10	10.88	9.37
3625.005	10	10.89	9.37
3693.720	10	10.88	9.37

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Bandwidth: 20MHz

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
ANT1			
3560.760	20	20.58	18.746
3625.005	20	20.61	18.737
3689.220	20	20.59	18.709
ANT2			
3560.760	20	20.59	18.714
3625.005	20	20.59	18.718
3689.220	20	20.59	18.713
ANT3			
3560.760	20	20.59	18.722
3625.005	20	20.59	18.719
3689.220	20	20.58	18.714
ANT4			
3560.760	20	20.58	18.707
3625.005	20	20.6	18.725
3689.220	20	20.59	18.712

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
16QAM			
ANT1			
3560.760	20	20.55	18.845
3625.005	20	20.56	18.832
3689.220	20	20.55	18.813
ANT2			
3560.760	20	20.55	18.814
3625.005	20	20.56	18.821
3689.220	20	20.56	18.818
ANT3			
3560.760	20	20.55	18.82
3625.005	20	20.56	18.819
3689.220	20	20.55	18.817
ANT4			
3560.760	20	20.57	18.846
3625.005	20	20.56	18.824
3689.220	20	20.55	18.815

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Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
64QAM			
ANT1			
3560.760	20	20.58	18.745
3625.005	20	20.6	18.731
3689.220	20	20.58	18.706
ANT2			
3560.760	20	20.58	18.709
3625.005	20	20.59	18.718
3689.220	20	20.59	18.712
ANT3			
3560.760	20	20.59	18.723
3625.005	20	20.59	18.713
3689.220	20	20.58	18.707
ANT4			
3560.760	20	20.58	18.706
3625.005	20	20.59	18.722
3689.220	20	20.59	18.711

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
256QAM			
ANT1			
3560.760	20	20.57	18.744
3625.005	20	20.59	18.725
3689.220	20	20.58	18.707
ANT2			
3560.760	20	20.59	18.714
3625.005	20	20.59	18.721
3689.220	20	20.59	18.716
ANT3			
3560.760	20	20.59	18.72
3625.005	20	20.59	18.714
3689.220	20	20.58	18.709
ANT4			
3560.760	20	20.58	18.696
3625.005	20	20.59	18.715
3689.220	20	20.59	18.702

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Bandwidth: 40MHz

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
ANT1			
3570.765	40	40.41	38.158
3625.005	40	40.42	38.093
3679.245	40	40.41	38.094
ANT2			
3570.765	40	40.41	38.056
3625.005	40	40.42	38.069
3679.245	40	40.41	38.055
ANT3			
3570.765	40	40.41	38.064
3625.005	40	40.42	38.075
3679.245	40	40.4	38.058
ANT4			
3570.765	40	40.41	38.057
3625.005	40	40.42	38.062
3679.245	40	40.41	38.05

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
16QAM			
ANT1			
3570.765	40	40.36	38.297
3625.005	40	40.37	38.241
3679.245	40	40.36	38.237
ANT2			
3570.765	40	40.35	38.202
3625.005	40	40.37	38.219
3679.245	40	40.36	38.205
ANT3			
3570.765	40	40.35	38.207
3625.005	40	40.36	38.22
3679.245	40	40.35	38.208
ANT4			
3570.765	40	40.36	38.204
3625.005	40	40.36	38.216
3679.245	40	40.35	38.196

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Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
64QAM			
ANT1			
3570.765	40	40.41	38.156
3625.005	40	40.42	38.09
3679.245	40	40.41	38.086
ANT2			
3570.765	40	40.41	38.056
3625.005	40	40.42	38.073
3679.245	40	38.051	40.41
ANT3			
3570.765	40	40.41	38.06
3625.005	40	40.42	38.076
3679.245	40	40.4	38.055
ANT4			
3570.765	40	40.41	38.054
3625.005	40	40.42	38.076
3679.245	40	40.41	38.044

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
256QAM			
ANT1			
3570.765	40	40.41	38.159
3625.005	40	40.42	38.094
3679.245	40	40.41	38.098
ANT2			
3570.765	40	40.41	38.055
3625.005	40	40.42	38.075
3679.245	40	40.41	38.054
ANT3			
3570.765	40	40.41	38.063
3625.005	40	40.42	38.077
3679.245	40	40.41	38.06
ANT4			
3570.765	40	40.4	38.045
3625.005	40	40.42	38.072
3679.245	40	40.41	38.036

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Bandwidth: 80MHz

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
ANT1			
3590.565	80	80.37	77.462
3625.005	80	80.36	77.357
3659.430	80	80.37	77.424
ANT2			
3590.565	80	80.40	77.422
3625.005	80	80.4	77.441
3659.430	80	80.38	77.399
ANT3			
3590.565	80	80.4	77.446
3625.005	80	80.39	77.423
3659.430	80	80.37	77.38
ANT4			
3590.565	80	80.38	77.381
3625.005	80	80.39	77.426
3659.430	80	80.4	77.425

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
16QAM			
ANT1			
3590.565	80	80.31	77.627
3625.005	80	80.3	77.564
3659.430	80	80.3	77.624
ANT2			
3590.565	80	80.33	77.598
3625.005	80	80.33	77.633
3659.430	80	80.31	77.609
ANT3			
3590.565	80	80.33	77.619
3625.005	80	80.32	77.629
3659.430	80	80.31	77.609
ANT4			
3590.565	80	80.32	77.595
3625.005	80	80.33	77.626
3659.430	80	80.33	77.634

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Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
64QAM			
ANT1			
3590.565	80	80.37	77.452
3625.005	80	80.37	77.367
3659.430	80	80.37	77.424
ANT2			
3590.565	80	80.39	77.424
3625.005	80	80.4	77.439
3659.430	80	80.39	77.407
ANT3			
3590.565	80	80.39	77.42
3625.005	80	80.39	77.422
3659.430	80	80.38	77.389
ANT4			
3590.565	80	80.38	77.379
3625.005	80	80.39	77.426
3659.430	80	80.39	77.417

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
256QAM			
ANT1			
3590.565	80	80.36	77.444
3625.005	80	80.36	77.374
3659.430	80	80.37	77.425
ANT2			
3590.565	80	80.39	77.407
3625.005	80	80.4	77.434
3659.430	80	80.39	77.409
ANT3			
3590.565	80	80.39	77.421
3625.005	80	80.39	77.421
3659.430	80	80.38	77.382
ANT4			
3590.565	80	80.37	77.372
3625.005	80	80.39	77.422
3659.430	80	80.4	77.425

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Bandwidth: 100MHz

Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
QPSK			
ANT1			
3600.570	100	100.5	97.349
3625.005	100	100.5	97.157
3649.485	100	100.5	97.33
ANT2			
3600.570	100	100.6	97.303
3625.005	100	100.6	97.319
3649.485	100	100.6	97.316
ANT3			
3600.570	100	100.6	97.321
3625.005	100	100.6	97.307
3649.485	100	100.6	97.326
ANT4			
3600.570	100	100.6	97.269
3625.005	100	100.6	97.311
3649.485	100	100.6	97.315
Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
16QAM			
ANT1			
3600.570	100	100.5	97.432
3625.005	100	100.4	97.21
3649.485	100	100.5	97.378
ANT2			
3600.570	100	100.5	97.386
3625.005	100	100.5	97.396
3649.485	100	100.5	97.369
ANT3			
3600.570	100	100.5	97.39
3625.005	100	100.5	97.384
3649.485	100	100.5	97.353
ANT4			
3600.570	100	100.5	97.346
3625.005	100	100.5	97.388
3649.485	100	100.5	97.37

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Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
64QAM			
ANT1			
3600.570	100	100.5	97.342
3625.005	100	100.5	97.161
3649.485	100	100.5	97.316
ANT2			
3600.570	100	100.6	97.322
3625.005	100	100.6	97.345
3649.485	100	100.6	97.292
ANT3			
3600.570	100	100.6	97.315
3625.005	100	100.6	97.326
3649.485	100	100.6	97.311
ANT4			
3600.57	100	100.6	97.962
3625.005	100	100.6	97.314
3649.485	100	100.6	97.32
Frequency (MHz)	Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
256QAM			
ANT1			
3600.570	100	100.5	97.328
3625.005	100	100.5	97.177
3649.485	100	100.5	97.323
ANT2			
3600.570	100	100.6	97.292
3625.005	100	100.6	97.322
3649.485	100	100.6	97.287
ANT3			
3600.570	100	100.6	97.309
3625.005	100	100.6	97.327
3649.485	100	100.6	97.304
ANT4			
3600.570	100	100.6	97.258
3625.005	100	100.6	97.313
3649.485	100	100.6	97.325

Observations:- Observed Occupied Bandwidth of the submitted devices are within the limits. As per the observations the device meets the FCC requirements.

Report No.: AAEMT/RF/250311-01

10MHz @3556.15MHz

ANT1:

QPSK



16QAM



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64QAM



256QAM

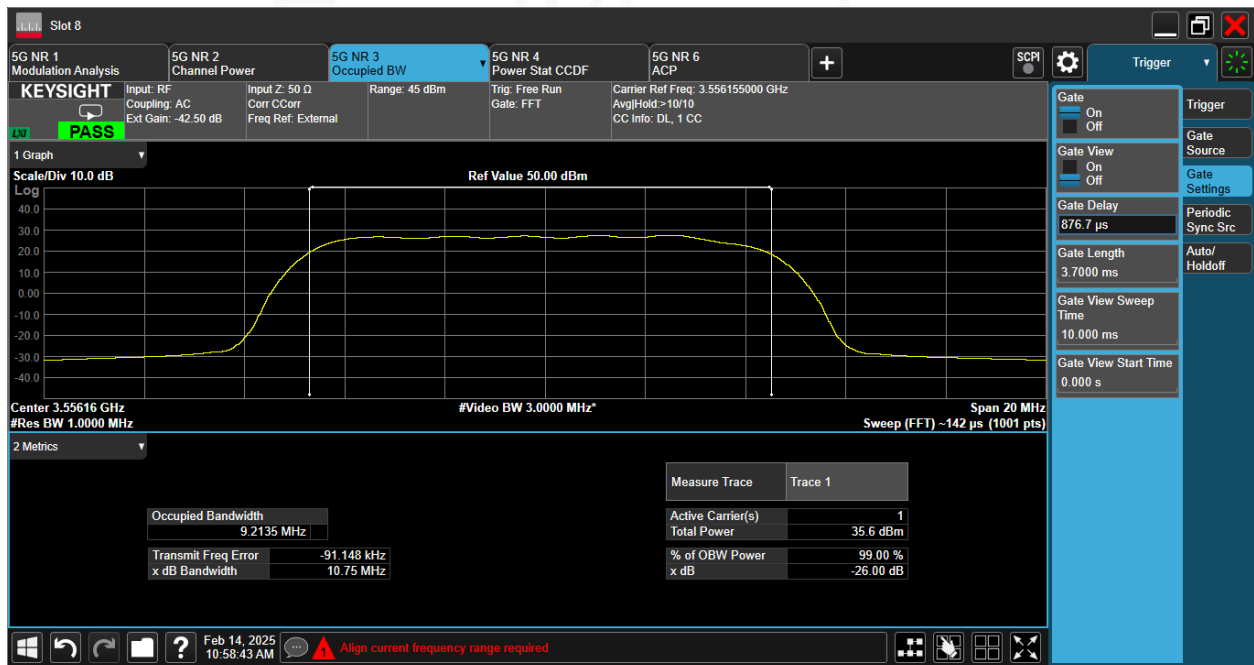


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ANT2:
QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



Report No.: AAEMT/RF/250311-01

ANT3:
QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



Report No.: AAEMT/RF/250311-01

ANT4:
QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



Report No.: AAEMT/RF/250311-01

10MHz @3625.005MHz

ANT1:

QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



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ANT2:
QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



Report No.: AAEMT/RF/250311-01

ANT3:
QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



Report No.: AAEMT/RF/250311-01

ANT4:
QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



Report No.: AAEMT/RF/250311-01

10MHz @3693.72MHz

ANT1:

QPSK



16QAM



Report No.: AAEMT/RF/250311-01

64QAM



256QAM



Report No.: AAEMT/RF/250311-01

ANT2:
QPSK



16QAM

