

TEST REPORT

Report Reference No.:	80260100096001	
Sample ID	BLC-01-0946117-002	
Date of issue	03/07/2026	
Total number of pages	41	
Testing Laboratory	TUV SUD South Asia Pvt Ltd	
Address	Plot No. 3-P1-B, Hitech Defence & Aerospace Park, KIADB Industrial Area, BK Palya, Bengaluru, Bengaluru North Taluk Pin code – 562149 India	
Applicant's name	Exicom Tele-Systems Limited	
Address	3rd Floor, Plot No 38, Sector 32, Gurugram, Haryana 122001 India	
Client Representative.....	Surya Kant Singh	
Test specification Standard.....	FCC Part 15 Subpart C	
Test Method	ANSI C63.10-2020	
Non-standard test method.....	NA	
Test Report Form Number.....	LAB_F(EE)_138-51	
Product Name.....	EV AC Charger	
Test Item Description.....	Electric Vehicle Supply Equipment	
Manufacturer	Exicom Tele-Systems Limited	
Model Number.....	Spin Air US 11k240-1T48WMR	
Serial Number.....	HE531296#D32210417040844	
Ratings.....	208/240 VAC, 50/60 Hz	
FCC ID.....	2BUQR-SPINAIR-WMRET	
Tested by (Name + Signature)	Nikhil G	
Reviewed & Approved by (Name + Signature)	Ayazahmad N	

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Possible test case verdicts:

- test case does not apply to the test object: N/A
- test object does meet the requirement: Pass
- test object does not meet the requirement: Fail

Testing:

Condition of the EUT on Receipt.....: Good
 Date of receipt of test item: 06/10/2025
 Date (s) of performance of tests.....: 17/11/2025 to 09/02/2026

General remarks:

1. The submitted sample(s) were not drawn by laboratory.
2. The test results presented in this report relate only to the object tested.
3. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.
4. The correctness of the information related to sample(s) in the Test Request Form/Customer letterhead/E-mail is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.
5. The laboratory will retain the sample(s) for 45 days except for the mandatory retention period specified by the Regulatory Bodies and unless otherwise specified by the client.
6. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
 "(see Enclosure #)" refers to additional information appended to the report.
 "(see appended table)" refers to a table appended to the report.
7. Throughout this report a point is used as the decimal separator.

Use of uncertainty of measurement for decisions on conformity (decision rule): Yes/No

☒ No decision rule is specified by the IEC/EN standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other: (to be specified)

Decisions on conformity: Decision on conformity of results is based on as per standard limits or criteria.

Summary of compliance: The Product comply with the requirements of FCC Part 15 Subpart C

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Revision History of Records

Test Report Number	Version	Reason for Change	Date Issued
80260100096001	01	Initial Report	03/07/2026

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1 TEST LABORATORY

1.1 Test Facility

TUV SUD South Asia Pvt Ltd
Plot No. 3-P1-B, Hitech Defence & Aerospace Park, KIADB Industrial Area, BK Palya, Bengaluru,
Bengaluru North Taluk | Pin code – 562149 India

FCC Registration Number: 553113
ISED Wireless Testing Laboratory: 33098

2 GENERAL INFORMATION

2.1 Appendices

The following documents are appended to this report as separate attachments:

Test Setup Photographs, External and Internal Photographs of the EUT, Label and its Location, Block Diagram, EUT Specifications, Schematic Diagrams, Bill of Materials, User Manual, and Maximum Permissible Exposure (MPE) information.

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3 TEST SUMMARY

Table 1: Test Summary

Requirement – Test	Basic Standard	Result
Occupied Channel bandwidth	FCC Part 15 Subpart C Section 15.215 (c)	Pass
Frequency tolerance	FCC part 15 Subpart C Section 15.225 (e)	Pass
Field Strength Measurement within the band 13.110-14.010 MHz	FCC part 15 Subpart C Section 15.225 (a,b,c,d) / (15.209)	Pass
Radiated spurious emissions	FCC 15.209/15.205	Pass
Conducted Spurious emission Test on AC Power lines	FCC 15.207	Pass
Antenna Requirement	FCC 15.203	Pass

Antenna Requirement:

The module uses a PCB trace antenna or a flex antenna connected via an internal U.FL connector that is not accessible to the end user. This prevents antenna replacement or modification, ensuring compliance with FCC 15.203

Note:

The model - **SpinAirUL11K240-1T48-W-M-R-ET, SpinAirUL11K240-1T40-W-M-R-ET, SpinAirUL11K240-1T32-W-M-R-ET**, have been included, as the manufacturer's specifications detailed in the **Product Model Similarities/Differentiating Characteristics** confirm either no changes or changes that do not necessitate separate testing.

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4 MEASUREMENT UNCERTAINTY

Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$

Table 2: Measurement Uncertainty

No.	Item	Uncertainty
1	Conducted Emission Test	2.25dB
2	Radiated Emission Test	4.71 dB

5 TEST EQUIPMENT USED

Table 3: Test Equipment Used

Sl. No	Test Equipment	Manufacturer	Model No	Serial No	Calibration Due Date
1.	Active Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519C	43	07/04/2026
2.	Biconical Antenna	Schwarzbeck Mess-Elektronik	VHBB 9124	1940	17/02/2026
3.	Log-Periodic Antenna	Schwarzbeck Mess-Elektronik	VUSLP 9111 B	735	18/02/2026
6.	EMI Test Receiver	ROHDE & SCHWARZ	ESR3	103112	25/02/2026
7.	EMI Test Receiver	ROHDE & SCHWARZ	ESR26	101821	05/02/2026
8.	Open Switch and Control Platform	ROHDE & SCHWARZ	OSP150	101158	27/02/2026
9.	EMI Test Receiver	ROHDE & SCHWARZ	ESW44	103295	10/03/2026
10.	Signal controlling unit	ROHDE & SCHWARZ	SCU01F	100507	--
13.	LISN	Scientific Mes - Technik Pvt. Ltd.	SMLIN32-2	2303007	28/01/2026
14.	Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	103167	16/01/2026

Table 4: Instrument application Software versions

Sl. No	Test Type	Application software and version
1	Antenna Port conducted measurement: TS8997 system	WMS 32 V11.60.00
2	Radiated spurious emission measurement- 10-meter Semi Anechoic Chamber	Elektra V5.03.0

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6 EQUIPMENT INFORMATION

6.1 Product Function

Schneider Charge is a Level 2 AC electric vehicle charging station designed for residential applications. This charging station is intended for charging electric vehicles fitted with a J1772 (Type 1) or J3400 (NACS) connector.

When installed with current transformers, charging station has integrated load management that dynamically adjusts charging output based on the home's available electrical capacity, to help avoid costly service panel upgrades.

6.2 Product Model Similarities/Differentiating Characteristics

Table 5: Product Model Similarities/Differentiating Characteristics

Block features/Model No.	Similarity	Differences
Voltage and current connection		
SpinAirUL7K240-NT32-W-M-R-ET	Input/ Output Voltage- L1+L2+GND: 208/240V nominal 50/60Hz.	Input/ Output Current 32A, 7.4kW Max, with (L1, L2) 8/6AWG, GND 10AWG
SpinAirUL9K240-NT40-W-M-R-ET		Input/ Output Current 40A, 9.6kW Max (L1, L2) 6AWG, GND 10AWG
SpinAirUL11K240-1T48-W-M-R-ET		Input/ Output Current 48A, 11.5 kW Max (L1, L2) 6AWG, GND 10AWG.
Input Plug/ Output Connection		
SpinAirUL7K240-1T32N6-W-M-R-ET	NEMA plug 6-50P with Wi-Fi and BLE, LTE, RFID, and Ethernet	With an AC type 1 Gun
SpinAirUL7K240-NT32N6-W-M-R-ET		With the Tesla (NACS) output Gun
SpinAirUL7K240-1T32N14-W-M-R-ET	NEMA plug 14-50P with Wi-Fi and BLE, LTE, RFID, and Ethernet	With an AC type 1 Gun
SpinAirUL7K240-NT32N14-W-M-R-ET		With the Tesla (NACS) output Gun
SpinAirUL7K240-1T32-W-M-R-ET	L1-L2 (6AWG) wire fixed GND (8AWG) connection (conduit) with Wi-Fi, BLE, LTE, RFID, and Ethernet	With an AC type 1 Gun
SpinAirUL7K240-NT32-W-M-R-ET		With the Tesla (NACS) output Gun
SpinAirUL9K240-1T40N6-W-M-R-ET	NEMA plug 6-50P with Wi-Fi and BLE, LTE, RFID, and Ethernet	With an AC type 1 Gun
SpinAirUL9K240-NT40N6-W-M-R-ET		With the Tesla (NACS) output Gun
SpinAirUL9K240-1T40N14-W-M-R-ET	NEMA plug 14-50P with Wi-Fi and BLE, LTE, RFID, and Ethernet	With an AC type 1 Gun
SpinAirUL9K240-NT40N14-W-M-R-ET		With the Tesla (NACS) output Gun
SpinAirUL9K240-1T40-W-M-R-ET	L1-L2 (6AWG) wire fixed GND (8AWG) connection (conduit) with Wi-Fi, BLE, LTE, RFID, and Ethernet	With an AC type 1 Gun
SpinAirUL9K240-NT40-W-M-R-ET		With the Tesla (NACS) output Gun
SpinAirUL11K240-1T48-W-M-R-ET	L1-L2 (6AWG) wire fixed GND (8AWG) connection (conduit) with Wi-Fi, BLE, LTE, RFID, and Ethernet	With an AC type 1 Gun
SpinAirUL11K240-NT48-W-M-R-ET		With the Tesla (NACS) output Gun
Signal Conditioning for voltage and current input/ output and power supply	No differences	All hardware is the same except differences.
Measurement and microcontroller	No differences	Common Software and hardware
Peripheral (LED, Key, Memory)	No differences	Common Software and hardware

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6.3 General Information of EUT

Table 6: EUT details as declared by client*

EUT Name	RFID Module	
Protocol	RFID 13.56MHz	
Operating Frequency Range	13.110-14.010 MHz	
Environmental conditions	Storage	-58°F to +158°F (-30°C to +50°C)
	Operating	-22°F to +122°F (-30°C to +50°C)
Supply Voltage	208/240 VAC with 60 Hz	
Max Measured field strength (Radiated)	42.56dBμV//m	
Modulation	Amplitude modulation	
Number of antennas	1	
Antenna Type	PCB Loop antenna	
EUT Dimension (LxWxH)	246mm x 246mm x 133mm	

***Disclaimer:** The TÜV SÜD is not responsible for the accuracy of the customer declared specification.

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7 TEST DESCRIPTION

7.1 Test Operation and software mode

Hardware Version Identification number (HVIN): V.35

Software Version: V.35.36.1.4

7.2 Test modes – data rates and modulations

Transmission was enabled with highest possible duty cycle on 13.56 MHz channel.

7.3 Accessories and Auxiliary Equipment

.NA

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8 OPERATIONAL DESCRIPTION

Its an EV AC charger which operate over AC mains supply. 208/240VAC nominal (167-264VAC) 50/60Hz, wired with L1,L2, GND NEMA Plug. EV charger power to the EV with SAE J1772(Type 1) and NACS. This product provide degree of protection to the end user (Over Current, Over Voltage, Under Voltage, Ground Fault, Surge Protection, Leakage Current Detection, Short Circuit Protection, Over Temperature). User can authenticate Electric Vehicle with EV charger to initiate charge with authentication with RFID, Plug & Play, via Spin Control mobile app. or 3rd party CMS/CMS based application. EV Charger facilitate with BLE/Wi-Fi/GSM/LTE/ ETHERNET (optional) connectivity for end user. EV Charger work over OCPP 1.6J protocols.

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9 TEST METHODOLOGY

9.1 Conducted Spurious Emission Test on AC Power Lines

AC powerline conducted emissions were measured across the 50Ω LISN port connected to the Equipment Under Test (EUT). Emission voltage and current measurements were performed on each current-carrying conductor at the EUT power cord plug using mating plugs and receptacles on the LISN. The EUT was tested using manufacturer-supplied or recommended power cords, ensuring equivalent electrical and shielding characteristics. The device will be positioned on a test table 80cm above the reference ground plane, with a vertical conducting plane located 40cm to its rear. AC conducted emission measurements were conducted over a frequency range of 150kHz to 30MHz, utilizing an AC adapter with a 110V AC 60Hz supply.

9.1.1 Test Setup Configuration

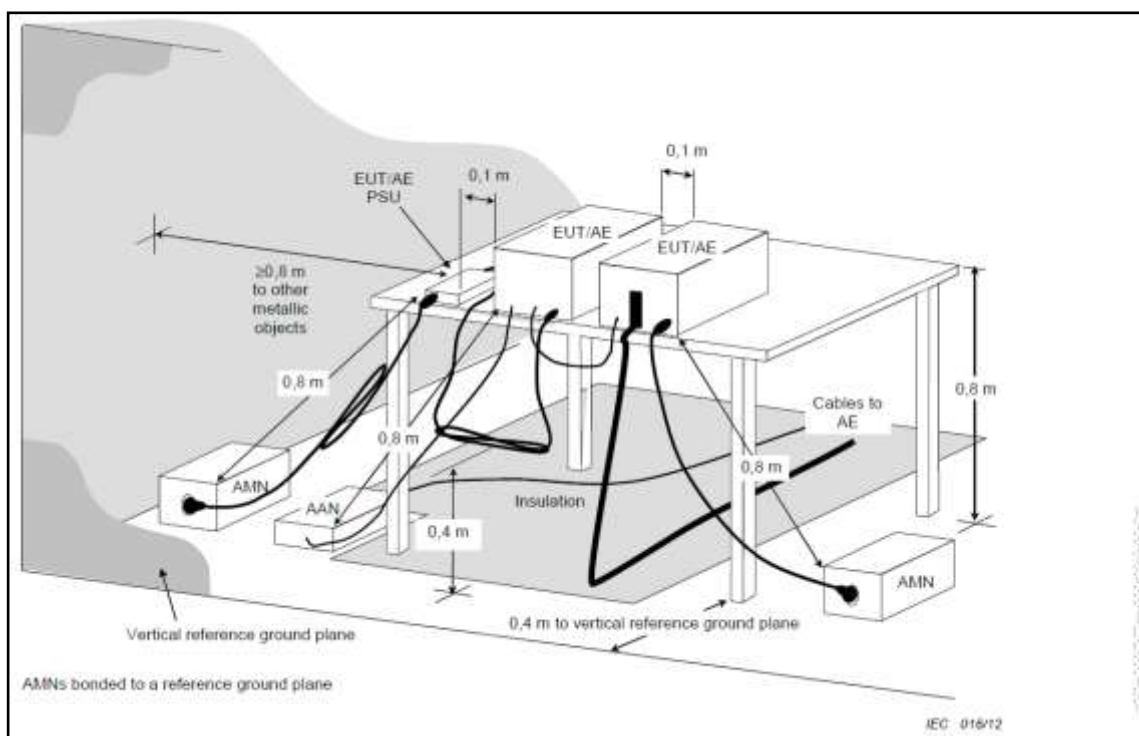


Figure 1: Conducted Spurious Emission Test on AC Power Lines

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9.2 Radiated Emission Test

The radiated emission measurement was performed according to the procedures in ANSI C63.10-2020. The equipment under test (EUT) was placed at the middle of the 1mtr high turntable for below 1 GHz and the EUT is 3 meters far from the measuring antenna. The turntable was rotated 360 ° for obtaining the maximum emission. The height of the measuring antennas was scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained. The measurement above 1GHz was performed by Horn Antenna, the measurement below 30 MHz was performed by loop antenna, Measurement from 30 MHz to 1000 MHz was performed by Broadband Trilog Antenna.

The EUT was rotated around the X-, Y-, and Z-Axis and the results from worst case axis are recorded

9.2.1 Test Setup Configuration

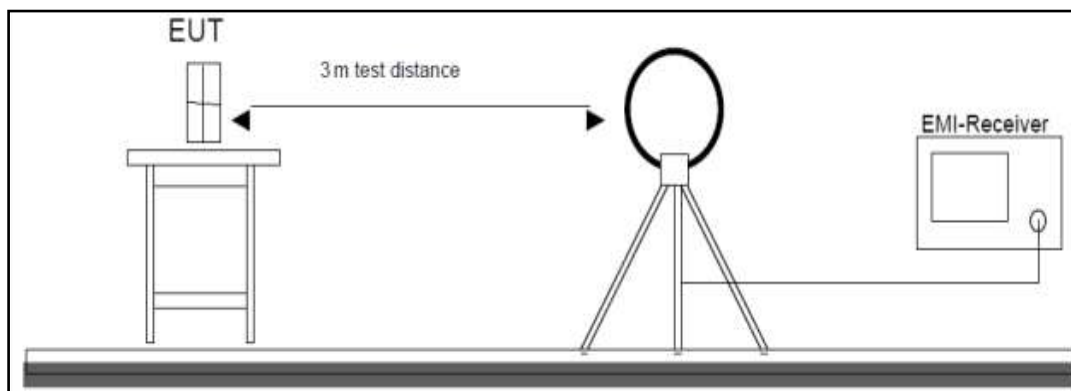


Figure 2: Frequency Range 9kHz- 30MHz

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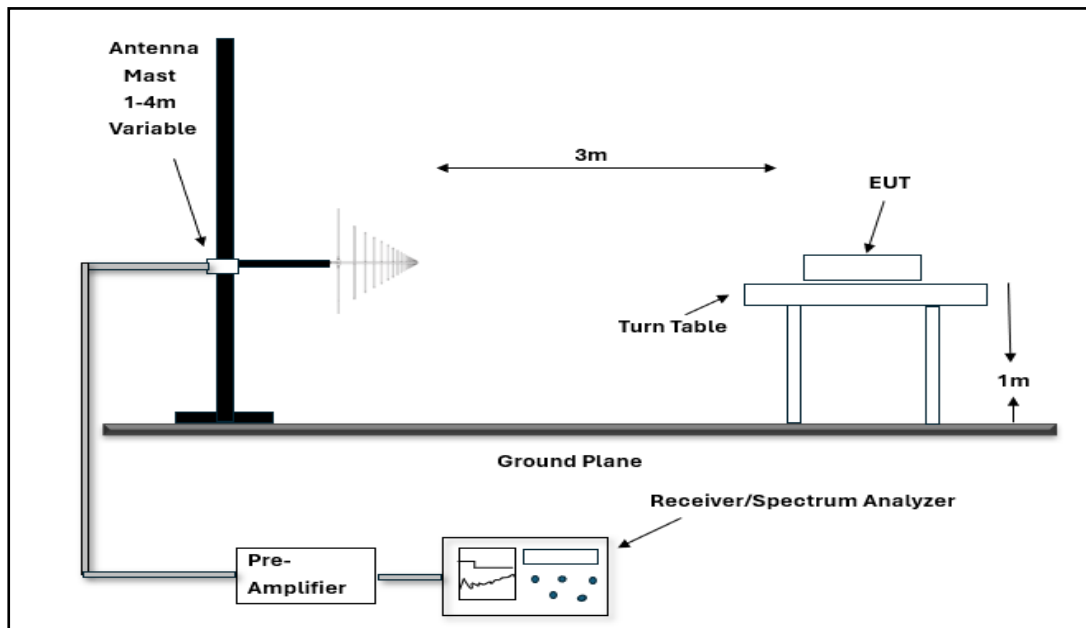


Figure 3: Frequency Range 30MHz - 1GHz

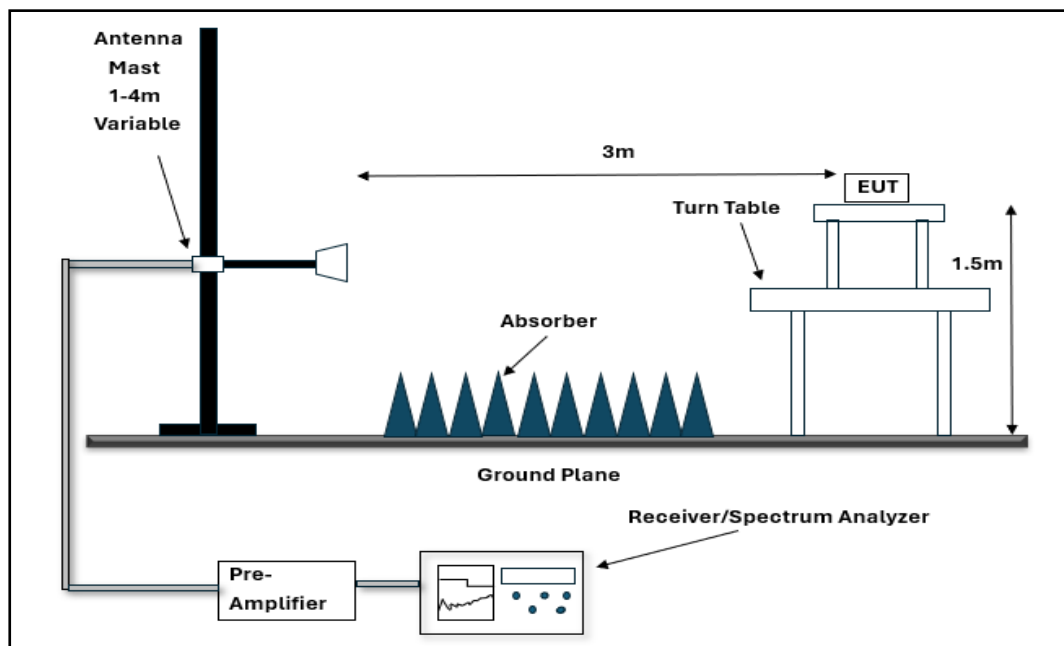


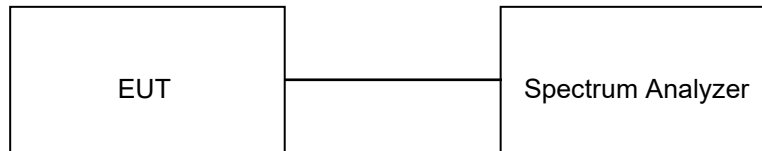
Figure 4: Frequency Range above 1GHz

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10 TEST CONDITIONS AND RESULTS – OCCUPIED CHANNEL BANDWIDTH

Test Specification	FCC 15.215 Section C
Test Method	Subclause 6.9.3 of ANSI C63.10-2020
Measurement Bandwidth	200 Hz
Detector	Peak
Requirement	Operation of the EUT must be within the assigned frequency band i.e 13.553MHz to 13.567MHz

Test Setup:



10.1 Environmental Conditions

Temperature	: 24°C
Relative humidity	: 52%
Power supply	: 208/240 VAC, 60 Hz

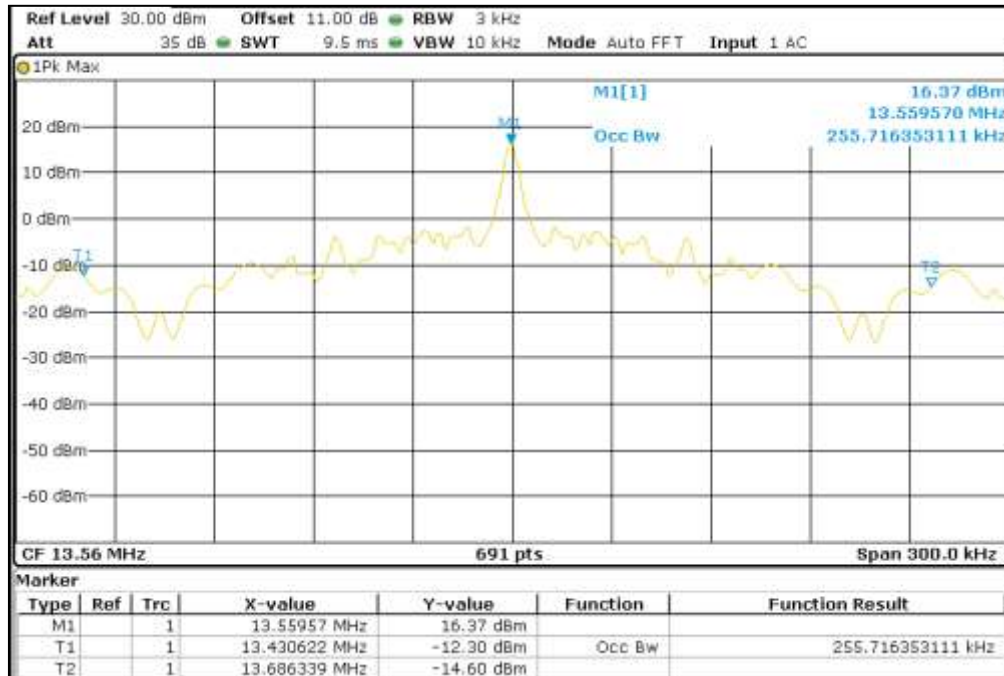
10.2 Test results

Table 7: Occupied channel bandwidth results

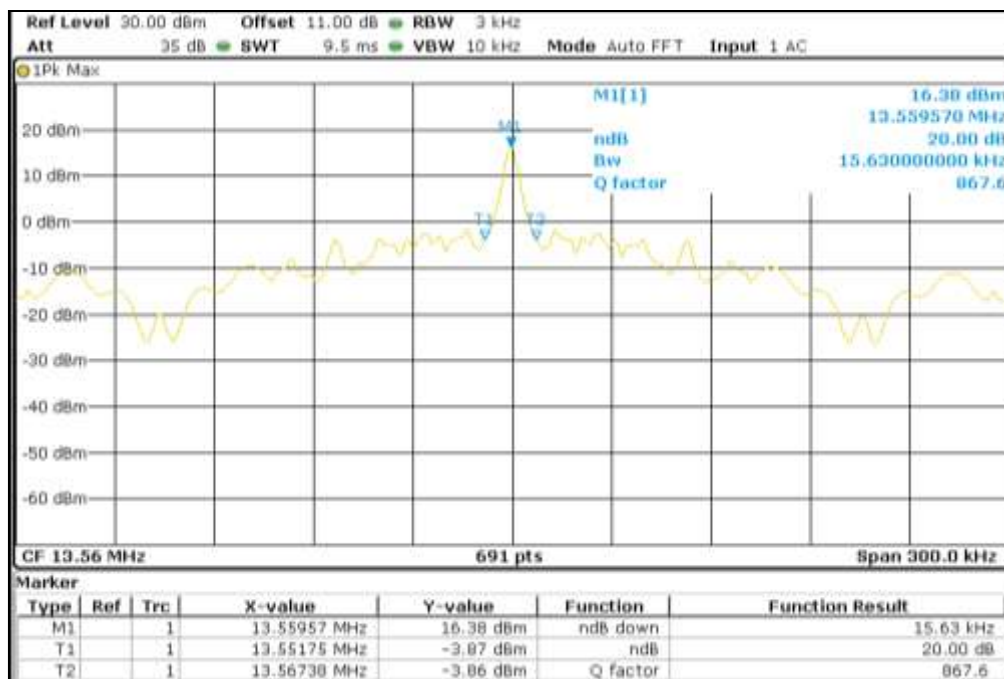
Channel Frequency (MHz)	Measured 99% Occupied Channel Bandwidth (kHz)	Measured 20dB Bandwidth (kHz)	Limit (MHz)
13.56	255.716	15.63	Operation of the EUT must be within the assigned frequency band i.e 13.710MHz to 14.010MHz

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Test plots:



99% Occupied Channel Bandwidth



20dB Bandwidth

Remark: Use of 1% to 5% RBW is not practical for this modulation, hence RBW of 200kHz is used.

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11 TEST CONDITIONS AND RESULTS – FREQUENCY TOLERANCE

Test Specification	FCC part 15 Subpart C 15.225 (e)
Test Method	Subclause 6.8 of ANSI C63.10-2020
Measurement Bandwidth	30 Hz
Detector	Peak detector
Requirement	The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ as per FCC

Test Setup:



11.1 Environmental Conditions

Temperature	: 24°C
Relative humidity	: 52%
Power supply	: 208/240 VAC, 60 Hz

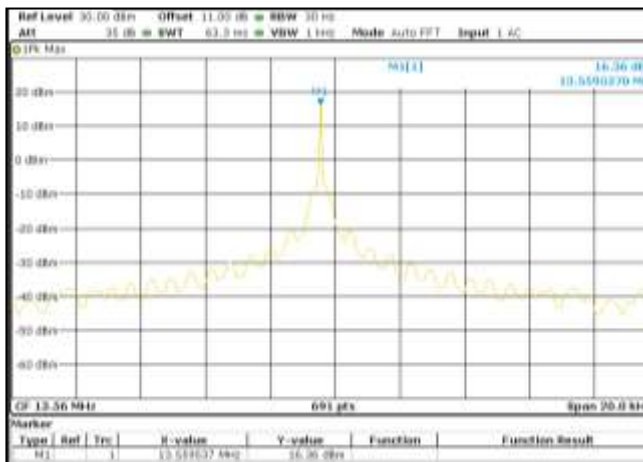
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11.2 Test results

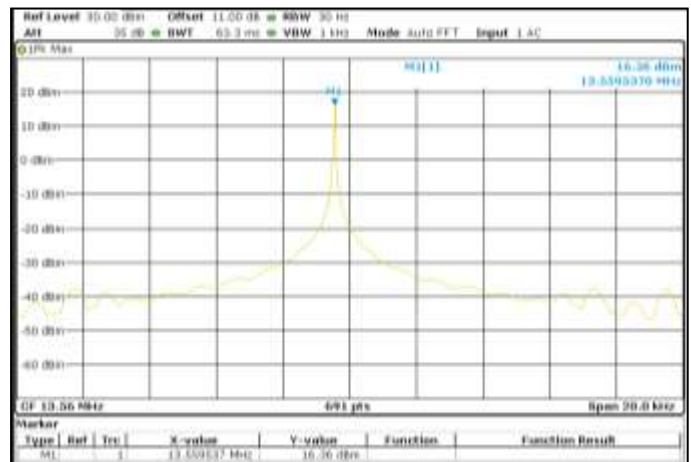
Temperature Variation: -30°C

Table 8: Frequency tolerance – temperature variation -30°C results

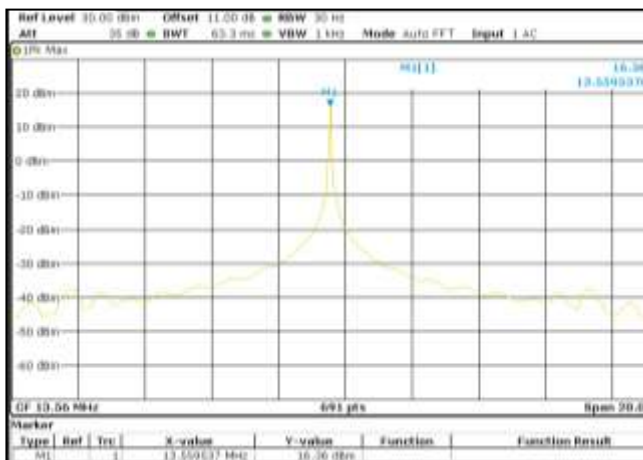
Temperature Variation: -30deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



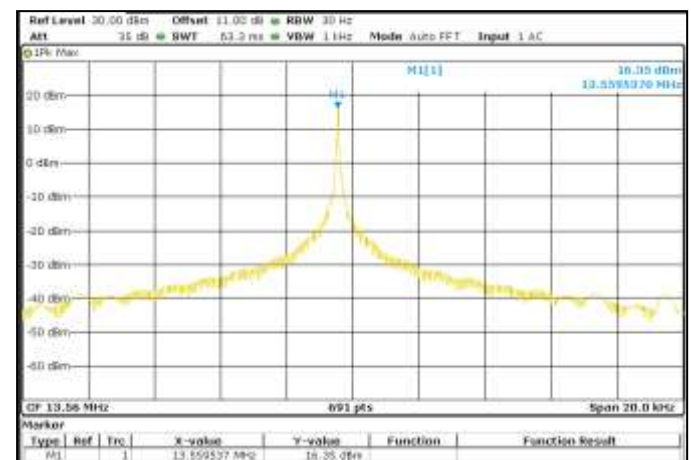
Duration: 0 min



Duration: 2 min



Duration: 5 min



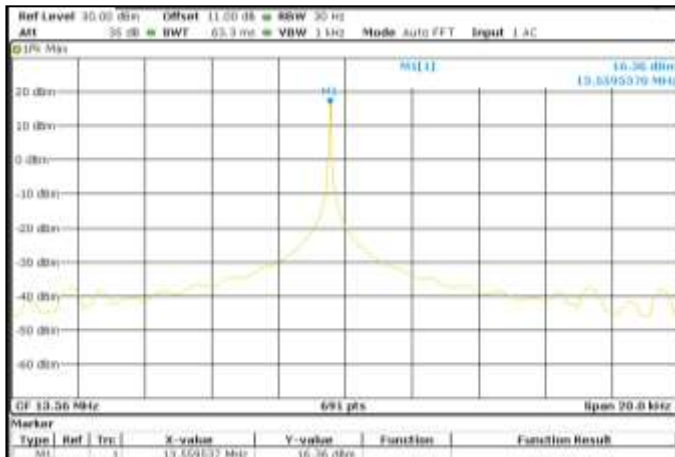
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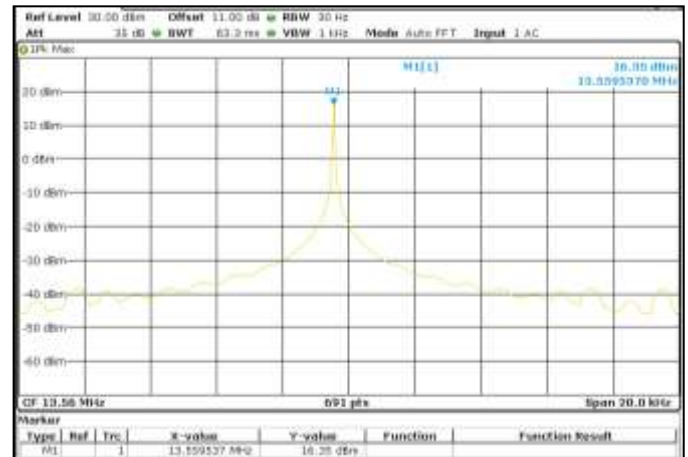
Temperature Variation: -20°C

Table 9: Frequency tolerance – temperature variation -20°C results

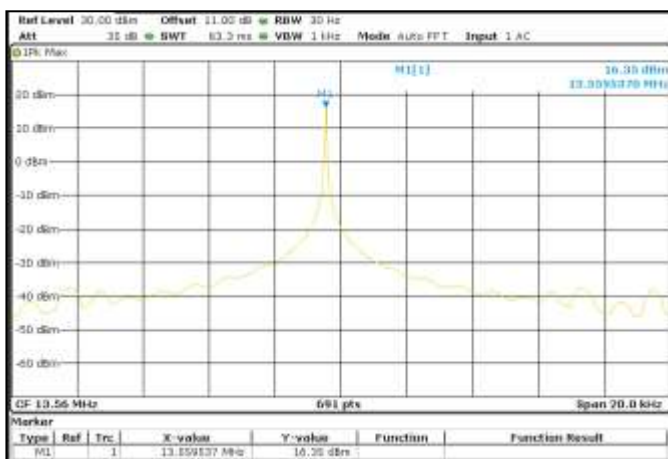
Temperature Variation: -20deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



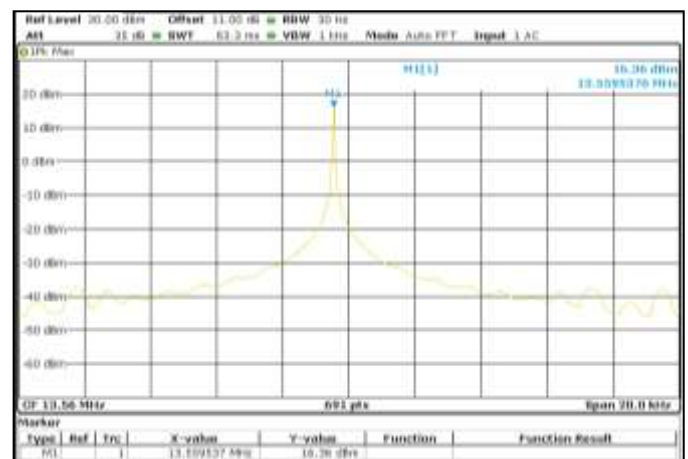
Duration: 0 min



Duration: 2 min



Duration: 5 min



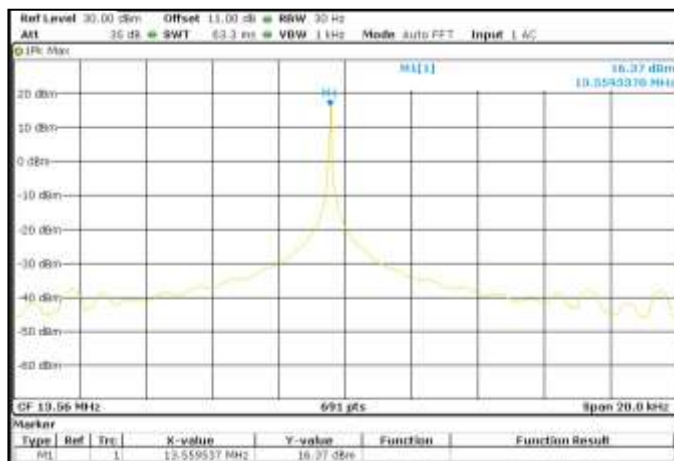
Duration: 10 min

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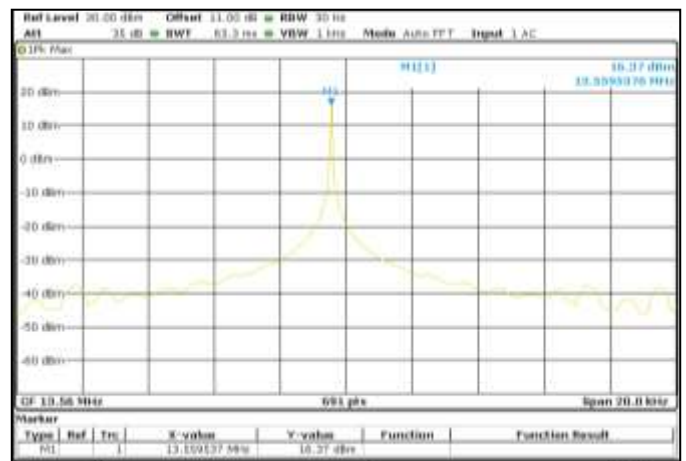
Temperature Variation: -10°C

Table 10: Frequency tolerance – temperature variation -10°C results

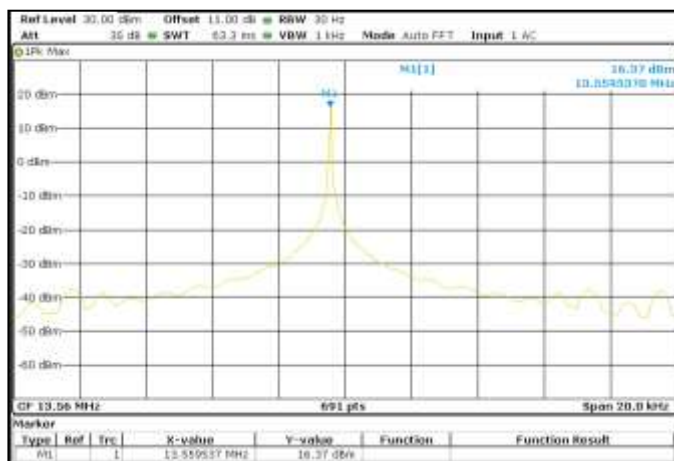
Temperature Variation: -10deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



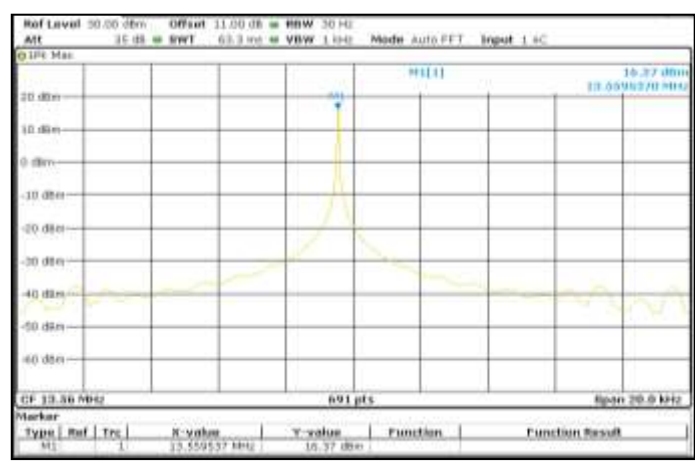
Duration: 0 min



Duration: 2 min



Duration: 5 min



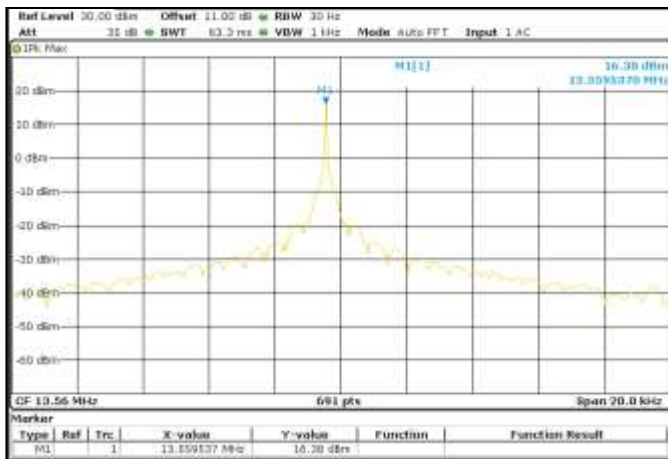
Duration: 10 min

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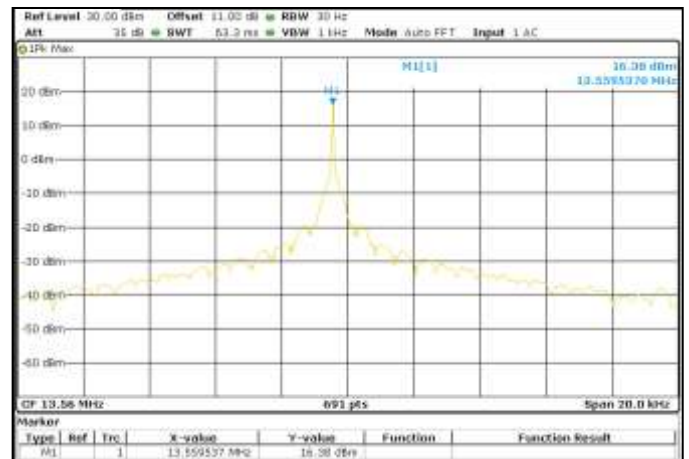
Temperature Variation: 0°C

Table 11: Frequency tolerance – temperature variation 0°C results

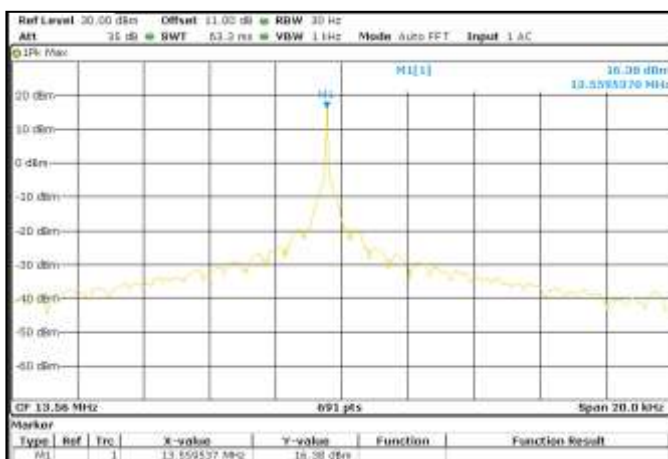
Temperature Variation: 0deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



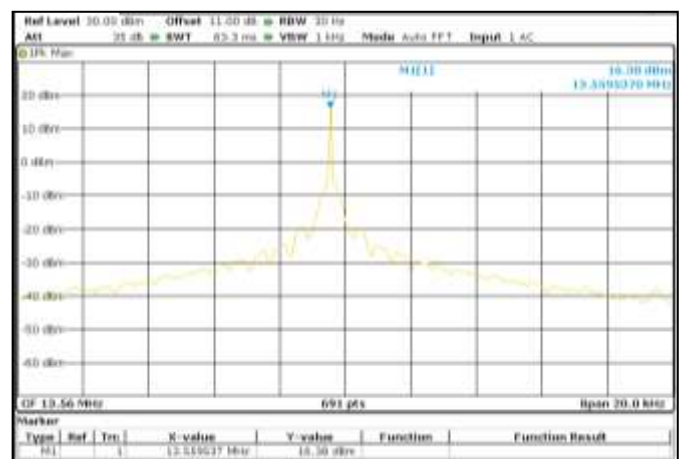
Duration: 0 min



Duration: 2 min



Duration: 5 min



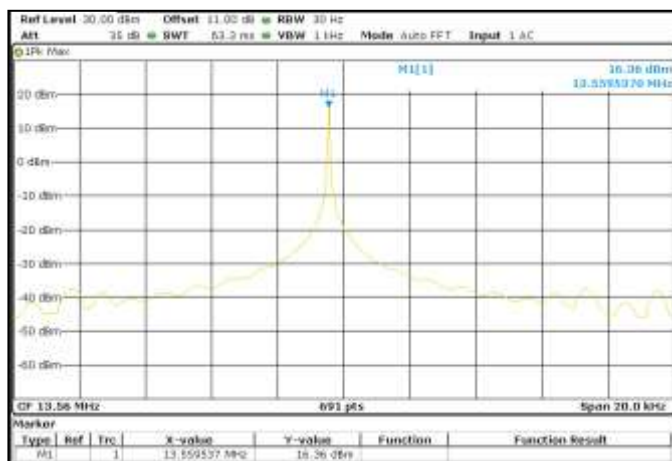
Duration: 10 min

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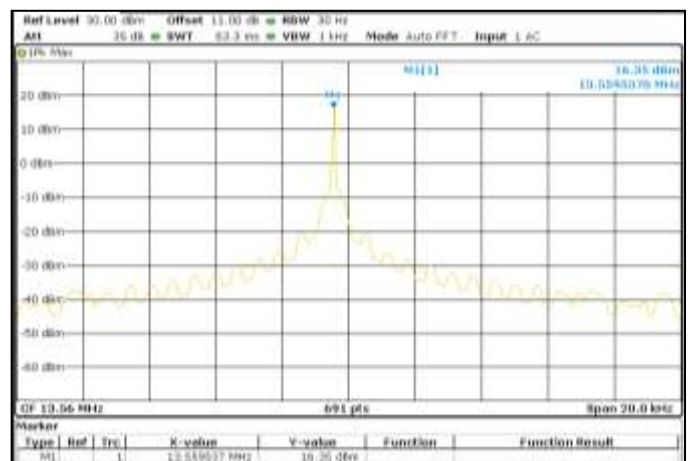
Temperature Variation: 10°C

Table 12: Frequency tolerance – temperature variation 10°C results

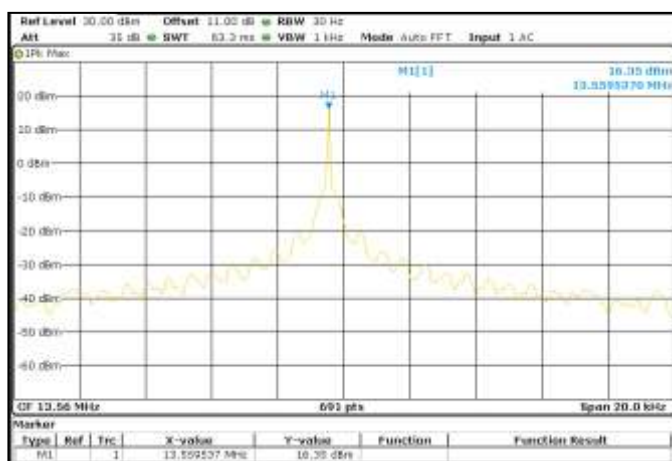
Temperature Variation: 10deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



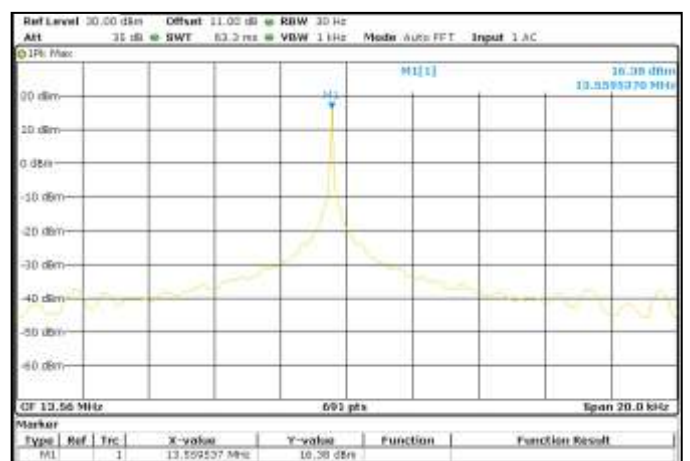
Duration: 0 min



Duration: 2 min



Duration: 5 min



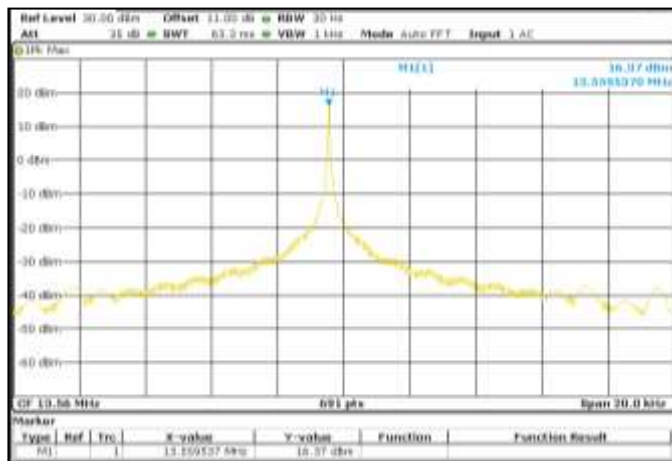
Duration: 10 min

Report Reference. No.: 80260100096001

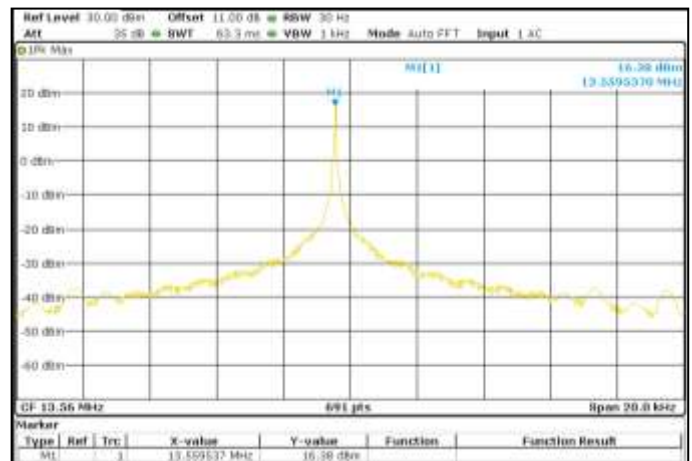
Temperature Variation: 20°C

Table 13: Frequency tolerance – temperature variation 20°C results

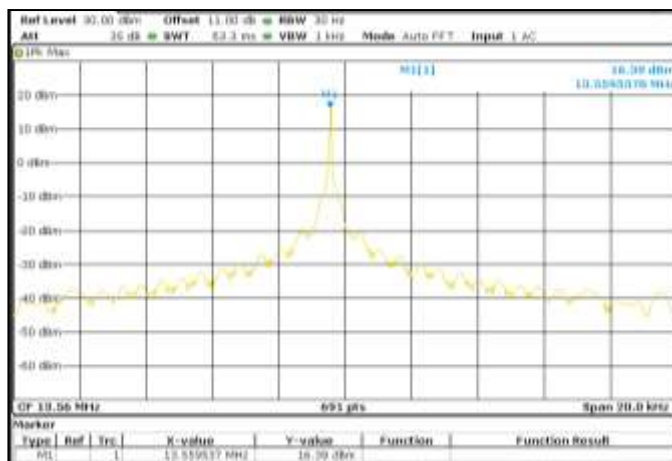
Temperature Variation: 20deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



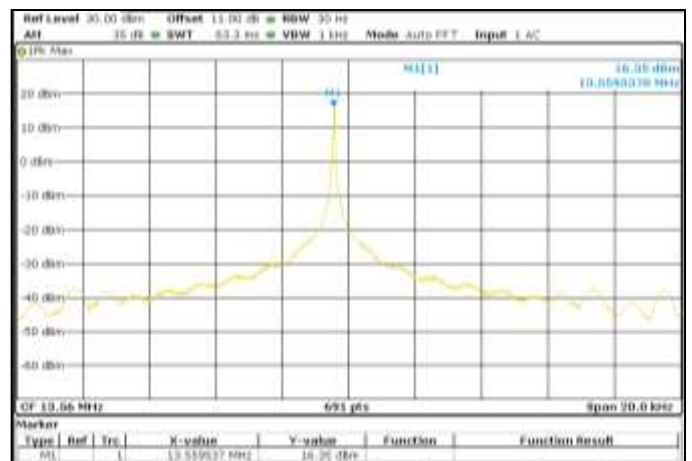
Duration: 0 min



Duration: 2 min



Duration: 5 min



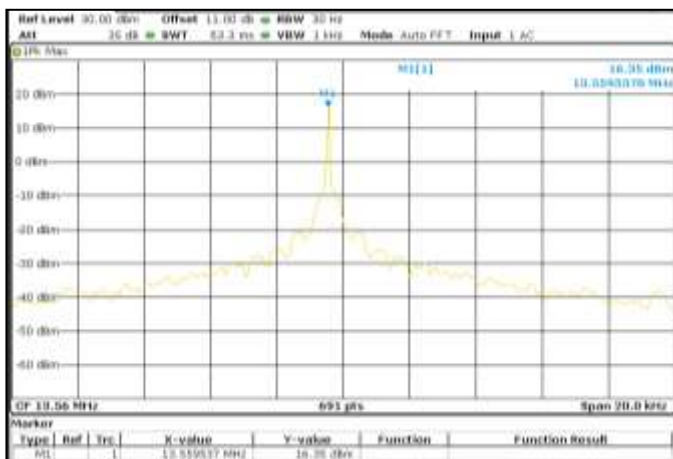
Duration: 10 min

Report Reference. No.: 80260100096001

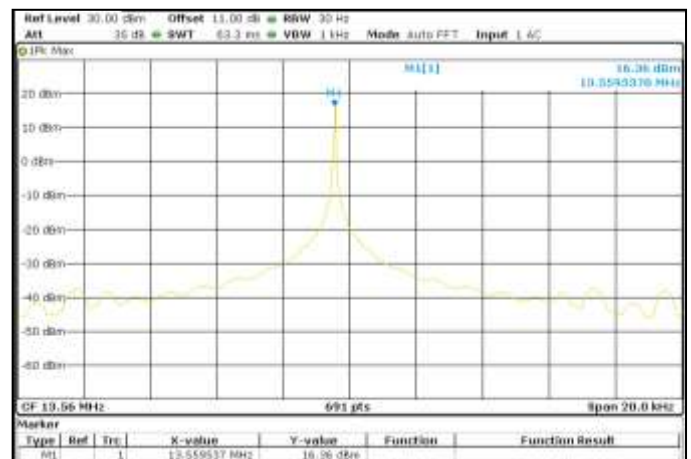
Temperature Variation: 25°C

Table 14: Frequency tolerance – temperature variation 25°C results

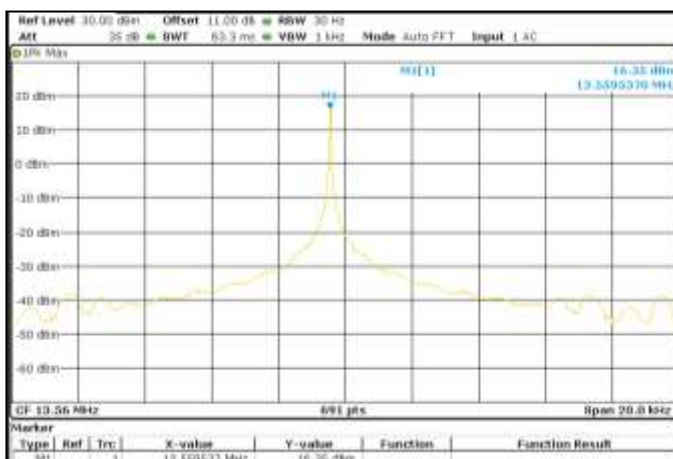
Temperature Variation: 25deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



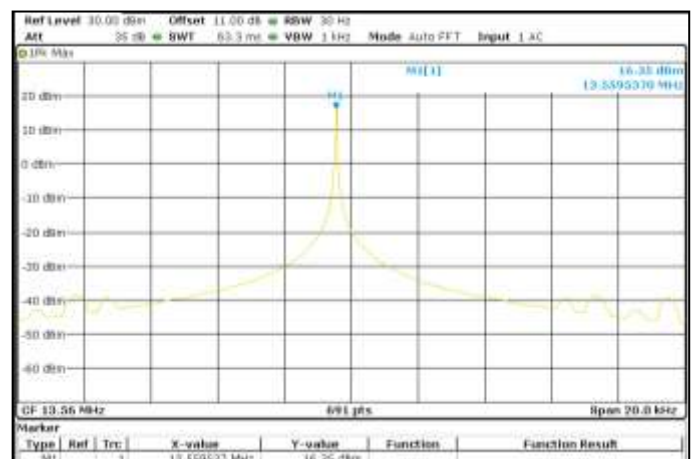
Duration: 0 min



Duration: 2 min



Duration: 5 min



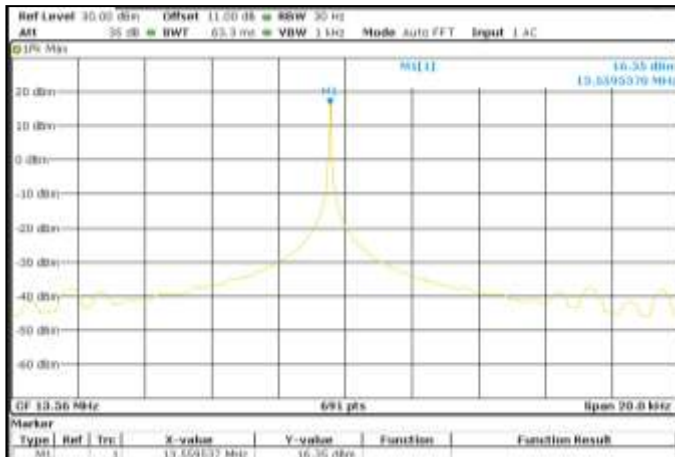
Duration: 10 min

Report Reference. No.: 80260100096001

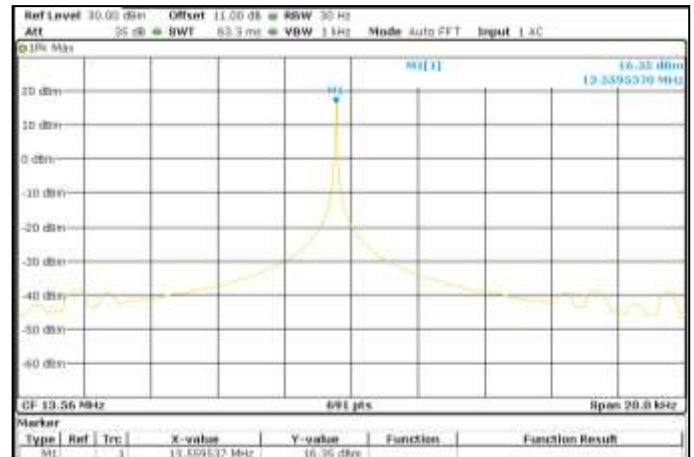
Temperature Variation: 30°C

Table 15: Frequency tolerance – temperature variation 30°C results

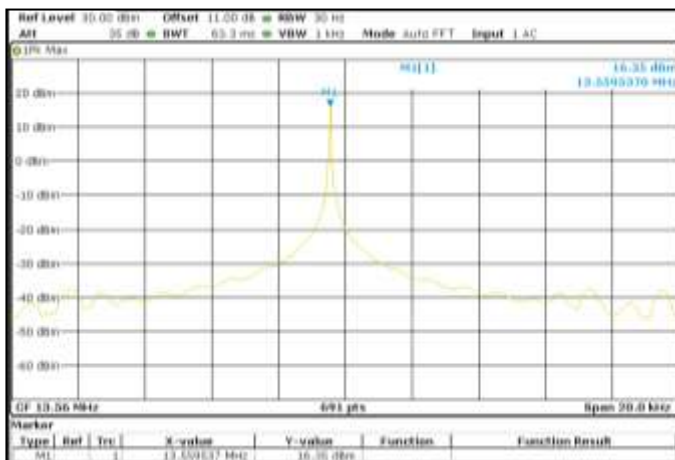
Temperature Variation: 30deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



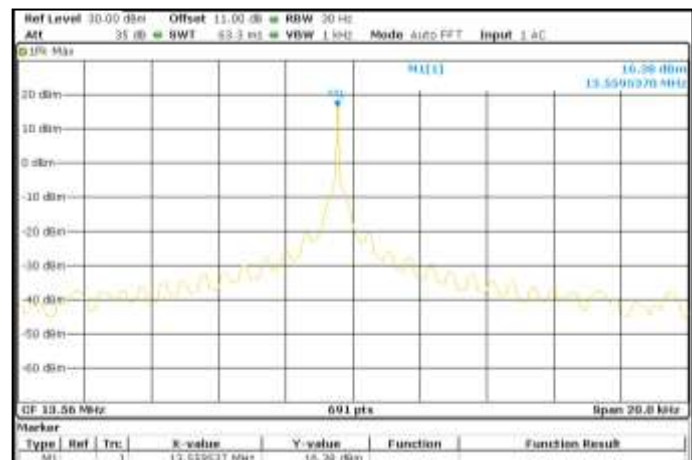
Duration: 0 min



Duration: 2 min



Duration: 5 min



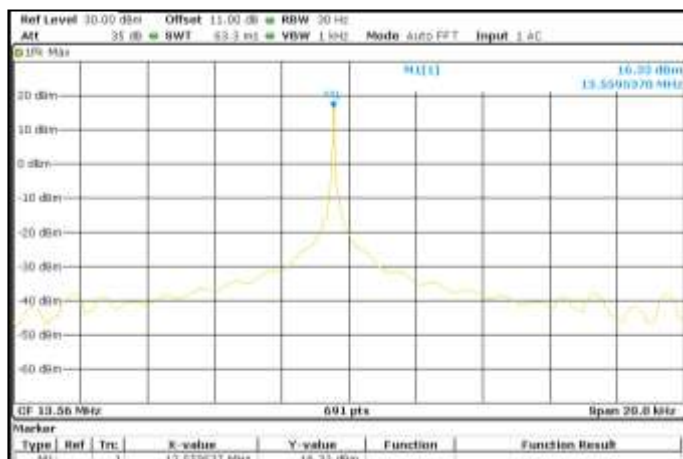
Duration: 10 min

Report Reference. No.: 80260100096001

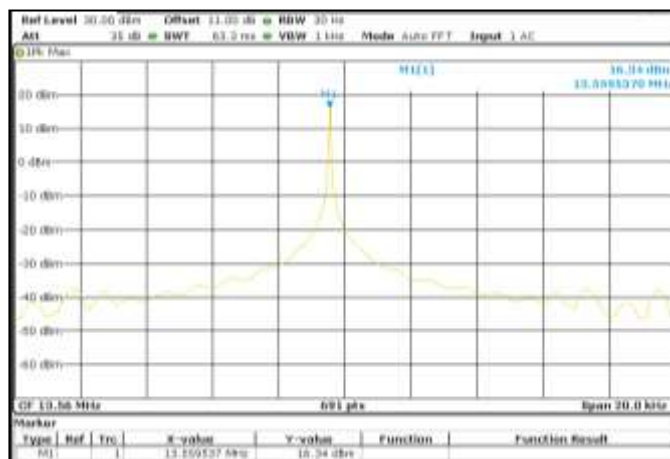
Temperature Variation: 40°C

Table 16: Frequency tolerance – temperature variation 40°C results

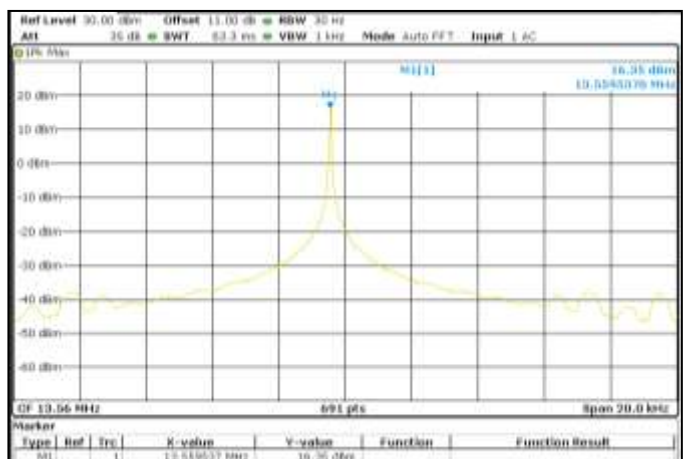
Temperature Variation: 40deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



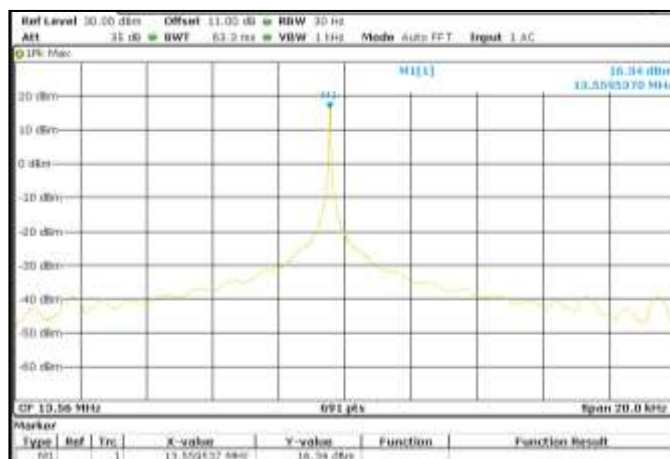
Duration: 0 min



Duration: 2 min



Duration: 5 min



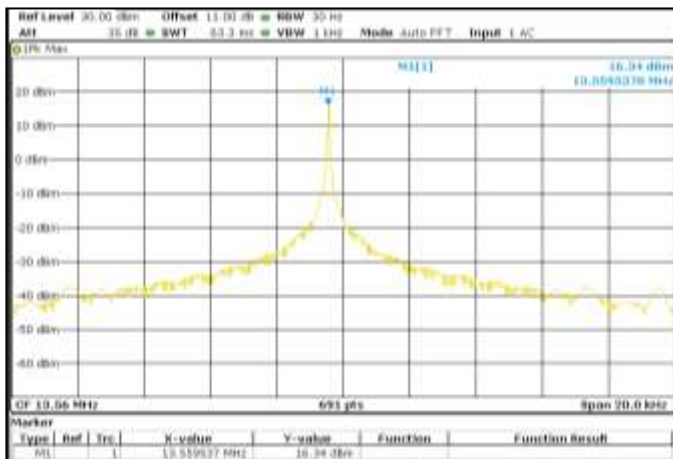
Duration: 10 min

Report Reference. No.: 80260100096001

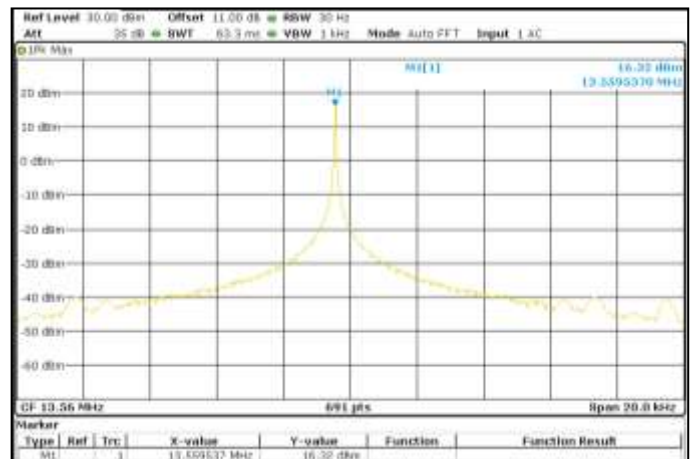
Temperature Variation: 50°C

Table 17: Frequency tolerance – temperature variation 50°C results

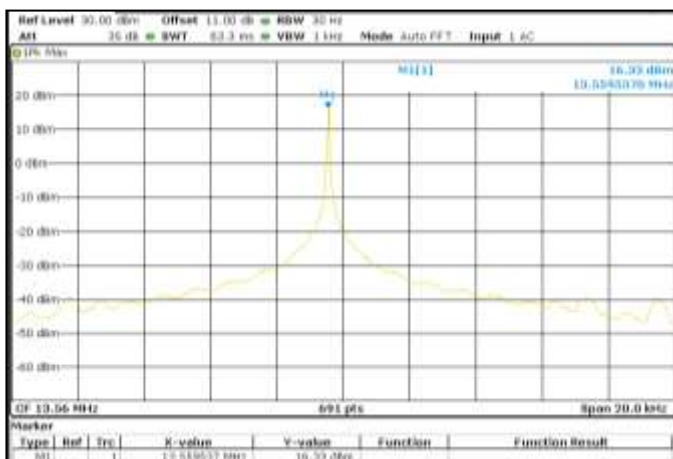
Temperature Variation: 50deg.C					
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.559537	0.000463	0.00341	±0.01
	2min	13.559537	0.000463	0.00341	±0.01
	5min	13.559537	0.000463	0.00341	±0.01
	10min	13.559537	0.000463	0.00341	±0.01



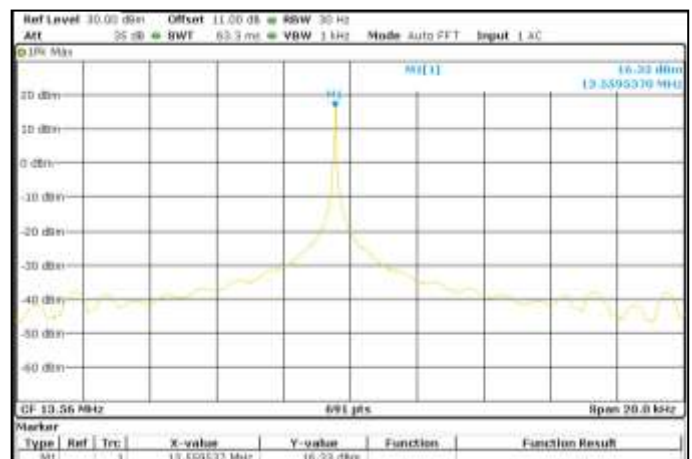
Duration: 0 min



Duration: 2 min



Duration: 5 min



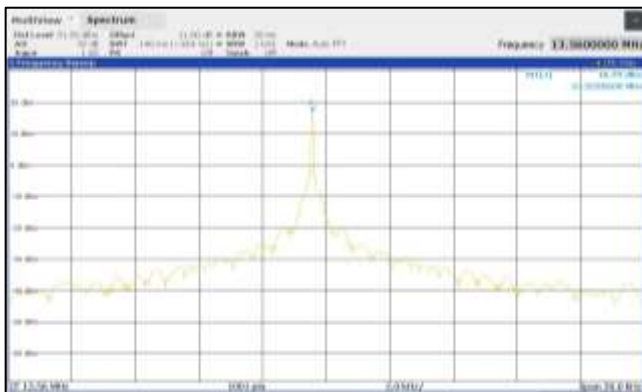
Duration: 10 min

Report Reference. No.: 80260100096001

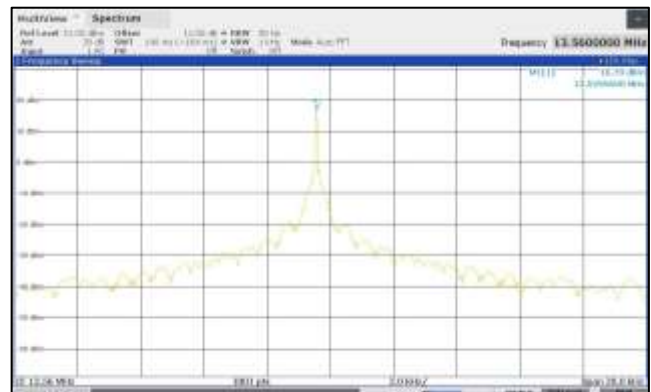
Voltage Variation: 102V

Table 18: Frequency tolerance – Voltage Variation: 102V results

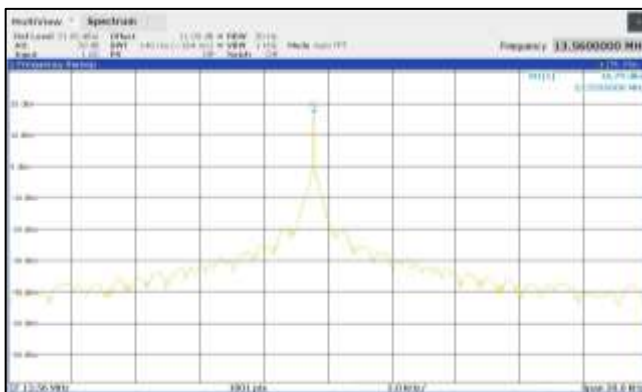
Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.55956	0.000440	0.00324	±0.01
	2min	13.55956	0.000440	0.00324	±0.01
	5min	13.55956	0.000440	0.00324	±0.01
	10min	13.55956	0.000440	0.00324	±0.01



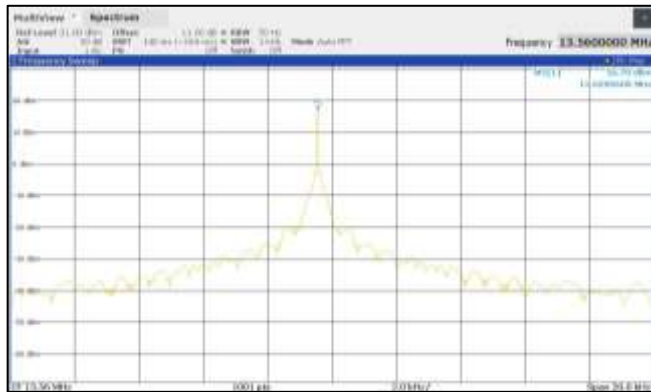
Duration: 0 min



Duration: 2 min



Duration: 5 min



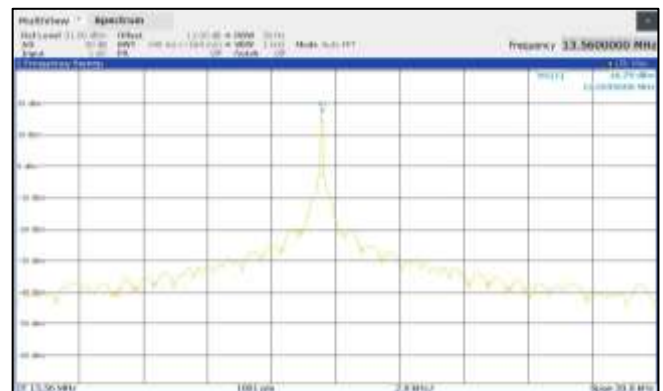
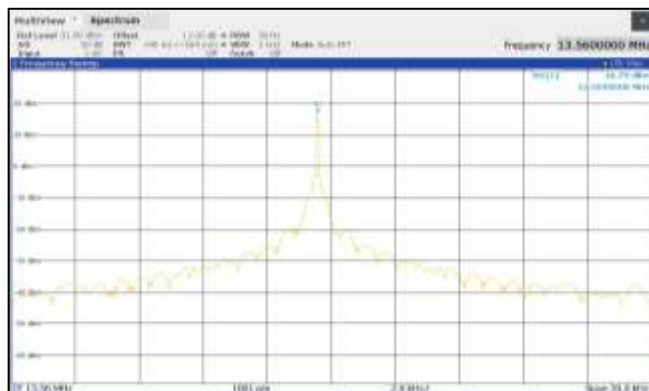
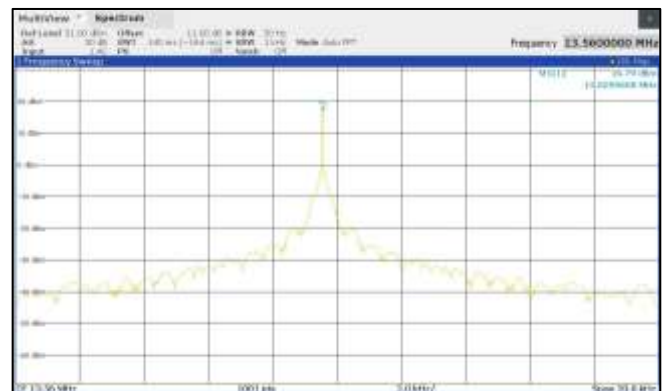
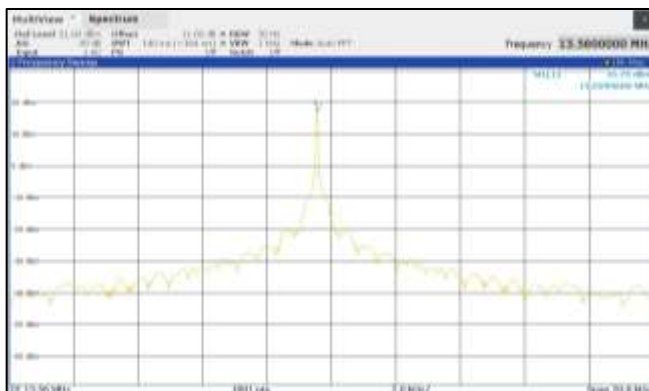
Duration: 10 min

Report Reference. No.: 80260100096001

Voltage Variation: 138V

Table 19: Frequency tolerance – Voltage Variation: 138V results

Channel Frequency (MHz)	Duration	Measured Frequency (MHz)	Frequency Error (MHz)	Frequency Tolerance (%)	Limit (%)
13.56	0	13.55956	0.000440	0.00324	±0.01
	2min	13.55956	0.000440	0.00324	±0.01
	5min	13.55956	0.000440	0.00324	±0.01
	10min	13.55956	0.000440	0.00324	±0.01



Report Reference. No.: 80260100096001

12 TEST CONDITIONS AND RESULTS – FIELD STRENGTH MEASUREMENT WITHIN THE BAND 13.110-14.010 MHz

Test Specification	FCC part 15 Subpart C 15.225
Test Method	ANSI C63.10-2020
Measuring Distance	3 m
Detector	Peak detector/Quasi Peak
Requirement	As mentioned in the below
Test Setup	Refer <u>TEST METHODOLOGY</u>

Table 20: Field strength limits in 13.110-14.010 MHz operation

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength limit for 30-meter distance ($\text{dB}\mu\text{V/m}$)	Field strength limit for 3-meter distance ($\text{dB}\mu\text{V/m}$)
13.553 -13.567	15848	83.99	123.99
13.410-13.553 and 13.567 -13.710	334	50.47	90.47
13.110 -13.410 and 13.710-14.010	106	40.5	80.5

Note: As per the 15.31 Section f(2) , distance correction factor of 40dB/decade is used to convert Field strength limit from 30 meter to 3 meter measurement antenna distance.

12.1 Environmental Conditions

Temperature	: 24°C
Relative humidity	: 52%
Power supply	: 208/240 VAC, 60 Hz

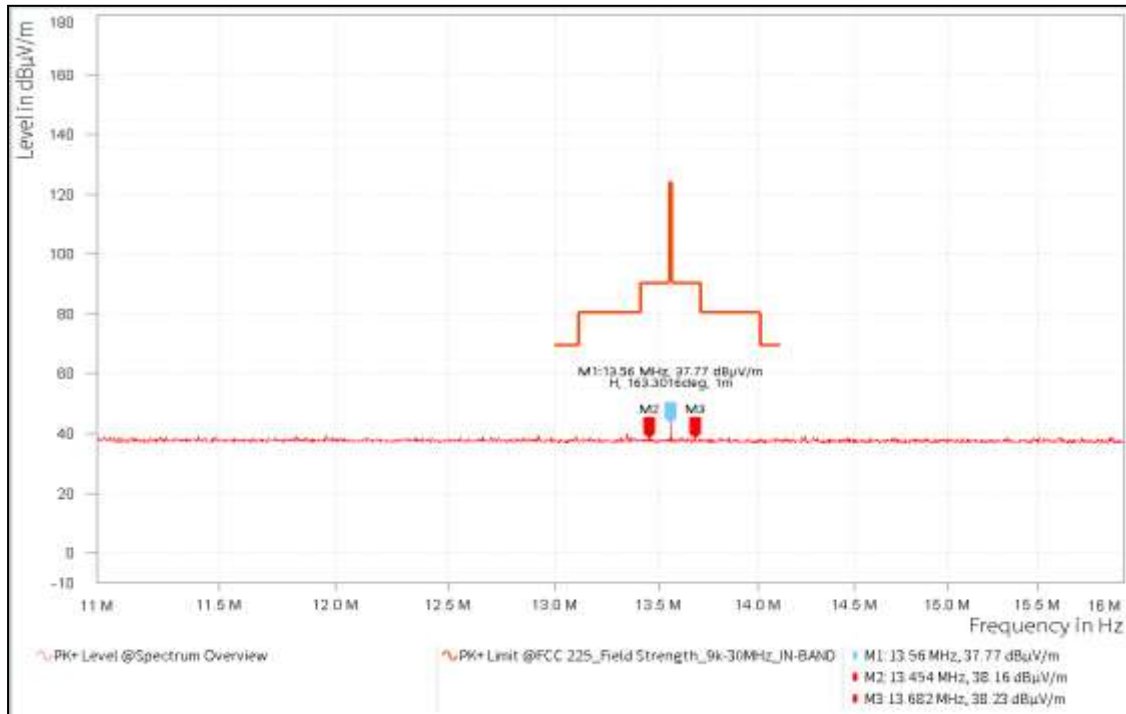
12.2 Test results

Table 21: Field strength measurement within the band 13.110MHz to 14.010MHz results

Antenna Polarization	Measured frequency (MHz)	Field Strength ($\text{dB}\mu\text{V/m}$)	Limit ($\text{dB}\mu\text{V/m}$)	Margin (dB)
Parallel	13.560	37.77	123.99	-86.22
	13.454	38.16	90.47	-52.31
	13.682	38.23	90.47	-52.24
Perpendicular	13.561	37.90	123.99	-86.09
	13.428	38.16	90.47	-52.31
	13.735	38.23	80.50	-42.27

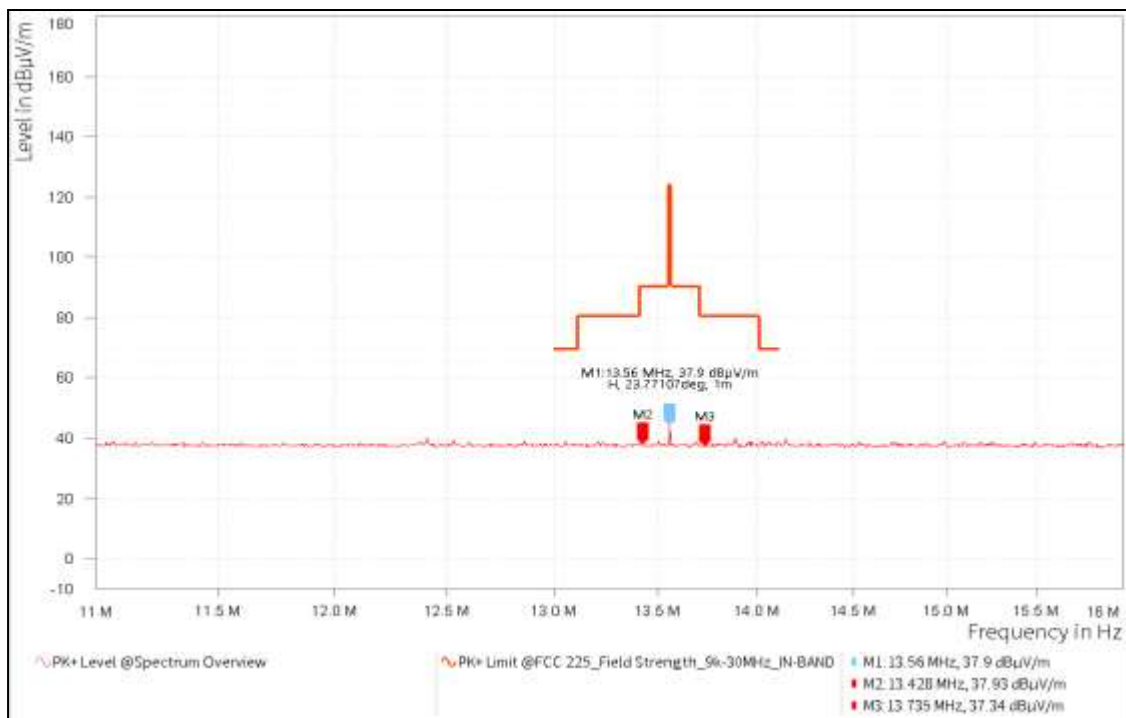
Report Reference. No.: 80260100096001

Test Plots:



Channel Frequency: 13.56MHz

Polarization: Parallel



Channel Frequency: 13.56MHz

Polarization: Perpendicular

Report Reference. No.: 80260100096001

13 TEST CONDITIONS AND RESULTS – SPURIOUS RADIATED EMISSIONS

Test Specification	FCC part 15 Subpart C 15.247 (d) / (15.209 & 15.205)
Test Method	ANSI C63.10-2020
Measuring Distance	3 m
Measurement Bandwidth	120kHz for frequency range < 1GHz
Detector	Refer remarks below
Requirement	As per the mentioned below Limits
Test Setup	Refer <u>TEST METHODOLOGY</u>

Table 22: Transmitter limits for Radiated emission

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength (dB $\mu\text{V/m}$)	Distance of Measurement (m)
0.009 – 0.490	2400/F(kHz)	48.50 – 13.80	300*
0.490 – 1.705	24000/F(kHz)	33.80 – 23.00	30*
1.705 -30	30	29.54	30*
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Remark: * The limit shows in the table above of frequency range 0.009 – 0.490, 0.490 – 1.705 MHz and 1.705-30MHz is at 300-meter, 30 meter and 30-meter range respectively, which corresponds to 128.51 – 93.80, 73.80 – 62.96 and 69.54 dB $\mu\text{V/m}$ at 3m range by extrapolation calculation and the measurement of loop antenna.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.

13.1 Environmental Conditions

Temperature	: 24°C
Relative humidity	: 52%
Power supply	: 208/240 VAC, 60 Hz

Report Reference. No.: 80260100096001

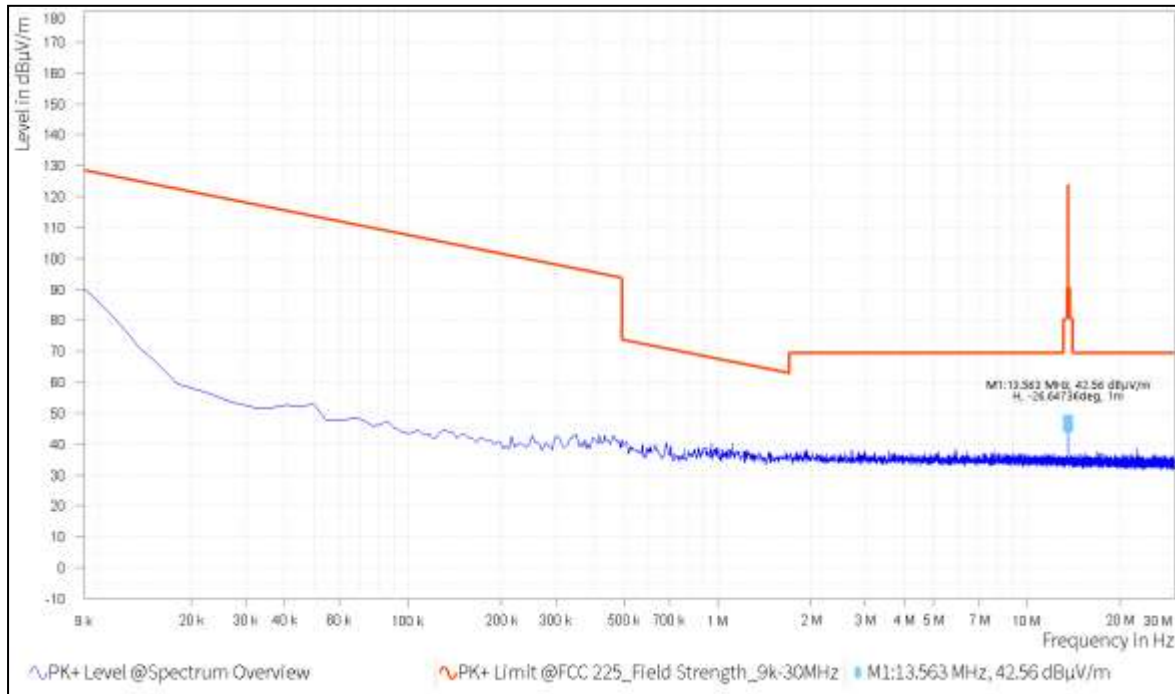
13.2 Test results

Table 23: Test results for frequency range 9kHz – 30MHz

Antenna Polarization	Measured Frequency (MHz)	Measured Spurious emission (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Parallel	13.563	42.56	123.99	-81.43
Perpendicular	13.563	42.28	123.99	-81.71

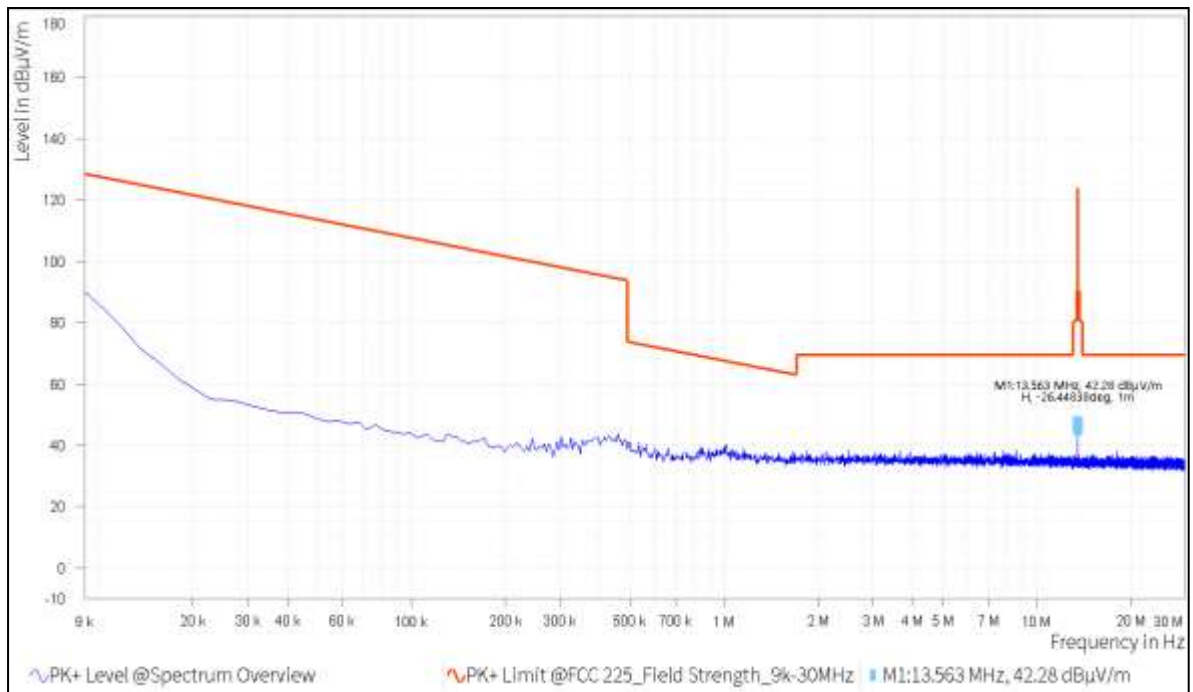
Report Reference. No.: 80260100096001

Test Plots:



Channel Frequency: 9kHz – 30MHz

Polarization: Parallel



Channel Frequency: 9kHz – 30MHz

Polarization: Perpendicular

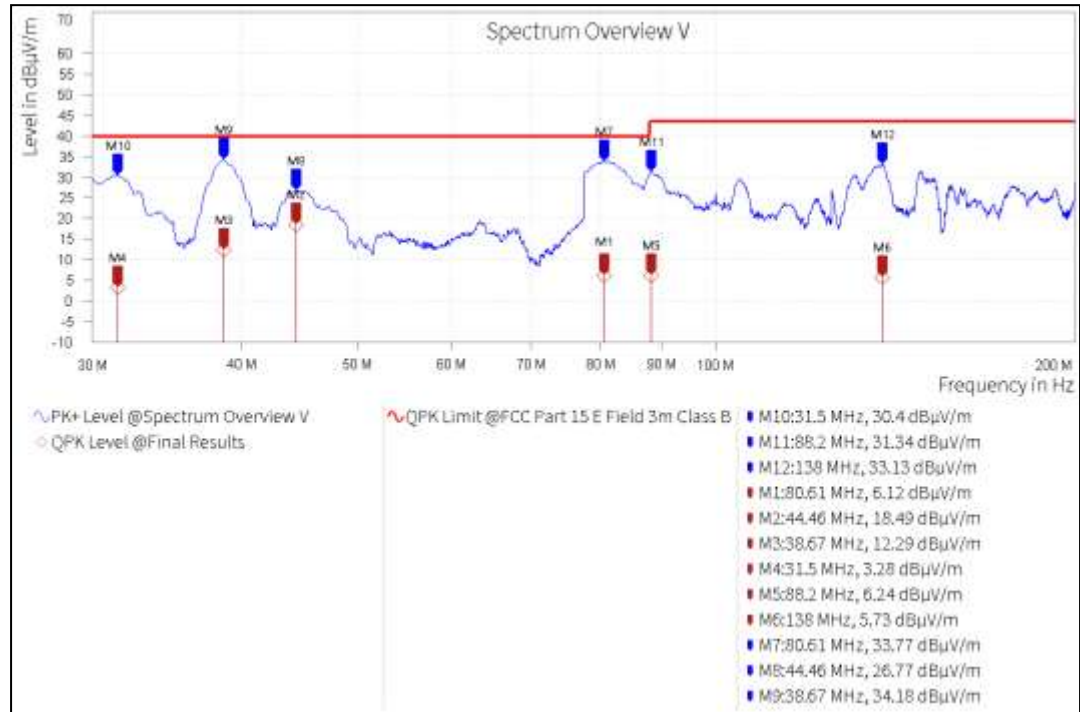
Report Reference. No.: 80260100096001

Table 24: Test results for frequency range 30MHz – 1GHz

Antenna Polarization	Measured Frequency (MHz)	Measured Quasi Peak value (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Vertical	31.50	3.28(QP)	40	-36.72
	38.67	12.29(QP)	40	-27.71
	44.46	18.49(QP)	40	-21.51
	80.61	6.12(QP)	40	-33.88
	88.20	6.24(QP)	43.5	-37.26
	138.00	5.73(QP)	43.5	-37.77
	240.79	32.55	46	-13.45
	352.55	31.42	46	-14.58
	433.91	33.77	46	-12.23
	599.99	30.88	46	-15.12
	950.00	31.20	46	-14.80
Horizontal	31.44	3.75(QP)	40	-36.25
	38.43	7.94(QP)	40	-32.06
	43.95	1.00(QP)	40	-39.00
	82.80	5.49(QP)	40	-34.51
	87.99	11.41(QP)	40	-28.59
	115.83	11.78(QP)	43.5	-31.72
	240.79	32.55	46	-13.45
	352.55	31.42	46	-14.58
	433.91	33.77	46	-12.23
	599.99	30.88	46	-15.12
	950.00	31.20	46	-14.80

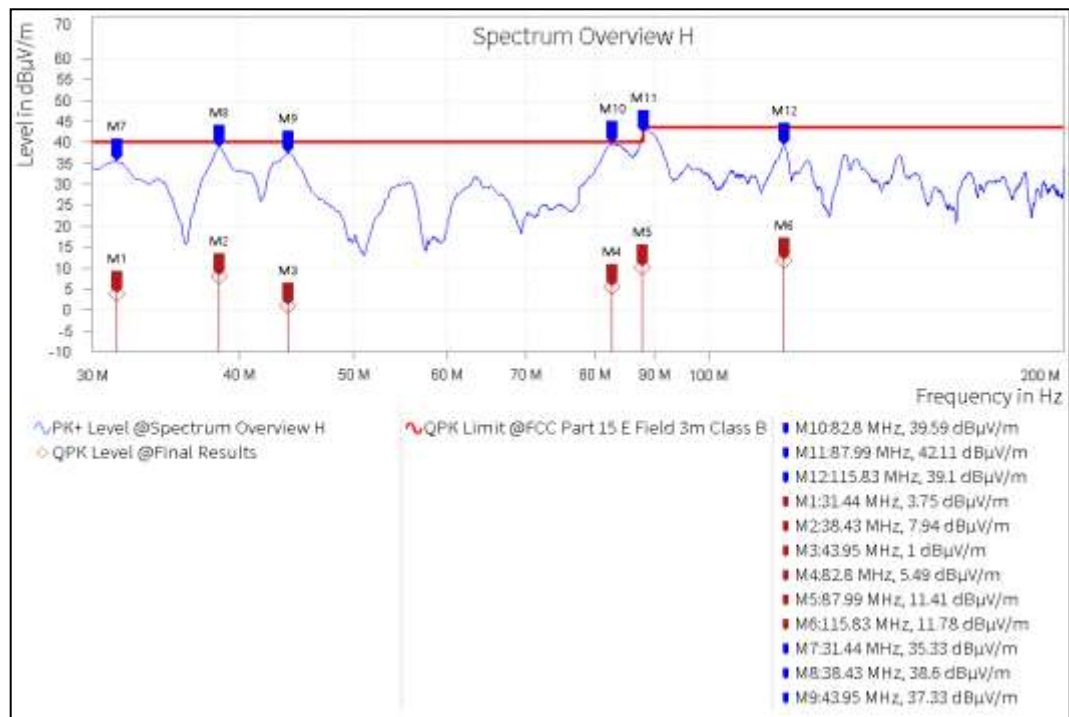
Report Reference. No.: 80260100096001

Test Plots:



Frequency range: 30MHz -200MHz

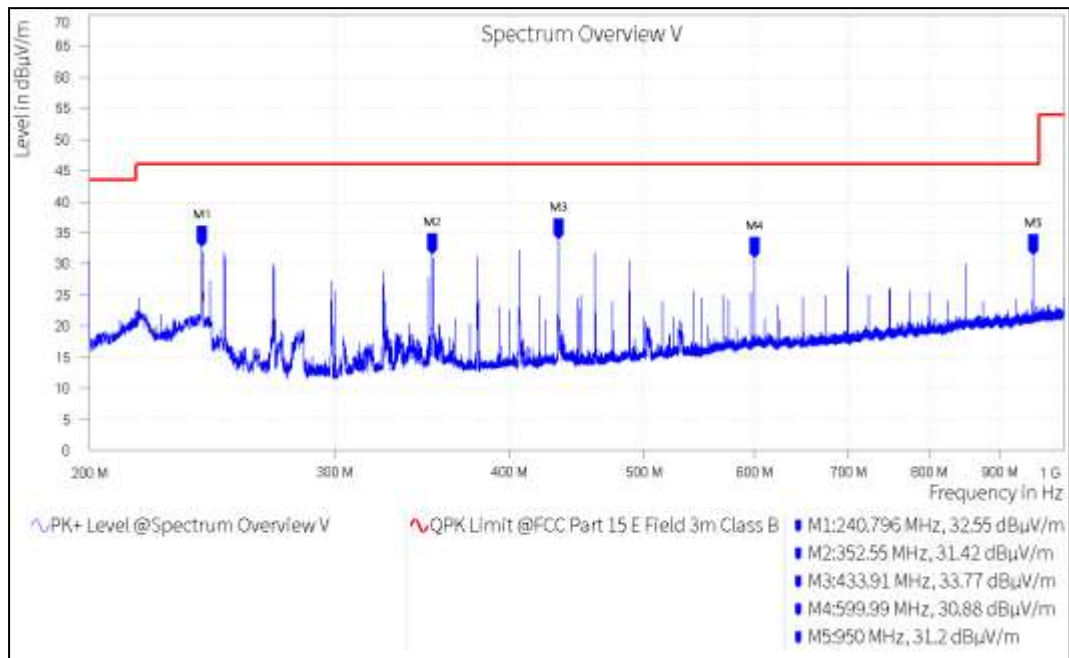
Polarization: Vertical



Frequency range: 30MHz -200MHz

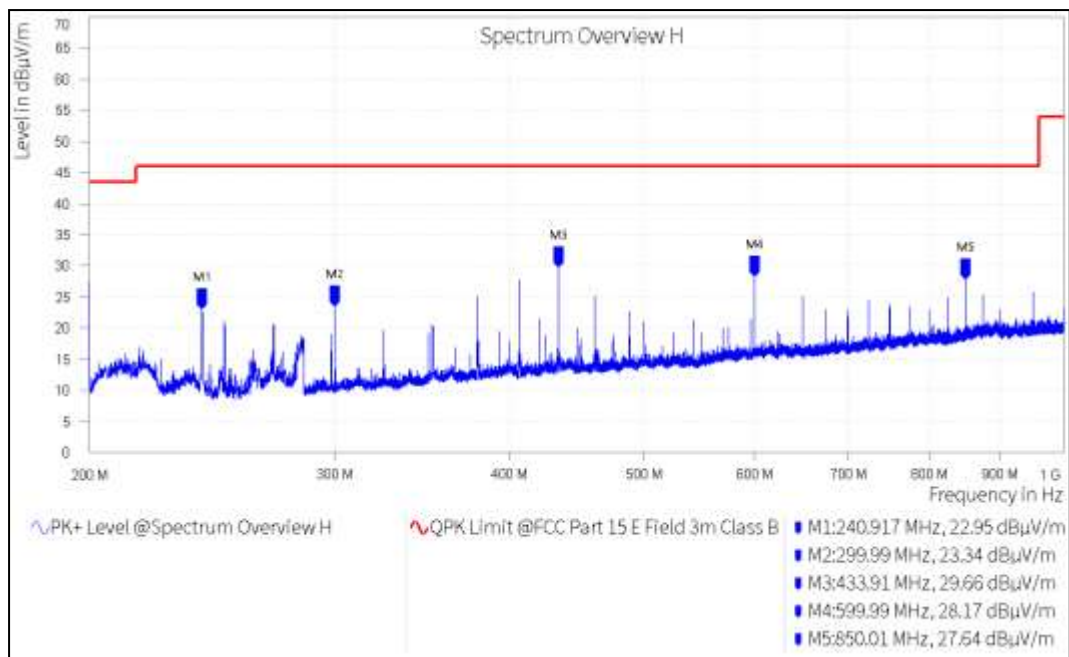
Polarization: Horizontal

Report Reference. No.: 80260100096001



Frequency range: 200MHz – 1GHz

Polarization: Vertical



Frequency range: 200MHz – 1GHz

Polarization: Horizontal

Report Reference. No.: 80260100096001

14 TEST CONDITIONS AND RESULTS – CONDUCTED SPURIOUS EMISSION TEST ON AC POWER LINE

Test Specification	FCC Part 15 Section 15.207
Test Method	ANSI C63.10-2020
Testing Location	Shielded Room
Measurement Bandwidth	9kHz
Frequency Range	150kHz – 30MHz
Test Setup	Refer <u>TEST METHODOLOGY</u>

Table 25: Limits of section 15.207

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak (dBμV)	Average (dBμV)
0.15-0.5	66-56*	56-46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency

14.1 Environmental Conditions

Temperature	: 24°C
Relative humidity	: 52%
Power supply	: 208/240 VAC, 60 Hz

14.2 Test result:

Note:

The EUT is powered by a split-phase supply (L1, L2, PE) with no Neutral. Conducted emissions were measured only on L1 and L2, as no Neutral conductor is provided.

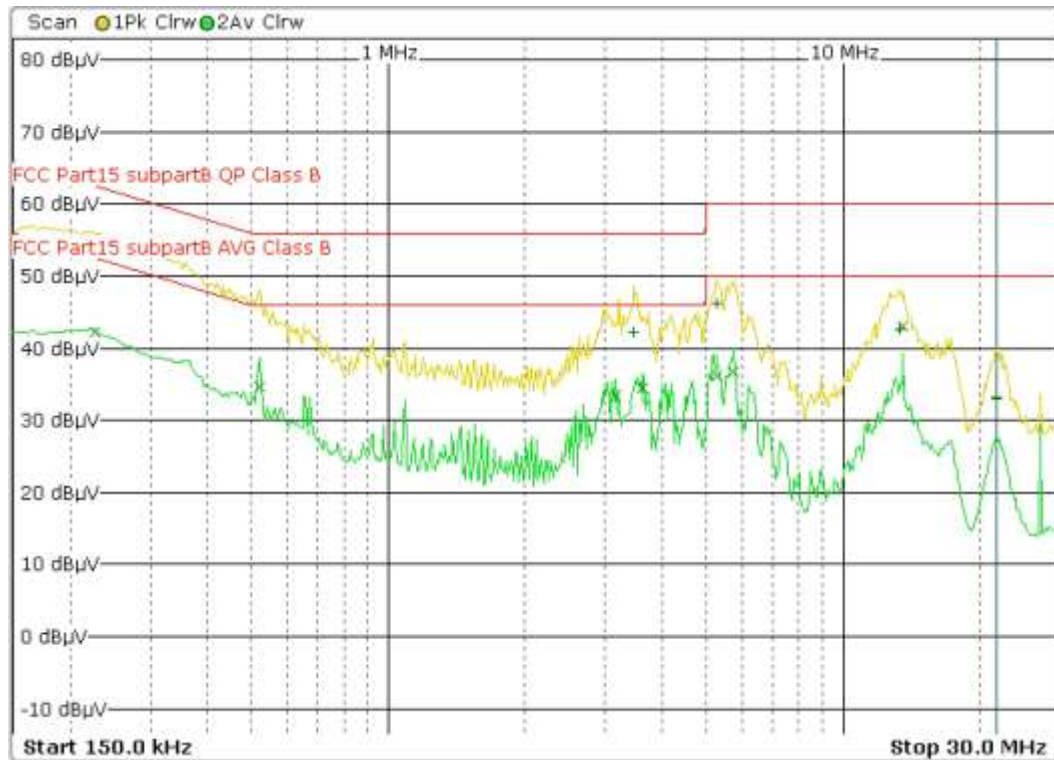
Report Reference. No.: 80260100096001

Power: 120VAC_ 60Hz_LINE 1

Table 26: Power - 120VAC_ 60Hz_LINE 1 Results

Trace	Frequency	Level (dBμV)	Detector	Delta Limit/dB
1	166.000000000 kHz	54.31	Quasi Peak	-10.85
2	226.000000000 kHz	42.34	Average	-10.26
2	522.000000000 kHz	34.67	Average	-11.33
2	3.154000000 MHz	33.33	Average	-12.67
1	3.458000000 MHz	42.21	Quasi Peak	-13.79
2	3.614000000 MHz	34.4	Average	-11.6
2	5.278000000 MHz	36.25	Average	-13.75
1	5.282000000 MHz	46.22	Quasi Peak	-13.78
2	5.738000000 MHz	36.77	Average	-13.23
1	13.274000000 MHz	42.75	Quasi Peak	-17.25
2	13.562000000 MHz	43.06	Average	-6.94
1	21.734000000 MHz	33.29	Quasi Peak	-26.71
1	21.734000000 MHz	39.89	Quasi Peak	-20.11

Test Plot:



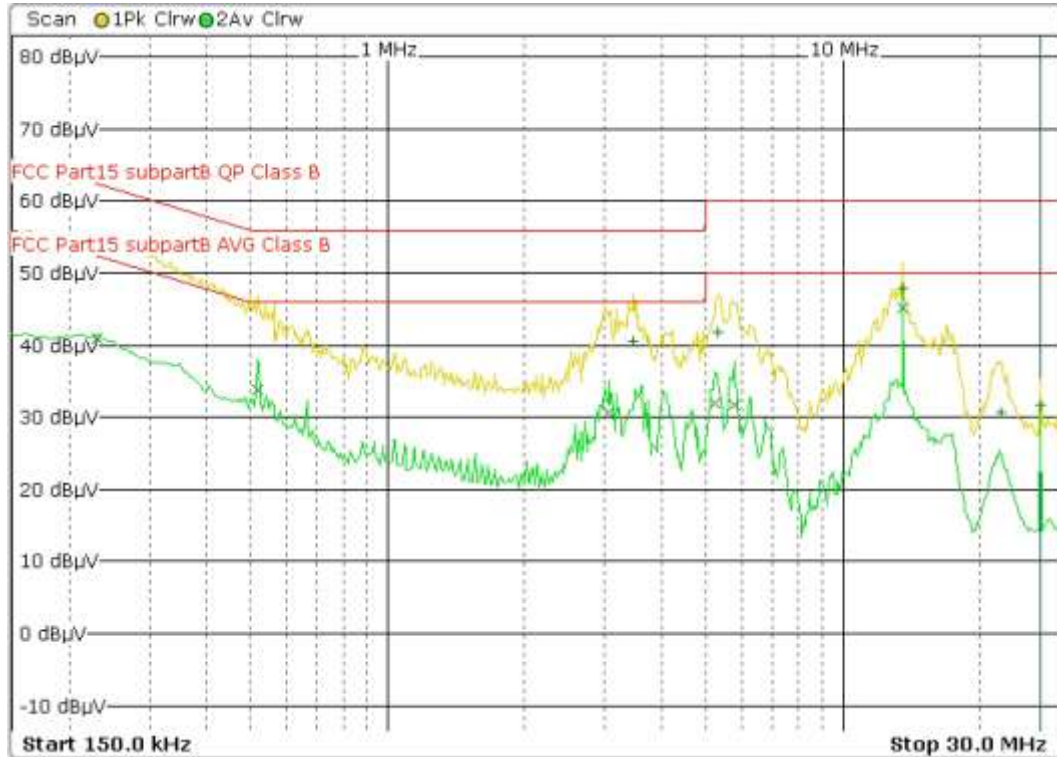
Report Reference. No.: 80260100096001

Power: 120VAC_ 60Hz_LINE 2

Table 27: Power - 120VAC_ 60Hz_LINE 2 Results

Trace	Frequency	Level (dB μ V)	Detector	Delta Limit/dB
1	162.000000000 kHz	53.28	Quasi Peak	-12.08
2	230.000000000 kHz	41.08	Average	-11.37
2	518.000000000 kHz	33.74	Average	-12.26
2	3.066000000 MHz	30.62	Average	-15.38
1	3.474000000 MHz	40.53	Quasi Peak	-15.47
2	5.242000000 MHz	31.91	Average	-18.09
1	5.326000000 MHz	41.91	Quasi Peak	-18.09
2	5.774000000 MHz	31.73	Average	-18.27
1	13.558000000 MHz	47.83	Quasi Peak	-12.17
2	13.558000000 MHz	45.1	Average	-4.90
1	22.234000000 MHz	30.6	Quasi Peak	-29.40
1	27.118000000 MHz	31.74	Quasi Peak	-28.26

Test Plot:



Report Reference. No.: 80260100096001

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-----End of Report-----