

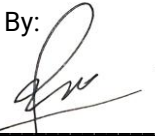
	  
MOTOROLA PENANG ADV. COMM. LABORATORY Motorola Solutions Malaysia Sdn. Bhd. Plot 2A Medan Bayan Lepas, Mukim 12, S.W.D. 11900 Bayan Lepas, Penang, Malaysia.	FCC / ISED TEST REPORT Report Revision : Rev.B
Date/s Tested : 03-February-2026 - 30-March-2026 Report Issue Date : 24-April-2026 Test Location : MOTOROLA PENANG ADV. COMM. LABORATORY Manufacturer/Location : Motorola Solutions Malaysia Sdn Bhd Plot 2A, Medan Bayan Lepas, Mukim 12 S.W.D 11900 Bayan Lepas, Penang, Malaysia Requestor : Ooi Vern Yin Product Type : Portable Product Marketing Name (PMN) : TLK 200 Hardware Version Identification : HK2300A Number (HVIN) Frequency Band : 2.402 - 2.480 GHz Max RF Output Power : 11.22 mWatts Applicant Name : Motorola Solutions Inc Applicant Address : Plot 2A, Medan Bayan Lepas, Mukim 12 S.W.D.11900 Bayan Lepas, Penang, Malaysia FCC Registrations : 461337 ISED Registration : 109AK Firmware Version Identification : D01.00.01 (BP), D01.06.08 (AP) Number (FVIN) The equipment was tested accordance to the requirement listed below: (2.4GHz BT LE) : PASS 47 CFR Part 15C ISED RSS 247 Issue 4	
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Prepared By:  Ahmad Azim Fashan Bin Fadzil Test Personnel	Approved Signatory:  Vincent Foong Chuen Kit Responsible Engineer

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REVISION HISTORY

Revision History	Description	Date	Originator
Rev. A	Initial Report	24-April-2026	Azim
Rev. B	Updated FVIN/HVIN	13-May-2026	Vincent

1.0 General Information

EUT Description:

Technologies	2.4GHz BT LE
TX Frequency range	2402MHz – 2480MHz
Modulation Type	GFSK
Connector type	PROGRAMMING, TEST & ALIGNMENT CABLE
Antenna type	FIXED CHIP
Temporary RF Connector	0.499dB

Note: The description and information regarding the EUT are provided by the customer. The laboratory shall not be held responsible for any inaccuracies or misinformation in the provided details that may result in incorrect test outcomes.

The EUT contains following accessory devices and data cable:

Item	Brand	Model or P/N
BATTERY PACK,BATT LIION 2500T	MOTOROLA	PMNN4578A
CHGR DESKTOP MULTI UNIT, INT PS US/NA	MOTOROLA	PMLN8569A
CABLE, ASSEMBLY,USB-C TO USB-A	MOTOROLA	PMKN4294A
STUBBY ANTENNA	MOTOROLA	AN000508A01

Channel number and frequency information:

40 channels are provided to this EUT:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, the EUT is to comply with the requirements of the following standards:

FCC 47 CFR Part 15 Subpart C
KDB 558074 D01 15.247 Meas Guidance v05
ANSI C63.10-2020+Cor.1-2023+C63.10a-2024 + Errata to C63.10a-2024

Deviation from standard

Not applicable as no deviation from standard test method

Modifications to EUT

For RF conducted measurements a pigtail was soldered out of the board while for radiated measurements there were no modifications to the device

2.0 Summary of Test Results

FCC Clause	ISED Clause	Test Item	Result	Remark	Serial number tested	Tested by
15.247 (a)(2)	RSS 247 5.2 (a)	DTS & 99% Channel Bandwidth	Pass	Highest 99% OCB: BT 4.0 - 1.06 MHz (1M06F1D)	64222BY0225	Azim
15.247 (b)(3)	RSS 247 5.4 (d)	Conducted RF Output Power (Peak)	Pass	Highest output power: BT 4.0 – 9.046 dBm (8.028mW)	64222BY0225	Azim
15.247(e)	RSS 247 5.2 (b)	Maximum Peak Power Spectral Density	Pass	Meet the limit requirement.	64222BY0225	Azim
15.247 (d)	RSS-247 5.5	Band-Edge Conducted Spurious Emission	Pass	Worst case emission: -49.96 dBm	64222BY0225	Azim
15.247 (b)	RSS-247 5.5	Conducted Spurious Emission	Pass	Worst case emission: -43.06 dBm	64222BY0225	Azim
15.205, 15.209, 15.247 (d)	RSS247 5.5	Radiated Emission within Restricted Bands	Pass	Worst case emission: RBE: 37.13dBuV/m (Margin: 16.87 dB) RSE: 20.34 dBuV/m (Margin: 23.16 dB)	64222BY0124, 64222BY0188, 64222BY0191	Nazrin & Fuad
15.207	RSS-Gen 8.8	AC Power Line Conducted Spurious Emission	Pass	Meet the limit requirement.	64222BY0124	Shidee
15.203	-	Antenna Requirement	NA	Internal antenna is not accessible to the end-user	NA	NA

3.0. Measurement Uncertainty

The measurement uncertainties below were calculated using approach describe in ETSI TR 100 028, ETSI TR 100 028-2 (using a coverage factor of $k = 1.96$) & CISPR 16-4-2 (using a coverage factor of $k=2$), which gives a level of confidence of approximately 95%.

According to CISPR 16-4-2, the levels were found to be below levels of U_{CISPR} and therefore no adjustment of the data for measurement uncertainty is required.

ETSI TR 100 028 & ETSI TR 100 028-2:

MEASUREMENT TYPE	FREQUENCY RANGE	EXPANDED UNCERTAINTY
Conducted Spurious Output Power	9kHz-12750MHz	± 2.82 dB

CISPR 16-4-2:

MEASUREMENT TYPE	FREQUENCY RANGE	EXPANDED UNCERTAINTY
AC Power-line Conducted Emissions	150kHz-30MHz	± 3.44 dB
Radiated Emissions	30MHz-1000MHz	± 6.00 dB
Radiated Emissions	1000MHz-18000MHz	± 5.14 dB
Radiated Emissions	18000MHz-40000MHz	± 5.36 dB

Final Reported Test Results

The final reported test results are calculated using the following equation:

Reported RF Measurement Results = Measured Measurement Results + Correction Factor

Where:

- Measured Measurement Results is the measured test results
- Correction Factor is the cumulative loss of all cables used during measurement, including temporary RF connector and antenna gain.

4.0 Equipment List

Bluetooth ATE # 1 (SW Version: Ate Main_3.2.2)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
SPECTRUM ANALYZER	E4440A	MY46185415	15-Jan-25	15-Jul-26
POWER SUPPLY	6652A	MY40001438	27-Aug-25	27-Aug-26
CHAMBER	SH-641	92003820	09-Jul-25	09-Jul-26

Radiated Emission Station (SW Version: EMC FCC RE v1.8.1)

Description	Model #	Serial Number	Calibration Date	Calibration Due Date
DRG HORN FREQ.	SAS-571	719	31-Oct-25	31-Oct-26
DRG HORN FREQ.	SAS-571	1027	21-Jul-25	21-Jul-26
DC Power Supply	N7977A	MY54420118	16-Apr-25	16-Apr-26
SIGNAL GENERATOR	SMB 100A	180683	20-Dec-24	20-Dec-27
EMI TEST RECEIVER	ESW44	101731	11-Aug-25	10-Aug-26
5m SEMI-ANECHOIC CHAMBER	S800-HX	J2308	Not Required	Not Required
BILOG ANTENNA	CBL 6112D	55546	30-Jun-25	30-Jun-26
BILOG ANTENNA	CBL6112B	2964	06-Nov-25	06-Nov-26
DATA LOGGER THERMOHYGROMETER	SDL500	A.016785	16-Jul-25	16-Jul-26
SYSTEM CONTROLLER	SC104V	050806-1	Not Required	Not Required
TURNTABLE FLUSH MOUNT 2M	FM2011	FM2011-001	Not Required	Not Required
ANTENNA POSITIONING TOWER	TLT2	090308-5	Not Required	Not Required
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170255	02-Apr-25	02-Apr-26
PREAMPLIFIER 18-40GHz	JS44- 18004000-33- 8P	2034566	Not Required	Not Required
PREAMPLIFIER 1-18GHz	EMC0518A45SE	981005	19-Sep-25	18-Sep-26
WIDEBAND RADIO COMMUNICATION TESTER	CMW500	153174	11-Jul-25	11-Jul-26
UXM 5G WIRELESS TEST PLATFORM	E7515B	MY22214199	02-Apr-25	02-Apr-26
PREAMPLIFIER	PAM-0118P	361	29-Sep-23	29-Sep-26

AC Powerline Station (SW Version: EMC32 Ver.10.60.10)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
DATA LOGGER	DSB	16344143	16-Jul-2025	16-Jul-2026
V-NETWORK 2-LINE	ENV216	101268	30-Jun-2025	30-Jun-2026
EMI TEST RECEIVER	ESCI 3	100225	04-Sep-2025	04-Sep-2026
PROGRAMMABLE AC SOURCE	61604	ABR000000926	20-Aug-2025	20-Aug-2026

Note: Performed test site validation in accordance with ANSI C63.4-2014+C63.4a-2017 (30 MHz - 1 GHz) and CISPR 16-1-4 (1 GHz - 18 GHz) annually but no less than once every 3 years.

5.0 Test Mode Applicability and Test Channel Detail

Radiated Emission Test (Above 1GHz)

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Type	Environmental Conditions
Test Mode	0 to 39	0,19,39	GFSK	23.4°C, 68.7%RH

Radiated Emission Test (Below 1GHz)

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Type	Environmental Conditions
Test Mode	0 to 39	0,19,39	GFSK	23.4°C, 68.7%RH

Power Line Conducted Emission Test

☐ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☐ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Type	Environmental Conditions
Application Mode	0 to 39	AUTO	AUTO	21.9°C, 56.2%RH

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

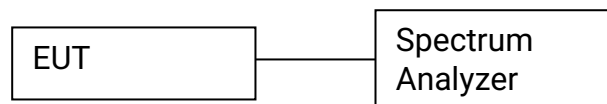
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel	Modulation Type	Environmental Conditions
Test Mode	0 to 39	0,19,39	GFSK	25°C, 54.8%RH

6.0 Transmitter Test Parameters

6.1 6dB Channel Bandwidth

6.1.1 Test Setup



- 1) Check and ensure the spectrum analyzer well calibrate.
- 2) Turn on the DUT and set DUT to transmit maximum power.
- 3) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
- 4) Setting of Spectrum analyzer :
 - a. RBW = 100 kHz
 - b. VBW = 300 kHz
 - c. Detector mode = Peak
 - d. Trace = Max hold
 - e. Sweep = auto
- 5) Measure the freq differnt of two frequencies that were attenuated 6dB from peak of the emission & record the frequency difference as the emission bandwidth.

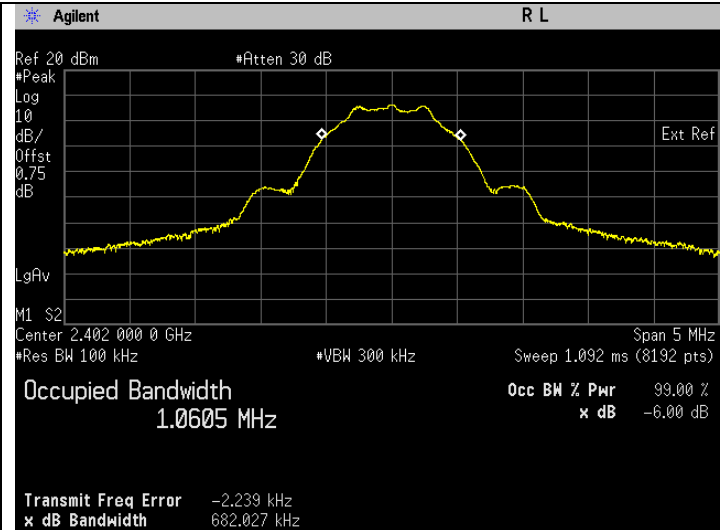
6.1.2 Test Limits:

Normal Condition (25 ° C)
≥500 kHz

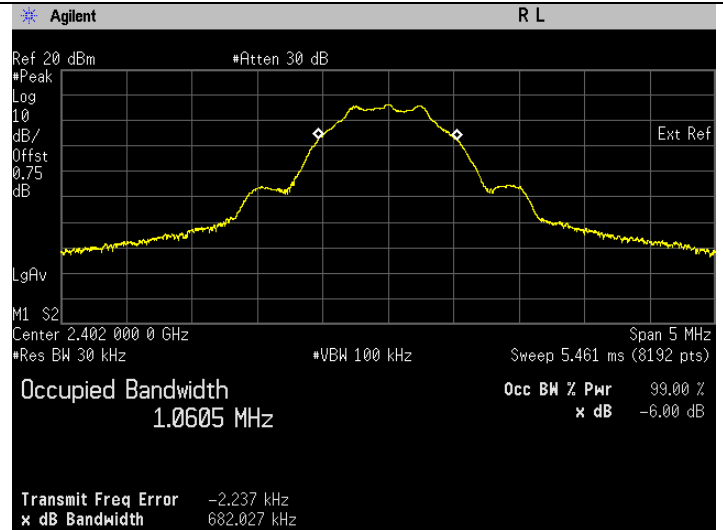
6.1.3 Test Data:

BTLE 1M

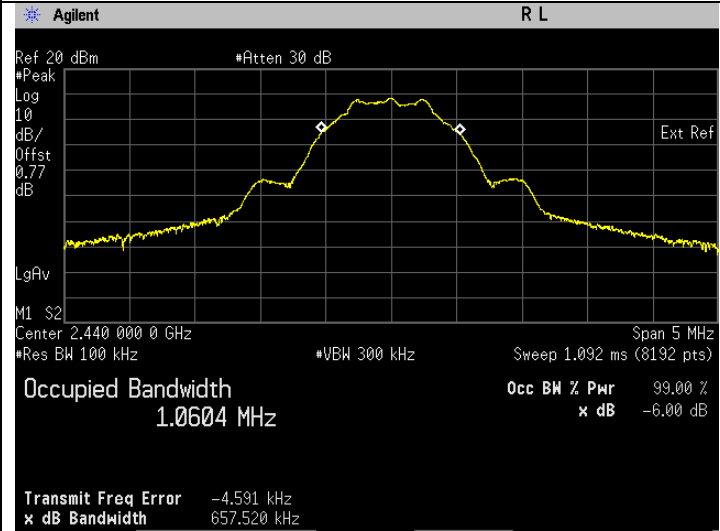
Test Conditions		Test Frequency	Results		
Standard	Data Rate	Tx (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Status
Bluetooth LE	1	2402	0.68	1.06	Pass
Bluetooth LE	1	2440	0.66	1.06	Pass
Bluetooth LE	1	2480	0.67	1.06	Pass



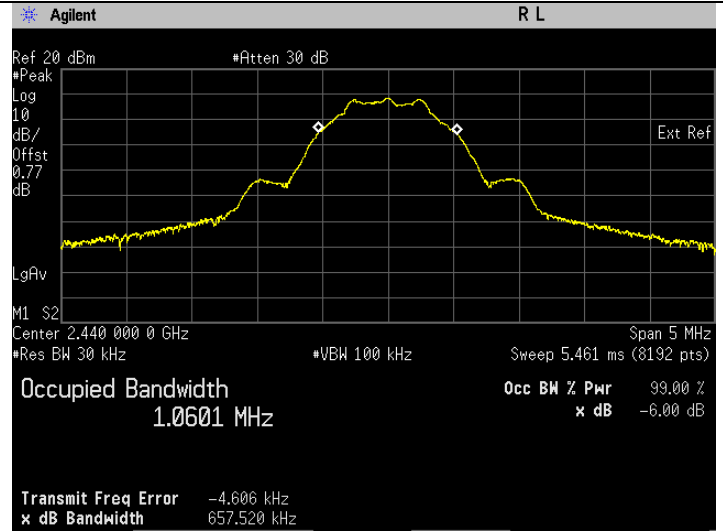
6dB Bandwidth. Bluetooth LE Frequency 2402 MHz



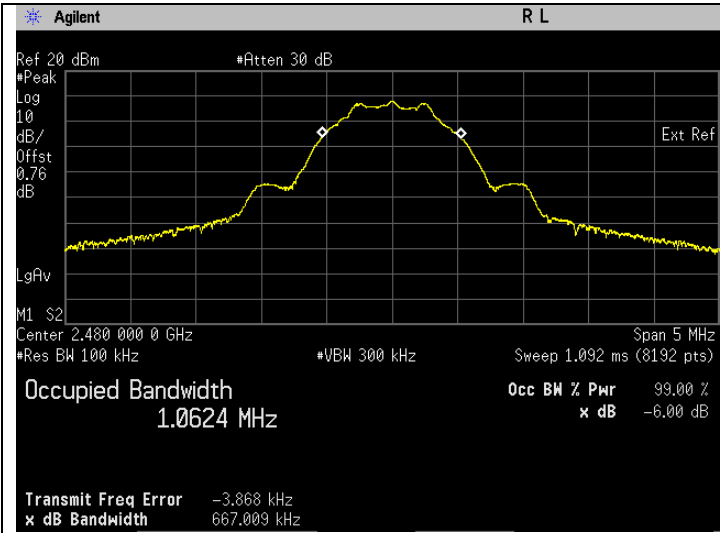
99% Bandwidth. Bluetooth LE Frequency 2402 MHz



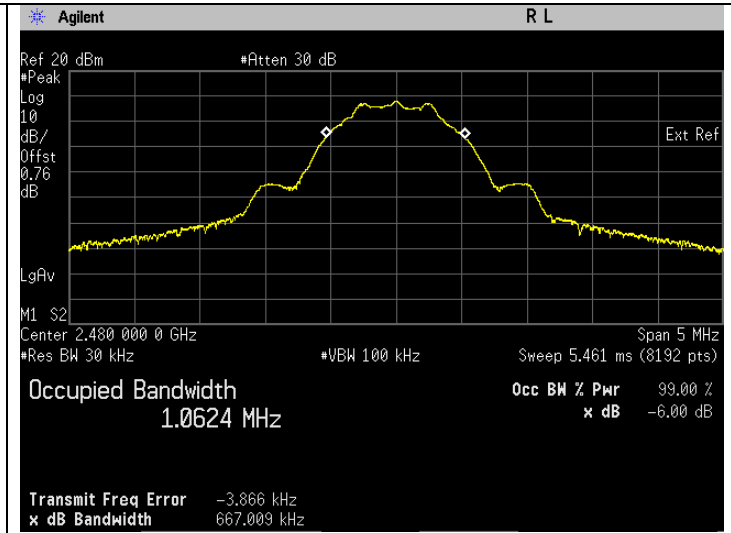
6dB Bandwidth. Bluetooth LE Frequency 2440 MHz



99% Bandwidth. Bluetooth LE Frequency 2440 MHz



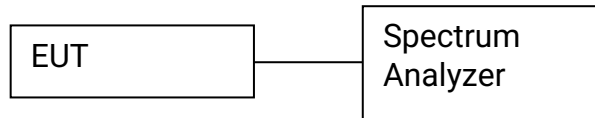
6dB Bandwidth. Bluetooth LE Frequency 2480 MHz



99% Bandwidth. Bluetooth LE Frequency 2480 MHz

6.2 Conducted RF Output Power

6.2.1 Test Setup



Peak

- 1) Check and ensure the spectrum analyzer well calibrate.
- 2) Turn on the DUT and set DUT to transmit maximum power.
- 3) Measure the duty cycle of transmitter output signal.
- 4) Setting of Spectrum analyzer :
 - a. Set the RBW = 3 MHz.
 - b. Set the VBW = 50 MHz.
 - c. Set the span $\geq [1.5 \times \text{OBW bandwidth}]$.
 - d. Detector = Peak
 - e. Sweep time = auto couple.
 - f. Trace mode = max hold.
 - g. Allow trace to fully stabilize.

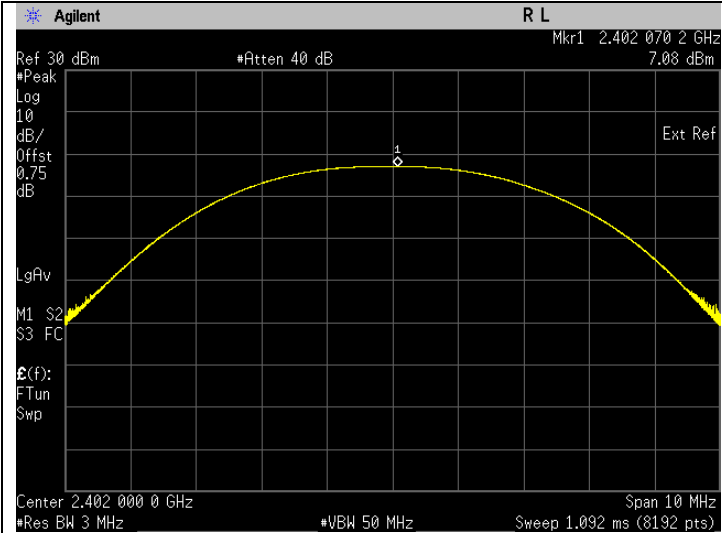
6.2.2 Test Limits:

Normal Condition (25 ° C)
≤ 1 Watt(30 dBm)

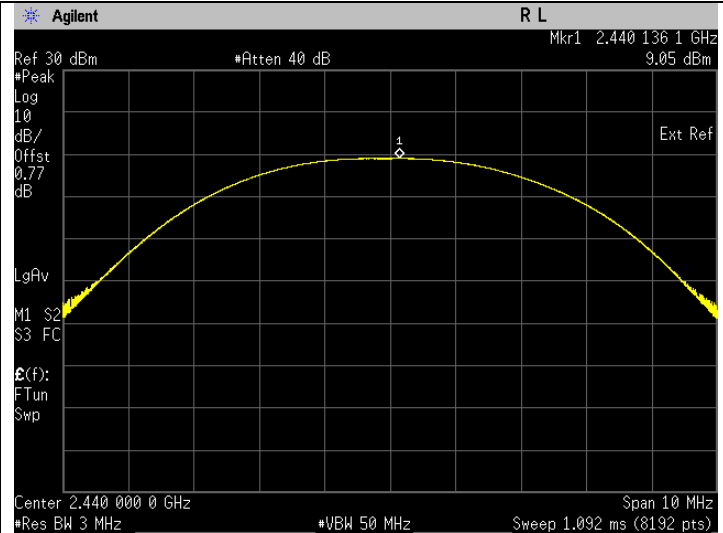
6.2.3 Test Data:

BTLE 1M

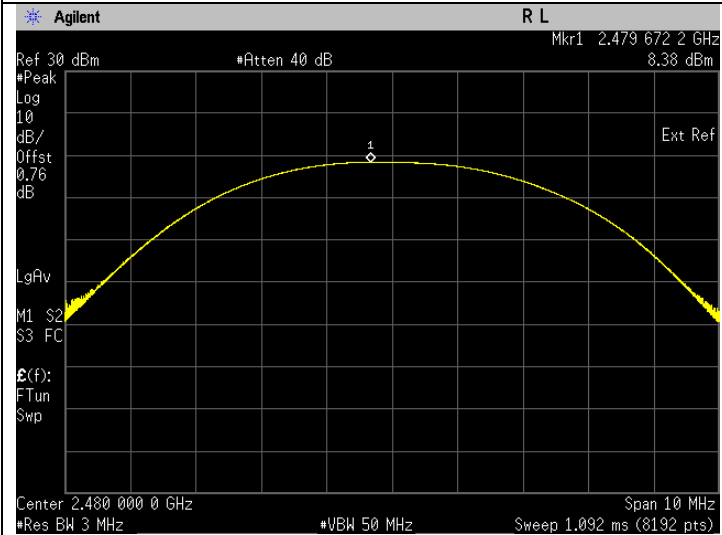
Test Conditions		Test Frequency	Results	
Standard	Data Rate	Tx (MHz)	Output Power (dBm)	Status
Bluetooth LE	1	2402	7.076	Pass
Bluetooth LE	1	2440	9.046	Pass
Bluetooth LE	1	2480	8.379	Pass



Frequency 2402 MHz



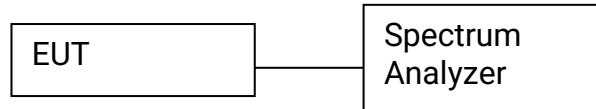
Frequency 2440 MHz



Frequency 2480 MHz

6.3 Maximum Peak Power Spectral Density

6.3.1 Test Setup



Maximum Peak

- 1) Check and ensure the spectrum analyzer well calibrate.
- 2) Turn on the DUT and set DUT to transmit maximum power.
- 3) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
- 4) Setting of Spectrum analyzer :
 - a. Set analyzer center frequency to DTS channel center frequency.
 - b. Set the span to 1.5 times the DTS bandwidth.
 - c. Set the RBW to 3 kHz.
 - d. Set the VBW $\geq [3 \times \text{RBW}]$.
 - e. Detector = peak.
 - f. Sweep time = auto couple.
 - g. Trace mode = max hold.
 - h. Allow trace to fully stabilize.
 - i. Use the peak marker function to determine the maximum amplitude level within the RBW.
 - j. If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

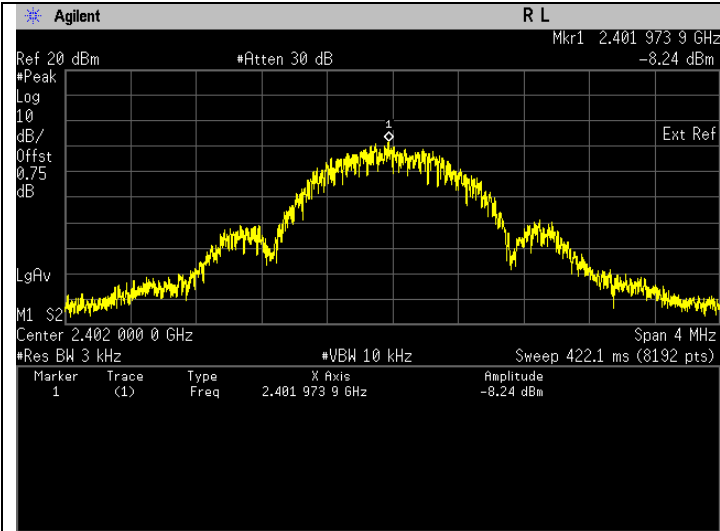
6.3.2 Test Limits:

Normal Condition (25 ° C)
$\leq 8 \text{ dBm/3kHz}$

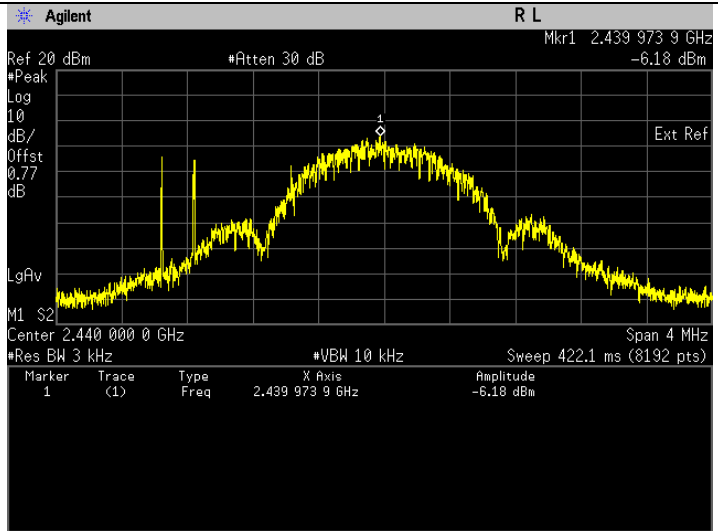
6.3.3 Test Result

BTLE 1M

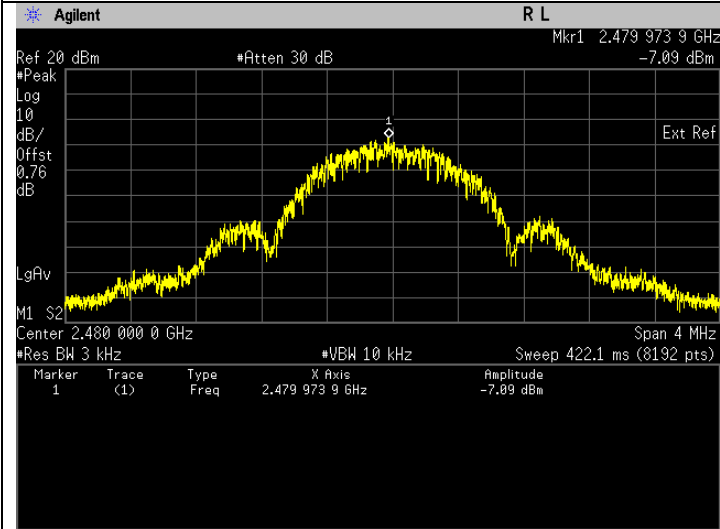
Test Conditions		Test Frequency	Results	
Standard	Data Rate	Tx (MHz)	Power (dBm/3kHz)	Status
Bluetooth LE	1	2402	-8.24	Pass
Bluetooth LE	1	2440	-6.18	Pass
Bluetooth LE	1	2480	-7.09	Pass



Maximum Power Spectral Density. Bluetooth LE
Frequency 2402 MHz



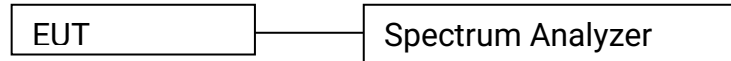
Maximum Power Spectral Density. Bluetooth LE
Frequency 2440 MHz



Maximum Power Spectral Density. Bluetooth LE
Frequency 2480 MHz

6.4 Conducted Spurious Emission

6.4.1 Test Setup



- 1) Check and ensure the spectrum analyzer well calibrate.
- 2) Turn on the DUT and set DUT to transmit maximum power.
- 3) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
- 4) Setting of Spectrum analyzer :
 - a. RBW = 100 kHz
 - b. VBW = 300 kHz
 - c. Detector mode = Peak
 - d. Trace = Max Hold
 - e. Sweep = auto
- 5) Use the peak marker function to measure highest emission and scan up to 10th harmonic.

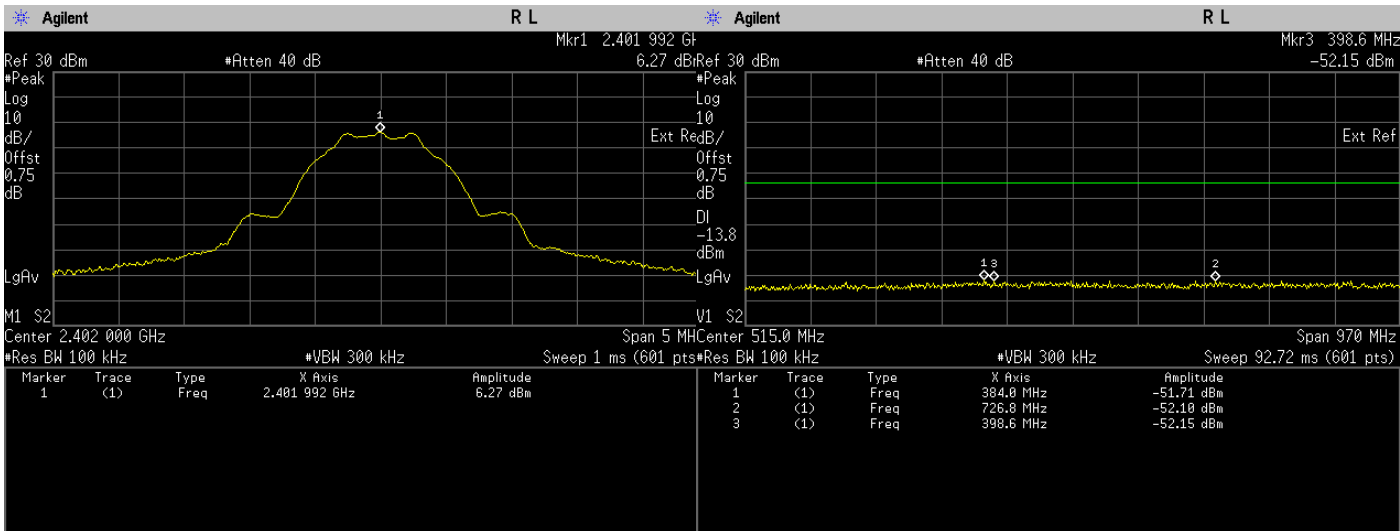
6.4.2 Test Limits:

Normal Condition (25 ° C)
Shall be at least 20 dB below max power. (Peak detector)

6.4.3 Test Result

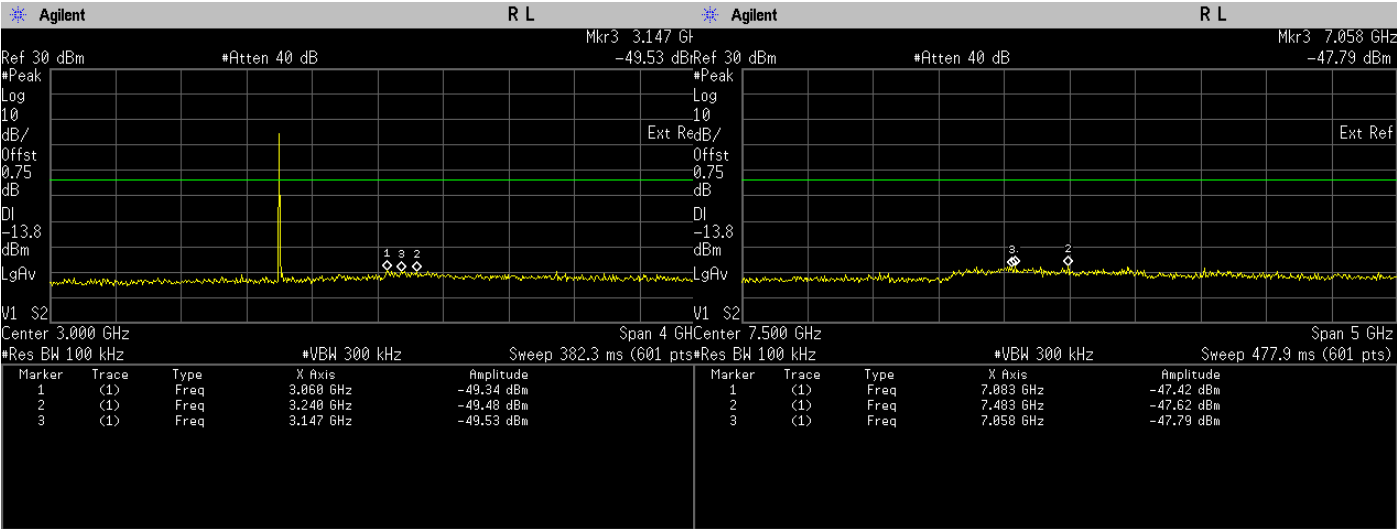
BTLE 1M

Test Conditions		Test Frequency	Results		
Standard	Data Rate	Tx (MHz)	Spurs (MHz)	Level (dBm)	Status
Bluetooth LE	1	2402	24983.00	-43.33	Pass
			24458.00	-43.72	Pass
			24692.00	-43.81	Pass
Bluetooth LE	1	2440	21150.00	-43.51	Pass
			24792.00	-43.62	Pass
			24100.00	-43.68	Pass
Bluetooth LE	1	2480	24317.00	-43.06	Pass
			24975.00	-43.63	Pass
			24917.00	-43.79	Pass



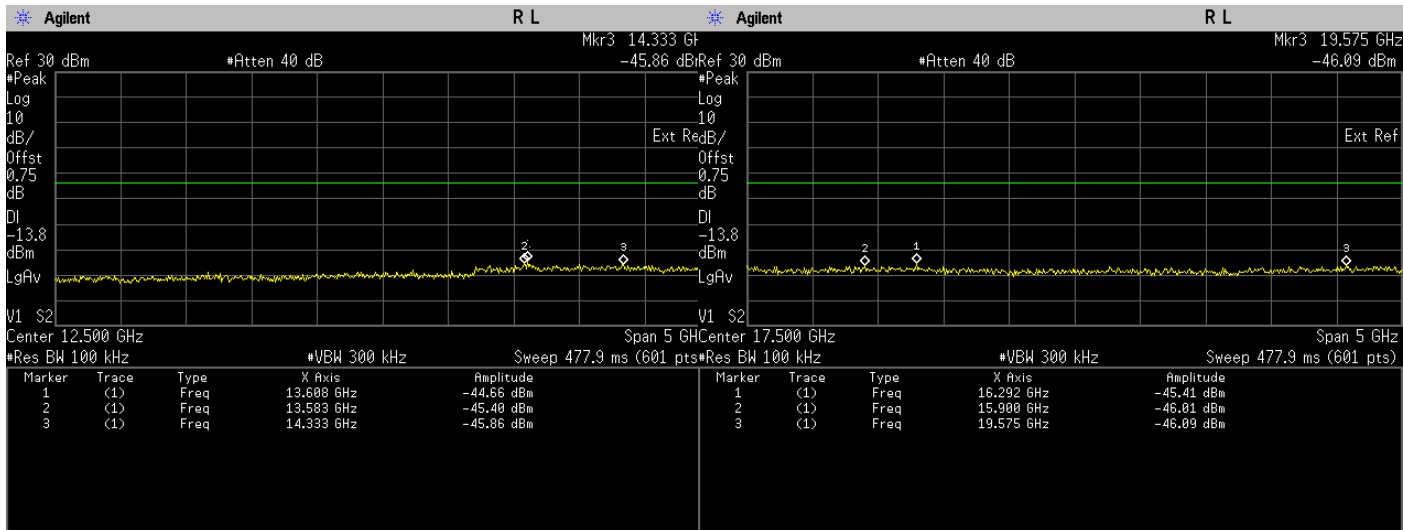
Conducted Emissions(Peak). Bluetooth LE, Frequency 2402 MHz Reference Level

Conducted Emissions(Peak). Bluetooth LE, Frequency 2402 MHz Emission Level, 30 MHz -> 1 GHz



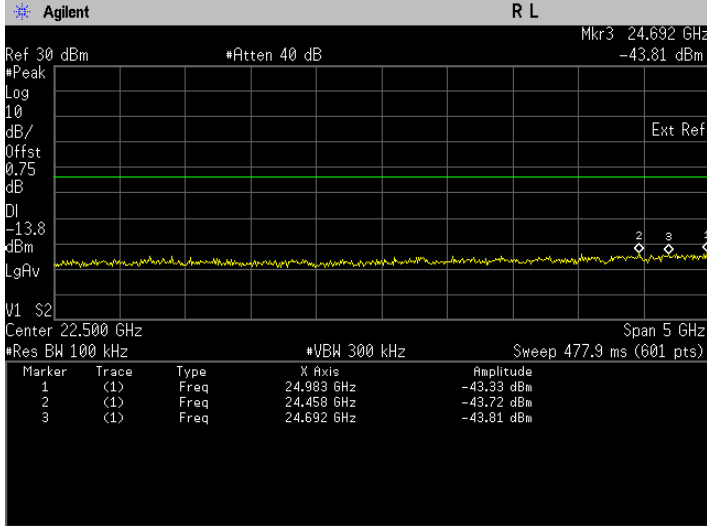
Conducted Emissions(Peak). Bluetooth LE, Frequency 2402 MHz Emission Level, 1 GHz -> 5 GHz

Conducted Emissions(Peak). Bluetooth LE, Frequency 2402 MHz Emission Level, 5 GHz -> 10 GHz

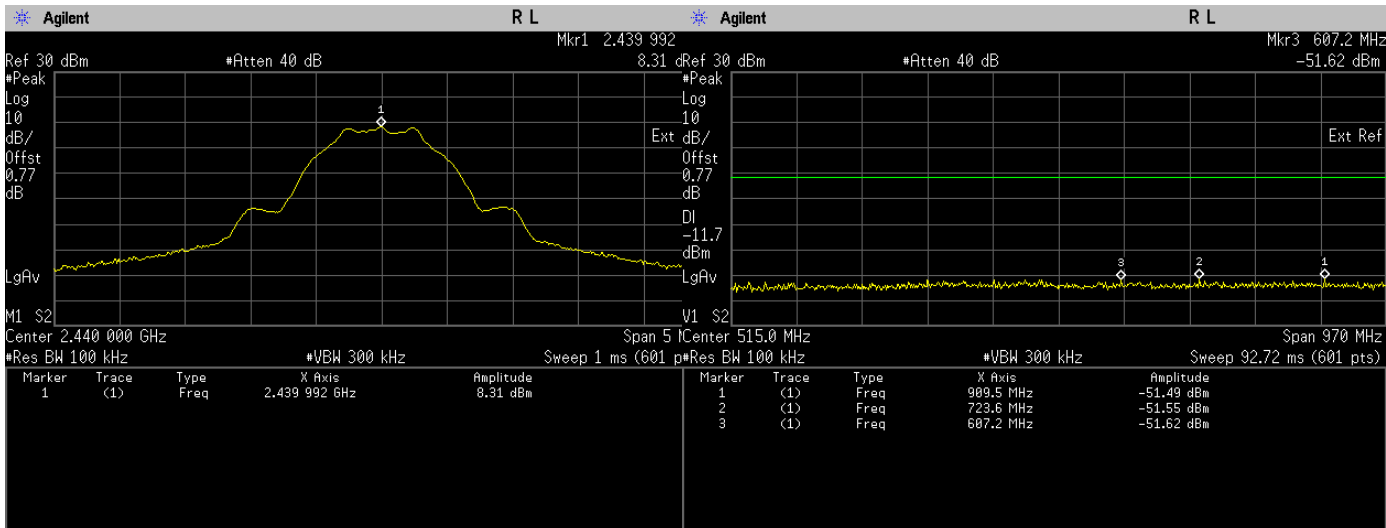


Conducted Emissions(Peak). Bluetooth LE, Frequency
2402 Emission Level, 10 GHz -> 15 GHz

Conducted Emissions(Peak). Bluetooth LE, Frequency
2402 MHz Emission Level, 15 GHz -> 20 GHz

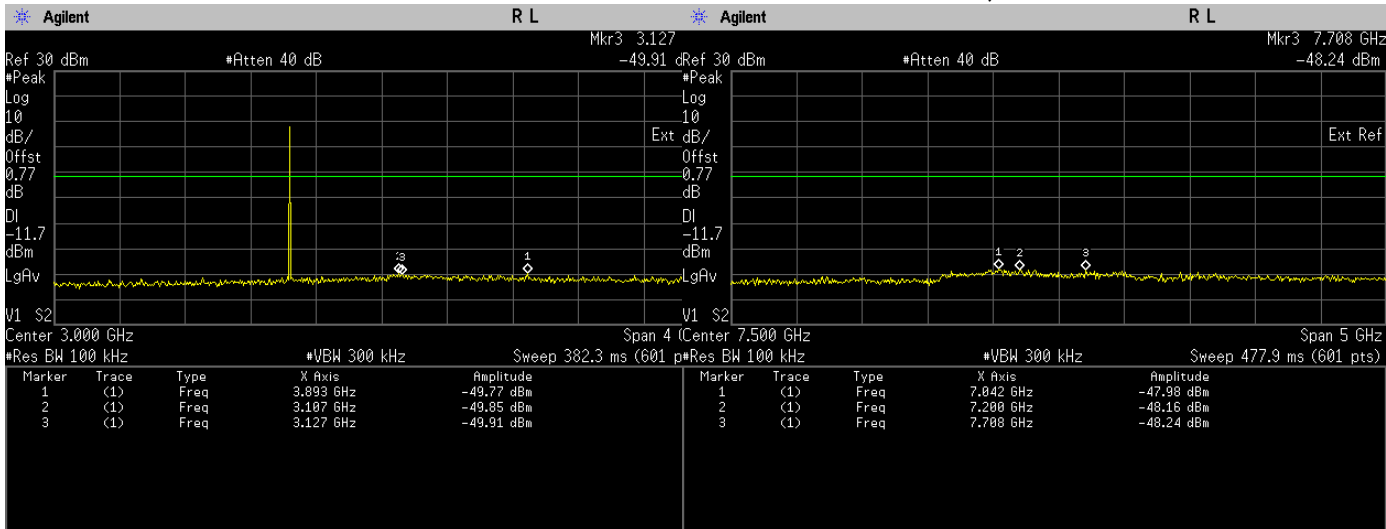


Conducted Emissions(Peak). Bluetooth LE, Frequency
2402 MHz Emission Level, 20 GHz -> 25 GHz



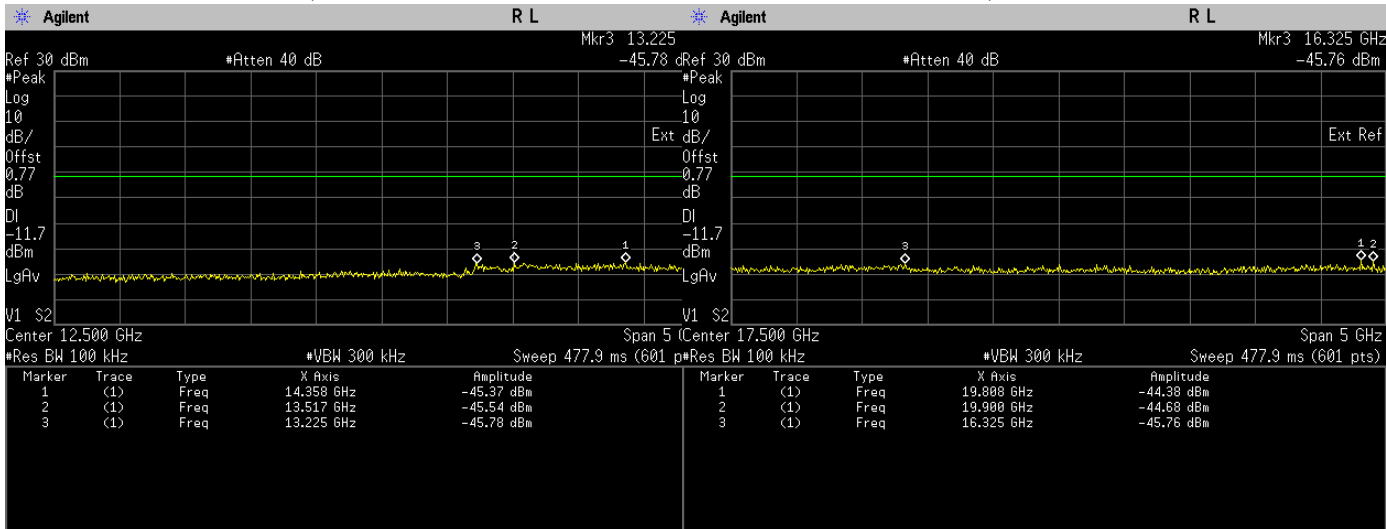
Conducted Emissions(Peak). Bluetooth LE, Frequency 2440 MHz Reference Level

Conducted Emissions(Peak). Bluetooth LE, Frequency 2440 MHz Emission Level, 30 MHz -> 1 GHz



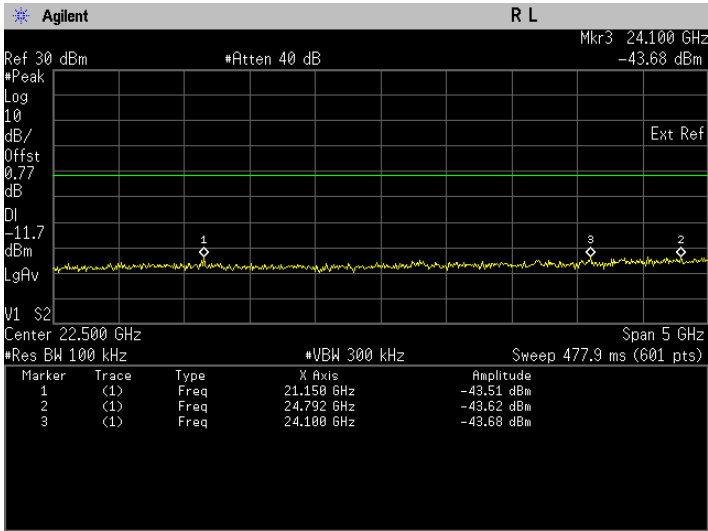
Conducted Emissions(Peak). Bluetooth LE, Frequency 2440 MHz Emission Level, 1 GHz -> 5 GHz

Conducted Emissions(Peak). Bluetooth LE, Frequency 2440 MHz Emission Level, 5 GHz -> 10 GHz

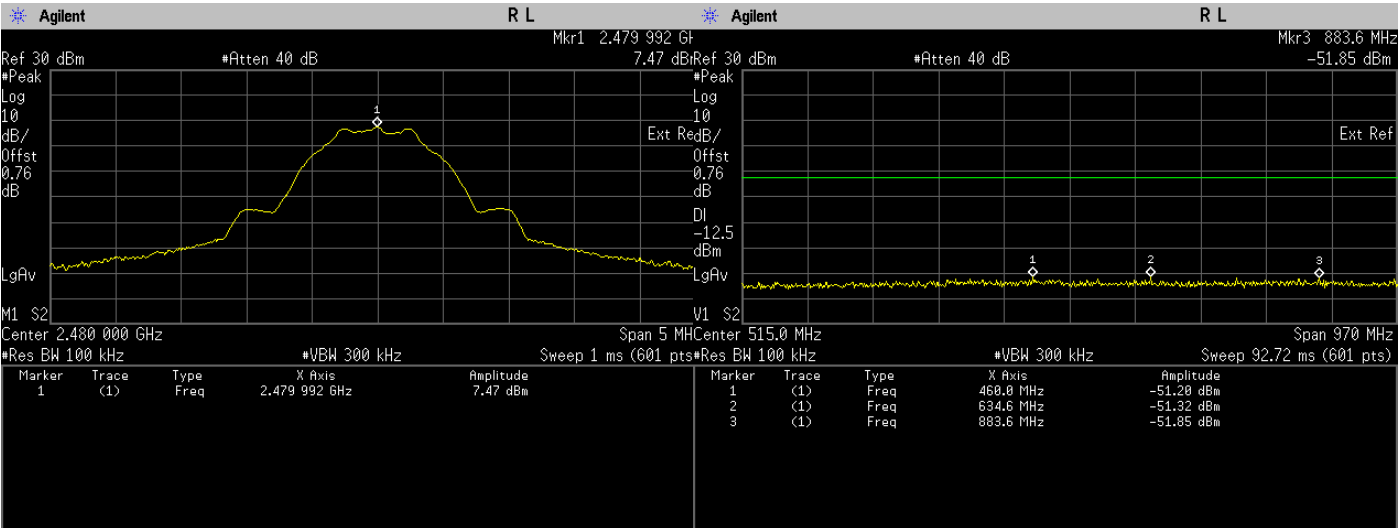


Conducted Emissions(Peak). Bluetooth LE, Frequency 2440 MHz Emission Level, 10 GHz -> 15 GHz

Conducted Emissions(Peak). Bluetooth LE, Frequency 2440 MHz Emission Level, 15 GHz -> 20 GHz

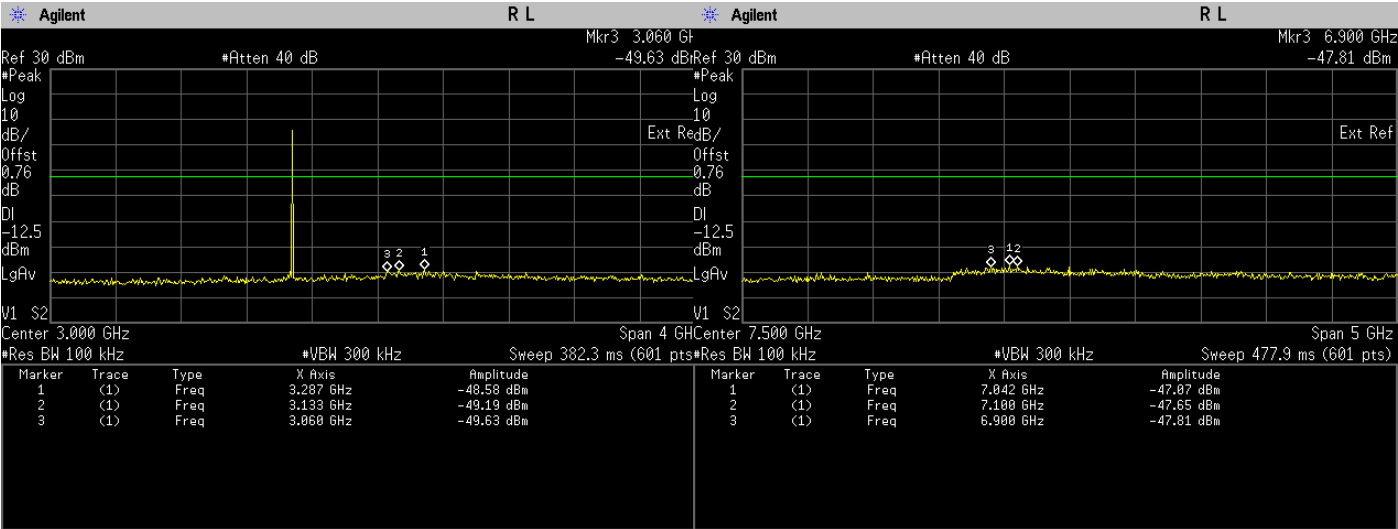


Conducted Emissions(Peak). Bluetooth LE,
Frequency 2440 MHz Emission Level, 20 GHz -> 25
GHz



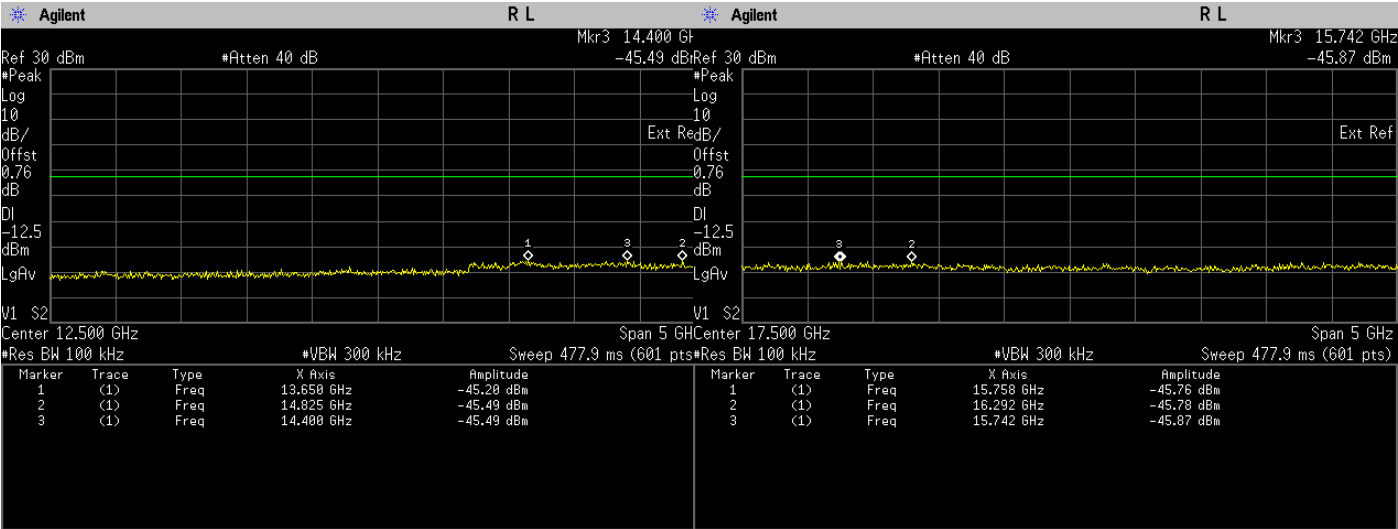
Conducted Emissions(Peak). Bluetooth LE, Frequency 2480 MHz Reference Level

Conducted Emissions(Peak). Bluetooth LE, Frequency 2480 MHz Emission Level, 30 MHz -> 1 GHz



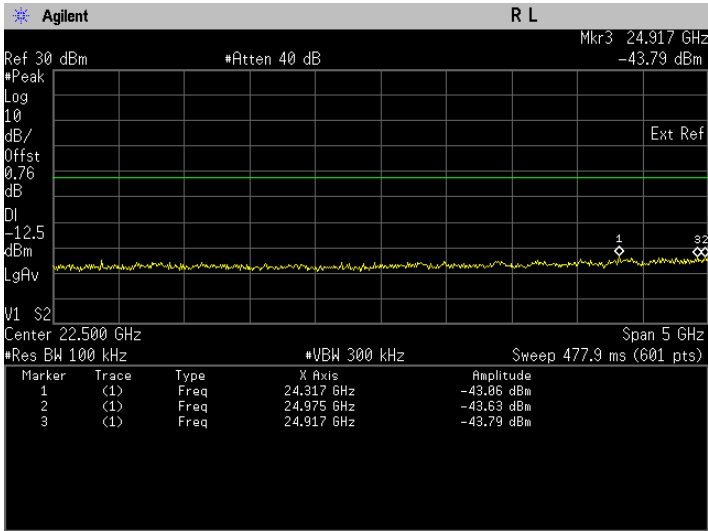
Conducted Emissions(Peak). Bluetooth LE, Frequency 2480 MHz Emission Level, 1 GHz -> 5 GHz

Conducted Emissions(Peak). Bluetooth LE, Frequency 2480 MHz Emission Level, 5 GHz -> 10 GHz



Conducted Emissions(Peak). Bluetooth LE, Frequency 2480 MHz Emission Level, 10 GHz -> 15 GHz

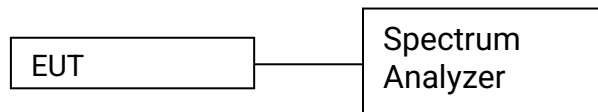
Conducted Emissions(Peak). Bluetooth LE, Frequency 2480 MHz Emission Level, 15 GHz -> 20 GHz



Conducted Emissions(Peak). Bluetooth LE, Frequency
2480 MHz Emission Level, 20 GHz -> 25 GHz

6.5 Band edge Conducted Spurious Emission

6.5.1 Test Setup



- a) Check and ensure the spectrum analyzer well calibrate.
- b) Turn on the DUT and set DUT to transmit maximum power.
- c) Connect DUT's antenna terminal to spectrum analyzer with a low loss cable.
- d) Setting of Spectrum analyzer :
 - a. RBW = 100 kHz
 - b. VBW = 300 kHz
 - c. Detector mode = Peak
 - d. Trace = Max Hold
 - e. Sweep = auto
- e) Use the peak marker function to measure highest emission.

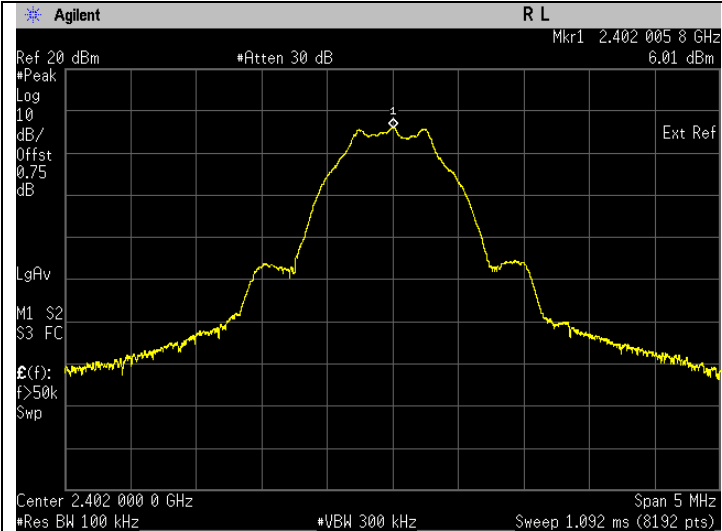
6.5.2 Test Limits:

Normal Condition (25 ° C)
Shall be at least 20 dB below max power. (Peak detector)

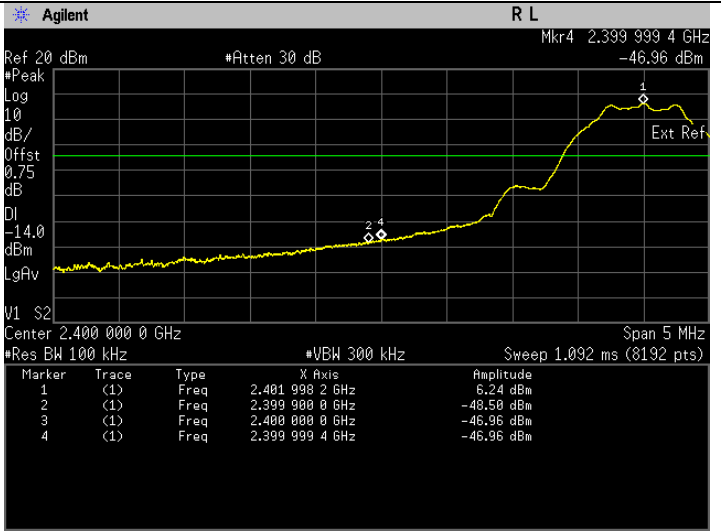
6.5.3 Test Result

BTLE 1M

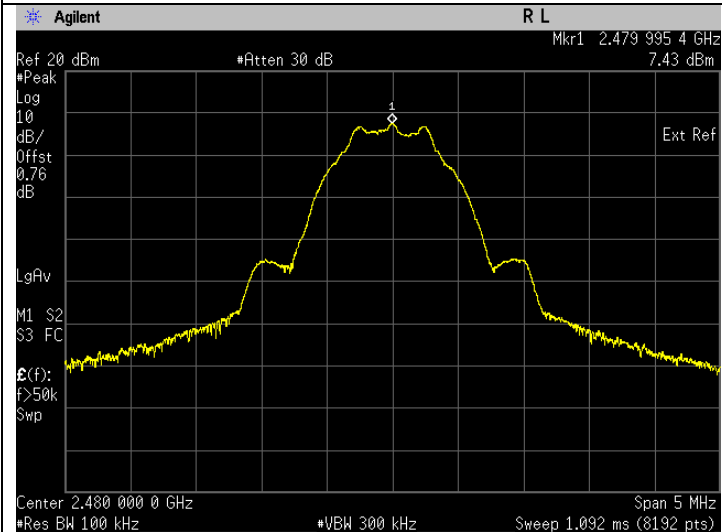
Test Conditions		Test Frequency	Results		
Standard	Data Rate	Tx (MHz)	Frequencies (MHz)	Power (dBm)	Status
Bluetooth LE	1	2402	2400.00	-46.96	Pass
Bluetooth LE	1	2480	2483.58	-53.22	Pass



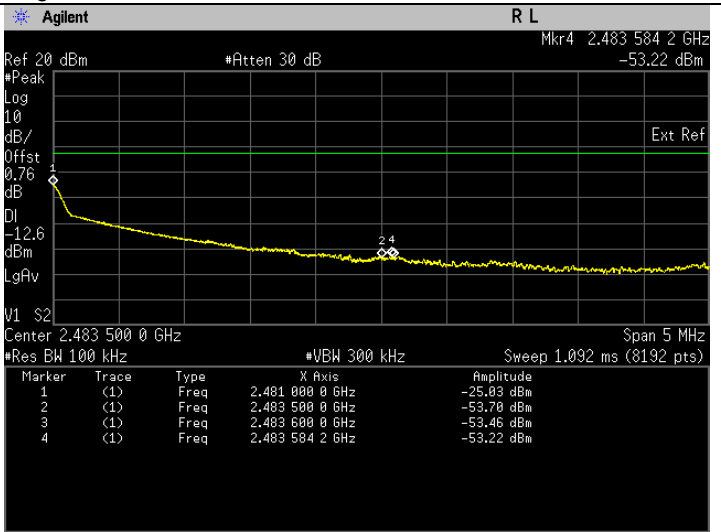
Band Edge(Peak). Bluetooth LE Frequency 2402 MHz
Reference Level



Band Edge(Peak). Bluetooth LE Frequency 2402 MHz Band
Edge



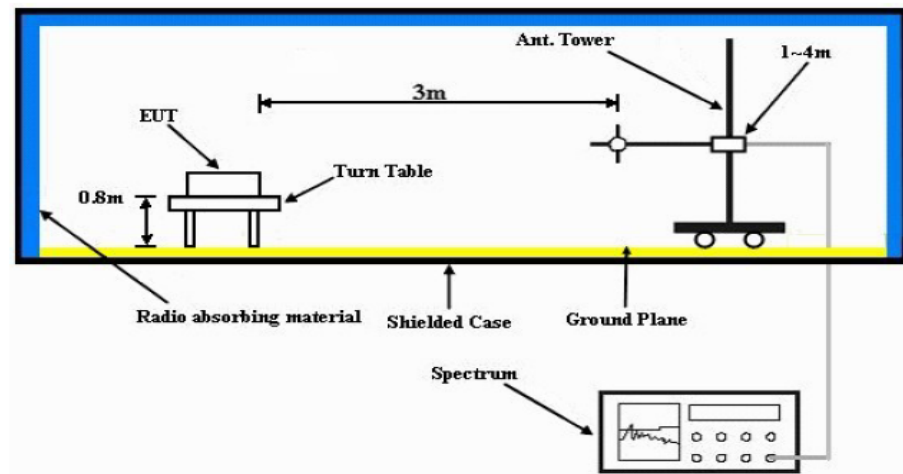
Band Edge(Peak). Bluetooth LE Frequency 2480 MHz
Reference Level



Band Edge(Peak). Bluetooth LE Frequency 2480 MHz Band
Edge

6.6 Radiated Emission within Restricted Bands

6.6.1 Test Setup



- The EUT is placed on the top of a rotating table 0.8m (<1GHz) or 1.5m (>1GHz) above the ground at a 3m semi-anechoic chamber. The table is rotated 360 degrees to determine the position of the highest radiation.
- The EUT is set 3m away from the interference-receiving antenna, which is mounted on the top of a variable-height antenna tower.
- The antenna is Bilog/Horn antenna depend on which frequency range uses, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT is arranged to its worst case and then the antenna is tuned to heights from 1m to 4m and the rotatable table is turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system is set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode is fall within the range of 10dB from the limit specified, the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Otherwise, the testing could be stopped and the peak values of the EUT would be reported.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3 MHz for Peak detection at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.

6.6.2 Test Limits:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power.

Frequency (MHz)	Field strength (microvolts/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
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

NOTE:

- 1) The lower limit shall apply at the transition frequencies.
- 2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 3) For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

6.6.3 Test Results:

SAC TX Restricted Band-edge : 1490N00-EMC-00040

FCC ID :	AZ489FT7187	IC :	109U-89FT7187
Model No :	HK2300A	Serial No :	64222BY0124
Battery :	PMNN4578A	Charger :	-
Accessory :	AN000508A01		
Test Mode :	BTLE - GFSK	Channel SP/Bandwidth (kHz) :	1000.0000
Test Frequency (MHz) :	2402.0000	Softpot Power :	-
Plane :	Y-Plane	Band :	-
Test Standard :	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024		

Antenna Polarization	Detector	Spur Freq (MHz)	Spur Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Vertical	Peak	2335.4550	47.15 *	74.00	26.85
Horizontal	Peak	2340.8890	47.04 *	74.00	26.96
Vertical	Average	2390.0000	35.08	54.00	18.92
Horizontal	Average	2390.0000	34.94	54.00	19.06
Vertical	Peak	2390.0000	44.19 *	74.00	29.81
Horizontal	Peak	2390.0000	44.98 *	74.00	29.02

Temperature (°C) :	23.5	Humidity (%) :	68.9
Test Performed by :	Nazrin & Fuad	Test Date :	Sun, 22 Feb, 2026
System MU :	6.00 dB (30MHz-1000MHz); 5.14 dB (1000MHz-18000MHz); 5.36 dB (18000MHz-40000MHz)		

Remarks:

** Indicates the spurious emission could not be detected due to noise limitations or ambient.

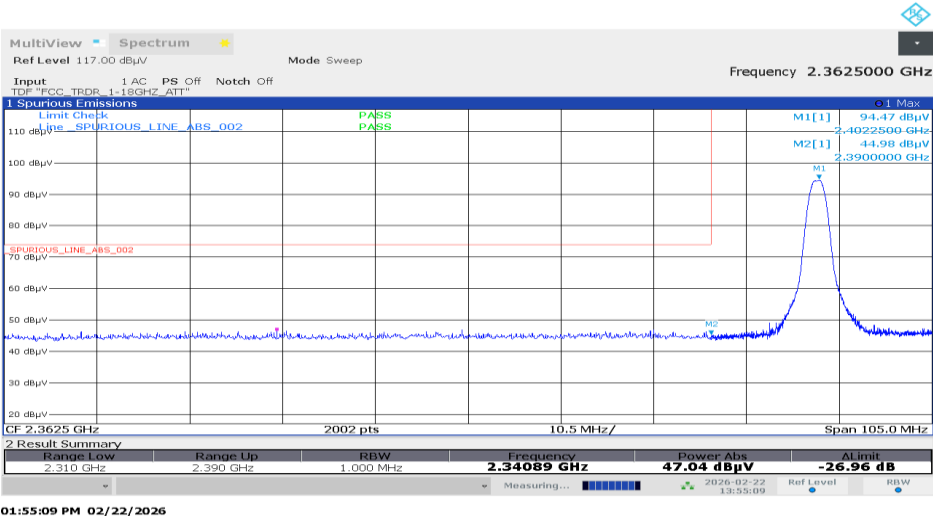
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

NOTE :

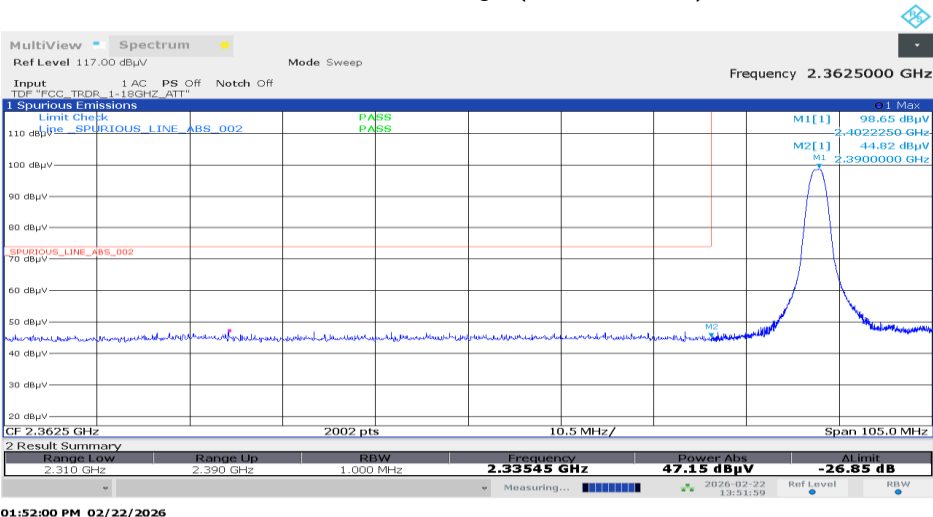
1) If the peak values is less than the QP limit, the QP result deemed to comply with QP limit.

2) If the peak values is less than the AV limit, the average result deemed to comply with AV limit.

Restricted Band Edge (Peak,Horizontal)



Restricted Band Edge (Peak,Vertical)



Restricted Band Edge (Average,Horizontal)



Restricted Band Edge (Average,Vertical)



Motorola Solutions

SAC TX Restricted Band-edge : 1490N00-EMC-00040

FCC ID :	AZ489FT7187	IC :	109U-89FT7187
Model No :	HK2300A	Serial No :	64222BY0124
Battery :	PMNN4578A	Charger :	-
Accessory :	AN000508A01		
Test Mode :	BTLE - GFSK	Channel SP/Bandwidth (kHz) :	1000.0000
Test Frequency (MHz) :	2480.0000	Softpot Power :	-
Plane :	Y-Plane	Band :	-
Test Standard :	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024		

Antenna Polarization	Detector	Spur Freq (MHz)	Spur Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	Average	2483.5000	37.13	54.00	16.87
Horizontal	Average	2483.5000	35.81	54.00	18.19
Vertical	Peak	2483.5000	53.98 *	74.00	20.02
Horizontal	Peak	2483.5000	45.19 *	74.00	28.81
Vertical	Peak	2483.5410	54.31	74.00	19.69
Vertical	Peak	2483.6070	52.53 *	74.00	21.47
Horizontal	Peak	2483.6400	50.25 *	74.00	23.75
Vertical	Peak	2483.7060	53.72 *	74.00	20.28
Vertical	Peak	2483.9860	52.08 *	74.00	21.92
Vertical	Peak	2484.0360	52.34 *	74.00	21.66
Horizontal	Peak	2484.2000	49.65 *	74.00	24.35
Vertical	Peak	2484.2170	52.30 *	74.00	21.70
Vertical	Peak	2484.2500	51.36 *	74.00	22.64
Horizontal	Peak	2484.3160	48.45 *	74.00	25.55
Vertical	Peak	2484.4480	50.35 *	74.00	23.65
Horizontal	Peak	2484.9420	48.64 *	74.00	25.36
Horizontal	Peak	2486.1130	46.16 *	74.00	27.84
Horizontal	Peak	2486.4420	46.39 *	74.00	27.61
Vertical	Peak	2490.2500	46.32 *	74.00	27.68
Horizontal	Peak	2490.7940	46.02 *	74.00	27.98
Horizontal	Peak	2497.9150	46.88 *	74.00	27.12
Horizontal	Peak	2498.8870	46.52 *	74.00	27.48
Vertical	Peak	2499.9750	45.13 *	74.00	28.87
Horizontal	Peak	2499.9920	44.56 *	74.00	29.44

Temperature (°C) :	23.5	Humidity (%) :	68.9
Test Performed by :	Nazrin & Fuad	Test Date :	Sun, 22 Feb, 2026
System MU :	6.00 dB (30MHz-1000MHz); 5.14 dB (1000MHz-18000MHz); 5.36 dB (18000MHz-40000MHz)		

Remarks:

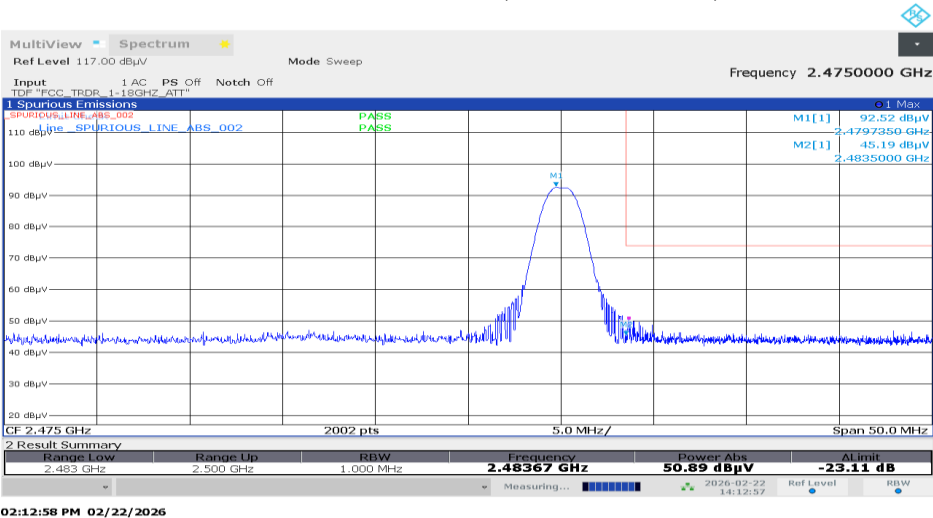
** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

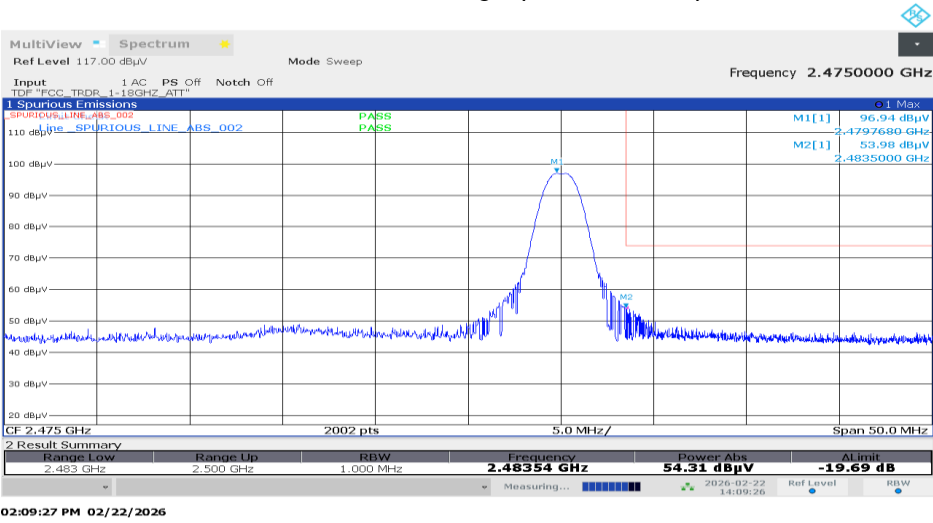
NOTE :

- 1) If the peak values is less than the QP limit, the QP result deemed to comply with QP limit.
- 2) If the peak values is less than the AV limit, the average result deemed to comply with AV limit.

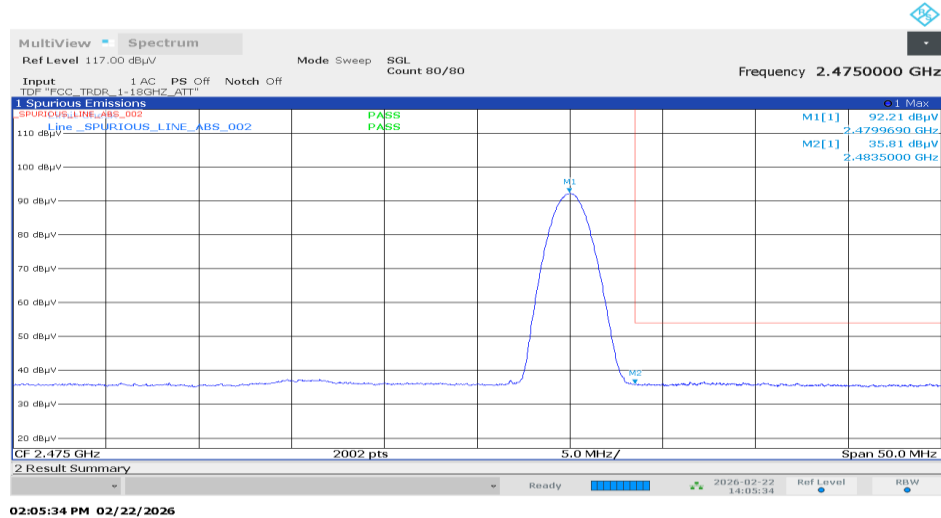
Restricted Band Edge (Peak,Horizontal)



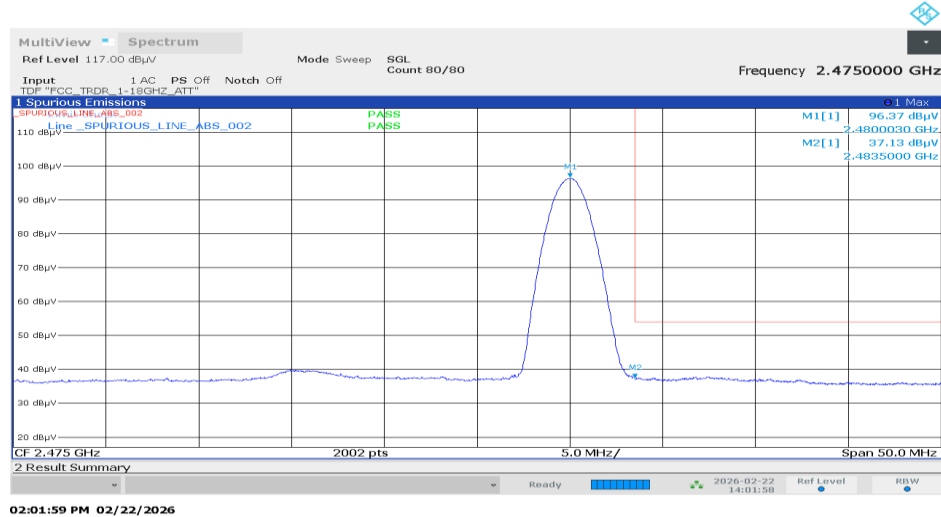
Restricted Band Edge (Peak,Vertical)



Restricted Band Edge (Average,Horizontal)



Restricted Band Edge (Average,Vertical)



SAC TX Radiated Emission : 1490N00-EMC-00040

FCC ID :	AZ489FT7187	IC :	109U-89FT7187
Model No :	HK2300A	Serial No :	64222BY0124
Battery :	PMNN4578A	Charger :	-
Accessory :	AN000508A01		
Test Mode :	BTLE - GFSK	Channel SP/Bandwidth (kHz) :	1000.0000
Test Frequency (MHz) :	2402.0000	Softpot Power :	-
Plane :	Y-Plane	Band :	-
Test Standard :	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024		

Antenna Polarization	Detector	Spur Freq (MHz)	Spur Level (dBµV/m)	Carrier Power (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	Peak	4804.0000	38.68 **	-	74.00	35.32
Horizontal	Peak	4804.0000	40.04 **	-	74.00	33.96
Vertical	Peak	7206.0000	42.57 **	101.14	81.14	38.57
Horizontal	Peak	7206.0000	42.57 **	101.14	81.14	38.57
Vertical	Peak	9608.0000	43.80 **	101.14	81.14	37.34
Horizontal	Peak	9608.0000	44.72 **	101.14	81.14	36.43
Vertical	Peak	12010.0000	45.22 **	-	74.00	28.78
Horizontal	Peak	12010.0000	45.84 **	-	74.00	28.16
Vertical	Peak	14412.0000	48.47 **	101.14	81.14	32.68
Horizontal	Peak	14412.0000	48.54 **	101.14	81.14	32.60
Vertical	Peak	16814.0000	50.34 **	101.14	81.14	30.80
Horizontal	Peak	16814.0000	49.60 **	101.14	81.14	31.54
Vertical	Peak	19216.0000	39.92 **	-	74.00	34.08
Horizontal	Peak	19216.0000	39.27 **	-	74.00	34.73
Vertical	Peak	21618.0000	40.00 **	101.14	81.14	41.14
Horizontal	Peak	21618.0000	40.61 **	101.14	81.14	40.53
Vertical	Peak	24020.0000	40.88 **	101.14	81.14	40.26
Horizontal	Peak	24020.0000	40.00 **	101.14	81.14	41.15

Temperature (°C) :	23.5	Humidity (%) :	68.9
Test Performed by :	Nazrin & Fuad	Test Date :	Tue, 24 Feb, 2026
System MU :	6.00 dB (30MHz-1000MHz); 5.14 dB (1000MHz-18000MHz); 5.36 dB (18000MHz-40000MHz)		

Remarks:

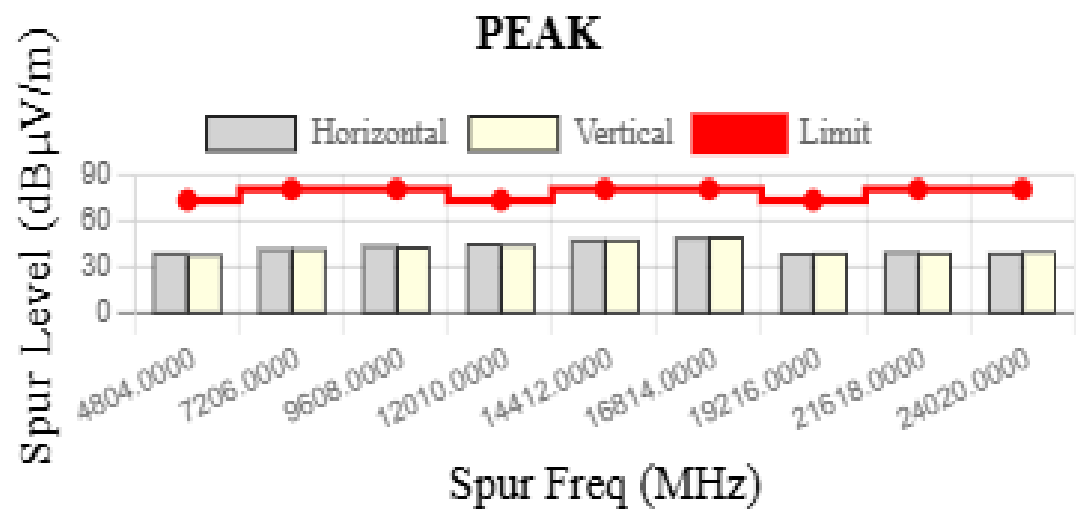
** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

NOTE :

1) If the peak values is less than the QP limit, the QP result deemed to comply with QP limit.

2) If the peak values is less than the AV limit, the average result deemed to comply with AV limit.



Motorola Solutions

SAC TX Radiated Emission : 1490N00-EMC-00040

FCC ID :	AZ489FT7187	IC :	109U-89FT7187
Model No :	HK2300A	Serial No :	64222BY0124
Battery :	PMNN4578A	Charger :	-
Accessory :	AN000508A01		
Test Mode :	BTLE - GFSK	Channel SP/Bandwidth (kHz) :	1000.0000
Test Frequency (MHz) :	2440.0000	Softpot Power :	-
Plane :	Y-Plane	Band :	-
Test Standard :	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024		

Antenna Polarization	Detector	Spur Freq (MHz)	Spur Level (dBµV/m)	Carrier Power (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	Peak	4880.0000	41.12 **	-	74.00	32.88
Horizontal	Peak	4880.0000	41.76 **	-	74.00	32.24
Vertical	Peak	7320.0000	44.49 **	-	74.00	29.51
Horizontal	Peak	7320.0000	42.43 **	-	74.00	31.57
Vertical	Peak	9760.0000	43.89 **	101.14	81.14	37.26
Horizontal	Peak	9760.0000	44.34 **	101.14	81.14	36.80
Vertical	Peak	12200.0000	47.20 **	-	74.00	26.80
Horizontal	Peak	12200.0000	46.88 **	-	74.00	27.12
Vertical	Peak	14640.0000	50.40 **	101.14	81.14	30.74
Horizontal	Peak	14640.0000	50.05 **	101.14	81.14	31.10
Vertical	Peak	17080.0000	50.05 **	101.14	81.14	31.09
Horizontal	Peak	17080.0000	52.54 **	101.14	81.14	28.61
Vertical	Peak	19520.0000	39.57 **	-	74.00	34.43
Horizontal	Peak	19520.0000	40.70 **	-	74.00	33.30
Vertical	Peak	21960.0000	41.08 **	101.14	81.14	40.06
Horizontal	Peak	21960.0000	40.28 **	101.14	81.14	40.86
Vertical	Peak	24400.0000	40.65 **	101.14	81.14	40.49
Horizontal	Peak	24400.0000	41.20 **	101.14	81.14	39.94

Temperature (°C) :	23.5	Humidity (%) :	68.9
Test Performed by :	Nazrin & Fuad	Test Date :	Tue, 24 Feb, 2026
System MU :	6.00 dB (30MHz-1000MHz); 5.14 dB (1000MHz-18000MHz); 5.36 dB (18000MHz-40000MHz)		

Remarks:

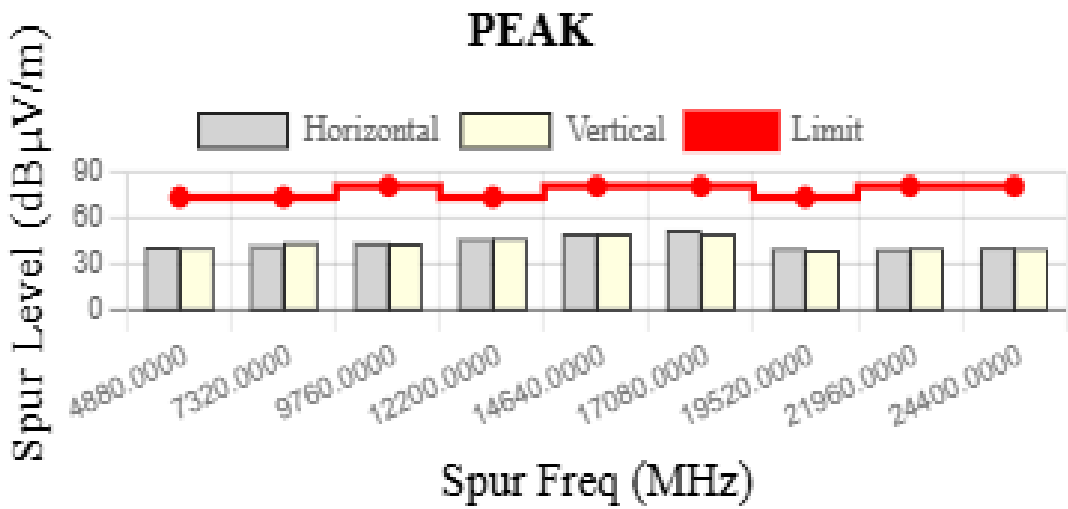
** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

NOTE :

1) If the peak values is less than the QP limit, the QP result deemed to comply with QP limit.

2) If the peak values is less than the AV limit, the average result deemed to comply with AV limit.



Motorola Solutions

SAC TX Radiated Emission : 1490N00-EMC-00040

FCC ID :	AZ489FT7187	IC :	109U-89FT7187
Model No :	HK2300A	Serial No :	64222BY0124
Battery :	PMNN4578A	Charger :	-
Accessory :	AN000508A01		
Test Mode :	BTLE - GFSK	Channel SP/Bandwidth (kHz) :	1000.0000
Test Frequency (MHz) :	2480.0000	Softpot Power :	-
Plane :	Y-Plane	Band :	-
Test Standard :	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024		

Antenna Polarization	Detector	Spur Freq (MHz)	Spur Level (dBµV/m)	Carrier Power (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Vertical	Peak	4960.0000	39.21 **	-	74.00	34.79
Horizontal	Peak	4960.0000	39.09 **	-	74.00	34.91
Vertical	Peak	7440.0000	43.41 **	-	74.00	30.59
Horizontal	Peak	7440.0000	43.04 **	-	74.00	30.96
Vertical	Peak	9920.0000	43.73 **	101.14	81.14	37.41
Horizontal	Peak	9920.0000	45.21 **	101.14	81.14	35.93
Vertical	Peak	12400.0000	45.96 **	-	74.00	28.04
Horizontal	Peak	12400.0000	46.34 **	-	74.00	27.66
Vertical	Peak	14880.0000	48.32 **	101.14	81.14	32.83
Horizontal	Peak	14880.0000	48.65 **	101.14	81.14	32.49
Vertical	Peak	17360.0000	50.80 **	101.14	81.14	30.34
Horizontal	Peak	17360.0000	51.52 **	101.14	81.14	29.62
Vertical	Peak	19840.0000	38.82 **	-	74.00	35.18
Horizontal	Peak	19840.0000	38.60 **	-	74.00	35.40
Vertical	Peak	22320.0000	40.49 **	-	74.00	33.51
Horizontal	Peak	22320.0000	40.48 **	-	74.00	33.52
Vertical	Peak	24800.0000	42.48 **	101.14	81.14	38.66
Horizontal	Peak	24800.0000	41.85 **	101.14	81.14	39.29

Temperature (°C) :	23.5	Humidity (%) :	68.9
Test Performed by :	Nazrin & Fuad	Test Date :	Tue, 24 Feb, 2026
System MU :	6.00 dB (30MHz-1000MHz); 5.14 dB (1000MHz-18000MHz); 5.36 dB (18000MHz-40000MHz)		

Remarks:

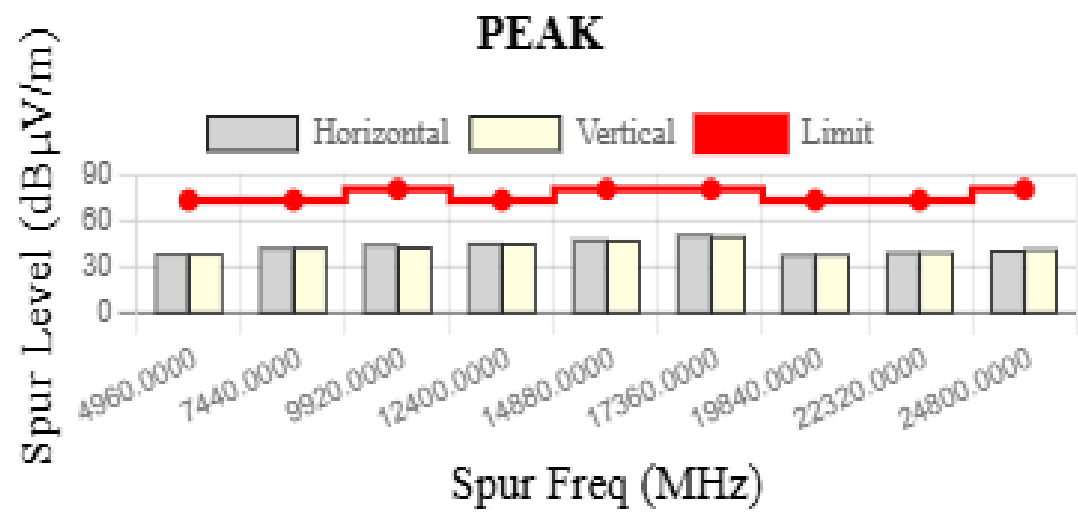
** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

NOTE :

1) If the peak values is less than the QP limit, the QP result deemed to comply with QP limit.

2) If the peak values is less than the AV limit, the average result deemed to comply with AV limit.



SAC TX Radiated Emission : 1490N00-EMC-00047

FCC ID :	AZ489FT7187	IC :	109U-89FT7187
Model No :	HK2300A	Serial No :	64222BY0124, 64222BY0188, 64222BY0191
Battery :	PMNN4578A	Charger :	PMLN8569A (PMLN8567A-C2, 3004209T03)
Accessory :	AN000508A01		
Test Mode :	BTLE - GFSK	Channel SP/Bandwidth (kHz) :	1000.0000
Test Frequency (MHz) :	2440.0000	Softpot Power :	-
Plane :	Y-Plane	Band :	-
Test Standard :	ANSI C63.10-2020+Cor. 1- 2023+C63.10a-2024 + Errata to C63.10a-2024	Voltage (V) :	120.00

Antenna Polarization	Detector	Spur Freq (MHz)	Spur Level (dBµV/m)	Carrier Power (dBµV/m)	Limit (dBµV/m)	Margin (dB)
Horizontal	Peak	31.3363	28.72 *	101.14	81.14	52.42
Vertical	Peak	31.8009	33.70 *	101.14	81.14	47.44
Vertical	Peak	72.1033	20.53 *	101.14	81.14	60.61
Horizontal	Peak	72.3051	14.69 *	101.14	81.14	66.45
Vertical	Peak	103.2428	22.42 *	101.14	81.14	58.72
Horizontal	Peak	103.4546	19.98 *	101.14	81.14	61.16
Horizontal	Quasi-Peak	165.9502	20.34 *	-	43.50	23.16
Vertical	Quasi-Peak	166.0282	14.31 *	-	43.50	29.19
Horizontal	Peak	195.1605	24.08 *	101.14	81.14	57.06
Vertical	Peak	196.0096	19.85 *	101.14	81.14	61.30
Horizontal	Quasi-Peak	258.1161	19.56 *	-	46.00	26.44
Vertical	Quasi-Peak	258.2799	21.78 *	-	46.00	24.22
Vertical	Peak	290.3390	23.10 *	101.14	81.14	58.05
Horizontal	Peak	290.7995	26.29 *	101.14	81.14	54.86

Temperature (°C) :	23.4	Humidity (%) :	68.7
Test Performed by :	Nazrin & Fuad	Test Date :	Sun, 8 Mar, 2026
System MU :	6.00 dB (30MHz-1000MHz); 5.14 dB (1000MHz-18000MHz); 5.36 dB (18000MHz-40000MHz)		

Remarks:

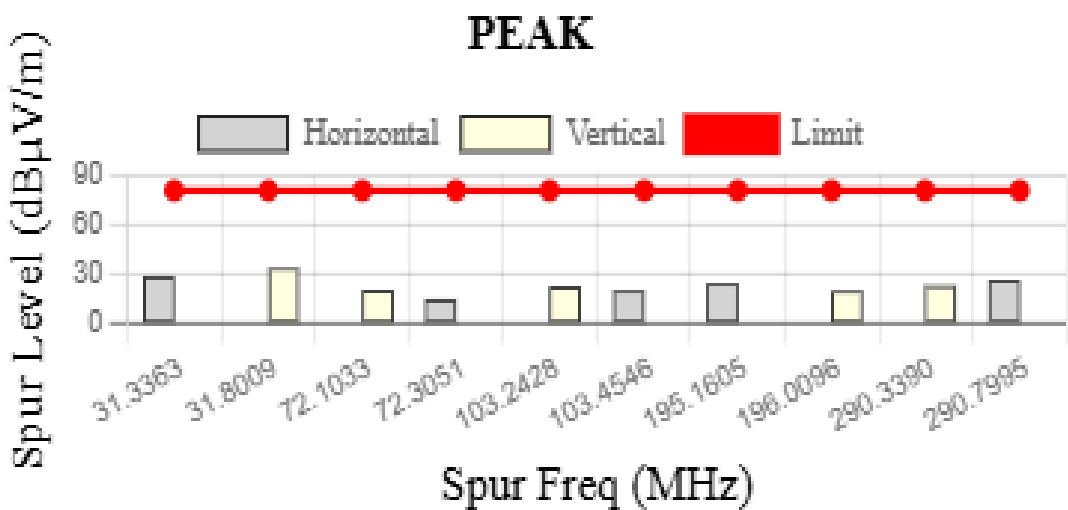
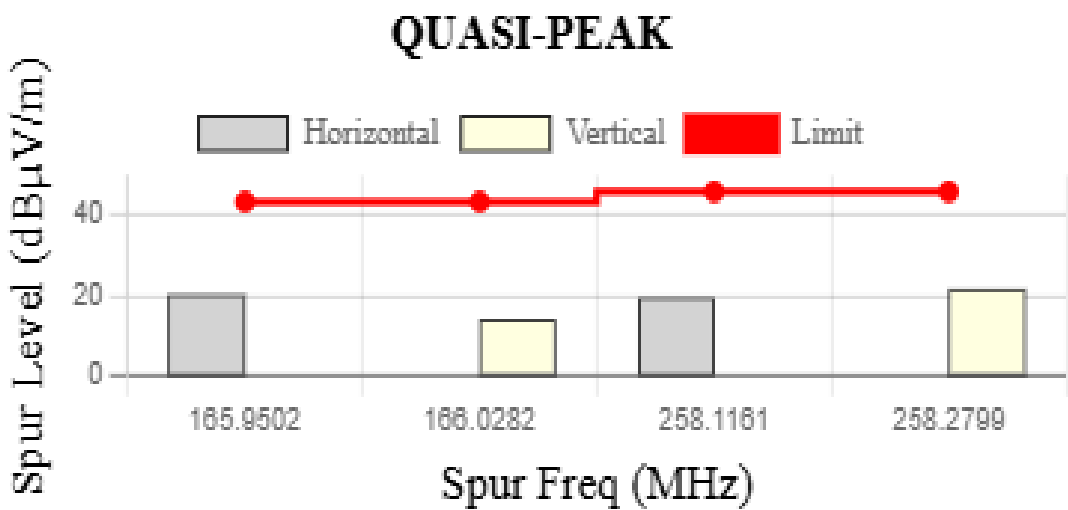
** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported.

NOTE :

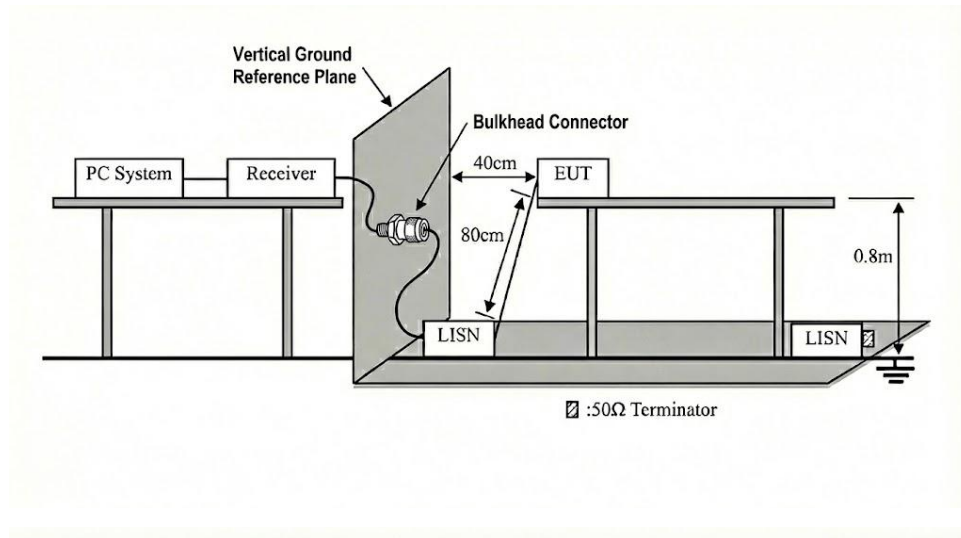
1) If the peak values is less than the QP limit, the QP result deemed to comply with QP limit.

2) If the peak values is less than the AV limit, the average result deemed to comply with AV limit.



6.7 AC Powerline Conducted Emission

6.7.1 Test Setup



- 1) Tests were conducted for both Receive and Transmit Mode of the EUT.
- 2) The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN) and connected to test receiver. All other EUT support units power cords were connected to the power mains through another LISN terminated with 50 ohm loads.
- 3) Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 4) The frequency range from 150 kHz to 30MHz was measured.

6.7.2 Test Limits:

For AC Power Line Conducted Test Limit can be Class A or B depends on product classification.

**Limits for conducted disturbance at the mains ports
of class A ITE**

Frequency range MHz	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60

NOTE The lower limit shall apply at the transition frequency.

Table 1: Limits for Conducted Disturbance at the Mains Ports of Class A ITE.

**Limits for conducted disturbance at the mains ports
of class B ITE**

Frequency range MHz	Limits dB(μ V)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50
NOTE 1 The lower limit shall apply at the transition frequencies.		
NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

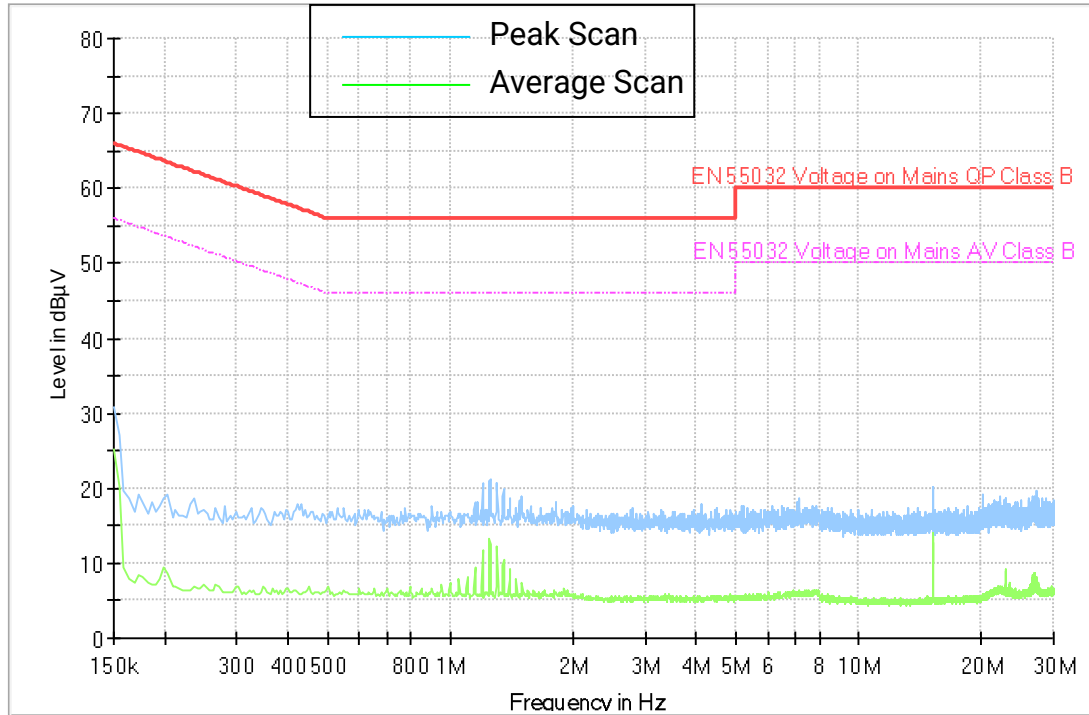
Table 2: Limits for Conducted Disturbance at the Mains Ports of Class B ITE

6.7.3 Test Result

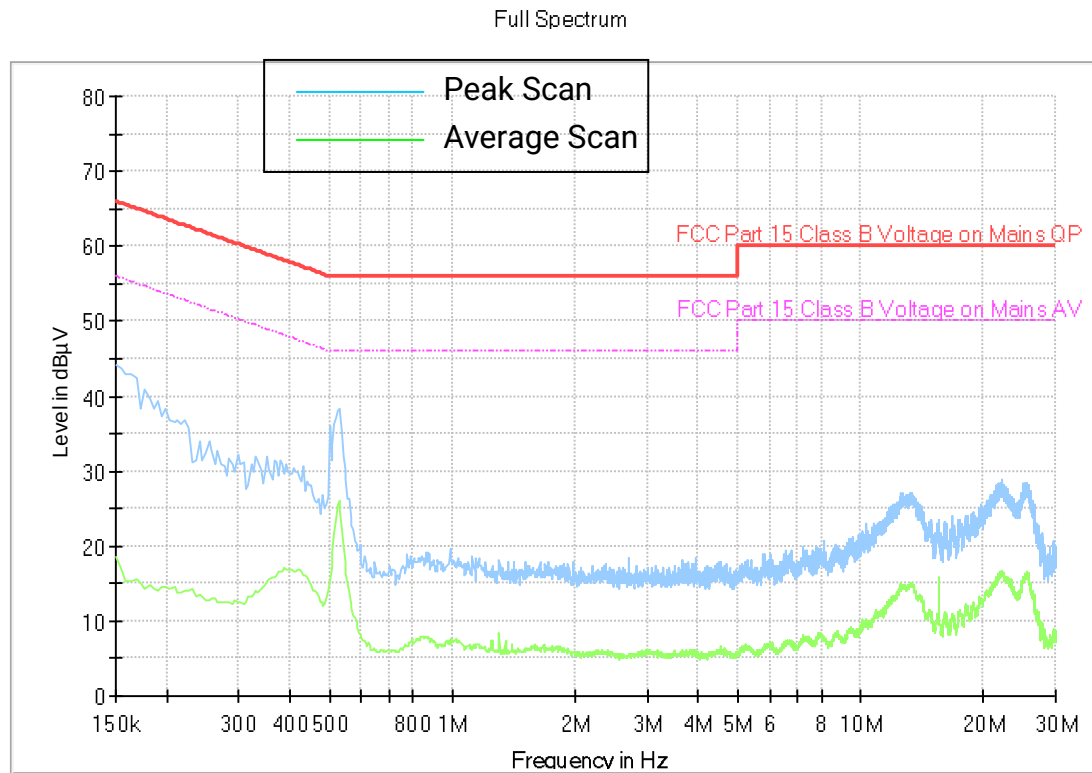
120VAC, 60Hz

1) Ambient

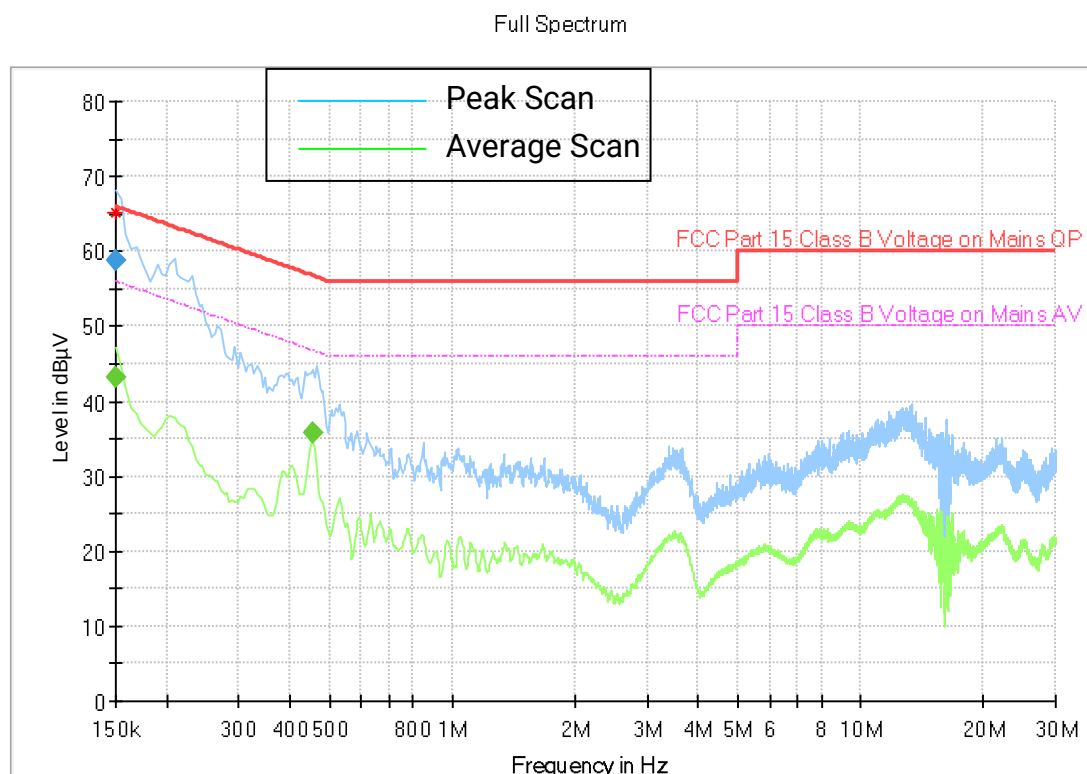
Full Spectrum



2) PSU Alone



3) Charger with Radio Standby

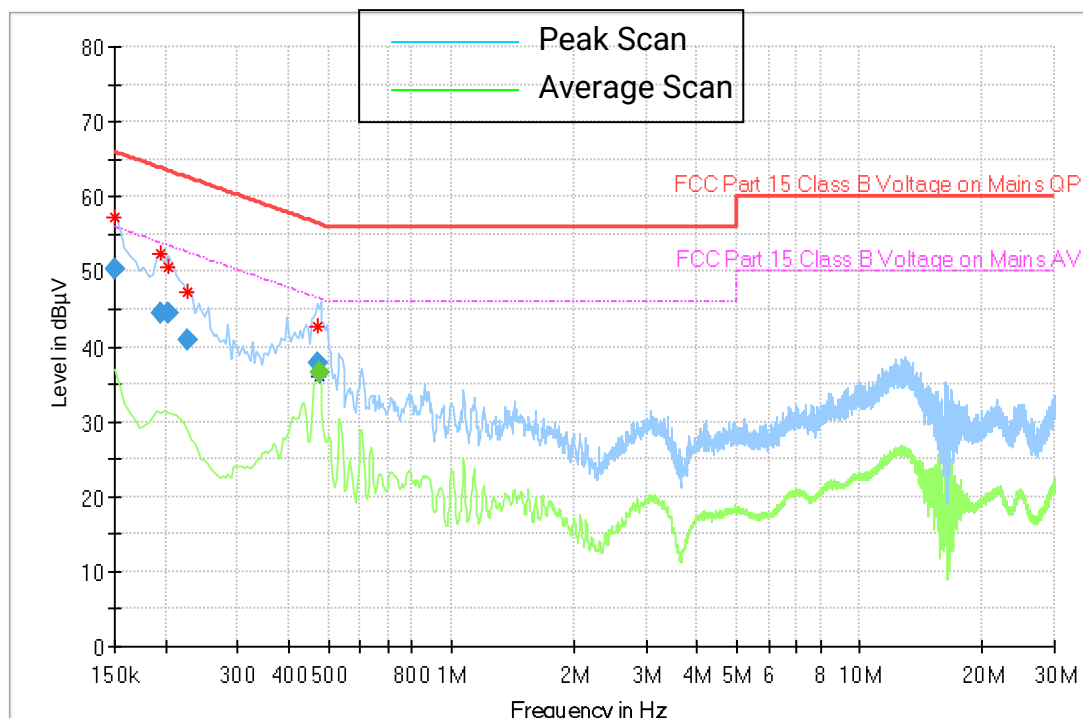


QuasiPeak and Average Measurement

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	43.14	56.00	12.86	L1	ON	10.5
0.150000	58.73	---	66.00	7.27	N	ON	10.5
0.456000	---	35.81	46.77	10.96	L1	ON	10.6

4) Charger with Radio TX BTLE 1M

Full Spectrum



QuasiPeak and

Average Measurement

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	50.26	---	66.00	15.74	N	ON	10.5
0.195000	44.57	---	63.82	19.26	N	ON	10.5
0.204000	44.45	---	63.45	19.00	L1	ON	10.5
0.226500	40.90	---	62.58	21.68	N	ON	10.3
0.469500	37.77	---	56.52	18.76	L1	ON	10.6
0.474000	---	36.42	46.44	10.02	L1	ON	10.6

END OF TEST REPORT