



TEST REPORT

Report No. : AA0015629(1) Date : 31 Mar 2021

Application No. : LA006277(0)

Applicant : Three Champions Enterprise Co., Ltd.
Flat E-105, 3/F., Tak Wing Industrial Building,
3 Tsun Wen Road, Tuen Mun, Hong Kong

Buyer : RSI International Limited
Room 1101, 11th Floor, Tower 2, China Hong Kong City, 33 Canton Road,
Tsimshatsui, Kowloon, Hong Kong.

Sample Description : One (1) submitted sample stated to be

Sample	:	Ear bud/Speaker/USB
Item Name	:	AL-D BT EB MINT
Claire's Category	:	Young
Claire's Order by Country	:	Int'l
Department No.	:	49
Claire's Style No.	:	95489-1
PO No.	:	869649S
PO Cancel Date	:	25 May 2021
Vendor Style No.	:	Z002-95489-1
FOB Port	:	Hong Kong

Date Received : 22 Mar 2021

Test Period : 25 Mar 2021 to 31 Mar 2021

Test Requested : FCC Certification for FCC Part 15, subpart C

Test Method : 47 CFR Part 15 (10-1-19 Edition),
ANSI C63.10 – 2013,
ANSI C63.4 – 2014

Test Engineer : Mr. Leung Shu Kan, Ken

Conclusion : The submitted sample was found to comply with technical requirement of FCC
Part 15 Subpart C, section 15.247.

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature :  Page 1 of 66

Wong Lap Pong / Andrew
Deputy Technical Manager

FCC ID: 2AVGC3CBT011

The conformity statement stated in Conclusion above is based on the decision made by the FCC/SEDA on 16 Mar 2021. Ref No. RT-EMC-048 / Issue Date: 16 Mar 2021 / Edition: 2
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Room 1302, Yan Hing Centre, 9-13 Wong Chuk Yeung St., Fo Tan, Shatin, N.T., Hong Kong.

Tel: (852) 2698 8198 Fax: (852) 2695 4177 E-mail: info@cmateesting.org Web Site: <http://www.cmateesting.org>



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RESULT SUMMARY

Test Item	FCC Requirement	Test Method	Result
Number of hopping frequency	§15.247(a)(1)(iii)	ANSI C63.10 §7.8.3	PASS
Band-edge	§15.247(d)	ANSI C63.10 §7.8.6 and 6.10	PASS
Carrier frequency separation	§15.247(a)	ANSI C63.10 §7.8.2	PASS
Time of occupancy (dwell time)	§15.247(a)	ANSI C63.10 §7.8.4	PASS
Output power	§15.247(b)(1)	ANSI C63.10 §7.8.5	PASS
Occupied bandwidth	§15.247(a)	ANSI C63.10 §7.8.7 and 6.9.2	PASS
Conducted spurious emission (Transmitter)	§15.247(d)	ANSI C63.10 §7.8.8, and §11.12.2.1	PASS
Radiated spurious emission (Transmitter)	§15.247(d)	ANSI C63.10 §6.4 – 6.6	PASS
Radiated spurious emission (Receiving, Charging)	§15.109(a)	ANSI C63.4 §8.3	PASS
Conducted emission on AC mains	§15.207(a)	ANSI C63.4 §7.3	PASS
Frequency Hopping System Requirement	§15.247(a)(1), (g), (h)	N/A	PASS

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1 Product Information

1.1 General Information

Product Description:	Model:
AL-D BT EB MINT Bluetooth Headphone	3CBT011

Primary function : Receive audio signal through the Bluetooth communication
Power supply : DC 3.7V (Li-ion Rechargeable battery)
DC 5.0V (micro-usb input)
RF related function : Bluetooth non-BLE communication
Electric Accessories sold with : Nil
Interconnection cable associated sold with : Nil
Operating condition : Not specified
Model difference : Not applicable
Remark : N/A

1.2 Technical Information

Operating Frequency : 2402 – 2480MHz
Digital Modulation : FHSS
Modulation : GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel : 79
Channel Bandwidth : 1.0MHz
Occupied Bandwidth : 1.18MHz
Signal Type : Data
Number of Antenna : One
Antenna Type : PCB Type
Antenna Gain : 0.0dBi
Rated Input Voltage : DC3.7V (Li-ion rechargeable battery)
DC5.0V (micro-usb input)
RF Technology Used : Bluetooth 5.0+EDR (non BLE)
Simplex or Duplex : Half-duplex
Adaptivity : FHSS adaptivity

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1.3 Associated Electric Accessories Information

N/A

1.4 Associated Cables

N/A

2.0 Equipment Units Tested (EUT)

Product Description	: AL-D BT EB MINT
Model	: 3CBT011
Serial No.	: Not specified
Sample Type	: Production Sample and engineering sample
Sample No.	: RA030630-013(5)
Rationale of selection	: Only one model number

3.0 Location of Test Facility

CMA Industrial Development Foundation Ltd.
Room 1302, Yan Hing Centre,
9-13 Wong Chuk Yeung,
Fo Tan, Shatin,
New Territories
Hong Kong.

FCC Accredited Lab (Designation Number: HK0004)

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4.0 List of test equipment, supporting equipment and cables

4.1 Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Calibration Due Date	Calibration Period
EMI Test Receiver	Rohde & Schwarz	ESCI	100152	23 Dec 2021	1Year
Spectrum Analyzer	R&S	FSP30	100628	22 Oct 2021	2Years
Biconical Antenna	Rohde & Schwarz	HK116	837414/004	29 Nov 2022	2Years
Log Periodic Antenna	Teseq	UPA6109	43666	29 Nov 2022	2Years
Loop Antenna	EMCO	6502	00056620	27 Oct 2022	2Years
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-531	02 Feb 2023	3Years
Broadband Pre-Amplifier	Schwarzbeck	BBV 9718	9718-119	02 Feb 2023	3Years
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170442	15 Sep 2021	2Years
Broadband Pre-Amplifier	Schwarzbeck	BBV 9719	9719-010	12 Sep 2021	2Years
Coaxial Cable	Schaffner	RG 213/U	N/A	09 May 2021	1Year
Coaxial Cable	Suhner	RG 214/U	N/A	09 May 2021	1Year
Coaxial Cable	Suhner	Sucoflex_104	N/A	14 Jan 2022	2Years
LISN	Rohde & Schwarz	ENV216	101323	23 Dec 2021	1Year
Coaxial Cable	Tyco Electronics	RG 58C/U	N/A	19 Oct 2021	1Year

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4.2 Supporting equipment

Equipment Name	Manufacturer	Model	Serial	Provided by
USB to TTL adaptor*	Not provided	CH340	Not labelled	Applicant
AC/DC adaptor	Apple	A1299	Not labelled	CMA

Remark: *only used for configure engineering mode

4.3 Cables

Nil

4.4 Software

Software Name	Version	Function	Provided by
FCC Assist*	V1.0.2.2	Configure Engineering mode	Applicant

Remark: *only used for configure engineering mode

5.0 Measurement Uncertainty

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a level of confidence of approximately 95%.

Radiated emissions

Frequency	Uncertainty (U_{lab})
30MHz ~ 200MHz (Horizontal)	4.59dB
30MHz ~ 200MHz (Vertical)	4.49dB
200MHz ~ 1000MHz (Horizontal)	4.94dB
200MHz ~ 1000MHz (Vertical)	4.97dB
1GHz ~ 6GHz	4.52dB
6GHz ~ 18GHz	4.58dB
18GHz ~ 40GHz	4.66dB

Line-conducted emissions

Frequency	Uncertainty (U_{lab})
150kHz ~ 30MHz	2.80dB

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6.0 Measurement

6.1 General Test condition

Temperature : 27.7°C
Test Voltage : DC 3.7V and AC 120V
Humidity : 51.4%
Atmosphere Pressure : 101.5kPa

6.2 Number of hopping frequency

6.2.1 Measurement

Requirement : FCC Part 15 § 15.247(a)(1)(iii)
Measuring procedure : ANSI C63.10:2013, clause 7.8.3
Span : 83.5MHz
RBW : 100kHz
VBW : 300kHz
Frequency range : 2.4000 – 2.4835GHz
Modulation tested : GFSK
Packet Type tested : DH5
Additional measuring procedure : Nil

6.2.2 Final Result

No. of hopping channels measured	Limit	Result	Worst case mode
79	≥ 15	PASS	GFSK and DH5

Remark: Detail test result and equipment setting refer to appendix A, p.27

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6.3 Band-edge measurement

6.3.1 Measurement

Requirement	: FCC Part 15 §15.247(d)
Measuring procedure	: ANSI C63.10:2013, section 7.8.6 and 6.10
Hopping mode	: Enabled and Disable
RBW	: 100kHz
VBW	: 300kHz
Frequency range	: 2310 – 2400MHz and 2483.5 – 2500MHz
Modulation tested	: GFSK, $\pi/4$ DQPSK, 8DPSK
Packet Type tested	: DH5, 2DH5, 3DH5
Channel tested for non-hopping mode	: 2402MHz for lowed band edge and 2480MHz for higher band edge
Additional measuring procedure	: For lower band edge (2400MHz) 1. Using the “Measurement 1” setting shown below the scan plot within the frequency span from 2400 – 2483.5MHz to measure the maximum peak value of fundamental 2. Using the “Measurement 2” setting shown below the scan plot within the frequency span from 2310 – 2400MHz to measure the bandedge reading 3. Compare that reading in procedure with the limit which equal to the measured maximum peak in procedure 1 minus 20dB For Upper bandedge (2483.5MHz) 1. Using the “Measurement 1” setting shown below the scan plot within the frequency span from 2400 – 2483.5MHz to measure the maximum peak value of fundamental 2. Using the “Measurement 2” setting shown below the scan plot within the frequency span from 2483.5 – 2500MHz to measure the bandedge reading 3. Compare that reading in procedure with the limit which equal to the measured maximum peak in procedure 1 minus 20dB

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6.3.2 Final Result

Bandedge frequency for lower bandedge (Worst Case)	Worst case (dBc) ²	Detector	Limit ¹ (dBc)	Result	Worst case
2399.829625	41.23	Peak	≥ 20.0	PASS	GFSK and DH5
Bandedge frequency for higher bandedge (Worst Case)	Worst case in (dBc) ²	Detector	Limit ¹	Result	Worst case
2497.937500	52.10	Peak	≥ 20.0	PASS	GFSK and DH5

Remark: 1) The limit is based on the transmitter demonstrated compliance with peak conducted power limit on section 6.6.2 of this report.

2) The Worst case dBc is the peak values measured in procedure 1 minus the worst case bandedge emission

3) Detail test result and equipment setting refer to appendix A, p58-61

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6.4 Carrier Frequency Separation

6.4.1 Measurement

Requirement	: FCC Part 15 §15.247(a)
Measuring procedure	: ANSI C63.10:2013, section 7.8.2
Hopping mode	: Enabled
RBW	: 100kHz
VBW	: 300kHz
Frequency range	: 2401-2404MHz, 2440-2443MHz, 2478-2481MHz
Modulation tested	: GFSK ²
Packet Type tested	: DH5 ²
Additional measuring procedure	: Nil
Remark	: 1) Since the measured value is more than 1.5 times of limit, only middle channel is measured. 2) Since the modulation and packet type does not affect the channel separation, GFSK and DH5 are selected as represented modulation and data type

6.4.2 Final Result

Carrier Frequency Separation	Limit ¹	Result	Worst case mode
1.002375MHz	0.793333MHz	PASS	GFSK and DH5

Remark: 1) Limit is 2/3 of the 20dB bandwidth in section 6.7 and conducted peak power is less than 0.125W in section 6.6 of this report.

2) Detail test result and equipment setting refer to appendix A, p55-57

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6.5 Time of occupancy (dwell time)

6.5.1 Measurement

Requirement	: FCC Part 15 §15.247(a)
Measuring procedure	: ANSI C63.10:2013, section 7.8.4
Hopping mode	: Disable
RBW	: 500kHz
VBW	: 1MHz
Modulation tested	: GFSK ³
Packet Type tested	: DH1, DH3, DH5
Channel tested for non-hopping mode	: 2441MHz
Additional measuring procedure	: 1) Setup engineering sample to channel 2441MHz and DH1 packet size to perform the measurement according to ANSI C63.10, section 7.8.4 2) Find the worst case packet size 3) Repeat procedure1 with the worst case packet size for channel 2402MHz and 2480MHz
Remark	: 1) Since the modulation does not affect the dwell time, GFSK is selected as represented modulation.

6.5.2 Final Result

Dwell time (worst case)	Limit	Result	Worst case mode
318.010ms	≤400ms	PASS	GFSK and DH5

Remark: 1) Detail test result and equipment setting refer to appendix A, p28-33

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6.6 Output Power

6.6.1 Measurement

Requirement : FCC Part 15 §15.247(b) (1)
 Measuring procedure : ANSI C63.10:2013, section 7.8.5
 Hopping mode : Disable
 Modulation tested : GFSK, $\pi/4$ DQPSK, 8DPSK
 Packet Type tested : DH5¹
 Channel tested for non-hopping mode : 2402MHz, 2441MHz, 2480MHz
 Additional measuring procedure : Nil
 Remark : 1) Since the packet size does not affect the output power, DH5 is selected as represented packet size.

6.6.2 Final Result

(a) Maximum peak conducted output power

Maximum peak conducted output power	Limit(s) ¹	Result	Modulation
-9.75dBm	≤21.0dBm	PASS	GFSK

Remark: 1) 0.125W (21.0dBm) limit is used for 2/3 20dB bandwidth requirement for channel separation.

2) Detail test result and equipment setting refer to appendix A, p34-36

(b) Maximum peak e.i.r.p.

Maximum peak e.i.r.p. ¹	Limit(s) ²	Result	Modulation
-9.75dBm	≤27.0dBm	PASS	GFSK

Remark: 1) Maximum peak e.i.r.p. = Maximum peak conducted output power + antenna gain (dBi)

2) Maximum peak e.i.r.p. limit = Maximum peak conducted output power limit + 0dBi

3) Detail test result and equipment setting refer to appendix A, p34-36



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6.7 Occupied Bandwidth

6.7.1 Measurement

Requirement : FCC Part 15 §15.247(a)
Measuring procedure : ANSI C63.10:2013, section 7.8.7 and 6.9.2
Hopping mode : Disable
Modulation tested : GFSK, $\pi/4$ DQPSK, 8DPSK
Packet Type tested : DH5¹
Channel tested for non-hopping mode : 2402MHz, 2441MHz, 2480MHz
Additional measuring procedure : Nil
Remark : 1) Since the packet size does not affect the bandwidth, DH5 is selected as represented packet size.

6.7.2 Final Result

20dB bandwidth	99% OBW	Modulation
953.250k	867.750k	GFSK
1304.625k	1180.500k	$\pi/4$ DQPSK
1283.625k	1170.000k	8DPSK

Remark: 1) Detail test result and equipment setting refer to appendix A, p37-54.

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6.8 Conducted Spurious emission (Transmitter)

6.8.1 Measurement

Requirement	: FCC Part 15 §15.247(d)
Measuring procedure	: ANSI C63.10:2013, section 5.5, 5.6, 7.8.8 and 11.12.2.1
Hopping mode	: Disable
RBW	: 100kHz
Detector	: 300kHz
Modulation tested	: GFSK ¹
Packet Type tested	: DH5 ²
Channel tested for non-hopping mode	:
Additional measuring procedure	: 1) Setup engineering sample to channel 2402MHz to perform the measurement according to ANSI C63.10, section 7.8.8 with pre-measurement setting 2) If the pre-measurement is over the limit, the final measurement is performed for the specific frequency according to final measurement setting or restricted band frequency 3) For non-restricted band frequency, peak detector and 100kHz RBW will be used for final measurement. 4) Repeat the procedure 1 to 3 for channel frequency of 2441MHz and 2480MHz
Remark	: 1) Since the GFSK generates a higher SPD with power level, GFSK is selected as represented modulation for testing. 2) Since DH5 generates a higher dwell time, DH5 is selected as representative packet size for testing

6.8.2 Final Result

Worst case spurious emission frequency	Worst case spurious emission power ¹	Limit ²	Margin	Result	Worst case mode
1734.202500MHz	-48.19dBm	-30.51dBm	-17.68dB	PASS	GFSK and DH5

- Remark: 1) Spurious emission power = measured conducted power + antenna gain(dBi) + ground reflection factor according to ANSI C63.10 section 11.12.2.2 for restricted band emission.
- 2) For restricted band emission, limit = restricted band field strength limit (dBuV/m) – 9.54 + 104.75dB according to ANSI C63.10 section 11.12.2.2 For non-restricted band, limit = SPD/100kHz – 20dB.
- 3) Detail test result and equipment setting refer to appendix A, p62-64

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6.9 Radiated Spurious emission (Transmitter)

6.9.1 Measurement

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 0.4m and 0.8m high above the ground for below 1GHz measurement and 1.5m high above the ground for above 1GHz measurement. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

For 30MHz to 300MHz, biconical antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. And the reference point of antenna shall be 1 m above the ground. Same procedure for frequency 300MHz to 1000MHz but Log-periodic antenna is used for final measurements.

For above 1GHz, horn antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. Preamplifier and High Pass filter was used for measurements. The reference point of antenna shall be 1 m above the ground.

The device was rotated through three X, Y, Z orthogonal to determine which attitude and configuration produce the highest emission during measurement for Radiated Emission measurement.

The Frequencies from fundamental up to the tenth harmonics were investigated, and emissions more 20dB below limit were not reported.

Bluetooth hopping + charging mode with GFSK modulation and DH5 packet type are selected as worst case mode for spurious radiated emission test from cabinet.

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6.9.2 Final Result

a) Test mode: Bluetooth

Polarization	Frequency (MHz)	Reading at 3m (dBμV)	Transducer Factor (dB/m)	Field Strength at 3m ¹ (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector (PK/ QP/AV)
H	2400.000	59.6	-4.7	54.9	74.0	-19.1	PK
H	2400.000	54.7	-4.7	50.0	54.0	-4.0	AV
V	2400.000	59.6	-4.7	54.9	74.0	-19.1	PK
V	2400.000	55.0	-4.7	50.3	54.0	-3.7	AV
H	2483.500	51.7	-4.7	47.0	54.0	-7.0	PK
V	2483.500	51.2	-4.7	46.5	54.0	-7.5	PK
H	4804.010	40.4	3.1	43.5	54.0	-10.5	PK
V	4803.813	41.6	3.1	44.7	54.0	-9.3	PK
H	4882.333	44.1	3.1	47.2	54.0	-6.8	PK
V	4882.199	43.7	3.1	46.8	54.0	-7.2	PK
H	4960.247	44.4	3.1	47.5	54.0	-6.5	PK
V	4960.198	45.8	3.1	48.9	54.0	-5.1	PK
H	7205.541	33.6	10.7	44.3	54.0	-9.7	PK
V	7205.837	33.5	10.7	44.2	54.0	-9.8	PK
H	7323.044	34.4	10.7	45.1	54.0	-8.9	PK
V	7323.011	34.1	10.7	44.8	54.0	-9.2	PK
H	7439.982	35.2	10.7	45.9	54.0	-8.1	PK
V	7439.901	35.2	10.7	45.9	54.0	-8.1	PK

Remark: 1) Field Strength = Reading + transducer factor.

2) Other emission with more than 20dB margin are not reported in this report.

3) If the peak measured values are lower than the average limit then the measured value compared with average limit.

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6.10 Radiated Spurious emission (other mode)

6.10.1 Measurement

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 0.4m and 0.8m high above the ground for below 1GHz measurement and 1.5m high above the ground for above 1GHz measurement. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

For 30MHz to 300MHz, biconical antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. And the reference point of antenna shall be 1 m above the ground. Same procedure for frequency 300MHz to 1000MHz but Log-periodic antenna is used for final measurements.

For above 1GHz, horn antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. Preamplifier and High Pass filter was used for measurements. The reference point of antenna shall be 1 m above the ground.

The device was rotated through three X, Y, Z orthogonal to determine which attitude and configuration produce the highest emission during measurement for Radiated Emission measurement.

The Frequencies from fundamental up to the tenth harmonics were investigated, and emissions more 20dB below limit were not reported.

Receiving mode and Charging are selected for spurious radiated emission test from cabinet.

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6.10.2 Final Result

Test mode: Receiving mode

Polarization	Frequency (MHz)	Reading at 3m (dBμV)	Transducer Factor (dB/m)	Field Strength at 3m ¹ (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)
H	61.484	4.6	10.7	15.3	40.0	-24.7	QP
V	99.387	8.2	11.1	19.3	43.5	-24.2	QP
H	130.790	6.7	13.7	20.4	43.5	-23.1	QP
V	162.396	3.0	15.8	18.8	43.5	-24.7	QP
H	200.462	3.2	15.1	18.3	43.5	-25.2	QP
V	238.853	5.3	15.1	20.4	46.0	-25.6	QP
H	284.393	7.9	15.1	23.0	46.0	-23.0	QP
V	334.701	7.4	17.7	25.1	46.0	-20.9	QP

Remark: 1) Field Strength = Reading + transducer factor.

2) Other emissions with more than 20dB margin are not reported in this report.

Test mode: Charging

Polarization	Frequency (MHz)	Reading at 3m (dBμV)	Transducer Factor (dB/m)	Field Strength at 3m ¹ (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)	Detector (PK/QP/AV)
V	111.038	13.3	12.2	25.5	43.5	-18.0	QP
H	129.531	7.0	13.7	20.7	43.5	-22.8	QP
V	166.250	19.8	15.8	35.6	43.5	-7.9	QP
H	166.437	12.7	15.8	28.5	43.5	-15.0	QP
V	189.187	13.0	16.8	29.8	43.5	-13.7	QP
H	200.375	6.7	15.1	21.8	43.5	-21.7	QP
H	228.875	8.8	15.1	23.9	46.0	-22.1	QP

Remark: 1) Field Strength = Reading + transducer factor.

2) Other emissions with more than 20dB margin are not reported in this report

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6.11 Conducted Emission

6.11.1 Measurement

Requirement : FCC Part 15 §15.207(a)
Measuring procedure : ANSI C63.4:2014, section 7.3
Test mode : Charging
RBW : 9kHz
VBW : 30kHz
Modulation tested : Nil
Packet Type tested : Nil
Additional measuring procedure : Nil
Remark : Nil

6.11.2 Final Result

Worst case conducted emission frequency	Worst case conducted emission	Limit	Margin	Detector	Lines	Worst case mode	Result
17.888MHz	48.83dBμV	56.00dBμV	-11.16dB	QP	L	charging	PASS

Remark: 1) Detail test result and equipment setting refer to appendix A, p65, 66

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7.0 Frequency Hopping System Requirement

Test Requirement: Section 15.247(a)(1), (g), (h)

The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom order list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

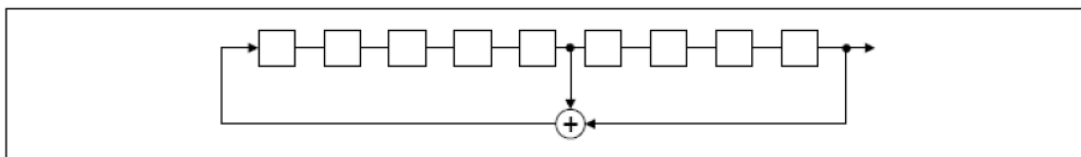
Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmissions bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hop sets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

Compliance for section 15.247(a)(1)

According to Bluetooth Core Specification, the pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONES; i.e. the shift register is initialized with nine ones.

- Number of shift register stage: 9
- Length of pseudorandom sequence: $2^9-1=511$ bits
- Longest sequence of zero: 8 (non-inverted signal)



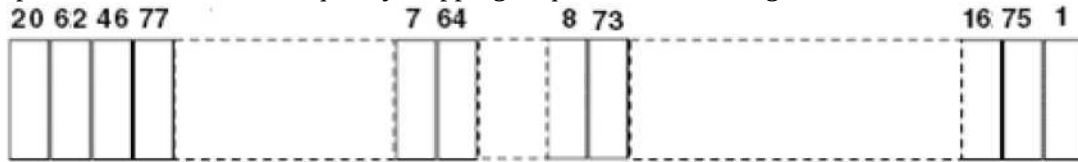
Linear Feedback Shift Register for Generation of the PRBS sequence

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An example of Pseudorandom Frequency Hopping Sequence as following:



Each frequency used equally on the average by each transmitter.

According to Bluetooth Core Specification, Bluetooth receivers are designed to have input and IF bandwidths that match the hopping channel bandwidths of any Bluetooth transmitters and shift frequencies in synchronization with the transmitted signals.

Compliance for section 15.247(g)

According to Bluetooth Core Specification, the Bluetooth system transmits the packet with the pseudorandom hopping frequency with a continuous data and the short burst transmission from the Bluetooth system is also transmitted under the frequency hopping system with the pseudorandom hopping frequency system.

Compliance for section 15.247(h)

According to Bluetooth Core specification, the Bluetooth system incorporates with an adaptive system to detect other user within the spectrum band so that it individually and independently to avoid hopping on the occupied channels.

According to the Bluetooth Core specification, the Bluetooth system is designed not have the ability to coordinate with other FHSS System in effort to avoid the simultaneous occupancy of the individual hopping frequencies by multiple transmitter.



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8.0 External photo, Internal Photo and Test configuration Photo

The External Photo, Internal Photo and Test Configuration Photo associated with this report for the tested product are saved in separated pdf file listed in the following

File content	File name
External Photo	2AVGC3CBT011 External photo.pdf
Internal Photo	2AVGC3CBT011 Internal photo.pdf
Test Configuration Photo	2AVGC3CBT011 Test setup photo.pdf

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APPENDIX A Test Result

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FCC Part 47 §15.247 2400-2483.5 MHz 2016

DUT Information

Frequencies

BT CH 0 (2402 MHz)	BT CH 1 (2403 MHz)	BT CH 2 (2404 MHz)
BT CH 3 (2405 MHz)	BT CH 4 (2406 MHz)	BT CH 5 (2407 MHz)
BT CH 6 (2408 MHz)	BT CH 7 (2409 MHz)	BT CH 8 (2410 MHz)
BT CH 9 (2411 MHz)	BT CH 10 (2412 MHz)	BT CH 11 (2413 MHz)
BT CH 12 (2414 MHz)	BT CH 13 (2415 MHz)	BT CH 14 (2416 MHz)
BT CH 15 (2417 MHz)	BT CH 16 (2418 MHz)	BT CH 17 (2419 MHz)
BT CH 18 (2420 MHz)	BT CH 19 (2421 MHz)	BT CH 20 (2422 MHz)
BT CH 21 (2423 MHz)	BT CH 22 (2424 MHz)	BT CH 23 (2425 MHz)
BT CH 24 (2426 MHz)	BT CH 25 (2427 MHz)	BT CH 26 (2428 MHz)
BT CH 27 (2429 MHz)	BT CH 28 (2430 MHz)	BT CH 29 (2431 MHz)
BT CH 30 (2432 MHz)	BT CH 31 (2433 MHz)	BT CH 32 (2434 MHz)
BT CH 33 (2435 MHz)	BT CH 34 (2436 MHz)	BT CH 35 (2437 MHz)
BT CH 36 (2438 MHz)	BT CH 37 (2439 MHz)	BT CH 38 (2440 MHz)
BT CH 39 (2441 MHz)	BT CH 40 (2442 MHz)	BT CH 41 (2443 MHz)
BT CH 42 (2444 MHz)	BT CH 43 (2445 MHz)	BT CH 44 (2446 MHz)
BT CH 45 (2447 MHz)	BT CH 46 (2448 MHz)	BT CH 47 (2449 MHz)
BT CH 48 (2450 MHz)	BT CH 49 (2451 MHz)	BT CH 50 (2452 MHz)
BT CH 51 (2453 MHz)	BT CH 52 (2454 MHz)	BT CH 53 (2455 MHz)
BT CH 54 (2456 MHz)	BT CH 55 (2457 MHz)	BT CH 56 (2458 MHz)
BT CH 57 (2459 MHz)	BT CH 58 (2460 MHz)	BT CH 59 (2461 MHz)
BT CH 60 (2462 MHz)	BT CH 61 (2463 MHz)	BT CH 62 (2464 MHz)
BT CH 63 (2465 MHz)	BT CH 64 (2466 MHz)	BT CH 65 (2467 MHz)
BT CH 66 (2468 MHz)	BT CH 67 (2469 MHz)	BT CH 68 (2470 MHz)
BT CH 69 (2471 MHz)	BT CH 70 (2472 MHz)	BT CH 71 (2473 MHz)
BT CH 72 (2474 MHz)	BT CH 73 (2475 MHz)	BT CH 74 (2476 MHz)
BT CH 75 (2477 MHz)	BT CH 76 (2478 MHz)	BT CH 77 (2479 MHz)
BT CH 78 (2480 MHz)		

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Hopping Frequencies (Hopping; GFSK; DH5)

Channels

Channels	Limit Min	Limit Max	Result
79	15	---	PASS



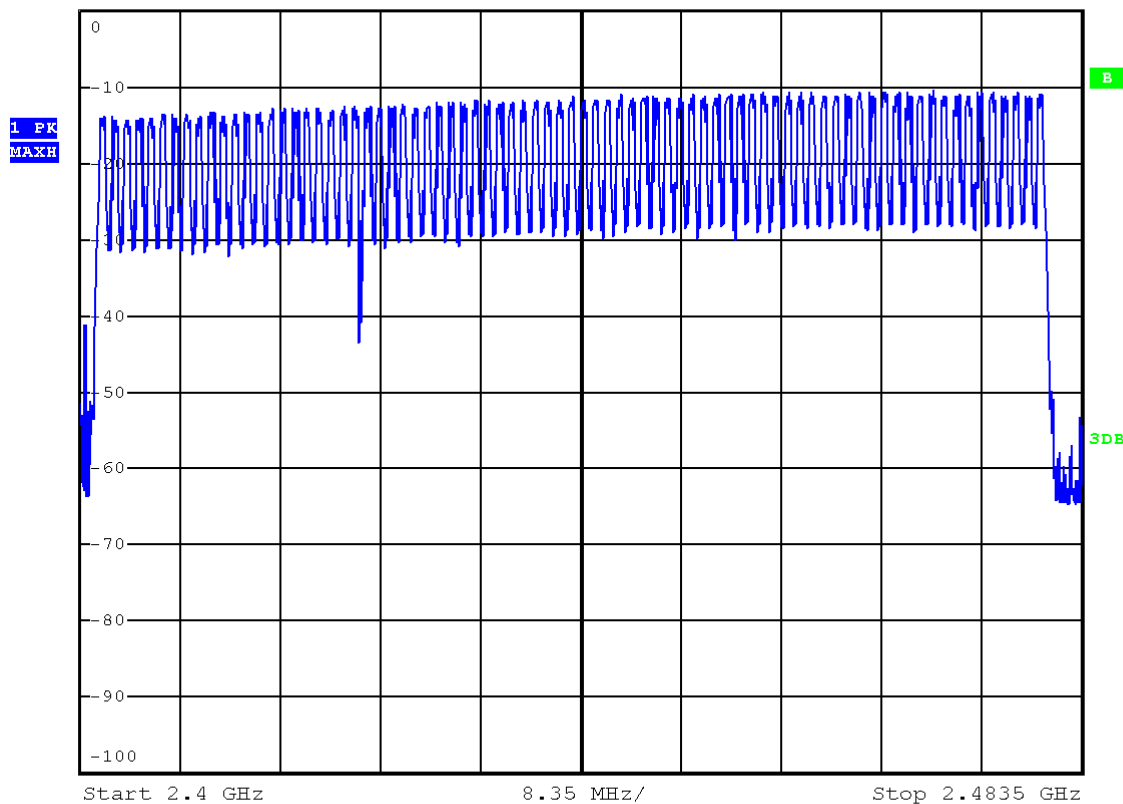
*RBW 100 kHz

VBW 300 kHz

*SWT 500 ms

Ref 0 dBm

*Att 10 dB



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Time of Channel Occupancy (2441 MHz; GFSK; DH1)

Result

DUT Frequency (MHz)	Result	Number of Hops in 3.16s	Number of Hops in 31.6s	Time of one pulse (ms)	Average time of occupancy (ms)
2441.000000	PASS	32	320	0.386	123.520



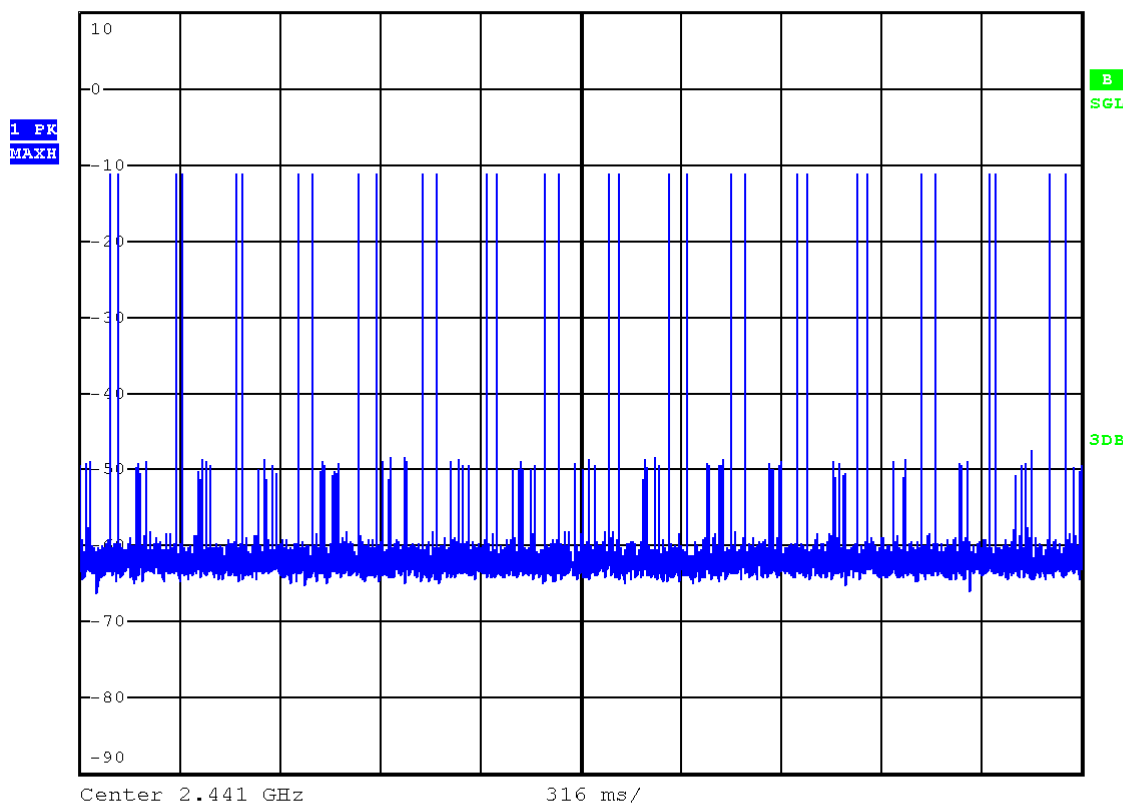
RBW 100 kHz

VBW 300 kHz

SWT 3.16 s

Ref 10 dBm

*Att 20 dB



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RBW 100 kHz Delta 1 [T1]
VBW 300 kHz -3.16 dB
SWT 5 ms 386.875000 μ s

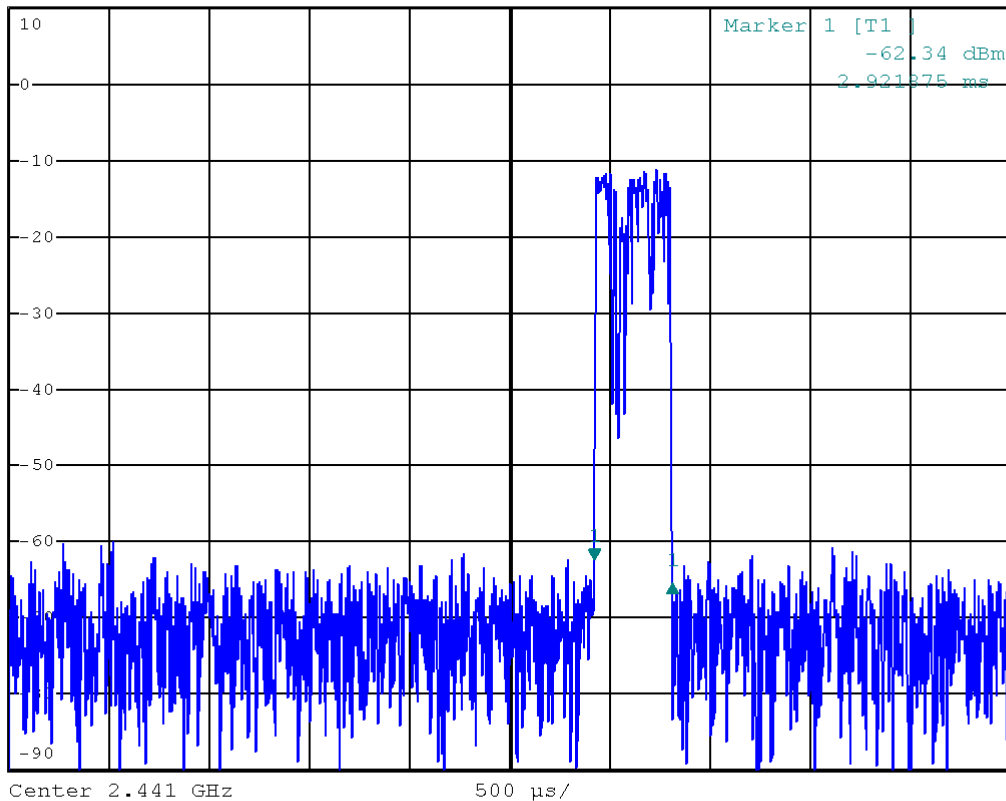
Ref 10 dBm

*Att 20 dB

SWT 5 ms

386.875000 μ s

1 PK
MAXH



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Time of Channel Occupancy(2) (2441 MHz; GFSK; DH3)

Result

DUT Frequency (MHz)	Result	Number of Hops in 3.16s	Number of Hops in 31.6s	Time of one pulse (ms)	Average time of occupancy (ms)
2441.000000	PASS	19	190	1.643	312.170



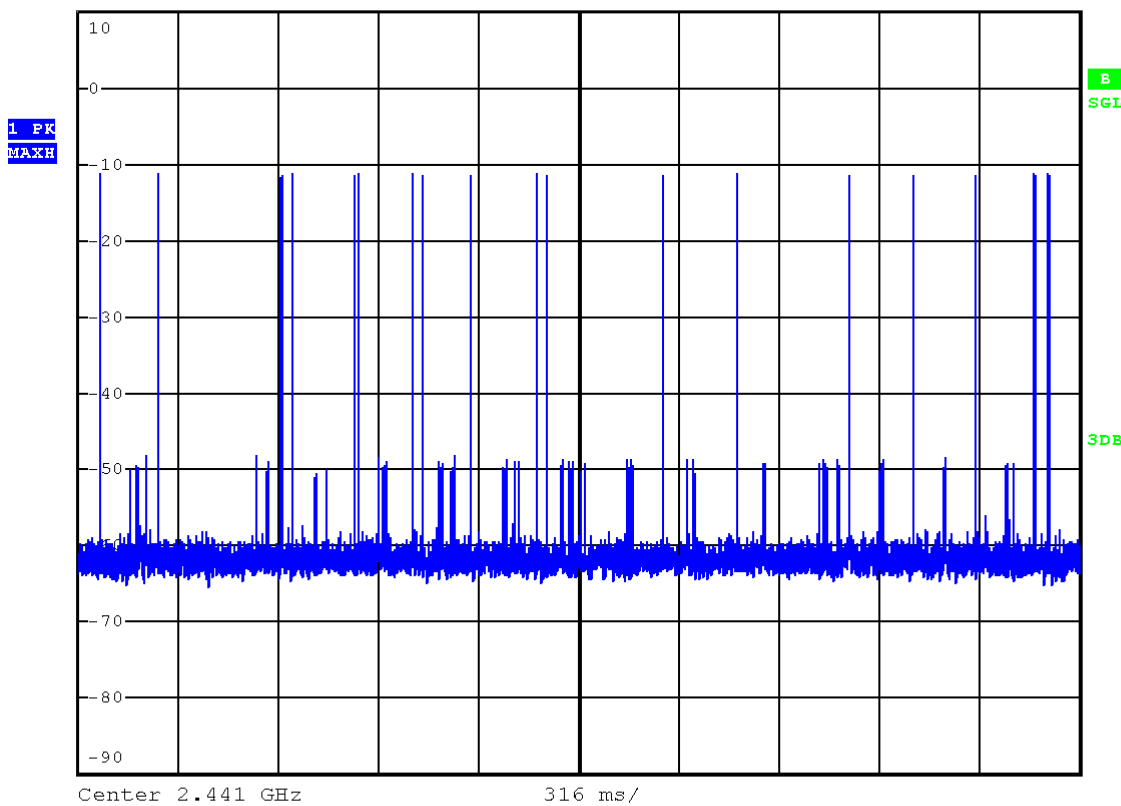
RBW 100 kHz

VBW 300 kHz

SWT 3.16 s

Ref 10 dBm

*Att 20 dB



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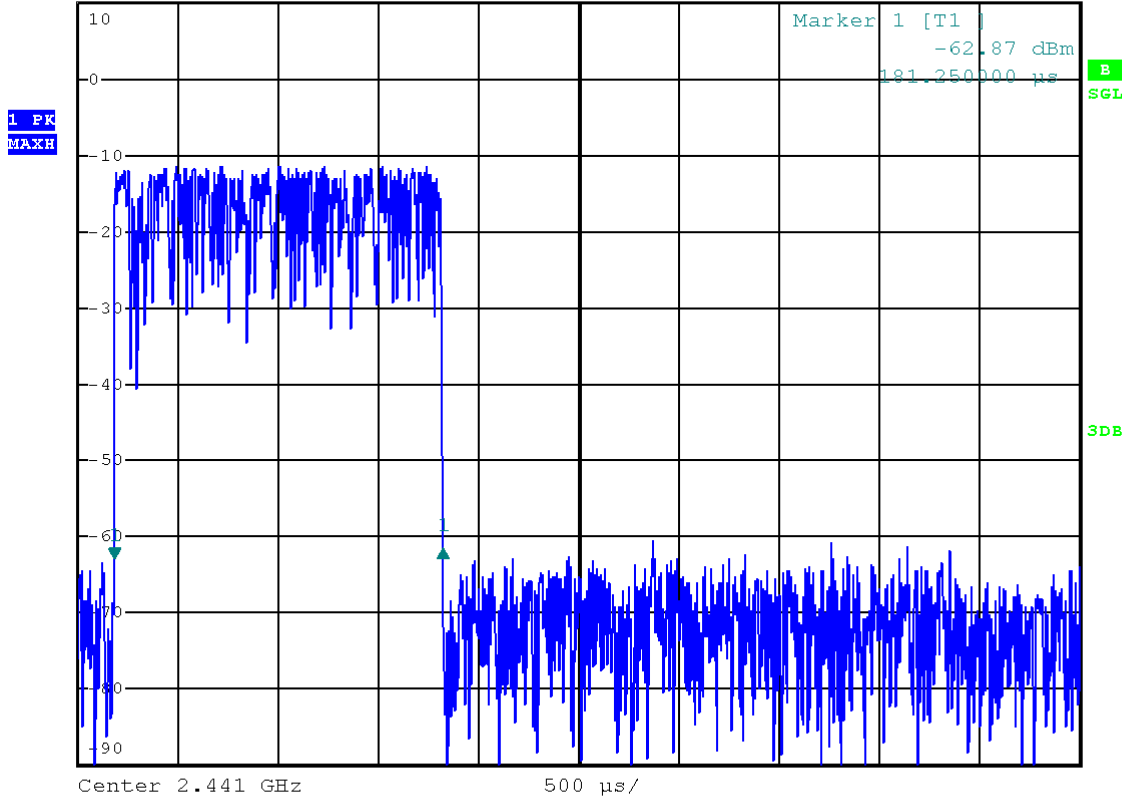
RBW 100 kHz Delta 1 [T1]
VBW 300 kHz 1.42 dB
SWT 5 ms 1.643125 ms

Ref 10 dBm

*Att 20 dB

SWT 5 ms

1.643125 ms



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Time of Channel Occupancy(3) (2441 MHz; GFSK; DH5)

Result

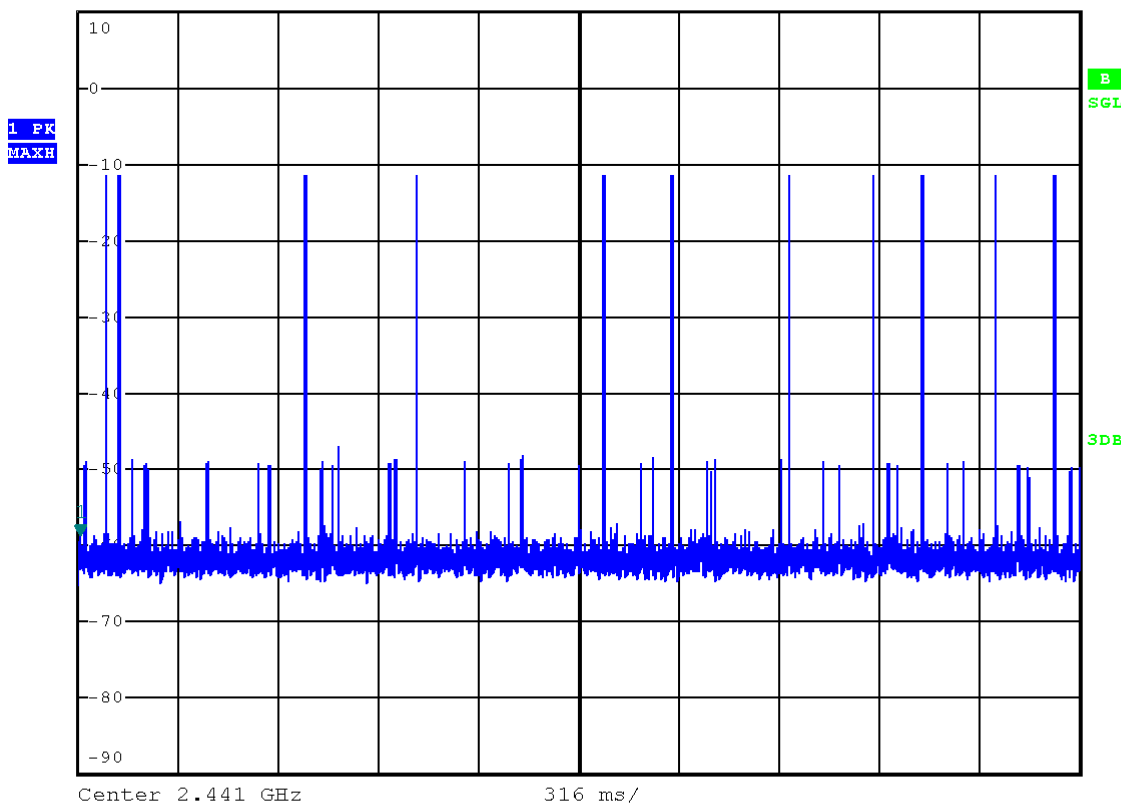
DUT Frequency (MHz)	Result	Number of Hops in 3.16s	Number of Hops in 31.6s	Time of one pulse (ms)	Average time of occupancy (ms)
2441.000000	PASS	11	110	2.891	318.010



RBW 100 kHz Marker 1 [T1]
VBW 300 kHz -58.65 dBm
SWT 3.16 s 8.776250 ms

Ref 10 dBm

*Att 20 dB



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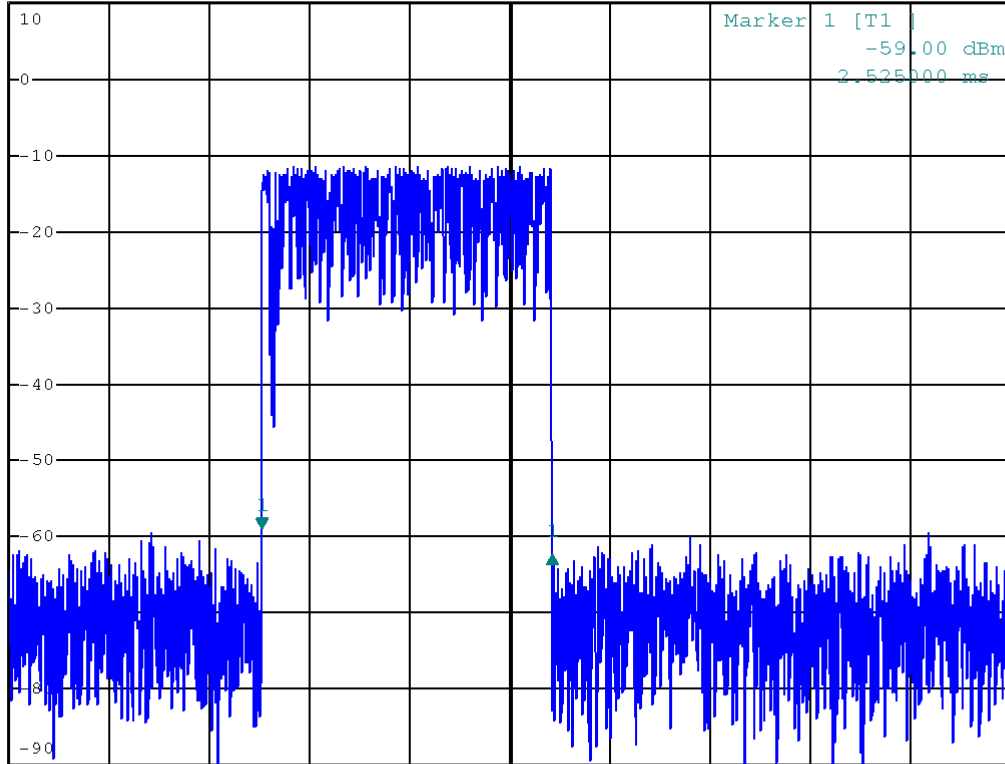


RBW 100 kHz Delta 1 [T1]
VBW 300 kHz -3.25 dB
SWT 10 ms 2.891250 ms

Ref 10 dBm

*Att 20 dB

1 PK
MAXH



Center 2.441 GHz

1 ms/

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RF output power (2402 MHz; GFSK; DH5)

Result

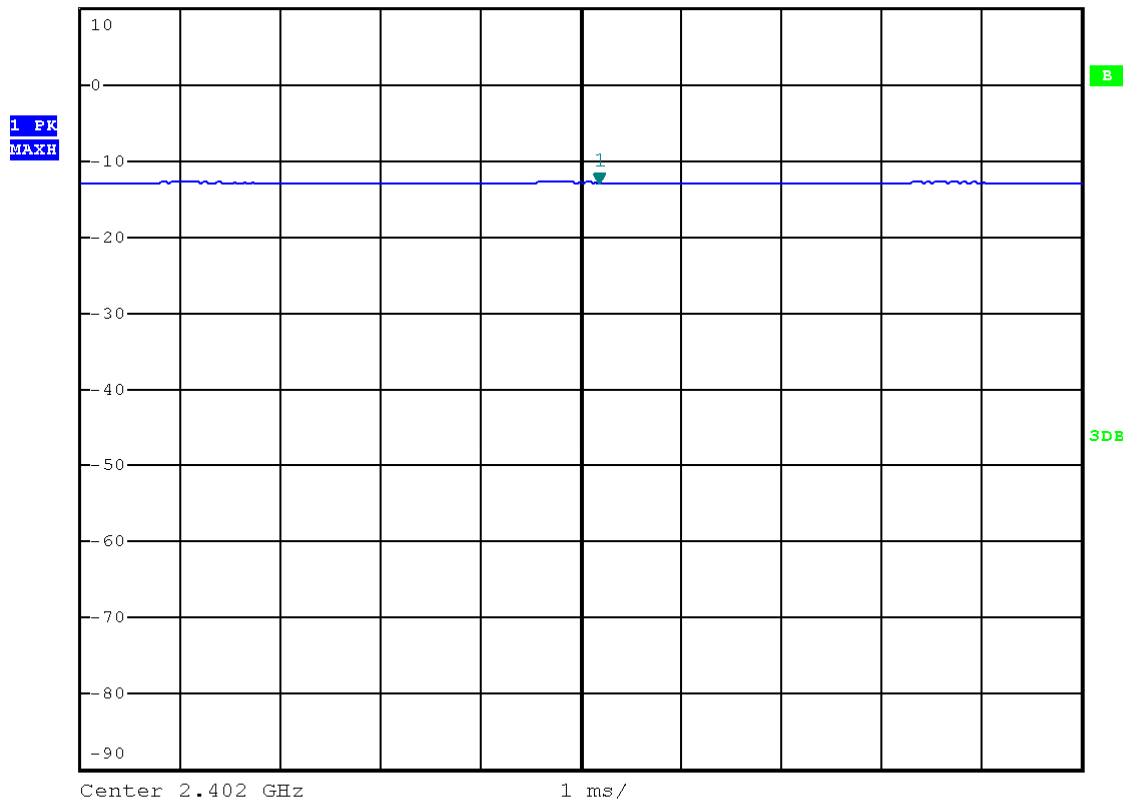
DUT Frequency (MHz)	Measured power (dBm)	Limit Max (dBm)	Result
2402.000000	-12.86	21.0	PASS



RBW 1 MHz Marker 1 [T1]
 VBW 3 MHz -12.86 dBm
 SWT 10 ms 5.176250 ms

Ref 10 dBm

*Att 20 dB



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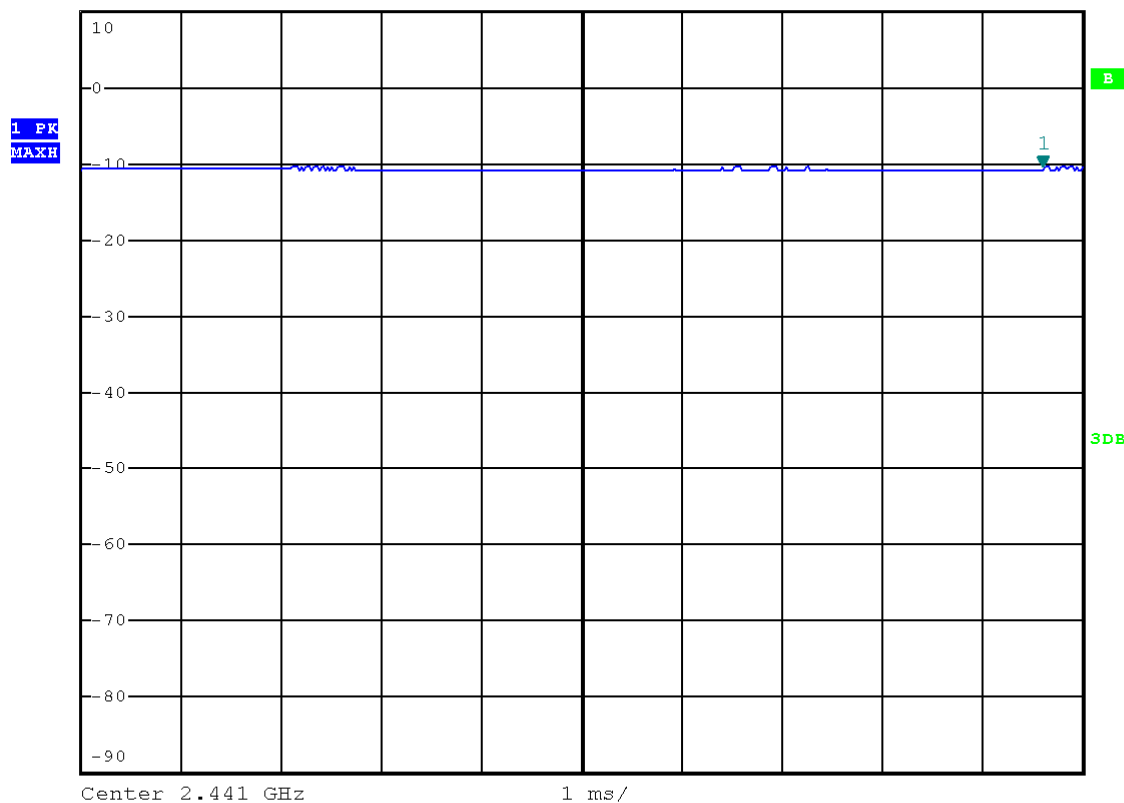
RF output power (2441 MHz; GFSK; DH5)

Result

DUT Frequency (MHz)	Measured power (dBm)	Limit Max (dBm)	Result
2441.000000	-10.35	21.0	PASS



Ref 10 dBm RBW 1 MHz Marker 1 [T1]
 *Att 20 dB VBW 3 MHz -10.35 dBm
 SWT 10 ms 9.603750 ms



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RF output power (2480 MHz; GFSK; DH5)

Result

DUT Frequency (MHz)	Measured power (dBm)	Limit Max (dBm)	Result
2480.000000	-9.75	21.0	PASS



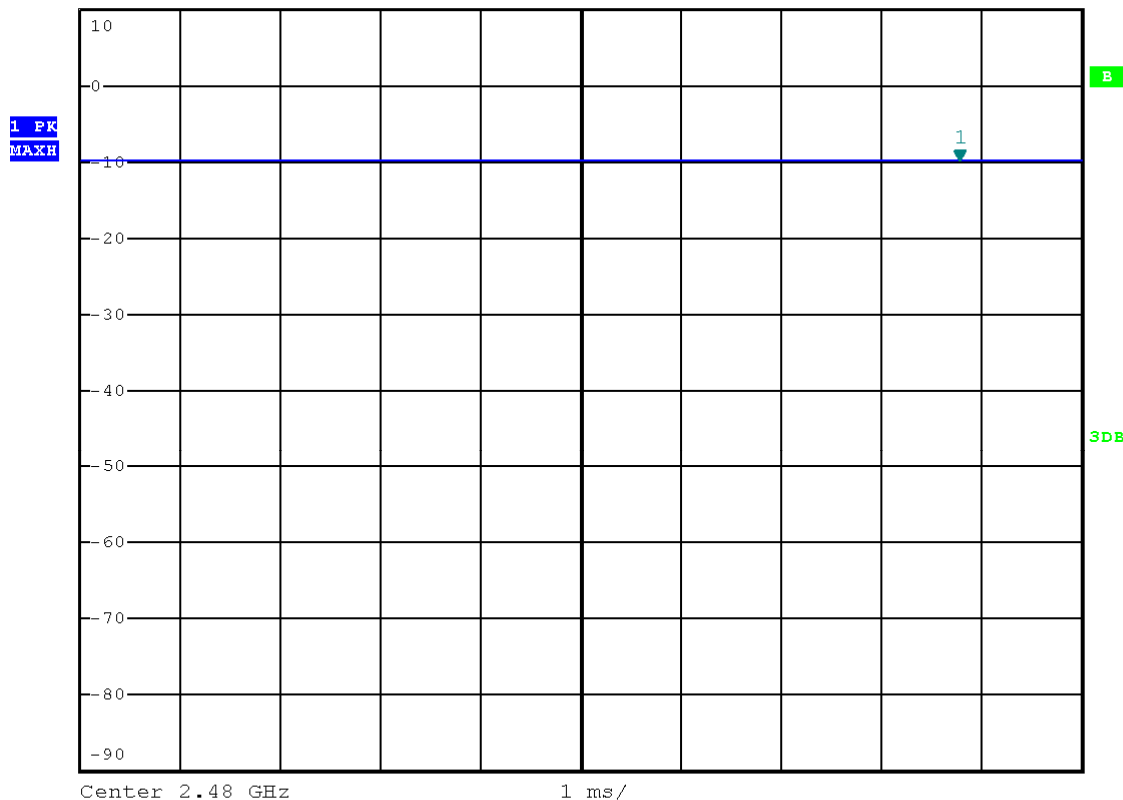
RBW 1 MHz Marker 1 [T1]
VBW 3 MHz -9.75 dBm
SWT 10 ms 8.776250 ms

Ref 10 dBm

*Att 20 dB

SWT 10 ms

8.776250 ms



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Emission Bandwidth 20 dB (2402 MHz; GFSK; DH5)

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2402.000000	0.952125	---	---



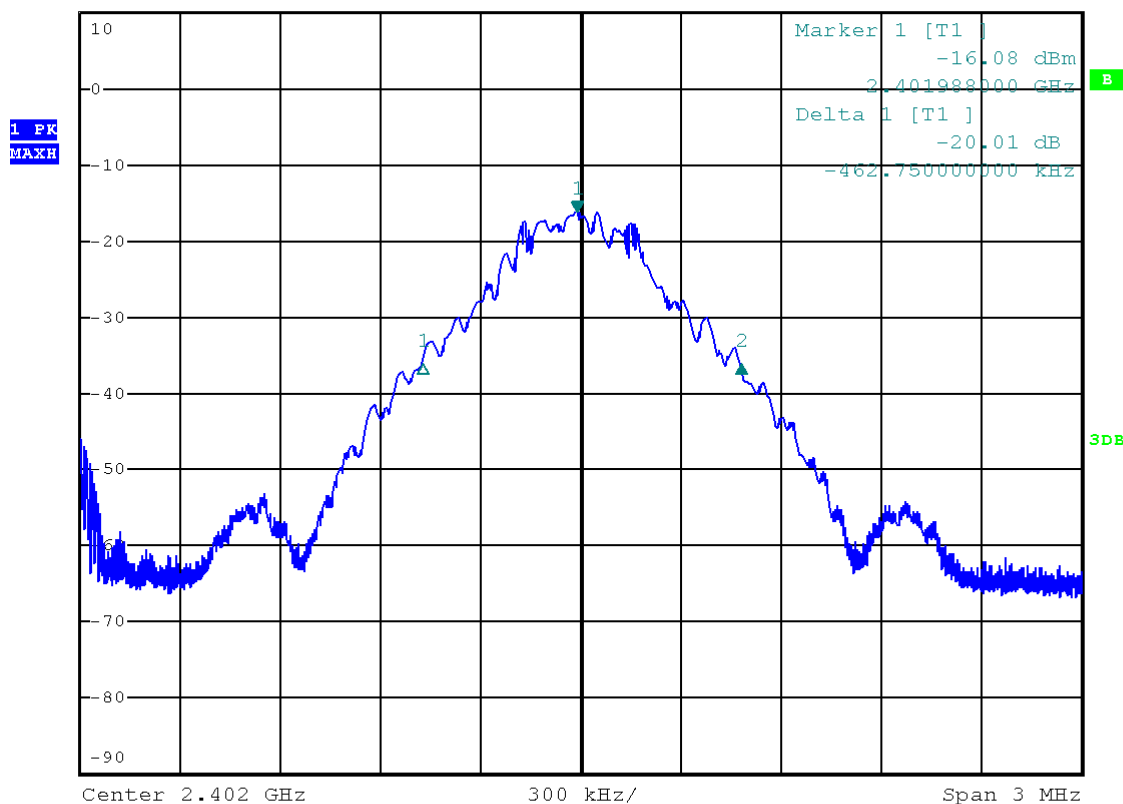
*RBW 30 kHz Delta 2 [T1]
 VBW 100 kHz -20.00 dB
 *Att 20 dB *SWT 500 ms 489.375000000 kHz

Ref 10 dBm

*Att 20 dB

*SWT 500 ms

489.375000000 kHz



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Occupied Channel Bandwidth 99% (2402 MHz; GFSK; DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2402.000000	0.866250	---	---

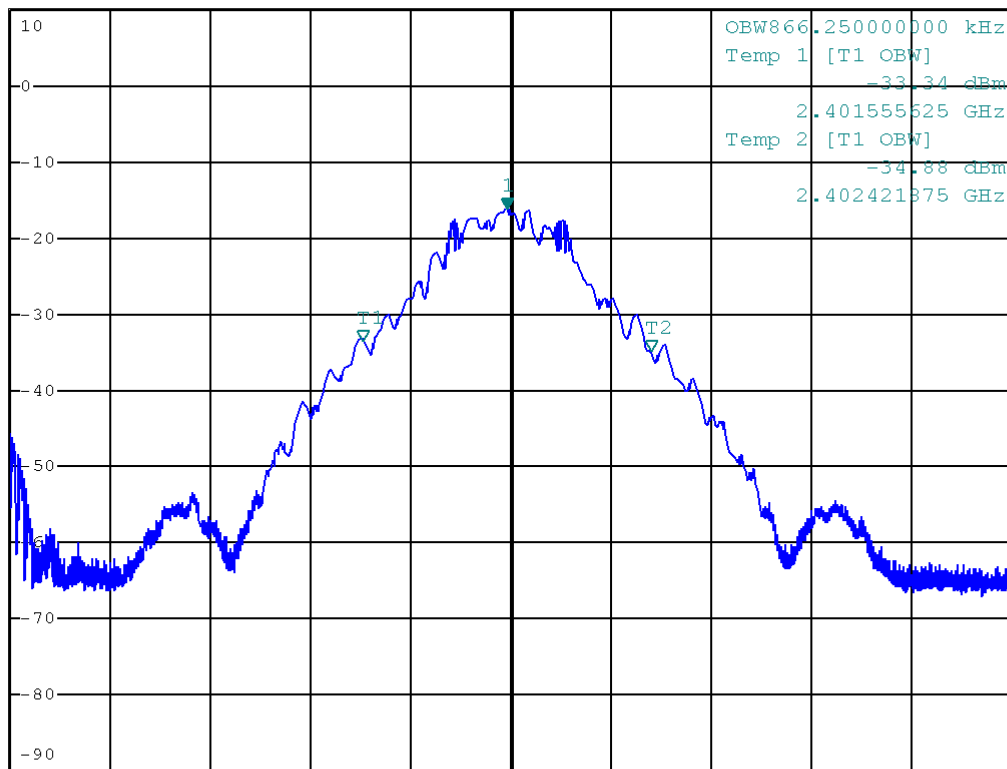


*RBW 30 kHz Marker 1 [T1]
 VBW 100 kHz -16.10 dBm
 *SWT 500 ms 2.401989125 GHz

Ref 10 dBm

*Att 20 dB

1 PK
MAXH



Center 2.402 GHz

300 kHz/

Span 3 MHz

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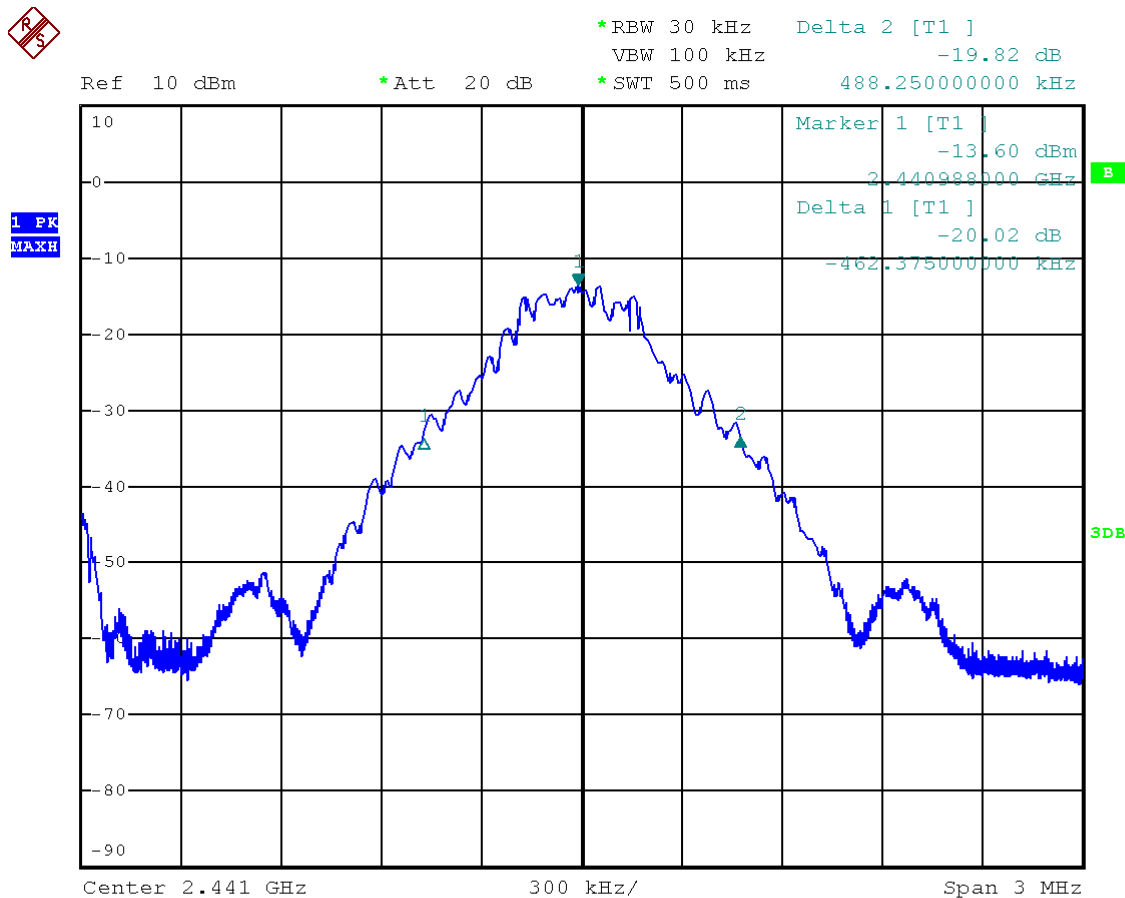
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Emission Bandwidth 20 dB (2441 MHz; GFSK; DH5)

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2441.000000	0.950625	---	---



FCC ID: 2AVGC3CBT011

TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2441 MHz; GFSK; DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2441.000000	0.865125	---	---

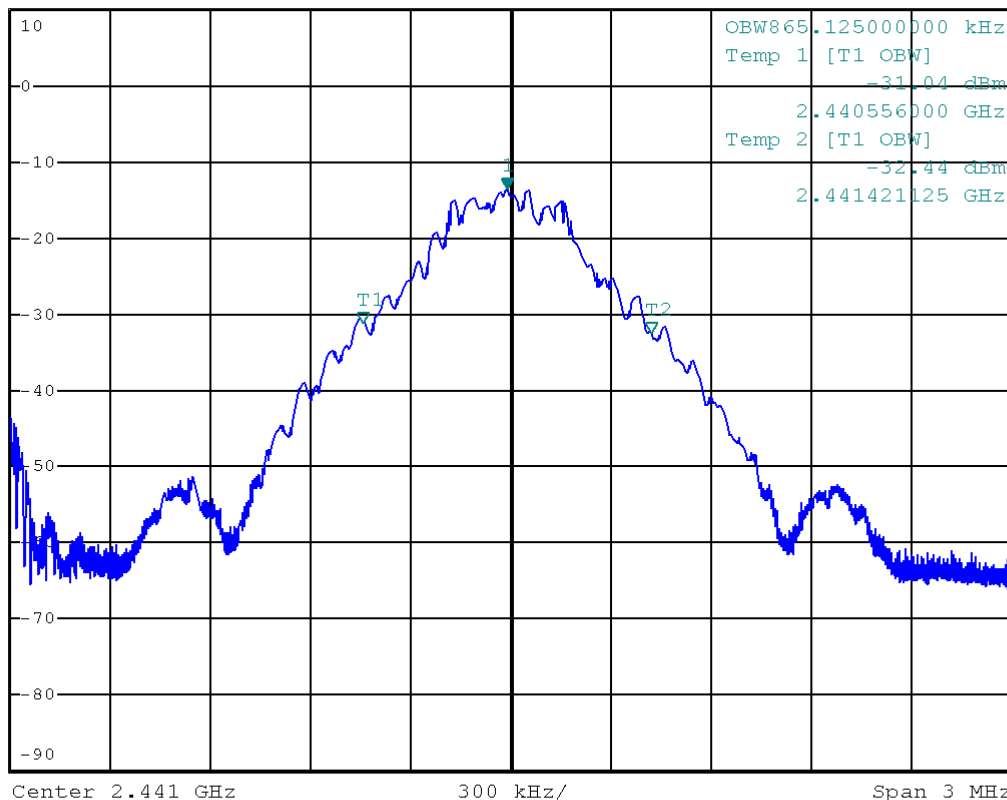


*RBW 30 kHz Marker 1 [T1]
 VBW 100 kHz -13.61 dBm
 *SWT 500 ms 2.440987250 GHz

Ref 10 dBm

*Att 20 dB

1 PK
MAXH



FCC ID: 2AVGC3CBT011

TEST REPORT

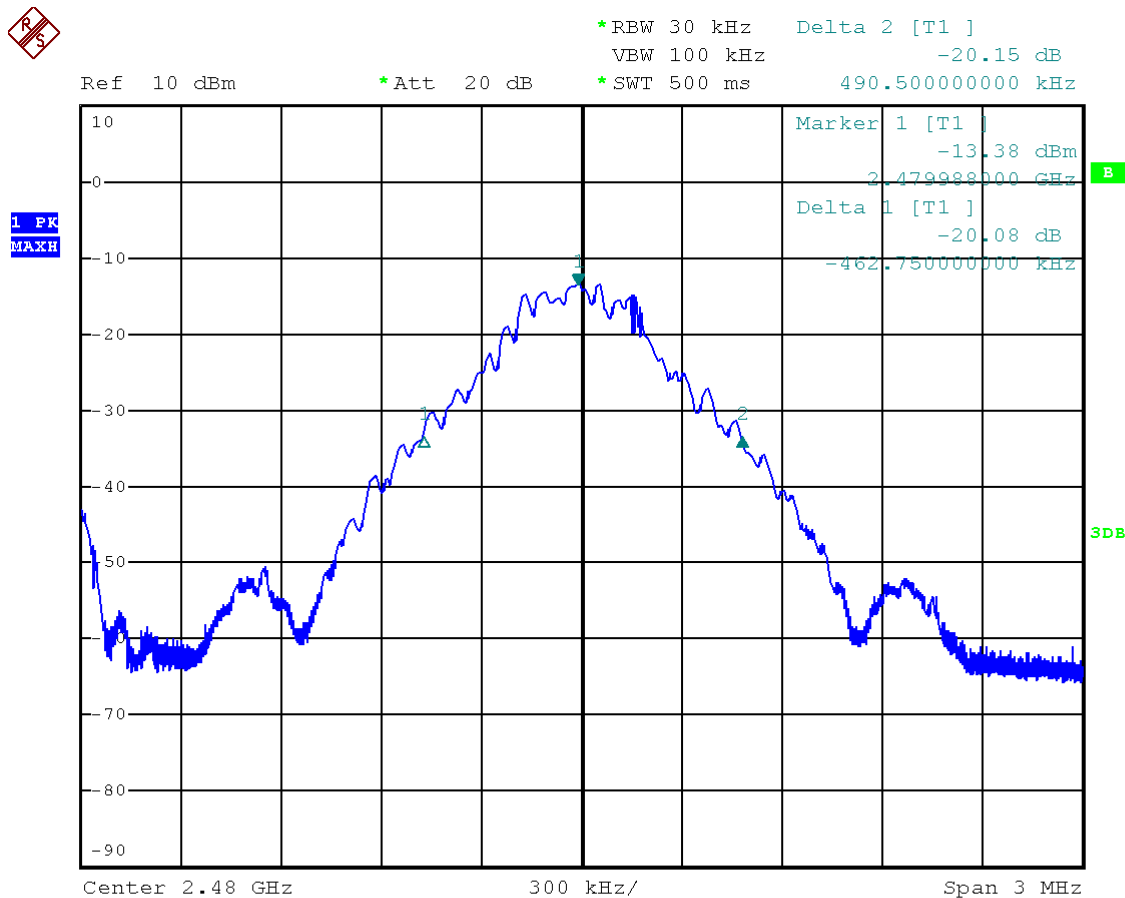
Report No. : AA0015629(1)

Date : 31 Mar 2021

Emission Bandwidth 20 dB (2480 MHz; GFSK; DH5)

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2480.000000	0.953250	---	---



FCC ID: 2AVGC3CBT011

TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2480 MHz; GFSK; DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2480.000000	0.867750	---	---

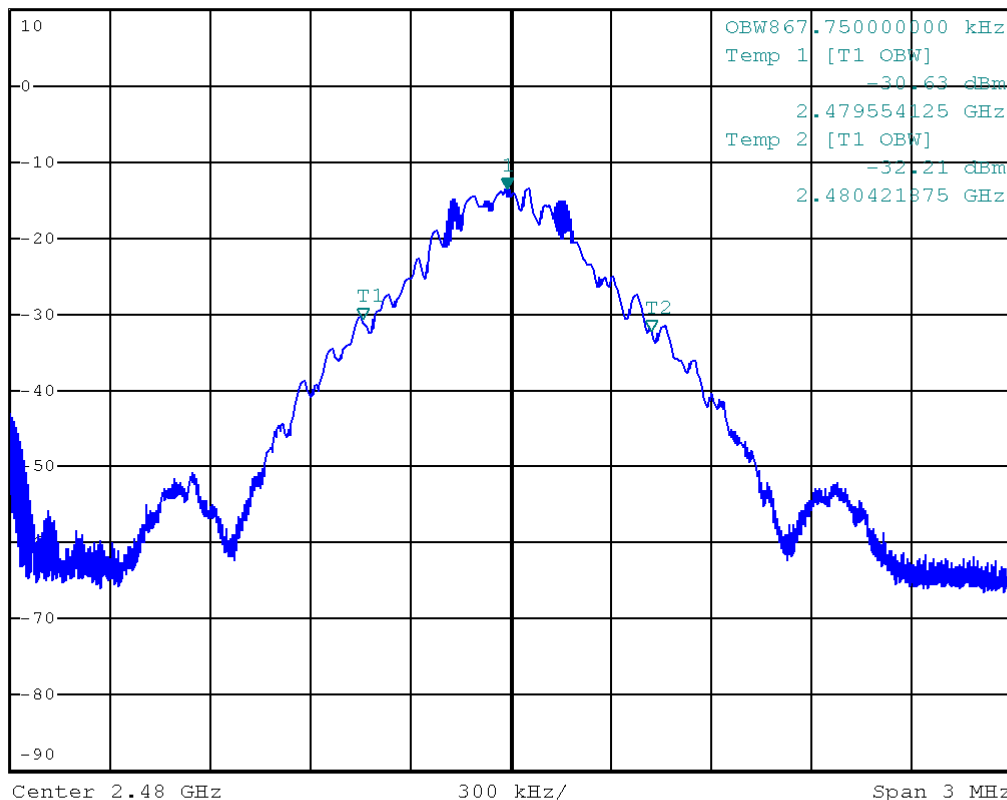


*RBW 30 kHz Marker 1 [T1]
 VBW 100 kHz -13.47 dBm
 *SWT 500 ms 2.479989875 GHz

Ref 10 dBm

*Att 20 dB

1 PK
MAXH



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CMA Industrial Development Foundation Limited

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Tel: (852) 2698 8198 Fax: (852) 2695 4177 E-mail: info@cmatesting.org Web Site: <http://www.cmatesting.org>

TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Emission Bandwidth 20 dB (2402 MHz; $\pi/4$ DQPSK; 2DH5)

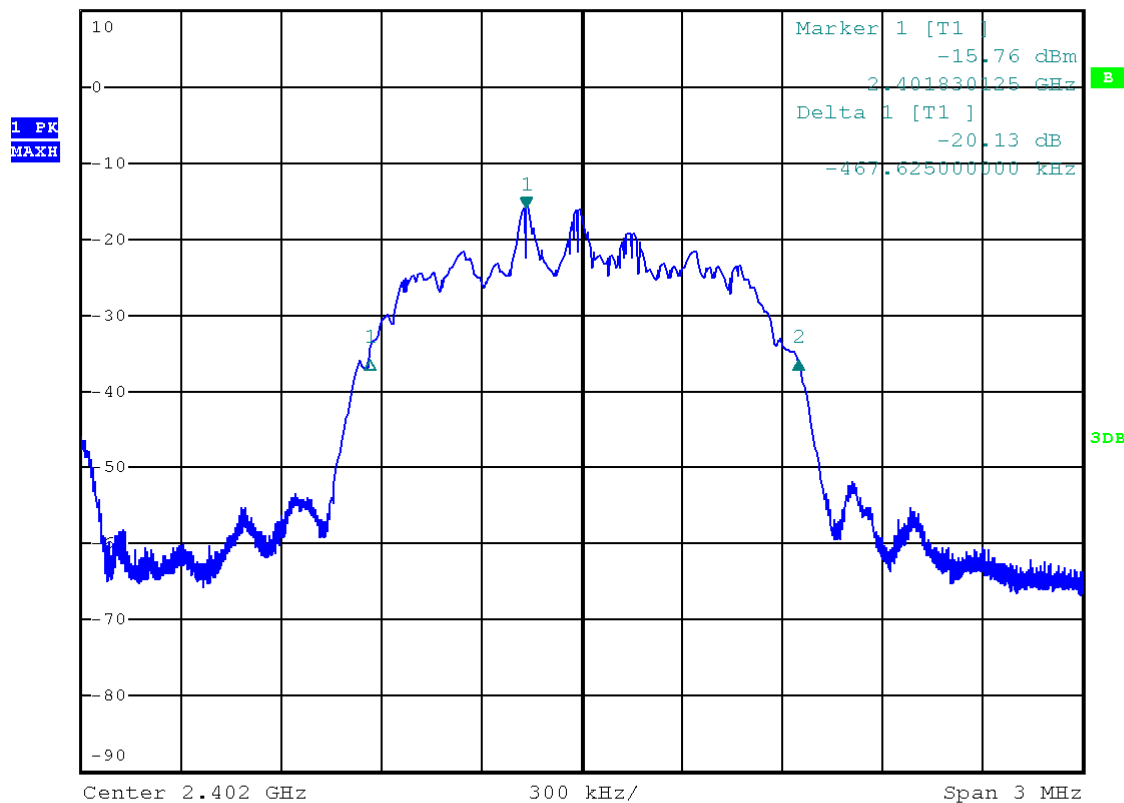
20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2402.000000	1.284000	---	---



*RBW 30 kHz Delta 2 [T1]
 VBW 100 kHz -20.08 dB
 *Att 20 dB *SWT 500 ms 816.375000000 kHz

Ref 10 dBm



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TEST REPORT

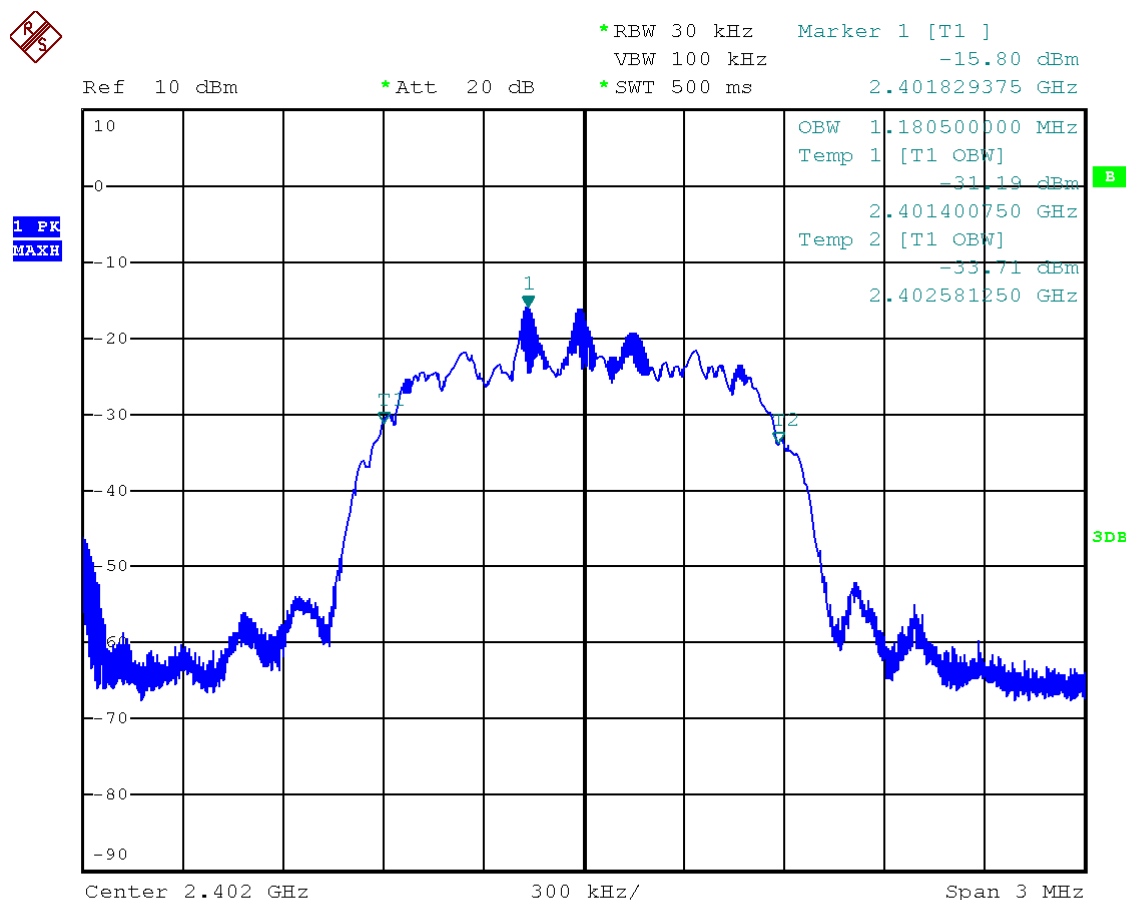
Report No. : AA0015629(1)

Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2402 MHz; $\pi/4$ DQPSK; 2DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2402.000000	1.180500	---	---



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TEST REPORT

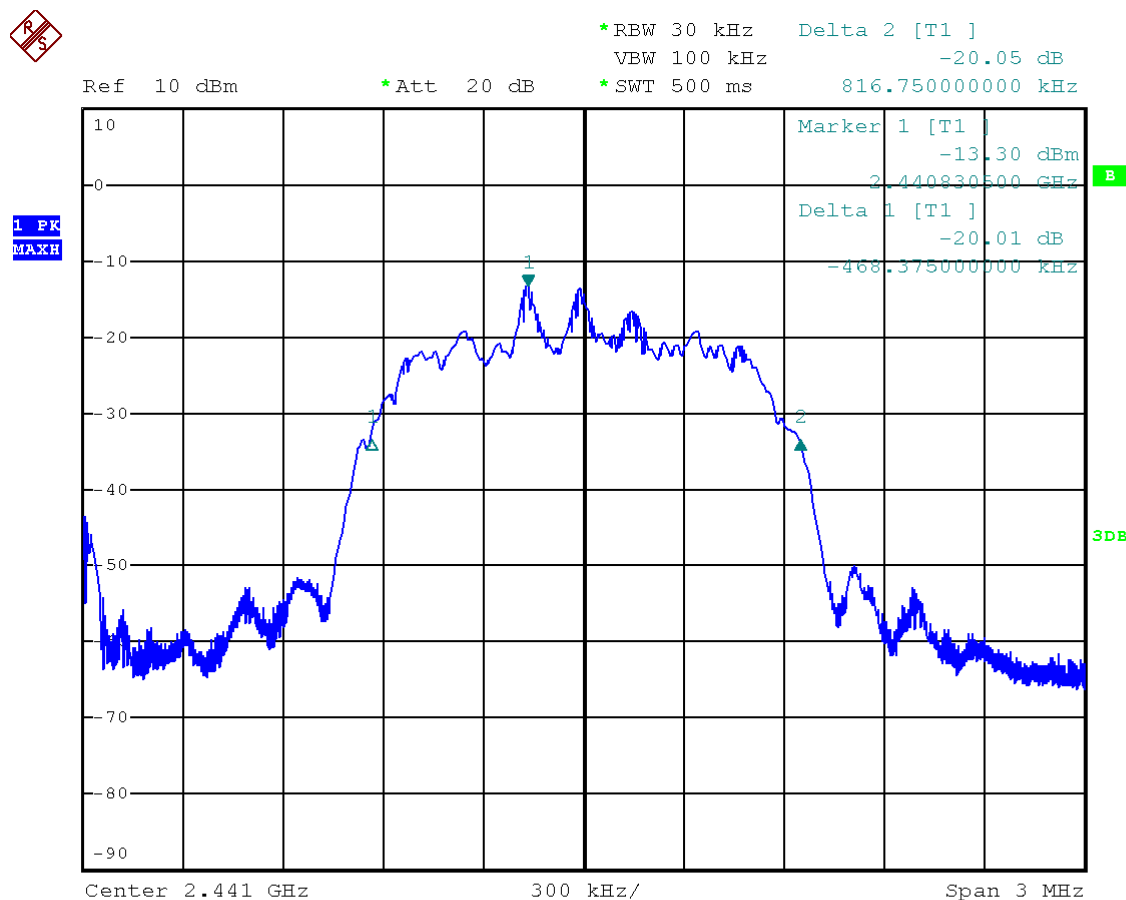
Report No. : AA0015629(1)

Date : 31 Mar 2021

Emission Bandwidth 20 dB (2441 MHz; $\pi/4$ DQPSK; 2DH5)

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2441.000000	1.285125	---	---



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Report No. : AA0015629(1)

Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2441 MHz; $\pi/4$ DQPSK; 2DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2441.000000	1.172250	---	---



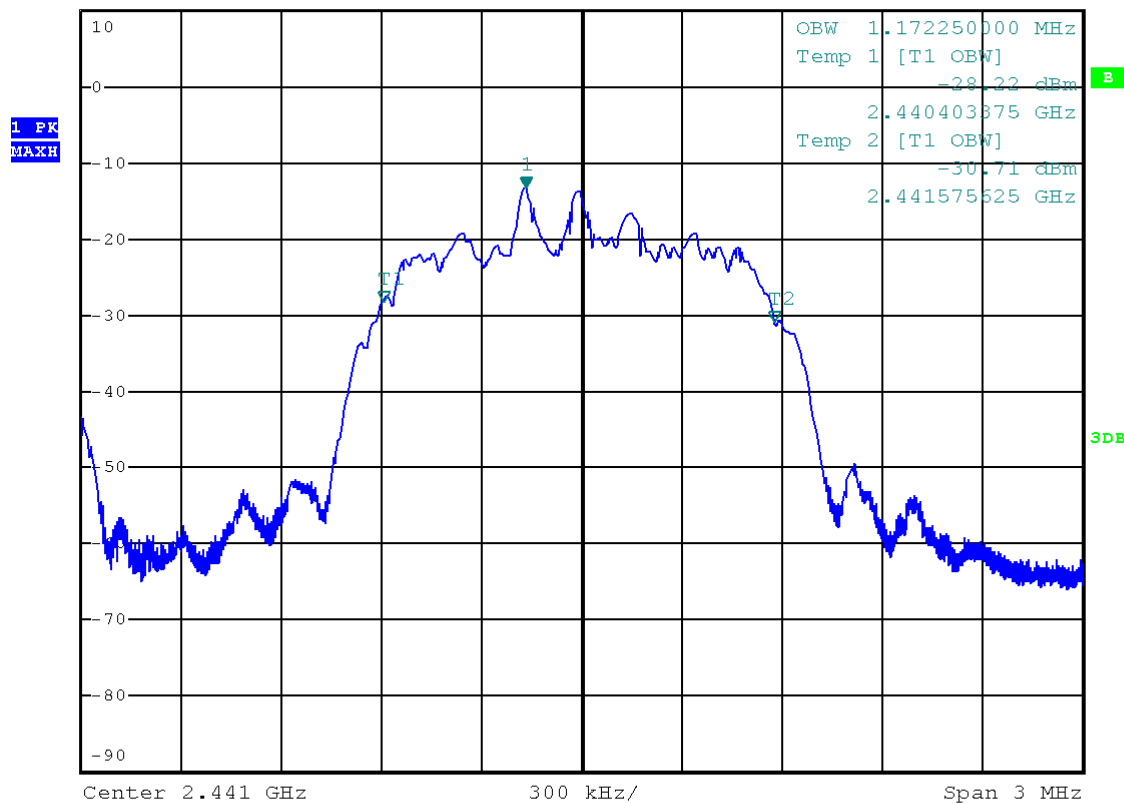
*RBW 30 kHz Marker 1 [T1]
 VBW 100 kHz -13.31 dBm
 *Att 20 dB *SWT 500 ms 2.440830500 GHz

Ref 10 dBm

*Att 20 dB

*SWT 500 ms

2.440830500 GHz



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TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2480 MHz; $\pi/4$ DQPSK; 2DH5)

99 % Bandwidth

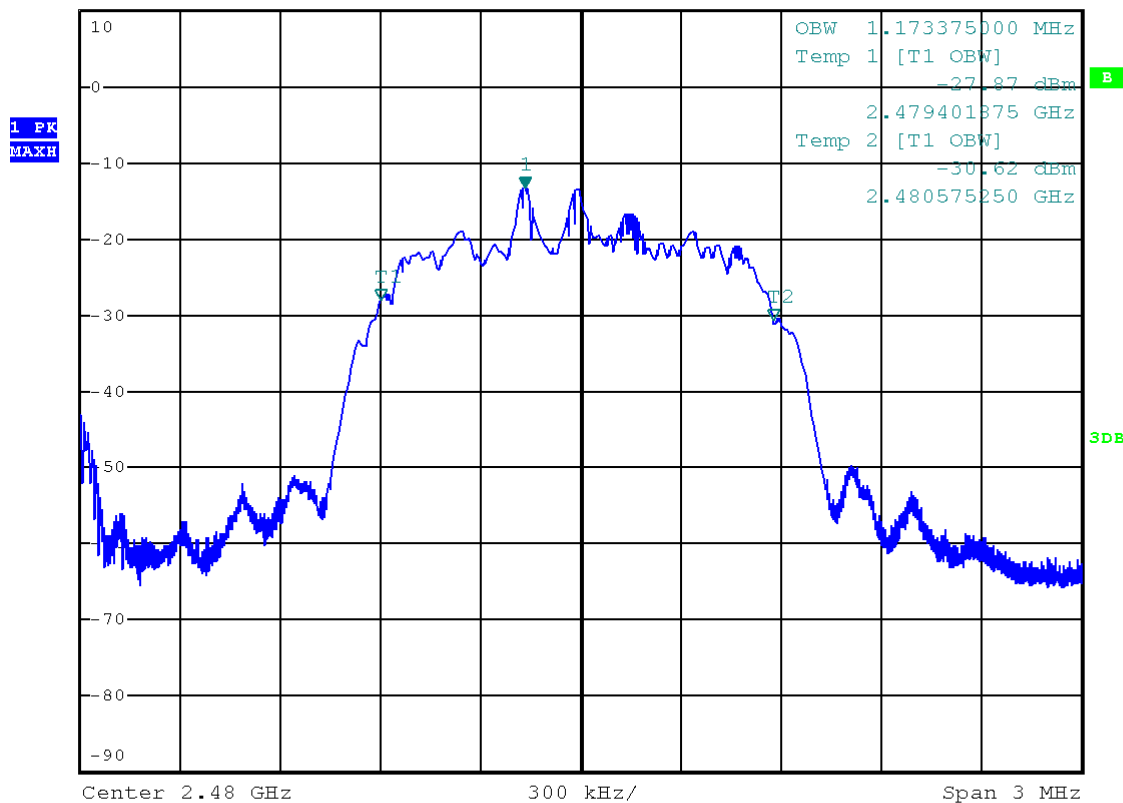
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2480.000000	1.173375	---	---



*RBW 30 kHz Marker 1 [T1]
 VBW 100 kHz -13.11 dBm
 *SWT 500 ms 2.479830125 GHz

Ref 10 dBm

*Att 20 dB



FCC ID: 2AVGC3CBT011

TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Emission Bandwidth 20 dB (2402 MHz; 8DPSK; 3DH5)

20 dB Bandwidth

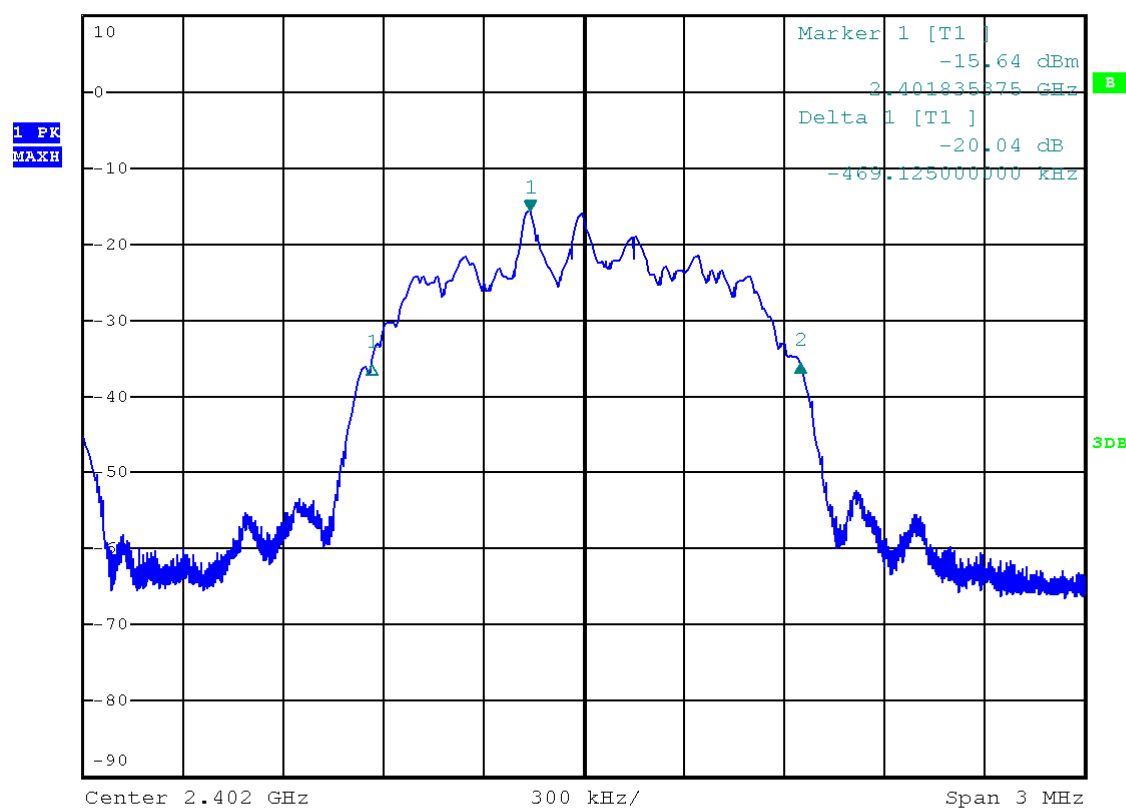
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2402.000000	1.283625	---	---



*RBW 30 kHz Delta 2 [T1]
 VBW 100 kHz -20.00 dB
 *SWT 500 ms 814.500000000 kHz

Ref 10 dBm

*Att 20 dB



FCC ID: 2AVGC3CBT011

TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2402 MHz; 8DPSK; 3DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2402.000000	1.169250	---	---



*RBW 30 kHz Marker 1 [T1]
 VBW 100 kHz -15.68 dBm
 *Att 20 dB 2.401834625 GHz
 *SWT 500 ms

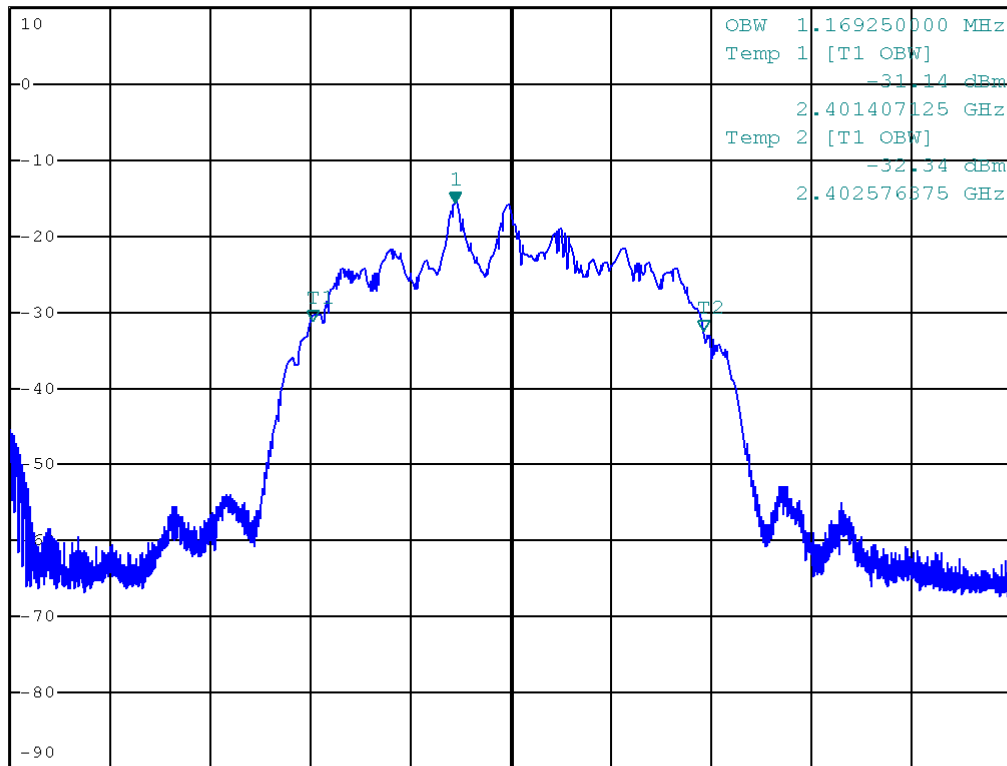
Ref 10 dBm

*Att 20 dB

*SWT 500 ms

2.401834625 GHz

1 PK
MAXH



Center 2.402 GHz

300 kHz/

Span 3 MHz

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TEST REPORT

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Date : 31 Mar 2021

Emission Bandwidth 20 dB (2441 MHz; 8DPSK; 3DH5)

20 dB Bandwidth

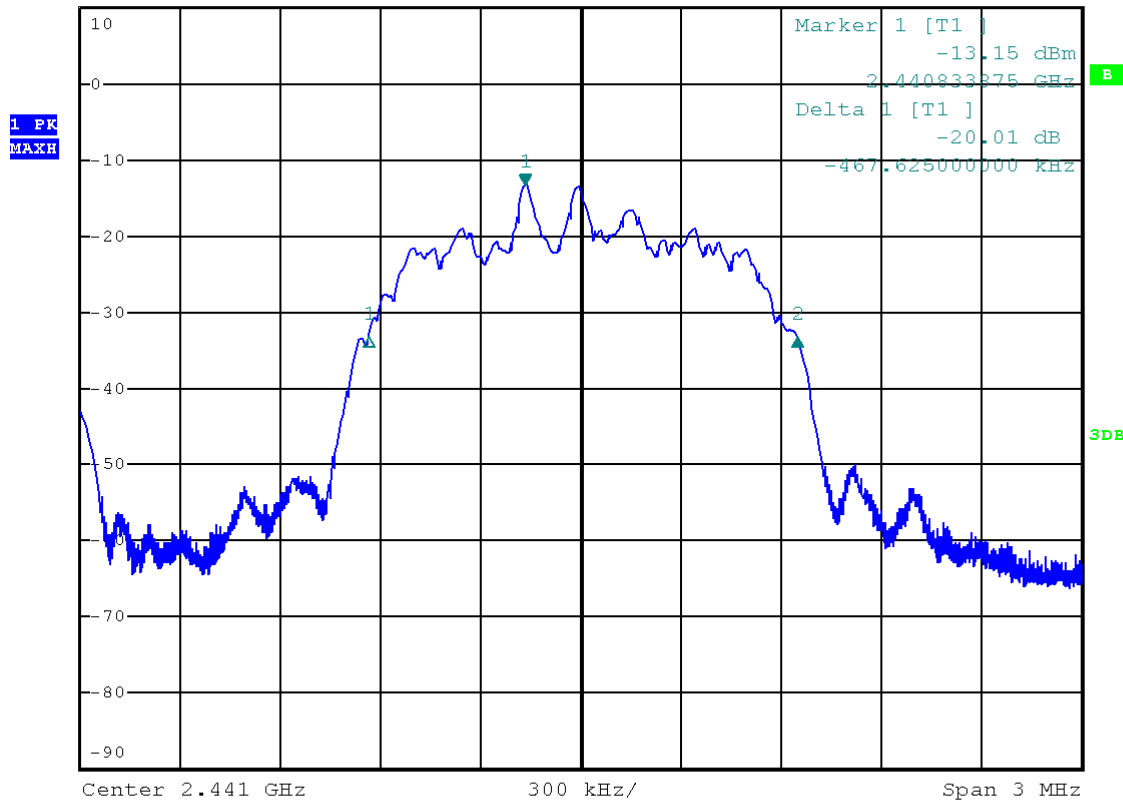
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2441.000000	1.281375	---	---



*RBW 30 kHz Delta 2 [T1]
 VBW 100 kHz -20.05 dB
 *SWT 500 ms 813.750000000 kHz

Ref 10 dBm

*Att 20 dB



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Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2441 MHz; 8DPSK; 3DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2441.000000	1.170000	---	---

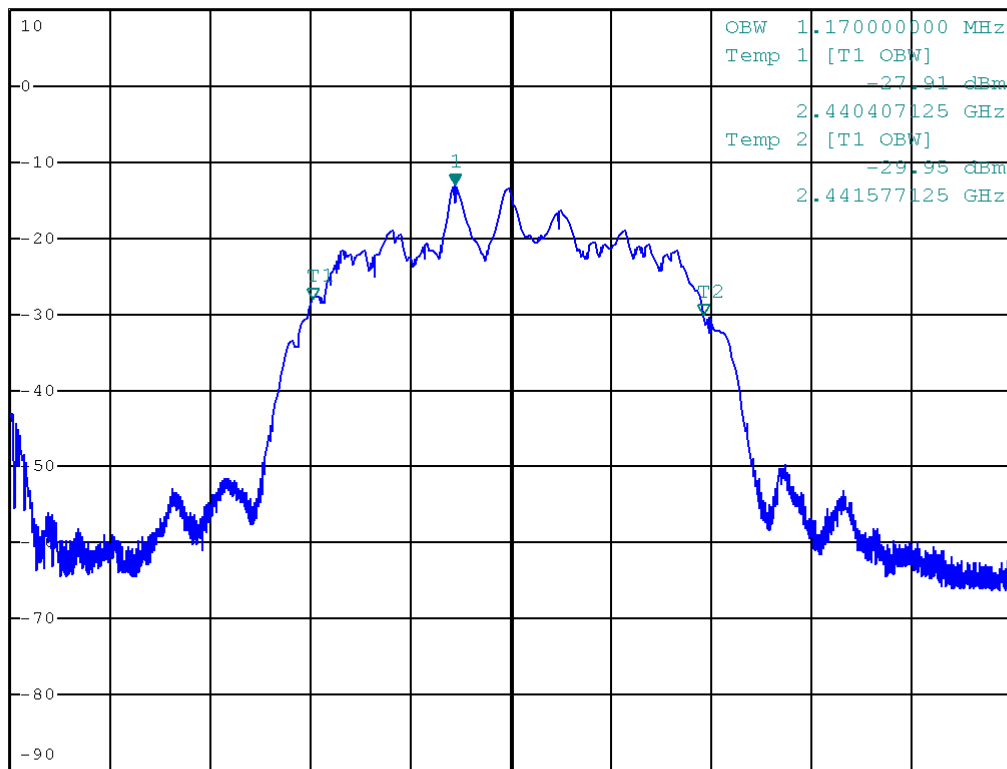


*RBW 30 kHz Marker 1 [T1]
 VBW 100 kHz -13.06 dBm
 *SWT 500 ms 2.440834250 GHz

Ref 10 dBm

*Att 20 dB

1 PK
MAXH



Center 2.441 GHz

300 kHz/

Span 3 MHz

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TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Emission Bandwidth 20 dB (2480 MHz; 8DPSK; 3DH5)

20 dB Bandwidth

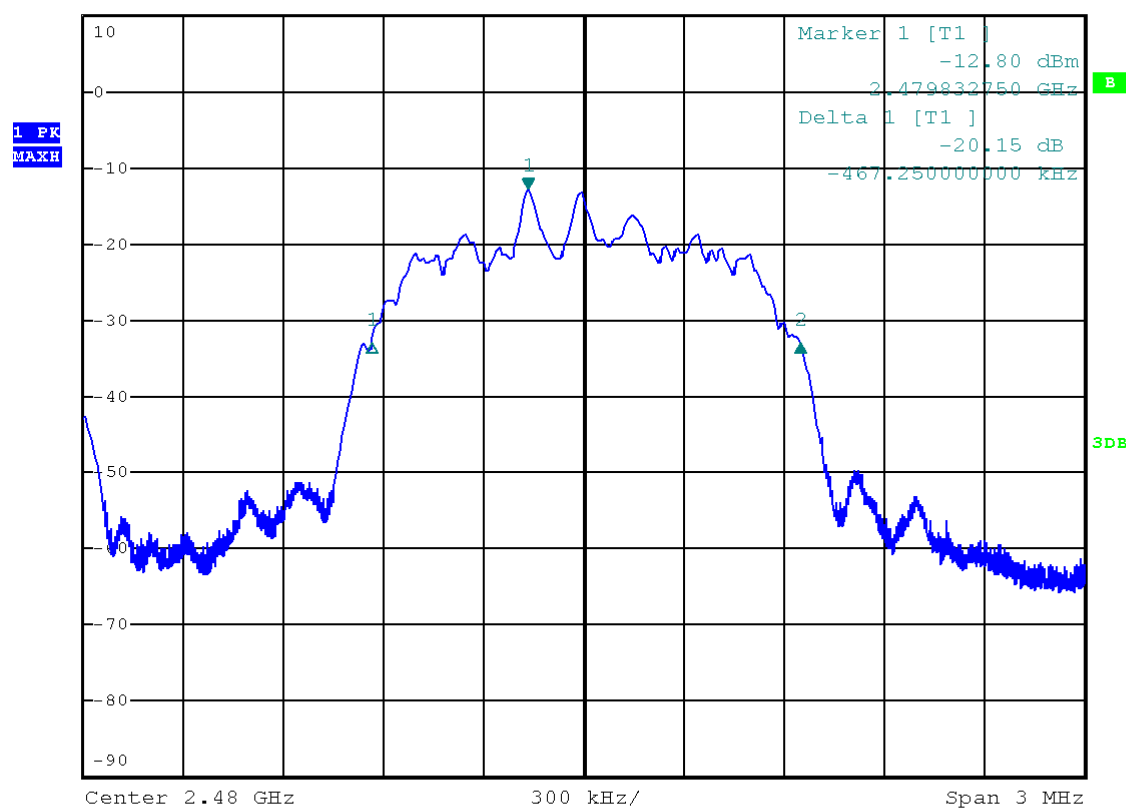
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2480.000000	1.281750	---	---



*RBW 30 kHz Delta 2 [T1]
 VBW 100 kHz -20.07 dB
 *SWT 500 ms 814.500000000 kHz

Ref 10 dBm

*Att 20 dB



FCC ID: 2AVGC3CBT011

TEST REPORT

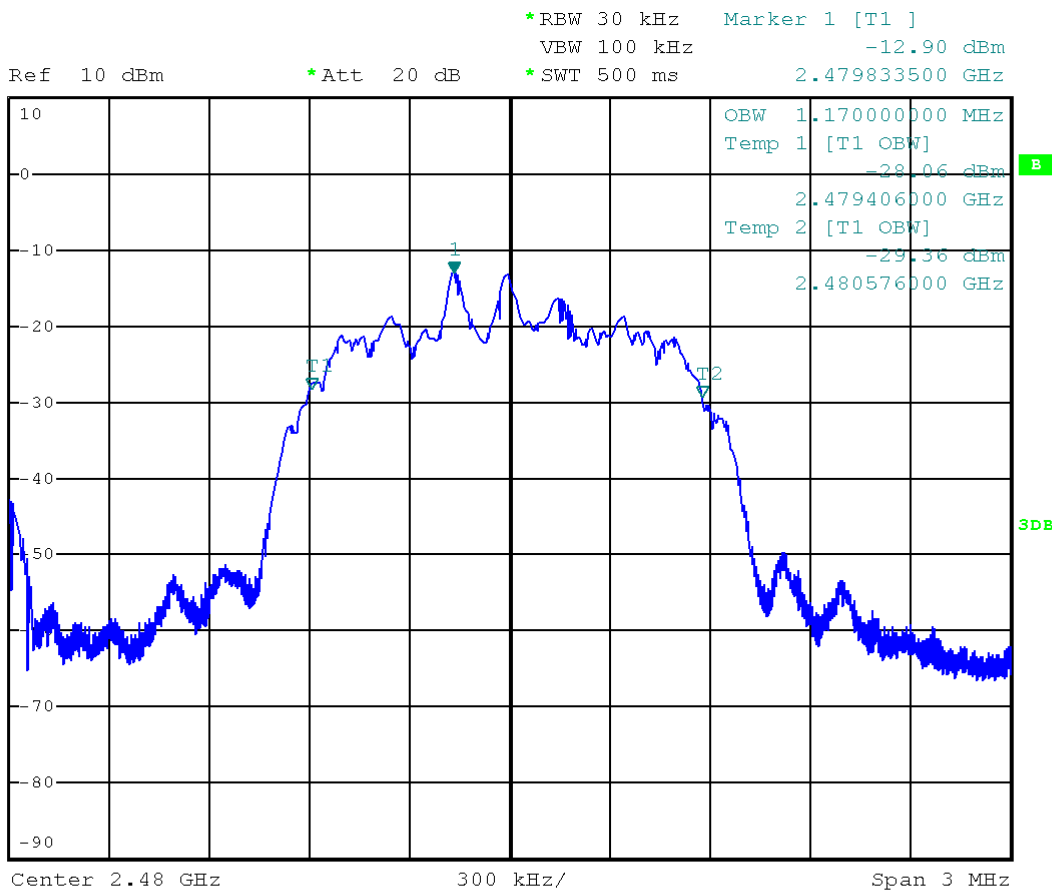
Report No. : AA0015629(1)

Date : 31 Mar 2021

Occupied Channel Bandwidth 99% (2480 MHz; 8DPSK; 3DH5)

99 % Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)
2480.000000	1.170000	---	---



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TEST REPORT

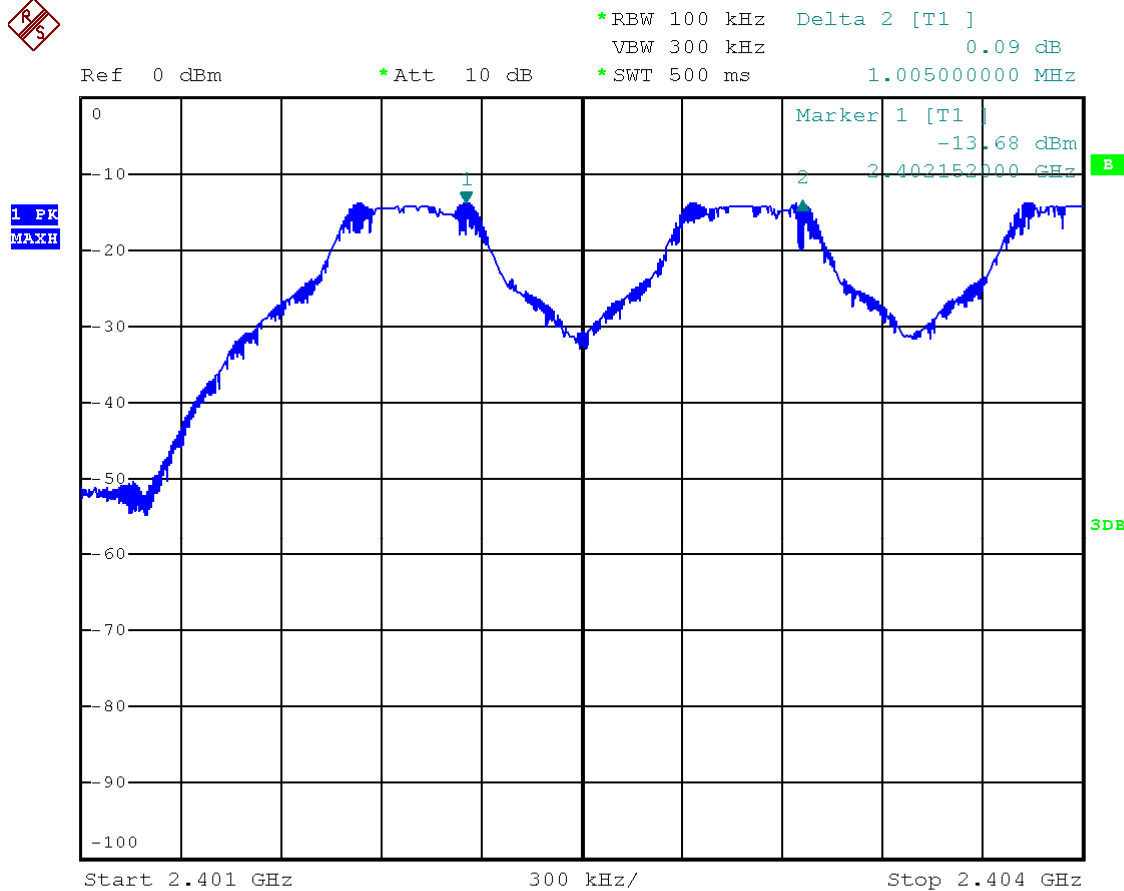
Report No. : AA0015629(1)

Date : 31 Mar 2021

Carrier Frequency Separation (2402 MHz; GFSK; DH5)

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)
2402.000000	1.005000	0.635500	---



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TEST REPORT

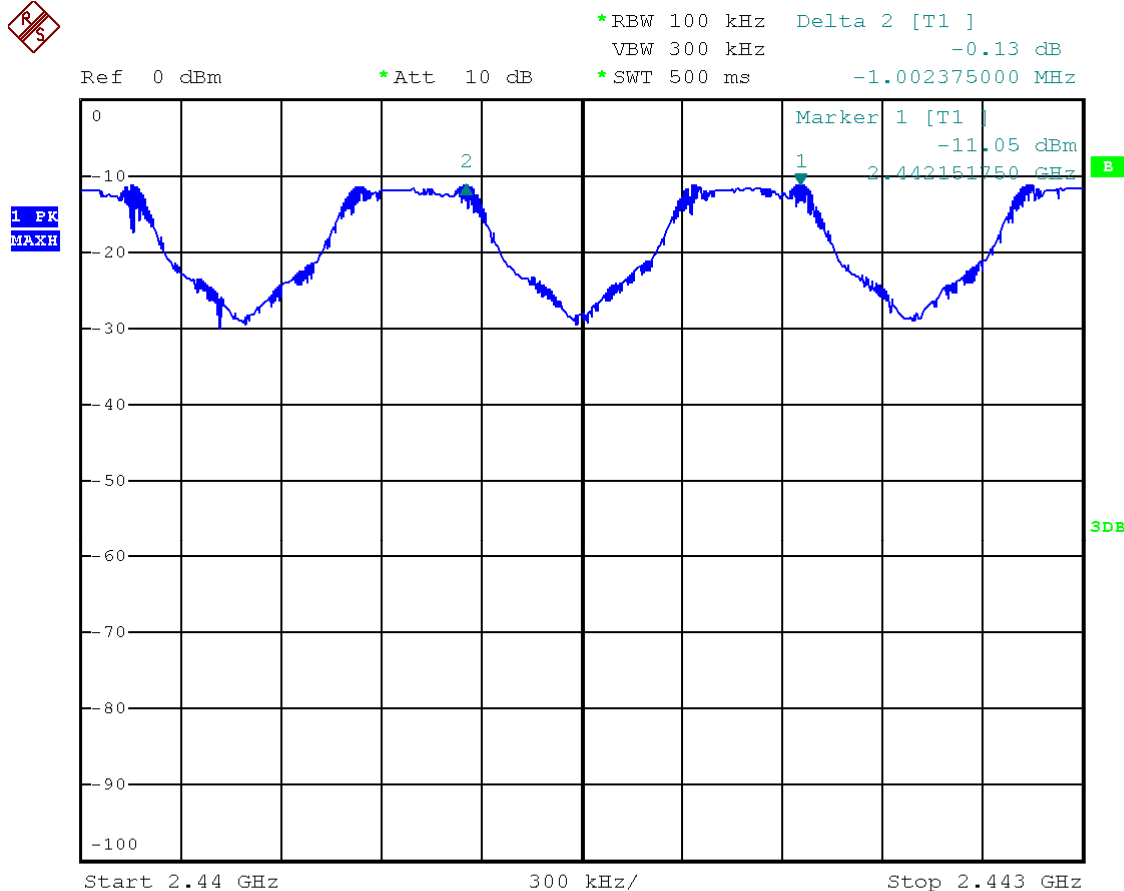
Report No. : AA0015629(1)

Date : 31 Mar 2021

Carrier Frequency Separation (2441 MHz; GFSK; DH5)

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)
2441.000000	1.002375	0.635500	---



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TEST REPORT

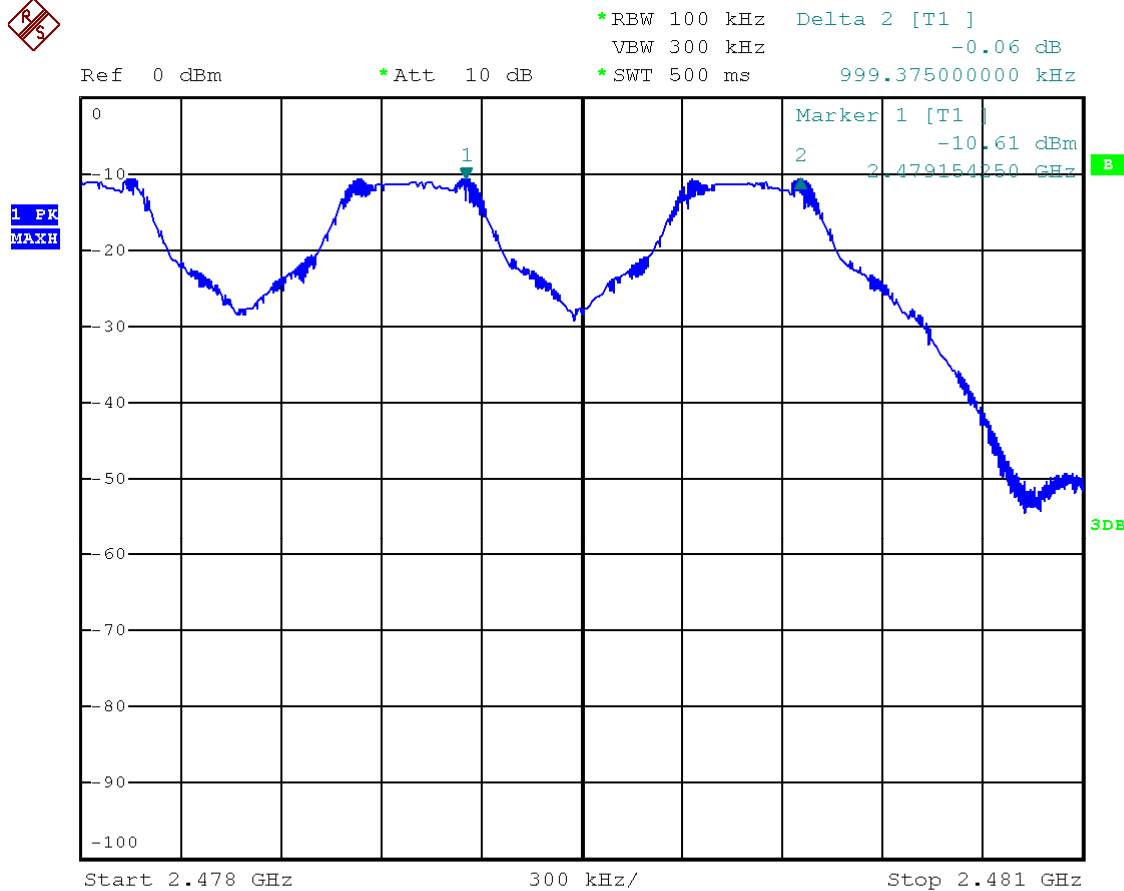
Report No. : AA0015629(1)

Date : 31 Mar 2021

Carrier Frequency Separation (2479 MHz; GFSK; DH5)

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)
2479.000000	0.999375	0.635500	---



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TEST REPORT

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Date : 31 Mar 2021

Band Edge low (Hopping; GFSK; DH5)

Result

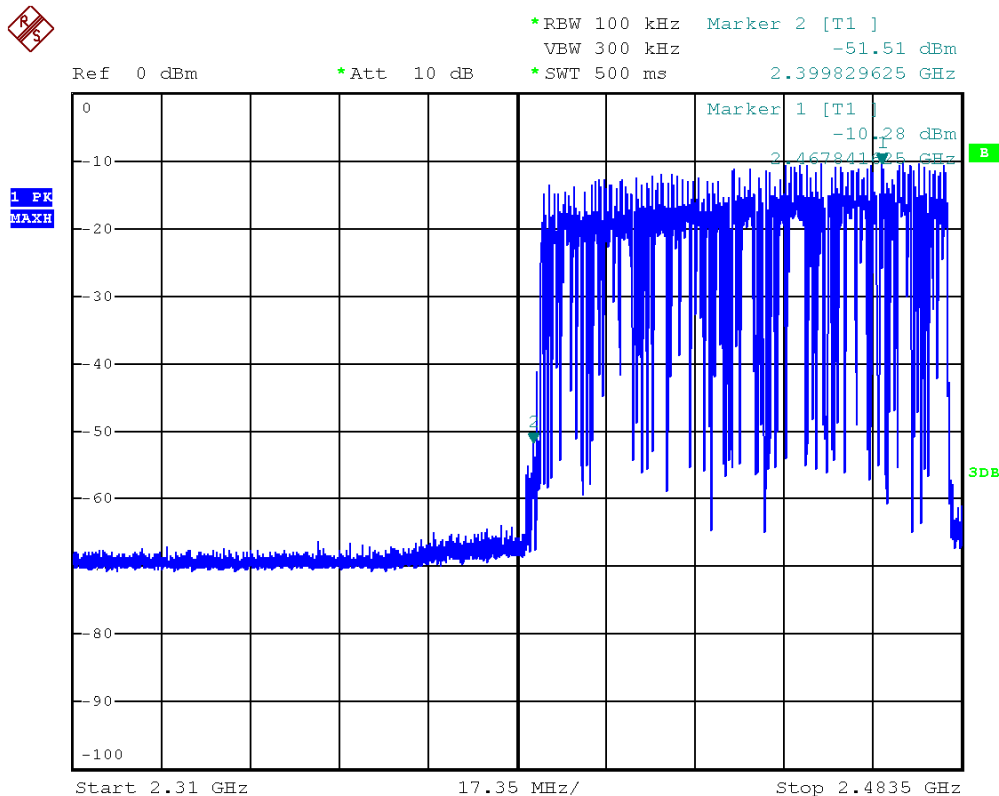
DUT Frequency (MHz)	Result
hopping	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2425.025000	-11.7

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2395.325000	-55.8	14.2	-41.7	PASS



FCC ID: 2AVGC3CBT011

TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Band Edge high (Hopping; GFSK; DH5)

Result

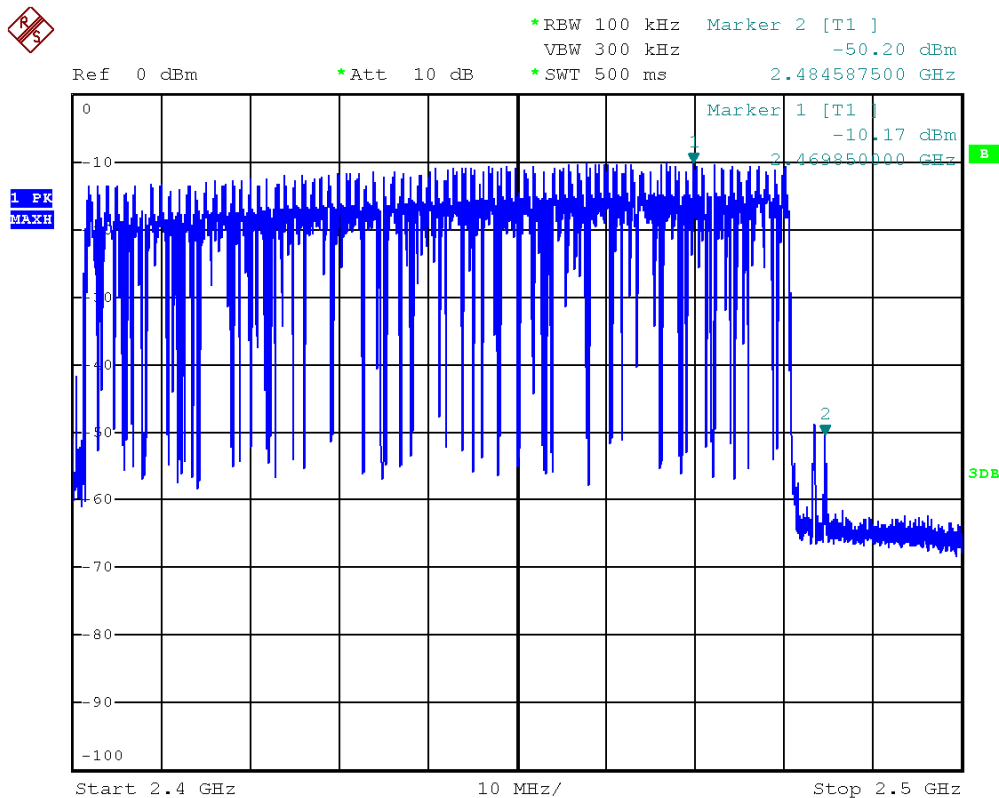
DUT Frequency (MHz)	Result
hopping	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2426.025000	-11.7

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.825000	-57.8	16.1	-41.7	PASS



FCC ID: 2AVGC3CBT011

TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Band Edge low (2402 MHz; GFSK; DH5)

Result

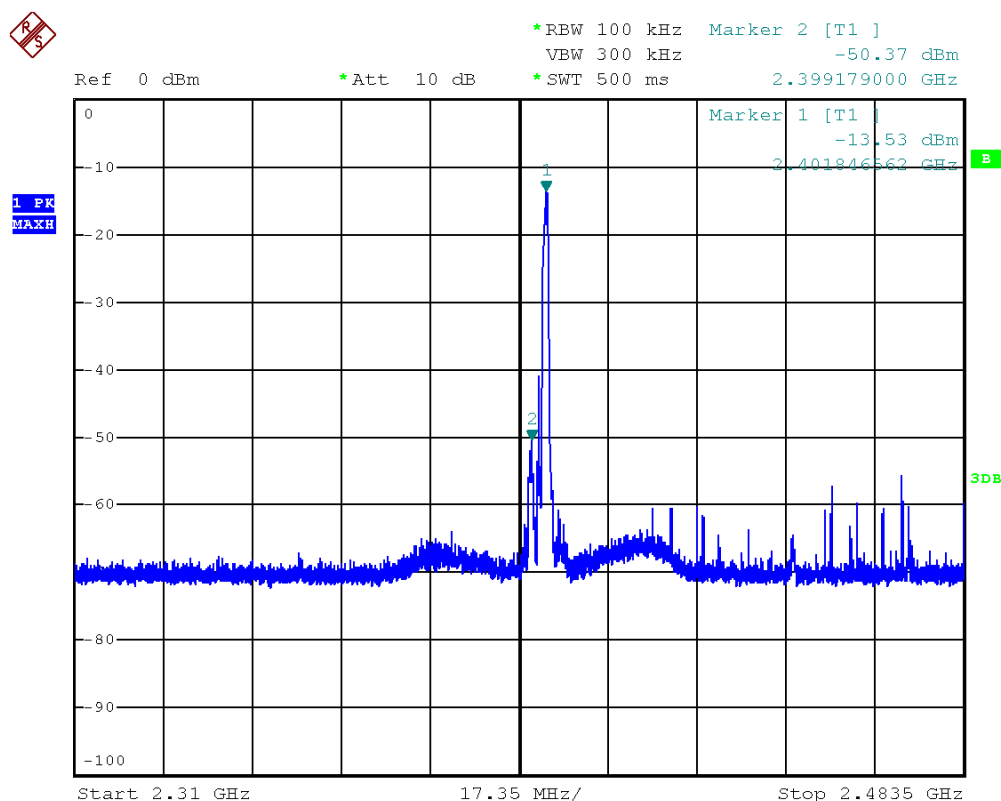
DUT Frequency (MHz)	Result
2402.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2402.025000	-12.5

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.825000	-52.5	10.0	-42.5	PASS



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TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

Band Edge high (2480 MHz; GFSK; DH5)

Result

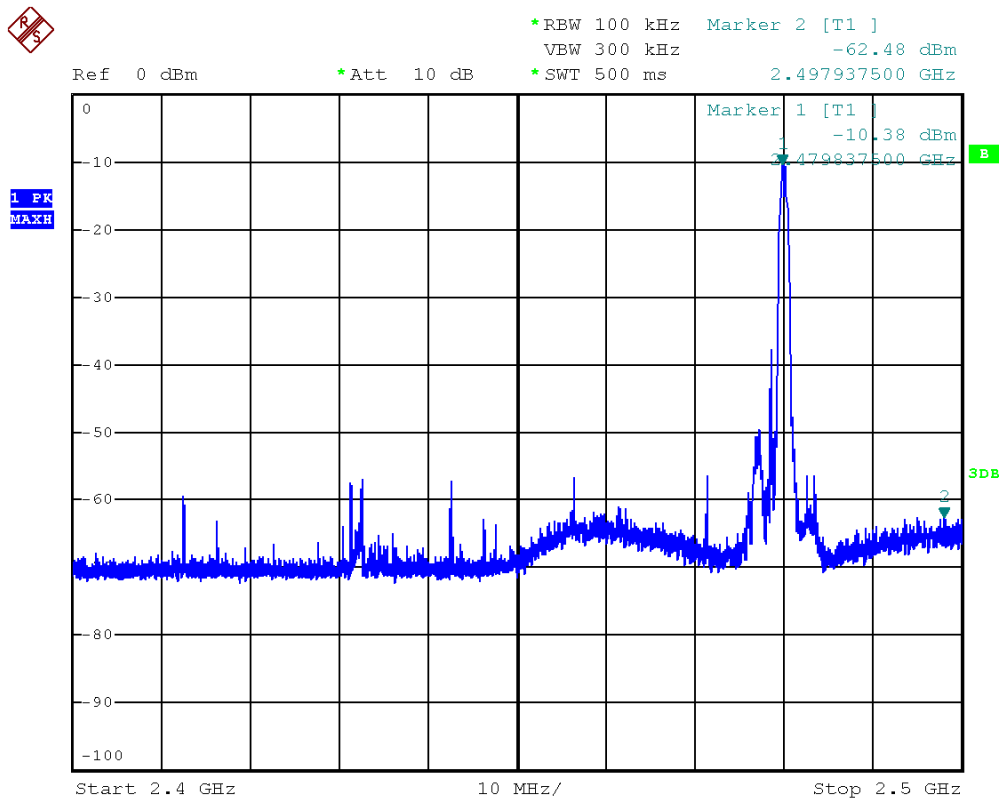
DUT Frequency (MHz)	Result
2480.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2480.025000	-12.2

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.275000	-56.3	14.0	-42.2	PASS



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TEST REPORT

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Date : 31 Mar 2021

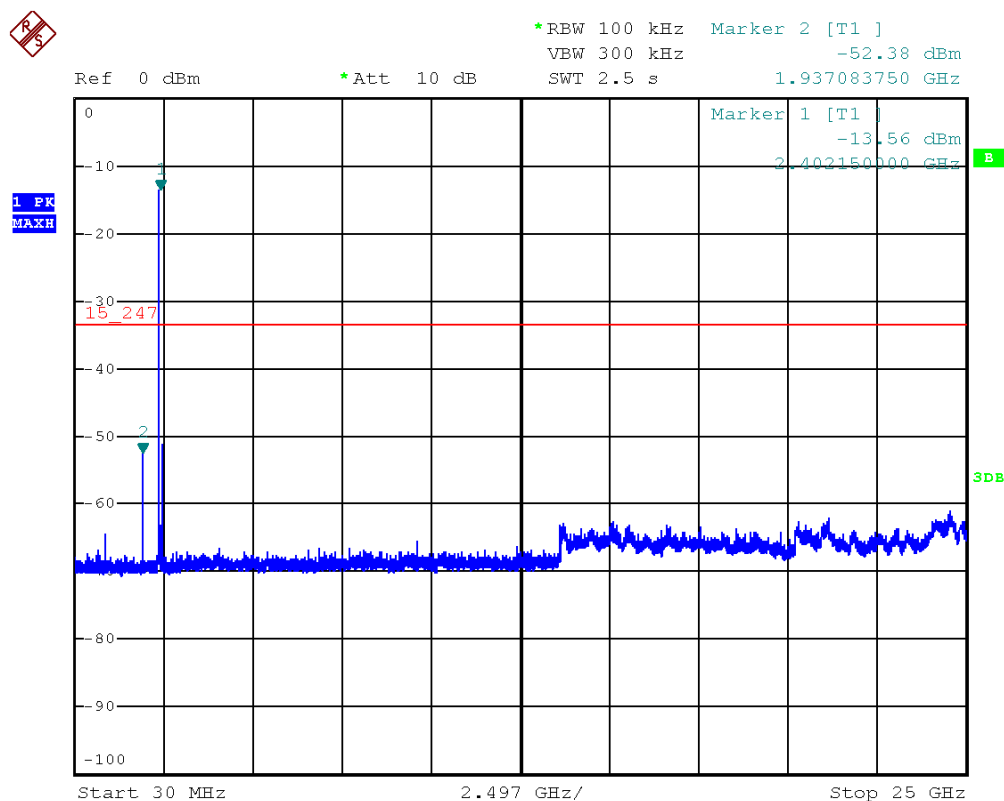
Tx Spurious Emission (2402 MHz; GFSK; DH5)

Result Inband Peak

Frequency (MHz)	Level (dBm)
2402.000	-13.56

Final measurements

Frequency (MHz)	level (dBm)	Limit (dBm)	Margin (dB)	Result
1937.083750	-52.38	-33.56	18.82	PASS



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Date : 31 Mar 2021

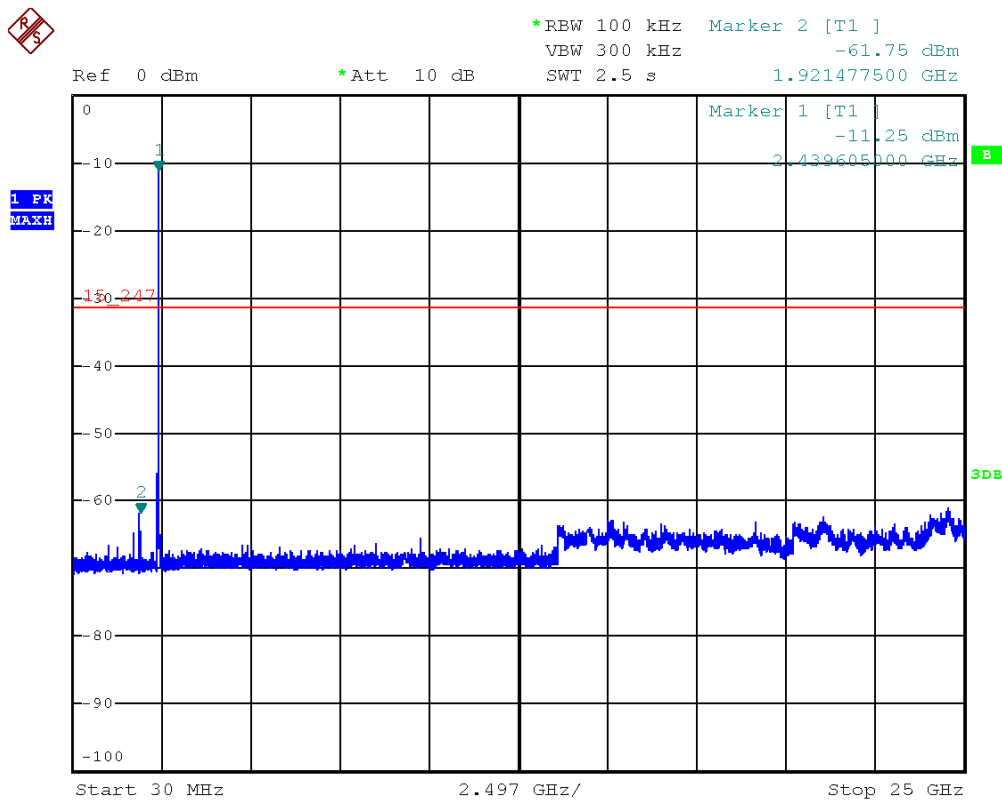
Tx Spurious Emission (2441 MHz; GFSK;DH5)

Result Inband Peak

Frequency (MHz)	Level (dBm)
2441.000	-11.25

Final measurements

Frequency (MHz)	level (dBm)	Limit (dBm)	Margin (dB)	Result
1921.477500	-61.75	-31.25	30.50	PASS



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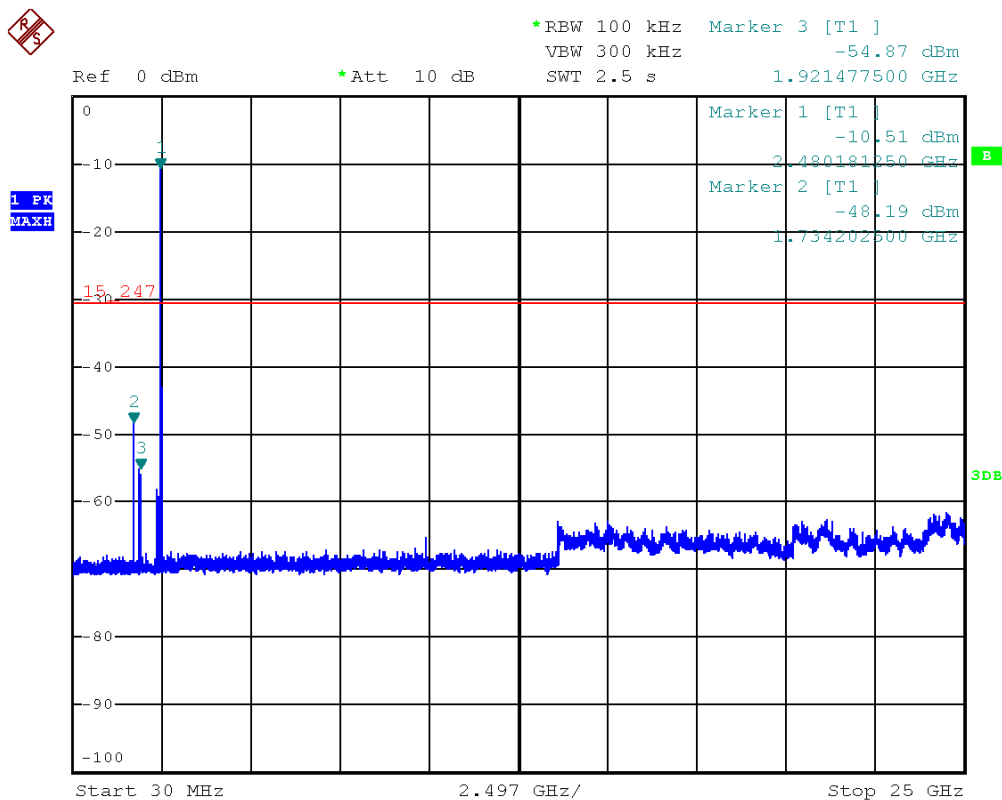
Tx Spurious Emission (2480 MHz; GFSK;DH5)

Result Inband Peak

Frequency (MHz)	Level (dBm)
2480.000	-10.51

Final measurements

Frequency (MHz)	level (dBm)	Limit (dBm)	Margin (dB)	Result
1734.202500	-48.19	-30.51	17.68	PASS
1921.477500	-54.87	-30.51	24.36	PASS



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TEST REPORT

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Date : 31 Mar 2021

Conducted Emission

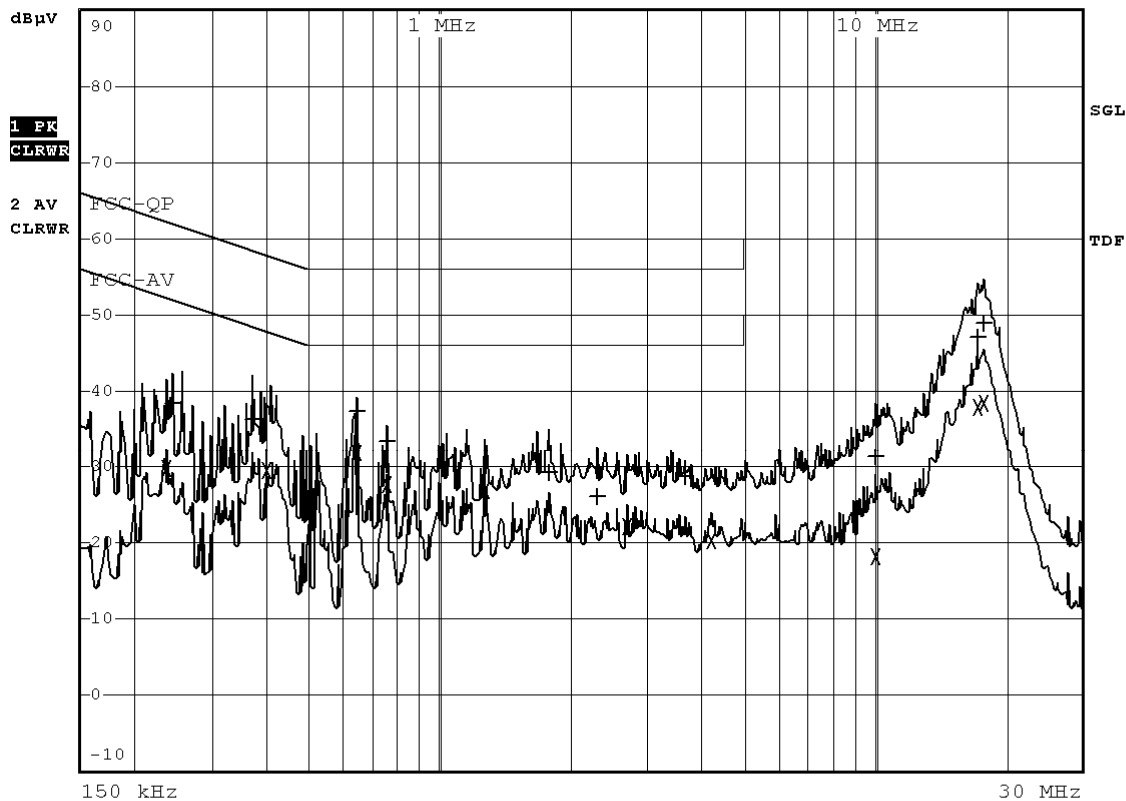
Test mode: charging



RBW 9 kHz

MT 1 s

Att 10 dB AUTO PREAMP OFF



FCC ID: 2AVGC3CBT011



TEST REPORT

Report No. : AA0015629(1)

Date : 31 Mar 2021

EDIT PEAK LIST (Final Measurement Results)				
Trace1:	FCC-QP			
Trace2:	FCC-AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV		DELTA LIMIT dB
2 Average	235.5 kHz	29.78	L1 gnd	-22.46
1 Quasi Peak	244.5 kHz	38.32	N gnd	-23.61
1 Quasi Peak	375 kHz	36.29	L1 gnd	-22.09
2 Average	402 kHz	29.51	L1 gnd	-18.30
1 Quasi Peak	639.5 kHz	37.49	L1 gnd	-18.50
2 Average	639.5 kHz	31.82	L1 gnd	-14.17
1 Quasi Peak	752 kHz	33.43	L1 gnd	-22.57
2 Average	752 kHz	27.72	L1 gnd	-18.27
2 Average	1.274 MHz	26.81	L1 gnd	-19.18
1 Quasi Peak	1.7915 MHz	29.29	L1 gnd	-26.70
1 Quasi Peak	2.3135 MHz	26.03	L1 gnd	-29.96
2 Average	2.705 MHz	22.13	L1 gnd	-23.86
1 Quasi Peak	3.6635 MHz	28.63	L1 gnd	-27.36
2 Average	4.208 MHz	20.22	L1 gnd	-25.77
1 Quasi Peak	10.0355 MHz	31.22	L1 gnd	-28.77
2 Average	10.0355 MHz	18.16	N gnd	-31.83
1 Quasi Peak	17.2625 MHz	47.03	L1 gnd	-12.96
2 Average	17.3435 MHz	37.79	L1 gnd	-12.20
1 Quasi Peak	17.888 MHz	48.83	L1 gnd	-11.16
2 Average	17.888 MHz	38.43	L1 gnd	-11.56

***** End of Report *****

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