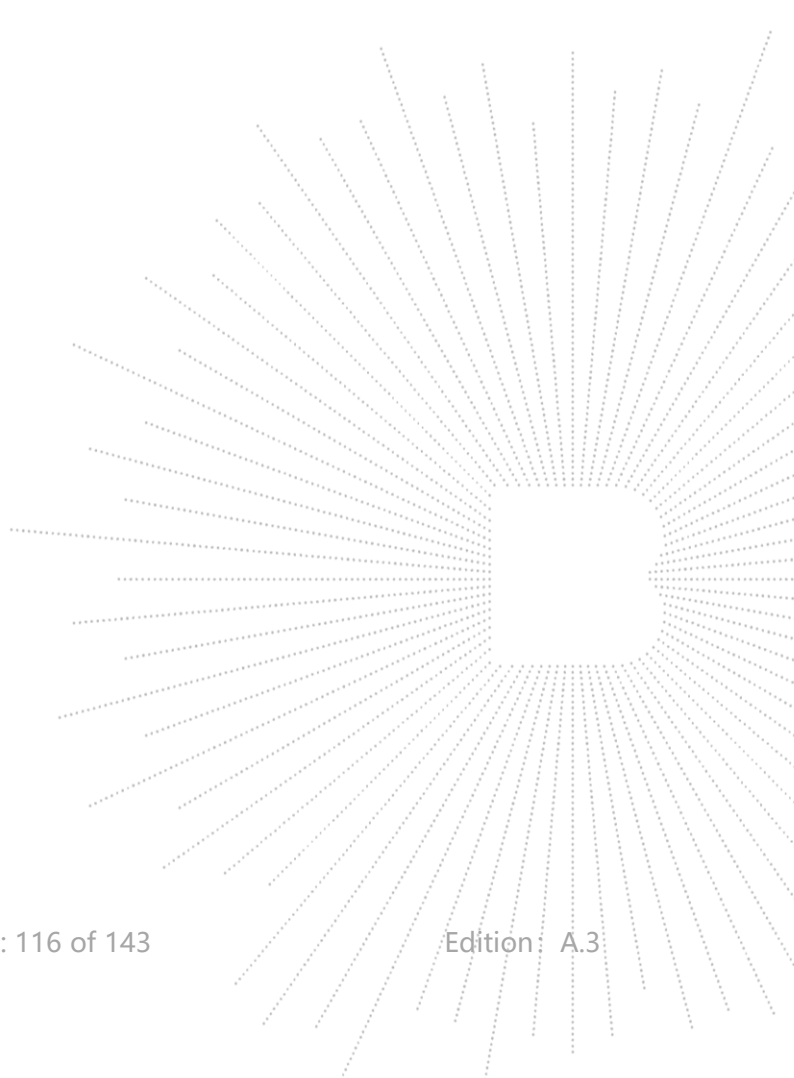


11.5 Test Result

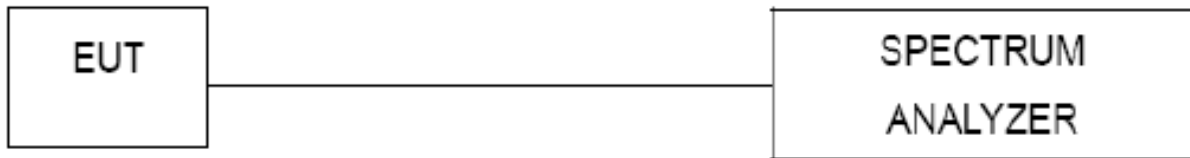
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5V
Operation Mode:	GFSK		

Bluetooth Device Address: 65-16-12-BC-C7-93



12. Dwell Time

12.1 Block Diagram Of Test Setup



12.2 Limit

Item	Limits
Hopping Freq. Dwell Time	$\leq 0.4 \text{ sec (In } 0.4 \text{ sec} \times \text{ spreading rate)}$

12.3 Measuring Instruments And Setting

Please refer to section 5 in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 Hz
RB	1 MHz
VB	1 MHz
Detector	Peak
Trace	Max Hold
Sweep	Continuous

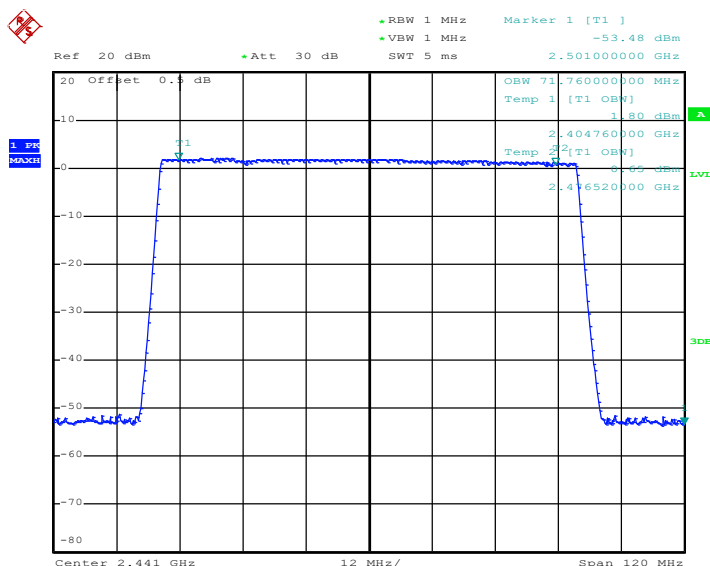
12.4 Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer
2. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
3. Use a video trigger with the trigger level set to enable triggering only on full pulses.
4. Sweep Time is more than once pulse time.
5. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
6. Measure the maximum time duration of one single pulse.
7. Set the EUT for DH5, DH3 and DH1 packet transmitting.
8. Measure the maximum time duration of one single pulse.
9. Dwell time = [spreading rate/79] x duty-cycle x 0.4 seconds. (to be determined for each mode, DH1, DH3, DH5)

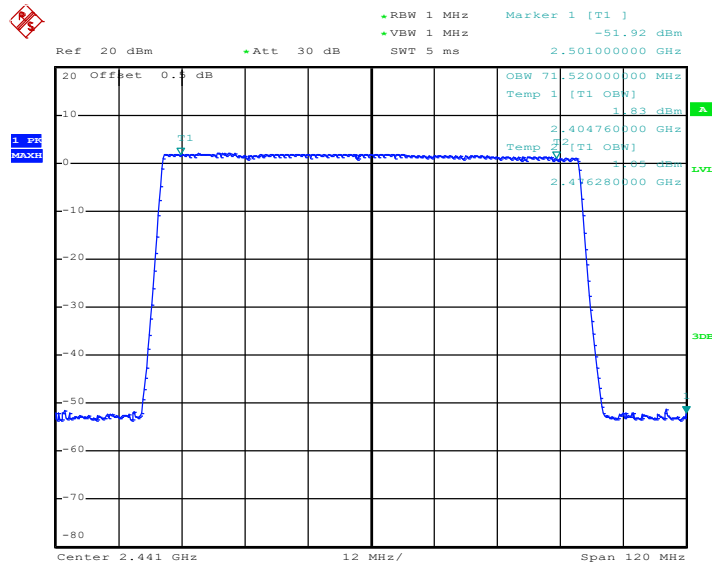
12.5 Test Result

Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5V
Test Mode:	GFSK		

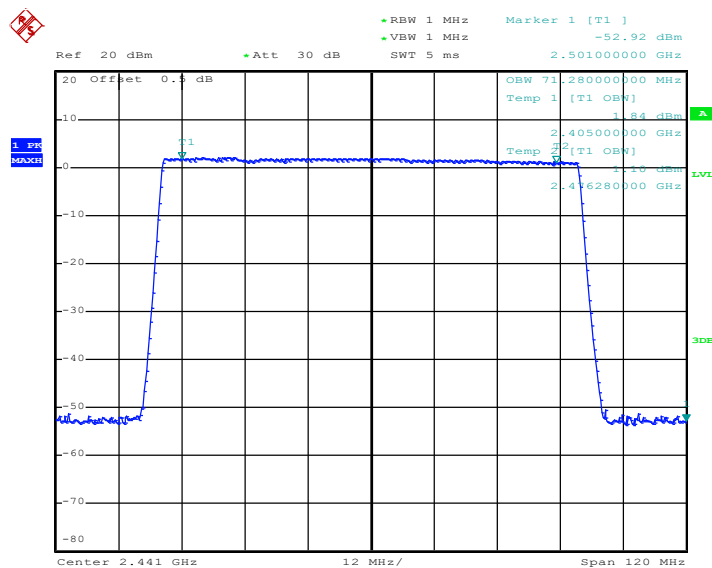
Data Packet	90% Spread BW	On time	burst cycle	Duty cycle	Dwell Time	Limits
	(MHz)	(ms)	(ms)	(%)	(s)	(s)
1DH1	71.760	0.436	1.260	0.346	0.126	0.400
1DH3	71.520	1.702	2.496	0.682	0.247	0.400
1DH5	71.280	2.964	3.758	0.789	0.285	0.400



Date: 18.SEP.2021 15:32:55



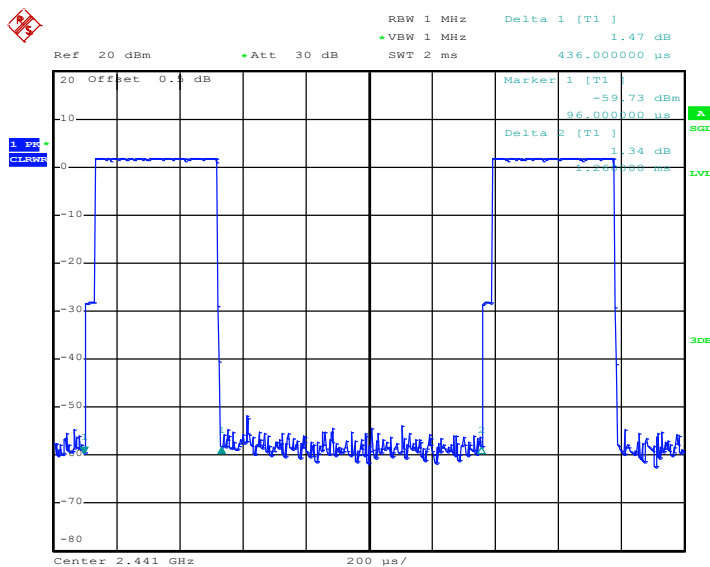
Date: 18.SEP.2021 15:33:47



Date: 18.SEP.2021 15:34:54

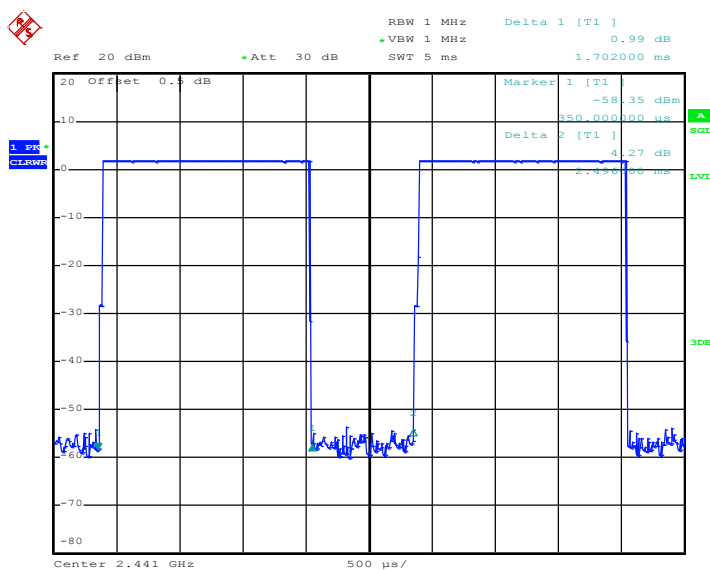
Duty-cycle = [on time/total time] x 100%

Dwell time = [spreading rate/79] x duty-cycle x 0.4 seconds



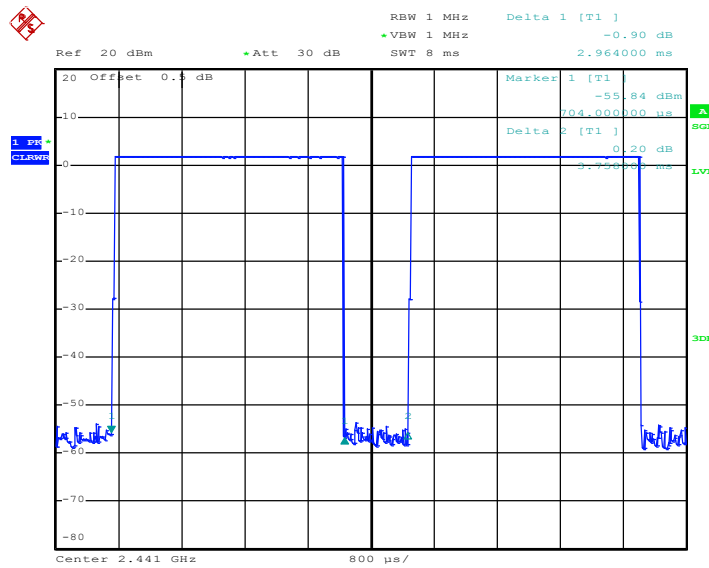
Date: 18.SEP.2021 16:19:35

1DH1



Date: 18.SEP.2021 16:20:49

1DH3

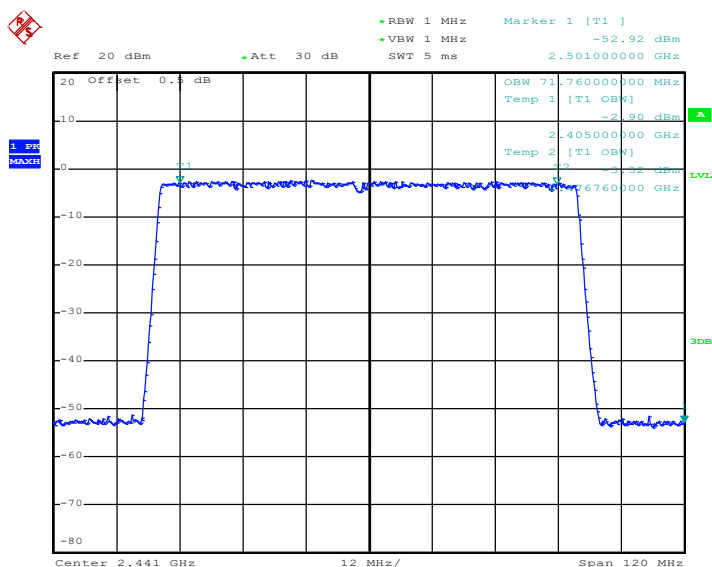


Date: 18.SEP.2021 16:21:59

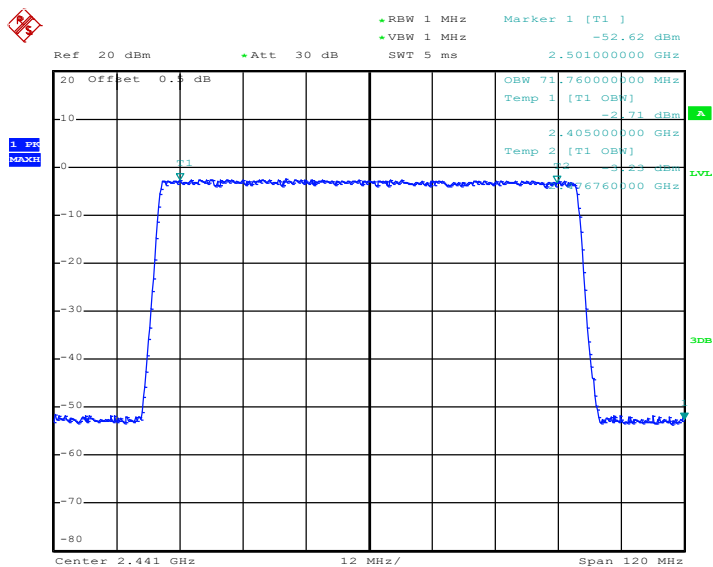
1DH5

Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5V
Test Mode:	$\pi/4$ -DQPSK		

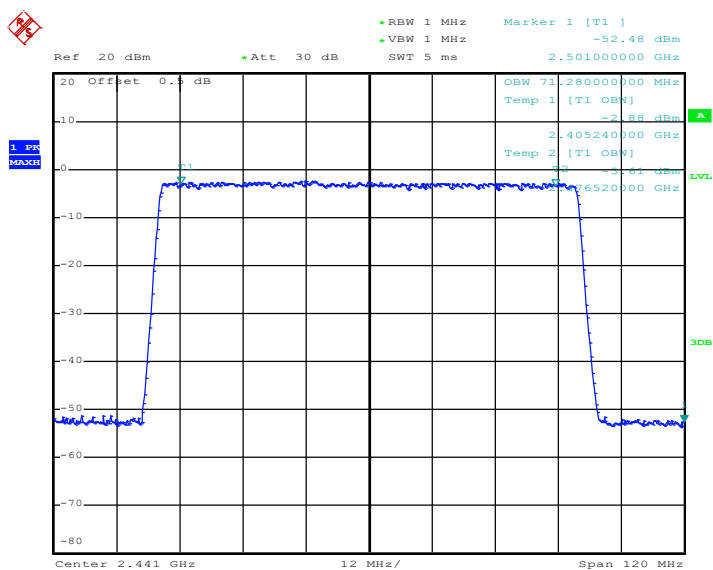
Data Packet	90% Spread BW	On time	burst cycle	Duty cycle	Dwell Time	Limits
	(MHz)	(ms)	(ms)	(%)	(s)	(s)
2DH1	71.760	0.440	1.260	0.349	0.127	0.400
2DH3	71.760	1.710	2.510	0.681	0.248	0.400
2DH5	71.280	2.972	3.756	0.791	0.286	0.400



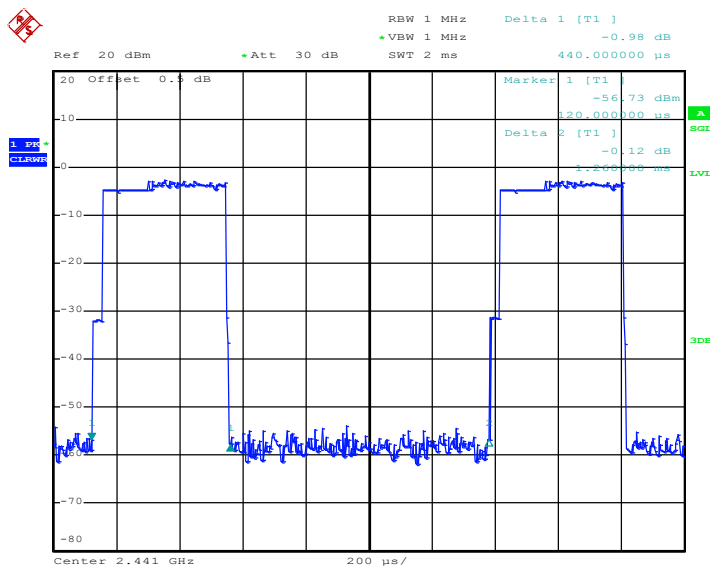
Date: 18.SEP.2021 15:47:14



Date: 18.SEP.2021 15:48:19

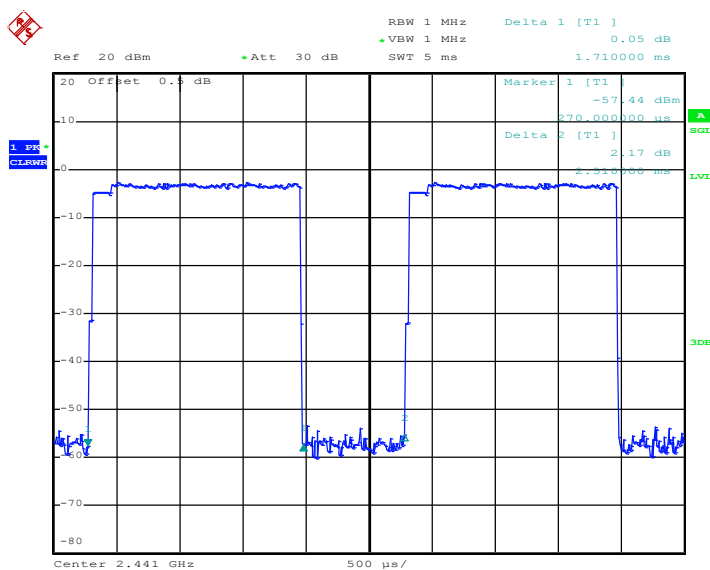


Date: 18.SEP.2021 15:50:38



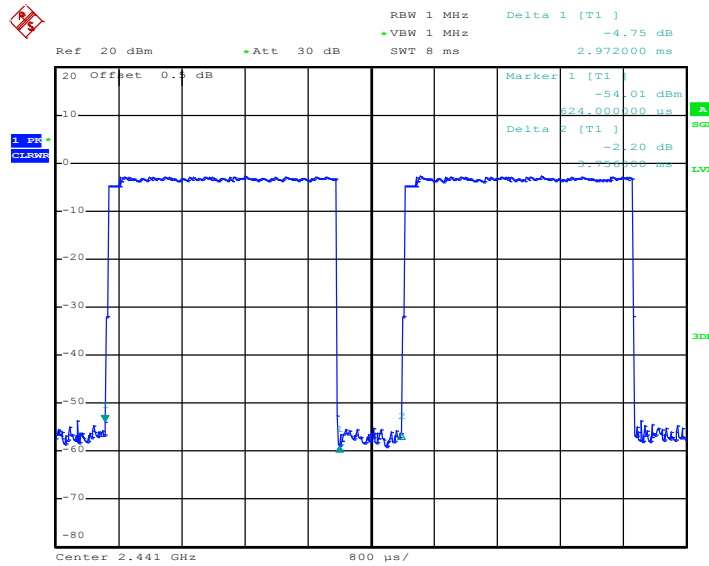
Date: 18.SEP.2021 16:22:51

2DH1



Date: 18.SEP.2021 16:23:45

2DH3

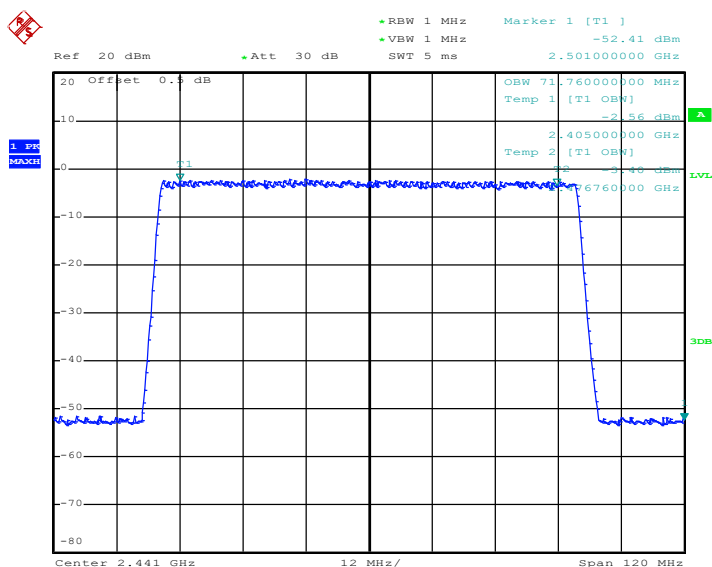


Date: 18.SEP.2021 16:24:40

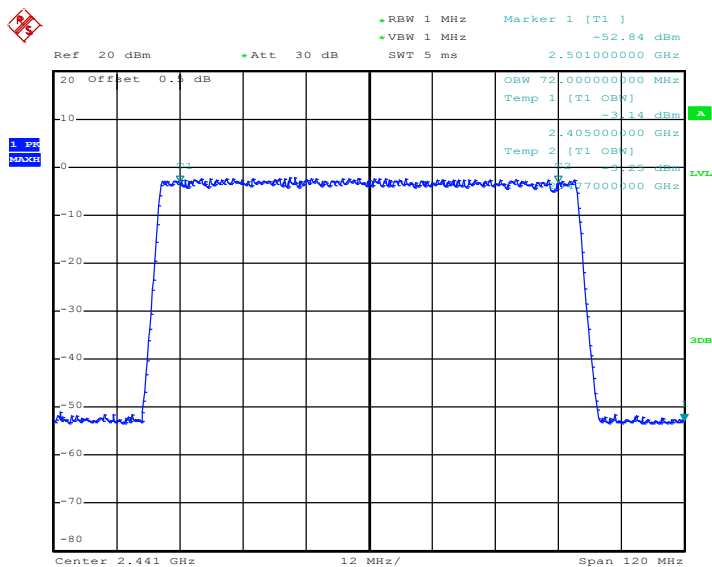
2DH5

Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5V
Test Mode:	8DPSK		

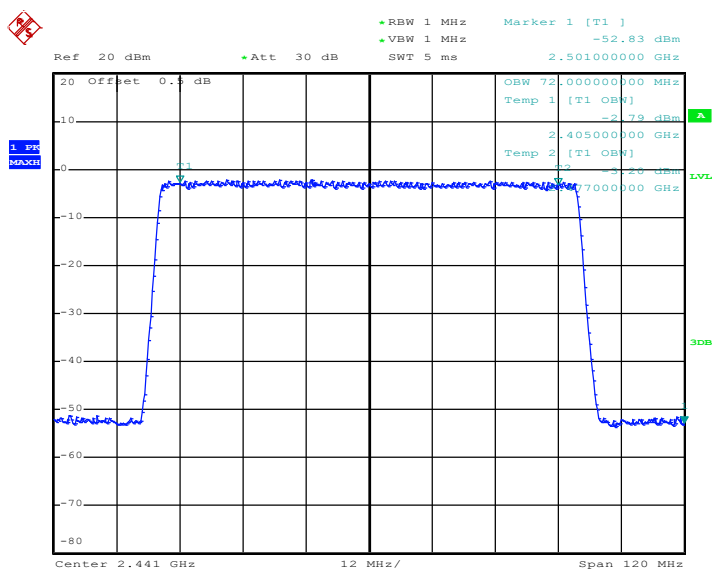
Data Packet	90% Spread BW	On time	burst cycle	Duty cycle	Dwell Time	Limits
	(MHz)	(ms)	(ms)	(%)	(s)	(s)
3DH1	71.760	0.444	1.260	0.352	0.128	0.400
3DH3	72.000	1.724	2520	0.001	0.000	0.400
3DH5	72.000	2.972	3.752	0.792	0.289	0.400



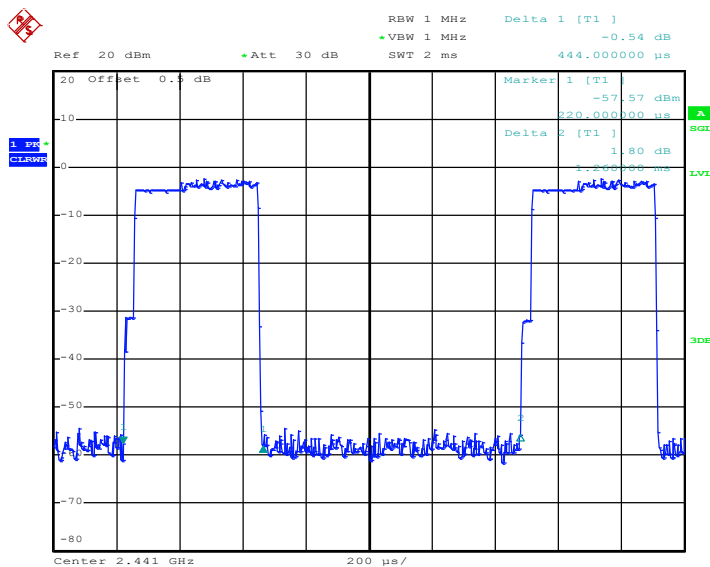
Date: 18.SEP.2021 16:07:12



Date: 18.SEP.2021 16:08:23

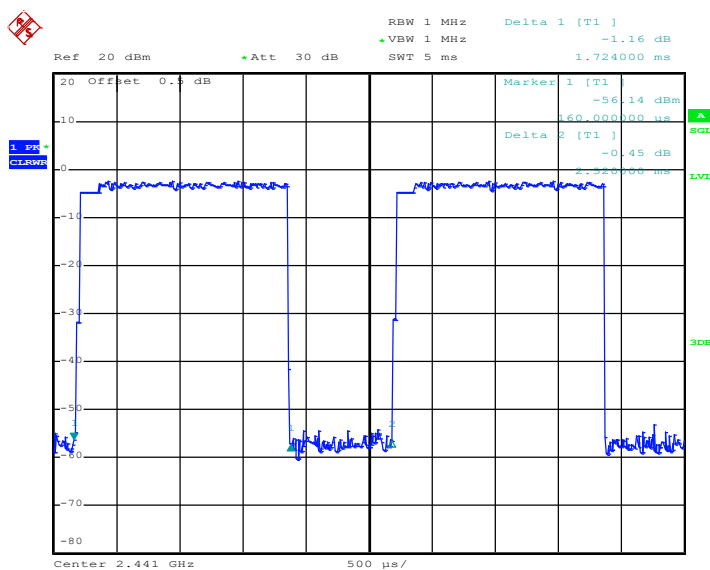


Date: 18.SEP.2021 16:10:12



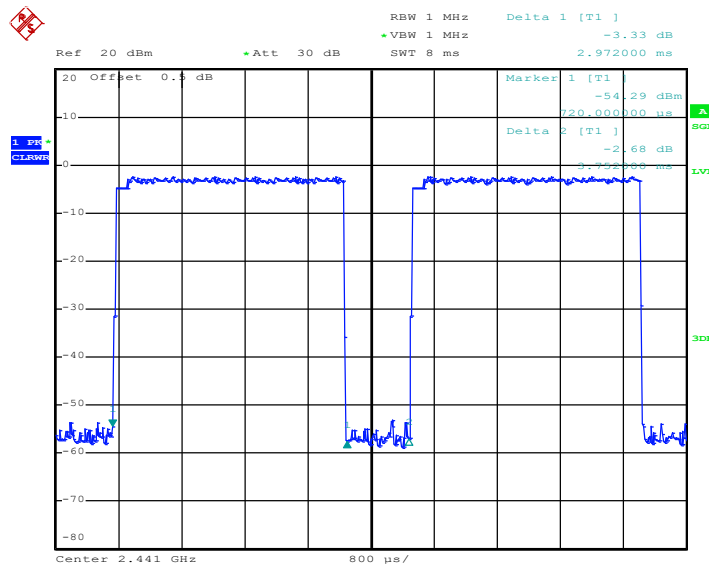
Date: 18.SEP.2021 16:25:32

3DH1



Date: 18.SEP.2021 16:26:34

3DH3

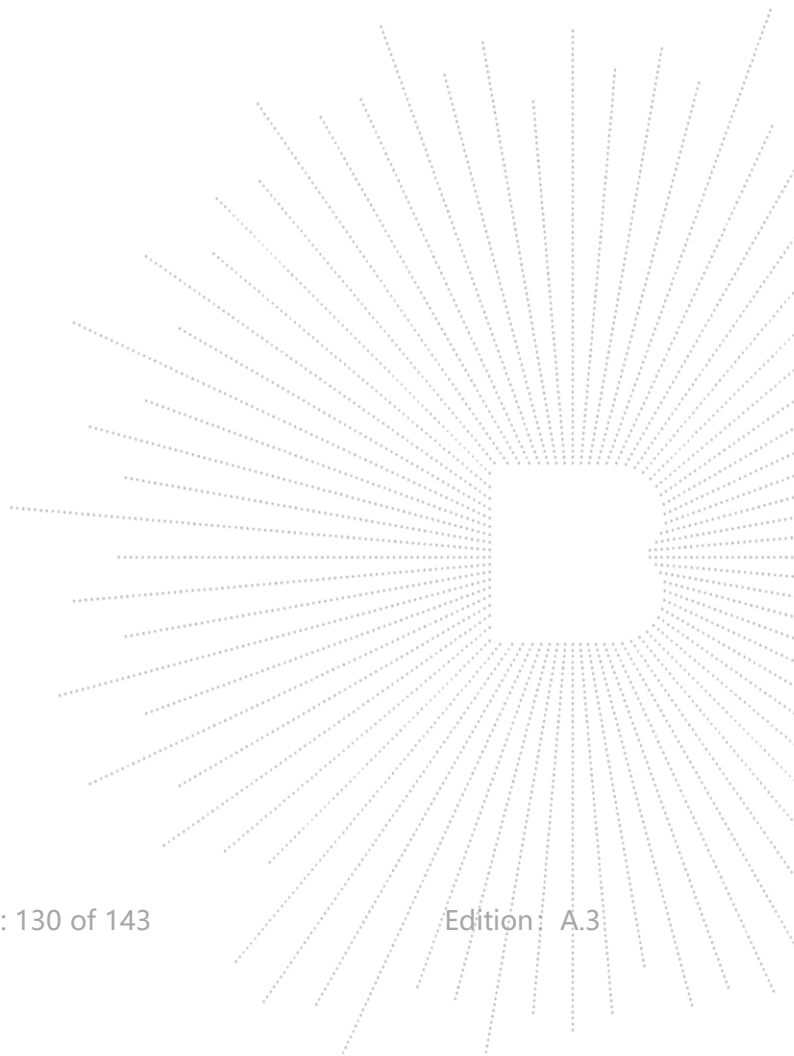


Date: 18.SEP.2021 16:27:28

3DH5

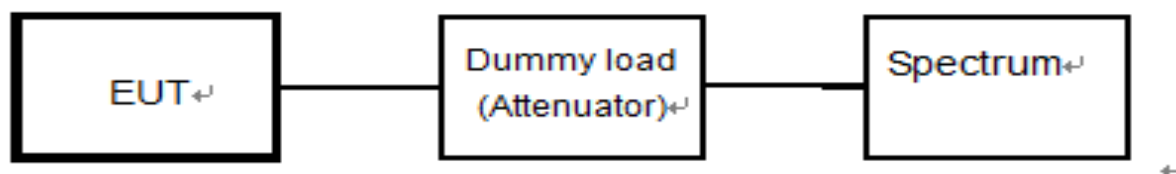
13. Carrier Sense

Not applicable, Since the EUT belong to Bluetooth.



14. Imitation Of Collateral Emission Of Receiver Measurement

14.1 Block Diagram Of Test Setup



14.2 Limit

Item	Limits
RX Spurious Emission:	$\leq 4\text{nW}$ ($f < 1\text{GHz}$)
	$\leq 20\text{nW}$ ($1\text{GHz} \leq f$)

14.3 Measuring Instruments And Setting

Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
VB	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

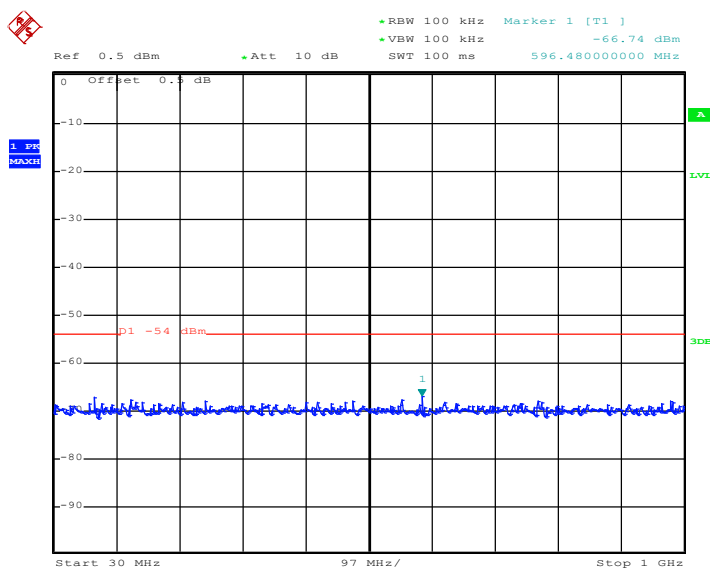
14.4 Test Procedure

- EUT have the continuous reception mode and fixed only one channelize.
- Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) / AT: 6dB / Ref: -20dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW
- SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 1250MHz. Search to mark peak reading value + cable loss shall be less than 20nW
- If power level of lower emissions are more than 1/10 of limit (.0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.

14.5 Test Result

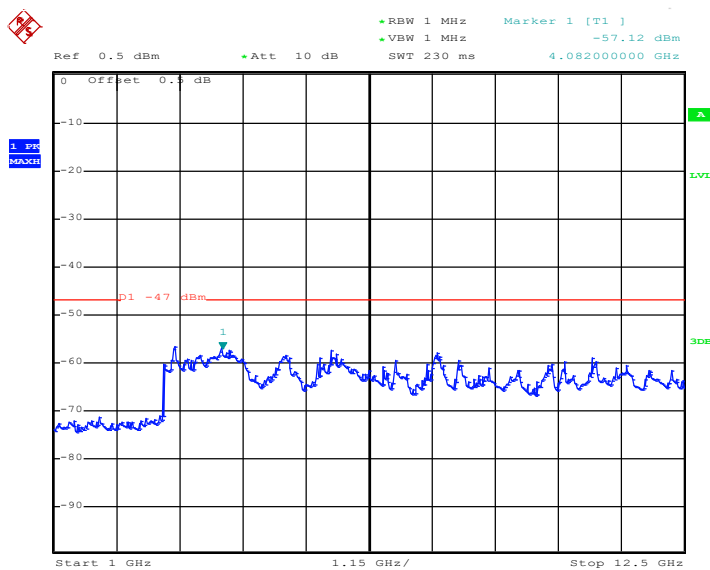
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5V
Operation Mode:	Normal Voltage-GFSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:24:14

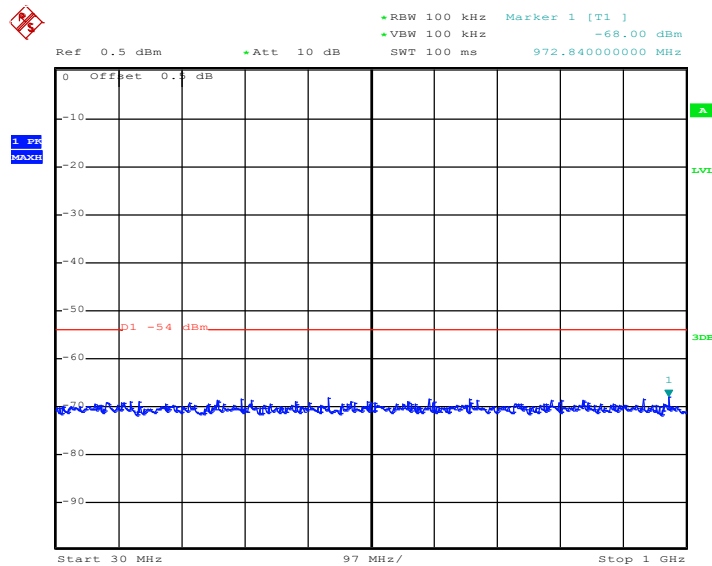
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:25:19

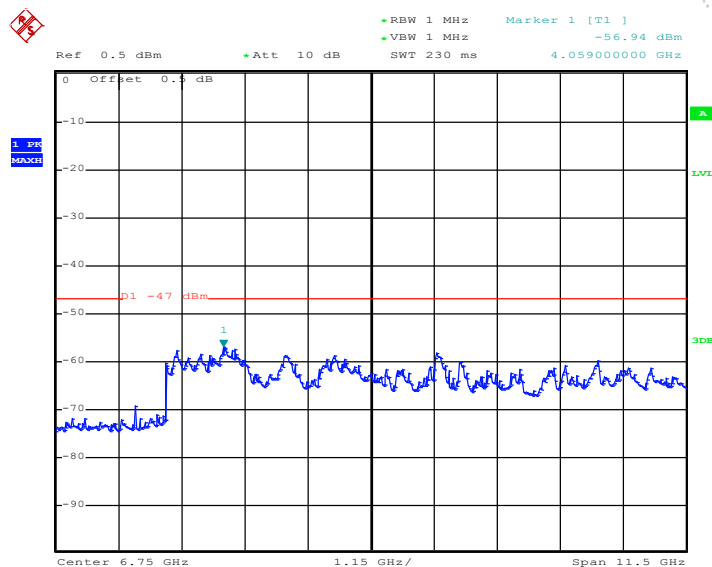
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5V
Operation Mode:	Normal Voltage- $\pi/4$ -DQPSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:26:59

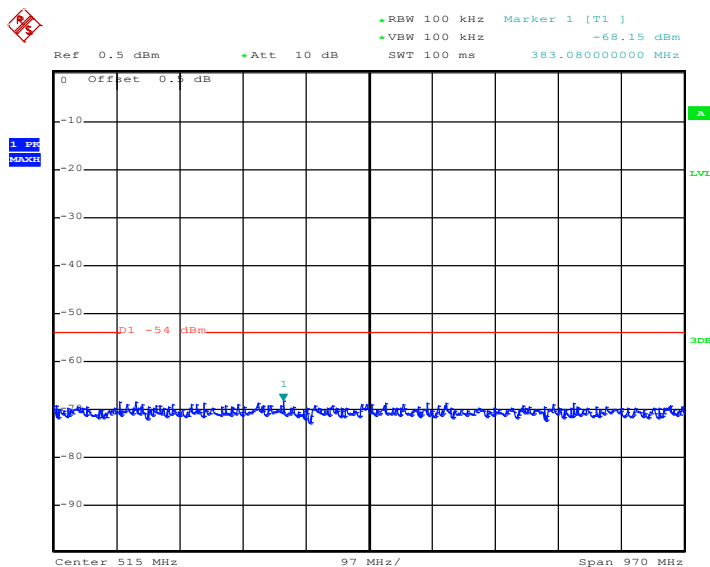
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:26:10

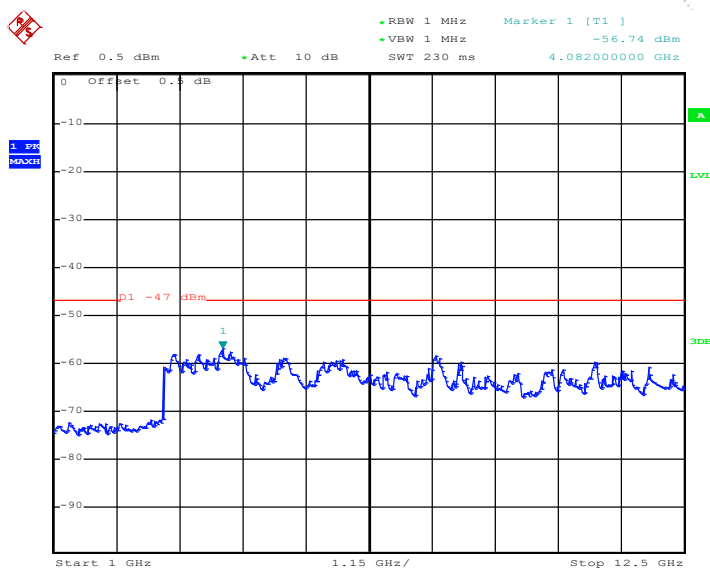
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5V
Operation Mode:	Normal Voltage-8DPSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:27:43

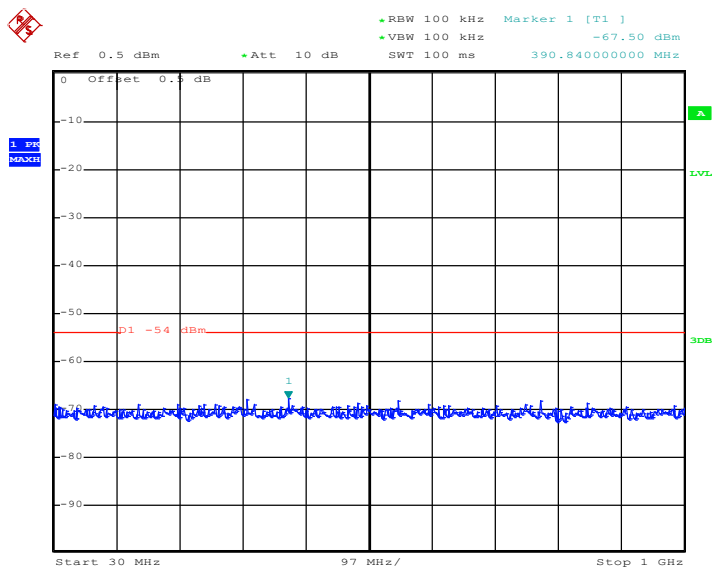
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:28:30

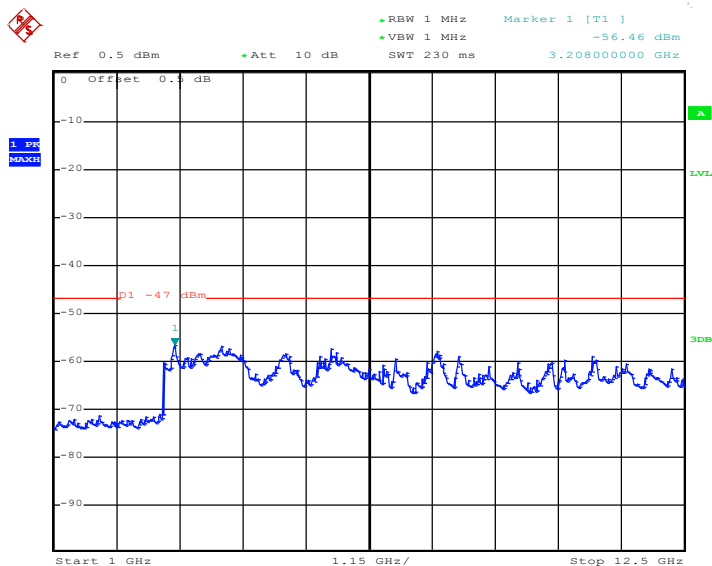
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5.5V
Operation Mode:	High Voltage-GFSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:24:20

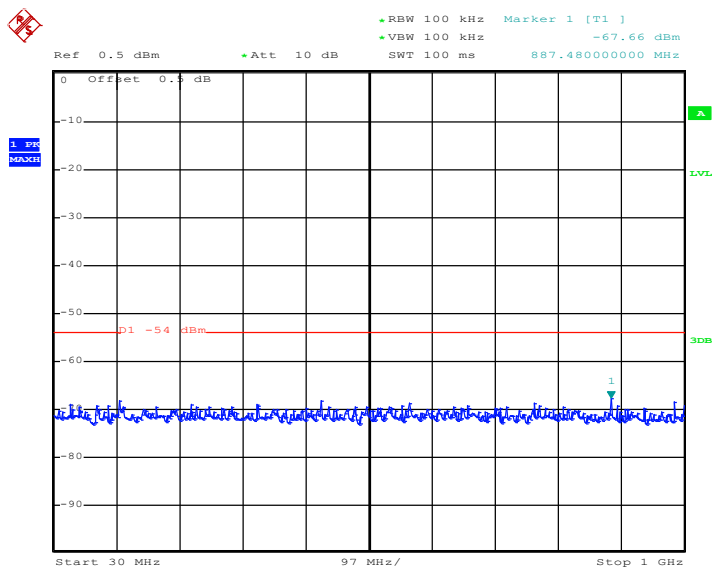
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:25:24

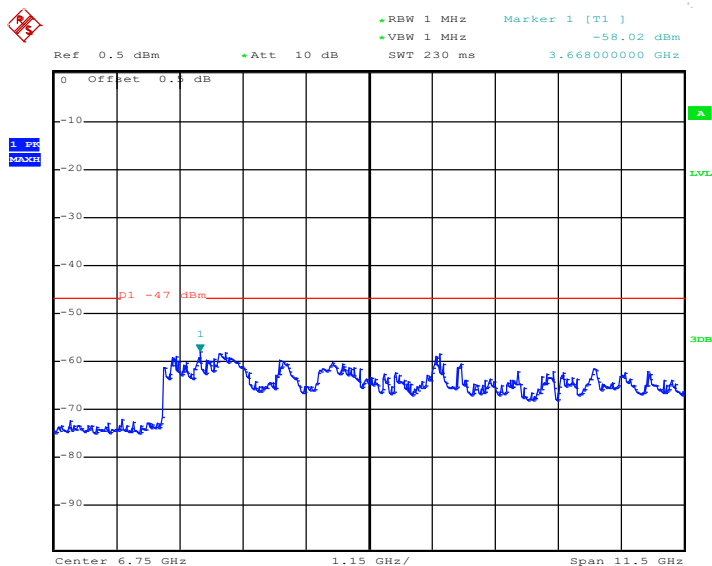
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5.5V
Operation Mode:	High Voltage- $\pi/4$ -DQPSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:27:03

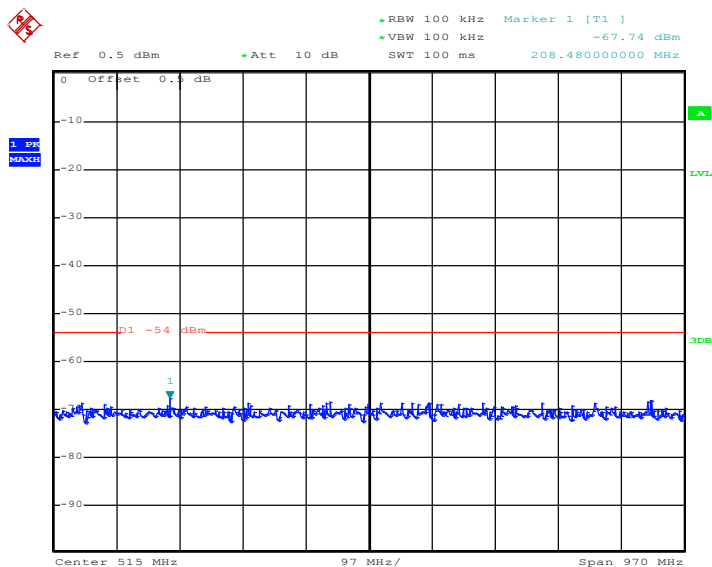
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:26:14

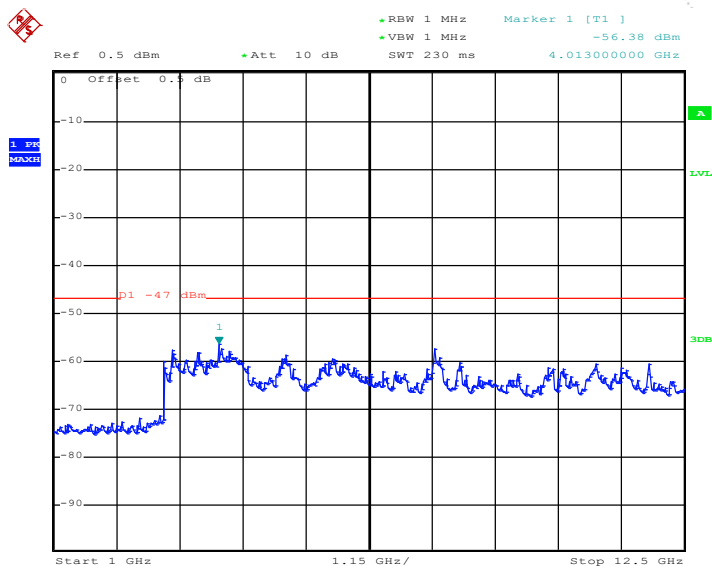
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 5.5V
Operation Mode:	High Voltage-8DPSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:27:48

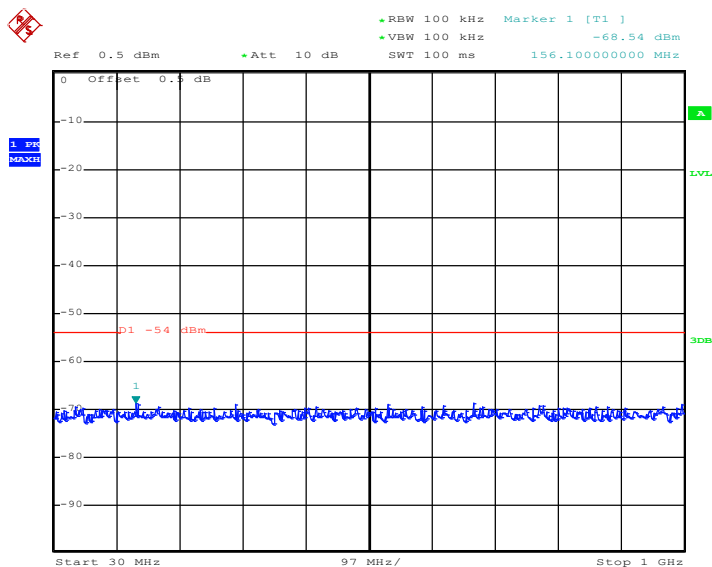
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:28:34

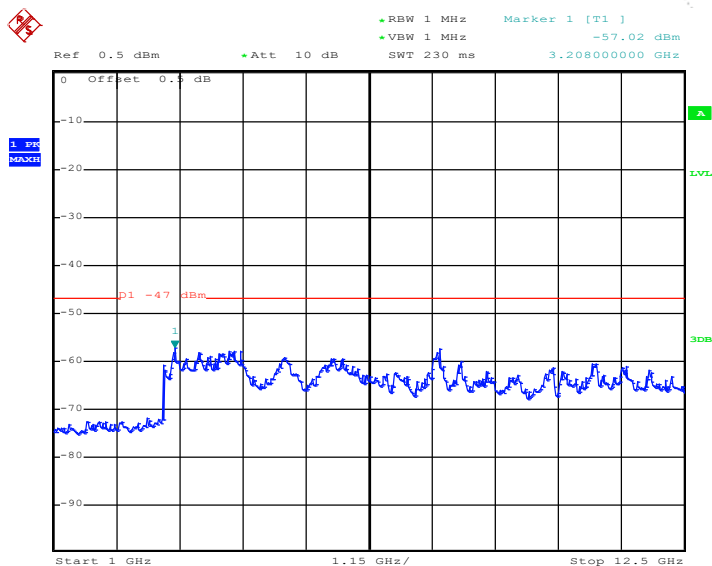
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 4.5V
Operation Mode:	Low Voltage-8DPSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:24:24

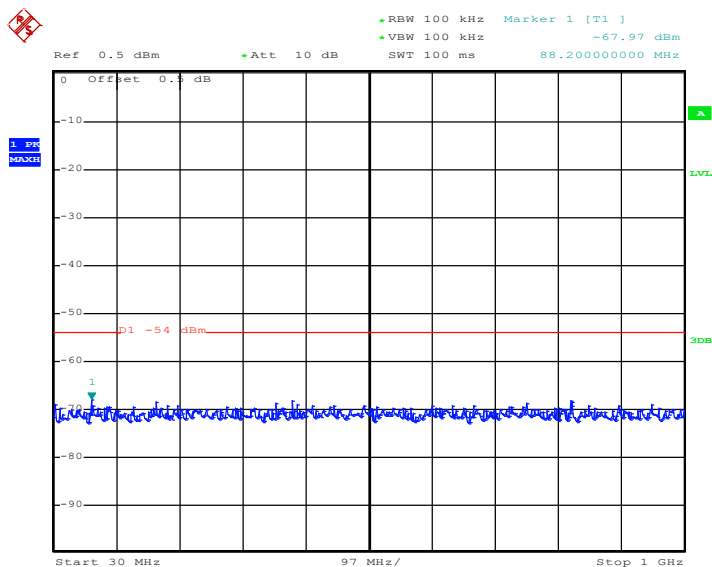
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:25:30

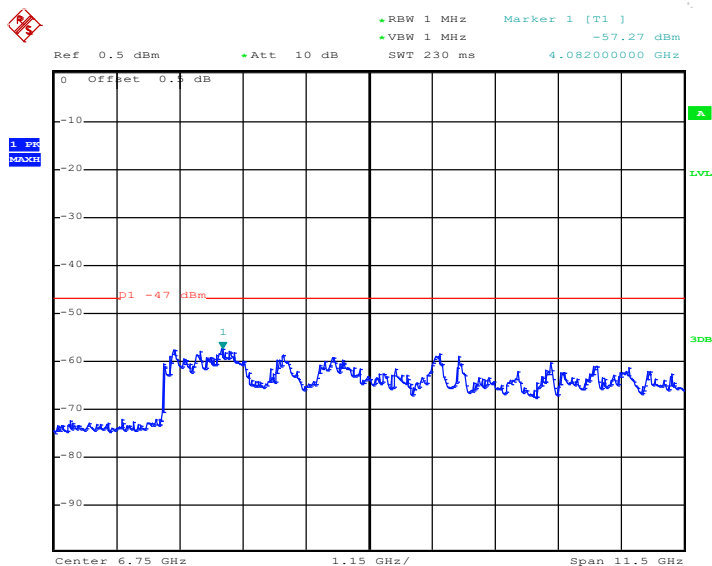
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 4.5V
Operation Mode:	Low Voltage- $\pi/4$ -DQPSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:27:07

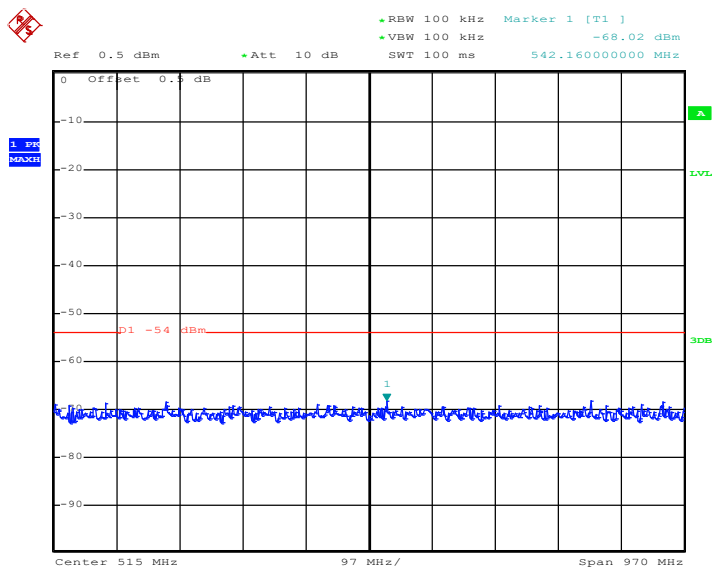
RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:26:17

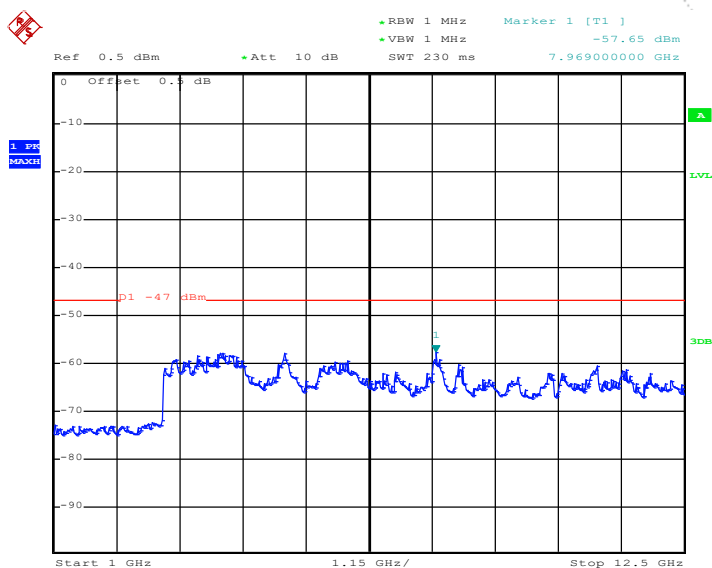
Temperature:	25°C		
Humidity:	55 % RH	Test Voltage	DC 4.5V
Operation Mode:	Low Voltage-8DPSK		

RX-Frequency Band 1 ($30 \text{ MHz} \leq f < 1000 \text{ MHz}$)



Date: 18.SEP.2021 15:27:52

RX-Frequency Band 2 ($1000 \text{ MHz} \leq f < 12500 \text{ MHz}$)



Date: 18.SEP.2021 15:28:39

15. EUT Photographs

EUT Photo 1

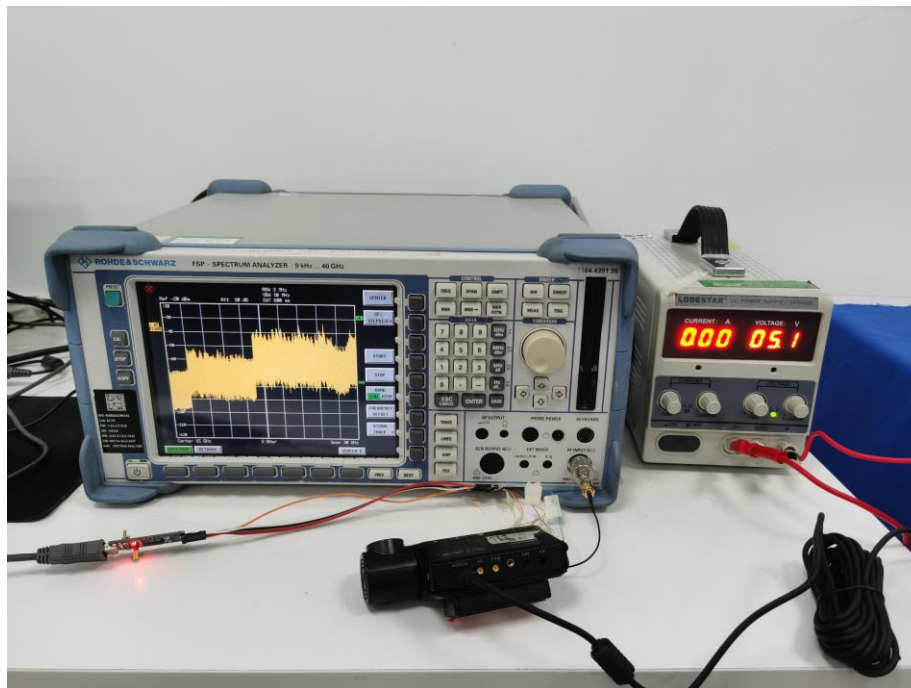


EUT Photo 2



16. EUT Test Setup Photographs

Measurement Photos



STATEMENT

- 1.The equipment lists are traceable to the national reference standards.
- 2.The test report can not be partially copied unless prior written approval is issued from our lab.
- 3.The test report is invalid without stamp of laboratory.
- 4.The test report is invalid without signature of person(s) testing and authorizing.
- 5.The test process and test result is only related to the Unit Under Test.
- 6.The quality system of our laboratory is in accordance with ISO/IEC17025.
- 7.If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: <http://www.chnbctc.com>

E-Mail: bctc@bctc-lab.com.cn

***** END *****