

39	Fig.79	990.384	P
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## For $\pi/4$ DQPSK

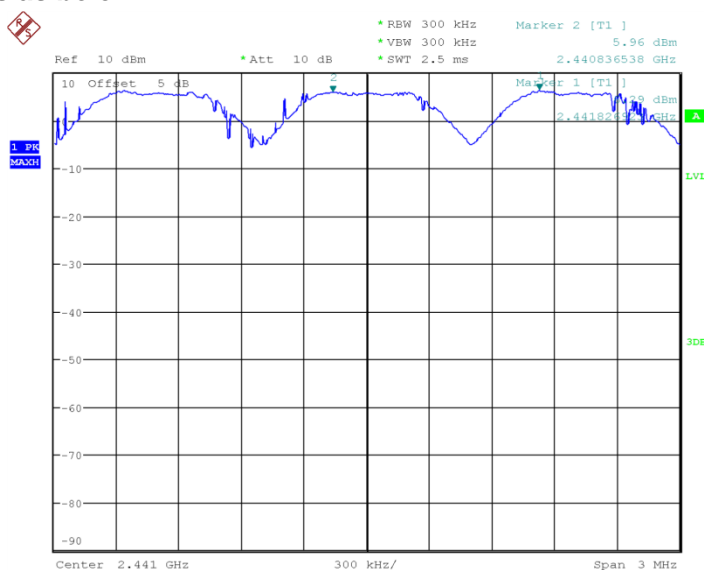
Channel	Carrier separation (KHz)	Conclusion
39	Fig.80	P

## For 8DPSK

Channel	Carrier separation (KHz)	Conclusion
39	Fig.81	P

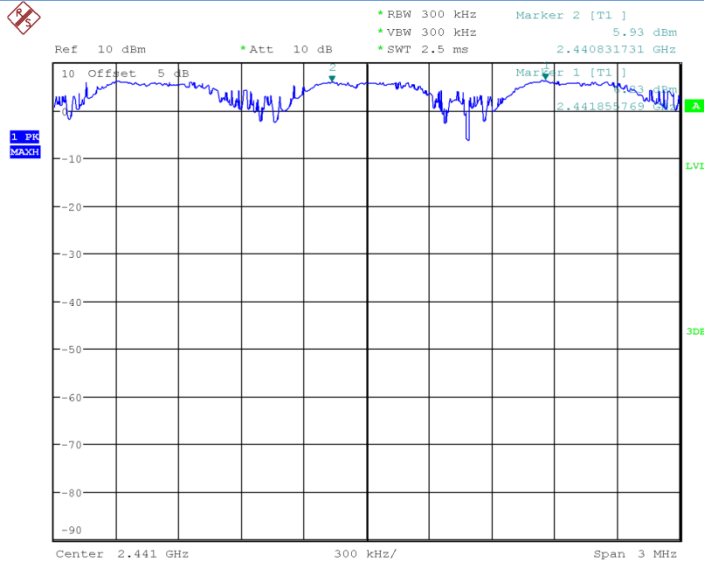
**Conclusion: PASS**

**Test graphs as below:**



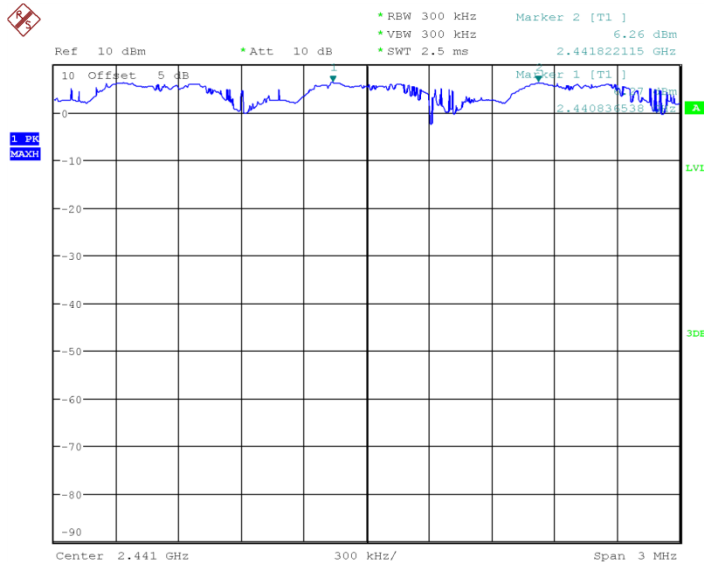
Date: 24.DEC.2016 13:45:52

Fig.79 Carrier separation measurement: GFSK, Ch39



Date: 24.DEC.2016 13:47:06

Fig.80 Carrier separation measurement:  $\pi/4$  DQPSK, Ch39



Date: 24.DEC.2016 13:48:20

Fig.81 Carrier separation measurement: 8DPSK, Ch39

## 6.8. Number Of Hopping Channels

### 6.8.1 Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (a)(1)(iii)	At least 15 non-overlapping channels

### 6.8.2 Test procedure

The measurement is according to ANSI C63.10 clause 7.8.3.

1. Connect the EUT through cable and divide with CBT32 and spectrum analyzer.
2. Enable the EUT transmit in hopping mode.
3. Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
4. RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
5. VBW  $\geq$  RBW.
6. Sweep: Auto.
7. Detector function: Peak.
8. Trace: Max hold.
9. Allow the trace to stabilize.
10. Record the test results.

### 6.8.3 Measurement Result:

#### For GFSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.82	79	P
40~78	Fig.83		P

#### For $\pi/4$ DQPSK

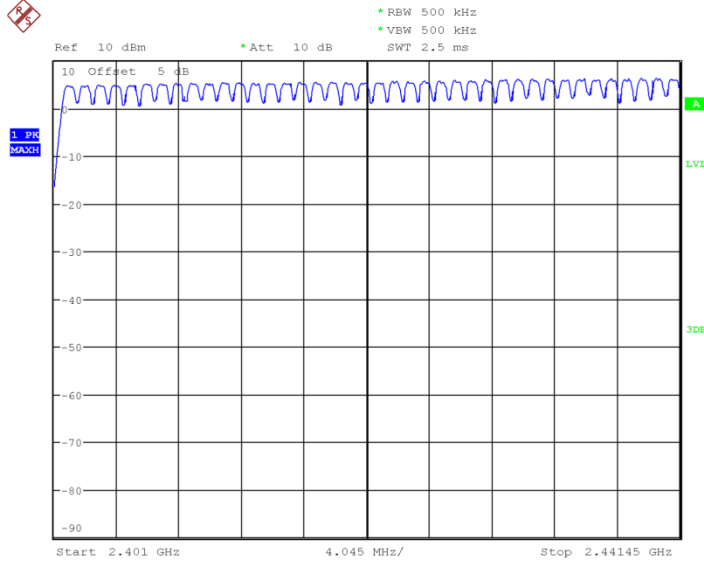
Channel	Number of hopping channels		Conclusion
0~39	Fig.84	79	P
40~78	Fig.85		P

#### For 8DPSK

Channel	Number of hopping channels		Conclusion
0~39	Fig.86	79	P
40~78	Fig.87		P

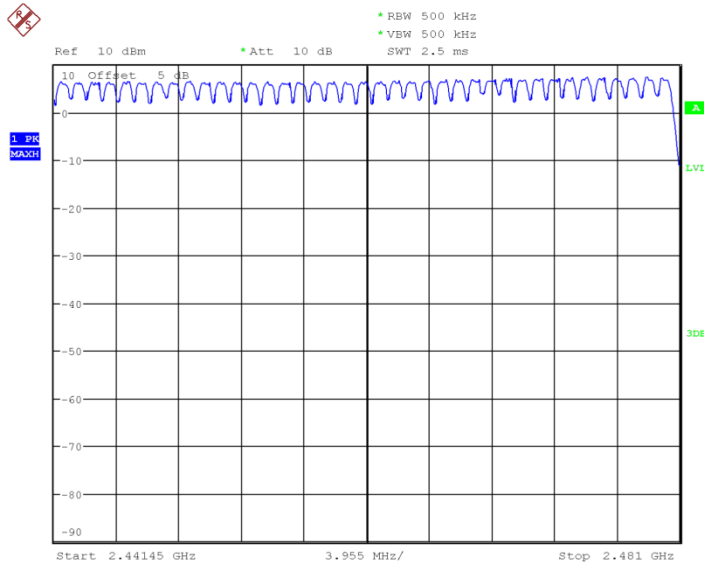
**Conclusion: PASS**

**Test graphs as below:**



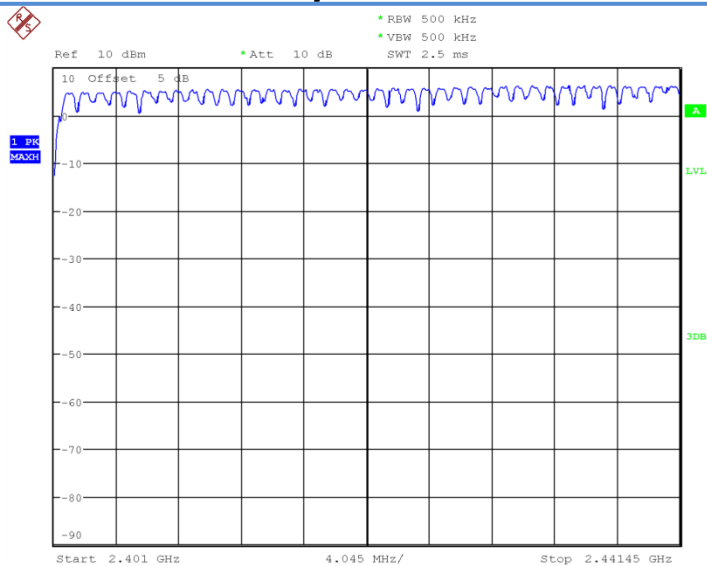
Date: 24.DEC.2016 13:50:57

Fig.82 Number of hopping frequency: GFSK, Ch0~39



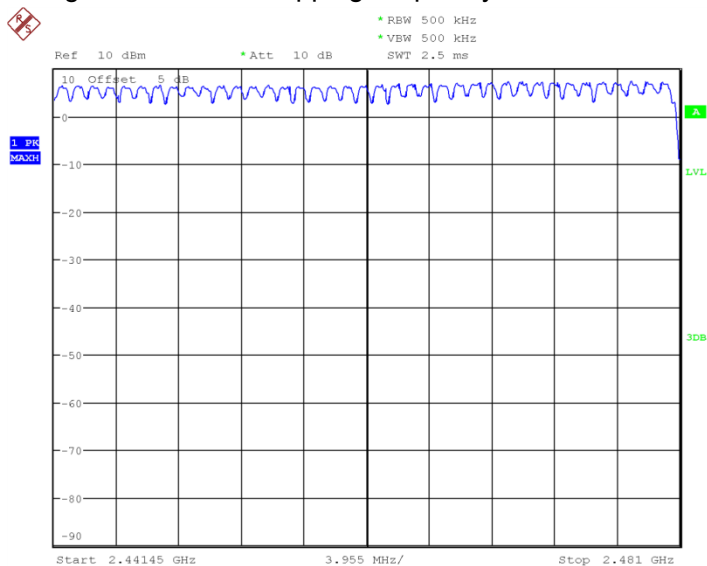
Date: 24.DEC.2016 13:53:02

Fig.83 Number of hopping frequency: GFSK, Ch40~78



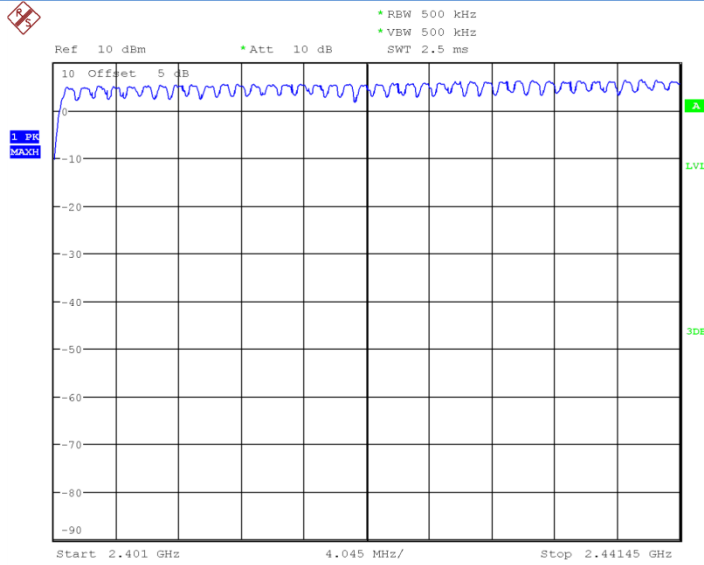
Date: 24.DEC.2016 13:55:07

Fig.84 Number of hopping frequency:  $\pi/4$  DQPSK, Ch0~39



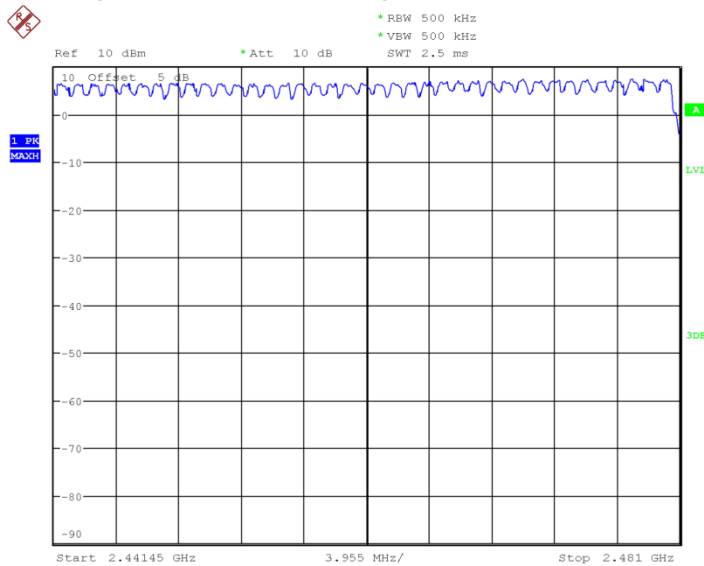
Date: 24.DEC.2016 13:57:13

Fig.85 Number of hopping frequency:  $\pi/4$  DQPSK, Ch40~78



Date: 24.DEC.2016 13:59:18

Fig.86 Number of hopping frequency: 8DPSK, Ch0~39



Date: 24.DEC.2016 14:01:22

Fig.87 Number of hopping frequency: 8DPSK, Ch40~78

## 7. Test Equipment and Ancillaries Used For Tests

The test equipment and ancillaries used are as follows.

### Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Vector Signal Analyzer	FSQ26	101096	Rohde&Schwarz	2017-05-11
2	DC Power Supply	ZUP60-14	LOC-220Z006	TDL-Lambda	2017-05-11
3	Bluetooth Tester	CBT32	100785	Rohde&Schwarz	2017-05-11

### Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Due date
1	Universal Radio Communication Tester	CMU200	123101	R&S	2017-05-11
2	Test Receiver	ESU40	100307	R&S	2017-05-11
3	Trilog Antenna	VULB9163	VULB9163-515	Schwarzbeck	2017-11-04
4	Double Ridged Guide Antenna	ETS-3117	135885	ETS	2017-05-05
5	2-Line V-Network	ENV216	101380	R&S	2017-05-11

### Anechoic chamber

Fully anechoic chamber by Frankonia German.

## 8. Test Environment

**Shielding Room1** (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 110 dB
Ground system resistance	< 0.5 Ω

**Control room** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

**Fully-anechoic chamber1** (6.9 meters×10.9 meters×5.4 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
VSWR	Between 0 and 6 dB, from 1GHz to 18GHz
Site Attenuation Deviation	Between -4 and 4 dB, 30MHz to 1GHz
Uniformity of field strength	Between 0 and 6 dB, from 80MHz to 3000 MHz



**ANNEX A. Deviations from Prescribed Test Methods**

No deviation from Prescribed Test Methods.

\*\*\*\*\*End The Report\*\*\*\*\*