

Appendix for SHEM2012010711CR -BT-L

Power level setting using in test:

Channel	DH5	2DH5	3DH5
0	46	46	46
39	46	46	46
78	46	46	46

1. Bandwidth

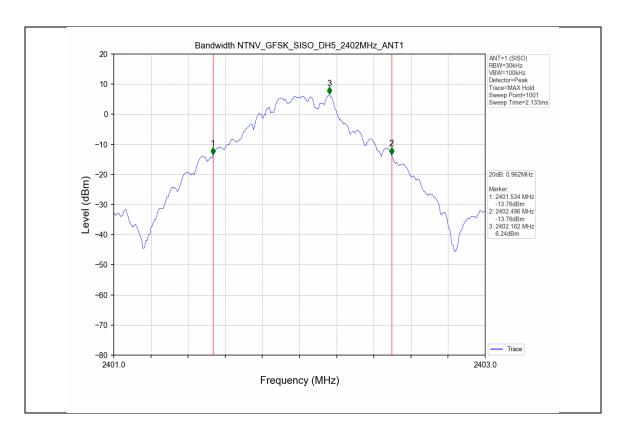
1.1 Test Result

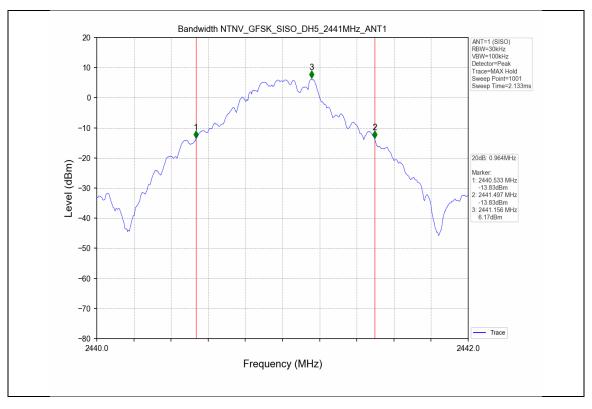
Test Mode	Frequency (MHz)	TX Type	ANT No.	20dB Bandwidth Test Result (MHz)	Verdict	
	2402	SISO	1	0.962	PASS	
GFSK	2441	SISO	1	0.964	PASS	
	2480	SISO	1	0.964	PASS	
	2402	SISO	1	1.234	PASS	
Pi/4DQPSK	2441	SISO	1	1.236	PASS	
	2480	SISO	1	1.234	PASS	
8DPSK	2402	SISO	1	1.285	PASS	
	2441	SISO	1	1.277	PASS	
	2480	SISO	1	1.279	PASS	

Test Mode	Frequency	TX Type	ANT No.	99% Occupied Bandwidth			
Test Mode	(MHz)	1 × 1 ype	ANTINO.	Test Res	sult (MHz)		
	2402	SISO	1	0.892	Only for Report Use		
GFSK	2441	2441 SISO 1 0.887		Only for Report Use			
	2480	SISO	1	0.884	Only for Report Use		
	2402	SISO	1	1.158	Only for Report Use		
Pi/4DQPSK	2441	SISO	1	1.157	Only for Report Use		
	2480	SISO	1	1.155	Only for Report Use		
8DPSK	2402	SISO	1	1.164	Only for Report Use		
	2441	SISO	1	1.160	Only for Report Use		
	2480	SISO	1	1.160	Only for Report Use		

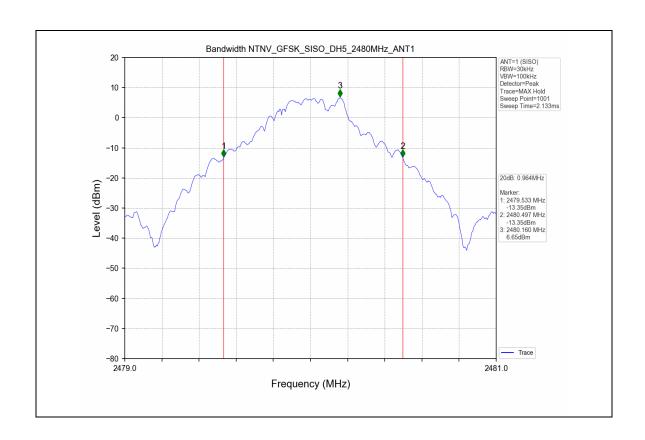
1.2 Test Graph - 20dB Bandwidth



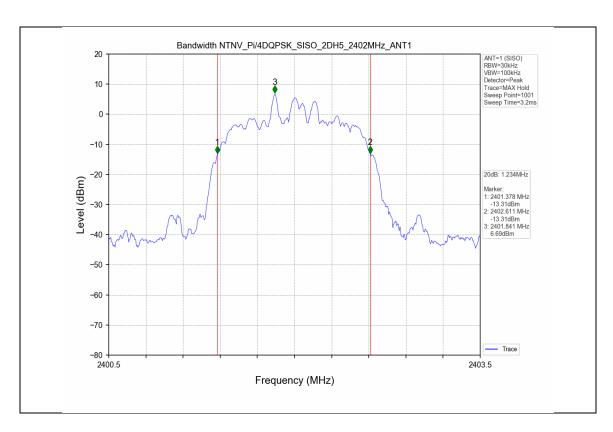


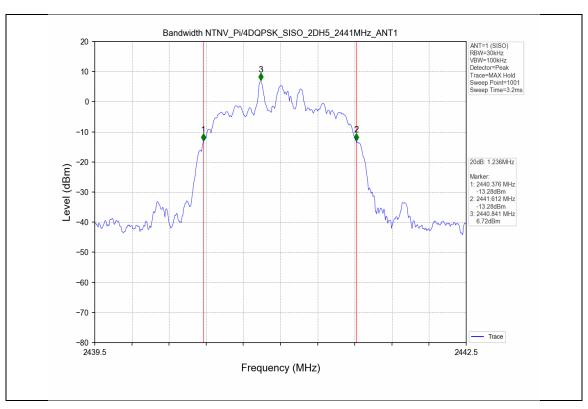






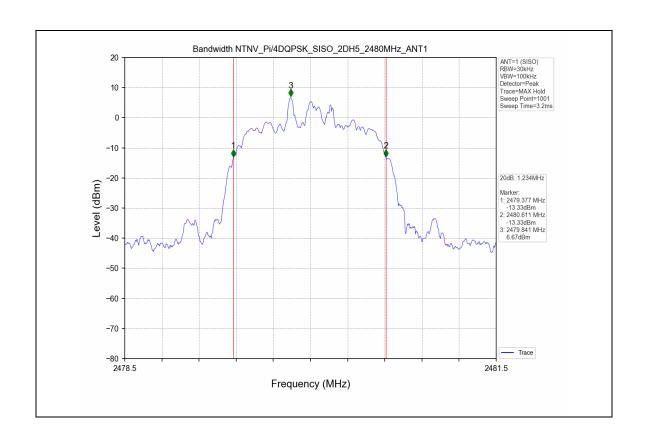




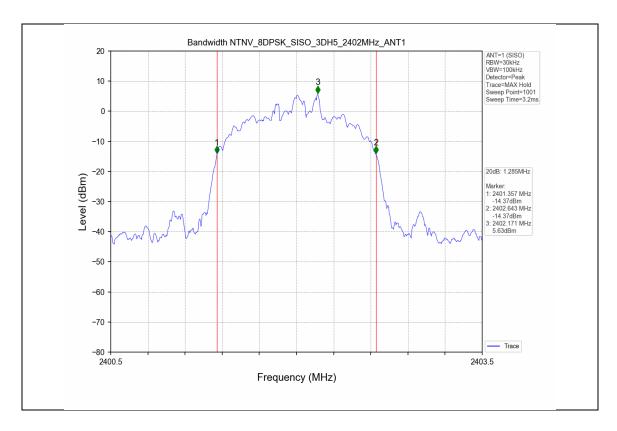


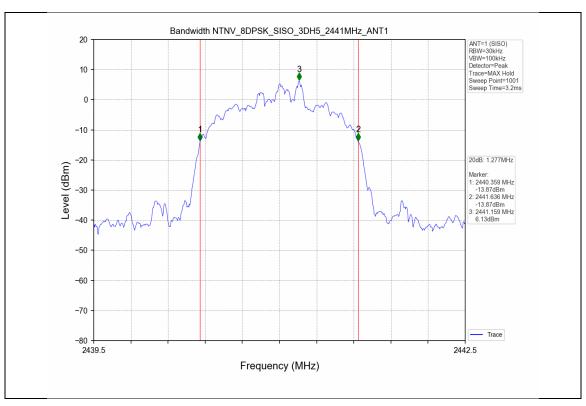
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮編: 201612 $\begin{array}{lll} t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{www.sgsgroup.com.cn} \\ t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{e sgs.china@sgs.com} \end{array}$



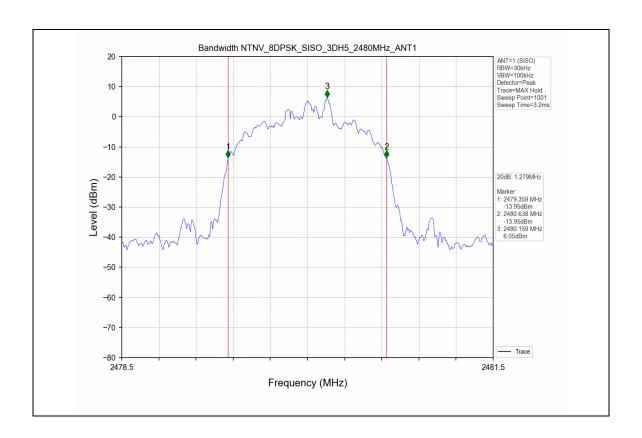






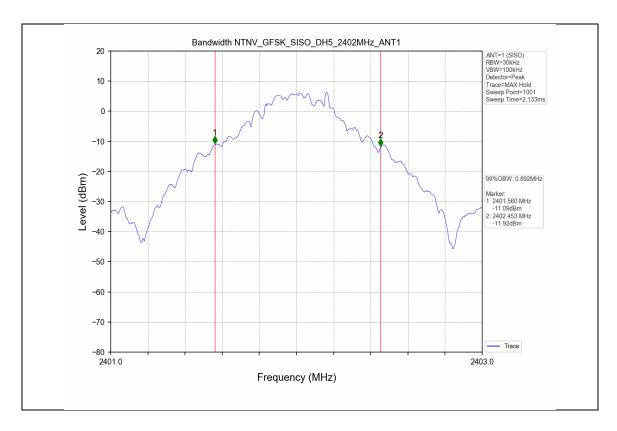


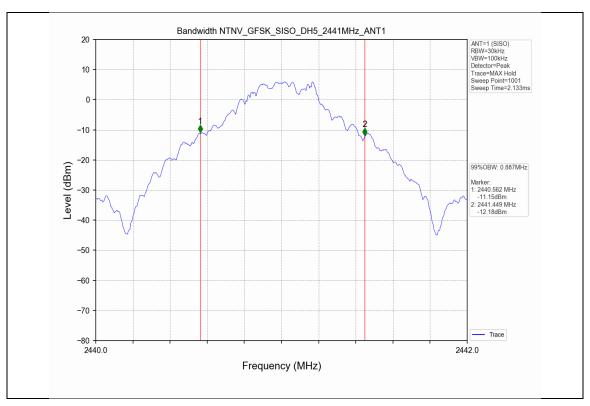




1.3 Test Graph - 99% Occupied Bandwidth

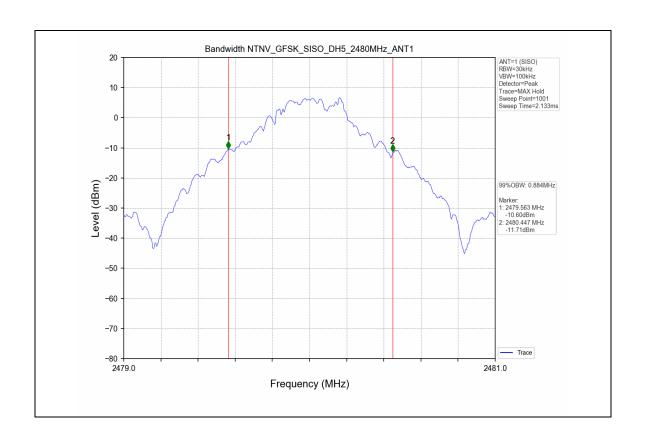




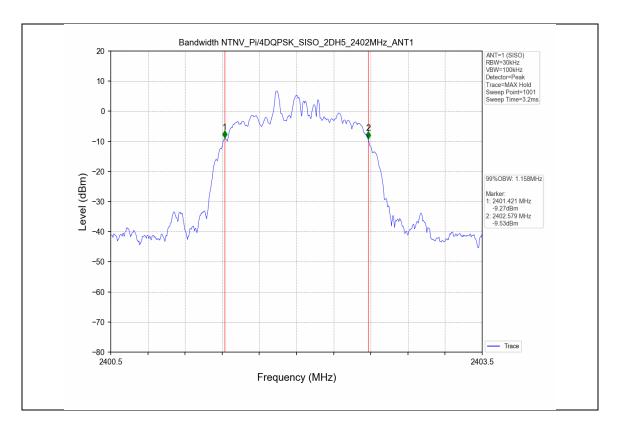


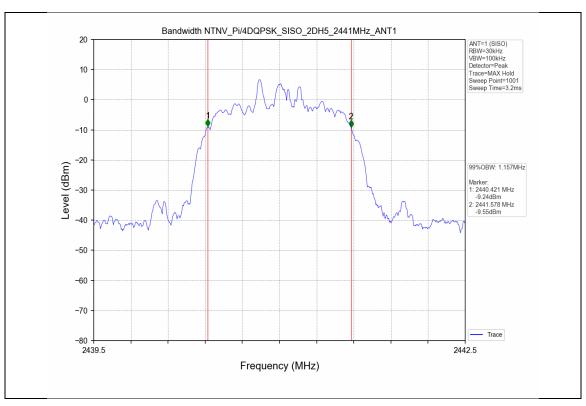
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮編: 201612 t(86-21)61915666 f(86-21)61915678 www.sgsgroup.com.cn t(86-21)61915666 f(86-21)61915678 e sgs.china@sgs.com



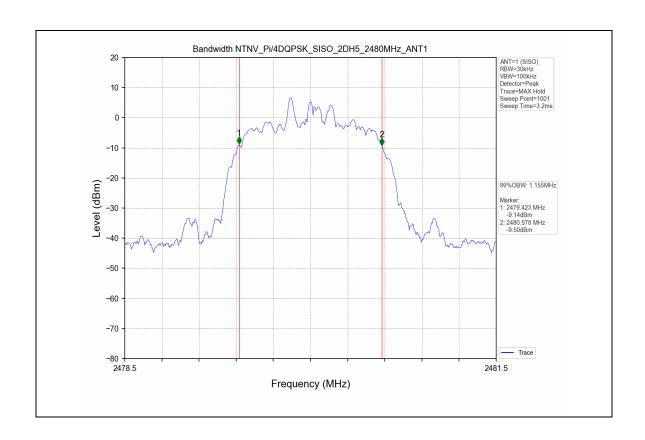




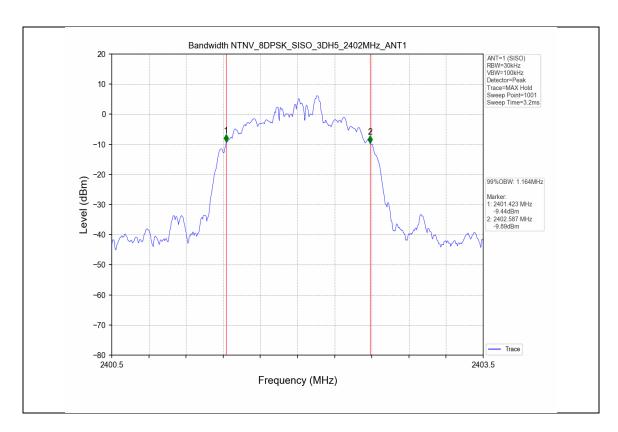


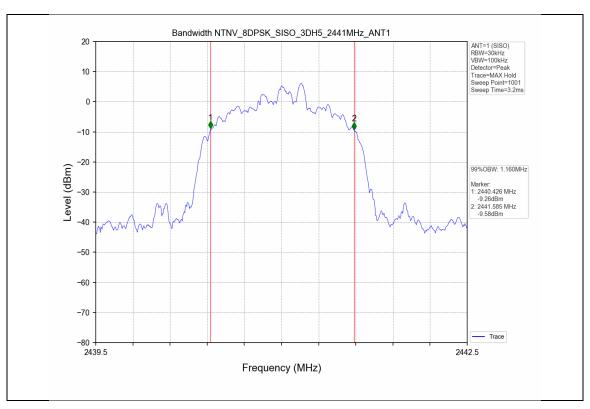




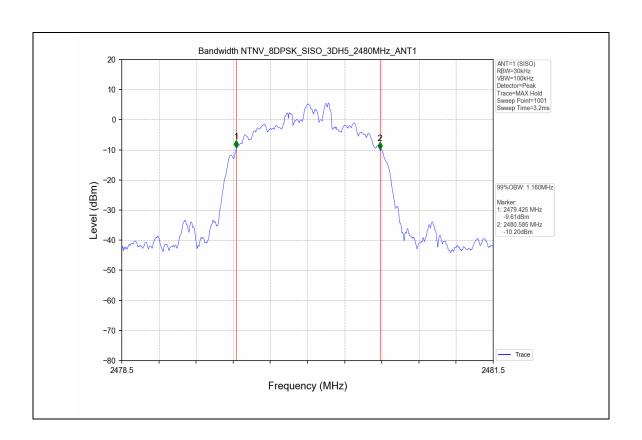












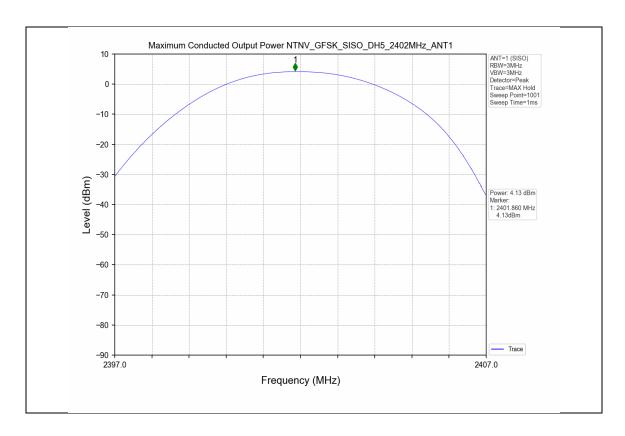
2. Maximum Conducted Output Power

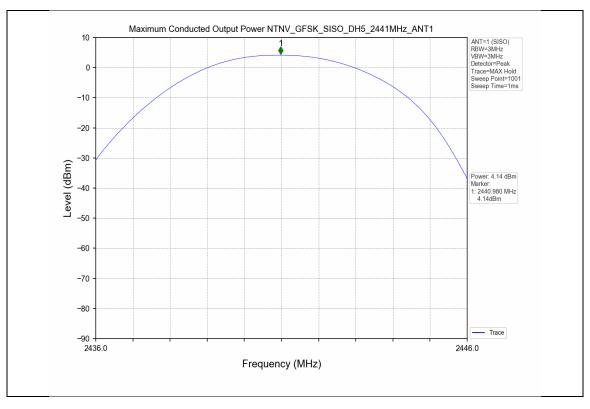
2.1 Test Result

Test Mode	Frequency (MHz)	Тх Туре	Measured Peak Output Power (dBm) Ant 1	Limits (dBm)	Verdict
	2402	SISO	4.13	30	PASS
GFSK	2441	SISO	4.14	30	PASS
	2480	SISO	4.61	30	PASS
	2402	SISO	4.12	20.97	PASS
Pi/4DQPSK	2441	SISO	4.12	20.97	PASS
	2480	SISO	4.60	20.97	PASS
	2402	SISO	4.29	20.97	PASS
8DPSK	2441	SISO	4.32	20.97	PASS
	2480	SISO	4.77	20.97	PASS

2.2 Test Graph

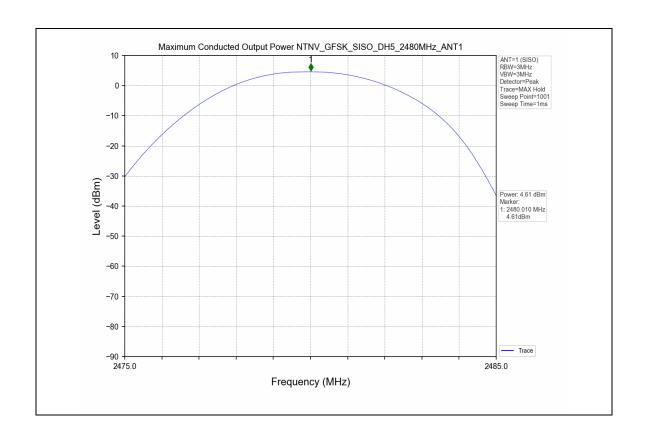




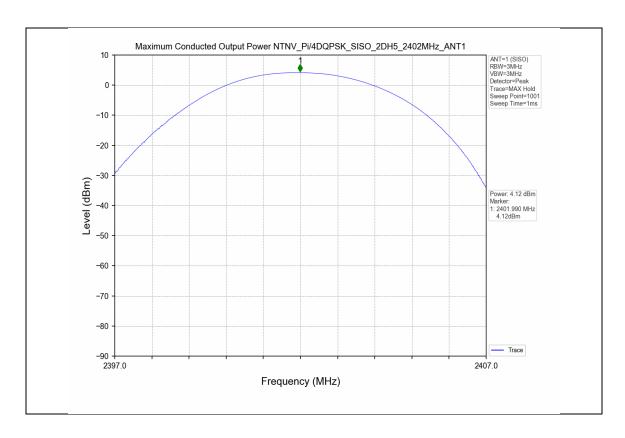


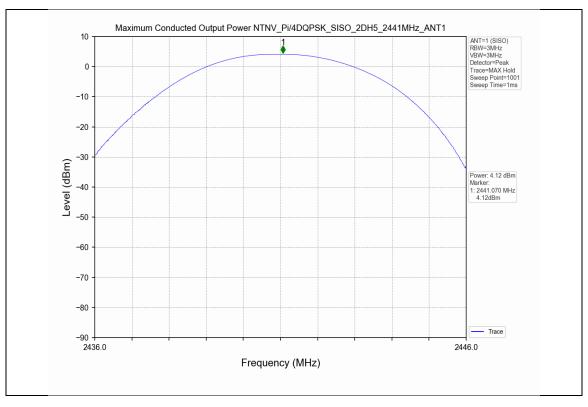
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮編: 201612 $\begin{array}{lll} t(86\text{-}21)\, 61915666 & f(86\text{-}21)61915678 & \text{www.sgsgroup.com.cn} \\ t(86\text{-}21)\, 61915666 & f(86\text{-}21)61915678 & \text{e sgs.china@sgs.com} \end{array}$



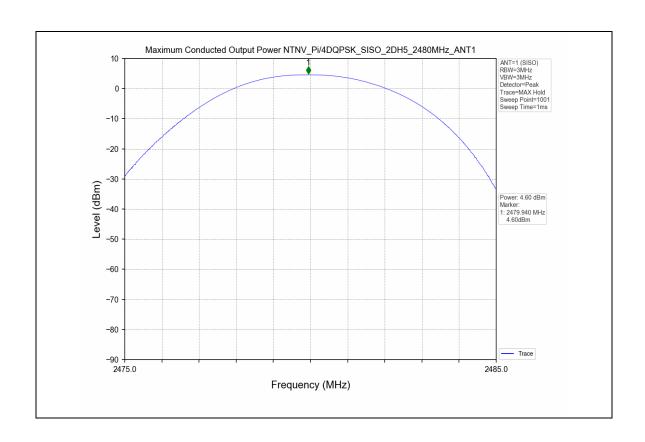




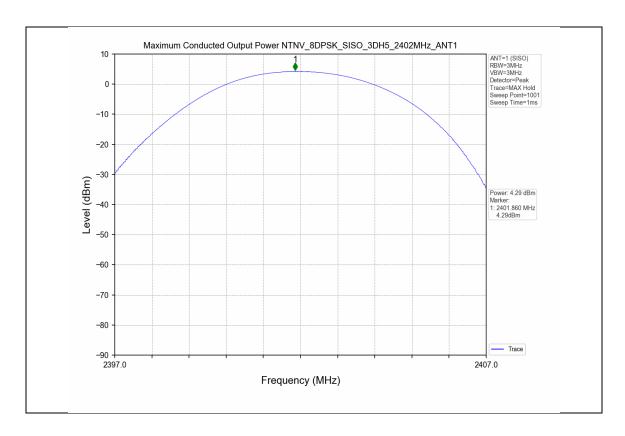


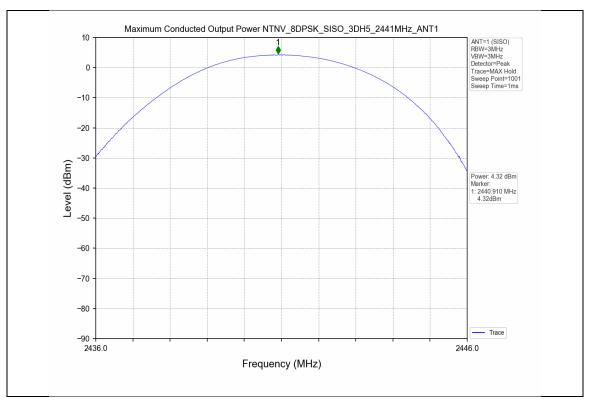






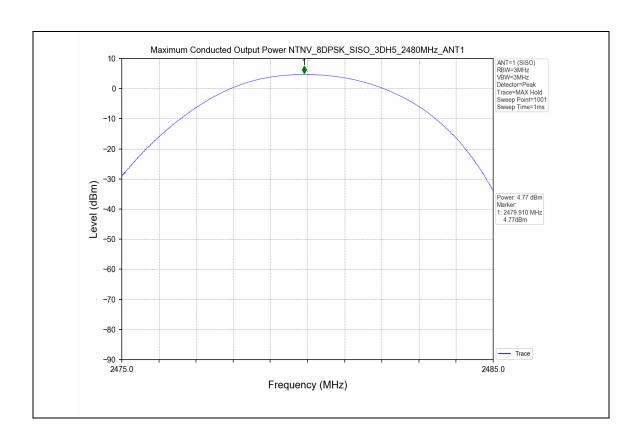






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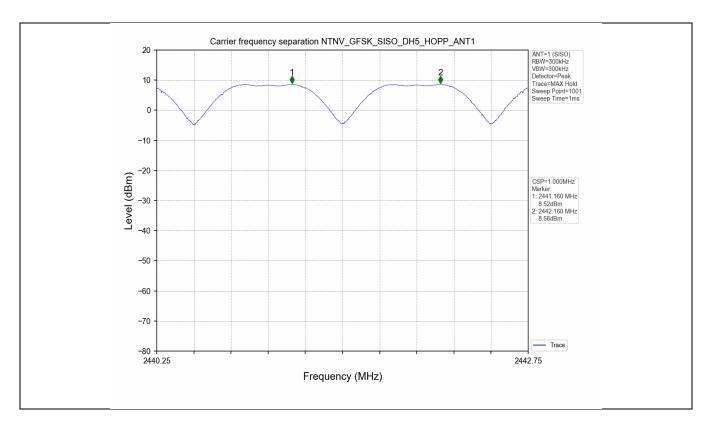
3. Carrier frequency separation

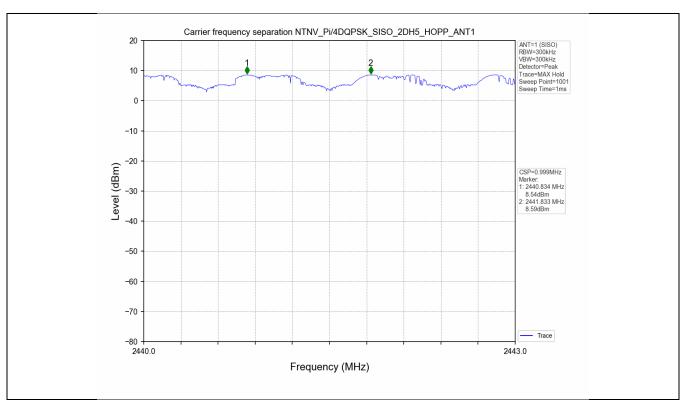
3.1 Test Result

Test Mode	TX Type	ANT No.	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limits (MHz)	Verdict
GFSK	SISO	1	1.000	0.964	≥0.964	PASS
Pi/4DQPSK	SISO	1	0.999	1.236	≥0.824	PASS
8DPSK	SISO	1	1.017	1.285	≥0.857	PASS

3.2 Test Graph

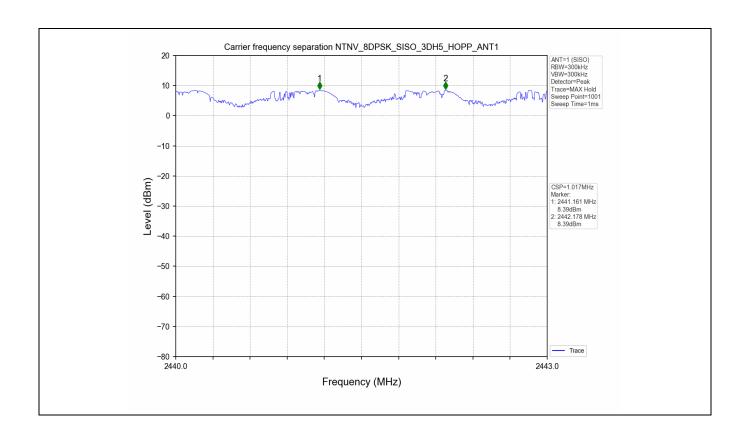






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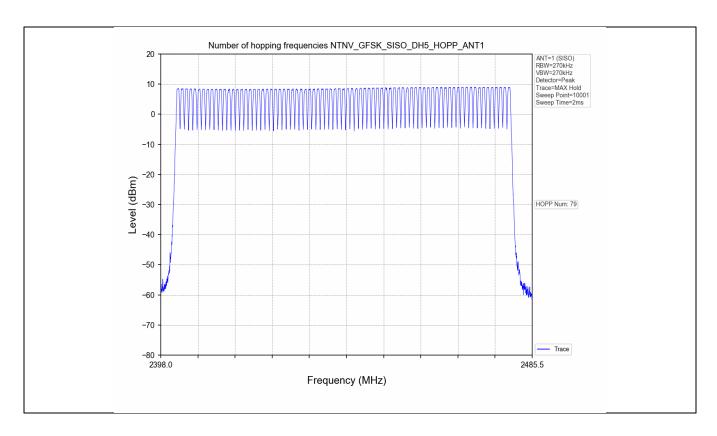
4. Number of hopping frequencies

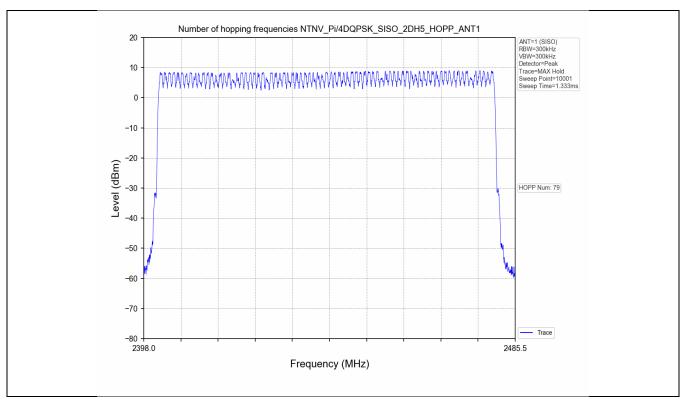
4.1 Test Result

Test Mode	TX Type	ANT No.	Num of Hopping Frequencies	Limits	Verdict
GFSK	SISO	1	79	≥15	PASS
Pi/4DQPSK	SISO	1	79	≥15	PASS
8DPSK	SISO	1	79	≥15	PASS

4.2 Test Graph

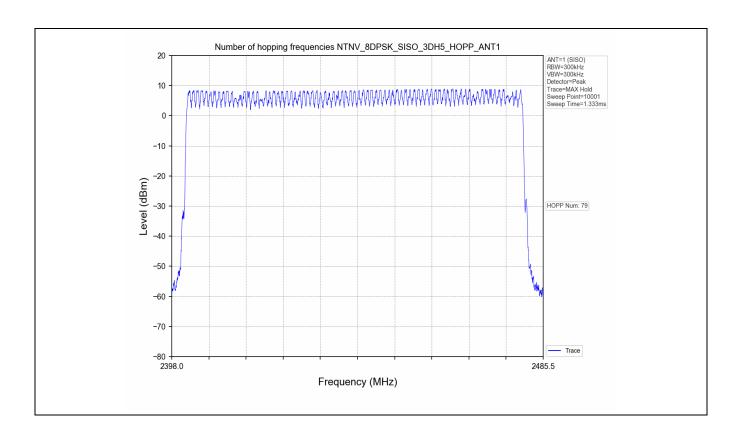






NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮編: 201612 $\begin{array}{lll} t(86\text{-}21)\, 61915666 & f(86\text{-}21)61915678 & \text{www.sgsgroup.com.cn} \\ t(86\text{-}21)\, 61915666 & f(86\text{-}21)61915678 & \text{e sgs.china@sgs.com} \end{array}$





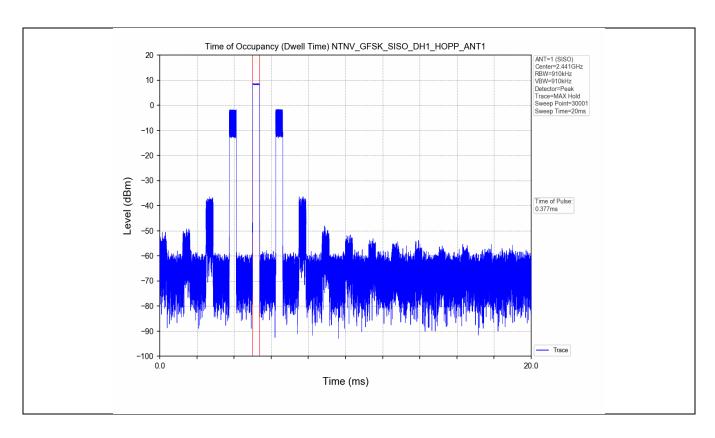
5. Time of Occupancy (Dwell Time)

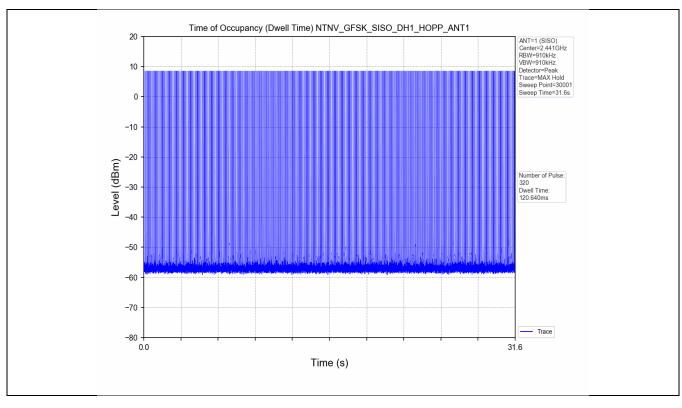
5.1 Test Result

Test Mode	Packet Type	ТХ Туре	ANT No.		_	Num of Pulse in Observation Period	Dwell Time (ms)	Limits (ms)	Verdict
	DH1	SISO	1	0.377	31.6	320	120.640	≤400	PASS
GFSK	DH3	SISO	1	1.633	31.6	160	261.280	≤400	PASS
	DH5	SISO	1	2.883	31.6	107	308.481	≤400	PASS
Pi/4DQ	2DH1	SISO	1	0.383	31.6	320	122.560	≤400	PASS
PSK	2DH3	SISO	1	1.636	31.6	160	261.760	≤400	PASS
FSK	2DH5	SISO	1	2.883	31.6	107	308.481	≤400	PASS
	3DH1	SISO	1	0.383	31.6	320	122.560	≤400	PASS
8DPSK	3DH3	SISO	1	1.635	31.6	160	261.600	≤400	PASS
	3DH5	SISO	1	2.886	31.6	107	308.802	≤400	PASS

5.2 Test Graph



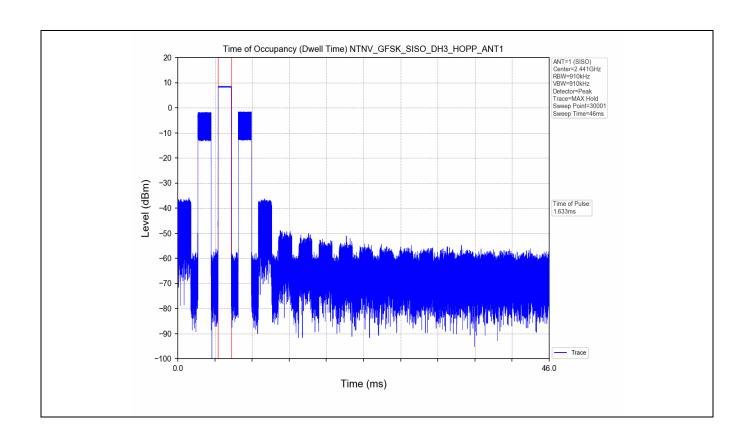




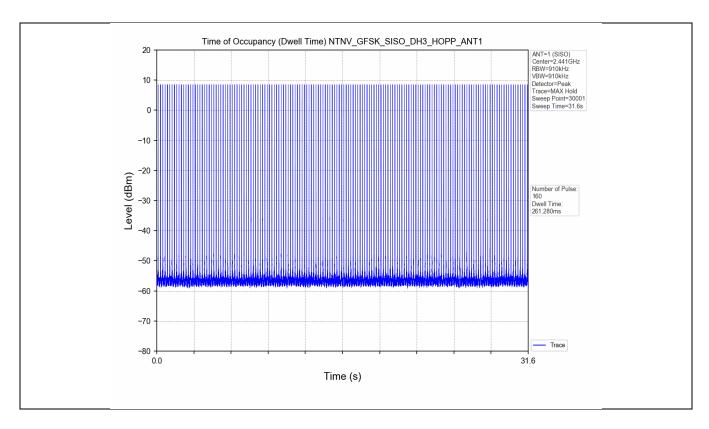
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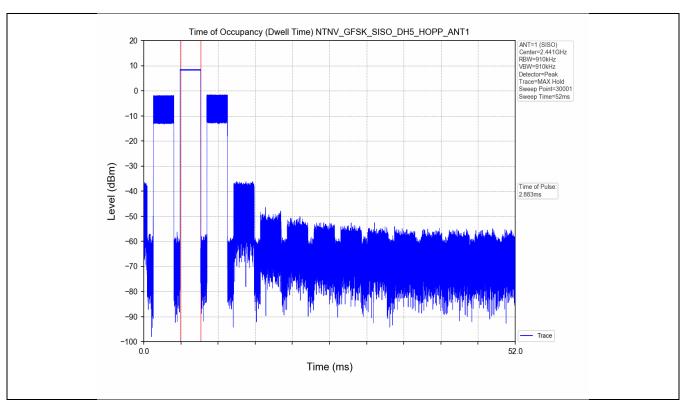
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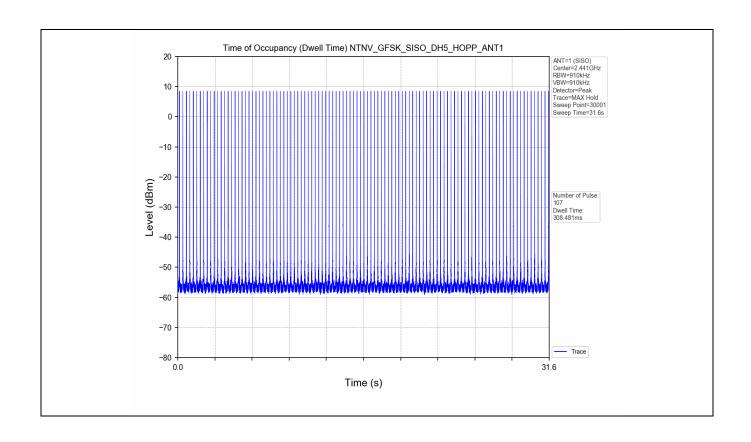
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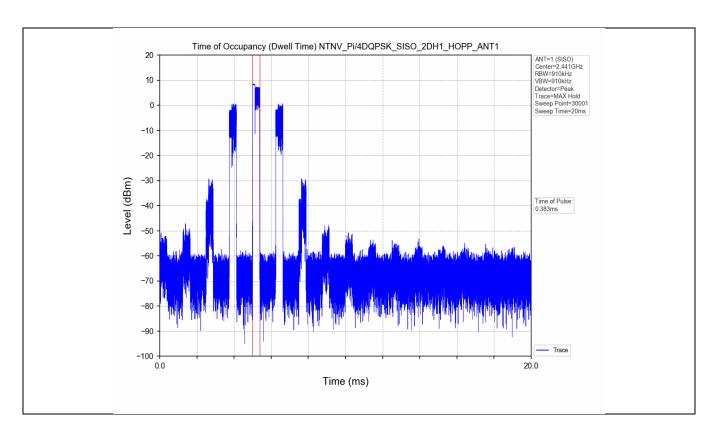
中国・上海 ・松江区金都西路588号

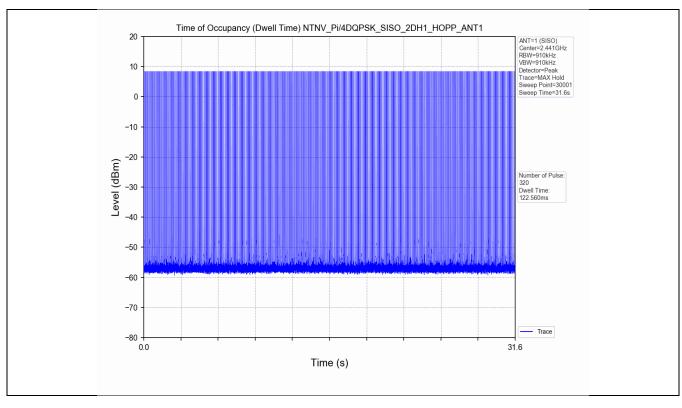
t(86-21)61915666 f(86-21)61915678 www.sgsgroup.com.cn











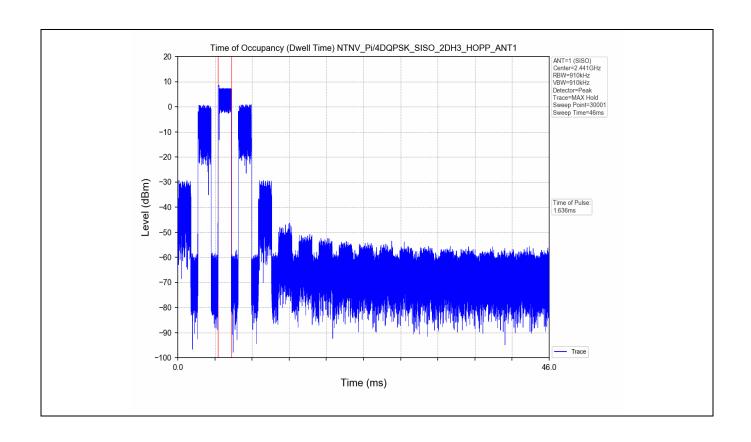
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NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612

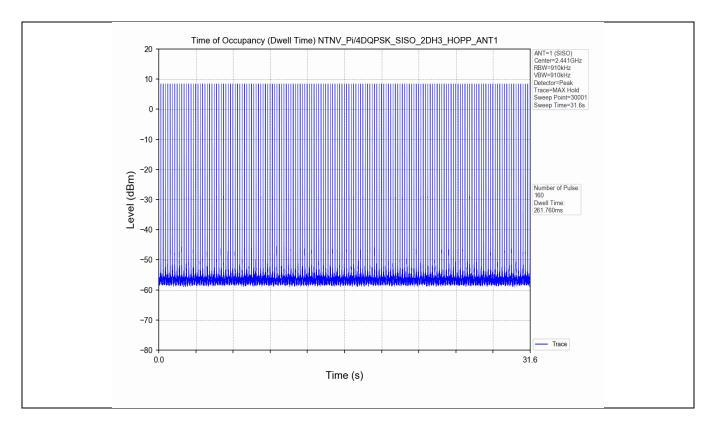
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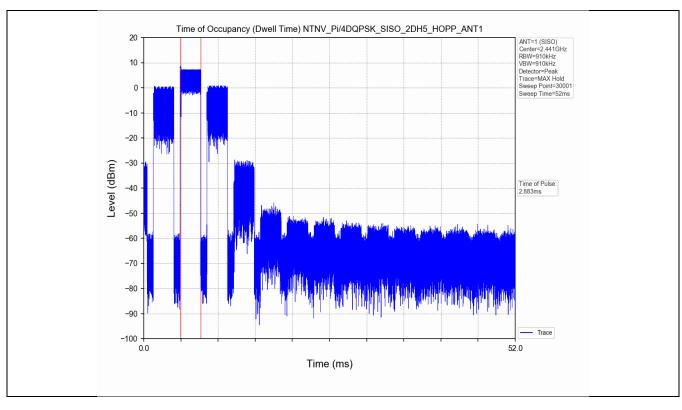
t(86-21)61915666 f(86-21)61915678 www.sgsgroup.com.cn











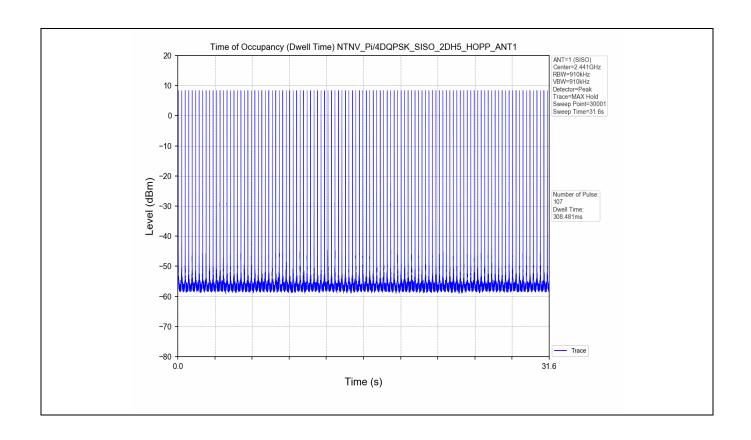
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NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612

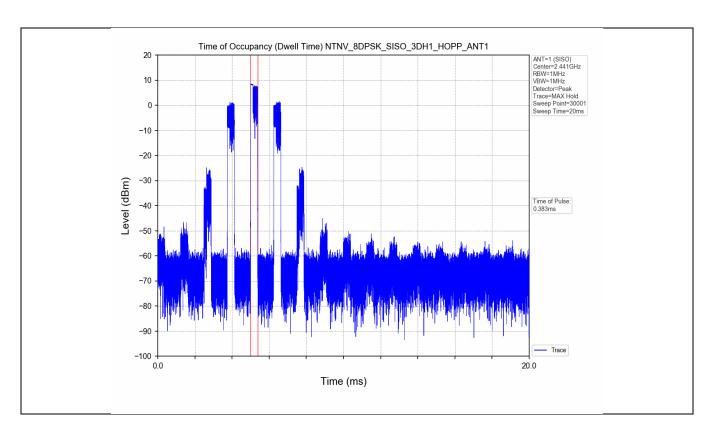
中国・上海 ・松江区金都西路588号

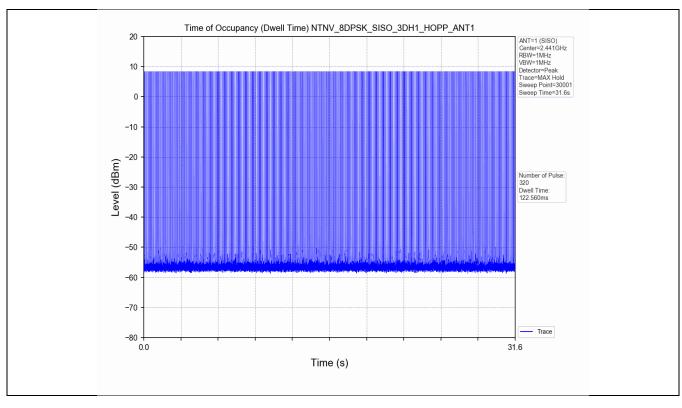
t(86-21)61915666 f(86-21)61915678 www.sgsgroup.com.cn











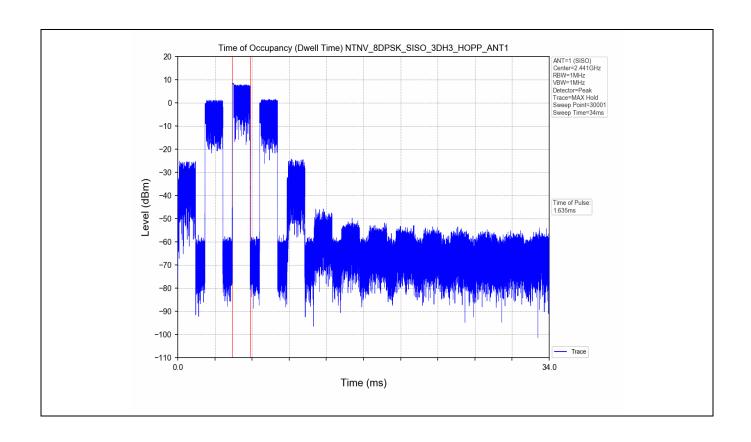
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NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612

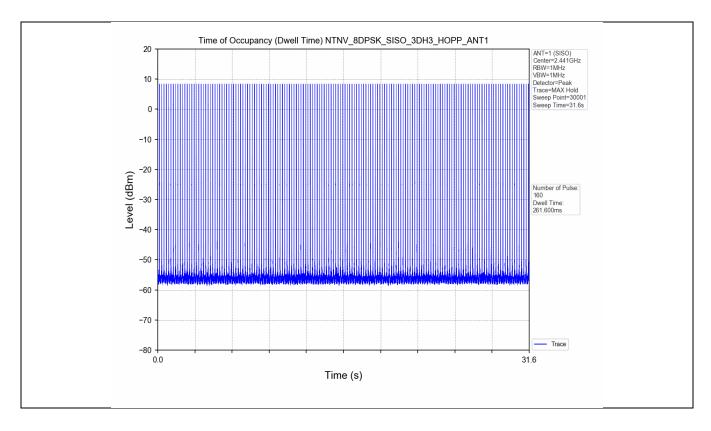
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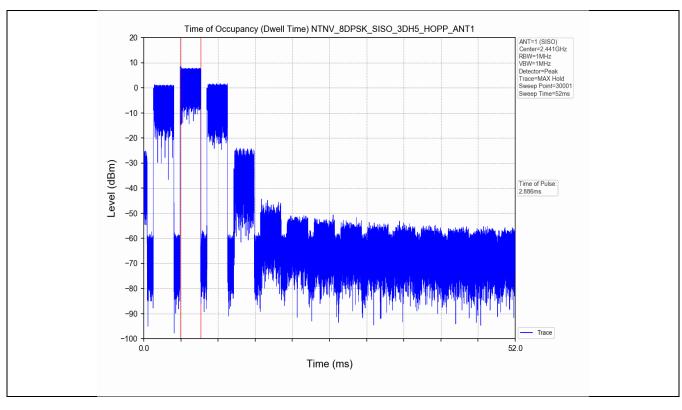
t(86-21)61915666 f(86-21)61915678 www.sgsgroup.com.cn











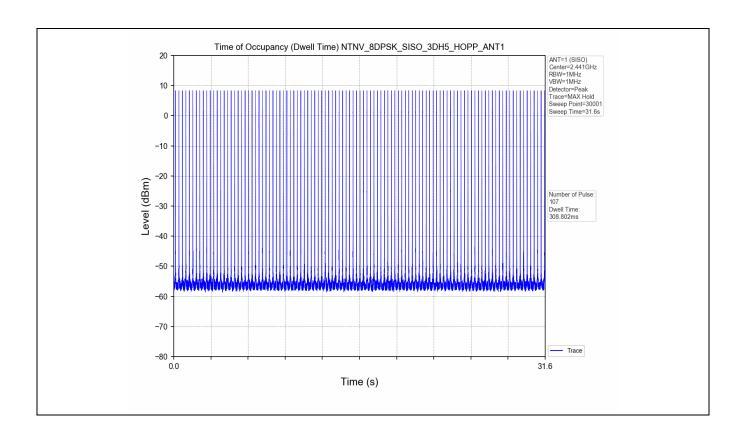
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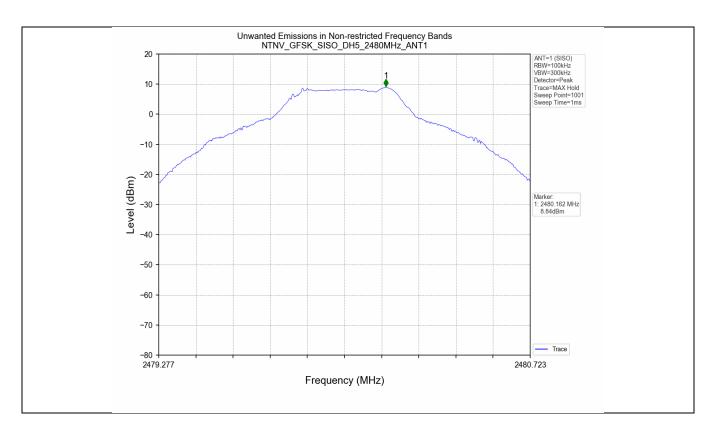
6. Unwanted Emissions in Non-restricted Frequency Bands

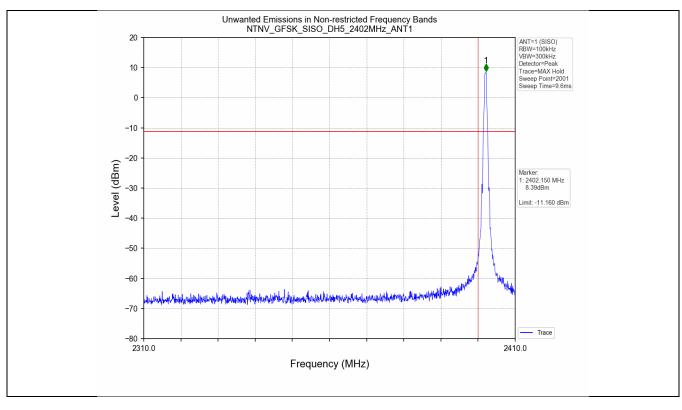
6.1 Test Result

Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
	2402	SISO	1	Refer to test graph	-11.16	PASS
GFSK	2441	SISO	1	Refer to test graph	-11.16	PASS
Gran	2480	SISO	1	Refer to test graph	-11.16	PASS
	Hopping	SISO	1	Refer to test graph	-11.16	PASS
	2402	SISO	1	Refer to test graph	-11.58	PASS
Pi/4DQPSK	2441	SISO	1	Refer to test graph	-11.58	PASS
PI/4DQP3K	2480	SISO	1	Refer to test graph	-11.58	PASS
	Hopping	SISO	1	Refer to test graph	-11.58	PASS
	2402	SISO	1	Refer to test graph	-11.67	PASS
8DPSK	2441	SISO	1	Refer to test graph	-11.67	PASS
	2480	SISO	1	Refer to test graph	-11.67	PASS
	Hopping	SISO	1	Refer to test graph	-11.67	PASS

6.2 Test Graph

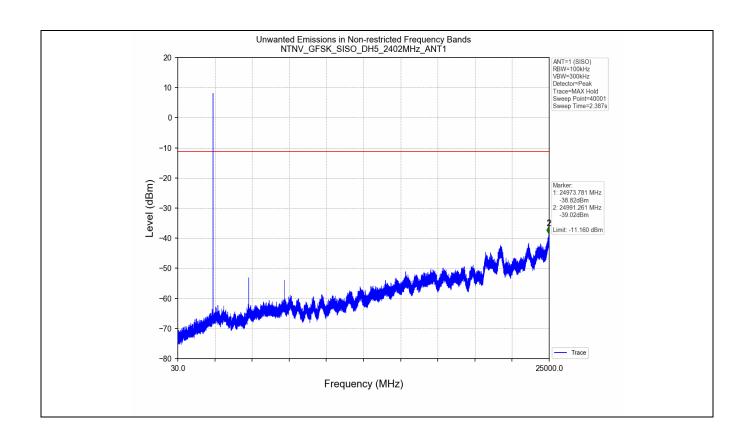




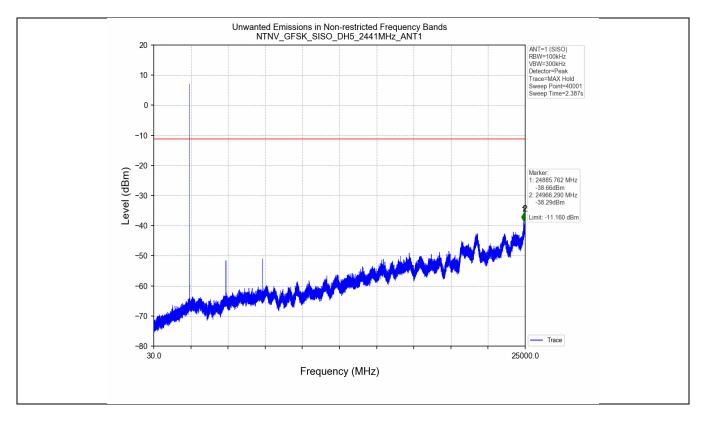


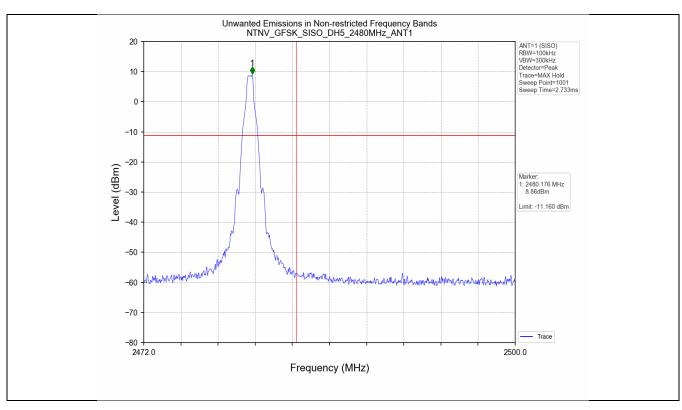
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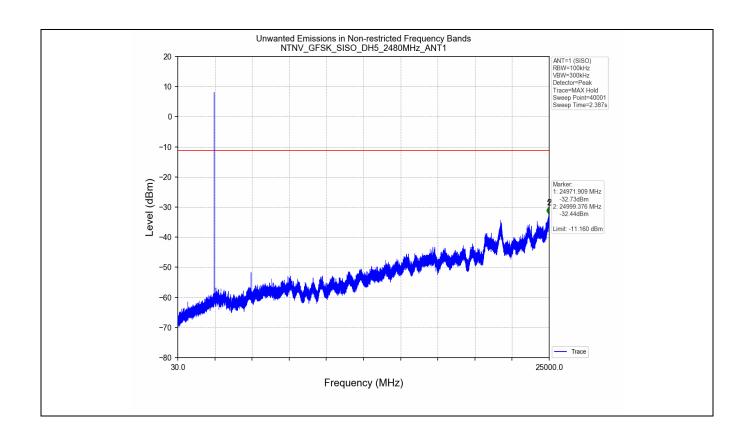




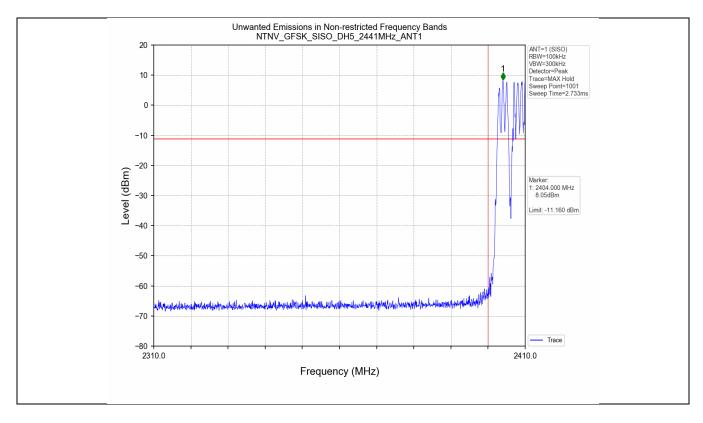


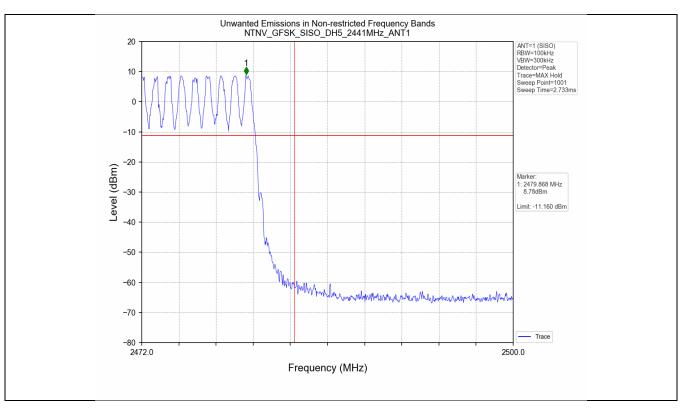
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮编: 201612 $\begin{array}{lll} t(86\text{-}21)\, 61915666 & f(86\text{-}21)61915678 & \text{www.sgsgroup.com.cn} \\ t(86\text{-}21)\, 61915666 & f(86\text{-}21)61915678 & \text{e sgs.china@sgs.com} \end{array}$





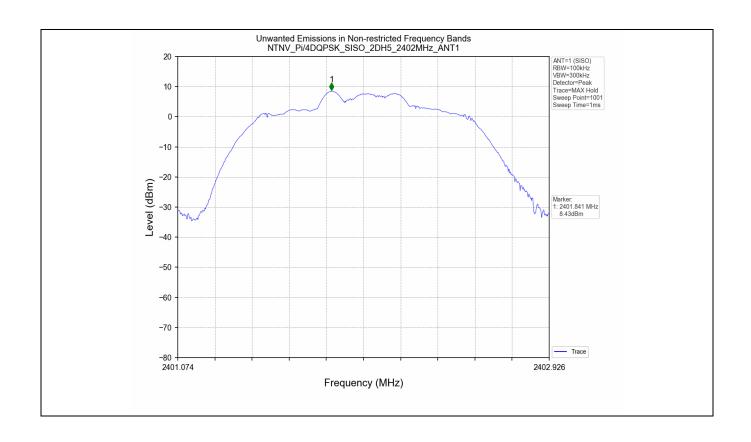




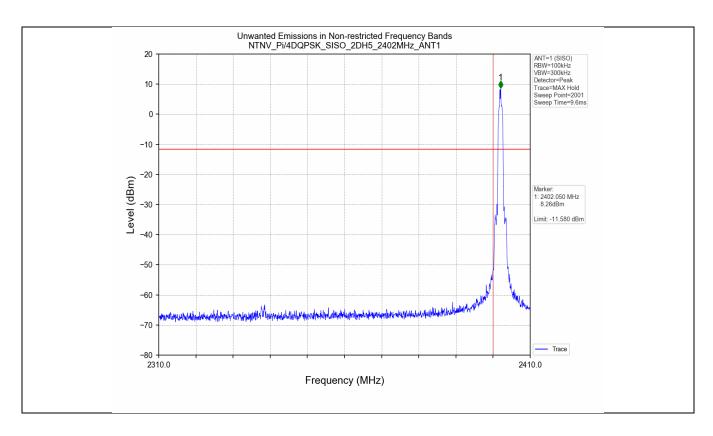


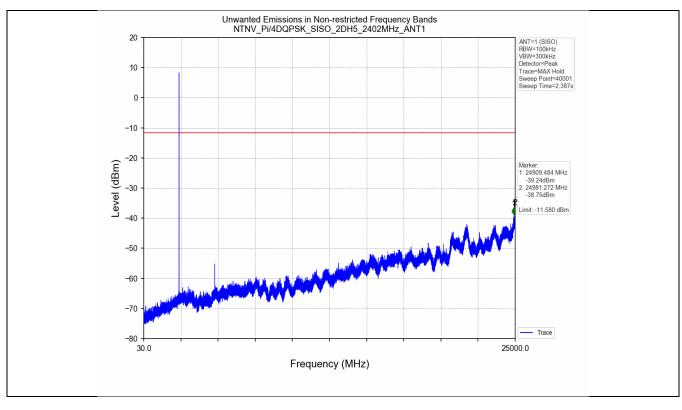
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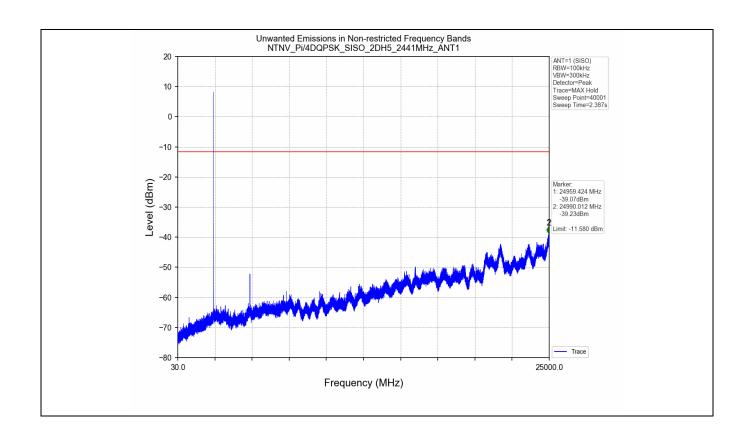




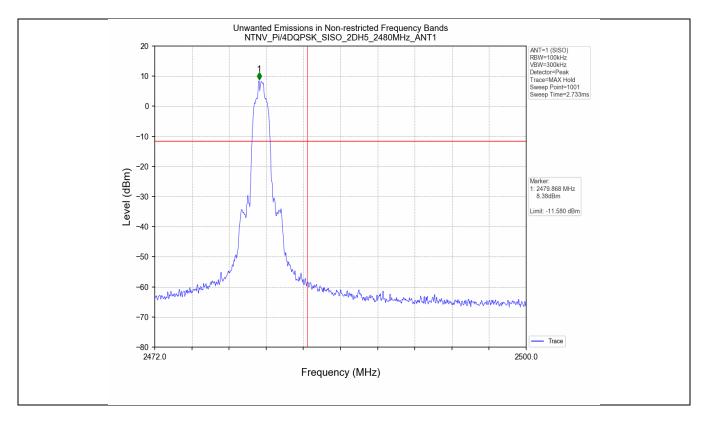


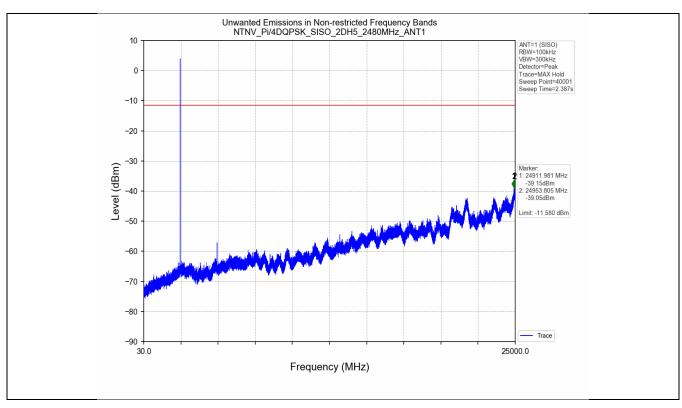
NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612 中国・上海・松江区金都西路588号 邮編: 201612 $\begin{array}{lll} t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{www.sgsgroup.com.cn} \\ t(86\text{--}21)\, 61915666 & f(86\text{--}21)\, 61915678 & \text{e sgs.china@sgs.com} \end{array}$











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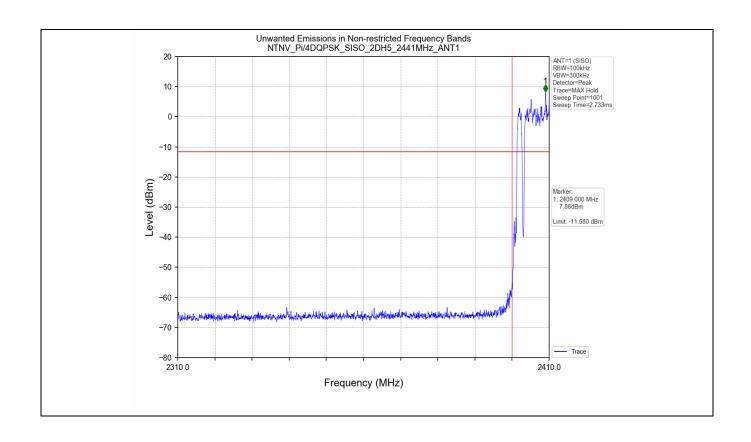
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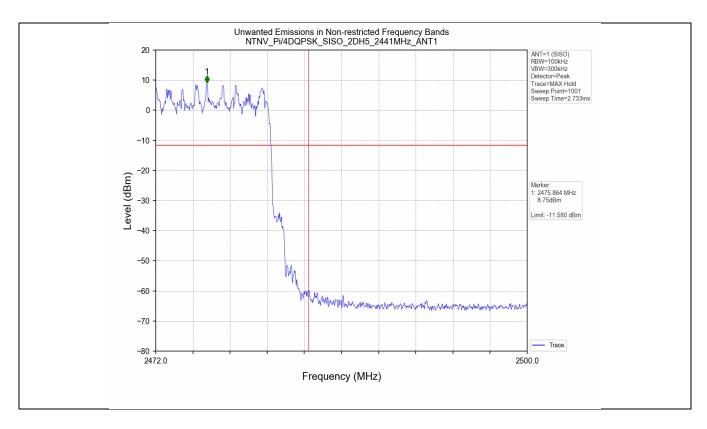
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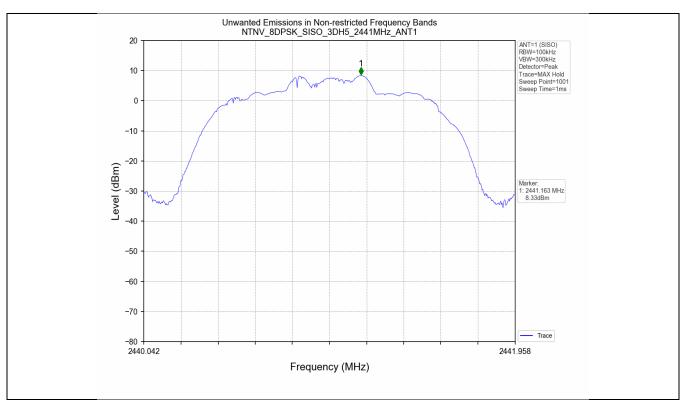
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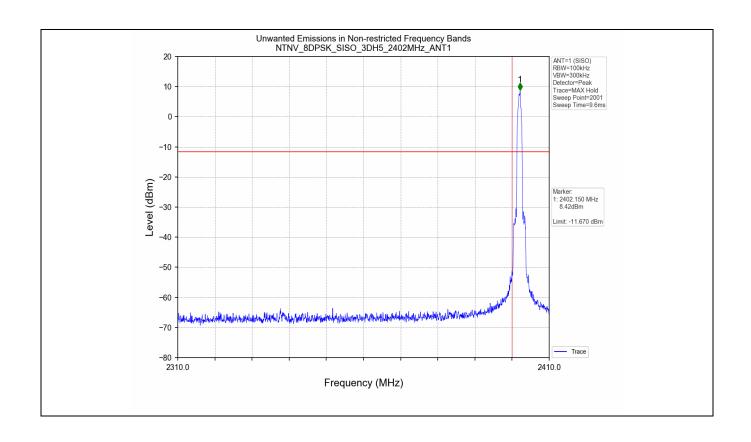




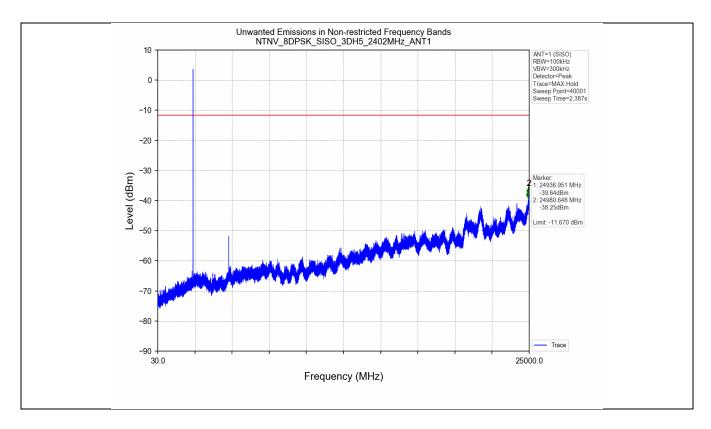


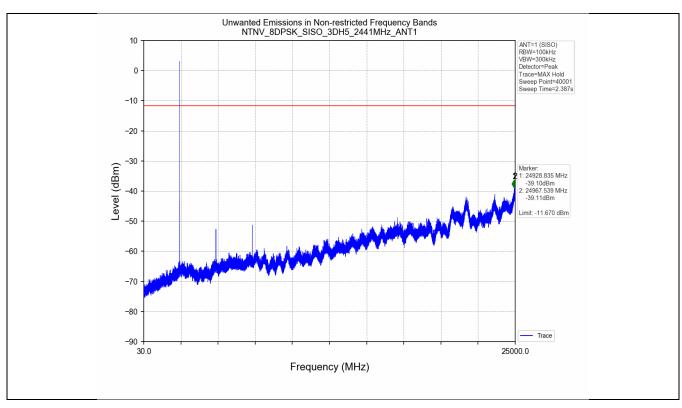












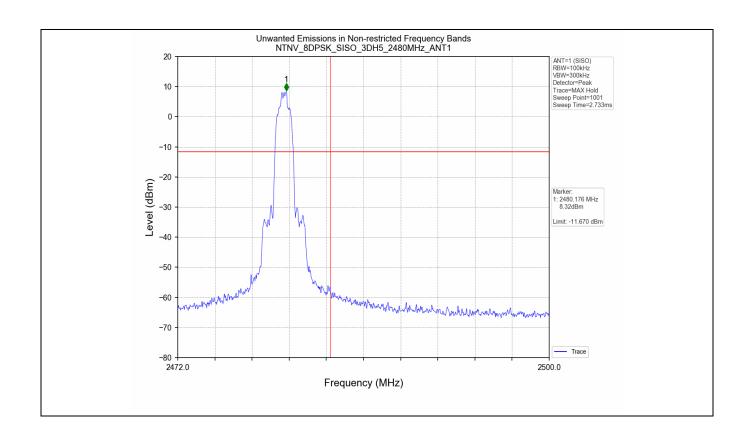
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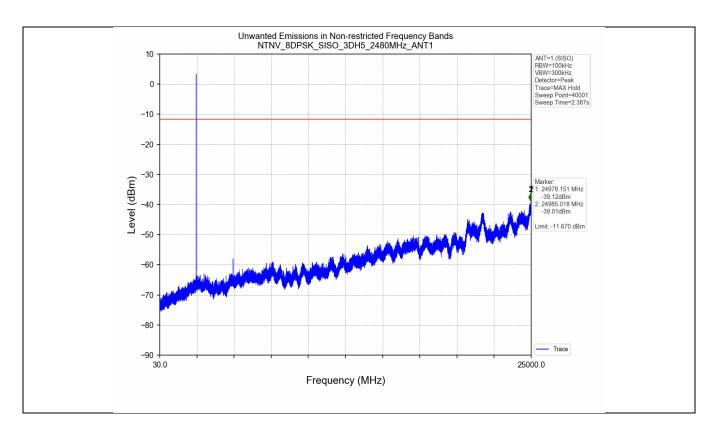
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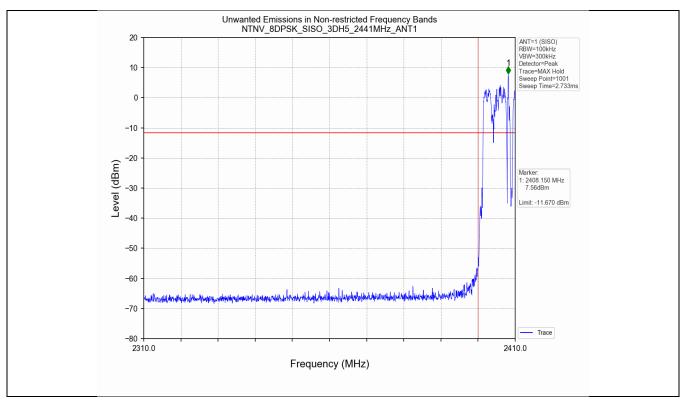
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