

# DWELL TIME



XMit 2017.12.13

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The hopping function of the EUT was enabled.

The dwell time limit is based on the Number of Hopping Channels \* 400 mS. For Bluetooth this would be 79 Channels \* 400mS = 31.6 Sec.

On Time During 31.6 Sec = Pulse Width \* Average Number of Pulses \* Scale Factor

➤ Average Number of Pulses is based on 4 samples.

➤ Scale Factor = 31.6 Sec / Screen Capture Sweep Time = 31.6 Sec / 6.32 Sec = 5

# DWELL TIME



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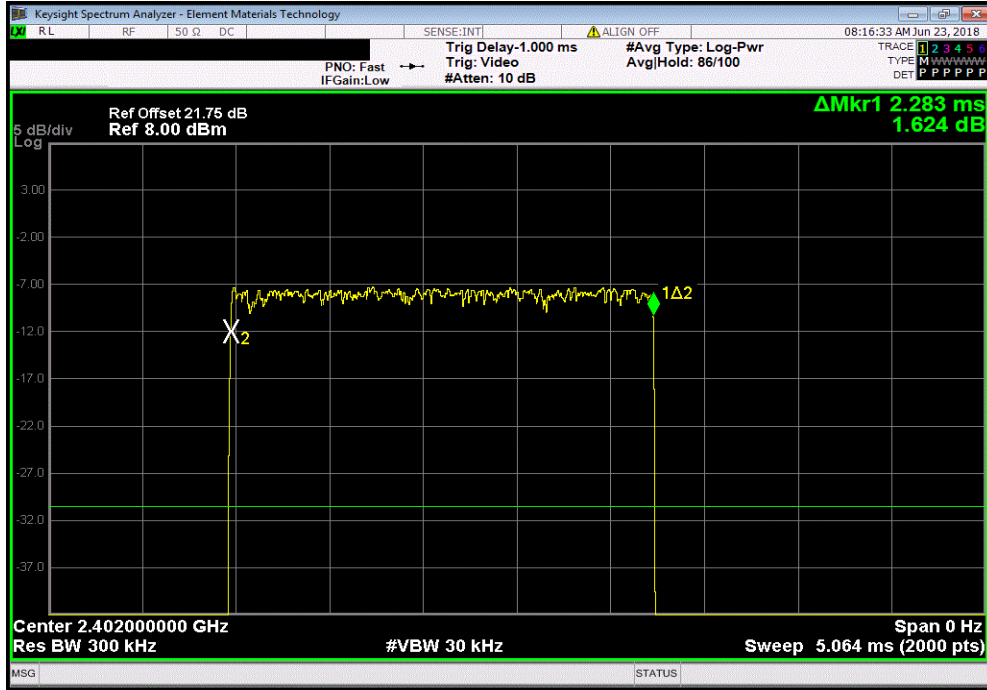
EUT: <b>Multi-Function Accessory</b>		Work Order: <b>STAK0117</b>					
Serial Number: <b>182010051A</b>		Date: <b>26-Jun-18</b>					
Customer: <b>Starkey Laboratories, Inc.</b>		Temperature: <b>22 °C</b>					
Attendees: <b>Charlie Esch</b>		Humidity: <b>57.5% RH</b>					
Project: <b>None</b>		Barometric Pres.: <b>1012 mbar</b>					
Tested by: <b>Dustin Sparks</b>		Power: <b>Battery</b>					
Job Site: <b>MN08</b>							
<b>TEST SPECIFICATIONS</b>							
FCC 15.247:2018		Test Method: <b>ANSI C63.10:2013</b>					
<b>COMMENTS</b>							
None							
<b>DEVIATIONS FROM TEST STANDARD</b>							
None							
Configuration #	7	Signature: <i>Dustin Sparks</i>					
	Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
<b>Hopping Mode</b>							
<b>GFSK, DM5</b>							
Low Channel, 2402 MHz	2.283	N/A	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	2.283	N/A	32	5	365.28	400	Pass
High Channel, 2480 MHz	2.28	N/A	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	2.28	N/A	32	5	364.8	400	Pass
<b>pi/4-DQPSK, 2DH5</b>							
Low Channel, 2402 MHz	1.051	N/A	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	1.051	N/A	64	5	336.32	400	Pass
High Channel, 2480 MHz	1.051	N/A	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	64	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	1.051	N/A	64	5	336.32	400	Pass
<b>8DPSK, 3DH5</b>							
Low Channel, 2402 MHz	2.298	N/A	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
Low Channel, 2402 MHz	2.298	N/A	32	5	367.68	400	Pass
High Channel, 2480 MHz	2.298	N/A	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	N/A	32	N/A	N/A	N/A	N/A	N/A
High Channel, 2480 MHz	2.298	N/A	32	5	367.68	400	Pass

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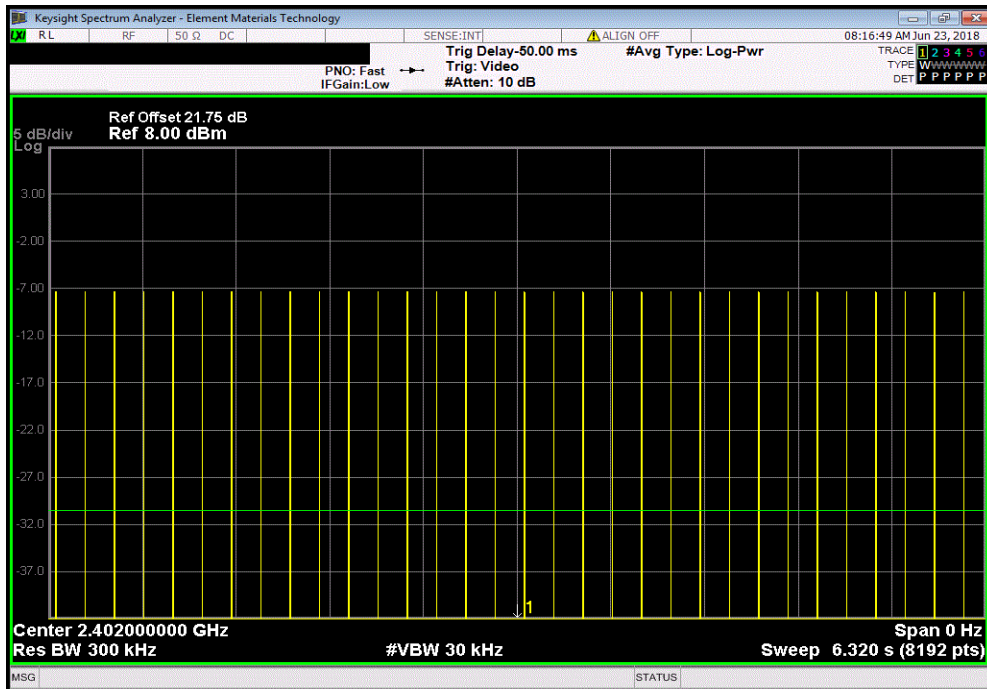


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Hopping Mode, GFSK, DM5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.283	N/A	N/A	N/A	N/A	N/A	N/A



Hopping Mode, GFSK, DM5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A

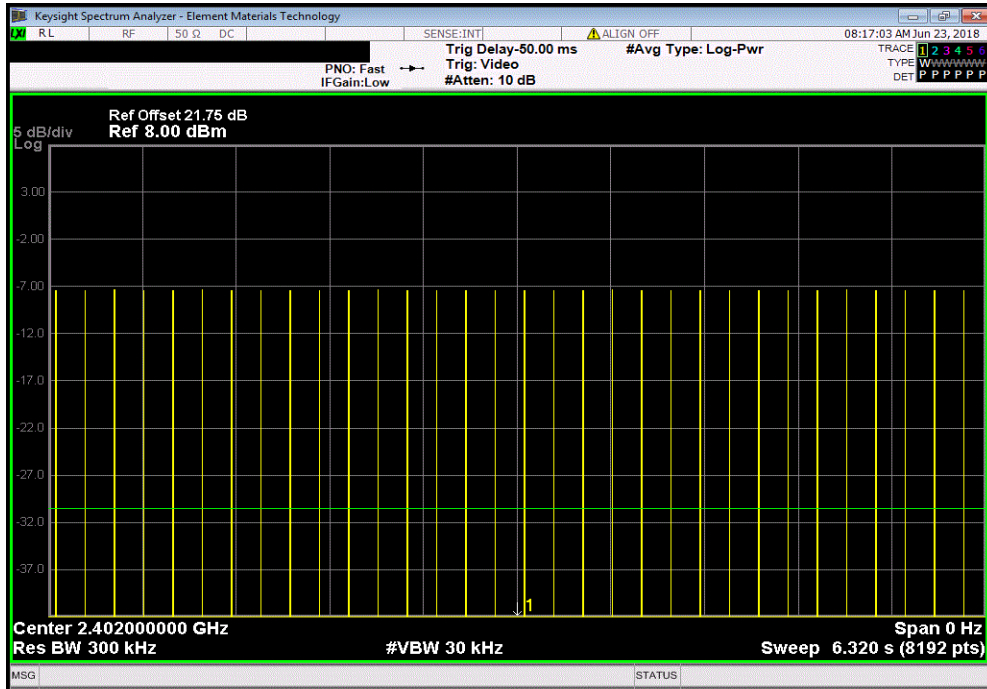


# DWELL TIME

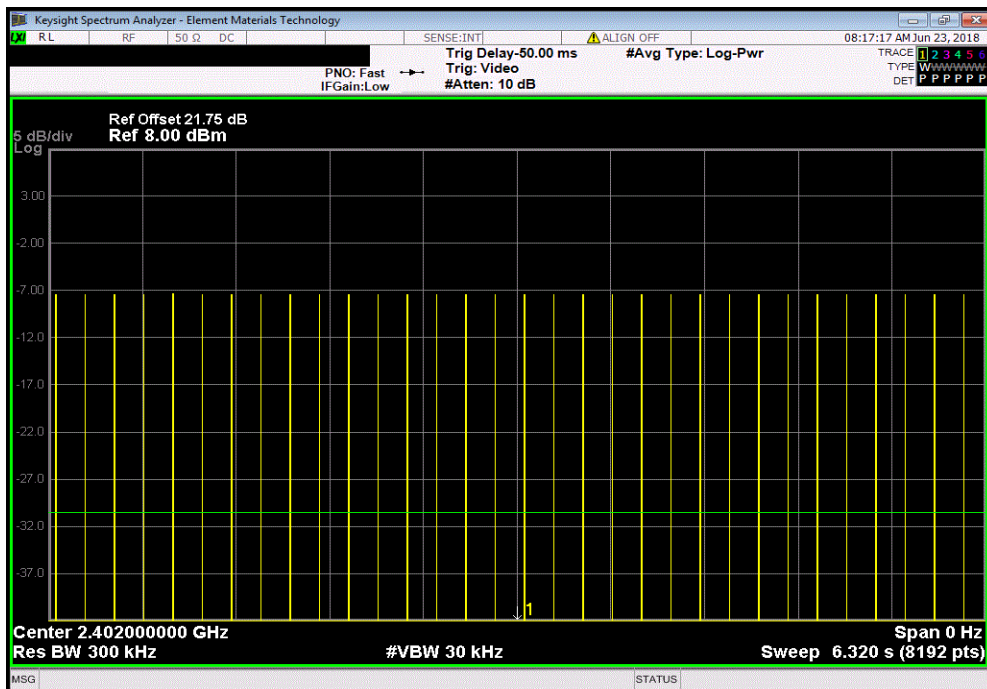


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Hopping Mode, GFSK, DM5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, GFSK, DM5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A

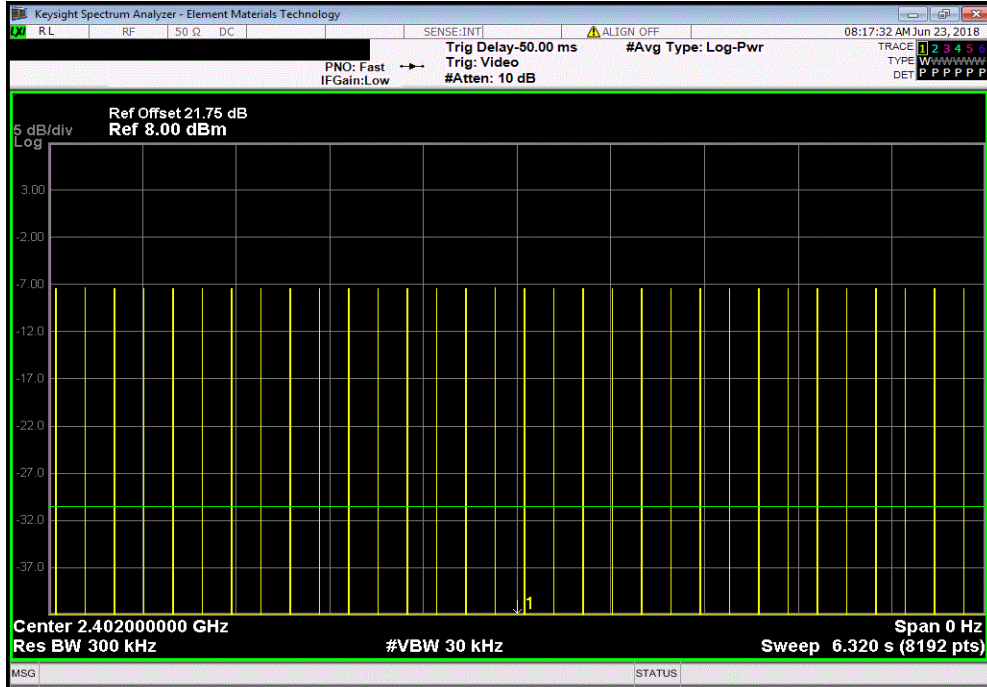


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Hopping Mode, GFSK, DM5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, GFSK, DM5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.283	N/A	32	5	365.28	400	Pass

Calculation Only

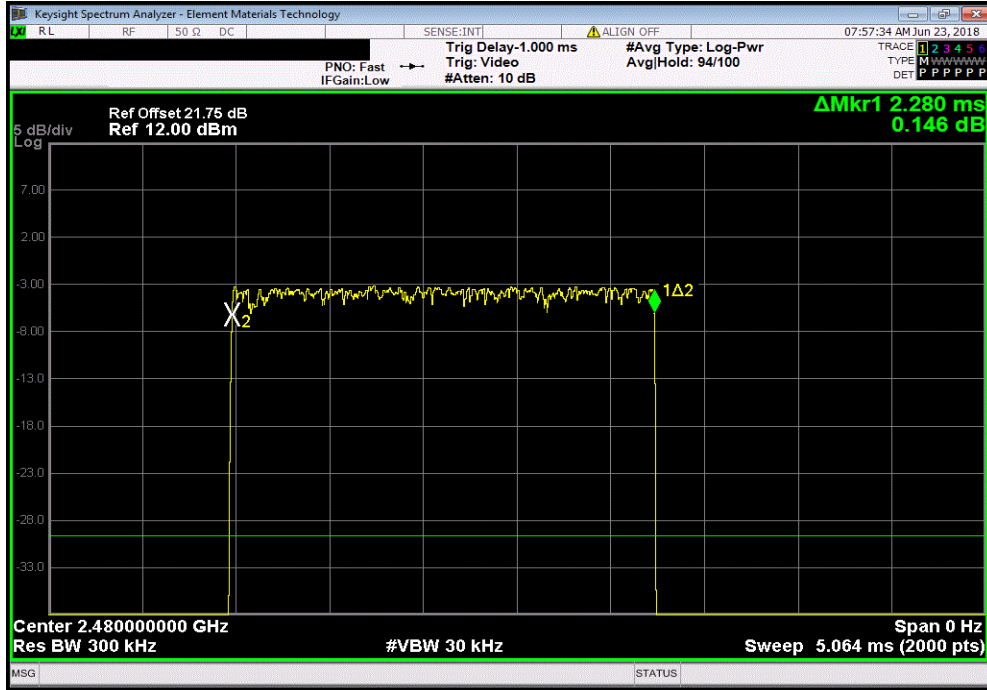
No Screen Capture Required

# DWELL TIME

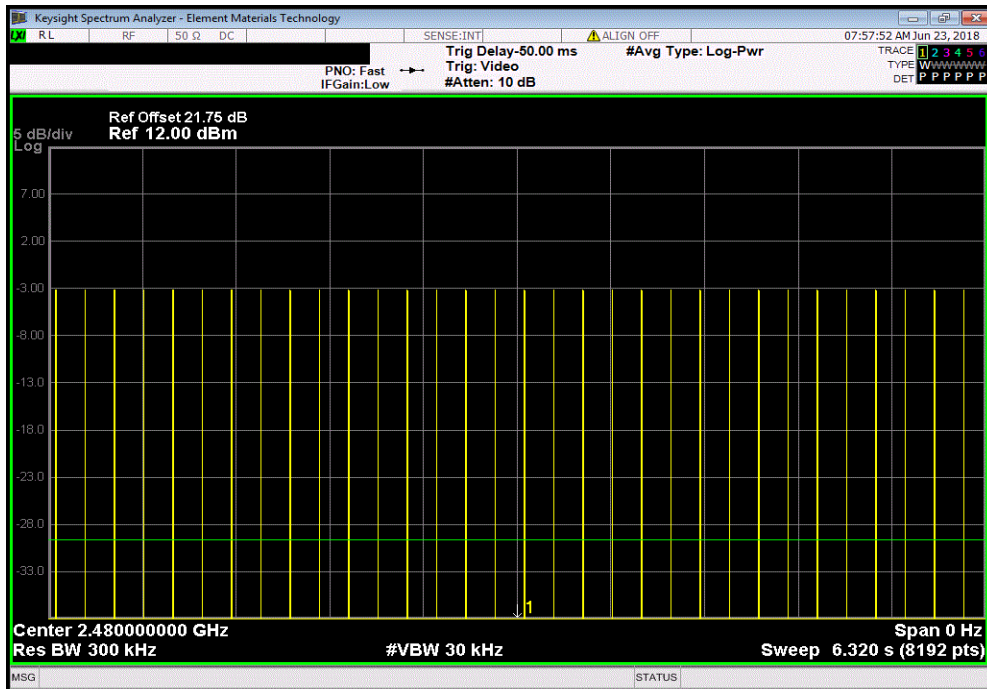


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Hopping Mode, GFSK, DM5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.28	N/A	N/A	N/A	N/A	N/A	N/A



Hopping Mode, GFSK, DM5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A

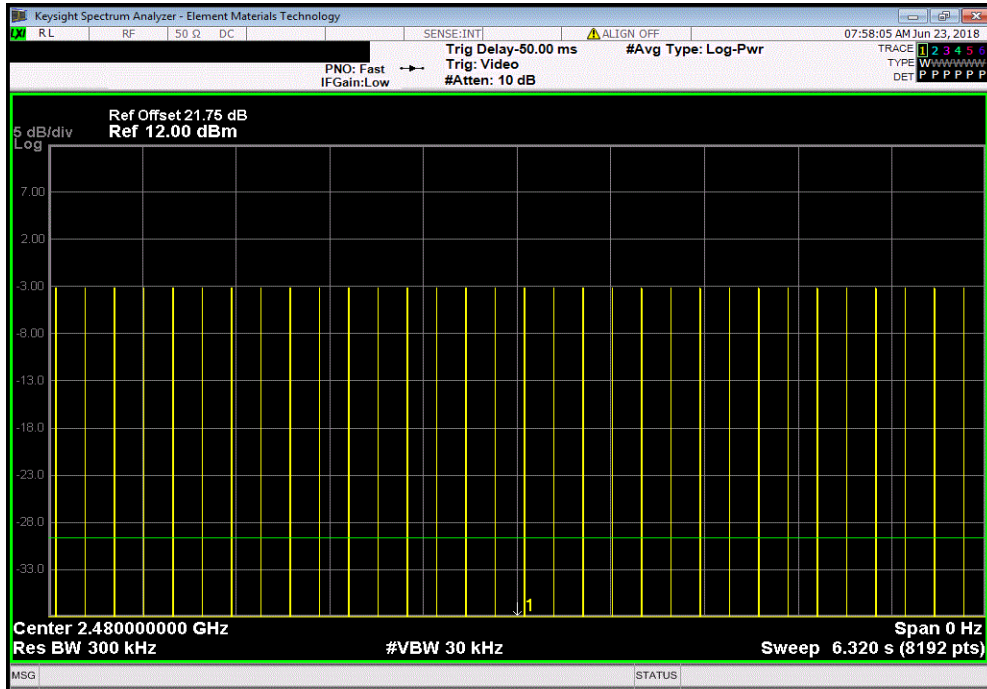


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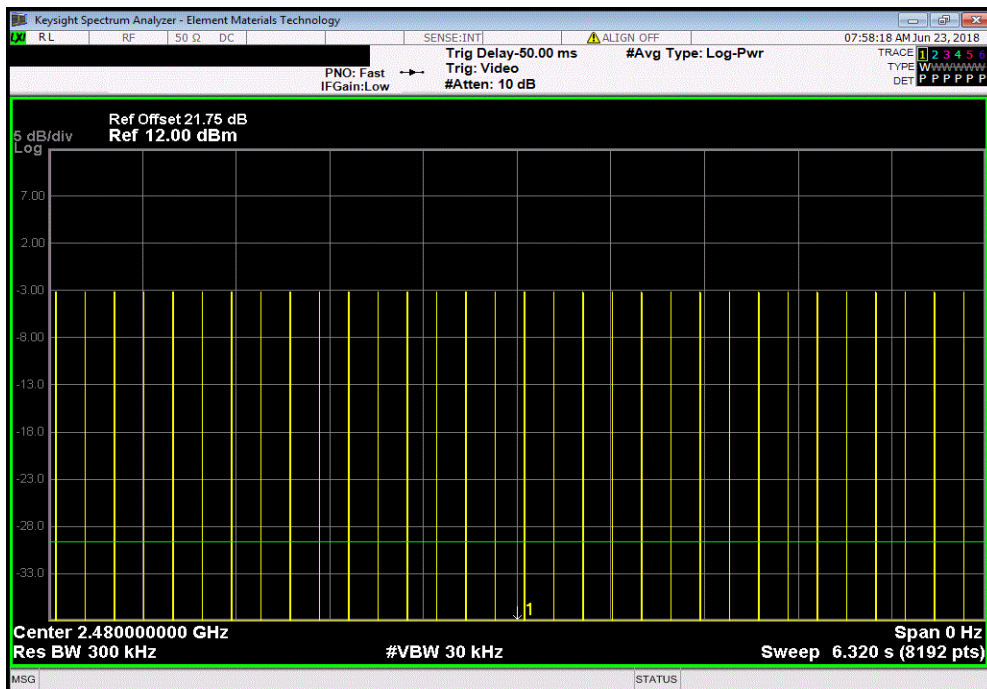


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Hopping Mode, GFSK, DM5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, GFSK, DM5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A

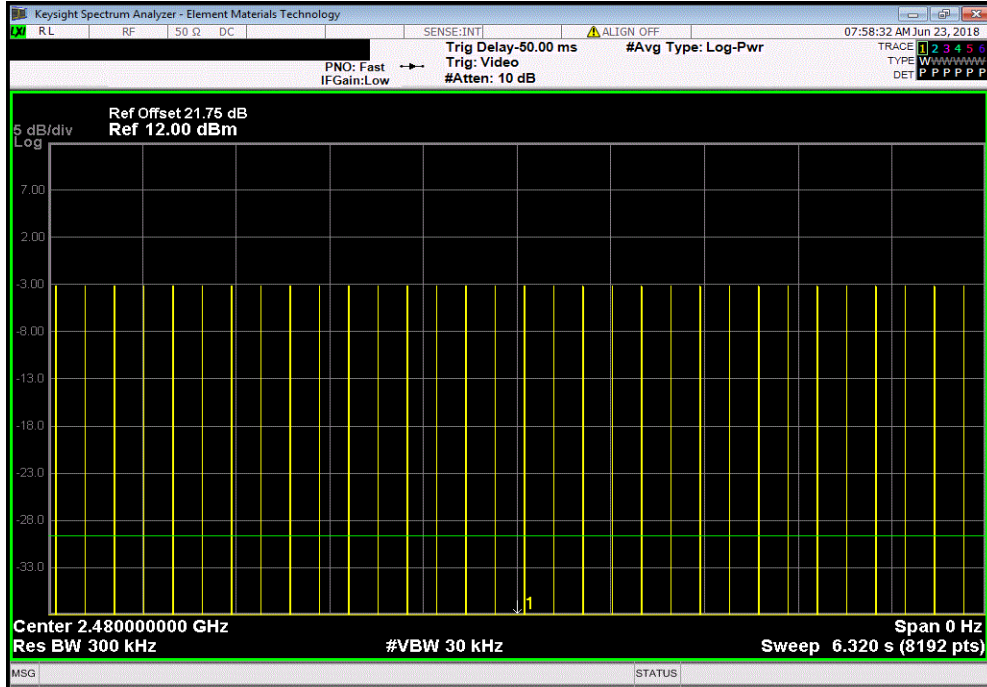


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Hopping Mode, GFSK, DM5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, GFSK, DM5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.28	N/A	32	5	364.8	400	Pass

Calculation Only

No Screen Capture Required

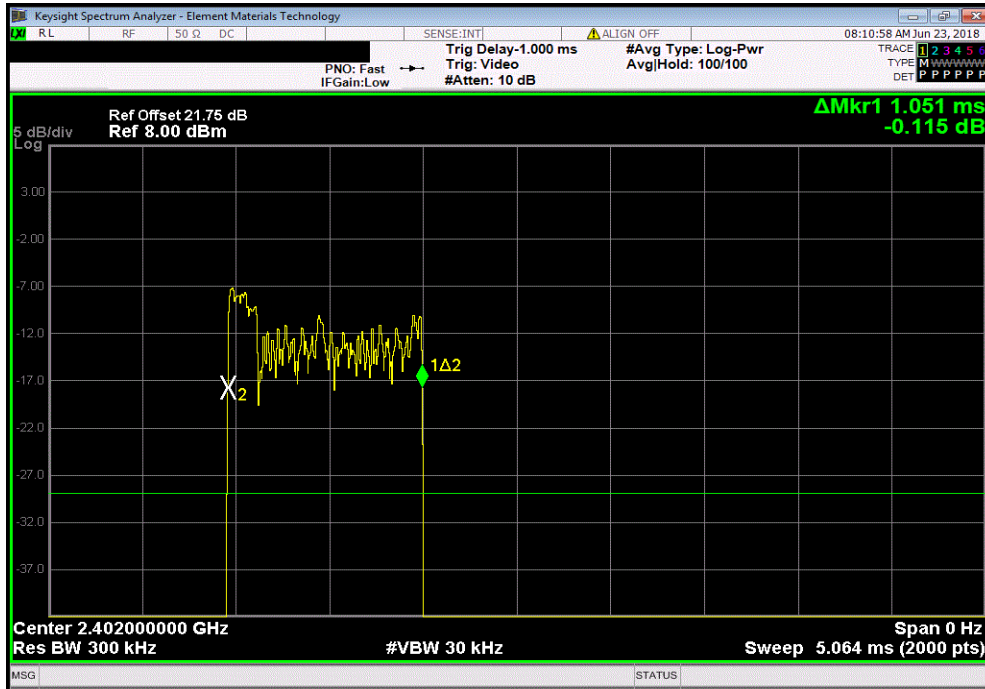


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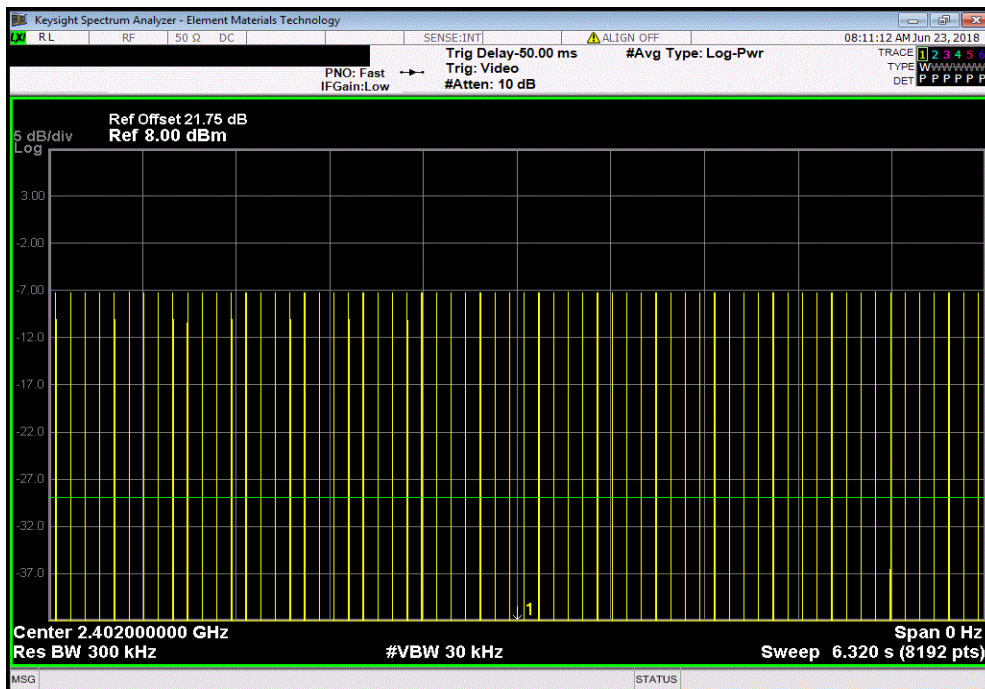


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Hopping Mode, pi/4-DQPSK, 2DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
1.051	N/A	N/A	N/A	N/A	N/A	N/A



Hopping Mode, pi/4-DQPSK, 2DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A

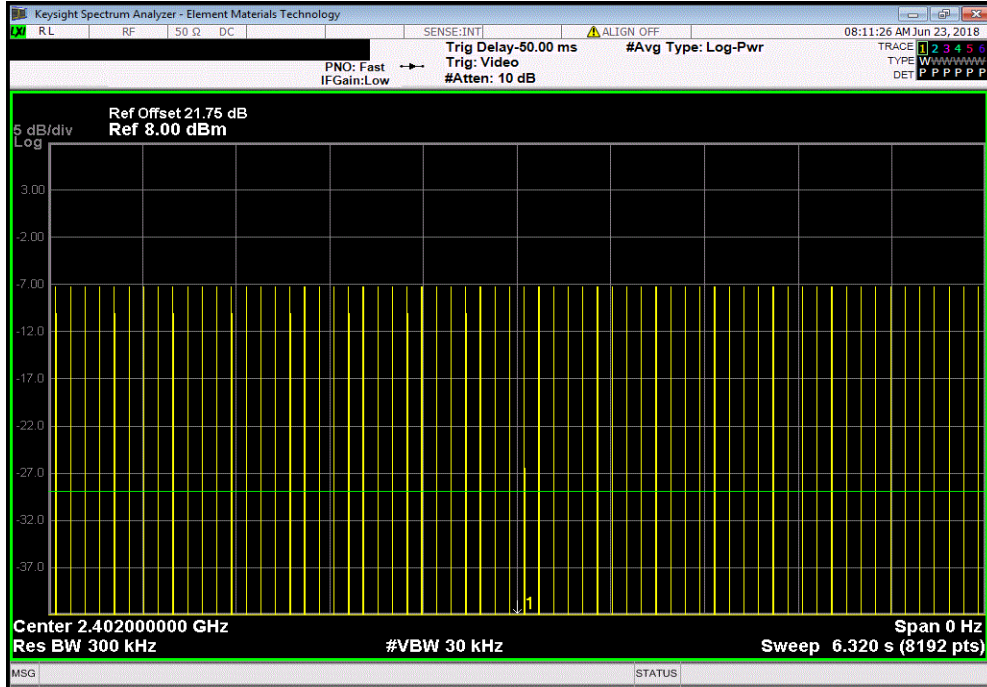


# DWELL TIME

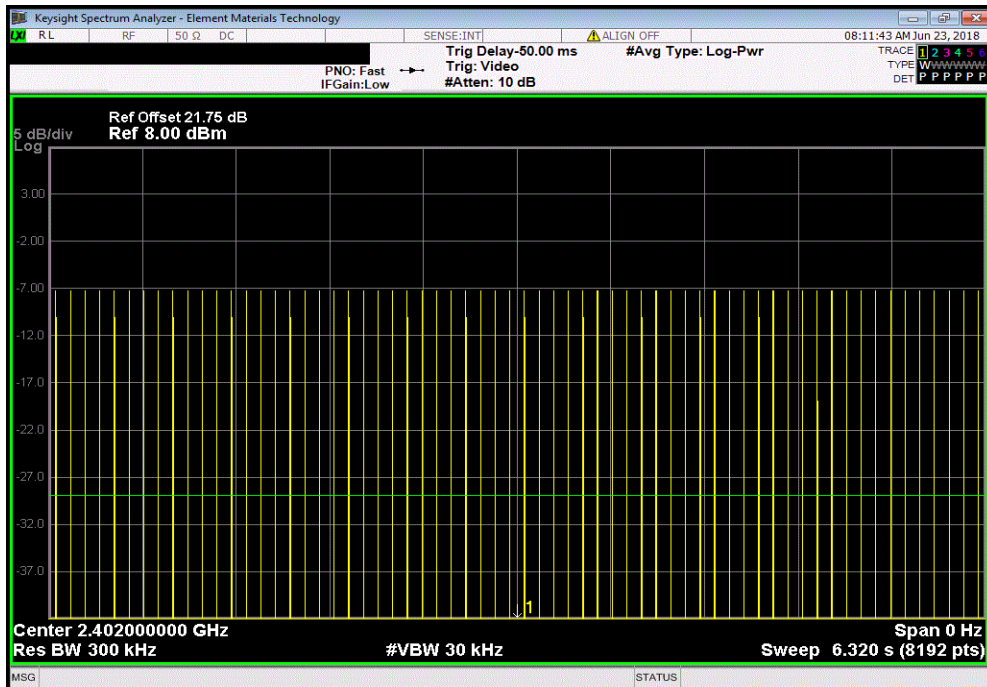


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Hopping Mode, pi/4-DQPSK, 2DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A



Hopping Mode, pi/4-DQPSK, 2DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A

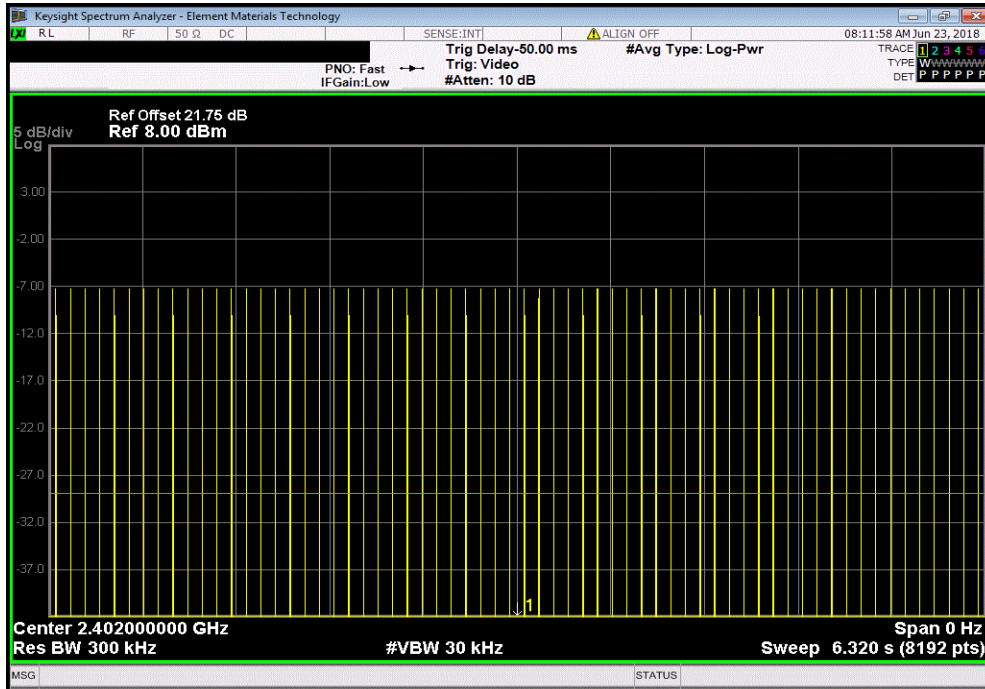


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Hopping Mode, pi/4-DQPSK, 2DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A



Hopping Mode, pi/4-DQPSK, 2DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
1.051	N/A	64	5	336.32	400	Pass

Calculation Only

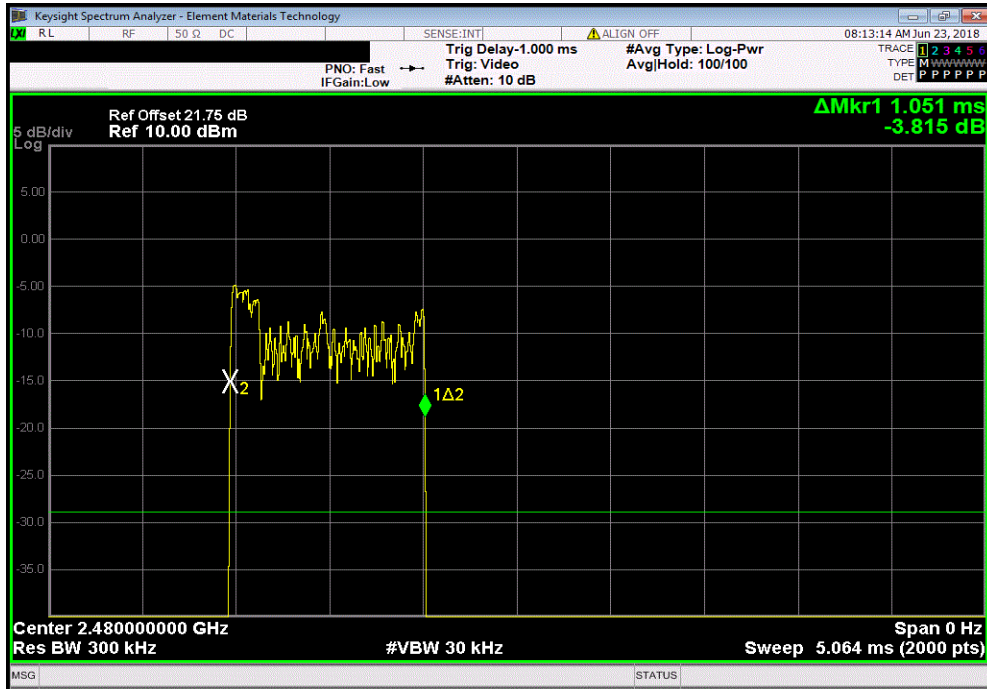
No Screen Capture Required

# DWELL TIME

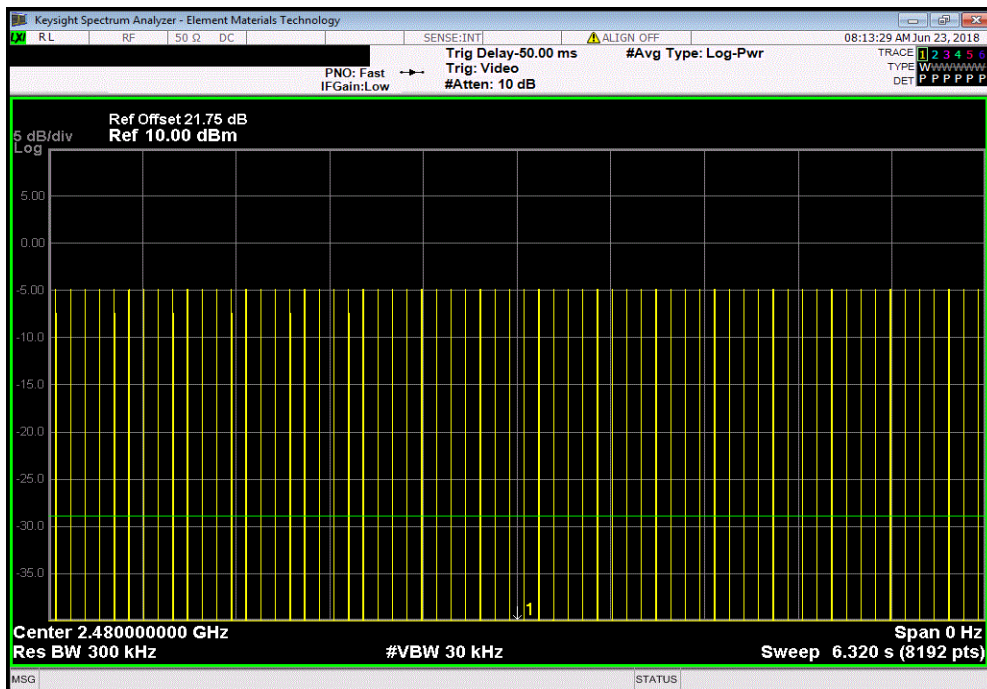


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Hopping Mode, pi/4-DQPSK, 2DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
1.051	N/A	N/A	N/A	N/A	N/A	N/A



Hopping Mode, pi/4-DQPSK, 2DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A

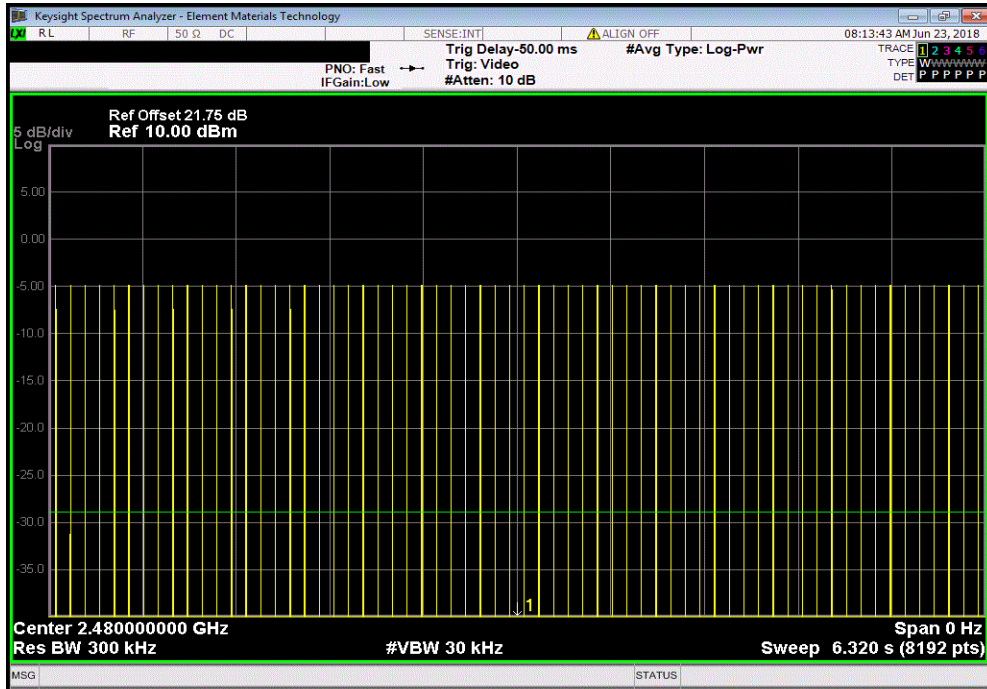


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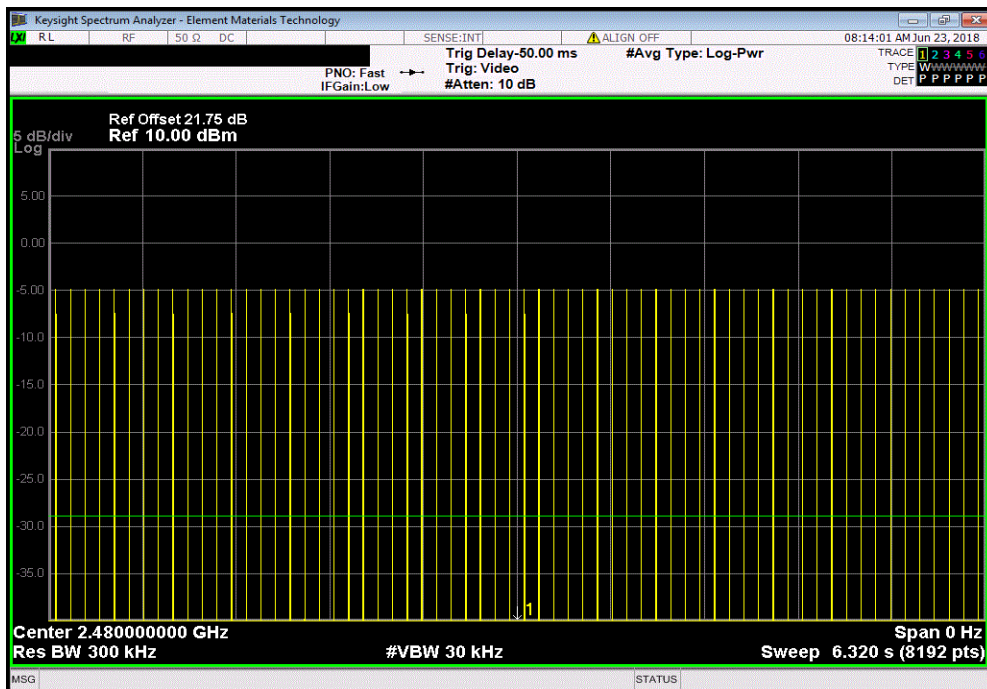


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Hopping Mode, pi/4-DQPSK, 2DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A



Hopping Mode, pi/4-DQPSK, 2DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A

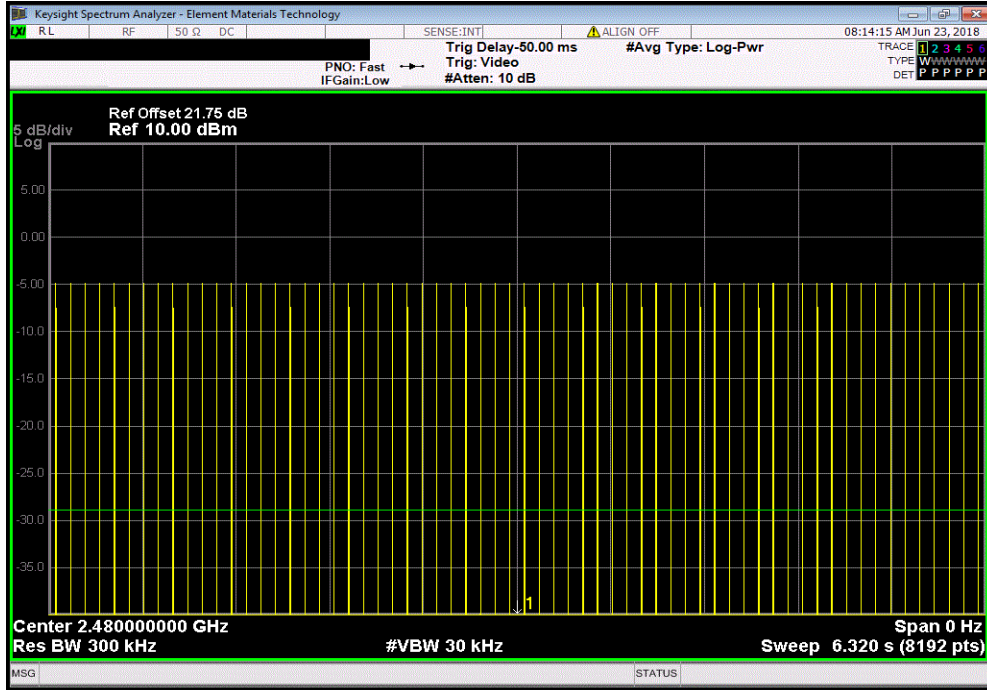


# DWELL TIME



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Hopping Mode, pi/4-DQPSK, 2DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	64	N/A	N/A	N/A	N/A	N/A



Hopping Mode, pi/4-DQPSK, 2DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
1.051	N/A	64	5	336.32	400	Pass

Calculation Only

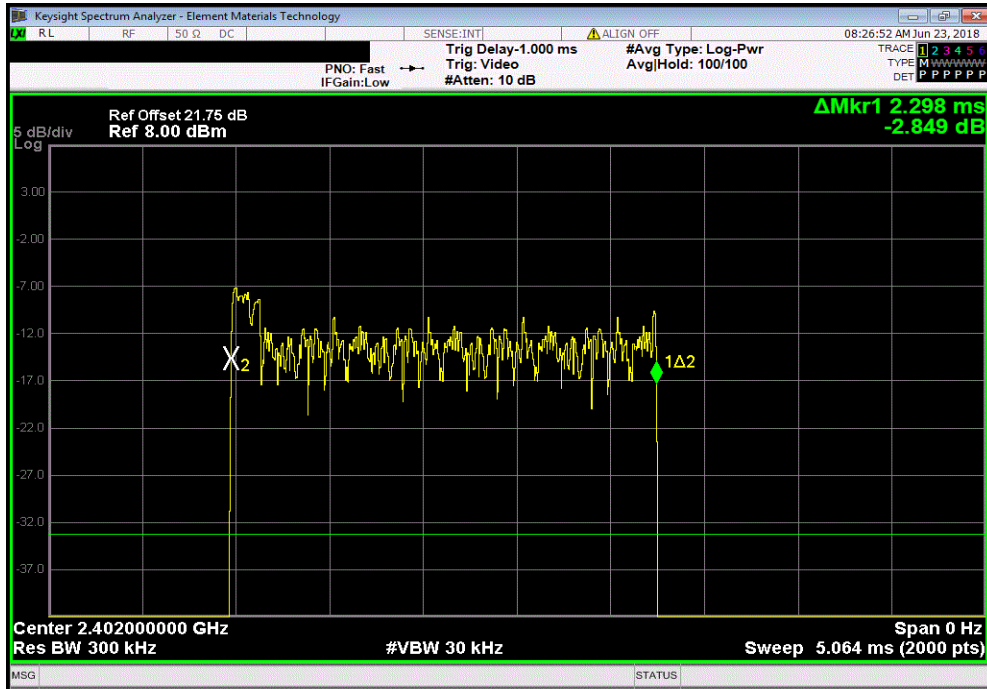
No Screen Capture Required

# DWELL TIME

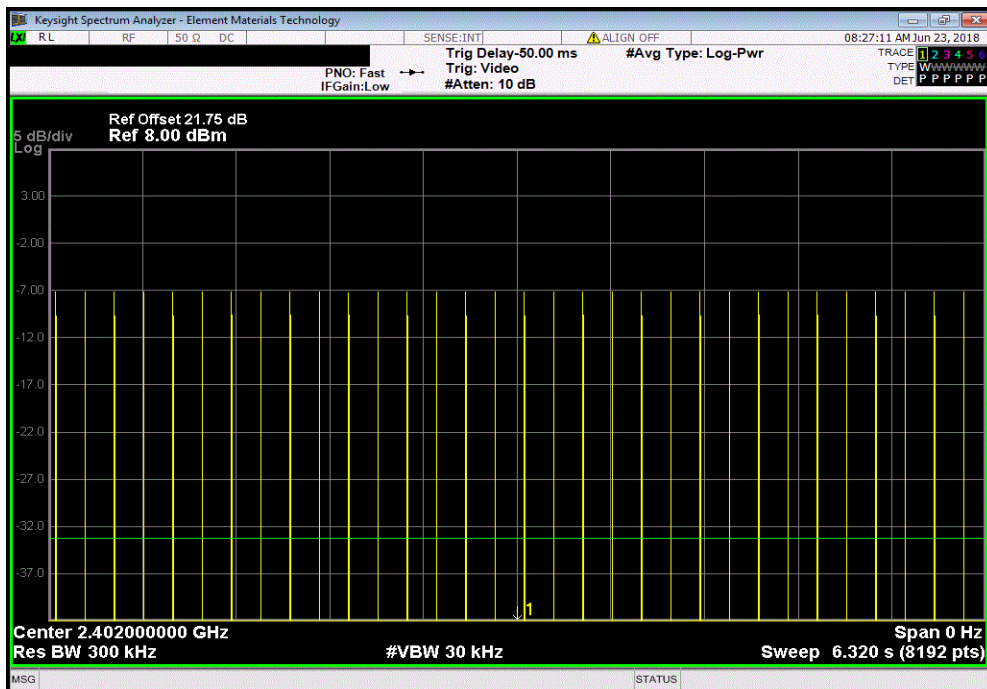


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Hopping Mode, 8DPSK, 3DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.298	N/A	N/A	N/A	N/A	N/A	N/A



Hopping Mode, 8DPSK, 3DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A

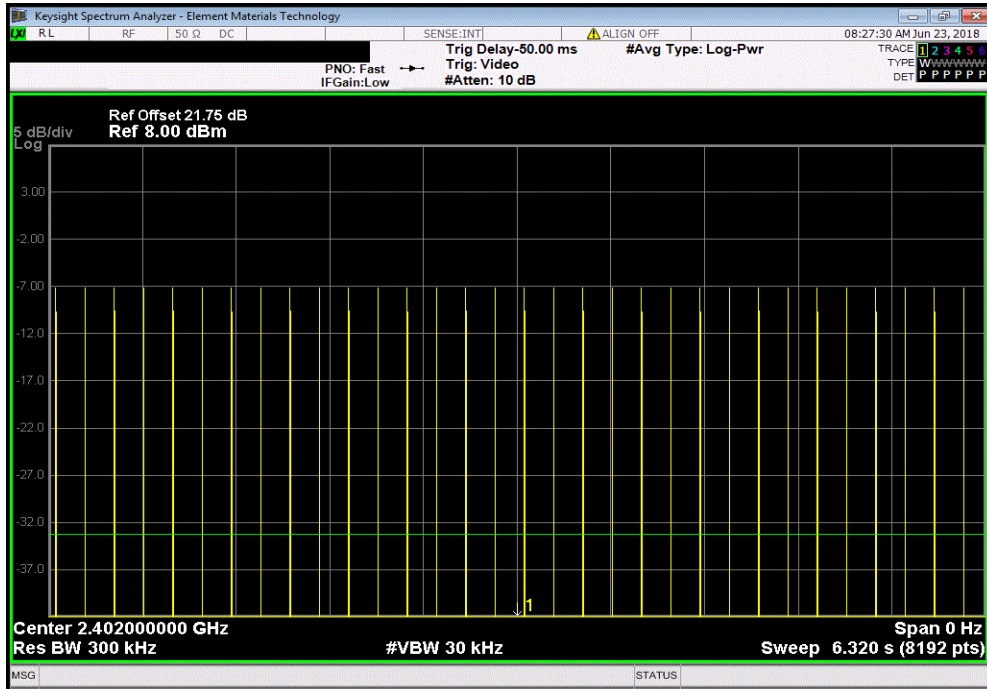


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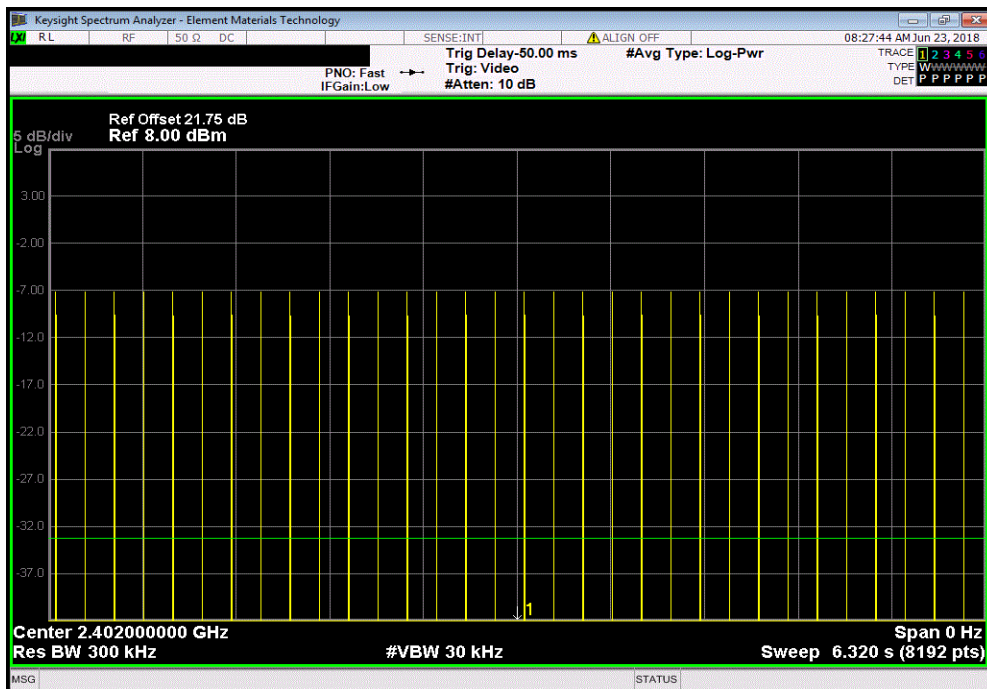


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Hopping Mode, 8DPSK, 3DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, 8DPSK, 3DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



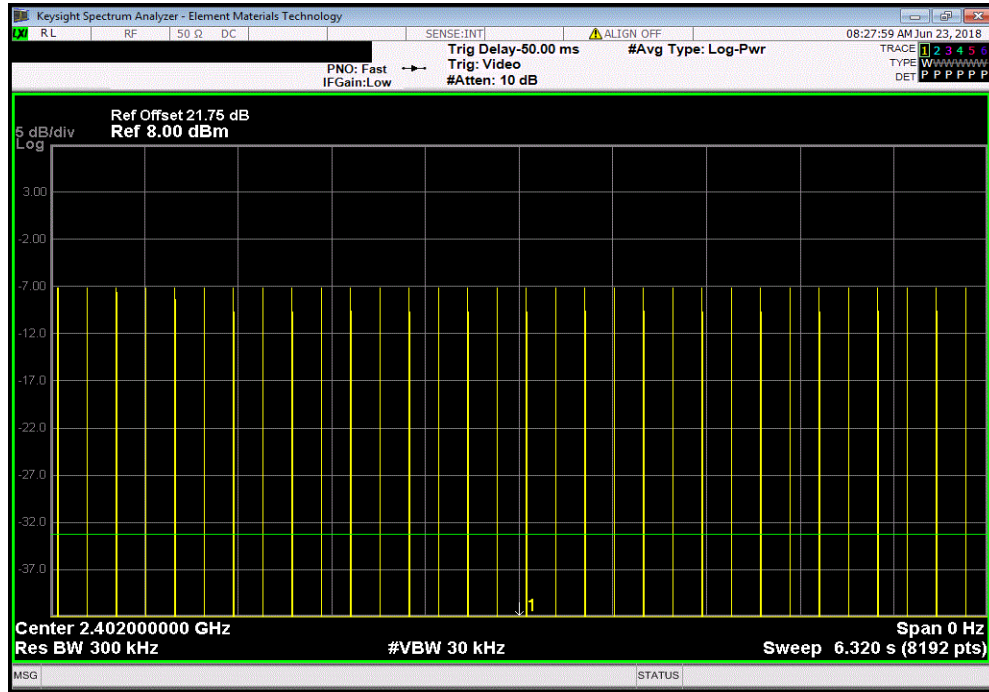


# DWELL TIME



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Hopping Mode, 8DPSK, 3DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, 8DPSK, 3DH5, Low Channel, 2402 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.298	N/A	32	5	367.68	400	Pass

Calculation Only

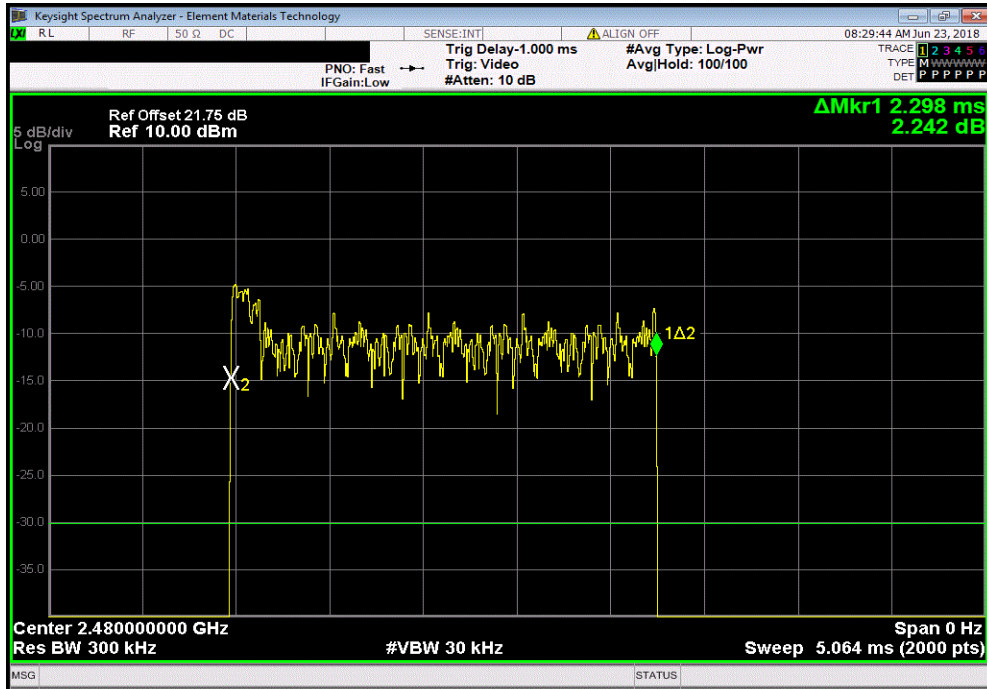
No Screen Capture Required

# DWELL TIME

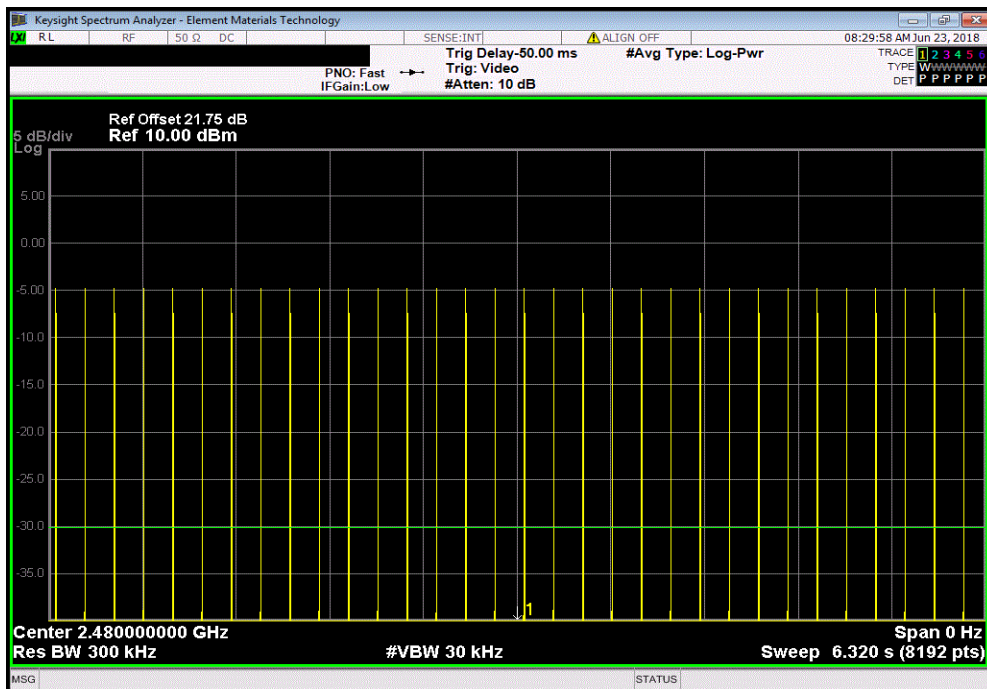


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Hopping Mode, 8DPSK, 3DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.298	N/A	N/A	N/A	N/A	N/A	N/A



Hopping Mode, 8DPSK, 3DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A

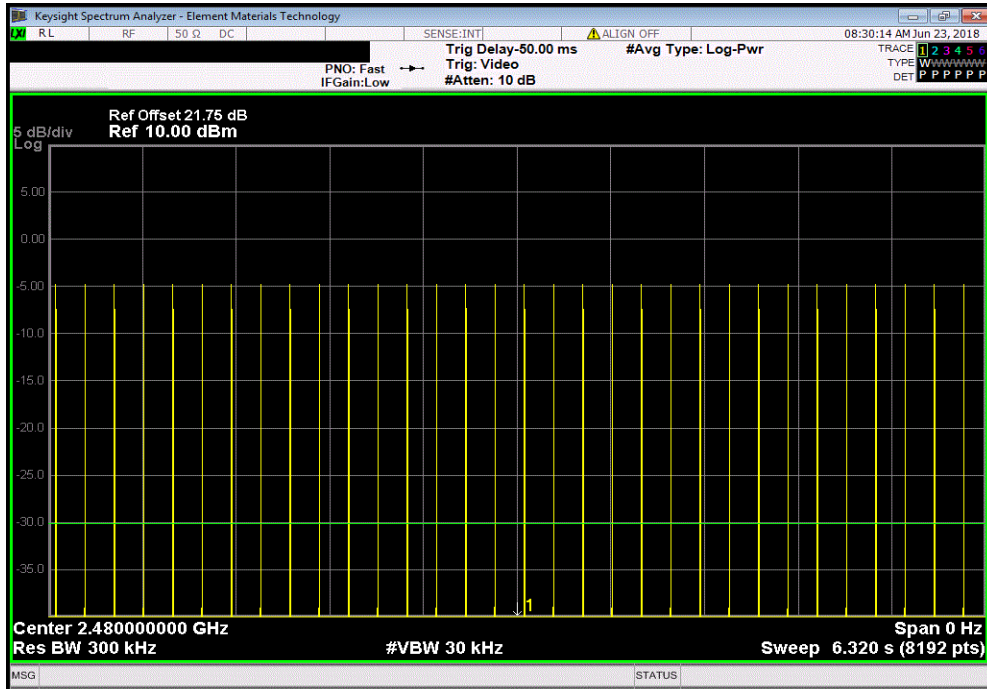


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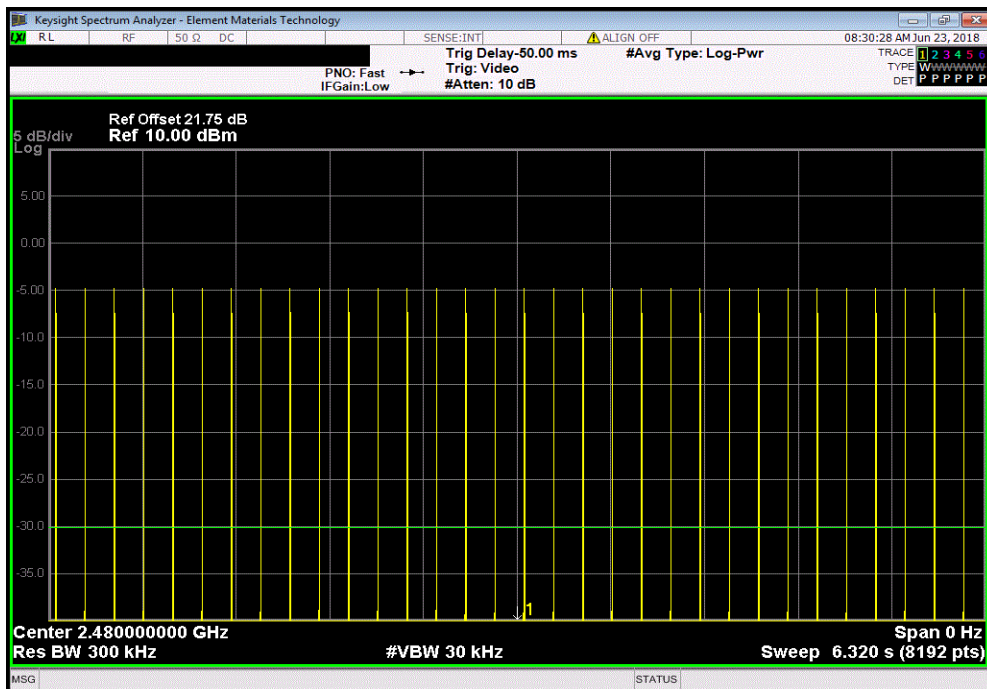


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Hopping Mode, 8DPSK, 3DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, 8DPSK, 3DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A

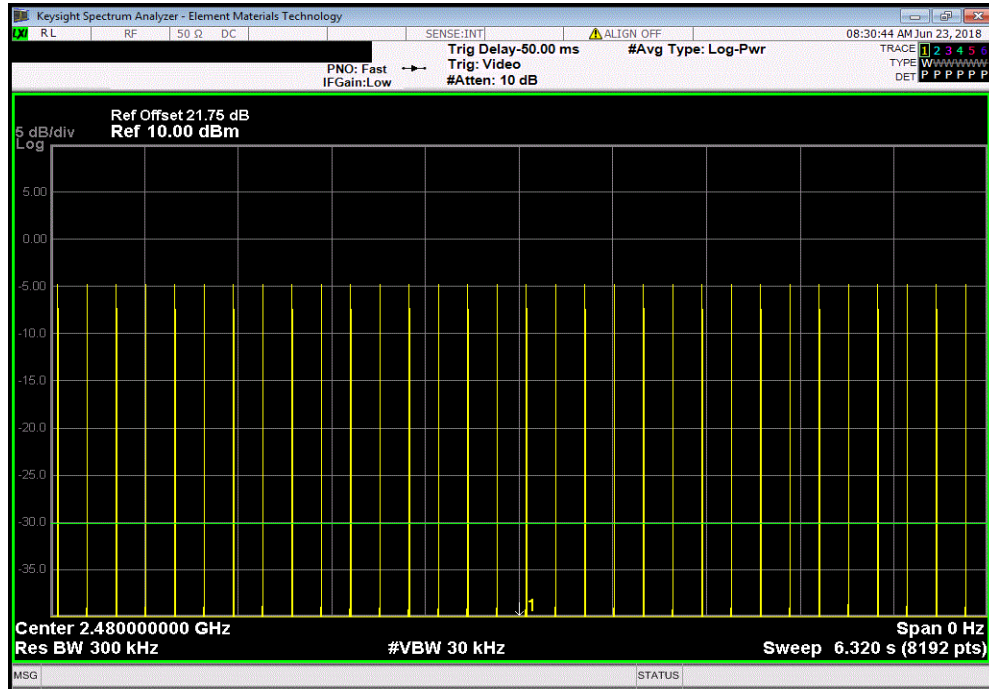


# DWELL TIME



TMTX 2017.12.14 XMI 2017.12.13

Hopping Mode, 8DPSK, 3DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
N/A	32	N/A	N/A	N/A	N/A	N/A



Hopping Mode, 8DPSK, 3DH5, High Channel, 2480 MHz						
Pulse Width (ms)	Number of Pulses	Average No. of Pulses	Scale Factor	On Time (ms) During 31.6 s	Limit (ms)	Results
2.298	N/A	32	5	367.68	400	Pass

Calculation Only

No Screen Capture Required

# OUTPUT POWER



XMII 2017.12.13

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet.

The method found in ANSI C63.10:2013 Section 7.8.5 was used for a FHSS radio.

**De Facto EIRP Limit:** The EUT meets the de facto EIRP limit of +27dBm.

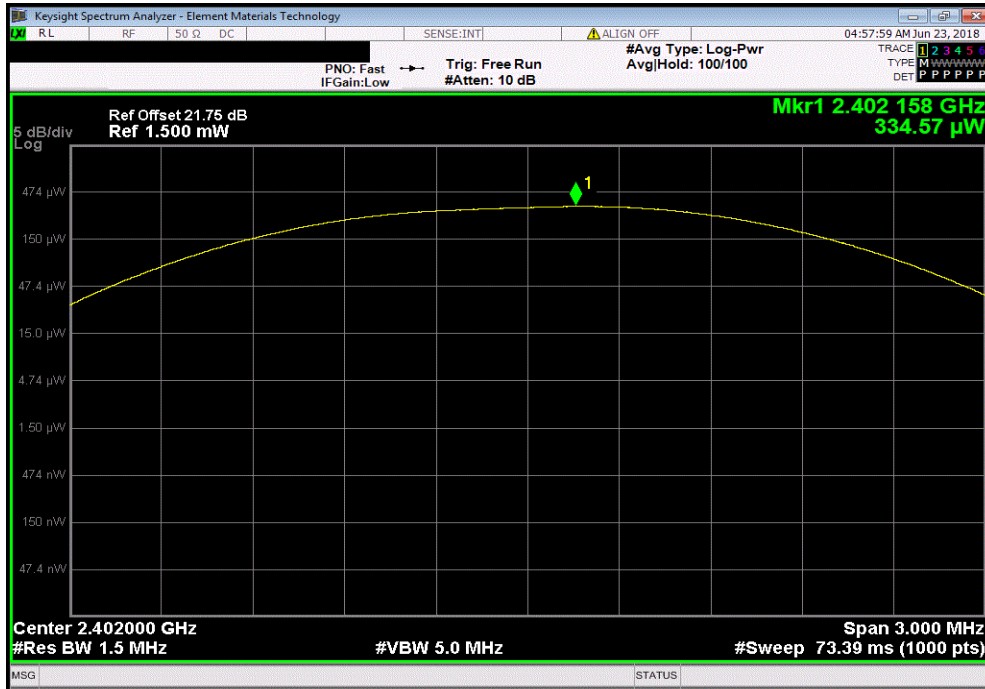


# OUTPUT POWER

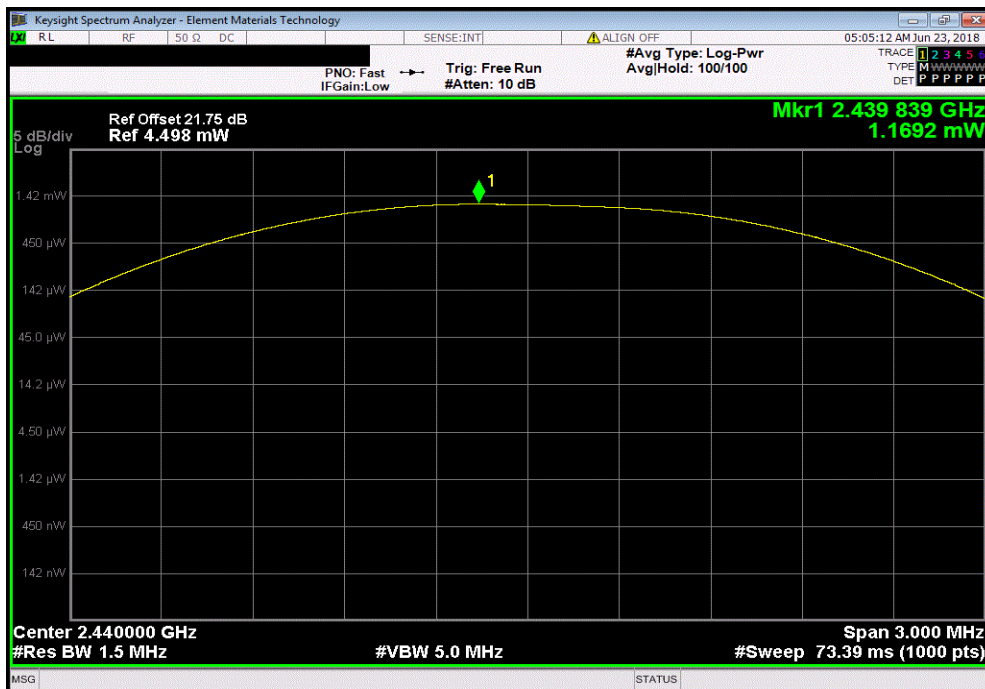


TMTX 2017.12.14 XMI 2017.12.13

DM5, GFSK, Low Channel						
				Value	Limit (<)	Result
				334.57 $\mu$ W	125 mW	Pass



DM5, GFSK, Mid Channel						
				Value	Limit (<)	Result
				1.169 mW	125 mW	Pass

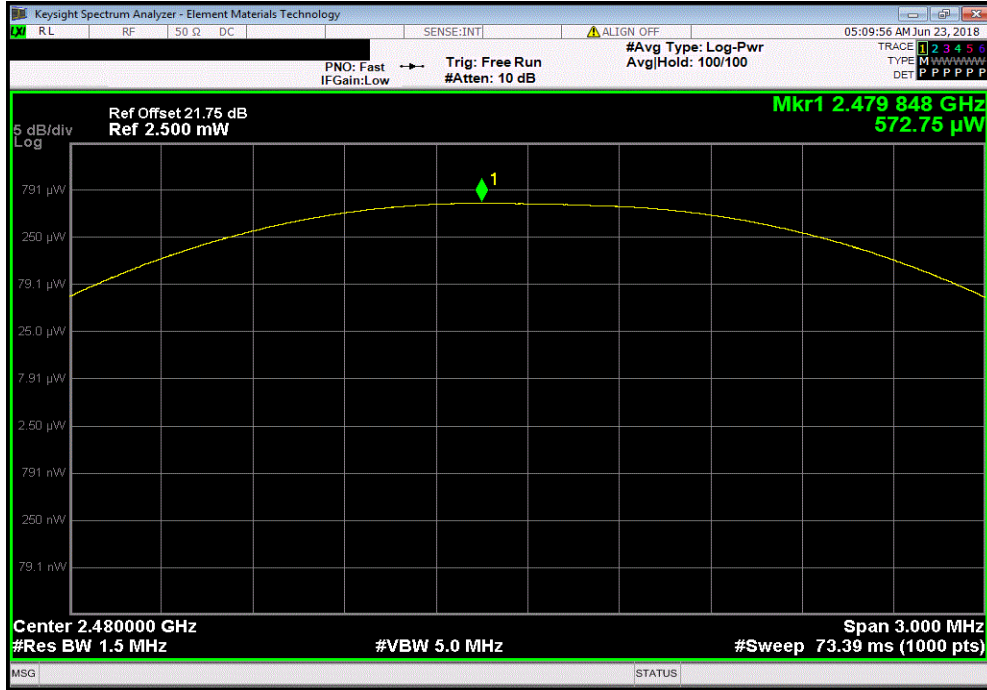


# OUTPUT POWER

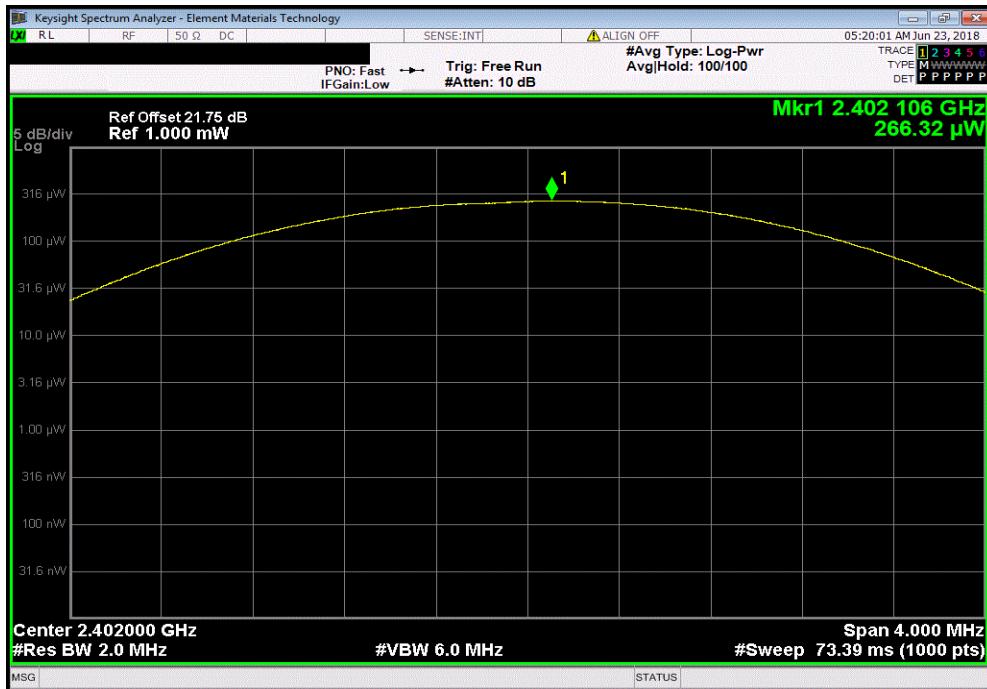


TMTX 2017.12.14 XMI 2017.12.13

DM5, GFSK, High Channel				Value	Limit	Result
				( $\mu$ W)	(<)	
				572.75	125 mW	Pass



2DH5, pi/4-DQPSK, Low Channel				Value	Limit	Result
				( $\mu$ W)	(<)	
				266.32	125 mW	Pass



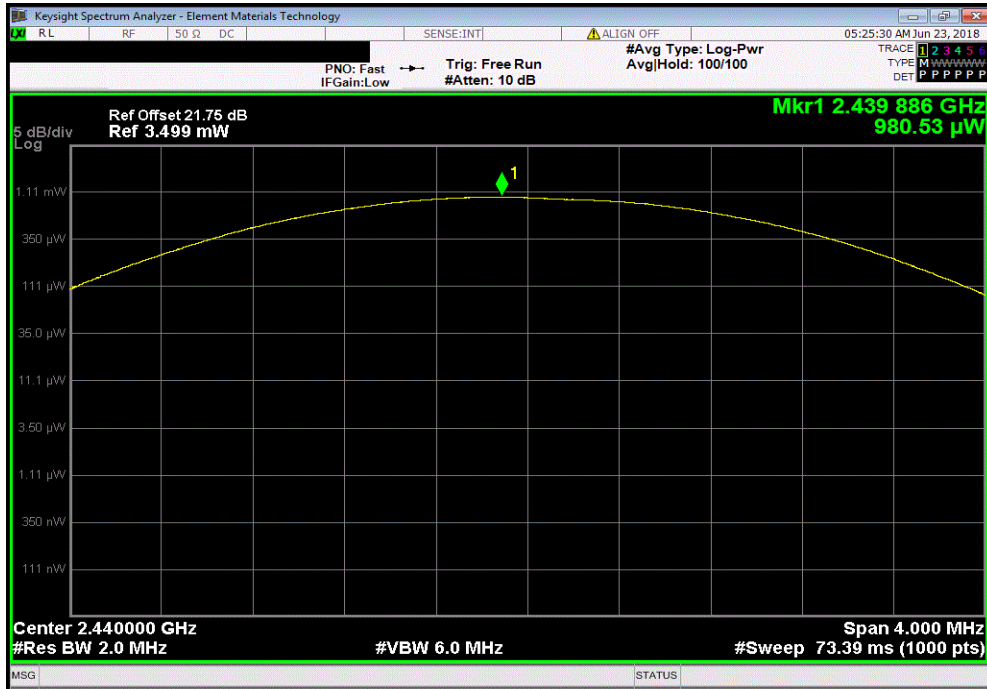


# OUTPUT POWER

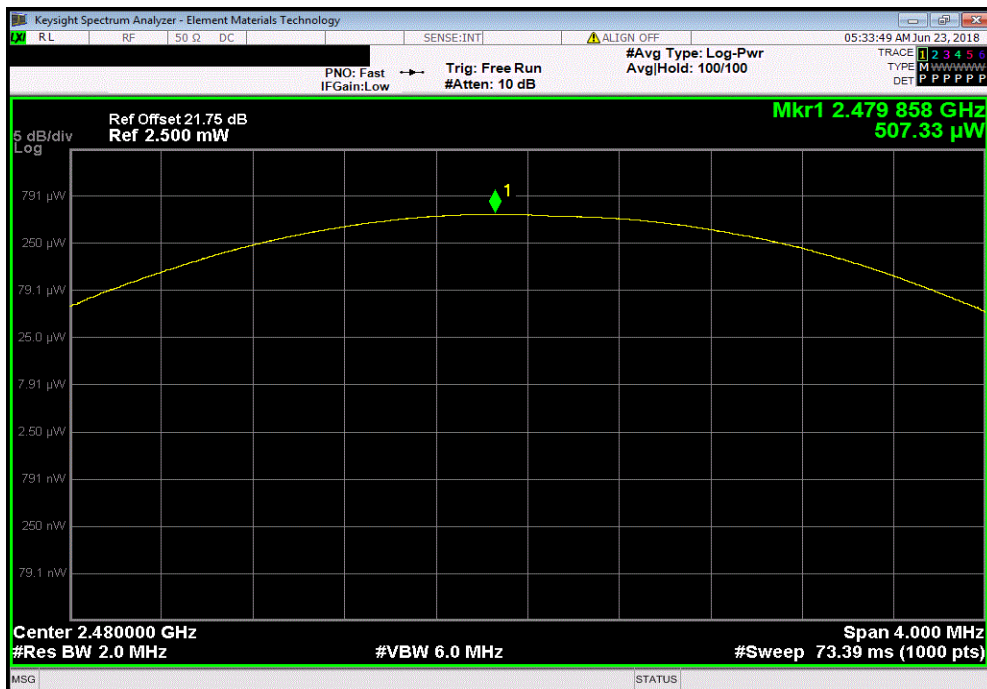


TMTx 2017.12.14 XMI 2017.12.13

2DH5, pi/4-DQPSK, Mid Channel						
				Value	Limit (<)	Result
				980.53 uW	125 mW	Pass



2DH5, pi/4-DQPSK, High Channel						
				Value	Limit (<)	Result
				507.33 uW	125 mW	Pass

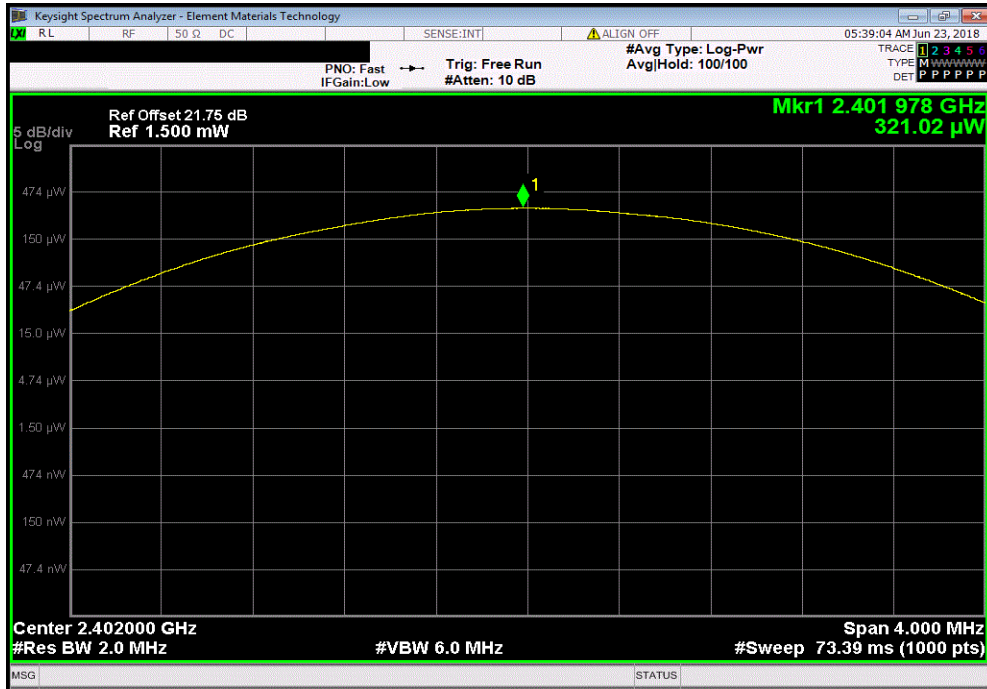


# OUTPUT POWER

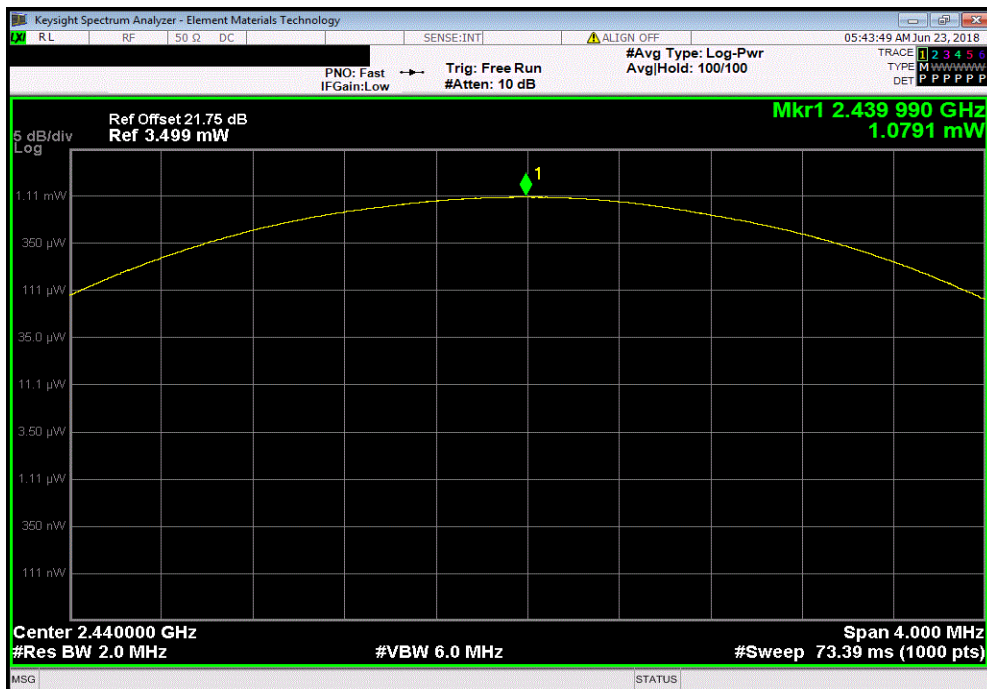


TMTx 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, Low Channel						
				Value	Limit (<)	Result
				321.02 $\mu$ W	125 mW	Pass



3DH5, 8-DPSK, Mid Channel						
				Value	Limit (<)	Result
				1.079 mW	125 mW	Pass

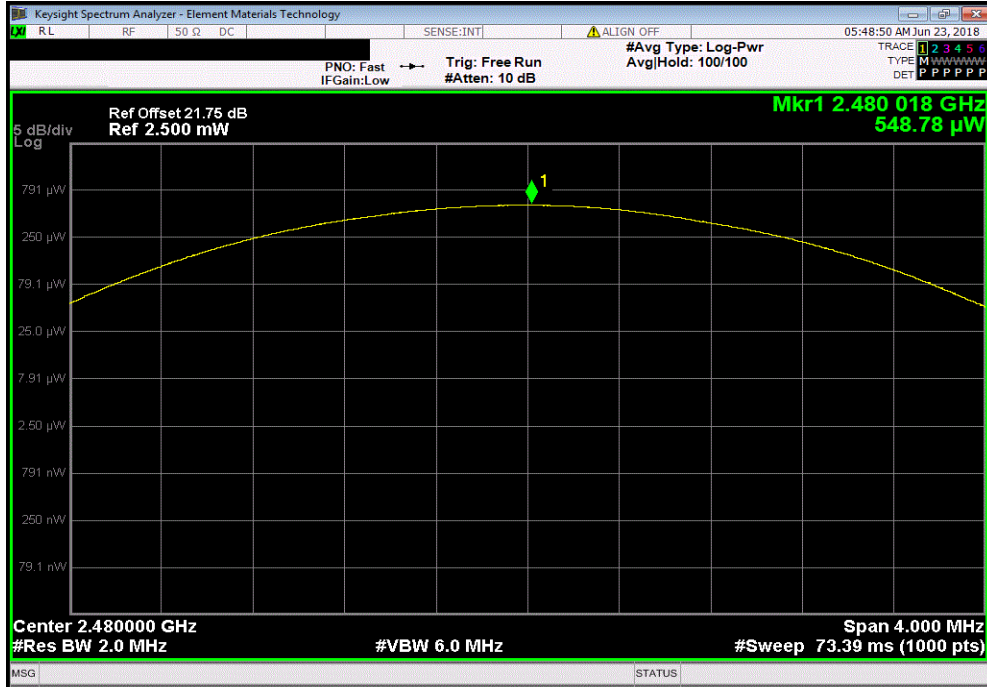


# OUTPUT POWER



TMTx 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, High Channel						
	Value	Limit	Result			
	548.78 $\mu$ W	125 mW	Pass			



# BAND EDGE COMPLIANCE



XMI 2017.12.13

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to low and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet in a no hop mode. The channels closest to the band edges were selected.

The spectrum was scanned below the lower band edge and above the higher band edge.

# BAND EDGE COMPLIANCE



TstTx 2017.12.14 XMI 2017.12.13

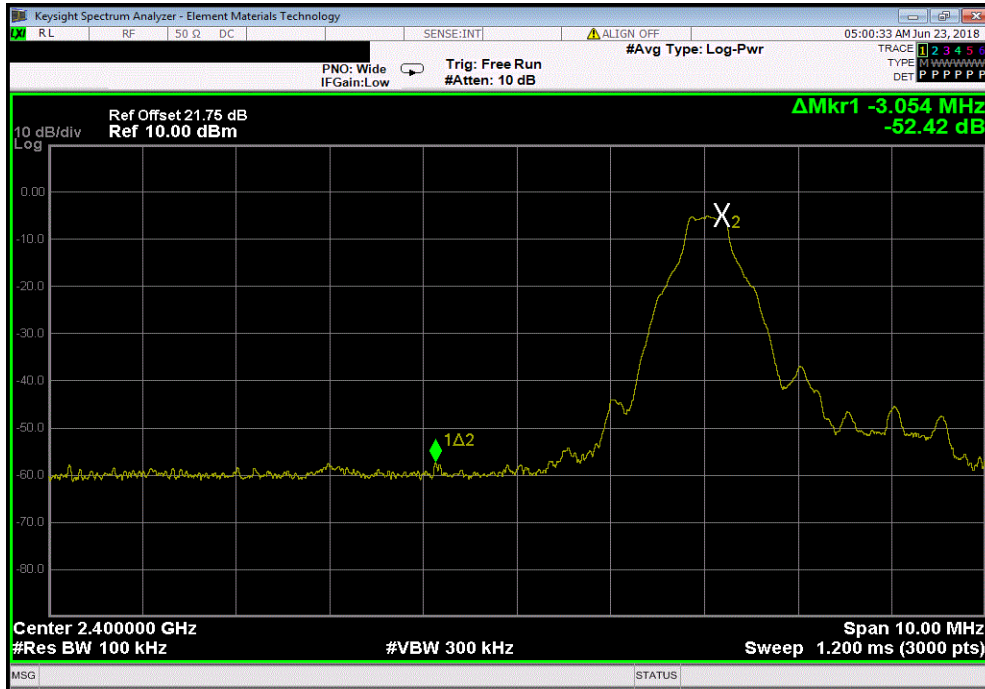
EUT: Multi-Function Accessory		Work Order: STAK0117	
Serial Number: 182010051A		Date: 26-Jun-18	
Customer: Starkey Laboratories, Inc.		Temperature: 21.9 °C	
Attendees: Charlie Esch		Humidity: 58% RH	
Project: None		Barometric Pres.: 1013 mbar	
Tested by: Dustin Sparks		Power: Battery	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2018		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	7	Signature <i>Dustin Sparks</i>	
		Value (dBc)	Limit ≤ (dBc) Result
DM5, GFSK			
	Low Channel	-52.43	-20 Pass
	High Channel	-53.34	-20 Pass
2DH5, pi/4-DQPSK			
	Low Channel	-50.45	-20 Pass
	High Channel	-52.86	-20 Pass
3DH5, 8-DPSK			
	Low Channel	-50.17	-20 Pass
	High Channel	-52.74	-20 Pass

# BAND EDGE COMPLIANCE

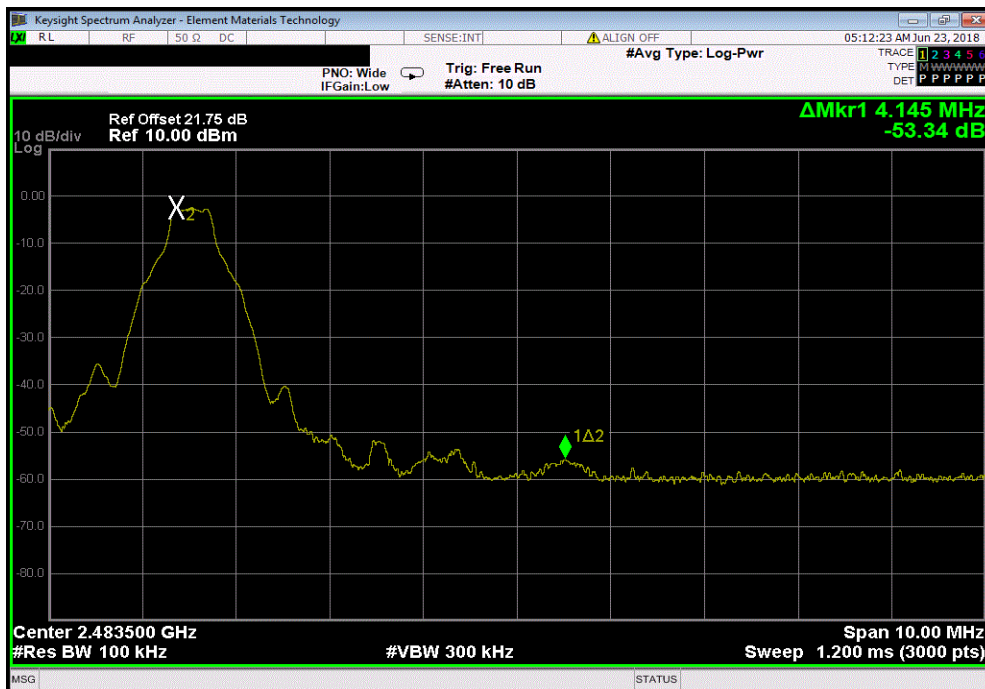


TMTx 2017.12.14 XMI 2017.12.13

DM5, GFSK, Low Channel						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.43	-20	Pass



DM5, GFSK, High Channel						
				Value (dBc)	Limit ≤ (dBc)	Result
				-53.34	-20	Pass

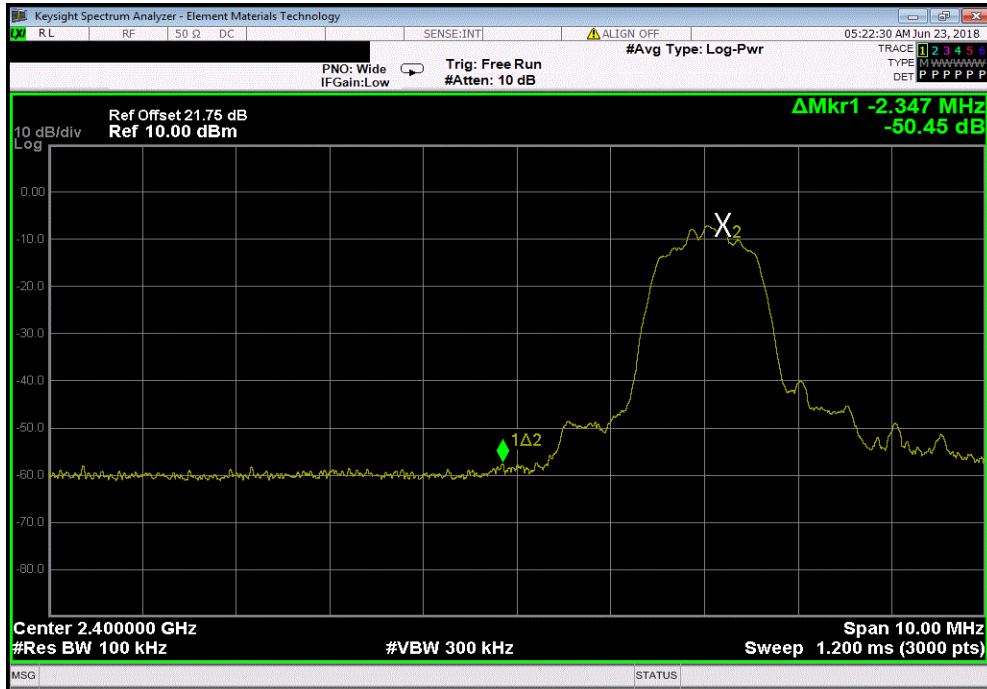


# BAND EDGE COMPLIANCE



TMTx 2017.12.14 XMI 2017.12.13

2DH5, pi/4-DQPSK, Low Channel						
				Value (dBc)	Limit ≤ (dBc)	Result
				-50.45	-20	Pass



2DH5, pi/4-DQPSK, High Channel						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.86	-20	Pass

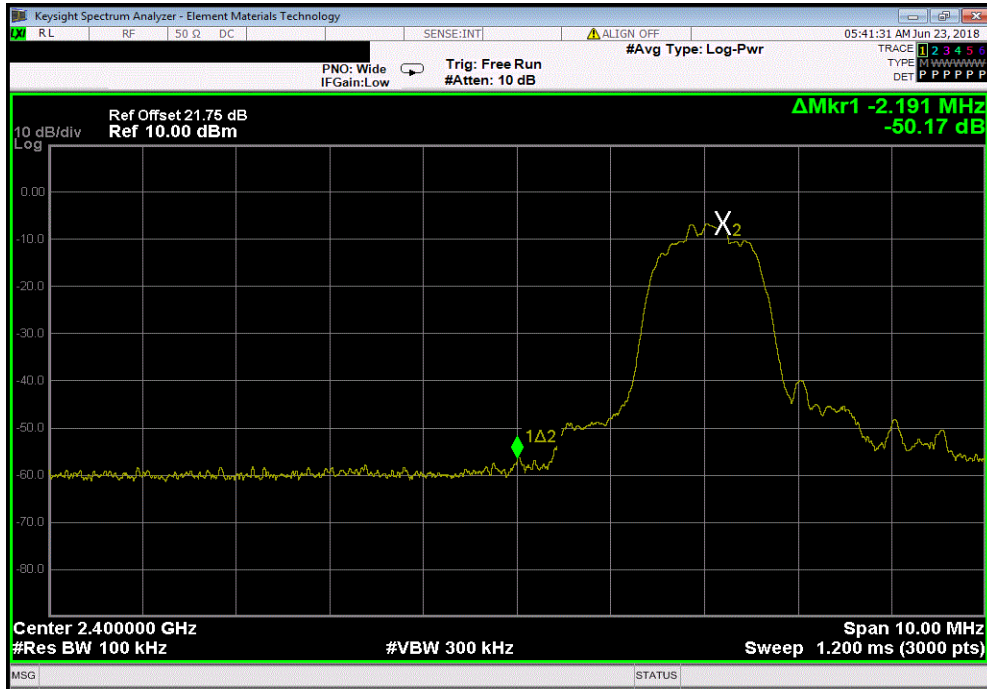


# BAND EDGE COMPLIANCE



TMTx 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, Low Channel						
				Value (dBc)	Limit ≤ (dBc)	Result
				-50.17	-20	Pass



3DH5, 8-DPSK, High Channel						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.74	-20	Pass





# BAND EDGE COMPLIANCE -HOPPING MODE



XMI 2017.12.13

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions at the edges of the authorized band were measured with the EUT set to its normal pseudo-random hopping sequence. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

# BAND EDGE COMPLIANCE -HOPPING MODE



TbITx 2017.12.14 XMI 2017.12.13

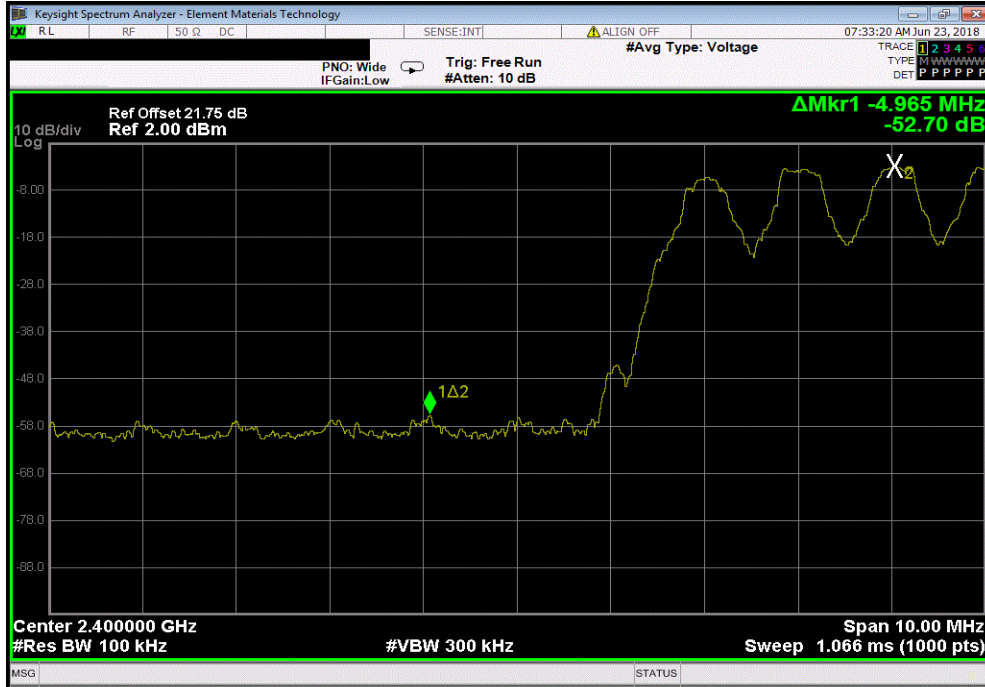
EUT: Multi-Function Accessory		Work Order: STAK0117	
Serial Number: 182010051A		Date: 26-Jun-18	
Customer: Starkey Laboratories, Inc.		Temperature: 22 °C	
Attendees: Charlie Esch		Humidity: 57.4% RH	
Project: None		Barometric Pres.: 1012 mbar	
Tested by: Dustin Sparks		Job Site: MN08	
Power: Battery			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2018		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	7	Signature <i>Dustin Sparks</i>	
		Value (dBc)	Limit ≤ (dBc) Result
Hopping Mode			
DM5, GFSK			
	Low Channel, 2402 MHz	-52.7	-20 Pass
	High Channel, 2480 MHz	-49.36	-20 Pass
2DH5, pi/4-DQPSK			
	Low Channel, 2402 MHz	-51.79	-20 Pass
	High Channel, 2480 MHz	-49.28	-20 Pass
3DH5, 8-DPSK			
	Low Channel, 2402 MHz	-52.11	-20 Pass
	High Channel, 2480 MHz	-48.18	-20 Pass

# BAND EDGE COMPLIANCE -HOPPING MODE



TMTX 2017.12.14 XMI 2017.12.13

Hopping Mode, DM5, GFSK, Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.7	-20	Pass



Hopping Mode, DM5, GFSK, High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-49.36	-20	Pass

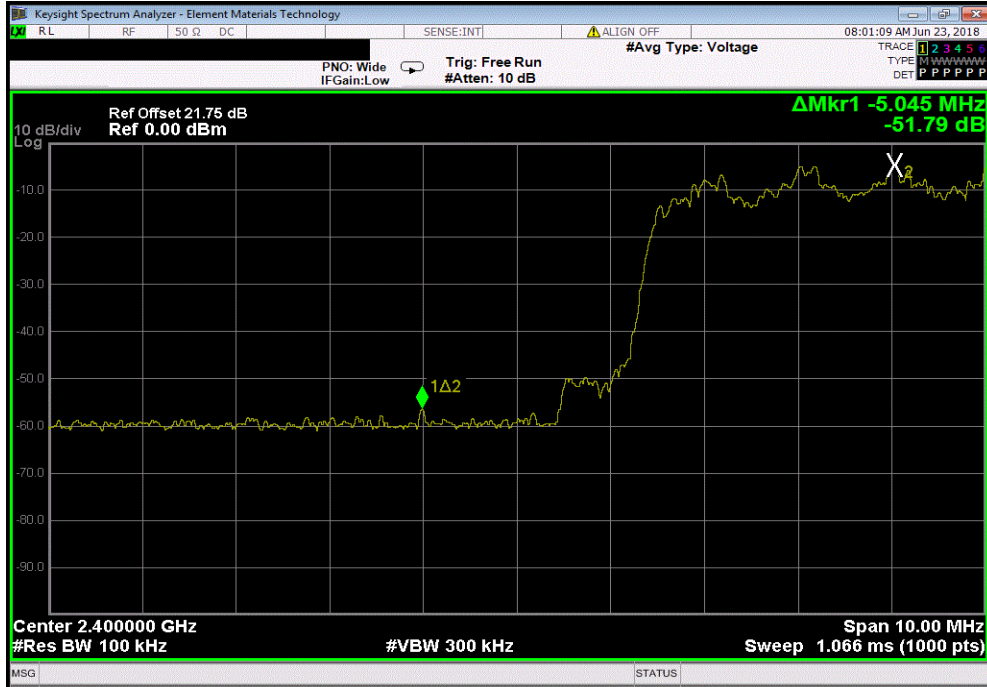


# BAND EDGE COMPLIANCE -HOPPING MODE

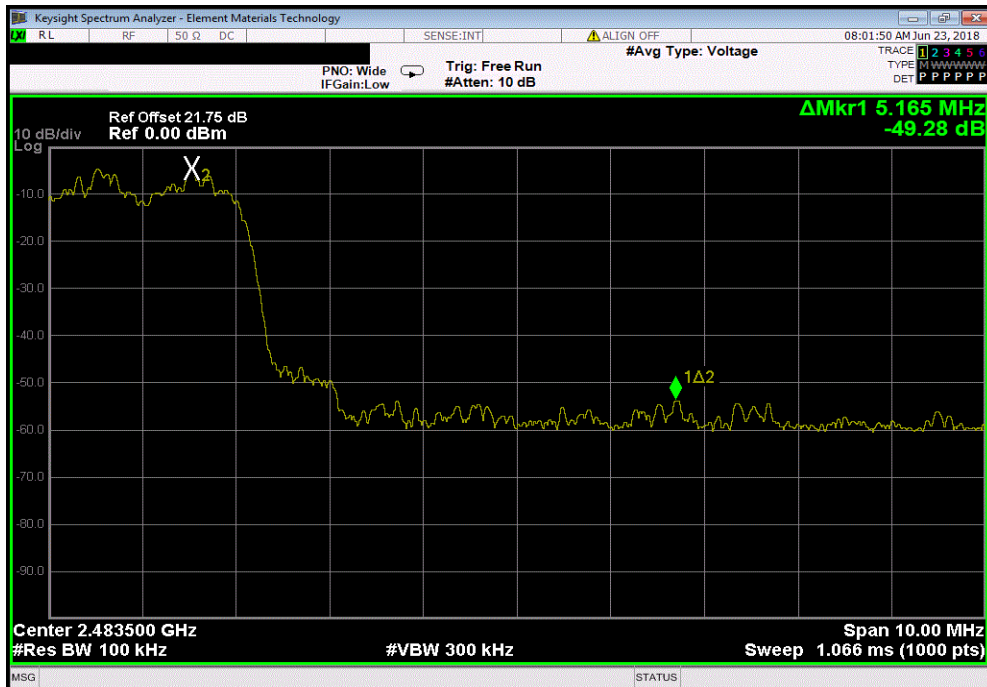


TMTX 2017.12.14 XMI 2017.12.13

Hopping Mode, 2DH5, pi/4-DQPSK, Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-51.79	-20	Pass



Hopping Mode, 2DH5, pi/4-DQPSK, High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-49.28	-20	Pass

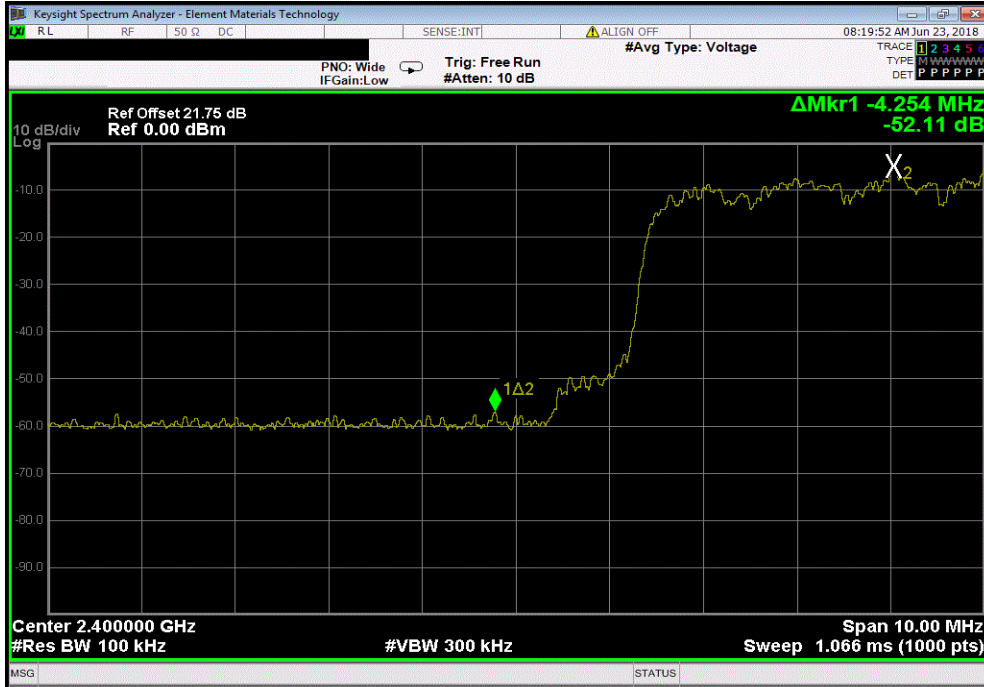


# BAND EDGE COMPLIANCE -HOPPING MODE

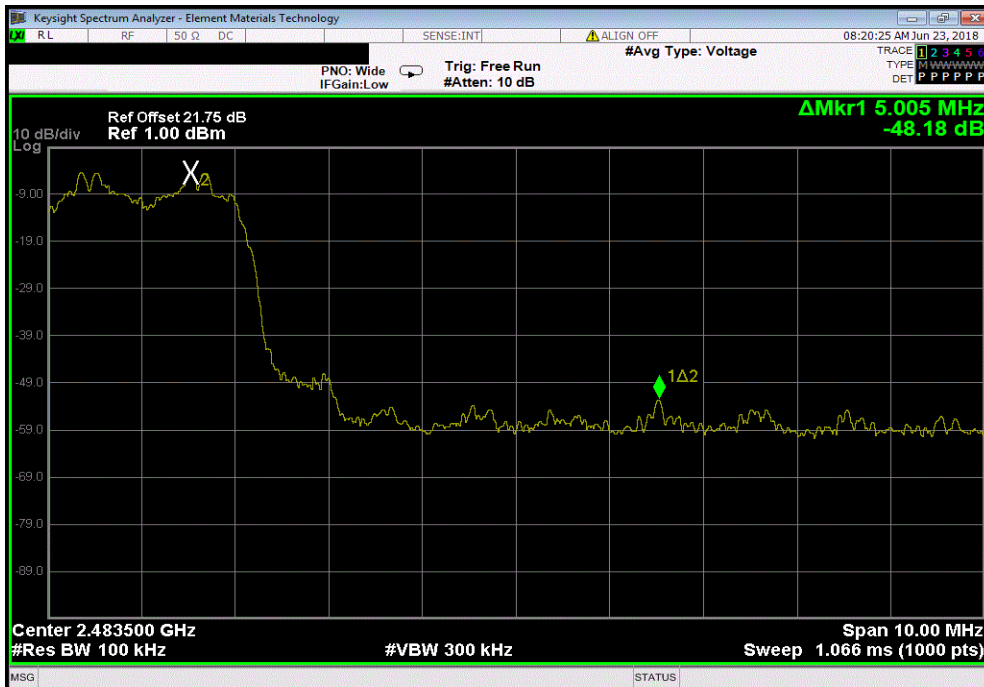


TMTX 2017.12.14 XMI 2017.12.13

Hopping Mode, 3DH5, 8-DPSK, Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.11	-20	Pass



Hopping Mode, 3DH5, 8-DPSK, High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-48.18	-20	Pass



# OCCUPIED BANDWIDTH



XMIT 2017.12.13

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The 20 dB occupied bandwidth was measured with the EUT set to low, medium and high transmit frequencies in the band. The EUT was transmitting at the data rate(s) listed in the datasheet in a no-hop mode.

# OCCUPIED BANDWIDTH



TbTx 2017.12.14 XMi 2017.12.13

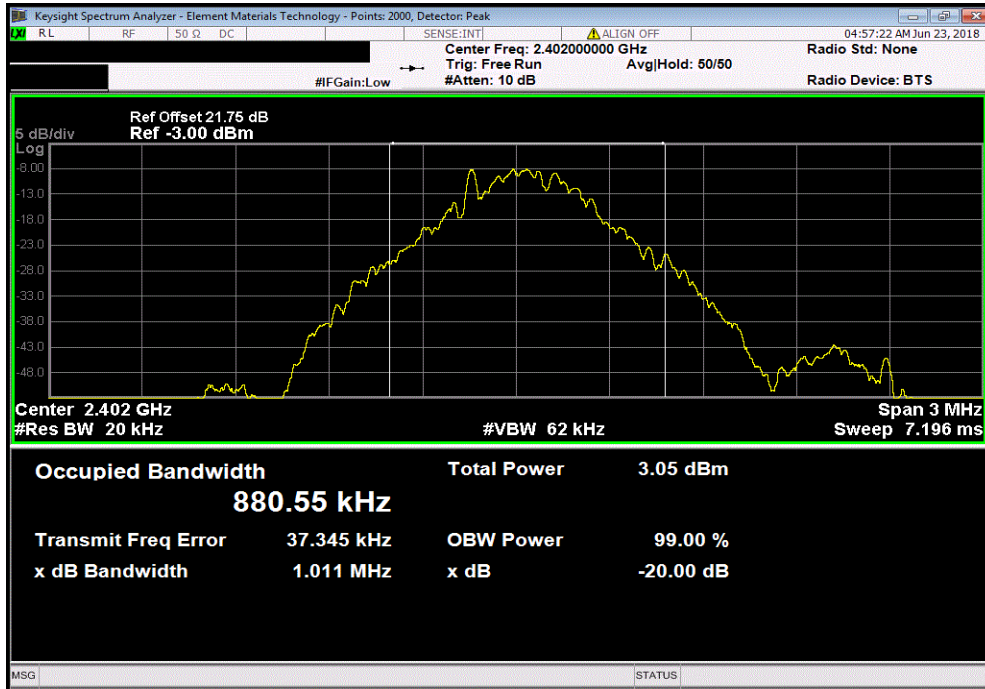
EUT: Multi-Function Accessory		Work Order: STAK0117	
Serial Number: 182010051A		Date: 26-Jun-18	
Customer: Starkey Laboratories, Inc.		Temperature: 22 °C	
Attendees: Charlie Esch		Humidity: 57.8% RH	
Project: None		Barometric Pres.: 1012 mbar	
Tested by: Dustin Sparks		Job Site: MN08	
Power: Battery			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2018		ANSI C63.10:2013	
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	7	Signature <i>Dustin Sparks</i>	
		Value	Limit (<)
DM5, GFSK			
	Low Channel	1.011 MHz	1.5 MHz
	Mid Channel	970.82 kHz	1.5 MHz
	High Channel	964.138 kHz	1.5 MHz
2DH5, pi/4-DQPSK			
	Low Channel	1.228 MHz	1.5 MHz
	Mid Channel	1.232 MHz	1.5 MHz
	High Channel	1.232 MHz	1.5 MHz
3DH5, 8-DPSK			
	Low Channel	1.256 MHz	1.5 MHz
	Mid Channel	1.255 MHz	1.5 MHz
	High Channel	1.256 MHz	1.5 MHz
			Result
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

# OCCUPIED BANDWIDTH

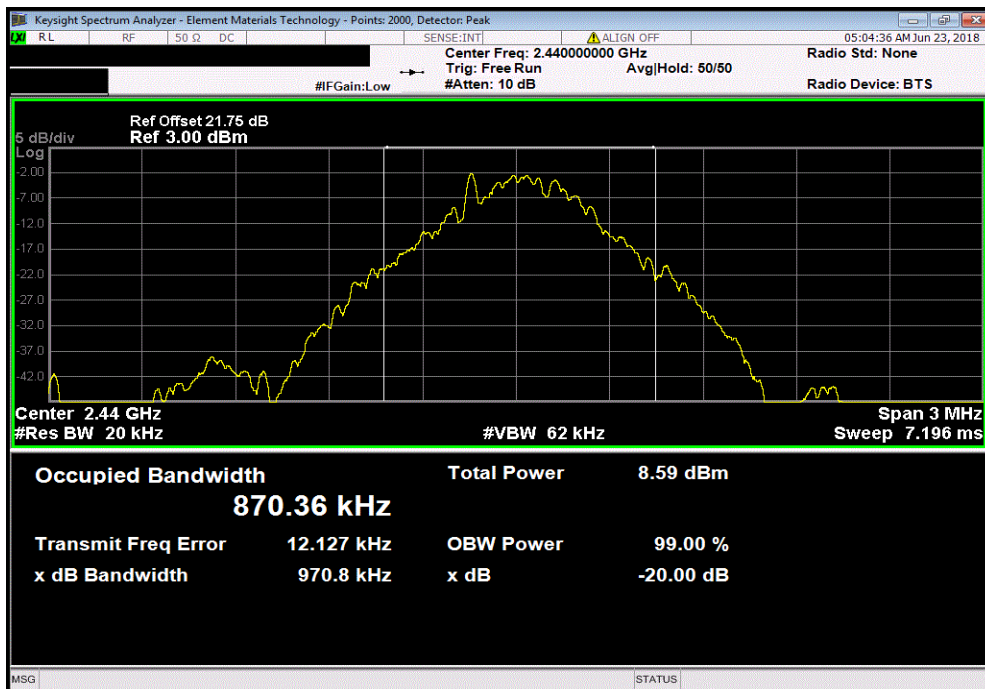


TMTX 2017.12.14 XMI 2017.12.13

DM5, GFSK, Low Channel						
				Value	Limit (<)	Result
				1.011 MHz	1.5 MHz	Pass



DM5, GFSK, Mid Channel						
				Value	Limit (<)	Result
				970.82 kHz	1.5 MHz	Pass



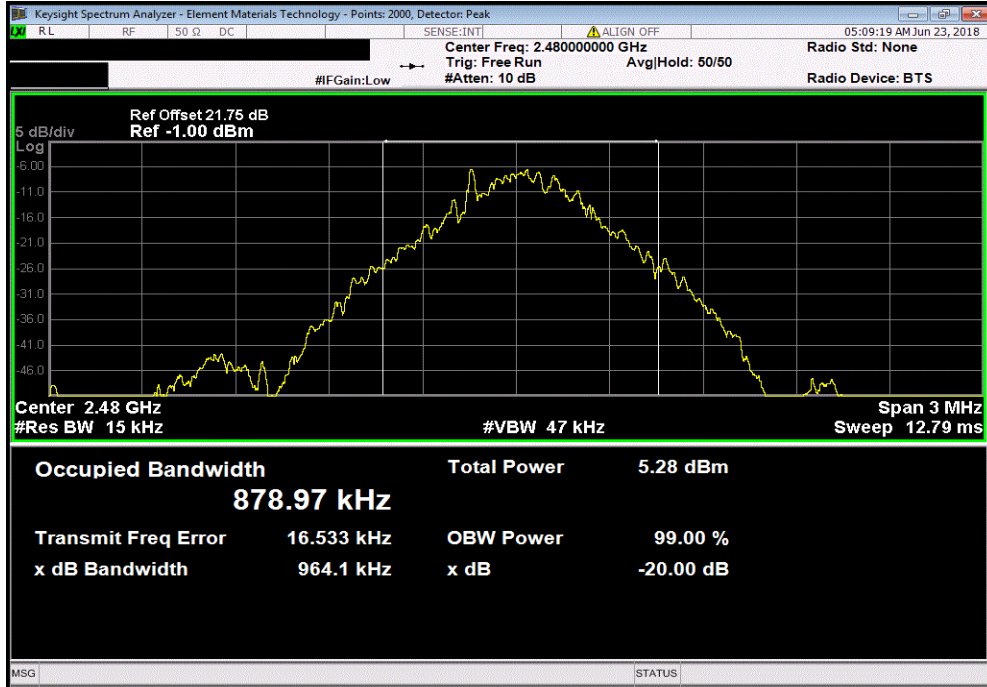


# OCCUPIED BANDWIDTH

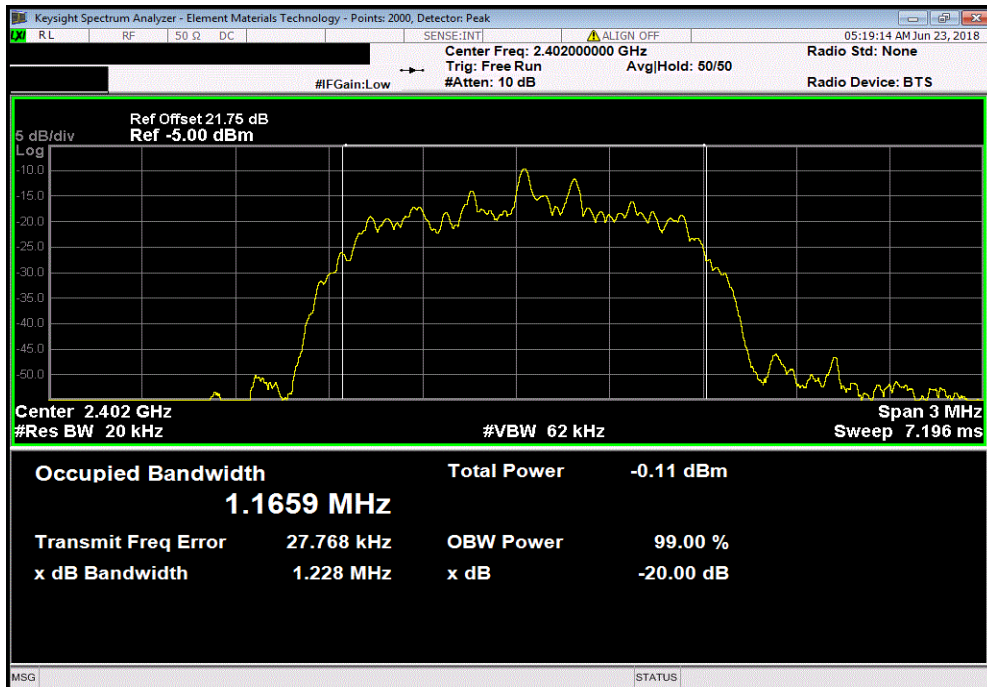


TMTX 2017.12.14 XMI 2017.12.13

DM5, GFSK, High Channel						
				Value	Limit (<)	Result
				964.138 kHz	1.5 MHz	Pass



2DH5, pi/4-DQPSK, Low Channel						
				Value	Limit (<)	Result
				1.228 MHz	1.5 MHz	Pass

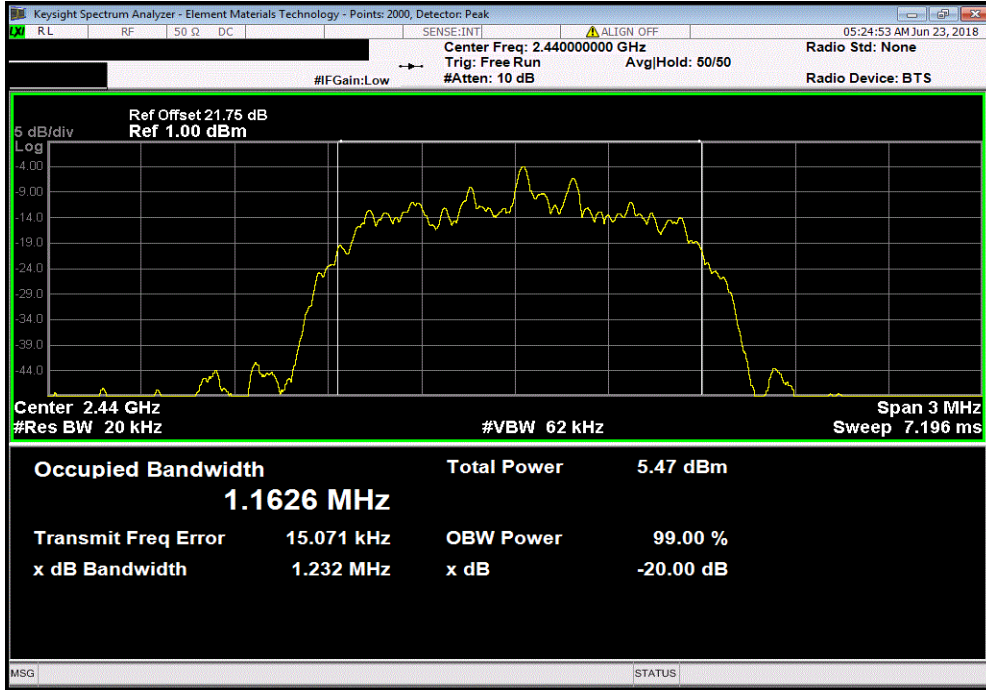


# OCCUPIED BANDWIDTH

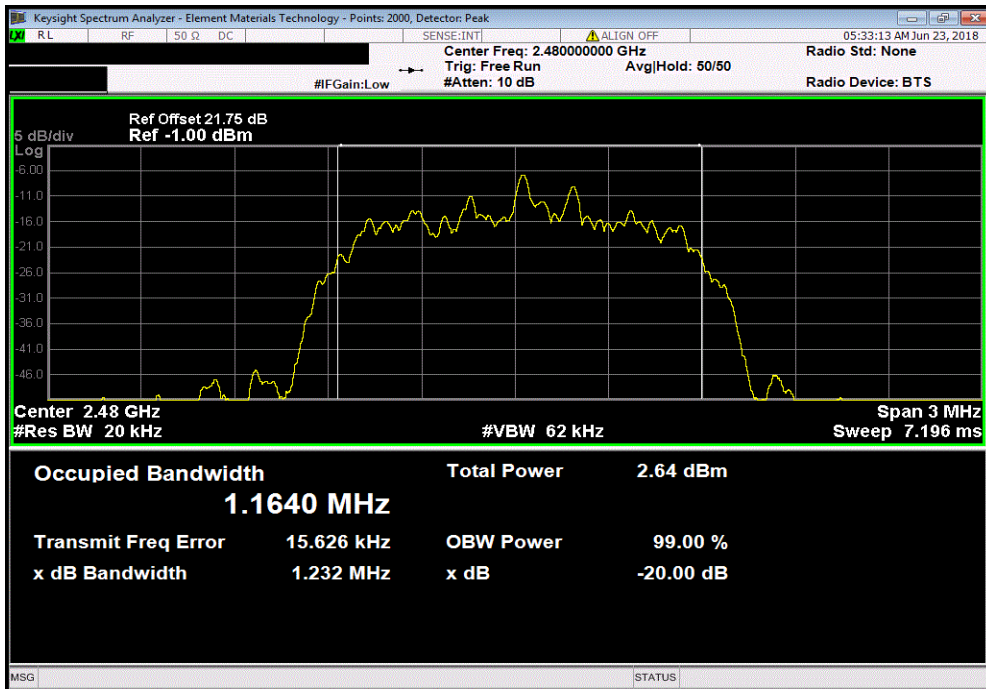


TMTx 2017.12.14 XMI 2017.12.13

2DH5, pi/4-DQPSK, Mid Channel						
	Value	Limit (<)	Result			
	1.232 MHz	1.5 MHz	Pass			



2DH5, pi/4-DQPSK, High Channel						
	Value	Limit (<)	Result			
	1.232 MHz	1.5 MHz	Pass			

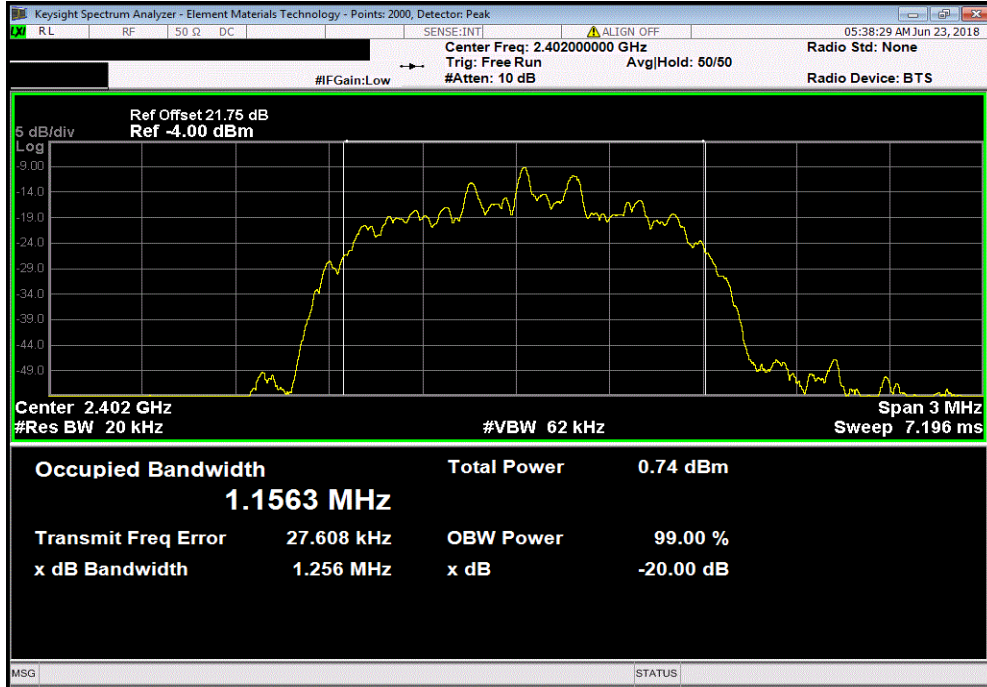


# OCCUPIED BANDWIDTH

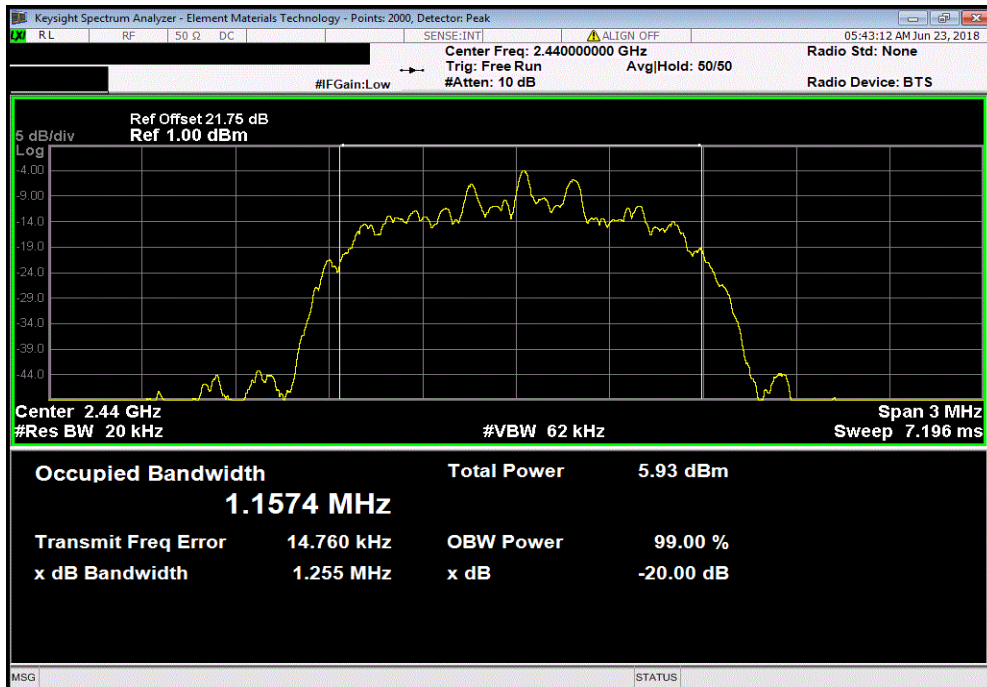


TMTX 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, Low Channel						
				Value	Limit (<)	Result
				1.256 MHz	1.5 MHz	Pass



3DH5, 8-DPSK, Mid Channel						
				Value	Limit (<)	Result
				1.255 MHz	1.5 MHz	Pass

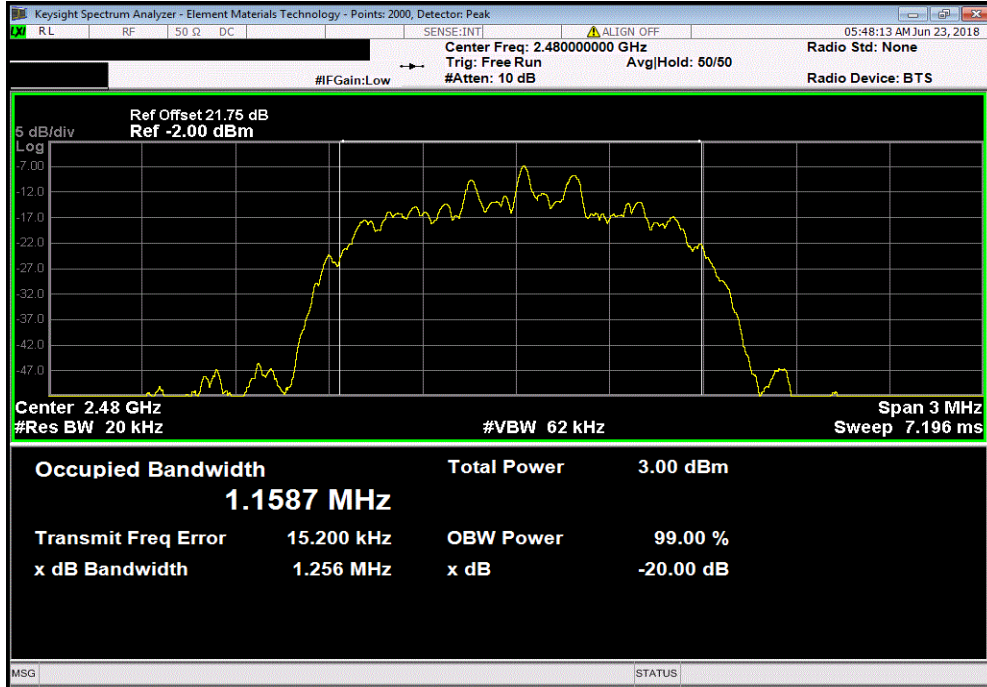


# OCCUPIED BANDWIDTH



TMTX 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, High Channel						
				Value	Limit	Result
				(<)		
				1.256 MHz	1.5 MHz	Pass



# SPURIOUS CONDUCTED EMISSIONS



XMit 2017.12.13

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet in a no-hop mode. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

# SPURIOUS CONDUCTED EMISSIONS



TstTx 2017.12.14 XMR 2017.12.13

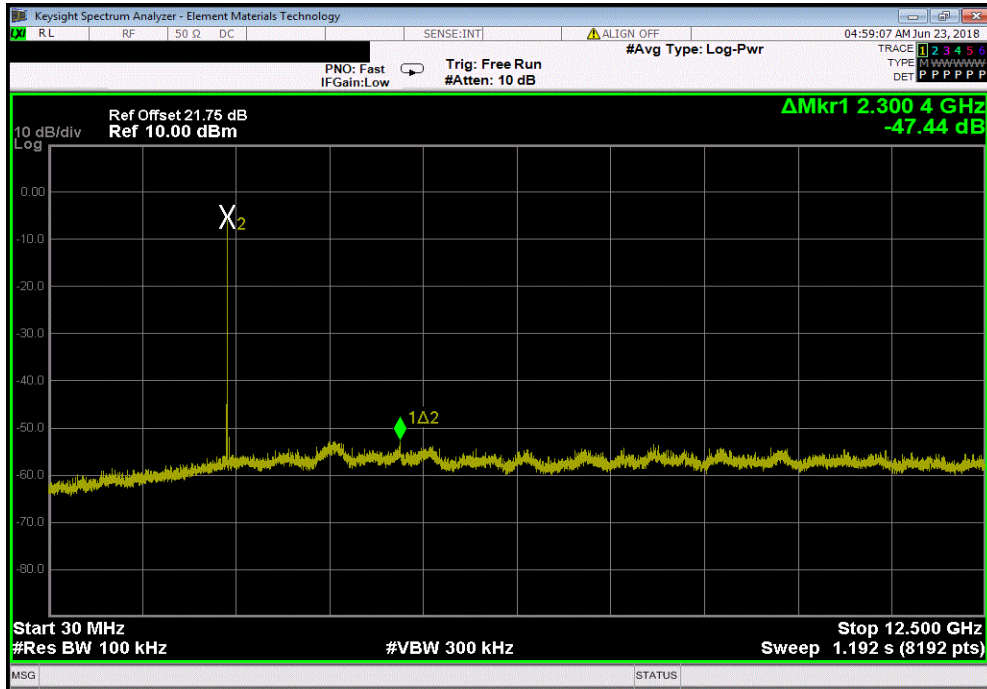
EUT:	Multi-Function Accessory		Work Order:	STAK0117	
Serial Number:	182010051A		Date:	26-Jun-18	
Customer:	Starkey Laboratories, Inc.		Temperature:	22 °C	
Attendees:	Charlie Esch		Humidity:	57.6% RH	
Project:	None		Barometric Pres.:	1012 mbar	
Tested by:	Dustin Sparks	Power:	Battery	Job Site:	MN08
TEST SPECIFICATIONS			Test Method		
FCC 15.247:2018			ANSI C63.10:2013		
COMMENTS					
None					
DEVIATIONS FROM TEST STANDARD					
None					
Configuration #	7	Signature <i>Dustin Sparks</i>			
		Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result
<b>DM5, GFSK</b>					
	Low Channel	30 MHz - 12.5 GHz	-47.44	-20	Pass
	Low Channel	12.5 GHz - 25 GHz	-45.27	-20	Pass
	Mid Channel	30 MHz - 12.5 GHz	-52.84	-20	Pass
	Mid Channel	12.5 GHz - 25 GHz	-50.8	-20	Pass
	High Channel	30 MHz - 12.5 GHz	-49.73	-20	Pass
	High Channel	12.5 GHz - 25 GHz	-48.11	-20	Pass
<b>2DH5, pi/4-DQPSK</b>					
	Low Channel	30 MHz - 12.5 GHz	-44.58	-20	Pass
	Low Channel	12.5 GHz - 25 GHz	-43.29	-20	Pass
	Mid Channel	30 MHz - 12.5 GHz	-50.66	-20	Pass
	Mid Channel	12.5 GHz - 25 GHz	-49.2	-20	Pass
	High Channel	30 MHz - 12.5 GHz	-47.41	-20	Pass
	High Channel	12.5 GHz - 25 GHz	-46.23	-20	Pass
<b>3DH5, 8-DPSK</b>					
	Low Channel	30 MHz - 12.5 GHz	-42.53	-20	Pass
	Low Channel	12.5 GHz - 25 GHz	-39.63	-20	Pass
	Mid Channel	30 MHz - 12.5 GHz	-50.84	-20	Pass
	Mid Channel	12.5 GHz - 25 GHz	-49.37	-20	Pass
	High Channel	30 MHz - 12.5 GHz	-47.34	-20	Pass
	High Channel	12.5 GHz - 25 GHz	-46	-20	Pass

# SPURIOUS CONDUCTED EMISSIONS

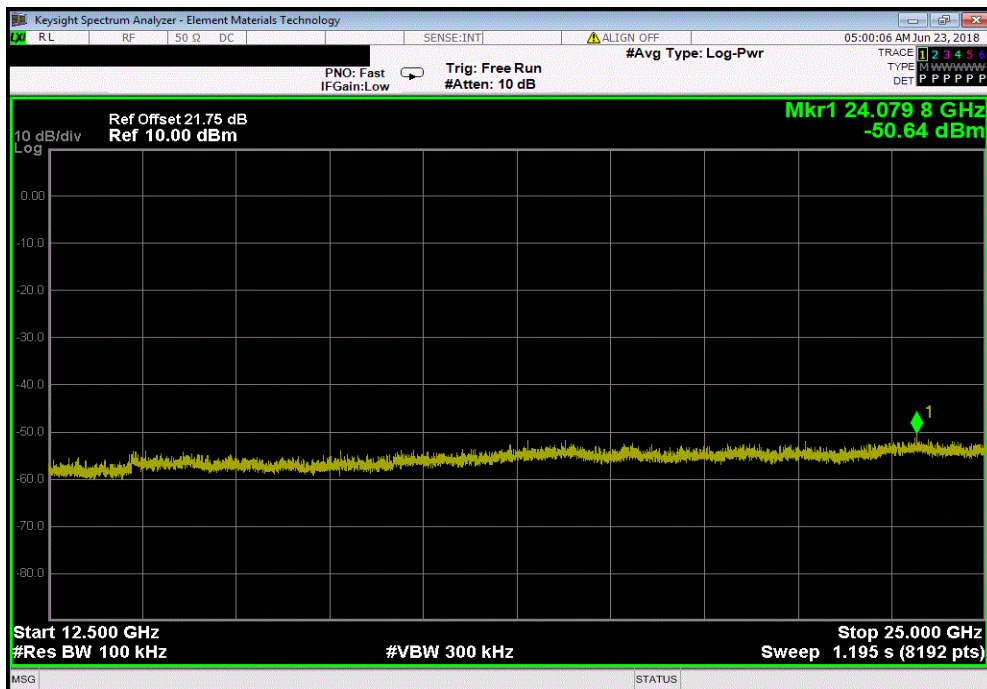


TMTx 2017.12.14 XMI 2017.12.13

DM5, GFSK, Low Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-47.44	-20	Pass	



DM5, GFSK, Low Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-45.27	-20	Pass	

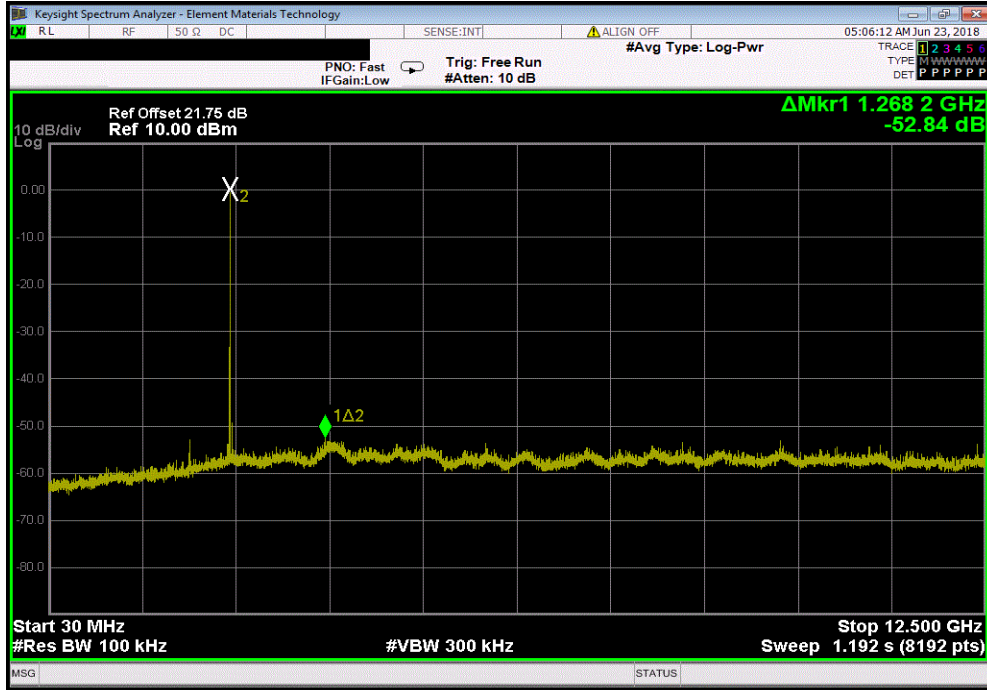


# SPURIOUS CONDUCTED EMISSIONS

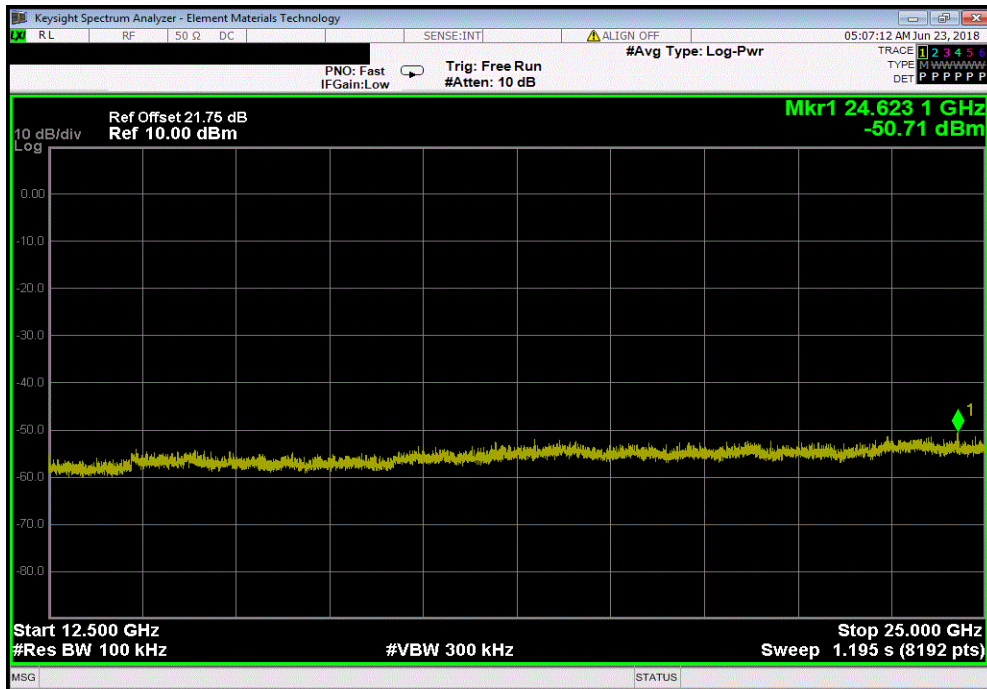


TMTX 2017.12.14 XMI 2017.12.13

DM5, GFSK, Mid Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-52.84	-20	Pass	



DM5, GFSK, Mid Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-50.8	-20	Pass	



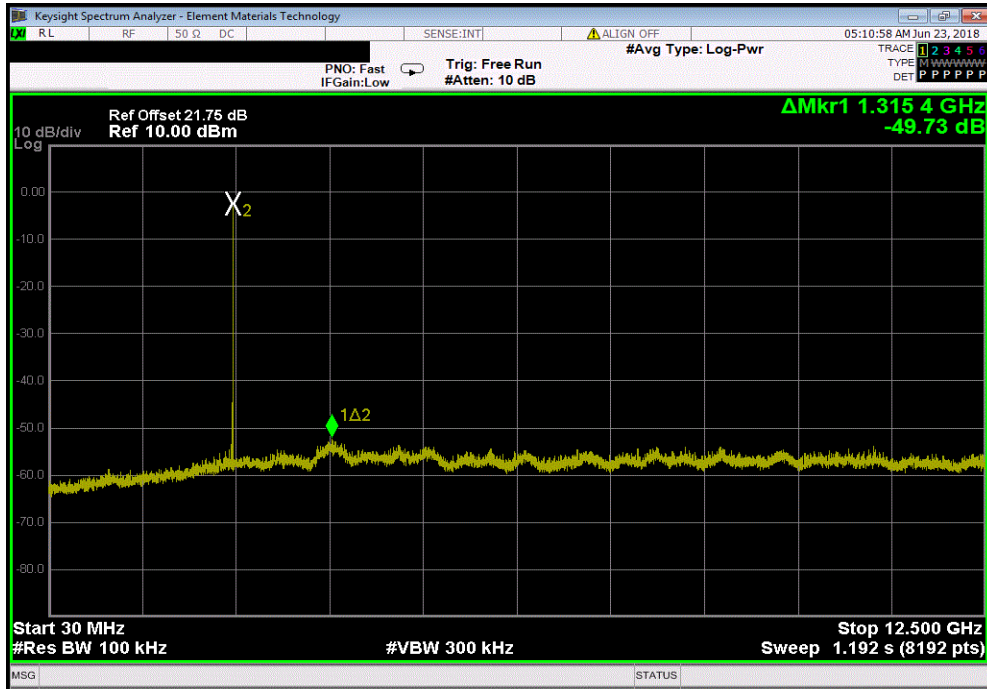


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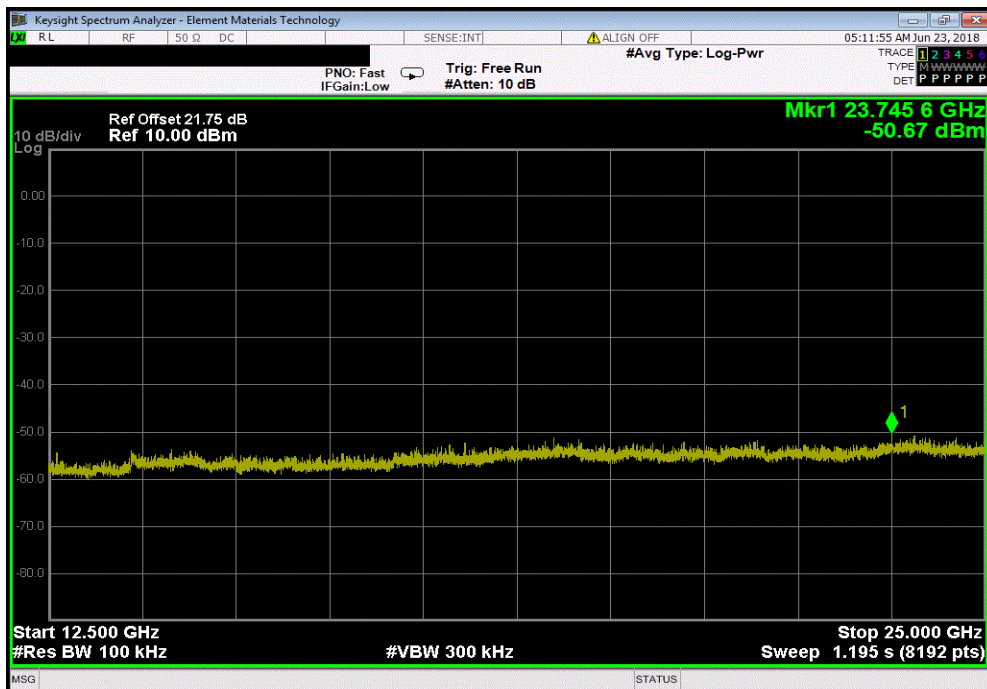


TMTX 2017.12.14 XMI 2017.12.13

DM5, GFSK, High Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-49.73	-20	Pass	



DM5, GFSK, High Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-48.11	-20	Pass	

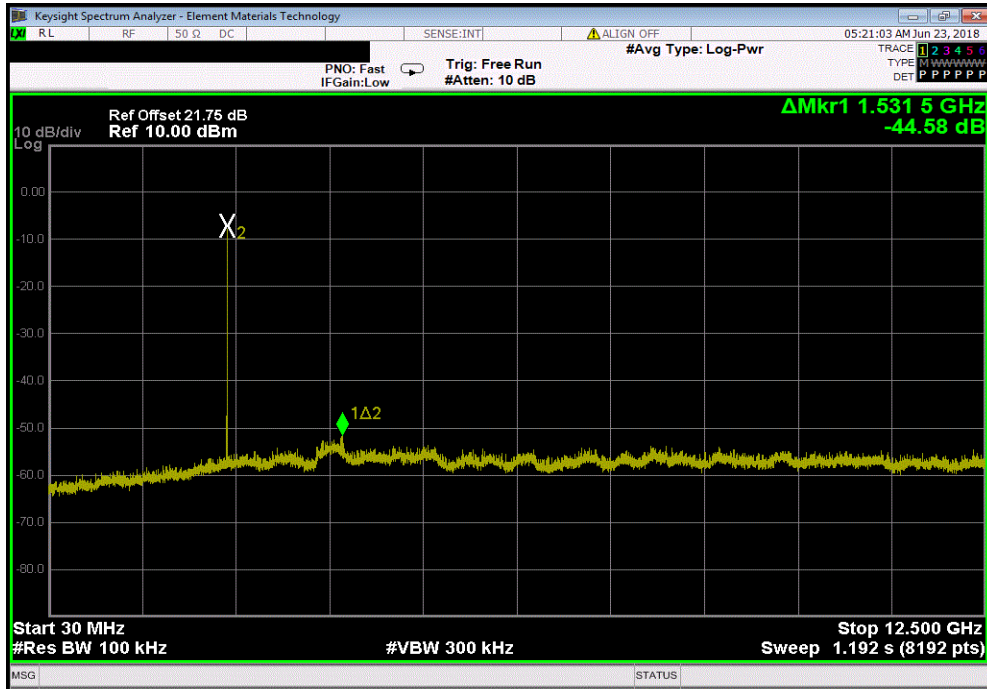


# SPURIOUS CONDUCTED EMISSIONS

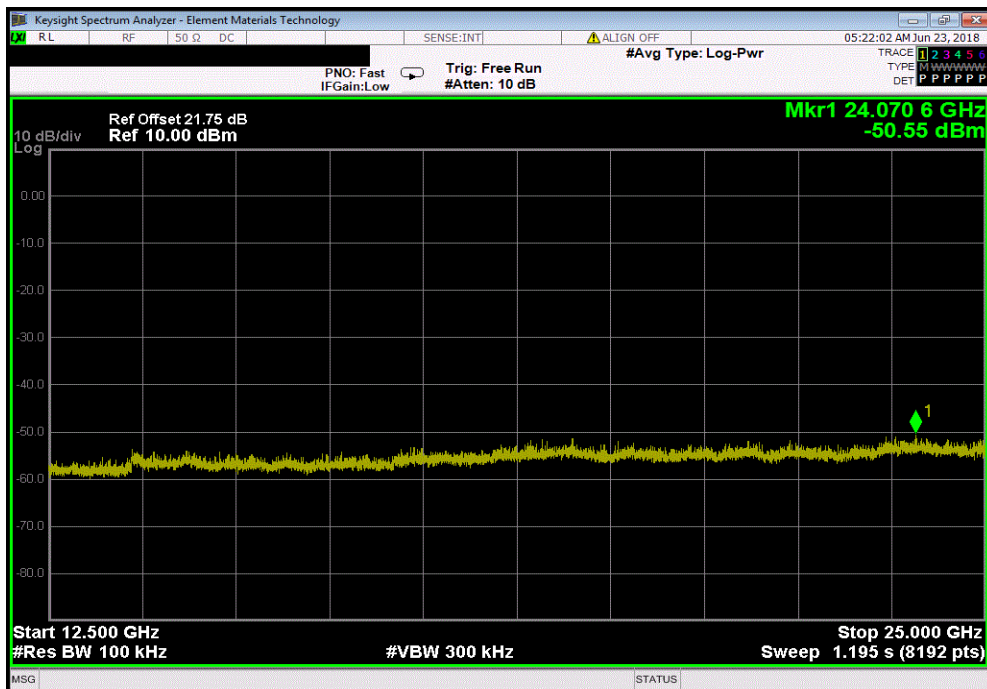


TMTx 2017.12.14 XMI 2017.12.13

2DH5, pi/4-DQPSK, Low Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-44.58	-20	Pass	



2DH5, pi/4-DQPSK, Low Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-43.29	-20	Pass	

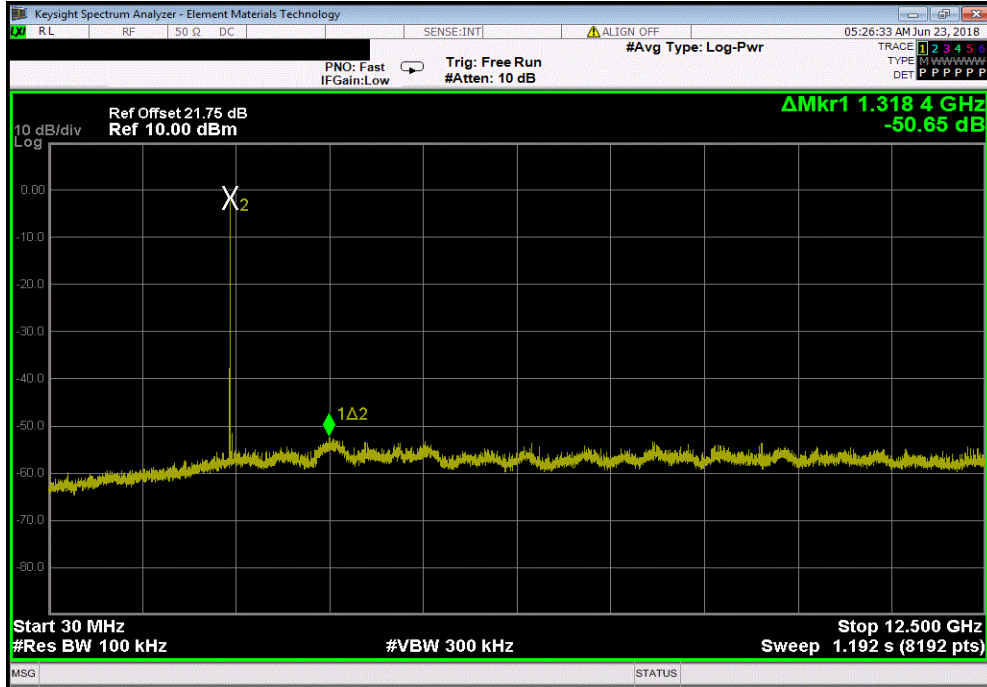


# SPURIOUS CONDUCTED EMISSIONS

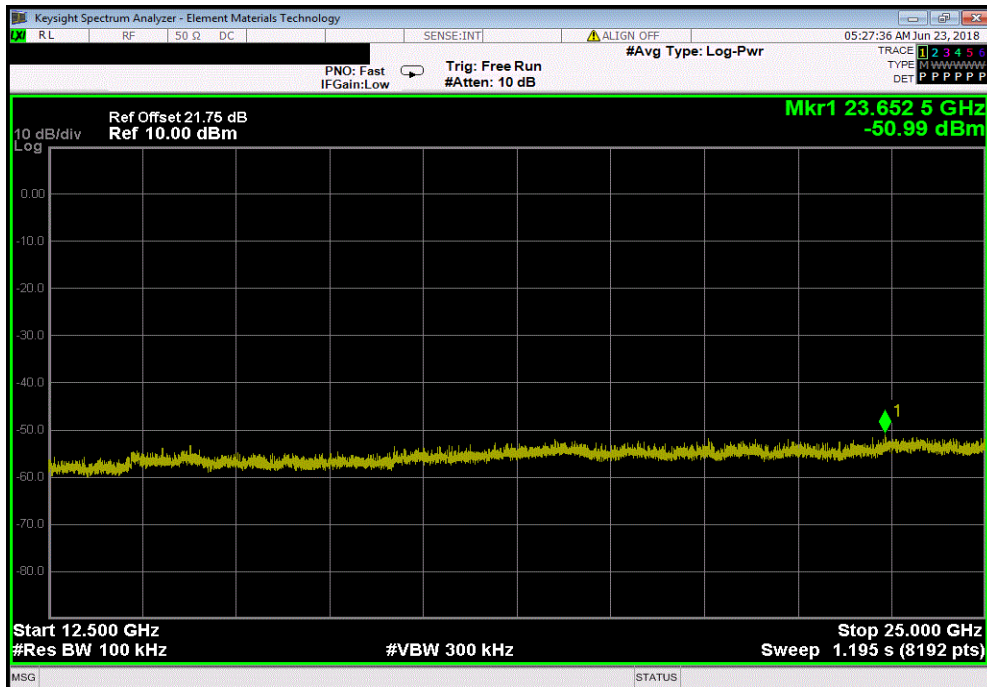


TMTX 2017.12.14 XMI 2017.12.13

2DH5, pi/4-DQPSK, Mid Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-50.66	-20	Pass	



2DH5, pi/4-DQPSK, Mid Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-49.2	-20	Pass	

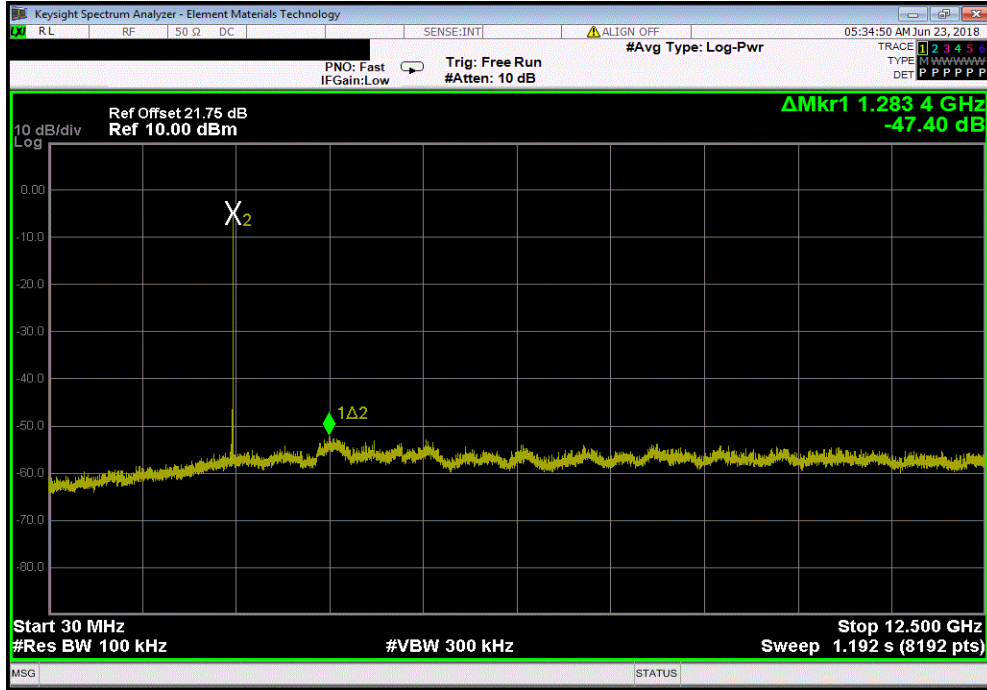


# SPURIOUS CONDUCTED EMISSIONS

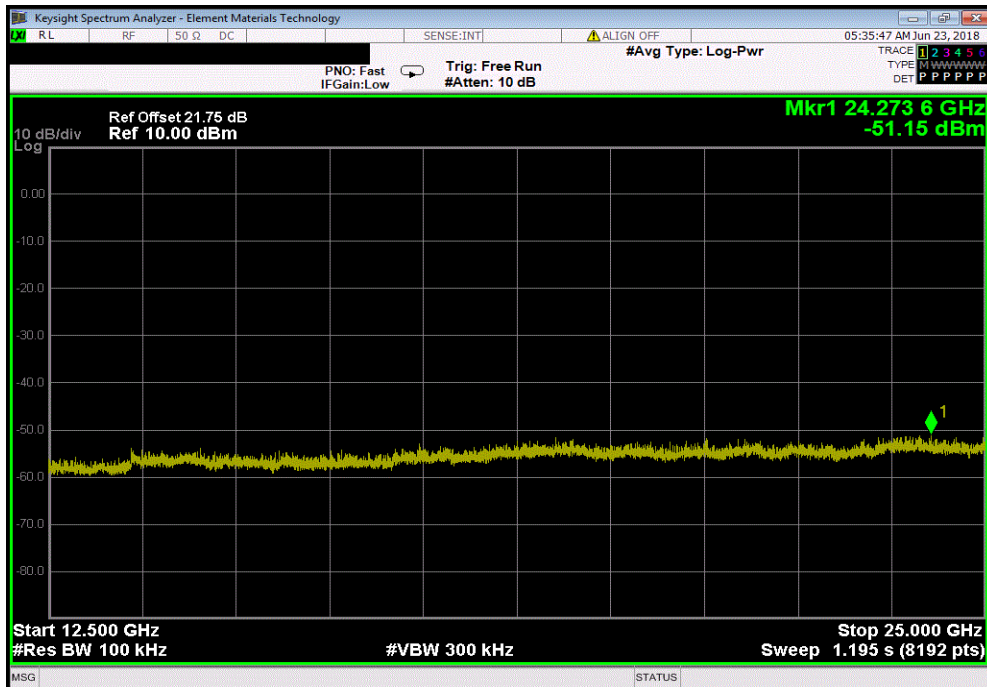


TMTx 2017.12.14 XMI 2017.12.13

2DH5, pi/4-DQPSK, High Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-47.41	-20	Pass	



2DH5, pi/4-DQPSK, High Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-46.23	-20	Pass	

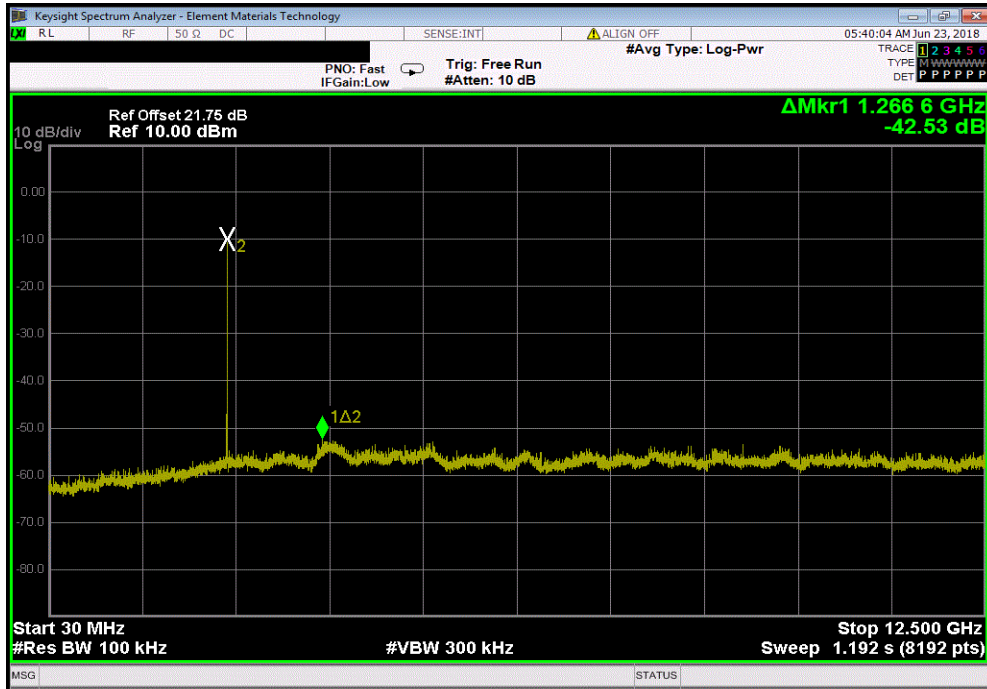


# SPURIOUS CONDUCTED EMISSIONS

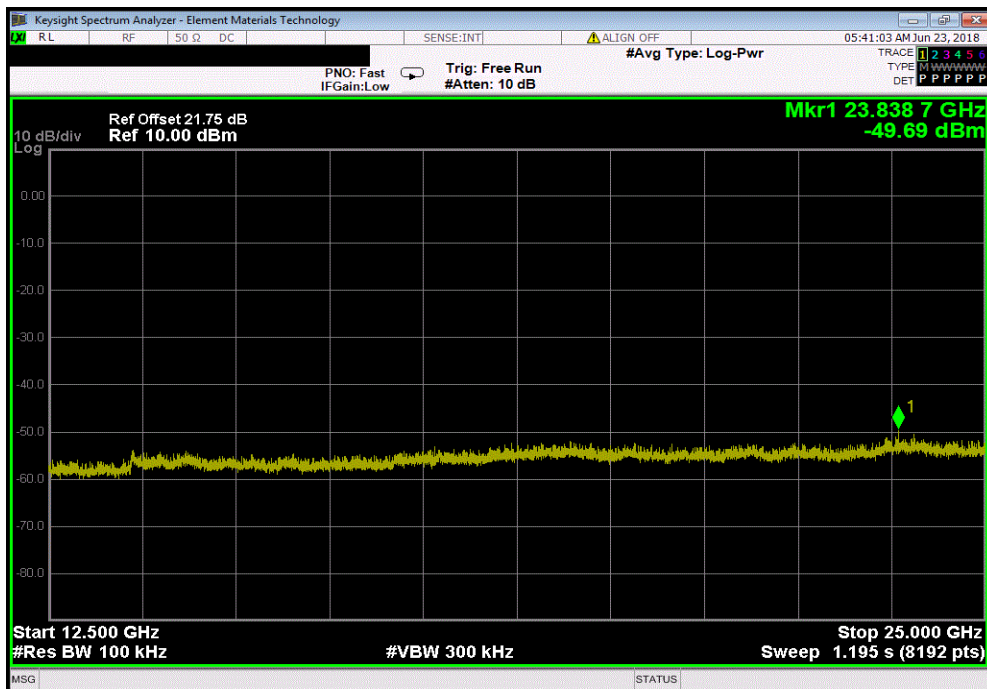


TMTX 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, Low Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-42.53	-20	Pass	



3DH5, 8-DPSK, Low Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-39.63	-20	Pass	

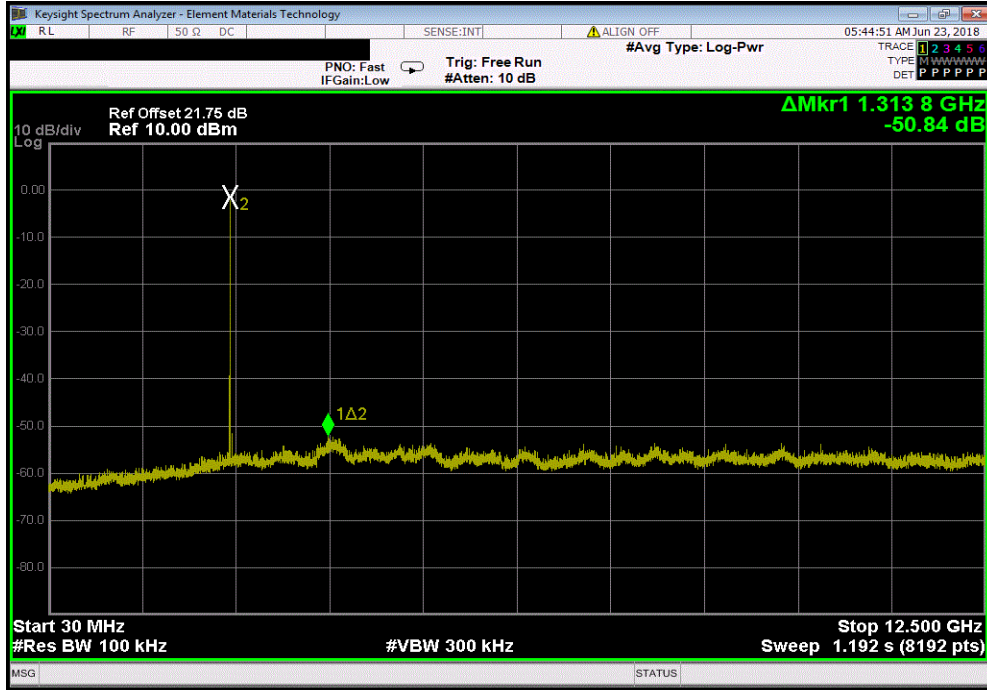


# SPURIOUS CONDUCTED EMISSIONS

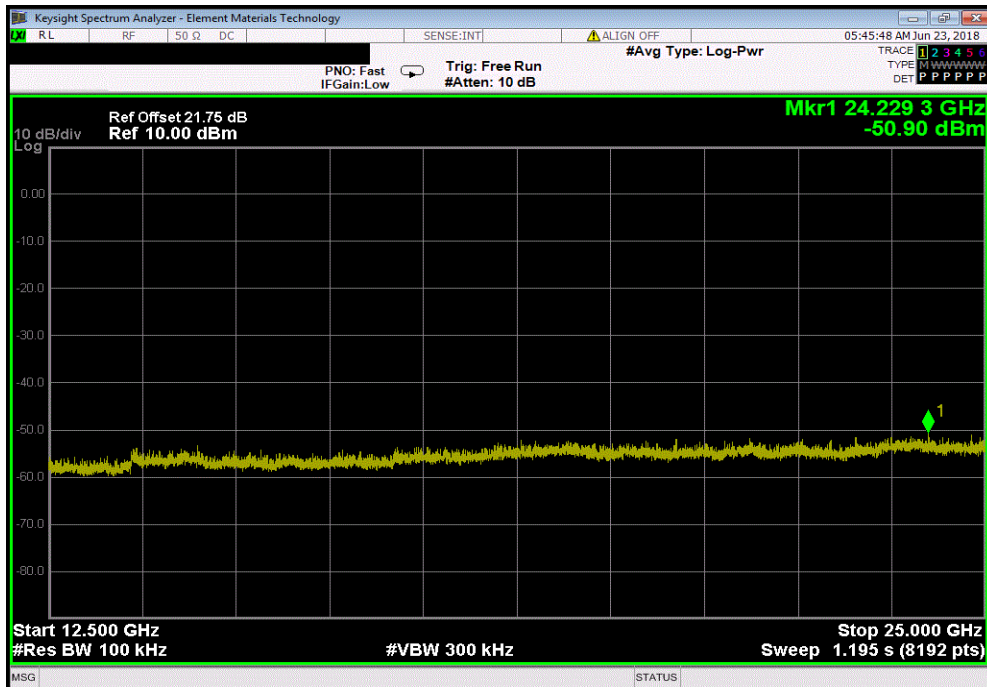


TMTX 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, Mid Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-50.84	-20	Pass	



3DH5, 8-DPSK, Mid Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-49.37	-20	Pass	

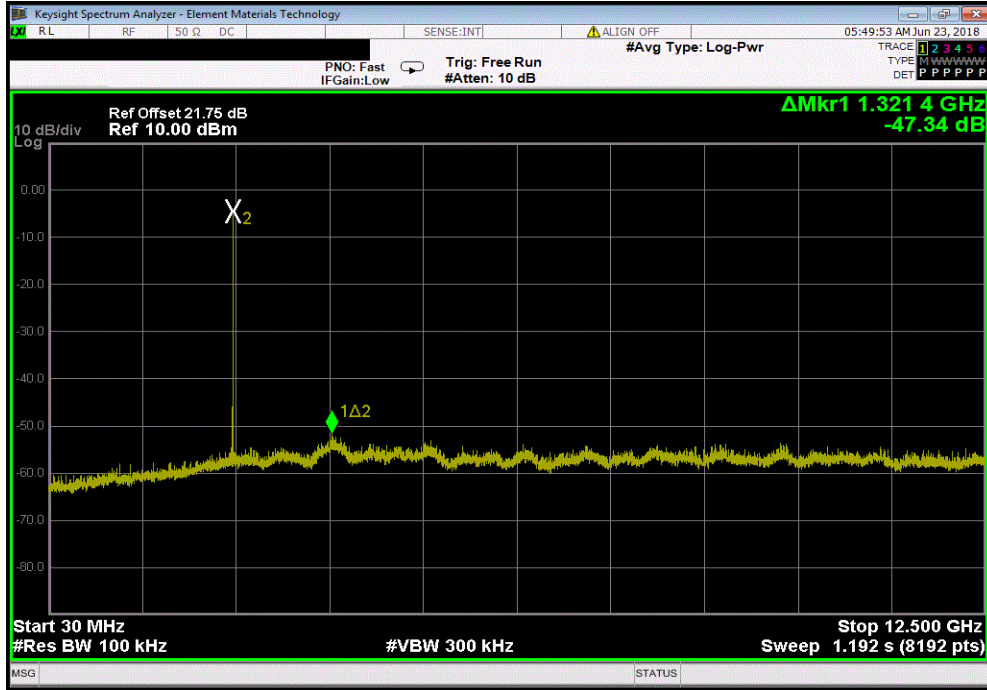


# SPURIOUS CONDUCTED EMISSIONS



TMTx 2017.12.14 XMI 2017.12.13

3DH5, 8-DPSK, High Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	-47.34	-20	Pass	



3DH5, 8-DPSK, High Channel				
Frequency Range	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	-46	-20	Pass	

