

BAND EDGE COMPLIANCE



XMIT 2019.09.05

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	N5173B	TIW	5-Jul-17	5-Jul-20
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	1-May-19	1-May-20

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 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



TMTx 2019.08.30.0 XMt 2019.09.05

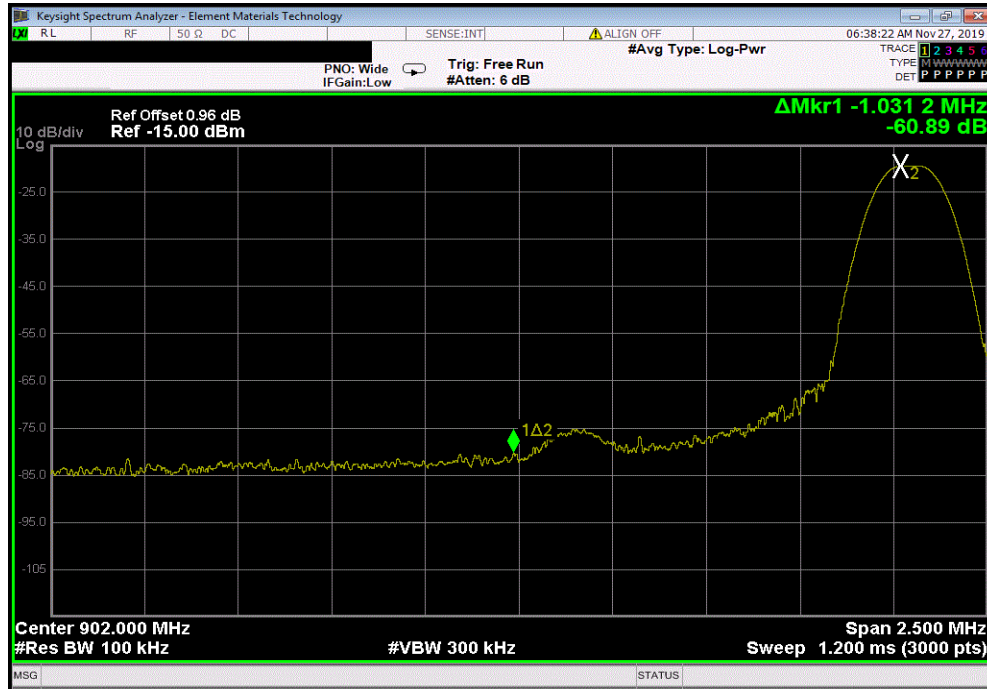
EUT: Beacon		Work Order: SMNC0001	
Serial Number: Unit 1		Date: 26-Nov-19	
Customer: SMRTGrid Inc.		Temperature: 23.2 °C	
Attendees: Bill Haag		Humidity: 29.4% RH	
Project: None		Barometric Pres.: 1013 mbar	
Tested by: Dustin Sparks		Power: Battery	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
DC block, measurement cable, and customer U.FL to SMA cable included in reference level offset. No external attenuator required due to low output power.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature <i>Dustin Sparks</i>	
		Value (dBc)	Limit ≤ (dBc) Result
LoRa, 902-928 MHz			
Low Channel, 903.08 MHz			
	293 bps	-60.89	-20 Pass
	3516 bps	-60.41	-20 Pass
	37500 bps	-56.42	-20 Pass
High Channel, 926.84 MHz			
	293 bps	-56.75	-20 Pass
	3516 bps	-55.69	-20 Pass
	37500 bps	-55.11	-20 Pass

BAND EDGE COMPLIANCE

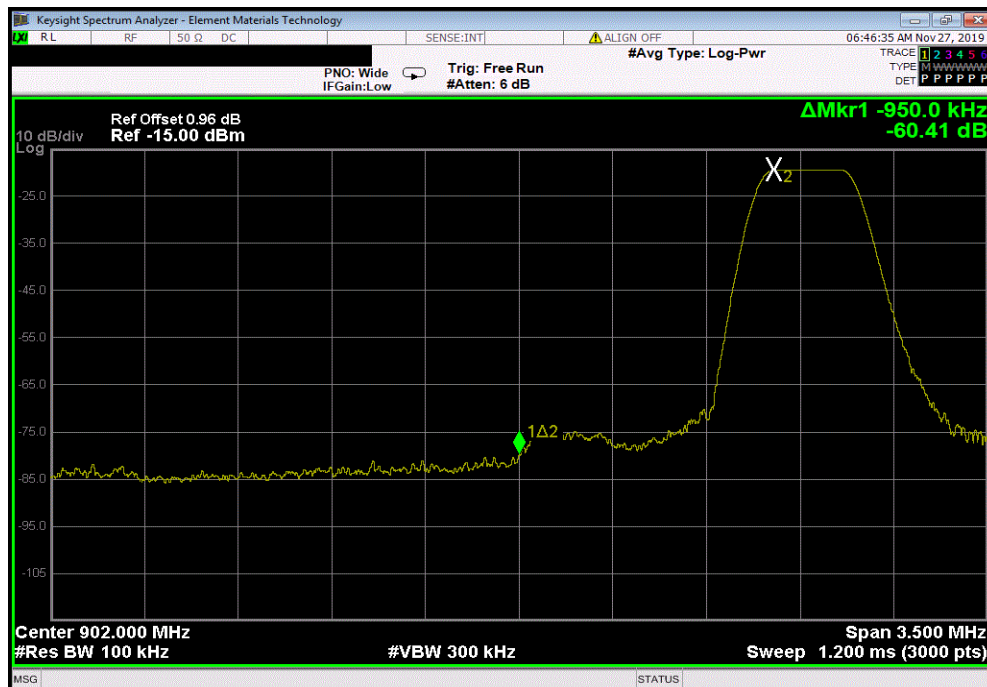


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 293 bps						
				Value (dBc)	Limit ≤ (dBc)	Result
				-60.89	-20	Pass



LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 3516 bps						
				Value (dBc)	Limit ≤ (dBc)	Result
				-60.41	-20	Pass

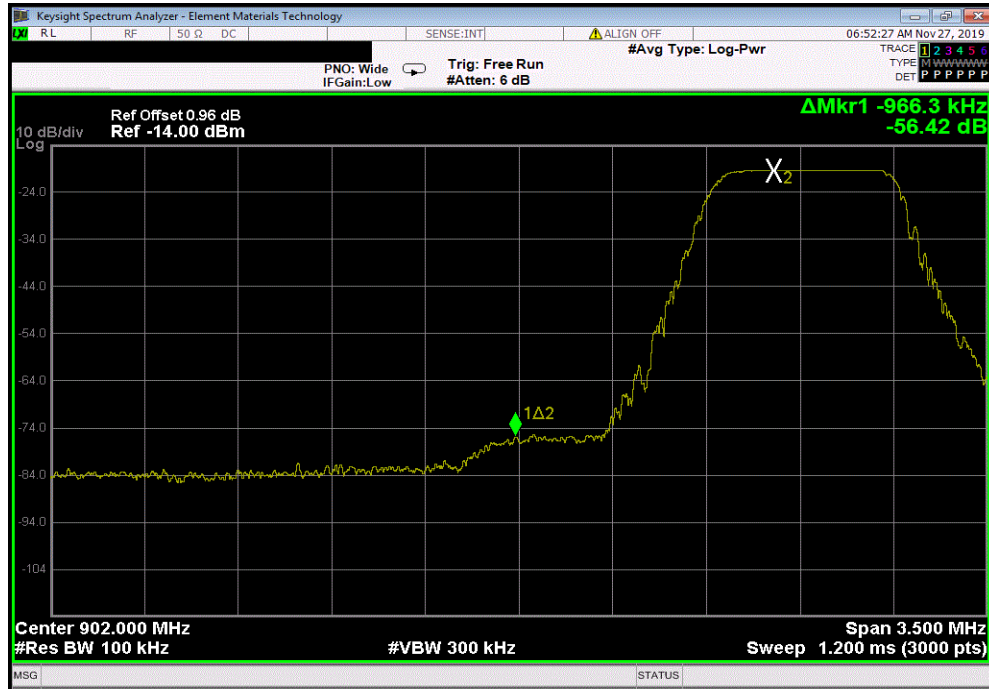


BAND EDGE COMPLIANCE

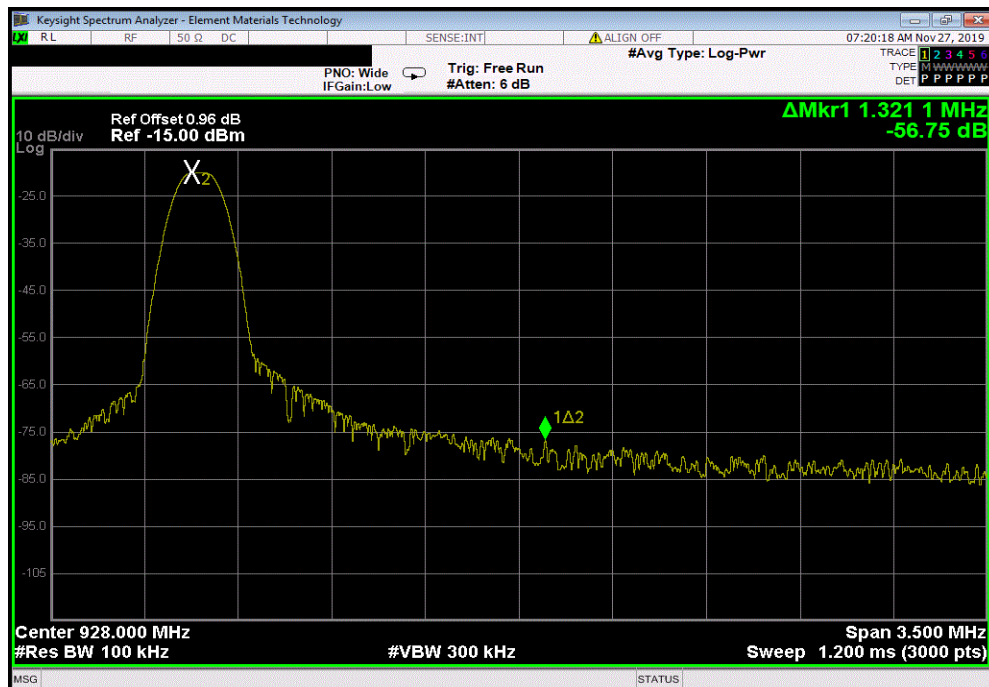


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 37500 bps						
				Value (dBc)	Limit ≤ (dBc)	Result
				-56.42	-20	Pass



LoRa, 902-928 MHz, High Channel, 926.84 MHz, 293 bps						
				Value (dBc)	Limit ≤ (dBc)	Result
				-56.75	-20	Pass

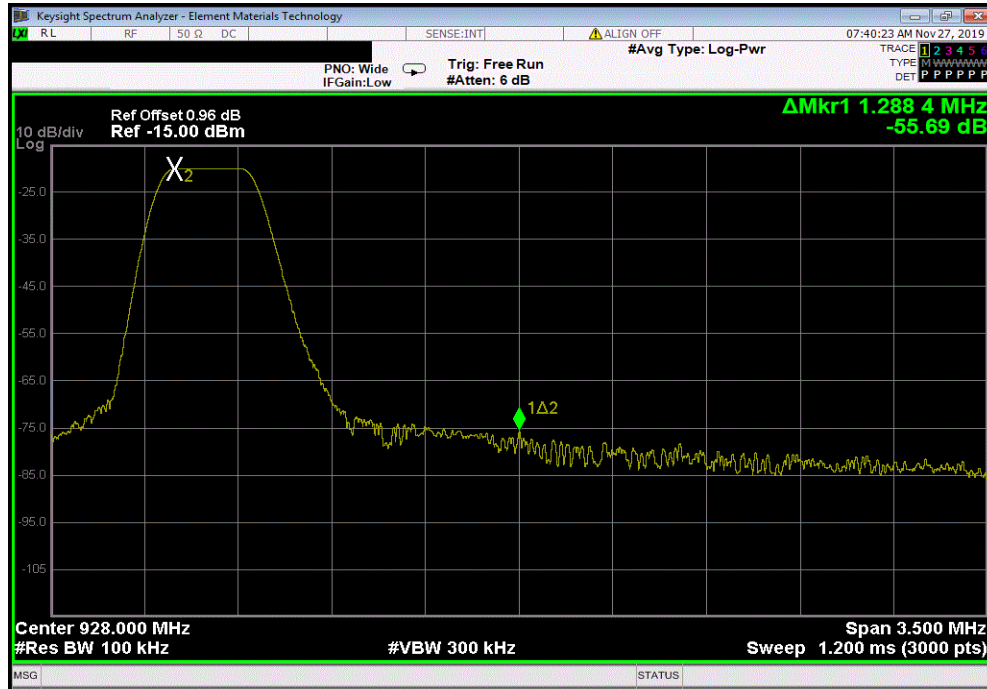


BAND EDGE COMPLIANCE

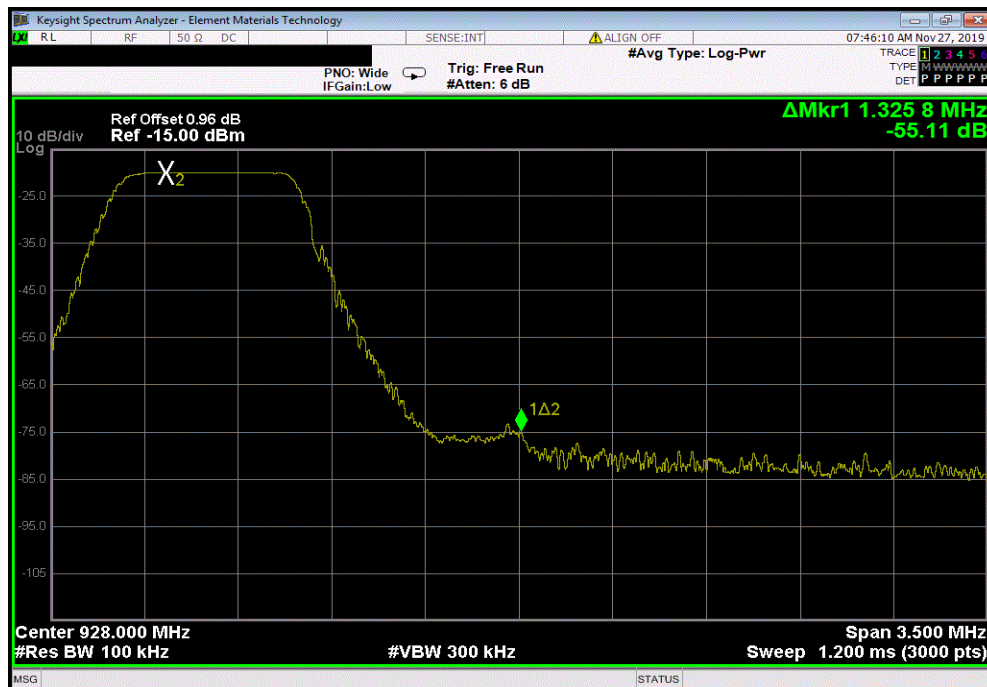


TbTtx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 3516 bps						
				Value (dBc)	Limit ≤ (dBc)	Result
				-55.69	-20	Pass



LoRa, 902-928 MHz, High Channel, 926.84 MHz, 37500 bps						
				Value (dBc)	Limit ≤ (dBc)	Result
				-55.11	-20	Pass



BAND EDGE COMPLIANCE (HOPPING MODE)



XMIT 2019.09.05

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	N5173B	TIW	5-Jul-17	5-Jul-20
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	1-May-19	1-May-20

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)



TMTx 2019.08.30.0 XMI 2019.09.05

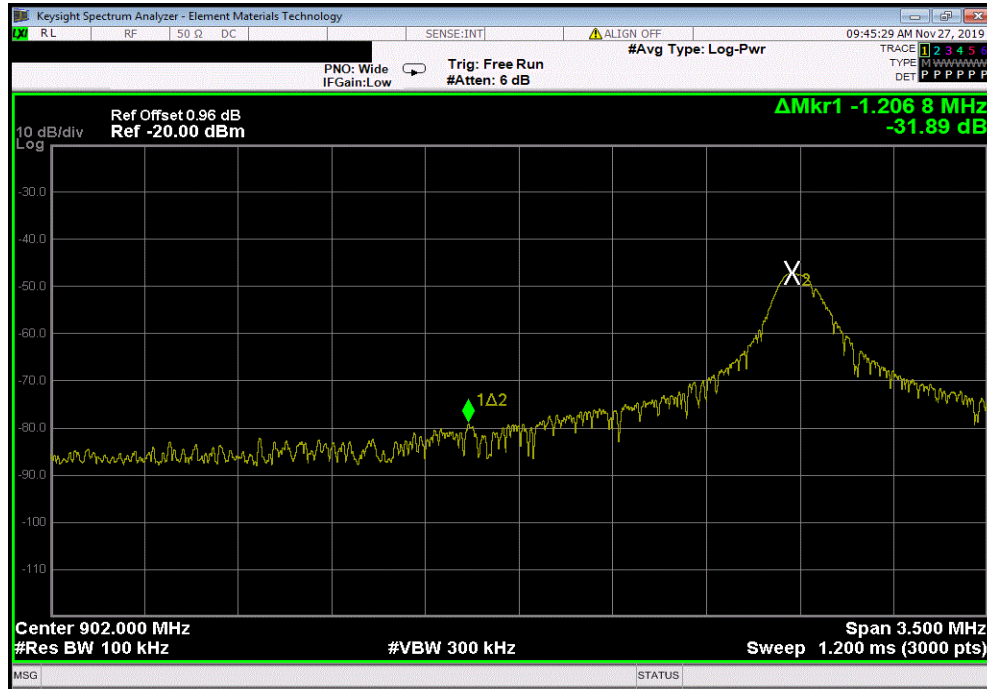
EUT: Beacon		Work Order: SMNC0001	
Serial Number: Unit 1		Date: 26-Nov-19	
Customer: SMRTGrid Inc.		Temperature: 23.3 °C	
Attendees: Bill Haag		Humidity: 29.5% RH	
Project: None		Barometric Pres.: 1012 mbar	
Tested by: Dustin Sparks		Power: Battery	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
DC block, measurement cable, and customer U.FL to SMA cable included in reference level offset. No external attenuator required due to low output power.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature <i>Dustin Sparks</i>	
		Value (dBc)	Limit ≤ (dBc) Result
Hopping Mode (All Channels)			
LoRa, 293 bps			
	Low Channel, 903.08 MHz	-31.89	-20 Pass
	High Channel, 926.84 MHz	-30.05	-20 Pass
LoRa, 3516 bps			
	Low Channel, 903.08 MHz	-31.85	-20 Pass
	High Channel, 926.84 MHz	-29.97	-20 Pass
LoRa, 37500 bps			
	Low Channel, 903.08 MHz	-31.73	-20 Pass
	High Channel, 926.84 MHz	-30.16	-20 Pass

BAND EDGE COMPLIANCE (HOPPING MODE)

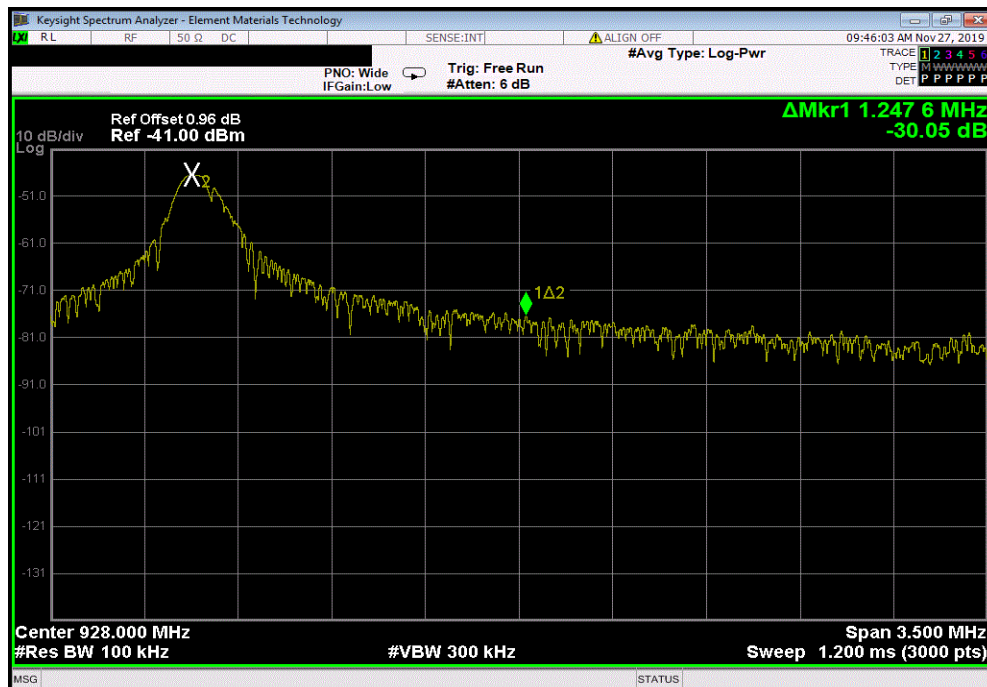


TbTx 2019.08.30.0 XMI 2019.09.05

Hopping Mode (All Channels), LoRa, 293 bps, Low Channel, 903.08 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-31.89	-20	Pass



Hopping Mode (All Channels), LoRa, 293 bps, High Channel, 926.84 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-30.05	-20	Pass

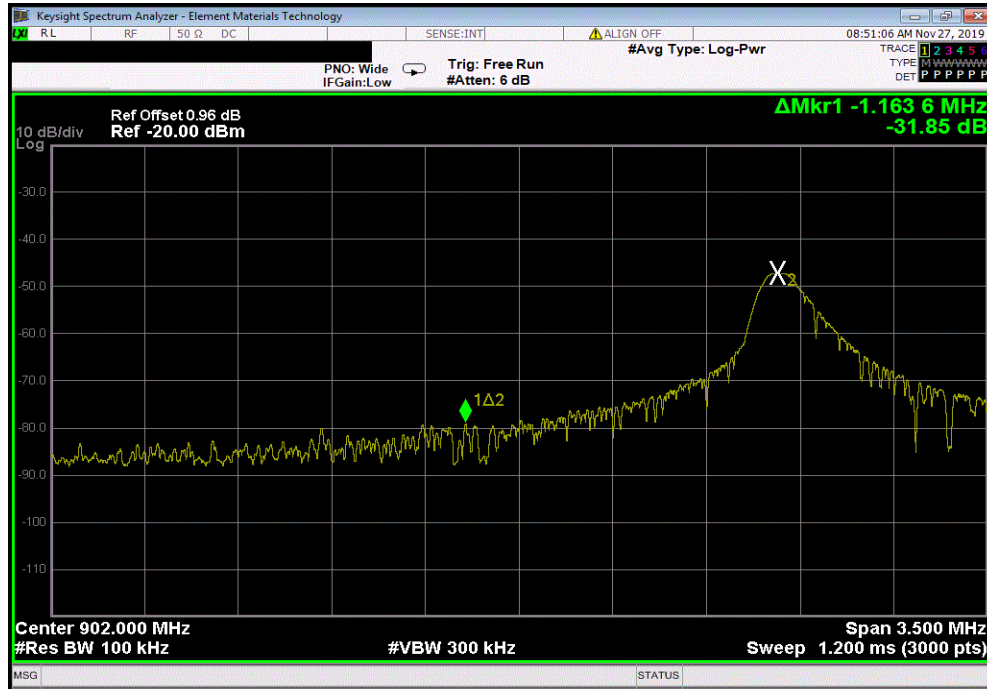


BAND EDGE COMPLIANCE (HOPPING MODE)

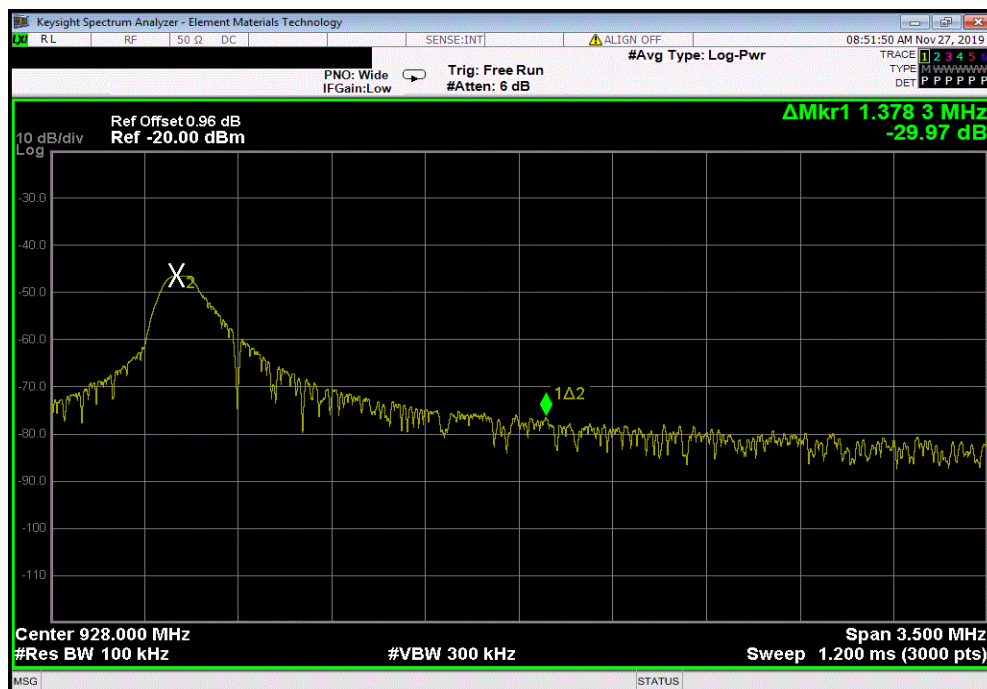


TbTtx 2019.08.30.0 XMI 2019.09.05

Hopping Mode (All Channels), LoRa, 3516 bps, Low Channel, 903.08 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)				
	-31.85	-20				
						Pass



Hopping Mode (All Channels), LoRa, 3516 bps, High Channel, 926.84 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)				
	-29.97	-20				
						Pass

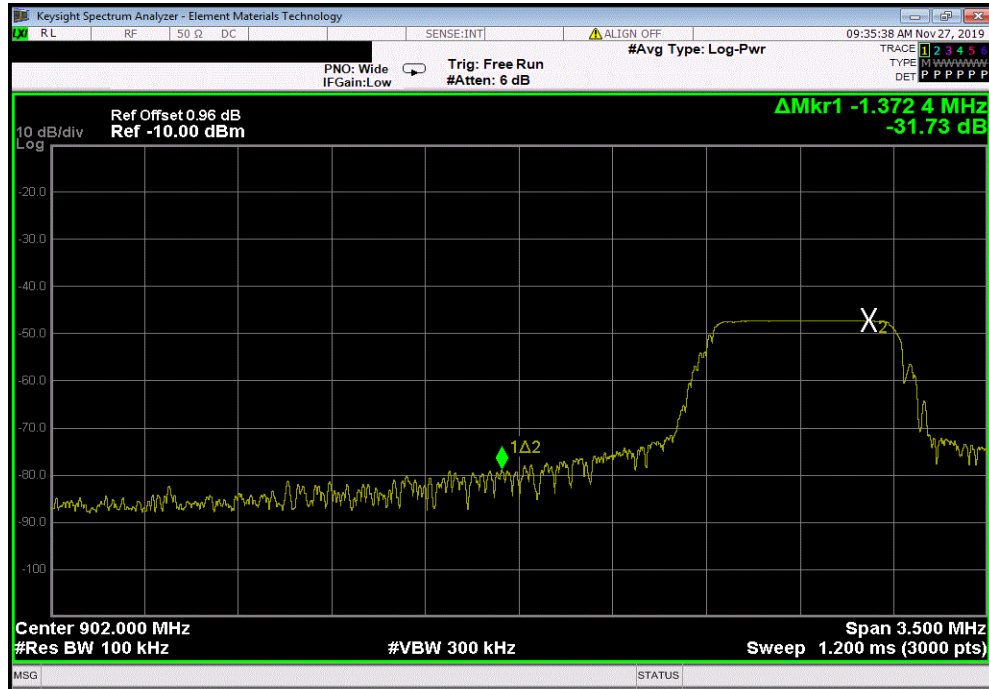


BAND EDGE COMPLIANCE (HOPPING MODE)

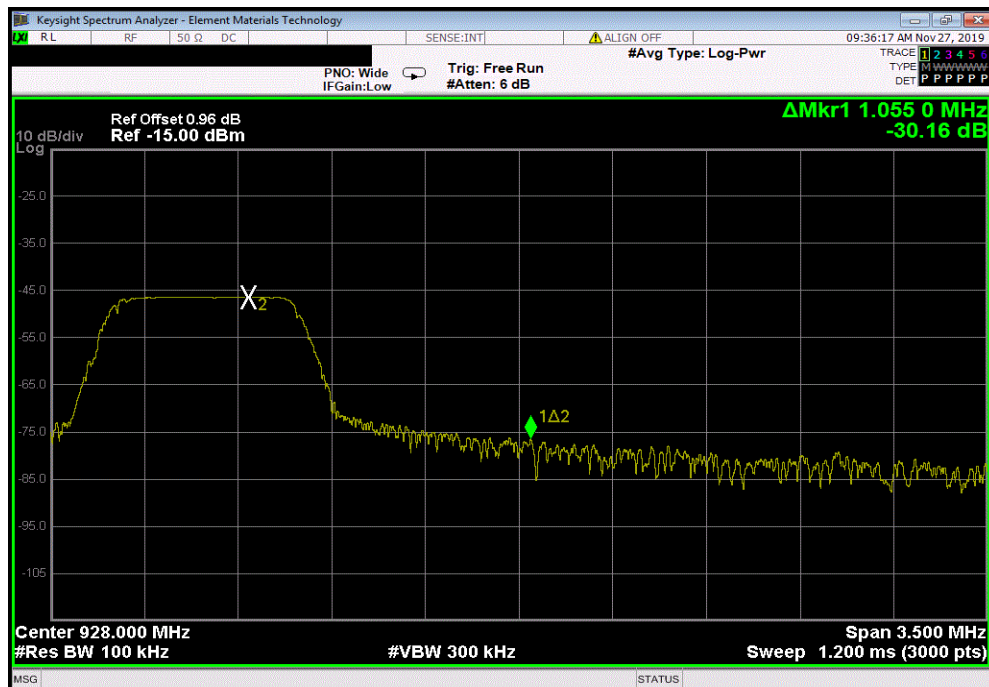


TbTtX 2019.08.30.0 XMI 2019.09.05

Hopping Mode (All Channels), LoRa, 37500 bps, Low Channel, 903.08 MHz						
	Value	Limit	Result			
	(dBc)	≤ (dBc)				
	-31.73	-20	Pass			



Hopping Mode (All Channels), LoRa, 37500 bps, High Channel, 926.84 MHz						
	Value	Limit	Result			
	(dBc)	≤ (dBc)				
	-30.16	-20	Pass			



OCCUPIED BANDWIDTH



XMIT 2019.09.05

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5173B	TIW	5-Jul-17	5-Jul-20
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	1-May-19	1-May-20

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



TMTx 2019.08.30.0 XMt 2019.09.05

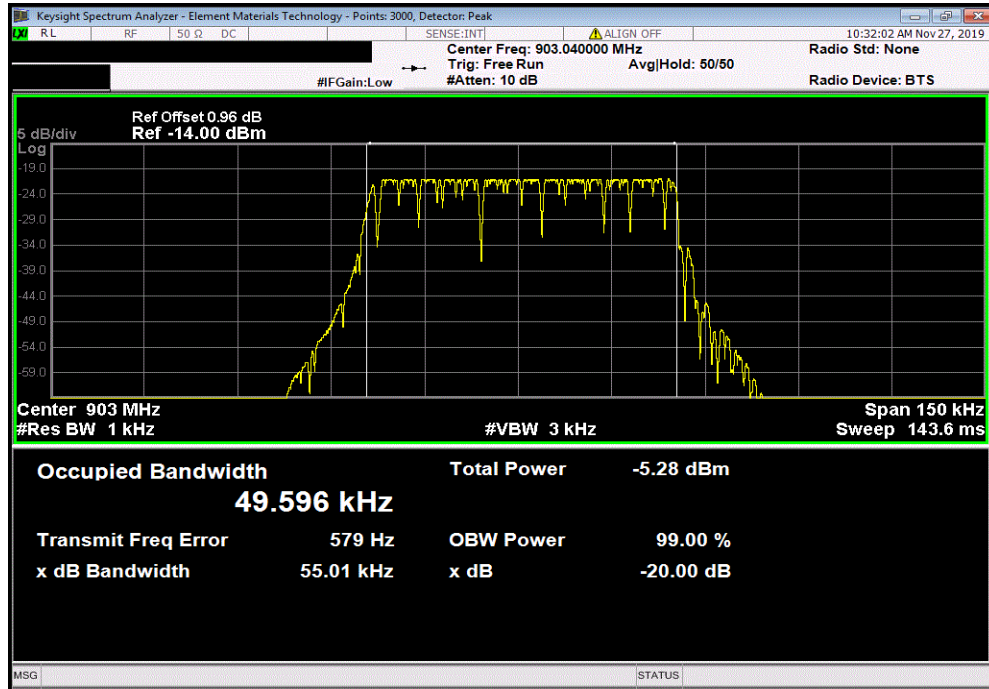
EUT: Beacon		Work Order: SMNC0001	
Serial Number: Unit 1		Date: 26-Nov-19	
Customer: SMRTGrid Inc.		Temperature: 23.1 °C	
Attendees: Bill Haag		Humidity: 29.6% RH	
Project: None		Barometric Pres.: 1011 mbar	
Tested by: Dustin Sparks	Power: Battery	Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
DC block, measurement cable, and customer U.FL to SMA cable included in reference level offset. No external attenuator required due to low output power.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature <i>Dustin Sparks</i>	
		Value	Limit
LoRa, 902-928 MHz			
Low Channel, 903.04 MHz			
293 bps		55.015 kHz	< 2.2 MHz
3516 bps		280.177 kHz	< 2.2 MHz
37500 bps		700.362 kHz	< 2.2 MHz
Mid Channel, 915 MHz			
293 bps		55.3 kHz	< 2.2 MHz
3516 bps		278.522 kHz	< 2.2 MHz
37500 bps		679.095 kHz	< 2.2 MHz
High Channel, 926.84 MHz			
293 bps		54.274 kHz	< 2.2 MHz
3516 bps		277.763 kHz	< 2.2 MHz
37500 bps		699.609 kHz	< 2.2 MHz
			Result
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

OCCUPIED BANDWIDTH

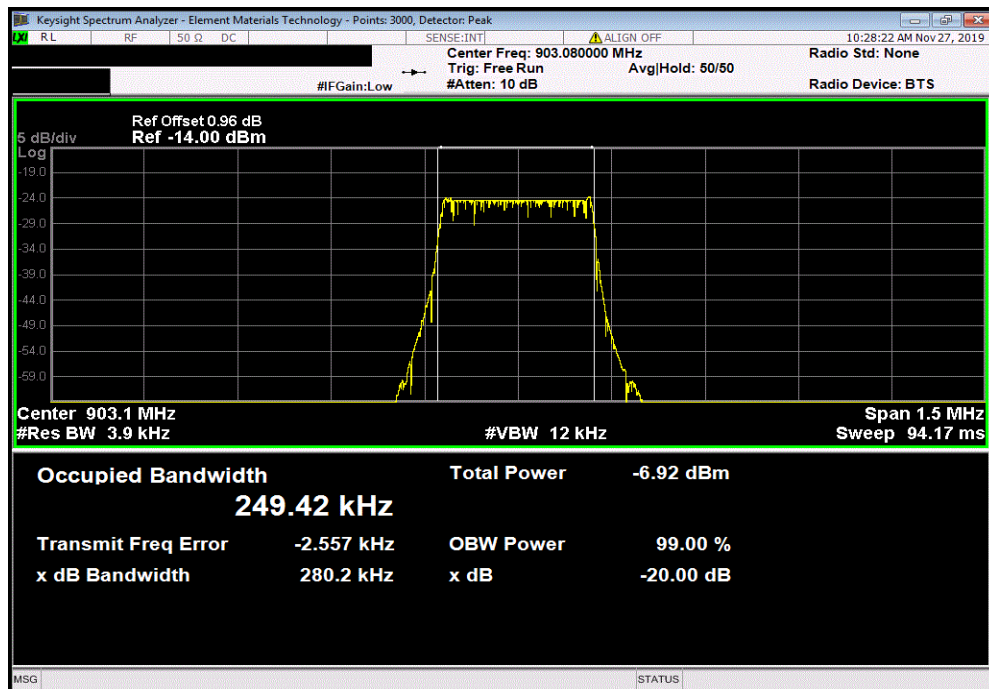


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.04 MHz, 293 bps						
				Value	Limit	Result
				55.015 kHz	< 2.2 MHz	Pass



LoRa, 902-928 MHz, Low Channel, 903.04 MHz, 3516 bps						
				Value	Limit	Result
				280.177 kHz	< 2.2 MHz	Pass



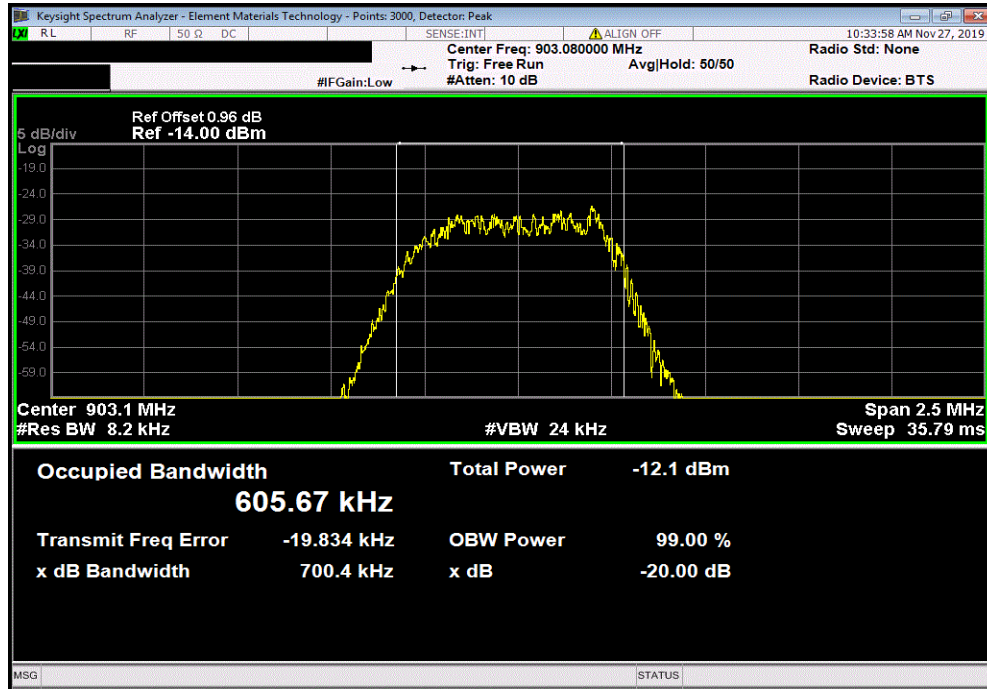
OCCUPIED BANDWIDTH



TbTx 2019.08.30.0 XMI 2019.09.05

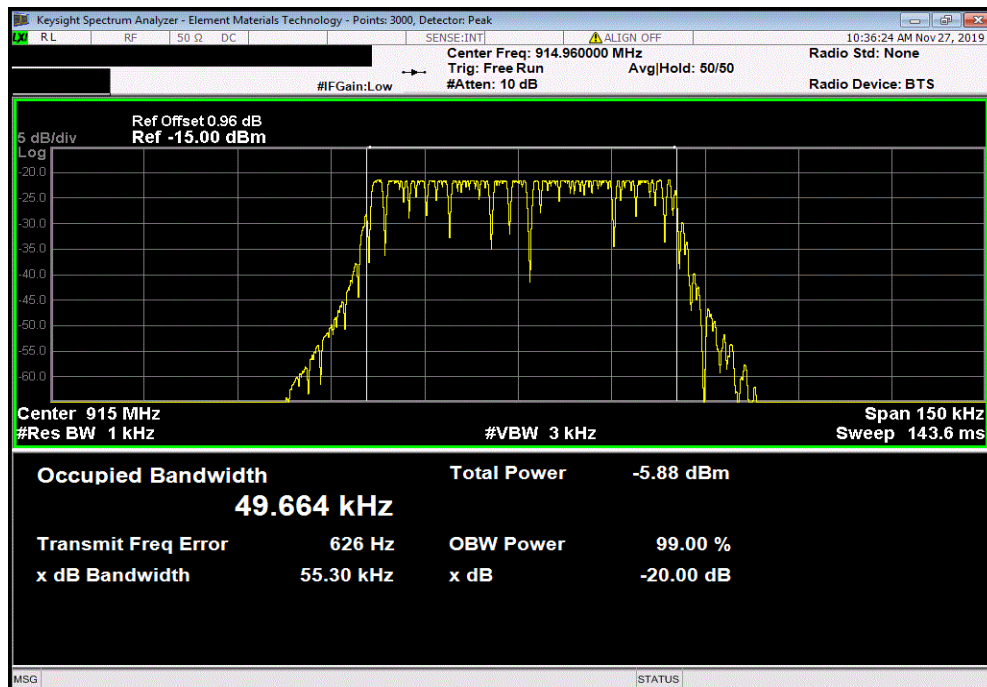
LoRa, 902-928 MHz, Low Channel, 903.04 MHz, 37500 bps

	Value	Limit	Result
	700.362 kHz	< 2.2 MHz	Pass



LoRa, 902-928 MHz, Mid Channel, 915 MHz, 293 bps

	Value	Limit	Result
	55.3 kHz	< 2.2 MHz	Pass

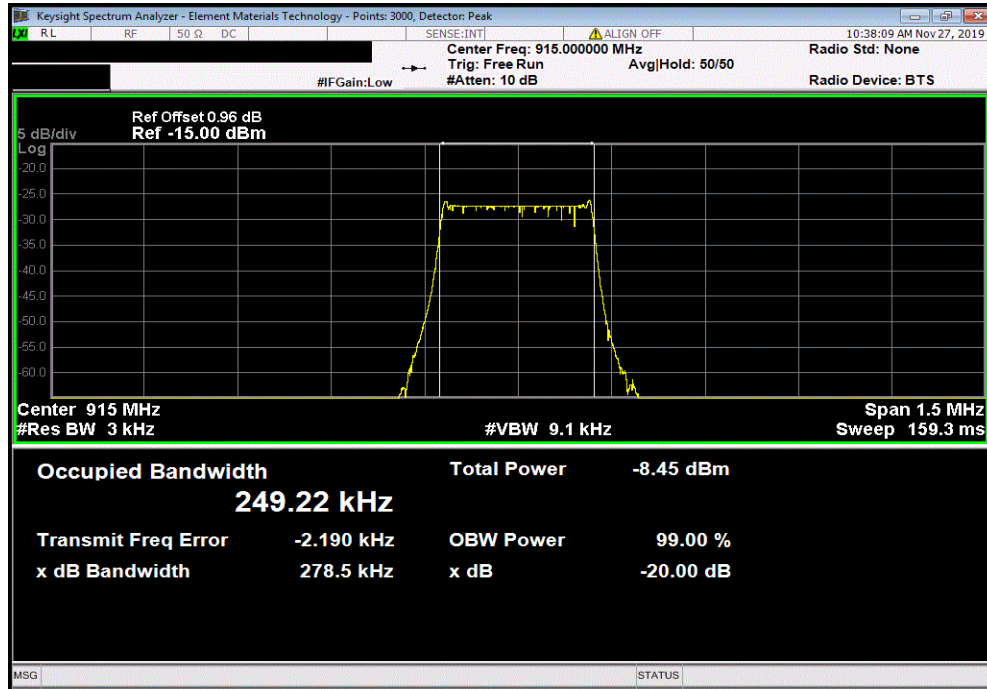


OCCUPIED BANDWIDTH

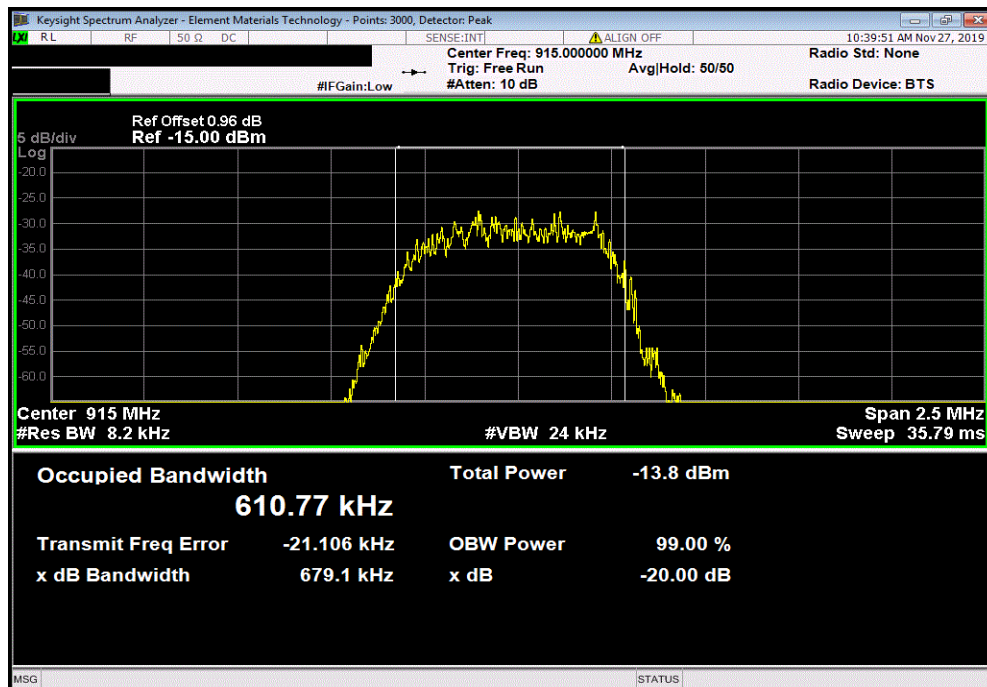


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Mid Channel, 915 MHz, 3516 bps						
				Value	Limit	Result
				278.522 kHz	< 2.2 MHz	Pass



LoRa, 902-928 MHz, Mid Channel, 915 MHz, 37500 bps						
				Value	Limit	Result
				679.095 kHz	< 2.2 MHz	Pass

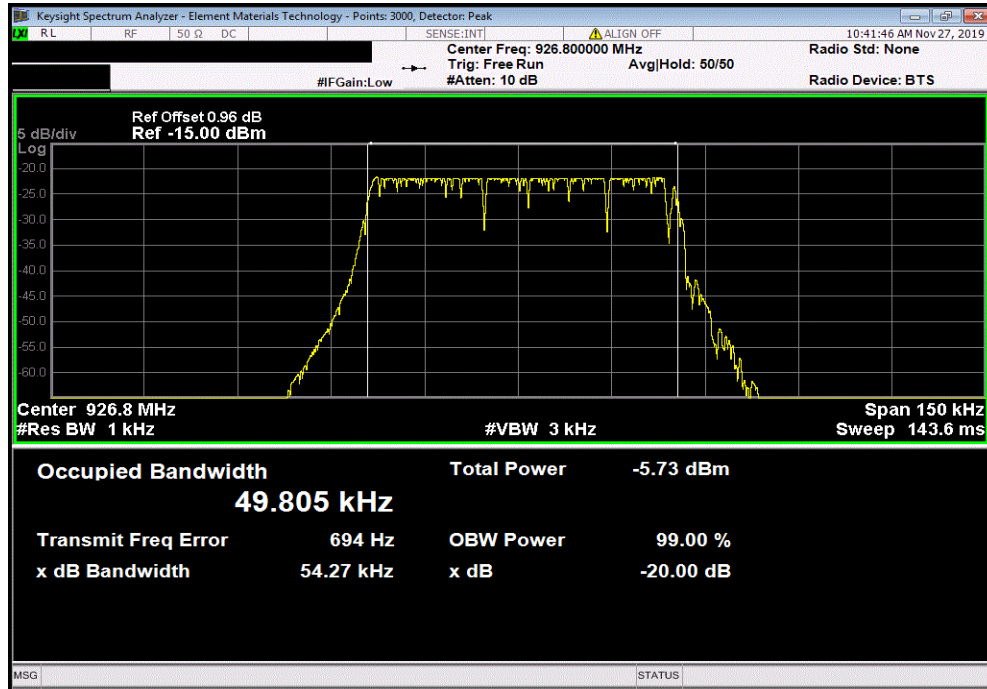


OCCUPIED BANDWIDTH

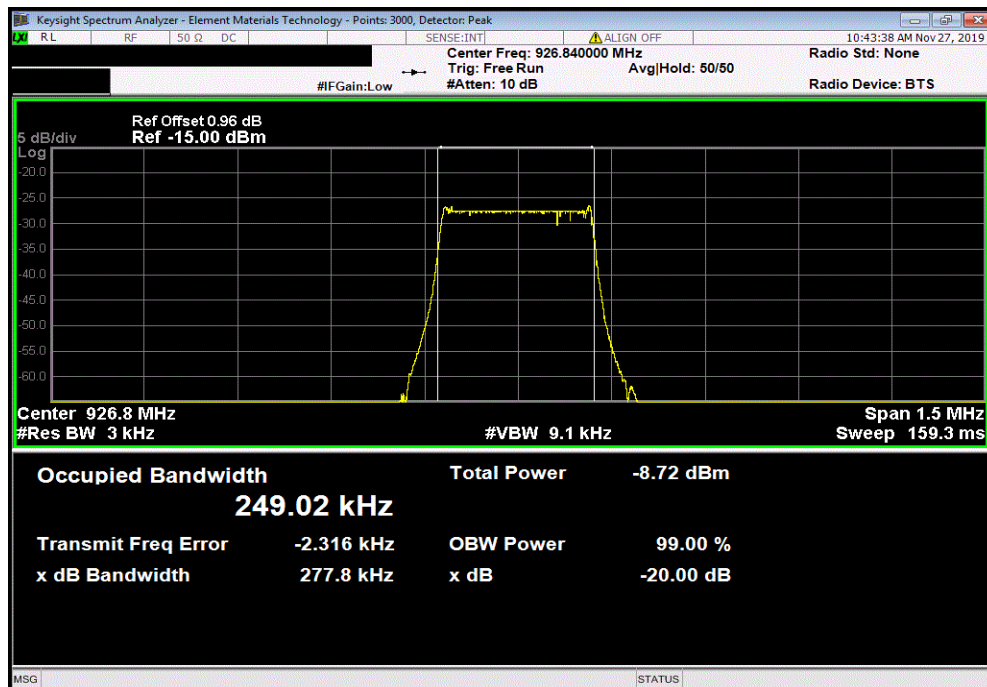


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 293 bps						
				Value	Limit	Result
				54.274 kHz	< 2.2 MHz	Pass



LoRa, 902-928 MHz, High Channel, 926.84 MHz, 3516 bps						
				Value	Limit	Result
				277.763 kHz	< 2.2 MHz	Pass

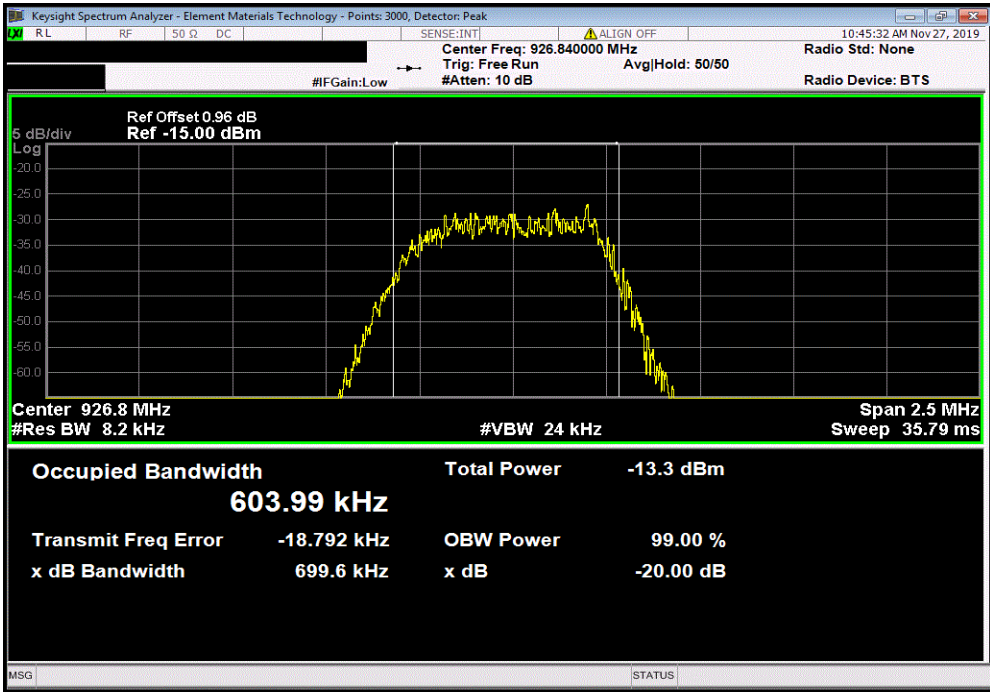


OCCUPIED BANDWIDTH



TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 37500 bps						
				Value	Limit	Result
				699.609 kHz	< 2.2 MHz	Pass



< 2.2 MHz Pass

SPURIOUS CONDUCTED EMISSIONS



XMIT 2019.09.05

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5173B	TIW	5-Jul-17	5-Jul-20
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	1-May-19	1-May-20

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. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

SPURIOUS CONDUCTED EMISSIONS



TMTx 2019.08.30.0 XMI 2019.09.05

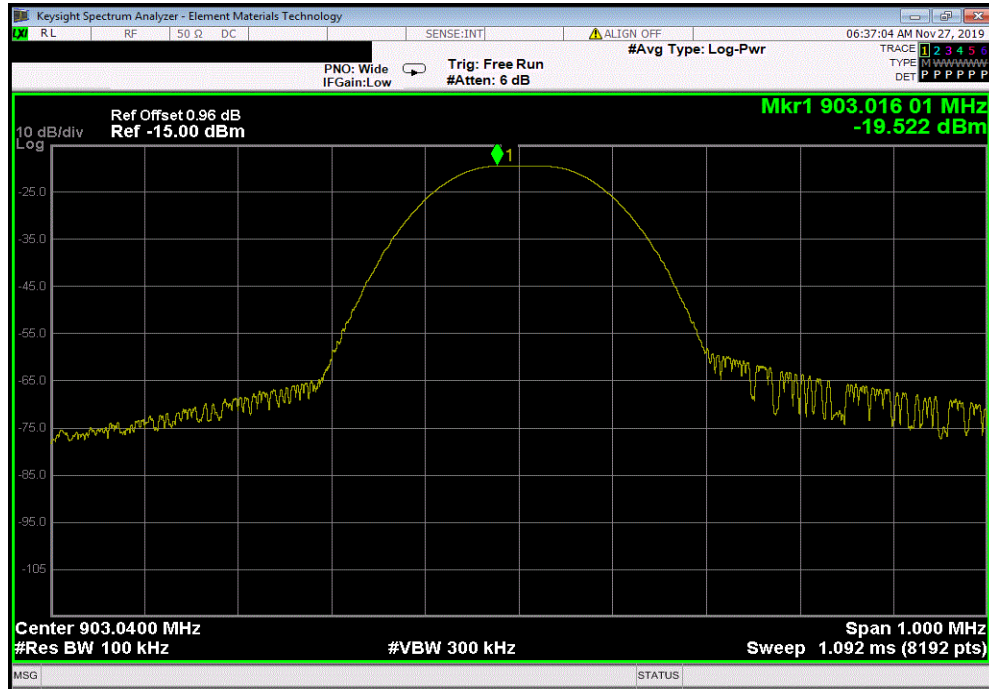
EUT: Beacon		Work Order: SMNC0001	
Serial Number: Unit 1		Date: 26-Nov-19	
Customer: SMRTGrid Inc.		Temperature: 23.2 °C	
Attendees: Bill Haag		Humidity: 28.9% RH	
Project: None		Barometric Pres.: 1013 mbar	
Tested by: Dustin Sparks		Power: Battery	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
DC block, measurement cable, and customer U.FL to SMA cable included in reference level offset. No external attenuator required due to low output power.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature <i>Dustin Sparks</i>	
		Frequency Range	Measured Freq (MHz)
			Max Value (dBc)
			Limit ≤ (dBc)
			Result
LoRa, 902-928 MHz			
Low Channel, 903.08 MHz			
	293 bps	Fundamental	903.02
	293 bps	30 MHz - 10 GHz	8126.75
	3516 bps	Fundamental	902.96
	3516 bps	30 MHz - 10 GHz	8126.75
	37500 bps	Fundamental	903.06
	37500 bps	30 MHz - 10 GHz	8126.75
Mid Channel, 915 MHz			
	293 bps	Fundamental	914.94
	293 bps	30 MHz - 10 GHz	8235.08
	3516 bps	Fundamental	914.88
	3516 bps	30 MHz - 10 GHz	8235.08
	37500 bps	Fundamental	914.94
	37500 bps	30 MHz - 10 GHz	8236.29
High Channel, 926.84 MHz			
	293 bps	Fundamental	926.82
	293 bps	30 MHz - 10 GHz	1853.35
	3516 bps	Fundamental	926.84
	3516 bps	30 MHz - 10 GHz	1853.35
	37500 bps	Fundamental	926.78
	37500 bps	30 MHz - 10 GHz	1853.35

SPURIOUS CONDUCTED EMISSIONS

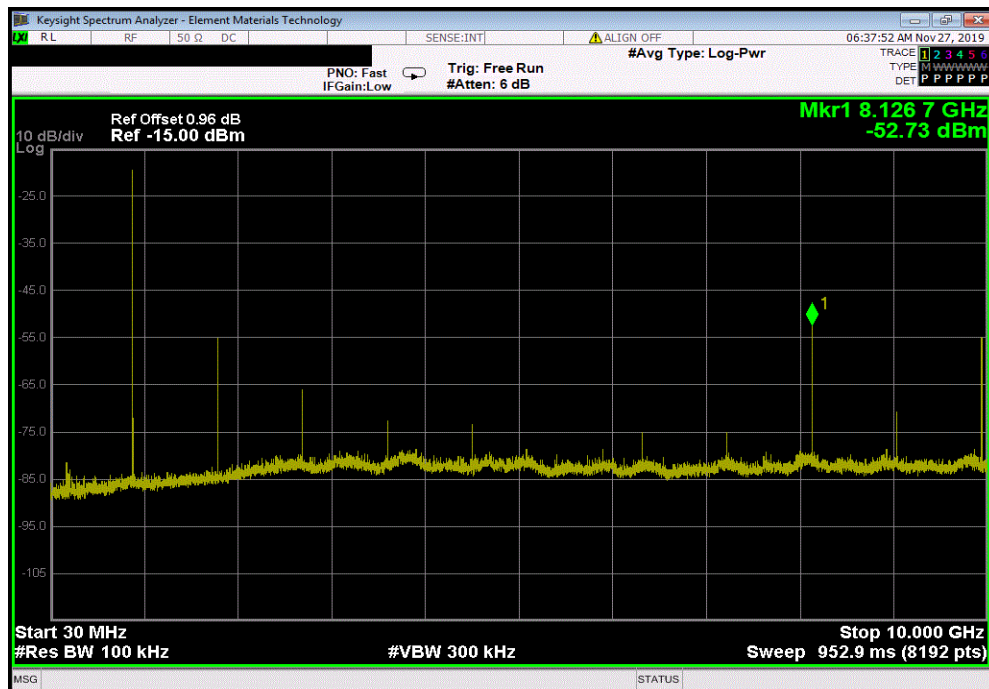


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	903.02	N/A	N/A	N/A		



LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	8126.75	-33.21	-20	Pass		

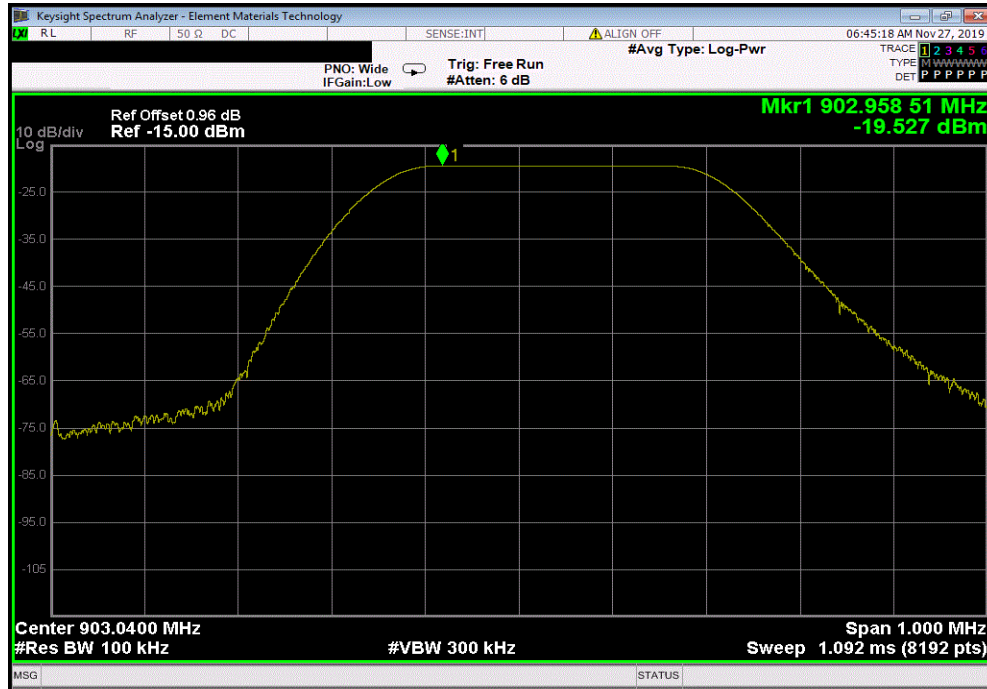


SPURIOUS CONDUCTED EMISSIONS

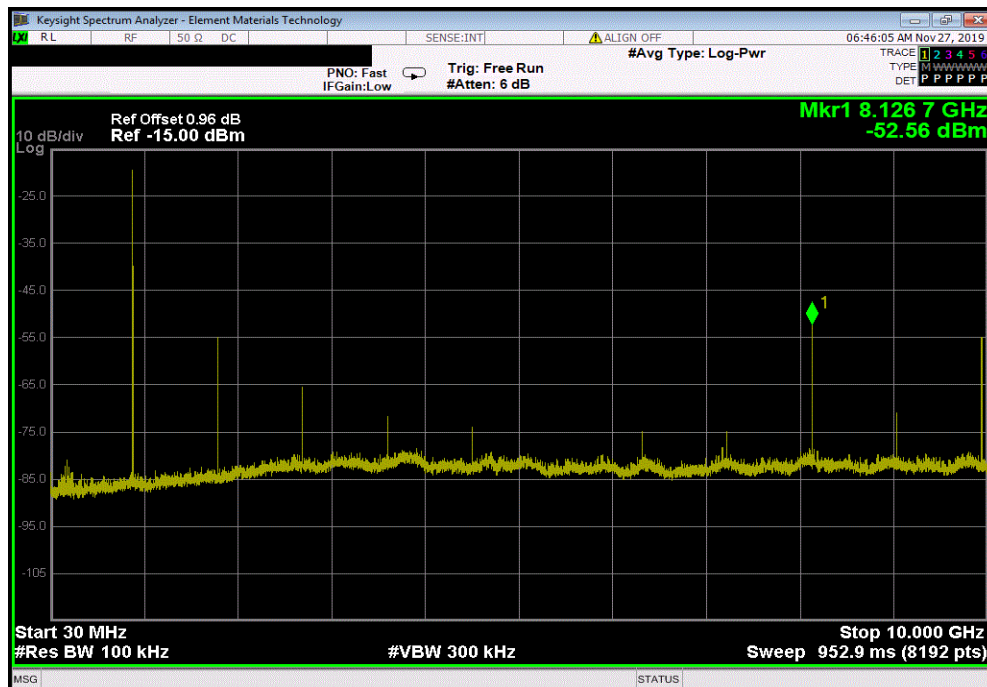


TbTtx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	902.96	N/A	N/A	N/A		



LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	8126.75	-33.03	-20	Pass		

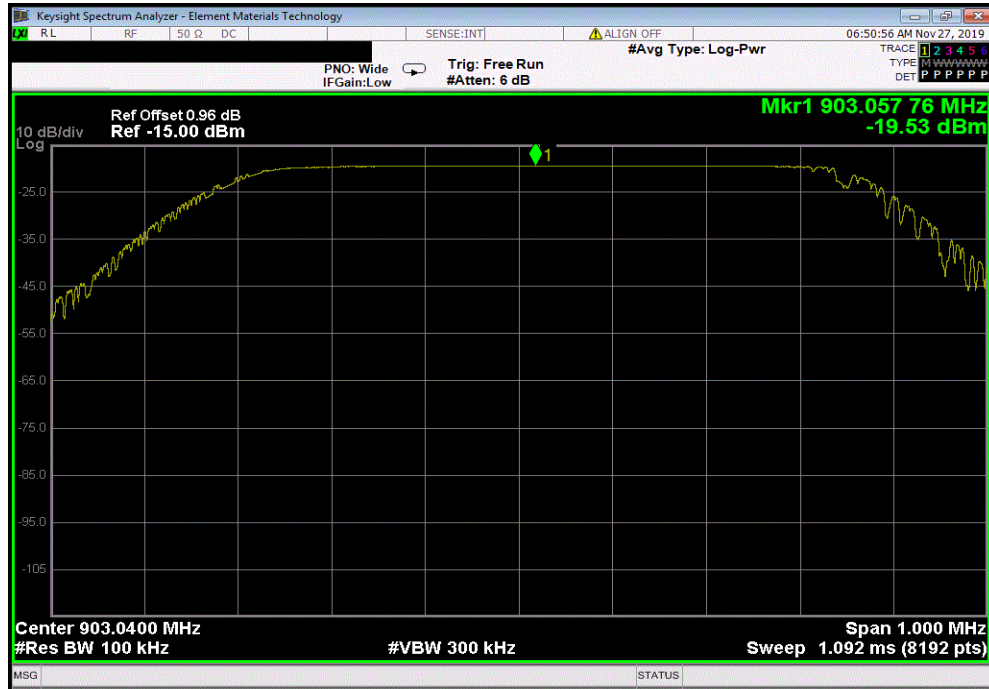


SPURIOUS CONDUCTED EMISSIONS

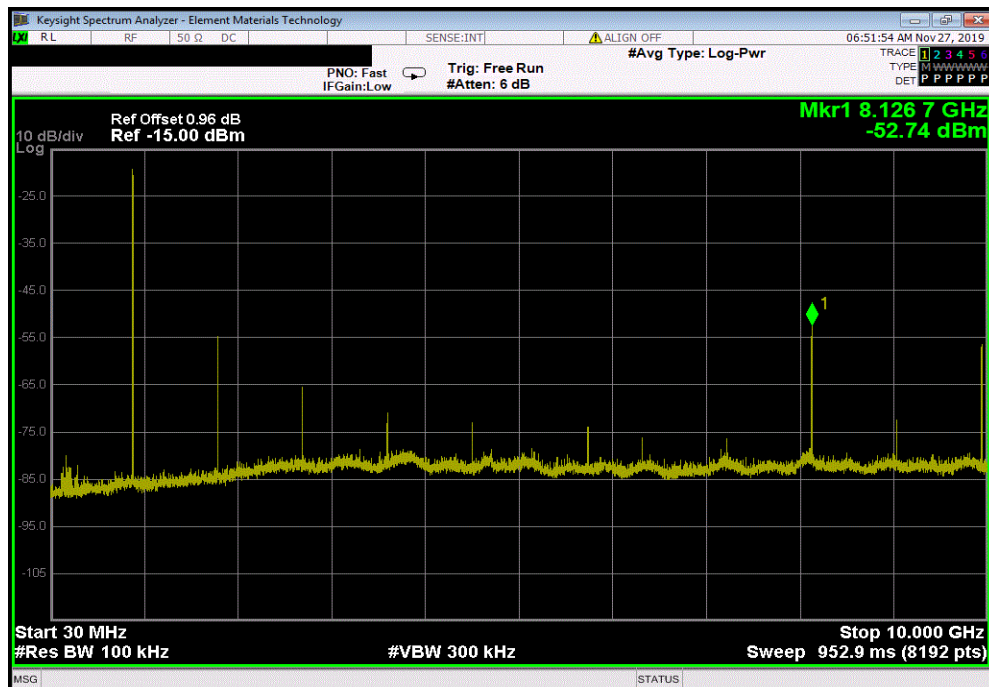


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	903.06	N/A	N/A	N/A		



LoRa, 902-928 MHz, Low Channel, 903.08 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	8126.75	-33.21	-20	Pass		

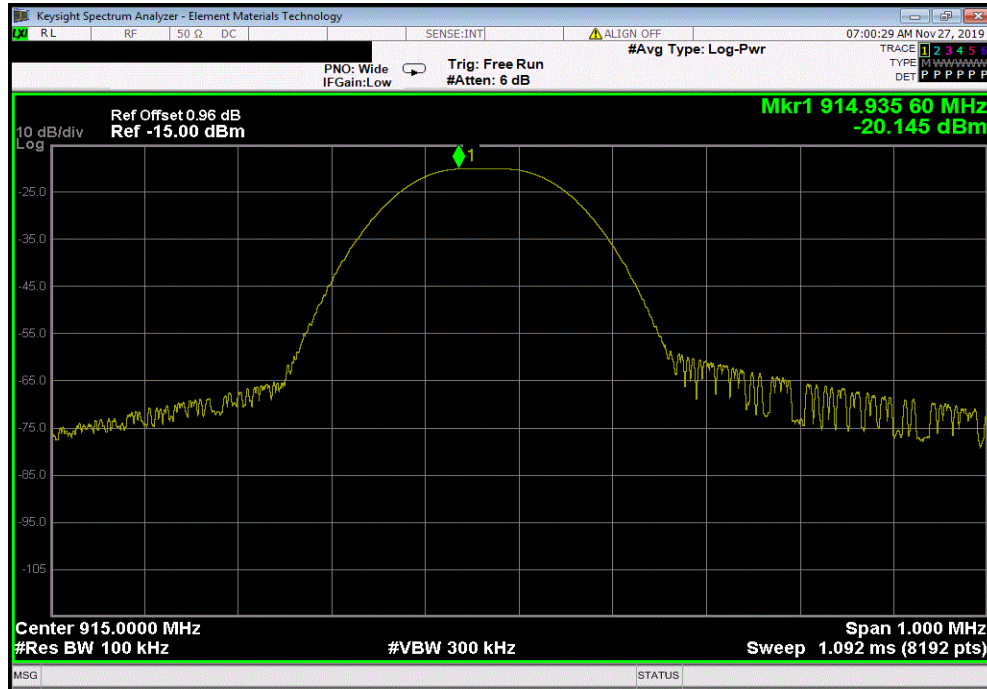


SPURIOUS CONDUCTED EMISSIONS

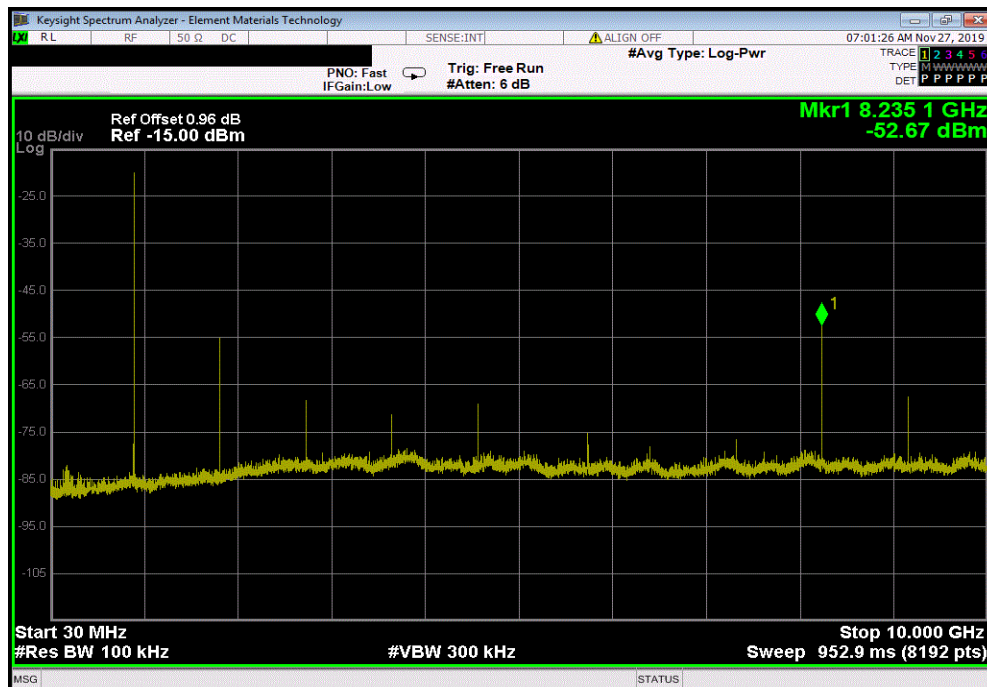


TbTtx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Mid Channel, 915 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	914.94	N/A	N/A	N/A		



LoRa, 902-928 MHz, Mid Channel, 915 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	8235.08	-32.52	-20	Pass		

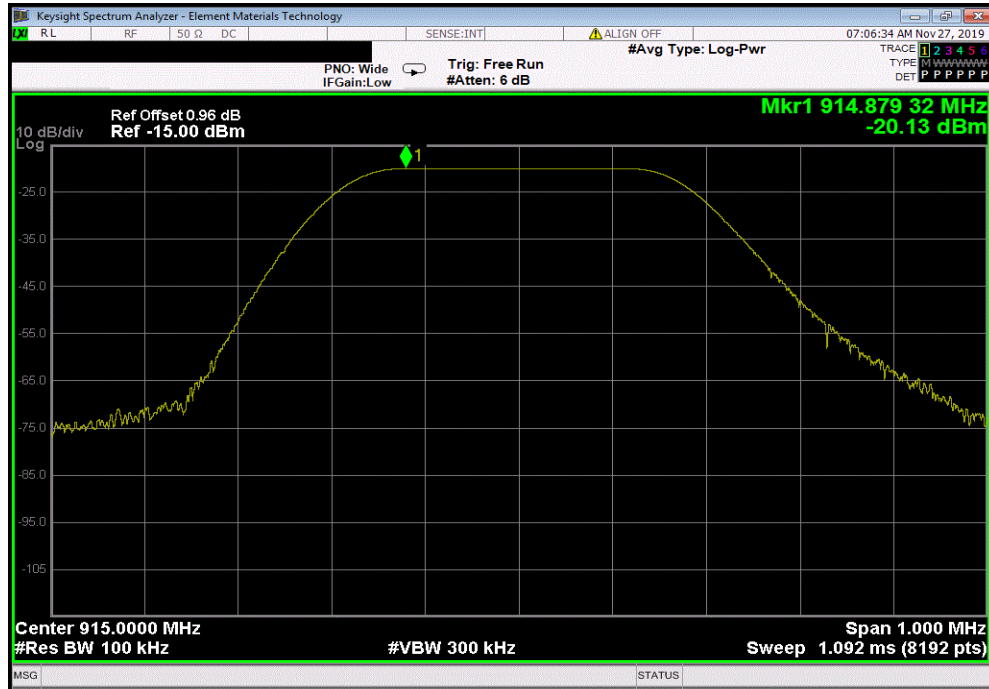


SPURIOUS CONDUCTED EMISSIONS

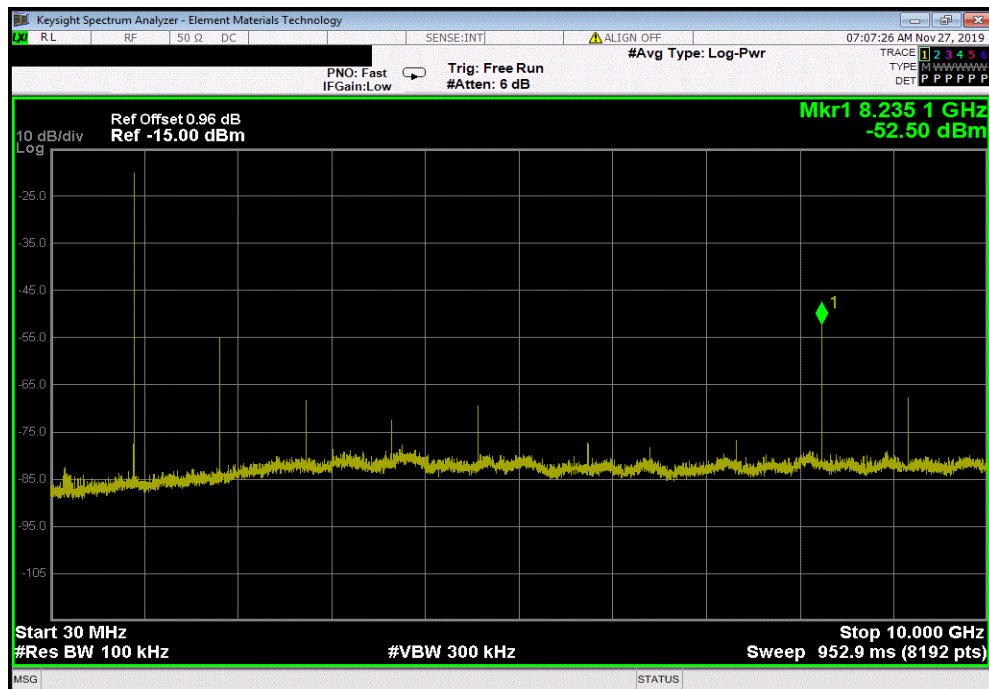


TbTtx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Mid Channel, 915 MHz, 3516 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	914.88	N/A	N/A	N/A		



LoRa, 902-928 MHz, Mid Channel, 915 MHz, 3516 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	8235.08	-32.37	-20	Pass		

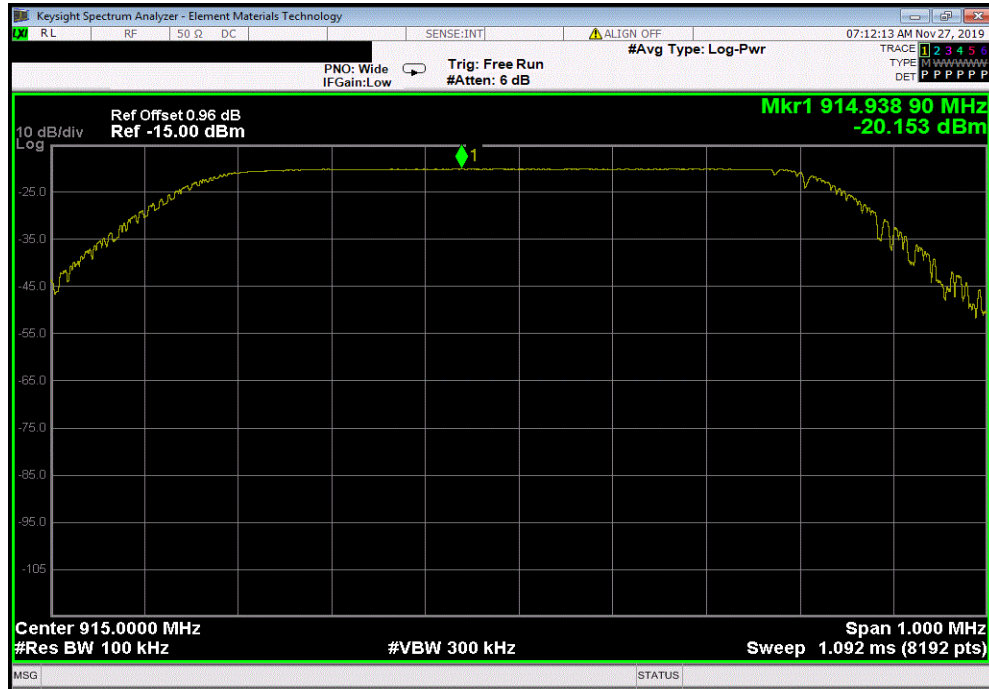


SPURIOUS CONDUCTED EMISSIONS

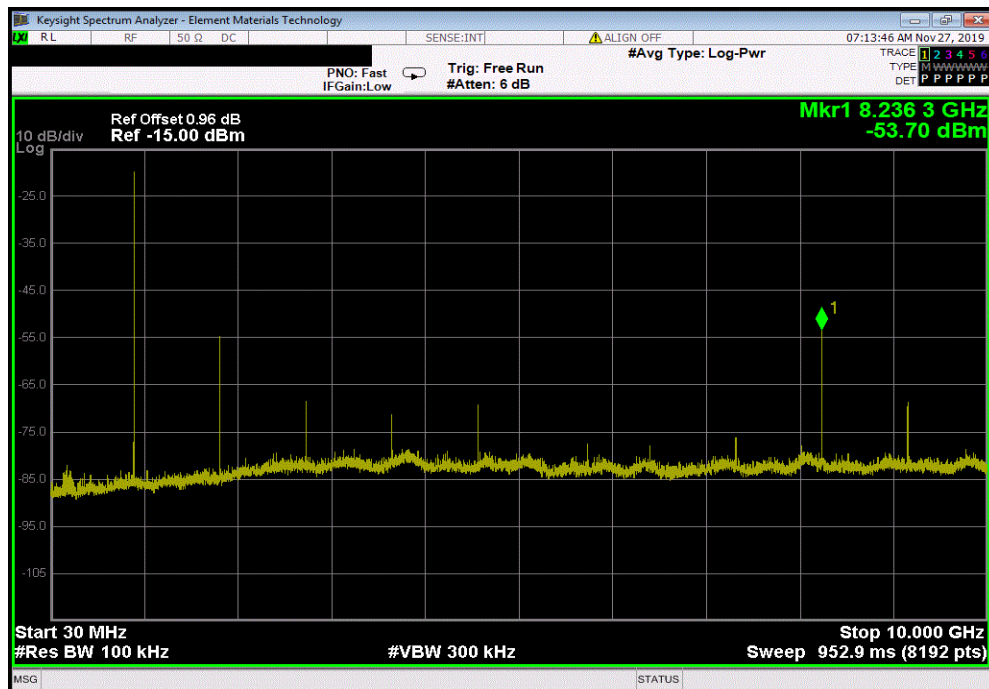


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Mid Channel, 915 MHz, 37500 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	914.94	N/A	N/A	N/A		



LoRa, 902-928 MHz, Mid Channel, 915 MHz, 37500 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	8236.29	-33.55	-20	Pass		

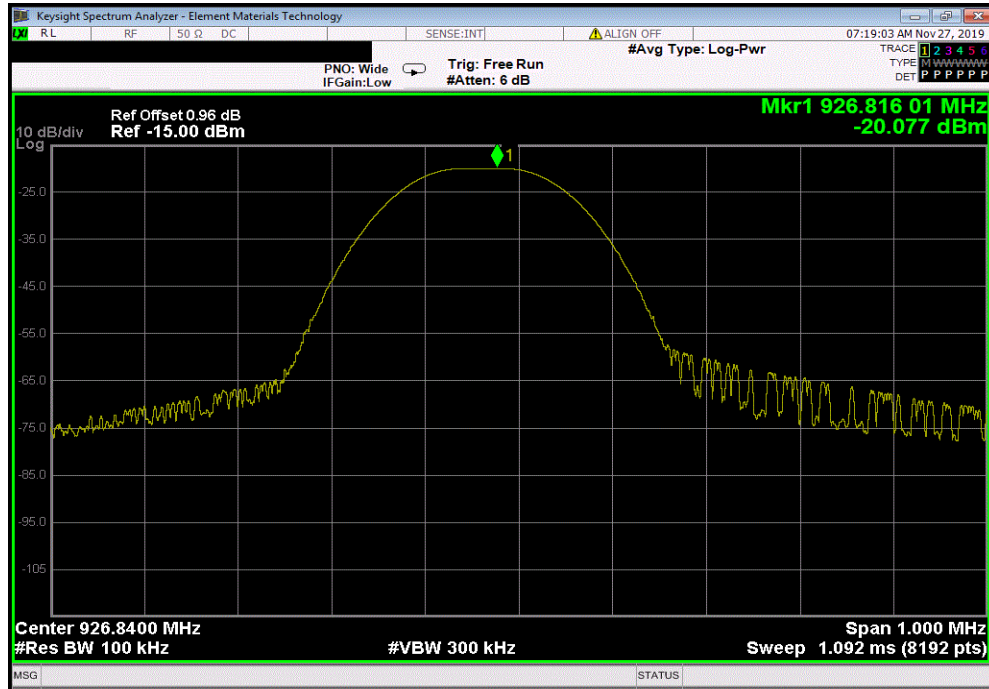


SPURIOUS CONDUCTED EMISSIONS

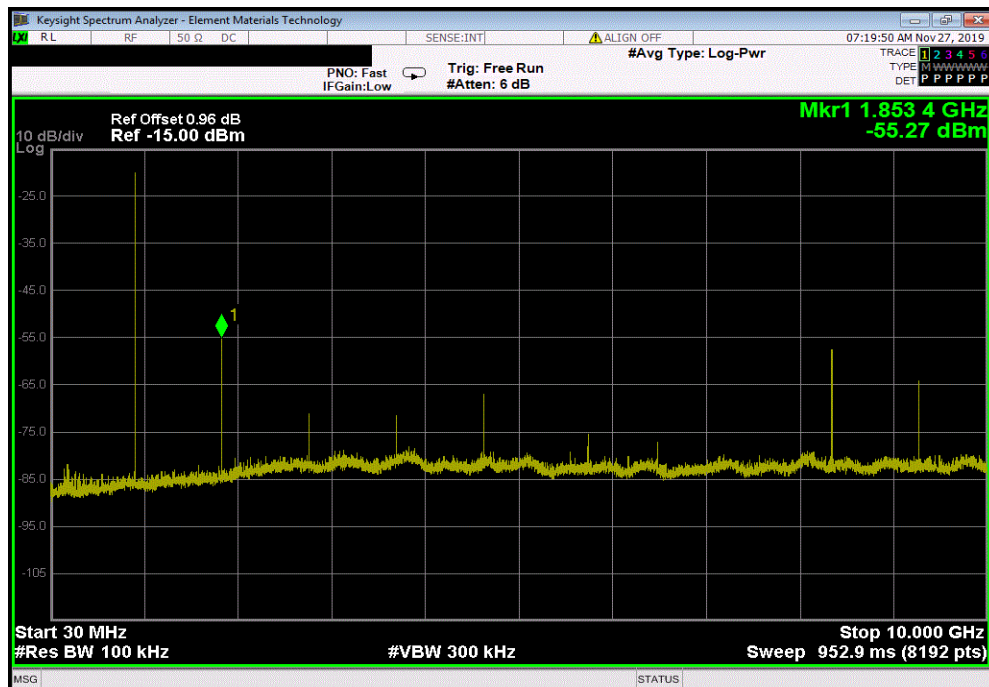


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	926.82	N/A	N/A	N/A		



LoRa, 902-928 MHz, High Channel, 926.84 MHz, 293 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	1853.35	-35.19	-20	Pass		

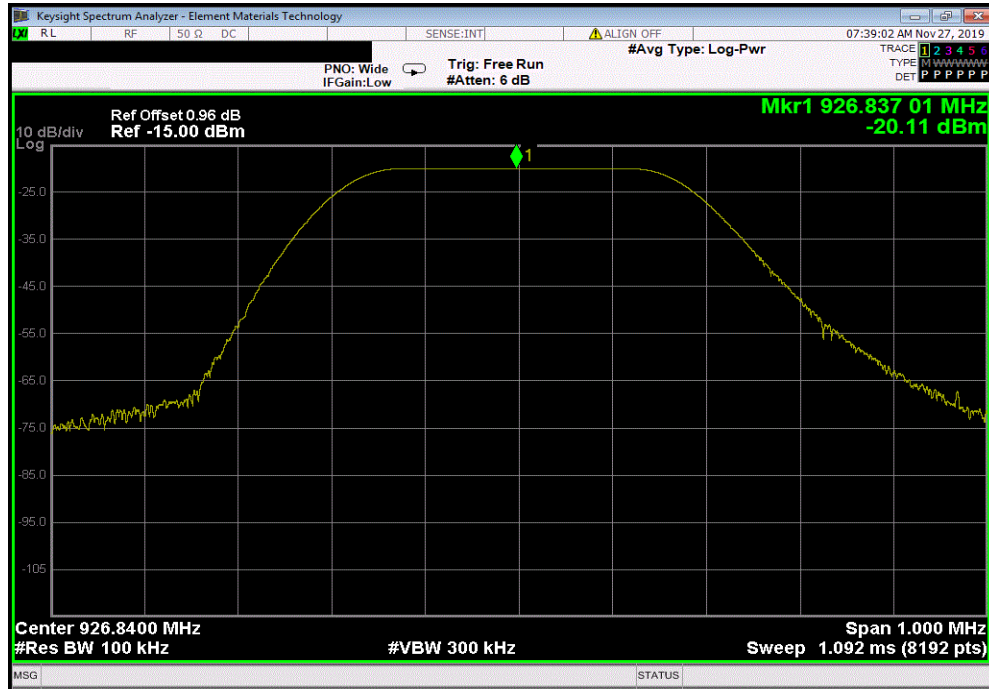


SPURIOUS CONDUCTED EMISSIONS

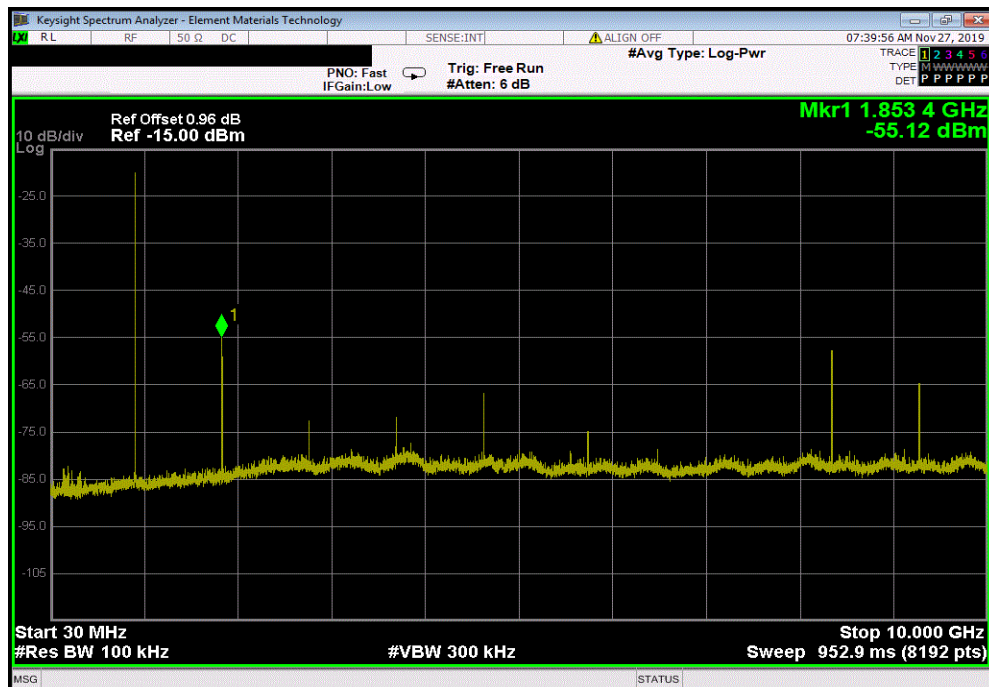


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 3516 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	926.84	N/A	N/A	N/A		



LoRa, 902-928 MHz, High Channel, 926.84 MHz, 3516 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	1853.35	-35.01	-20	Pass		

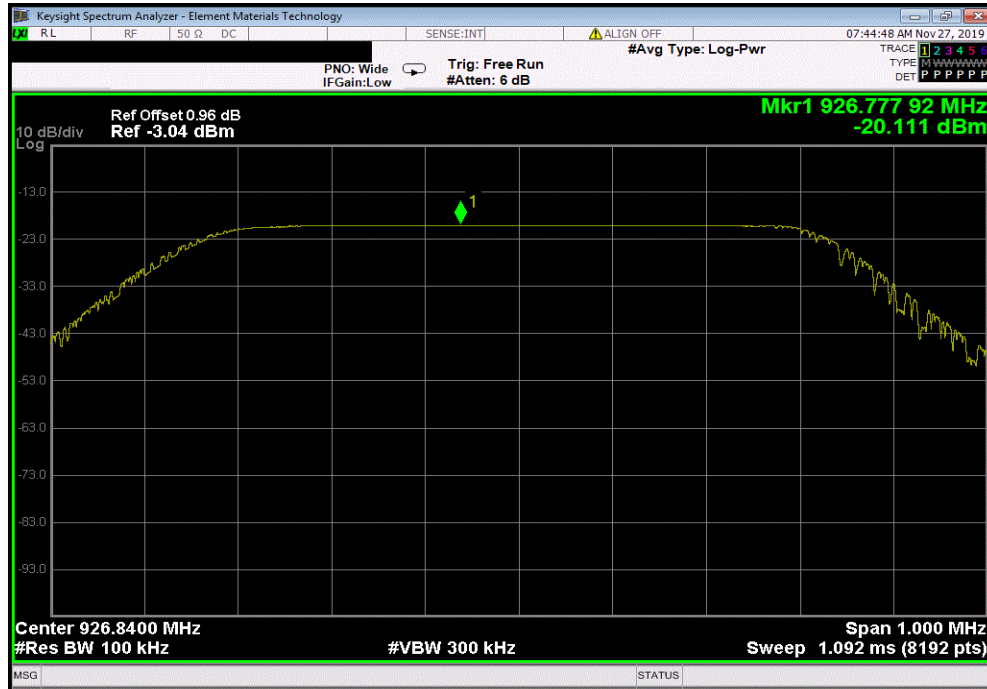


SPURIOUS CONDUCTED EMISSIONS

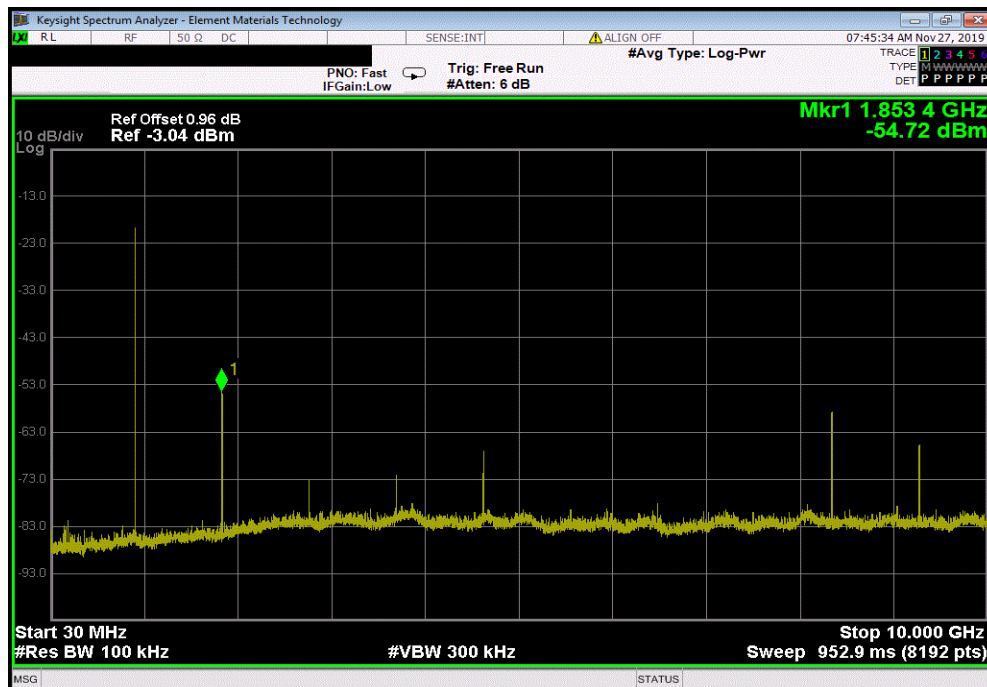


TbTtx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 37500 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	926.78	N/A	N/A	N/A		



LoRa, 902-928 MHz, High Channel, 926.84 MHz, 37500 bps						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 10 GHz	1853.35	-34.61	-20	Pass		



POWER SPECTRAL DENSITY



XMIT 2019.09.05

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	N5173B	TIW	5-Jul-17	5-Jul-20
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	15-Sep-19	15-Sep-20
Block - DC	Fairview Microwave	SD3379	AMI	6-Aug-19	6-Aug-20
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	1-May-19	1-May-20

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The maximum power spectral density measurements was measured using the channels and modes as called out on the following data sheets.

Per the procedure outlined in ANSI C63.10 the peak power spectral density was measured in a 3 kHz RBW.

POWER SPECTRAL DENSITY



TMTx 2019.08.30.0 XMt 2019.09.05

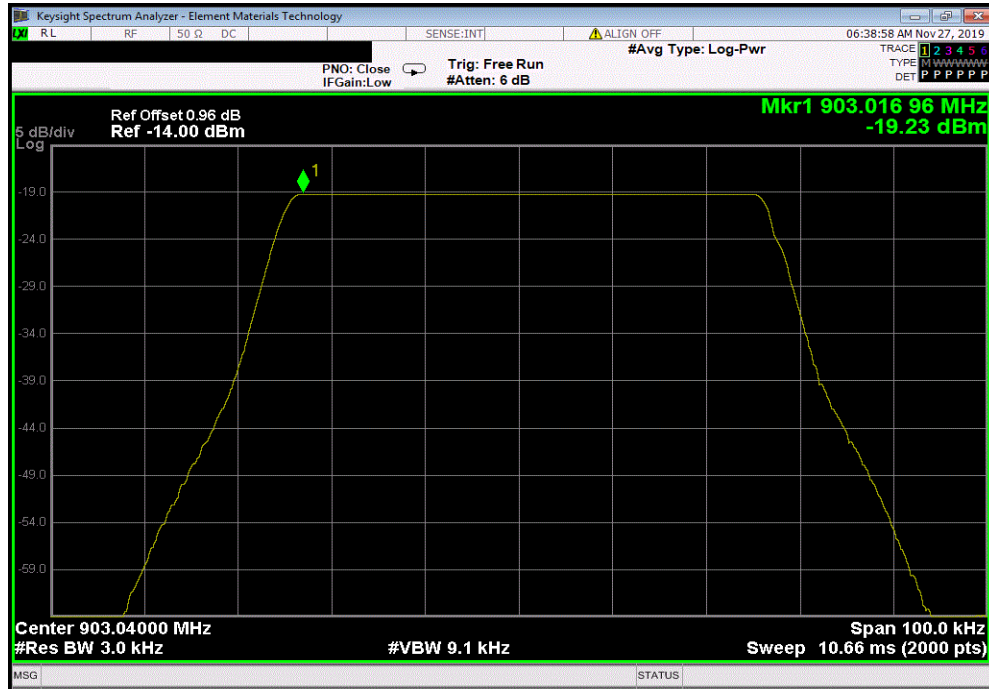
EUT: Beacon		Work Order: SMNC0001	
Serial Number: Unit 1		Date: 26-Nov-19	
Customer: SMRTGrid Inc.		Temperature: 23.2 °C	
Attendees: Bill Haag		Humidity: 28.9% RH	
Project: None		Barometric Pres.: 1013 mbar	
Tested by: Dustin Sparks		Power: Battery	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
DC block, measurement cable, and customer U.FL to SMA cable included in reference level offset. No external attenuator required due to low output power.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	4	Signature <i>Dustin Sparks</i>	
		Value dBm/3kHz	Limit < dBm/3kHz
LoRa, 902-928 MHz			
Low Channel, 903.04 MHz			
	293 bps	-19.227	8
	3516 bps	-25.828	8
	37500 bps	-32.702	8
Mid Channel, 915 MHz			
	293 bps	-19.848	8
	3516 bps	-26.413	8
	37500 bps	-33.287	8
High Channel, 926.84 MHz			
	293 bps	-19.791	8
	3516 bps	-26.38	8
	37500 bps	-33.339	8

POWER SPECTRAL DENSITY

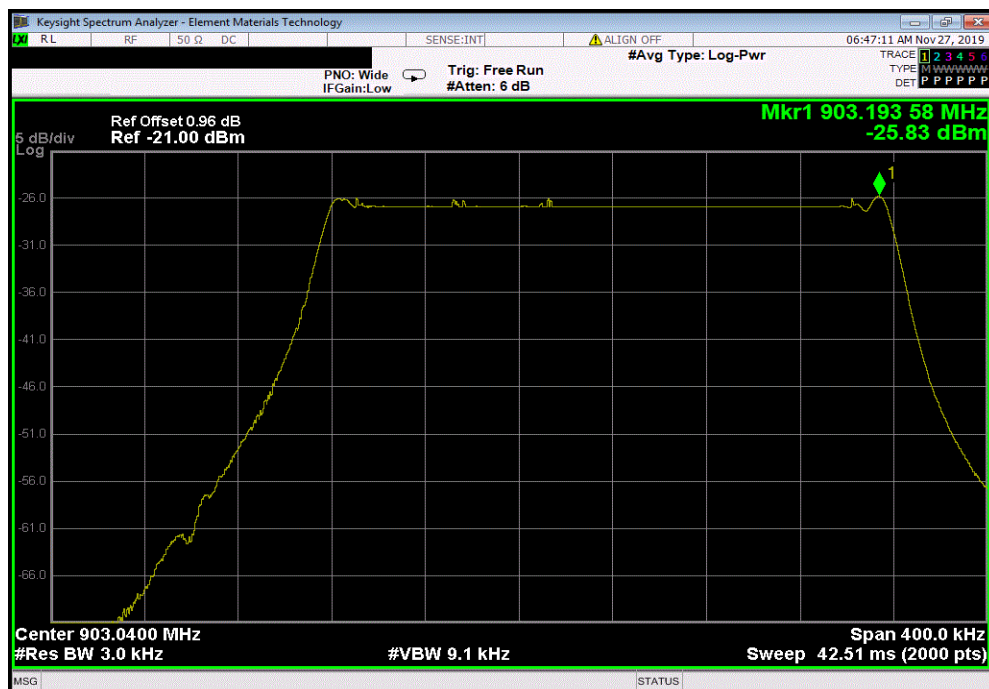


TbTtX 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.04 MHz, 293 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-19.227	8	Pass			



LoRa, 902-928 MHz, Low Channel, 903.04 MHz, 3516 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-25.828	8	Pass			

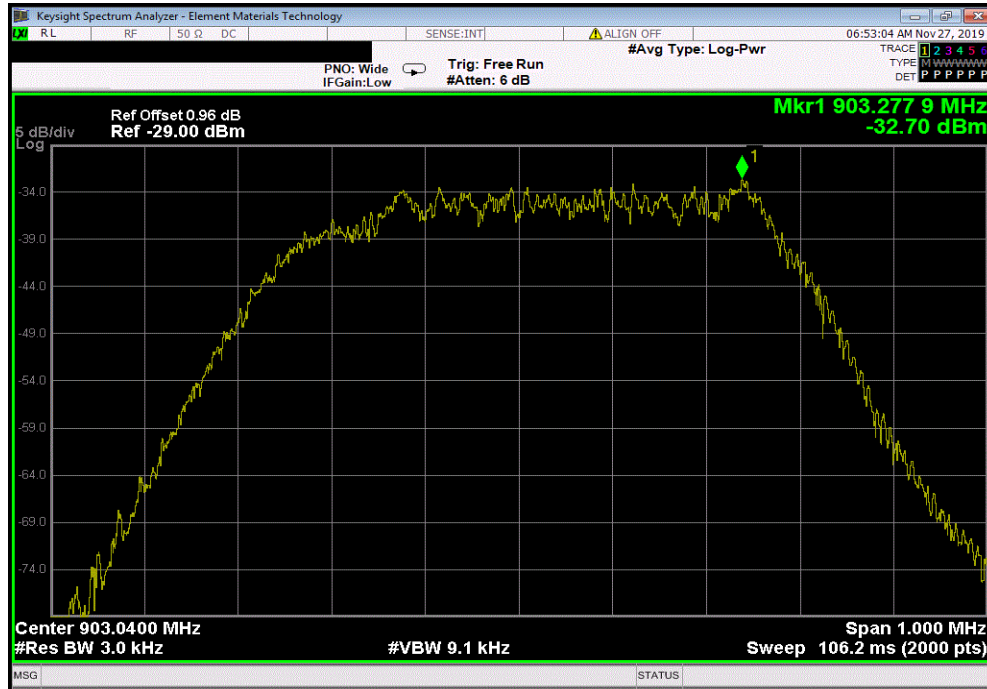


POWER SPECTRAL DENSITY

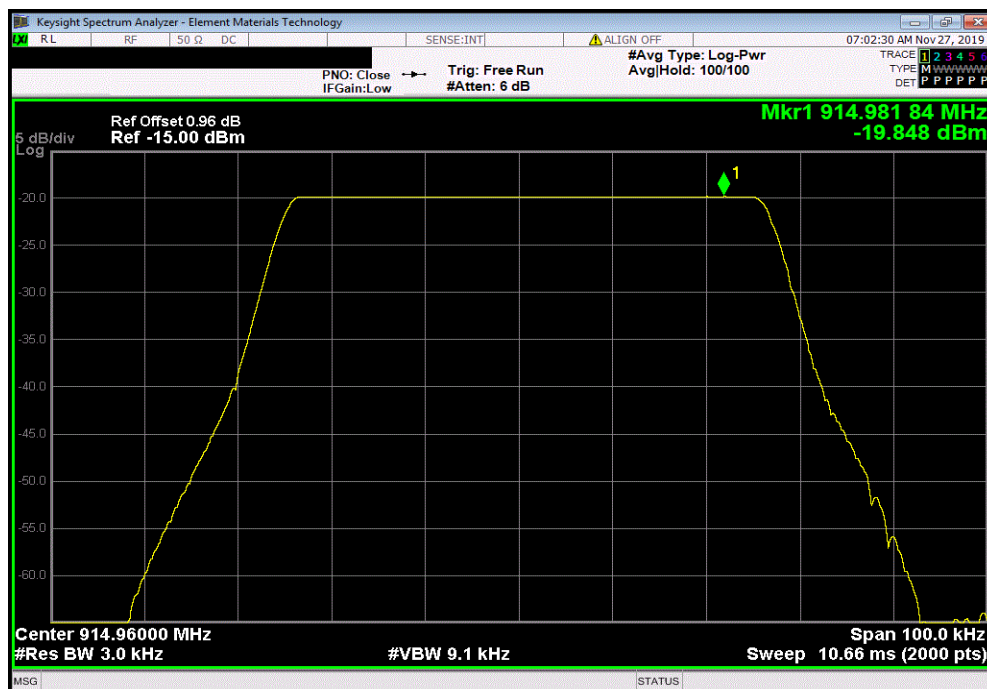


TbTtx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Low Channel, 903.04 MHz, 37500 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-32.702	8	Pass			



LoRa, 902-928 MHz, Mid Channel, 915 MHz, 293 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-19.848	8	Pass			

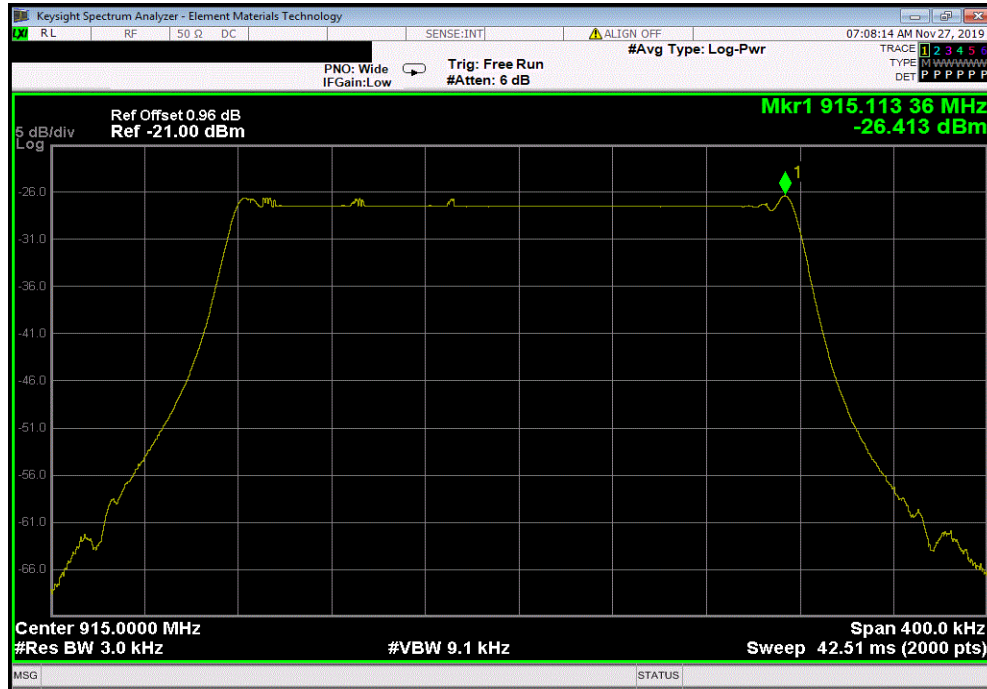


POWER SPECTRAL DENSITY

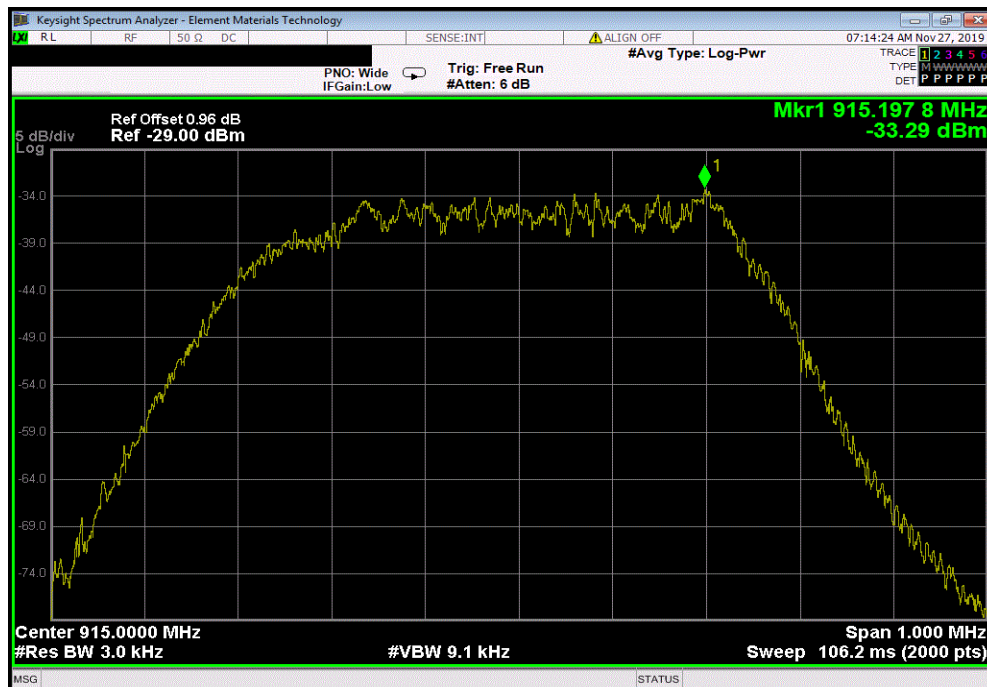


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, Mid Channel, 915 MHz, 3516 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-26.413	8	Pass			



LoRa, 902-928 MHz, Mid Channel, 915 MHz, 37500 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-33.287	8	Pass			

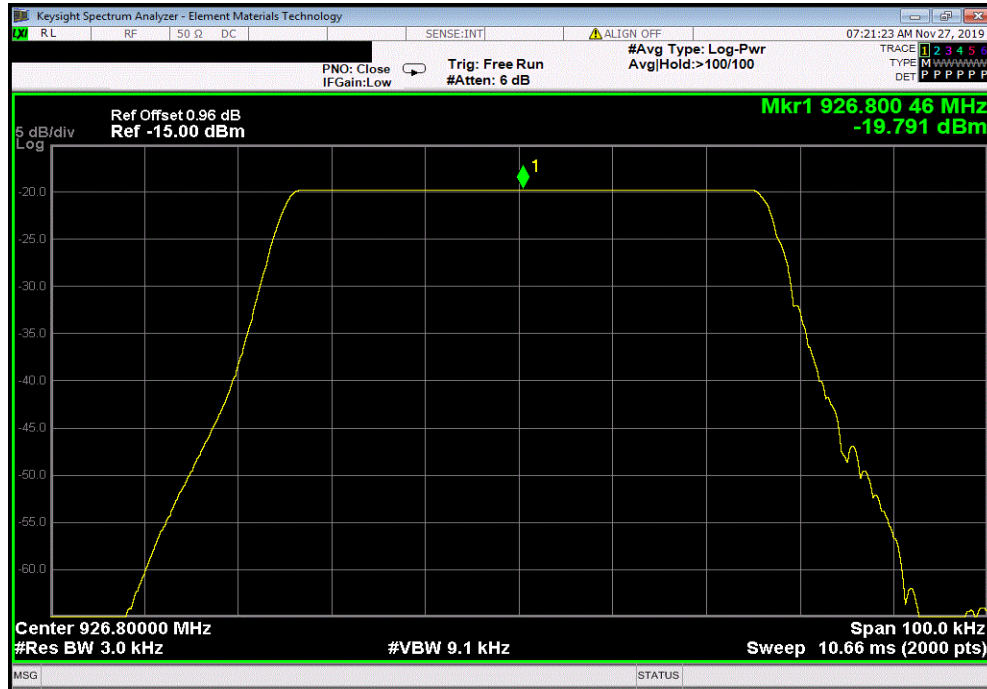


POWER SPECTRAL DENSITY

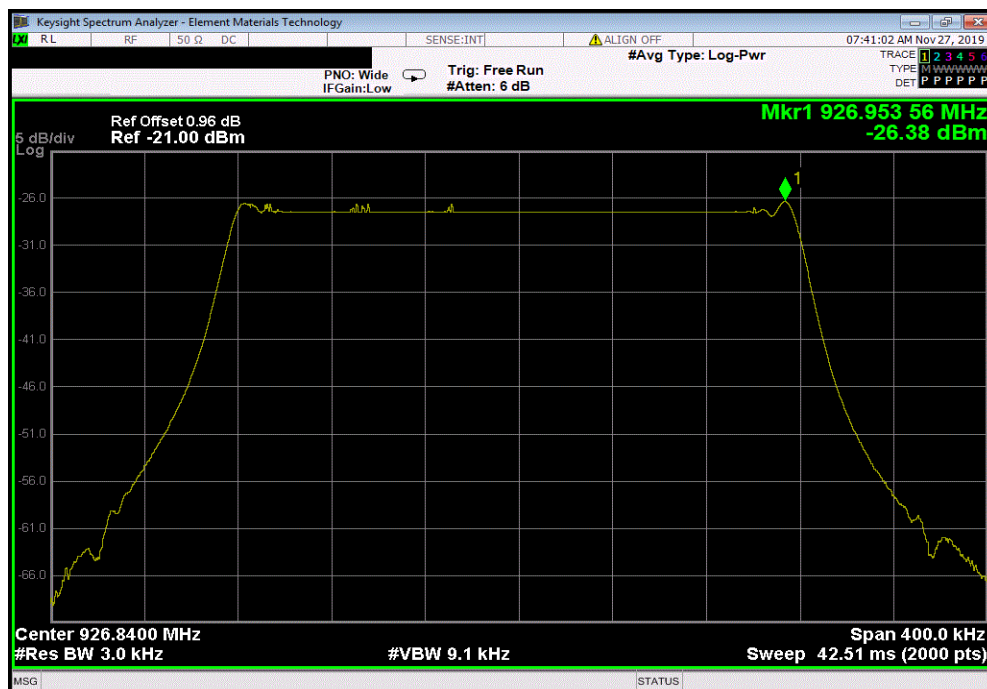


TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 293 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-19.791	8	Pass			



LoRa, 902-928 MHz, High Channel, 926.84 MHz, 3516 bps						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	-26.38	8	Pass			



POWER SPECTRAL DENSITY



TbTx 2019.08.30.0 XMI 2019.09.05

LoRa, 902-928 MHz, High Channel, 926.84 MHz, 37500 bps							
Value					Limit		Results
dBm/3kHz					< dBm/3kHz		
				-33.339	8	Pass	

