

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



XMIT 2022.02.07.0

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	Keysight	N5171B (EXG)	TEY	2019-12-31	2022-12-31
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2021-04-16	2022-04-16
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2021-09-12	2022-09-12
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2021-06-02	2022-06-02
Block - DC	Fairview Microwave	SD3379	AMI	2021-08-13	2022-08-13

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum.

Prior to measuring peak transmit power the DTS bandwidth (B) was measured.

The method found in ANSI C63.10:2013 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

Equivalent Isotropic Radiated Power (EIRP) = Max Measured Power + Antenna gain (dBi)

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TSTx 2021.12.14.1 XMR 2022.02.07.0

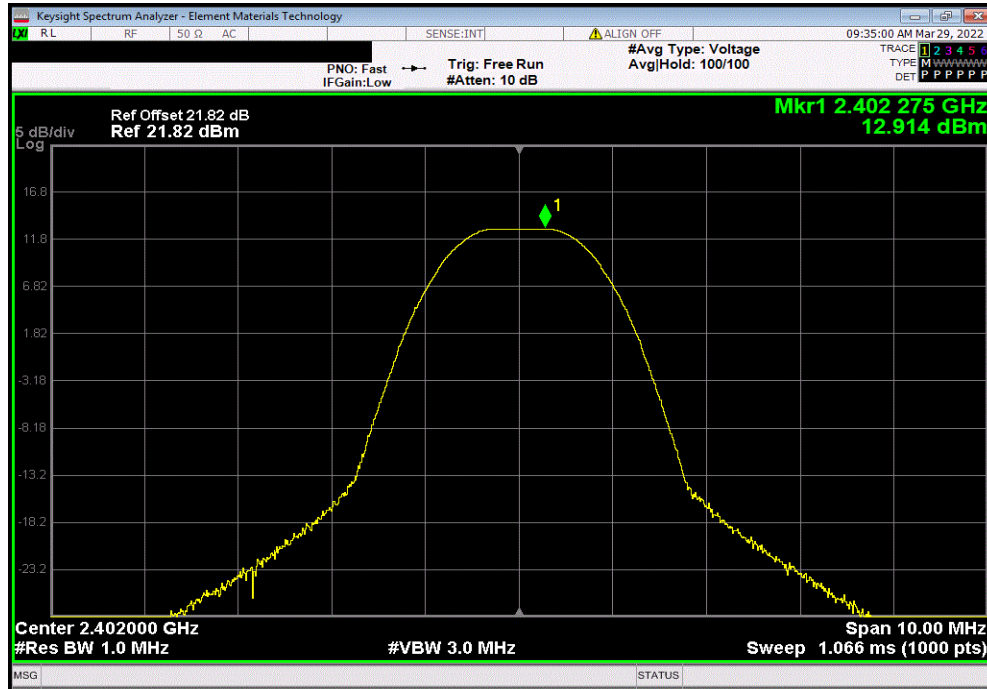
EUT: SLATESAFETY BAND V2		Work Order: FITY0001	
Serial Number: 6563		Date: 29-Mar-22	
Customer: FireHUD Inc. DBA SlateSafety		Temperature: 24.4 °C	
Attendees: Dustin Morris		Humidity: 19.9% RH	
Project: None		Barometric Pres.: 1015 mbar	
Tested by: Andrew Rogstad, Christopher Heintzelman		Power: 110VAC/60Hz	
Job Site: MN08			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2022		ANSI C63.10:2013	
COMMENTS			
Reference level offset accounts for measurement cable, DC block, attenuator, and customer's cable.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature <i>Andrew Rogstad</i>	
		Out Pwr (dBm)	Antenna Gain (dBi)
BLE/GFSK 125 kbps Low Channel, 2402 MHz		12.914	2.5
BLE/GFSK 125 kbps Mid Channel, 2442 MHz		13.195	2.5
BLE/GFSK 125 kbps High Channel, 2480 MHz		12.994	2.5
BLE/GFSK 1 Mbps Low Channel, 2402 MHz		18.678	2.5
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz		18.949	2.5
BLE/GFSK 1 Mbps High Channel, 2480 MHz		18.794	2.5
BLE/GFSK 2 Mbps Low Channel, 2402 MHz		18.754	2.5
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz		18.957	2.5
BLE/GFSK 2 Mbps High Channel, 2480 MHz		18.835	2.5
		EIRP (dBm)	EIRP Limit (dBm)
		15.414	36
		15.695	36
		15.494	36
		21.178	36
		21.449	36
		21.294	36
		21.254	36
		21.457	36
		21.335	36
			Result
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

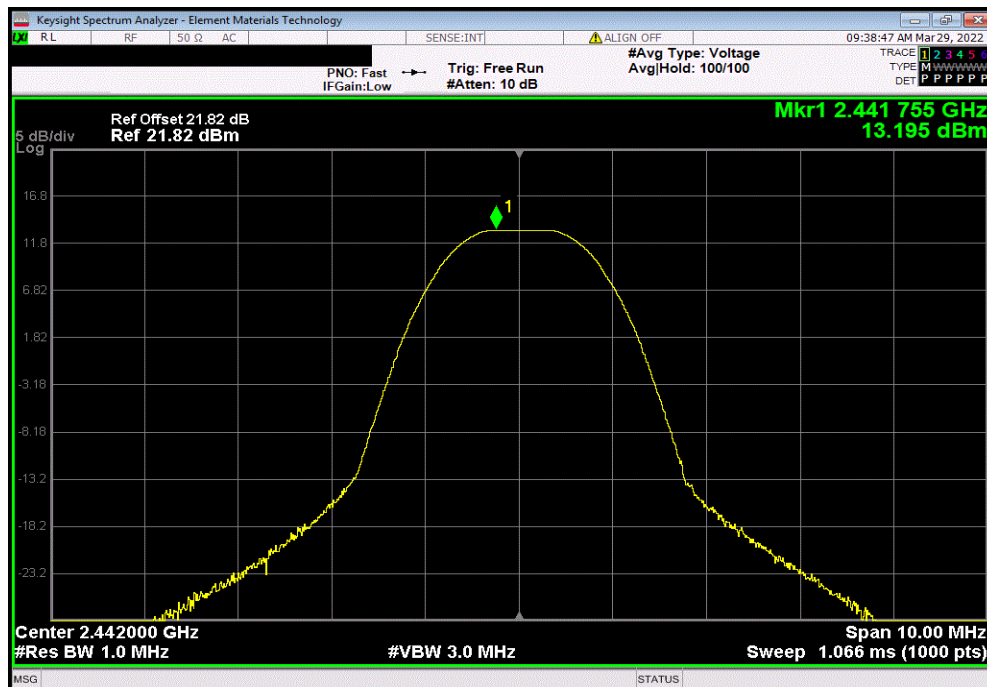


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps Low Channel, 2402 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	12.914	2.5	15.414	36	Pass	



BLE/GFSK 125 kbps Mid Channel, 2442 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	13.195	2.5	15.695	36	Pass	

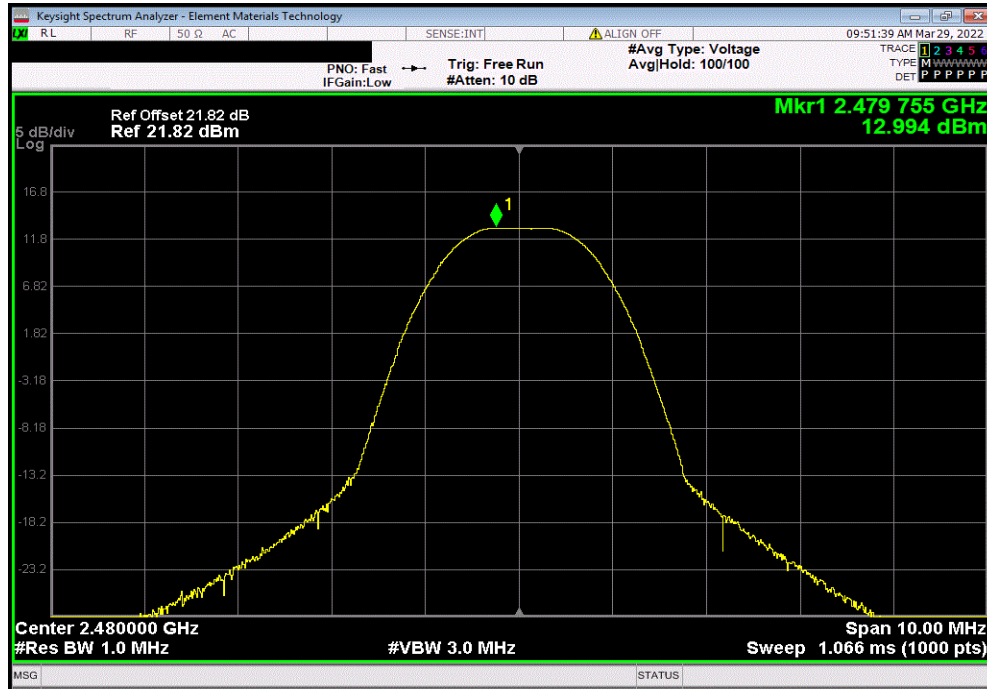


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

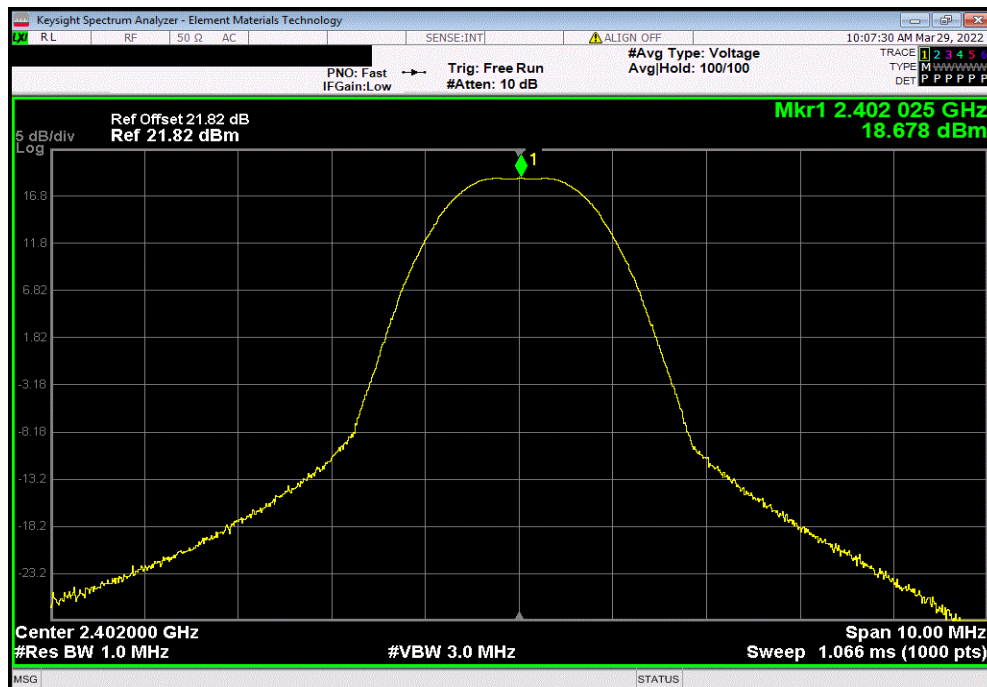


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps High Channel, 2480 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	12.994	2.5	15.494	36	Pass	



BLE/GFSK 1 Mbps Low Channel, 2402 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	18.678	2.5	21.178	36	Pass	

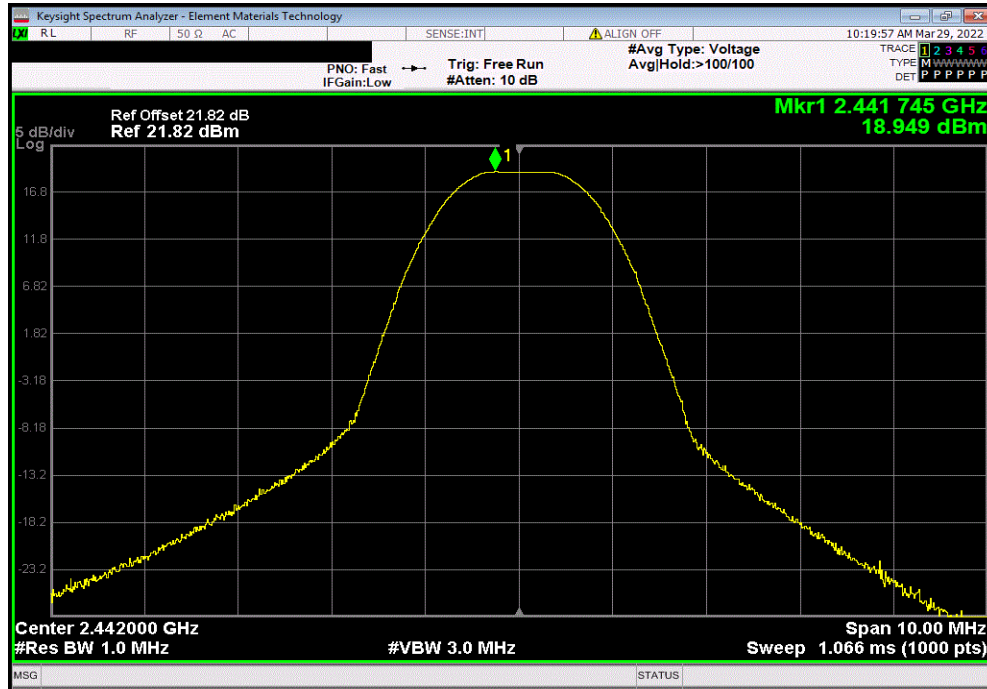


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

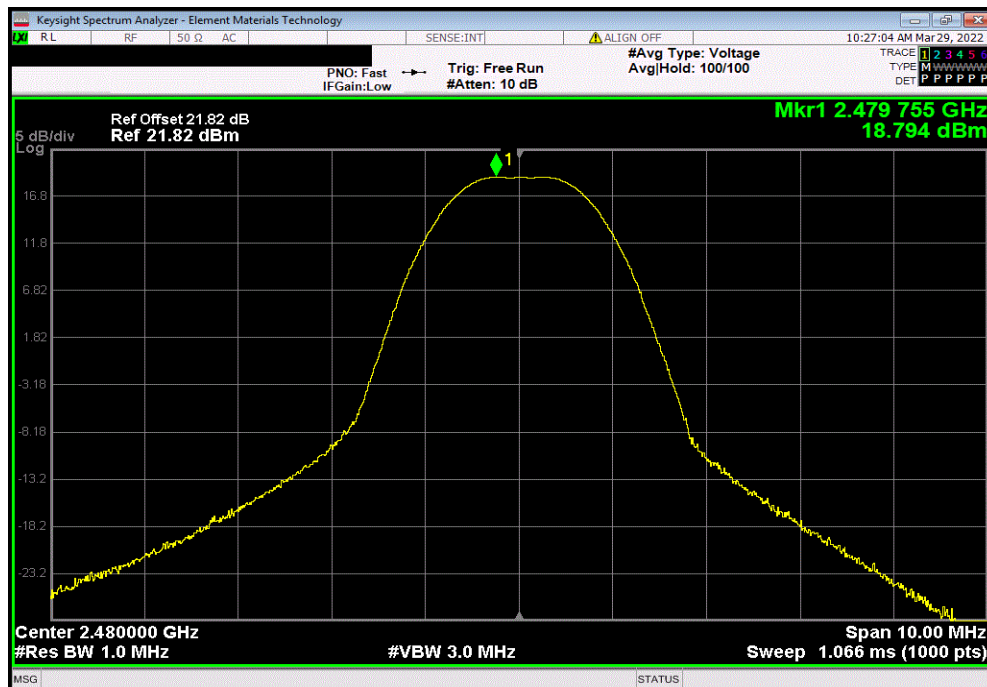


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 1 Mbps Mid Channel, 2442 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	18.949	2.5	21.449	36	Pass	



BLE/GFSK 1 Mbps High Channel, 2480 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	18.794	2.5	21.294	36	Pass	

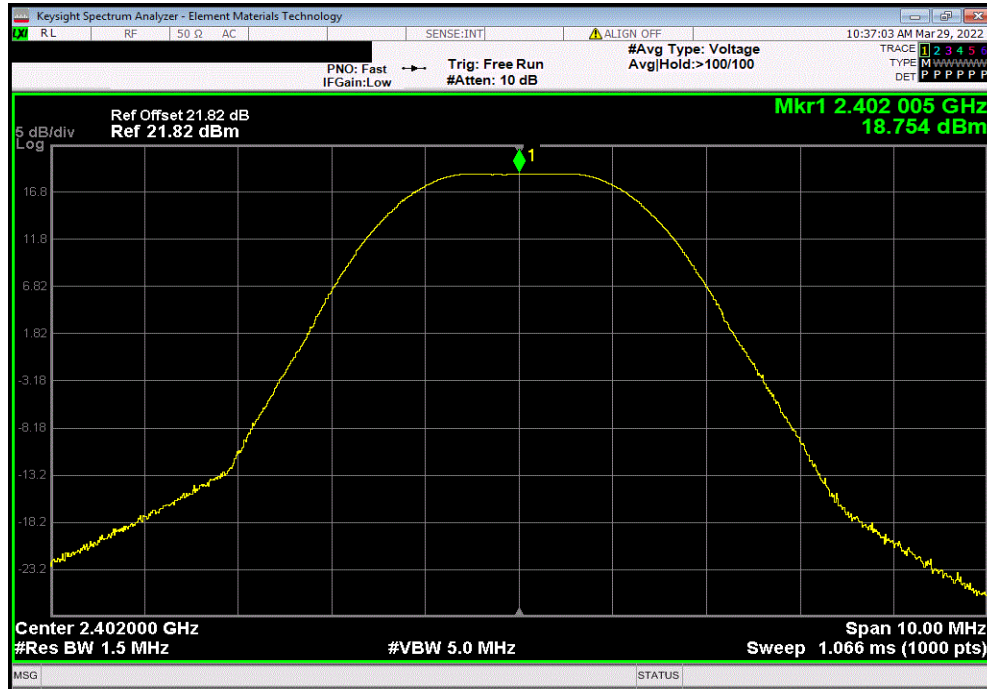


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

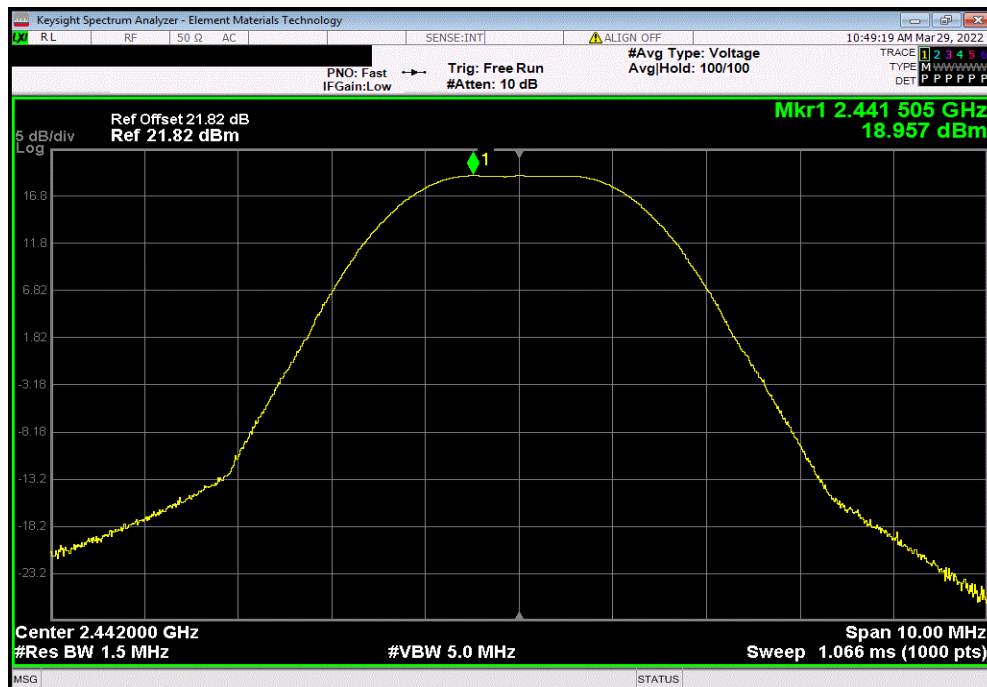


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps Low Channel, 2402 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	18.754	2.5	21.254	36	Pass	



BLE/GFSK 2 Mbps Mid Channel, 2442 MHz						
	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
	18.957	2.5	21.457	36	Pass	

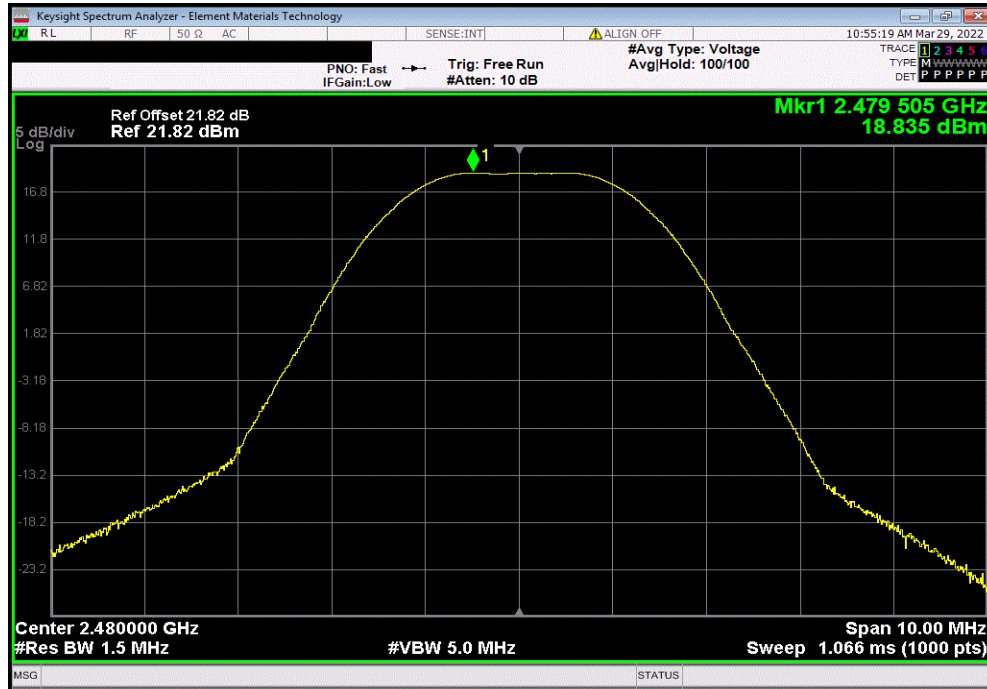


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps High Channel, 2480 MHz					
Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result	
18.835	2.5	21.335	36	Pass	



POWER SPECTRAL DENSITY



XMIT 2022.02.07.0

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TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5171B (EXG)	TEY	2019-12-31	2022-12-31
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2021-09-12	2022-09-12
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2021-06-02	2022-06-02
Block - DC	Fairview Microwave	SD3379	AMI	2021-08-13	2022-08-13
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2021-04-16	2022-04-16

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



TSTx 2021.12.14.1 XMR 2022.02.07.0

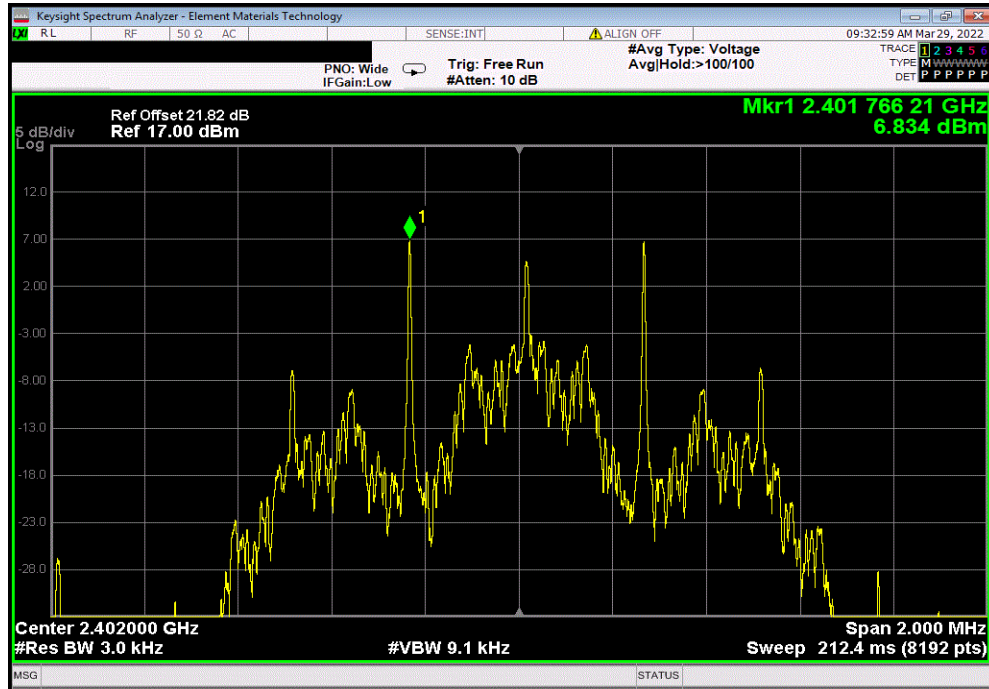
EUT: SLATESAFETY BAND V2		Work Order: FITY0001	
Serial Number: 6563		Date: 29-Mar-22	
Customer: FireHUD Inc. DBA SlateSafety		Temperature: 24.4 °C	
Attendees: Dustin Morris		Humidity: 20% RH	
Project: None		Barometric Pres.: 1015 mbar	
Tested by: Andrew Rogstad, Christopher Heintzelman		Power: 110VAC/60Hz	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2022		ANSI C63.10:2013	
COMMENTS			
Reference level offset accounts for measurement cable, DC block, attenuator, and customer's cable.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature <i>Andrew Rogstad</i>	
		Value dBm/3kHz	Limit < dBm/3kHz
BLE/GFSK 125 kbps Low Channel, 2402 MHz		6.834	8
BLE/GFSK 125 kbps Mid Channel, 2442 MHz		7.172	8
BLE/GFSK 125 kbps High Channel, 2480 MHz		6.985	8
BLE/GFSK 1 Mbps Low Channel, 2402 MHz		2.046	8
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz		2.185	8
BLE/GFSK 1 Mbps High Channel, 2480 MHz		2.147	8
BLE/GFSK 2 Mbps Low Channel, 2402 MHz		0.303	8
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz		0.489	8
BLE/GFSK 2 Mbps High Channel, 2480 MHz		0.372	8
			Results
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass
			Pass

POWER SPECTRAL DENSITY

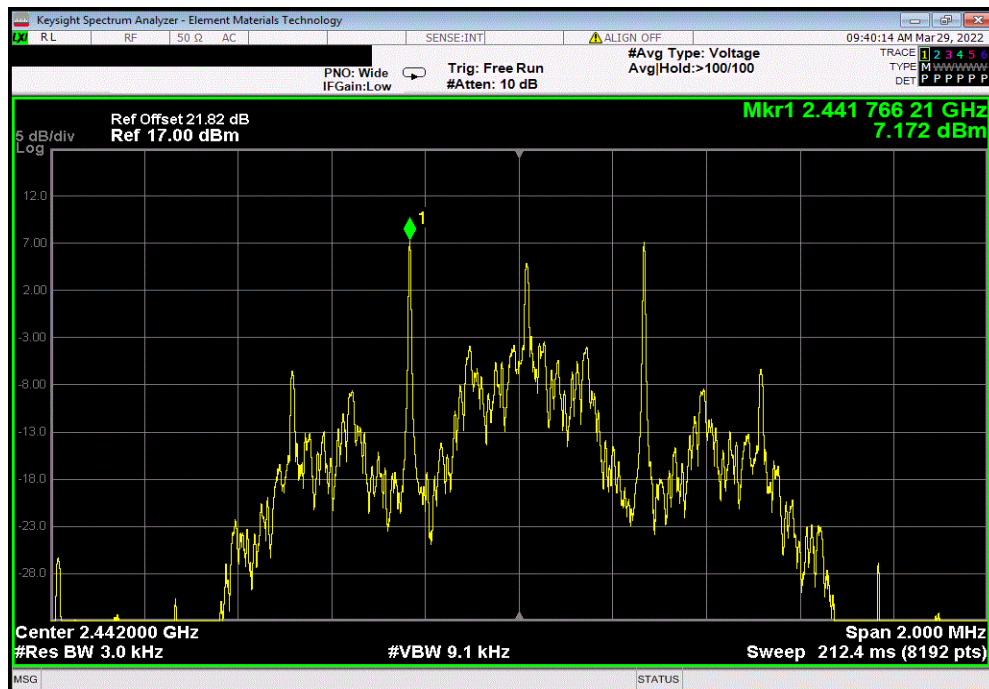


TbTtx 2021.12.14.1 XM8 2022.02.07.0

BLE/GFSK 125 kbps Low Channel, 2402 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	6.834	8	Pass			



BLE/GFSK 125 kbps Mid Channel, 2442 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	7.172	8	Pass			

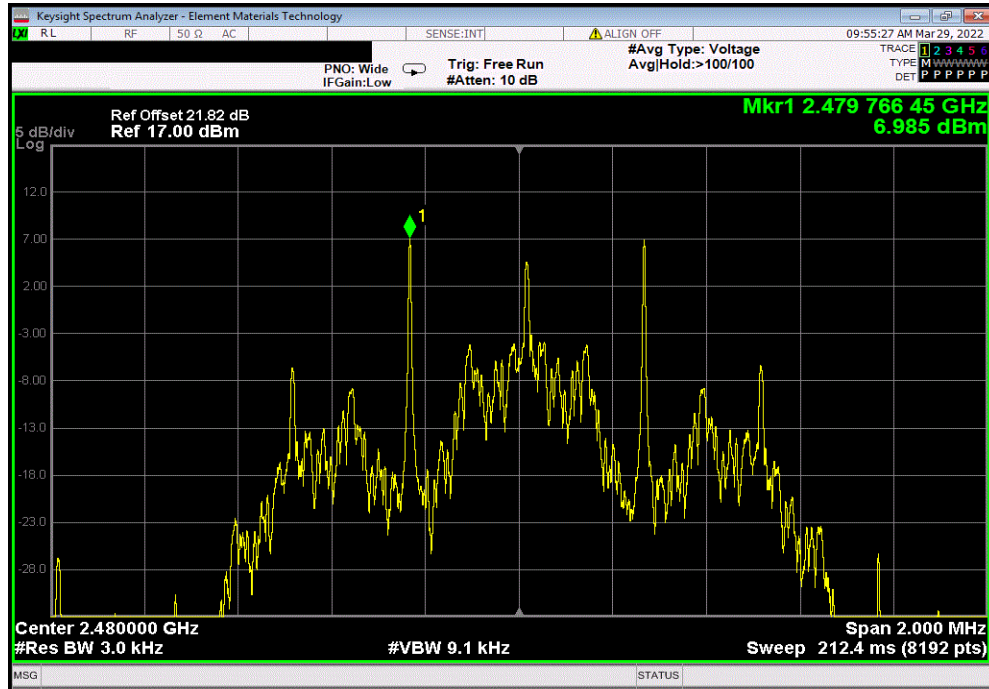


POWER SPECTRAL DENSITY

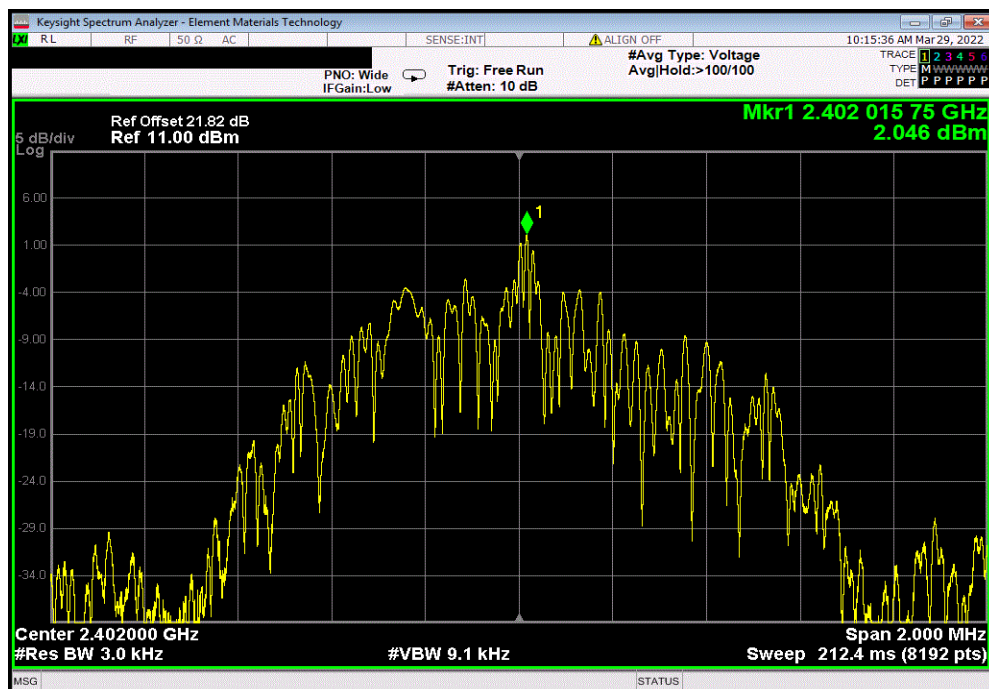


TbTb 2021.12.14.1 XMR 2022.02.07.0

BLE/GFSK 125 kbps High Channel, 2480 MHz						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	6.985	8	Pass			



BLE/GFSK 1 Mbps Low Channel, 2402 MHz						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	2.046	8	Pass			

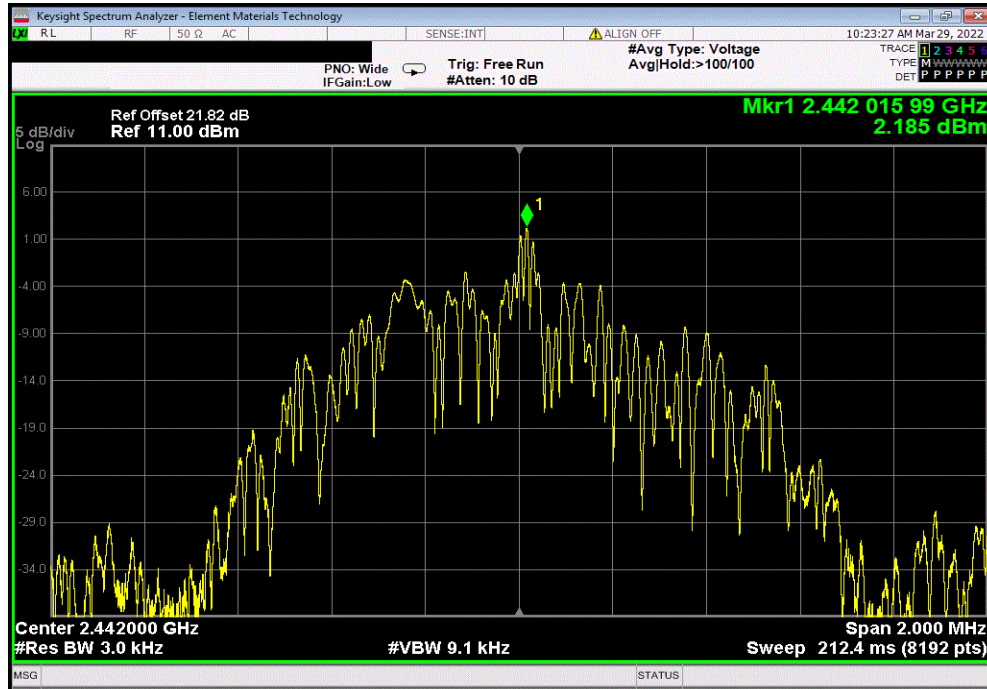


POWER SPECTRAL DENSITY

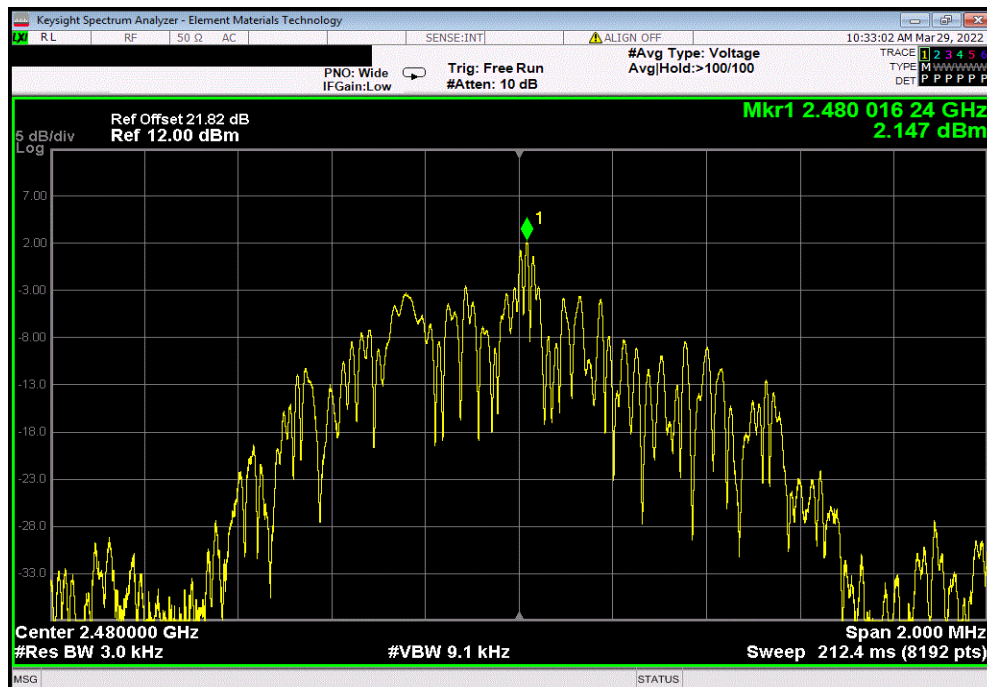


TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 1 Mbps Mid Channel, 2442 MHz						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	2.185	8	Pass			



BLE/GFSK 1 Mbps High Channel, 2480 MHz						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	2.147	8	Pass			

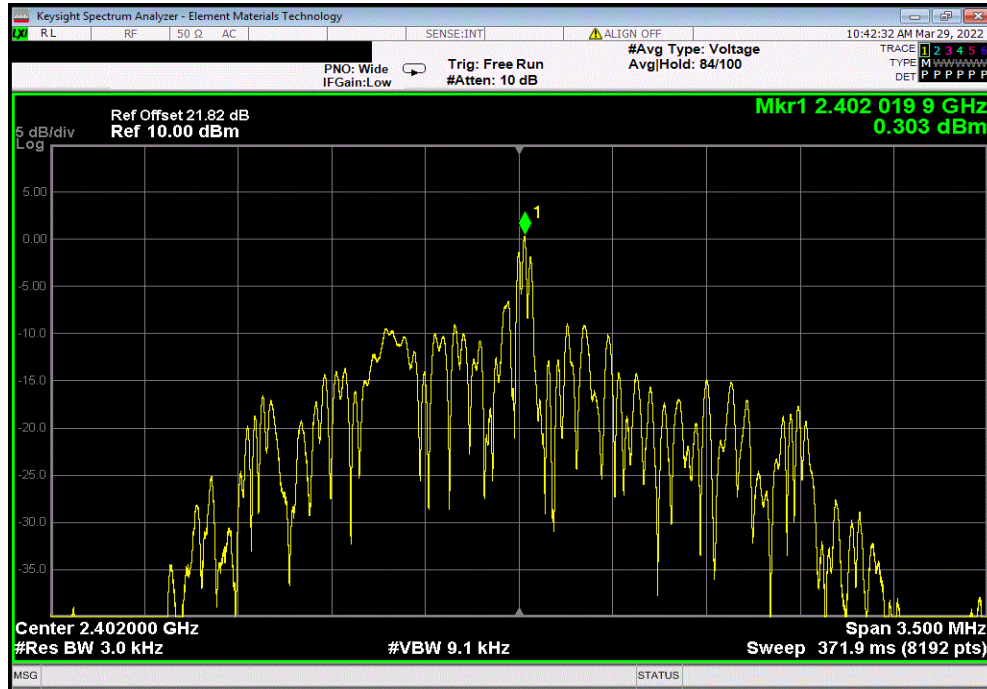


POWER SPECTRAL DENSITY

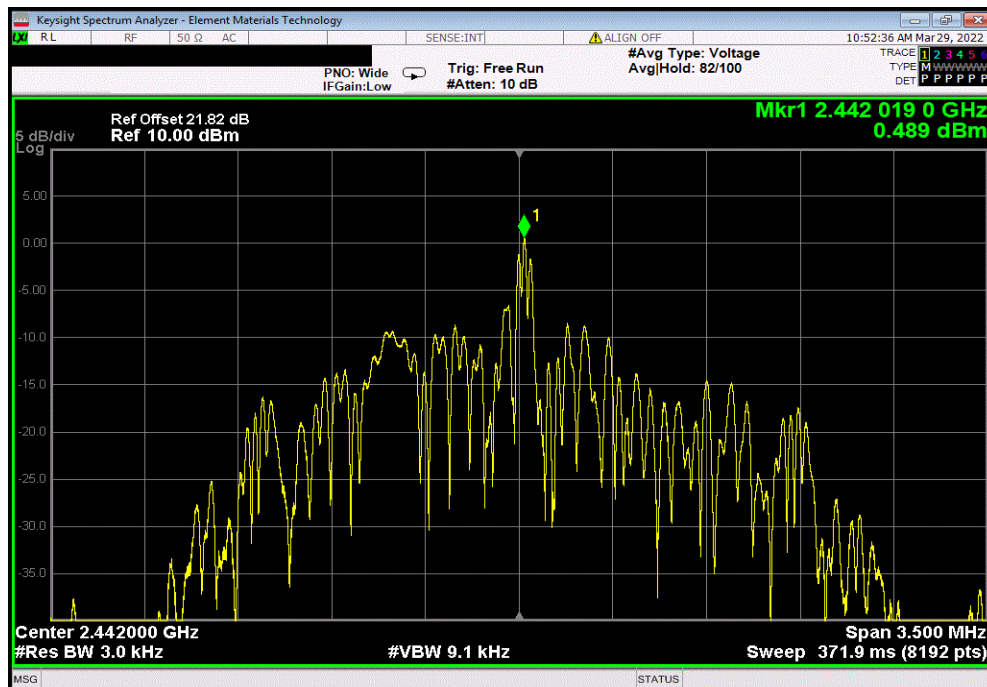


TbTx 2021.12.14.1 XM8 2022.02.07.0

BLE/GFSK 2 Mbps Low Channel, 2402 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	0.303	8	Pass			



BLE/GFSK 2 Mbps Mid Channel, 2442 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	0.489	8	Pass			

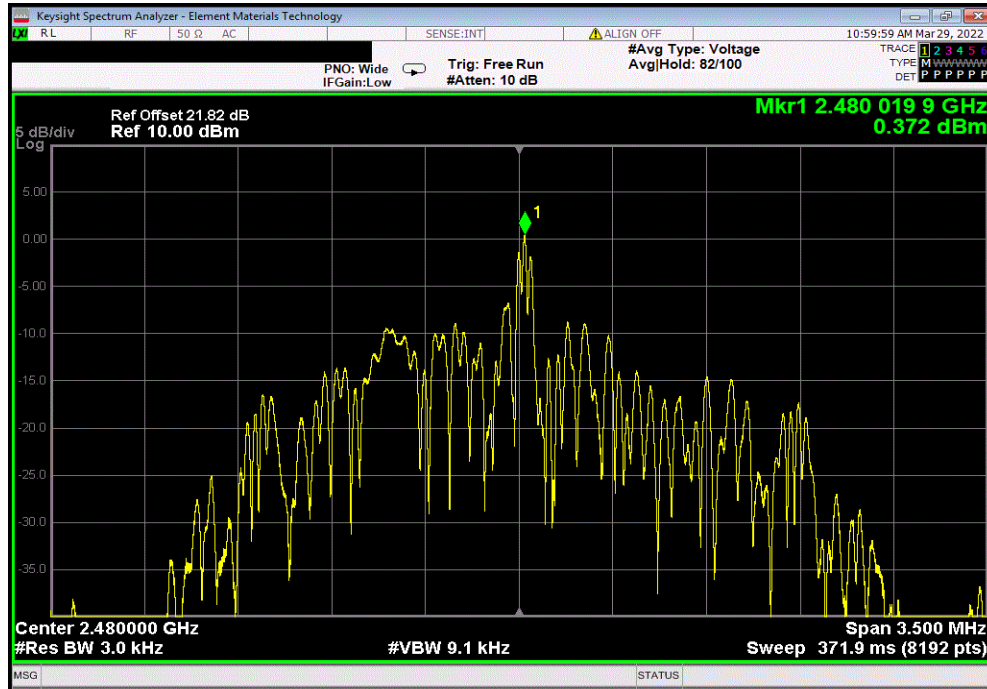


POWER SPECTRAL DENSITY



TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps High Channel, 2480 MHz						
	Value	Limit				
	dBm/3kHz	< dBm/3kHz	Results			
	0.372	8	Pass			



BAND EDGE COMPLIANCE



XMit 2022.02.07.0

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	Keysight	N5171B (EXG)	TEY	2019-12-31	2022-12-31
Cable	Micro-Coax	D150A-1-0720-200	MNL	2021-09-12	2022-09-12
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2021-06-02	2022-06-02
Block - DC	Fairview Microwave	SD3379	AMI	2021-08-13	2022-08-13
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2021-04-16	2022-04-16

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 bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. 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



TSTx 2021.12.14.1 XMR 2022.02.07.0

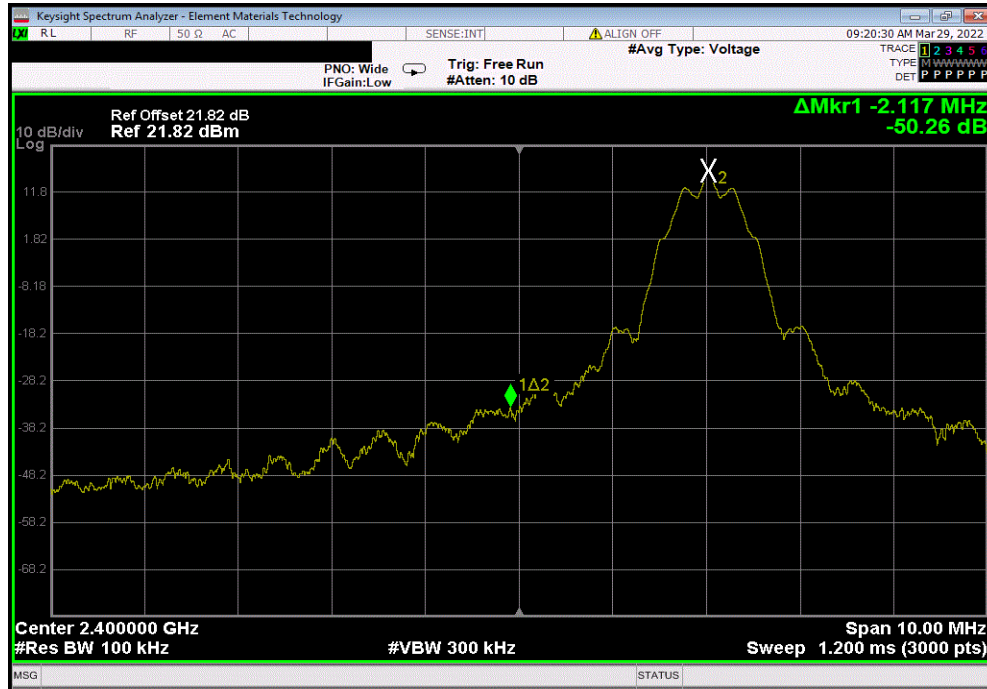
EUT: SLATESAFETY BAND V2		Work Order: FITY0001	
Serial Number: 6563		Date: 29-Mar-22	
Customer: FireHUD Inc. DBA SlateSafety		Temperature: 24.4 °C	
Attendees: Dustin Morris		Humidity: 20% RH	
Project: None		Barometric Pres.: 1015 mbar	
Tested by: Andrew Rogstad, Christopher Heintzelman		Power: 110VAC/60Hz	
		Job Site: MN08	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2022		ANSI C63.10:2013	
COMMENTS			
Reference level offset accounts for measurement cable, DC block, attenuator, and customer's cable.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature <i>Andrew Rogstad</i>	
		Value (dBc)	Limit ≤ (dBc) Result
BLE/GFSK 125 kbps Low Channel, 2402 MHz		-50.26	-20 Pass
BLE/GFSK 125 kbps High Channel, 2480 MHz		-57.14	-20 Pass
BLE/GFSK 1 Mbps Low Channel, 2402 MHz		-49.3	-20 Pass
BLE/GFSK 1 Mbps High Channel, 2480 MHz		-56.44	-20 Pass
BLE/GFSK 2 Mbps Low Channel, 2402 MHz		-32.67	-20 Pass
BLE/GFSK 2 Mbps High Channel, 2480 MHz		-52.52	-20 Pass

BAND EDGE COMPLIANCE



TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-50.26	-20	Pass



BLE/GFSK 125 kbps High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-57.14	-20	Pass

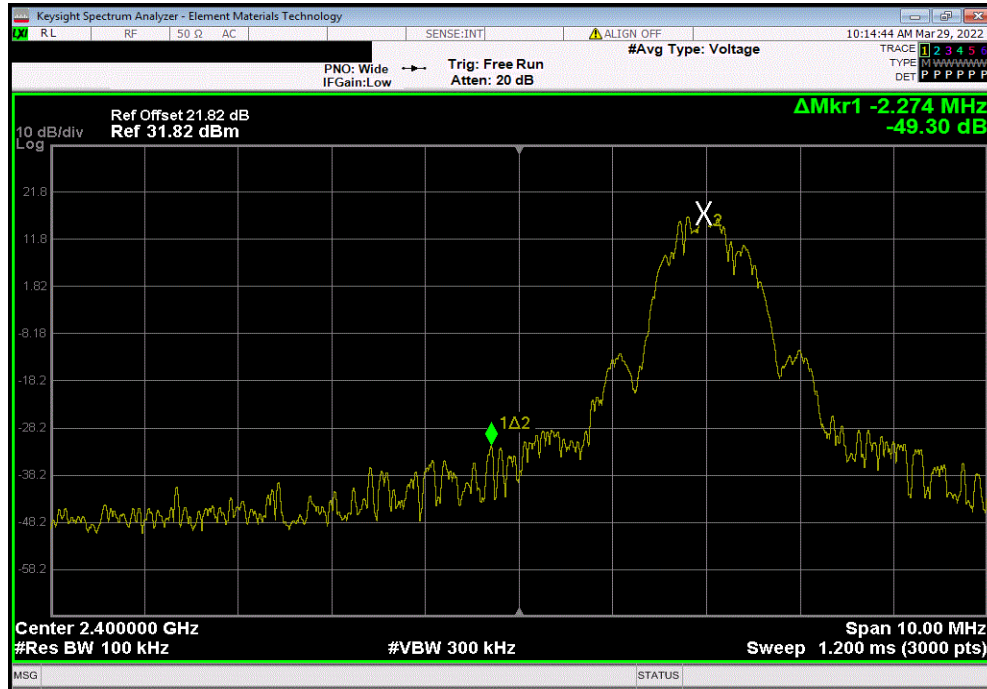


BAND EDGE COMPLIANCE



TbTtx 2021.12.14.1 XM8 2022.02.07.0

BLE/GFSK 1 Mbps Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-49.3	-20	Pass



BLE/GFSK 1 Mbps High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-56.44	-20	Pass

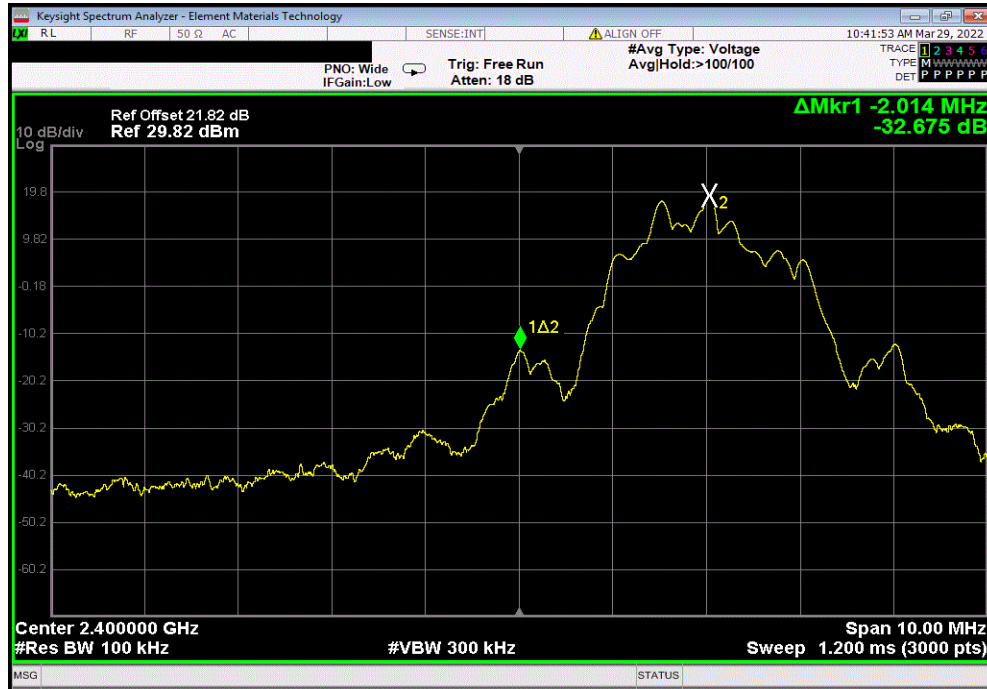


BAND EDGE COMPLIANCE



TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps Low Channel, 2402 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-32.67	-20	Pass



BLE/GFSK 2 Mbps High Channel, 2480 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-52.52	-20	Pass



SPURIOUS CONDUCTED EMISSIONS



XMIT 2022.02.07.0

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Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2021-09-12	2022-09-12
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2021-06-02	2022-06-02
Block - DC	Fairview Microwave	SD3379	AMI	2021-08-13	2022-08-13
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2021-04-16	2022-04-16

TEST DESCRIPTION

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 fundamental was measured with a 100 kHz resolution bandwidth and the highest value was recorded. The rest of the spectrum was then measured with a 100 kHz resolution bandwidth and the highest value was found. The difference between the value found on the fundamental and the rest of the spectrum was compared against the limit to determine compliance.

The reference level offset for the fundamental screen capture was based on a measured value of the loss between the spectrum analyzer and the EUT which was verified at the time of test. The remaining screen capture(s) use an internal transducer factor on the analyzer to correct the displayed trace based on the cable loss over frequency. The reference level offset for the additional screen capture(s) is then based on the expected attenuator value and any other losses.

Fundamental Offset = Ref Lvl Offset showing measured composite factor of all losses

Remaining Screen capture(s) Offset = "Internal" cable loss factor not shown on screen capture + Ref Lvl Offset showing expected attenuator value and any other losses

SPURIOUS CONDUCTED EMISSIONS



TWtX 2021.12.14.1 XMR 2022.02.07.0

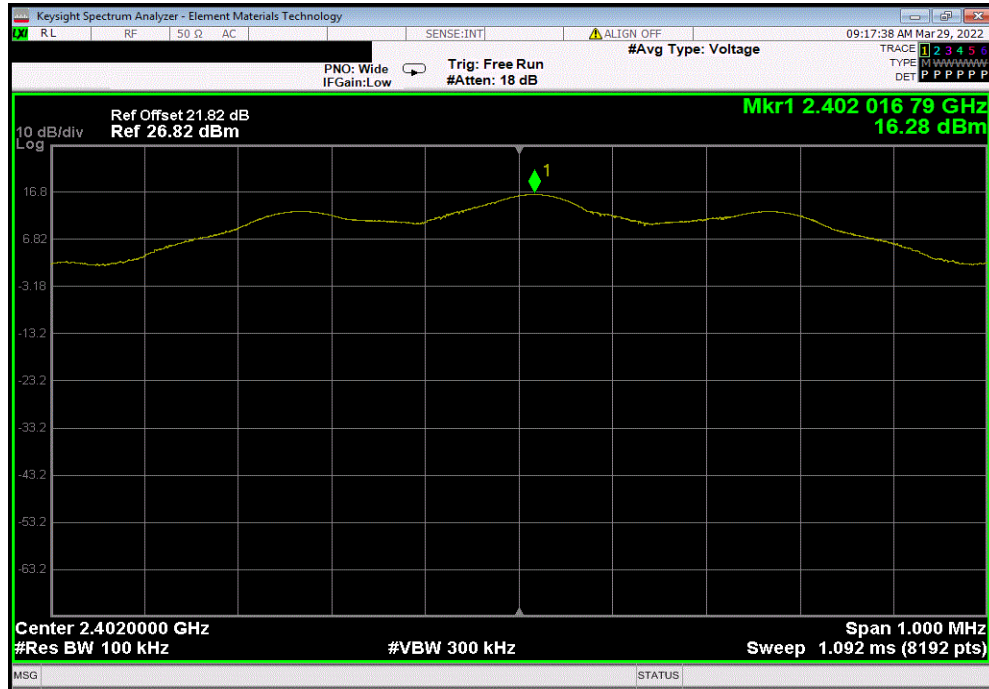
EUT: SLATESAFETY BAND V2		Work Order: FITY0001	
Serial Number: 6563		Date: 29-Mar-22	
Customer: FireHUD Inc. DBA SlateSafety		Temperature: 24.4 °C	
Attendees: Dustin Morris		Humidity: 19.7% RH	
Project: None		Barometric Pres.: 1015 mbar	
Tested by: Andrew Rogstad, Christopher Heintzelman		Power: 110VAC/60Hz	
TEST SPECIFICATIONS		Job Site: MN08	
FCC 15.247:2022		Test Method	
		ANSI C63.10:2013	
COMMENTS			
Reference level offset accounts for measurement cable, DC block, attenuator, and customer's cable.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	1	Signature 	
		Frequency Range	Measured Freq (MHz)
			Max Value (dBc)
			Limit ≤ (dBc)
			Result
BLE/GFSK 125 kbps Low Channel, 2402 MHz		Fundamental	2402.02
BLE/GFSK 125 kbps Low Channel, 2402 MHz		30 MHz - 12.5 GHz	7090.9
BLE/GFSK 125 kbps Low Channel, 2402 MHz		12.5 GHz - 25 GHz	24870.28
BLE/GFSK 125 kbps Mid Channel, 2442 MHz		Fundamental	2442.02
BLE/GFSK 125 kbps Mid Channel, 2442 MHz		30 MHz - 12.5 GHz	5856.23
BLE/GFSK 125 kbps Mid Channel, 2442 MHz		12.5 GHz - 25 GHz	24980.16
BLE/GFSK 125 kbps High Channel, 2480 MHz		Fundamental	2480.02
BLE/GFSK 125 kbps High Channel, 2480 MHz		30 MHz - 12.5 GHz	2671.37
BLE/GFSK 125 kbps High Channel, 2480 MHz		12.5 GHz - 25 GHz	24618.48
BLE/GFSK 1 Mbps Low Channel, 2402 MHz		Fundamental	2401.76
BLE/GFSK 1 Mbps Low Channel, 2402 MHz		30 MHz - 12.5 GHz	5713.13
BLE/GFSK 1 Mbps Low Channel, 2402 MHz		12.5 GHz - 25 GHz	24591.01
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz		Fundamental	2441.76
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz		30 MHz - 12.5 GHz	7380.16
BLE/GFSK 1 Mbps Mid Channel, 2442 MHz		12.5 GHz - 25 GHz	24955.74
BLE/GFSK 1 Mbps High Channel, 2480 MHz		Fundamental	2479.76
BLE/GFSK 1 Mbps High Channel, 2480 MHz		30 MHz - 12.5 GHz	12104.18
BLE/GFSK 1 Mbps High Channel, 2480 MHz		12.5 GHz - 25 GHz	24981.69
BLE/GFSK 2 Mbps Low Channel, 2402 MHz		Fundamental	2402.02
BLE/GFSK 2 Mbps Low Channel, 2402 MHz		30 MHz - 12.5 GHz	7206.61
BLE/GFSK 2 Mbps Low Channel, 2402 MHz		12.5 GHz - 25 GHz	24919.12
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz		Fundamental	2442.02
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz		30 MHz - 12.5 GHz	7508.04
BLE/GFSK 2 Mbps Mid Channel, 2442 MHz		12.5 GHz - 25 GHz	24821.45
BLE/GFSK 2 Mbps High Channel, 2480 MHz		Fundamental	2480.02
BLE/GFSK 2 Mbps High Channel, 2480 MHz		30 MHz - 12.5 GHz	9299.91
BLE/GFSK 2 Mbps High Channel, 2480 MHz		12.5 GHz - 25 GHz	24775.67

SPURIOUS CONDUCTED EMISSIONS

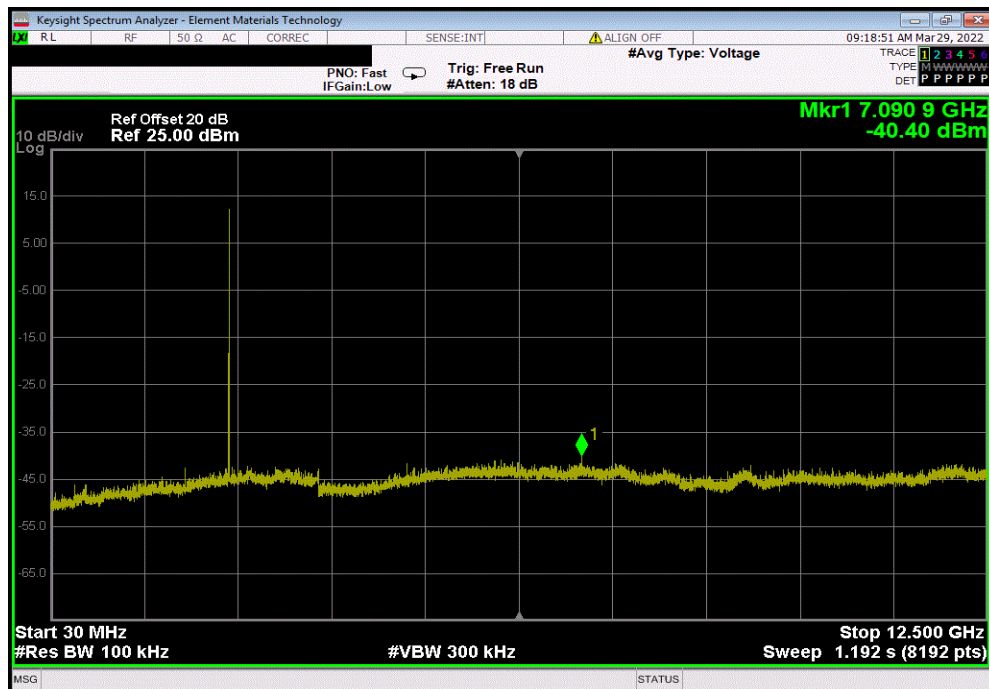


TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps Low Channel, 2402 MHz						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	2402.02	N/A	N/A	N/A		



BLE/GFSK 125 kbps Low Channel, 2402 MHz						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 12.5 GHz	7090.9	-56.62	-20	Pass		

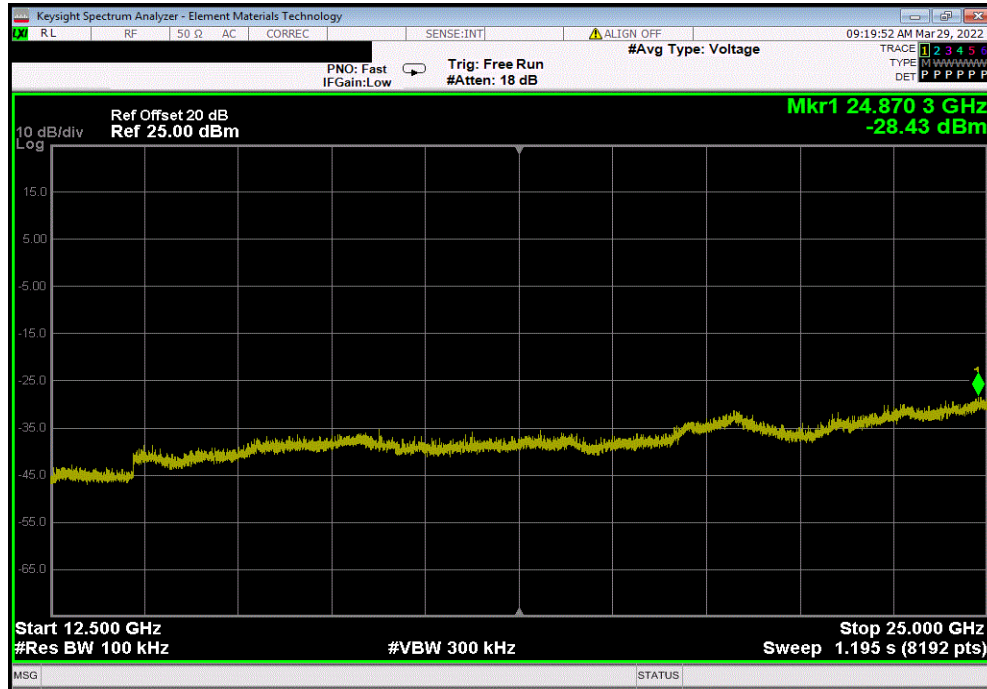


SPURIOUS CONDUCTED EMISSIONS

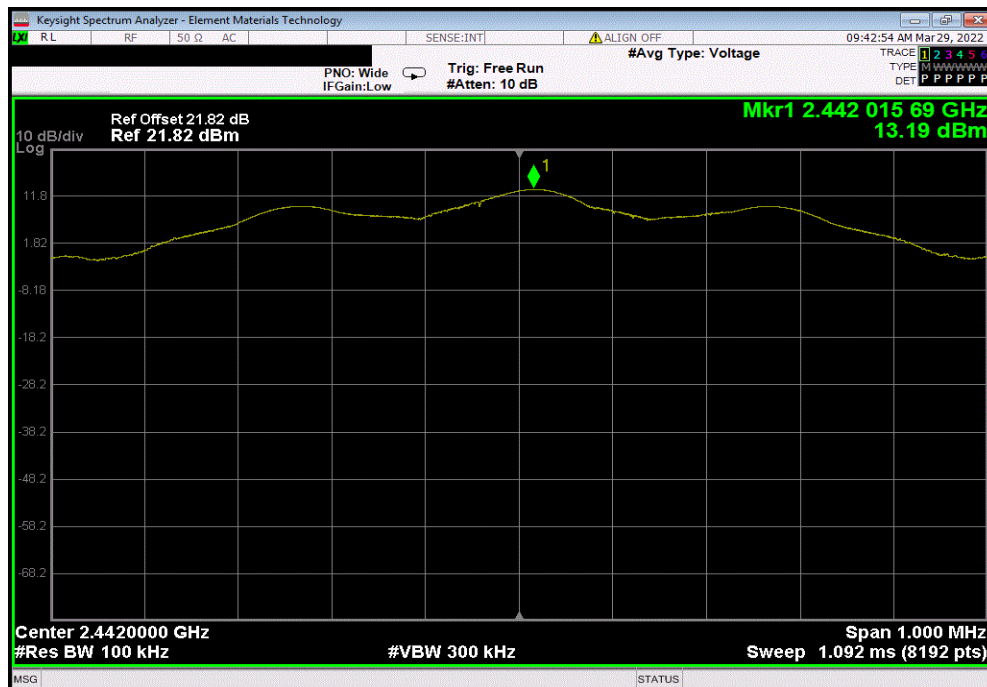


TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps Low Channel, 2402 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24870.28	-44.65	-20	Pass	



BLE/GFSK 125 kbps Mid Channel, 2442 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	2442.02	N/A	N/A	N/A	

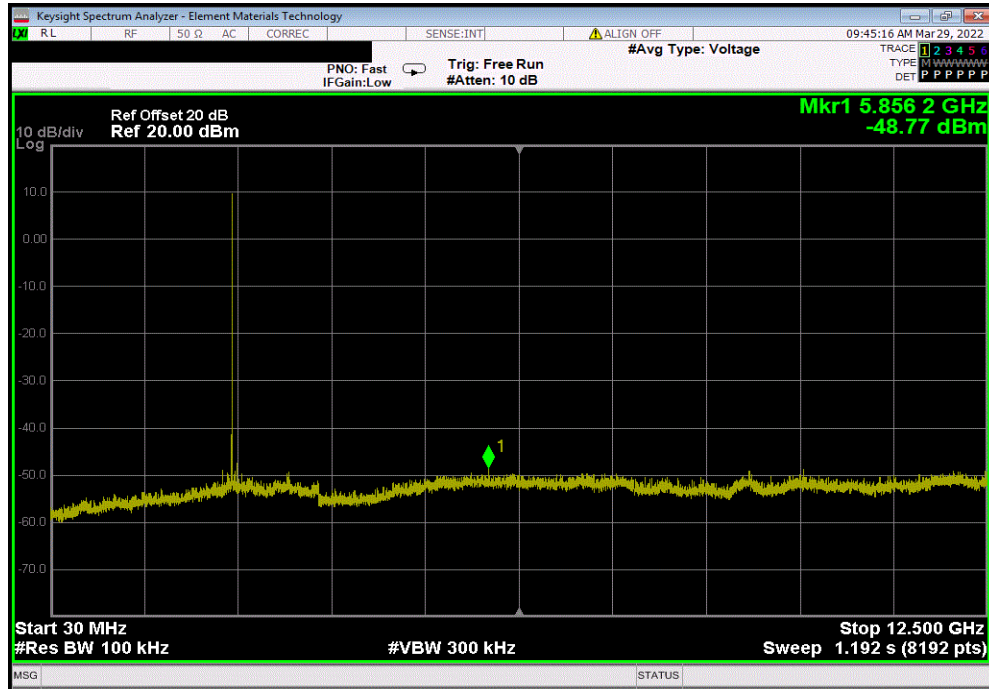


SPURIOUS CONDUCTED EMISSIONS

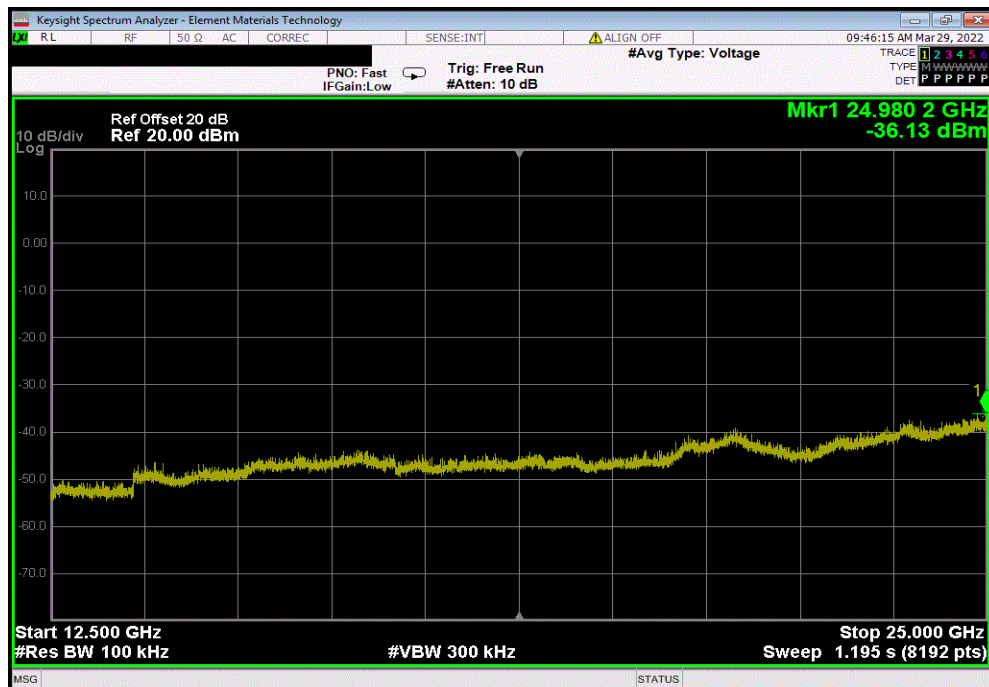


TbTtX 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps Mid Channel, 2442 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	5856.23	-61.96	-20	Pass	



BLE/GFSK 125 kbps Mid Channel, 2442 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24980.16	-49.32	-20	Pass	

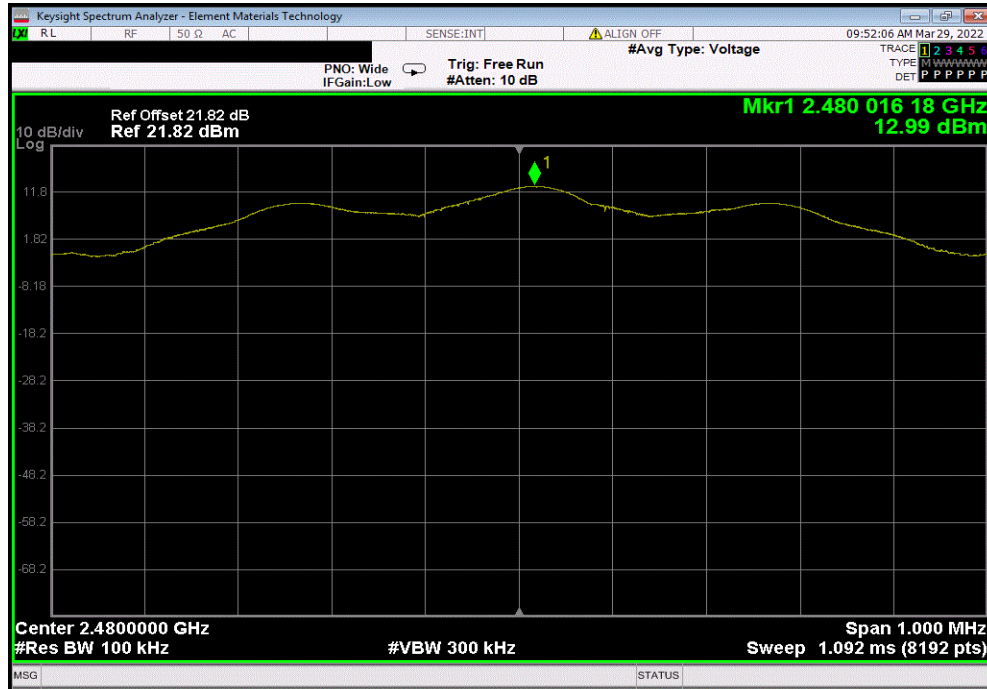


SPURIOUS CONDUCTED EMISSIONS

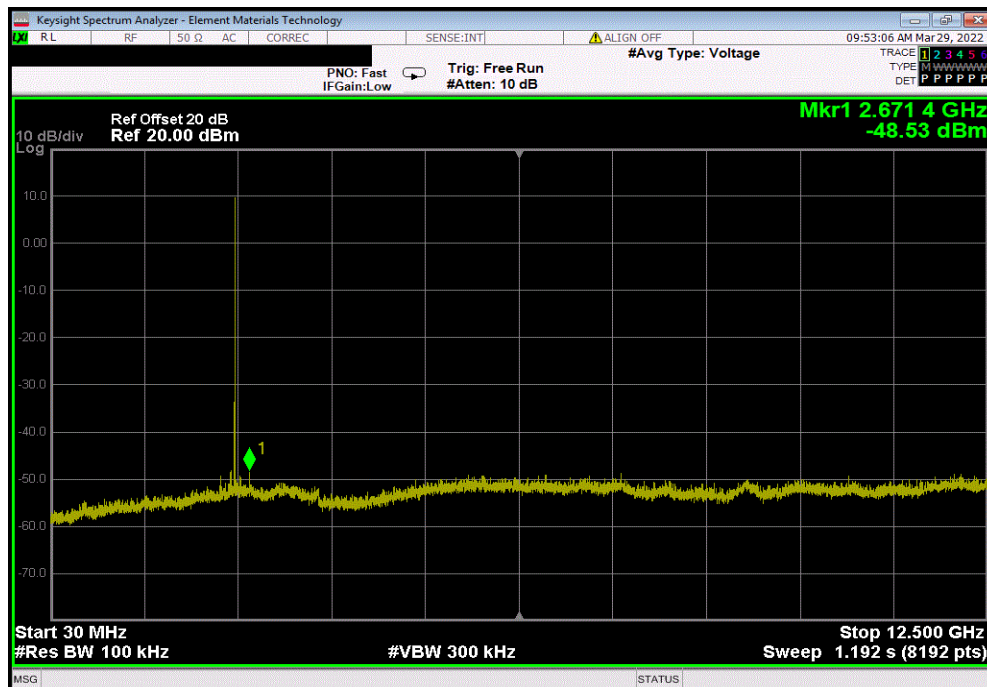


TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	2480.02	N/A	N/A	N/A	



BLE/GFSK 125 kbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	2671.37	-61.53	-20	Pass	

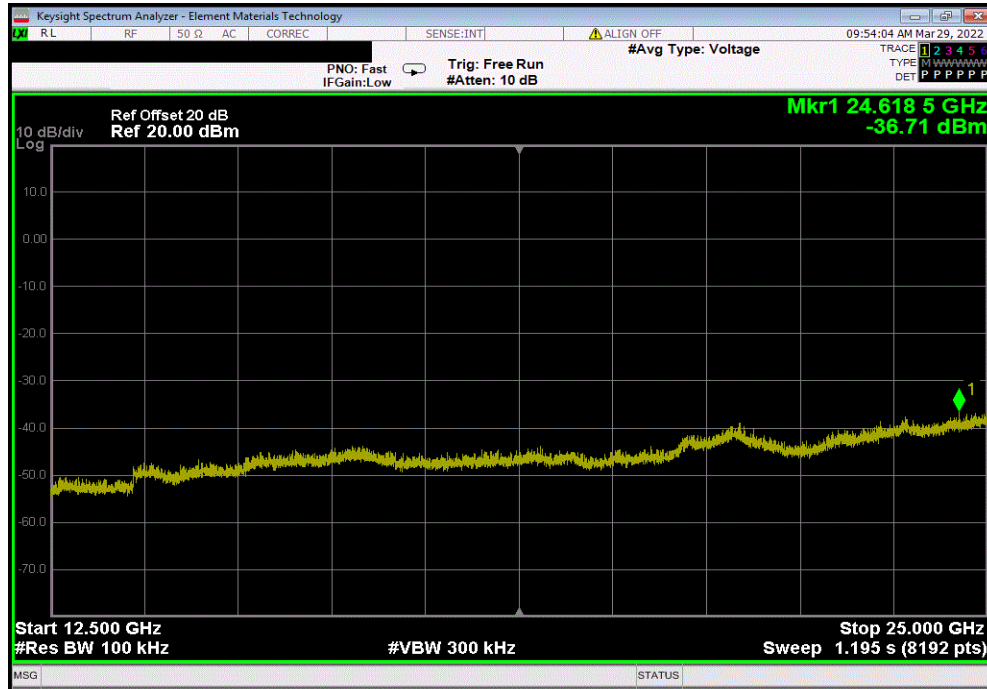


SPURIOUS CONDUCTED EMISSIONS

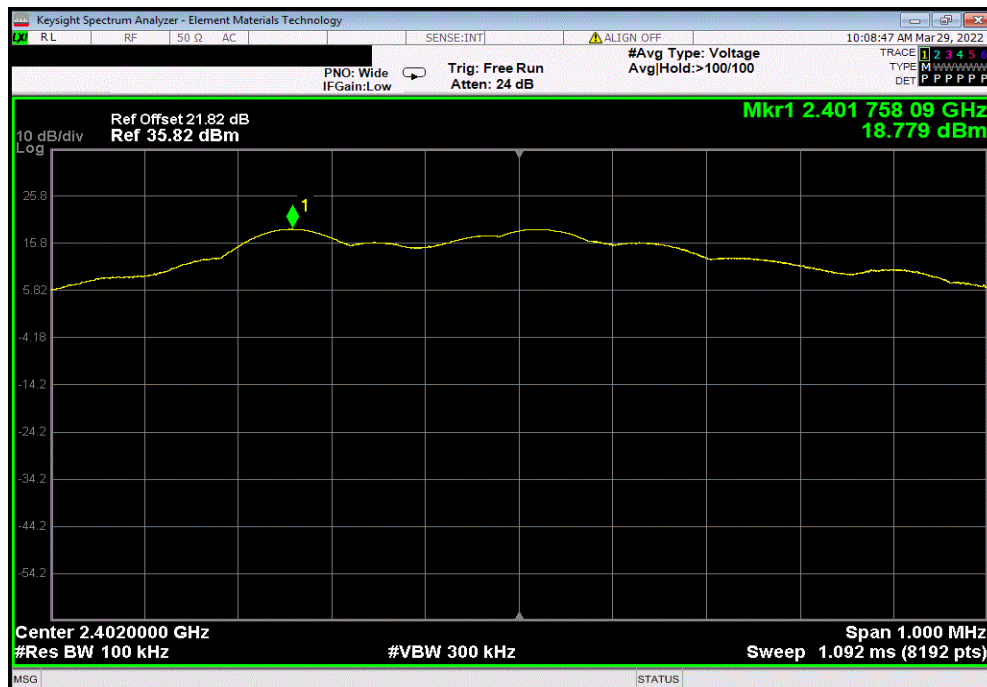


TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 125 kbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24618.48	-49.7	-20	Pass	



BLE/GFSK 1 Mbps Low Channel, 2402 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	2401.76	N/A	N/A	N/A	

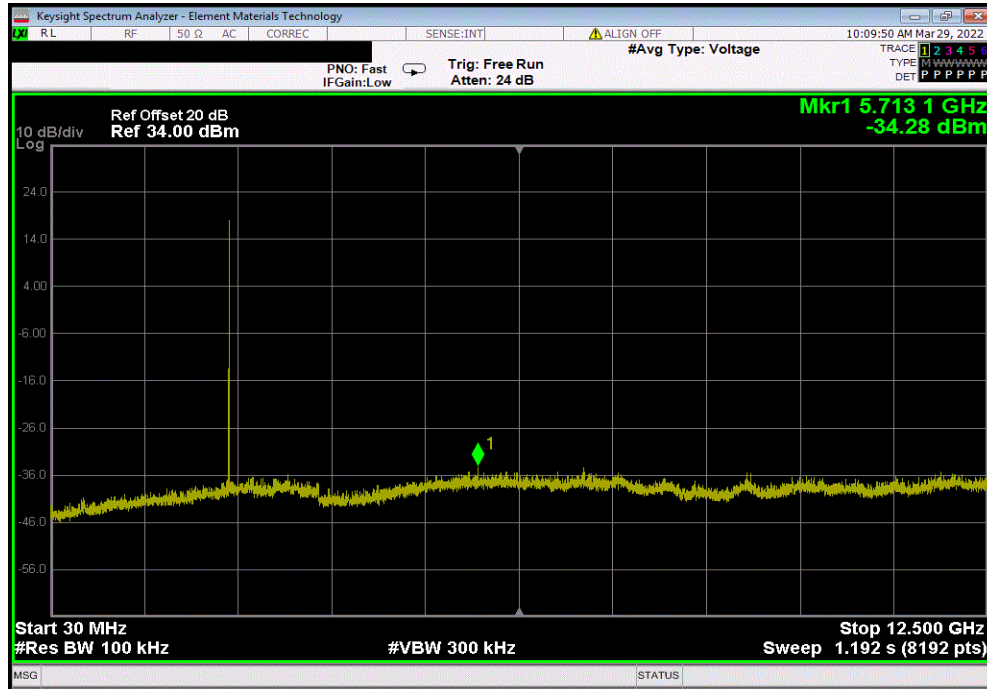


SPURIOUS CONDUCTED EMISSIONS

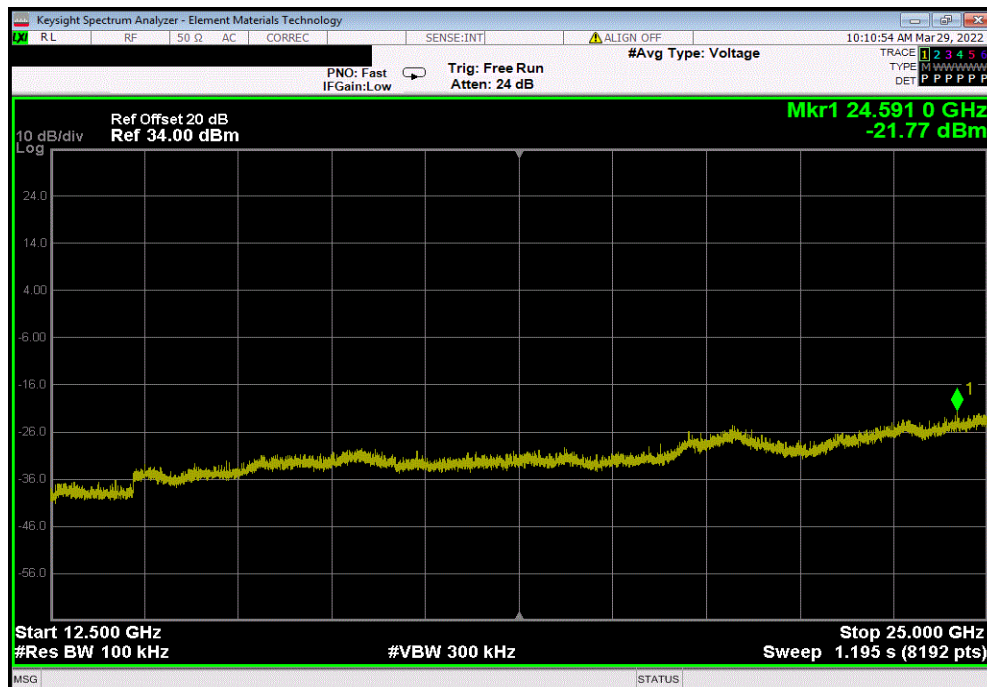


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 1 Mbps Low Channel, 2402 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	5713.13	-53.05	-20	Pass	



BLE/GFSK 1 Mbps Low Channel, 2402 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24591.01	-40.54	-20	Pass	

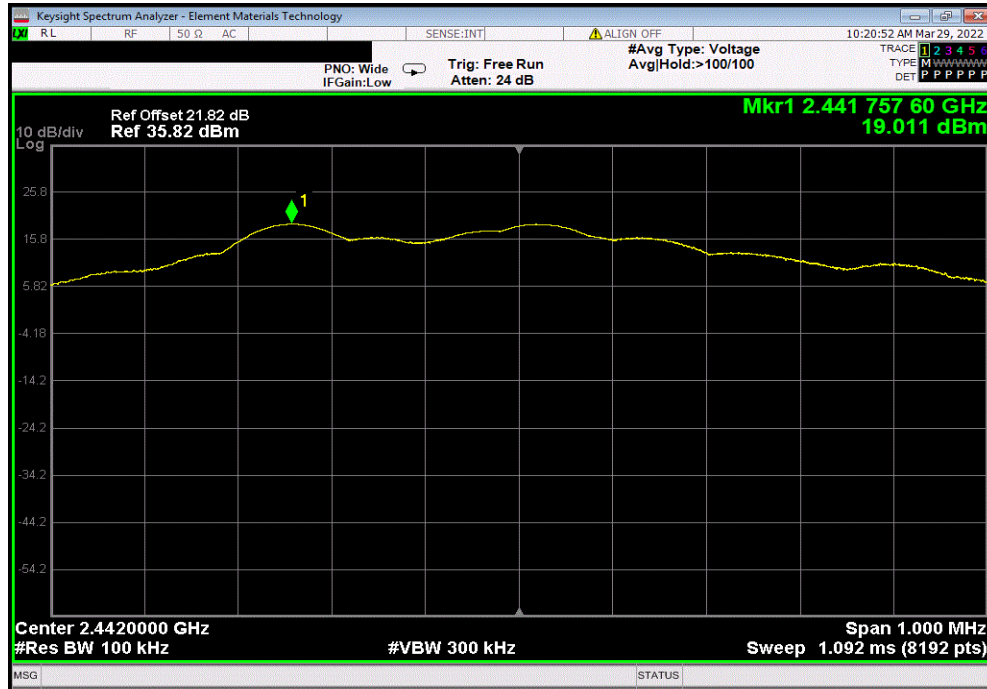


SPURIOUS CONDUCTED EMISSIONS

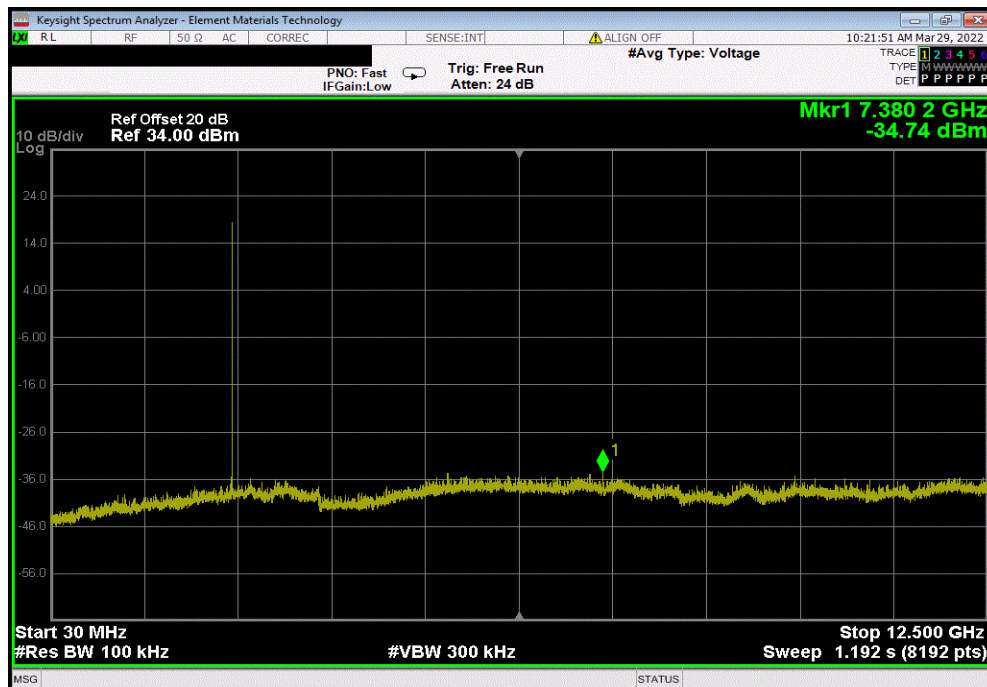


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 1 Mbps Mid Channel, 2442 MHz						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	2441.76	N/A	N/A	N/A		



BLE/GFSK 1 Mbps Mid Channel, 2442 MHz						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 12.5 GHz	7380.16	-53.76	-20	Pass		

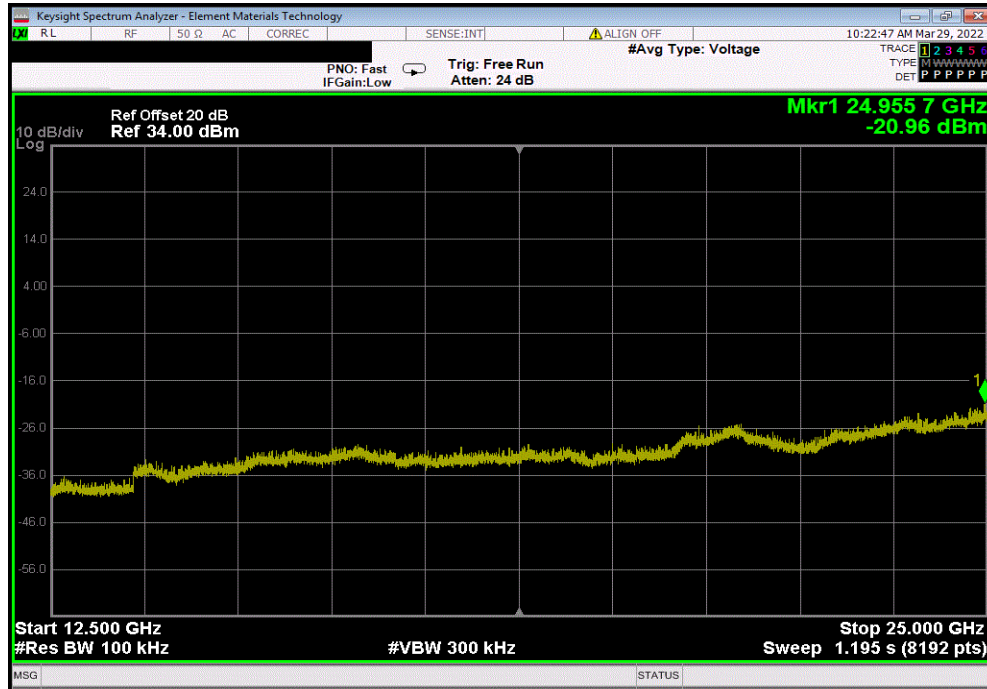


SPURIOUS CONDUCTED EMISSIONS

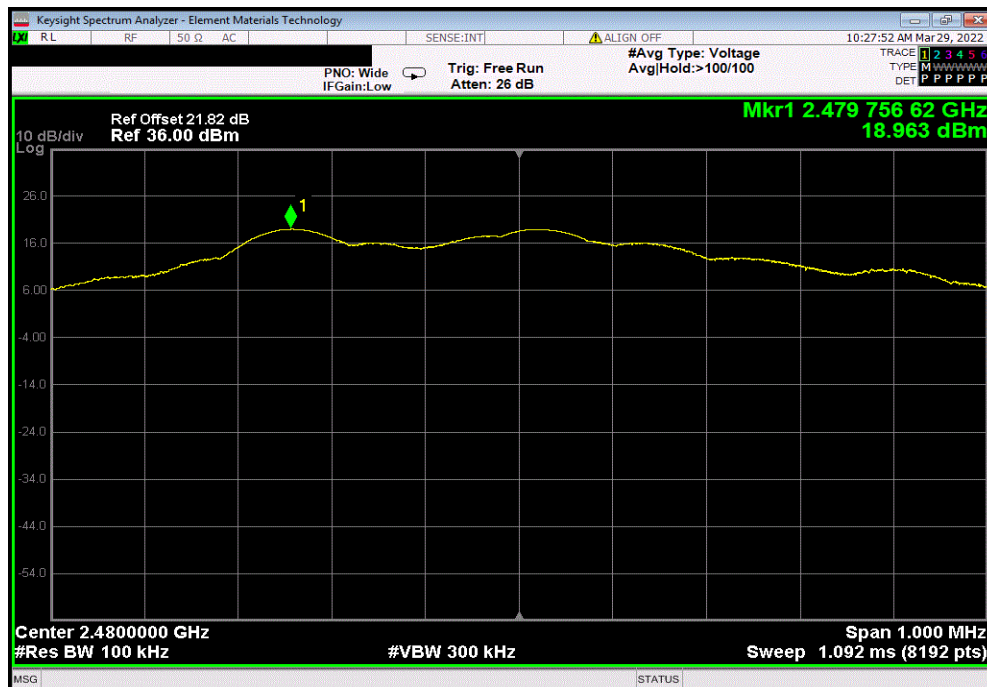


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 1 Mbps Mid Channel, 2442 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24955.74	-39.98	-20	Pass	



BLE/GFSK 1 Mbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	2479.76	N/A	N/A	N/A	

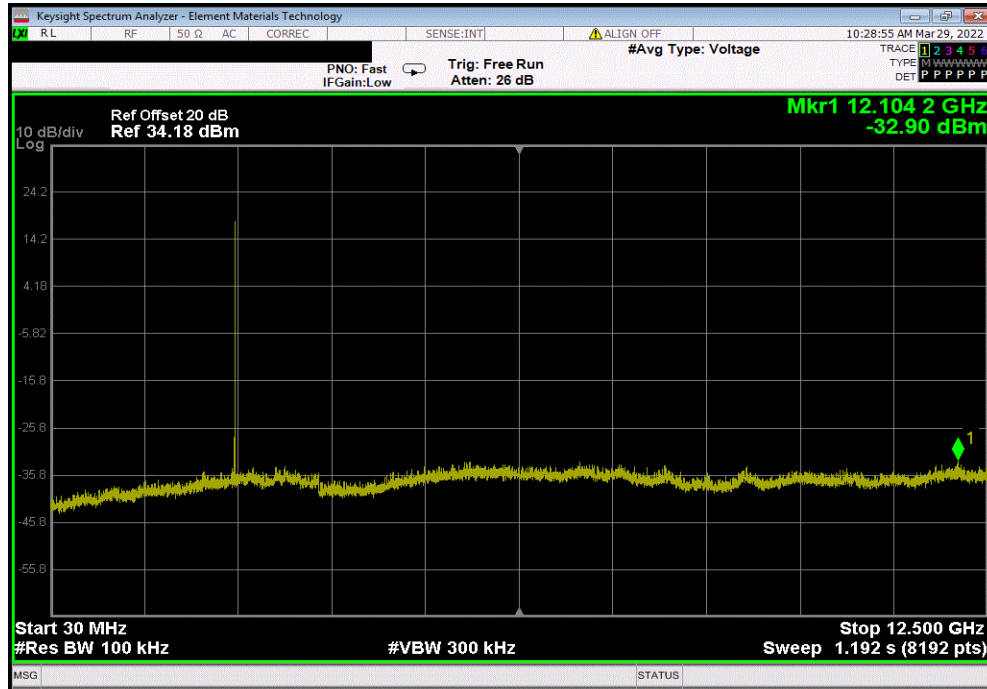


SPURIOUS CONDUCTED EMISSIONS

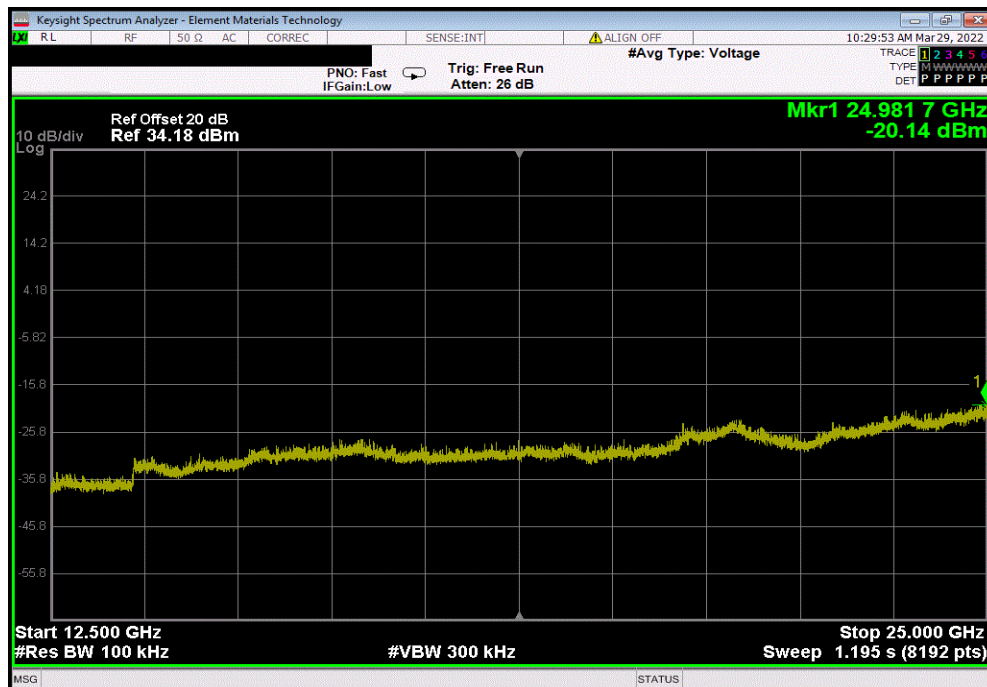


TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 1 Mbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	12104.18	-51.79	-20	Pass	



BLE/GFSK 1 Mbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24981.69	-39.03	-20	Pass	

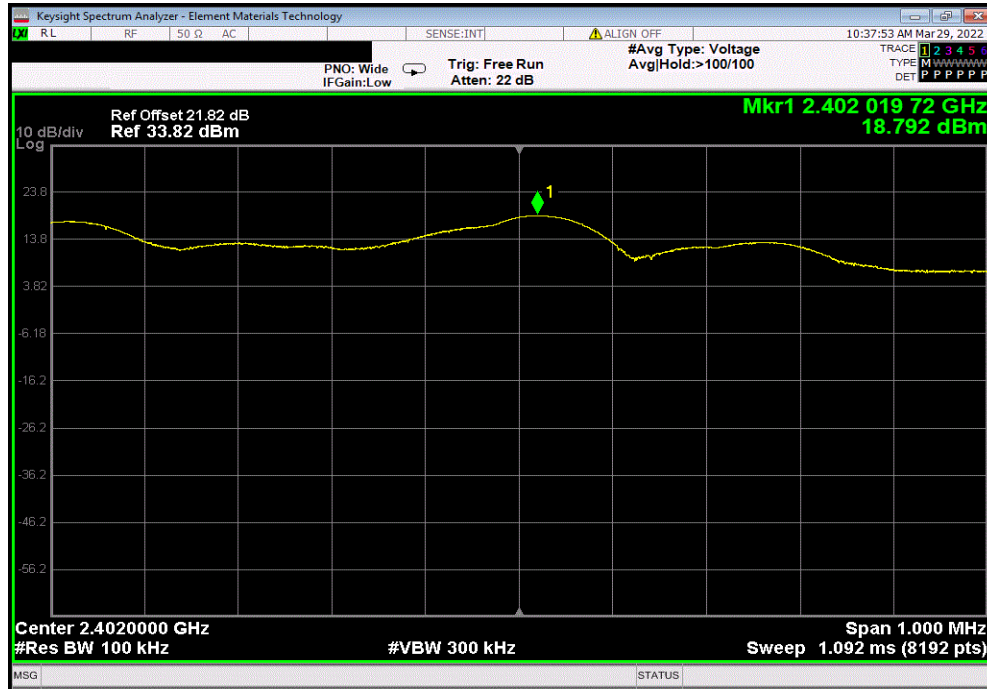


SPURIOUS CONDUCTED EMISSIONS

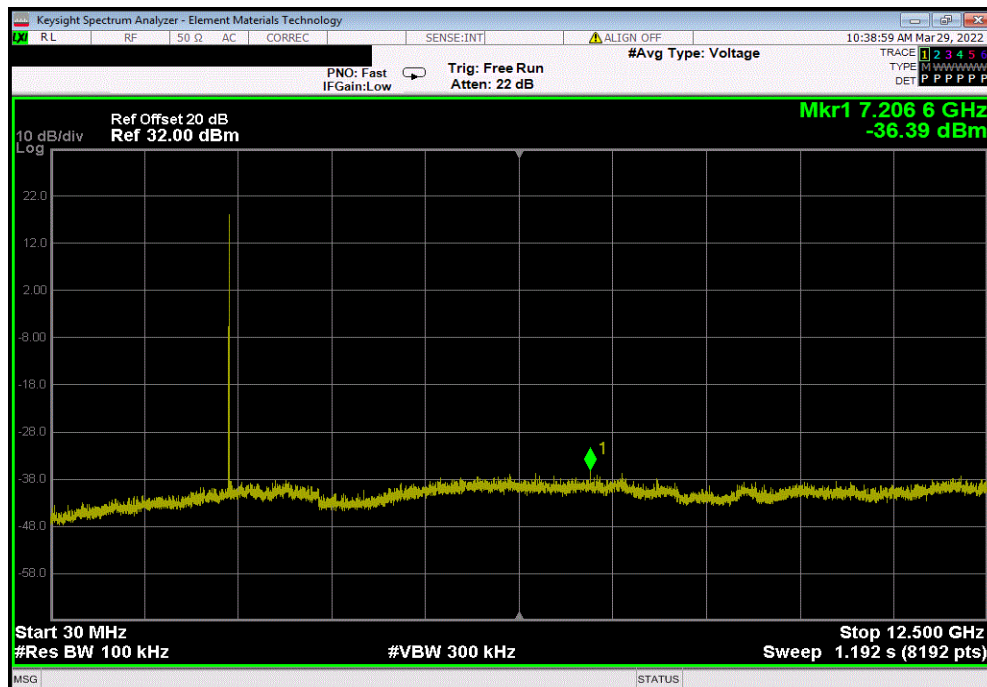


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps Low Channel, 2402 MHz						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
Fundamental	2402.02	N/A	N/A	N/A		



BLE/GFSK 2 Mbps Low Channel, 2402 MHz						
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result		
30 MHz - 12.5 GHz	7206.61	-55.18	-20	Pass		

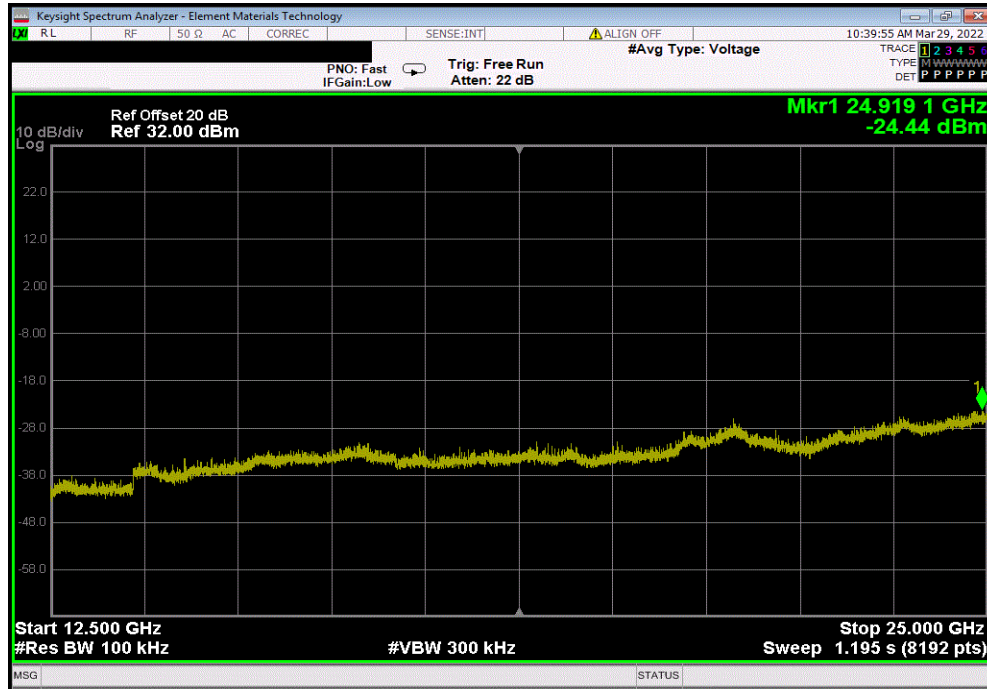


SPURIOUS CONDUCTED EMISSIONS

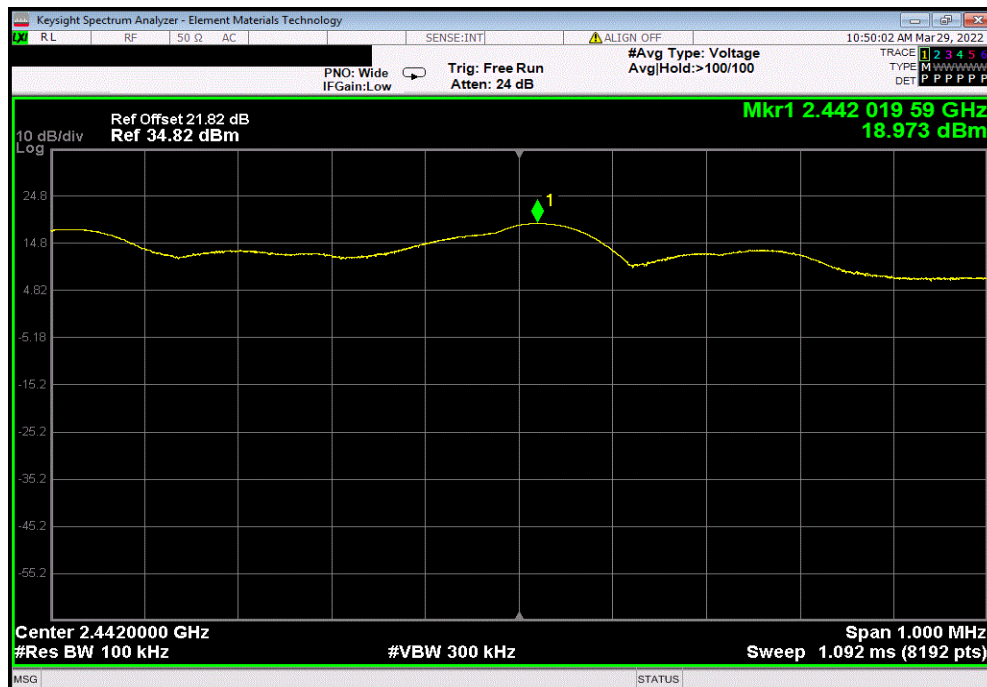


TbTtx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps Low Channel, 2402 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24919.12	-43.23	-20	Pass	



BLE/GFSK 2 Mbps Mid Channel, 2442 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	2442.02	N/A	N/A	N/A	

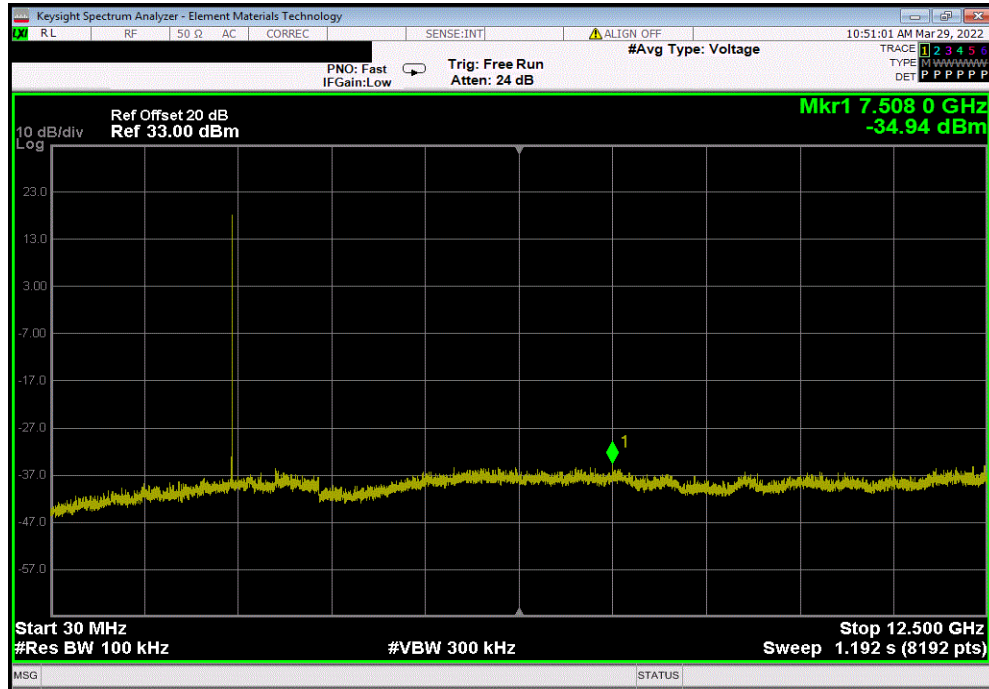


SPURIOUS CONDUCTED EMISSIONS

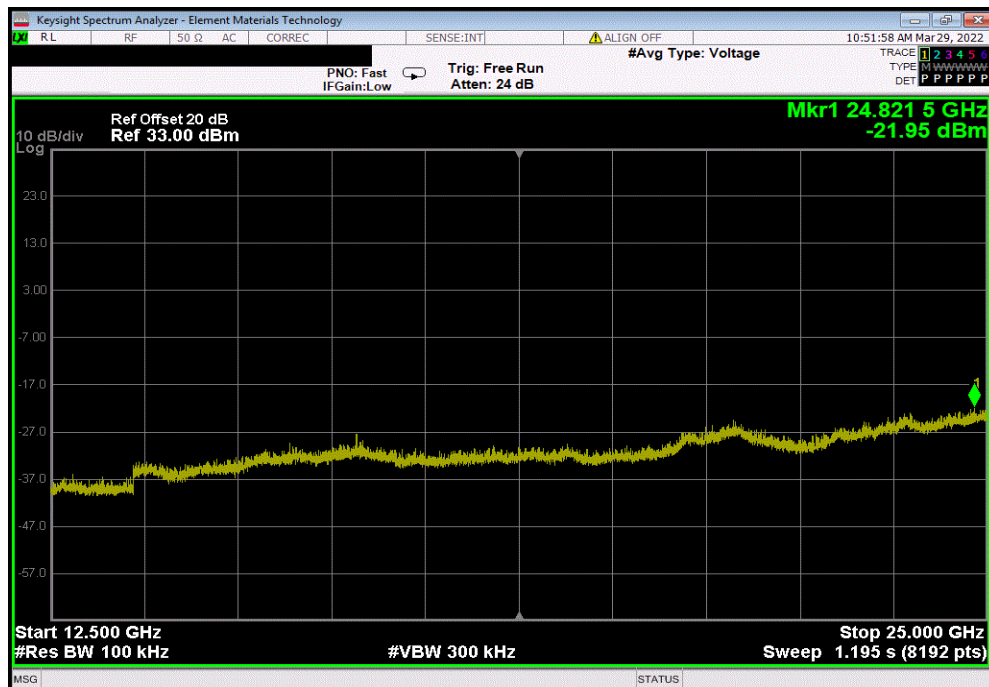


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps Mid Channel, 2442 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	7508.04	-53.93	-20	Pass	



BLE/GFSK 2 Mbps Mid Channel, 2442 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24821.45	-40.94	-20	Pass	

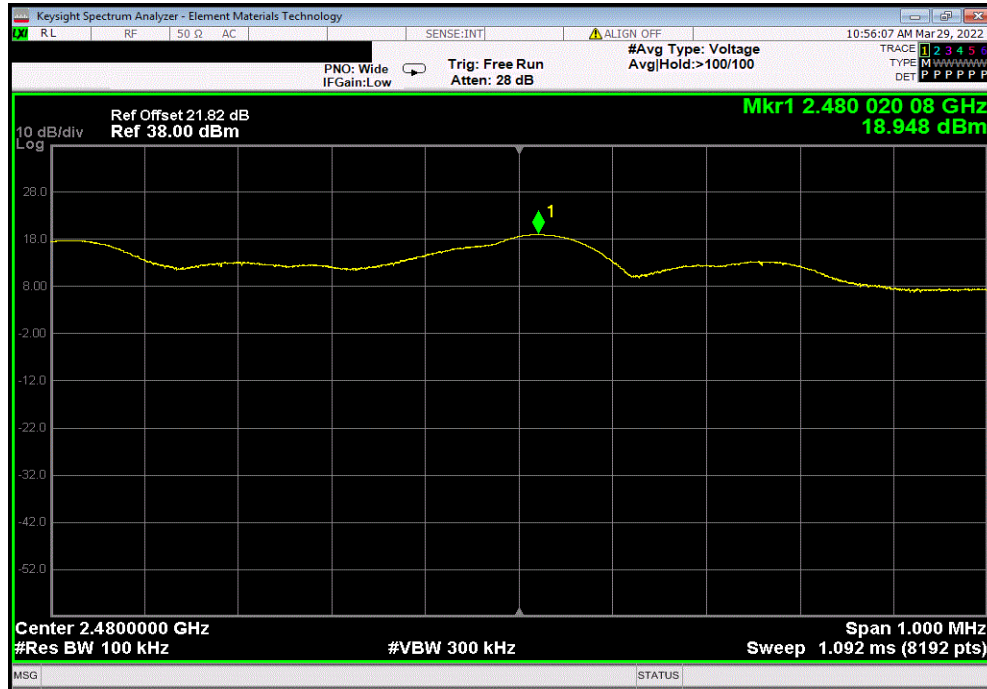


SPURIOUS CONDUCTED EMISSIONS

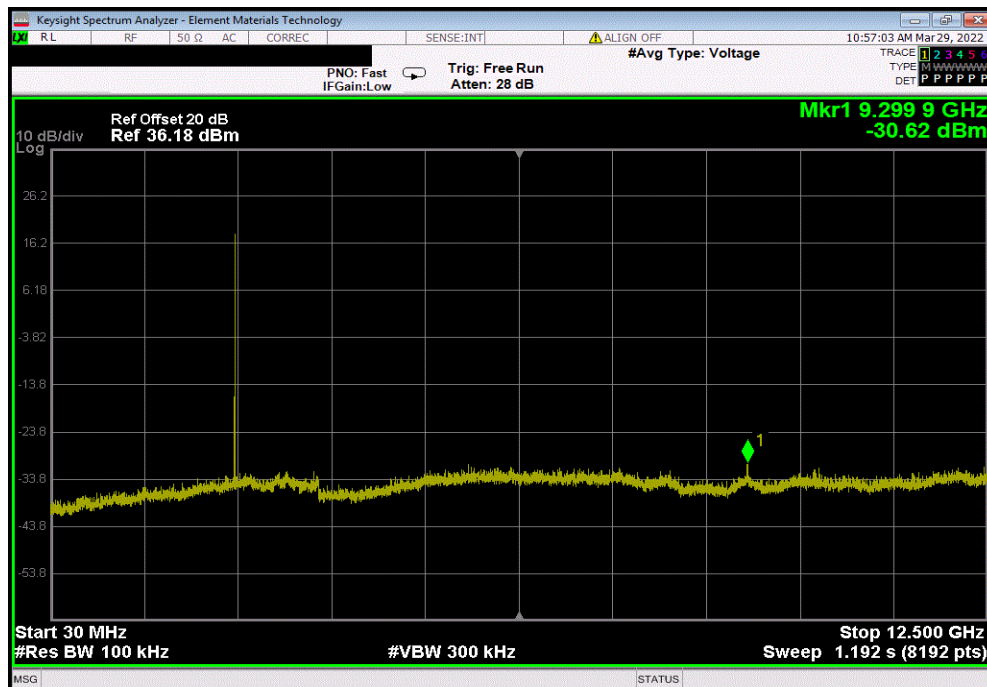


TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
Fundamental	2480.02	N/A	N/A	N/A	



BLE/GFSK 2 Mbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
30 MHz - 12.5 GHz	9299.91	-49.5	-20	Pass	

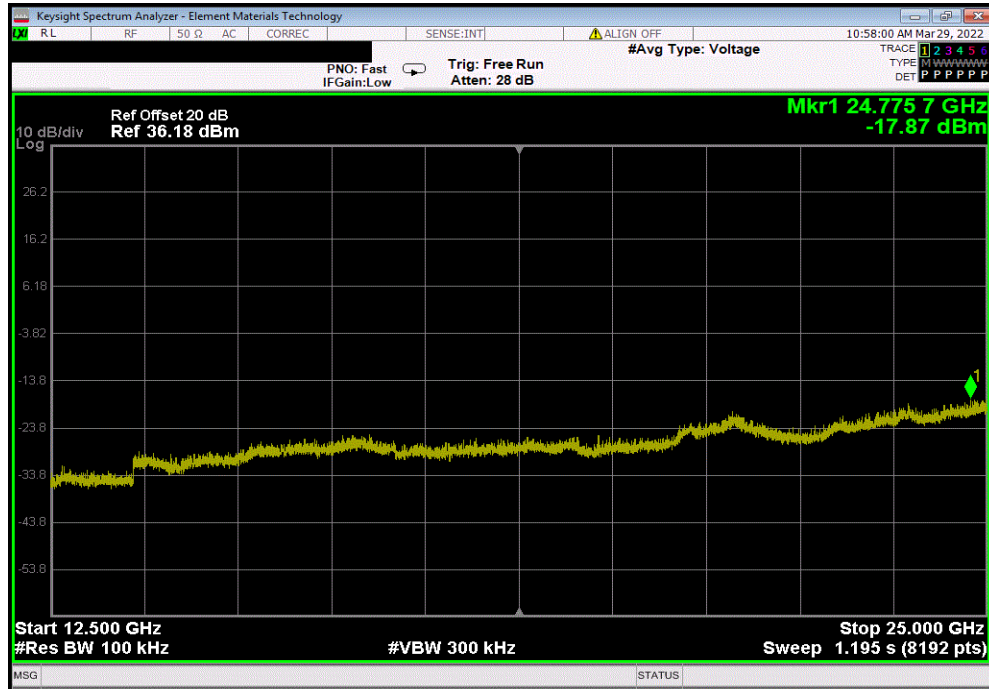


SPURIOUS CONDUCTED EMISSIONS



TbTx 2021.12.14.1 XMt 2022.02.07.0

BLE/GFSK 2 Mbps High Channel, 2480 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result	
12.5 GHz - 25 GHz	24775.67	-36.74	-20	Pass	



SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are not included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Average measurements were calculated by subtracting a Duty Cycle Correction Factor (DCCF) from the peak measurements per KDB 558074. The DCCF = $20 \cdot \log(\text{Field DC})$

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	2021-05-21	2022-05-21
Antenna - Double Ridge	ETS Lindgren	3115	AJQ	2021-01-25	2023-01-25
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2022-01-18	2023-01-18
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2022-01-18	2023-01-18
Antenna - Standard Gain	ETS Lindgren	3160-07	AXP	NCR	NCR
Cable	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	2022-01-18	2023-01-18
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	2022-01-18	2023-01-18
Antenna - Standard Gain	ETS Lindgren	3160-08	AIQ	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	2022-01-18	2023-01-18
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNP	2021-09-09	2022-09-09
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	2021-09-09	2022-09-09
Antenna - Biconilog	ETS Lindgren	3142D	AXO	2021-09-14	2023-09-14
Cable	ESM Cable Corp.	Bilog Cables	MNH	2021-10-13	2022-10-13
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	2021-10-13	2022-10-13
Filter - Low Pass	Micro-Tronics	LPM50004	LFK	2021-09-09	2022-09-09
Filter - High Pass	Micro-Tronics	HPM50111	LFN	2021-09-09	2022-09-09
Attenuator	Fairview Microwave	SA18E-20	TWZ	2021-09-09	2022-09-09

SPURIOUS RADIATED EMISSIONS

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.2 dB	-5.2 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 26500 MHz

POWER INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

FITY0001-2
FITY0001-5

MODES INVESTIGATED

Transmitting BLE Low, Mid, and High Chs (2402, 2442, and 2480 MHz), 1 Mbps, 2 Mbps, and 125kbps.
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SPURIOUS RADIATED EMISSIONS

EUT:	SLATESAFETY BAND V2	Work Order:	FITY0001
Serial Number:	6563	Date:	2022-04-01
Customer:	FireHUD Inc. DBA SlateSafety	Temperature:	24.1°C
Attendees:	Dustin Morris	Relative Humidity:	24.1%
Customer Project:		Bar. Pressure (PMSL):	1018 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	110VAC/60Hz	Configuration:	FITY0001-

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2022	ANSI C63.10:2013

TEST PARAMETERS

Run #:	14	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

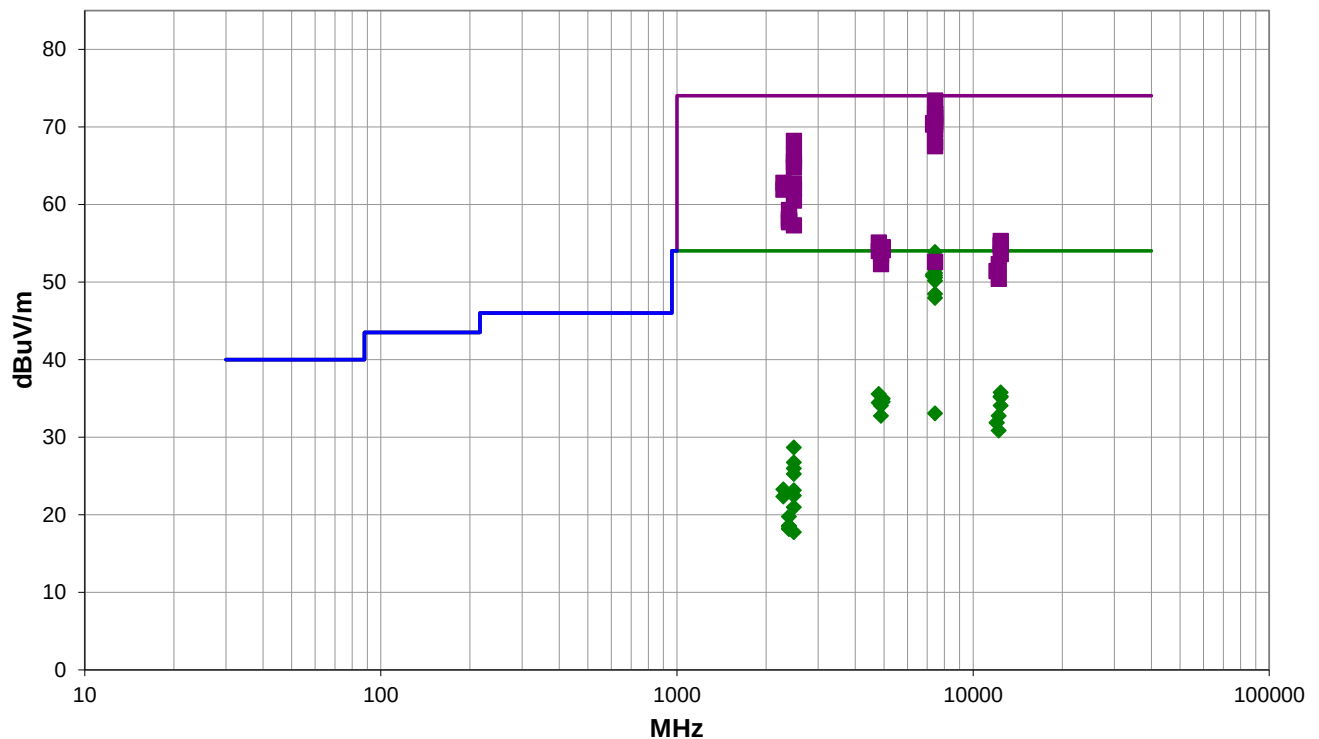
Power setting -4 for 1 and 2 Mbps, -12 for 125kbps. Test mode is 59% for 125kbps, 16.8% for 1 Mbps, and 10.8% for 2 Mbps. Ferrite 742 711 42 on programming connector. In the field, device will be limited to 10.52% duty cycle. Peak measurements were taken, average measurements were calculated by subtracting $20 \cdot \log(\text{duty cycle})$ per KDB 558074.

EUT OPERATING MODES

Transmitting BLE Low, Mid, and High Chs (2402, 2442, and 2480 MHz), 1 Mbps, 2 Mbps, and 125kbps.

DEVIATIONS FROM TEST STANDARD

None



Run #: 14

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #14

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7439.950	63.4	10.0	2.4	258.9	-19.6	0.0	Horz	AV	0.0	53.8	54.0	-0.2	EUT Horz, High Ch, 2 Mbps
7439.950	63.4	10.0	2.4	258.9		0.0	Horz	PK	0.0	73.4	74.0	-0.6	EUT Horz, High Ch, 2 Mbps
7440.117	62.7	10.0	2.4	274.0	-19.6	0.0	Horz	AV	0.0	53.1	54.0	-0.9	EUT Horz, High Ch, 1 Mbps
7440.117	62.7	10.0	2.4	274.0		0.0	Horz	PK	0.0	72.7	74.0	-1.3	EUT Horz, High Ch, 1 Mbps
7440.092	61.7	10.0	2.0	304.0	-19.6	0.0	Horz	AV	0.0	52.1	54.0	-1.9	EUT Vert, High Ch, 1 Mbps
7440.083	61.7	10.0	2.1	312.9	-19.6	0.0	Horz	AV	0.0	52.1	54.0	-1.9	EUT Vert, High Ch, 2 Mbps
7440.108	61.3	10.0	2.1	311.9	-19.6	0.0	Horz	AV	0.0	51.7	54.0	-2.3	EUT On Side, High Ch, 1 Mbps
7440.092	61.7	10.0	2.0	304.0		0.0	Horz	PK	0.0	71.7	74.0	-2.3	EUT Vert, High Ch, 1 Mbps
7440.083	61.7	10.0	2.1	312.9		0.0	Horz	PK	0.0	71.7	74.0	-2.3	EUT Vert, High Ch, 2 Mbps
7439.992	61.2	10.0	2.2	282.9	-19.6	0.0	Vert	AV	0.0	51.6	54.0	-2.4	EUT On Side, High Ch, 1 Mbps
7440.108	61.3	10.0	2.1	311.9		0.0	Horz	PK	0.0	71.3	74.0	-2.7	EUT On Side, High Ch, 1 Mbps
7439.992	61.2	10.0	2.2	282.9		0.0	Vert	PK	0.0	71.2	74.0	-2.8	EUT On Side, High Ch, 1 Mbps
7439.917	60.7	10.0	2.1	256.0	-19.6	0.0	Vert	AV	0.0	51.1	54.0	-2.9	EUT On Side, High Ch, 2 Mbps
7326.017	60.2	10.3	1.3	250.9	-19.6	0.0	Horz	AV	0.0	50.9	54.0	-3.1	EUT Horz, Mid Ch, 1 Mbps
7440.042	60.4	10.0	3.0	18.0	-19.6	0.0	Vert	AV	0.0	50.8	54.0	-3.2	EUT Horz, High Ch, 1 Mbps
7325.917	60.0	10.3	2.1	256.0	-19.6	0.0	Vert	AV	0.0	50.7	54.0	-3.3	EUT On Side, Mid Ch, 1 Mbps
7439.917	60.7	10.0	2.1	256.0		0.0	Vert	PK	0.0	70.7	74.0	-3.3	EUT On Side, High Ch, 2 Mbps
7440.075	60.1	10.0	3.1	30.9	-19.6	0.0	Vert	AV	0.0	50.5	54.0	-3.5	EUT Horz, High Ch, 2 Mbps
7326.017	60.2	10.3	1.3	250.9		0.0	Horz	PK	0.0	70.5	74.0	-3.5	EUT Horz, Mid Ch, 1 Mbps
7440.042	60.4	10.0	3.0	18.0		0.0	Vert	PK	0.0	70.4	74.0	-3.6	EUT Horz, High Ch, 1 Mbps
7325.917	60.0	10.3	2.1	256.0		0.0	Vert	PK	0.0	70.3	74.0	-3.7	EUT On Side, Mid Ch, 1 Mbps
7440.050	59.7	10.0	2.0	304.9	-19.6	0.0	Horz	AV	0.0	50.1	54.0	-3.9	EUT On Side, High Ch, 2 Mbps
7440.075	60.1	10.0	3.1	30.9		0.0	Vert	PK	0.0	70.1	74.0	-3.9	EUT Horz, High Ch, 2 Mbps
7440.050	59.7	10.0	2.0	304.9		0.0	Horz	PK	0.0	69.7	74.0	-4.3	EUT On Side, High Ch, 2 Mbps
7440.050	58.0	10.0	1.2	196.9	-19.6	0.0	Vert	AV	0.0	48.4	54.0	-5.6	EUT Vert, High Ch, 1 Mbps
2483.500	52.0	-3.8	1.0	156.9		20.0	Horz	PK	0.0	68.2	74.0	-5.8	EUT Horz, High Ch, 2 Mbps
7440.050	58.0	10.0	1.2	196.9		0.0	Vert	PK	0.0	68.0	74.0	-6.0	EUT Vert, High Ch, 1 Mbps
7440.042	57.5	10.0	2.0	196.9	-19.6	0.0	Vert	AV	0.0	47.9	54.0	-6.1	EUT Vert, High Ch, 2 Mbps
7440.042	57.5	10.0	2.0	196.9		0.0	Vert	PK	0.0	67.5	74.0	-6.5	EUT Vert, High Ch, 2 Mbps
2483.658	50.1	-3.8	1.1	92.9		20.0	Vert	PK	0.0	66.3	74.0	-7.7	EUT Vert, High Ch, 2 Mbps
2483.592	49.3	-3.8	4.0	157.9		20.0	Horz	PK	0.0	65.5	74.0	-8.5	EUT Horz, High Ch, 1 Mbps
2483.550	48.6	-3.8	1.1	30.0		20.0	Horz	PK	0.0	64.8	74.0	-9.2	EUT On Side, High Ch, 2 Mbps
2288.200	45.7	-2.9	2.6	177.0		20.0	Horz	PK	0.0	62.8	74.0	-11.2	EUT Horz, High Ch, 1 Mbps
2483.508	46.5	-3.8	1.2	236.9		20.0	Vert	PK	0.0	62.7	74.0	-11.3	EUT On Side, High Ch, 2 Mbps
2483.775	45.8	-3.8	3.2	150.9		20.0	Horz	PK	0.0	62.0	74.0	-12.0	EUT Horz, High Ch, 125kbps
2287.983	44.8	-2.9	1.1	98.0		20.0	Horz	PK	0.0	61.9	74.0	-12.1	EUT Horz, High Ch, 2 Mbps
2483.783	44.3	-3.8	4.0	299.0		20.0	Horz	PK	0.0	60.5	74.0	-13.5	EUT Vert, High Ch, 2 Mbps
2388.350	42.8	-3.5	1.5	76.0		20.0	Horz	PK	0.0	59.3	74.0	-14.7	EUT Horz, Low Ch, 2 Mbps
2389.042	41.6	-3.5	1.5	45.9		20.0	Horz	PK	0.0	58.1	74.0	-15.9	EUT Horz, Low Ch, 1 Mbps
2389.500	41.6	-3.5	1.5	153.9		20.0	Vert	PK	0.0	58.1	74.0	-15.9	EUT Vert, Low Ch, 2 Mbps

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2388.808	41.3	-3.5	1.5	238.0		20.0	Horz	PK	0.0	57.8	74.0	-16.2	EUT Horz, Low Ch, 125 kbps
2387.708	41.2	-3.5	1.5	145.9		20.0	Vert	PK	0.0	57.7	74.0	-16.3	EUT Vert, Low Ch, 1 Mbps
2484.650	41.1	-3.8	1.5	347.9		20.0	Vert	PK	0.0	57.3	74.0	-16.7	EUT Horz, High Ch, 2 Mbps
12401.400	51.4	3.9	1.8	250.0	-19.6	0.0	Vert	AV	0.0	35.7	54.0	-18.3	EUT On Side, High Ch, 1 Mbps
4803.400	52.3	2.8	2.5	354.0	-19.6	0.0	Vert	AV	0.0	35.5	54.0	-18.5	EUT On Side, Low Ch, 1 Mbps
12401.400	51.4	3.9	1.8	250.0		0.0	Vert	PK	0.0	55.3	74.0	-18.7	EUT On Side, High Ch, 1 Mbps
12400.090	50.9	3.9	1.0	264.0	-19.6	0.0	Horz	AV	0.0	35.2	54.0	-18.8	EUT Horz, High Ch, 1 Mbps
12398.790	55.4	-0.7	2.4	264.0	-19.6	0.0	Horz	AV	0.0	35.1	54.0	-18.9	EUT Horz, High Ch, 1 Mbps
4803.400	52.3	2.8	2.5	354.0		0.0	Vert	PK	0.0	55.1	74.0	-18.9	EUT On Side, Low Ch, 1 Mbps
4959.450	51.4	3.1	3.9	94.0	-19.6	0.0	Horz	AV	0.0	34.9	54.0	-19.1	EUT Horz, High Ch, 1 Mbps
12400.090	50.9	3.9	1.0	264.0		0.0	Horz	PK	0.0	54.8	74.0	-19.2	EUT Horz, High Ch, 1 Mbps
12398.790	55.4	-0.7	2.4	264.0		0.0	Horz	PK	0.0	54.7	74.0	-19.3	EUT Horz, High Ch, 1 Mbps
4960.308	51.0	3.1	2.3	33.0	-19.6	0.0	Vert	AV	0.0	34.5	54.0	-19.5	EUT On Side, High Ch, 1 Mbps
4959.450	51.4	3.1	3.9	94.0		0.0	Horz	PK	0.0	54.5	74.0	-19.5	EUT Horz, High Ch, 1 Mbps
4803.650	51.2	2.8	2.4	62.0	-19.6	0.0	Horz	AV	0.0	34.4	54.0	-19.6	EUT Horz, Low Ch, 1 Mbps
4960.308	51.0	3.1	2.3	33.0		0.0	Vert	PK	0.0	54.1	74.0	-19.9	EUT On Side, High Ch, 1 Mbps
12398.830	54.3	-0.7	1.8	257.0	-19.6	0.0	Vert	AV	0.0	34.0	54.0	-20.0	EUT On Side, High Ch, 1 Mbps
4883.450	50.7	2.9	1.5	48.0	-19.6	0.0	Vert	AV	0.0	34.0	54.0	-20.0	EUT On Side, Mid Ch, 1 Mbps
4803.650	51.2	2.8	2.4	62.0		0.0	Horz	PK	0.0	54.0	74.0	-20.0	EUT Horz, Low Ch, 1 Mbps
12398.830	54.3	-0.7	1.8	257.0		0.0	Vert	PK	0.0	53.6	74.0	-20.4	EUT On Side, High Ch, 1 Mbps
4883.450	50.7	2.9	1.5	48.0		0.0	Vert	PK	0.0	53.6	74.0	-20.4	EUT On Side, Mid Ch, 1 Mbps
7439.125	42.6	10.0	1.3	278.0	-19.6	0.0	Horz	AV	0.0	33.0	54.0	-21.0	EUT Horz, High Ch, 125kbps
4883.675	49.4	2.9	1.3	347.0	-19.6	0.0	Horz	AV	0.0	32.7	54.0	-21.3	EUT Horz, Mid Ch, 1 Mbps
12208.910	53.6	-1.3	2.4	261.0	-19.6	0.0	Horz	AV	0.0	32.7	54.0	-21.3	EUT Horz, Mid Ch, 1 Mbps
7439.125	42.6	10.0	1.3	278.0		0.0	Horz	PK	0.0	52.6	74.0	-21.4	EUT Horz, High Ch, 125kbps
4883.675	49.4	2.9	1.3	347.0		0.0	Horz	PK	0.0	52.3	74.0	-21.7	EUT Horz, Mid Ch, 1 Mbps
12208.910	53.6	-1.3	2.4	261.0		0.0	Horz	PK	0.0	52.3	74.0	-21.7	EUT Horz, Mid Ch, 1 Mbps
12008.900	52.7	-1.3	2.5	253.0	-19.6	0.0	Horz	AV	0.0	31.8	54.0	-22.2	EUT Horz, Low Ch, 1 Mbps
12011.380	52.7	-1.3	2.6	163.9	-19.6	0.0	Vert	AV	0.0	31.8	54.0	-22.2	EUT On Side, Low Ch, 1 Mbps
12008.900	52.7	-1.3	2.5	253.0		0.0	Horz	PK	0.0	51.4	74.0	-22.6	EUT Horz, Low Ch, 1 Mbps
12011.380	52.7	-1.3	2.6	163.9		0.0	Vert	PK	0.0	51.4	74.0	-22.6	EUT On Side, Low Ch, 1 Mbps
12208.810	51.7	-1.3	1.8	257.0	-19.6	0.0	Vert	AV	0.0	30.8	54.0	-23.2	EUT On Side, Mid Ch, 1 Mbps
12208.810	51.7	-1.3	1.8	257.0		0.0	Vert	PK	0.0	50.4	74.0	-23.6	EUT On Side, Mid Ch, 1 Mbps
2483.500	52.0	-3.8	1.0	156.9	-19.6	20.0	Horz	AV	0.0	28.6	54.0	-25.4	EUT Horz, High Ch, 2 Mbps
2483.658	50.1	-3.8	1.1	92.9	-19.6	20.0	Vert	AV	0.0	26.7	54.0	-27.3	EUT Vert, High Ch, 2 Mbps
2483.592	49.3	-3.8	4.0	157.9	-19.6	20.0	Horz	AV	0.0	25.9	54.0	-28.1	EUT Horz, High Ch, 1 Mbps
2483.550	48.6	-3.8	1.1	30.0	-19.6	20.0	Horz	AV	0.0	25.2	54.0	-28.8	EUT On Side, High Ch, 2 Mbps
2288.200	45.7	-2.9	2.6	177.0	-19.6	20.0	Horz	AV	0.0	23.2	54.0	-30.8	EUT Horz, High Ch, 1 Mbps
2483.508	46.5	-3.8	1.2	236.9	-19.6	20.0	Vert	AV	0.0	23.1	54.0	-30.9	EUT On Side, High Ch, 2 Mbps
2483.775	45.8	-3.8	3.2	150.9	-19.6	20.0	Horz	AV	0.0	22.4	54.0	-31.6	EUT Horz, High Ch, 125kbps
2287.983	44.8	-2.9	1.1	98.0	-19.6	20.0	Horz	AV	0.0	22.3	54.0	-31.7	EUT Horz, High Ch, 2 Mbps

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.783	44.3	-3.8	4.0	299.0	-19.6	20.0	Horz	AV	0.0	20.9	54.0	-33.1	EUT Vert, High Ch, 2 Mbps
2388.350	42.8	-3.5	1.5	76.0	-19.6	20.0	Horz	AV	0.0	19.7	54.0	-34.3	EUT Horz, Low Ch, 2 Mbps
2389.042	41.6	-3.5	1.5	45.9	-19.6	20.0	Horz	AV	0.0	18.5	54.0	-35.5	EUT Horz, Low Ch, 1 Mbps
2389.500	41.6	-3.5	1.5	153.9	-19.6	20.0	Vert	AV	0.0	18.5	54.0	-35.5	EUT Vert, Low Ch, 2 Mbps
2388.808	41.3	-3.5	1.5	238.0	-19.6	20.0	Horz	AV	0.0	18.2	54.0	-35.8	EUT Horz, Low Ch, 125 kbps
2387.708	41.2	-3.5	1.5	145.9	-19.6	20.0	Vert	AV	0.0	18.1	54.0	-35.9	EUT Vert, Low Ch, 1 Mbps
2484.650	41.1	-3.8	1.5	347.9	-19.6	20.0	Vert	AV	0.0	17.7	54.0	-36.3	EUT Horz, High Ch, 2 Mbps

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	SLATESAFETY BAND V2	Work Order:	FITY0001
Serial Number:	6563	Date:	2022-07-21
Customer:	FireHUD Inc. DBA SlateSafety	Temperature:	20.8°C
Attendees:	None	Relative Humidity:	53.5%
Customer Project:	N/A	Bar. Pressure (PMSL):	1013 mb
Tested By:	Chris Patterson	Job Site:	MN05
Power:	Battery	Configuration:	FITY0001-5

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2022	ANSI C63.10:2013

TEST PARAMETERS

Run #:	55	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

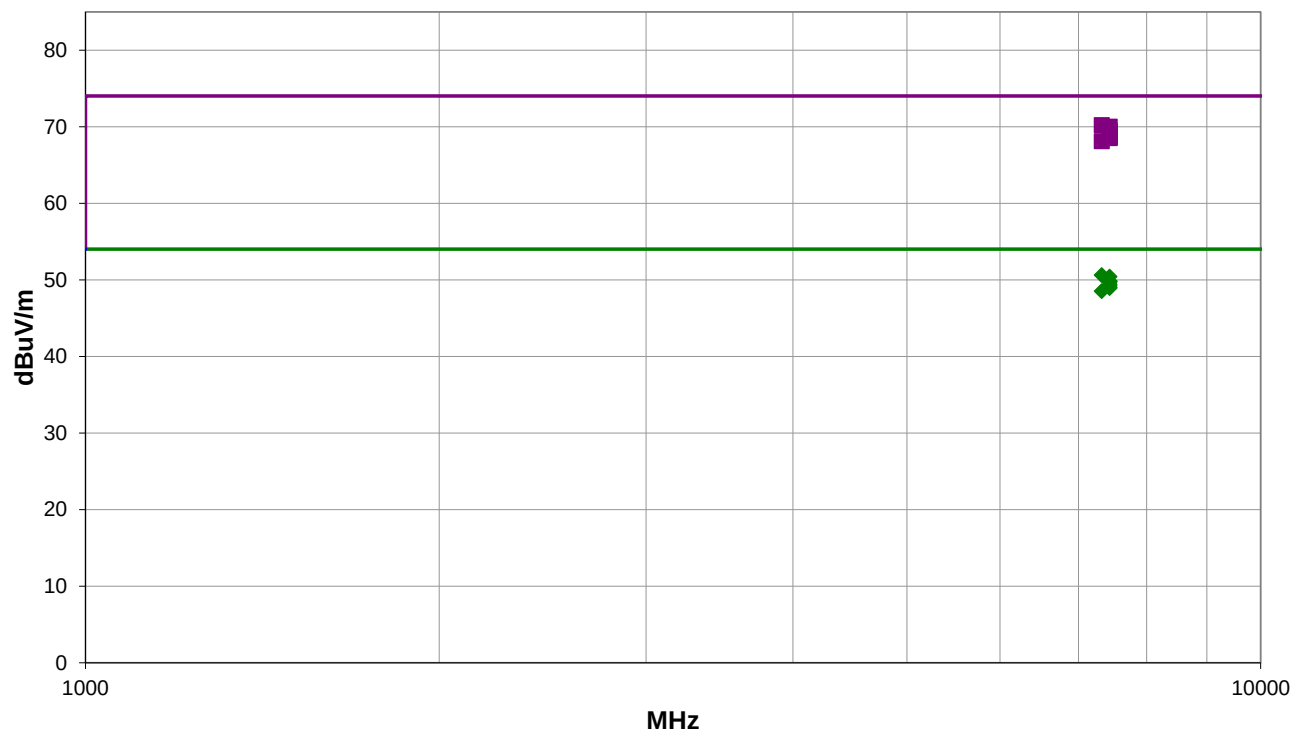
Battery mode spot checks. AC Charger and cable removed. Power setting -4 for 1 and 2 Mbps, -12 for 125kbps. Test mode is 59% for 125kbps, 16.8% for 1 Mbps, and 10.8% for 2 Mbps. Ferrite 742 711 42 on programming connector. In the field, device will be limited to 1.14% duty cycle. Peak measurements were taken, average measurements were calculated by subtracting $20 \cdot \log(\text{duty cycle})$ per KDB 558074.

EUT OPERATING MODES

Transmitting BLE Low, Mid, and High Chs (2402, 2442, and 2480 MHz), 1 Mbps, 2 Mbps, and 125kbps.

DEVIATIONS FROM TEST STANDARD

None



Run #: 55

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #55

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	DCCF (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7325.925	58.9	11.3	2.26	350.0	3.0	-19.6	Vert	AV	0.0	50.6	54.0	-3.4	EUT On Side, Mid Ch, 1 Mbps
7440.017	58.2	11.8	3.21	9.0	3.0	-19.6	Vert	AV	0.0	50.4	54.0	-3.6	EUT Horz, High Ch, 2 Mbps
7325.925	58.9	11.3	2.26	350.0	3.0	0.0	Vert	PK	0.0	70.2	74.0	-3.8	EUT On Side, Mid Ch, 1 Mbps
7440.017	58.2	11.8	3.21	9.0	3.0	0.0	Vert	PK	0.0	70.0	74.0	-4.0	EUT Horz, High Ch, 2 Mbps
7440.067	57.6	11.8	2.12	204.9	3.0	-19.6	Vert	AV	0.0	49.8	54.0	-4.2	EUT On Side, High Ch, 2 Mbps
7439.917	57.6	11.8	2.3	103.9	3.0	-19.6	Horz	AV	0.0	49.8	54.0	-4.2	EUT Vert, High Ch, 1 Mbps
7440.200	57.5	11.8	2.24	279.9	3.0	-19.6	Horz	AV	0.0	49.7	54.0	-4.3	EUT Vert, High Ch, 2 Mbps
7440.067	57.6	11.8	2.12	204.9	3.0	0.0	Vert	PK	0.0	69.4	74.0	-4.6	EUT On Side, High Ch, 2 Mbps
7439.917	57.6	11.8	2.3	103.9	3.0	0.0	Horz	PK	0.0	69.4	74.0	-4.6	EUT Vert, High Ch, 1 Mbps
7439.967	57.2	11.8	2.19	73.0	3.0	-19.6	Vert	AV	0.0	49.4	54.0	-4.6	EUT Vert, High Ch, 2 Mbps
7440.200	57.5	11.8	2.24	279.9	3.0	0.0	Horz	PK	0.0	69.3	74.0	-4.7	EUT Vert, High Ch, 2 Mbps
7439.983	57.0	11.8	1.12	156.0	3.0	-19.6	Horz	AV	0.0	49.2	54.0	-4.8	EUT Horz, High Ch, 2 Mbps
7439.967	57.2	11.8	2.19	73.0	3.0	0.0	Vert	PK	0.0	69.0	74.0	-5.0	EUT Vert, High Ch, 2 Mbps
7440.108	56.8	11.8	3.59	247.9	3.0	-19.6	Vert	AV	0.0	49.0	54.0	-5.0	EUT On Side, High Ch, 1 Mbps
7439.883	56.7	11.8	3.75	157.9	3.0	-19.6	Horz	AV	0.0	48.9	54.0	-5.1	EUT On Side, High Ch, 2 Mbps
7439.983	57.0	11.8	1.12	156.0	3.0	0.0	Horz	PK	0.0	68.8	74.0	-5.2	EUT Horz, High Ch, 2 Mbps
7440.108	56.8	11.8	3.59	247.9	3.0	0.0	Vert	PK	0.0	68.6	74.0	-5.4	EUT On Side, High Ch, 1 Mbps
7439.883	56.7	11.8	3.75	157.9	3.0	0.0	Horz	PK	0.0	68.5	74.0	-5.5	EUT On Side, High Ch, 2 Mbps
7326.025	56.8	11.3	2.58	250.9	3.0	-19.6	Horz	AV	0.0	48.5	54.0	-5.5	EUT Horz, Mid Ch, 1 Mbps
7326.025	56.8	11.3	2.58	250.9	3.0	0.0	Horz	PK	0.0	68.1	74.0	-5.9	EUT Horz, Mid Ch, 1 Mbps

CONCLUSION

Pass



Tested By

End of Test Report