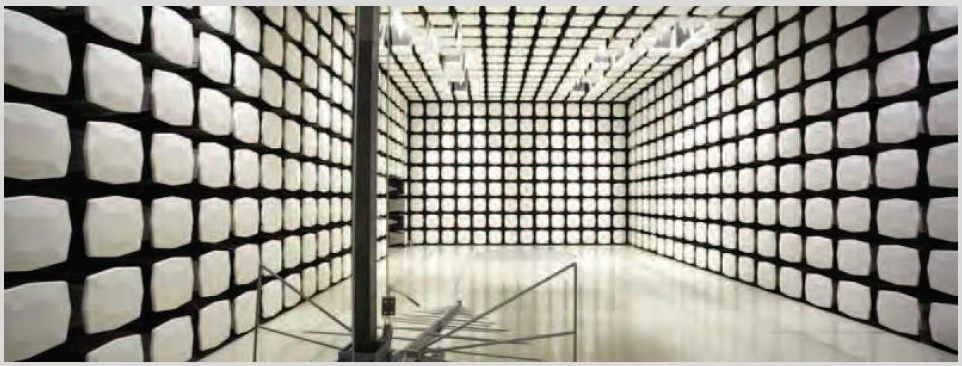
Polaris Industries, Inc.

7 Inch Snow, RC-7W

FCC 15.247:2020

902 - 928 MHz FHSS Transceiver

Report: POLR0070.4, Issue Date: July 10, 2020



NVLAP LAB CODE: 200630-0

CERTIFICATE OF TEST

Last Date of Test: April 29, 2020
Polaris Industries, Inc.
EUT: 7 Inch Snow, RC-7W

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2020	ANSI C63.10:2013, KDB 558074

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions (Transmitter)	No	N/A	Not required for a vehicle powered product
6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
7.5	Duty Cycle	Yes	N/A	
7.8.2	Carrier Frequency Separation	Yes	Pass	
7.8.3	Number of Hopping Frequencies	Yes	Pass	
7.8.4	Dwell Time	Yes	Pass	
7.8.5	Output Power	Yes	Pass	
7.8.5	Equivalent Isotropic Radiated Power	Yes	Pass	
7.8.6	Band Edge Compliance	Yes	Pass	
7.8.6	Band Edge Compliance - Hopping Mode	Yes	Pass	
7.8.7	Occupied Bandwidth	Yes	Pass	
7.8.8	Spurious Conducted Emissions	Yes	Pass	
11.10.2	Power Spectral Density	No	N/A	Not required for FHSS devices.

Deviations From Test Standards

None

Approved By:

Kyle Holgate, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY

Revision Number	Description	Date (yyyy-mm-dd)	Page Number
00	None		

ACCREDITATIONS AND AUTHORIZATIONS

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC 17065 as a product certifier. This allows Element to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

European Union

European Commission – Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIT / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFCA – Recognized by OFCA as a CAB for the acceptance of test data.

Vietnam

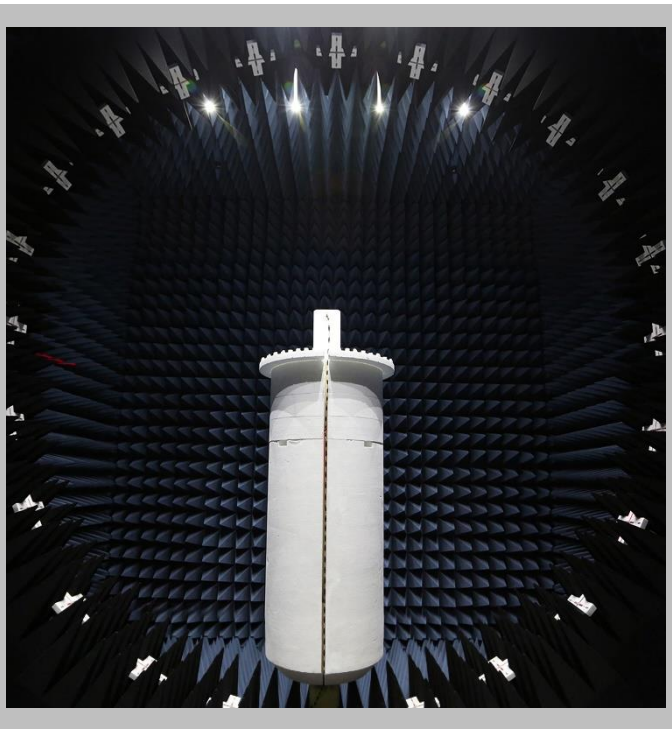
MIC – Recognized by MIC as a CAB for the acceptance of test data.

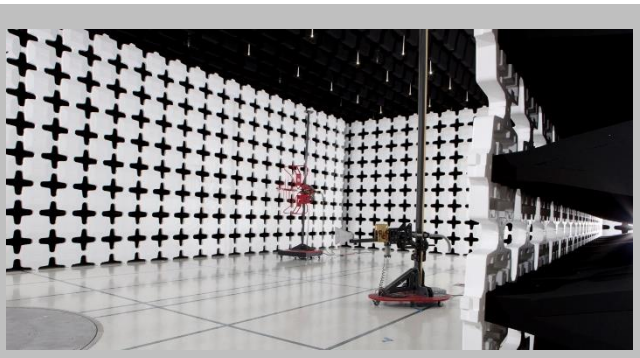
SCOPE

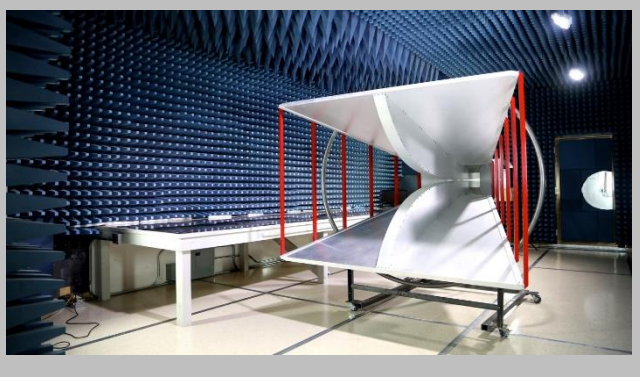
For details on the Scopes of our Accreditations, please visit:
https://www.nwemc.com/emc-testing-accreditations

FACILITIES

California	Minnesota	Oregon	Texas	Washington
Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP				
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Innovation, Science and Economic Development Canada				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
BSMI				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI				
A-0029	A-0109	A-0108	A-0201	A-0110
Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
US0158	US0175	US0017	US0191	US0157







MEASUREMENT UNCERTAINTY

element
TMU.2015.07.10

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

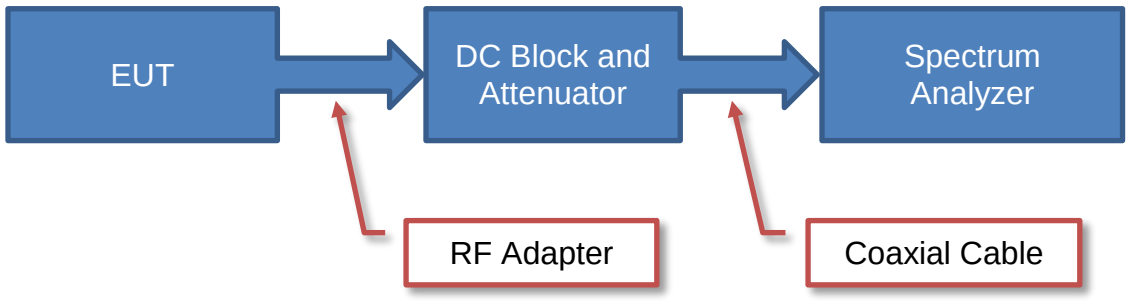
A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

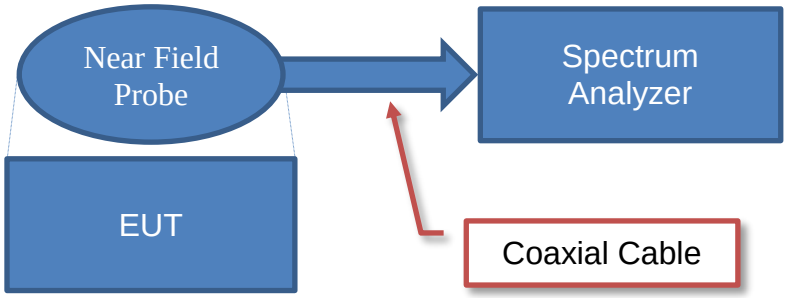
Test	+ MU	- MU
Frequency Accuracy	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	2.6 dB	-2.6 dB

Test Setup Block Diagrams

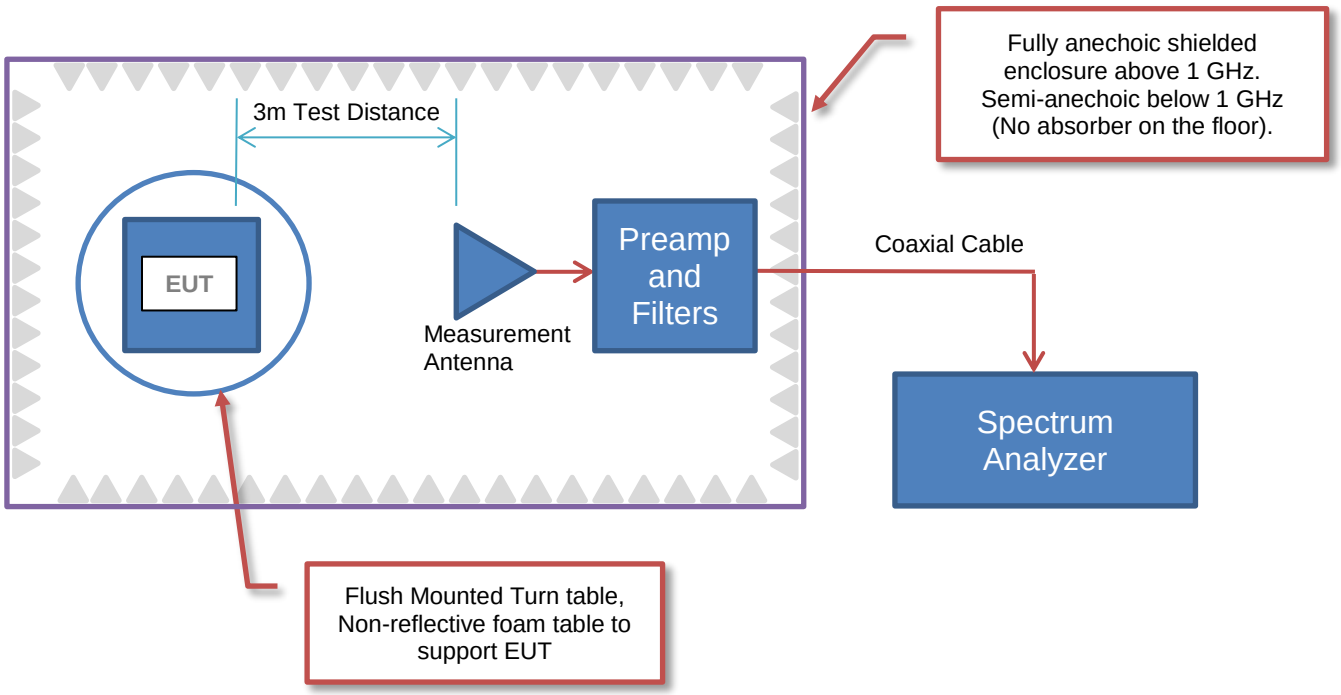
Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	Polaris Industries, Inc.
Address:	7290 E. Viking Blvd.
City, State, Zip:	Wyoming, MN 55092
Test Requested By:	Travis Chambers
EUT:	7 Inch Snow, RC-7W
First Date of Test:	April 20, 2020
Last Date of Test:	April 29, 2020
Receipt Date of Samples:	April 14, 2020
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

The Polaris RC-7W display and navigation unit is mounted on the dash of snowmobiles. The display runs the Linux operating system using an NXP iMX6 quad-core microprocessor. It is equipped with a high-brightness 800x480 pixel LCD display and is powered from the vehicle's electrical system. Vehicle information is acquired and displayed on the display. Connection to the vehicle's CAN bus and various analog sensors provide the vehicle information. The display contains the Texas Instruments (TI) CC2564MODNCMOER certified Bluetooth module and the TI WL1837MODGIMOCR certified Bluetooth/WiFi module. These radios are used to communicate to the user's phone or headset and to connect to cloud-based services. Both Bluetooth transceivers can operate in Classic and LE modes of operation. The WiFi band use only the 2.4GHz band. The display contains a Polaris proprietary Vehicle-to-Vehicle radio. This communicates vehicle position and status messages among a ride group of similarly equipped vehicles. The radio is a 915MHz band frequency-hopping spreadspectrum design. The power level and frequency hop sequence is programmable to comply with the political locale. For example, in the United States, channels between 902.5MHz and 927.5 are used at a power level of 30dBi. In the EU market, the function is not activated. The transceiver is comprised of a Semtech SX1276 with LNA/PA provided by the Skyworks SE2435L. The modulation scheme is LoRa digital modulation. Max data rate is 125kHz and maximum transmit time is 400mS. The vehicle-to-vehicle transceiver uses external mounted antenna (Laird DS-B806896). The device will also contain a GPS receiver. A GNSS receiver based on the Telit SE868-V3 module is used for navigational and time-keeping functions. The antenna for this function is external to the display. The display will be powered by the vehicles rechargeable battery and the radios can transmit while the battery is recharging.

Testing Objective:

Seeking to demonstrate compliance under FCC 15.247:2020 for operation in the 902 - 928 MHz Band.

CONFIGURATIONS

Configuration POLR0070- 3

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Vehicle Display	Polaris Industries, Inc.	RC-7W	20093F0001

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
DC Power Supply	Dr. Meter	PS-305DM	190204661
V2V Antenna	Laird	Unknown	Unknown
GPS Antenna	Polaris Industries, Inc.	Unknown	Unknown

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	Precision 7530	35569950878

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Ethernet	No	5.0 m	No	Ethernet to USB	Laptop
Ethernet to USB	Yes	0.3 m	No	Vehicle Display	Ethernet
AC Power	No	1.8 m	No	AC Mains	DC Power Supply
V2V Antenna Cable	Yes	4.0 m	No	Vehicle Display	V2V Antenna
GPS Antenna Cable	Yes	0.4 m	No	Vehicle Display	GPS Antenna
DC Power Leads	No	1.5 m	No	Vehicle Display	DC Power Supply

CONFIGURATIONS

Configuration POLR0070- 6

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Vehicle Display	Polaris Industries, Inc.	RC-7W	20093F0005

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	Precision 7530	35569950878

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Switching Power Supply	LINKSYS	AD12V/0.5A-SW	ENG-07-09-F2291
Wireless G Broadband Router	LINKSYS	WRT546	CDFG1GC83032

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Power Cable (router)	No	1.8 m	No	Switching Power Supply	Wireless G Broadband Router
DC Power Cable (Vehicle Display)	No	0.8 m	No	DC Power Leads	Vehicle Display
DC Power Leads	No	0.7 m	No	DC Power Cable (Vehicle Display)	DC Supply
Ethernet	No	1.0 m	No	Laptop	Gigabit Ethernet Adapter
Ethernet to USB	No	0.3 m	No	Vehicle Display	Ethernet

CONFIGURATIONS

Configuration POLR0070- 8

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Vehicle Display	Polaris	RC-7W	20093F0005

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	Precision 7530	35569950878

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Power Cable (Vehicle Display)	No	0.8 m	No	DC Power Leads	Vehicle Display
DC Power Leads	No	0.7 m	No	DC Power Cable (Vehicle Display)	DC Supply
Ethernet	No	1.0 m	No	Laptop	Gigabit Ethernet Adapter
Ethernet to USB	No	0.3 m	No	Vehicle Display	Ethernet

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2020-04-20	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2020-04-28	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	2020-04-29	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2020-04-29	Carrier Frequency Separation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	2020-04-29	Number of Hopping Frequencies	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	2020-04-29	Dwell Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	2020-04-29	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2020-04-29	Equivalent Isotropic Radiated Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
9	2020-04-29	Band Edge Compliance - Hopping Mode	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
10	2020-04-29	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
11	2020-04-29	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

SPURIOUS RADIATED EMISSIONS

PSA-ESCI 2020.04.03.0

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Continuous transmit LoRa, modulated, low channel 902.4 MHz, mid channel, 915.4 MHz, high channel 927.6 MHz.

POWER SETTINGS INVESTIGATED

12VDC

CONFIGURATIONS INVESTIGATED

POLR0070 - 3

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	12400 MHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Filter - High Pass	Micro-Tronics	HPM50108	HFV	2019-11-18	12 mo
Filter - Low Pass	Micro-Tronics	LPM50003	LFB	2020-02-15	12 mo
Filter - Low Pass	Micro-Tronics	LPM50004	LFD	2020-02-15	12 mo
Attenuator	Coaxicom	3910-10	AWX	2020-02-15	12 mo
Attenuator	Coaxicom	3910-20	AXZ	2020-02-15	12 mo
Cable	None	Standard Gain Horns Cable	EVF	2019-11-19	12 mo
Cable	N/A	Double Ridge Horn Cables	EVB	2019-11-18	12 mo
Cable	N/A	Bilog Cables	EVA	2019-11-18	12 mo
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-08001200-30-10P	PAO	2019-11-19	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2019-11-18	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AOL	2019-11-18	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	NCR	0 mo
Antenna - Double Ridge	EMCO	3115	AHC	2018-07-02	24 mo
Antenna - Biconilog	Teseq	CBL 6141B	AXR	2018-10-02	24 mo
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFI	2019-12-13	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

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.

Measurements at the edges of the allowable band may be presented in an alternative method as provided for in the ANSI C63.10 Marker-Delta method. This method involves performing an in-band fundamental measurement followed by a screen capture of the fundamental and out-of-band emission using reduced measurement instrumentation bandwidths. The amplitude delta measured on this screen capture is applied to the fundamental emission value to show the out-of-band emission level as applied to the limit.

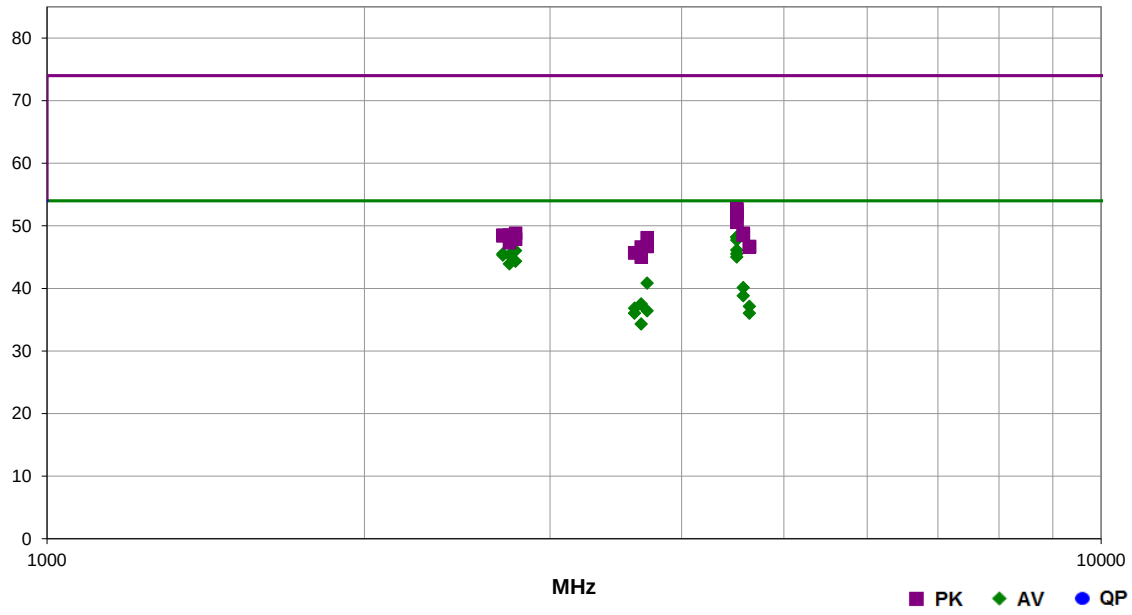
SPURIOUS RADIATED EMISSIONS

EmiR5 2019.08.15.1 PSA-ESCI 2020.04.03.0

Work Order:	POLR0070	**Date:**	2020-04-20		
Project:	None	**Temperature:**	23.6 °C		
Job Site:	EV01	**Humidity:**	38.2% RH		
Serial Number:	20093F0001	**Barometric Pres.:**	1022 mbar	**Tested by:**	Cole Ghizzone
EUT:	7 Inch Snow, RC-7W				
Configuration:	3				
Customer:	Polaris Industries, Inc.				
Attendees:	None				
EUT Power:	12VDC				
Operating Mode:	Continuous transmit LoRa, modulated, low channel 902.4 MHz, mid channel, 915.4 MHz, high channel 927.6 MHz.				
Deviations:	None				
Comments:	See data comments for EUT orientation. The EUT transmits at a duty cycle of 95.1%. A duty cycle correction factor of 10*log(1/DC) = 10*log(1/0.951) = 0.22 dB was added to the AVG measurements.				

Test Specifications	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

Run #	170	**Test Distance (m)**	3	**Antenna Height(s)**	1 to 4(m)	**Results**	Pass



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4512.000	43.0	5.0	2.2	141.0	0.2	0.0	Vert	AV	0.0	48.2	54.0	-5.8	Low channel, EUT Vertical
4511.992	42.9	5.0	2.5	136.0	0.2	0.0	Horz	AV	0.0	48.1	54.0	-5.9	Low channel, EUT Vertical
4512.008	42.5	5.0	1.8	185.0	0.2	0.0	Horz	AV	0.0	47.7	54.0	-6.3	Low channel, EUT Vertical
4512.025	40.9	5.0	2.5	139.0	0.2	0.0	Horz	AV	0.0	46.1	54.0	-7.9	Low channel, EUT Horizontal
2782.858	48.0	-2.2	1.0	93.0	0.2	0.0	Horz	AV	0.0	46.0	54.0	-8.0	High channel, EUT Vertical
4512.025	40.3	5.0	1.5	248.0	0.2	0.0	Vert	AV	0.0	45.5	54.0	-8.5	Low channel, EUT On Side
2707.250	47.9	-2.6	1.1	249.0	0.2	0.0	Vert	AV	0.0	45.5	54.0	-8.5	Low channel, EUT Vertical
2707.217	47.7	-2.6	1.1	274.0	0.2	0.0	Horz	AV	0.0	45.3	54.0	-8.7	Low channel, EUT Vertical
2746.200	47.5	-2.4	1.1	86.0	0.2	0.0	Horz	AV	0.0	45.3	54.0	-8.7	Mid channel, EUT Vertical
4512.025	39.8	5.0	3.9	0.0	0.2	0.0	Vert	AV	0.0	45.0	54.0	-9.0	Low channel, EUT Horizontal
2782.850	46.3	-2.2	1.5	237.0	0.2	0.0	Vert	AV	0.0	44.3	54.0	-9.7	High channel, EUT Vertical
2746.275	46.1	-2.4	1.3	239.0	0.2	0.0	Vert	AV	0.0	43.9	54.0	-10.1	Mid channel, EUT Vertical
3710.408	36.7	3.9	3.0	163.0	0.2	0.0	Vert	AV	0.0	40.8	54.0	-13.2	High channel, EUT Vertical
4576.975	34.9	5.0	2.3	143.0	0.2	0.0	Horz	AV	0.0	40.1	54.0	-13.9	Mid channel, EUT Vertical
4576.942	33.6	5.0	1.2	174.0	0.2	0.0	Vert	AV	0.0	38.8	54.0	-15.2	Mid channel, EUT Vertical
3661.608	33.7	3.6	3.3	165.0	0.2	0.0	Vert	AV	0.0	37.5	54.0	-16.5	Mid channel, EUT Vertical
4638.000	31.9	5.0	2.4	235.0	0.2	0.0	Horz	AV	0.0	37.1	54.0	-16.9	High channel, EUT Vertical
3609.608	33.4	3.2	1.8	81.0	0.2	0.0	Horz	AV	0.0	36.8	54.0	-17.2	Low channel, EUT Vertical
3710.408	32.3	3.9	2.0	10.0	0.2	0.0	Horz	AV	0.0	36.4	54.0	-17.6	High channel, EUT Vertical
3609.575	32.6	3.2	1.6	213.0	0.2	0.0	Vert	AV	0.0	36.0	54.0	-18.0	Low channel, EUT Vertical
4637.992	30.8	5.0	1.5	180.0	0.2	0.0	Vert	AV	0.0	36.0	54.0	-18.0	High channel, EUT Vertical
3661.642	30.5	3.6	1.5	13.0	0.2	0.0	Horz	AV	0.0	34.3	54.0	-19.7	Mid channel, EUT Vertical

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4512.200	47.7	5.0	2.5	136.0	0.0	0.0	Horz	PK	0.0	52.7	74.0	-21.3	Low channel, EUT Vertical
4512.317	47.6	5.0	2.2	141.0	0.0	0.0	Vert	PK	0.0	52.6	74.0	-21.4	Low channel, EUT Vertical
4511.783	47.2	5.0	1.8	185.0	0.0	0.0	Horz	PK	0.0	52.2	74.0	-21.8	Low channel, EUT On Side
4512.392	46.8	5.0	2.5	139.0	0.0	0.0	Horz	PK	0.0	51.8	74.0	-22.2	Low channel, EUT Horizontal
4512.067	45.8	5.0	3.9	0.0	0.0	0.0	Vert	PK	0.0	50.8	74.0	-23.2	Low channel, EUT Horizontal
4512.217	45.6	5.0	1.5	248.0	0.0	0.0	Vert	PK	0.0	50.6	74.0	-23.4	Low channel, EUT On Side
4577.200	43.8	5.0	2.3	143.0	0.0	0.0	Horz	PK	0.0	48.8	74.0	-25.2	Mid channel, EUT Vertical
2782.625	51.0	-2.2	1.0	93.0	0.0	0.0	Horz	PK	0.0	48.8	74.0	-25.2	High channel, EUT Vertical
2707.250	51.1	-2.6	1.1	249.0	0.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	Low channel, EUT Vertical
2746.175	50.9	-2.4	1.1	86.0	0.0	0.0	Horz	PK	0.0	48.5	74.0	-25.5	Mid channel, EUT Vertical
4576.700	43.5	5.0	1.2	174.0	0.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	Mid channel, EUT Vertical
2707.458	51.0	-2.6	1.1	274.0	0.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	Low channel, EUT Vertical
3710.458	44.2	3.9	3.0	163.0	0.0	0.0	Vert	PK	0.0	48.1	74.0	-25.9	High channel, EUT Vertical
2782.858	50.1	-2.2	1.5	237.0	0.0	0.0	Vert	PK	0.0	47.9	74.0	-26.1	High channel, EUT Vertical
2746.317	49.7	-2.4	1.3	239.0	0.0	0.0	Vert	PK	0.0	47.3	74.0	-26.7	Mid channel, EUT Vertical
4638.175	41.7	5.0	1.5	180.0	0.0	0.0	Vert	PK	0.0	46.7	74.0	-27.3	High channel, EUT Vertical
3710.225	42.8	3.9	2.0	10.0	0.0	0.0	Horz	PK	0.0	46.7	74.0	-27.3	High channel, EUT Vertical
3661.558	43.0	3.6	3.3	165.0	0.0	0.0	Vert	PK	0.0	46.6	74.0	-27.4	Mid channel, EUT Vertical
4637.917	41.6	5.0	2.4	235.0	0.0	0.0	Horz	PK	0.0	46.6	74.0	-27.4	High channel, EUT Vertical
3609.758	42.5	3.2	1.8	81.0	0.0	0.0	Horz	PK	0.0	45.7	74.0	-28.3	Low channel, EUT Vertical
3609.692	42.5	3.2	1.6	213.0	0.0	0.0	Vert	PK	0.0	45.7	74.0	-28.3	Low channel, EUT Vertical
3661.800	41.4	3.6	1.5	13.0	0.0	0.0	Horz	PK	0.0	45.0	74.0	-29.0	Mid channel, EUT Vertical

DUTY CYCLE

XMit 2020.03.25.0

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
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21

TEST DESCRIPTION

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the measurement during the burst duration.

DUTY CYCLE

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	7 Inch Snow, RC-7W			**Work Order:**	POLR0070
Serial Number:	20093F0005			**Date:**	29-Apr-20
Customer:	Polaris Industries, Inc.			**Temperature:**	21.9 °C
Attendees:	None			**Humidity:**	45.9% RH
Project:	None			**Barometric Pres.:**	1017 mbar
Tested by:	Jeff Alcoke and Kam Robertson	**Power:**	14 VDC	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable

DEVIATIONS FROM TEST STANDARD

None

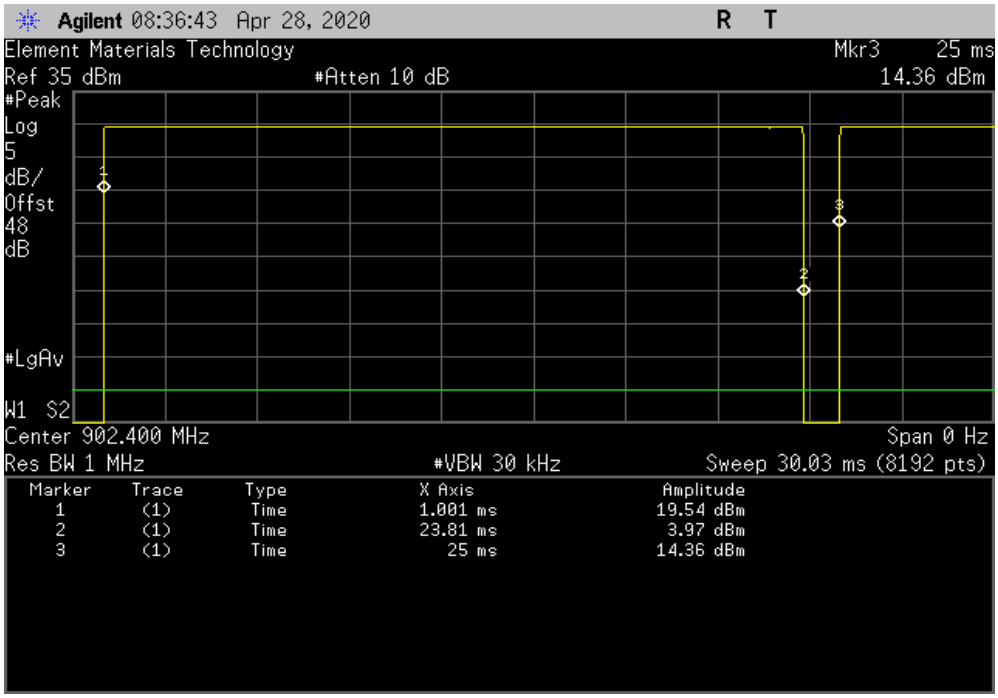
Configuration #	8	Signature

	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
FSK, Single Channel						
Low Channel, 902.4 MHz	22.813 ms	23.998 ms	1	95.1	N/A	N/A
Low Channel, 902.4 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel, 915.4 MHz	22.817 ms	23.998 ms	1	95.1	N/A	N/A
Mid Channel, 915.4 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel, 927.6 MHz	22.821 ms	24.005 ms	1	95.1	N/A	N/A
High Channel, 927.6 MHz	N/A	N/A	5	N/A	N/A	N/A

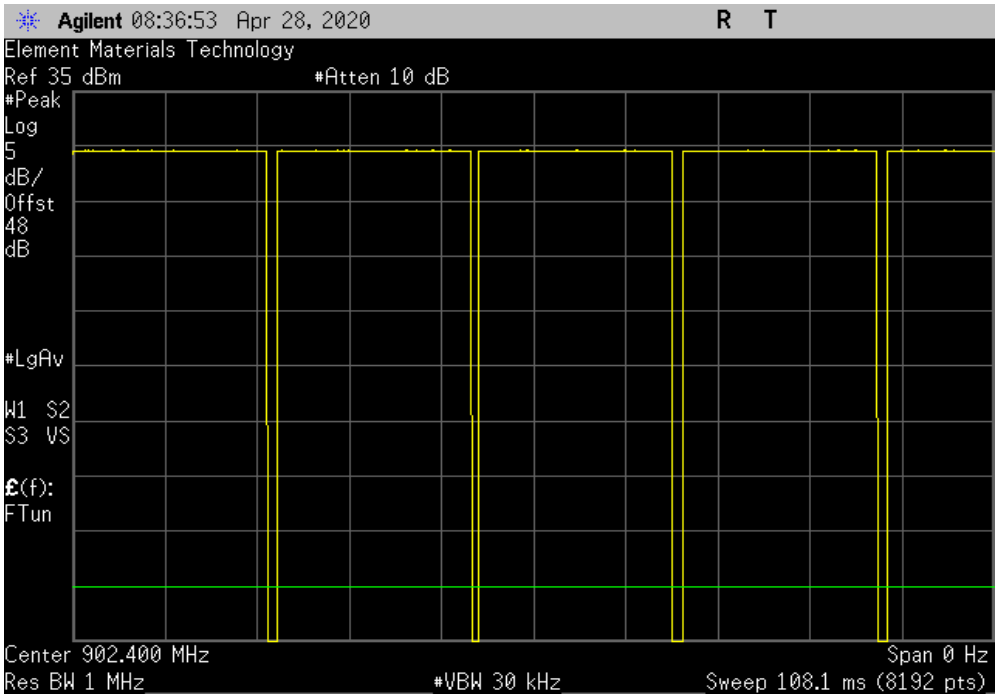
DUTY CYCLE

TbtTx 2019.08.30.0 XMit 2020.03.25.0

FSK, Single Channel, Low Channel, 902.4 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	22.813 ms	23.998 ms	1	95.1	N/A	N/A

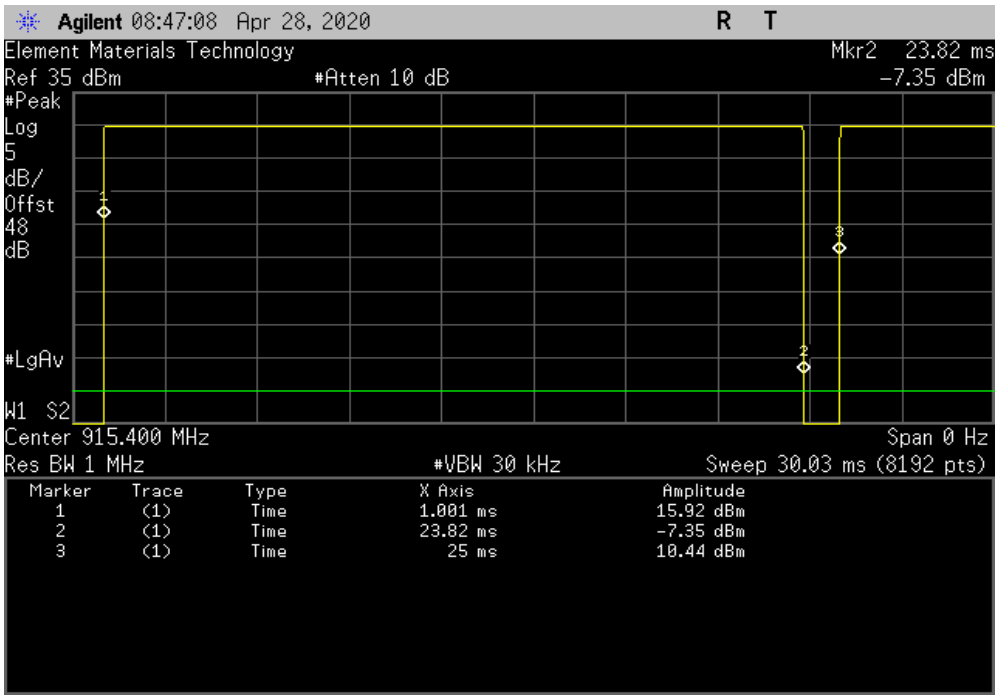


FSK, Single Channel, Low Channel, 902.4 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

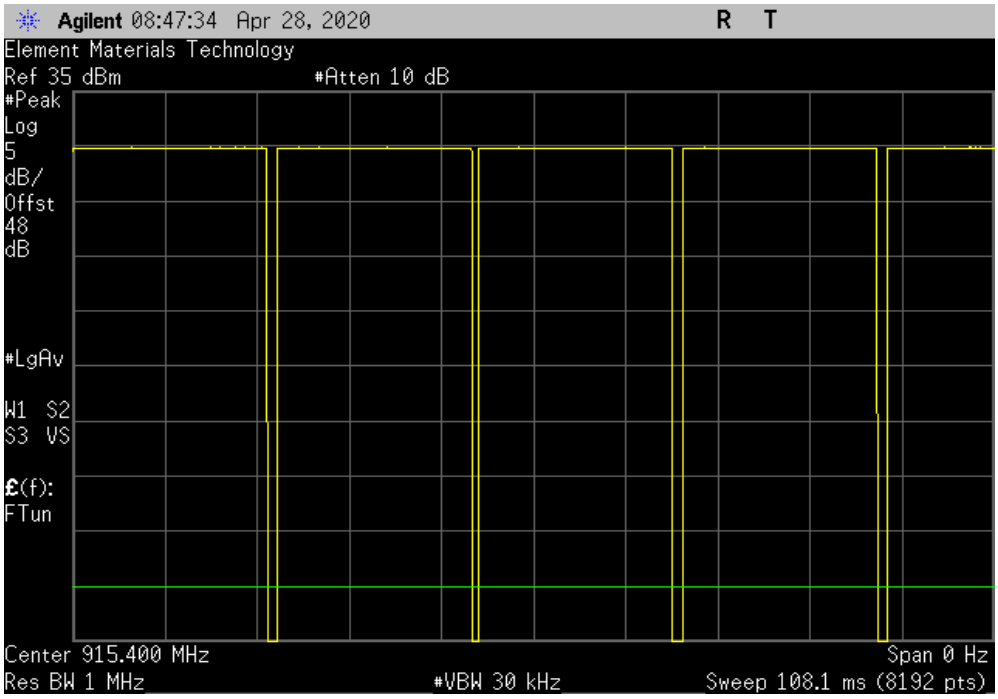


DUTY CYCLE

FSK, Single Channel, Mid Channel, 915.4 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	22.817 ms	23.998 ms	1	95.1	N/A	N/A



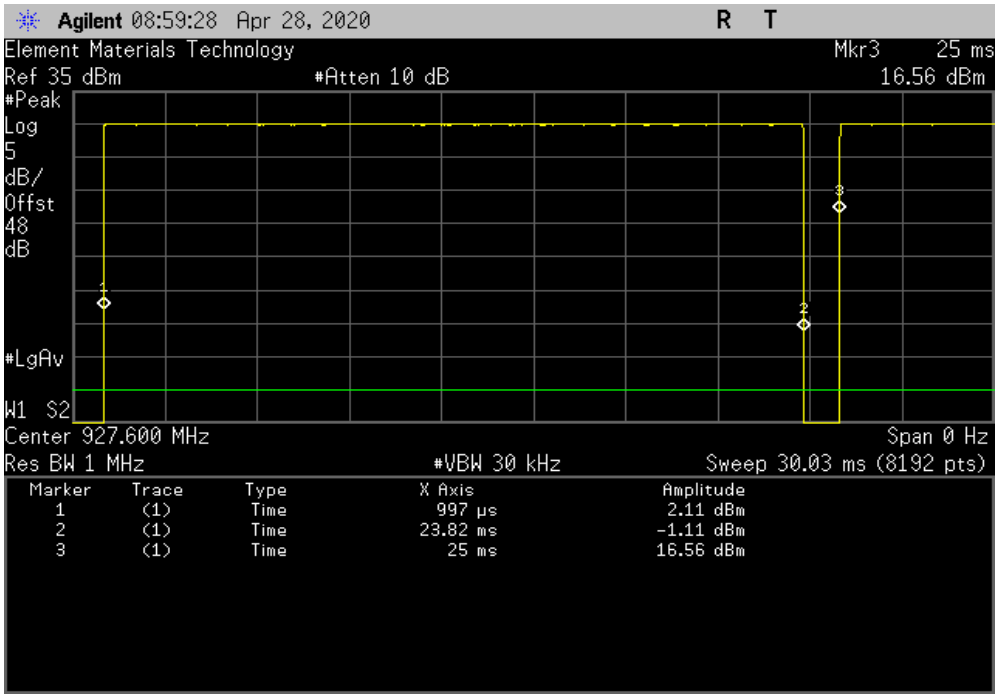
FSK, Single Channel, Mid Channel, 915.4 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



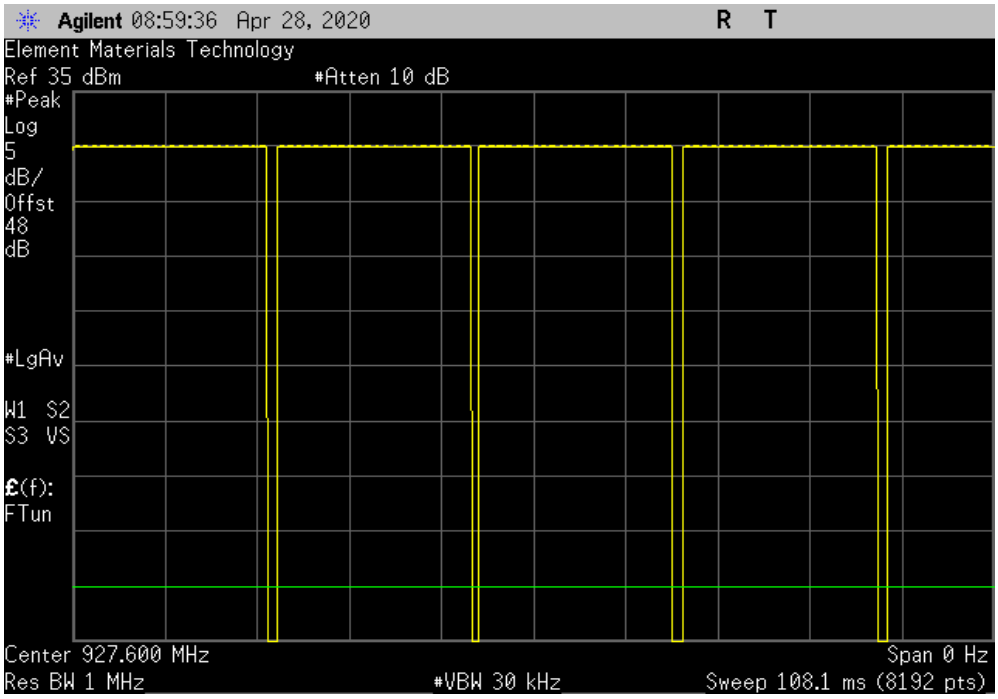
DUTY CYCLE

TbtTx 2019.08.30.0 XMit 2020.03.25.0

FSK, Single Channel, High Channel, 927.6 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	22.821 ms	24.005 ms	1	95.1	N/A	N/A



FSK, Single Channel, High Channel, 927.6 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



CARRIER FREQUENCY SEPARATION

XMit 2020.03.25.0

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
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21

TEST DESCRIPTION

The channel carrier frequencies in the 902-928 MHz band must be separated by 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater. The EUT was operated in pseudorandom hopping mode. The spectrum was scanned across two adjacent peaks. The separation between the peaks of these channels was measured.

CARRIER FREQUENCY SEPARATION

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	7 Inch Snow, RC-7W			**Work Order:**	POLR0070
Serial Number:	20093F0005			**Date:**	29-Apr-20
Customer:	Polaris Industries, Inc.			**Temperature:**	21.9 °C
Attendees:	None			**Humidity:**	45.9% RH
Project:	None			**Barometric Pres.:**	1017 mbar
Tested by:	Jeff Alcoke and Kam Robertson	**Power:**	14 VDC	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable. The limit of 0.145 MHz is the 20 dB bandwidth of the hopping channel with the largest measured value.

DEVIATIONS FROM TEST STANDARD

None

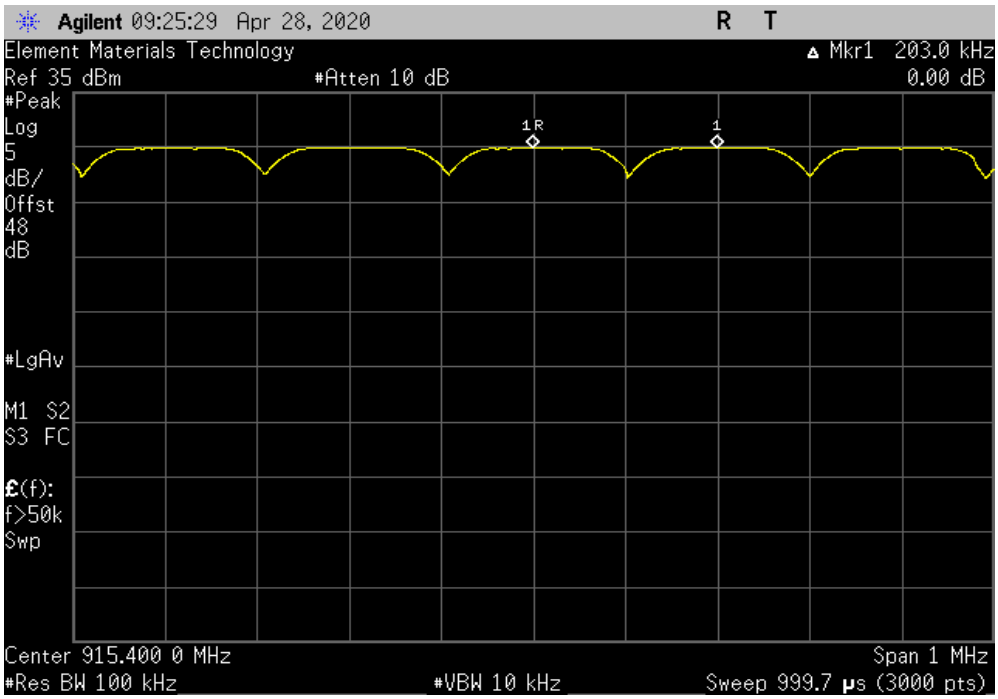
Configuration #	8	Signature

	Value	Limit (≥)	Results
FSK, Hopping Mode			
Mid Channel, 915.4 MHz	0.2 MHz	0.145 MHz	Pass

CARRIER FREQUENCY SEPARATION

TbtTx 2019.08.30.0 XMit 2020.03.25.0

FSK, Hopping Mode, Mid Channel, 915.4 MHz						
				Value	Limit (≥)	Results
				0.2 MHz	0.145 MHz	Pass



NUMBER OF HOPPING FREQUENCIES

XMit 2020.03.25.0

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	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21

TEST DESCRIPTION

The number of hopping frequencies was measured across the authorized band. The hopping function of the EUT was enabled.

NUMBER OF HOPPING FREQUENCIES

element

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	7 Inch Snow, RC-7W			**Work Order:**	POLR0070
Serial Number:	20093F0005			**Date:**	29-Apr-20
Customer:	Polaris Industries, Inc.			**Temperature:**	21.9 °C
Attendees:	None			**Humidity:**	45.9% RH
Project:	None			**Barometric Pres.:**	1016 mbar
Tested by:	Jeff Alcoke and Kam Robertson	**Power:**	14 VDC	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable.

DEVIATIONS FROM TEST STANDARD

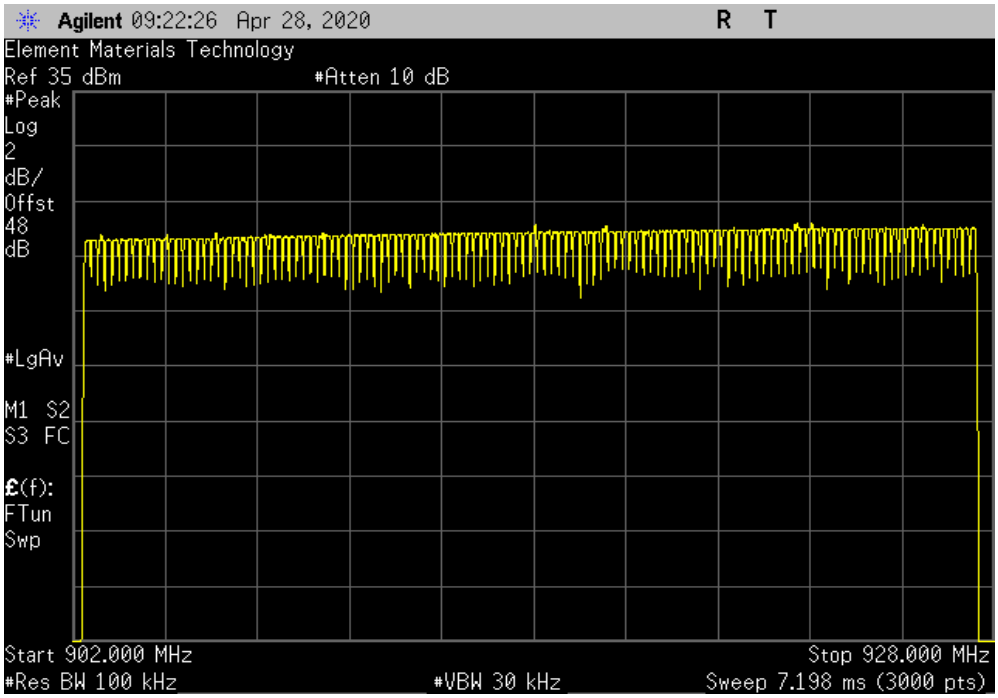
None

Configuration #	8	Signature

	Number of Channels	Limit (≥)	Results
FSK, Hopping Mode			
Mid Channel, 915.4 MHz	126	50	Pass

NUMBER OF HOPPING FREQUENCIES

FSK, Hopping Mode, Mid Channel, 915.4 MHz						
				Number of Channels	Limit (≥)	Results
				126	50	Pass



DWELL TIME

XMit 2020.03.25.0

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
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21

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 average dwell time of any frequency shall not be greater than 0.4 seconds within a 20 second period.

DWELL TIME

element

XMit 2020.03.25.0

EUT:	**7 Inch Snow, RC-7W**			**Work Order:**	**POLR0070**
Serial Number:	**20093F0005**			**Date:**	**28-Apr-20**
Customer:	**Polaris Industries, Inc.**			**Temperature:**	**22.4 °C**
Attendees:	**None**			**Humidity:**	**41.5% RH**
Project:	**None**			**Barometric Pres.:**	**1026 mbar**
Tested by:	**Jeff Alcoke and Kam Robertson**	**Power:**	**14 VDC**	**Job Site:**	**EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable

DEVIATIONS FROM TEST STANDARD

None

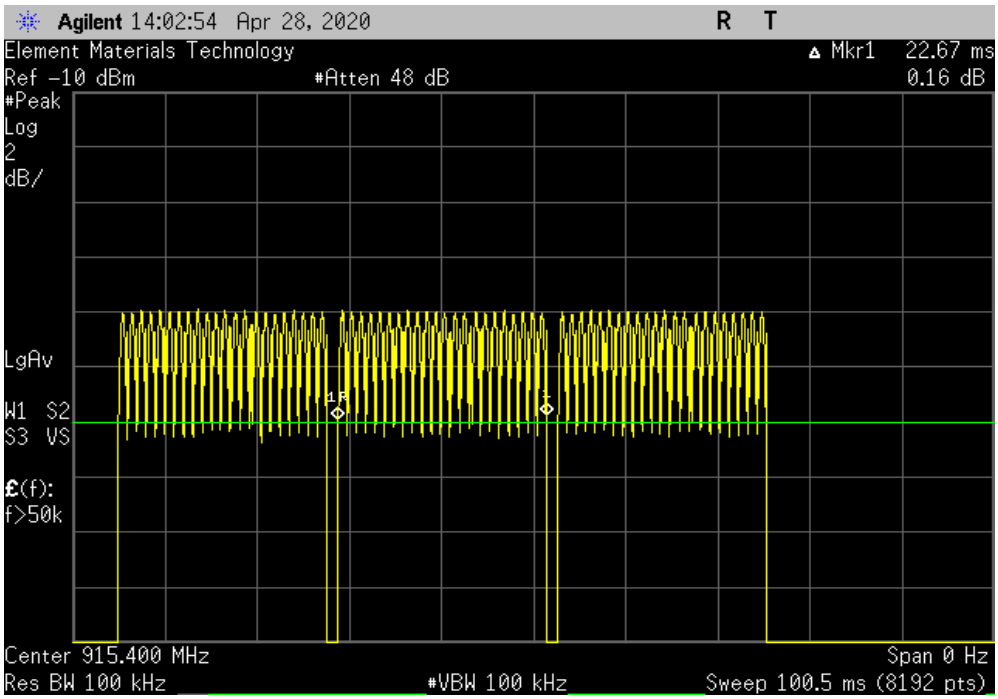
Configuration #	**8**	*Signature*

		Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
FSK, Hopping								
	Mid Channel, 915.4 MHz							
	Pulse 1	22.67	-	-	-	-	-	-
	Pulse 2	380.90	-	-	-	-	-	-
	20 sec Duration 1	-	3.00	1.00	448.91	-	-	-
	20 sec Duration 2	-	6.00	1.00	516.92	-	-	-
	20 sec Duration 3	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 4	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 5	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 6	-	3.00	1.00	448.91	-	-	-
	20 sec Duration 7	-	3.00	1.00	448.91	-	-	-
	20 sec Duration 8	-	9.00	0.00	204.03	-	-	-
	20 sec Duration 9	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 10	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 11	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 12	-	3.00	1.00	448.91	-	-	-
	20 sec Duration 13	-	3.00	1.00	448.91	-	-	-
	20 sec Duration 14	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 15	-	6.00	0.00	136.02	-	-	-
	20 sec Duration 16	-	9.00	0.00	204.03	-	-	-
	20 sec Duration 17	-	3.00	0.00	68.01	-	-	-
	20 sec Duration 18	-	9.00	0.00	204.03	-	-	-
	20 sec Duration 19	-	9.00	0.00	204.03	-	-	-
	20 sec Duration 20	-	6.00	0.00	136.02	-	-	-
	Calculation	-	-	-	-	243.49	≤ 400	Pass

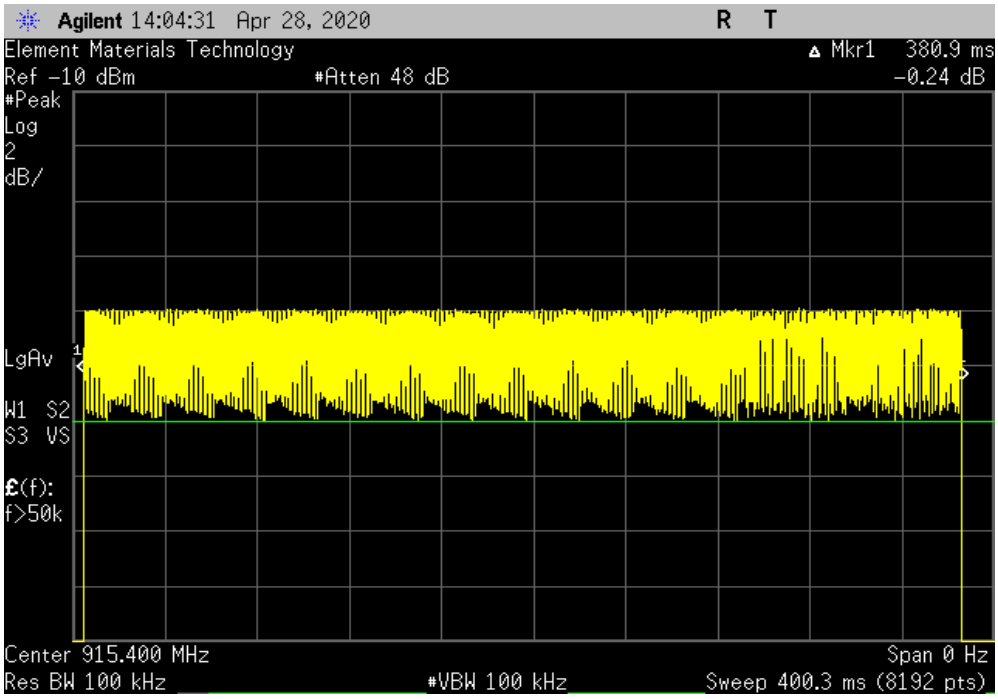
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, Pulse 1						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
22.67	-	-	-	-	-	-



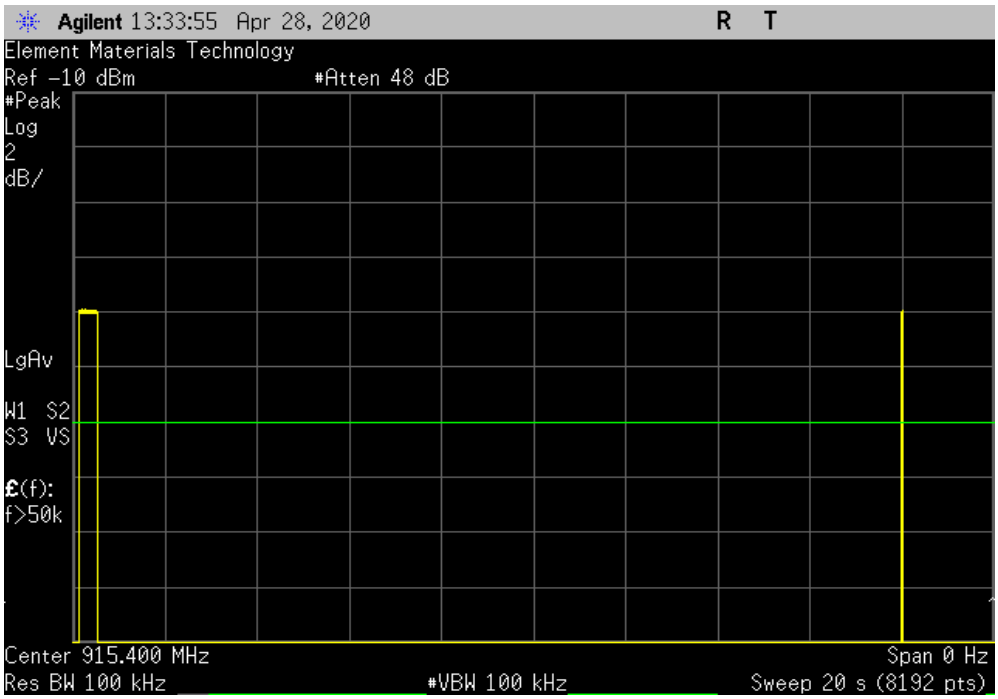
FSK, Hopping, Mid Channel, 915.4 MHz, Pulse 2						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
380.9	-	-	-	-	-	-



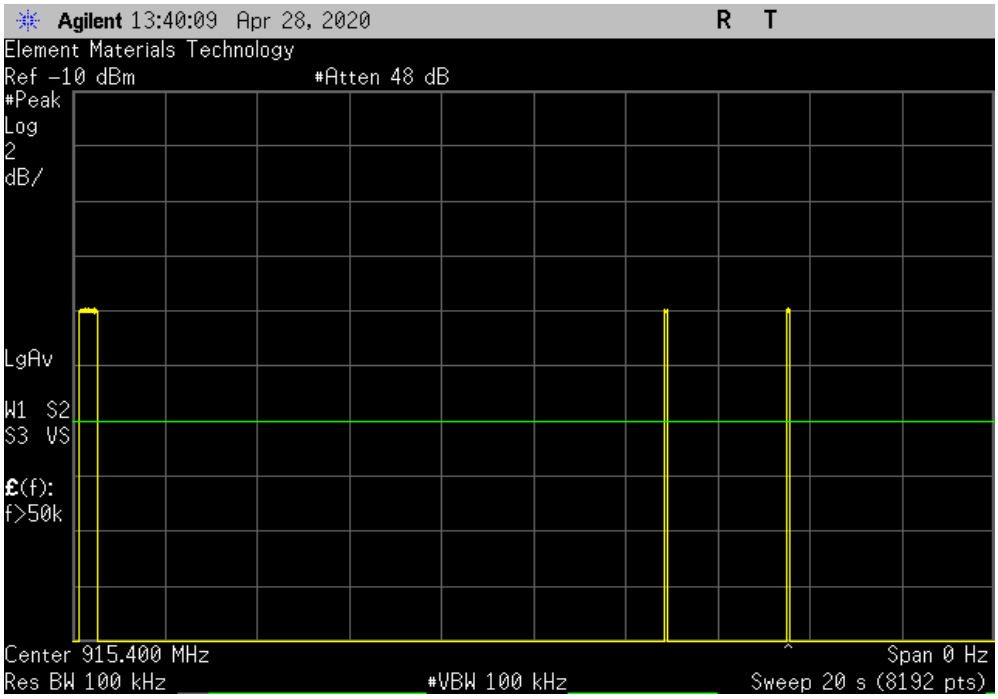
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 1						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	3	1	448.91	-	-	-



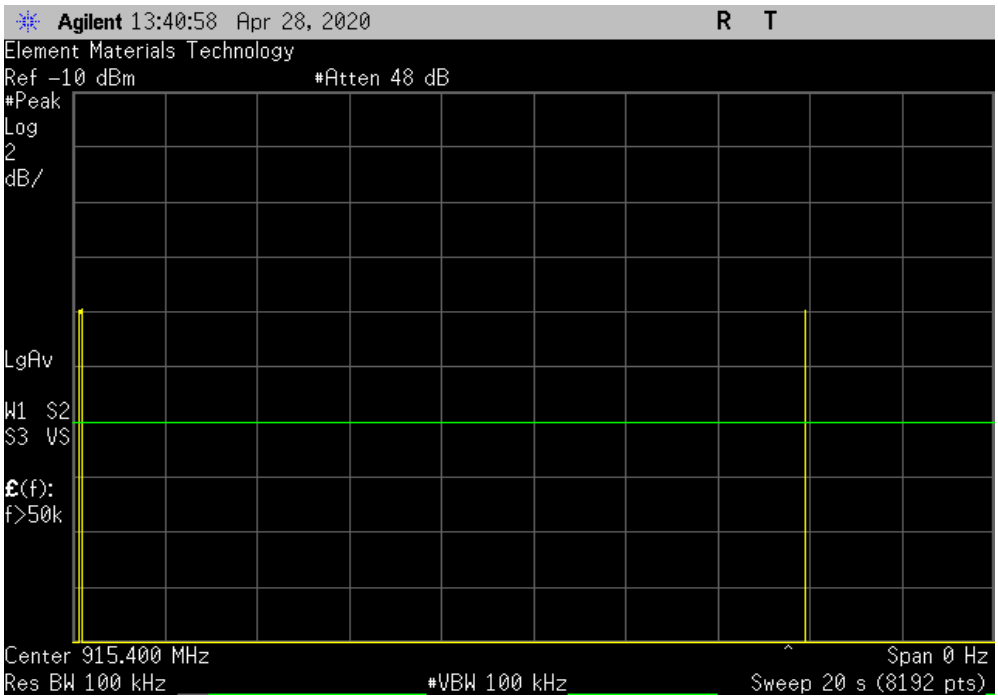
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 2						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	1	516.92	-	-	-



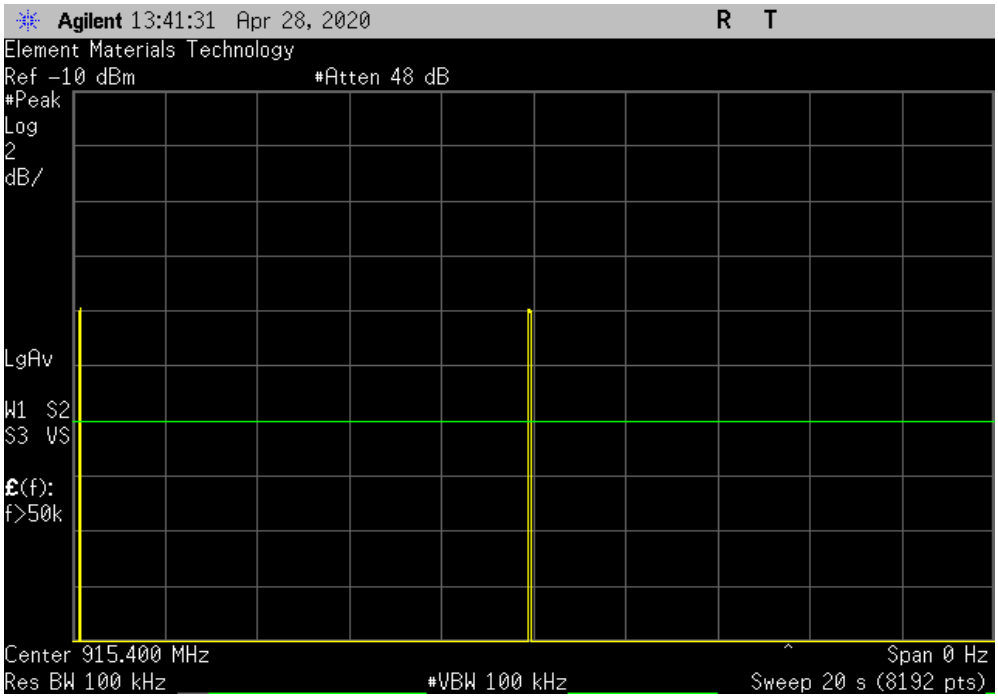
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 3						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



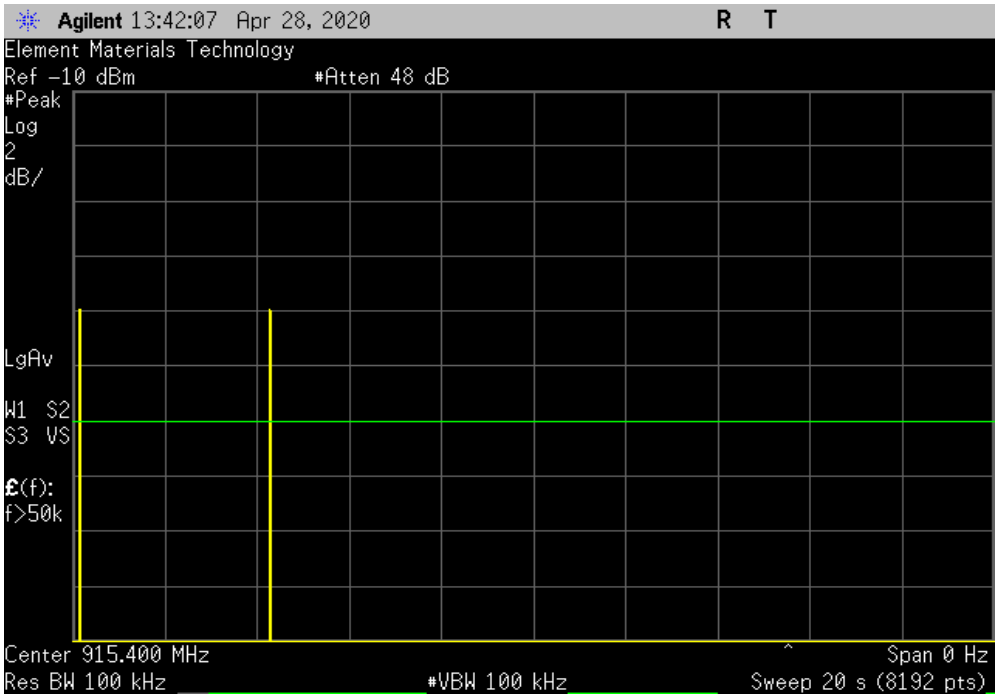
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 4						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



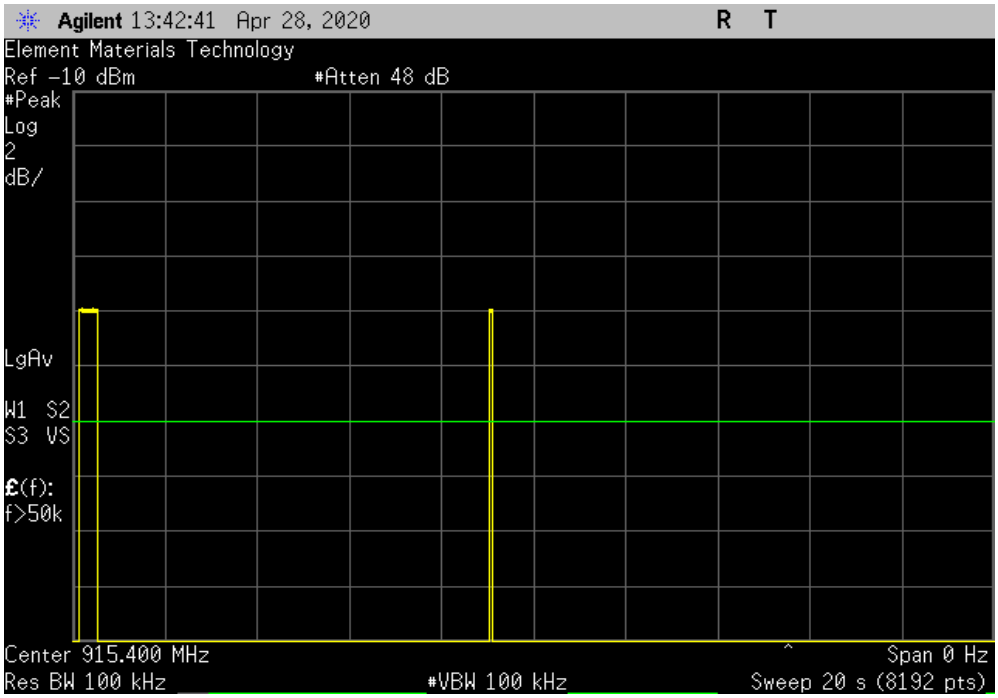
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 5						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



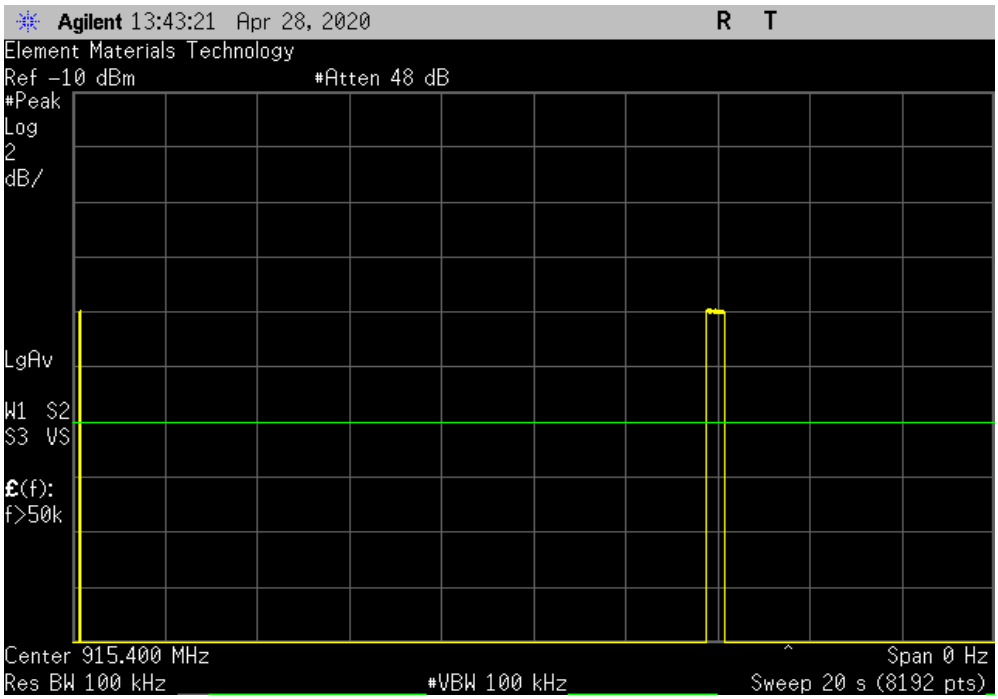
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 6						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	3	1	448.91	-	-	-



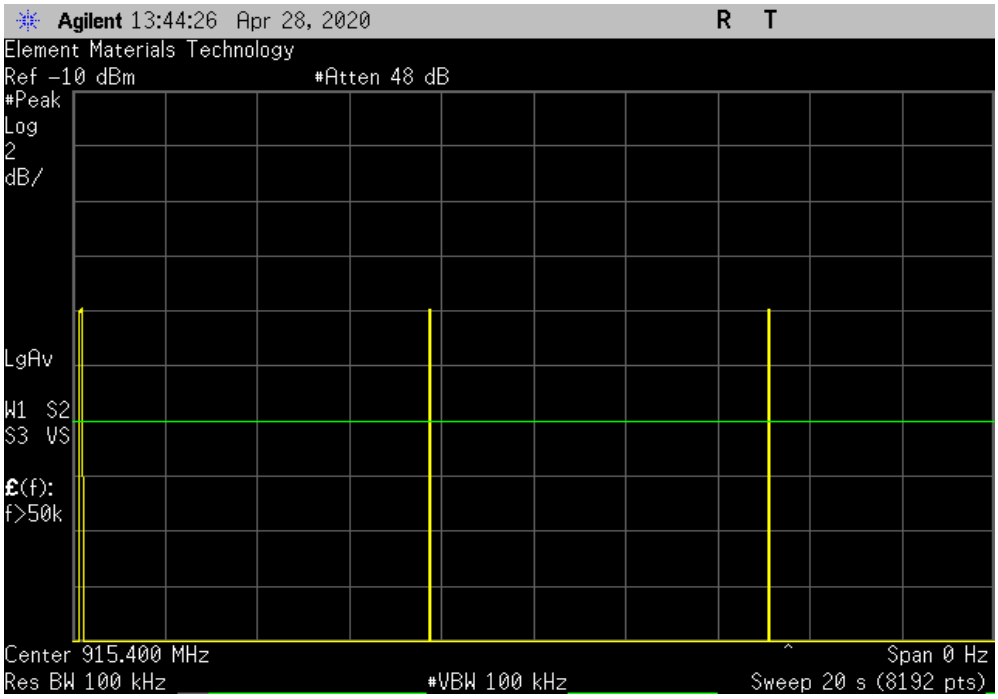
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 7						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	3	1	448.91	-	-	-



FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 8						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	9	0	204.03	-	-	-

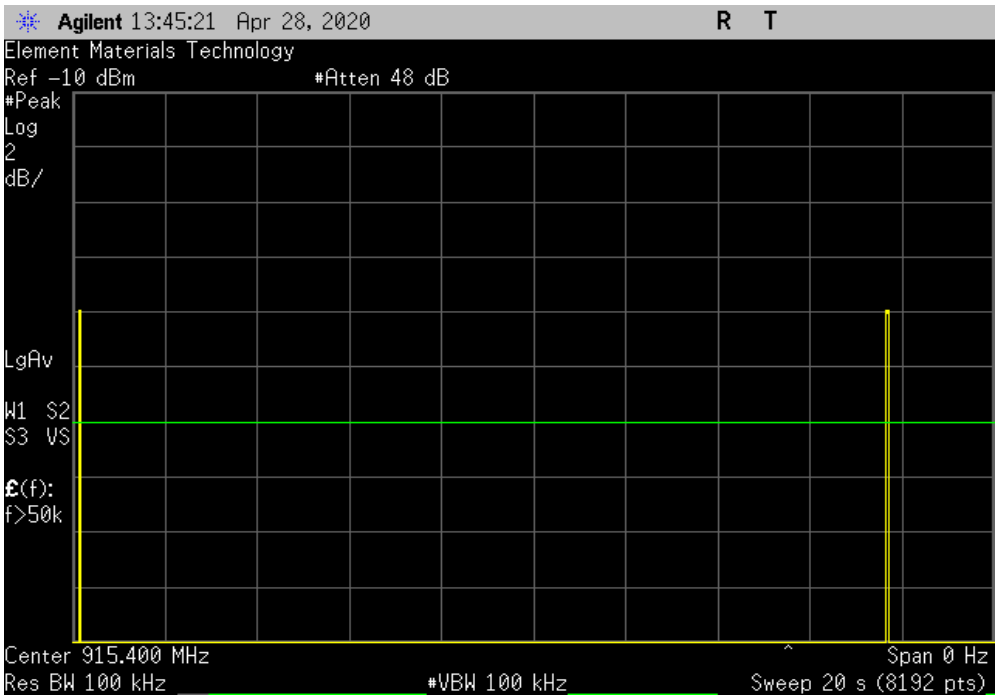


DWELL TIME

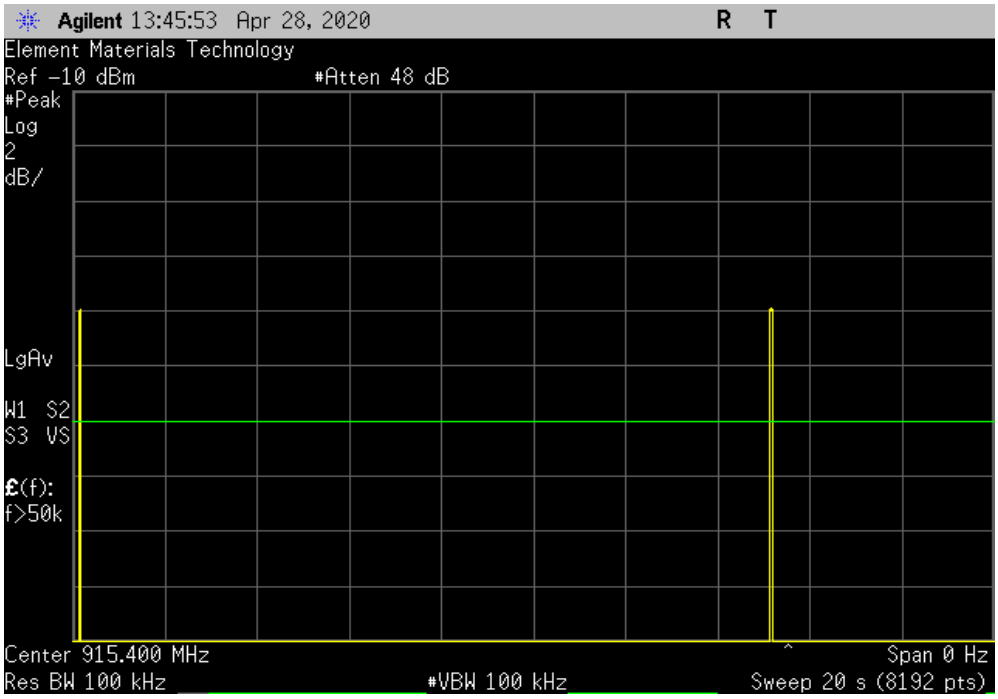
element

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 9						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



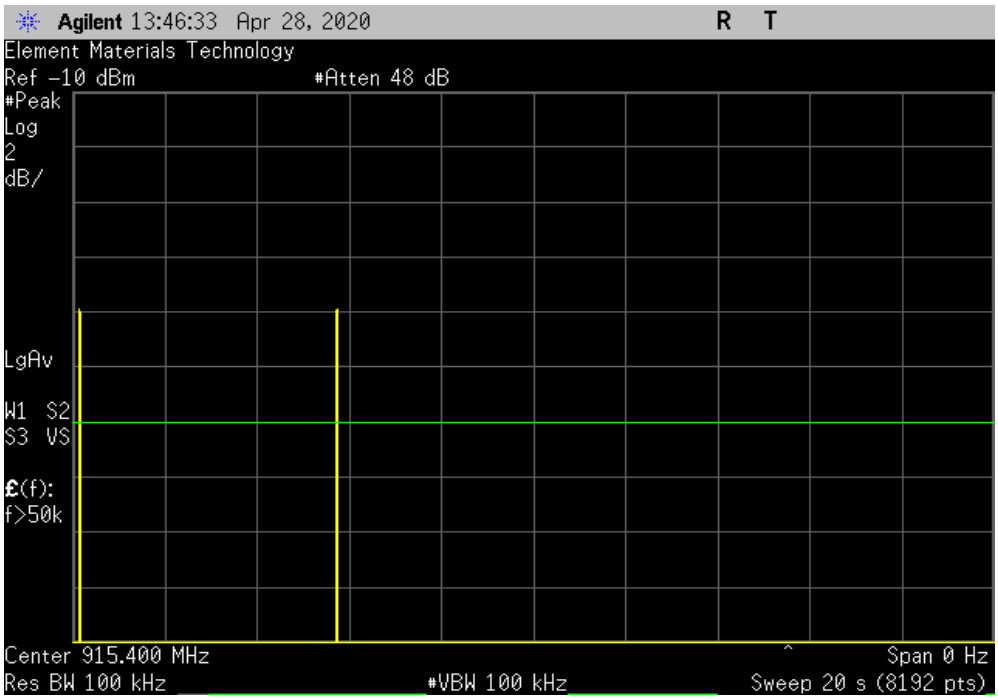
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 10						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



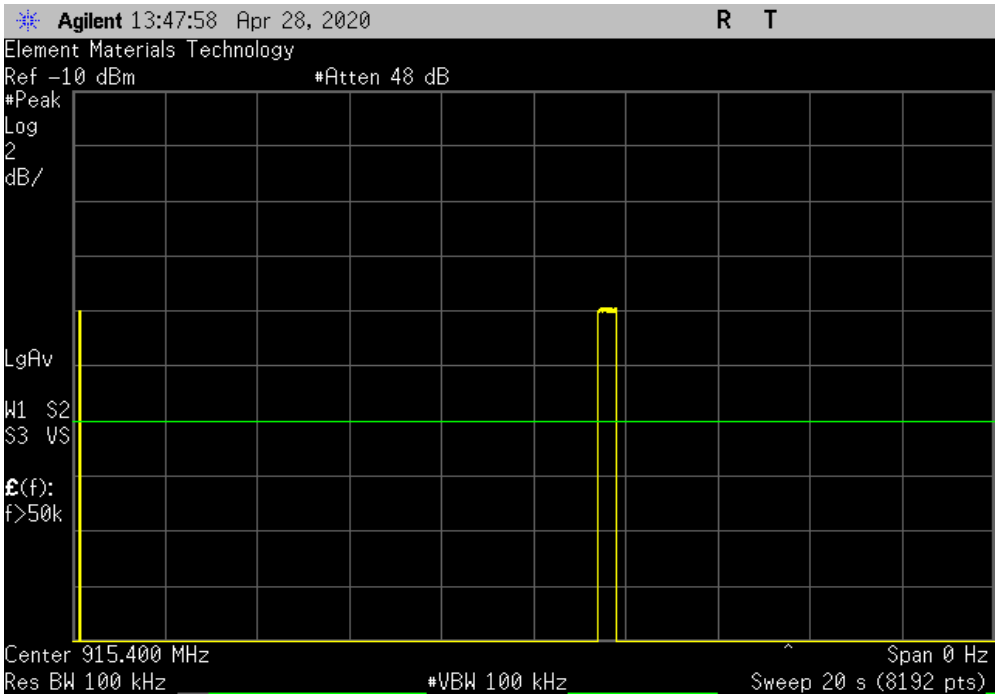
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 11						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



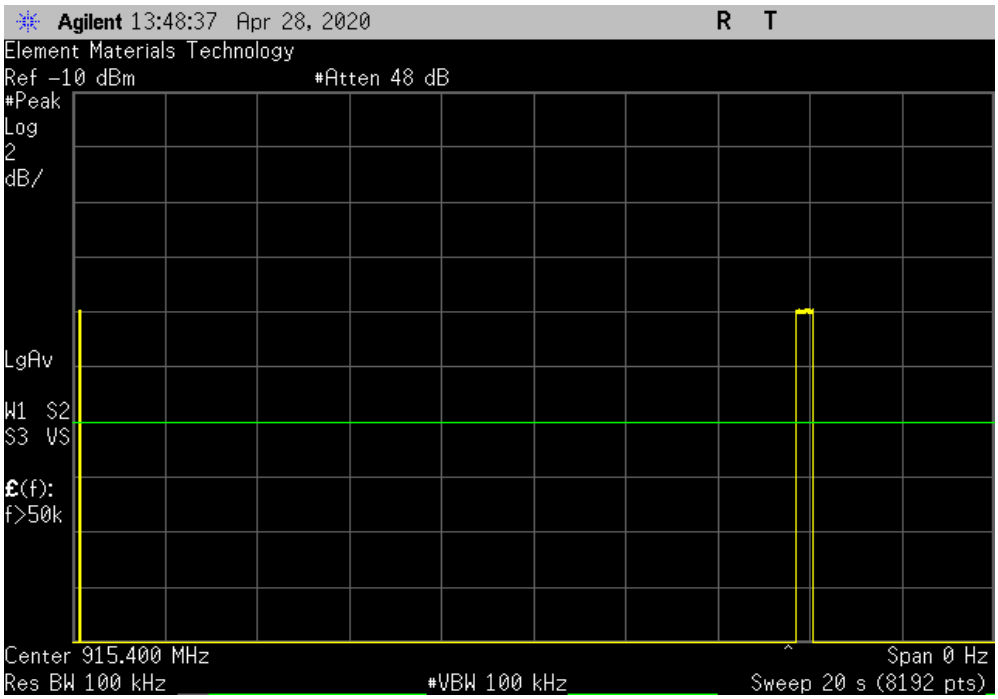
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 12						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	3	1	448.91	-	-	-



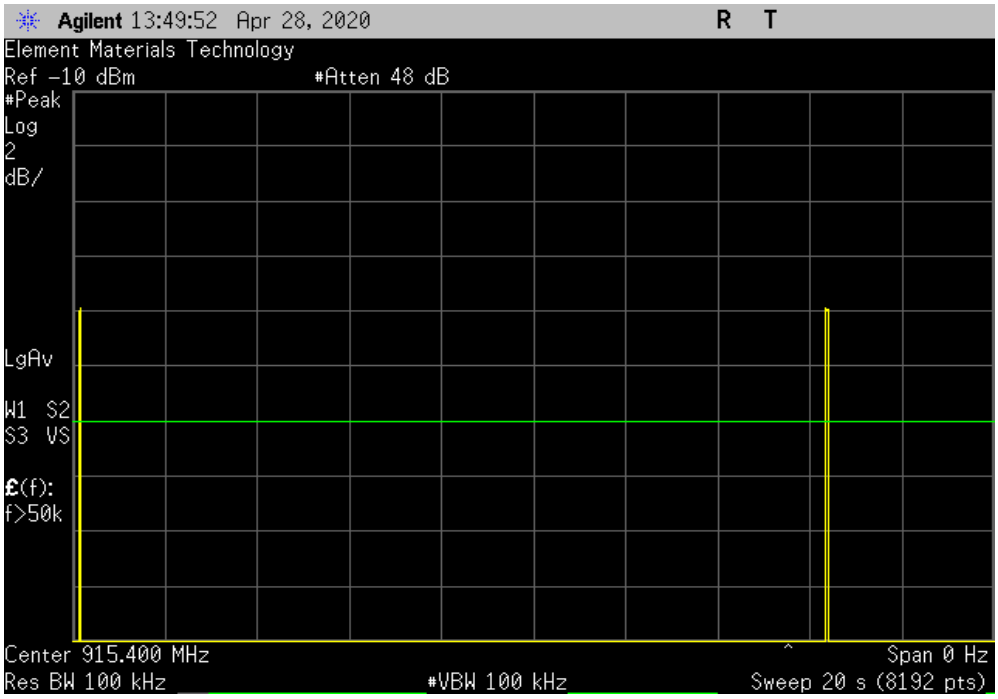
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 13						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	3	1	448.91	-	-	-



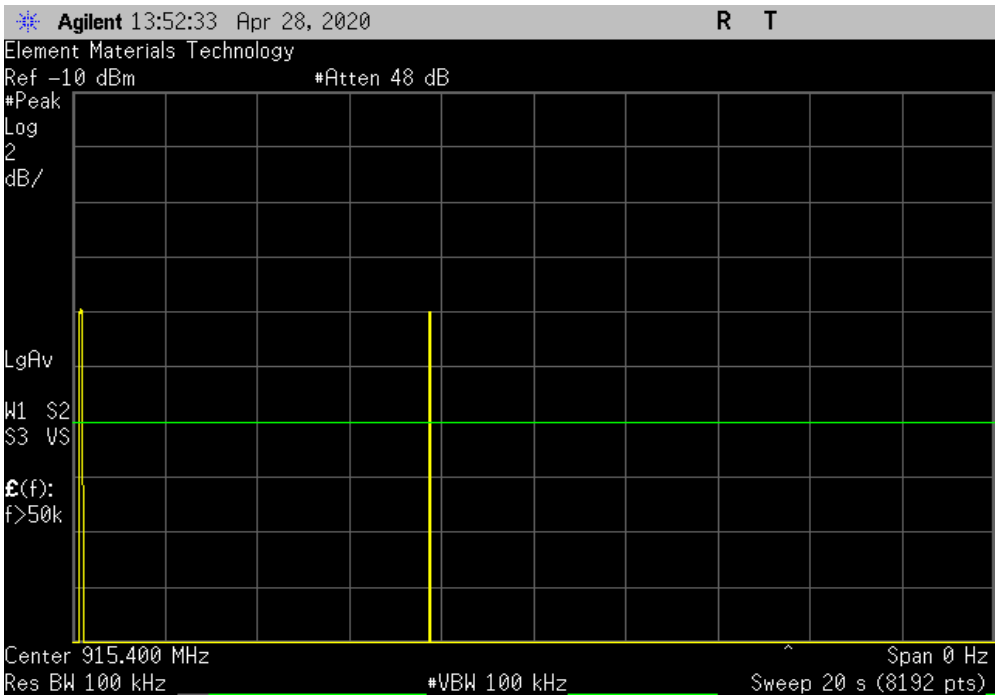
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 14						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



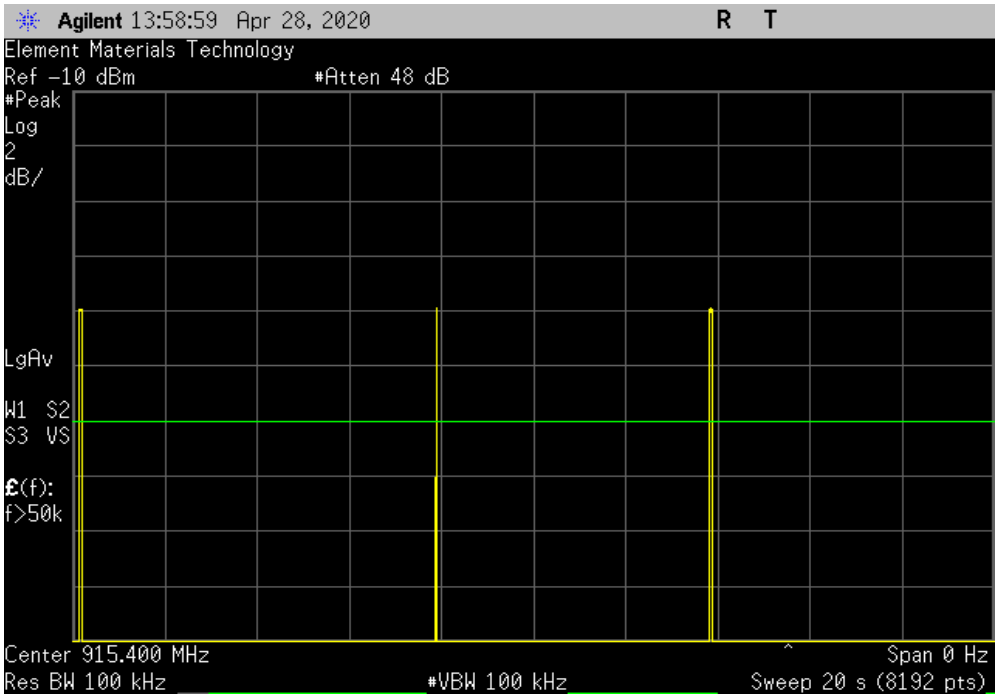
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 15						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



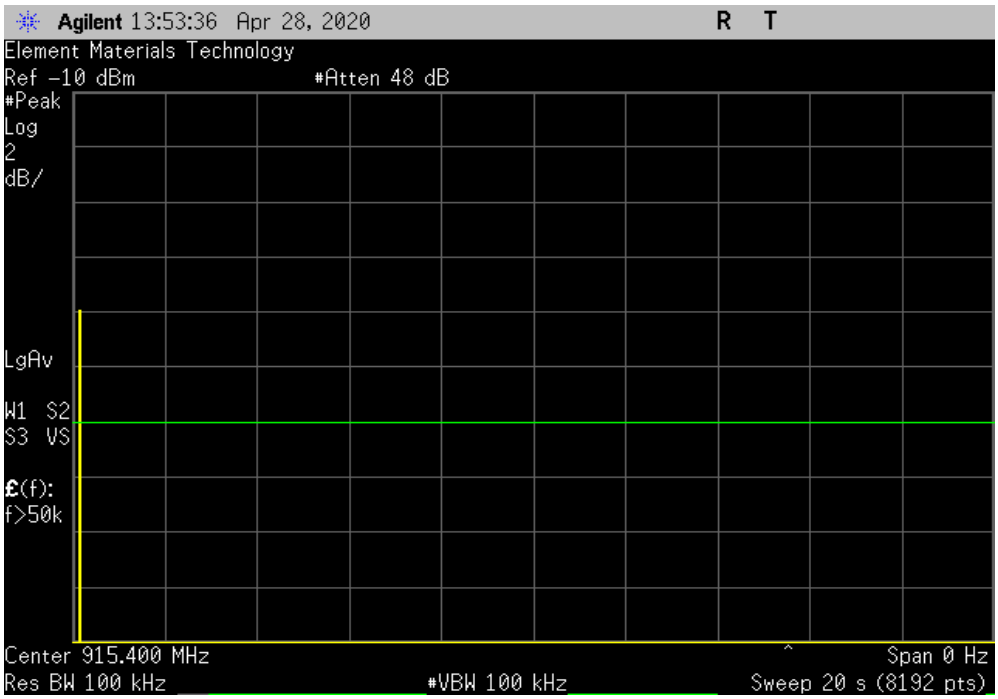
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 16						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	9	0	204.03	-	-	-



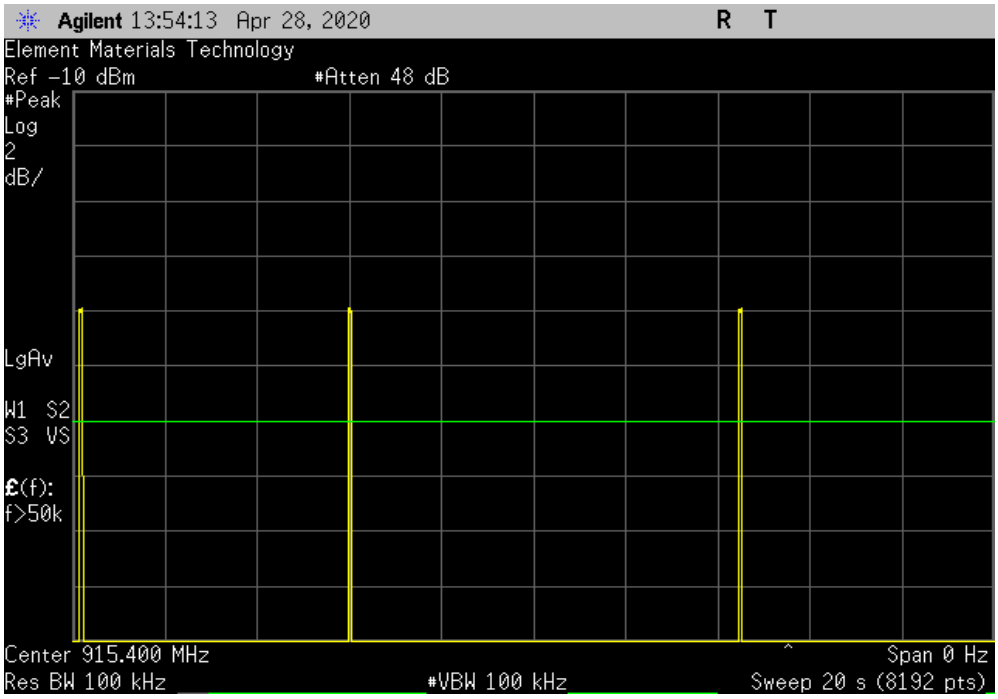
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 17						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	3	0	68.01	-	-	-



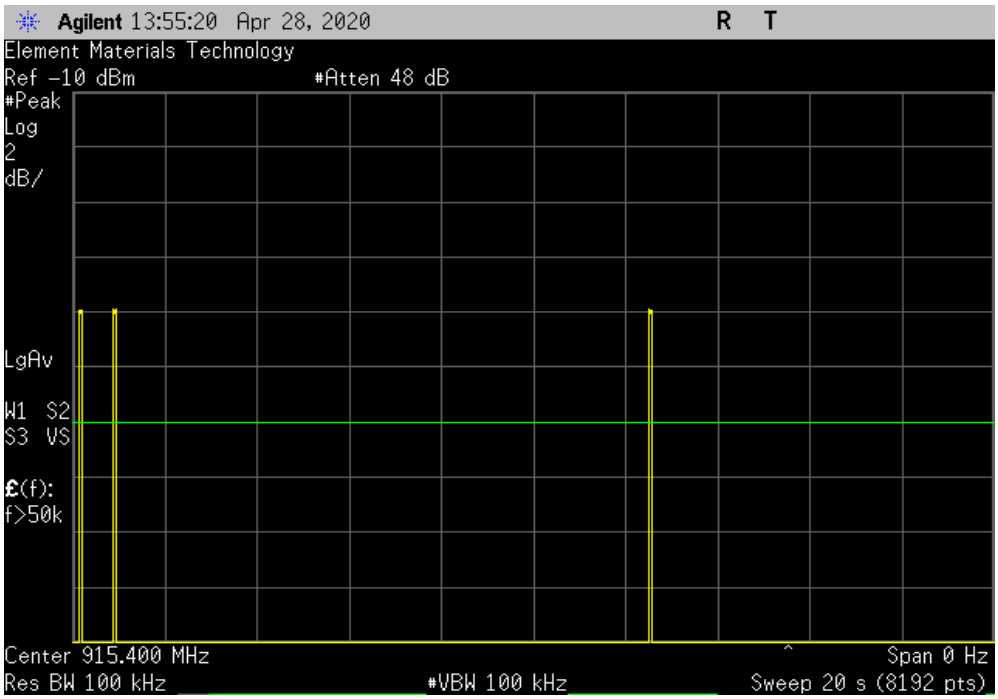
FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 18						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	9	0	204.03	-	-	-



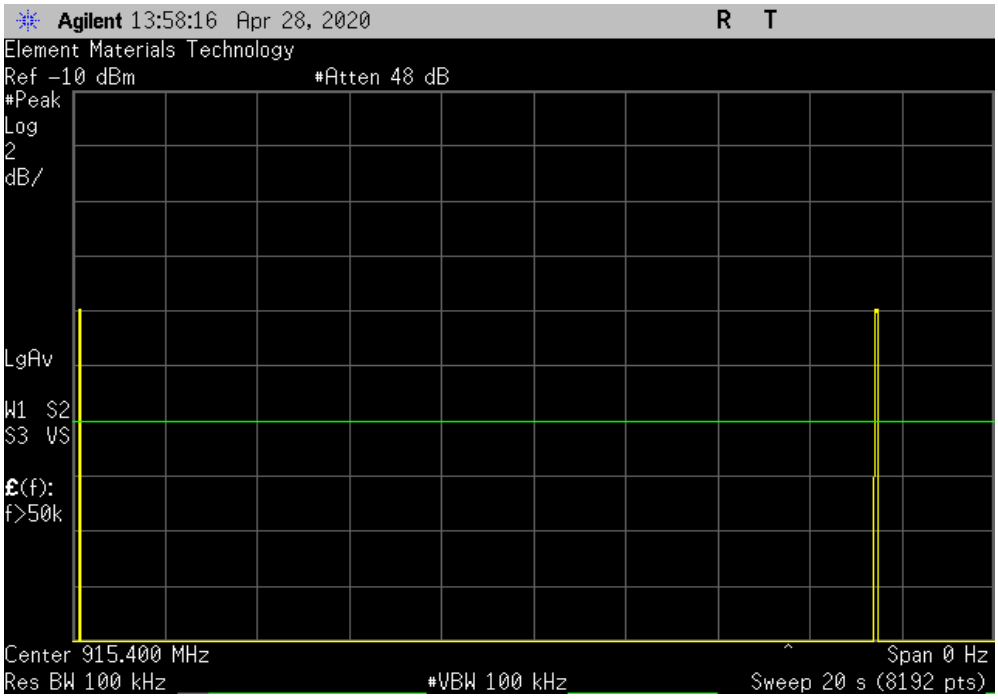
DWELL TIME

XMit 2020.03.25.0

FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 19						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	9	0	204.03	-	-	-



FSK, Hopping, Mid Channel, 915.4 MHz, 20 sec Duration 20						
Duration (ms)	Count Pulse 1	Count Pulse 2	Dwell time (ms) 20 sec period	Avg Dwell Time (ms)	Limit (ms)	Result
-	6	0	136.02	-	-	-



OUTPUT POWER

XMit 2020.03.25.0

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
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20

TEST DESCRIPTION

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.

OUTPUT POWER

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	**7 Inch Snow, RC-7W**			**Work Order:**	**POLR0070**
Serial Number:	**20093F0005**			**Date:**	**29-Apr-20**
Customer:	**Polaris Industries, Inc.**			**Temperature:**	**21.9 °C**
Attendees:	**None**			**Humidity:**	**46.1% RH**
Project:	**None**			**Barometric Pres.:**	**1016 mbar**
Tested by:	**Jeff Alcoke and Kam Robertson**	**Power:**	**14 VDC**	**Job Site:**	**EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable

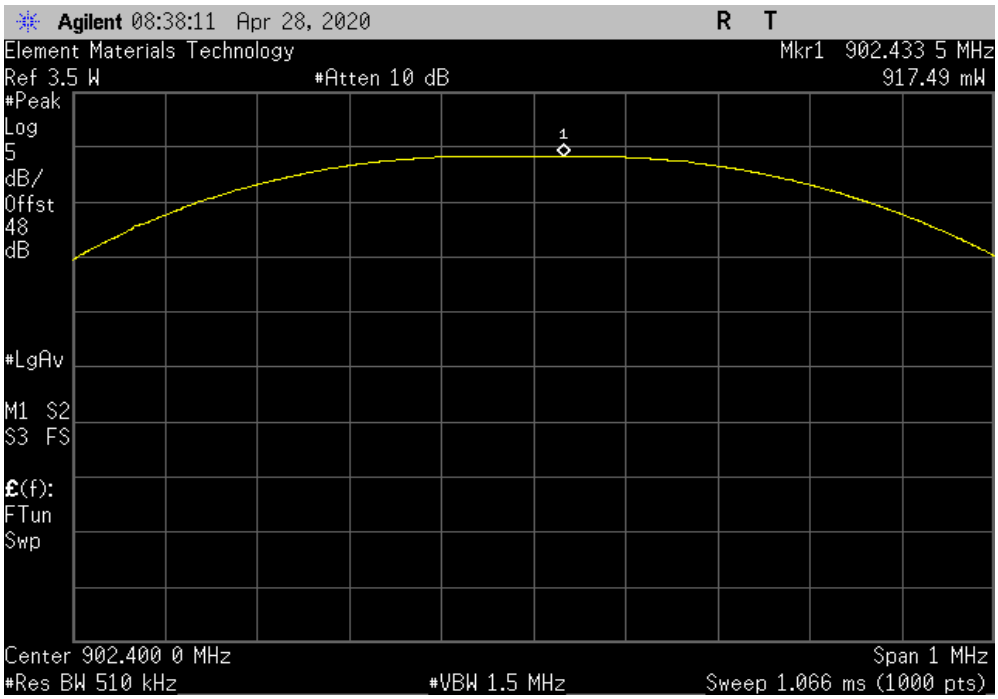
DEVIATIONS FROM TEST STANDARD

None

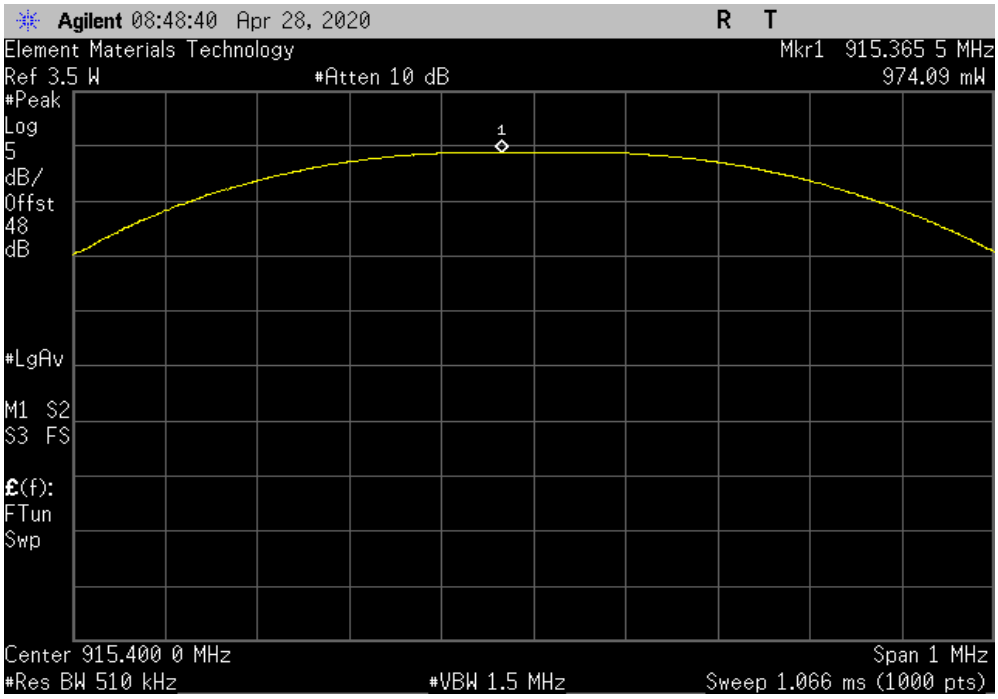
Configuration #	**8**	*Signature* 

	Out Pwr Value	**Limit (≤)**	**Result**
FSK, Single Channel			
Low Channel, 902.4 MHz	0.917 W	1 W	Pass
Mid Channel, 915.4 MHz	0.974 W	1 W	Pass
High Channel, 927.6 MHz	0.99 W	1 W	Pass

FSK, Single Channel, Low Channel, 902.4 MHz						
				Out Pwr Value	Limit (≤)	Result
				0.917 W	1 W	Pass

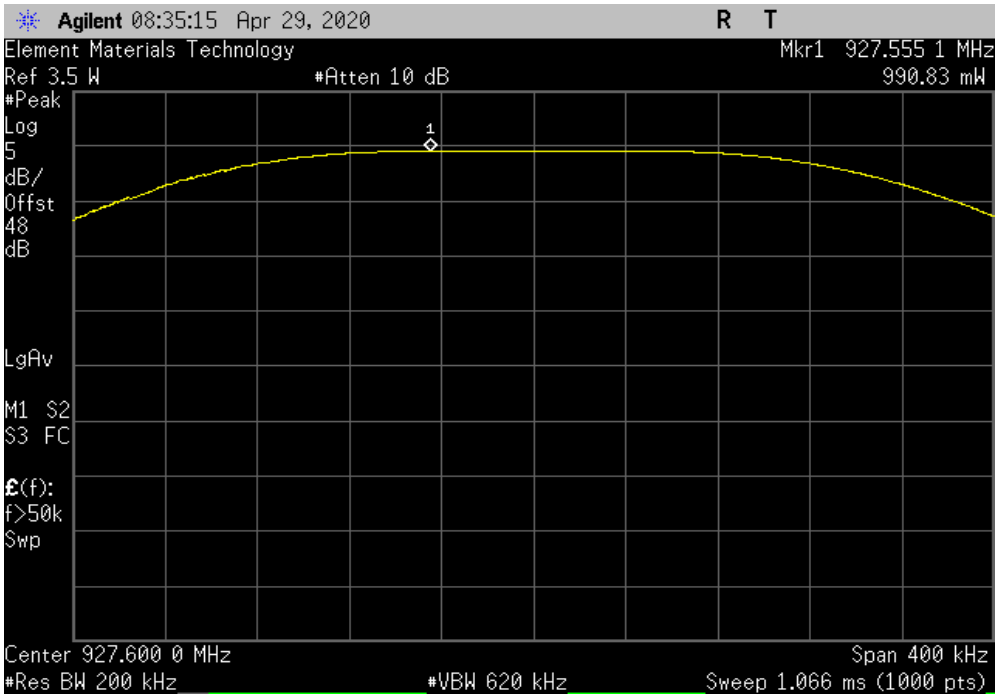


FSK, Single Channel, Mid Channel, 915.4 MHz						
				Out Pwr Value	Limit (≤)	Result
				0.974 W	1 W	Pass



OUTPUT POWER

FSK, Single Channel, High Channel, 927.6 MHz						
				Out Pwr Value	Limit (≤)	Result
				0.99 W	1 W	Pass



EQUIVALENT ISOTROPIC RADIATED POWER

XMit 2020.03.25.0

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
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21

TEST DESCRIPTION

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.

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

EQUIVALENT ISOTROPIC RADIATED POWER

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	7 Inch Snow, RC-7W			**Work Order:**	POLR0070
Serial Number:	20093F0005			**Date:**	29-Apr-20
Customer:	Polaris Industries, Inc.			**Temperature:**	21.9 °C
Attendees:	None			**Humidity:**	46% RH
Project:	None			**Barometric Pres.:**	1016 mbar
Tested by:	Jeff Alcoke and Kam Robertson	**Power:**	14 VDC	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable

DEVIATIONS FROM TEST STANDARD

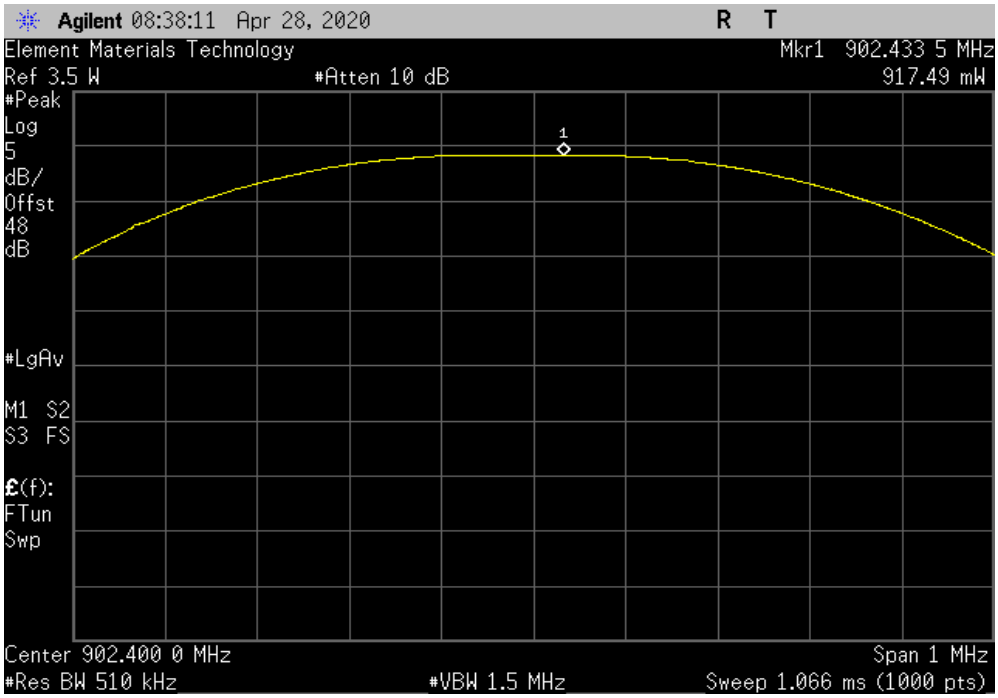
None

Configuration #	8	Signature

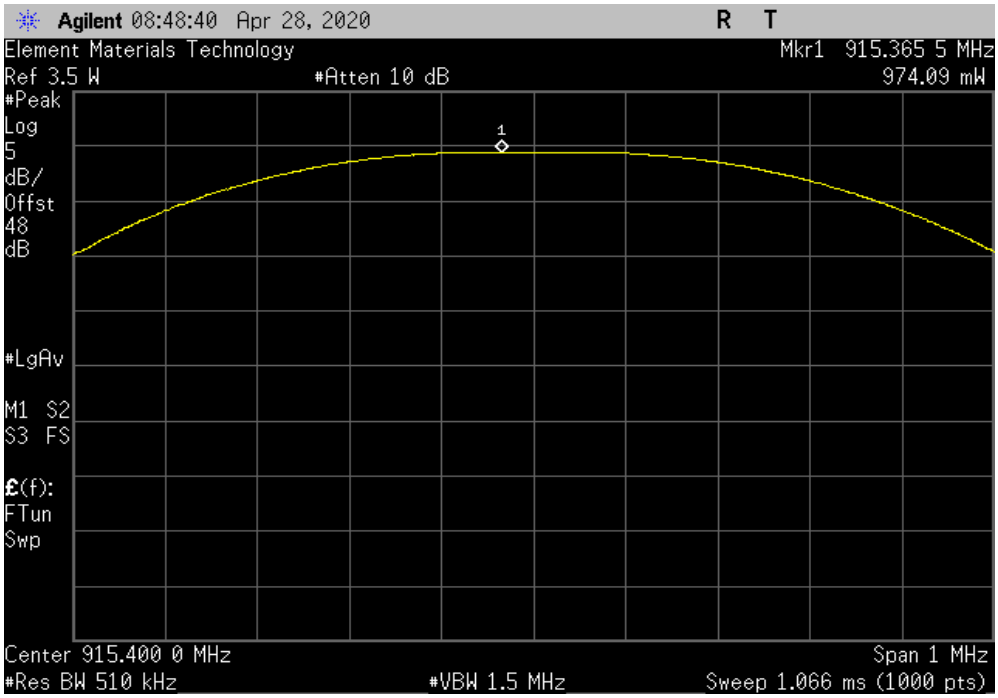
	Output Power (mW)	Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
FSK, Single Channel						
Low Channel, 902.4 MHz	917.46	29.6	3.0	32.6	36	Pass
Mid Channel, 915.4 MHz	974.09	29.9	3.0	32.9	36	Pass
High Channel, 927.6 MHz	990.83	30.0	3.0	33.0	36	Pass

EQUIVALENT ISOTROPIC RADIATED POWER

FSK, Single Channel, Low Channel, 902.4 MHz						
	Output Power (mW)	Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
	917.46	29.6	3.0	32.6	36	Pass

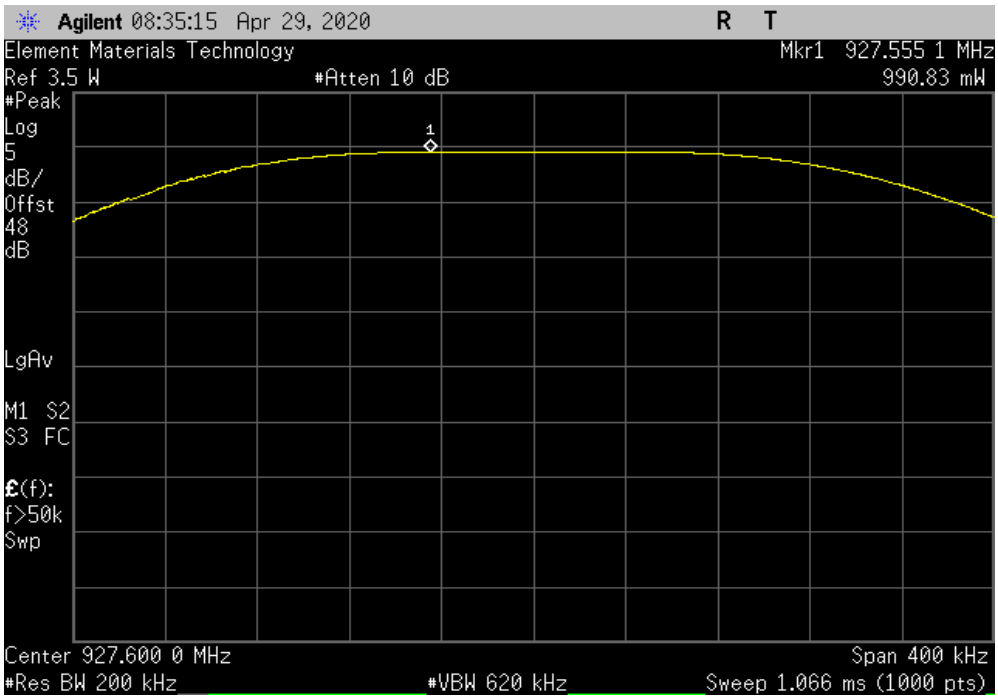


FSK, Single Channel, Mid Channel, 915.4 MHz						
	Output Power (mW)	Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
	974.09	29.9	3.0	32.9	36	Pass



EQUIVALENT ISOTROPIC RADIATED POWER

FSK, Single Channel, High Channel, 927.6 MHz						
	Output Power (mW)	Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
	990.83	30.0	3.0	33.0	36	Pass



BAND EDGE COMPLIANCE

XMit 2020.03.25.0

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
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20

TEST DESCRIPTION

These measurements were made using a direct connection between the radio frequency output of the equipment under test and a spectrum analyzer. The spurious radio frequency conducted emissions at the edges of the authorized band were measured with the equipment under test set to low and high transmit frequencies. The equipment under test 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

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	7 Inch Snow, RC-7W			**Work Order:**	POLR0070
Serial Number:	20093F0005			**Date:**	28-Apr-20
Customer:	Polaris Industries, Inc.			**Temperature:**	22.7 °C
Attendees:	None			**Humidity:**	42.5% RH
Project:	None			**Barometric Pres.:**	1026 mbar
Tested by:	Jeff Alcoke and Kam Robertson	**Power:**	14 VDC	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC block, 46 dB attenuation, and measurement cable.

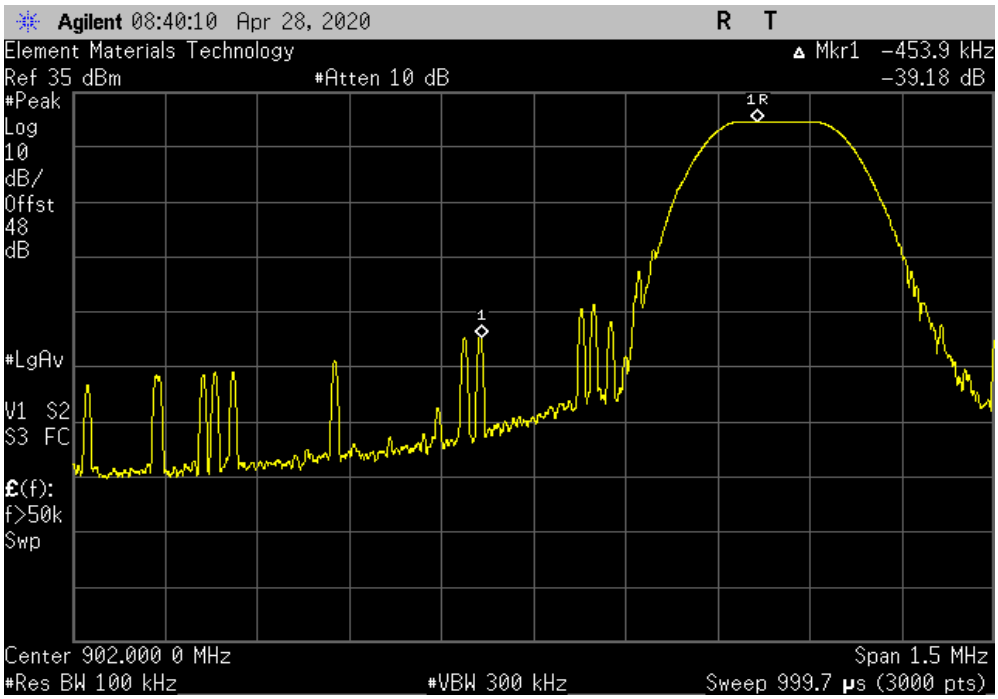
DEVIATIONS FROM TEST STANDARD

None

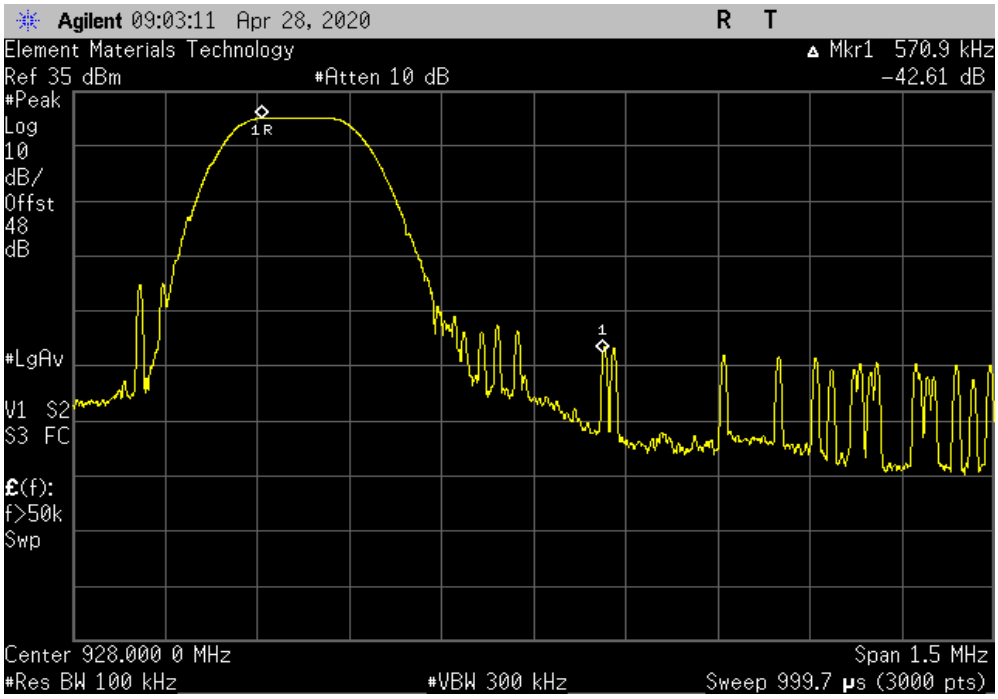
Configuration #	6	Signature

	Value (dBc)	Limit ≤ (dBc)	Result
FSK, Single Channel			
Low Channel, 902.4 MHz	-39.18	-20	Pass
High Channel, 927.6 MHz	-42.61	-20	Pass

FSK, Single Channel, Low Channel, 902.4 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-39.18	-20	Pass



FSK, Single Channel, High Channel, 927.6 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-42.61	-20	Pass



BAND EDGE COMPLIANCE - HOPPING MODE

XMit 2020.03.25.0

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
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21

TEST DESCRIPTION

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

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	7 Inch Snow, RC-7W			**Work Order:**	POLR0070
Serial Number:	20093F0005			**Date:**	29-Apr-20
Customer:	Polaris Industries, Inc.			**Temperature:**	21.9 °C
Attendees:	None			**Humidity:**	45.9% RH
Project:	None			**Barometric Pres.:**	1017 mbar
Tested by:	Jeff Alcoke and Kam Robertson	**Power:**	14 VDC	**Job Site:**	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable

DEVIATIONS FROM TEST STANDARD

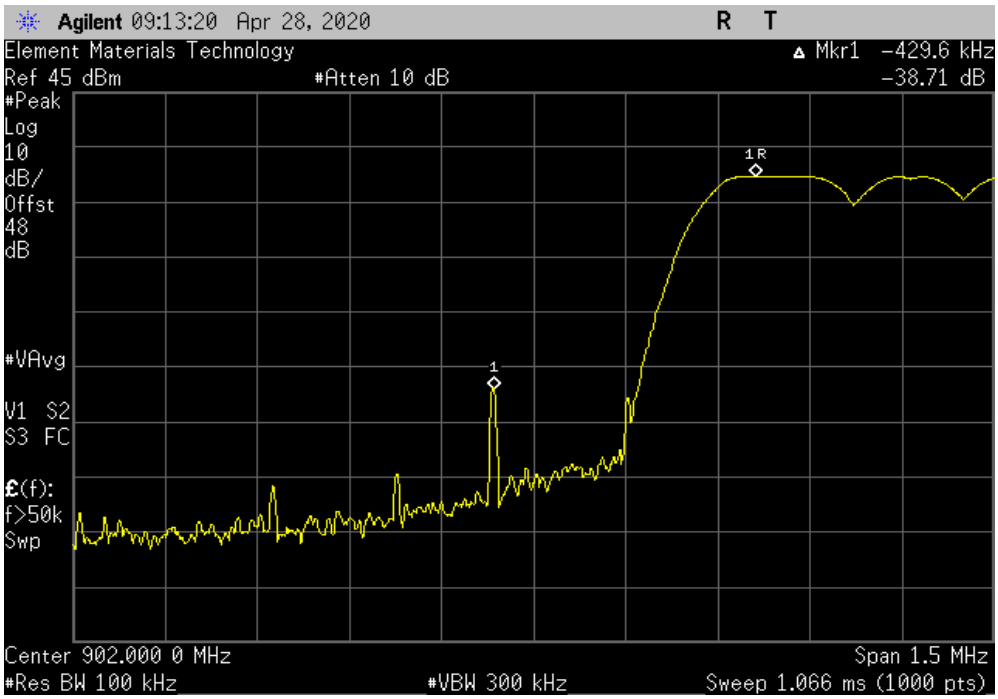
None

Configuration #	8	Signature

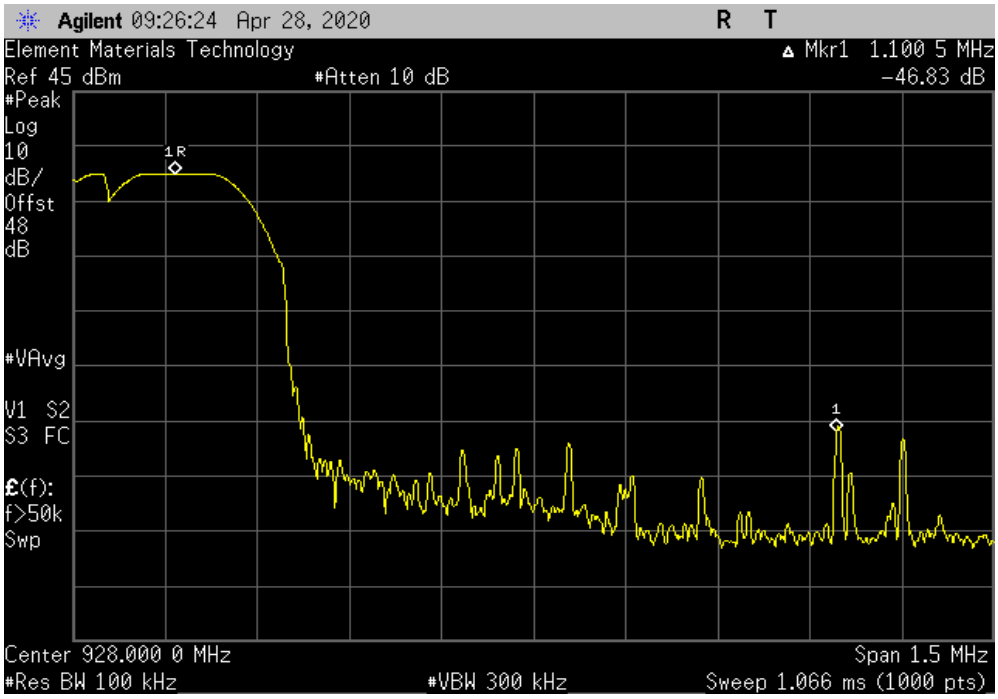
	Value (dBc)	Limit ≤ (dBc)	Result
FSK, Hopping Mode			
Low Channel, 902.4 MHz	-38.71	-20	Pass
High Channel, 927.6 MHz	-46.83	-20	Pass

BAND EDGE COMPLIANCE - HOPPING MODE

FSK, Hopping Mode, Low Channel, 902.4 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-38.71	-20	Pass



FSK, Hopping Mode, High Channel, 927.6 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-46.83	-20	Pass



OCCUPIED BANDWIDTH

XMit 2020.03.25.0

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
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20

TEST DESCRIPTION

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

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	**7 Inch Snow, RC-7W**			**Work Order:**	**POLR0070**
Serial Number:	**20093F0005**			**Date:**	**29-Apr-20**
Customer:	**Polaris Industries, Inc.**			**Temperature:**	**21.9 °C**
Attendees:	**None**			**Humidity:**	**46% RH**
Project:	**None**			**Barometric Pres.:**	**1016 mbar**
Tested by:	**Jeff Alcoke and Kam Robertson**	**Power:**	**14 VDC**	**Job Site:**	**EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable

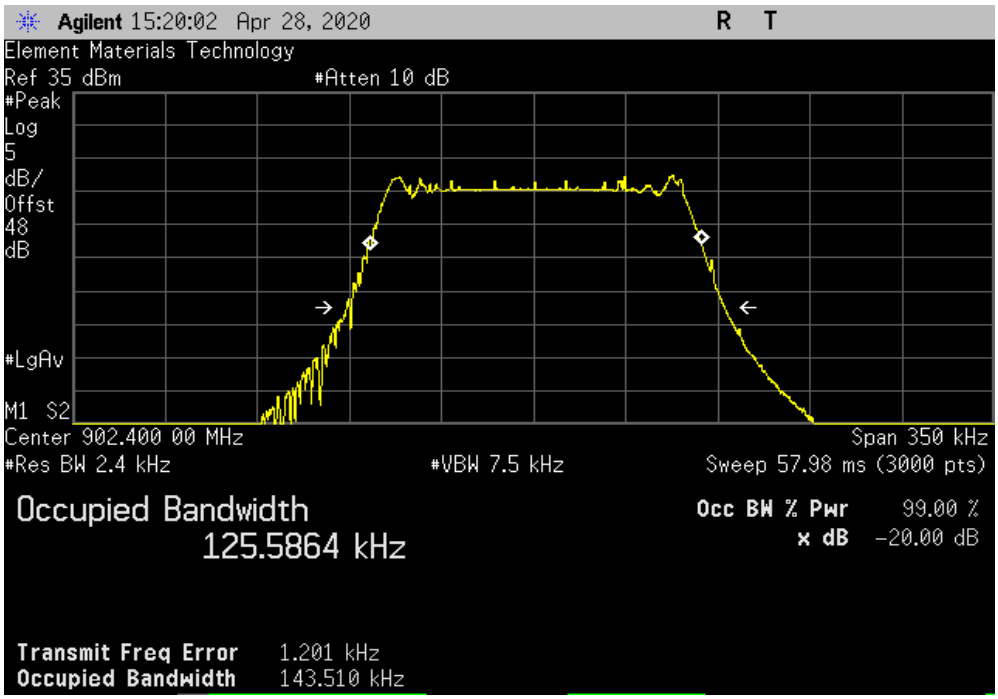
DEVIATIONS FROM TEST STANDARD

None

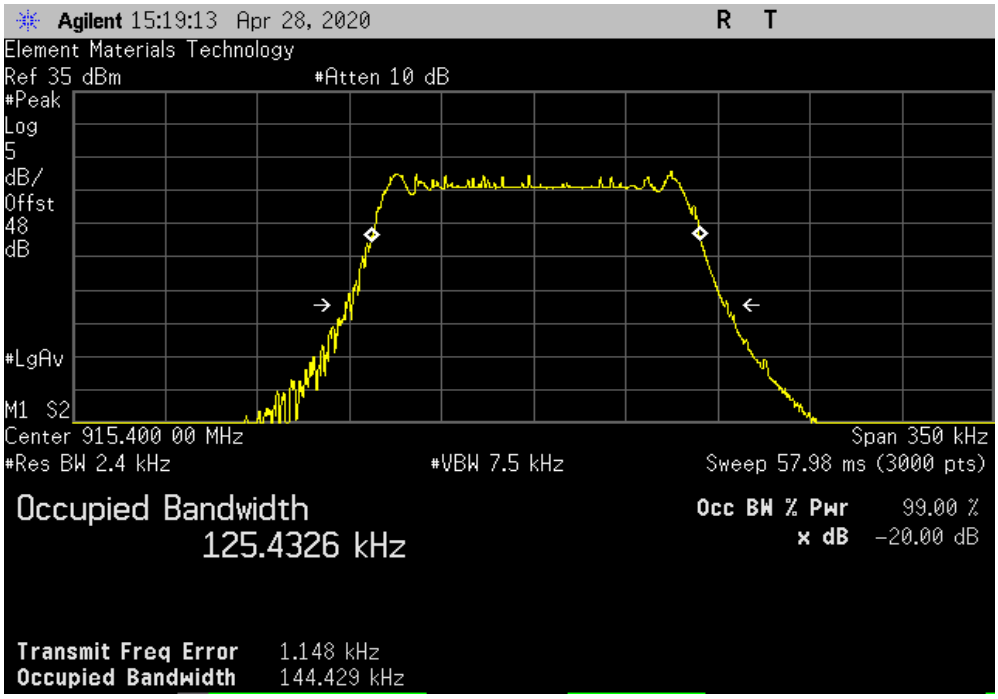
Configuration #	**8**	*Signature*

	Value	**Limit (≤)**	**Result**
FSK, Single Channel			
Low Channel, 902.4 MHz	143.51 kHz	250 kHz	Pass
Mid Channel, 915.4 MHz	144.429 kHz	250 kHz	Pass
High Channel, 927.6 MHz	145.453 kHz	250 kHz	Pass

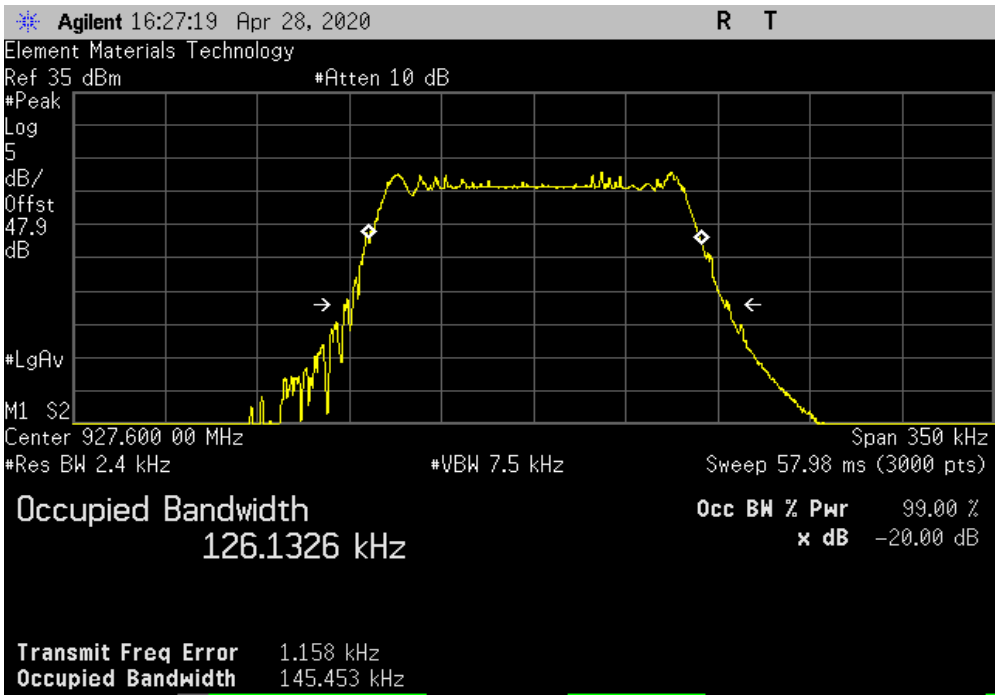
FSK, Single Channel, Low Channel, 902.4 MHz						
				Value	Limit (≤)	Result
				143.51 kHz	250 kHz	Pass



FSK, Single Channel, Mid Channel, 915.4 MHz						
				Value	Limit (≤)	Result
				144.429 kHz	250 kHz	Pass



FSK, Single Channel, High Channel, 927.6 MHz						
				Value	Limit (≤)	Result
				145.453 kHz	250 kHz	Pass



SPURIOUS CONDUCTED EMISSIONS

XMit 2020.03.25.0

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
Power Supply - DC	MPJA	9950 PS	TQA	NCR	NCR
Meter - Multimeter	Tektronix	DMM912	MMH	15-Feb-19	15-Feb-22
Generator - Signal	Agilent	N5183A	TID	26-Apr-19	26-Apr-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVH	13-Mar-20	13-Mar-21
Attenuator	Fairview Microwave	18B5W-26	RFZ	23-Jul-19	23-Jul-20
Attenuator	S.M. Electronics	SA26B-20	AUY	13-Mar-20	13-Mar-21
Block - DC	Fairview Microwave	SD3379	AMW	13-Mar-20	13-Mar-21
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	28-Feb-20	28-Feb-21

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 in a no-hop mode. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

SPURIOUS CONDUCTED EMISSIONS

TbtTx 2019.08.30.0 XMit 2020.03.25.0

EUT:	**7 Inch Snow, RC-7W**			**Work Order:**	**POLR0070**
Serial Number:	**20093F0005**			**Date:**	**29-Apr-20**
Customer:	**Polaris Industries, Inc.**			**Temperature:**	**21.9 °C**
Attendees:	**None**			**Humidity:**	**46.1% RH**
Project:	**None**			**Barometric Pres.:**	**1017 mbar**
Tested by:	**Jeff Alcoke and Kam Robertson**	**Power:**	**14 VDC**	**Job Site:**	**EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2020	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 46 dB attenuation, and measurement cable

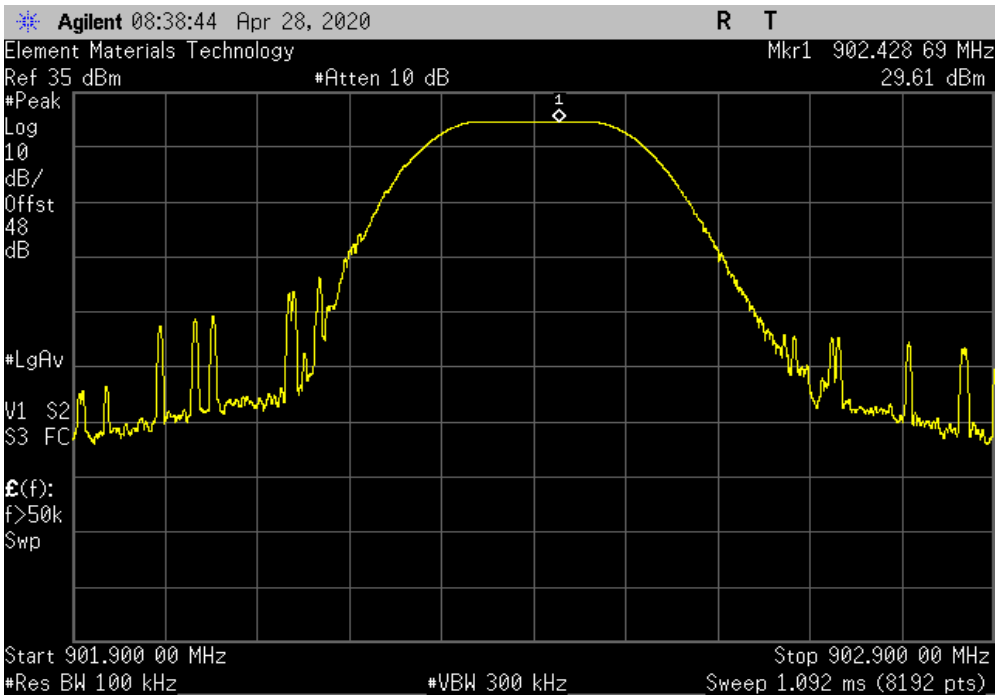
DEVIATIONS FROM TEST STANDARD

None

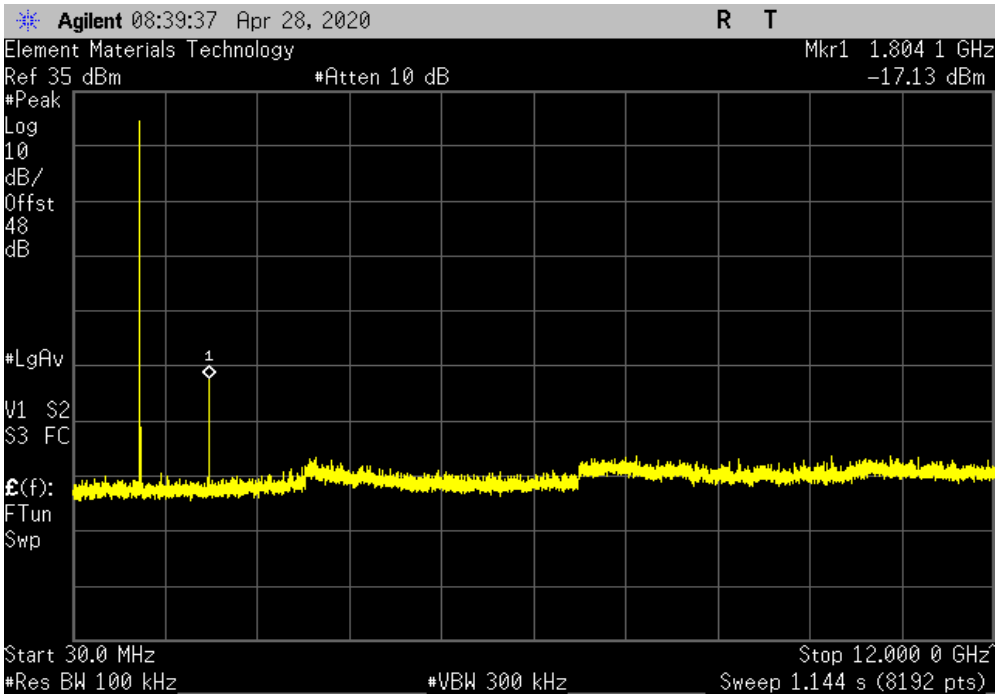
Configuration #	**8**	*Signature*

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
FSK, Single Channel					
Low Channel, 902.4 MHz	Fundamental	902.43	N/A	N/A	N/A
Low Channel, 902.4 MHz	30 MHz - 12 GHz	1804.1	-46.74	-20	Pass
Mid Channel, 915.4 MHz	Fundamental	915.44	N/A	N/A	N/A
Mid Channel, 915.4 MHz	30 MHz - 12 GHz	1830.4	-48.01	-20	Pass
High Channel, 927.6 MHz	Fundamental	927.59	N/A	N/A	N/A
High Channel, 927.6 MHz	30 MHz - 12 GHz	1855.2	-48.29	-20	Pass

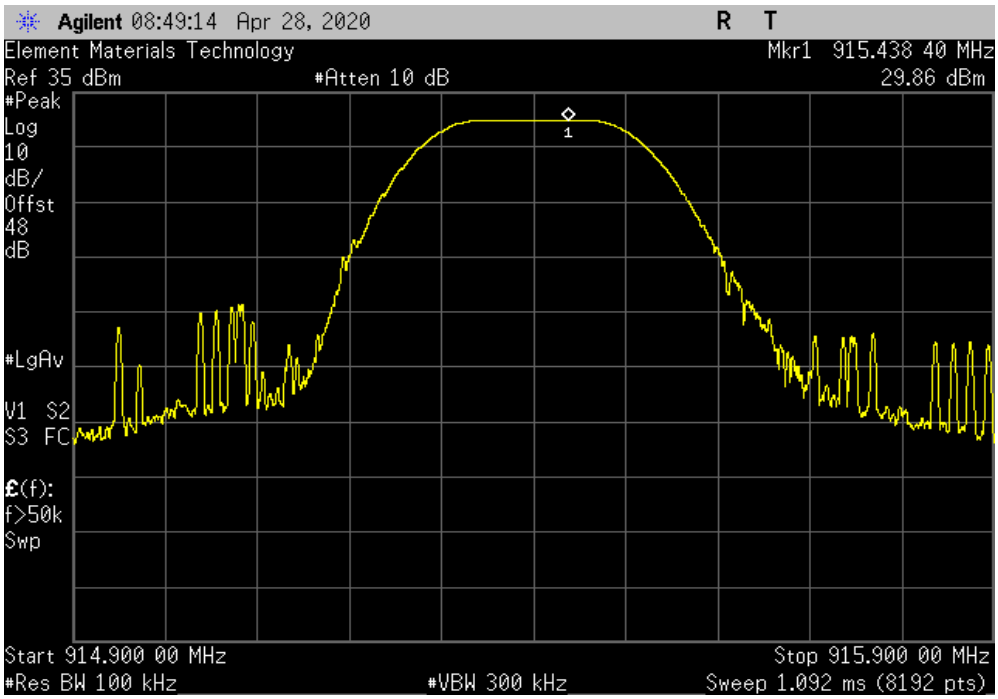
FSK, Single Channel, Low Channel, 902.4 MHz					
Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental	902.43	N/A	N/A	N/A



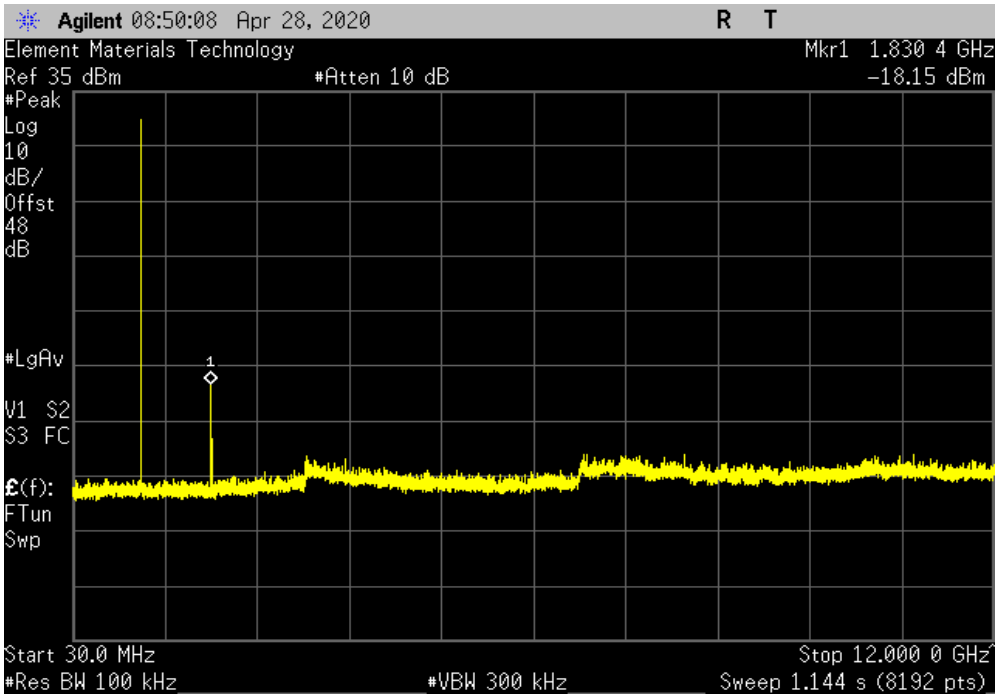
FSK, Single Channel, Low Channel, 902.4 MHz				
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12 GHz	1804.1	-46.74	-20	Pass



FSK, Single Channel, Mid Channel, 915.4 MHz						
	Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental		915.44	N/A	N/A	N/A

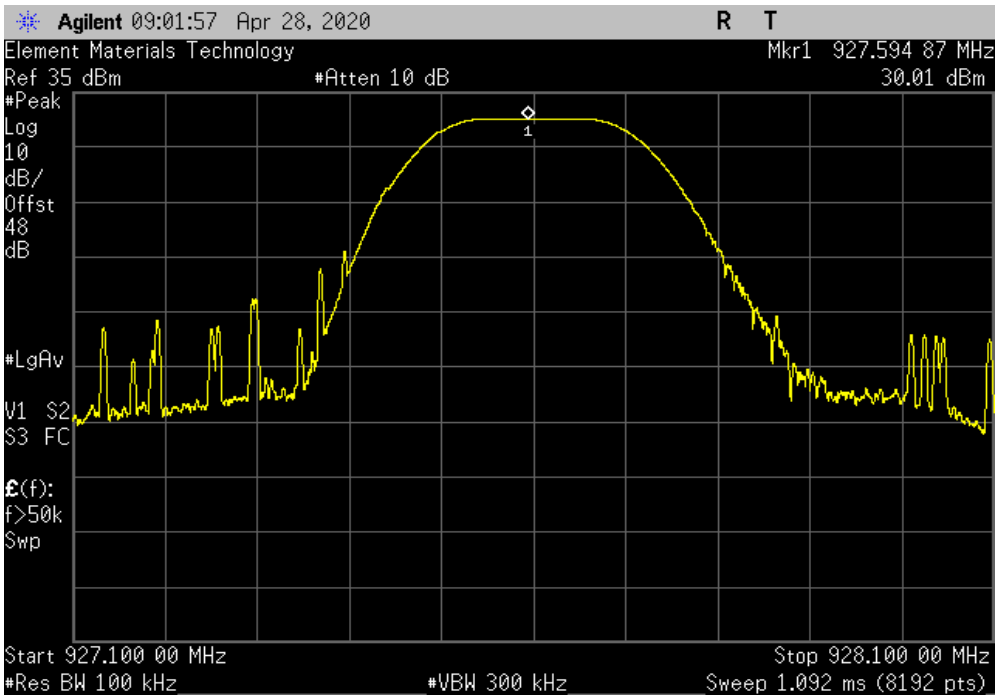


FSK, Single Channel, Mid Channel, 915.4 MHz					
Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12 GHz	1830.4	-48.01	-20	Pass



FSK, Single Channel, High Channel, 927.6 MHz

Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental	927.59	N/A	N/A	N/A



FSK, Single Channel, High Channel, 927.6 MHz

Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
30 MHz - 12 GHz	1855.2	-48.29	-20	Pass