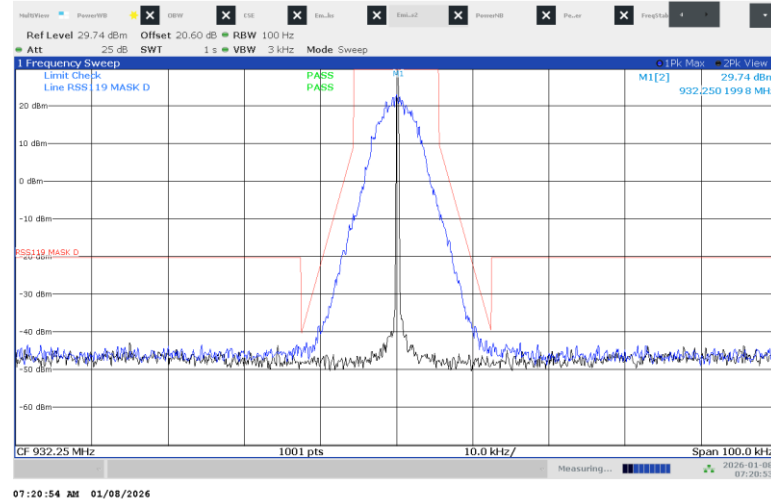
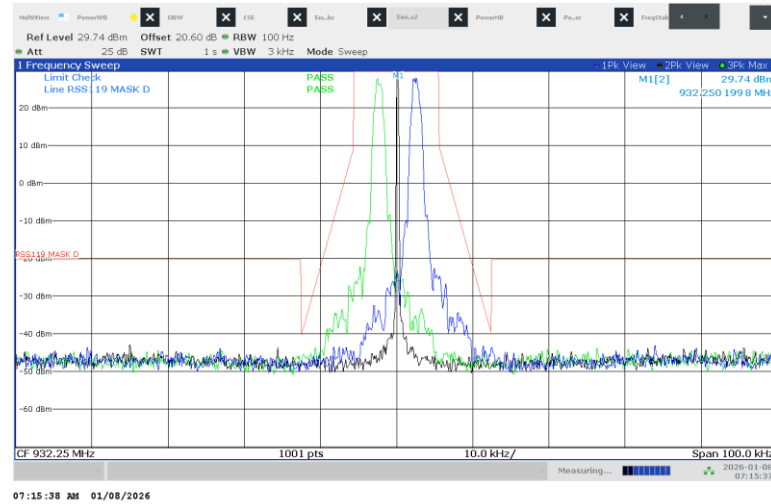


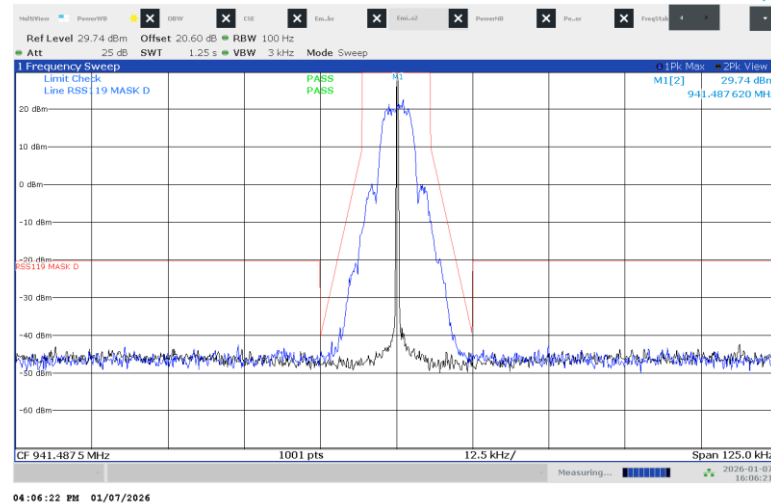
932.25MHz – 12.5kHz Channel Spacing – 8SFSK (Half Baud) Mode



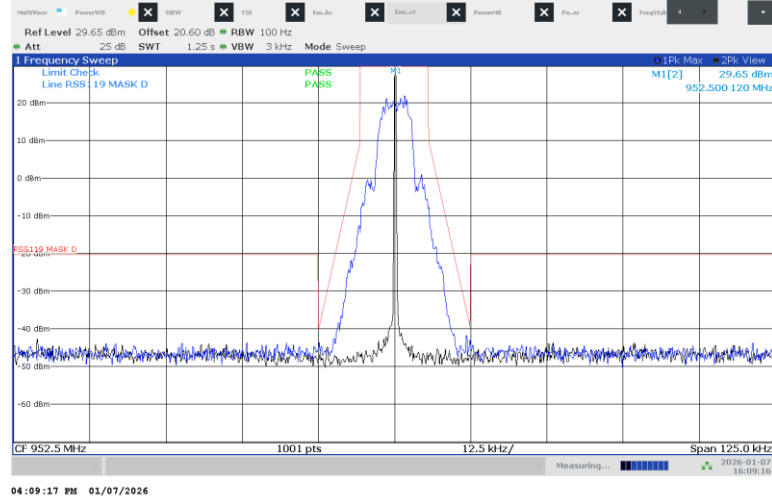
932.25MHz – 12.5kHz Channel Spacing – 2SFSK (1/8 Baud) Mode (Offset +/- 4 Channels)



941.4875MHz – 12.5kHz Channel Spacing – mPass 5k Mode



952.5MHz – 12.5kHz Channel Spacing – mPass 5k Mode



Test Personnel: Jeremy Pickens

Test Date: 07-08 January 2026

Ambient Temperature: 19.6 - 20.1°C

Reference Standard: ANSI C63.26

Relative Humidity: 45.6 – 46.4%

Atmospheric Pressure: 98.3 – 98.6kPa

8 Occupied Bandwidth

8.1 Method

The methods defined in ANSI C63.26, Section 5.4.4 were applied for measuring the 99% Occupied (Power) Bandwidth (OBW). The antenna port was connected directly to a spectrum analyzer through a cable and attenuator(s). The attenuation was accounted for by applying an offset to the spectrum analyzer. The spectrum analyzer was configured with a 3dB Resolution Bandwidth (RBW) between 1% and 5% of the anticipated occupied bandwidth, the Video Bandwidth (VBW) was set to at least 3 x RBW, and the span was configured to at least 1.5 times the OBW. The 99% OBW function of the spectrum analyzer was used to take the measurements.

TEST SITE: RF Bench

The RF bench consists of a Rohde & Schwarz TS8997 automated test system coupled with a temperature/humidity environmental chamber. Where applicable, 2.4 and 5GHz radio measurements are automated using the Rohde & Schwarz EMC32 test software. The TS8997 system houses a switch matrix (OSP), along with a spectrum analyzer, vector network analyzer, and analog signal generator.

8.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
212165	Temperature/Humidity/Pressure Sensor	Extech	SD700	110344	04/29/2025	04/29/2026
213500	Analog Signal Generator (8kHz-40GHz)	Rohde & Schwarz	SMB100B	106096	08/20/2024	08/20/2026
213502	Spectrum Analyzer (2Hz-43.5GHz)	Rohde & Schwarz	FSW43	102972	08/01/2024	08/01/2026
213503-01	Megaphase	OSP DUT Cable 1	KC12-K1K1-80	20815001 001	VBU	VBU
213507-06	Tojoin	6dB SMA Attenuator	6dB	240425	VBU	VBU
213507-10	Tojoin	10dB SMA Attenuator	10dB	241120	VBU	VBU

Software Utilized

Name	Manufacturer	Version
RSCCommander	Rohde & Schwarz	2.4.2 64-bit (2023)

8.3 Results

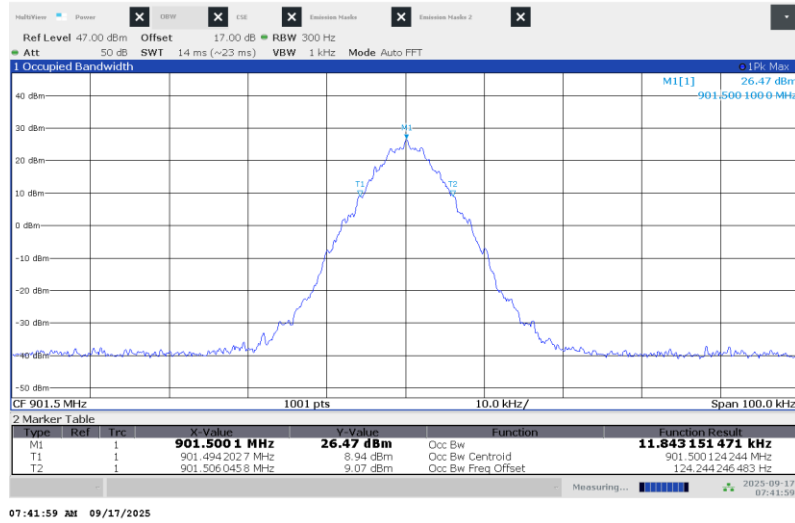
The sample tested was found to Comply.

8.4 Test Data

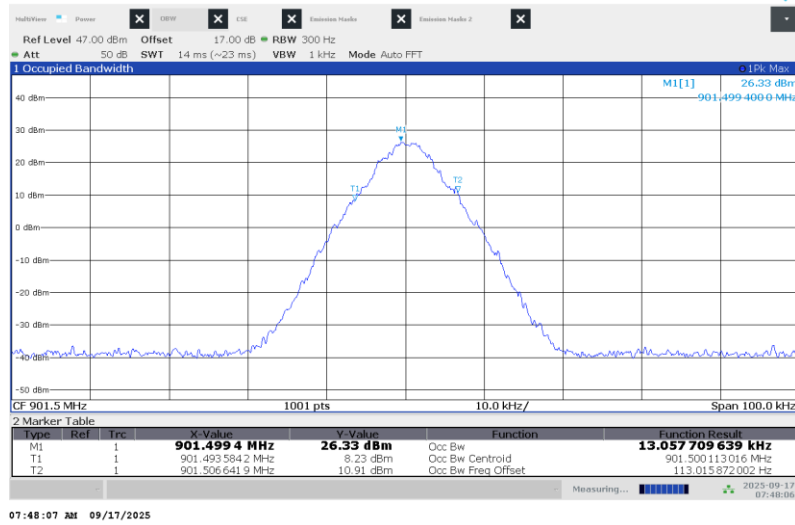
Frequency (MHz)	Mode	99% Bandwidth (kHz)
901.5	Normal	11.843
901.5	Double Density	13.058
901.5	C&I (Half Baud)	5.920
901.5	2SFSK (Half Baud)	5.915
901.5	4SFSK (Half Baud)	6.961
901.5	8SFSK (Half Baud)	7.270
901.5	2SFSK	11.863
901.5	4SFSK	13.955
901.5	8SFSK	14.585
901.5	2SFSK (1/8 Baud)	1.478
901.5	Boost	1.249
930.5	mPass 5k	5.807
930.5	mPass 10k	11.723

Frequency (MHz)	Mode	99% Bandwidth (kHz)
940.0125	mPass 5k	5.784
940.0125	mPass 10k	11.805
928.925	Normal	11.771
928.925	Double Density	13.114
928.925	C&I (Half Baud)	6.038
928.925	2SFSK (Half Baud)	5.924
928.925	4SFSK (Half Baud)	6.975
928.925	8SFSK (Half Baud)	7.281
928.925	2SFSK (1/8 Baud)	1.500
928.925	2SFSK	11.911
928.925	4SFSK	13.896
928.925	8SFSK	14.611
928.925	Boost	1.273
932.25	Normal	11.820
932.25	Double Density	13.340
932.25	C&I (Half Baud)	6.000
932.25	2SFSK (Half Baud)	5.947
932.25	4SFSK (Half Baud)	7.003
932.25	8SFSK (Half Baud)	7.167
932.25	2SFSK (1/8 Baud)	1.485
932.25	2SFSK	11.807
932.25	4SFSK	13.897
932.25	8SFSK	14.551
932.25	Boost	1.191
941.4875	mPass 5k	5.850
941.4875	mPass 10k	11.789
952.5	mPass 5k	5.806
952.5	mPass 10k	11.829
959.925	mPass 5k	5.848
959.925	mPass 10k	11.737

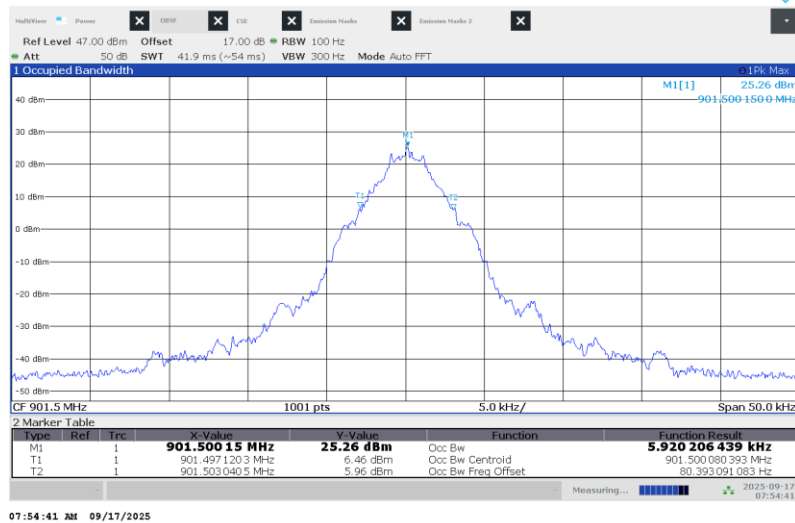
901.5MHz – Normal Mode



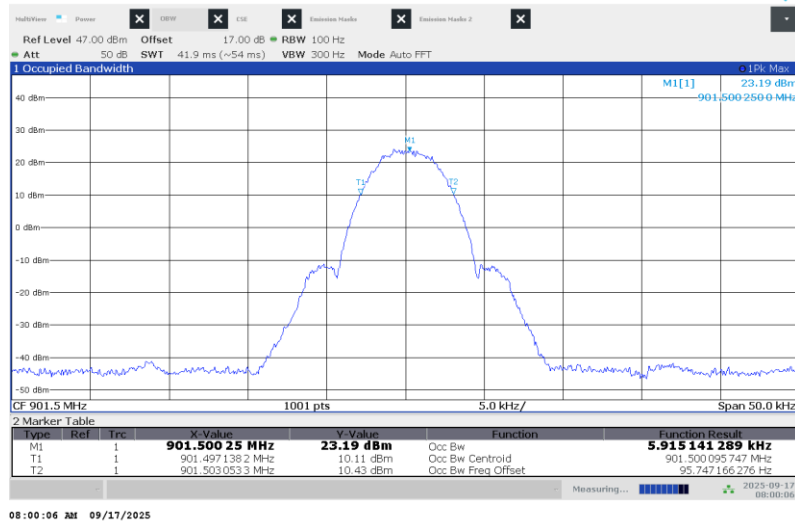
901.5MHz – Double Density Mode



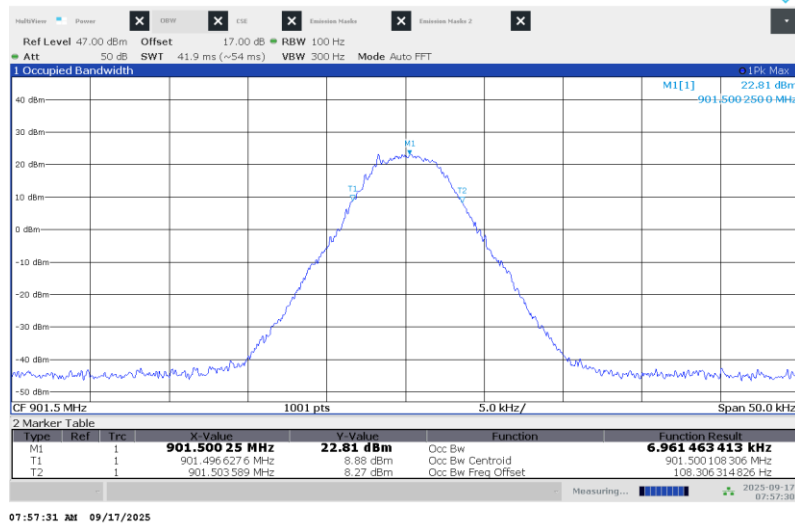
901.5MHz – C&I (Half Baud) Mode



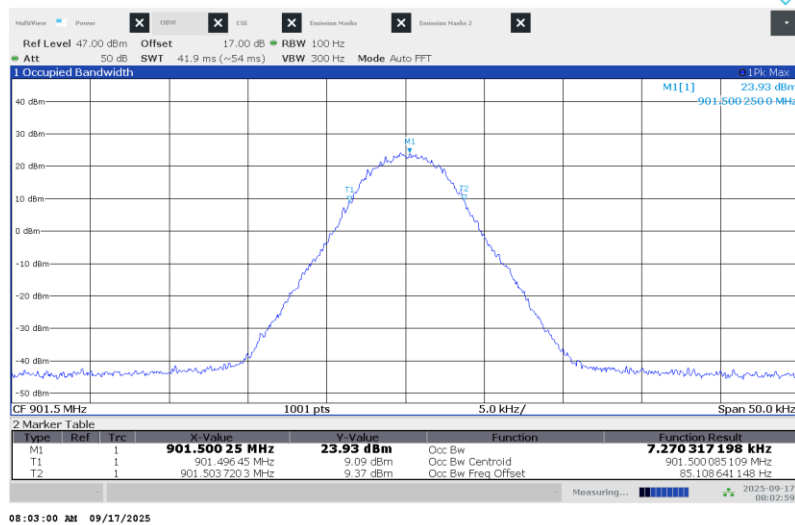
901.5MHz – 2SFSK (Half Baud) Mode



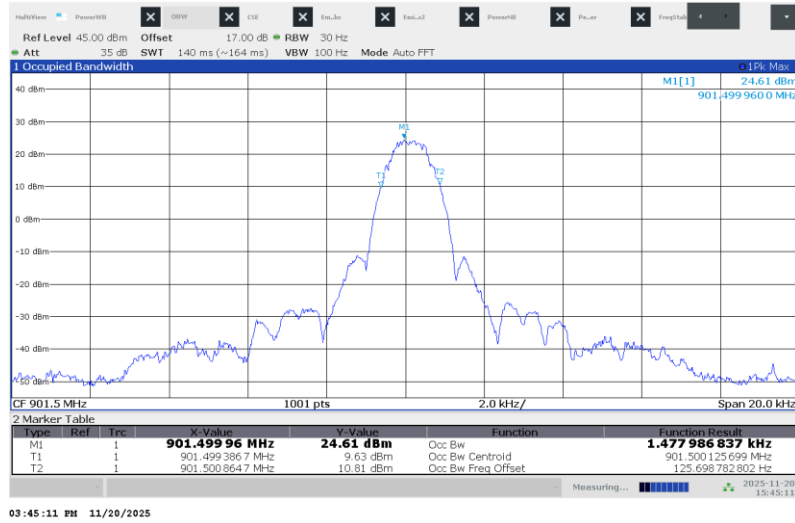
901.5MHz – 4SFSK (Half Baud) Mode



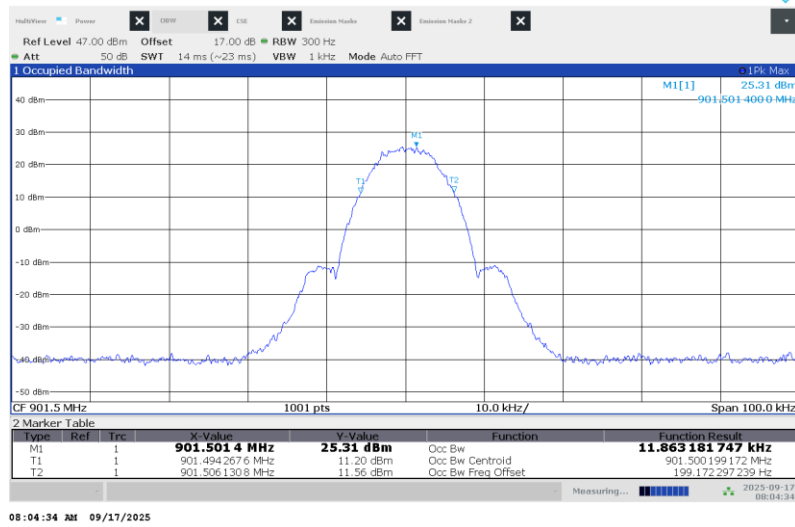
901.5MHz – 8SFSK (Half Baud) Mode



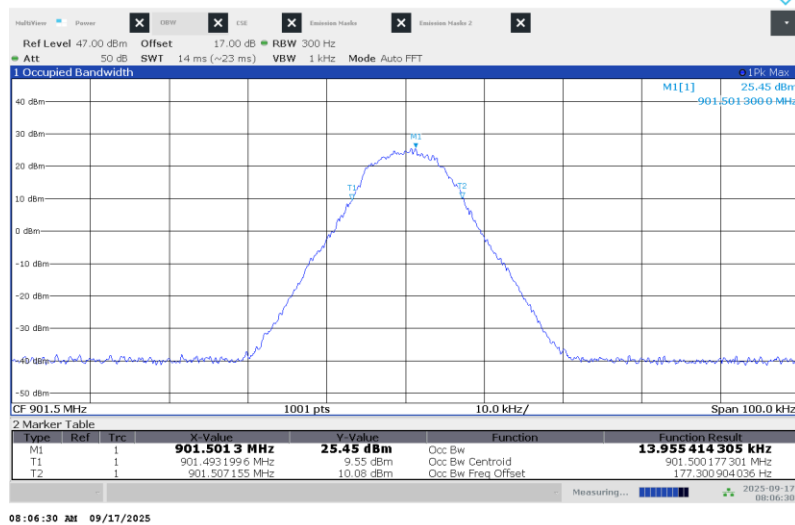
901.5MHz – 2SFSK (1/8 Baud) Mode



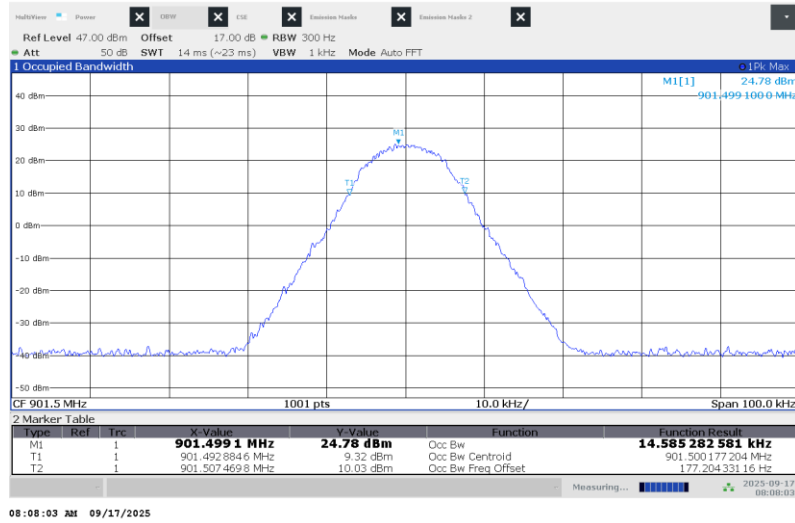
901.5MHz – 2SFSK Mode



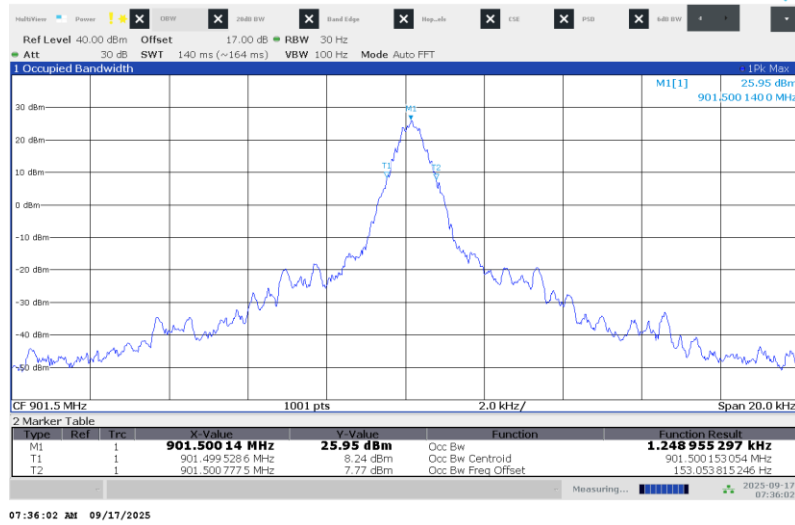
901.5MHz – 4SFSK Mode



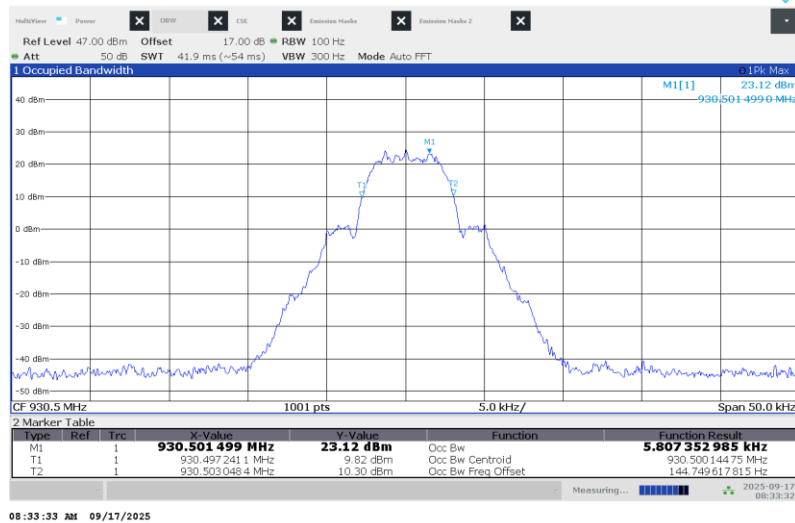
901.5MHz – 8SFSK Mode



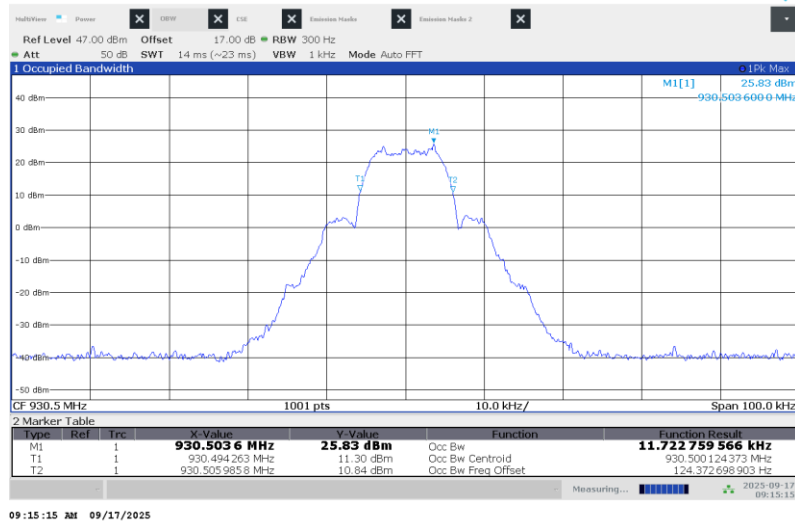
901.5MHz – Boost Mode



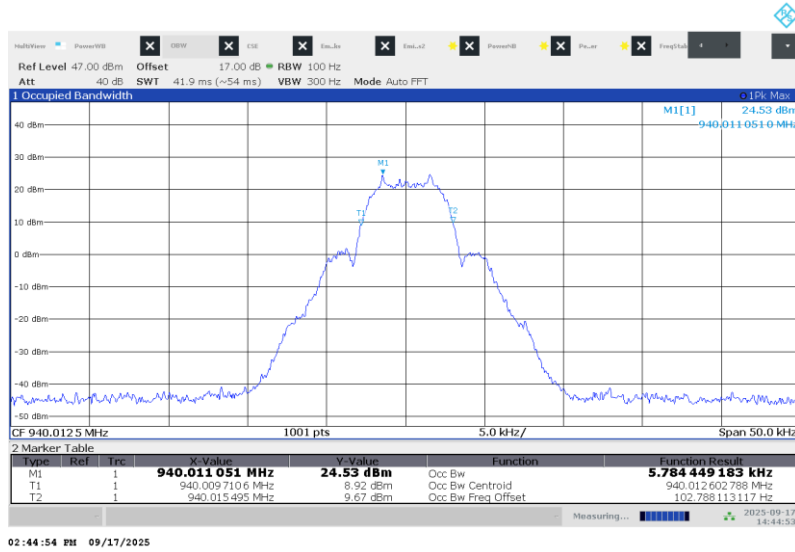
930.5MHz – mPass 5k Mode



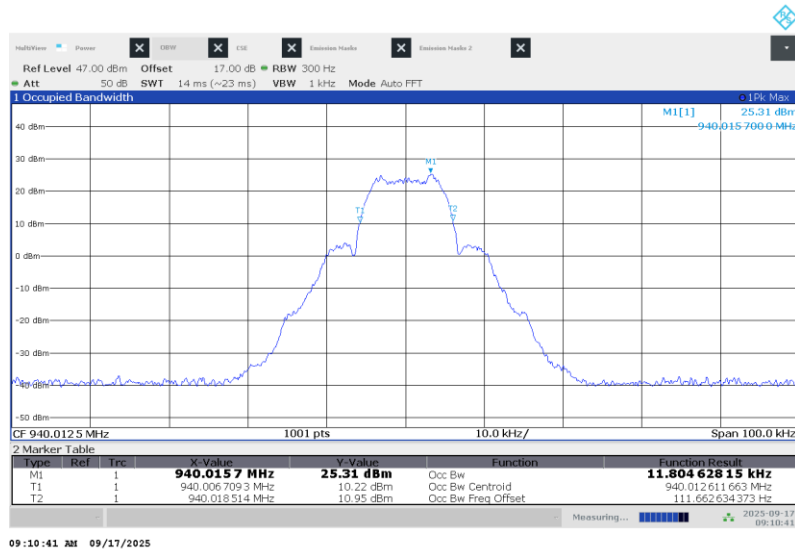
930.5MHz – mPass 10k Mode



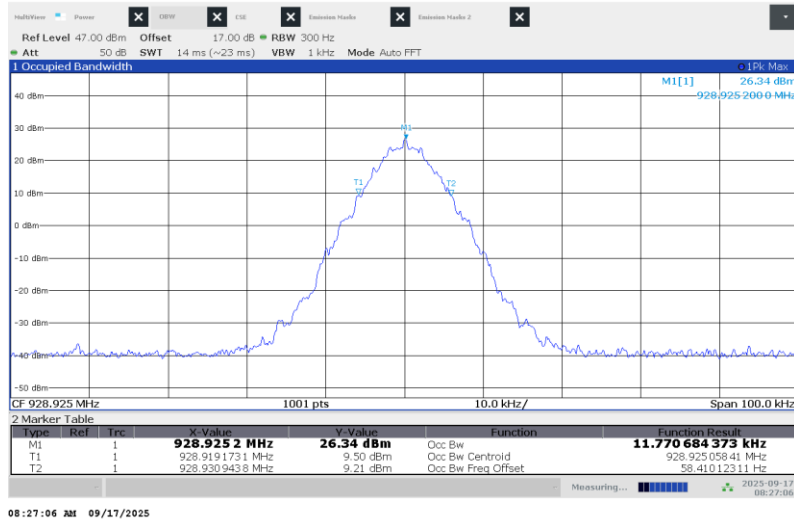
940.0125MHz – mPass 5k Mode



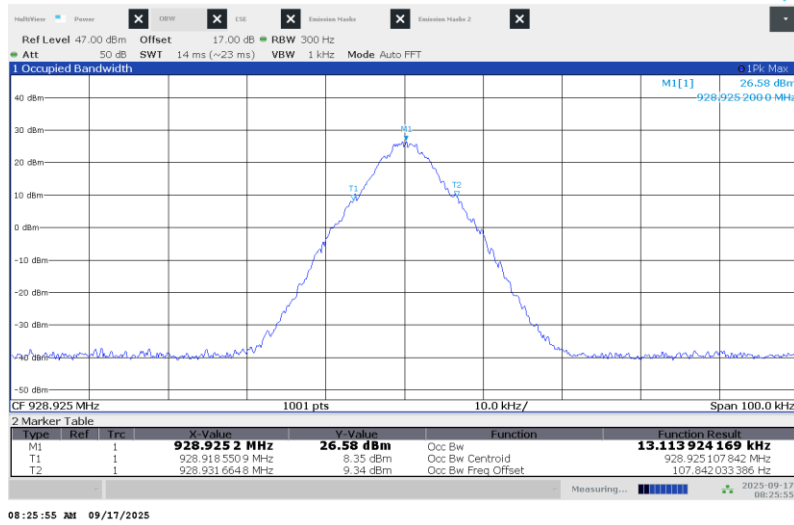
940.0125MHz – mPass 10k Mode



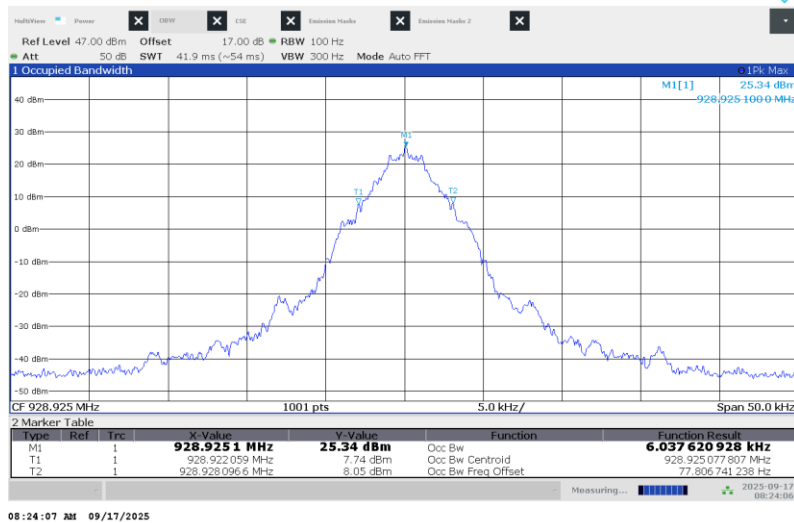
928.925MHz – Normal Mode



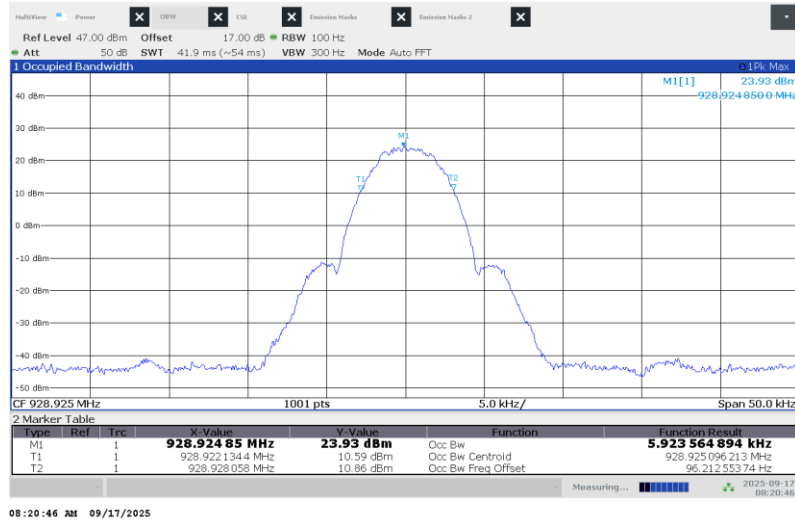
928.925MHz – Double Density Mode



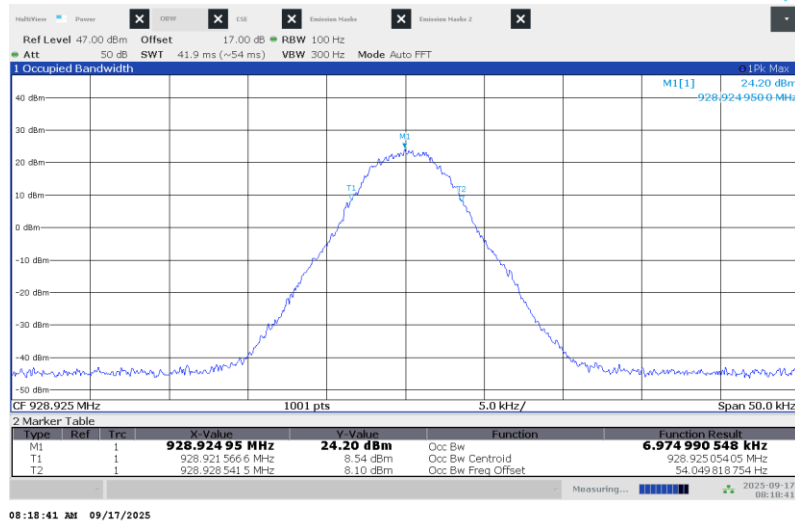
928.925MHz – C&I (Half Baud) Mode



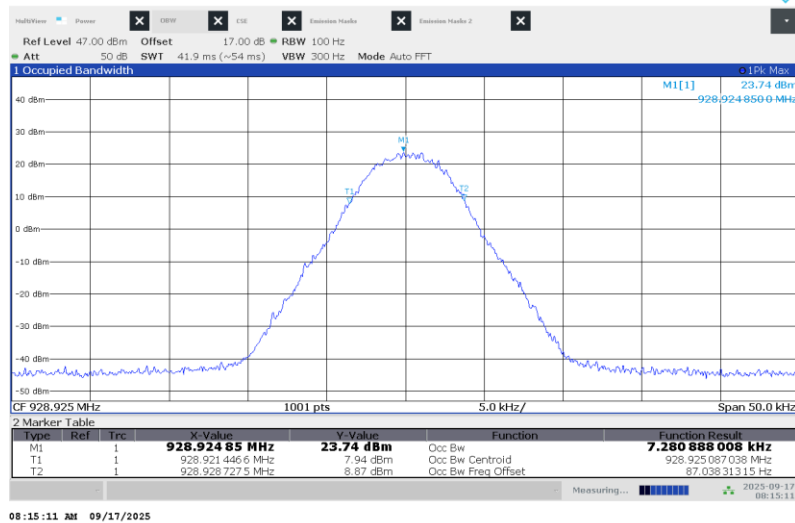
928.925MHz – 2SFSK (Half Baud) Mode



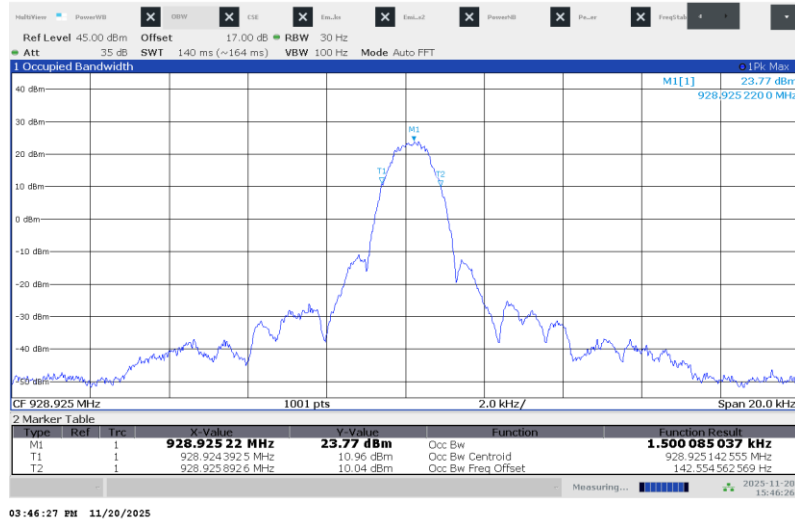
928.925MHz – 4SFSK (Half Baud) Mode



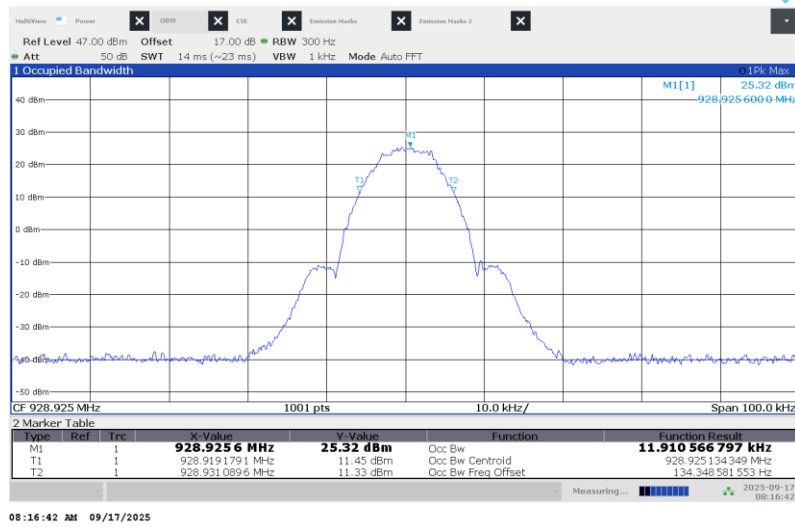
928.925MHz – 8SFSK (Half Baud) Mode



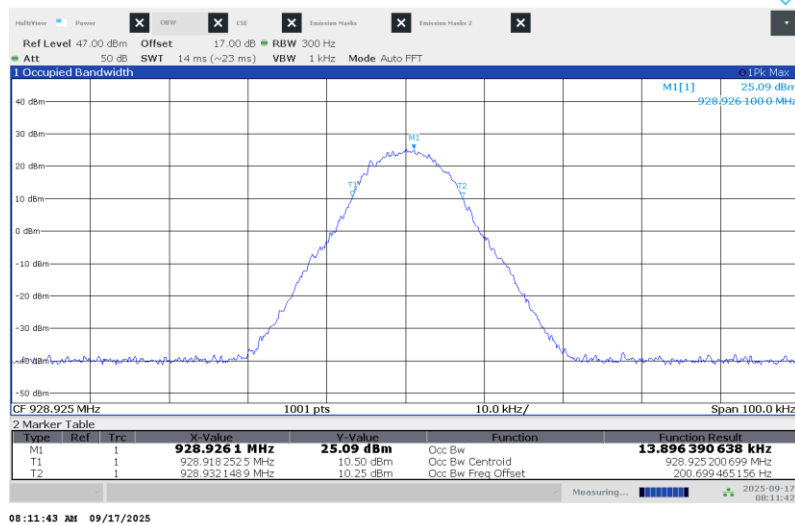
928.925MHz – 2SFSK (1/8 Baud) Mode



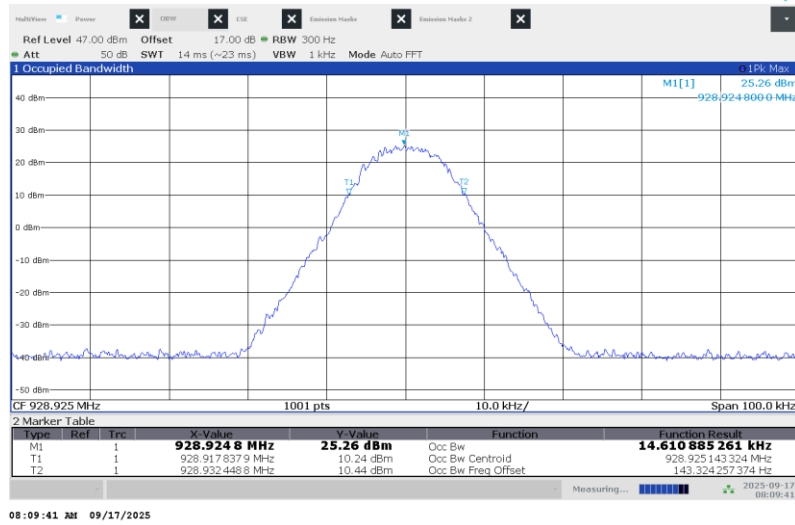
928.925MHz – 2SFSK Mode



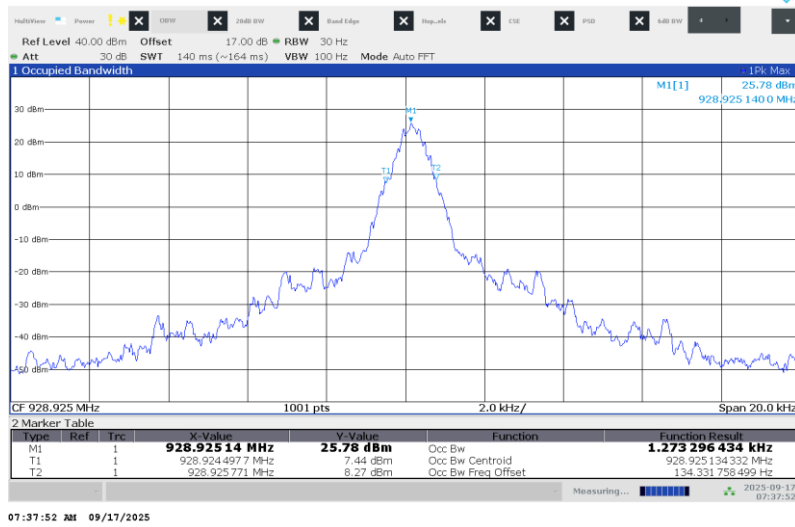
928.925MHz – 4SFSK Mode



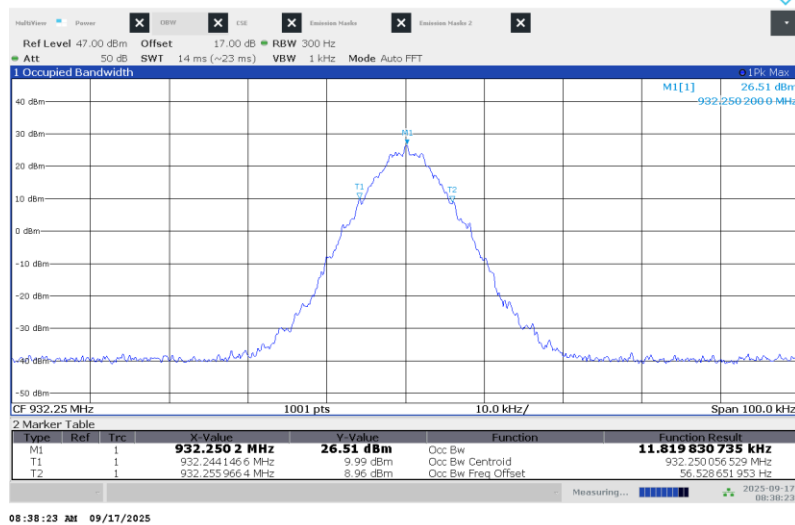
928.925MHz – 8SFSK Mode



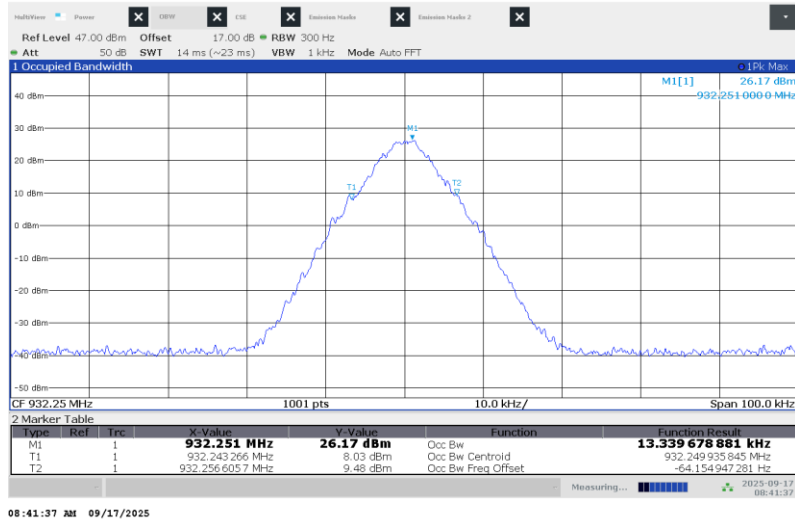
928.925MHz – Boost Mode



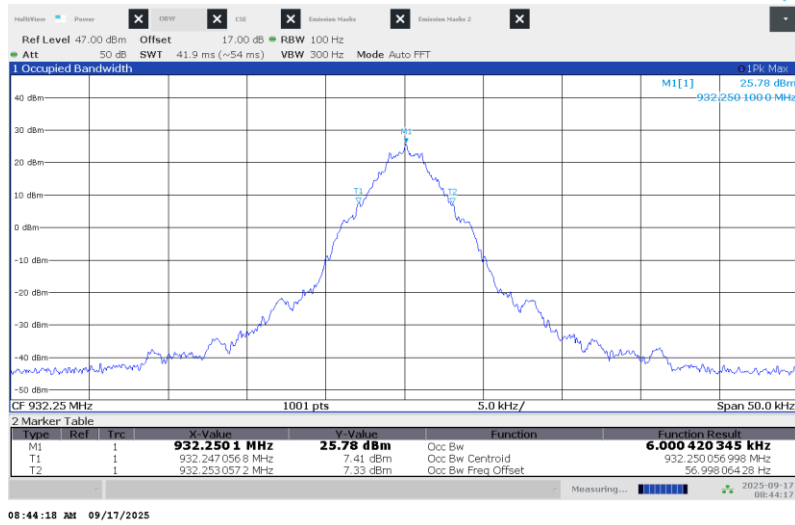
932.25MHz –Normal Mode



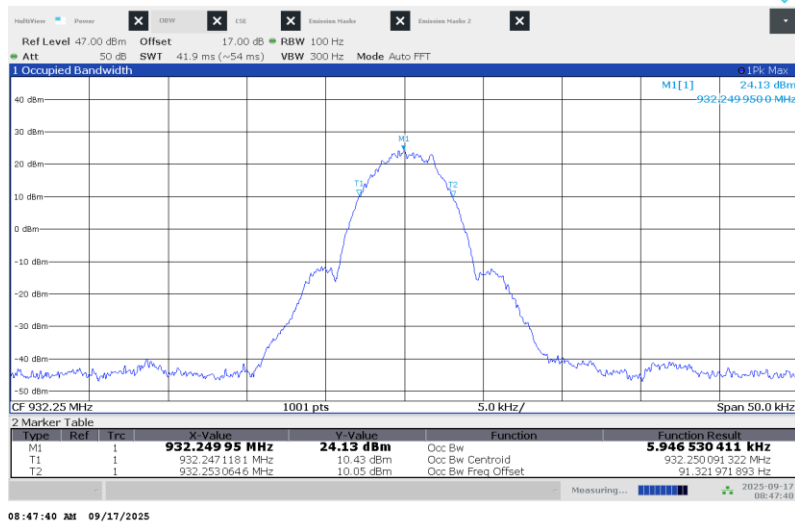
932.25MHz – Double Density Mode



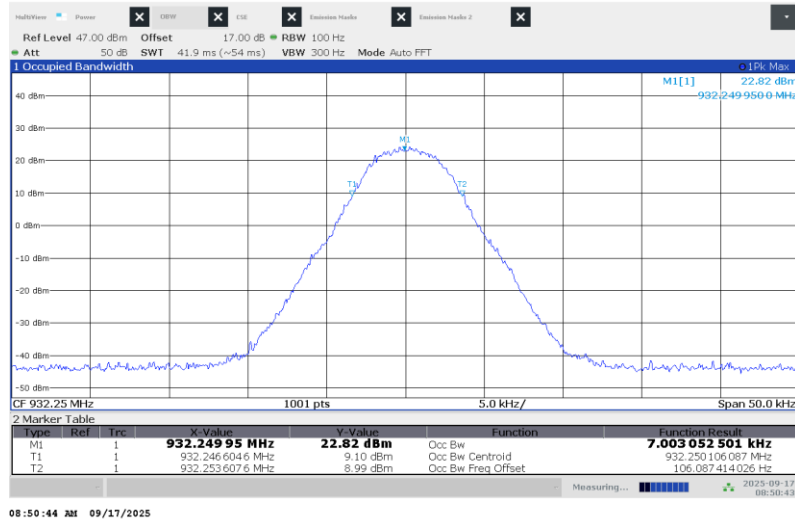
932.25MHz – C&I (Half Baud) Mode



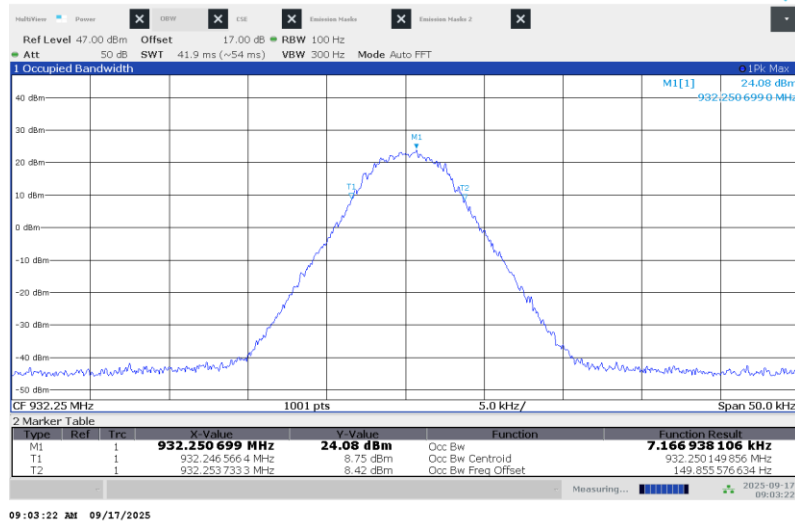
932.25MHz – 2SFSK (Half Baud) Mode



932.25MHz – 4SFSK (Half Baud) Mode



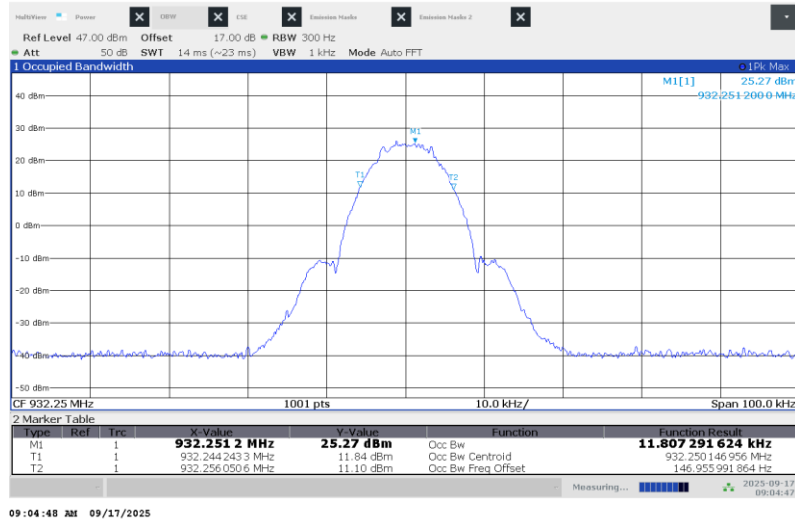
932.25MHz – 8SFSK (Half Baud) Mode



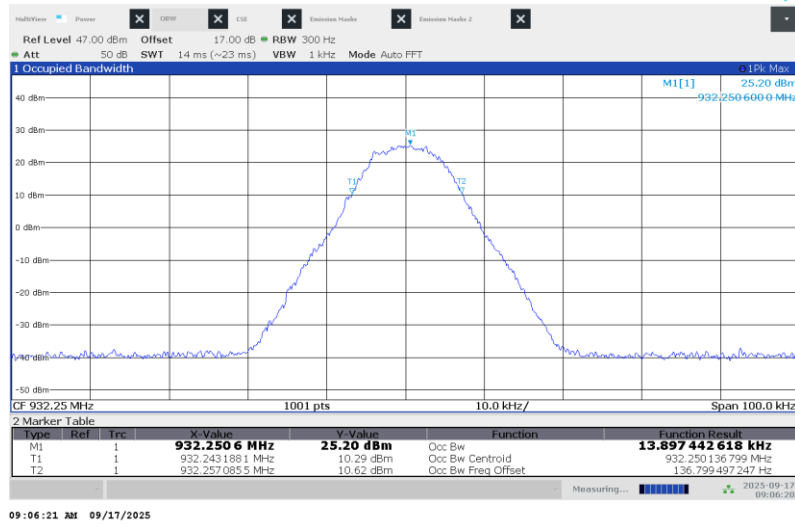
932.25MHz – 2SFSK (1/8 Baud) Mode



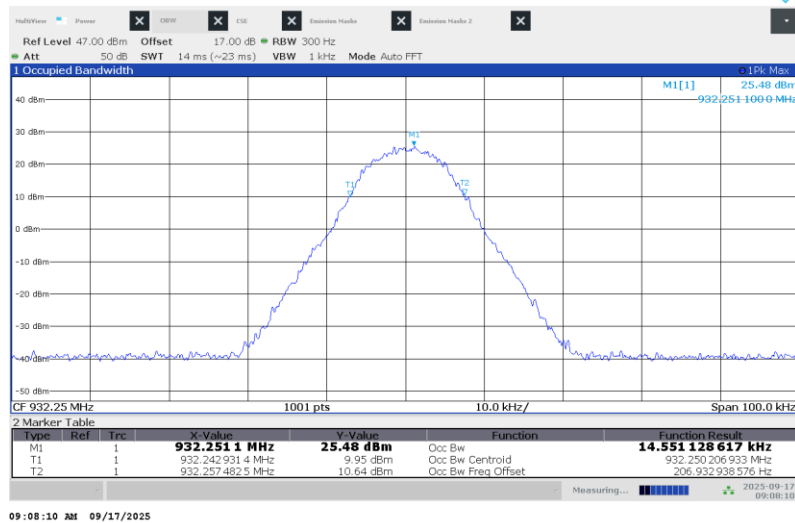
932.25MHz – 2SFSK Mode



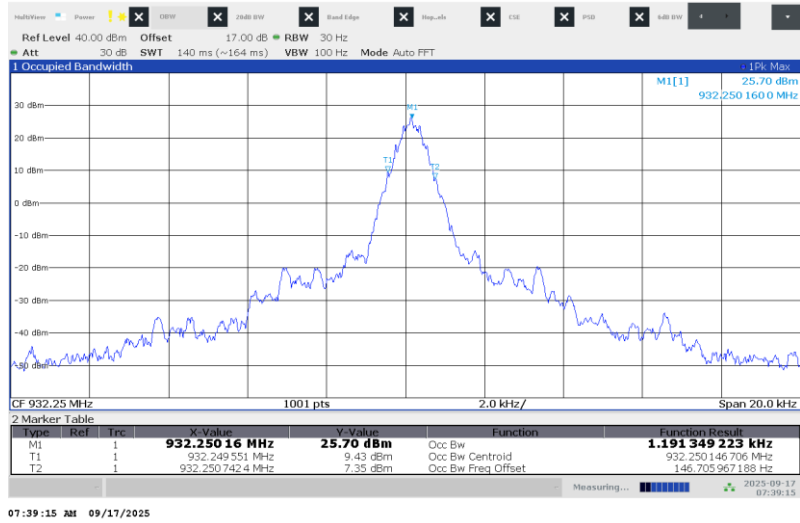
932.25MHz – 4SFSK Mode



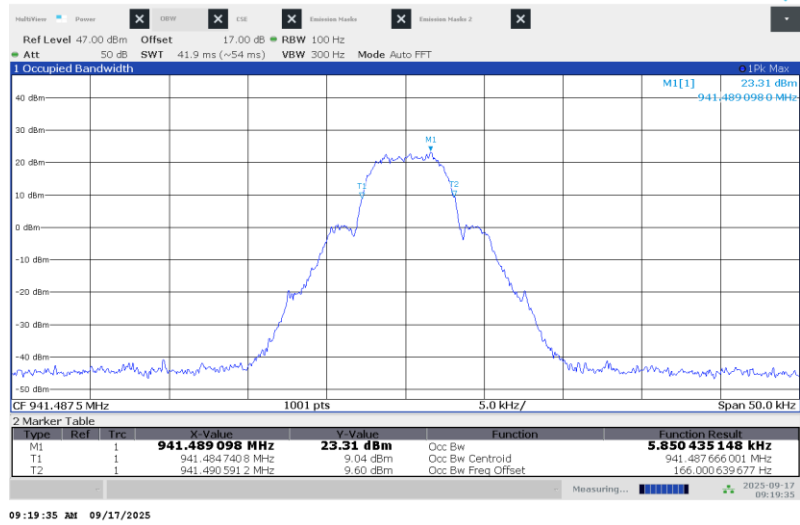
932.25MHz – 8SFSK Mode



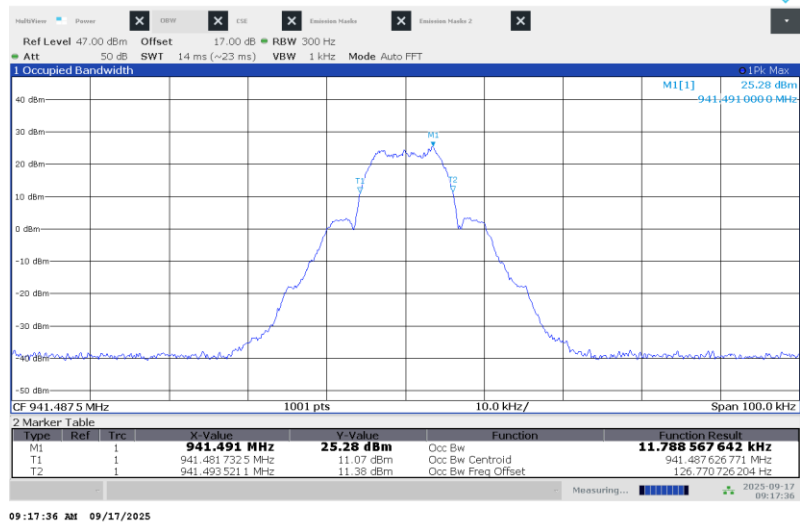
932.25MHz – Boost Mode



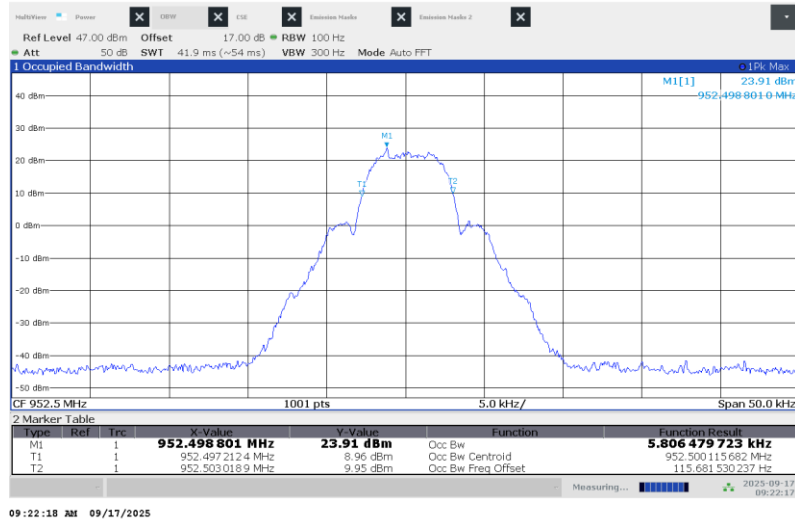
941.4875MHz – mPass 5k Mode



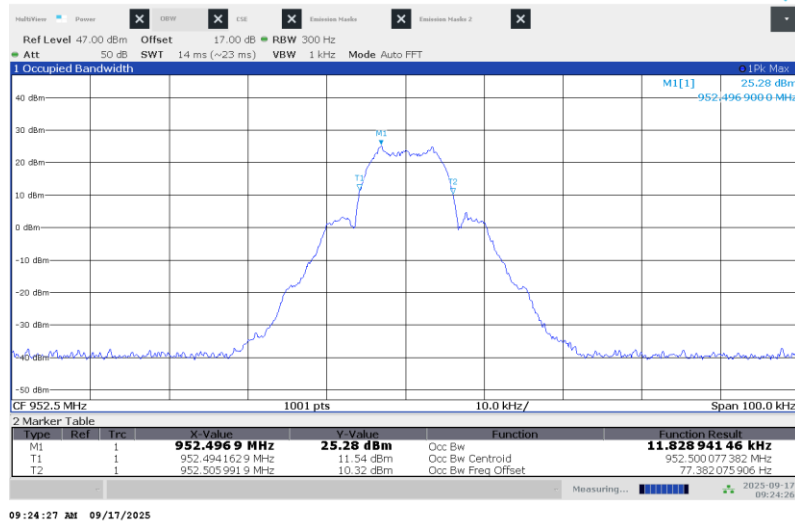
941.4875MHz – mPass 10k Mode



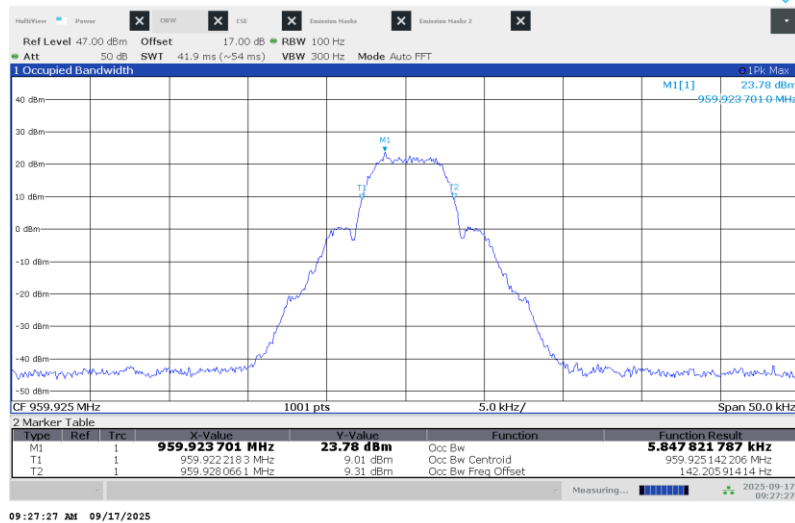
952.5MHz – mPass 5k Mode



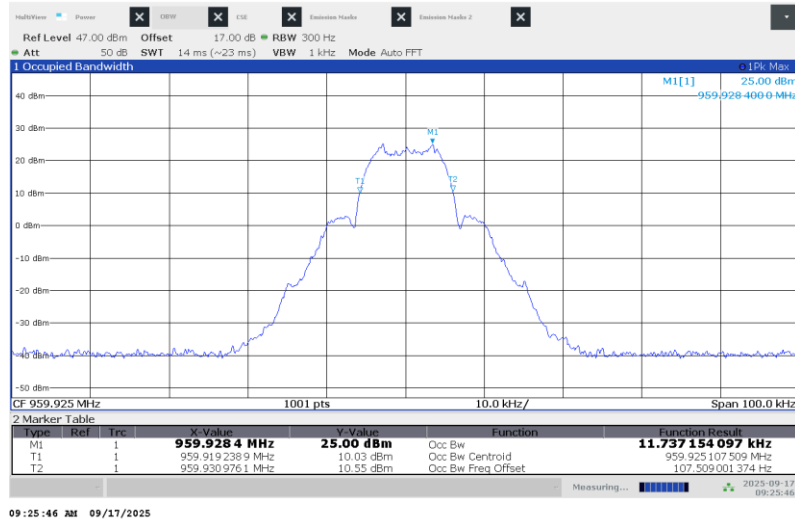
952.5MHz – mPass 10k Mode



959.925MHz – mPass 5k Mode



959.925MHz – mPass 10k Mode

Test Personnel: Jeremy PickensTest Date: 15-16 September, 10/20 November 2025Ambient Temperature: 20.2 – 22.4°CProduct Standard: ANSI C63.26Relative Humidity: 38.7 – 44.8%Atmospheric Pressure: 98.1 – 98.7kPa

9 Spurious Emissions at Antenna Terminals

9.1 Method

The methods defined in ANSI C63.26, Section 5.7.3 were applied for measuring the out of band emissions. The antenna port was connected directly to a spectrum analyzer through a cable and attenuator(s). The attenuation was accounted for by applying an offset to the spectrum analyzer for the attenuator and a transducer function for the cable loss. The spectrum analyzer was configured with the following Resolution Bandwidth (RBW) settings:

Frequency Range (MHz)	RBW
0.009 – 0.150	1 kHz
0.150 – 30	10 kHz
30 – 1000	100 kHz
1000 – 10000	1 MHz

TEST SITE: RF Bench

The RF bench consists of a Rohde & Schwarz TS8997 automated test system coupled with a temperature/humidity environmental chamber. Where applicable, 2.4 and 5GHz radio measurements are automated using the Rohde & Schwarz EMC32 test software. The TS8997 system houses a switch matrix (OSP), along with a spectrum analyzer, vector network analyzer, and analog signal generator.

9.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
212165	Temperature/Humidity/Pressure Sensor	Extech	SD700	110344	04/29/2025	04/29/2026
213500	Analog Signal Generator (8kHz-40GHz)	Rohde & Schwarz	SMB100B	106096	08/20/2024	08/20/2026
213502	Spectrum Analyzer (2Hz-43.5GHz)	Rohde & Schwarz	FSW43	102972	08/01/2024	08/01/2026
213503-01	Megaphase	OSP DUT Cable 1	KC12-K1K1-80	20815001001	VBU	VBU
213507-06	Tojoin	6dB SMA Attenuator	6dB	240425	VBU	VBU
213507-10	Tojoin	10dB SMA Attenuator	10dB	241120	VBU	VBU

Software Utilized

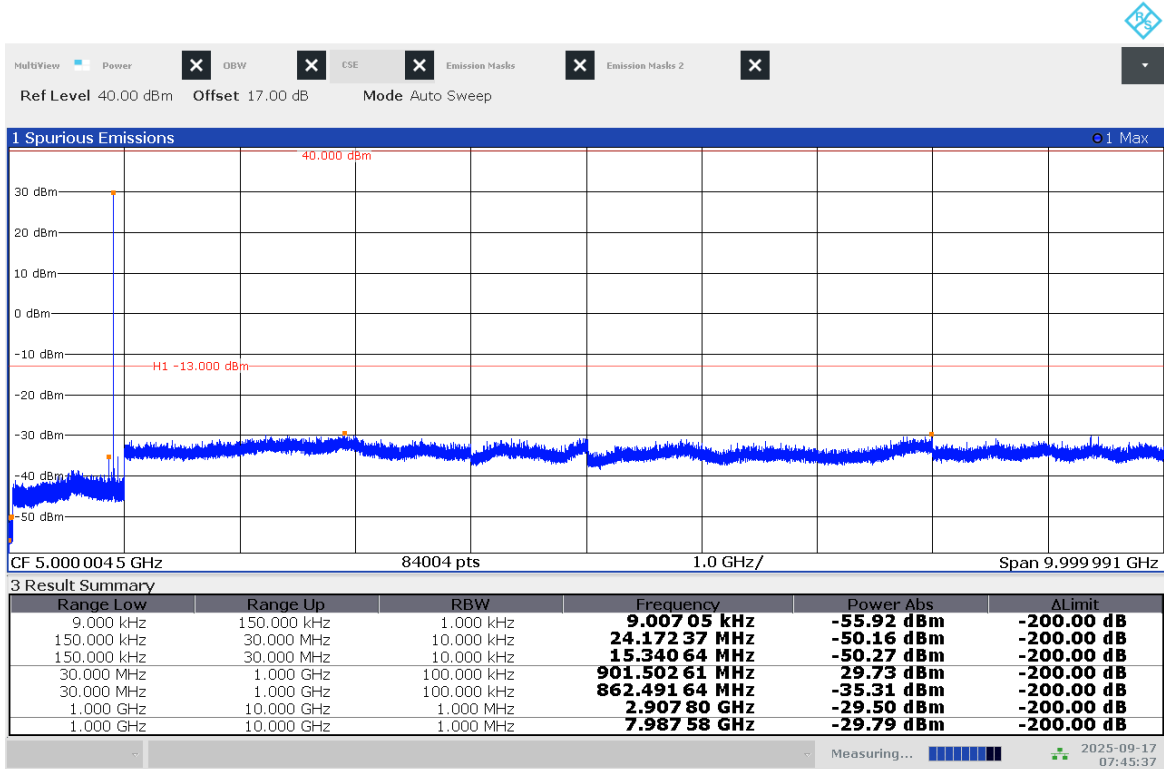
Name	Manufacturer	Version
RSCCommander	Rohde & Schwarz	2.4.2 64-bit (2023)

9.3 Results

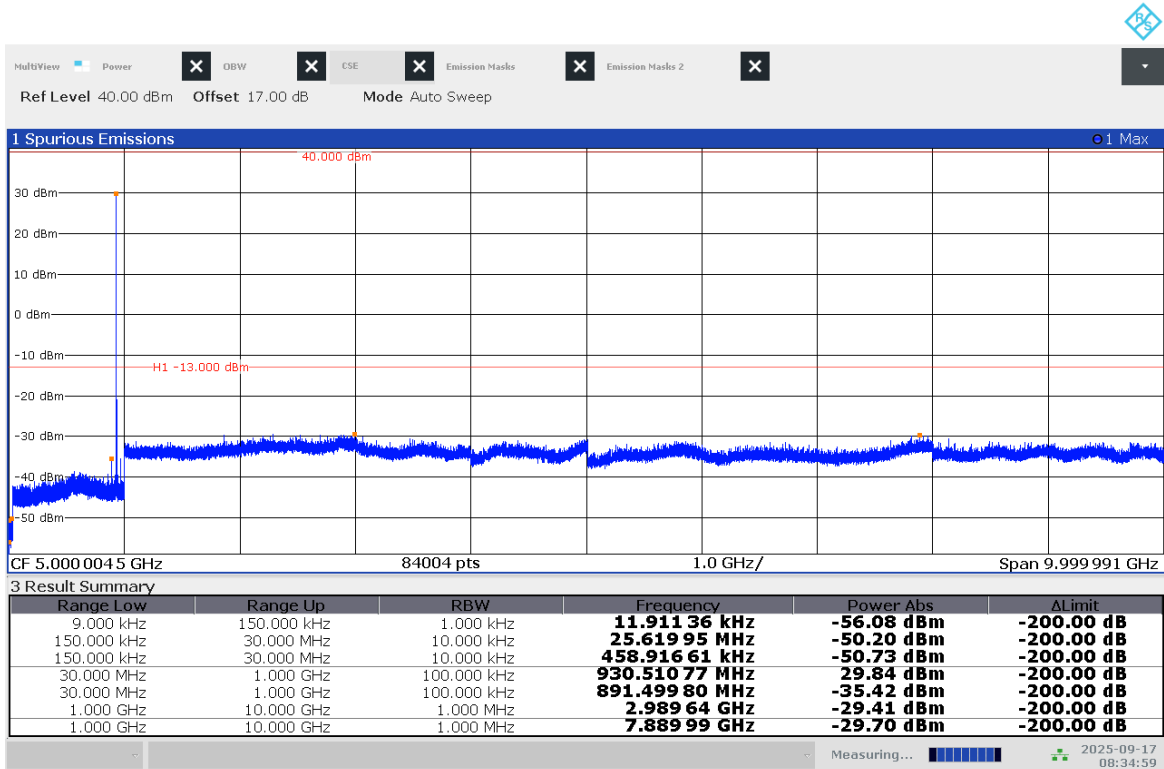
The sample tested was found to Comply.

9.4 Test Data – Interquip TCXO

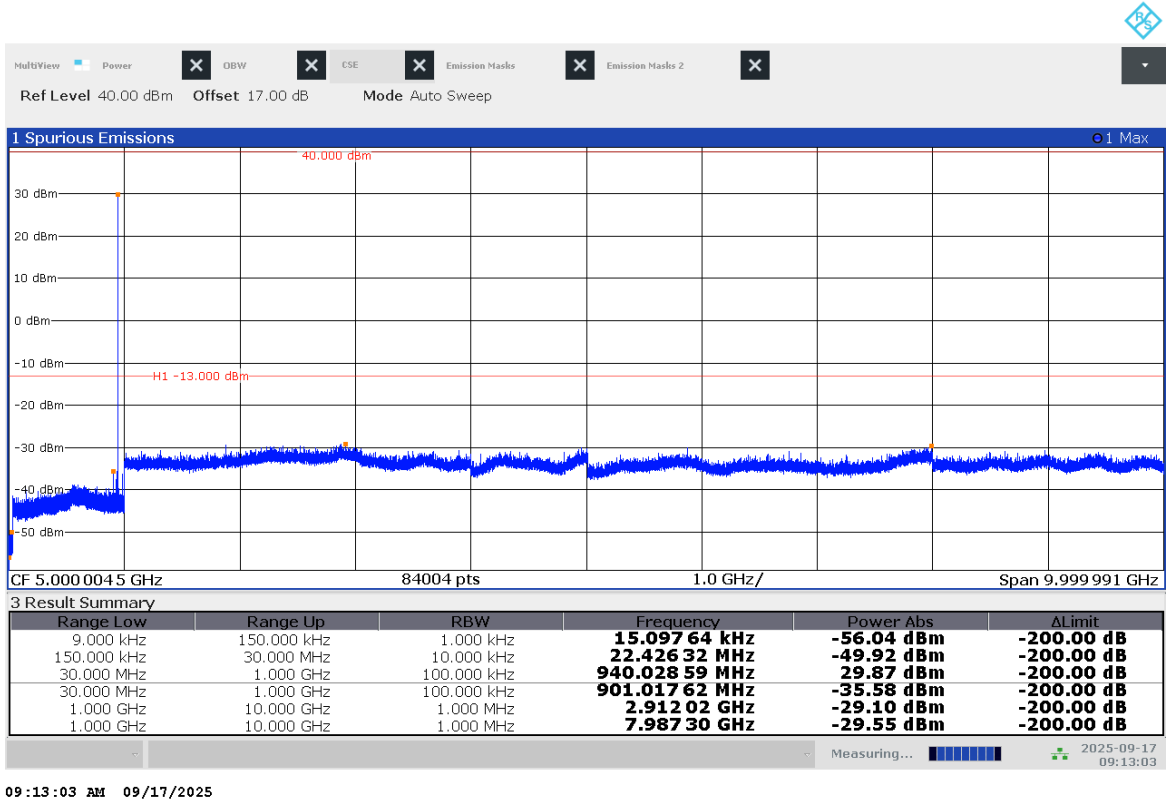
901.5MHz –Normal Mode (Part 24 / RSS-134)



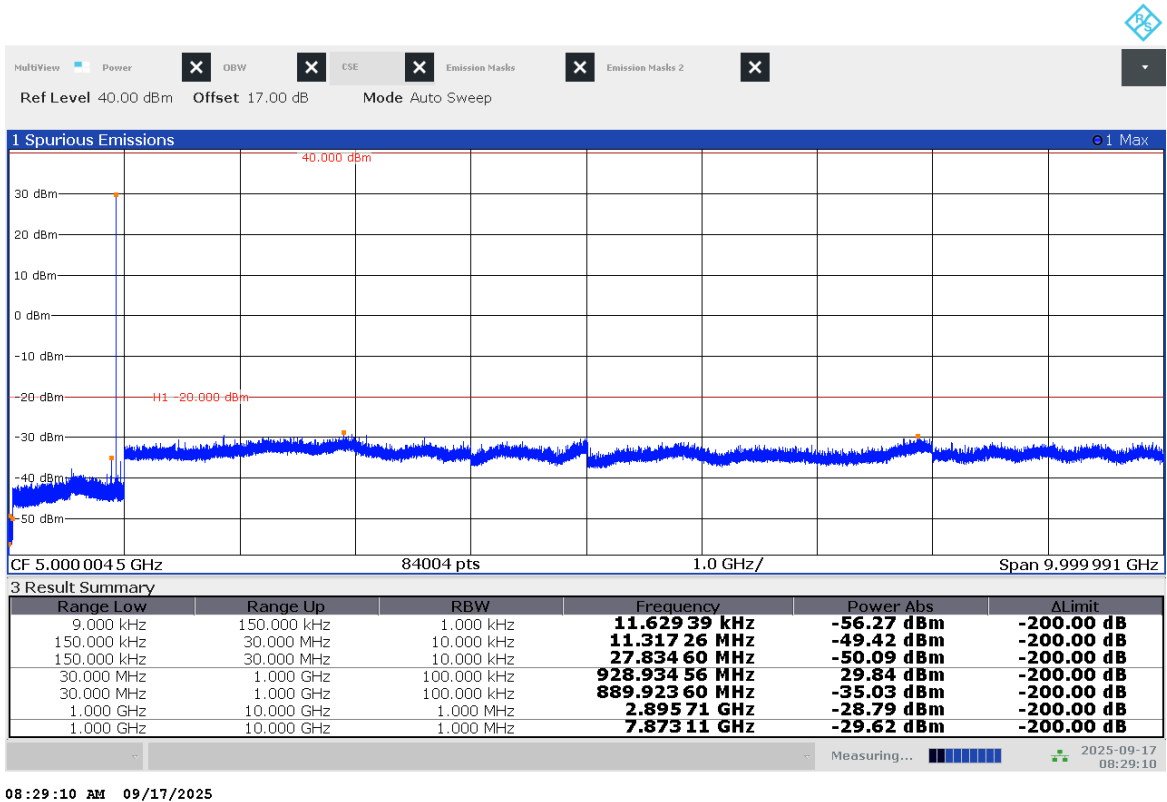
930.5MHz –mPass 5k Mode (Part 24 / RSS-134)



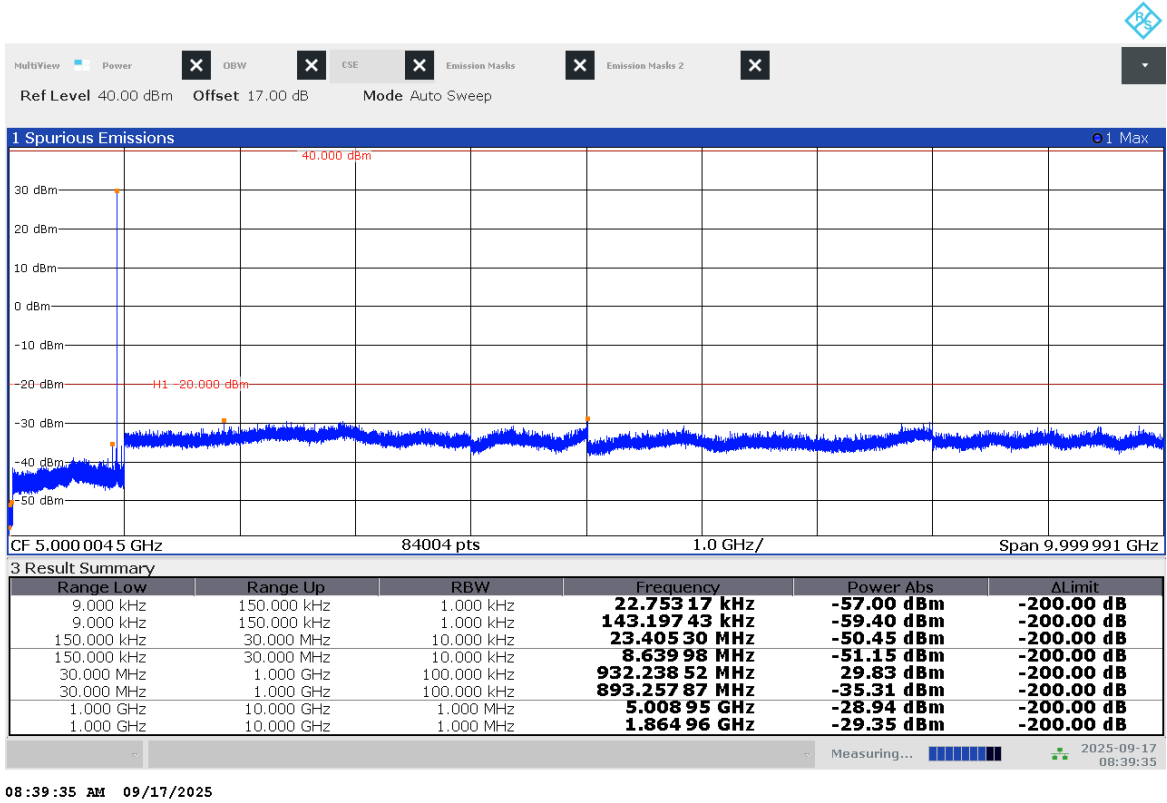
940.0125MHz –mPass 5k Mode (Part 24 / RSS-134)



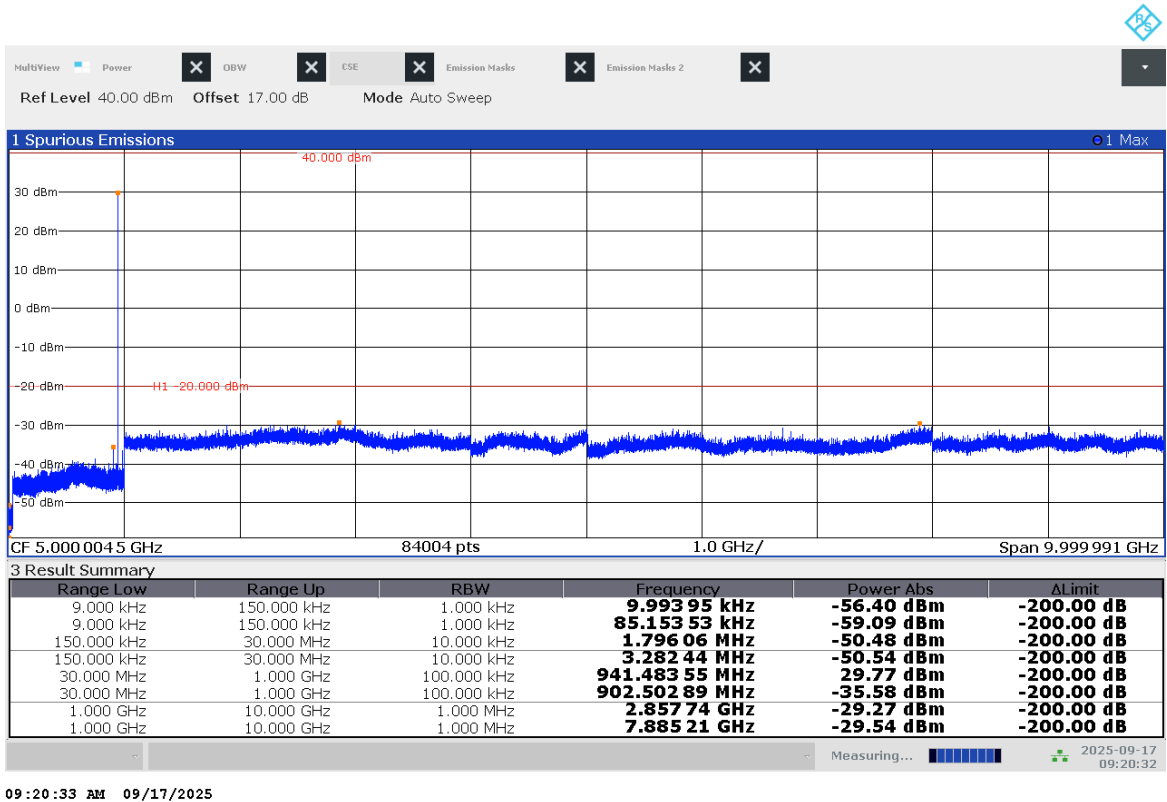
928.925MHz –Normal Mode (Part 101 / RSS-119)



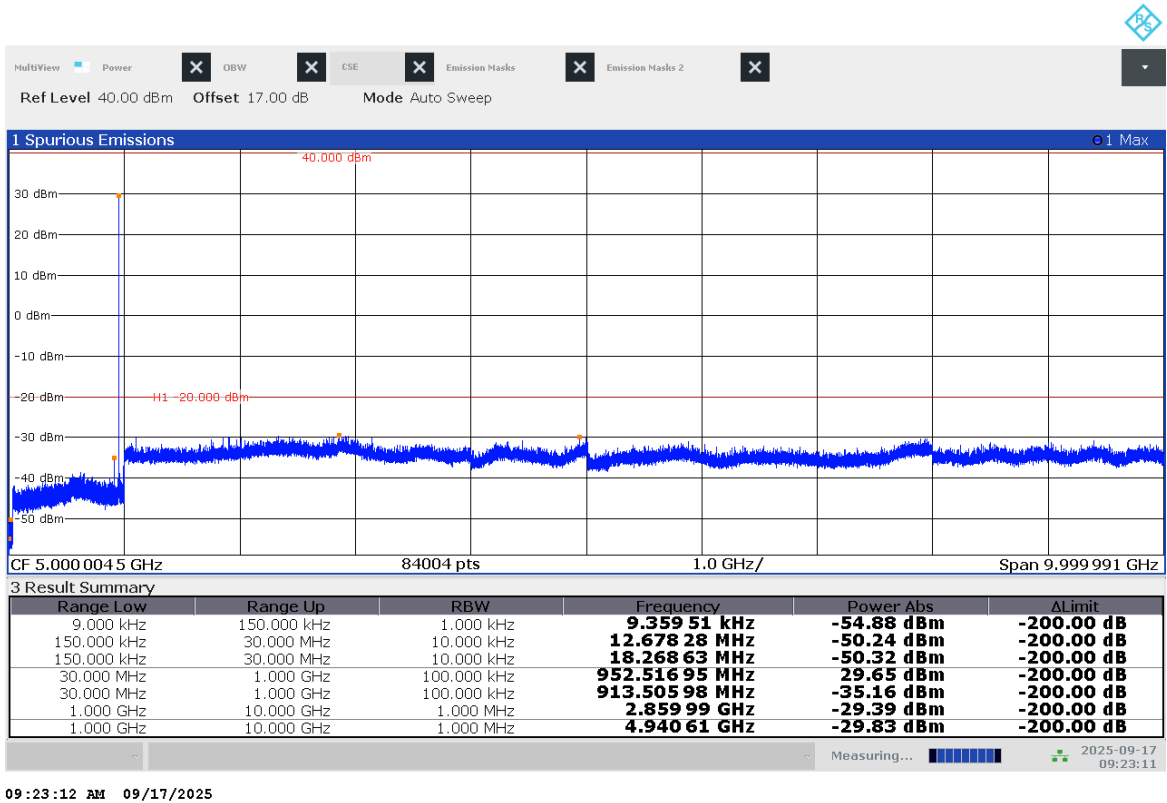
932.25MHz –Normal Mode (Part 101 / RSS-119)



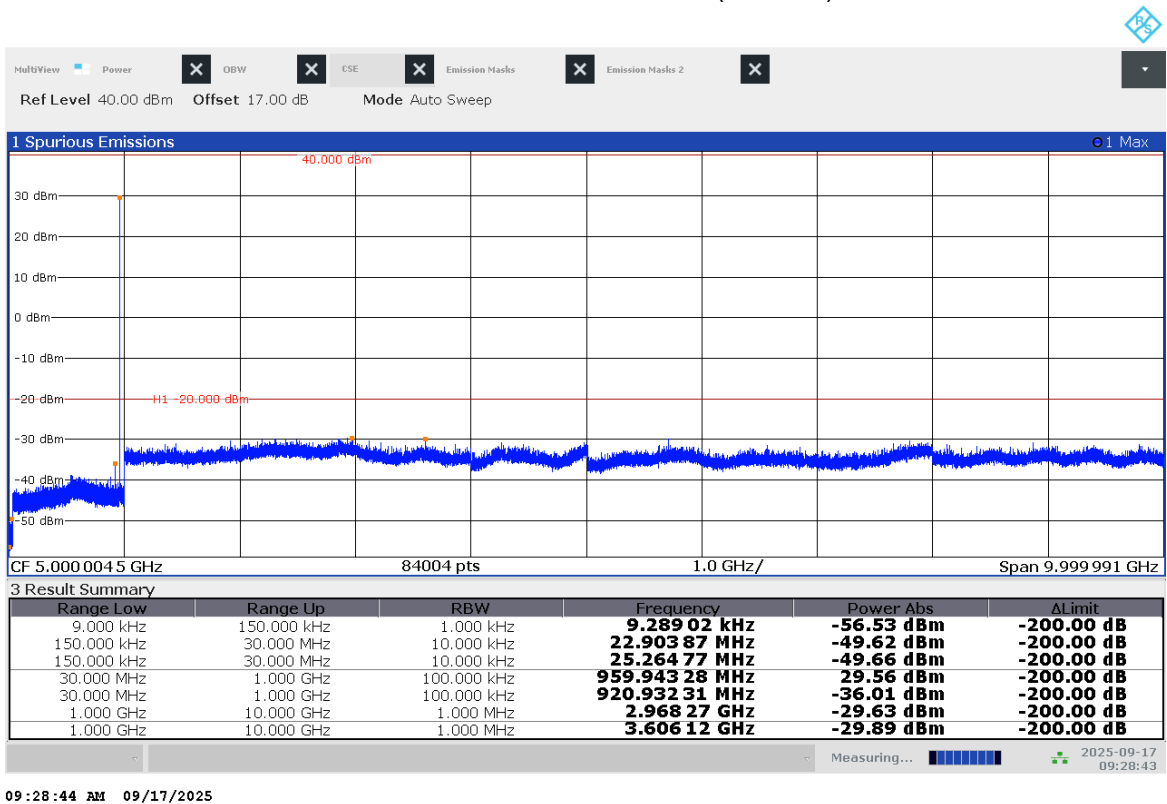
941.4875MHz –mPass 5k Mode (Part 101 / RSS-119)



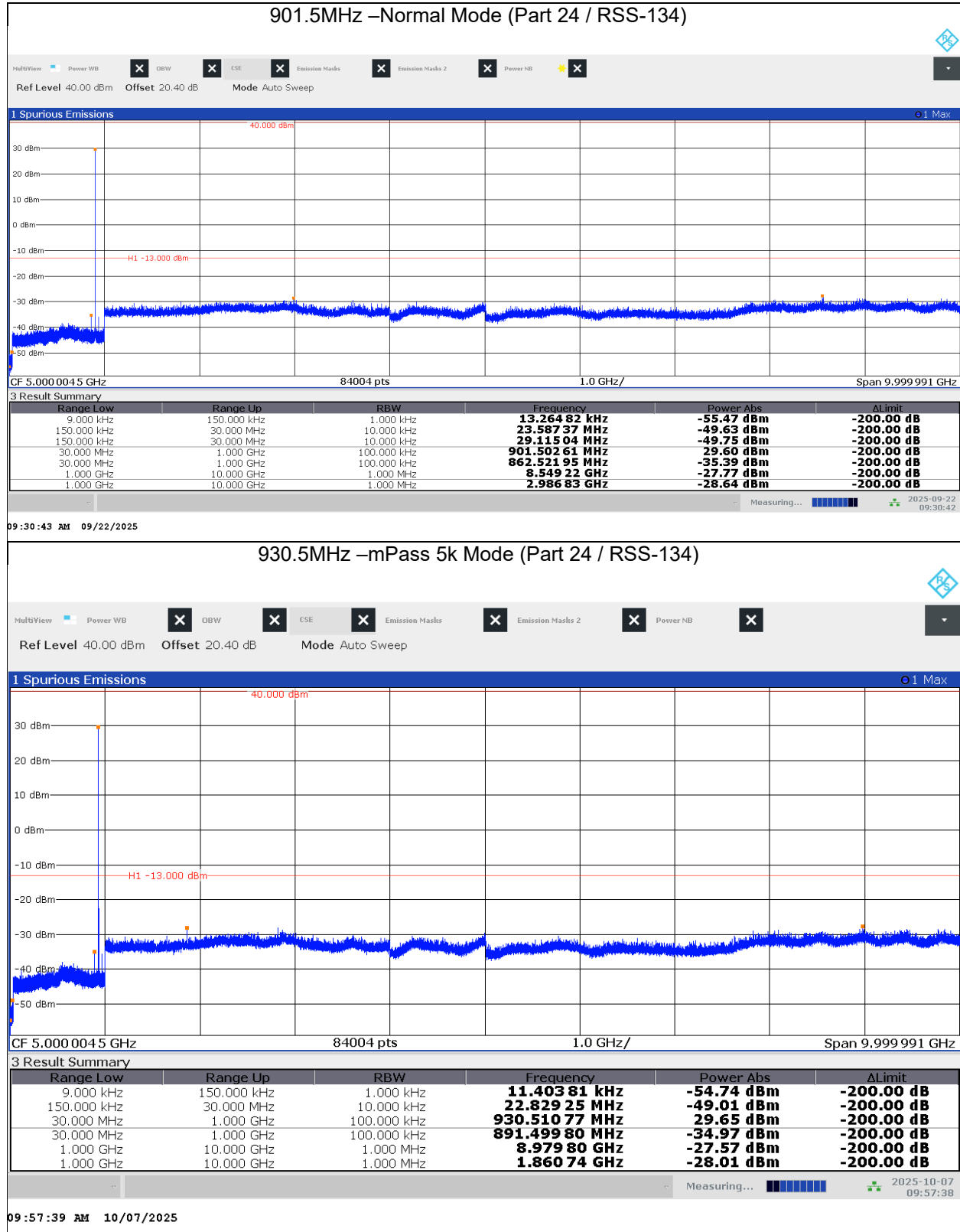
952.5MHz – mPass 5k Mode (Part 101 / RSS-119)

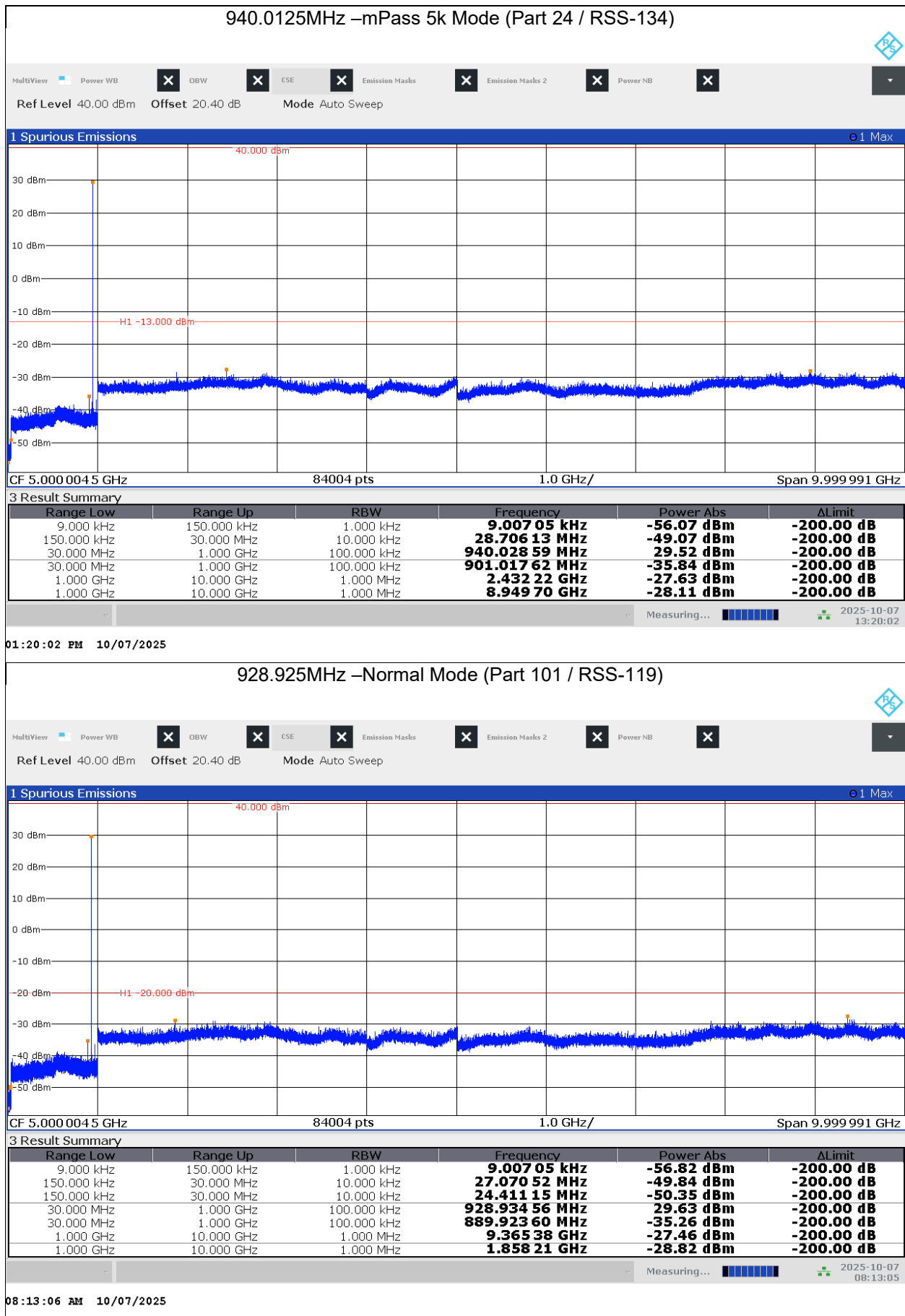


959.925MHz – mPass 5k Mode (Part 101)

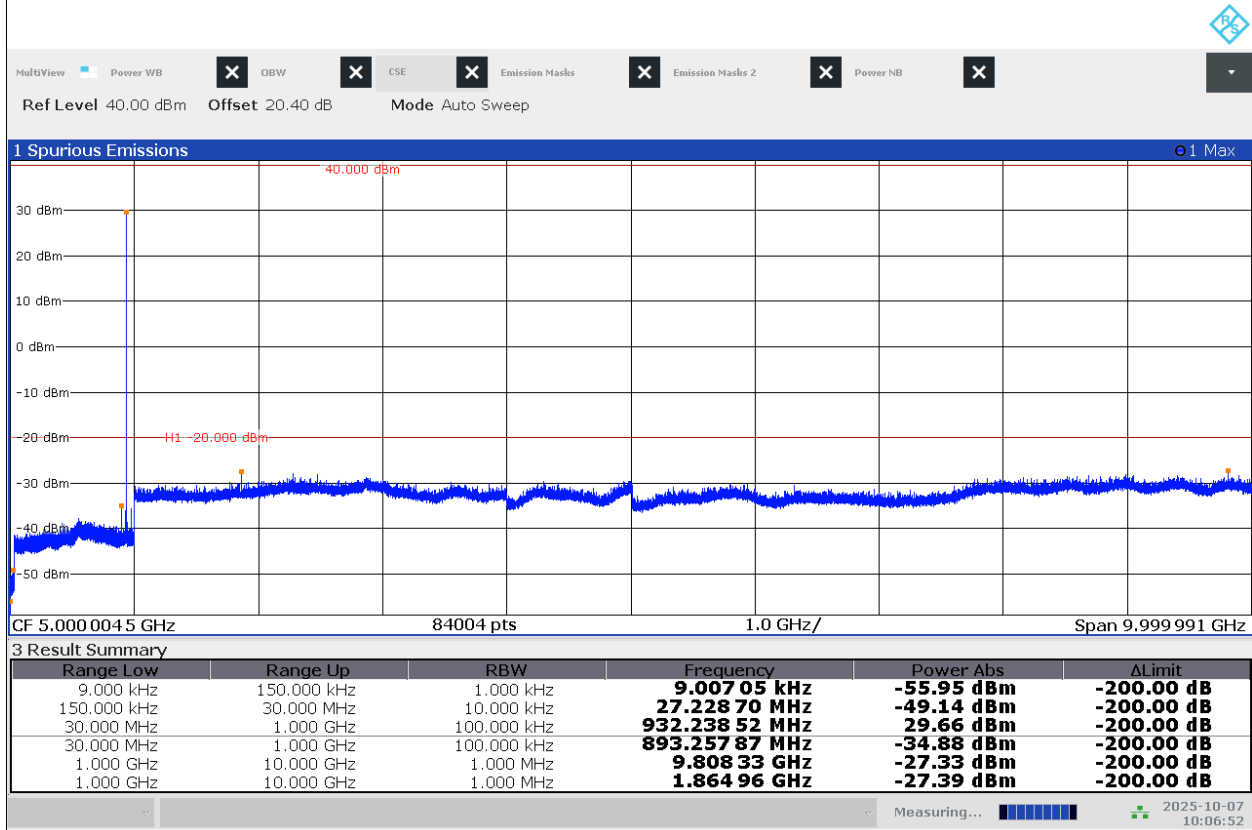


9.5 Test Data – KDS TCXO



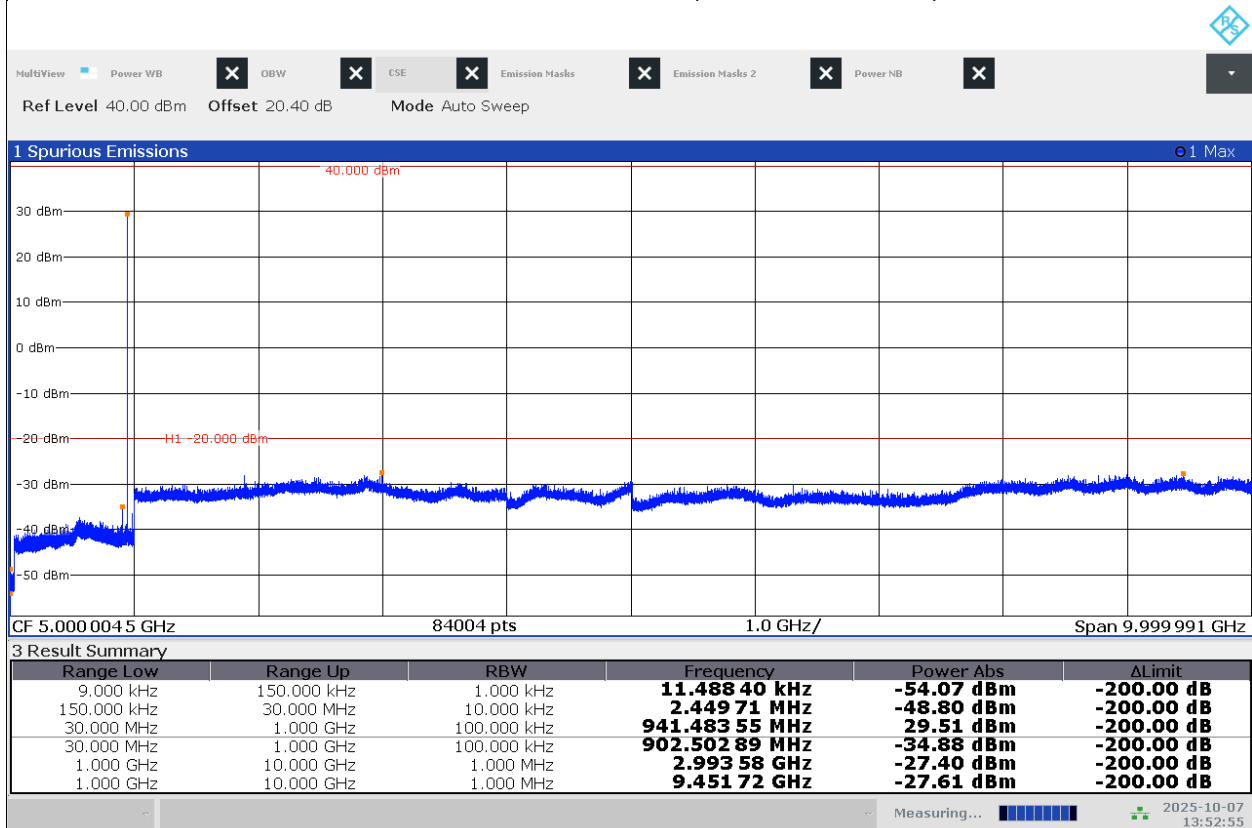


932.25MHz –Normal Mode (Part 101 / RSS-119)



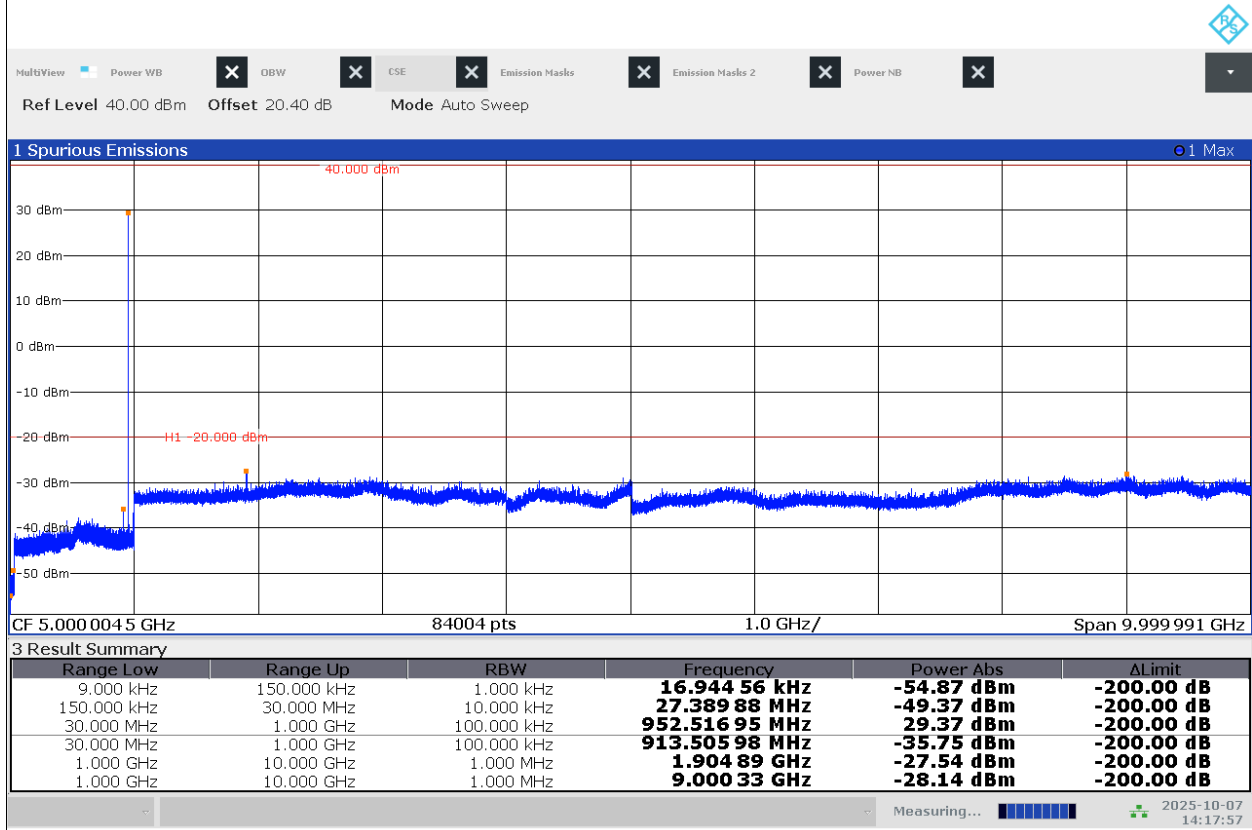
10:06:52 AM 10/07/2025

941.4875MHz –mPass 5k Mode (Part 101 / RSS-119)



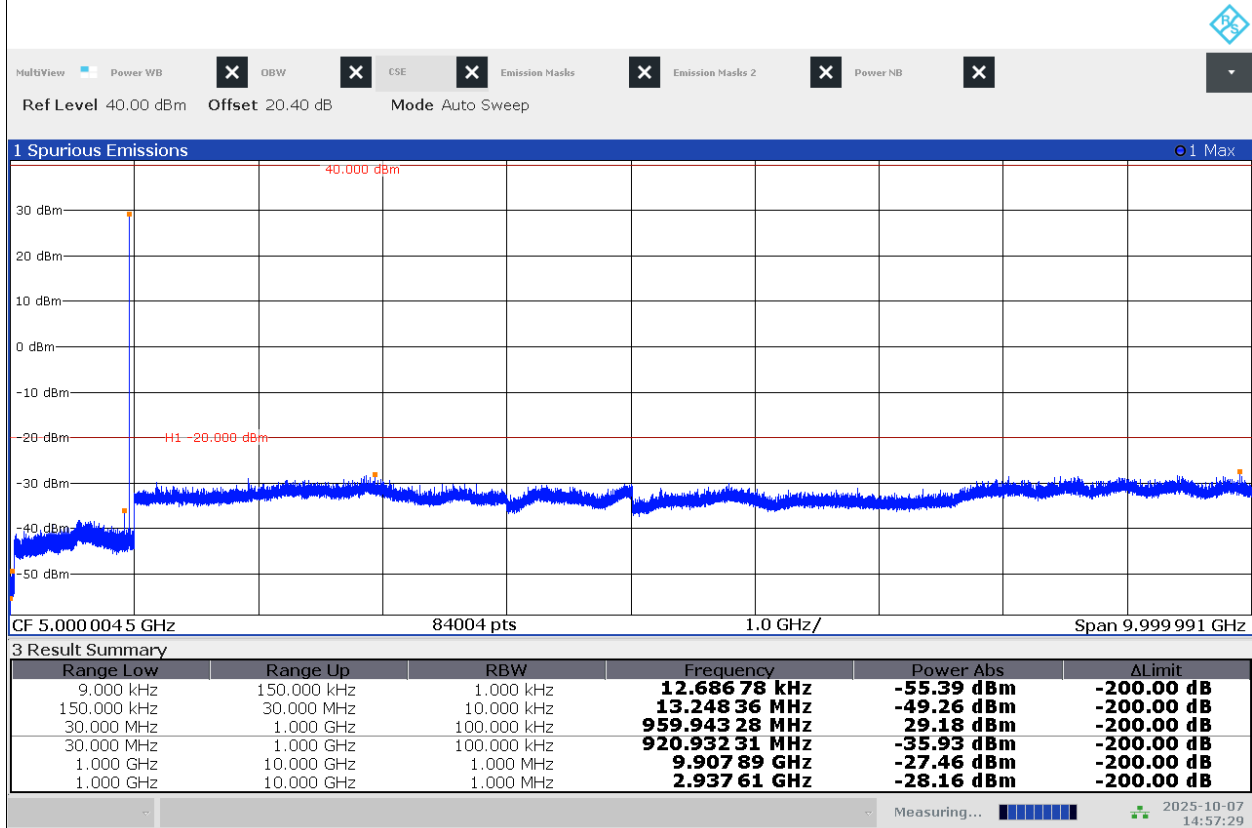
01:52:55 PM 10/07/2025

952.5MHz – mPass 5k Mode (Part 101 / RSS-119)



02:17:57 PM 10/07/2025

959.925MHz – mPass 5k Mode (Part 101)



02:57:30 PM 10/07/2025

Test Personnel: Jeremy Pickens 

Test Date: 17 - 22 September 2025

Ambient Temperature: 21.8 – 22.1°C

Reference Standard: ANSI C63.26

Relative Humidity: 42.8 - 44.7%

Atmospheric Pressure: 98.1 - 98.3kPa

Note: Only the worst-case modulation was evaluated for each band.

10 Field Strength of Spurious Emissions

10.1 Method

The field strength methods defined in ANSI C63.26, Section 5.5.4 were applied for measuring the radiated spurious emissions. The EUT was tested at a height of 0.8m for measurements below 1GHz and at 1.5 meters for measurements above 1GHz. Radiated field strength pre-scans were performed at a distance of 3 meters using a bandwidth of 200Hz (9kHz to 150kHz), 10kHz (15kHz-30MHz), 100kHz (30MHz-1GHz), and 1MHz above 1GHz. The video bandwidth (VBW) was set to at least 3 times the RBW. The results were compared to the EIRP limits by applying a 95.2dB conversion to the applicable limit (e.g. -13dBm + 95.2 = 82.2dBμV/m at 3 meters). For tabular data, the resulting field strength measurements were converted to EIRP using the same 95.2dB correction and compared to the applicable EIRP limit.

TEST SITE: 10 Meter Chamber

10 Meter Semi-Anechoic Chamber The test site for radiated emissions is located at 1950 Evergreen Blvd, Suite 100, Duluth, Georgia 30096. It is a 10-meter semi-anechoic chamber manufactured by Panashield. Embedded in the floor is a 3-meter diameter turntable.

Sample Calculation

The field strength was calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$\begin{aligned}\text{Correction} &= \text{AF} + \text{CF} - \text{AG} \\ \text{FS} &= \text{RA} + \text{Correction}\end{aligned}$$

Where

- FS = Field Strength in dBμV/m
- RA = Receiver Amplitude (including preamplifier) in dBμV
- CF = Cable Attenuation Factor in dB
- AF = Antenna Factor in dB
- AG = Amplifier Gain in dB

An example for the calculations in the following table is as follows.

Assume a receiver reading of 70.92 dBμV is obtained. The correction factor is calculated by adding the antenna factor of 26.26 dB and cable factor of 1.89 dB. The amplifier gain of 40.11 dB is subtracted, giving a correction factor of -11.96 dB/m. The correction factor is then added to the receiver amplitude resulting a field strength of 58.96dBμV/m.

$$\begin{aligned}\text{RA} &= 70.92 \text{ dB}\mu\text{V} \\ \text{Correction} &= -11.96 \text{ dB/m} \\ \text{FS} &= 58.96 \text{ dB}\mu\text{V/m}\end{aligned}$$

To convert from field strength to EIRP, the following equations were used

$$\text{EIRP} = (E \times d)^2 / 30$$

Where:

- E = field strength in V/m
- d = measurement distance in m
- EIRP = equivalent isotropically radiated power in W

Working in dB units:

$$\text{EIRP}_{\text{dBm}} = \text{E}_{\text{dB}\mu\text{V/m}} + 20\log(d_m) - 104.77$$

For d = 3:

$$\text{EIRP}_{\text{dBm}} = \text{E}_{\text{dB}\mu\text{V/m}} - 95.2$$

Example

$$\begin{aligned}\text{FS} &= 58.96 \text{ dB}\mu\text{V/m} \\ \text{EIRP}_{\text{dBm}} &= 58.96 - 95.2 = -36.24 \text{ dBm}\end{aligned}$$

10.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
200074	Preamplifier, 10 MHz to 2000 MHz	Mini-Circuits	ZKL-2	D011105	1/24/2025	01/24/2026
200162	EMI Receiver (20Hz-40GHz)	Rohde & Schwarz	ESU 40	100314	10/7/2025	10/07/2026
211262	Controller - Turntable and Mast	Sunol	SC99V	SC99V-1	VBU	VBU
211264	Mast - Antenna	Sunol	TWR95	NNN2	VBU	VBU
212166	Barometric Pressure/Humidity Datalogger	Extech	SD700	110392	4/2/2025	04/02/2026
213073	Antenna positioning tower	Sunol	TLT2	040314-5	VBU	VBU
213103	1GHz High Pass Filter	Micro-Tronics	HPM50108	140	6/18/2025	06/18/2026
213365	PreAmplifier 100Hz-30MHz	Com-Power	PAL-010	181492	06/18/2025	06/18/2026
213451	Omni -directional Comb Generator	Com-Power	CGO-520	281266	VBU	VBU
213453	Preamplifier 500MHz-18GHz	Com-Power	PAM-118A	18040030	10/20/2025	10/20/2026
213058A	Antenna, Horn, <18 GHz	A.H. Systems	SAS-200/571	246	4/3/2025	04/03/2026
MM5	RF Coax Cable 9KHz-18GHz	Maury Microwave	UC-N-MM78	1514381	04/01/2025	04/01/2026
MM8	RF Coax Cable 9kHz-18GHz	Maury Microwave	UC-N-MM-267	1635289	6/18/2025	06/18/2026
MM36	RF Coax Cable 9kHz-18GHz	Maury Microwave	UC-N-MM36	16 32 10	06/18/2025	06/18/2026
MP10	RF Coax Cable 9KHz-18GHz	Fairview Microwave	FMCA1282-394	MP10	6/18/2025	06/18/2026
MP12	RF Coax Cable 9KHz-18GHz	Fairview Microwave	SCE180060505-700CM	MP12	1/23/2025	01/23/2026
MP14	RF Coax Cable 9kHz-18GHz	Megaphase	EC29-N1N1-276-H	20938802	9/19/2025	09/19/2026

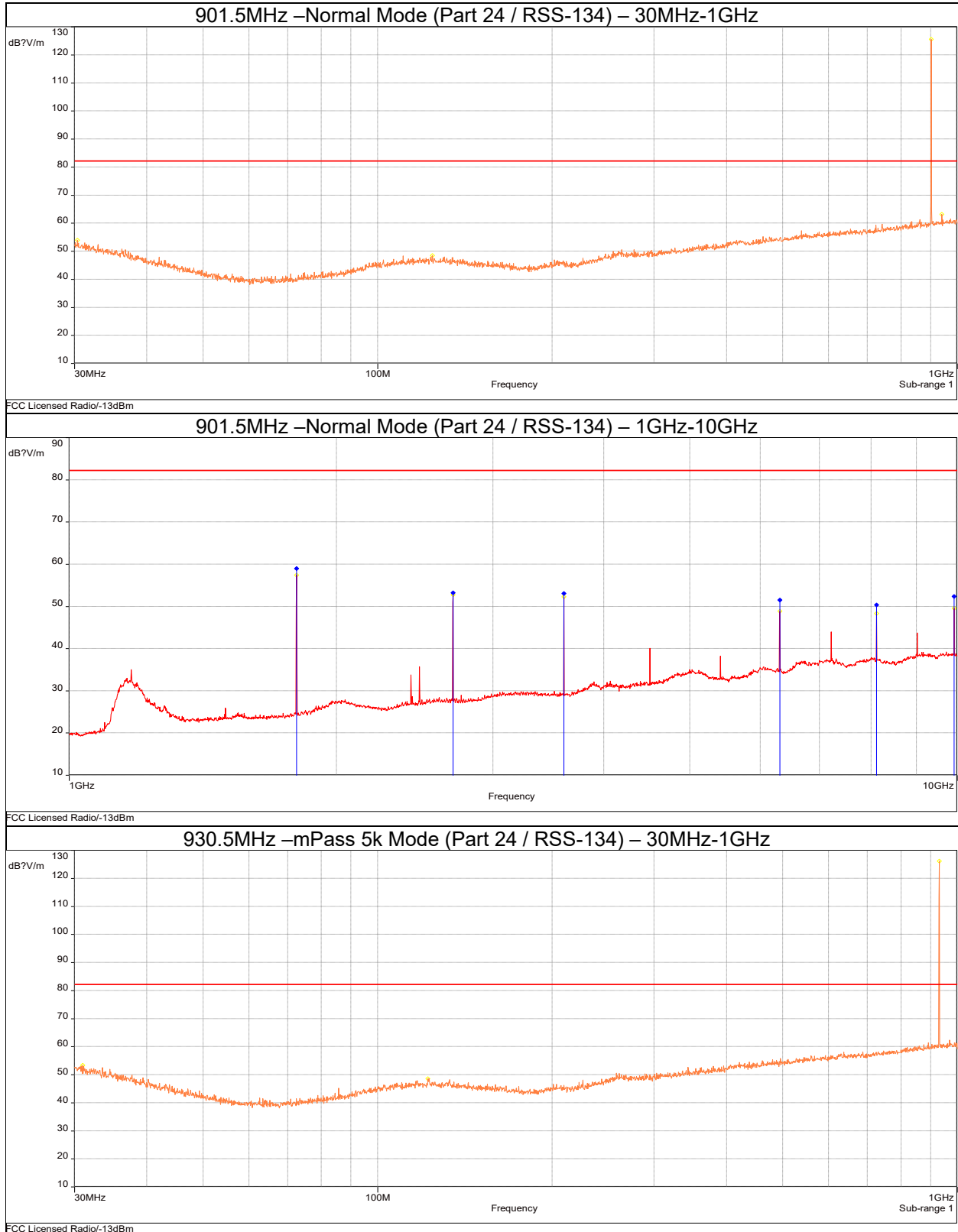
Software Utilized

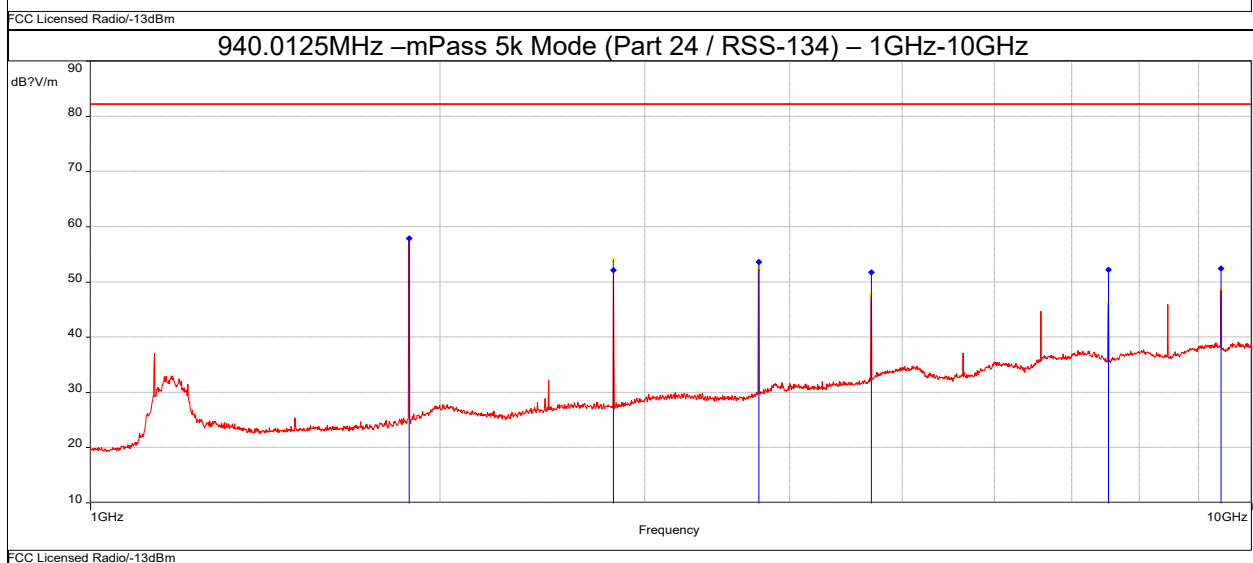
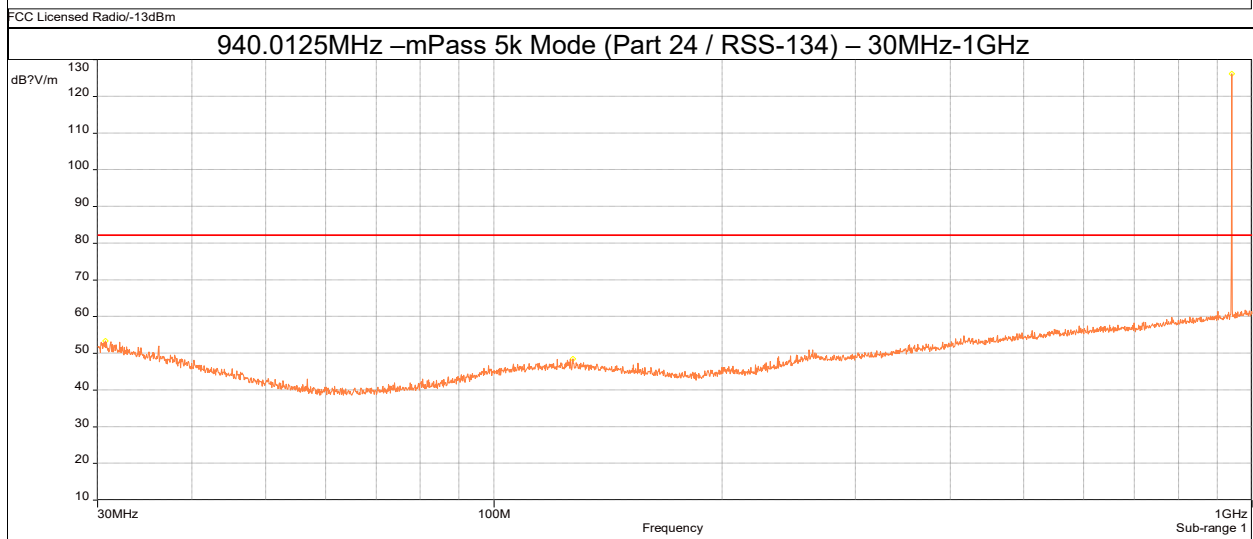
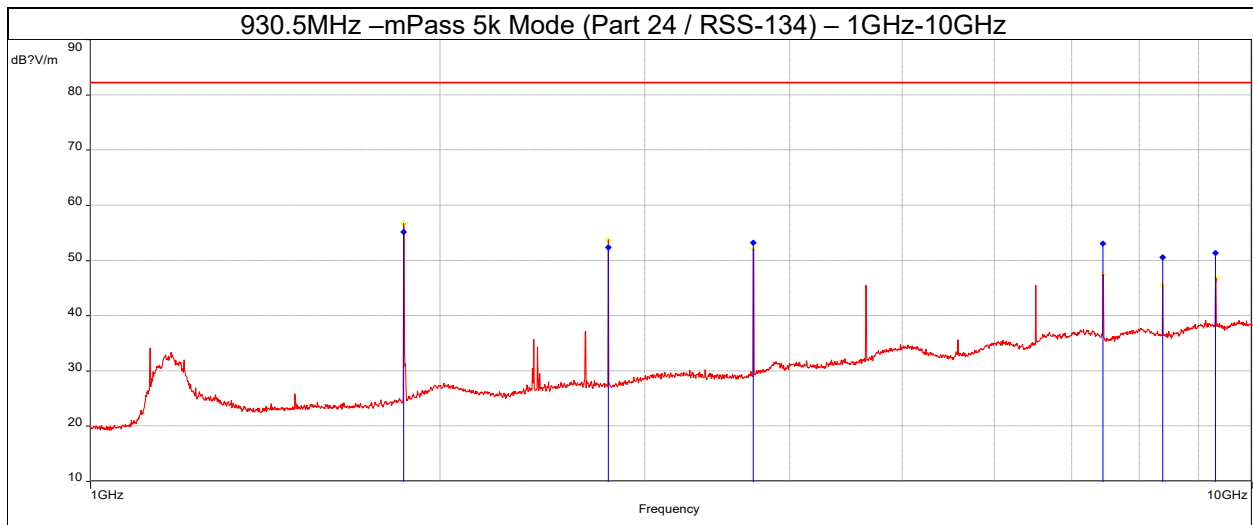
Name	Manufacturer	Version
BAT EMC	NEXIO	3.19.1.18

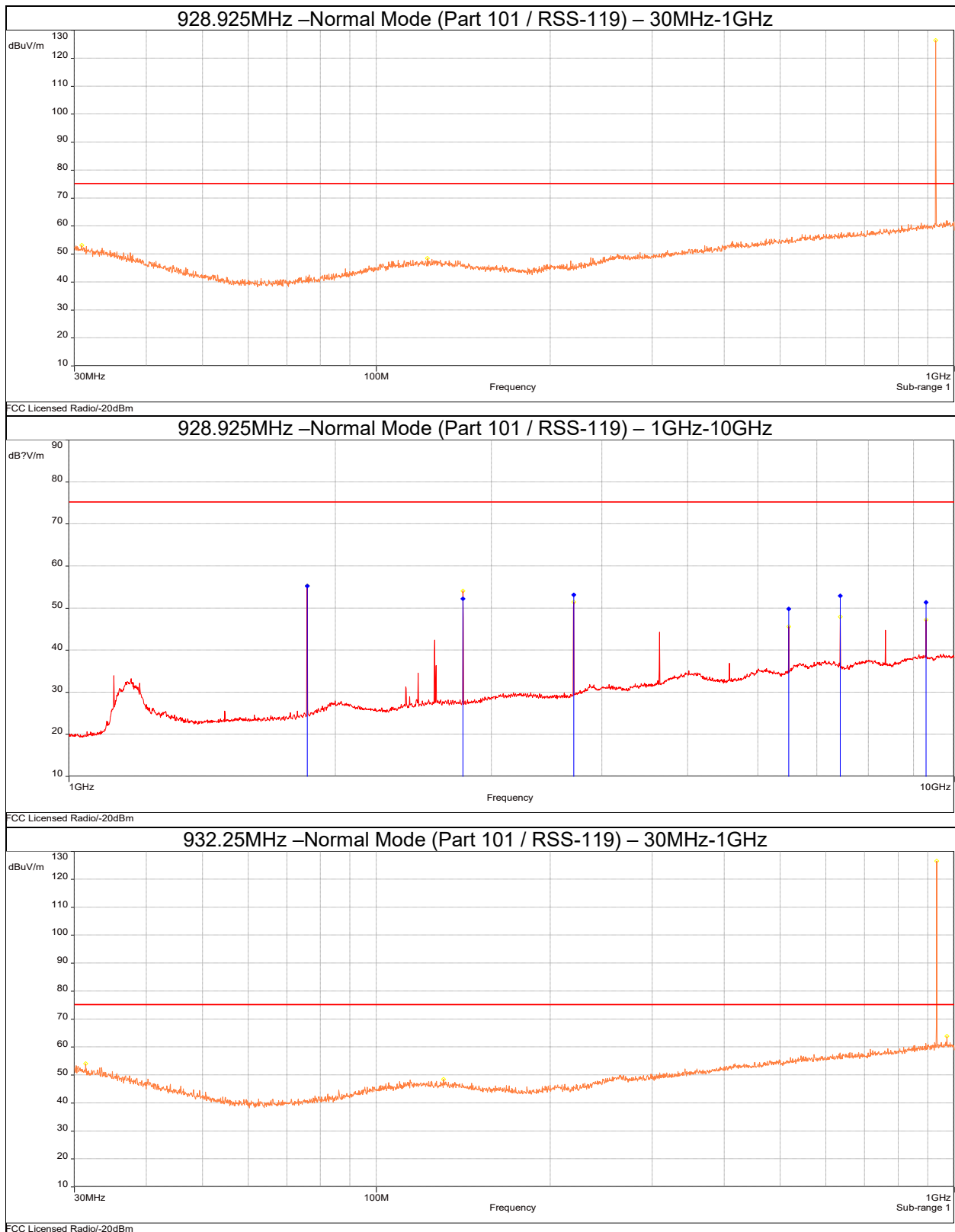
10.3 Results

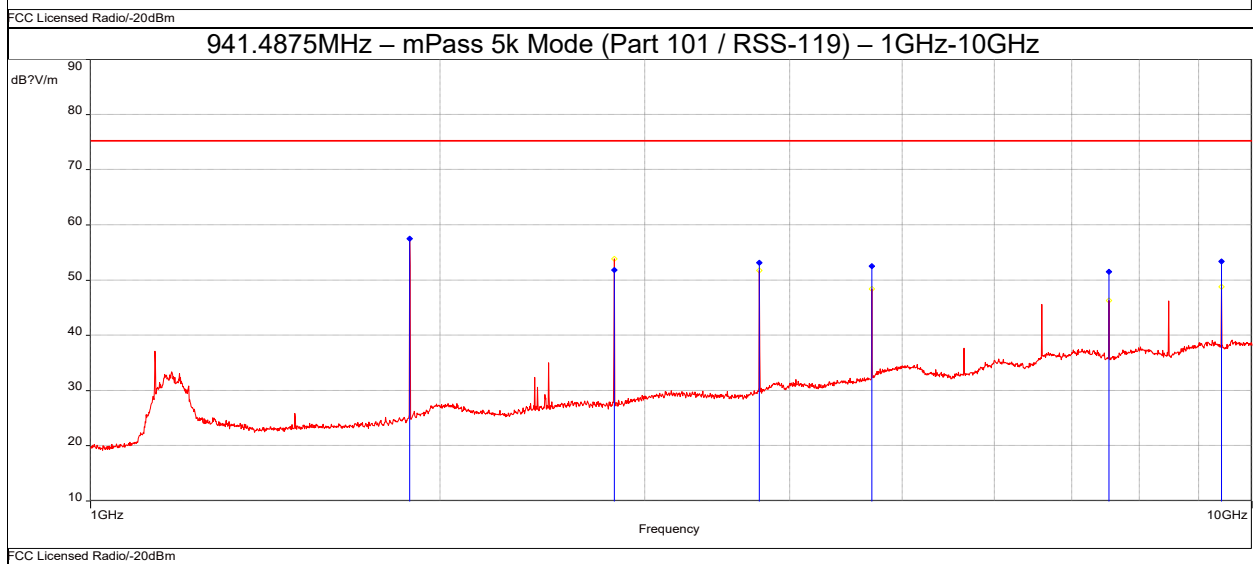
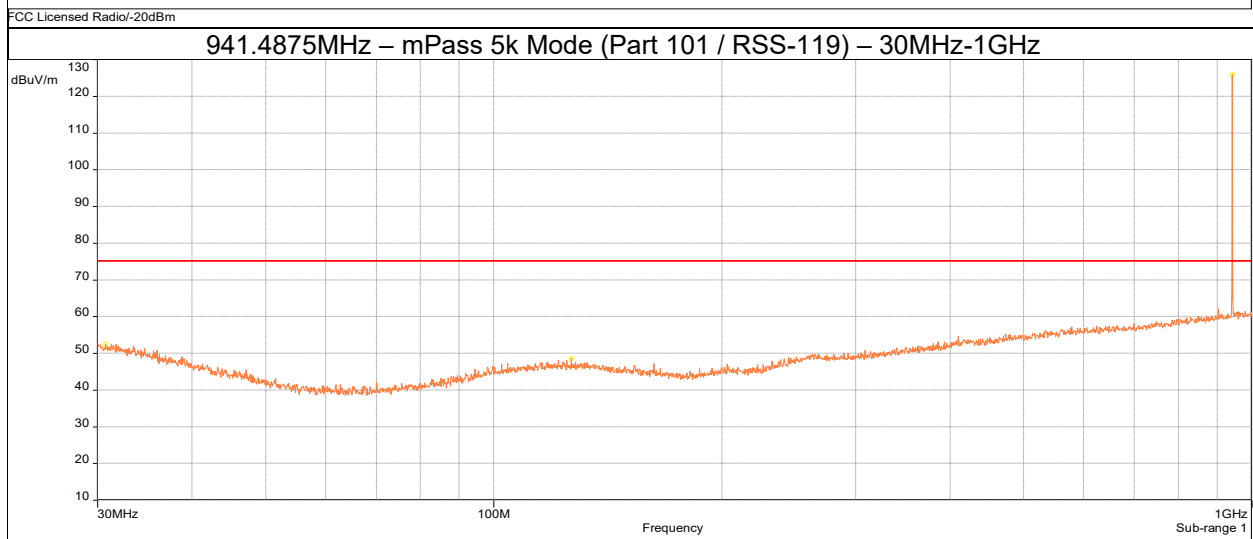
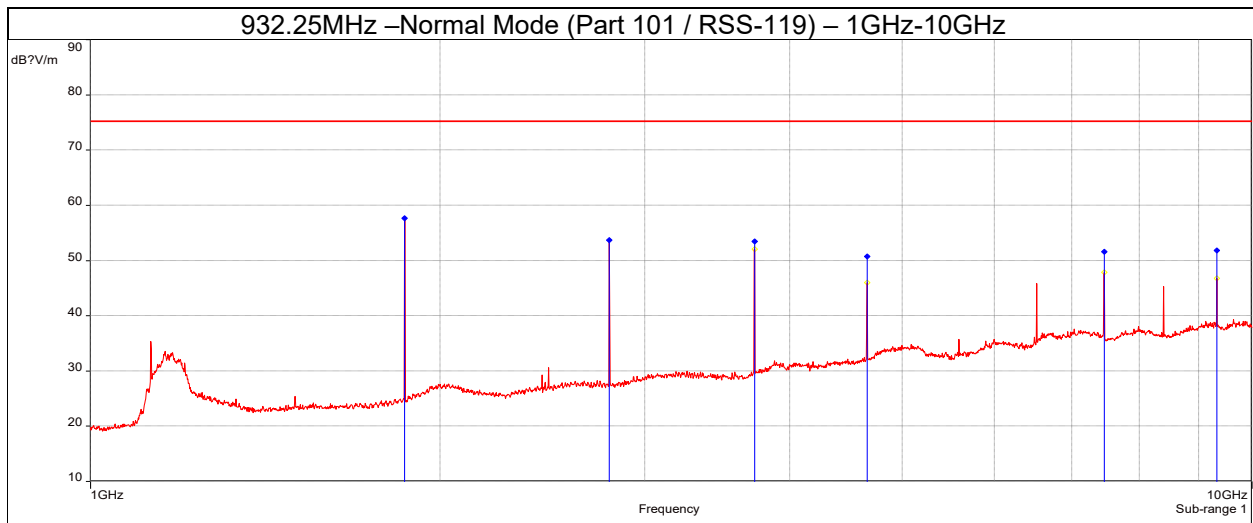
The sample tested was found to Comply.

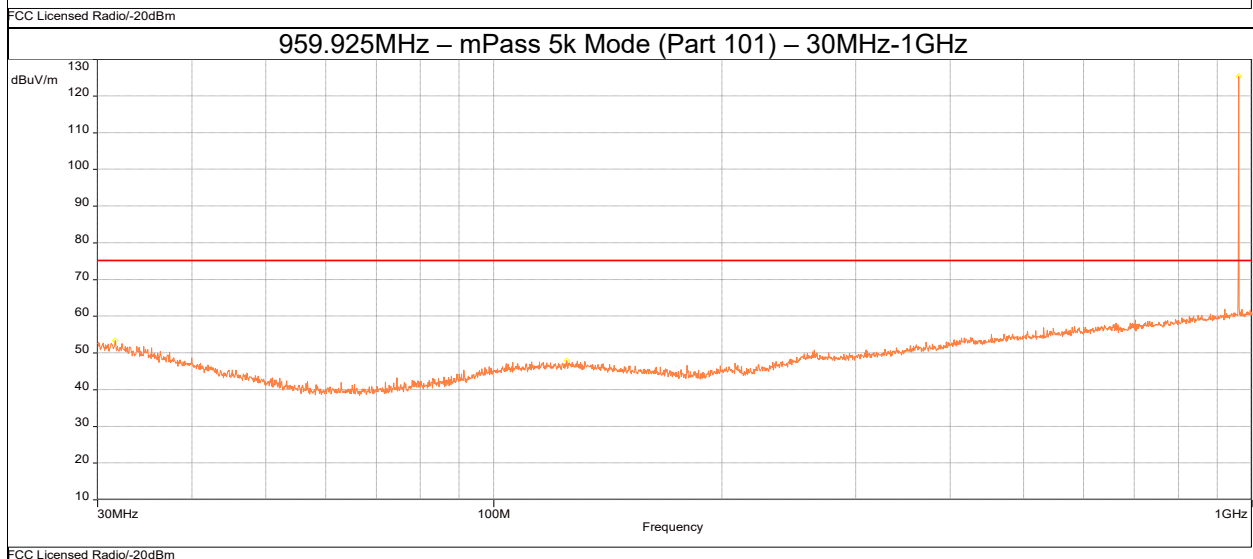
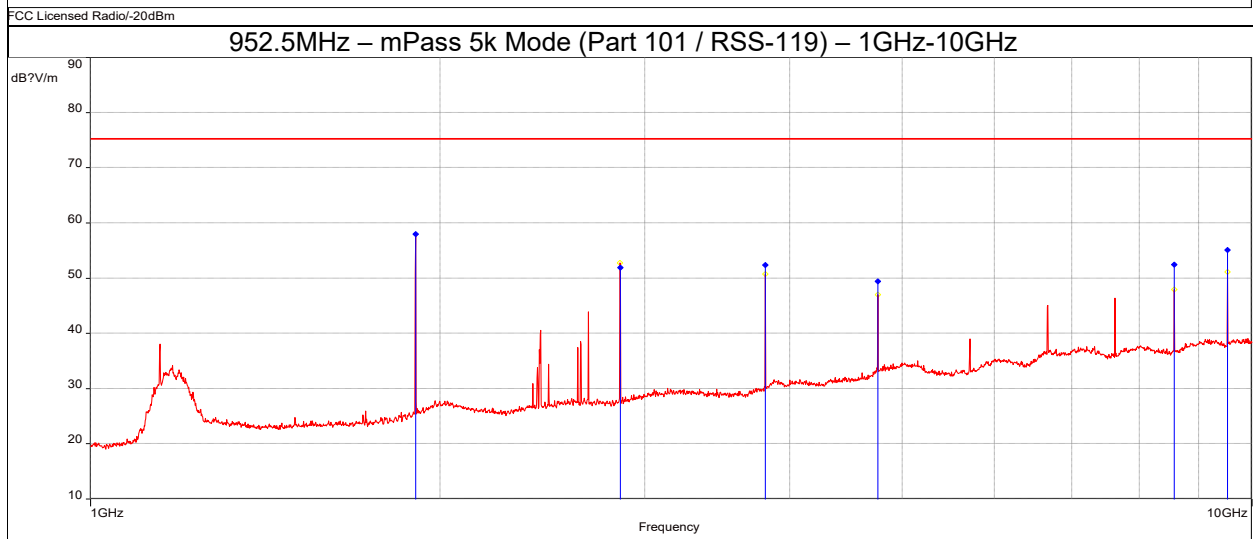
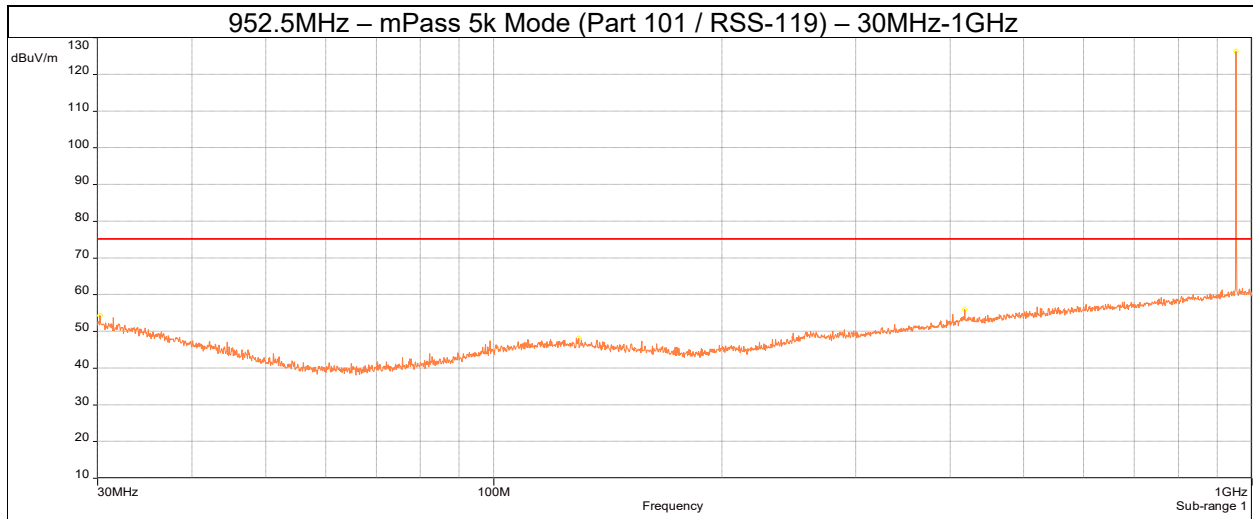
10.4 Plots/Data

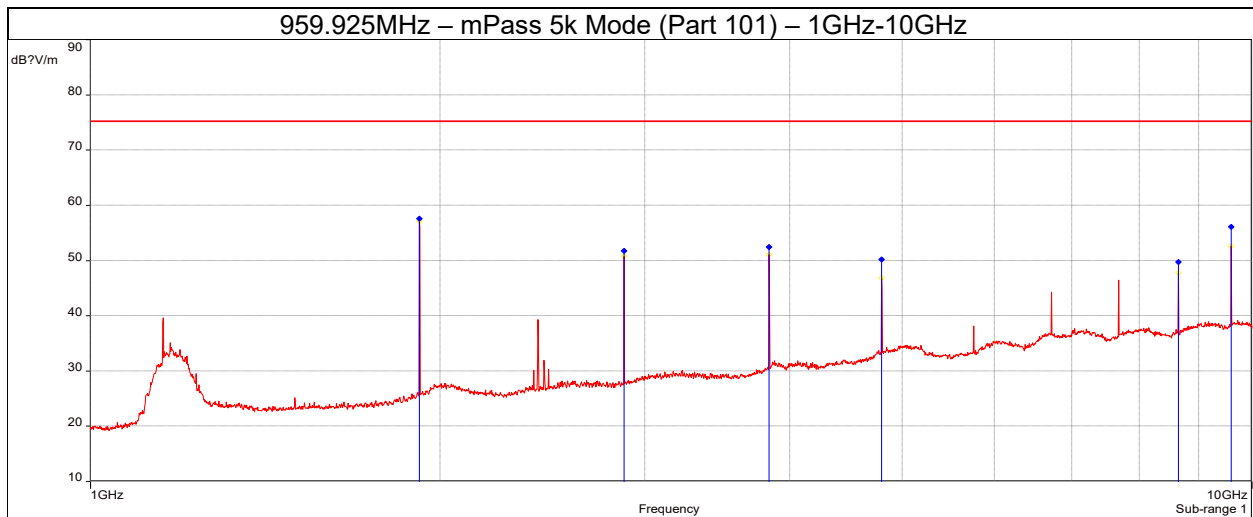












FCC Licensed Radio/-20dBm

Tabular Data

Mode	TX Frequency (MHz)	Frequency (MHz)	Reading (dBµV)	Correction (dB/m)	Field Strength (dBµV/m)	Free Space Conversion	EIRP (dBm)	Limit (dBm)	Margin (dB)
Normal	901.5	1802.994	70.92	-11.96	58.96	95.2	-36.24	-13	-23.24
Normal	901.5	2704.489	62.67	-9.41	53.26	95.2	-41.94	-13	-28.94
Normal	901.5	3606.017	61.82	-8.77	53.05	95.2	-42.15	-13	-29.15
Normal	901.5	6310.510	53.54	-2.00	51.54	95.2	-43.66	-13	-30.66
Normal	901.5	8113.515	50.21	0.14	50.35	95.2	-44.85	-13	-31.85
Normal	901.5	9916.515	51.21	1.18	52.39	95.2	-42.81	-13	-29.81
mPass 5k	930.5	1860.997	66.51	-11.35	55.16	95.2	-40.04	-13	-27.04
mPass 5k	930.5	2791.500	61.95	-9.61	52.34	95.2	-42.86	-13	-29.86
mPass 5k	930.5	3721.995	61.70	-8.44	53.26	95.2	-41.94	-13	-28.94
mPass 5k	930.5	7443.989	53.60	-0.54	53.06	95.2	-42.14	-13	-29.14
mPass 5k	930.5	8374.485	49.90	0.69	50.59	95.2	-44.61	-13	-31.61
mPass 5k	930.5	9305.021	50.24	1.16	51.40	95.2	-43.8	-13	-30.80
Normal	940.0125	1880.020	69.04	-11.15	57.89	95.2	-37.31	-13	-24.31
Normal	940.0125	2820.100	61.74	-9.62	52.12	95.2	-43.08	-13	-30.08
Normal	940.0125	3760.000	61.90	-8.26	53.64	95.2	-41.56	-13	-28.56
Normal	940.0125	4700.200	57.06	-5.32	51.74	95.2	-43.46	-13	-30.46
Normal	940.0125	7520.200	52.97	-0.76	52.21	95.2	-42.99	-13	-29.99
Normal	940.0125	9400.110	51.37	1.12	52.49	95.2	-42.71	-13	-29.71
Normal	928.925	1857.859	66.61	-11.38	55.23	95.2	-39.97	-20	-19.97
Normal	928.925	2786.768	61.80	-9.61	52.19	95.2	-43.01	-20	-23.01
Normal	928.925	3715.701	61.62	-8.46	53.16	95.2	-42.04	-20	-22.04
Normal	928.925	6502.477	51.16	-1.33	49.83	95.2	-45.37	-20	-25.37
Normal	928.925	7431.411	53.47	-0.53	52.94	95.2	-42.26	-20	-22.26
Normal	928.925	9289.263	50.15	1.20	51.35	95.2	-43.85	-20	-23.85
Normal	932.25	1864.300	68.99	-11.32	57.67	95.2	-37.53	-20	-17.53
Normal	932.25	2796.700	63.33	-9.63	53.70	95.2	-41.5	-20	-21.50
Normal	932.25	3729.100	61.84	-8.41	53.43	95.2	-41.77	-20	-21.77
Normal	932.25	4661.200	56.26	-5.55	50.71	95.2	-44.49	-20	-24.49
Normal	932.25	7458.100	52.15	-0.58	51.57	95.2	-43.63	-20	-23.63
Normal	932.25	9322.600	50.66	1.15	51.81	95.2	-43.39	-20	-23.39
Normal	941.4875	1882.900	68.61	-11.10	57.51	95.2	-37.69	-20	-17.69
Normal	941.4875	2824.600	61.43	-9.62	51.81	95.2	-43.39	-20	-23.39
Normal	941.4875	3766.000	61.41	-8.23	53.18	95.2	-42.02	-20	-22.02
Normal	941.4875	4707.400	57.80	-5.29	52.51	95.2	-42.69	-20	-22.69
Normal	941.4875	7531.900	52.31	-0.78	51.53	95.2	-43.67	-20	-23.67
Normal	941.4875	9415.000	52.24	1.14	53.38	95.2	-41.82	-20	-21.82
mPass 5k	952.5	1904.800	68.74	-10.79	57.95	95.2	-37.25	-20	-17.25
mPass 5k	952.5	2857.600	61.46	-9.56	51.90	95.2	-43.3	-20	-23.30
mPass 5k	952.5	3810.100	60.37	-7.96	52.41	95.2	-42.79	-20	-22.79
mPass 5k	952.5	4762.600	54.49	-5.06	49.43	95.2	-45.77	-20	-25.77
mPass 5k	952.5	8572.600	51.29	1.16	52.45	95.2	-42.75	-20	-22.75
mPass 5k	952.5	9525.100	53.95	1.13	55.08	95.2	-40.12	-20	-20.12
mPass 5k	959.925	1919.854	68.35	-10.78	57.57	95.2	-37.63	-20	-17.63
mPass 5k	959.925	2879.776	62.37	-10.61	51.76	95.2	-43.44	-20	-23.44
mPass 5k	959.925	3839.694	61.96	-9.50	52.46	95.2	-42.74	-20	-22.74
mPass 5k	959.925	4799.635	57.89	-7.70	50.19	95.2	-45.01	-20	-25.01
mPass 5k	959.925	8639.341	54.70	-4.93	49.77	95.2	-45.43	-20	-25.43
mPass 5k	959.925	9599.268	54.79	1.29	56.08	95.2	-39.12	-20	-19.12

Test Personnel: Jeremy Pickens Test Date: 13 October / 05 November 2025Ambient Temperature: 21.2 – 22.1°CReference Standard: ANSI C63.26Relative Humidity: 38.5 – 43.9%Atmospheric Pressure: 98.1 – 98.5kPa

Note: Only the worst-case modulation was evaluated for each band.

11 Frequency Stability

11.1 Method

The methods defined in ANSI C63.26, Section 5.6.3 were applied for measuring the Frequency Stability. The DUT was placed within a temperature chamber, and the antenna port was connected directly to a spectrum analyzer through a cable and attenuator. For each band tested, the DUT was configured to transmit a CW signal. Frequency measurements were made over the temperature range -30°C to +50°C. The nominal operating voltage was 3.65Vdc, so frequency was also measured at 85% and 115% of the nominal voltage at +20°C. For each temperature measured, a period of time sufficient to stabilize all components was allowed.

TEST SITE: RF Bench

The RF bench consists of a Rohde & Schwarz TS8997 automated test system coupled with a temperature/humidity environmental chamber. Where applicable, 2.4 and 5GHz radio measurements are automated using the Rohde & Schwarz EMC32 test software. The TS8997 system houses a switch matrix (OSP), along with a spectrum analyzer, vector network analyzer, and analog signal generator.

11.2 Test Equipment

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
211992	Digital thermometer - Two channel.	General Tool	DT80-2	140402566	02/27/2025	02/27/2026
213502	Spectrum Analyzer (2Hz-43.5GHz)	Rohde & Schwarz	FSW43	102972	08/01/2024	08/01/2026
213505	Temperature/Humidity Chamber	Sanwood	SMC-64-LL	10301	VBU	VBU
213503-01	Megaphase	OSP DUT Cable 1	KC12-K1K1-80	20815001 001	VBU	VBU
213507-10	Tojoin	10dB SMA Attenuator	10dB	241120	VBU	VBU

Software Utilized

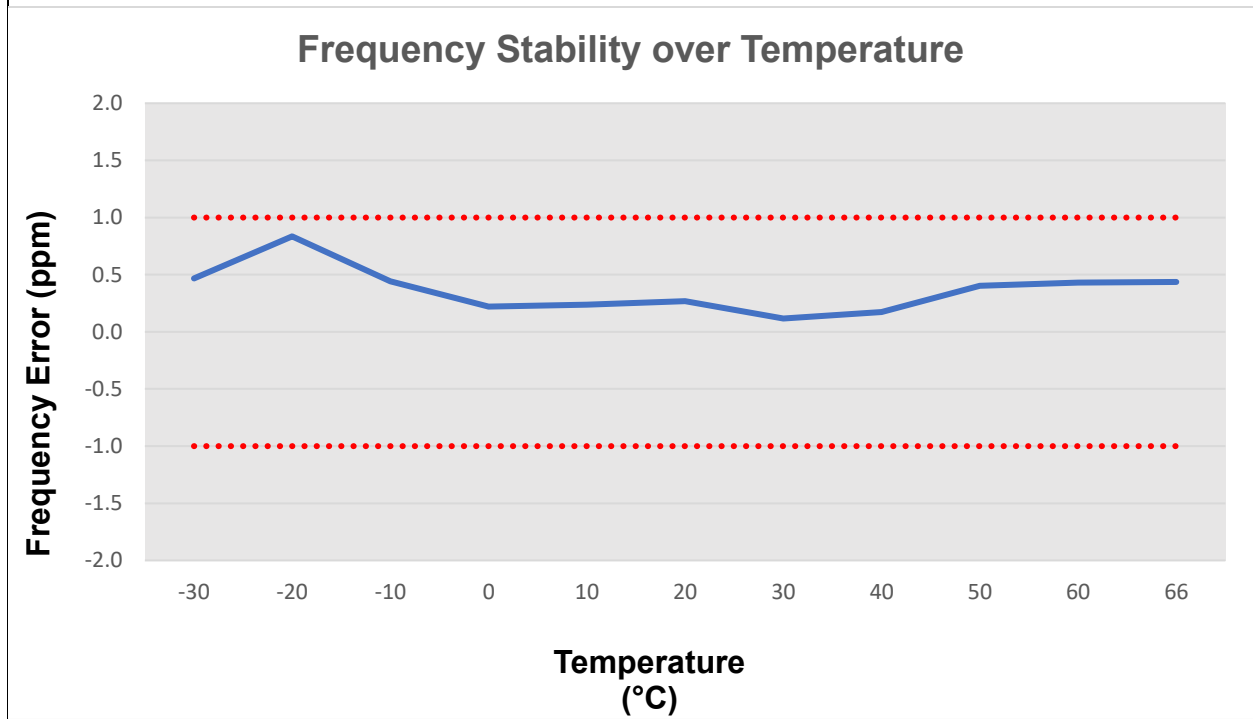
Name	Manufacturer	Version
None		

11.3 Results

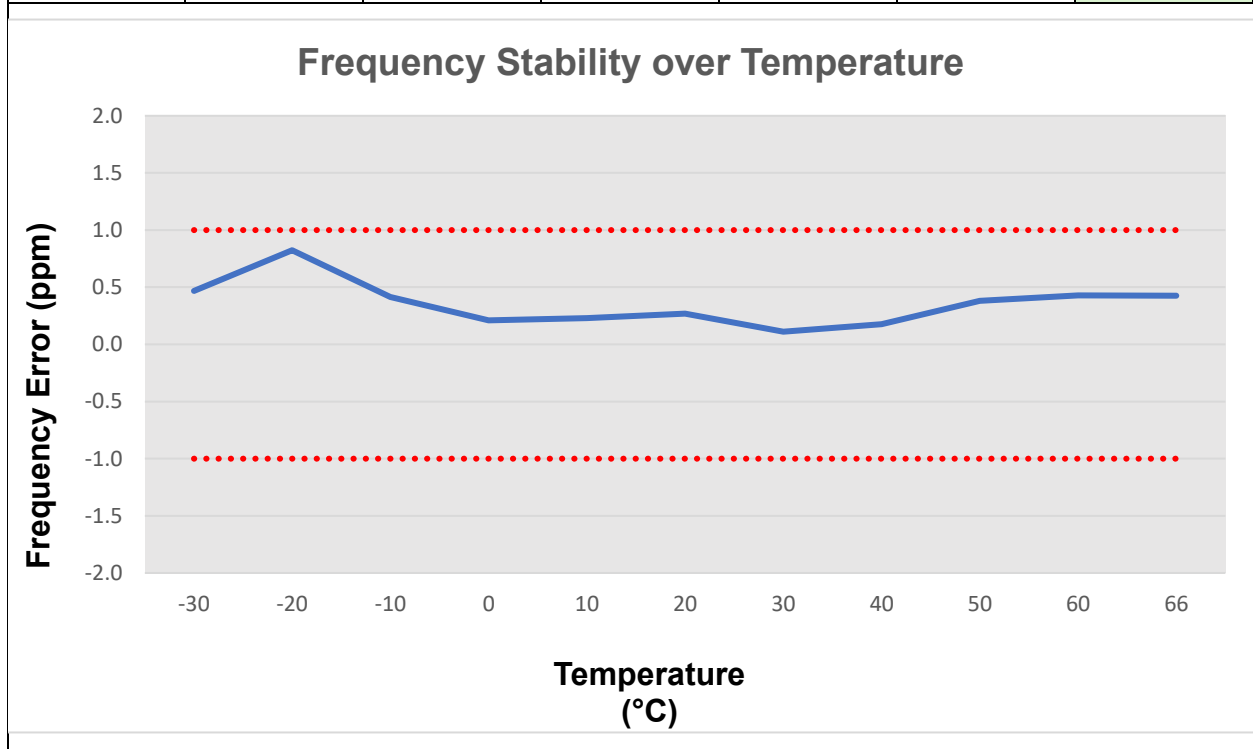
The sample tested was found to Comply.

11.4 Test Data – Interquip TCXO

TX Frequency = 901.5 MHz						
Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	901.500422	0.5	+/-1	-0.5	Compliant
-20	3.65	901.500753	0.8	+/-1	-0.2	Compliant
-10	3.65	901.500398	0.4	+/-1	-0.6	Compliant
0	3.65	901.500199	0.2	+/-1	-0.8	Compliant
10	3.65	901.500213	0.2	+/-1	-0.8	Compliant
20	3.65	901.500243	0.3	+/-1	-0.7	Compliant
30	3.65	901.500105	0.1	+/-1	-0.9	Compliant
40	3.65	901.500155	0.2	+/-1	-0.8	Compliant
50	3.65	901.500362	0.4	+/-1	-0.6	Compliant
60	3.65	901.500388	0.4	+/-1	-0.6	Compliant
66	3.65	901.500394	0.4	+/-1	-0.6	Compliant
20	3.1025	901.500245	0.3	+/-1	-0.7	Compliant
20	4.1975	901.500244	0.3	+/-1	-0.7	Compliant

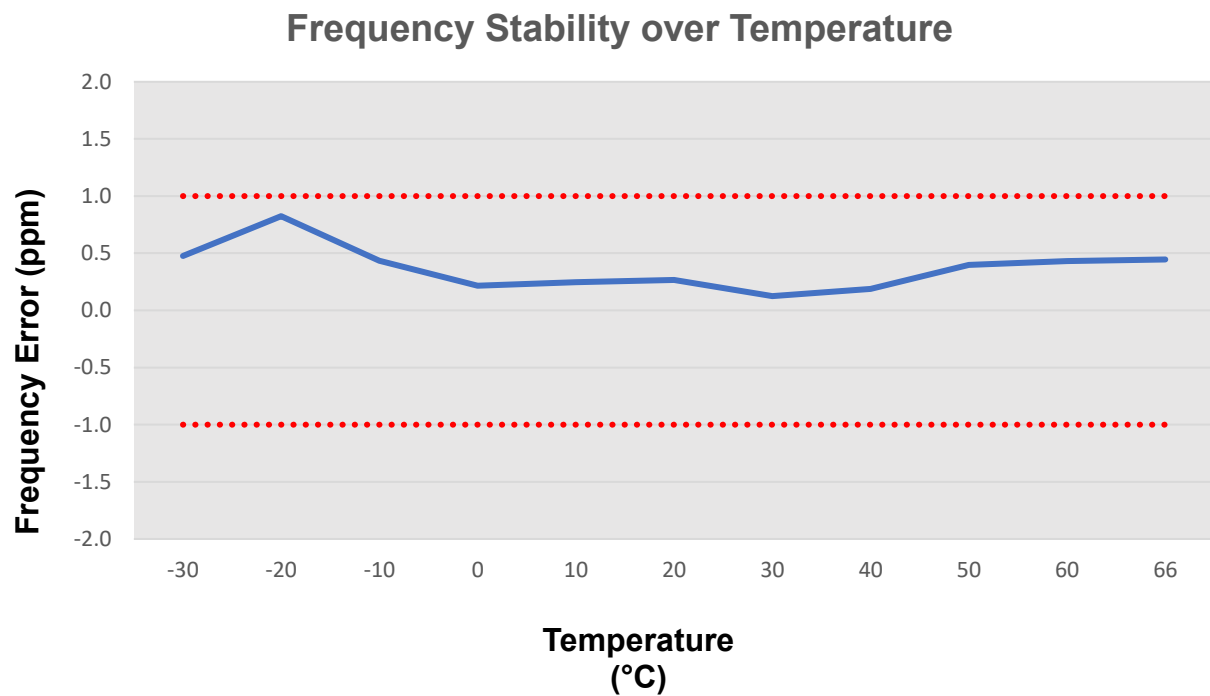


TX Frequency = 928.925 MHz						
Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	928.925434	0.5	+/-1	-0.5	Compliant
-20	3.65	928.925765	0.8	+/-1	-0.2	Compliant
-10	3.65	928.925386	0.4	+/-1	-0.6	Compliant
0	3.65	928.925195	0.2	+/-1	-0.8	Compliant
10	3.65	928.925213	0.2	+/-1	-0.8	Compliant
20	3.65	928.925250	0.3	+/-1	-0.7	Compliant
30	3.65	928.925103	0.1	+/-1	-0.9	Compliant
40	3.65	928.925163	0.2	+/-1	-0.8	Compliant
50	3.65	928.925355	0.4	+/-1	-0.6	Compliant
60	3.65	928.925398	0.4	+/-1	-0.6	Compliant
66	3.65	928.925395	0.4	+/-1	-0.6	Compliant
20	3.1025	928.925235	0.3	+/-1	-0.7	Compliant
20	4.1975	928.925238	0.3	+/-1	-0.7	Compliant

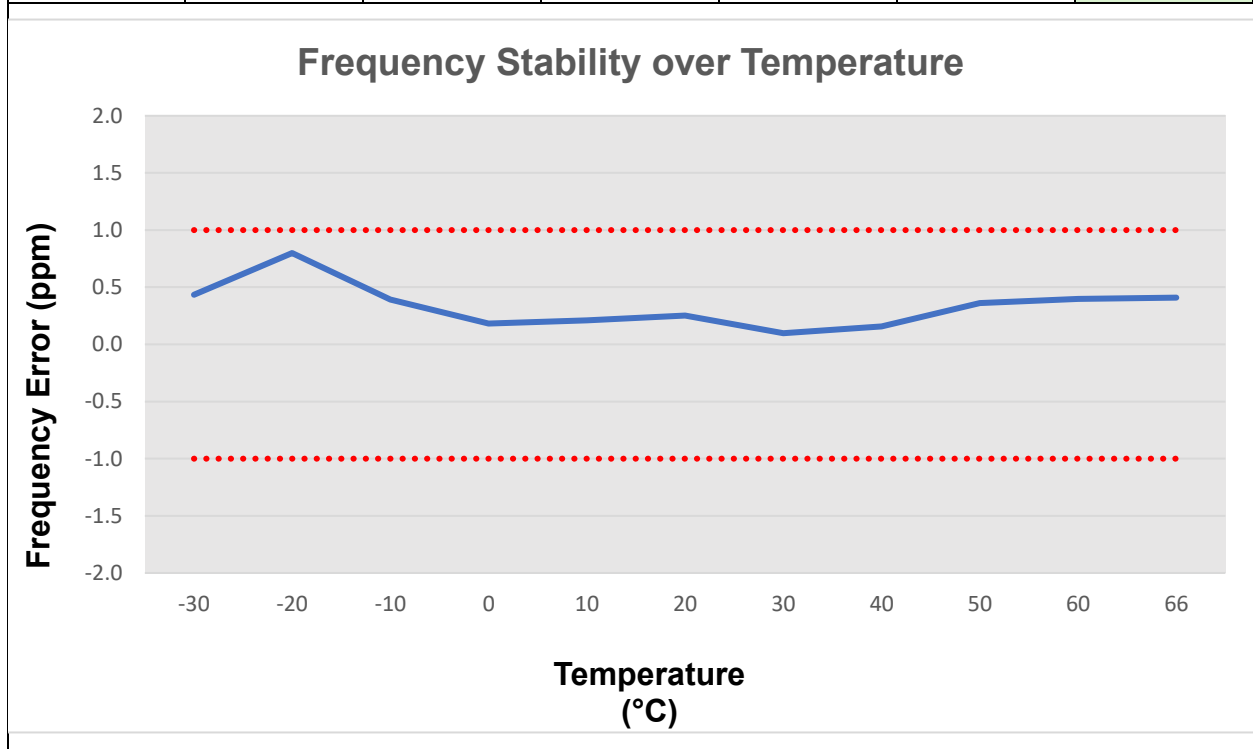


TX Frequency = 930.5 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	930.500442	0.5	+/-1	-0.5	Compliant
-20	3.65	930.500767	0.8	+/-1	-0.2	Compliant
-10	3.65	930.500404	0.4	+/-1	-0.6	Compliant
0	3.65	930.500201	0.2	+/-1	-0.8	Compliant
10	3.65	930.500229	0.2	+/-1	-0.8	Compliant
20	3.65	930.500248	0.3	+/-1	-0.7	Compliant
30	3.65	930.500116	0.1	+/-1	-0.9	Compliant
40	3.65	930.500175	0.2	+/-1	-0.8	Compliant
50	3.65	930.500369	0.4	+/-1	-0.6	Compliant
60	3.65	930.500401	0.4	+/-1	-0.6	Compliant
66	3.65	930.500415	0.4	+/-1	-0.6	Compliant
20	3.1025	930.500263	0.3	+/-1	-0.7	Compliant
20	4.1975	930.500252	0.3	+/-1	-0.7	Compliant

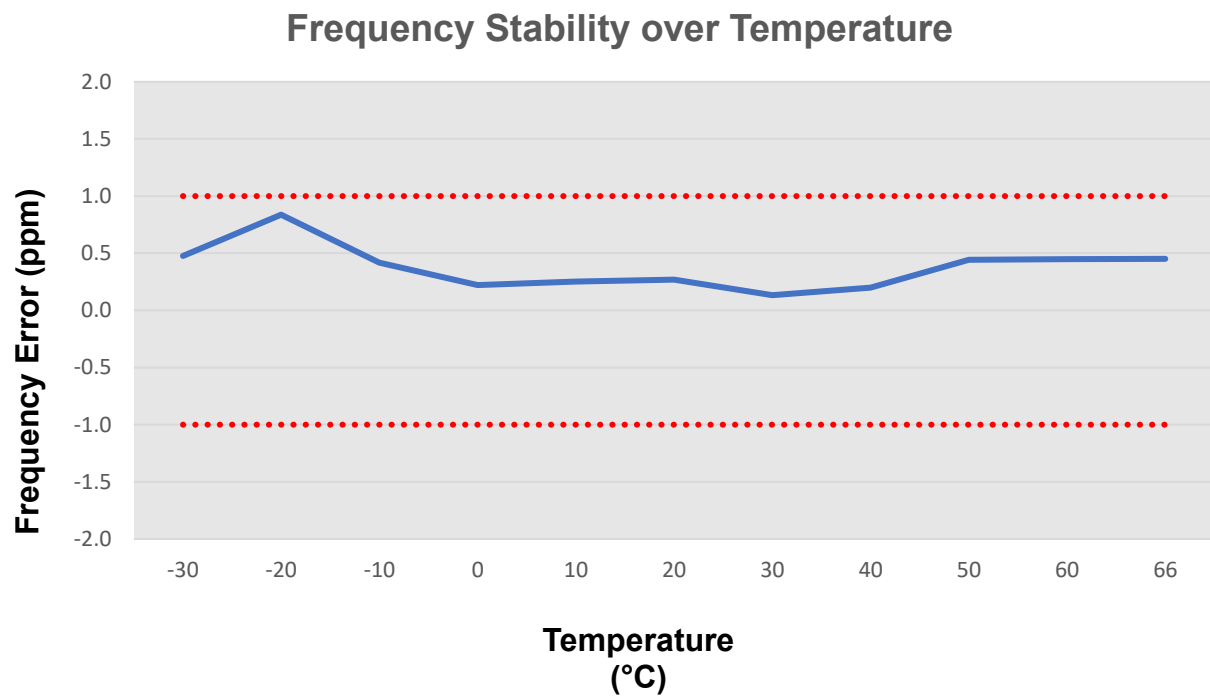


TX Frequency = 932.25 MHz						
Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	932.250404	0.4	+/-1	-0.6	Compliant
-20	3.65	932.250745	0.8	+/-1	-0.2	Compliant
-10	3.65	932.250366	0.4	+/-1	-0.6	Compliant
0	3.65	932.250170	0.2	+/-1	-0.8	Compliant
10	3.65	932.250197	0.2	+/-1	-0.8	Compliant
20	3.65	932.250234	0.3	+/-1	-0.7	Compliant
30	3.65	932.250091	0.1	+/-1	-0.9	Compliant
40	3.65	932.250147	0.2	+/-1	-0.8	Compliant
50	3.65	932.250337	0.4	+/-1	-0.6	Compliant
60	3.65	932.250372	0.4	+/-1	-0.6	Compliant
66	3.65	932.250382	0.4	+/-1	-0.6	Compliant
20	3.1025	932.250218	0.2	+/-1	-0.8	Compliant
20	4.1975	932.250220	0.2	+/-1	-0.8	Compliant



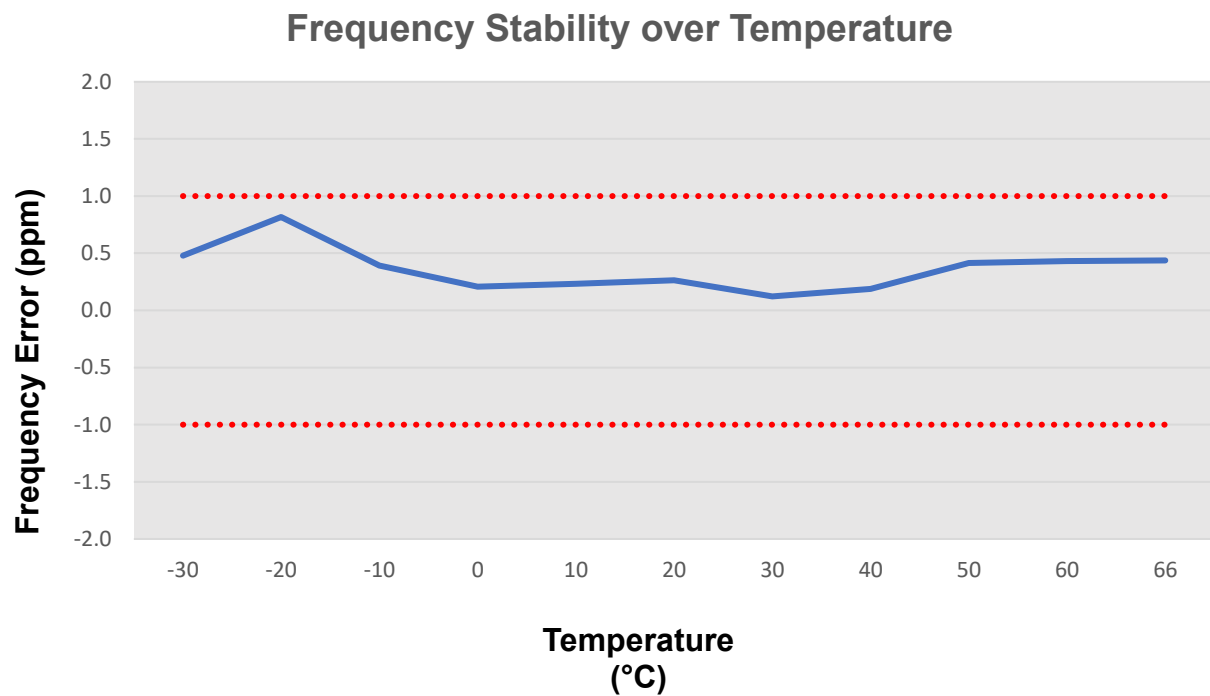
TX Frequency = 940.0125 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	940.012947	0.5	+/-1	-0.5	Compliant
-20	3.65	940.013287	0.8	+/-1	-0.2	Compliant
-10	3.65	940.012893	0.4	+/-1	-0.6	Compliant
0	3.65	940.012707	0.2	+/-1	-0.8	Compliant
10	3.65	940.012736	0.3	+/-1	-0.7	Compliant
20	3.65	940.012753	0.3	+/-1	-0.7	Compliant
30	3.65	940.012625	0.1	+/-1	-0.9	Compliant
40	3.65	940.012687	0.2	+/-1	-0.8	Compliant
50	3.65	940.012916	0.4	+/-1	-0.6	Compliant
60	3.65	940.012920	0.4	+/-1	-0.6	Compliant
66	3.65	940.012924	0.5	+/-1	-0.5	Compliant
20	3.1025	940.012768	0.3	+/-1	-0.7	Compliant
20	4.1975	940.012754	0.3	+/-1	-0.7	Compliant



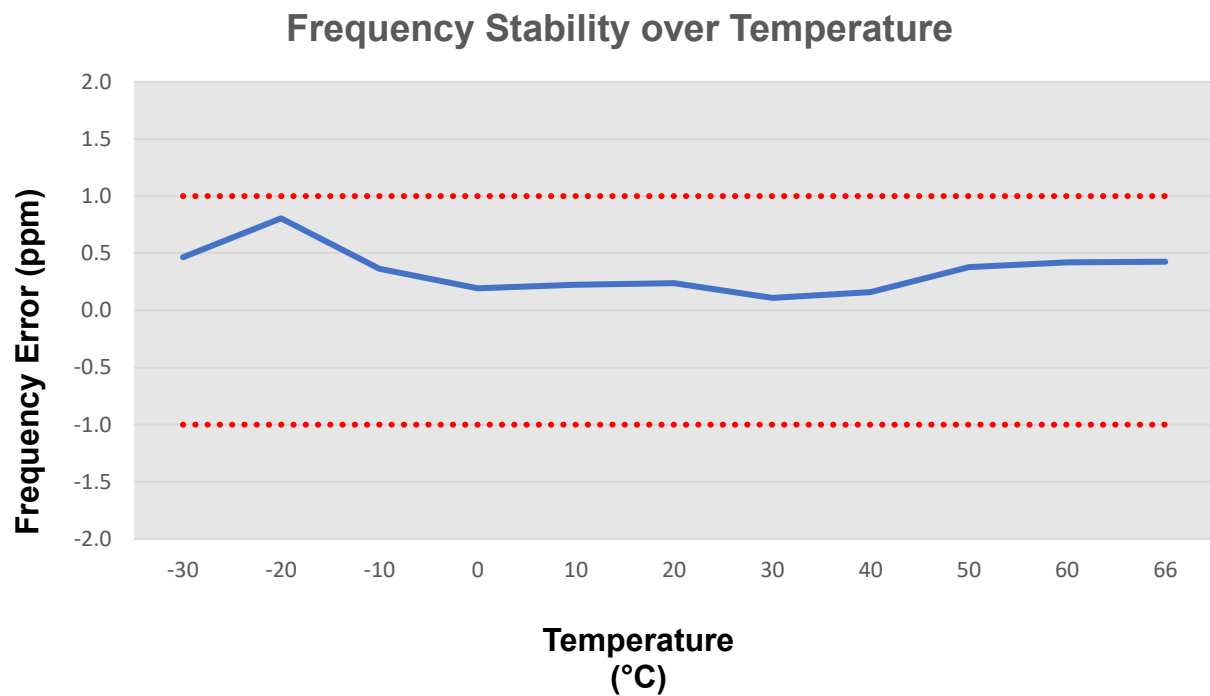
TX Frequency = 941.4875 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	941.487952	0.5	+/-1	-0.5	Compliant
-20	3.65	941.488269	0.8	+/-1	-0.2	Compliant
-10	3.65	941.487870	0.4	+/-1	-0.6	Compliant
0	3.65	941.487694	0.2	+/-1	-0.8	Compliant
10	3.65	941.487720	0.2	+/-1	-0.8	Compliant
20	3.65	941.487748	0.3	+/-1	-0.7	Compliant
30	3.65	941.487615	0.1	+/-1	-0.9	Compliant
40	3.65	941.487676	0.2	+/-1	-0.8	Compliant
50	3.65	941.487889	0.4	+/-1	-0.6	Compliant
60	3.65	941.487906	0.4	+/-1	-0.6	Compliant
66	3.65	941.487911	0.4	+/-1	-0.6	Compliant
20	3.1025	941.487739	0.3	+/-1	-0.7	Compliant
20	4.1975	941.487737	0.3	+/-1	-0.7	Compliant



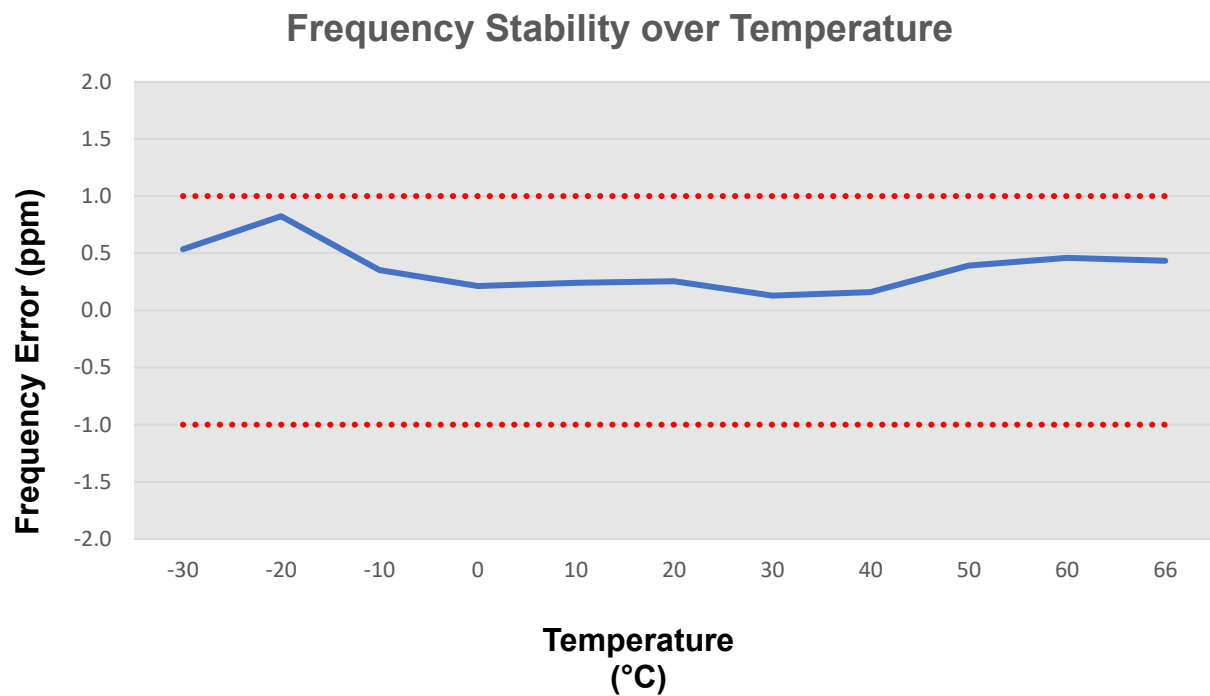
TX Frequency = 952.5 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	952.500444	0.5	+/-1	-0.5	Compliant
-20	3.65	952.500767	0.8	+/-1	-0.2	Compliant
-10	3.65	952.500346	0.4	+/-1	-0.6	Compliant
0	3.65	952.500185	0.2	+/-1	-0.8	Compliant
10	3.65	952.500213	0.2	+/-1	-0.8	Compliant
20	3.65	952.500227	0.2	+/-1	-0.8	Compliant
30	3.65	952.500104	0.1	+/-1	-0.9	Compliant
40	3.65	952.500153	0.2	+/-1	-0.8	Compliant
50	3.65	952.500360	0.4	+/-1	-0.6	Compliant
60	3.65	952.500399	0.4	+/-1	-0.6	Compliant
66	3.65	952.500406	0.4	+/-1	-0.6	Compliant
20	3.1025	952.500249	0.3	+/-1	-0.7	Compliant
20	4.1975	952.500233	0.2	+/-1	-0.8	Compliant



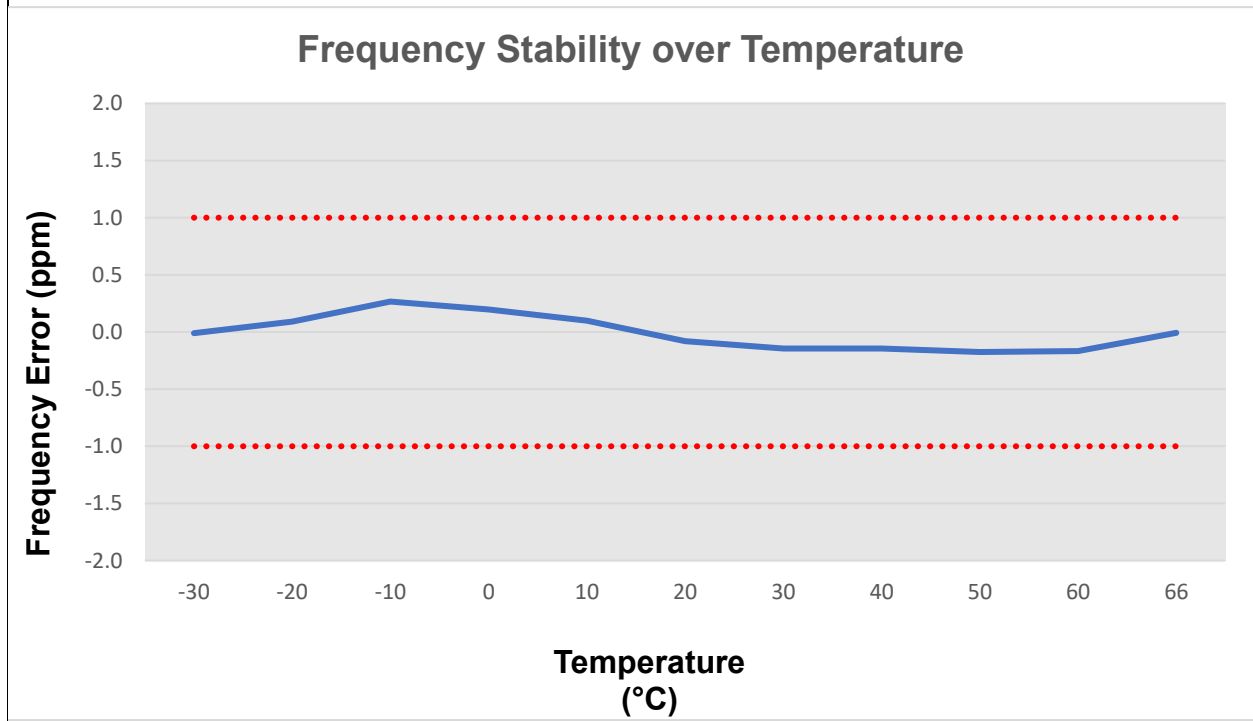
TX Frequency = 959.925 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	959.925513	0.5	+/-1	-0.5	Compliant
-20	3.65	959.925791	0.8	+/-1	-0.2	Compliant
-10	3.65	959.925340	0.4	+/-1	-0.6	Compliant
0	3.65	959.925204	0.2	+/-1	-0.8	Compliant
10	3.65	959.925232	0.2	+/-1	-0.8	Compliant
20	3.65	959.925245	0.3	+/-1	-0.7	Compliant
30	3.65	959.925124	0.1	+/-1	-0.9	Compliant
40	3.65	959.925154	0.2	+/-1	-0.8	Compliant
50	3.65	959.925377	0.4	+/-1	-0.6	Compliant
60	3.65	959.925440	0.5	+/-1	-0.5	Compliant
66	3.65	959.925418	0.4	+/-1	-0.6	Compliant
20	3.1025	959.925241	0.3	+/-1	-0.7	Compliant
20	4.1975	959.925240	0.3	+/-1	-0.7	Compliant

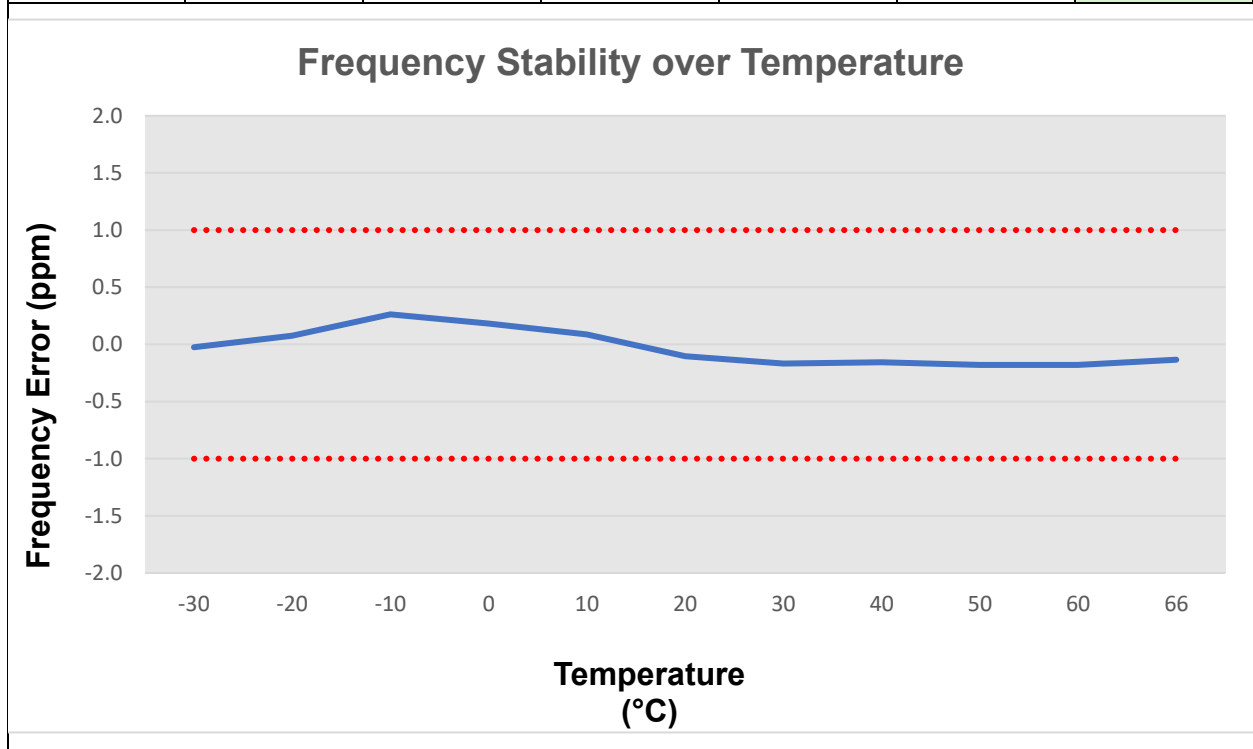


11.5 Test Data – KDS TCXO

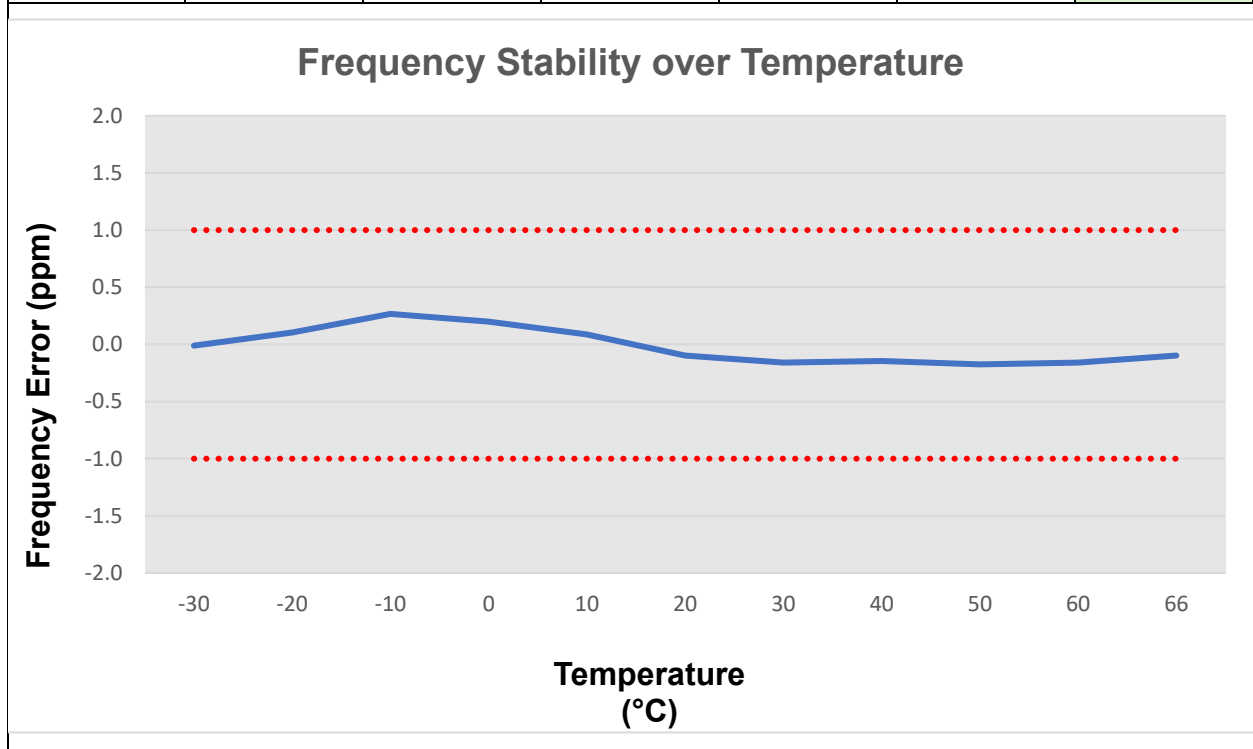
TX Frequency = 901.5 MHz						
Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	959.924981	0.0	+/-1	-1.0	Compliant
-20	3.65	959.925083	0.1	+/-1	-0.9	Compliant
-10	3.65	959.925244	0.3	+/-1	-0.7	Compliant
0	3.65	959.925174	0.2	+/-1	-0.8	Compliant
10	3.65	959.925086	0.1	+/-1	-0.9	Compliant
20	3.65	959.924928	-0.1	+/-1	-0.9	Compliant
30	3.65	959.924846	-0.2	+/-1	-0.8	Compliant
40	3.65	959.924853	-0.2	+/-1	-0.8	Compliant
50	3.65	959.924828	-0.2	+/-1	-0.8	Compliant
60	3.65	959.924833	-0.2	+/-1	-0.8	Compliant
66	3.65	959.924886	-0.1	+/-1	-0.9	Compliant
20	3.1025	959.924906	-0.1	+/-1	-0.9	Compliant
20	4.1975	959.924884	-0.1	+/-1	-0.9	Compliant



TX Frequency = 928.925 MHz						
Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	928.924977	0.0	+/-1	-1.0	Compliant
-20	3.65	928.925071	0.1	+/-1	-0.9	Compliant
-10	3.65	928.925244	0.3	+/-1	-0.7	Compliant
0	3.65	928.925169	0.2	+/-1	-0.8	Compliant
10	3.65	928.925081	0.1	+/-1	-0.9	Compliant
20	3.65	928.924903	-0.1	+/-1	-0.9	Compliant
30	3.65	928.924845	-0.2	+/-1	-0.8	Compliant
40	3.65	928.924855	-0.2	+/-1	-0.8	Compliant
50	3.65	928.924833	-0.2	+/-1	-0.8	Compliant
60	3.65	928.924833	-0.2	+/-1	-0.8	Compliant
66	3.65	928.924875	-0.1	+/-1	-0.9	Compliant
20	3.1025	928.924898	-0.1	+/-1	-0.9	Compliant
20	4.1975	928.924896	-0.1	+/-1	-0.9	Compliant

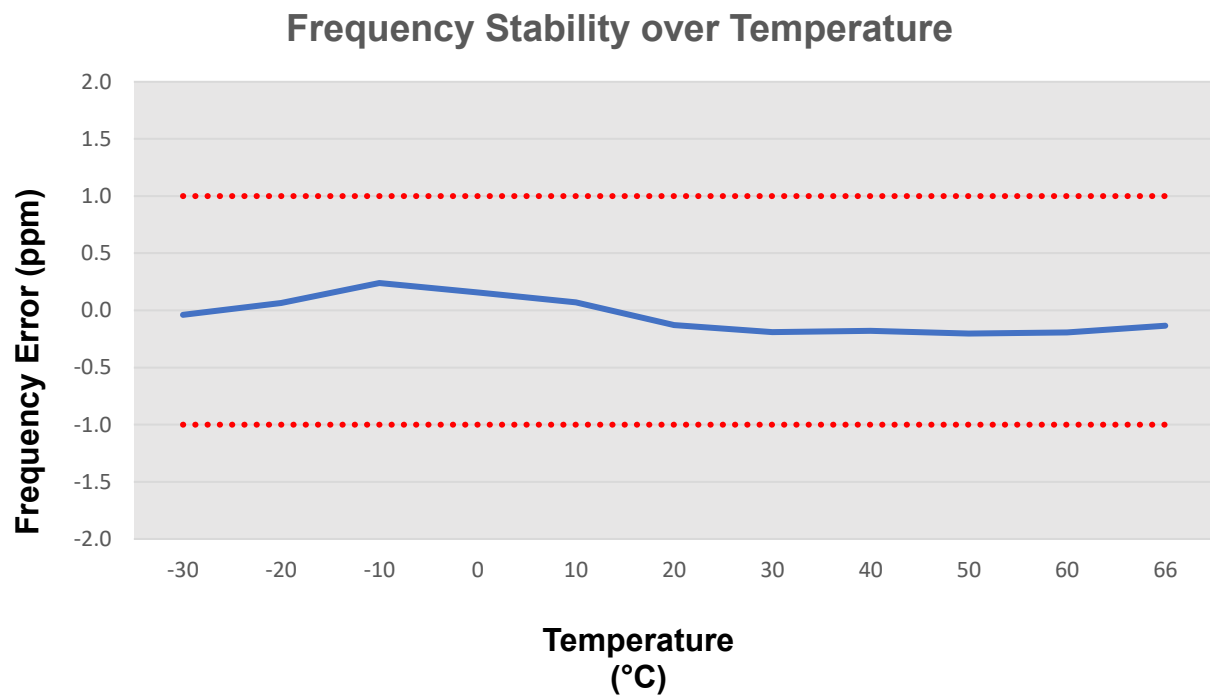


TX Frequency = 930.5 MHz						
Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	930.499990	0.0	+/-1	-1.0	Compliant
-20	3.65	930.500096	0.1	+/-1	-0.9	Compliant
-10	3.65	930.500248	0.3	+/-1	-0.7	Compliant
0	3.65	930.500185	0.2	+/-1	-0.8	Compliant
10	3.65	930.500081	0.1	+/-1	-0.9	Compliant
20	3.65	930.499908	-0.1	+/-1	-0.9	Compliant
30	3.65	930.499852	-0.2	+/-1	-0.8	Compliant
40	3.65	930.499865	-0.1	+/-1	-0.9	Compliant
50	3.65	930.499837	-0.2	+/-1	-0.8	Compliant
60	3.65	930.499852	-0.2	+/-1	-0.8	Compliant
66	3.65	930.499908	-0.1	+/-1	-0.9	Compliant
20	3.1025	930.499903	-0.1	+/-1	-0.9	Compliant
20	4.1975	930.499899	-0.1	+/-1	-0.9	Compliant



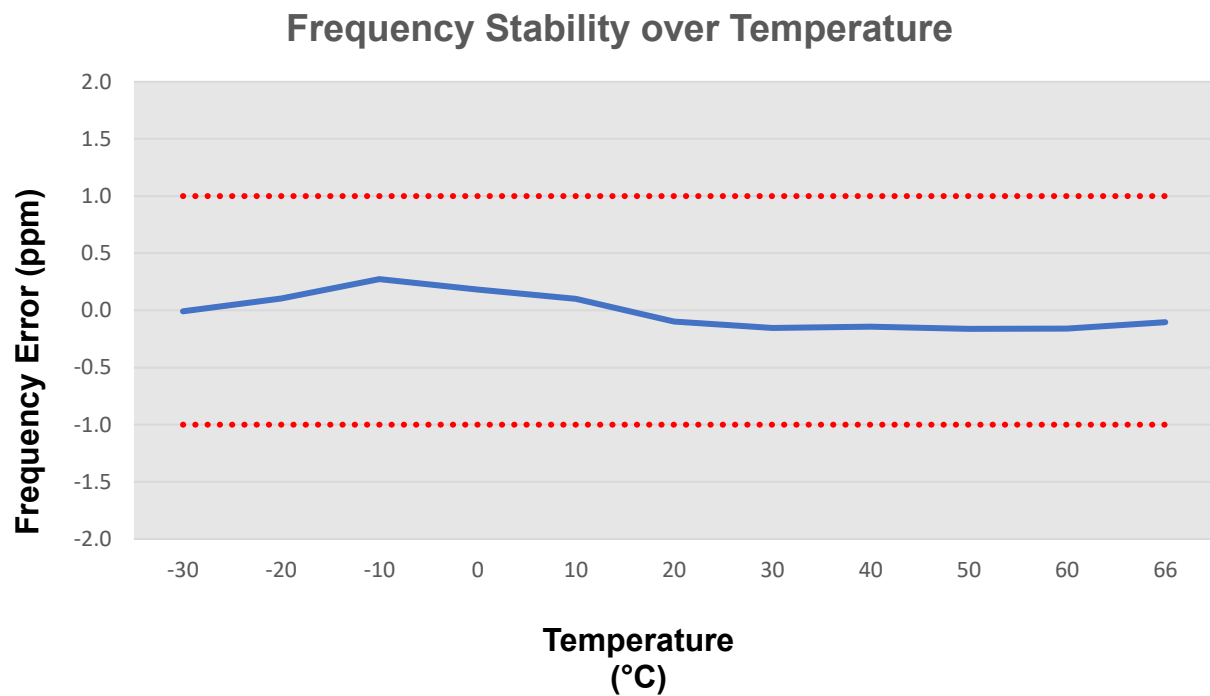
TX Frequency = 932.25 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	932.249963	0.0	+/-1	-1.0	Compliant
-20	3.65	932.250059	0.1	+/-1	-0.9	Compliant
-10	3.65	932.250223	0.2	+/-1	-0.8	Compliant
0	3.65	932.250146	0.2	+/-1	-0.8	Compliant
10	3.65	932.250065	0.1	+/-1	-0.9	Compliant
20	3.65	932.249880	-0.1	+/-1	-0.9	Compliant
30	3.65	932.249823	-0.2	+/-1	-0.8	Compliant
40	3.65	932.249832	-0.2	+/-1	-0.8	Compliant
50	3.65	932.249811	-0.2	+/-1	-0.8	Compliant
60	3.65	932.249821	-0.2	+/-1	-0.8	Compliant
66	3.65	932.249874	-0.1	+/-1	-0.9	Compliant
20	3.1025	932.249881	-0.1	+/-1	-0.9	Compliant
20	4.1975	932.249866	-0.1	+/-1	-0.9	Compliant

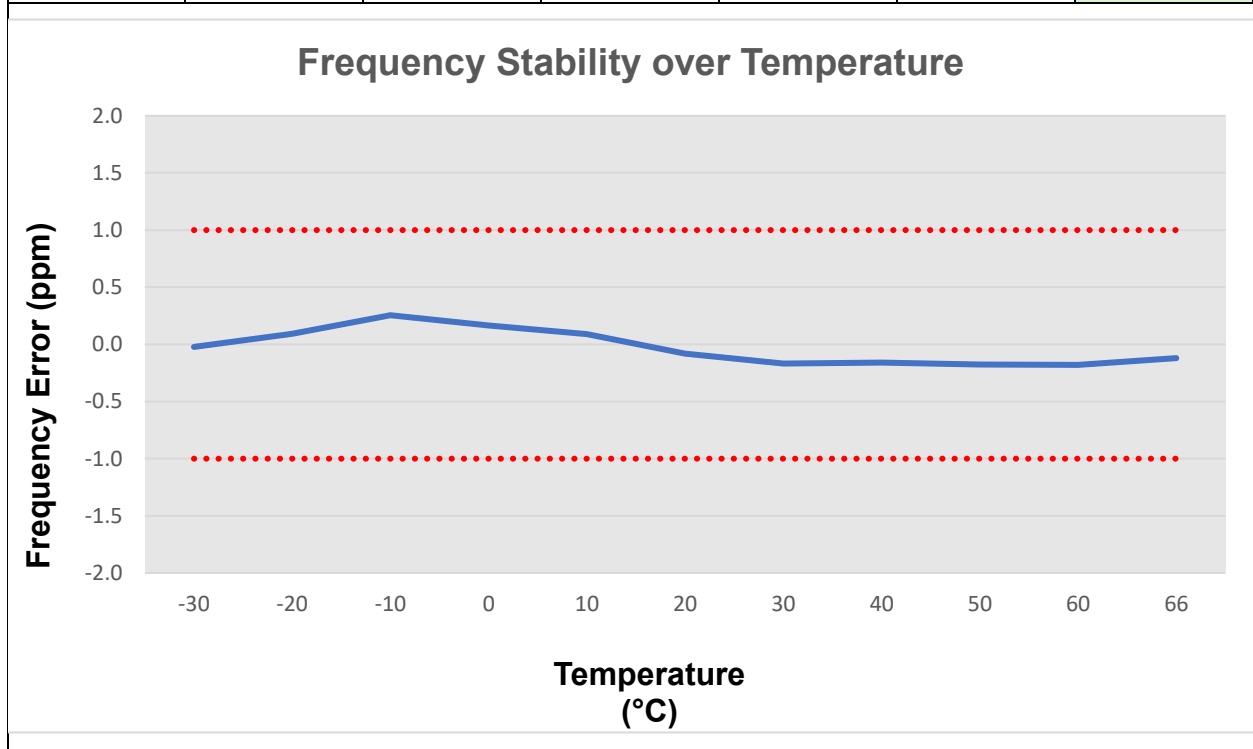


TX Frequency = 940.0125 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	940.012492	0.0	+/-1	-1.0	Compliant
-20	3.65	940.012598	0.1	+/-1	-0.9	Compliant
-10	3.65	940.012757	0.3	+/-1	-0.7	Compliant
0	3.65	940.012672	0.2	+/-1	-0.8	Compliant
10	3.65	940.012595	0.1	+/-1	-0.9	Compliant
20	3.65	940.012407	-0.1	+/-1	-0.9	Compliant
30	3.65	940.012355	-0.2	+/-1	-0.8	Compliant
40	3.65	940.012366	-0.1	+/-1	-0.9	Compliant
50	3.65	940.012348	-0.2	+/-1	-0.8	Compliant
60	3.65	940.012350	-0.2	+/-1	-0.8	Compliant
66	3.65	940.012404	-0.1	+/-1	-0.9	Compliant
20	3.1025	940.012403	-0.1	+/-1	-0.9	Compliant
20	4.1975	940.012396	-0.1	+/-1	-0.9	Compliant

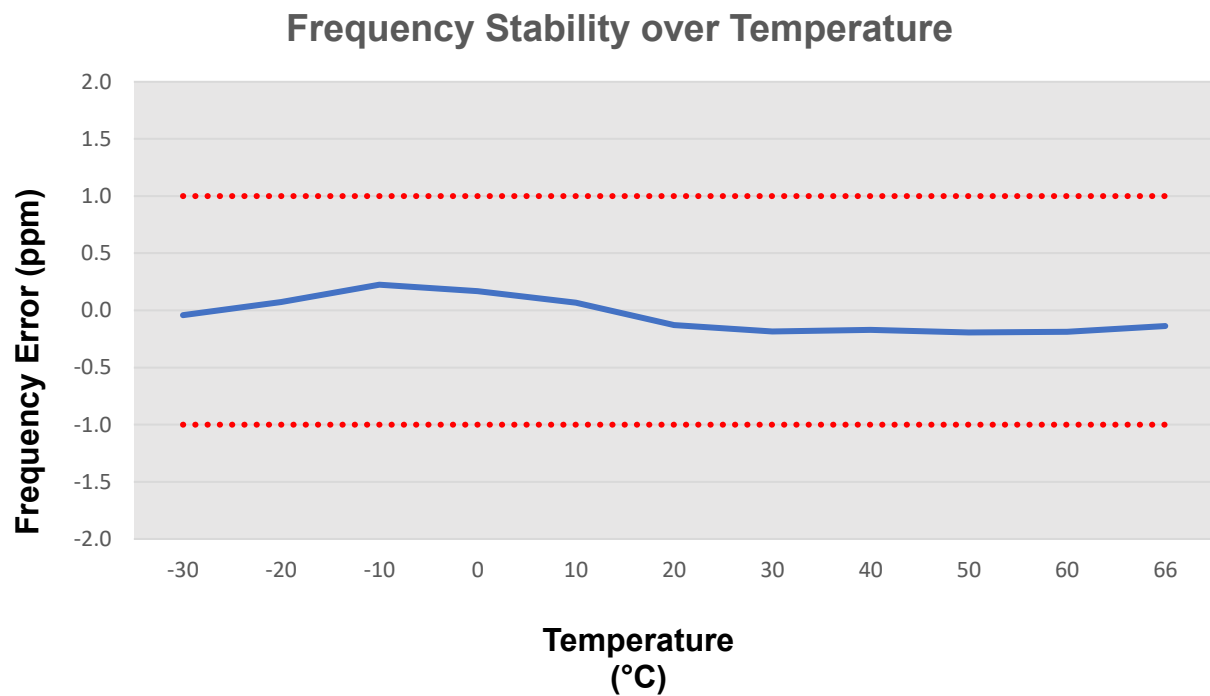


TX Frequency = 941.4875 MHz						
Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	941.487479	0.0	+/-1	-1.0	Compliant
-20	3.65	941.487586	0.1	+/-1	-0.9	Compliant
-10	3.65	941.487740	0.3	+/-1	-0.7	Compliant
0	3.65	941.487656	0.2	+/-1	-0.8	Compliant
10	3.65	941.487584	0.1	+/-1	-0.9	Compliant
20	3.65	941.487423	-0.1	+/-1	-0.9	Compliant
30	3.65	941.487343	-0.2	+/-1	-0.8	Compliant
40	3.65	941.487351	-0.2	+/-1	-0.8	Compliant
50	3.65	941.487333	-0.2	+/-1	-0.8	Compliant
60	3.65	941.487331	-0.2	+/-1	-0.8	Compliant
66	3.65	941.487386	-0.1	+/-1	-0.9	Compliant
20	3.1025	941.487411	-0.1	+/-1	-0.9	Compliant
20	4.1975	941.487383	-0.1	+/-1	-0.9	Compliant



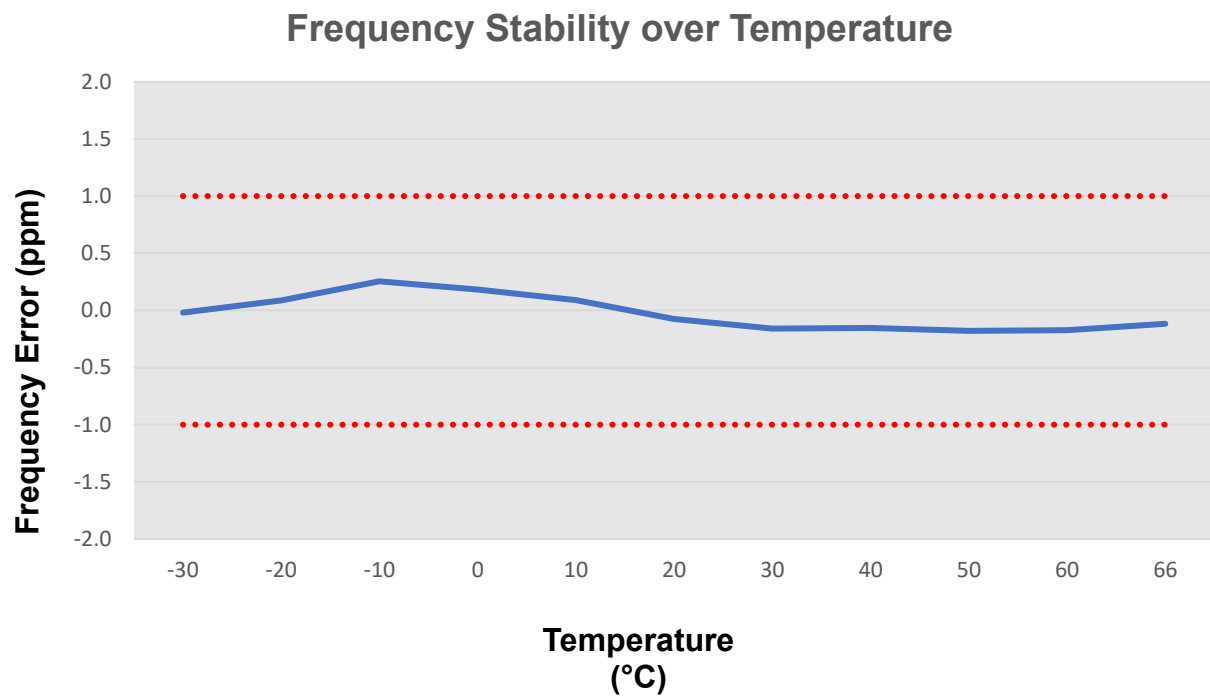
TX Frequency = 952.5 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	952.499961	0.0	+/-1	-1.0	Compliant
-20	3.65	952.500069	0.1	+/-1	-0.9	Compliant
-10	3.65	952.500214	0.2	+/-1	-0.8	Compliant
0	3.65	952.500159	0.2	+/-1	-0.8	Compliant
10	3.65	952.500065	0.1	+/-1	-0.9	Compliant
20	3.65	952.499878	-0.1	+/-1	-0.9	Compliant
30	3.65	952.499825	-0.2	+/-1	-0.8	Compliant
40	3.65	952.499837	-0.2	+/-1	-0.8	Compliant
50	3.65	952.499816	-0.2	+/-1	-0.8	Compliant
60	3.65	952.499821	-0.2	+/-1	-0.8	Compliant
66	3.65	952.499869	-0.1	+/-1	-0.9	Compliant
20	3.1025	952.499872	-0.1	+/-1	-0.9	Compliant
20	4.1975	952.499870	-0.1	+/-1	-0.9	Compliant



TX Frequency = 959.925 MHz

Temperature °C	Input Voltage Vdc	Measured Carrier Frequency MCF _{MHz}	Frequency Error ppm	Limit ppm	Margin ppm	Verdict
-30	3.65	959.924981	0.0	+/-1	-1.0	Compliant
-20	3.65	959.925083	0.1	+/-1	-0.9	Compliant
-10	3.65	959.925244	0.3	+/-1	-0.7	Compliant
0	3.65	959.925174	0.2	+/-1	-0.8	Compliant
10	3.65	959.925086	0.1	+/-1	-0.9	Compliant
20	3.65	959.924928	-0.1	+/-1	-0.9	Compliant
30	3.65	959.924846	-0.2	+/-1	-0.8	Compliant
40	3.65	959.924853	-0.2	+/-1	-0.8	Compliant
50	3.65	959.924828	-0.2	+/-1	-0.8	Compliant
60	3.65	959.924833	-0.2	+/-1	-0.8	Compliant
66	3.65	959.924886	-0.1	+/-1	-0.9	Compliant
20	3.1025	959.924906	-0.1	+/-1	-0.9	Compliant
20	4.1975	959.924884	-0.1	+/-1	-0.9	Compliant



12 Measurement Uncertainty

Parameter	Expanded Uncertainty for Normal k factor equal to 2
Radio Frequency	0.07 PPM
Total RF Power (Conducted)	0.65 dB
Power Density (Conducted)	0.65 dB
RF Spurious (Conducted)	1.8 dB
Radiated Emissions (9kHz-30MHz)	4.7 dB
Radiated Emissions (30MHz-1GHz)	4.1 dB
Radiated Emissions (1GHz-18GHz)	4.5dB
Radiated Emissions (18GHz-40GHz)	4.7 dB
AC Line Conducted Emissions	2.8 dB
Temperature	0.7°
Humidity	3.9%

13 Revision History

Revision Level	Date	Prepared By	Reviewed By	Notes
0	18 February 2026	JOP	MC	Original Issue

END OF REPORT