

FREQUENCY STABILITY



XMIT 2020.12.30.0

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	Fluke	77-IV	MLT	2020-10-15	2023-10-15
Chamber - Temperature/Humidity	Cincinnati Sub Zero (CSZ)	ZPH-8-2-SCT/AC	TBH	NCR	NCR
Transformer	Staco Energy Products Co.	3PN2520B	XFZ	NCR	NCR
Thermometer	Omega Engineering, Inc.	HH311	DUI	2021-02-02	2024-02-02
Probe - Near Field Set	Com-Power	PS-400	IPX	NCR	NCR
Cable	UtiFlex Micro-Coax	UFD1150A-1-0720-200200	TXJ	2020-09-22	2021-09-22
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	2021-01-06	2022-01-06

TEST DESCRIPTION

The spectrum analyzer is equipped with a precision frequency reference that exceeds the stability requirement of the EUT.

Measurements were made on the single transmit frequency as called out on the data sheets. Testing was done while the EUT was continuously polling.

The primary supply voltage was varied from 85 % to 115% of the nominal voltage while at ambient temperature. Using a temperature chamber, the transmit frequency was recorded at the extremes of the specified temperature range of -20 ° to +50° C and at 10°C intervals.

The requirement of a frequency tolerance of $\pm 0.01\%$ is equivalent to 100 ppm
The formula to check for compliance is:

$$\text{ppm} = (\text{Measured Frequency} / \text{Measured Nominal Frequency} - 1) * 1,000,000$$

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TSTx 2021.03.19.1 XMR 2020.12.30.0

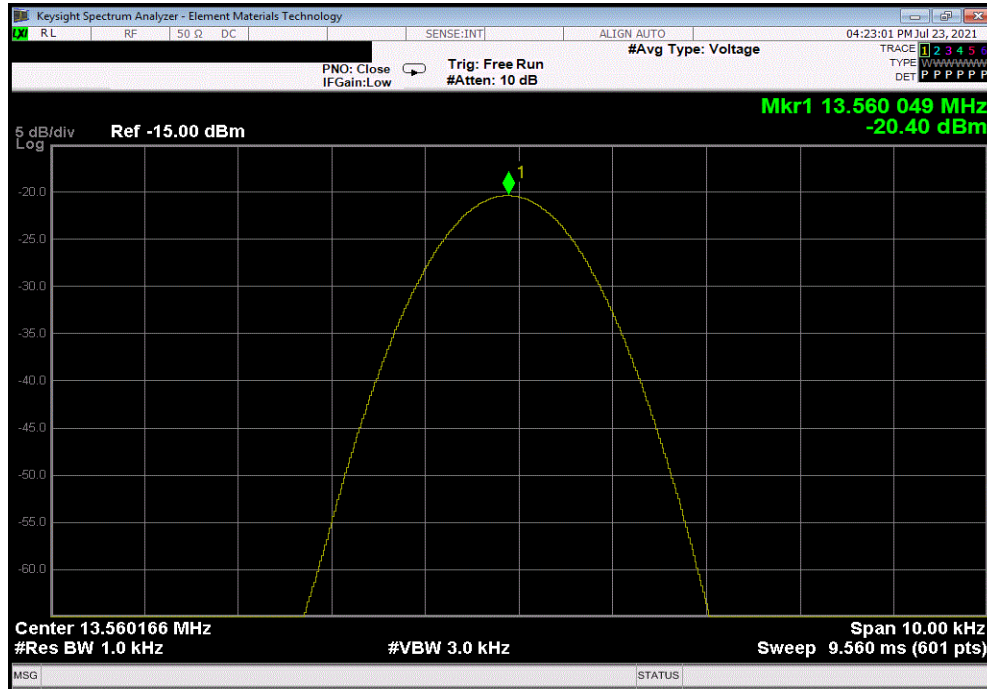
EUT: GLP12408 SAL Alinity C End Section		Work Order: ABBO0080	
Serial Number: ENG02-AP		Date: 24-Jul-21	
Customer: Abbott Laboratories		Temperature: 25 °C	
Attendees: Don Mendell		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1019 mbar	
Tested by: Mark Baytan		Power: 220VAC/60Hz	
TEST SPECIFICATIONS		Test Method	
FCC 15.225:2021		ANSI C63.10:2013	
COMMENTS			
AccessPoint Radio			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Measured Value (MHz)	Assigned Value (MHz)
		Error (ppm)	Limit (ppm)
			Results
Normal Voltage			
	Mid Channel, 13.56 MHz	13.56004933	13.56004933
		0	100
	Pass		
Extreme Voltage +15%			
	Mid Channel, 13.56 MHz	13.56003267	13.56004933
		1.2	100
	Pass		
Extreme Voltage -15%			
	Mid Channel, 13.56 MHz	13.56003367	13.56004933
		1.2	100
	Pass		
Extreme Temperature +50°C			
	Mid Channel, 13.56 MHz	13.55996633	13.56004933
		6.1	100
	Pass		
Extreme Temperature +40°C			
	Mid Channel, 13.56 MHz	13.55998367	13.56004933
		4.8	100
	Pass		
Extreme Temperature +30°C			
	Mid Channel, 13.56 MHz	13.560033	13.56004933
		1.2	100
	Pass		
Extreme Temperature +20°C			
	Mid Channel, 13.56 MHz	13.56003267	13.56004933
		1.2	100
	Pass		
Extreme Temperature +10°C			
	Mid Channel, 13.56 MHz	13.56009967	13.56004933
		3.7	100
	Pass		
Extreme Temperature 0°C			
	Mid Channel, 13.56 MHz	13.560116	13.56004933
		4.9	100
	Pass		
Extreme Temperature -10°C			
	Mid Channel, 13.56 MHz	13.560133	13.56004933
		6.2	100
	Pass		
Extreme Temperature -20°C			
	Mid Channel, 13.56 MHz	13.56011633	13.56004933
		4.9	100
	Pass		

FREQUENCY STABILITY

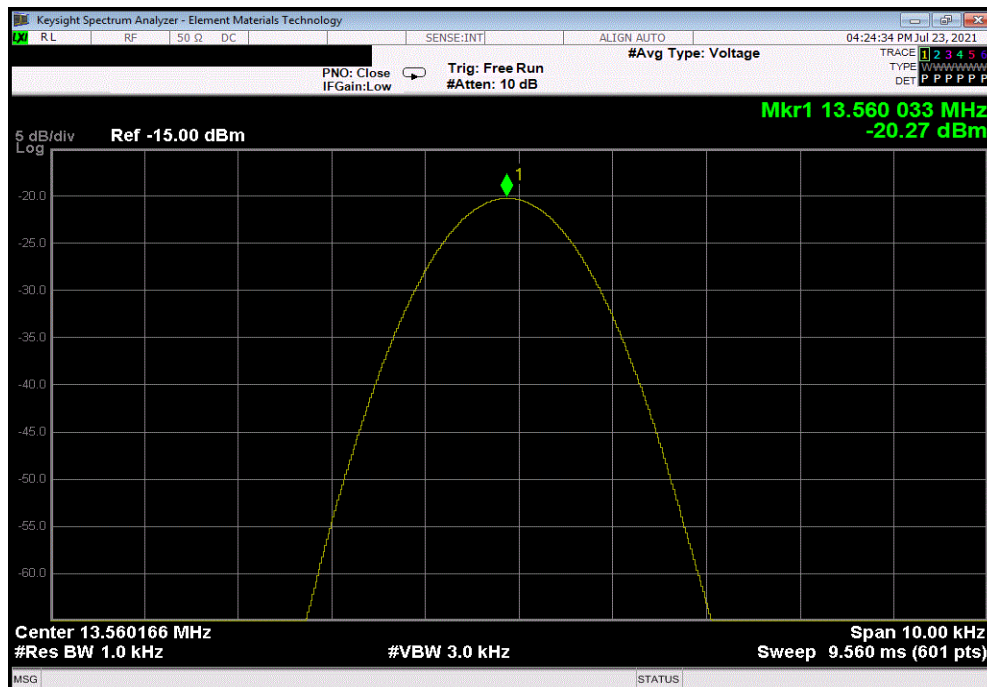


TbTx 2021.03.19.1 XMt 2020.12.30.0

Normal Voltage, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56004933	13.56004933	0	100	Pass



Extreme Voltage +15%, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56003267	13.56004933	1.2	100	Pass

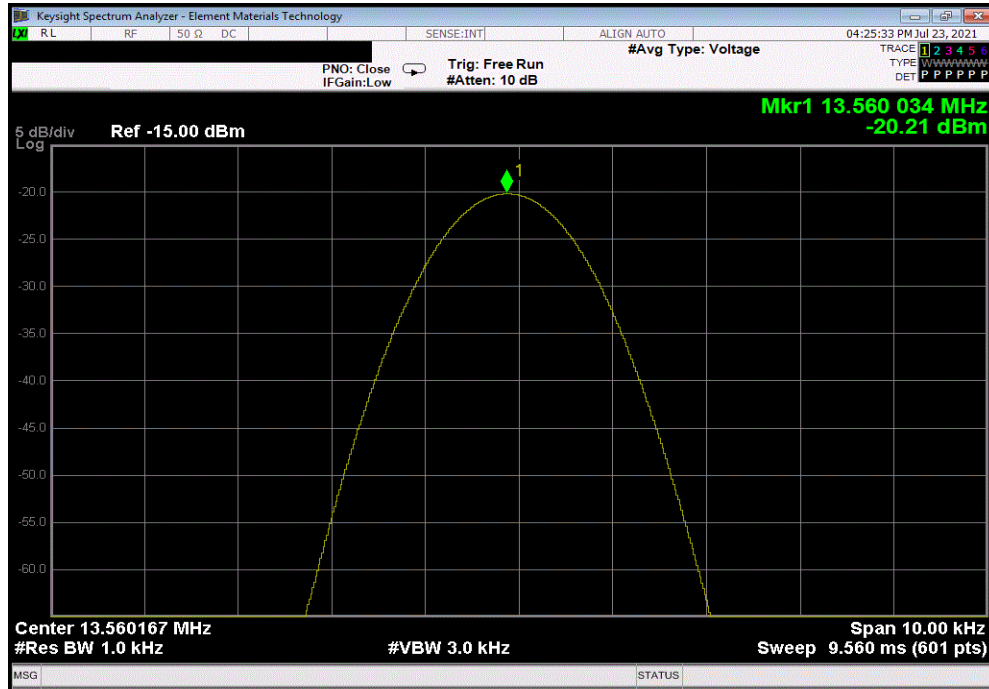


FREQUENCY STABILITY

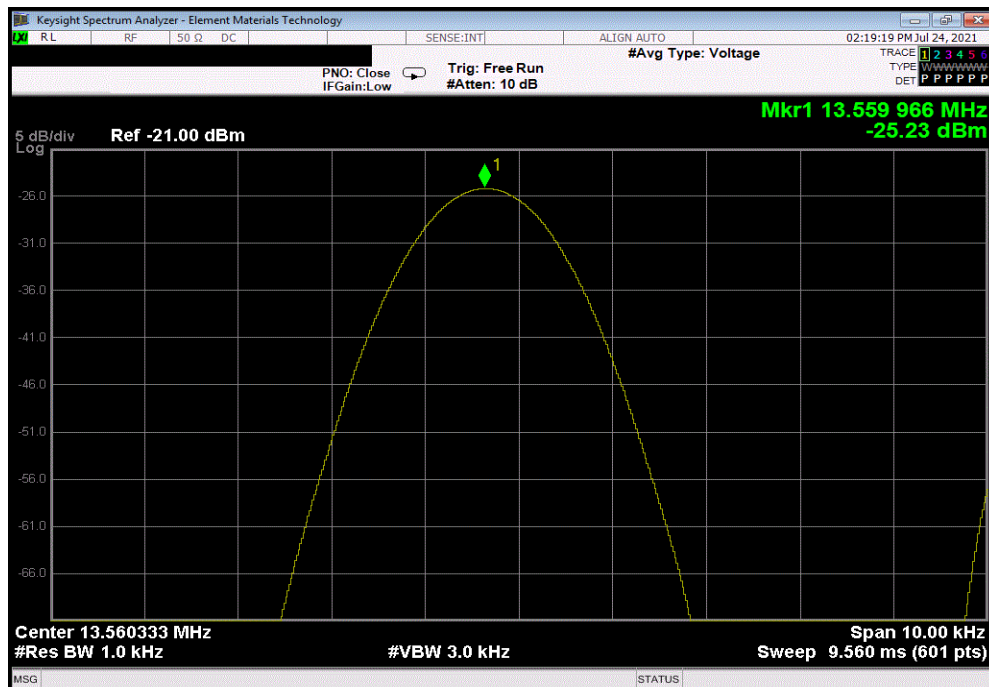


TbTx 2021.03.19.1 XMt 2020.12.30.0

Extreme Voltage -15%, Mid Channel, 13.56 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
13.56003367	13.56004933	1.2	100	Pass	



Extreme Temperature +50°C, Mid Channel, 13.56 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
13.55996633	13.56004933	6.1	100	Pass	

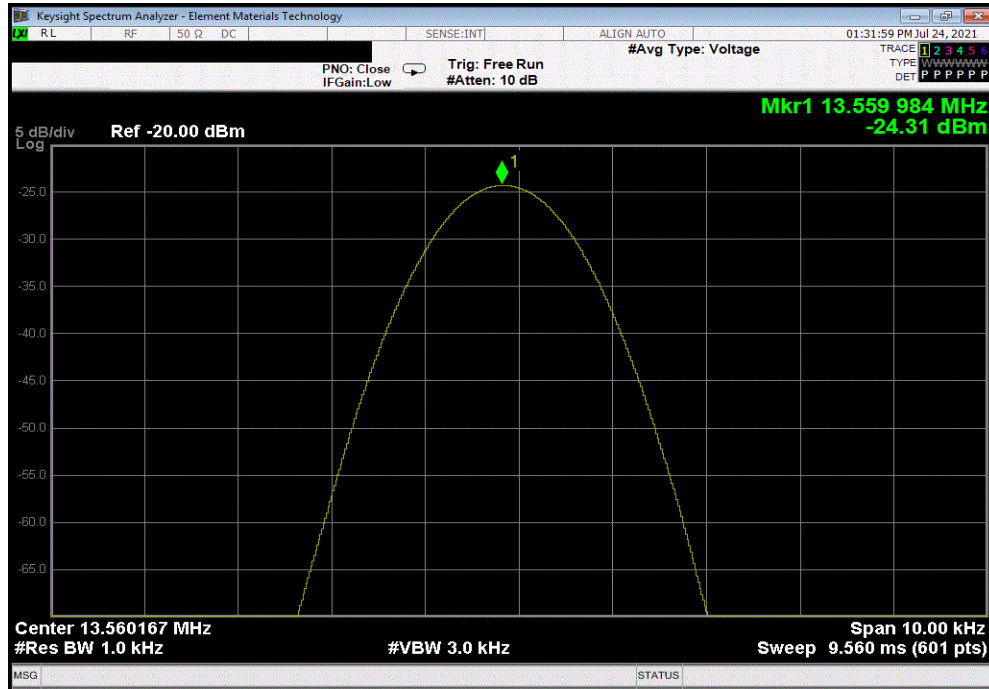


FREQUENCY STABILITY

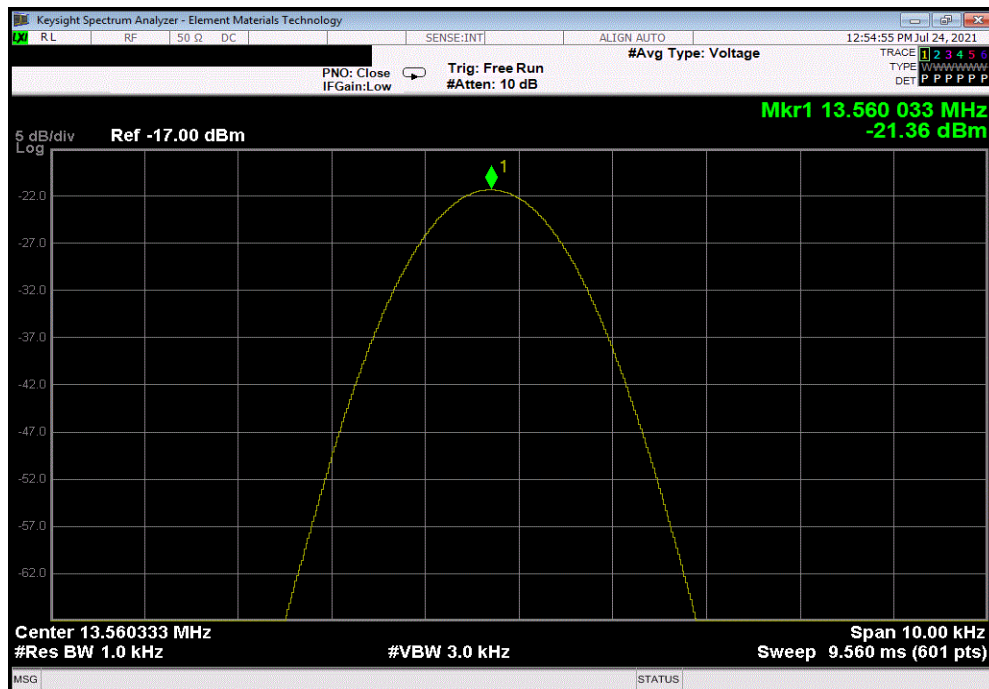


TbTx 2021.03.19.1 XMt 2020.12.30.0

Extreme Temperature +40°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.55998367	13.56004933	4.8	100	Pass



Extreme Temperature +30°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.560033	13.56004933	1.2	100	Pass

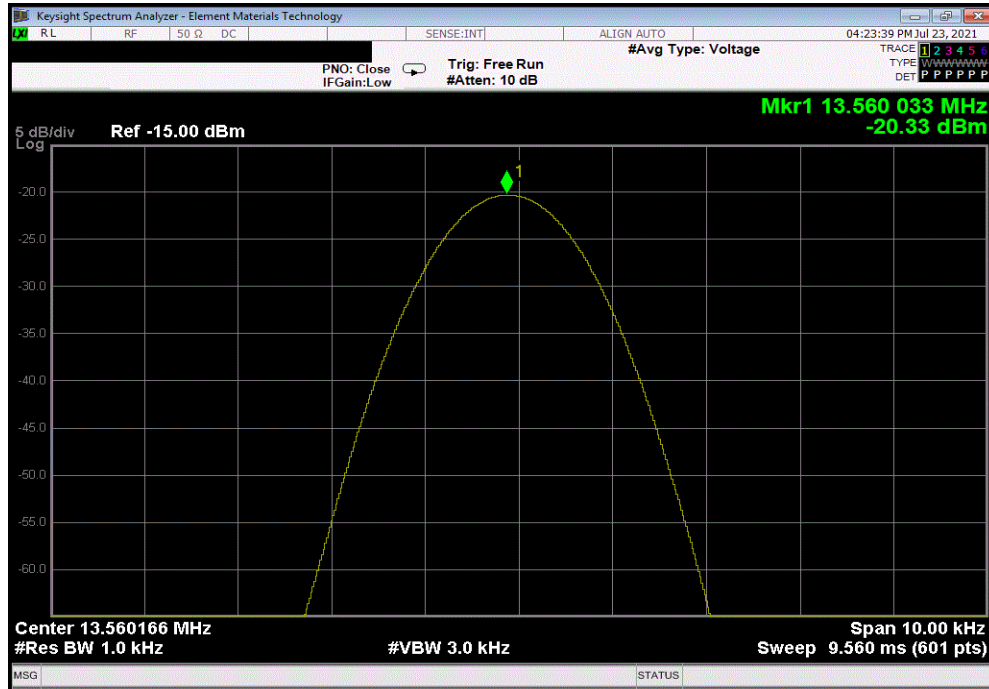


FREQUENCY STABILITY

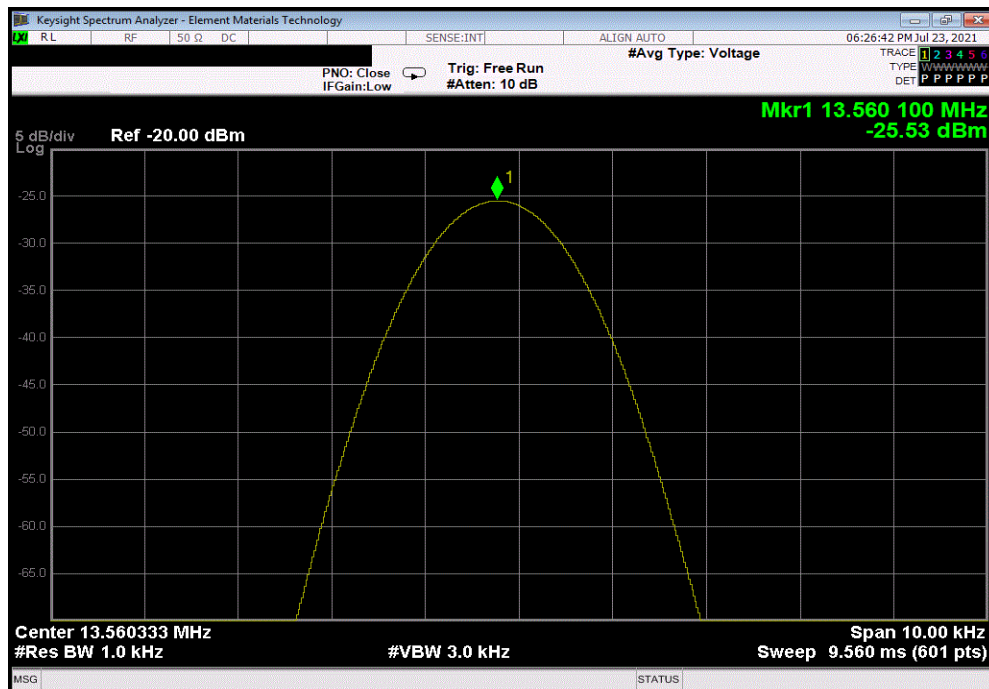


TbTx 2021.03.19.1 XMt 2020.12.30.0

Extreme Temperature +20°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56003267	13.56004933	1.2	100	Pass



Extreme Temperature +10°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56009967	13.56004933	3.7	100	Pass

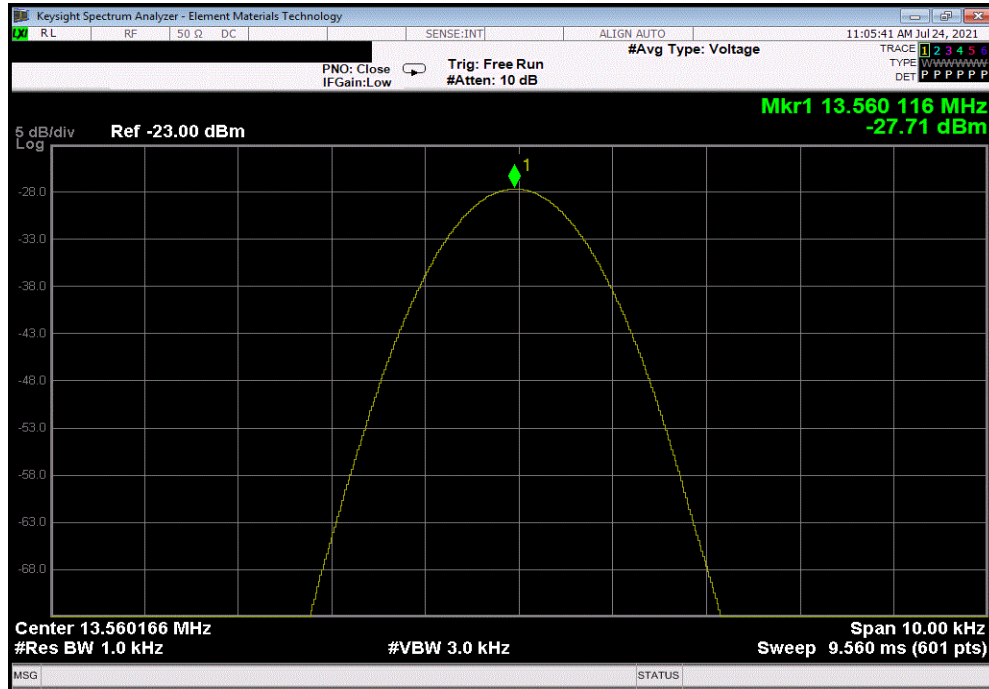


FREQUENCY STABILITY

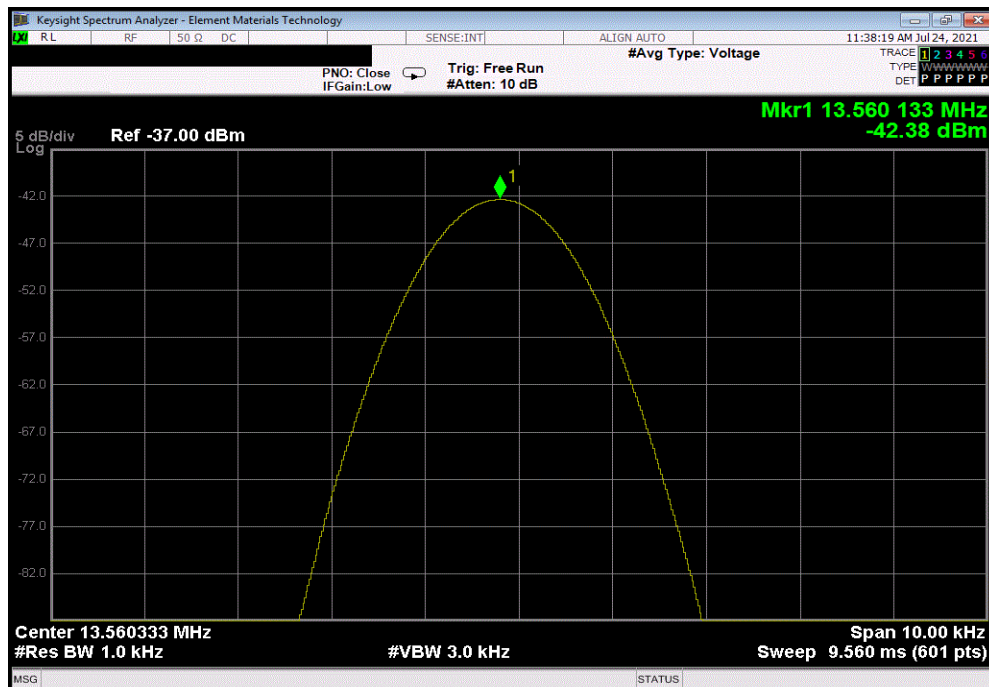


TbTx 2021.03.19.1 XMt 2020.12.30.0

Extreme Temperature 0°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.560116	13.56004933	4.9	100	Pass



Extreme Temperature -10°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.560133	13.56004933	6.2	100	Pass

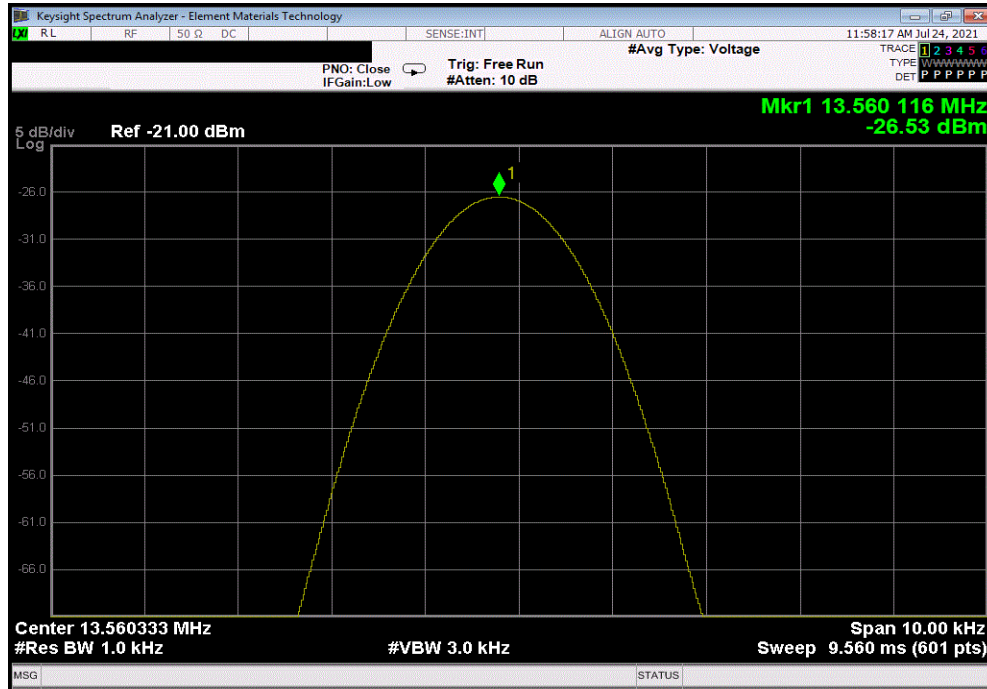


FREQUENCY STABILITY



TbTx 2021.03.19.1 XMt 2020.12.30.0

Extreme Temperature -20°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56011633	13.56004933	4.9	100	Pass



FREQUENCY STABILITY



TSTx 2021.03.19.1 XMR 2020.12.30.0

EUT: GLP12408 SAL Alinity C End Section		Work Order: ABBO0080	
Serial Number: ENG05-CS		Date: 24-Jul-21	
Customer: Abbott Laboratories		Temperature: 25 °C	
Attendees: Don Mendell		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1019 mbar	
Tested by: Mark Baytan		Power: 220VAC/60Hz	
TEST SPECIFICATIONS		Test Method	
FCC 15.225:2021		ANSI C63.10:2013	
COMMENTS			
CrossSwitch Radio/Convergent Radio. Both radios are electrically identical and share the same PCB: 20005732, therefore, the data presented accounts for both radios.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Measured Value (MHz)	Assigned Value (MHz)
		Error (ppm)	Limit (ppm)
			Results
CrossSwitch Radio - Antenna 1			
Normal Voltage			
	Mid Channel, 13.56 MHz	13.56009967	13.56009967
	Extreme Voltage +15%	0	100
	Mid Channel, 13.56 MHz	13.56009967	13.56009967
	Extreme Voltage -15%	0	100
	Mid Channel, 13.56 MHz	13.56006633	13.56009967
	Extreme Temperature +50°C	2.5	100
	Mid Channel, 13.56 MHz	13.55998267	13.56009967
	Extreme Temperature +40°C	8.6	100
	Mid Channel, 13.56 MHz	13.560016	13.56009967
	Extreme Temperature +30°C	6.2	100
	Mid Channel, 13.56 MHz	13.56004967	13.56009967
	Extreme Temperature +20°C	3.7	100
	Mid Channel, 13.56 MHz	13.56006633	13.56009967
	Extreme Temperature +10°C	2.5	100
	Mid Channel, 13.56 MHz	13.56014967	13.56009967
	Extreme Temperature 0°C	3.7	100
	Mid Channel, 13.56 MHz	13.560183	13.56009967
	Extreme Temperature -10°C	6.1	100
	Mid Channel, 13.56 MHz	13.5602	13.56009967
	Extreme Temperature -20°C	7.4	100
	Mid Channel, 13.56 MHz	13.560183	13.56009967
		6.1	100
CrossSwitch Radio - Antenna 2			
Normal Voltage			
	Mid Channel, 13.56 MHz	13.56003267	13.56003267
	Extreme Voltage +15%	0	100
	Mid Channel, 13.56 MHz	13.56009967	13.56003267
	Extreme Voltage -15%	4.9	100
	Mid Channel, 13.56 MHz	13.560016	13.56003267
	Extreme Temperature +50°C	1.2	100
	Mid Channel, 13.56 MHz	13.55994933	13.56003267
	Extreme Temperature +40°C	6.1	100
	Mid Channel, 13.56 MHz	13.55993367	13.56003267
	Extreme Temperature +30°C	7.3	100
	Mid Channel, 13.56 MHz	13.55998333	13.56003267
	Extreme Temperature +20°C	3.6	100
	Mid Channel, 13.56 MHz	13.560066	13.56003267
	Extreme Temperature +10°C	2.5	100
	Mid Channel, 13.56 MHz	13.560066	13.56003267
	Extreme Temperature 0°C	2.5	100
	Mid Channel, 13.56 MHz	13.56009967	13.56003267
	Extreme Temperature -10°C	4.9	100
	Mid Channel, 13.56 MHz	13.56011633	13.56003267
	Extreme Temperature -20°C	6.1	100
	Mid Channel, 13.56 MHz	13.56008367	13.56003267
		3.8	100

ThyTx 2021.03.19.1 YMI 2020.12.30.4

Keysight Spectrum Analyzer - Element Materials Technology

05:22:49 PM Jul 23, 2021

RL RF 50 Ω DC SENSE:INT ALIGN AUTO #Avg Type: Voltage

PNO: Close IFGain:Low Trig: Free Run #Atten: 10 dB

TRACE 1 2 3 4 5 6
TYPE WWWWWWW
DET P P P P P P

5 dB/div Log Ref -12.00 dBm

Mkr1 13.560 066 MHz
-23.33 dBm

Center 13.560333 MHz
#Res BW 1.0 kHz

#VBW 3.0 kHz

Span 10.00 kHz
Sweep 9.560 ms (601 pts)

MSG STATUS

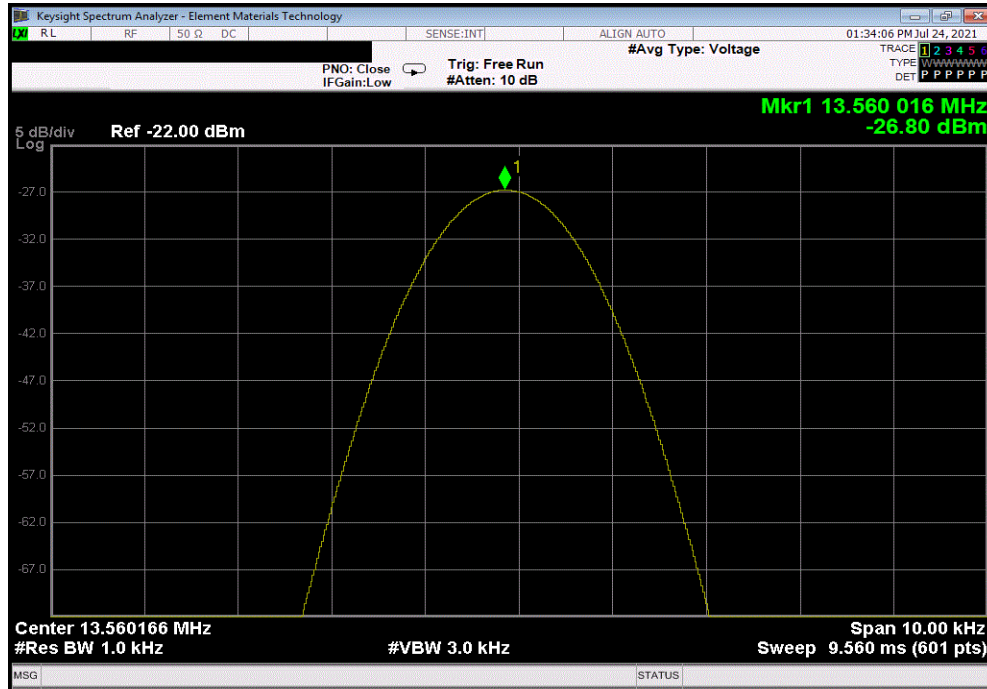
[illegible]

FREQUENCY STABILITY

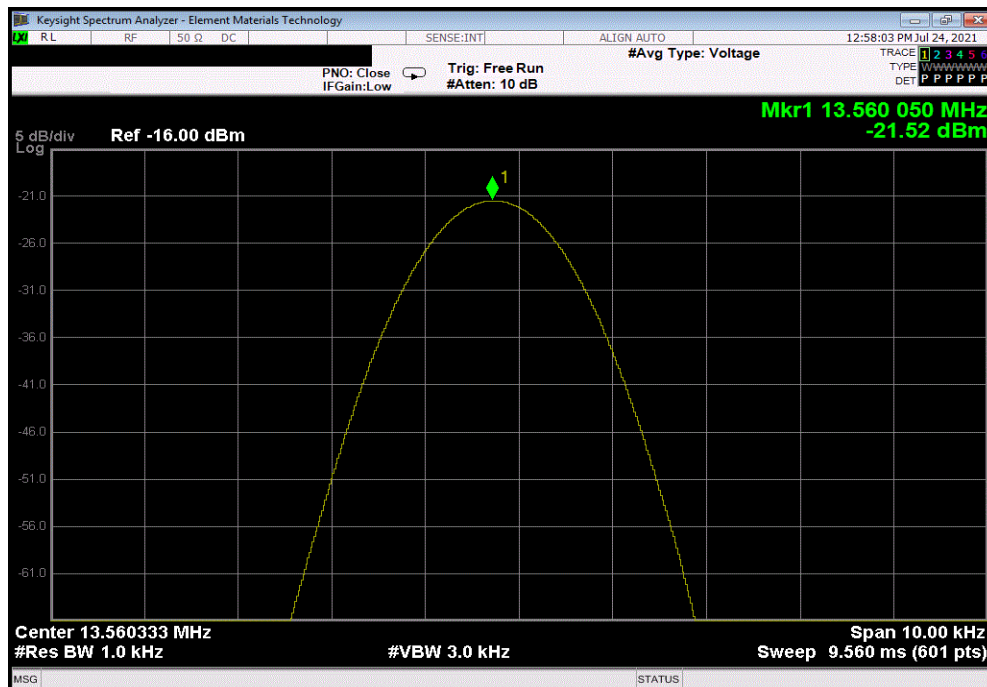


TbTx 2021.03.19.1 XMt 2020.12.30.0

CrossSwitch Radio - Antenna 1, Extreme Temperature +40°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.560016	13.56009967	6.2	100	Pass	

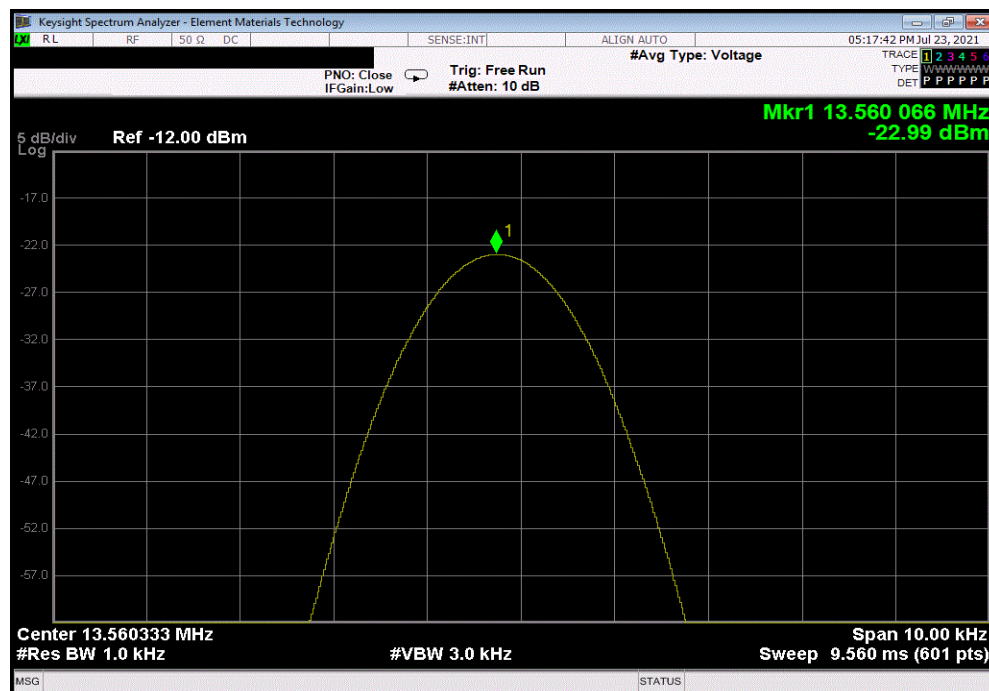


CrossSwitch Radio - Antenna 1, Extreme Temperature +30°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.56004967	13.56009967	3.7	100	Pass	

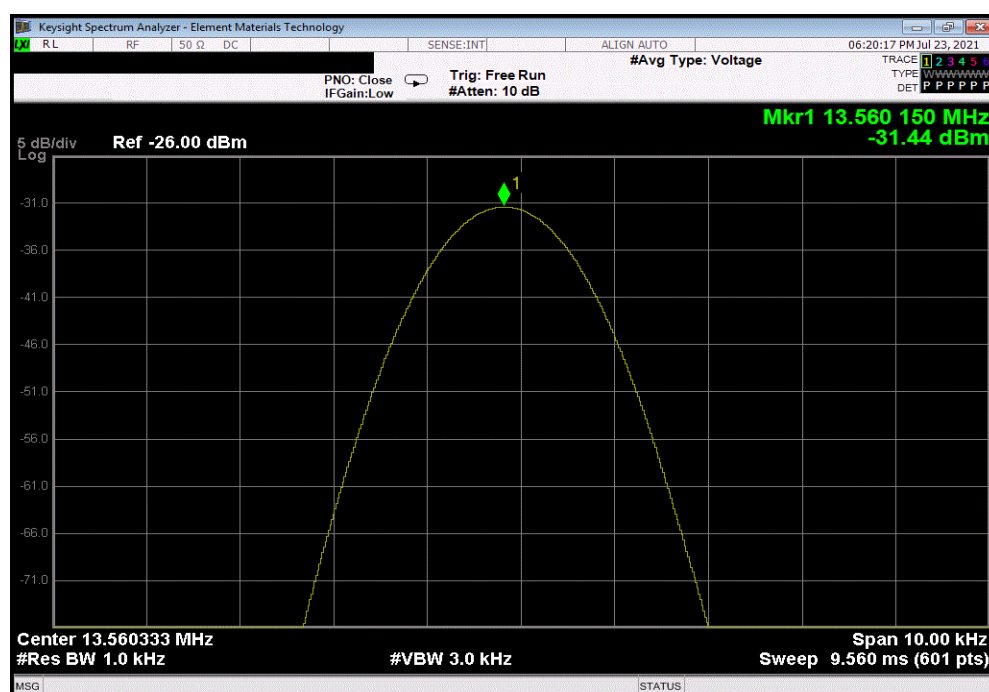


ThyTx 2021.02.19.1 YMit 2020.12.30.4

CrossSwitch Radio - Antenna 1, Extreme Temperature +20°C, Mid Channel, 13.56 MHz					
Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
13.56006633	13.56009967	2.5	100	Pass	



CrossSwitch Radio - Antenna 1, Extreme Temperature +10°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13 56014967	13 56009967	3.7	100	Pass

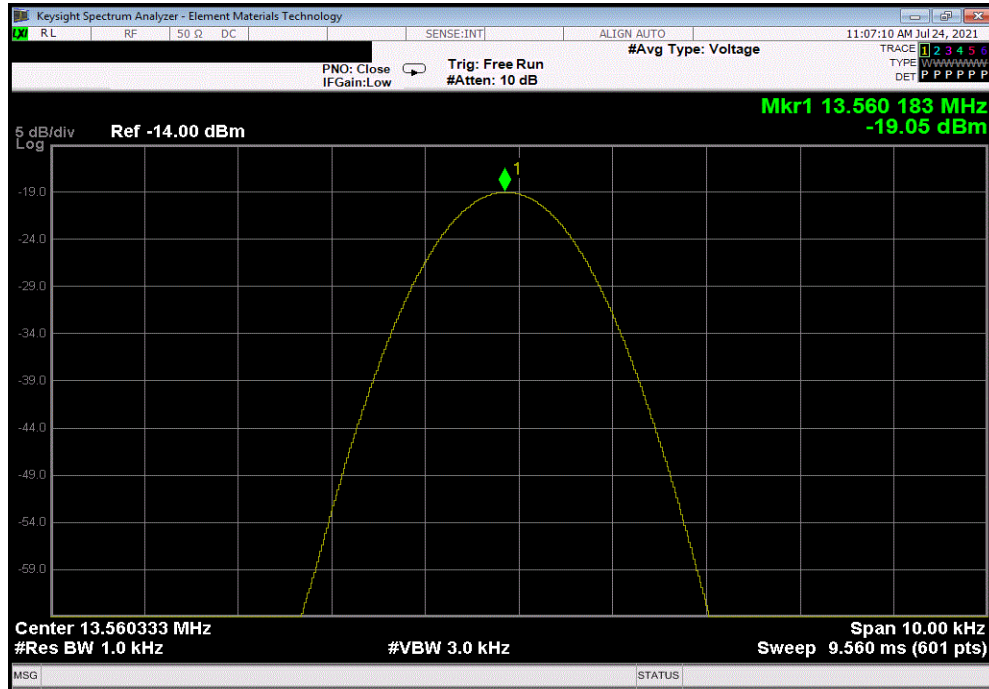


FREQUENCY STABILITY

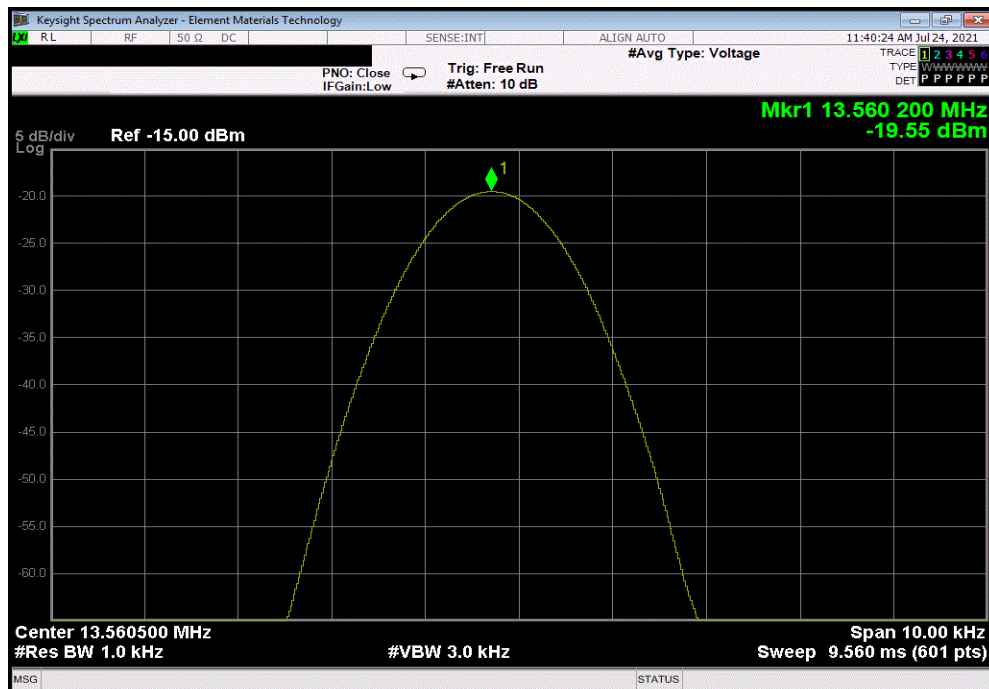


TbTx 2021.03.19.1 XM8 2020.12.30.0

CrossSwitch Radio - Antenna 1, Extreme Temperature 0°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.560183	13.56009967	6.1	100	Pass	



CrossSwitch Radio - Antenna 1, Extreme Temperature -10°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.5602	13.56009967	7.4	100	Pass	

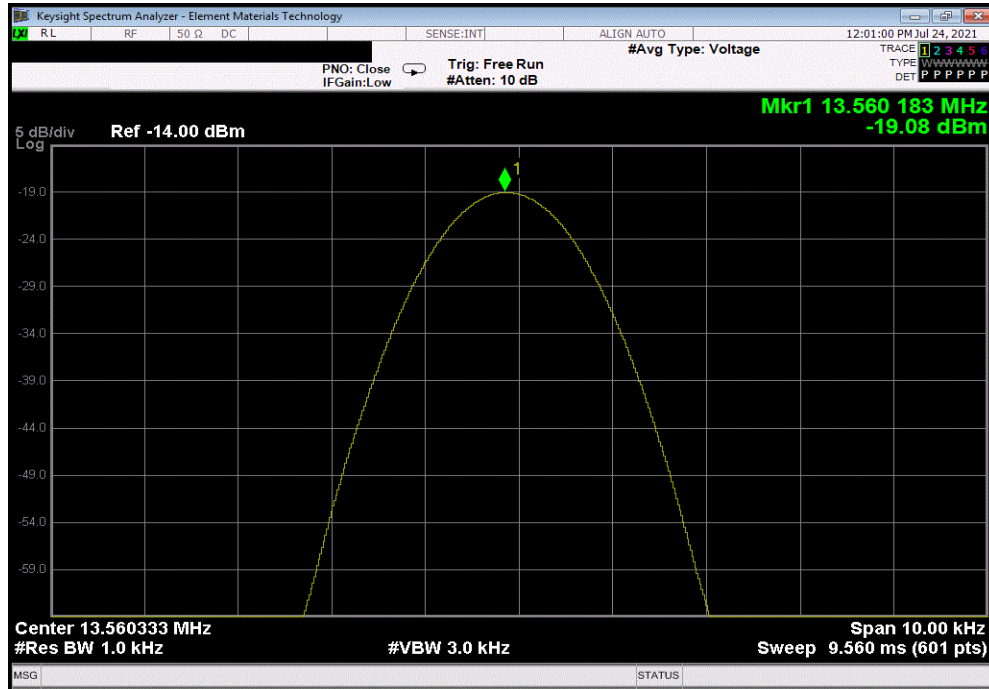


FREQUENCY STABILITY

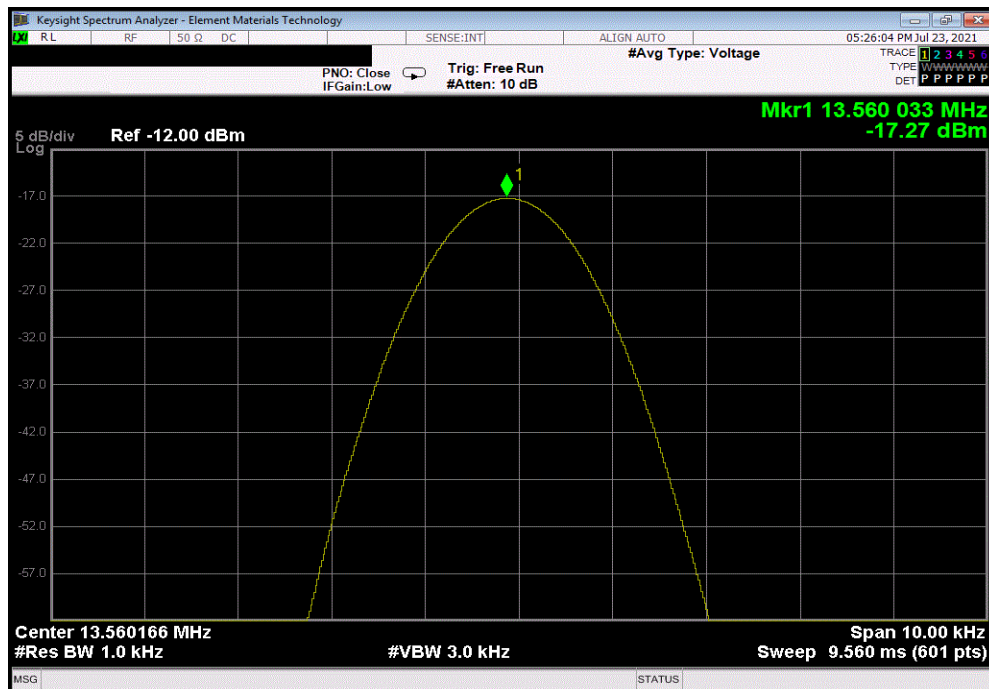


TbTx 2021.03.19.1 XMt 2020.12.30.0

CrossSwitch Radio - Antenna 1, Extreme Temperature -20°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.560183	13.56009967	6.1	100	Pass	



CrossSwitch Radio - Antenna 2, Normal Voltage, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.56003267	13.56003267	0	100	Pass	



ThyTx 2021.02.19.1 YMit 2020.12.30.4

Keysight Spectrum Analyzer - Element Materials Technology

05:28:14 PM Jul 23, 2021

RL RF 50 Ω DC SENSE:INT ALIGN AUTO #Avg Type: Voltage

PNO: Close IFGain:Low Trig: Free Run #Atten: 10 dB

TRACE 1 2 3 4 5 6
TYPE WWWWWWW
DET P P P P P P

5 dB/div Ref -12.00 dBm

Mkr1 13.560 100 MHz
-20.03 dBm

Center 13.560333 MHz
#Res BW 1.0 kHz #VBW 3.0 kHz Span 10.00 kHz
Sweep 9.560 ms (601 pts)

MSG STATUS

The figure is a screenshot of a Keysight Spectrum Analyzer. The main display area shows a single, broad peak centered at 13.560333 MHz. The peak is marked with a green diamond and the number '1'. The vertical axis represents power in dBm, ranging from -57.0 to -17.0 dBm. The horizontal axis represents frequency, with a span of 10.00 kHz. The reference level is set to -12.00 dBm. The resolution bandwidth (Res BW) is 1.0 kHz, and the video bandwidth (VBW) is 3.0 kHz. The sweep time is 9.560 ms, resulting in 601 points per trace. The average type is set to Voltage. The display is in Log mode. The top status bar shows the date and time as 05:28:14 PM on July 23, 2021. The bottom status bar shows the message and status indicators.

Keysight Spectrum Analyzer - Element Materials Technology

05:31:47 PM Jul 23, 2021

SENSE:INT ALIGN AUTO

#Avg Type: Voltage

PNO: Close IFGain:Low Trig: Free Run #Atten: 10 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W
DET P P P P P P

5 dB/div Log Ref -12.00 dBm

Mkr1 13.560 016 MHz
-17.37 dBm

Center 13.560166 MHz
#Res BW 1.0 kHz

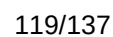
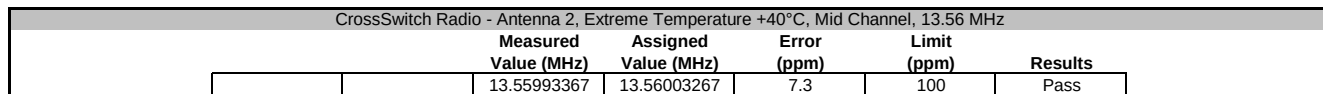
#VBW 3.0 kHz

Span 10.00 kHz
Sweep 9.560 ms (601 pts)

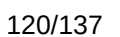
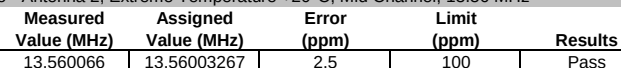
MSG STATUS

TbtTx 2021.03.19.1 XMIT 2020.12.30.1

CrossSwitch Radio - Antenna 2, Extreme Temperature +50°C, Mid Channel, 13.56 MHz						
		Measured	Assigned	Error	Limit	Results
		Value (MHz)	Value (MHz)	(ppm)	(ppm)	
		13.55994933	13.56003267	6.1	100	Pass



Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
13.55998333	13.56003267	3.6	100	Pass

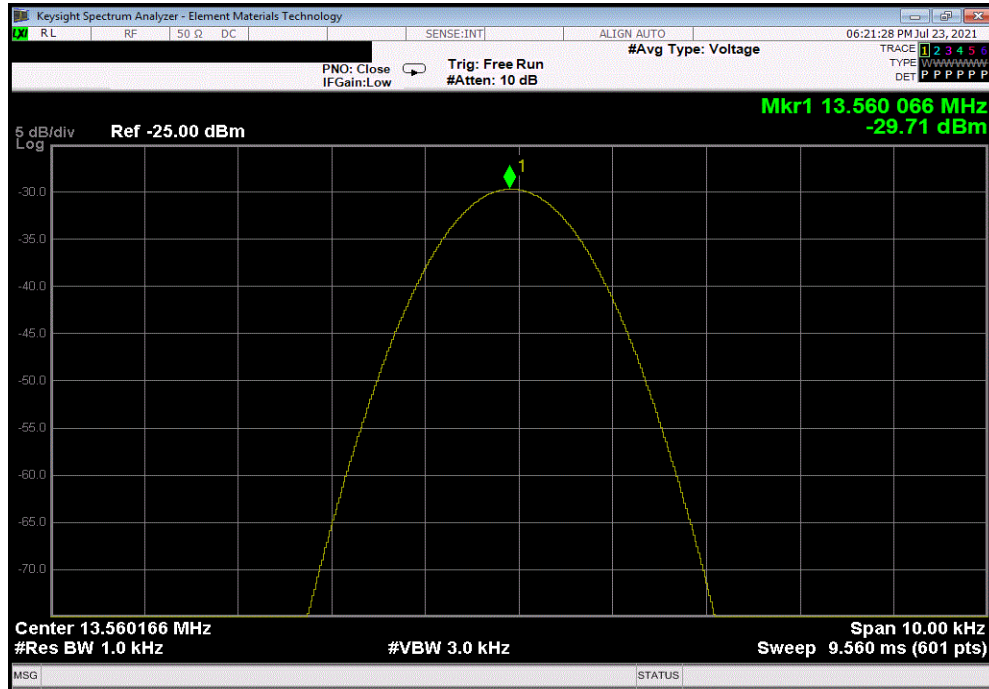


FREQUENCY STABILITY

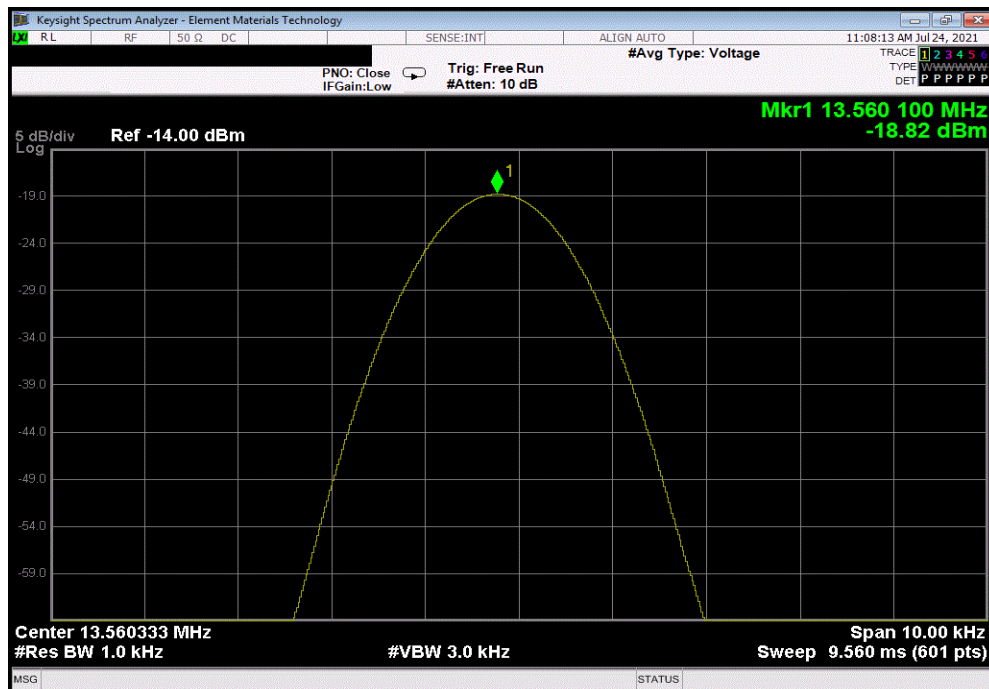


TbTx 2021.03.19.1 XMt 2020.12.30.0

CrossSwitch Radio - Antenna 2, Extreme Temperature +10°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.560066	13.56003267	2.5	100	Pass	



CrossSwitch Radio - Antenna 2, Extreme Temperature 0°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.56009967	13.56003267	4.9	100	Pass	

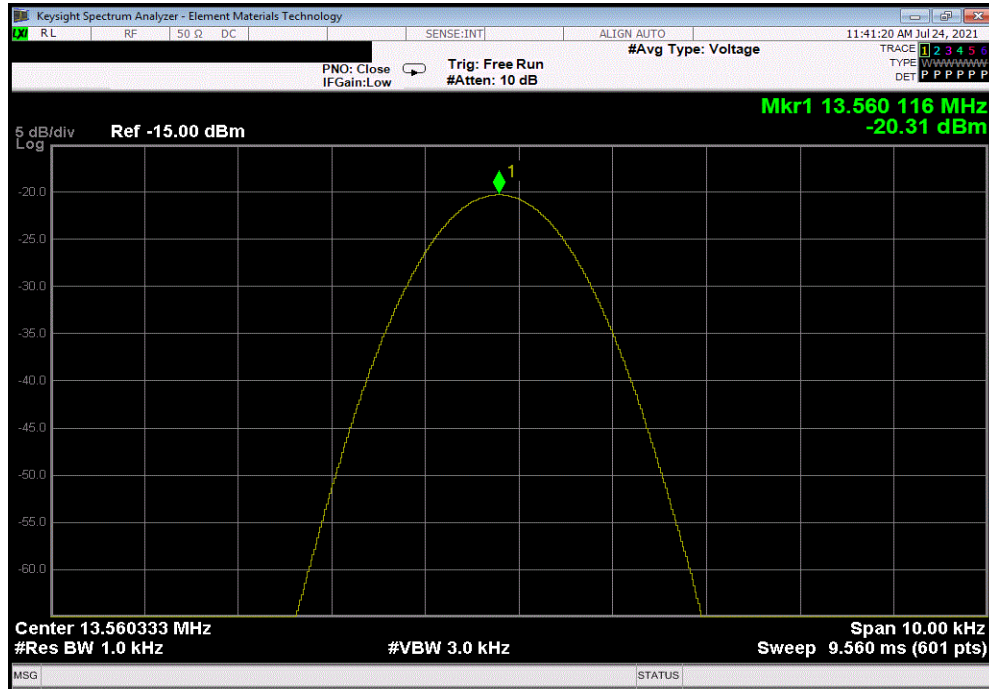


FREQUENCY STABILITY

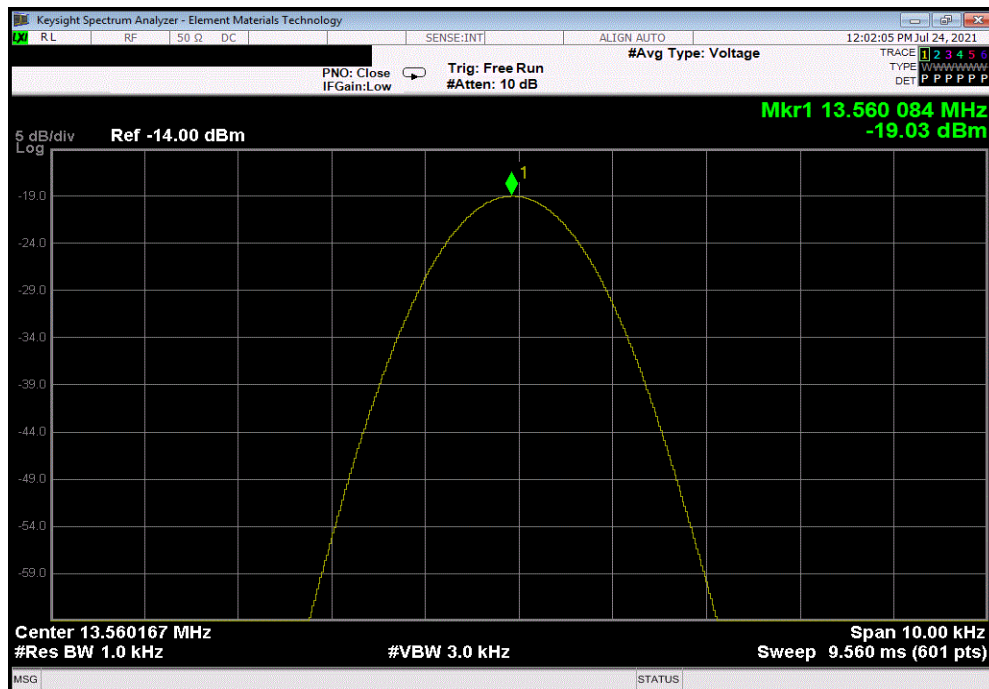


TbTx 2021.03.19.1 XMt 2020.12.30.0

CrossSwitch Radio - Antenna 2, Extreme Temperature -10°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56011633	13.56003267	6.1	100	Pass



CrossSwitch Radio - Antenna 2, Extreme Temperature -20°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Assigned Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56008367	13.56003267	3.8	100	Pass



FREQUENCY STABILITY



TSTx 2021.03.19.1 XMR 2020.12.30.0

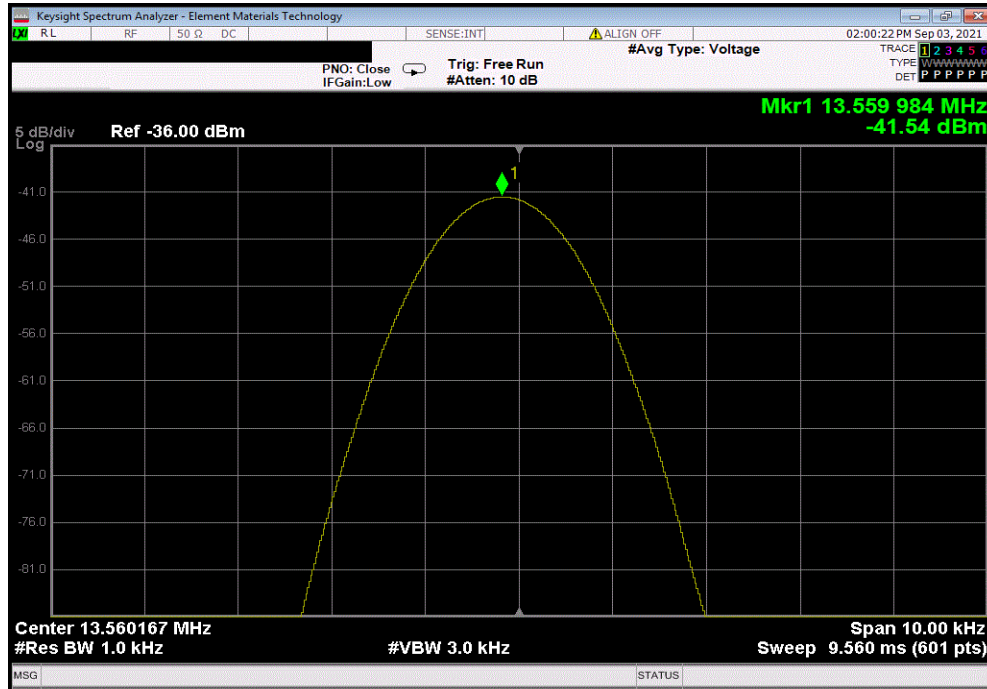
EUT: GLP12409 SAL Alinity C End Section		Work Order: ABBO0080			
Serial Number: ENG01-DVR		Date: 3-Sep-21			
Customer: Abbott Laboratories		Temperature: 24.7 °C			
Attendees: Don Mendell		Humidity: 48.7% RH			
Project: None		Barometric Pres.: 1014 mbar			
Tested by: Mark Baytan		Power: 220VAC/60Hz			
TEST SPECIFICATIONS		Test Method			
FCC 15.225:2021		ANSI C63.10:2013			
COMMENTS					
Divergent Radio.					
DEVIATIONS FROM TEST STANDARD					
None					
Configuration #	2	Signature 			
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
Normal Voltage					
Mid Channel, 13.56 MHz	13.55998367	13.55998367	0	100	Pass
Extreme Voltage +15%					
Mid Channel, 13.56 MHz	13.55998367	13.55998367	0	100	Pass
Extreme Voltage -15%					
Mid Channel, 13.56 MHz	13.559983	13.55998367	0	100	Pass
Extreme Temperature +50°C					
Mid Channel, 13.56 MHz	13.55989933	13.55998367	6.2	100	Pass
Extreme Temperature +40°C					
Mid Channel, 13.56 MHz	13.559933	13.55998367	3.7	100	Pass
Extreme Temperature +30°C					
Mid Channel, 13.56 MHz	13.559966	13.55998367	1.3	100	Pass
Extreme Temperature +20°C					
Mid Channel, 13.56 MHz	13.560016	13.55998367	2.4	100	Pass
Extreme Temperature +10°C					
Mid Channel, 13.56 MHz	13.56006633	13.55998367	6.1	100	Pass
Extreme Temperature 0°C					
Mid Channel, 13.56 MHz	13.56009967	13.55998367	8.6	100	Pass
Extreme Temperature -10°C					
Mid Channel, 13.56 MHz	13.560116	13.55998367	9.8	100	Pass
Extreme Temperature -20°C					
Mid Channel, 13.56 MHz	13.56011633	13.55998367	9.8	100	Pass

FREQUENCY STABILITY

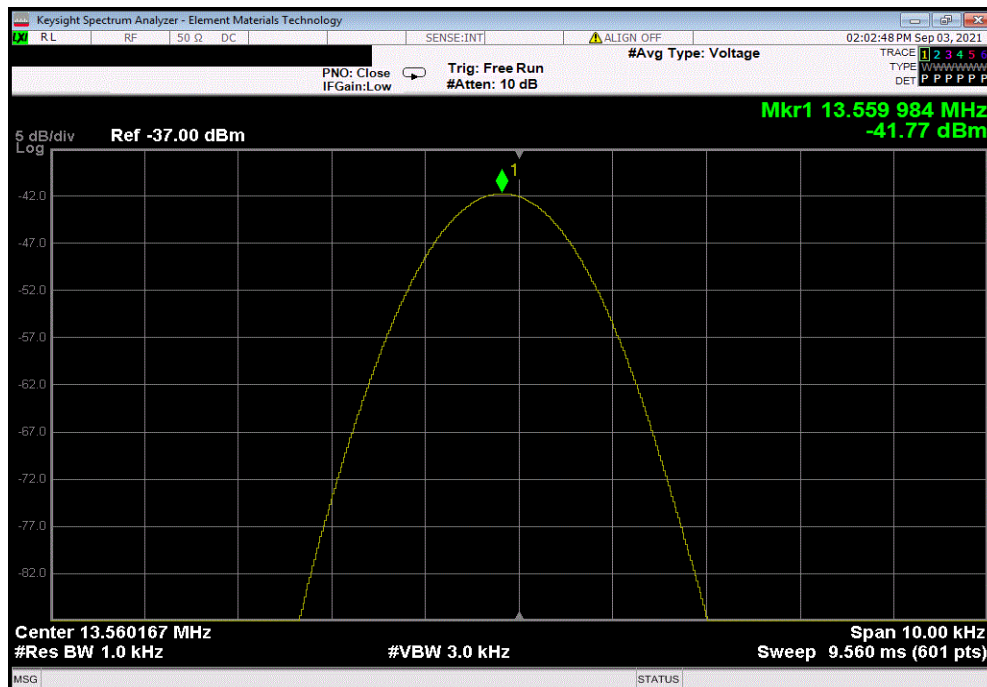


TbTx 2021.03.19.1 XMt 2020.12.30.0

Normal Voltage, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.55998367	13.55998367	0	100	Pass



Extreme Voltage +15%, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.55998367	13.55998367	0	100	Pass

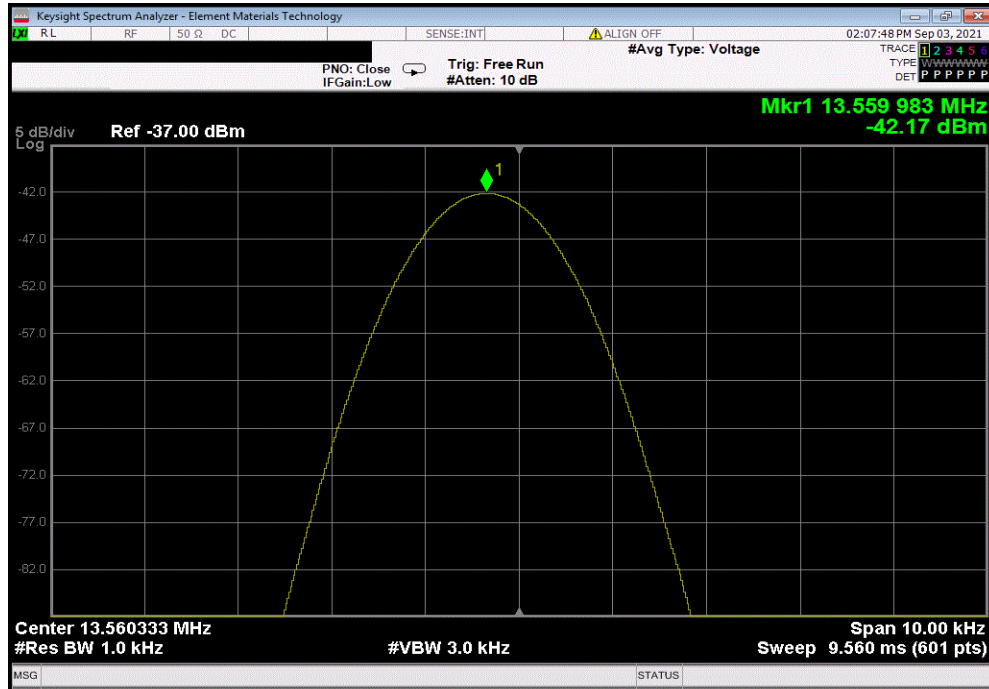


FREQUENCY STABILITY

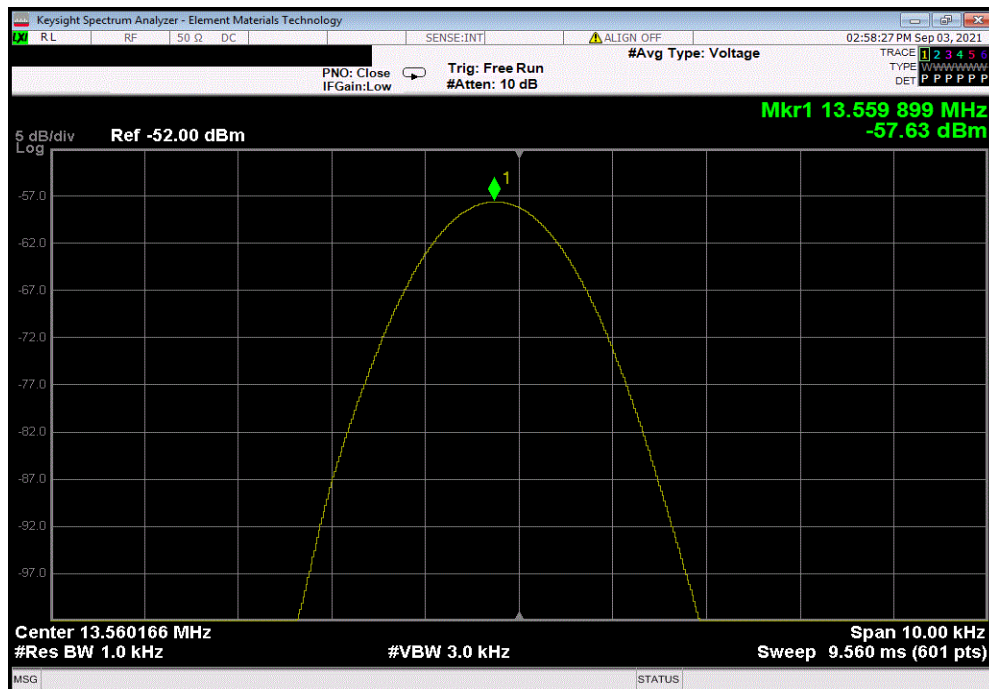


TbTx 2021.03.19.1 XMt 2020.12.30.0

Extreme Voltage -15%, Mid Channel, 13.56 MHz					
Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results	
13.559983	13.55998367	0	100	Pass	



Extreme Temperature +50°C, Mid Channel, 13.56 MHz					
Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results	
13.55989933	13.55998367	6.2	100	Pass	

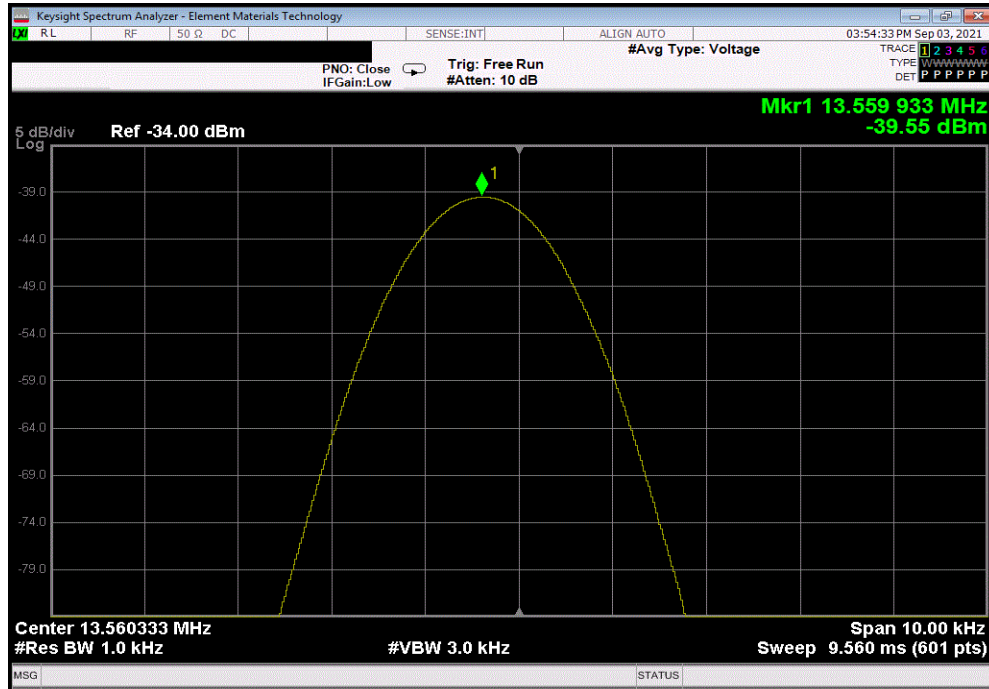


FREQUENCY STABILITY

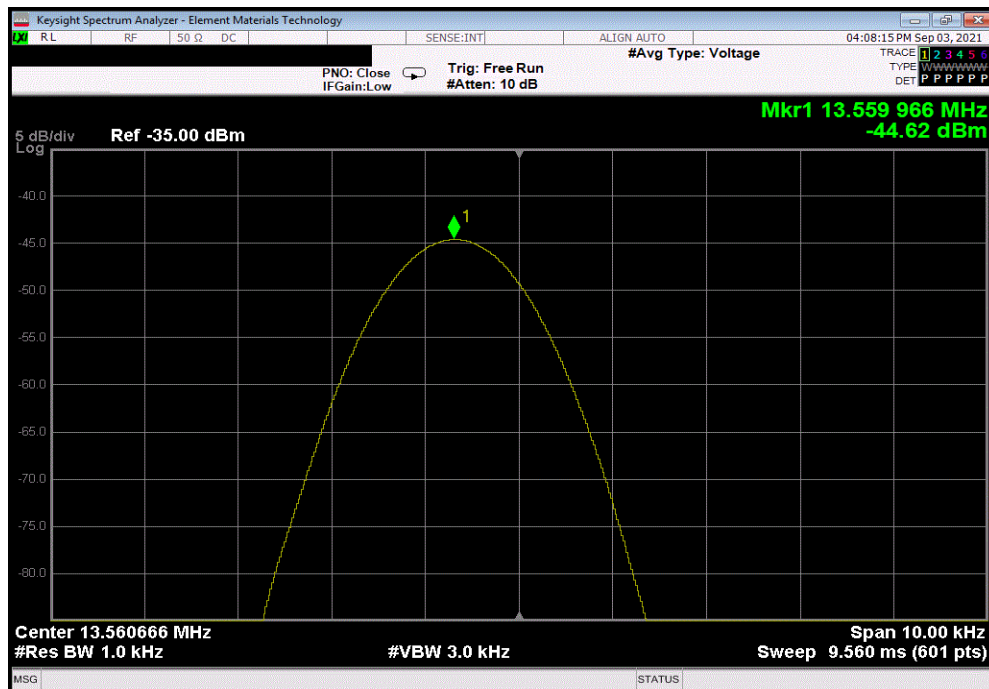


TbTtX 2021.03.19.1 XMt 2020.12.30.0

Extreme Temperature +40°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.559933	13.55998367	3.7	100	Pass	



Extreme Temperature +30°C, Mid Channel, 13.56 MHz						
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results	
	13.559966	13.55998367	1.3	100	Pass	

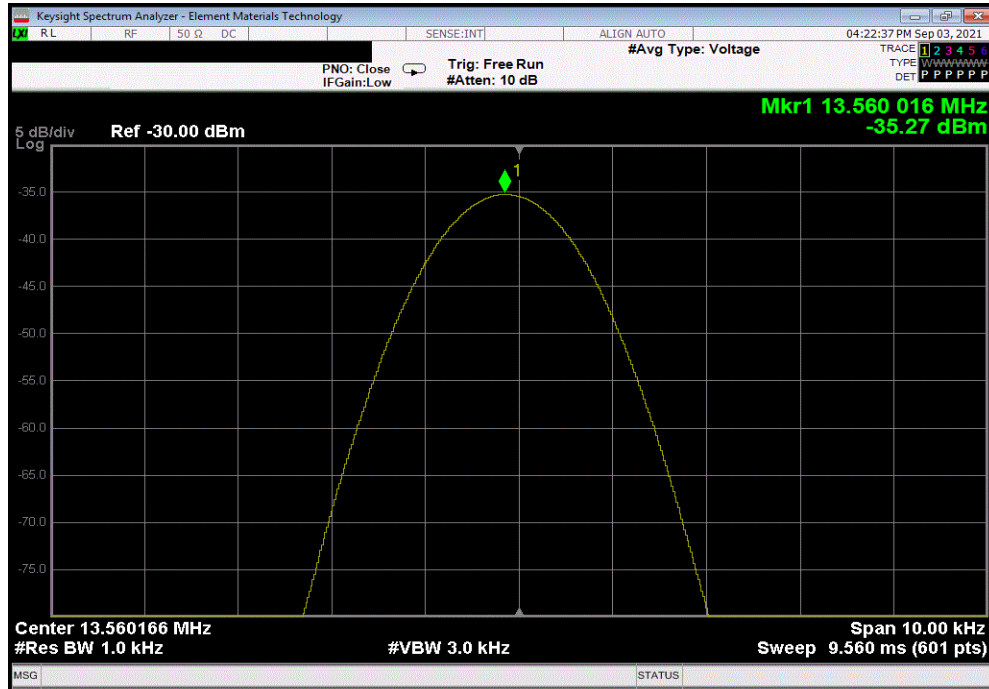


FREQUENCY STABILITY

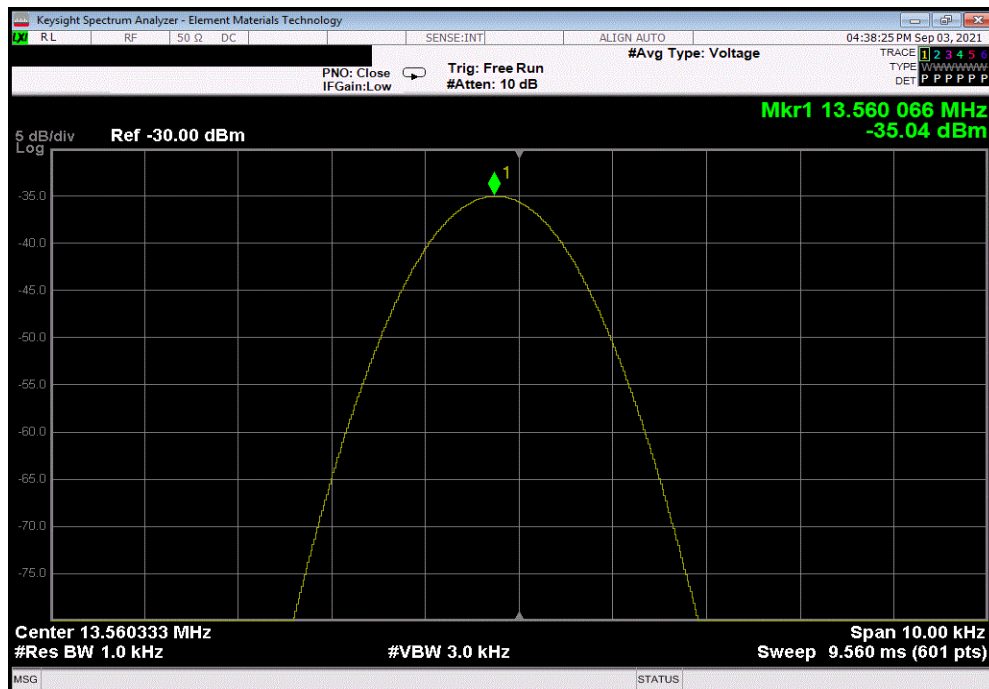


TbTx 2021.03.19.1 XMt 2020.12.30.0

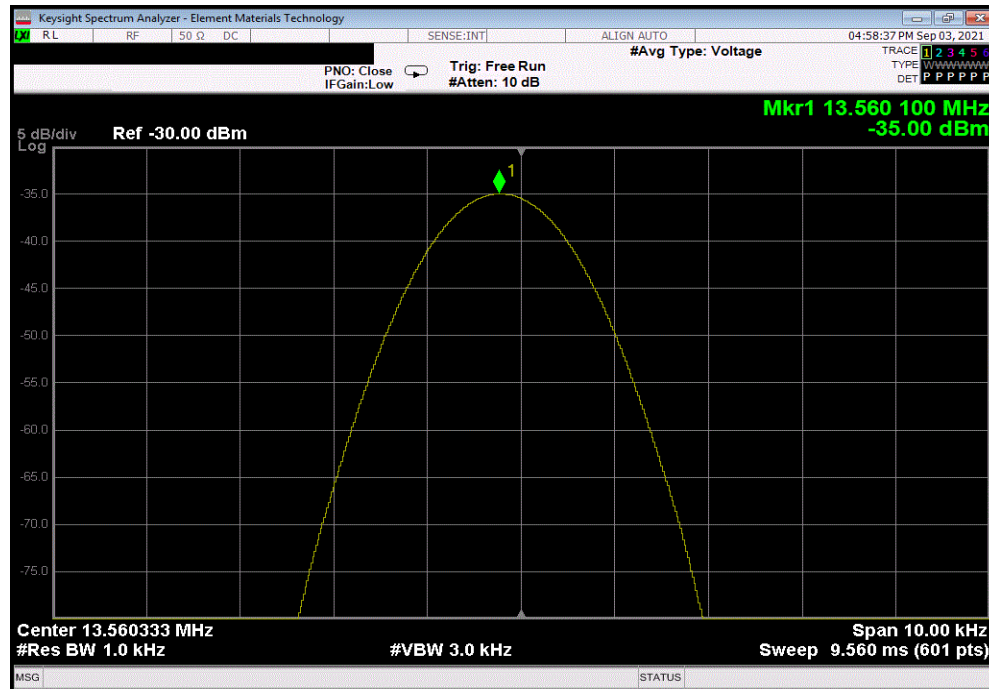
Extreme Temperature +20°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.560016	13.55998367	2.4	100	Pass



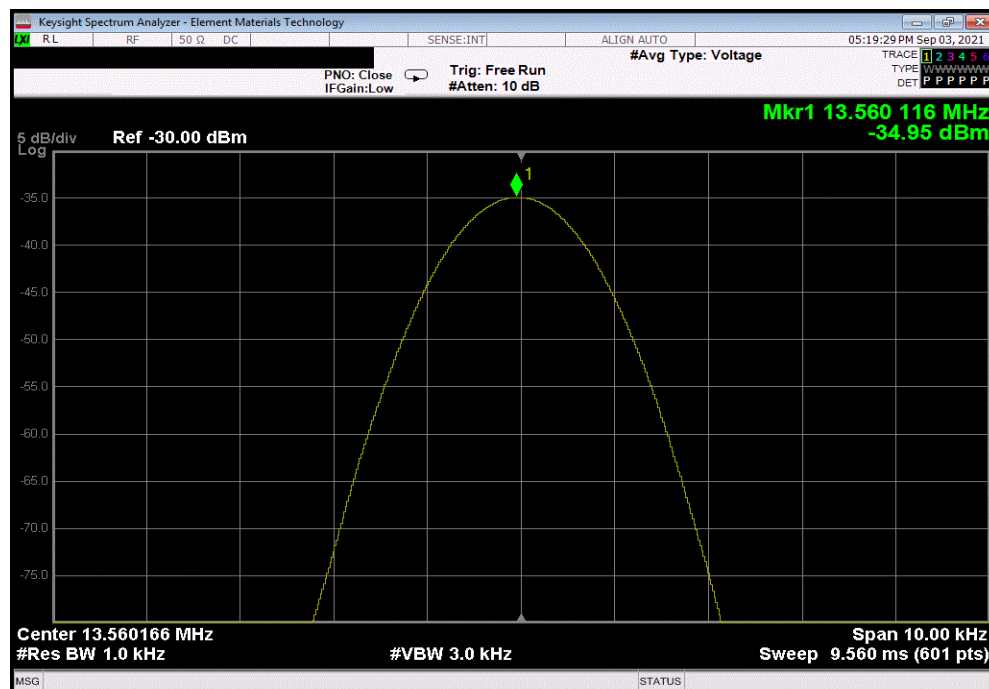
Extreme Temperature +10°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56006633	13.55998367	6.1	100	Pass



Extreme Temperature 0°C, Mid Channel, 13.56 MHz						
		Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
		13.56009967	13.55998367	8.6	100	Pass



Extreme Temperature -10°C, Mid Channel, 13.56 MHz						
		Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
		13.560116	13.55998367	9.8	100	Pass

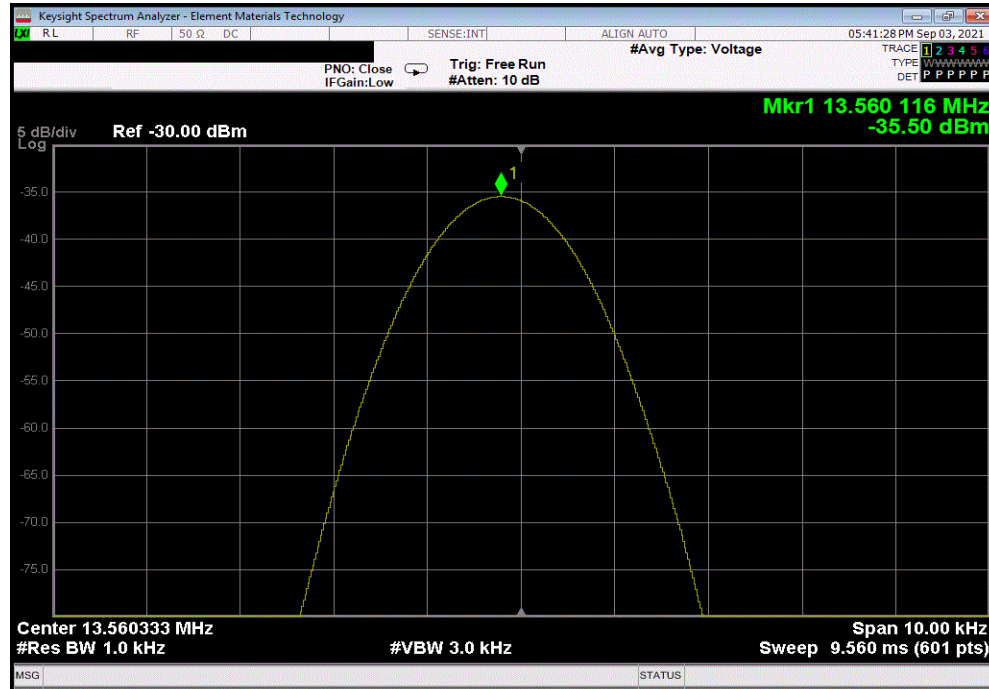


FREQUENCY STABILITY



TbTtX 2021.03.19.1 XMt 2020.12.30.0

Extreme Temperature -20°C, Mid Channel, 13.56 MHz					
	Measured Value (MHz)	Nominal Value (MHz)	Error (ppm)	Limit (ppm)	Results
	13.56011633	13.55998367	9.8	100	Pass



OCCUPIED BANDWIDTH



XMIT 2020.12.30.0

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
Probe - Near Field Set	Com-Power	PS-400	IPX	NCR	NCR
Cable	UtiFlex Micro-Coax	UFD1150A-1-0720-200200	TXJ	2020-09-22	2021-09-22
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	2021-01-06	2022-01-06

TEST DESCRIPTION

As defined in FCC 15.215 Part (c), intentional radiators must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designed in the rule section under which the equipment is operated.

The 20 dB bandwidth must be contained within the band 13.110-14.010 MHz.

The emissions bandwidth was measured with the EUT configured for continuous modulated operation.

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) of the spectrum analyzer was set to the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) bandwidth was set to at least 3 times the resolution bandwidth. The analyzer sweep time was set to auto to prevent video filtering or averaging. A sample detector was used unless the device was not able to be operated in a continuous transmit mode, in which case a peak detector was used.

The spectrum analyzer occupied bandwidth measurement function was used to find the emissions bandwidth.

OCCUPIED BANDWIDTH



TutTx 2021.03.19.1 XMI 2020.12.30.0

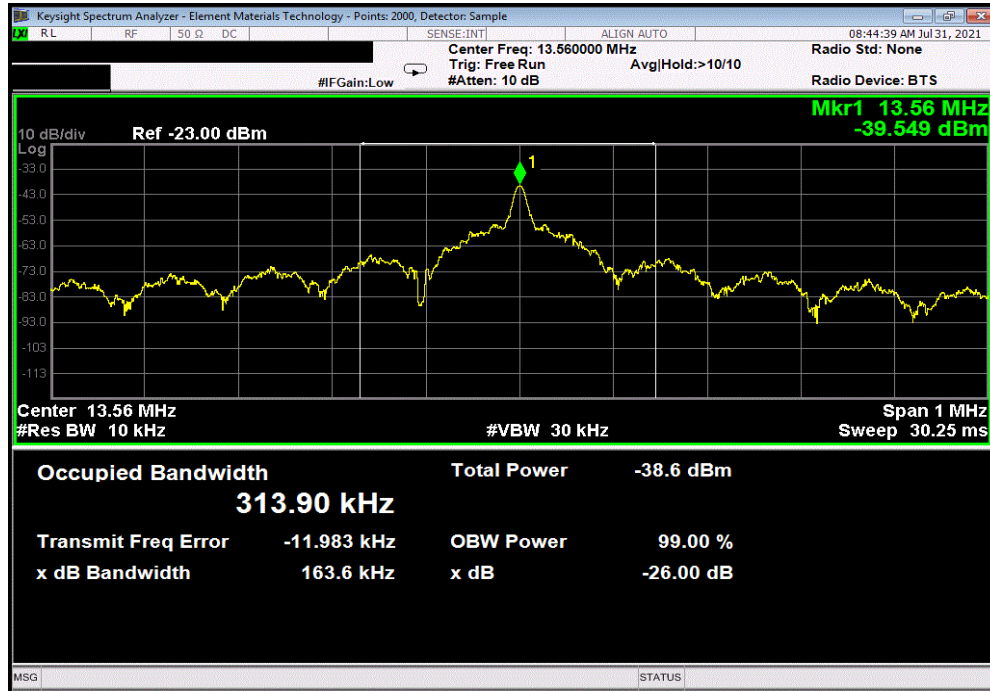
EUT:	GLP12409 SAL Alinity C End Section		Work Order:	ABBO0080	
Serial Number:	ENG02-AP		Date:	24-Jul-21	
Customer:	Abbott Laboratories		Temperature:	25 °C	
Attendees:	Don Mendell		Humidity:	48.4% RH	
Project:	None		Barometric Pres.:	1019 mbar	
Tested by:	Mark Baytan	Power:	220VAC/60Hz	Job Site:	TX05
TEST SPECIFICATIONS			Test Method		
FCC 15.225:2021			ANSI C63.10:2013		
COMMENTS					
AccessPoint Radio. Emissions bandwidth taken with a 26 dB bandwidth. This is worst case as compared with the 20 dB bandwidth called out in FCC 15.215.					
DEVIATIONS FROM TEST STANDARD					
None					
Configuration #	2	Signature 			
			Value	Limit	Result
Normal Voltage			13.110 MHz $\geq$ BW $\leq$ 14.010 MHz		
Mid Channel, 13.56 MHz			163.60 kHz	Within	Pass

OCCUPIED BANDWIDTH



TbTtx 2021.03.19.1 XMR 2020.12.30.0

Normal Voltage, Mid Channel, 13.56 MHz				Limit	
Value		13.110 MHz $\geq$ BW $\leq$ 14.010 MHz		Result	
163.60 kHz		Within		Pass	



OCCUPIED BANDWIDTH



TdTx 2021.03.19.1 XMI 2020.12.30.0

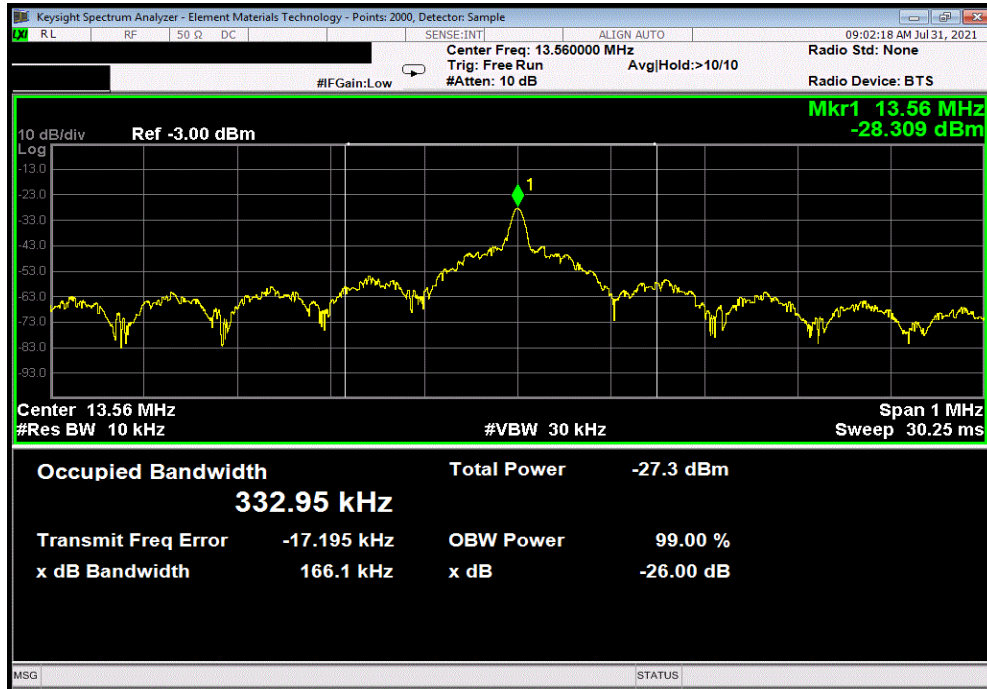
EUT: GLP12409 SAL Alinity C End Section		Work Order: ABBO0080	
Serial Number: ENG05-CS		Date: 24-Jul-21	
Customer: Abbott Laboratories		Temperature: 25 °C	
Attendees: Don Mendell		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1019 mbar	
Tested by: Mark Baytan		Job Site: TX05	
Power: 220VAC/60Hz			
TEST SPECIFICATIONS		Test Method	
FCC 15.225:2021		ANSI C63.10:2013	
COMMENTS			
CrossSwitch Radio/Convergent Radio. Both radios are electrically identical and share the same PCB: 20005732, therefore, the data presented accounts for both radios. Emissions bandwidth taken with a 26 dB bandwidth. This is worst case as compared with the 20 dB bandwidth called out in FCC 15.215.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
			13.110 MHz ≥ BW ≤ 14.010 MHz
CrossSwitch Radio - Antenna 1			
Normal Voltage			
Mid Channel, 13.56 MHz		166.1 kHz	Within Pass
CrossSwitch Radio - Antenna 2			
Normal Voltage			
Mid Channel, 13.56 MHz		167.7 kHz	Within Pass

OCCUPIED BANDWIDTH

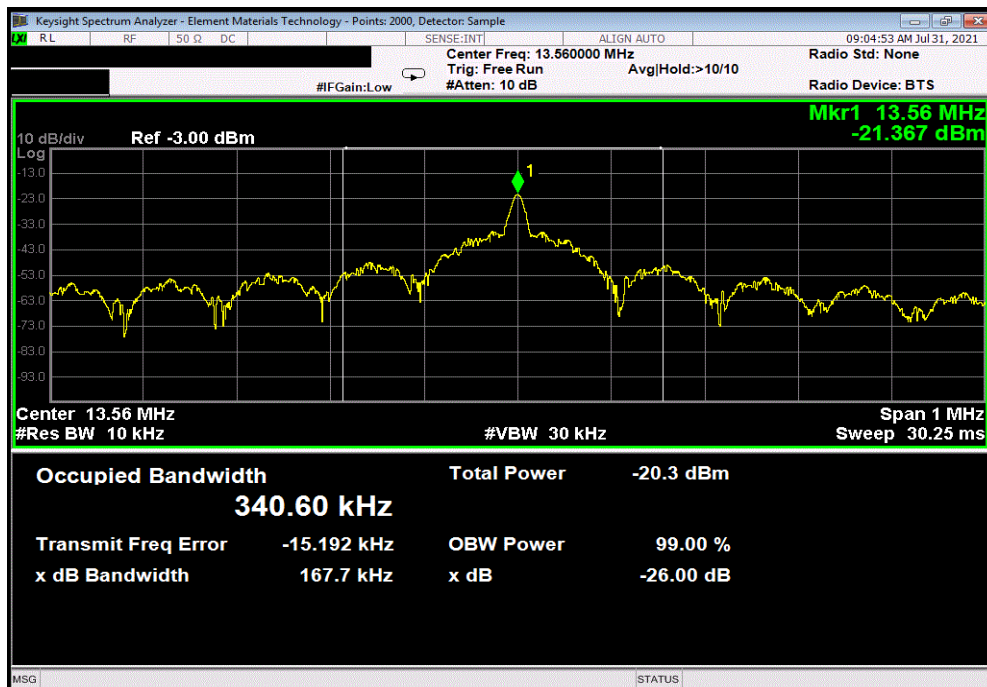


TbTb 2021.03.19.1 XMt 2020.12.30.0

CrossSwitch Radio - Antenna 1, Normal Voltage, Mid Channel, 13.56 MHz					
			Limit		
Value			13.110 MHz $\geq$ BW $\leq$ 14.010 MHz	Result	
		166.1 kHz	Within	Pass	



CrossSwitch Radio - Antenna 2, Normal Voltage, Mid Channel, 13.56 MHz					
			Limit		
Value			13.110 MHz $\geq$ BW $\leq$ 14.010 MHz	Result	
		167.7 kHz	Within	Pass	



OCCUPIED BANDWIDTH



TbTb 2021.03.19.1 XM8 2020.12.30.0

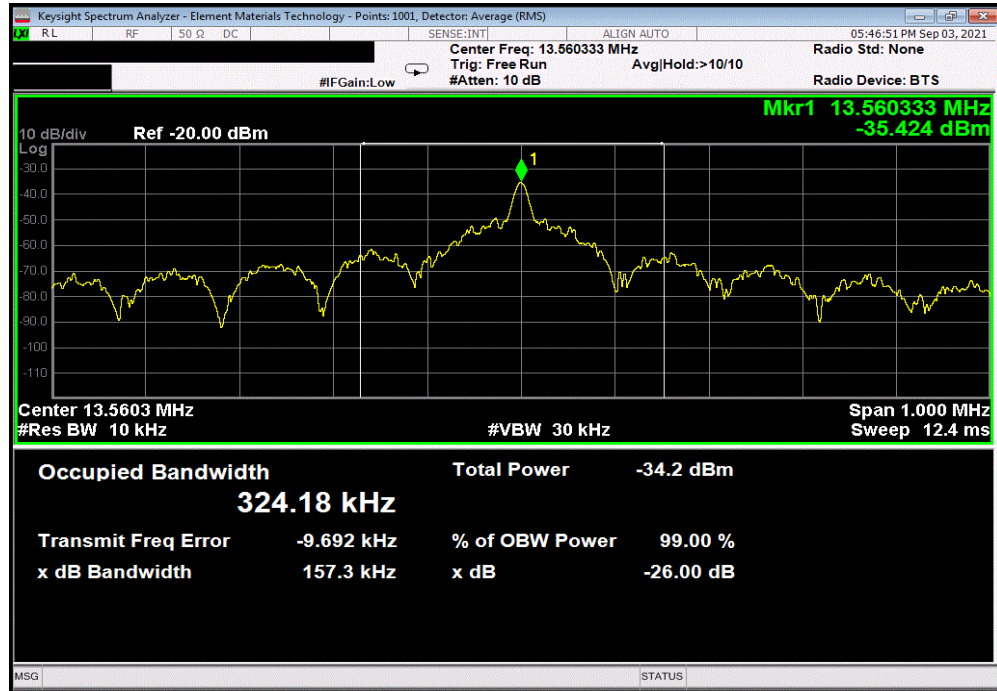
EUT: GLP12409 SAL Alinity C End Section		Work Order: ABBO0080	
Serial Number: ENG01-DVR		Date: 2-Sep-21	
Customer: Abbott Laboratories		Temperature: 25 °C	
Attendees: Don Mendell		Humidity: 48.4% RH	
Project: None		Barometric Pres.: 1019 mbar	
Tested by: Mark Baytan		Job Site: TX05	
Power: 220VAC/60Hz			
TEST SPECIFICATIONS			
FCC 15.225:2021		Test Method	
		ANSI C63.10:2013	
COMMENTS			
Divergent Radio. Emissions bandwidth taken with a 26 dB bandwidth. This is worst case as compared with the 20 dB bandwidth called out in FCC 15.215.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Limit
		13.110 MHz $\geq$ BW $\leq$ 14.010 MHz	Result
Normal Voltage			
Mid Channel, 13.56 MHz		157.3 kHz	Within Pass

OCCUPIED BANDWIDTH



TbTtx 2021.03.19.1 XMt 2020.12.30.0

Normal Voltage, Mid Channel, 13.56 MHz						
				Limit		
Value				13.110 MHz $\geq$ BW $\leq$ 14.010 MHz	Result	
157.3 kHz				Within	Pass	



End of Test Report