

Appendix A _ Conducted Test Data

1. Conducted Peak Output Power

Temperature	25.4°C	Relative Humidity	55%
Test Mode	TX Mode	Test Voltage	DC56V

Test Result

Antenna1(External Antenna):

Dense reader mode ISO-18000-63								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	911.25	32.282	4	15	43.282	41.132	44.77	Pass
High	920.25	32.291	4	15	43.291	41.141		

Single reader mode ISO-18000-63								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	911.75	32.267	4	15	43.267	41.117	44.77	Pass
High	919.25	32.266	4	15	43.266	41.116		

Low data rate ISO-18000-62(40kbps)								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	911.75	32.273	4	15	43.273	41.123	44.77	Pass
High	919.75	32.307	4	15	43.307	41.157		

High data rate ISO-18000-62(80kbps)								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	912.75	32.268	4	15	43.268	41.118	44.77	Pass
High	918.75	32.304	4	15	43.304	41.154		

Unmodulated ISO-10374								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	902.75	32.595	4	15	43.595	41.445	44.77	Pass
High	903.25	32.569	4	15	43.569	41.419		
Low	910.75	32.107	4	15	43.107	40.957		

High	920.75	32.407	4	15	43.407	41.257		
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PS111								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Mid	915.75	33.022	4	15	44.022	41.872	44.77	Pass

Title 21								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	913.75	32.319	4	15	43.319	41.169	44.77	Pass
High	917.75	32.325	4	15	43.325	41.175		

Antenna 2(Internal Antenna) :

Dense reader mode ISO-18000-63								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	911.25	32.23	0	13	45.23	43.08	44.77	Pass
High	920.25	31.70	0	13	44.70	42.55		

Single reader mode ISO-18000-63								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	911.75	32.08	0	13	45.08	42.93	44.77	Pass
High	919.25	31.64	0	13	44.64	42.49		

Low data rate ISO-18000-62(40kbps)								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	911.75	31.95	0	13	44.95	42.8	44.77	Pass
High	919.75	31.61	0	13	44.61	42.46		

High data rate ISO-18000-62(80kbps)								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	912.75	31.95	0	13	44.95	42.8	44.77	Pass
High	918.75	32.07	0	13	45.07	42.92		

Unmodulated ISO-10374								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	902.75	31.64	0	13	44.64	42.49	44.77	Pass
High	903.25	32.34	0	13	45.34	43.19		
Low	910.75	31.79	0	13	44.79	42.64		
High	920.75	31.43	0	13	44.43	42.28		

PS111								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Mid	915.75	32.66	0	13	45.66	43.51	44.77	Pass

Title 21								
Channel	Frequency (MHz)	Conducted Power (dBm)	Cable loss (dB)	Antenna gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP Limit (dBm)	Verdict
Low	913.75	32.08	0	13	45.08	42.93	44.77	Pass
High	917.75	31.35	0	13	40.35	42.2		

2.Bandwidth

Temperature	25.4℃	Relative Humidity	55%
Test Mode	TX Mode	Test Voltage	DC56V

Test Result

Antenna 1(External Antenna) :

Dense reader mode ISO-18000-63			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	911.25	437.9	332.46
High	920.25	436.4	332.10
Single reader mode ISO-18000-63			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	911.75	531.2	416.42
High	919.25	533.5	416.42
Low data rate ISO-18000-62(40kbps)			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	911.75	467.9	362.27
High	919.75	466.5	325.28
High data rate ISO-18000-62(80kbps)			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	912.75	630.1	473.93
High	918.75	629.1	473.95
PS111			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Mid	915.75	575.7	408.3
Title 21			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	913.75	1033	907.08
High	917.75	1032	904.91
Unmodulated ISO-10374			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	902.75	287.5	214.31
High	920.75	286.4	213.85

Test Graphs

26 dB Bandwidth

Dense reader mode ISO-18000-63

Low Channel(911.25MHz)

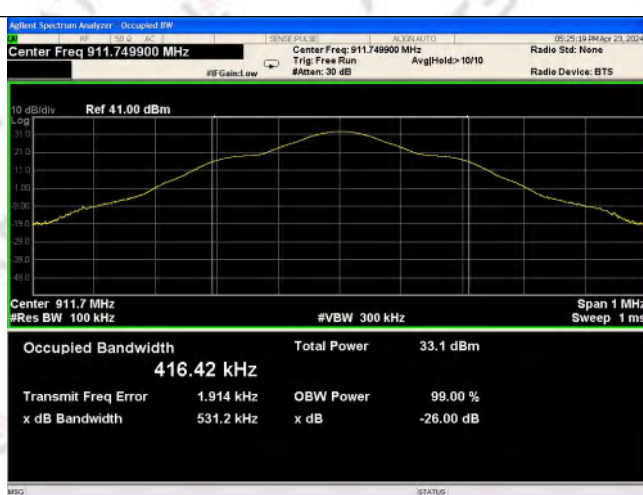


High channel(920.25MHz)

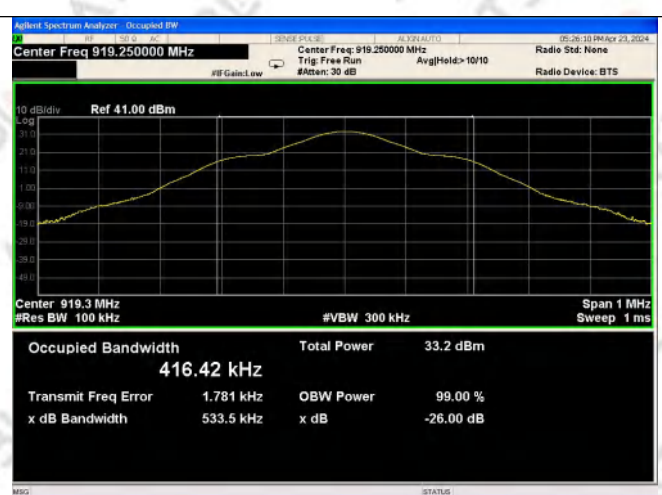


Single reader mode ISO-18000-63

Low channel(911.75MHz)

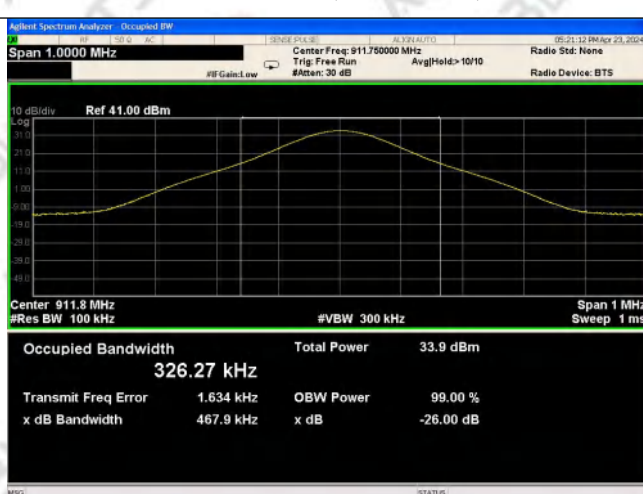


High channel(919.25MHz)

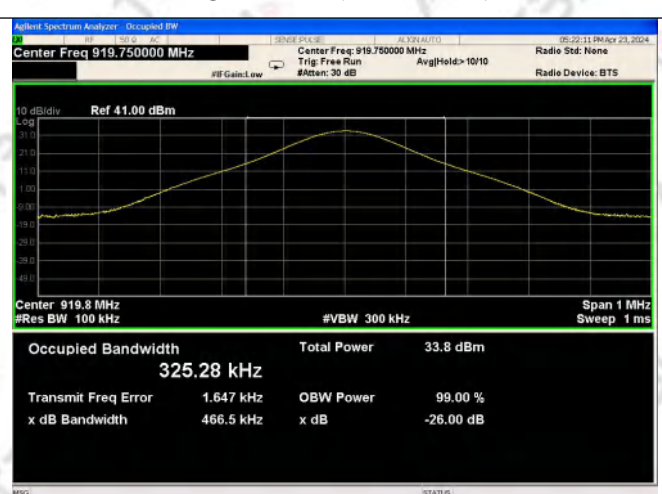


Low data rate ISO-18000-62(40kbps)

Low channel(911.75MHz)



High channel(919.75MHz)



High data rate ISO-18000-62 (80kbps)

Low channel(912.75MHz)



High channel(918.75MHz)



PS111

915.75MHz



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Title 21

Low channel(913.75MHz)



High channel(917.75MHz)



Unmodulated ISO-1374



Antenna 2(Internal Antenna):

Dense reader mode ISO-18000-63			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	911.25	443.0	315.86
High	920.25	443.5	316.57
Single reader mode ISO-18000-63			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	911.75	444.2	316.72
High	919.25	438.1	313.18
Low data rate ISO-18000-62(40kbps)			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	911.75	448.9	336.89
High	919.75	447.6	319.50
High data rate ISO-18000-62(80kbps)			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	912.75	645.4	485.16
High	918.75	629.1	473.95
PS111			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Mid	915.75	622.4	441.01
Title 21			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	913.75	1033	907.08
High	917.75	1032	904.91
Unmodulated ISO-10374			
Channel	Frequency (MHz)	-26 dB Bandwidth(KHz)	99% Bandwidth(KHz)
Low	902.75	286.4	214.63
High	920.75	286.6	214.62

Test Graphs

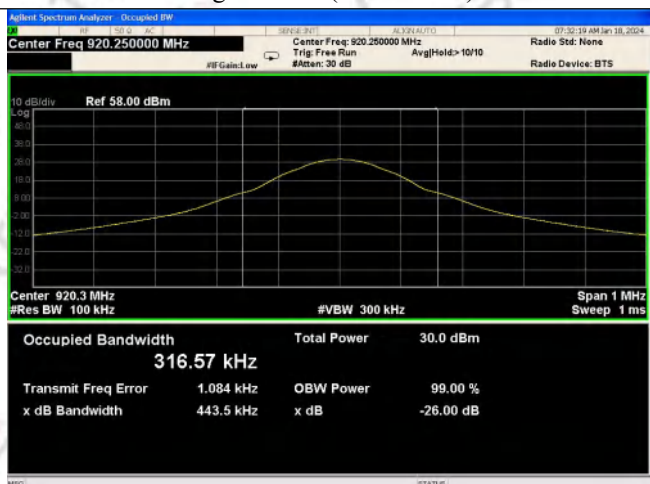
26 dB Bandwidth

Dense reader mode ISO-18000-63

Low Channel(911.25MHz)

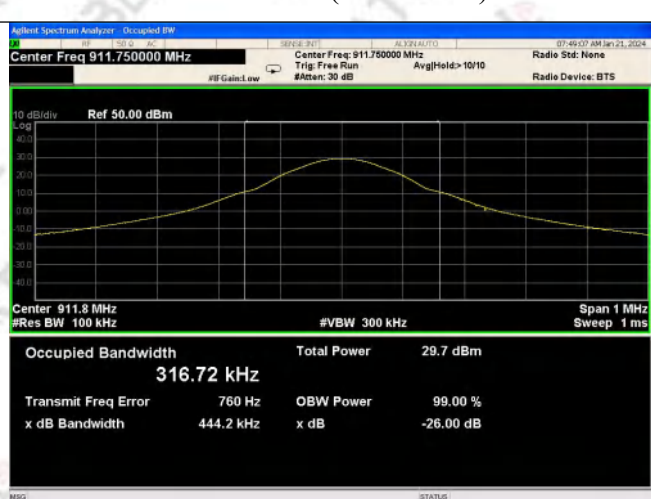


High channel(920.25MHz)



Single reader mode ISO-18000-63

Low channel(911.75MHz)

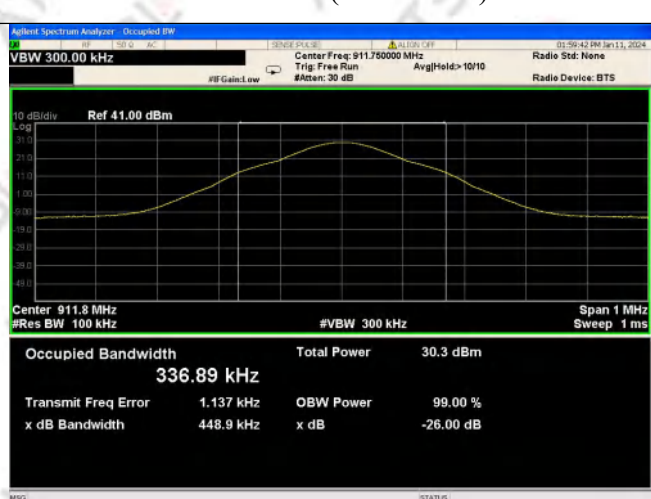


High channel(919.25MHz)



Low data rate ISO-18000-62(40kbps)

Low channel(911.75MHz)

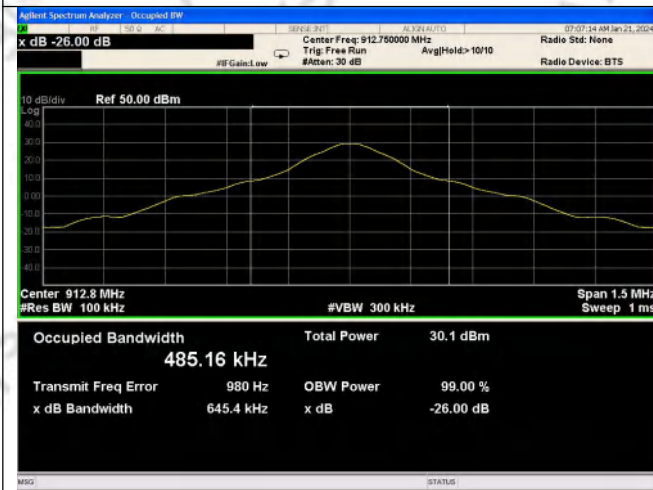


High channel(919.75MHz)

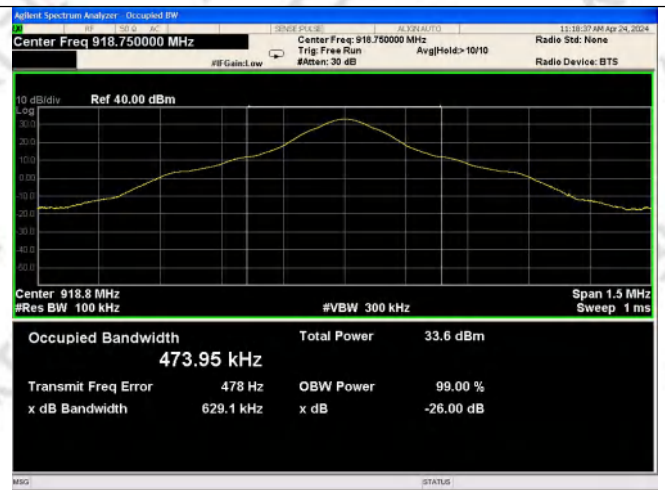


High data rate ISO-18000-62 (80kbps)

Low channel(912.75MHz)

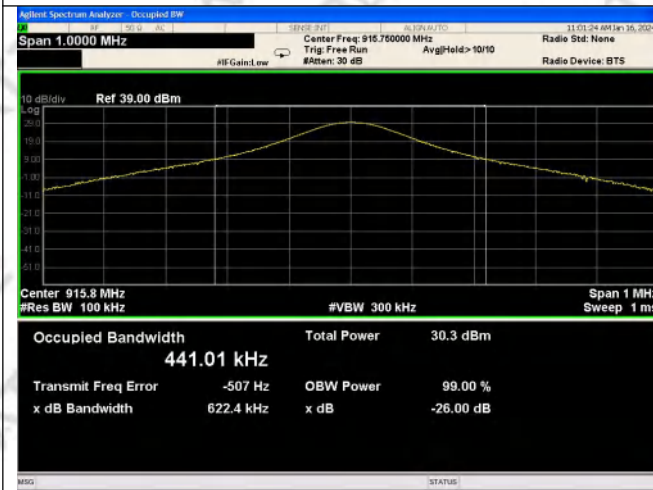


High channel(918.75MHz)



PS111

915.75MHz

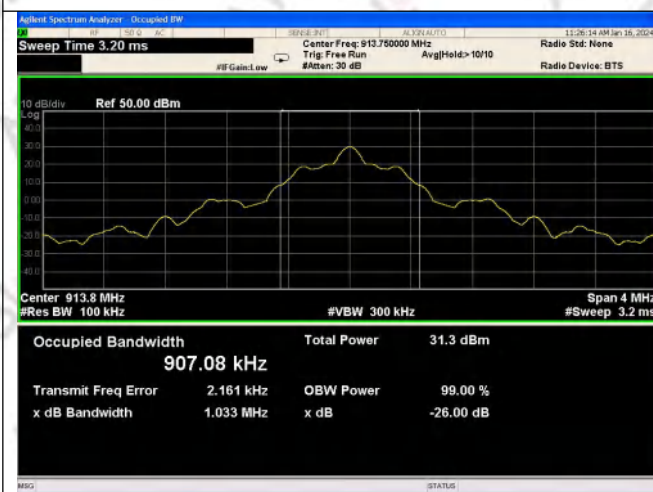


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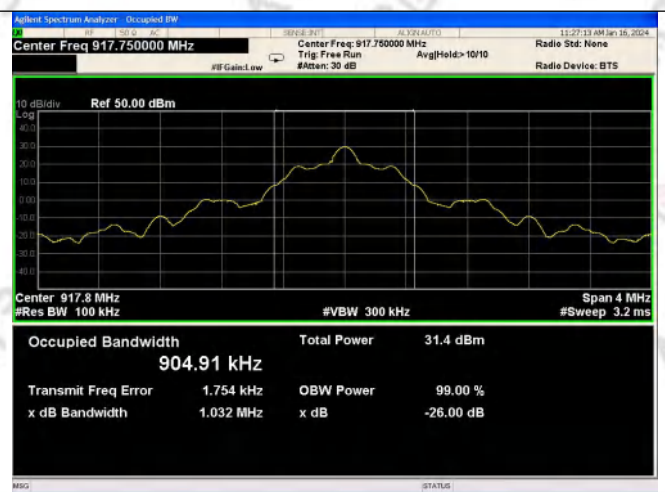
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Title 21

Low channel(913.75MHz)



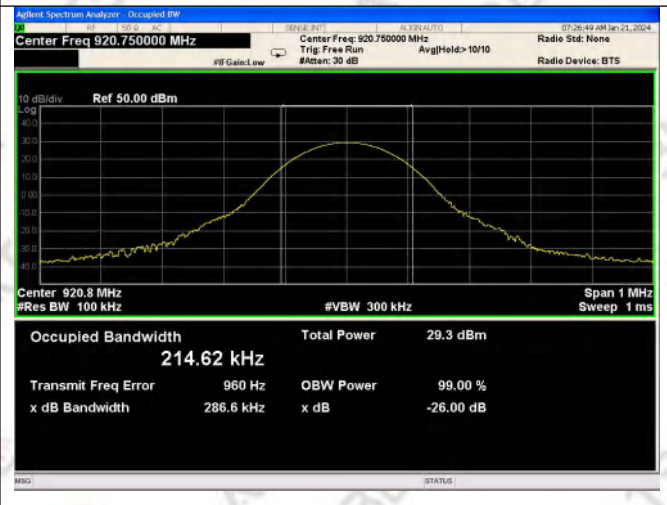
High channel(917.75MHz)



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lated ISO-1374

Low channel(902.75MHz)

High channel(920.75MHz)



3.Frequency Stability

Temperature	25.4°C	Relative Humidity	55%
Test Mode	TX Mode	Test Voltage	DC56V

Antenna 1(External Antenna):

Dense reader mode ISO-18000-63					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	911.25	911.2508	-0.088	±2.5
	-40°C,Nominal	911.25	911.251	-0.110	
	+50°C,Nominal	911.25	911.2505	-0.055	
High	+22°C,Nominal	920.25	920.2512	-0.130	
	-40°C,Nominal	920.25	920.2509	-0.098	
	+70°C,Nominal	920.25	920.2513	-0.141	
Single reader mode ISO-18000-63					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	911.75	911.7506	-0.066	±2.5
	-40°C,Nominal	911.75	911.7503	-0.033	
	+50°C,Nominal	911.75	911.7508	-0.088	
High	+22°C,Nominal	919.25	919.251	-0.109	
	-40°C,Nominal	919.25	919.2513	-0.141	
	+70°C,Nominal	919.25	919.2511	-0.120	
Low data rate ISO-18000-62(40kbps)					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	911.75	911.7506	-0.066	±2.5
	-40°C,Nominal	911.75	911.7509	-0.099	
	+50°C,Nominal	911.75	911.7502	-0.022	
High	+22°C,Nominal	919.75	919.7502	-0.022	
	-40°C,Nominal	919.75	919.7508	-0.087	
	+70°C,Nominal	919.75	919.7506	-0.065	

High data rate ISO-18000-62 (80kbps)					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	912.75	912.7516	-0.175	±2.5
	-40°C,Nominal	912.75	912.7511	-0.121	
	+70°C,Nominal	912.75	912.7513	-0.142	
High	+22°C,Nominal	918.75	918.7506	-0.065	
	-40°C,Nominal	918.75	918.7504	-0.044	
	+70°C,Nominal	918.75	918.7505	-0.054	
Unmodulated ISO-10374					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	902.75	902.7504	-0.044	±2.5
	-40°C,Nominal	902.75	902.7503	-0.033	
	+70°C,Nominal	902.75	902.7507	-0.078	
High	+22°C,Nominal	903.25	903.2514	-0.155	
	-40°C,Nominal	903.25	903.2511	-0.122	
	+70°C,Nominal	903.25	903.2518	-0.199	
Low	+22°C,Nominal	910.75	910.7512	-0.132	
	-40°C,Nominal	910.75	910.7516	-0.176	
	+70°C,Nominal	910.75	910.7515	-0.165	
High	+22°C,Nominal	920.75	920.7506	-0.065	
	-40°C,Nominal	920.75	920.7501	-0.011	
	+70°C,Nominal	920.75	920.7504	-0.043	
PS111					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Mid	+22°C,Nominal	915.75	915.7512	-0.131	±2.5
	-40°C,Nominal	915.75	915.7516	-0.175	
	+50°C,Nominal	915.75	915.7514	-0.153	
Title 21					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	913.75	913.7512	-0.131	±2.5
	-40°C,Nominal	913.75	913.7511	-0.120	
	+70°C,Nominal	913.75	913.7519	-0.208	
High	+22°C,Nominal	917.75	917.7516	-0.174	
	-40°C,Nominal	917.75	917.7513	-0.142	
	+70°C,Nominal	917.75	917.7517	-0.185	

Antenna 2(Internal Antenna):

Dense reader mode ISO-18000-63					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	911.25	911.251	-1.097	±2.5
	-40°C,Nominal	911.25	911.251	-1.097	
	+50°C,Nominal	911.25	911.25	0.000	
High	+22°C,Nominal	920.25	920.251	-1.087	
	-40°C,Nominal	920.25	920.25	0.000	
	+70°C,Nominal	920.25	920.251	-1.087	
Single reader mode ISO-18000-63					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	911.75	911.7501	-0.110	±2.5
	-40°C,Nominal	911.75	911.7502	-0.219	
	+50°C,Nominal	911.75	911.7506	-0.658	
High	+22°C,Nominal	919.25	919.2503	-0.326	
	-40°C,Nominal	919.25	919.2513	-1.414	
	+70°C,Nominal	919.25	919.2512	-1.305	
Low data rate ISO-18000-62(40kbps)					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	911.75	911.7502	-0.219	±2.5
	-40°C,Nominal	911.75	911.7503	-0.329	
	+50°C,Nominal	911.75	911.7500	0.000	
High	+22°C,Nominal	919.75	919.7502	-0.217	
	-40°C,Nominal	919.75	919.7507	-0.761	
	+70°C,Nominal	919.75	919.7509	-0.979	

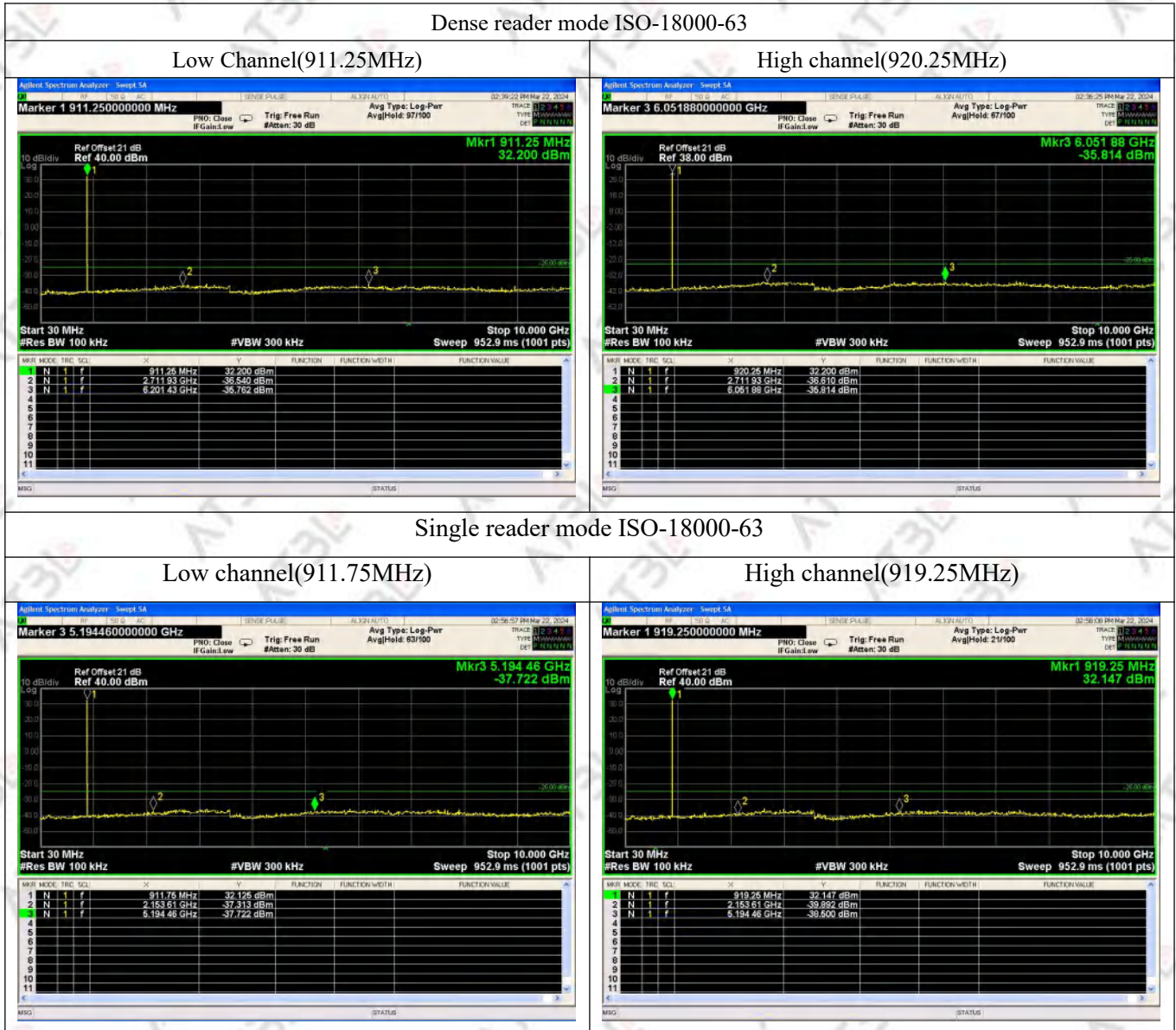
High data rate ISO-18000-62 (80kbps)					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	912.75	912.7513	-1.424	±2.5
	-40°C,Nominal	912.75	912.7503	-0.329	
	+70°C,Nominal	912.75	912.7516	-1.753	
High	+22°C,Nominal	918.75	918.7502	-0.218	
	-40°C,Nominal	918.75	918.7506	-0.653	
	+70°C,Nominal	918.75	918.7500	0.000	
Unmodulated ISO-10374					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	902.75	902.7506	-0.665	±2.5
	-40°C,Nominal	902.75	902.7501	-0.111	
	+70°C,Nominal	902.75	902.7503	-0.332	
High	+22°C,Nominal	903.25	903.2503	-0.332	
	-40°C,Nominal	903.25	903.2510	-1.107	
	+70°C,Nominal	903.25	903.2503	-0.332	
Low	+22°C,Nominal	910.75	910.7509	-0.988	
	-40°C,Nominal	910.75	910.7510	-1.098	
	+70°C,Nominal	910.75	910.7503	-0.329	
High	+22°C,Nominal	920.75	920.7507	-0.760	
	-40°C,Nominal	920.75	920.7501	-0.109	
	+70°C,Nominal	920.75	920.7506	-0.652	
PS111					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Mid	+22°C,Nominal	915.75	915.7510	-1.092	±2.5
	-40°C,Nominal	915.75	915.7511	-1.201	
	+50°C,Nominal	915.75	915.7508	-0.874	
Title 21					
Channel	Test Condition	Nominal Frequency (MHz)	Measured Frequency (MHz)	Result (ppm)	Limit (ppm)
Low	+22°C,Nominal	913.75	913.7508	-0.876	±2.5
	-40°C,Nominal	913.75	913.7502	-0.219	
	+70°C,Nominal	913.75	913.7503	-0.328	
High	+22°C,Nominal	917.75	917.7511	-1.199	
	-40°C,Nominal	917.75	917.7510	-1.090	
	+70°C,Nominal	917.75	917.7506	-0.654	

4.Spurious Emission At Antenna Terminals

Temperature	25.4°C	Relative Humidity	55%
Test Mode	TX Mode	Test Voltage	DC56V

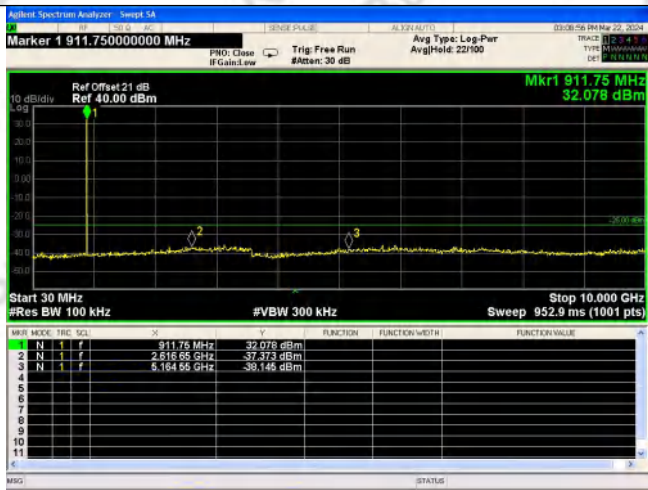
Test Graphs

Antenna 1(External Antenna):

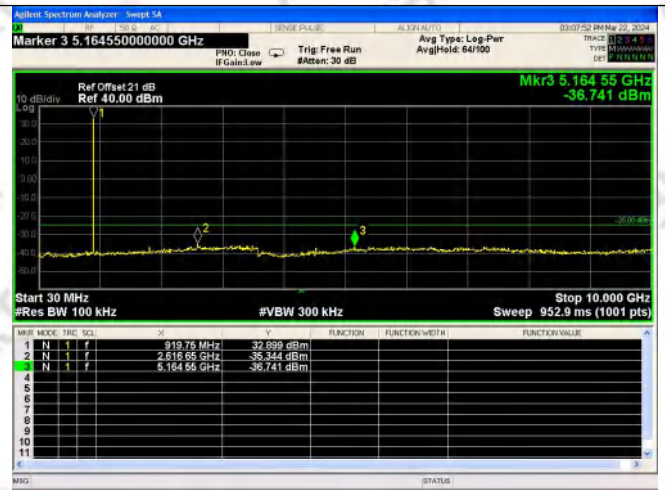


Low data rate ISO-18000-62(40kbps)

Low channel(911.75MHz)

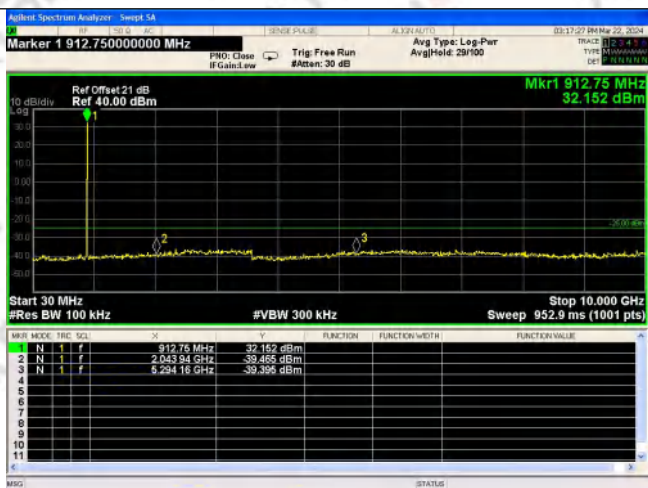


High channel(919.75MHz)

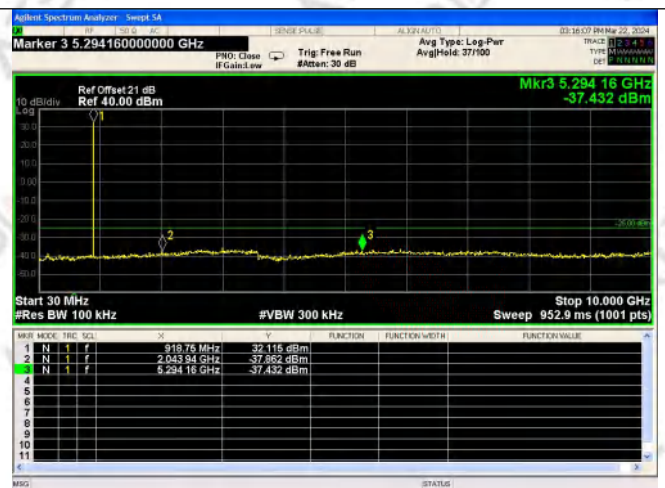


High data rate ISO-18000-62 (80kbps)

Low channel(912.75MHz)



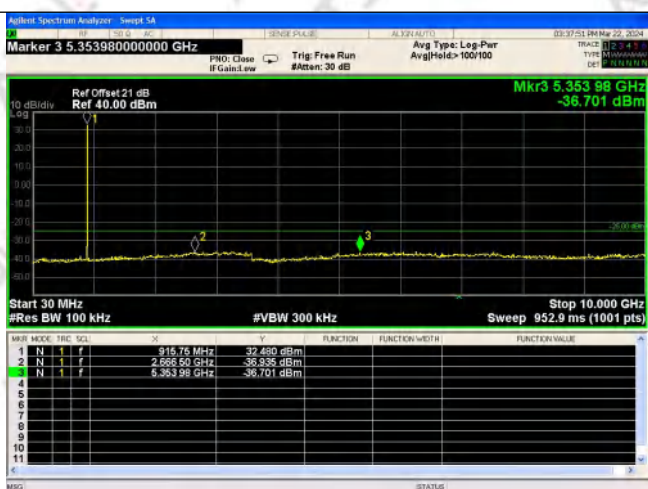
High channel(918.75MHz)



PS111

915.75MHz

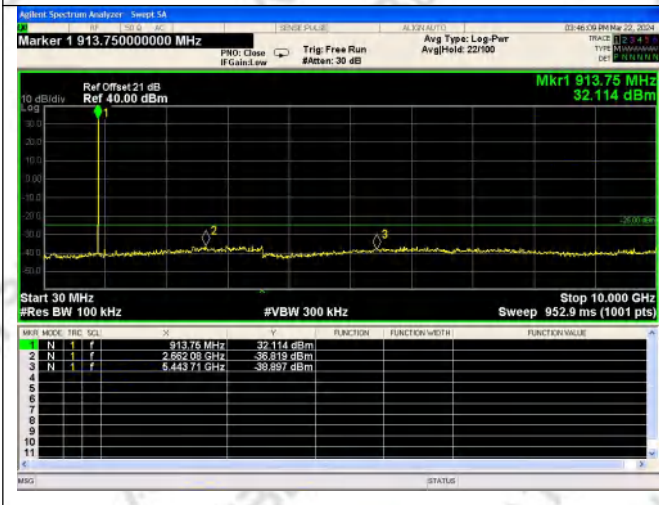
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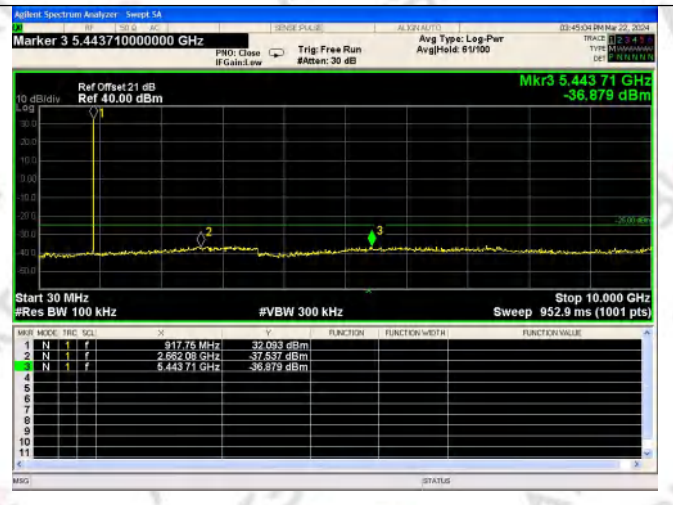
/

Title 21

Low channel(913.75MHz)

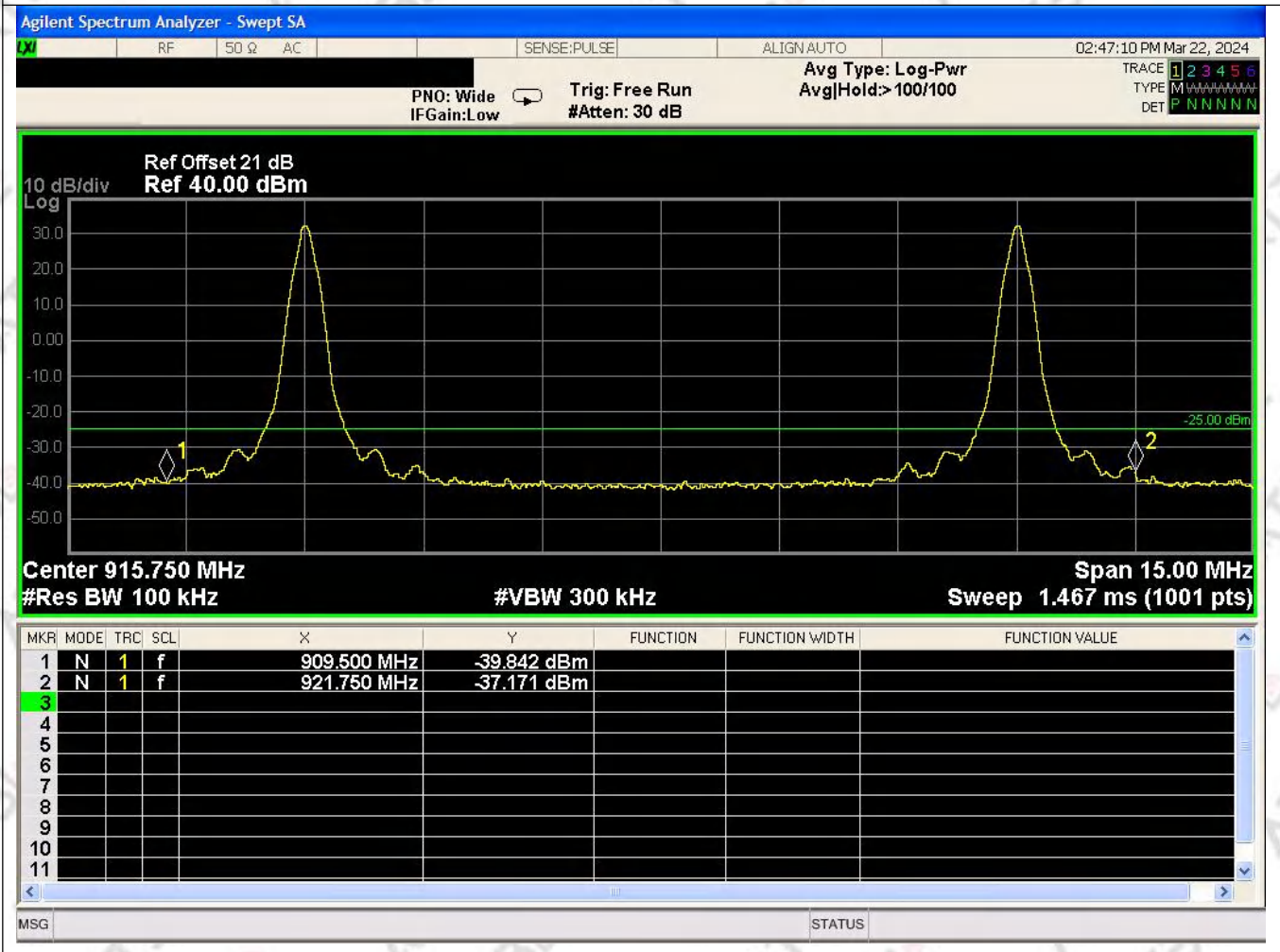


High channel(917.75MHz)

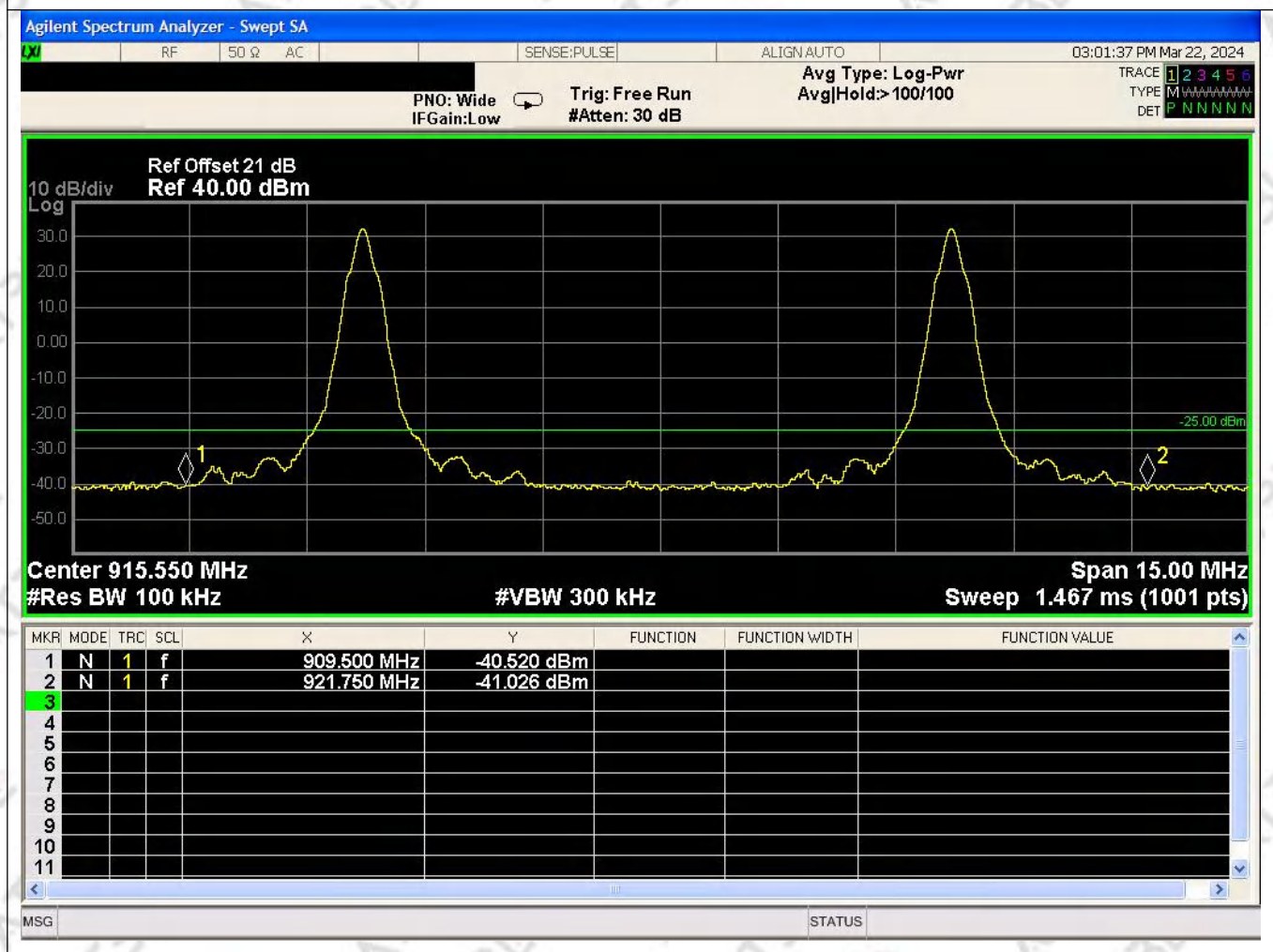


Band Edge follow:

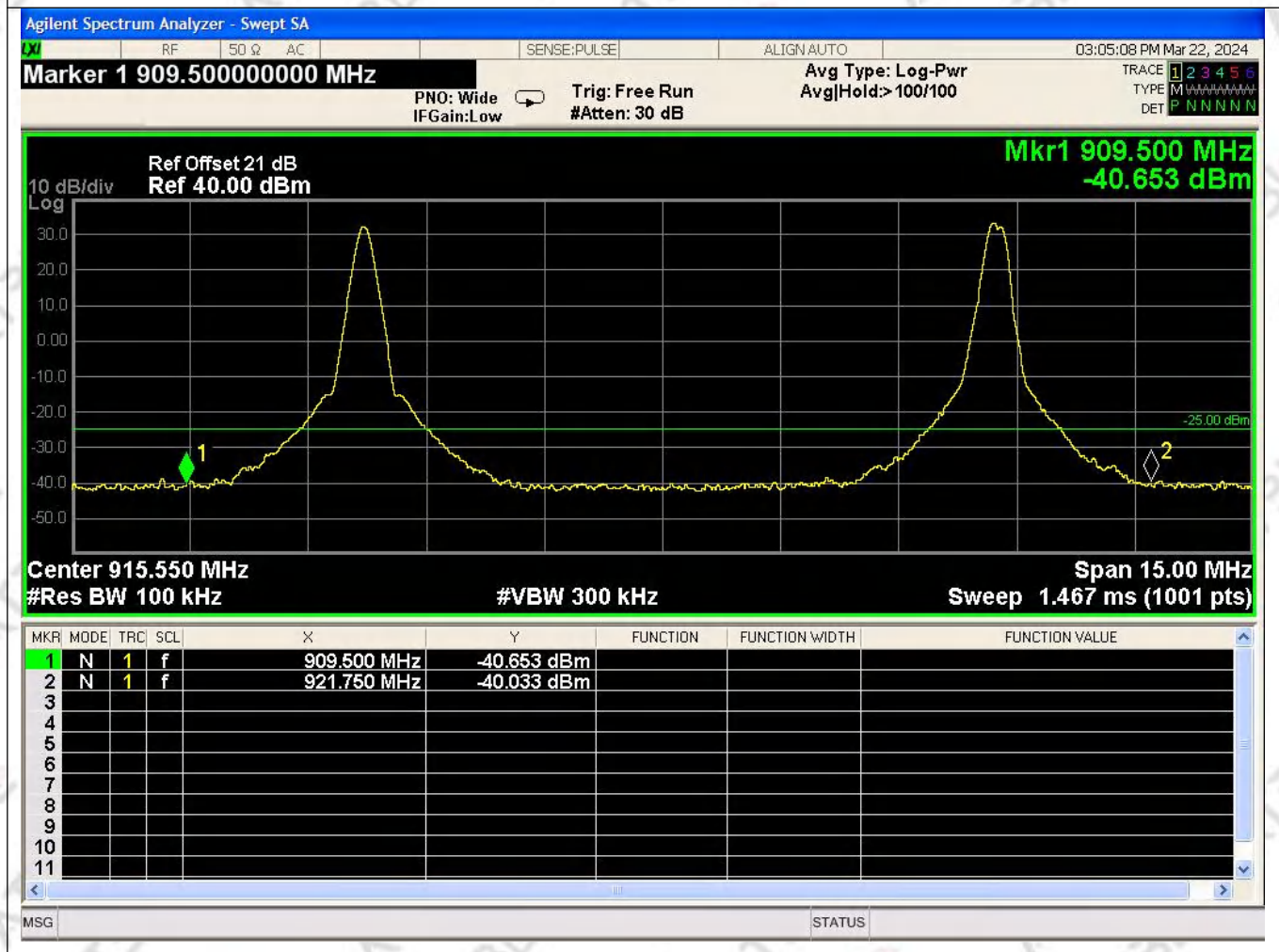
Lower and Upper Band Edge-910.75~920.75-Dense reader mode ISO-18000-63



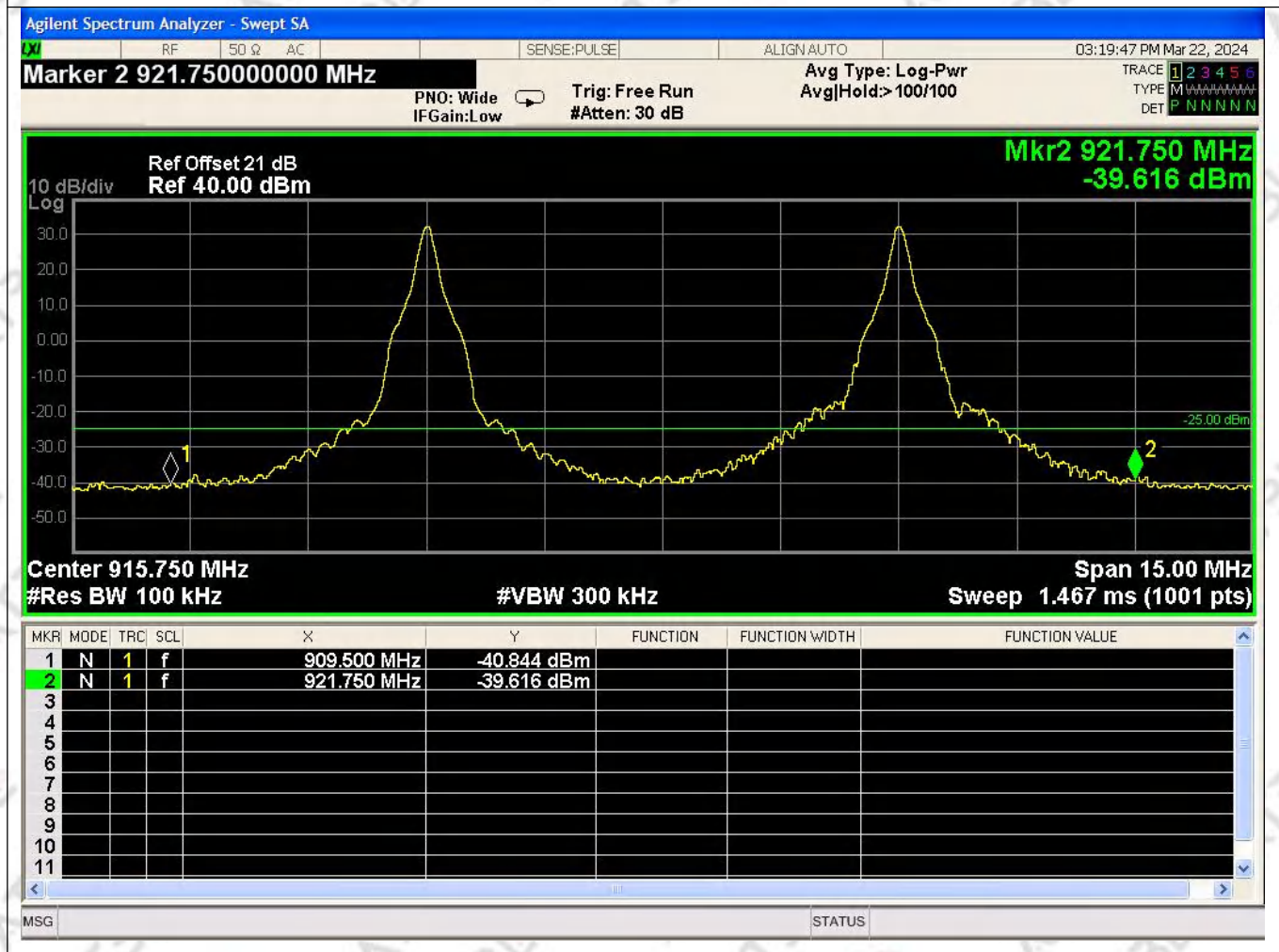
Lower and Upper Band Edge-910.75~920.75-Single reader mode ISO-18000-63



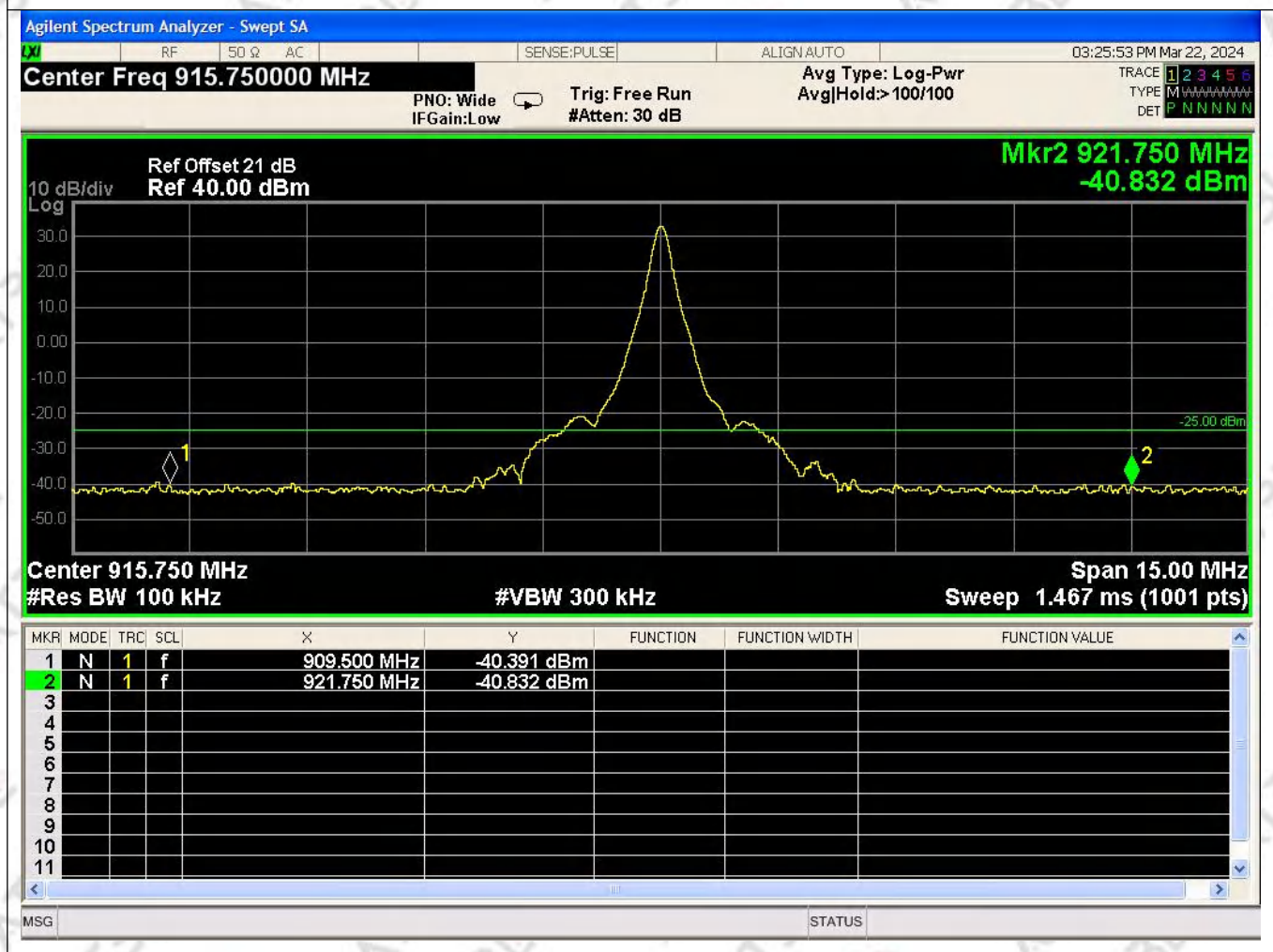
Lower and Upper Band Edge-910.75~920.75-Low data rate ISO-18000-62(40kbps)



Lower and Upper Band Edge-910.75~920.75-High data rate ISO-18000-62 (80kbps)



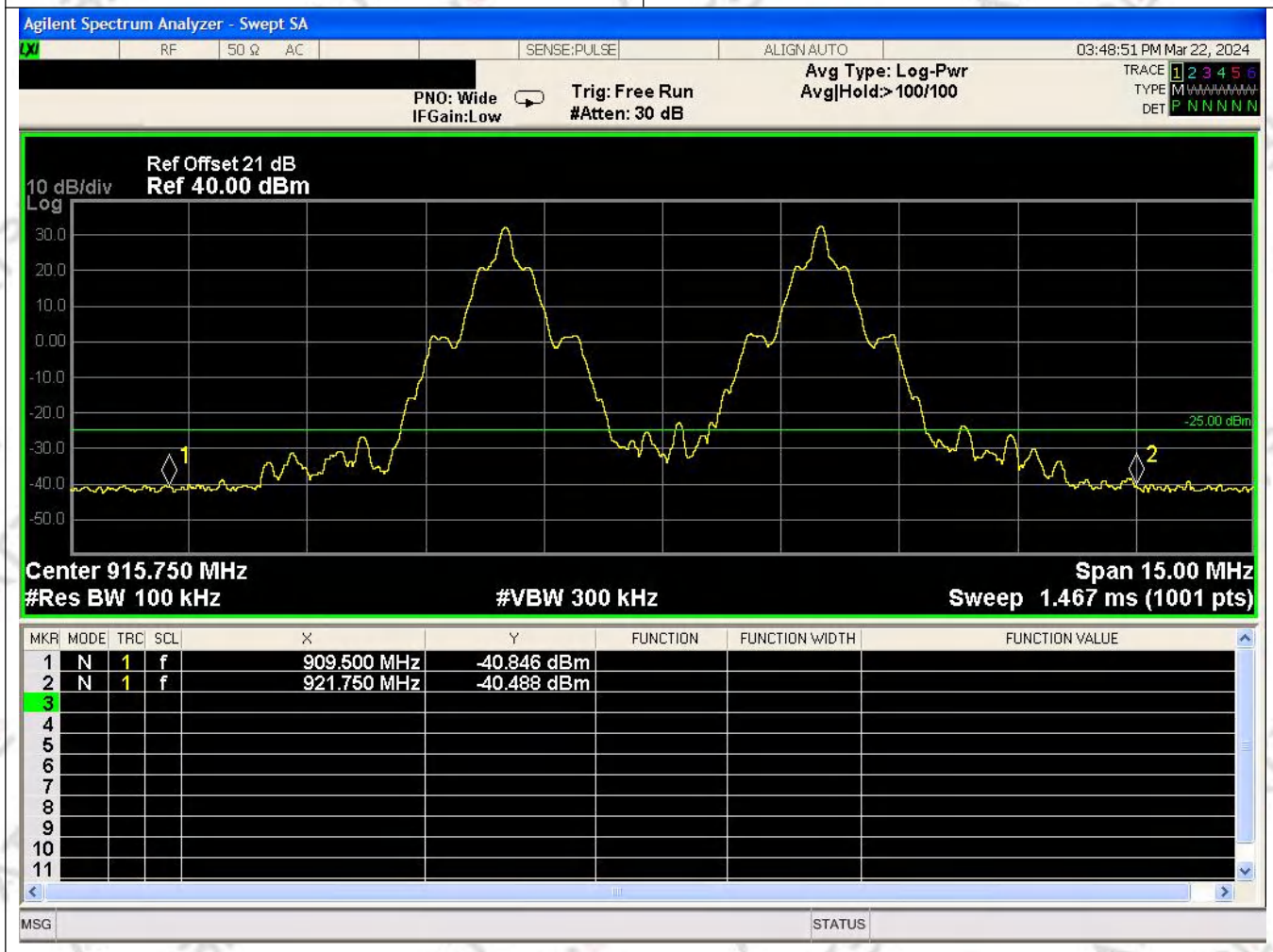
Lower and Upper Band Edge-910.75~920.75-PS111



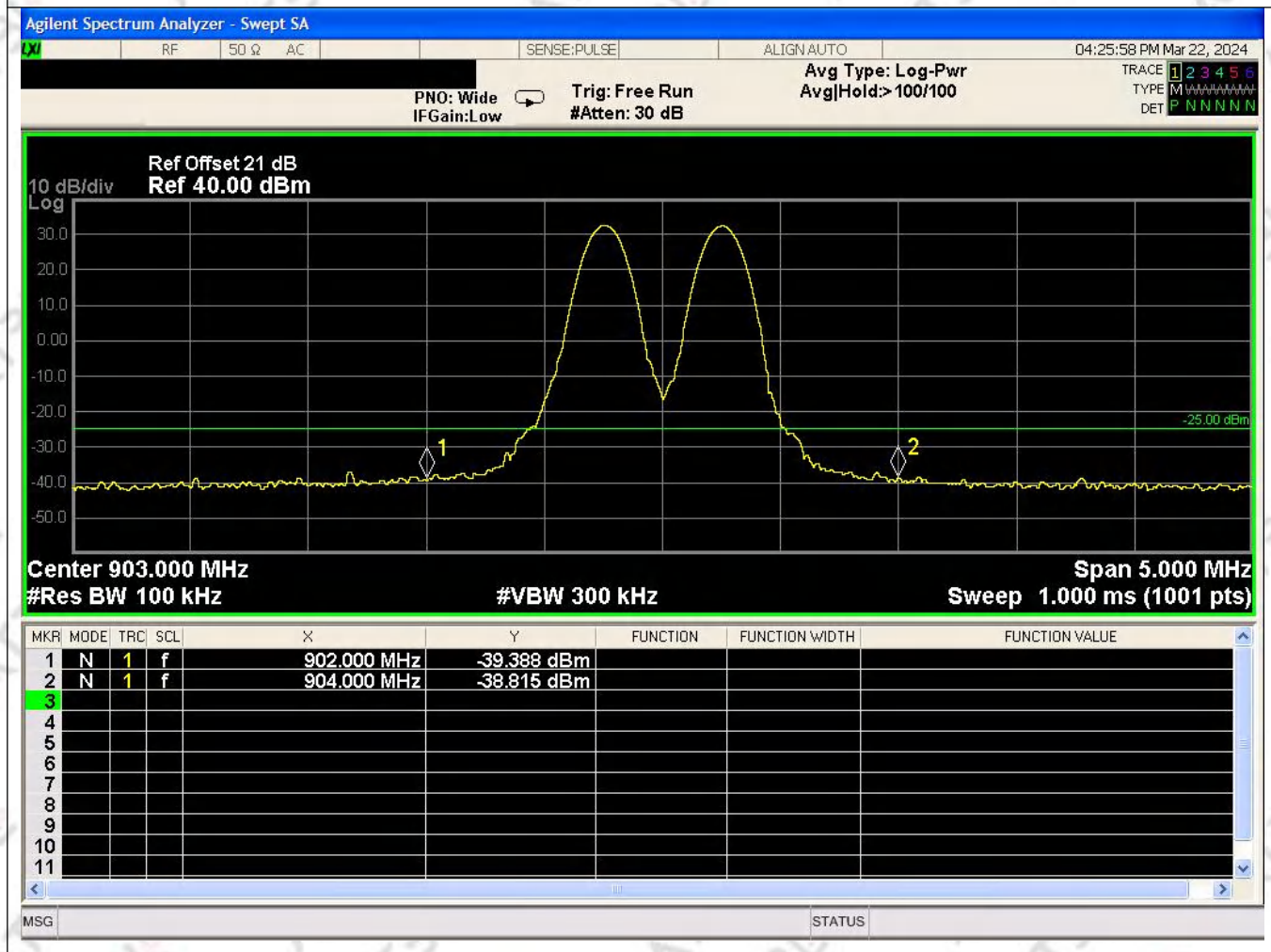
Lower and Upper Band Edge-910.75~920.75-Title 21

Low channel(913.75MHz)

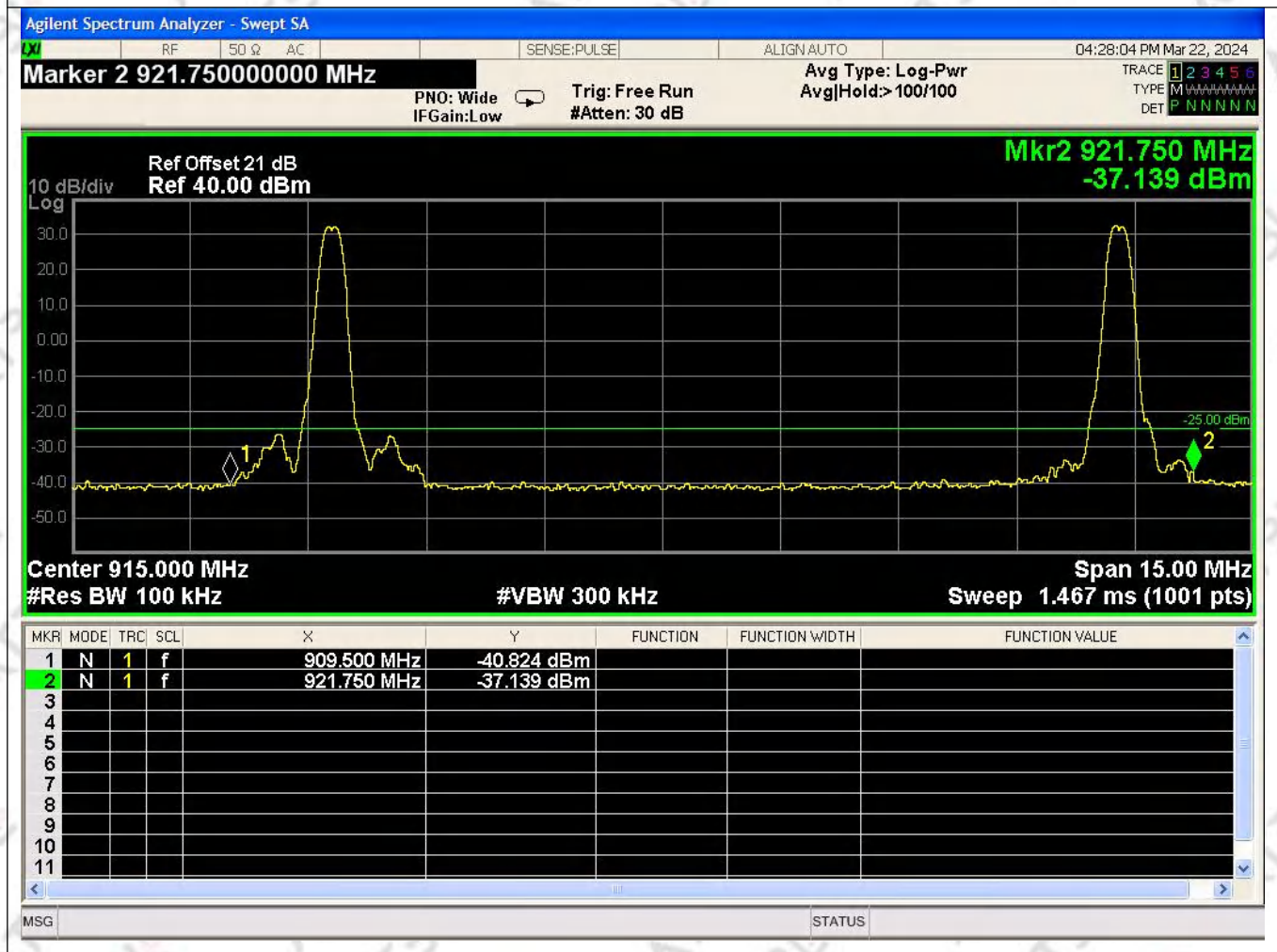
High channel(917.75MHz)



Lower and Upper Band Edge-Low band- Unmodulated ISO-10374



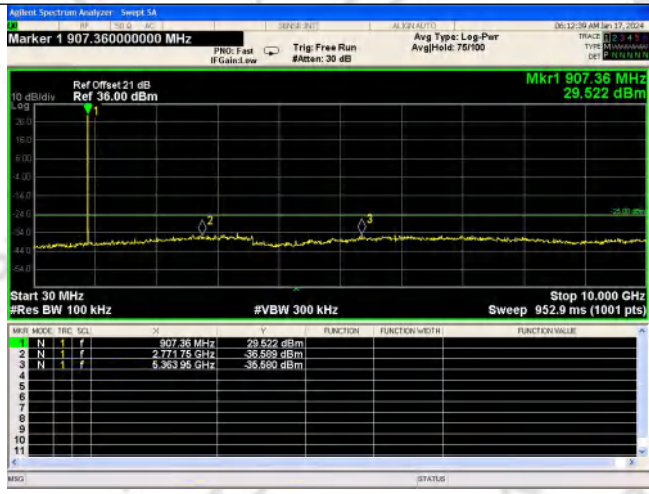
Lower and Upper Band Edge-902.75-920.75- Unmodulated ISO-10374



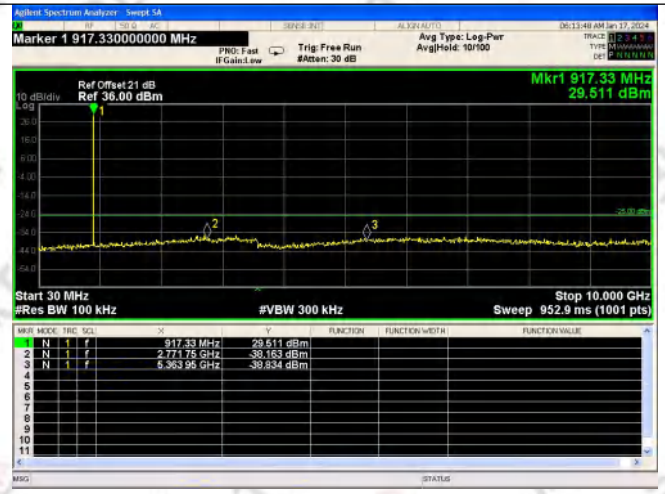
Antenna 2(Internal Antenna) :

Dense reader mode ISO-18000-63

Low Channel(911.25MHz)

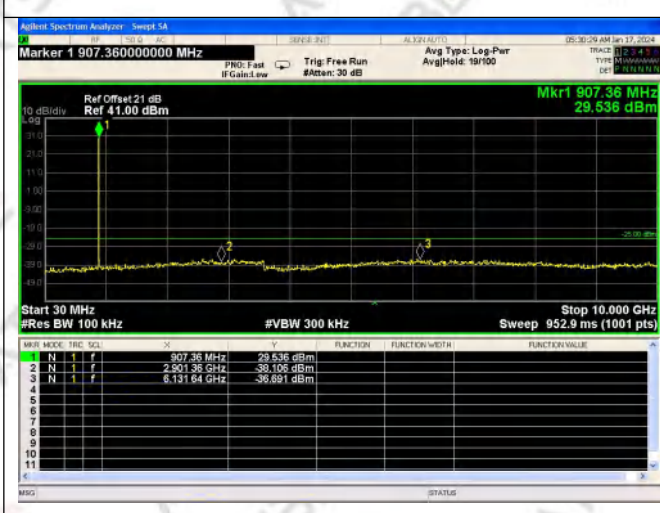


High channel(920.25MHz)

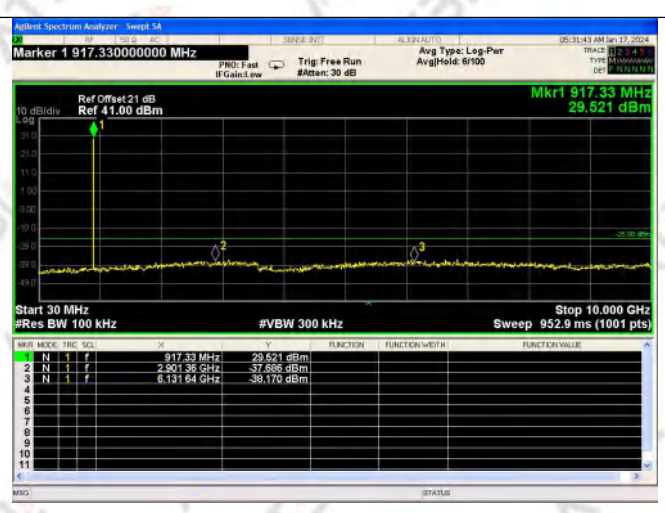


Single reader mode ISO-18000-63

Low channel(911.75MHz)

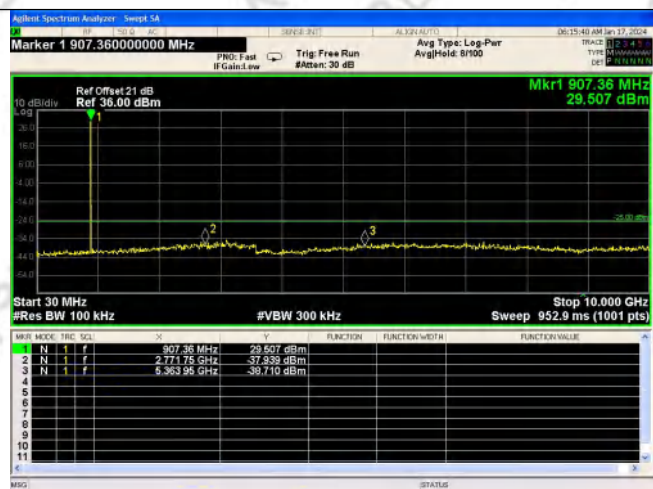


High channel(919.25MHz)

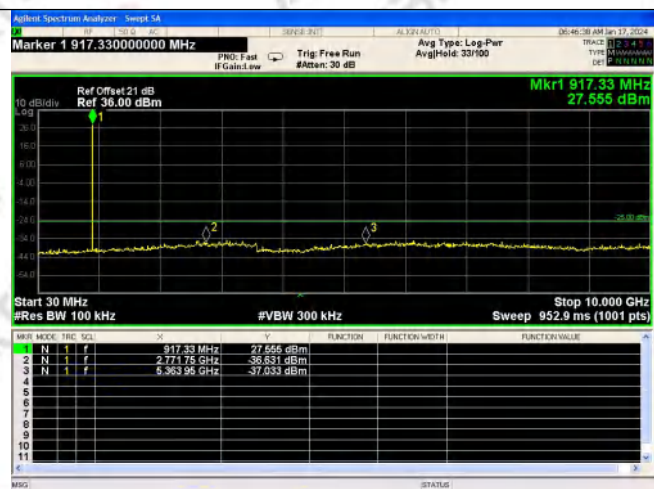


Low data rate ISO-18000-62(40kbps)

Low channel(911.75MHz)

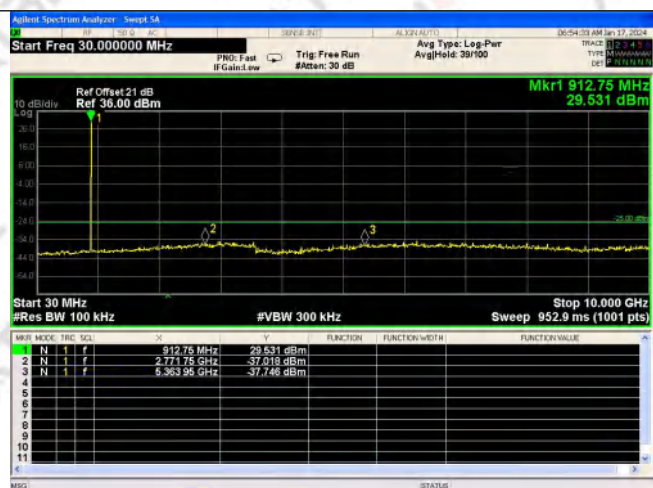


High channel(919.75MHz)

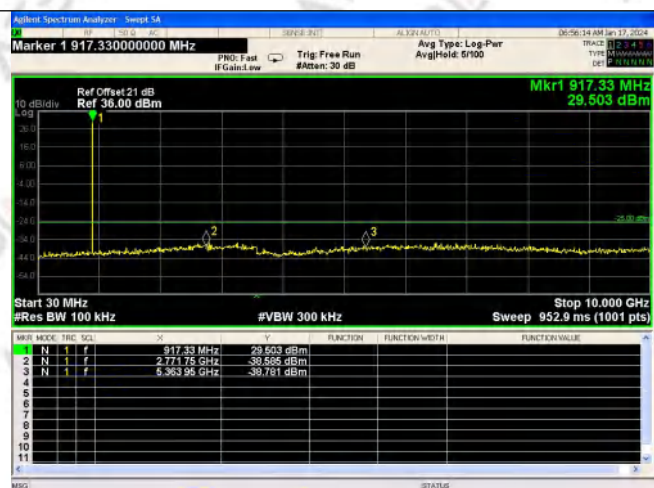


High data rate ISO-18000-62 (80kbps)

Low channel(912.75MHz)

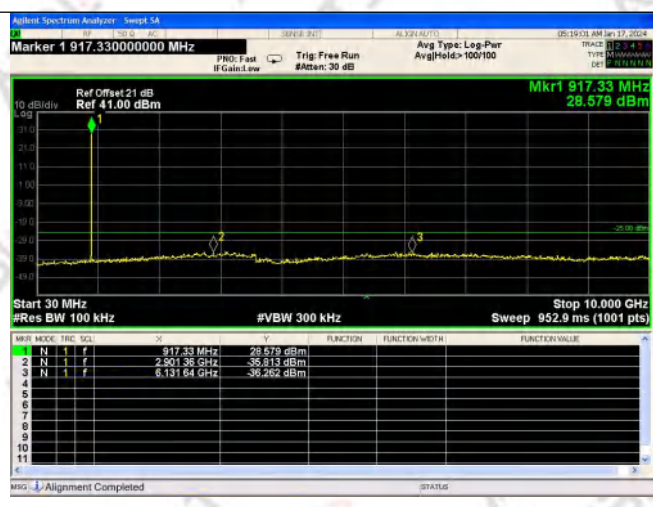


High channel(918.75MHz)



PS111

915.75MHz

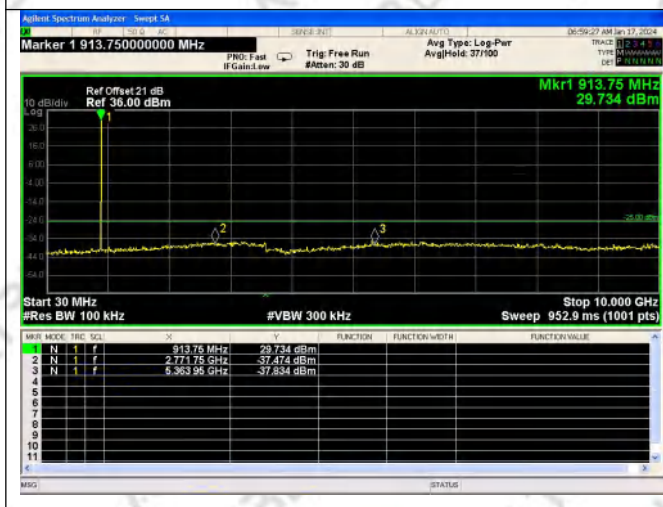


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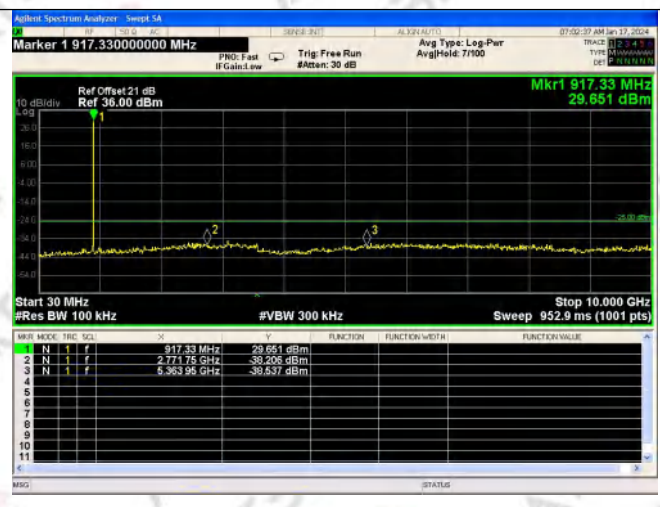
/

Title 21

Low channel(913.75MHz)

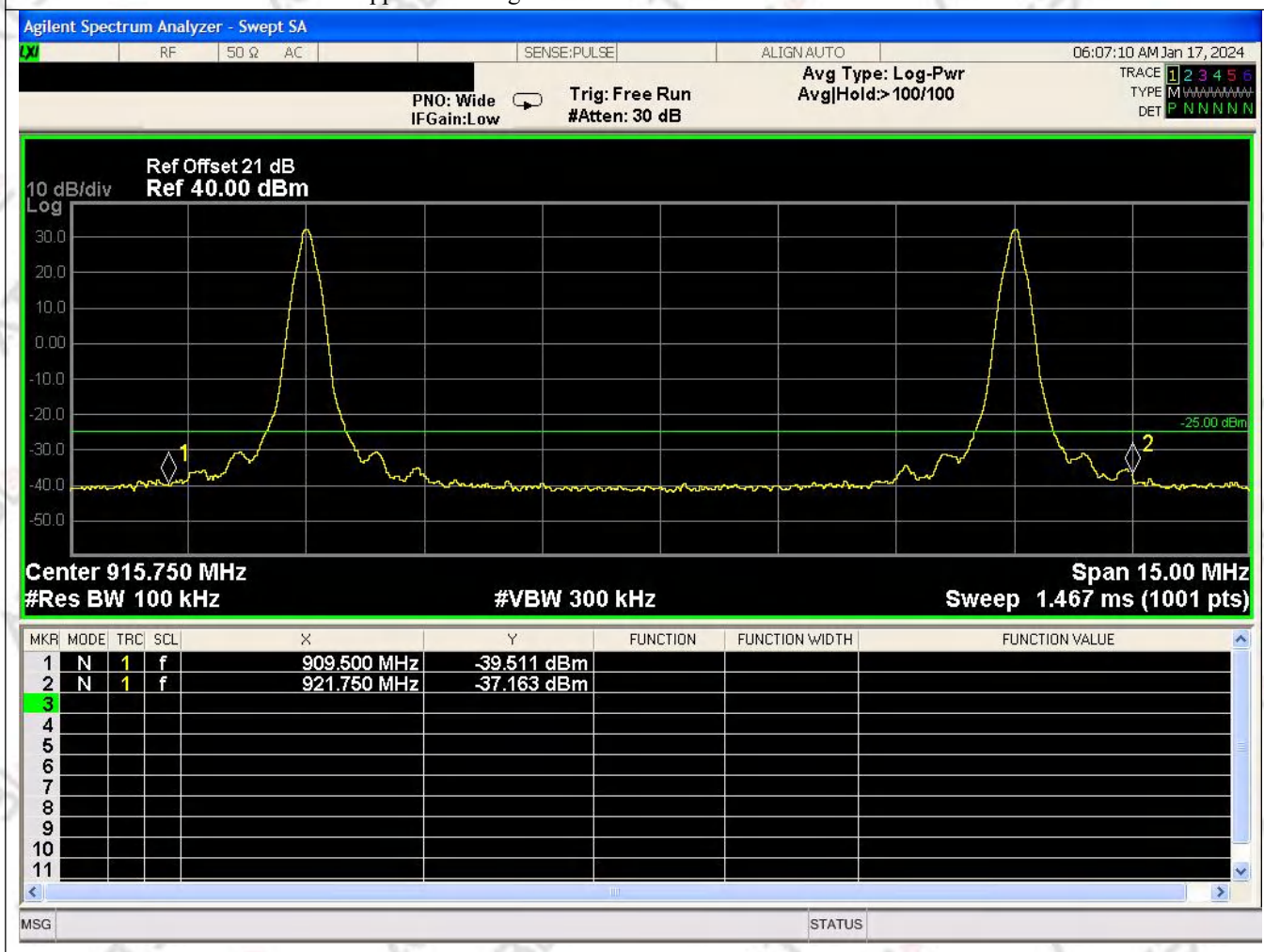


High channel(917.75MHz)

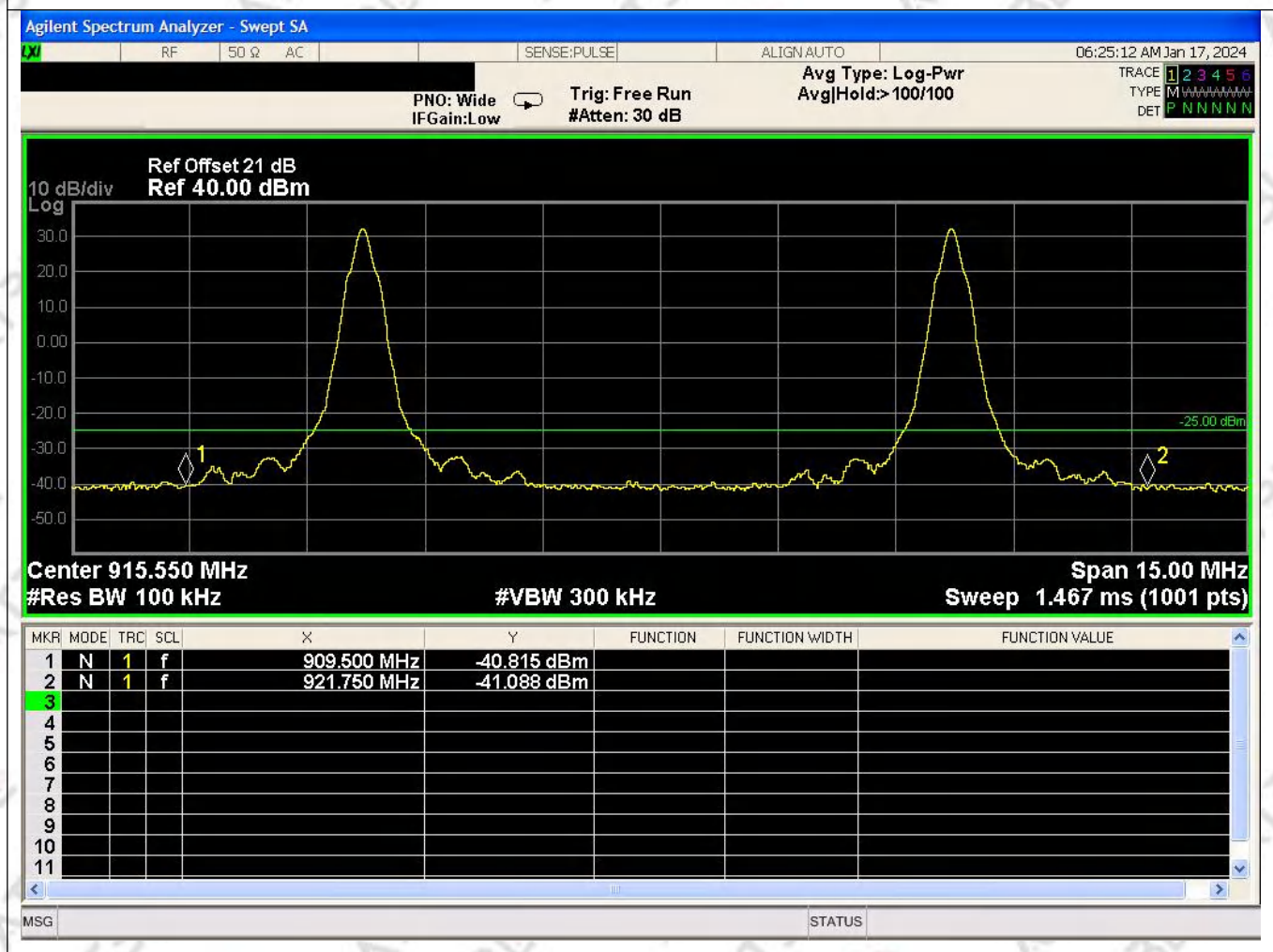


Band Edge follow:

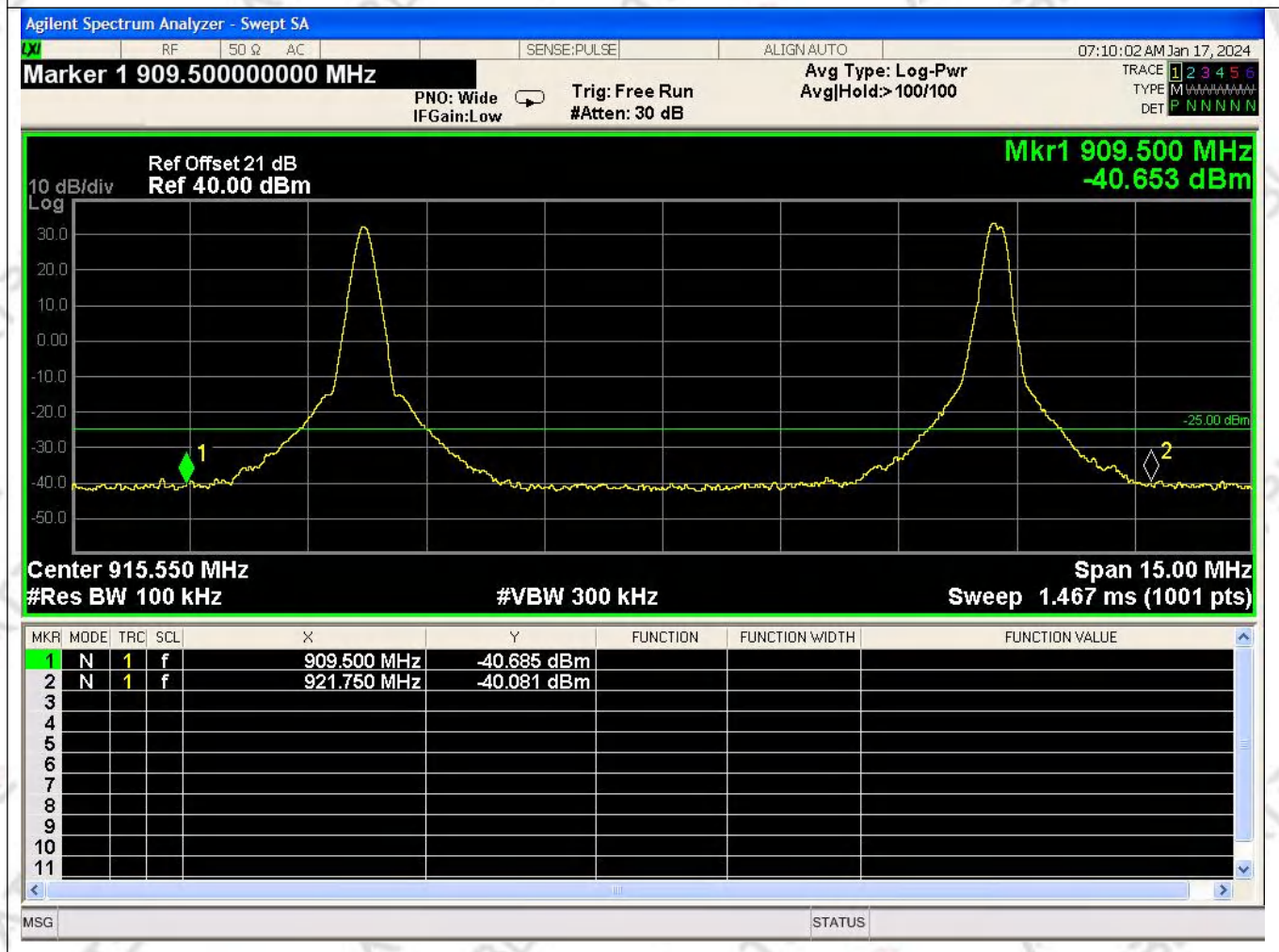
Lower and Upper Band Edge-910.75~920.75-Dense reader mode ISO-18000-63



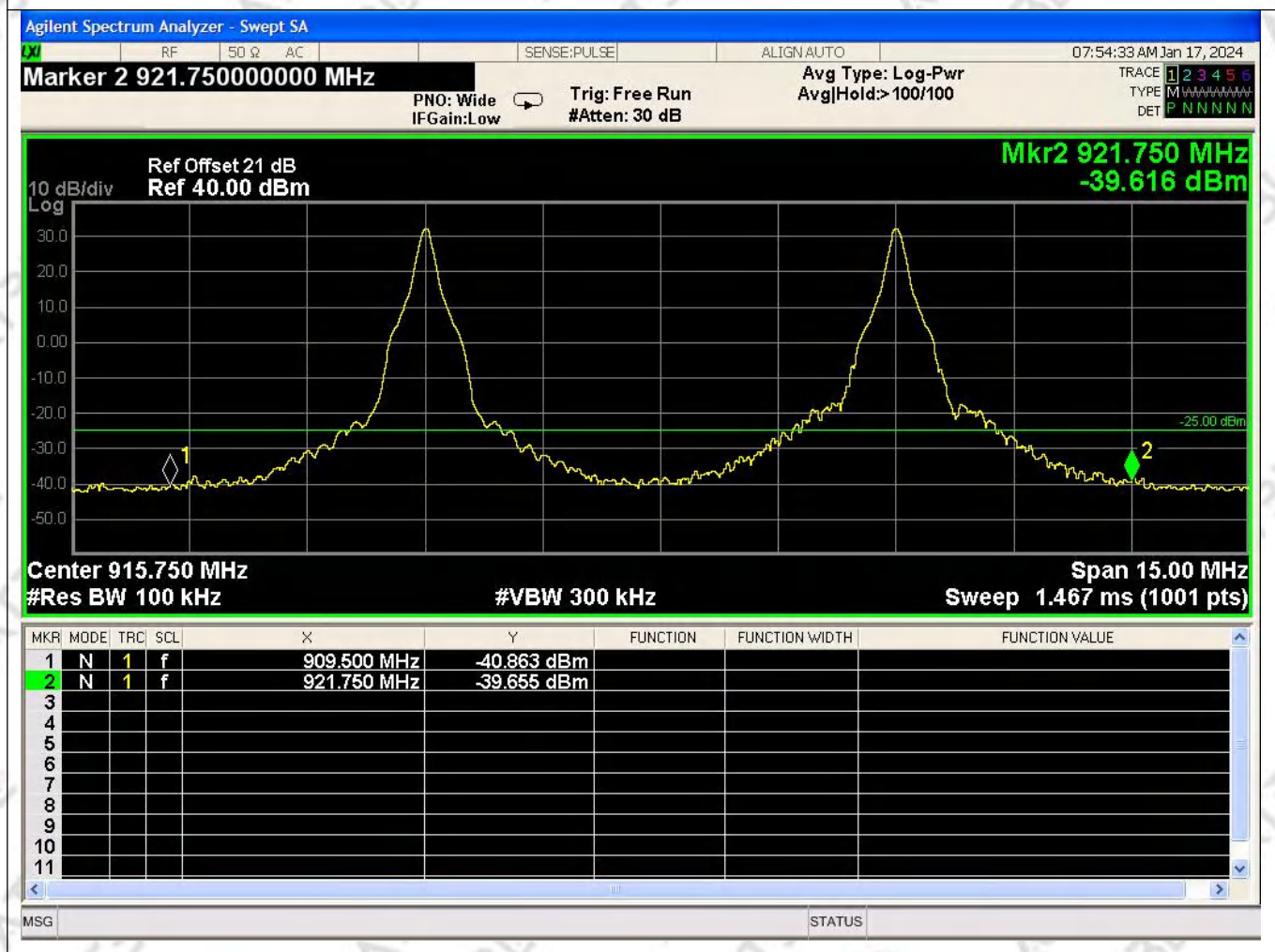
Lower and Upper Band Edge-910.75~920.75-Single reader mode ISO-18000-63



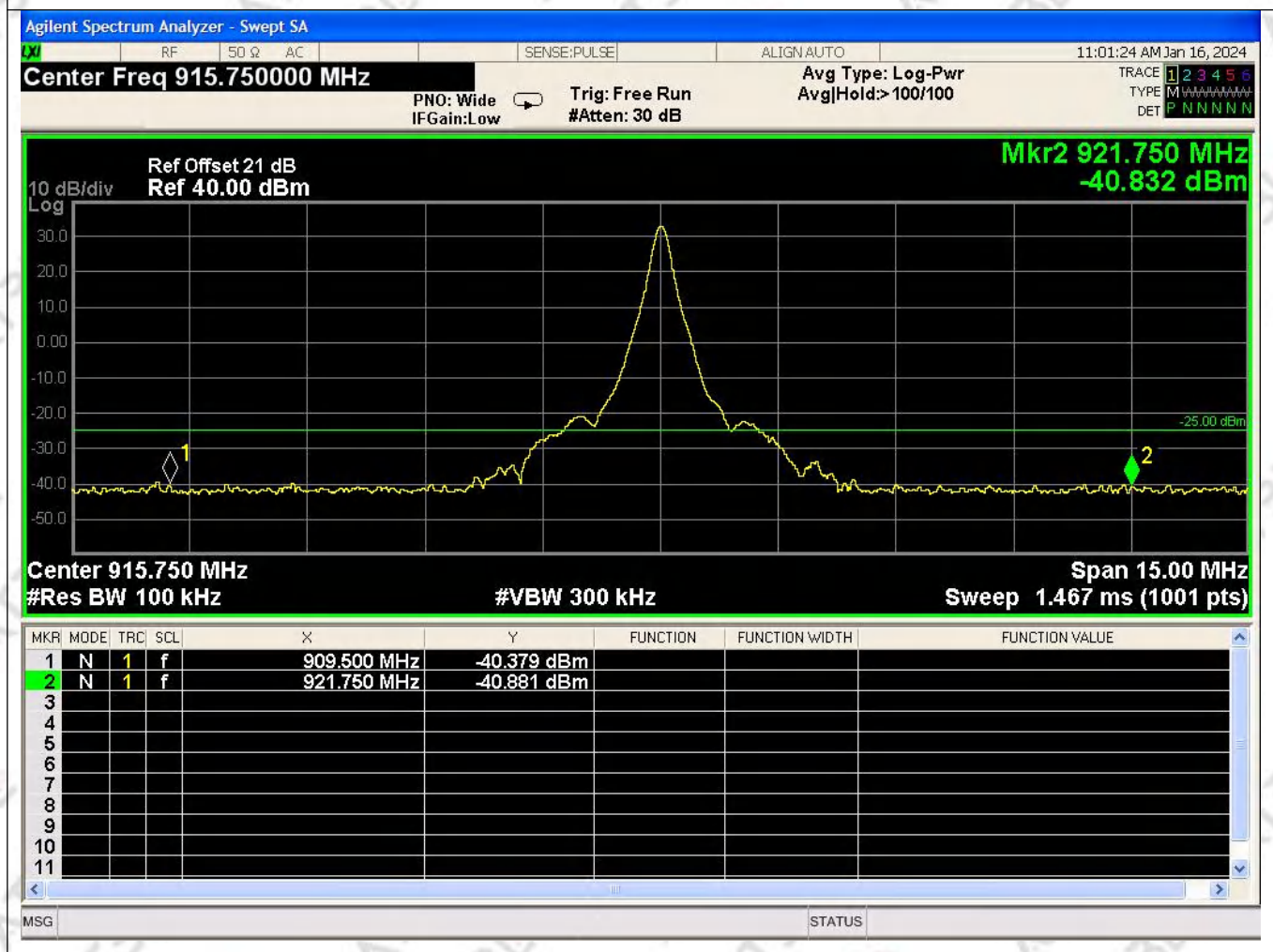
Lower and Upper Band Edge-910.75~920.75-Low data rate ISO-18000-62(40kbps)



Lower and Upper Band Edge-910.75~920.75-High data rate ISO-18000-62 (80kbps)



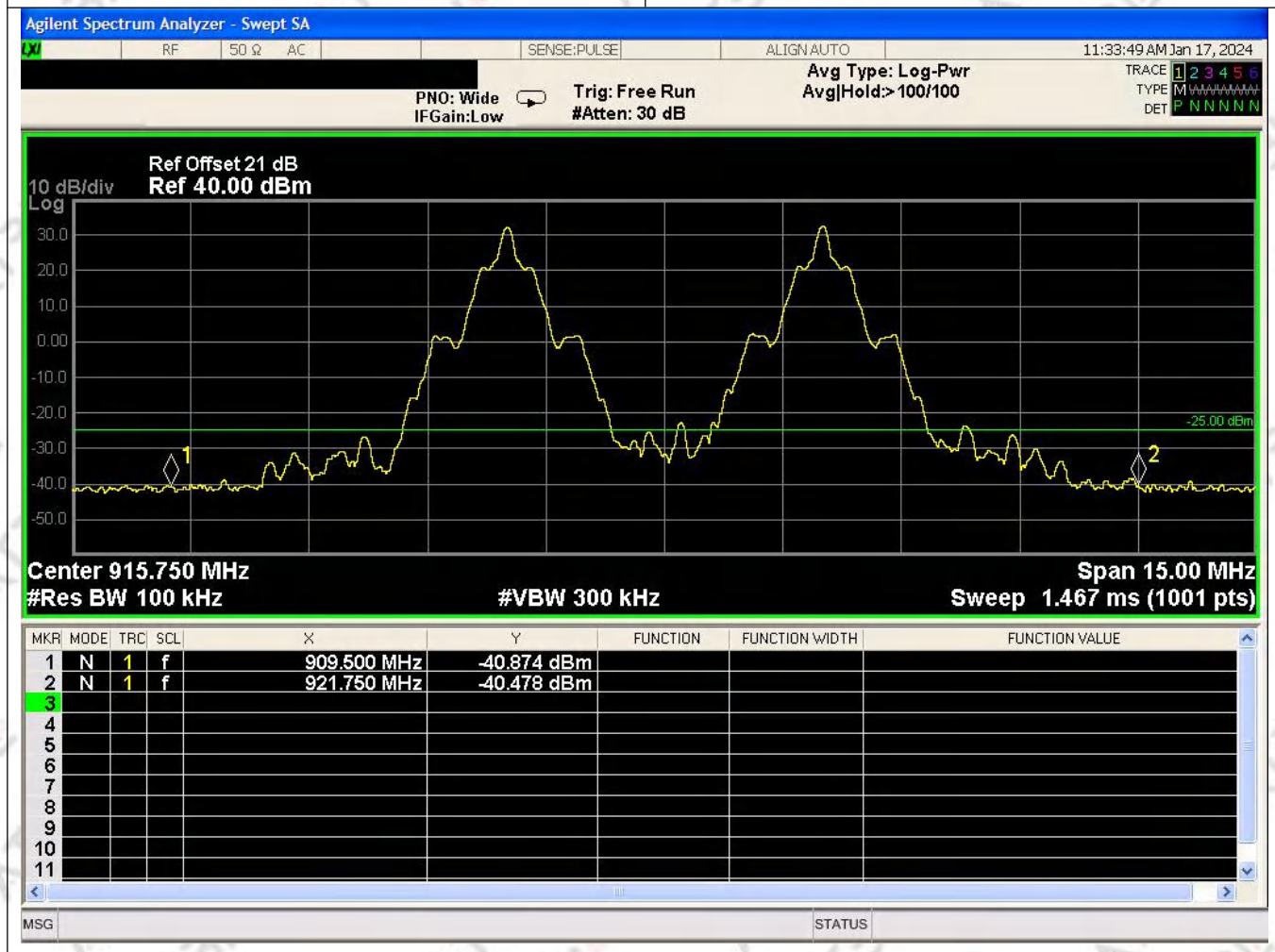
Lower and Upper Band Edge-910.75~920.75-PS111



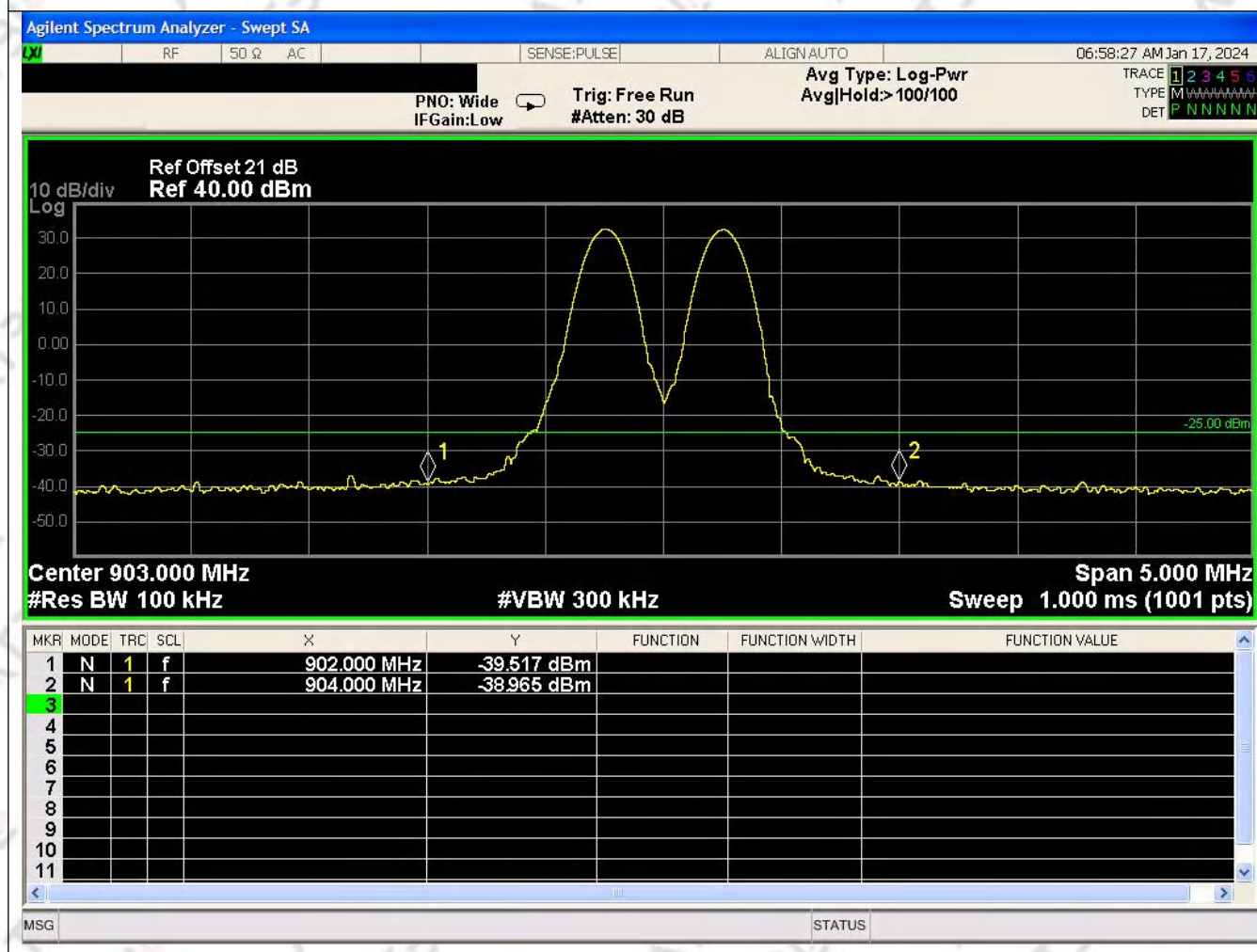
Lower and Upper Band Edge-910.75~920.75-Title 21

Low channel(913.75MHz)

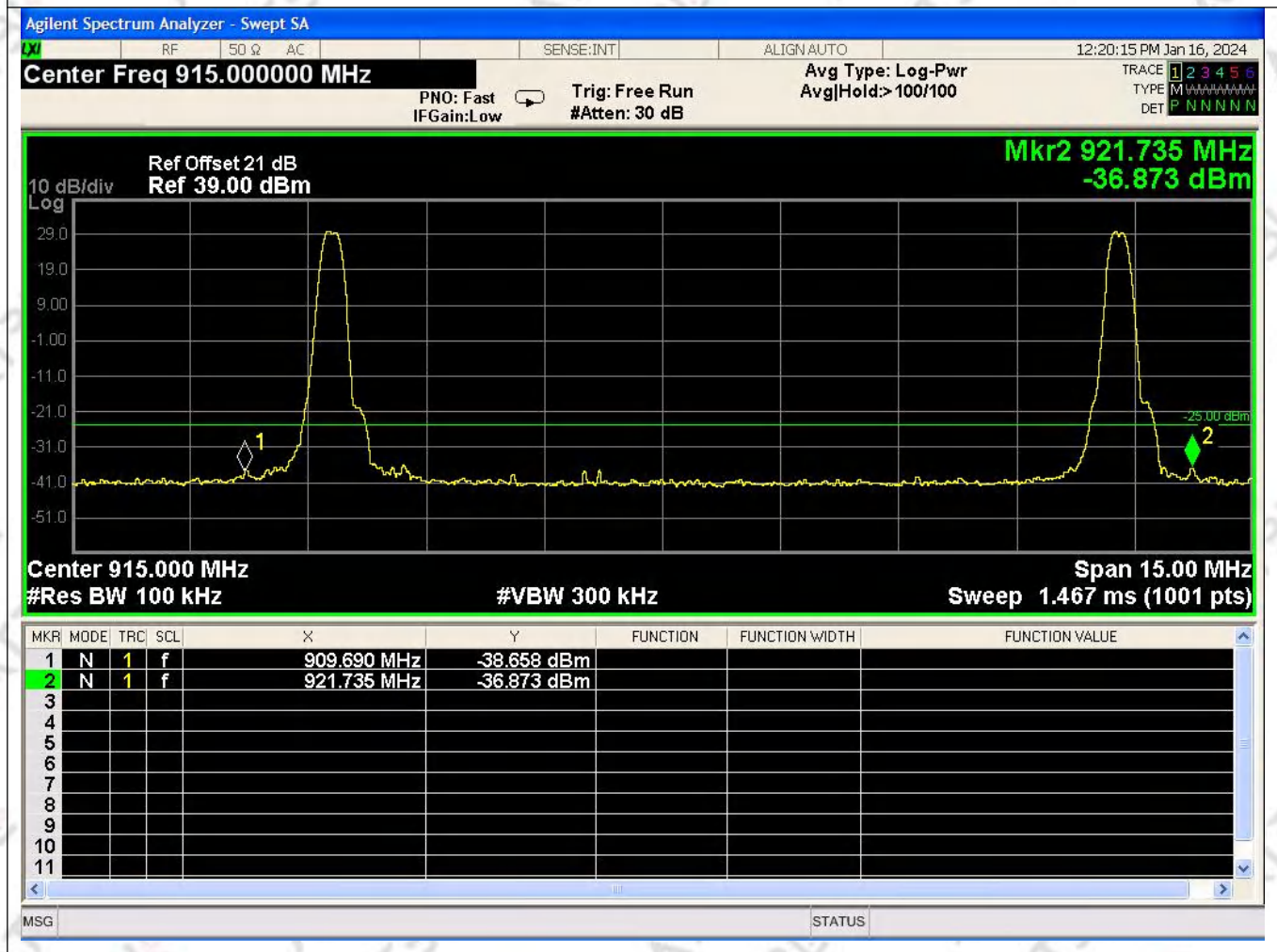
High channel(917.75MHz)



Lower and Upper Band Edge-Low band- Unmodulated ISO-10374



Lower and Upper Band Edge-902.75-920.75- Unmodulated ISO-10374



*****END OF THE REPORT APPENDIX A*****