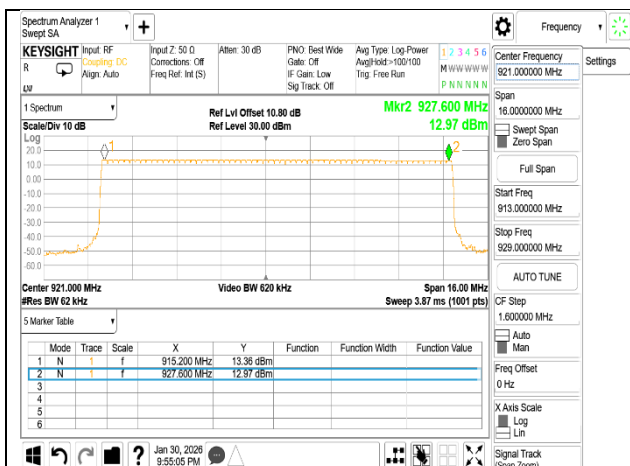


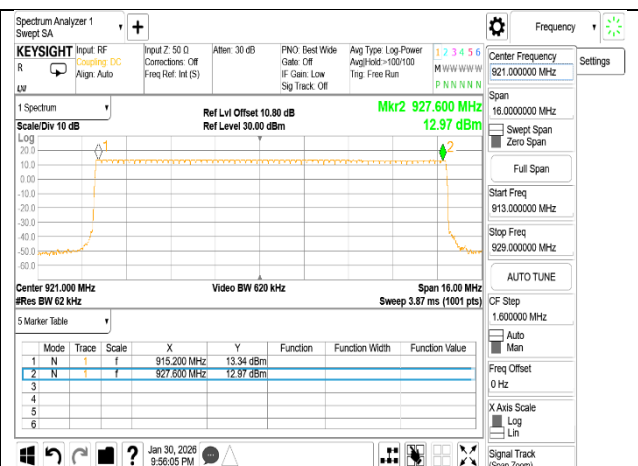
7.3 Number Of Hopping Frequency

Tabular Data of Total Channel Number

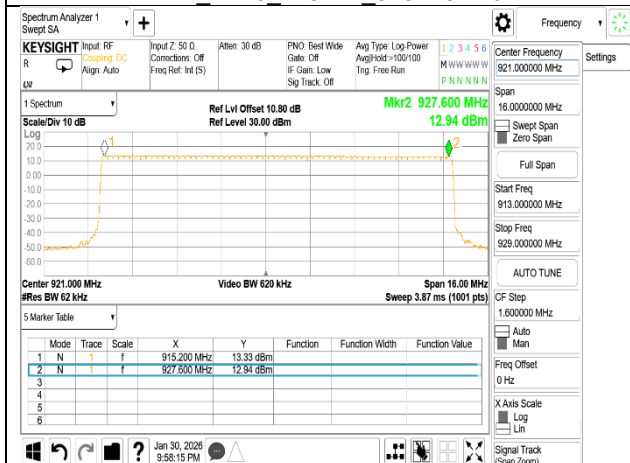
	Mode	Channel Number
902 – 928 MHz	SF7_125kHz	64
	SF8_125kHz	64
	SF9_125kHz	64
	SF10_125kHz	64
	SF8_500kHz	8



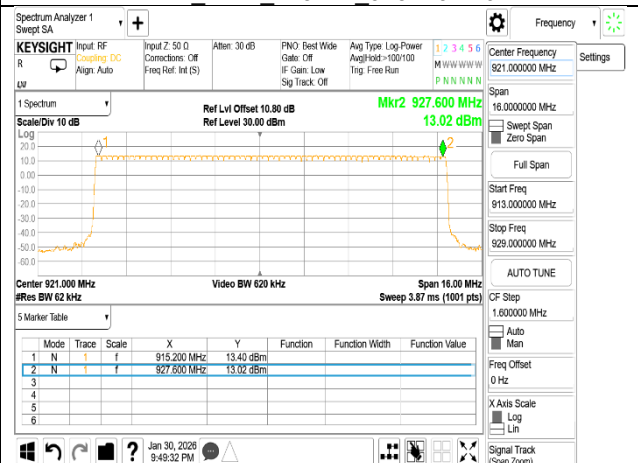
Lora_SF10_125kHz 915.2-927.6



Lora_SF11_125kHz 915.2-927.6



Lora_SF12_125kHz 915.2-927.6

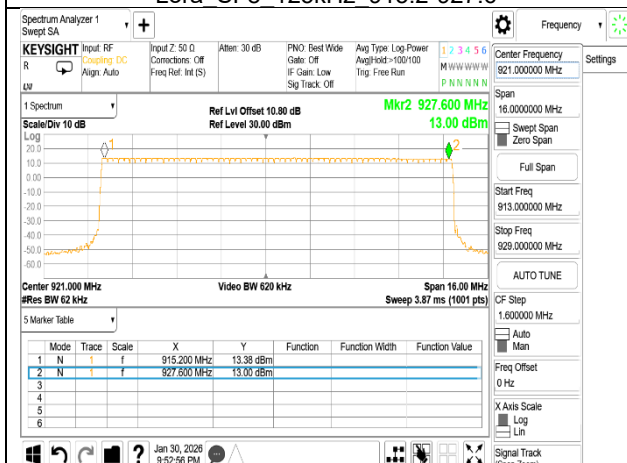
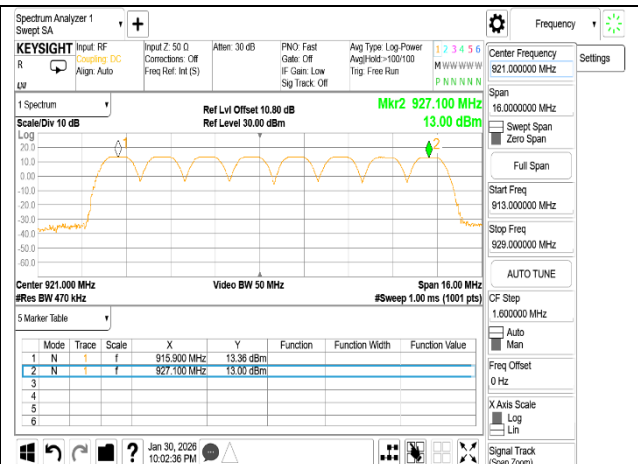
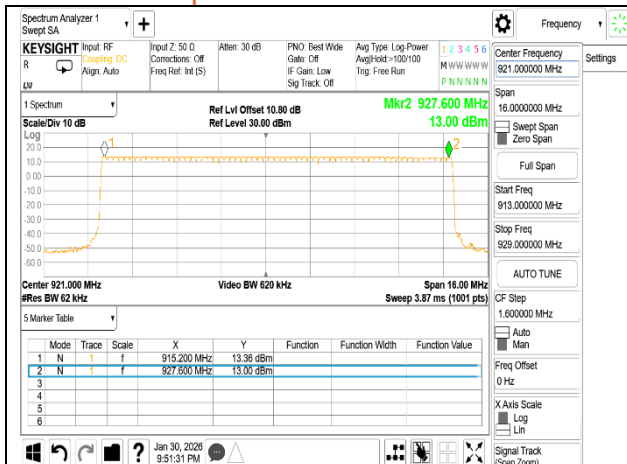


Lora_SF7_125kHz 915.2-927.6

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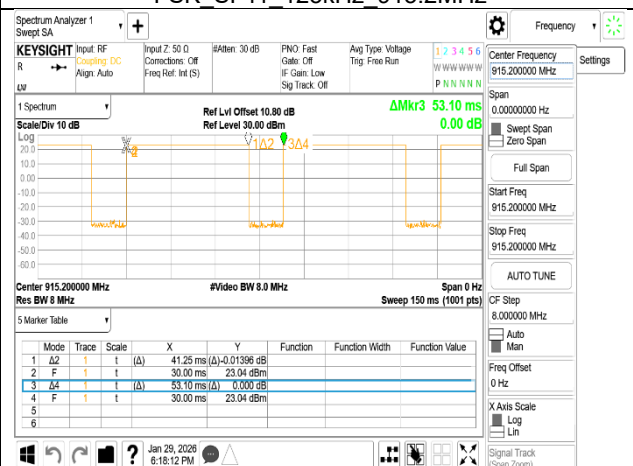
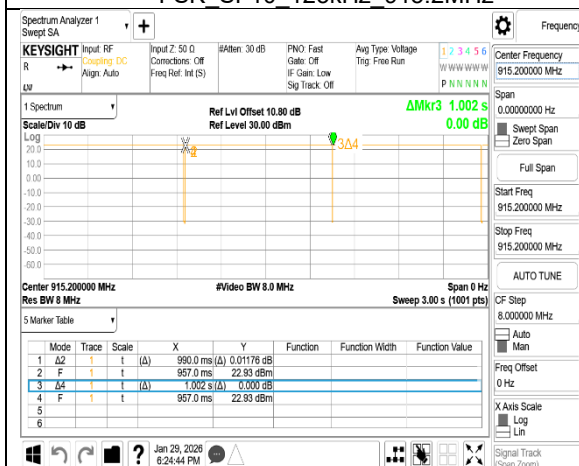
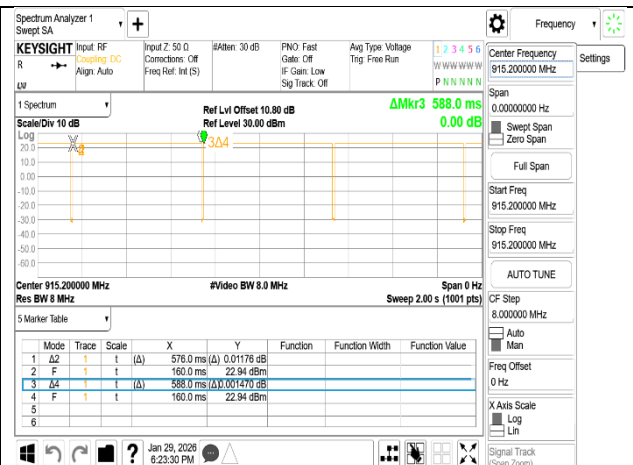
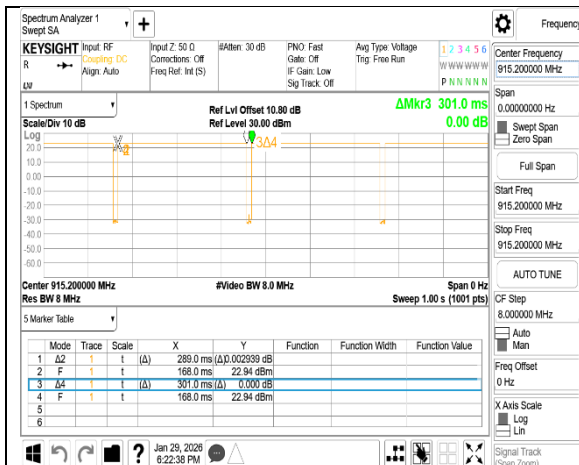
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7.4 Duty Cycle & Maximum Output Power

Mode	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) = 10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
LoRa SF7 125kHz	77.68	1.10	0.02	1.00
LoRa SF8 125kHz	86.01	0.65	0.01	1.00
LoRa SF9 125kHz	92.33	0.35	0.01	1.00
LoRa SF10 125kHz	96.01	0.18	0.00	1.00
LoRa SF11 125kHz	97.96	0.09	0.00	1.00
LoRa SF12 125kHz	98.80	0.05	0.00	0.01
LoRa SF8 500kHz	60.64	2.17	0.06	1.00



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LoRa SF7 125kHz mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.84	30
31	921.4	15	12.73	30
62	927.6	15	12.61	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.50	30
31	921.4	15	12.42	30
62	927.6	15	12.33	30

***Note:**

1.Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.

LoRa SF8 125kHz mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	915.2	14	11.99	30
31	921.4	16	13.59	30
62	927.6	14	11.90	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	915.2	14	11.63	30
31	921.4	16	13.24	30
62	927.6	14	11.55	30

***Note:**

1.Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offseted to the power meter for Avg. power and cable loss has been offseted for Peak power measurement.

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LoRa SF9 125kHz mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.83	30
31	921.4	16	13.53	30
62	927.6	15	12.71	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.48	30
31	921.4	16	13.20	30
62	927.6	15	12.40	30

***Note:**

1. Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offsetted to the power meter for Avg. power and cable loss has been offsetted for Peak power measurement.

LoRa SF10 125kHz mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	915.2	14	11.97	30
31	921.4	16	13.65	30
62	927.6	15	12.76	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	915.2	14	11.61	30
31	921.4	16	13.28	30
62	927.6	15	12.43	30

***Note:**

1. Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offsetted to the power meter for Avg. power and cable loss has been offsetted for Peak power measurement.

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LoRa SF11 125kHz mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.88	30
31	921.4	15	0.00	30
62	927.6	15	0.00	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.75	30
31	921.4	15	12.63	30
62	927.6	15	12.57	30

***Note:**

1. Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offsetted to the power meter for Avg. power and cable loss has been offsetted for Peak power measurement.

LoRa SF12 125kHz mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.85	30
31	921.4	15	12.74	30
62	927.6	15	12.65	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
0	915.2	15	12.72	30
31	921.4	15	12.60	30
62	927.6	15	12.53	30

***Note:**

1. Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offsetted to the power meter for Avg. power and cable loss has been offsetted for Peak power measurement.

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LoRa SF8 500kHz mode:

CH	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	Required Limit (dBm)
64	915.9	20	18.23	30
67	920.7	20	18.16	30
71	927.1	20	18.10	30
CH	Frequency (MHz)	Power Setting	Avg. Output Power (dBm)	Required Limit (dBm)
64	915.9	20	18.20	30
67	920.7	20	18.13	30
71	927.1	20	18.07	30

***Note:**

1. Measured by power meter, cable loss 10.8 dB + Duty cycle factor has been offset to the power meter for Avg. power and cable loss has been offset for Peak power measurement.

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7.5 Maximum Power Spectral Density

LoRa SF7 125kHz mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Duty factor	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
915.2	-2.32	1.10	-1.23	8	PASS
921.4	-2.10	1.10	-1.00	8	PASS
927.6	-1.59	1.10	-0.50	8	PASS

***Note:**

1.cable loss as 10.8 dB that offsets in the spectrum

LoRa SF8 125kHz mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Duty factor	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
915.2	-2.69	0.65	-2.03	8	PASS
921.4	-0.05	0.65	0.61	8	PASS
927.6	-3.05	0.65	-2.40	8	PASS

***Note:**

1.cable loss as 10.8 dB that offsets in the spectrum

LoRa SF9 125kHz mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Duty factor	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
915.2	-0.36	0.35	-0.02	8	PASS
921.4	-0.70	0.35	-0.35	8	PASS
927.6	-0.55	0.35	-0.20	8	PASS

***Note:**

1.cable loss as 10.8 dB that offsets in the spectrum

LoRa SF10 125kHz mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Duty factor	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
915.2	-0.52	0.18	-0.34	8	PASS
921.4	0.57	0.18	0.74	8	PASS
927.6	-0.04	0.18	0.14	8	PASS

***Note:**

1.cable loss as 10.8 dB that offsets in the spectrum

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LoRa SF11 125kHz mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Duty factor	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
915.2	-1.14	0.09	-1.05	8	PASS
921.4	-1.76	0.09	-1.67	8	PASS
927.6	-0.57	0.09	-0.48	8	PASS

Note:*1.cable loss as 10.8 dB that offsets in the spectrum**

LoRa SF12 125kHz mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Duty factor	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
915.2	-0.96	0.05	-0.91	8	PASS
921.4	-0.86	0.05	-0.80	8	PASS
927.6	-1.01	0.05	-0.95	8	PASS

Note:*1.cable loss as 10.8 dB that offsets in the spectrum**

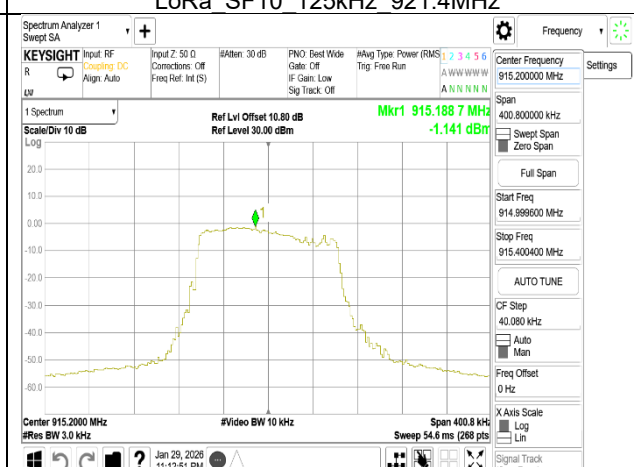
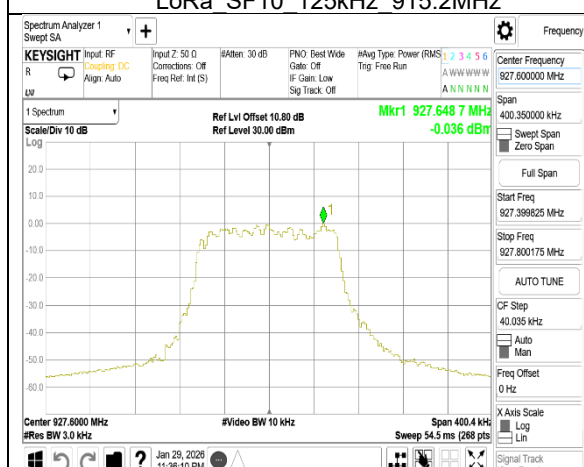
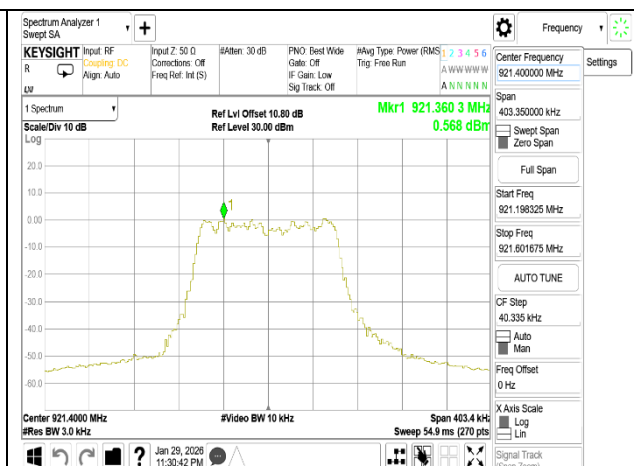
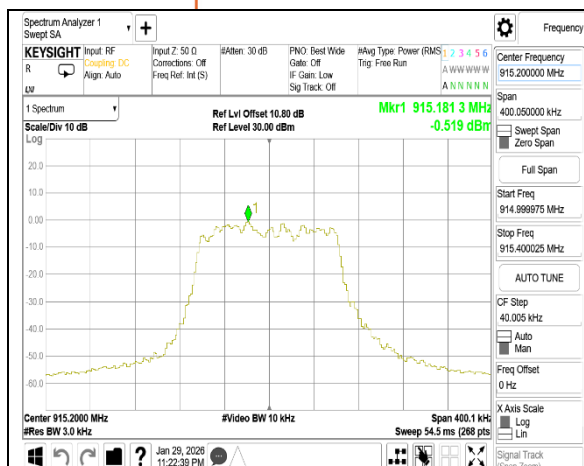
LoRa SF8 500kHz mode

Frequency (MHz)	RF Power Density (dBm/3kHz)	Duty factor	RF Power Density (dBm/3kHz)	Maximum Limit (dBm/3kHz)	Result
915.9	-3.128	2.17	-0.96	8	PASS
920.7	-2.98	2.17	-0.81	8	PASS
927.1	-3.21	2.17	-1.03	8	PASS

Note:*1.cable loss as 10.8 dB that offsets in the spectrum**

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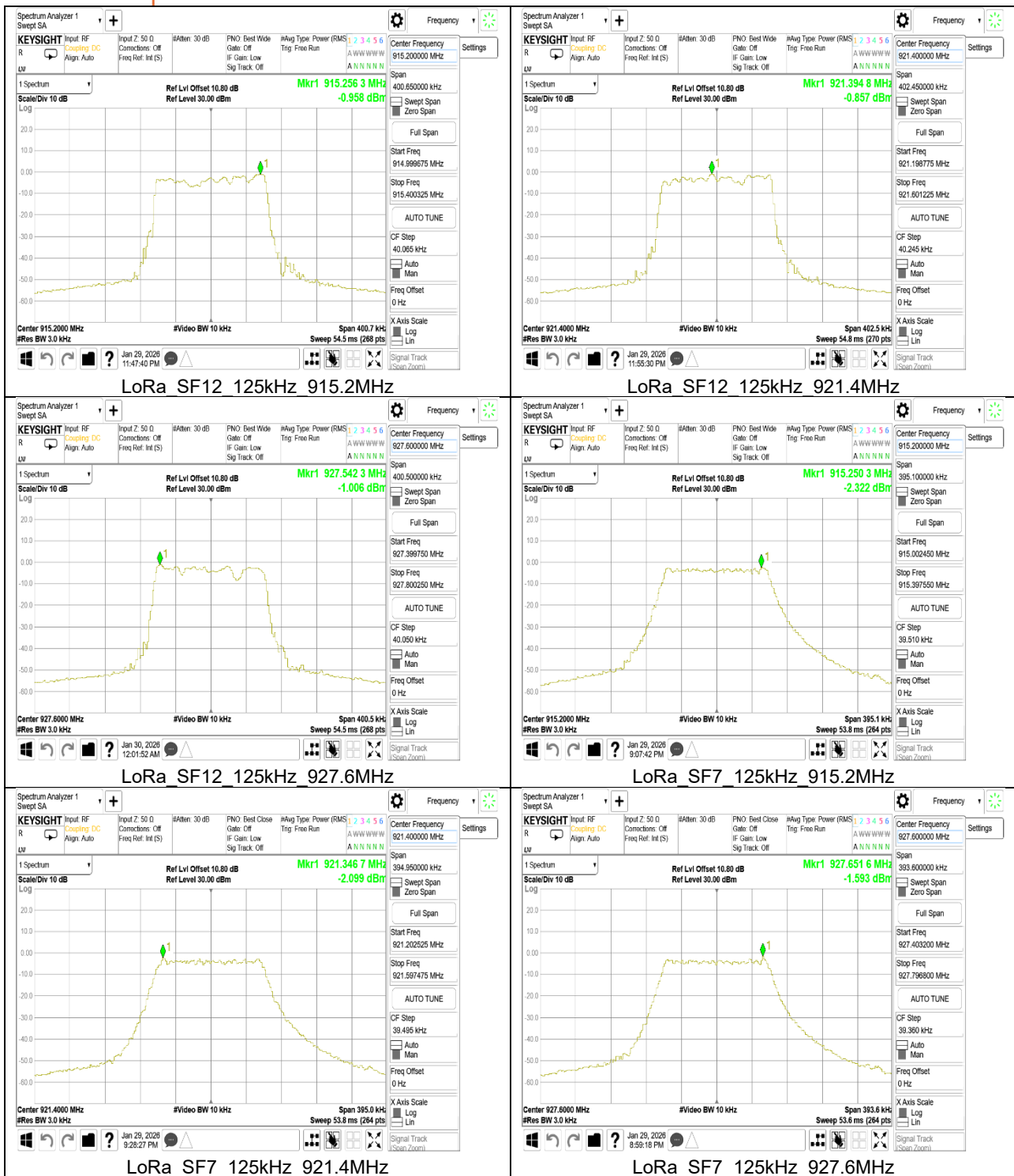
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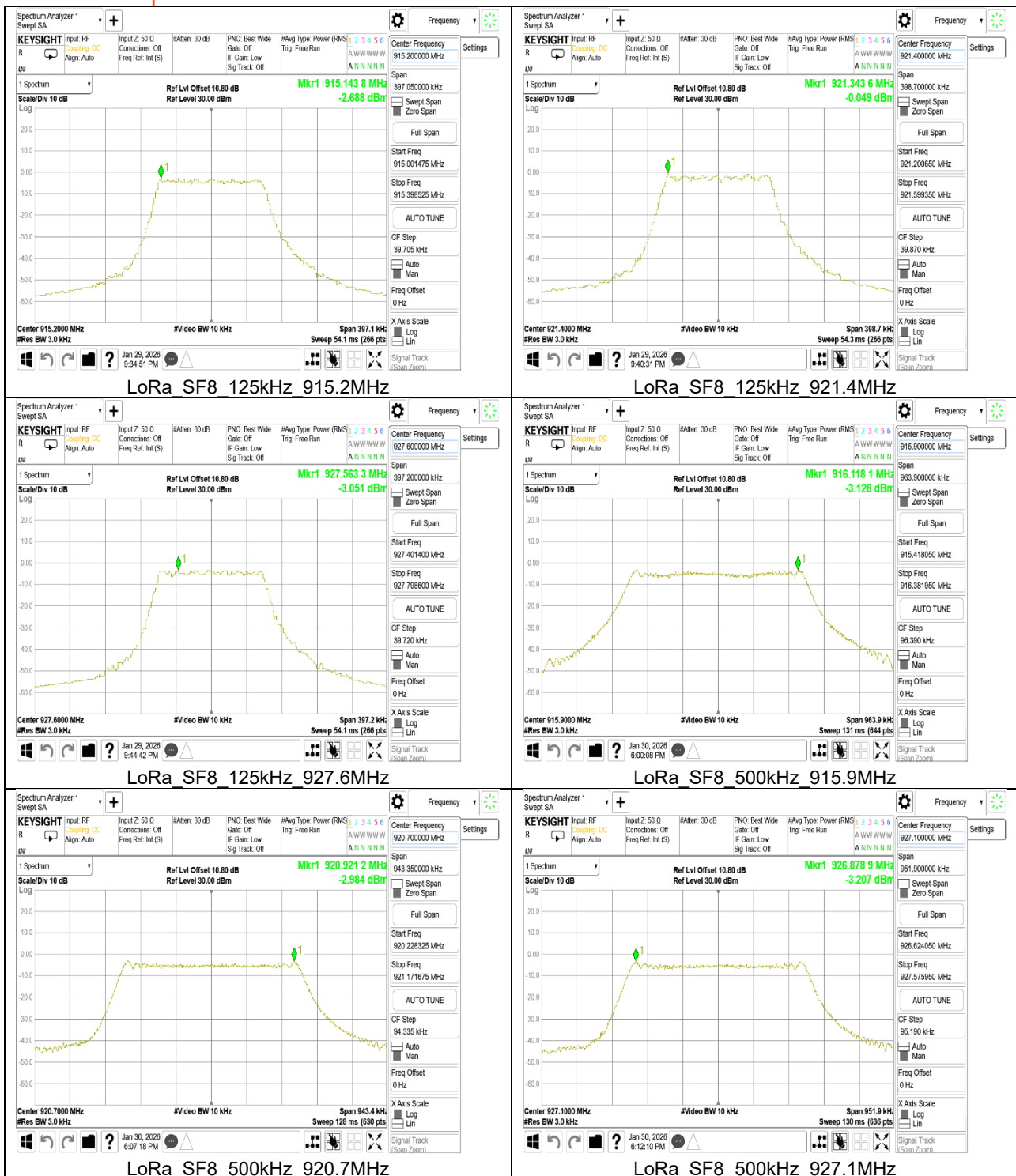
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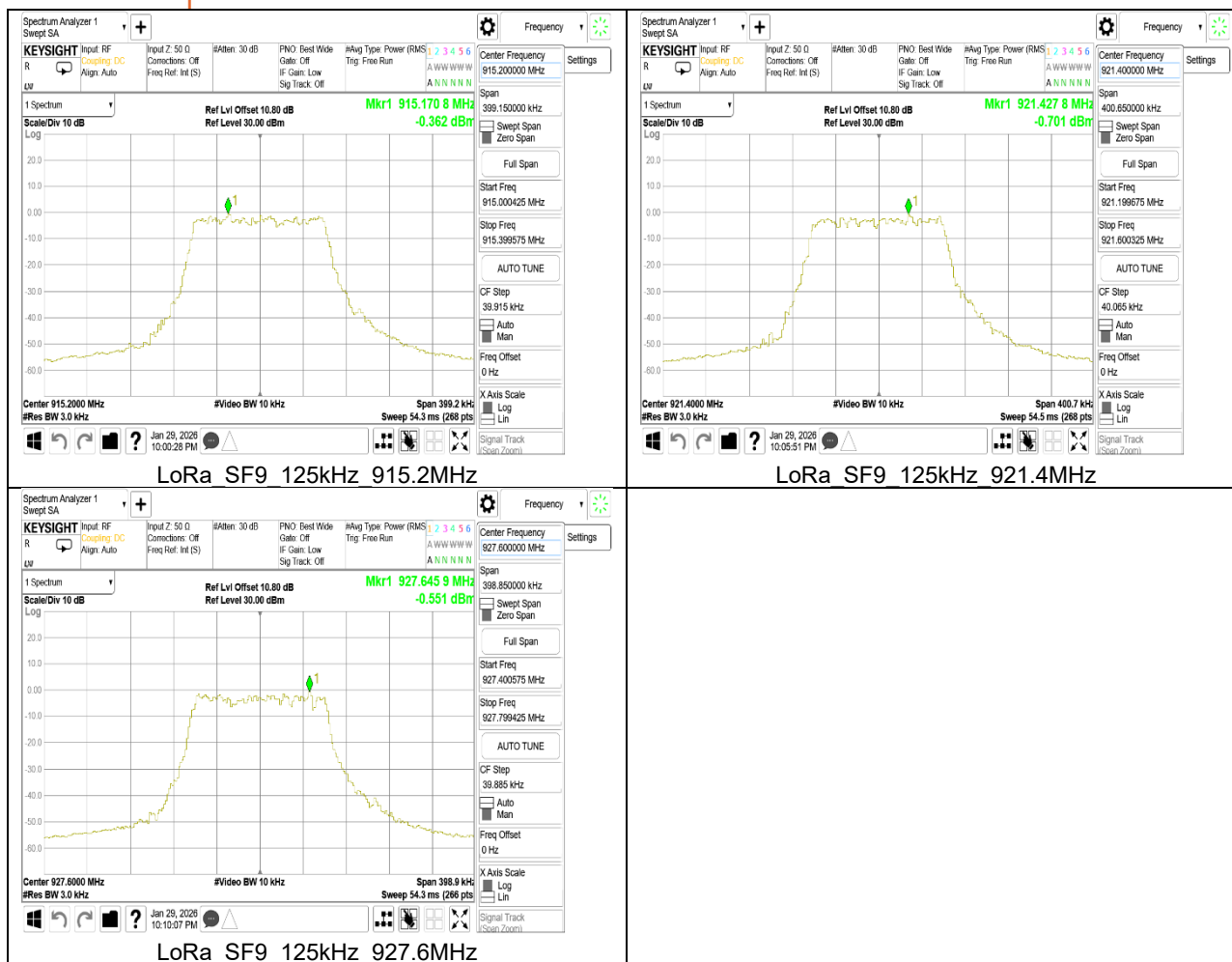
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7.6 Time Of Occupancy (Dwell Time)

Channel	PACKET TYPE	Number of transmission in a 25.6s	Dwell Time (ms)	Limit (ms)
921.4	LoRa_SF7_125kHz	1	25.9	400
921.4	LoRa_SF8_125kHz	1	51.8	400
921.4	LoRa_SF9_125kHz	1	103.5	400
921.4	LoRa_SF10_125kHz	1	207	400
Channel	PACKET TYPE	Number of transmission in a 3.2s	Dwell Time (ms)	Limit (ms)
920.7	LoRa_SF8_500kHz	1	12.98	400

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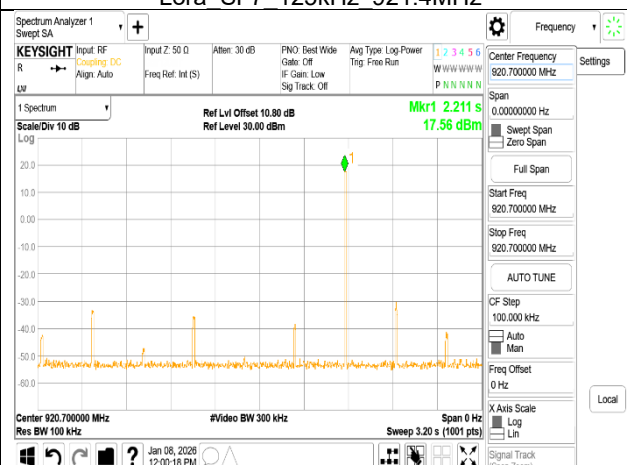
Lora SF10 125kHz 921.4MHz



Lora SF7 125kHz 921.4MHz



Lora SF8 125kHz 921.4MHz



Lora SF8 500kHz 920.7MHz



Lora SF9 125kHz 921.4MHz

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7.7 Out Of Band Emission

LoRa SF7 125kHz_ Reference Level of Limit

Frequency (MHz)	RF Power Density (dBm)	Reference Level of Limit = PSD - 30dB (dBm)
915.2	13.34	-16.66
921.4	13.12	-16.88
927.6	12.95	-17.05

***Note:**

- 1.cable loss as 10.8 dB that offsets in the spectrum
- 2.Refer to next page for plots.

LoRa SF8 125kHz_ Reference Level of Limit

Frequency (MHz)	RF Power Density (dBm)	Reference Level of Limit = PSD - 30dB (dBm)
915.2	12.43	-17.57
921.4	14.23	-15.77
927.6	12.06	-17.94

***Note:**

- 1.cable loss as 10.8 dB that offsets in the spectrum
- 2.Refer to next page for plots.

LoRa SF9 125kHz_ Reference Level of Limit

Frequency (MHz)	RF Power Density (dBm)	Reference Level of Limit = PSD - 30dB (dBm)
915.2	13.33	-16.67
921.4	13.14	-16.86
927.6	12.95	-17.05

***Note:**

- 1.cable loss as 10.8 dB that offsets in the spectrum
- 2.Refer to next page for plots.

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LoRa SF10 125kHz_ Reference Level of Limit

Frequency (MHz)	RF Power Density (dBm)	Reference Level of Limit = PSD - 30dB (dBm)
915.2	12.42	-17.58
921.4	14.25	-15.75
927.6	12.94	-17.06

***Note:**

- 1.cable loss as 10.8 dB that offsets in the spectrum
- 2.Refer to next page for plots.

LoRa SF11 125kHz_ Reference Level of Limit

Frequency (MHz)	RF Power Density (dBm)	Reference Level of Limit = PSD - 30dB (dBm)
915.2	13.29	-16.71
921.4	13.12	-16.88
927.6	12.94	-17.06

***Note:**

- 1.cable loss as 10.8 dB that offsets in the spectrum
- 2.Refer to next page for plots.

LoRa SF12 125kHz_ Reference Level of Limit

Frequency (MHz)	RF Power Density (dBm)	Reference Level of Limit = PSD - 30dB (dBm)
915.2	13.33	-16.67
921.4	13.13	-16.87
927.6	12.94	-17.06

***Note:**

- 1.cable loss as 10.8 dB that offsets in the spectrum
- 2.Refer to next page for plots.

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LoRa SF8 500kHz_ Reference Level of Limit

Frequency (MHz)	RF Power Density (dBm)	Reference Level of Limit = PSD - 30dB (dBm)
915.9	19.06	-10.94
920.7	18.93	-11.07
927.1	18.69	-11.31

***Note:**

- 1.cable loss as 10.8 dB that offsets in the spectrum
- 2.Refer to next page for plots.

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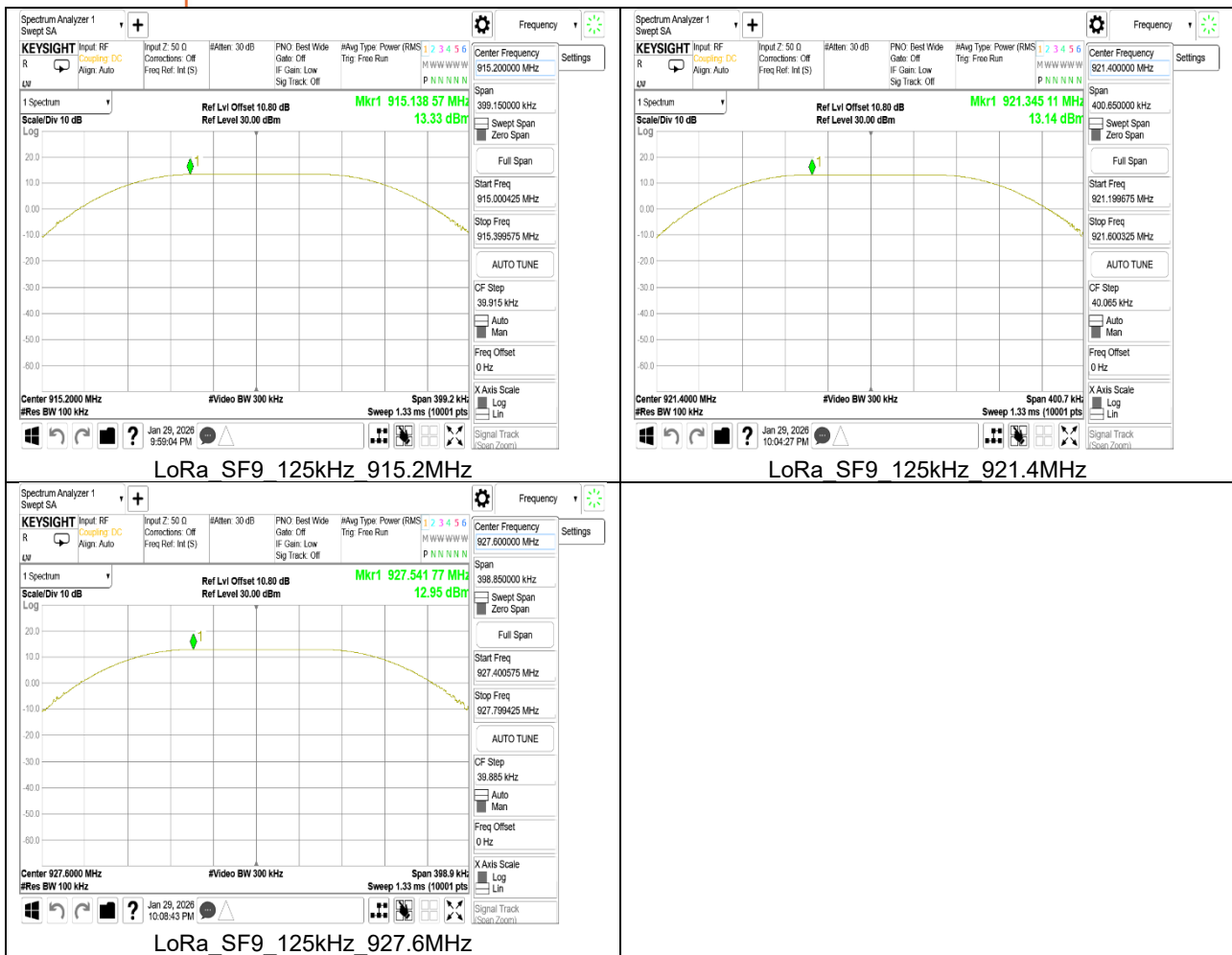
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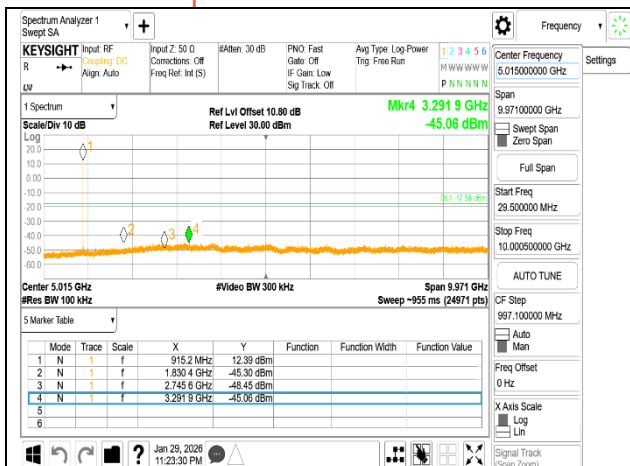
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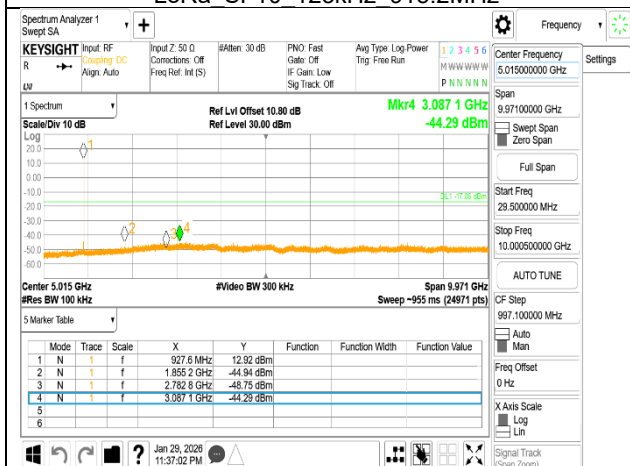
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LoRa SF10 125kHz 915.2MHz



LoRa SF10 125kHz 921.4MHz



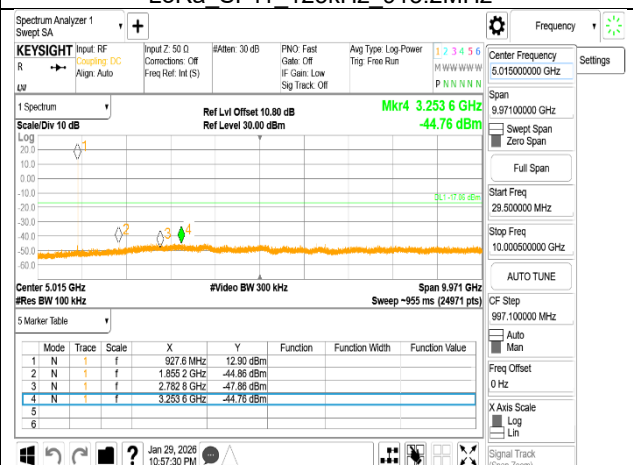
LoRa SF10 125kHz 927.6MHz



LoRa SF11 125kHz 915.2MHz



LoRa SF11 125kHz 921.4MHz



LoRa SF11 125kHz 927.6MHz

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