

Appendix A

Test Information:

Serial No.:	2VUU-1	Test Date:	2024/12/23~2025/01/06
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C):	19.8~23.2	Relative Humidity: (%)	31~56	ATM Pressure: (kPa)	101.2~102.8
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Micro-Coax	Coaxial Cable	UFB205A	323308-012	2024/01/02	2025/01/01
Minl-Clrcuits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/02/25	2025/02/24
Micro-Coax	Coaxial Cable	UFB205A	323308-012	2024/06/01	2025/05/31
Eastsheep	Coaxial Attenuator	5W-N-JK-6G-10dB	F-08-EM488	2024/06/07	2025/06/06
All-sun	Multimeter	EM305A	8348897	2024/08/16	2025/08/15
R&S	Spectrum Analyzer	FSV40	101947	2024/09/05	2025/09/04
R&S	Wideband Radio Communication Tester	CMW500	144976	2024/09/05	2025/09/04
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2024/09/06	2025/09/05
TDK-Lambda	DC Power Supply	Z+60-14	F-08-EM038-1	N/A	N/A

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Frequency stability vs. temperature & Frequency stability vs. voltage Compliance**IC RSS 132****GSM 850**

Mode	Result (MHz)	Limit (MHz)	Verdict
GSM_Low_TN/VN	824.081	824	Pass
GSM_Low_T1/VN	824.075	824	Pass
GSM_Low_T2/VN	824.079	824	Pass
GSM_Low_T3/VN	824.076	824	Pass
GSM_Low_T4/VN	824.076	824	Pass
GSM_Low_T5/VN	824.084	824	Pass
GSM_Low_T6/VN	824.080	824	Pass
GSM_Low_T7/VN	824.078	824	Pass
GSM_Low_T8/VN	824.077	824	Pass
GSM_Low_TN/VH	824.080	824	Pass
GSM_Low_TN/VL	824.079	824	Pass
GSM_High_TN/VN	848.918	849	Pass
GSM_High_T1/VN	848.922	849	Pass
GSM_High_T2/VN	848.923	849	Pass
GSM_High_T3/VN	848.921	849	Pass
GSM_High_T4/VN	848.920	849	Pass
GSM_High_T5/VN	848.921	849	Pass
GSM_High_T6/VN	848.921	849	Pass
GSM_High_T7/VN	848.921	849	Pass
GSM_High_T8/VN	848.923	849	Pass
GSM_High_TN/VH	848.924	849	Pass
GSM_High_TN/VL	848.919	849	Pass
EDGE_Low_Slot1_TN/VN	824.081	824	Pass
EDGE_Low_Slot1_T1/VN	824.076	824	Pass
EDGE_Low_Slot1_T2/VN	824.084	824	Pass
EDGE_Low_Slot1_T3/VN	824.082	824	Pass
EDGE_Low_Slot1_T4/VN	824.079	824	Pass
EDGE_Low_Slot1_T5/VN	824.080	824	Pass
EDGE_Low_Slot1_T6/VN	824.079	824	Pass
EDGE_Low_Slot1_T7/VN	824.076	824	Pass
EDGE_Low_Slot1_T8/VN	824.080	824	Pass
EDGE_Low_Slot1_TN/VH	824.082	824	Pass
EDGE_Low_Slot1_TN/VL	824.083	824	Pass
EDGE_High_Slot1_TN/VN	848.923	849	Pass
EDGE_High_Slot1_T1/VN	848.922	849	Pass
EDGE_High_Slot1_T2/VN	848.923	849	Pass
EDGE_High_Slot1_T3/VN	848.923	849	Pass
EDGE_High_Slot1_T4/VN	848.920	849	Pass
EDGE_High_Slot1_T5/VN	848.922	849	Pass
EDGE_High_Slot1_T6/VN	848.924	849	Pass
EDGE_High_Slot1_T7/VN	848.922	849	Pass
EDGE_High_Slot1_T8/VN	848.921	849	Pass
EDGE_High_Slot1_TN/VH	848.922	849	Pass
EDGE_High_Slot1_TN/VL	848.918	849	Pass

Note:

TN: 20°C; **T1:** -30°C; **T2:** -20°C; **T3:** -10°C; **T4:** 0°C; **T5:** 10°C; **T6:** 30°C; **T7:** 40°C; **T8:** 50°C.

VN: Normal Voltage; **VL:** Low Voltage; **VH:** High Voltage.

FCC Part 22H

GSM 850

Mode	Test Channel (MHz)	Frequency Error		Limit (ppm)	Verdict
		(Hz)	(ppm)		
GSM_Middle_TN/VN	836.6	5.6	0.0066	±2.5	Pass
GSM_Middle_T1/VN	836.6	8.9	0.0106	±2.5	Pass
GSM_Middle_T2/VN	836.6	-2.3	-0.0028	±2.5	Pass
GSM_Middle_T3/VN	836.6	5.9	0.0071	±2.5	Pass
GSM_Middle_T4/VN	836.6	3.0	0.0036	±2.5	Pass
GSM_Middle_T5/VN	836.6	13.4	0.0160	±2.5	Pass
GSM_Middle_T6/VN	836.6	4.8	0.0057	±2.5	Pass
GSM_Middle_T7/VN	836.6	4.6	0.0055	±2.5	Pass
GSM_Middle_T8/VN	836.6	5.5	0.0066	±2.5	Pass
GSM_Middle_TN/VH	836.6	4.8	0.0057	±2.5	Pass
GSM_Middle_TN/VL	836.6	1.5	0.0018	±2.5	Pass
EDGE_Middle_Slot1_TN/VN	836.6	9.7	0.0116	±2.5	Pass
EDGE_Middle_Slot1_T1/VN	836.6	13.1	0.0156	±2.5	Pass
EDGE_Middle_Slot1_T2/VN	836.6	7.2	0.0086	±2.5	Pass
EDGE_Middle_Slot1_T3/VN	836.6	8.7	0.0104	±2.5	Pass
EDGE_Middle_Slot1_T4/VN	836.6	9.5	0.0113	±2.5	Pass
EDGE_Middle_Slot1_T5/VN	836.6	7.6	0.0090	±2.5	Pass
EDGE_Middle_Slot1_T6/VN	836.6	11.4	0.0136	±2.5	Pass
EDGE_Middle_Slot1_T7/VN	836.6	9.4	0.0112	±2.5	Pass
EDGE_Middle_Slot1_T8/VN	836.6	10.2	0.0122	±2.5	Pass
EDGE_Middle_Slot1_TN/VH	836.6	5.5	0.0065	±2.5	Pass
EDGE_Middle_Slot1_TN/VL	836.6	16.6	0.0199	±2.5	Pass

Note:

Frequency Error (ppm)=Frequency Error (MHz)/Test Channel (MHz)*10⁶
TN: 20°C; T1: -30°C; T2: -20°C; T3: -10°C; T4: 0°C; T5: 10°C; T6: 30°C; T7: 40°C; T8: 50°C.
VN: Normal Voltage; VL: Low Voltage; VH: High Voltage.

FCC Part 24E & IC RSS 133**GSM 1900**

Mode	Result (MHz)	Limit (MHz)	Verdict
GSM_Low_TN/VN	1850.080	1850	Pass
GSM_Low_T1/VN	1850.081	1850	Pass
GSM_Low_T2/VN	1850.080	1850	Pass
GSM_Low_T3/VN	1850.081	1850	Pass
GSM_Low_T4/VN	1850.082	1850	Pass
GSM_Low_T5/VN	1850.083	1850	Pass
GSM_Low_T6/VN	1850.080	1850	Pass
GSM_Low_T7/VN	1850.082	1850	Pass
GSM_Low_T8/VN	1850.081	1850	Pass
GSM_Low_TN/VH	1850.078	1850	Pass
GSM_Low_TN/VL	1850.080	1850	Pass
GSM_High_TN/VN	1909.922	1910	Pass
GSM_High_T1/VN	1909.921	1910	Pass
GSM_High_T2/VN	1909.922	1910	Pass
GSM_High_T3/VN	1909.920	1910	Pass
GSM_High_T4/VN	1909.920	1910	Pass
GSM_High_T5/VN	1909.923	1910	Pass
GSM_High_T6/VN	1909.921	1910	Pass
GSM_High_T7/VN	1909.922	1910	Pass
GSM_High_T8/VN	1909.922	1910	Pass
GSM_High_TN/VH	1909.920	1910	Pass
GSM_High_TN/VL	1909.919	1910	Pass
EDGE_Low_Slot1_TN/VN	1850.078	1850	Pass
EDGE_Low_Slot1_T1/VN	1850.075	1850	Pass
EDGE_Low_Slot1_T2/VN	1850.079	1850	Pass
EDGE_Low_Slot1_T3/VN	1850.083	1850	Pass
EDGE_Low_Slot1_T4/VN	1850.081	1850	Pass
EDGE_Low_Slot1_T5/VN	1850.080	1850	Pass
EDGE_Low_Slot1_T6/VN	1850.079	1850	Pass
EDGE_Low_Slot1_T7/VN	1850.078	1850	Pass
EDGE_Low_Slot1_T8/VN	1850.082	1850	Pass
EDGE_Low_Slot1_TN/VH	1850.082	1850	Pass
EDGE_Low_Slot1_TN/VL	1850.079	1850	Pass
EDGE_High_Slot1_TN/VN	1909.924	1910	Pass
EDGE_High_Slot1_T1/VN	1909.919	1910	Pass
EDGE_High_Slot1_T2/VN	1909.920	1910	Pass
EDGE_High_Slot1_T3/VN	1909.925	1910	Pass
EDGE_High_Slot1_T4/VN	1909.926	1910	Pass
EDGE_High_Slot1_T5/VN	1909.919	1910	Pass
EDGE_High_Slot1_T6/VN	1909.920	1910	Pass
EDGE_High_Slot1_T7/VN	1909.922	1910	Pass
EDGE_High_Slot1_T8/VN	1909.921	1910	Pass
EDGE_High_Slot1_TN/VH	1909.922	1910	Pass
EDGE_High_Slot1_TN/VL	1909.926	1910	Pass

Note:

TN: 20°C; T1: -30°C; T2: -20°C; T3: -10°C; T4: 0°C; T5: 10°C; T6: 30°C; T7: 40°C; T8: 50°C.

VN: Normal Voltage; VL: Low Voltage; VH: High Voltage.

Occupied Bandwidth

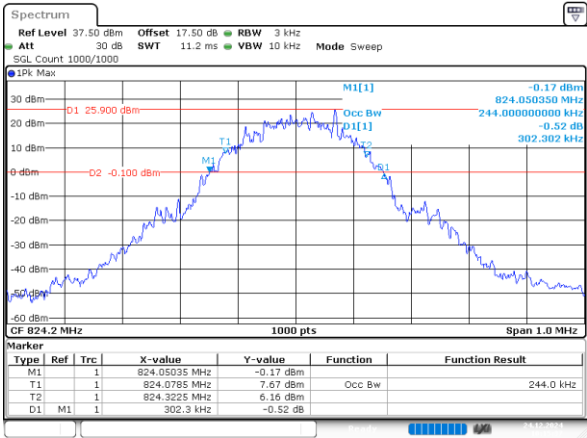
FCC Part 22H & IC RSS 132

GSM 850, Normal

Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.244	0.302
GSM_Middle	0.245	0.307
GSM_High	0.235	0.274
EDGE_Low_Slot1	0.242	0.314
EDGE_Middle_Slot1	0.239	0.313
EDGE_High_Slot1	0.238	0.301

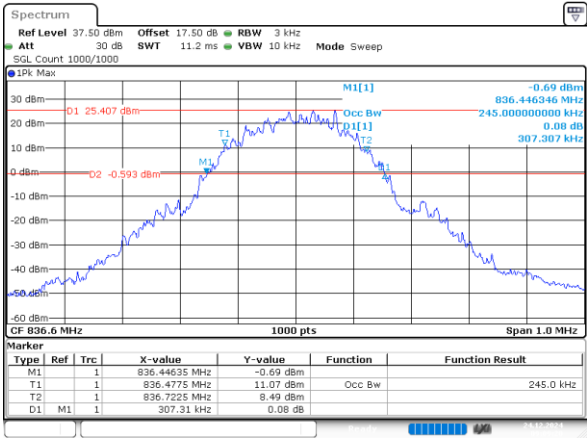
GSM 850, Normal

GSM_Low



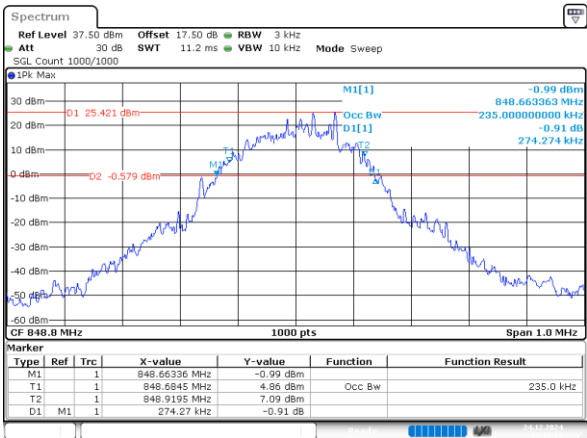
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GSM_Middle



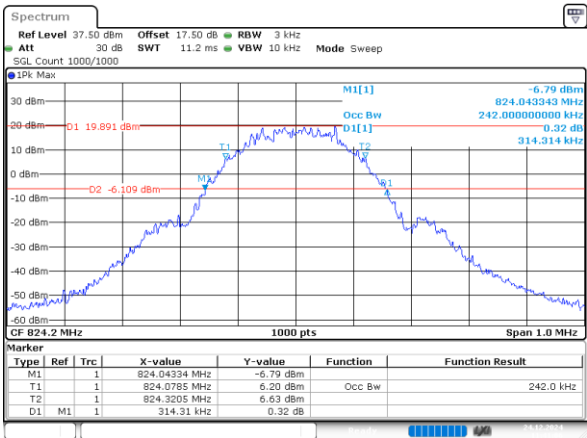
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GSM_High



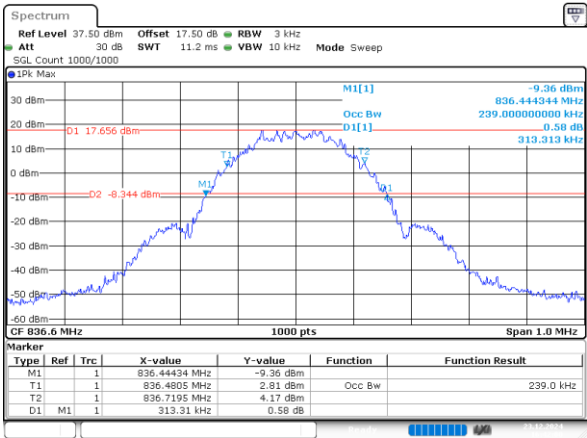
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EDGE_Low_Slot1



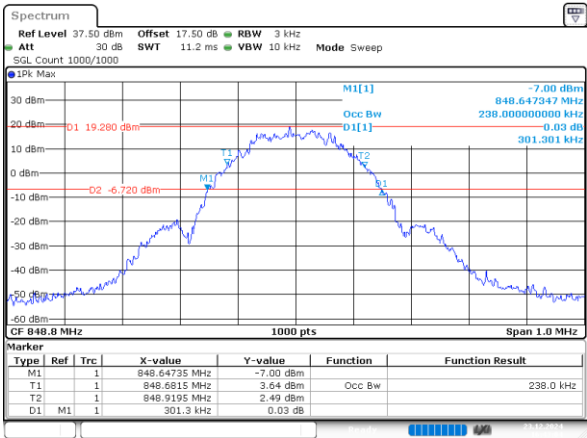
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EDGE_Middle_Slot1



ProjectNo.:2402A62839E-RF Tester:Loge Long
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EDGE_High_Slot1



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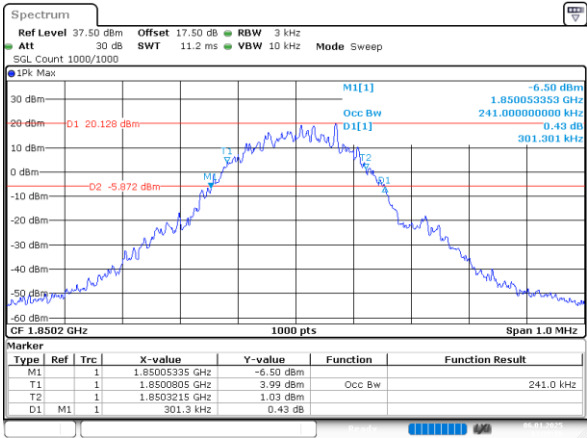
FCC Part 24E & IC RSS 133

GSM 1900, Normal

Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.241	0.301
GSM_Middle	0.242	0.301
GSM_High	0.243	0.300
EDGE_Low_Slot1	0.243	0.316
EDGE_Middle_Slot1	0.241	0.315
EDGE_High_Slot1	0.248	0.313

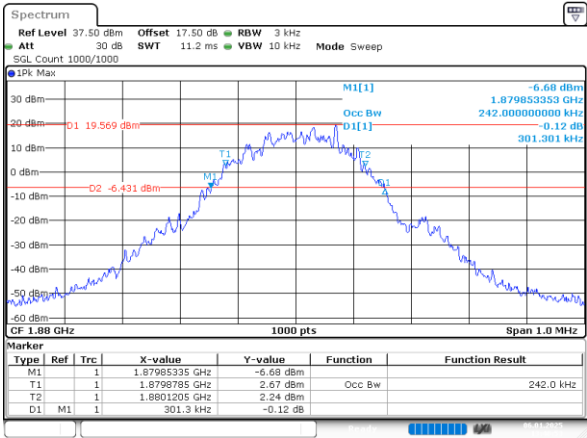
GSM 1900, Normal

GSM_Low



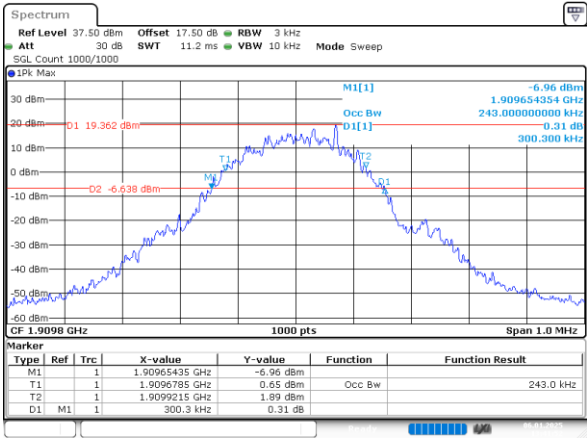
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GSM_Middle



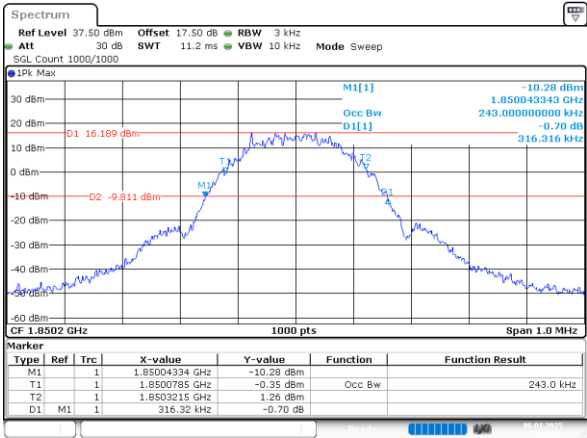
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GSM_High



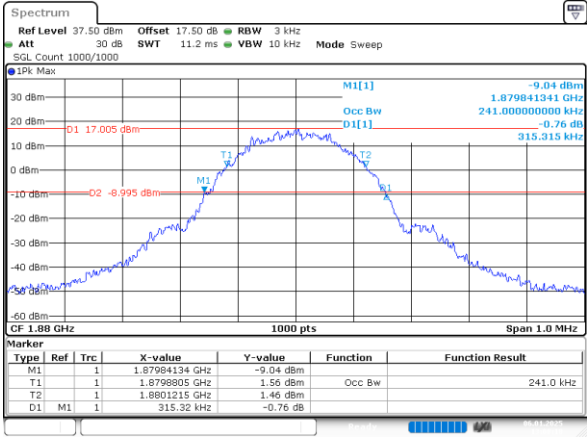
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EDGE_Low_Slot1



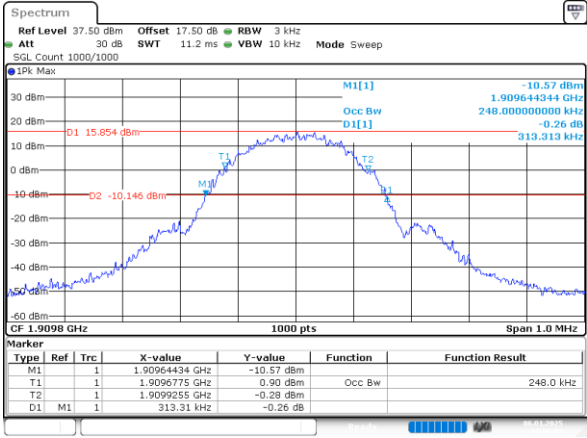
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EDGE_Middle_Slot1



ProjectNo.:2402A62839E-RF Tester:Loge Long
Date: 6.JAN.2025 13:08:18

EDGE_High_Slot1



ProjectNo.:2402A62839E-RF Tester:Loge Long
Date: 6.JAN.2025 13:09:05

RF Output Power

FCC Part 22H & IC RSS 132
GSM 850, Normal

Mode	Average Conducted Power(dBm)	ERP (dBm)	FCC Limit(dBm)	IC Limit(dBm)	Verdict
GSM_Low	33.02	26.82	38.45	34.77	Pass
GSM_Middle	32.78	26.58	38.45	34.77	Pass
GSM_High	32.93	26.73	38.45	34.77	Pass
GPRS_Low_Slot1	33.06	26.86	38.45	34.77	Pass
GPRS_Low_Slot2	30.70	24.50	38.45	34.77	Pass
GPRS_Low_Slot3	28.71	22.51	38.45	34.77	Pass
GPRS_Low_Slot4	26.69	20.49	38.45	34.77	Pass
GPRS_Middle_Slot1	32.81	26.61	38.45	34.77	Pass
GPRS_Middle_Slot2	30.40	24.20	38.45	34.77	Pass
GPRS_Middle_Slot3	28.45	22.25	38.45	34.77	Pass
GPRS_Middle_Slot4	26.35	20.15	38.45	34.77	Pass
GPRS_High_Slot1	32.91	26.71	38.45	34.77	Pass
GPRS_High_Slot2	30.21	24.01	38.45	34.77	Pass
GPRS_High_Slot3	28.25	22.05	38.45	34.77	Pass
GPRS_High_Slot4	26.15	19.95	38.45	34.77	Pass
EDGE_Low_Slot1	25.79	19.59	38.45	34.77	Pass
EDGE_Low_Slot2	24.42	18.22	38.45	34.77	Pass
EDGE_Low_Slot3	21.97	15.77	38.45	34.77	Pass
EDGE_Low_Slot4	19.64	13.44	38.45	34.77	Pass
EDGE_Middle_Slot1	25.45	19.25	38.45	34.77	Pass
EDGE_Middle_Slot2	24.10	17.90	38.45	34.77	Pass
EDGE_Middle_Slot3	21.68	15.48	38.45	34.77	Pass
EDGE_Middle_Slot4	19.31	13.11	38.45	34.77	Pass
EDGE_High_Slot1	25.37	19.17	38.45	34.77	Pass
EDGE_High_Slot2	24.05	17.85	38.45	34.77	Pass
EDGE_High_Slot3	21.64	15.44	38.45	34.77	Pass
EDGE_High_Slot4	19.36	13.16	38.45	34.77	Pass

Note:
ERP = Peak Conducted Power(dBm) - L_c(dB) + G_T(dBd)
G_T(dBd) = G_T(dBi) - 2.15
1.Ant Gain = -3.95dBi;
2.C_L = signal attenuation in the connecting cable between the transmitter and antenna in 0.1dB

FCC Part 24E & IC RSS 133**GSM 1900, Normal**

Mode	Average Conducted Power(dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM_Low	27.00	28.12	33	Pass
GSM_Middle	26.80	27.92	33	Pass
GSM_High	26.13	27.25	33	Pass
GPRS_Low_Slot1	29.37	30.49	33	Pass
GPRS_Low_Slot2	27.18	28.30	33	Pass
GPRS_Low_Slot3	25.45	26.57	33	Pass
GPRS_Low_Slot4	23.21	24.33	33	Pass
GPRS_Middle_Slot1	29.39	30.51	33	Pass
GPRS_Middle_Slot2	26.92	28.04	33	Pass
GPRS_Middle_Slot3	25.21	26.33	33	Pass
GPRS_Middle_Slot4	23.12	24.24	33	Pass
GPRS_High_Slot1	28.92	30.04	33	Pass
GPRS_High_Slot2	26.24	27.36	33	Pass
GPRS_High_Slot3	24.55	25.67	33	Pass
GPRS_High_Slot4	22.40	23.52	33	Pass
EDGE_Low_Slot1	24.26	25.38	33	Pass
EDGE_Low_Slot2	22.23	23.35	33	Pass
EDGE_Low_Slot3	19.92	21.04	33	Pass
EDGE_Low_Slot4	16.97	18.09	33	Pass
EDGE_Middle_Slot1	24.25	25.37	33	Pass
EDGE_Middle_Slot2	22.58	23.70	33	Pass
EDGE_Middle_Slot3	20.14	21.26	33	Pass
EDGE_Middle_Slot4	17.75	18.87	33	Pass
EDGE_High_Slot1	23.61	24.73	33	Pass
EDGE_High_Slot2	21.94	23.06	33	Pass
EDGE_High_Slot3	19.45	20.57	33	Pass
EDGE_High_Slot4	16.67	17.79	33	Pass

Note:

EIRP = Peak Conducted Power(dBm) - LC(dB) + GT(dBi)

1.Ant Gain = 1.12dBi;

2.CL = signal attenuation in the connecting cable between the transmitter and antenna in 0dB

Peak-to-average Ratio (PAR)

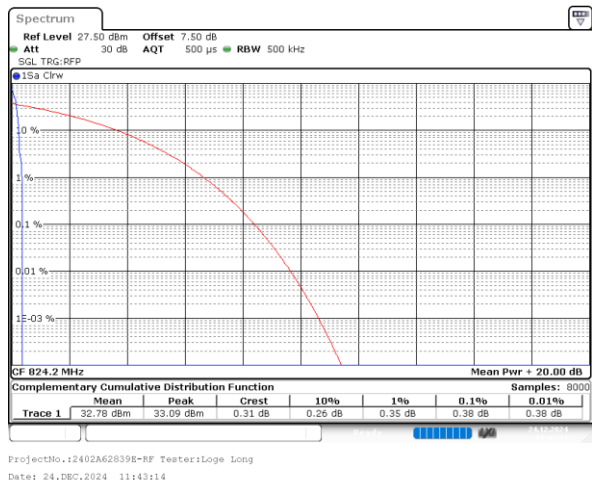
FCC Part 22H & IC RSS 132

GSM 850, Normal

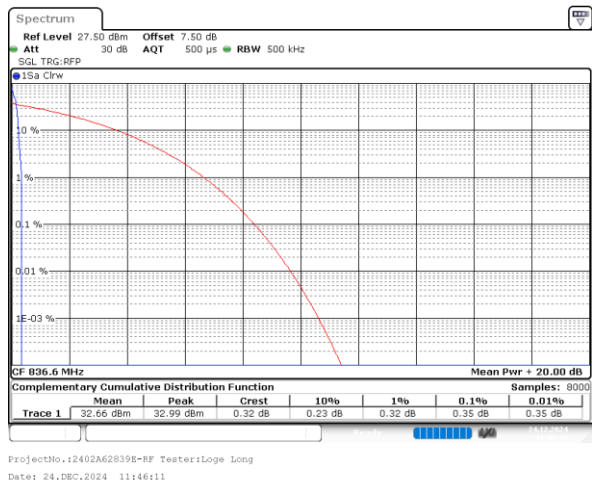
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GSM_Low	0.38	13
GSM_Middle	0.35	13
GSM_High	0.38	13

GSM 850, Normal

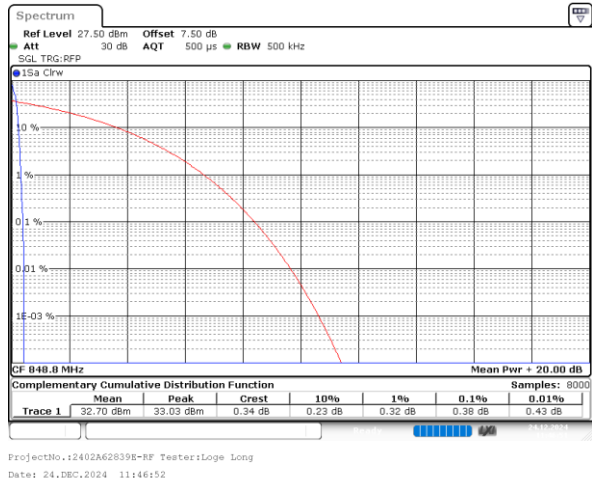
GSM_Low



GSM_Middle



GSM_High



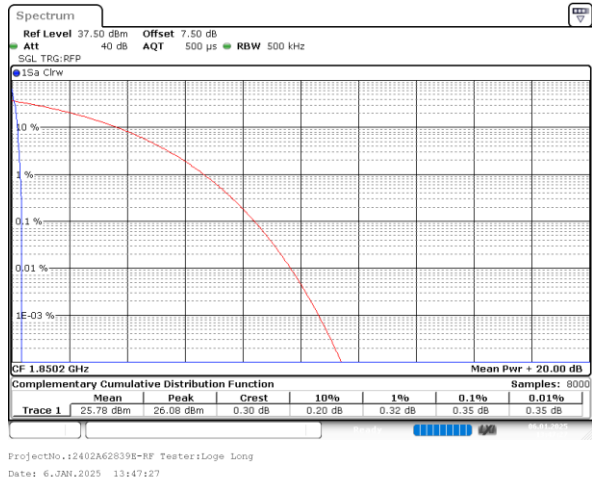
FCC Part 24E & IC RSS 133

GSM 1900, Normal

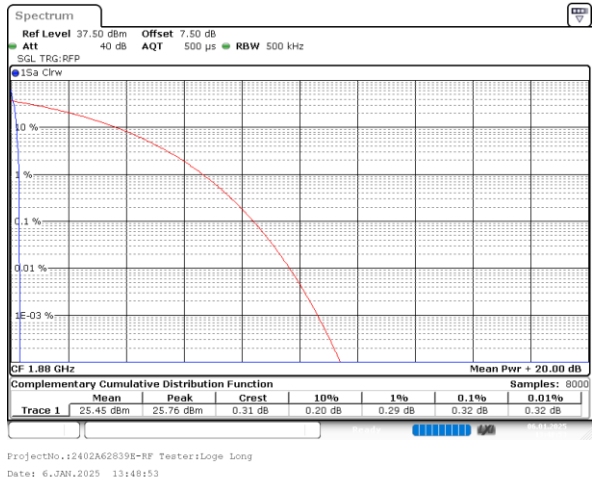
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GSM_Middle	0.32	13
GSM_High	0.35	13

GSM 1900, Normal

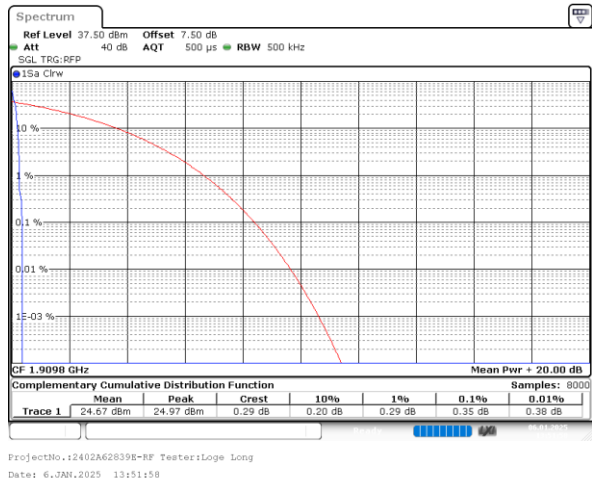
GSM_Low



GSM_Middle



GSM_High

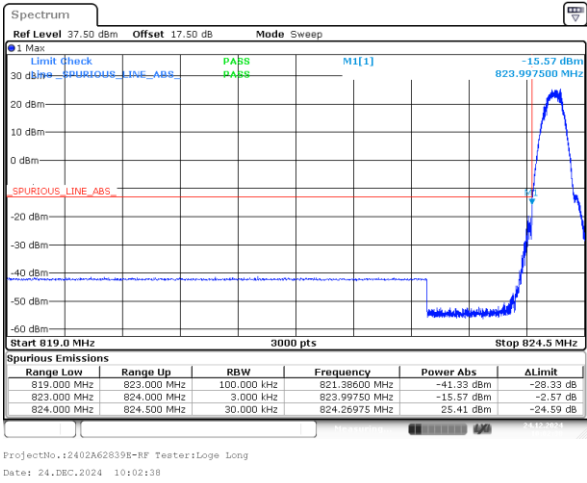


Out of band emission, Band Edge

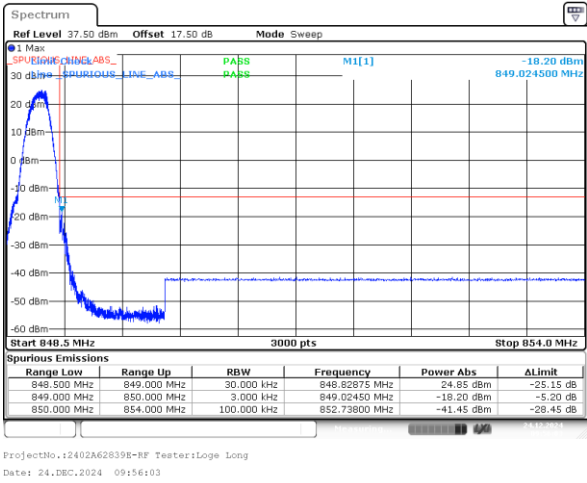
FCC Part 22H & IC RSS 132

GSM 850, Normal

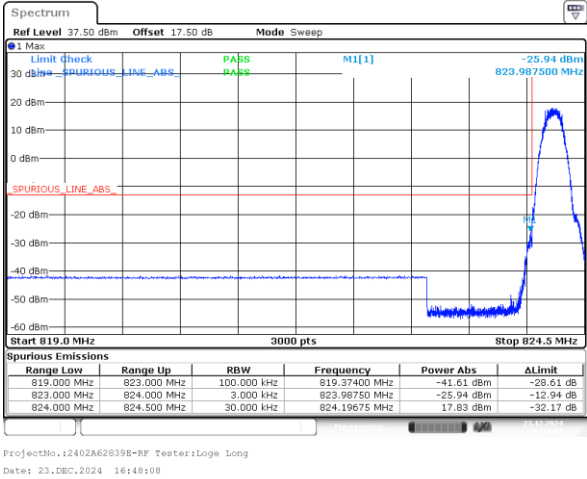
GSM_Low



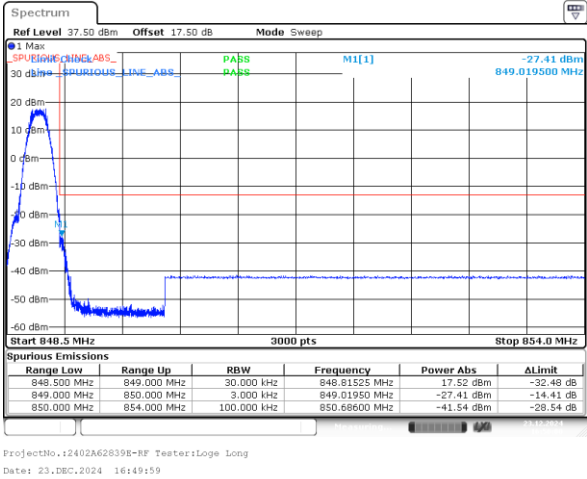
GSM_High



EDGE_Low_Slot1

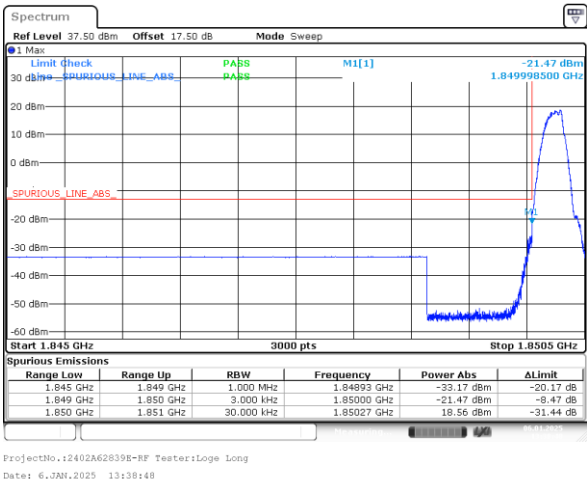


EDGE_High_Slot1

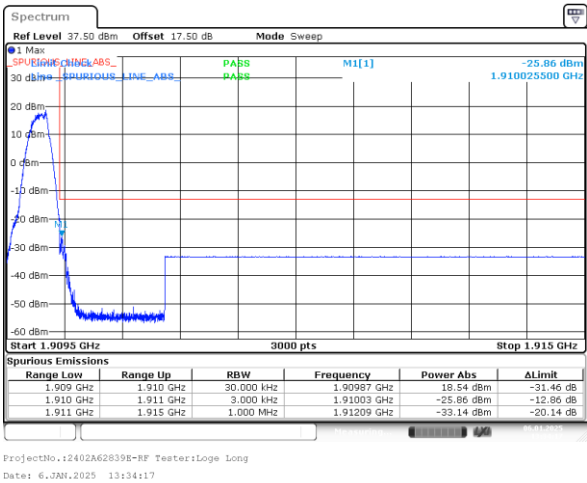


GSM 1900, Normal

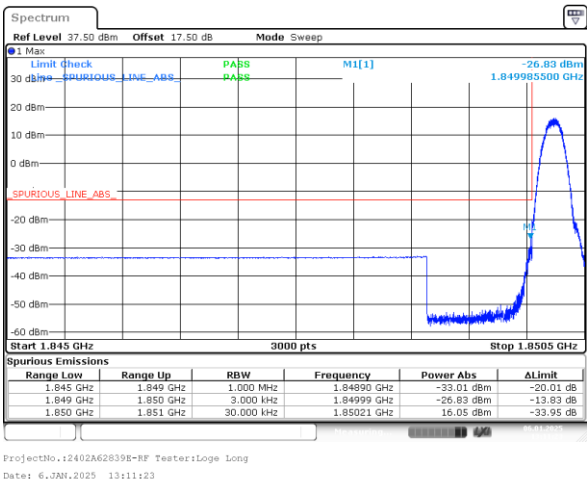
GSM_Low



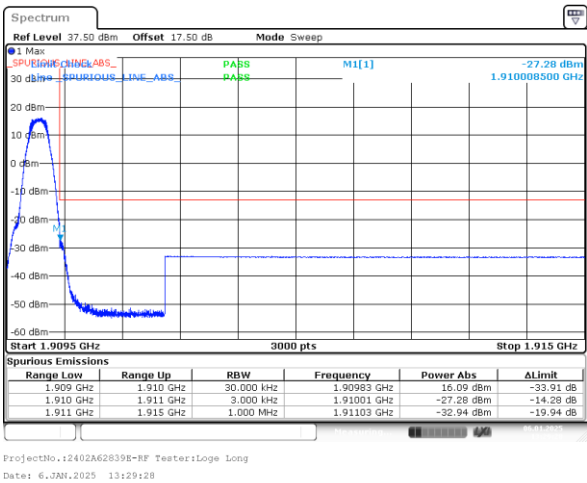
GSM_High



EDGE_Low_Slot1



EDGE_High_Slot1



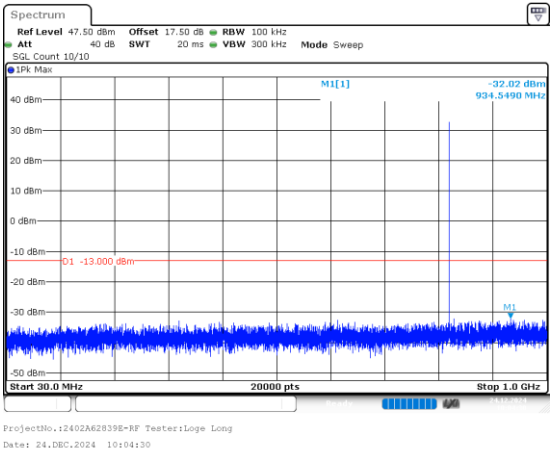
Spurious Emissions at Antenna Terminal

FCC Part 22H & IC RSS 132

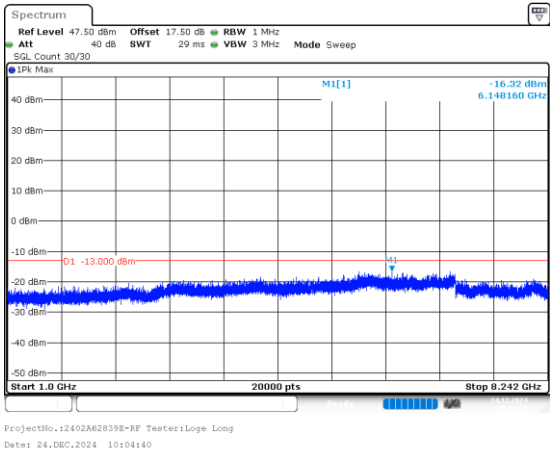
GSM 850, Normal

GSM_Low

Below 1G

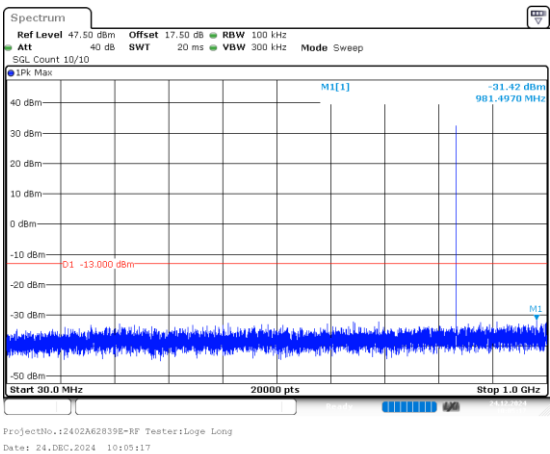


Above 1G

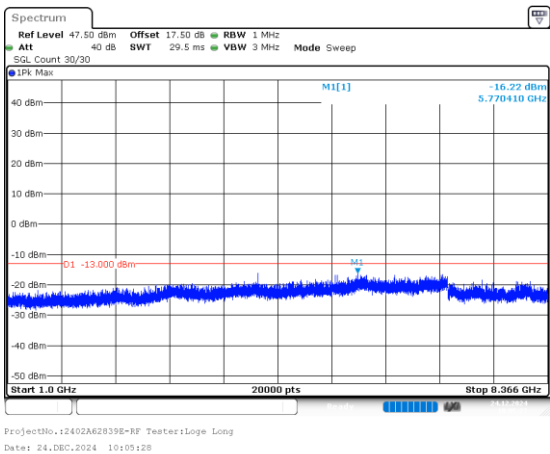


GSM_Middle

Below 1G

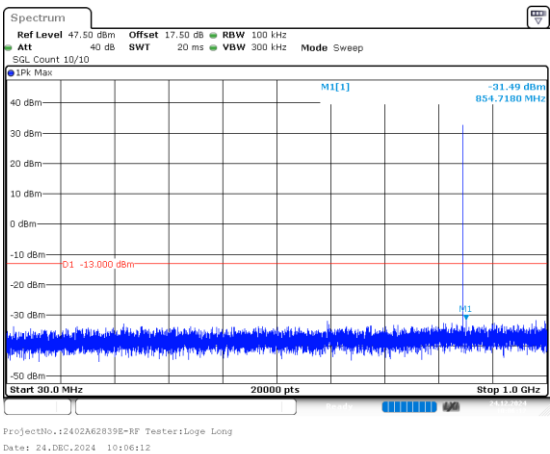


Above 1G

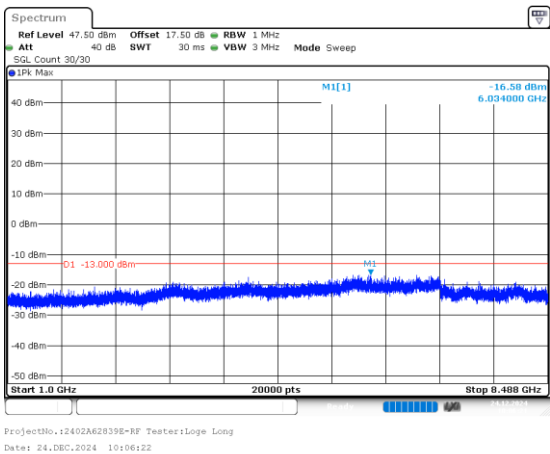


GSM_High

Below 1G



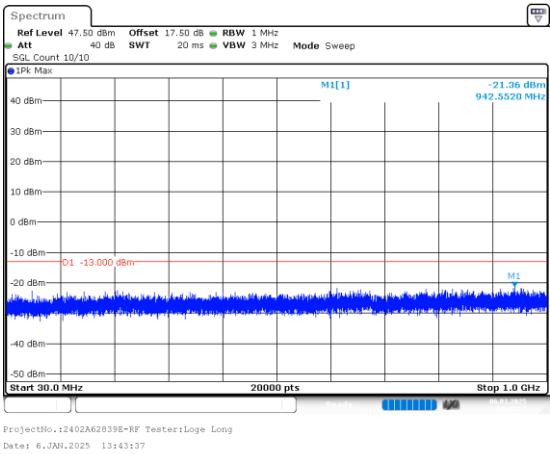
Above 1G



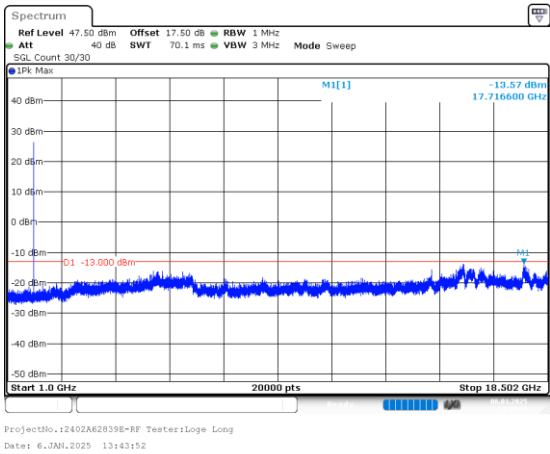
GSM 1900, Normal

GSM_Low

Below 1G

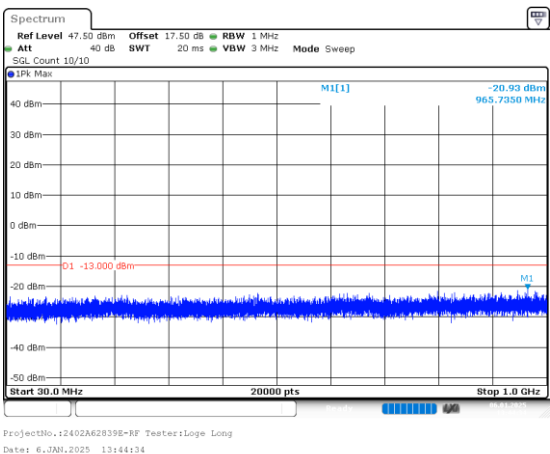


Above 1G

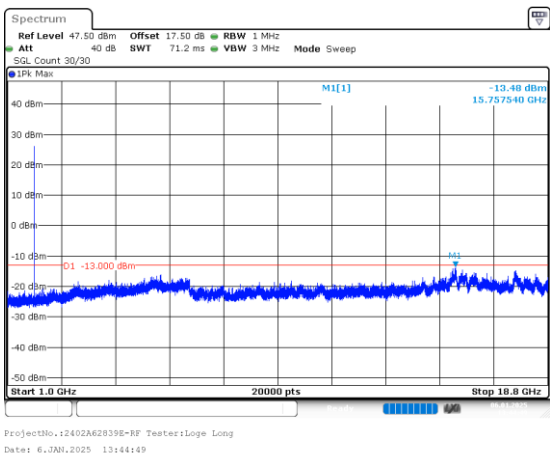


GSM_Middle

Below 1G

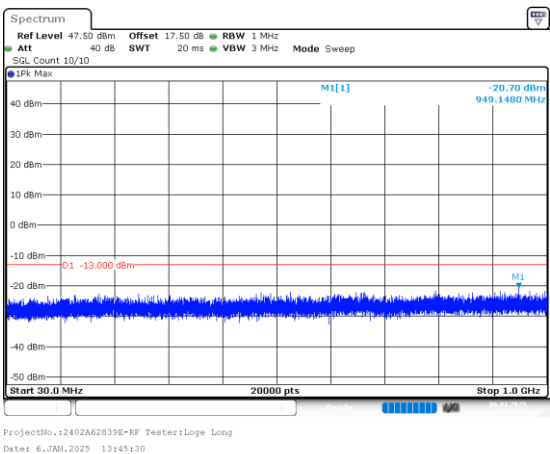


Above 1G

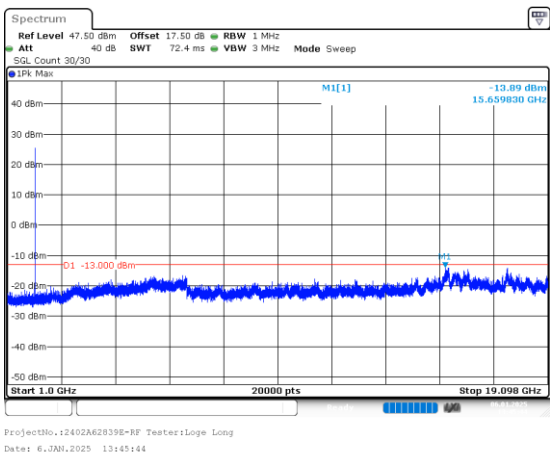


GSM_High

Below 1G



Above 1G



***** END OF DATA *****