

Appendix A

Test Information:

Serial No.:	31ZT-1	Test Date:	2025/05/09~2025/06/02
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.3	Relative Humidity: (%)	68	ATM Pressure: (kPa)	100.8
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Micro-Coax	Coaxial Cable	UFB205A	323308-015	2024/06/01	2025/05/31
Narda	Coaxial Attenuator	773-10	F-08-EM511	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
Minl-Clrucits	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2025/02/25	2026/02/24
Micro-Coax	Coaxial Cable	UFB205A	323308-015	2025/06/01	2026/05/31
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

FCC Part 22H

GSM 850

Mode	Test Channel (MHz)	Frequency Error		Limit (ppm)	Verdict
		(Hz)	(ppm)		
GPRS_Middle_GMSK_TN/VN	836.6	6.4	0.0076	±2.5	Pass
GPRS_Middle_GMSK_T1/VN	836.6	6.9	0.0083	±2.5	Pass
GPRS_Middle_GMSK_T2/VN	836.6	4.6	0.0055	±2.5	Pass
GPRS_Middle_GMSK_T3/VN	836.6	4.3	0.0051	±2.5	Pass
GPRS_Middle_GMSK_T4/VN	836.6	7.9	0.0094	±2.5	Pass
GPRS_Middle_GMSK_T5/VN	836.6	4.6	0.0054	±2.5	Pass
GPRS_Middle_GMSK_T6/VN	836.6	6.2	0.0074	±2.5	Pass
GPRS_Middle_GMSK_T7/VN	836.6	5.0	0.0060	±2.5	Pass
GPRS_Middle_GMSK_T8/VN	836.6	4.6	0.0055	±2.5	Pass
GPRS_Middle_GMSK_TN/VH	836.6	5.3	0.0063	±2.5	Pass
GPRS_Middle_GMSK_TN/VL	836.6	5.9	0.0071	±2.5	Pass
EDGE_Middle_8PSK_TN/VN	836.6	0.5	0.0005	±2.5	Pass
EDGE_Middle_8PSK_T1/VN	836.6	2.2	0.0026	±2.5	Pass
EDGE_Middle_8PSK_T2/VN	836.6	1.8	0.0022	±2.5	Pass
EDGE_Middle_8PSK_T3/VN	836.6	0.3	0.0004	±2.5	Pass
EDGE_Middle_8PSK_T4/VN	836.6	2.4	0.0029	±2.5	Pass
EDGE_Middle_8PSK_T5/VN	836.6	2.0	0.0024	±2.5	Pass
EDGE_Middle_8PSK_T6/VN	836.6	2.4	0.0029	±2.5	Pass
EDGE_Middle_8PSK_T7/VN	836.6	0.6	0.0007	±2.5	Pass
EDGE_Middle_8PSK_T8/VN	836.6	0.1	0.0002	±2.5	Pass
EDGE_Middle_8PSK_TN/VH	836.6	1.7	0.0020	±2.5	Pass
EDGE_Middle_8PSK_TN/VL	836.6	1.5	0.0018	±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

GSM 1900

Mode	Result (MHz)	Limit (MHz)	Verdict
GPRS_Low_GMSK_TN/VN	1850.083	1850	Pass
GPRS_Low_GMSK_T1/VN	1850.077	1850	Pass
GPRS_Low_GMSK_T2/VN	1850.079	1850	Pass
GPRS_Low_GMSK_T3/VN	1850.081	1850	Pass
GPRS_Low_GMSK_T4/VN	1850.080	1850	Pass
GPRS_Low_GMSK_T5/VN	1850.079	1850	Pass
GPRS_Low_GMSK_T6/VN	1850.081	1850	Pass
GPRS_Low_GMSK_T7/VN	1850.079	1850	Pass
GPRS_Low_GMSK_T8/VN	1850.078	1850	Pass
GPRS_Low_GMSK_TN/VH	1850.081	1850	Pass
GPRS_Low_GMSK_TN/VL	1850.080	1850	Pass
GPRS_High_GMSK_TN/VN	1909.924	1910	Pass
GPRS_High_GMSK_T1/VN	1909.926	1910	Pass
GPRS_High_GMSK_T2/VN	1909.927	1910	Pass
GPRS_High_GMSK_T3/VN	1909.927	1910	Pass
GPRS_High_GMSK_T4/VN	1909.927	1910	Pass
GPRS_High_GMSK_T5/VN	1909.929	1910	Pass
GPRS_High_GMSK_T6/VN	1909.924	1910	Pass
GPRS_High_GMSK_T7/VN	1909.925	1910	Pass
GPRS_High_GMSK_T8/VN	1909.926	1910	Pass
GPRS_High_GMSK_TN/VH	1909.928	1910	Pass
GPRS_High_GMSK_TN/VL	1909.922	1910	Pass
EDGE_Low_8PSK_TN/VN	1850.077	1850	Pass
EDGE_Low_8PSK_T1/VN	1850.074	1850	Pass
EDGE_Low_8PSK_T2/VN	1850.075	1850	Pass
EDGE_Low_8PSK_T3/VN	1850.075	1850	Pass
EDGE_Low_8PSK_T4/VN	1850.077	1850	Pass
EDGE_Low_8PSK_T5/VN	1850.078	1850	Pass
EDGE_Low_8PSK_T6/VN	1850.078	1850	Pass
EDGE_Low_8PSK_T7/VN	1850.081	1850	Pass

Mode	Result (MHz)	Limit (MHz)	Verdict
EDGE_Low_8PSK_T8/VN	1850.076	1850	Pass
EDGE_Low_8PSK_TN/VH	1850.080	1850	Pass
EDGE_Low_8PSK_TN/VL	1850.075	1850	Pass
EDGE_High_8PSK_TN/VN	1909.928	1910	Pass
EDGE_High_8PSK_T1/VN	1909.930	1910	Pass
EDGE_High_8PSK_T2/VN	1909.928	1910	Pass
EDGE_High_8PSK_T3/VN	1909.926	1910	Pass
EDGE_High_8PSK_T4/VN	1909.925	1910	Pass
EDGE_High_8PSK_T5/VN	1909.929	1910	Pass
EDGE_High_8PSK_T6/VN	1909.928	1910	Pass
EDGE_High_8PSK_T7/VN	1909.923	1910	Pass
EDGE_High_8PSK_T8/VN	1909.922	1910	Pass
EDGE_High_8PSK_TN/VH	1909.932	1910	Pass
EDGE_High_8PSK_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

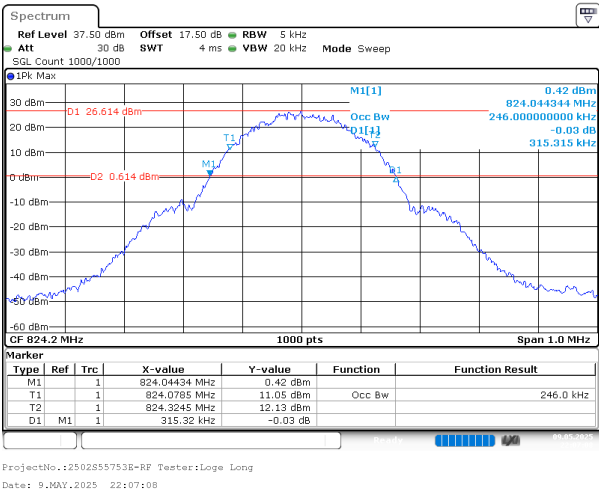
FCC Part 22H

GSM 850, Normal

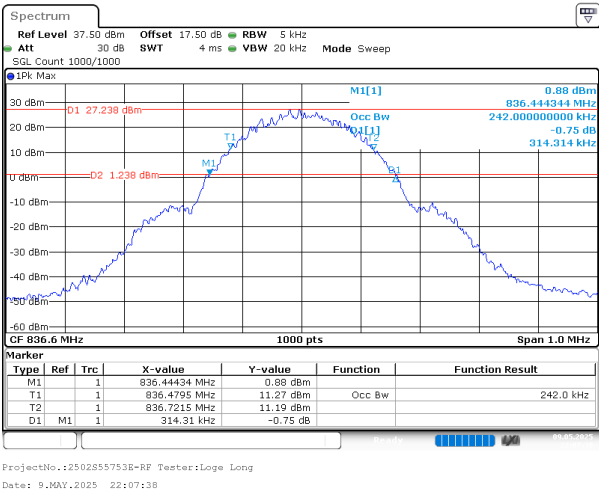
Mode	99% OBW (MHz)	26dB BW (MHz)
GPRS_Low_GMSK	0.246	0.315
GPRS_Middle_GMSK	0.242	0.314
GPRS_High_GMSK	0.245	0.320
EDGE_Low_8PSK	0.249	0.314
EDGE_Middle_8PSK	0.246	0.312
EDGE_High_8PSK	0.243	0.317

GSM 850, Normal

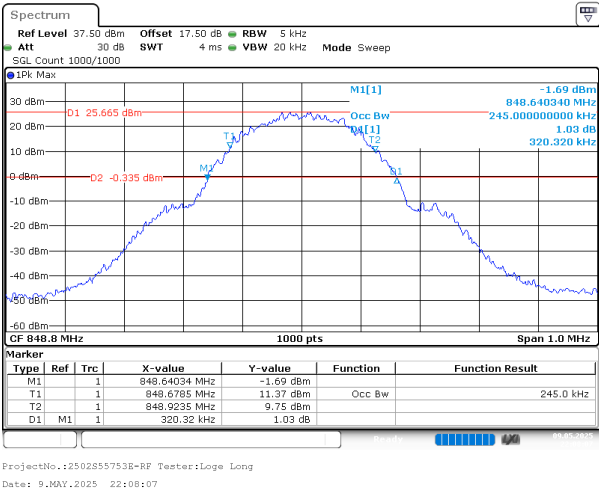
GPRS_Low_GMSK



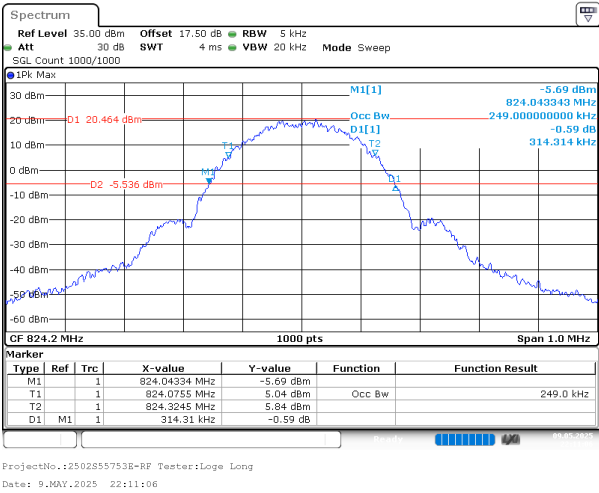
GPRS_Middle_GMSK



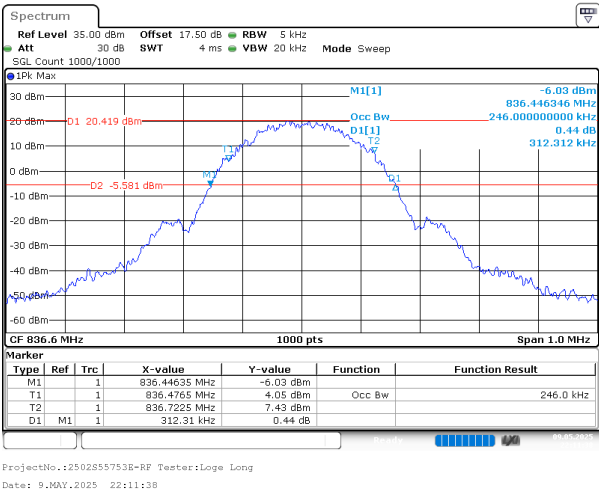
GPRS_High_GMSK



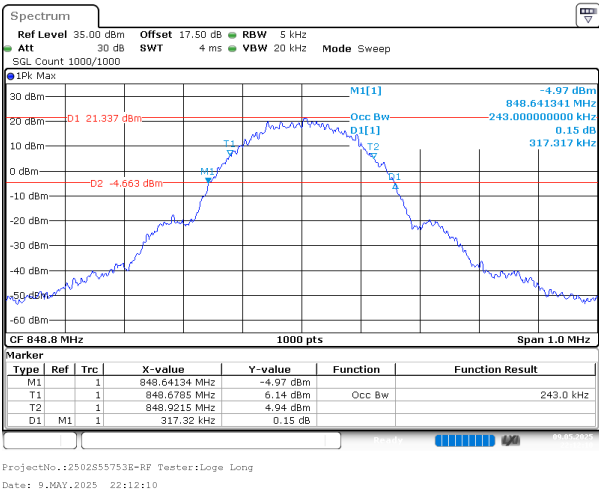
EDGE_Low_8PSK



EDGE_Middle_8PSK



EDGE_High_8PSK



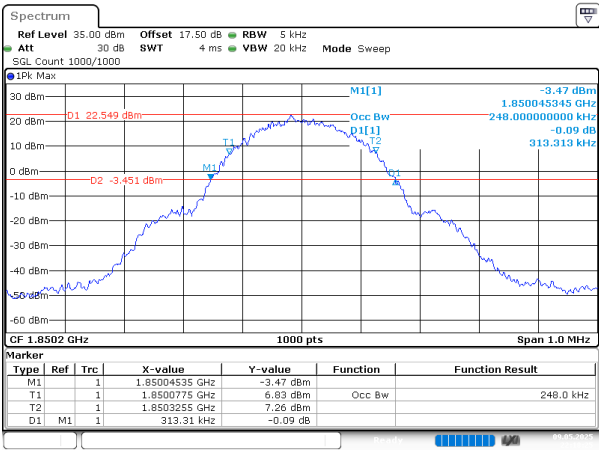
FCC Part 24E

GSM 1900, Normal

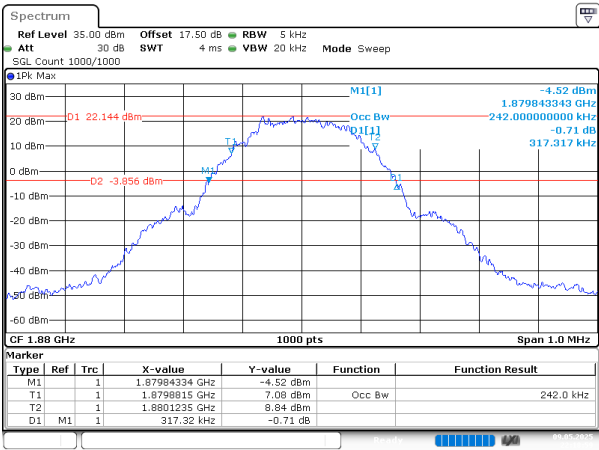
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GPRS_Low_GMSK	0.248	0.313
GPRS_Middle_GMSK	0.242	0.317
GPRS_High_GMSK	0.242	0.318
EDGE_Low_8PSK	0.251	0.313
EDGE_Middle_8PSK	0.251	0.309
EDGE_High_8PSK	0.250	0.326

GSM 1900, Normal

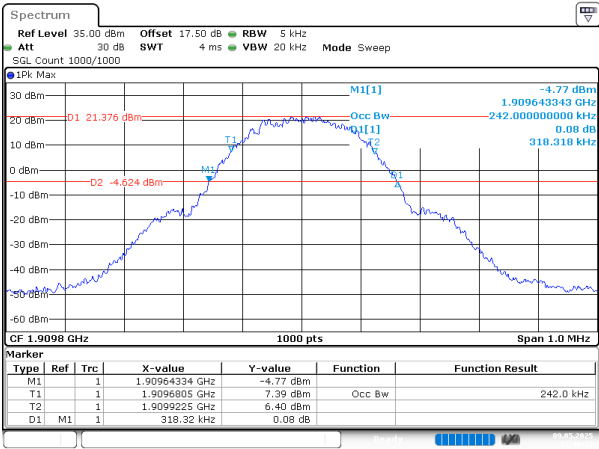
GPRS_Low_GMSK



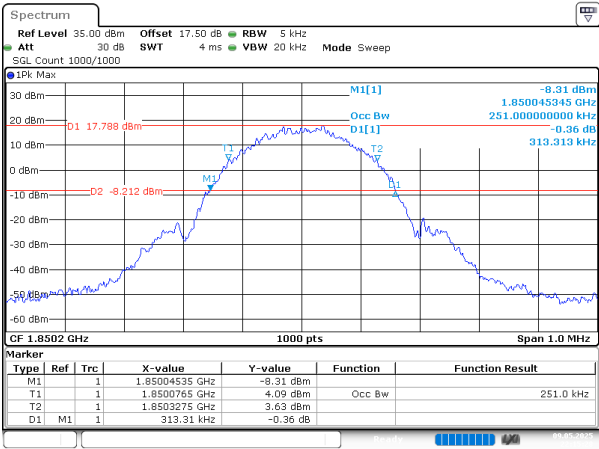
GPRS_Middle_GMSK



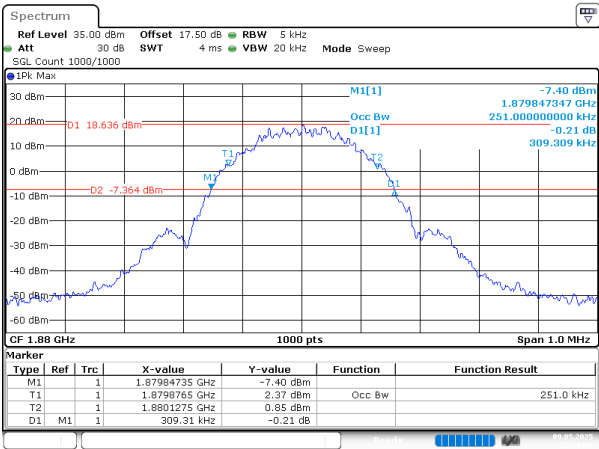
GPRS_High_GMSK



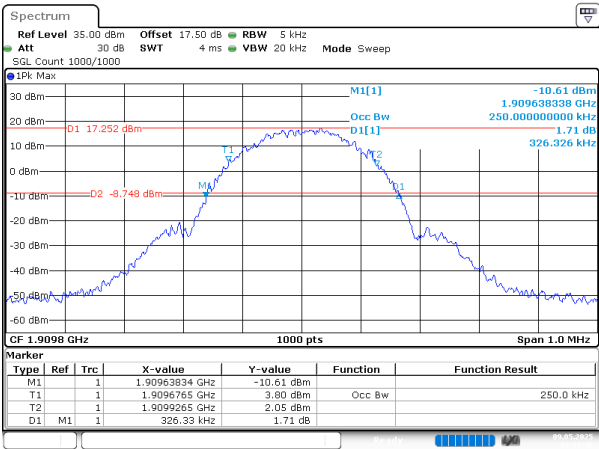
EDGE_Low_8PSK



EDGE_Middle_8PSK



EDGE_High_8PSK



RF Output Power

FCC Part 22H

GSM 850, Normal

Mode	Average Conducted Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
GPRS_Low_Slot1	33.19	27.37	38.45	Pass
GPRS_Low_Slot2	32.49	26.67	38.45	Pass
GPRS_Low_Slot3	30.77	24.95	38.45	Pass
GPRS_Low_Slot4	29.70	23.88	38.45	Pass
GPRS_Middle_Slot1	33.17	27.35	38.45	Pass
GPRS_Middle_Slot2	32.49	26.67	38.45	Pass
GPRS_Middle_Slot3	30.81	24.99	38.45	Pass
GPRS_Middle_Slot4	29.74	23.92	38.45	Pass
GPRS_High_Slot1	33.13	27.31	38.45	Pass
GPRS_High_Slot2	32.47	26.65	38.45	Pass
GPRS_High_Slot3	30.81	24.99	38.45	Pass
GPRS_High_Slot4	29.75	23.93	38.45	Pass
EDGE_Low_Slot1	27.38	21.56	38.45	Pass
EDGE_Low_Slot2	26.29	20.47	38.45	Pass
EDGE_Low_Slot3	24.27	18.45	38.45	Pass
EDGE_Low_Slot4	23.15	17.33	38.45	Pass
EDGE_Middle_Slot1	27.36	21.54	38.45	Pass
EDGE_Middle_Slot2	26.33	20.51	38.45	Pass
EDGE_Middle_Slot3	24.20	18.38	38.45	Pass
EDGE_Middle_Slot4	23.11	17.29	38.45	Pass
EDGE_High_Slot1	27.43	21.61	38.45	Pass
EDGE_High_Slot2	26.34	20.52	38.45	Pass
EDGE_High_Slot3	24.20	18.38	38.45	Pass
EDGE_High_Slot4	23.07	17.25	38.45	Pass

Note:

ERP = Average Conducted Power(dBm) + Antenna Gain(dBd) - Cable Loss(dB)

Antenna Gain(dBd) = Antenna Gain(dBi) - 2.15

1.Antenna Gain = -3.67dBi;

2.Cable Loss = 0dB.

FCC Part 24E

GSM 1900, Normal

Mode	Average Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
GPRS_Low_Slot1	29.43	26.47	33	Pass
GPRS_Low_Slot2	28.69	25.73	33	Pass
GPRS_Low_Slot3	26.87	23.91	33	Pass
GPRS_Low_Slot4	25.78	22.82	33	Pass
GPRS_Middle_Slot1	29.58	26.62	33	Pass
GPRS_Middle_Slot2	28.83	25.87	33	Pass
GPRS_Middle_Slot3	27.02	24.06	33	Pass
GPRS_Middle_Slot4	25.92	22.96	33	Pass
GPRS_High_Slot1	29.79	26.83	33	Pass
GPRS_High_Slot2	29.04	26.08	33	Pass
GPRS_High_Slot3	27.26	24.30	33	Pass
GPRS_High_Slot4	26.18	23.22	33	Pass
EDGE_Low_Slot1	25.19	22.23	33	Pass
EDGE_Low_Slot2	23.92	20.96	33	Pass
EDGE_Low_Slot3	21.72	18.76	33	Pass
EDGE_Low_Slot4	20.48	17.52	33	Pass
EDGE_Middle_Slot1	25.22	22.26	33	Pass
EDGE_Middle_Slot2	24.02	21.06	33	Pass
EDGE_Middle_Slot3	21.80	18.84	33	Pass
EDGE_Middle_Slot4	20.55	17.59	33	Pass
EDGE_High_Slot1	25.51	22.55	33	Pass
EDGE_High_Slot2	24.36	21.40	33	Pass
EDGE_High_Slot3	22.14	19.18	33	Pass
EDGE_High_Slot4	20.95	17.99	33	Pass

Note:

EIRP = Average Conducted Power(dBm) + Antenna Gain(dBi) - Cable Loss(dB)

1.Antenna Gain = -2.96dBi;

2.Cable Loss = 0dB.

Peak-to-average Ratio(PAR)

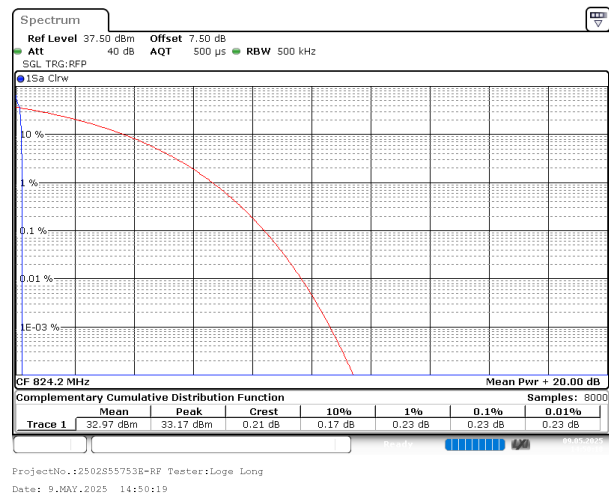
FCC Part 22H

GSM 850, Normal

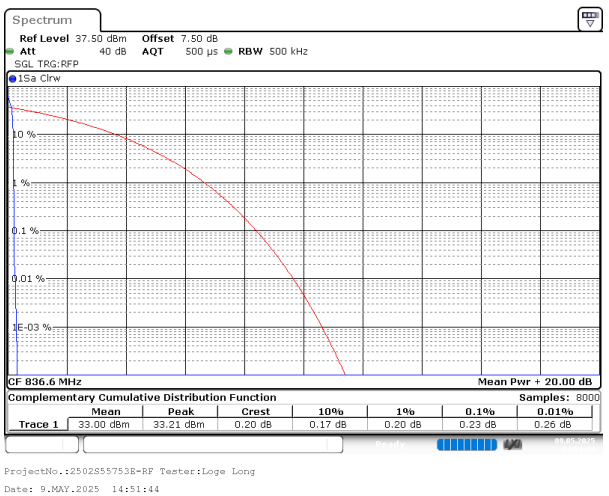
Mode	Result (dB)	Limit (dB)
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GPRS_Middle_GMSK	0.23	13
GPRS_High_GMSK	0.23	13

GSM 850, Normal

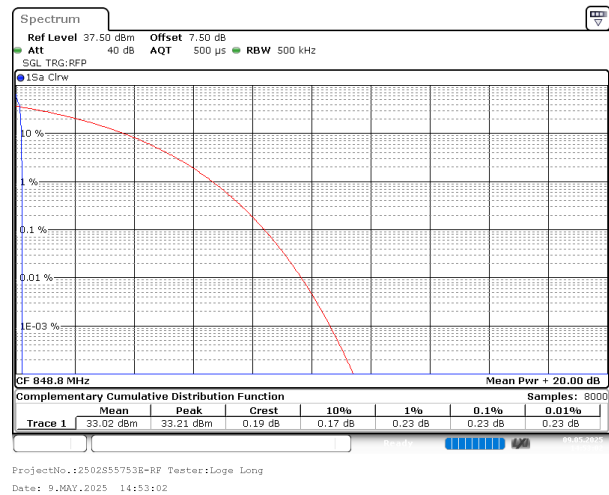
GPRS_Low_GMSK



GPRS_Middle_GMSK



GPRS_High_GMSK



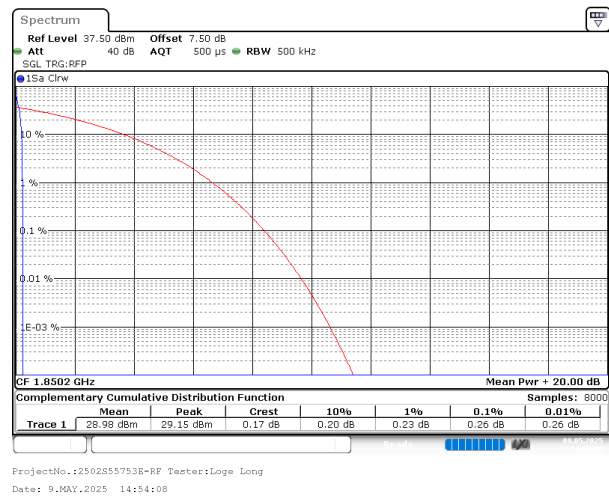
FCC Part 24E

GSM 1900, Normal

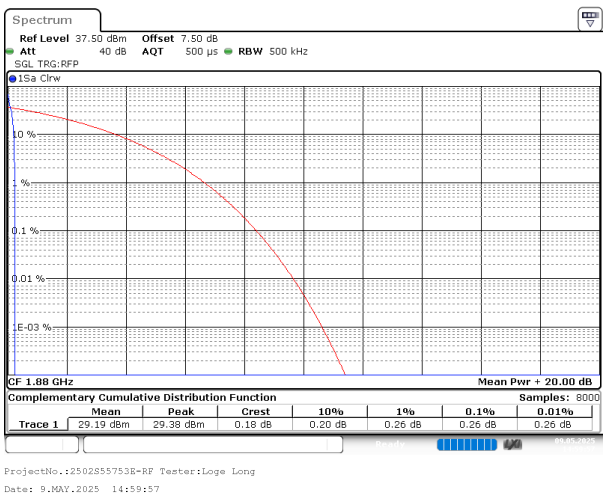
Mode	Result (dB)	Limit (dB)
GPRS_Low_GMSK	0.26	13
GPRS_Middle_GMSK	0.26	13
GPRS_High_GMSK	0.29	13

GSM 1900, Normal

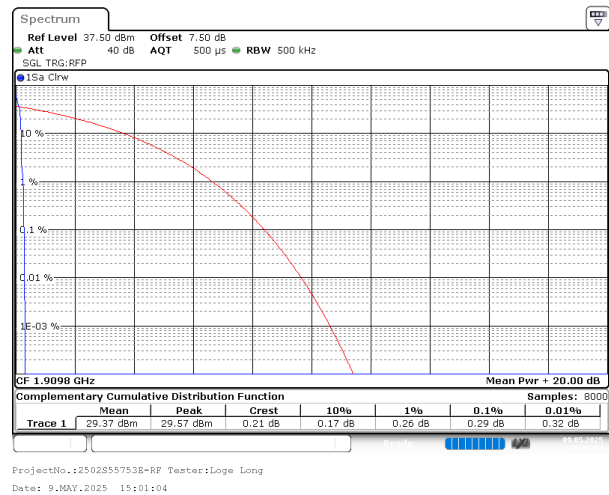
GPRS_Low_GMSK



GPRS_Middle_GMSK



GPRS_High_GMSK

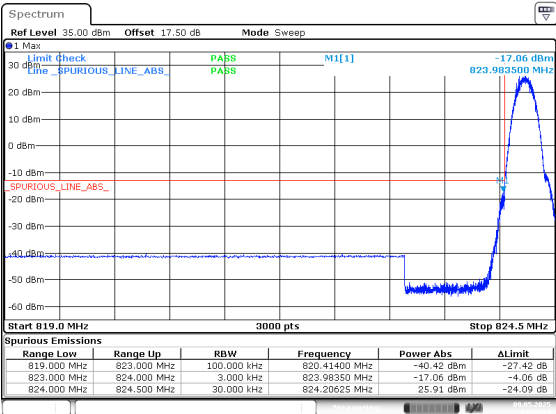


Out of band emission,Band Edge

FCC Part 22H

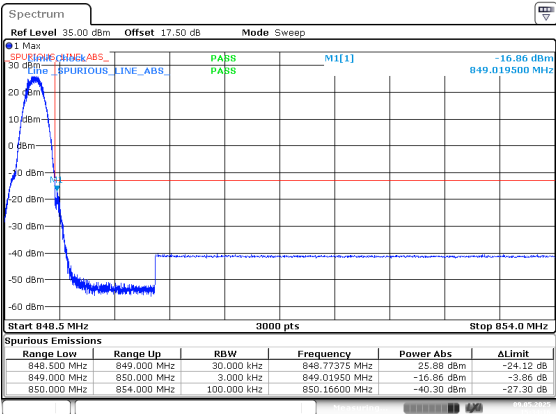
GSM 850, Normal

GPRS_Low_GMSK



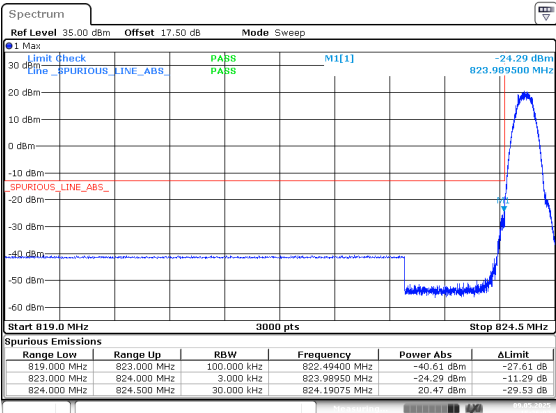
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GPRS_High_GMSK



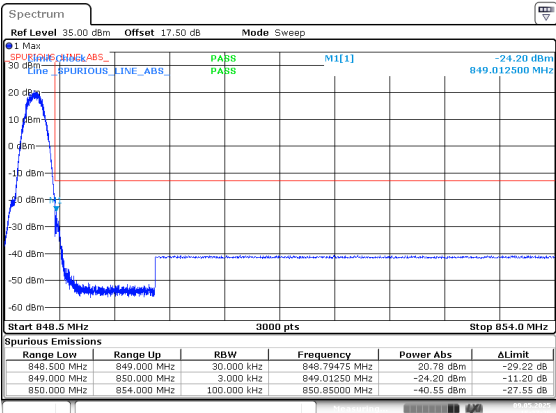
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EDGE_Low_8PSK



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Date: 9.MAY.2025 15:36:03

EDGE_High_8PSK

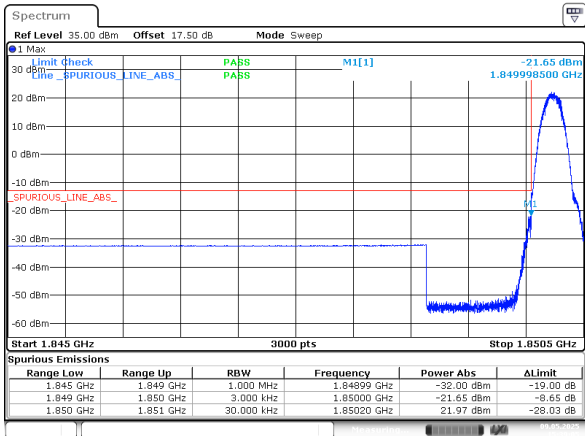


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FCC Part 24E

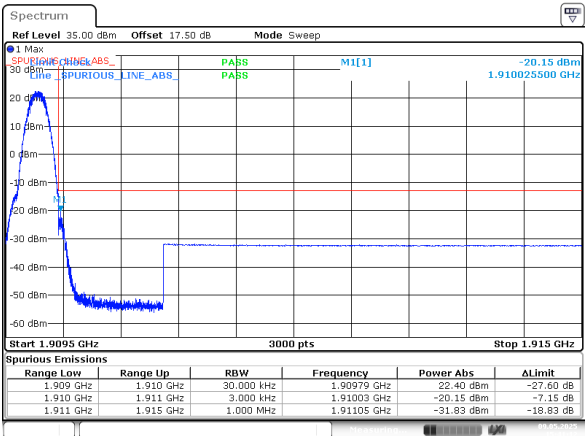
GSM 1900, Normal

GPRS_Low_GMSK



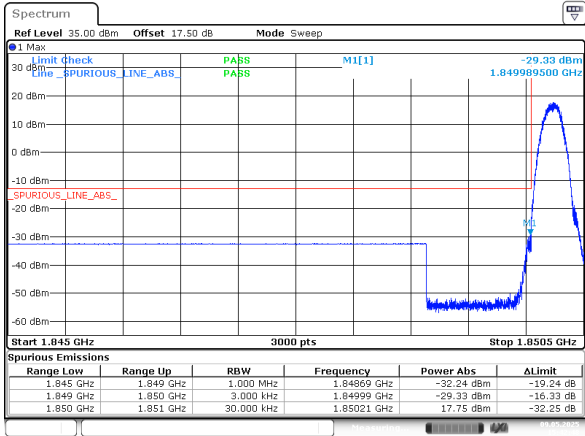
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GPRS_High_GMSK



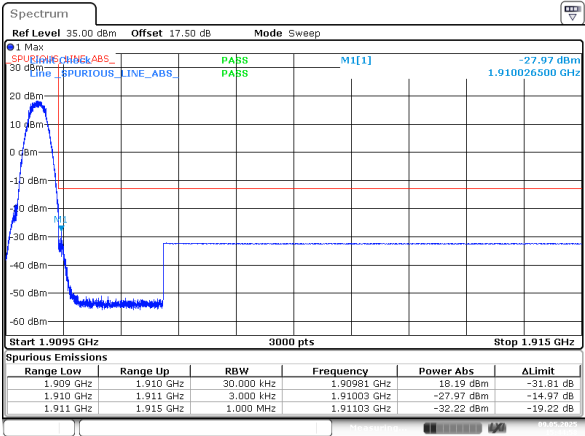
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EDGE_Low_8PSK



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EDGE_High_8PSK



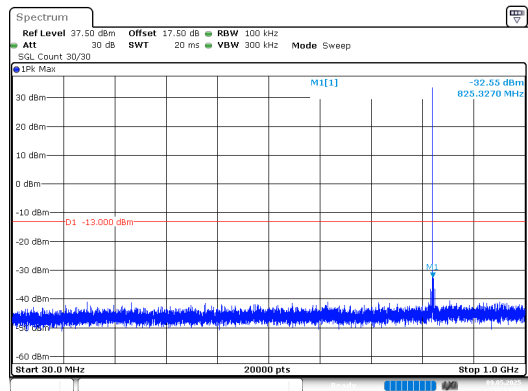
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Spurious Emissions at Antenna Terminal

FCC Part 22H
GSM 850, Normal

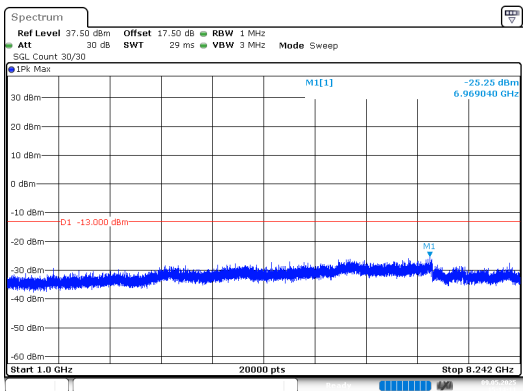
GPRS_Low_GMSK

Below 1G



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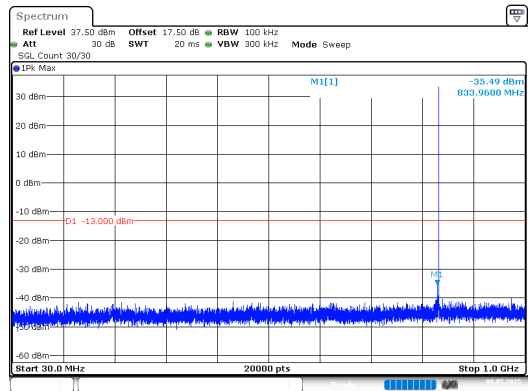
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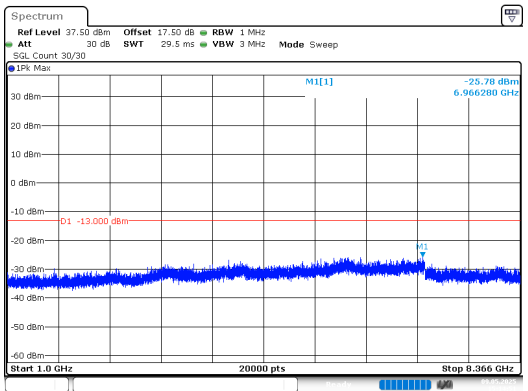
GPRS_Middle_GMSK

Below 1G



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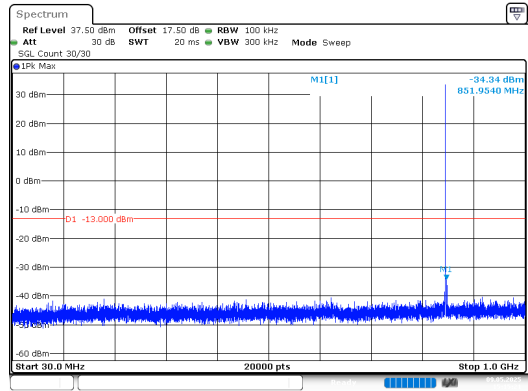
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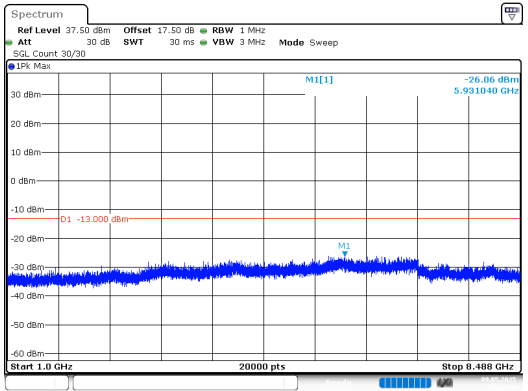
GPRS_High_GMSK

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ProjectNo.:2502S55753E-RF Testet:Loge Long
Date: 9.MAY.2025 15:15:21

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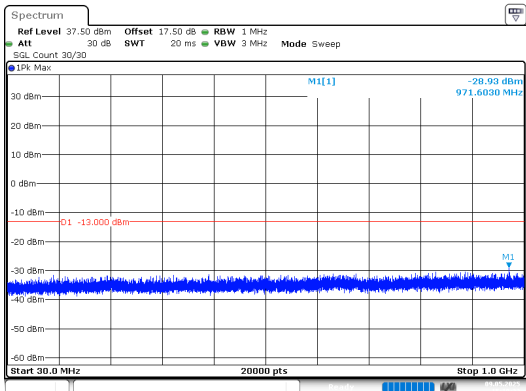
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Date: 9.MAY.2025 15:15:30

FCC Part 24E

GSM 1900, Normal

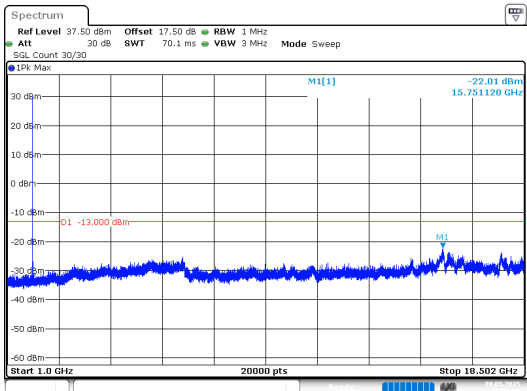
GPRS_Low_GMSK

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ProjectNo.:2502S55753E-RF Tester:Loge Long
Date: 9.MAY.2025 15:10:33

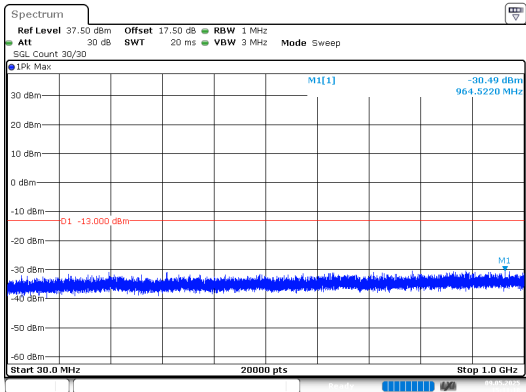
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Date: 9.MAY.2025 15:10:47

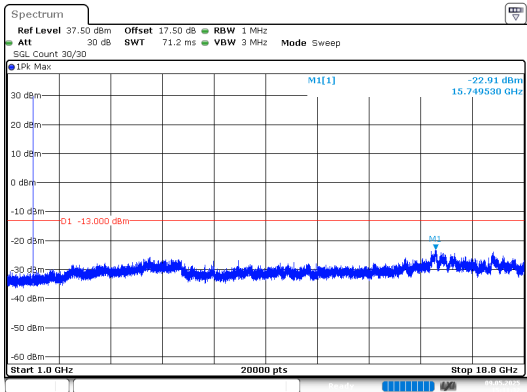
GPRS_Middle_GMSK

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ProjectNo.:2502S55753E-RF Tester:Loge Long
Date: 9.MAY.2025 15:11:18

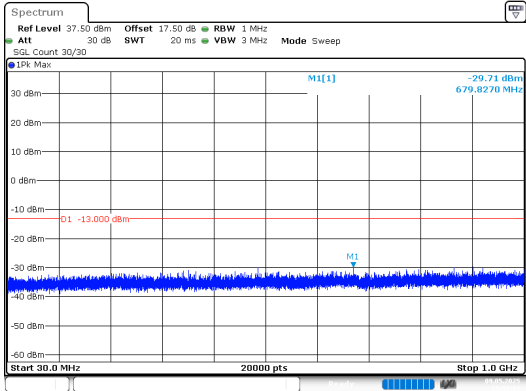
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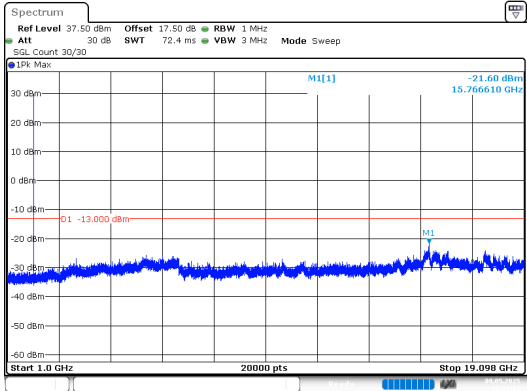
GPRS_High_GMSK

Below 1G



ProjectNo.:2502S55753E-RF Tester:Loge Long
Date: 9.MAY.2025 15:12:01

Above 1G



ProjectNo.:2502S55753E-RF Tester:Loge Long
Date: 9.MAY.2025 15:12:15

**** END ****