

Appendix A

Test Information:

Serial No.:	2V3G-1	Test Date:	2024/12/02~2024/12/05
Test Site:	RF	Test Mode:	Transmitting
Tester:	Karl Liang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C):	22.0~24.3	Relative Humidity: (%)	52~58	ATM Pressure: (kPa)	101.6~101.8
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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-Clrcuts	Coaxial Power Splitters & Combiner	ZFRSC-183-S+	SF448201614	2024/02/25	2025/02/24
R&S	Coaxial Attenuator	10dB	F-08-EM512	2024/06/13	2025/06/12
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	824.077	824	Pass
GSM_Low_T1/VN	824.081	824	Pass
GSM_Low_T2/VN	824.078	824	Pass
GSM_Low_T3/VN	824.078	824	Pass
GSM_Low_T4/VN	824.076	824	Pass
GSM_Low_T5/VN	824.079	824	Pass
GSM_Low_T6/VN	824.079	824	Pass
GSM_Low_T7/VN	824.080	824	Pass
GSM_Low_T8/VN	824.080	824	Pass
GSM_Low_TN/VH	824.079	824	Pass
GSM_Low_TN/VL	824.079	824	Pass
GSM_High_TN/VN	848.923	849	Pass
GSM_High_T1/VN	848.920	849	Pass
GSM_High_T2/VN	848.923	849	Pass
GSM_High_T3/VN	848.923	849	Pass
GSM_High_T4/VN	848.923	849	Pass
GSM_High_T5/VN	848.921	849	Pass
GSM_High_T6/VN	848.922	849	Pass
GSM_High_T7/VN	848.921	849	Pass
GSM_High_T8/VN	848.917	849	Pass
GSM_High_TN/VH	848.920	849	Pass
GSM_High_TN/VL	848.922	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	-22.5	-0.027	±2.5	Pass
GSM_Middle_T1/VN	836.6	-18.1	-0.022	±2.5	Pass
GSM_Middle_T2/VN	836.6	-23.5	-0.028	±2.5	Pass
GSM_Middle_T3/VN	836.6	-15.8	-0.019	±2.5	Pass
GSM_Middle_T4/VN	836.6	-18.1	-0.022	±2.5	Pass
GSM_Middle_T5/VN	836.6	-14.8	-0.018	±2.5	Pass
GSM_Middle_T6/VN	836.6	-19.5	-0.023	±2.5	Pass
GSM_Middle_T7/VN	836.6	-20.7	-0.025	±2.5	Pass
GSM_Middle_T8/VN	836.6	-17.9	-0.021	±2.5	Pass
GSM_Middle_TN/VH	836.6	-21.2	-0.025	±2.5	Pass
GSM_Middle_TN/VL	836.6	-20.4	-0.024	±2.5	Pass
GSM_Middle_TN/VN	836.6	-22.5	-0.027	±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	1850.079	1850	Pass
GSM_Low_T1/VN	1850.079	1850	Pass
GSM_Low_T2/VN	1850.081	1850	Pass
GSM_Low_T3/VN	1850.082	1850	Pass
GSM_Low_T4/VN	1850.080	1850	Pass
GSM_Low_T5/VN	1850.081	1850	Pass
GSM_Low_T6/VN	1850.079	1850	Pass
GSM_Low_T7/VN	1850.081	1850	Pass
GSM_Low_T8/VN	1850.076	1850	Pass
GSM_Low_TN/VH	1850.082	1850	Pass
GSM_Low_TN/VL	1850.077	1850	Pass
GSM_High_TN/VN	1909.922	1910	Pass
GSM_High_T1/VN	1909.922	1910	Pass
GSM_High_T2/VN	1909.921	1910	Pass
GSM_High_T3/VN	1909.924	1910	Pass
GSM_High_T4/VN	1909.921	1910	Pass
GSM_High_T5/VN	1909.920	1910	Pass
GSM_High_T6/VN	1909.922	1910	Pass
GSM_High_T7/VN	1909.922	1910	Pass
GSM_High_T8/VN	1909.920	1910	Pass
GSM_High_TN/VH	1909.921	1910	Pass
GSM_High_TN/VL	1909.924	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

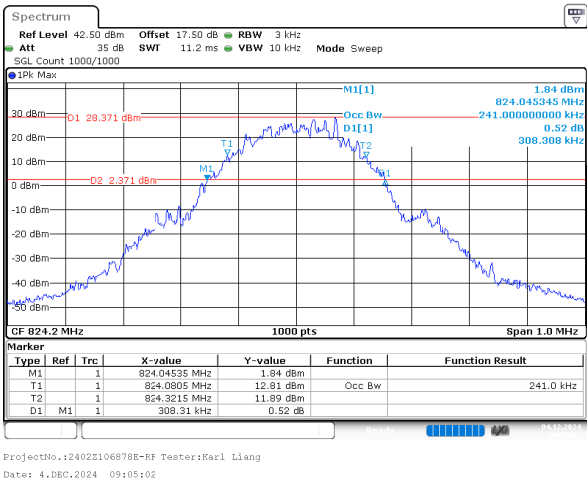
FCC Part 22H & IC RSS 132

GSM 850 , Normal

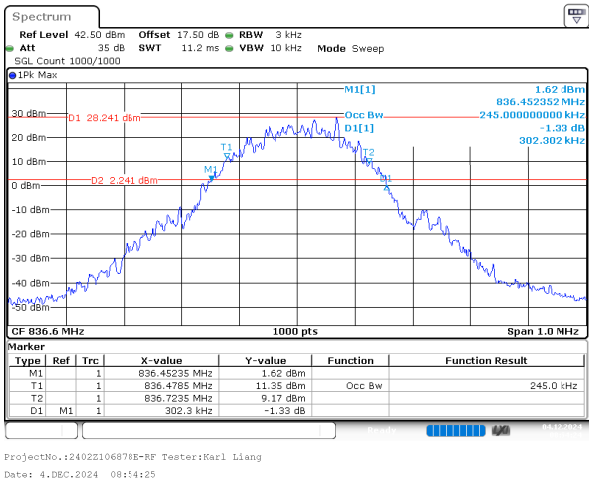
Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.241	0.308
GSM_Middle	0.245	0.302
GSM_High	0.242	0.304

GSM 850 , Normal

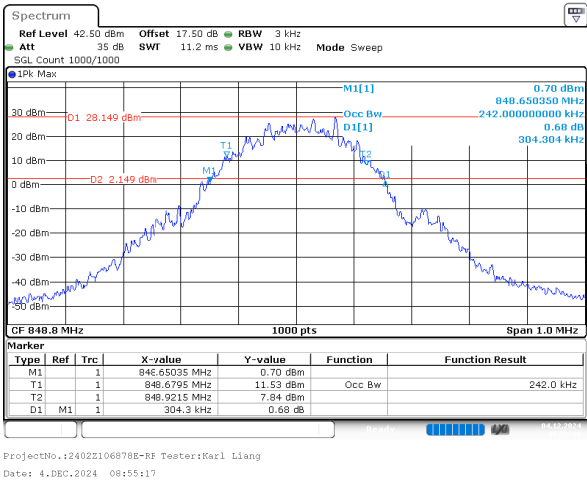
GSM_Low



GSM_Middle



GSM_High



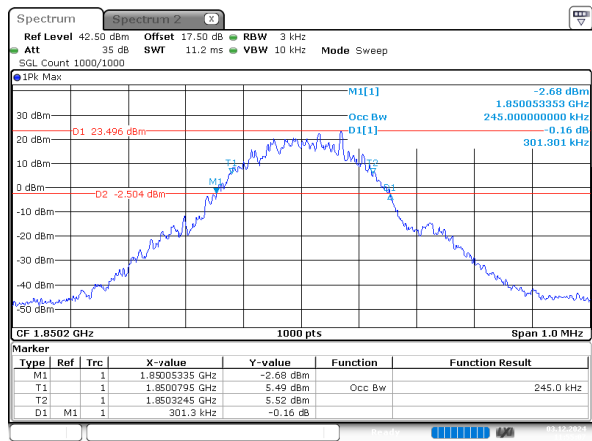
FCC Part 24E & IC RSS 133

GSM 1900 , Normal

Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.245	0.301
GSM_Middle	0.243	0.307
GSM_High	0.241	0.301

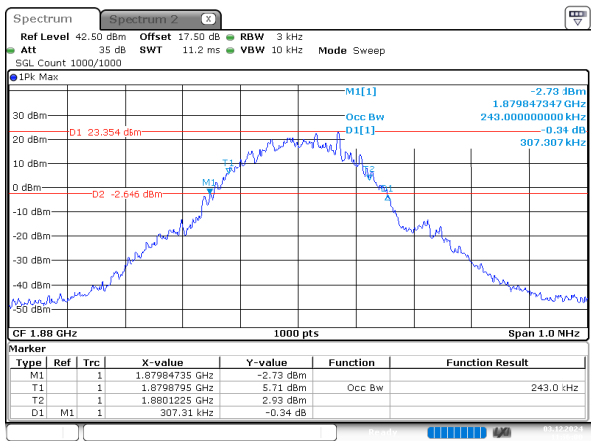
GSM 1900 , Normal

GSM_Low



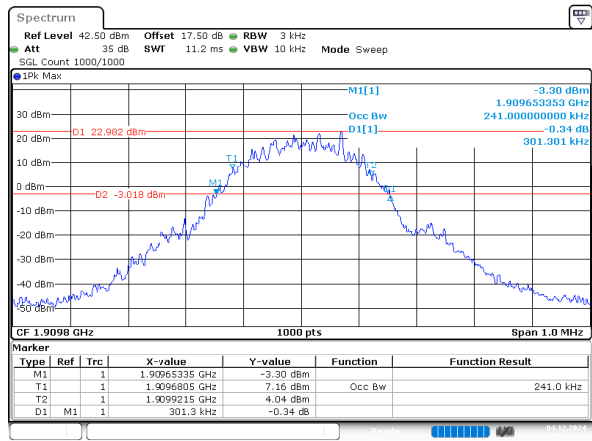
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GSM_Middle



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Date: 3.DEC.2024 11:16:00

GSM_High



ProjectNo.:2402Z106878E-RF Tester:Karl Liang
Date: 4.DEC.2024 09:38:20

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	35.35	31.65	38.45	34.77	Pass
GSM_Middle	35.13	31.43	38.45	34.77	Pass
GSM_High	34.94	31.24	38.45	34.77	Pass
GPRS_Low_Slot1	35.37	31.67	38.45	34.77	Pass
GPRS_Low_Slot2	33.08	29.38	38.45	34.77	Pass
GPRS_Low_Slot3	31.25	27.55	38.45	34.77	Pass
GPRS_Low_Slot4	29.21	25.51	38.45	34.77	Pass
GPRS_Middle_Slot1	35.08	31.38	38.45	34.77	Pass
GPRS_Middle_Slot2	32.97	29.27	38.45	34.77	Pass
GPRS_Middle_Slot3	31.18	27.48	38.45	34.77	Pass
GPRS_Middle_Slot4	29.18	25.48	38.45	34.77	Pass
GPRS_High_Slot1	35.01	31.31	38.45	34.77	Pass
GPRS_High_Slot2	32.99	29.29	38.45	34.77	Pass
GPRS_High_Slot3	31.22	27.52	38.45	34.77	Pass
GPRS_High_Slot4	29.25	25.55	38.45	34.77	Pass

Note:

ERP = Average Peak Conducted Power(dBm) - L_C(dB) + G_T(dBd)

G_T(dBd) = G_T(dBi) - 2.15

1.Ant Gain = -1.55dBi;

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

FCC Part 24E & IC RSS 133

GSM 1900 , Normal

Mode	Average Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
GSM_Low	31.09	31.45	33	Pass
GSM_Middle	30.77	31.13	33	Pass
GSM_High	30.39	30.75	33	Pass
GPRS_Low_Slot1	31.10	31.46	33	Pass
GPRS_Low_Slot2	29.08	29.44	33	Pass
GPRS_Low_Slot3	27.45	27.81	33	Pass
GPRS_Low_Slot4	25.53	25.89	33	Pass
GPRS_Middle_Slot1	30.77	31.13	33	Pass
GPRS_Middle_Slot2	28.54	28.90	33	Pass
GPRS_Middle_Slot3	27.02	27.38	33	Pass
GPRS_Middle_Slot4	25.15	25.51	33	Pass
GPRS_High_Slot1	30.40	30.76	33	Pass
GPRS_High_Slot2	27.99	28.35	33	Pass
GPRS_High_Slot3	26.50	26.86	33	Pass
GPRS_High_Slot4	24.66	25.02	33	Pass

Note:

$EIRP = \text{Average Peak Conducted Power(dBm)} - L_C(dB) + G_T(dBi)$

- 1.Ant Gain = 0.36dBi;
- 2.C_L = signal attenuation in the connecting cable between the transmitter and antenna in 0dB

Peak-to-average Ratio(PAR)

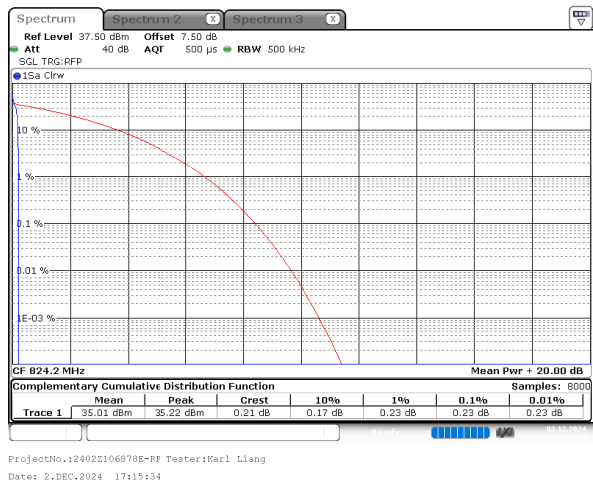
FCC Part 22H & IC RSS 132

GSM 850 , Normal

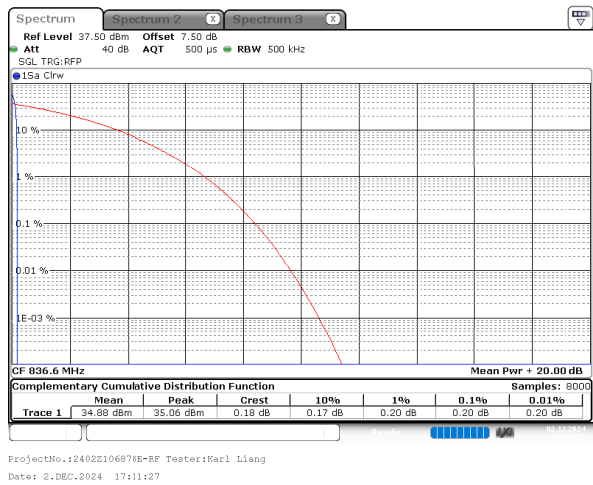
Mode	Result (dB)	Limit (dB)
GSM_Low	0.23	13
GSM_Middle	0.20	13
GSM_High	0.29	13

GSM 850 , Normal

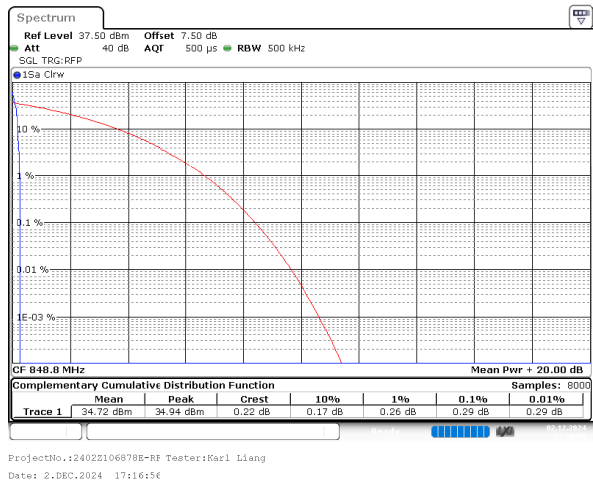
GSM_Low



GSM_Middle



GSM_High



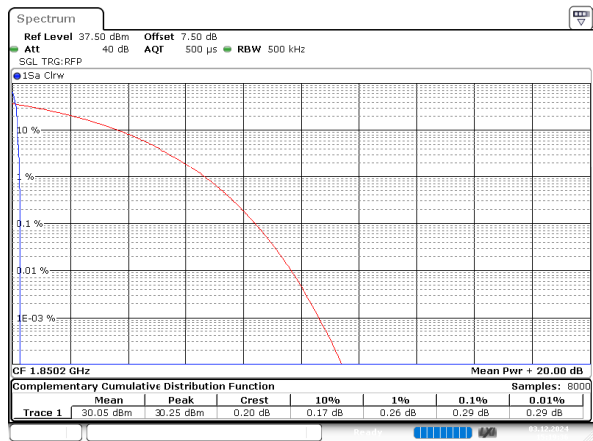
FCC Part 24E & IC RSS 133

GSM 1900 , Normal

Mode	Result (dB)	Limit (dB)
GSM_Low	0.29	13
GSM_Middle	0.26	13
GSM_High	0.23	13

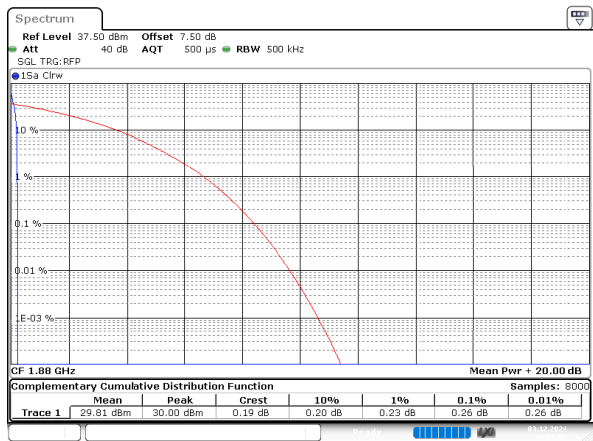
GSM 1900 , Normal

GSM_Low



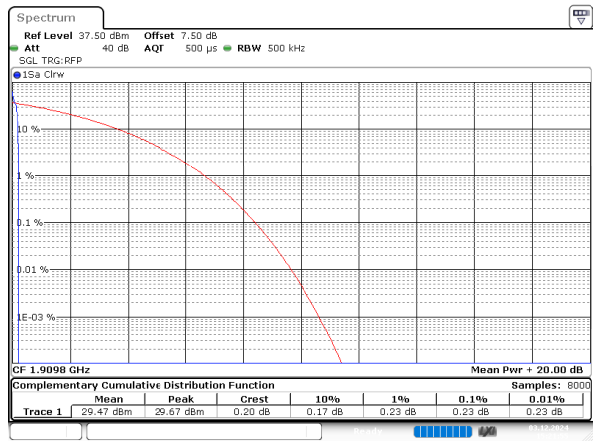
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Date: 3.DEC.2024 15:19:36

GSM_Middle



ProjectNo.:2402Z106878E-RF Tester:Karl Liang
Date: 3.DEC.2024 15:21:02

GSM_High



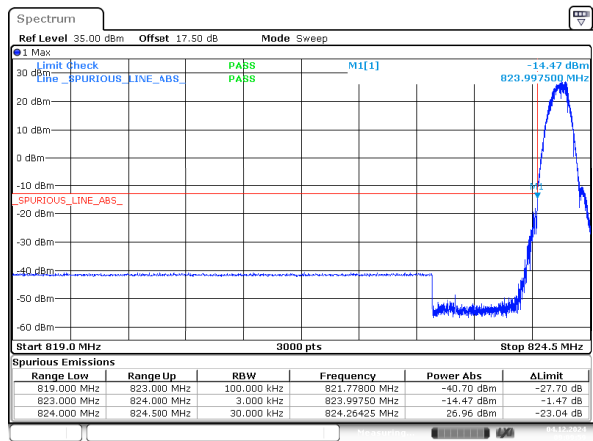
ProjectNo.:2402Z106878E-RF Tester:Karl Liang
Date: 3.DEC.2024 15:21:55

Out of band emission,Band Edge

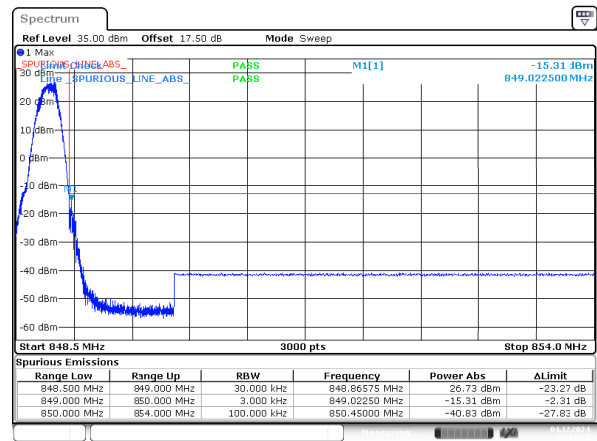
FCC Part 22H & IC RSS 132

GSM 850 , Normal

GSM_Low



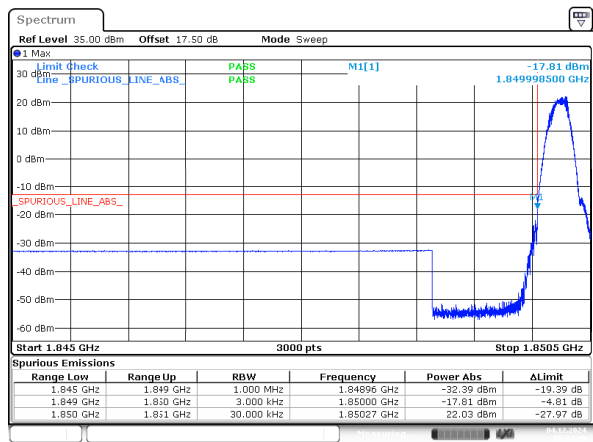
GSM_High



FCC Part 24E & IC RSS 133

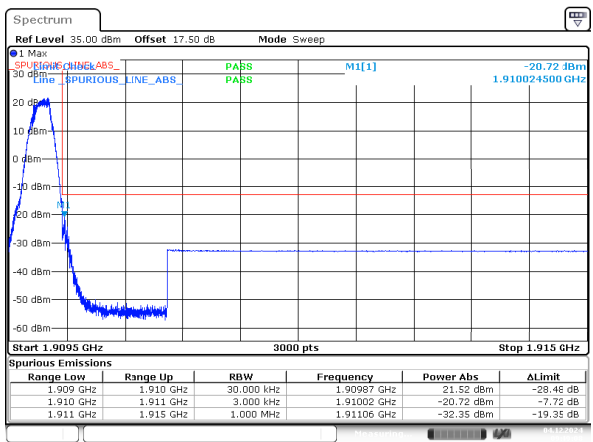
GSM 1900 , Normal

GSM_Low



ProjectNo.:2402Z106878E-RF Tester:Karl Liang
Date: 4.DEC.2024 09:47:40

GSM_High



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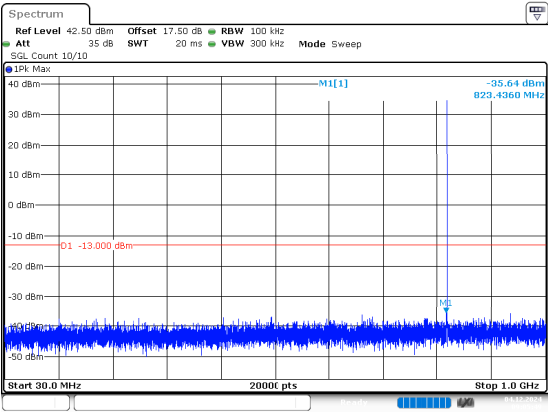
Spurious Emissions at Antenna Terminal

FCC Part 22H & IC RSS 132

GSM 850 , Normal

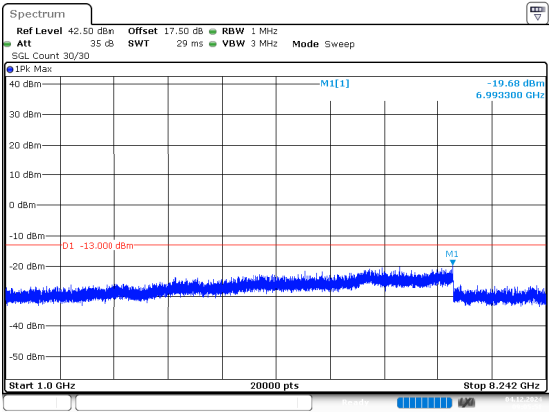
GSM_Low

Below 1G



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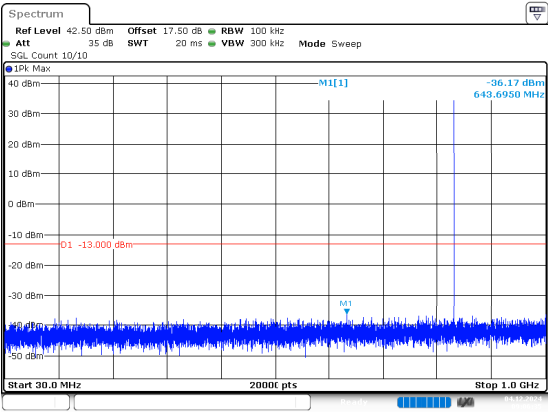
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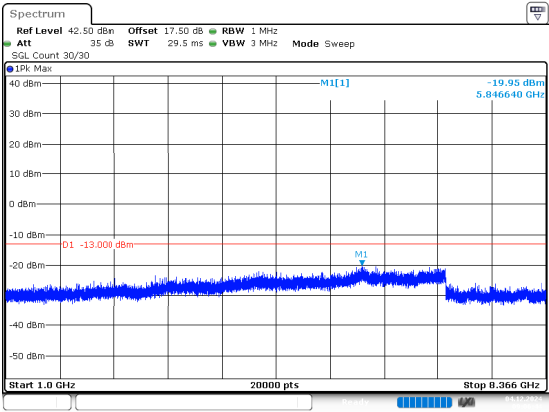
GSM_Middle

Below 1G



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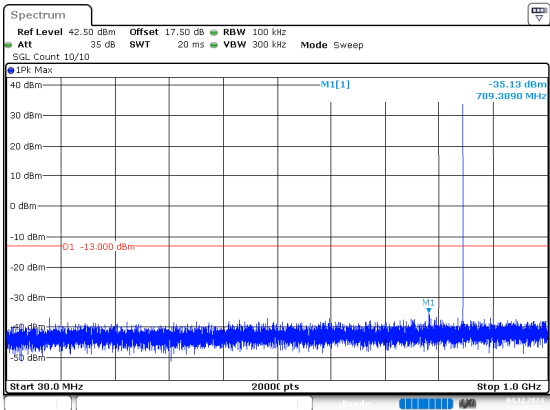
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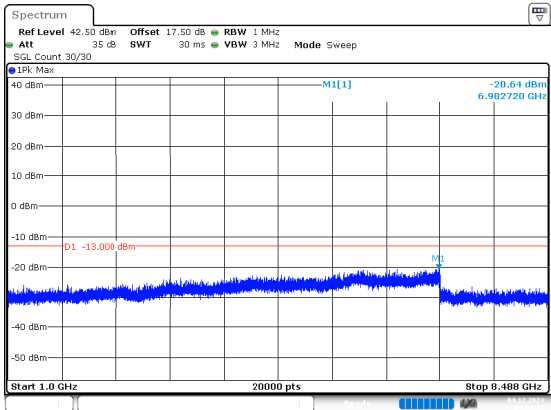
GSM_High

Below 1G



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Date: 4.DEC.2024 09:07:20

Above 1G



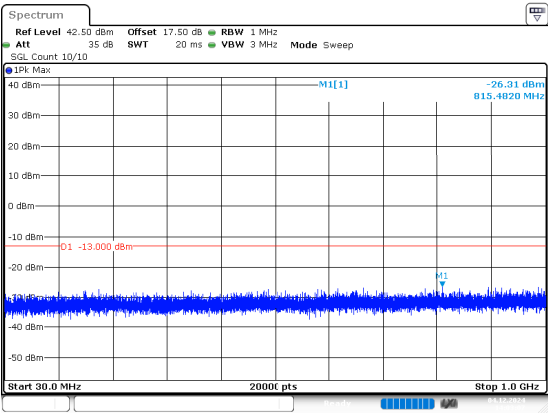
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FCC Part 24E & IC RSS 133

GSM 1900 , Normal

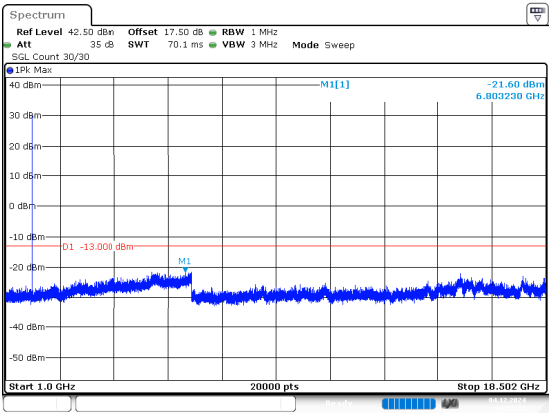
GSM_Low

Below 1G



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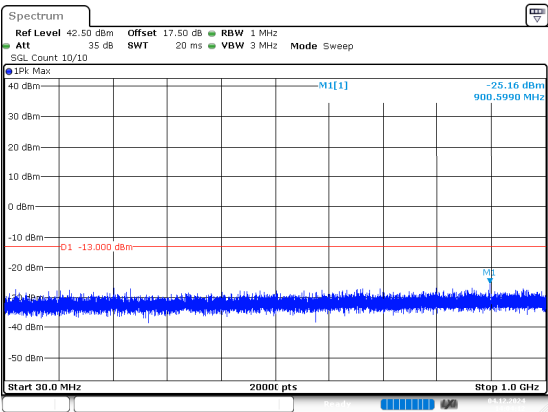
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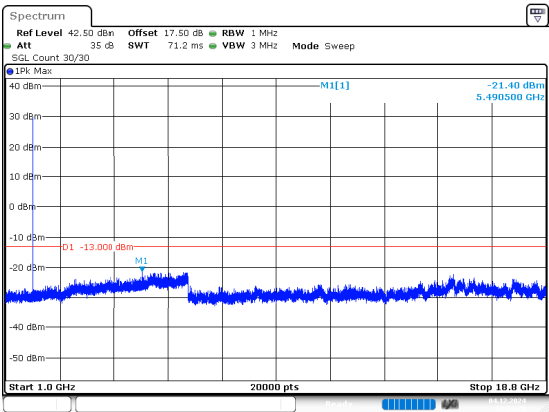
GSM_Middle

Below 1G



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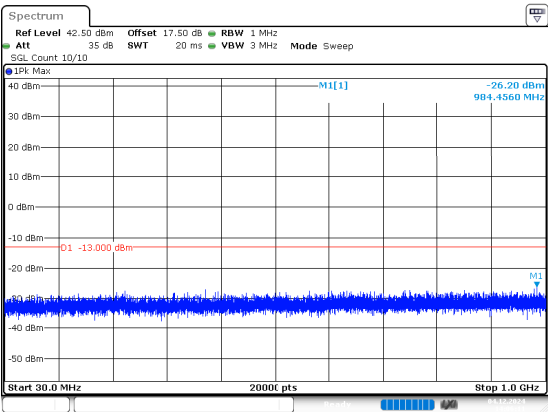
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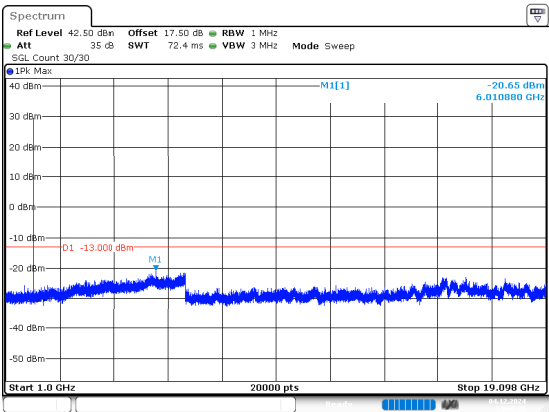
GSM_High

Below 1G



ProjectNo.:2402Z106878E-RF Tester:Karl Liang
Date: 4.DEC.2024 14:06:11

Above 1G



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