

Appendix A

Test Information:

Serial No.:	2UZB-1	Test Date:	2024/11/29~2024/12/14
Test Site:	RF	Test Mode:	Transmitting
Tester:	Loge Long	Test Result:	Pass

Environmental Conditions:

Temperature: (°C):	20.9~24.3	Relative Humidity: (%)	31~58	ATM Pressure: (kPa)	101.1~102.3
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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
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	824.079	824	Pass
GSM_Low_T1/VN	824.079	824	Pass
GSM_Low_T2/VN	824.083	824	Pass
GSM_Low_T3/VN	824.075	824	Pass
GSM_Low_T4/VN	824.079	824	Pass
GSM_Low_T5/VN	824.078	824	Pass
GSM_Low_T6/VN	824.079	824	Pass
GSM_Low_T7/VN	824.078	824	Pass
GSM_Low_T8/VN	824.079	824	Pass
GSM_Low_TN/VH	824.078	824	Pass
GSM_Low_TN/VL	824.078	824	Pass
GSM_High_TN/VN	848.923	849	Pass
GSM_High_T1/VN	848.923	849	Pass
GSM_High_T2/VN	848.922	849	Pass
GSM_High_T3/VN	848.921	849	Pass
GSM_High_T4/VN	848.922	849	Pass
GSM_High_T5/VN	848.924	849	Pass
GSM_High_T6/VN	848.923	849	Pass
GSM_High_T7/VN	848.921	849	Pass
GSM_High_T8/VN	848.925	849	Pass
GSM_High_TN/VH	848.923	849	Pass
GSM_High_TN/VL	848.926	849	Pass
EDGE_Low_Slot1_TN/VN	824.079	824	Pass
EDGE_Low_Slot1_T1/VN	824.080	824	Pass
EDGE_Low_Slot1_T2/VN	824.080	824	Pass
EDGE_Low_Slot1_T3/VN	824.081	824	Pass
EDGE_Low_Slot1_T4/VN	824.084	824	Pass
EDGE_Low_Slot1_T5/VN	824.082	824	Pass
EDGE_Low_Slot1_T6/VN	824.077	824	Pass
EDGE_Low_Slot1_T7/VN	824.080	824	Pass

Mode	Result (MHz)	Limit (MHz)	Verdict
EDGE_Low_Slot1_T8/VN	824.076	824	Pass
EDGE_Low_Slot1_TN/VH	824.076	824	Pass
EDGE_Low_Slot1_TN/VL	824.079	824	Pass
EDGE_High_Slot1_TN/VN	848.921	849	Pass
EDGE_High_Slot1_T1/VN	848.923	849	Pass
EDGE_High_Slot1_T2/VN	848.920	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	848.919	849	Pass
EDGE_High_Slot1_T6/VN	848.919	849	Pass
EDGE_High_Slot1_T7/VN	848.923	849	Pass
EDGE_High_Slot1_T8/VN	848.916	849	Pass
EDGE_High_Slot1_TN/VH	848.916	849	Pass
EDGE_High_Slot1_TN/VL	848.924	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	3.7	0.0044	±2.5	Pass
GSM_Middle_T1/VN	836.6	5.2	0.0062	±2.5	Pass
GSM_Middle_T2/VN	836.6	4.4	0.0053	±2.5	Pass
GSM_Middle_T3/VN	836.6	7.1	0.0085	±2.5	Pass
GSM_Middle_T4/VN	836.6	5.5	0.0066	±2.5	Pass
GSM_Middle_T5/VN	836.6	6.1	0.0073	±2.5	Pass
GSM_Middle_T6/VN	836.6	7.3	0.0087	±2.5	Pass
GSM_Middle_T7/VN	836.6	5.1	0.0061	±2.5	Pass
GSM_Middle_T8/VN	836.6	5.8	0.0069	±2.5	Pass
GSM_Middle_TN/VH	836.6	5.5	0.0066	±2.5	Pass
GSM_Middle_TN/VL	836.6	5.3	0.0064	±2.5	Pass
EDGE_Middle_Slot1_TN/VN	836.6	10.1	0.0120	±2.5	Pass
EDGE_Middle_Slot1_T1/VN	836.6	11.0	0.0132	±2.5	Pass
EDGE_Middle_Slot1_T2/VN	836.6	10.9	0.0130	±2.5	Pass
EDGE_Middle_Slot1_T3/VN	836.6	13.5	0.0161	±2.5	Pass
EDGE_Middle_Slot1_T4/VN	836.6	14.2	0.0170	±2.5	Pass
EDGE_Middle_Slot1_T5/VN	836.6	12.2	0.0146	±2.5	Pass
EDGE_Middle_Slot1_T6/VN	836.6	12.2	0.0146	±2.5	Pass
EDGE_Middle_Slot1_T7/VN	836.6	10.6	0.0127	±2.5	Pass
EDGE_Middle_Slot1_T8/VN	836.6	10.9	0.0130	±2.5	Pass
EDGE_Middle_Slot1_TN/VH	836.6	11.5	0.0138	±2.5	Pass
EDGE_Middle_Slot1_TN/VL	836.6	16.1	0.0192	±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	1850.075	1850	Pass
GSM_Low_T2/VN	1850.077	1850	Pass
GSM_Low_T3/VN	1850.081	1850	Pass
GSM_Low_T4/VN	1850.079	1850	Pass
GSM_Low_T5/VN	1850.081	1850	Pass
GSM_Low_T6/VN	1850.081	1850	Pass
GSM_Low_T7/VN	1850.080	1850	Pass
GSM_Low_T8/VN	1850.082	1850	Pass
GSM_Low_TN/VH	1850.083	1850	Pass
GSM_Low_TN/VL	1850.080	1850	Pass
GSM_High_TN/VN	1909.922	1910	Pass
GSM_High_T1/VN	1909.923	1910	Pass
GSM_High_T2/VN	1909.922	1910	Pass
GSM_High_T3/VN	1909.925	1910	Pass
GSM_High_T4/VN	1909.927	1910	Pass
GSM_High_T5/VN	1909.926	1910	Pass
GSM_High_T6/VN	1909.926	1910	Pass
GSM_High_T7/VN	1909.927	1910	Pass
GSM_High_T8/VN	1909.925	1910	Pass
GSM_High_TN/VH	1909.923	1910	Pass
GSM_High_TN/VL	1909.924	1910	Pass
EDGE_Low_Slot1_TN/VN	1850.075	1850	Pass
EDGE_Low_Slot1_T1/VN	1850.079	1850	Pass
EDGE_Low_Slot1_T2/VN	1850.079	1850	Pass
EDGE_Low_Slot1_T3/VN	1850.081	1850	Pass
EDGE_Low_Slot1_T4/VN	1850.081	1850	Pass
EDGE_Low_Slot1_T5/VN	1850.078	1850	Pass
EDGE_Low_Slot1_T6/VN	1850.080	1850	Pass
EDGE_Low_Slot1_T7/VN	1850.082	1850	Pass

Mode	Result (MHz)	Limit (MHz)	Verdict
EDGE_Low_Slot1_T8/VN	1850.080	1850	Pass
EDGE_Low_Slot1_TN/VH	1850.077	1850	Pass
EDGE_Low_Slot1_TN/VL	1850.080	1850	Pass
EDGE_High_Slot1_TN/VN	1909.921	1910	Pass
EDGE_High_Slot1_T1/VN	1909.923	1910	Pass
EDGE_High_Slot1_T2/VN	1909.919	1910	Pass
EDGE_High_Slot1_T3/VN	1909.920	1910	Pass
EDGE_High_Slot1_T4/VN	1909.921	1910	Pass
EDGE_High_Slot1_T5/VN	1909.924	1910	Pass
EDGE_High_Slot1_T6/VN	1909.918	1910	Pass
EDGE_High_Slot1_T7/VN	1909.920	1910	Pass
EDGE_High_Slot1_T8/VN	1909.921	1910	Pass
EDGE_High_Slot1_TN/VH	1909.924	1910	Pass
EDGE_High_Slot1_TN/VL	1909.920	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

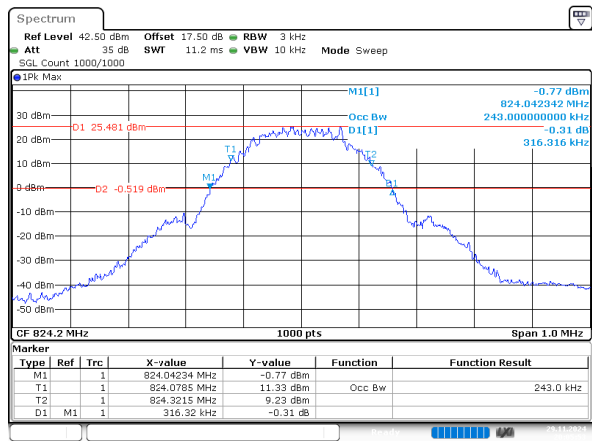
FCC Part 22H & IC RSS 132

GSM 850 , Normal

Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.243	0.316
GSM_Middle	0.244	0.311
GSM_High	0.243	0.318
EDGE_Low_Slot1	0.242	0.312
EDGE_Middle_Slot1	0.241	0.303
EDGE_High_Slot1	0.242	0.306

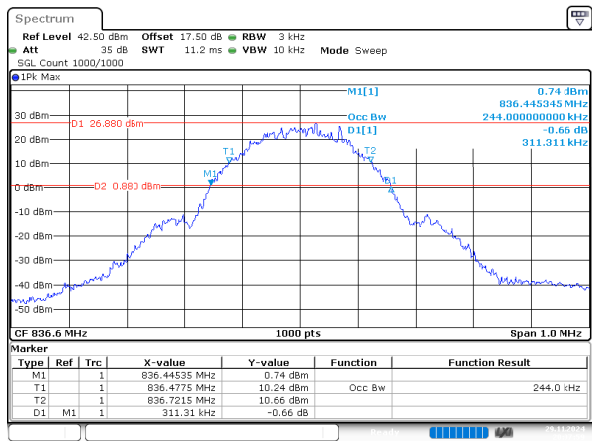
GSM 850 , Normal

GSM_Low



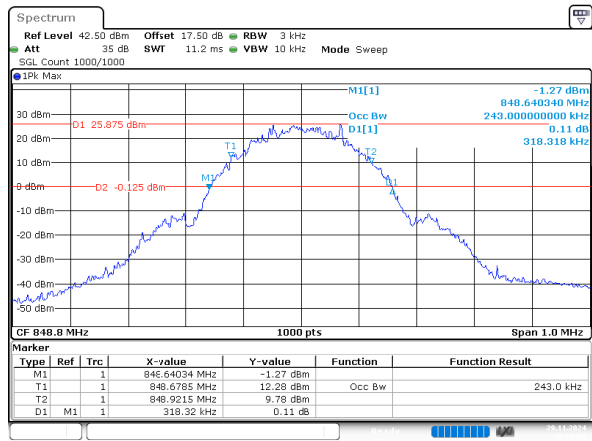
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GSM_Middle



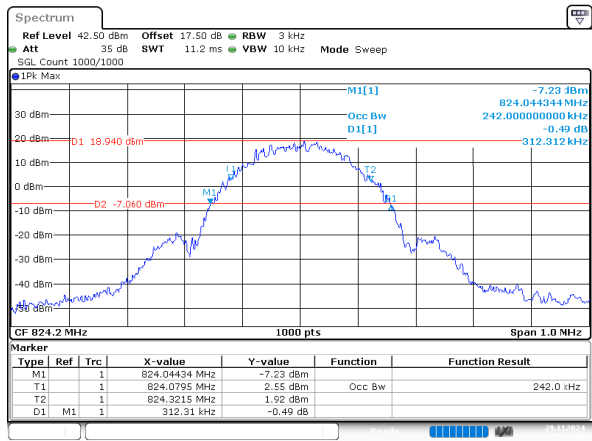
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GSM_High



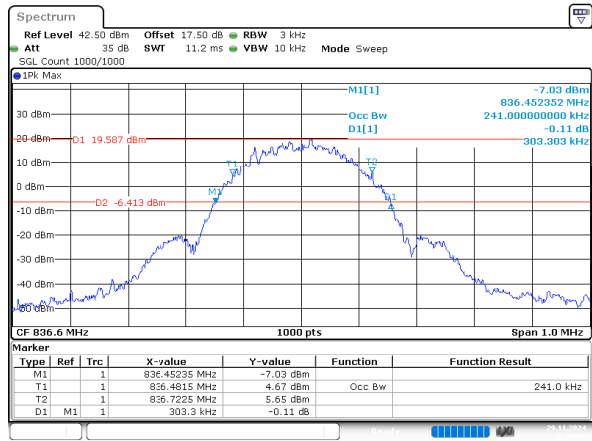
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EDGE_Low_Slot1



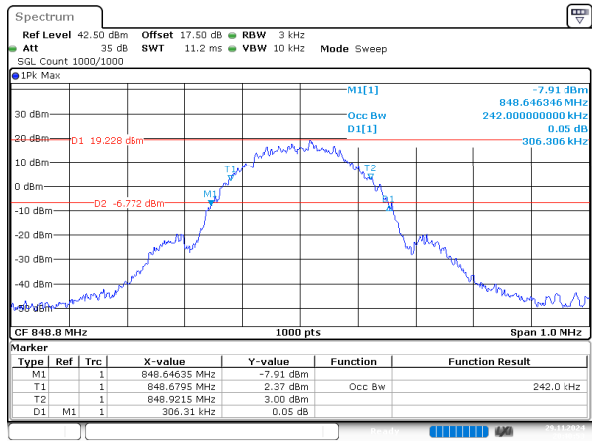
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EDGE_Middle_Slot1



ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 29.NOV.2024 20:14:02

EDGE_High_Slot1



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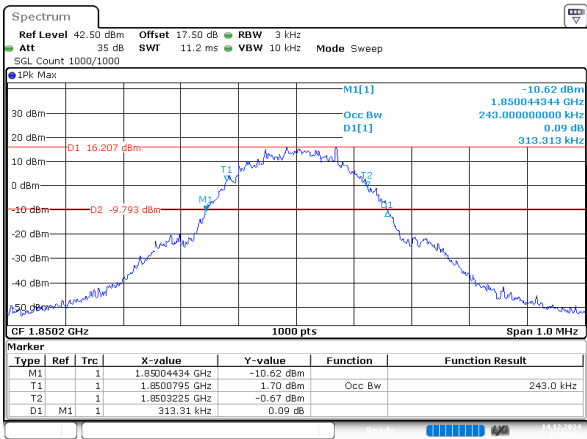
FCC Part 24E & IC RSS 133

GSM 1900 , Normal

Mode	99% OBW (MHz)	26dB BW (MHz)
GSM_Low	0.243	0.313
GSM_Middle	0.244	0.313
GSM_High	0.243	0.313
EDGE_Low_Slot1	0.242	0.309
EDGE_Middle_Slot1	0.240	0.292
EDGE_High_Slot1	0.237	0.309

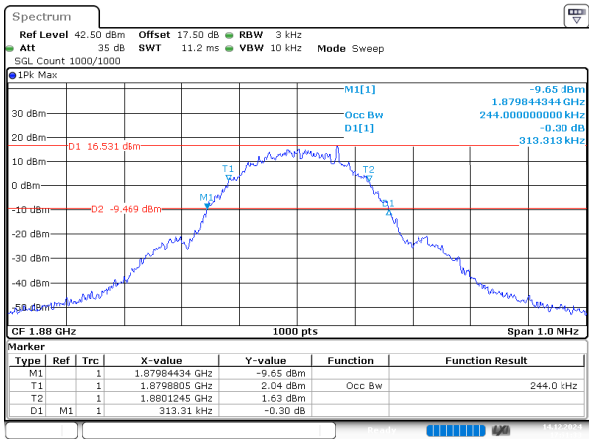
GSM 1900 , Normal

GSM_Low



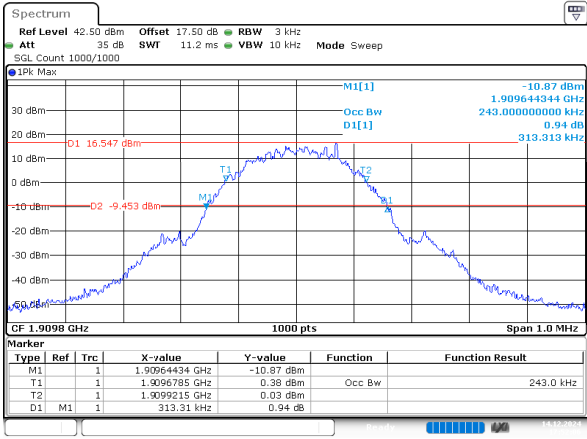
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GSM_Middle



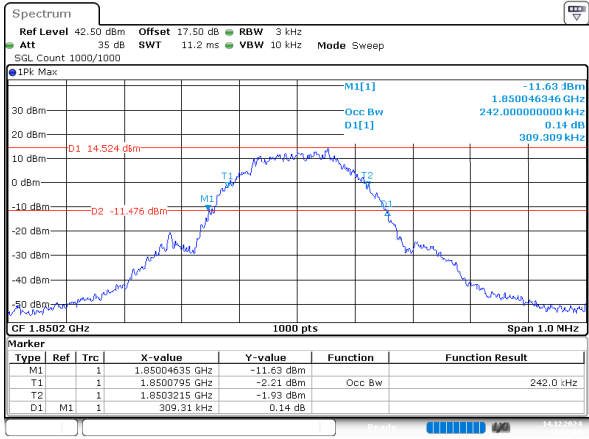
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GSM_High



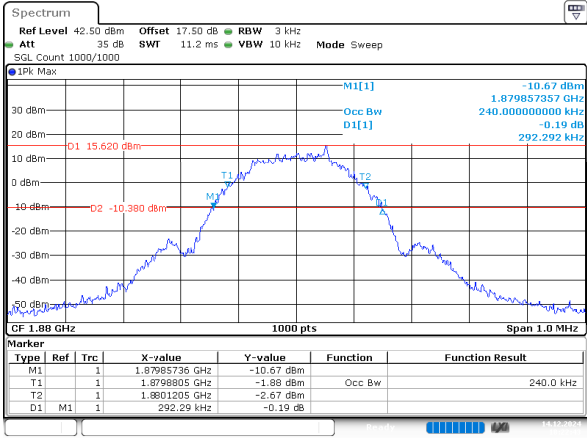
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EDGE_Low_Slot1



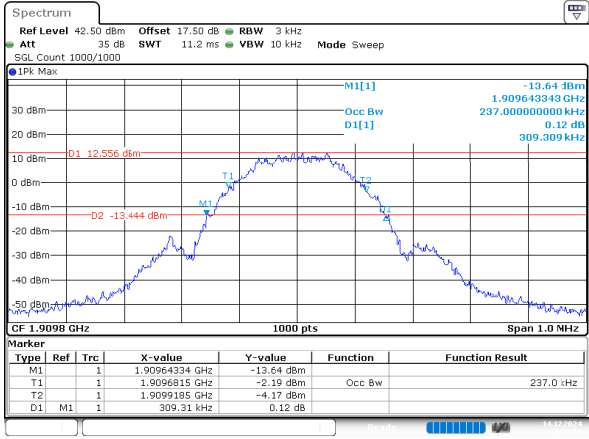
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EDGE_Middle_Slot1



ProjectNo.:2402Z68759E-RF Tester:Loge Long
 Date: 14.DEC.2024 18:22:44

EDGE_High_Slot1



ProjectNo.:2402Z68759E-RF Tester:Loge Long
 Date: 14.DEC.2024 18:23:18

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	32.50	29.54	38.45	34.77	Pass
GSM_Middle	32.45	29.49	38.45	34.77	Pass
GSM_High	32.49	29.53	38.45	34.77	Pass
GPRS_Low_Slot1	32.53	29.57	38.45	34.77	Pass
GPRS_Low_Slot2	30.09	27.13	38.45	34.77	Pass
GPRS_Low_Slot3	28.09	25.13	38.45	34.77	Pass
GPRS_Low_Slot4	26.08	23.12	38.45	34.77	Pass
GPRS_Middle_Slot1	32.43	29.47	38.45	34.77	Pass
GPRS_Middle_Slot2	30.10	27.14	38.45	34.77	Pass
GPRS_Middle_Slot3	28.13	25.17	38.45	34.77	Pass
GPRS_Middle_Slot4	26.07	23.11	38.45	34.77	Pass
GPRS_High_Slot1	32.51	29.55	38.45	34.77	Pass
GPRS_High_Slot2	30.16	27.20	38.45	34.77	Pass
GPRS_High_Slot3	28.15	25.19	38.45	34.77	Pass
GPRS_High_Slot4	26.04	23.08	38.45	34.77	Pass
EDGE_Low_Slot1	25.66	22.70	38.45	34.77	Pass
EDGE_Low_Slot2	24.52	21.56	38.45	34.77	Pass
EDGE_Low_Slot3	22.30	19.34	38.45	34.77	Pass
EDGE_Low_Slot4	20.38	17.42	38.45	34.77	Pass
EDGE_Middle_Slot1	25.78	22.82	38.45	34.77	Pass
EDGE_Middle_Slot2	24.76	21.80	38.45	34.77	Pass
EDGE_Middle_Slot3	22.32	19.36	38.45	34.77	Pass
EDGE_Middle_Slot4	20.47	17.51	38.45	34.77	Pass
EDGE_High_Slot1	25.34	22.38	38.45	34.77	Pass
EDGE_High_Slot2	24.40	21.44	38.45	34.77	Pass
EDGE_High_Slot3	21.98	19.02	38.45	34.77	Pass
EDGE_High_Slot4	20.12	17.16	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 = -0.71dBi;

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	24.61	25.42	33	Pass
GSM_Middle	24.47	25.28	33	Pass
GSM_High	24.02	24.83	33	Pass
GPRS_Low_Slot1	24.60	25.41	33	Pass
GPRS_Low_Slot2	22.56	23.37	33	Pass
GPRS_Low_Slot3	20.88	21.69	33	Pass
GPRS_Low_Slot4	18.89	19.70	33	Pass
GPRS_Middle_Slot1	24.49	25.30	33	Pass
GPRS_Middle_Slot2	22.33	23.14	33	Pass
GPRS_Middle_Slot3	20.70	21.51	33	Pass
GPRS_Middle_Slot4	18.75	19.56	33	Pass
GPRS_High_Slot1	24.05	24.86	33	Pass
GPRS_High_Slot2	21.91	22.72	33	Pass
GPRS_High_Slot3	20.32	21.13	33	Pass
GPRS_High_Slot4	18.40	19.21	33	Pass
EDGE_Low_Slot1	22.02	22.83	33	Pass
EDGE_Low_Slot2	20.49	21.30	33	Pass
EDGE_Low_Slot3	18.50	19.31	33	Pass
EDGE_Low_Slot4	16.74	17.55	33	Pass
EDGE_Middle_Slot1	21.36	22.17	33	Pass
EDGE_Middle_Slot2	20.03	20.84	33	Pass
EDGE_Middle_Slot3	18.06	18.87	33	Pass
EDGE_Middle_Slot4	16.27	17.08	33	Pass
EDGE_High_Slot1	20.78	21.59	33	Pass
EDGE_High_Slot2	19.43	20.24	33	Pass
EDGE_High_Slot3	17.51	18.32	33	Pass
EDGE_High_Slot4	15.84	16.65	33	Pass

Note:

EIRP = Peak Conducted Power(dBm) - L_C(dB) + G_T(dBi)

1.Ant Gain = 0.81dBi;

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

Peak-to-average Ratio(PAR)

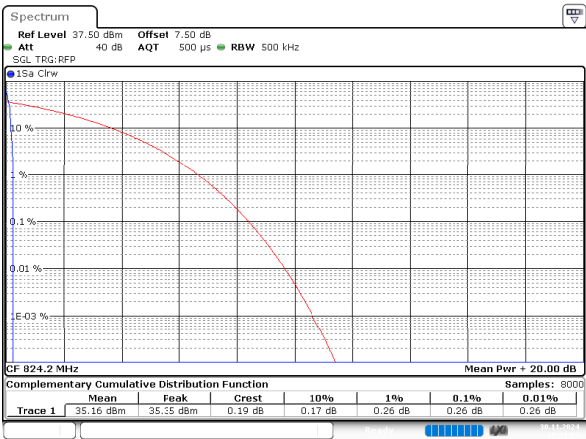
FCC Part 22H & IC RSS 132

GSM 850 , Normal

Mode	Result (dB)	Limit (dB)
GSM_Low	0.26	13
GSM_Middle	0.29	13
GSM_High	0.20	13

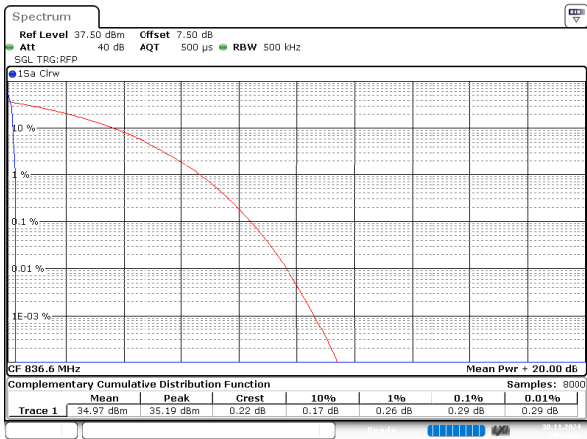
GSM 850 , Normal

GSM_Low



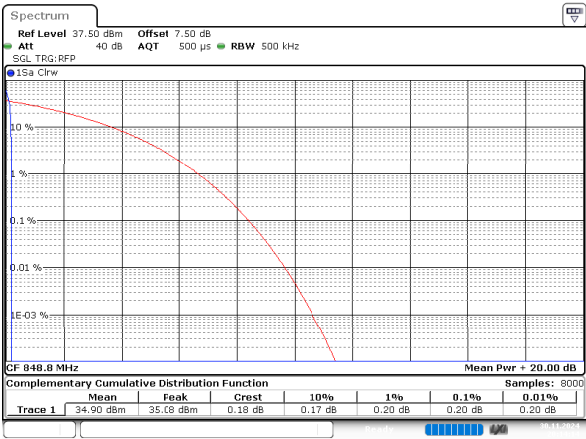
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GSM_Middle



ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 30.NOV.2024 20:11:08

GSM_High



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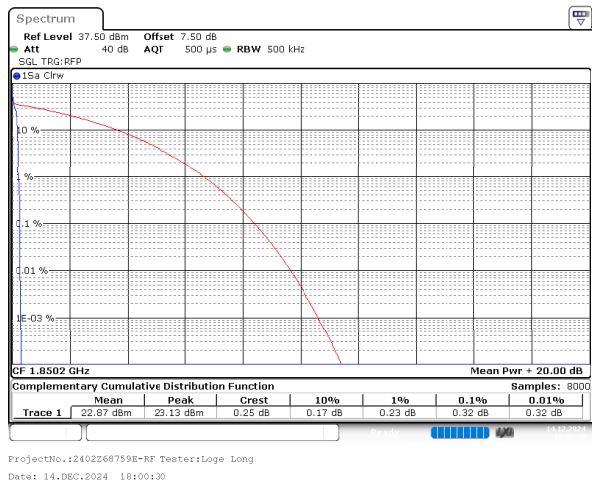
FCC Part 24E & IC RSS 133

GSM 1900 , Normal

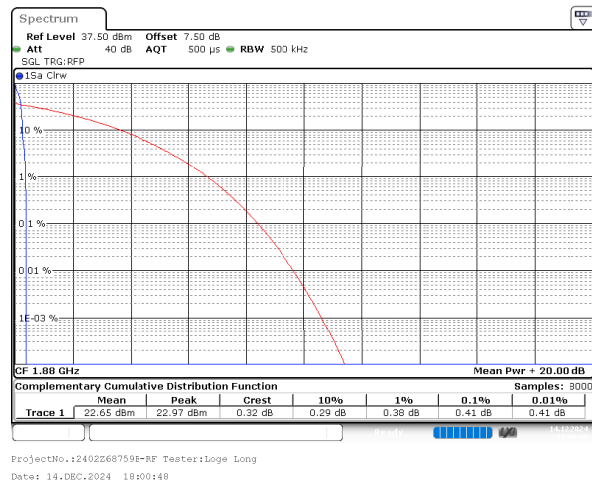
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GSM_Middle	0.41	13
GSM_High	0.29	13

GSM 1900 , Normal

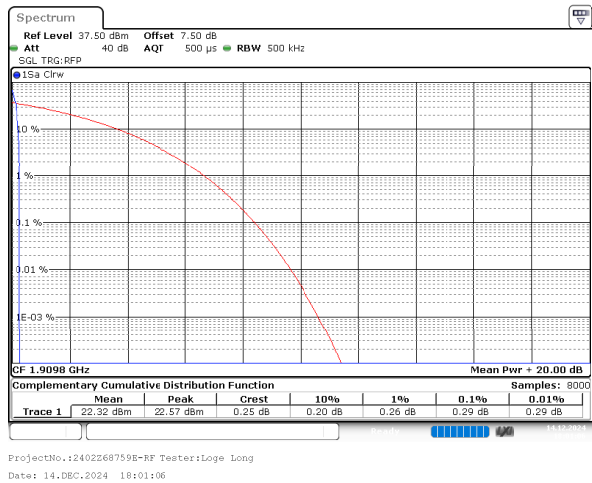
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GSM_Middle



GSM_High

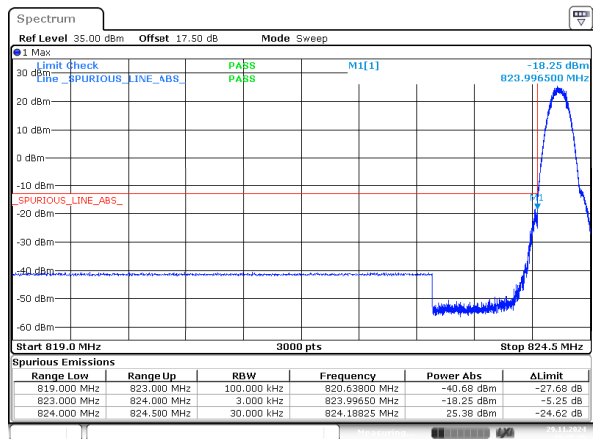


Out of band emission,Band Edge

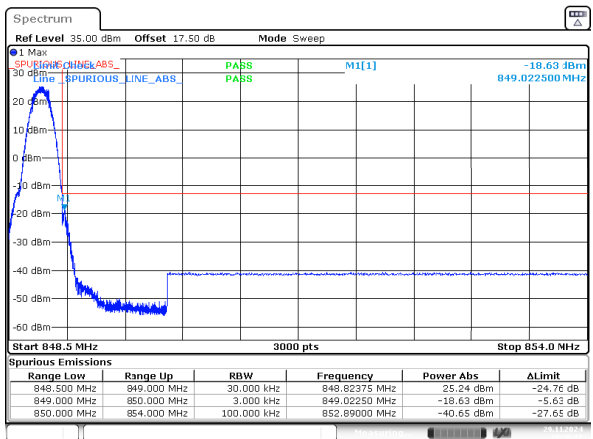
FCC Part 22H & IC RSS 132

GSM 850 , Normal

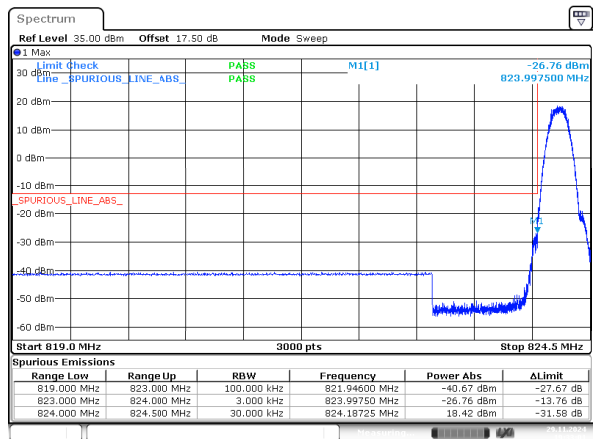
GSM_Low



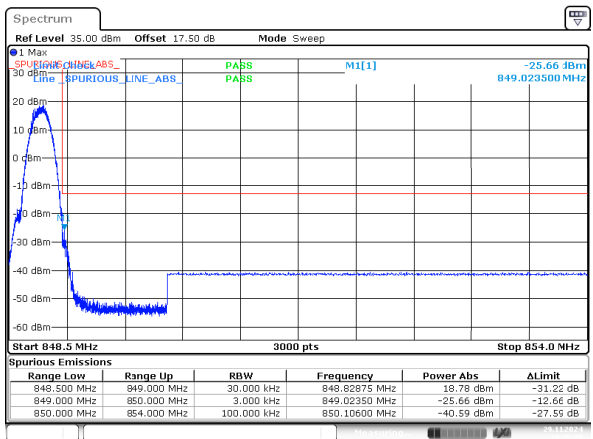
GSM_High



EDGE_Low_Slot1



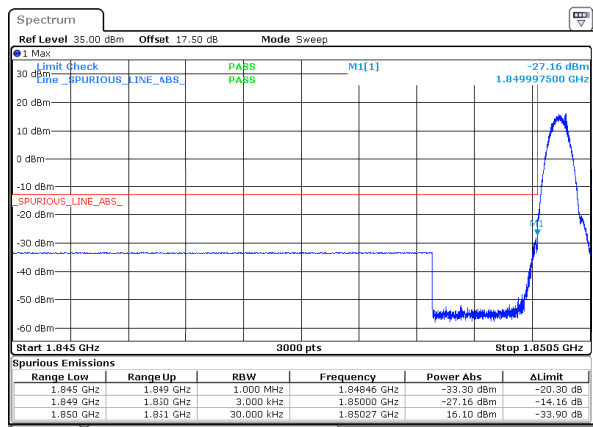
EDGE_High_Slot1



FCC Part 24E & IC RSS 133

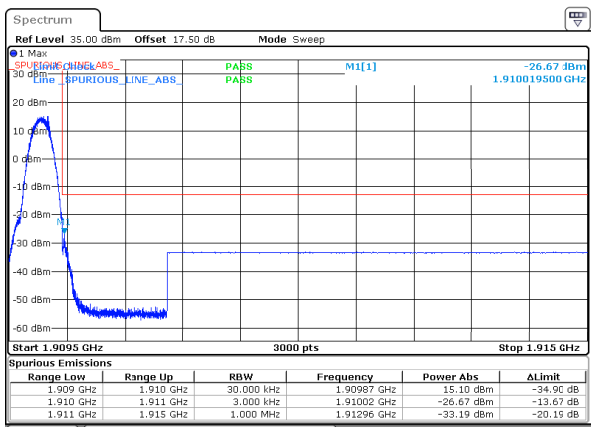
GSM 1900 , Normal

GSM_Low



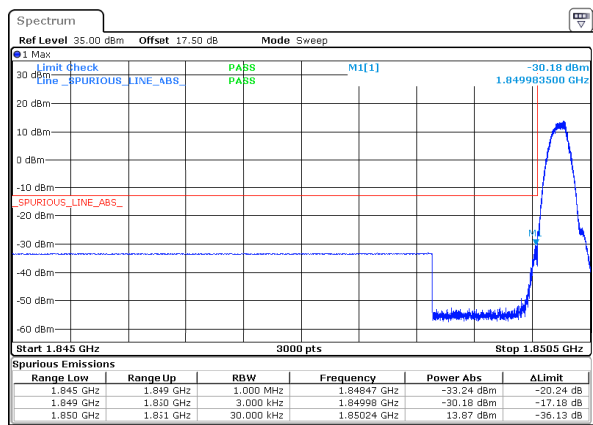
ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 14.DEC.2024 18:08:46

GSM_High



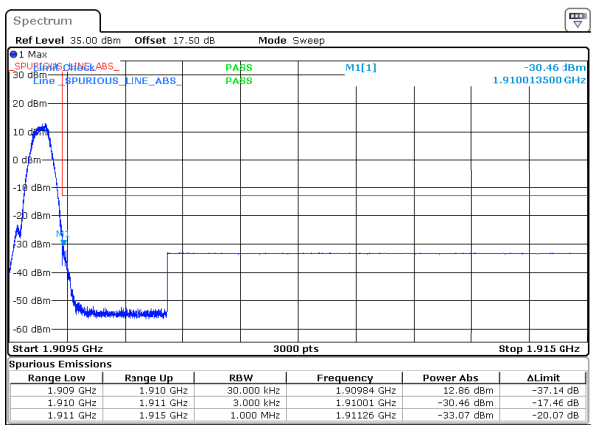
ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 14.DEC.2024 18:10:40

EDGE_Low_Slot1



ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 14.DEC.2024 18:13:00

EDGE_High_Slot1



ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 14.DEC.2024 18:16:02

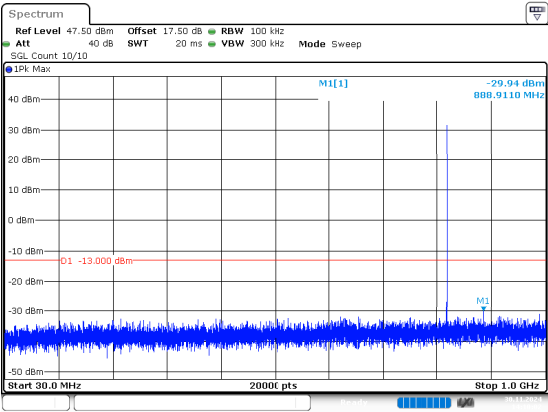
Spurious Emissions at Antenna Terminal

FCC Part 22H & IC RSS 132

GSM 850 , Normal

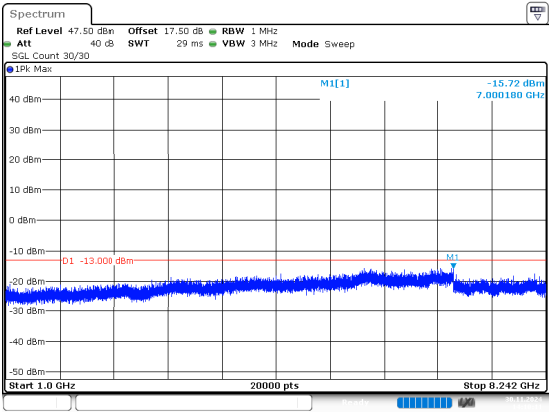
GSM_Low

Below 1G



ProjectNo.:2402Z68759E-R7 Tester:Loge Long
Date: 30.NOV.2024 14:10:02

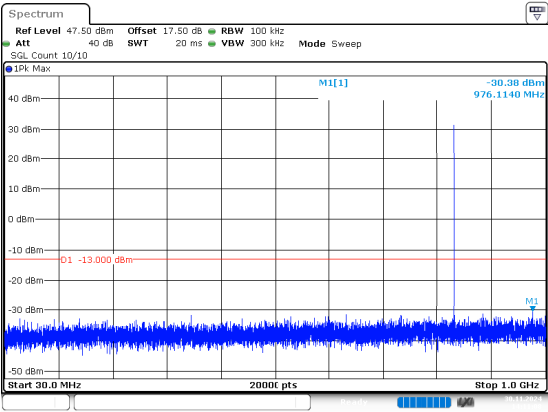
Above 1G



ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 30.NOV.2024 14:10:12

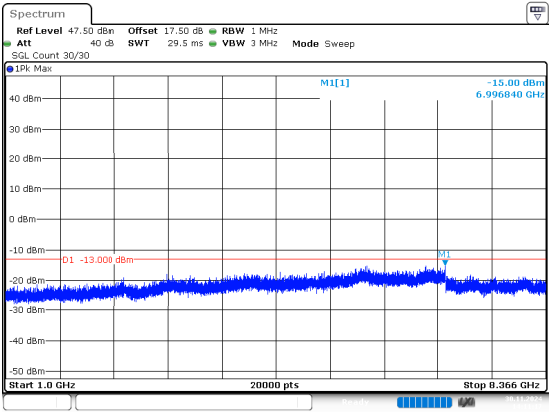
GSM_Middle

Below 1G



ProjectNo.:2402Z68759E-R7 Tester:Loge Long
Date: 30.NOV.2024 14:11:09

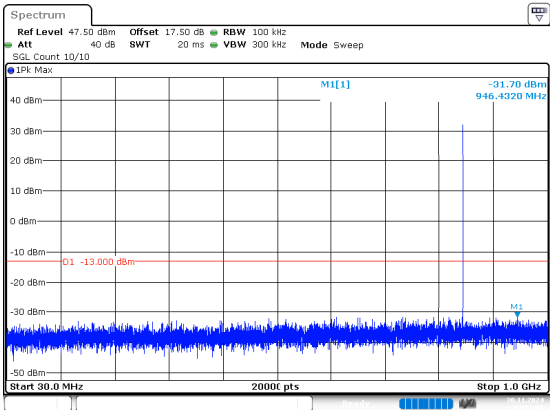
Above 1G



ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 30.NOV.2024 14:11:18

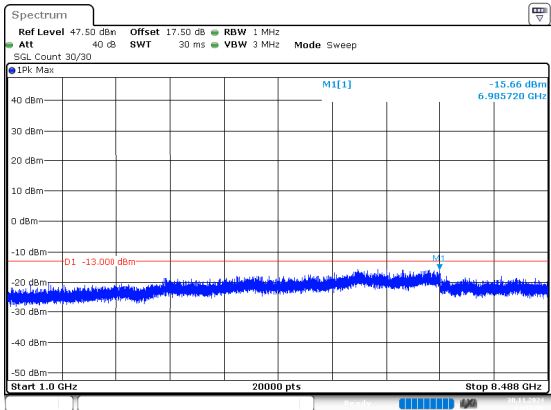
GSM_High

Below 1G



ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 30.NOV.2024 14:12:00

Above 1G

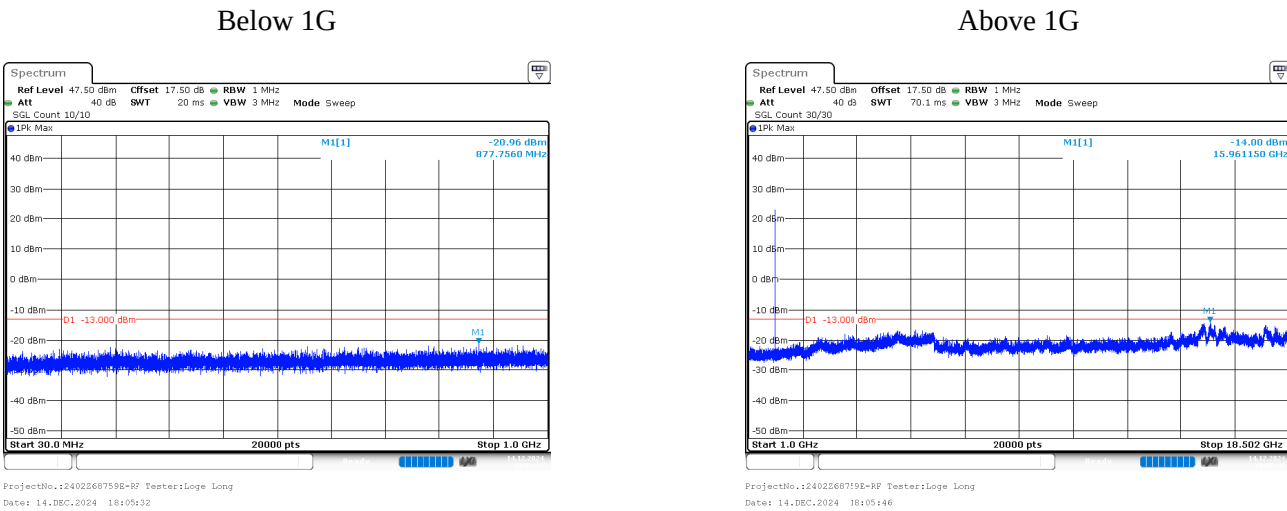


ProjectNo.:2402Z68759E-RF Tester:Loge Long
Date: 30.NOV.2024 14:12:09

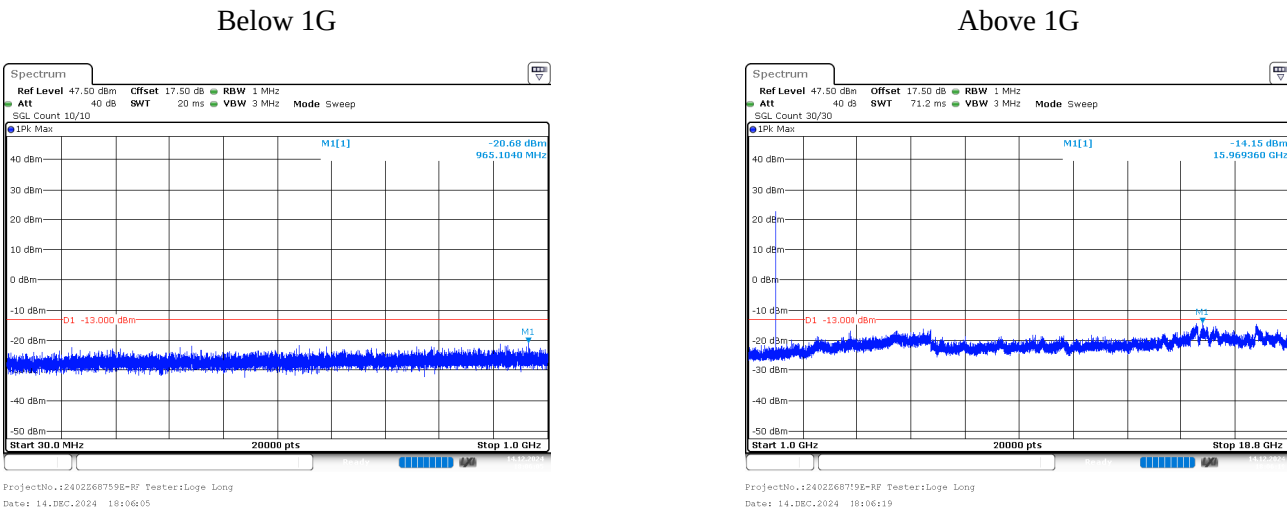
FCC Part 24E & IC RSS 133

GSM 1900 , Normal

GSM_Low



GSM_Middle



GSM_High

