

Appendix B2

Test Information:

Sample No.:	2SY1-1	Test Date:	2024/11/01~2024/12/3
Test Site:	RF	Test Mode:	Transmitting
Tester:	Leo Lin	Test Result:	Pass

Environmental Conditions:

Temperature: (°C):	24.5-26.5	Relative Humidity: (%)	45-55	ATM Pressure: (kPa)	101
-----------------------	-----------	---------------------------	-------	------------------------	-----

Frequency stability vs. temperature &Frequency stability vs. voltage Compliance

FCC Part 22H

Band 5

Mode	Test Channel (MHz)	Frequency Error		Limit (ppm)	Verdict
		(Hz)	(ppm)		
R99_Middle_TN/VN	836.4	9.5	0.011	±2.5	Pass
R99_Middle_T1/VN	836.4	-6.5	-0.008	±2.5	Pass
R99_Middle_T2/VN	836.4	-1.0	-0.001	±2.5	Pass
R99_Middle_T3/VN	836.4	1.7	0.002	±2.5	Pass
R99_Middle_T4/VN	836.4	7.8	0.009	±2.5	Pass
R99_Middle_T5/VN	836.4	-7.5	-0.009	±2.5	Pass
R99_Middle_T6/VN	836.4	4.7	0.006	±2.5	Pass
R99_Middle_T7/VN	836.4	-0.5	-0.001	±2.5	Pass
R99_Middle_T8/VN	836.4	-3.4	-0.004	±2.5	Pass
R99_Middle_TN/VH	836.4	-7.0	-0.008	±2.5	Pass
R99_Middle_TN/VL	836.4	2.0	0.002	±2.5	Pass

Note:

Frequency Error (ppm)=Frequency Error (Hz)/Test Channel(MHz)

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

Band 2

Mode	Result (MHz)	Limit (MHz)	Verdict
R99_Low_TN/VN	1850.005	1850	Pass
R99_Low_T1/VN	1850.023	1850	Pass
R99_Low_T2/VN	1850.081	1850	Pass
R99_Low_T3/VN	1850.052	1850	Pass
R99_Low_T4/VN	1850.012	1850	Pass
R99_Low_T5/VN	1850.079	1850	Pass
R99_Low_T6/VN	1850.024	1850	Pass
R99_Low_T7/VN	1850.051	1850	Pass
R99_Low_T8/VN	1850.021	1850	Pass
R99_Low_TN/VH	1850.010	1850	Pass
R99_Low_TN/VL	1850.092	1850	Pass
R99_High_TN/VN	1909.974	1910	Pass
R99_High_T1/VN	1909.942	1910	Pass
R99_High_T2/VN	1909.942	1910	Pass
R99_High_T3/VN	1909.942	1910	Pass
R99_High_T4/VN	1909.948	1910	Pass
R99_High_T5/VN	1909.996	1910	Pass
R99_High_T6/VN	1909.996	1910	Pass
R99_High_T7/VN	1909.906	1910	Pass
R99_High_T8/VN	1909.966	1910	Pass
R99_High_TN/VH	1909.909	1910	Pass
R99_High_TN/VL	1909.904	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

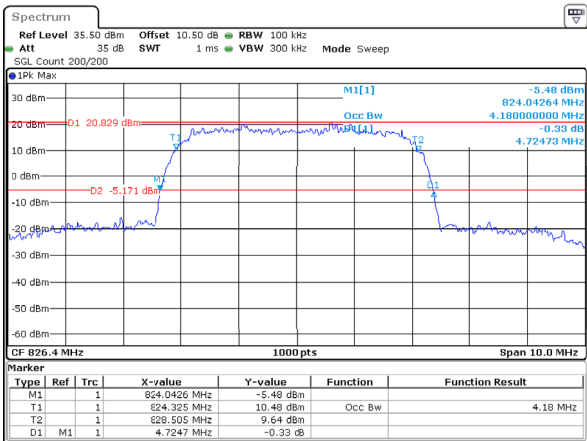
FCC Part 22H

Band 5, Normal

Mode	99% OBW (MHz)	EBW (MHz)
R99_Low	4.180	4.725
R99_Middle	4.150	4.611
R99_High	4.170	4.685

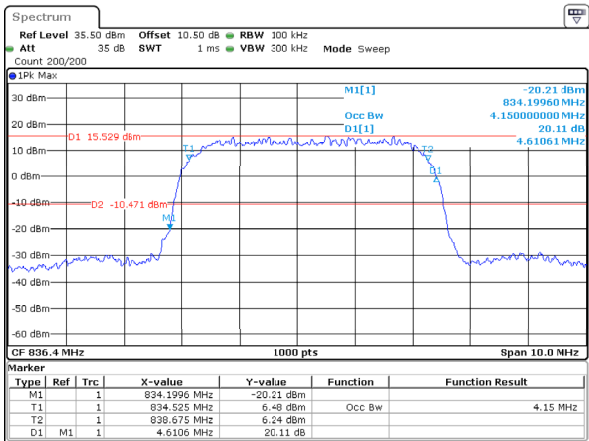
Band 5, Normal

R99_Low



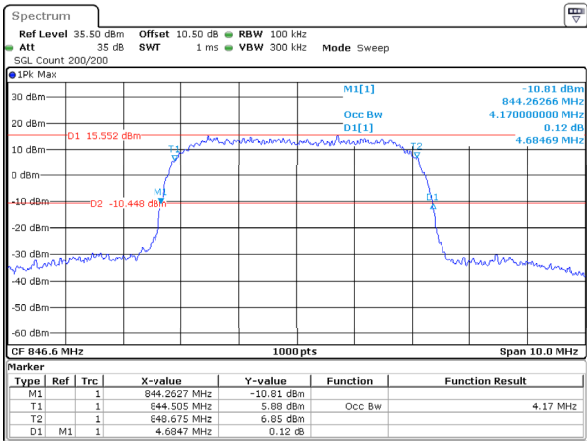
ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 2.DEC.2024 16:47:35

R99_Middle



ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 3.DEC.2024 14:50:21

R99_High



ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 3.DEC.2024 14:50:53

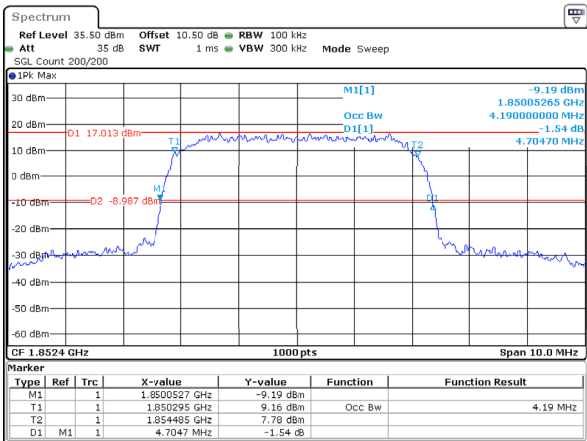
FCC Part 24E

Band 2, Normal

Mode	99% OBW (MHz)	EBW (MHz)
R99_Low	4.190	4.705
R99_Middle	4.180	4.685
R99_High	4.150	4.715

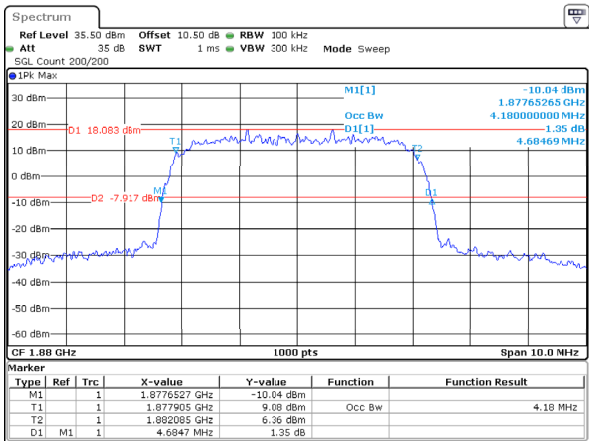
Band 2 , Normal

R99_Low



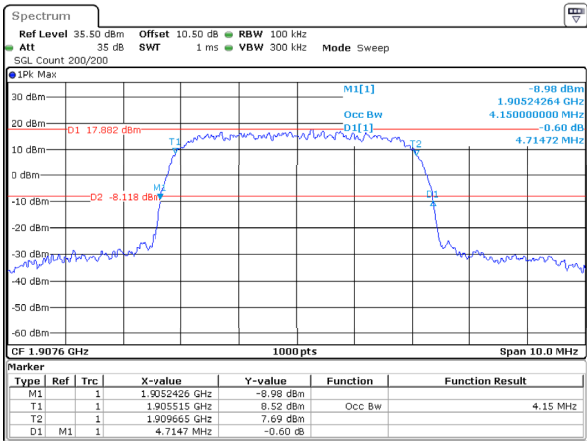
ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 2.DEC.2024 16:37:05

R99_Middle



ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 2.DEC.2024 16:37:27

R99_High



ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 2.DEC.2024 16:37:50

RF Output Power

FCC Part 22H

Band 5, Normal

Mode	Conducted Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
R99_Low	23.59	15.97	38.45	Pass
R99_Middle	23.57	15.95	38.45	Pass
R99_High	23.61	15.99	38.45	Pass
HSDPA_Low_Subtest1	22.11	14.49	38.45	Pass
HSDPA_Low_Subtest2	21.98	14.36	38.45	Pass
HSDPA_Low_Subtest3	22.01	14.39	38.45	Pass
HSDPA_Low_Subtest4	21.92	14.30	38.45	Pass
HSDPA_Middle_Subtest1	22.19	14.57	38.45	Pass
HSDPA_Middle_Subtest2	22.15	14.53	38.45	Pass
HSDPA_Middle_Subtest3	22.14	14.52	38.45	Pass
HSDPA_Middle_Subtest4	22.27	14.65	38.45	Pass
HSDPA_High_Subtest1	22.16	14.54	38.45	Pass
HSDPA_High_Subtest2	22.2	14.58	38.45	Pass
HSDPA_High_Subtest3	22.22	14.60	38.45	Pass
HSDPA_High_Subtest4	22.16	14.54	38.45	Pass
HSUPA_Low_Subtest1	22.17	14.55	38.45	Pass
HSUPA_Low_Subtest2	22.04	14.42	38.45	Pass
HSUPA_Low_Subtest3	22.05	14.43	38.45	Pass
HSUPA_Low_Subtest4	22.07	14.45	38.45	Pass
HSUPA_Low_Subtest5	21.89	14.27	38.45	Pass
HSUPA_Middle_Subtest1	22.10	14.48	38.45	Pass
HSUPA_Middle_Subtest2	21.97	14.35	38.45	Pass
HSUPA_Middle_Subtest3	22.15	14.53	38.45	Pass
HSUPA_Middle_Subtest4	22.15	14.53	38.45	Pass
HSUPA_Middle_Subtest5	22.30	14.68	38.45	Pass
HSUPA_High_Subtest1	22.15	14.53	38.45	Pass
HSUPA_High_Subtest2	22.11	14.49	38.45	Pass
HSUPA_High_Subtest3	21.32	13.70	38.45	Pass
HSUPA_High_Subtest4	22.01	14.39	38.45	Pass
HSUPA_High_Subtest5	21.85	14.23	38.45	Pass

Mode	Conducted Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
HSPA+_Low_Subtest1	22.16	14.54	38.45	Pass
HSPA+_Middle_Subtest1	22.08	14.46	38.45	Pass
HSPA+_High_Subtest1	22.02	14.40	38.45	Pass

Note:

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

G_T(dBd) = G_T(dBi) - 2.15

B5:

1.Ant Gain = -4.97dBi;

2.C_L = signal attenuation in the connecting cable between the transmitter and antenna in 0.5dB

FCC Part 24E

Band 2, Normal

Mode	Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
R99_Low	23.70	23.34	33	Pass
R99_Middle	23.66	23.30	33	Pass
R99_High	23.78	23.42	33	Pass
HSDPA_Low_Subtest1	21.71	21.35	33	Pass
HSDPA_Low_Subtest2	21.52	21.16	33	Pass
HSDPA_Low_Subtest3	21.56	21.20	33	Pass
HSDPA_Low_Subtest4	21.51	21.15	33	Pass
HSDPA_Middle_Subtest1	21.63	21.27	33	Pass
HSDPA_Middle_Subtest2	21.65	21.29	33	Pass
HSDPA_Middle_Subtest3	21.69	21.33	33	Pass
HSDPA_Middle_Subtest4	21.66	21.30	33	Pass
HSDPA_High_Subtest1	21.22	20.86	33	Pass
HSDPA_High_Subtest2	22.01	21.65	33	Pass
HSDPA_High_Subtest3	21.99	21.63	33	Pass
HSDPA_High_Subtest4	20.31	19.95	33	Pass
HSUPA_Low_Subtest1	20.65	20.29	33	Pass
HSUPA_Low_Subtest2	21.24	20.88	33	Pass
HSUPA_Low_Subtest3	21.45	21.09	33	Pass
HSUPA_Low_Subtest4	21.41	21.05	33	Pass
HSUPA_Low_Subtest5	21.49	21.13	33	Pass
HSUPA_Middle_Subtest1	21.36	21.00	33	Pass
HSUPA_Middle_Subtest2	21.38	21.02	33	Pass
HSUPA_Middle_Subtest3	23.70	23.34	33	Pass
HSUPA_Middle_Subtest4	21.36	21.00	33	Pass
HSUPA_Middle_Subtest5	22.05	21.69	33	Pass
HSUPA_High_Subtest1	21.36	21.00	33	Pass
HSUPA_High_Subtest2	22.00	21.64	33	Pass
HSUPA_High_Subtest3	23.04	22.68	33	Pass
HSUPA_High_Subtest4	21.52	21.16	33	Pass
HSUPA_High_Subtest5	21.54	21.18	33	Pass
HSPA+_Low_Subtest1	21.22	20.86	33	Pass
HSPA+_Middle_Subtest1	21.28	20.92	33	Pass
HSPA+_High_Subtest1	21.34	20.98	33	Pass

Note:

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

B2:

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

Band 5, Normal

Mode	Result (dB)	Limit (dB)
R99_Low	3.43	13
R99_Middle	3.46	13
R99_High	3.43	13

FCC Part 24E

Band 2, Normal

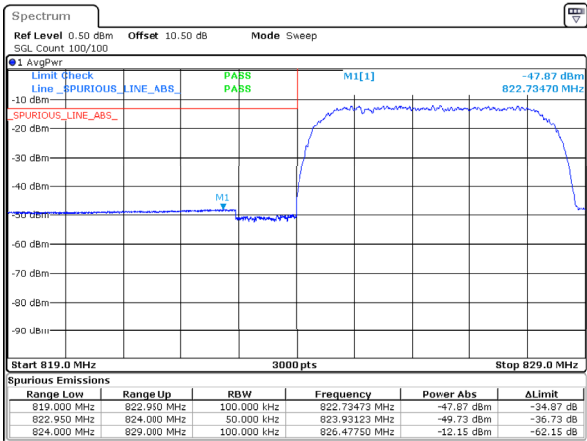
Mode	Result (dB)	Limit (dB)
R99_Low	3.46	13
R99_Middle	3.43	13
R99_High	3.46	13

Out of band emission, Band Edge

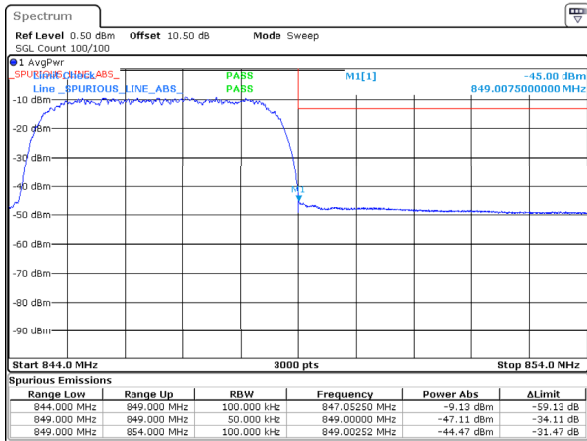
FCC Part 22H

Band 5, Normal

R99_Low



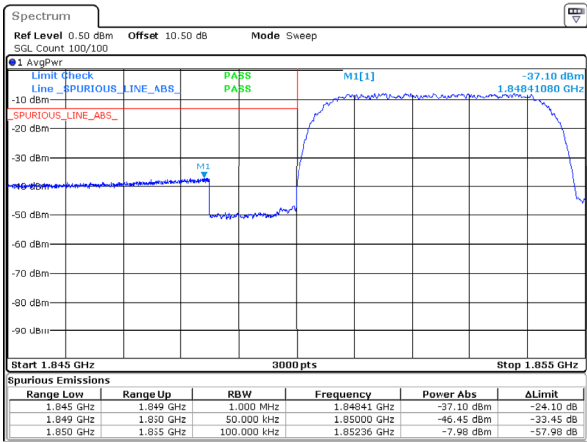
R99_High



FCC Part 24E

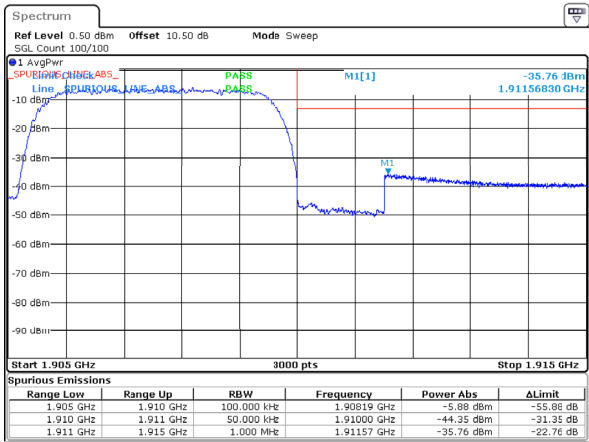
Band 2, Normal

R99_Low



ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 19.NOV.2024 22:21:14

R99_High



ProjectNo.:2401Y99438E-RF Tester:Leo Lin
Date: 19.NOV.2024 22:22:03

Spurious Emissions at Antenna Terminal

