Band4-1513-1

Band4-1513-2

Band4-1513-3

Band4-1513-4

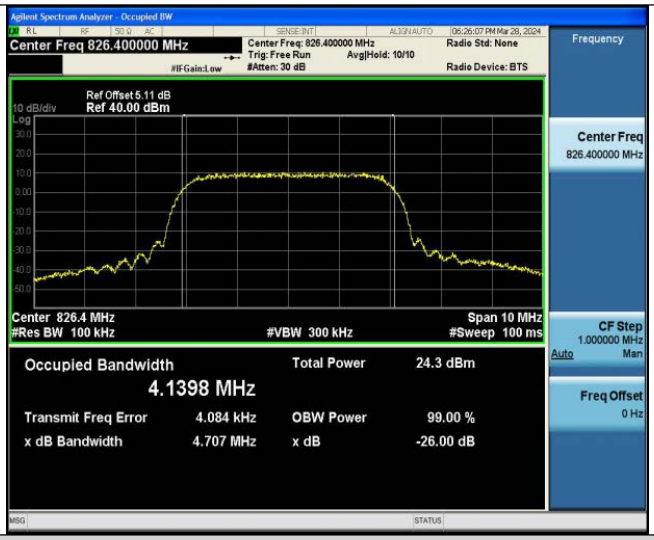
Band4-1513-5

Band5-4132-1

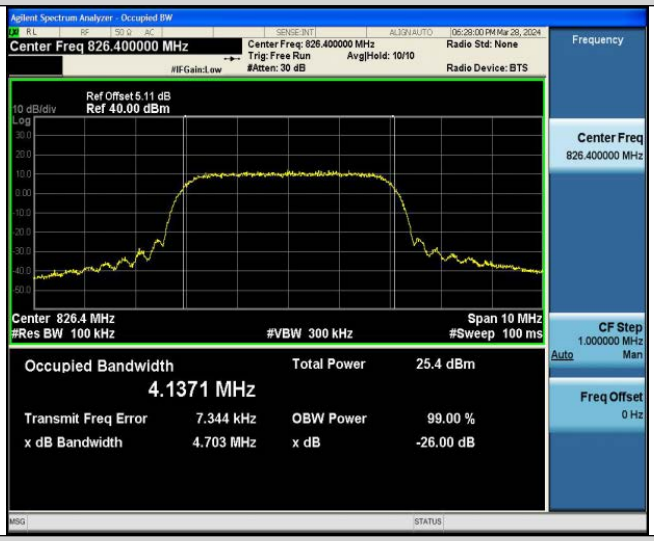
Band5-4132-2

Band5-4132-3

Band5-4132-4



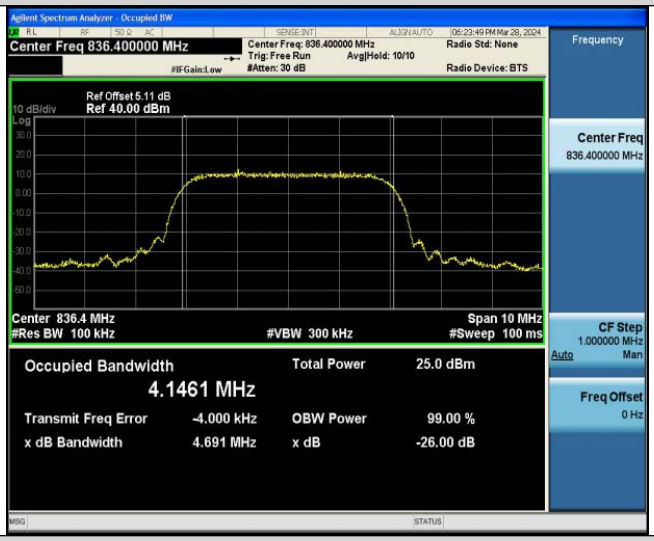
Band5-4132-5



Band5-4182-1

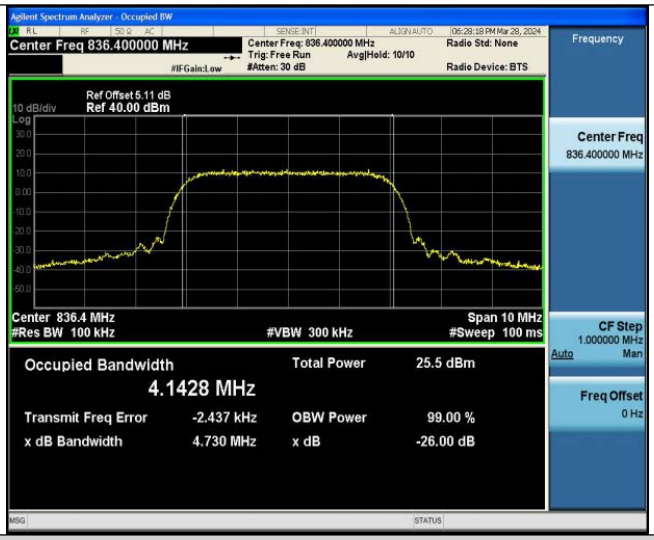
Band5-4182-2

Band5-4182-3



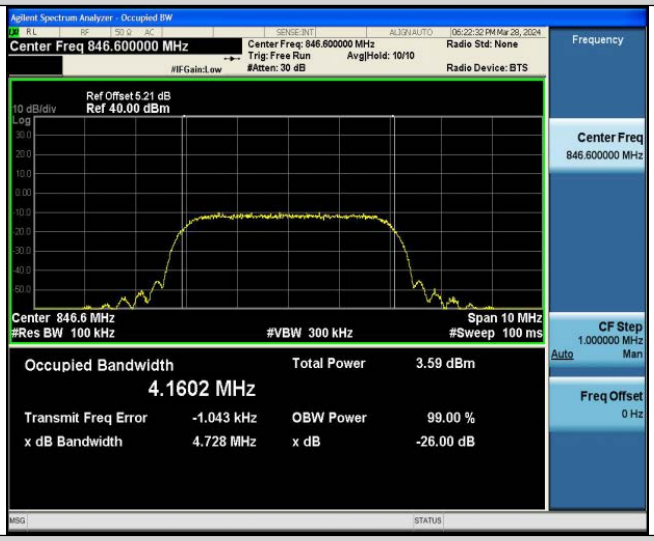
Band5-4182-4

Band5-4182-5

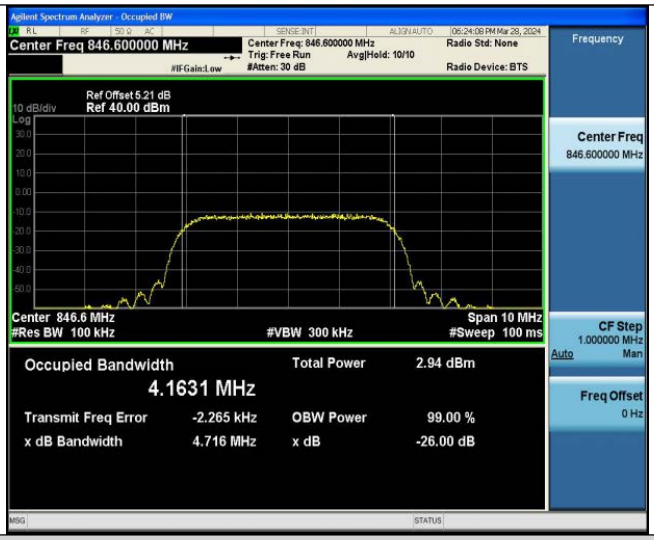


Band5-4233-1

Band5-4233-2

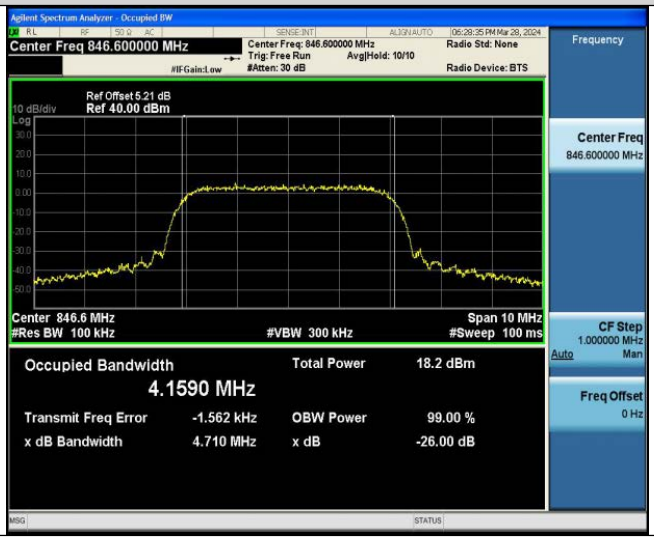


Band5-4233-3



Band5-4233-4

Band5-4233-5



8. Band Edge

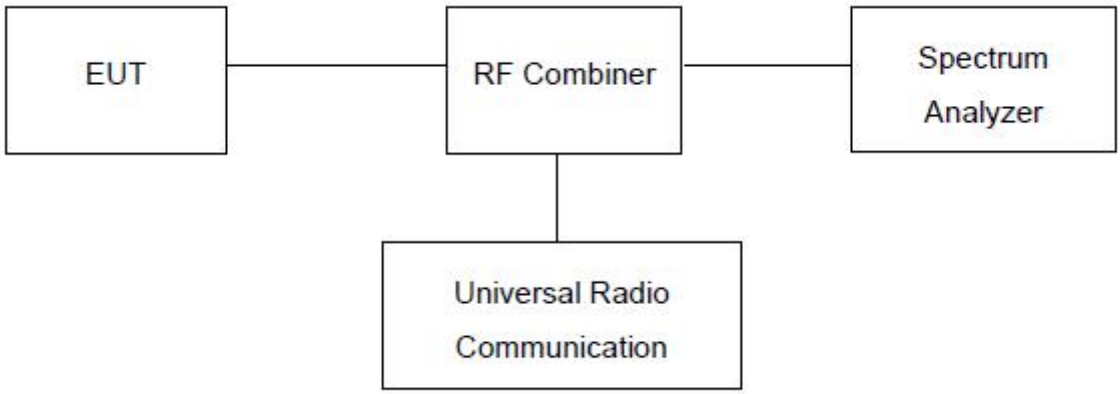
Test Limit:

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in §2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified. See section 4.

Test procedure:

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

Test setup:



Measurement Result:

Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band2	9262	1850.00	-21.81	-13	PASS
Band2	9538	1910.14	-22.02	-13	PASS
Band4	1312	1710.00	-21.13	-13	PASS
Band4	1513	1755.00	-22.83	-13	PASS
Band5	4132	824.00	-24.31	-13	PASS
Band5	4233	849.00	-22.87	-13	PASS

Band	Channel	SubTest	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band2	9262	1	1849.83	-24.57	-13	PASS
Band2	9262	2	1850.00	-23.91	-13	PASS
Band2	9262	3	1850.00	-23.67	-13	PASS
Band2	9262	4	1849.91	-23.76	-13	PASS
Band2	9538	1	1910.19	-22.54	-13	PASS
Band2	9538	2	1910.00	-22.82	-13	PASS
Band2	9538	3	1910.00	-22.05	-13	PASS
Band2	9538	4	1910.00	-22.70	-13	PASS
Band4	1312	1	1710.00	-23.77	-13	PASS
Band4	1312	2	1710.00	-23.73	-13	PASS
Band4	1312	3	1710.00	-24.52	-13	PASS
Band4	1312	4	1710.00	-24.46	-13	PASS
Band4	1513	1	1755.14	-24.24	-13	PASS
Band4	1513	2	1755.01	-24.89	-13	PASS
Band4	1513	3	1755.01	-22.02	-13	PASS
Band4	1513	4	1755.01	-21.23	-13	PASS
Band5	4132	1	824.00	-24.12	-13	PASS
Band5	4132	2	824.00	-26.20	-13	PASS
Band5	4132	3	824.00	-26.09	-13	PASS
Band5	4132	4	824.00	-25.51	-13	PASS
Band5	4233	1	849.00	-22.82	-13	PASS
Band5	4233	2	849.00	-24.42	-13	PASS
Band5	4233	3	849.17	-24.03	-13	PASS
Band5	4233	4	849.17	-23.93	-13	PASS

Band	Channel	SubTest	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band2	9262	1	1850.00	-24.57	-13	PASS
Band2	9262	2	1850.00	-23.97	-13	PASS
Band2	9262	3	1849.86	-25.10	-13	PASS
Band2	9262	4	1850.00	-24.51	-13	PASS
Band2	9262	5	1850.00	-23.07	-13	PASS
Band2	9538	1	1910.00	-22.84	-13	PASS
Band2	9538	2	1910.12	-22.15	-13	PASS
Band2	9538	3	1910.00	-20.90	-13	PASS
Band2	9538	4	1910.15	-21.37	-13	PASS
Band2	9538	5	1910.16	-23.60	-13	PASS
Band4	1312	1	1710.00	-23.96	-13	PASS
Band4	1312	2	1710.00	-24.74	-13	PASS
Band4	1312	3	1710.00	-24.72	-13	PASS
Band4	1312	4	1710.00	-24.96	-13	PASS
Band4	1312	5	1710.00	-23.97	-13	PASS
Band4	1513	1	1755.17	-23.80	-13	PASS
Band4	1513	2	1755.00	-24.09	-13	PASS
Band4	1513	3	1755.00	-23.64	-13	PASS
Band4	1513	4	1755.08	-25.67	-13	PASS
Band4	1513	5	1755.00	-23.21	-13	PASS
Band5	4132	1	823.97	-18.83	-13	PASS
Band5	4132	2	824.00	-25.52	-13	PASS
Band5	4132	3	823.86	-21.06	-13	PASS
Band5	4132	4	824.00	-25.12	-13	PASS
Band5	4132	5	824.00	-24.76	-13	PASS
Band5	4233	1	849.12	-17.78	-13	PASS
Band5	4233	2	849.00	-24.28	-13	PASS
Band5	4233	3	849.15	-24.63	-13	PASS
Band5	4233	4	849.00	-23.54	-13	PASS
Band5	4233	5	849.00	-24.44	-13	PASS

Test Graphs:

Band2-9262

Band2-9538

Band4-1312

Band4-1513

Band5-4132

Band5-4233

Band2-9262-1

Band2-9262-2

Band2-9262-3

Band2-9262-4

Band2-9538-1

Band2-9538-2

Band2-9538-3

Band2-9538-4

Band4-1312-1

Band4-1312-2

Band4-1312-3

Band4-1312-4

Band4-1513-1

Band4-1513-2

Band4-1513-3

Band4-1513-4

Band5-4132-1

Band5-4132-2

Band5-4132-3

Band5-4132-4

Band5-4233-1

Band5-4233-2

Band5-4233-3

Band5-4233-4

Band2-9262-1

Band2-9262-2

Band2-9262-3

Band2-9262-4

Band2-9262-5

Band2-9538-1

Band2-9538-2

Band2-9538-3

Band2-9538-4

Band2-9538-5

Band4-1312-1

Band4-1312-2

Band4-1312-3

Band4-1312-4

Band4-1312-5

Band4-1513-1

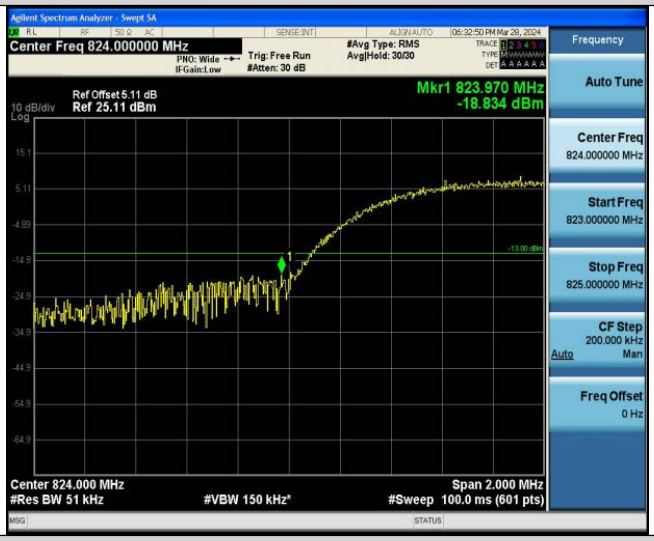
Band4-1513-2

Band4-1513-3

Band4-1513-4

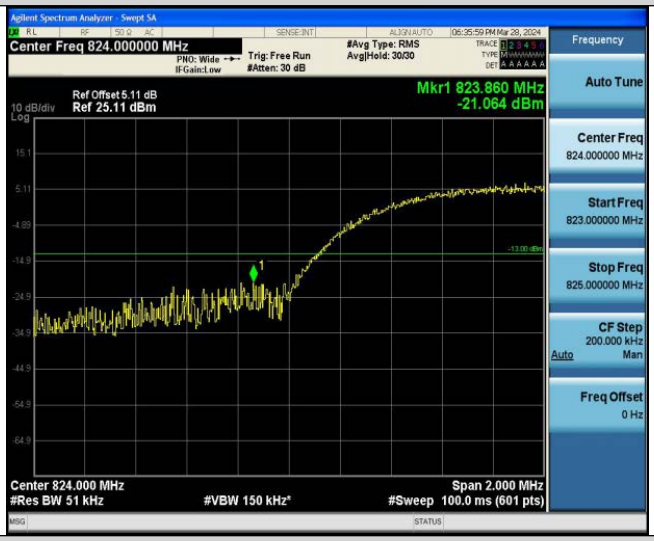
Band4-1513-5

Band5-4132-1



Band5-4132-2

Band5-4132-3



Band5-4132-4

Band5-4132-5

Band5-4233-1

Band5-4233-2

Band5-4233-3

Band5-4233-4

Band5-4233-5

9. Frequency Stability

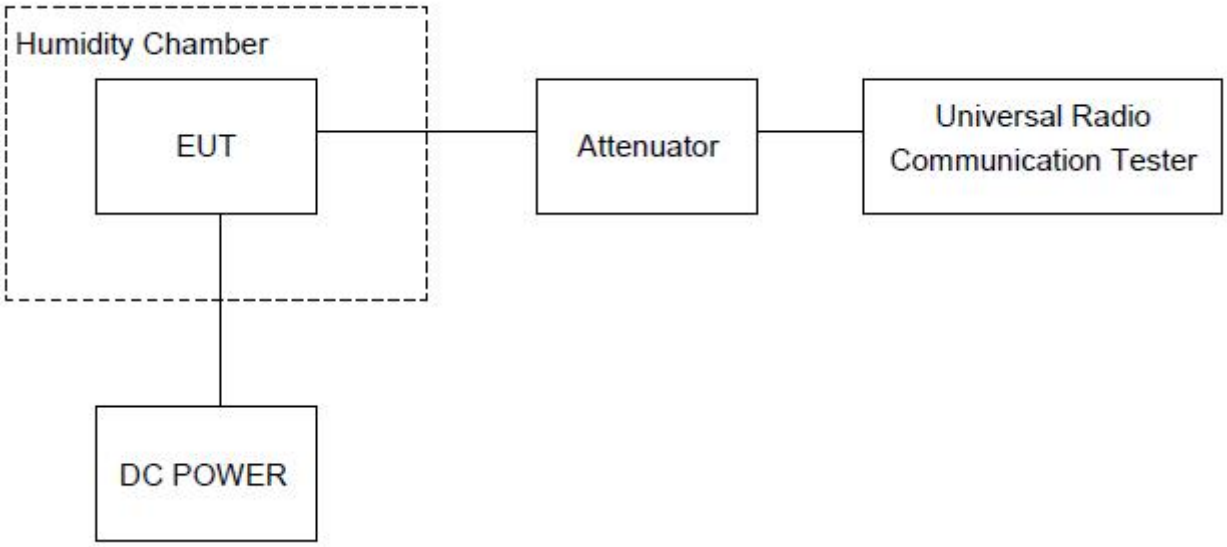
Test limit:

The frequency stability of the transmitter shall be measured while varying the ambient temperatures and supply voltages over the ranges specified in §2.1055. The specific frequency stability limits are provided in the relevant rules section(s). see section 4.

Test procedure:

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

Test setup:



9.1. Measurement Result (Worst)

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band2	9262	VL	NT	4.41	0.002381	±2.5	PASS
Band2	9262	VN	NT	4.80	0.002591	±2.5	PASS
Band2	9262	VH	NT	3.96	0.002138	±2.5	PASS
Band2	9400	VL	NT	-0.62	-0.000330	±2.5	PASS
Band2	9400	VN	NT	-0.72	-0.000383	±2.5	PASS
Band2	9400	VH	NT	0.47	0.000250	±2.5	PASS
Band2	9538	VL	NT	-4.69	-0.002459	±2.5	PASS
Band2	9538	VN	NT	-4.69	-0.002459	±2.5	PASS
Band2	9538	VH	NT	-5.00	-0.002621	±2.5	PASS
Band4	1312	VL	NT	17.85	0.010424	±2.5	PASS
Band4	1312	VN	NT	17.74	0.010360	±2.5	PASS
Band4	1312	VH	NT	17.57	0.010260	±2.5	PASS
Band4	1413	VL	NT	0.08	0.000046	±2.5	PASS
Band4	1413	VN	NT	-0.02	-0.000012	±2.5	PASS
Band4	1413	VH	NT	0.36	0.000208	±2.5	PASS
Band4	1513	VL	NT	-15.84	-0.009038	±2.5	PASS
Band4	1513	VN	NT	-15.88	-0.009061	±2.5	PASS
Band4	1513	VH	NT	-16.40	-0.009358	±2.5	PASS
Band5	4132	VL	NT	2.11	0.002553	±2.5	PASS
Band5	4132	VN	NT	1.96	0.002372	±2.5	PASS
Band5	4132	VH	NT	2.29	0.002771	±2.5	PASS
Band5	4182	VL	NT	0.36	0.000430	±2.5	PASS
Band5	4182	VN	NT	0.01	0.000012	±2.5	PASS
Band5	4182	VH	NT	-0.12	-0.000143	±2.5	PASS
Band5	4233	VL	NT	-2.29	-0.002705	±2.5	PASS
Band5	4233	VN	NT	-2.45	-0.002894	±2.5	PASS
Band5	4233	VH	NT	-2.22	-0.002622	±2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band2	9262	NV	-30	3.92	0.002116	±2.5	PASS
Band2	9262	NV	-20	4.41	0.002381	±2.5	PASS
Band2	9262	NV	0	4.16	0.002246	±2.5	PASS
Band2	9262	NV	10	4.01	0.002165	±2.5	PASS
Band2	9262	NV	20	4.05	0.002186	±2.5	PASS
Band2	9400	NV	-30	0.44	0.000234	±2.5	PASS
Band2	9400	NV	-20	-0.35	-0.000186	±2.5	PASS
Band2	9400	NV	0	-0.13	-0.000069	±2.5	PASS
Band2	9400	NV	10	-0.21	-0.000112	±2.5	PASS
Band2	9400	NV	20	-0.28	-0.000149	±2.5	PASS
Band2	9538	NV	-30	-5.14	-0.002694	±2.5	PASS

Band2	9538	NV	-20	-4.94	-0.002590	±2.5	PASS
Band2	9538	NV	0	-4.95	-0.002595	±2.5	PASS
Band2	9538	NV	10	-4.63	-0.002427	±2.5	PASS
Band2	9538	NV	20	-5.22	-0.002736	±2.5	PASS
Band4	1312	NV	-30	18.47	0.010786	±2.5	PASS
Band4	1312	NV	-20	17.73	0.010354	±2.5	PASS
Band4	1312	NV	0	17.51	0.010225	±2.5	PASS
Band4	1312	NV	10	17.85	0.010424	±2.5	PASS
Band4	1312	NV	20	17.95	0.010482	±2.5	PASS
Band4	1413	NV	-30	-0.41	-0.000237	±2.5	PASS
Band4	1413	NV	-20	-0.61	-0.000352	±2.5	PASS
Band4	1413	NV	0	0.55	0.000317	±2.5	PASS
Band4	1413	NV	10	-0.09	-0.000052	±2.5	PASS
Band4	1413	NV	20	-0.01	-0.000006	±2.5	PASS
Band4	1513	NV	-30	-16.10	-0.009186	±2.5	PASS
Band4	1513	NV	-20	-16.43	-0.009375	±2.5	PASS
Band4	1513	NV	0	-15.28	-0.008718	±2.5	PASS
Band4	1513	NV	10	-16.22	-0.009255	±2.5	PASS
Band4	1513	NV	20	-16.64	-0.009494	±2.5	PASS
Band5	4132	NV	-30	2.37	0.002868	±2.5	PASS
Band5	4132	NV	-20	2.04	0.002469	±2.5	PASS
Band5	4132	NV	0	1.98	0.002396	±2.5	PASS
Band5	4132	NV	10	2.39	0.002892	±2.5	PASS
Band5	4132	NV	20	2.07	0.002505	±2.5	PASS
Band5	4182	NV	-30	-0.21	-0.000251	±2.5	PASS
Band5	4182	NV	-20	0.13	0.000155	±2.5	PASS
Band5	4182	NV	0	0.05	0.000060	±2.5	PASS
Band5	4182	NV	10	0.24	0.000287	±2.5	PASS
Band5	4182	NV	20	0.08	0.000096	±2.5	PASS
Band5	4233	NV	-30	-2.38	-0.002811	±2.5	PASS
Band5	4233	NV	-20	-2.32	-0.002740	±2.5	PASS
Band5	4233	NV	0	-2.37	-0.002799	±2.5	PASS
Band5	4233	NV	10	-2.27	-0.002681	±2.5	PASS
Band5	4233	NV	20	-2.62	-0.003095	±2.5	PASS

15 APPENDIX I -- TEST SETUP PHOTOGRAPH

Refer to ”Test Setup Photos”.

16 APPENDIX II -- EUT PHOTOGRAPH

Refer to “ External Photos” and “Internal Photos”.

********THE END REPORT********