



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

-48	-10	3.447587442	0.002	107	0.05	compliant
-48	0	-3.39949911	-0.002	107	0.05	compliant
-48	10	-2.377032652	-0.001	107	0.05	compliant
-48	30	-1.818340497	-0.001	107	0.05	compliant
-48	40	2.241175971	0.001	107	0.05	compliant
-48	50	-2.718567048	-0.001	107	0.05	compliant
16QAM Modulation ANT4						
-48	-30	4.02986625	0.002	107	0.05	compliant
-48	-20	-4.497464688	-0.002	107	0.05	compliant
-48	-10	-2.192191387	-0.001	107	0.05	compliant
-48	0	2.556170075	0.001	107	0.05	compliant
-48	10	-5.510804913	-0.003	107	0.05	compliant
-48	30	-3.445787079	-0.002	107	0.05	compliant
-48	40	-3.485200141	-0.002	107	0.05	compliant
-48	50	-2.923154461	-0.001	107	0.05	compliant
256QAM Modulation ANT1						
-48	-30	4.633220087	0.002	107	0.05	compliant
-48	-20	3.413864033	0.002	107	0.05	compliant
-48	-10	-2.135467512	-0.001	107	0.05	compliant
-48	0	-6.267644931	-0.003	107	0.05	compliant
-48	10	2.805711993	0.001	107	0.05	compliant
-48	30	-2.73781814	-0.001	107	0.05	compliant
-48	40	5.193632824	0.002	107	0.05	compliant
-48	50	1.976417843	0.001	107	0.05	compliant
256QAM Modulation ANT2						
-48	-30	2.965473032	0.001	107	0.05	compliant
-48	-20	2.835309933	0.001	107	0.05	compliant
-48	-10	1.942603849	0.001	107	0.05	compliant
-48	0	-3.705487907	-0.002	107	0.05	compliant
-48	10	1.413913451	0.001	107	0.05	compliant
-48	30	-3.909828665	-0.002	107	0.05	compliant
-48	40	3.63019004	0.002	107	0.05	compliant
-48	50	-2.155382826	-0.001	107	0.05	compliant
256QAM Modulation ANT3						
-48	-30	3.342821292	0.002	107	0.05	compliant
-48	-20	-2.447419247	-0.001	107	0.05	compliant
-48	-10	-3.592231806	-0.002	107	0.05	compliant
-48	0	2.708849497	0.001	107	0.05	compliant
-48	10	-2.392177921	-0.001	107	0.05	compliant
-48	30	-3.719899105	-0.002	107	0.05	compliant
-48	40	2.498188915	0.001	107	0.05	compliant
-48	50	-2.869867385	-0.001	107	0.05	compliant
256QAM Modulation ANT4						
-48	-30	-2.185329795	-0.001	107	0.05	compliant
-48	-20	-4.426270461	-0.002	107	0.05	compliant
-48	-10	4.016867315	0.002	107	0.05	compliant
-48	0	4.366804787	0.002	107	0.05	compliant
-48	10	-4.722290905	-0.002	107	0.05	compliant
-48	30	3.307261504	0.002	107	0.05	compliant
-48	40	-3.847049957	-0.002	107	0.05	compliant
-48	50	-3.035573027	-0.001	107	0.05	compliant

Config C:

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 49 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612**Table 9 Frequency stability with temp. var. (15MHz Channel BW)**

Carrier Frequency: 2155 MHz						
Supply Voltage (DC) [V]	Ambient Temperature [°C]	Frequency Deviation		Manufacturer's Specification		Result
		[Hz]	[ppm]	[Hz]	[ppm]	
QPSK Modulation ANT1						
-48	-30	4.556739586	0.002	107	0.05	compliant
-48	-20	-3.660838556	-0.002	107	0.05	compliant
-48	-10	-3.624972305	-0.002	107	0.05	compliant
-48	0	3.792661009	0.002	107	0.05	compliant
-48	10	-3.904382174	-0.002	107	0.05	compliant
-48	30	2.512485516	0.001	107	0.05	compliant
-48	40	3.039345756	0.001	107	0.05	compliant
-48	50	-2.441947436	-0.001	107	0.05	compliant
QPSK Modulation ANT2						
-48	-30	1.342732212	0.001	107	0.05	compliant
-48	-20	-2.11002538	-0.001	107	0.05	compliant
-48	-10	-2.712336718	-0.001	107	0.05	compliant
-48	0	-4.340964078	-0.002	107	0.05	compliant
-48	10	2.567046467	0.001	107	0.05	compliant
-48	30	-2.894421777	-0.001	107	0.05	compliant
-48	40	-2.296895109	-0.001	107	0.05	compliant
-48	50	-3.054721965	-0.001	107	0.05	compliant
QPSK Modulation ANT3						
-48	-30	2.668790112	0.001	107	0.05	compliant
-48	-20	2.701028789	0.001	107	0.05	compliant
-48	-10	-3.626498947	-0.002	107	0.05	compliant
-48	0	3.731516772	0.002	107	0.05	compliant
-48	10	3.734302882	0.002	107	0.05	compliant
-48	30	3.023215395	0.001	107	0.05	compliant
-48	40	-1.982413305	-0.001	107	0.05	compliant
-48	50	-2.814422842	-0.001	107	0.05	compliant
QPSK Modulation ANT4						
-48	-30	3.057609792	0.001	107	0.05	compliant
-48	-20	2.448697924	0.001	107	0.05	compliant
-48	-10	3.938631853	0.002	107	0.05	compliant
-48	0	-2.664781641	-0.001	107	0.05	compliant
-48	10	-4.048707196	-0.002	107	0.05	compliant
-48	30	-3.139174878	-0.001	107	0.05	compliant
-48	40	-4.315529368	-0.002	107	0.05	compliant
-48	50	-2.65201561	-0.001	107	0.05	compliant
64QAM Modulation ANT1						
-48	-30	-3.487626309	-0.002	107	0.05	compliant
-48	-20	3.043895122	0.001	107	0.05	compliant
-48	-10	-3.087842051	-0.001	107	0.05	compliant
-48	0	2.438356751	0.001	107	0.05	compliant
-48	10	-5.99446299	-0.003	107	0.05	compliant
-48	30	-1.990055025	-0.001	107	0.05	compliant
-48	40	4.10573819	0.002	107	0.05	compliant
-48	50	3.546473599	0.002	107	0.05	compliant
64QAM Modulation ANT2						
-48	-30	3.112576087	0.001	107	0.05	compliant
-48	-20	-4.400196631	-0.002	107	0.05	compliant
-48	-10	-4.872713762	-0.002	107	0.05	compliant
-48	0	-5.711745762	-0.003	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 50 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

-48	10	2.204891935	0.001	107	0.05	compliant
-48	30	-2.662630504	-0.001	107	0.05	compliant
-48	40	-6.161022757	-0.003	107	0.05	compliant
-48	50	3.971746482	0.002	107	0.05	compliant
64QAM Modulation ANT3						
-48	-30	3.458359497	0.002	107	0.05	compliant
-48	-20	2.568993514	0.001	107	0.05	compliant
-48	-10	-2.645953136	-0.001	107	0.05	compliant
-48	0	-3.700841626	-0.002	107	0.05	compliant
-48	10	-3.128489916	-0.001	107	0.05	compliant
-48	30	-3.31327421	-0.002	107	0.05	compliant
-48	40	2.042543638	0.001	107	0.05	compliant
-48	50	4.576374195	0.002	107	0.05	compliant
64QAM Modulation ANT4						
-48	-30	-3.097986337	-0.001	107	0.05	compliant
-48	-20	-2.283355716	-0.001	107	0.05	compliant
-48	-10	2.924553846	0.001	107	0.05	compliant
-48	0	3.810930066	0.002	107	0.05	compliant
-48	10	-3.247206914	-0.002	107	0.05	compliant
-48	30	-2.633724725	-0.001	107	0.05	compliant
-48	40	-3.748583549	-0.002	107	0.05	compliant
-48	50	2.743259829	0.001	107	0.05	compliant
16QAM Modulation ANT1						
-48	-30	2.592620003	0.001	107	0.05	compliant
-48	-20	-3.507250876	-0.002	107	0.05	compliant
-48	-10	-3.964620118	-0.002	107	0.05	compliant
-48	0	-5.117323453	-0.002	107	0.05	compliant
-48	10	2.895125508	0.001	107	0.05	compliant
-48	30	3.287267828	0.002	107	0.05	compliant
-48	40	-2.734343361	-0.001	107	0.05	compliant
-48	50	-2.646102657	-0.001	107	0.05	compliant
16QAM Modulation ANT2						
-48	-30	-3.105993455	-0.001	107	0.05	compliant
-48	-20	-2.758250994	-0.001	107	0.05	compliant
-48	-10	3.403765586	0.002	107	0.05	compliant
-48	0	-1.623623757	-0.001	107	0.05	compliant
-48	10	2.840132802	0.001	107	0.05	compliant
-48	30	2.738892072	0.001	107	0.05	compliant
-48	40	-2.028627496	-0.001	107	0.05	compliant
-48	50	-3.264336119	-0.002	107	0.05	compliant
16QAM Modulation ANT3						
-48	-30	2.88411029	0.001	107	0.05	compliant
-48	-20	-3.041728487	-0.001	107	0.05	compliant
-48	-10	-2.461792028	-0.001	107	0.05	compliant
-48	0	-2.938813341	-0.001	107	0.05	compliant
-48	10	2.557122207	0.001	107	0.05	compliant
-48	30	3.069686063	0.001	107	0.05	compliant
-48	40	-2.729740299	-0.001	107	0.05	compliant
-48	50	-3.12225282	-0.001	107	0.05	compliant
16QAM Modulation ANT4						
-48	-30	-3.607822364	-0.002	107	0.05	compliant
-48	-20	-2.302311041	-0.001	107	0.05	compliant
-48	-10	-3.715150233	-0.002	107	0.05	compliant
-48	0	3.986946103	0.002	107	0.05	compliant
-48	10	4.083347158	0.002	107	0.05	compliant
-48	30	-3.372423816	-0.002	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 51 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

-48	40	2.616611891	0.001	107	0.05	compliant
-48	50	-3.333862696	-0.002	107	0.05	compliant
256QAM Modulation ANT1						
-48	-30	1.786903558	0.001	107	0.05	compliant
-48	-20	3.978892928	0.002	107	0.05	compliant
-48	-10	3.316355433	0.002	107	0.05	compliant
-48	0	-4.214430519	-0.002	107	0.05	compliant
-48	10	-3.288994412	-0.002	107	0.05	compliant
-48	30	-4.174847854	-0.002	107	0.05	compliant
-48	40	3.195556928	0.001	107	0.05	compliant
-48	50	3.413988888	0.002	107	0.05	compliant
256QAM Modulation ANT2						
-48	-30	2.228452504	0.001	107	0.05	compliant
-48	-20	-2.504746226	-0.001	107	0.05	compliant
-48	-10	2.404935658	0.001	107	0.05	compliant
-48	0	-3.849470231	-0.002	107	0.05	compliant
-48	10	-4.008951219	-0.002	107	0.05	compliant
-48	30	2.288677788	0.001	107	0.05	compliant
-48	40	2.600565567	0.001	107	0.05	compliant
-48	50	-2.583154564	-0.001	107	0.05	compliant
256QAM Modulation ANT3						
-48	-30	2.361575898	0.001	107	0.05	compliant
-48	-20	-2.005925417	-0.001	107	0.05	compliant
-48	-10	-2.476229856	-0.001	107	0.05	compliant
-48	0	3.871084627	0.002	107	0.05	compliant
-48	10	2.397966455	0.001	107	0.05	compliant
-48	30	3.718109219	0.002	107	0.05	compliant
-48	40	2.801314986	0.001	107	0.05	compliant
-48	50	-2.896900551	-0.001	107	0.05	compliant
256QAM Modulation ANT4						
-48	-30	5.028323794	0.002	107	0.05	compliant
-48	-20	4.713826929	0.002	107	0.05	compliant
-48	-10	-2.857139334	-0.001	107	0.05	compliant
-48	0	1.557925898	0.001	107	0.05	compliant
-48	10	3.860352299	0.002	107	0.05	compliant
-48	30	-2.907217495	-0.001	107	0.05	compliant
-48	40	2.621498061	0.001	107	0.05	compliant
-48	50	-2.991746587	-0.001	107	0.05	compliant

Config D:**Table 108 Frequency stability with temp. var. (20MHz Channel BW)**

Carrier Frequency: 2155 MHz						
Supply Voltage (DC) [V]	Ambient Temperature [°C]	Frequency Deviation		Manufacturer's Specification		Result
		[Hz]	[ppm]	[Hz]	[ppm]	
QPSK Modulation ANT1						
-48	-30	2.706071682	0.001	107	0.05	compliant
-48	-20	4.443862417	0.002	107	0.05	compliant
-48	-10	-3.326058359	-0.002	107	0.05	compliant
-48	0	4.049766285	0.002	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 52 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

-48	10	4.420269106	0.002	107	0.05	compliant
-48	30	3.138549073	0.001	107	0.05	compliant
-48	40	-1.367502264	-0.001	107	0.05	compliant
-48	50	-2.770494903	-0.001	107	0.05	compliant
QPSK Modulation ANT2						
-48	-30	2.481162737	0.001	107	0.05	compliant
-48	-20	2.943566797	0.001	107	0.05	compliant
-48	-10	1.876191673	0.001	107	0.05	compliant
-48	0	-2.341679574	-0.001	107	0.05	compliant
-48	10	5.785945687	0.003	107	0.05	compliant
-48	30	2.570702418	0.001	107	0.05	compliant
-48	40	-2.577717023	-0.001	107	0.05	compliant
-48	50	2.228889498	0.001	107	0.05	compliant
QPSK Modulation ANT3						
-48	-30	3.561997146	0.002	107	0.05	compliant
-48	-20	3.565692168	0.002	107	0.05	compliant
-48	-10	2.1833965	0.001	107	0.05	compliant
-48	0	-4.96395689	-0.002	107	0.05	compliant
-48	10	-3.006871557	-0.001	107	0.05	compliant
-48	30	-2.310197888	-0.001	107	0.05	compliant
-48	40	3.564057915	0.002	107	0.05	compliant
-48	50	-2.204226403	-0.001	107	0.05	compliant
QPSK Modulation ANT4						
-48	-30	-2.110160276	-0.001	107	0.05	compliant
-48	-20	-2.740728451	-0.001	107	0.05	compliant
-48	-10	-3.344208235	-0.002	107	0.05	compliant
-48	0	-3.727633593	-0.002	107	0.05	compliant
-48	10	-2.303910805	-0.001	107	0.05	compliant
-48	30	2.657946243	0.001	107	0.05	compliant
-48	40	3.184136804	0.001	107	0.05	compliant
-48	50	-2.516044333	-0.001	107	0.05	compliant
64QAM Modulation ANT1						
-48	-30	4.016239545	0.002	107	0.05	compliant
-48	-20	-3.198495397	-0.001	107	0.05	compliant
-48	-10	3.2038465	0.001	107	0.05	compliant
-48	0	-4.32607223	-0.002	107	0.05	compliant
-48	10	-2.825107367	-0.001	107	0.05	compliant
-48	30	-2.459797397	-0.001	107	0.05	compliant
-48	40	-2.411327077	-0.001	107	0.05	compliant
-48	50	2.174578476	0.001	107	0.05	compliant
64QAM Modulation ANT2						
-48	-30	-2.824449257	-0.001	107	0.05	compliant
-48	-20	-2.003880363	-0.001	107	0.05	compliant
-48	-10	2.009698801	0.001	107	0.05	compliant
-48	0	-2.123008162	-0.001	107	0.05	compliant
-48	10	1.889404957	0.001	107	0.05	compliant
-48	30	-2.312549404	-0.001	107	0.05	compliant
-48	40	4.322623863	0.002	107	0.05	compliant
-48	50	-2.649927337	-0.001	107	0.05	compliant
64QAM Modulation ANT3						
-48	-30	1.935203763	0.001	107	0.05	compliant
-48	-20	-3.165837843	-0.001	107	0.05	compliant
-48	-10	-2.570964789	-0.001	107	0.05	compliant
-48	0	-3.481462554	-0.002	107	0.05	compliant
-48	10	-2.624126355	-0.001	107	0.05	compliant
-48	30	-2.949369737	-0.001	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 53 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

-48	40	-3.19473249	-0.001	107	0.05	compliant
-48	50	2.880970351	0.001	107	0.05	compliant
64QAM Modulation ANT4						
-48	-30	-3.780757397	-0.002	107	0.05	compliant
-48	-20	-3.403524388	-0.002	107	0.05	compliant
-48	-10	3.333921413	0.002	107	0.05	compliant
-48	0	3.55045544	0.002	107	0.05	compliant
-48	10	-3.455927872	-0.002	107	0.05	compliant
-48	30	2.398898505	0.001	107	0.05	compliant
-48	40	1.888012557	0.001	107	0.05	compliant
-48	50	5.312692956	0.002	107	0.05	compliant
16QAM Modulation ANT1						
-48	-30	2.835051273	0.001	107	0.05	compliant
-48	-20	-2.330248099	-0.001	107	0.05	compliant
-48	-10	-2.90042226	-0.001	107	0.05	compliant
-48	0	1.818498858	0.001	107	0.05	compliant
-48	10	2.06889883	0.001	107	0.05	compliant
-48	30	-2.178979848	-0.001	107	0.05	compliant
-48	40	-3.050884407	-0.001	107	0.05	compliant
-48	50	-3.345463774	-0.002	107	0.05	compliant
16QAM Modulation ANT2						
-48	-30	4.648579488	0.002	107	0.05	compliant
-48	-20	5.392653693	0.003	107	0.05	compliant
-48	-10	2.047333546	0.001	107	0.05	compliant
-48	0	-2.876193757	-0.001	107	0.05	compliant
-48	10	3.019879441	0.001	107	0.05	compliant
-48	30	-2.141795194	-0.001	107	0.05	compliant
-48	40	3.129473698	0.001	107	0.05	compliant
-48	50	-3.180053682	-0.001	107	0.05	compliant
16QAM Modulation ANT3						
-48	-30	-4.092843155	-0.002	107	0.05	compliant
-48	-20	2.87798277	0.001	107	0.05	compliant
-48	-10	-2.685004292	-0.001	107	0.05	compliant
-48	0	-4.037636099	-0.002	107	0.05	compliant
-48	10	2.15491571	0.001	107	0.05	compliant
-48	30	-3.242863168	-0.002	107	0.05	compliant
-48	40	-2.555426618	-0.001	107	0.05	compliant
-48	50	-1.890633648	-0.001	107	0.05	compliant
16QAM Modulation ANT4						
-48	-30	-3.891448723	-0.002	107	0.05	compliant
-48	-20	4.713258095	0.002	107	0.05	compliant
-48	-10	2.669698588	0.001	107	0.05	compliant
-48	0	1.585720311	0.001	107	0.05	compliant
-48	10	3.916895657	0.002	107	0.05	compliant
-48	30	4.116886557	0.002	107	0.05	compliant
-48	40	2.887366572	0.001	107	0.05	compliant
-48	50	-1.595191861	-0.001	107	0.05	compliant
256QAM Modulation ANT1						
-48	-30	-4.281446018	-0.002	107	0.05	compliant
-48	-20	-5.689520185	-0.003	107	0.05	compliant
-48	-10	-3.42568339	-0.002	107	0.05	compliant
-48	0	2.591393277	0.001	107	0.05	compliant
-48	10	-4.492835433	-0.002	107	0.05	compliant
-48	30	3.055902416	0.001	107	0.05	compliant
-48	40	2.704500512	0.001	107	0.05	compliant
-48	50	2.907269663	0.001	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 54 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

256QAM Modulation ANT2						
-48	-30	-3.680678346	-0.002	107	0.05	compliant
-48	-20	3.023353565	0.001	107	0.05	compliant
-48	-10	-2.311860735	-0.001	107	0.05	compliant
-48	0	-1.691360012	-0.001	107	0.05	compliant
-48	10	-4.017818574	-0.002	107	0.05	compliant
-48	30	-3.533468771	-0.002	107	0.05	compliant
-48	40	2.391434464	0.001	107	0.05	compliant
-48	50	-1.889887353	-0.001	107	0.05	compliant
256QAM Modulation ANT3						
-48	-30	-3.11652082	-0.001	107	0.05	compliant
-48	-20	-4.110139998	-0.002	107	0.05	compliant
-48	-10	-2.126270992	-0.001	107	0.05	compliant
-48	0	-2.457333248	-0.001	107	0.05	compliant
-48	10	-2.808935533	-0.001	107	0.05	compliant
-48	30	2.907395829	0.001	107	0.05	compliant
-48	40	-3.992038546	-0.002	107	0.05	compliant
-48	50	-4.144348204	-0.002	107	0.05	compliant
256QAM Modulation ANT4						
-48	-30	-3.559800825	-0.002	107	0.05	compliant
-48	-20	-2.446053695	-0.001	107	0.05	compliant
-48	-10	-3.795147204	-0.002	107	0.05	compliant
-48	0	2.964163141	0.001	107	0.05	compliant
-48	10	2.972543298	0.001	107	0.05	compliant
-48	30	2.46576732	0.001	107	0.05	compliant
-48	40	-2.757306938	-0.001	107	0.05	compliant
-48	50	-2.996143594	-0.001	107	0.05	compliant



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612**Frequency Stability with Voltage Variation:**

The EUT was placed in a climatic chamber and allowed to stabilize at +20 degrees Celsius for at least 60 minutes. With the supply voltage of the EUT set to 85% of the nominal value, the frequency error was measure. This procedure was repeated at 100% and 115% of the nominal supply voltage value.

Config A:

Carrier Frequency: 2155 MHz						
Supply Voltage (DC) [V]	Ambient Temperature [°C]	Frequency Deviation		Manufacturer's Specification		Result
		[Hz]	[ppm]	[Hz]	[ppm]	
QPSK Modulation ANT1						
-40.8	20	-2.765893587	-0.001	107	0.05	compliant
-48.0	20	-2.535703825	-0.001	107	0.05	compliant
-55.2	20	-3.014486865	-0.001	107	0.05	compliant
QPSK Modulation ANT2						
-40.8	20	-3.143367576	-0.001	107	0.05	compliant
-48.0	20	-2.453180496	-0.001	107	0.05	compliant
-55.2	20	-2.431555622	-0.001	107	0.05	compliant
QPSK Modulation ANT3						
-40.8	20	-4.232737992	-0.002	107	0.05	compliant
-48.0	20	-5.729601835	-0.003	107	0.05	compliant
-55.2	20	-3.625459067	-0.002	107	0.05	compliant
QPSK Modulation ANT4						
-40.8	20	-3.977860033	-0.002	107	0.05	compliant
-48.0	20	-5.20549409	-0.002	107	0.05	compliant
-55.2	20	-3.536486038	-0.002	107	0.05	compliant
64QAM Modulation ANT1						
-40.8	20	4.419386387	0.002	107	0.05	compliant
-48.0	20	3.840087302	0.002	107	0.05	compliant
-55.2	20	2.562662557	0.001	107	0.05	compliant
64QAM Modulation ANT2						
-40.8	20	3.414863095	0.002	107	0.05	compliant
-48.0	20	4.935201723	0.002	107	0.05	compliant
-55.2	20	4.142291582	0.002	107	0.05	compliant
64QAM Modulation ANT3						
-40.8	20	3.79241741	0.002	107	0.05	compliant
-48.0	20	3.118337554	0.001	107	0.05	compliant
-55.2	20	5.136428081	0.002	107	0.05	compliant
64QAM Modulation ANT4						
-40.8	20	4.163666745	0.002	107	0.05	compliant
-48.0	20	3.43299922	0.002	107	0.05	compliant
-55.2	20	3.551819245	0.002	107	0.05	compliant
16QAM Modulation ANT1						
-40.8	20	-4.363792541	-0.002	107	0.05	compliant
-48.0	20	-5.320800701	-0.002	107	0.05	compliant
-55.2	20	-2.718794713	-0.001	107	0.05	compliant
16QAM Modulation ANT2						
-40.8	20	-4.587392032	-0.002	107	0.05	compliant
-48.0	20	4.127100692	0.002	107	0.05	compliant
-55.2	20	-3.807261237	-0.002	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 56 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

16QAM Modulation ANT3						
-40.8	20	-3.435201215	-0.002	107	0.05	compliant
-48.0	20	3.345041187	0.002	107	0.05	compliant
-55.2	20	2.387451968	0.001	107	0.05	compliant
16QAM Modulation ANT4						
-40.8	20	-2.784970275	-0.001	107	0.05	compliant
-48.0	20	-5.406410928	-0.003	107	0.05	compliant
-55.2	20	-5.009125744	-0.002	107	0.05	compliant
256QAM Modulation ANT1						
-40.8	20	-3.654987813	-0.002	107	0.05	compliant
-48.0	20	-3.717628133	-0.002	107	0.05	compliant
-55.2	20	-1.977172215	-0.001	107	0.05	compliant
256QAM Modulation ANT2						
-40.8	20	4.720655998	0.002	107	0.05	compliant
-48.0	20	-1.855589653	-0.001	107	0.05	compliant
-55.2	20	-4.632788332	-0.002	107	0.05	compliant
256QAM Modulation ANT3						
-40.8	20	-2.79560918	-0.001	107	0.05	compliant
-48.0	20	3.800673148	0.002	107	0.05	compliant
-55.2	20	-2.69563141	-0.001	107	0.05	compliant
256QAM Modulation ANT4						
-40.8	20	-3.303545964	-0.002	107	0.05	compliant
-48.0	20	5.216088903	0.002	107	0.05	compliant
-55.2	20	-4.667821631	-0.002	107	0.05	compliant

Table 119 Frequency stability with voltage var. (5 MHz Channel BW)

Config B:

Continuing...

Carrier Frequency: 2155 MHz						
Supply Voltage (DC) [V]	Ambient Temperature [°C]	Frequency Deviation		Manufacturer's Specification		Result
		[Hz]	[ppm]	[Hz]	[ppm]	
QPSK Modulation ANT1						
-40.8	20	-2.964285814	-0.001	107	0.05	compliant
-48.0	20	-2.38231718	-0.001	107	0.05	compliant
-55.2	20	-3.705744166	-0.002	107	0.05	compliant
QPSK Modulation ANT2						
-40.8	20	-3.915756242	-0.002	107	0.05	compliant
-48.0	20	-3.367144309	-0.002	107	0.05	compliant
-55.2	20	3.431611622	0.002	107	0.05	compliant
QPSK Modulation ANT3						
-40.8	20	-3.147869356	-0.001	107	0.05	compliant
-48.0	20	3.001322693	0.001	107	0.05	compliant
-55.2	20	-3.787937894	-0.002	107	0.05	compliant
QPSK Modulation ANT4						
-40.8	20	-3.486347196	-0.002	107	0.05	compliant
-48.0	20	3.143595022	0.001	107	0.05	compliant
-55.2	20	1.62506265	0.001	107	0.05	compliant
64QAM Modulation ANT1						
-40.8	20	3.455913902	0.002	107	0.05	compliant
-48.0	20	1.616915179	0.001	107	0.05	compliant
-55.2	20	3.921066964	0.002	107	0.05	compliant
64QAM Modulation ANT2						
-40.8	20	2.226343495	0.001	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 57 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

-48.0	20	3.12639575	0.001	107	0.05	compliant
-55.2	20	3.052989268	0.001	107	0.05	compliant
64QAM Modulation ANT3						
-40.8	20	3.769955656	0.002	107	0.05	compliant
-48.0	20	-2.750164858	-0.001	107	0.05	compliant
-55.2	20	3.068428341	0.001	107	0.05	compliant
64QAM Modulation ANT4						
-40.8	20	2.586440969	0.001	107	0.05	compliant
-48.0	20	-2.644975466	-0.001	107	0.05	compliant
-55.2	20	-1.922939555	-0.001	107	0.05	compliant
16QAM Modulation ANT1						
-40.8	20	3.275719355	0.002	107	0.05	compliant
-48.0	20	-2.516470195	-0.001	107	0.05	compliant
-55.2	20	4.383811756	0.002	107	0.05	compliant
16QAM Modulation ANT2						
-40.8	20	1.706134208	0.001	107	0.05	compliant
-48.0	20	-2.99888954	-0.001	107	0.05	compliant
-55.2	20	-3.678935173	-0.002	107	0.05	compliant
16QAM Modulation ANT3						
-40.8	20	3.165965318	0.001	107	0.05	compliant
-48.0	20	-2.966233515	-0.001	107	0.05	compliant
-55.2	20	5.05319098	0.002	107	0.05	compliant
16QAM Modulation ANT4						
-40.8	20	-3.85227424	-0.002	107	0.05	compliant
-48.0	20	3.558385069	0.002	107	0.05	compliant
-55.2	20	-3.836515825	-0.002	107	0.05	compliant
256QAM Modulation ANT1						
-40.8	20	2.801080118	0.001	107	0.05	compliant
-48.0	20	6.188877742	0.003	107	0.05	compliant
-55.2	20	3.614311572	0.002	107	0.05	compliant
256QAM Modulation ANT2						
-40.8	20	-2.962001308	-0.001	107	0.05	compliant
-48.0	20	3.949379898	0.002	107	0.05	compliant
-55.2	20	4.377526639	0.002	107	0.05	compliant
256QAM Modulation ANT3						
-40.8	20	-4.964466789	-0.002	107	0.05	compliant
-48.0	20	-3.503871267	-0.002	107	0.05	compliant
-55.2	20	-5.367301928	-0.002	107	0.05	compliant
256QAM Modulation ANT4						
-40.8	20	-3.513315751	-0.002	107	0.05	compliant
-48.0	20	-1.546224521	-0.001	107	0.05	compliant
-55.2	20	4.200688563	0.002	107	0.05	compliant

Table 12 Frequency stability with voltage var. (10 MHz Channel BW)

Config C:

Carrier Frequency: 2155 MHz						
Supply Voltage (DC) [V]	Ambient Temperature [°C]	Frequency Deviation		Manufacturer's Specification		Result
		[Hz]	[ppm]	[Hz]	[ppm]	
QPSK Modulation ANT1						
-40.8	20	-2.349348797	-0.001	107	0.05	compliant
-48.0	20	-3.490502786	-0.002	107	0.05	compliant
-55.2	20	-2.878811792	-0.001	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 58 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

QPSK Modulation ANT2						
-40.8	20	3.557112941	0.002	107	0.05	compliant
-48.0	20	-3.298771771	-0.002	107	0.05	compliant
-55.2	20	-4.160878889	-0.002	107	0.05	compliant
QPSK Modulation ANT3						
-40.8	20	-2.417476207	-0.001	107	0.05	compliant
-48.0	20	-2.941978601	-0.001	107	0.05	compliant
-55.2	20	3.495721612	0.002	107	0.05	compliant
QPSK Modulation ANT4						
-40.8	20	2.966923057	0.001	107	0.05	compliant
-48.0	20	3.797046666	0.002	107	0.05	compliant
-55.2	20	2.811250815	0.001	107	0.05	compliant
64QAM Modulation ANT1						
-40.8	20	-1.369308957	-0.001	107	0.05	compliant
-48.0	20	-2.383486717	-0.001	107	0.05	compliant
-55.2	20	-2.706255036	-0.001	107	0.05	compliant
64QAM Modulation ANT2						
-40.8	20	-2.298401232	-0.001	107	0.05	compliant
-48.0	20	-3.075331406	-0.001	107	0.05	compliant
-55.2	20	-3.213068994	-0.001	107	0.05	compliant
64QAM Modulation ANT3						
-40.8	20	2.294053993	0.001	107	0.05	compliant
-48.0	20	2.676042859	0.001	107	0.05	compliant
-55.2	20	-4.520625807	-0.002	107	0.05	compliant
64QAM Modulation ANT4						
-40.8	20	-1.142988622	-0.001	107	0.05	compliant
-48.0	20	2.131675574	0.001	107	0.05	compliant
-55.2	20	-3.749233147	-0.002	107	0.05	compliant
16QAM Modulation ANT1						
-40.8	20	-2.976718533	-0.001	107	0.05	compliant
-48.0	20	-3.878378193	-0.002	107	0.05	compliant
-55.2	20	4.192404449	0.002	107	0.05	compliant
16QAM Modulation ANT2						
-40.8	20	-4.254880187	-0.002	107	0.05	compliant
-48.0	20	-2.954833908	-0.001	107	0.05	compliant
-55.2	20	-2.888466261	-0.001	107	0.05	compliant
16QAM Modulation ANT3						
-40.8	20	-2.587701747	-0.001	107	0.05	compliant
-48.0	20	-3.610904241	-0.002	107	0.05	compliant
-55.2	20	-2.867773874	-0.001	107	0.05	compliant
16QAM Modulation ANT4						
-40.8	20	3.973820567	0.002	107	0.05	compliant
-48.0	20	2.790702492	0.001	107	0.05	compliant
-55.2	20	-2.942368665	-0.001	107	0.05	compliant
256QAM Modulation ANT1						
-40.8	20	-2.950222552	-0.001	107	0.05	compliant
-48.0	20	-2.955701566	-0.001	107	0.05	compliant
-55.2	20	-4.115194461	-0.002	107	0.05	compliant
256QAM Modulation ANT2						
-40.8	20	2.515999367	0.001	107	0.05	compliant
-48.0	20	-3.648681741	-0.002	107	0.05	compliant
-55.2	20	1.689415803	0.001	107	0.05	compliant
256QAM Modulation ANT3						
-40.8	20	2.724649385	0.001	107	0.05	compliant
-48.0	20	2.071826166	0.001	107	0.05	compliant
-55.2	20	-3.344874422	-0.002	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 59 of 137



FCC ID: VBNAHIB-01

Test Report No:
Typeappr-1508717799-612

256QAM Modulation ANT4						
-40.8	20	-3.393023435	-0.002	107	0.05	compliant
-48.0	20	4.215439403	0.002	107	0.05	compliant
-55.2	20	3.010450891	0.001	107	0.05	compliant

Table 31 Frequency stability with voltage var. (15 MHz Channel BW)

Config D:

Carrier Frequency: 2155 MHz						
Supply Voltage (DC) [V]	Ambient Temperature [°C]	Frequency Deviation		Manufacturer's Specification		Result
		[Hz]	[ppm]	[Hz]	[ppm]	
QPSK Modulation ANT1						
-40.8	20	-3.69174988	-0.002	107	0.05	compliant
-48.0	20	-2.34406165	-0.001	107	0.05	compliant
-55.2	20	2.817368077	0.001	107	0.05	compliant
QPSK Modulation ANT2						
-40.8	20	-2.13939893	-0.001	107	0.05	compliant
-48.0	20	-2.562169684	-0.001	107	0.05	compliant
-55.2	20	2.758105402	0.001	107	0.05	compliant
QPSK Modulation ANT3						
-40.8	20	-1.884116282	-0.001	107	0.05	compliant
-48.0	20	4.294245009	0.002	107	0.05	compliant
-55.2	20	-3.210999275	-0.001	107	0.05	compliant
QPSK Modulation ANT4						
-40.8	20	5.609887739	0.003	107	0.05	compliant
-48.0	20	3.316614748	0.002	107	0.05	compliant
-55.2	20	2.247849188	0.001	107	0.05	compliant
64QAM Modulation ANT1						
-40.8	20	-3.934281995	-0.002	107	0.05	compliant
-48.0	20	3.089160455	0.001	107	0.05	compliant
-55.2	20	2.752459404	0.001	107	0.05	compliant
64QAM Modulation ANT2						
-40.8	20	2.341482905	0.001	107	0.05	compliant
-48.0	20	3.104148564	0.001	107	0.05	compliant
-55.2	20	3.915669396	0.002	107	0.05	compliant
64QAM Modulation ANT3						
-40.8	20	-4.084175744	-0.002	107	0.05	compliant
-48.0	20	1.741484448	0.001	107	0.05	compliant
-55.2	20	-2.725843806	-0.001	107	0.05	compliant
64QAM Modulation ANT4						
-40.8	20	-2.021803666	-0.001	107	0.05	compliant
-48.0	20	-1.587176666	-0.001	107	0.05	compliant
-55.2	20	3.290159802	0.002	107	0.05	compliant
16QAM Modulation ANT1						
-40.8	20	-3.902872122	-0.002	107	0.05	compliant
-48.0	20	-2.602602981	-0.001	107	0.05	compliant
-55.2	20	-3.036583439	-0.001	107	0.05	compliant
16QAM Modulation ANT2						
-40.8	20	2.440944663	0.001	107	0.05	compliant
-48.0	20	3.460275766	0.002	107	0.05	compliant
-55.2	20	-3.486663045	-0.002	107	0.05	compliant
16QAM Modulation ANT3						
-40.8	20	2.174849578	0.001	107	0.05	compliant

FCC 47 CFR part 27 (2018)

08. Apr 2019
Page 60 of 137