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# Test Band = NR UL CA n25A-n77A 3700M-3980M\_ TM1 Test Channel = Mid Channel

Final	Data List								
NO.	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity
1	3729.18	33.49	-87.02	-53.53	-13.00	40.53	163	163	Horizontal
2	5593.77	50.55	-105.40	-54.85	-13.00	41.85	254	156	Horizontal
3	7458.36	47.86	-100.54	-52.68	-13.00	39.68	188	356	Horizontal
4	7590.18	49.05	-99.85	-50.80	-13.00	37.80	163	206	Horizontal
5	11835.27	43.42	-91.75	-48.33	-13.00	35.33	251	266	Horizontal
6	15180.36	42.76	-89.91	-47.15	-13.00	34.15	174	277	Horizontal

Final	Final Data List											
NO	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority			
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity			
1	3729.18	34.46	-87.02	-52.56	-13.00	39.56	142	104	Vertical			
2	5593.77	50.52	-105.40	-54.88	-13.00	41.88	263	208	Vertical			
3	7458.36	48.02	-100.54	-52.52	-13.00	39.52	254	15	Vertical			
4	7590.18	49.06	-99.85	-50.79	-13.00	37.79	185	93	Vertical			
5	11835.27	42.89	-91.75	-48.86	-13.00	35.86	265	74	Vertical			
6	15180.36	42.25	-89.91	-47.66	-13.00	34.66	241	329	Vertical			





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# Test Band = NR UL CA n25A-n77A 3700M-3980M\_ TM1 Test Channel = High Channel

Final	Final Data List												
NO.	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority				
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity				
1	3754.18	34.90	-86.80	-51.90	-13.00	38.90	142	323	Horizontal				
2	5631.27	50.74	-105.28	-54.54	-13.00	41.54	263	186	Horizontal				
3	7508.36	48.76	-100.30	-51.54	-13.00	38.54	251	226	Horizontal				
4	7870.18	46.74	-98.77	-52.03	-13.00	39.03	174	195	Horizontal				
5	11805.27	43.43	-91.86	-48.43	-13.00	35.43	186	76	Horizontal				
6	15740.36	42.64	-90.73	-48.09	-13.00	35.09	255	65	Horizontal				

Final	Final Data List											
NO	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority			
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity			
1	3754.18	34.53	-86.80	-52.27	-13.00	39.27	142	78	Vertical			
2	5631.27	50.13	-105.28	-55.15	-13.00	42.15	263	280	Vertical			
3	7508.36	48.72	-100.30	-51.58	-13.00	38.58	254	209	Vertical			
4	7870.18	47.26	-98.77	-51.51	-13.00	38.51	175	178	Vertical			
5	11805.27	43.95	-91.86	-47.91	-13.00	34.91	265	0	Vertical			
6	15740.36	42.33	-90.73	-48.40	-13.00	35.40	218	16	Vertical			



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Final	Final Data List												
NO.	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority				
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity				
1	1554.68	39.40	-95.18	-55.78	-13.00	42.78	163	360	Horizontal				
2	2332.02	38.36	-92.24	-53.88	-13.00	40.88	274	175	Horizontal				
3	3109.36	37.38	-88.89	-51.51	-13.00	38.51	166	11	Horizontal				
4	7310.18	47.85	-100.63	-52.78	-13.00	39.78	254	147	Horizontal				
5	10965.27	43.33	-91.32	-47.99	-13.00	34.99	196	238	Horizontal				
6	14620.36	42.04	-89.81	-47.77	-13.00	34.77	264	347	Horizontal				

Final Data List											
NO	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority		
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity		
1	1554.68	40.15	-95.18	-55.03	-13.00	42.03	262	273	Vertical		
2	2332.02	38.67	-92.24	-53.57	-13.00	40.57	241	70	Vertical		
3	3109.36	37.19	-88.89	-51.70	-13.00	38.70	175	3	Vertical		
4	7310.18	48.43	-100.63	-52.20	-13.00	39.20	284	328	Vertical		
5	10965.27	41.96	-91.32	-49.36	-13.00	36.36	221	93	Vertical		
6	14620.36	41.17	-89.81	-48.64	-13.00	35.64	145	74	Vertical		





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# Test Band = NR UL CA n13A-n77A 3700M-3980M\_ TM1 Test Channel = Mid Channel

Final	Data List								
NO	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity
1	1559.68	39.33	-95.17	-55.84	-13.00	42.84	263	284	Horizontal
2	2339.52	38.94	-92.21	-53.27	-13.00	40.27	185	360	Horizontal
3	3119.36	37.77	-88.84	-51.07	-13.00	38.07	196	236	Horizontal
4	7590.18	49.30	-99.85	-50.55	-13.00	37.55	241	287	Horizontal
5	11835.27	43.95	-91.75	-47.80	-13.00	34.80	175	317	Horizontal
6	15180.36	42.59	-89.91	-47.32	-13.00	34.32	142	277	Horizontal

Final	Final Data List											
NO.	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority			
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity			
1	1559.68	39.74	-95.17	-55.43	-13.00	42.43	142	103	Vertical			
2	2339.52	39.33	-92.21	-52.88	-13.00	39.88	241	49	Vertical			
3	3119.36	37.38	-88.84	-51.46	-13.00	38.46	142	42	Vertical			
4	7590.18	49.46	-99.85	-50.39	-13.00	37.39	263	0	Vertical			
5	11835.27	42.32	-91.75	-49.43	-13.00	36.43	106	278	Vertical			
6	15180.36	42.60	-89.91	-47.31	-13.00	34.31	302	0	Vertical			





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# Test Band = NR UL CA n13A-n77A 3700M-3980M\_ TM1 Test Channel = High Channel

Final Data List											
NO.	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority		
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity		
1	1564.68	40.16	-95.16	-55.00	-13.00	42.00	142	3	Horizontal		
2	2347.02	38.82	-92.18	-53.36	-13.00	40.36	263	348	Horizontal		
3	3129.36	37.37	-88.79	-51.42	-13.00	38.42	284	95	Horizontal		
4	7870.18	47.22	-98.77	-51.55	-13.00	38.55	176	279	Horizontal		
5	11805.27	43.23	-91.86	-48.63	-13.00	35.63	253	4	Horizontal		
6	15740.36	43.05	-90.73	-47.68	-13.00	34.68	254	156	Horizontal		

Final	Final Data List											
NO.	Frequency	Reading	Factor	Level	Limit	Margin	Height	Angle	Dolority			
NO.	[MHz]	[dBµV]	[dB]	[dBm]	[dBm]	[dB]	[cm]	[°]	Polarity			
1	1564.68	39.13	-95.16	-56.03	-13.00	43.03	142	221	Vertical			
2	2347.02	38.60	-92.18	-53.58	-13.00	40.58	263	70	Vertical			
3	3129.36	36.90	-88.79	-51.89	-13.00	38.89	284	360	Vertical			
4	7870.18	47.09	-98.77	-51.68	-13.00	38.68	175	357	Vertical			
5	11805.27	43.66	-91.86	-48.20	-13.00	35.20	263	225	Vertical			
6	15740.36	42.89	-90.73	-47.84	-13.00	34.84	241	236	Vertical			

#### Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & AMP. The basic equation with a sample calculation is as follows:

AF = Antenna Factor(dB/m)

Factor = Cable Factor(dB) - Preamplifier (dB)

Level = Reading Level + AF + Factor -95.26

Margin = Limit - Level



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#### Frequency Stability for SA

**Test Result** 

Frequency Error VS. Voltage

	Voltage												
Band	SC S	Bandwidt h	Modulation	Channe I	RB Config	Voltag e	Temp e rature	Deviation(Hz	Deviation (ppm)	Verdic t			
N77-3700- 3980	30	100	DFT- PI2BPSK	М	Outer_Fu II	VH	NT	9.100000	0.00237 0	PAS S			
N77-3700- 3980	30	100	DFT- PI2BPSK	М	Outer_Fu II	VN	NT	25.200000	0.00656 3	PAS S			
N77-3700- 3980	30	100	DFT- PI2BPSK	М	Outer_Fu II	VL	NT	12.900000	0.00335 9	PAS S			
N77-3700- 3980	30	100	CP-QPSK	М	Outer_Fu II	VH	NT	8.900000	0.00231 8	PAS S			
N77-3700- 3980	30	100	CP-QPSK	М	Outer_Fu II	VN	NT	14.600000	0.00380 2	PAS S			
N77-3700- 3980	30	100	CP-QPSK	М	Outer_Fu II	VL	NT	13.900000	0.00362 0	PAS S			





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#### Frequency Error VS. Temperature

	Temperature												
Band	scs	Bandwidth	Modulation	Channel	RB Config	Voltag e	Temp e rature	Deviation(Hz)	Deviation (ppm)	Verdic t			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	-30	9.200000	0.002396	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	-20	7.400000	0.001927	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	-10	13.300000	0.003464	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	0	14.600000	0.003802	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	10	15.200000	0.003958	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	20	7.500000	0.001953	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	30	11.700000	0.003047	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	40	16.000000	0.004167	PASS			
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	50	12.800000	0.003333	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	-30	13.900000	0.003620	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	-20	6.800000	0.001771	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	-10	9.200000	0.002396	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	0	5.300000	0.001380	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	10	3.500000	0.000911	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	20	15.800000	0.004115	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	30	12.200000	0.003177	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	40	6.200000	0.001615	PASS			
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	50	13.700000	0.003568	PASS			



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#### **Test Result for MIMO**

Frequency Error VS. Voltage

Voltage										
Band	scs	Band width	Modulation	Channel	RB Config	Voltag e	Temperatur e	Deviation (Hz)	Deviation (ppm)	Verdic t
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	VH	NT	-7.100000	-0.003242	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	VN	NT	-6.500000	-0.006352	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	VL	NT	12.200000	0.004712	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	VH	NT	-6.100000	-0.003257	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	VN	NT	-12.400000	-0.003658	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	VL	NT	-13.500000	-0.003657	PASS

Frequency Error VS. Temperature

Trequency Error vo. Temperature										
Temperature										
Band	scs	Band width	Modulation	Channel	RB Config	Voltag e	Temperatur e	Deviation (Hz)	Deviation (ppm)	Verdic t
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	-30	-7.200000	-0.002563	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	-20	-10.500000	-0.002736	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	-10	14.500000	0.003752	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	0	-8.200000	-0.002234	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	10	-15.500000	-0.004063	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	20	-19.500000	-0.005134	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	30	-6.200000	-0.001533	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	40	13.500000	0.003456	PASS
N77-3700-3980	30	100	DFT- PI2BPSK	М	Outer_Full	NV	50	-5.700000	-0.001512	PASS



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N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	-30	-9.200000	-0.002325	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	-20	-20.200000	-0.005352	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	-10	-12.200000	-0.003254	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	0	-8.700000	-0.002235	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	10	-8.200000	-0.002123	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	20	-10.300000	-0.002744	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	30	-14.200000	-0.003732	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	40	-7.500000	-0.002025	PASS
N77-3700-3980	30	100	CP-QPSK	М	Outer_Full	NV	50	10.200000	0.002563	PASS

---End of Attachment---

