



Frequency Stability

Test Result

Voltage										
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation (Hz)	Deviation (ppm)	Verdict
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	VL	NT	9.000000	0.002426	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	VN	NT	11.000000	0.002965	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	VH	NT	1.000000	0.000270	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	-30	15.000000	0.004042	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	-20	5.000000	0.001348	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	-10	4.000000	0.001078	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	0	6.000000	0.001617	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	10	19.000000	0.005121	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	20	9.000000	0.002426	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	30	18.000000	0.004852	PASS



N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	40	17.000000	0.004582	PASS
N77-3700-3980	30	20	DFT-QPSK	L	Outer_Full	NV	50	19.000000	0.005121	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	VL	NT	3.000000	0.000781	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	VN	NT	1.000000	0.000260	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	VH	NT	19.000000	0.004948	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	-30	13.000000	0.003385	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	-20	15.000000	0.003906	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	-10	2.000000	0.000521	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	0	8.000000	0.002083	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	10	7.000000	0.001823	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	20	9.000000	0.002344	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	30	12.000000	0.003125	PASS
N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	40	17.000000	0.004427	PASS



N77-3700-3980	30	20	DFT-QPSK	M	Outer_Full	NV	50	16.000000	0.004167	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	VL	NT	7.000000	0.001763	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	VN	NT	6.000000	0.001511	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	VH	NT	15.000000	0.003778	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	-30	2.000000	0.000504	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	-20	1.000000	0.000252	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	-10	9.000000	0.002267	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	0	2.000000	0.000504	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	10	15.000000	0.003778	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	20	17.000000	0.004282	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	30	4.000000	0.001008	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	40	6.000000	0.001511	PASS
N77-3700-3980	30	20	DFT-QPSK	H	Outer_Full	NV	50	5.000000	0.001259	PASS

**N78-3450-3550****Peak-to-Average Ratio(CCDF)****Test Result**

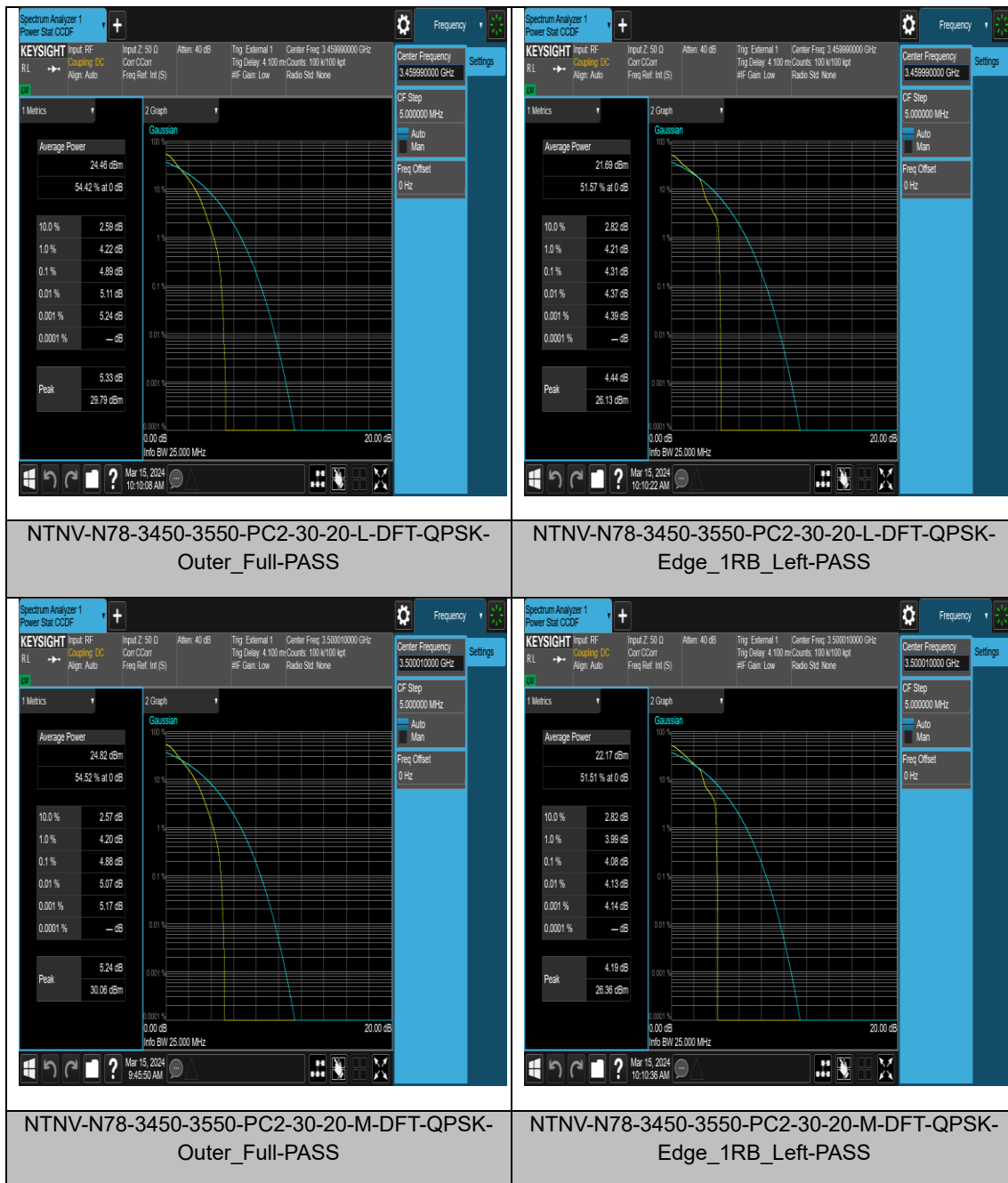
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Limit	Verdict
N78-3450-3550	30	20	DFT-QPSK	L	Outer_Full	4.89	≤13	PASS
N78-3450-3550	30	20	DFT-QPSK	L	Edge_1RB_Left	4.31	≤13	PASS
N78-3450-3550	30	20	DFT-QPSK	M	Outer_Full	4.88	≤13	PASS
N78-3450-3550	30	20	DFT-QPSK	M	Edge_1RB_Left	4.08	≤13	PASS
N78-3450-3550	30	20	DFT-QPSK	H	Outer_Full	4.78	≤13	PASS
N78-3450-3550	30	20	DFT-QPSK	H	Edge_1RB_Left	3.93	≤13	PASS



BUREAU
VERITAS

Reference No.: W7L-231218W001RF11

Test Graphs



BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

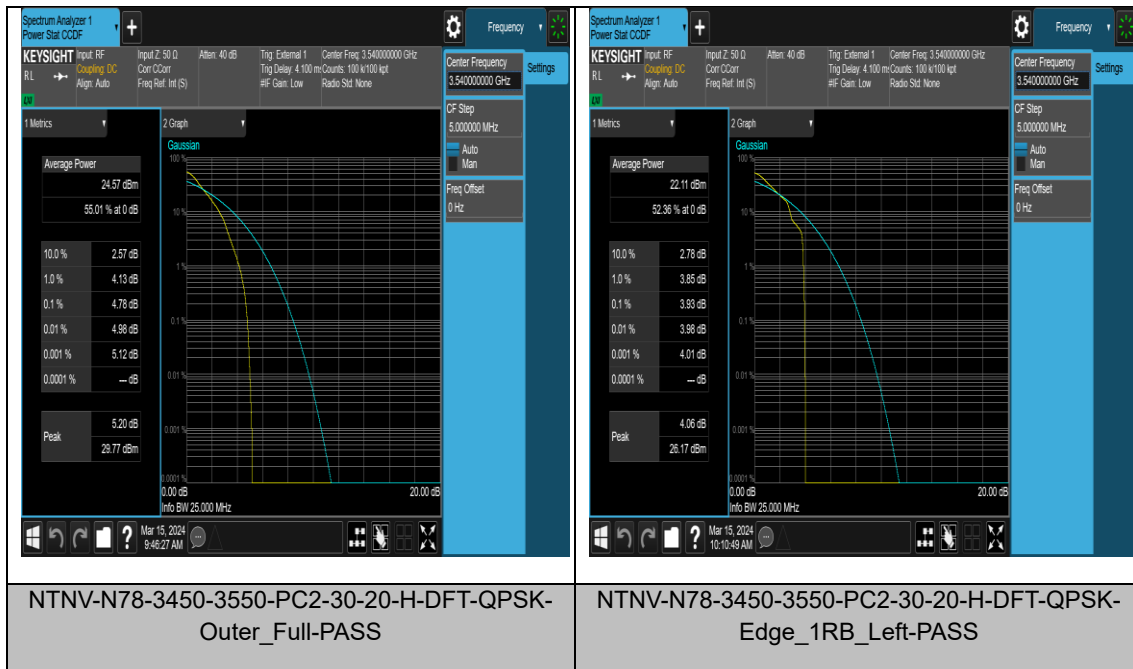
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com



BUREAU
VERITAS

Reference No.: W7L-231218W001RF11



BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com



26dB Bandwidth and Occupied Bandwidth

Test Result

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result (99%)	Result (26dB)	Verdict
N78- 3450- 3550	30	20	DFT-PI2BPSK	M	Outer_Full	17.782	18.77	PASS
N78- 3450- 3550	30	20	DFT-QPSK	M	Outer_Full	17.844	19.24	PASS
N78- 3450- 3550	30	20	DFT-16QAM	M	Outer_Full	17.876	19.04	PASS
N78- 3450- 3550	30	20	DFT-64QAM	M	Outer_Full	17.814	19.23	PASS
N78- 3450- 3550	30	20	DFT-256QAM	M	Outer_Full	17.827	19.24	PASS
N78- 3450- 3550	30	30	DFT-PI2BPSK	M	Outer_Full	26.759	28.44	PASS
N78- 3450- 3550	30	30	DFT-QPSK	M	Outer_Full	26.773	28.85	PASS
N78- 3450- 3550	30	30	DFT-16QAM	M	Outer_Full	26.769	29.03	PASS
N78- 3450- 3550	30	30	DFT-64QAM	M	Outer_Full	26.774	28.52	PASS
N78- 3450- 3550	30	30	DFT-256QAM	M	Outer_Full	26.785	28.38	PASS
N78- 3450- 3550	30	40	DFT-PI2BPSK	M	Outer_Full	35.751	38.00	PASS



N78-3450-3550	30	40	DFT-QPSK	M	Outer_Full	35.797	37.82	PASS
N78-3450-3550	30	40	DFT-16QAM	M	Outer_Full	35.842	37.78	PASS
N78-3450-3550	30	40	DFT-64QAM	M	Outer_Full	35.835	38.16	PASS
N78-3450-3550	30	40	DFT-256QAM	M	Outer_Full	35.833	37.82	PASS
N78-3450-3550	30	50	DFT-PI2BPSK	M	Outer_Full	45.752	47.74	PASS
N78-3450-3550	30	50	DFT-QPSK	M	Outer_Full	45.765	47.96	PASS
N78-3450-3550	30	50	DFT-16QAM	M	Outer_Full	45.768	47.92	PASS
N78-3450-3550	30	50	DFT-64QAM	M	Outer_Full	45.734	48.94	PASS
N78-3450-3550	30	50	DFT-256QAM	M	Outer_Full	45.751	47.89	PASS
N78-3450-3550	30	60	DFT-PI2BPSK	M	Outer_Full	57.835	60.20	PASS
N78-3450-3550	30	60	DFT-QPSK	M	Outer_Full	57.943	61.16	PASS
N78-3450-3550	30	60	DFT-16QAM	M	Outer_Full	57.800	60.13	PASS
N78-3450-3550	30	60	DFT-64QAM	M	Outer_Full	57.831	60.97	PASS



N78-3450-3550	30	60	DFT-256QAM	M	Outer_Full	57.829	60.22	PASS
N78-3450-3550	30	70	DFT-PI2BPSK	M	Outer_Full	64.134	66.95	PASS
N78-3450-3550	30	70	DFT-QPSK	M	Outer_Full	64.280	66.87	PASS
N78-3450-3550	30	70	DFT-16QAM	M	Outer_Full	64.276	66.92	PASS
N78-3450-3550	30	70	DFT-64QAM	M	Outer_Full	64.239	66.92	PASS
N78-3450-3550	30	70	DFT-256QAM	M	Outer_Full	64.192	66.93	PASS
N78-3450-3550	30	80	DFT-PI2BPSK	M	Outer_Full	77.123	79.91	PASS
N78-3450-3550	30	80	DFT-QPSK	M	Outer_Full	77.102	80.17	PASS
N78-3450-3550	30	80	DFT-16QAM	M	Outer_Full	76.884	79.85	PASS
N78-3450-3550	30	80	DFT-64QAM	M	Outer_Full	77.195	79.93	PASS
N78-3450-3550	30	80	DFT-256QAM	M	Outer_Full	77.055	80.14	PASS
N78-3450-3550	30	90	DFT-PI2BPSK	M	Outer_Full	86.733	89.86	PASS
N78-3450-3550	30	90	DFT-QPSK	M	Outer_Full	86.727	89.84	PASS



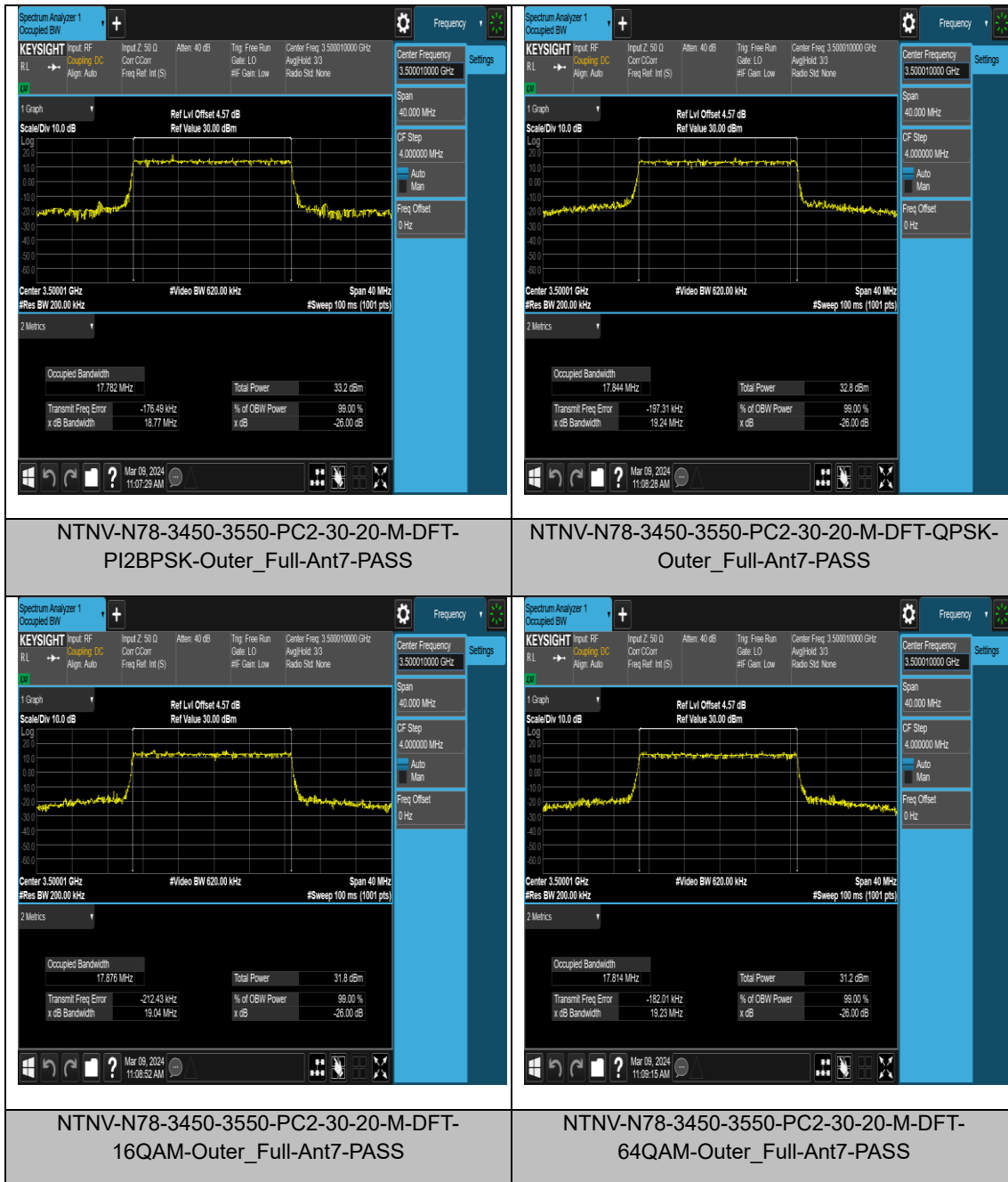
N78-3450-3550	30	90	DFT-16QAM	M	Outer_Full	86.927	89.77	PASS
N78-3450-3550	30	90	DFT-64QAM	M	Outer_Full	86.499	89.73	PASS
N78-3450-3550	30	90	DFT-256QAM	M	Outer_Full	86.632	89.93	PASS
N78-3450-3550	30	100	DFT-PI2BPSK	M	Outer_Full	96.137	100.2	PASS
N78-3450-3550	30	100	DFT-16QAM	M	Outer_Full	96.371	99.89	PASS
N78-3450-3550	30	100	DFT-64QAM	M	Outer_Full	96.263	99.86	PASS
N78-3450-3550	30	100	DFT-256QAM	M	Outer_Full	96.194	99.68	PASS
N78-3450-3550	30	100	DFT-QPSK	M	Outer_Full	96.287	99.90	PASS



BUREAU
VERITAS

Reference No.: W7L-231218W001RF11

Test Graphs



BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

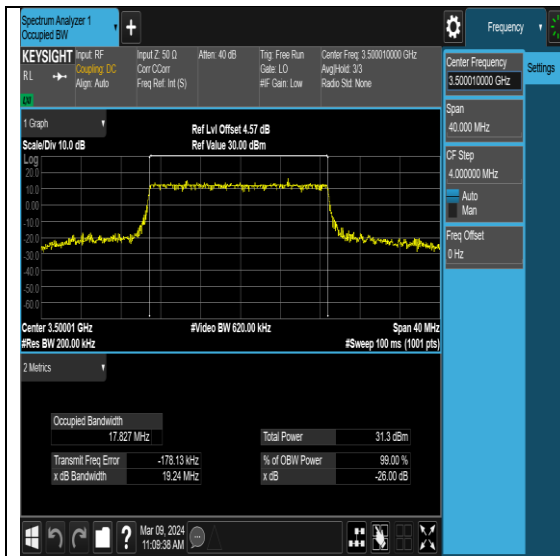
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com

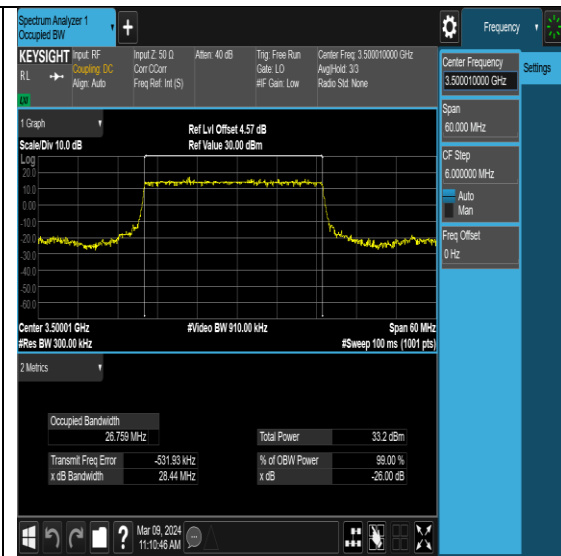


BUREAU
VERITAS

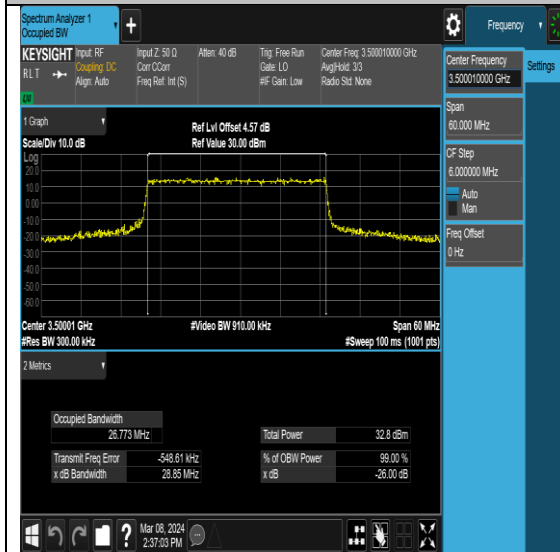
Reference No.: W7L-231218W001RF11



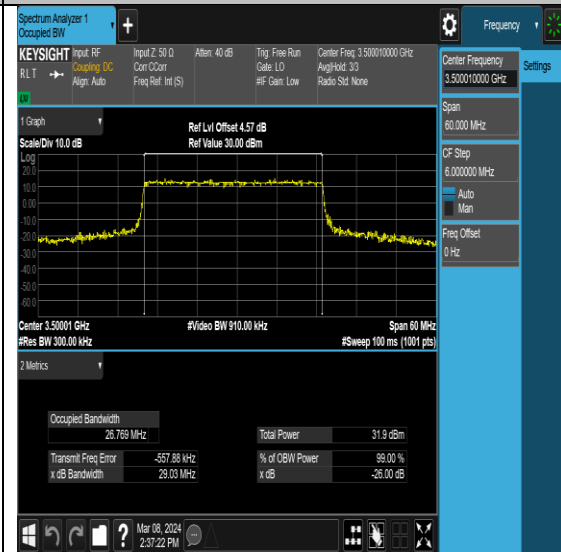
NTNV-N78-3450-3550-PC2-30-20-M-DFT-
256QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-30-M-DFT-
PI2BPSK-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-30-M-DFT-QPSK-
Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-30-M-DFT-
16QAM-Outer_Full-Ant7-PASS

BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

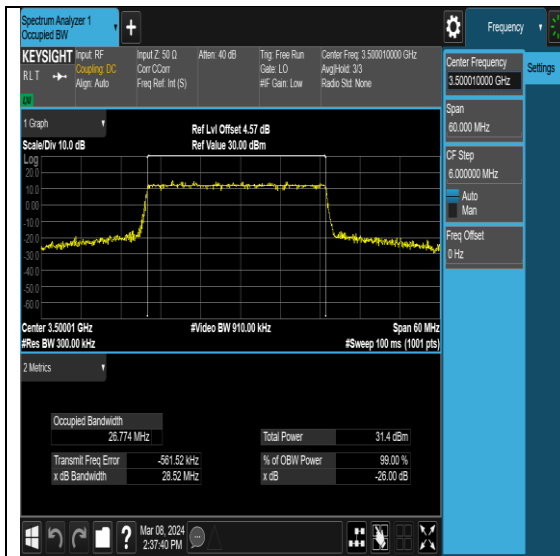
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com

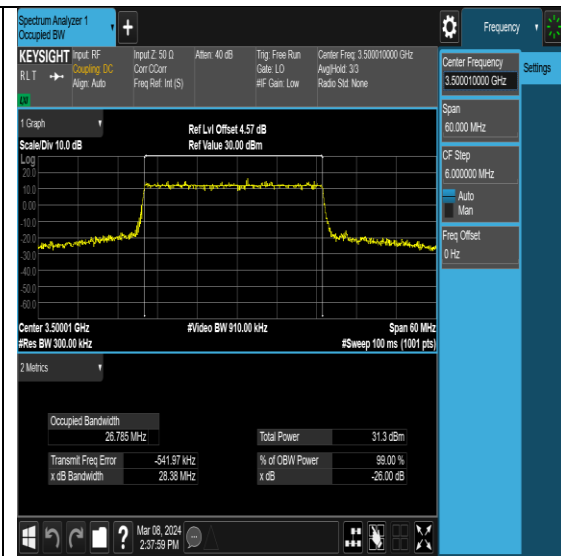


BUREAU
VERITAS

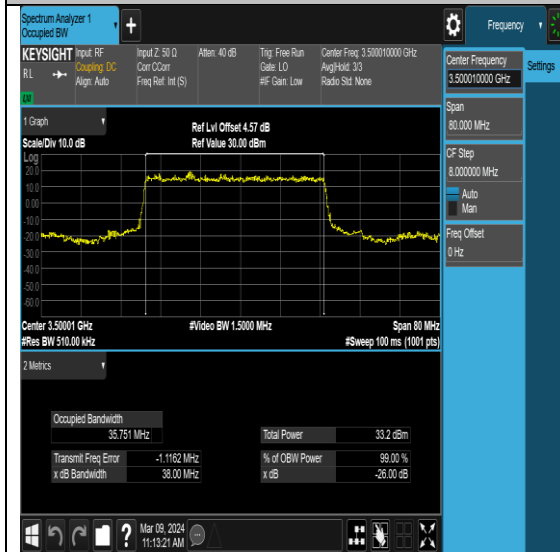
Reference No.: W7L-231218W001RF11



NTNV-N78-3450-3550-PC2-30-30-M-DFT-
64QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-30-M-DFT-
256QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-40-M-DFT-
PI2BPSK-Outer_Full-Ant7-PASS

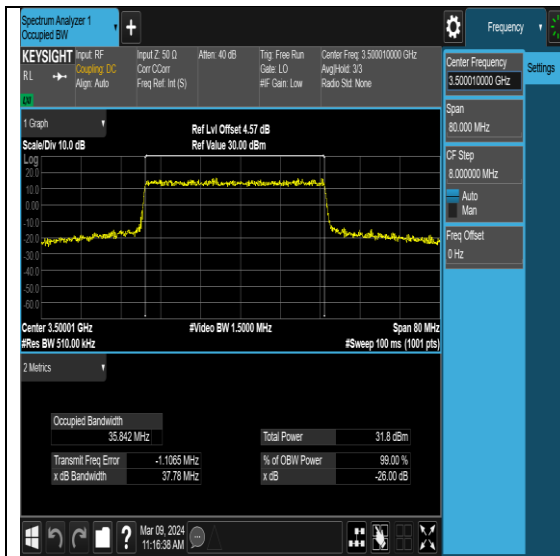


NTNV-N78-3450-3550-PC2-30-40-M-DFT-QPSK-
Outer_Full-Ant7-PASS



BUREAU
VERITAS

Reference No.: W7L-231218W001RF11



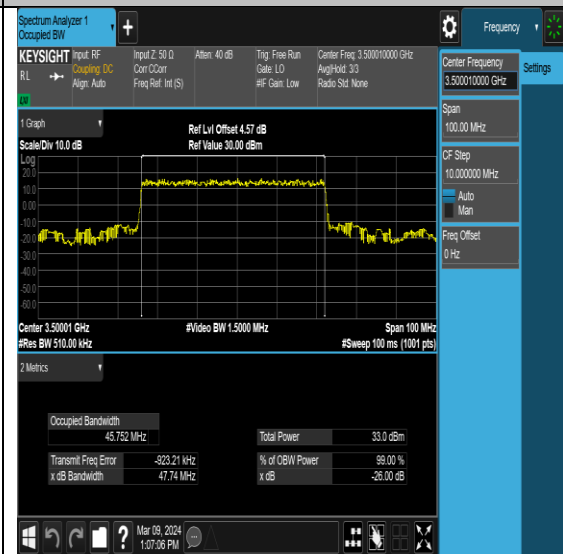
NTNV-N78-3450-3550-PC2-30-40-M-DFT-
16QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-40-M-DFT-
64QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-40-M-DFT-
256QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-50-M-DFT-
PI2BPSK-Outer_Full-Ant7-PASS

BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

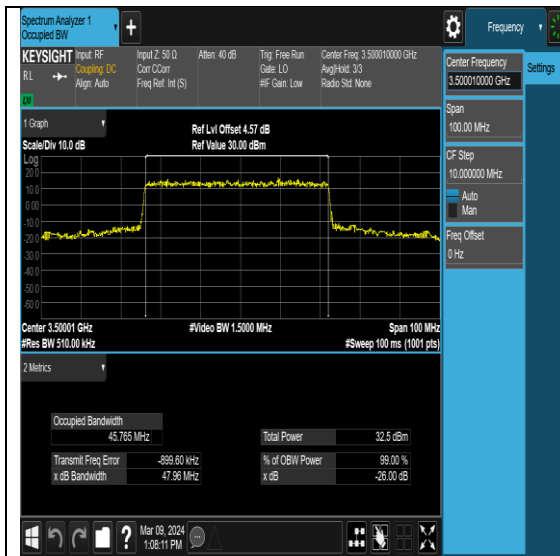
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com



BUREAU
VERITAS

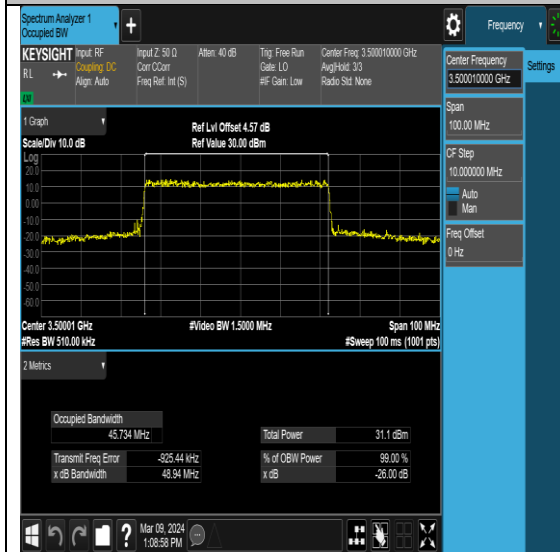
Reference No.: W7L-231218W001RF11



NTNV-N78-3450-3550-PC2-30-50-M-DFT-QPSK-
Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-50-M-DFT-
16QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-50-M-DFT-
64QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-50-M-DFT-
256QAM-Outer_Full-Ant7-PASS

BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

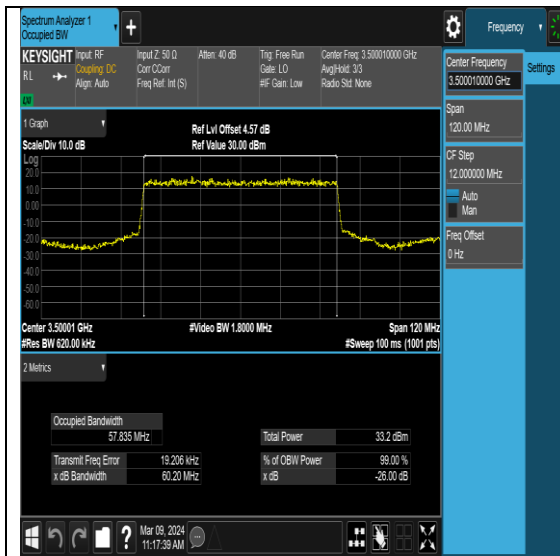
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com

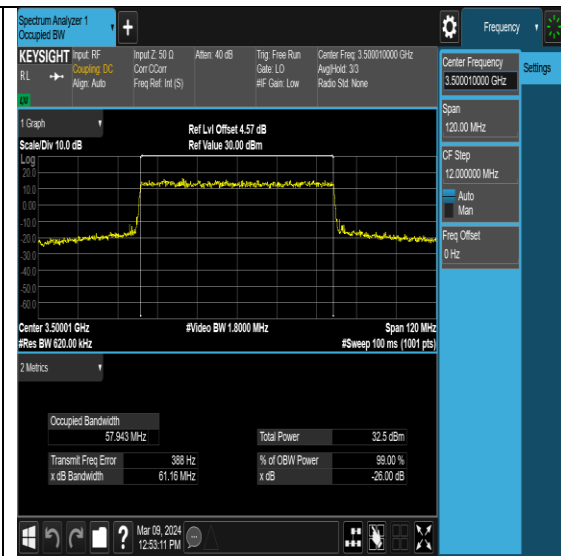


BUREAU
VERITAS

Reference No.: W7L-231218W001RF11



NTNV-N78-3450-3550-PC2-30-60-M-DFT-
P12BPSK-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-60-M-DFT-QPSK-
Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-60-M-DFT-
16QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-60-M-DFT-
64QAM-Outer_Full-Ant7-PASS

BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

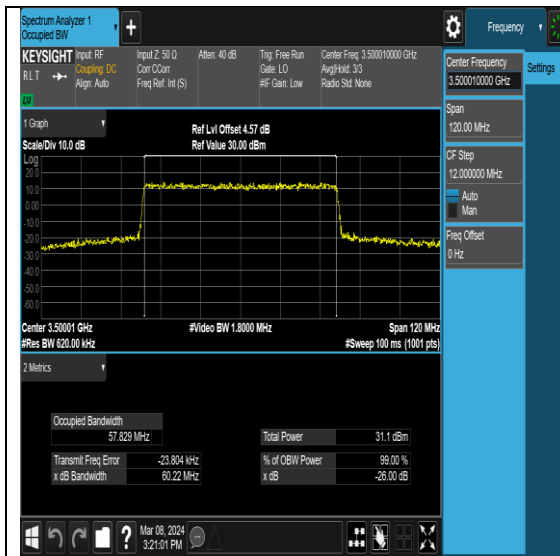
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com



BUREAU
VERITAS

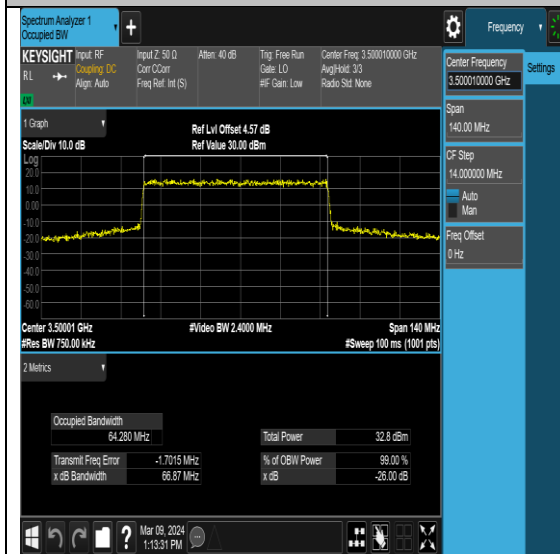
Reference No.: W7L-231218W001RF11



NTNV-N78-3450-3550-PC2-30-60-M-DFT-
256QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-70-M-DFT-
PI2BPSK-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-70-M-DFT-QPSK-
Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-70-M-DFT-
16QAM-Outer_Full-Ant7-PASS

BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

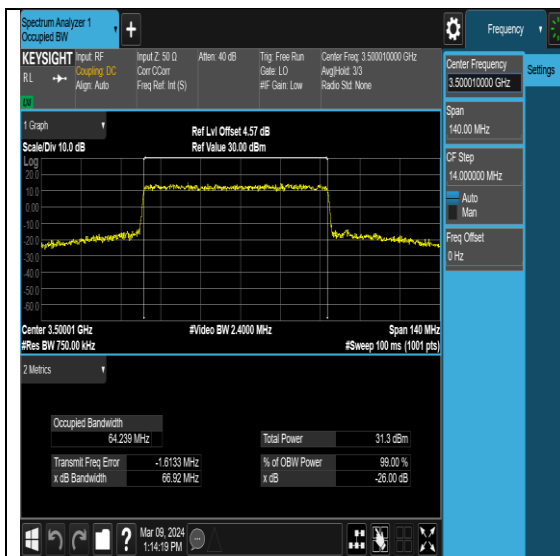
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com

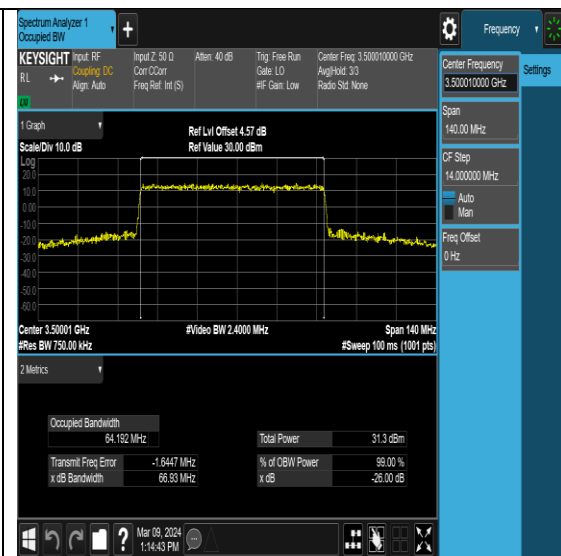


BUREAU
VERITAS

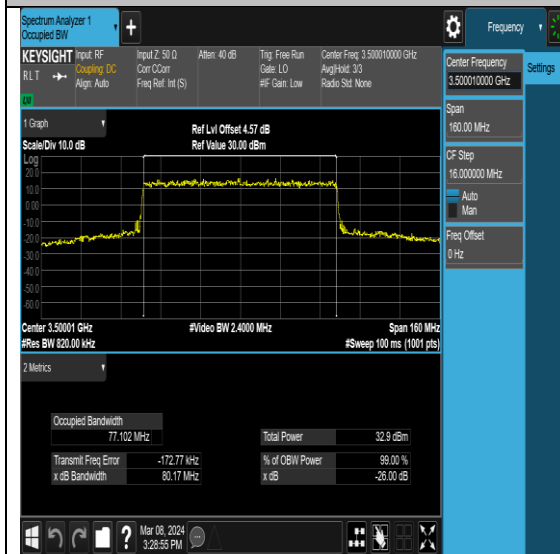
Reference No.: W7L-231218W001RF11



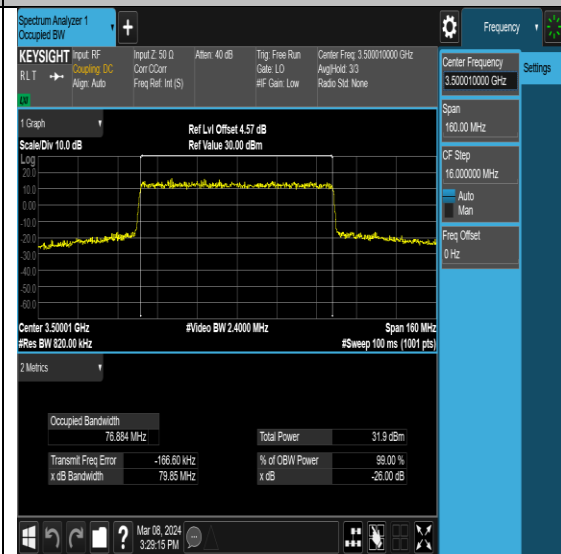
NTNV-N78-3450-3550-PC2-30-70-M-DFT-
64QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-70-M-DFT-
256QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-80-M-DFT-QPSK-
Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-80-M-DFT-
16QAM-Outer_Full-Ant7-PASS

BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

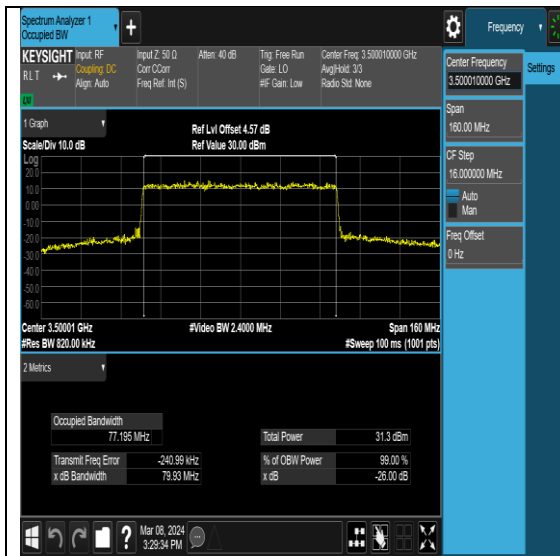
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com



BUREAU
VERITAS

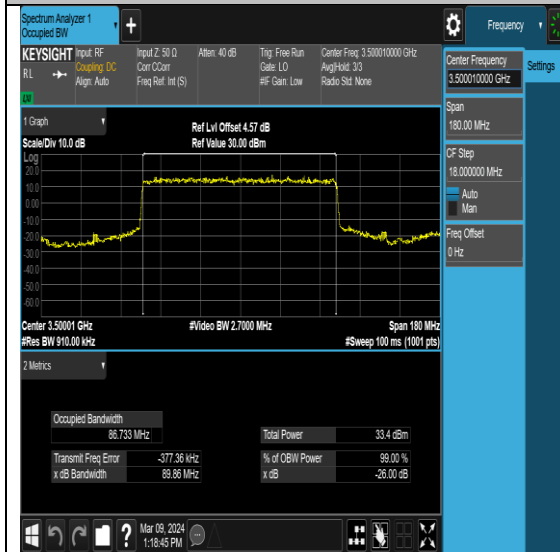
Reference No.: W7L-231218W001RF11



NTNV-N78-3450-3550-PC2-30-80-M-DFT-
64QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-80-M-DFT-
256QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-90-M-DFT-
PI2BPSK-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-90-M-DFT-QPSK-
Outer_Full-Ant7-PASS

BV 7Layers Communications Technology
(Shenzhen) Co., Ltd

Room B37, Warehouse A5, No.3 Chiwan 4th Road,
Zhaoshang Street, Nanshan District Shenzhen,
Guangdong, People's Republic of China

Tel: +86 755 8869 6566

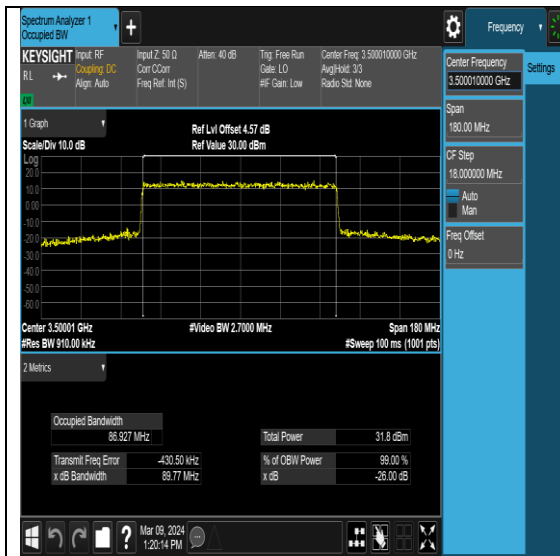
Fax: +86 755 8869 6577

Email: customerservice.sw@bureauveritas.com



BUREAU
VERITAS

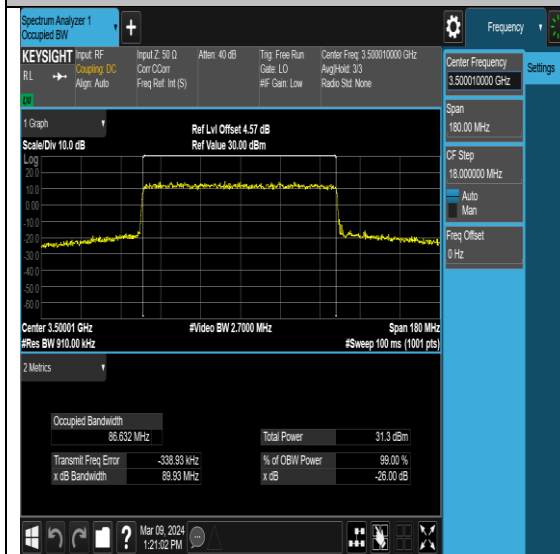
Reference No.: W7L-231218W001RF11



NTNV-N78-3450-3550-PC2-30-90-M-DFT-
16QAM-Outer_Full-Ant7-PASS



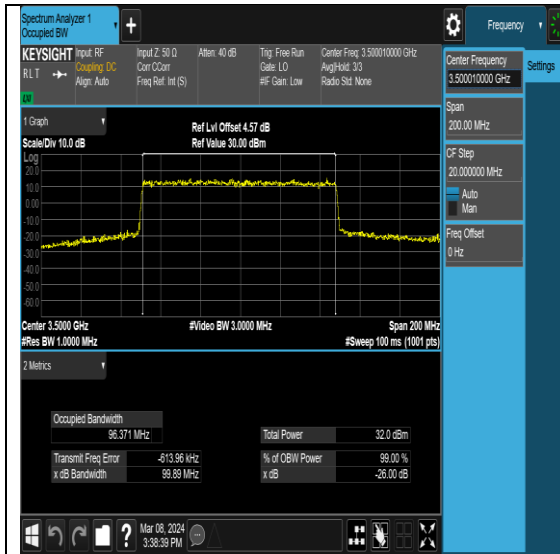
NTNV-N78-3450-3550-PC2-30-90-M-DFT-
64QAM-Outer_Full-Ant7-PASS



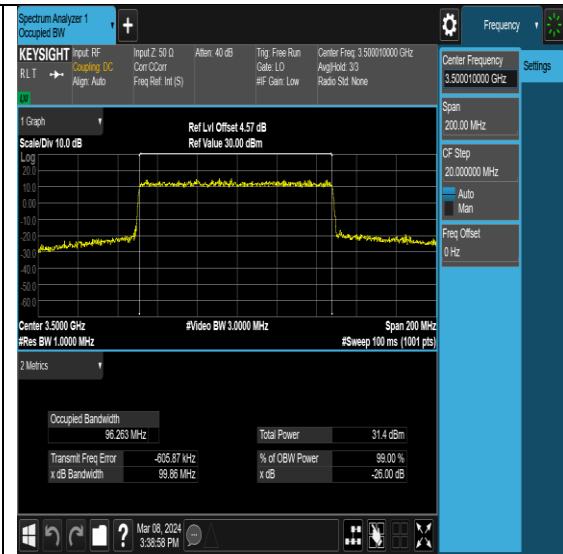
NTNV-N78-3450-3550-PC2-30-90-M-DFT-
256QAM-Outer_Full-Ant7-PASS



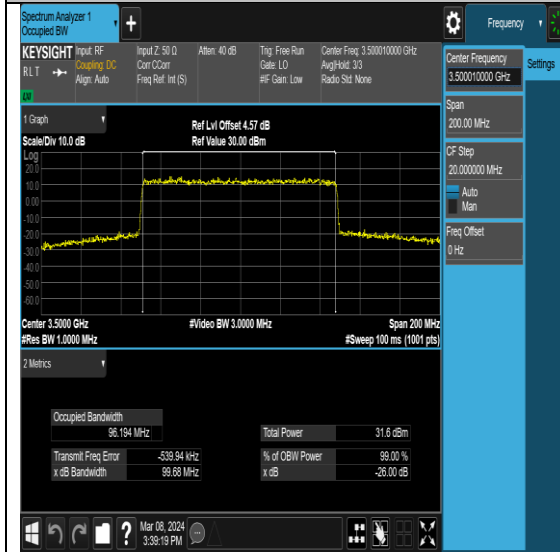
NTNV-N78-3450-3550-PC2-30-100-M-DFT-
PI2BPSK-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-100-M-DFT-
16QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-100-M-DFT-
64QAM-Outer_Full-Ant7-PASS



NTNV-N78-3450-3550-PC2-30-100-M-DFT-
256QAM-Outer_Full-Ant7-PASS