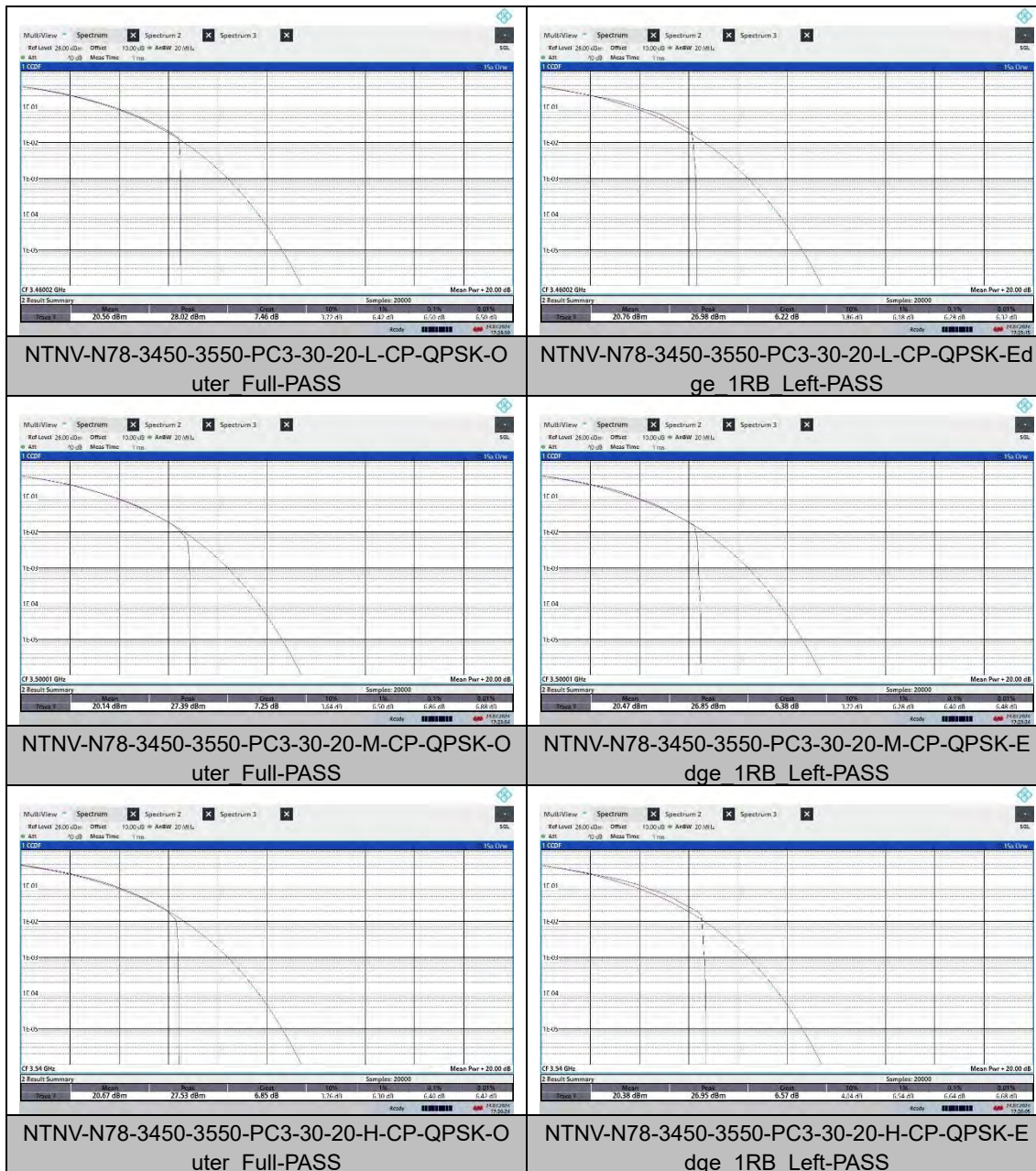
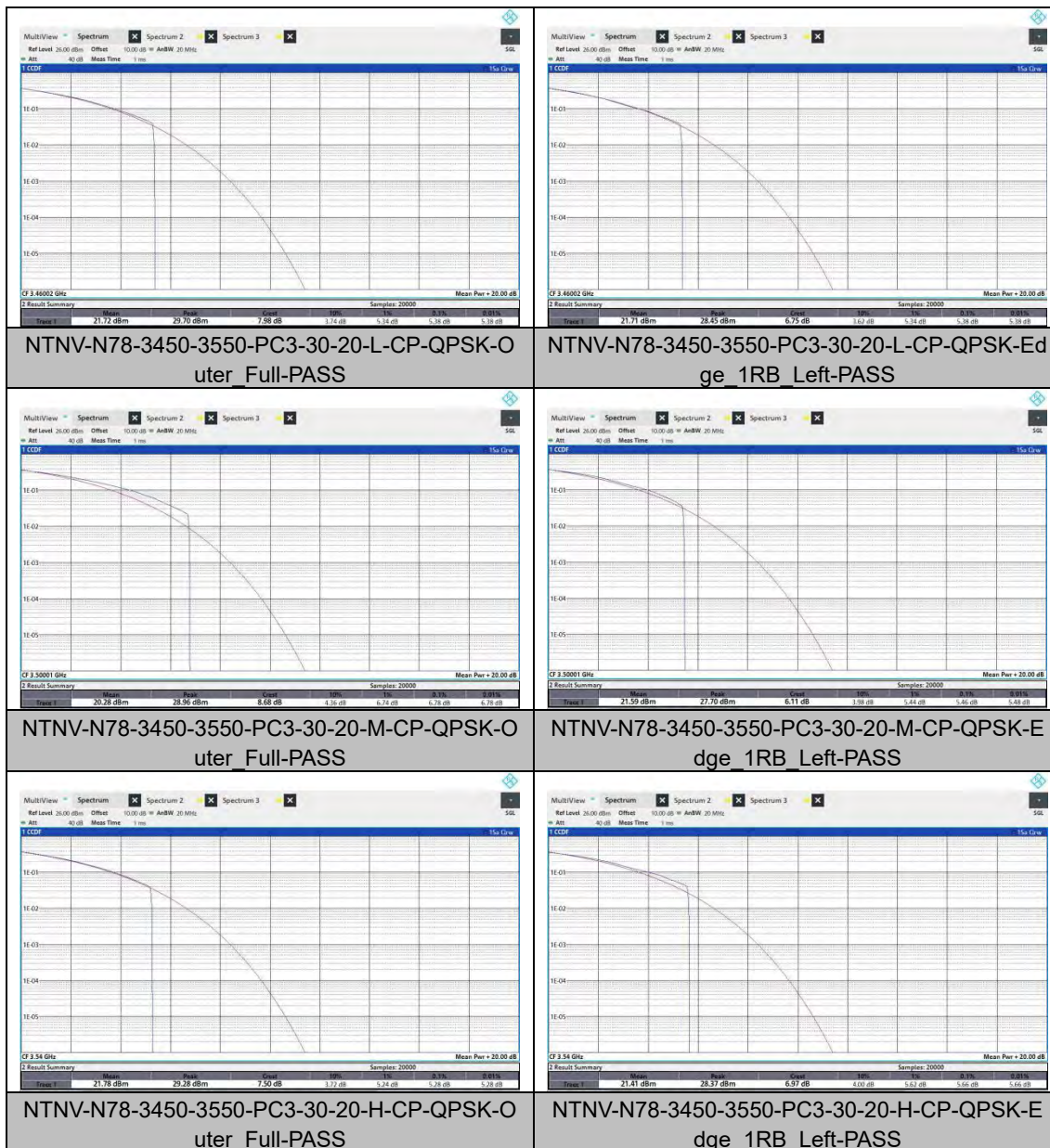


TEST GRAPHS-ANT7



TEST GRAPHS-ANT4



26DB BANDWIDTH AND OCCUPIED BANDWIDTH FOR MIMO TEST RESULT-ANT7

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result (99%)	Result (26dB)	Verdict
N78-3450 -3550	30	10	CP-QPSK	M	Outer_Full	8.593	9.57	PASS
N78-3450 -3550	30	10	CP-16QAM	M	Outer_Full	8.558	9.53	PASS
N78-3450 -3550	30	10	CP-64QAM	M	Outer_Full	8.571	9.41	PASS
N78-3450 -3550	30	10	CP-256QAM	M	Outer_Full	8.589	9.41	PASS
N78-3450 -3550	30	20	CP-QPSK	M	Outer_Full	18.215	19.66	PASS
N78-3450 -3550	30	20	CP-16QAM	M	Outer_Full	18.266	19.86	PASS
N78-3450 -3550	30	20	CP-64QAM	M	Outer_Full	18.208	19.70	PASS
N78-3450 -3550	30	20	CP-256QAM	M	Outer_Full	18.204	19.66	PASS
N78-3450 -3550	30	30	CP-QPSK	M	Outer_Full	27.882	29.43	PASS
N78-3450 -3550	30	30	CP-16QAM	M	Outer_Full	27.848	29.37	PASS
N78-3450 -3550	30	30	CP-64QAM	M	Outer_Full	27.894	29.49	PASS
N78-3450 -3550	30	30	CP-256QAM	M	Outer_Full	27.927	29.37	PASS
N78-3450 -3550	30	40	CP-QPSK	M	Outer_Full	37.898	39.80	PASS
N78-3450 -3550	30	40	CP-16QAM	M	Outer_Full	37.933	39.80	PASS
N78-3450 -3550	30	40	CP-64QAM	M	Outer_Full	37.838	39.64	PASS
N78-3450 -3550	30	40	CP-256QAM	M	Outer_Full	37.910	39.80	PASS
N78-3450 -3550	30	50	CP-QPSK	M	Outer_Full	47.557	49.65	PASS
N78-3450 -3550	30	50	CP-16QAM	M	Outer_Full	47.460	49.45	PASS
N78-3450 -3550	30	50	CP-64QAM	M	Outer_Full	47.549	49.45	PASS
N78-3450 -3550	30	50	CP-256QAM	M	Outer_Full	47.542	49.45	PASS
N78-3450 -3550	30	60	CP-QPSK	M	Outer_Full	57.888	60.78	PASS
N78-3450 -3550	30	60	CP-16QAM	M	Outer_Full	58.066	60.66	PASS



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N78-3450 -3550	30	60	CP-64QAM	M	Outer_Full	57.934	60.78	PASS
N78-3450 -3550	30	60	CP-256QAM	M	Outer_Full	57.946	60.66	PASS
N78-3450 -3550	30	70	CP-QPSK	M	Outer_Full	67.594	70.49	PASS
N78-3450 -3550	30	70	CP-16QAM	M	Outer_Full	67.555	70.49	PASS
N78-3450 -3550	30	70	CP-64QAM	M	Outer_Full	67.590	70.49	PASS
N78-3450 -3550	30	70	CP-256QAM	M	Outer_Full	67.544	70.63	PASS
N78-3450 -3550	30	80	CP-QPSK	M	Outer_Full	77.578	80.72	PASS
N78-3450 -3550	30	80	CP-16QAM	M	Outer_Full	77.492	80.40	PASS
N78-3450 -3550	30	80	CP-64QAM	M	Outer_Full	77.503	80.40	PASS
N78-3450 -3550	30	80	CP-256QAM	M	Outer_Full	77.577	80.56	PASS
N78-3450 -3550	30	90	CP-QPSK	M	Outer_Full	87.530	90.63	PASS
N78-3450 -3550	30	90	CP-16QAM	M	Outer_Full	87.407	90.63	PASS
N78-3450 -3550	30	90	CP-64QAM	M	Outer_Full	87.639	90.81	PASS
N78-3450 -3550	30	90	CP-256QAM	M	Outer_Full	87.519	90.81	PASS
N78-3450 -3550	30	100	CP-QPSK	M	Outer_Full	97.377	100.70	PASS
N78-3450 -3550	30	100	CP-16QAM	M	Outer_Full	97.266	100.70	PASS
N78-3450 -3550	30	100	CP-64QAM	M	Outer_Full	97.322	100.90	PASS
N78-3450 -3550	30	100	CP-256QAM	M	Outer_Full	97.329	100.90	PASS

TEST RESULT-ANT4

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result (99%)	Result (26dB)	Verdict
N78-3450 -3550	30	10	CP-QPSK	M	Outer_Full	8.588	9.51	PASS
N78-3450 -3550	30	10	CP-16QAM	M	Outer_Full	8.588	9.63	PASS
N78-3450 -3550	30	10	CP-64QAM	M	Outer_Full	8.576	9.41	PASS
N78-3450 -3550	30	10	CP-256QAM	M	Outer_Full	8.575	9.41	PASS
N78-3450 -3550	30	20	CP-QPSK	M	Outer_Full	18.242	19.66	PASS
N78-3450 -3550	30	20	CP-16QAM	M	Outer_Full	18.220	19.66	PASS
N78-3450 -3550	30	20	CP-64QAM	M	Outer_Full	18.238	19.66	PASS



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N78-3450 -3550	30	20	CP-256QAM	M	Outer_Full	18.273	19.70	PASS
N78-3450 -3550	30	30	CP-QPSK	M	Outer_Full	27.809	29.43	PASS
N78-3450 -3550	30	30	CP-16QAM	M	Outer_Full	27.815	29.49	PASS
N78-3450 -3550	30	30	CP-64QAM	M	Outer_Full	27.882	29.31	PASS
N78-3450 -3550	30	30	CP-256QAM	M	Outer_Full	27.883	29.43	PASS
N78-3450 -3550	30	40	CP-QPSK	M	Outer_Full	37.810	39.80	PASS
N78-3450 -3550	30	40	CP-16QAM	M	Outer_Full	37.773	39.80	PASS
N78-3450 -3550	30	40	CP-64QAM	M	Outer_Full	37.838	39.72	PASS
N78-3450 -3550	30	40	CP-256QAM	M	Outer_Full	37.873	39.80	PASS
N78-3450 -3550	30	50	CP-QPSK	M	Outer_Full	47.417	49.55	PASS
N78-3450 -3550	30	50	CP-16QAM	M	Outer_Full	47.461	49.45	PASS
N78-3450 -3550	30	50	CP-64QAM	M	Outer_Full	47.428	49.45	PASS
N78-3450 -3550	30	50	CP-256QAM	M	Outer_Full	47.492	49.55	PASS
N78-3450 -3550	30	60	CP-QPSK	M	Outer_Full	57.766	60.78	PASS
N78-3450 -3550	30	60	CP-16QAM	M	Outer_Full	57.933	60.90	PASS
N78-3450 -3550	30	60	CP-64QAM	M	Outer_Full	57.950	60.90	PASS
N78-3450 -3550	30	60	CP-256QAM	M	Outer_Full	57.925	60.90	PASS
N78-3450 -3550	30	70	CP-QPSK	M	Outer_Full	67.498	70.35	PASS
N78-3450 -3550	30	70	CP-16QAM	M	Outer_Full	67.665	70.91	PASS
N78-3450 -3550	30	70	CP-64QAM	M	Outer_Full	67.546	70.63	PASS
N78-3450 -3550	30	70	CP-256QAM	M	Outer_Full	67.698	70.49	PASS
N78-3450 -3550	30	80	CP-QPSK	M	Outer_Full	77.615	80.56	PASS
N78-3450 -3550	30	80	CP-16QAM	M	Outer_Full	77.433	80.72	PASS
N78-3450 -3550	30	80	CP-64QAM	M	Outer_Full	77.502	80.56	PASS
N78-3450 -3550	30	80	CP-256QAM	M	Outer_Full	77.509	80.72	PASS
N78-3450 -3550	30	90	CP-QPSK	M	Outer_Full	87.471	90.63	PASS
N78-3450 -3550	30	90	CP-16QAM	M	Outer_Full	87.296	90.63	PASS

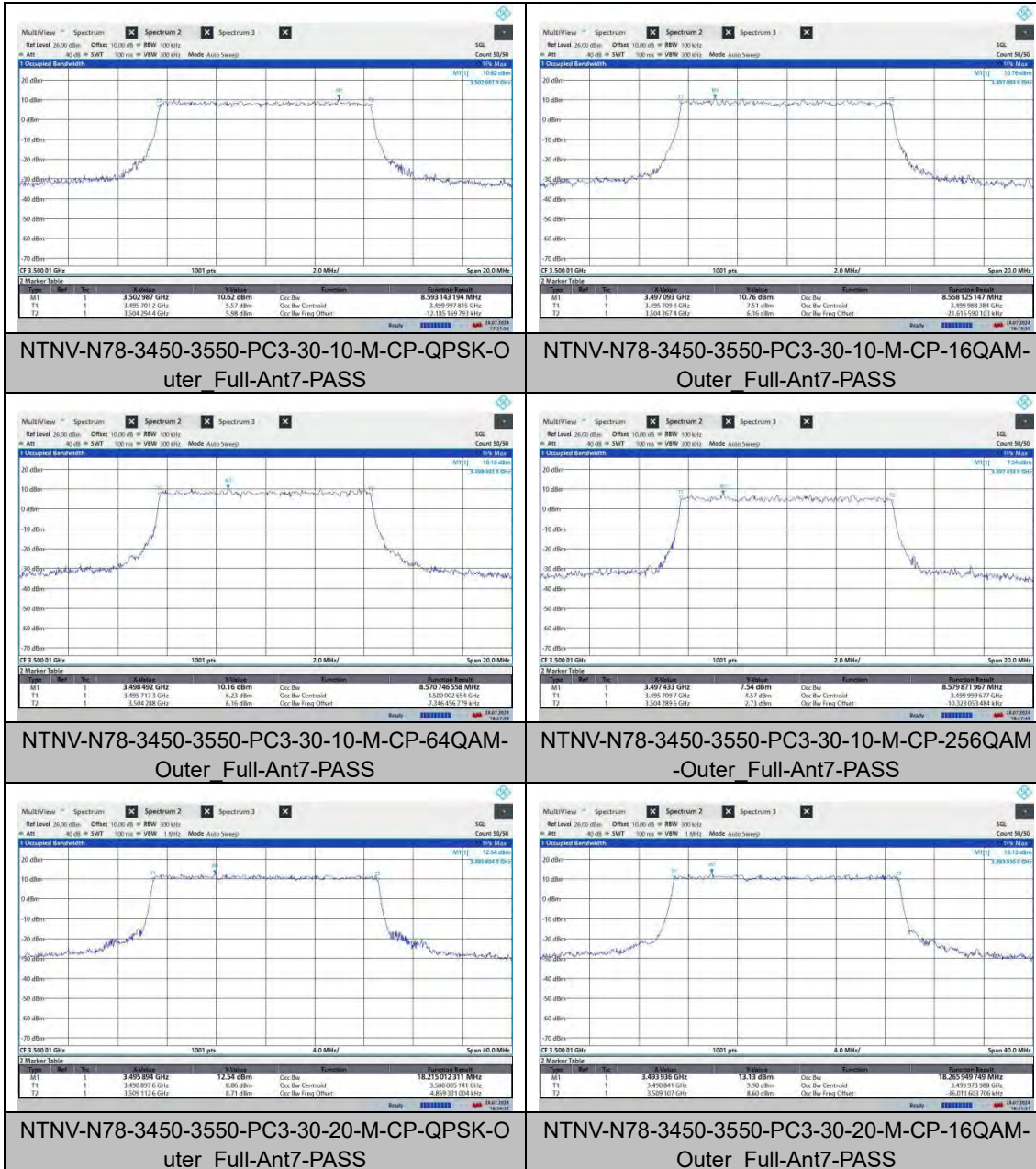


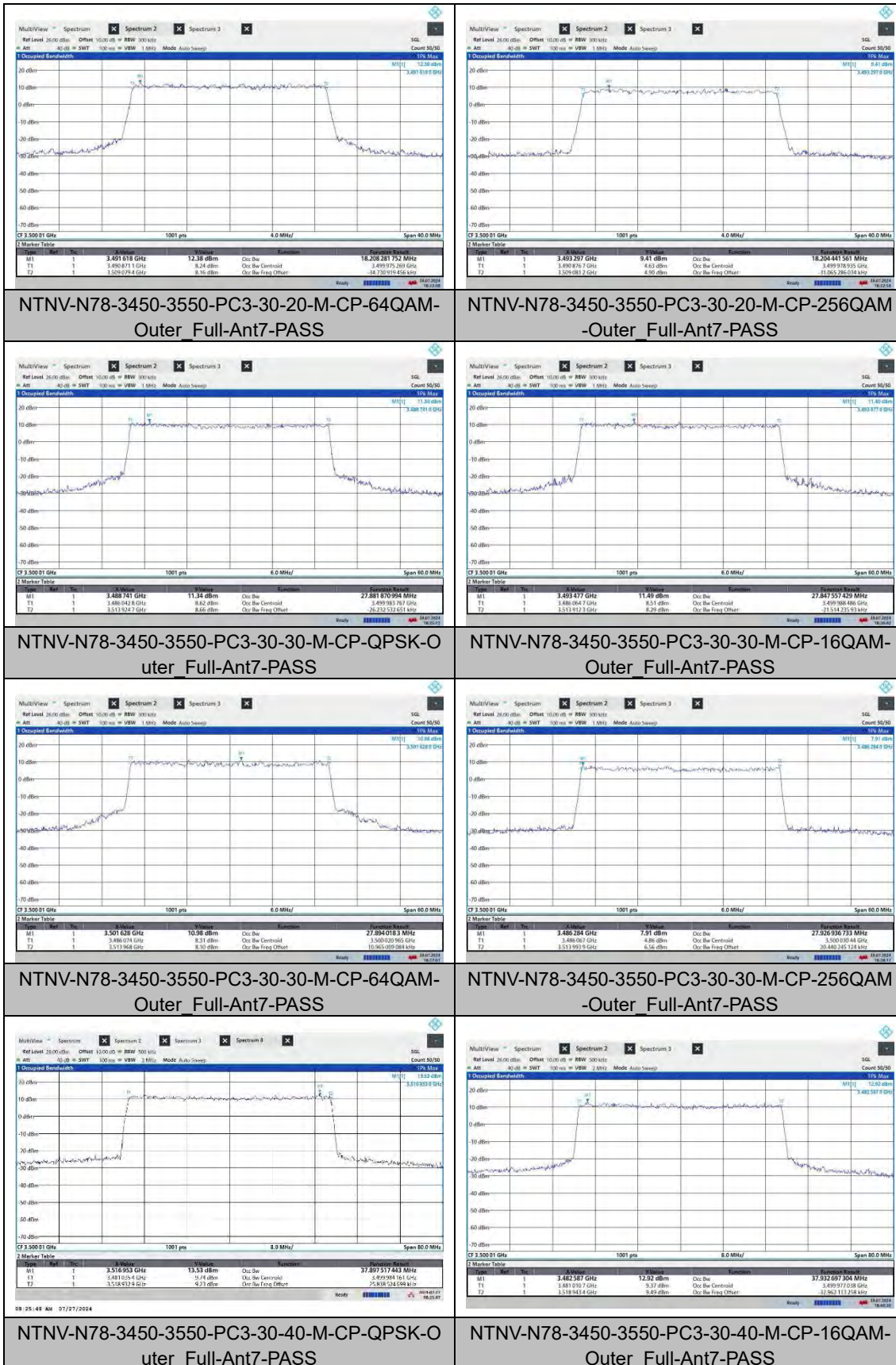
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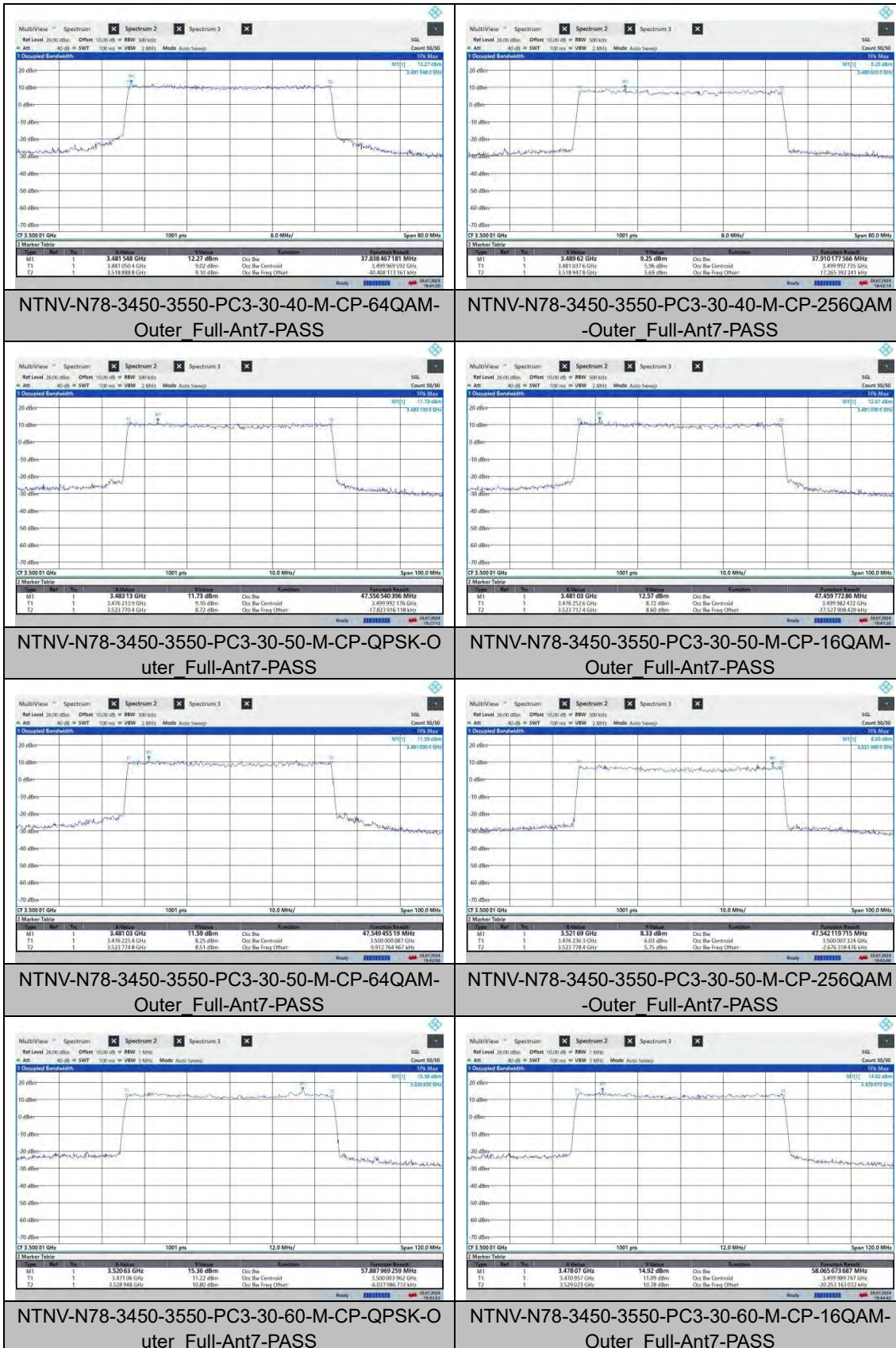
N78-3450 -3550	30	90	CP-64QAM	M	Outer_Full	87.338	90.63	PASS
N78-3450 -3550	30	90	CP-256QAM	M	Outer_Full	87.365	90.63	PASS
N78-3450 -3550	30	100	CP-QPSK	M	Outer_Full	97.299	100.70	PASS
N78-3450 -3550	30	100	CP-16QAM	M	Outer_Full	97.365	100.90	PASS
N78-3450 -3550	30	100	CP-64QAM	M	Outer_Full	97.493	100.70	PASS
N78-3450 -3550	30	100	CP-256QAM	M	Outer_Full	97.371	100.90	PASS

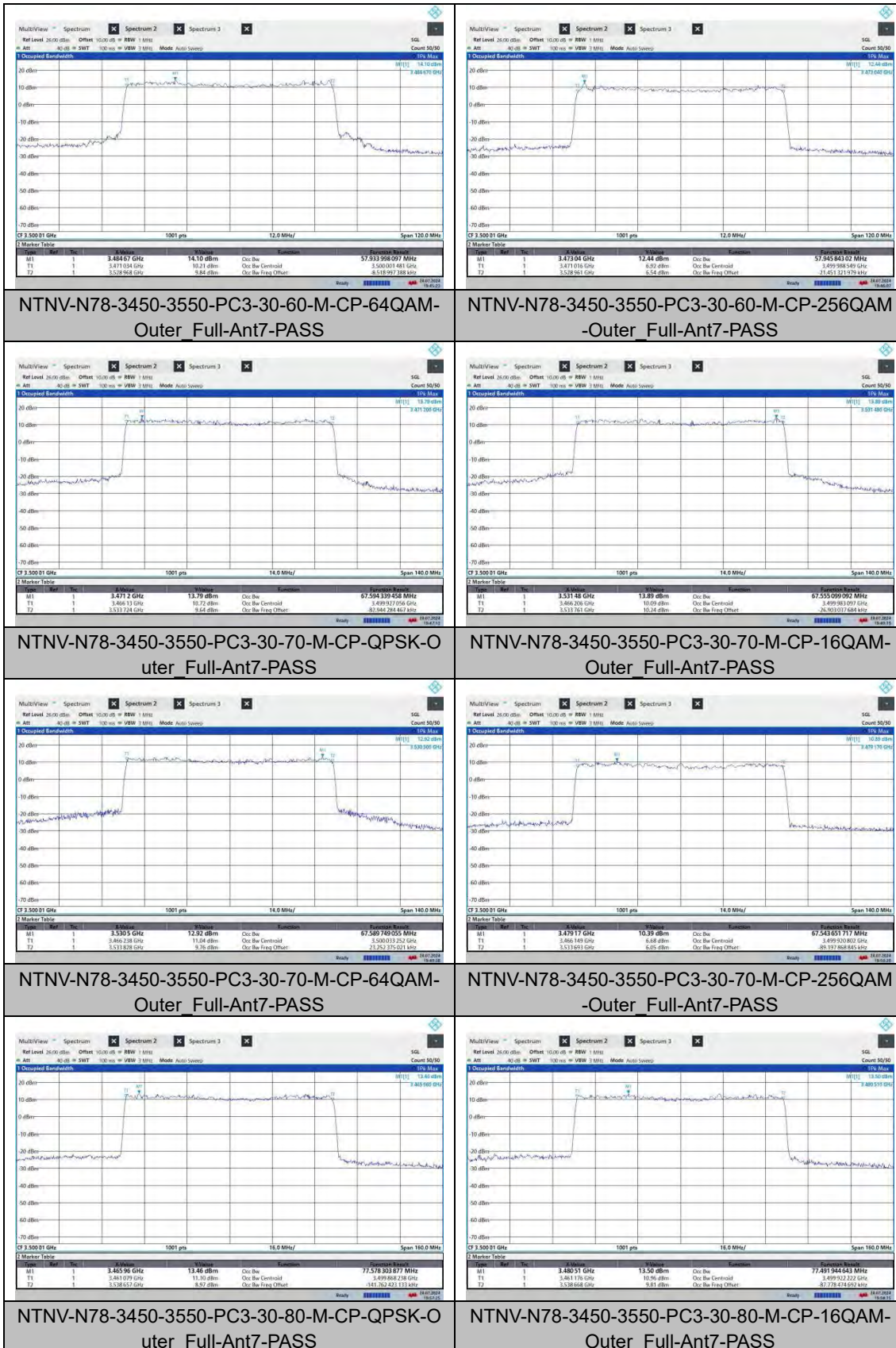
TEST GRAPHS-ANT7

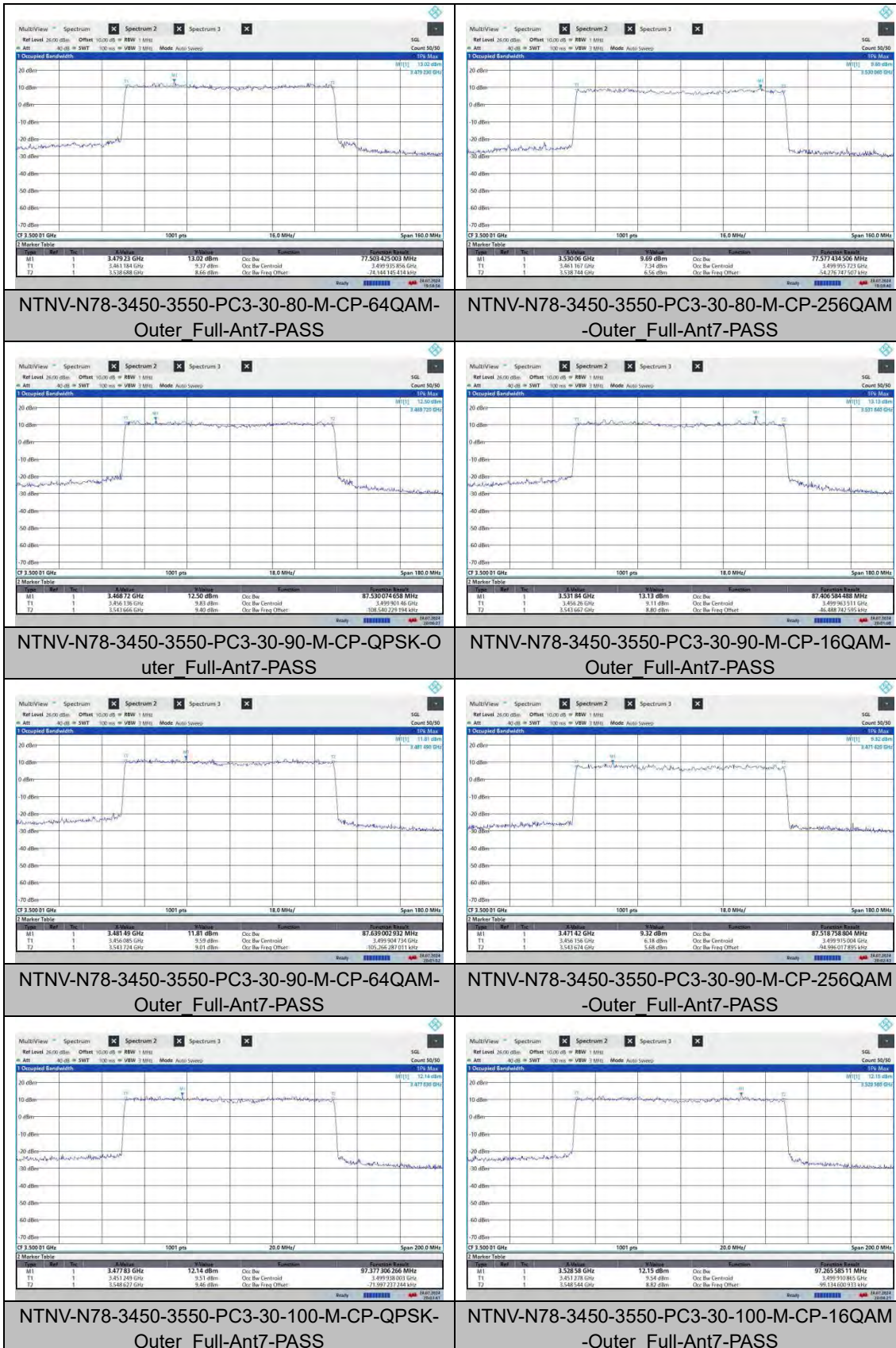
OCCUPIED BANDWIDTH

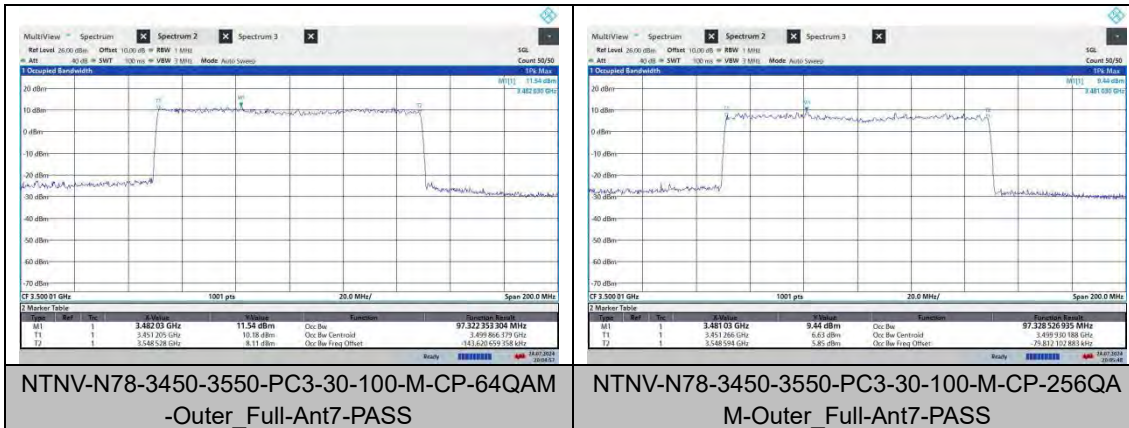




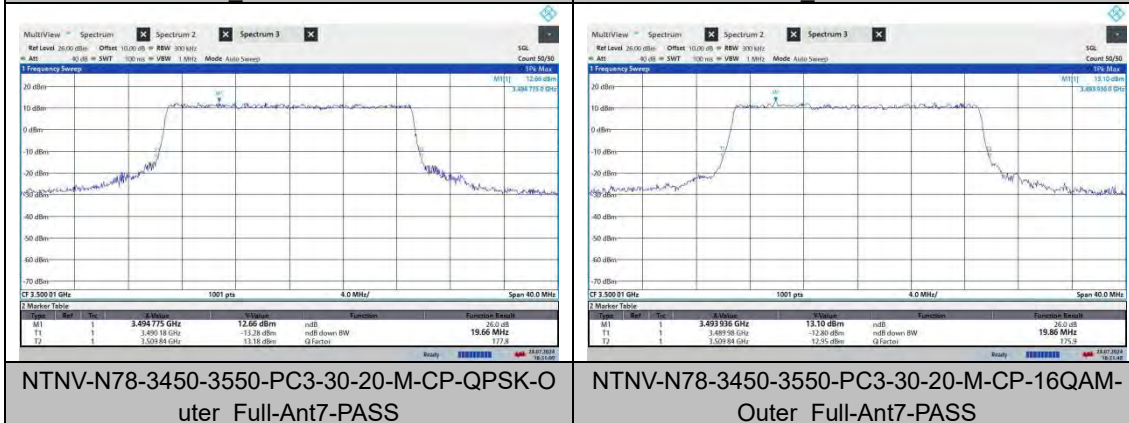
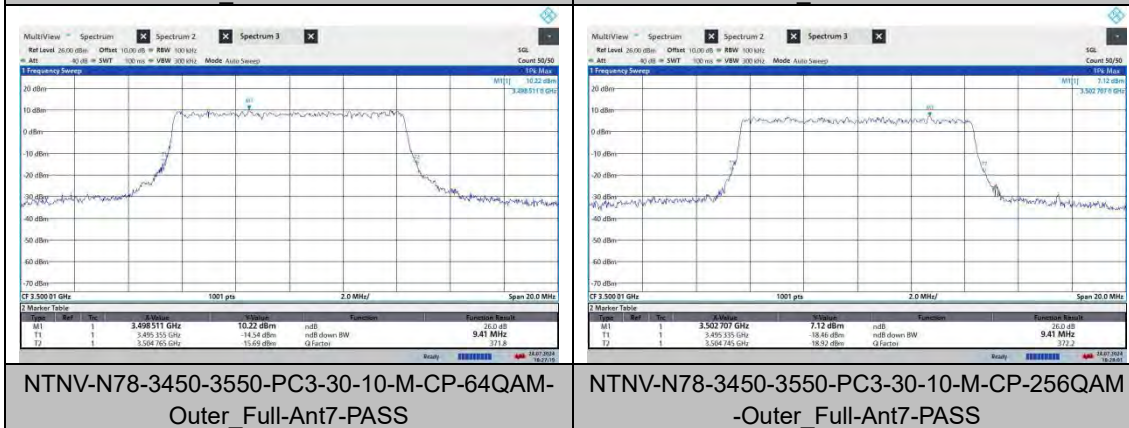
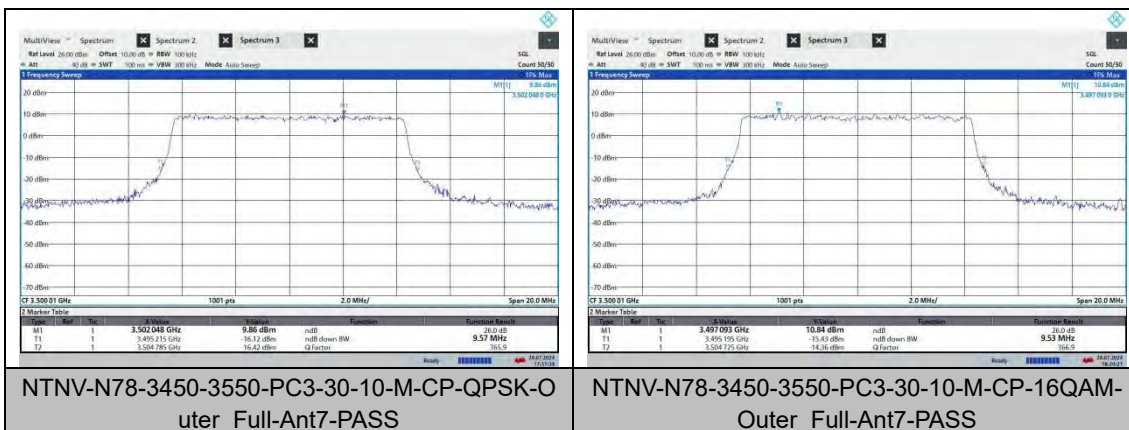


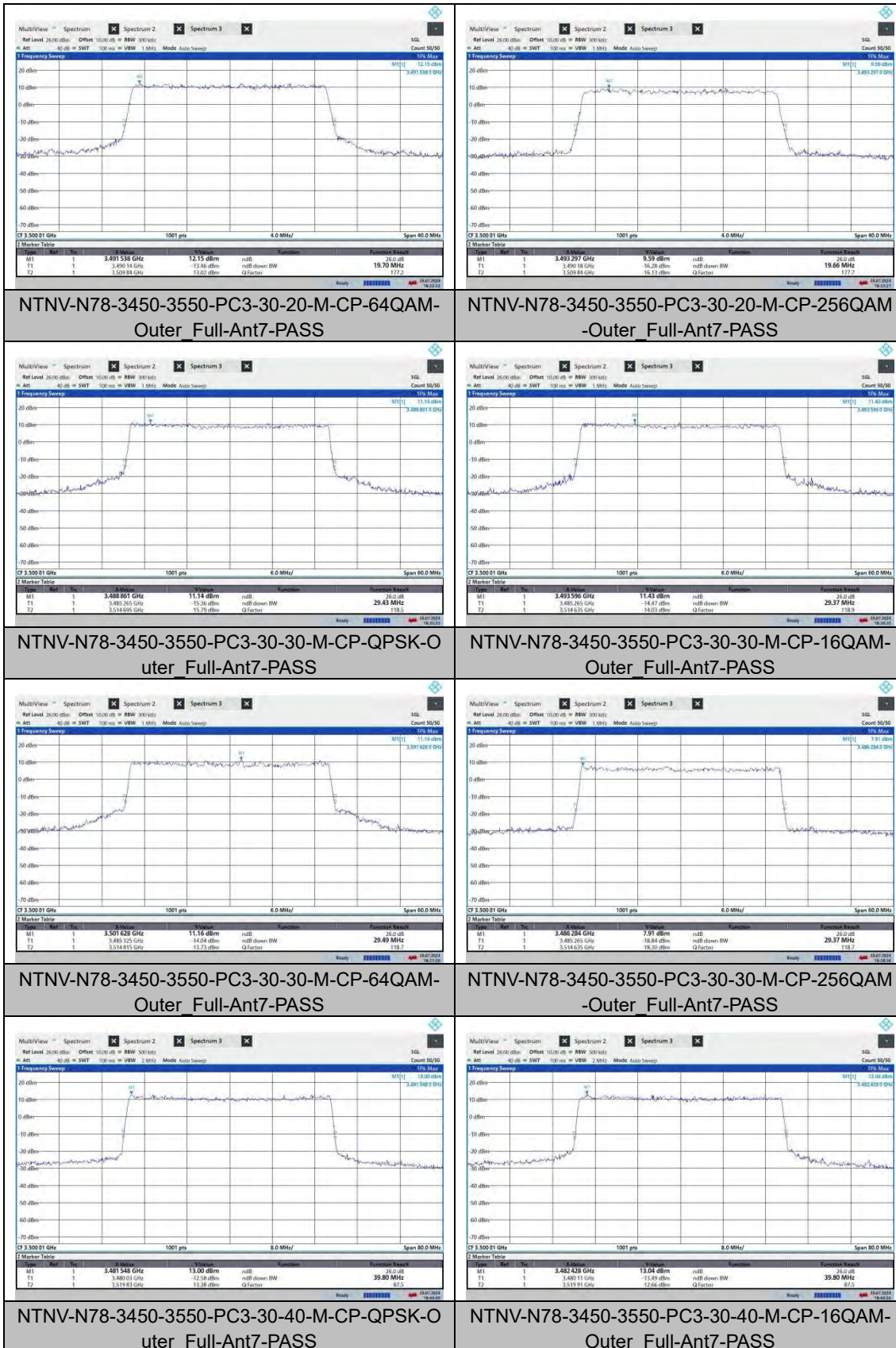


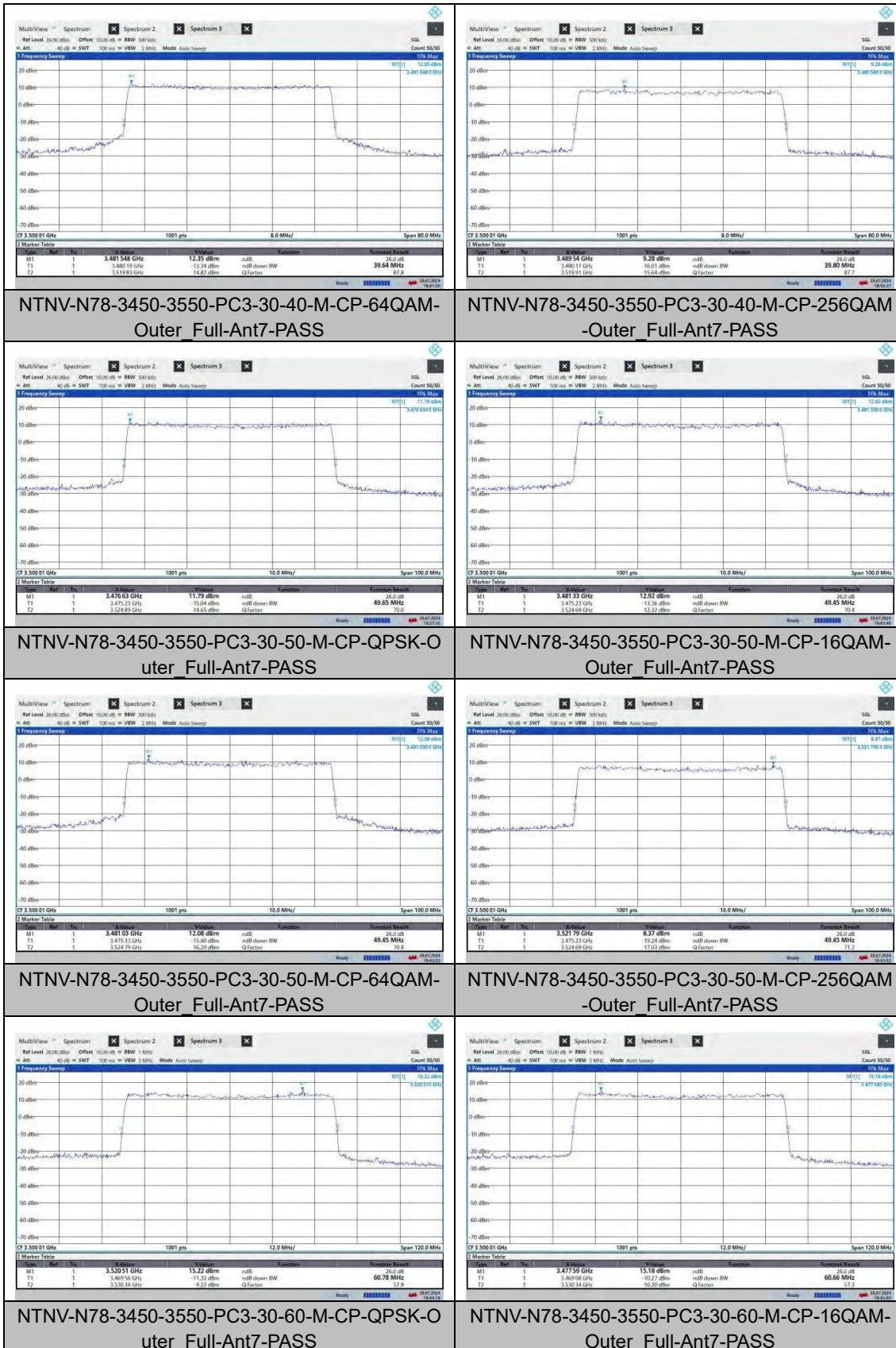


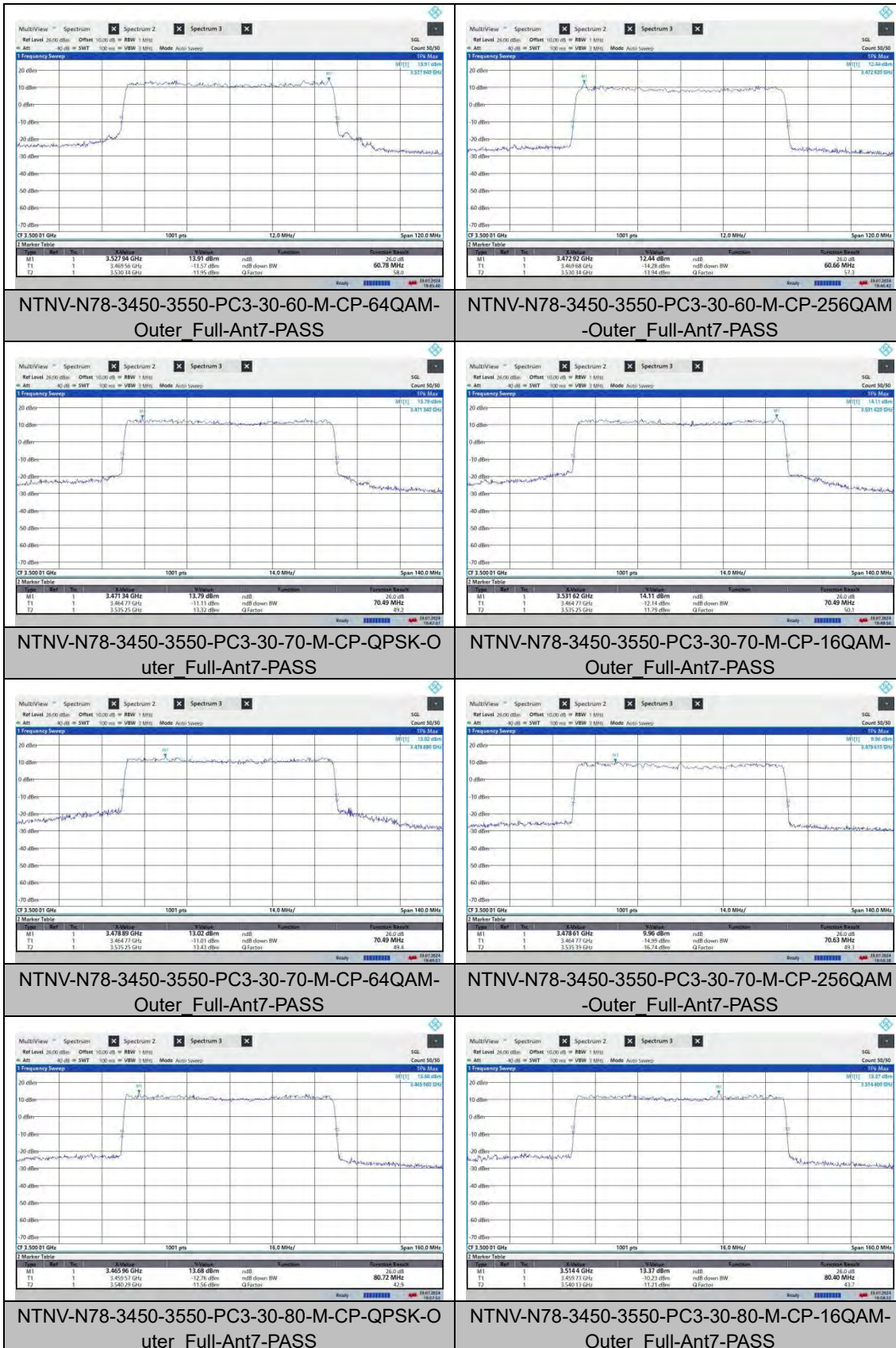


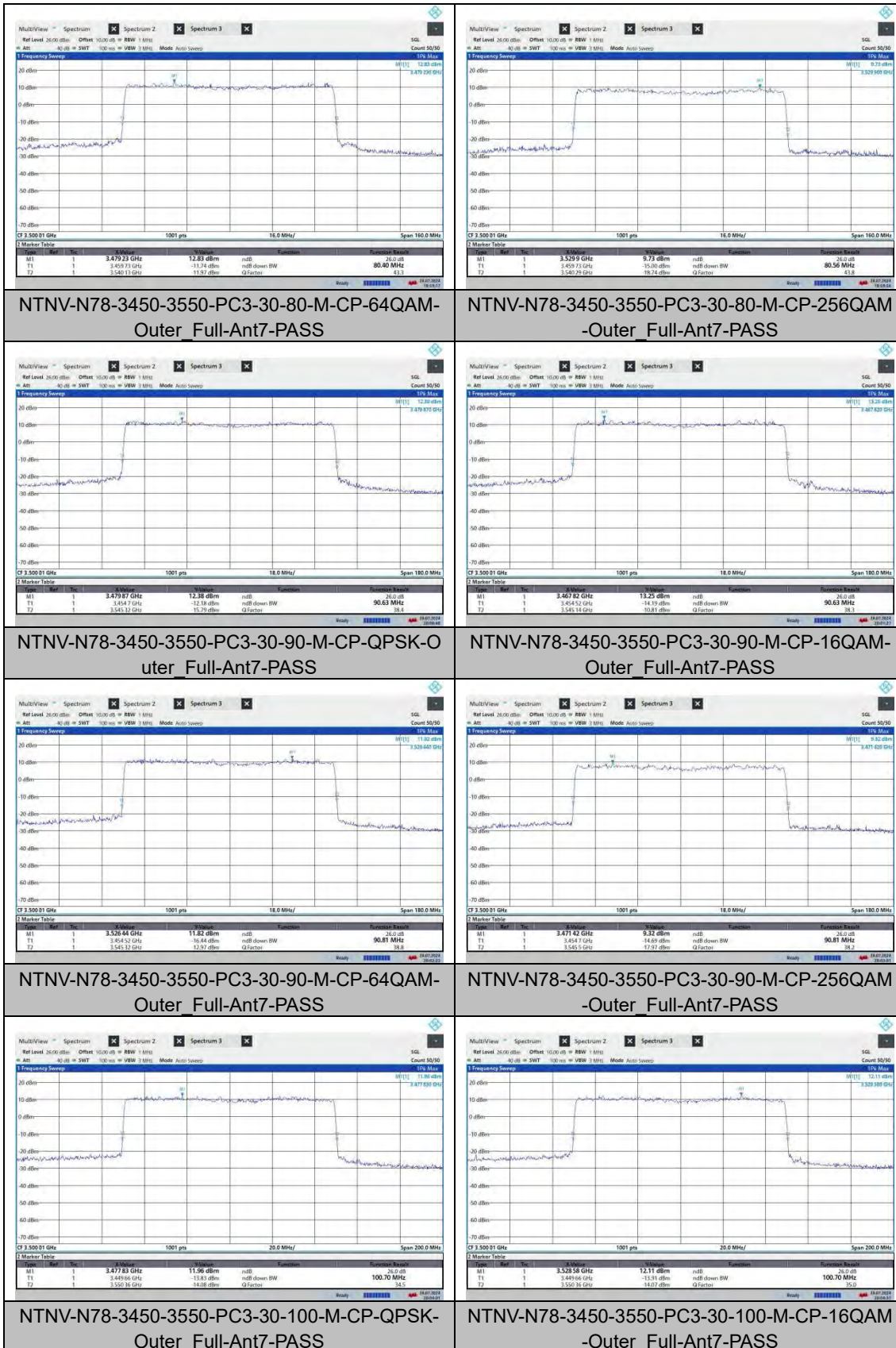
26DB BANDWIDTH

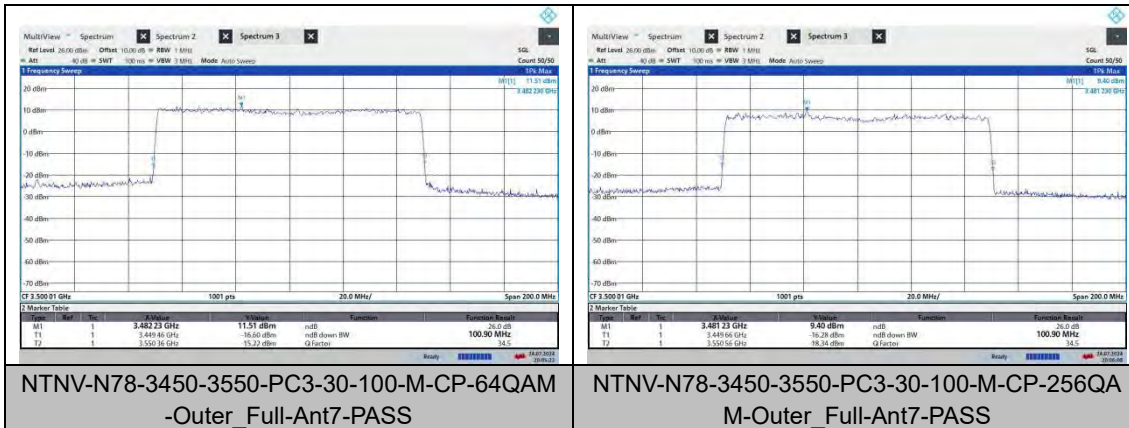






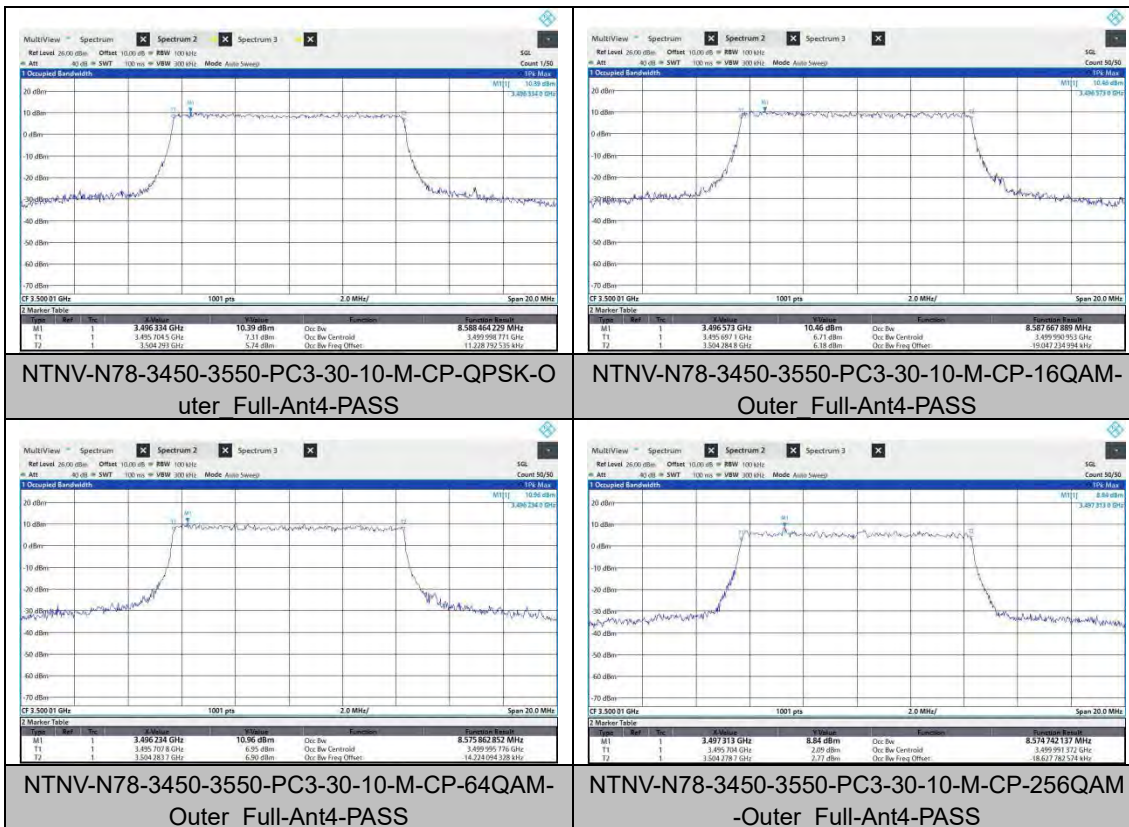


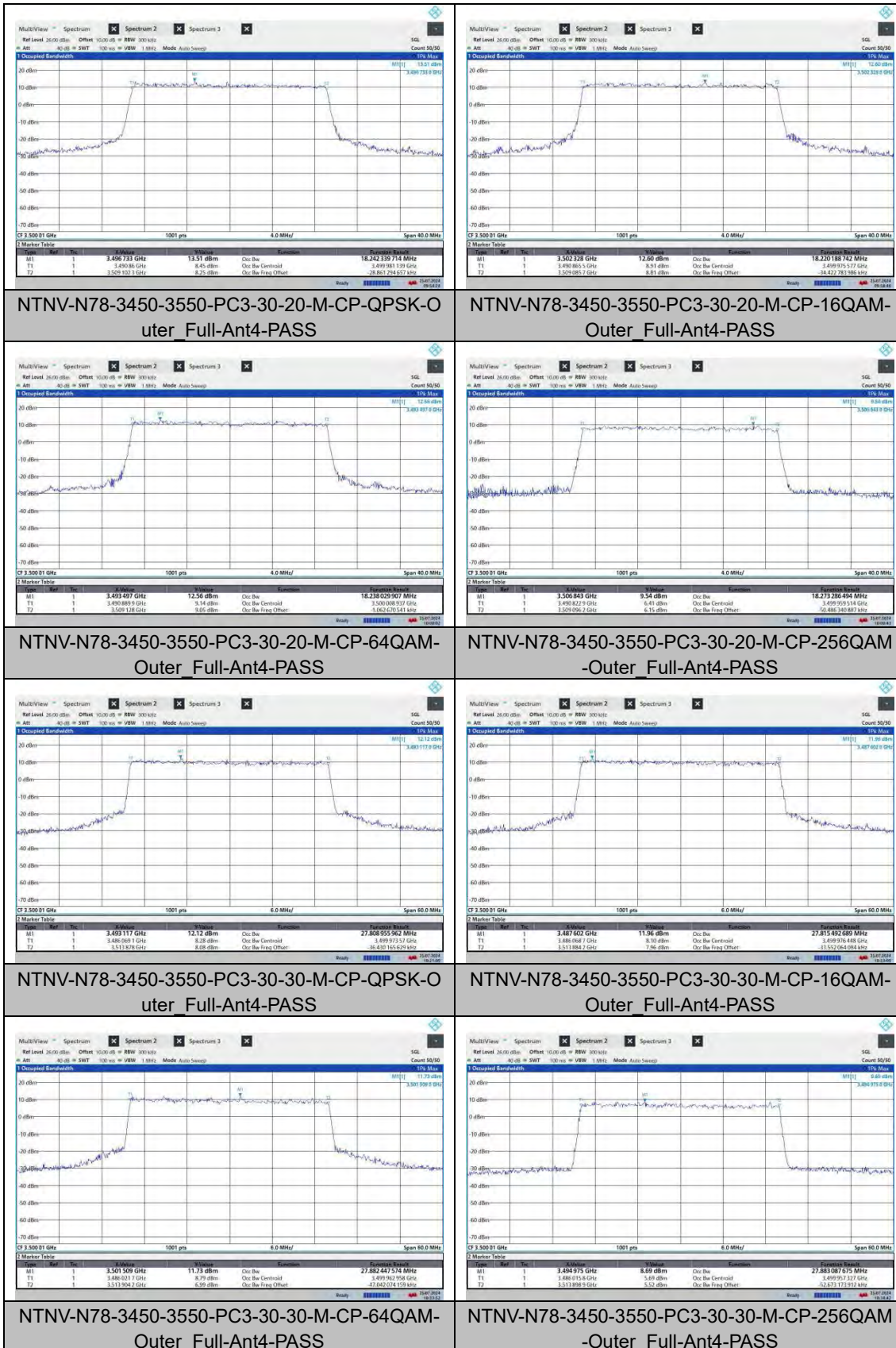


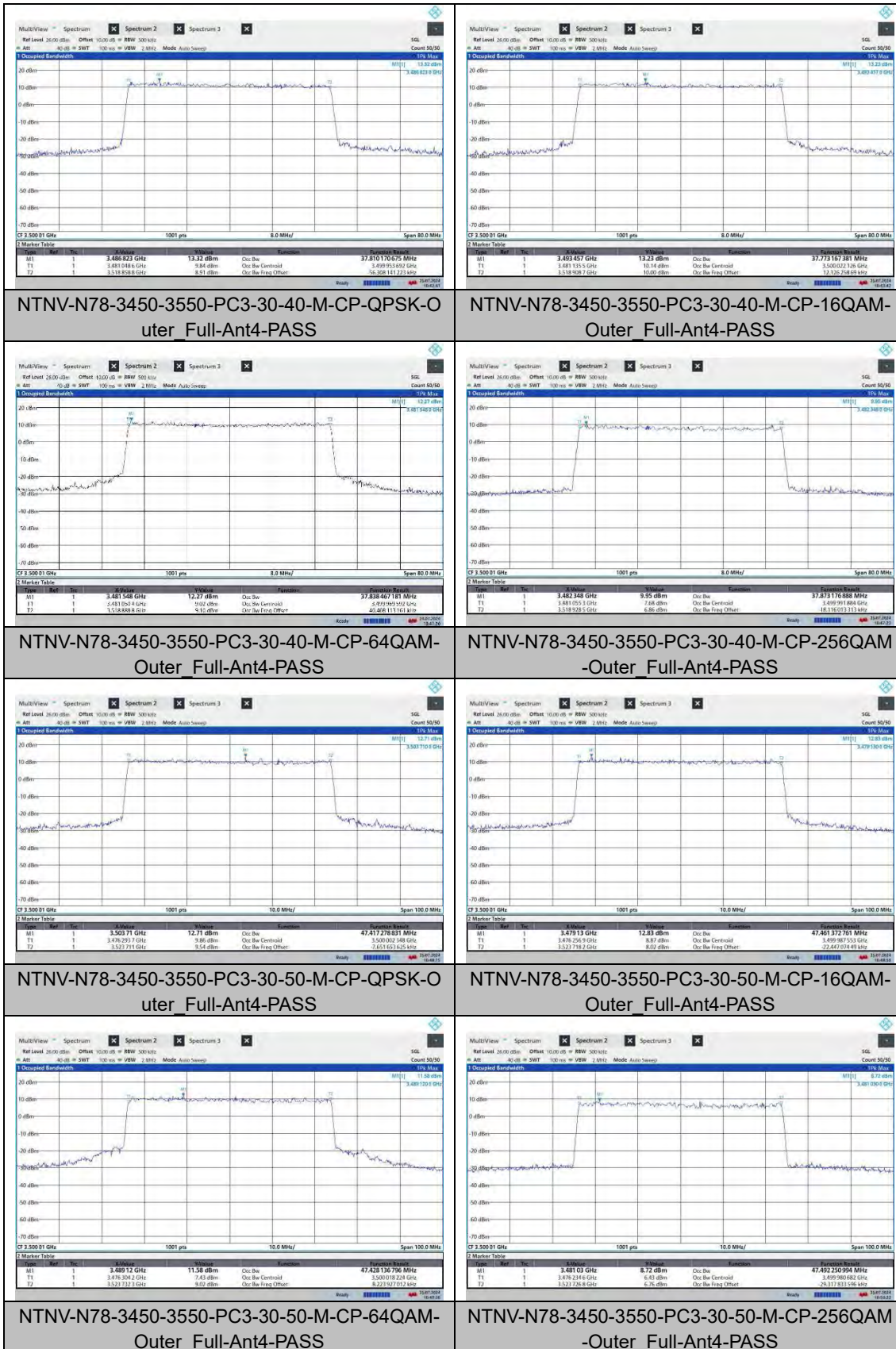


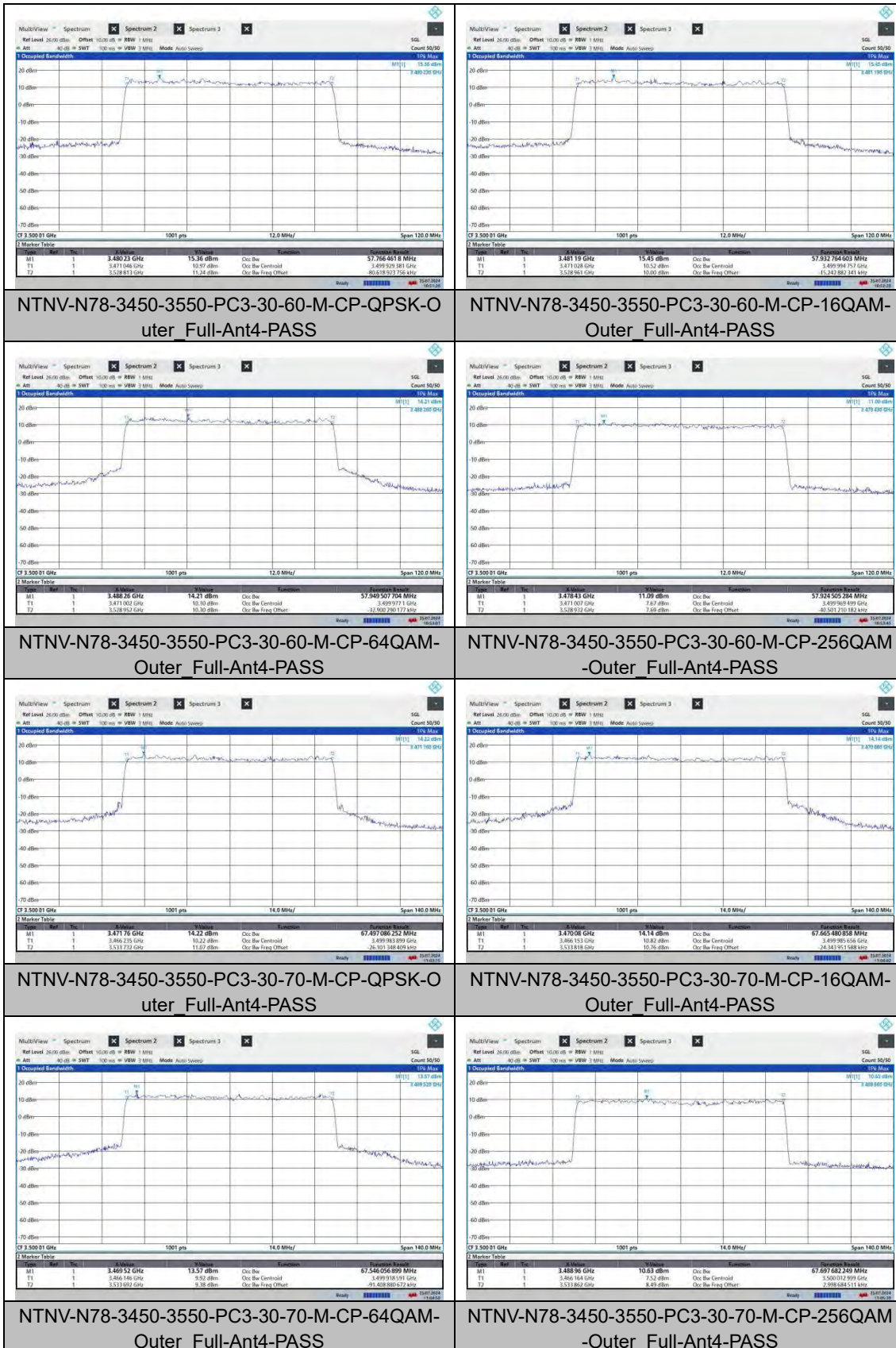
TEST GRAPHS-ANT4

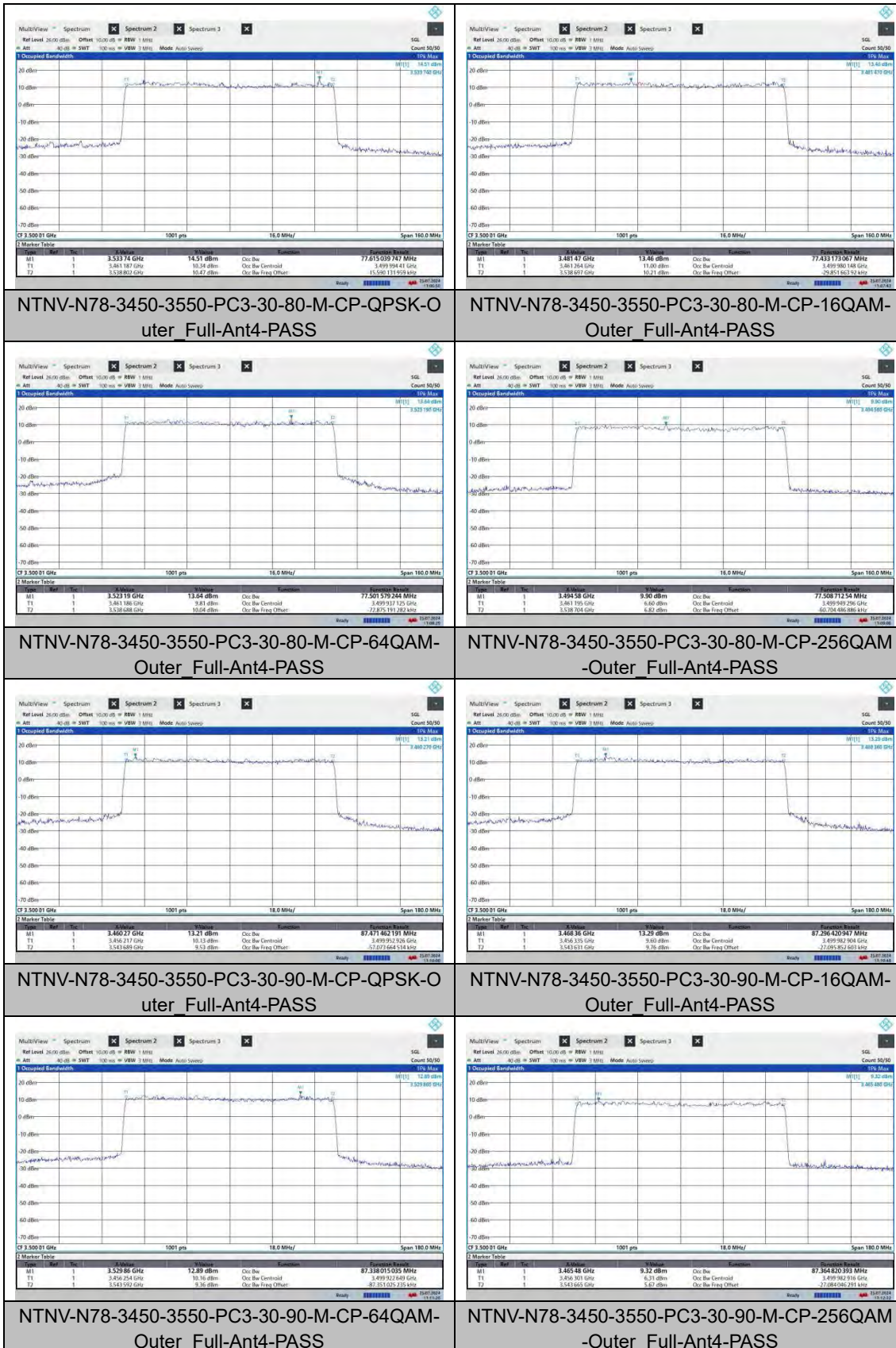
OCCUPIED BANDWIDTH

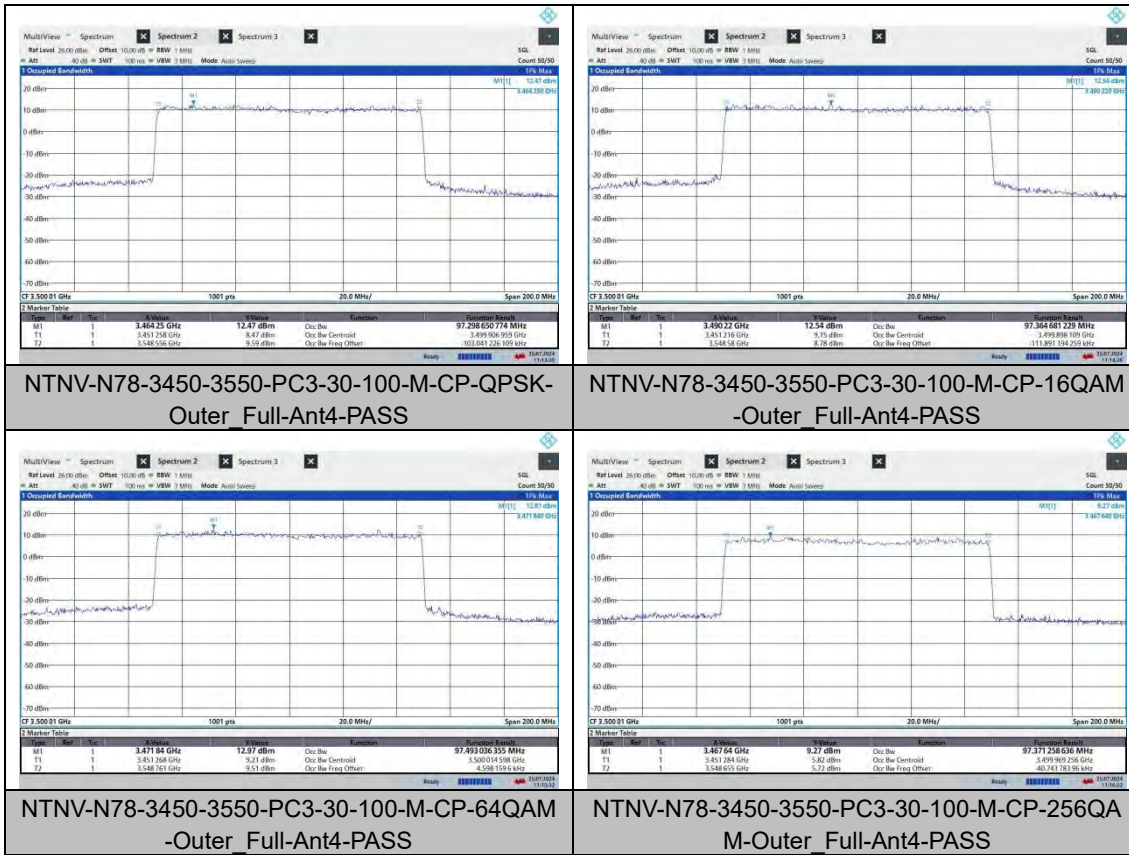




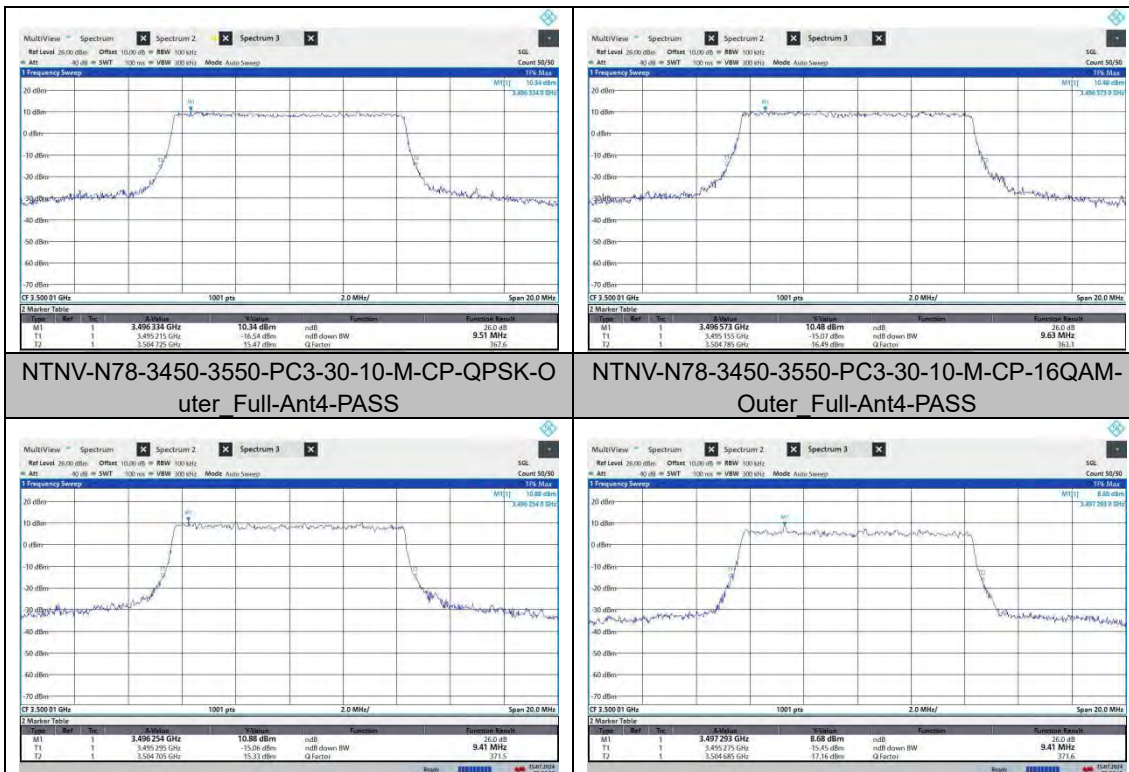








26DB BANDWIDTH

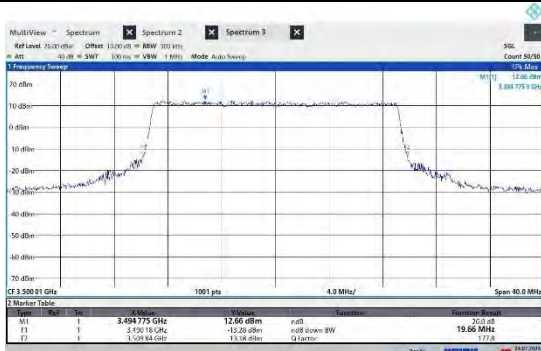




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VERITAS

Reference No.: W7L-P24050018RF11

NTNV-N78-3450-3550-PC3-30-10-M-CP-64QAM-
Outer_Full-Ant4-PASS



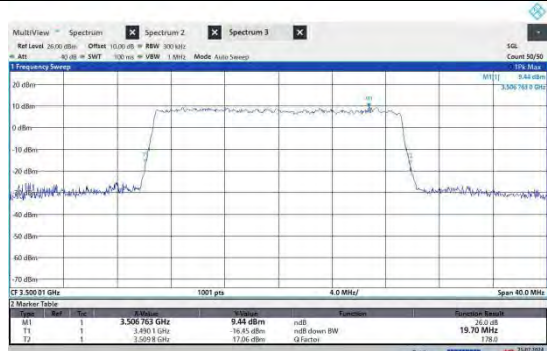
NTNV-N78-3450-3550-PC3-30-10-M-CP-256QAM
-Outer_Full-Ant4-PASS



NTNV-N78-3450-3550-PC3-30-20-M-CP-QPSK-O
uter_Full-Ant4-PASS



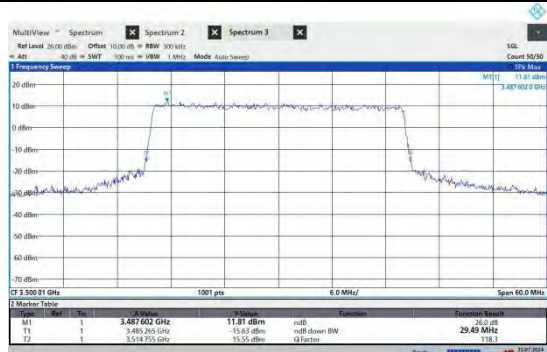
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Outer_Full-Ant4-PASS



NTNV-N78-3450-3550-PC3-30-20-M-CP-64QAM-
Outer_Full-Ant4-PASS



NTNV-N78-3450-3550-PC3-30-20-M-CP-256QAM
-Outer_Full-Ant4-PASS



NTNV-N78-3450-3550-PC3-30-30-M-CP-QPSK-O
uter_Full-Ant4-PASS

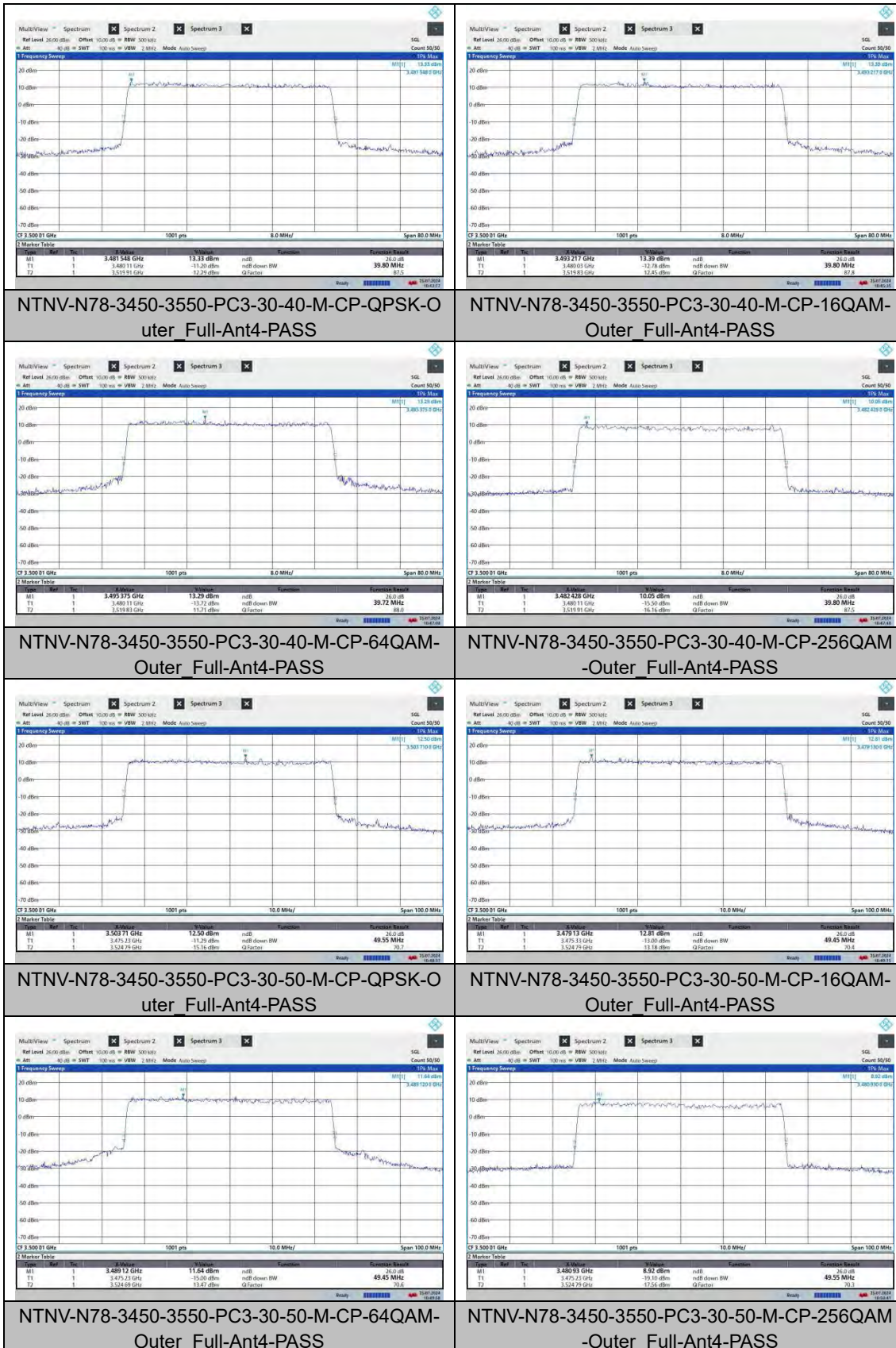


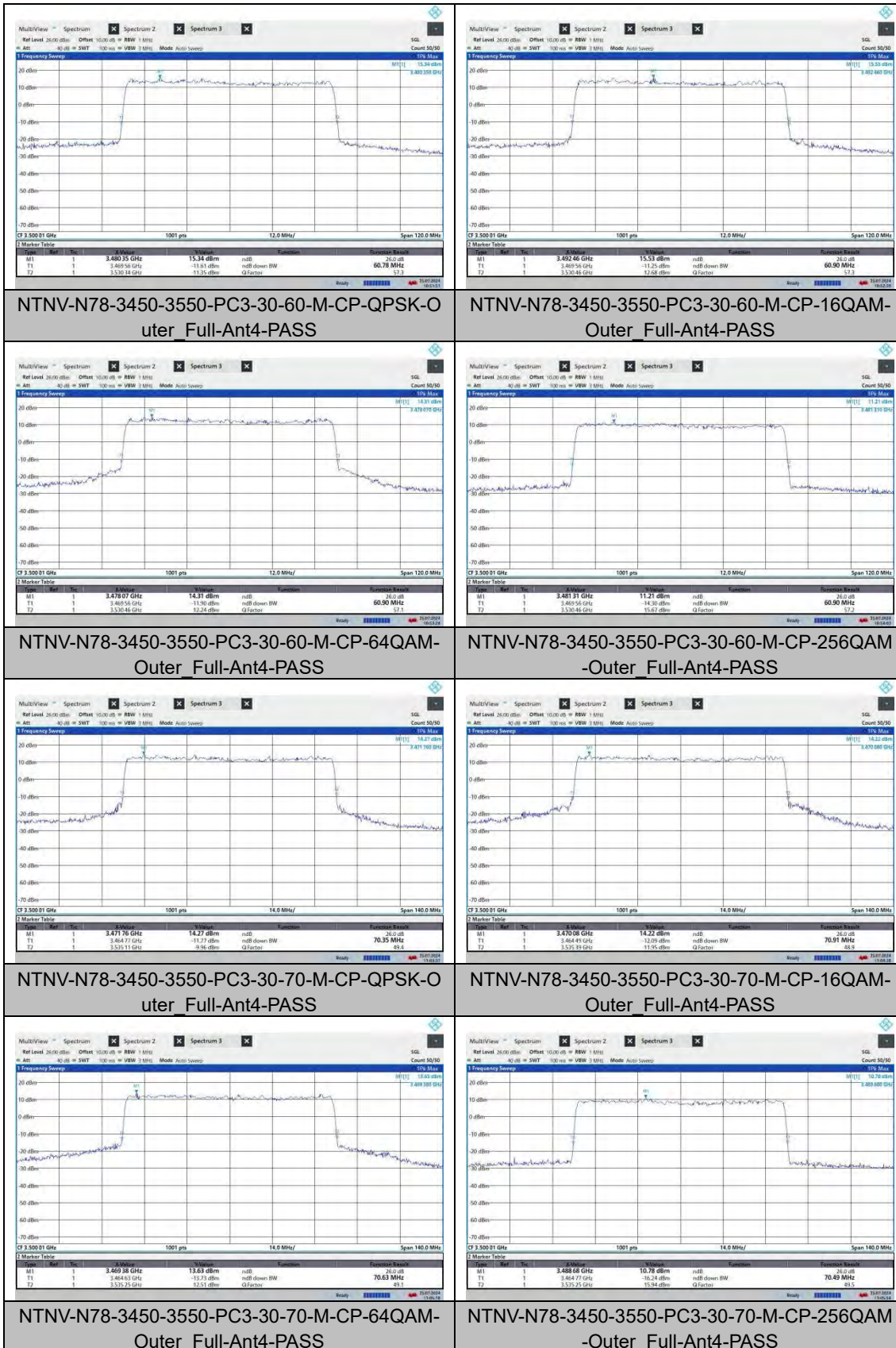
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Outer_Full-Ant4-PASS

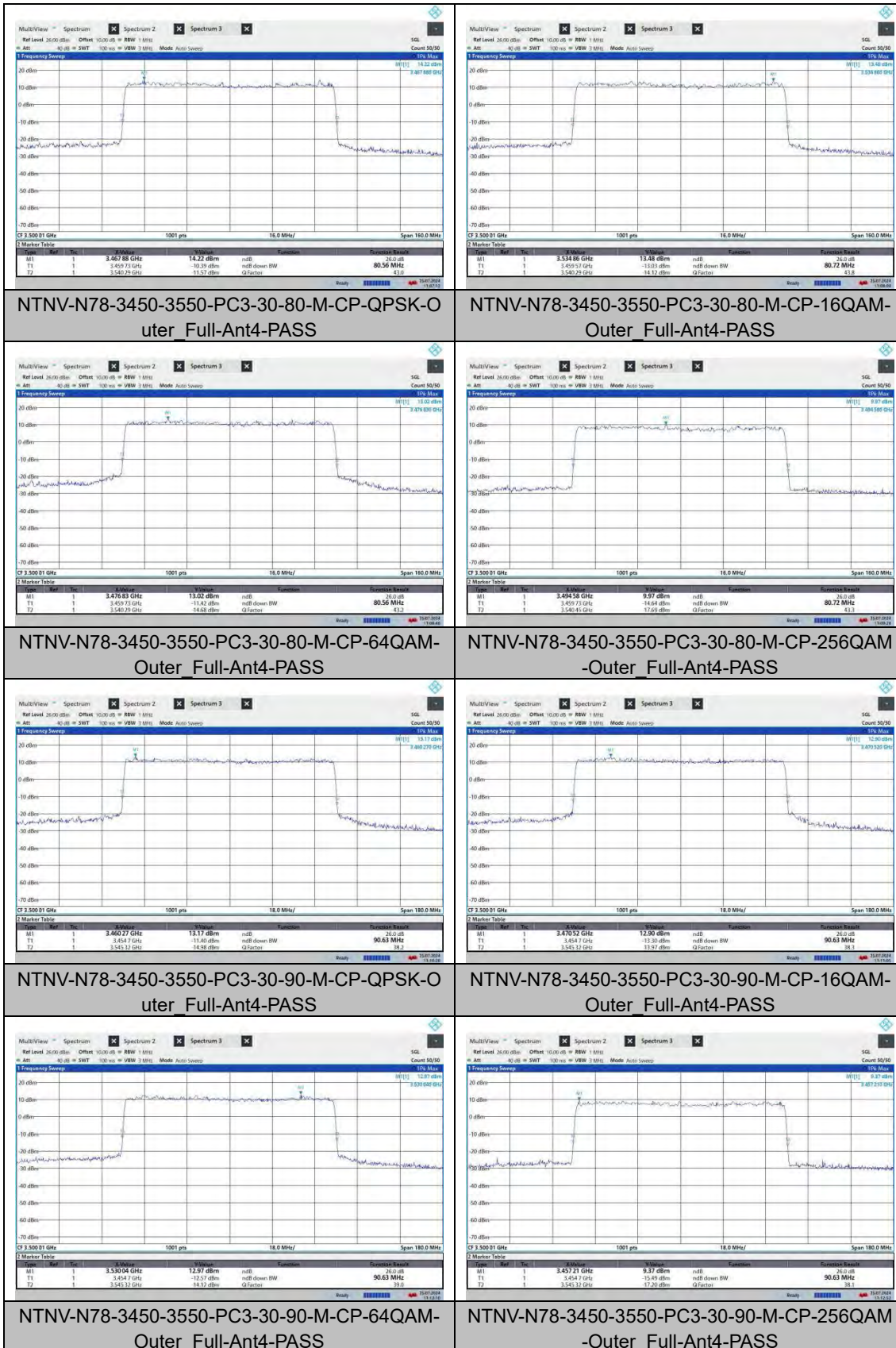


NTNV-N78-3450-3550-PC3-30-30-M-CP-64QAM-
Outer_Full-Ant4-PASS

NTNV-N78-3450-3550-PC3-30-30-M-CP-256QAM
-Outer_Full-Ant4-PASS



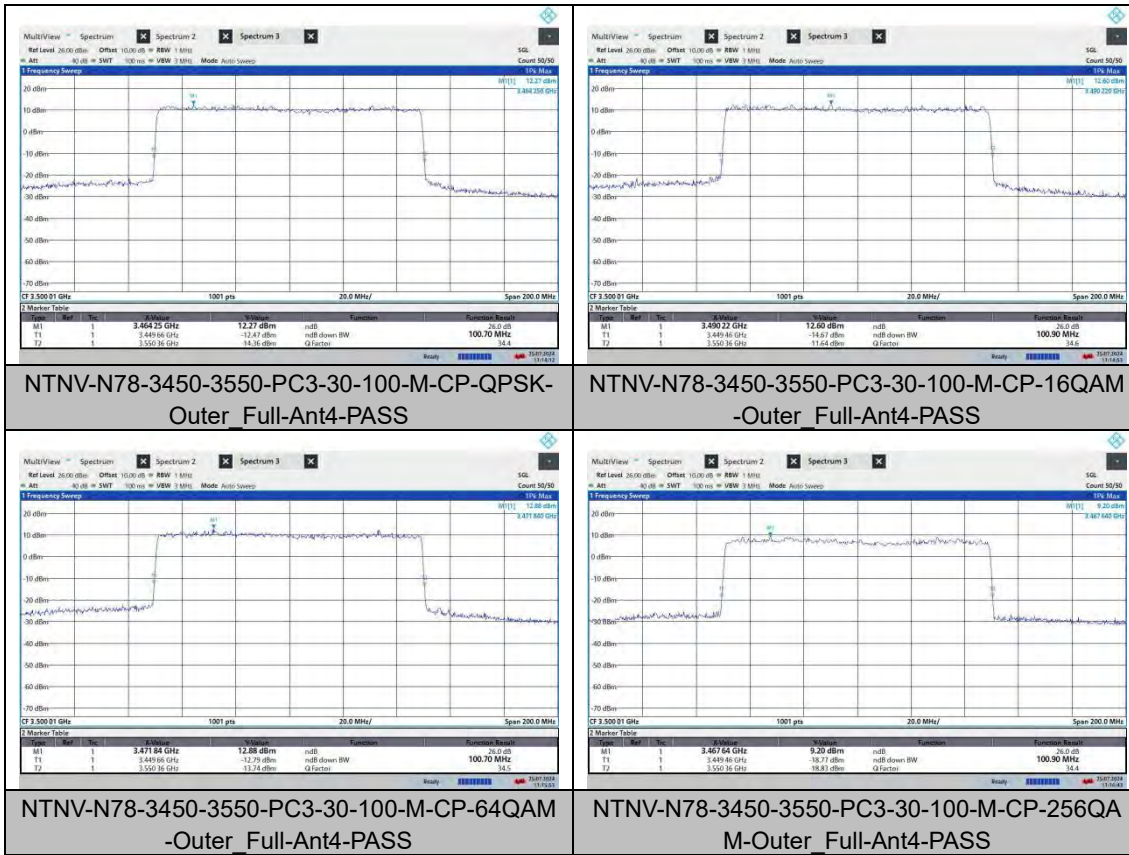






BUREAU
VERITAS

Reference No.: W7L-P24050018RF11



BAND EDGE FOR MIMO TEST RESULT-ANT7

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Verdict
N78-3450-3 550	30	20	CP-QPSK	L	Outer_Full	See Graph	PASS
N78-3450-3 550	30	20	CP-QPSK	L	Edge_1RB_ Left	See Graph	PASS
N78-3450-3 550	30	20	CP-QPSK	H	Outer_Full	See Graph	PASS
N78-3450-3 550	30	20	CP-QPSK	H	Edge_1RB_ Right	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	L	Outer_Full	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	L	Edge_1RB_ Left	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	H	Outer_Full	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	H	Edge_1RB_ Right	See Graph	PASS
N78-3450-3 550	30	100	CP-QPSK	M	Edge_1RB_ Left	See Graph	PASS
N78-3450-3 550	30	100	CP-QPSK	M	Outer_Full	See Graph	PASS
N78-3450-3 550	30	100	CP-QPSK	M	Edge_1RB_ Right	See Graph	PASS

TEST RESULT-ANT4

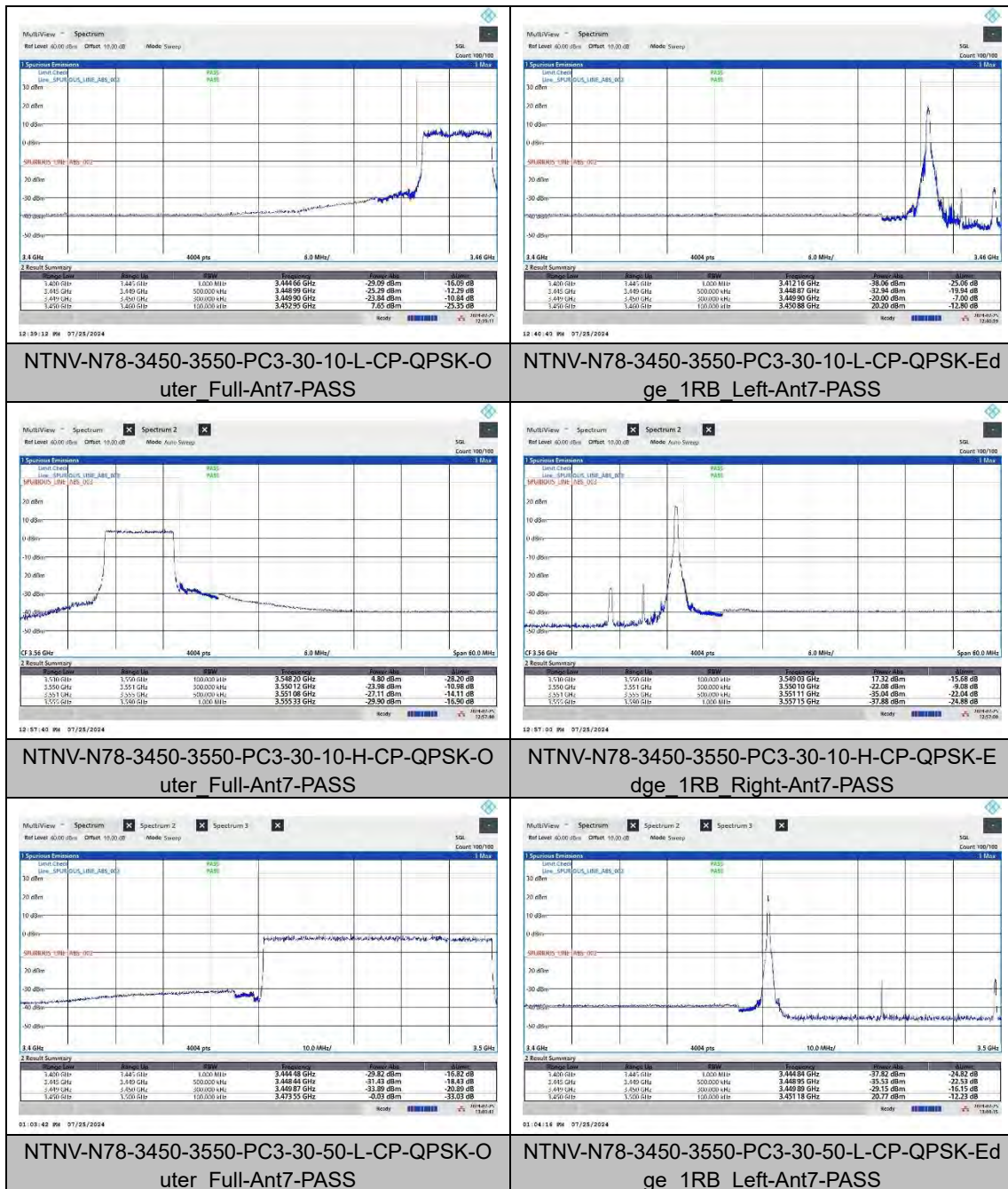
Band	SCS	Bandwidth	Modulation	Channel	RB Config	Result	Verdict
N78-3450-3 550	30	20	CP-QPSK	L	Outer_Full	See Graph	PASS
N78-3450-3 550	30	20	CP-QPSK	L	Edge_1RB_ Left	See Graph	PASS
N78-3450-3 550	30	20	CP-QPSK	H	Outer_Full	See Graph	PASS
N78-3450-3 550	30	20	CP-QPSK	H	Edge_1RB_ Right	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	L	Outer_Full	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	L	Edge_1RB_ Left	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	H	Outer_Full	See Graph	PASS
N78-3450-3 550	30	60	CP-QPSK	H	Edge_1RB_ Right	See Graph	PASS
N78-3450-3 550	30	100	CP-QPSK	M	Edge_1RB_ Left	See Graph	PASS
N78-3450-3 550	30	100	CP-QPSK	M	Outer_Full	See Graph	PASS



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N78-3450-3 550	30	100	CP-QPSK	M	Edge_1RB_ Right	See Graph	PASS
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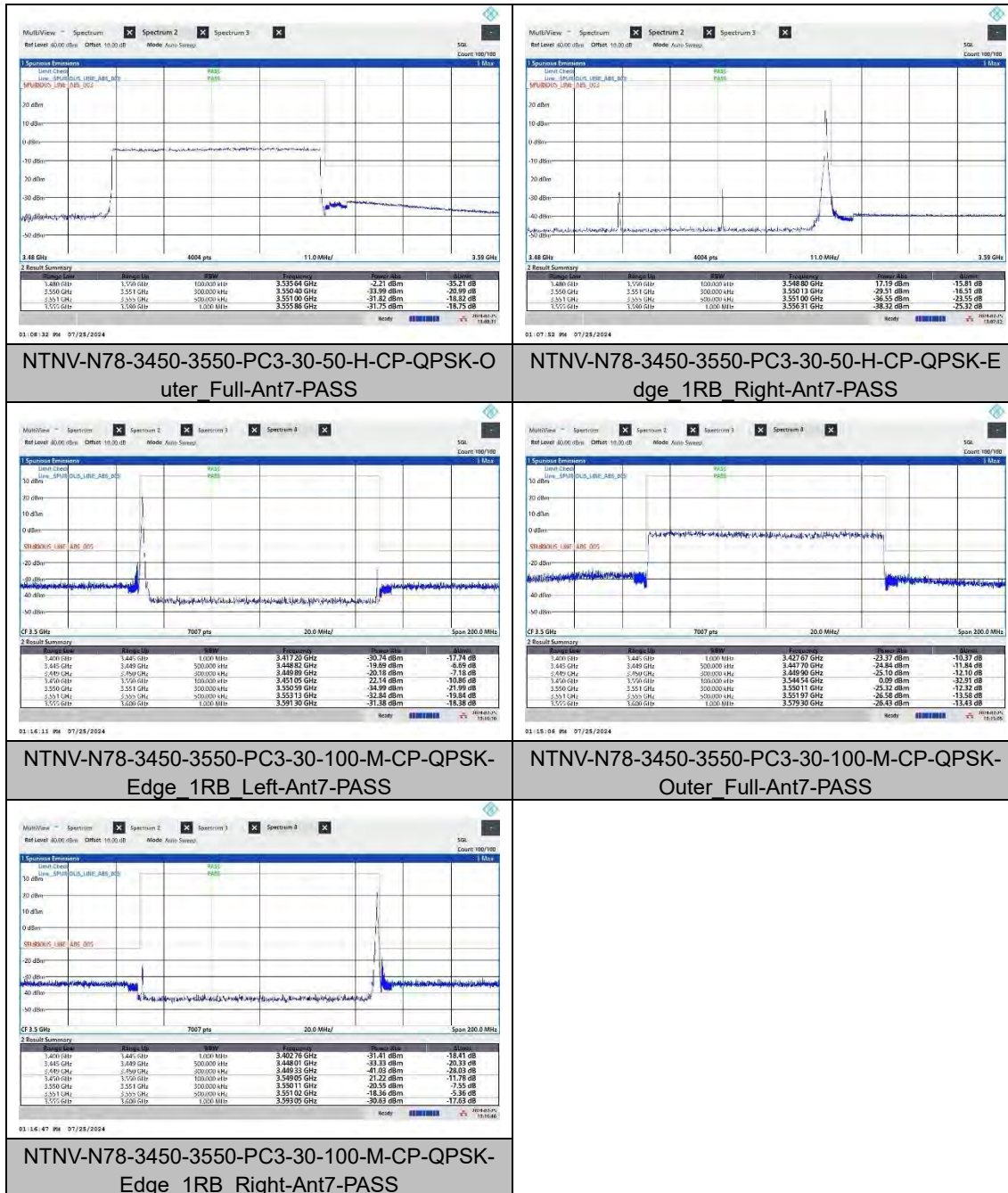
TEST GRAPHS-ANT7



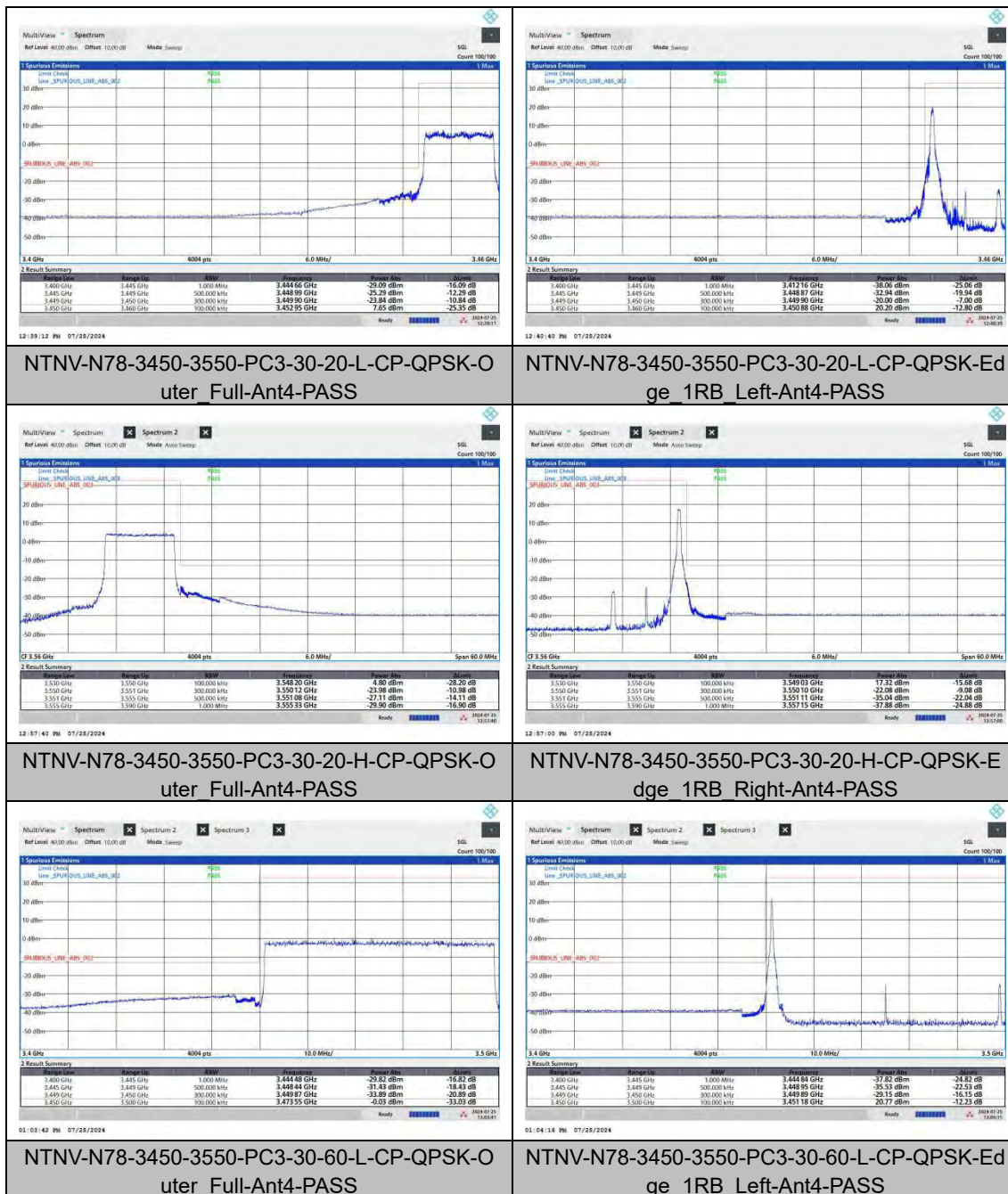


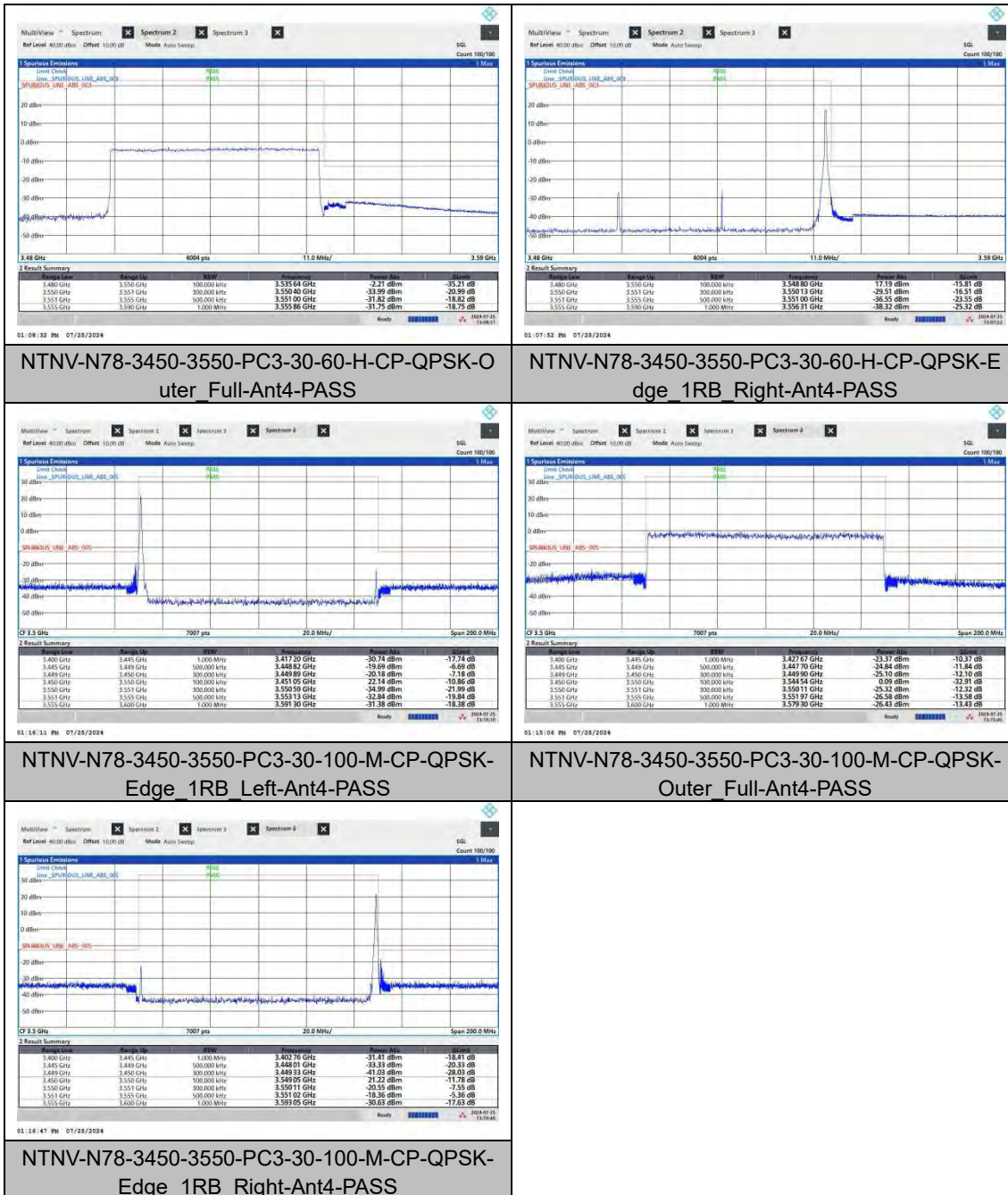
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VERITAS

Reference No.: W7L-P24050018RF11



TEST GRAPHS-ANT4







Reference No.: W7L-P24050018RF11

CONDUCTED SPURIOUS EMISSION FOR MIMO TEST RESULT-ANT7

Band	SCS	Bandwidth	Modulation	Channel	RB Config	StartFreq	StopFreq	Result	Limit	Verdict
N78-3 450-350	30	10	CP-QPSK	L	Edge_1RB_Left	30	40000	-21.86	-13	PASS
N78-3 450-350	30	10	CP-QPSK	M	Edge_1RB_Left	30	40000	-22.31	-13	PASS
N78-3 450-350	30	10	CP-QPSK	H	Edge_1RB_Left	30	40000	-22.08	-13	PASS
N78-3 450-350	30	50	CP-QPSK	L	Edge_1RB_Left	30	40000	-22.12	-13	PASS
N78-3 450-350	30	50	CP-QPSK	M	Edge_1RB_Left	30	40000	-21.95	-13	PASS
N78-3 450-350	30	50	CP-QPSK	H	Edge_1RB_Left	30	40000	-20.88	-13	PASS
N78-3 450-350	30	100	CP-QPSK	M	Edge_1RB_Left	30	40000	-22.54	-13	PASS

TEST RESULT-ANT4

Band	SCS	Bandwidth	Modulation	Channel	RB Config	StartFreq	StopFreq	Result	Limit	Verdict
N78-3 450-350	30	10	CP-QPSK	L	Edge_1RB_Left	30	40000	-21.86	-13	PASS
N78-3 450-350	30	10	CP-QPSK	M	Edge_1RB_Left	30	40000	-22.31	-13	PASS
N78-3 450-350	30	10	CP-QPSK	H	Edge_1RB_Left	30	40000	-22.08	-13	PASS
N78-3 450-350	30	50	CP-QPSK	L	Edge_1RB_Left	30	40000	-22.12	-13	PASS
N78-3 450-350	30	50	CP-QPSK	M	Edge_1RB_Left	30	40000	-21.95	-13	PASS
N78-3 450-350	30	50	CP-QPSK	H	Edge_1RB_Left	30	40000	-20.88	-13	PASS

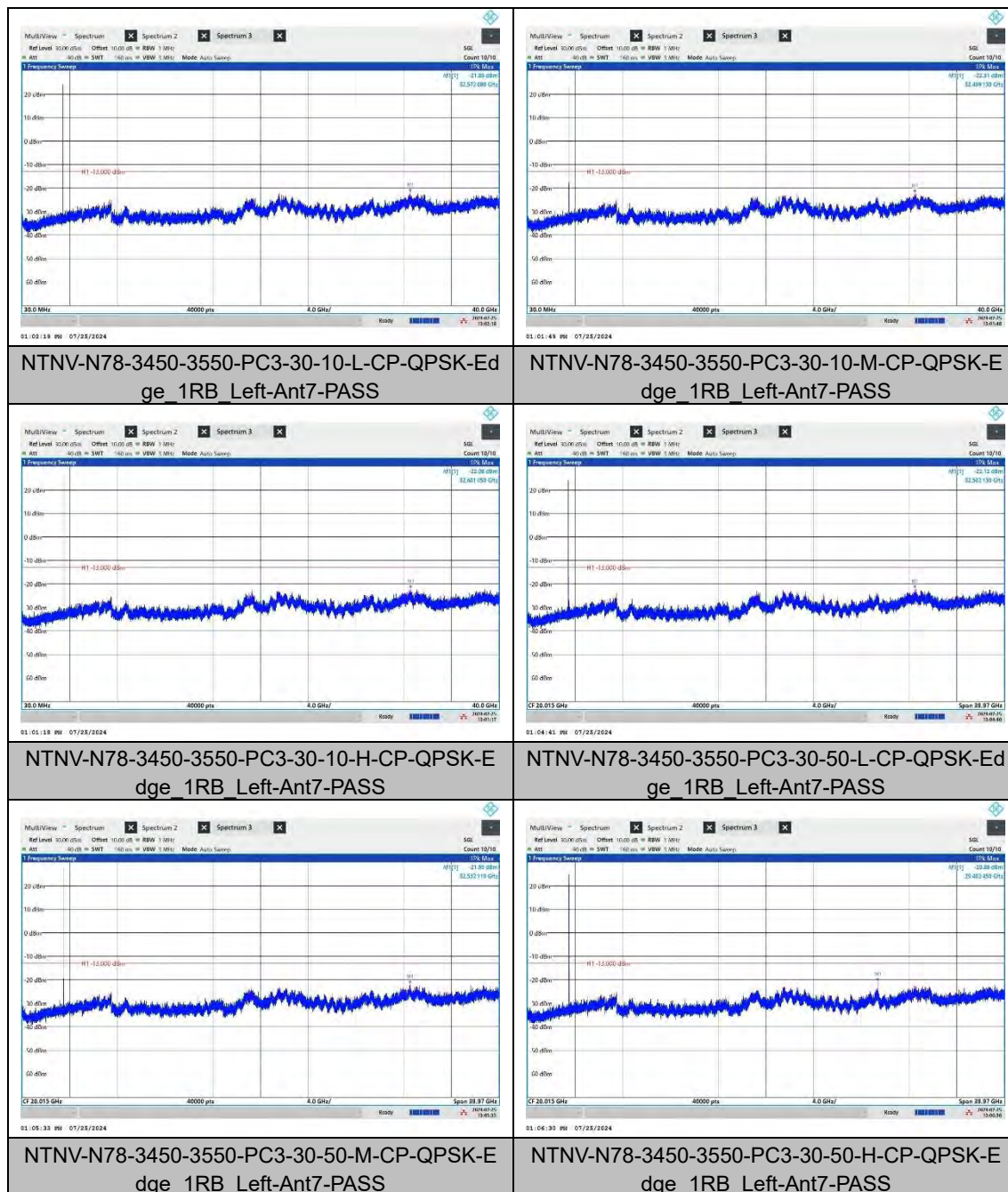


BUREAU
VERITAS

Reference No.: W7L-P24050018RF11

N78-3 450-35 50	30	100	CP-QPSK	M	Edge_1RB_Left	30	40000	-22.54	-13	PASS
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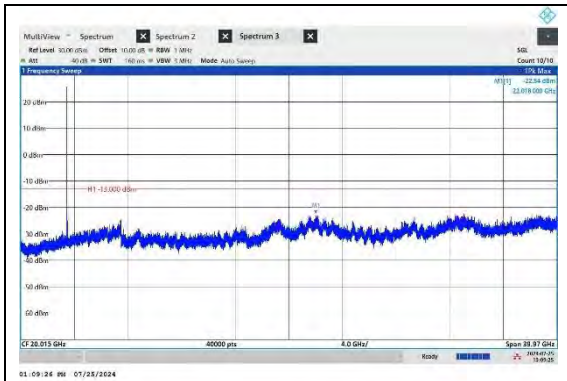
TEST GRAPHS-ANT7





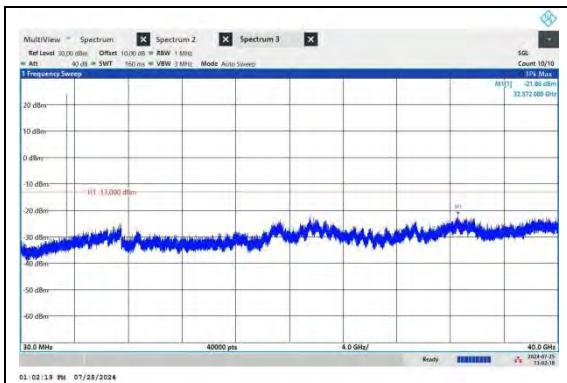
BUREAU
VERITAS

Reference No.: W7L-P24050018RF11

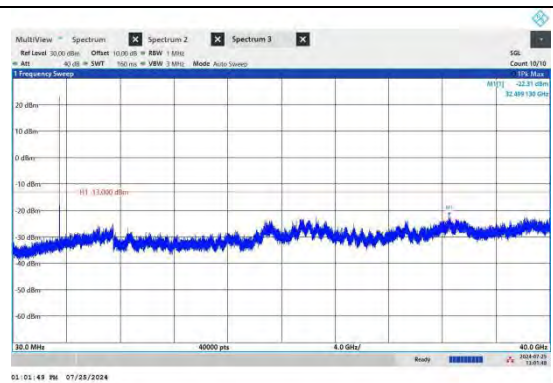


NTNV-N78-3450-3550-PC3-30-100-M-CP-QPSK-
Edge 1RB Left-Ant7-PASS

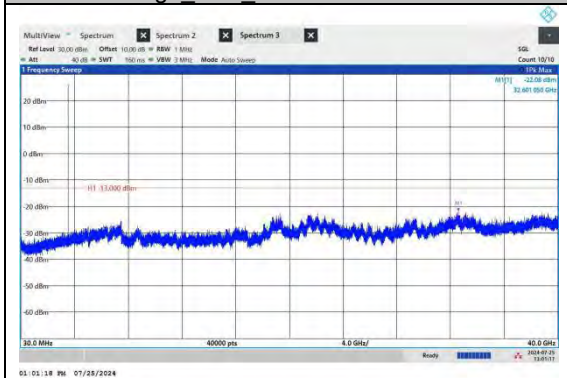
TEST GRAPHS-ANT4



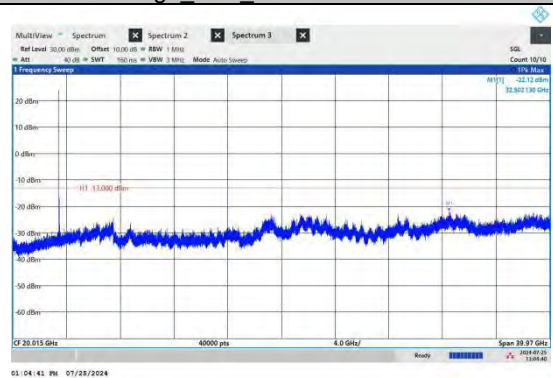
NTNV-N78-3450-3550-PC3-30-10-L-CP-QPSK-Ed
ge 1RB Left-Ant4-PASS



NTNV-N78-3450-3550-PC3-30-10-M-CP-QPSK-E
dge 1RB Left-Ant4-PASS



NTNV-N78-3450-3550-PC3-30-10-H-CP-QPSK-E
dge 1RB Left-Ant4-PASS

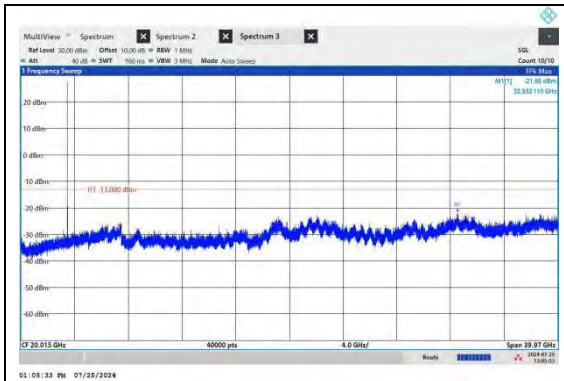


NTNV-N78-3450-3550-PC3-30-50-L-CP-QPSK-Ed
ge 1RB Left-Ant4-PASS

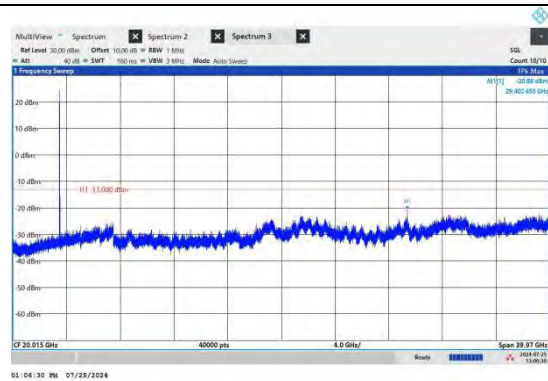


BUREAU
VERITAS

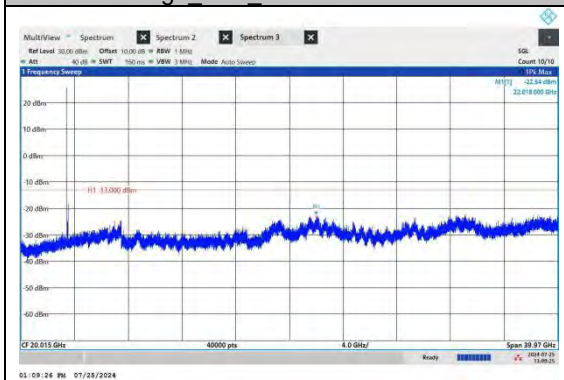
Reference No.: W7L-P24050018RF11



NTV-N78-3450-3550-PC3-30-50-M-CP-QPSK-E
dge_1RB_Left-Ant4-PASS



NTV-N78-3450-3550-PC3-30-50-H-CP-QPSK-E
dge_1RB_Left-Ant4-PASS



NTV-N78-3450-3550-PC3-30-100-M-CP-QPSK-
Edge_1RB_Left-Ant4-PASS

FREQUENCY STABILITY FOR MIMO TEST RESULT-ANT7

Band	SCS	Bandwidth	Modulation	Channel	RB Config	Voltage	Temperature	Deviation(Hz)	Deviation (ppm)	Verdict
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	VL	NT	6.000000	0.000009	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	VN	NT	-22.000000	-0.000033	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	VH	NT	-21.000000	-0.000032	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	-30	16.000000	0.000024	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	-20	25.000000	0.000038	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	-10	17.000000	0.000026	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	0	0.000000	0.000000	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	10	20.000000	0.000030	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	20	11.000000	0.000017	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	30	-4.000000	-0.000006	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	40	26.000000	0.000039	PASS
N78-345 0-3550	30	20	CP-QPSK	L	Outer_Full	NV	50	-14.000000	-0.000021	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	VL	NT	-20.000000	-0.000030	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	VN	NT	33.000000	0.000050	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	VH	NT	-22.000000	-0.000033	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	NV	-30	-34.000000	-0.000051	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	NV	-20	-15.000000	-0.000023	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	NV	-10	-20.000000	-0.000030	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	NV	0	-30.000000	-0.000045	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	NV	10	-3.000000	-0.000005	PASS
N78-345 0-3550	30	20	CP-QPSK	M	Outer_Full	NV	20	9.000000	0.000014	PASS
N78-345	30	20	CP-QPSK	M	Outer_Full	NV	30	8.000000	0.000012	PASS