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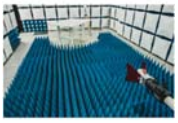

MEASUREMENT REPORT
FCC Part 30 5G mmWave

Applicant Name:
LG Electronics USA, Inc.
1000 Sylvan Avenue
Englewood Cliffs, NJ 07632
United States

Date of Testing:
01/02 - 02/21/2020
Test Site/Location:
PCTEST Lab. Columbia, MD, USA
Test Report Serial No.:
1M1912300227-06.ZNF

FCC ID:	**ZNFV600VM**
APPLICANT:	**LG Electronics USA, Inc.**

Application Type:	Class II Permissive Change
Model:	LM-V600VM
Additional Model(s):	LMV600VM, V600VM, LM-V600QM5, LMV600QM5, V600QM5, LM-V600QM6, LMV600QM6, V600QM6
EUT Type:	Portable Handset
FCC Classification:	Part 30 Mobile Transmitter (5GM)
FCC Rule Part(s):	30
Test Procedure(s):	ANSI C63.26-2015, KDB 971168 D01 v03r01, KDB 842590 D01 v01

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Randy Ortanez
President

ACCREDITED
TESTING CERT#2041.01

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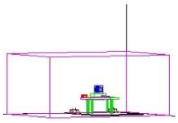
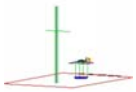


MEASUREMENT REPORT
FCC Part 30



Antenna	Mode	Bandwidth (MHz)	CCs Active	Band	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
							Max. Power (W)	Max. Power (dBm)		
Ant1	SISO	50	1	n261	30	27500 - 28350	0.312	24.94	45M6G7D	QPSK
Ant1	SISO	50	1	n261	30	27500 - 28350	0.190	22.79	45M8W7D	16QAM
Ant1	SISO	50	1	n261	30	27500 - 28350	0.129	21.11	46M3W7D	64QAM
Ant1	SISO	50	1	n261	30	27500 - 28350	0.272	24.35	45M3G7D	BPSK
Ant1	MIMO	50	1	n261	30	27500 - 28350	0.426	26.29	45M6G7D	QPSK
Ant1	MIMO	50	1	n261	30	27500 - 28350	0.271	24.33	45M8W7D	16QAM
Ant1	MIMO	50	1	n261	30	27500 - 28350	0.169	22.29	46M3W7D	64QAM
Ant1	MIMO	50	1	n261	30	27500 - 28350	0.299	24.75	45M3G7D	BPSK
Ant1	SISO	50	4	n261	30	27500 - 28350	0.155	21.92	194MG7D	QPSK
Ant1	SISO	50	4	n261	30	27500 - 28350	0.115	20.61	194MW7D	16QAM
Ant1	SISO	50	4	n261	30	27500 - 28350	0.072	18.56	196MW7D	64QAM
Ant1	SISO	50	4	n261	30	27500 - 28350	0.163	22.13	193MG7D	BPSK
Ant1	MIMO	50	4	n261	30	27500 - 28350	0.247	23.94	194MG7D	QPSK
Ant1	MIMO	50	4	n261	30	27500 - 28350	0.187	22.71	194MW7D	16QAM
Ant1	MIMO	50	4	n261	30	27500 - 28350	0.107	20.30	196MW7D	64QAM
Ant1	MIMO	50	4	n261	30	27500 - 28350	0.259	24.13	193MG7D	BPSK
Ant1	SISO	100	1	n261	30	27500 - 28350	0.286	24.56	92M8G7D	QPSK
Ant1	SISO	100	1	n261	30	27500 - 28350	0.175	22.43	92M6W7D	16QAM
Ant1	SISO	100	1	n261	30	27500 - 28350	0.101	20.06	92M9W7D	64QAM
Ant1	SISO	100	1	n261	30	27500 - 28350	0.252	24.02	90M7G7D	BPSK
Ant1	MIMO	100	1	n261	30	27500 - 28350	0.423	26.26	92M8G7D	QPSK
Ant1	MIMO	100	1	n261	30	27500 - 28350	0.250	23.97	92M6W7D	16QAM
Ant1	MIMO	100	1	n261	30	27500 - 28350	0.146	21.65	92M9W7D	64QAM
Ant1	MIMO	100	1	n261	30	27500 - 28350	0.317	25.02	90M7G7D	BPSK
Ant1	SISO	100	4	n261	30	27500 - 28350	0.101	20.06	390MG7D	QPSK
Ant1	SISO	100	4	n261	30	27500 - 28350	0.101	20.06	390MW7D	16QAM
Ant1	SISO	100	4	n261	30	27500 - 28350	0.097	19.89	391MW7D	64QAM
Ant1	SISO	100	4	n261	30	27500 - 28350	0.103	20.14	388MG7D	BPSK
Ant1	MIMO	100	4	n261	30	27500 - 28350	0.159	22.03	390MG7D	QPSK
Ant1	MIMO	100	4	n261	30	27500 - 28350	0.159	22.03	390MW7D	16QAM
Ant1	MIMO	100	4	n261	30	27500 - 28350	0.153	21.86	391MW7D	64QAM
Ant1	MIMO	100	4	n261	30	27500 - 28350	0.160	22.05	388MG7D	BPSK

EUT Overview (QTM0 - Band n261)

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Antenna	Mode	Bandwidth (MHz)	CCs Active	Band	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
							Max. Power (W)	Max. Power (dBm)		
Ant2	SISO	50	1	n261	30	27500 - 28350	0.280	24.48	45M3G7D	QPSK
Ant2	SISO	50	1	n261	30	27500 - 28350	0.188	22.74	45M5W7D	16QAM
Ant2	SISO	50	1	n261	30	27500 - 28350	0.096	19.81	45M5W7D	64QAM
Ant2	SISO	50	1	n261	30	27500 - 28350	0.273	24.36	45M4G7D	BPSK
Ant2	MIMO	50	1	n261	30	27500 - 28350	0.521	27.17	45M3G7D	QPSK
Ant2	MIMO	50	1	n261	30	27500 - 28350	0.311	24.93	45M5W7D	16QAM
Ant2	MIMO	50	1	n261	30	27500 - 28350	0.176	22.45	45M5W7D	64QAM
Ant2	MIMO	50	1	n261	30	27500 - 28350	0.471	26.73	45M4G7D	BPSK
Ant2	SISO	50	4	n261	30	27500 - 28350	0.082	19.12	194MG7D	QPSK
Ant2	SISO	50	4	n261	30	27500 - 28350	0.095	19.78	194MW7D	16QAM
Ant2	SISO	50	4	n261	30	27500 - 28350	0.091	19.61	194MW7D	64QAM
Ant2	SISO	50	4	n261	30	27500 - 28350	0.073	18.66	193MG7D	BPSK
Ant2	MIMO	50	4	n261	30	27500 - 28350	0.139	21.42	194MG7D	QPSK
Ant2	MIMO	50	4	n261	30	27500 - 28350	0.187	22.71	194MW7D	16QAM
Ant2	MIMO	50	4	n261	30	27500 - 28350	0.180	22.54	194MW7D	64QAM
Ant2	MIMO	50	4	n261	30	27500 - 28350	0.145	21.61	193MG7D	BPSK
Ant2	SISO	100	1	n261	30	27500 - 28350	0.265	24.24	90M4G7D	QPSK
Ant2	SISO	100	1	n261	30	27500 - 28350	0.154	21.88	90M6W7D	16QAM
Ant2	SISO	100	1	n261	30	27500 - 28350	0.088	19.45	90M7W7D	64QAM
Ant2	SISO	100	1	n261	30	27500 - 28350	0.255	24.07	90M7G7D	BPSK
Ant2	MIMO	100	1	n261	30	27500 - 28350	0.508	27.06	90M4G7D	QPSK
Ant2	MIMO	100	1	n261	30	27500 - 28350	0.293	24.66	90M6W7D	16QAM
Ant2	MIMO	100	1	n261	30	27500 - 28350	0.171	22.34	90M7W7D	64QAM
Ant2	MIMO	100	1	n261	30	27500 - 28350	0.489	26.90	90M7G7D	BPSK
Ant2	SISO	100	4	n261	30	27500 - 28350	0.098	19.92	387MG7D	QPSK
Ant2	SISO	100	4	n261	30	27500 - 28350	0.098	19.92	387MW7D	16QAM
Ant2	SISO	100	4	n261	30	27500 - 28350	0.094	19.75	389MW7D	64QAM
Ant2	SISO	100	4	n261	30	27500 - 28350	0.101	20.06	388MG7D	BPSK
Ant2	MIMO	100	4	n261	30	27500 - 28350	0.189	22.76	387MG7D	QPSK
Ant2	MIMO	100	4	n261	30	27500 - 28350	0.189	22.76	387MW7D	16QAM
Ant2	MIMO	100	4	n261	30	27500 - 28350	0.182	22.59	389MW7D	64QAM
Ant2	MIMO	100	4	n261	30	27500 - 28350	0.194	22.89	388MG7D	BPSK

EUT Overview (QTM1 - Band n261)

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Antenna	Mode	Bandwidth (MHz)	CCs Active	Band	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
							Max. Power (W)	Max. Power (dBm)		
Ant3	SISO	50	1	n261	30	27500 - 28350	0.171	22.34	45M4G7D	QPSK
Ant3	SISO	50	1	n261	30	27500 - 28350	0.132	21.22	45M6W7D	16QAM
Ant3	SISO	50	1	n261	30	27500 - 28350	0.055	17.37	45M7W7D	64QAM
Ant3	SISO	50	1	n261	30	27500 - 28350	0.168	22.26	45M3G7D	BPSK
Ant3	MIMO	50	1	n261	30	27500 - 28350	0.266	24.25	45M4G7D	QPSK
Ant3	MIMO	50	1	n261	30	27500 - 28350	0.204	23.09	45M6W7D	16QAM
Ant3	MIMO	50	1	n261	30	27500 - 28350	0.085	19.29	45M7W7D	64QAM
Ant3	MIMO	50	1	n261	30	27500 - 28350	0.197	22.93	45M3G7D	BPSK
Ant3	SISO	50	4	n261	30	27500 - 28350	0.047	16.72	194MG7D	QPSK
Ant3	SISO	50	4	n261	30	27500 - 28350	0.047	16.72	194MW7D	16QAM
Ant3	SISO	50	4	n261	30	27500 - 28350	0.045	16.55	197MW7D	64QAM
Ant3	SISO	50	4	n261	30	27500 - 28350	0.049	16.90	193MG7D	BPSK
Ant3	MIMO	50	4	n261	30	27500 - 28350	0.086	19.33	194MG7D	QPSK
Ant3	MIMO	50	4	n261	30	27500 - 28350	0.086	19.33	194MW7D	16QAM
Ant3	MIMO	50	4	n261	30	27500 - 28350	0.074	18.71	197MW7D	64QAM
Ant3	MIMO	50	4	n261	30	27500 - 28350	0.092	19.62	193MG7D	BPSK
Ant3	SISO	100	1	n261	30	27500 - 28350	0.166	22.20	90M6G7D	QPSK
Ant3	SISO	100	1	n261	30	27500 - 28350	0.129	21.11	91M0W7D	16QAM
Ant3	SISO	100	1	n261	30	27500 - 28350	0.058	17.67	91M2W7D	64QAM
Ant3	SISO	100	1	n261	30	27500 - 28350	0.165	22.17	90M9G7D	BPSK
Ant3	MIMO	100	1	n261	30	27500 - 28350	0.266	24.25	90M6G7D	QPSK
Ant3	MIMO	100	1	n261	30	27500 - 28350	0.202	23.05	91M0W7D	16QAM
Ant3	MIMO	100	1	n261	30	27500 - 28350	0.092	19.66	91M2W7D	64QAM
Ant3	MIMO	100	1	n261	30	27500 - 28350	0.263	24.20	90M9G7D	BPSK
Ant3	SISO	100	4	n261	30	27500 - 28350	0.065	18.10	383MG7D	QPSK
Ant3	SISO	100	4	n261	30	27500 - 28350	0.065	18.10	384MW7D	16QAM
Ant3	SISO	100	4	n261	30	27500 - 28350	0.022	13.40	386MW7D	64QAM
Ant3	SISO	100	4	n261	30	27500 - 28350	0.066	18.17	389MG7D	BPSK
Ant3	MIMO	100	4	n261	30	27500 - 28350	0.099	19.96	383MG7D	QPSK
Ant3	MIMO	100	4	n261	30	27500 - 28350	0.099	19.96	384MW7D	16QAM
Ant3	MIMO	100	4	n261	30	27500 - 28350	0.035	15.46	386MW7D	64QAM
Ant3	MIMO	100	4	n261	30	27500 - 28350	0.103	20.13	389MG7D	BPSK

EUT Overview (QTM2 - Band n261)

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Antenna	Mode	Bandwidth (MHz)	CCs Active	Band	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
							Max. Power (W)	Max. Power (dBm)		
Ant1	SISO	50	1	n260	30	37000 - 40000	0.320	25.05	45M4G7D	QPSK
Ant1	SISO	50	1	n260	30	37000 - 40000	0.189	22.76	48M2W7D	16QAM
Ant1	SISO	50	1	n260	30	37000 - 40000	0.097	19.86	45M8W7D	64QAM
Ant1	SISO	50	1	n260	30	37000 - 40000	0.315	24.98	44M8G7D	BPSK
Ant1	SISO	50	4	n260	30	37000 - 40000	0.092	19.66	194MG7D	QPSK
Ant1	SISO	50	4	n260	30	37000 - 40000	0.067	18.29	195MW7D	16QAM
Ant1	SISO	50	4	n260	30	37000 - 40000	0.056	17.45	195MW7D	64QAM
Ant1	SISO	50	4	n260	30	37000 - 40000	0.085	19.30	194MG7D	BPSK
Ant1	SISO	100	1	n260	30	37000 - 40000	0.206	23.14	90M8G7D	QPSK
Ant1	SISO	100	1	n260	30	37000 - 40000	0.150	21.76	90M2W7D	16QAM
Ant1	SISO	100	1	n260	30	37000 - 40000	0.075	18.73	90M9W7D	64QAM
Ant1	SISO	100	1	n260	30	37000 - 40000	0.203	23.08	89M9G7D	BPSK
Ant1	SISO	100	4	n260	30	37000 - 40000	0.056	17.51	390MG7D	QPSK
Ant1	SISO	100	4	n260	30	37000 - 40000	0.039	15.88	392MW7D	16QAM
Ant1	SISO	100	4	n260	30	37000 - 40000	0.033	15.15	399MW7D	64QAM
Ant1	SISO	100	4	n260	30	37000 - 40000	0.054	17.34	389MG7D	BPSK
Ant1	MIMO	50	1	n260	30	37000 - 40000	0.627	27.98	45M4G7D	QPSK
Ant1	MIMO	50	1	n260	30	37000 - 40000	0.370	25.69	48M2W7D	16QAM
Ant1	MIMO	50	1	n260	30	37000 - 40000	0.188	22.74	45M8W7D	64QAM
Ant1	MIMO	50	1	n260	30	37000 - 40000	0.620	27.93	44M8G7D	BPSK
Ant1	MIMO	50	4	n260	30	37000 - 40000	0.149	21.73	194MG7D	QPSK
Ant1	MIMO	50	4	n260	30	37000 - 40000	0.114	20.59	195MW7D	16QAM
Ant1	MIMO	50	4	n260	30	37000 - 40000	0.079	18.95	195MW7D	64QAM
Ant1	MIMO	50	4	n260	30	37000 - 40000	0.137	21.38	194MG7D	BPSK
Ant1	MIMO	100	1	n260	30	37000 - 40000	0.404	26.07	90M8G7D	QPSK
Ant1	MIMO	100	1	n260	30	37000 - 40000	0.299	24.75	90M2W7D	16QAM
Ant1	MIMO	100	1	n260	30	37000 - 40000	0.146	21.65	90M9W7D	64QAM
Ant1	MIMO	100	1	n260	30	37000 - 40000	0.399	26.01	89M9G7D	BPSK
Ant1	MIMO	100	4	n260	30	37000 - 40000	0.108	20.33	390MG7D	QPSK
Ant1	MIMO	100	4	n260	30	37000 - 40000	0.075	18.73	392MW7D	16QAM
Ant1	MIMO	100	4	n260	30	37000 - 40000	0.063	18.01	399MW7D	64QAM
Ant1	MIMO	100	4	n260	30	37000 - 40000	0.105	20.19	389MG7D	BPSK

EUT Overview (QTM0 - Band n260)

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Antenna	Mode	Bandwidth (MHz)	CCs Active	Band	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
							Max. Power (W)	Max. Power (dBm)		
Ant2	SISO	50	1	n260	30	37000 - 40000	0.351	25.45	45M4G7D	QPSK
Ant2	SISO	50	1	n260	30	37000 - 40000	0.237	23.75	45M3W7D	16QAM
Ant2	SISO	50	1	n260	30	37000 - 40000	0.132	21.19	45M4W7D	64QAM
Ant2	SISO	50	1	n260	30	37000 - 40000	0.345	25.38	44M9G7D	BPSK
Ant2	SISO	50	4	n260	30	37000 - 40000	0.104	20.15	195MG7D	QPSK
Ant2	SISO	50	4	n260	30	37000 - 40000	0.069	18.37	198MW7D	16QAM
Ant2	SISO	50	4	n260	30	37000 - 40000	0.037	15.72	197MW7D	64QAM
Ant2	SISO	50	4	n260	30	37000 - 40000	0.094	19.72	193MG7D	BPSK
Ant2	SISO	100	1	n260	30	37000 - 40000	0.394	25.95	90M3G7D	QPSK
Ant2	SISO	100	1	n260	30	37000 - 40000	0.218	23.39	90M6W7D	16QAM
Ant2	SISO	100	1	n260	30	37000 - 40000	0.132	21.19	91M0W7D	64QAM
Ant2	SISO	100	1	n260	30	37000 - 40000	0.393	25.94	90M7G7D	BPSK
Ant2	SISO	100	4	n260	30	37000 - 40000	0.124	20.92	391MG7D	QPSK
Ant2	SISO	100	4	n260	30	37000 - 40000	0.097	19.86	388MW7D	16QAM
Ant2	SISO	100	4	n260	30	37000 - 40000	0.056	17.49	395MW7D	64QAM
Ant2	SISO	100	4	n260	30	37000 - 40000	0.121	20.81	391MG7D	BPSK
Ant2	MIMO	50	1	n260	30	37000 - 40000	0.700	28.45	45M4G7D	QPSK
Ant2	MIMO	50	1	n260	30	37000 - 40000	0.457	26.60	45M3W7D	16QAM
Ant2	MIMO	50	1	n260	30	37000 - 40000	0.252	24.02	45M4W7D	64QAM
Ant2	MIMO	50	1	n260	30	37000 - 40000	0.687	28.37	44M9G7D	BPSK
Ant2	MIMO	50	4	n260	30	37000 - 40000	0.203	23.08	195MG7D	QPSK
Ant2	MIMO	50	4	n260	30	37000 - 40000	0.133	21.24	198MW7D	16QAM
Ant2	MIMO	50	4	n260	30	37000 - 40000	0.074	18.70	197MW7D	64QAM
Ant2	MIMO	50	4	n260	30	37000 - 40000	0.181	22.58	193MG7D	BPSK
Ant2	MIMO	100	1	n260	30	37000 - 40000	0.757	28.79	90M3G7D	QPSK
Ant2	MIMO	100	1	n260	30	37000 - 40000	0.348	25.42	90M6W7D	16QAM
Ant2	MIMO	100	1	n260	30	37000 - 40000	0.210	23.22	91M0W7D	64QAM
Ant2	MIMO	100	1	n260	30	37000 - 40000	0.749	28.75	90M7G7D	BPSK
Ant2	MIMO	100	4	n260	30	37000 - 40000	0.244	23.88	391MG7D	QPSK
Ant2	MIMO	100	4	n260	30	37000 - 40000	0.184	22.65	388MW7D	16QAM
Ant2	MIMO	100	4	n260	30	37000 - 40000	0.112	20.48	395MW7D	64QAM
Ant2	MIMO	100	4	n260	30	37000 - 40000	0.235	23.72	391MG7D	BPSK

EUT Overview (QTM1 - Band n260)

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Antenna	Mode	Bandwidth (MHz)	CCs Active	Band	FCC Rule Part	Tx Frequency (MHz)	EIRP		Emission Designator	Modulation
							Max. Power (W)	Max. Power (dBm)		
Ant3	SISO	50	1	n260	30	37000 - 40000	0.180	22.56	45M7G7D	QPSK
Ant3	SISO	50	1	n260	30	37000 - 40000	0.132	21.20	45M5W7D	16QAM
Ant3	SISO	50	1	n260	30	37000 - 40000	0.063	17.99	45M3W7D	64QAM
Ant3	SISO	50	1	n260	30	37000 - 40000	0.169	22.27	45M3G7D	BPSK
Ant3	SISO	50	4	n260	30	37000 - 40000	0.045	16.51	195MG7D	QPSK
Ant3	SISO	50	4	n260	30	37000 - 40000	0.033	15.19	197MW7D	16QAM
Ant3	SISO	50	4	n260	30	37000 - 40000	0.018	12.59	196MW7D	64QAM
Ant3	SISO	50	4	n260	30	37000 - 40000	0.038	15.79	194MG7D	BPSK
Ant3	SISO	100	1	n260	30	37000 - 40000	0.250	23.98	90M6G7D	QPSK
Ant3	SISO	100	1	n260	30	37000 - 40000	0.077	18.88	90M3W7D	16QAM
Ant3	SISO	100	1	n260	30	37000 - 40000	0.111	20.44	91M3W7D	64QAM
Ant3	SISO	100	1	n260	30	37000 - 40000	0.234	23.70	90M3G7D	BPSK
Ant3	SISO	100	4	n260	30	37000 - 40000	0.071	18.50	389MG7D	QPSK
Ant3	SISO	100	4	n260	30	37000 - 40000	0.052	17.16	393MW7D	16QAM
Ant3	SISO	100	4	n260	30	37000 - 40000	0.032	15.06	395MW7D	64QAM
Ant3	SISO	100	4	n260	30	37000 - 40000	0.069	18.38	390MG7D	BPSK
Ant3	MIMO	50	1	n260	30	37000 - 40000	0.346	25.39	45M7G7D	QPSK
Ant3	MIMO	50	1	n260	30	37000 - 40000	0.231	23.63	45M5W7D	16QAM
Ant3	MIMO	50	1	n260	30	37000 - 40000	0.120	20.81	45M3W7D	64QAM
Ant3	MIMO	50	1	n260	30	37000 - 40000	0.327	25.15	45M3G7D	BPSK
Ant3	MIMO	50	4	n260	30	37000 - 40000	0.151	21.78	195MG7D	QPSK
Ant3	MIMO	50	4	n260	30	37000 - 40000	0.088	19.43	197MW7D	16QAM
Ant3	MIMO	50	4	n260	30	37000 - 40000	0.049	16.86	196MW7D	64QAM
Ant3	MIMO	50	4	n260	30	37000 - 40000	0.065	18.14	194MG7D	BPSK
Ant3	MIMO	100	1	n260	30	37000 - 40000	0.232	23.65	90M6G7D	QPSK
Ant3	MIMO	100	1	n260	30	37000 - 40000	0.361	25.58	90M3W7D	16QAM
Ant3	MIMO	100	1	n260	30	37000 - 40000	0.206	23.15	91M3W7D	64QAM
Ant3	MIMO	100	1	n260	30	37000 - 40000	0.351	25.45	90M3G7D	BPSK
Ant3	MIMO	100	4	n260	30	37000 - 40000	0.135	21.30	389MG7D	QPSK
Ant3	MIMO	100	4	n260	30	37000 - 40000	0.090	19.52	393MW7D	16QAM
Ant3	MIMO	100	4	n260	30	37000 - 40000	0.055	17.43	395MW7D	64QAM
Ant3	MIMO	100	4	n260	30	37000 - 40000	0.132	21.21	390MG7D	BPSK

EUT Overview (QTM2 - Band n260)

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1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2 PCTEST Test Location

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility located at 7185 Oakland Mills Road, Columbia, MD 21046. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014.

1.3 Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab located in Columbia, MD 21046, U.S.A.

- PCTEST is an ISO 17025-2005 accredited test facility under the American Association for Laboratory Accreditation (A2LA) with Certificate number 2041.01 for Specific Absorption Rate (SAR), Hearing Aid Compatibility (HAC) testing, where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.

- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC 17065-2012 by A2LA (Certificate number 2041.03) in all scopes of FCC Rules and ISED Standards (RSS).

- PCTEST facility is a registered (2451B) test laboratory with the site description on file with ISED.

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **LG Portable Handset FCC ID: ZNFV600VM**. The test data contained in this report pertains only to the emissions due to the EUT's 5G mmWave function.

The EUT has 3 dual pole patch arrays (Denoted as QTM#0, QTM#1 and QTM#2). The dual pole patch array each consists of 4 radiating elements. Each of the patch antennas is comprised of two separate antenna feeds – one for horizontal and one for vertical polarization.

The EUT supports up to 8CC for DL, and 4CC for UL. For each CC, the EUT supports both 50MHz bandwidth and 100MHz bandwidth. For modulation, the EUT supports a subcarrier spacing (SCS) of 120kHz with two transmission schemes, CP-OFDM and DFT-s-OFDM, with QPSK, 16QAM and 64QAM. Different Beam IDs are supported, each corresponding to a different position in space for each antenna. During testing, FTM (Factory Test Mode) was used to operate the transmitter. MIMO operation was achieved by enabling two Beam IDs at the same time: one is from the list of H Beam IDs and other is from the list of V Beam IDs.

Name	Antenna
QTM #0	Ant1
QTM #1	Ant2
QTM #2	Ant3

Test Device Serial No.: 00163, 00239, 00247, 00189

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 CDMA/EvDO Rev0/A, 1x Advanced (BC0, BC1), 850/1900 GSM/GPRS/EDGE, 850/1700/1900 WCDMA/HSPA, Multi-band LTE, 5G NR (n5, n66, n2, n260, n261), 802.11b/g/n/ax WLAN, 802.11a/n/ac/ax UNII, Bluetooth (1x, EDR, LE), NFC, ANT+

2.3 Test Configuration

The EUT was tested per the guidance of KDB 842590 D01 v01 and ANSI C63.26-2015. See Section 7.0 of this test report for a description of the radiated tests.

EIRP Simulation data for all Beam IDs was used to determine the worst case Beam ID for SISO operation and Beam ID pair for MIMO operation. These Beam ID's were used for final measurements.

All testing was performed using FTM (Factory Test Mode) software at continuous Tx operation. When implemented out in the field, the EUT will operate with a maximum uplink configuration (i.e., a maximum uplink duty cycle of 100%). The FTM software was also used for the EUT operation in the ENDC mode.

2.4 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

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3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The measurement procedures described in the document titled "American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services" (ANSI C63.26-2015) and the guidance provided in KDB 842590 D01 v01 were used in the measurement of the EUT.

3.2 Radiated Power and Radiated Spurious Emissions

§30.202, §30.203

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary for radiated emissions measurements in the spurious domain. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 6m x 5.2m elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1GHz. For measurements below 1GHz, the absorbers are removed. A raised turntable is used for radiated measurement. The turn table is a continuously rotatable, remote-controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm tall test table made of Styrodur is placed on top of the turn table. A Styrodur pedestal is placed on top of the test table to bring the total table height to 1.5m for measurements above 1GHz.

Radiated power (EIRP) measurements were performed in a full anechoic chamber (FAC) conforming to the site validation requirements of CISPR 16-1-4. Radiated spurious emission measurements from 30MHz – 18GHz were performed in a semi anechoic chamber (SAC) conforming to the site validation requirements of CISPR 16-1-4. A positioner was used to manipulate the EUT through several positions in space by rotating about the roll axis as shown in the figure below. The positioner was mounted on top of a turntable bringing the total EUT height to 1.5m.

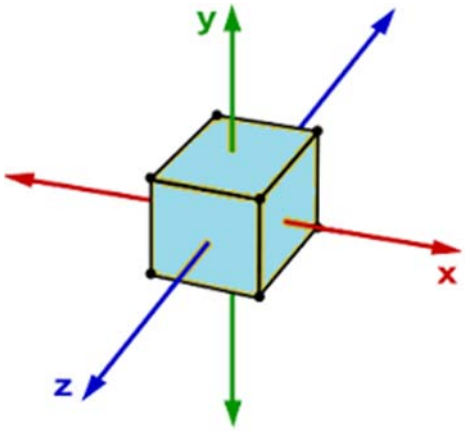

Figure 3-1. Rotation of the EUT Through Three Orthogonal Planes

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The equipment under test was transmitting while connected to its integral antenna and is placed on a turntable. The measurement antenna is in the far field of the EUT per formula $2D^2/\lambda$ where D is the larger between the dimension of the measurement antenna and the transmitting antenna of the EUT. In this case, "D" is equal to 6.0cm and is the largest dimension of the measurement antenna. The EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer.

Frequency Range (GHz)	Wavelength(cm)	Far Field Distance (m)	Measurement Distance (m)
18-40	0.749	0.54	1.00
40-60	0.500	1.39	1.50
60-90	0.333	0.91	1.00
90-140	0.214	0.58	1.00
140-200	0.150	0.39	1.00

Table 3-1. Far-Field Distance & Measurment Distance per Frequency Range

Radiated power levels are investigated while the receive antenna was rotated through all angles to determine the worst case polarization/positioning. It was determined that H=0 degree and V=90 degree are the worst case positions when the EUT was transmitting horizontally and vertically polarized beams, respectively.

The maximized power level is recorded using the spectrum analyzer "Channel Power" function with the integration bandwidth set to the emissions' occupied bandwidth. The EIRP is calculated from the raw power level measured with the spectrum analyzer using the formulas shown below.

Effective Isotropic Radiated Power Sample Calculation

The measured e.i.r.p is converted to E-field in V/m. Then, the distance correction is applied before converting back to calculated e.i.r.p, as explained in KDB 971168 D01.

Field Strength [dBμV/m] = Measured Value [dBm] + AFCL [dB/m] + 107

= - 32.74 dBm + (40.7dB/m + 8.78dB) + 107 = 123.74dBuV/m

= 10^(123.74/20)/1000000 = 1.54 V/m

e.i.r.p. [dBm] = 10 * log((E-Field*D_m)^2/30) + 30dB

= 10*log((1.54V/m * 1.00m)^2/30) + 30dB

= 18.98 dBm e.i.r.p.

Sample MIMO e.i.r.p. Calculation:

The e.i.r.p of the H Beam and V Beam were first measured individually. The measured values were then summed in linear power units then converted back to dBm per the guidance of KDB 662911 D01.

Conversion to linear value = 10^(e.i.r.p/10) = 10^(17.45/10) = 55.59mW

MIMO e.i.r.p. = $e.i.r.p._H$ + $e.i.r.p._V$

= 55.59mW + 20.04mW

=10*log(75.63mW)

= 18.79dBm

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4.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty (±dB)
Conducted Bench Top Measurements	1.13
Radiated Disturbance (<1GHz)	4.98
Radiated Disturbance (>1GHz)	5.07
Radiated Disturbance (>18GHz)	5.09

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5.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to an accredited ISO/IEC 17025 calibration facility. Measurements antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	N9030A	PXA Signal Analyzer (44GHz)	6/12/2019	Annual	6/12/2020	MY52350166
Agilent	N9030A	50GHz PXA Signal Analyzer	11/22/2019	Annual	11/22/2020	US51350301
COM-Power	AL-130R	Active Loop Antenna	8/22/2019	Annual	8/22/2020	121085
Com-Power	PAM-103	Pre-Amplifier (1-1000MHz)	5/10/2019	Annual	5/10/2020	441112
Emco	3115	Horn Antenna (1-18GHz)	3/28/2018	Biennial	3/28/2020	9704-5182
Espec	ESX-2CA	Environmental Chamber	6/13/2019	Annual	6/13/2020	17620
ETS-Lindgren	3116C	DRG Horn Antenna	3/11/2019	Annual	3/11/2020	218893
Keysight Technologies	N9030A	3Hz-44GHz PXA Signal Analyzer	5/2/2019	Annual	5/2/2020	MY49430494
OML Inc.	M05RH	WR-05 Horn antenna,24 dBi, 140 to 200GHz	10/31/2019	Annual	10/31/2020	18073001
OML Inc.	M08RH	WR-08 Horn Antenna, 24dBi, 90 to 140 GHz	7/30/2018	Biennial	7/30/2020	18073001
OML Inc.	M12RH	WR-12 Horn Antenna, 24dBi, 60 to 90 GHz	10/31/2019	Annual	10/31/2020	18073001
OML Inc.	M19RH	WR-19 Horn Antenna, 24dBi, 40 to 60 GHz	10/31/2019	Annual	10/31/2020	18073001
Rohde & Schwarz	180-442-KF	Horn (Small)	8/21/2018	Biennial	8/21/2020	U157403-01
Rohde & Schwarz	ESU26	EMI Test Receiver (26.5GHz)	6/5/2019	Annual	6/5/2020	100342
Rohde & Schwarz	ESW44	EMI Test Receiver 2Hz to 44 GHz	10/16/2019	Annual	10/16/2020	101716
Rohde & Schwarz	FSW67	Signal / Spectrum Analyzer	5/6/2019	Annual	5/6/2020	103200
Rohde & Schwarz	SFUNIT-Rx	Shielded Filter Unit	7/8/2019	Annual	7/8/2020	102133
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	4/19/2018	Biennial	4/19/2020	A051107
Virginia Diodes Inc	SAX252	SAX Module (60 - 90GHz)	9/30/2019	Annual	9/30/2020	SAX252
Virginia Diodes Inc	SAX253	SAX Module (90 - 140GHz)	9/30/2019	Annual	9/30/2020	SAX253
Virginia Diodes Inc	SAX254	SAX Module (140 - 220GHz)	9/30/2019	Annual	9/30/2020	SAX254
Virginia Diodes Inc	SAX411	SAX Module (40 - 60GHz)	10/2/2019	Annual	10/2/2020	SAX411

Table 5-1. Test Equipment

Notes:

For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.

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6.0 SAMPLE CALCULATIONS

Emission Designator

QPSK Modulation

Emission Designator = 800MG7D

BW = 800 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 802MW7D

BW = 802 MHz
W = Amplitude/Angle Modulated
7 = Quantized/Digital Info
D = Data transmission, telemetry, telecommand

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7.0 TEST RESULTS

7.1 Summary

Company Name: LG Electronics USA, Inc.

FCC ID: ZNFV600VM

FCC Classification: Part 30 Mobile Transmitter (5GM)

Mode(s): TDD

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A	RADIATED	PASS	Section 7.2
2.1046, 30.202	Equivalent Isotropic Radiated Power	43dBm		PASS	Section 7.3
2.1051, 30.203	Spurious Emissions	-13dBm/MHz for all out-of-band emissions		PASS	Section 7.4
2.1051, 30.203	Out-of-Band Emissions at the Band Edge	-13dBm/MHz for all out-of-band emissions, -5dBm/MHz from the band edge up to 10% of the channel BW		PASS	Section 7.5

Table 7-1. Summary of Radiated Test Results

Notes:

1) All modes of operation and modulations were investigated. The test results shown in the following sections represent the worst case emissions.
2) Per 2.1057(a)(2), spurious emissions were investigated up to 100GHz for n261 and up to 200GHz for n260.
3) All radiated emission measurements at the band edge are converted to an equivalent conductive power by subtracting the known antenna gain from the EIRP measured at each frequency of interest. These emissions are compared to the 30.203 spurious emission limits as conductive power levels.
4) The radiated RF output power and all out-of-band emissions in the spurious domain are evaluated to the EIRP limits.
5) "CC" refers to "Component Carriers".
6) Beam IDs were chosed based on which Beam ID produces the highest EIRP during EIRP simulation.
7) All testing was performed using FTM (Factory Test Mode) software at continuous Tx operation (100% duty cycle).
8) The CP-OFDM and DFT-s-OFDM QPSK transmission schemes were investigated fully for each test type and only the worst case data is included.

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7.2 Occupied Bandwidth

§2.1049

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Procedure Used

ANSI C63.26-2015 Section 5.4.3
KDB 842590 D01 v01 Section 4.3

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Test Notes

None.

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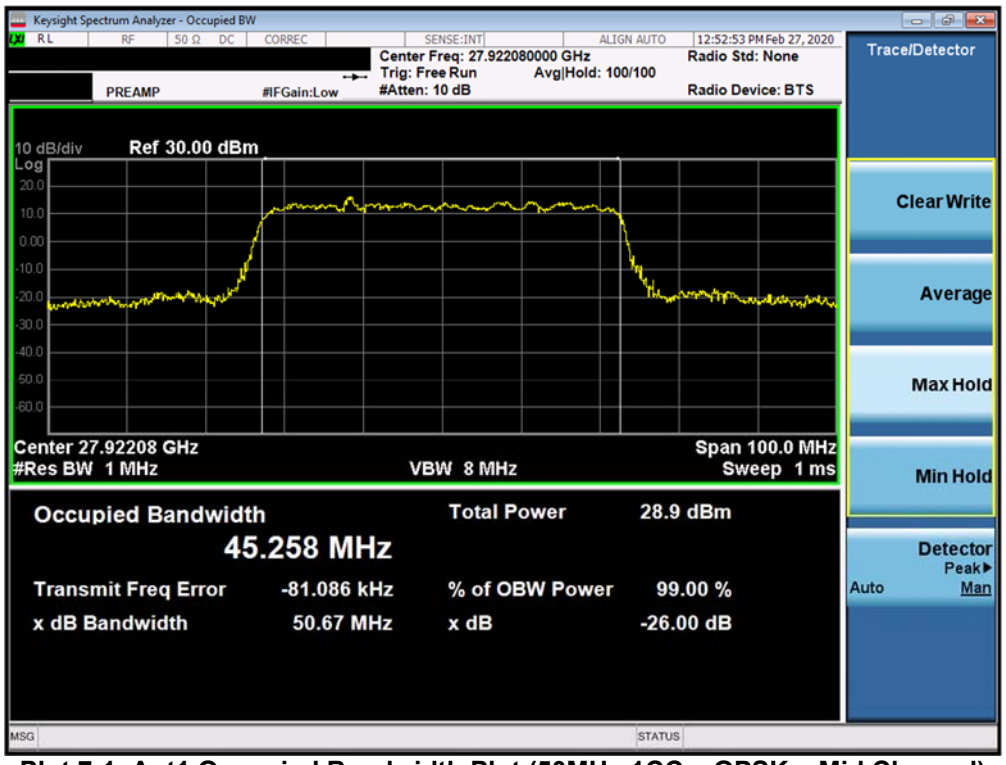
Band n261

Channel	Bandwidth	CCs Active	Modulation	OBW [MHz]
Mid	50	1	BPSK	45.26
		4	BPSK	192.93
	100	1	BPSK	90.68
		4	BPSK	387.89

Table 7-2. Summary of Ant1 Occupied Bandwidths (n261)



Plot 7-1. Ant1 Occupied Bandwidth Plot (50MHz-1CC – QPSK – Mid Channel)

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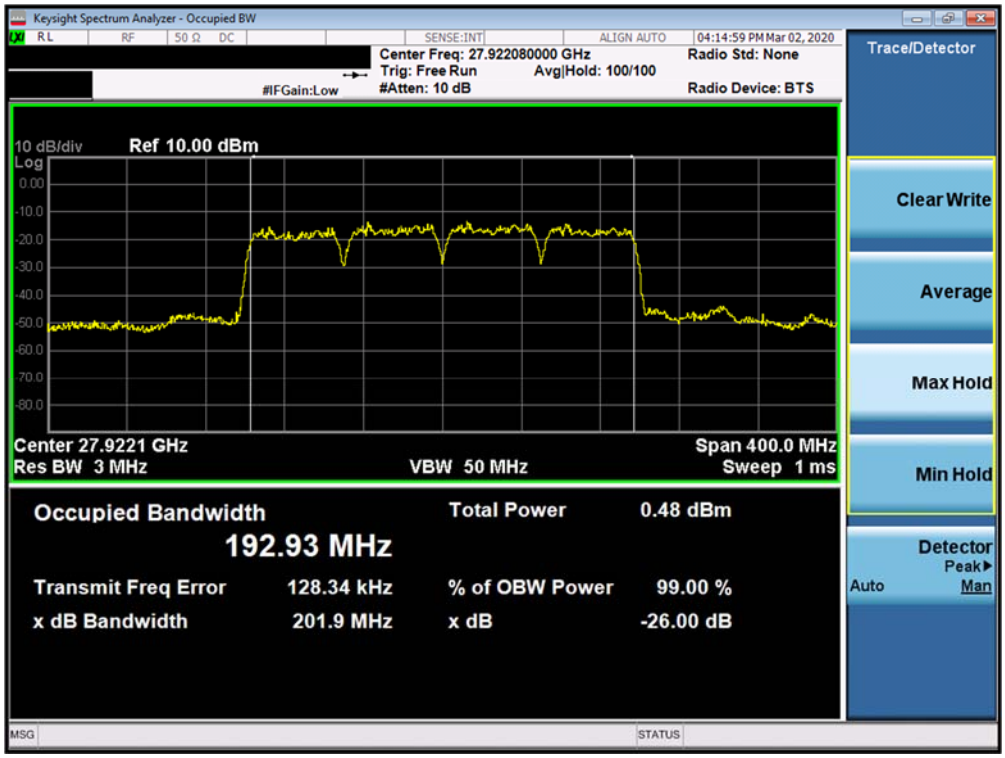
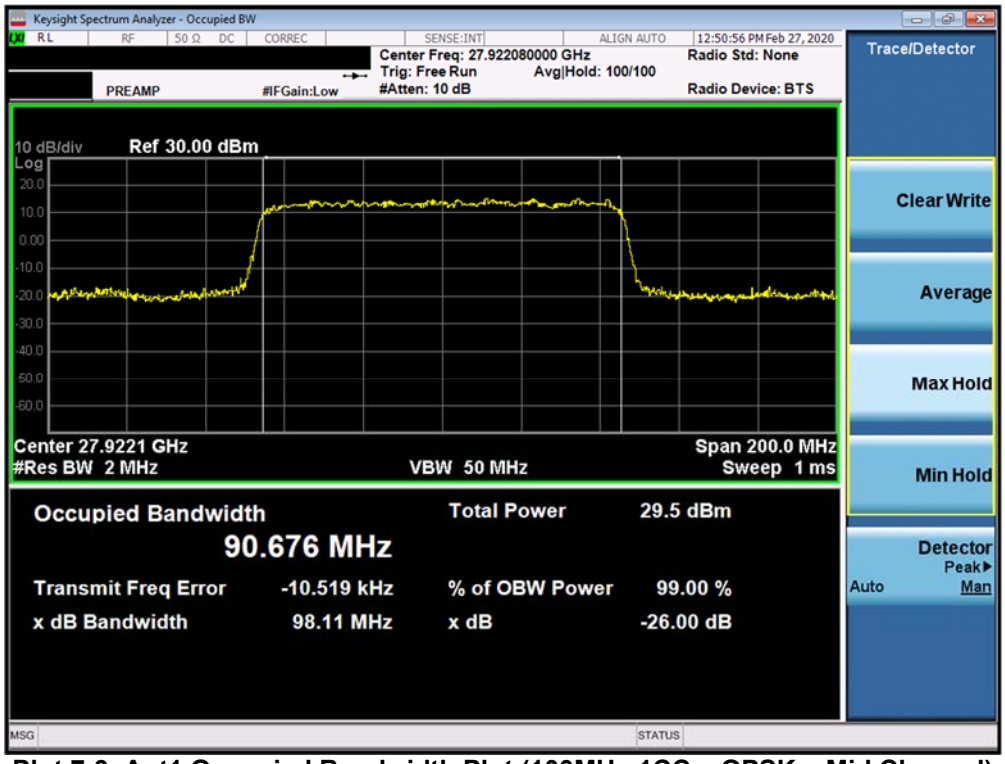


Plot 7-2. Ant1 Occupied Bandwidth Plot (50MHz-4CC – QPSK – Mid Channel)



Plot 7-3. Ant1 Occupied Bandwidth Plot (100MHz-1CC – QPSK – Mid Channel)

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Plot 7-4. Ant1 Occupied Bandwidth Plot (100MHz-4CC – QPSK – Mid Channel)

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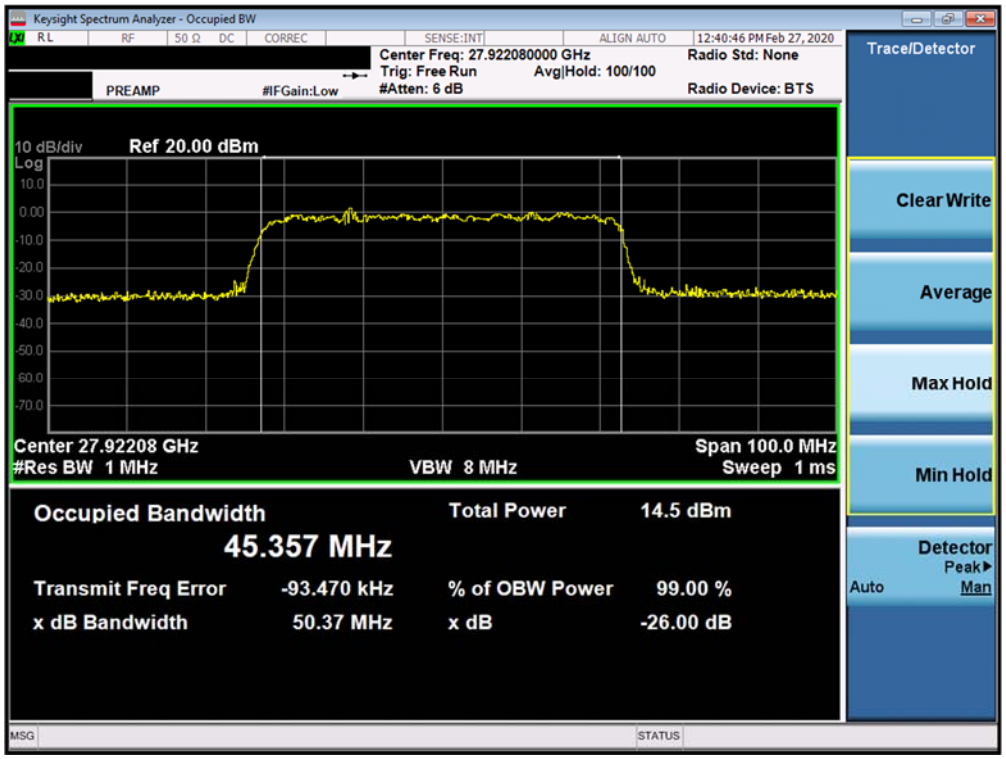
Channel	Bandwidth	CCs Active	Modulation	OBW [MHz]
Mid	50	1	BPSK	45.36
		4	BPSK	193.13
	100	1	BPSK	90.67
		4	BPSK	388.37

Table 7-3. Summary of Ant2 Occupied Bandwidths (n261)



Plot 7-5. Ant2 Occupied Bandwidth Plot (50MHz-1CC – QPSK – Mid Channel)

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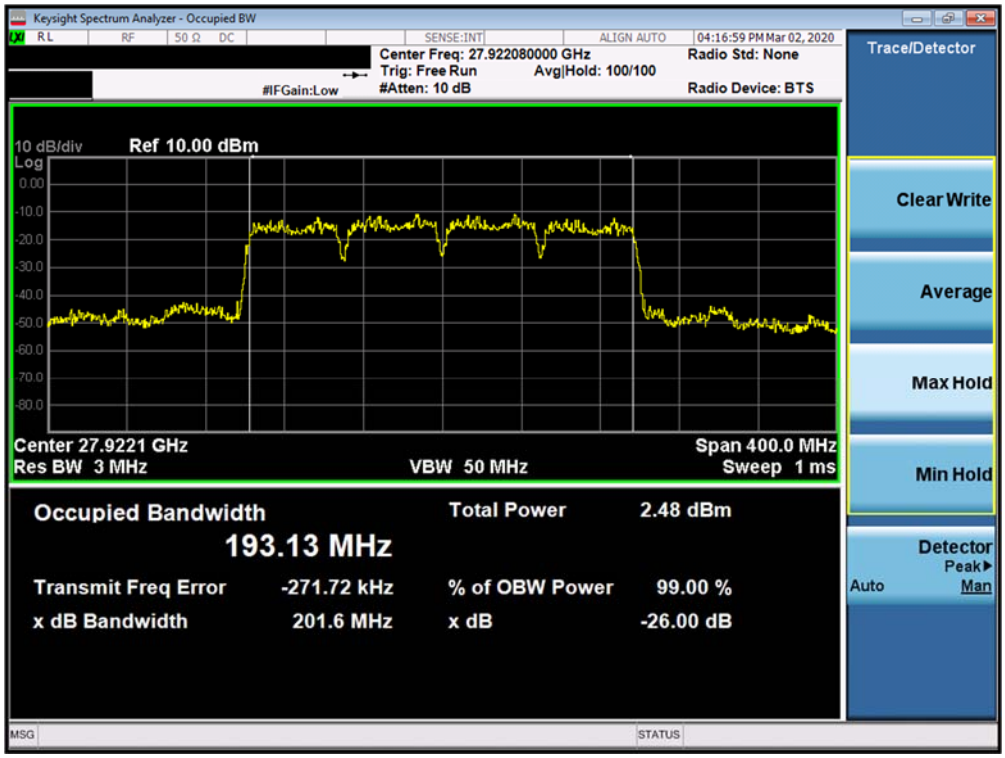
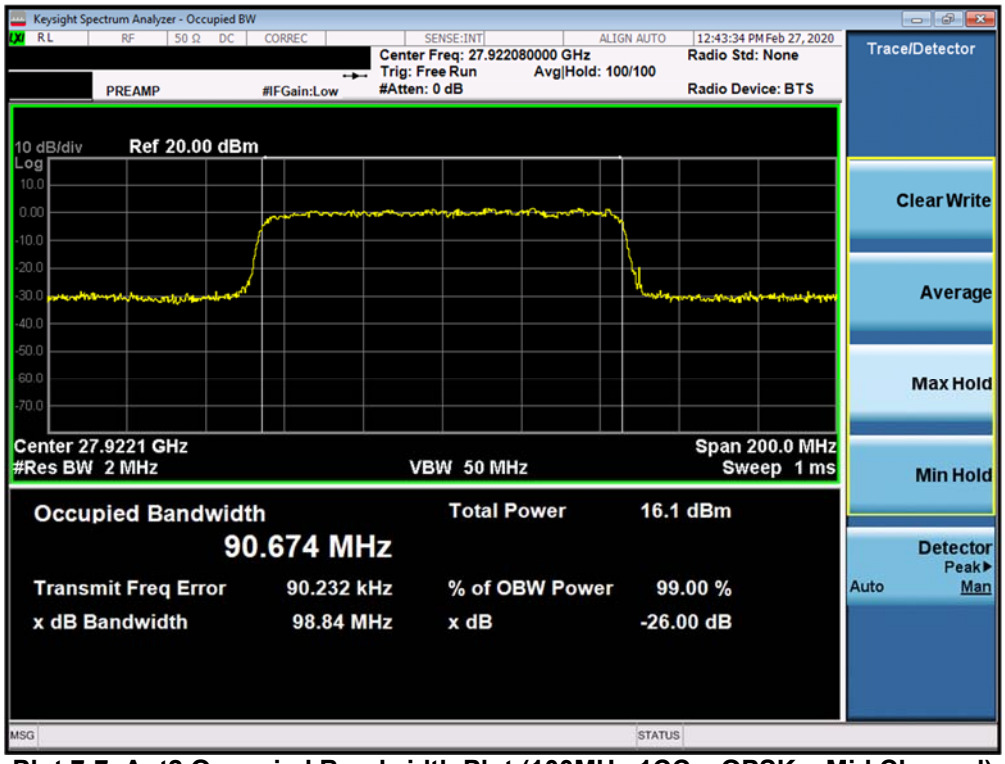


Plot 7-6. Ant2 Occupied Bandwidth Plot (50MHz-4CC – QPSK – Mid Channel)



Plot 7-7. Ant2 Occupied Bandwidth Plot (100MHz-1CC – QPSK – Mid Channel)

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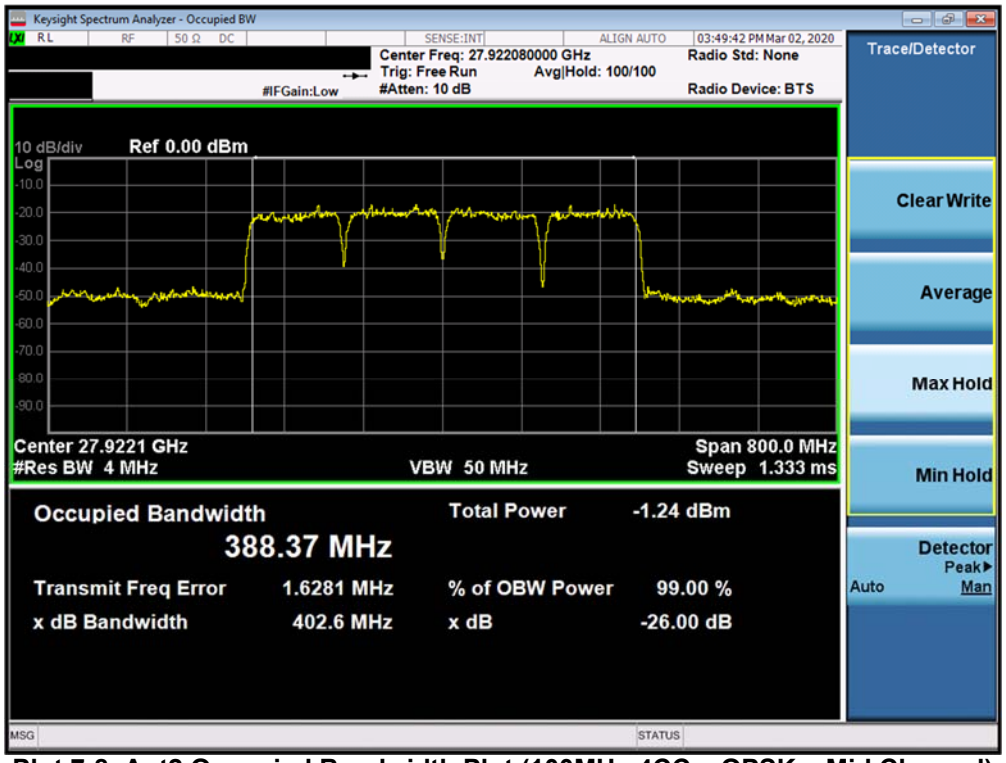

Plot 7-8. Ant2 Occupied Bandwidth Plot (100MHz-4CC – QPSK – Mid Channel)

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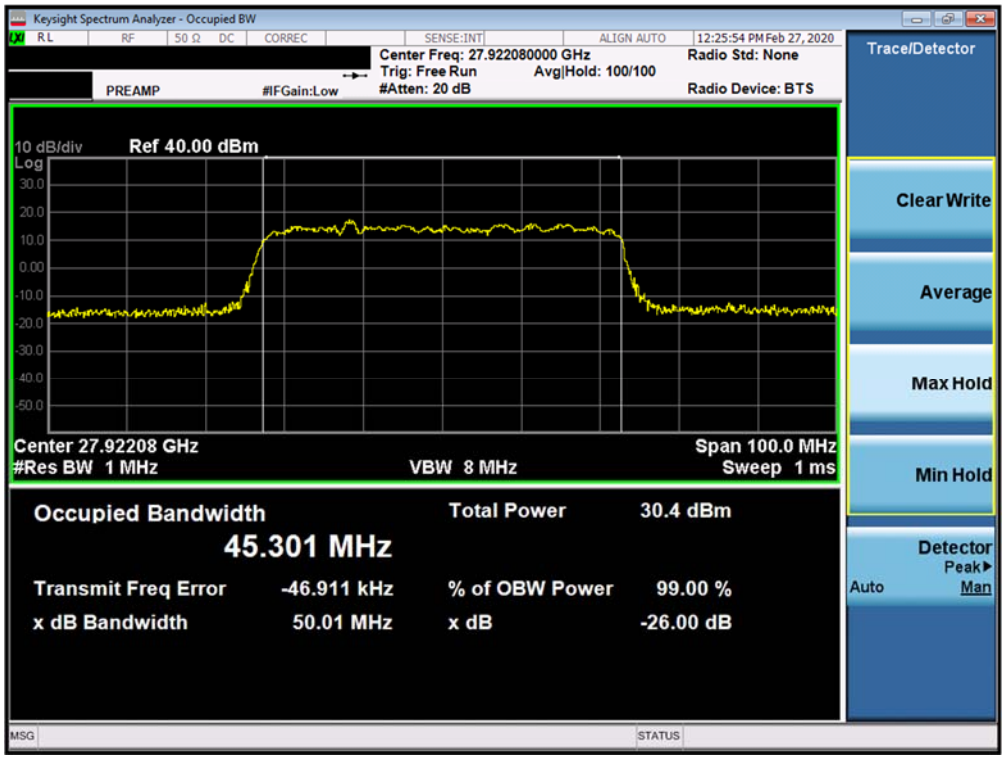
Channel	Bandwidth	CCs Active	Modulation	OBW [MHz]
Mid	50	1	BPSK	45.30
		4	BPSK	192.86
	100	1	BPSK	90.85
		4	BPSK	388.50

Table 7-4. Summary of Ant3 Occupied Bandwidths (n261)



Plot 7-9. Ant3 Occupied Bandwidth Plot (50MHz-1CC – QPSK – Mid Channel)

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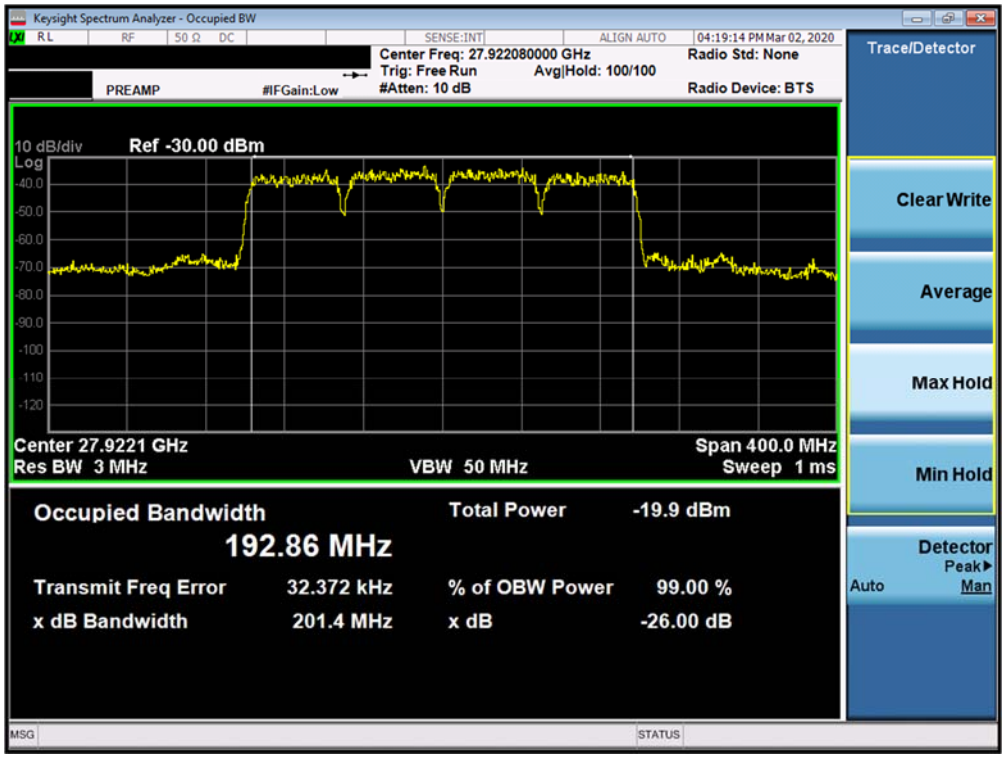
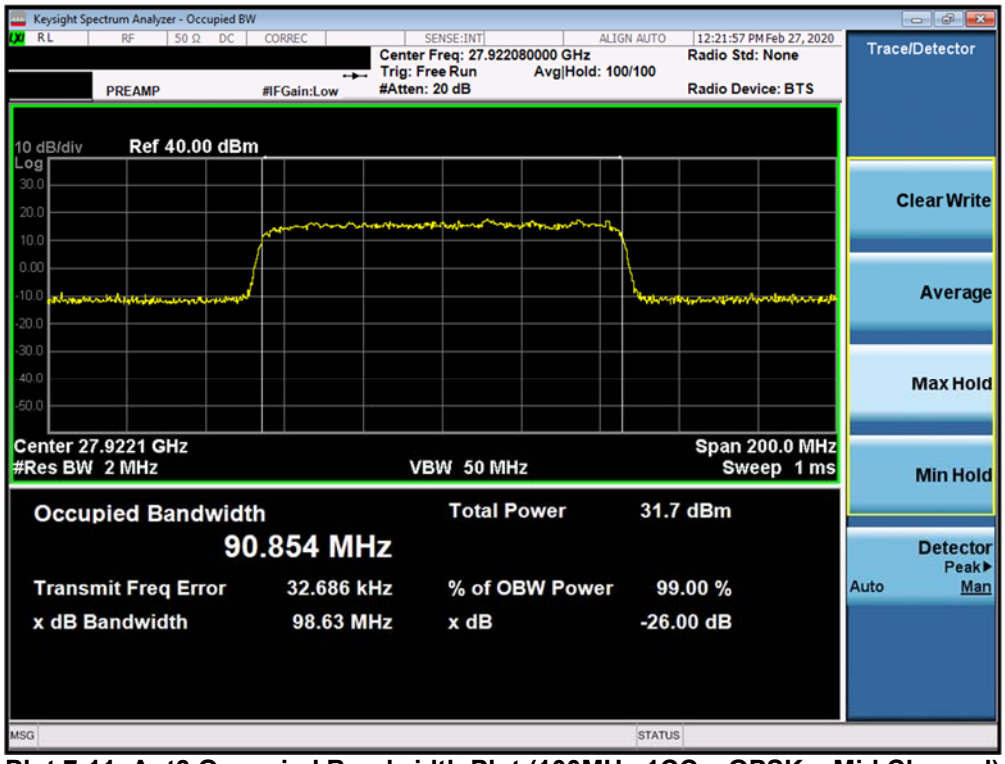


Plot 7-10. Ant3 Occupied Bandwidth Plot (50MHz-4CC – QPSK – Mid Channel)



Plot 7-11. Ant3 Occupied Bandwidth Plot (100MHz-1CC – QPSK – Mid Channel)

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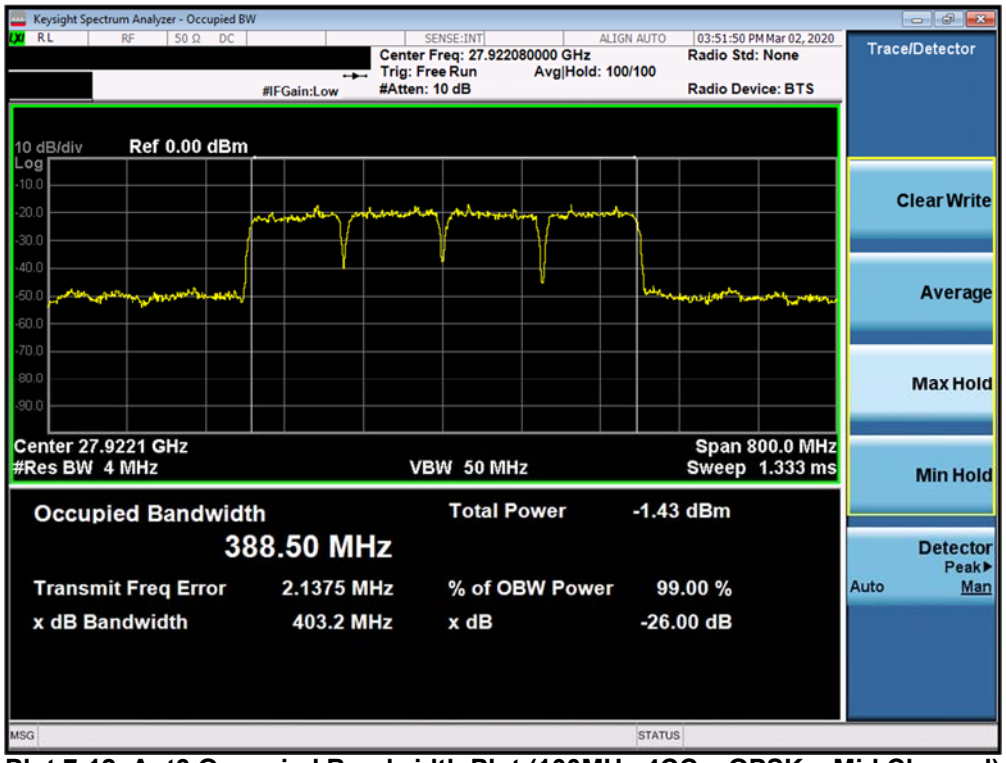

Plot 7-12. Ant3 Occupied Bandwidth Plot (100MHz-4CC – QPSK – Mid Channel)

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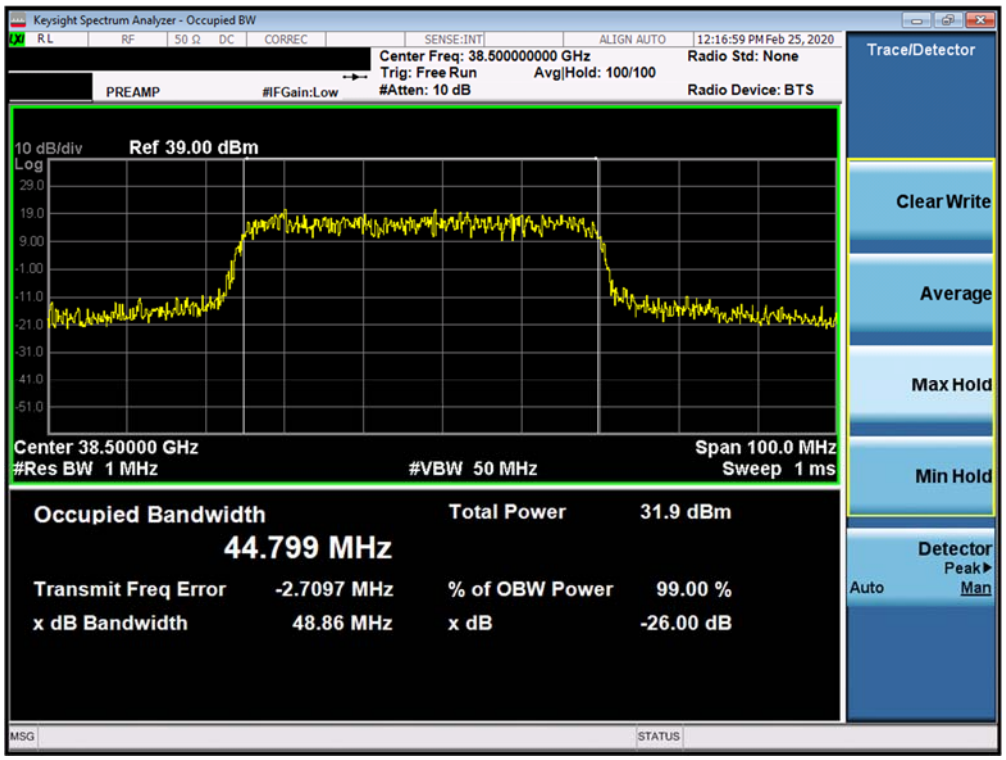
Channel	Bandwidth	CCs Active	Modulation	OBW [MHz]
Mid	50	1	BPSK	44.80
		4	BPSK	194.36
	100	1	BPSK	89.87
		4	BPSK	389.36

Table 7-5. Summary of Ant1 Occupied Bandwidths (n260)



Plot 7-13. Ant1 Occupied Bandwidth Plot (50MHz-1CC – QPSK – Mid Channel)

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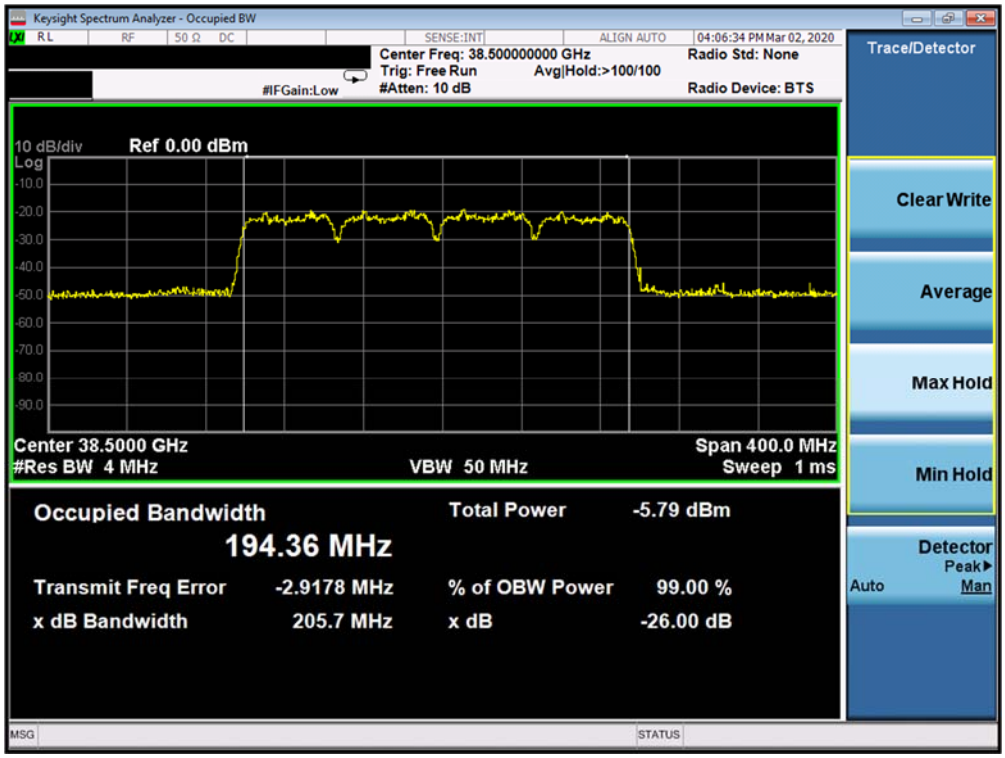
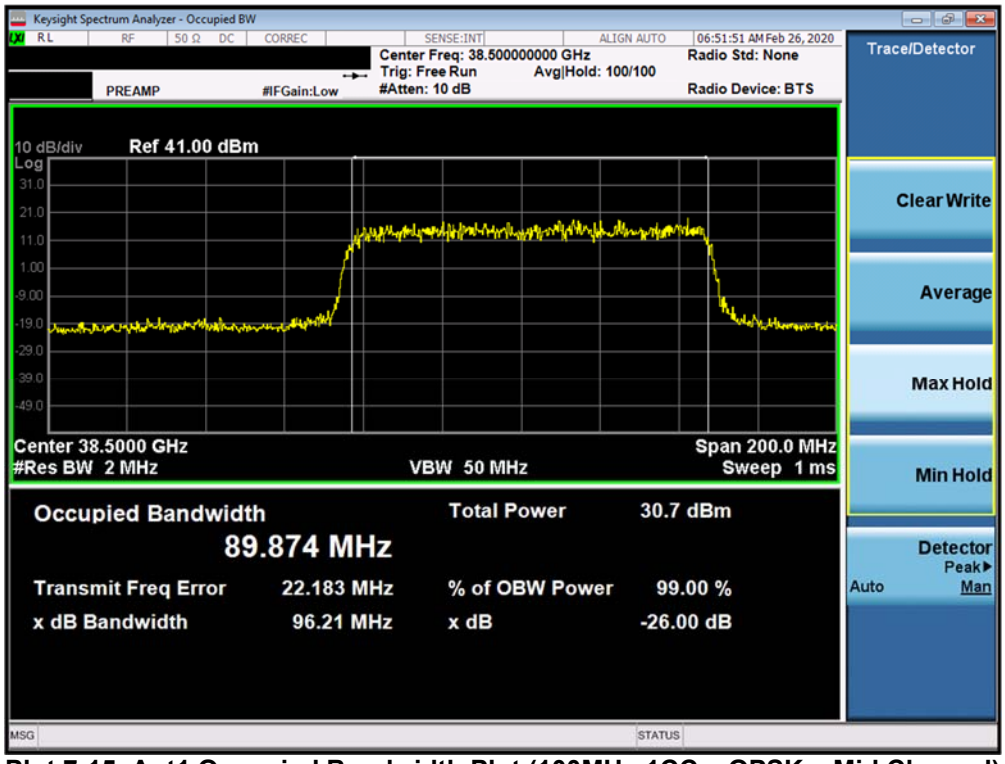


Plot 7-14. Ant1 Occupied Bandwidth Plot (50MHz-4CC – QPSK – Mid Channel)



Plot 7-15. Ant1 Occupied Bandwidth Plot (100MHz-1CC – QPSK – Mid Channel)

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Plot 7-16. Ant1 Occupied Bandwidth Plot (100MHz-4CC – QPSK – Mid Channel)

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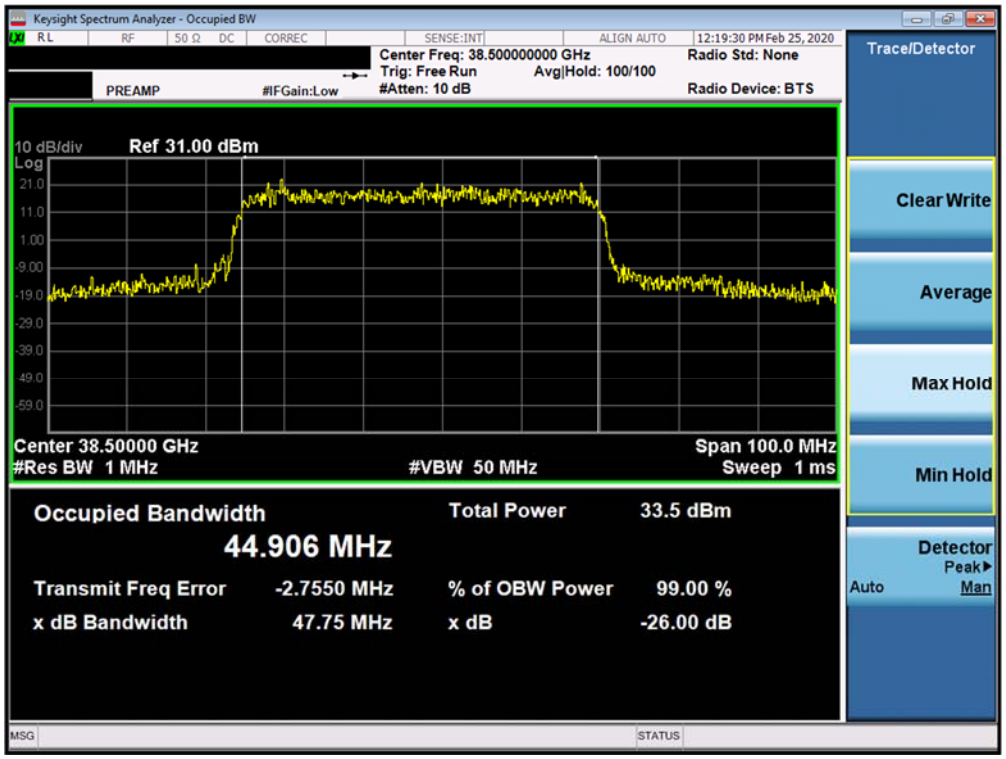
Channel	Bandwidth	CCs Active	Modulation	OBW [MHz]
Mid	50	1	BPSK	44.91
		4	BPSK	193.37
	100	1	BPSK	90.71
		4	BPSK	390.88

Table 7-6. Summary of Ant2 Occupied Bandwidths (n260)



Plot 7-17. Ant2 Occupied Bandwidth Plot (50MHz-1CC – QPSK – Mid Channel)

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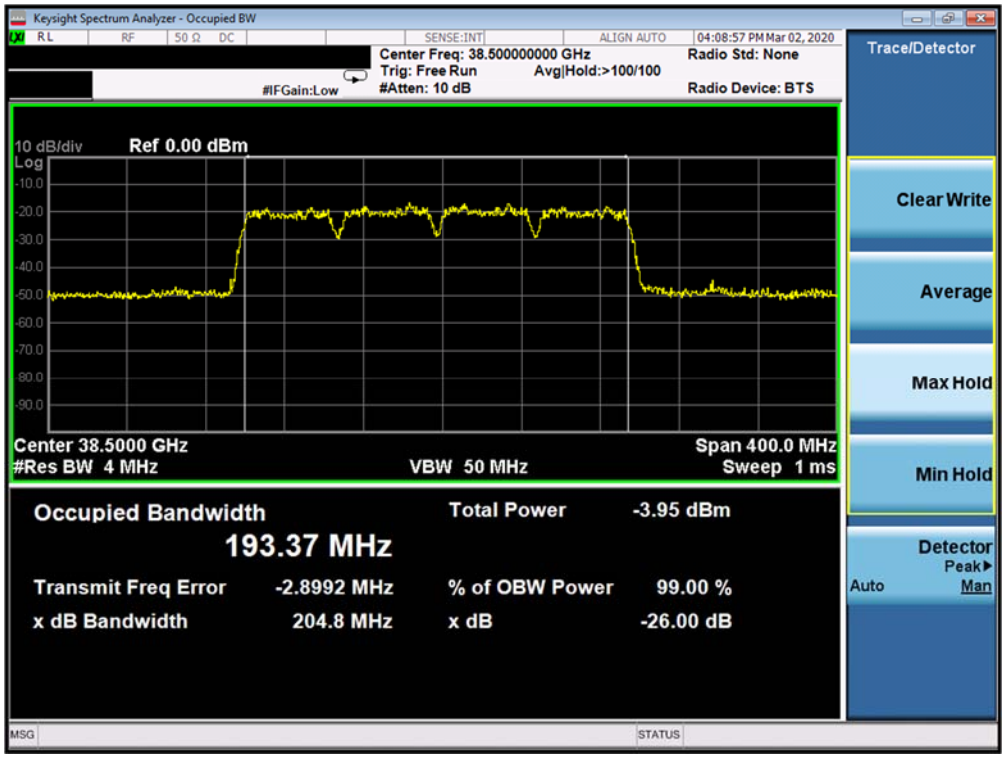
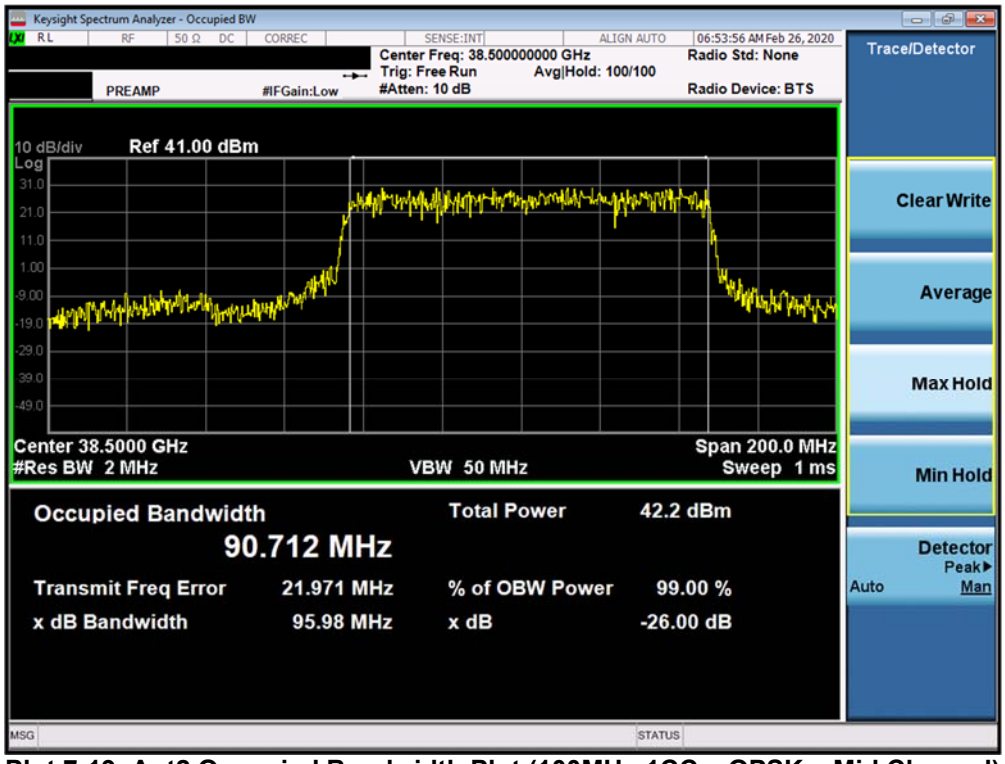


Plot 7-18. Ant2 Occupied Bandwidth Plot (50MHz-4CC – QPSK – Mid Channel)



Plot 7-19. Ant2 Occupied Bandwidth Plot (100MHz-1CC – QPSK – Mid Channel)

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Plot 7-20. Ant2 Occupied Bandwidth Plot (100MHz-4CC – QPSK – Mid Channel)

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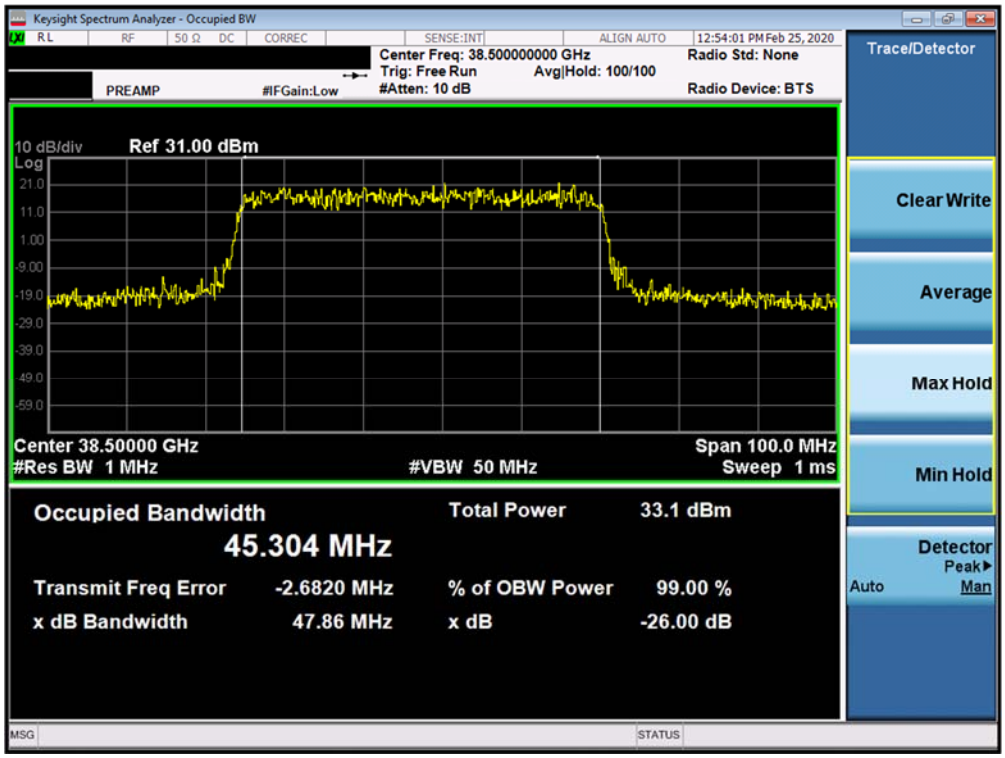
Channel	Bandwidth	CCs Active	Modulation	OBW [MHz]
Mid	50	1	BPSK	45.30
		4	BPSK	194.48
	100	1	BPSK	90.26
		4	BPSK	390.25

Table 7-7. Summary of Ant3 Occupied Bandwidths (n260)



Plot 7-21. Ant3 Occupied Bandwidth Plot (50MHz-1CC – QPSK – Mid Channel)

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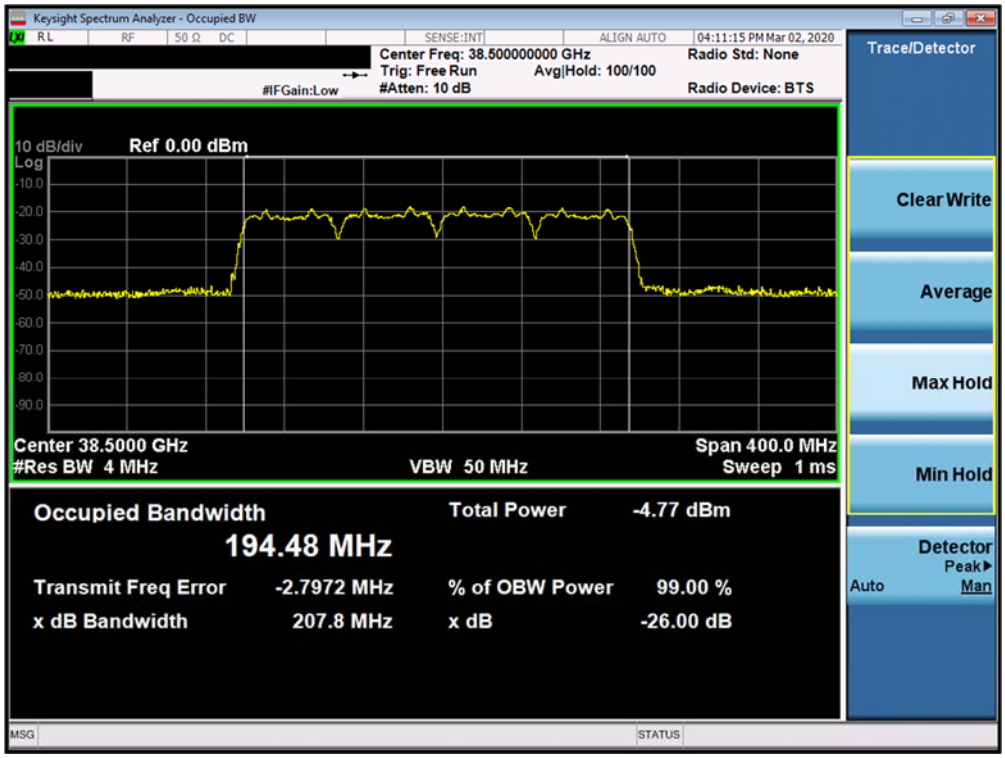
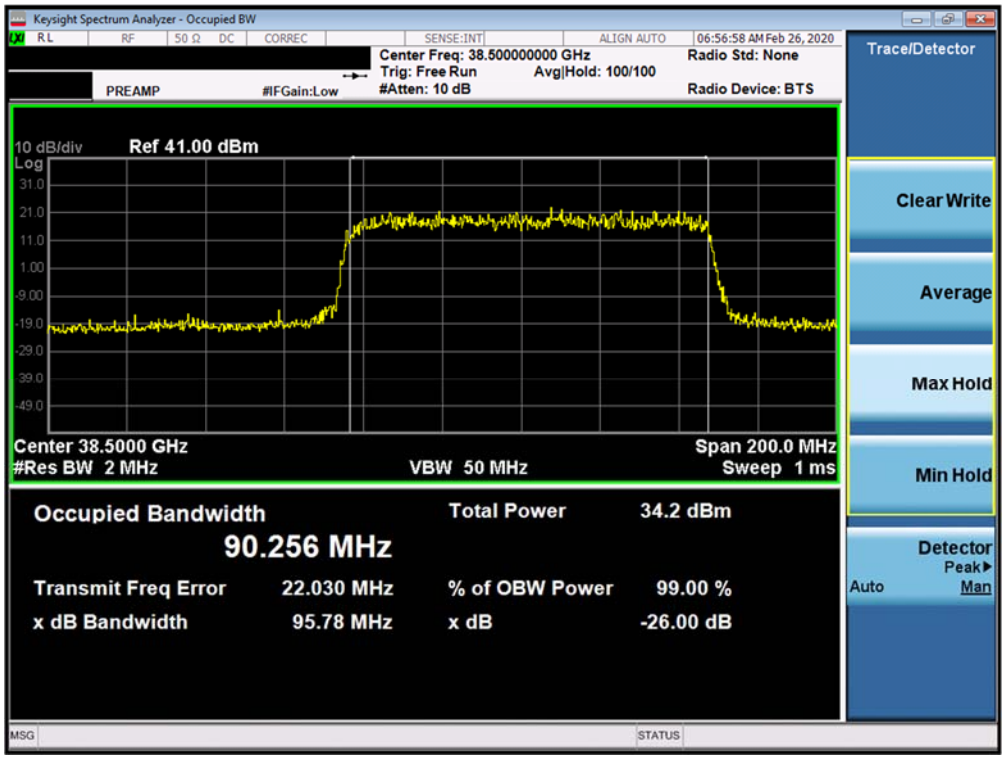


Plot 7-22. Ant3 Occupied Bandwidth Plot (50MHz-4CC – QPSK – Mid Channel)



Plot 7-23. Ant3 Occupied Bandwidth Plot (100MHz-1CC – QPSK – Mid Channel)

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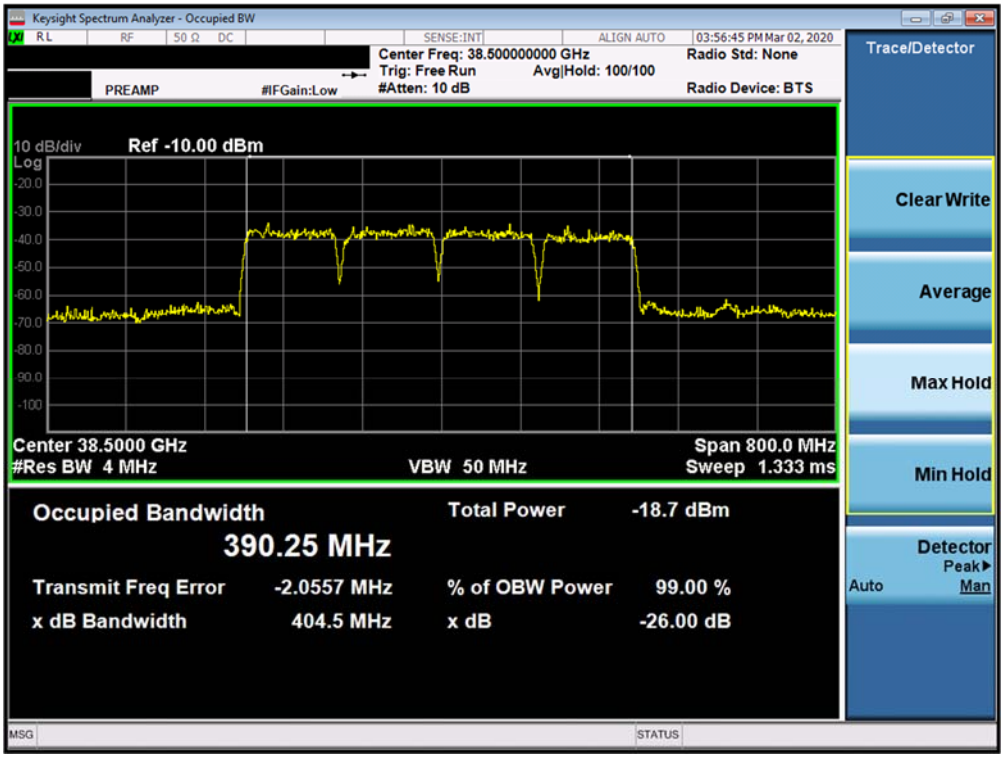

Plot 7-24. Ant3 Occupied Bandwidth Plot (100MHz-4CC – QPSK – Mid Channel)

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7.3 Equivalent Isotropic Radiated Power

§2.1046, §30.202

Test Overview

Equivalent Isotropic Radiated Power (EIRP) measurements are performed using broadband horn antennas. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

The average power of the sum of all antenna elements is limited to a maximum EIRP of +43 dBm.

Test Procedures Used

ANSI C63.26-2015 Section 5.2.4.4.1
KDB 842590 D01 v01 Section 4.2

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW ≥ 3 x RBW
4. Span = 2x to 3x the OBW
5. No. of sweep points ≥ 2 x span / RBW
6. Detector = RMS
7. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
8. Trace mode = trace averaging (RMS) over 100 sweeps
9. The trace was allowed to stabilize

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Test Notes

1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

2) Elements within the same antenna array are correlated to produce beamforming array gain. Antenna arrays cannot be correlated with another antenna array. During testing, only one antenna array was active.

3) EIRP measurements were taken at 1m test distance.

4) The average EIRP reported below is calculated per section 5.2.7 of ANSI C63.26-2015 which states: EIRP (dBm) = E (dBµV/m) + 20log(D) − 104.8; where D is the measurement distance (in the far field region) in m. The field strength E is calculated E (dBµV/m) = Spectrum Analyzer Channel Power Level (dBm) + Antenna Factor (dB/m) + Cable Loss (dB) + 107.

5) Radiated power levels are investigated while the receive antenna was rotated through all angles to determine the worst case polarization/positioning. It was determined that H=0 degree and V=90 degree are the worst case positions when the EUT was transmitting horizontally and vertically polarized beams, respectively.

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Band n261

CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	27534.84	Low	H	QPSK	V	152	233	1/16	20.57
		27534.84	Low	V	QPSK	H	68	102	1/16	24.94
		27922.08	Mid	H	QPSK	V	151	235	1/16	20.97
		27922.08	Mid	V	QPSK	H	67	102	1/16	22.82
		28319.52	High	H	QPSK	V	156	233	1/16	21.96
		28319.52	High	V	QPSK	H	67	100	1/16	22.67
		27534.84	Low	H	16QAM	V	152	233	1/16	19.10
		27534.84	Low	V	16QAM	H	68	102	1/16	22.79
		27922.08	Mid	H	16QAM	V	151	235	1/16	18.78
		27922.08	Mid	V	16QAM	H	67	102	1/16	20.92
		28319.52	High	H	16QAM	V	156	233	1/16	19.96
		28319.52	High	V	16QAM	H	67	100	1/16	21.03
		27534.84	Low	H	64QAM	V	152	233	1/16	16.07
		27534.84	Low	V	64QAM	H	68	102	1/16	21.11
		27922.08	Mid	H	64QAM	V	151	235	1/16	16.15
		27922.08	Mid	V	64QAM	H	67	102	1/16	18.71
		28319.52	High	H	64QAM	V	156	233	1/16	16.89
		28319.52	High	V	64QAM	H	67	100	1/16	18.62
		27534.84	Low	H	BPSK	V	152	233	1/16	19.99
		27534.84	Low	V	BPSK	H	68	102	1/16	24.35
		27922.08	Mid	H	BPSK	V	151	235	1/16	20.37
		27922.08	Mid	V	BPSK	H	67	102	1/16	22.28
		28319.52	High	H	BPSK	V	156	233	1/16	21.29
		28319.52	High	V	BPSK	H	67	100	1/16	22.15
	MIMO	27534.84	Low	H	QPSK	V	152	233	1/16	26.29
		27534.84	Low	V	QPSK	H	68	102		
		27534.84	Low	H	16QAM	V	152	233	1/16	24.33
		27534.84	Low	V	16QAM	H	68	102		
		27534.84	Low	H	64QAM	V	152	233	1/16	22.29
		27534.84	Low	V	64QAM	H	68	102		
		27534.84	Low	H	BPSK	V	152	233	1/16	24.58
		27534.84	Low	V	BPSK	H	68	102		
		27922.08	Mid	H	QPSK	V	151	235	1/16	25.00
		27922.08	Mid	V	QPSK	H	67	102		
		27922.08	Mid	H	16QAM	V	151	235	1/16	22.99
		27922.08	Mid	V	16QAM	H	67	102		
		27922.08	Mid	H	64QAM	V	151	235	1/16	20.63
		27922.08	Mid	V	64QAM	H	67	102		
		27922.08	Mid	H	BPSK	V	151	235	1/16	24.44
		27922.08	Mid	V	BPSK	H	67	102		
		28319.52	High	H	QPSK	V	156	233	1/16	25.34
		28319.52	High	V	QPSK	H	67	100		
		28319.52	High	H	16QAM	V	156	233	1/16	23.54
		28319.52	High	V	16QAM	H	67	100		
		28319.52	High	H	64QAM	V	156	233	1/16	20.85
		28319.52	High	V	64QAM	H	67	100		
		28319.52	High	H	BPSK	V	156	233	1/16	24.75
		28319.52	High	V	BPSK	H	67	100		

Table 7-8. Ant1 EIRP Data (Band n261 - 50MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	27924.96	Mid	H	QPSK	V	152	232	1/31	19.64
		27924.96	Mid	V	QPSK	H	68	102	1/31	21.92
		27924.96	Mid	H	16QAM	V	152	232	1/31	18.56
		27924.96	Mid	V	16QAM	H	68	102	1/31	20.61
		27924.96	Mid	H	64QAM	V	152	232	1/31	15.50
		27924.96	Mid	V	64QAM	H	68	102	1/31	18.56
		27924.96	Mid	H	BPSK	V	152	232	1/31	19.79
		27924.96	Mid	V	BPSK	H	68	102	1/31	22.13
	MIMO	27924.96	Mid	H	QPSK	V	152	232	1/31	23.94
		27924.96	Mid	V	QPSK	H	68	102		
		27924.96	Mid	H	16QAM	V	152	232	1/31	22.71
		27924.96	Mid	V	16QAM	H	68	102		
		27924.96	Mid	H	64QAM	V	152	232	1/31	20.30
		27924.96	Mid	V	64QAM	H	68	102		
		27924.96	Mid	H	BPSK	V	152	232	1/31	24.13
		27924.96	Mid	V	BPSK	H	68	102		

Table 7-9. Ant1 EIRP Data (Band n261 - 50MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	27534.84	Low	H	QPSK	V	153	231	1/32	21.37
		27534.84	Low	V	QPSK	H	73	96	1/32	24.56
		27922.08	Mid	H	QPSK	V	152	233	1/32	21.97
		27922.08	Mid	V	QPSK	H	74	98	1/32	22.67
		28319.52	High	H	QPSK	V	158	231	1/32	22.19
		28319.52	High	V	QPSK	H	73	97	1/32	22.88
		27534.84	Low	H	16QAM	V	153	231	1/32	18.74
		27534.84	Low	V	16QAM	H	73	96	1/32	22.43
		27922.08	Mid	H	16QAM	V	152	233	1/32	19.45
		27922.08	Mid	V	16QAM	H	74	98	1/32	19.99
		28319.52	High	H	16QAM	V	158	231	1/32	19.85
		28319.52	High	V	16QAM	H	73	97	1/32	20.12
		27534.84	Low	H	64QAM	V	153	231	1/32	16.51
		27534.84	Low	V	64QAM	H	73	96	1/32	20.06
		27922.08	Mid	H	64QAM	V	152	233	1/32	17.39
		27922.08	Mid	V	64QAM	H	74	98	1/32	18.05
		28319.52	High	H	64QAM	V	158	231	1/32	17.35
		28319.52	High	V	64QAM	H	73	97	1/32	18.26
		27534.84	Low	H	BPSK	V	153	231	1/32	20.79
		27534.84	Low	V	BPSK	H	73	96	1/32	24.02
		27922.08	Mid	H	BPSK	V	152	233	1/32	21.33
		27922.08	Mid	V	BPSK	H	74	98	1/32	22.04
		28319.52	High	H	BPSK	V	158	231	1/32	21.62
		28319.52	High	V	BPSK	H	73	97	1/32	22.36
	MIMO	27534.84	Low	H	QPSK	V	153	231	1/32	26.26
		27534.84	Low	V	QPSK	H	73	96		
		27534.84	Low	H	16QAM	V	153	231	1/32	23.97
		27534.84	Low	V	16QAM	H	73	96		
		27534.84	Low	H	64QAM	V	153	231	1/32	21.65
		27534.84	Low	V	64QAM	H	73	96		
		27534.84	Low	H	BPSK	V	153	231	1/32	24.31
		27534.84	Low	V	BPSK	H	73	96		
		27922.08	Mid	H	QPSK	V	152	233	1/32	25.34
		27922.08	Mid	V	QPSK	H	74	98		
		27922.08	Mid	H	16QAM	V	152	233	1/32	22.74
		27922.08	Mid	V	16QAM	H	74	98		
		27922.08	Mid	H	64QAM	V	152	233	1/32	20.74
		27922.08	Mid	V	64QAM	H	74	98		
		27922.08	Mid	H	BPSK	V	152	233	1/32	24.71
		27922.08	Mid	V	BPSK	H	74	98		
		28319.52	High	H	QPSK	V	158	231	1/32	25.56
		28319.52	High	V	QPSK	H	73	97		
		28319.52	High	H	16QAM	V	158	231	1/32	23.00
		28319.52	High	V	16QAM	H	73	97		
		28319.52	High	H	64QAM	V	158	231	1/32	20.84
		28319.52	High	V	64QAM	H	73	97		
		28319.52	High	H	BPSK	V	158	231	1/32	25.02
		28319.52	High	V	BPSK	H	73	97		

Table 7-10. Ant1 EIRP Data (Band n261 - 100MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	27926.52	Mid	H	QPSK	V	153	234	1/31	17.65
		27926.52	Mid	V	QPSK	H	72	96	1/31	20.06
		27926.52	Mid	H	16QAM	V	153	234	1/31	17.65
		27926.52	Mid	V	16QAM	H	72	96	1/31	20.06
		27926.52	Mid	H	64QAM	V	153	234	1/31	14.09
		27926.52	Mid	V	64QAM	H	72	96	1/31	16.21
		27926.52	Mid	H	BPSK	V	153	234	1/65	17.57
		27926.52	Mid	V	BPSK	H	72	96	1/65	20.14
	MIMO	27926.52	Mid	H	QPSK	V	153	234	1/31	22.03
		27926.52	Mid	V	QPSK	H	72	96		
		27926.52	Mid	H	16QAM	V	153	234	1/31	22.03
		27926.52	Mid	V	16QAM	H	72	96		
		27926.52	Mid	H	64QAM	V	153	234	1/31	18.29
		27926.52	Mid	V	64QAM	H	72	96		
		27926.52	Mid	H	BPSK	V	153	234	1/31	22.05
		27926.52	Mid	V	BPSK	H	72	96		

Table 7-11. Ant1 EIRP Data (Band n261 - 100MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	27534.84	Low	H	QPSK	V	175	44	1/16	23.81
		27534.84	Low	V	QPSK	H	179	37	1/16	24.48
		27922.08	Mid	H	QPSK	V	181	42	1/16	22.91
		27922.08	Mid	V	QPSK	H	181	33	1/16	22.76
		28319.52	High	H	QPSK	V	181	40	1/16	23.81
		28319.52	High	V	QPSK	H	180	37	1/16	23.91
		27534.84	Low	H	16QAM	V	175	44	1/16	20.92
		27534.84	Low	V	16QAM	H	179	37	1/16	22.74
		27922.08	Mid	H	16QAM	V	181	42	1/16	20.69
		27922.08	Mid	V	16QAM	H	181	33	1/16	21.08
		28319.52	High	H	16QAM	V	181	40	1/16	21.83
		28319.52	High	V	16QAM	H	180	37	1/16	21.69
		27534.84	Low	H	64QAM	V	175	44	1/16	19.03
		27534.84	Low	V	64QAM	H	179	37	1/16	19.48
		27922.08	Mid	H	64QAM	V	181	42	1/16	17.98
		27922.08	Mid	V	64QAM	H	181	33	1/16	18.84
		28319.52	High	H	64QAM	V	181	40	1/16	19.03
		28319.52	High	V	64QAM	H	180	37	1/16	19.81
		27534.84	Low	H	BPSK	V	175	44	1/16	23.71
		27534.84	Low	V	BPSK	H	179	37	1/16	24.36
		27922.08	Mid	H	BPSK	V	181	42	1/16	22.77
		27922.08	Mid	V	BPSK	H	181	33	1/16	22.59
		28319.52	High	H	BPSK	V	181	40	1/16	23.65
		28319.52	High	V	BPSK	H	180	37	1/16	23.79
	MIMO	27534.84	Low	H	QPSK	V	175	44	1/16	27.17
		27534.84	Low	V	QPSK	H	179	37		
		27534.84	Low	H	16QAM	V	175	44	1/16	24.93
		27534.84	Low	V	16QAM	H	179	37		
		27534.84	Low	H	64QAM	V	175	44	1/16	22.27
		27534.84	Low	V	64QAM	H	179	37		
		27534.84	Low	H	BPSK	V	175	44	1/16	24.88
		27534.84	Low	V	BPSK	H	179	37		
		27922.08	Mid	H	QPSK	V	181	42	1/16	25.85
		27922.08	Mid	V	QPSK	H	181	33		
		27922.08	Mid	H	16QAM	V	181	42	1/16	23.90
		27922.08	Mid	V	16QAM	H	181	33		
		27922.08	Mid	H	64QAM	V	181	42	1/16	21.44
		27922.08	Mid	V	64QAM	H	181	33		
		27922.08	Mid	H	BPSK	V	181	42	1/16	25.69
		27922.08	Mid	V	BPSK	H	181	33		
		28319.52	High	H	QPSK	V	181	40	1/16	26.87
		28319.52	High	V	QPSK	H	180	37		
		28319.52	High	H	16QAM	V	181	40	1/16	24.77
		28319.52	High	V	16QAM	H	180	37		
		28319.52	High	H	64QAM	V	181	40	1/16	22.45
		28319.52	High	V	64QAM	H	180	37		
		28319.52	High	H	BPSK	V	181	40	1/16	26.73
		28319.52	High	V	BPSK	H	180	37		

Table 7-12. Ant2 EIRP Data (Band n261 - 50MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	27559.32	Low	H	QPSK	V	180	39	1/31	18.28
		27559.32	Low	V	QPSK	H	177	35	1/31	18.55
		27559.32	Low	H	16QAM	V	180	39	1/31	19.78
		27559.32	Low	V	16QAM	H	177	35	1/31	19.62
		27559.32	Low	H	64QAM	V	180	39	1/31	14.83
		27559.32	Low	V	64QAM	H	177	35	1/31	14.92
		27559.32	Low	H	BPSK	V	135	78	1/31	18.54
		27559.32	Low	V	BPSK	H	143	64	1/31	18.66
	MIMO	27559.32	Low	H	QPSK	V	180	39	1/31	21.42
		27559.32	Low	V	QPSK	H	177	35		
		27559.32	Low	H	16QAM	V	180	39	1/31	22.71
		27559.32	Low	V	16QAM	H	177	35		
		27559.32	Low	H	64QAM	V	180	39	1/31	17.88
		27559.32	Low	V	64QAM	H	177	35		
		27559.32	Low	H	BPSK	V	135	78	1/31	21.61
		27559.32	Low	V	BPSK	H	143	64		

Table 7-13. Ant2 EIRP Data (Band n261 - 50MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	27534.84	Low	H	QPSK	V	183	42	1/32	23.85
		27534.84	Low	V	QPSK	H	175	33	1/32	24.24
		27922.08	Mid	H	QPSK	V	183	43	1/32	22.54
		27922.08	Mid	V	QPSK	H	180	36	1/32	23.46
		28319.52	High	H	QPSK	V	183	45	1/32	23.20
		28319.52	High	V	QPSK	H	179	38	1/32	23.73
		27534.84	Low	H	16QAM	V	183	42	1/32	20.64
		27534.84	Low	V	16QAM	H	175	33	1/32	21.27
		27922.08	Mid	H	16QAM	V	183	43	1/32	21.02
		27922.08	Mid	V	16QAM	H	180	36	1/32	21.03
		28319.52	High	H	16QAM	V	183	45	1/32	21.41
		28319.52	High	V	16QAM	H	179	38	1/32	21.88
		27534.84	Low	H	64QAM	V	183	42	1/32	18.39
		27534.84	Low	V	64QAM	H	175	33	1/32	19.09
		27922.08	Mid	H	64QAM	V	183	43	1/32	18.54
		27922.08	Mid	V	64QAM	H	180	36	1/32	18.87
		28319.52	High	H	64QAM	V	183	45	1/32	19.20
		28319.52	High	V	64QAM	H	179	38	1/32	19.45
		27534.84	Low	H	BPSK	V	183	42	1/32	23.70
		27534.84	Low	V	BPSK	H	175	33	1/32	24.07
		27922.08	Mid	H	BPSK	V	183	43	1/32	22.35
		27922.08	Mid	V	BPSK	H	180	36	1/32	23.36
		28319.52	High	H	BPSK	V	183	45	1/32	23.02
		28319.52	High	V	BPSK	H	179	38	1/32	23.62
	MIMO	27534.84	Low	H	QPSK	V	183	42	1/32	27.06
		27534.84	Low	V	QPSK	H	175	33		
		27534.84	Low	H	16QAM	V	183	42	1/32	23.97
		27534.84	Low	V	16QAM	H	175	33		
		27534.84	Low	H	64QAM	V	183	42	1/32	21.76
		27534.84	Low	V	64QAM	H	175	33		
		27534.84	Low	H	BPSK	V	183	42	1/32	26.90
		27534.84	Low	V	BPSK	H	175	33		
		27922.08	Mid	H	QPSK	V	183	43	1/32	26.03
		27922.08	Mid	V	QPSK	H	180	36		
		27922.08	Mid	H	16QAM	V	183	43	1/32	24.04
		27922.08	Mid	V	16QAM	H	180	36		
		27922.08	Mid	H	64QAM	V	183	43	1/32	21.72
		27922.08	Mid	V	64QAM	H	180	36		
		27922.08	Mid	H	BPSK	V	183	43	1/32	25.89
		27922.08	Mid	V	BPSK	H	180	36		
		28319.52	High	H	QPSK	V	183	45	1/32	26.48
		28319.52	High	V	QPSK	H	179	38		
		28319.52	High	H	16QAM	V	183	45	1/32	24.66
		28319.52	High	V	16QAM	H	179	38		
		28319.52	High	H	64QAM	V	183	45	1/32	22.34
		28319.52	High	V	64QAM	H	179	38		
		28319.52	High	H	BPSK	V	183	45	1/32	26.34
		28319.52	High	V	BPSK	H	179	38		

Table 7-14. Ant2 EIRP Data (Band n261 - 100MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	27534.84	Low	H	QPSK	V	135	78	1/32	18.82
		27534.84	Low	V	QPSK	H	143	64	1/32	20.27
	MIMO	27534.84	Low	H	QPSK	V	135	78	1/32	22.61
		27534.84	Low	V	QPSK	H	143	64		

Table 7-15. Ant2 EIRP Data with DD/WCP (Band n261 - 100MHz-1CC)

CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	27559.32	Low	H	QPSK	V	180	39	1/63	19.57
		27559.32	Low	V	QPSK	H	176	32	1/63	19.92
		27559.32	Low	H	16QAM	V	180	39	1/63	19.57
		27559.32	Low	V	16QAM	H	176	32	1/63	19.92
		27559.32	Low	H	64QAM	V	180	39	1/63	15.69
		27559.32	Low	V	64QAM	H	176	32	1/63	16.04
		27559.32	Low	H	BPSK	V	180	39	1/63	19.69
		27559.32	Low	V	BPSK	H	176	32	1/63	20.06
	MIMO	27559.32	Low	H	QPSK	V	180	39	1/63	22.76
		27559.32	Low	V	QPSK	H	176	32		
		27559.32	Low	H	16QAM	V	180	39	1/63	22.76
		27559.32	Low	V	16QAM	H	176	32		
		27559.32	Low	H	64QAM	V	180	39	1/63	18.88
		27559.32	Low	V	64QAM	H	176	32		
		27559.32	Low	H	BPSK	V	180	39	1/31	22.89
		27559.32	Low	V	BPSK	H	176	32		

Table 7-16. Ant2 EIRP Data (Band n261 - 100MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	27534.84	Low	H	QPSK	H	267	308	1/16	19.77
		27534.84	Low	V	QPSK	H	167	83	1/16	22.34
		27922.08	Mid	H	QPSK	H	267	304	1/16	19.12
		27922.08	Mid	V	QPSK	H	162	87	1/16	20.05
		28319.52	High	H	QPSK	H	267	302	1/16	19.76
		28319.52	High	V	QPSK	H	179	80	1/16	20.14
		27534.84	Low	H	16QAM	H	267	308	1/16	18.54
		27534.84	Low	V	16QAM	H	167	83	1/16	21.22
		27922.08	Mid	H	16QAM	H	267	304	1/16	18.43
		27922.08	Mid	V	16QAM	H	162	87	1/16	17.56
		28319.52	High	H	16QAM	H	267	302	1/16	19.06
		28319.52	High	V	16QAM	H	179	80	1/16	19.01
		27534.84	Low	H	64QAM	H	267	308	1/16	14.84
		27534.84	Low	V	64QAM	H	167	83	1/16	17.37
		27922.08	Mid	H	64QAM	H	267	304	1/16	15.14
		27922.08	Mid	V	64QAM	H	162	87	1/16	15.26
		28319.52	High	H	64QAM	H	267	302	1/16	15.62
		28319.52	High	V	64QAM	H	179	80	1/16	15.82
		27534.84	Low	H	BPSK	H	267	308	1/16	19.71
		27534.84	Low	V	BPSK	H	167	83	1/16	22.26
		27922.08	Mid	H	BPSK	H	267	304	1/16	19.05
		27922.08	Mid	V	BPSK	H	162	87	1/16	19.95
		28319.52	High	H	BPSK	H	267	302	1/16	19.74
		28319.52	High	V	BPSK	H	179	80	1/16	20.10
	MIMO	27534.84	Low	H	QPSK	H	267	308	1/16	24.25
		27534.84	Low	V	QPSK	H	167	83		
		27534.84	Low	H	16QAM	H	267	308	1/16	23.09
		27534.84	Low	V	16QAM	H	167	83		
		27534.84	Low	H	64QAM	H	267	308	1/16	19.29
		27534.84	Low	V	64QAM	H	167	83		
		27534.84	Low	H	BPSK	H	267	308	1/16	22.60
		27534.84	Low	V	BPSK	H	167	83		
		27922.08	Mid	H	QPSK	H	267	304	1/16	22.62
		27922.08	Mid	V	QPSK	H	162	87		
		27922.08	Mid	H	16QAM	H	267	304	1/16	21.03
		27922.08	Mid	V	16QAM	H	162	87		
		27922.08	Mid	H	64QAM	H	267	304	1/16	18.21
		27922.08	Mid	V	64QAM	H	162	87		
		27922.08	Mid	H	BPSK	H	267	304	1/16	22.53
		27922.08	Mid	V	BPSK	H	162	87		
		28319.52	High	H	QPSK	H	267	302	1/16	22.96
		28319.52	High	V	QPSK	H	179	80		
		28319.52	High	H	16QAM	H	267	302	1/16	22.05
		28319.52	High	V	16QAM	H	179	80		
		28319.52	High	H	64QAM	H	267	302	1/16	18.73
		28319.52	High	V	64QAM	H	179	80		
		28319.52	High	H	BPSK	H	267	302	1/16	22.93
		28319.52	High	V	BPSK	H	179	80		

Table 7-17. Ant3 EIRP Data (Band n261 - 50MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	27559.32	Low	H	QPSK	H	267	308	1/16	15.88
		27559.32	Low	V	QPSK	H	164	82	1/16	16.72
		27559.32	Low	H	16QAM	H	267	308	1/16	15.88
		27559.32	Low	V	16QAM	H	164	82	1/16	16.72
		27559.32	Low	H	64QAM	H	267	308	1/16	11.31
		27559.32	Low	V	64QAM	H	164	82	1/16	13.28
		27559.32	Low	H	BPSK	H	267	308	1/16	16.28
		27559.32	Low	V	BPSK	H	164	82	1/16	16.90
	MIMO	27559.32	Low	H	QPSK	H	267	308	1/16	19.33
		27559.32	Low	V	QPSK	H	164	82		
		27559.32	Low	H	16QAM	H	267	308	1/16	19.33
		27559.32	Low	V	16QAM	H	164	82		
		27559.32	Low	H	64QAM	H	267	308	1/16	15.41
		27559.32	Low	V	64QAM	H	164	82		
		27559.32	Low	H	BPSK	H	267	308	1/16	19.62
		27559.32	Low	V	BPSK	H	164	82		

Table 7-18. Ant3 EIRP Data (Band n261 - 50MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	27534.84	Low	H	QPSK	H	268	306	1/32	19.80
		27534.84	Low	V	QPSK	H	164	84	1/32	22.20
		27922.08	Mid	H	QPSK	H	268	305	1/32	20.90
		27922.08	Mid	V	QPSK	H	161	88	1/32	21.55
		28319.52	High	H	QPSK	H	267	303	1/32	20.82
		28319.52	High	V	QPSK	H	176	88	1/32	20.19
		27534.84	Low	H	16QAM	H	268	306	1/32	18.63
		27534.84	Low	V	16QAM	H	164	84	1/32	21.11
		27922.08	Mid	H	16QAM	H	268	305	1/32	19.10
		27922.08	Mid	V	16QAM	H	161	88	1/32	19.15
		28319.52	High	H	16QAM	H	267	303	1/32	19.23
		28319.52	High	V	16QAM	H	176	88	1/32	18.65
		27534.84	Low	H	64QAM	H	268	306	1/32	15.32
		27534.84	Low	V	64QAM	H	164	84	1/32	17.67
		27922.08	Mid	H	64QAM	H	268	305	1/32	16.23
		27922.08	Mid	V	64QAM	H	161	88	1/32	16.24
		28319.52	High	H	64QAM	H	267	303	1/32	16.25
		28319.52	High	V	64QAM	H	176	88	1/32	15.71
		27534.84	Low	H	BPSK	H	268	306	1/32	19.70
		27534.84	Low	V	BPSK	H	164	84	1/32	22.17
		27922.08	Mid	H	BPSK	H	268	305	1/32	20.84
		27922.08	Mid	V	BPSK	H	161	88	1/32	21.51
		28319.52	High	H	BPSK	H	267	303	1/32	20.76
		28319.52	High	V	BPSK	H	176	88	1/32	20.18
	MIMO	27534.84	Low	H	QPSK	H	268	306	1/32	24.17
		27534.84	Low	V	QPSK	H	164	84		
		27534.84	Low	H	16QAM	H	268	306	1/32	23.05
		27534.84	Low	V	16QAM	H	164	84		
		27534.84	Low	H	64QAM	H	268	306	1/32	19.66
		27534.84	Low	V	64QAM	H	164	84		
		27534.84	Low	H	BPSK	H	268	306	1/32	22.52
		27534.84	Low	V	BPSK	H	164	84		
		27922.08	Mid	H	QPSK	H	268	305	1/32	24.25
		27922.08	Mid	V	QPSK	H	161	88		
		27922.08	Mid	H	16QAM	H	268	305	1/32	22.14
		27922.08	Mid	V	16QAM	H	161	88		
		27922.08	Mid	H	64QAM	H	268	305	1/32	19.25
		27922.08	Mid	V	64QAM	H	161	88		
		27922.08	Mid	H	BPSK	H	268	305	1/32	24.20
		27922.08	Mid	V	BPSK	H	161	88		
		28319.52	High	H	QPSK	H	267	303	1/32	23.53
		28319.52	High	V	QPSK	H	176	88		
		28319.52	High	H	16QAM	H	267	303	1/32	21.96
		28319.52	High	V	16QAM	H	176	88		
		28319.52	High	H	64QAM	H	267	303	1/32	19.00
		28319.52	High	V	64QAM	H	176	88		
		28319.52	High	H	BPSK	H	267	303	1/32	23.49
		28319.52	High	V	BPSK	H	176	88		

Table 7-19. Ant3 EIRP Data (Band n261 - 100MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	27559.32	Low	H	QPSK	H	269	286	1/63	15.39
		27559.32	Low	V	QPSK	H	165	84	1/63	18.10
		27559.32	Low	H	16QAM	H	269	286	1/63	15.39
		27559.32	Low	V	16QAM	H	165	84	1/63	18.10
		27559.32	Low	H	64QAM	H	269	286	1/63	11.23
		27559.32	Low	V	64QAM	H	165	84	1/63	13.40
		27559.32	Low	H	BPSK	H	269	286	1/63	15.74
		27559.32	Low	V	BPSK	H	165	84	1/63	18.17
	MIMO	27559.32	Low	H	QPSK	H	269	286	1/63	19.96
		27559.32	Low	V	QPSK	H	165	84		
		27559.32	Low	H	16QAM	H	269	286	1/63	19.96
		27559.32	Low	V	16QAM	H	165	84		
		27559.32	Low	H	64QAM	H	269	286	1/63	15.46
		27559.32	Low	V	64QAM	H	165	84		
		27559.32	Low	H	BPSK	H	269	286	1/31	20.13
		27559.32	Low	V	BPSK	H	165	84		

Table 7-20. Ant3 EIRP Data (Band n261 - 100MHz-4CC)

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Band n260

CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	37027.32	Low	H	QPSK	V	105	121	1/16	21.65
		37027.32	Low	V	QPSK	H	102	78	1/16	21.62
		38497.44	Mid	H	QPSK	V	101	116	1/16	25.05
		38497.44	Mid	V	QPSK	H	101	78	1/16	24.88
		39966.24	High	H	QPSK	V	102	80	1/16	21.67
		39966.24	High	V	QPSK	H	103	78	1/16	21.80
		37027.32	Low	H	16QAM	V	105	121	1/16	19.40
		37027.32	Low	V	16QAM	H	102	78	1/16	19.53
		38497.44	Mid	H	16QAM	V	101	116	1/16	22.76
		38497.44	Mid	V	16QAM	H	101	78	1/16	22.59
		39966.24	High	H	16QAM	V	102	80	1/16	19.74
		39966.24	High	V	16QAM	H	103	78	1/16	19.24
		37027.32	Low	H	64QAM	V	105	121	1/16	17.54
		37027.32	Low	V	64QAM	H	102	78	1/16	17.53
		38497.44	Mid	H	64QAM	V	101	116	1/16	19.86
		38497.44	Mid	V	64QAM	H	101	78	1/16	19.59
		39966.24	High	H	64QAM	V	102	80	1/16	17.75
		39966.24	High	V	64QAM	H	103	78	1/16	17.19
		37027.32	Low	H	BPSK	V	105	121	1/16	21.60
		37027.32	Low	V	BPSK	H	102	78	1/16	21.54
		38497.44	Mid	H	BPSK	V	101	116	1/16	24.98
		38497.44	Mid	V	BPSK	H	101	78	1/16	24.85
		39966.24	High	H	BPSK	V	102	80	1/16	21.57
		39966.24	High	V	BPSK	H	103	78	1/16	21.71
	MIMO	37027.32	Low	H	QPSK	V	105	121	1/16	24.65
		37027.32	Low	V	QPSK	H	102	78		
		37027.32	Low	H	16QAM	V	105	121	1/16	22.48
		37027.32	Low	V	16QAM	H	102	78		
		37027.32	Low	H	64QAM	V	105	121	1/16	20.55
		37027.32	Low	V	64QAM	H	102	78		
		37027.32	Low	H	BPSK	V	105	121	1/16	22.00
		37027.32	Low	V	BPSK	H	102	78		
		38497.44	Mid	H	QPSK	V	101	116	1/16	27.98
		38497.44	Mid	V	QPSK	H	101	78		
		38497.44	Mid	H	16QAM	V	101	116	1/16	25.69
		38497.44	Mid	V	16QAM	H	101	78		
		38497.44	Mid	H	64QAM	V	101	116	1/16	22.74
		38497.44	Mid	V	64QAM	H	101	78		
		38497.44	Mid	H	BPSK	V	101	116	1/16	27.93
		38497.44	Mid	V	BPSK	H	101	78		
		39966.24	High	H	QPSK	V	102	80	1/16	24.75
		39966.24	High	V	QPSK	H	103	78		
		39966.24	High	H	16QAM	V	102	80	1/16	22.51
		39966.24	High	V	16QAM	H	103	78		
		39966.24	High	H	64QAM	V	102	80	1/16	20.49
		39966.24	High	V	64QAM	H	103	78		
		39966.24	High	H	BPSK	V	102	80	1/16	24.65
		39966.24	High	V	BPSK	H	103	78		

Table 7-21. Ant1 EIRP Data (Band n260 - 50MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	38497.44	Mid	H	QPSK	V	103	118	1/31	19.66
		38497.44	Mid	V	QPSK	H	103	79	1/31	17.53
		38497.44	Mid	H	16QAM	V	103	118	1/31	18.29
		38497.44	Mid	V	16QAM	H	103	79	1/31	16.72
		38497.44	Mid	H	64QAM	V	103	118	1/31	17.45
		38497.44	Mid	V	64QAM	H	103	79	1/31	13.62
		38497.44	Mid	H	BPSK	V	103	118	1/31	19.30
		38497.44	Mid	V	BPSK	H	103	79	1/31	17.19
	MIMO	39966.24	Mid	H	QPSK	V	103	118	1/31	21.73
		39966.24	Mid	V	QPSK	H	103	79		
		39966.24	Mid	H	16QAM	V	103	118	1/31	20.59
		39966.24	Mid	V	16QAM	H	103	79		
		39966.24	Mid	H	64QAM	V	103	118	1/31	18.95
		39966.24	Mid	V	64QAM	H	103	79		
		39966.24	Mid	H	BPSK	V	103	118	1/31	21.38
		39966.24	Mid	V	BPSK	H	103	79		

Table 7-22. Ant1 EIRP Data (Band n260 - 50MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	37027.32	Low	H	QPSK	V	105	121	1/32	21.73
		37027.32	Low	V	QPSK	H	100	70	1/32	21.88
		38497.44	Mid	H	QPSK	V	106	116	1/32	22.97
		38497.44	Mid	V	QPSK	H	102	75	1/32	23.14
		39966.24	High	H	QPSK	V	111	104	1/32	21.33
		39966.24	High	V	QPSK	H	102	77	1/32	21.90
		37027.32	Low	H	16QAM	V	105	121	1/32	19.57
		37027.32	Low	V	16QAM	H	100	70	1/32	19.72
		38497.44	Mid	H	16QAM	V	106	116	1/32	21.76
		38497.44	Mid	V	16QAM	H	102	75	1/32	21.72
		39966.24	High	H	16QAM	V	111	104	1/32	19.25
		39966.24	High	V	16QAM	H	102	77	1/32	19.81
		37027.32	Low	H	64QAM	V	105	121	1/32	16.66
		37027.32	Low	V	64QAM	H	100	70	1/32	16.72
		38497.44	Mid	H	64QAM	V	106	116	1/32	18.55
		38497.44	Mid	V	64QAM	H	102	75	1/32	18.73
		39966.24	High	H	64QAM	V	111	104	1/32	15.94
		39966.24	High	V	64QAM	H	102	77	1/32	16.90
		37027.32	Low	H	BPSK	V	105	121	1/32	21.71
		37027.32	Low	V	BPSK	H	100	70	1/32	21.85
		38497.44	Mid	H	BPSK	V	106	116	1/32	22.92
		38497.44	Mid	V	BPSK	H	102	75	1/32	23.08
		39966.24	High	H	BPSK	V	111	104	1/32	21.26
		39966.24	High	V	BPSK	H	102	77	1/32	21.80
	MIMO	37027.32	Low	H	QPSK	V	105	121	1/32	24.82
		37027.32	Low	V	QPSK	H	100	70		
		37027.32	Low	H	16QAM	V	105	121	1/32	22.65
		37027.32	Low	V	16QAM	H	100	70		
		37027.32	Low	H	64QAM	V	105	121	1/32	19.70
		37027.32	Low	V	64QAM	H	100	70		
		37027.32	Low	H	BPSK	V	105	121	1/32	22.29
		37027.32	Low	V	BPSK	H	100	70		
		38497.44	Mid	H	QPSK	V	106	116	1/32	26.07
		38497.44	Mid	V	QPSK	H	102	75		
		38497.44	Mid	H	16QAM	V	106	116	1/32	24.75
		38497.44	Mid	V	16QAM	H	102	75		
		38497.44	Mid	H	64QAM	V	106	116	1/32	21.65
		38497.44	Mid	V	64QAM	H	102	75		
		38497.44	Mid	H	BPSK	V	106	116	1/32	26.01
		38497.44	Mid	V	BPSK	H	102	75		
		39966.24	High	H	QPSK	V	111	104	1/32	24.63
		39966.24	High	V	QPSK	H	102	77		
		39966.24	High	H	16QAM	V	111	104	1/32	22.55
		39966.24	High	V	16QAM	H	102	77		
		39966.24	High	H	64QAM	V	111	104	1/32	19.46
		39966.24	High	V	64QAM	H	102	77		
		39966.24	High	H	BPSK	V	111	104	1/32	24.55
		39966.24	High	V	BPSK	H	102	77		

Table 7-23. Ant1 EIRP Data (Band n260 - 100MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	38497.44	Mid	H	QPSK	V	105	115	1/63	17.51
		38497.44	Mid	V	QPSK	H	101	73	1/63	17.12
		38497.44	Mid	H	16QAM	V	105	115	1/63	15.56
		38497.44	Mid	V	16QAM	H	101	73	1/63	15.88
		38497.44	Mid	H	64QAM	V	105	115	1/63	15.15
		38497.44	Mid	V	64QAM	H	101	73	1/63	14.85
		38497.44	Mid	H	BPSK	V	105	115	1/65	17.34
		38497.44	Mid	V	BPSK	H	101	73	1/65	17.02
	MIMO	39966.24	Mid	H	QPSK	V	105	115	1/63	20.33
		39966.24	Mid	V	QPSK	H	101	73		
		39966.24	Mid	H	16QAM	V	105	115	1/63	18.73
		39966.24	Mid	V	16QAM	H	101	73		
		39966.24	Mid	H	64QAM	V	105	115	1/63	18.01
		39966.24	Mid	V	64QAM	H	101	73		
		39966.24	Mid	H	BPSK	V	105	115	1/31	20.19
		39966.24	Mid	V	BPSK	H	101	73		

Table 7-24. Ant1 EIRP Data (Band n260 - 100MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	37027.32	Low	H	QPSK	H	177	312	1/16	21.78
		37027.32	Low	V	QPSK	V	181	317	1/16	22.58
		38497.44	Mid	H	QPSK	H	182	309	1/16	25.45
		38497.44	Mid	V	QPSK	V	182	302	1/16	25.43
		39966.24	High	H	QPSK	H	187	311	1/16	23.01
		39966.24	High	V	QPSK	V	182	314	1/16	23.30
		37027.32	Low	H	16QAM	H	177	312	1/16	19.89
		37027.32	Low	V	16QAM	V	181	317	1/16	20.54
		38497.44	Mid	H	16QAM	H	182	309	1/16	23.75
		38497.44	Mid	V	16QAM	V	182	302	1/16	23.42
		39966.24	High	H	16QAM	H	187	311	1/16	21.03
		39966.24	High	V	16QAM	V	182	314	1/16	21.04
		37027.32	Low	H	64QAM	H	177	312	1/16	17.07
		37027.32	Low	V	64QAM	V	181	317	1/16	17.11
		38497.44	Mid	H	64QAM	H	182	309	1/16	21.19
		38497.44	Mid	V	64QAM	V	182	302	1/16	20.82
		39966.24	High	H	64QAM	H	187	311	1/16	18.17
		39966.24	High	V	64QAM	V	182	314	1/16	18.50
		38497.44	Mid	H	BPSK	H	177	312	1/16	21.70
		38497.44	Mid	V	BPSK	V	181	317	1/16	22.53
		38497.44	Mid	H	BPSK	H	182	309	1/16	25.38
		38497.44	Mid	V	BPSK	V	182	302	1/16	25.34
		39966.24	High	H	BPSK	H	187	311	1/16	22.90
		39966.24	High	V	BPSK	V	182	314	1/16	23.29
	MIMO	37027.32	Low	H	QPSK	H	177	312	1/16	25.21
		37027.32	Low	V	QPSK	V	181	317		
		37027.32	Low	H	16QAM	H	177	312	1/16	23.24
		37027.32	Low	V	16QAM	V	181	317		
		37027.32	Low	H	64QAM	H	177	312	1/16	20.10
		37027.32	Low	V	64QAM	V	181	317		
		38497.44	Mid	H	BPSK	H	177	312	1/16	25.15
		38497.44	Mid	V	BPSK	V	181	317		
		38497.44	Mid	H	QPSK	H	182	309	1/16	28.45
		38497.44	Mid	V	QPSK	V	182	302		
		38497.44	Mid	H	16QAM	H	182	309	1/16	26.60
		38497.44	Mid	V	16QAM	V	182	302		
		38497.44	Mid	H	64QAM	H	182	309	1/16	24.02
		38497.44	Mid	V	64QAM	V	182	302		
		38497.44	Mid	H	BPSK	H	182	309	1/16	28.37
		38497.44	Mid	V	BPSK	V	182	302		
		39966.24	High	H	QPSK	H	187	311	1/16	26.17
		39966.24	High	V	QPSK	V	182	314		
		39966.24	High	H	16QAM	H	187	311	1/16	24.05
		39966.24	High	V	16QAM	V	182	314		
		39966.24	High	H	64QAM	H	187	311	1/16	21.35
		39966.24	High	V	64QAM	V	182	314		
		39966.24	High	H	BPSK	H	187	311	1/16	26.11
		39966.24	High	V	BPSK	V	182	314		

Table 7-25. Ant2 EIRP Data (Band n260 - 50MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	38497.44	Mid	H	QPSK	H	136	241	1/16	17.11
		38497.44	Mid	V	QPSK	V	140	235	1/16	18.87
	MIMO	38497.44	Mid	H	QPSK	H	136	241	1/16	21.09
		38497.44	Mid	V	QPSK	V	140	235		

Table 7-26. Ant2 EIRP Data with DD/WCP (Band n260 - 50MHz-1CC)

CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	38497.44	Mid	H	QPSK	H	184	309	1/31	20.15
		38497.44	Mid	V	QPSK	V	188	120	1/31	19.99
		38497.44	Mid	H	16QAM	H	184	309	1/31	18.37
		38497.44	Mid	V	16QAM	V	188	120	1/31	18.09
		38497.44	Mid	H	64QAM	H	184	309	1/31	15.72
		38497.44	Mid	V	64QAM	V	188	120	1/31	15.65
		38497.44	Mid	H	BPSK	H	184	309	1/31	19.42
		38497.44	Mid	V	BPSK	V	188	120	1/31	19.72
	MIMO	38497.44	Mid	H	QPSK	H	184	309	1/31	23.08
		38497.44	Mid	V	QPSK	V	188	120		
		38497.44	Mid	H	16QAM	H	184	309	1/31	21.24
		38497.44	Mid	V	16QAM	V	188	120		
		38497.44	Mid	H	64QAM	H	184	309	1/31	18.70
		38497.44	Mid	V	64QAM	V	188	120		
		38497.44	Mid	H	BPSK	H	184	309	1/31	22.58
		38497.44	Mid	V	BPSK	V	188	120		

Table 7-27. Ant2 EIRP Data (Band n260 - 50MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	37027.32	Low	H	QPSK	H	179	313	1/32	22.67
		37027.32	Low	V	QPSK	V	179	310	1/32	22.66
		38497.44	Mid	H	QPSK	H	184	309	1/32	25.60
		38497.44	Mid	V	QPSK	V	184	310	1/32	25.95
		39966.24	High	H	QPSK	H	187	307	1/32	23.49
		39966.24	High	V	QPSK	V	184	313	1/32	23.53
		37027.32	Low	H	16QAM	H	179	313	1/32	20.53
		37027.32	Low	V	16QAM	V	179	310	1/32	20.66
		38497.44	Mid	H	16QAM	H	184	309	1/32	23.39
		38497.44	Mid	V	16QAM	V	184	310	1/32	21.14
		39966.24	High	H	16QAM	H	187	307	1/32	21.34
		39966.24	High	V	16QAM	V	184	313	1/32	21.37
		37027.32	Low	H	64QAM	H	179	313	1/32	17.83
		37027.32	Low	V	64QAM	V	179	310	1/32	17.59
		38497.44	Mid	H	64QAM	H	184	309	1/32	21.19
		38497.44	Mid	V	64QAM	V	184	310	1/32	18.93
		39966.24	High	H	64QAM	H	187	307	1/32	19.37
		39966.24	High	V	64QAM	V	184	313	1/32	17.89
		37027.32	Low	H	BPSK	H	179	313	1/32	22.65
		37027.32	Low	V	BPSK	V	179	310	1/32	22.62
		38497.44	Mid	H	BPSK	H	184	309	1/32	25.52
		38497.44	Mid	V	BPSK	V	184	310	1/32	25.94
		39966.24	High	H	BPSK	H	187	307	1/32	23.39
		39966.24	High	V	BPSK	V	184	313	1/32	23.44
	MIMO	37027.32	Low	H	QPSK	H	179	313	1/32	25.68
		37027.32	Low	V	QPSK	V	179	310		
		37027.32	Low	H	16QAM	H	179	313	1/32	23.61
		37027.32	Low	V	16QAM	V	179	310		
		37027.32	Low	H	64QAM	H	179	313	1/32	20.72
		37027.32	Low	V	64QAM	V	179	310		
		37027.32	Low	H	BPSK	H	179	313	1/32	23.08
		37027.32	Low	V	BPSK	V	179	310		
		38497.44	Mid	H	QPSK	H	184	309	1/32	28.79
		38497.44	Mid	V	QPSK	V	184	310		
		38497.44	Mid	H	16QAM	H	184	309	1/32	25.42
		38497.44	Mid	V	16QAM	V	184	310		
		38497.44	Mid	H	64QAM	H	184	309	1/32	23.22
		38497.44	Mid	V	64QAM	V	184	310		
		38497.44	Mid	H	BPSK	H	184	309	1/32	28.75
		38497.44	Mid	V	BPSK	V	184	310		
		39966.24	High	H	QPSK	H	187	307	1/32	26.52
		39966.24	High	V	QPSK	V	184	313		
		39966.24	High	H	16QAM	H	187	307	1/32	24.37
		39966.24	High	V	16QAM	V	184	313		
		39966.24	High	H	64QAM	H	187	307	1/32	21.70
		39966.24	High	V	64QAM	V	184	313		
		39966.24	High	H	BPSK	H	187	307	1/32	26.43
		39966.24	High	V	BPSK	V	184	313		

Table 7-28. Ant2 EIRP Data (Band n260 - 100MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	38497.44	Mid	H	QPSK	H	182	315	1/32	20.81
		38497.44	Mid	V	QPSK	V	180	310	1/32	20.92
		38497.44	Mid	H	16QAM	H	182	315	1/32	19.40
		38497.44	Mid	V	16QAM	V	180	310	1/32	19.86
		38497.44	Mid	H	64QAM	H	182	315	1/32	17.44
		38497.44	Mid	V	64QAM	V	180	310	1/32	17.49
		38497.44	Mid	H	BPSK	H	182	315	1/32	20.60
		38497.44	Mid	V	BPSK	V	180	310	1/32	20.81
	MIMO	39966.24	Mid	H	QPSK	H	182	315	1/32	23.88
		39966.24	Mid	V	QPSK	V	180	310		
		39966.24	Mid	H	16QAM	H	182	315	1/32	22.65
		39966.24	Mid	V	16QAM	V	180	310		
		39966.24	Mid	H	64QAM	H	182	315	1/32	20.48
		39966.24	Mid	V	64QAM	V	180	310		
		39966.24	Mid	H	BPSK	H	182	315	1/16	23.72
		39966.24	Mid	V	BPSK	V	180	310		

Table 7-29. Ant2 EIRP Data (Band n260 - 100MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	37027.32	Low	H	QPSK	V	287	316	1/16	18.20
		37027.32	Low	V	QPSK	V	182	160	1/16	19.95
		38497.44	Mid	H	QPSK	V	281	317	1/16	22.56
		38497.44	Mid	V	QPSK	V	186	158	1/16	22.20
		39966.24	High	H	QPSK	V	286	310	1/16	18.55
		39966.24	High	V	QPSK	V	184	149	1/16	19.48
		37027.32	Low	H	16QAM	V	287	316	1/16	17.38
		37027.32	Low	V	16QAM	V	182	160	1/16	17.65
		38497.44	Mid	H	16QAM	V	281	317	1/16	21.20
		38497.44	Mid	V	16QAM	V	186	158	1/16	19.95
		39966.24	High	H	16QAM	V	286	310	1/16	17.21
		39966.24	High	V	16QAM	V	184	149	1/16	18.11
		37027.32	Low	H	64QAM	V	287	316	1/16	15.14
		37027.32	Low	V	64QAM	V	182	160	1/16	14.31
		38497.44	Mid	H	64QAM	V	281	317	1/16	17.99
		38497.44	Mid	V	64QAM	V	186	158	1/16	17.60
		39966.24	High	H	64QAM	V	286	310	1/16	14.74
		39966.24	High	V	64QAM	V	184	149	1/16	16.11
		37027.32	Low	H	BPSK	V	287	316	1/16	17.99
		37027.32	Low	V	BPSK	V	182	160	1/16	19.67
		38497.44	Mid	H	BPSK	V	281	317	1/16	22.27
		38497.44	Mid	V	BPSK	V	186	158	1/16	22.00
		39966.24	High	H	BPSK	V	286	310	1/16	18.32
		39966.24	High	V	BPSK	V	184	149	1/16	19.23
	MIMO	37027.32	Low	H	QPSK	V	287	316	1/16	22.17
		37027.32	Low	V	QPSK	V	182	160		
		37027.32	Low	H	16QAM	V	287	316	1/16	20.53
		37027.32	Low	V	16QAM	V	182	160		
		37027.32	Low	H	64QAM	V	287	316	1/16	17.76
		37027.32	Low	V	64QAM	V	182	160		
		37027.32	Low	H	BPSK	V	287	316	1/16	19.99
		37027.32	Low	V	BPSK	V	182	160		
		38497.44	Mid	H	QPSK	V	281	317	1/16	25.39
		38497.44	Mid	V	QPSK	V	186	158		
		38497.44	Mid	H	16QAM	V	281	317	1/16	23.63
		38497.44	Mid	V	16QAM	V	186	158		
		38497.44	Mid	H	64QAM	V	281	317	1/16	20.81
		38497.44	Mid	V	64QAM	V	186	158		
		38497.44	Mid	H	BPSK	V	281	317	1/16	25.15
		38497.44	Mid	V	BPSK	V	186	158		
		39966.24	High	H	QPSK	V	286	310	1/16	22.05
		39966.24	High	V	QPSK	V	184	149		
		39966.24	High	H	16QAM	V	286	310	1/16	20.69
		39966.24	High	V	16QAM	V	184	149		
		39966.24	High	H	64QAM	V	286	310	1/16	18.49
		39966.24	High	V	64QAM	V	184	149		
		39966.24	High	H	BPSK	V	286	310	1/16	21.81
		39966.24	High	V	BPSK	V	184	149		

Table 7-30. Ant3 EIRP Data (Band n260 - 50MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	38497.44	Mid	H	QPSK	V	283	316	1/31	14.73
		38497.44	Mid	V	QPSK	V	187	166	1/31	16.51
		38497.44	Mid	H	16QAM	V	283	316	1/31	13.32
		38497.44	Mid	V	16QAM	V	187	166	1/31	15.19
		38497.44	Mid	H	64QAM	V	283	316	1/31	10.81
		38497.44	Mid	V	64QAM	V	187	166	1/31	12.59
		38497.44	Mid	H	BPSK	V	283	316	1/31	14.34
		38497.44	Mid	V	BPSK	V	187	166	1/31	15.79
	MIMO	39966.24	Mid	H	QPSK	V	283	316	1/31	21.78
		39966.24	Mid	V	QPSK	V	187	166		
		39966.24	Mid	H	16QAM	V	283	316	1/31	19.43
		39966.24	Mid	V	16QAM	V	187	166		
		39966.24	Mid	H	64QAM	V	283	316	1/31	16.86
		39966.24	Mid	V	64QAM	V	187	166		
		39966.24	Mid	H	BPSK	V	283	316	1/31	18.14
		39966.24	Mid	V	BPSK	V	187	166		

Table 7-31. Ant3 EIRP Data (Band n260 - 50MHz-4CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
1	SISO	37027.32	Low	H	QPSK	V	291	319	1/32	19.23
		37027.32	Low	V	QPSK	V	182	159	1/32	21.71
		38497.44	Mid	H	QPSK	V	284	316	1/32	20.84
		38497.44	Mid	V	QPSK	V	186	159	1/32	23.98
		39966.24	High	H	QPSK	V	285	314	1/32	18.06
		39966.24	High	V	QPSK	V	183	138	1/32	17.05
		37027.32	Low	H	16QAM	V	291	319	1/32	15.51
		37027.32	Low	V	16QAM	V	182	159	1/32	18.38
		38497.44	Mid	H	16QAM	V	284	316	1/32	15.99
		38497.44	Mid	V	16QAM	V	186	159	1/32	18.66
		39966.24	High	H	16QAM	V	285	314	1/32	18.08
		39966.24	High	V	16QAM	V	183	138	1/32	18.88
		37027.32	Low	H	64QAM	V	291	319	1/32	13.29
		37027.32	Low	V	64QAM	V	182	159	1/32	15.79
		38497.44	Mid	H	64QAM	V	284	316	1/32	15.29
		38497.44	Mid	V	64QAM	V	186	159	1/32	17.82
		39966.24	High	H	64QAM	V	285	314	1/32	20.44
		39966.24	High	V	64QAM	V	183	138	1/32	19.81
		37027.32	Low	H	BPSK	V	291	319	1/32	18.98
		37027.32	Low	V	BPSK	V	182	159	1/32	21.51
		38497.44	Mid	H	BPSK	V	284	316	1/32	20.65
		38497.44	Mid	V	BPSK	V	186	159	1/32	23.70
		39966.24	High	H	BPSK	V	285	314	1/32	17.83
		39966.24	High	V	BPSK	V	183	138	1/32	16.78
	MIMO	37027.32	Low	H	QPSK	V	291	319	1/32	23.65
		37027.32	Low	V	QPSK	V	182	159		
		37027.32	Low	H	16QAM	V	291	319	1/32	25.58
		37027.32	Low	V	16QAM	V	182	159		
		37027.32	Low	H	64QAM	V	291	319	1/32	19.92
		37027.32	Low	V	64QAM	V	182	159		
		37027.32	Low	H	BPSK	V	291	319	1/32	23.44
		37027.32	Low	V	BPSK	V	182	159		
		38497.44	Mid	H	QPSK	V	284	316	1/32	22.26
		38497.44	Mid	V	QPSK	V	186	159		
		38497.44	Mid	H	16QAM	V	284	316	1/32	20.96
		38497.44	Mid	V	16QAM	V	186	159		
		38497.44	Mid	H	64QAM	V	284	316	1/32	17.85
		38497.44	Mid	V	64QAM	V	186	159		
		38497.44	Mid	H	BPSK	V	284	316	1/32	25.45
		38497.44	Mid	V	BPSK	V	186	159		
		39966.24	High	H	QPSK	V	285	314	1/32	23.15
		39966.24	High	V	QPSK	V	183	138		
		39966.24	High	H	16QAM	V	285	314	1/32	21.51
		39966.24	High	V	16QAM	V	183	138		
		39966.24	High	H	64QAM	V	285	314	1/32	23.15
		39966.24	High	V	64QAM	V	183	138		
		39966.24	High	H	BPSK	V	285	314	1/32	20.35
		39966.24	High	V	BPSK	V	183	138		

Table 7-32. Ant3 EIRP Data (Band n260 - 100MHz-1CC)

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CCs active	Mode	Frequency [MHz]	Channel	Beam Pol	Modulation	Ant. Pol. [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	RB Size/Offset	EIRP [dBm]
4	SISO	38497.44	Mid	H	QPSK	V	282	316	1/65	18.06
		38497.44	Mid	V	QPSK	V	182	150	1/65	18.50
		38497.44	Mid	H	16QAM	V	282	316	1/65	15.75
		38497.44	Mid	V	16QAM	V	182	150	1/65	17.16
		38497.44	Mid	H	64QAM	V	282	316	1/65	13.67
		38497.44	Mid	V	64QAM	V	182	150	1/65	15.06
		38497.44	Mid	H	BPSK	V	282	316	1/65	18.02
		38497.44	Mid	V	BPSK	V	182	150	1/65	18.38
	MIMO	39966.24	Mid	H	QPSK	V	282	316	1/65	21.30
		39966.24	Mid	V	QPSK	V	182	150		
		39966.24	Mid	H	16QAM	V	282	316	1/65	19.52
		39966.24	Mid	V	16QAM	V	182	150		
		39966.24	Mid	H	64QAM	V	282	316	1/65	17.43
		39966.24	Mid	V	64QAM	V	182	150		
		39966.24	Mid	H	BPSK	V	282	316	1/31	21.21
		39966.24	Mid	V	BPSK	V	182	150		

Table 7-33. Ant3 EIRP Data (Band n260 - 100MHz-4CC)

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7.4 Radiated Spurious and Harmonic Emissions

§2.1051, §30.203

Test Overview

The spectrum is scanned from 30MHz to 100GHz for n261 and from 30MHz to 200GHz for n260. All out of band emissions are measured in a radiated test setup while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The conductive power or total radiated power of any emissions outside a licensee's frequency block shall be -13dBm/1MHz.

Test Procedure Used

ANSI C63.26-2015 Section 5.7.4
KDB 842590 D01 v01 Section 4.4.2 and Section 4.4.3

Test Settings

1. Start frequency was set to 30MHz and stop frequency was set to 100 GHz for n261 and 200GHz for n260. Several plots are used to show investigations in this entire span.
2. Detector = RMS
3. Trace mode = trace average
4. Sweep time = auto couple
5. Number of sweep points ≥ 2 x Span/RBW
6. The trace was allowed to stabilize
7. RBW = 1MHz, VBW = 3MHz

Test Notes

1) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the tables below.

2) All radiated spurious emissions were measured as EIRP to compare with the §30.203 TRP limits.

3) Elements within the same antenna array are correlated to produce beamforming array gain. Antenna arrays cannot be correlated with another antenna array. During testing, only one antenna array was active.

4) The plots from 1-200GHz show corrected average EIRP levels. Plots below 1GHz are corrected field strength levels. The average EIRP reported below is calculated per section 5.2.7 of ANSI C63.26-2015 which states: EIRP (dBm) = E (dBμV/m) + 20log(D) − 104.8; where D is the measurement distance (in the far field region) in m. The field strength E is calculated E (dBμV/m) = Spectrum Analyzer Level (dBm) + Antenna Factor (dB/m) + Cable Loss (dB) + Harmonic Mixer Conversion Loss (dB) + 107. All appropriate Antenna Factor and Cable Loss have been applied in the spectrum analyzer for each measurement. For measurements > 40GHz, Harmonic Mixer Conversion Loss was also applied to the spectrum analyzer.

5) Emissions below 18GHz were measured at a 3 meter test distance, while emissions above 18GHz were measured at the appropriate far field distance. The far field of the mmWave signal is based on formula: R > 2D^2/wavelength, where D is the larger between the dimension of the measurement antenna and the transmitting antenna of the EUT. In this case, D is the largest dimension of the measurement antenna.

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Frequency Range (GHz)	Wavelength(cm)	Far Field Distance (m)	Measurement Distance (m)
18-40	0.749	0.54	1.00
40-60	0.500	1.39	1.50
60-90	0.333	0.91	1.00
90-140	0.214	0.58	1.00
140-200	0.150	0.39	1.00

Table 7-34. Far-Field Distance & Measurement Distance per Frequency Range

6) All emissions from 30MHz - 60GHz were measured using a spectrum analyzer with an internal preamplifier. Emissions >60GHz were measured using a harmonic mixer with the spectrum analyzer.

7) All RSE's were measured with 1CC. It was determined that adding more CC's causes the overall amplitude of just 1CC to decrease, therefore, 1CC is the worst case for the purposes of spurious emissions measurements.

8) The "-" shown in the following RSE tables are used to denote a noise floor measurement.

9) All RSE's were investigated in EN-DC mode and with 802.11 chipset active. It was determined that there is no new emission introduced by EN-DC mode, or the 802.11 chipset. For EN-DC mode, n261 uses LTE Bands 13/5/12/2/66/48 and n260 uses LTE Bands 13/5/12/14/2/66/30/48.

10) There was no discernible difference in the spurious emission levels when using different LTE anchor bands. Thus, for Band n261, LTE Band 5 was used for QTM#0 / Ant1, LTE Band 4 was used for QTM#1 / Ant2 and LTE B2 was used for QTM2 / Ant3 EN-DC investigations. And for Band n260, LTE Band 5 was used for QTM#0 / Ant1, LTE Band 2 was used for QTM#1 / Ant2 and LTE B30 was used for QTM2 / Ant3 EN-DC investigations.

11) For the n261 band spurious emission measurements, the spectrum directly below the fundamental frequency is investigated from 18 - 27.375GHz and the spectrum directly above the fundamental frequency is investigated from 28.475 - 40GHz. The portion of spectrum from 27.375 - 27.5GHz and 28.35 - 28.475GHz is shown Section 7.5 which covers band edge emissions.

12) For the n260 band spurious emission measurements, the spectrum directly below the fundamental frequency is investigated from 18 - 36.85GHz and the spectrum directly above the fundamental frequency is investigated from 40.15 - 60GHz. The portion of spectrum from 36.85 - 40GHz and 40 - 40.15GHz is shown Section 7.5 which covers band edge emissions.

13) H Beam and V Beam radiated spurious emissions were investigated.

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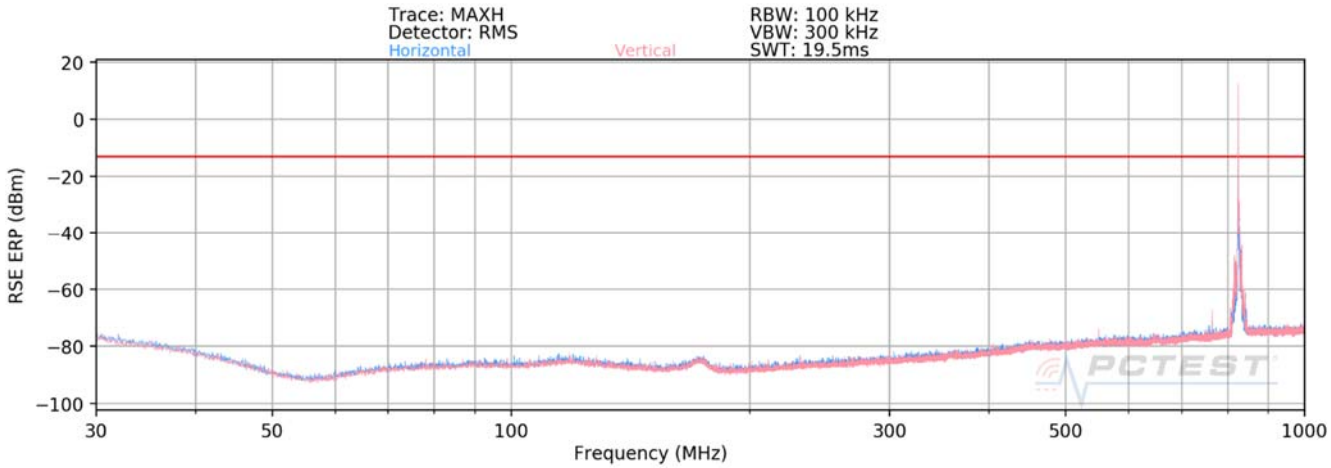
Band n261 – QTM#0 / ANT1
30MHz - 1GHz



Plot 7-25. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel)

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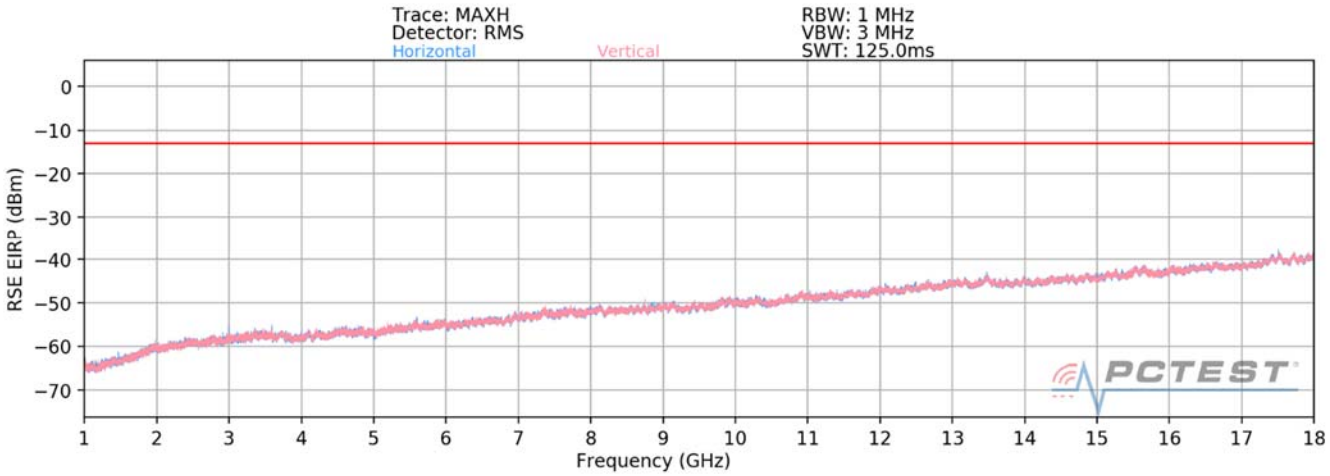
1GHz - 18GHz



Plot 7-26. Ant1-n261 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel)

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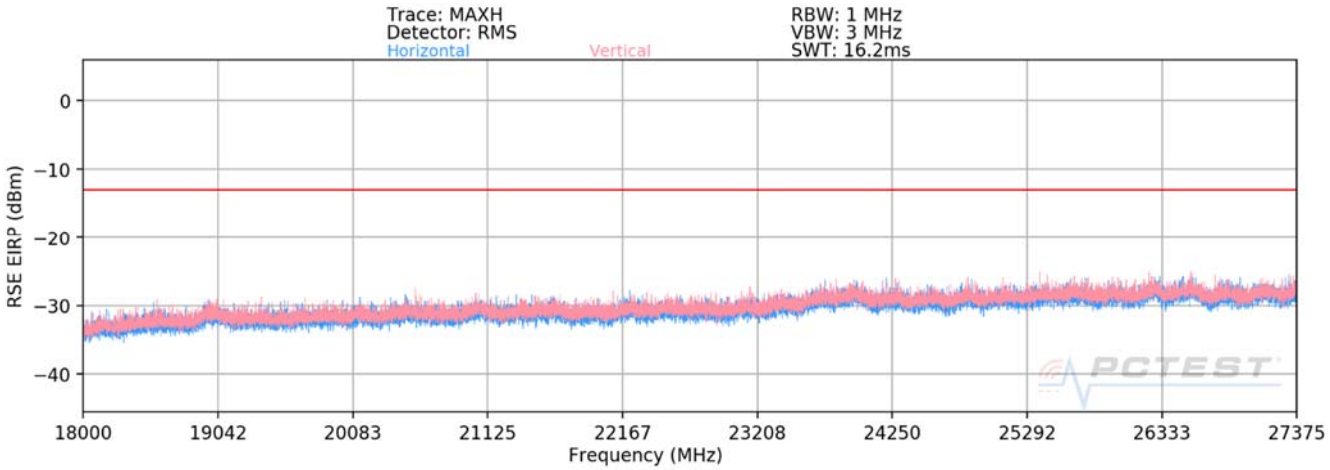
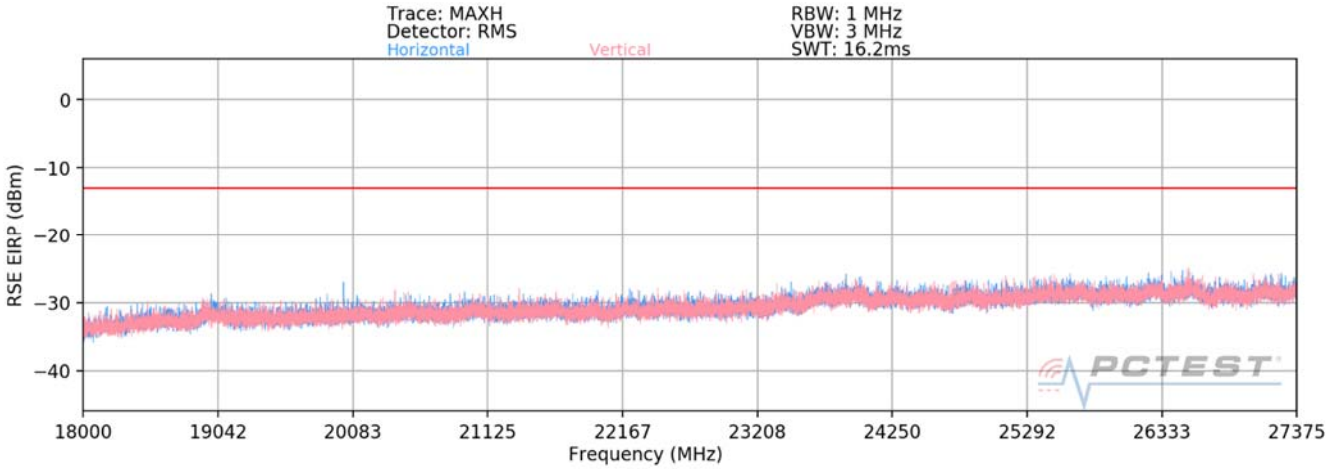


Plot 7-27. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-28. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
26343.90	Low	50	H	QPSK	H	-	-	-25.67	-13.00	-12.67
26176.30	Low	50	V	QPSK	V	-	-	-23.94	-13.00	-10.94
25973.20	Mid	50	H	QPSK	H	-	-	-26.17	-13.00	-13.17
26384.30	Mid	50	V	QPSK	V	-	-	-25.04	-13.00	-12.04
25374.30	High	50	H	QPSK	H	-	-	-26.76	-13.00	-13.76
26379.10	High	50	V	QPSK	V	-	-	-25.18	-13.00	-12.18

Table 7-35. Ant1 - SISO -Spurious Emissions Table (18GHz - 27.375GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-21.71	-13.00	-8.71
Mid	50	QPSK	-22.56	-13.00	-9.56
High	50	QPSK	-22.89	-13.00	-9.89

Table 7-36. Ant1 - MIMO -Spurious Emissions Table (18GHz - 27.375GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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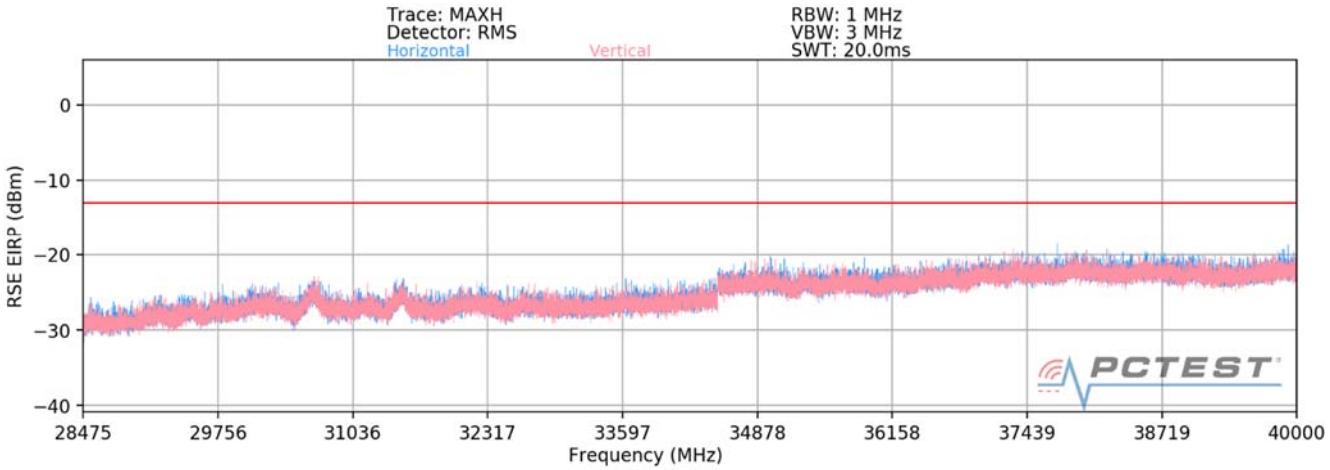
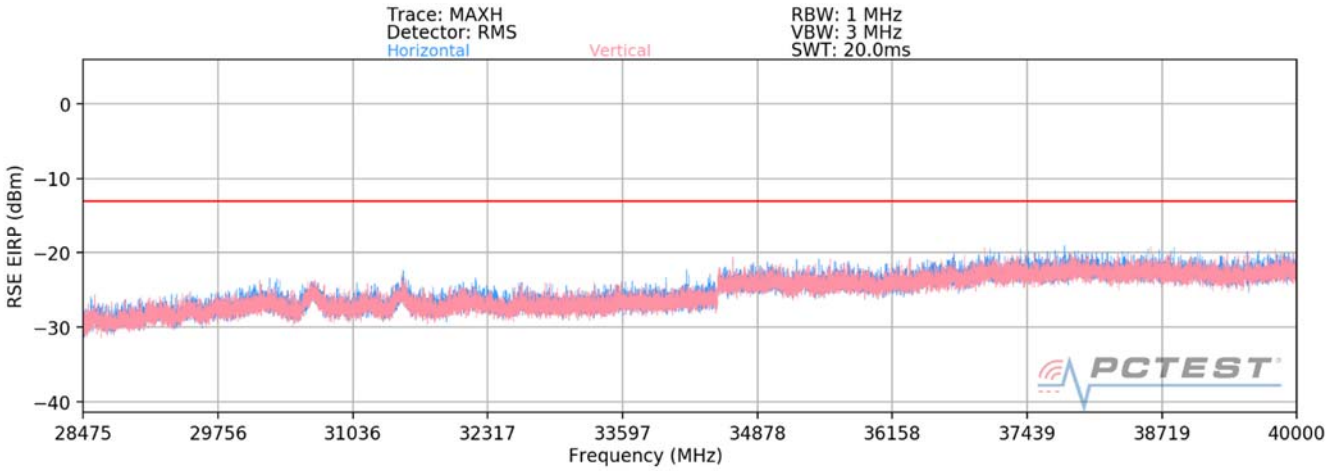
28.475GHz - 40GHz



Plot 7-29. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-30. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
37896.10	Low	50	H	QPSK	H	-	-	-25.64	-13.00	-12.64
37963.10	Low	50	V	QPSK	V	-	-	-22.81	-13.00	-9.81
38018.90	Mid	50	H	QPSK	H	-	-	-21.94	-13.00	-8.94
38128.90	Mid	50	V	QPSK	V	-	-	-22.74	-13.00	-9.74
37953.80	High	50	H	QPSK	H	-	-	-23.66	-13.00	-10.66
38147.10	High	50	V	QPSK	V	-	-	-21.70	-13.00	-8.70

Table 7-37. Ant1 - SISO -Spurious Emissions Table (28.475GHz - 40GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-20.99	-13.00	-7.99
Mid	50	QPSK	-19.31	-13.00	-6.31
High	50	QPSK	-19.56	-13.00	-6.56

Table 7-38. Ant1 - MIMO -Spurious Emissions Table (28.475GHz - 40GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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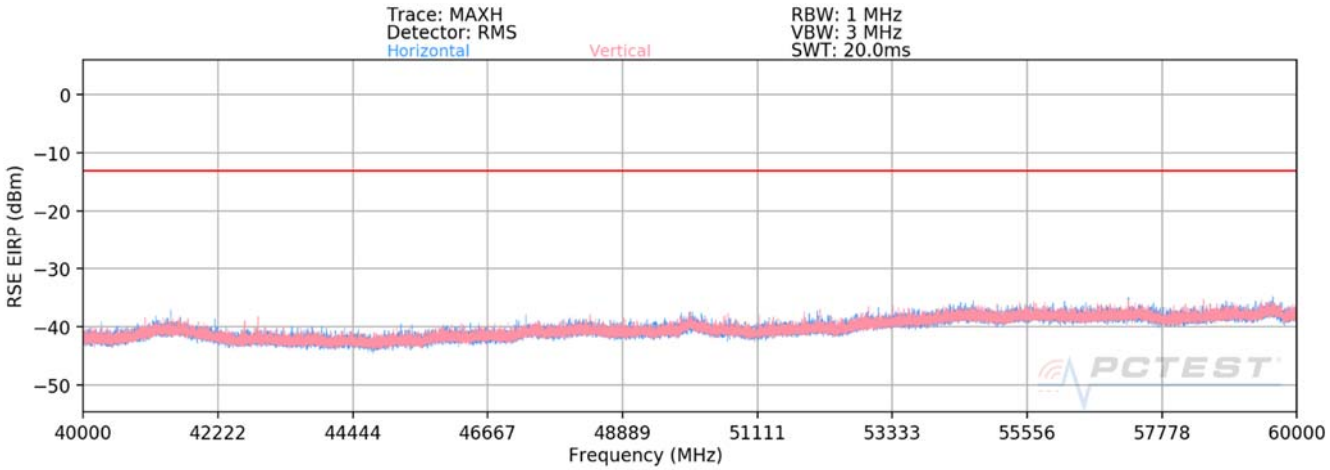
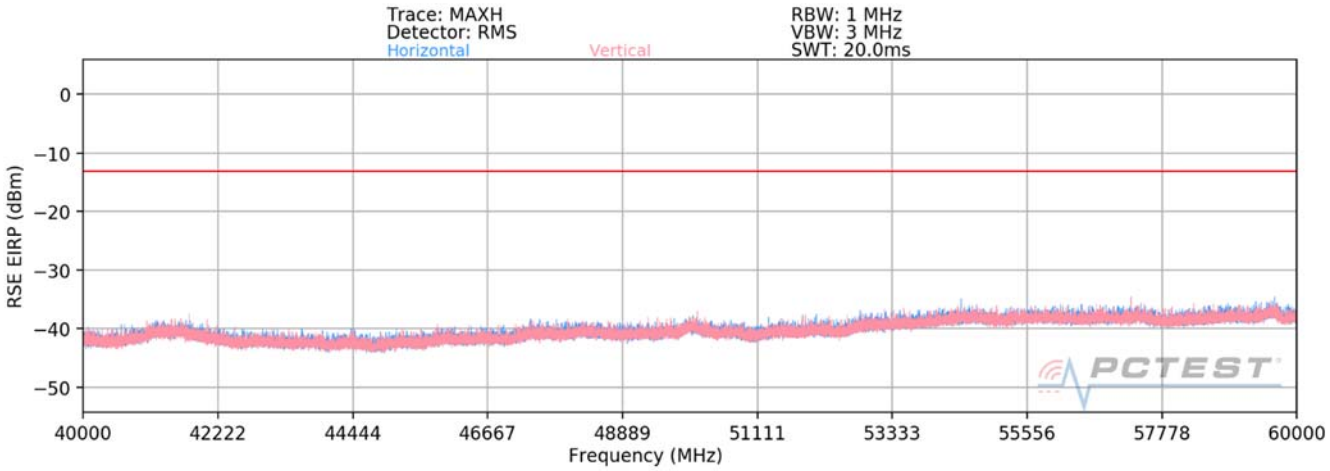


Plot 7-31. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-32. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55073.46	Low	50	H	QPSK	H	-	-	-45.67	-13.00	-32.67
55056.99	Low	50	V	QPSK	H	-	-	-45.77	-13.00	-32.77
55833.30	Mid	50	H	QPSK	H	-	-	-45.58	-13.00	-32.58
55842.96	Mid	50	V	QPSK	H	-	-	-45.62	-13.00	-32.62
56634.96	High	50	H	QPSK	H	-	-	-45.35	-13.00	-32.35
56634.57	High	50	V	QPSK	H	-	-	-45.42	-13.00	-32.42

Table 7-39. Ant1 - SISO -Spurious Emissions Table (40GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-42.71	-13.00	-29.71
Mid	50	QPSK	-42.59	-13.00	-29.59
High	50	QPSK	-42.38	-13.00	-29.38

Table 7-40. Ant1 - MIMO -Spurious Emissions Table (40GHz - 60GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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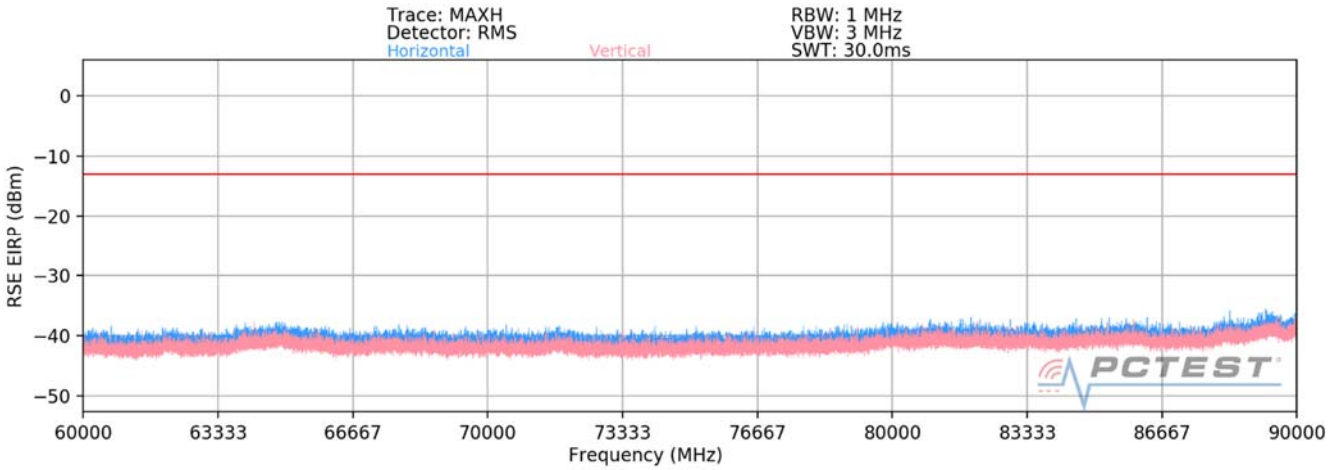
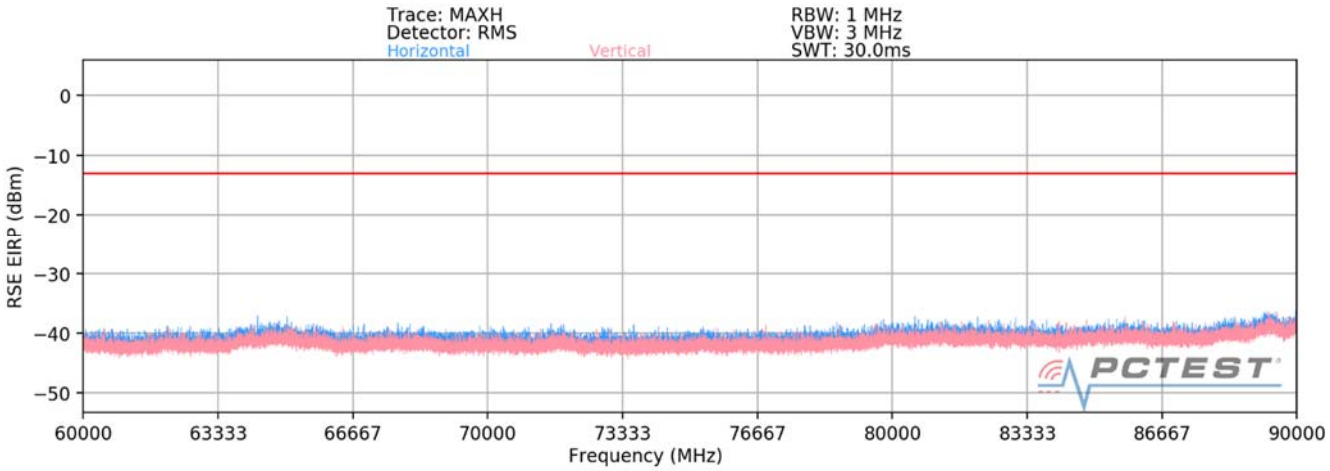


Plot 7-33. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-34. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
82596.24	Low	50	H	QPSK	V	-	-	-45.34	-13.00	-32.34
82617.21	Low	50	V	QPSK	V	-	-	-45.43	-13.00	-32.43
83773.86	Mid	50	H	QPSK	V	-	-	-45.86	-13.00	-32.86
83778.93	Mid	50	V	QPSK	V	-	-	-45.39	-13.00	-32.39
84963.63	High	50	H	QPSK	V	-	-	-45.21	-13.00	-32.21
84958.65	High	50	V	QPSK	V	-	-	-45.24	-13.00	-32.24

Table 7-41. Ant1 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-42.37	-13.00	-29.37
Mid	50	QPSK	-42.61	-13.00	-29.61
High	50	QPSK	-42.21	-13.00	-29.21

Table 7-42. Ant1 - MIMO -Spurious Emissions Table (60GHz - 90GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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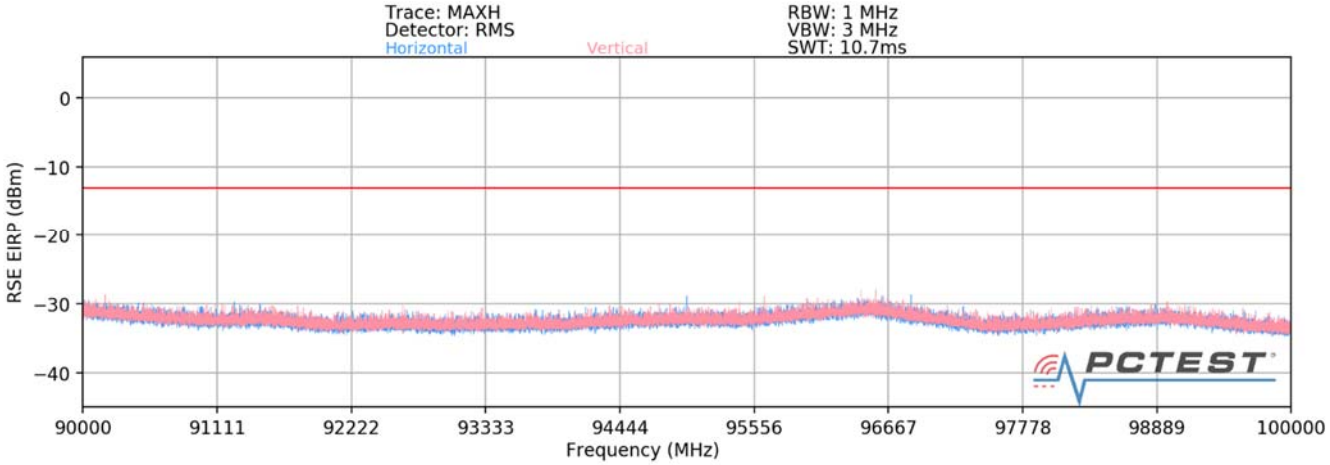
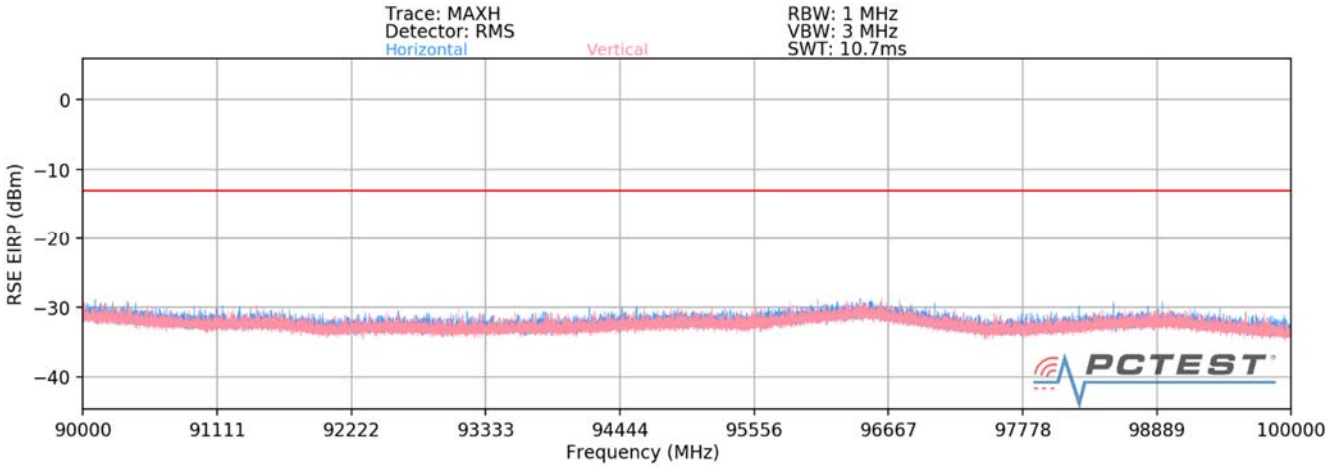
90GHz - 100GHz



Plot 7-35. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-36. Ant1-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
96541.30	Low	50	H	QPSK	H	-	-	-28.91	-13.00	-15.91
96637.60	Low	50	V	QPSK	V	-	-	-29.77	-13.00	-16.77
96631.70	Mid	50	H	QPSK	H	-	-	-30.94	-13.00	-17.94
96547.50	Mid	50	V	QPSK	V	-	-	-28.76	-13.00	-15.76
90256.40	High	50	H	QPSK	H	-	-	-30.31	-13.00	-17.31
96537.80	High	50	V	QPSK	V	-	-	-28.19	-13.00	-15.19

Table 7-43. Ant1 - SISO -Spurious Emissions Table (90GHz - 100GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-26.31	-13.00	-13.31
Mid	50	QPSK	-26.70	-13.00	-13.70
High	50	QPSK	-26.11	-13.00	-13.11

Table 7-44. Ant1 - MIMO -Spurious Emissions Table (90GHz - 100GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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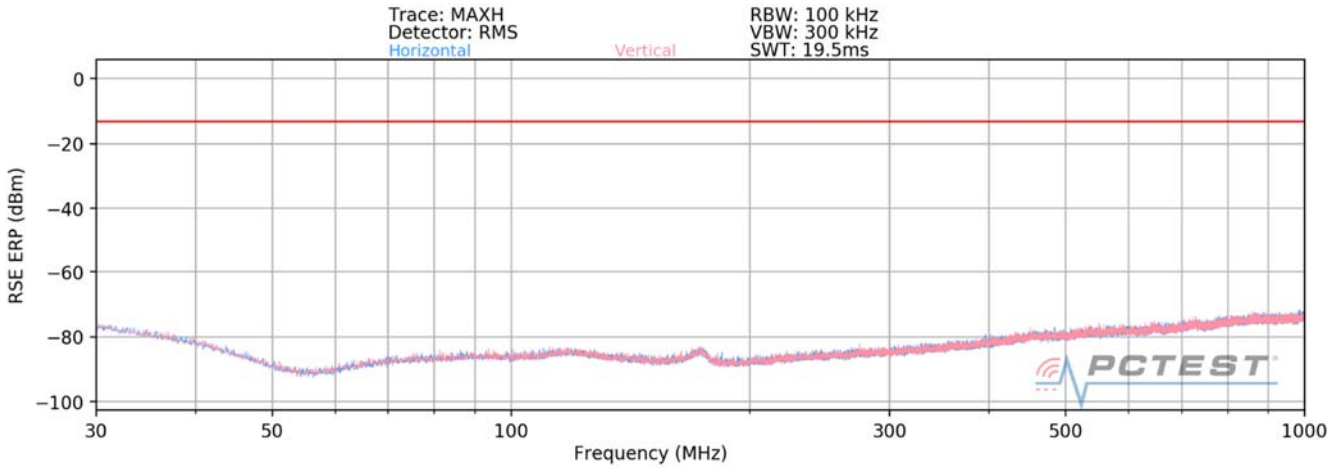
Band n261 – QTM#1 / Ant2
30MHz - 1GHz



Plot 7-37. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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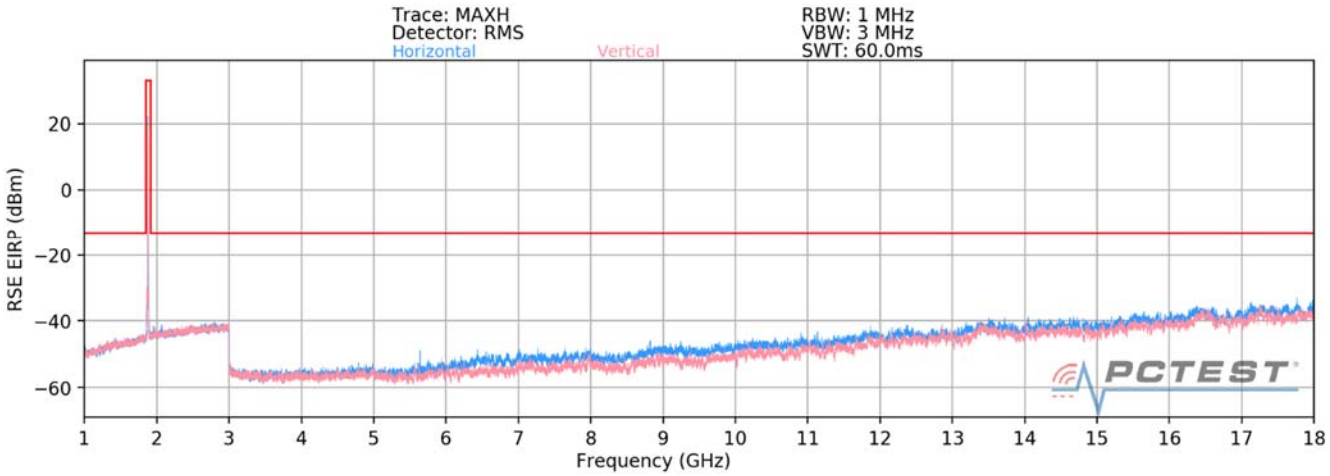
1GHz - 18GHz



Plot 7-38. Ant2-n261 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel)

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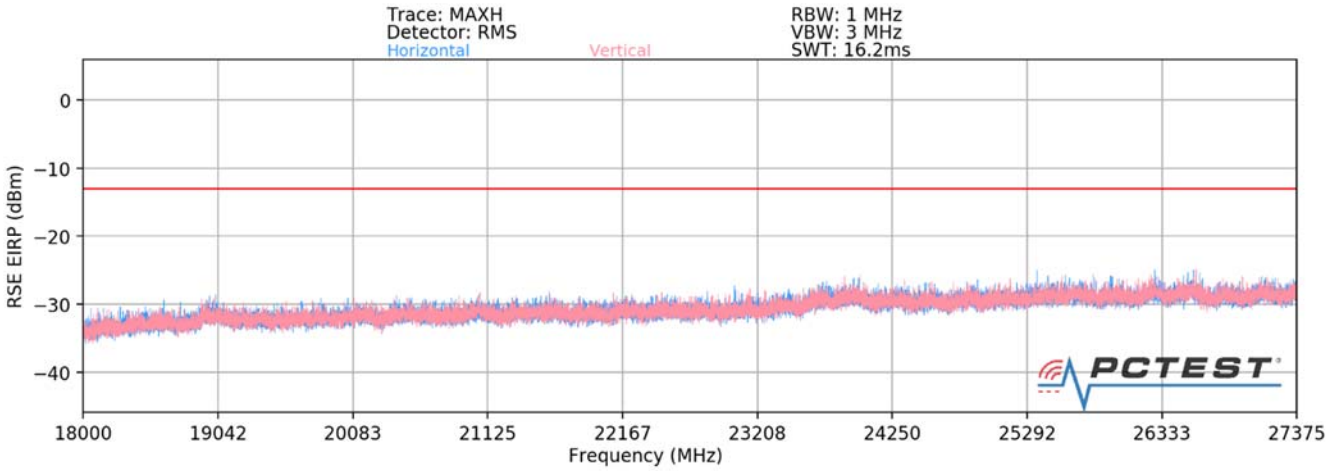
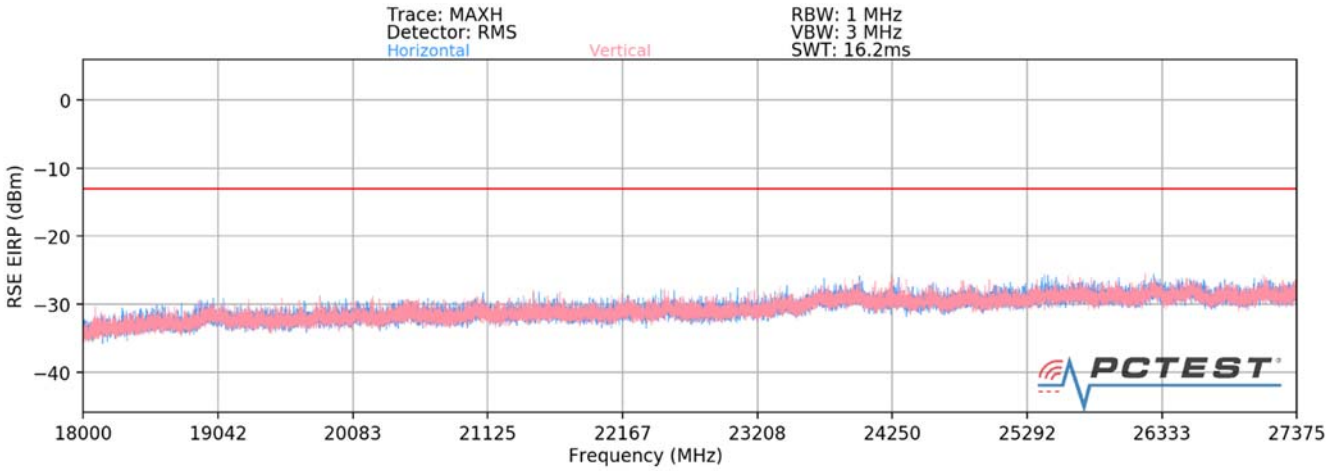
18GHz - 27.375GHz



Plot 7-39. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-40. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
25618.20	Low	50	H	QPSK	H	-	-	-25.06	-13.00	-12.06
26176.10	Low	50	V	QPSK	V	-	-	-24.29	-13.00	-11.29
25183.60	Mid	50	H	QPSK	H	-	-	-25.97	-13.00	-12.97
26169.90	Mid	50	V	QPSK	V	-	-	-26.08	-13.00	-13.08
25897.30	High	50	H	QPSK	H	-	-	-24.94	-13.00	-11.94
26197.60	High	50	V	QPSK	V	-	-	-25.67	-13.00	-12.67

Table 7-45. Ant2 - SISO -Spurious Emissions Table (18GHz - 27.375GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-21.65	-13.00	-8.65
Mid	50	QPSK	-23.01	-13.00	-10.01
High	50	QPSK	-22.28	-13.00	-9.28

Table 7-46. Ant2 - MIMO -Spurious Emissions Table (18GHz - 27.375GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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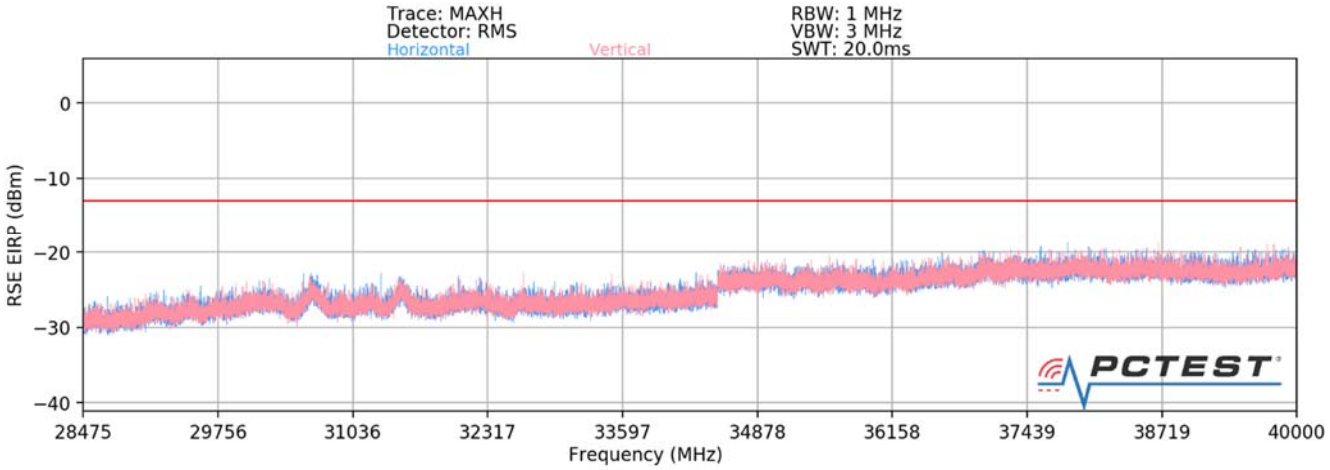
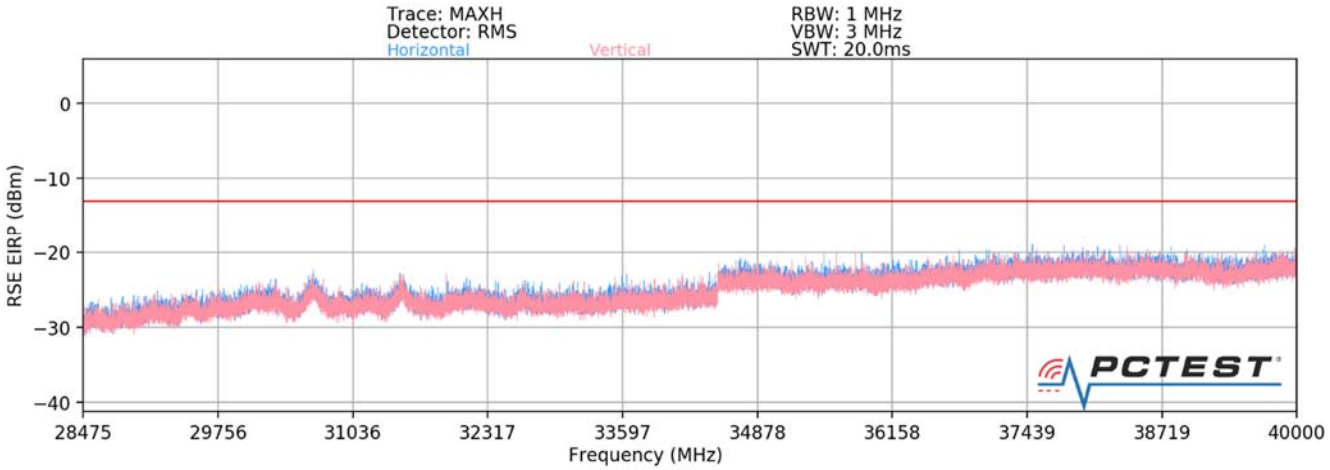
28.475GHz - 40GHz



Plot 7-41. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-42. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
38684.10	Low	50	H	QPSK	H	-	-	-22.34	-13.00	-9.34
37319.90	Low	50	V	QPSK	V	-	-	-21.64	-13.00	-8.64
38023.80	Mid	50	H	QPSK	H	-	-	-21.39	-13.00	-8.39
38053.90	Mid	50	V	QPSK	V	-	-	-23.91	-13.00	-10.91
37326.40	High	50	H	QPSK	H	-	-	-22.64	-13.00	-9.64
38048.10	High	50	V	QPSK	V	-	-	-21.76	-13.00	-8.76

Table 7-47. Ant2 - SISO -Spurious Emissions Table (28.475GHz - 40GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-18.97	-13.00	-5.97
Mid	50	QPSK	-19.46	-13.00	-6.46
High	50	QPSK	-19.17	-13.00	-6.17

Table 7-48. Ant2 - MIMO -Spurious Emissions Table (28.475GHz - 40GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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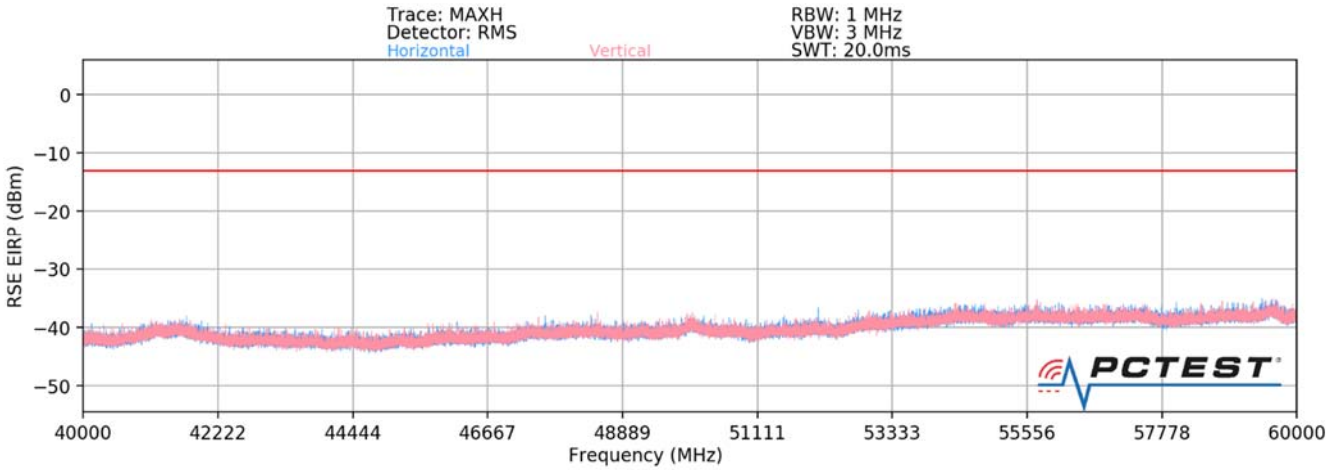
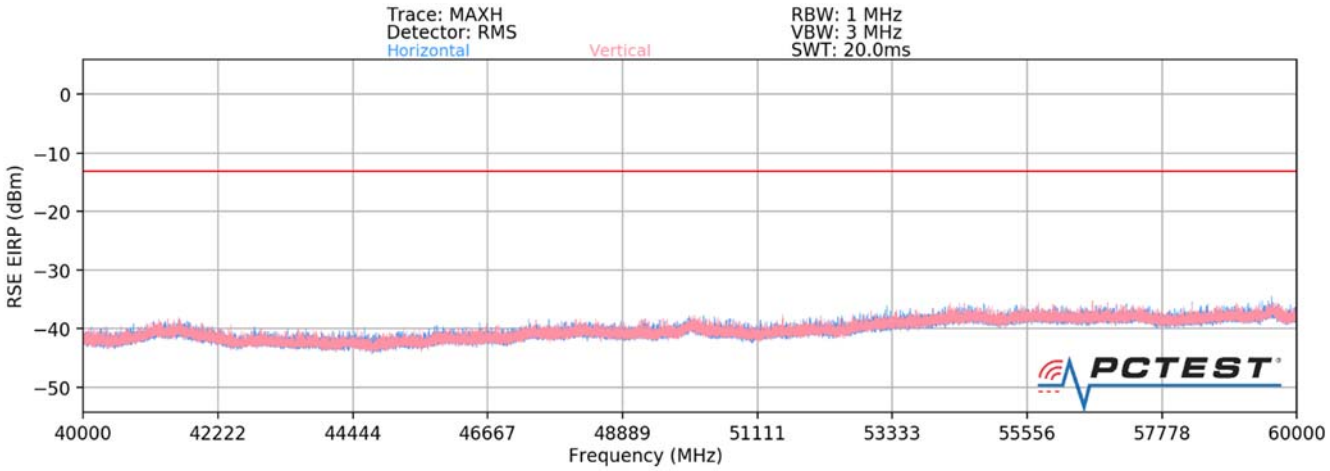


Plot 7-43. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-44. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55065.87	Low	50	H	QPSK	H	-	-	-45.76	-13.00	-32.76
55080.09	Low	50	V	QPSK	V	-	-	-45.22	-13.00	-32.22
55858.50	Mid	50	H	QPSK	H	-	-	-45.02	-13.00	-32.02
55849.68	Mid	50	V	QPSK	V	-	-	-45.12	-13.00	-32.12
56631.93	High	50	H	QPSK	H	-	-	-45.20	-13.00	-32.20
56626.29	High	50	V	QPSK	V	-	-	-45.35	-13.00	-32.35

Table 7-49. Ant2 - SISO -Spurious Emissions Table (40GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-42.47	-13.00	-29.47
Mid	50	QPSK	-42.06	-13.00	-29.06
High	50	QPSK	-42.27	-13.00	-29.27

Table 7-50. Ant2 - MIMO -Spurious Emissions Table (40GHz - 60GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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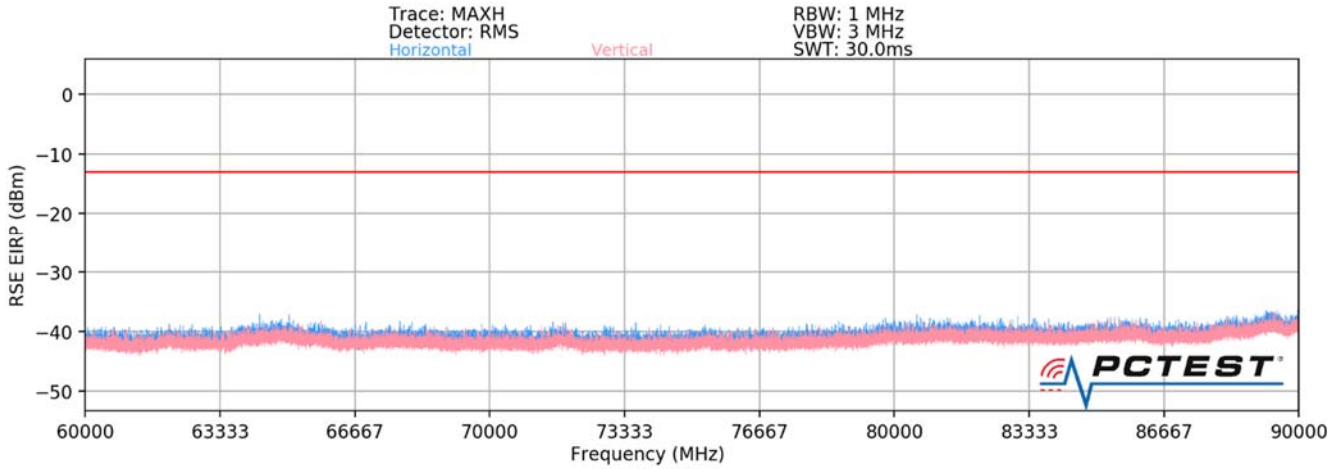
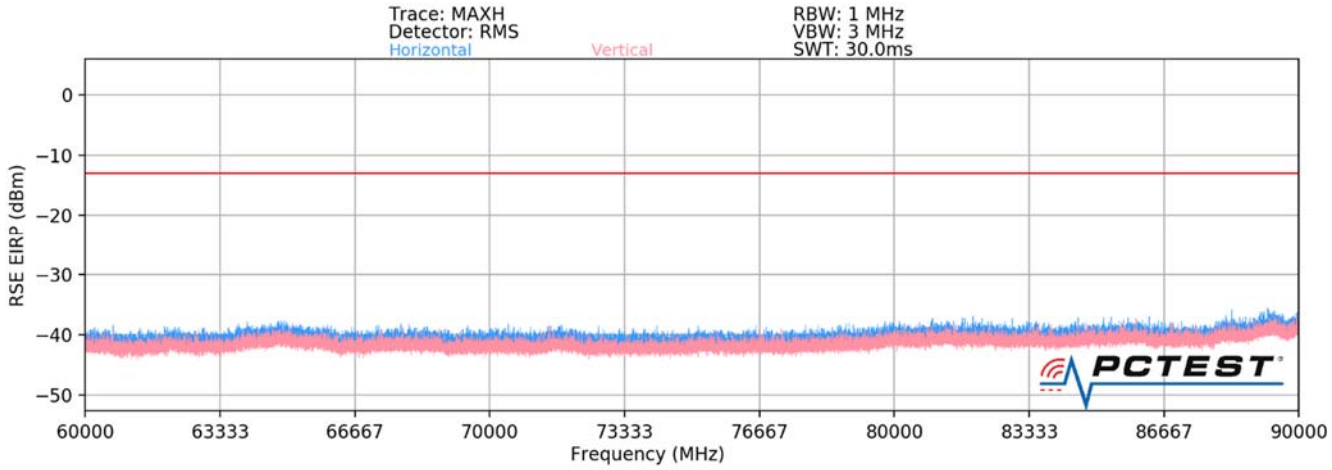


Plot 7-45. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-46. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
82595.16	Low	50	H	QPSK	V	-	-	-45.78	-13.00	-32.78
82600.05	Low	50	V	QPSK	V	-	-	-45.74	-13.00	-32.74
83753.34	Mid	50	H	QPSK	V	-	-	-45.84	-13.00	-32.84
83752.44	Mid	50	V	QPSK	V	-	-	-45.86	-13.00	-32.86
84962.97	High	50	H	QPSK	V	-	-	-45.74	-13.00	-32.74
84950.76	High	50	V	QPSK	V	-	-	-45.46	-13.00	-32.46

Table 7-51. Ant2 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-42.75	-13.00	-29.75
Mid	50	QPSK	-42.84	-13.00	-29.84
High	50	QPSK	-42.58	-13.00	-29.58

Table 7-52. Ant2 - MIMO -Spurious Emissions Table (60GHz - 90GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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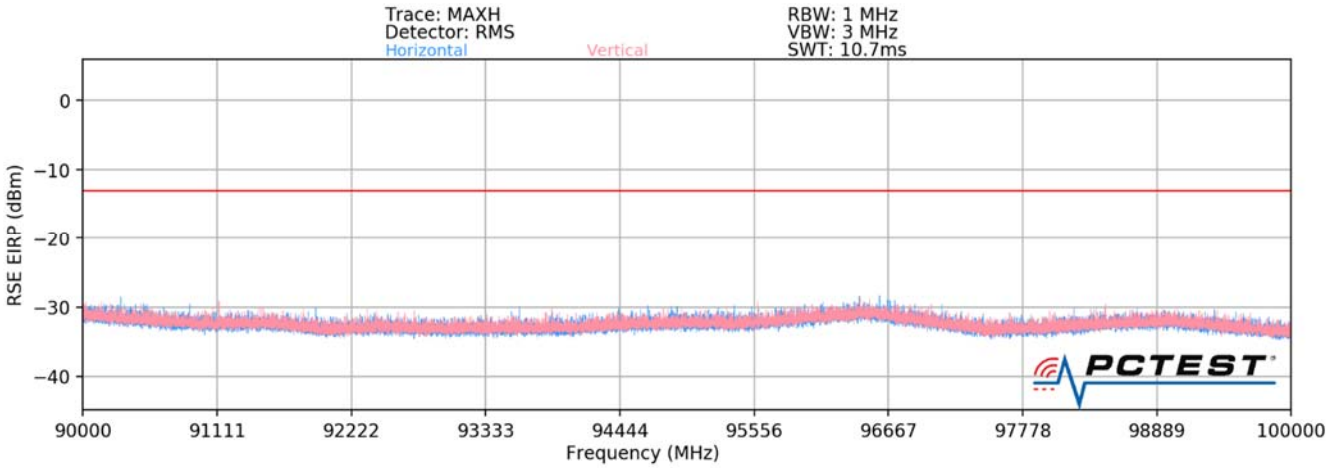
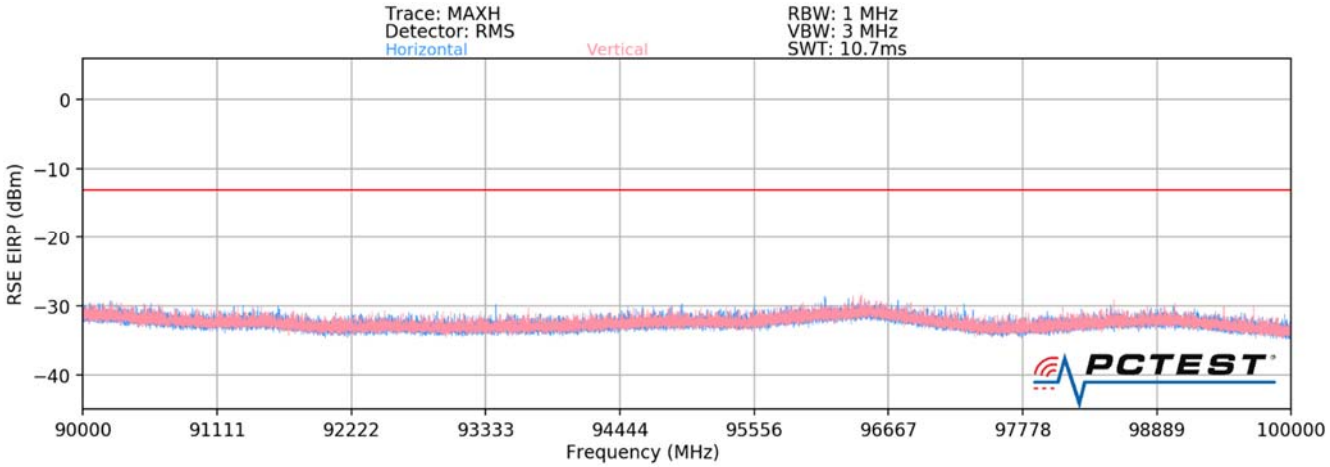


Plot 7-47. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-48. Ant2-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
95316.90	Low	50	H	QPSK	H	-	-	-27.61	-13.00	-14.61
96013.80	Low	50	V	QPSK	V	-	-	-28.93	-13.00	-15.93
95394.30	Mid	50	H	QPSK	H	-	-	-28.09	-13.00	-15.09
95262.50	Mid	50	V	QPSK	V	-	-	-30.84	-13.00	-17.84
95614.10	High	50	H	QPSK	H	-	-	-29.37	-13.00	-16.37
91398.30	High	50	V	QPSK	V	-	-	-28.30	-13.00	-15.30

Table 7-53. Ant2 - SISO -Spurious Emissions Table (90GHz - 100GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-25.21	-13.00	-12.21
Mid	50	QPSK	-26.24	-13.00	-13.24
High	50	QPSK	-25.79	-13.00	-12.79

Table 7-54. Ant2 - MIMO -Spurious Emissions Table (90GHz - 100GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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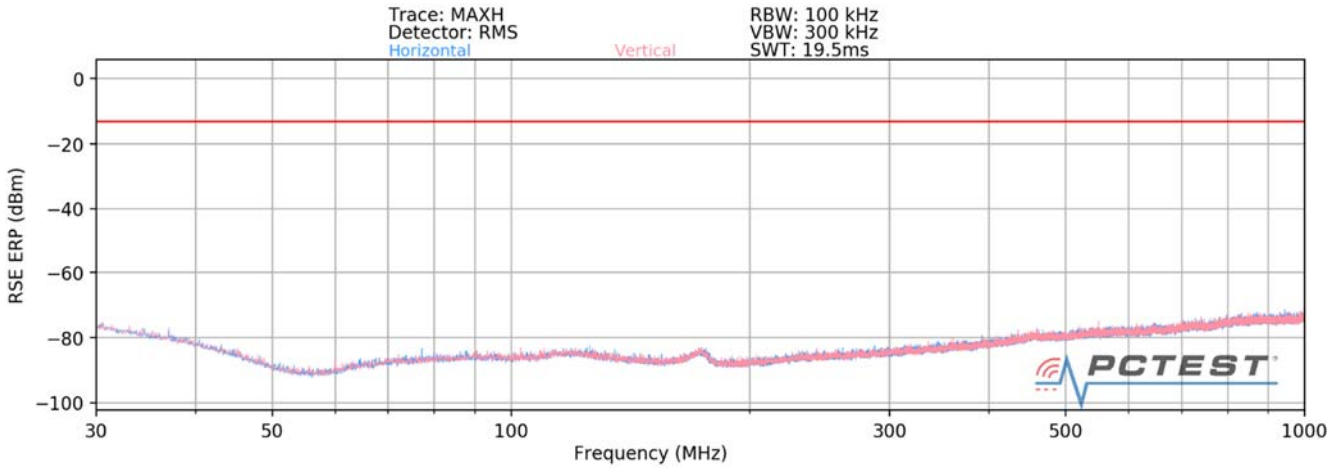
Band n261 – QTM#2 / Ant3
30MHz - 1GHz



Plot 7-49. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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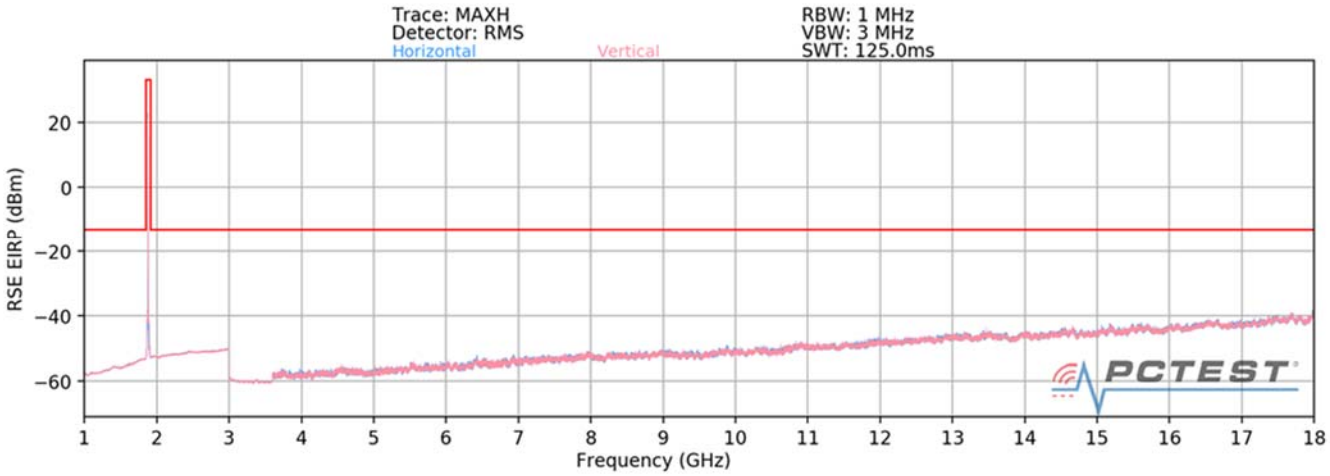
1GHz - 18GHz



Plot 7-50. Ant3-n261 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel V Beam)

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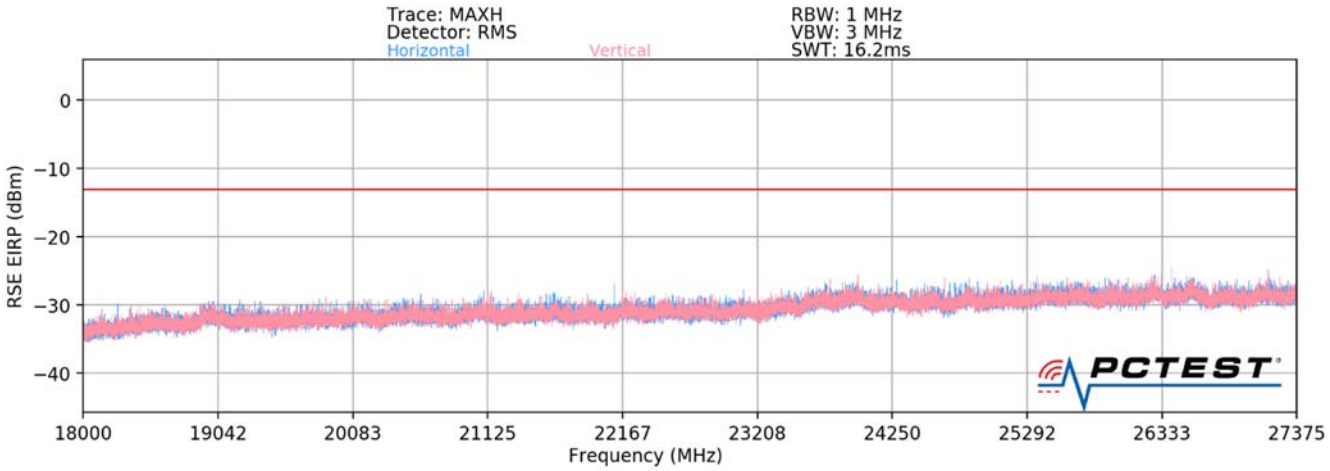
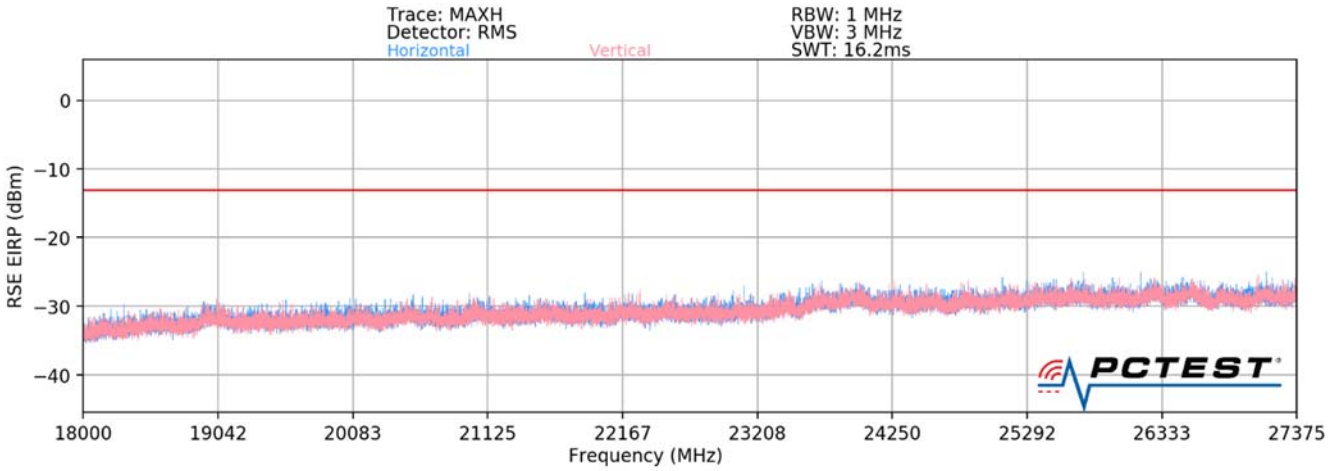
18GHz - 27.375GHz



Plot 7-51. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-52. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
25931.80	Low	50	H	QPSK	H	-	-	-24.31	-13.00	-11.31
26526.30	Low	50	V	QPSK	V	-	-	-25.94	-13.00	-12.94
25361.90	Mid	50	H	QPSK	H	-	-	-25.30	-13.00	-12.30
25176.60	Mid	50	V	QPSK	V	-	-	-24.98	-13.00	-11.98
25189.50	High	50	H	QPSK	H	-	-	-27.02	-13.00	-14.02
25673.30	High	50	V	QPSK	V	-	-	-25.13	-13.00	-12.13

Table 7-55. Ant3 - SISO -Spurious Emissions Table (18GHz - 27.375GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-22.04	-13.00	-9.04
Mid	50	QPSK	-22.13	-13.00	-9.13
High	50	QPSK	-22.96	-13.00	-9.96

Table 7-56. Ant3 - MIMO -Spurious Emissions Table (18GHz - 27.375GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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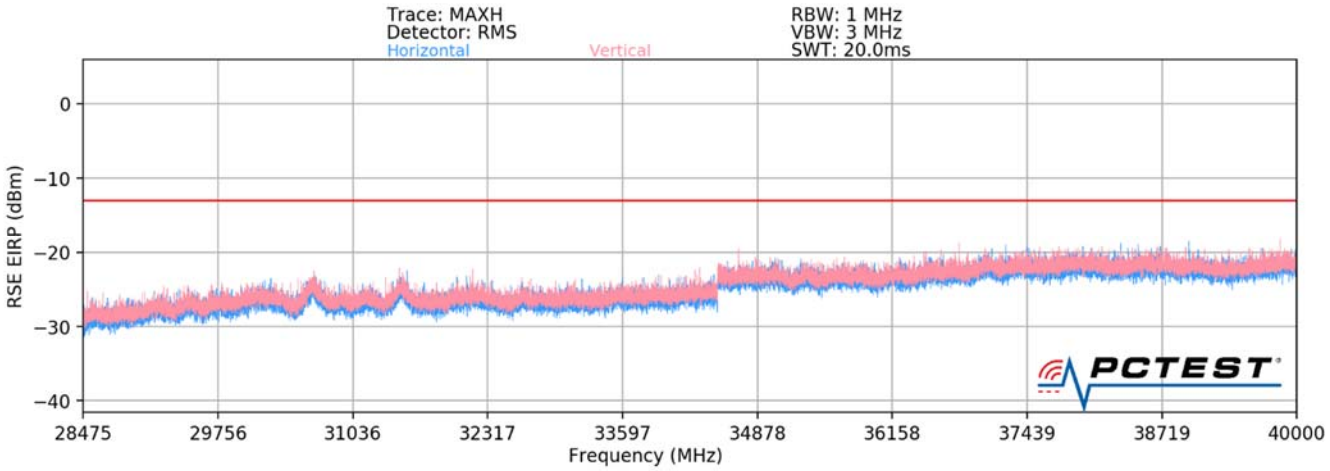
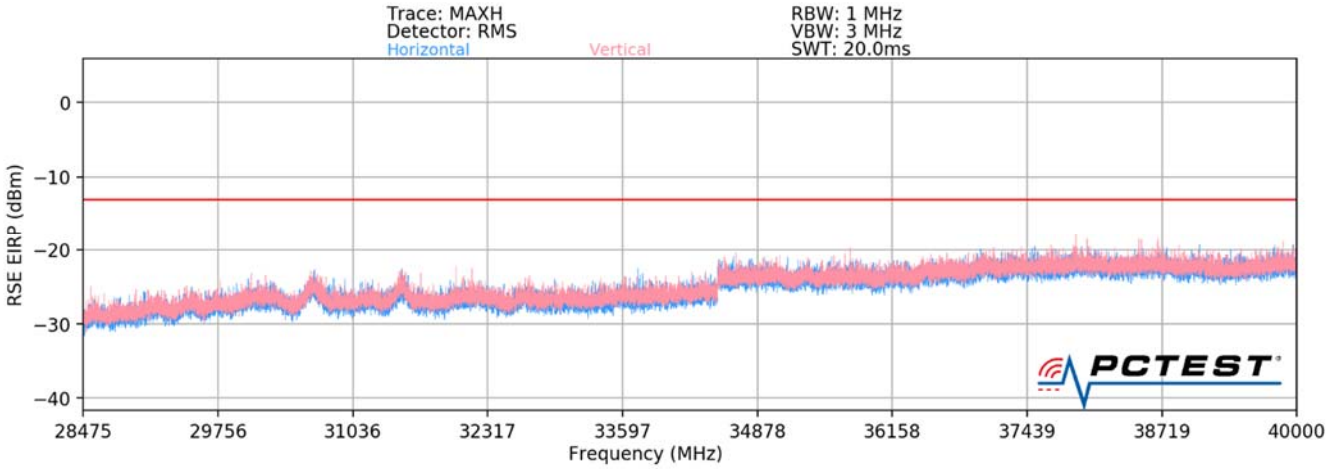
28.475GHz - 40GHz



Plot 7-53. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-54. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
38018.30	Low	50	H	QPSK	H	-	-	-23.61	-13.00	-10.61
38129.00	Low	50	V	QPSK	V	-	-	-22.85	-13.00	-9.85
38249.30	Mid	50	H	QPSK	H	-	-	-23.66	-13.00	-10.66
38012.60	Mid	50	V	QPSK	V	-	-	-21.83	-13.00	-8.83
37986.60	High	50	H	QPSK	H	-	-	-22.08	-13.00	-9.08
38231.90	High	50	V	QPSK	V	-	-	-23.76	-13.00	-10.76

Table 7-57. Ant3 - SISO -Spurious Emissions Table (28.475GHz - 40GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-20.20	-13.00	-7.20
Mid	50	QPSK	-19.64	-13.00	-6.64
High	50	QPSK	-19.83	-13.00	-6.83

Table 7-58. Ant3 - MIMO -Spurious Emissions Table (28.475GHz - 40GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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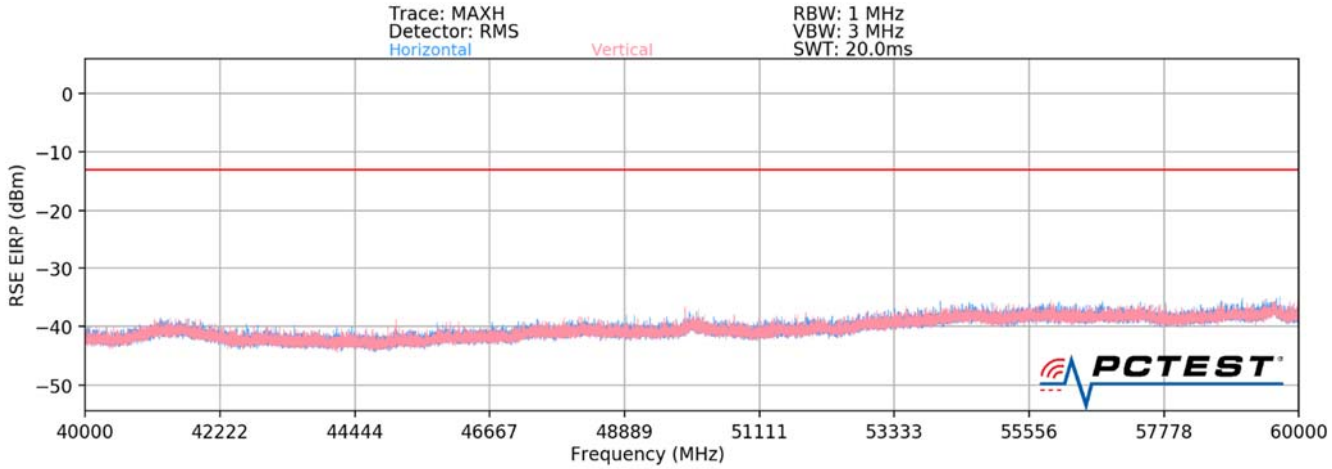
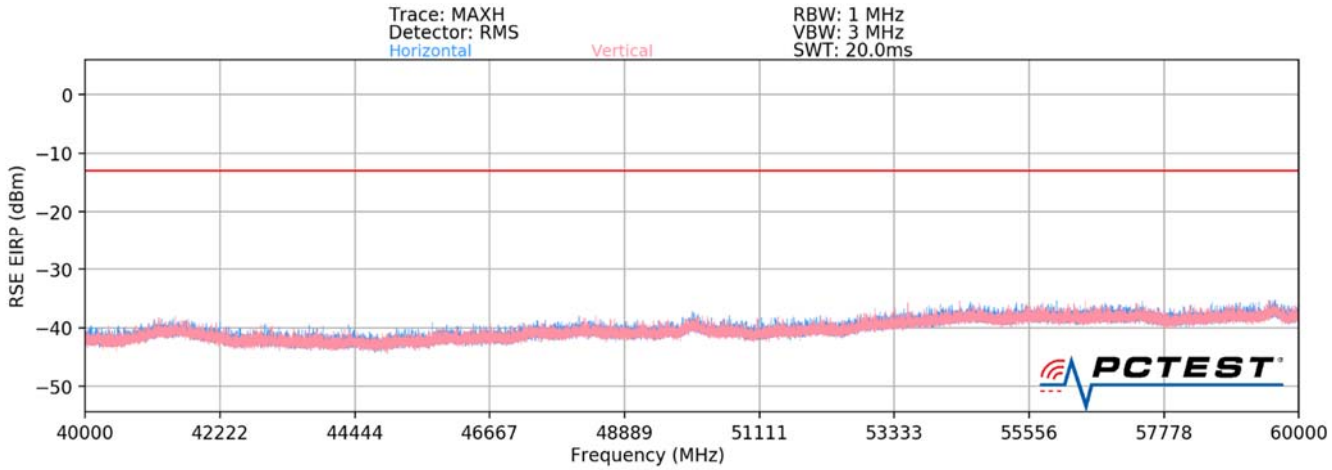


Plot 7-55. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-56. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55073.64	Low	50	H	QPSK	V	-	-	-45.66	-13.00	-32.66
55070.52	Low	50	V	QPSK	V	-	-	-45.70	-13.00	-32.70
55841.16	Mid	50	H	QPSK	V	-	-	-45.08	-13.00	-32.08
55848.18	Mid	50	V	QPSK	V	-	-	-45.23	-13.00	-32.23
56634.81	High	50	H	QPSK	V	-	-	-45.39	-13.00	-32.39
56627.67	High	50	V	QPSK	V	-	-	-45.39	-13.00	-32.39

Table 7-59. Ant3 - SISO -Spurious Emissions Table (40GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-42.67	-13.00	-29.67
Mid	50	QPSK	-42.14	-13.00	-29.14
High	50	QPSK	-42.38	-13.00	-29.38

Table 7-60. Ant3 - MIMO -Spurious Emissions Table (40GHz - 60GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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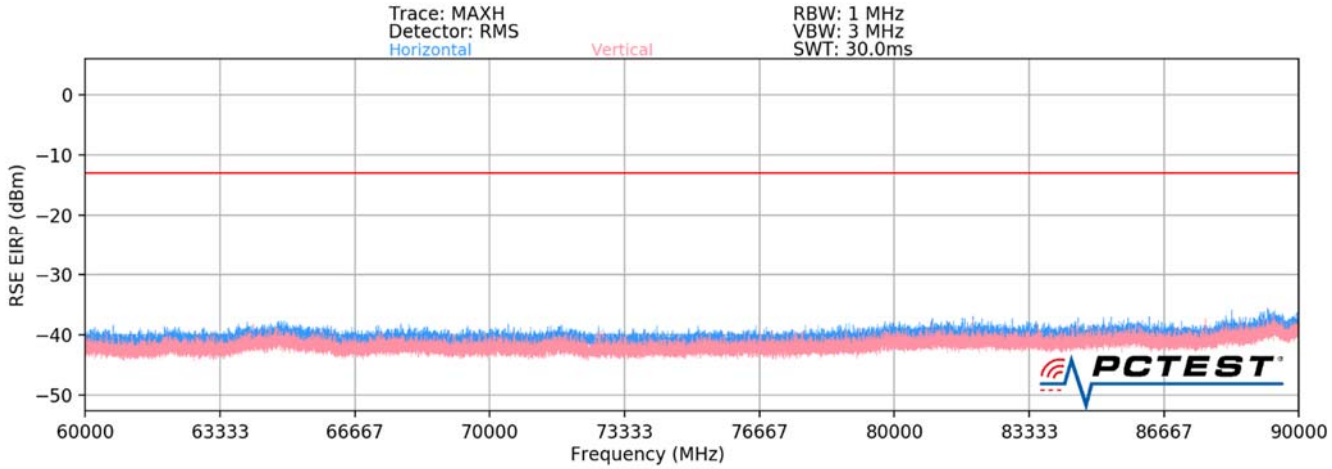
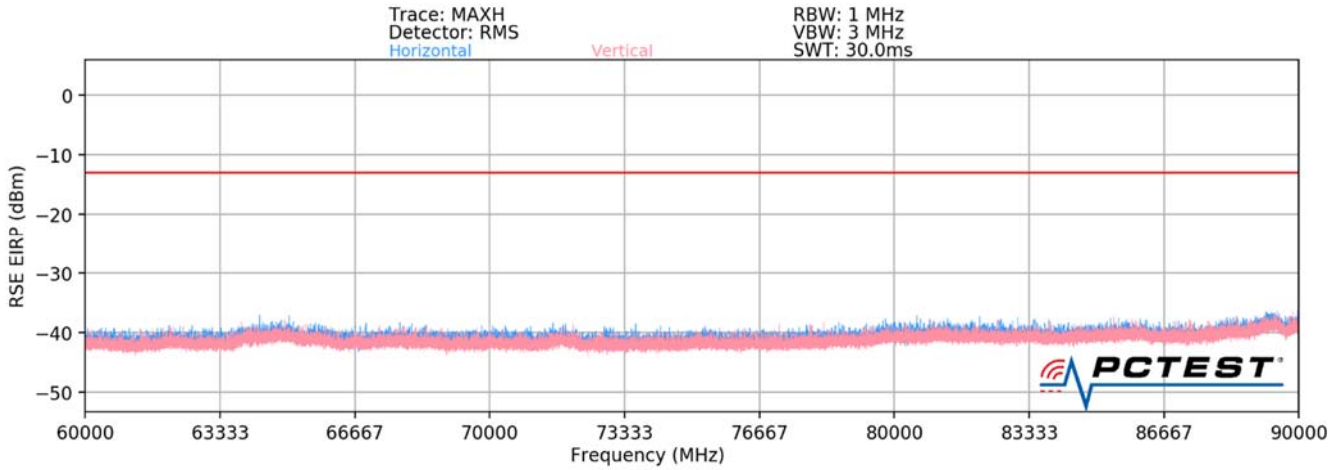


Plot 7-57. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-58. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
82596.18	Low	50	H	QPSK	V	-	-	-45.66	-13.00	-32.66
82605.93	Low	50	V	QPSK	V	-	-	-45.75	-13.00	-32.75
83772.33	Mid	50	H	QPSK	V	-	-	-45.97	-13.00	-32.97
83751.99	Mid	50	V	QPSK	V	-	-	-45.80	-13.00	-32.80
84964.89	High	50	H	QPSK	V	-	-	-45.56	-13.00	-32.56
84963.75	High	50	V	QPSK	V	-	-	-45.50	-13.00	-32.50

Table 7-61. Ant3 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-42.69	-13.00	-29.69
Mid	50	QPSK	-42.87	-13.00	-29.87
High	50	QPSK	-42.52	-13.00	-29.52

Table 7-62. Ant3 - MIMO -Spurious Emissions Table (60GHz - 90GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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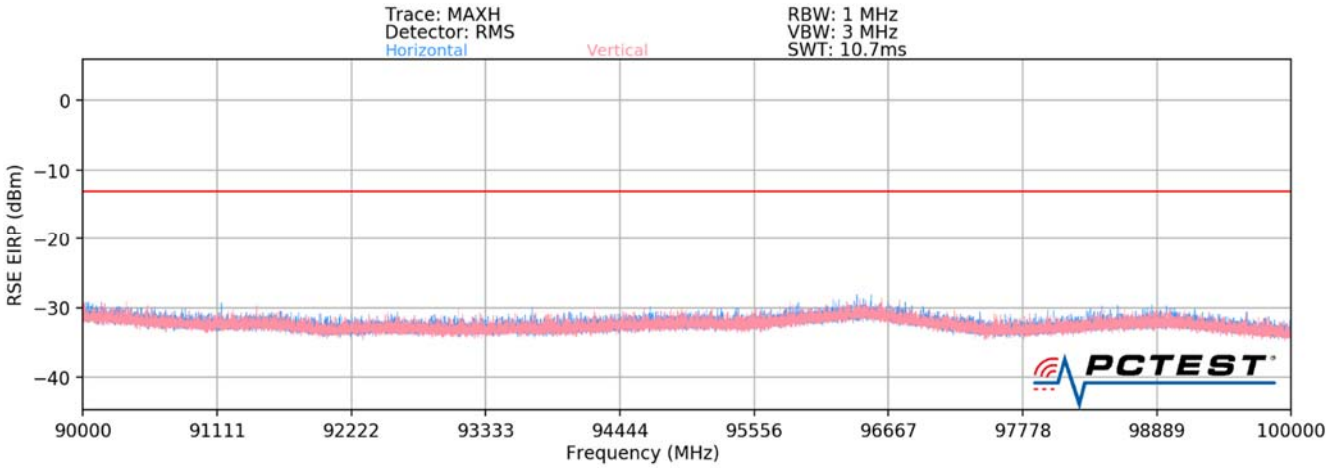
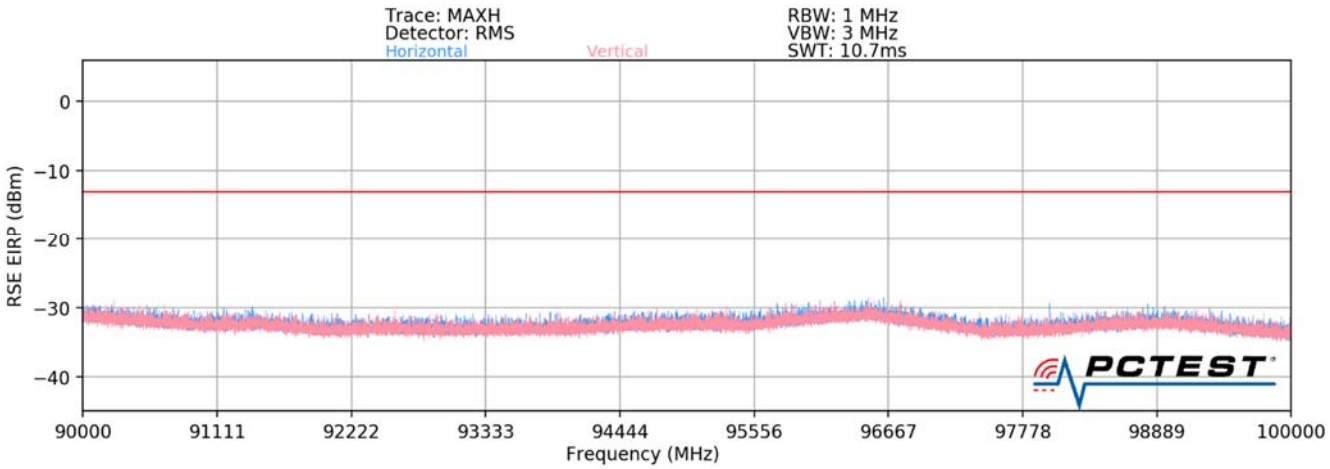


Plot 7-59. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-60. Ant3-n261 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
96318.90	Low	50	H	QPSK	H	-	-	-28.05	-13.00	-15.05
96013.80	Low	50	V	QPSK	V	-	-	-27.06	-13.00	-14.06
95896.30	Mid	50	H	QPSK	H	-	-	-28.64	-13.00	-15.64
95128.30	Mid	50	V	QPSK	V	-	-	-30.18	-13.00	-17.18
95896.40	High	50	H	QPSK	H	-	-	-28.63	-13.00	-15.63
96018.80	High	50	V	QPSK	V	-	-	-29.08	-13.00	-16.08

Table 7-63. Ant3 - SISO -Spurious Emissions Table (90GHz - 100GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-24.52	-13.00	-11.52
Mid	50	QPSK	-26.33	-13.00	-13.33
High	50	QPSK	-25.84	-13.00	-12.84

Table 7-64. Ant3 - MIMO -Spurious Emissions Table (90GHz - 100GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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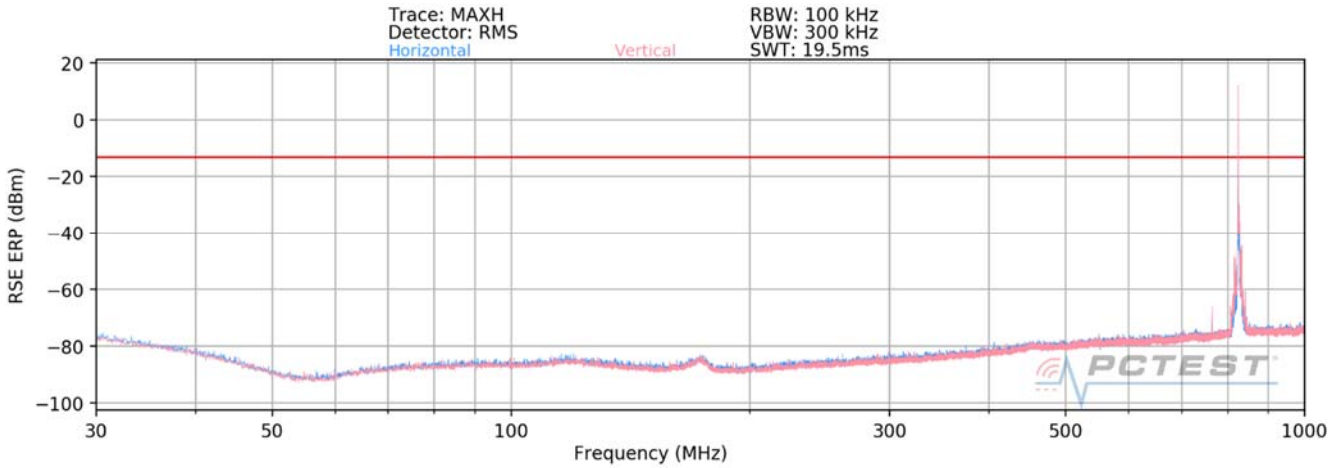
Band n260 – QTM#0 / Ant1
30MHz - 1GHz



Plot 7-61. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel)

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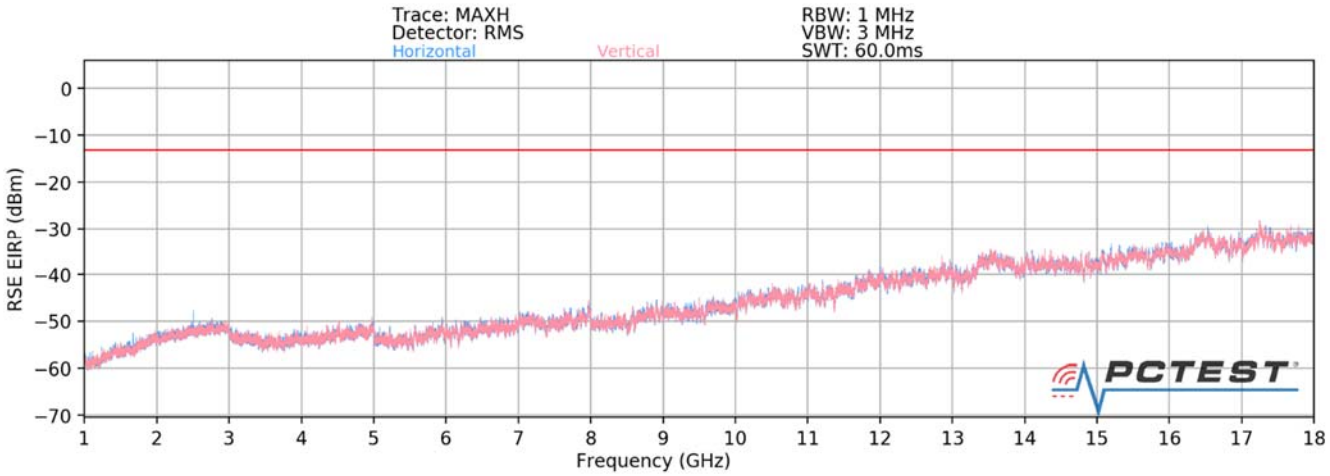
1GHz - 18GHz



Plot 7-62. Ant1-n260 Radiated Spurious Plot 1GHz - 18GHz (1CC QPSK Mid Channel)

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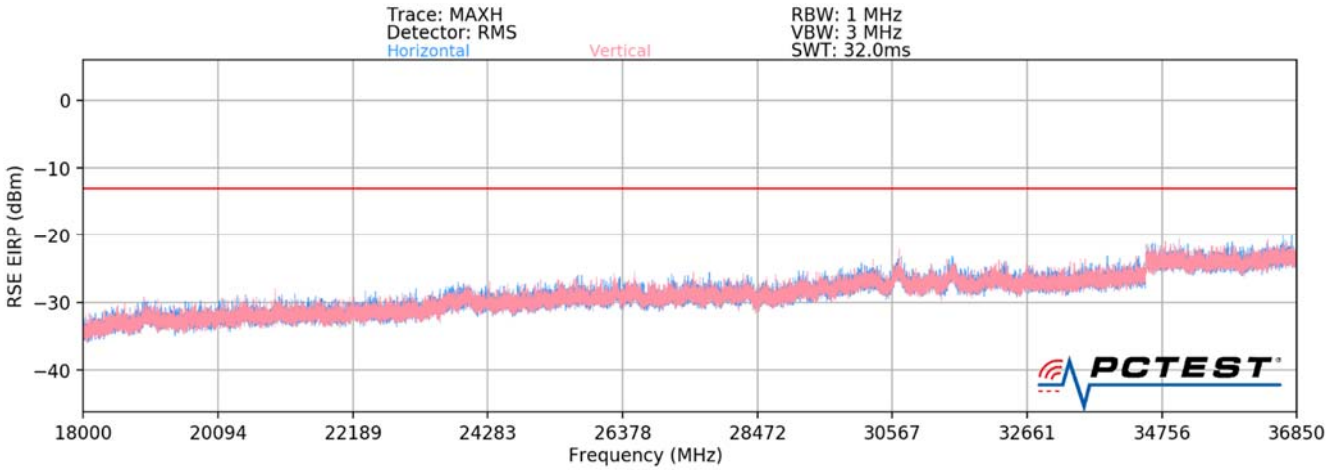
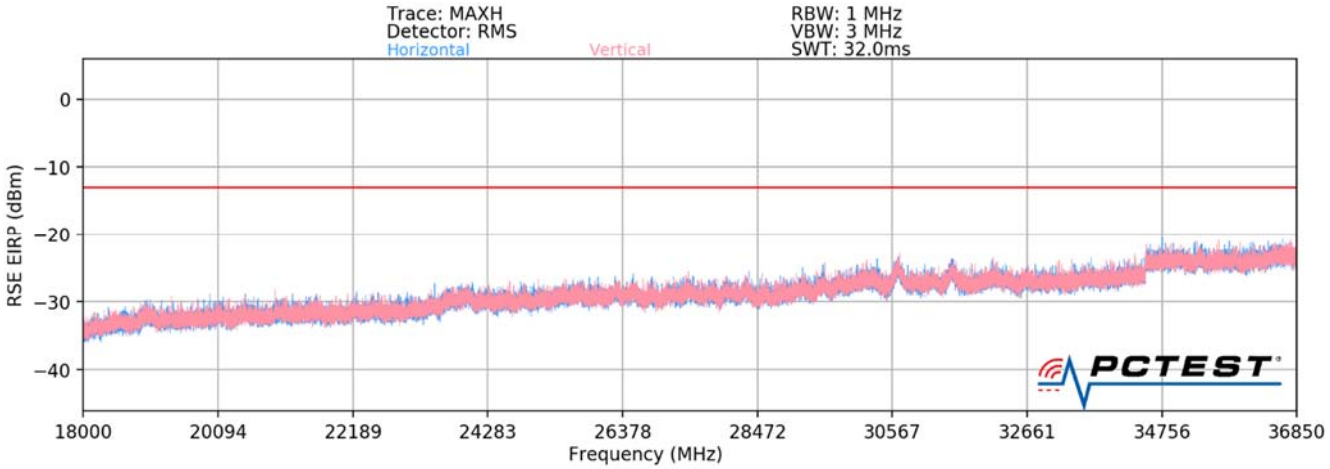
18GHz - 36.85GHz



Plot 7-63. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-64. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
36013.80	Low	50	H	QPSK	H	-	-	-23.31	-13.00	-10.31
35983.60	Low	50	V	QPSK	V	-	-	-22.84	-13.00	-9.84
35964.30	Mid	50	H	QPSK	H	-	-	-22.94	-13.00	-9.94
35978.20	Mid	50	V	QPSK	V	-	-	-23.07	-13.00	-10.07
36013.80	High	50	H	QPSK	H	-	-	-21.39	-13.00	-8.39
36015.10	High	50	V	QPSK	V	-	-	-22.78	-13.00	-9.78

Table 7-65. Ant1 - SISO -Spurious Emissions Table (18GHz - 36.85GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-20.06	-13.00	-7.06
Mid	50	QPSK	-19.99	-13.00	-6.99
High	50	QPSK	-19.02	-13.00	-6.02

Table 7-66. Ant1 - MIMO -Spurious Emissions Table (18GHz - 36.85GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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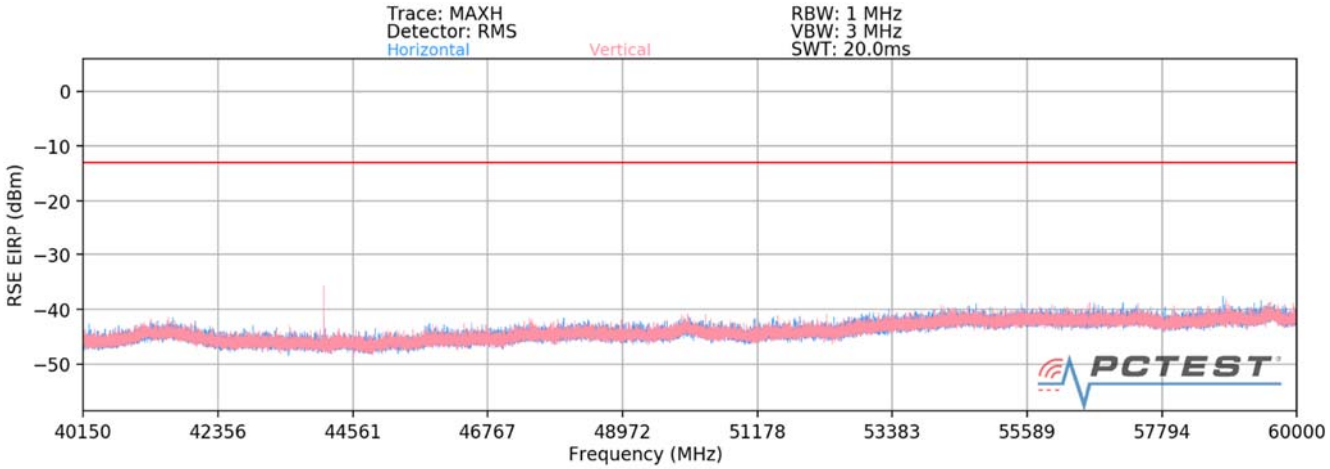
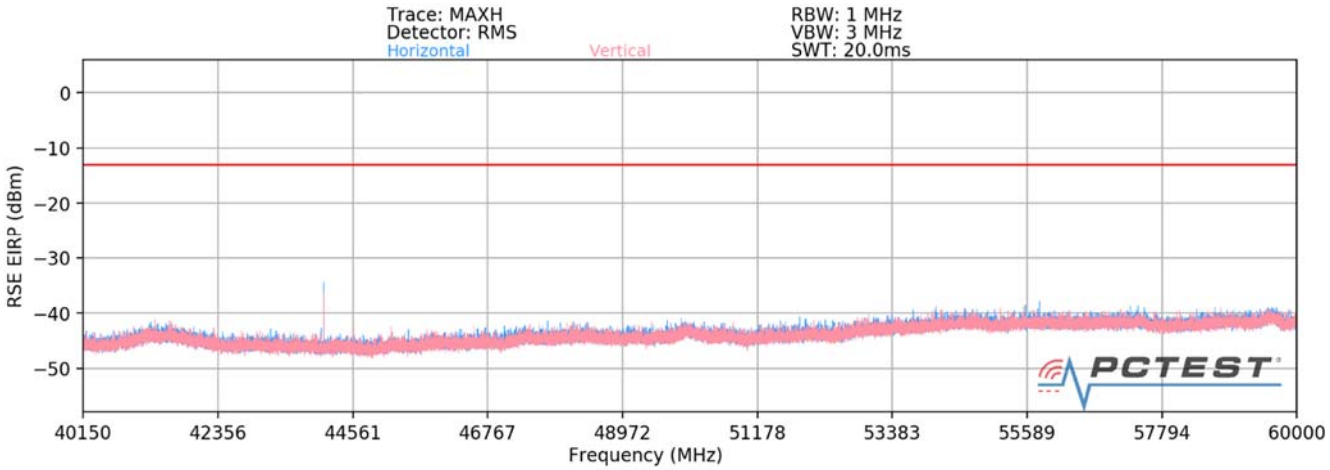


Plot 7-65. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-66. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
43031.10	Low	50	H	QPSK	H	80	102	-30.31	-13.00	-17.31
43029.40	Low	50	V	QPSK	V	78	100	-31.87	-13.00	-18.87
44083.20	Mid	50	H	QPSK	H	67	97	-32.82	-13.00	-19.82
44082.60	Mid	50	V	QPSK	V	58	87	-31.07	-13.00	-18.07
46238.30	High	50	H	QPSK	H	68	108	-33.37	-13.00	-20.37
46239.70	High	50	V	QPSK	V	71	101	-32.48	-13.00	-19.48

Table 7-67. Ant1 - SISO -Spurious Emissions Table (40.15GHz - 60GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-28.01	-13.00	-15.01
Mid	50	QPSK	-28.85	-13.00	-15.85
High	50	QPSK	-29.89	-13.00	-16.89

Table 7-68. Ant1 - MIMO -Spurious Emissions Table (40.15GHz - 60GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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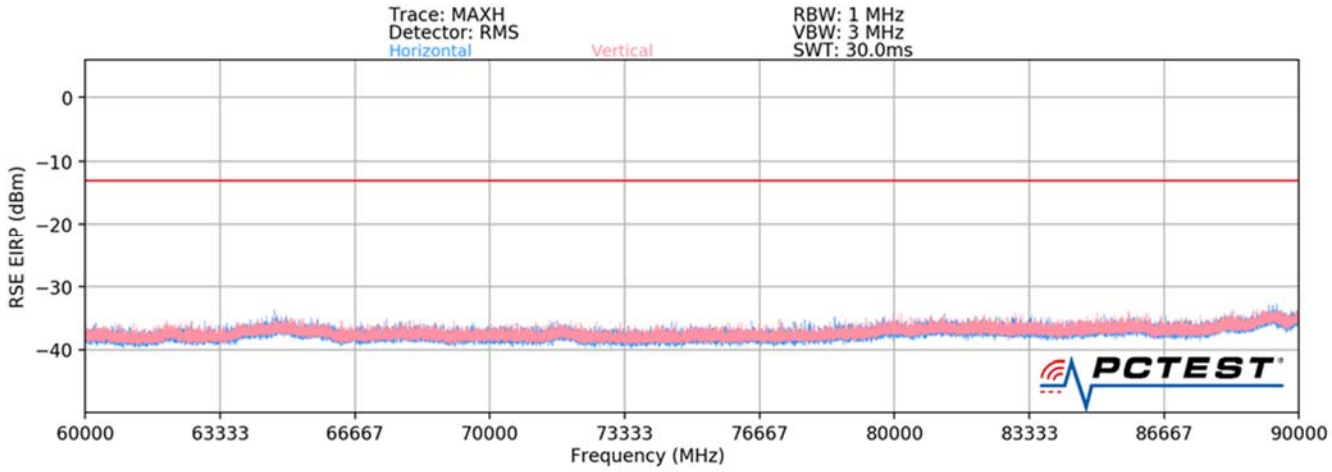
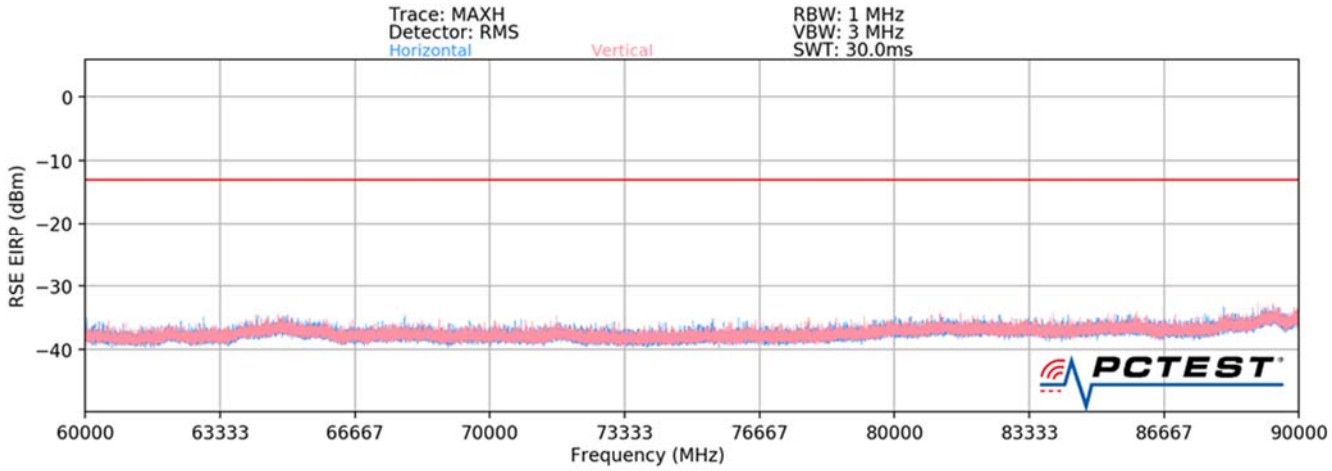


Plot 7-67. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-68. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1.5 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
74055.45	Low	50	H	QPSK	V	93	330	-42.89	-13.00	-29.89
74055.87	Low	50	V	QPSK	V	249	240	-44.82	-13.00	-31.82
76996.08	Mid	50	H	QPSK	V	73	86	-44.19	-13.00	-31.19
77003.04	Mid	50	V	QPSK	V	55	66	-42.43	-13.00	-29.43
79922.19	High	50	H	QPSK	V	-	-	-45.21	-13.00	-32.21
79928.01	High	50	V	QPSK	V	-	-	-45.26	-13.00	-32.26

Table 7-69. Ant1 - SISO -Spurious Emissions Table (60GHz - 90GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-40.74	-13.00	-27.74
Mid	50	QPSK	-40.21	-13.00	-27.21
High	50	QPSK	-42.22	-13.00	-29.22

Table 7-70. Ant1 - MIMO -Spurious Emissions Table (60GHz - 90GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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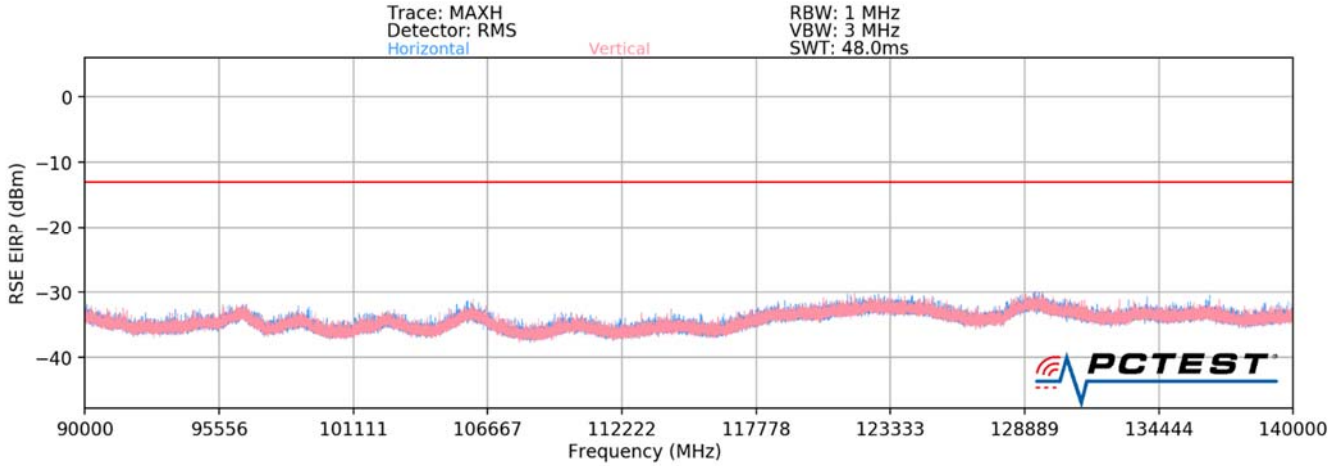
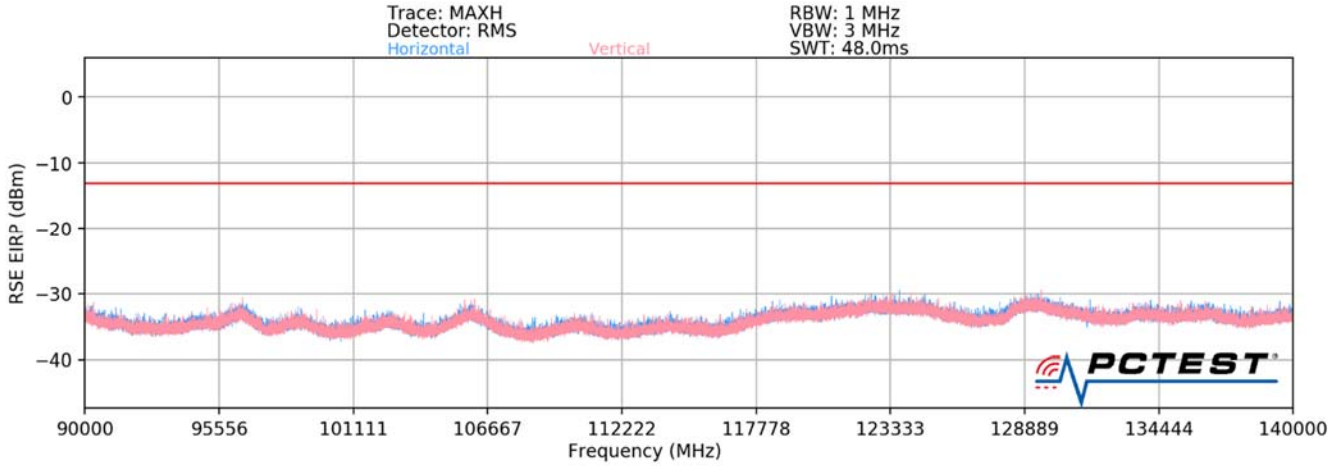


Plot 7-69. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel H Beam)



Plot 7-70. Ant1-n260 Radiated Spurious Plot (1CC QPSK Mid Channel V Beam)

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Spurious Emissions EIRP Sample Calculation (n260)

The raw radiated spurious level is converted to field strength in dBuV/m. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 1 meter.

RSE EIRP (dBm) = Analyzer Level (dBm) + 107 + AFCL (dB/m) + Harmonic Mixer Conversion Loss[dB] + 20Log(Dm) – 104.8

Frequency [MHz]	Channnel	Bandwidth (MHz)	EUT Beam Pol.	Modulation	Antenna Polarization [H/V]	Turntable Azimuth [degrees]	Positioner Azimuth [degrees]	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
123468.30	Low	50	H	QPSK	H	-	-	-28.31	-13.00	-15.31
123593.50	Low	50	V	QPSK	V	-	-	-30.51	-13.00	-17.51
128893.60	Mid	50	H	QPSK	H	-	-	-29.68	-13.00	-16.68
123349.30	Mid	50	V	QPSK	V	-	-	-28.61	-13.00	-15.61
123456.90	High	50	H	QPSK	H	-	-	-30.95	-13.00	-17.95
128898.30	High	50	V	QPSK	V	-	-	-30.47	-13.00	-17.47

Table 7-71. Ant1 - SISO -Spurious Emissions Table (90GHz - 140GHz)

Channnel	Bandwidth (MHz)	Modulation	Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
Low	50	QPSK	-26.26	-13.00	-13.26
Mid	50	QPSK	-26.10	-13.00	-13.10
High	50	QPSK	-27.69	-13.00	-14.69

Table 7-72. Ant1 - MIMO -Spurious Emissions Table (90GHz - 140GHz)

Notes

1. The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, cable losses, and harmonic mixer conversion losses. Measurements were performed at a distance of 1 meter.
2. To address compliance of MIMO RSE per KDB 662911 D01, the MIMO RSE EIRP is calculated by summing the worst case H Beam EIRP and V Beam EIRP in linear powers units then converted back to dBm:

EIRP(H Beam) + EIRP(V Beam) = EIRP(MIMO)

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