

<n66 Ant8>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				344000	349000	354000	Tune-up limit	MPR
Frequency (MHz)				1720	1745	1770	(dBm)	(dB)
20	PI/2 BPSK	1	1	20.67	20.78	20.98	21.0	0.0
20	PI/2 BPSK	1	53	20.82	20.53	20.95		
20	PI/2 BPSK	1	104	20.98	20.62	20.92		
20	PI/2 BPSK	50	0	19.62	19.94	19.57	20.0	1.0
20	PI/2 BPSK	50	28	19.54	19.96	19.88		
20	PI/2 BPSK	50	56	19.54	19.78	19.79		
20	PI/2 BPSK	100	0	19.78	19.61	19.59	20.0	1.0
20	QPSK	1	1	20.99	20.69	20.54	21.0	0.0
20	QPSK	1	53	20.91	20.51	20.83		
20	QPSK	1	104	20.95	20.68	20.87		
20	QPSK	50	0	19.99	19.70	19.74	20.0	1.0
20	QPSK	50	28	19.57	19.64	19.57		
20	QPSK	50	56	19.83	19.80	19.83		
20	QPSK	100	0	19.62	19.58	19.80	20.0	1.0
20	16QAM	1	1	20.72	20.80	20.90	21.0	0.0
20	16QAM	1	53	20.68	20.88	20.97		
20	16QAM	1	104	20.68	20.77	20.94		
20	16QAM	50	0	19.85	19.57	19.66	20.0	1.0
20	16QAM	50	28	19.63	19.88	19.88		
20	16QAM	50	56	19.54	19.93	19.92		
20	16QAM	100	0	19.69	19.63	19.74	20.0	1.0
20	64QAM	1	1	20.59	20.75	20.77	21.0	0.0
20	64QAM	1	53	20.90	20.78	20.89		
20	64QAM	1	104	20.88	20.97	20.57		
20	64QAM	50	0	19.60	19.52	19.55	20.0	1.0
20	64QAM	50	28	19.54	19.67	19.76		
20	64QAM	50	56	19.94	19.58	19.87		
20	64QAM	100	0	19.64	19.86	19.58	20.0	1.0
20	256QAM	1	1	20.54	20.84	20.89	21.0	0.0
20	256QAM	1	53	20.86	20.77	20.78		
20	256QAM	1	104	20.51	20.61	20.63		
20	256QAM	50	0	19.72	19.92	19.83	20.0	1.0
20	256QAM	50	28	19.79	19.57	19.57		
20	256QAM	50	56	19.76	19.61	19.92		
20	256QAM	100	0	19.78	19.62	20.00	20.0	1.0
Channel				343500	349000	354500	Tune-up limit	MPR
Frequency (MHz)				1717.5	1745	1772.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	20.84	20.81	20.55	21.0	0.0
Channel				343000	349000	355000	Tune-up limit	MPR
Frequency (MHz)				1715	1745	1775	(dBm)	(dB)
10	PI/2 BPSK	1	1	20.92	20.98	20.63	21.0	0.0
Channel				342500	349000	355500	Tune-up limit	MPR
Frequency (MHz)				1712.5	1745	1777.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	20.53	20.71	20.80	21.0	0.0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)	MPR (dB)
Channel				N/A	340500	N/A	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				N/A	1702.5	N/A		
15	PI/2 BPSK	1	1	N/A	23.72	N/A	24.0	0.0
15	PI/2 BPSK	1	40	N/A	23.72	N/A		
15	PI/2 BPSK	1	78	N/A	23.82	N/A		
15	PI/2 BPSK	37	0	N/A	22.76	N/A	23.0	1.0
15	PI/2 BPSK	37	21	N/A	22.60	N/A		
15	PI/2 BPSK	37	42	N/A	22.98	N/A		
15	PI/2 BPSK	75	0	N/A	22.72	N/A	23.0	1.0
15	QPSK	1	1	N/A	23.92	N/A	24.0	0.0
15	QPSK	1	40	N/A	23.65	N/A		
15	QPSK	1	78	N/A	23.79	N/A		
15	QPSK	37	0	N/A	22.52	N/A	23.0	1.0
15	QPSK	37	21	N/A	22.80	N/A		
15	QPSK	37	42	N/A	22.87	N/A		
15	QPSK	75	0	N/A	22.75	N/A	23.0	1.0
15	16QAM	1	1	N/A	23.74	N/A	24.0	0.0
15	16QAM	1	40	N/A	23.74	N/A		
15	16QAM	1	78	N/A	23.79	N/A		
15	16QAM	37	0	N/A	22.85	N/A	23.0	1.0
15	16QAM	37	21	N/A	22.80	N/A		
15	16QAM	37	42	N/A	22.54	N/A		
15	16QAM	75	0	N/A	22.65	N/A	23.0	1.0
15	64QAM	1	1	N/A	23.79	N/A	24.0	0.0
15	64QAM	1	40	N/A	23.64	N/A		
15	64QAM	1	78	N/A	23.61	N/A		
15	64QAM	37	0	N/A	22.91	N/A	23.0	1.0
15	64QAM	37	21	N/A	22.87	N/A		
15	64QAM	37	42	N/A	22.59	N/A		
15	64QAM	75	0	N/A	22.64	N/A	23.0	1.0
15	256QAM	1	1	N/A	23.68	N/A	24.0	0.0
15	256QAM	1	40	N/A	23.57	N/A		
15	256QAM	1	78	N/A	23.90	N/A		
15	256QAM	37	0	N/A	22.54	N/A	23.0	1.0
15	256QAM	37	21	N/A	23.00	N/A		
15	256QAM	37	42	N/A	22.94	N/A		
15	256QAM	75	0	N/A	22.82	N/A	23.0	1.0
Channel				340000	340500	341000	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1700	1702.5	1705		
10	PI/2 BPSK	1	1	23.67	23.59	23.98	24.0	0.0
Channel				339500	340500	341500	Tune-up limit (dBm)	MPR (dB)
Frequency (MHz)				1697.5	1702.5	1707.5		
5	PI/2 BPSK	1	1	23.71	23.87	23.94	24.0	0.0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				134600	136100	137600	Tune-up limit	MPR
Frequency (MHz)				673	680.5	688	(dBm)	(dB)
20	PI/2 BPSK	1	1	23.54	23.98	23.71	24.0	0.0
20	PI/2 BPSK	1	53	23.77	23.82	23.80		
20	PI/2 BPSK	1	104	23.88	23.80	23.85		
20	PI/2 BPSK	50	0	22.76	22.85	22.51	23.0	1.0
20	PI/2 BPSK	50	28	22.80	22.63	22.57		
20	PI/2 BPSK	50	56	22.90	22.79	22.73		
20	PI/2 BPSK	100	0	22.67	22.97	22.62	23.0	1.0
20	QPSK	1	1	23.61	23.54	23.52	24.0	0.0
20	QPSK	1	53	23.85	23.68	23.71		
20	QPSK	1	104	23.91	23.58	23.86		
20	QPSK	50	0	22.56	22.74	22.64	23.0	1.0
20	QPSK	50	28	22.61	22.78	22.51		
20	QPSK	50	56	22.84	22.66	22.80		
20	QPSK	100	0	22.98	22.87	22.81	23.0	1.0
20	16QAM	1	1	23.70	23.83	23.78	24.0	0.0
20	16QAM	1	53	23.66	23.71	23.95		
20	16QAM	1	104	23.78	23.70	23.87		
20	16QAM	50	0	22.72	22.52	23.00	23.0	1.0
20	16QAM	50	28	22.81	22.60	22.67		
20	16QAM	50	56	22.59	22.98	22.54		
20	16QAM	100	0	22.79	22.81	22.67	23.0	1.0
20	64QAM	1	1	23.75	23.98	23.88	24.0	0.0
20	64QAM	1	53	23.90	23.57	23.54		
20	64QAM	1	104	23.93	23.84	23.73		
20	64QAM	50	0	22.62	22.63	22.78	23.0	1.0
20	64QAM	50	28	22.70	22.51	22.92		
20	64QAM	50	56	22.73	22.86	22.81		
20	64QAM	100	0	22.66	22.90	22.57	23.0	1.0
20	256QAM	1	1	23.62	23.59	23.68	24.0	0.0
20	256QAM	1	53	23.71	23.82	23.62		
20	256QAM	1	104	23.51	23.84	23.98		
20	256QAM	50	0	22.68	22.60	22.96	23.0	1.0
20	256QAM	50	28	22.90	22.57	22.63		
20	256QAM	50	56	22.59	22.99	22.61		
20	256QAM	100	0	22.87	22.69	22.87	23.0	1.0
Channel				134100	136100	138100	Tune-up limit	MPR
Frequency (MHz)				670.5	680.5	690.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	23.82	23.72	23.94	24.0	0.0
Channel				133600	136100	138600	Tune-up limit	MPR
Frequency (MHz)				668	680.5	693	(dBm)	(dB)
10	PI/2 BPSK	1	1	23.78	23.56	23.53	24.0	0.0
Channel				133100	136100	139100	Tune-up limit	MPR
Frequency (MHz)				665.5	680.5	685.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	23.91	24.00	23.75	24.0	0.0

<n77 PC3 Ant4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	646720	679333	Tune-up limit	MPR
Frequency (MHz)				3310	3750	4190	(dBm)	(dB)
20	PI/2 BPSK	1	1	24.17	24.47	24.47	24.5	0.0
20	PI/2 BPSK	1	53	24.14	24.40	24.14		
20	PI/2 BPSK	1	104	24.27	24.14	24.44		
20	PI/2 BPSK	50	0	23.00	23.39	23.31	23.5	1.0
20	PI/2 BPSK	50	28	23.49	23.27	23.01		
20	PI/2 BPSK	50	56	23.12	23.04	23.34		
20	PI/2 BPSK	100	0	23.46	23.36	23.13	23.5	1.0
20	QPSK	1	1	24.21	24.37	24.30	24.5	0.0
20	QPSK	1	53	24.37	24.41	24.10		
20	QPSK	1	104	24.40	24.48	24.38		
20	QPSK	50	0	23.39	23.21	23.31	23.5	1.0
20	QPSK	50	28	23.14	23.13	23.18		
20	QPSK	50	56	23.17	23.27	23.45		
20	QPSK	100	0	23.19	23.49	23.36	23.5	1.0
20	16QAM	1	1	24.42	24.11	24.34	24.5	0.0
20	16QAM	1	53	24.28	24.18	24.15		
20	16QAM	1	104	24.09	24.09	24.33		
20	16QAM	50	0	23.33	23.09	23.14	23.5	1.0
20	16QAM	50	28	23.36	23.23	23.20		
20	16QAM	50	56	23.07	23.47	23.17		
20	16QAM	100	0	23.07	23.36	23.14	23.5	1.0
20	64QAM	1	1	24.04	24.26	24.39	24.5	0.0
20	64QAM	1	53	24.41	24.48	24.45		
20	64QAM	1	104	24.36	24.07	24.37		
20	64QAM	50	0	23.12	23.05	23.22	23.5	1.0
20	64QAM	50	28	23.14	23.16	23.49		
20	64QAM	50	56	23.20	23.50	23.48		
20	64QAM	100	0	23.20	23.23	23.36	23.5	1.0
20	256QAM	1	1	24.00	24.17	24.31	24.5	0.0
20	256QAM	1	53	24.40	24.03	24.08		
20	256QAM	1	104	24.30	24.05	24.16		
20	256QAM	50	0	23.40	23.47	23.34	23.5	1.0
20	256QAM	50	28	23.04	23.19	23.42		
20	256QAM	50	56	23.03	23.01	23.20		
20	256QAM	100	0	23.15	23.41	23.03	23.5	1.0
Channel				620166	646720	679833	Tune-up limit	MPR
Frequency (MHz)				3307.5	3750	4192.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	24.21	24.10	24.42	24.5	0.0
Channel				619666	646720	680333	Tune-up limit	MPR
Frequency (MHz)				3305	3750	4195	(dBm)	(dB)
10	PI/2 BPSK	1	1	24.21	24.40	24.11	24.5	0.0
Channel				619166	646720	680833	Tune-up limit	MPR
Frequency (MHz)				3302.5	3750	4197.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	24.44	24.09	24.34	24.5	0.0

<n77 PC3 Ant6>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	646720	679333	Tune-up limit	MPR
Frequency (MHz)				3310	3750	4190	(dBm)	(dB)
20	PI/2 BPSK	1	1	21.31	21.39	21.28	21.5	0.0
20	PI/2 BPSK	1	53	21.33	21.10	21.06		
20	PI/2 BPSK	1	104	21.27	21.47	21.26		
20	PI/2 BPSK	50	0	20.25	20.32	20.01	20.5	1.0
20	PI/2 BPSK	50	28	20.13	20.36	20.11		
20	PI/2 BPSK	50	56	20.02	20.17	20.41		
20	PI/2 BPSK	100	0	20.02	20.08	20.46	20.5	1.0
20	QPSK	1	1	21.17	21.28	21.38	21.5	0.0
20	QPSK	1	53	21.07	21.44	21.13		
20	QPSK	1	104	21.30	21.35	21.35		
20	QPSK	50	0	20.02	20.23	20.22	20.5	1.0
20	QPSK	50	28	20.04	20.30	20.21		
20	QPSK	50	56	20.06	20.16	20.07		
20	QPSK	100	0	20.18	20.37	20.33	20.5	1.0
20	16QAM	1	1	21.24	21.14	21.47	21.5	0.0
20	16QAM	1	53	21.28	21.14	21.19		
20	16QAM	1	104	21.08	21.01	21.38		
20	16QAM	50	0	20.29	20.28	20.08	20.5	1.0
20	16QAM	50	28	20.44	20.01	20.33		
20	16QAM	50	56	20.22	20.18	20.08		
20	16QAM	100	0	20.29	20.37	20.37	20.5	1.0
20	64QAM	1	1	21.32	21.43	21.09	21.5	0.0
20	64QAM	1	53	21.11	21.32	21.19		
20	64QAM	1	104	21.50	21.29	21.19		
20	64QAM	50	0	20.11	20.45	20.43	20.5	1.0
20	64QAM	50	28	20.46	20.22	20.28		
20	64QAM	50	56	20.50	20.26	20.13		
20	64QAM	100	0	20.11	20.10	20.48	20.5	1.0
20	256QAM	1	1	21.31	21.43	21.05	21.5	0.0
20	256QAM	1	53	21.47	21.11	21.12		
20	256QAM	1	104	21.23	21.05	21.19		
20	256QAM	50	0	20.38	20.11	20.35	20.5	1.0
20	256QAM	50	28	20.35	20.24	20.11		
20	256QAM	50	56	20.42	20.05	20.39		
20	256QAM	100	0	20.41	20.05	20.13	20.5	1.0
Channel				620166	646720	679833	Tune-up limit	MPR
Frequency (MHz)				3307.5	3750	4192.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	21.41	21.35	21.16	21.5	0.0
Channel				619666	646720	680333	Tune-up limit	MPR
Frequency (MHz)				3305	3750	4195	(dBm)	(dB)
10	PI/2 BPSK	1	1	21.49	21.49	21.49	21.5	0.0
Channel				619166	646720	680833	Tune-up limit	MPR
Frequency (MHz)				3302.5	3750	4197.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	21.14	21.26	21.35	21.5	0.0

<n77 PC2 Ant4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	646720	679333	Tune-up limit	MPR
Frequency (MHz)				3310	3750	4190	(dBm)	(dB)
20	PI/2 BPSK	1	1	25.73	25.88	25.64	26.0	0.0
20	PI/2 BPSK	1	53	25.97	25.58	25.70		
20	PI/2 BPSK	1	104	25.56	25.54	25.73		
20	PI/2 BPSK	50	0	24.85	24.67	24.59	25.0	1.0
20	PI/2 BPSK	50	28	24.60	24.84	24.84		
20	PI/2 BPSK	50	56	24.72	24.96	24.56		
20	PI/2 BPSK	100	0	24.79	24.70	24.59	25.0	1.0
20	QPSK	1	1	25.54	25.55	25.59	26.0	0.0
20	QPSK	1	53	25.84	25.62	25.71		
20	QPSK	1	104	25.70	25.69	25.65		
20	QPSK	50	0	24.51	24.88	24.55	25.0	1.0
20	QPSK	50	28	24.81	24.99	24.65		
20	QPSK	50	56	24.93	24.88	24.55		
20	QPSK	100	0	24.78	24.61	24.88	25.0	1.0
20	16QAM	1	1	25.58	25.87	25.69	26.0	0.0
20	16QAM	1	53	25.51	25.96	25.87		
20	16QAM	1	104	25.89	25.84	25.90		
20	16QAM	50	0	24.92	24.75	24.58	25.0	1.0
20	16QAM	50	28	24.80	24.65	24.55		
20	16QAM	50	56	24.85	24.65	24.74		
20	16QAM	100	0	24.87	24.99	24.63	25.0	1.0
20	64QAM	1	1	25.84	25.67	25.64	26.0	0.0
20	64QAM	1	53	25.63	25.67	25.98		
20	64QAM	1	104	25.62	25.56	25.56		
20	64QAM	50	0	24.61	24.97	24.91	25.0	1.0
20	64QAM	50	28	24.86	24.61	24.51		
20	64QAM	50	56	24.98	24.51	24.53		
20	64QAM	100	0	24.58	24.86	24.97	25.0	1.0
20	256QAM	1	1	25.75	25.85	25.52	26.0	0.0
20	256QAM	1	53	25.56	25.88	25.55		
20	256QAM	1	104	25.57	25.76	25.64		
20	256QAM	50	0	24.85	24.68	24.87	25.0	1.0
20	256QAM	50	28	24.86	24.57	24.70		
20	256QAM	50	56	24.66	24.53	24.87		
20	256QAM	100	0	24.62	24.97	24.59	25.0	1.0
Channel				620166	646720	679833	Tune-up limit	MPR
Frequency (MHz)				3307.5	3750	4192.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	25.90	25.99	25.61	26.0	0.0
Channel				619666	646720	680333	Tune-up limit	MPR
Frequency (MHz)				3305	3750	4195	(dBm)	(dB)
10	PI/2 BPSK	1	1	25.80	25.54	25.64	26.0	0.0
Channel				619166	646720	680833	Tune-up limit	MPR
Frequency (MHz)				3302.5	3750	4197.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	25.51	25.53	25.92	26.0	0.0

<n77 PC2 Ant6>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	646720	679333	Tune-up limit	MPR
Frequency (MHz)				3310	3750	4190	(dBm)	(dB)
20	PI/2 BPSK	1	1	22.71	22.68	22.86	23.0	0.0
20	PI/2 BPSK	1	53	22.61	22.64	22.80		
20	PI/2 BPSK	1	104	22.69	22.78	22.53		
20	PI/2 BPSK	50	0	21.60	21.75	21.77	22.0	1.0
20	PI/2 BPSK	50	28	21.91	21.98	21.84		
20	PI/2 BPSK	50	56	21.72	21.83	21.53		
20	PI/2 BPSK	100	0	21.99	21.88	21.79	22.0	1.0
20	QPSK	1	1	22.67	22.68	22.90	23.0	0.0
20	QPSK	1	53	22.92	22.59	22.56		
20	QPSK	1	104	22.56	22.66	22.67		
20	QPSK	50	0	21.82	21.91	21.82	22.0	1.0
20	QPSK	50	28	21.59	21.96	21.56		
20	QPSK	50	56	21.97	21.60	21.80		
20	QPSK	100	0	21.78	21.52	21.58	22.0	1.0
20	16QAM	1	1	22.82	22.72	22.76	23.0	0.0
20	16QAM	1	53	22.69	22.61	22.62		
20	16QAM	1	104	22.73	22.71	22.98		
20	16QAM	50	0	21.84	21.62	21.59	22.0	1.0
20	16QAM	50	28	21.91	21.63	21.71		
20	16QAM	50	56	21.65	21.82	21.53		
20	16QAM	100	0	21.70	21.71	21.58	22.0	1.0
20	64QAM	1	1	22.75	22.98	22.99	23.0	0.0
20	64QAM	1	53	22.67	22.65	22.57		
20	64QAM	1	104	22.97	22.81	22.69		
20	64QAM	50	0	21.69	21.82	21.54	22.0	1.0
20	64QAM	50	28	21.73	21.65	21.79		
20	64QAM	50	56	21.57	21.54	21.69		
20	64QAM	100	0	21.92	21.91	21.76	22.0	1.0
20	256QAM	1	1	22.65	22.67	22.67	23.0	0.0
20	256QAM	1	53	22.51	22.65	22.73		
20	256QAM	1	104	22.94	22.67	22.80		
20	256QAM	50	0	21.87	21.61	21.61	22.0	1.0
20	256QAM	50	28	21.66	22.00	21.80		
20	256QAM	50	56	21.93	21.90	21.99		
20	256QAM	100	0	21.62	21.69	21.73	22.0	1.0
Channel				620166	646720	679833	Tune-up limit	MPR
Frequency (MHz)				3307.5	3750	4192.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	22.60	22.84	22.53	23.0	0.0
Channel				619666	646720	680333	Tune-up limit	MPR
Frequency (MHz)				3305	3750	4195	(dBm)	(dB)
10	PI/2 BPSK	1	1	22.63	22.95	22.76	23.0	0.0
Channel				619166	646720	680833	Tune-up limit	MPR
Frequency (MHz)				3302.5	3750	4197.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	22.61	22.63	22.88	23.0	0.0

<n78 PC3 Ant4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	636667	652666	Tune-up limit	MPR
Frequency (MHz)				3310	3550	3790	(dBm)	(dB)
20	PI/2 BPSK	1	1	24.07	24.30	24.42	24.5	0.0
20	PI/2 BPSK	1	53	24.00	24.43	24.40		
20	PI/2 BPSK	1	104	24.01	24.01	24.17		
20	PI/2 BPSK	50	0	23.28	23.00	23.25	23.5	1.0
20	PI/2 BPSK	50	28	23.10	23.30	23.47		
20	PI/2 BPSK	50	56	23.08	23.45	23.15		
20	PI/2 BPSK	100	0	23.32	23.35	23.42	23.5	1.0
20	QPSK	1	1	24.28	24.03	24.40	24.5	0.0
20	QPSK	1	53	24.45	24.38	24.14		
20	QPSK	1	104	24.37	24.06	24.05		
20	QPSK	50	0	23.33	23.40	23.17	23.5	1.0
20	QPSK	50	28	23.47	23.43	23.03		
20	QPSK	50	56	23.10	23.05	23.10		
20	QPSK	100	0	23.07	23.38	23.02	23.5	1.0
20	16QAM	1	1	24.10	24.03	24.17	24.5	0.0
20	16QAM	1	53	24.36	24.38	24.46		
20	16QAM	1	104	24.20	24.10	24.16		
20	16QAM	50	0	23.23	23.06	23.20	23.5	1.0
20	16QAM	50	28	23.16	23.26	23.43		
20	16QAM	50	56	23.17	23.07	23.49		
20	16QAM	100	0	23.13	23.35	23.12	23.5	1.0
20	64QAM	1	1	24.04	24.39	24.06	24.5	0.0
20	64QAM	1	53	24.41	24.46	24.42		
20	64QAM	1	104	24.37	24.07	24.02		
20	64QAM	50	0	23.34	23.17	23.36	23.5	1.0
20	64QAM	50	28	23.43	23.47	23.31		
20	64QAM	50	56	23.28	23.03	23.33		
20	64QAM	100	0	23.02	23.28	23.44	23.5	1.0
20	256QAM	1	1	24.17	24.14	24.24	24.5	0.0
20	256QAM	1	53	24.08	24.08	24.46		
20	256QAM	1	104	24.38	24.02	24.43		
20	256QAM	50	0	23.47	23.17	23.00	23.5	1.0
20	256QAM	50	28	23.44	23.11	23.40		
20	256QAM	50	56	23.24	23.23	23.32		
20	256QAM	100	0	23.44	23.02	23.47	23.5	1.0
Channel				620166	376000	653166	Tune-up limit	MPR
Frequency (MHz)				3307.5	1880	3792.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	24.16	24.33	24.13	24.5	0.0
Channel				619666	376000	653666	Tune-up limit	MPR
Frequency (MHz)				3305	1880	3795	(dBm)	(dB)
10	PI/2 BPSK	1	1	24.26	24.29	24.11	24.5	0.0
Channel				619166	376000	654166	Tune-up limit	MPR
Frequency (MHz)				3302.5	1880	3797.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	24.48	24.19	24.28	24.5	0.0

<n78 PC3 Ant6>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	636667	652666	Tune-up limit	MPR
Frequency (MHz)				3310	3550	3790	(dBm)	(dB)
20	PI/2 BPSK	1	1	21.37	21.18	21.39	21.5	0.0
20	PI/2 BPSK	1	53	21.09	21.35	21.31		
20	PI/2 BPSK	1	104	21.33	21.40	21.27		
20	PI/2 BPSK	50	0	20.02	20.42	20.40	20.5	1.0
20	PI/2 BPSK	50	28	20.41	20.26	20.23		
20	PI/2 BPSK	50	56	20.11	20.44	20.12		
20	PI/2 BPSK	100	0	20.07	20.06	20.01	20.5	1.0
20	QPSK	1	1	21.05	21.19	21.39	21.5	0.0
20	QPSK	1	53	21.26	21.01	21.20		
20	QPSK	1	104	21.50	21.22	21.32		
20	QPSK	50	0	20.28	20.17	20.10	20.5	1.0
20	QPSK	50	28	20.43	20.24	20.35		
20	QPSK	50	56	20.48	20.07	20.14		
20	QPSK	100	0	20.25	20.03	20.16	20.5	1.0
20	16QAM	1	1	21.36	21.28	21.10	21.5	0.0
20	16QAM	1	53	21.36	21.20	21.44		
20	16QAM	1	104	21.20	21.02	21.24		
20	16QAM	50	0	20.37	20.03	20.10	20.5	1.0
20	16QAM	50	28	20.48	20.44	20.38		
20	16QAM	50	56	20.44	20.38	20.42		
20	16QAM	100	0	20.41	20.38	20.31	20.5	1.0
20	64QAM	1	1	21.12	21.35	21.26	21.5	0.0
20	64QAM	1	53	21.42	21.36	21.13		
20	64QAM	1	104	21.18	21.15	21.26		
20	64QAM	50	0	20.26	20.34	20.00	20.5	1.0
20	64QAM	50	28	20.12	20.23	20.28		
20	64QAM	50	56	20.21	20.33	20.44		
20	64QAM	100	0	20.24	20.49	20.47	20.5	1.0
20	256QAM	1	1	21.19	21.35	21.09	21.5	0.0
20	256QAM	1	53	21.46	21.24	21.25		
20	256QAM	1	104	21.40	21.08	21.31		
20	256QAM	50	0	20.31	20.50	20.36	20.5	1.0
20	256QAM	50	28	20.29	20.06	20.17		
20	256QAM	50	56	20.11	20.49	20.13		
20	256QAM	100	0	20.11	20.31	20.18	20.5	1.0
Channel				620166	376000	653166	Tune-up limit	MPR
Frequency (MHz)				3307.5	1880	3792.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	21.29	21.30	21.15	21.5	0.0
Channel				619666	376000	653666	Tune-up limit	MPR
Frequency (MHz)				3305	1880	3795	(dBm)	(dB)
10	PI/2 BPSK	1	1	21.22	21.45	21.41	21.5	0.0
Channel				619166	376000	654166	Tune-up limit	MPR
Frequency (MHz)				3302.5	1880	3797.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	21.47	21.10	21.05	21.5	0.0

<n78 PC2 Ant4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	636667	652666	Tune-up limit	MPR
Frequency (MHz)				3310	3550	3790	(dBm)	(dB)
20	PI/2 BPSK	1	1	25.58	25.57	25.53	26.0	0.0
20	PI/2 BPSK	1	53	25.50	25.65	25.86		
20	PI/2 BPSK	1	104	25.67	25.93	25.67		
20	PI/2 BPSK	50	0	24.54	24.93	24.94	25.0	1.0
20	PI/2 BPSK	50	28	24.90	24.70	24.68		
20	PI/2 BPSK	50	56	24.90	24.98	24.74		
20	PI/2 BPSK	100	0	24.51	24.74	24.78	25.0	1.0
20	QPSK	1	1	25.99	25.98	25.76	26.0	0.0
20	QPSK	1	53	25.89	25.96	25.83		
20	QPSK	1	104	25.72	25.73	25.94		
20	QPSK	50	0	24.66	24.93	24.69	25.0	1.0
20	QPSK	50	28	24.88	24.62	24.63		
20	QPSK	50	56	24.54	25.00	24.69		
20	QPSK	100	0	24.64	24.64	24.55	25.0	1.0
20	16QAM	1	1	25.62	25.70	25.88	26.0	0.0
20	16QAM	1	53	25.63	25.64	25.69		
20	16QAM	1	104	25.80	25.85	25.99		
20	16QAM	50	0	24.72	24.85	24.70	25.0	1.0
20	16QAM	50	28	24.87	24.53	24.54		
20	16QAM	50	56	24.57	24.56	24.65		
20	16QAM	100	0	24.61	24.97	24.90	25.0	1.0
20	64QAM	1	1	25.83	25.63	25.91	26.0	0.0
20	64QAM	1	53	25.88	25.79	25.94		
20	64QAM	1	104	25.88	25.80	25.67		
20	64QAM	50	0	24.80	24.77	24.74	25.0	1.0
20	64QAM	50	28	24.62	24.71	24.83		
20	64QAM	50	56	24.77	24.61	24.59		
20	64QAM	100	0	24.52	24.93	24.59	25.0	1.0
20	256QAM	1	1	25.60	25.71	25.75	26.0	0.0
20	256QAM	1	53	25.93	25.68	25.79		
20	256QAM	1	104	25.85	25.58	25.91		
20	256QAM	50	0	24.77	24.78	24.59	25.0	1.0
20	256QAM	50	28	24.64	24.77	24.57		
20	256QAM	50	56	24.70	24.94	24.65		
20	256QAM	100	0	24.61	24.63	24.82	25.0	1.0
Channel				620166	376000	653166	Tune-up limit	MPR
Frequency (MHz)				3307.5	1880	3792.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	25.76	25.66	25.98	26.0	0.0
Channel				619666	376000	653666	Tune-up limit	MPR
Frequency (MHz)				3305	1880	3795	(dBm)	(dB)
10	PI/2 BPSK	1	1	25.93	25.67	25.88	26.0	0.0
Channel				619166	376000	654166	Tune-up limit	MPR
Frequency (MHz)				3302.5	1880	3797.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	25.90	25.91	25.88	26.0	0.0

<n78 PC2 Ant6>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	636667	652666	Tune-up limit	MPR
Frequency (MHz)				3310	3550	3790	(dBm)	(dB)
20	PI/2 BPSK	1	1	22.90	22.95	22.92	23.0	0.0
20	PI/2 BPSK	1	53	22.86	22.84	22.75		
20	PI/2 BPSK	1	104	22.67	22.82	22.78		
20	PI/2 BPSK	50	0	21.84	21.86	21.62	22.0	1.0
20	PI/2 BPSK	50	28	21.74	21.87	21.75		
20	PI/2 BPSK	50	56	21.86	21.97	21.99		
20	PI/2 BPSK	100	0	21.65	21.63	21.52	22.0	1.0
20	QPSK	1	1	22.73	22.83	23.00	23.0	0.0
20	QPSK	1	53	22.99	22.62	22.68		
20	QPSK	1	104	22.87	22.90	22.93		
20	QPSK	50	0	21.51	21.57	21.64	22.0	1.0
20	QPSK	50	28	21.77	21.60	21.75		
20	QPSK	50	56	21.79	21.63	21.61		
20	QPSK	100	0	21.85	21.90	21.66	22.0	1.0
20	16QAM	1	1	22.60	22.58	22.67	23.0	0.0
20	16QAM	1	53	22.95	22.71	22.69		
20	16QAM	1	104	22.83	22.80	22.72		
20	16QAM	50	0	21.87	21.60	21.62	22.0	1.0
20	16QAM	50	28	21.79	21.83	21.87		
20	16QAM	50	56	21.63	21.91	21.57		
20	16QAM	100	0	21.96	21.69	21.83	22.0	1.0
20	64QAM	1	1	22.77	22.88	22.91	23.0	0.0
20	64QAM	1	53	22.76	22.87	22.83		
20	64QAM	1	104	22.57	22.95	22.59		
20	64QAM	50	0	21.54	21.63	21.71	22.0	1.0
20	64QAM	50	28	21.64	21.94	21.69		
20	64QAM	50	56	21.57	21.50	21.79		
20	64QAM	100	0	21.55	21.59	21.54	22.0	1.0
20	256QAM	1	1	22.74	22.66	22.72	23.0	0.0
20	256QAM	1	53	22.94	22.89	23.00		
20	256QAM	1	104	22.59	22.74	22.88		
20	256QAM	50	0	21.77	21.98	21.92	22.0	1.0
20	256QAM	50	28	21.87	21.86	21.82		
20	256QAM	50	56	21.90	21.85	21.70		
20	256QAM	100	0	21.50	21.73	21.92	22.0	1.0
Channel				620166	376000	653166	Tune-up limit	MPR
Frequency (MHz)				3307.5	1880	3792.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	22.71	22.94	22.64	23.0	0.0
Channel				619666	376000	653666	Tune-up limit	MPR
Frequency (MHz)				3305	1880	3795	(dBm)	(dB)
10	PI/2 BPSK	1	1	23.00	22.64	22.98	23.0	0.0
Channel				619166	376000	654166	Tune-up limit	MPR
Frequency (MHz)				3302.5	1880	3797.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	22.52	22.62	22.73	23.0	0.0

Table 9.2 FR1 Backoff Power Measurements

<n2 Ant0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
				372000	376000	380000	Tune-up limit	MPR
				1860	1880	1900	(dBm)	(dB)
20	PI/2 BPSK	1	1	17.02	17.10	17.12	17.5	0.0
20	PI/2 BPSK	1	53	17.27	17.41	17.29		
20	PI/2 BPSK	1	104	17.18	17.11	17.09		
20	PI/2 BPSK	50	0	16.01	16.13	16.20	16.5	1.0
20	PI/2 BPSK	50	28	16.17	16.35	16.50		
20	PI/2 BPSK	50	56	16.07	16.49	16.05		
20	PI/2 BPSK	100	0	16.47	16.10	16.44	16.5	1.0
20	QPSK	1	1	17.40	17.30	17.41	17.5	0.0
20	QPSK	1	53	17.05	17.36	17.13		
20	QPSK	1	104	17.38	17.27	17.12		
20	QPSK	50	0	16.29	16.17	16.42	16.5	1.0
20	QPSK	50	28	16.32	16.09	16.48		
20	QPSK	50	56	16.02	16.31	16.12		
20	QPSK	100	0	16.04	16.37	16.49	16.5	1.0
20	16QAM	1	1	17.36	17.19	17.01	17.5	0.0
20	16QAM	1	53	17.11	17.40	17.03		
20	16QAM	1	104	17.47	17.10	17.17		
20	16QAM	50	0	16.00	16.19	16.14	16.5	1.0
20	16QAM	50	28	16.42	16.14	16.41		
20	16QAM	50	56	16.15	16.15	16.39		
20	16QAM	100	0	16.43	16.39	16.46	16.5	1.0
20	64QAM	1	1	17.24	17.01	17.06	17.5	0.0
20	64QAM	1	53	17.21	17.23	17.47		
20	64QAM	1	104	17.46	17.45	17.05		
20	64QAM	50	0	16.37	16.25	16.46	16.5	1.0
20	64QAM	50	28	16.25	16.16	16.26		
20	64QAM	50	56	16.29	16.27	16.34		
20	64QAM	100	0	16.40	16.41	16.09	16.5	1.0
20	256QAM	1	1	17.25	17.30	17.46	17.5	0.0
20	256QAM	1	53	17.09	17.22	17.24		
20	256QAM	1	104	17.23	17.04	17.43		
20	256QAM	50	0	16.11	16.07	16.40	16.5	1.0
20	256QAM	50	28	16.15	16.20	16.36		
20	256QAM	50	56	16.41	16.03	16.02		
20	256QAM	100	0	16.20	16.21	16.24	16.5	1.0
				371500	376000	380500	Tune-up limit	MPR
				1857.5	1880	1902.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	17.35	17.38	17.26	17.5	0.0
				371000	376000	381000	Tune-up limit	MPR
				1855	1880	1905	(dBm)	(dB)
10	PI/2 BPSK	1	1	17.39	17.22	17.33	17.5	0.0
				370500	376000	381500	Tune-up limit	MPR
				1852.5	1880	1907.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	17.23	17.28	17.43	17.5	0.0

<n2 Ant8>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				372000	376000	380000	Tune-up limit	MPR
Frequency (MHz)				1860	1880	1900	(dBm)	(dB)
20	PI/2 BPSK	1	1	14.42	14.19	14.26	14.5	0.0
20	PI/2 BPSK	1	53	14.25	14.18	14.12		
20	PI/2 BPSK	1	104	14.47	14.02	14.40		
20	PI/2 BPSK	50	0	13.08	13.01	13.46	13.5	1.0
20	PI/2 BPSK	50	28	13.02	13.28	13.39		
20	PI/2 BPSK	50	56	13.10	13.22	13.33		
20	PI/2 BPSK	100	0	13.40	13.29	13.23	13.5	1.0
20	QPSK	1	1	14.31	14.22	14.26	14.5	0.0
20	QPSK	1	53	14.43	14.48	14.14		
20	QPSK	1	104	14.08	14.29	14.07		
20	QPSK	50	0	13.08	13.01	13.47	13.5	1.0
20	QPSK	50	28	13.38	13.47	13.41		
20	QPSK	50	56	13.03	13.15	13.13		
20	QPSK	100	0	13.44	13.23	13.46	13.5	1.0
20	16QAM	1	1	14.47	14.29	14.37	14.5	0.0
20	16QAM	1	53	14.38	14.35	14.01		
20	16QAM	1	104	14.48	14.40	14.10		
20	16QAM	50	0	13.28	13.08	13.43	13.5	1.0
20	16QAM	50	28	13.40	13.19	13.12		
20	16QAM	50	56	13.46	13.23	13.25		
20	16QAM	100	0	13.46	13.22	13.22	13.5	1.0
20	64QAM	1	1	14.32	14.11	14.08	14.5	0.0
20	64QAM	1	53	14.47	14.36	14.23		
20	64QAM	1	104	14.14	14.20	14.05		
20	64QAM	50	0	13.14	13.42	13.09	13.5	1.0
20	64QAM	50	28	13.20	13.45	13.11		
20	64QAM	50	56	13.13	13.11	13.11		
20	64QAM	100	0	13.48	13.26	13.38	13.5	1.0
20	256QAM	1	1	14.08	14.25	14.38	14.5	0.0
20	256QAM	1	53	14.33	14.04	14.45		
20	256QAM	1	104	14.24	14.13	14.40		
20	256QAM	50	0	13.24	13.09	13.08	13.5	1.0
20	256QAM	50	28	13.35	13.17	13.30		
20	256QAM	50	56	13.02	13.39	13.09		
20	256QAM	100	0	13.22	13.13	13.09	13.5	1.0
Channel				371500	376000	380500	Tune-up limit	MPR
Frequency (MHz)				1857.5	1880	1902.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	14.10	14.05	14.18	14.5	0.0
Channel				371000	376000	381000	Tune-up limit	MPR
Frequency (MHz)				1855	1880	1905	(dBm)	(dB)
10	PI/2 BPSK	1	1	14.19	14.42	14.08	14.5	0.0
Channel				370500	376000	381500	Tune-up limit	MPR
Frequency (MHz)				1852.5	1880	1907.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	14.48	14.08	14.32	14.5	0.0

<n7 Ant0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				502000	507000	512000	Tune-up limit	MPR
Frequency (MHz)				2510	2535	2560	(dBm)	(dB)
20	PI/2 BPSK	1	1	19.45	19.34	19.23	19.5	0.0
20	PI/2 BPSK	1	53	19.38	19.23	19.36		
20	PI/2 BPSK	1	104	19.26	19.34	19.47		
20	PI/2 BPSK	50	0	18.48	18.15	18.14	18.5	1.0
20	PI/2 BPSK	50	28	18.07	18.46	18.46		
20	PI/2 BPSK	50	56	18.48	18.32	18.07		
20	PI/2 BPSK	100	0	18.09	18.22	18.21	18.5	1.0
20	QPSK	1	1	19.32	19.07	19.04	19.5	0.0
20	QPSK	1	53	19.33	19.31	19.38		
20	QPSK	1	104	19.26	19.15	19.46		
20	QPSK	50	0	18.24	18.06	18.41	18.5	1.0
20	QPSK	50	28	18.41	18.02	18.42		
20	QPSK	50	56	18.30	18.12	18.02		
20	QPSK	100	0	18.23	18.21	18.41	18.5	1.0
20	16QAM	1	1	19.09	19.43	19.45	19.5	0.0
20	16QAM	1	53	19.00	19.43	19.34		
20	16QAM	1	104	19.07	19.36	19.45		
20	16QAM	50	0	18.02	18.22	18.14	18.5	1.0
20	16QAM	50	28	18.18	18.21	18.34		
20	16QAM	50	56	18.30	18.15	18.17		
20	16QAM	100	0	18.03	18.50	18.29	18.5	1.0
20	64QAM	1	1	19.35	19.13	19.10	19.5	0.0
20	64QAM	1	53	19.34	19.47	19.14		
20	64QAM	1	104	19.50	19.45	19.36		
20	64QAM	50	0	18.37	18.01	18.04	18.5	1.0
20	64QAM	50	28	18.03	18.01	18.48		
20	64QAM	50	56	18.44	18.04	18.31		
20	64QAM	100	0	18.12	18.10	18.01	18.5	1.0
20	256QAM	1	1	19.27	19.26	19.34	19.5	0.0
20	256QAM	1	53	19.48	19.49	19.40		
20	256QAM	1	104	19.21	19.48	19.22		
20	256QAM	50	0	18.39	18.09	18.42	18.5	1.0
20	256QAM	50	28	18.23	18.44	18.08		
20	256QAM	50	56	18.39	18.03	18.41		
20	256QAM	100	0	18.26	18.20	18.23	18.5	1.0
Channel				501500	507000	511500	Tune-up limit	MPR
Frequency (MHz)				2507.5	2535	2562.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	19.44	19.40	19.23	19.5	0.0
Channel				501000	507000	511000	Tune-up limit	MPR
Frequency (MHz)				2505	2535	2565	(dBm)	(dB)
10	PI/2 BPSK	1	1	19.16	19.17	19.18	19.5	0.0
Channel				500500	507000	510500	Tune-up limit	MPR
Frequency (MHz)				2502.5	2535	2567.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	19.32	19.18	19.18	19.5	0.0

<n25 Ant0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				372000	376500	381000	Tune-up limit	MPR
Frequency (MHz)				1860	1882.5	1905	(dBm)	(dB)
20	PI/2 BPSK	1	1	17.33	17.34	17.12	17.5	0.0
20	PI/2 BPSK	1	53	17.25	17.21	17.35		
20	PI/2 BPSK	1	104	17.16	17.32	17.21		
20	PI/2 BPSK	50	0	16.36	16.23	16.30	16.5	1.0
20	PI/2 BPSK	50	28	16.44	16.31	16.07		
20	PI/2 BPSK	50	56	16.34	16.20	16.20		
20	PI/2 BPSK	100	0	16.24	16.07	16.44	16.5	1.0
20	QPSK	1	1	17.04	17.36	17.07	17.5	0.0
20	QPSK	1	53	17.22	17.15	17.26		
20	QPSK	1	104	17.01	17.02	17.16		
20	QPSK	50	0	16.26	16.18	16.17	16.5	1.0
20	QPSK	50	28	16.18	16.02	16.01		
20	QPSK	50	56	16.24	16.23	16.19		
20	QPSK	100	0	16.46	16.25	16.31	16.5	1.0
20	16QAM	1	1	17.40	17.36	17.22	17.5	0.0
20	16QAM	1	53	17.39	17.22	17.48		
20	16QAM	1	104	17.35	17.10	17.06		
20	16QAM	50	0	16.45	16.46	16.32	16.5	1.0
20	16QAM	50	28	16.48	16.38	16.01		
20	16QAM	50	56	16.23	16.19	16.21		
20	16QAM	100	0	16.02	16.36	16.37	16.5	1.0
20	64QAM	1	1	17.16	17.35	17.13	17.5	0.0
20	64QAM	1	53	17.40	17.26	17.44		
20	64QAM	1	104	17.24	17.02	17.42		
20	64QAM	50	0	16.20	16.32	16.32	16.5	1.0
20	64QAM	50	28	16.15	16.41	16.10		
20	64QAM	50	56	16.37	16.38	16.33		
20	64QAM	100	0	16.22	16.26	16.19	16.5	1.0
20	256QAM	1	1	17.39	17.04	17.40	17.5	0.0
20	256QAM	1	53	17.46	17.02	17.26		
20	256QAM	1	104	17.09	17.27	17.08		
20	256QAM	50	0	16.16	16.36	16.07	16.5	1.0
20	256QAM	50	28	16.27	16.16	16.38		
20	256QAM	50	56	16.48	16.05	16.15		
20	256QAM	100	0	16.47	16.21	16.48	16.5	1.0
Channel				371500	376500	381500	Tune-up limit	MPR
Frequency (MHz)				1857.5	1882.5	1907.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	17.09	17.47	17.18	17.5	0.0
Channel				371000	376500	382000	Tune-up limit	MPR
Frequency (MHz)				1855	1882.5	1910	(dBm)	(dB)
10	PI/2 BPSK	1	1	17.32	17.09	17.09	17.5	0.0
Channel				370500	376500	382500	Tune-up limit	MPR
Frequency (MHz)				1852.5	1882.5	1912.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	17.30	17.20	17.21	17.5	0.0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				516000	519000	522000	Tune-up limit	MPR
Frequency (MHz)				2580	2595	2610	(dBm)	(dB)
20	PI/2 BPSK	1	1	19.06	19.15	19.23	19.5	0.0
20	PI/2 BPSK	1	53	19.39	19.40	19.04		
20	PI/2 BPSK	1	104	19.31	19.10	19.02		
20	PI/2 BPSK	50	0	18.04	18.14	18.03	18.5	1.0
20	PI/2 BPSK	50	28	18.28	18.39	18.33		
20	PI/2 BPSK	50	56	18.49	18.28	18.15		
20	PI/2 BPSK	100	0	18.48	18.47	18.30	18.5	1.0
20	QPSK	1	1	19.24	19.32	19.48	19.5	0.0
20	QPSK	1	53	19.34	19.44	19.13		
20	QPSK	1	104	19.27	19.09	19.49		
20	QPSK	50	0	18.42	18.42	18.46	18.5	1.0
20	QPSK	50	28	18.39	18.08	18.37		
20	QPSK	50	56	18.32	18.19	18.26		
20	QPSK	100	0	18.43	18.05	18.50	18.5	1.0
20	16QAM	1	1	19.07	19.30	19.35	19.5	0.0
20	16QAM	1	53	19.23	19.07	19.38		
20	16QAM	1	104	19.13	19.42	19.43		
20	16QAM	50	0	18.47	18.13	18.49	18.5	1.0
20	16QAM	50	28	18.07	18.09	18.17		
20	16QAM	50	56	18.20	18.22	18.25		
20	16QAM	100	0	18.16	18.06	18.36	18.5	1.0
20	64QAM	1	1	19.15	19.18	19.12	19.5	0.0
20	64QAM	1	53	19.43	19.06	19.36		
20	64QAM	1	104	19.21	19.36	19.48		
20	64QAM	50	0	18.19	18.36	18.14	18.5	1.0
20	64QAM	50	28	18.32	18.07	18.25		
20	64QAM	50	56	18.27	18.41	18.34		
20	64QAM	100	0	18.32	18.44	18.14	18.5	1.0
20	256QAM	1	1	19.03	19.50	19.50	19.5	0.0
20	256QAM	1	53	19.18	19.34	19.35		
20	256QAM	1	104	19.41	19.39	19.02		
20	256QAM	50	0	18.02	18.34	18.27	18.5	1.0
20	256QAM	50	28	18.30	18.23	18.08		
20	256QAM	50	56	18.45	18.06	18.50		
20	256QAM	100	0	18.32	18.29	18.45	18.5	1.0
Channel				515500	519000	522500	Tune-up limit	MPR
Frequency (MHz)				2577.5	2595	2612.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	19.45	19.07	19.47	19.5	0.0
Channel				515000	519000	523000	Tune-up limit	MPR
Frequency (MHz)				2575	2595	2615	(dBm)	(dB)
10	PI/2 BPSK	1	1	19.45	19.10	19.01	19.5	0.0
Channel				514500	519000	523500	Tune-up limit	MPR
Frequency (MHz)				2572.5	2595	2617.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	19.36	19.10	19.47	19.5	0.0

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				501200	518601	536000	Tune-up limit	MPR
Frequency (MHz)				2506	2593	2680	(dBm)	(dB)
20	PI/2 BPSK	1	1	19.18	19.48	19.00	19.5	0.0
20	PI/2 BPSK	1	53	19.01	19.41	19.17		
20	PI/2 BPSK	1	104	19.25	19.37	19.33		
20	PI/2 BPSK	50	0	18.38	18.18	18.09	18.5	1.0
20	PI/2 BPSK	50	28	18.22	18.13	18.14		
20	PI/2 BPSK	50	56	18.43	18.15	18.33		
20	PI/2 BPSK	100	0	18.11	18.07	18.03	18.5	1.0
20	QPSK	1	1	19.31	19.33	19.02	19.5	0.0
20	QPSK	1	53	19.49	19.50	19.01		
20	QPSK	1	104	19.06	19.19	19.01		
20	QPSK	50	0	18.00	18.41	18.42	18.5	1.0
20	QPSK	50	28	18.21	18.09	18.32		
20	QPSK	50	56	18.26	18.30	18.23		
20	QPSK	100	0	18.36	18.35	18.38	18.5	1.0
20	16QAM	1	1	19.09	19.33	19.27	19.5	0.0
20	16QAM	1	53	19.23	19.23	19.23		
20	16QAM	1	104	19.03	19.24	19.02		
20	16QAM	50	0	18.39	18.33	18.33	18.5	1.0
20	16QAM	50	28	18.45	18.17	18.35		
20	16QAM	50	56	18.20	18.24	18.32		
20	16QAM	100	0	18.41	18.29	18.39	18.5	1.0
20	64QAM	1	1	19.25	19.26	19.15	19.5	0.0
20	64QAM	1	53	19.36	19.30	19.36		
20	64QAM	1	104	19.27	19.06	19.28		
20	64QAM	50	0	18.11	18.13	18.30	18.5	1.0
20	64QAM	50	28	18.33	18.32	18.15		
20	64QAM	50	56	18.02	18.21	18.21		
20	64QAM	100	0	18.05	18.36	18.46	18.5	1.0
20	256QAM	1	1	19.06	19.24	19.48	19.5	0.0
20	256QAM	1	53	19.36	19.32	19.15		
20	256QAM	1	104	19.19	19.45	19.48		
20	256QAM	50	0	18.45	18.04	18.30	18.5	1.0
20	256QAM	50	28	18.49	18.36	18.46		
20	256QAM	50	56	18.28	18.19	18.19		
20	256QAM	100	0	18.17	18.21	18.50	18.5	1.0
Channel				500700	518601	536500	Tune-up limit	MPR
Frequency (MHz)				2503.5	2593	2682.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	19.21	19.10	19.28	19.5	0.0
Channel				500200	518601	537000	Tune-up limit	MPR
Frequency (MHz)				2501	2593	2685	(dBm)	(dB)
10	PI/2 BPSK	1	1	19.36	19.03	19.42	19.5	0.0
Channel				499700	518601	537500	Tune-up limit	MPR
Frequency (MHz)				2498.5	2593	2687.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	19.09	19.36	19.12	19.5	0.0

<n66 Ant0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				344000	349000	354000	Tune-up limit	MPR
Frequency (MHz)				1720	1745	1770	(dBm)	(dB)
20	PI/2 BPSK	1	1	19.27	19.33	19.29	19.5	0.0
20	PI/2 BPSK	1	53	19.23	19.06	19.42		
20	PI/2 BPSK	1	104	19.13	19.47	19.13		
20	PI/2 BPSK	50	0	18.02	18.04	18.16	18.5	1.0
20	PI/2 BPSK	50	28	18.40	18.41	18.08		
20	PI/2 BPSK	50	56	18.08	18.24	18.18		
20	PI/2 BPSK	100	0	18.31	18.47	18.15	18.5	1.0
20	QPSK	1	1	19.44	19.41	19.46	19.5	0.0
20	QPSK	1	53	19.20	19.45	19.48		
20	QPSK	1	104	19.19	19.32	19.41		
20	QPSK	50	0	18.03	18.42	18.09	18.5	1.0
20	QPSK	50	28	18.27	18.18	18.24		
20	QPSK	50	56	18.36	18.21	18.02		
20	QPSK	100	0	18.31	18.37	18.46	18.5	1.0
20	16QAM	1	1	19.14	19.00	19.49	19.5	0.0
20	16QAM	1	53	19.41	19.33	19.40		
20	16QAM	1	104	19.31	19.15	19.26		
20	16QAM	50	0	18.48	18.42	18.40	18.5	1.0
20	16QAM	50	28	18.47	18.12	18.00		
20	16QAM	50	56	18.02	18.23	18.16		
20	16QAM	100	0	18.08	18.40	18.18	18.5	1.0
20	64QAM	1	1	19.02	19.08	19.49	19.5	0.0
20	64QAM	1	53	19.00	19.30	19.30		
20	64QAM	1	104	19.41	19.30	19.37		
20	64QAM	50	0	18.32	18.12	18.04	18.5	1.0
20	64QAM	50	28	18.33	18.32	18.16		
20	64QAM	50	56	18.40	18.07	18.40		
20	64QAM	100	0	18.45	18.44	18.44	18.5	1.0
20	256QAM	1	1	19.48	19.01	19.08	19.5	0.0
20	256QAM	1	53	19.07	19.45	19.40		
20	256QAM	1	104	19.01	19.07	19.27		
20	256QAM	50	0	18.21	18.03	18.40	18.5	1.0
20	256QAM	50	28	18.08	18.45	18.26		
20	256QAM	50	56	18.38	18.43	18.44		
20	256QAM	100	0	18.22	18.42	18.30	18.5	1.0
Channel				343500	349000	354500	Tune-up limit	MPR
Frequency (MHz)				1717.5	1745	1772.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	19.36	19.07	19.44	19.5	0.0
Channel				343000	349000	355000	Tune-up limit	MPR
Frequency (MHz)				1715	1745	1775	(dBm)	(dB)
10	PI/2 BPSK	1	1	19.09	19.13	19.04	19.5	0.0
Channel				342500	349000	355500	Tune-up limit	MPR
Frequency (MHz)				1712.5	1745	1777.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	19.25	19.43	19.29	19.5	0.0

<n66 Ant8>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				344000	349000	354000	Tune-up limit	MPR
Frequency (MHz)				1720	1745	1770	(dBm)	(dB)
20	PI/2 BPSK	1	1	16.23	16.40	16.35	16.5	0.0
20	PI/2 BPSK	1	53	16.46	16.47	16.01		
20	PI/2 BPSK	1	104	16.18	16.16	16.11		
20	PI/2 BPSK	50	0	15.32	15.01	15.06	15.5	1.0
20	PI/2 BPSK	50	28	15.45	15.28	15.17		
20	PI/2 BPSK	50	56	15.19	15.08	15.17		
20	PI/2 BPSK	100	0	15.31	15.31	15.05	15.5	1.0
20	QPSK	1	1	16.04	16.26	16.33	16.5	0.0
20	QPSK	1	53	16.21	16.13	16.17		
20	QPSK	1	104	16.30	16.27	16.18		
20	QPSK	50	0	15.08	15.11	15.29	15.5	1.0
20	QPSK	50	28	15.07	15.25	15.46		
20	QPSK	50	56	15.41	15.12	15.30		
20	QPSK	100	0	15.19	15.07	15.44	15.5	1.0
20	16QAM	1	1	16.17	16.06	16.34	16.5	0.0
20	16QAM	1	53	16.09	16.21	16.10		
20	16QAM	1	104	16.34	16.02	16.31		
20	16QAM	50	0	15.08	15.29	15.19	15.5	1.0
20	16QAM	50	28	15.30	15.21	15.04		
20	16QAM	50	56	15.48	15.21	15.46		
20	16QAM	100	0	15.23	15.25	15.13	15.5	1.0
20	64QAM	1	1	16.14	16.14	16.34	16.5	0.0
20	64QAM	1	53	16.22	16.09	16.45		
20	64QAM	1	104	16.26	16.25	16.15		
20	64QAM	50	0	15.30	15.07	15.36	15.5	1.0
20	64QAM	50	28	15.05	15.11	15.32		
20	64QAM	50	56	15.26	15.29	15.36		
20	64QAM	100	0	15.13	15.36	15.50	15.5	1.0
20	256QAM	1	1	16.32	16.35	16.44	16.5	0.0
20	256QAM	1	53	16.03	16.06	16.28		
20	256QAM	1	104	16.24	16.42	16.20		
20	256QAM	50	0	15.10	15.06	15.22	15.5	1.0
20	256QAM	50	28	15.16	15.26	15.21		
20	256QAM	50	56	15.25	15.07	15.30		
20	256QAM	100	0	15.37	15.40	15.47	15.5	1.0
Channel				343500	349000	354500	Tune-up limit	MPR
Frequency (MHz)				1717.5	1745	1772.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	16.42	16.17	16.41	16.5	0.0
Channel				343000	349000	355000	Tune-up limit	MPR
Frequency (MHz)				1715	1745	1775	(dBm)	(dB)
10	PI/2 BPSK	1	1	16.16	16.25	16.07	16.5	0.0
Channel				342500	349000	355500	Tune-up limit	MPR
Frequency (MHz)				1712.5	1745	1777.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	16.30	16.04	16.27	16.5	0.0

<n77 PC2 & PC3 Ant4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	646720	679333	Tune-up limit	MPR
Frequency (MHz)				3310	3750	4190	(dBm)	(dB)
20	PI/2 BPSK	1	1	21.00	21.25	21.08	21.5	0.0
20	PI/2 BPSK	1	53	21.15	21.48	21.46		
20	PI/2 BPSK	1	104	21.43	21.46	21.14		
20	PI/2 BPSK	50	0	20.48	20.35	20.22	20.5	1.0
20	PI/2 BPSK	50	28	20.39	20.44	20.08		
20	PI/2 BPSK	50	56	20.45	20.26	20.11		
20	PI/2 BPSK	100	0	20.15	20.28	20.34	20.5	1.0
20	QPSK	1	1	21.46	21.25	21.42	21.5	0.0
20	QPSK	1	53	21.10	21.03	21.17		
20	QPSK	1	104	21.11	21.14	21.33		
20	QPSK	50	0	20.44	20.07	20.46	20.5	1.0
20	QPSK	50	28	20.39	20.33	20.13		
20	QPSK	50	56	20.10	20.14	20.17		
20	QPSK	100	0	20.05	20.45	20.25	20.5	1.0
20	16QAM	1	1	21.33	21.33	21.38	21.5	0.0
20	16QAM	1	53	21.25	21.06	21.01		
20	16QAM	1	104	21.02	21.36	21.03		
20	16QAM	50	0	20.38	20.19	20.48	20.5	1.0
20	16QAM	50	28	20.29	20.41	20.37		
20	16QAM	50	56	20.29	20.02	20.11		
20	16QAM	100	0	20.06	20.48	20.42	20.5	1.0
20	64QAM	1	1	21.06	21.25	21.49	21.5	0.0
20	64QAM	1	53	21.20	21.08	21.44		
20	64QAM	1	104	21.26	21.42	21.12		
20	64QAM	50	0	20.02	20.18	20.31	20.5	1.0
20	64QAM	50	28	20.36	20.18	20.23		
20	64QAM	50	56	20.25	20.38	20.47		
20	64QAM	100	0	20.17	20.13	20.20	20.5	1.0
20	256QAM	1	1	21.20	21.41	21.42	21.5	0.0
20	256QAM	1	53	21.26	21.30	21.23		
20	256QAM	1	104	21.18	21.32	21.09		
20	256QAM	50	0	20.26	20.47	20.18	20.5	1.0
20	256QAM	50	28	20.50	20.19	20.13		
20	256QAM	50	56	20.46	20.18	20.16		
20	256QAM	100	0	20.03	20.12	20.49	20.5	1.0
Channel				620166	646720	679833	Tune-up limit	MPR
Frequency (MHz)				3307.5	3750	4192.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	21.27	21.39	21.01	21.5	0.0
Channel				619666	646720	680333	Tune-up limit	MPR
Frequency (MHz)				3305	3750	4195	(dBm)	(dB)
10	PI/2 BPSK	1	1	21.26	21.03	21.49	21.5	0.0
Channel				619166	646720	680833	Tune-up limit	MPR
Frequency (MHz)				3302.5	3750	4197.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	21.09	21.15	21.18	21.5	0.0

<n77 PC2 & PC3 Ant6>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	646720	679333	Tune-up limit	MPR
Frequency (MHz)				3310	3750	4190	(dBm)	(dB)
20	PI/2 BPSK	1	1	18.43	18.18	18.30	18.5	0.0
20	PI/2 BPSK	1	53	18.36	18.44	18.20		
20	PI/2 BPSK	1	104	18.40	18.07	18.47		
20	PI/2 BPSK	50	0	17.02	17.08	17.01	17.5	1.0
20	PI/2 BPSK	50	28	17.31	17.27	17.10		
20	PI/2 BPSK	50	56	17.49	17.19	17.27		
20	PI/2 BPSK	100	0	17.34	17.40	17.34	17.5	1.0
20	QPSK	1	1	18.41	18.24	18.07	18.5	0.0
20	QPSK	1	53	18.11	18.03	18.30		
20	QPSK	1	104	18.08	18.11	18.15		
20	QPSK	50	0	17.22	17.23	17.15	17.5	1.0
20	QPSK	50	28	17.37	17.18	17.48		
20	QPSK	50	56	17.24	17.14	17.36		
20	QPSK	100	0	17.19	17.12	17.29	17.5	1.0
20	16QAM	1	1	18.19	18.39	18.09	18.5	0.0
20	16QAM	1	53	18.50	18.12	18.48		
20	16QAM	1	104	18.09	18.06	18.41		
20	16QAM	50	0	17.28	17.29	17.00	17.5	1.0
20	16QAM	50	28	17.14	17.12	17.32		
20	16QAM	50	56	17.11	17.34	17.36		
20	16QAM	100	0	17.06	17.40	17.43	17.5	1.0
20	64QAM	1	1	18.25	18.28	18.33	18.5	0.0
20	64QAM	1	53	18.17	18.00	18.20		
20	64QAM	1	104	18.24	18.22	18.31		
20	64QAM	50	0	17.27	17.00	17.19	17.5	1.0
20	64QAM	50	28	17.40	17.38	17.44		
20	64QAM	50	56	17.50	17.36	17.30		
20	64QAM	100	0	17.34	17.20	17.09	17.5	1.0
20	256QAM	1	1	18.25	18.16	18.27	18.5	0.0
20	256QAM	1	53	18.23	18.41	18.34		
20	256QAM	1	104	18.50	18.30	18.24		
20	256QAM	50	0	17.03	17.11	17.09	17.5	1.0
20	256QAM	50	28	17.48	17.23	17.03		
20	256QAM	50	56	17.08	17.47	17.38		
20	256QAM	100	0	17.08	17.49	17.38	17.5	1.0
Channel				620166	646720	679833	Tune-up limit	MPR
Frequency (MHz)				3307.5	3750	4192.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	18.48	18.14	18.35	18.5	0.0
Channel				619666	646720	680333	Tune-up limit	MPR
Frequency (MHz)				3305	3750	4195	(dBm)	(dB)
10	PI/2 BPSK	1	1	18.34	18.42	18.49	18.5	0.0
Channel				619166	646720	680833	Tune-up limit	MPR
Frequency (MHz)				3302.5	3750	4197.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	18.00	18.16	18.49	18.5	0.0

<n78 PC2 & PC3 Ant4>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	636667	652666	Tune-up limit	MPR
Frequency (MHz)				3310	3550	3790	(dBm)	(dB)
20	PI/2 BPSK	1	1	21.09	21.17	21.49	21.5	0.0
20	PI/2 BPSK	1	53	21.43	21.07	21.07		
20	PI/2 BPSK	1	104	21.28	21.47	21.48		
20	PI/2 BPSK	50	0	20.02	20.48	20.24	20.5	1.0
20	PI/2 BPSK	50	28	20.33	20.18	20.35		
20	PI/2 BPSK	50	56	20.07	20.05	20.18		
20	PI/2 BPSK	100	0	20.22	20.22	20.24	20.5	1.0
20	QPSK	1	1	21.39	21.20	21.09	21.5	0.0
20	QPSK	1	53	21.29	21.21	21.31		
20	QPSK	1	104	21.23	21.05	21.09		
20	QPSK	50	0	20.46	20.43	20.42	20.5	1.0
20	QPSK	50	28	20.05	20.21	20.41		
20	QPSK	50	56	20.10	20.46	20.48		
20	QPSK	100	0	20.30	20.26	20.49	20.5	1.0
20	16QAM	1	1	21.49	21.21	21.24	21.5	0.0
20	16QAM	1	53	21.02	21.25	21.00		
20	16QAM	1	104	21.26	21.22	21.21		
20	16QAM	50	0	20.36	20.03	20.12	20.5	1.0
20	16QAM	50	28	20.32	20.02	20.21		
20	16QAM	50	56	20.13	20.16	20.21		
20	16QAM	100	0	20.37	20.49	20.27	20.5	1.0
20	64QAM	1	1	21.05	21.05	21.13	21.5	0.0
20	64QAM	1	53	21.28	21.43	21.39		
20	64QAM	1	104	21.02	21.23	21.16		
20	64QAM	50	0	20.44	20.27	20.25	20.5	1.0
20	64QAM	50	28	20.36	20.04	20.10		
20	64QAM	50	56	20.21	20.35	20.26		
20	64QAM	100	0	20.09	20.41	20.22	20.5	1.0
20	256QAM	1	1	21.43	21.50	21.07	21.5	0.0
20	256QAM	1	53	21.42	21.17	21.26		
20	256QAM	1	104	21.32	21.26	21.18		
20	256QAM	50	0	20.44	20.14	20.18	20.5	1.0
20	256QAM	50	28	20.30	20.22	20.04		
20	256QAM	50	56	20.04	20.00	20.14		
20	256QAM	100	0	20.31	20.41	20.24	20.5	1.0
Channel				620166	376000	653166	Tune-up limit	MPR
Frequency (MHz)				3307.5	1880	3792.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	21.44	21.32	21.29	21.5	0.0
Channel				619666	376000	653666	Tune-up limit	MPR
Frequency (MHz)				3305	1880	3795	(dBm)	(dB)
10	PI/2 BPSK	1	1	21.17	21.17	21.07	21.5	0.0
Channel				619166	376000	654166	Tune-up limit	MPR
Frequency (MHz)				3302.5	1880	3797.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	21.45	21.25	21.08	21.5	0.0

<n78 PC2 & PC3 Ant6>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low	Power Middle	Power High	Tune-up limit	MPR
				Ch. / Freq.	Ch. / Freq.	Ch. / Freq.	(dBm)	(dB)
Channel				620666	636667	652666	Tune-up limit	MPR
Frequency (MHz)				3310	3550	3790	(dBm)	(dB)
20	PI/2 BPSK	1	1	18.27	18.24	18.07	18.5	0.0
20	PI/2 BPSK	1	53	18.44	18.09	18.15		
20	PI/2 BPSK	1	104	18.34	18.32	18.48		
20	PI/2 BPSK	50	0	17.01	17.39	17.07	17.5	1.0
20	PI/2 BPSK	50	28	17.18	17.27	17.10		
20	PI/2 BPSK	50	56	17.34	17.48	17.12		
20	PI/2 BPSK	100	0	17.04	17.03	17.44	17.5	1.0
20	QPSK	1	1	18.18	18.40	18.39	18.5	0.0
20	QPSK	1	53	18.42	18.50	18.32		
20	QPSK	1	104	18.06	18.24	18.10		
20	QPSK	50	0	17.23	17.01	17.37	17.5	1.0
20	QPSK	50	28	17.29	17.36	17.46		
20	QPSK	50	56	17.41	17.42	17.44		
20	QPSK	100	0	17.27	17.36	17.23	17.5	1.0
20	16QAM	1	1	18.46	18.17	18.45	18.5	0.0
20	16QAM	1	53	18.05	18.50	18.15		
20	16QAM	1	104	18.28	18.20	18.48		
20	16QAM	50	0	17.40	17.43	17.44	17.5	1.0
20	16QAM	50	28	17.40	17.29	17.02		
20	16QAM	50	56	17.17	17.27	17.47		
20	16QAM	100	0	17.25	17.04	17.33	17.5	1.0
20	64QAM	1	1	18.35	18.21	18.23	18.5	0.0
20	64QAM	1	53	18.48	18.26	18.03		
20	64QAM	1	104	18.23	18.08	18.03		
20	64QAM	50	0	17.19	17.20	17.05	17.5	1.0
20	64QAM	50	28	17.10	17.00	17.14		
20	64QAM	50	56	17.06	17.31	17.04		
20	64QAM	100	0	17.43	17.46	17.29	17.5	1.0
20	256QAM	1	1	18.03	18.34	18.27	18.5	0.0
20	256QAM	1	53	18.36	18.48	18.04		
20	256QAM	1	104	18.39	18.09	18.10		
20	256QAM	50	0	17.34	17.09	17.35	17.5	1.0
20	256QAM	50	28	17.28	17.35	17.25		
20	256QAM	50	56	17.09	17.19	17.26		
20	256QAM	100	0	17.36	17.17	17.19	17.5	1.0
Channel				620166	376000	653166	Tune-up limit	MPR
Frequency (MHz)				3307.5	1880	3792.5	(dBm)	(dB)
15	PI/2 BPSK	1	1	18.47	18.13	18.45	18.5	0.0
Channel				619666	376000	653666	Tune-up limit	MPR
Frequency (MHz)				3305	1880	3795	(dBm)	(dB)
10	PI/2 BPSK	1	1	18.44	18.20	18.41	18.5	0.0
Channel				619166	376000	654166	Tune-up limit	MPR
Frequency (MHz)				3302.5	1880	3797.5	(dBm)	(dB)
5	PI/2 BPSK	1	1	18.38	18.43	18.49	18.5	0.0

9. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8W/kg.

FR1 Note:

1. For 5G NR test procedure was following step similar FCC KDB 941225 D05:
 - a. SAR testing start with the largest channel bandwidth and measure SAR for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
 - b. 50% RB allocation for PI/2 BPSK SAR testing follows 1RB PI/2 BPSK allocation procedure
 - c. PI/2 BPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - d. QPSK/16QAM/64QAM/256QAM output powers are not ½ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - e. Smaller bandwidth output power for each RB allocation configuration for this device will not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - f. For 5G FR1 n5/n12/n41/n71 the maximum bandwidth does not support three non-overlapping channels, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
2. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% duty cycle. The Qualcomm QRCT program was used to establish the connection.

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 Band 2_Ant 8	20M	BPSK	1	53	Side A	10mm	376000	1880	14.18	14.50	0.241	0.26
	FR1 Band 2_Ant 8	20M	BPSK	50	28		10mm	376000	1880	13.28	13.50	0.216	0.23
	FR1 Band 2_Ant 8	20M	BPSK	1	53	Side C	10mm	376000	1880	14.18	14.50	0.259	0.28
	FR1 Band 2_Ant 8	20M	BPSK	50	28		10mm	376000	1880	13.28	13.50	0.224	0.24
	FR1 Band 2_Ant 8	20M	BPSK	1	53	Side D	10mm	376000	1880	14.18	14.50	0.498	0.54
	FR1 Band 2_Ant 8	20M	BPSK	50	28		10mm	376000	1880	13.28	13.50	0.404	0.43
	FR1 Band 2_Ant 0	20M	BPSK	1	53	Side C	10mm	376000	1880	14.22	14.50	0.352	0.38
	FR1 Band 5_Ant 1	10M	BPSK	1	53	Side A	10mm	167300	836.5	20.89	21.00	0.386	0.40
	FR1 Band 5_Ant 1	10M	BPSK	50	28		10mm	167300	836.5	19.59	20.00	0.308	0.34
	FR1 Band 5_Ant 1	10M	BPSK	1	53	Side B	10mm	167300	836.5	20.89	21.00	0.322	0.33
	FR1 Band 5_Ant 1	10M	BPSK	50	28		10mm	167300	836.5	19.59	20.00	0.287	0.32
	FR1 Band 5_Ant 1	10M	BPSK	1	53	Side C	10mm	167300	836.5	20.89	21.00	0.483	0.50
	FR1 Band 5_Ant 1	10M	BPSK	50	28		10mm	167300	836.5	19.59	20.00	0.416	0.46
	FR1 Band 5_Ant 1	10M	BPSK	1	53	Side D	10mm	167300	836.5	20.89	21.00	0.203	0.21
	FR1 Band 5_Ant 1	10M	BPSK	50	28		10mm	167300	836.5	19.59	20.00	0.157	0.17
	FR1 Band 5_Ant 1	10M	BPSK	1	53	Side E	10mm	167300	836.5	20.89	21.00	0.0325	0.03
	FR1 Band 5_Ant 1	10M	BPSK	50	28		10mm	167300	836.5	19.59	20.00	0.0256	0.03
	FR1 Band 5_Ant 0	10M	BPSK	1	53	Side C	10mm	167300	836.5	19.68	21.00	0.492	0.67
	FR1 Band 7_Ant 0	20M	BPSK	1	53	Side A	10mm	507000	2535	19.23	19.50	0.717	0.76
	FR1 Band 7_Ant 0	20M	BPSK	50	28		10mm	507000	2535	18.46	18.50	0.654	0.66
	FR1 Band 7_Ant 0	20M	BPSK	1	53	Side B	10mm	507000	2535	19.23	19.50	0.114	0.12
	FR1 Band 7_Ant 0	20M	BPSK	50	28		10mm	507000	2535	18.46	18.50	0.052	0.05
	FR1 Band 7_Ant 0	20M	BPSK	1	53	Side C	10mm	507000	2535	19.23	19.50	0.652	0.69
	FR1 Band 7_Ant 0	20M	BPSK	50	28		10mm	507000	2535	18.46	18.50	0.522	0.53
	FR1 Band 7_Ant 0	20M	BPSK	1	53	Side D	10mm	507000	2535	19.23	19.50	0.104	0.11
	FR1 Band 7_Ant 0	20M	BPSK	50	28		10mm	507000	2535	18.46	18.50	0.0687	0.07
	FR1 Band 7_Ant 0	20M	BPSK	1	53	Side F	10mm	502000	2510	19.38	19.50	0.810	0.83
1	FR1 Band 7_Ant 0	20M	BPSK	1	53		10mm	507000	2535	19.23	19.50	0.840	0.89
	FR1 Band 7_Ant 0	20M	BPSK	1	53		10mm	512000	2560	19.36	19.50	0.800	0.83
	FR1 Band 7_Ant 0	20M	BPSK	50	28		10mm	507000	2535	18.46	18.50	0.726	0.73
	FR1 Band 7_Ant 0	20M	BPSK	1	49	Side F	20mm	507000	2535	23.73	24.00	0.793	0.84
	FR1 Band 7_Ant 0	20M	BPSK	1	49	Side F	10mm	507000	2535	20.82	16.50	0.401	0.15
2	FR1 Band 12_Ant 0	15M	BPSK	1	53	Side A	10mm	141500	707.5	23.57	24.00	0.301	0.33
	FR1 Band 12_Ant 0	15M	BPSK	50	28		10mm	141500	707.5	22.63	23.00	0.238	0.26
	FR1 Band 12_Ant 0	15M	BPSK	1	53	Side B	10mm	141500	707.5	23.57	24.00	0.148	0.16
	FR1 Band 12_Ant 0	15M	BPSK	50	28		10mm	141500	707.5	22.63	23.00	0.103	0.11
	FR1 Band 12_Ant 0	15M	BPSK	1	53	Side C	10mm	141500	707.5	23.57	24.00	0.280	0.31
	FR1 Band 12_Ant 0	15M	BPSK	50	28		10mm	141500	707.5	22.63	23.00	0.214	0.23
	FR1 Band 12_Ant 0	15M	BPSK	1	53	Side D	10mm	141500	707.5	23.57	24.00	0.163	0.18
	FR1 Band 12_Ant 0	15M	BPSK	50	28		10mm	141500	707.5	22.63	23.00	0.108	0.12
	FR1 Band 12_Ant 0	15M	BPSK	1	53	Side F	10mm	141500	707.5	23.57	24.00	0.0191	0.02
	FR1 Band 12_Ant 0	15M	BPSK	50	28		10mm	141500	707.5	22.63	23.00	0.0128	0.01
	FR1 Band 12_Ant 0	15M	BPSK	1	53	Side A	20mm	141500	707.5	20.66	21.00	0.152	0.16

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
3	FR1 Band 13_Ant 0	10M	BPSK	1	27	Side A	10mm	156400	782	23.61	24.00	0.375	0.41
	FR1 Band 13_Ant 0	10M	BPSK	25	14		10mm	156400	782	22.59	23.00	0.318	0.35
	FR1 Band 13_Ant 0	10M	BPSK	1	27	Side B	10mm	156400	782	23.61	24.00	0.255	0.28
	FR1 Band 13_Ant 0	10M	BPSK	25	14		10mm	156400	782	22.59	23.00	0.198	0.22
	FR1 Band 13_Ant 0	10M	BPSK	1	27	Side C	10mm	156400	782	23.61	24.00	0.336	0.37
	FR1 Band 13_Ant 0	10M	BPSK	25	14		10mm	156400	782	22.59	23.00	0.187	0.21
	FR1 Band 13_Ant 0	10M	BPSK	1	27	Side D	10mm	156400	782	23.61	24.00	0.169	0.19
	FR1 Band 13_Ant 0	10M	BPSK	25	14		10mm	156400	782	22.59	23.00	0.114	0.13
	FR1 Band 13_Ant 0	10M	BPSK	1	27	Side F	10mm	156400	782	23.61	24.00	0.0366	0.04
	FR1 Band 13_Ant 0	10M	BPSK	25	14		10mm	156400	782	22.59	23.00	0.0296	0.03
FR1 Band 13_Ant 0	10M	BPSK	1	27	Side A	10mm	156400	782	20.81	21.00	0.186	0.19	
4	FR1 Band 14_Ant 0	10M	BPSK	1	27	Side A	10mm	158600	793	23.78	24.00	0.349	0.37
	FR1 Band 14_Ant 0	10M	BPSK	25	14		10mm	158600	793	22.62	23.00	0.307	0.34
	FR1 Band 14_Ant 0	10M	BPSK	1	27	Side B	10mm	158600	793	23.78	24.00	0.186	0.20
	FR1 Band 14_Ant 0	10M	BPSK	25	14		10mm	158600	793	22.62	23.00	0.124	0.14
	FR1 Band 14_Ant 0	10M	BPSK	1	27	Side C	10mm	158600	793	23.78	24.00	0.334	0.35
	FR1 Band 14_Ant 0	10M	BPSK	25	14		10mm	158600	793	22.62	23.00	0.259	0.28
	FR1 Band 14_Ant 0	10M	BPSK	1	27	Side D	10mm	158600	793	23.78	24.00	0.121	0.13
	FR1 Band 14_Ant 0	10M	BPSK	25	14		10mm	158600	793	22.62	23.00	0.0957	0.10
	FR1 Band 14_Ant 0	10M	BPSK	1	27	Side F	10mm	158600	793	23.78	24.00	0.0434	0.05
	FR1 Band 14_Ant 0	10M	BPSK	25	14		10mm	158600	793	22.62	23.00	0.0333	0.04
	FR1 Band 14_Ant 0	10M	BPSK	1	27	Side A	10mm	158600	793	20.79	21.00	0.172	0.18
	FR1 Band 25_Ant 0	20M	QPSK	1	53	Side A	10mm	376500	1882.5	17.21	17.50	0.290	0.31
	FR1 Band 25_Ant 0	20M	QPSK	50	28		10mm	376500	1882.5	16.31	16.50	0.228	0.24
	FR1 Band 25_Ant 0	20M	QPSK	1	53	Side B	10mm	376500	1882.5	17.21	17.50	0.0542	0.06
FR1 Band 25_Ant 0	20M	QPSK	50	28	10mm		376500	1882.5	16.31	16.50	0.0457	0.05	
FR1 Band 25_Ant 0	20M	QPSK	1	53	Side C	10mm	376500	1882.5	17.21	17.50	0.301	0.32	
FR1 Band 25_Ant 0	20M	QPSK	50	28		10mm	376500	1882.5	16.31	16.50	0.259	0.27	
FR1 Band 25_Ant 0	20M	QPSK	1	53	Side D	10mm	376500	1882.5	17.21	17.50	0.148	0.16	
FR1 Band 25_Ant 0	20M	QPSK	50	28		10mm	376500	1882.5	16.31	16.50	0.114	0.12	
FR1 Band 25_Ant 0	20M	QPSK	1	53	Side F	10mm	372000	1860	17.25	17.50	0.740	0.78	
5	FR1 Band 25_Ant 0	20M	QPSK	1		53	10mm	376500	1882.5	17.21	17.50	0.800	0.86
FR1 Band 25_Ant 0	20M	QPSK	1	53		10mm	381000	1905	17.35	17.50	0.662	0.69	
FR1 Band 25_Ant 0	20M	QPSK	1	53		10mm	376500	1882.5	16.31	16.50	0.657	0.69	
FR1 Band 25_Ant 0	20M	QPSK	50	28	Side F	20mm	376500	1882.5	24.41	24.50	0.713	0.73	
FR1 Band 25_Ant 0	20M	QPSK	1	53	Side F	10mm	376500	1882.5	14.43	14.50	0.387	0.39	
FR1 Band 26_Ant 0	20M	BPSK	1	53	Side A	10mm	166300	831.5	23.83	24.00	0.420	0.44	
FR1 Band 26_Ant 0	20M	BPSK	50	28		10mm	166300	831.5	22.98	23.00	0.353	0.35	
FR1 Band 26_Ant 0	20M	BPSK	1	53	Side B	10mm	166300	831.5	23.83	24.00	0.341	0.35	
FR1 Band 26_Ant 0	20M	BPSK	50	28		10mm	166300	831.5	22.98	23.00	0.267	0.27	
6	FR1 Band 26_Ant 0	20M	BPSK	1	53	Side C	10mm	166300	831.5	23.83	24.00	0.523	0.54
	FR1 Band 26_Ant 0	20M	BPSK	50	28		10mm	166300	831.5	22.98	23.00	0.473	0.48
	FR1 Band 26_Ant 0	20M	BPSK	1	53	Side D	10mm	166300	831.5	23.83	24.00	0.218	0.23
	FR1 Band 26_Ant 0	20M	BPSK	50	28		10mm	166300	831.5	22.98	23.00	0.166	0.17
	FR1 Band 26_Ant 0	20M	BPSK	1	53	Side F	10mm	166300	831.5	23.83	24.00	0.0385	0.04
	FR1 Band 26_Ant 0	20M	BPSK	50	28		10mm	166300	831.5	22.98	23.00	0.0311	0.03
	FR1 Band 26_Ant 0	20M	BPSK	1	53	Side C	10mm	166300	831.5	20.94	21.00	0.259	0.26

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 Band 30_Ant 0	10M	BPSK	1	27	Side A	10mm	462000	2310	22.94	24.00	0.271	0.35
	FR1 Band 30_Ant 0	10M	BPSK	25	14		10mm	462000	2310	21.64	23.00	0.218	0.30
	FR1 Band 30_Ant 0	10M	BPSK	1	27	Side B	10mm	462000	2310	22.94	24.00	0.0531	0.07
	FR1 Band 30_Ant 0	10M	BPSK	25	14		10mm	462000	2310	21.64	23.00	0.0422	0.06
	FR1 Band 30_Ant 0	10M	BPSK	1	27	Side C	10mm	462000	2310	22.94	24.00	0.205	0.26
	FR1 Band 30_Ant 0	10M	BPSK	25	14		10mm	462000	2310	21.64	23.00	0.138	0.19
7	FR1 Band 30_Ant 0	10M	BPSK	1	27	Side D	10mm	462000	2310	22.94	24.00	0.283	0.36
	FR1 Band 30_Ant 0	10M	BPSK	25	14		10mm	462000	2310	21.64	23.00	0.211	0.29
	FR1 Band 30_Ant 0	10M	BPSK	1	27	Side F	10mm	462000	2310	22.94	24.00	0.267	0.34
	FR1 Band 30_Ant 0	10M	BPSK	25	14		10mm	462000	2310	21.64	23.00	0.193	0.26
	FR1 Band 30_Ant 0	10M	BPSK	1	27	Side D	10mm	462000	2310	20.88	21.00	0.144	0.15
8	FR1 Band 41_Ant 8	20M	BPSK	1	53	Side A	10mm	518601	2593	19.41	19.50	0.736	0.75
	FR1 Band 41_Ant 8	20M	BPSK	50	28		10mm	518601	2593	18.13	18.50	0.682	0.74
	FR1 Band 41_Ant 8	20M	BPSK	1	53	Side C	10mm	518601	2593	19.41	19.50	0.278	0.28
	FR1 Band 41_Ant 8	20M	BPSK	50	28		10mm	518601	2593	18.13	18.50	0.226	0.25
	FR1 Band 41_Ant 8	20M	BPSK	1	53	Side D	10mm	518601	2593	19.41	19.50	0.0941	0.10
	FR1 Band 41_Ant 8	20M	BPSK	50	28		10mm	518601	2593	18.13	18.50	0.0876	0.10
	FR1 Band 41_Ant 8	20M	BPSK	1	53	Side A	20mm	518601	2593	27.31	27.50	0.598	0.62
	FR1 Band 41_Ant 8	20M	BPSK	1	53	Side A	10mm	518601	2593	16.44	16.50	0.325	0.33
	FR1 Band 41_Ant 0	20M	BPSK	1	53	Side A	10mm	518601	2593	16.37	16.50	0.387	0.40
	FR1 Band 48_Ant 4	20M	BPSK	1	53	Side A	10mm	637333	3560	21.06	21.50	0.808	0.89
	FR1 Band 48_Ant 4	20M	BPSK	1	53		10mm	640220	3603.3	21.24	21.50	0.850	0.90
	FR1 Band 48_Ant 4	20M	BPSK	1	53	Side A	10mm	643113	3625	21.19	21.50	0.833	0.89
	FR1 Band 48_Ant 4	20M	BPSK	1	53		10mm	646000	3690	21.18	21.50	0.829	0.89
	FR1 Band 48_Ant 4	20M	BPSK	1	53	Side B	10mm	643113	3625	21.17	21.50	0.726	0.78
	FR1 Band 48_Ant 4	20M	BPSK	1	53		10mm	643113	3625	21.19	21.50	0.690	0.74
	FR1 Band 48_Ant 4	20M	BPSK	50	28	Side B	10mm	643113	3625	20.10	20.50	0.556	0.61
	FR1 Band 48_Ant 4	20M	BPSK	1	53		10mm	643113	3625	21.19	21.50	0.364	0.39
	FR1 Band 48_Ant 4	20M	BPSK	50	28	Side C	10mm	643113	3625	20.10	20.50	0.278	0.31
	FR1 Band 48_Ant 4	20M	BPSK	1	53		10mm	643113	3625	21.19	21.50	0.599	0.64
	FR1 Band 48_Ant 4	20M	BPSK	50	28	Side F	10mm	643113	3625	20.10	20.50	0.523	0.57
	FR1 Band 48_Ant 4	20M	BPSK	1	53		10mm	643113	3625	18.35	18.50	0.425	0.44
	FR1 Band 48_Ant 6	20M	BPSK	1	53	Side A	10mm	643113	3625	18.28	18.50	0.461	0.48
	FR1 Band 48_Ant 6	20M	BPSK	50	28		10mm	643113	3625	17.42	17.50	0.383	0.39
	FR1 Band 48_Ant 6	20M	BPSK	1	53	Side C	10mm	643113	3625	18.28	18.50	0.501	0.53
	FR1 Band 48_Ant 6	20M	BPSK	50	28		10mm	643113	3625	17.42	17.50	0.429	0.44
	FR1 Band 48_Ant 6	20M	BPSK	1	53	Side D	10mm	643113	3625	18.28	18.50	0.511	0.54
	FR1 Band 48_Ant 6	20M	BPSK	50	28		10mm	643113	3625	17.42	17.50	0.449	0.46
	FR1 Band 48_Ant 6	20M	BPSK	1	53	Side E	10mm	643113	3625	18.28	18.50	0.254	0.27
	FR1 Band 48_Ant 6	20M	BPSK	50	28		10mm	643113	3625	17.42	17.50	0.169	0.17

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
10	FR1 Band 66_Ant 0	20M	BPSK	1	53	Side A	10mm	349000	1745	19.06	19.50	0.617	0.68
	FR1 Band 66_Ant 0	20M	BPSK	50	28		10mm	349000	1745	18.41	18.50	0.559	0.57
	FR1 Band 66_Ant 0	20M	BPSK	1	53	Side B	10mm	349000	1745	19.06	19.50	0.0862	0.10
	FR1 Band 66_Ant 0	20M	BPSK	50	28		10mm	349000	1745	18.41	18.50	0.0779	0.08
	FR1 Band 66_Ant 0	20M	BPSK	1	53	Side C	10mm	349000	1745	19.06	19.50	0.746	0.83
	FR1 Band 66_Ant 0	20M	BPSK	50	28		10mm	349000	1745	18.41	18.50	0.699	0.71
	FR1 Band 66_Ant 0	20M	BPSK	1	53	Side D	10mm	349000	1745	19.06	19.50	0.176	0.20
	FR1 Band 66_Ant 0	20M	BPSK	50	28		10mm	349000	1745	18.41	18.50	0.129	0.13
	FR1 Band 66_Ant 0	20M	BPSK	1	53	Side F	10mm	344000	1720	19.23	19.50	0.708	0.75
	FR1 Band 66_Ant 0	20M	BPSK	1	53		10mm	349000	1745	19.06	19.50	0.808	0.89
	FR1 Band 66_Ant 0	20M	BPSK	1	53		10mm	354000	1770	19.42	19.50	0.800	0.81
	FR1 Band 66_Ant 0	20M	BPSK	50	28		10mm	349000	1745	18.41	16.50	0.743	0.48
FR1 Band 66_Ant 0	20M	BPSK	1	53	Side F	20mm	349000	1745	24.37	24.50	0.758	0.78	
FR1 Band 66_Ant 0	20M	BPSK	1	53	Side F	10mm	349000	1745	15.48	15.50	0.389	0.39	
11	FR1 Band 66_Ant 8	20M	BPSK	1	53	Side A	10mm	349000	1745	16.47	16.50	0.296	0.30
	FR1 Band 66_Ant 8	20M	BPSK	50	28		10mm	349000	1745	15.28	15.50	0.138	0.15
	FR1 Band 66_Ant 8	20M	BPSK	1	53	Side C	10mm	349000	1745	16.47	16.50	0.229	0.23
	FR1 Band 66_Ant 8	20M	BPSK	50	28		10mm	349000	1745	15.28	15.50	0.168	0.18
	FR1 Band 66_Ant 8	20M	BPSK	1	53	Side D	10mm	349000	1745	16.47	16.50	0.407	0.41
	FR1 Band 66_Ant 8	20M	BPSK	50	28		10mm	349000	1745	15.28	15.50	0.326	0.34
12	FR1 Band 70_Ant 8	20M	BPSK	1	53	Side A	10mm	340500	1702.5	23.72	24.00	0.723	0.77
	FR1 Band 70_Ant 8	20M	BPSK	50	28		10mm	340500	1702.5	22.60	23.00	0.657	0.72
	FR1 Band 70_Ant 8	20M	BPSK	1	53	Side B	10mm	340500	1702.5	23.72	24.00	0.195	0.21
	FR1 Band 70_Ant 8	20M	BPSK	50	28		10mm	340500	1702.5	22.60	23.00	0.127	0.14
	FR1 Band 70_Ant 8	20M	BPSK	1	53	Side C	10mm	340500	1702.5	23.72	24.00	0.815	0.87
	FR1 Band 70_Ant 8	20M	BPSK	50	28		10mm	340500	1702.5	22.60	23.00	0.734	0.81
FR1 Band 70_Ant 8	20M	BPSK	1	53	Side C	10mm	340500	1702.5	23.86	24.00	0.387	0.40	
12	FR1 Band 71_Ant 0	20M	BPSK	1	53	Side A	10mm	136100	680.5	23.82	24.00	0.393	0.41
	FR1 Band 71_Ant 0	20M	BPSK	50	28		10mm	136100	680.5	22.63	23.00	0.314	0.34
	FR1 Band 71_Ant 0	20M	BPSK	1	53	Side B	10mm	136100	680.5	23.82	24.00	0.216	0.23
	FR1 Band 71_Ant 0	20M	BPSK	50	28		10mm	136100	680.5	22.63	23.00	0.167	0.18
	FR1 Band 71_Ant 0	20M	BPSK	1	53	Side C	10mm	136100	680.5	23.82	24.00	0.371	0.39
	FR1 Band 71_Ant 0	20M	BPSK	50	28		10mm	136100	680.5	22.63	23.00	0.303	0.33
	FR1 Band 71_Ant 0	20M	BPSK	1	53	Side D	10mm	136100	680.5	23.82	24.00	0.254	0.26
	FR1 Band 71_Ant 0	20M	BPSK	50	28		10mm	136100	680.5	22.63	23.00	0.196	0.21
	FR1 Band 71_Ant 0	20M	BPSK	1	53	Side F	10mm	136100	680.5	23.82	24.00	0.0206	0.02
	FR1 Band 71_Ant 0	20M	BPSK	50	28		10mm	136100	680.5	22.63	23.00	0.0127	0.01
	FR1 Band 71_Ant 0	20M	BPSK	1	53	Side A	10mm	136100	680.5	20.88	21.00	0.167	0.17

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
13	FR1 Band 77_Ant 4	20M	BPSK	1	53	Side A	10mm	646720	3700.8	21.48	21.50	0.683	0.69
	FR1 Band 77_Ant 4	20M	BPSK	50	28		10mm	646720	3700.8	20.44	20.50	0.601	0.61
	FR1 Band 77_Ant 4	20M	BPSK	1	53	Side B	10mm	646720	3700.8	21.48	21.50	0.736	0.74
	FR1 Band 77_Ant 4	20M	BPSK	50	28		10mm	646720	3700.8	20.44	20.50	0.657	0.67
	FR1 Band 77_Ant 4	20M	BPSK	1	53	Side C	10mm	646720	3700.8	21.48	21.50	0.333	0.34
	FR1 Band 77_Ant 4	20M	BPSK	50	28		10mm	646720	3700.8	20.44	20.50	0.244	0.25
	FR1 Band 77_Ant 4	20M	BPSK	1	53	Side F	10mm	646720	3700.8	21.48	21.50	0.509	0.51
	FR1 Band 77_Ant 4	20M	BPSK	50	28		10mm	646720	3700.8	20.44	20.50	0.416	0.42
	FR1 Band 77_Ant 4	20M	BPSK	1	53	Side F	20mm	646720	3700.8	25.88	26.00	0.709	0.73
	FR1 Band 77_Ant 4	20M	BPSK	1	53	Side F	10mm	646720	3700.8	18.35	18.50	0.362	0.37
	FR1 Band 77_Ant 6	20M	BPSK	1	53	Side A	10mm	646720	3700.8	18.44	18.50	0.423	0.43
	FR1 Band 77_Ant 6	20M	BPSK	50	28		10mm	646720	3700.8	17.08	17.50	0.366	0.40
FR1 Band 77_Ant 6	20M	BPSK	1	53	Side C	10mm	646720	3700.8	18.44	18.50	0.161	0.16	
FR1 Band 77_Ant 6	20M	BPSK	50	28		10mm	646720	3700.8	17.08	17.50	0.076	0.08	
FR1 Band 77_Ant 6	20M	BPSK	1	53	Side D	10mm	646720	3700.8	18.44	18.50	0.519	0.53	
FR1 Band 77_Ant 6	20M	BPSK	50	28		10mm	646720	3700.8	17.08	17.50	0.459	0.51	
FR1 Band 77_Ant 6	20M	BPSK	1	53	Side E	10mm	646720	3700.8	18.44	18.50	0.346	0.35	
FR1 Band 77_Ant 6	20M	BPSK	50	28		10mm	646720	3700.8	17.08	17.50	0.273	0.30	
FR1 Band 78_Ant 6	20M	BPSK	1	53	Side A	10mm	636667	3550	18.09	18.50	0.386	0.42	
FR1 Band 78_Ant 6	20M	BPSK	50	28		10mm	636667	3550	17.27	17.50	0.222	0.23	
FR1 Band 78_Ant 6	20M	BPSK	1	53	Side C	10mm	636667	3550	18.09	18.50	0.117	0.13	
FR1 Band 78_Ant 6	20M	BPSK	50	28		10mm	636667	3550	17.27	17.50	0.053	0.06	
FR1 Band 78_Ant 6	20M	BPSK	1	53	Side D	10mm	636667	3550	18.09	18.50	0.457	0.50	
FR1 Band 78_Ant 6	20M	BPSK	50	28		10mm	636667	3550	17.27	17.50	0.398	0.42	
FR1 Band 78_Ant 6	20M	BPSK	1	53	Side E	10mm	636667	3550	18.09	18.50	0.288	0.32	
FR1 Band 78_Ant 6	20M	BPSK	50	28		10mm	636667	3550	17.27	17.50	0.221	0.23	

10. Simultaneous Transmission Analysis

The 3G/4G/WiFi and FR2 data are located in report number SAR.20220610 and SAR.20220612. The data listed in the tables below was extracted from the reports filed with this report.

Sim-Tx configuration

No.	Simultaneous Transmission Configuration	Exposure Positions
		Body
1	UMTS + 2.4 GHz Wifi 0 + 2.4 GHz WiFi 1	Yes
2	UMTS + 5 GHz Wifi 0 + 5 GHz WiFi 1	Yes
3	LTE + 2.4 GHz Wifi 0 + 2.4 GHz WiFi 1	Yes
4	LTE + 5 GHz Wifi 0 + 5 GHz WiFi 1	Yes
5	FR1 + 2.4 GHz Wifi 0 + 2.4 GHz WiFi 1	Yes
6	FR1 + 5 GHz Wifi 0 + 5 GHz WiFi 1	Yes
7	LTE + FR2 + 2.4 GHz WiFi 0 + 2.4 GHz WiFi 1	Yes
8	LTE + FR2 + 5 GHz WiFi 0 + 5 GHz WiFi 1	Yes

General Note:

1. The worst case WLAN reported SAR for each configuration was used for SAR summation, regardless of whether the WLAN channel has Hotspot capability. Therefore, the following summations represent the absolute worst cases for simultaneous transmission with WLAN.
2. The Scaled SAR summation is calculated based on the same configuration and test position.

Body Exposure Conditions

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz Wi-Fi 0	2.4GHz Wi-Fi 1	5GHz Wi-Fi 0	5GHz Wi-Fi 1		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)		
WCDMA II Ant 0	Side A	0.24	0.19	0.20	0.22	0.19	0.63	0.65
	Side B	0.01		0.09		0.21	0.10	0.22
	Side C	0.28	0.13	0.18	0.25	0.21	0.59	0.74
	Side D	0.16	0.21		0.26		0.37	0.42
	Side E		0.04		0.17		0.04	0.17
	Side F	0.87		0.07		0.17	0.94	1.04
WCDMA IV Ant 0	Side A	0.73	0.19	0.20	0.22	0.19	1.12	1.14
	Side B	0.09		0.09		0.21	0.18	0.30
	Side C	0.88	0.13	0.18	0.25	0.21	1.19	1.34
	Side D	0.03	0.21		0.26		0.24	0.29
	Side E		0.04		0.17		0.04	0.17
	Side F	0.60		0.07		0.17	0.67	0.77
WCDMA V Ant 0	Side A	0.88	0.19	0.20	0.22	0.19	1.27	1.29
	Side B	0.58		0.09		0.21	0.67	0.79
	Side C	0.87	0.13	0.18	0.25	0.21	1.18	1.33
	Side D	0.40	0.21		0.26		0.61	0.66
	Side E		0.04		0.17		0.04	0.17
	Side F	0.07		0.07		0.17	0.14	0.24
LTE Band 7 Ant 0	Side A	0.60	0.19	0.20	0.22	0.19	0.99	1.01
	Side B	0.03		0.09		0.21	0.12	0.24
	Side C	0.26	0.13	0.18	0.25	0.21	0.57	0.72
	Side D	0.10	0.21		0.26		0.31	0.36
	Side E		0.04		0.17		0.04	0.17
	Side F	0.84		0.07		0.17	0.91	1.01
LTE Band 12 Ant 0	Side A	0.17	0.19	0.20	0.22	0.19	0.56	0.58
	Side B	0.10		0.09		0.21	0.19	0.31
	Side C	0.16	0.13	0.18	0.25	0.21	0.47	0.62
	Side D	0.10	0.21		0.26		0.31	0.36
	Side E		0.04		0.17		0.04	0.17
	Side F	0.09		0.07		0.17	0.16	0.26
LTE Band 13 Ant 0	Side A	0.50	0.19	0.20	0.22	0.19	0.89	0.91
	Side B	0.35		0.09		0.21	0.44	0.56
	Side C	0.44	0.13	0.18	0.25	0.21	0.75	0.90
	Side D	0.24	0.21		0.26		0.45	0.50
	Side E		0.04		0.17		0.04	0.17
	Side F	0.06		0.07		0.17	0.13	0.23
LTE Band 14 Ant 0	Side A	0.48	0.19	0.20	0.22	0.19	0.87	0.89
	Side B	0.21		0.09		0.21	0.30	0.42
	Side C	0.46	0.13	0.18	0.25	0.21	0.77	0.92
	Side D	0.15	0.21		0.26		0.36	0.41
	Side E		0.04		0.17		0.04	0.17
	Side F	0.07		0.07		0.17	0.14	0.24
LTE Band 25 Ant 0	Side A	0.20	0.19	0.20	0.22	0.19	0.59	0.61
	Side B	0.18		0.09		0.21	0.27	0.39
	Side C	0.40	0.13	0.18	0.25	0.21	0.71	0.86
	Side D	0.59	0.21		0.26		0.80	0.85
	Side E		0.04		0.17		0.04	0.17
	Side F	0.81		0.07		0.17	0.88	0.98

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz Wi-Fi 0	2.4GHz Wi-Fi 1	5GHz Wi-Fi 0	5GHz Wi-Fi 1		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)		
LTE Band 26 Ant 0	Side A	0.74	0.19	0.20	0.22	0.19	1.13	1.15
	Side B	0.46		0.09		0.21	0.55	0.67
	Side C	0.74	0.13	0.18	0.25	0.21	1.05	1.20
	Side D	0.35	0.21		0.26		0.56	0.61
	Side E		0.04		0.17		0.04	0.17
	Side F	0.08		0.07		0.17	0.15	0.25
LTE Band 30 Ant 0	Side A	0.30	0.19	0.20	0.22	0.19	0.69	0.71
	Side B	0.02		0.09		0.21	0.11	0.23
	Side C	0.28	0.13	0.18	0.25	0.21	0.59	0.74
	Side D	0.74	0.21		0.26		0.95	1.00
	Side E		0.04		0.17		0.04	0.17
	Side F	0.33		0.07		0.17	0.40	0.50
LTE Band 41 Ant 0	Side A	0.59	0.19	0.20	0.22	0.19	0.98	1.00
	Side B	0.35		0.09		0.21	0.44	0.56
	Side C	0.58	0.13	0.18	0.25	0.21	0.89	1.04
	Side D	0.30	0.21		0.26		0.51	0.56
	Side E		0.04		0.17		0.04	0.17
	Side F	0.90		0.07		0.17	0.97	1.07
LTE Band 48 Ant 4	Side A	0.61	0.19	0.20	0.22	0.19	1.00	1.02
	Side B	0.14		0.09		0.21	0.23	0.35
	Side C	0.33	0.13	0.18	0.25	0.21	0.64	0.79
	Side D		0.21		0.26		0.21	0.26
	Side E		0.04		0.17		0.04	0.17
	Side F	0.68		0.07		0.17	0.75	0.85
LTE Band 66 Ant 0	Side A	0.52	0.19	0.20	0.22	0.19	0.91	0.93
	Side B	0.06		0.09		0.21	0.15	0.27
	Side C	0.66	0.13	0.18	0.25	0.21	0.97	1.12
	Side D	0.19	0.21		0.26		0.40	0.45
	Side E		0.04		0.17		0.04	0.17
	Side F	0.80		0.07		0.17	0.87	0.97
LTE Band 71 Ant 0	Side A	0.17	0.19	0.20	0.22	0.19	0.56	0.58
	Side B	0.08		0.09		0.21	0.17	0.29
	Side C	0.16	0.13	0.18	0.25	0.21	0.47	0.62
	Side D	0.11	0.21		0.26		0.32	0.37
	Side E		0.04		0.17		0.04	0.17
	Side F	0.02		0.07		0.17	0.09	0.19
FR1 Band n7 Ant 0	Side A	0.76	0.19	0.20	0.22	0.19	1.15	1.17
	Side B	0.12		0.09		0.21	0.21	0.33
	Side C	0.69	0.13	0.18	0.25	0.21	1.00	1.15
	Side D	0.11	0.21		0.26		0.32	0.37
	Side E		0.04		0.17		0.04	0.17
	Side F	0.89		0.07		0.17	0.96	1.06
FR1 Band n12 Ant 0	Side A	0.33	0.19	0.20	0.22	0.19	0.72	0.74
	Side B	0.16		0.09		0.21	0.25	0.37
	Side C	0.31	0.13	0.18	0.25	0.21	0.62	0.77
	Side D	0.18	0.21		0.26		0.39	0.44
	Side E		0.04		0.17		0.04	0.17
	Side F	0.02		0.07		0.17	0.09	0.19

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz Wi-Fi 0	2.4GHz Wi-Fi 1	5GHz Wi-Fi 0	5GHz Wi-Fi 1		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)		
FR1 Band n13 Ant 0	Side A	0.41	0.19	0.20	0.22	0.19	0.80	0.82
	Side B	0.28		0.09		0.21	0.37	0.49
	Side C	0.37	0.13	0.18	0.25	0.21	0.68	0.83
	Side D	0.19	0.21		0.26		0.40	0.45
	Side E		0.04		0.17		0.04	0.17
	Side F	0.04		0.07		0.17	0.11	0.21
FR1 Band n14 Ant 0	Side A	0.37	0.19	0.20	0.22	0.19	0.76	0.78
	Side B	0.20		0.09		0.21	0.29	0.41
	Side C	0.35	0.13	0.18	0.25	0.21	0.66	0.81
	Side D	0.13	0.21		0.26		0.34	0.39
	Side E		0.04		0.17		0.04	0.17
	Side F	0.05		0.07		0.17	0.12	0.22
FR1 Band n25 Ant 0	Side A	0.31	0.19	0.20	0.22	0.19	0.70	0.72
	Side B	0.06		0.09		0.21	0.15	0.27
	Side C	0.32	0.13	0.18	0.25	0.21	0.63	0.78
	Side D	0.16	0.21		0.26		0.37	0.42
	Side E		0.04		0.17		0.04	0.17
	Side F	0.86		0.07		0.17	0.93	1.03
FR1 Band n26 Ant 0	Side A	0.44	0.19	0.20	0.22	0.19	0.83	0.85
	Side B	0.35		0.09		0.21	0.44	0.56
	Side C	0.54	0.13	0.18	0.25	0.21	0.85	1.00
	Side D	0.23	0.21		0.26		0.44	0.49
	Side E		0.04		0.17		0.04	0.17
	Side F	0.04		0.07		0.17	0.11	0.21
FR1 Band n30 Ant 0	Side A	0.35	0.19	0.20	0.22	0.19	0.74	0.76
	Side B	0.07		0.09		0.21	0.16	0.28
	Side C	0.26	0.13	0.18	0.25	0.21	0.57	0.72
	Side D	0.36	0.21		0.26		0.57	0.62
	Side E		0.04		0.17		0.04	0.17
	Side F	0.34		0.07		0.17	0.41	0.51
FR1 Band n41 Ant 8	Side A	0.75	0.19	0.20	0.22	0.19	1.14	1.16
	Side B			0.09		0.21	0.09	0.21
	Side C	0.28	0.13	0.18	0.25	0.21	0.59	0.74
	Side D	0.10	0.21		0.26		0.31	0.36
	Side E		0.04		0.17		0.04	0.17
	Side F			0.07		0.17	0.07	0.17
FR1 Band n48 Ant 4	Side A	0.90	0.19	0.20	0.22	0.19	1.29	1.31
	Side B	0.74		0.09		0.21	0.83	0.95
	Side C	0.39	0.13	0.18	0.25	0.21	0.70	0.85
	Side D		0.21		0.26		0.21	0.26
	Side E		0.04		0.17		0.04	0.17
	Side F	0.64		0.07		0.17	0.71	0.81
FR1 Band n66 Ant 0	Side A	0.68	0.19	0.20	0.22	0.19	1.07	1.09
	Side B	0.10		0.09		0.21	0.19	0.31
	Side C	0.83	0.13	0.18	0.25	0.21	1.14	1.29
	Side D	0.20	0.21		0.26		0.41	0.46
	Side E		0.04		0.17		0.04	0.17
	Side F	0.89		0.07		0.17	0.96	1.06

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN	2.4GHz Wi-Fi 0	2.4GHz Wi-Fi 1	5GHz Wi-Fi 0	5GHz Wi-Fi 1		
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)		
FR1 Band n70 Ant 8	Side A	0.77	0.19	0.20	0.22	0.19	1.16	1.18
	Side B	0.21		0.09		0.21	0.30	0.42
	Side C	0.87	0.13	0.18	0.25	0.21	1.18	1.33
	Side D		0.21		0.26		0.21	0.26
	Side E		0.04		0.17		0.04	0.17
	Side F			0.07		0.17	0.07	0.17
FR1 Band n71 Ant 0	Side A	0.41	0.19	0.20	0.22	0.19	0.80	0.82
	Side B	0.23		0.09		0.21	0.32	0.44
	Side C	0.39	0.13	0.18	0.25	0.21	0.70	0.85
	Side D	0.26	0.21		0.26		0.47	0.52
	Side E		0.04		0.17		0.04	0.17
	Side F	0.02		0.07		0.17	0.09	0.19
FR1 Band n77 Ant 4	Side A	0.69	0.19	0.20	0.22	0.19	1.08	1.10
	Side B	0.74		0.09		0.21	0.83	0.95
	Side C	0.34	0.13	0.18	0.25	0.21	0.65	0.80
	Side D		0.21		0.26		0.21	0.26
	Side E		0.04		0.17		0.04	0.17
	Side F	0.51		0.07		0.17	0.58	0.68

LTE UL CA	SAR ₁	SAR ₂	WiFi Sum of Tx0 and Tx1	Total
2A-4A	0.14	0.31	0.47	0.92
2A-5A	0.14	0.38	0.47	0.99
2A-13A	0.33	0.26	0.47	1.06
2A-66A	0.14	0.32	0.47	0.93
4A-5A	0.37	0.38	0.47	1.22
4A-13A	0.31	0.26	0.47	1.04
5A-66A	0.38	0.35	0.47	1.20
13A-66A	0.26	0.32	0.47	1.05

FR1 UL ENDC-LTE (NSA)	SAR ₁	SAR ₂	WiFi Sum of Tx0 and Tx1	Total
5A-n2A	0.38	0.38	0.47	1.23
13A-n2A	0.26	0.54	0.47	1.27
66A-n2A	0.35	0.54	0.47	1.36
2A-n5A	0.14	0.50	0.47	1.11
48A-n5A	0.34	0.67	0.47	1.48
66A-n5A	0.35	0.50	0.47	1.32
2A-n66A	0.14	0.41	0.47	1.02
5A-n66A	0.38	0.39	0.47	1.24
7A-n66A	0.43	0.41	0.47	1.31
12A-n66A	0.08	0.41	0.47	0.96
13A-n66A	0.26	0.41	0.47	1.14
48A-n66A	0.34	0.38	0.47	1.19
2A-n71A	0.33	0.41	0.47	1.21
7A-n71A	0.24	0.41	0.47	1.12
66A-n71A	0.32	0.41	0.47	1.20
2A-n77A	0.14	0.37	0.47	0.98
5A-n77A	0.35	0.37	0.47	1.19
7A-n77A	0.43	0.37	0.47	1.27
12A-n77A	0.08	0.37	0.47	0.92
13A-n77A	0.26	0.37	0.47	1.10
14A-n77A	0.23	0.37	0.47	1.07
25A-n77A	0.41	0.37	0.47	1.25
66A-n77A	0.35	0.37	0.47	1.19
2A-n78A	0.14	0.37	0.47	0.98
5A-n78A	0.35	0.37	0.47	1.19
7A-n78A	0.43	0.37	0.47	1.27
12A-n78A	0.08	0.37	0.47	0.92
25A-n78A	0.41	0.37	0.47	1.25
66A-n78A	0.35	0.37	0.47	1.19

FR2 UL ENDC-LTE (NSA)		Ratio to Limit for LTE	Ratio to Limit for FR2	WiFi Ratio of Tx0 and Tx1	Total
1CC	2A-n260A	0.09	0.11	0.30	0.50
	5A-n260A	0.22	0.11	0.30	0.63
	12A-n260A	0.05	0.11	0.30	0.46
	13A-n260A	0.16	0.11	0.30	0.57
	48A-n260A	0.21	0.11	0.30	0.62
	66A-n260A	0.22	0.11	0.30	0.63
2CC	2A-n260G	0.09	0.25	0.30	0.64
	5A-n260G	0.22	0.25	0.30	0.77
	13A-n260G	0.16	0.25	0.30	0.71
	48A-n260G	0.21	0.25	0.30	0.76
	66A-n260G	0.22	0.25	0.30	0.77
1CC	2A-n261A	0.09	0.16	0.30	0.55
	5A-n261A	0.22	0.16	0.30	0.68
	13A-n261A	0.16	0.16	0.30	0.62
	48A-n261A	0.21	0.16	0.30	0.67
	66A-n261A	0.22	0.16	0.30	0.68
2CC	2A-n261G	0.09	0.27	0.30	0.66
	5A-n261G	0.22	0.27	0.30	0.79
	13A-n261G	0.16	0.27	0.30	0.73
	48A-n261G	0.21	0.27	0.30	0.78
	66A-n261G	0.22	0.27	0.30	0.79

11. Test Equipment List

Table 11.1 Equipment Specifications

Type	Calibration Due Date	Calibration Done Date	Serial Number
Staubli Robot TX60L	N/A	N/A	F07/55M6A1/A/01
Measurement Controller CS8c	N/A	N/A	1012
ELI5 Flat Phantom	N/A	N/A	1251
Device Holder	N/A	N/A	N/A
Data Acquisition Electronics 4	08/06/2022	08/06/2021	759
SPEAG E-Field Probe EX3DV4	01/14/2023	01/14/2022	7530
Speag Validation Dipole D750V2	06/04/2023	06/04/2021	1053
Speag Validation Dipole D900V2	06/04/2023	06/04/2021	1d128
Speag Validation Dipole D1750V2	06/03/2023	06/03/2021	1061
Speag Validation Dipole D1900V2	06/04/2023	06/04/2021	5d147
Speag Validation Dipole D2300V2	06/03/2023	06/03/2021	1060
Speag Validation Dipole D2550V2	06/03/2023	06/03/2021	1003
Speag Validation Dipole D3500V2	04/13/2023	04/13/2021	1061
Speag Validation Dipole D3700V2	04/13/2023	04/13/2021	1024
Speag Validation Dipole D3900V2	01/13/2023	01/13/2022	1082
Speag Validation Dipole D4200V2	01/13/2023	01/13/2022	1025
Agilent N1911A Power Meter	03/16/2023	03/16/2022	GB45100254
Agilent N1922A Power Sensor	03/17/2023	03/17/2022	MY45240464
Agilent (HP) 8561E Spectrum Analyzer	03/17/2023	03/17/2022	31720068
Agilent (HP) 83752A Synthesized Sweeper	03/17/2023	03/17/2022	3610A01048
Agilent (HP) 8753C Vector Network Analyzer	03/17/2023	03/17/2022	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	03/16/2023	03/16/2022	2904A00595
Anritsu MT8821C	N/A	N/A	6201381721
Apriel Dielectric Probe Assembly	N/A	N/A	0011
Head Equivalent Matter (600 MHz)	N/A	N/A	N/A
Head Equivalent Matter (750 MHz)	N/A	N/A	N/A
Head Equivalent Matter (900 MHz)	N/A	N/A	N/A
Head Equivalent Matter (1750 MHz)	N/A	N/A	N/A
Head Equivalent Matter (1900 MHz)	N/A	N/A	N/A
Head Equivalent Matter (2300 MHz)	N/A	N/A	N/A
Head Equivalent Matter (2450 MHz)	N/A	N/A	N/A
Head Equivalent Matter (2550 MHz)	N/A	N/A	N/A
Head Equivalent Matter (3-6 GHz)	N/A	N/A	N/A

12. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the FCC/IC. These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The tested device complies with the requirements in respect to all parameters subject to the test. The test results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body is a very complex phenomena that depends on the mass, shape, and size of the body; the orientation of the body with respect to the field vectors; and, the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because innumerable factors may interact to determine the specific biological outcome of an exposure to electromagnetic fields, any protection guide shall consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

13. References

- [1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation, August 1996
- [2] ANSI/IEEE C95.1 – 1992, American National Standard Safety Levels with respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300kHz to 100GHz, New York: IEEE, 1992.
- [3] ANSI/IEEE C95.3 – 1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave, New York: IEEE, 1992.
- [4] International Electrotechnical Commission, IEC 62209-2 (Edition 1.0), Human Exposure to radio frequency fields from hand-held and body mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz), March 2010.
- [5] IEEE Standard 1528 – 2013, IEEE Recommended Practice for Determining the Peak-Spatial Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques, June 2013.
- [6] Industry Canada, RSS – 102 Issue 5, Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands), March 2015.
- [7] Health Canada, Safety Code 6, Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3kHz to 300 GHz, 2009.

Appendix A – System Validation Plots and Data

Test Result for UIM Dielectric Parameter

Thu 09/Jun/2022

Freq Frequency(GHz)

FCC_eH Limits for Head Epsilon

FCC_sH Limits for Head Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eH	FCC_sH	Test_e	Test_s
0.5800	42.82	0.88	42.07	0.89
0.5900	42.77	0.88	42.01	0.90
0.6000	42.72	0.88	41.96	0.90
0.6100	42.67	0.88	41.91	0.91
0.6200	42.62	0.88	41.86	0.91
0.6300	42.56	0.88	41.79	0.91
0.6400	42.51	0.88	41.73	0.91
0.6500	42.46	0.88	41.67	0.91
0.6600	42.41	0.88	41.61	0.92
0.6700	42.36	0.89	41.55	0.92
0.6730	42.345	0.89	41.532	0.92*
0.6800	42.31	0.89	41.49	0.92
0.6805	42.307	0.89	41.487	0.921*
0.6880	42.262	0.89	41.442	0.928*
0.6900	42.25	0.89	41.43	0.93
0.7000	42.20	0.89	41.37	0.93

* value intepolated

Test Result for UIM Dielectric Parameter

Thu 09/Jun/2022

Freq Frequency(GHz)

FCC_eH Limits for Head Epsilon

FCC_sH Limits for Head Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eH	FCC_sH	Test_e	Test_s
0.7000	42.20	0.89	41.27	0.89
0.7040	42.18	0.89	41.242	0.894*
0.7075	42.163	0.89	41.218	0.898*
0.7100	42.15	0.89	41.20	0.90
0.7110	42.145	0.89	41.195	0.901*
0.7200	42.10	0.89	41.15	0.91
0.7300	42.05	0.89	41.08	0.92
0.7400	41.99	0.89	41.02	0.92
0.7500	41.94	0.89	40.97	0.93
0.7600	41.89	0.89	40.91	0.94
0.7700	41.84	0.89	40.85	0.95
0.7800	41.79	0.90	40.79	0.95
0.7820	41.778	0.90	40.778	0.952*
0.7900	41.73	0.90	40.73	0.96
0.7930	41.715	0.90	40.718	0.96*
0.8000	41.68	0.90	40.69	0.96

* value interpolated

Test Result for UIM Dielectric Parameter
Wed 08/Jun/2022
Freq Frequency(GHz)
eH Limits for Head Epsilon
sH Limits for Head Sigma
Test_e Epsilon of UIM
Test_s Sigma of UIM

Freq	eH	sH	Test_e	Test_s
0.8000	41.68	0.90	41.14	0.92
0.8100	41.63	0.90	41.09	0.93
0.8200	41.58	0.90	41.03	0.94
0.8215	41.573	0.90	41.038	0.94*
0.8300	41.53	0.90	41.08	0.94
0.8315	41.526	0.902	41.076	0.942*
0.8400	41.50	0.91	41.05	0.95
0.8415	41.50	0.912	41.047	0.952*
0.8500	41.50	0.92	41.03	0.96
0.8600	41.50	0.93	41.01	0.97
0.8700	41.50	0.94	40.99	0.98
0.8800	41.50	0.95	40.98	0.99
0.8900	41.50	0.96	40.97	1.00
0.9000	41.50	0.97	40.96	1.01
0.9100	41.50	0.98	40.95	1.02
0.9200	41.49	0.98	40.94	1.02

* value interpolated

Test Result for UIM Dielectric Parameter
Tue 31/May/2022
Freq Frequency(GHz)
eH Limits for Head Epsilon
sH Limits for Head Sigma
Test_e Epsilon of UIM
Test_s Sigma of UIM

Freq	eH	sH	Test_e	Test_s
1.7000	40.16	1.34	39.16	1.35
1.7025	40.155	1.343	39.155	1.353*
1.7100	40.14	1.35	39.14	1.36
1.7200	40.13	1.35	39.12	1.37
1.7300	40.11	1.36	39.10	1.37
1.7400	40.09	1.37	39.08	1.38
1.7450	40.085	1.37	39.07	1.385*
1.7500	40.08	1.37	39.06	1.39
1.7600	40.06	1.38	39.04	1.40
1.7700	40.05	1.38	39.02	1.41
1.7800	40.03	1.39	39.00	1.41
1.7900	40.02	1.39	38.98	1.42

* value interpolated

Test Result for UIM Dielectric Parameter

Fri 27/May/2022

Freq Frequency(GHz)

eH Limits for Head Epsilon

sH Limits for Head Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	eH	sH	Test_e	Test_s
1.8500	40.00	1.40	39.65	1.40
1.8600	40.00	1.40	39.63	1.41
1.8700	40.00	1.40	39.61	1.41
1.8800	40.00	1.40	39.59	1.42
1.8825	40.00	1.40	39.585	1.42*
1.8900	40.00	1.40	39.57	1.42
1.9000	40.00	1.40	39.55	1.42
1.9050	40.00	1.40	39.54	1.425*
1.9100	40.00	1.40	39.53	1.43
1.9200	40.00	1.40	39.52	1.44

* value interpolated

Test Result for UIM Dielectric Parameter

Fri 03/Jun/2022

Freq Frequency(GHz)

FCC_eH Limits for Head Epsilon

FCC_sH Limits for Head Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eH	FCC_sH	Test_e	Test_s
2.2900	39.48	1.66	38.71	1.69
2.3000	39.47	1.67	38.69	1.70
2.3100	39.45	1.68	38.67	1.71
2.3200	39.43	1.68	38.65	1.72
2.3300	39.41	1.69	38.63	1.73
2.3400	39.40	1.70	38.61	1.74
2.3500	39.38	1.71	38.59	1.75
2.3600	39.36	1.72	38.57	1.76
2.3700	39.34	1.73	38.56	1.77
2.3800	39.32	1.74	38.54	1.78
2.3900	39.31	1.75	38.52	1.79
2.4000	39.29	1.76	38.50	1.80
2.4100	39.27	1.76	38.49	1.81

* value interpolated

Test Result for UIM Dielectric Parameter

Wed 01/Jun/2022

Freq Frequency(GHz)

FCC_eH Limits for Head Epsilon

FCC_sH Limits for Head Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eH	FCC_sH	Test_e	Test_s
2.4900	39.15	1.84	38.88	1.84
2.5000	39.14	1.85	38.86	1.85
2.5060	39.128	1.862	38.842	1.856*
2.5100	39.12	1.87	38.83	1.86
2.5200	39.11	1.88	38.81	1.88
2.5300	39.10	1.89	38.79	1.89
2.5350	39.095	1.895	38.775	1.895*
2.5400	39.09	1.90	38.76	1.90
2.5445	39.081	1.905	38.751	1.909*
2.5500	39.07	1.91	38.74	1.92
2.5600	39.06	1.92	38.72	1.93
2.5700	39.05	1.93	38.69	1.94
2.5800	39.03	1.94	38.67	1.96
2.5900	39.02	1.95	38.64	1.97
2.5930	39.017	1.953	38.643	1.97*
2.6000	39.01	1.96	38.65	1.97
2.6100	39.00	1.97	38.63	1.98
2.6200	38.98	1.99	38.62	1.99
2.6300	38.97	2.00	38.60	2.00
2.6400	38.96	2.01	38.58	2.01
2.6415	38.959	2.012	38.577	2.012*
2.6500	38.95	2.02	38.56	2.02
2.6600	38.93	2.03	38.55	2.03
2.6700	38.92	2.04	38.53	2.04
2.6800	38.91	2.05	38.51	2.05
2.6900	38.89	2.06	38.49	2.06
2.7000	38.88	2.07	38.48	2.07

* value interpolated

Test Result for UIM Dielectric Parameter

Sun 05/Jun/2022

Freq Frequency(GHz)

FCC_eH Limits for Head Epsilon

FCC_sH Limits for Head Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eH	FCC_sH	Test_e	Test_s
3.3000	38.16	2.70	37.59	2.73
3.3100	38.15	2.71	37.58	2.74*
3.3200	38.14	2.72	37.57	2.75
3.3400	38.12	2.74	37.55	2.77
3.3600	38.09	2.76	37.52	2.79
3.3800	38.07	2.78	37.50	2.81
3.4000	38.05	2.80	37.48	2.83
3.4077	38.038	2.808	37.468	2.838*
3.4200	38.02	2.82	37.45	2.85
3.4400	38.00	2.85	37.43	2.88
3.4600	37.98	2.87	37.41	2.90
3.4800	37.95	2.89	37.38	2.92
3.5000	37.93	2.91	37.36	2.94
3.5054	37.925	2.915	37.355	2.945*
3.5200	37.91	2.93	37.34	2.96
3.5400	37.88	2.95	37.31	2.98
3.5600	37.86	2.97	37.29	3.00
3.5800	37.84	2.99	37.27	3.02
3.6000	37.81	3.02	37.24	3.05
3.6031	37.807	3.023	37.237	3.053*
3.6033	37.807	3.023	37.237	3.053*
3.6200	37.79	3.04	37.22	3.07
3.6250	37.785	3.045	37.215	3.075*
3.6400	37.77	3.06	37.20	3.09
3.6600	37.75	3.08	37.18	3.11
3.6800	37.72	3.10	37.15	3.13
3.7000	37.70	3.12	37.13	3.15
3.7008	37.699	3.121	37.129	3.151*
3.7200	37.68	3.14	37.11	3.17
3.7400	37.65	3.17	37.08	3.20
3.7600	37.63	3.19	37.06	3.22
3.7800	37.61	3.21	37.04	3.24
3.7985	37.582	3.229	37.012	3.259*
3.8000	37.58	3.23	37.01	3.26
3.8200	37.56	3.25	36.99	3.28
3.8400	37.54	3.27	36.97	3.30
3.8600	37.51	3.29	36.94	3.32
3.8800	37.49	3.31	36.92	3.34
3.8902	37.48	3.325	36.91	3.355*
3.9000	37.47	3.34	36.90	3.37
3.9200	37.44	3.36	36.87	3.39
3.9400	37.42	3.38	36.85	3.41
3.9600	37.40	3.40	36.83	3.43
3.9800	37.37	3.42	36.80	3.45
3.9939	37.356	3.434	36.786	3.464*
4.0000	37.35	3.44	36.78	3.47
4.0200	37.33	3.46	36.76	3.49
4.0400	37.30	3.48	36.73	3.51
4.0600	37.28	3.51	36.71	3.54
4.0800	37.26	3.53	36.69	3.56
4.0916	37.243	3.542	36.673	3.572*
4.1000	37.23	3.55	36.66	3.58
4.1200	37.21	3.57	36.64	3.60
4.1400	37.19	3.59	36.62	3.62
4.1600	37.16	3.61	36.59	3.64
4.1800	37.14	3.63	36.57	3.66
4.1900	37.13	3.64	36.56	3.67*
4.2000	37.12	3.65	36.55	3.68

* value interpolated

RF Exposure Lab

Plot 1

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN 1053

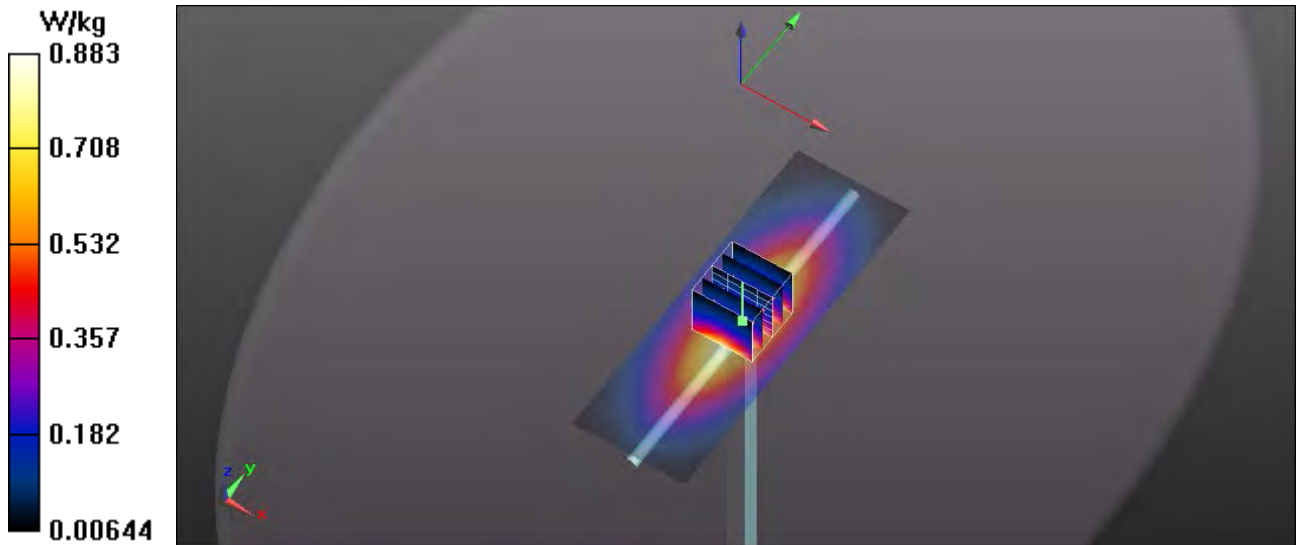
Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
 Medium: HSL750; Medium parameters used (interpolated): $f = 750$ MHz; $\sigma = 0.93$ S/m; $\epsilon_r = 40.97$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/9/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 – SN7530; ConvF(10.44, 10.44, 10.44); Calibrated: 1/14/2022;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

750 MHz Head/Verification/Area Scan (41x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
 Maximum value of SAR (interpolated) = 0.871 W/kg

750 MHz Head/Verification /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 33.452 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 1.76 mW/g
 $P_{in} = 100$ mW
SAR(1 g) = 0.866 mW/g; SAR(10 g) = 0.559 mW/g
 Maximum value of SAR (measured) = 0.883 W/kg



RF Exposure Lab

Plot 2

DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:1d128

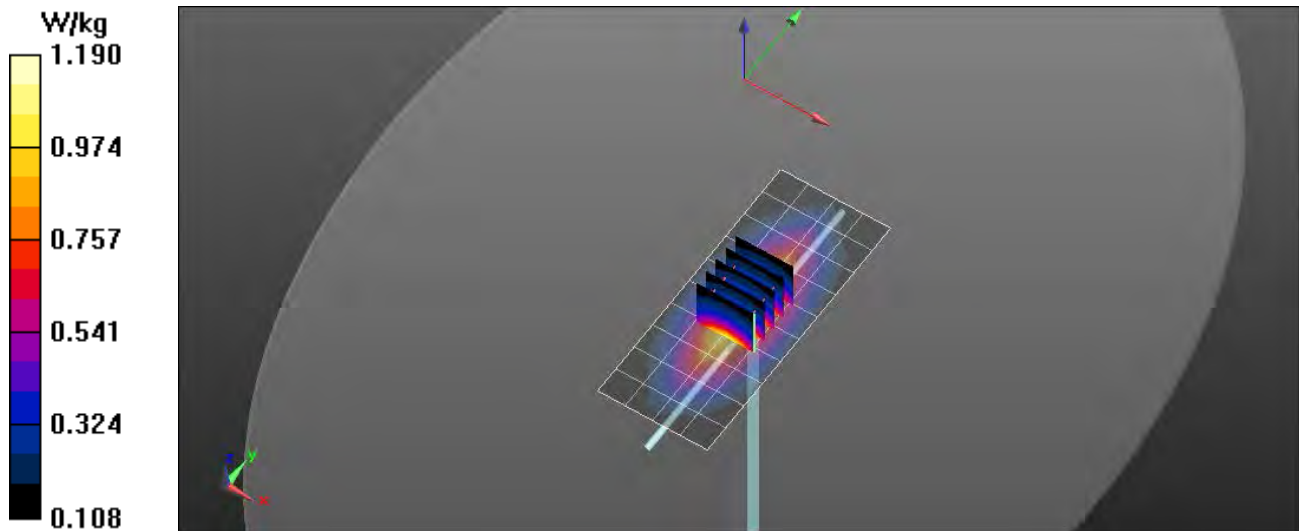
Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1
Medium: HSL900; Medium parameters used: $f = 900 \text{ MHz}$; $\sigma = 1.01 \text{ S/m}$; $\epsilon_r = 40.96$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

Test Date: Date: 6/8/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN7530; ConvF(9.98, 9.98, 9.98); Calibrated: 1/14/2022;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

900 MHz Head/Verification/Area Scan (5x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 1.22 W/kg

900 MHz Head/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 30.119 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.49 W/kg
 $P_{in} = 100 \text{ mW}$
SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.716 W/kg
Maximum value of SAR (measured) = 1.19 W/kg



RF Exposure Lab

Plot 3

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN:1061

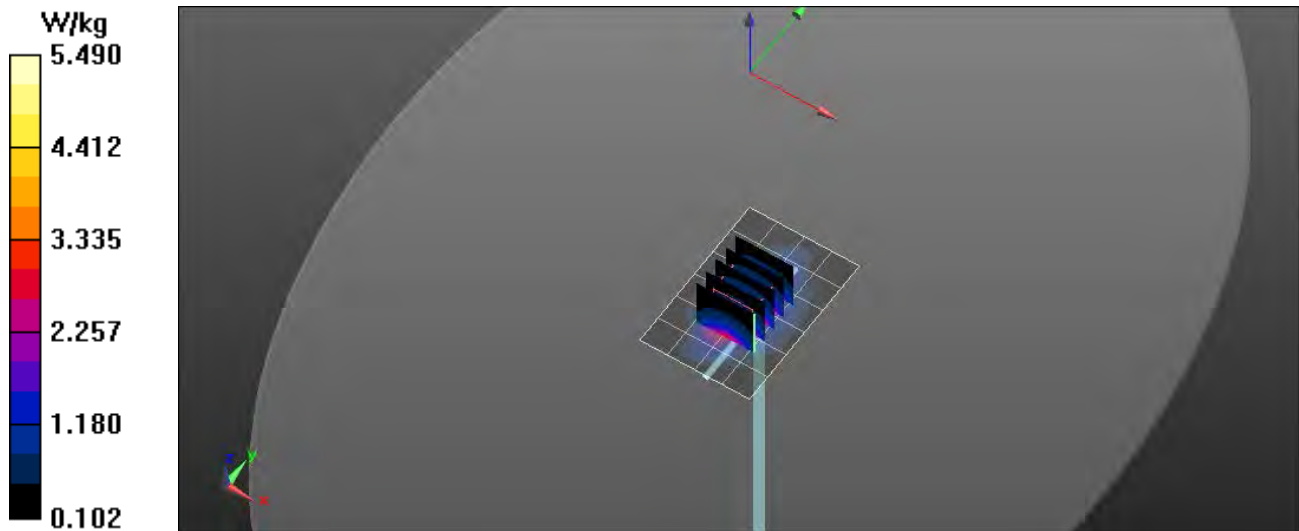
Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
 Medium: HSL1750; Medium parameters used: $f = 1750$ MHz; $\sigma = 1.39$ S/m; $\epsilon_r = 39.06$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 5/31/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 - SN7530; ConvF(8.42, 8.42, 8.42); Calibrated: 1/14/2022;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1750 MHz Head/Verification/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 5.46 W/kg

1750 MHz Head/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 34.885 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 6.97 W/kg
 $P_{in} = 100$ mW
SAR(1 g) = 3.81 W/kg; SAR(10 g) = 1.99 W/kg
 Maximum value of SAR (measured) = 5.47 W/kg



RF Exposure Lab

Plot 4

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN: 5d147

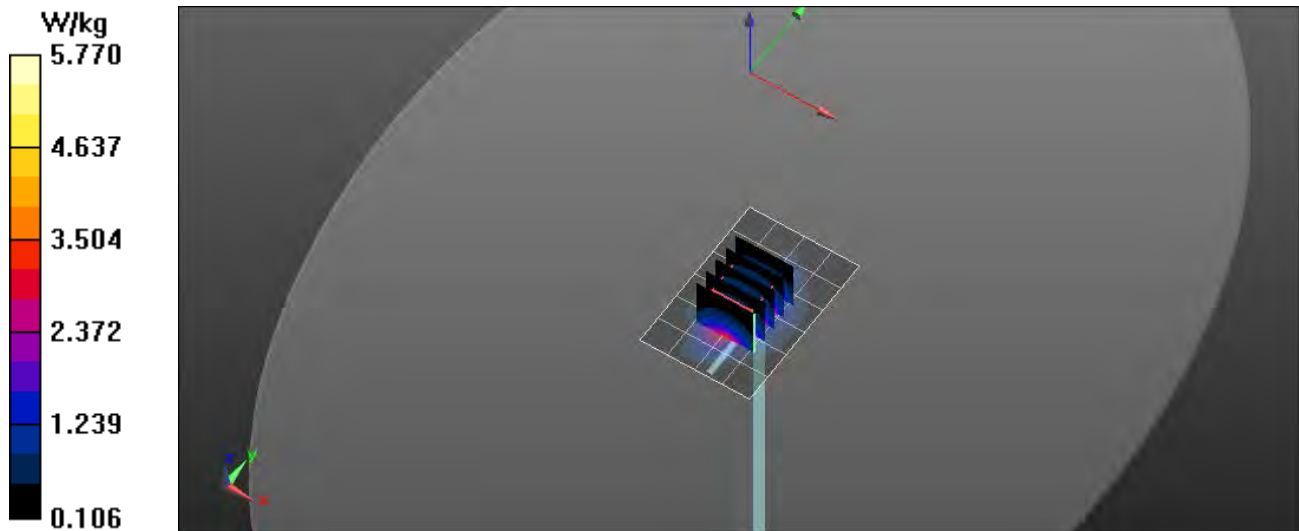
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: HSL1900; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 39.55$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 5/27/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN7530; ConvF(8.06, 8.06, 8.06); Calibrated: 1/14/2022;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1900 MHz Head/Verification/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.68 W/kg

1900 MHz Head/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 34.662 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 7.18 W/kg
 $P_{in} = 100$ mW
SAR(1 g) = 4.12 W/kg; SAR(10 g) = 2.14 W/kg
Maximum value of SAR (measured) = 5.77 W/kg



RF Exposure Lab

Plot 5

DUT: Dipole 2300 MHz D2300V2; Type: D2300V2; Serial: D2300V2 - SN: 1060

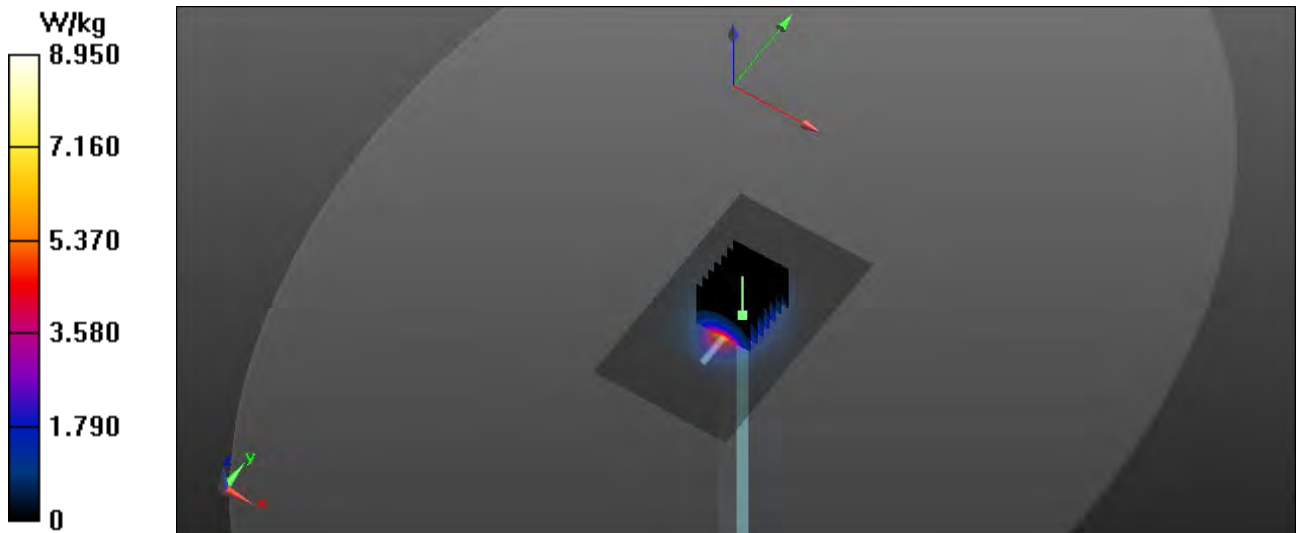
Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: HSL2300; Medium parameters used: $f = 2300$ MHz; $\sigma = 1.7$ S/m; $\epsilon_r = 38.69$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 6/3/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 – SN7530; ConvF(7.85, 7.85, 7.85); Calibrated: 1/14/2022;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

2300 MHz Head/Verification/Area Scan (61x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 8.52 W/kg

2300 MHz Head/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.157 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 11.2 W/kg
 $P_{in} = 100$ mW
SAR(1 g) = 5.01 W/kg; SAR(10 g) = 2.41 W/kg
Maximum value of SAR (measured) = 8.95 W/kg



RF Exposure Lab

Plot 6

DUT: Dipole 2550 MHz D2550V2; Type: D2550V2; Serial: D2550V2 - SN:1003

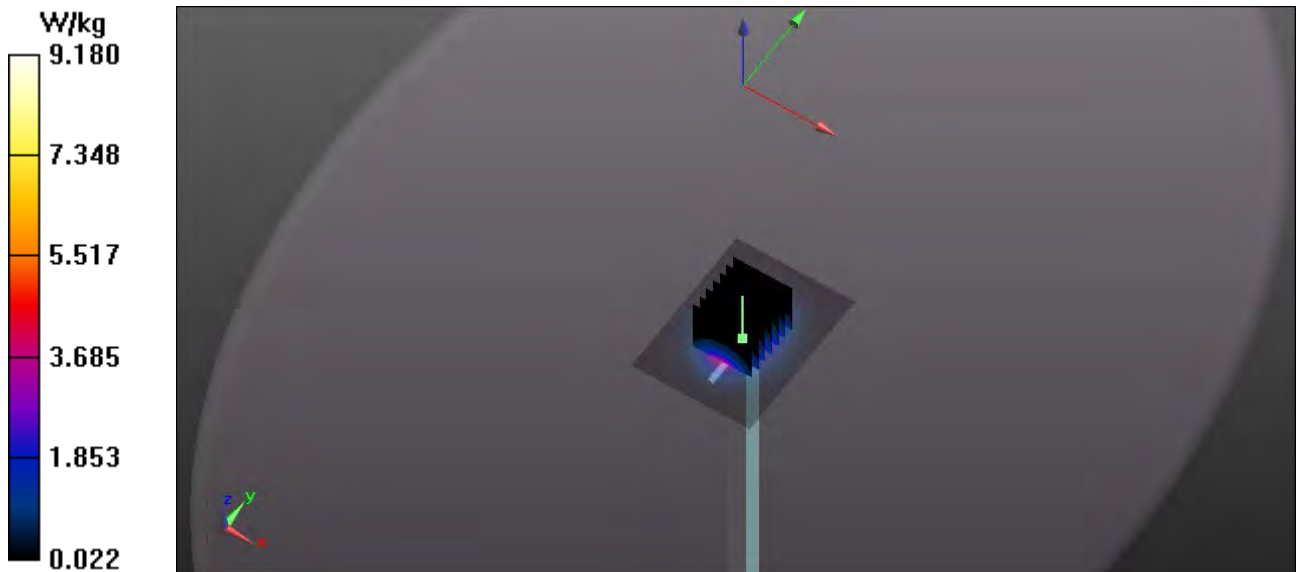
Communication System: CW; Frequency: 2550 MHz; Duty Cycle: 1:1
 Medium: HSL2550; Medium parameters used: $f = 2550$ MHz; $\sigma = 1.92$ S/m; $\epsilon_r = 38.74$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/1/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 - SN7530; ConvF(7.42, 7.42, 7.42); Calibrated: 1/14/2022;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

2550 MHz Head/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 9.05 W/kg

2550 MHz Head/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 55.923 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 11.8 W/kg
 $P_{in} = 100$ mW
SAR(1 g) = 5.66 W/kg; SAR(10 g) = 2.49 W/kg
 Maximum value of SAR (measured) = 9.18 W/kg



RF Exposure Lab

Plot 7

DUT: Dipole D3300V2; Type: D3300V2; Serial: D3300V2 - SN: 1032

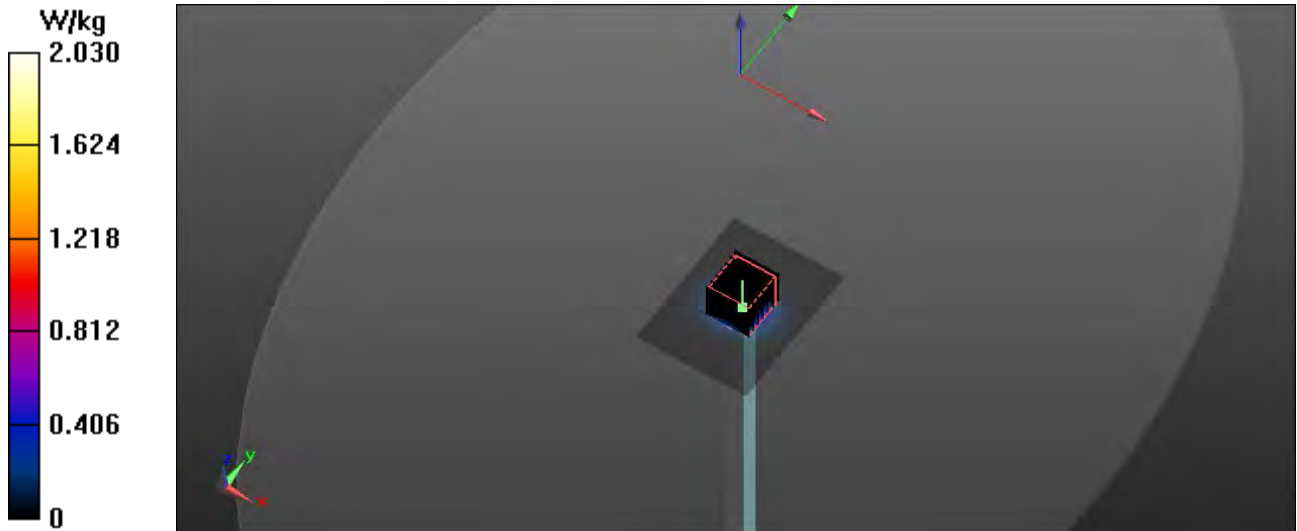
Communication System: CW; Frequency: 3300 MHz; Duty Cycle: 1:1
Medium: HSL 3-6 GHz; Medium parameters used: $f = 3300$ MHz; $\sigma = 2.73$ S/m; $\epsilon_r = 37.59$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 6/5/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 – SN7530; ConvF(7.12, 7.12, 7.12); Calibrated: 1/14/2022;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

3300 MHz Head/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.81 W/kg

3300 MHz Head/Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 14.856 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.68 W/kg
Pin=10 mW
SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.253 W/kg
Maximum value of SAR (measured) = 2.03 W/kg



RF Exposure Lab

Plot 8

DUT: Dipole D3500V2; Type: D3500V2; Serial: D3500V2 - SN: 1061

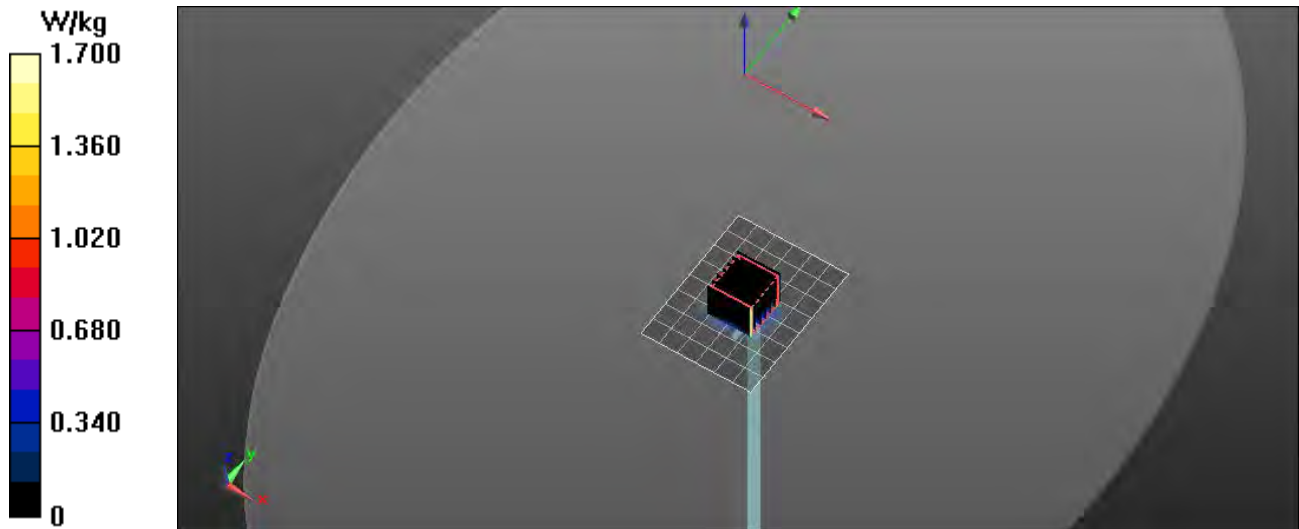
Communication System: CW; Frequency: 3500 MHz; Duty Cycle: 1:1
 Medium: HSL 3-6 GHz; Medium parameters used: $f = 3500$ MHz; $\sigma = 2.94$ S/m; $\epsilon_r = 37.36$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/5/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 - SN7530; ConvF(7.1, 7.1, 7.1); Calibrated: 4/12/2022;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

3500 MHz Head/Verification/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 1.65 W/kg

3500 MHz Head/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
 Reference Value = 21.367 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 3.71 W/kg
 $P_{in} = 10$ mW
SAR(1 g) = 0.682 W/kg; SAR(10 g) = 0.254 W/kg
 Maximum value of SAR (measured) = 1.7 W/kg



RF Exposure Lab

Plot 9

DUT: Dipole D3700V2; Type: D3700V2; Serial: D3700V2 - SN:1024

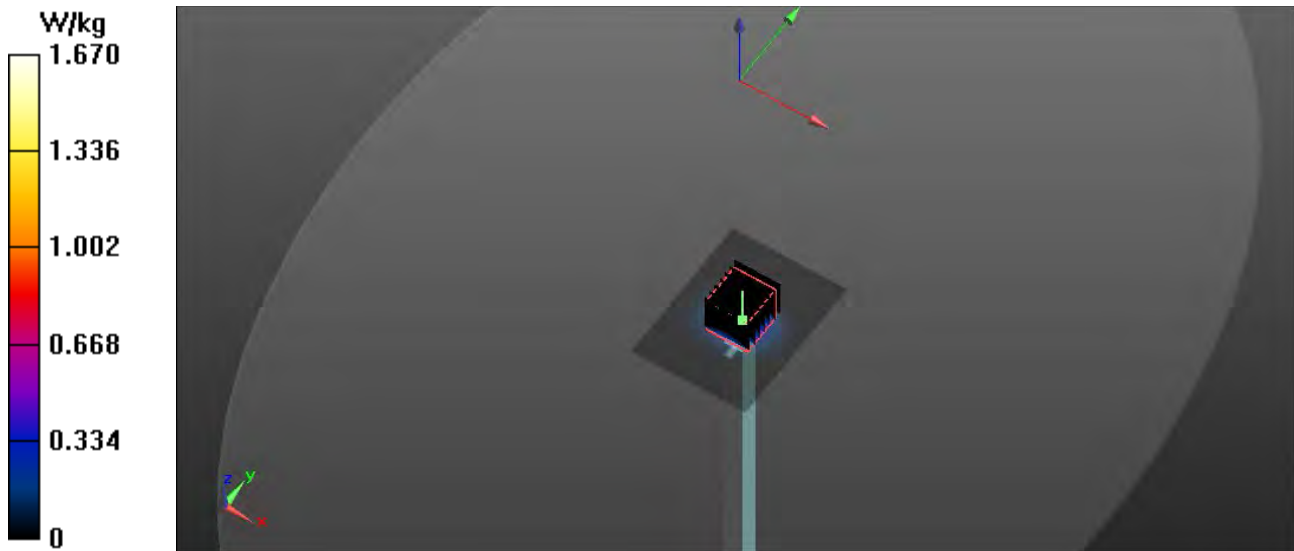
Communication System: CW; Frequency: 3700 MHz; Duty Cycle: 1:1
 Medium: HSL 3-6 GHz; Medium parameters used: $f = 3700$ MHz; $\sigma = 3.15$ S/m; $\epsilon_r = 37.13$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/5/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 – SN7530; ConvF(6.9, 6.9, 6.9); Calibrated: 1/14/2022;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

3700 MHz Head/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 1.65 W/kg

3700 MHz Head/Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 21.467 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 3.47 W/kg
 $P_{in} = 10$ mW
SAR(1 g) = 0.698 W/kg; SAR(10 g) = 0.251 W/kg
 Maximum value of SAR (measured) = 1.67 W/kg



RF Exposure Lab

Plot 10

DUT: Dipole D3900V2; Type: D3900V2; Serial: D3900V2 - SN:1082

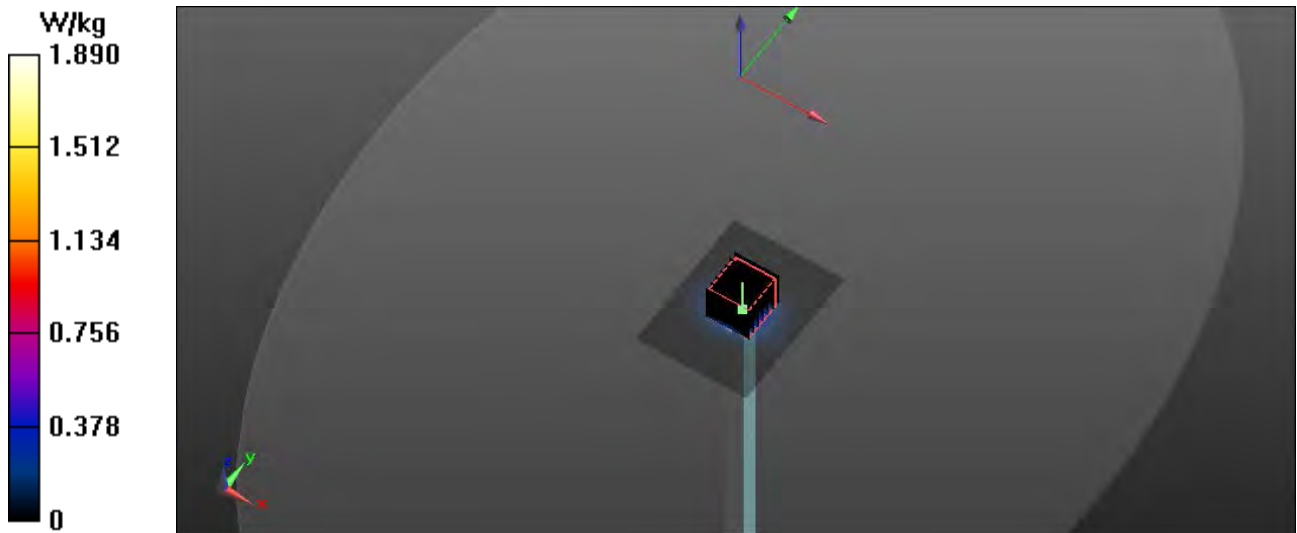
Communication System: CW; Frequency: 3900 MHz; Duty Cycle: 1:1
 Medium: HSL 3-6 GHz; Medium parameters used: $f = 3900$ MHz; $\sigma = 3.37$ S/m; $\epsilon_r = 36.9$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/5/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 – SN7530; ConvF(4.9, 4.9, 4.9); Calibrated: 1/14/2022;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

3900 MHz Head/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
 Maximum value of SAR (interpolated) = 1.47 W/kg

3900 MHz Head/Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
 Reference Value = 15.385 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 3.34 W/kg
 Pin=10 mW
SAR(1 g) = 0.709 W/kg; SAR(10 g) = 0.248 W/kg
 Maximum value of SAR (measured) = 1.89 W/kg



RF Exposure Lab

Plot 11

DUT: Dipole D4200V2; Type: D4200V2; Serial: D4200V2 - SN:1025

Communication System: CW; Frequency: 4200 MHz; Duty Cycle: 1:1
 Medium: HSL 3-6 GHz; Medium parameters used: $f = 4200$ MHz; $\sigma = 3.68$ S/m; $\epsilon_r = 36.55$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/5/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 – SN7530; ConvF(6.38, 6.38, 6.38); Calibrated: 1/14/2022;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

4200 MHz Head/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.72 W/kg

4200 MHz Head/Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 17.167 V/m; Power Drift = -0.01 dB

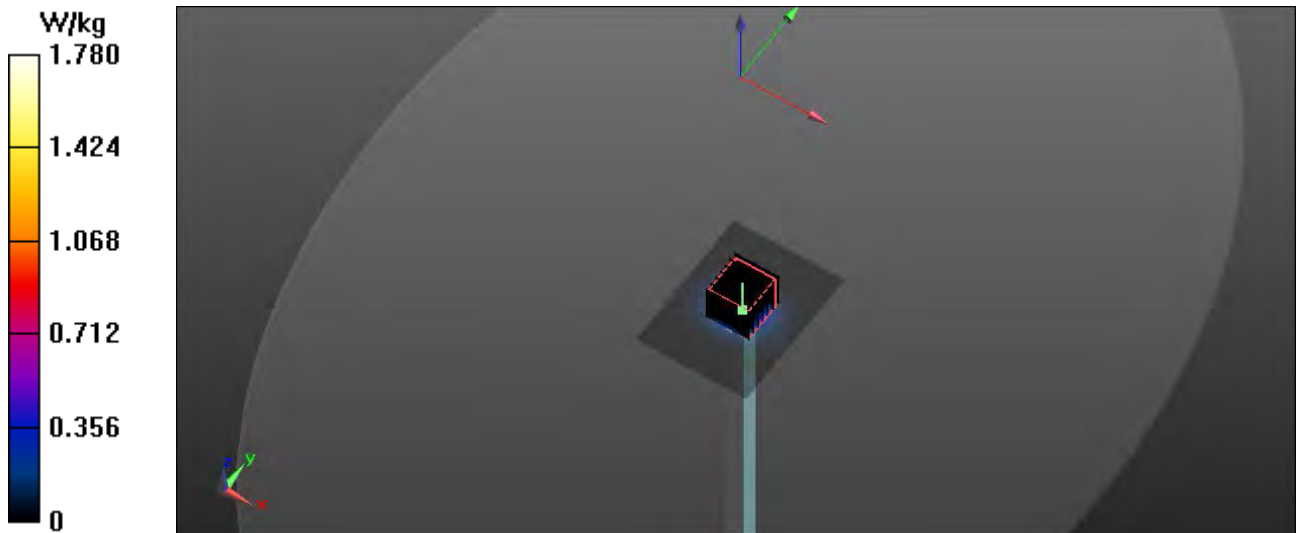
Peak SAR (extrapolated) = 2.46 W/kg

Pin=10 mW

SAR(1 g) = 0.674 W/kg; SAR(10 g) = 0.228 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.77 W/kg



Appendix B – SAR Test Data Plots

RF Exposure Lab

Plot 1

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 2535 MHz; Duty Cycle: 1:1
Medium: HSL2550; Medium parameters used (interpolated): $f = 2535$ MHz; $\sigma = 1.895$ S/m; $\epsilon_r = 38.775$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 6/1/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(7.42, 7.42, 7.42); Calibrated: 1/14/2022
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n7 FR1/Side F 1 RB 53 Offset Ant 0 Mid/Area Scan (7x13x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.71 W/kg

Band n7 FR1/Side F 1 RB 53 Offset Ant 0 Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

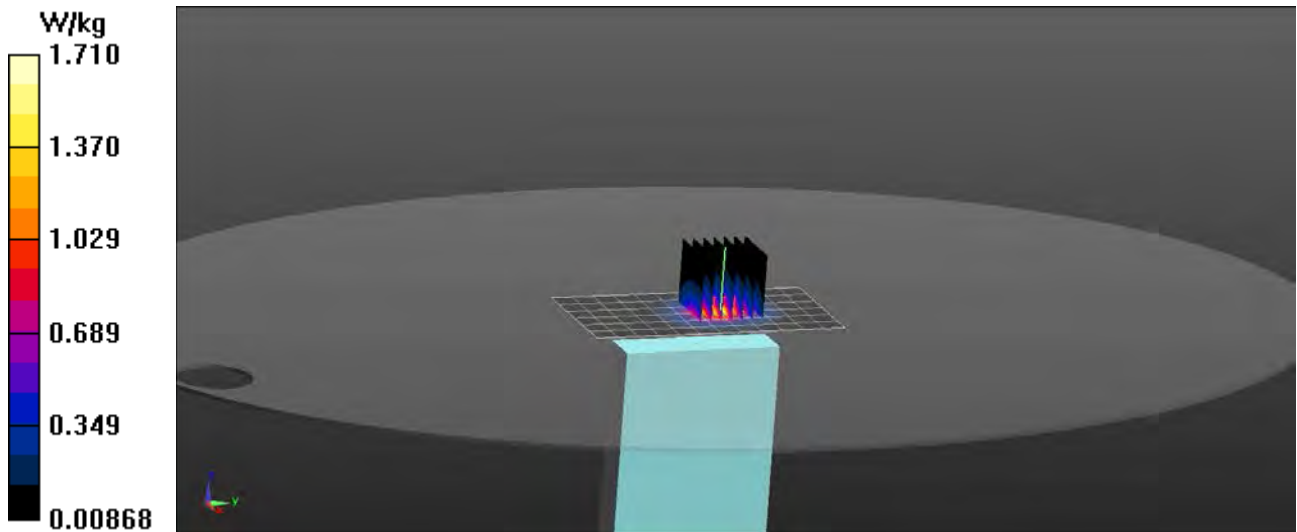
Reference Value = 21.49 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 2.27 W/kg

SAR(1 g) = 0.84 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.71 W/kg



RF Exposure Lab

Plot 2

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 15 MHz, BPSK); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium: HSL750; Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.898 \text{ S/m}$; $\epsilon_r = 41.218$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

Test Date: Date: 6/9/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(10.44, 10.44, 10.44); Calibrated: 1/14/2022
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n12 FR1/Side A 1 RB 40 Offset Ant 0 Mid/Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.342 W/kg

Band n12 FR1/Side A 1 RB 40 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

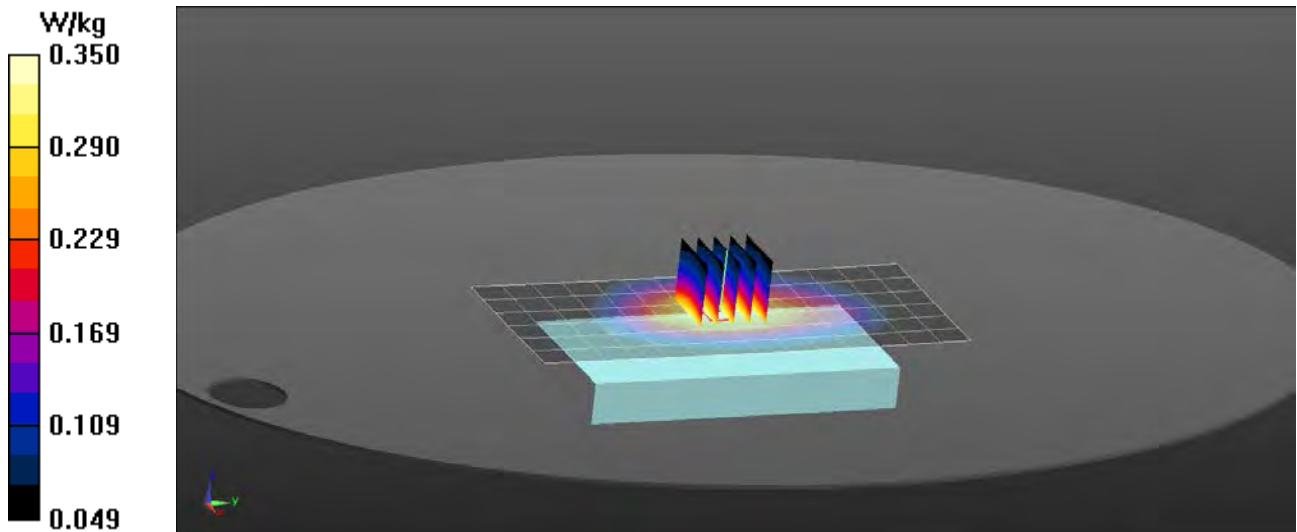
Reference Value = 19.07 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.389 W/kg

SAR(1 g) = 0.301 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.350 W/kg



RF Exposure Lab

Plot 3

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 10 MHz, BPSK); Frequency: 782 MHz; Duty Cycle: 1:1
Medium: HSL750; Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 0.952 \text{ S/m}$; $\epsilon_r = 40.778$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

Test Date: Date: 6/9/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(10.44, 10.44, 10.44); Calibrated: 1/14/2022
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n13 FR1/Side A 1 RB 26 Offset Ant 0 Mid/Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.425 W/kg

Band n13 FR1/Side A 1 RB 26 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

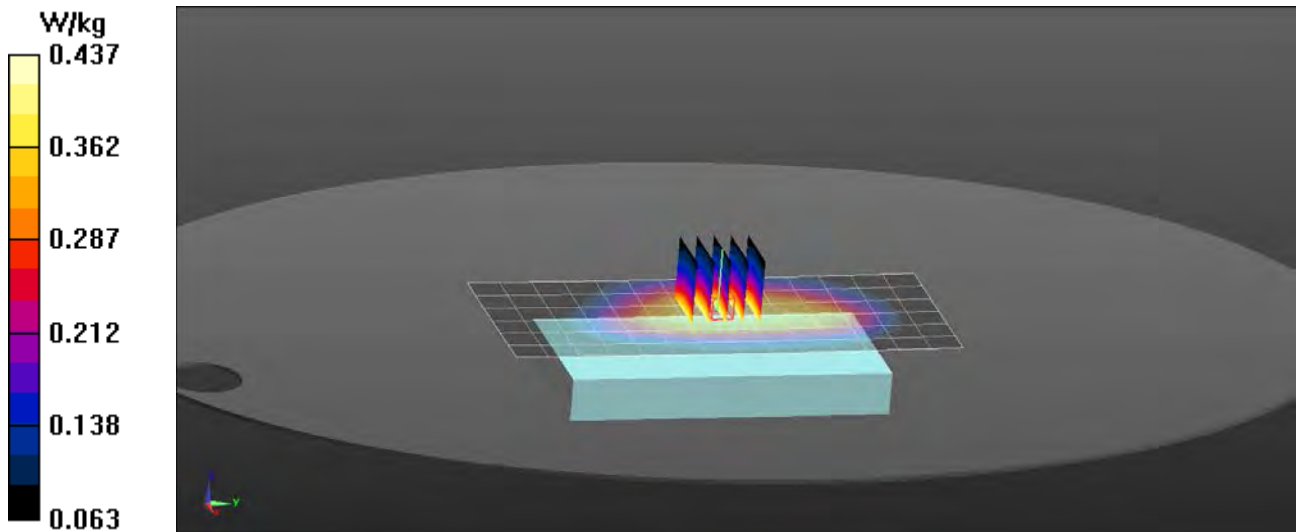
Reference Value = 20.51 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.483 W/kg

SAR(1 g) = 0.375 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.437 W/kg



RF Exposure Lab

Plot 4

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 10 MHz, BPSK); Frequency: 793 MHz; Duty Cycle: 1:1
 Medium: HSL750; Medium parameters used (interpolated): $f = 793 \text{ MHz}$; $\sigma = 0.96 \text{ S/m}$; $\epsilon_r = 40.718$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

Test Date: Date: 6/9/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(10.44, 10.44, 10.44); Calibrated: 1/14/2022
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n14 FR1/Side A 1 RB 26 Offset Ant 0 Mid/Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.428 W/kg

Band n14 FR1/Side A 1 RB 26 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

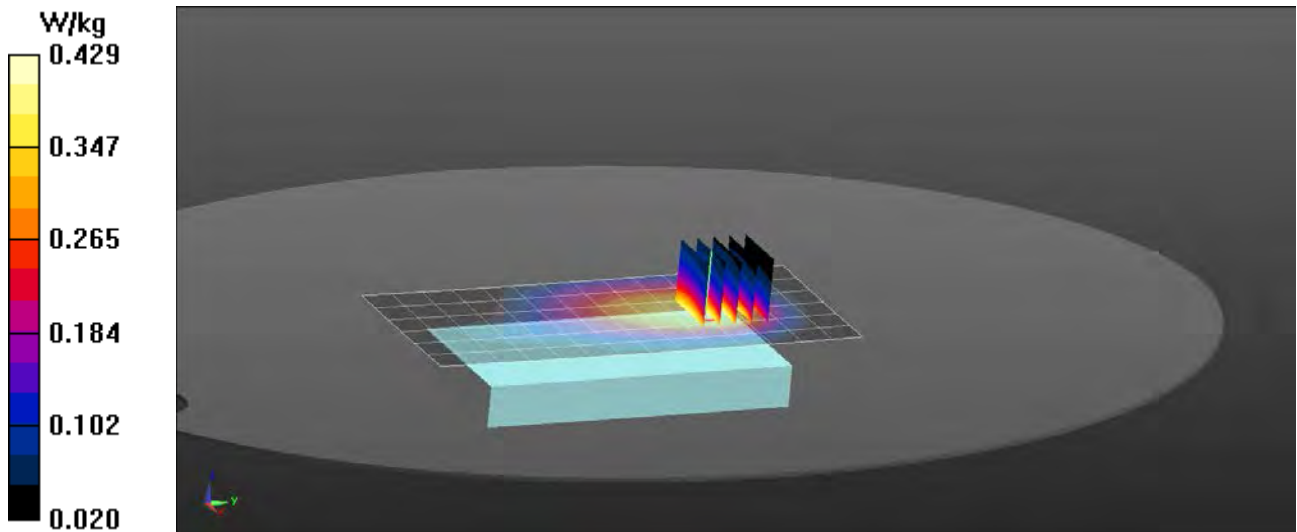
Reference Value = 16.05 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.513 W/kg

SAR(1 g) = 0.349 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.429 W/kg



RF Exposure Lab

Plot 5

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 1882.5 MHz; Duty Cycle: 1:1
 Medium: HSL1900; Medium parameters used (interpolated): $f = 1882.5$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 39.585$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 5/27/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(8.06, 8.06, 8.06); Calibrated: 1/14/2022
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n25 FR1/Side F 1 RB 53 Offset Ant 0 Mid/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.831 W/kg

Band n25 FR1/Side F 1 RB 53 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

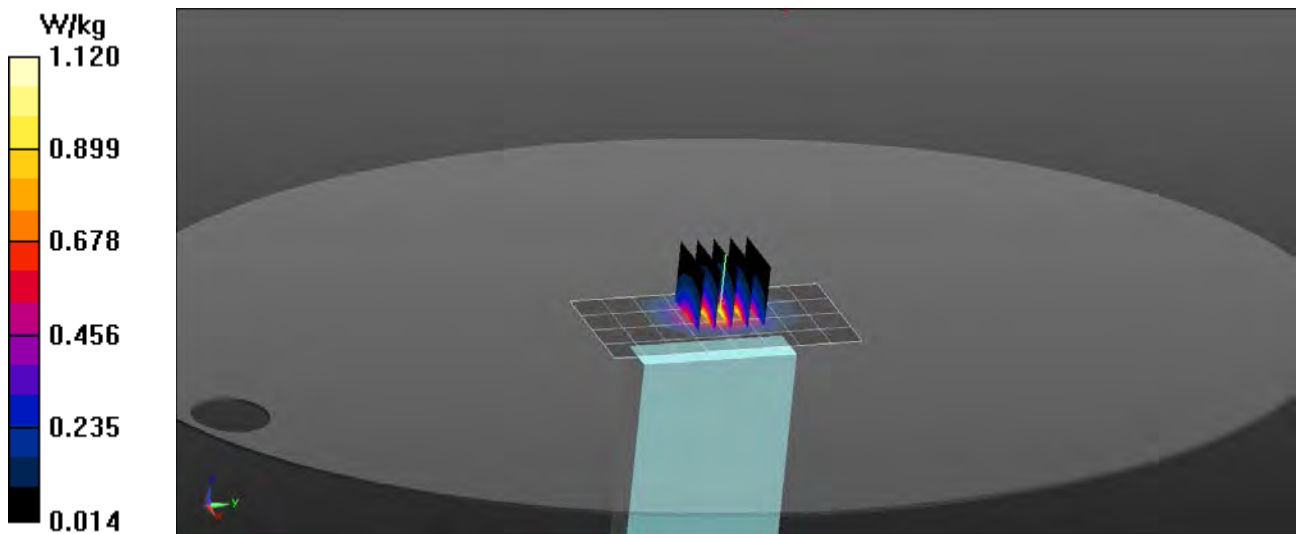
Reference Value = 21.62 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.800 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.12 W/kg



RF Exposure Lab

Plot 6

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 831.5 MHz; Duty Cycle: 1:1
 Medium: HSL835; Medium parameters used (interpolated): $f = 831.5$ MHz; $\sigma = 0.942$ S/m; $\epsilon_r = 41.076$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/8/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(9.98, 9.98, 9.98); Calibrated: 1/14/2022
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n26 FR1/Side C 1 RB 53 Offset Ant 0 Mid/Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.626 W/kg

Band n26 FR1/Side C 1 RB 53 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

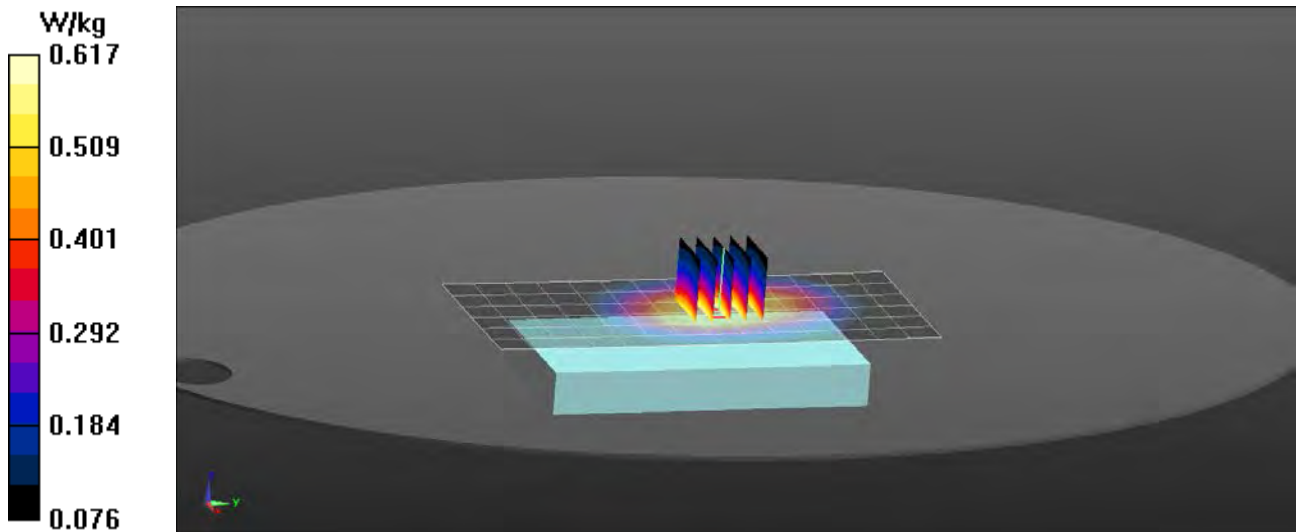
Reference Value = 24.54 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.690 W/kg

SAR(1 g) = 0.523 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.617 W/kg



RF Exposure Lab

Plot 7

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 10 MHz, BPSK); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium: HSL2300; Medium parameters used: $f = 2310$ MHz; $\sigma = 1.71$ S/m; $\epsilon_r = 38.67$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

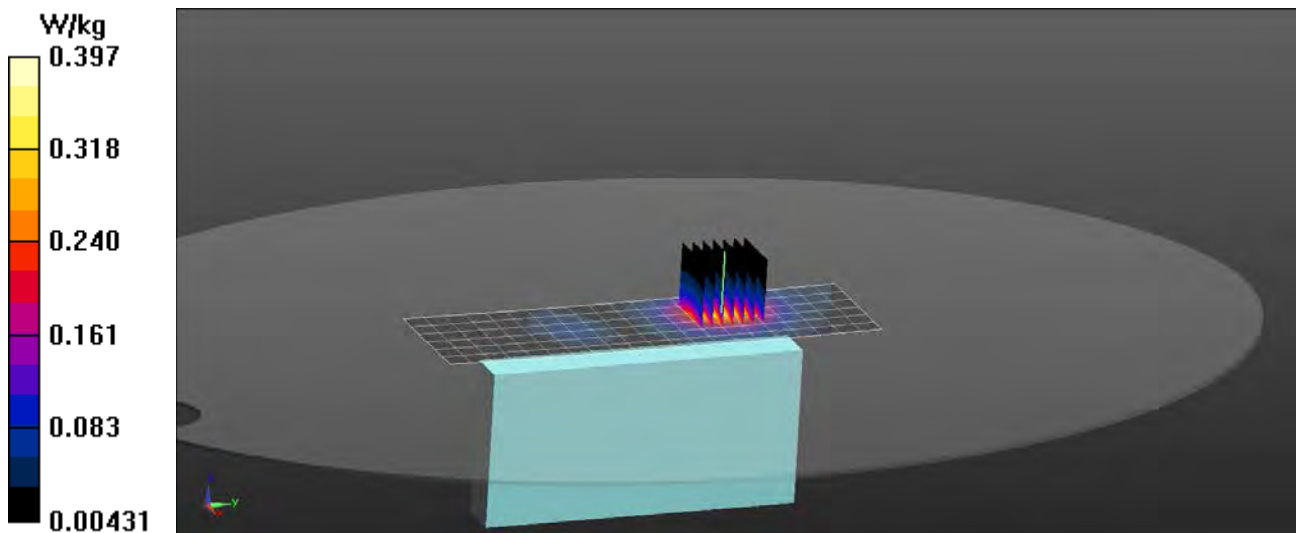
Test Date: Date: 6/3/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(7.85, 7.85, 7.85); Calibrated: 1/14/2022
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n30 FR1/Side D 1 RB 26 Offset Ant 0 Mid/Area Scan (7x22x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.376 W/kg

Band n30 FR1/Side D 1 RB 26 Offset Ant 0 Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 4.080 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 0.507 W/kg
SAR(1 g) = 0.283 W/kg
 Maximum value of SAR (measured) = 0.397 W/kg



RF Exposure Lab

Plot 8

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 2593 MHz; Duty Cycle: 1:1
 Medium: HSL2550; Medium parameters used (interpolated): $f = 2593$ MHz; $\sigma = 1.97$ S/m; $\epsilon_r = 38.643$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 6/1/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(7.42, 7.42, 7.42); Calibrated: 1/14/2022
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n41 FR1/Side A 1 RB 53 Offset Ant 0 Mid/Area Scan (10x22x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.13 W/kg

Band n41 FR1/Side A 1 RB 53 Offset Ant 0 Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

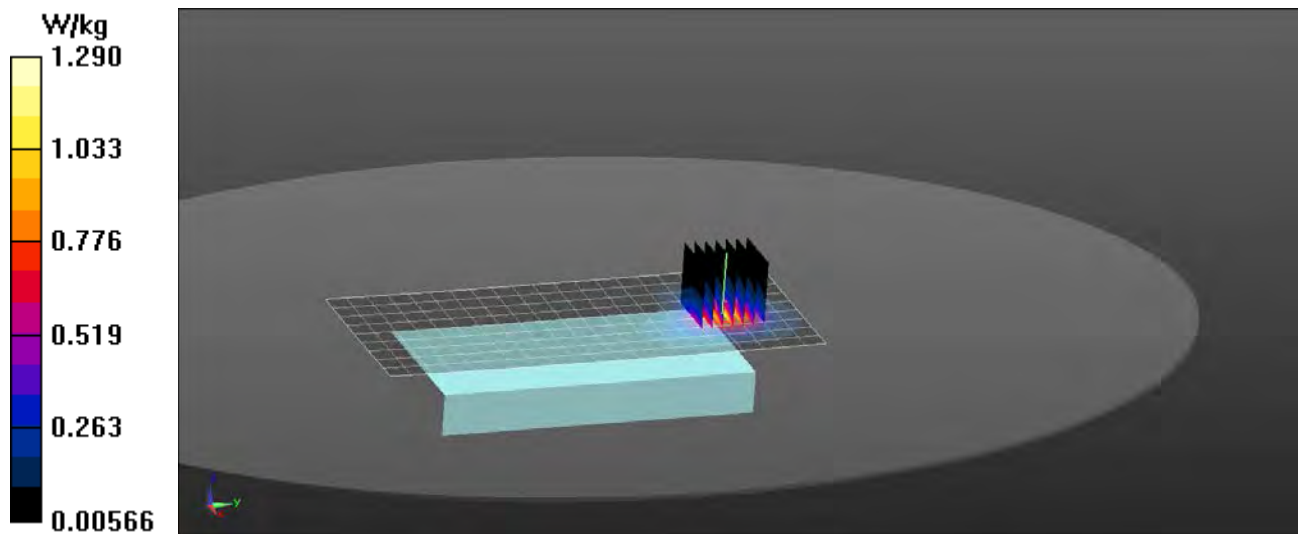
Reference Value = 4.771 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 0.736 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.29 W/kg



RF Exposure Lab

Plot 9

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 3603.3 MHz; Duty Cycle: 1:1
Medium: HSL3-6GHz; Medium parameters used (interpolated): $f = 3603.3$ MHz; $\sigma = 3.053$ S/m; $\epsilon_r = 37.237$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 6/5/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(6.9, 6.9, 6.9); Calibrated: 1/14/2022
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n48 FR1/Side A 1 RB 53 Offset Ant 4 Mid/Area Scan (10x22x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.30 W/kg

Band n48 FR1/Side A 1 RB 53 Offset Ant 4 Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm

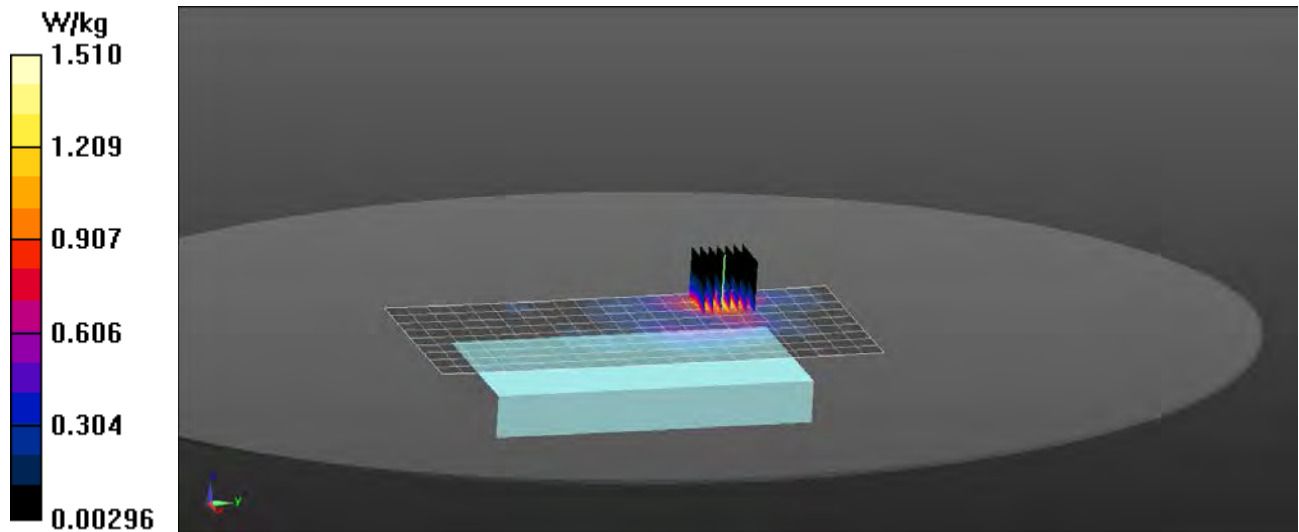
Reference Value = 6.483 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.21 W/kg

SAR(1 g) = 0.850 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.51 W/kg



RF Exposure Lab

Plot 10

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: HSL1750; Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.385$ S/m; $\epsilon_r = 39.07$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 5/31/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(8.42, 8.42, 8.42); Calibrated: 1/14/2022
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n66 FR1/Side F 1 RB 53 Offset Ant 0 Mid/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.12 W/kg

Band n66 FR1/Side F 1 RB 53 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

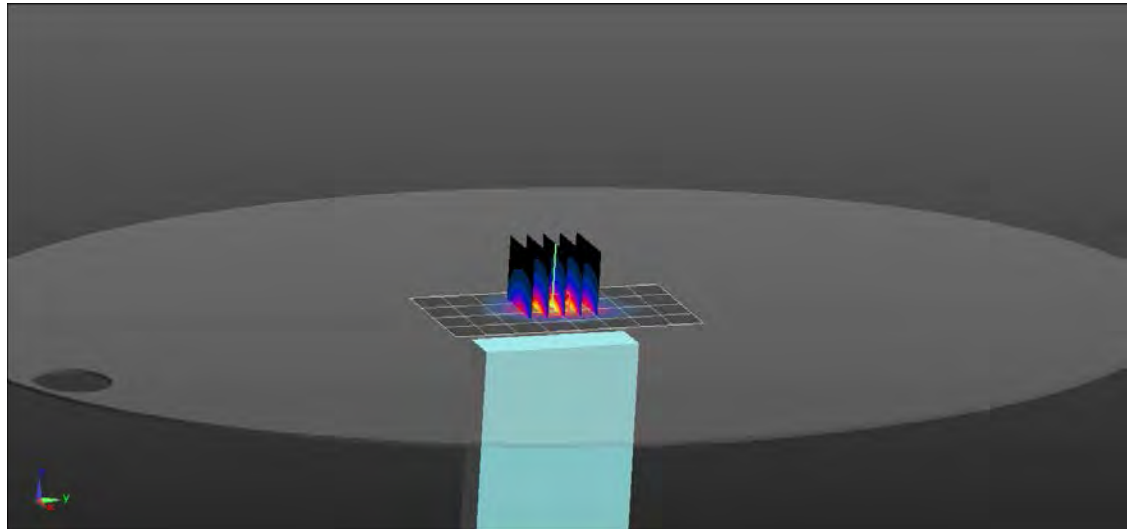
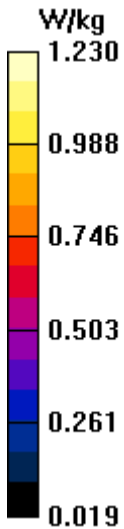
Reference Value = 26.19 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 0.808 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.23 W/kg



RF Exposure Lab

Plot 11

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 1702.5 MHz; Duty Cycle: 1:1
Medium: HSL1750; Medium parameters used (interpolated): $f = 1702.5$ MHz; $\sigma = 1.353$ S/m; $\epsilon_r = 39.155$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 6/1/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(8.42, 8.42, 8.42); Calibrated: 1/14/2022
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n70 FR1/Side C 1 RB 53 Offset Ant 8 Mid/Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.14 W/kg

Band n70 FR1/Side C 1 RB 53 Offset Ant 8 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.12 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.815 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.17 W/kg

Band n70 FR1/Side C 1 RB 53 Offset Ant 8 Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

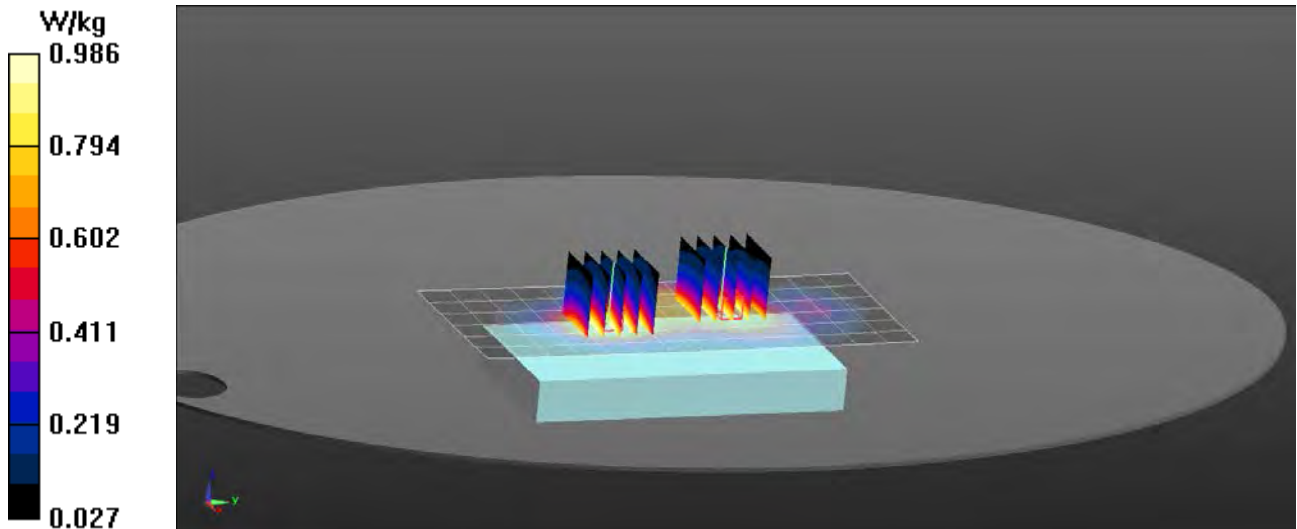
Reference Value = 22.12 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.751 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.986 W/kg



RF Exposure Lab

Plot 12

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: HSL600; Medium parameters used (interpolated): $f = 680.5$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 41.487$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

Test Date: Date: 6/10/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(10.44, 10.44, 10.44); Calibrated: 1/14/2022
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/6/2021
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n71 FR1/Side A 1 RB 53 Offset Ant 0 Mid/Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.464 W/kg

Band n71 FR1/Side A 1 RB 53 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

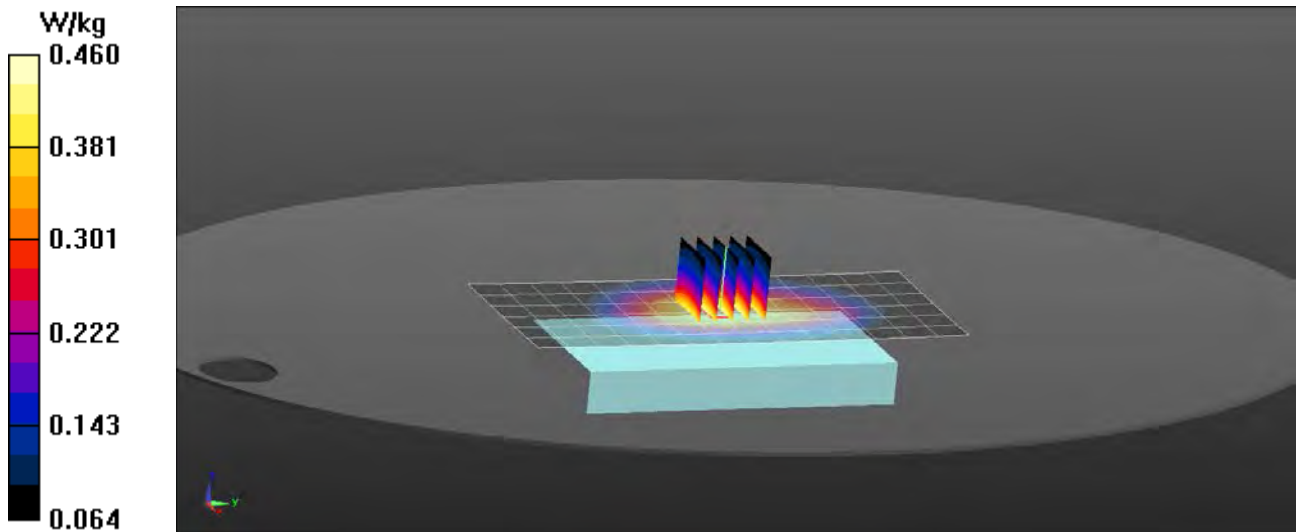
Reference Value = 21.87 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.510 W/kg

SAR(1 g) = 0.393 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.460 W/kg



RF Exposure Lab

Plot 13

DUT: M3000A; Type: Hotspot; Serial: BW170122E00018

Communication System: FR1 (NR, 1 RB, 20 MHz, BPSK); Frequency: 3700.8 MHz; Duty Cycle: 1:1
 Medium: HSL3-6GHz; Medium parameters used (interpolated): $f = 3700.8 \text{ MHz}$; $\sigma = 3.151 \text{ S/m}$; $\epsilon_r = 37.129$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

Test Date: Date: 6/5/2022; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN7530; ConvF(6.9, 6.9, 6.9); Calibrated: 1/14/2022
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn759; Calibrated: 8/6/2021
 Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
 Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band n77 FR1/Side B 1 RB 49 Offset Ant 4 Mid/Area Scan (7x22x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.30 W/kg

Band n77 FR1/Side B 1 RB 49 Offset Ant 4 Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm

Reference Value = 9.619 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.93 W/kg

SAR(1 g) = 0.736 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.33 W/kg

Band n77 FR1/Side B 1 RB 49 Offset Ant 4 Mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=4mm

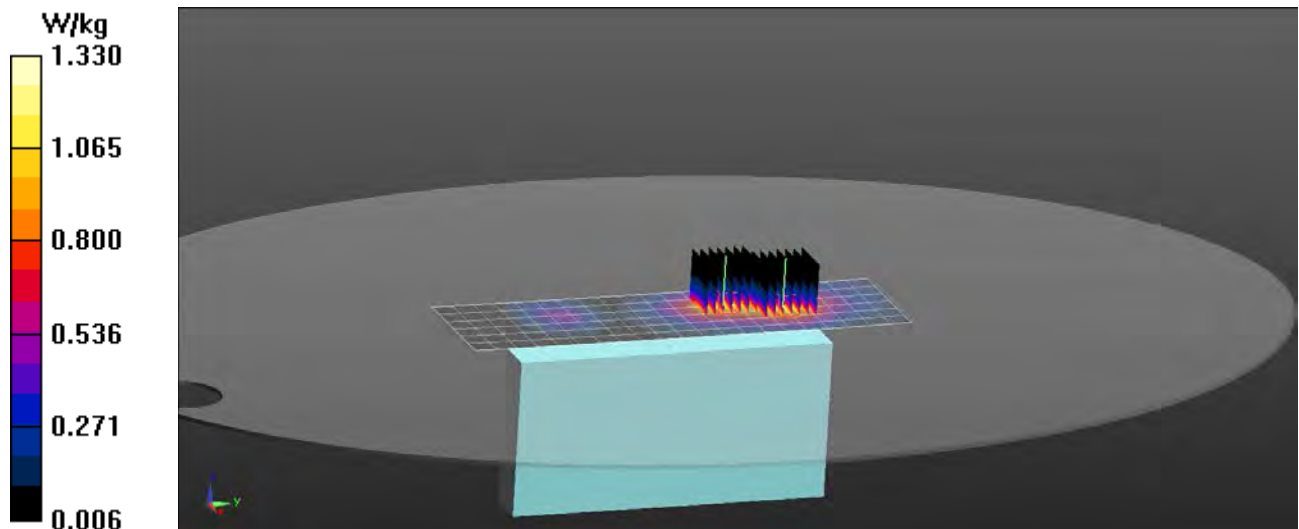
Reference Value = 9.619 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.713 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.33 W/kg



Appendix C – SAR Test Setup Photos



Test Position Side A 10 mm Gap



Test Position Side B 10 mm Gap



Test Position Side C 10 mm Gap



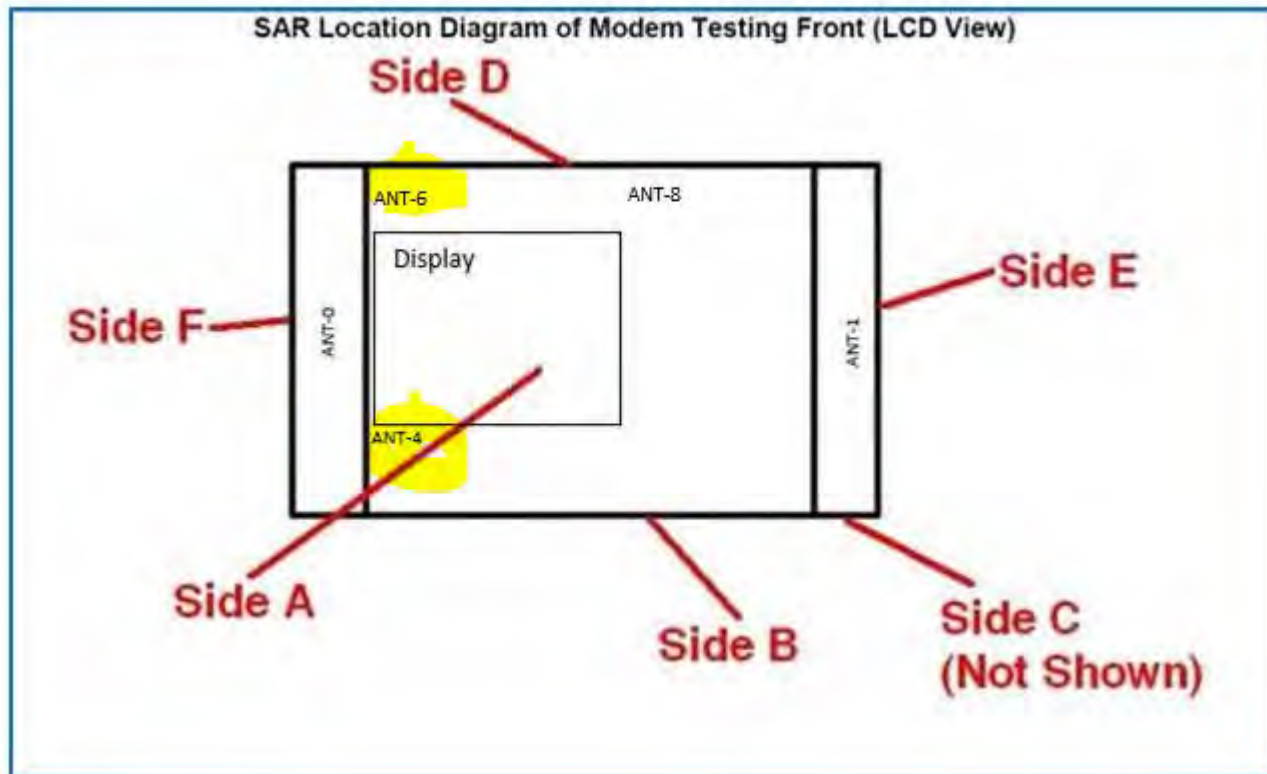
Test Position Side D 10 mm Gap



Test Position Side E 10 mm Gap



Test Position Side F 10 mm Gap



Test Positions

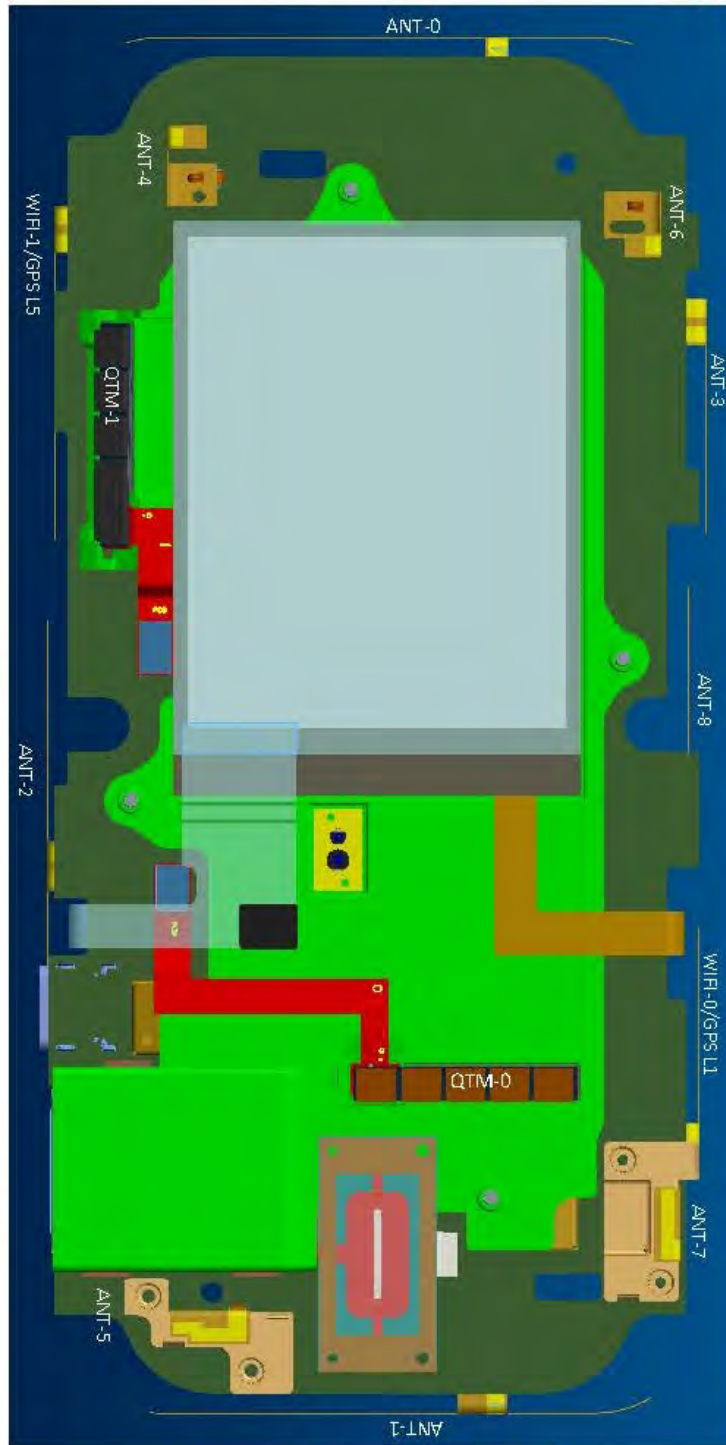
Side C Not Shown

Side F

Side B

Side D

Side A Shown



Side E

Antenna Locations



Front of Device



Back of Device

Appendix D – Probe Calibration Data Sheets

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **RF Exposure Lab**

Certificate No: **EX3-7530_Jan22**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7530**

Calibration procedure(s) **QA CAL-01 v9, QA CAL-12 v9, QA CAL-14 v6, QA CAL-23 v5,
QA CAL-25 v7
Calibration procedure for dosimetric E-field probes**

Calibration date: **January 14, 2022**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	09-Apr-21 (No. 217-03291/03292)	Apr-22
Power sensor NRP-Z91	SN: 103244	09-Apr-21 (No. 217-03291)	Apr-22
Power sensor NRP-Z91	SN: 103245	09-Apr-21 (No. 217-03292)	Apr-22
Reference 20 dB Attenuator	SN: CC2552 (20x)	09-Apr-21 (No. 217-03343)	Apr-22
DAE4	SN: 660	13-Oct-21 (No. DAE4-660_Oct21)	Oct-22
Reference Probe ES3DV2	SN: 3013	27-Dec-21 (No. ES3-3013_Dec21)	Dec-22
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-20)	In house check: Jun-22
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-22

Calibrated by:	Name Leif Klysnar	Function Laboratory Technician	Signature
Approved by:	Name Sven Kühn	Function Deputy Manager	

Issued: January 19, 2022

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * *frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,y,z}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * *ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7530

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.42	0.48	0.43	$\pm 10.1 \%$
DCP (mV) ^B	99.3	99.7	98.7	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Max dev.	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	159.3	$\pm 2.2 \%$	$\pm 4.7 \%$
		Y	0.0	0.0	1.0		142.4		
		Z	0.0	0.0	1.0		141.6		

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7530

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-141.7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an *Area Scan* job.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7530

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
13	55.0	0.75	19.61	19.61	19.61	0.00	1.00	± 13.3 %
30	55.0	0.75	17.99	17.99	17.99	0.00	1.00	± 13.3 %
750	41.9	0.89	10.44	10.44	10.44	0.56	0.80	± 12.0 %
900	41.5	0.97	9.98	9.98	9.98	0.48	0.80	± 12.0 %
1300	40.8	1.14	9.27	9.27	9.27	0.40	0.95	± 12.0 %
1750	40.1	1.37	8.42	8.42	8.42	0.30	0.86	± 12.0 %
1900	40.0	1.40	8.06	8.06	8.06	0.30	0.86	± 12.0 %
2300	39.5	1.67	7.85	7.85	7.85	0.34	0.90	± 12.0 %
2450	39.2	1.80	7.65	7.65	7.65	0.33	0.90	± 12.0 %
2600	39.0	1.96	7.42	7.42	7.42	0.35	0.90	± 12.0 %
3300	38.2	2.71	7.12	7.12	7.12	0.35	1.30	± 13.1 %
3500	37.9	2.91	7.10	7.10	7.10	0.35	1.30	± 13.1 %
3700	37.7	3.12	6.90	6.90	6.90	0.35	1.30	± 13.1 %
3900	37.5	3.32	6.83	6.83	6.83	0.40	1.60	± 13.1 %
4200	37.1	3.63	6.38	6.38	6.38	0.40	1.70	± 13.1 %
5250	35.9	4.71	5.45	5.45	5.45	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.80	4.80	4.80	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.98	4.98	4.98	0.40	1.80	± 13.1 %

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7530

Calibration Parameter Determined in Head Tissue Simulating Media

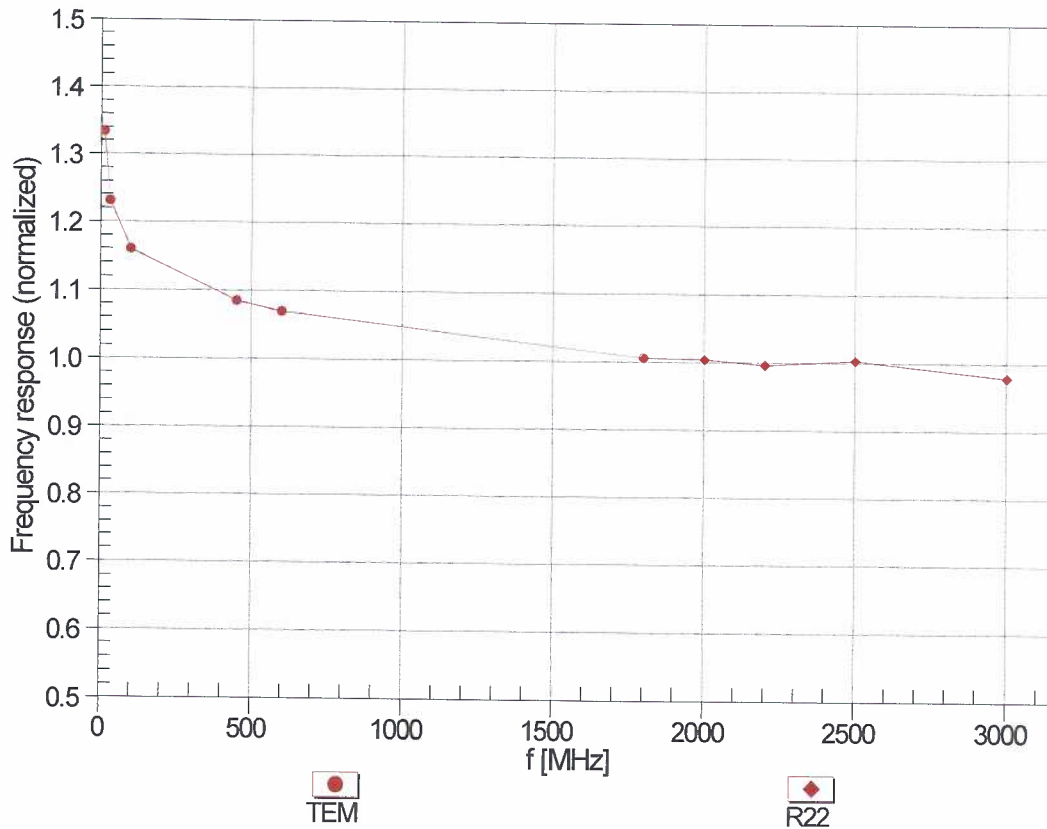
f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
6500	34.5	6.07	5.60	5.60	5.60	0.20	2.50	± 18.6 %

^c Frequency validity above 6GHz is ± 700 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies 6-10 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz; below ± 2% for frequencies between 3-6 GHz; and below ± 4% for frequencies between 6-10 GHz at any distance larger than half the probe tip diameter from the boundary.

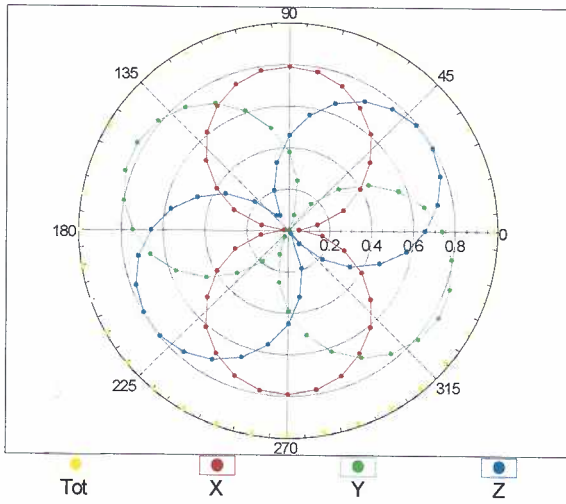
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



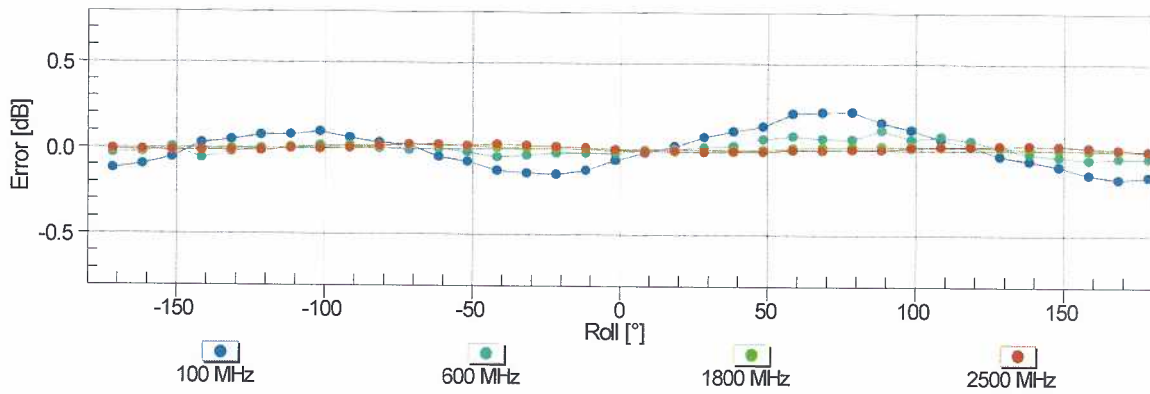
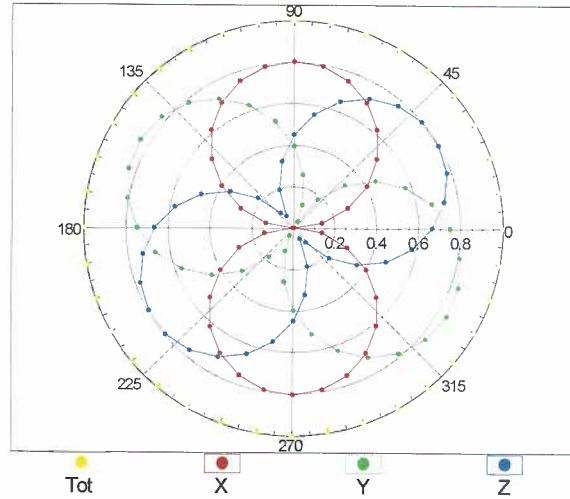
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

Receiving Pattern (ϕ), $\theta = 0^\circ$

f=600 MHz,TEM



f=1800 MHz,R22



Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)