6. Measurement Data (continued)

6.6. Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1))

6.6.1. SAR Test Exclusion Calculation

Requirement: Portable devices as defined in § 2.1093 of this chapter operating under Part 15 are subject to radio frequency radiation exposure requirements as specified in §§ 1.1307(b) and 2.1093 of this chapter.

For a 1-g SAR, the test exclusion result must be ≤ 3.0.

Test Notes: The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by the following formula:

$$\text{SAR Test Exclusion} = \frac{P_{MAX}}{d_{MIN}} \times \sqrt{f_{(GHz)}} \quad (1)$$

P_{MAX} mW Maximum power of channel, including tune-up tolerance

d_{MIN} mm Minimum test separation distance, mm (≤ 50 mm)

$f_{(GHz)}$ GHz $f_{(GHz)}$ is the RF channel transmit frequency in GHz (>100 MHz and <6 GHz)

(1) FCC OET 447498 **-** Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

Result: The device under test meets the exclusion requirement detailed in FCC OET 447498.

		Phantom Data	Without Phantom Data
Input: P_{MAX}[1]	(mW)	0.0001	0.0004
d_{MIN}	(mm)	5.00	5.00
$f_{(GHz)}$		4.204	4.285
Test Exclusion:		**0.00003**	**0.0002**
Limit Exemption:		**3.00**	**3.00**

[1] Taken from the peak data in Section 6.5 of this test report (converted to mW).

The device does not exceed the test limit exemption and therefore a routine SAR Evaluation is not required

Note: Phantom Data consisted of using a Speag cylinder, Model: Dog Neck, PN: QD DOG 001 BA, Serial # 1001. The Speag cylinder has a length of 30 cm, a diameter of 15 cm (representative of an average neck size for a medium to large dog). The Gel is SPEAG head gel (closest match to neck tissue) and ¼" foam spacing was used on the phantom to approximate the dog's fur.

Specifications for the Speag cylinder may be found on the next pages.

6. Measurement Data (continued)

6.6. Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1)) (cont.)

Measured data of Head Gel Material

f(MHz)	eps.R	sigma(S/m)	loss tangent	f(MHz)	eps.R	sigma(S/m)	loss tangent
1000	43.71	1.06	0.43	2550	40.30	2.01	0.35
1050	43.51	1.08	0.42	2600	40.17	2.06	0.35
1100	43.39	1.11	0.42	2650	40.04	2.10	0.36
1150	43.25	1.12	0.41	2700	39.97	2.15	0.36
1200	43.10	1.16	0.40	2750	39.82	2.18	0.36
1250	42.98	1.18	0.40	2800	39.74	2.23	0.36
1300	42.84	1.20	0.39	2850	39.66	2.27	0.36
1350	42.67	1.24	0.39	2900	39.54	2.32	0.36
1400	42.59	1.26	0.38	2950	39.45	2.36	0.36
1450	42.42	1.28	0.38	3000	39.34	2.40	0.37
1500	42.32	1.31	0.37	3050	39.22	2.45	0.37
1550	42.20	1.34	0.37	3100	39.14	2.48	0.37
1600	42.05	1.37	0.36	3150	39.01	2.53	0.37
1650	41.95	1.39	0.36	3200	38.94	2.57	0.37
1700	41.81	1.42	0.36	3250	38.83	2.61	0.37
1750	41.73	1.46	0.36	3300	38.71	2.65	0.37
1800	41.64	1.49	0.36	3350	38.66	2.70	0.37
1850	41.55	1.52	0.36	3400	38.53	2.74	0.38
1900	41.45	1.55	0.35	3450	38.46	2.79	0.38
1950	41.37	1.58	0.35	3500	38.39	2.83	0.38
2000	41.27	1.62	0.35	3550	38.28	2.88	0.38
2050	41.23	1.65	0.35	3600	38.24	2.93	0.38
2100	41.10	1.68	0.35	3650	38.12	2.97	0.38
2150	41.01	1.72	0.35	3700	38.05	3.02	0.39
2200	40.92	1.76	0.35	3750	37.99	3.06	0.39
2250	40.82	1.80	0.35	3800	37.86	3.11	0.39
2300	40.75	1.83	0.35	3850	37.82	3.16	0.39
2350	40.66	1.87	0.35	3900	37.71	3.21	0.39
2400	40.55	1.91	0.35	3950	37.64	3.26	0.39
2450	40.49	1.94	0.35	4000	37.59	3.30	0.39
2500	40.37	1.98	0.35	4050	37.46	3.36	0.40

6. Measurement Data (continued)

6.6. Public Exposure to Radio Frequency Energy Levels (1.1307 (b)(1)) (cont.)

Measured data of Head Gel Material

f(MHz)	eps.R	sigma(S/m)	loss tangent	f(MHz)	eps.R	sigma(S/m)	loss tangent
4100	37.42	3.41	0.40	5650	34.63	5.06	0.46
4150	37.33	3.45	0.40	5700	34.59	5.11	0.47
4200	37.25	3.51	0.40	5750	34.47	5.16	0.47
4250	37.20	3.55	0.40	5800	34.39	5.22	0.47
4300	37.08	3.60	0.41	5850	34.33	5.28	0.47
4350	37.00	3.66	0.41	5900	34.21	5.33	0.47
4400	36.92	3.71	0.41	5950	34.17	5.39	0.48
4450	36.80	3.77	0.41	6000	34.06	5.43	0.48
4500	36.74	3.82	0.42	6250	33.63	5.71	0.49
4550	36.64	3.87	0.42	6500	33.24	5.98	0.50
4600	36.54	3.93	0.42	6750	32.76	6.25	0.51
4650	36.45	3.99	0.42	7000	32.35	6.53	0.52
4700	36.36	4.05	0.43	7250	31.87	6.85	0.53
4750	36.30	4.10	0.43	7500	31.47	7.15	0.54
4800	36.19	4.15	0.43	7750	31.06	7.44	0.56
4850	36.10	4.21	0.43	8000	30.69	7.73	0.57
4900	36.02	4.26	0.43				
4950	35.92	4.32	0.44				
5000	35.84	4.37	0.44				
5050	35.73	4.42	0.44				
5100	35.63	4.49	0.44				
5150	35.55	4.54	0.45				
5200	35.48	4.59	0.45				
5250	35.38	4.64	0.45				
5300	35.31	4.69	0.45				
5350	35.23	4.74	0.45				
5400	35.13	4.79	0.45				
5450	35.06	4.84	0.46				
5500	34.94	4.88	0.46				
5550	34.83	4.94	0.46				
5600	34.75	5.00	0.46				