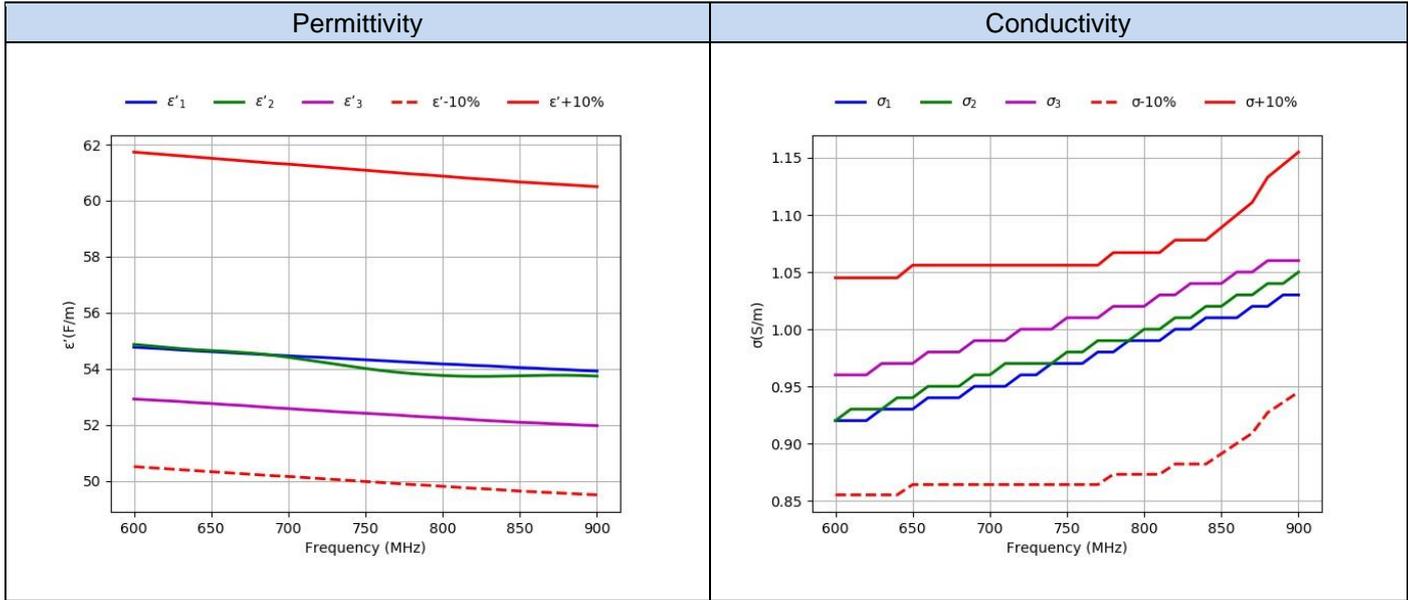


# Annex D. TSL Dielectric Parameters

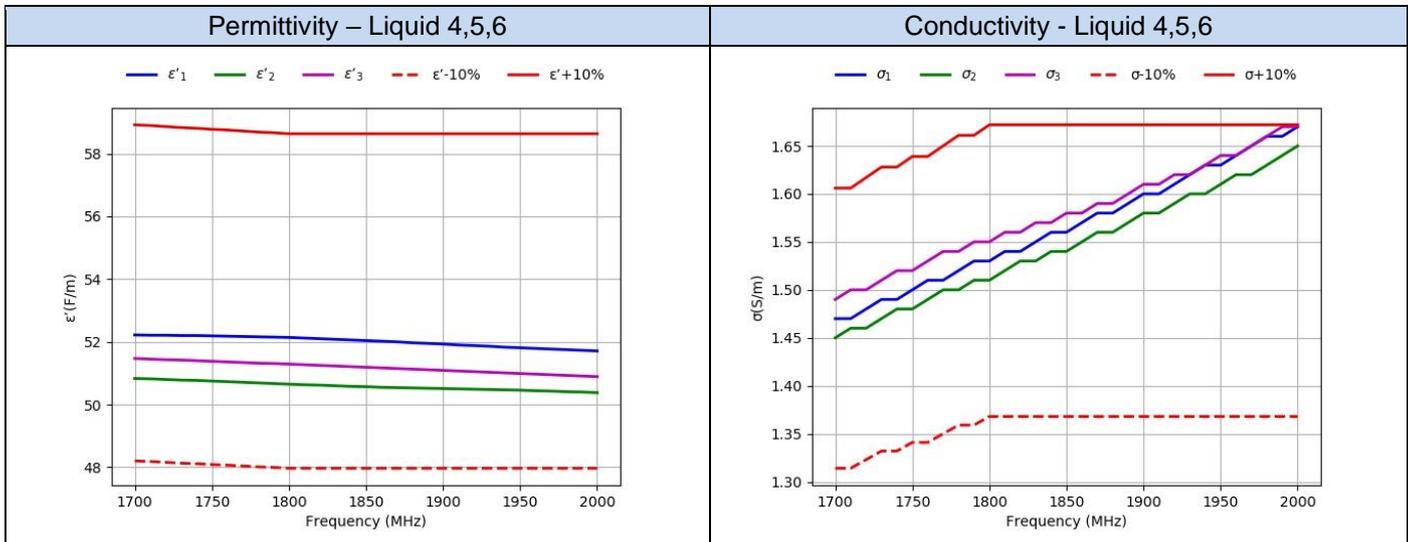
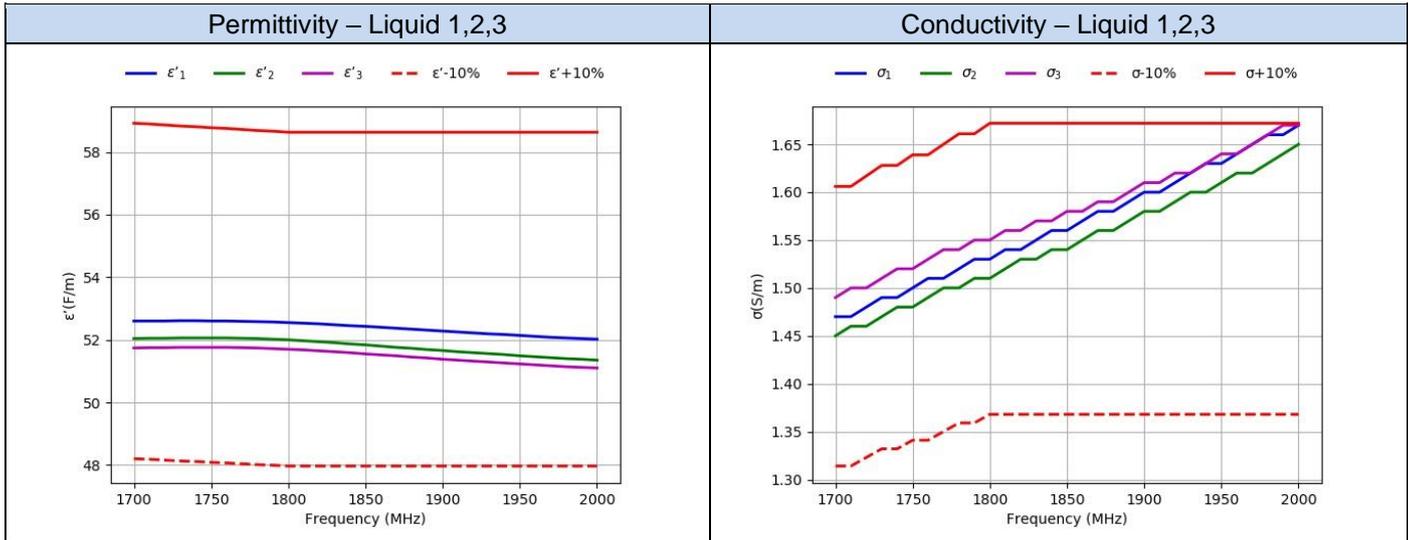
## D.1 Body 600MHz-900MHz

Freq. (MHz)	Target		2021-05-03		2021-05-25		2021-05-31	
	Target		Measured		Measured		Measured	
	$\epsilon'$ (F/m)	$\sigma$ (S/m)	$\epsilon'_1$ (F/m)	$\sigma_1$ (S/m)	$\epsilon'_2$ (F/m)	$\sigma_2$ (S/m)	$\epsilon'_3$ (F/m)	$\sigma_3$ (S/m)
600	54.02	0.95	54.77	0.92	54.87	0.92	52.92	0.96
610	53.97	0.95	54.74	0.92	54.82	0.93	52.89	0.96
620	53.93	0.95	54.71	0.92	54.77	0.93	52.86	0.96
630	53.89	0.95	54.67	0.93	54.72	0.93	52.83	0.97
640	53.85	0.95	54.64	0.93	54.68	0.94	52.79	0.97
650	53.81	0.96	54.61	0.93	54.65	0.94	52.76	0.97
660	53.77	0.96	54.58	0.94	54.62	0.95	52.72	0.98
670	53.73	0.96	54.55	0.94	54.58	0.95	52.69	0.98
680	53.69	0.96	54.52	0.94	54.54	0.95	52.65	0.98
690	53.66	0.96	54.49	0.95	54.48	0.96	52.61	0.99
700	53.62	0.96	54.46	0.95	54.41	0.96	52.58	0.99
710	53.59	0.96	54.43	0.95	54.33	0.97	52.54	0.99
720	53.55	0.96	54.41	0.96	54.25	0.97	52.51	1.0
730	53.52	0.96	54.38	0.96	54.17	0.97	52.47	1.0
740	53.49	0.96	54.35	0.97	54.09	0.97	52.44	1.0
750	53.46	0.96	54.32	0.97	54.01	0.98	52.41	1.01
760	53.43	0.96	54.29	0.97	53.94	0.98	52.38	1.01
770	53.4	0.96	54.26	0.98	53.88	0.99	52.35	1.01
780	53.38	0.97	54.23	0.98	53.83	0.99	52.31	1.02
790	53.35	0.97	54.2	0.99	53.79	0.99	52.28	1.02
800	53.33	0.97	54.17	0.99	53.76	1.0	52.25	1.02
810	53.31	0.97	54.15	0.99	53.74	1.0	52.22	1.03
820	53.29	0.98	54.12	1.0	53.73	1.01	52.18	1.03
830	53.27	0.98	54.1	1.0	53.73	1.01	52.15	1.04
840	53.25	0.98	54.07	1.01	53.74	1.02	52.12	1.04
850	53.23	0.99	54.04	1.01	53.75	1.02	52.09	1.04
860	53.21	1.00	54.02	1.01	53.76	1.03	52.07	1.05
870	53.2	1.01	53.99	1.02	53.77	1.03	52.04	1.05
880	53.18	1.03	53.97	1.02	53.77	1.04	52.02	1.06
890	53.17	1.04	53.94	1.03	53.76	1.04	51.99	1.06
900	53.16	1.05	53.92	1.03	53.74	1.05	51.97	1.06



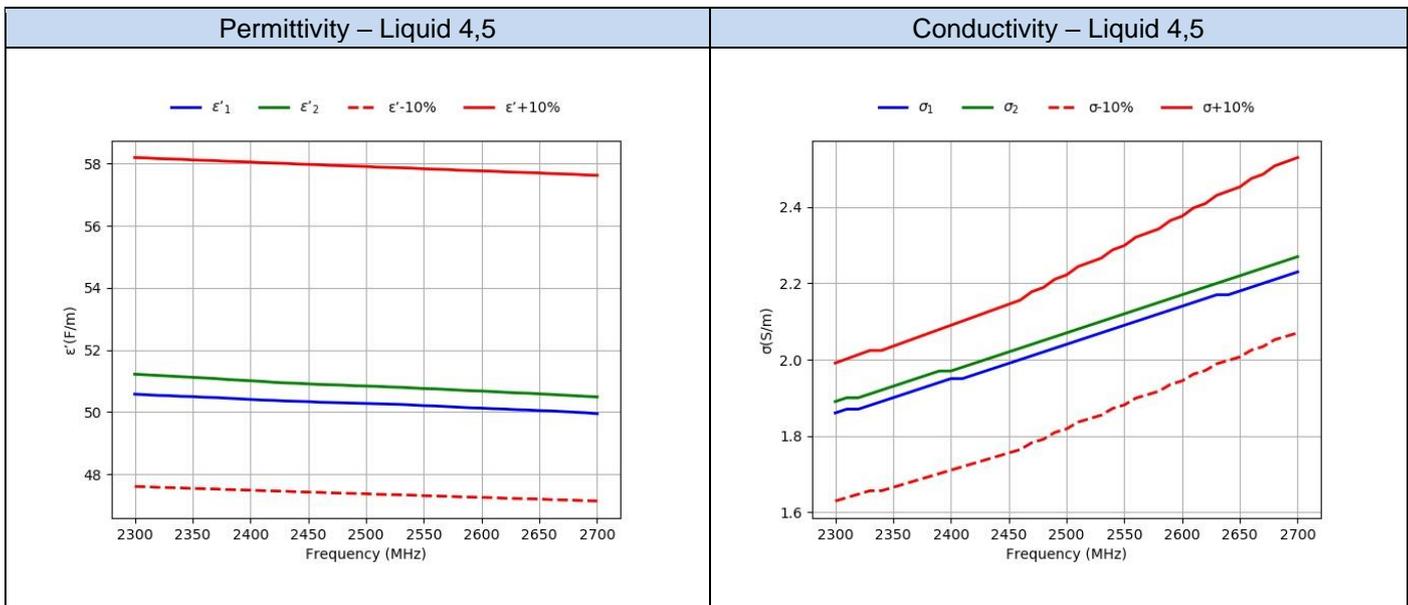
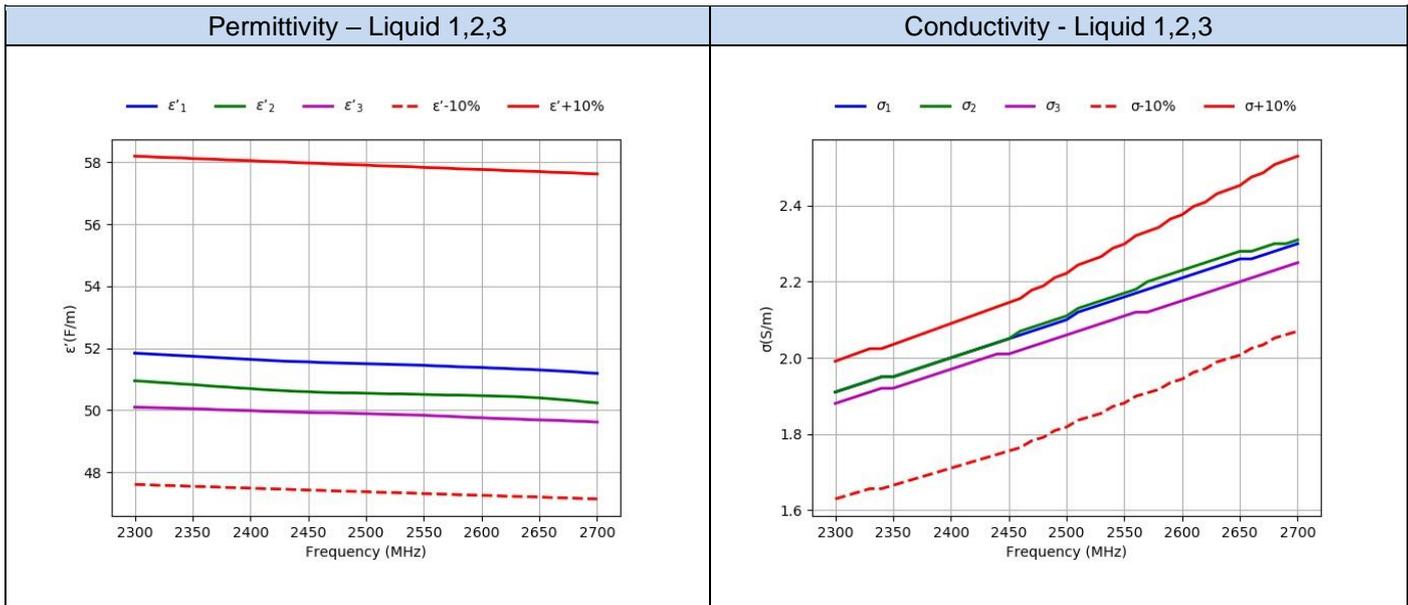
**D.2 Body 1700MHz-2000MHz**

Target			Measured											
			2021-05-03		2021-05-06		2021-05-10		2021-05-25		2021-06-03		2021-06-28	
Freq.(MHz)	$\epsilon'F/m$	$\sigma S/m$	$\epsilon'_1F/m$	$\sigma_1S/m$	$\epsilon'_2F/m$	$\sigma_2S/m$	$\epsilon'_3F/m$	$\sigma_3S/m$	$\epsilon'_4F/m$	$\sigma_4S/m$	$\epsilon'_5F/m$	$\sigma_5S/m$	$\epsilon'_6F/m$	$\sigma_6S/m$
1700.0	53.56	1.46	52.6	1.47	52.04	1.45	51.74	1.49	52.22	1.47	50.83	1.47	51.47	1.49
1710.0	53.54	1.46	52.6	1.47	52.05	1.46	51.75	1.5	52.21	1.47	50.82	1.47	51.45	1.49
1720.0	53.51	1.47	52.6	1.48	52.05	1.46	51.75	1.5	52.21	1.48	50.8	1.48	51.43	1.5
1730.0	53.48	1.48	52.61	1.49	52.06	1.47	51.76	1.51	52.2	1.49	50.78	1.49	51.42	1.5
1740.0	53.46	1.48	52.61	1.49	52.06	1.48	51.76	1.52	52.2	1.49	50.77	1.49	51.4	1.51
1750.0	53.43	1.49	52.6	1.5	52.06	1.48	51.76	1.52	52.19	1.5	50.75	1.5	51.38	1.52
1760.0	53.41	1.49	52.6	1.51	52.06	1.49	51.76	1.53	52.18	1.51	50.73	1.51	51.36	1.52
1770.0	53.38	1.5	52.59	1.51	52.05	1.5	51.75	1.54	52.17	1.51	50.71	1.51	51.34	1.53
1780.0	53.35	1.51	52.58	1.52	52.04	1.5	51.74	1.54	52.16	1.52	50.69	1.52	51.32	1.54
1790.0	53.33	1.51	52.57	1.53	52.02	1.51	51.72	1.55	52.15	1.52	50.67	1.52	51.31	1.54
1800.0	53.3	1.52	52.55	1.53	52.0	1.51	51.7	1.55	52.14	1.53	50.65	1.53	51.29	1.55
1810.0	53.3	1.52	52.53	1.54	51.97	1.52	51.68	1.56	52.12	1.54	50.63	1.54	51.27	1.56
1820.0	53.3	1.52	52.51	1.54	51.94	1.53	51.65	1.56	52.1	1.54	50.62	1.54	51.25	1.56
1830.0	53.3	1.52	52.48	1.55	51.91	1.53	51.62	1.57	52.08	1.55	50.6	1.55	51.23	1.57
1840.0	53.3	1.52	52.45	1.56	51.87	1.54	51.59	1.57	52.06	1.56	50.58	1.55	51.21	1.58
1850.0	53.3	1.52	52.43	1.56	51.84	1.54	51.55	1.58	52.04	1.56	50.57	1.56	51.19	1.58
1860.0	53.3	1.52	52.4	1.57	51.8	1.55	51.52	1.58	52.02	1.57	50.55	1.57	51.17	1.59
1870.0	53.3	1.52	52.37	1.58	51.76	1.56	51.49	1.59	52.0	1.58	50.54	1.57	51.15	1.6
1880.0	53.3	1.52	52.34	1.58	51.73	1.56	51.45	1.59	51.97	1.59	50.53	1.58	51.13	1.6
1890.0	53.3	1.52	52.31	1.59	51.69	1.57	51.42	1.6	51.95	1.59	50.52	1.59	51.11	1.61
1900.0	53.3	1.52	52.28	1.6	51.66	1.58	51.38	1.61	51.93	1.6	50.51	1.59	51.09	1.62
1910.0	53.3	1.52	52.25	1.6	51.62	1.58	51.35	1.61	51.9	1.61	50.5	1.6	51.07	1.62
1920.0	53.3	1.52	52.22	1.61	51.59	1.59	51.32	1.62	51.88	1.61	50.49	1.61	51.05	1.63
1930.0	53.3	1.52	52.19	1.62	51.56	1.6	51.29	1.62	51.86	1.62	50.48	1.61	51.03	1.63
1940.0	53.3	1.52	52.17	1.63	51.53	1.6	51.26	1.63	51.83	1.63	50.47	1.62	51.01	1.64
1950.0	53.3	1.52	52.14	1.63	51.49	1.61	51.23	1.64	51.81	1.63	50.46	1.62	50.99	1.65
1960.0	53.3	1.52	52.11	1.64	51.46	1.62	51.2	1.64	51.79	1.64	50.44	1.63	50.97	1.65
1970.0	53.3	1.52	52.08	1.65	51.43	1.62	51.17	1.65	51.77	1.65	50.43	1.64	50.95	1.66
1980.0	53.3	1.52	52.06	1.66	51.4	1.63	51.14	1.66	51.75	1.65	50.41	1.64	50.93	1.67
1990.0	53.3	1.52	52.04	1.66	51.38	1.64	51.12	1.67	51.73	1.66	50.4	1.65	50.91	1.67
2000.0	53.3	1.52	52.02	1.67	51.35	1.65	51.1	1.67	51.71	1.67	50.38	1.66	50.89	1.68



### D.3 Body 2300MHz-2700MHz

Freq.(MHz)	Target		Measured									
			2021-04-29		2021-05-11		2021-05-31		2021-06-08		2021-06-29	
	$\epsilon'$ F/m	$\sigma$ S/m	$\epsilon'_1$ F/m	$\sigma_1$ S/m	$\epsilon'_2$ F/m	$\sigma_2$ S/m	$\epsilon'_3$ F/m	$\sigma_3$ S/m	$\epsilon'_4$ F/m	$\sigma_4$ S/m	$\epsilon'_5$ F/m	$\sigma_5$ S/m
2300.0	52.9	1.81	51.84	1.91	50.95	1.91	50.1	1.88	50.58	1.86	51.22	1.89
2310.0	52.89	1.82	51.82	1.92	50.93	1.92	50.09	1.89	50.56	1.87	51.2	1.9
2320.0	52.87	1.83	51.8	1.93	50.9	1.93	50.08	1.9	50.54	1.87	51.18	1.9
2330.0	52.86	1.84	51.78	1.94	50.88	1.94	50.07	1.91	50.53	1.88	51.16	1.91
2340.0	52.85	1.84	51.76	1.95	50.85	1.95	50.06	1.92	50.51	1.89	51.14	1.92
2350.0	52.83	1.85	51.74	1.95	50.83	1.95	50.05	1.92	50.5	1.9	51.12	1.93
2360.0	52.82	1.86	51.72	1.96	50.8	1.96	50.04	1.93	50.48	1.91	51.1	1.94
2370.0	52.81	1.87	51.7	1.97	50.77	1.97	50.02	1.94	50.47	1.92	51.08	1.95
2380.0	52.79	1.88	51.68	1.98	50.75	1.98	50.01	1.95	50.45	1.93	51.05	1.96
2390.0	52.78	1.89	51.66	1.99	50.72	1.99	50.0	1.96	50.43	1.94	51.03	1.97
2400.0	52.77	1.9	51.64	2.0	50.7	2.0	49.99	1.97	50.41	1.95	51.01	1.97
2410.0	52.75	1.91	51.62	2.01	50.67	2.01	49.97	1.98	50.39	1.95	50.99	1.98
2420.0	52.74	1.92	51.6	2.02	50.65	2.02	49.96	1.99	50.38	1.96	50.96	1.99
2430.0	52.73	1.93	51.58	2.03	50.63	2.03	49.95	2.0	50.36	1.97	50.94	2.0
2440.0	52.71	1.94	51.57	2.04	50.61	2.04	49.94	2.01	50.35	1.98	50.93	2.01
2450.0	52.7	1.95	51.56	2.05	50.6	2.05	49.93	2.01	50.34	1.99	50.91	2.02
2460.0	52.69	1.96	51.54	2.06	50.58	2.07	49.92	2.02	50.32	2.0	50.89	2.03
2470.0	52.67	1.98	51.53	2.07	50.57	2.08	49.92	2.03	50.31	2.01	50.88	2.04
2480.0	52.66	1.99	51.52	2.08	50.56	2.09	49.91	2.04	50.3	2.02	50.87	2.05
2490.0	52.65	2.01	51.51	2.09	50.56	2.1	49.9	2.05	50.29	2.03	50.85	2.06
2500.0	52.64	2.02	51.5	2.1	50.55	2.11	49.89	2.06	50.28	2.04	50.84	2.07
2510.0	52.62	2.04	51.49	2.12	50.54	2.13	49.88	2.07	50.27	2.05	50.83	2.08
2520.0	52.61	2.05	51.48	2.13	50.53	2.14	49.87	2.08	50.26	2.06	50.81	2.09
2530.0	52.6	2.06	51.47	2.14	50.53	2.15	49.86	2.09	50.25	2.07	50.8	2.1
2540.0	52.59	2.08	51.46	2.15	50.52	2.16	49.85	2.1	50.23	2.08	50.78	2.11
2550.0	52.57	2.09	51.45	2.16	50.51	2.17	49.84	2.11	50.21	2.09	50.76	2.12
2560.0	52.56	2.11	51.43	2.17	50.5	2.18	49.82	2.12	50.2	2.1	50.75	2.13
2570.0	52.55	2.12	51.42	2.18	50.49	2.2	49.81	2.12	50.18	2.11	50.73	2.14
2580.0	52.53	2.13	51.4	2.19	50.49	2.21	49.79	2.13	50.16	2.12	50.71	2.15
2590.0	52.52	2.15	51.39	2.2	50.48	2.22	49.77	2.14	50.14	2.13	50.69	2.16
2600.0	52.51	2.16	51.38	2.21	50.47	2.23	49.76	2.15	50.13	2.14	50.68	2.17
2610.0	52.5	2.18	51.36	2.22	50.46	2.24	49.74	2.16	50.11	2.15	50.66	2.18
2620.0	52.48	2.19	51.35	2.23	50.45	2.25	49.73	2.17	50.1	2.16	50.64	2.19
2630.0	52.47	2.21	51.33	2.24	50.44	2.26	49.72	2.18	50.08	2.17	50.62	2.2
2640.0	52.46	2.22	51.32	2.25	50.42	2.27	49.7	2.19	50.07	2.17	50.61	2.21
2650.0	52.45	2.23	51.3	2.26	50.4	2.28	49.69	2.2	50.05	2.18	50.59	2.22
2660.0	52.43	2.25	51.28	2.26	50.37	2.28	49.68	2.21	50.04	2.19	50.57	2.23
2670.0	52.42	2.26	51.26	2.27	50.34	2.29	49.67	2.22	50.02	2.2	50.55	2.24
2680.0	52.41	2.28	51.24	2.28	50.31	2.3	49.65	2.23	50.0	2.21	50.53	2.25
2690.0	52.39	2.29	51.21	2.29	50.27	2.3	49.64	2.24	49.98	2.22	50.51	2.26
2700.0	52.38	2.3	51.19	2.3	50.24	2.31	49.62	2.25	49.95	2.23	50.49	2.27



**D.4 Body 3500MHz-4000MHz**

Freq. (MHz)	Target		2021-06-02 Measured		2021-07-05 Measured	
	$\epsilon'$ (F/m)	$\sigma$ (S/m)	$\epsilon'_1$ (F/m)	$\sigma_1$ (S/m)	$\epsilon'_2$ (F/m)	$\sigma_2$ (S/m)
3550.0	51.25	3.37	47.88	3.14	48.15	3.13
3560.0	51.24	3.38	47.87	3.15	48.12	3.14
3570.0	51.23	3.4	47.85	3.16	48.1	3.15
3580.0	51.21	3.41	47.83	3.17	48.07	3.16
3590.0	51.2	3.42	47.81	3.18	48.05	3.17
3600.0	51.19	3.43	47.79	3.19	48.03	3.19
3610.0	51.17	3.44	47.77	3.2	48.0	3.2
3620.0	51.16	3.45	47.75	3.21	47.98	3.21
3630.0	51.15	3.47	47.73	3.22	47.96	3.22
3640.0	51.13	3.48	47.72	3.23	47.94	3.23
3650.0	51.12	3.49	47.7	3.24	47.91	3.24
3660.0	51.1	3.5	47.68	3.25	47.89	3.25
3670.0	51.09	3.51	47.66	3.26	47.87	3.26
3680.0	51.08	3.52	47.64	3.27	47.85	3.27
3690.0	51.06	3.54	47.62	3.28	47.83	3.28
3700.0	51.05	3.55	47.6	3.29	47.81	3.3
3710.0	51.04	3.56	47.59	3.3	47.79	3.31
3720.0	51.02	3.57	47.57	3.31	47.77	3.32
3730.0	51.01	3.58	47.55	3.32	47.75	3.33
3740.0	51.0	3.59	47.53	3.33	47.74	3.34
3750.0	50.98	3.61	47.52	3.34	47.72	3.35
3760.0	50.97	3.62	47.5	3.35	47.7	3.36
3770.0	50.95	3.63	47.48	3.36	47.69	3.38
3780.0	50.94	3.64	47.46	3.38	47.67	3.39
3790.0	50.93	3.65	47.44	3.39	47.66	3.4
3800.0	50.91	3.66	47.43	3.4	47.64	3.41
3810.0	50.9	3.68	47.41	3.41	47.63	3.42
3820.0	50.89	3.69	47.4	3.42	47.62	3.43
3830.0	50.87	3.7	47.38	3.43	47.6	3.45
3840.0	50.86	3.71	47.37	3.44	47.59	3.46
3850.0	50.85	3.72	47.36	3.45	47.58	3.47
3860.0	50.83	3.73	47.34	3.46	47.56	3.48
3870.0	50.82	3.75	47.33	3.47	47.55	3.49
3880.0	50.81	3.76	47.31	3.48	47.54	3.5
3890.0	50.79	3.77	47.3	3.49	47.52	3.51
3900.0	50.78	3.78	47.28	3.5	47.51	3.53
3910.0	50.77	3.79	47.27	3.51	47.5	3.54
3920.0	50.75	3.8	47.26	3.52	47.48	3.55
3930.0	50.74	3.82	47.24	3.53	47.47	3.56
3940.0	50.72	3.83	47.23	3.54	47.45	3.57
3950.0	50.71	3.84	47.21	3.55	47.44	3.58
3960.0	50.7	3.85	47.2	3.57	47.42	3.59
3970.0	50.68	3.86	47.18	3.58	47.4	3.6
3980.0	50.67	3.87	47.17	3.59	47.39	3.61
3990.0	50.66	3.89	47.16	3.6	47.37	3.62
4000.0	50.64	3.9	47.14	3.61	47.35	3.63

