Appendix 5. Simulated Tissues

The body mixture consists of water, Polysorbate (Tween 20) and salt. Visual inspection is made to ensure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

Ingredient (% by weight)	**Frequency 750/835/850/900 MHz**
	Body
De-Ionized Water	71.30
Polysorbate 20	28.00
Salt	0.70

Ingredient (% by weight)	**Frequency 1800/1900 MHz**
	Body
De-Ionized Water	71.50
Polysorbate 20	28.00
Salt	0.50

Ingredient (% by weight)	**Frequency 2450 MHz**
	Body
De-Ionized Water	71.70
Polysorbate 20	28.00
Salt	0.30

Stimulating Liquid for 3700 MHz to 5800 MHz are supplied and manufactured by SPEAG

Ingredient (% by weight)	**Frequency**
	3700 - 5800 MHz Body
De-Ionized Water	~78.00
Mineral Oil	~11.00
Emulsifiers	~9.00
Additives and Salt	~2.00

Appendix 6. System Check and Dielectric Parameters

Dielectric Property Measurements: The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.
The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3-4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.
Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

System Performance Check: Prior to the assessment, the system was verified in the flat region of the phantom, 750 MHz, 900 MHz, 1800 MHz, 1900 MHz, 2450 MHz and 5.0 GHz dipoles were used. A forward power of 250 mW was applied to the 750 MHz, 900 MHz, 1800 MHz, 1900 MHz, 2450 MHz dipoles and 100 mW was applied to 5.0 GHz dipole and the system was verified to a tolerance of ±5% for the 900MHz, 1800MHz, 1900MHz, 2450 MHz and 5.0 GHz dipoles.

The applicable verification normalised to 1 Watt.

Site 57

System Check 900 Body
Date: 17/07/2014
Validation Dipole and Serial Number: D900V2 SN: 035

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	24.0	21.5	ε_r	55.00	53.20	-3.27	5.00
				σ	1.05	1.03	-2.33	5.00
				1g SAR	10.40	10.16	-2.31	5.00
				10g SAR	6.73	6.80	1.04	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
128	GSM850	824.2	ε_r	53.50
			σ	0.98
190		836.6	ε_r	53.50
			σ	0.98
251		848.8	ε_r	53.50
			σ	0.99
20450	LTE Band 5	829.0	ε_r	53.50
			σ	0.98
20525		836.5	ε_r	53.50
			σ	0.98
20600		844.0	ε_r	53.50
			σ	0.99

System Check 900 Body
Date: 21/07/2014
Validation Dipole and Serial Number: D900V2 SN: 035

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0	22.8	ε_r	55.00	56.35	2.45	5.00
				ε_r	1.05	1.02	-2.95	5.00
				ε_r	10.40	10.12	-2.69	5.00
				ε_r	6.73	6.56	-2.53	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
4132	WCDMA FDD 5	826.4	ε_r	53.50
			σ	0.98
4183		836.6	ε_r	53.50
			Σ	0.98
4233		846.6	ε_r	53.50
			σ	0.99

Site 57 (Continued)

System Check 900 Body
Date: 28/07/2014
Validation Dipole and Serial Number: D900V2 SN: 035

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0	22.0	ε_r	55.00	53.44	-2.84	5.00
				ε_r	1.05	1.02	-2.76	5.00
				ε_r	10.40	10.24	-1.54	5.00
				ε_r	6.73	6.84	1.63	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
4132	WCDMA FDD 5	826.4	ε_r	53.76
			σ	0.97
4183		836.6	ε_r	53.70
			σ	0.98
4233		846.6	ε_r	53.67
			σ	0.99

System Check 2450 Body
Date: 04/09/2014
Validation Dipole and Serial Number: D2440V2 SN: 701

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	24.0	23.5	ε_r	52.70	50.62	-3.95	5.00
				σ	1.95	2.04	4.77	5.00
				1g SAR	51.40	52.80	2.72	5.00
				10g SAR	23.90	24.32	1.76	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
6	Wi-Fi 2.4 GHz	2437.0	ε_r	50.62
			σ	2.04
39	*Bluetooth*	2441.0	ε_r	50.60
			σ	2.03

Site 59

System Check 2450 Body
Date: 24/07/2014
Validation Dipole and Serial Number: D2440V2 SN: 701

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	24.0	23.5	ε_r	52.70	53.32	1.18	5.00
				σ	1.95	2.02	3.44	5.00
				1g SAR	51.40	50.80	-1.17	5.00
				10g SAR	23.90	23.40	-2.09	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
1	Wi-Fi 2.4 GHz	2412.0	ε_r	53.42
			σ	1.98
6		2437.0	ε_r	53.35
			σ	2.01
11		2462.0	ε_r	53.28
			σ	2.03

System Check 5200 Body
Date: 11/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0	23.0	ε_r	49.01	47.96	5.40	5.00
				σ	5.30	5.40	1.87	5.00
				1g SAR	73.10	75.70	3.56	5.00
				10g SAR	20.40	20.80	1.96	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
46	Wi-Fi 5.0 GHz	5230	ε_r	47.96
			σ	5.47
54		5270	ε_r	47.87
			σ	5.52

System Check 5200 Body
Date: 14/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0	23.0	ε_r	49.01	47.51	-3.06	5.00
				σ	5.30	5.43	2.47	5.00
				1g SAR	73.10	73.70	0.82	5.00
				10g SAR	20.40			5.00

Channel Number	Band	Frequency (MHz)	Parameters	
46	Wi-Fi 5.0 GHz	5230	ε_r	47.47
			σ	5.49
54		5270	ε_r	47.39
			σ	5.54

Site 59 (Continued)

System Check 5200 Body
Date: 18/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0	23.0	ε_r	49.01	48.52	-1.00	5.00
				σ	5.30	5.37	1.38	5.00
				1g SAR	73.10	75.10	2.74	5.00
				10g SAR	20.40	20.60	0.98	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
48	Wi-Fi 5.0 GHz	5240	ε_r	48.51
			σ	5.44
54		5270	ε_r	48.44
			σ	5.48
62		5310	ε_r	48.34
			σ	5.53

System Check 5200 Body
Date: 21/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0	23.0	ε_r	49.01	48.25	-1.55	5.00
				σ	5.30	5.32	0.40	5.00
				1g SAR	73.10	71.90	-1.64	5.00
				10g SAR	20.40	19.60	-3.92	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
48	Wi-Fi 5.0 GHz	5240	ε_r	48.13
			σ	5.35

Site 59 (Continued)

System Check 5200 Body
Date: 26/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0	23.0	ε_r	49.01	47.77	-2.53	5.00
				σ	5.30	5.37	1.27	5.00
				1g SAR	73.10	76.10	4.10	5.00
				10g SAR	20.40	20.80	1.96	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
40	Wi-Fi 5.0 GHz	5200	ε_r	47.77
			σ	5.38
48		5240	ε_r	47.78
			σ	5.48
52		5260	ε_r	47.76
			σ	5.51
54		5270	ε_r	47.74
			σ	5.51
60		5300	ε_r	47.68
			σ	5.52

System Check 5200 Body
Date: 01/09/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0	23.0	ε_r	49.01	48.40	-1.24	5.00
				σ	5.30	5.34	0.84	5.00
				1g SAR	73.10	73.00	-0.14	5.00
				10g SAR	20.40	19.80	-2.94	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
48	Wi-Fi 5.0 GHz	5240	ε_r	48.33
			σ	5.45
54		5270	ε_r	48.29
			σ	5.48

Site 59 (Continued)

System Check 5500 Body
Date: 18/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5500	24.0	24.0	ε_r	48.60	48.15	-0.93	5.00
				σ	5.65	5.74	1.51	5.00
				1g SAR	79.00	79.50	0.63	5.00
				10g SAR	21.90	21.80	-0.46	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
62	Wi-Fi 5.0 GHz	5310	ε_r	48.34
			σ	5.53

System Check 5500 Body
Date: 26/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5500	24.0	24.0	ε_r	48.60	47.63	-2.00	5.00
				σ	5.65	5.80	2.70	5.00
				1g SAR	79.00	80.10	1.39	5.00
				10g SAR	21.90	20.90	-4.57	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
100	Wi-Fi 5.0 GHz	5500	ε_r	47.63
			σ	5.81

Site 59 (Continued)

System Check 5500 Body
Date: 01/09/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5500	24.0	24.0	ε_r	48.60	48.11	-1.01	5.00
				σ	5.65	5.68	0.54	5.00
				1g SAR	79.00	81.90	3.67	5.00
				10g SAR	21.90	21.30	-2.74	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
100	Wi-Fi 5.0 GHz	5500	ε_r	48.06
			σ	5.81
102		5510	ε_r	48.03
			σ	5.81
110		5550	ε_r	47.89
			σ	5.83
116		5580	ε_r	47.88
			σ	5.90
134		5670	ε_r	47.74
			σ	6.02
140		5700	ε_r	47.73
			σ	6.07

System Check 5800 Body
Date: 01/09/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5800	24.0	24.0	ε_r	48.20	47.65	-1.14	5.00
				σ	6.00	6.07	1.12	5.00
				1g SAR	73.20	74.00	1.09	5.00
				10g SAR	20.20	20.40	0.99	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
134	Wi-Fi 5.0 GHz	5670	ε_r	47.74
			σ	6.02
140		5700	ε_r	47.73
			σ	6.07

Site 60

System Check 2450 Body
Date: 21/07/2014
Validation Dipole and Serial Number: D2440V2 SN: 701

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	24.0	23.5	ε_r	52.70	50.85	-3.51	5.00
				σ	1.95	1.92	-1.44	5.00
				1g SAR	51.40	50.00	-2.72	5.00
				10g SAR	23.90	23.68	-0.92	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
1	Wi-Fi 2.4 GHz	2412.0	ε_r	50.93
			σ	1.89
6		2437.0	ε_r	50.88
			σ	1.91
11		2462.0	ε_r	50.82
			σ	1.93

System Check 5200 Body
Date: 11/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5200	24.0	23.0	ε_r	49.01	47.71	-2.65	5.00
				σ	5.30	5.23	-1.23	5.00
				1g SAR	73.10	71.00	-2.87	5.00
				10g SAR	20.40	20.70	1.47	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
46	Wi-Fi 5.0 GHz	5230	ε_r	47.68
			σ	5.30

Site 60 (Continued)

System Check 5500 Body
Date: 18/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5500	24.0	24.0	ε_r	48.60	46.87	-3.56	5.00
				σ	5.65	5.72	1.29	5.00
				1g SAR	79.00	77.40	-2.03	5.00
				10g SAR	21.90	22.40	2.28	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
100	Wi-Fi 5.0 GHz	5500	ε_r	46.87
			σ	5.73
116		5580	ε_r	46.64
			σ	5.85
140		5700	ε_r	46.32
			σ	6.03

System Check 5500 Body
Date: 21/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5500	24.0	24.0	ε_r	48.60	47.00	-3.29	5.00
				σ	5.65	5.69	0.70	5.00
				1g SAR	79.00	75.20	-4.81	5.00
				10g SAR	21.90	21.80	-0.46	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
100	Wi-Fi 5.0 GHz	5500	ε_r	47.00
			σ	5.75
116		5580	ε_r	46.77
			σ	5.88
140		5700	ε_r	46.46
			σ	6.08

Site 60 (Continued)

System Check 5500 Body
Date: 01/09/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5500	24.0	24.0	ε_r	48.60	48.81	0.43	5.00
				σ	5.65	5.60	-0.82	5.00
				1g SAR	79.00	76.90	-2.66	5.00
				10g SAR	21.90	22.30	1.83	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
100	Wi-Fi 5.0 GHz	5500	ε_r	48.06
			σ	5.81
102		5510	ε_r	48.77
			σ	5.63
110		5550	ε_r	48.62
			σ	5.69
134		5670	ε_r	48.35
			σ	5.88

System Check 5800 Body
Date: 11/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5800	24.0	24.0	ε_r	48.20	46.31	-3.92	5.00
				σ	6.00	6.14	2.25	5.00
				1g SAR	73.20	71.80	-1.91	5.00
				10g SAR	20.20	20.40	0.99	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
159	Wi-Fi 5.0 GHz	5795	ε_r	46.32
			σ	6.13

System Check 5800 Body
Date: 14/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5800	24.0	24.0	ε_r	48.20	46.22	-4.11	5.00
				σ	6.00	6.12	1.98	5.00
				1g SAR	73.20	72.90	-0.41	5.00
				10g SAR	20.20	21.00	3.96	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
159	Wi-Fi 5.0 GHz	5795	ε_r	46.23
			σ	6.12

Site 60 (Continued)

System Check 5800 Body
Date: 21/08/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5800	24.0	24.0	ε_r	48.20	46.23	-4.09	5.00
				σ	6.00	6.23	3.86	5.00
				1g SAR	73.20	69.70	-4.78	5.00
				10g SAR	20.20	20.00	-0.99	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
157	Wi-Fi 5.0 GHz	5785	ε_r	46.25
			σ	6.21

System Check 5800 Body
Date: 01/09/2014
Validation Dipole and Serial Number: D5GHzV2 SN: 1016

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	5800	24.0	24.0	ε_r	48.20	48.11	-0.19	5.00
				σ	6.00	6.08	1.29	5.00
				1g SAR	73.20	72.60	-0.82	5.00
				10g SAR	20.20	20.80	2.97	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
157	Wi-Fi 5.0 GHz	5785	ε_r	48.13
			σ	6.06

Site 61

System Check 1900 Body
Date: 17/07/2014
Validation Dipole and Serial Number: D1900V2 SN: 537

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	23.0	23.1	ε_r	53.30	52.25	-1.97	5.00
				σ	1.52	1.56	2.57	5.00
				1g SAR	40.20	40.40	0.50	5.00
				10g SAR	21.1	20.84	-1.23	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
512	PCS1900	1850.2	ε_r	51.72
			σ	1.50
661		1880.0	ε_r	51.64
			σ	1.54
810		1909.8	ε_r	51.56
			σ	1.57

System Check 1900 Body
Date: 21/07/2014
Validation Dipole and Serial Number: D1900V2 SN: 537

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	24.0	23.8	ε_r	53.30	52.58	-1.35	5.00
				σ	1.52	1.53	0.42	5.00
				1g SAR	40.20	41.60	3.48	5.00
				10g SAR	21.1	21.60	2.37	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
9262	WCDMA FDD 2	1852.4	ε_r	52.75
			σ	1.49
9400		1880.0	ε_r	52.65
			σ	1.51
9538		1907.6	ε_r	52.54
			σ	1.54
18700	LTE Band 2	1860.0	ε_r	52.73
			σ	1.49
18900		1880.0	ε_r	52.65
			σ	1.51
19100		1900.0	ε_r	52.58
			σ	1.53

Site 61 (Continued)

System Check 1900 Body
Date: 24/07/2014
Validation Dipole and Serial Number: D1900V2 SN: 537

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	24.0	24.0	ε_r	53.30	52.46	-1.58	5.00
				σ	1.52	1.56	2.78	5.00
				1g SAR	40.20	41.20	2.49	5.00
				10g SAR	21.1	21.56	2.18	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
18700	LTE Band 2	1860.0	ε_r	52.73
			σ	1.49
18900		1880.0	ε_r	52.65
			σ	1.51
19100		1900.0	ε_r	52.58
			σ	1.53

System Check 1900 Body
Date: 28/07/2014
Validation Dipole and Serial Number: D1900V2 SN: 537

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	24.3	23.0	ε_r	53.30	51.54	-3.30	5.00
				σ	1.52	1.55	2.29	5.00
				1g SAR	40.20	40.40	0.50	5.00
				10g SAR	21.1	21.08	-0.09	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
9262	WCDMA FDD 2	1852.4	ε_r	52.06
			σ	1.51
9400		1880.0	ε_r	51.97
			σ	1.54
9538		1907.6	ε_r	51.87
			σ	1.56

Site 61 (Continued)

System Check 1900 Body
Date: 31/07/2014
Validation Dipole and Serial Number: D1900V2 SN: 537

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	23.0	22.0	ε_r	53.30	51.91	-2.61	5.00
				σ	1.52	1.55	1.74	5.00
				1g SAR	40.20	41.60	3.48	5.00
				10g SAR	21.1	21.52	1.99	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
18700	LTE Band 2	1860.0	ε_r	52.05
			σ	1.51
18900		1880.0	ε_r	51.98
			σ	1.53
19100		1900.0	ε_r	51.91
			σ	1.55

System Check 2450 Body
Date: 06/08/2014
Validation Dipole and Serial Number: D2440V2 SN: 701

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	24.0	24.0	ε_r	52.70	53.45	1.42	5.00
				σ	1.95	2.01	3.24	5.00
				1g SAR	51.40	52.80	2.72	5.00
				10g SAR	23.90	24.68	3.26	5.00

Channel Number	Band	Frequency (MHz)	Parameters	
0	*Bluetooth*	2402.0	ε_r	53.52
			σ	1.95
39		2441.0	ε_r	53.46
			σ	2.00
78		2480.0	ε_r	53.35
			σ	2.05

Appendix 7. Measurement Uncertainty Table

Measurement uncertainty tables for technologies tested.

A.7.1. GSM / GPRS / EDGE 850 / WCDMA FDD 5 / LTE Band 5 Body Configurations 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	$c_{i\ (1g)}$	Standard Uncertainty		υ_i or υ_{eff}
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration /Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.510	2.510	normal (k=1)	1.0000	1.0000	2.510	2.510	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.000	2.000	normal (k=1)	1.0000	0.6400	1.280	1.280	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	1.560	1.560	normal (k=1)	1.0000	0.6000	0.936	0.936	5
	Combined standard uncertainty			t-distribution			9.37	9.37	>500
	Expanded uncertainty			k = 1.96			18.36	18.36	>500

A.7.2. PCS / GPRS / EDGE 1900 / WCDMA FDD 2 / LTE Band 2 Body Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	$c_{i\ (1g)}$	Standard Uncertainty		υ_i or υ_{eff}
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	1.860	1.860	normal (k=1)	1.0000	1.0000	1.860	1.860	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.610	2.610	normal (k=1)	1.0000	0.6400	1.670	1.670	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.140	2.140	normal (k=1)	1.0000	0.6000	1.284	1.284	5
	Combined standard uncertainty			t-distribution			9.32	9.32	>500
	Expanded uncertainty			k = 1.96			18.26	18.26	>500

A.7.3. Wi-Fi 2450 MHz Body Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	$c_{i\ (1g)}$	Standard Uncertainty		υ_i or υ_{eff}
							+ u (%)	- u (%)	
B	Probe calibration	6.000	6.000	normal (k=1)	1.0000	1.0000	6.000	6.000	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	2.440	2.440	normal (k=1)	1.0000	1.0000	2.440	2.440	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	2.260	2.260	normal (k=1)	1.0000	0.6400	1.446	1.446	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	2.150	2.150	normal (k=1)	1.0000	0.6000	1.290	1.290	5
	Combined standard uncertainty			t-distribution			9.36	9.36	>500
	Expanded uncertainty			k = 1.96			18.35	18.35	>500

A.7.4. Wi-Fi 5GHz Body Configuration 1g

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	$c_{i\ (1g)}$	Standard Uncertainty		υ_i or υ_{eff}
							+ u (%)	- u (%)	
B	Probe calibration	6.550	6.550	normal (k=1)	1.0000	1.0000	6.550	6.550	∞
B	Axial Isotropy	0.250	0.250	normal (k=1)	1.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	1.300	1.300	normal (k=1)	1.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.160	0.160	normal (k=1)	1.0000	1.0000	0.160	0.160	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration / Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	1.960	1.960	normal (k=1)	1.0000	1.0000	1.960	1.960	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	4.370	4.370	normal (k=1)	1.0000	0.6400	2.797	2.797	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	4.270	4.270	normal (k=1)	1.0000	0.6000	2.562	2.562	5
	Combined standard uncertainty			t-distribution			10.15	10.15	>450
	Expanded uncertainty			k = 1.96			19.90	19.90	>450

Appendix 8. 3G Test set-up

3G (12.K RMC / HSDPA / HSUPA) setup

The module power levels were measured in both HSPA and 3G RMC 12.2kbps modes and compared to ensure the correct mode of operation had been established.

The following tables taken from FCC 3G SAR procedures (KDB 941225 D01 SAR test for 3G devices v02) below were applied using an wireless communications test set which supports 3G / HSDPA release 5 / HSUPA release 6.

Sub-test Setup for Release 5 HSDPA

Sub-test	β_c	β_d	B_d *(SF)*	β_c/β_d	β_{hs} (1)	SM (dB) (2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 (3)	15/15 (3)	64	12/15 (3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $B_{hs}/\beta_c = 24/15$

Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

Sub-test Setup for Release 6 HSUPA

Sub-test	β_c	β_d	B_d *(SF)*	β_c/β_d	β_{hs} (1)	B_{oc}	B_{od}	B_{od} *(SF)*	B_{od} *(codes)*	CM (2) (dB)	MPR (dB)	AG (4) Index	E-TFCI
1	11/15 (3)	15/15 (3)	64	11/15 (3)	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	31/15	B_{al1}: 47/15 B_{al2}: 47/15	4	1	2.0	1.0	15	92
4	2/15	15/15	64	2/15	2/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (4)	15/15 (4)	64	15/15 (4)	24/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $B_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH AND E-DPCCH for the Power Back-off is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Tavle 5.1g.

Note 6: B_{od} can not be set directly; it is set by Absolute Grant Value.

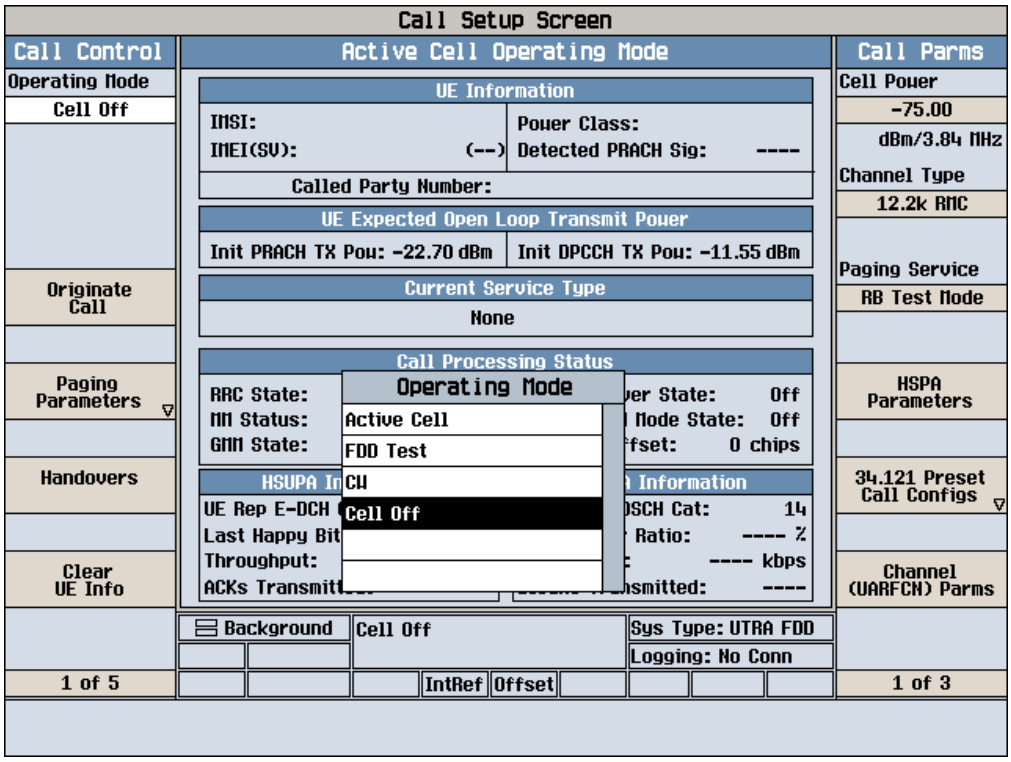
Appendix 9. DC-HSDPA CAT24 Test set-up

A.9.1. Establish a DC-HSDPA RB Test Mode Connection with DL 42Mbps

RB (radio bearer) test mode is a special, defined-channel configuration designed to simplify the testing environment. Since W-CDMA is an incredibly flexible system, defined radio bearers, called RMCs (reference measurement channels) simplify which configurations need to be tested for RF performance.
RB test mode provides the ability to set up a standalone channel configuration originating from the 8960 via call-processing. The direction of the call setup is always from the 8960 to the UE. This is the typical RF test that is used throughout the lifecycle of a device's design process. Using RB test mode is attractive to device manufacturers because it does not require extra software to control the UE. In this type of call connection, the radio bearer (within the 8960) essentially controls the UE during test.

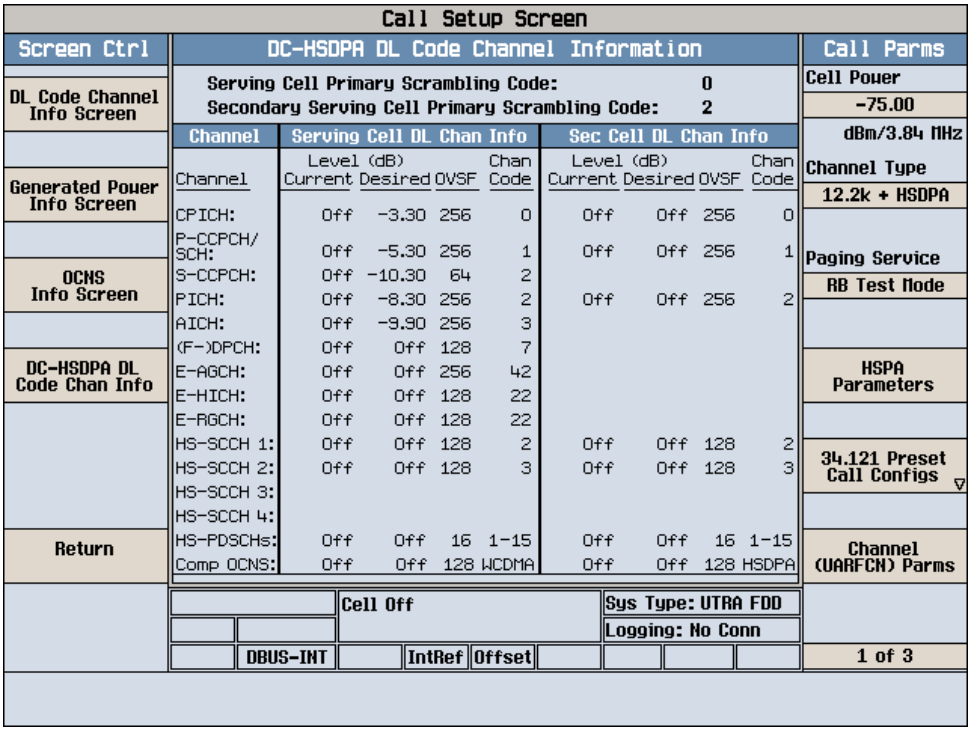
A.9.1.1 Configure 8960

1. Press **Operating Mode** (**F1**), select **Cell Off** operating mode.



2. Set the **Channel type** to **12.2k + HSDPA**.

3. Set the downlink channel code. In order to achieve the 42 Mbps maximum downlink throughput, you have to set up 15 HS-PDSCHs which will possibly cause a code collision.
To easily configure the downlink 15 HS-PDSCH for a maximum throughput, use the code preset to configure the code channels for both the serving cell and the secondary serving cell.
Select **Call Control 2 of 6**-> **Generator Info (F3)** -> **Downlink Channel Configs (F4)** -> **DL Chan code Preset Configs (F5)**, choose **34.121 Tables E.6.2.3,4 (HSDPA 15 HS-PDSCHs).**
Set the **Conn S-CCPCH Cfg** to **Off** to avoid the code collision.
To see the channel code allocation for the serving cell and the secondary serving cell, select **Additional Gen Info Screens (F1) -> DC-HSDPA DL Code Chan Info (F4).**



4. Configure DC-HSDPA parameters to achieve the Maximum Downlink Data Rate:
First of all, you must know the maximum data rate of the device under test according to its category and the key factors to achieve the maximum date rate. In this lab, you use a category 24 device whose maximum data rate is 42 Mbps when DC-HSDPA is configured.
a) Set up the HSDPA RB Test Mode Parameters

*Path: Call Parms 1 of 3 -> HSPA Parameters (**F10**) -> HSDPA Parameters (**F10**) -> HSDPA RB Test Mode Setup (**F8**) -> HSDPA RB Test Mode Settings (**F8**).*

- **RB Test HS-DSCH Configuration Type** = **User Defined**
- **RB Test User Defined HS-DSCH MAC entity** = **MAC-ehs** (Note 1)
- **RB Test User Defined HARQ Processes** = **6** (Note 2)
- **RB Test User Defined UE IR Buffer Allocation** = **Implicit**
- **RB Test User Defined DC-HSDPA State** = **On**
- **RB Test Mode DC-HSDPA DPCH Loopback State** = **On**

Note 1: DC-HSDPA requires MAC-ehs. You must set the MAC entity to MAC-ehs before setting the DC-HSDPA state)
Note 2: To restrict the amount of soft memory that can be allocated to a single HARQ process (and thus limit the amount of data that has to be transferred across the UE"s internal data buses) the specifications require that when setting up a DC-HSDPA call with the implicit HARQ memory partitioning the network must configure 6, 7, or 8 HARQ processes per cell. For the explicit HARQ memory partitioning case, the number of HARQ processes can be 1 through 8, but the memory size for each HARQ process cannot be greater than the number of soft channel bits for an implicit memory partitioning with 6 processes per HS-DSCH channel.
b) Set up the Serving Cell Parameters

Path: **F10**

- **RB Test User Defined 64QAM State** =**On**
- **RB Test User Defined Active HS-PDSCHs** =**15**
- **RB Test User Def Transport Block Size Index** =**62**
- **RB Test User Defined Modulation Type** =**64QAM**
- **RB Test User Defined Inter-TTI Interval** =**1**

c) Set up the Secondary Serving Cell Parameters
Path: **F11**

- **RB Test User Def Secondary Cell 64QAM State** =**On**
- **RBTM User Def Sec Cell Active HS-PDSCHs** = **15**

- **RBTM User Def Sec Cell TB Size Index** = **62**
- **RBTM User Def Sec Cell Modulation Type** =**64QAM**
- **RBTM User Def Sec Cell Inter-TTI Interval** = **1**

d) Set the **Secondary Serving Cell Power (dBm/3.84 MHz)** to **-25 dBm/3.84 MHz**

*Path: Return (**F12**) -> HSDPA Parms 2 of 2 -> Secondary Serv Cell Parms (**F10**)*
e) Set the **Cell power** to **-25 dBm/3.84 MHz**

*Path: CALL SETUP -> **F7***
f) Set the HSDPA Conn DL Channel Levels

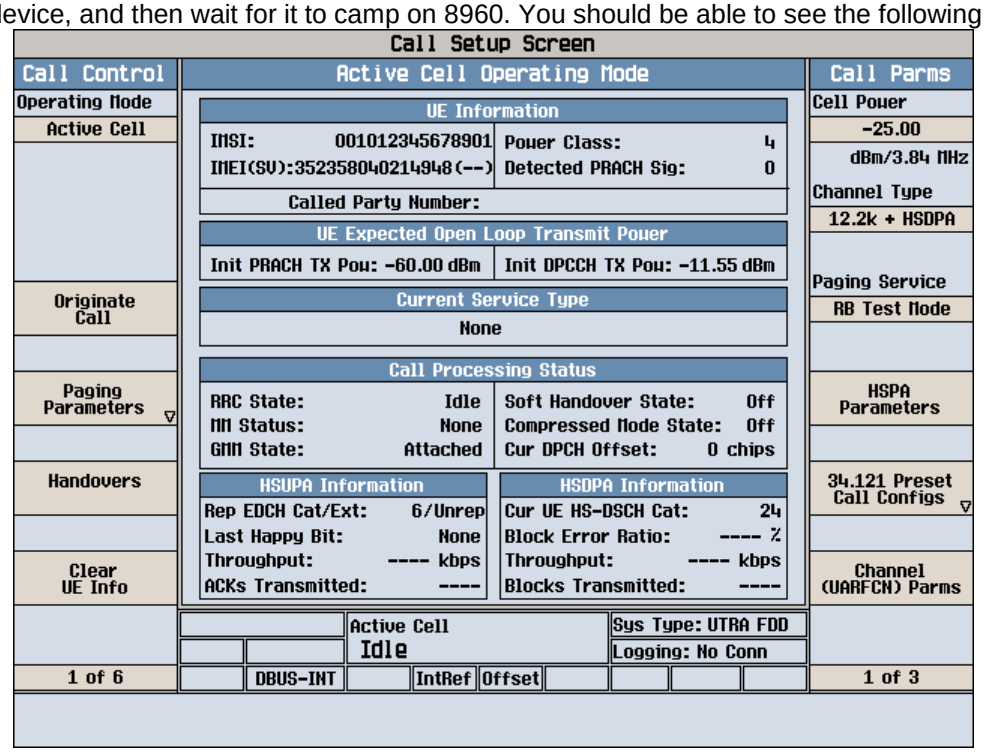
*Path: CALL SETUP -> Call Control 2 of 6 -> Generator Info (**F3**) ->Downlink Channel Levels (**F3**) -> Connected DL Channel Levels (**F3**) -> **F3***

- **HSDPA Cell 1 Connected CPICH Level** = **-8**
- **HSDPA Cell 1 Connected P-CCPCH/SCH Level** = **-20**
- **HSDPA Cell 1 Connected PICH Level** = **off**
- **HSDPA Cell 1 Connected DPCH Level** = **-30**
- **HSDPA Cell 1 Connected HS-PDSCH Level (Sum)** = **-1 dBm**
- **HSDPA Cell 1 Connected HS-SCCH 1 to 4 Level** = **-20,-20,off,off**
- **Secondary Cell HSDPA Conn CPICH Level** = **-8**
- **Secondary Cell HSDPA Conn PCCPCH/SCH Level** = **-20**
- **Secondary Cell HSDPA Conn PICH Level** = **off**
- **Secondary Cell HSDPA Conn HS-PDSCHs Lvl (Sum)** = **-1 dBm**
- **Secondary Cell HSDPA Conn HS-SCCH 1 to 4 Level** = **-20,-20,off,off**

5. Set the **Operating Mode** (**F1**) to **Active Cell**.

A.9.1.2. Power on the UE and Set up the Connection

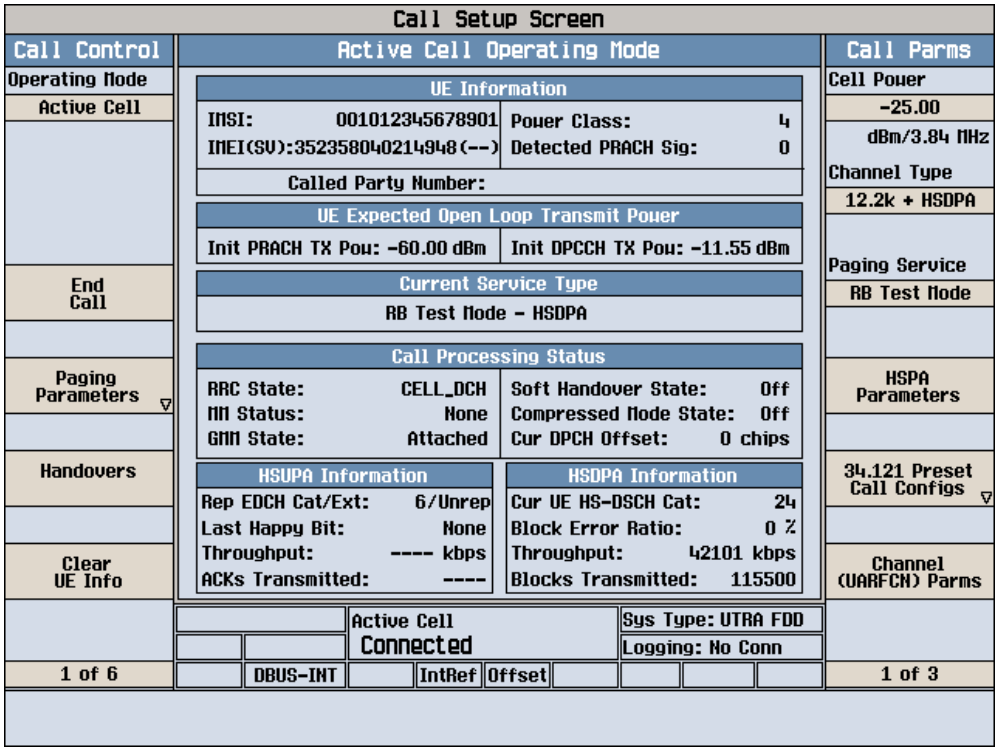
Power on the device, and then wait for it to camp on 8960. You should be able to see the following screen.



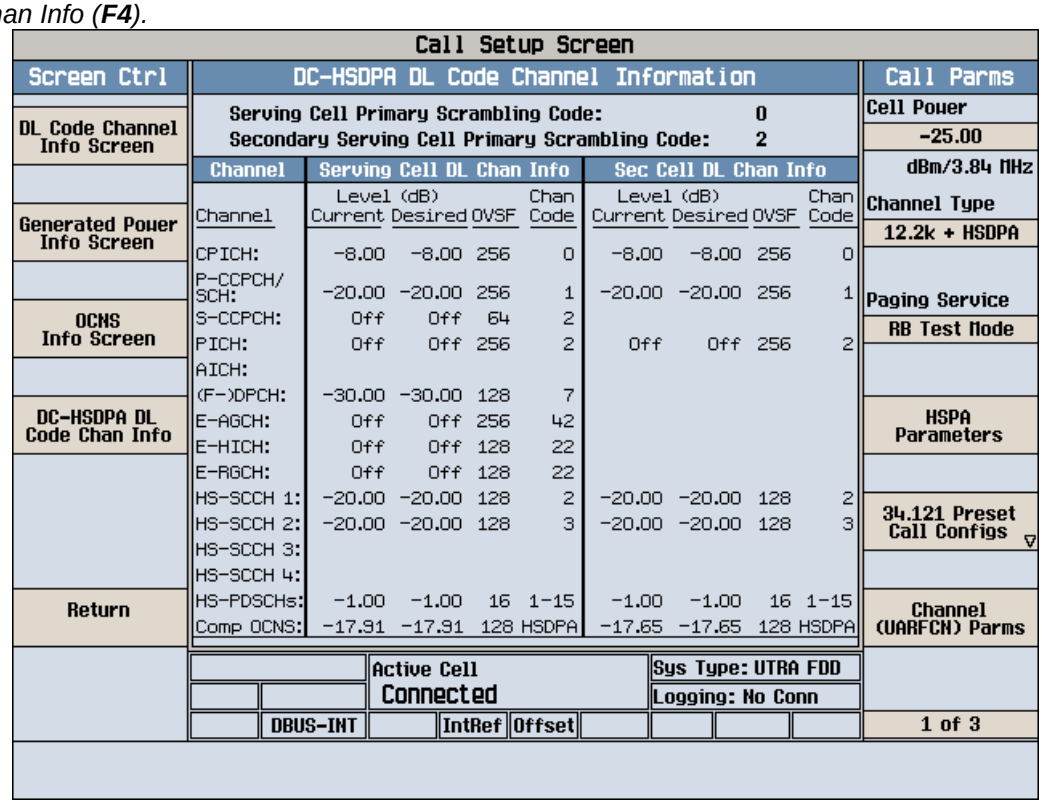
The UE reports HSDPA categories to 8960, which represents its maximum data rate capability. DC-HSDPA requires UE categories 21 to 24.
The GMM state must be **Attached**, otherwise you cannot establish a HSDPA connection.
2. Originate the Connection

a) Now, Originate an RB Test call with DC-HSDPA by pressing „**F3**" from the main Call Setup screen.

b) After a connection is set up, you will be able to see the throughput from the HSDPA Information window. Press the **Measurement Reset** key to reset the calculation.



Now you can also check the connected DC-HSDPA downlink channel levels.
*Path: CALL SETUP->Call Control 2 of 6 -> Generator Info (**F3**) -> Additional Gen Info Screens (**F1**) ->DC-HSDPA DL Code Chan Info (**F4**).*



A.9.2. Activate/ Deactivate the Secondary Serving Cell

Once a DC-HSDPA connection is established, 8960 can control the UE to start or stop monitoring the secondary serving cell using HS-SCCH orders. The HS-SCCH orders can be sent on either the serving or secondary serving cell.

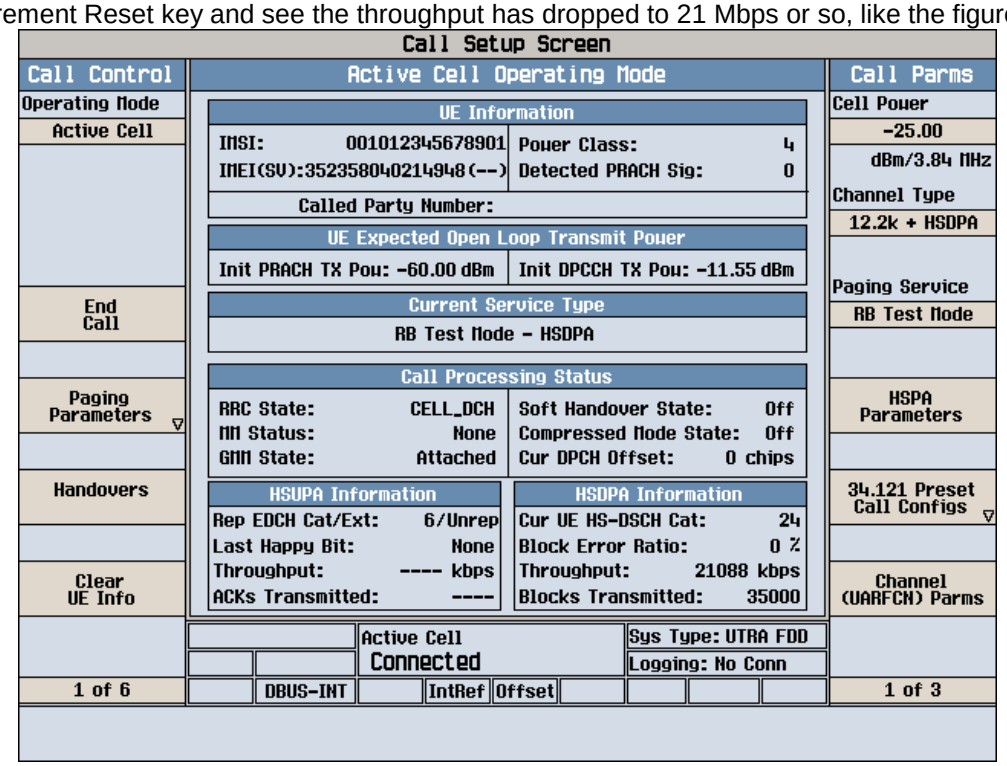
A.9.2.1 Deactivate the Secondary Serving Cell

1. Setup the Deactivate Secondary Cell Parameter

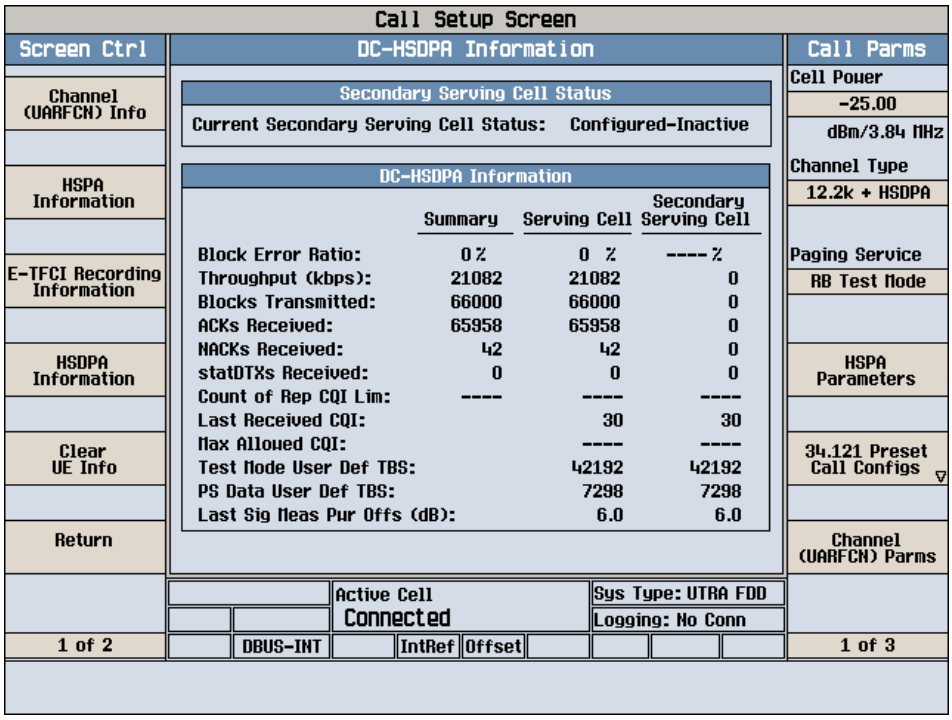
*Path: CALL SETUP->Call Control 6 of 6 -> HS-SCCH Order (**F3**) -> Deactivate Secondary Cell (**F2**)*
In this lab you set it to deactivate the secondary serving cell from the serving cell.

- **Deactivate Secondary Cell HS-SCCH Order From** = **Serving Cell**

Press **Send Deactivate Secondary Cell** (**F5**)
Press Measurement Reset key and see the throughput has dropped to 21 Mbps or so, like the figure below:

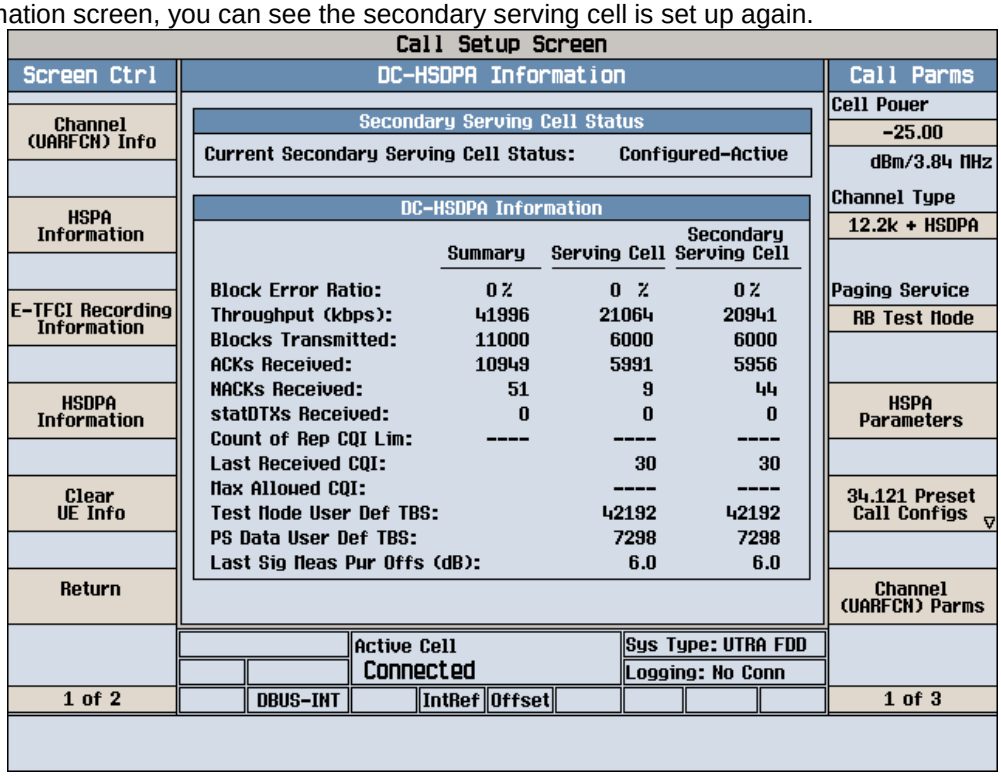


You can see more on the DC-HSDPA Information screen.
Path: *CALL SETUP->Call Control 2 of 6 -> Additional Screens (**F1**) -> HSDPA Information (**F4**) -> DC-HSDPA Information (**F4**).*



A.9.2.2 Re-activate the Secondary Serving Cell

Now you can activate the secondary serving cell by pressing back to the HS-SCCH Order menu.
*Path: CALL SETUP->Call Control 6 of 6 -> HS-SCCH Order (**F3**)*
Press **Send Activate Secondary Cell** (**F1**).
Press the Measurement Reset key and see the throughput has increased to 42 Mbps. When you look at the DC-HSDPA Information screen, you can see the secondary serving cell is set up again.



When DC-HSDPA is active, the HBLER measurement can also be used to perform receiver testing. 3GPP TS 34.121-1 sections 6.3C and 6.3D are supported and can be set up and tested as described in an appendix in another document, DC-HSDPA User Guide.