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Appendix B For Test Report No.: SZEM1501000357HR

Authorized Signature:



EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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3 Appendix_A: Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Part I – RF Conducted Power of Transmitter for GSM850

		RF Output Power(Conducted)							
TEST CONDITIONS	Channel128(L)		Channel190(I	M)	Channel251(H)				
	824.2MHz		836.6 MHz		848.8 MHz				
Tnom/ Vnom	Measured(dBm)	Limit (dBm)	Measured(dBm)	Limit (dBm)	Measured(dBm)	Limit (dBm)			
GSM/TM1 (GSM ONLY)	32.62	38.5	32.82	38.5	32.56	38.5			
GSM/TM1(GPRS)	32.61	38.5	32.79	38.5	32.55	38.5			

Part 2– Effective Radiated Power of Transmitter (ERP) for GSM850

Test Mode	Freq. (MHz)	Meas. Level (dBm)	Substitution Antenna Type	SGP (dBm)	Substitution Gain(dBd)	Cable Loss (dB)	Substitution Level(ERP) / dBm	Limit (dBm)	Result
GSM/TM1 (GSM ONLY)	824.2	28.61	Dipole Ant.	34.05	-4.90	0.6	28.55	38.5	Pass
GSM/TM1 (GSM ONLY)	836.6	28.81	Dipole Ant.	34.40	-5.02	0.6	28.78	38.5	Pass
GSM/TM1 (GSM ONLY)	848.8	28.55	Dipole Ant.	34.12	-5.00	0.6	28.52	38.5	Pass
GSM/TM1 (GPRS)	824.2	28.60	Dipole	34.04	-4.90	0.6	28.54	38.5	Pass
GSM/TM1 (GPRS)	836.6	28.78	Dipole	34.35	-5.02	0.6	28.73	38.5	Pass
GSM/TM1 (GPRS)	848.8	28.54	Dipole	34.11	-5.00	0.6	28.51	38.5	Pass

Note:

a: For getting the ERP (Efficient Radiated Power) in substitution method, the following formula should be taken to calculate it,

ERP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]

b: SGP=Signal Generator Level

c: RBW > emission bandwidth, VBW > 3 x RBW. Detector: RMS



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Part I – RF Conducted Power of Transmitter for GSM1900

		RF Output Power(Conducted)							
TEST CONDITIONS	Channel128(L)		Channel190(M)	Channel251(H)				
	1850.2MHz	1850.2MHz		Z	1909.8 MHz				
Tnom/ Vnom	Measured(dBm)	Limit	Measured(dBm)	Limit	Measured(dBm)	Limit			
	Measured(dDiff)	(dBm)	Measured(dDm)	(dBm)	Measured(dbiii)	(dBm)			
GSM/TM1	27.58	33	26.48	33	27.07	33			
(GSM ONLY)	27.00	00	55 20.40		21.07	00			
GSM/TM1	27.55	33	26.41	33	27.02	33			
(GPRS)	27.00		20.41	- 55	21.02	55			

Part 2– Effective Isotropic Radiated Power of Transmitter (EIRP) for GSM1900

Test Mode	Freq. (MHz)	Meas. Level (dBm)	Substitution Antenna Type	SGP (dBm)	Substitution Gain(dBi)	Cable Loss (dB)	Substitution Level(ERP) / dBm	Limit (dBm)	Resu It
GSM/TM1 (GSM ONLY)	1850.2	30.26	Horn Ant.	26.63	4.5	1	30.13	33	Pass
GSM/TM1 (GSM ONLY)	1880.0	29.16	Horn Ant.	25.63	4.5	1	29.13	33	Pass
GSM/TM1 (GSM ONLY)	1909.8	29.75	Horn Ant.	26.08	4.5	1	29.58	33	Pass
GSM/TM1 (GPRS)	1850.2	30.21	Horn Ant.	26.62	4.5	1	30.12	33	Pass
GSM/TM1 (GPRS)	1880.0	29.12	Horn Ant.	25.58	4.5	1	29.08	33	Pass
GSM/TM1 (GPRS)	1909.8	29.70	Horn Ant.	26.12	4.5	1	29.62	33	Pass

Note:

a, For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

EIRP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBi]

- b, SGP=Signal Generator Level
- c: RBW > emission bandwidth, VBW > 3 x RBW
 - Detector: RMS

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4 Appendix_B: Peak-to-Average Ratio

Part I - Test Results

Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
		LCH	0.15	13	PASS
GSM850	GSM/TM1	MCH	0.21	13	PASS
		HCH	0.07	13	PASS
		LCH	0.11	13	PASS
GSM1900	GSM/TM1	MCH	0.09	13	PASS
		HCH	0.14	13	PASS



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5 Appendix_C: Modulation Characteristics

Part I - Test Plots

5.1 For GSM

5.1.1 Test Band = GSM850

5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = MCH

🐼 GSM8	50 Modulat	ion		Circuit Switched Single Slot	"I" I	Connect Control
Max. Level: Auto +20	Low Noise Off Q :	PCL: 5/33. / O		C	: Slot : 3 off Current	R Ext.Phase
+10 +5						Appli- cation
49W		www	N	~~~~~	W	Trigger Ana. Lvl.
-15 -20 0 20	40 60	80	100	120	Sym. 140	MS Signal
,	C (correlation o.k.) Current	Average	Max / Min	Ťiming Ad	13 Sym. vance Error	BS Signal
Phase Error Peak RMS Origin Offset	2.9 ° 1.0 ° - 54.5 dB	2.9 ° 1.1 ° - 55.5 dB	4.0 ° 1.5 ° – 45.2 dB	Avg. Burst P	1.6 dBm ower(Cur.) 0 Bursts	Network
I/Q Imbalance Frequency Erri <mark> - Cha</mark> i	– 60.0 dB _Q	- 54.6 dB 8 Hz	– 45.5 ав 19 нг		tistic Count	Marker
TCH Level Channe	190	Timeslot		Bursts out o	f Tolerance	Menus



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5.1.2 Test Band = GSM1900

5.1.2.1 Test Mode = GSM/TM1

5.1.2.1.1 Test Channel = MCH

🛞 GSM	1900 Modul	ation		Circuit Switched Single Slot	Connect Control
° Max.Level: Aut +20 ₿: +15	o Low Noise / Off Q :	PCL: 0 / 30.0		661 Meas Slot : 3 Off Current	R Ext.Phase
+10 +5					Appli- cation
+0~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	www.	······	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Analyzer Level _{Trg.}
-15 -20 0 20	40 60	80	100	\$ym. 120 140	MS Signal
,	SC (correlation o.k.) Current	Average	Max / Min	0.00 Sym. Timing Advance Error	BS Signal
Phase Error — Peak RMS Origin Offset		3.0 ° 0.9 ° - 56.1 dB	5.1 ° 1.2 ° - 47.6 dB	Avg. Burst Power (Cur.) 100 Bursts	Network
I/Q Imbalance	- 60.1 dB @	– 58.1 dB – 10 Hz	- 47.4 dB - 36 Hz	Statistic Count	Marker
TCH Level Chan	66 1 nel Hopping	Timeslot		Bursts out of Tolerance	Menus



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6 Appendix_D: Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [kHz]	Verdict
		LCH	245.75	316.90	PASS
GSM850	GSM/TM1	MCH	243.71	323.10	PASS
		HCH	244.30	320.10	PASS
		LCH	243.11	315.50	PASS
GSM1900	GSM/TM1	MCH	245.58	317.70	PASS
		HCH	244.58	321.30	PASS



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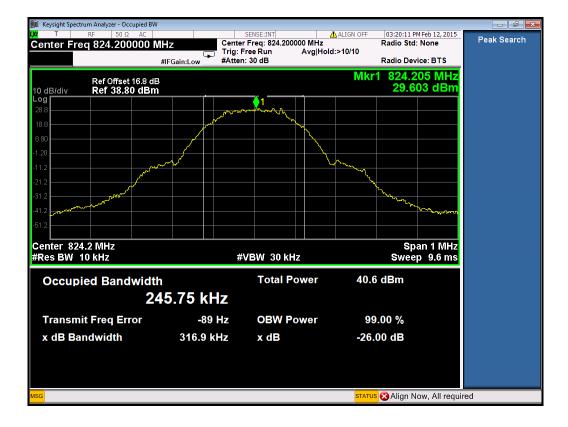
Part II - Test Plots

6.1 For GSM

6.1.1 Test Band = GSM850

6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH





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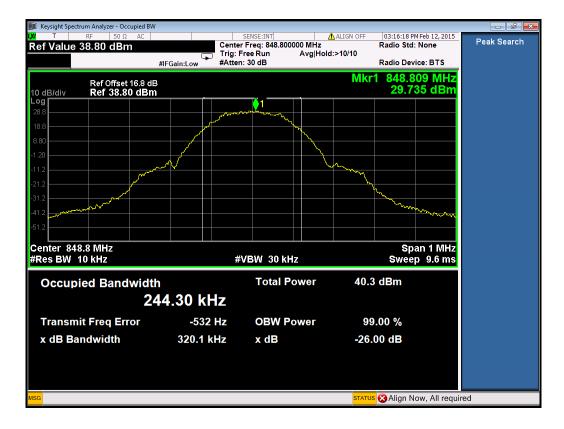
6.1.1.1.2 Test Channel = MCH





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6.1.1.1.3 Test Channel = HCH





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6.2 Test Band = GSM1900

6.2.1.1 Test Mode = GSM/TM1

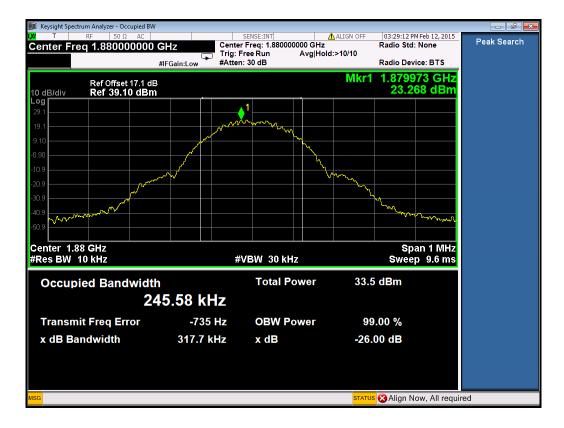
6.2.1.1.1 Test Channel = LCH





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6.2.1.1.2 Test Channel = MCH

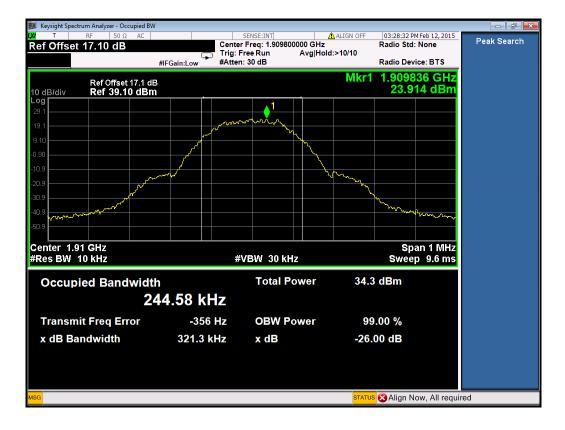






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6.2.1.1.3 Test Channel = HCH





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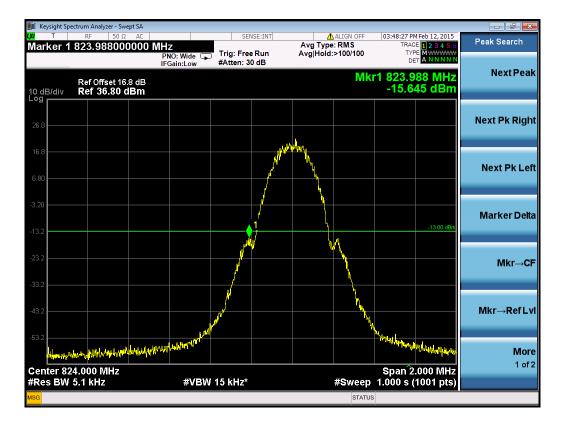
7 Appendix_E: Band Edges Compliance

Part I - Test Plots

7.1 For GSM

7.1.1 Test Band = GSM850

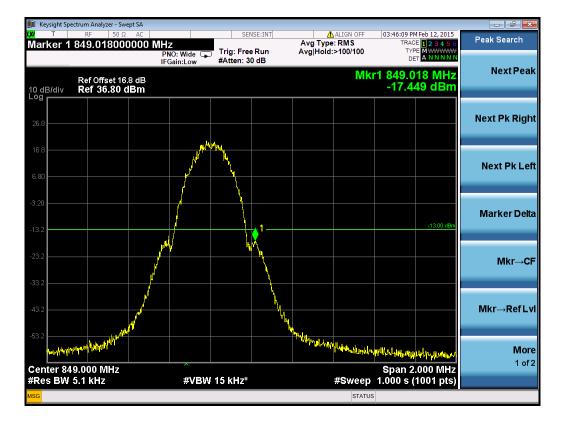
- 7.1.1.1 Test Mode = GSM/TM1
- 7.1.1.1.1 Test Channel = LCH





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7.1.1.1.2 Test Channel = HCH



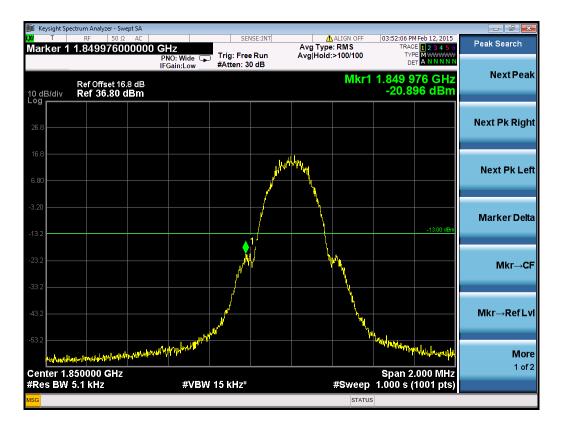


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7.1.2 Test Band = GSM1900

7.1.2.1 Test Mode = GSM/TM1

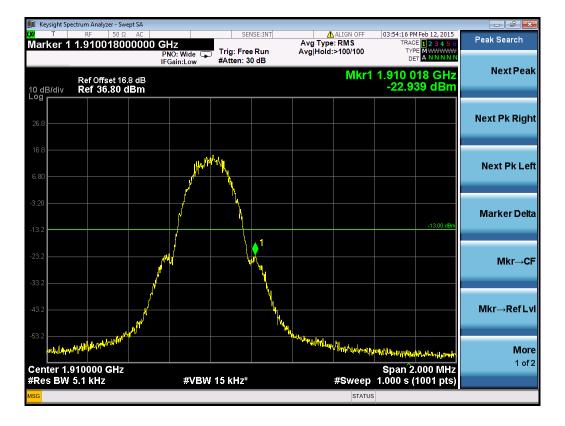
7.1.2.1.1 Test Channel = LCH





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7.1.2.1.2 Test Channel = HCH





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8 Appendix_F: Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of < RBW/2 so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = k * (Span / RBW)" with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Part I - Test Plots

8.1 For GSM

8.1.1 Test Band = GSM850

8.1.1.1 Test Mode = GSM/TM1

8.1.1.1.1 Test Channel = LCH

🎉 Keysight Spectrum Analyzer - Swept SA					
₩ T RF 50 Ω AC Display Line -13.00 dBm		Avg Type:	Log-Pwr TF	PM Feb 12, 2015 ACE 1 2 3 4 5 6	Trace/Detector
	PNO: Fast Trig: Free IFGain:Low #Atten: 3		Mkr1 824		Select Trace
Ref Offset 16.8 dB 10 dB/div Ref 36.80 dBm			33.	054 dBm	1
26.8					Clear Write
16.8					
6.80					Trace Average
-3.20					Max Hold
-13.2				-13.00 dBm	
-23.2	film of the state	aline the Martin and a start for the start and a start for a start for the start of		(haline balling the ba	Min Hold
-33.2	and the provide state and a particulation of the pa	A construction of the second			
-43.2					View Blank Trace On
-53.2					More
Start 30 MHz #Res BW 1.0 MHz	#VBW 3.0 MHz		Stop 1 veep 21.33 ms	2.750 GHz (40001 pts)	1 of 3
MSG			STATUS		



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8.1.1.1.2 Test Channel = MCH

🎉 Keysight Spectrum Analyzer - Swept SA							- 5 🔀
LXI T RF 50 Ω AC		SENSE:II		ALIGN OFF	03:41:04 PM Feb TRACE		Peak Search
Marker 1 836.766000000 N	PNO: Fast IFGain:Low	Trig: Free Ru #Atten: 30 dB	n Avg Hold	:>100/100	TYPE M		Next Peak
Ref Offset 16.8 dB 10 dB/div Ref 36.80 dBm					32.986	dBm	
26.8						-	Next Pk Right
6.80							Next Pk Left
-3.20						13.00 dBm	Marker Delta
	والدين من الم	وروبا والمرابع	and a state of the local set of the loca		hildrichte stangebeiteren b ^e itekt		Mkr→CF
-33.2		ni a admini a ka juli kada na jene gana d					Mkr→RefLvl
-43.2							
Start 30 MHz #Res BW 1.0 MHz	#VBW	3.0 MHz	s	weep <u>21</u>	Stop 12.75 .33 ms (4000	0 GHz 01 pts)	More 1 of 2
MSG				STATUS			



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8.1.1.1.3 Test Channel = HCH

🎉 Keysight Spectrum Analyzer - Swept SA				
Marker 1 849.168000000 Γ	ЛНz	SE:INT ALIG Avg Type: Log Run Avg Hold:>100	g-Pwr TRACE 1 2 3 4 5 6	Peak Search
Ref Offset 16.8 dB 10 dB/div Ref 36.80 dBm	PNO: Fast Trig: Free IFGain:Low #Atten: 30		Mkr1 849.168 MHz 32.675 dBm	NextPeak
26.8				Next Pk Right
6.80				Next Pk Left
-13.2			-13.00 dBm	Marker Delta
-23.2	and a standard standa	a del tablé differenti des la des des que server a del actual de grand de actual des	ر میں میں اور	Mkr→CF
-43.2				Mkr→RefLvl
-53.2 Start 30 MHz #Res BW 1.0 MHz	#VBW 3.0 MHz	Swee	Stop 12.750 GHz ep 21.33 ms (40001 pts)	More 1 of 2
MSG			STATUS	



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8.1.2 Test Band = GSM1900

8.1.2.1 Test Mode = GSM/TM1

8.1.2.1.1 Test Channel = LCH

🎉 Keysight Spec	ctrum Analyzer - Swept SA								- 7 🔀
<mark>IXI</mark> ⊺ Dieplav I	RF 50 Ω AC		SENSE			ALIGN OFF		Feb 12, 2015	Trace/Detector
Display L	ine -13.00 dBn	PNO: Fast IFGain:Low	Trig: Free R #Atten: 30 c	lun A	vg Hold:>	>100/100	TYP DE		Select Trace
10 dB/div Log	Ref Offset 17.1 dE Ref 37.10 dBm	3				Mk	r1 1.850 28.00) 3 GHz 33 dBm	1
27.1	1								Clear Write
17.1 7.10									Trace Average
-2.90								-13.00 dBm	Max Hold
			Toppost your Reducer South Lifes		ing the state of the			tiff a many last of the distance of the second s	Min Hold
-42.9			<mark>den _tan bergen ber</mark>	(All i gooden gli Ald i g					View Blank Trace On
-52.9 Start 30 M #Res BW 7		#\/B)A(3.0 MHz			ween 50	Stop 20.	000 GHz 0001 pts)	More 1 of 3
MSG		#VDVV	5.0-WII 12		31	STATUS	vr-1119 (4	soor pis)	



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8.1.2.1.2 Test Channel = MCH

🚺 Keysight Spectrum Analyzer - Swept SA						- 7 💌
X T RF 50 Ω AC Marker 1 1.88022050000	0 GHz	SENSE:INT	Avg Type: L		3:36:53 PM Feb 12, 2015 TRACE 1 2 3 4 5 6	Peak Search
	PNO: Fast D Trig): Free Run ten: 30 dB	Avg Hold:>1	100/100		
Ref Offset 17.1 dB 10 dB/div Ref 37.10 dBm				Mkr1	1.880 2 GHz 27.295 dBm	Next Peak
27.1						Next Pk Right
7.10						Next Pk Left
-2.90					-13.00 dBm	Marker Delta
-22.9			, and the set of the set			Mkr→CF
-42.9						Mkr→RefLvl
-52.9 Start 30 MHz				S	top 20.000 GHz	More 1 of 2
#Res BW 1.0 MHz	#VBW 3.0	MHz	Swi	eep 50.67	ms (40001 pts)	
MSG				STATUS		





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8.1.2.1.3 Test Channel = HCH

🔰 Keysight Spectrum Analy								- 6 🔀
<mark>⋈</mark> ⊤ _R Marker 1 1.910′	50 Ω AC	CH2	SENSE:INT	Avg Type	ALIGN OFF		Feb 12, 2015	Peak Search
Ref Off 10 dB/div Ref 3	set 17.1 dB 7.10 dBm	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold:	>100/100	TYP DE (r1 1.91 (E M WWWWW T P N N N N N	Next Peak
								Next Pk Right
7.10								Next Pk Left
-2.90							-13.00 dBm	Marker Delta
-22.9		Albert Hitter (1) (Alberts with the pro-	n ja sin kana si kata sa ki bada ya ka Mana sa				n (prosi d ^{i la} tradi i () () () () Carach, d ^{alan} (, tradi i ()	Mkr→CF
-42.9								Mkr→RefLvl
Start 30 MHz #Res BW 1.0 MH	z	#VBW	3.0 MHz		weep <u>50</u>	Stop 20. .67 ms (4	000 GHz 0001 pts)	More 1 of 2
MSG					STATUS			



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9 Appendix_G: Field Strength of Spurious Radiation

Part I - Test Plots

9.1 For GSM

9.1.1 Test Band = GSM850

9.1.1.1 Test Mode = GSM/TM1

GSM Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
53.468	-66.4	-13.0	-53.4	Vertical
80.866	-62.2	-13.0	-49.2	Vertical
139.011	-62.5	-13.0	-49.5	Vertical
170.396	-59.4	-13.0	-46.4	Vertical
326.438	-63.3	-13.0	-50.3	Vertical
656.949	-57.2	-13.0	-44.2	Vertical
43.334	-66.6	-13.0	-53.6	Horizontal
94.050	-64.2	-13.0	-51.2	Horizontal
130.176	-59.8	-13.0	-46.8	Horizontal
174.931	-57.7	-13.0	-44.7	Horizontal
322.179	-51.5	-13.0	-38.5	Horizontal
607.168	-58.6	-13.0	-45.6	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1645.823	-46.0	-13.0	-33.0	Vertical
2472.751	-46.5	-13.0	-33.5	Vertical
3202.730	-45.0	-13.0	-32.0	Vertical
4534.554	-43.1	-13.0	-30.1	Vertical
6298.854	-39.5	-13.0	-26.5	Vertical
8880.433	-36.3	-13.0	-23.3	Vertical
1645.823	-43.3	-13.0	-30.3	Horizontal
2472.751	-46.1	-13.0	-33.1	Horizontal
3122.270	-45.6	-13.0	-32.6	Horizontal
5009.716	-41.9	-13.0	-28.9	Horizontal
6516.203	-38.8	-13.0	-25.8	Horizontal
8749.604	-36.1	-13.0	-23.1	Horizontal



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GPRS Below 1GHz				
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
38.126	-71.7	-13.0	-58.7	Vertical
90.120	-68.8	-13.0	-55.8	Vertical
226.735	-68.7	-13.0	-55.7	Vertical
338.444	-65.6	-13.0	-52.6	Vertical
468.443	-61.4	-13.0	-48.4	Vertical
701.538	-58.2	-13.0	-45.2	Vertical
35.938	-72.5	-13.0	-59.5	Horizontal
58.233	-69.1	-13.0	-56.1	Horizontal
105.504	-67.7	-13.0	-54.7	Horizontal
223.043	-68.1	-13.0	-55.1	Horizontal
406.762	-63.6	-13.0	-50.6	Horizontal
690.115	-59.3	-13.0	-46.3	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1645.823	-47.5	-13.0	-34.5	Vertical
2472.751	-44.2	-13.0	-31.2	Vertical
4061.178	-44.9	-13.0	-31.9	Vertical
5605.527	-42.3	-13.0	-29.3	Vertical
7062.943	-38.8	-13.0	-25.8	Vertical
8880.433	-36.3	-13.0	-23.3	Vertical
1645.823	-43.6	-13.0	-30.6	Horizontal
2472.751	-45.8	-13.0	-32.8	Horizontal
3606.502	-46.2	-13.0	-33.2	Horizontal
4515.366	-44.0	-13.0	-31.0	Horizontal
6153.646	-40.0	-13.0	-27.0	Horizontal
8749.604	-36.1	-13.0	-23.1	Horizontal



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9.1.2 Test Band = GSM1900

9.1.2.1 Test Mode = GSM/TM1

GSM Below 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
39.528	-67.8	-13.0	-54.8	Vertical
79.028	-65.7	-13.0	-52.7	Vertical
138.555	-63.8	-13.0	-50.8	Vertical
172.082	-60.1	-13.0	-47.1	Vertical
544.818	-62.4	-13.0	-49.4	Vertical
813.865	-58.0	-13.0	-45.0	Vertical
38.001	-67.0	-13.0	-54.0	Horizontal
87.496	-61.7	-13.0	-48.7	Horizontal
131.896	-64.8	-13.0	-51.8	Horizontal
176.662	-58.4	-13.0	-45.4	Horizontal
338.444	-65.6	-13.0	-52.6	Horizontal
603.194	-61.6	-13.0	-48.6	Horizontal

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3699.687	-41.4	-13.0	-28.4	Vertical
5107.780	-41.9	-13.0	-28.9	Vertical
7322.183	-37.3	-13.0	-24.3	Vertical
8774.732	-36.3	-13.0	-23.3	Vertical
10515.432	-31.6	-13.0	-18.6	Vertical
12399.868	-29.3	-13.0	-16.3	Vertical
3699.687	-43.7	-13.0	-30.7	Horizontal
5035.087	-42.1	-13.0	-29.1	Horizontal
6528.883	-39.2	-13.0	-26.2	Horizontal
7824.060	-37.3	-13.0	-24.3	Horizontal
10036.798	-33.1	-13.0	-20.1	Horizontal
12466.700	-29.5	-13.0	-16.5	Horizontal



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GFN3 DEIUW IGHZ				
Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
36.413	-70.2	-13.0	-57.2	Vertical
82.746	-71.9	-13.0	-58.9	Vertical
116.808	-67.7	-13.0	-54.7	Vertical
224.512	-68.6	-13.0	-55.6	Vertical
389.765	-67.4	-13.0	-54.4	Vertical
659.110	-62.0	-13.0	-49.0	Vertical
38.126	-70.2	-13.0	-57.2	Horizontal
95.607	-69.4	-13.0	-56.4	Horizontal
217.975	-67.3	-13.0	-54.3	Horizontal
325.368	-67.0	-13.0	-54.0	Horizontal
535.947	-64.1	-13.0	-51.1	Horizontal
764.058	-61.2	-13.0	-48.2	Horizontal

GPRS Below 1GHz

Above 1GHz

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
3996.000	-46.5	-13.0	-33.5	Vertical
5389.850	-44.6	-13.0	-31.6	Vertical
6623.143	-40.3	-13.0	-27.3	Vertical
8542.040	-37.8	-13.0	-24.8	Vertical
10236.579	-34.0	-13.0	-21.0	Vertical
12267.276	-30.4	-13.0	-17.4	Vertical
3897.008	-45.0	-13.0	-32.0	Horizontal
5497.135	-43.4	-13.0	-30.4	Horizontal
6670.781	-40.0	-13.0	-27.0	Horizontal
8315.518	-38.1	-13.0	-25.1	Horizontal
9840.916	-35.2	-13.0	-22.2	Horizontal
12114.377	-30.6	-13.0	-17.6	Horizontal

NOTE:

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- Pretest was performed at the EUT in low, middle, high channel, but only the worst test channel(Channel 192 for GSM850 and Channel 661 for GSM1900)and only the data of the worst case show in the test report.

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10 Appendix_H: Frequency Stability

10.1 For GSM

10.1.1 Frequency Error VS. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
GSM850	GSM/TM1	LCH	TN	VL	-3.10	-0.00376	PASS
				VN	-8.00	-0.00971	PASS
				VH	0.52	0.00063	PASS
		МСН	ΤN	VL	-7.74	-0.00925	PASS
				VN	-6.52	-0.00779	PASS
				VH	-5.16	-0.00617	PASS
		НСН	TN	VL	-0.80	-0.00094	PASS
				VN	-5.52	-0.00650	PASS
				VH	-8.94	-0.01053	PASS
GSM1900	GSM/TM1	LCH	TN	VL	-10.09	-0.00545	PASS
				VN	-8.54	-0.00462	PASS
				VH	-2.40	-0.00128	PASS
		МСН	TN	VL	-1.69	-0.00090	PASS
				VN	-7.38	-0.00393	PASS
				VH	-1.05	-0.00055	PASS
		НСН	TN	VL	-8.28	-0.00434	PASS
				VN	-18.93	-0.00991	PASS
				VH	3.80	0.00205	PASS



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10.1.2 Frequency Error VS. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Limit [ppm]	Verdict
GSM850	GSM/TM1	LCH	VN	-30	-1.98	-0.00240	±2.5	PASS
				-20	-1.27	-0.00154	±2.5	PASS
				-10	-1.59	-0.00193	±2.5	PASS
				0	-3.53	-0.00428	±2.5	PASS
				10	1.25	0.00152	±2.5	PASS
				20	2.48	0.00301	±2.5	PASS
				30	2.57	0.00312	±2.5	PASS
				40	1.09	0.00132	±2.5	PASS
				50	6.19	0.00751	±2.5	PASS
		МСН	VN	-30	0.25	0.00030	±2.5	PASS
				-20	2.96	0.00354	±2.5	PASS
				-10	-0.61	-0.00073	±2.5	PASS
				0	-1.96	-0.00234	±2.5	PASS
				10	0.43	0.00051	±2.5	PASS
				20	-1.12	-0.00134	±2.5	PASS
				30	0.94	0.00112	±2.5	PASS
				40	1.52	0.00182	±2.5	PASS
				50	2.36	0.00282	±2.5	PASS
		НСН	VN	-30	0.32	0.00038	±2.5	PASS
				-20	4.97	0.00586	±2.5	PASS
				-10	-0.65	-0.00077	±2.5	PASS
				0	-1.10	-0.00130	±2.5	PASS
				10	-0.84	-0.00099	±2.5	PASS
				20	-1.10	-0.00130	±2.5	PASS
				30	-1.30	-0.00153	±2.5	PASS
				40	-2.20	-0.00259	±2.5	PASS
				50	-0.13	-0.00015	±2.5	PASS



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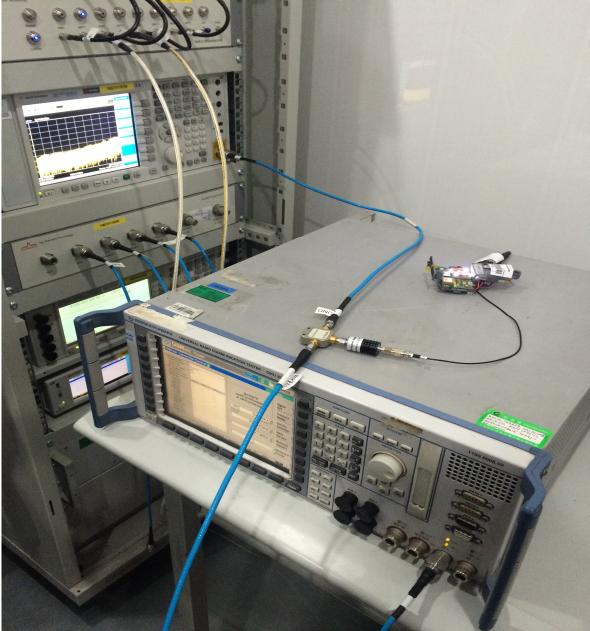
				-30	-14.93	-0.00807	±2.5	PASS	
				-20	-8.87	-0.00479	±2.5	PASS	
				-10	-14.04	-0.00759	±2.5	PASS	
				0	-2.22	-0.00120	±2.5	PASS	
			LCH	VN	10	1.65	0.00089	±2.5	PASS
				20	-5.06	-0.00273	±2.5	PASS	
				30	-13.84	-0.00748	±2.5	PASS	
				40	-10.42	-0.00563	±2.5	PASS	
				50	1.33	0.00072	±2.5	PASS	
		МСН	VN	-30	-5.77	-0.00307	±2.5	PASS	
	GSM/TM1			-20	-7.39	-0.00393	±2.5	PASS	
				-10	-13.13	-0.00698	±2.5	PASS	
				0	-0.67	-0.00036	±2.5	PASS	
GSM1900				10	-15.33	-0.00815	±2.5	PASS	
				20	-7.64	-0.00406	±2.5	PASS	
				30	2.43	0.00129	±2.5	PASS	
				40	-8.87	-0.00472	±2.5	PASS	
				50	-11.96	-0.00636	±2.5	PASS	
		нсн	VN	-30	-14.73	-0.00771	±2.5	PASS	
				-20	-5.24	-0.00274	±2.5	PASS	
				-10	-6.79	-0.00356	±2.5	PASS	
				0	-11.76	-0.00616	±2.5	PASS	
				10	1.02	0.00053	±2.5	PASS	
				20	2.57	0.00135	±2.5	PASS	
				30	-6.34	-0.00332	±2.5	PASS	
				40	-13.64	-0.00714	±2.5	PASS	
				50	-2.21	-0.00116	±2.5	PASS	



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11 Appendix I: Test Setup

RF Conducted Test:





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Tx below 1GHz Tx above 1GHz 111

The End

