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Appendix B

GSM850&1900



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1 Effective (Isotropic) Radiated Power Output Data

Part I - Test Results

Main Supply:

Test Band	Test Mode	Test Channel	Measured[dB]	ERP[dB]	Limit[dBm]	Verdict
		LCH	32.16	31.24	38.45	PASS
	GSM/TM1	MCH	32.39	31.44	38.45	PASS
GSM 850		HCH	32.31	31.38	38.45	PASS
G3W 050		LCH	26.45	25.52	38.45	PASS
	GSM/TM2	MCH	26.43	25.49	38.45	PASS
		HCH	26.48	25.56	38.45	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 > $3 \times RBW$.

Detector: RMS

Test Band	Test Mode	Test Channel	Measured[dB]	EIRP[dB]	Limit[dBm]	Verdict
		LCH	29.84	29.84	33	PASS
	GSM/TM1	MCH	29.87	29.83	33	PASS
CSM 1000		HCH	29.91	29.83	33	PASS
GSM 1900		LCH	26.12	26.08	33	PASS
	GSM/TM2	MCH	26.24	26.19	33	PASS
		HCH	26.29	26.21	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 > $3 \times RBW$.

Detector: RMS



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Secondary Supply:

Test Band	Test Mode	Test Channel	Measured[dB]	ERP[dB]	Limit[dBm]	Verdict
		LCH	32.07	31.12	38.45	PASS
	GSM/TM1	MCH	32.21	31.29	38.45	PASS
GSM 850		HCH	32.03	31.11	38.45	PASS
GSIVI 650		LCH	25.93	24.98	38.45	PASS
	GSM/TM2	MCH	25.85	24.92	38.45	PASS
		HCH	25.81	24.89	38.45	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 > $3 \times RBW$.

Detector: RMS

Test Band	Test Mode	Test Channel	Measured[dB]	EIRP[dB]	Limit[dBm]	Verdict
		LCH	29.66	28.68	33	PASS
	GSM/TM1	MCH	29.67	28.59	33	PASS
GSM 1900		HCH	29.79	28.79	33	PASS
GSIM 1900		LCH	25.42	24.30	33	PASS
	GSM/TM2	MCH	24.96	23.85	33	PASS
		HCH	24.92	23.86	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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2 Peak-to-Average Ratio

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Part I - Test F		Tast Olamasi			
Test Band	Test Mode	Test Channel	Measured[dB]	Limit [dB]	Verdict
		LCH	6.43	13	PASS
	GSM/TM1	MCH	6.46	13	PASS
GSM 850		НСН	6.46	13	PASS
G2INI 020		LCH	8.38	13	PASS
	GSM/TM2	MCH	8.46	13	PASS
		НСН	8.29	13	PASS
		LCH	6.49	13	PASS
	GSM/TM1	MCH	6.43	13	PASS
GSM 1900		НСН	6.41	13	PASS
G2M 1900		LCH	8.49	13	PASS
	GSM/TM2	MCH	8.29	13	PASS
		НСН	8.49	13	PASS



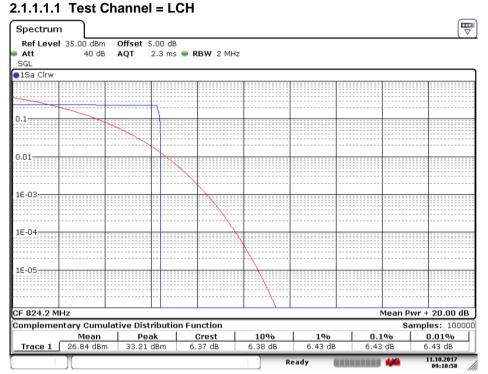
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Part II - Test Plots

2.1 For GSM

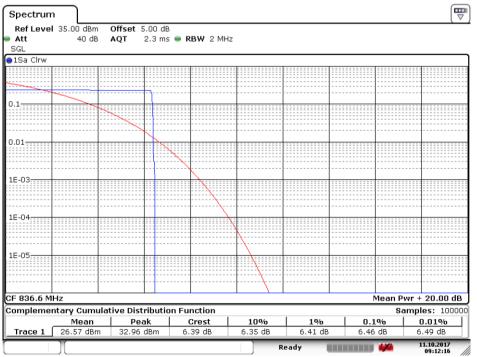
2.1.1 Test Band = GSM 850

2.1.1.1 Test Mode = GSM/TM1



Date: 11.OCT.2017 09:10:59

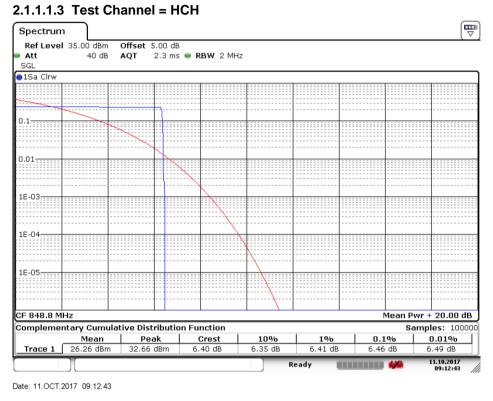
2.1.1.1.2 Test Channel = MCH



Date: 11.OCT.2017 09:12:16



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2.1.1.2 Test Mode = GSM/TM2





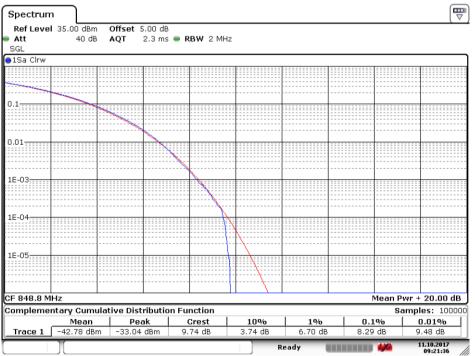
Date: 11.OCT.2017 09:22:48



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P Spectrum Ref Level 35.00 dBm Offset 5.00 dB 2.3 ms 🖷 RBW 2 MHz Att 40 dB AQT SGL ⊖1Sa Cirw 0.1 0.01 1E-03-1E-04-1E-05-CF 836.6 MHz Mean Pwr + 20.00 dB Complementary Cumulative Distribution Function Samples: 100000 Peak 0.01% Crest 10% 0.1% Mean 1% Trace 1 -42.77 dBm -32.94 dBm 9.83 dB 3.62 dB 6.64 dB 8.46 dB 9.74 dB 11.10.2017 09:22:16 Ready Date: 11.OCT.2017 09:22:16

2.1.1.2.3 Test Channel = HCH



Date: 11.OCT.2017 09:21:36

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2.1.1.2.2 Test Channel = MCH



2.1.2 Test Band = GSM 1900

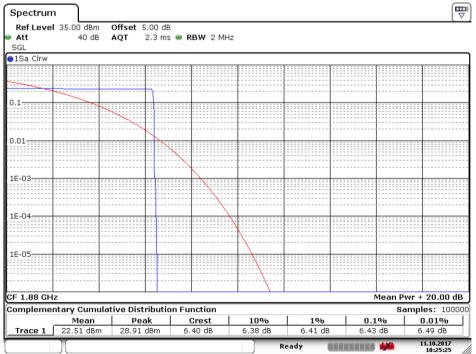
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2.1.2.1 Test Mode = GSM/TM1 2.1.2.1.1 Test Channel = LCH **B** Spectrum Ref Level 35.00 dBm Offset 5.00 dB 2.3 ms 👄 RBW 2 MHz Att 40 dB AOT SGL ●1Sa Clrw 0.1 0.01-1E-03-1E-04: 1E-05-CF 1.8502 GHz Mean Pwr + 20.00 dB Complementary Cumulative Distribution Function Samples: 100000 Peak Crest 10% 0.1% 0.01%Mean 1% Trace 1 22.66 dBn 29.06 dBr 6.46 dB 6.40 dE 6.35 dB 6.49 dB 6.49 dB 11.10.2017 10:26:21 Ready

Date: 11.OCT.2017 10:26:22

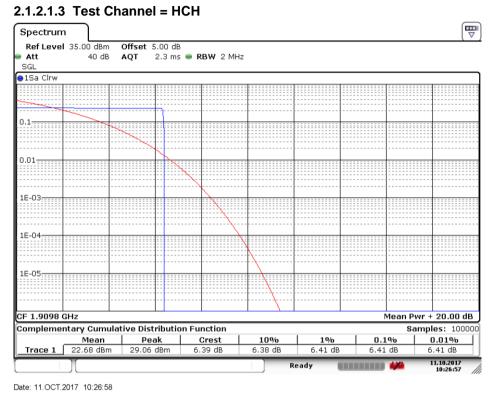
2.1.2.1.2 Test Channel = MCH



Date: 11.OCT.2017 10:25:25

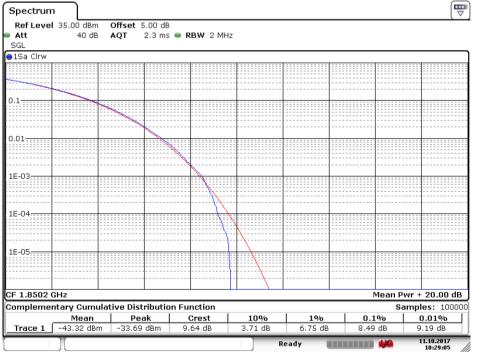


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2.1.2.2 Test Mode = GSM/TM2





Date: 11.OCT.2017 10:29:05



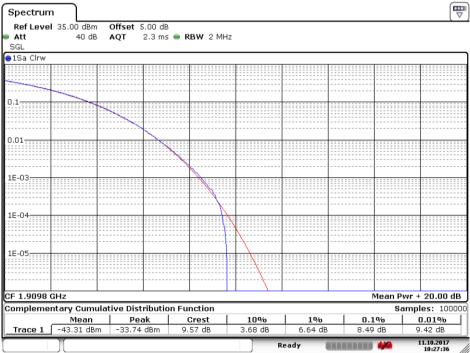
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P Spectrum Ref Level 35.00 dBm Offset 5.00 dB 2.3 ms 🖷 RBW 2 MHz Att 40 dB AQT SGL ⊖1Sa Cirw 0.1 0.01 1E-03-1E-04 1E-05-CF 1.88 GHz Mean Pwr + 20.00 dB Complementary Cumulative Distribution Function Samples: 100000 Peak 0.01% Crest 10% 0.1% Mean 1% Trace 1 -43.27 dBm -33.36 dBm 9.91 dB 3.68 dB 6.61 dB 8.29 dB 9.57 dB 11.10.2017 Ready

2.1.2.2.2 Test Channel = MCH

Date: 11.OCT.2017 10:28:05

2.1.2.2.3 Test Channel = HCH



Date: 11.OCT.2017 10:27:36



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3 Modulation Characteristics

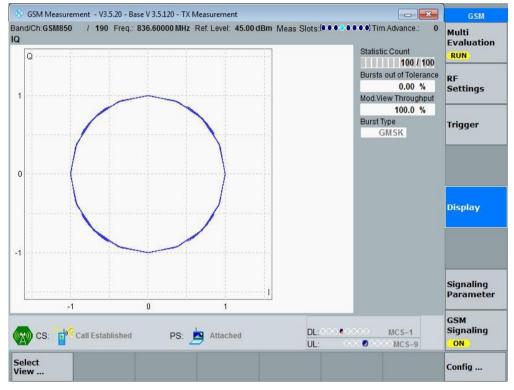
Part I - Test Plots

3.1 For GSM

3.1.1 Test Band = GSM 850

3.1.1.1 Test Mode = GSM/TM1

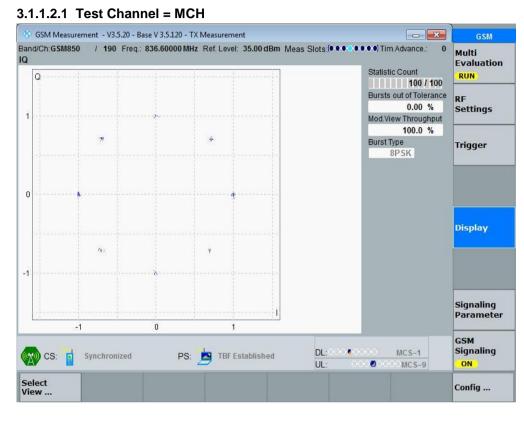
3.1.1.1.1 Test Channel = MCH





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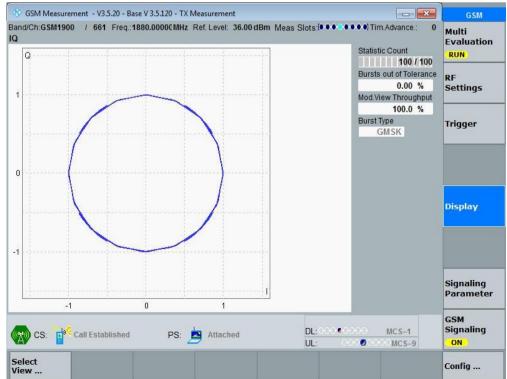
3.1.1.2 Test Mode = GSM/TM2



3.1.2 Test Band = GSM 1900

3.1.2.1 Test Mode = GSM/TM1

3.1.2.1.1 Test Channel = MCH

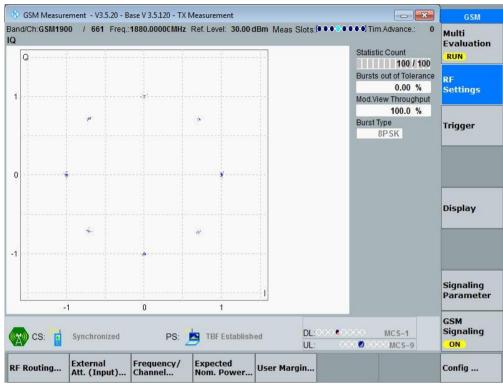




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3.1.2.2 Test Mode = GSM/TM2

3.1.2.2.1 Test Channel = MCH





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4 Bandwidth

Part I - Test Results

Test Band	Test Mode	Test Channel	Occupied Bandwidth [kHz]	Emission Bandwidth [kHz]	Verdict
		LCH	243.8	319.7	PASS
	GSM/TM1	MCH	242.8	322.7	PASS
GSM 850		HCH	244.8	318.7	PASS
GSIVI 050		LCH	237.8	315.7	PASS
	GSM/TM2 MCH		238.8	317.7	PASS
		HCH	239.8	312.7	PASS
		LCH	246.8	316.7	PASS
	GSM/TM1	MCH	245.8	316.7	PASS
GSM 1900		HCH	246.8	313.7	PASS
GSW 1900		LCH	245.8	316.7	PASS
	GSM/TM2	MCH	244.8	312.7	PASS
		HCH	242.8	315.7	PASS



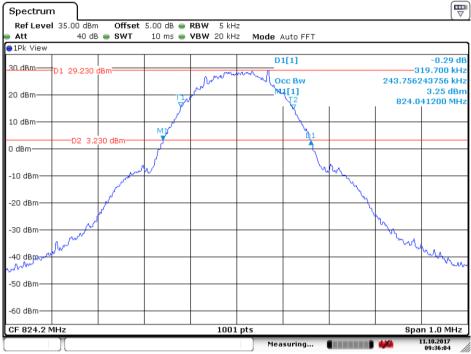
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4.1 For GSM

4.1.1 Test Band = GSM 850

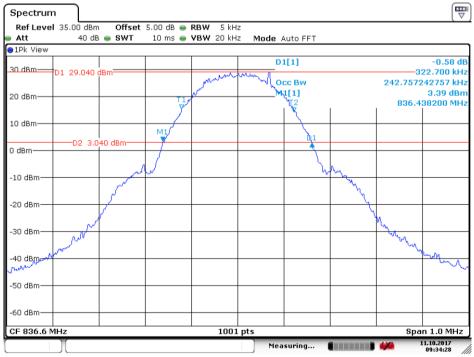
4.1.1.1 Test Mode = GSM/TM1

4.1.1.1.1 Test Channel = LCH



Date: 11.OCT.2017 09:36:05

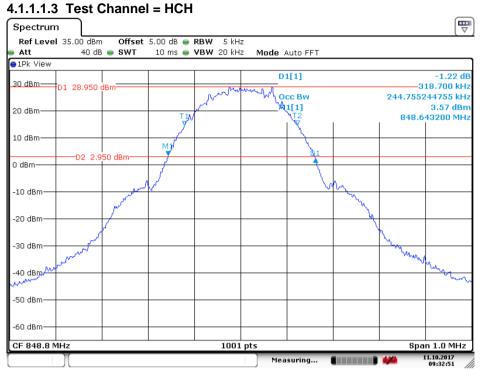
4.1.1.1.2 Test Channel = MCH



Date: 11.OCT.2017 09:34:29

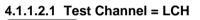


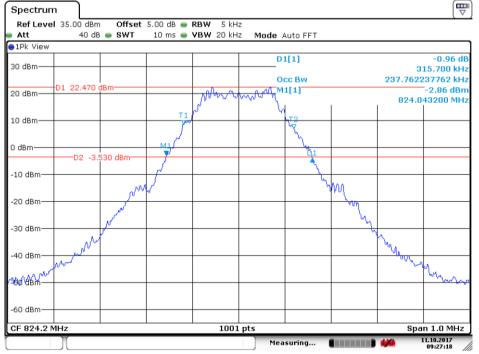
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Date: 11.OCT.2017 09:32:51

4.1.1.2 Test Mode = GSM/TM2

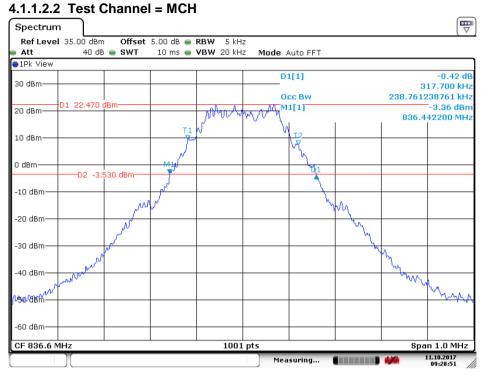




Date: 11.OCT.2017 09:27:18

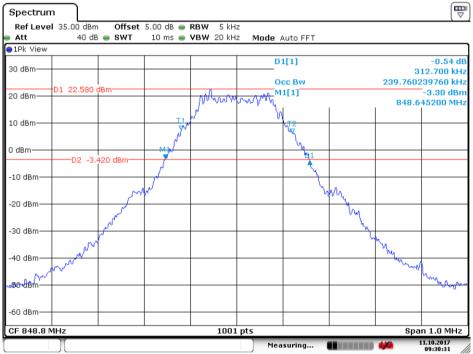


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Date: 11.OCT.2017 09:30:31

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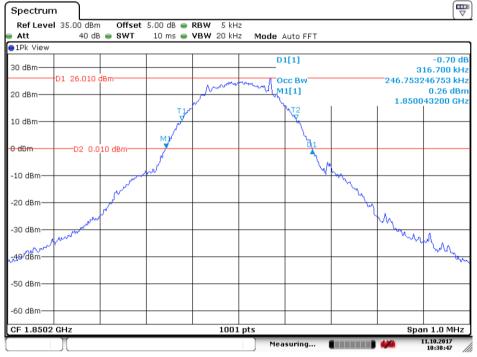


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4.1.2 Test Band = GSM 1900

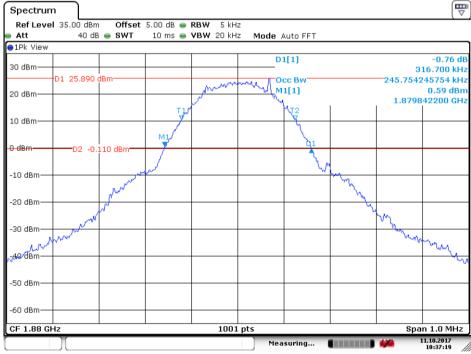
4.1.2.1 Test Mode = GSM/TM1

4.1.2.1.1 Test Channel = LCH



Date: 11.OCT.2017 10:38:47

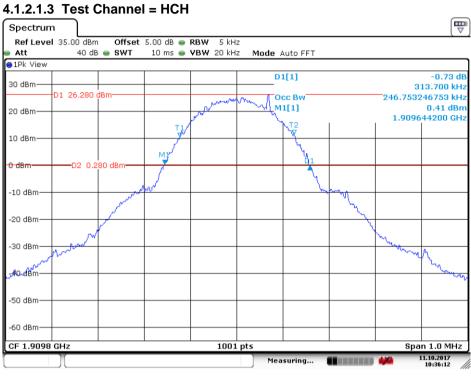
4.1.2.1.2 Test Channel = MCH



Date: 11.OCT.2017 10:37:19



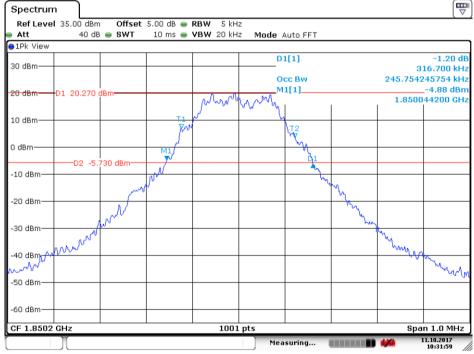
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Date: 11.OCT.2017 10:36:13

4.1.2.2 Test Mode = GSM/TM2

4.1.2.2.1 Test Channel = LCH

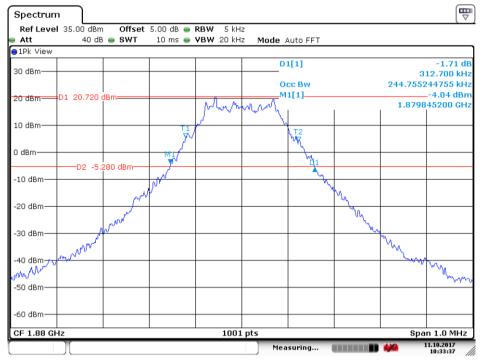


Date: 11.OCT.2017 10:31:59



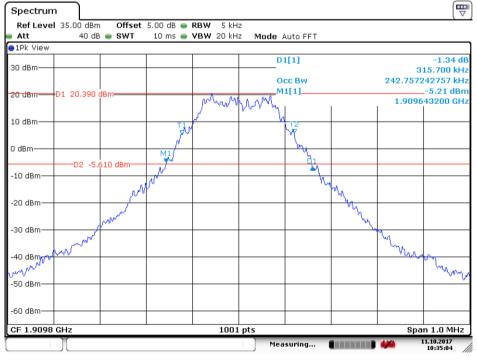
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4.1.2.2.2 Test Channel = MCH



Date: 11.OCT.2017 10:33:37

4.1.2.2.3 Test Channel = HCH



Date: 11.OCT.2017 10:35:05



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5 Band Edges Compliance

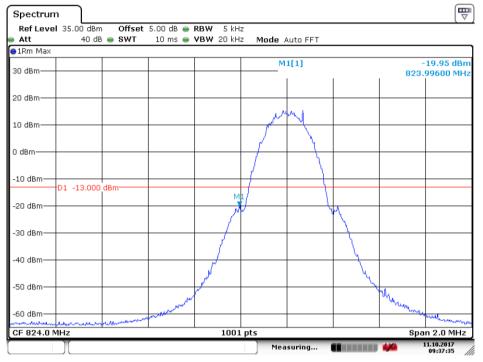
Part I - Test Plots

5.1 For GSM

5.1.1 Test Band = GSM 850

5.1.1.1 Test Mode = GSM/TM1

5.1.1.1.1 Test Channel = LCH

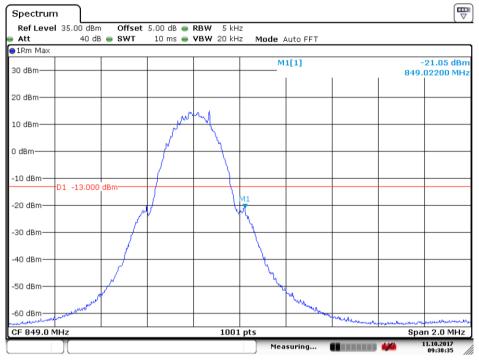


Date: 11.OCT.2017 09:37:36



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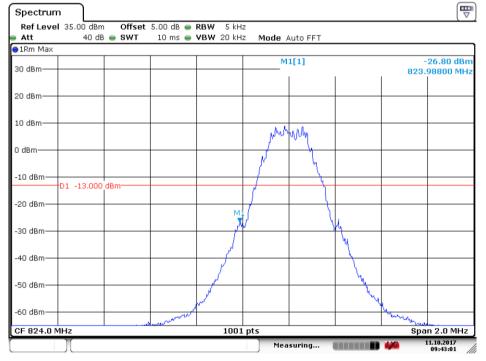
5.1.1.1.2 Test Channel = HCH



Date: 11.OCT.2017 09:38:36

5.1.1.2 Test Mode = GSM/TM2

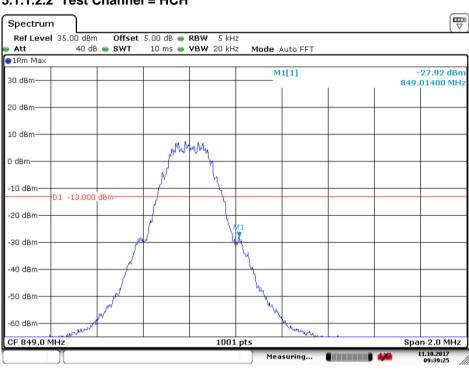
5.1.1.2.1 Test Channel = LCH



Date: 11.OCT.2017 09:43:02



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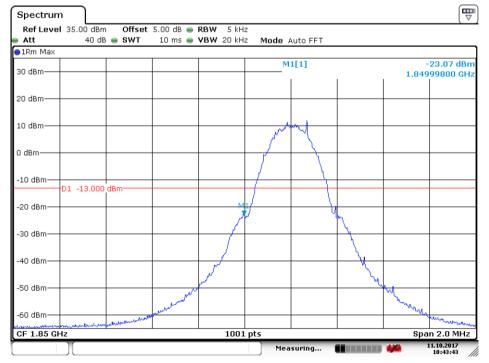
5.1.1.2.2 Test Channel = HCH

Date: 11.OCT.2017 09:39:26

5.1.2 Test Band = GSM 1900

5.1.2.1 Test Mode = GSM/TM1

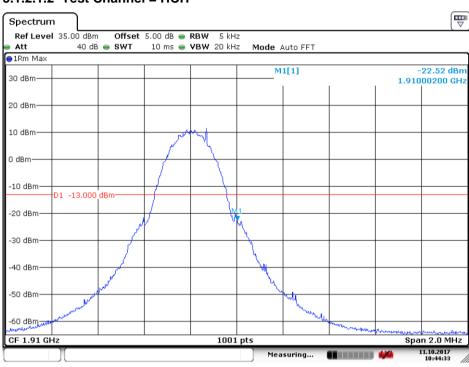
5.1.2.1.1 Test Channel = LCH



Date: 11.OCT.2017 10:43:43



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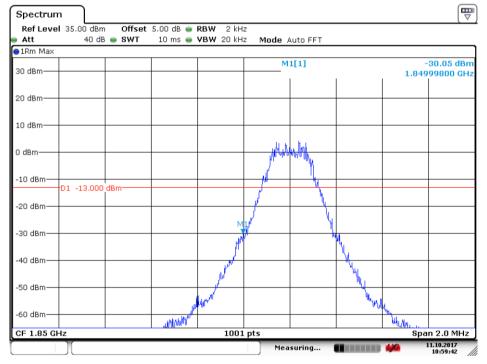


5.1.2.1.2 Test Channel = HCH

Date: 11.OCT.2017 10:44:33

5.1.2.2 Test Mode = GSM/TM2

5.1.2.2.1 Test Channel = LCH

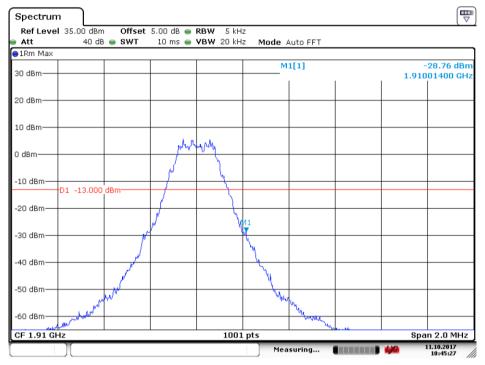


Date: 11.OCT.2017 10:59:42



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5.1.2.2.2 Test Channel = HCH



Date: 11.OCT.2017 10:45:27



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6 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.

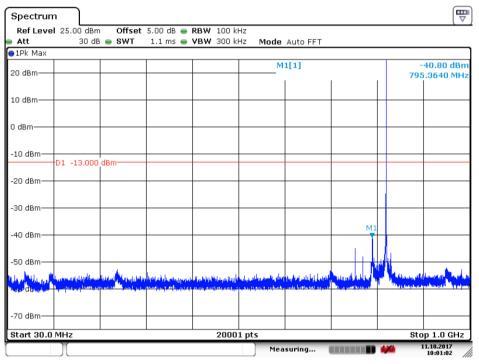
Part I - Test Plots

6.1 For GSM

6.1.1 Test Band = GSM 850

6.1.1.1 Test Mode = GSM/TM1

6.1.1.1.1 Test Channel = LCH



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									eport No age:	.: SZEM170900995905 28 of 43
	el 25.00 dBm		5.00 dB 👄							
Att 1Pk Max	30 dB	SWT 🖷	30 ms 👄	VBW 3 MH2	Mode A	uto Sweep				
20 dBm-					M	1[1]			23.75 dBm 48640 GHz	
10 dBm										
0 dBm										
-10 dBm—	-D1 -13.000	dBm								
-20 dBM 1										
-30 dBm										
-40 dBm	Liter attended		U, m. the activity of the second	التلايط والقرير ولور			alman a literature de la sec	مر المراجع والمراجع الم	della final product de llas	
_{ปกร} ะเองไปไข้เท็ก ^{สมมอ}		a para da de la cita de								
-60 dBm—										
-70 dBm—										
Start 1.0 (GHz			2000	1 pts				10.0 GHz	
					Mea	suring		444	11.10.2017 10:01:35	

Date: 11.OCT.2017 10:01:36

6.1.1.1.2 Test Channel = MCH

Spectrum	n									
Ref Leve	1 25.00	dBm Offs	et 5.00 dB 👄	RBW 100 k	Hz					
e Att	3	0 dB 😑 SWT	1.1 ms 👄	VBW 300 k	Hz Mode	Auto FFT				
⊖1Pk Max										
20 dBm					M	1[1]	I			43.74 dBm .0980 MHz
10 dBm										
0 dBm										
-10 dBm	D1 -13.	000 dBm								
-20 dBm										
-30 dBm										
-40 dBm		_						Mi		
-50 dBm								M		1. b
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-70 dBm										
Start 30.0	MHz	1		2000	1 pts				Sto	p 1.0 GHz
					Mea	suring		4/6	1	1.10.2017 09:59:18

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								eport No age:	b.: SZEM170900995905 29 of 43
Spectrun Ref Leve	l 25.00 dBn	n Offset 3 e SWT		RBW 1 MHz VBW 3 MHz					
All 1Pk Max	30 U	5 - 5 WI	30 ms 👅		: MODE A	uto Sweep			
20 dBm					M	1[1]	1	23.92 dBm 73390 GHz	
10 dBm									
0 dBm									
-10 dBm	D1 -13.000	dBm							
-20 dBm 1									
-30 dBm	1								
-40 dBm	discolor of the light		ر بر المار المراجع المراجع (المراجع المراجع) مرجع المراجع المراجع المراجع (المراجع) مرجع المراجع (المراجع)	And the second states of the s			Adaqa (araba yumuda Adaqa (araba yumuda	etti menyati bistesta yalgi P ^{atria} Managina pengenar	
- co dom	الارتياني <u>بر من معرفها مرتبع ور</u>								
-60 dBm									
								10.0.011	
Start 1.0 G	JHZ			2000				10.0 GHz	
					Mea	suring		11.10.2017 09:59:53	

Date: 11.OCT.2017 09:59:54

6.1.1.1.3 Test Channel = HCH

Spectrun	n										
Ref Leve					RBW 100 ki						
Att		30 dB	SWT	1.1 ms 😑	VBW 300 ki	Hz Mode	Auto FFT				
⊖1Pk Max											
20 dBm		_				M	1[1]	I	I		44.82 dBm 7760 MHz
10 dBm											
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-20 dBm		_									
-30 dBm—											
-40 dBm—		_						M1			
-50 dBm				1						1	
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-70 dBm											
Start 30.0	MHz				2000	1 pts		1		Sto	p 1.0 GHz
						Mea	suring		4/6	1	1.10.2017 09:57:45

Date: 11.OCT.2017 09:57:46



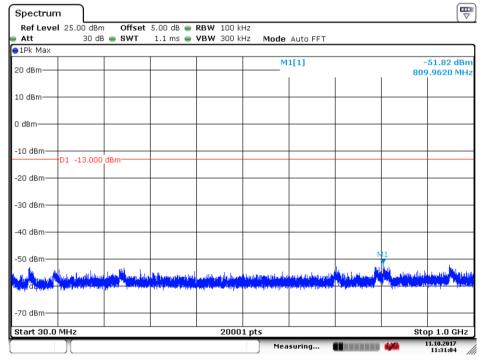
Spectrur	n								Report No Page:	: SZEM170900995905 30 of 43
Ref Leve	25.00 dBm	Offset	5.00 dB 👄	RBW 1 MHz VBW 3 MHz		uto Sweep			(+)	
1Pk Max	50 GE	, on t	30 m3 🚽		Mode A	ato Sweep				
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-20 dBm v11										
-30 dBm										
-40 dBm			J. Bay, Int Market Street, S	والمرود والتقاوين وروا			وريد تم فرهيلين	a. data madah	- Million Junets de celer	
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-60 dBm—										
-70 dBm—										
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					Mea	suring		494	11.10.2017 09:58:21	

Date: 11.OCT.2017 09:58:21

6.1.2 Test Band = GSM 1900

Test Mode = GSM/TM1 6.1.2.1

6.1.2.1.1 Test Channel = LCH



Date: 11.OCT.2017 11:31:04

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								•		01 01 40
Spectrum	n I 25.00 dBm	Offcot	5.00 dB 👄							
Att		swr		VBW 3 MHz		uto Sweep				
⊖1Pk Max										
20 dBm					M	1[1]	1		-33.83 dBm 700540 GHz	
10 dBm										
0 dBm										
-10 dBm—	D1 -13.000	dBm								
-20 dBm—-										
-30 dBm—-		l IV	1							
-40 dBm			ىرى مەلەرلىرى بەرلىرى بەرلىرى		. And the second		فريقه ورواد ومحتم ورافع	a to talk a statistic	understate best officiality of the	
nda, tana ayan da		Lap des altes abients providents			and a second	Contraction of the second				
-70 dBm										
Start 1.0 G	Hz			2000	1 pts			Sto	p 10.0 GHz	
	Υ					suring			11.10.2017 11:30:29	
Date: 11.OCT.:	2017 11:30:3	0								
Spectrum Ref Level		Offset	5.00 dB 👄	RBW 1 MHz	2					
Ref Level	25.00 dBm	Offset	5.00 dB 👄 30 ms 👄	RBW 1 MHz VBW 3 MHz		uto Sweep				
Ref Leve	25.00 dBm				Mode A					
Ref Level	25.00 dBm				Mode A	uto Sweep 1[1]			-38.53 dBm 817760 GHz	
Ref Level Att 1Pk Max 20 dBm- 10 dBm-	25.00 dBm				Mode A				-38.53 dBm	
Ref Level Att PIPk Max 20 dBm 10 dBm 0 dBm	25.00 dBm				Mode A				-38.53 dBm	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm	25.00 dBm	3 • SWT			Mode A				-38.53 dBm	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	1 25.00 dBm 30 dE	3 • SWT			Mode A				-38.53 dBm	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	1 25.00 dBm 30 dE	dBm	30 ms	VBW 3 MH2	Mode A			19.1	-38.53 dBm	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	D1 -13.000	dBm	30 ms		Mode A			19.1	-38.53 dBm 817760 GHz	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	D1 -13.000	dBm	30 ms		Mode A			19.1	-38.53 dBm 817760 GHz	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	D1 -13.000	dBm	30 ms		Mode A			19.1	-38.53 dBm 817760 GHz	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	D1 -13.000	dBm	30 ms		Mode A			19.1	-38.53 dBm 817760 GHz	
Ref Level Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	D1 -13.000	dBm	30 ms					19.1	-38.53 dBm 817760 GHz	

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6.1.2.1.2 Test Channel = MCH

Spectrur	n)								
	el 25.00 dBn			RBW 100 ki					
Att 1Pk Max	30 QE	B 👄 SWT	1.1 ms 📟	VBW 300 ki	HZ Mode	Auto FFT			
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20 dBm						I		95	i3.4670 MHz
10 10									
10 dBm									
0 dBm									
0 0.0111									
-10 dBm—									
	-D1 -13.000	dBm							
-20 dBm—									
-30 dBm									
10 -10									
-40 dBm—									
-50 dBm									M1
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-60' d8m		hidre. pertone	the particular states	white Defilies of	and appetication (erenderen grad bestellen	Temperturner	1 Tricklept-type	anap-d-r
-70 dBm—									
Start 30.0	MHz			2000	1 pts			St	op 1.0 GHz
					Mea	suring		444	11.10.2017 11:27:33
	2017 11:27:3	33							
Spectrur	n		r 00 db 👄						
Spectrur	n 1 25.00 dBm			RBW 1 MHz VBW 3 MHz		uto Sweep			
Spectrur Ref Leve	n 1 25.00 dBm	n Offset			Mode A	uto Sweep			
Spectrur Ref Leve Att 1Pk Max	n 1 25.00 dBm	n Offset			Mode A	uto Sweep			-32.82 dBm
Spectrur Ref Leve Att	n 1 25.00 dBm	n Offset			Mode A				
Spectrur Ref Leve Att 1Pk Max	n 1 25.00 dBm	n Offset			Mode A				-32.82 dBm
Spectrur Ref Leve Att 1Pk Max 20 dBm	n 1 25.00 dBm	n Offset			Mode A				-32.82 dBm
Spectrur Ref Leve Att 1Pk Max 20 dBm	n 1 25.00 dBm	n Offset			Mode A				-32.82 dBm
Spectrur Ref Leve Att 1Pk Max 20 dBm- 10 dBm- 0 dBm-	n 1 25.00 dBm	n Offset			Mode A				-32.82 dBm
Spectrur Ref Leve Att 1Pk Max 20 dBm 10 dBm	n	n Offset 3 • SWT			Mode A				-32.82 dBm
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Spectrur Ref Leve Att 1Pk Max 20 dBm- 10 dBm- 0 dBm-	n	n Offset 3 • SWT			Mode A				-32.82 dBm
Spectrur Ref Leve Att 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm-	n	n Offset 3 • SWT			Mode A				-32.82 dBm
Spectrur Ref Leve Att 1Pk Max 20 dBm- 10 dBm- 0 dBm- -10 dBm-	n	n Offset 3 • SWT			Mode A				-32.82 dBm
Spectrur Ref Leve Att 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm-	n	dBm	30 ms	VBW 3 MHz	- Mode A			3.	-32.82 dBm 760390 GHz
Spectrur Ref Leve Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	n	dBm	30 ms	VBW 3 MHz	Mode A	1[1]			-32.82 dBm 760390 GHz
Spectrur Ref Leve Att 1Pk Max 20 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-	n	dBm	30 ms	VBW 3 MHz	- Mode A	1[1]			-32.82 dBm 760390 GHz
Spectrur Ref Leve Att 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm	n	dBm	30 ms	VBW 3 MHz	- Mode A	1[1]			-32.82 dBm 760390 GHz
Spectrur Ref Leve Att 1Pk Max 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	n	dBm	30 ms	VBW 3 MHz	- Mode A	1[1]			-32.82 dBm 760390 GHz
Spectrur Ref Leve Att 1Pk Max 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -60 dBm	n	dBm	30 ms	VBW 3 MHz	- Mode A	1[1]			-32.82 dBm 760390 GHz
Spectrur Ref Leve Att 1Pk Max 20 dBm	n	dBm	30 ms		Mode A	1[1]			-32.82 dBm 760390 GHz
Spectrur Ref Leve Att 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -60 dBm	n	dBm	30 ms	VBW 3 MHz	Mode A	1[1]		3.	-32.82 dBm 760390 GHz

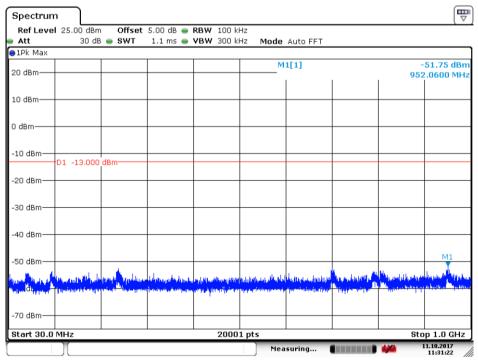
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Spectrun Ref Leve	n I 25.00 dBm	o Offset	5.00 dB 👄	RBW 1 MHa	2					
Att 1Pk Max	30 dB	SWT 😑 SWT	30 ms 👄	VBW 3 MHz	Mode A	uto Sweep				
●1РК Мах					M	1[1]			38.80 dBm	
20 dBm						1(1)	I		88260 GHz	
10 dBm										
0 dBm										
-10 dBm	D1 -13.000	dBm								
-20 dBm										
-30 dBm										
-40 dBm		يغدر عامد رو	a a statumant taile	المعران الألادين ورا	The second grad	ار اندر ورا ^{نده} اندر ورا ^{نده}	in the second state in the second state	ية. 19 مارويل (19 مارويل (19 م	M1	
and a partition and		parents and a grant	An Almahla Manual	Western Strength	والارجادة والمعرفة المالة	the second s	a second the second second	Same preta a stat	(Burrell Mar	
-50 dBm										
-60 dBm										
-70 dBm—										
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					Mea	suring		- 444	11.10.2017 11:29:45	

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6.1.2.1.3 Test Channel = HCH



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Spectrun	n								age:
	1 25.00 dBm	Offset	5.00 dB 📻	RBW 1 MHz	2				(∀)
Att		SWT		VBW 3 MHz		uto Sweep			
1Pk Max									00.11.10
0 dBm					M	1[1]			-32.11 dBm 19780 GHz
.0 dBm									
dBm									
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	D1 -13.000	dBm							
20 dBm									
30 dBm—			M1						
40 dBm			i i stati kon	الم المحمد ال	A CONTRACTOR OF STREET	allered at 1	وليتروج والمتعار والمتعار	يەم بىلى	معالية. المعالية
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00 ubiii—									
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	2112			2000	1 ntc			Ctor	10.0.011-
start 1.0 (GHz 2017 11:31:4	5		2000		suring			10.0 GHz
te: 11.0CT.	2017 11:31:4		5.00 dB 👄	2000 2000 RBW 1 MHz	Mea	suring			11.10.2017
te: 11.0CT. Spectrun Ref Leve Att	2017 11:31:4 n l 25.00 dBm				Mea	suring (11.10.2017 11:31:45
te: 11.0CT. Spectrum Ref Leve	2017 11:31:4 n l 25.00 dBm	Offset		RBW 1 MHz	Mea	uto Sweep		4 /2	11.10.2017 11:31:45
te: 11.0CT. Spectrun Ref Leve Att	2017 11:31:4 n l 25.00 dBm	Offset		RBW 1 MHz	Mea			49 0	11.10.2017 11:31:45
te: 11.0CT. Spectrum Ref Leve Att 1Pk Max	2017 11:31:4 n l 25.00 dBm	Offset		RBW 1 MHz	Mea	uto Sweep		49 6	11.10.2017 11:31:45 /// ▽ 38.16 dBm
te: 11.0CT. Spectrum Ref Leve Att 1Pk Max	2017 11:31:4 n l 25.00 dBm	Offset		RBW 1 MHz	Mea	uto Sweep		49 6	11.10.2017 11:31:45 /// ▽ 38.16 dBm
te: 11.0CT. Spectrum Ref Leve Att 1Pk Max 0 dBm 0 dBm	2017 11:31:4 n l 25.00 dBm	Offset		RBW 1 MHz	Mea	uto Sweep		49 6	11.10.2017 11:31:45 /// ▽ 38.16 dBm
te: 11.0CT. Spectrun Ref Leve Att 1Pk Max 10 dBm-	2017 11:31:4 n l 25.00 dBm	Offset		RBW 1 MHz	Mea	uto Sweep		49 6	11.10.2017 11:31:45 /// ▽ 38.16 dBm
te: 11.0CT. Spectrum Ref Leve Att 1Pk Max 0 dBm 0 dBm	2017 11:31:4 n l 25.00 dBm	Offset		RBW 1 MHz	Mea	uto Sweep		49 6	11.10.2017 11:31:45 /// ▽ 38.16 dBm
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te: 11.0CT. Spectrum Ref Leve Att 1Pk Max 0 dBm dBm dBm	2017 11:31:4 n I 25.00 dBm 30 dB	Offset SWT		RBW 1 MHz	Mea	uto Sweep		49 6	11.10.2017 11:31:45 /// ▽ 38.16 dBm
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tter 1.0 C spectrun Ref Leve Att 1Pk Max 0 dBm 0 dBm 10 dBm 20 dBm 20 dBm 40 dBm 40 dBm	2017 11:31:4 n 1 25.00 dBm 30 dB	Offset SWT	30 ms 🖷	RBW 1 MHz VBW 3 MHz	Mea	uto Sweep			11.10.2017 11.31145 /// ⊽ 38.16 dBm 125760 GHz
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te: 11.0CT. Spectrun Ref Leve Att 1Pk Max 0 dBm 0 dBm 10 dBm 20 dBm 20 dBm 30 dBm 40 dBm 50 dBm	2017 11:31:4 n 1 25.00 dBm 30 dB	Offset SWT	30 ms 🖷	RBW 1 MHz VBW 3 MHz	Mea	uto Sweep			11.10.2017 11.31145 /// ⊽ 38.16 dBm 125760 GHz
itart 1.0 (te: 11,OCT. Spectrum Ref Leve Att 1Pk Max 0 dBm 0 dBm 10 dBm 20 dBm 30 dBm 30 dBm 50 dBm 50 dBm 60 dBm 70 dBm	2017 11:31:4	Offset SWT	30 ms 🖷	RBW 1 MHz YBW 3 MHz	Mea	uto Sweep			11.10.2017 11.31.45
tert 1.0 C Spectrun Ref Leve Att 1Pk Max 0 dBm dBm 10 dBm 20 dBm 30 dBm 10 dBm 50 dBm 50 dBm 50 dBm	2017 11:31:4	Offset SWT	30 ms 🖷	RBW 1 MHz VBW 3 MHz	Mea	uto Sweep		19.6	11.10.2017 11.31.45 /// ⊽ 38.16 dBm 125760 GHz

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7 Field Strength of Spurious Radiation

Part I - Test Plots

7.1 For GSM

Main Supply:

7.1.1 Test Band = GSM 850

7.1.1.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1545.937	-49.55	-13.00	-36.55	Vertical
2074.312	-45.54	-13.00	-32.54	Vertical
4336.875	-49.99	-13.00	-36.99	Vertical
1410.833	-50.48	-13.00	-37.48	Horizontal
1801.312	-46.57	-13.00	-33.57	Horizontal
3909.375	-51.43	-13.00	-38.43	Horizontal

7.1.1.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1277.500	-51.03	-13.00	-38.03	Vertical
2169.937	-44.36	-13.00	-31.36	Vertical
3621.375	-52.44	-13.00	-39.44	Vertical
1210.833	-51.63	-13.00	-38.63	Horizontal
1758.375	-47.49	-13.00	-34.49	Horizontal
4190.250	-50.97	-13.00	-37.97	Horizontal

7.1.1.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1281.666	-51.00	-13.00	-38.00	Vertical
1849.125	-46.95	-13.00	-33.95	Vertical
4093.125	-51.18	-13.00	-38.18	Vertical
1734.750	-48.32	-13.00	-35.32	Horizontal
2167.500	-45.61	-13.00	-32.61	Horizontal
4212.375	-51.14	-13.00	-38.14	Horizontal



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7.1.2 Test Band = GSM 1900

7.1.2.1.1 Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1278.800	-51.28	-13.00	-38.28	Vertical
2184.860	-44.72	-13.00	-31.72	Vertical
4257.000	-52.32	-13.00	-39.32	Vertical
1473.960	-50.78	-13.00	-37.78	Horizontal
2772.100	-42.08	-13.00	-29.08	Horizontal
4006.125	-51.25	-13.00	-38.25	Horizontal

7.1.2.1.2 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1397.700	-52.29	-13.00	-39.29	Vertical
2192.280	-45.17	-13.00	-32.17	Vertical
4344.750	-50.35	-13.00	-37.35	Vertical
1091.020	-52.32	-13.00	-39.32	Horizontal
2780.580	-41.87	-13.00	-28.87	Horizontal
3968.625	-52.12	-13.00	-39.12	Horizontal

7.1.2.1.3 Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1226.320	-51.20	-13.00	-38.20	Vertical
2230.440	-43.79	-13.00	-30.79	Vertical
4035.375	-51.45	-13.00	-38.45	Vertical
1512.500	-50.47	-13.00	-37.47	Horizontal
2308.880	-44.13	-13.00	-31.13	Horizontal
4159.500	-51.32	-13.00	-38.32	Horizontal

Secondary Supply: 7.1.3 Test Band = GSM 850

7.1.3.1.1 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
1793.625	-46.52	-13.00	-33.52	Vertical
2688.937	-41.80	-13.00	-28.80	Vertical
6324.500	-48.59	-13.00	-35.59	Vertical
1451.666	-50.42	-13.00	-37.42	Horizontal
2606.250	-42.13	-13.00	-29.13	Horizontal
5095.125	-48.65	-13.00	-35.65	Horizontal



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7.1.4 Test Band = GSM 1900

7.1.4.1.1 Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Over Limit (dB)	Polarization
2431.840	-36.19	-13.00	23.19	Vertical
3760.125	-47.71	-13.00	34.71	Vertical
5640.375	-45.55	-13.00	32.55	Vertical
2580.240	-36.11	-13.00	23.11	Horizontal
3759.375	-48.41	-13.00	35.41	Horizontal
5640.750	-45.85	-13.00	32.85	Horizontal

NOTE:

1) All modes are tested, but the data presented above is the worst case. 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.



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8 Frequency Stability

8.1 Frequency Error VS. Voltage

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				VL	2.67	0.00324	PASS
		LCH	ΤN	VN	1.31	0.00159	PASS
				VH	-2.38	-0.00289	PASS
				VL	-2.83	-0.00338	PASS
	GSM/TM1	MCH	TN	VN	-3.82	-0.00457	PASS
				VH	-4.75	-0.00568	PASS
			CH TN	VL	3.03	0.00357	PASS
GSM		HCH TN		VN	-2.92	-0.00344	PASS
850				VH	-2.90	-0.00342	PASS
650				VL	-3.46 -0.00420	PASS	
		LCH	TN	VN	1.53	0.00186	PASS
				VH	-5.18	-0.00628	PASS
				VL	3.03	0.00362	PASS
	GSM/TM2	MCH	ΤN	VN	2.20	0.00263	PASS
				VH	-4.37	-0.00522	PASS
				VL	1.40	0.00165	PASS
		HCH	ΤN	VN	-3.34	-0.00393	PASS
				VH	2.23	0.00263	PASS



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Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict		
				VL	-2.33	-0.00126	PASS		
		LCH	TN	VN	3.14	0.00170	PASS		
				VH	1.42	0.00077	PASS		
				VL	1.49	0.00079	PASS		
	GSM/TM1	MCH	TN	VN	-2.20	-0.00117	PASS		
				VH	3.30	0.00176	PASS		
		НСН		VL	-2.55	-2.55 -0.00134	PASS		
			TN	VN	2.37	0.00124	PASS		
GSM				VH	-1.60	-0.00084	PASS		
1900				VL	1.25	0.00068	PASS		
		LCH	ΤN	VN	-2.30	-0.00124	PASS		
				VH	2.30	0.00124	PASS		
				VL	-2.22	-0.00118	PASS		
	GSM/TM2	MCH	ΤN	VN	1.45	0.00077	PASS		
				VH	4.54	0.00241	PASS		
			TN	VL	-2.45	-0.00128	PASS		
		HCH		VN	3.50	0.00183	PASS		
				VH	-4.31	-0.00226	PASS		



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8.2 Frequency Error VS. Temperature

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-30	-4.72	-0.00573	PASS
				-20	1.89	0.00229	PASS
				-10	1.42	0.00172	PASS
				0	-3.60	-0.00437	PASS
		LCH	VN	10	2.49	0.00302	PASS
				20	-4.63	-0.00562	PASS
				30	1.73	0.00210	PASS
				40	-0.25	-0.00030	PASS
				50	-4.20	-0.00510	PASS
		МСН	VN	-30	-2.96	-0.00354	PASS
	GSM/TM1			-20	-5.80	-0.00693	PASS
				-10	-0.43	-0.00051	PASS
GSM				0	-2.53	-0.00302	PASS
850				10	1.37	0.00164	PASS
				20	3.80	0.00454	PASS
				30	1.57	0.00188	PASS
				40	0.27	0.00032	PASS
				50	-3.32	-0.00397	PASS
		нсн	VN	-30	-0.94	-0.00111	PASS
				-20	3.76	0.00443	PASS
				-10	3.15	0.00371	PASS
				0	-2.52	-0.00297	PASS
				10	1.56	0.00184	PASS
				20	-2.37	-0.00279	PASS
				30	3.72	0.00438	PASS
				40	-0.36	-0.00042	PASS
				50	-4.52	-0.00533	PASS



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-30	-2.42	-0.00294	PASS
				-20	2.31	0.00280	PASS
				-10	-5.15	-0.00625	PASS
				0	1.32	0.00160	PASS
		LCH	VN	10	-5.36	-0.00650	PASS
				20	-4.13	-0.00501	PASS
				30	-4.22	-0.00512	PASS
				40	-5.65	-0.00686	PASS
				50	-5.75	-0.00698	PASS
		FM2 MCH	VN	-30	-2.94	-0.00351	PASS
	GSM/TM2			-20	3.37	0.00403	PASS
				-10	-4.43	-0.00530	PASS
GSM				0	2.90	0.00347	PASS
850				10	-5.15	-0.00616	PASS
				20	-3.56	-0.00426	PASS
				30	-2.06	-0.00246	PASS
				40	-3.32	-0.00397	PASS
				50	-5.52	-0.00660	PASS
				-30	-3.47	-0.00409	PASS
				-20	-2.72	-0.00320	PASS
				-10	-5.71	-0.00673	PASS
				0	-5.62	-0.00662	PASS
			VN	10	3.05	0.00359	PASS
				20	-4.63	-0.00545	PASS
				30	-3.55	-0.00418	PASS
				40	-2.86	-0.00337	PASS
				50	-2.08	-0.00245	PASS



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-30	-3.45	-0.00186	PASS
				-20	-4.49	-0.00243	PASS
				-10	2.03	0.00110	PASS
				0	-3.65	-0.00197	PASS
		LCH	VN	10	-3.59	-0.00194	PASS
				20	1.35	0.00073	PASS
				30	-3.30	-0.00178	PASS
				40	-5.04	-0.00272	PASS
				50	-3.34	-0.00181	PASS
		тм1 мсн	VN	-30	-4.97	-0.00264	PASS
	GSM/TM1			-20	5.29	0.00281	PASS
				-10	-2.02	-0.00107	PASS
GSM				0	4.35	0.00231	PASS
1900				10	-4.27	-0.00227	PASS
				20	-6.37	-0.00339	PASS
				30	-3.43	-0.00182	PASS
				40	-8.40	-0.00447	PASS
				50	-5.20	-0.00277	PASS
				-30	-3.56	-0.00186	PASS
				-20	3.62	0.00190	PASS
				-10	3.84	0.00201	PASS
				0	-2.34	-0.00123	PASS
			VN	10	-2.28	-0.00119	PASS
				20	-4.14	-0.00217	PASS
				30	1.50	0.00079	PASS
				40	-4.09	-0.00214	PASS
				50	-4.25	-0.00223	PASS



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Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Verdict
				-30	-2.23	-0.00121	PASS
				-20	-4.30	-0.00232	PASS
				-10	1.50	0.00081	PASS
				0	-2.49	-0.00135	PASS
		LCH	VN	10	-2.99	-0.00162	PASS
				20	-4.56	-0.00246	PASS
				30	1.20	0.00065	PASS
				40	-3.33	-0.00180	PASS
				50	-6.11	-0.00330	PASS
			VN	-30	-5.56	-0.00296	PASS
	GSM/TM2	/TM2 MCH		-20	-2.46	-0.00131	PASS
				-10	-4.50	-0.00239	PASS
GSM				0	1.70	0.00090	PASS
1900				10	-5.37	-0.00286	PASS
				20	-2.74	-0.00146	PASS
				30	-3.58	-0.00190	PASS
				40	0.57	0.00030	PASS
				50	-5.30	-0.00282	PASS
				-30	-3.08	-0.00161	PASS
				-20	2.77	0.00145	PASS
				-10	1.34	0.00070	PASS
				0	-5.29	-0.00277	PASS
			VN	10	-6.23	-0.00326	PASS
				20	-3.99	-0.00209	PASS
				30	-2.40	-0.00126	PASS
1				40	-2.29	-0.00120	PASS
				50	-5.88	-0.00308	PASS

The End