



# Appendix B

## GSM 850 & 1900



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)



## CONTENT

	Page
1. EFFECTIVE (ISOTROPIC) RADIATED POWER OUTPUT DATA .....	4
1.1. Test Result(Up Antenna).....	4
1.2. Test Result(Down Antenna) .....	5
2. PEAK-TO-AVERAGE RATIO .....	7
2.1. Test Result.....	7
2.2. Part II - Test Plots .....	8
3. MODULATION CHARACTERISTICS .....	20
3.1. For GSM.....	20
3.1.1. Test Band = GSM 850.....	20
3.1.1.1. Test Mode = GSM/TM1.....	20
3.1.1.1.1. Test Channel = MCH.....	20
3.1.1.2. Test Mode = GSM/TM2.....	21
3.1.1.2.1. Test Channel = MCH.....	21
3.1.2. Test Band = GSM 1900 .....	22
3.1.2.1. Test Mode = GSM/TM1.....	22
3.1.2.1.1. Test Channel = MCH.....	22
3.1.2.2. Test Mode = GSM/TM2.....	23
3.1.2.2.1. Test Channel = MCH.....	23
4. 26dB BANDWIDTH AND OCCUPIED BANDWIDTH .....	24
4.1. Test Result.....	24
4.2. Test Plots.....	24
5. BAND EDGE COMPLIANCE .....	31
5.1. Test Plots.....	31
6. SPURIOUS EMISSION AT ANTENNA TERMINAL .....	35
6.1. Test Plots.....	35
7. FIELD STRENGTH OF SPURIOUS RADIATION .....	65
7.1. Test Band = GSM 1900(Down Antenna).....	65
7.1.1. Test Channel = LCH.....	65
7.1.2. Test Channel = MCH.....	65
7.1.3. Test Channel = HCH .....	66
7.2. Test Band = GSM 850(Down Antenna) .....	66
7.2.1. Test Channel = LCH.....	66



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

7.2.2.	Test Channel = MCH.....	67
7.2.3.	Test Channel = HCH.....	67
7.3.	Test Band = GSM 1900(Up Antenna).....	68
7.3.1.	Test Channel = LCH.....	68
7.3.2.	Test Channel = MCH.....	68
7.3.3.	Test Channel = HCH.....	69
7.4.	Test Band = GSM 850(Up Antenna).....	69
7.4.1.	Test Channel = LCH.....	69
7.4.2.	Test Channel = MCH.....	70
7.4.3.	Test Channel = HCH.....	70
8.	FREQUENCY STABILITY .....	71
8.1.	Frequency Error Vs Voltage.....	71
8.2.	Frequency Error Vs Temperature.....	72



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)



## 1. Effective (Isotropic) Radiated Power Output Data

### 1.1. Test Result(Up Antenna)

Band	Channel	Slot	Conducted Power (dBm)	ERP (dBm)	Limit(dBm)	Verdict
GSM850	128	---	32.52	32.17	38.45	PASS
GSM850	190	---	32.40	32.05	38.45	PASS
GSM850	251	---	32.73	32.38	38.45	PASS
EGPRS850	128	1	26.72	26.37	38.45	PASS
EGPRS850	128	2	24.41	24.06	38.45	PASS
EGPRS850	128	3	23.51	23.16	38.45	PASS
EGPRS850	128	4	21.74	21.39	38.45	PASS
EGPRS850	190	1	26.77	26.42	38.45	PASS
EGPRS850	190	2	24.54	24.19	38.45	PASS
EGPRS850	190	3	23.50	23.15	38.45	PASS
EGPRS850	190	4	21.80	21.45	38.45	PASS
EGPRS850	251	1	26.72	26.37	38.45	PASS
EGPRS850	251	2	24.33	23.98	38.45	PASS
EGPRS850	251	3	23.54	23.19	38.45	PASS
EGPRS850	251	4	21.80	21.45	38.45	PASS

Band	Channel	Slot	Conducted Power (dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM1900	512	---	29.51	30.31	33.00	PASS
GSM1900	661	---	29.50	30.3	33.00	PASS
GSM1900	810	---	29.20	30	33.00	PASS
EGPRS1900	512	1	29.48	30.28	33.00	PASS
EGPRS1900	512	2	26.60	27.4	33.00	PASS
EGPRS1900	512	3	25.60	26.4	33.00	PASS
EGPRS1900	512	4	24.51	25.31	33.00	PASS
EGPRS1900	661	1	29.50	30.3	33.00	PASS
EGPRS1900	661	2	26.49	27.29	33.00	PASS
EGPRS1900	661	3	25.46	26.26	33.00	PASS
EGPRS1900	661	4	24.29	25.09	33.00	PASS
EGPRS1900	810	1	29.25	30.05	33.00	PASS
EGPRS1900	810	2	26.89	27.69	33.00	PASS
EGPRS1900	810	3	25.45	26.25	33.00	PASS
EGPRS1900	810	4	24.40	25.2	33.00	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



## 1.2. Test Result(Down Antenna)

Band	Channel	Slot	Conducted Power (dBm)	ERP (dBm)	Limit(dBm)	Verdict
GSM850	128	---	32.28	32.43	38.45	PASS
GSM850	190	---	32.61	32.76	38.45	PASS
GSM850	251	---	32.58	32.73	38.45	PASS
EGPRS850	128	1	26.53	26.68	38.45	PASS
EGPRS850	128	2	24.45	24.6	38.45	PASS
EGPRS850	128	3	22.45	22.6	38.45	PASS
EGPRS850	128	4	21.42	21.57	38.45	PASS
EGPRS850	190	1	26.64	26.79	38.45	PASS
EGPRS850	190	2	24.65	24.8	38.45	PASS
EGPRS850	190	3	22.64	22.79	38.45	PASS
EGPRS850	190	4	21.63	21.78	38.45	PASS
EGPRS850	251	1	26.78	26.93	38.45	PASS
EGPRS850	251	2	24.70	24.85	38.45	PASS
EGPRS850	251	3	22.63	22.78	38.45	PASS
EGPRS850	251	4	21.93	22.08	38.45	PASS

Band	Channel	Slot	Conducted Power (dBm)	EIRP (dBm)	Limit(dBm)	Verdict
GSM1900	512	---	29.94	30.44	33.00	PASS
GSM1900	661	---	29.91	30.41	33.00	PASS
GSM1900	810	---	30.08	30.58	33.00	PASS
EGPRS1900	512	1	26.00	26.5	33.00	PASS
EGPRS1900	512	2	23.40	23.9	33.00	PASS
EGPRS1900	512	3	21.18	21.68	33.00	PASS
EGPRS1900	512	4	20.20	20.7	33.00	PASS
EGPRS1900	661	1	25.90	26.4	33.00	PASS
EGPRS1900	661	2	23.30	23.8	33.00	PASS
EGPRS1900	661	3	21.19	21.69	33.00	PASS
EGPRS1900	661	4	20.17	20.67	33.00	PASS
EGPRS1900	810	1	26.11	26.61	33.00	PASS
EGPRS1900	810	2	23.54	24.04	33.00	PASS
EGPRS1900	810	3	21.30	21.8	33.00	PASS
EGPRS1900	810	4	20.40	20.9	33.00	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report and certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



Remark:

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

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.  
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



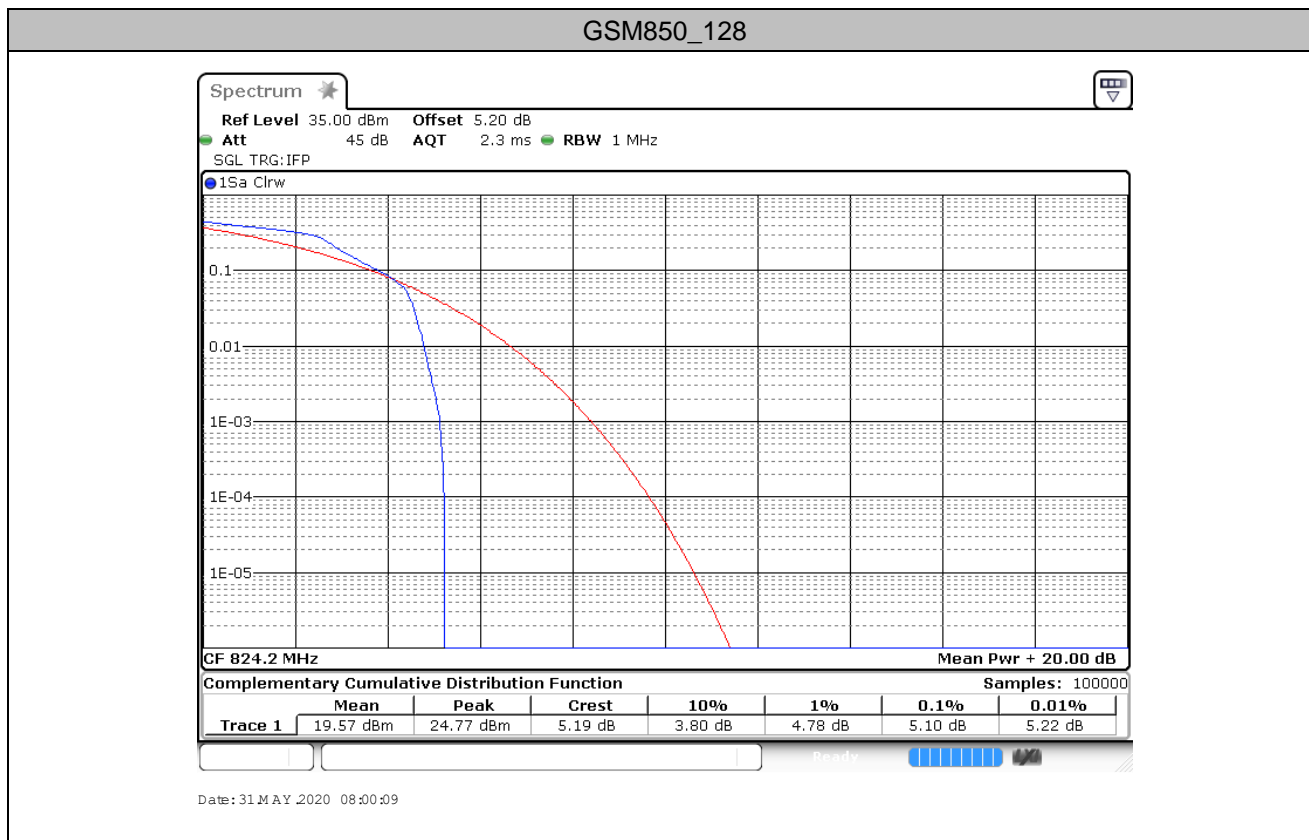
## 2. Peak-to-Average Ratio

### 2.1. Test Result

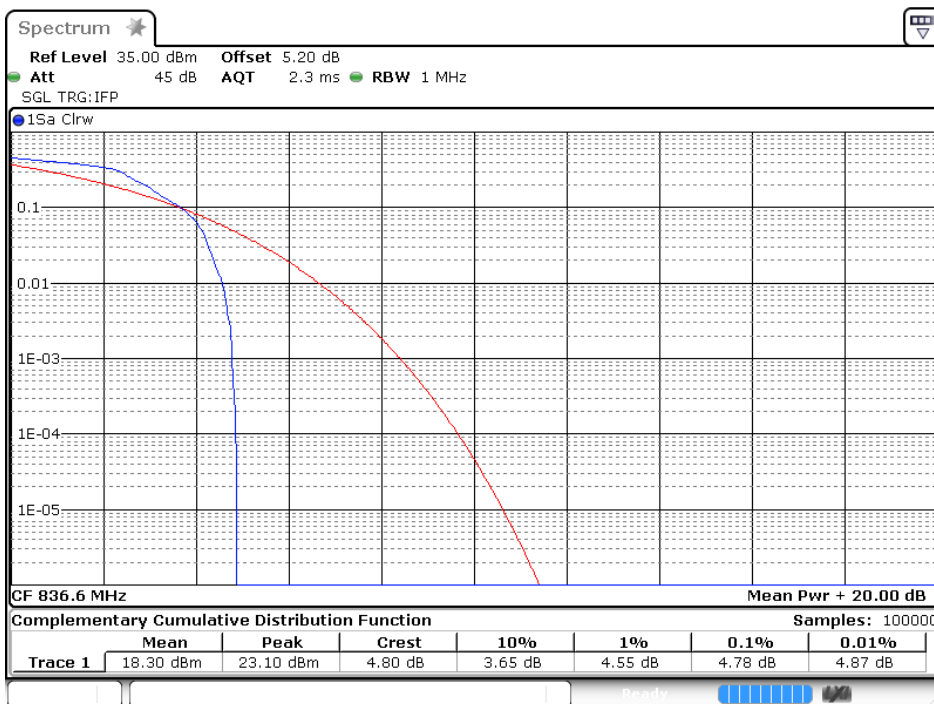
Band	Channel	Peak-to-Average Ratio(dB)	Limit(dB)	Verdict
GSM850	128	7.97	13	PASS
GSM850	190	8.09	13	PASS
GSM850	251	8.23	13	PASS
EGPRS850	128	5.10	13	PASS
EGPRS850	190	4.78	13	PASS
EGPRS850	251	10.90	13	PASS
GSM1900	512	7.88	13	PASS
GSM1900	661	7.91	13	PASS
GSM1900	810	7.97	13	PASS
EGPRS1900	512	10.64	13	PASS
EGPRS1900	661	10.87	13	PASS
EGPRS1900	810	11.33	13	PASS



## 2.2.Part II - Test Plots



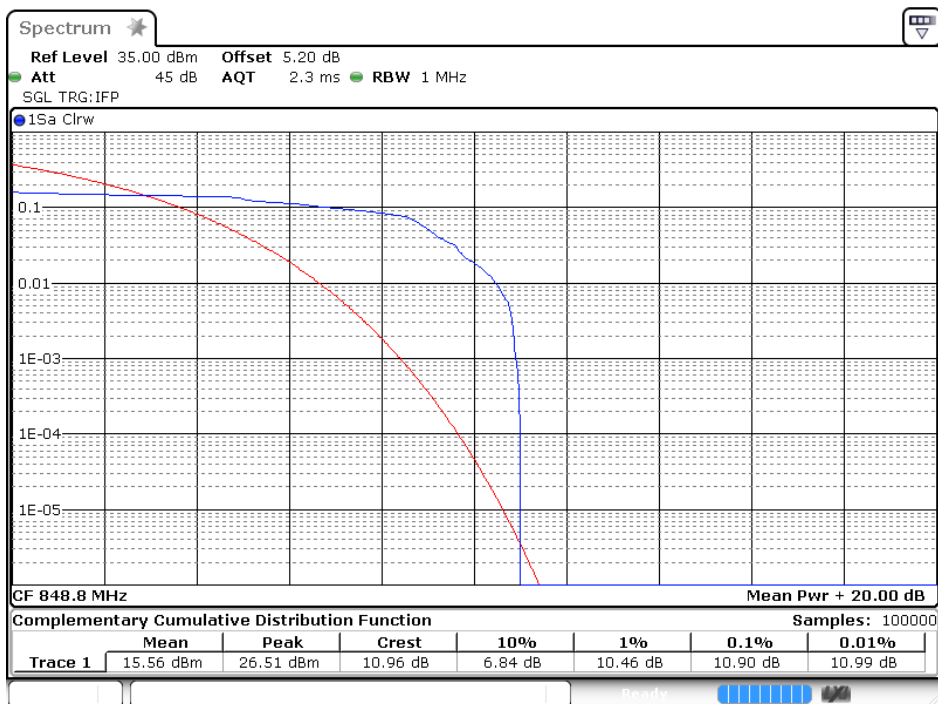
GSM850\_190



Date: 31 MAY 2020 08:00:49



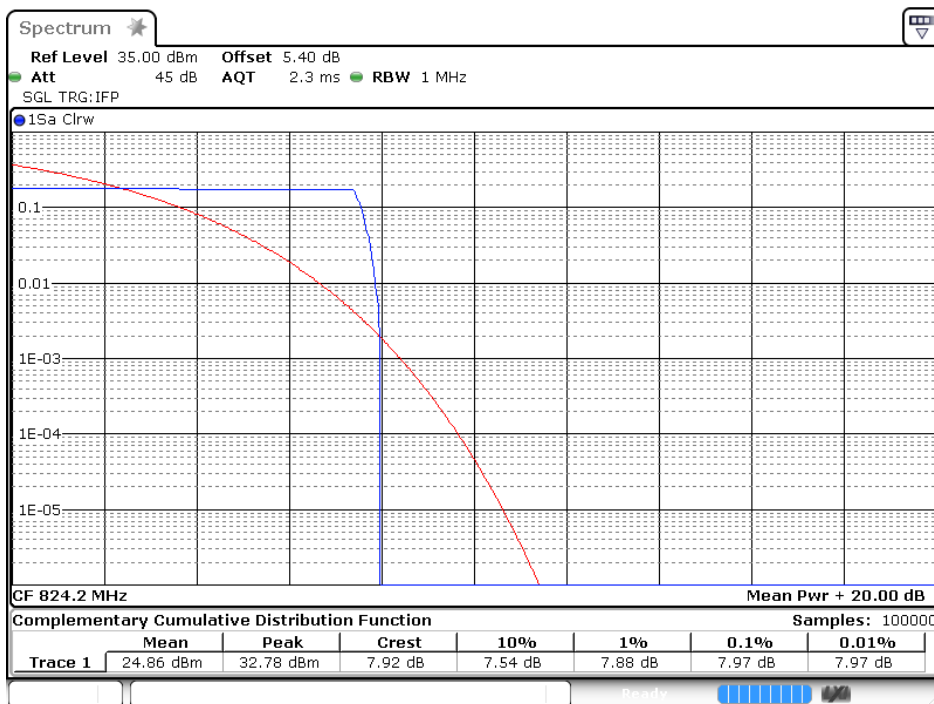
## GSM850\_251



Date: 31 MAY 2020 08:01:16



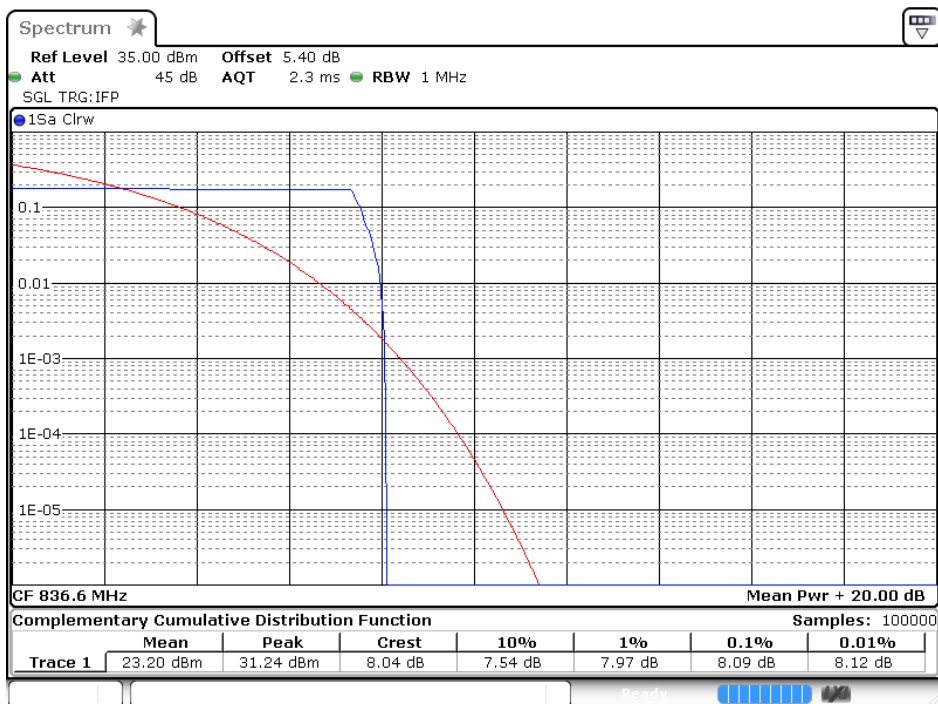
EGPRS850\_128



Date: 31 MAY 2020 07:36:40



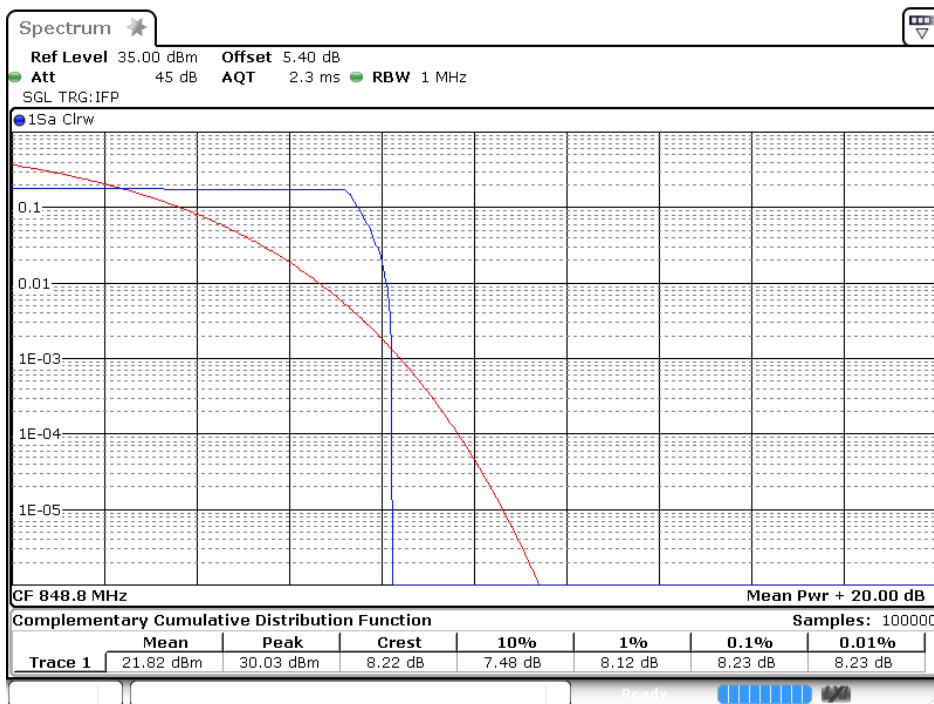
EGPRS850\_190



Date: 31 MAY 2020 07:37:07



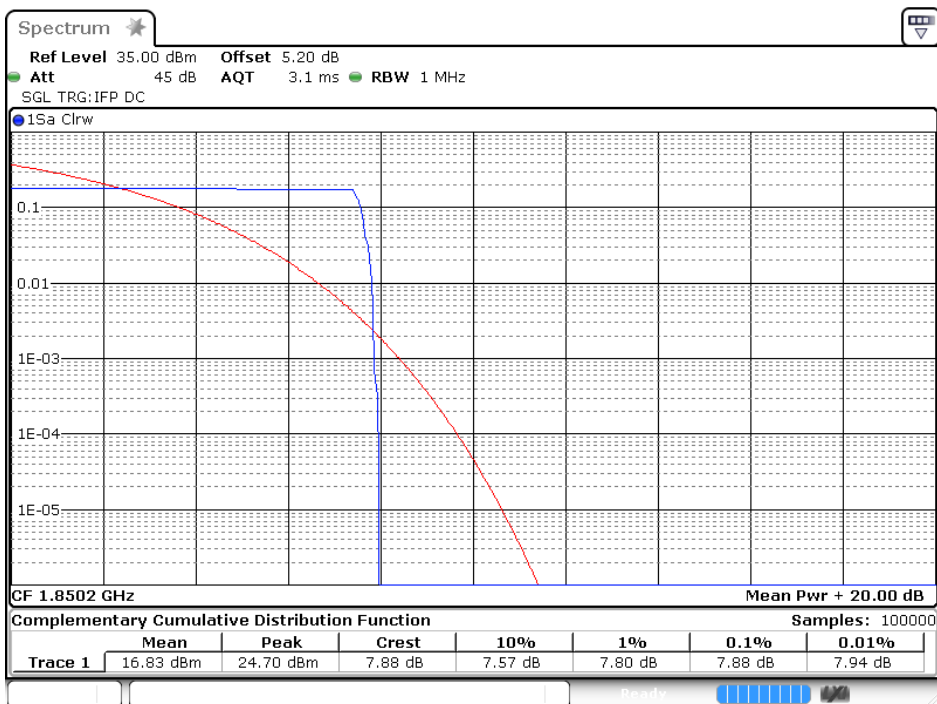
## EGPRS850\_251



Date: 31 MAY 2020 07:37:34



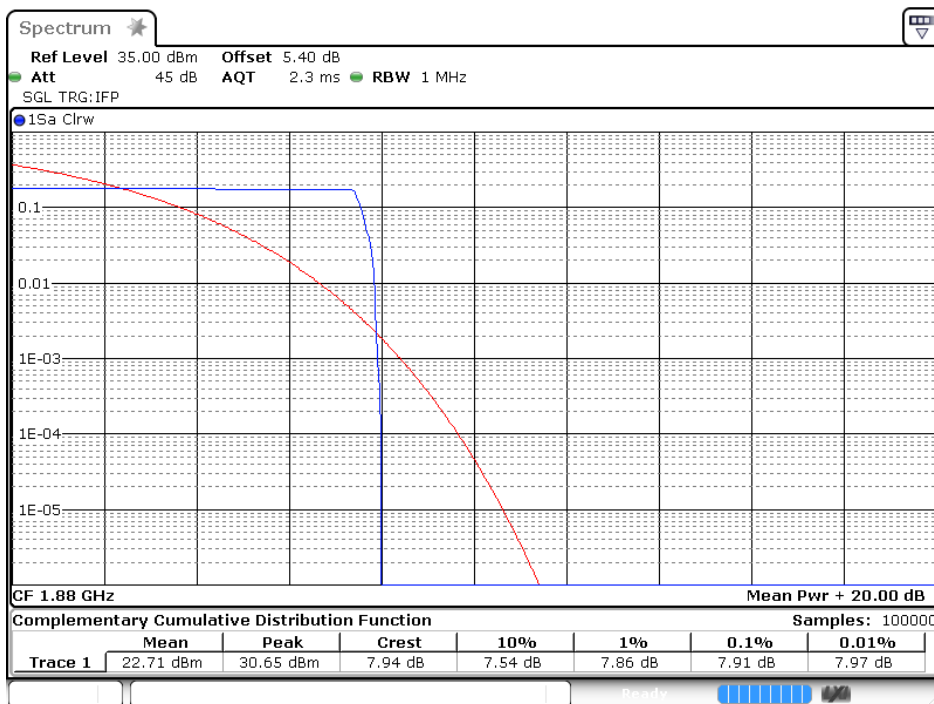
## GSM1900\_512



Date: 31 MAY 2020 08:10:58



GSM1900\_661



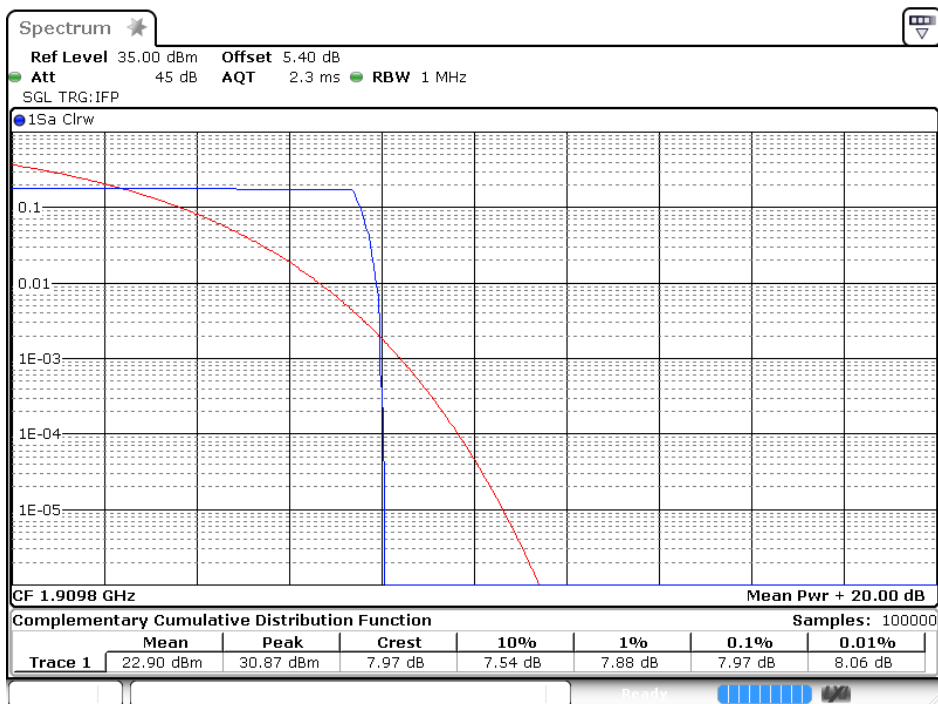
Date: 31 MAY 2020 07:14:59



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

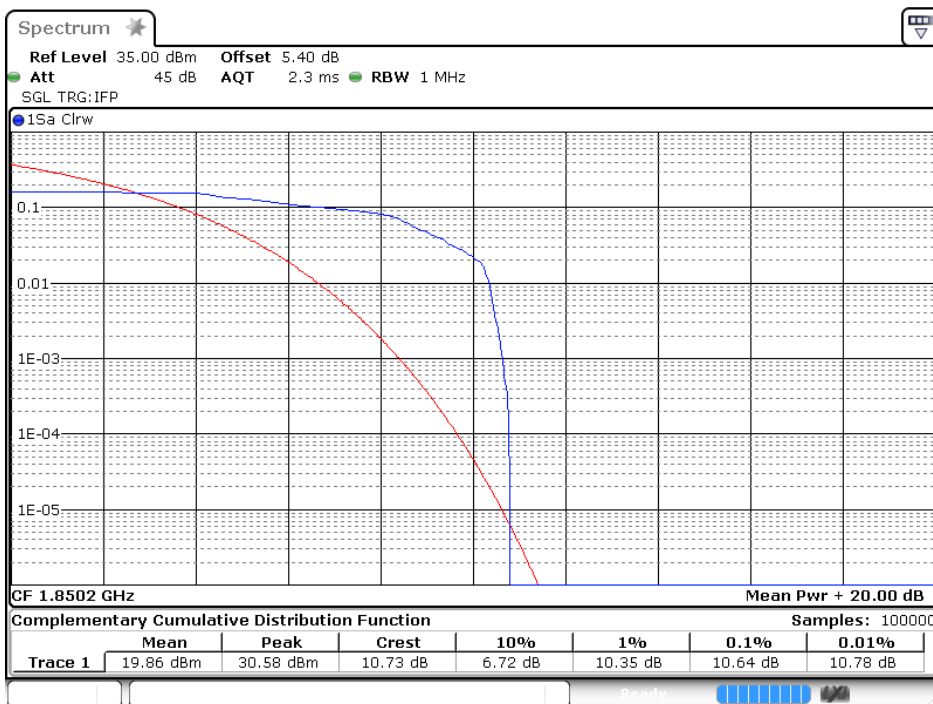
## GSM1900\_810



Date: 31 MAY 2020 07:15:26



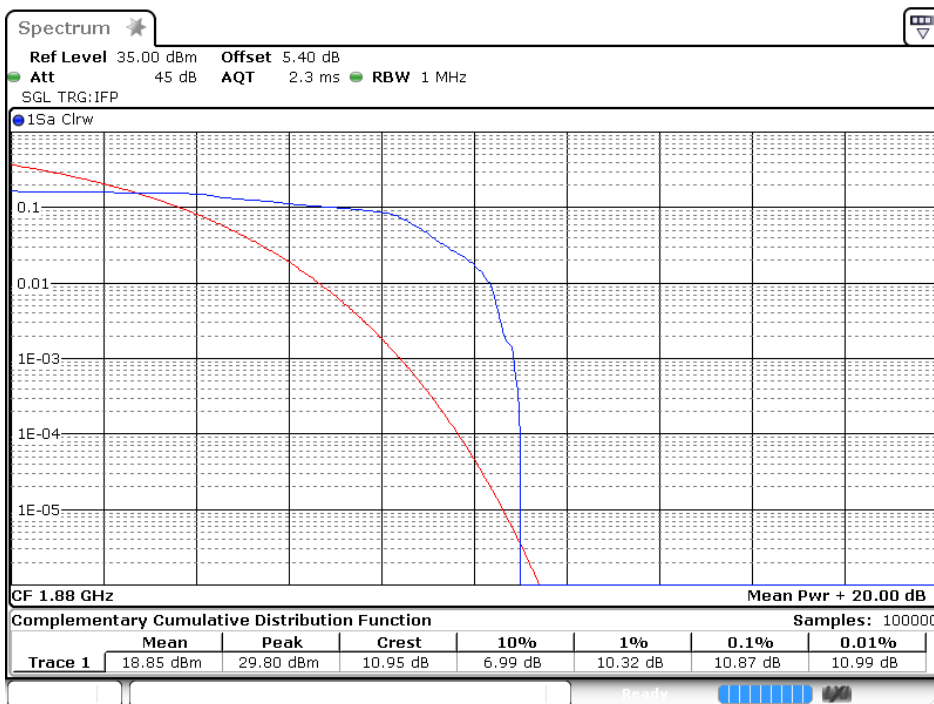
## EGPRS1900\_512



Date: 31 MAY 2020 07:26:56



## EGPRS1900\_661



Date: 31 MAY 2020 07:27:24



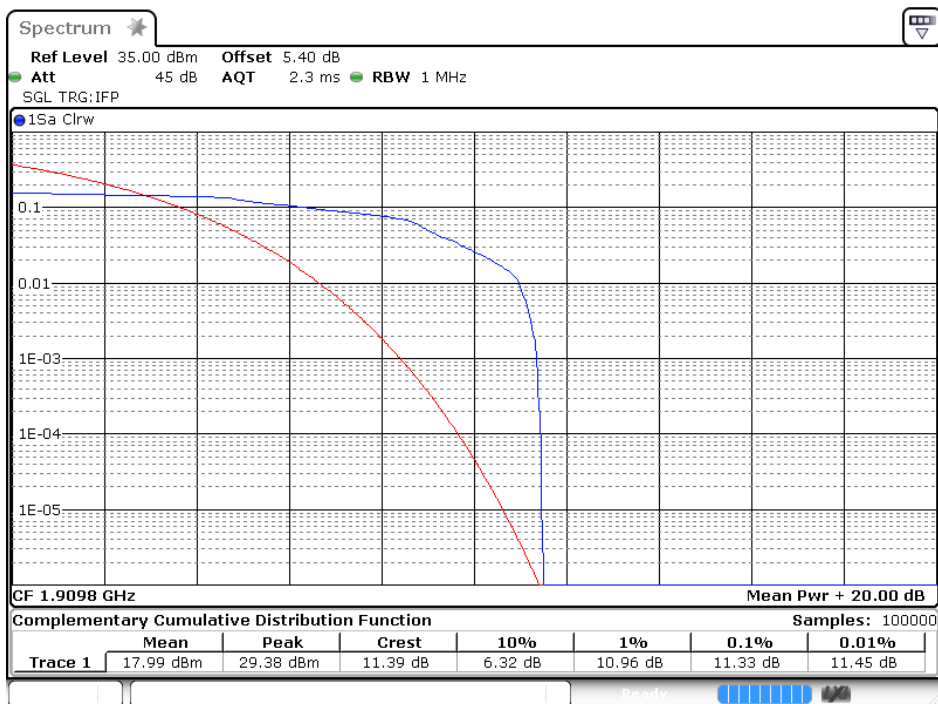
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## EGPRS1900\_810



Date: 31 MAY 2020 07:27:52



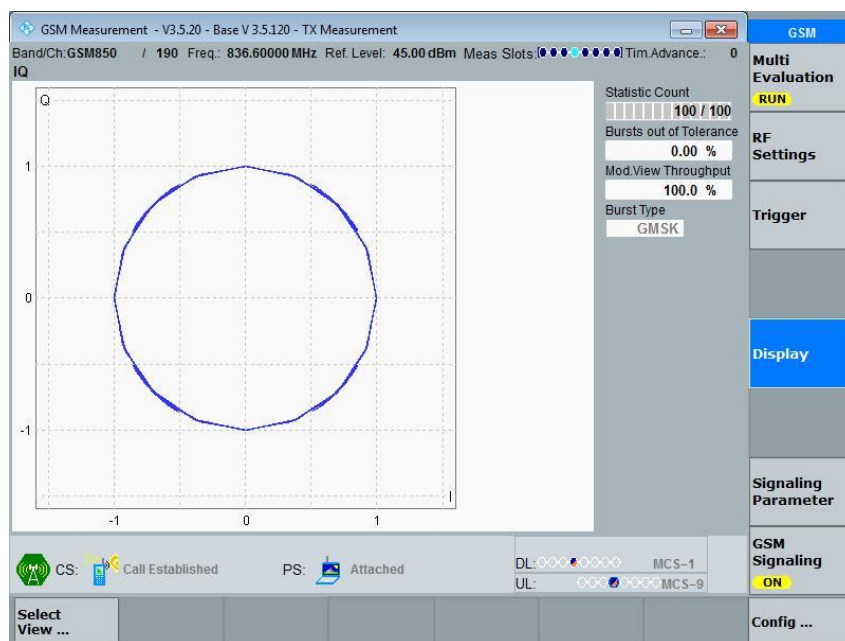
### 3. Modulation Characteristics

#### 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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

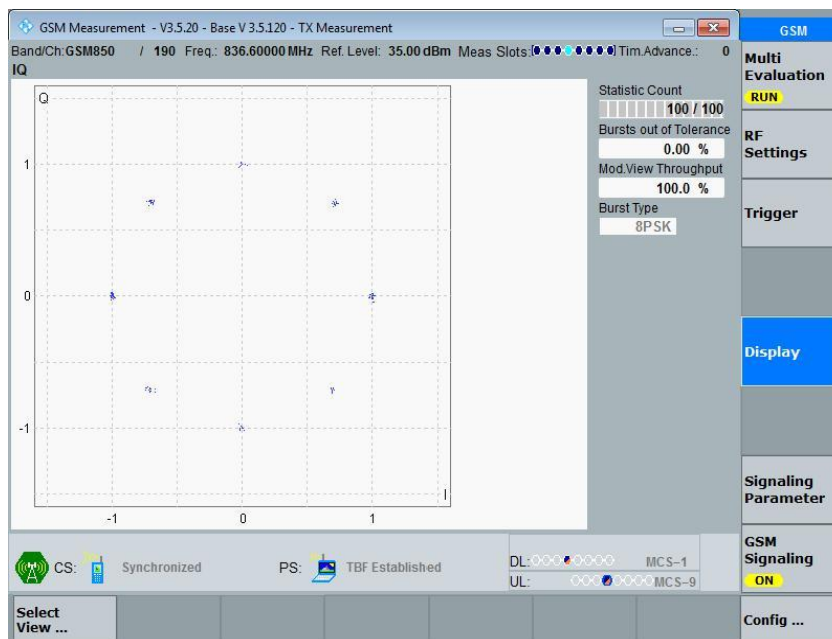
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Centre, CCC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



### 3.1.1.2. Test Mode = GSM/TM2

#### 3.1.1.2.1. Test Channel = MCH

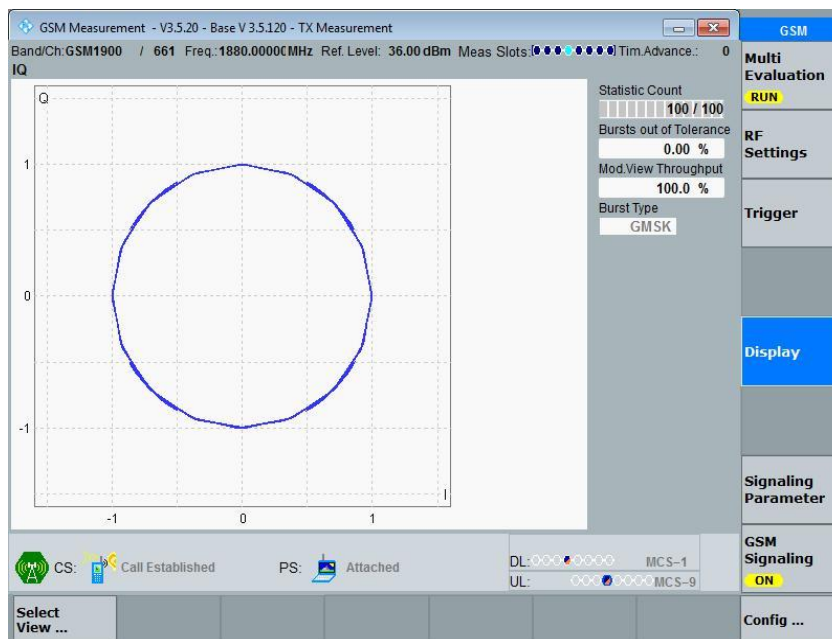




### 3.1.2. Test Band = GSM 1900

#### 3.1.2.1. Test Mode = GSM/TM1

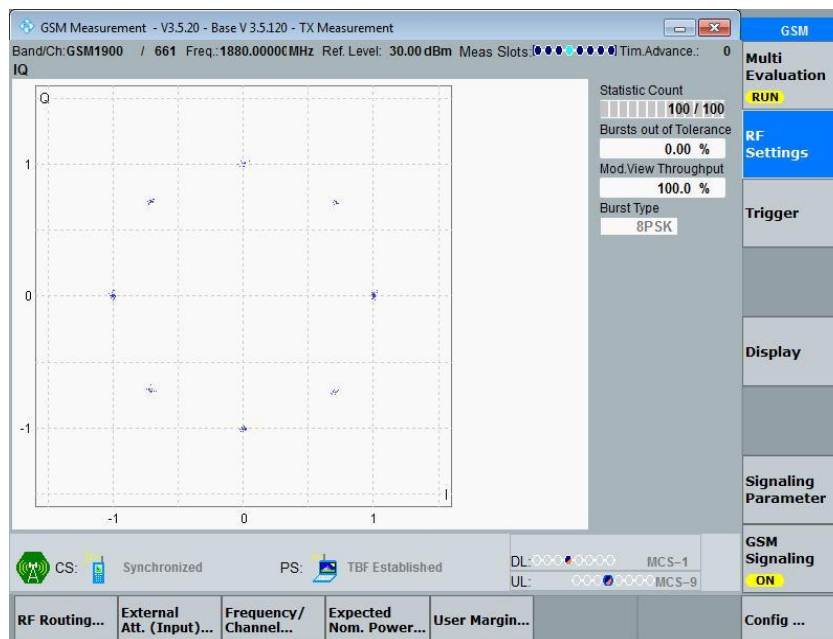
##### 3.1.2.1.1. Test Channel = MCH





### 3.1.2.2. Test Mode = GSM/TM2

#### 3.1.2.2.1. Test Channel = MCH



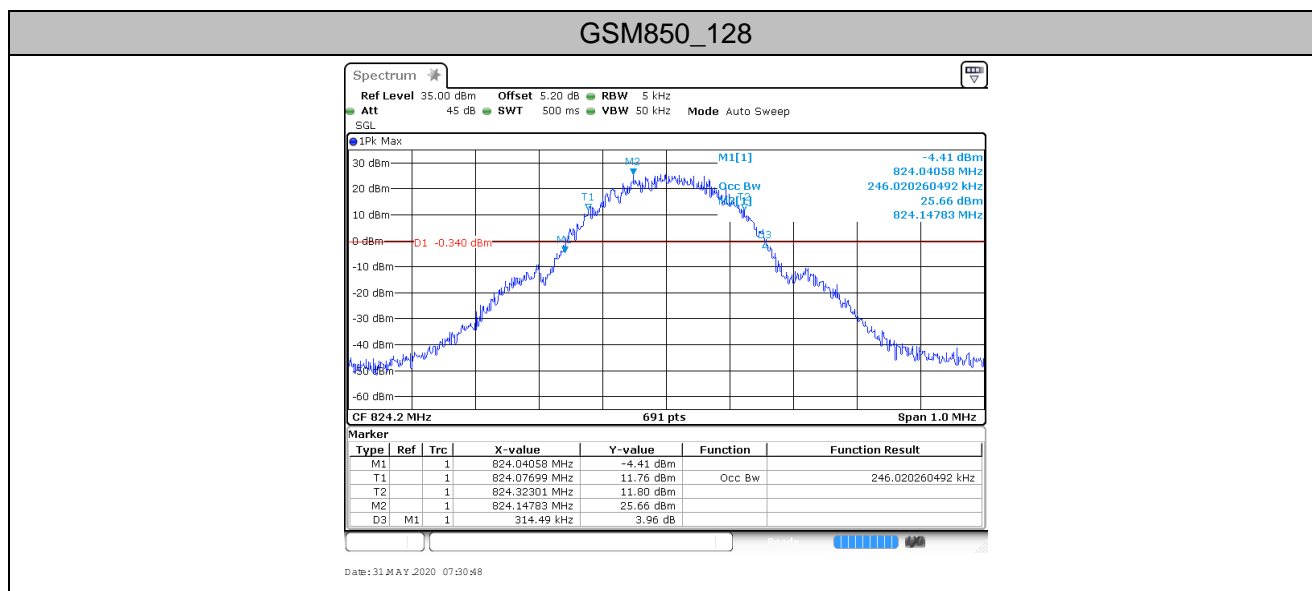


## 4. 26dB Bandwidth and Occupied Bandwidth

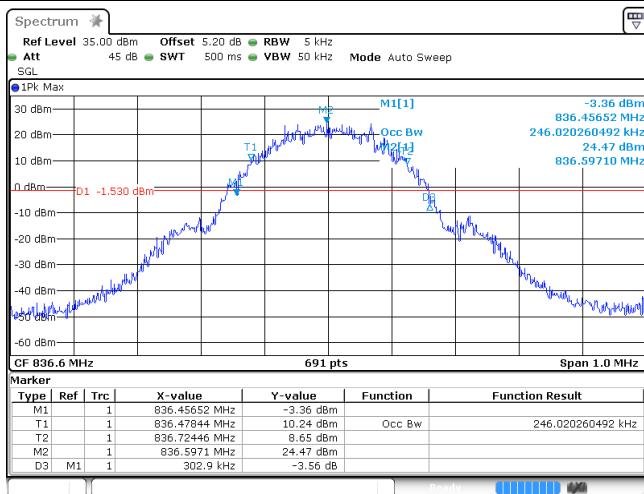
### 4.1. Test Result

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
GSM850	128	246.02	314.49	---	PASS
GSM850	190	246.02	302.90	---	PASS
GSM850	251	243.13	308.70	---	PASS
EGPRS850	128	257.60	310.40	---	PASS
EGPRS850	190	250.36	304.35	---	PASS
EGPRS850	251	248.92	304.35	---	PASS
GSM1900	512	243.13	302.90	---	PASS
GSM1900	661	243.13	315.94	---	PASS
GSM1900	810	243.13	305.80	---	PASS
EGPRS1900	512	246.02	298.55	---	PASS
EGPRS1900	661	243.13	284.06	---	PASS
EGPRS1900	810	241.68	302.90	---	PASS

### 4.2. Test Plots

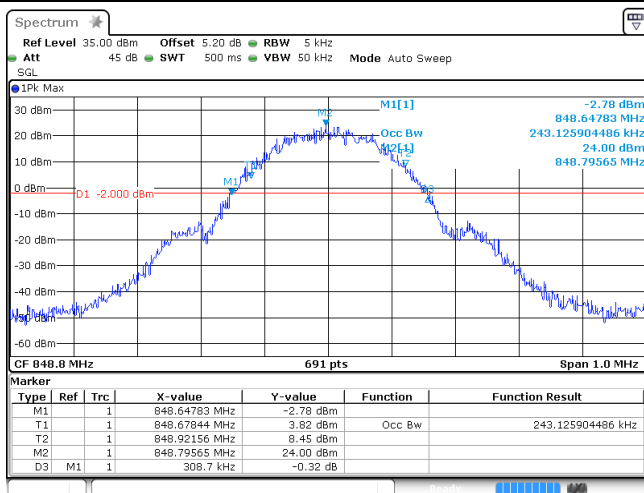


## GSM850\_190



Date: 31 MAY 2020 07:31:13

## GSM850\_251



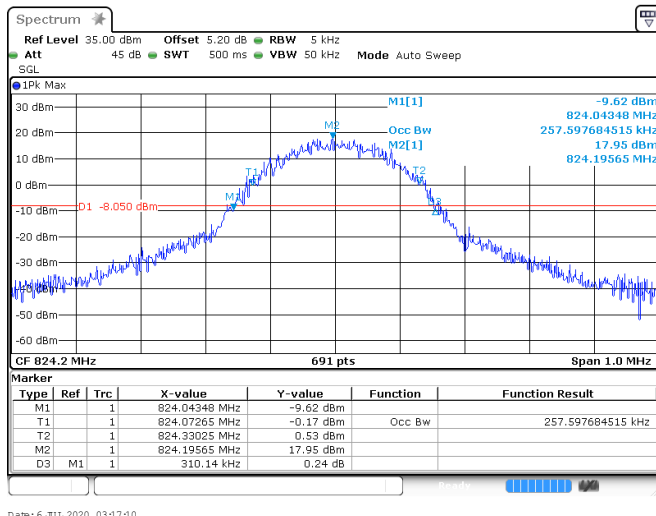
Date: 31 MAY 2020 07:31:19



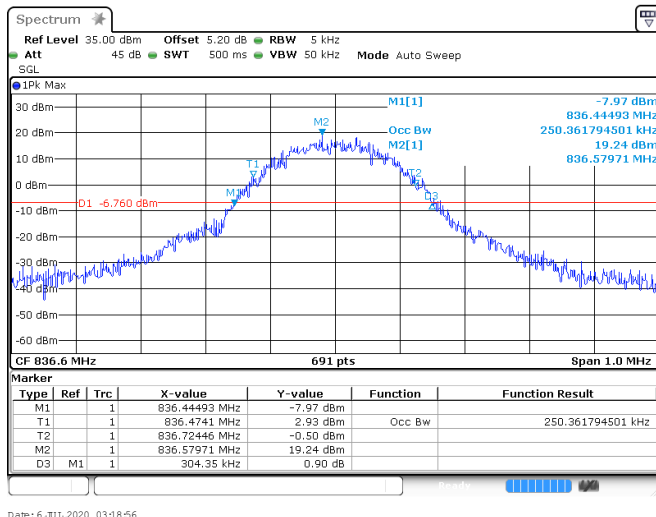
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

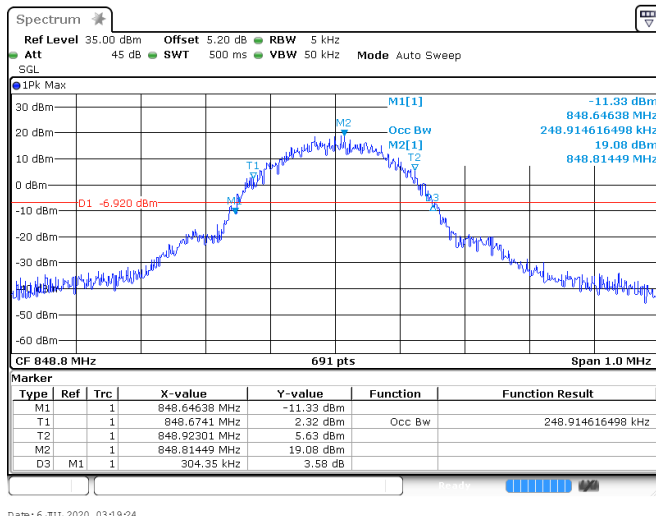
## EGPRS850\_128



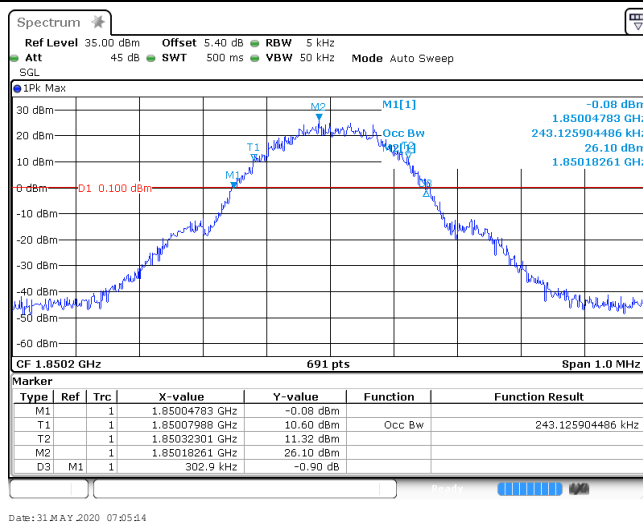
## EGPRS850\_190



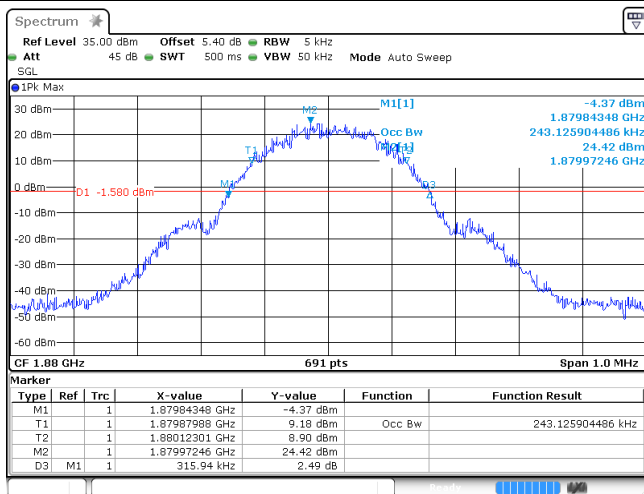
## EGPRS850\_251



## GSM1900\_512

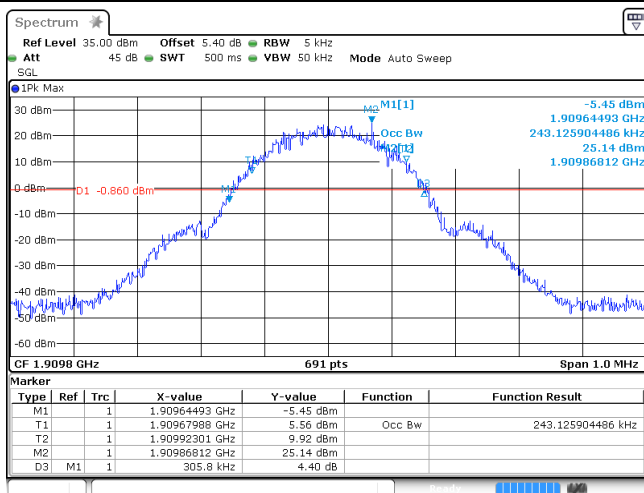


## GSM1900\_661



Date: 31 MAY 2020 07:05:40

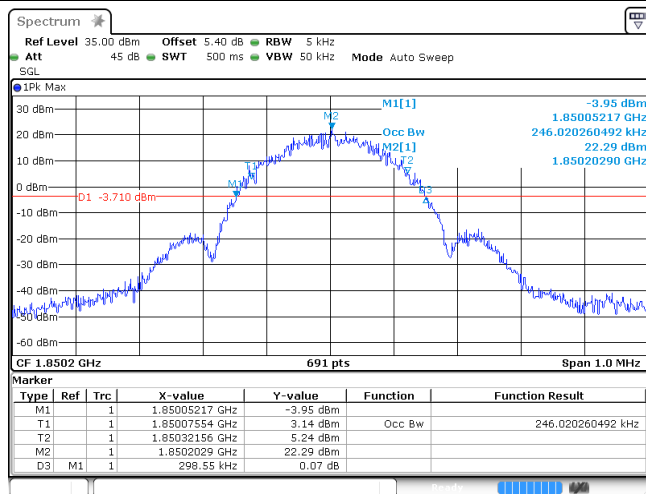
## GSM1900\_810



Date: 31 MAY 2020 07:06:06

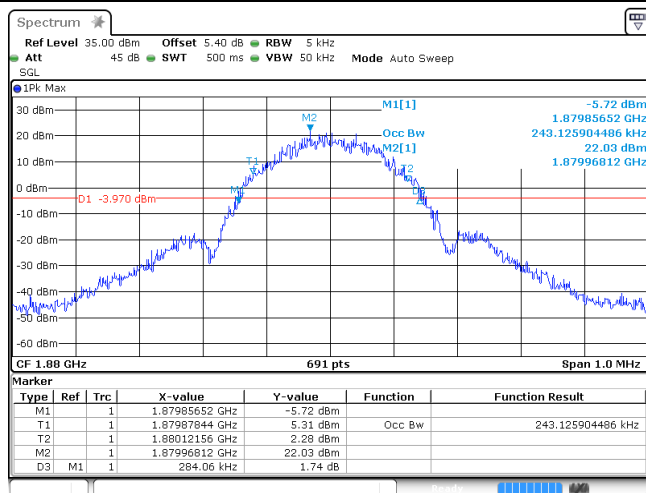


## EGPRS1900\_512



Date: 31 MAY 2020 07:17:51

## EGPRS1900\_661



Date: 31 MAY 2020 07:17:59



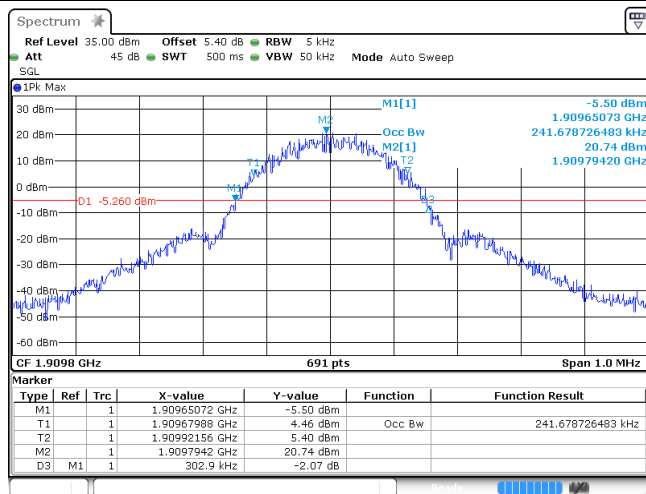
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

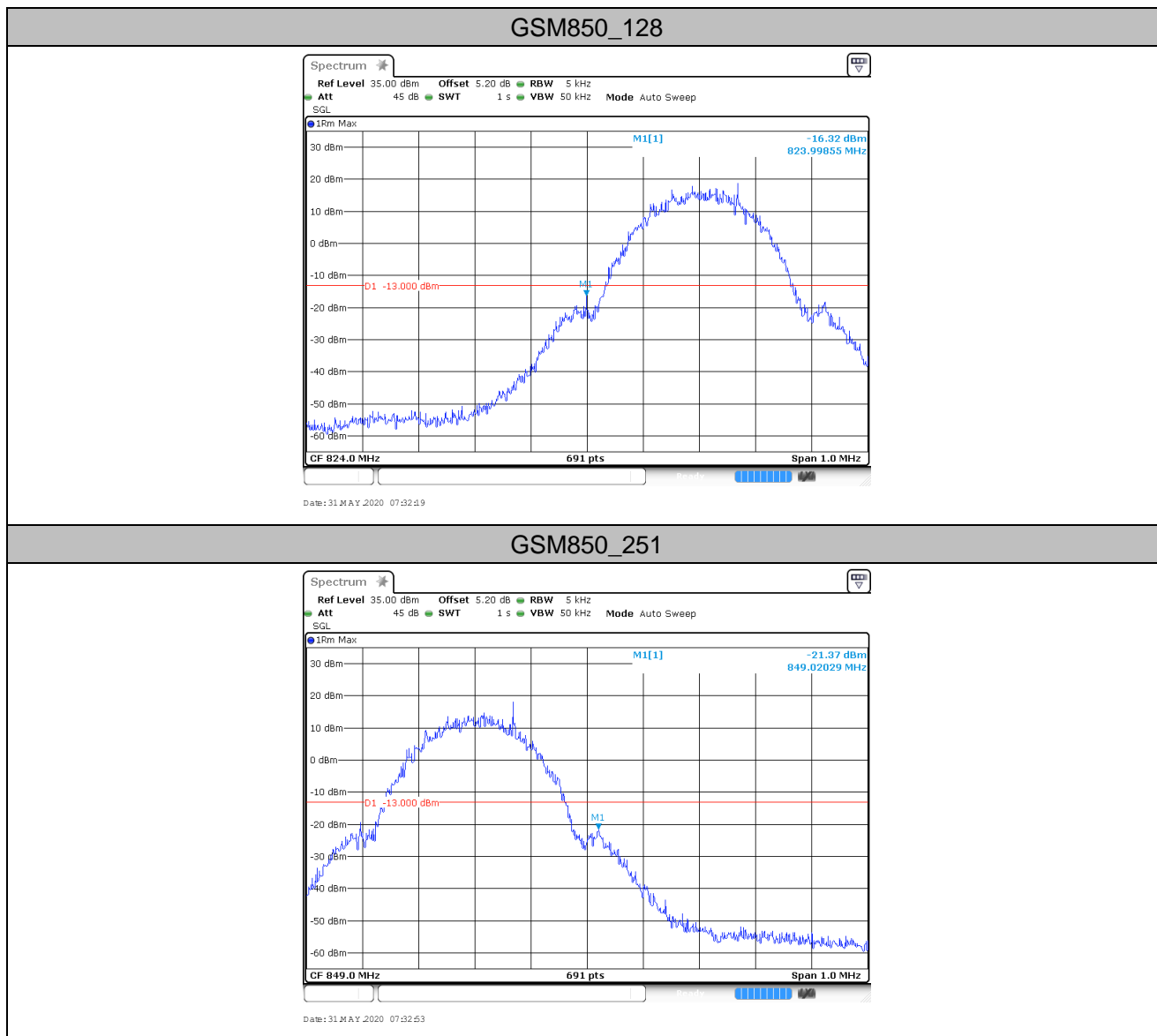
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## EGPRS1900\_810

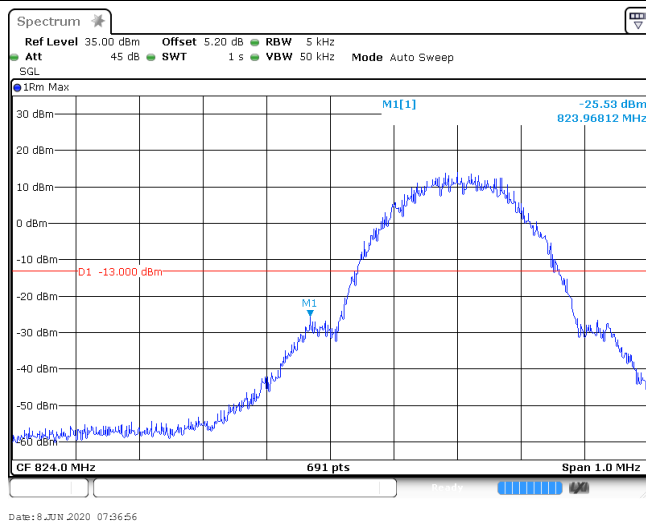


## 5. Band Edge Compliance

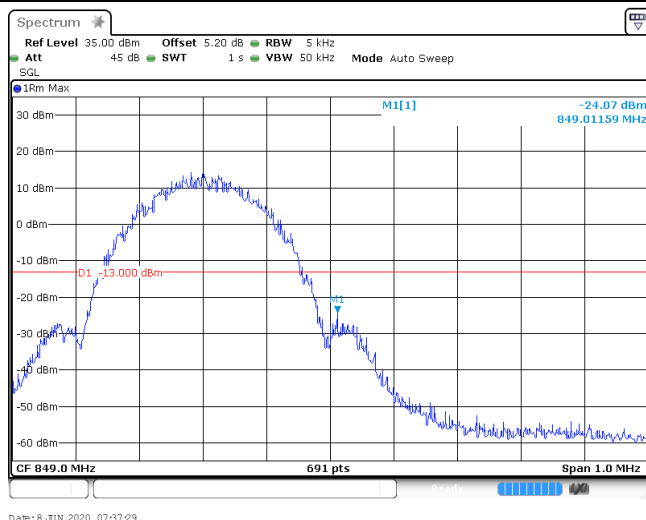
### 5.1. Test Plots



### EGPRS850\_128



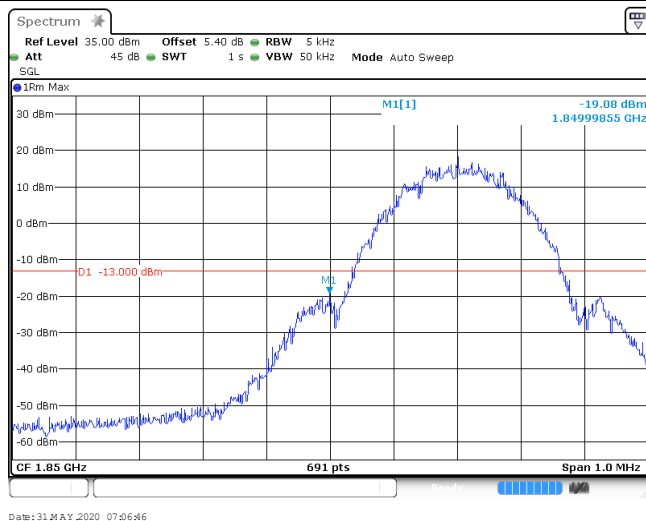
### EGPRS850\_251



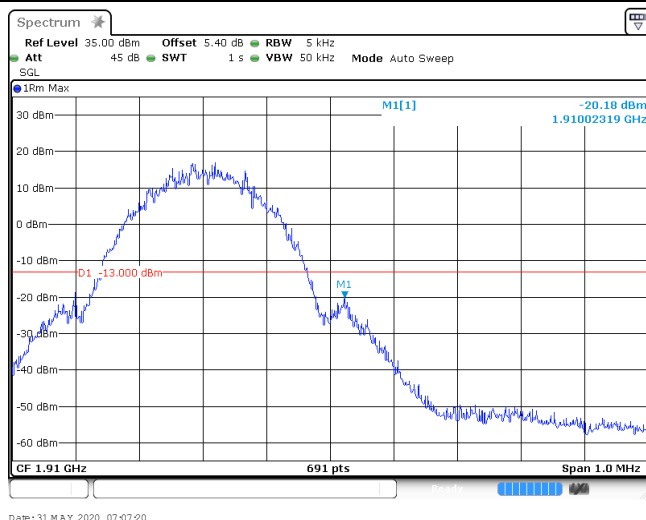
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### GSM1900\_512



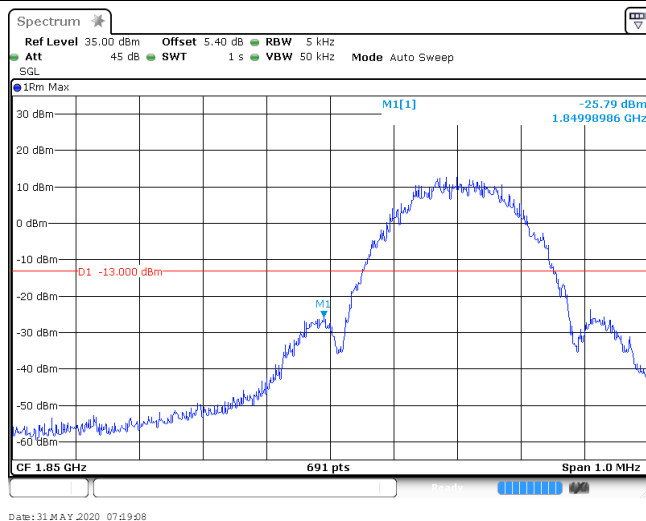
### GSM1900\_810



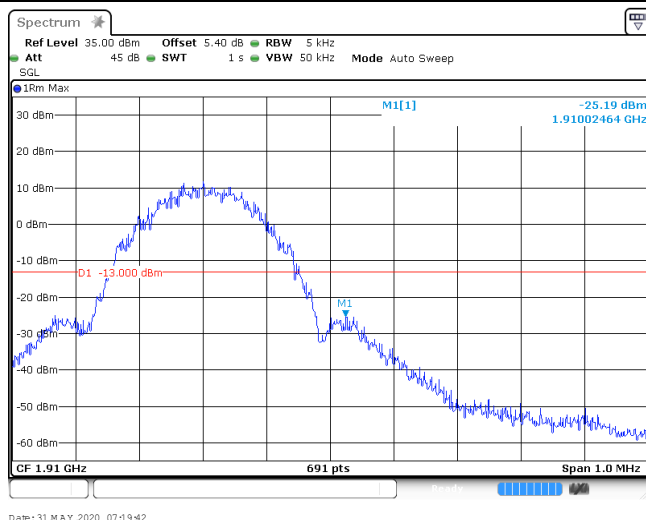
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

### EGPRS1900\_512



### EGPRS1900\_810



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

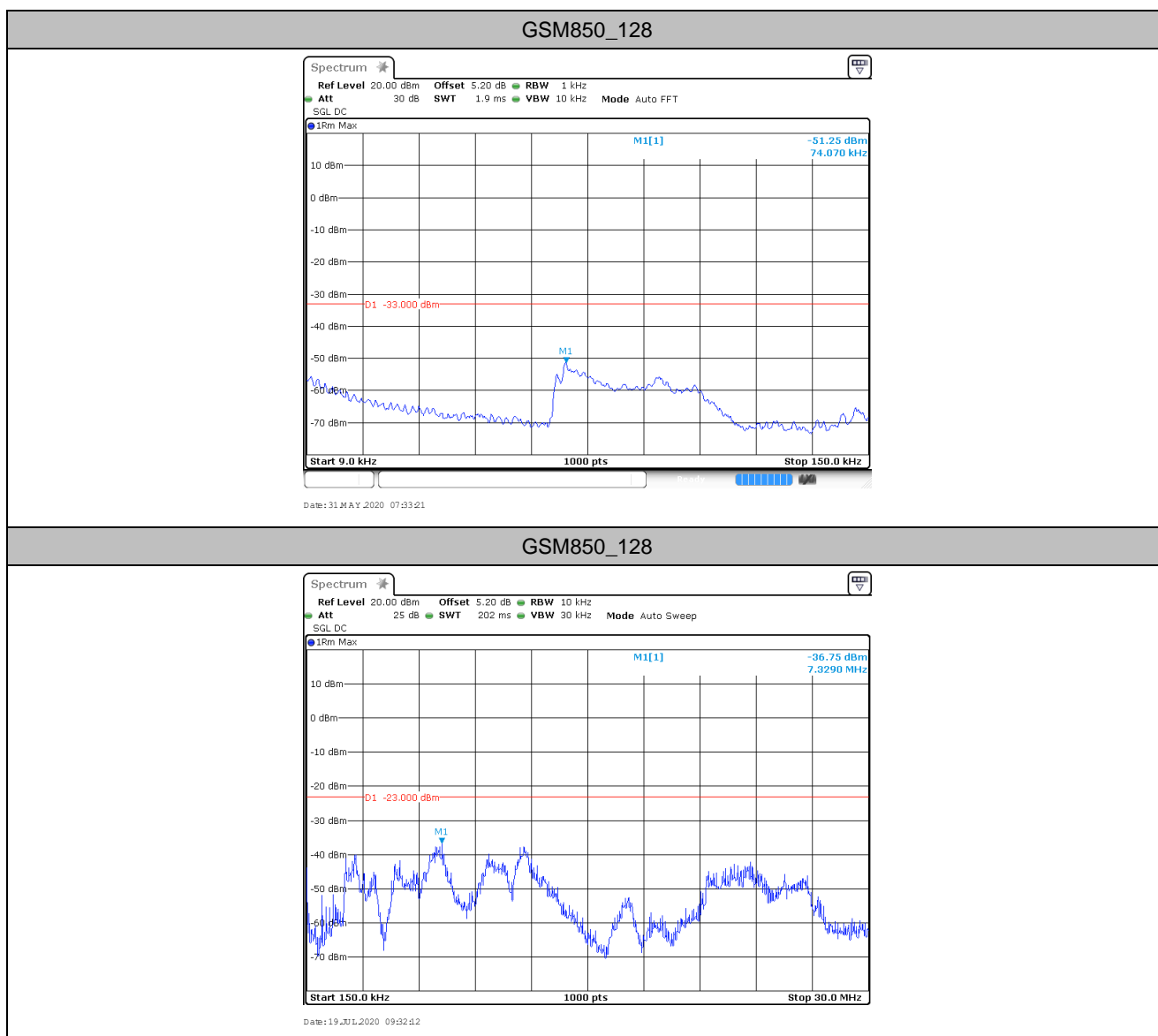


## 6. Spurious Emission at Antenna Terminal

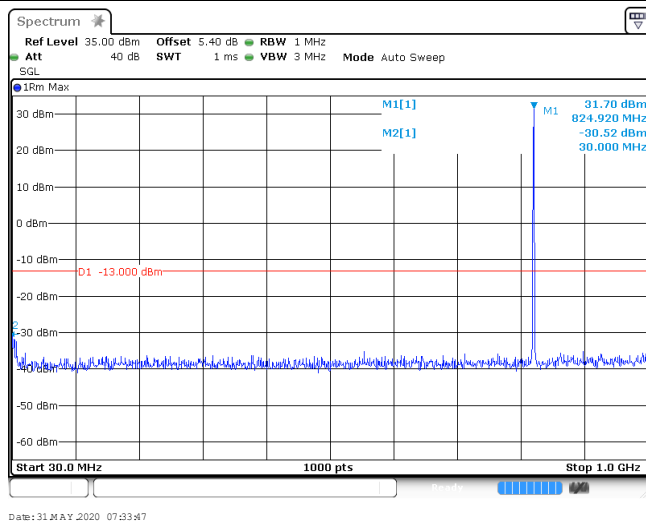
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of  $< RBW/2$  so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =  $k * (\text{Span} / RBW)$ " with  $k$  between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

### 6.1. Test Plots

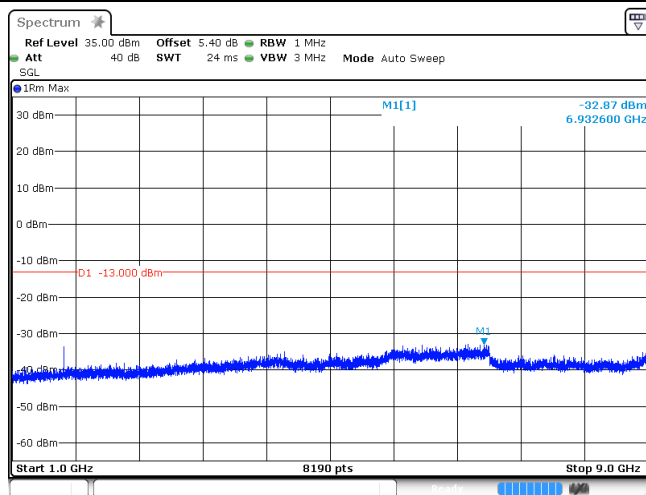


**GSM850\_128**



Date: 31 MAY 2020 07:33:47

**GSM850\_128**



Date: 31 MAY 2020 07:34:00

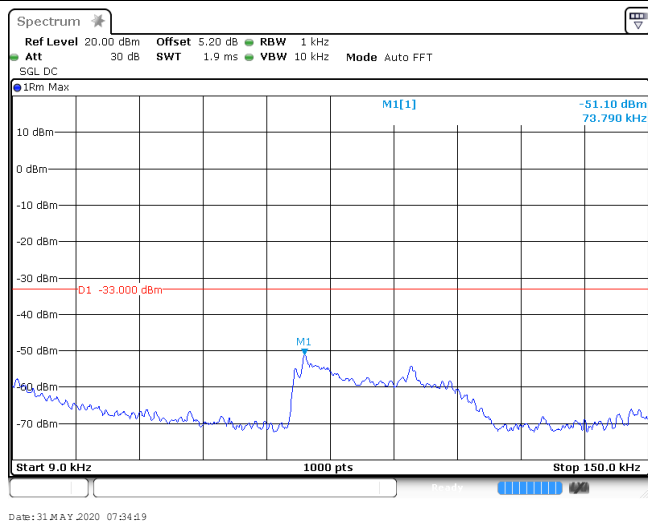


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

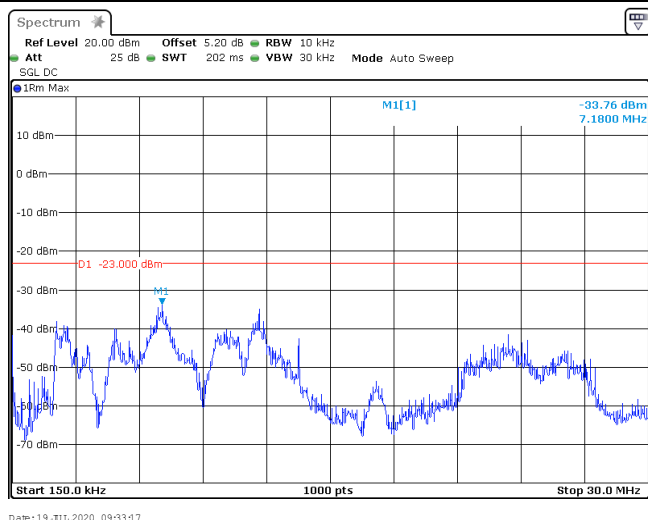
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

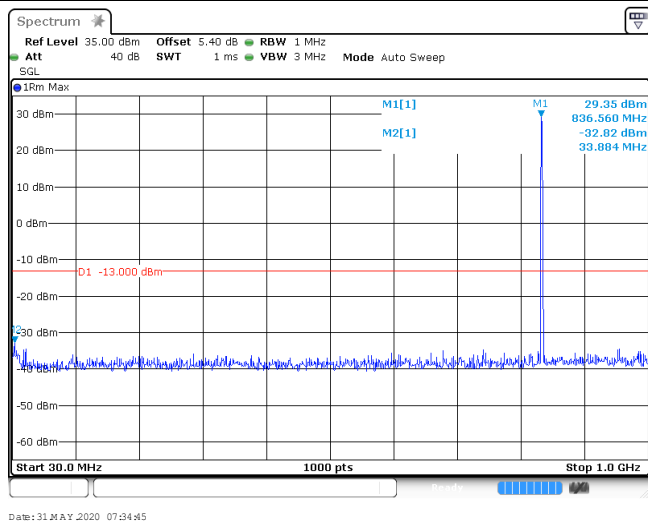
## GSM850\_190



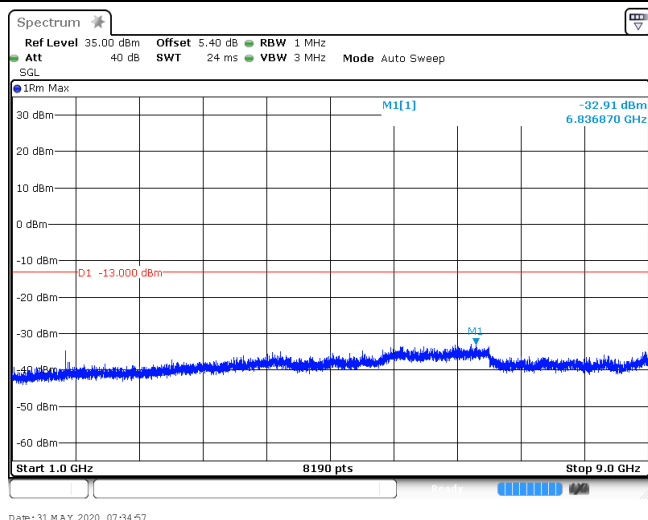
## GSM850\_190



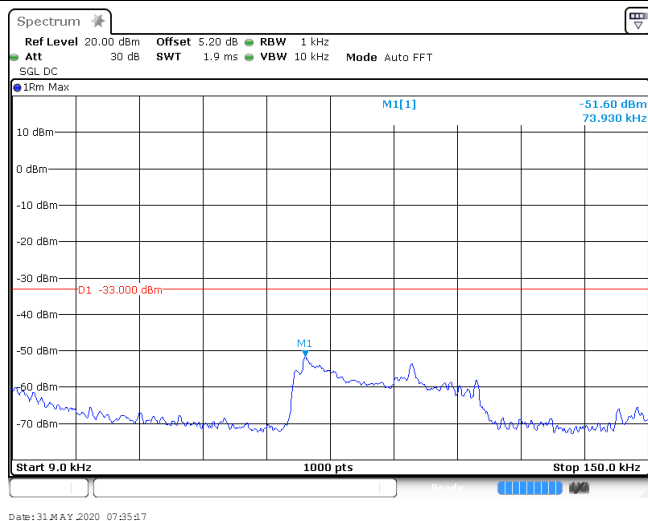
### GSM850\_190



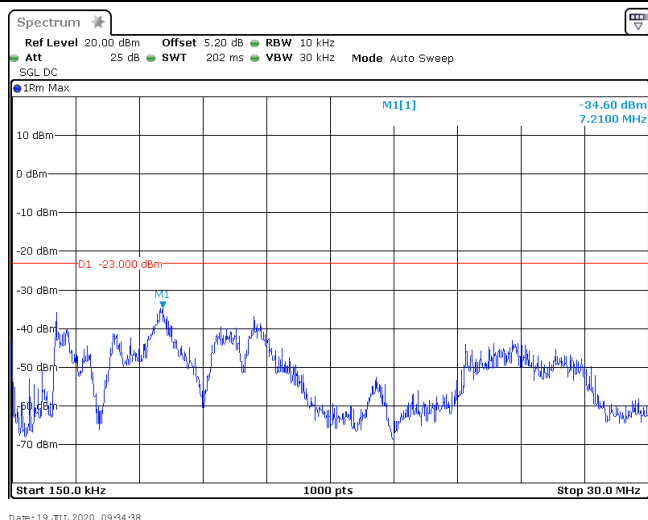
### GSM850\_190



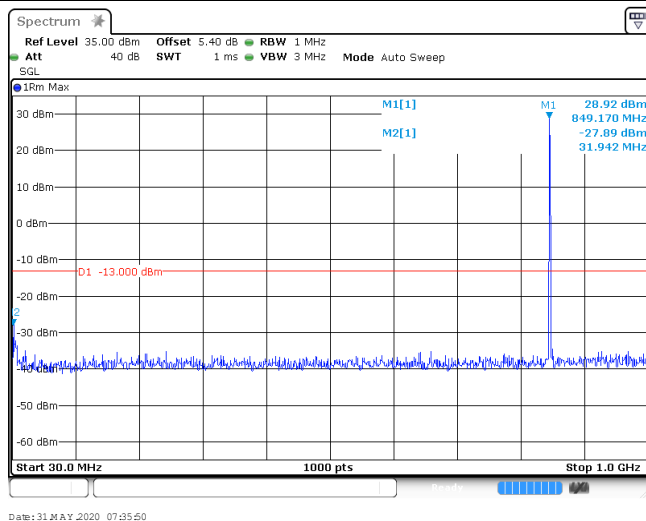
**GSM850\_251**



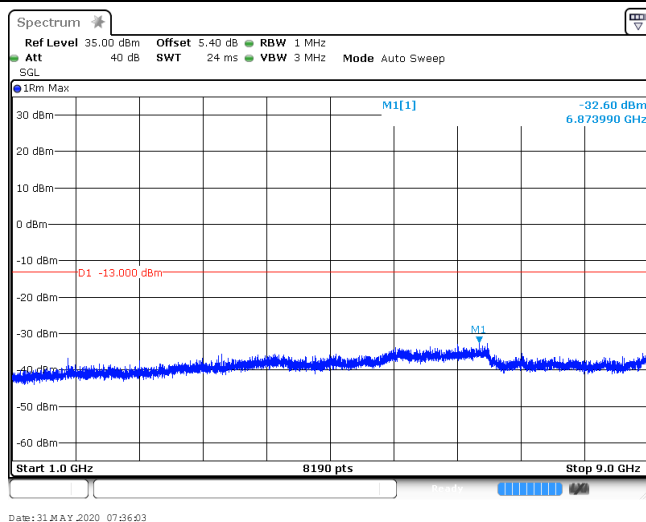
**GSM850\_251**



## GSM850\_251



## GSM850 251



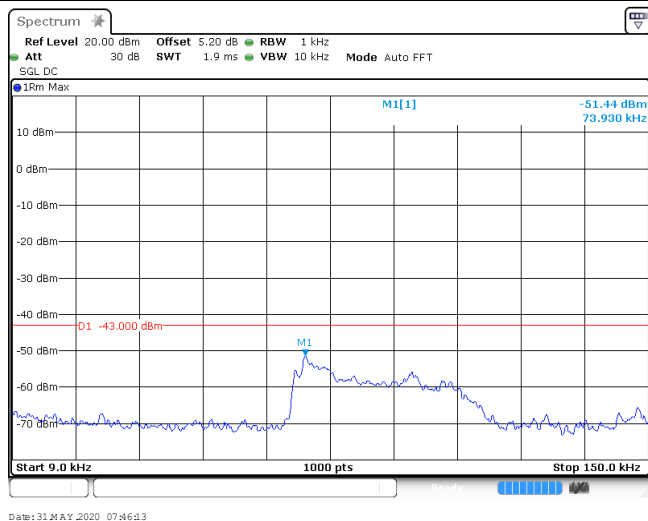
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed hereinafter, available on request or accessible at <http://www.sas.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to its Terms and Conditions for Electronic Documents available at <http://www.sas.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced in full, without the prior written approval of the Company. Any unauthorized translation, forgery, falsification of the content or alteration of this document is illegal and may be liable to criminal sanctions to the fullest extent of the law. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

**Attention:** To check the authenticity of testing/inspection report & certificate, please contact us at telephone: (86-755) 8307 1443.

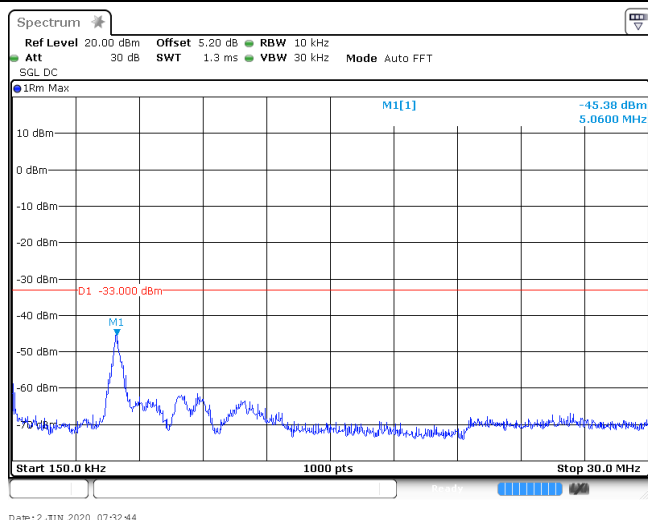
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

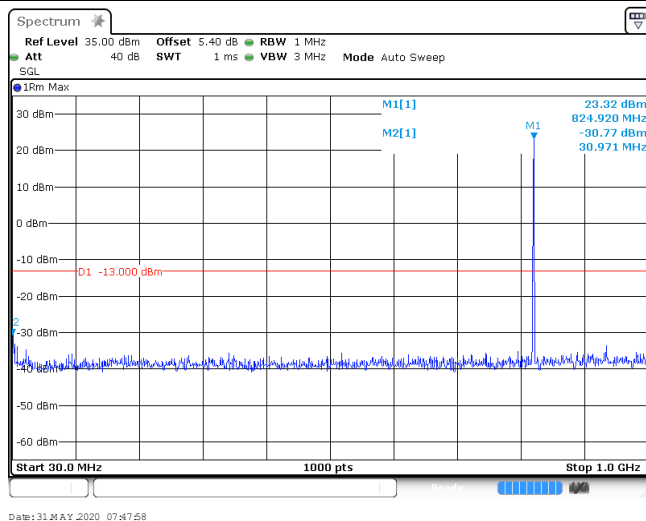
## EGPRS850\_128



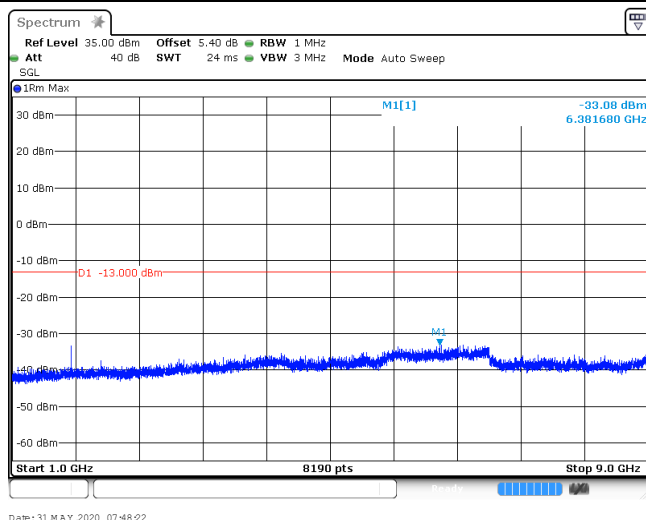
## EGPRS850\_128



EGPRS850\_128



EGPRS850\_128

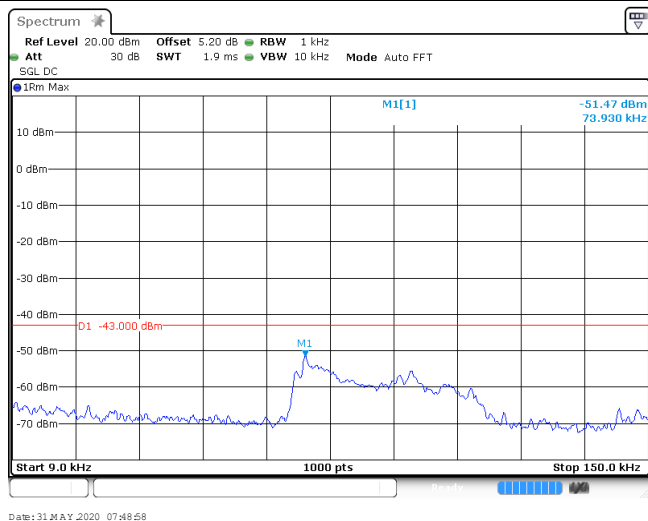


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

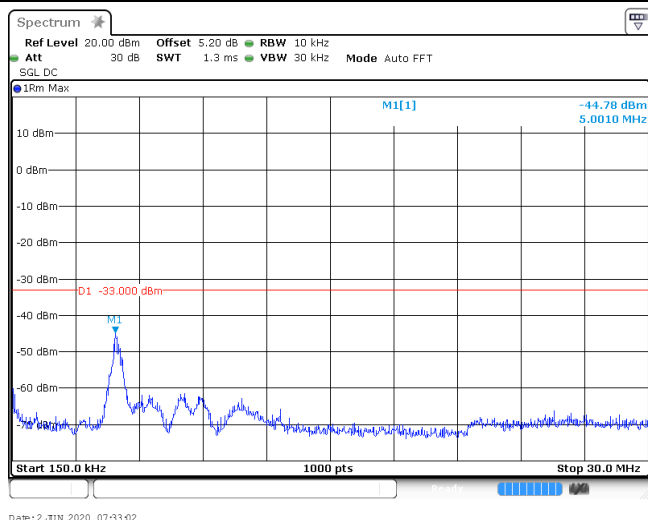
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center, EMC Laboratory.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

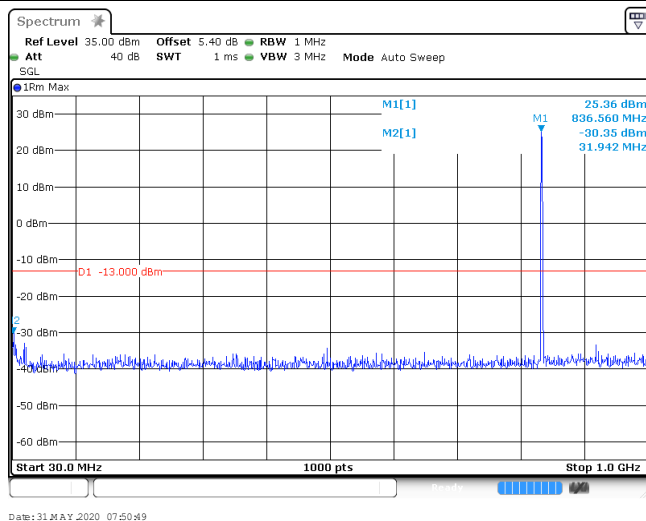
## EGPRS850\_190



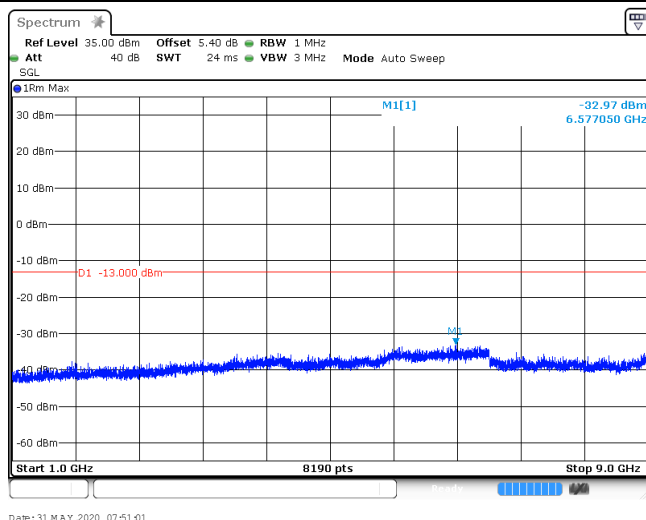
## EGPRS850\_190



EGPRS850\_190



EGPRS850\_190

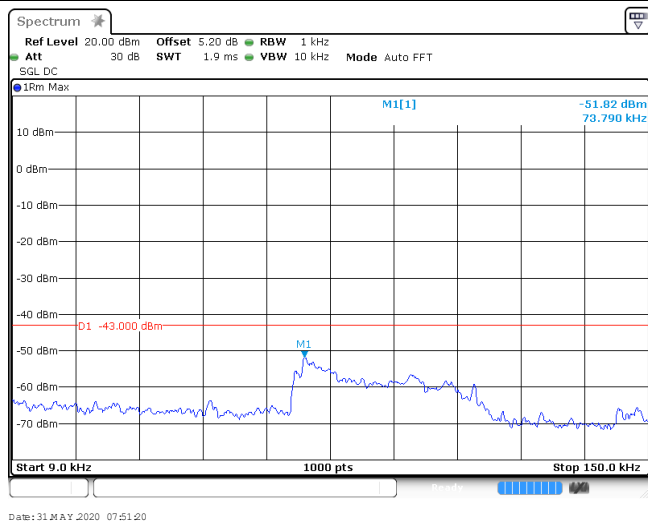


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

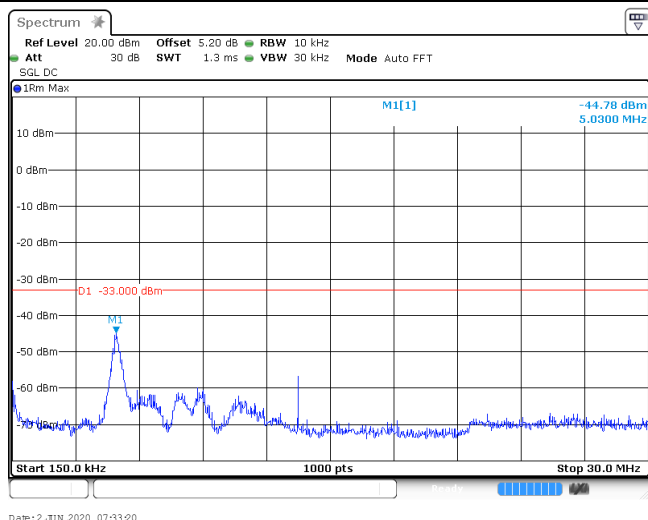
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

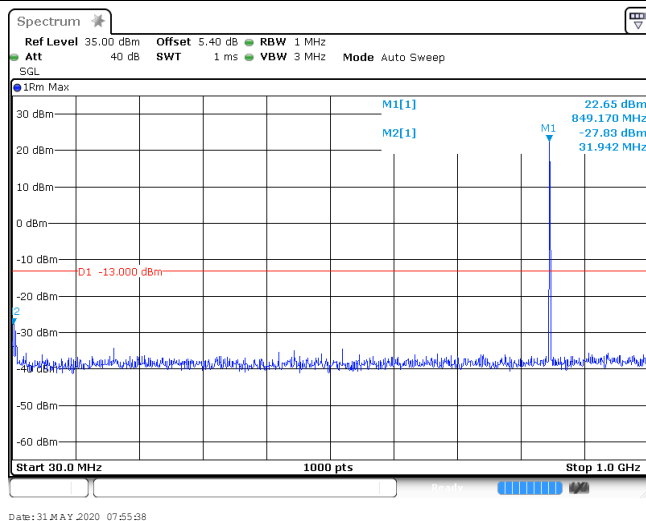
EGPRS850\_251



EGPRS850\_251

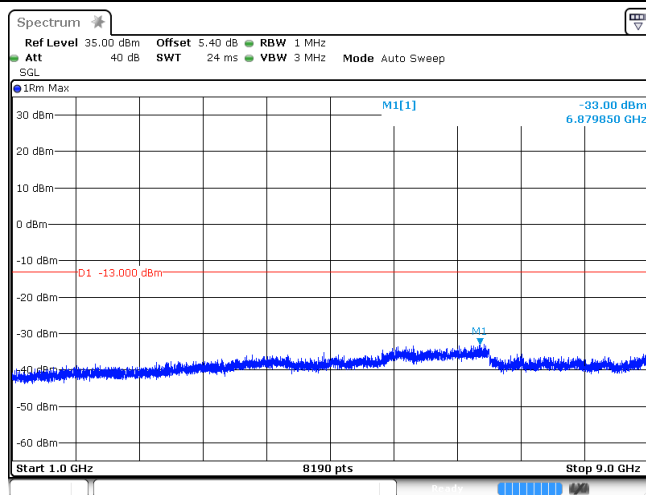


EGPRS850\_251



Date: 31 MAY 2020 07:55:58

EGPRS850\_251



Date: 31 MAY 2020 07:55:50



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

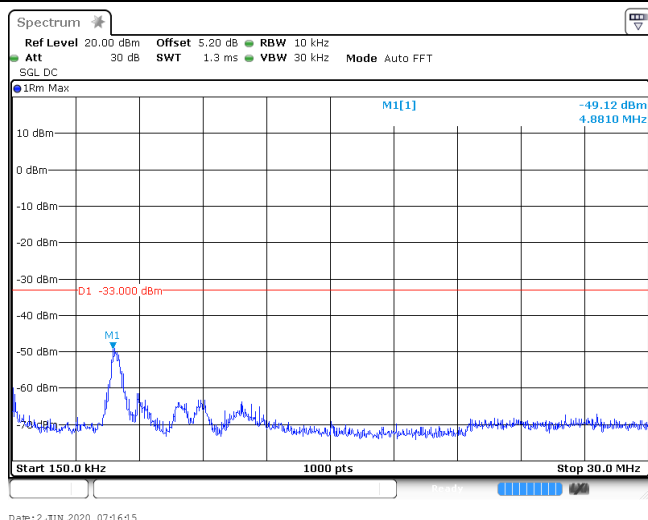
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### GSM1900\_512



Date: 31 MAY 2020 07:07:48

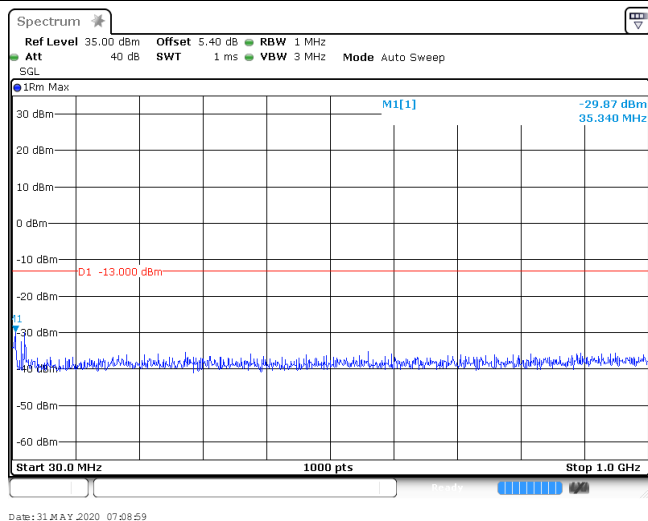
### GSM1900\_512



Date: 2 JUN 2020 07:16:15

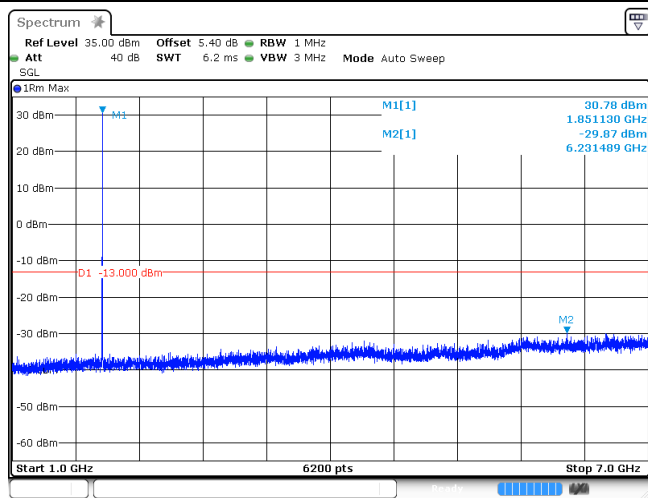


**GSM1900\_512**



Date: 31 MAY 2020 07:08:59

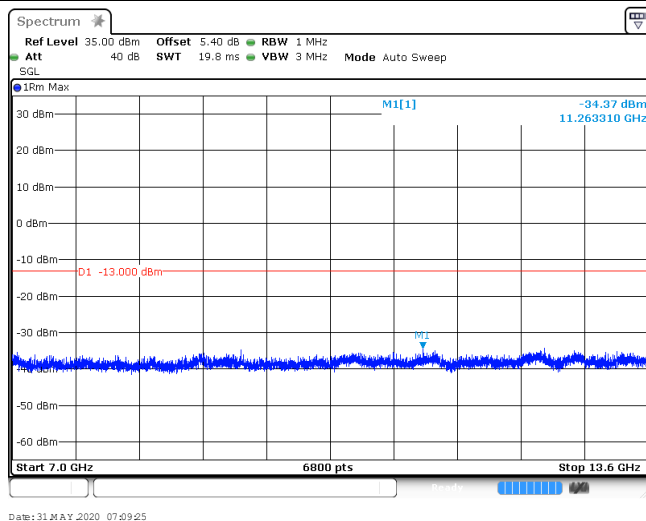
**GSM1900\_512**



Date: 31 MAY 2020 07:09:12

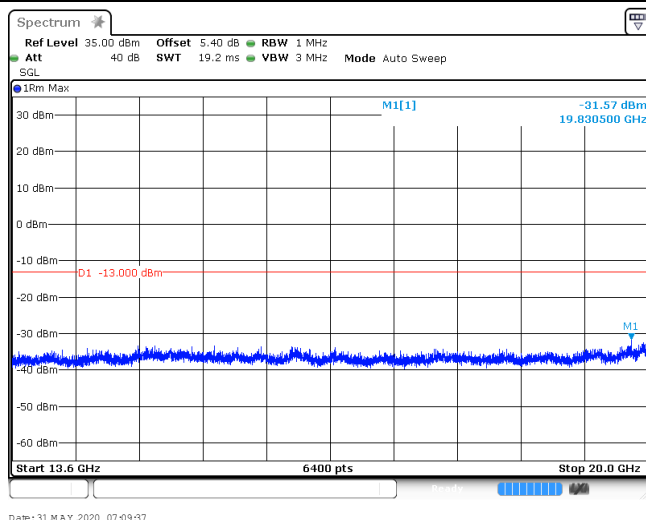


**GSM1900\_512**



Date: 31 MAY 2020 07:09:25

**GSM1900\_512**



Date: 31 MAY 2020 07:09:37

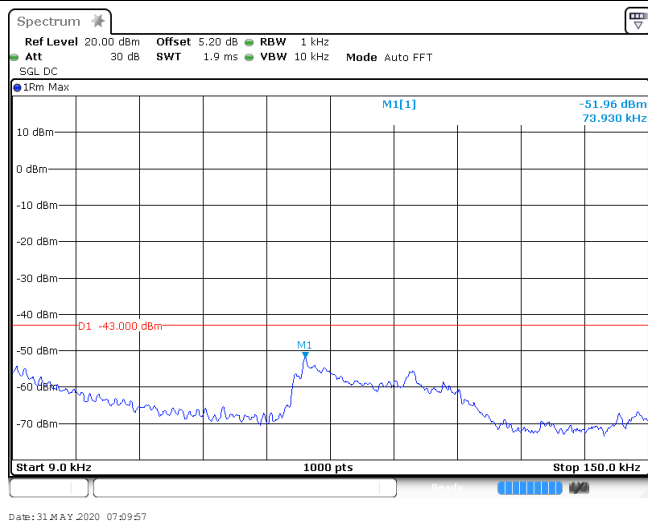


SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

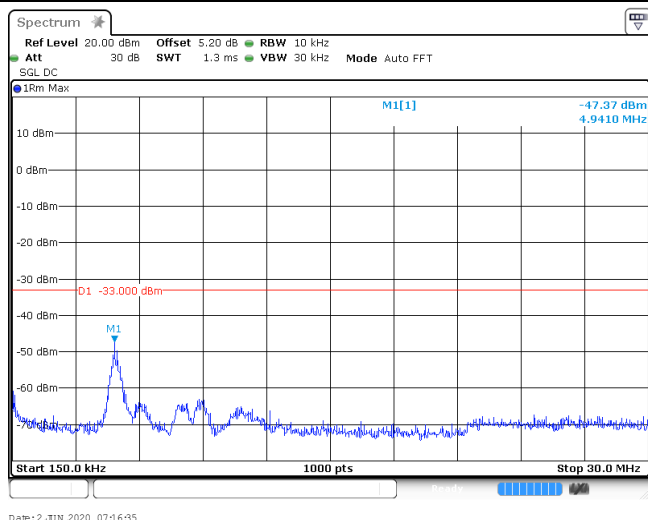
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

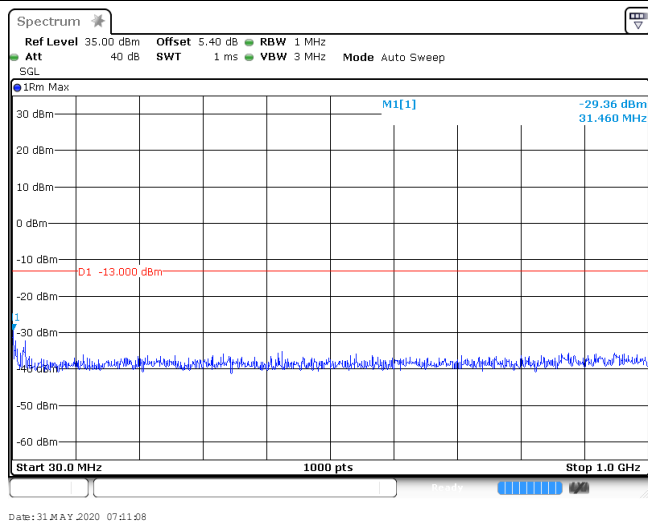
## GSM1900\_661



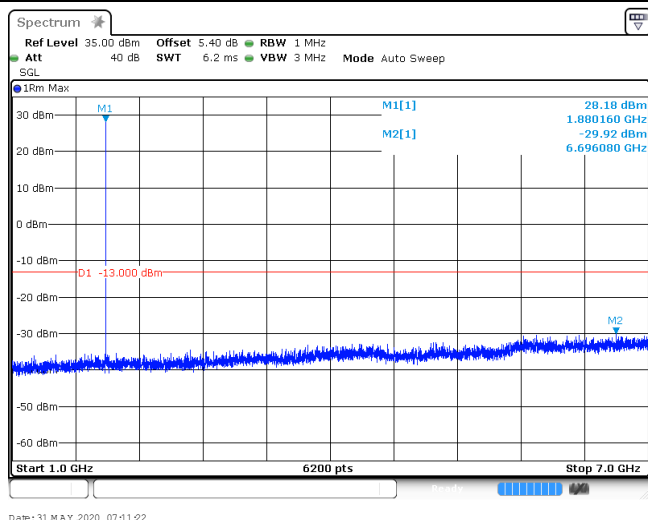
## GSM1900\_661



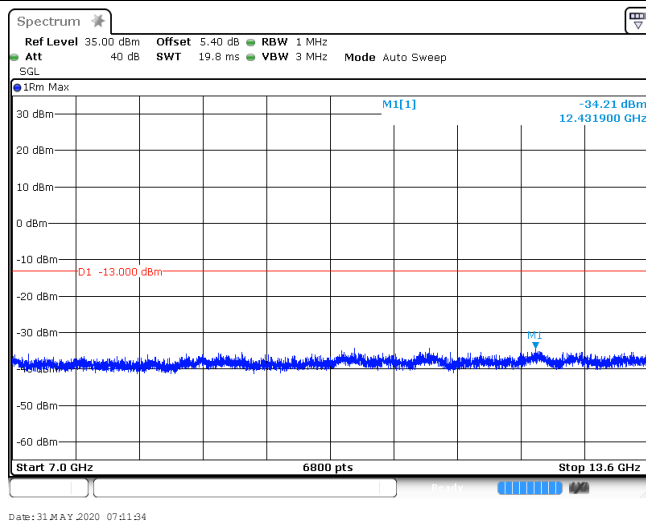
GSM1900\_661



GSM1900\_661

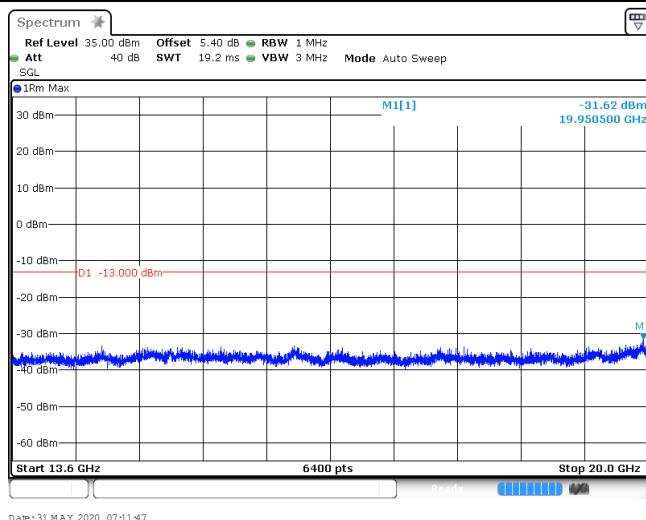


GSM1900\_661



Date: 31 MAY 2020 07:11:34

GSM1900\_661



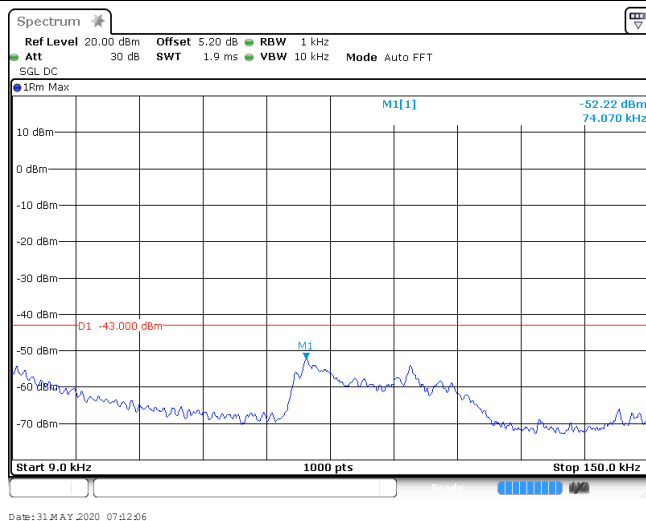
Date: 31 MAY 2020 07:11:47



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

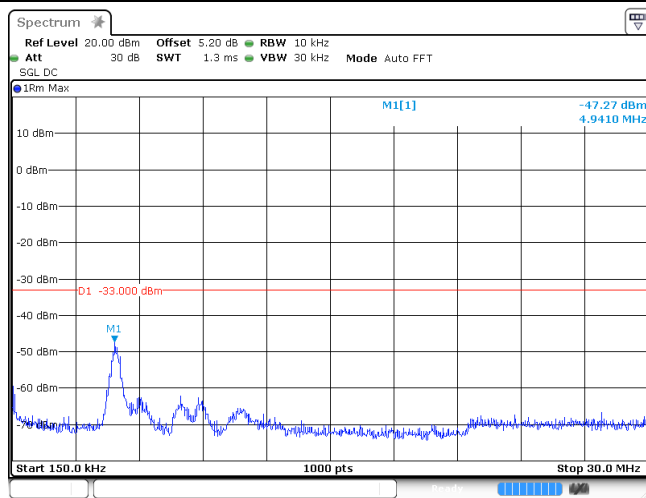
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

**GSM1900\_810**



Date: 31 MAY 2020 07:12:06

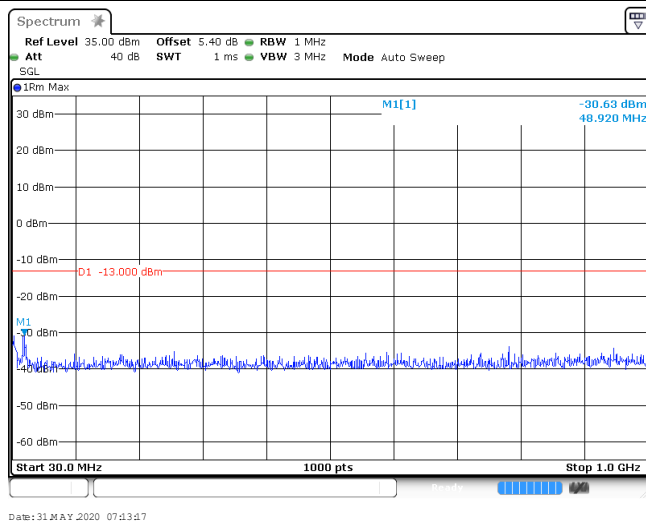
**GSM1900\_810**



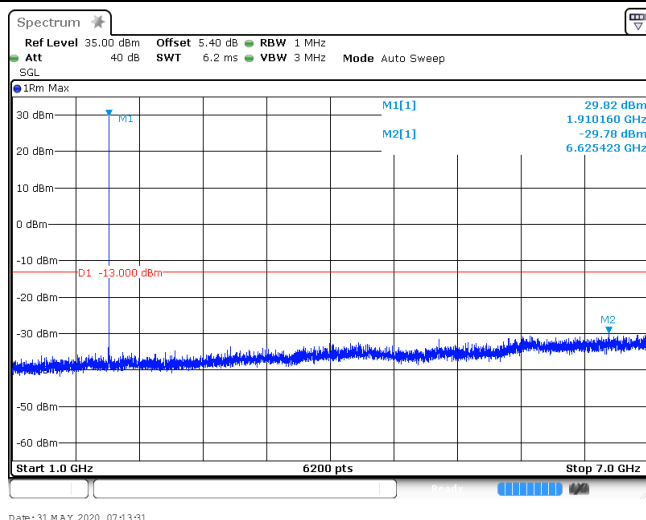
Date: 2 JUN 2020 07:16:54



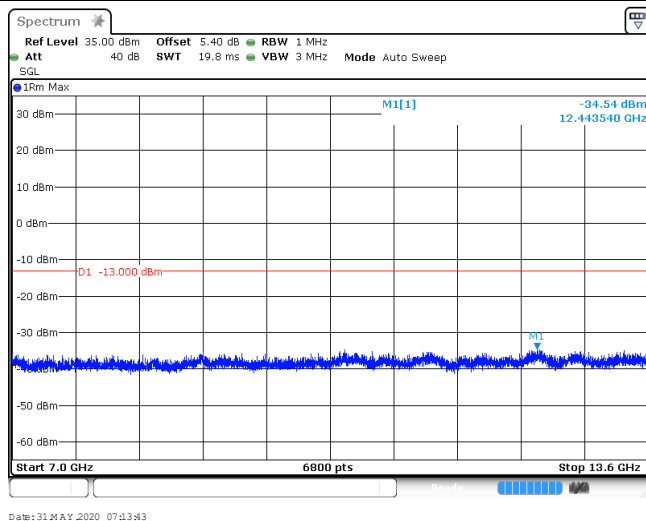
### GSM1900\_810



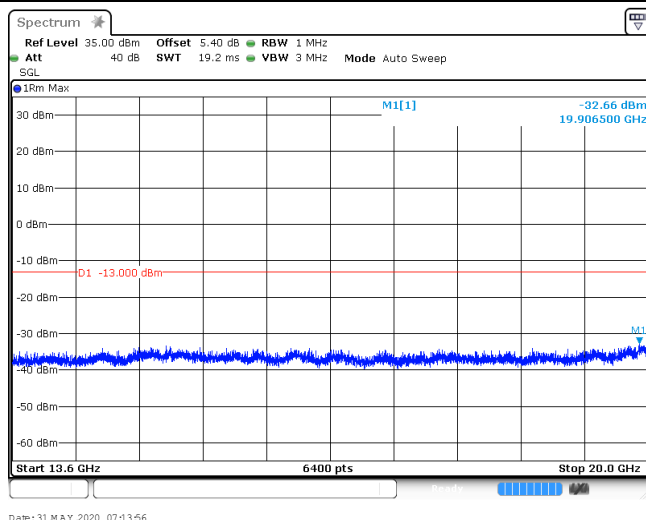
### GSM1900\_810



**GSM1900\_810**



**GSM1900\_810**

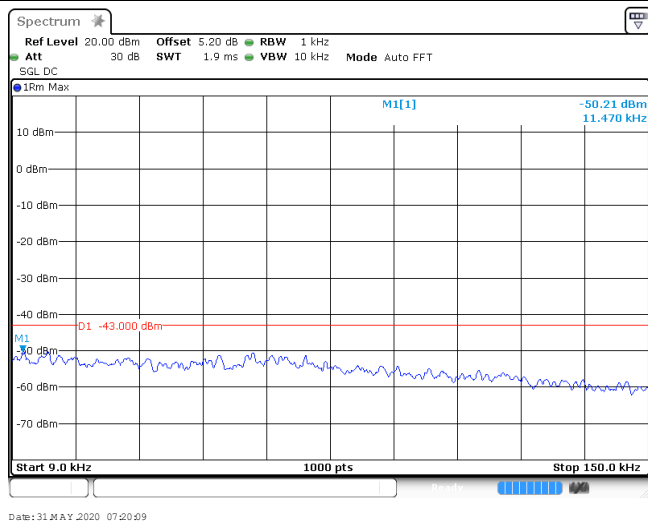


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

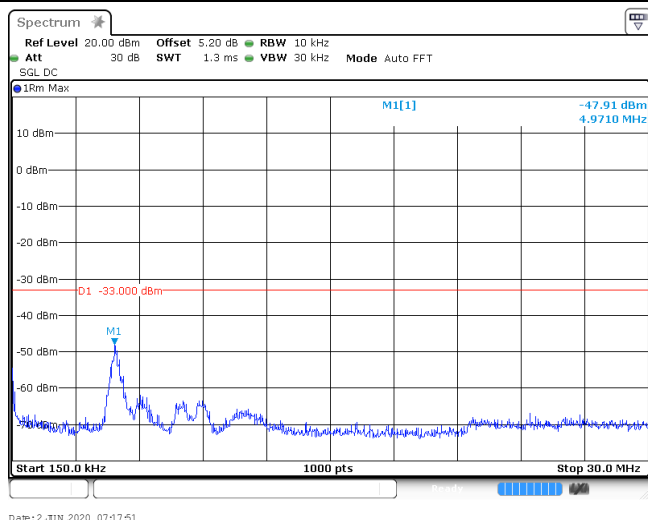
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

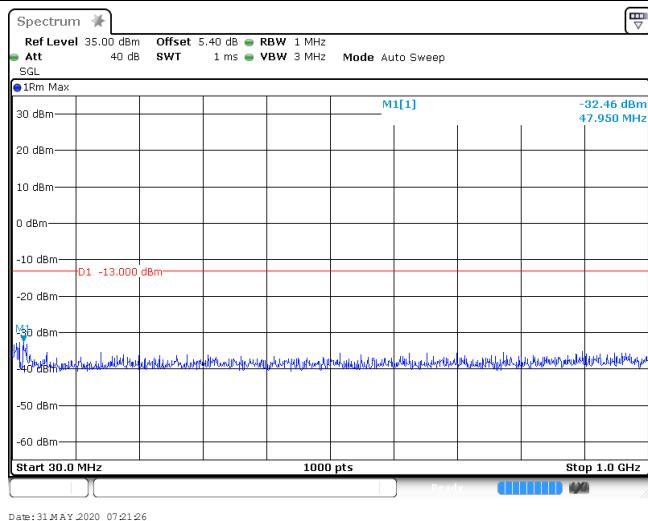
EGPRS1900\_512



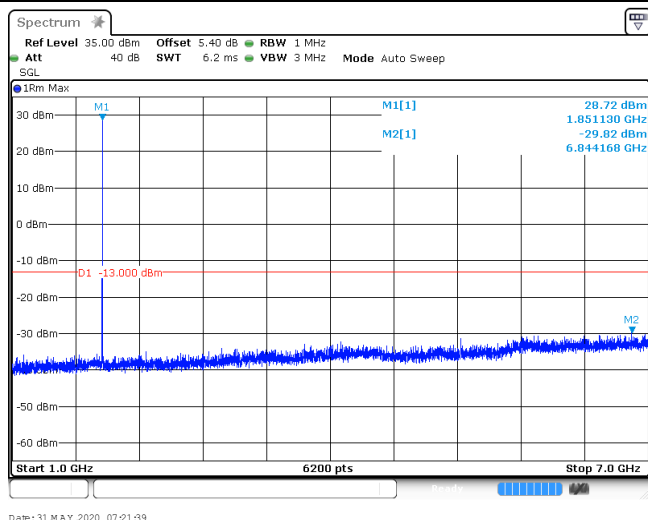
EGPRS1900\_512



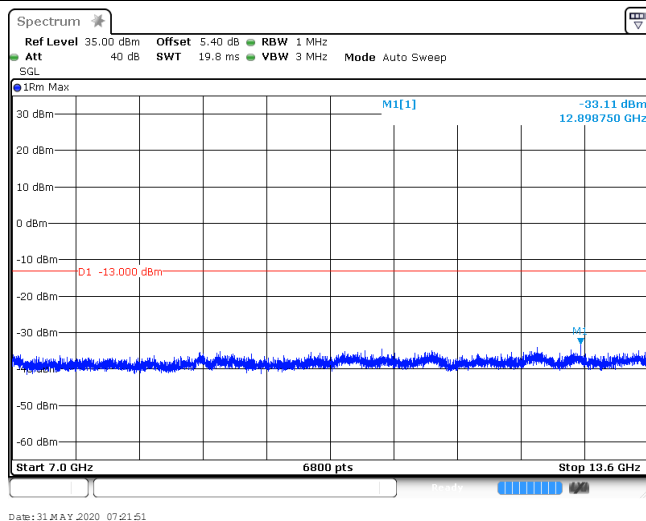
## EGPRS1900\_512



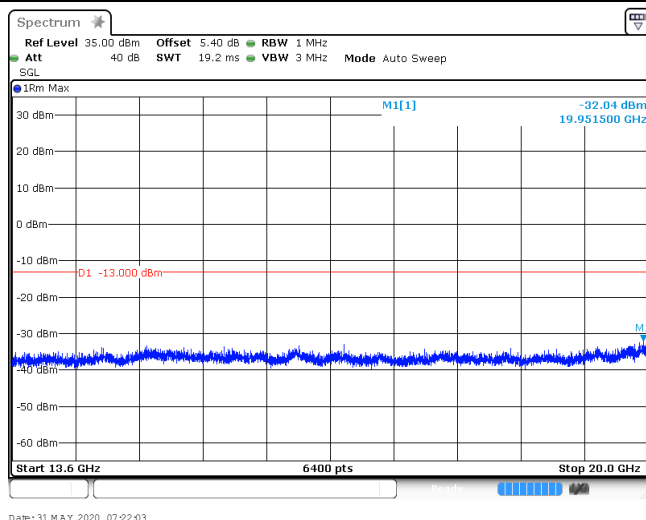
## EGPRS1900\_512



EGPRS1900\_512



EGPRS1900\_512

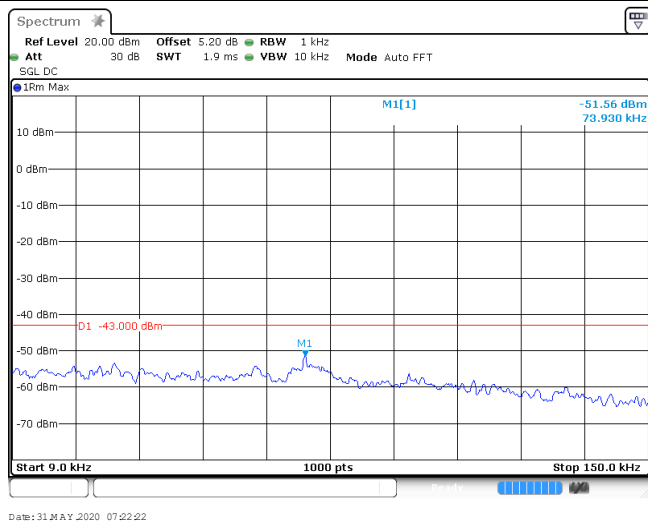


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

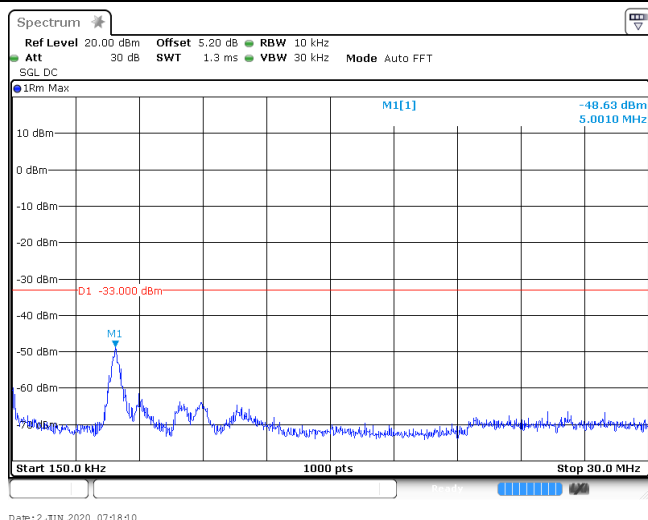
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

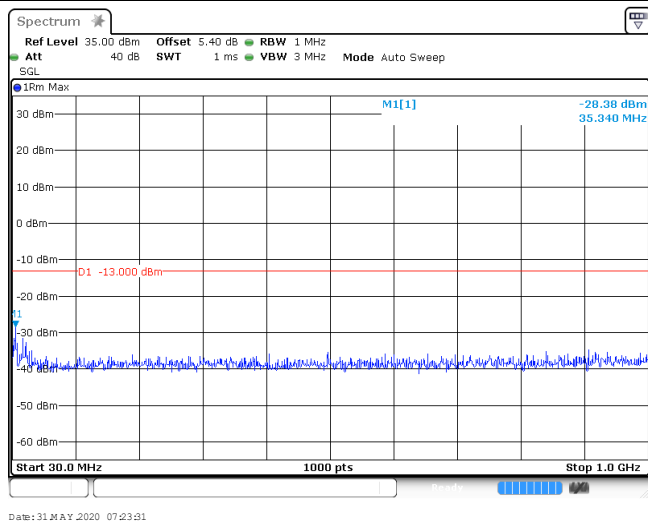
EGPRS1900\_661



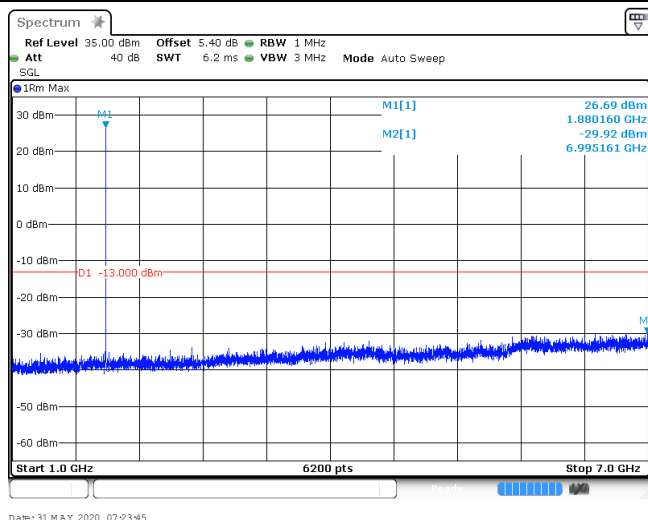
EGPRS1900\_661



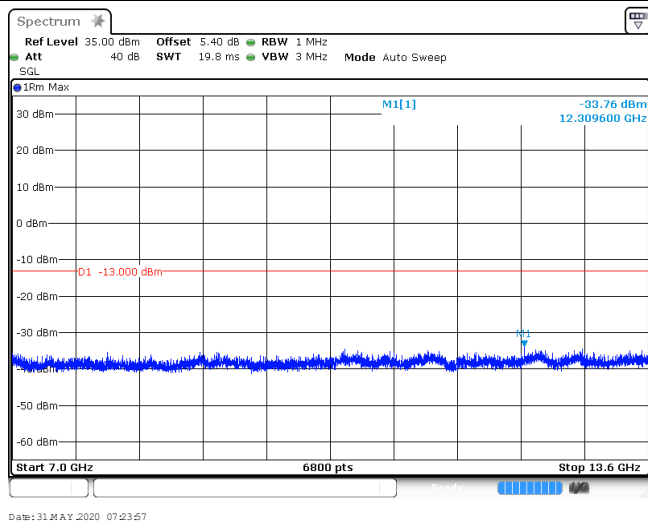
## EGPRS1900\_661



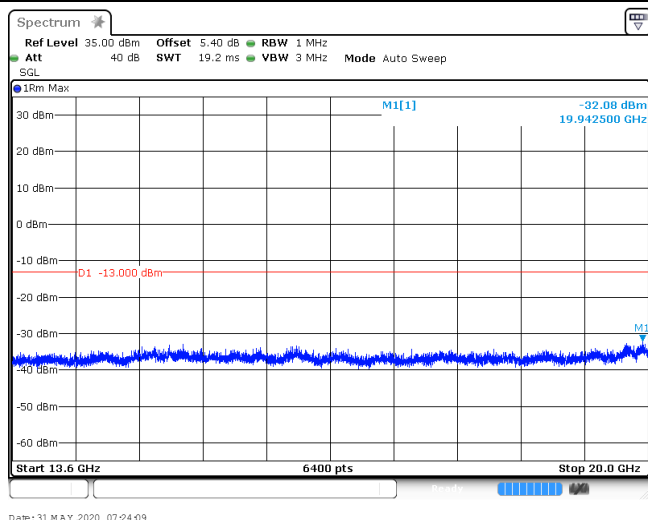
## EGPRS1900\_661



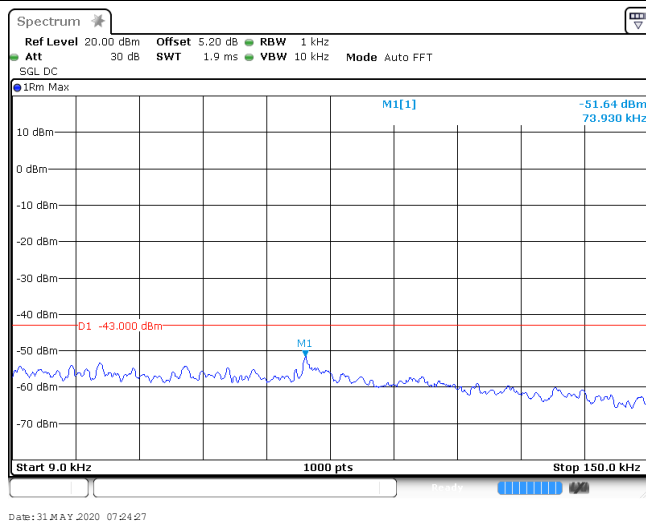
EGPRS1900\_661



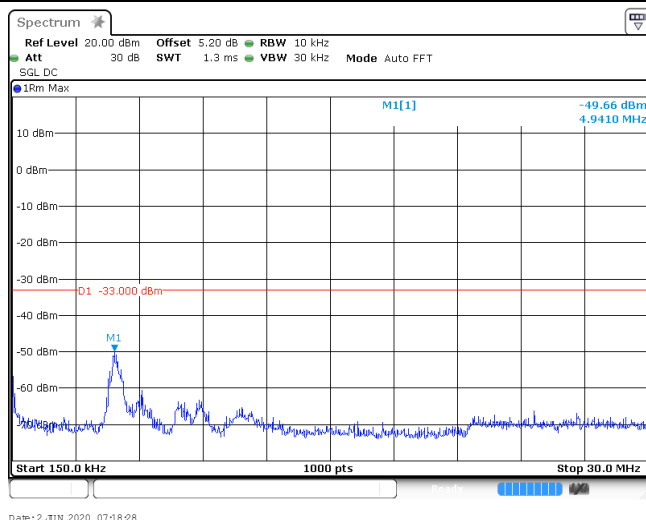
EGPRS1900\_661



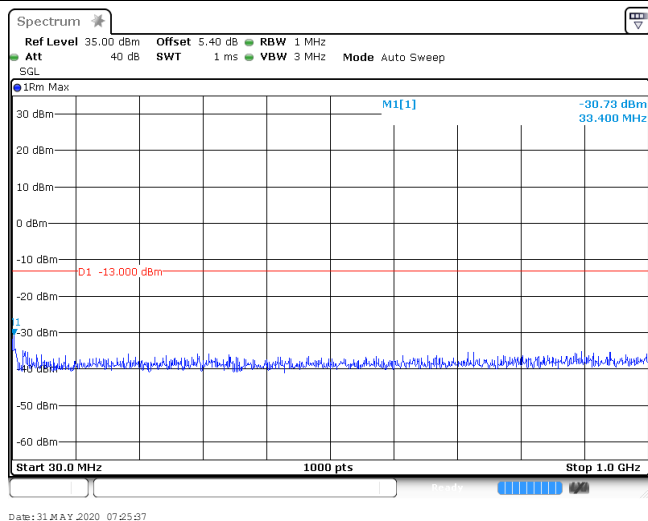
EGPRS1900\_810



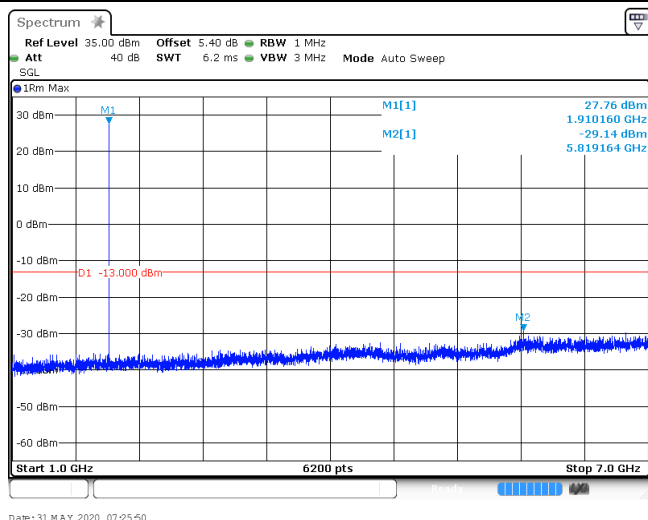
EGPRS1900\_810



EGPRS1900\_810



EGPRS1900\_810

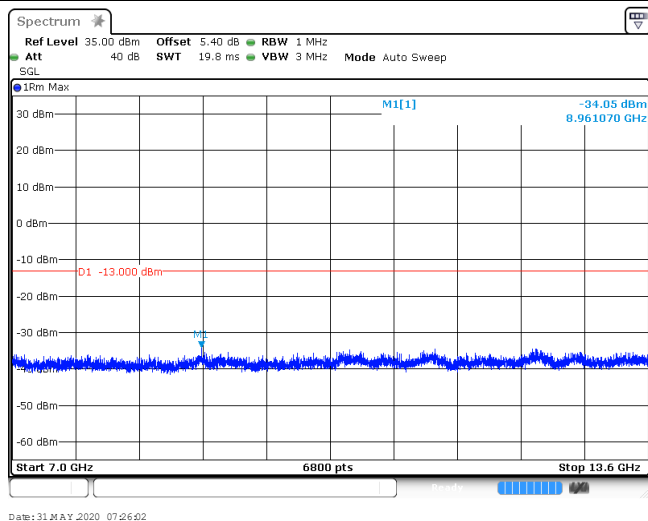


Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

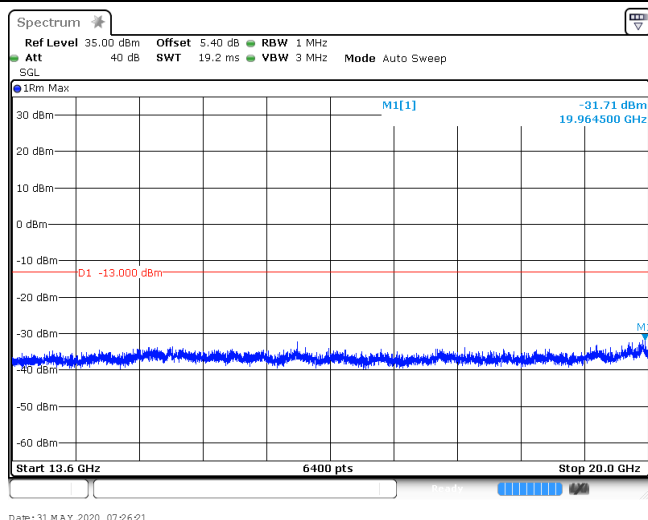
SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center, EMC Laboratory.

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

EGPRS1900\_810



EGPRS1900\_810



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

## 7. Field Strength of Spurious Radiation

### 7.1. Test Band = GSM 1900(Down Antenna)

#### 7.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.114000	-60.71	-13.00	47.71	192	234	Vertical
191.990000	-76.57	-13.00	63.57	282	128	Vertical
929.675000	-71.23	-13.00	58.23	209	107	Vertical
3700.000000	-55.90	-13.00	42.90	263	20	Vertical
5550.450000	-41.66	-13.00	28.66	208	141	Vertical
10653.400000	-50.57	-13.00	37.57	200	154	Vertical
65.453500	-61.56	-13.00	48.56	273	357	Horizontal
192.038500	-68.03	-13.00	55.03	291	284	Horizontal
942.188000	-71.42	-13.00	58.42	264	62	Horizontal
3761.600000	-56.69	-13.00	43.69	200	115	Horizontal
5550.100000	-45.54	-13.00	32.54	238	131	Horizontal
7339.300000	-53.08	-13.00	40.08	168	97	Horizontal

#### 7.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.065500	-60.39	-13.00	47.39	195	98	Vertical
191.844500	-77.54	-13.00	64.54	265	86	Vertical
955.040500	-71.16	-13.00	58.16	224	48	Vertical
3759.850000	-54.96	-13.00	41.96	231	307	Vertical
5639.700000	-40.44	-13.00	27.44	256	27	Vertical
10627.962500	-50.61	-13.00	37.61	233	60	Vertical
65.696000	-63.58	-13.00	50.58	258	290	Horizontal
191.844500	-68.93	-13.00	55.93	241	326	Horizontal
959.017500	-70.55	-13.00	57.55	188	267	Horizontal
3759.850000	-53.33	-13.00	40.33	214	252	Horizontal
5639.700000	-47.50	-13.00	34.50	181	178	Horizontal
7614.050000	-53.54	-13.00	40.54	175	271	Horizontal



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 7.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
66.617500	-60.87	-13.00	47.87	169	120	Vertical
191.941500	-77.56	-13.00	64.56	244	354	Vertical
946.650000	-72.07	-13.00	59.07	216	237	Vertical
3957.950000	-57.33	-13.00	44.33	253	86	Vertical
5729.300000	-44.69	-13.00	31.69	158	162	Vertical
7962.300000	-52.75	-13.00	39.75	234	86	Vertical
65.065500	-62.24	-13.00	49.24	166	96	Horizontal
192.038500	-67.94	-13.00	54.94	256	83	Horizontal
942.430500	-71.66	-13.00	58.66	197	347	Horizontal
3819.000000	-51.14	-13.00	38.14	225	273	Horizontal
5728.950000	-48.03	-13.00	35.03	206	13	Horizontal
10610.225000	-49.94	-13.00	36.94	296	91	Horizontal

## 7.2. Test Band = GSM 850(Down Antenna)

### 7.2.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.647500	-60.35	-13.00	47.35	287	125	Vertical
191.941500	-76.19	-13.00	63.19	269	238	Vertical
1669.050000	-55.52	-13.00	42.52	282	92	Vertical
2462.250000	-50.46	-13.00	37.46	183	205	Vertical
4145.200000	-56.01	-13.00	43.01	281	256	Vertical
6519.600000	-54.58	-13.00	41.58	154	85	Vertical
65.599000	-62.74	-13.00	49.74	153	296	Horizontal
191.844500	-68.10	-13.00	55.10	259	227	Horizontal
1665.900000	-56.64	-13.00	43.64	206	260	Horizontal
2469.825000	-49.82	-13.00	36.82	256	126	Horizontal
4171.800000	-56.16	-13.00	43.16	232	237	Horizontal
5455.250000	-54.80	-13.00	41.80	208	115	Horizontal



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

### 7.2.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.453500	-60.52	-13.00	47.52	209	101	Vertical
191.699000	-76.99	-13.00	63.99	220	143	Vertical
1625.700000	-56.24	-13.00	43.24	274	316	Vertical
2502.825000	-49.87	-13.00	36.87	165	119	Vertical
3457.100000	-57.38	-13.00	44.38	231	238	Vertical
4726.550000	-55.54	-13.00	42.54	248	338	Vertical
65.211000	-63.09	-13.00	50.09	206	240	Horizontal
191.844500	-67.39	-13.00	54.39	244	71	Horizontal
1623.075000	-56.69	-13.00	43.69	232	122	Horizontal
2546.775000	-50.68	-13.00	37.68	175	203	Horizontal
3285.600000	-57.90	-13.00	44.90	287	110	Horizontal
4327.900000	-55.06	-13.00	42.06	233	341	Horizontal

### 7.2.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.647500	-61.07	-13.00	48.07	232	99	Vertical
191.844500	-77.13	-13.00	64.13	271	67	Vertical
1673.475000	-56.56	-13.00	43.56	234	358	Vertical
2506.275000	-50.26	-13.00	37.26	258	283	Vertical
4185.800000	-56.38	-13.00	43.38	190	308	Vertical
6738.350000	-53.74	-13.00	40.74	194	14	Vertical
65.938500	-62.93	-13.00	49.93	241	220	Horizontal
191.844500	-67.93	-13.00	54.93	207	131	Horizontal
1761.000000	-55.20	-13.00	42.20	154	285	Horizontal
2603.925000	-50.32	-13.00	37.32	175	282	Horizontal
4297.100000	-55.45	-13.00	42.45	230	44	Horizontal
6867.500000	-53.20	-13.00	40.20	233	98	Horizontal





### 7.3. Test Band = GSM 1900(Up Antenna)

#### 7.3.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.647500	-61.52	-13.00	48.52	175	243	Vertical
191.893000	-76.98	-13.00	63.98	298	28	Vertical
935.252500	-71.61	-13.00	58.61	156	255	Vertical
3700.000000	-55.16	-13.00	42.16	213	199	Vertical
5550.450000	-41.49	-13.00	28.49	197	118	Vertical
10711.287500	-50.26	-13.00	37.26	226	211	Vertical
65.308000	-63.44	-13.00	50.44	257	182	Horizontal
192.087000	-67.97	-13.00	54.97	277	46	Horizontal
949.220500	-71.08	-13.00	58.08	187	217	Horizontal
3700.000000	-54.59	-13.00	41.59	214	44	Horizontal
5550.800000	-39.49	-13.00	26.49	168	131	Horizontal
7836.650000	-52.90	-13.00	39.90	263	58	Horizontal

#### 7.3.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.696000	-60.42	-13.00	47.42	278	285	Vertical
191.941500	-77.69	-13.00	64.69	205	274	Vertical
951.597000	-71.22	-13.00	58.22	193	290	Vertical
3828.100000	-56.99	-13.00	43.99	171	155	Vertical
5639.700000	-41.50	-13.00	28.50	268	300	Vertical
10470.662500	-50.32	-13.00	37.32	233	147	Vertical
66.084000	-63.15	-13.00	50.15	257	286	Horizontal
192.087000	-68.19	-13.00	55.19	157	270	Horizontal
969.251000	-71.05	-13.00	58.05	160	277	Horizontal
3760.200000	-54.16	-13.00	41.16	249	100	Horizontal
5639.700000	-43.92	-13.00	30.92	188	218	Horizontal
7964.750000	-52.72	-13.00	39.72	152	37	Horizontal



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



### 7.3.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.550500	-62.36	-13.00	49.36	165	159	Vertical
191.941500	-77.71	-13.00	64.71	277	267	Vertical
948.638500	-71.61	-13.00	58.61	284	259	Vertical
3819.350000	-53.62	-13.00	40.62	263	314	Vertical
5729.650000	-46.13	-13.00	33.13	226	338	Vertical
10622.462500	-50.81	-13.00	37.81	214	231	Vertical
65.453500	-63.67	-13.00	50.67	214	167	Horizontal
191.990000	-67.70	-13.00	54.70	204	288	Horizontal
951.791000	-70.71	-13.00	57.71	205	299	Horizontal
3819.350000	-52.53	-13.00	39.53	275	239	Horizontal
5730.000000	-43.47	-13.00	30.47	204	251	Horizontal
7854.500000	-52.41	-13.00	39.41	170	160	Horizontal

### 7.4. Test Band = GSM 850(Up Antenna)

#### 7.4.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
66.375000	-62.32	-13.00	49.32	298	108	Vertical
191.893000	-78.26	-13.00	65.26	236	127	Vertical
612.679000	-77.75	-13.00	64.75	248	174	Vertical
1621.425000	-56.53	-13.00	43.53	191	248	Vertical
2599.575000	-49.98	-13.00	36.98	279	282	Vertical
3357.000000	-57.41	-13.00	44.41	232	297	Vertical
65.453500	-63.44	-13.00	50.44	229	103	Horizontal
191.844500	-68.65	-13.00	55.65	245	325	Horizontal
1672.050000	-56.40	-13.00	43.40	244	196	Horizontal
2597.850000	-50.25	-13.00	37.25	151	231	Horizontal
4348.550000	-55.69	-13.00	42.69	188	256	Horizontal
6765.650000	-53.86	-13.00	40.86	297	221	Horizontal



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center EEC Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

#### 7.4.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
66.472000	-60.78	-13.00	47.78	162	37	Vertical
191.990000	-78.37	-13.00	65.37	147	280	Vertical
607.392500	-78.31	-13.00	65.31	168	159	Vertical
1670.775000	-56.48	-13.00	43.48	159	134	Vertical
2589.750000	-48.64	-13.00	35.64	231	177	Vertical
4187.550000	-55.73	-13.00	42.73	281	265	Vertical
65.599000	-62.43	-13.00	49.43	139	278	Horizontal
192.038500	-67.81	-13.00	54.81	177	254	Horizontal
1719.300000	-54.69	-13.00	41.69	199	162	Horizontal
2464.125000	-50.87	-13.00	37.87	204	195	Horizontal
4235.150000	-55.23	-13.00	42.23	208	136	Horizontal
6511.900000	-54.37	-13.00	41.37	179	111	Horizontal

#### 7.4.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Height [cm]	Angle [°]	Polarization
65.162500	-61.67	-13.00	48.67	157	89	Vertical
191.941500	-78.62	-13.00	65.62	163	23	Vertical
1677.375000	-56.06	-13.00	43.06	158	157	Vertical
2552.700000	-50.37	-13.00	37.37	260	130	Vertical
4210.650000	-56.37	-13.00	43.37	169	297	Vertical
6433.150000	-54.36	-13.00	41.36	168	0	Vertical
65.308000	-64.41	-13.00	51.41	154	310	Horizontal
191.844500	-68.43	-13.00	55.43	230	304	Horizontal
1668.750000	-56.88	-13.00	43.88	241	23	Horizontal
2600.700000	-50.18	-13.00	37.18	267	180	Horizontal
4365.350000	-55.61	-13.00	42.61	273	136	Horizontal
6541.650000	-54.53	-13.00	41.53	168	174	Horizontal

Remark:

- 1) According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2) The disturbance above 12.75GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



## 8. Frequency Stability

### 8.1. Frequency Error Vs Voltage

Voltage							
BAND	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VL	TN	10.10	0.012254	±2.5	PASS
GSM850	128	VN	TN	-4.98	-0.006048	±2.5	PASS
GSM850	128	VH	TN	2.83	0.003437	±2.5	PASS
GSM850	190	VL	TN	8.69	0.010388	±2.5	PASS
GSM850	190	VN	TN	-2.61	-0.003115	±2.5	PASS
GSM850	190	VH	TN	-11.36	-0.013573	±2.5	PASS
GSM850	251	VL	TN	4.41	0.005192	±2.5	PASS
GSM850	251	VN	TN	2.85	0.003358	±2.5	PASS
GSM850	251	VH	TN	13.12	0.015460	±2.5	PASS
EGPRS850	128	VL	TN	-12.35	-0.014982	±2.5	PASS
EGPRS850	128	VN	TN	1.97	0.002393	±2.5	PASS
EGPRS850	128	VH	TN	-14.90	-0.018083	±2.5	PASS
EGPRS850	190	VL	TN	2.89	0.003456	±2.5	PASS
EGPRS850	190	VN	TN	5.99	0.007165	±2.5	PASS
EGPRS850	190	VH	TN	2.36	0.002821	±2.5	PASS
EGPRS850	251	VL	TN	5.92	0.006971	±2.5	PASS
EGPRS850	251	VN	TN	4.36	0.005140	±2.5	PASS
EGPRS850	251	VH	TN	-10.05	-0.011842	±2.5	PASS
GSM1900	512	VL	TN	-2.84	-0.001534	±2.5	PASS
GSM1900	512	VN	TN	-7.74	-0.004181	±2.5	PASS
GSM1900	512	VH	TN	-7.85	-0.004245	±2.5	PASS
GSM1900	661	VL	TN	-5.50	-0.002928	±2.5	PASS
GSM1900	661	VN	TN	-3.94	-0.002097	±2.5	PASS
GSM1900	661	VH	TN	2.77	0.001472	±2.5	PASS
GSM1900	810	VL	TN	4.75	0.002488	±2.5	PASS
GSM1900	810	VN	TN	-10.65	-0.005577	±2.5	PASS
GSM1900	810	VH	TN	-6.57	-0.003438	±2.5	PASS
EGPRS1900	512	VL	TN	-5.66	-0.003059	±2.5	PASS
EGPRS1900	512	VN	TN	-14.79	-0.007995	±2.5	PASS
EGPRS1900	512	VH	TN	4.09	0.002211	±2.5	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
 No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgsgroup.com.cn  
 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



EGPRS1900	661	VL	TN	9.07	0.004825	±2.5	PASS
EGPRS1900	661	VN	TN	-9.96	-0.005296	±2.5	PASS
EGPRS1900	661	VH	TN	0.81	0.000429	±2.5	PASS
EGPRS1900	810	VL	TN	5.17	0.002708	±2.5	PASS
EGPRS1900	810	VN	TN	-0.55	-0.000290	±2.5	PASS
EGPRS1900	810	VH	TN	2.43	0.001274	±2.5	PASS

## 8.2. Frequency Error Vs Temperature

Temperature							
BAND	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
GSM850	128	VN	-30	11.20	0.013589	±2.5	PASS
GSM850	128	VN	-20	3.34	0.004052	±2.5	PASS
GSM850	128	VN	-10	11.08	0.013445	±2.5	PASS
GSM850	128	VN	0	-10.38	-0.012594	±2.5	PASS
GSM850	128	VN	10	-0.84	-0.001014	±2.5	PASS
GSM850	128	VN	20	11.92	0.014462	±2.5	PASS
GSM850	128	VN	30	7.66	0.009299	±2.5	PASS
GSM850	128	VN	40	0.75	0.000913	±2.5	PASS
GSM850	128	VN	50	10.05	0.012194	±2.5	PASS
GSM850	190	VN	-30	5.35	0.006394	±2.5	PASS
GSM850	190	VN	-20	13.77	0.016457	±2.5	PASS
GSM850	190	VN	-10	1.91	0.002280	±2.5	PASS
GSM850	190	VN	0	-1.71	-0.002045	±2.5	PASS
GSM850	190	VN	10	11.85	0.014164	±2.5	PASS
GSM850	190	VN	20	1.11	0.001323	±2.5	PASS
GSM850	190	VN	30	-10.29	-0.012298	±2.5	PASS
GSM850	190	VN	40	13.66	0.016330	±2.5	PASS
GSM850	190	VN	50	-12.59	-0.015051	±2.5	PASS
GSM850	251	VN	-30	-1.31	-0.001547	±2.5	PASS
GSM850	251	VN	-20	7.84	0.009240	±2.5	PASS
GSM850	251	VN	-10	-8.73	-0.010290	±2.5	PASS
GSM850	251	VN	0	1.21	0.001429	±2.5	PASS
GSM850	251	VN	10	2.39	0.002815	±2.5	PASS
GSM850	251	VN	20	-9.25	-0.010899	±2.5	PASS
GSM850	251	VN	30	-8.92	-0.010514	±2.5	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)

SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch (CSTC) Laboratory

No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



GSM850	251	VN	40	10.24	0.012069	±2.5	PASS
GSM850	251	VN	50	6.22	0.007323	±2.5	PASS
EGPRS850	128	VN	-30	3.90	0.004734	±2.5	PASS
EGPRS850	128	VN	-20	-5.64	-0.006842	±2.5	PASS
EGPRS850	128	VN	-10	-1.23	-0.001498	±2.5	PASS
EGPRS850	128	VN	0	-1.33	-0.001618	±2.5	PASS
EGPRS850	128	VN	10	4.78	0.005803	±2.5	PASS
EGPRS850	128	VN	20	-1.43	-0.001735	±2.5	PASS
EGPRS850	128	VN	30	3.56	0.004316	±2.5	PASS
EGPRS850	128	VN	40	4.35	0.005274	±2.5	PASS
EGPRS850	128	VN	50	1.41	0.001711	±2.5	PASS
EGPRS850	190	VN	-30	-7.79	-0.009315	±2.5	PASS
EGPRS850	190	VN	-20	-0.23	-0.000272	±2.5	PASS
EGPRS850	190	VN	-10	-7.72	-0.009227	±2.5	PASS
EGPRS850	190	VN	0	2.27	0.002709	±2.5	PASS
EGPRS850	190	VN	10	-10.23	-0.012227	±2.5	PASS
EGPRS850	190	VN	20	-9.18	-0.010975	±2.5	PASS
EGPRS850	190	VN	30	9.99	0.011943	±2.5	PASS
EGPRS850	190	VN	40	-14.02	-0.016753	±2.5	PASS
EGPRS850	190	VN	50	9.77	0.011683	±2.5	PASS
EGPRS850	251	VN	-30	-11.73	-0.013823	±2.5	PASS
EGPRS850	251	VN	-20	-7.28	-0.008577	±2.5	PASS
EGPRS850	251	VN	-10	-13.57	-0.015984	±2.5	PASS
EGPRS850	251	VN	0	-5.70	-0.006710	±2.5	PASS
EGPRS850	251	VN	10	-7.77	-0.009153	±2.5	PASS
EGPRS850	251	VN	20	11.19	0.013183	±2.5	PASS
EGPRS850	251	VN	30	0.65	0.000766	±2.5	PASS
EGPRS850	251	VN	40	-4.23	-0.004982	±2.5	PASS
EGPRS850	251	VN	50	-13.78	-0.016232	±2.5	PASS
GSM1900	512	VN	-30	5.31	0.002870	±2.5	PASS
GSM1900	512	VN	-20	8.89	0.004807	±2.5	PASS
GSM1900	512	VN	-10	5.61	0.003033	±2.5	PASS
GSM1900	512	VN	0	-10.98	-0.005937	±2.5	PASS
GSM1900	512	VN	10	-10.49	-0.005669	±2.5	PASS
GSM1900	512	VN	20	-2.15	-0.001160	±2.5	PASS
GSM1900	512	VN	30	1.79	0.000965	±2.5	PASS
GSM1900	512	VN	40	6.79	0.003671	±2.5	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



GSM1900	512	VN	50	-11.55	-0.006242	±2.5	PASS
GSM1900	661	VN	-30	11.61	0.006177	±2.5	PASS
GSM1900	661	VN	-20	3.15	0.001676	±2.5	PASS
GSM1900	661	VN	-10	2.71	0.001439	±2.5	PASS
GSM1900	661	VN	0	-13.95	-0.007420	±2.5	PASS
GSM1900	661	VN	10	1.41	0.000751	±2.5	PASS
GSM1900	661	VN	20	11.51	0.006125	±2.5	PASS
GSM1900	661	VN	30	-10.16	-0.005406	±2.5	PASS
GSM1900	661	VN	40	-14.94	-0.007949	±2.5	PASS
GSM1900	661	VN	50	-6.66	-0.003544	±2.5	PASS
GSM1900	810	VN	-30	7.97	0.004176	±2.5	PASS
GSM1900	810	VN	-20	-8.30	-0.004347	±2.5	PASS
GSM1900	810	VN	-10	-0.16	-0.000083	±2.5	PASS
GSM1900	810	VN	0	-14.78	-0.007738	±2.5	PASS
GSM1900	810	VN	10	8.87	0.004644	±2.5	PASS
GSM1900	810	VN	20	-1.22	-0.000638	±2.5	PASS
GSM1900	810	VN	30	-1.65	-0.000865	±2.5	PASS
GSM1900	810	VN	40	-12.48	-0.006533	±2.5	PASS
GSM1900	810	VN	50	0.28	0.000148	±2.5	PASS
EGPRS1900	512	VN	-30	-2.60	-0.001403	±2.5	PASS
EGPRS1900	512	VN	-20	-1.48	-0.000802	±2.5	PASS
EGPRS1900	512	VN	-10	-3.37	-0.001822	±2.5	PASS
EGPRS1900	512	VN	0	-14.87	-0.008037	±2.5	PASS
EGPRS1900	512	VN	10	6.46	0.003493	±2.5	PASS
EGPRS1900	512	VN	20	11.29	0.006103	±2.5	PASS
EGPRS1900	512	VN	30	7.83	0.004233	±2.5	PASS
EGPRS1900	512	VN	40	0.46	0.000251	±2.5	PASS
EGPRS1900	512	VN	50	-5.03	-0.002718	±2.5	PASS
EGPRS1900	661	VN	-30	11.90	0.006330	±2.5	PASS
EGPRS1900	661	VN	-20	-5.64	-0.002998	±2.5	PASS
EGPRS1900	661	VN	-10	-13.63	-0.007251	±2.5	PASS
EGPRS1900	661	VN	0	-6.76	-0.003594	±2.5	PASS
EGPRS1900	661	VN	10	-11.24	-0.005979	±2.5	PASS
EGPRS1900	661	VN	20	-6.75	-0.003592	±2.5	PASS
EGPRS1900	661	VN	30	-11.64	-0.006189	±2.5	PASS
EGPRS1900	661	VN	40	-10.58	-0.005630	±2.5	PASS
EGPRS1900	661	VN	50	5.38	0.002861	±2.5	PASS



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: [CN.Doccheck@sgs.com](mailto:CN.Doccheck@sgs.com)  
No.1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, China 518057 t (86-755) 26012053 f (86-755) 26710594 www.sgs.com.cn  
中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com



EGPRS1900	810	VN	-30	0.24	0.000128	±2.5	PASS
EGPRS1900	810	VN	-20	9.96	0.005214	±2.5	PASS
EGPRS1900	810	VN	-10	7.94	0.004159	±2.5	PASS
EGPRS1900	810	VN	0	3.71	0.001941	±2.5	PASS
EGPRS1900	810	VN	10	-6.25	-0.003273	±2.5	PASS
EGPRS1900	810	VN	20	-1.33	-0.000697	±2.5	PASS
EGPRS1900	810	VN	30	-11.86	-0.006209	±2.5	PASS
EGPRS1900	810	VN	40	6.06	0.003171	±2.5	PASS
EGPRS1900	810	VN	50	-14.41	-0.007546	±2.5	PASS

The End

