TEST REPORT

Applicant Name:	Inrico Technologies Co.,Ltd
Address:	A1703, Shenzhen National Engineering Laboratory Building, No. 20 Gaoxin South 7th Road Shenzhen China
Report Number:	SZGMA240130-06895E-RF-00C
FCC ID:	2AIV6-S380

Test Standard (s)

FCC PART 27; FCC PART 22H; FCC PART 24E; FCC PART 90

Sample Description

Product Type:	Rugged PTToC Radio
Model No.:	S380
Multiple Model(s) No.:	N/A
Trade Mark:	Inrico®
Date Received:	2024/01/30
Issue Date:	2024/07/02

Test Result:	Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Gala Liu

RF Engineer

Approved By:

Nancy Wang

RF Supervisor

Note: The information marked # is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "▼".

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	SZGMA240130-06895E-RF-00C	Original Report	2024/07/02

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Rugged PTToC Radio			
Tested Model	S380			
Multiple Model(s)	N/A			
Frequency Range	GSM 850: 824-849MHz(TX); 869-894MHz(RX) PCS 1900: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(TX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 17: 704-716MHz(TX); 734-746MHz(RX) LTE Band 26: 814-849MHz(TX/RX) LTE Band 38: 2570-2620MHz(TX/RX) LTE Band 40 Lower: 2305-2315MHz (TX/RX) LTE Band 40 Upper: 2350-2360MHz (TX/RX) LTE Band 41: 2496-2690MHz(TX/RX) LTE Band 66: 1710-1780MHz(TX); 2110-2200MHz(RX)			
Modulation Technique	2G: GMSK, 8PSK 3G: BPSK, QPSK, 16QAM, 64QAM 4G: QPSK, 16QAM			
Antenna Specification#	Antenna	Operation Bands	Antenna Gain (G_T) (dBi)	L_C (dB)
	Main ANT	GSM 850/WCDMA/LTE B5	-1.74	0.5
		PCS1900/WCDMA/LTE B2	0.37	0.7
		LTE B4	-1.32	0.9
		LTE B7	-0.36	1.0
		LTE B12/B17	-4.70	0.5
		LTE B26	-1.74	0.5
		LTE B38	-0.30	1.0
		LTE B40	0.10	1.0
		LTE B41	-0.30	1.0
		LTE B66	-1.32	0.9
	Note: Lc= Signal Attenuation in the connecting cable between the transmitter and antenna, in dB.			
Voltage Range	DC3.8V from Li-ion Battery or DC 5V from Type-C Port or DC5V from Charger			
Sample serial number	2HCN-2 for Radiated Emissions Test 2HCN-11 for RF Conducted Test (Assigned by BACL, Shenzhen)			
Sample/EUT Status	Good condition			
Normal/Extreme Condition#	L.V.: Low Voltage 3.23V_{DC} N.V.: Normal Voltage 3.8V_{DC} H.V.: High Voltage 4.37V_{DC}			
Adapter Information	Model: SA12BV-120100U Input: AC 100-240V, 50/60Hz 0.4A Output: DC 12.0V 1.0A			
Charger Information	Model: CI-80GH Input: DC12V, 1000mA Output: DC5V			

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H, Part24-Subpart E, Part 27 and Part 90 of the Federal Communication Commission's rules.
The objective is to determine the compliance of the EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability and band edge.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 - Miscellaneous Wireless Communications Services
Part 90 – Private Land Mobile Radio Service

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 971168 D01: Power Meas License Digital Systems v03r01

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		0.72 dB(k=2, 95% level of confidence)
Unwanted Emission, conducted		1.75 dB(k=2, 95% level of confidence)
RF Frequency		213.55 Hz(k=2, 95% level of confidence)
Radiated Emissions	30MHz~200MHz (Horizontal)	4.48dB(k=2, 95% level of confidence)
	30MHz~200MHz (Vertical)	4.55dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Horizontal)	4.85dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Vertical)	5.05dB(k=2, 95% level of confidence)
	1GHz - 6GHz	5.35dB(k=2, 95% level of confidence)
	6GHz - 18GHz	5.44dB(k=2, 95% level of confidence)
	18GHz - 40GHz	5.16dB(k=2, 95% level of confidence)
Temperature		±1℃
Humidity		±1%
Supply voltages		±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 715558, the FCC Designation No. : CN5045.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The final qualification test was performed with the EUT operating at normal mode.

Frequency Band	Bandwidth (MHz)	Test Frequency (MHz)		
		Lowest	Middle	Highest
GSM850	0.25	824.2	836.6	848.8
PCS1900	0.25	1850.2	1880	1909.8
WCDMA B2	4.2	1852.4	1880	1907.6
WCDMA B5	4.2	826.4	836.6	846.6
LTE B2	1.4	1850.7	1880	1909.3
	3	1851.5	1880	1908.5
	5	1852.5	1880	1907.5
	10	1855	1880	1905
	15	1857.5	1880	1902.5
	20	1860	1880	1900
LTE B4	1.4	1710.7	1732.5	1754.3
	3	1711.5	1732.5	1753.5
	5	1712.5	1732.5	1752.5
	10	1715	1732.5	1750
	15	1717.5	1732.5	1747.5
	20	1720	1732.5	1745
LTE B5	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
LTE B7	5	2502.5	2535	2567.5
	10	2505	2535	2565
	15	2507.5	2535	2562.5
	20	2510	2535	2560
LTE B12	1.4	699.7	707.5	715.3
	3	700.5	707.5	714.5
	5	701.5	707.5	713.5
	10	704.0	707.5	711.0
LTE B17	5	706.5	710	713.5
	10	709	710	711

Frequency Band	Bandwidth (MHz)	Test Frequency (MHz)		
		Lowest for 90s	Highest for 90s	Channel Cross 90s and 22H
LTE 26 Lower	1.4	814.7	823.3	824
	3	815.5	822.5	824
	5	816.5	821.5	824
	10	819	/	824
	15	821.5	/	824
	Note: For 15MHz bandwidth, 821.5MHz cross Rules 90s and 22H.			
Frequency Band	Bandwidth (MHz)	Test Frequency (MHz)		
		Lowest for 22H	Middle for 22H	Highest for 22H
LTE 26 Upper	1.4	824.7	836.5	848.3
	3	825.5	836.5	847.5
	5	826.5	836.5	846.5
	10	829	836.5	844
	15	831.5	836.5	841.5

Frequency Band	Bandwidth (MHz)	Test Frequency (MHz)		
		Lowest	Middle	Highest
LTE B38	5	2572.5	2595	2617.5
	10	2575	2595	2615
	15	2577.5	2595	2612.5
	20	2580	2595	2610
LTE B40 Lower	5	2307.5	/	2312.5
	10	/	2310	/
LTE B40 Upper	5	2352.5	/	2357.5
	10	/	2355	/
LTE B41	5	2498.5	2593	2687.5
	10	2501	2593	2685
	15	2503.5	2593	2682.5
	20	2506	2593	2680
LTE B66	1.4	1710.7	1745	1779.3
	3	1711.5	1745	1778.5
	5	1712.5	1745	1777.5
	10	1715	1745	1775
	15	1717.5	1745	1772.5
	20	1720	1745	1770

Equipment Modifications

No modification was made to the EUT.

Support Equipment List and Details

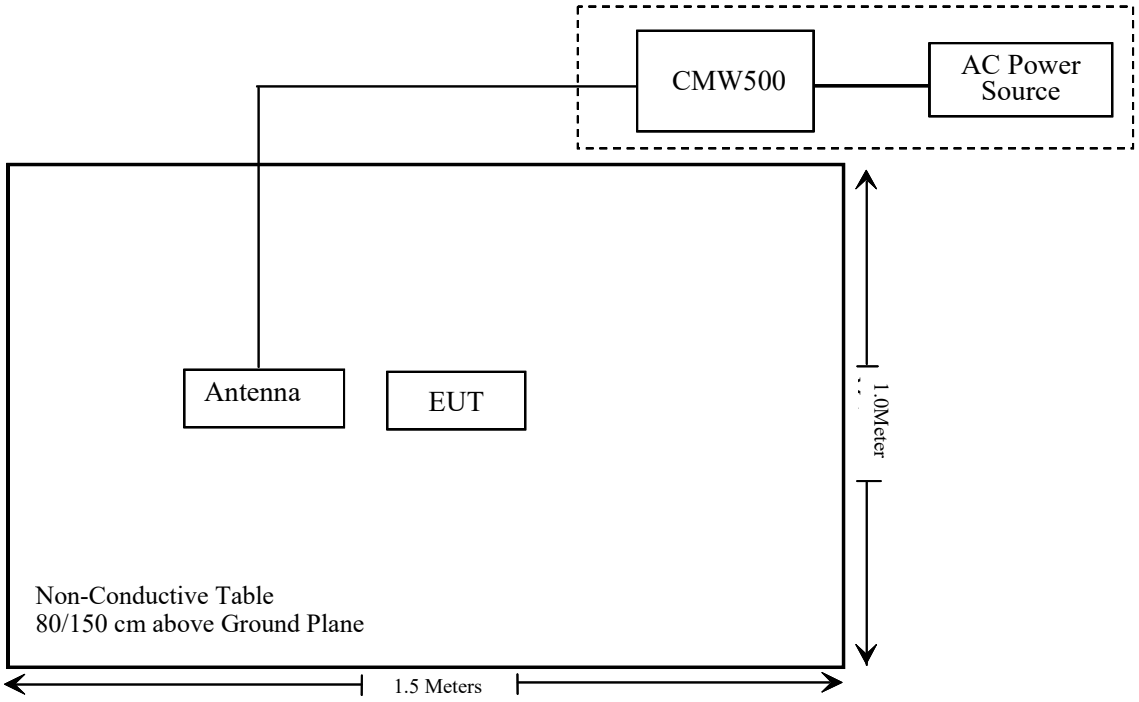
Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	141718

Support Cable Description

Cable Description	Length (m)	From / Port	To
Un-shielded detachable AC cable	1.2	AC Power	CMW500

Block Diagram of Test Setup

For radiated spurious emission



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 ,§2.1093	RF Exposure (SAR)	Compliant
§2.1046; § 22.913(a)(d); § 24.232(c)(d); §27.50(a)(c)(d)(h); §90.635	RF Output Power	Compliant
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53; §90.209	Occupied Bandwidth	Compliant
§ 2.1051; §22.917 (a); § 24.238 (a); §27.53; §90.691	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53; §90.691	Field Strength of Spurious Radiation	Compliant
§ 22.917 (a); § 24.238 (a); §27.53 (a) (g)(h)(m); §90.691	Band Edge	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54; §90.213	Frequency stability	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
R&S	EMI Test Receiver	ESR3	102455	2024/01/16	2025/01/15
Sonoma instrument	Pre-amplifier	310 N	186238	2023/06/08	2024/06/07
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2024/07/19
Unknown	Cable	Chamber Cable 1	F-03-EM236	2023/08/03	2024/08/02
Unknown	Cable	Chamber Cable 4	EC-007	2023/08/03	2024/08/02
COM-POWER	Dipole Antenna	AD-100	721027	NCR	NCR
Rohde & Schwarz	Spectrum Analyzer	FSV40	101605	2023/04/18	2024/04/17
COM-POWER	Pre-amplifier	PA-122	181919	2023/06/29	2024/06/28
Schwarzbeck	Horn Antenna	BBHA9120D(1201)	1143	2023/07/26	2024/07/25
A.H.System	Horn Antenna	SAS-200/571	135	2021/07/14	2024/07/13
Unknown	RF Cable	KMSE	0735	2023/10/08	2024/10/07
Unknown	RF Cable	UFA147	219661	2023/10/08	2024/10/07
Unknown	1.3G High Pass filter	1.3GHz	101120	2023/08/03	2024/08/02
JD	Filter Switch Unit	DT7210FSU	DQ77930	NCR	NCR
JD	Multiplex Switch Test Control Set	DT7220FSU	DQ77926	NCR	NCR
A.H.System	Pre-amplifier	PAM-1840VH	190	2023/08/03	2024/08/02
Electro-Mechanics Co	Horn Antenna	3116	9510-2270	2023/09/18	2026/09/17
Electro-Mechanics Co	Horn Antenna	3116	2026	2023/09/18	2026/09/17
UTIFLEX	RF Cable	NO. 13	232308-001	2023/08/03	2024/08/02
Agilent	Signal Generator	N5183A	MY50140588	2023/12/18	2024/12/17
RF Conducted Test					
R&S	SPECTRUM ANALYZER	FSU26	200120	2024/01/08	2025/01/07
Rohde & Schwarz	Signal and Spectrum Analyzer	FSV40	101473	2024/01/16	2025/01/15
R&S	Wideband Radio Communication Tester	CMW500	141718	2023/09/06	2024/09/05
BACL	Temperature & Humidity Chamber	BTH-150-40	30145	2024/01/16	2025/01/15
instek	DC Power Supply	GPS-3030DD	EM832096	NCR	NCR
Fluke	Digital Multimeter	287	19000011	2023/06/08	2024/06/07
Fluke	Digital Multimeter	287	19000011	2024/05/21	2025/05/20
narda	Power divider	SN5	100005	2023/12/07	2024/12/06
WEINSCHEL	3dB Attenuator	Unknown	F-03-EM220	2023/07/04	2024/07/03
Unknown	RF Cable	65475	01670515	2023/07/04	2024/07/03

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307(b) & §2.1093 - RF EXPOSURE INFORMATION

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Compliant, please refer to the SAR report: SZGMA240130-06895E-SAA.

FCC§2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H,24E&27&90 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046, § 22.913 (a) (d)&§ 24.232 (c) (d) &§27.50 (a)(c)(d)(h) &§90.635 - RF OUTPUT POWER

Applicable Standard

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (c),mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

According to §27.50 (a)(3) Mobile and portable stations.
(i) For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, *except that* for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.
(ii) Mobile and portable stations are not permitted to transmit in the 2315-2320 MHz and 2345-2350 MHz bands.
(iii) *Automatic transmit power control.* Mobile and portable stations transmitting in the 2305-2315 MHz band or in the 2350-2360 MHz band must employ automatic transmit power control when operating so the stations operate with the minimum power necessary for successful communications.
(iv) *Prohibition on external vehicle-mounted antennas.* The use of external vehicle-mounted antennas for mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band is prohibited.

According to §27.50(c), Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP. And Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

According to §27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

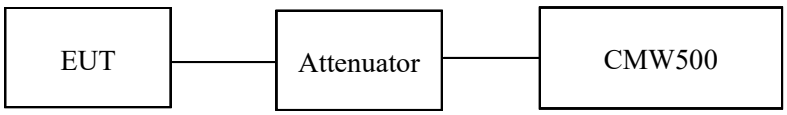
According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2496-2690MHz.

According to §90.635, the maximum ERP must not exceed 100Watts (50dBm) for 814-824MHz.

Test Procedure

Conducted method: ANSI C63.26-2015 Section 5.2

The RF output of the transmitter was connected to the CMW500 through sufficient attenuation.



Test Data

Environmental Conditions

Temperature:	26~27 ℃
Relative Humidity:	49~50 %
ATM Pressure:	101 kPa

The testing was performed by Bruce Lin from 2024-03-15 to 2024-05-18.

Test Result: Compliant

Cellular Band (Part 22H)

GSM 850

Test Mode	Conducted Peak Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
	Lowest Channel	Middle Channel	Highest Channel		
GSM	32.47	32.47	32.29	**28.08**	38.45
GPRS 1 Slot	32.30	32.39	32.26	28.00	38.45
GPRS 2 Slots	30.26	30.23	30.27	25.88	38.45
GPRS 3 Slots	28.12	28.24	28.24	23.85	38.45
GPRS 4 Slots	26.40	26.36	26.23	22.01	38.45
EDGE 1 Slot	27.69	27.67	27.55	**23.30**	38.45
EDGE 2 Slots	25.33	25.53	25.48	21.14	38.45
EDGE 3 Slots	23.39	23.59	23.55	19.20	38.45
EDGE 4 Slots	21.38	21.43	21.59	17.20	38.45

Note:
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

WCAMA B5

Test Mode	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
	Lowest Channel	Middle Channel	Highest Channel		
WCDMA R99	21.21	**21.28**	21.23	**16.89**	38.45
HSDPA Subtest 1	20.77	20.69	20.88	16.49	38.45
HSDPA Subtest 2	20.58	20.33	20.28	16.19	38.45
HSDPA Subtest 3	20.44	20.42	20.33	16.05	38.45
HSDPA Subtest 4	20.38	20.52	20.39	16.13	38.45
HSUPA Subtest 1	20.37	20.33	20.51	16.12	38.45
HSUPA Subtest 2	20.71	20.42	20.44	16.32	38.45
HSUPA Subtest 3	20.42	20.51	20.33	16.12	38.45
HSUPA Subtest 4	20.56	20.66	20.41	16.27	38.45
HSUPA Subtest 5	20.66	20.39	20.47	16.27	38.45

Note:
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

PCS Band (Part 24E)

PCS 1900

Test Mode	Conducted Peak Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
	Lowest Channel	Middle Channel	Highest Channel		
GSM	29.39	29.50	29.44	**29.17**	33
GPRS 1 Slot	29.04	29.27	29.24	28.94	33
GPRS 2 Slots	27.21	27.34	27.41	27.08	33
GPRS 3 Slots	25.51	25.31	25.52	25.19	33
GPRS 4 Slots	23.19	23.02	23.06	22.86	33
EDGE 1 Slot	26.86	26.71	26.76	**26.53**	33
EDGE 2 Slots	25.16	25.05	25.22	24.89	33
EDGE 3 Slots	23.22	23.28	23.24	22.95	33
EDGE 4 Slots	21.30	21.14	21.06	20.97	33
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)					

WCDMA B2

Test Mode	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
	Lowest Channel	Middle Channel	Highest Channel		
WCDMA R99	22.71	**22.75**	22.66	**22.42**	33
HSDPA Subtest 1	22.15	22.08	22.11	21.82	33
HSDPA Subtest 2	22.33	22.12	22.25	22.00	33
HSDPA Subtest 3	22.14	22.14	22.30	21.97	33
HSDPA Subtest 4	22.32	22.28	22.14	21.99	33
HSUPA Subtest 1	20.45	20.36	20.78	20.45	33
HSUPA Subtest 2	20.46	20.52	20.35	20.19	33
HSUPA Subtest 3	20.53	20.41	20.46	20.20	33
HSUPA Subtest 4	20.33	20.37	20.57	20.24	33
HSUPA Subtest 5	20.42	20.39	20.42	20.09	33
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)					

LTE Band 2：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	22.34	22.32	22.17	22.26	33
	RB1#3	22.59	22.53	22.07		
	RB1#5	22.48	22.39	22.03		
	RB3#0	22.25	22.30	22.16		
	RB3#3	22.48	22.11	22.32		
	RB6#0	21.33	21.17	21.22		
1.4MHz 16QAM	RB1#0	21.29	21.36	21.37	21.46	33
	RB1#3	21.35	21.53	21.59		
	RB1#5	20.88	21.50	21.79		
	RB3#0	21.12	21.25	20.95		
	RB3#3	21.21	21.22	21.17		
	RB6#0	20.23	20.27	20.15		
3MHz QPSK	RB1#0	22.41	22.61	22.44	22.28	33
	RB1#8	22.61	22.14	22.35		
	RB1#14	22.52	22.37	22.21		
	RB6#0	21.24	21.10	21.09		
	RB6#9	21.38	21.12	21.14		
	RB15#0	21.28	21.10	21.11		
3MHz 16QAM	RB1#0	21.28	21.53	21.46	21.48	33
	RB1#8	21.19	21.43	21.61		
	RB1#14	21.32	21.69	21.81		
	RB6#0	20.35	20.10	20.26		
	RB6#9	20.09	20.25	20.26		
	RB15#0	20.27	20.31	19.97		
5MHz QPSK	RB1#0	22.62	22.36	22.23	**22.29**	33
	RB1#13	22.55	22.22	22.29		
	RB1#24	22.51	22.40	22.30		
	RB15#0	21.20	21.19	21.09		
	RB15#10	21.39	21.10	21.17		
	RB25#0	21.29	21.14	21.04		
5MHz 16QAM	RB1#0	21.08	21.04	21.63	21.44	33
	RB1#13	21.16	20.49	21.38		
	RB1#24	21.47	20.64	21.77		
	RB15#0	20.35	20.03	20.03		
	RB15#10	20.53	20.11	20.12		
	RB25#0	20.45	20.26	20.12		
10MHz QPSK	RB1#0	22.54	22.41	22.42	22.26	33
	RB1#25	22.59	22.18	22.41		
	RB1#49	22.45	22.25	22.19		
	RB25#0	21.26	21.30	21.42		

	RB25#25	21.35	21.09	21.06		
	RB50#0	21.22	21.12	21.22		
10MHz 16QAM	RB1#0	21.42	21.92	21.74	21.82	33
	RB1#25	21.46	21.60	21.82		
	RB1#49	21.09	21.42	22.15		
	RB25#0	20.57	20.29	20.37		
	RB25#25	20.60	20.29	20.45		
	RB50#0	20.29	20.17	20.31		
15MHz QPSK	RB1#0	22.31	22.29	22.25	22.16	33
	RB1#38	22.49	22.17	22.19		
	RB1#74	22.13	22.31	22.34		
	RB36#0	21.40	21.29	21.32		
	RB36#39	21.38	21.20	21.29		
	RB75#0	21.26	21.17	21.30		
15MHz 16QAM	RB1#0	21.50	21.83	21.90	21.93	33
	RB1#38	21.62	21.57	22.26		
	RB1#74	21.28	21.70	21.87		
	RB36#0	20.42	20.36	20.42		
	RB36#39	20.17	20.27	20.38		
	RB75#0	20.30	20.25	20.32		
20MHz QPSK	RB1#0	22.40	22.17	22.49	22.24	33
	RB1#50	22.57	22.20	22.43		
	RB1#99	22.25	22.32	22.51		
	RB50#0	21.40	21.15	21.47		
	RB50#50	21.38	21.18	21.12		
	RB100#0	21.40	21.19	21.19		
20MHz 16QAM	RB1#0	21.99	21.50	21.45	**21.96**	33
	RB1#50	22.29	21.56	21.82		
	RB1#99	21.94	21.44	21.25		
	RB50#0	20.42	20.27	20.52		
	RB50#50	20.30	20.32	20.20		
	RB100#0	20.38	20.27	20.30		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						

LTE Band 4：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	20.26	20.50	20.65	18.63	30
	RB1#3	20.48	20.69	20.85		
	RB1#5	20.22	20.48	20.67		
	RB3#0	20.39	20.48	20.56		
	RB3#3	20.32	20.56	20.52		
	RB6#0	19.51	19.53	19.55		
1.4MHz 16QAM	RB1#0	19.71	19.46	19.82	18.00	30
	RB1#3	20.22	19.66	19.83		
	RB1#5	20.14	19.48	19.88		
	RB3#0	19.48	19.84	19.58		
	RB3#3	19.35	19.78	19.55		
	RB6#0	18.37	18.45	18.87		
3MHz QPSK	RB1#0	20.55	20.55	20.40	18.50	30
	RB1#8	20.19	20.35	20.56		
	RB1#14	20.36	20.61	20.72		
	RB6#0	19.44	19.50	19.44		
	RB6#9	19.36	19.66	19.54		
	RB15#0	19.44	19.59	19.52		
3MHz 16QAM	RB1#0	19.51	19.87	19.66	18.12	30
	RB1#8	19.36	19.81	19.73		
	RB1#14	19.26	19.93	20.34		
	RB6#0	18.48	18.46	18.63		
	RB6#9	18.31	18.50	18.74		
	RB15#0	18.47	18.70	18.48		
5MHz QPSK	RB1#0	20.30	20.37	20.49	18.43	30
	RB1#13	20.09	20.57	20.47		
	RB1#24	20.14	20.39	20.65		
	RB15#0	19.44	19.57	19.58		
	RB15#10	19.45	19.54	19.59		
	RB25#0	19.41	19.54	19.75		
5MHz 16QAM	RB1#0	19.36	19.56	19.78	17.77	30
	RB1#13	19.08	19.20	19.80		
	RB1#24	19.17	18.99	19.99		
	RB15#0	18.34	18.56	18.43		
	RB15#10	18.35	18.44	18.46		
	RB25#0	18.29	18.65	18.59		
10MHz QPSK	RB1#0	20.62	20.56	20.54	18.58	30
	RB1#25	20.46	20.80	20.57		
	RB1#49	20.48	20.56	20.55		
	RB25#0	19.36	19.54	19.46		

	RB25#25	19.42	19.51	19.66		
	RB50#0	19.54	19.54	19.45		
10MHz 16QAM	RB1#0	19.40	19.79	20.00	18.10	30
	RB1#25	19.21	19.91	19.95		
	RB1#49	19.13	19.68	20.32		
	RB25#0	18.41	18.63	18.81		
	RB25#25	18.30	18.61	18.84		
	RB50#0	18.38	18.49	18.76		
15MHz QPSK	RB1#0	20.37	20.40	20.57	18.59	30
	RB1#38	20.33	20.51	20.59		
	RB1#74	20.11	20.39	20.81		
	RB36#0	19.41	19.60	19.76		
	RB36#39	19.46	19.50	19.51		
	RB75#0	19.46	19.47	19.72		
15MHz 16QAM	RB1#0	19.75	19.86	20.49	**18.27**	30
	RB1#38	19.58	19.50	20.26		
	RB1#74	19.42	19.35	20.47		
	RB36#0	18.37	18.68	18.82		
	RB36#39	18.26	18.56	18.70		
	RB75#0	18.38	18.55	18.59		
20MHz QPSK	RB1#0	20.24	20.35	20.66	**18.69**	30
	RB1#50	20.36	20.51	20.82		
	RB1#99	20.49	20.31	20.91		
	RB50#0	19.51	19.60	19.80		
	RB50#50	19.64	19.61	19.68		
	RB100#0	19.60	19.66	19.68		
20MHz 16QAM	RB1#0	20.17	19.68	19.55	18.12	30
	RB1#50	20.34	19.76	19.52		
	RB1#99	20.30	19.48	19.51		
	RB50#0	18.54	18.73	18.83		
	RB50#50	18.49	18.67	18.60		
	RB100#0	18.57	18.67	18.60		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						

LTE Band 5：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	18.86	18.54	18.77	**14.70**	38.45
	RB1#3	19.09	18.61	19.02		
	RB1#5	18.88	18.48	18.67		
	RB3#0	18.61	18.65	18.58		
	RB3#3	18.51	18.75	18.69		
	RB6#0	17.67	17.67	17.74		
1.4MHz 16QAM	RB1#0	17.74	18.18	17.72	13.79	38.45
	RB1#3	17.82	17.99	17.48		
	RB1#5	17.63	17.94	17.97		
	RB3#0	17.76	17.66	17.86		
	RB3#3	17.51	17.78	17.99		
	RB6#0	16.79	16.81	16.27		
3MHz QPSK	RB1#0	18.67	18.54	18.55	14.59	38.45
	RB1#8	18.67	18.71	18.56		
	RB1#14	18.58	18.56	18.98		
	RB6#0	17.70	17.60	17.60		
	RB6#9	17.64	17.59	17.56		
	RB15#0	17.57	17.67	17.67		
3MHz 16QAM	RB1#0	17.90	17.89	17.58	13.76	38.45
	RB1#8	17.69	17.81	17.67		
	RB1#14	18.15	17.99	17.70		
	RB6#0	16.61	16.55	16.59		
	RB6#9	16.60	16.87	16.87		
	RB15#0	16.37	16.56	16.63		
5MHz QPSK	RB1#0	18.48	18.47	18.53	14.29	38.45
	RB1#13	18.58	18.65	18.66		
	RB1#24	18.59	18.68	18.42		
	RB15#0	17.54	17.57	17.70		
	RB15#10	17.51	17.67	17.69		
	RB25#0	17.56	17.67	17.64		
5MHz 16QAM	RB1#0	17.14	17.95	17.81	13.61	38.45
	RB1#13	17.06	17.54	17.39		
	RB1#24	17.03	18.00	17.40		
	RB15#0	16.22	16.49	16.57		
	RB15#10	16.36	16.49	16.55		
	RB25#0	16.47	16.59	16.72		
10MHz QPSK	RB1#0	18.83	18.65	18.44	14.56	38.45
	RB1#25	18.87	18.70	18.67		
	RB1#49	18.86	18.85	18.95		
	RB25#0	17.61	17.73	17.64		
	RB25#25	17.73	17.70	17.66		

	RB50#0	17.72	17.73	17.67		
10MHz 16QAM	RB1#0	17.94	18.30	17.64	**13.91**	38.45
	RB1#25	18.05	18.19	17.86		
	RB1#49	17.75	18.23	17.66		
	RB25#0	16.52	16.80	16.86		
	RB25#25	16.69	16.63	16.98		
	RB50#0	16.63	16.56	16.66		

Note:
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

LTE Band 7：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	21.35	21.87	21.55	20.51	33
	RB1#13	21.77	21.67	21.55		
	RB1#24	21.81	21.79	21.51		
	RB15#0	20.75	20.65	20.52		
	RB15#10	20.80	20.75	20.67		
	RB25#0	20.81	20.79	20.70		
5MHz 16QAM	RB1#0	20.90	20.61	20.25	19.76	33
	RB1#13	20.95	20.86	20.22		
	RB1#24	21.12	20.60	20.15		
	RB15#0	19.80	19.78	19.75		
	RB15#10	19.96	19.77	19.61		
	RB25#0	19.81	19.83	19.86		
10MHz QPSK	RB1#0	21.65	21.67	21.12	**20.51**	33
	RB1#25	21.83	21.87	21.08		
	RB1#49	21.52	21.78	20.98		
	RB25#0	20.67	20.77	20.08		
	RB25#25	20.77	19.97	20.14		
	RB50#0	20.78	20.08	19.96		
10MHz 16QAM	RB1#0	20.79	20.57	20.41	19.82	33
	RB1#25	21.18	20.90	20.59		
	RB1#49	21.01	20.81	20.95		
	RB25#0	19.97	19.04	19.21		
	RB25#25	19.82	19.05	19.24		
	RB50#0	19.80	19.18	19.08		
15MHz QPSK	RB1#0	20.83	20.99	20.97	19.74	33
	RB1#38	20.97	21.09	21.02		
	RB1#74	21.01	21.10	20.99		
	RB36#0	20.17	20.08	20.02		
	RB36#39	19.98	20.14	20.03		
	RB75#0	20.17	20.12	20.07		
15MHz 16QAM	RB1#0	20.10	20.51	20.38	**19.86**	33
	RB1#38	19.52	20.37	20.40		
	RB1#74	19.88	20.39	21.22		
	RB36#0	19.21	19.11	18.94		
	RB36#39	18.87	19.19	19.16		
	RB75#0	19.23	19.16	18.84		
20MHz QPSK	RB1#0	20.63	21.07	21.04	20.04	33
	RB1#50	21.26	21.06	21.14		
	RB1#99	21.15	20.82	21.40		
	RB50#0	20.17	20.12	20.03		
	RB50#50	19.98	20.11	19.95		

	RB100#0	20.11	20.11	19.93		
20MHz 16QAM	RB1#0	20.07	21.06	19.99	19.70	33
	RB1#50	20.07	20.45	20.04		
	RB1#99	20.18	20.49	20.09		
	RB50#0	19.15	19.01	18.91		
	RB50#50	18.96	19.10	18.93		
	RB100#0	19.22	19.10	19.03		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						

LTE Band 12：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	21.02	22.64	22.67	**15.66**	34.77
	RB1#3	22.91	22.75	22.76		
	RB1#5	22.89	22.70	23.01		
	RB3#0	22.67	22.92	22.71		
	RB3#3	22.79	22.79	22.76		
	RB6#0	21.71	21.81	21.67		
1.4MHz 16QAM	RB1#0	21.51	22.00	22.01	14.74	34.77
	RB1#3	21.71	22.08	22.09		
	RB1#5	21.99	22.00	21.58		
	RB3#0	21.59	21.78	21.88		
	RB3#3	21.88	21.70	21.91		
	RB6#0	20.83	20.92	21.07		
3MHz QPSK	RB1#0	22.84	22.81	22.97	15.62	34.77
	RB1#8	22.63	22.70	22.66		
	RB1#14	22.80	22.77	22.96		
	RB6#0	21.60	21.85	21.79		
	RB6#9	21.72	21.74	21.69		
	RB15#0	21.69	21.85	21.75		
3MHz 16QAM	RB1#0	21.87	22.04	22.32	**15.12**	34.77
	RB1#8	21.16	21.84	22.18		
	RB1#14	21.75	21.95	22.47		
	RB6#0	20.40	20.78	20.80		
	RB6#9	20.52	20.75	20.75		
	RB15#0	20.77	20.96	20.79		
5MHz QPSK	RB1#0	22.82	22.74	22.61	15.61	34.77
	RB1#13	22.65	22.70	22.65		
	RB1#24	22.96	22.77	22.96		
	RB15#0	21.61	21.81	21.69		
	RB15#10	21.85	21.71	21.66		
	RB25#0	21.67	21.84	21.73		
5MHz 16QAM	RB1#0	21.57	21.33	21.99	15.07	34.77
	RB1#13	21.44	21.22	22.00		
	RB1#24	21.95	20.97	22.42		
	RB15#0	20.74	20.71	20.63		
	RB15#10	20.90	20.68	20.59		
	RB25#0	20.72	20.87	20.72		
10MHz QPSK	RB1#0	22.94	22.73	22.71	15.59	34.77
	RB1#25	22.94	22.93	22.66		
	RB1#49	22.86	22.64	22.76		
	RB25#0	21.65	21.82	21.79		

	RB25#25	21.71	21.54	21.78		
	RB50#0	21.69	21.74	21.74		
10MHz 16QAM	RB1#0	21.70	22.44	22.27	15.09	34.77
	RB1#25	21.94	22.15	22.23		
	RB1#49	21.70	21.95	22.05		
	RB25#0	21.02	20.81	20.97		
	RB25#25	20.93	20.64	20.93		
	RB50#0	20.84	20.79	20.77		

Note:
ERP= Conducted Power(dBm) - LC(dB) + GT(dBd)
GT(dBd)=GT(dBi)-2.15

LTE Band 17：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	22.31	22.36	22.45	15.10	34.77
	RB1#13	22.36	22.14	22.38		
	RB1#24	22.41	22.33	22.05		
	RB15#0	21.44	21.42	21.37		
	RB15#10	21.46	21.33	21.27		
	RB25#0	21.50	21.38	21.30		
5MHz 16QAM	RB1#0	21.99	21.18	20.87	14.64	34.77
	RB1#13	21.67	21.27	20.95		
	RB1#24	21.86	21.12	20.86		
	RB15#0	20.47	20.42	20.30		
	RB15#10	20.71	20.31	20.18		
	RB25#0	20.31	20.32	20.45		
10MHz QPSK	RB1#0	22.72	22.47	22.50	**15.37**	34.77
	RB1#25	22.56	22.29	22.35		
	RB1#49	22.53	22.46	22.23		
	RB25#0	21.64	21.58	21.45		
	RB25#25	21.39	21.35	21.36		
	RB50#0	21.51	21.43	21.40		
10MHz 16QAM	RB1#0	21.59	22.22	21.96	**14.87**	34.77
	RB1#25	21.48	21.83	21.93		
	RB1#49	21.58	22.07	21.56		
	RB25#0	20.75	20.67	20.53		
	RB25#25	20.61	20.45	20.42		
	RB50#0	20.57	20.48	20.57		

Note:
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

LTE Band 26 (Part 90s):

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Channel For 90S	Highest Channel For 90S	Cross Channel		
1.4MHz QPSK	RB1#0	17.99	18.29	18.09	14.02	50
	RB1#3	18.10	18.17	18.30		
	RB1#5	18.03	18.38	18.41		
	RB3#0	18.23	18.15	18.11		
	RB3#3	18.23	18.24	18.00		
	RB6#0	17.13	17.28	17.06		
1.4MHz 16QAM	RB1#0	17.24	17.37	17.05	13.29	50
	RB1#3	17.41	17.38	17.34		
	RB1#5	17.68	17.20	17.13		
	RB3#0	17.02	17.53	16.81		
	RB3#3	16.87	17.22	16.84		
	RB6#0	16.23	16.31	15.92		
3MHz QPSK	RB1#0	18.40	18.64	18.35	**14.39**	50
	RB1#8	18.38	18.54	18.38		
	RB1#14	18.40	18.78	18.41		
	RB6#0	17.35	17.70	17.50		
	RB6#9	17.33	17.59	17.34		
	RB15#0	17.44	17.72	17.45		
3MHz 16QAM	RB1#0	17.65	18.18	17.82	**13.85**	50
	RB1#8	17.55	18.12	18.01		
	RB1#14	17.44	18.24	18.08		
	RB6#0	16.52	16.59	16.29		
	RB6#9	16.42	16.57	16.53		
	RB15#0	16.61	16.73	16.80		
5MHz QPSK	RB1#0	18.46	18.53	18.48	14.29	50
	RB1#13	18.53	18.68	18.44		
	RB1#24	18.11	18.50	18.37		
	RB15#0	17.40	17.69	17.56		
	RB15#10	17.39	17.61	17.41		
	RB25#0	17.40	17.60	17.49		
5MHz 16QAM	RB1#0	17.52	17.28	17.56	13.47	50
	RB1#13	17.09	16.95	17.25		
	RB1#24	17.14	17.86	17.28		
	RB15#0	16.64	16.50	16.59		
	RB15#10	16.34	16.65	16.56		
	RB25#0	16.37	/	16.40		
10MHz QPSK	RB1#0	18.51	/	18.59	14.31	50
	RB1#25	18.37	/	18.70		
	RB1#49	18.47	/	18.47		
	RB25#0	17.33	/	17.51		

	RB25#25	17.43	/	17.58		
	RB50#0	17.38	/	17.55		
10MHz 16QAM	RB1#0	17.59	/	18.06	13.67	50
	RB1#25	17.41	/	17.94		
	RB1#49	17.51	/	17.76		
	RB25#0	16.43	/	16.57		
	RB25#25	16.52	/	16.61		
	RB50#0	16.43	/	16.66		
15MHz QPSK	RB1#0	17.97	/	17.61	13.64	50
	RB1#38	17.86	/	17.92		
	RB1#74	18.03	/	17.95		
	RB36#0	17.01	/	16.85		
	RB36#39	16.95	/	17.03		
	RB75#0	16.89	/	16.90		
15MHz 16QAM	RB1#0	17.37	/	16.91	12.98	50
	RB1#38	17.33	/	16.88		
	RB1#74	17.24	/	16.89		
	RB36#0	15.98	/	15.99		
	RB36#39	15.90	/	16.18		
	RB75#0	16.07	/	15.95		

Note:
ERP= Conducted Power(dBm) - LC(dB) + GT(dBd)
GT(dBd)=GT(dBi)-2.15

LTE Band 26 (Part 22H):

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum ERP (dBm)	ERP Limit (dBm)
		Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H		
1.4MHz QPSK	RB1#0	18.42	18.40	18.45	14.38	38.45
	RB1#3	18.53	18.28	18.66		
	RB1#5	18.46	18.49	18.77		
	RB3#0	18.66	18.26	18.47		
	RB3#3	18.66	18.35	18.36		
	RB6#0	17.56	17.39	17.42		
1.4MHz 16QAM	RB1#0	17.67	17.48	17.41	13.72	38.45
	RB1#3	17.84	17.49	17.70		
	RB1#5	18.11	17.31	17.49		
	RB3#0	17.45	17.64	17.17		
	RB3#3	17.30	17.33	17.20		
	RB6#0	16.66	16.42	16.28		
3MHz QPSK	RB1#0	18.83	18.75	18.71	14.50	38.45
	RB1#8	18.81	18.65	18.74		
	RB1#14	18.83	18.89	18.77		
	RB6#0	17.78	17.81	17.86		
	RB6#9	17.76	17.70	17.70		
	RB15#0	17.87	17.83	17.81		
3MHz 16QAM	RB1#0	18.08	18.29	18.18	14.05	38.45
	RB1#8	17.98	18.23	18.37		
	RB1#14	17.87	18.35	18.44		
	RB6#0	16.95	16.70	16.65		
	RB6#9	16.85	16.68	16.89		
	RB15#0	17.04	16.84	17.16		
5MHz QPSK	RB1#0	18.89	18.64	18.84	14.57	38.45
	RB1#13	18.96	18.79	18.80		
	RB1#24	18.54	18.61	18.73		
	RB15#0	17.83	17.80	17.92		
	RB15#10	17.82	17.72	17.77		
	RB25#0	17.83	17.71	17.85		
5MHz 16QAM	RB1#0	17.95	17.39	17.92	13.58	38.45
	RB1#13	17.52	17.06	17.61		
	RB1#24	17.57	17.97	17.64		
	RB15#0	17.07	16.61	16.95		
	RB15#10	16.77	16.76	16.92		
	RB25#0	16.80	16.73	16.76		
10MHz QPSK	RB1#0	18.94	18.88	18.95	**14.67**	38.45
	RB1#25	18.80	18.80	19.06		

	RB1#49	18.90	18.80	18.83		
	RB25#0	17.76	17.90	17.87		
	RB25#25	17.86	17.75	17.94		
	RB50#0	17.81	17.85	17.91		
10MHz 16QAM	RB1#0	18.02	18.59	18.42	**14.31**	38.45
	RB1#25	17.84	18.55	18.30		
	RB1#49	17.94	18.70	18.12		
	RB25#0	16.86	16.79	16.93		
	RB25#25	16.95	16.73	16.97		
	RB50#0	16.86	16.78	17.02		
15MHz QPSK	RB1#0	18.40	18.20	17.97	14.07	38.45
	RB1#38	18.29	18.27	18.28		
	RB1#74	18.46	18.45	18.31		
	RB36#0	17.44	17.29	17.21		
	RB36#39	17.38	17.22	17.39		
	RB75#0	17.32	17.24	17.26		
15MHz 16QAM	RB1#0	17.80	18.06	17.27	13.90	38.45
	RB1#38	17.76	17.68	17.24		
	RB1#74	17.67	18.29	17.25		
	RB36#0	16.41	16.35	16.35		
	RB36#39	16.33	16.20	16.54		
	RB75#0	16.50	16.23	16.31		

Note:
ERP= Conducted Power(dBm) - L_C(dB) + G_T(dBd)
G_T(dBd)=G_T(dBi)-2.15

LTE Band 38：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	21.04	20.79	20.80	19.74	33
	RB1#13	20.99	20.68	20.95		
	RB1#24	20.99	20.98	20.75		
	RB15#0	20.02	19.90	19.74		
	RB15#10	20.04	19.89	19.81		
	RB25#0	19.98	19.80	19.96		
5MHz 16QAM	RB1#0	19.59	20.19	20.06	18.98	33
	RB1#13	19.63	20.28	19.99		
	RB1#24	19.67	20.18	19.84		
	RB15#0	18.92	18.98	18.79		
	RB15#10	18.84	18.90	19.12		
	RB25#0	19.13	19.08	18.82		
10MHz QPSK	RB1#0	21.12	20.98	20.84	19.86	33
	RB1#25	21.14	21.16	20.77		
	RB1#49	20.86	20.99	21.06		
	RB25#0	20.17	19.94	19.92		
	RB25#25	19.97	20.00	19.83		
	RB50#0	19.99	19.91	19.90		
10MHz 16QAM	RB1#0	20.18	20.30	20.10	19.03	33
	RB1#25	20.27	20.26	20.33		
	RB1#49	19.93	20.20	20.13		
	RB25#0	19.08	19.24	19.14		
	RB25#25	18.92	19.01	19.16		
	RB50#0	18.94	19.01	18.99		
15MHz QPSK	RB1#0	21.09	20.99	20.78	**20.00**	33
	RB1#38	20.92	20.83	20.73		
	RB1#74	21.18	21.30	20.66		
	RB36#0	20.16	20.06	19.84		
	RB36#39	20.01	20.03	19.79		
	RB75#0	19.87	19.87	19.93		
15MHz 16QAM	RB1#0	20.08	20.39	19.94	19.10	33
	RB1#38	19.94	20.40	19.71		
	RB1#74	19.89	20.23	19.75		
	RB36#0	18.96	18.94	19.13		
	RB36#39	18.83	18.85	18.96		
	RB75#0	19.01	19.07	19.00		
20MHz QPSK	RB1#0	21.02	20.91	21.06	19.92	33
	RB1#50	21.06	21.22	21.11		
	RB1#99	21.05	20.94	20.79		
	RB50#0	19.96	20.07	19.91		

	RB50#50	19.84	19.85	19.92		
	RB100#0	19.93	19.85	19.86		
20MHz 16QAM	RB1#0	20.13	19.73	20.50	**19.38**	33
	RB1#50	20.57	19.63	20.68		
	RB1#99	20.23	19.38	20.42		
	RB50#0	19.24	19.15	19.10		
	RB50#50	18.92	19.11	19.03		
	RB100#0	19.20	18.87	19.05		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						

LTE Band 40 Lower

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	21.04	/	21.49	20.59	24
	RB1#13	20.92	/	21.48		
	RB1#24	20.98	/	21.38		
	RB15#0	20.14	/	20.37		
	RB15#10	20.27	/	20.49		
	RB25#0	20.17	/	20.54		
5MHz 16QAM	RB1#0	20.16	/	20.13	19.73	24
	RB1#13	20.49	/	20.15		
	RB1#24	20.63	/	20.12		
	RB15#0	19.13	/	19.39		
	RB15#10	19.15	/	19.49		
	RB25#0	19.22	/	19.59		
10MHz QPSK	RB1#0	/	21.49	/	**20.59**	24
	RB1#25	/	21.48	/		
	RB1#49	/	21.38	/		
	RB25#0	/	20.37	/		
	RB25#25	/	20.49	/		
	RB50#0	/	20.54	/		
10MHz 16QAM	RB1#0	/	20.55	/	**19.75**	24
	RB1#25	/	20.63	/		
	RB1#49	/	20.65	/		
	RB25#0	/	19.19	/		
	RB25#25	/	19.55	/		
	RB50#0	/	19.25	/		

Note:
For 5MHz bandwidth, the channel power is equal to the test result in dBm/5MHz.
For10MHz bandwidth, the channel power is the sum power of 10MHz bandwidth, the result is less than 24dBm, so in any 5MHz bandwidth, it's will not exceed limit.
EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)
EIRP PSD=Conducted PSD(dBm/5MHz) - L_C(dB) + G_T(dBi)

LTE Band 40 Upper:

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	21.13	/	21.73	**20.84**	24
	RB1#13	21.05	/	21.74		
	RB1#24	21.08	/	21.70		
	RB15#0	20.06	/	20.66		
	RB15#10	20.20	/	20.50		
	RB25#0	20.02	/	20.57		
5MHz 16QAM	RB1#0	20.33	/	21.01	**20.36**	24
	RB1#13	20.60	/	21.26		
	RB1#24	20.30	/	20.92		
	RB15#0	19.19	/	19.82		
	RB15#10	19.62	/	19.69		
	RB25#0	19.27	/	19.56		
10MHz QPSK	RB1#0	/	21.34	/	20.60	24
	RB1#25	/	21.38	/		
	RB1#49	/	21.50	/		
	RB25#0	/	20.24	/		
	RB25#25	/	20.25	/		
	RB50#0	/	20.17	/		
10MHz 16QAM	RB1#0	/	20.04	/	19.63	24
	RB1#25	/	20.33	/		
	RB1#49	/	20.53	/		
	RB25#0	/	19.33	/		
	RB25#25	/	19.25	/		
	RB50#0	/	19.24	/		

Note:
For 5MHz bandwidth, the channel power is equal to the test result in dBm/5MHz.
For10MHz bandwidth, the channel power is the sum power of 10MHz bandwidth, the result is less than 24dBm, so in any 5MHz bandwidth, it's will not exceed limit.
EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)
EIRP PSD=Conducted PSD(dBm/5MHz) - L_C(dB) + G_T(dBi)

LTE Band 41：

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
5MHz QPSK	RB1#0	20.87	20.77	20.44	19.65	33
	RB1#13	20.81	20.58	20.58		
	RB1#24	20.89	20.95	20.59		
	RB15#0	19.93	19.83	19.57		
	RB15#10	20.08	19.82	19.54		
	RB25#0	19.91	19.79	19.63		
5MHz 16QAM	RB1#0	19.58	19.90	19.65	18.89	33
	RB1#13	19.49	20.19	19.48		
	RB1#24	19.61	19.92	19.84		
	RB15#0	18.77	18.82	18.48		
	RB15#10	18.75	18.75	18.69		
	RB25#0	19.11	19.13	18.66		
10MHz QPSK	RB1#0	20.99	20.83	20.93	**19.90**	33
	RB1#25	20.84	20.81	20.77		
	RB1#49	21.20	20.86	20.64		
	RB25#0	19.98	20.11	19.85		
	RB25#25	20.04	19.96	19.54		
	RB50#0	19.94	20.00	19.54		
10MHz 16QAM	RB1#0	20.22	19.95	19.57	19.14	33
	RB1#25	20.17	20.00	19.94		
	RB1#49	20.44	19.88	20.02		
	RB25#0	19.26	18.84	18.71		
	RB25#25	19.43	18.79	18.65		
	RB50#0	19.03	18.77	18.69		
15MHz QPSK	RB1#0	20.78	20.96	20.51	19.68	33
	RB1#38	20.84	20.79	20.57		
	RB1#74	20.98	20.92	20.61		
	RB36#0	19.92	19.91	19.60		
	RB36#39	19.98	19.82	19.58		
	RB75#0	19.98	19.95	19.51		
15MHz 16QAM	RB1#0	19.83	19.99	19.66	18.89	33
	RB1#38	19.70	19.75	19.60		
	RB1#74	19.74	20.19	19.59		
	RB36#0	18.84	19.00	18.89		
	RB36#39	18.99	18.94	18.73		
	RB75#0	19.06	18.85	18.59		
20MHz QPSK	RB1#0	20.99	20.73	20.79	19.82	33
	RB1#50	21.12	20.90	20.66		
	RB1#99	21.06	20.69	20.63		
	RB50#0	19.91	20.04	19.64		
	RB50#50	19.99	19.99	19.64		
	RB100#0	20.11	20.07	19.59		
20MHz 16QAM	RB1#0	20.52	19.97	19.12	**19.54**	33
	RB1#50	20.84	20.52	19.51		
	RB1#99	20.36	20.09	19.27		
	RB50#0	19.03	19.14	18.83		
	RB50#50	19.19	19.01	18.78		
	RB100#0	19.12	19.00	18.69		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						

LTE Band 66:

Test Bandwidth & Modulation	Resource Block & RB offset	Conducted Average Output Power(dBm)			Maximum EIRP (dBm)	EIRP Limit (dBm)
		Lowest Channel	Middle Channel	Highest Channel		
1.4MHz QPSK	RB1#0	20.10	20.46	20.01	18.24	30
	RB1#3	20.21	20.34	20.15		
	RB1#5	19.93	20.20	20.05		
	RB3#0	19.95	20.40	20.16		
	RB3#3	19.93	20.11	20.28		
	RB6#0	18.98	19.17	19.07		
1.4MHz 16QAM	RB1#0	19.03	19.36	19.36	17.43	30
	RB1#3	19.05	19.53	19.56		
	RB1#5	18.92	19.25	19.65		
	RB3#0	19.39	19.17	19.28		
	RB3#3	19.25	18.79	19.36		
	RB6#0	17.90	18.23	17.88		
3MHz QPSK	RB1#0	20.16	20.26	20.16	18.14	30
	RB1#8	19.82	20.24	20.28		
	RB1#14	19.90	20.36	20.16		
	RB6#0	18.99	19.10	19.08		
	RB6#9	18.91	19.15	19.01		
	RB15#0	19.00	19.22	19.06		
3MHz 16QAM	RB1#0	19.18	19.50	19.40	17.57	30
	RB1#8	18.33	19.08	19.31		
	RB1#14	18.42	19.40	19.79		
	RB6#0	17.96	18.32	17.99		
	RB6#9	17.89	18.09	18.05		
	RB15#0	18.16	18.18	18.02		
5MHz QPSK	RB1#0	20.00	20.24	20.11	18.11	30
	RB1#13	19.78	20.13	20.06		
	RB1#24	19.93	20.33	20.17		
	RB15#0	18.95	19.34	19.01		
	RB15#10	19.05	19.17	19.00		
	RB25#0	19.04	19.16	19.08		
5MHz 16QAM	RB1#0	19.19	18.70	19.54	17.32	30
	RB1#13	18.61	18.73	18.95		
	RB1#24	18.59	18.44	19.52		
	RB15#0	17.97	18.16	17.81		
	RB15#10	17.89	18.10	17.97		
	RB25#0	17.99	18.31	18.00		
10MHz QPSK	RB1#0	20.01	20.25	20.11	18.16	30
	RB1#25	19.95	20.33	20.29		
	RB1#49	19.95	20.38	20.10		
	RB25#0	19.04	19.31	19.25		
	RB25#25	19.01	19.14	19.09		

	RB50#0	19.05	19.30	19.07		
10MHz 16QAM	RB1#0	19.01	19.55	19.96	17.74	30
	RB1#25	18.73	19.47	19.70		
	RB1#49	18.68	19.32	19.34		
	RB25#0	18.37	18.44	18.38		
	RB25#25	18.14	18.29	18.13		
	RB50#0	17.91	18.28	18.15		
15MHz QPSK	RB1#0	19.98	20.25	20.13	18.25	30
	RB1#38	19.82	20.19	19.99		
	RB1#74	19.85	20.47	20.05		
	RB36#0	19.09	19.20	19.26		
	RB36#39	19.07	19.08	19.06		
	RB75#0	19.09	19.29	19.22		
15MHz 16QAM	RB1#0	19.26	19.45	19.92	17.70	30
	RB1#38	18.88	19.42	19.90		
	RB1#74	18.78	19.57	19.74		
	RB36#0	18.06	18.29	18.40		
	RB36#39	18.01	18.03	17.94		
	RB75#0	18.13	18.30	18.32		
20MHz QPSK	RB1#0	19.86	20.21	20.46	**18.39**	30
	RB1#50	19.98	20.18	20.61		
	RB1#99	20.18	20.10	20.10		
	RB50#0	19.09	19.23	19.25		
	RB50#50	19.01	19.27	19.41		
	RB100#0	19.07	19.27	19.19		
20MHz 16QAM	RB1#0	19.14	19.76	19.43	**17.75**	30
	RB1#50	19.71	19.97	19.23		
	RB1#99	19.64	19.92	18.96		
	RB50#0	18.00	18.26	18.31		
	RB50#50	17.93	18.24	18.06		
	RB100#0	18.11	18.37	18.31		
Note: EIRP=Conducted Power(dBm) - L_C(dB) + G_T(dBi)						

Peak-to-average ratio (PAR)

Cellular Band

GSM850

Test Mode	Peak-to-average Ratio(dB)			Limit (dB)
	Lowest Channel	Middle Channel	Highest Channel	
GSM	2.34	2.26	2.18	13
EDGE	2.76	2.81	2.69	13

WCDMA Band 5

Test Mode	Peak-to-average Ratio(dB)			Limit (dB)
	Lowest Channel	Middle Channel	Highest Channel	
WCDMA R99	4.11	4.77	4.17	13
HSDPA	4.40	4.66	4.17	13
HSUPA	4.53	4.72	4.89	13

PCS Band

PCS1900

Test Mode	Peak-to-average Ratio(dB)			Limit (dB)
	Lowest Channel	Middle Channel	Highest Channel	
GSM	2.98	2.67	2.57	13
EDGE	2.34	2.46	2.42	13

WCDMA Band 2

Test Mode	Peak-to-average Ratio(dB)			Limit (dB)
	Lowest Channel	Middle Channel	Highest Channel	
WCDMA R99	4.83	4.01	4.47	13
HSDPA	4.12	4.45	4.32	13
HSUPA	4.62	4.22	4.02	13

LTE Band: *(pre-scan all bandwidth, the worst case as below)*

LTE Band 2 20MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	6.42	9.3	7.89	13
	RB100#0	6.40	8.17	9.66	13
20MHz 16QAM	RB1#0	6.34	7.12	7.57	13
	RB100#0	7.76	6.17	6.21	13

LTE Band 4 20MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	7.86	6.08	6.92	13
	RB100#0	6.63	9.79	6.72	13
20MHz 16QAM	RB1#0	6.94	7.78	6.23	13
	RB100#0	7.85	6.17	7.99	13

LTE Band 5 10MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	8.00	9.01	9.31	13
	RB50#0	8.76	7.21	9.02	13
10MHz 16QAM	RB1#0	7.31	8.05	9.62	13
	RB50#0	6.59	8.53	7.72	13

LTE Band 7 20MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	8.97	9.67	8.09	13
	RB100#0	8.44	7.36	9.69	13
20MHz 16QAM	RB1#0	6.41	9.08	9.01	13
	RB100#0	6.45	6.64	9.43	13

LTE Band 12 10MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	8.24	9.4	9.23	13
	RB50#0	7.11	8.51	7.31	13
10MHz 16QAM	RB1#0	9.52	6.53	9.44	13
	RB50#0	6.49	8.94	8.50	13

LTE Band 17 10MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
10MHz QPSK	RB1#0	9.57	8.32	10.00	13
	RB50#0	7.82	10.00	6.97	13
10MHz 16QAM	RB1#0	6.01	7.31	8.24	13
	RB50#0	7.74	6.87	7.47	13

LTE Band 26(Part 22H) 15MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H	
15MHz QPSK	RB1#0	9.65	6.65	6.84	13
	RB75#0	7.42	7.57	7.47	13
15MHz 16QAM	RB1#0	8.05	8.57	8.06	13
	RB75#0	9.01	9.69	9.1	13

LTE Band 26(Part 90s) 15MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Frequency For 90s	Highest Frequency For 90s	Cross Channel	
15MHz QPSK	RB1#0	9.56	/	6.71	13
	RB75#0	7.36	/	7.32	13
15MHz 16QAM	RB1#0	8.11	/	8.01	13
	RB75#0	9.04	/	9.22	13

LTE Band 38 20MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	6.80	6.12	8.40	13
	RB100#0	6.70	8.53	9.02	13
20MHz 16QAM	RB1#0	7.13	9.13	8.57	13
	RB100#0	9.15	8.26	6.36	13

LTE Band 41 20MHz Bandwidth

Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	8.58	6.29	8.45	13
	RB100#0	8.72	7.15	7.06	13
20MHz 16QAM	RB1#0	9.39	7.47	9.11	13
	RB100#0	9.47	7.59	9.03	13

LTE Band 66 20MHz Bandwidth

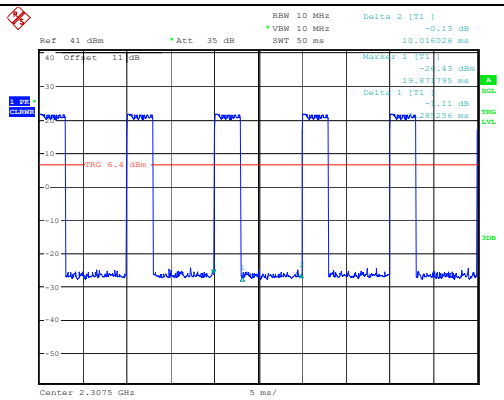
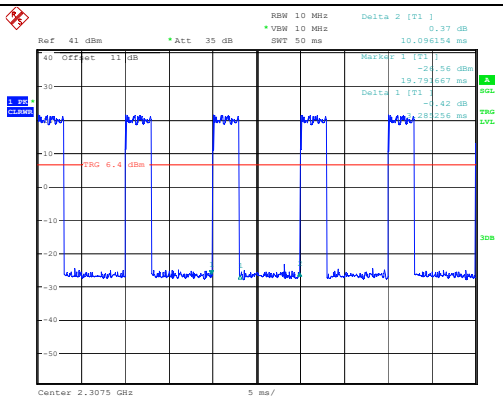
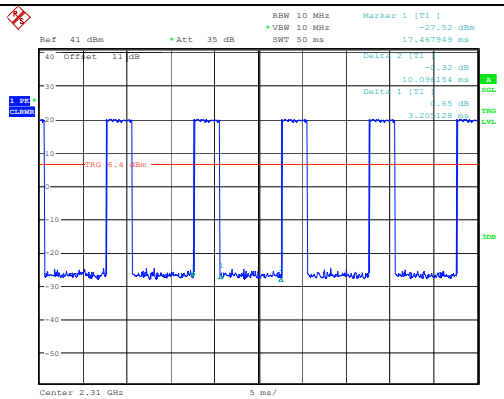
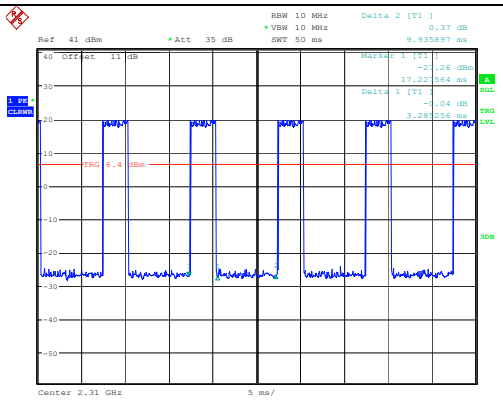
Test Bandwidth & Modulation	Resource Block & RB offset	Peak-to-average Ratio(dB)			Limit (dB)
		Lowest Channel	Middle Channel	Highest Channel	
20MHz QPSK	RB1#0	6.36	9.21	9.39	13
	RB100#0	8.10	6.73	9.89	13
20MHz 16QAM	RB1#0	9.24	9.58	8.39	13
	RB100#0	7.64	8.69	6.19	13

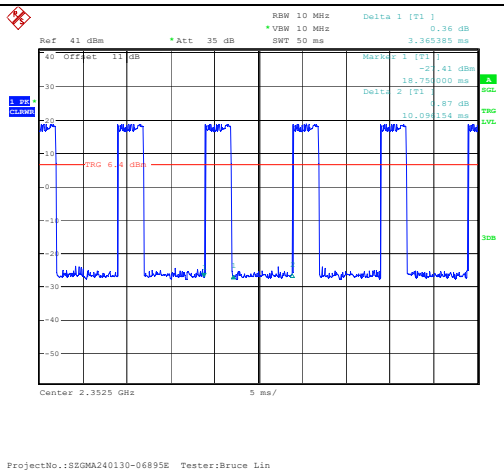
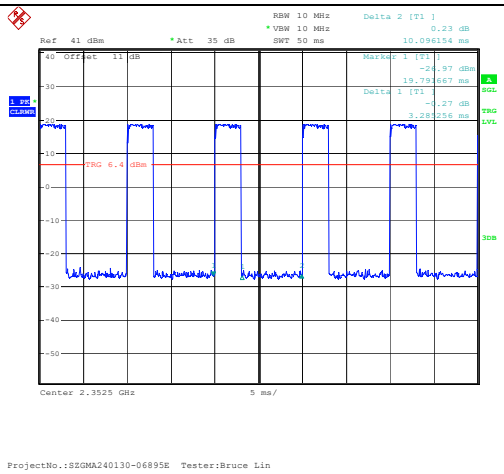
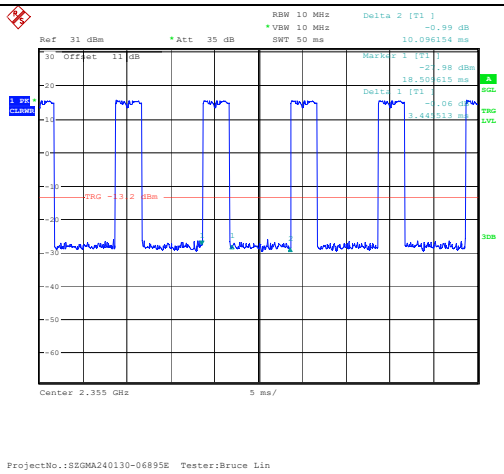
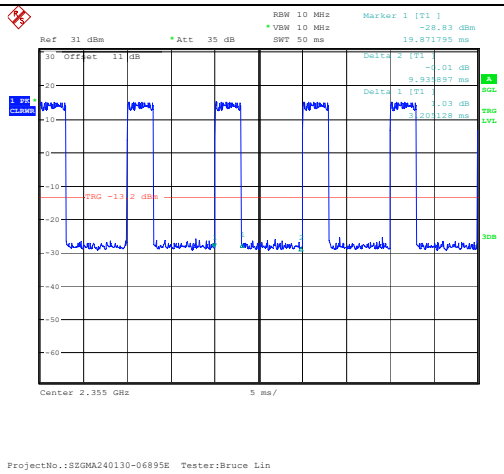
LTE Band 40 Duty Cycle

Operation Band	Modulation	Bandwidth	Ton (ms)	Ton+off (ms)	Duty Cycle (%)	Limit (%)
LTE Band 40 Lower	QPSK	5M	3.285	10.016	32.80	38
		10M	3.205	10.096	31.75	38
	16QAM	5M	3.285	10.096	32.54	38
		10M	3.285	9.936	33.06	38
LTE Band 40 Upper	QPSK	5M	3.365	10.096	33.33	38
		10M	3.446	10.096	34.13	38
	16QAM	5M	3.285	10.096	32.54	38
		10M	3.205	9.936	32.26	38

LTE Band 40 Duty Cycle

Lower Band

Channel	Bandwidth QPSK	Bandwidth 16QAM
5MHz		
10MHz		

LTE Band 40 Duty Cycle		
Upper Band		
Channel	Bandwidth QPSK	Bandwidth 16QAM
5MHz		
10MHz		

FCC §2.1049, §22.905, §22.917& §24.238&§27.53&§90.209 - OCCUPIED BANDWIDTH

Applicable Standard

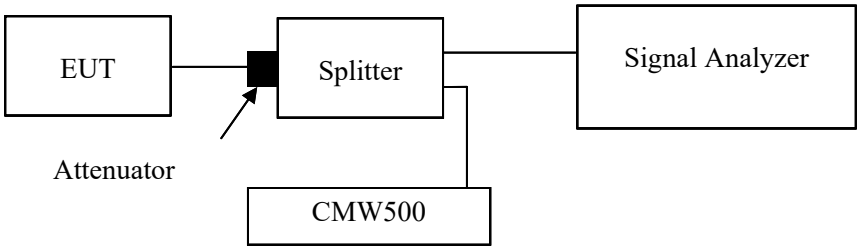
FCC 47 §2.1049, §22.905, §22.917, §24.238, §27.53 and §90.209.

Test Procedure

ANSI C63.26-2015 Section 5.4.4

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.



Test Data

Environmental Conditions

Temperature:	26~27 ℃
Relative Humidity:	49~50 %
ATM Pressure:	101 kPa

The testing was performed by Bruce Lin and Leo Jin from 2024-03-10 to 2024-07-01.

EUT operation mode: Transmitting

Test Result: Compliant

Please refer to the following tables and plots.

Cellular Band (Part 22H)

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
GSM	0.247	0.245	0.243	0.314	0.313	0.317
EDGE	0.247	0.248	0.245	0.319	0.323	0.321

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
WCDMA R99	4.16	4.16	4.15	4.755	4.77	4.755
HSDPA	4.18	4.15	4.17	4.74	4.725	4.74
HSUPA	4.15	4.16	4.16	4.755	4.755	4.77

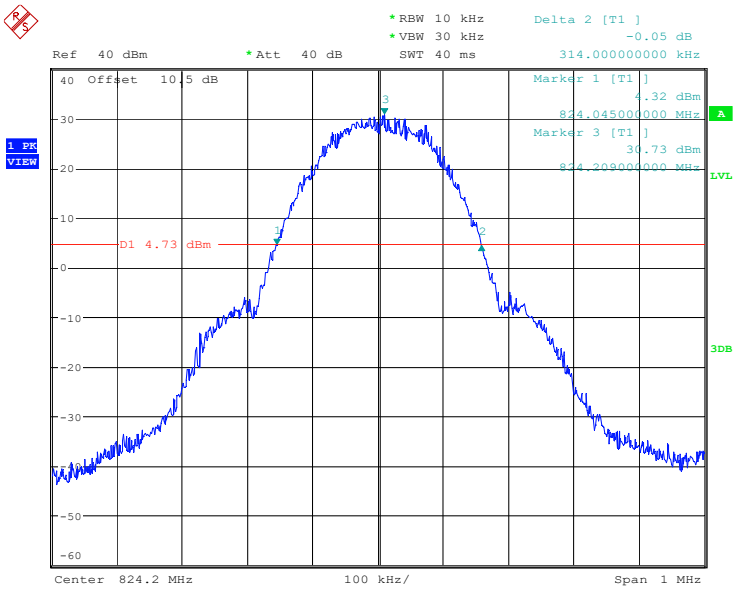
PCS Band (Part 24E)

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
GSM	0.246	0.246	0.243	0.318	0.318	0.321
EDGE	0.246	0.245	0.246	0.324	0.323	0.309

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
WCDMA R99	4.14	4.13	4.12	4.755	4.725	4.725
HSDPA	4.18	4.15	4.13	5.445	4.725	4.725
HSUPA	4.14	4.14	4.14	4.995	4.725	4.740

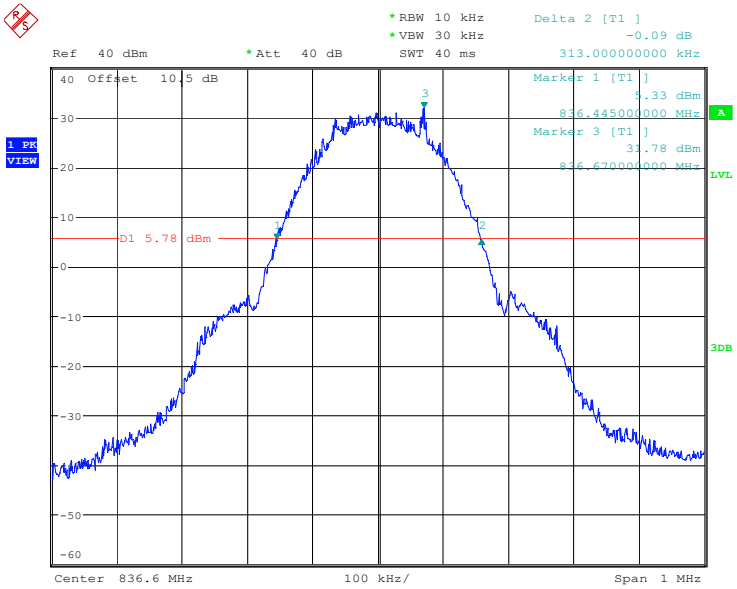
26dB Bandwidth:
Cellular Band

GSM(GMSK) Mode, Low channel



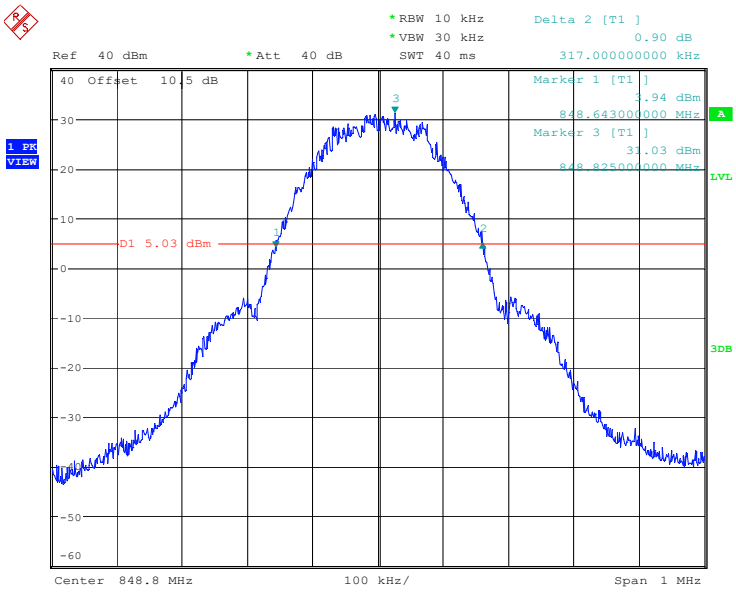
ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:12:23

GSM(GMSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:31:53

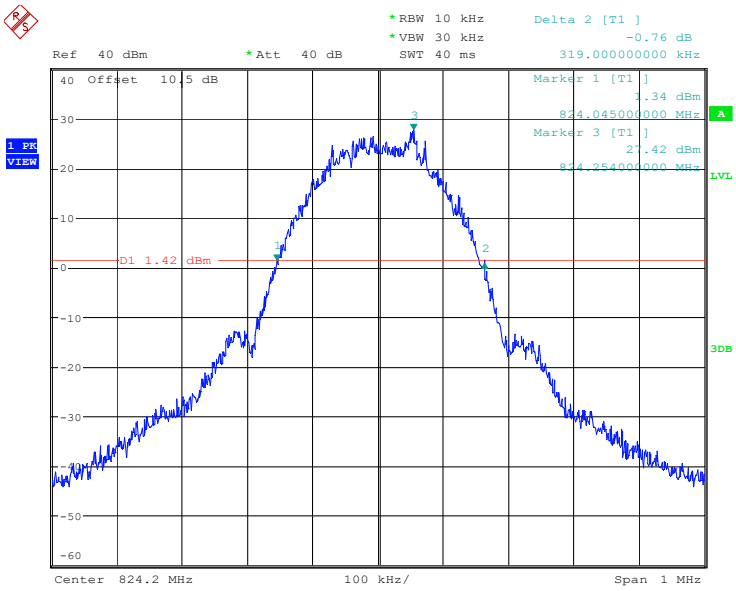
GSM(GMSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:20:58

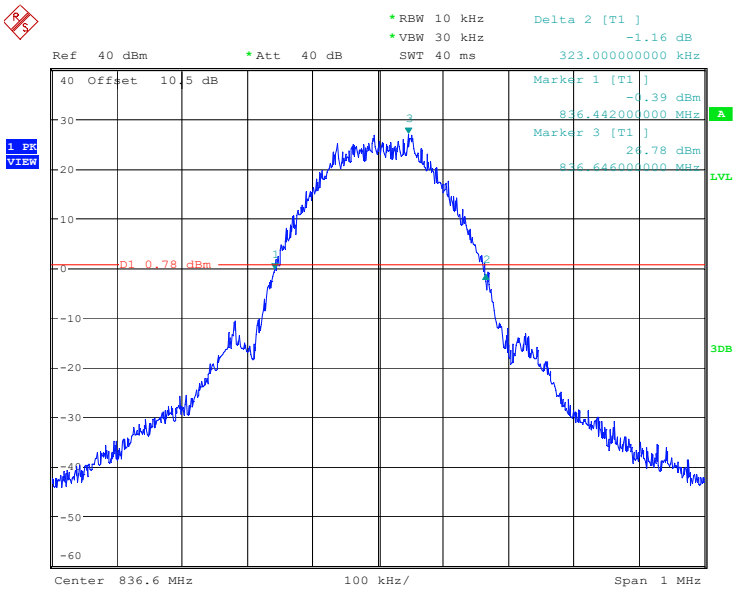
GSM(8PSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:19:20

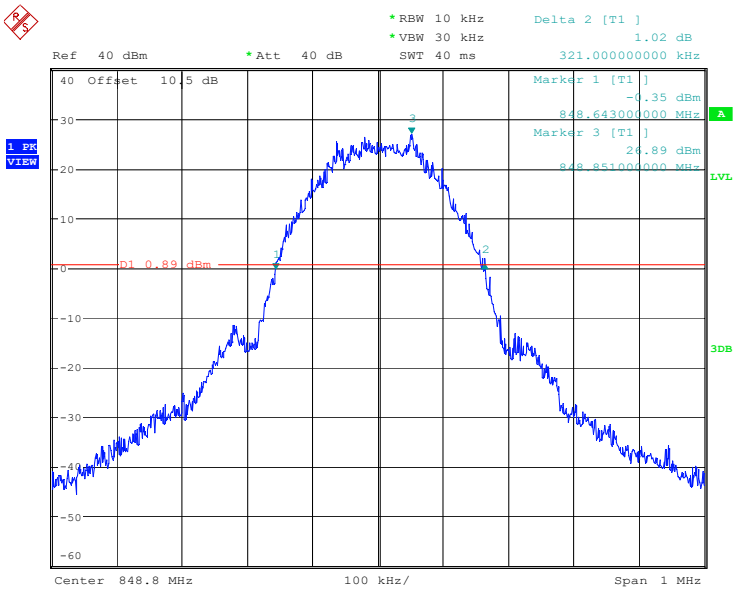
GSM(8PSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:26:42

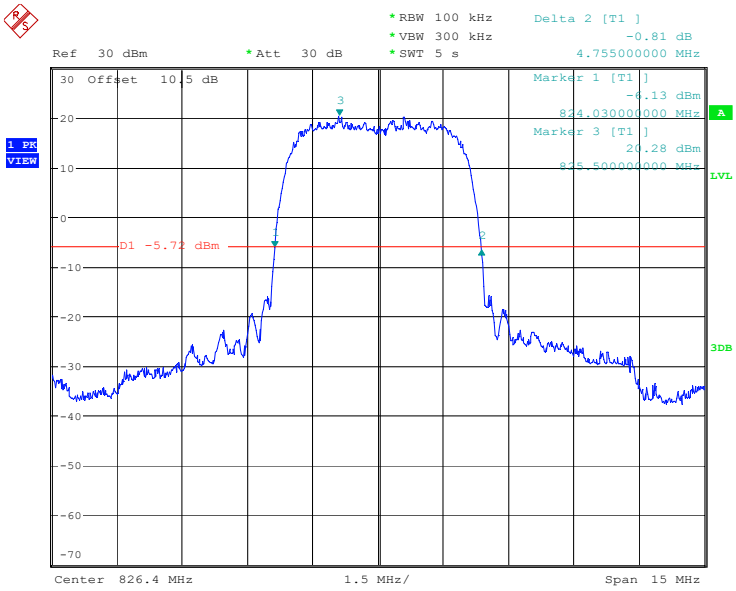
GSM(8PSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:30:14

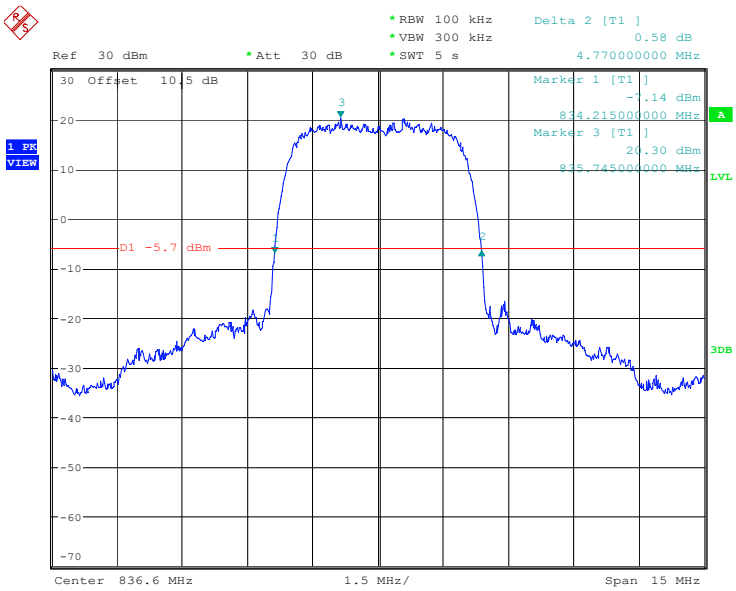
RMC (BPSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 22:52:04

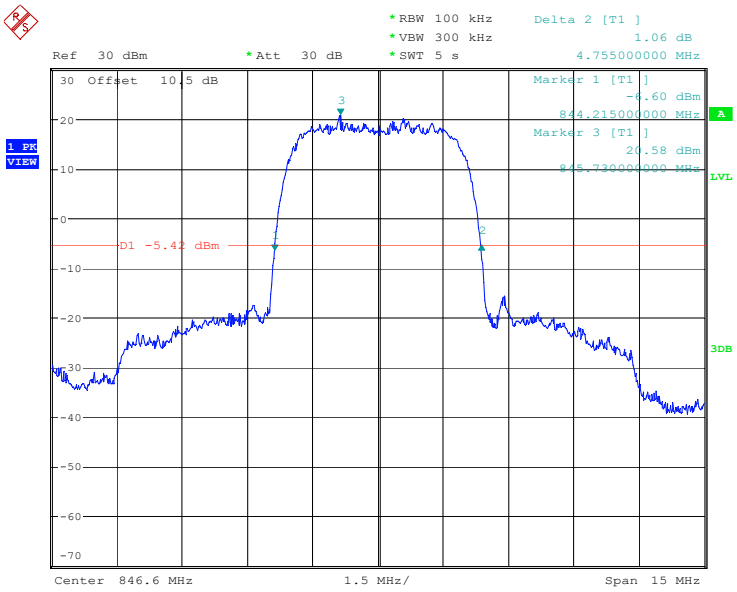
RMC (BPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 22:55:19

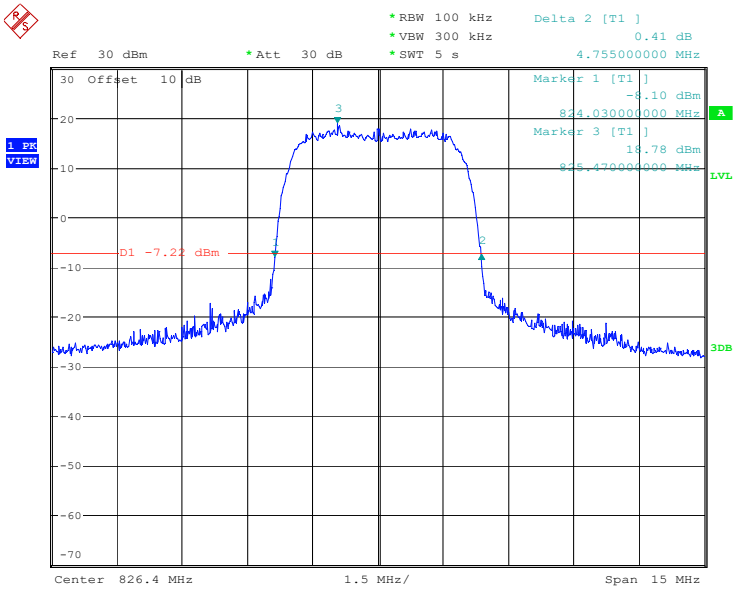
RMC (BPSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 22:57:36

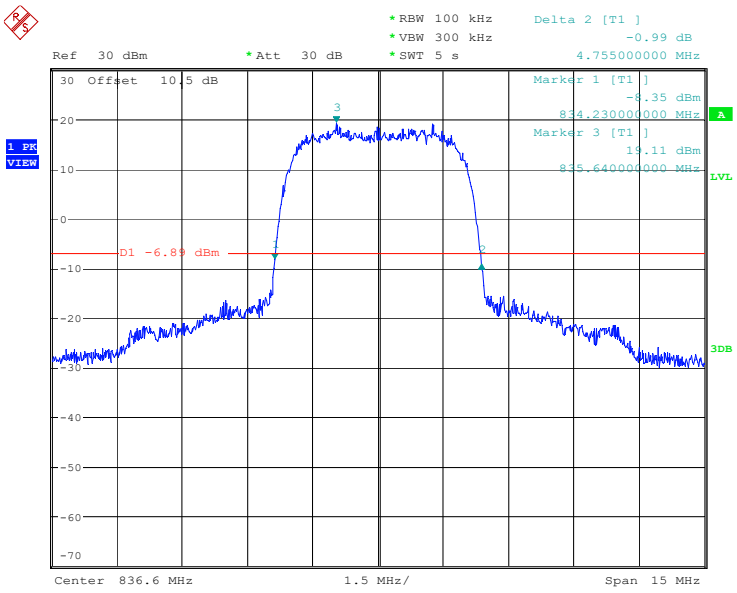
HSUPA (QPSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:16:47

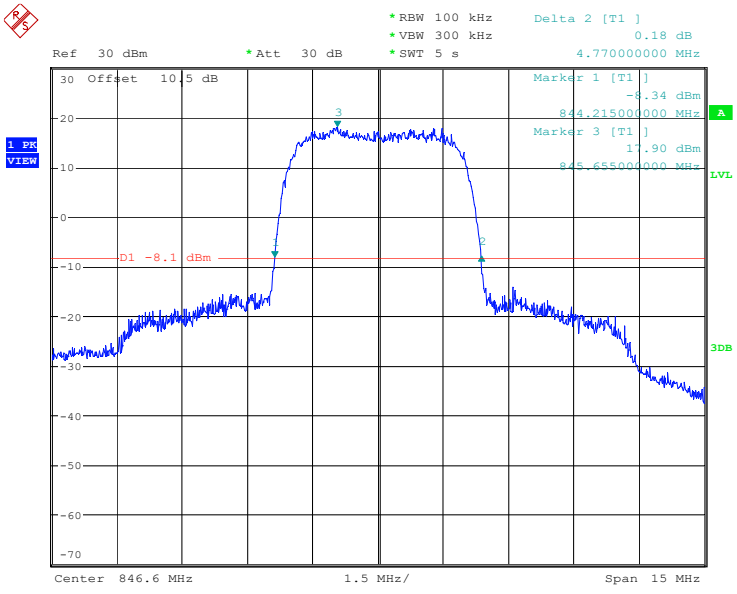
HSUPA (QPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:13:34

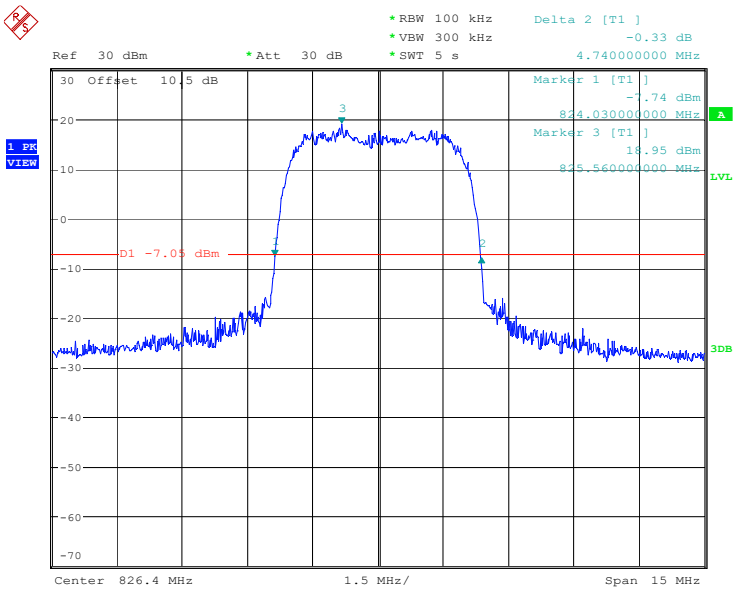
HSUPA (QPSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:10:36

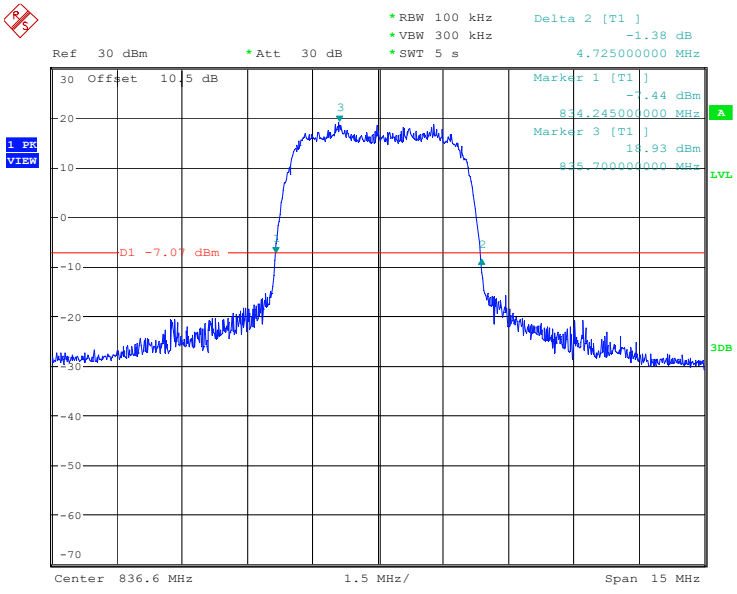
HSDPA (16QAM) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:01:52

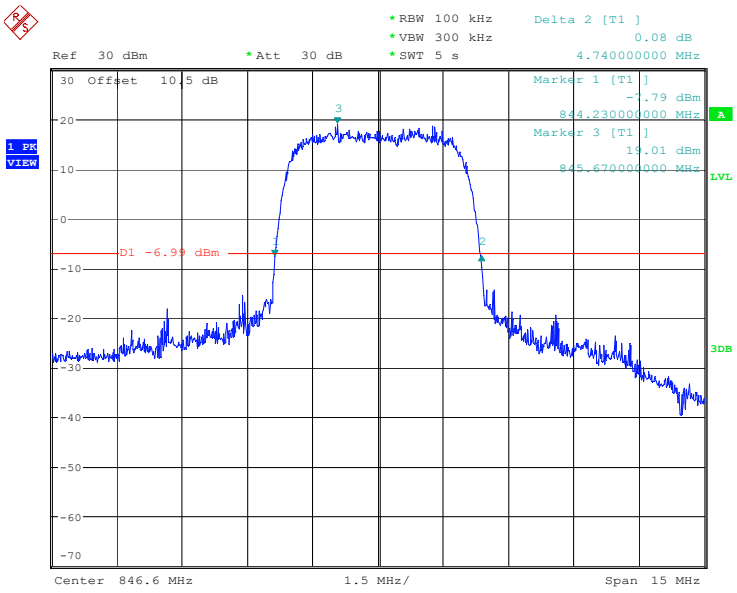
HSDPA (16QAM) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:04:53

HSDPA (16QAM) Mode, High channel

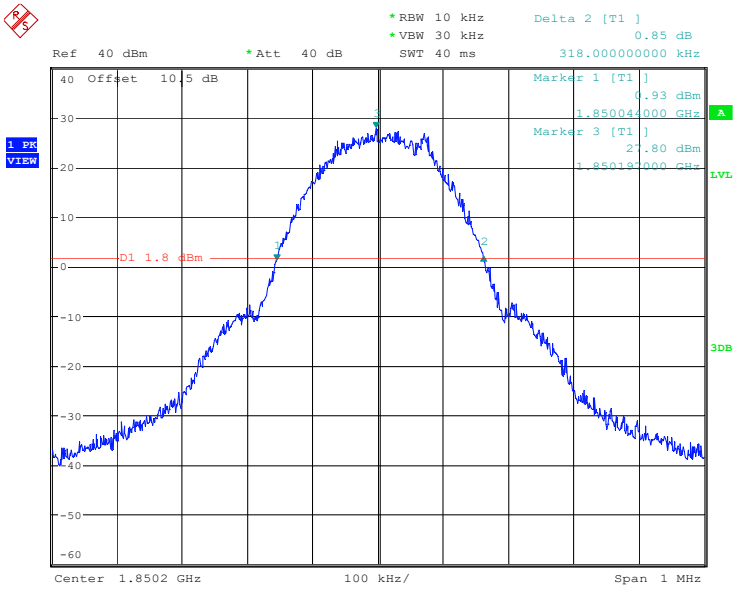


ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:07:23

PCS Band

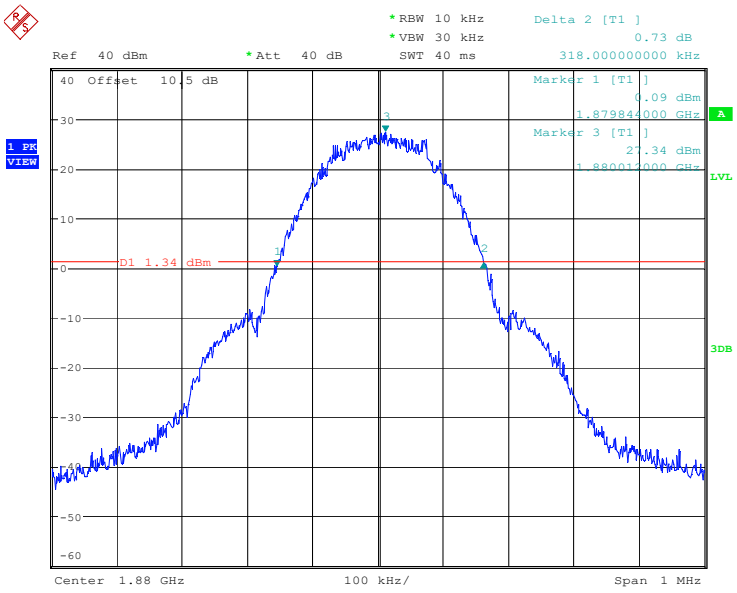
GSM(GMSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 20:43:00

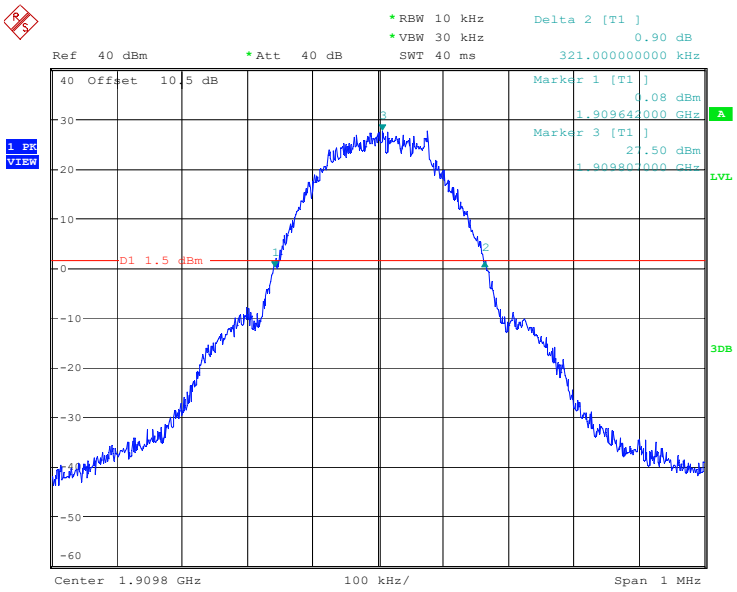
GSM(GMSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 21:22:02

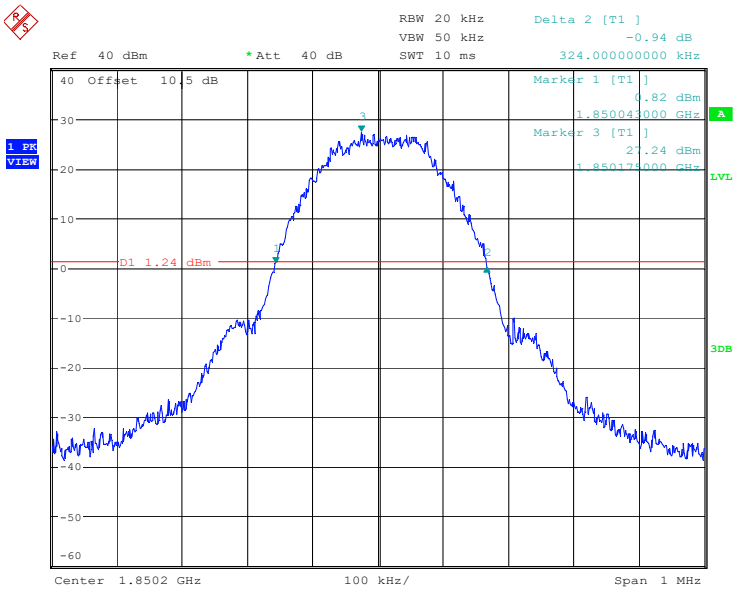
GSM(GMSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 21:27:01

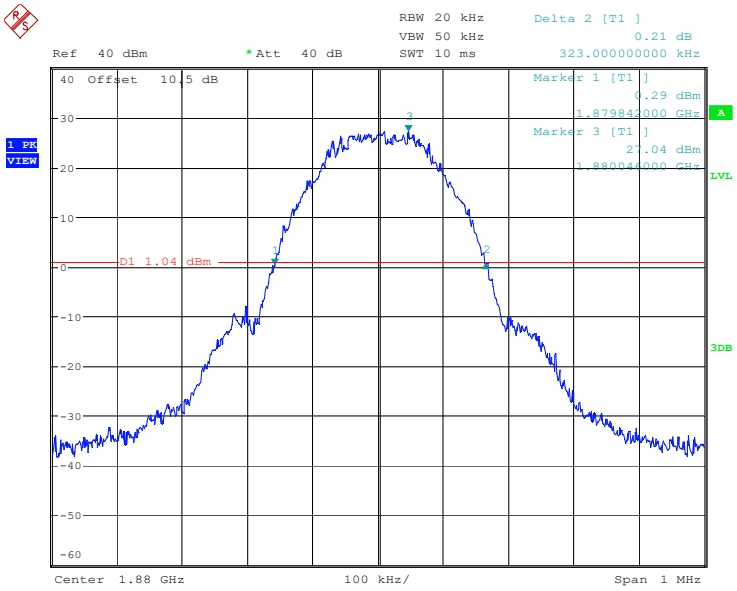
GSM(8PSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:47:48

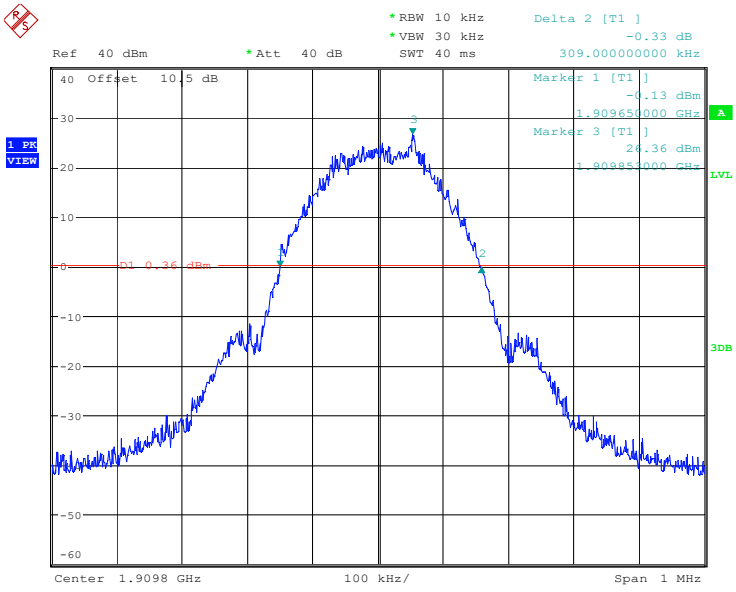
GSM(8PSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 20:00:54

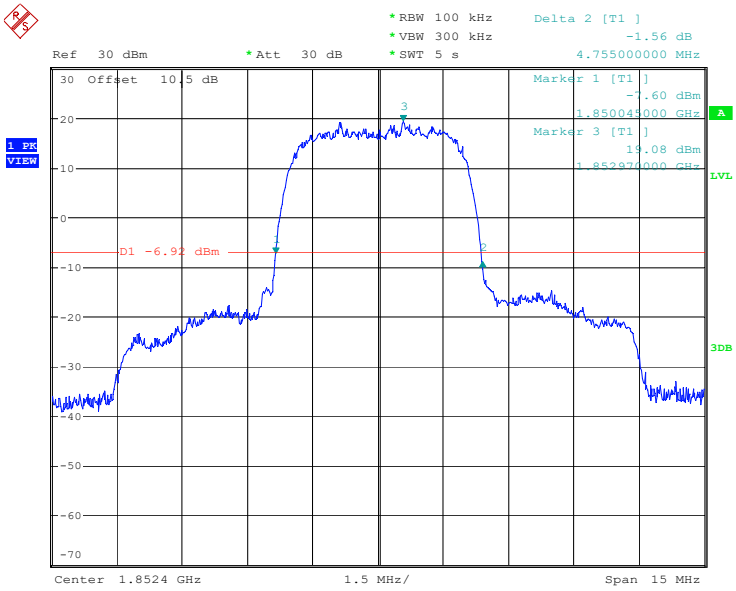
GSM(8PSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:54:22

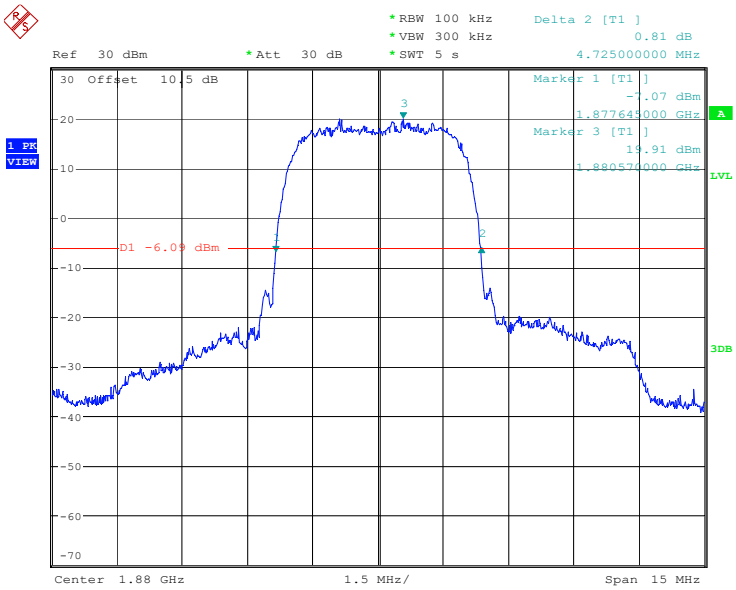
RMC (BPSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:23:46

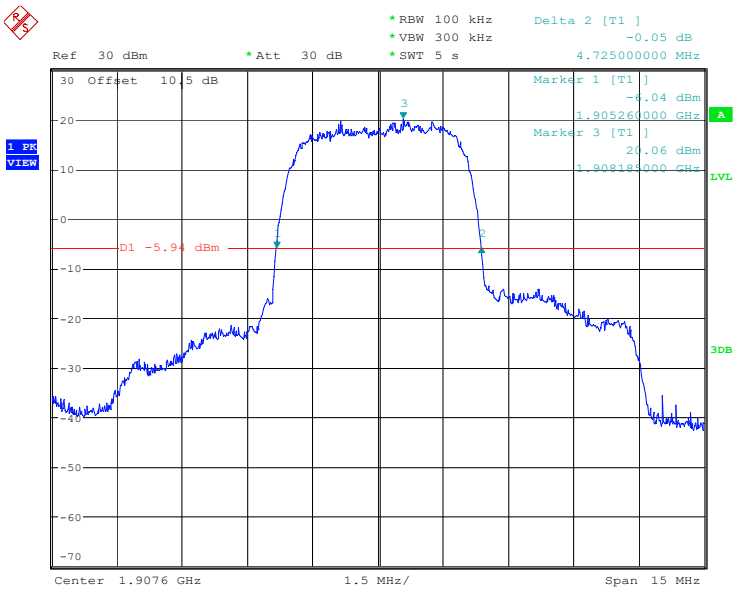
RMC (BPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:29:05

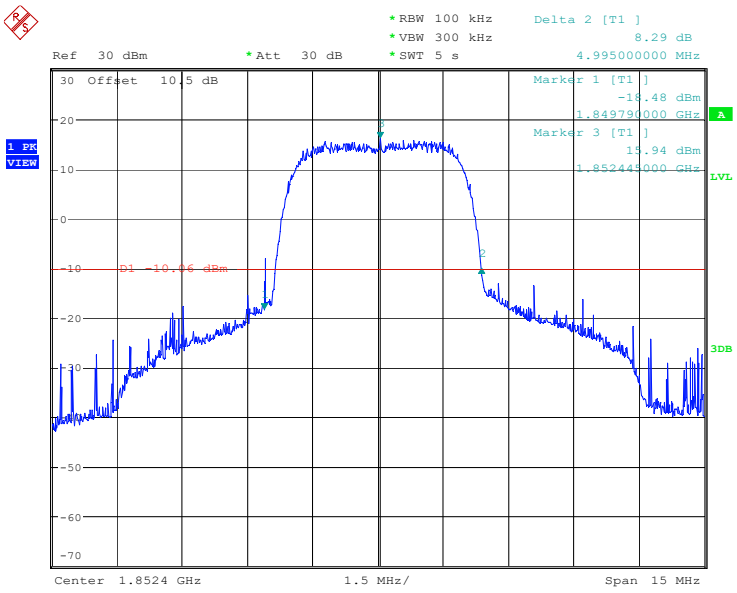
RMC (BPSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:31:36

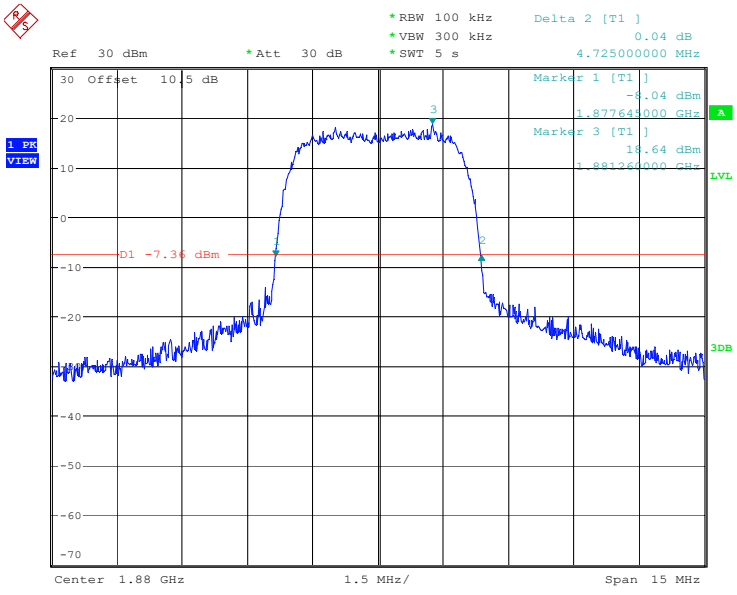
HSUPA (QPSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:53:42

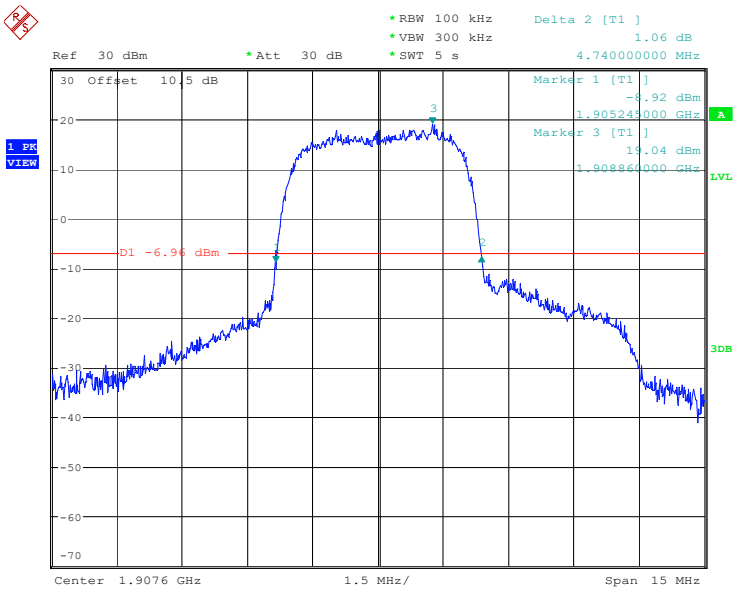
HSUPA (QPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

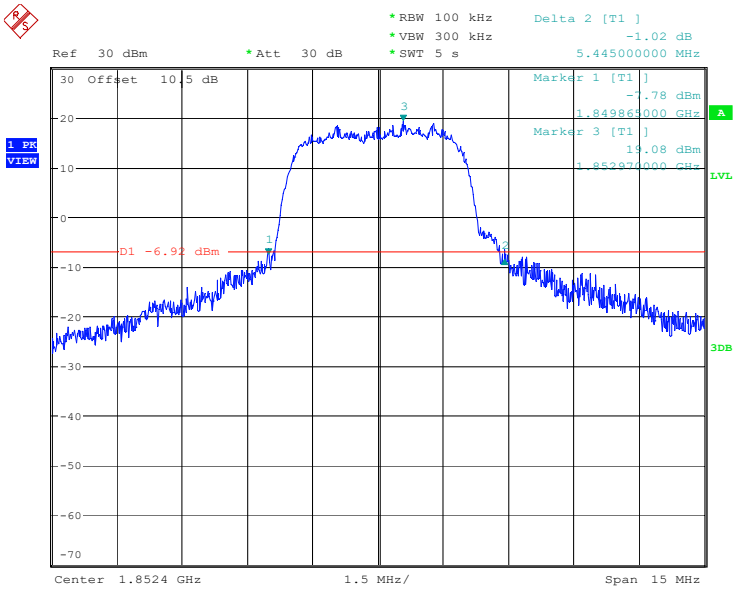
Date: 14.MAR.2024 23:57:29

HSUPA (QPSK) Mode, High channel



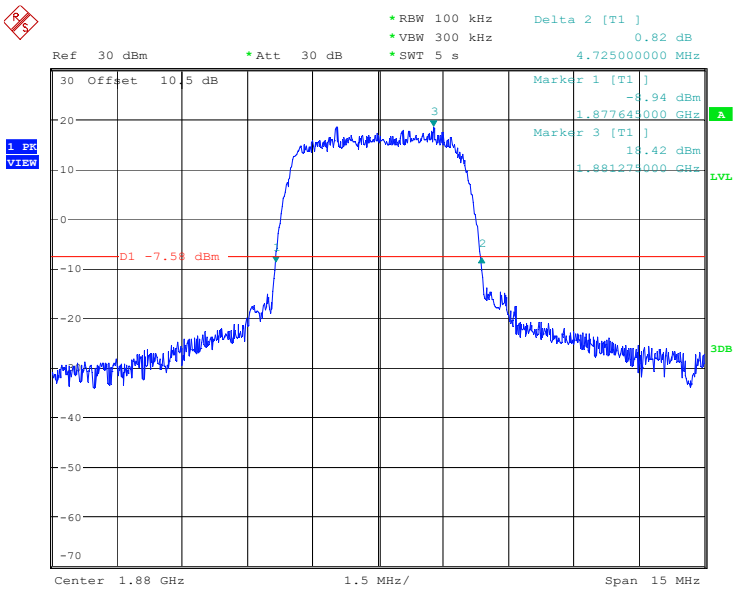
ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:01:25

HSDPA (16QAM) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:47:40

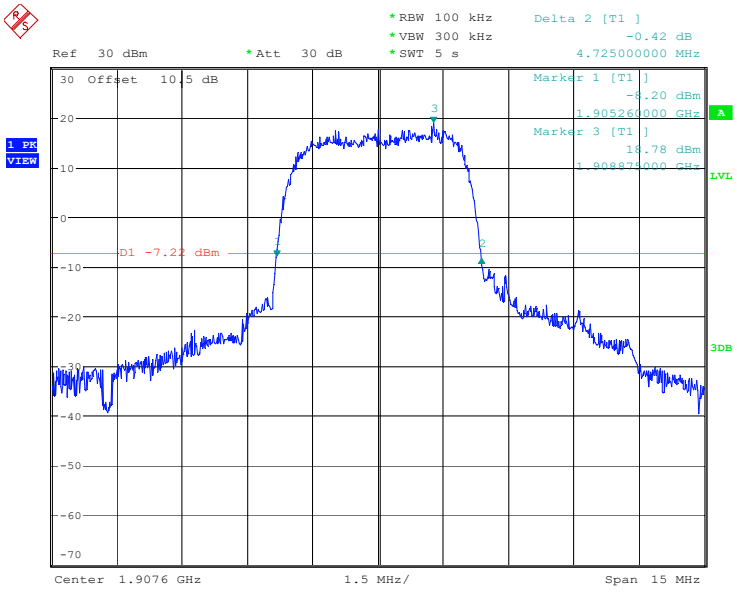
HSDPA (16QAM) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:43:42

HSDPA (16QAM) Mode, High channel

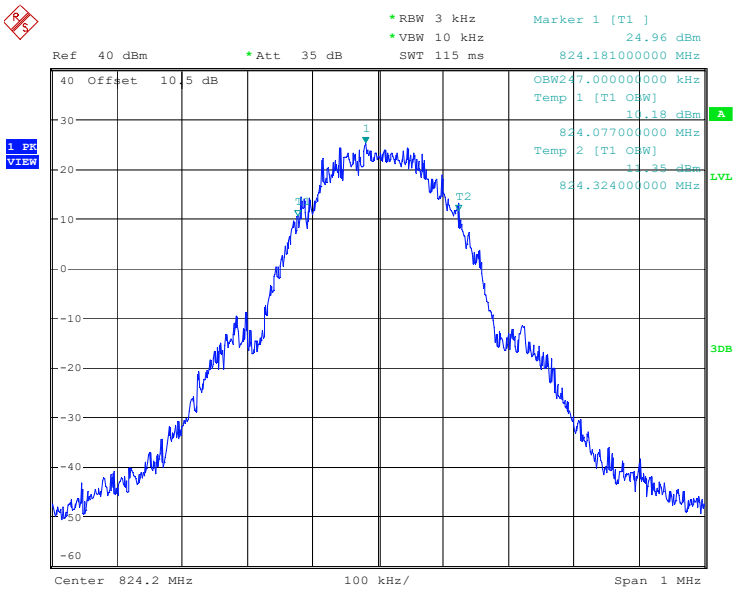


ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:40:39

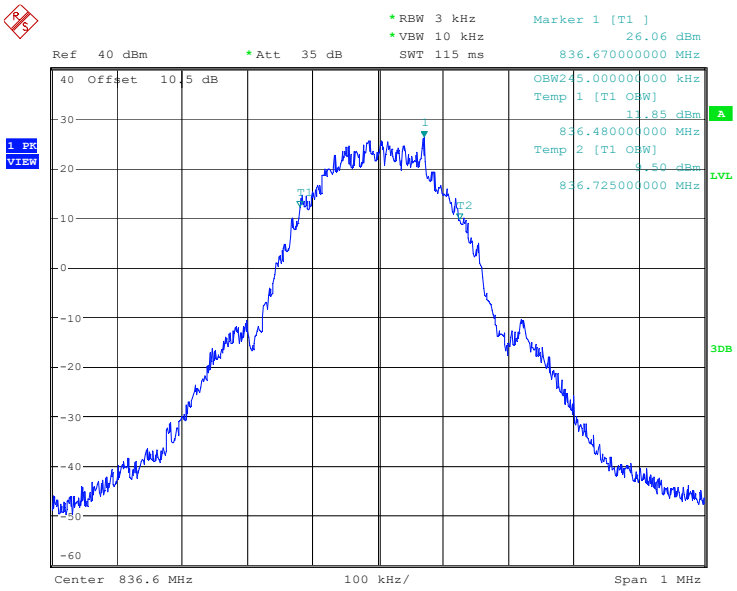
99% Occupied Bandwidth:
Cellular Band

GSM(GMSK) Mode, Low channel



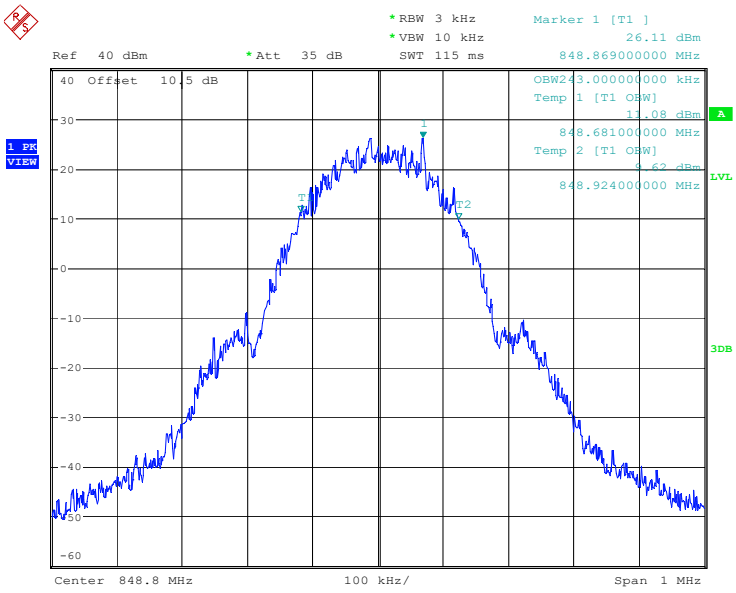
ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:13:18

GSM(GMSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:32:46

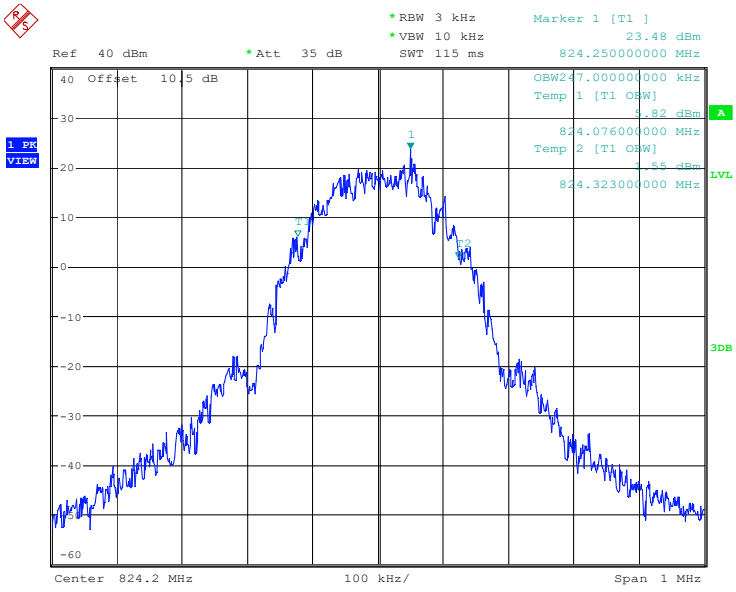
GSM(GMSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:21:32

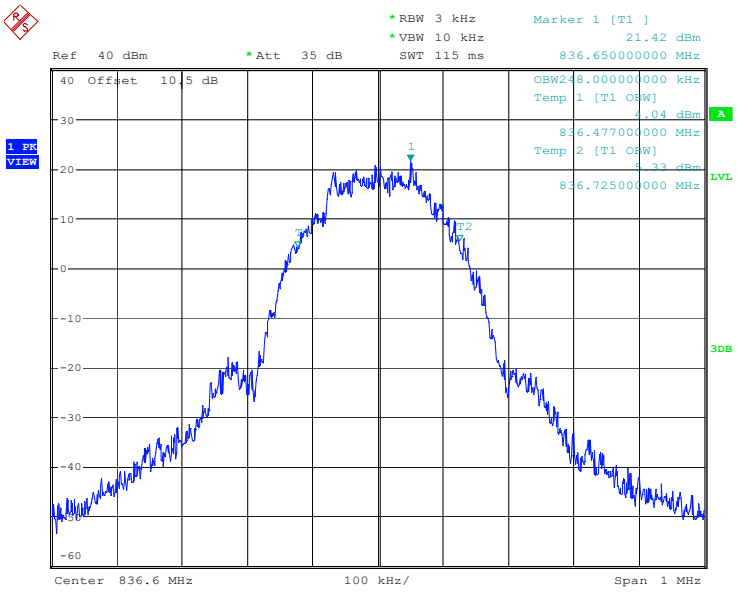
GSM(8PSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:19:54

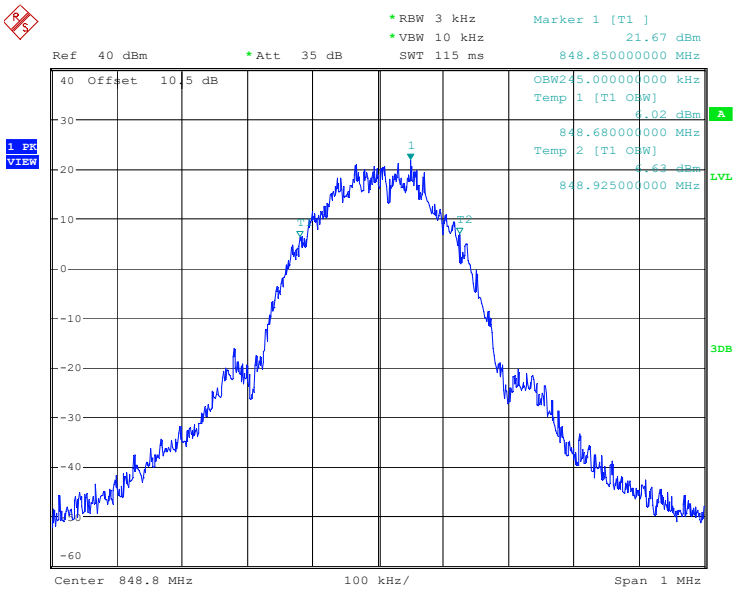
GSM(8PSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:27:15

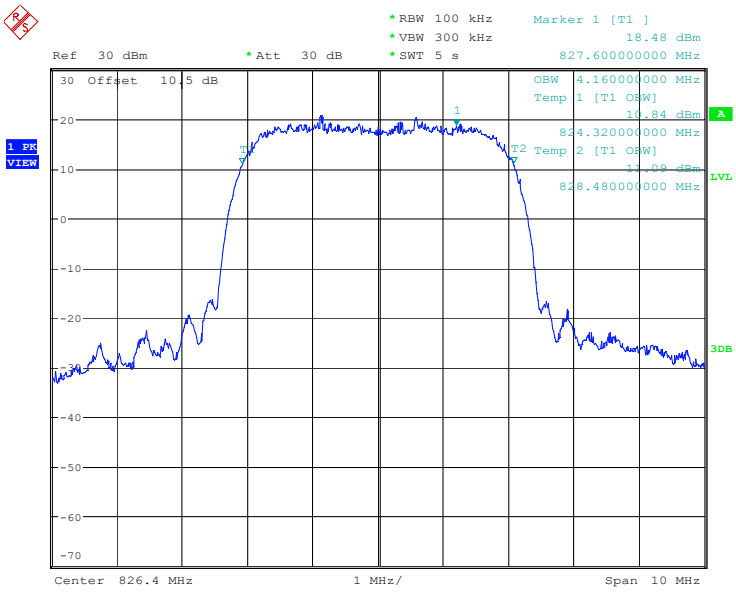
GSM(8PSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:30:47

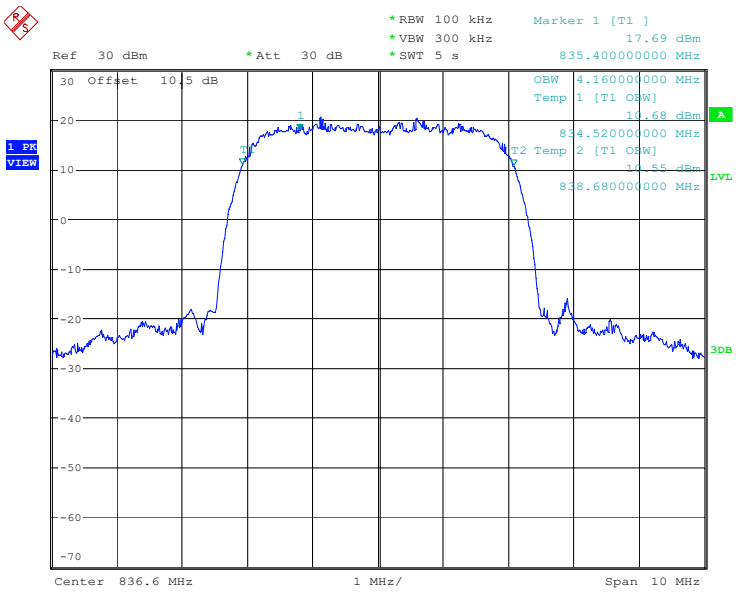
RMC (BPSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 22:52:54

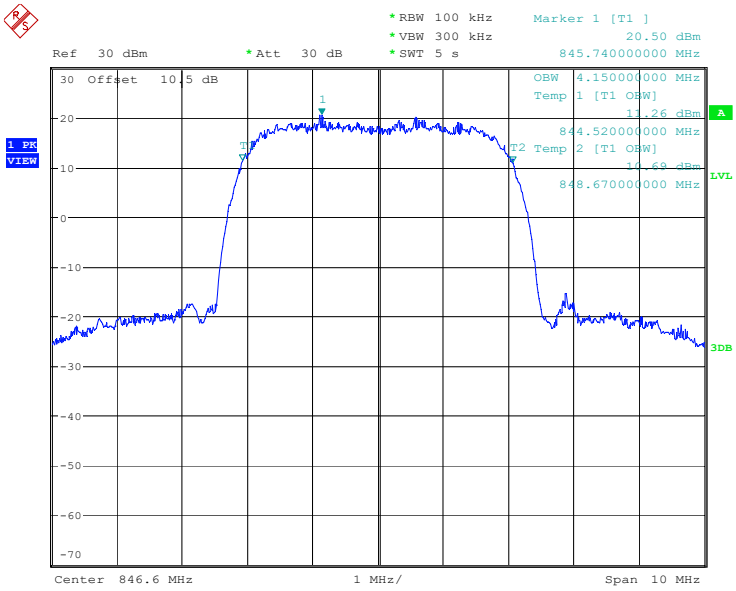
RMC (BPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 22:56:02

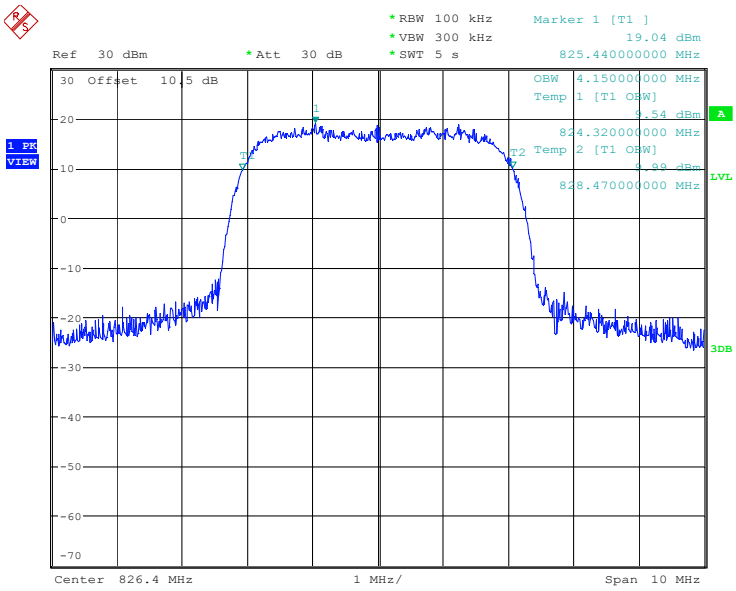
RMC (BPSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 22:58:08

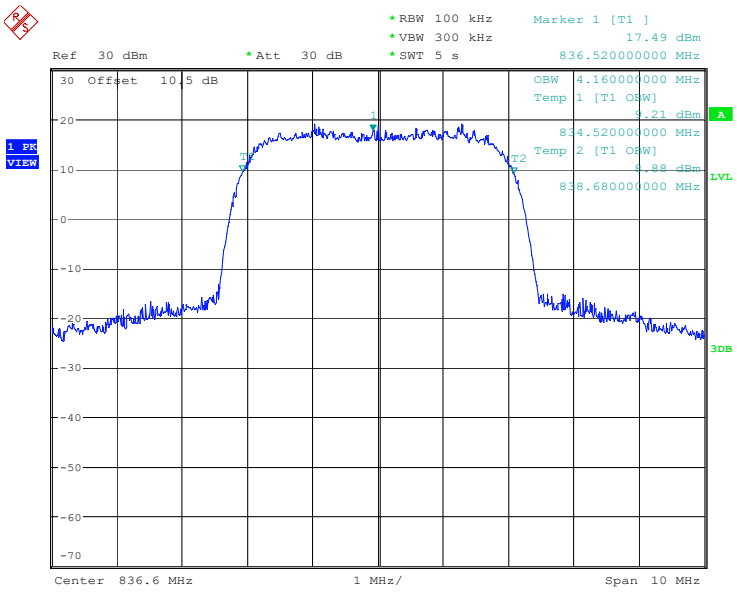
HSUPA (QPSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:17:37

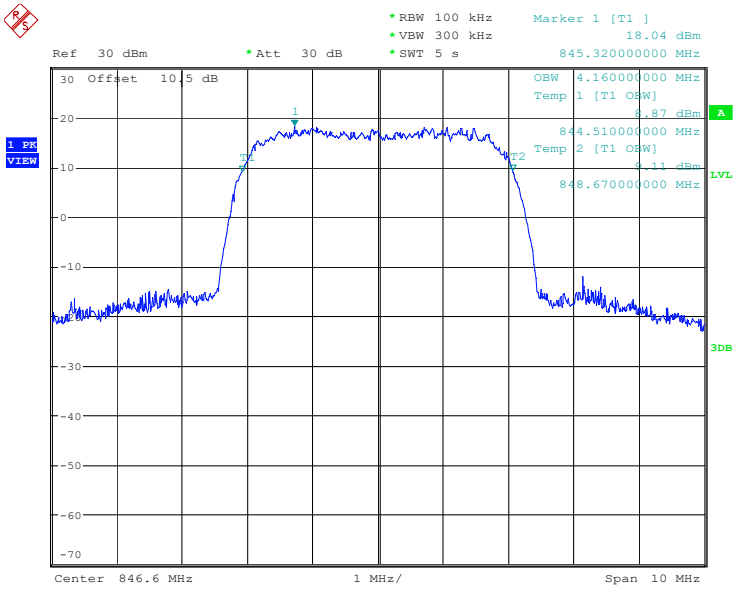
HSUPA (QPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:14:08

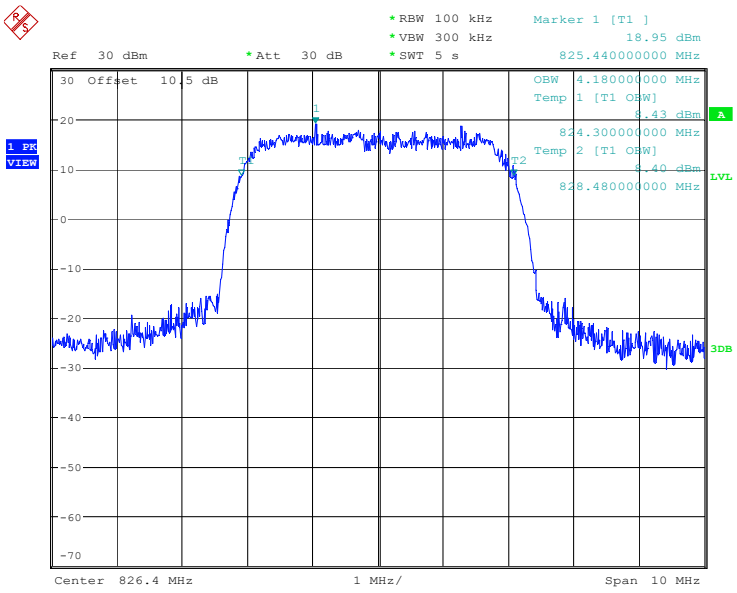
HSUPA (QPSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:11:24

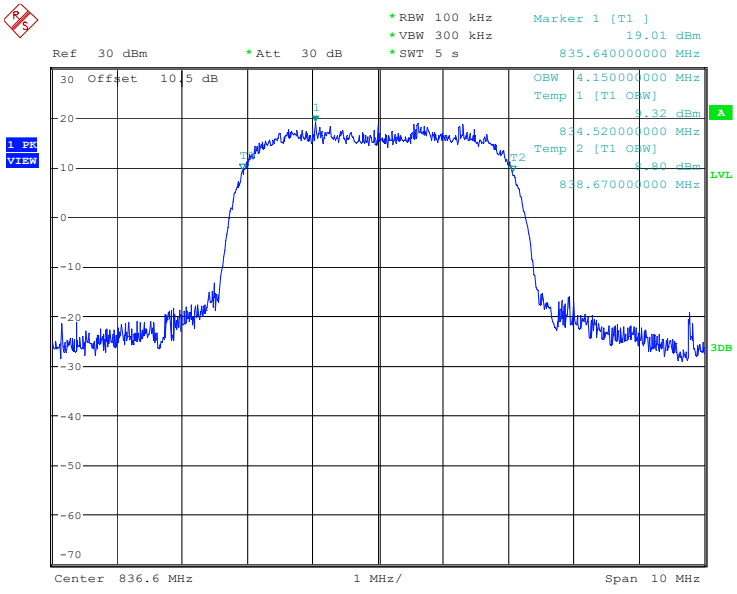
HSDPA (16QAM) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:02:16

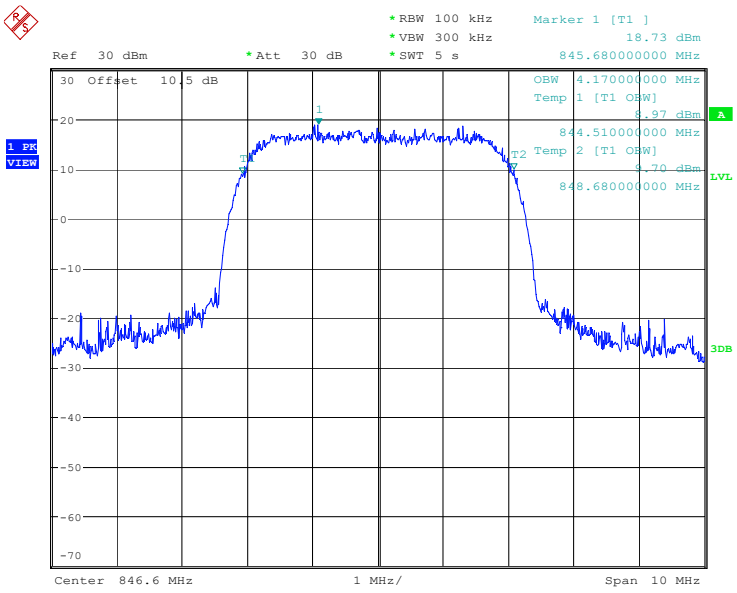
HSDPA (16QAM) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:05:23

HSDPA (16QAM) Mode, High channel

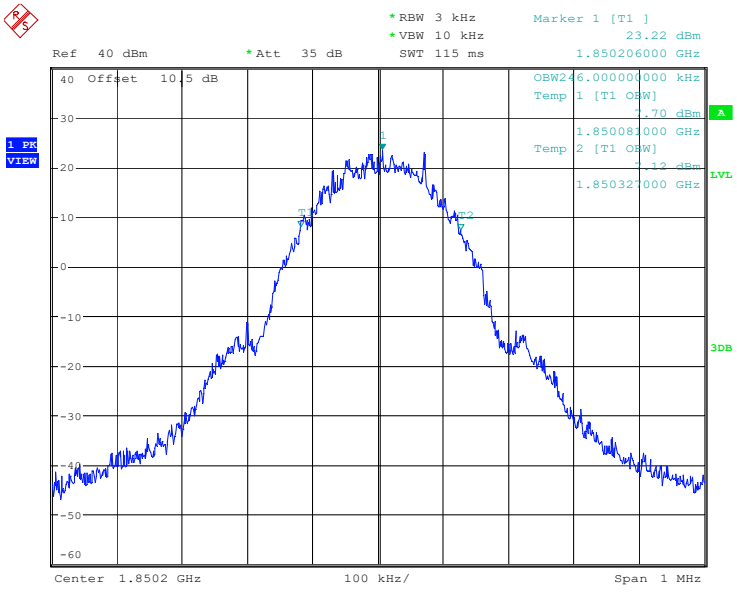


ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:07:53

PCS Band

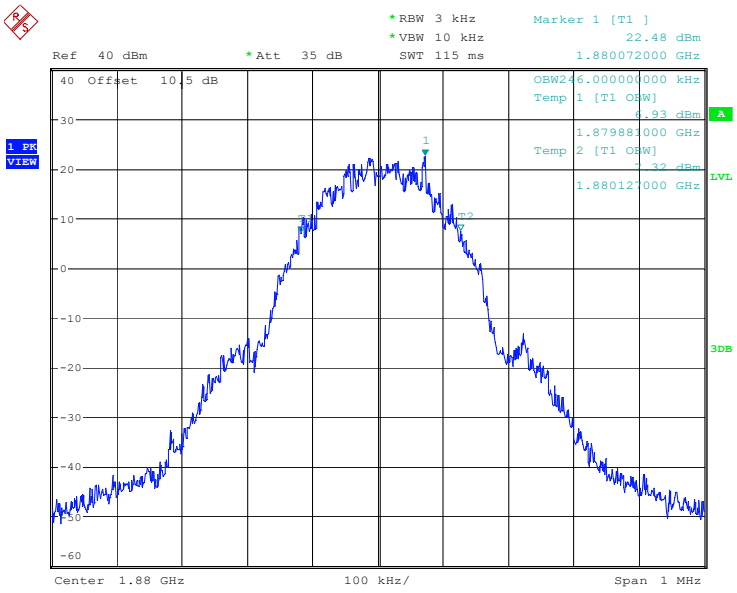
GSM(GMSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 20:44:04

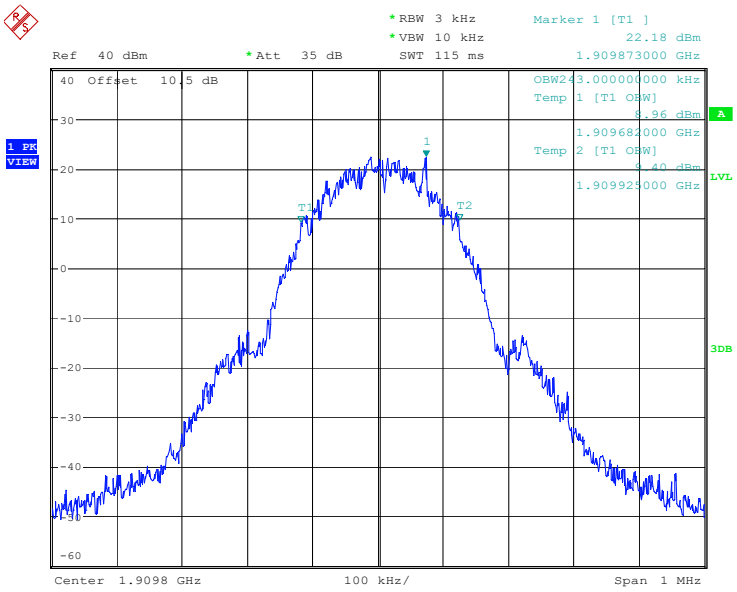
GSM(GMSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 21:22:36

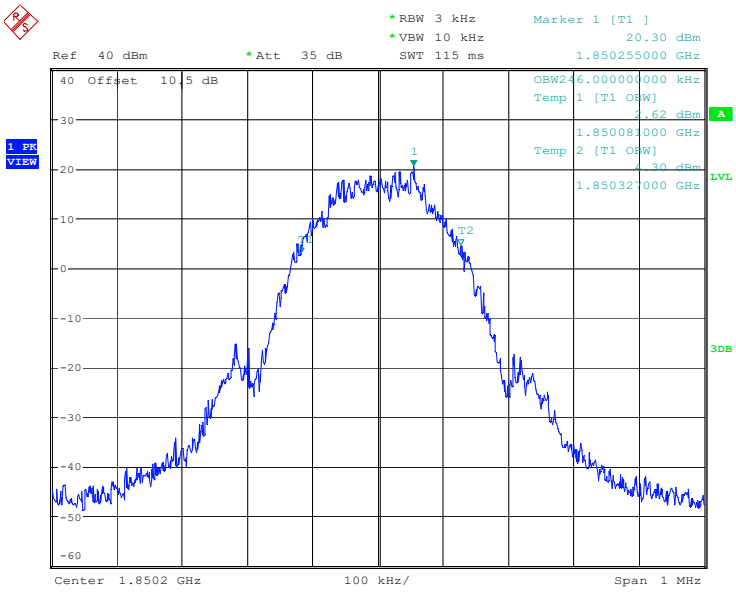
GSM(GMSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 21:27:34

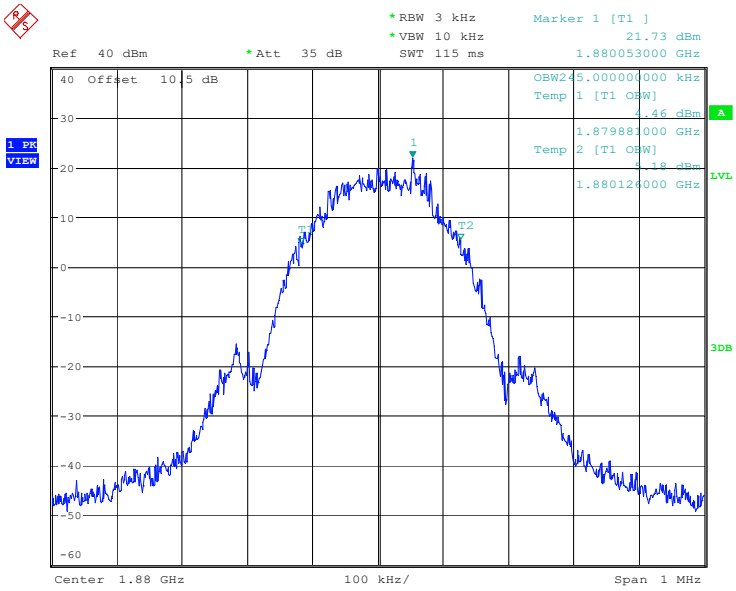
GSM(8PSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:48:41

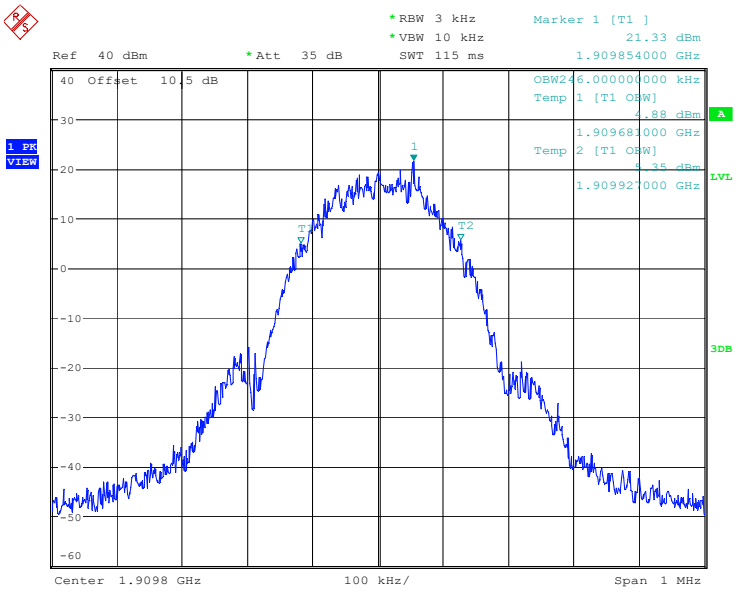
GSM(8PSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 20:01:46

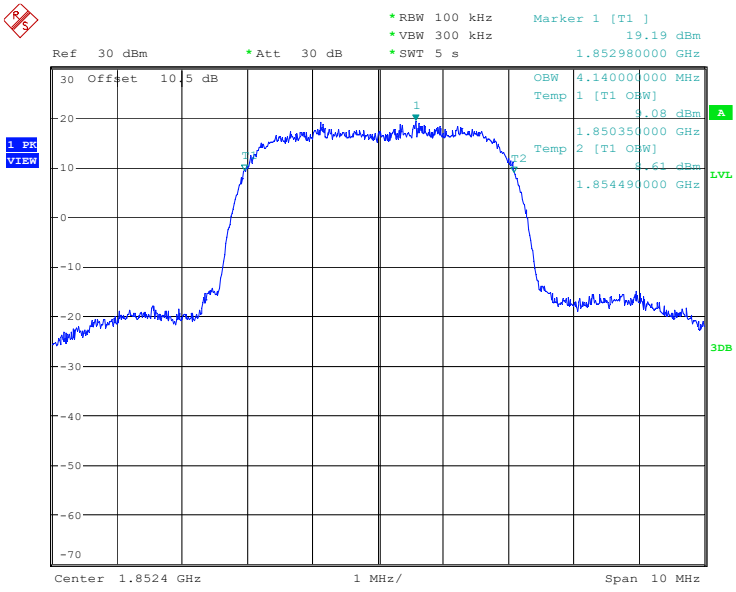
GSM(8PSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:54:55

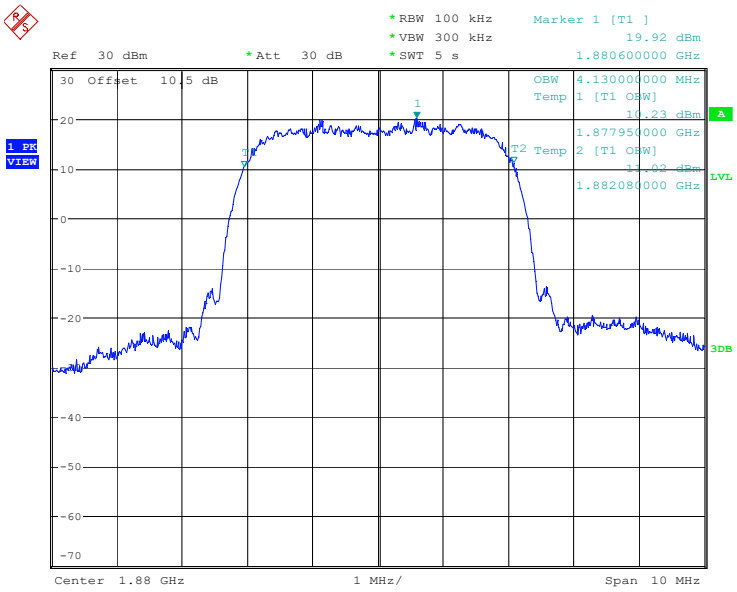
RMC (BPSK) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:24:17

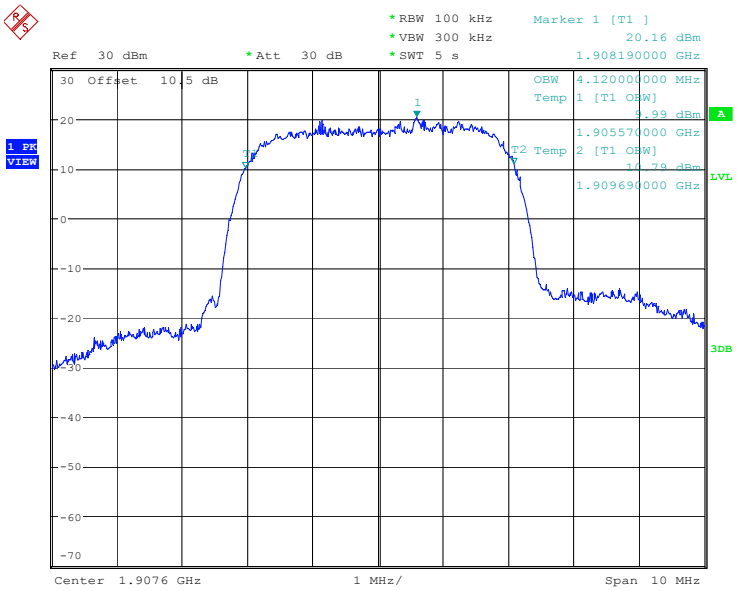
RMC (BPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:29:35

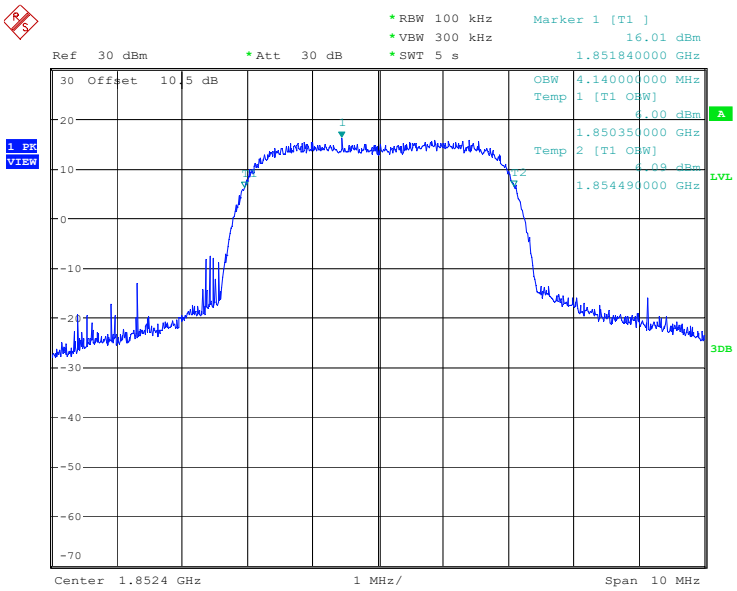
RMC (BPSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

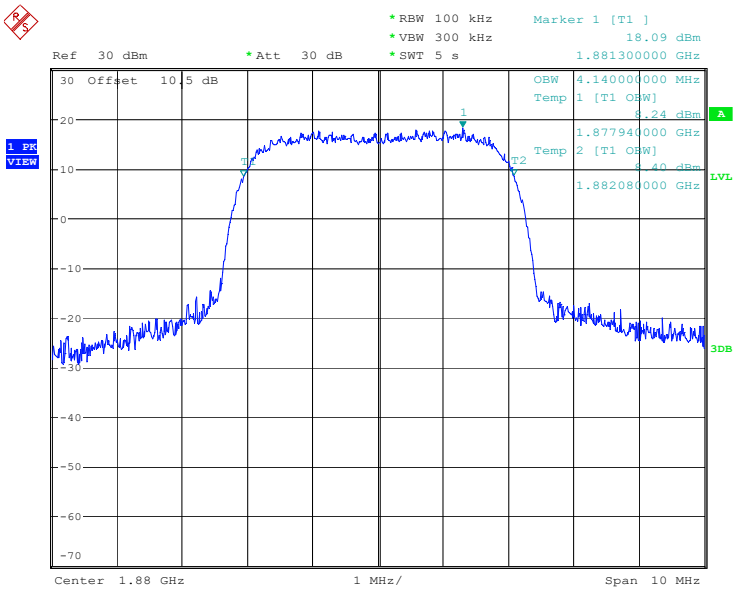
Date: 14.MAR.2024 23:33:47

HSUPA (QPSK) Mode, Low channel



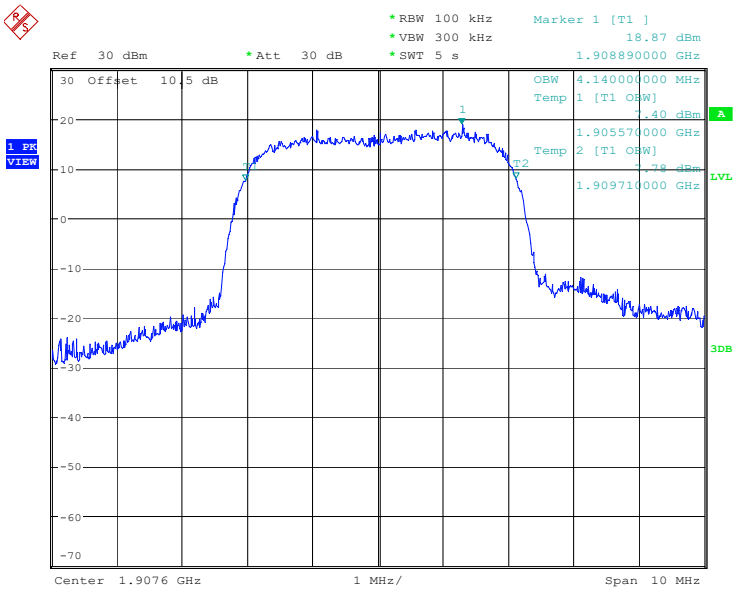
ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:54:23

HSUPA (QPSK) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:59:20

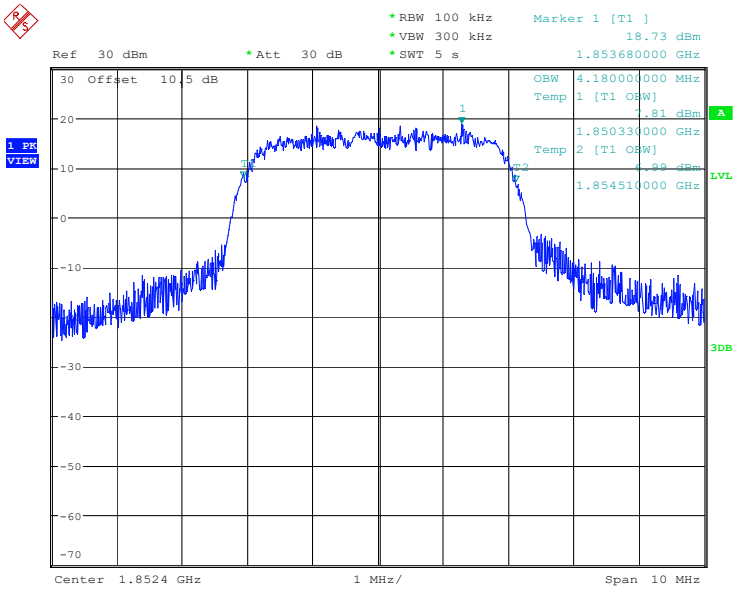
HSUPA (QPSK) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:02:48

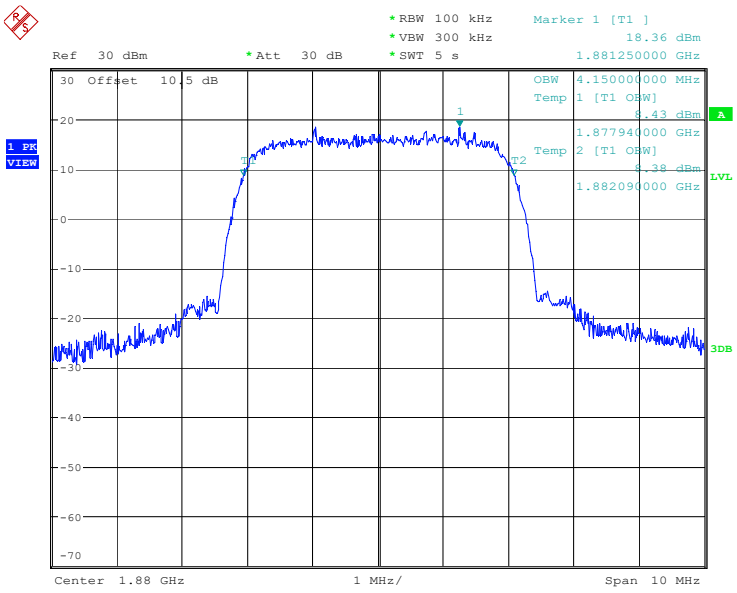
HSDPA (16QAM) Mode, Low channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:48:31

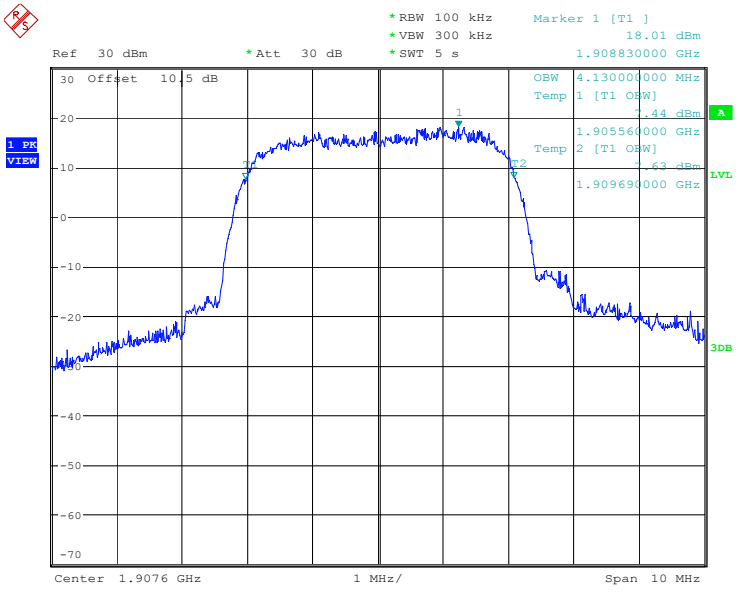
HSDPA (16QAM) Mode, Middle channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:45:04

HSDPA (16QAM) Mode, High channel



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:41:19

LTE Band 2:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.104	1.110	1.110	1.314	1.320	1.308
1.4MHz 16QAM	1.116	1.098	1.104	1.332	1.296	1.332
3MHz QPSK	2.700	2.700	2.700	2.952	2.940	2.952
3MHz 16QAM	2.700	2.688	2.700	2.952	2.976	2.952
5MHz QPSK	4.520	4.540	4.520	5.060	5.020	5.040
5MHz 16QAM	4.540	4.520	4.520	5.060	4.960	5.040
10MHz QPSK	8.960	8.960	8.960	9.760	9.840	9.680
10MHz 16QAM	8.920	8.960	8.960	9.600	9.600	9.680
15MHz QPSK	13.440	13.500	13.620	14.820	14.820	15.060
15MHz 16QAM	13.440	13.500	13.620	14.760	14.880	15.000
20MHz QPSK	17.840	18.080	18.080	19.360	19.440	19.600
20MHz 16QAM	17.840	18.000	18.080	19.280	19.600	19.520

LTE Band 4:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.098	1.110	1.104	1.308	1.296	1.308
1.4MHz 16QAM	1.098	1.104	1.110	1.308	1.314	1.332
3MHz QPSK	2.700	2.700	2.700	2.940	2.940	2.952
3MHz 16QAM	2.688	2.700	2.700	2.976	2.964	2.964
5MHz QPSK	4.520	4.520	4.520	5.020	4.980	5.020
5MHz 16QAM	4.520	4.540	4.540	4.980	5.060	5.120
10MHz QPSK	8.960	8.960	8.960	9.800	9.680	9.760
10MHz 16QAM	8.960	8.960	8.960	9.720	9.720	9.760
15MHz QPSK	13.560	13.440	13.500	14.940	14.940	14.880
15MHz 16QAM	13.560	13.440	13.500	14.820	14.820	14.880
20MHz QPSK	18.000	17.920	18.000	19.600	19.280	19.440
20MHz 16QAM	17.920	17.840	17.920	19.600	19.280	19.520

LTE Band 5

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.110	1.098	1.110	1.284	1.302	1.320
1.4MHz 16QAM	1.098	1.104	1.098	1.308	1.308	1.302
3MHz QPSK	2.700	2.688	2.700	2.928	2.940	2.964
3MHz 16QAM	2.700	2.688	2.688	2.940	2.952	2.964
5MHz QPSK	4.520	4.500	4.520	4.980	4.980	5.020
5MHz 16QAM	4.520	4.520	4.520	5.060	5.040	5.020
10MHz QPSK	8.960	8.920	8.960	9.760	9.600	9.760
10MHz 16QAM	8.960	8.960	8.960	9.720	9.640	9.680

LTE Band 7:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.520	4.520	4.540	5.000	5.040	5.000
5MHz 16QAM	4.520	4.540	4.500	5.060	5.060	5.020
10MHz QPSK	8.920	9.000	8.920	9.720	9.720	9.760
10MHz 16QAM	8.960	8.960	8.960	9.680	9.720	9.600
15MHz QPSK	13.440	13.560	13.500	14.880	14.940	14.940
15MHz 16QAM	13.440	13.440	13.500	14.760	14.880	14.880
20MHz QPSK	17.920	17.920	18.000	19.600	19.440	19.600
20MHz 16QAM	17.920	17.920	18.000	19.520	19.520	19.520

LTE Band 12:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.104	1.104	1.104	1.290	1.320	1.320
1.4MHz 16QAM	1.098	1.104	1.098	1.314	1.308	1.308
3MHz QPSK	2.700	2.700	2.700	2.952	2.940	2.964
3MHz 16QAM	2.700	2.700	2.688	2.952	2.952	2.964
5MHz QPSK	4.520	4.540	4.500	5.000	5.060	5.060
5MHz 16QAM	4.540	4.520	4.540	5.020	5.020	5.020
10MHz QPSK	8.960	8.960	8.960	9.640	9.840	9.640
10MHz 16QAM	8.920	8.920	8.960	9.760	9.640	9.680

LTE Band 17:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.520	4.500	4.520	5.020	5.020	5.020
5MHz 16QAM	4.520	4.540	4.500	5.060	5.080	5.000
10MHz QPSK	8.960	8.960	8.920	9.720	9.760	9.640
10MHz 16QAM	8.960	8.960	8.960	9.640	9.680	9.720

LTE Band 26(Part 90s):

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Lowest Frequency For 90s	Highest Frequency For 90s	Cross Channel	Lowest Frequency For 90s	Highest Frequency For 90s	Cross Channel
1.4MHz QPSK	1.104	1.104	1.098	1.332	1.296	1.326
1.4MHz 16QAM	1.110	1.104	1.110	1.308	1.314	1.314
3MHz QPSK	2.700	2.700	2.688	2.940	2.952	2.964
3MHz 16QAM	2.688	2.700	2.688	2.976	2.952	2.928
5MHz QPSK	4.520	4.520	4.520	5.020	5.020	5.000
5MHz 16QAM	4.540	4.520	4.540	5.040	5.020	5.060
10MHz QPSK	8.960	/	8.960	9.680	/	9.680
10MHz 16QAM	8.960	/	8.960	9.720	/	9.720
15MHz QPSK	13.500	/	13.500	14.827	/	14.940
15MHz 16QAM	13.500	/	13.500	14.923	/	14.880

LTE Band 26(Part 22H):

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H	Lowest Frequency For 22H	Middle Frequency For 22H	Highest Frequency For 22H
1.4MHz QPSK	1.110	1.104	1.104	1.296	1.344	1.410
1.4MHz 16QAM	1.104	1.110	1.110	1.320	1.314	1.320
3MHz QPSK	2.688	2.700	2.688	2.952	2.964	2.964
3MHz 16QAM	2.688	2.688	2.688	2.952	2.964	2.964
5MHz QPSK	4.500	4.520	4.520	5.020	5.020	5.040
5MHz 16QAM	4.540	4.520	4.540	5.060	4.940	5.060
10MHz QPSK	8.960	8.960	8.960	9.720	9.800	9.640
10MHz 16QAM	8.960	8.960	8.960	9.720	9.720	9.640
15MHz QPSK	13.500	13.500	13.440	14.940	14.880	14.880
15MHz 16QAM	13.500	13.500	13.500	14.940	14.820	14.880

LTE Band 38:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.500	4.520	4.520	4.840	5.020	4.960
5MHz 16QAM	4.520	4.520	4.520	5.080	5.140	5.040
10MHz QPSK	8.960	8.960	8.960	9.800	9.840	9.880
10MHz 16QAM	8.960	8.960	8.960	9.640	9.680	9.600
15MHz QPSK	13.500	13.620	13.500	14.580	16.560	15.000
15MHz 16QAM	13.558	13.510	13.510	16.154	14.808	16.471
20MHz QPSK	17.920	17.920	17.920	19.920	19.360	19.680
20MHz 16QAM	17.920	17.920	17.920	20.480	20.080	21.200

LTE Band 40 Lower:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle channel	High Channel
5MHz QPSK	4.520	/	4.540	5.060	/	5.540
5MHz 16QAM	4.520	/	4.540	5.020	/	5.280
10MHz QPSK	/	8.960	/	/	10.160	/
10MHz 16QAM	/	8.920	/	/	9.720	/

LTE Band 40 Upper:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle channel	High Channel
5MHz QPSK	4.520	/	4.520	5.240	/	5.060
5MHz 16QAM	4.520	/	4.520	5.320	/	5.040
10MHz QPSK	/	9.000	/	/	10.200	/
10MHz 16QAM	/	8.960	/	/	9.600	/

LTE Band 41:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
5MHz QPSK	4.520	4.500	4.520	4.980	5.000	5.040
5MHz 16QAM	4.520	4.540	4.520	5.240	5.040	5.160
10MHz QPSK	8.960	8.960	8.960	9.720	9.960	9.880
10MHz 16QAM	8.960	8.960	8.960	9.720	9.640	9.560
15MHz QPSK	13.500	13.620	13.500	16.440	16.620	14.880
15MHz 16QAM	13.560	13.620	13.560	15.480	16.860	15.240
20MHz QPSK	17.920	17.920	18.000	19.360	20.000	19.360
20MHz 16QAM	17.920	17.920	17.920	19.440	20.000	19.520

LTE Band 66:

Operation Mode	99% Occupied Bandwidth (MHz)			26 dB Occupied Bandwidth (MHz)		
	Low Channel	Middle channel	High Channel	Low Channel	Middle Channel	High Channel
1.4MHz QPSK	1.104	1.104	1.110	1.296	1.320	1.332
1.4MHz 16QAM	1.104	1.110	1.104	1.296	1.314	1.284
3MHz QPSK	2.700	2.700	2.700	2.964	2.940	2.964
3MHz 16QAM	2.688	2.700	2.700	2.952	2.976	2.952
5MHz QPSK	4.520	4.520	4.520	5.020	5.020	5.040
5MHz 16QAM	4.540	4.520	4.540	5.080	5.020	5.040
10MHz QPSK	8.960	8.960	8.960	9.760	9.800	9.800
10MHz 16QAM	8.960	8.960	8.960	9.760	9.800	9.680
15MHz QPSK	13.500	13.560	13.440	15.000	14.880	14.820
15MHz 16QAM	13.560	13.500	13.560	14.940	14.880	14.820
20MHz QPSK	18.000	17.920	17.840	19.680	19.440	19.360
20MHz 16QAM	18.080	18.000	17.920	19.520	19.440	19.360

The test plots of LTE band please refer to the Appendix A.

FCC §2.1051, §22.917(a) & §24.238(a) & §27.53 & §90.691 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standard

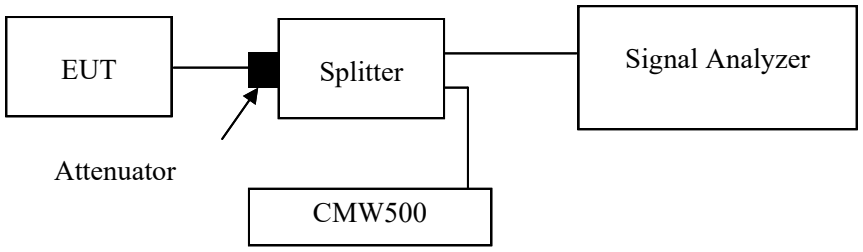
FCC §2.1051, §22.917(a) & §24.238(a) & §27.53& §90.691.

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

ANSI C63.26-2015 Section 5.7

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz. Sufficient scans were taken to show any out of band emissions up to 10^{th} harmonic.



Note: the worst path loss (cable loss and splitter inset loss) among the test frequency range was added into plots.

Test Data

Environmental Conditions

Temperature:	26~27 ℃
Relative Humidity:	49~50 %
ATM Pressure:	101 kPa

The testing was performed by Bruce Lin from 2024-03-11 to 2024-05-18.

EUT operation mode: Transmitting

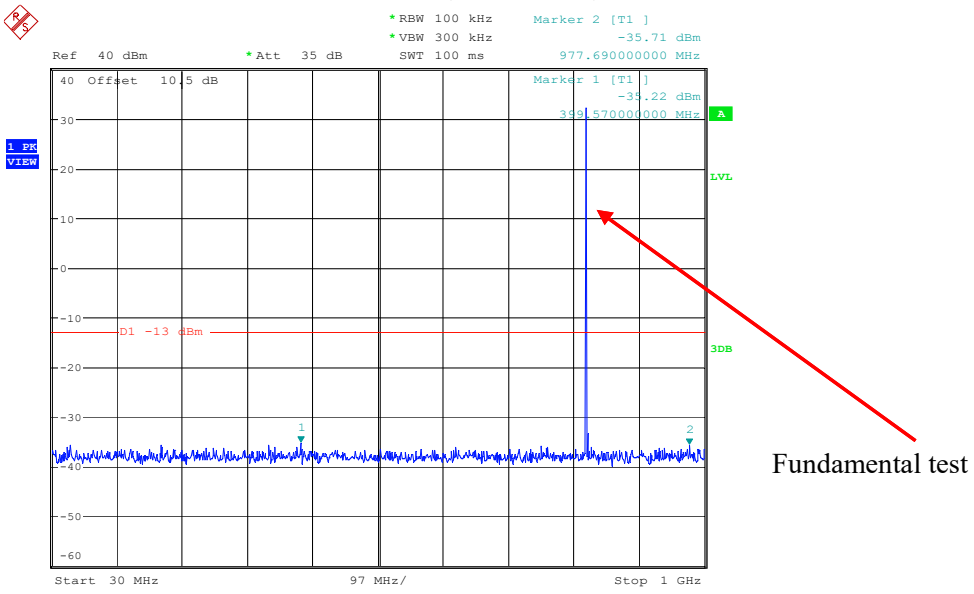
Test result: Compliant

Please refer to the following plots.

Cellular Band

Low Channel:

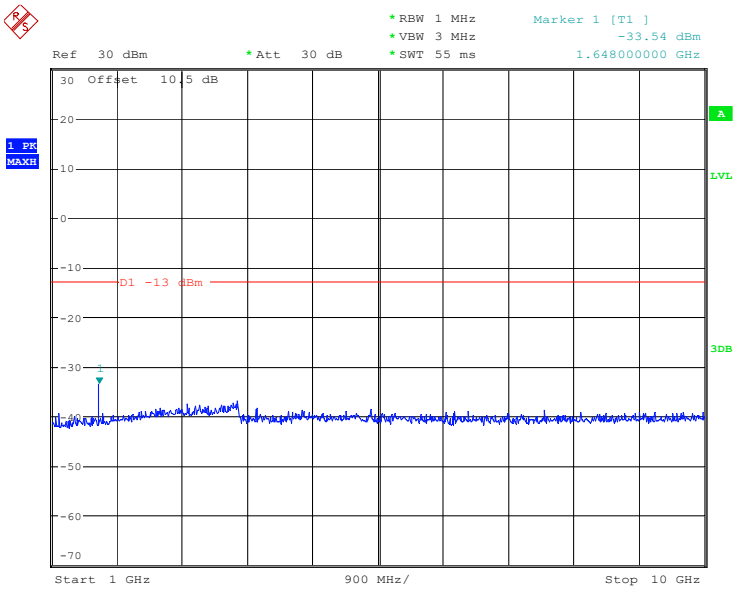
30 MHz – 1GHz (GSM Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:15:10

1GHz – 10GHz (GSM Mode)

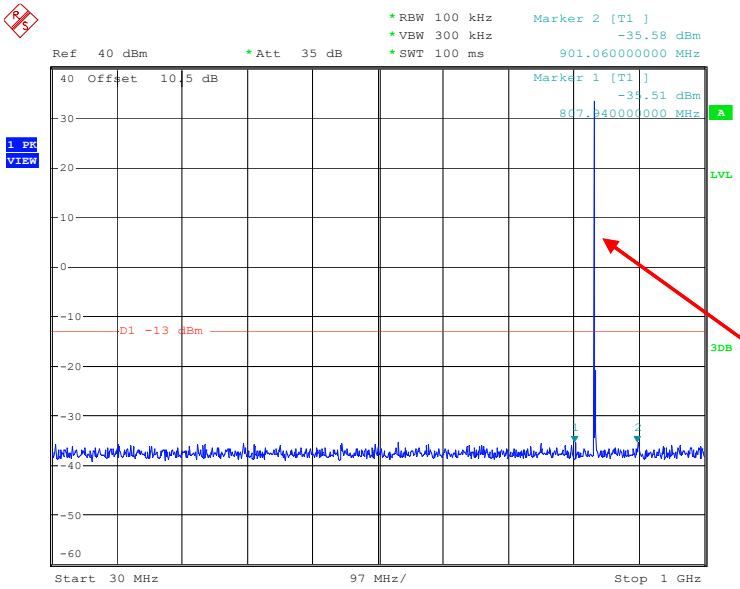


ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:15:41

Middle Channel:

30 MHz – 1GHz (GSM Mode)

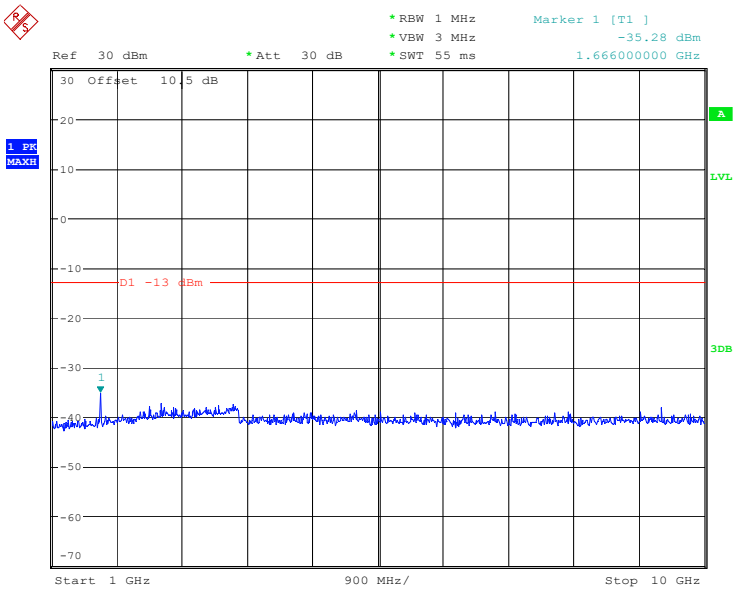


Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:33:58

1GHz – 10GHz (GSM Mode)

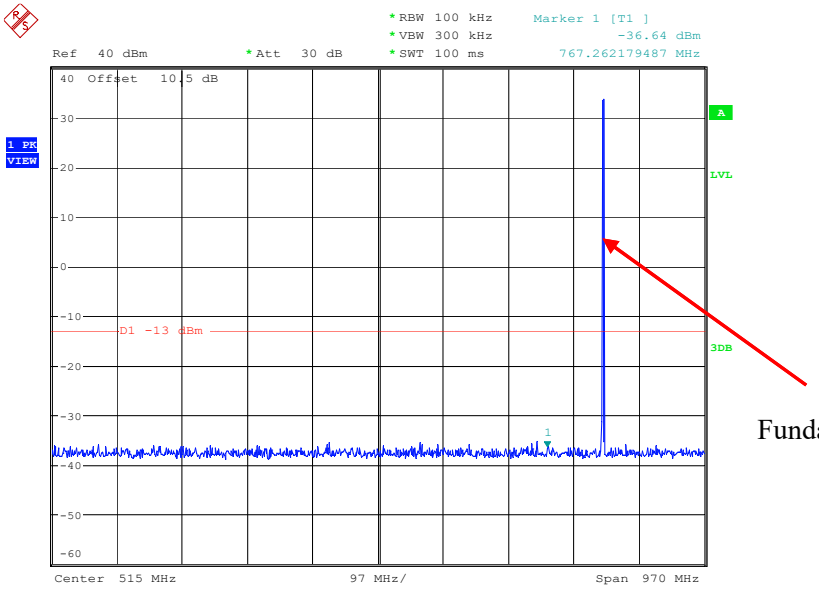


ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:19:27

High Channel:

30 MHz – 1GHz (GSM Mode)

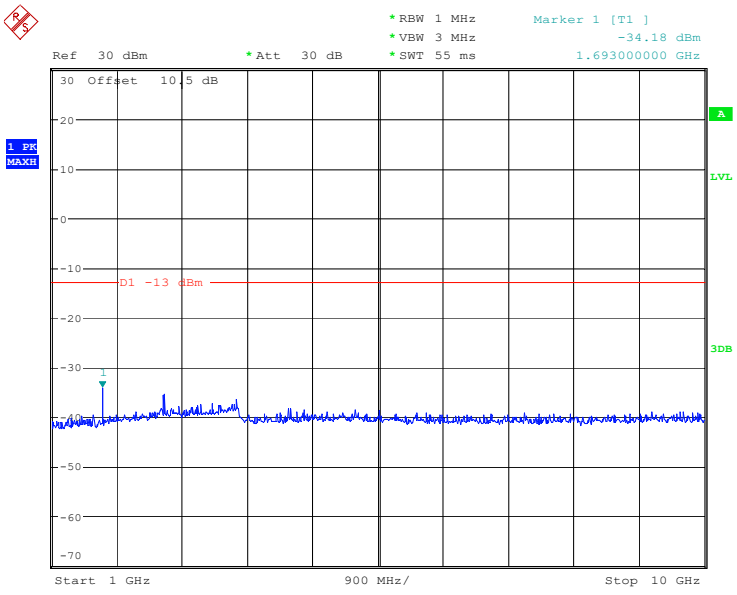


Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:24:32

1GHz – 10GHz (GSM Mode)

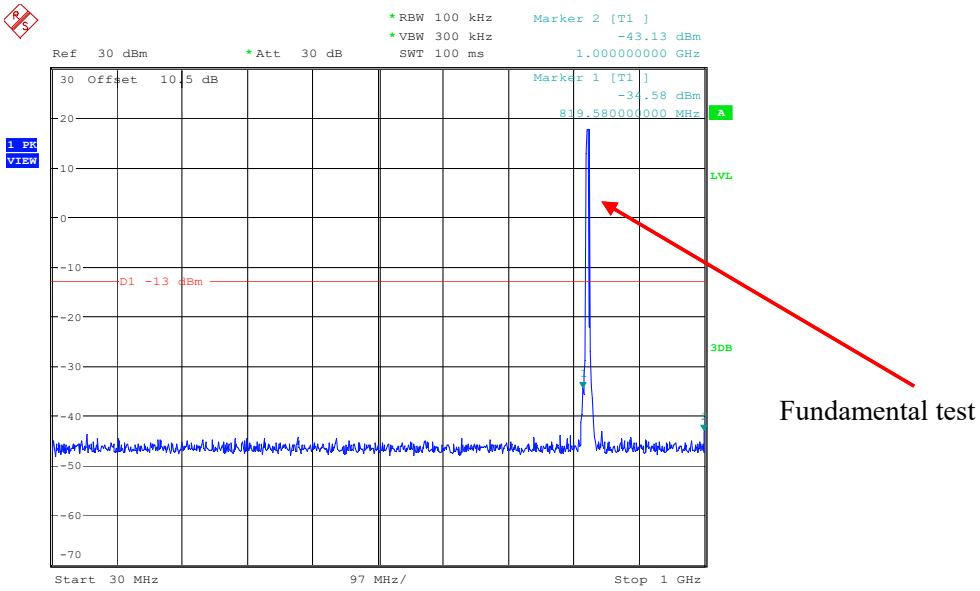


ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 15.MAR.2024 00:25:03

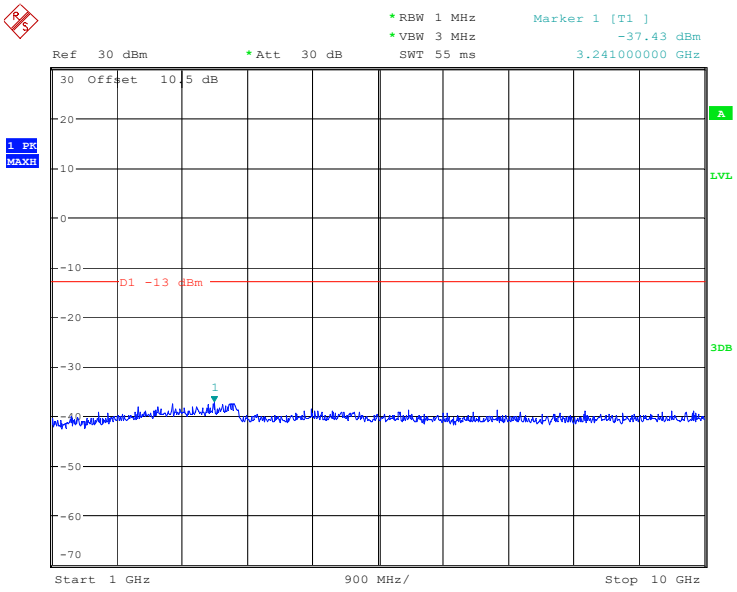
Low Channel:

30 MHz – 1GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:53:35

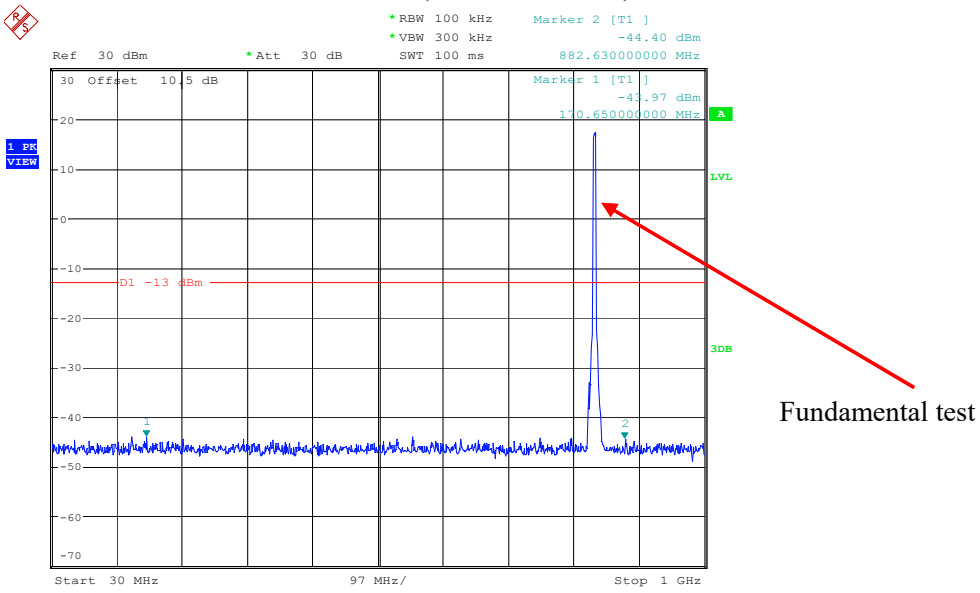
1GHz – 10GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:54:06

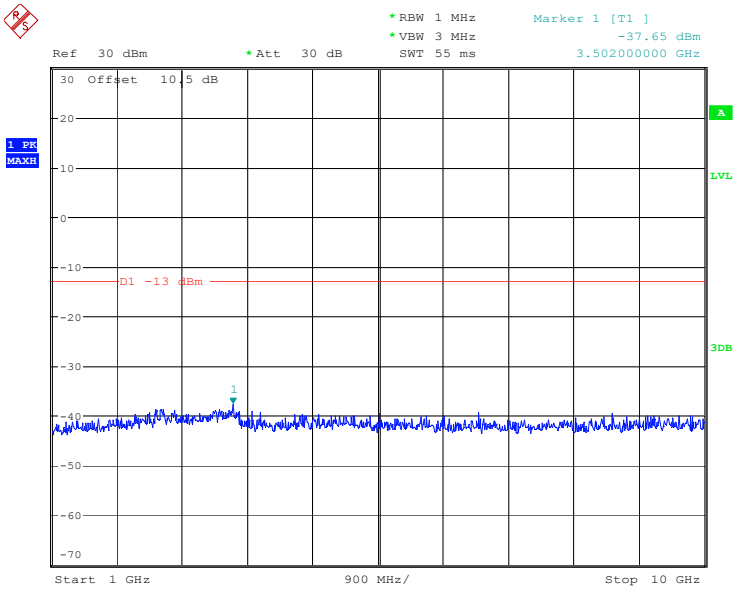
Middle Channel:

30 MHz – 1GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:56:18

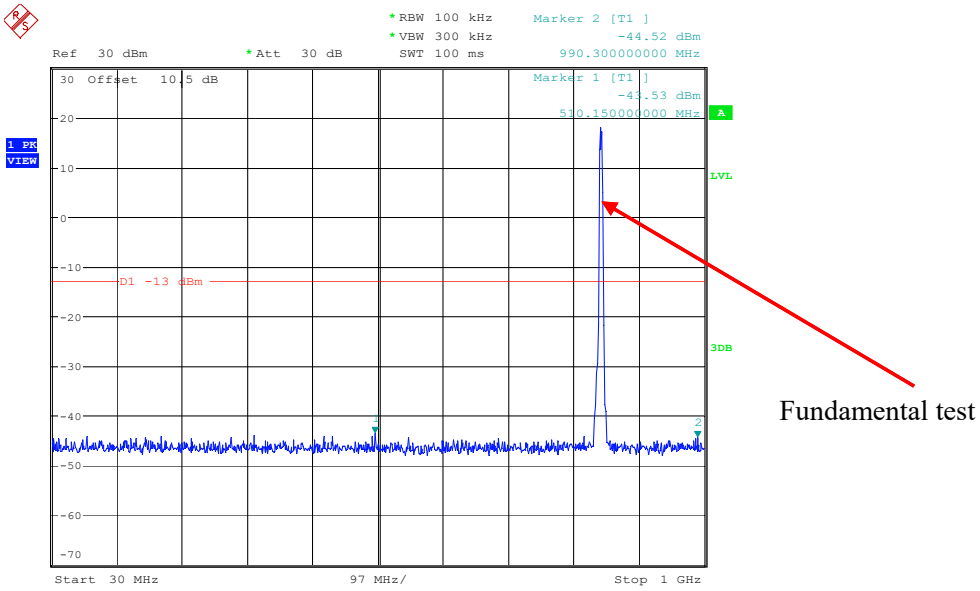
1GHz – 10GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:56:27

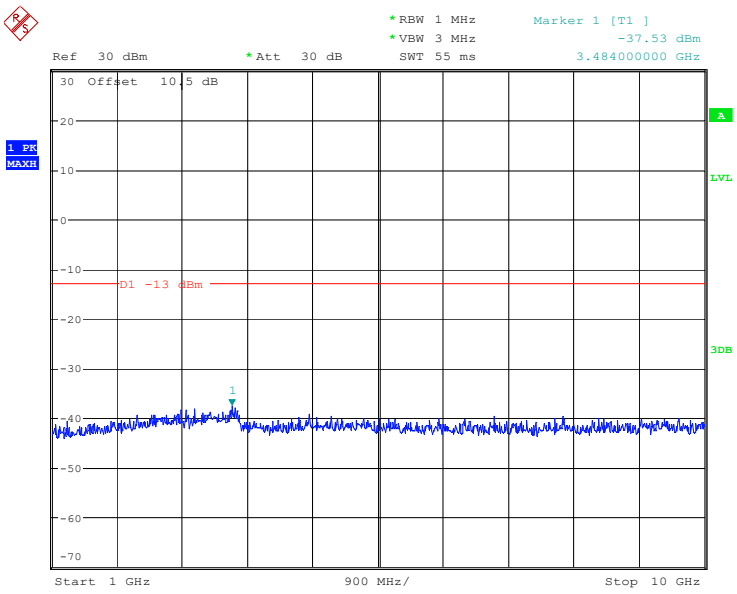
High Channel:

30 MHz – 1GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:58:37

1GHz – 10GHz (WCDMA Mode)

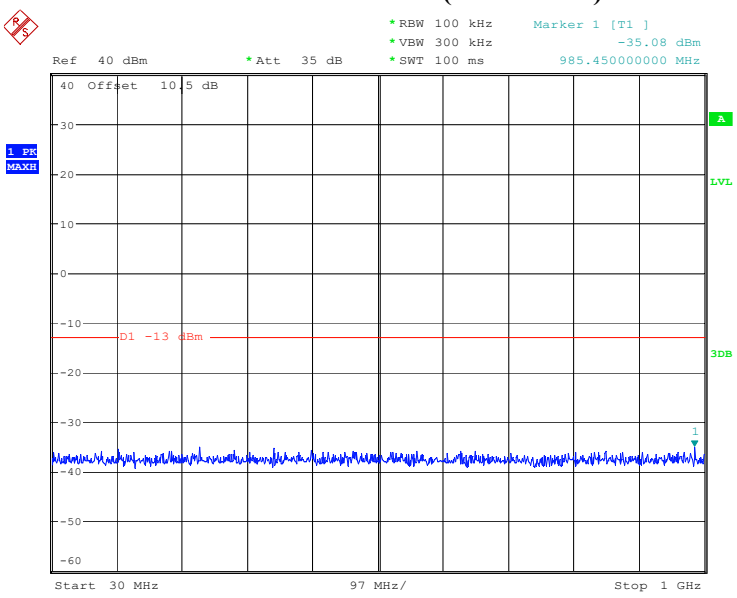


ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:58:48

PCS Band

Low Channel:

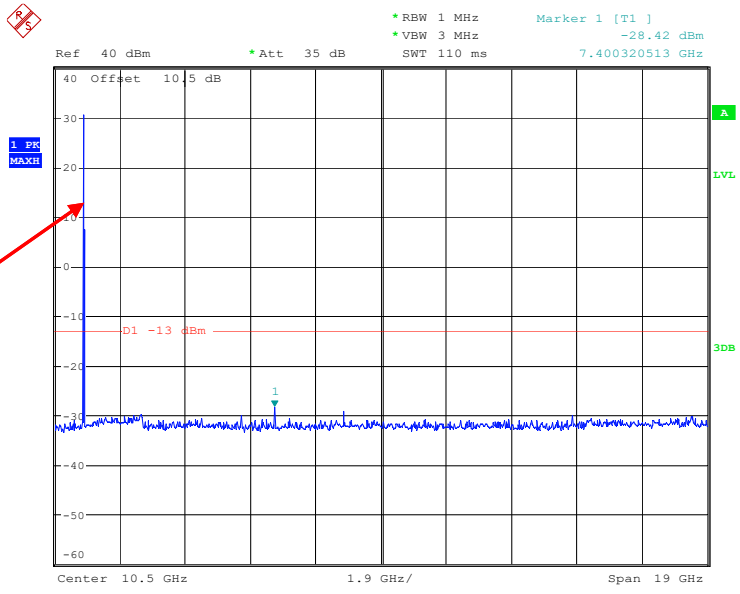
30 MHz – 1GHz (GSM Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 20:45:38

1 GHz – 20GHz (GSM Mode)



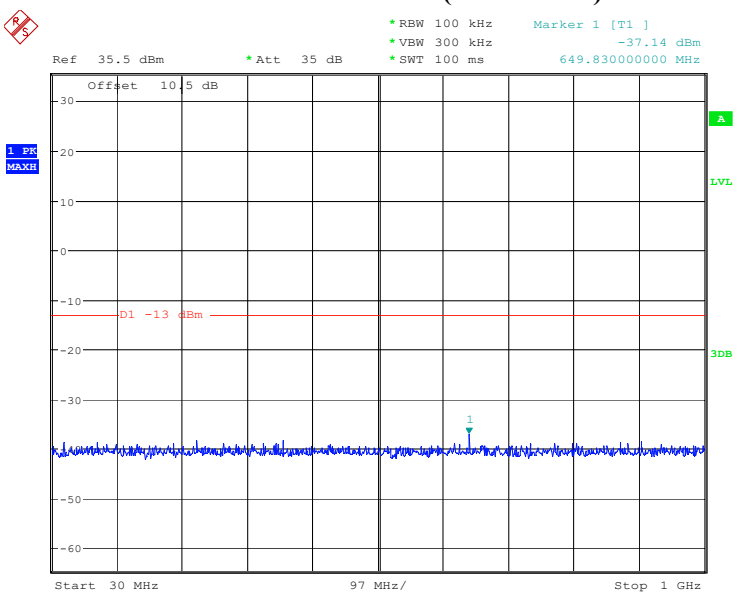
Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 20:46:57

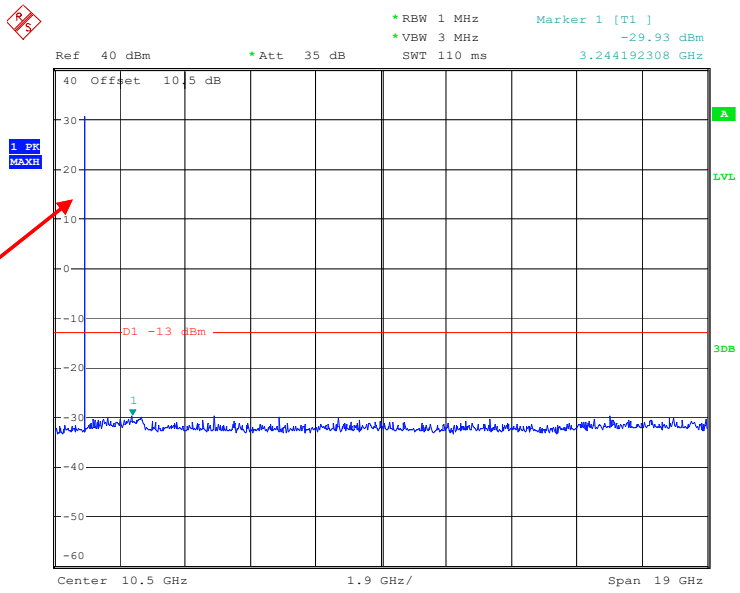
Middle Channel:

30 MHz – 1GHz (GSM Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 20.MAR.2024 21:23:07

1GHz – 20GHz (GSM Mode)

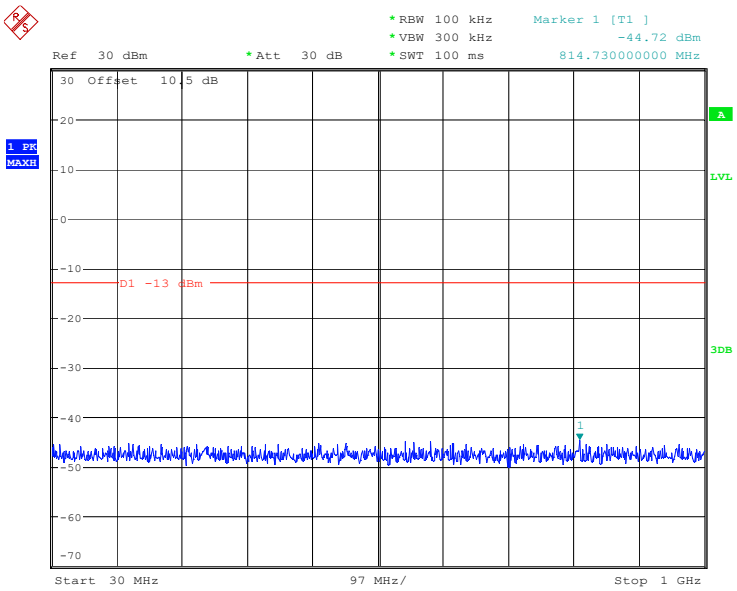


Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 20.MAR.2024 21:24:06

High Channel:

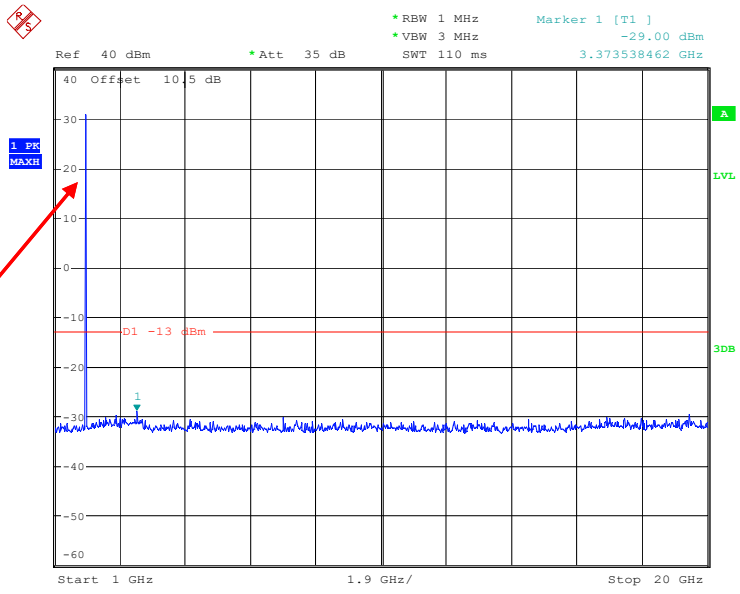
30 MHz – 1GHz (GSM Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 21:28:26

1 GHz – 20GHz (GSM Mode)



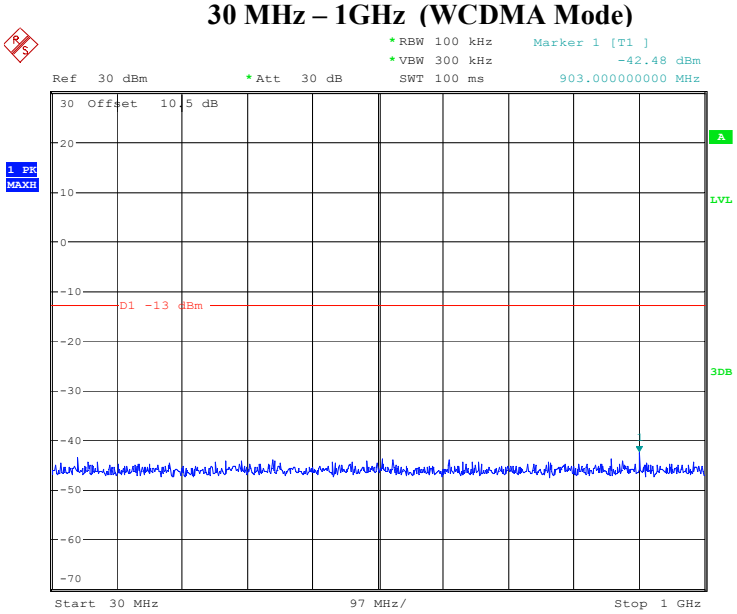
Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 21:29:33

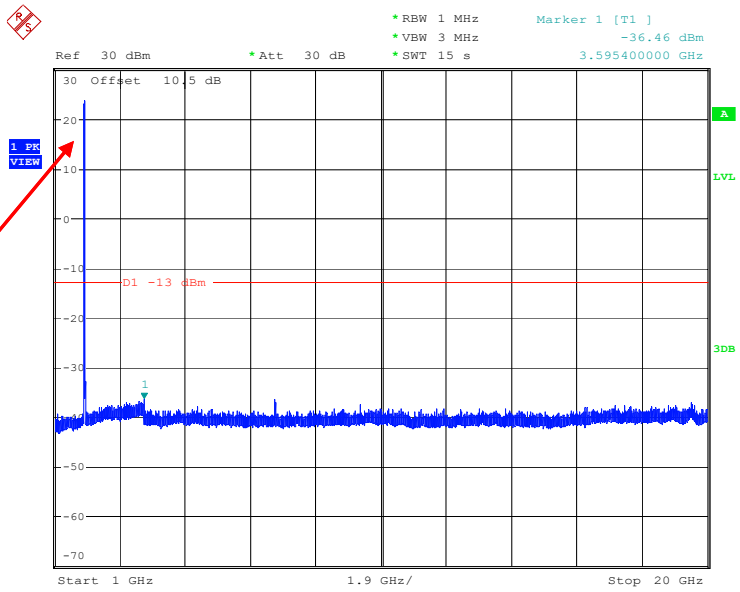
Low Channel:

30 MHz – 1GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:25:17

1GHz – 20GHz (WCDMA Mode)

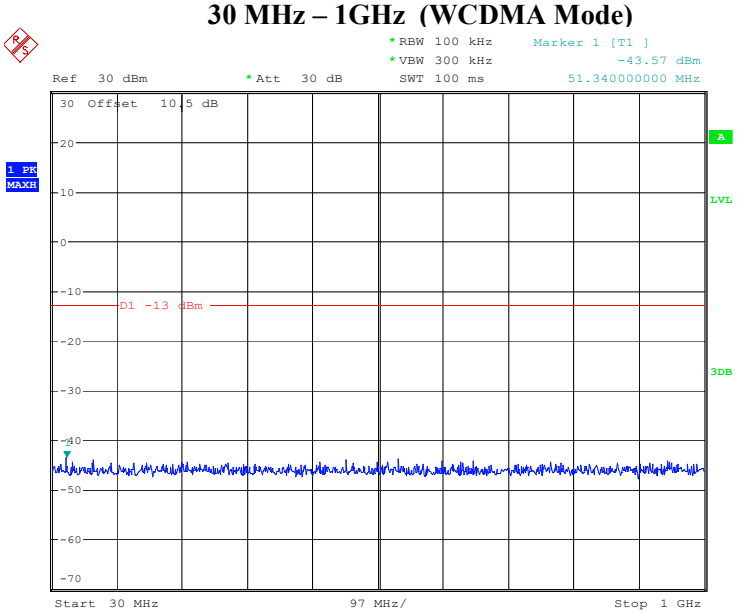


Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:26:39

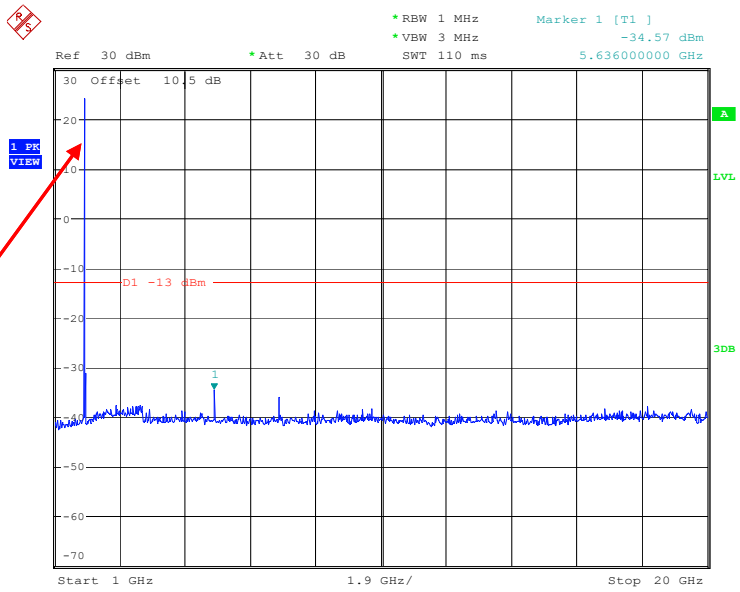
Middle Channel:

30 MHz – 1GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:29:56

1 GHz – 20GHz (WCDMA Mode)

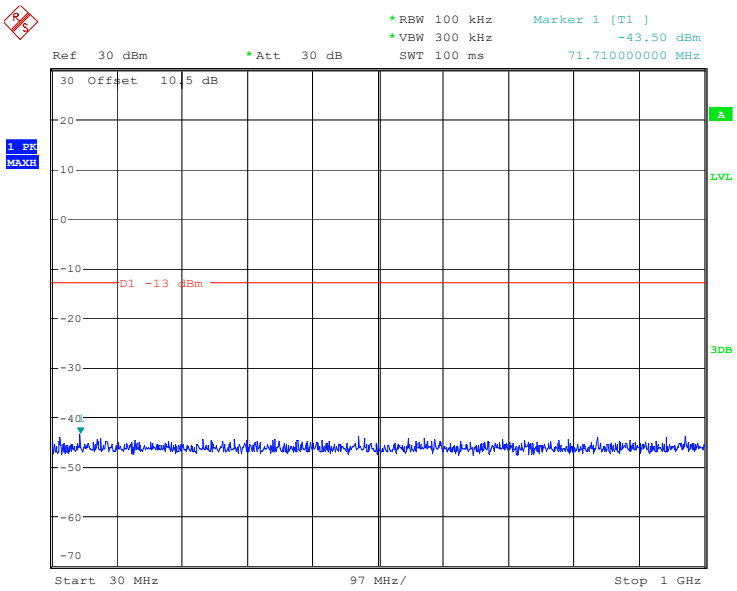


Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:30:16

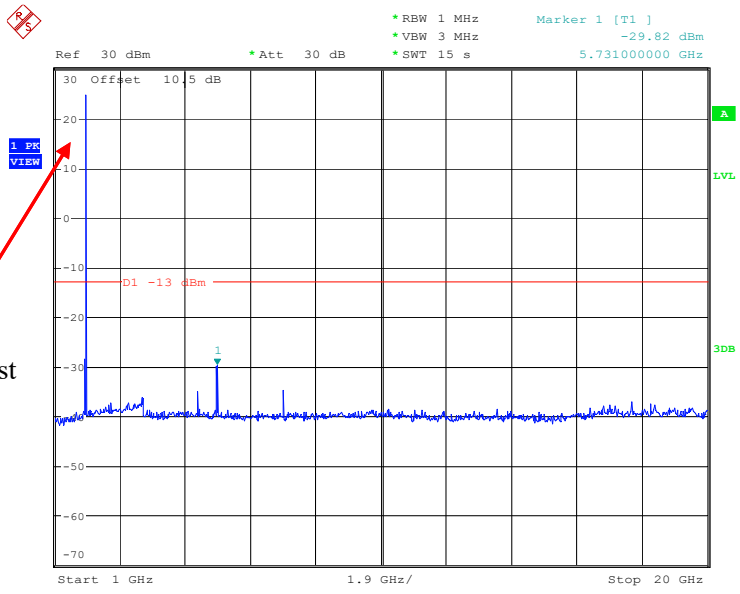
High Channel:

30 MHz – 1GHz (WCDMA Mode)



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:34:54

1GHz – 20GHz (WCDMA Mode)



Fundamental test

ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:35:27

The test plots of LTE band please refer to the Appendix B.

FCC § 2.1053; § 22.917 (a); § 24.238 (a); §27.53& §90.691 - SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, §22.917(a) & § 24.238(a) &§ 27.53& §90.691.

Test Procedure

ANSI/TIA-603-E-2016 Section 2.2.12
KDB 671168 D01 v03r01 Section 6.2

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the receiving antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	25~26.3 ℃
Relative Humidity:	49 %
ATM Pressure:	101 kPa

The testing was performed byAnson Su on 2024-03-13 for below1GHz and Zenos Qiao on 2024-04-01forabove 1GHz.

EUT operation mode: Transmitting (Pre-scan in the X, Y and Z axes of orientation, the worst case Y-axis of orientation was recorded)

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
GSM Band 5								
Test frequency range: 30MHz-10GHz								
Low Channel								
951.3	33.14	H	-63.4	1.36	0.0	-64.76	-13	51.76
951.3	33.22	V	-60.8	1.36	0.0	-62.16	-13	49.16
1648.40	47.09	H	-60.6	0.90	8.60	-52.90	-13	39.90
1648.40	47.96	V	-60.2	0.90	8.60	-52.50	-13	39.50
2472.60	58.26	H	-49.1	1.10	8.80	-41.40	-13	28.40
2472.60	56.42	V	-50.7	1.10	8.80	-43.00	-13	30.00
3296.80	55.66	H	-50.3	1.30	8.80	-42.80	-13	29.80
3296.80	52.78	V	-52.9	1.30	8.80	-45.40	-13	32.40
Middle Channel								
953.2	33.59	H	-62.9	1.36	0.0	-64.26	-13	51.26
953.2	33.42	V	-60.6	1.36	0.0	-61.96	-13	48.96
1673.20	48.62	H	-58.9	0.90	8.60	-51.20	-13	38.20
1673.20	48.89	V	-59.3	0.90	8.60	-51.60	-13	38.60
2509.80	58.12	H	-49.2	1.10	8.80	-41.50	-13	28.50
2509.80	58.03	V	-49.1	1.10	8.80	-41.40	-13	28.40
3346.40	52.88	H	-53.1	1.30	8.80	-45.60	-13	32.60
3346.40	51.09	V	-54.6	1.30	8.80	-47.10	-13	34.10
High Channel								
954.9	33.81	H	-62.7	1.36	0.0	-64.06	-13	51.06
954.9	33.67	V	-60.4	1.36	0.0	-61.76	-13	48.76
1697.60	53.12	H	-54.4	0.90	8.60	-46.70	-13	33.70
1697.60	51.58	V	-56.6	0.90	8.60	-48.90	-13	35.90
2546.40	58.60	H	-48.8	1.10	8.80	-41.10	-13	28.10
2546.40	58.14	V	-49.0	1.10	8.80	-41.30	-13	28.30
3395.20	48.11	H	-57.9	1.30	9.90	-49.30	-13	36.30
3395.20	47.02	V	-58.6	1.30	9.90	-50.00	-13	37.00

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
GSM Band 2								
Test frequency range: 30MHz-20GHz								
951.3	33.14	H	-63.4	1.36	0.0	-64.76	-13	51.76
951.3	33.22	V	-60.8	1.36	0.0	-62.16	-13	49.16
3700.40	46.35	H	-59.1	1.30	11.00	-49.40	-13	36.40
3700.40	45.81	V	-59.4	1.30	11.00	-49.70	-13	36.70
Middle Channel								
953.2	33.59	H	-62.9	1.36	0.0	-64.26	-13	51.26
953.2	33.42	V	-60.6	1.36	0.0	-61.96	-13	48.96
3760.00	47.29	H	-57.8	1.30	10.70	-48.40	-13	35.40
3760.00	47.07	V	-58.0	1.30	10.70	-48.60	-13	35.60
High Channel								
954.9	33.81	H	-62.7	1.36	0.0	-64.06	-13	51.06
954.9	33.67	V	-60.4	1.36	0.0	-61.76	-13	48.76
3819.60	49.74	H	-55.4	1.30	10.70	-46.00	-13	33.00
3819.60	50.21	V	-54.9	1.30	10.70	-45.50	-13	32.50

Frequency (MHz)	Receiver Reading (dBµV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
WCDMA Band 5								
Test frequency range: 30MHz-10GHz								
Low Channel								
951.3	33.14	H	-63.4	1.36	0.0	-64.76	-13	51.76
951.3	33.22	V	-60.8	1.36	0.0	-62.16	-13	49.16
1652.80	47.62	H	-59.9	0.90	8.60	-52.20	-13	39.20
1652.80	48.11	V	-60.0	0.90	8.60	-52.30	-13	39.30
2479.20	56.87	H	-50.5	1.10	8.80	-42.80	-13	29.80
2479.20	58.55	V	-48.6	1.10	8.80	-40.90	-13	27.90
3305.60	44.22	H	-61.8	1.30	8.80	-54.30	-13	41.30
3305.60	44.74	V	-60.9	1.30	8.80	-53.40	-13	40.40
Middle Channel								
953.2	33.59	H	-62.9	1.36	0.0	-64.26	-13	51.26
953.2	33.42	V	-60.6	1.36	0.0	-61.96	-13	48.96
1673.20	48.25	H	-59.3	0.90	8.60	-51.60	-13	38.60
1673.20	49.18	V	-59.0	0.90	8.60	-51.30	-13	38.30
2509.80	52.16	H	-55.2	1.10	8.80	-47.50	-13	34.50
2509.80	54.64	V	-52.5	1.10	8.80	-44.80	-13	31.80
3346.40	44.59	H	-61.4	1.30	8.80	-53.90	-13	40.90
3346.40	45.12	V	-60.6	1.30	8.80	-53.10	-13	40.10
High Channel								
954.9	33.81	H	-62.7	1.36	0.0	-64.06	-13	51.06
954.9	33.67	V	-60.4	1.36	0.0	-61.76	-13	48.76
1693.20	49.07	H	-58.5	0.90	8.60	-50.80	-13	37.80
1693.20	49.86	V	-58.3	0.90	8.60	-50.60	-13	37.60
2539.80	51.45	H	-55.9	1.10	8.80	-48.20	-13	35.20
2539.80	54.10	V	-53.0	1.10	8.80	-45.30	-13	32.30
3386.40	44.78	H	-61.2	1.30	9.90	-52.60	-13	39.60
3386.40	45.34	V	-60.3	1.30	9.90	-51.70	-13	38.70

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
WCDMA Band 2								
Test frequency range: 30MHz-20GHz								
Low Channel								
951.3	33.14	H	-63.4	1.36	0.0	-64.76	-13	51.76
951.3	33.22	V	-60.8	1.36	0.0	-62.16	-13	49.16
3704.80	57.63	H	-47.8	1.30	11.00	-38.10	-13	25.10
3704.80	58.56	V	-46.7	1.30	11.00	-37.00	-13	24.00
5557.20	45.51	H	-56.9	1.70	10.90	-47.70	-13	34.70
5557.20	46.52	V	-56.0	1.70	10.90	-46.80	-13	33.80
Middle Channel								
953.2	33.59	H	-62.9	1.36	0.0	-64.26	-13	51.26
953.2	33.42	V	-60.6	1.36	0.0	-61.96	-13	48.96
3760.00	59.40	H	-45.7	1.30	10.70	-36.30	-13	23.30
3760.00	60.07	V	-45.0	1.30	10.70	-35.60	-13	22.60
5640.00	44.91	H	-57.5	1.70	10.90	-48.30	-13	35.30
5640.00	45.14	V	-57.4	1.70	10.90	-48.20	-13	35.20
High Channel								
954.9	33.81	H	-62.7	1.36	0.0	-64.06	-13	51.06
954.9	33.67	V	-60.4	1.36	0.0	-61.76	-13	48.76
3815.20	60.46	H	-44.7	1.30	10.70	-35.30	-13	22.30
3815.20	61.68	V	-43.4	1.30	10.70	-34.00	-13	21.00
5722.80	45.66	H	-56.5	1.70	11.10	-47.10	-13	34.10
5722.80	45.05	V	-57.3	1.70	11.10	-47.90	-13	34.90

LTE Bands: (pre-scan QPSK & 16QAM with all bandwidths, the worst case as below)

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 2								
Test frequency range: 30MHz-20GHz								
QPSK 1.4MHz Bandwidth, Low channel								
953.8	31.88	H	-64.6	1.36	0.0	-65.96	-13	52.96
953.8	31.94	V	-62.1	1.36	0.0	-63.46	-13	50.46
3701.40	62.61	H	-42.8	1.30	11.00	-33.10	-13	20.10
3701.40	63.27	V	-42.0	1.30	11.00	-32.30	-13	19.30
5552.10	52.37	H	-50.0	1.70	10.90	-40.80	-13	27.80
5552.10	50.68	V	-51.9	1.70	10.90	-42.70	-13	29.70
QPSK 1.4MHz Bandwidth, Middle channel								
951.3	32.91	H	-63.6	1.36	0.0	-64.96	-13	51.96
951.3	33.03	V	-61.0	1.36	0.0	-62.36	-13	49.36
3760.00	66.21	H	-38.9	1.30	10.70	-29.50	-13	16.50
3760.00	66.78	V	-38.3	1.30	10.70	-28.90	-13	15.90
5640.00	54.21	H	-48.2	1.70	10.90	-39.00	-13	26.00
5640.00	52.45	V	-50.1	1.70	10.90	-40.90	-13	27.90
QPSK 1.4MHz Bandwidth, High channel								
958.0	33.49	H	-63.0	1.36	0.0	-64.36	-13	51.36
958.0	33.51	V	-60.5	1.36	0.0	-61.86	-13	48.86
3818.60	64.84	H	-40.3	1.30	10.70	-30.90	-13	17.90
3818.60	65.12	V	-39.9	1.30	10.70	-30.50	-13	17.50
5727.90	52.04	H	-50.1	1.70	11.10	-40.70	-13	27.70
5727.90	48.78	V	-53.6	1.70	11.10	-44.20	-13	31.20

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 4								
Test frequency range: 30MHz-20GHz								
QPSK 1.4MHz Bandwidth, Low channel								
959.9	31.63	H	-64.9	1.36	0.0	-66.26	-13	53.26
959.9	31.65	V	-62.4	1.36	0.0	-63.76	-13	50.76
3421.40	57.68	H	-48.3	1.30	9.90	-39.70	-13	26.70
3421.40	59.22	V	-46.4	1.30	9.90	-37.80	-13	24.80
5132.10	49.64	H	-53.5	1.50	9.60	-45.40	-13	32.40
5132.10	51.36	V	-51.3	1.50	9.60	-43.20	-13	30.20
QPSK 1.4MHz Bandwidth, Middle channel								
954.4	32.35	H	-64.2	1.36	0.0	-65.56	-13	52.56
954.4	32.46	V	-61.6	1.36	0.0	-62.96	-13	49.96
3465.00	58.45	H	-47.5	1.30	10.50	-38.30	-13	25.30
3465.00	59.89	V	-45.7	1.30	10.50	-36.50	-13	23.50
5197.50	48.97	H	-54.1	1.60	9.70	-46.00	-13	33.00
5197.50	50.74	V	-51.9	1.60	9.70	-43.80	-13	30.80
QPSK 1.4MHz Bandwidth, High channel								
951.8	33.25	H	-63.3	1.36	0.0	-64.66	-13	51.66
951.8	33.31	V	-60.7	1.36	0.0	-62.06	-13	49.06
3508.60	59.10	H	-46.8	1.30	10.50	-37.60	-13	24.60
3508.60	60.52	V	-45.1	1.30	10.50	-35.90	-13	22.90
5262.90	49.75	H	-53.2	1.60	10.00	-44.80	-13	31.80
5262.90	51.66	V	-51.0	1.60	10.00	-42.60	-13	29.60

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 5								
Test frequency range: 30MHz-10GHz								
QPSK 1.4MHz Bandwidth, Low channel								
952.0	31.71	H	-64.8	1.36	0.0	-66.16	-13	53.16
952.0	31.83	V	-62.2	1.36	0.0	-63.56	-13	50.56
1649.40	48.62	H	-59.0	0.90	8.60	-51.30	-13	38.30
1649.40	50.03	V	-58.2	0.90	8.60	-50.50	-13	37.50
2474.10	62.65	H	-44.7	1.10	8.80	-37.00	-13	24.00
2474.10	63.45	V	-43.7	1.10	8.80	-36.00	-13	23.00
3298.80	44.56	H	-61.4	1.30	8.80	-53.90	-13	40.90
3298.80	45.24	V	-60.4	1.30	8.80	-52.90	-13	39.90
QPSK 1.4MHz Bandwidth, Low channel								
958.7	32.83	H	-63.7	1.36	0.0	-65.06	-13	52.06
958.7	32.91	V	-61.1	1.36	0.0	-62.46	-13	49.46
1673.00	54.30	H	-53.3	0.90	8.60	-45.60	-13	32.60
1673.00	53.12	V	-55.0	0.90	8.60	-47.30	-13	34.30
2509.50	48.23	H	-59.1	1.10	8.80	-51.40	-13	38.40
2509.50	47.36	V	-59.8	1.10	8.80	-52.10	-13	39.10
3346.00	44.38	H	-61.6	1.30	8.80	-54.10	-13	41.10
3346.00	44.95	V	-60.7	1.30	8.80	-53.20	-13	40.20
QPSK 1.4MHz Bandwidth, Low channel								
953.4	33.34	H	-63.2	1.36	0.0	-64.56	-13	51.56
953.4	33.42	V	-60.6	1.36	0.0	-61.96	-13	48.96
1696.60	55.47	H	-52.1	0.90	8.60	-44.40	-13	31.40
1696.60	54.23	V	-53.9	0.90	8.60	-46.20	-13	33.20
2544.90	48.96	H	-58.4	1.10	8.80	-50.70	-13	37.70
2544.90	47.38	V	-59.7	1.10	8.80	-52.00	-13	39.00
3393.20	44.65	H	-61.3	1.30	9.90	-52.70	-13	39.70
3393.20	45.19	V	-60.5	1.30	9.90	-51.90	-13	38.90

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 7								
Test frequency range: 30MHz-26.5GHz								
QPSK 5MHz Bandwidth, Low channel								
957.4	32.57	H	-63.9	1.36	0.0	-65.26	-25	40.26
957.4	32.39	V	-61.7	1.36	0.0	-63.06	-25	38.06
5005.00	47.76	H	-55.5	1.50	9.80	-47.20	-25	22.20
5005.00	46.54	V	-56.0	1.50	9.80	-47.70	-25	22.70
7507.50	44.89	H	-51.1	1.90	10.80	-42.20	-25	17.20
7507.50	44.97	V	-51.3	1.90	10.80	-42.40	-25	17.40
QPSK 5MHz Bandwidth, Middle channel								
959.9	33.21	H	-63.3	1.36	0.0	-64.66	-25	39.66
959.9	33.19	V	-60.9	1.36	0.0	-62.26	-25	37.26
5070.00	48.93	H	-54.2	1.50	9.60	-46.10	-25	21.10
5070.00	47.34	V	-55.3	1.50	9.60	-47.20	-25	22.20
7605.00	44.78	H	-51.1	1.90	11.00	-42.00	-25	17.00
7605.00	45.12	V	-51.1	1.90	11.00	-42.00	-25	17.00
QPSK 5MHz Bandwidth, High channel								
956.8	33.46	H	-63.0	1.36	0.0	-64.36	-25	39.36
956.8	33.31	V	-60.7	1.36	0.0	-62.06	-25	37.06
5135.00	49.88	H	-53.3	1.50	9.60	-45.20	-25	20.20
5135.00	49.13	V	-53.5	1.50	9.60	-45.40	-25	20.40
7702.50	45.06	H	-50.7	1.90	10.90	-41.70	-25	16.70
7702.50	45.65	V	-50.5	1.90	10.90	-41.50	-25	16.50

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 12								
Test frequency range: 30MHz-10GHz								
QPSK 1.4MHz Bandwidth, Low channel								
958.8	32.04	H	-64.5	1.36	0.0	-65.86	-13	52.86
958.8	32.09	V	-62.0	1.36	0.0	-63.36	-13	50.36
1399.40	53.17	H	-54.5	0.80	7.90	-47.40	-13	34.40
1399.40	48.54	V	-59.9	0.80	7.90	-52.80	-13	39.80
2099.10	48.69	H	-58.6	1.00	8.30	-51.30	-13	38.30
2099.10	48.25	V	-59.6	1.00	8.30	-52.30	-13	39.30
2798.80	45.67	H	-60.9	1.20	9.20	-52.90	-13	39.90
2798.80	46.53	V	-59.8	1.20	9.20	-51.80	-13	38.80
QPSK 1.4MHz Bandwidth, Middle channel								
959.1	32.63	H	-63.9	1.36	0.0	-65.26	-13	52.26
959.1	32.71	V	-61.3	1.36	0.0	-62.66	-13	49.66
1415.00	46.54	H	-61.2	0.80	7.90	-54.10	-13	41.10
1415.00	45.93	V	-62.5	0.80	7.90	-55.40	-13	42.40
2122.50	51.45	H	-55.9	1.00	8.30	-48.60	-13	35.60
2122.50	47.66	V	-60.2	1.00	8.30	-52.90	-13	39.90
2830.00	45.68	H	-60.9	1.20	9.20	-52.90	-13	39.90
2830.00	45.84	V	-60.5	1.20	9.20	-52.50	-13	39.50
QPSK 1.4MHz Bandwidth, High channel								
950.6	33.62	H	-62.9	1.36	0.0	-64.26	-13	51.26
950.6	33.61	V	-60.4	1.36	0.0	-61.76	-13	48.76
1430.60	49.14	H	-58.6	0.80	7.90	-51.50	-13	38.50
1430.60	47.09	V	-61.3	0.80	7.90	-54.20	-13	41.20
2145.90	47.82	H	-59.5	1.00	8.30	-52.20	-13	39.20
2145.90	45.56	V	-62.3	1.00	8.30	-55.00	-13	42.00
2861.20	44.98	H	-61.3	1.20	9.00	-53.50	-13	40.50
2861.20	45.77	V	-60.3	1.20	9.00	-52.50	-13	39.50

Frequency (MHz)	Receiver Reading (dBµV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 17								
Test frequency range: 30MHz-10GHz								
QPSK 5MHz Bandwidth, Low channel								
951.7	31.52	H	-65.0	1.36	0.0	-66.36	-13	53.36
951.7	31.49	V	-62.6	1.36	0.0	-63.96	-13	50.96
1413.00	46.94	H	-60.8	0.80	7.90	-53.70	-13	40.70
1413.00	48.77	V	-59.6	0.80	7.90	-52.50	-13	39.50
2119.50	50.59	H	-56.7	1.00	8.30	-49.40	-13	36.40
2119.50	49.09	V	-58.7	1.00	8.30	-51.40	-13	38.40
2826.00	44.44	H	-62.1	1.20	9.20	-54.10	-13	41.10
2826.00	45.15	V	-61.2	1.20	9.20	-53.20	-13	40.20
QPSK 5MHz Bandwidth, Middle channel								
956.6	32.43	H	-64.1	1.36	0.0	-65.46	-13	52.46
956.6	32.54	V	-61.5	1.36	0.0	-62.86	-13	49.86
1420.00	50.07	H	-57.6	0.80	7.90	-50.50	-13	37.50
1420.00	52.82	V	-55.6	0.80	7.90	-48.50	-13	35.50
2130.00	53.44	H	-53.9	1.00	8.30	-46.60	-13	33.60
2130.00	52.95	V	-54.9	1.00	8.30	-47.60	-13	34.60
2840.00	44.53	H	-62.0	1.20	9.20	-54.00	-13	41.00
2840.00	45.11	V	-61.2	1.20	9.20	-53.20	-13	40.20
QPSK 5MHz Bandwidth, High channel								
958.5	33.14	H	-63.4	1.36	0.0	-64.76	-13	51.76
958.5	33.26	V	-60.8	1.36	0.0	-62.16	-13	49.16
1427.00	52.02	H	-55.7	0.80	7.90	-48.60	-13	35.60
1427.00	52.53	V	-55.9	0.80	7.90	-48.80	-13	35.80
2140.50	54.56	H	-52.7	1.00	8.30	-45.40	-13	32.40
2140.50	54.75	V	-53.1	1.00	8.30	-45.80	-13	32.80
2854.00	44.56	H	-61.7	1.20	9.00	-53.90	-13	40.90
2854.00	44.83	V	-61.2	1.20	9.00	-53.40	-13	40.40

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 26 (Part 90s)								
Test frequency range: 30MHz-10GHz								
QPSK 1.4MHz Bandwidth, Low channel								
951.2	32.13	H	-64.4	1.36	0.0	-65.76	-13	52.76
951.2	32.22	V	-61.8	1.36	0.0	-63.16	-13	50.16
1629.40	48.62	H	-59.0	0.90	8.60	-51.30	-13	38.30
1629.40	50.03	V	-58.2	0.90	8.60	-50.50	-13	37.50
2444.10	62.65	H	-44.7	1.10	9.10	-36.70	-13	23.70
2444.10	63.45	V	-43.8	1.10	9.10	-35.80	-13	22.80
3258.80	44.56	H	-61.4	1.30	8.80	-53.90	-13	40.90
3258.80	45.24	V	-60.4	1.30	8.80	-52.90	-13	39.90
QPSK 1.4MHz Bandwidth, High channel								
951.6	32.56	H	-63.97	1.36	0.0	-65.33	-13	52.33
951.6	32.30	V	-61.72	1.36	0.0	-63.08	-13	50.08
1646.60	49.5	H	-58.2	0.90	8.60	-50.50	-13	37.50
1646.60	50.2	V	-58.0	0.90	8.60	-50.30	-13	37.30
2469.90	63.07	H	-44.3	1.10	8.80	-36.60	-13	23.60
2469.90	63.67	V	-43.4	1.10	8.80	-35.70	-13	22.70
3293.20	45.03	H	-61.0	1.30	8.80	-53.50	-13	40.50
3293.20	46.13	V	-59.6	1.30	8.80	-52.10	-13	39.10
QPSK 1.4MHz Bandwidth, Cross channel								
953.8	32.52	H	-64.0	1.36	0.0	-65.36	-13	52.36
953.8	32.63	V	-61.4	1.36	0.0	-62.76	-13	49.76
1648.00	49.50	H	-58.2	0.90	8.60	-50.50	-13	37.50
1648.00	50.20	V	-58.0	0.90	8.60	-50.30	-13	37.30
2472.00	63.07	H	-44.3	1.10	8.80	-36.60	-13	23.60
2472.00	63.67	V	-43.4	1.10	8.80	-35.70	-13	22.70
3296.00	45.03	H	-61.0	1.30	8.80	-53.50	-13	40.50
3296.00	46.13	V	-59.6	1.30	8.80	-52.10	-13	39.10

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 26 (Part 22H)								
Test frequency range: 30MHz-10GHz								
QPSK 1.4MHz Bandwidth, Low channel								
953.8	32.54	H	-63.98	1.36	0.0	-65.34	-13	52.34
953.8	32.37	V	-61.36	1.36	0.0	-62.72	-13	49.72
1649.40	50.12	H	-57.5	0.90	8.60	-49.80	-13	36.80
1649.40	51.33	V	-56.9	0.90	8.60	-49.20	-13	36.20
2474.10	62.89	H	-44.5	1.10	8.80	-36.80	-13	23.80
2474.10	62.11	V	-45.0	1.10	8.80	-37.30	-13	24.30
3298.80	45.36	H	-60.6	1.30	8.80	-53.10	-13	40.10
3298.80	46.78	V	-58.9	1.30	8.80	-51.40	-13	38.40
QPSK 1.4MHz Bandwidth, Middle channel								
958.4	32.91	H	-63.6	1.36	0.0	-64.96	-13	51.96
958.4	33.02	V	-61.0	1.36	0.0	-62.36	-13	49.36
1673.00	54.3	H	-53.3	0.90	8.60	-45.60	-13	32.60
1673.00	53.12	V	-55.0	0.90	8.60	-47.30	-13	34.30
2509.50	48.23	H	-59.1	1.10	8.80	-51.40	-13	38.40
2509.50	47.36	V	-59.8	1.10	8.80	-52.10	-13	39.10
3346.00	44.38	H	-61.6	1.30	8.80	-54.10	-13	41.10
3346.00	44.95	V	-60.7	1.30	8.80	-53.20	-13	40.20
QPSK 1.4MHz Bandwidth, High channel								
957.2	33.74	H	-62.8	1.36	0.0	-64.16	-13	51.16
957.2	33.78	V	-60.3	1.36	0.0	-61.66	-13	48.66
1696.60	55.47	H	-52.1	0.90	8.60	-44.40	-13	31.40
1696.60	54.23	V	-53.9	0.90	8.60	-46.20	-13	33.20
2544.90	48.96	H	-58.4	1.10	8.80	-50.70	-13	37.70
2544.90	47.38	V	-59.7	1.10	8.80	-52.00	-13	39.00
3393.20	44.65	H	-61.3	1.30	9.90	-52.70	-13	39.70
3393.20	45.19	V	-60.5	1.30	9.90	-51.90	-13	38.90

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 38								
Test frequency range: 30MHz-26.5GHz								
QPSK 5MHz Bandwidth, Low channel								
950.8	32.72	H	-63.8	1.36	0.0	-65.16	-25	40.16
950.8	32.51	V	-61.5	1.36	0.0	-62.86	-25	37.86
5145.00	45.12	H	-58.1	1.50	9.60	-50.00	-25	25.00
5145.00	45.86	V	-56.8	1.50	9.60	-48.70	-25	23.70
7717.50	52.84	H	-43.0	1.90	10.90	-34.00	-25	9.00
7717.50	47.29	V	-48.9	1.90	10.90	-39.90	-25	14.90
QPSK 5MHz Bandwidth, Middle channel								
954.4	33.06	H	-63.4	1.36	0.0	-64.76	-25	39.76
954.4	32.94	V	-61.1	1.36	0.0	-62.46	-25	37.46
5190.00	46.52	H	-56.5	1.60	9.70	-48.40	-25	23.40
5190.00	45.99	V	-56.7	1.60	9.70	-48.60	-25	23.60
7785.00	54.17	H	-41.6	1.90	11.10	-32.40	-25	7.40
7785.00	48.63	V	-47.5	1.90	11.10	-38.30	-25	13.30
QPSK 5MHz Bandwidth, High channel								
956.7	33.57	H	-62.9	1.36	0.0	-64.26	-25	39.26
956.7	33.48	V	-60.6	1.36	0.0	-61.96	-25	36.96
5235.00	45.97	H	-57.1	1.60	9.70	-49.00	-25	24.00
5235.00	46.36	V	-56.3	1.60	9.70	-48.20	-25	23.20
7852.50	53.97	H	-41.7	1.90	11.10	-32.50	-25	7.50
7852.50	49.62	V	-46.4	1.90	11.10	-37.20	-25	12.20

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 40 (Lower Band)								
Test frequency range: 30MHz-25GHz								
QPSK 5MHz Bandwidth, Low channel								
951.1	33.14	H	-63.4	1.36	0.0	-64.76	-40	24.76
951.1	33.01	V	-61.0	1.36	0.0	-62.36	-40	22.36
4615.00	47.12	H	-56.9	1.50	10.50	-47.90	-40	7.90
4615.00	47.86	V	-55.7	1.50	10.50	-46.70	-40	6.70
6922.50	45.84	H	-52.4	1.90	10.30	-44.00	-40	4.00
6922.50	45.28	V	-53.1	1.90	10.30	-44.70	-40	4.70
QPSK 5MHz Bandwidth, High channel								
950.2	33.63	H	-62.9	1.36	0.0	-64.26	-40	24.26
950.2	33.74	V	-60.3	1.36	0.0	-61.66	-40	21.66
4625.00	48.05	H	-55.9	1.50	10.50	-46.90	-40	6.90
4625.00	48.69	V	-54.9	1.50	10.50	-45.90	-40	5.90
6937.50	46.12	H	-52.1	1.90	10.30	-43.70	-40	3.70
6937.50	45.84	V	-52.5	1.90	10.30	-44.10	-40	4.10
LTE Band 40 (Upper Band)								
Test frequency range: 30MHz-25GHz								
QPSK 5MHz Bandwidth, Low channel								
951.7	32.61	H	-63.9	1.36	0.0	-65.26	-40	25.26
951.7	32.74	V	-61.3	1.36	0.0	-62.66	-40	22.66
4705.00	47.68	H	-56.1	1.50	10.30	-47.30	-40	7.30
4705.00	48.14	V	-55.2	1.50	10.30	-46.40	-40	6.40
7057.50	45.09	H	-52.3	1.90	10.20	-44.00	-40	4.00
7057.50	44.91	V	-52.6	1.90	10.20	-44.30	-40	4.30
QPSK 5MHz Bandwidth, High channel								
956.3	33.51	H	-63.0	1.36	0.0	-64.36	-40	24.36
956.3	33.63	V	-60.4	1.36	0.0	-61.76	-40	21.76
4715.00	45.42	H	-58.4	1.50	10.30	-49.60	-40	9.60
4715.00	48.78	V	-54.6	1.50	10.30	-45.80	-40	5.80
7072.50	45.61	H	-51.8	1.90	10.20	-43.50	-40	3.50
7072.50	45.33	V	-52.2	1.90	10.20	-43.90	-40	3.90

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 41								
Test frequency range: 30MHz-27GHz								
QPSK 5MHz Bandwidth, Low channel								
959.2	32.33	H	-64.2	1.36	0.0	-65.56	-25	40.56
959.2	32.24	V	-61.8	1.36	0.0	-63.16	-25	38.16
4997.00	50.24	H	-53.1	1.50	9.80	-44.80	-25	19.80
4997.00	53.37	V	-49.2	1.50	9.80	-40.90	-25	15.90
7495.50	50.94	H	-45.0	1.90	10.80	-36.10	-25	11.10
7495.50	49.48	V	-46.8	1.90	10.80	-37.90	-25	12.90
QPSK 5MHz Bandwidth, Middle channel								
958.4	32.94	H	-63.6	1.36	0.0	-64.96	-25	39.96
958.4	32.78	V	-61.3	1.36	0.0	-62.66	-25	37.66
5186.00	45.84	H	-57.2	1.60	9.70	-49.10	-25	24.10
5186.00	47.05	V	-55.6	1.60	9.70	-47.50	-25	22.50
7779.00	51.87	H	-43.9	1.90	11.10	-34.70	-25	9.70
7779.00	53.13	V	-43.0	1.90	11.10	-33.80	-25	8.80
QPSK 5MHz Bandwidth, High channel								
959.7	33.74	H	-62.8	1.36	0.0	-64.16	-25	39.16
959.7	33.65	V	-60.4	1.36	0.0	-61.76	-25	36.76
5375.00	48.23	H	-54.6	1.70	10.50	-45.80	-25	20.80
5375.00	51.44	V	-51.3	1.70	10.50	-42.50	-25	17.50
8062.50	50.97	H	-44.7	2.00	11.40	-35.30	-25	10.30
8062.50	49.39	V	-46.6	2.00	11.40	-37.20	-25	12.20

Frequency (MHz)	Receiver Reading (dBμV)	Polar (H / V)	Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Substituted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBi/dBd)			
LTE Band 66								
Test frequency range: 30MHz-20GHz								
QPSK 1.4MHz Bandwidth, Low channel								
957.0	32.22	H	-64.3	1.36	0.0	-65.66	-13	52.66
957.0	32.34	V	-61.7	1.36	0.0	-63.06	-13	50.06
3421.40	46.57	H	-59.4	1.30	9.90	-50.80	-13	37.80
3421.40	45.96	V	-59.7	1.30	9.90	-51.10	-13	38.10
5132.10	51.43	H	-51.7	1.50	9.60	-43.60	-13	30.60
5132.10	50.12	V	-52.5	1.50	9.60	-44.40	-13	31.40
QPSK 1.4MHz Bandwidth, Middle channel								
953.2	33.02	H	-63.5	1.36	0.0	-64.86	-13	51.86
953.2	33.14	V	-60.9	1.36	0.0	-62.26	-13	49.26
3490.00	46.87	H	-59.1	1.30	10.50	-49.90	-13	36.90
3490.00	45.98	V	-59.6	1.30	10.50	-50.40	-13	37.40
5235.00	47.24	H	-55.8	1.60	9.70	-47.70	-13	34.70
5235.00	46.52	V	-56.1	1.60	9.70	-48.00	-13	35.00
QPSK 1.4MHz Bandwidth, High channel								
958.1	33.84	H	-62.7	1.36	0.0	-64.06	-13	51.06
958.1	33.93	V	-60.1	1.36	0.0	-61.46	-13	48.46
3558.60	46.87	H	-58.8	1.30	10.90	-49.20	-13	36.20
3558.60	45.98	V	-59.5	1.30	10.90	-49.90	-13	36.90
5337.90	47.24	H	-55.7	1.60	10.00	-47.30	-13	34.30
5337.90	46.52	V	-56.2	1.60	10.00	-47.80	-13	34.80

Note:
Absolute Level = Reading Level + Substituted Factor
Substituted Factor contains: Substituted Level - Cable loss+ Antenna Gain
Margin = Absolute Level - Limit

FCC§ 22.917 (a); § 24.238 (a); §27.53 (a) (g)(h)(m); §90.691- BAND EDGES

Applicable Standard

According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to FCC §27.53 (a), For operations in the 2305-2320 MHz band and the 2345-2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:
(4)For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands:
(i) By a factor of not less than: 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than 55 + 10 log (P) dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than 61 + 10 log (P) dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than 67 + 10 log (P) dB on all frequencies between 2328 and 2337 MHz;
(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 55 + 10 log (P) dB on all frequencies between 2296 and 2300 MHz, 61 + 10 log (P) dB on all frequencies between 2292 and 2296 MHz, 67 + 10 log (P) dB on all frequencies between 2288 and 2292 MHz, and 70 + 10 log (P) dB below 2288 MHz;
(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2365 MHz, and not less than 70 + 10 log (P) dB above 2365 MHz.

According to FCC §27.53 (g) , For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC §27.53 (h), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to FCC §27.53 (m), For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5MHz.

According to § 90.691, (a) Out-of-band emission requirement shall apply only to the “outer” channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

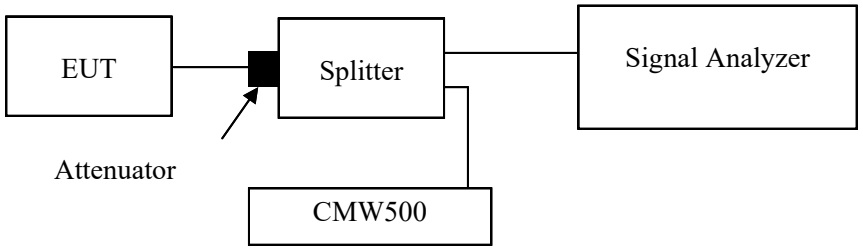
(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section

Test Procedure

ANSI C63.26-2015 Section 5.7

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Test Data

Environmental Conditions

Temperature:	26~27 ℃
Relative Humidity:	49~50 %
ATM Pressure:	101 kPa

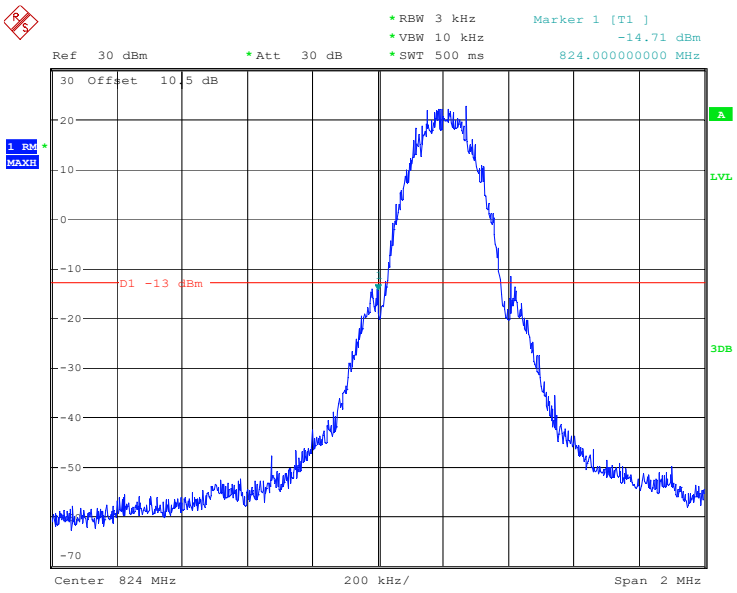
The testing was performed by Bruce Lin from 2024-03-12to 2024-07-01.

EUT operation mode: Transmitting (Worst case)

Test Result: Compliant

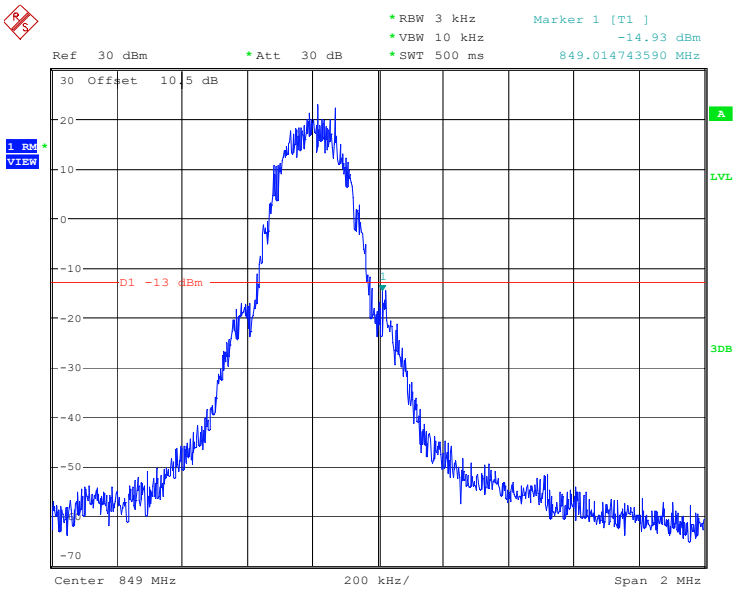
Please refer to the following plots.

Cellular Band, Left Band Edge for GSM (GMSK) Mode



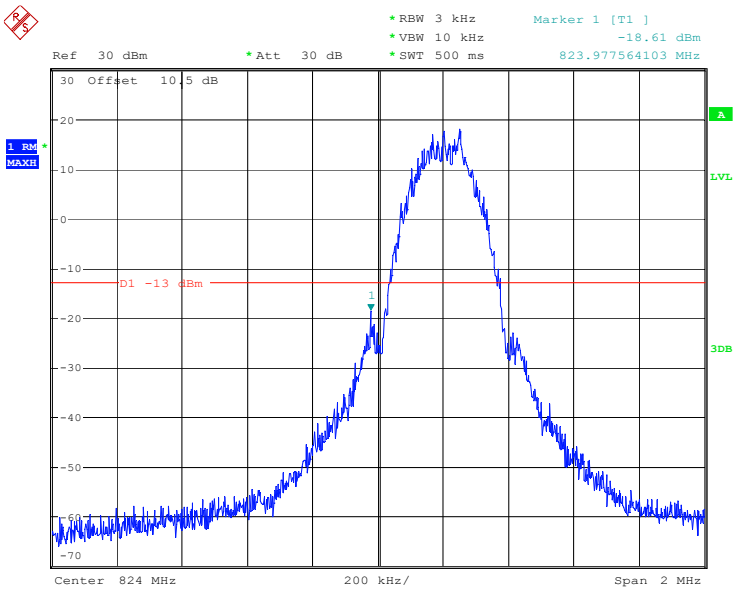
ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:14:54

Cellular Band, Right Band Edge for GSM (GMSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:23:01

Cellular Band, Left Band Edge for EDGE (8PSK) Mode



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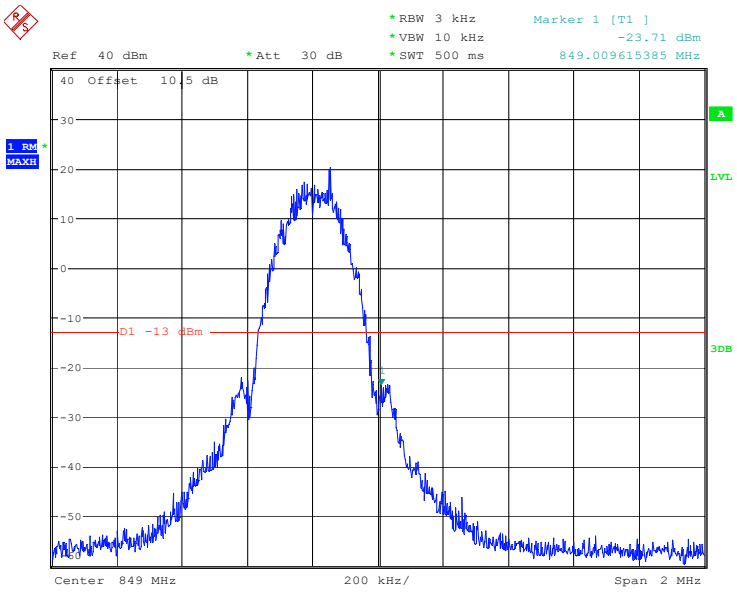
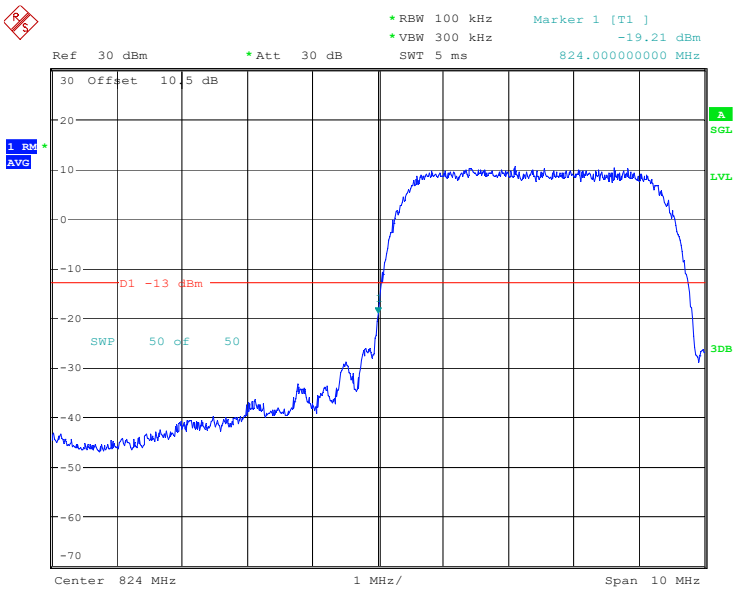
Date: 20.MAR.2024 19:21:36

Cellular Band, Right Band Edge for EDGE (8PSK) Mode



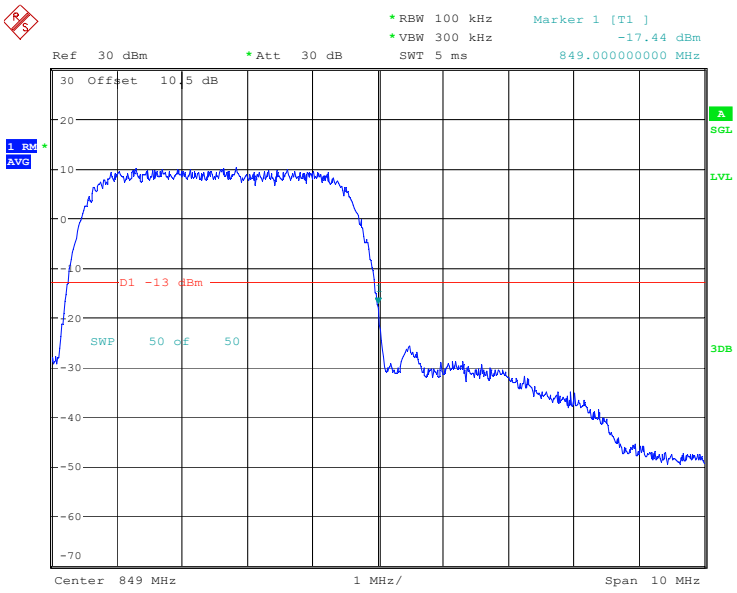
ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 20.MAR.2024 19:32:02

Cellular Band, Left Band Edge for RMC (BPSK) Mode



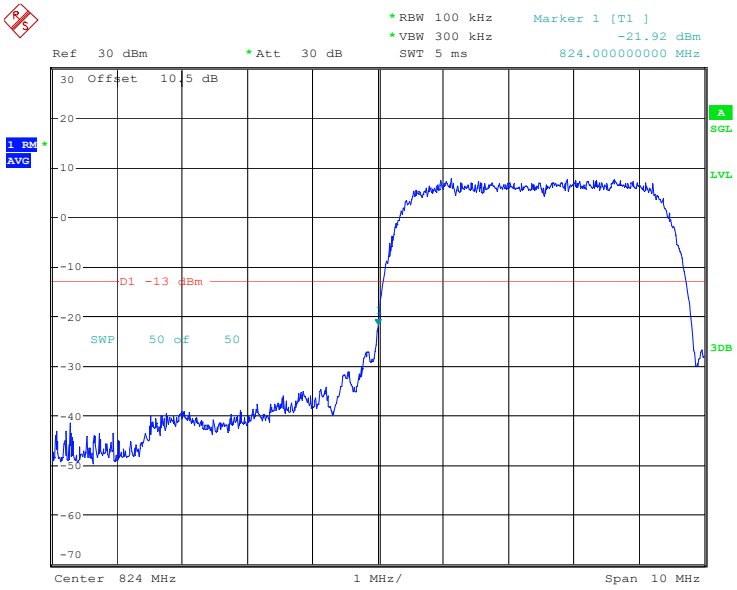
ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:53:19

Cellular Band, Right Band Edge for RMC (BPSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 22:58:21

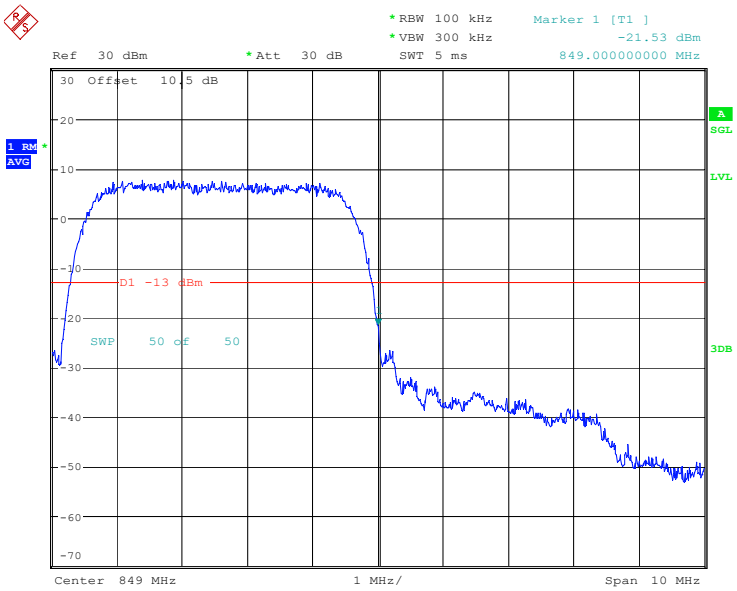
Cellular Band, Left Band Edge for HSDPA(16QAM) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:02:31

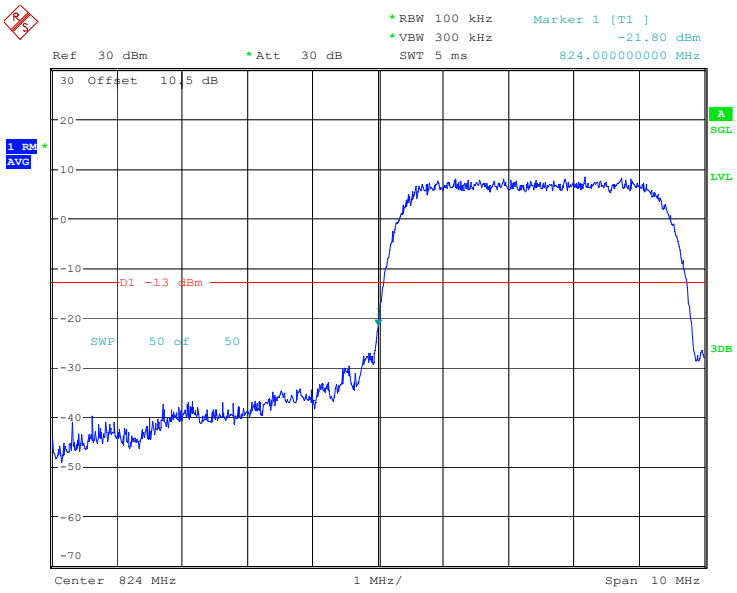
Cellular Band, Right Band Edge for HSDPA (16QAM) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:08:05

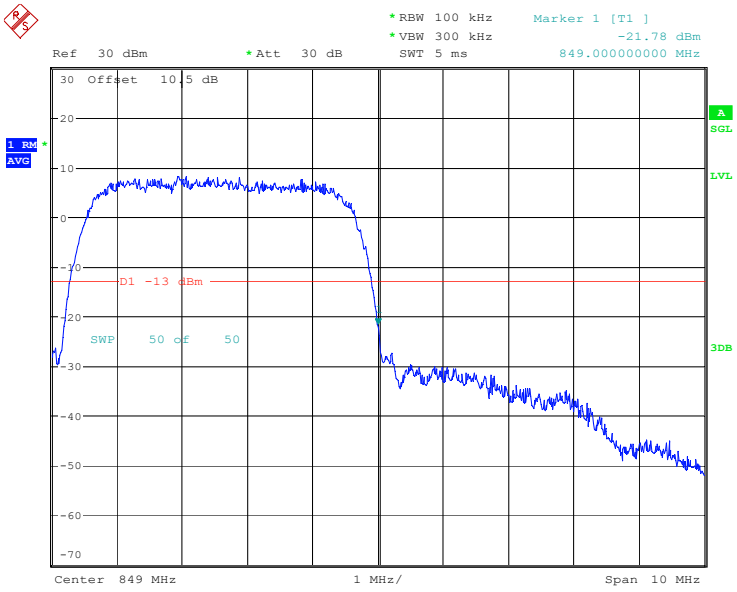
Cellular Band, Left Band Edge for HSUPA (QPSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:17:48

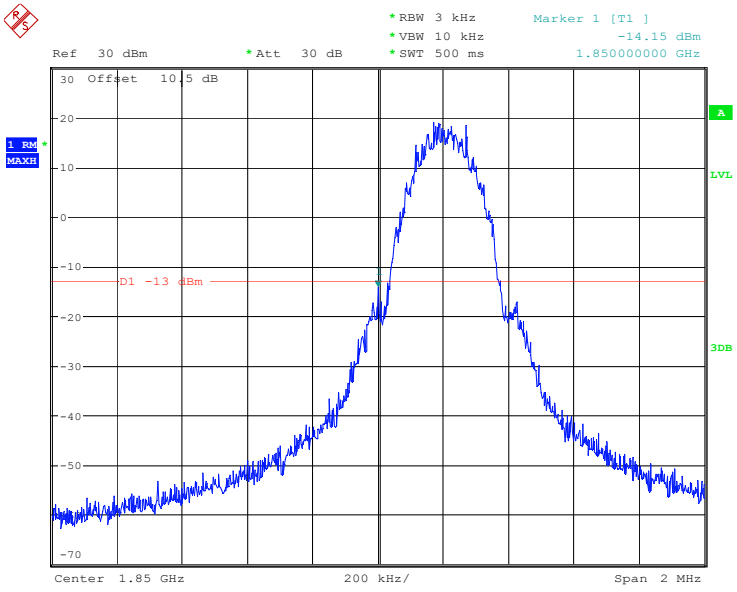
Cellular Band, Right Band Edge for HSUPA (QPSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:11:38

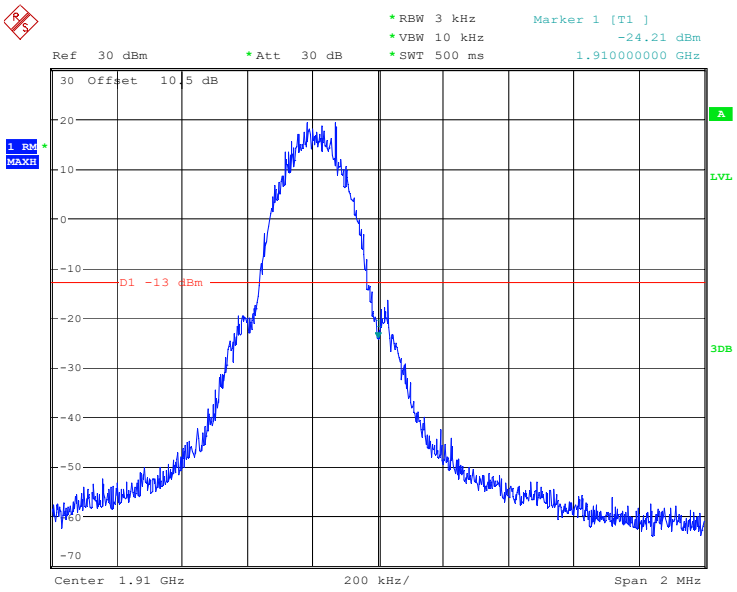
PCS Band, Left Band Edge for GSM (GMSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 20:45:18

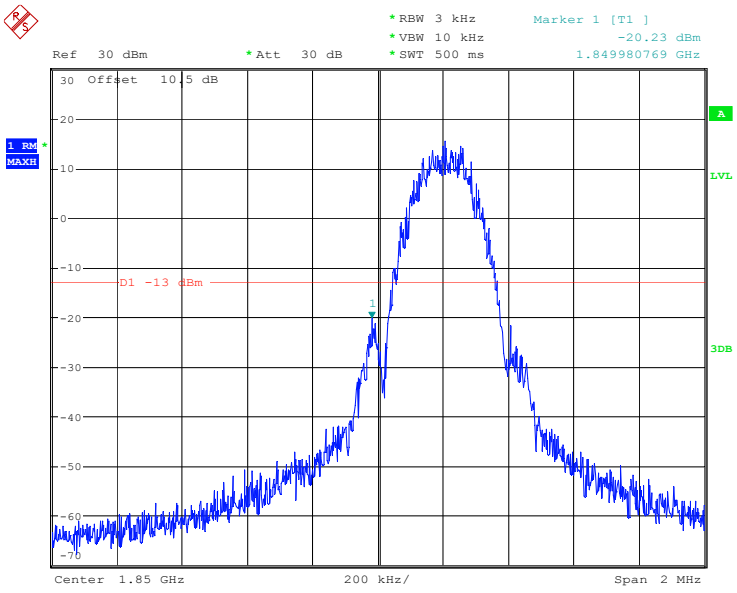
PCS Band, Right Band Edge for GSM (GMSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 21:28:16

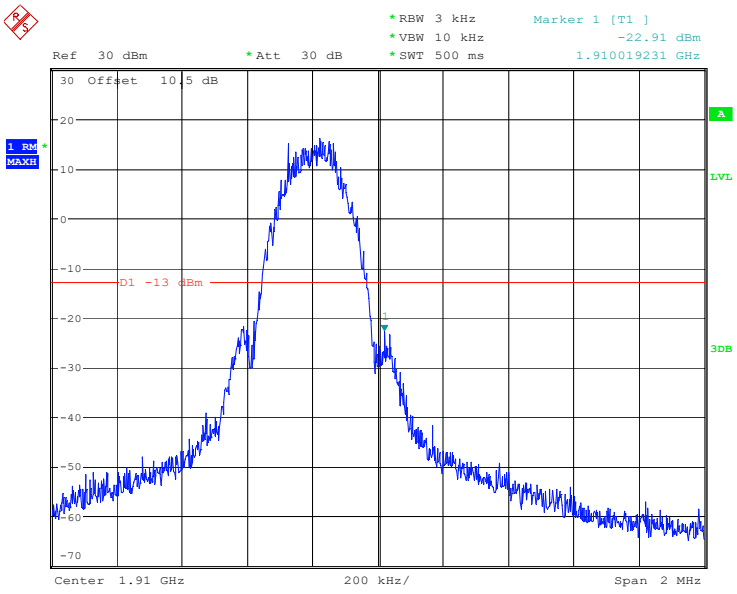
PCS Band, Left Band Edge for EDGE (8PSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:49:43

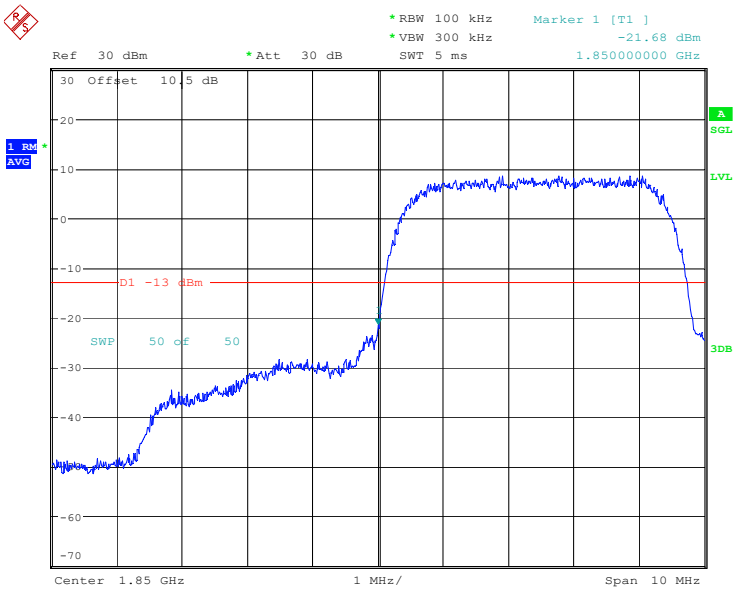
PCS Band, Right Band Edge for EDGE (8PSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 20.MAR.2024 19:55:49

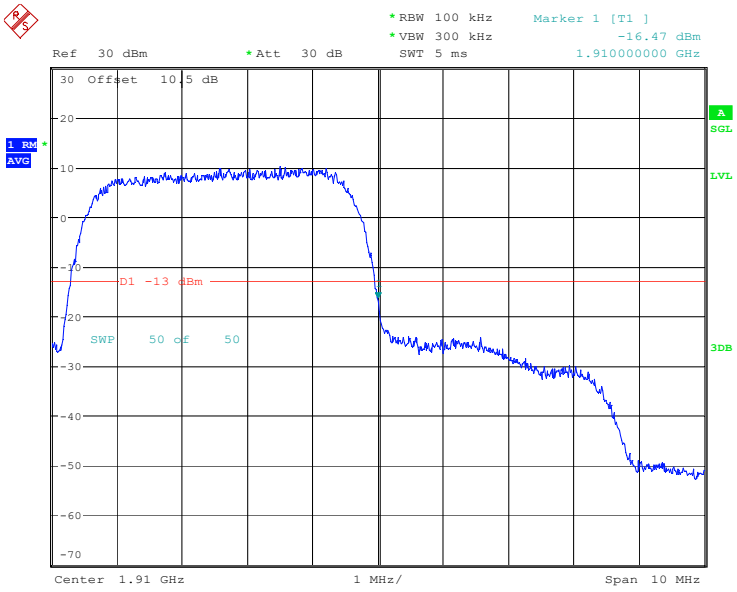
PCS Band, Left Band Edge for RMC (BPSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:24:56

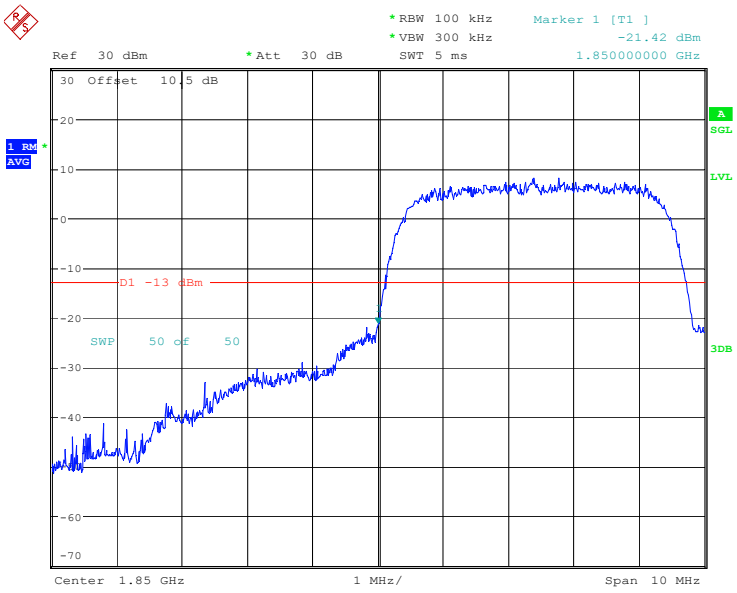
PCS Band, Right Band Edge for RMC (BPSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:34:33

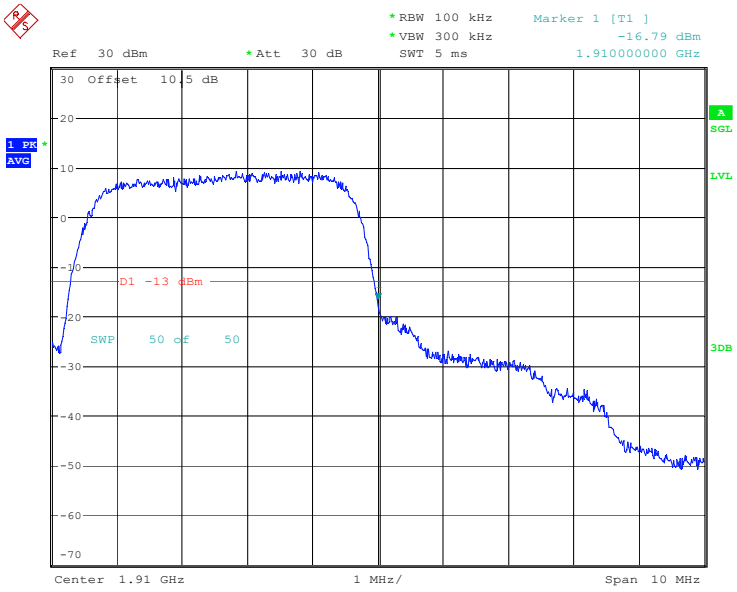
PCS Band, Left Band Edge for HSDPA(16QAM) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

Date: 14.MAR.2024 23:49:19

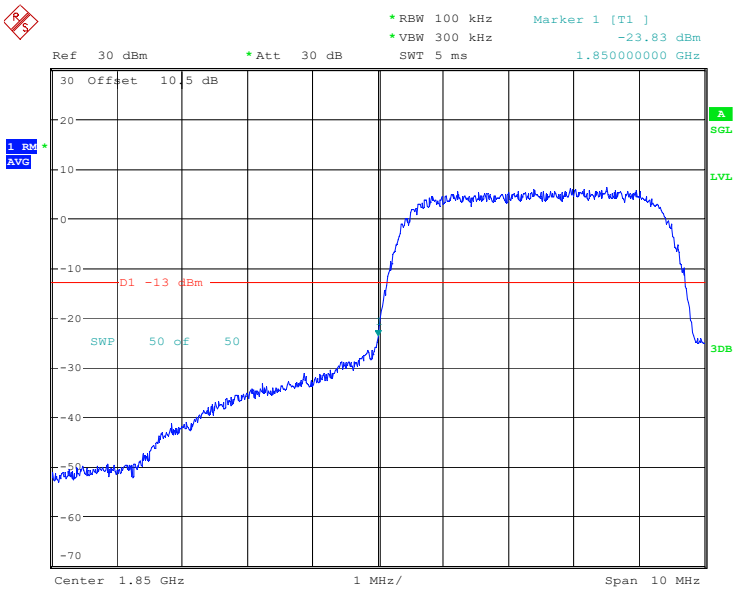
PCS Band, Right Band Edge for HSDPA (16QAM) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin

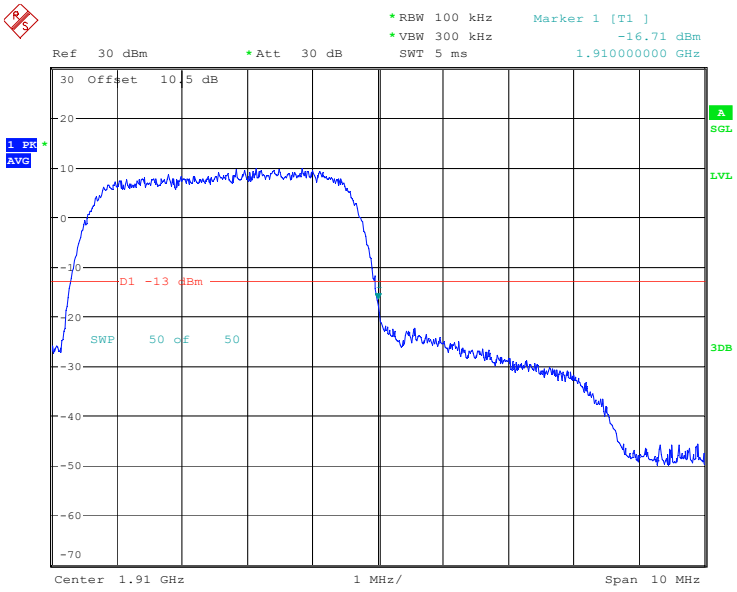
Date: 14.MAR.2024 23:41:38

PCS Band, Left Band Edge for HSUPA (QPSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 14.MAR.2024 23:55:21

PCS Band, Right Band Edge for HSUPA (QPSK) Mode



ProjectNo.:SZGMA240130-06895E Tester:Bruce Lin
Date: 15.MAR.2024 00:03:02

The test plots of LTE bands please refer to the Appendix C.

FCC § 2.1055; § 22.355; § 24.235; §27.54; §90.213- FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, §22.355, §24.235; §27.54; §90.213.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile > 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

According to §24.235&§27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

According to §90.213, unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following table:

TABLE 1 TO §90.213(a)—MINIMUM FREQUENCY STABILITY

[Parts per million (ppm)]

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	[1 2 3]100	100	200
25-50	20	20	50
72-76	5		50
150-174	[5 11]5	[6]5	[4 6]50
216-220	1.0		1.0
220-222[12]	0.1	1.5	1.5
421-512	[7 11 14]2.5	[8]5	[8]5
806-809	[14]1.0	1.5	1.5
809-824	[14]1.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	[14]0.1	1.5	1.5
902-928	2.5	2.5	2.5
902-928[13]	2.5	2.5	2.5
929-930	1.5		
935-940	0.1	1.5	1.5
1427-1435	[9]300	300	300
Above 2450[10]			

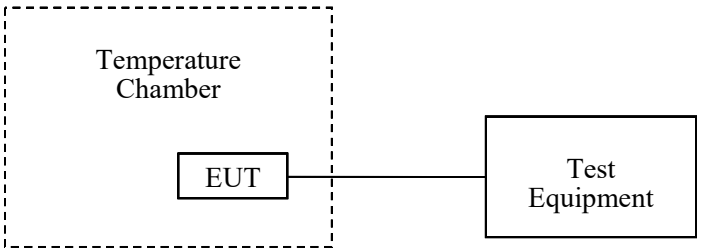
Test Procedure

ANSI C63.26-2015 Section 5.6

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data

Environmental Conditions

Temperature:	26~27 ℃
Relative Humidity:	49~50 %
ATM Pressure:	101 kPa

The testing was performed by Bruce Lin from 2024-03-15 to 2024-03-20.

EUT operation mode: Transmitting

Test Result: Compliant

Please refer to the following tables.

Cellular Band (Part 22H)

GSM Mode

Test Modulation:	GMSK		Test Channel:	836.6	MHz
Test Item	Temperature (°C)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	103.148	0.123	2.5
	-20	3.8	117.775	0.141	2.5
	-10	3.8	113.111	0.135	2.5
	0	3.8	104.195	0.125	2.5
	10	3.8	102.646	0.123	2.5
	20	3.8	100.757	0.120	2.5
	30	3.8	104.419	0.125	2.5
	40	3.8	100.932	0.121	2.5
	50	3.8	115.397	0.138	2.5
Frequency Stability vs. Voltage	20	3.23	119.149	0.142	2.5
	20	4.37	104.654	0.125	2.5

Test Modulation:	8PSK		Test Channel:	836.6	MHz
Test Item	Temperature (°C)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	118.427	0.142	2.5
	-20	3.8	102.818	0.123	2.5
	-10	3.8	111.251	0.133	2.5
	0	3.8	107.22	0.128	2.5
	10	3.8	108.535	0.130	2.5
	20	3.8	100.61	0.120	2.5
	30	3.8	102.395	0.122	2.5
	40	3.8	111.668	0.133	2.5
	50	3.8	107.313	0.128	2.5
Frequency Stability vs. Voltage	20	3.23	101.102	0.121	2.5
	20	4.37	111.879	0.134	2.5

WCDMA Mode

Test Modulation:	WCDMA R99		Test Channel:	836.6	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	103.319	0.123	2.5
	-20	3.8	113.138	0.135	2.5
	-10	3.8	102.711	0.123	2.5
	0	3.8	108.007	0.129	2.5
	10	3.8	106.154	0.127	2.5
	20	3.8	104.281	0.125	2.5
	30	3.8	114.86	0.137	2.5
	40	3.8	107.227	0.128	2.5
	50	3.8	105.047	0.126	2.5
Frequency Stability vs. Voltage	20	3.23	115.16	0.138	2.5
	20	4.37	102.753	0.123	2.5

PCS Band (Part 24E)

GSM Mode

Test Mode:	GMSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1850.023	1850.000	1909.997	1910.000
	-20	3.8	1850.012	1850.000	1909.980	1910.000
	-10	3.8	1850.001	1850.000	1909.984	1910.000
	0	3.8	1850.008	1850.000	1909.987	1910.000
	10	3.8	1850.014	1850.000	1909.979	1910.000
	20	3.8	1850.025	1850.000	1909.986	1910.000
	30	3.8	1850.004	1850.000	1909.974	1910.000
	40	3.8	1850.009	1850.000	1909.992	1910.000
	50	3.8	1850.029	1850.000	1909.985	1910.000
Frequency Stability vs. Voltage	20	3.23	1850.021	1850.000	1909.990	1910.000
	20	4.37	1850.024	1850.000	1909.987	1910.000

Test Mode:	8PSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1850.005	1850.000	1909.986	1910.000
	-20	3.8	1850.006	1850.000	1909.972	1910.000
	-10	3.8	1850.006	1850.000	1909.987	1910.000
	0	3.8	1850.021	1850.000	1909.986	1910.000
	10	3.8	1850.025	1850.000	1909.989	1910.000
	20	3.8	1850.006	1850.000	1909.976	1910.000
	30	3.8	1850.024	1850.000	1909.999	1910.000
	40	3.8	1850.001	1850.000	1909.982	1910.000
	50	3.8	1850.015	1850.000	1909.998	1910.000
Frequency Stability vs. Voltage	20	3.23	1850.001	1850.000	1909.985	1910.000
	20	4.37	1850.030	1850.000	1909.993	1910.000

WCDMA Mode

Test Mode:	WCDMA R99	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1850.022	1850.000	1909.999	1910.000
	-20	3.8	1850.013	1850.000	1909.992	1910.000
	-10	3.8	1850.001	1850.000	1909.994	1910.000
	0	3.8	1850.028	1850.000	1909.974	1910.000
	10	3.8	1850.023	1850.000	1909.978	1910.000
	20	3.8	1850.022	1850.000	1909.971	1910.000
	30	3.8	1850.009	1850.000	1909.971	1910.000
	40	3.8	1850.010	1850.000	1909.989	1910.000
	50	3.8	1850.012	1850.000	1909.985	1910.000
Frequency Stability vs. Voltage	20	3.23	1850.016	1850.000	1909.989	1910.000
	20	4.37	1850.017	1850.000	1909.987	1910.000

LTE Band 2:

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1850.006	1850.000	1909.992	1910.000
	-20	3.8	1850.008	1850.000	1909.971	1910.000
	-10	3.8	1850.001	1850.000	1909.990	1910.000
	0	3.8	1850.016	1850.000	1909.982	1910.000
	10	3.8	1850.029	1850.000	1909.998	1910.000
	20	3.8	1850.028	1850.000	1909.973	1910.000
	30	3.8	1850.010	1850.000	1909.984	1910.000
	40	3.8	1850.022	1850.000	1909.995	1910.000
	50	3.8	1850.015	1850.000	1909.981	1910.000
Frequency Stability vs. Voltage	20	3.23	1850.003	1850.000	1909.997	1910.000
	20	4.37	1850.013	1850.000	1909.979	1910.000

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1850.029	1850.000	1909.982	1910.000
	-20	3.8	1850.020	1850.000	1909.980	1910.000
	-10	3.8	1850.001	1850.000	1909.982	1910.000
	0	3.8	1850.003	1850.000	1909.985	1910.000
	10	3.8	1850.029	1850.000	1909.979	1910.000
	20	3.8	1850.023	1850.000	1909.992	1910.000
	30	3.8	1850.015	1850.000	1909.981	1910.000
	40	3.8	1850.015	1850.000	1909.983	1910.000
	50	3.8	1850.022	1850.000	1909.974	1910.000
Frequency Stability vs. Voltage	20	3.23	1850.004	1850.000	1909.982	1910.000
	20	4.37	1850.016	1850.000	1909.987	1910.000

LTE Band 4:

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1710.004	1710.00	1754.998	1755
	-20	3.8	1710.015	1710.00	1754.998	1755
	-10	3.8	1710.015	1710.00	1754.970	1755
	0	3.8	1710.025	1710.00	1754.995	1755
	10	3.8	1710.002	1710.00	1754.977	1755
	20	3.8	1710.002	1710.00	1754.986	1755
	30	3.8	1710.021	1710.00	1754.995	1755
	40	3.8	1710.020	1710.00	1754.983	1755
	50	3.8	1710.002	1710.00	1754.996	1755
Frequency Stability vs. Voltage	20	3.23	1710.027	1710.00	1754.974	1755
	20	4.37	1710.006	1710.00	1754.970	1755

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1710.002	1710.00	1754.987	1755
	-20	3.8	1710.005	1710.00	1754.995	1755
	-10	3.8	1710.022	1710.00	1754.980	1755
	0	3.8	1710.025	1710.00	1754.999	1755
	10	3.8	1710.004	1710.00	1754.978	1755
	20	3.8	1710.025	1710.00	1754.983	1755
	30	3.8	1710.020	1710.00	1754.977	1755
	40	3.8	1710.030	1710.00	1754.999	1755
	50	3.8	1710.009	1710.00	1754.982	1755
Frequency Stability vs. Voltage	20	3.23	1710.014	1710.00	1754.993	1755
	20	4.37	1710.026	1710.00	1754.987	1755

LTE Band 5:

Test Modulation:	10 MHz QPSK		Test Channel:	836.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	118.777	0.142	2.5
	-20	3.8	117.404	0.140	2.5
	-10	3.8	115.612	0.138	2.5
	0	3.8	105.843	0.127	2.5
	10	3.8	105.612	0.126	2.5
	20	3.8	116.864	0.140	2.5
	30	3.8	100.270	0.120	2.5
	40	3.8	112.798	0.135	2.5
	50	3.8	110.730	0.132	2.5
Frequency Stability vs. Voltage	20	3.23	111.363	0.133	2.5
	20	4.37	110.166	0.132	2.5

Test Modulation:	10 MHz 16QAM		Test Channel:	836.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	103.900	0.124	2.5
	-20	3.8	113.490	0.136	2.5
	-10	3.8	103.727	0.124	2.5
	0	3.8	102.464	0.122	2.5
	10	3.8	114.860	0.137	2.5
	20	3.8	102.356	0.122	2.5
	30	3.8	119.061	0.142	2.5
	40	3.8	111.377	0.133	2.5
	50	3.8	106.997	0.128	2.5
Frequency Stability vs. Voltage	20	3.23	107.350	0.128	2.5
	20	4.37	118.778	0.142	2.5

LTE Band 7:

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2500.021	2500.00	2569.985	2570
	-20	3.8	2500.014	2500.00	2569.972	2570
	-10	3.8	2500.021	2500.00	2569.991	2570
	0	3.8	2500.029	2500.00	2569.989	2570
	10	3.8	2500.017	2500.00	2569.972	2570
	20	3.8	2500.016	2500.00	2569.996	2570
	30	3.8	2500.020	2500.00	2569.995	2570
	40	3.8	2500.007	2500.00	2569.979	2570
	50	3.8	2500.023	2500.00	2569.990	2570
Frequency Stability vs. Voltage	20	3.23	2500.028	2500.00	2569.970	2570
	20	4.37	2500.004	2500.00	2569.991	2570

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2500.001	2500.00	2569.990	2570
	-20	3.8	2500.004	2500.00	2569.995	2570
	-10	3.8	2500.002	2500.00	2569.982	2570
	0	3.8	2500.012	2500.00	2569.985	2570
	10	3.8	2500.012	2500.00	2569.972	2570
	20	3.8	2500.029	2500.00	2569.973	2570
	30	3.8	2500.028	2500.00	2569.988	2570
	40	3.8	2500.006	2500.00	2569.996	2570
	50	3.8	2500.011	2500.00	2569.983	2570
Frequency Stability vs. Voltage	20	3.23	2500.004	2500.00	2569.975	2570
	20	4.37	2500.018	2500.00	2569.978	2570

LTE Band 12:

Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	699.013	699.00	715.979	716.00
	-20	3.8	699.028	699.00	715.985	716.00
	-10	3.8	699.013	699.00	715.987	716.00
	0	3.8	699.003	699.00	715.985	716.00
	10	3.8	699.016	699.00	715.991	716.00
	20	3.8	699.017	699.00	715.982	716.00
	30	3.8	699.012	699.00	715.974	716.00
	40	3.8	699.023	699.00	715.999	716.00
	50	3.8	699.006	699.00	715.970	716.00
Frequency Stability vs. Voltage	20	3.23	699.023	699.00	715.977	716.00
	20	4.37	699.016	699.00	715.975	716.00

Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	699.001	699.00	715.993	716.00
	-20	3.8	699.003	699.00	715.993	716.00
	-10	3.8	699.023	699.00	715.996	716.00
	0	3.8	699.022	699.00	715.975	716.00
	10	3.8	699.028	699.00	715.976	716.00
	20	3.8	699.025	699.00	715.988	716.00
	30	3.8	699.002	699.00	715.998	716.00
	40	3.8	699.009	699.00	715.989	716.00
	50	3.8	699.001	699.00	715.981	716.00
Frequency Stability vs. Voltage	20	3.23	699.021	699.00	715.999	716.00
	20	4.37	699.012	699.00	715.991	716.00

LTE Band 17:

Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	704.022	704.00	715.990	716.00
	-20	3.8	704.012	704.00	715.993	716.00
	-10	3.8	704.024	704.00	715.983	716.00
	0	3.8	704.017	704.00	715.999	716.00
	10	3.8	704.012	704.00	715.985	716.00
	20	3.8	704.029	704.00	715.996	716.00
	30	3.8	704.007	704.00	715.992	716.00
	40	3.8	704.016	704.00	715.981	716.00
	50	3.8	704.007	704.00	715.994	716.00
Frequency Stability vs. Voltage	20	3.23	704.025	704.00	715.986	716.00
	20	4.37	704.027	704.00	715.995	716.00

Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	704.014	704.00	715.981	716.00
	-20	3.8	704.027	704.00	715.974	716.00
	-10	3.8	704.010	704.00	715.996	716.00
	0	3.8	704.005	704.00	715.988	716.00
	10	3.8	704.018	704.00	715.989	716.00
	20	3.8	704.002	704.00	715.979	716.00
	30	3.8	704.030	704.00	715.996	716.00
	40	3.8	704.023	704.00	715.975	716.00
	50	3.8	704.024	704.00	715.980	716.00
Frequency Stability vs. Voltage	20	3.23	704.026	704.00	715.983	716.00
	20	4.37	704.012	704.00	715.977	716.00

LTE Band 26 (Part 90s):

Test Modulation:	15 MHz QPSK		Test Channel:	821.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	103.446	0.126	2.5
	-20	3.8	114.230	0.139	2.5
	-10	3.8	104.638	0.127	2.5
	0	3.8	104.898	0.128	2.5
	10	3.8	110.409	0.134	2.5
	20	3.8	116.871	0.142	2.5
	30	3.8	106.575	0.130	2.5
	40	3.8	102.637	0.125	2.5
	50	3.8	110.262	0.134	2.5
Frequency Stability vs. Voltage	20	3.23	118.125	0.144	2.5
	20	4.37	113.250	0.138	2.5

Test Modulation:	15 MHz 16QAM		Test Channel:	821.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	104.264	0.127	2.5
	-20	3.8	110.185	0.134	2.5
	-10	3.8	106.282	0.129	2.5
	0	3.8	112.603	0.137	2.5
	10	3.8	105.862	0.129	2.5
	20	3.8	101.837	0.124	2.5
	30	3.8	104.778	0.128	2.5
	40	3.8	114.098	0.139	2.5
	50	3.8	104.608	0.127	2.5
Frequency Stability vs. Voltage	20	3.23	107.28	0.131	2.5
	20	4.37	113.054	0.138	2.5

LTE Band 26 (Part 22H):

Test Modulation:	15 MHz QPSK		Test Channel:	831.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	118.330	0.142	2.5
	-20	3.8	111.035	0.134	2.5
	-10	3.8	100.296	0.121	2.5
	0	3.8	118.765	0.143	2.5
	10	3.8	103.790	0.125	2.5
	20	3.8	101.012	0.121	2.5
	30	3.8	106.968	0.129	2.5
	40	3.8	117.808	0.142	2.5
	50	3.8	115.138	0.138	2.5
Frequency Stability vs. Voltage	20	3.23	105.432	0.127	2.5
	20	4.37	119.121	0.143	2.5

Test Modulation:	15 MHz 16QAM		Test Channel:	831.5	MHz
Test Item	Temperature (℃)	Voltage (V_{DC})	Frequency Error		Limit
			(Hz)	(ppm)	(ppm)
Frequency Stability vs. Temperature	-30	3.8	112.474	0.135	2.5
	-20	3.8	101.304	0.122	2.5
	-10	3.8	119.667	0.144	2.5
	0	3.8	103.039	0.124	2.5
	10	3.8	105.710	0.127	2.5
	20	3.8	118.902	0.143	2.5
	30	3.8	106.498	0.128	2.5
	40	3.8	113.961	0.137	2.5
	50	3.8	101.272	0.122	2.5
Frequency Stability vs. Voltage	20	3.23	104.472	0.126	2.5
	20	4.37	111.542	0.134	2.5

LTE Band 38:

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2570.018	2570.00	2619.985	2620
	-20	3.8	2570.009	2570.00	2619.998	2620
	-10	3.8	2570.012	2570.00	2619.999	2620
	0	3.8	2570.023	2570.00	2619.986	2620
	10	3.8	2570.019	2570.00	2619.995	2620
	20	3.8	2570.003	2570.00	2619.451	2620
	30	3.8	2570.030	2570.00	2619.987	2620
	40	3.8	2570.021	2570.00	2619.984	2620
	50	3.8	2570.015	2570.00	2619.999	2620
Frequency Stability vs. Voltage	20	3.23	2570.018	2570.00	2619.988	2620
	20	4.37	2570.013	2570.00	2619.990	2620

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2570.008	2570.00	2619.983	2620
	-20	3.8	2570.022	2570.00	2619.992	2620
	-10	3.8	2570.011	2570.00	2619.654	2620
	0	3.8	2570.027	2570.00	2619.999	2620
	10	3.8	2570.025	2570.00	2619.994	2620
	20	3.8	2570.022	2570.00	2619.995	2620
	30	3.8	2570.008	2570.00	2619.991	2620
	40	3.8	2570.026	2570.00	2619.978	2620
	50	3.8	2570.004	2570.00	2619.991	2620
Frequency Stability vs. Voltage	20	3.23	2570.003	2570.00	2619.993	2620
	20	4.37	2570.021	2570.00	2619.977	2620

LTE Band 40 Lower:

Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2305.030	2305.000	2314.978	2315.000
	-20	3.8	2305.013	2305.000	2314.971	2315.000
	-10	3.8	2305.013	2305.000	2314.977	2315.000
	0	3.8	2305.004	2305.000	2314.976	2315.000
	10	3.8	2305.011	2305.000	2314.975	2315.000
	20	3.8	2305.020	2305.000	2314.993	2315.000
	30	3.8	2305.021	2305.000	2314.975	2315.000
	40	3.8	2305.024	2305.000	2314.996	2315.000
	50	3.8	2305.022	2305.000	2314.999	2315.000
Frequency Stability vs. Voltage	20	3.23	2305.014	2305.000	2314.986	2315.000
	20	4.37	2305.012	2305.000	2314.992	2315.000

Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2305.013	2305.000	2314.971	2315.000
	-20	3.8	2305.018	2305.000	2314.989	2315.000
	-10	3.8	2305.011	2305.000	2314.854	2315.000
	0	3.8	2305.003	2305.000	2314.989	2315.000
	10	3.8	2305.006	2305.000	2314.992	2315.000
	20	3.8	2305.025	2305.000	2314.991	2315.000
	30	3.8	2305.018	2305.000	2314.998	2315.000
	40	3.8	2305.026	2305.000	2314.991	2315.000
	50	3.8	2305.021	2305.000	2314.978	2315.000
Frequency Stability vs. Voltage	20	3.23	2305.003	2305.000	2314.977	2315.000
	20	4.37	2305.023	2305.000	2314.980	2315.000

LTE Band 40 Upper:

Test Mode:	10M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2350.011	2350.000	2359.975	2360.000
	-20	3.8	2350.012	2350.000	2359.995	2360.000
	-10	3.8	2350.011	2350.000	2359.997	2360.000
	0	3.8	2350.026	2350.000	2359.979	2360.000
	10	3.8	2350.001	2350.000	2359.982	2360.000
	20	3.8	2350.003	2350.000	2359.988	2360.000
	30	3.8	2350.021	2350.000	2359.991	2360.000
	40	3.8	2350.022	2350.000	2359.985	2360.000
	50	3.8	2350.022	2350.000	2359.988	2360.000
Frequency Stability vs. Voltage	20	3.23	2350.231	2350.000	2359.998	2360.000
	20	4.37	2350.002	2350.000	2359.640	2360.000

Test Mode:	10M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2350.014	2350.000	2359.973	2360.000
	-20	3.8	2350.014	2350.000	2359.991	2360.000
	-10	3.8	2350.016	2350.000	2359.994	2360.000
	0	3.8	2350.023	2350.000	2359.977	2360.000
	10	3.8	2350.006	2350.000	2359.992	2360.000
	20	3.8	2350.011	2350.000	2359.974	2360.000
	30	3.8	2350.008	2350.000	2359.995	2360.000
	40	3.8	2350.316	2350.000	2359.995	2360.000
	50	3.8	2350.005	2350.000	2359.981	2360.000
Frequency Stability vs. Voltage	20	3.23	2350.026	2350.000	2359.985	2360.000
	20	4.37	2350.014	2350.000	2359.973	2360.000

LTE Band 41:

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2496.020	2496.00	2689.976	2690
	-20	3.8	2496.011	2496.00	2689.981	2690
	-10	3.8	2496.018	2496.00	2689.992	2690
	0	3.8	2496.012	2496.00	2689.975	2690
	10	3.8	2496.004	2496.00	2689.979	2690
	20	3.8	2496.019	2496.00	2689.993	2690
	30	3.8	2496.024	2496.00	2689.984	2690
	40	3.8	2496.021	2496.00	2689.995	2690
	50	3.8	2496.018	2496.00	2689.977	2690
Frequency Stability vs. Voltage	20	3.23	2496.028	2496.00	2689.989	2690
	20	4.37	2496.020	2496.00	2689.993	2690

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	2496.010	2496.00	2689.997	2690
	-20	3.8	2496.028	2496.00	2689.994	2690
	-10	3.8	2496.314	2496.00	2689.977	2690
	0	3.8	2496.013	2496.00	2689.989	2690
	10	3.8	2496.003	2496.00	2689.982	2690
	20	3.8	2496.012	2496.00	2689.994	2690
	30	3.8	2496.021	2496.00	2689.978	2690
	40	3.8	2496.017	2496.00	2689.981	2690
	50	3.8	2496.015	2496.00	2689.973	2690
Frequency Stability vs. Voltage	20	3.23	2496.023	2496.00	2689.989	2690
	20	4.37	2496.010	2496.00	2689.976	2690

LTE Band 66:

Test Mode:	20M QPSK	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1710.003	1710.00	1779.974	1780
	-20	3.8	1710.002	1710.00	1779.994	1780
	-10	3.8	1710.005	1710.00	1779.986	1780
	0	3.8	1710.017	1710.00	1779.978	1780
	10	3.8	1710.006	1710.00	1779.993	1780
	20	3.8	1710.021	1710.00	1779.989	1780
	30	3.8	1710.015	1710.00	1779.973	1780
	40	3.8	1710.010	1710.00	1779.992	1780
	50	3.8	1710.023	1710.00	1779.995	1780
Frequency Stability vs. Voltage	20	3.23	1710.009	1710.00	1779.970	1780
	20	4.37	1710.025	1710.00	1779.999	1780

Test Mode:	20M 16QAM	Test Channel: Lowest for Lower Edge,Highest for Upper Edge				
Test Item	Temperature (℃)	Voltage (V_{DC})	Lower Edge (MHz)		Upper Edge (MHz)	
			Result	Limit	Result	Limit
Frequency Stability vs. Temperature	-30	3.8	1710.008	1710.00	1779.992	1780
	-20	3.8	1710.028	1710.00	1779.988	1780
	-10	3.8	1710.028	1710.00	1779.972	1780
	0	3.8	1710.015	1710.00	1779.982	1780
	10	3.8	1710.021	1710.00	1779.994	1780
	20	3.8	1710.003	1710.00	1779.996	1780
	30	3.8	1710.008	1710.00	1779.983	1780
	40	3.8	1710.007	1710.00	1779.978	1780
	50	3.8	1710.014	1710.00	1779.970	1780
Frequency Stability vs. Voltage	20	3.23	1710.003	1710.00	1779.984	1780
	20	4.37	1710.023	1710.00	1779.984	1780

EUT PHOTOGRAPHS

Please refer to the attachment SZGMA240130-06895E-RF External photo and SZGMA240130-06895E - RF Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment SZGMA240130-06895E-RFD Test Setup photo.

******* END OF REPORT *******