



TEST REPORT

FCC ID: 2ADYY-AE10

Product: Mobile Phone

Model No.: AE10

Trade Mark: TECNO

Report No.: WSCT-A2LA-R&E240300009A-RF

Issued Date: 11 July 2024

Issued for:

TECNO MOBILE LIMITED

FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI
STREET FOTAN NT HONGKONG

Issued By:

World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.

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apply to the tested sample.



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1. GENERAL INFORMATION

Product: Mobile Phone
Model No.: AE10
Additional Model: TECNO
Applicant: **TECNO MOBILE LIMITED**
FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer: **TECNO MOBILE LIMITED**
FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Date of receipt: 14 February 2024
Date of Test: 15 February 2024 to 11 July 2024
Applicable Standards: FCC CFR Title 47 Part 2, 22, 24, 27, 90
ANSI C63.26-2015

The above equipment has been tested by World Standardization Certification & Testing Group (Shenzhen) Co., Ltd. And found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:

Wang Xiang

(Wang Xiang)

Checked By:

Qin Shuiquan

(Qin Shuiquan)

Approved By:

Liu Fuxin

(Liu Fuxin)

Date:

11 July 2024





2. GENERAL DESCRIPTION OF EUT

Equipment Type:	Mobile Phone
Model	AE10
Trade Mark	TECNO
Software version:	AE10-H833A-U-OP-240421V2267
Hardware version:	V2.0
Operating Bands	GSM/GPRS/EGPRS 850/1900 MHz WCDMA/HSDPA/HSUPA Band 2/4/5 FDD LTE Band 2/4/5/7/12/17/66 TDD LTE Band 38/41/42 FDD NR Band 5/7/12/66 TDD NR Band 41/77/78
Antenna Type:	FIPA Antenna
Antenna gain:	GSM 850,/WCDMA B5,/LTE B5/NR/N5: -5.33dbi PCS 1900/WCDMA B2/LTE B2: -4.32dbi WCDMA B4/LTE B4/B66/N66: -3.83dbi LTE B7/B38/B41/N7/N41: -1.55dbi LTE B12/B17 NR n12: -6.31dbi LTE B42, NR77/78: -1.5dbi
Radiated Power (EIRP/ERP) Limit	GSM 850,/WCDMA B5,/LTE B5/NR N5: 7.00W(38.45dBm) PCS 1900/WCDMA B2/LTE B2: 2.00W(33.01dBm) WCDMA B4/LTE B4/B66/N66: 1.00W(30.00dBm) LTE B7/B38/B41/N7/N41: 2.00W(33.01dBm) LTE B12/B17 NR n12: 3.00W(34.77dBm) LTE B42, NR77/78: 1.00W(30.00dBm)
Operation Frequency Range:	GSM850: 824-849MHz (TX), 869-894MHz (RX) PCS1900: 1850-1910MHz (TX), 1930-1990MHz (RX) WCDMA Band2: 1850-1910MHz (TX), 1930-1990MHz (RX); WCDMA Band4: 1710-1755MHz (TX), 2110-2155MHz (RX); WCDMA Band5: 824-849MHz (TX), 869-894MHz (RX); LTE Band2: 1850-1910MHz (TX), 1930-1990MHz (RX); LTE Band4: 1710-1755MHz (TX), 2110-2155MHz (RX); LTE Band5: 824-849MHz (TX), 869-894MHz (RX); LTE Band7: 2500-2570MHz (TX), 2620-2690MHz (RX); LTE Band12: 699-716MHz (TX), 729-746MHz (RX); LTE Band17: 704-716MHz (TX), 734-746MHz (RX); LTE Band38: 2570-2620MHz(TX), 2570-2620MHz(RX); LTE Band41: 2496-2690 MHz(TX), 2496-2690 MHz(RX); LTE Band42: 3450-3550 MHz(TX), 3450-3550 MHz(RX); LTE Band66:1710-1780 MHz(TX), 2110-2200 MHz(RX); LTE CA: CA_B41C NR Band5: 824-849MHz (TX), 869-894MHz (RX); NR Band7: 2500-2570MHz (TX), 2620-2690MHz (RX); NR Band12: 699-716MHz (TX), 729-746MHz (RX); NR Band38:2570-2620MHz(TX), 2570-2620MHz(RX); NR Band41:2496-2690 MHz(TX), 2496-2690 MHz(RX); NR Band66:1710-1780 MHz(TX), 2110-2200 MHz(RX); NR Band77:3450-3550 MHz(TX), 3450-3550 MHz(RX); NR Band77:3700-3980 MHz(TX), 3700-3980 MHz(RX);



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	NR Band78:3450-3550 MHz(TX), 3450-3550 MHz(RX); NR Band78:3700-3800 MHz(TX), 3700-3800 MHz(RX); NSA(EN-DC): DC_2A_n7A, DC_2A_n66A, DC_2A_n78A, DC_4A_n41A, DC_4A_n78A, DC_5A_n7A, DC_5A_n41A,DC_5A_n66A, DC_5A_n77A,DC_5A_n78A, DC_7A_n7A, DC_7A_n66A, DC_7A_n77A, DC_7A_n78A, DC_38A_n78A DC_41A_n41A, DC_41A_n77A, DC_41A_n78A, DC_66A_n7A,DC_66A_n41A,DC_66A_n66A,DC_66A_n77A,DC_66A_n78A
Modulation Type	GSM/GPRS: GMSK EGPRS: 8PSK WCDMA: QPSK HSDPA/HSUPA: QPSK /16QAM LTE: QPSK/16QAM NR: BPSK/ QPSK/16QAM/64QAM/256QAM
Operating Voltage:	Adapter: U700TSA Input: 100-240V~50/60Hz 2.0A Output: 5.0V~3.0A 15.0W or 5.0-10.0V~7.0A MAX or 11.0V~6.4A MAX or 4.0-20.0V~3.5A 70.0W MAX Rechargeable Li-ion Polymer Battery Model1: BL-29GT Rated Voltage: 3.86V Rated Capacity: 2973mAh/11.48Wh Typical Capacity: 3043mAh/11.75Wh Limited Charge Voltage: 4.53V Rechargeable Li-ion Polymer Battery Model2: BL-25MT Rated Voltage: 3.86V Rated Capacity: 2637mAh/10.18Wh Typical Capacity: 2707mAh/10.45Wh Limited Charge Voltage: 4.53V
Max power:	See Table 2.1
Remark:	N/A.

Note: 1. The EUT is a Mobile Phone, supporting dual SIM card slots under the same transceiver. Both SIM card slots support GSM, WCDMA, LTE, NR and both SIM card slots share the same transceiver, so only SIM1 is tested in this report.

2. #: The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.

3. N/A stands for no applicable.

4. Antenna gain provided by the customer.


Table 2.1 Maximum power in the operating frequency band.

Operation Band (s)	Power Class	Modulation Type	Maximum conducted output power (dBm)	ERP/EIRP (dBm)
GSM 850	Class 4	GMSK	32.85	25.37
EGPRS 850	Class 4	8PSK	26.87	19.39
GSM 1900	Class 1	GMSK	29.85	25.53
EGPRS 1900	Class 1	8PSK	24.54	20.22
WCDMA Band 2	Class 3	QPSK	23.04	18.72
WCDMA Band 4	Class 3	QPSK	22.83	19.00
WCDMA Band 5	Class 3	QPSK	22.98	15.50
E-UTRA Band 2	Class 3	QPSK	25.32	21.00
E-UTRA Band 2	Class 3	16QAM	24.63	20.31
E-UTRA Band 4	Class 3	QPSK	24.76	20.93
E-UTRA Band 4	Class 3	16QAM	24.02	20.19
E-UTRA Band 5	Class 3	QPSK	25.30	17.82
E-UTRA Band 5	Class 3	16QAM	24.74	17.26
E-UTRA Band 7	Class 3	QPSK	22.52	20.97
E-UTRA Band 7	Class 3	16QAM	21.97	20.42
E-UTRA Band 12	Class 3	QPSK	25.27	16.81
E-UTRA Band 12	Class 3	16QAM	24.65	16.19
E-UTRA Band 17	Class 3	QPSK	25.24	16.78
E-UTRA Band 17	Class 3	16QAM	24.58	16.12
E-UTRA Band 38	Class 3	QPSK	22.50	20.95
E-UTRA Band 38	Class 3	16QAM	21.99	20.44
E-UTRA Band 41	Class 3	QPSK	23.37	21.82
E-UTRA Band 41	Class 3	16QAM	22.91	21.36
E-UTRA Band 42 (3450-3550Mhz)	Class 3	QPSK	21.59	19.47
	Class 3	16QAM	20.97	20.09
E-UTRA Band 66	Class 3	QPSK	24.25	20.42
E-UTRA Band 66	Class 3	16QAM	23.38	19.55
NR n5	Class 3	BPSK	23.13	15.65
	Class 3	QPSK	23.50	16.02
	Class 3	16QAM	22.41	14.93





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	Class 3	64QAM	21.30	13.82
	Class 3	256QAM	19.31	11.83
NR n7	Class 3	BPSK	21.24	19.69
	Class 3	QPSK	21.32	19.77
	Class 3	16QAM	20.33	18.78
	Class 3	64QAM	18.98	17.43
	Class 3	256QAM	18.75	17.20
	Class 3	BPSK	23.13	14.67
NR n12	Class 3	QPSK	23.51	15.05
	Class 3	16QAM	22.14	13.68
	Class 3	64QAM	21.03	12.57
	Class 3	256QAM	20.77	12.31
	Class 3	BPSK	23.49	21.94
NR n38	Class 3	QPSK	23.53	21.98
	Class 3	16QAM	22.63	21.08
	Class 3	64QAM	20.97	19.42
	Class 3	256QAM	18.67	17.12
	Class 3	BPSK	24.48	22.93
	Class 3	QPSK	24.95	23.40
NR n41	Class 3	16QAM	23.78	22.23
	Class 3	64QAM	22.3	20.75
	Class 3	256QAM	20.43	18.88
	Class 3	BPSK	22.06	18.23
	Class 3	QPSK	22.24	18.41
NR n66	Class 3	16QAM	21.41	17.58
	Class 3	64QAM	19.77	15.94
	Class 3	256QAM	19.46	15.63
	Class 3	BPSK	22.30	20.80
	Class 3	QPSK	22.5	21.00
NR n77 (3450-3550Mhz)	Class 3	16QAM	21.15	19.65
	Class 3	64QAM	19.85	18.35
	Class 3	256QAM	17.86	16.36
	Class 3	BPSK	22.80	21.30
	Class 3	BPSK	22.80	21.30





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NR n77 (3700-3980 Mhz)	Class 3	QPSK	22.76	21.26
	Class 3	16QAM	21.64	20.14
	Class 3	64QAM	20.07	18.57
	Class 3	256QAM	18.14	16.64
NR n78 (3450-3550 Mhz)	Class 3	BPSK	20.07	18.57
	Class 3	QPSK	20.2	18.70
	Class 3	16QAM	19.23	17.73
	Class 3	64QAM	17.73	16.23
	Class 3	256QAM	15.85	14.35
NR n78 (3700-3800 Mhz)	Class 3	BPSK	20.18	18.68
	Class 3	QPSK	20.24	18.74
	Class 3	16QAM	19.19	17.69
	Class 3	64QAM	17.87	16.37
	Class 3	256QAM	15.83	14.33





3. FACILITIES AND ACCREDITATIONS

3.1. Facilities

All measurement facilities used to collect the measurement data are located at **Building A-B, Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China of the World Standardization Certification & Testing Group(Shenzhen) CO., LTD**

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

3.2. ACCREDITATIONS

CNAS - Registration Number: L3732

China National Accreditation Service for Conformity Assessment, The test firm Registration Number: L3732

FCC - Designation Number: CN1303

World Standardization Certification & Testing Group(Shenzhen) CO., LTD. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Designation Number: CN1303.

A2LA - Certificate Number: 5768.01

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number: 5768.01

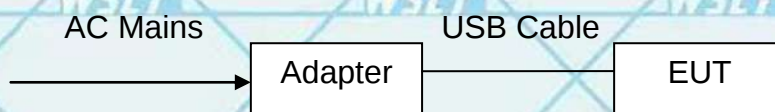




3.3. EUT System Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

Fig. 3.2-1 Configuration of EUT System



(EUT: Mobile Phone)

Table 3.2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Adapter	U700TSA		Accessories

***Note: All the accessories have been used during the test. The following “EUT” in setup diagram means EUT system.

3.4. Description Of Test Channels And Test Modes

Test channels:

Test Mode	UL Channel	UL Channel No.	UL Frequency (MHz)
GSM/GPRS/EGPRS 850	Low Channel	128	824.2
	Middle Channel	190	836.6
	High Channel	251	848.8
GSM/GPRS/EGPRS 1900	Low Channel	512	1850.2
	Middle Channel	661	1880.0
	High Channel	810	1909.8
WCDMA Band 2	Low Channel	9262	1852.4
	Middle Channel	9400	1880.0
	High Channel	9538	1907.6
WCDMA Band 4	Low Channel	1312	1712.4
	Middle Channel	1412	1732.6
	High Channel	1513	1752.6
WCDMA Band 5	Low Channel	4132	826.4
	Middle Channel	4182	836.4
	High Channel	4233	846.6

LTE Band2			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	1.4	18607	1850.7
	3	18615	1851.5
	5	18625	1852.5
	10	18650	1855
	15	18675	1857.5
	20	18700	1860
Mid Range	1.4/3/5/10/15/20	18900	1880
High Range	1.4	19193	1909.3
	3	19185	1908.5
	5	19175	1907.5
	10	19150	1905
	15	19125	1902.5
	20	19100	1900



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LTE Band4			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	1.4	19957	1710.7
	3	19965	1711.5
	5	19975	1712.5
	10	20000	1715
	15	20025	1717.5
	20	20050	1720
Mid Range	1.4/3/5/10/15/20	20175	1732.5
High Range	1.4	20393	1754.3
	3	20385	1753.5
	5	20375	1752.5
	10	20350	1750
	15	20325	1747.5
	20	20300	1745

LTE Band 5			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	1.4	20407	824.7
	3	20415	825.5
	5	20425	826.5
	10	20450	829
Mid Range	1.4/3/5/10	20525	836.5
High Range	1.4	20643	848.3
	3	20635	847.5
	5	20625	846.5
	10	20600	844





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LTE Band 7			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	20775	2502.5
	10	20800	2505
	15	20825	2507.5
	20	20850	2510
Mid Range	5/10/15/20	21100	2535
High Range	5	21425	2567.5
	10	21400	2565
	15	21375	2562.5
	20	21350	2560

LTE Band 12			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	1.4	23017	699.7
	3	23025	700.5
	5	23035	701.5
	10	23060	704
Mid Range	1.4/3/5/10	23095	707.5
High Range	1.4	23173	715.3
	3	23165	714.5
	5	23155	713.5
	10	23130	711

LTE Band 17			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	23755	706.5
	10	23780	709
Mid Range	5/10	23790	710
High Range	5	23825	713.5
	10	23800	711





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LTE Band 38			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	37775	2572.5
	10	37800	2575
	15	37825	2577.5
	20	37850	2580
Mid Range	5/10/15/20	38000	2595
High Range	5	38225	2617.5
	10	38200	2615
	15	38175	2612.5
	20	38150	2610

LTE Band 41			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	39675	2498.5
	10	39700	2501
	15	39725	2503.5
	20	39750	2506
Mid Range	5/10/15/20	40620	2593
High Range	5	41565	2687.5
	10	41540	2685
	15	41515	2682.5
	20	41490	2680

LTE Band 42(3450-3550Mhz)			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	42115	3452.5
	10	42140	3455
	15	42165	3457.5
	20	42190	3460
Mid Range	5/10/15/20	42590	3500
High Range	5	43065	3547.5
	10	43040	3545
	15	43015	3542.5
	20	42990	3540

LTE Band66			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	1.4	131979	1710.7
	3	131987	1711.5





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	5	131997	1712.5
	10	132022	1715
	15	132047	1717.5
	20	132322	1720
Mid Range	1.4/3/5/10/15/20	132322	1745
	1.4	132665	1779.3
	3	132657	1778.5
	5	132647	1777.5
	10	132622	1775
	15	132597	1772.5
	20	132572	1770





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NR n5			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	165800	829
	15	166300	831.5
	20	166800	834
Mid Range	10/15/20	167300	836.5
High Range	10	168800	844
	15	168300	841.5
	20	167800	839

NR n7			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	501000	2505
	15	501500	2507.5
	20	502000	2510
Mid Range	10/15/20	507000	2535
High Range	10	513000	2565
	15	512500	2562.5
	20	512000	2560

NR n12			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	140800	704
	15	141300	706.5
Mid Range	10/15	141500	707.5
High Range	10	142200	711
	15	141700	708.5

NR n38			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	515000	2575
	15	515500	2577.5
	20	522500	2580
Mid Range	10/15/20	519000	2595
High Range	10	523000	2615
	15	522500	2612.5
	20	522000	2610





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NR n41			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	20	501204	2506
	50	504204	2521
	100	509202	2546
Mid Range	20/50/100	518598	2593
High Range	20	535998	2680
	50	532998	2665
	100	528000	2640

NR n66			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	343000	1715
	20	344000	1720
	40	346000	1730
Mid Range	10/20/40	349000	1745
High Range	10	355000	1775
	20	354000	1770
	40	349000	1760

NR n77(3450-3550Mhz)			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	630334	3455
	50	631668	3475
Mid Range	10/50/100	633334	3500
High Range	10	636332	3545
	50	635000	3525

NR n77(3700-3980Mhz)			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	647000	3705
	50	648334	3725
	100	650000	3750
Mid Range	10/50/100	656000	3890
High Range	10	665000	3975
	50	663666	3955
	100	662000	3930





NR n78(3450-3550Mhz)			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	630334	3455
	50	631668	3475
Mid Range	10/50/100	633334	3500
High Range	10	636332	3545
	50	635000	3525

NR n78(3700-3800Mhz)			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	10	647000	3705
	50	648334	3725
Mid Range	10/50/100	650000	3750
High Range	10	653000	3795
	50	651666	3775

Note 1: BPSK&QPSK&16QAM&QAM64&QAM256 modulation has been measured;

Note 2: The worst condition was recorded in the test report if no other modes test data.



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3.5. Equipment Modifications

Not available for this EUT intended for grant.





4. SUMMARY OF TEST REQUIREMENTS AND RESULTS

No.	Description	FCC Part No.	Test Verdict	Remark
1	Conducted RF Output Power	2.1046	Pass	--
2	Effective (Isotropic) Radiated Power	2.1046 22.913(a) 24.232(c) 27.50 90.635(b) 90.542(a) 90.1321(a)	Pass	--
3	Peak to Average Ratio	2.1046 22.913(d) 24.232(d) 27.50(d)	Pass	--
4	Occupied Bandwidth	2.1049 22.917(b) 24.238(b) 27.53 90.209	Pass	--
5	Frequency Stability	2.1055 22.355 24.235 27.54 90.213	Pass	--
6	Spurious Emission at Antenna Terminals	2.1051 22.917 24.238 27.53 90.691 90.543	Pass	--
7	Band Edge	2.1051 22.917 24.238 27.53 90.691 90.543	Pass	--
8	Field Strength of Spurious Radiation	2.1053 22.917 24.238 27.53 90.691 90.543	Pass	--



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5. MEASUREMENT INSTRUMENTS

NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	Calibration Date	Calibration Due.
EMI Test Receiver	R&S	ESCI	100005	11/05/2023	11/04/2024
LISN	AFJ	LS16	16010222119	11/05/2023	11/04/2024
LISN(EUT)	Mestec	AN3016	04/10040	11/05/2023	11/04/2024
Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	11/05/2023	11/04/2024
Coaxial cable	Megalon	LMR400	N/A	11/05/2023	11/04/2024
GPIO cable	Megalon	GPIO	N/A	11/05/2023	11/04/2024
Spectrum Analyzer	R&S	FSU	100114	11/05/2023	11/04/2024
Pre Amplifier	H.P.	HP8447E	2945A02715	11/05/2023	11/04/2024
Pre-Amplifier	CDSI	PAP-1G18-38	--	11/05/2023	11/04/2024
Loop Antenna	R&S	HFH2-Z2	100296	11/05/2023	11/04/2024
Bi-log Antenna	SUNOL Sciences	JB3	A021907	11/05/2023	11/04/2024
9*6*6 Anechoic	--	--	--	11/05/2023	11/04/2024
Horn Antenna	COMPLIANCE ENGINEERING	CE18000	--	11/05/2023	11/04/2024
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-631	11/05/2023	11/04/2024
Power meter	Anritsu	ML2487A	6K00003613	11/05/2023	11/04/2024
Power meter	Anritsu	MA2491A	32263	11/05/2023	11/04/2024
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	11/05/2023	11/04/2024
System-Controller	CCS	N/A	N/A	N.C.R	N.C.R
Turn Table	CCS	N/A	N/A	N.C.R	N.C.R
Antenna Tower	CCS	N/A	N/A	N.C.R	N.C.R
RF cable	Murata	MXHQ87WA3000	-	11/05/2023	11/04/2024
Loop Antenna	EMCO	6502	00042960	11/05/2023	11/04/2024
Wideband Radio Communication Tester	R&S	CMW 500	103974	11/05/2023	11/04/2024
Horn Antenna	SCHWARZBECK	BBHA 9170	1123	11/05/2023	11/04/2024
H & T Chamber	Guangzhou gongwen	GDJS-500-40	0329	11/05/2023	11/04/2024
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY60192341	11/05/2023	11/04/2024
Anechoic chamber	SAEMC	966	-	11/05/2023	11/04/2024
Spectrum Analyzer	KEYSIGHT	N9010B	MY60241089	11/05/2023	11/04/2024



6. Transmitter Radiated Power (EIRP/ERP)

Test limit:

FCC § 2.1046 & 22.913(a) & 24.232(c) & 27.50(a) & 27.50(b) & 27.50(c) & 27.50(d) & 27.50(h) & 27.50(j) & 27.50(k) & 90.635(b) & 90.542(a)

According to FCC section 22.913(a) (5), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 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.

According to FCC section 27.50(a) (3), for mobile and portable stations transmitting in the 2305-2315MHz band or the 2350-2360MHz band, the average EIRP must not exceed 50 mill watts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards. For mobile and portable stations using time division depleting (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands.

FCC section 27.50(b) (10), portable stations (hand-held devices) transmitting in the 746-757MHz, 776-788MHz, and 805-806MHz bands are limited to 3 watts ERP.

FCC section 27.50(c) (10), portable stations (hand-held devices) in the 600MHz uplink band and the 698-746MHz band, and fixed and mobile stations in the 600MHz uplink band are limited to 3 watts ERP.

FCC section 27.50(d) (4), 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. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(7) Fixed, mobile, and portable (hand-held) stations operating in the 2000-2020 MHz band are limited to 2 watts EIRP.

And FCC section 27.50(h) (2), for mobile and other user stations, mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

FCC section 27.50(j) (3), for mobile, and portable (hand-held) stations operating in the 3700-3980 MHz band are limited to 1 watt EIRP.

FCC section 27.50(k) (3), Mobile devices are limited to 1Watt (30 dBm) EIRP in the 3450-3550 MHz band.

Test procedure:

Description of the Conducted Output Power Measurement

The EUT is coupled to the SS with attenuator through power splitter; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. A system simulator is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The relevant equation for determining the conducted measured value is:

Conducted Output Power Value (dBm) = Measured Value (dBm) + Path Loss (dB)

where:

Conducted Output Power Value = final conducted measured value in the conducted power test, in dBm;
Measured Value = measured conducted power received by spectrum analyzer or power meter, in dBm;
Path Loss = signal attenuation in the connecting cable between the transmitter and spectrum analyzer or power meter, including external cable loss, in dB;

During the test, the data of Path Loss (dB) is added in the spectrum analyzer or power meter, so Measured Value (dBm) is the final values which contains the data of Path Loss (dB).



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Description of the Transmitter Radiated Power Measurement

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

Final measurement calculation as below

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP/EIRP} = P_{\text{Meas}} + \text{GT} - \text{LC}$$

where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

dBd (ERP)=dBi (EIRP) -2.15 dB

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).





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Test Result

GSM Mode Test Data:

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Mode		Frequency (MHz)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	Limt (dBm)	Verdict
GSM850		824.2	32.44	-5.33	-7.48	24.96	38.45	Pass
		836.6	32.85	-5.33	-7.48	25.37	38.45	Pass
		848.8	32.21	-5.33	-7.48	24.73	38.45	Pass
GPRS850	1 Tx Slots	824.2	29.45	-5.33	-7.48	21.97	38.45	Pass
		836.6	29.72	-5.33	-7.48	22.24	38.45	Pass
		848.8	29.46	-5.33	-7.48	21.98	38.45	Pass
	2 Tx Slots	824.2	29.52	-5.33	-7.48	22.04	38.45	Pass
		836.6	29.42	-5.33	-7.48	21.94	38.45	Pass
		848.8	28.73	-5.33	-7.48	21.25	38.45	Pass
	3 Tx Slots	824.2	29.39	-5.33	-7.48	21.91	38.45	Pass
		836.6	29.26	-5.33	-7.48	21.78	38.45	Pass
		848.8	28.39	-5.33	-7.48	20.91	38.45	Pass
	4 Tx Slots	824.2	29.02	-5.33	-7.48	21.54	38.45	Pass
		836.6	29.14	-5.33	-7.48	21.66	38.45	Pass
		848.8	29.12	-5.33	-7.48	21.64	38.45	Pass
EPRS850	1 Tx Slots	824.2	26.35	-5.33	-7.48	18.87	38.45	Pass
		836.6	26.32	-5.33	-7.48	18.84	38.45	Pass
		848.8	26.55	-5.33	-7.48	19.07	38.45	Pass
	2 Tx Slots	824.2	26.33	-5.33	-7.48	18.85	38.45	Pass
		836.6	25.69	-5.33	-7.48	18.21	38.45	Pass
		848.8	26.36	-5.33	-7.48	18.88	38.45	Pass
	3 Tx Slots	824.2	26.10	-5.33	-7.48	18.62	38.45	Pass
		836.6	26.38	-5.33	-7.48	18.90	38.45	Pass
		848.8	26.11	-5.33	-7.48	18.63	38.45	Pass
	4 Tx Slots	824.2	25.98	-5.33	-7.48	18.50	38.45	Pass
		836.6	26.87	-5.33	-7.48	19.39	38.45	Pass
		848.8	25.63	-5.33	-7.48	18.15	38.45	Pass

Mode		Frequency (MHz)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limt (dBm)	Verdict
GSM1900		1850.2	28.68	-4.32	24.36	33.01	Pass
		1880	29.85	-4.32	25.53	33.01	Pass
		1909.8	29.14	-4.32	24.82	33.01	Pass
GPRS1900	1 Tx Slots	1850.2	26.63	-4.32	22.31	33.01	Pass
		1880	26.06	-4.32	21.74	33.01	Pass
		1909.8	25.90	-4.32	21.58	33.01	Pass
	2 Tx Slots	1850.2	26.28	-4.32	21.96	33.01	Pass
		1880	26.00	-4.32	21.68	33.01	Pass
		1909.8	26.20	-4.32	21.88	33.01	Pass
	3 Tx Slots	1850.2	27.16	-4.32	22.84	33.01	Pass
		1880	26.19	-4.32	21.87	33.01	Pass
		1909.8	25.61	-4.32	21.29	33.01	Pass
	4 Tx Slots	1850.2	26.14	-4.32	21.82	33.01	Pass
		1880	26.32	-4.32	22.00	33.01	Pass
		1909.8	25.66	-4.32	21.34	33.01	Pass
EGPRS1900	1 Tx Slots	1850.2	24.17	-4.32	19.85	33.01	Pass
		1880	24.10	-4.32	19.78	33.01	Pass
		1909.8	24.54	-4.32	20.22	33.01	Pass
	2 Tx Slots	1850.2	24.12	-4.32	19.80	33.01	Pass
		1880	23.73	-4.32	19.41	33.01	Pass
		1909.8	23.73	-4.32	19.41	33.01	Pass
	3 Tx Slots	1850.2	23.84	-4.32	19.52	33.01	Pass
		1880	24.52	-4.32	20.20	33.01	Pass
		1909.8	23.71	-4.32	19.39	33.01	Pass
	4 Tx Slots	1850.2	24.28	-4.32	19.96	33.01	Pass
		1880	23.86	-4.32	19.54	33.01	Pass
		1909.8	23.98	-4.32	19.66	33.01	Pass





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Note 1: For the GPRS and EGPRS mode, all slots were tested and just the worst data were recorded in this table.

Note 2: $ERP/EIRP = P_{Meas} + GT - LC$

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

$ERP = EIRP - 2.15$; where ERP and EIRP are expressed in consistent units.

Note 3: Set PCL to 5 for GSM/GPRS 850 (power class 4) and 0 for GSM/GPRS 1900 (power class 1). Set PCL to 8 for EGPRS850 (power class E2) and 2 for EGPRS1900 (power class E2)



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WCDMA Mode Test Data:

Band	Mode	Frequency (MHz)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Verdict
Band 2	RMC 12.2K	1852.4	23.04	-4.32	18.72	33.01	Pass
		1880	23.02	-4.32	18.70	33.01	Pass
		1907.6	21.86	-4.32	17.54	33.01	Pass
	HSDPA	1 Tx Slots	1852.4	-4.32	17.56	33.01	Pass
			1880	-4.32	17.70	33.01	Pass
			1907.6	-4.32	17.55	33.01	Pass
		2 Tx Slots	1852.4	-4.32	17.90	33.01	Pass
			1880	-4.32	17.32	33.01	Pass
			1907.6	-4.32	17.88	33.01	Pass
		3 Tx Slots	1852.4	-4.32	18.50	33.01	Pass
			1880	-4.32	17.59	33.01	Pass
			1907.6	-4.32	18.13	33.01	Pass
		4 Tx Slots	1852.4	-4.32	17.47	33.01	Pass
			1880	-4.32	18.31	33.01	Pass
			1907.6	-4.32	17.45	33.01	Pass
	HSUPA	1 Tx Slots	1852.4	-4.32	18.55	33.01	Pass
			1880	-4.32	17.30	33.01	Pass
			1907.6	-4.32	17.87	33.01	Pass
		2 Tx Slots	1852.4	-4.32	17.70	33.01	Pass
			1880	-4.32	17.82	33.01	Pass
			1907.6	-4.32	17.34	33.01	Pass
		3 Tx Slots	1852.4	-4.32	17.39	33.01	Pass
			1880	-4.32	17.77	33.01	Pass
			1907.6	-4.32	17.49	33.01	Pass
		4 Tx Slots	1852.4	-4.32	18.62	33.01	Pass
			1880	-4.32	18.21	33.01	Pass
			1907.6	-4.32	17.14	33.01	Pass
		5 Tx Slots	1852.4	-4.32	17.10	33.01	Pass
			1880	-4.32	17.85	33.01	Pass
			1907.6	-4.32	18.21	33.01	Pass





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Band	Mode		Frequency (MHz)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Verdict
Band 4	RMC 12.2K		1712.4	22.83	-3.83	19.00	30.00	Pass
			1732.6	22.74	-3.83	18.91	30.00	Pass
			1752.6	22.75	-3.83	18.92	30.00	Pass
	HSDPA	1 Tx Slots	1712.4	22.59	-3.83	18.76	30.00	Pass
			1732.6	22.69	-3.83	18.86	30.00	Pass
			1752.6	21.62	-3.83	17.79	30.00	Pass
		2 Tx Slots	1712.4	22.74	-3.83	18.91	30.00	Pass
			1732.6	22.46	-3.83	18.63	30.00	Pass
			1752.6	21.76	-3.83	17.93	30.00	Pass
		3 Tx Slots	1712.4	21.76	-3.83	17.93	30.00	Pass
			1732.6	21.96	-3.83	18.13	30.00	Pass
			1752.6	21.73	-3.83	17.90	30.00	Pass
		4 Tx Slots	1712.4	22.63	-3.83	18.80	30.00	Pass
			1732.6	21.96	-3.83	18.13	30.00	Pass
			1752.6	21.71	-3.83	17.88	30.00	Pass
	HSUPA	1 Tx Slots	1712.4	21.88	-3.83	18.05	30.00	Pass
			1732.6	22.13	-3.83	18.30	30.00	Pass
			1752.6	21.25	-3.83	17.42	30.00	Pass
		2 Tx Slots	1712.4	21.73	-3.83	17.90	30.00	Pass
			1732.6	21.96	-3.83	18.13	30.00	Pass
			1752.6	21.79	-3.83	17.96	30.00	Pass
		3 Tx Slots	1712.4	22.13	-3.83	18.30	30.00	Pass
			1732.6	22.67	-3.83	18.84	30.00	Pass
			1752.6	21.70	-3.83	17.87	30.00	Pass
		4 Tx Slots	1712.4	22.40	-3.83	18.57	30.00	Pass
			1732.6	22.03	-3.83	18.20	30.00	Pass
			1752.6	22.01	-3.83	18.18	30.00	Pass
		5 Tx Slots	1712.4	21.73	-3.83	17.90	30.00	Pass
			1732.6	22.20	-3.83	18.37	30.00	Pass
			1752.6	22.15	-3.83	18.32	30.00	Pass





Band	Mode		Frequency (MHz)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	Limt (dBm)	Verdict	
Band 5	RMC 12.2K		826.4	22.15	-5.33	-7.48	14.67	38.45	Pass	
			836.4	22.79	-5.33	-7.48	15.31	38.45	Pass	
			846.6	22.98	-5.33	-7.48	15.50	38.45	Pass	
	HSDPA		1 Tx Slots	826.4	22.24	-5.33	-7.48	14.76	38.45	Pass
				836.4	22.08	-5.33	-7.48	14.60	38.45	Pass
				846.6	22.16	-5.33	-7.48	14.68	38.45	Pass
			2 Tx Slots	826.4	21.73	-5.33	-7.48	14.25	38.45	Pass
				836.4	21.59	-5.33	-7.48	14.11	38.45	Pass
				846.6	22.56	-5.33	-7.48	15.08	38.45	Pass
			3 Tx Slots	826.4	22.04	-5.33	-7.48	14.56	38.45	Pass
				836.4	21.83	-5.33	-7.48	14.35	38.45	Pass
				846.6	22.31	-5.33	-7.48	14.83	38.45	Pass
			4 Tx Slots	826.4	21.84	-5.33	-7.48	14.36	38.45	Pass
				836.4	21.55	-5.33	-7.48	14.07	38.45	Pass
				846.6	21.31	-5.33	-7.48	13.83	38.45	Pass
	HSUPA		1 Tx Slots	826.4	21.81	-5.33	-7.48	14.33	38.45	Pass
				836.4	22.28	-5.33	-7.48	14.80	38.45	Pass
				846.6	22.08	-5.33	-7.48	14.60	38.45	Pass
			2 Tx Slots	826.4	21.89	-5.33	-7.48	14.41	38.45	Pass
				836.4	22.45	-5.33	-7.48	14.97	38.45	Pass
				846.6	21.84	-5.33	-7.48	14.36	38.45	Pass
			3 Tx Slots	826.4	22.46	-5.33	-7.48	14.98	38.45	Pass
				836.4	21.81	-5.33	-7.48	14.33	38.45	Pass
				846.6	22.92	-5.33	-7.48	15.44	38.45	Pass
			4 Tx Slots	826.4	21.24	-5.33	-7.48	13.76	38.45	Pass
				836.4	21.82	-5.33	-7.48	14.34	38.45	Pass
				846.6	21.54	-5.33	-7.48	14.06	38.45	Pass
			5 Tx Slots	826.4	22.53	-5.33	-7.48	15.05	38.45	Pass
				836.4	22.14	-5.33	-7.48	14.66	38.45	Pass
				846.6	21.84	-5.33	-7.48	14.36	38.45	Pass

Note 1: For the HSDPA and HSUPA mode, all subtests were tested and just the worst data were recorded in this table.

Note 2: ERP/EIRP = P_{Meas} + GT - LC

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

ERP = EIRP - 2.15; where ERP and EIRP are expressed in consistent units.

Note: Please refer to Annex (LTE&NR Chapter 1 Transmitter Radiated Power) for more test data





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7. Peak to Average Ratio

7.1.1. Limit

FCC § 2.1046 & 24.232(d) & 27.50(d) & 27.50(j) & 27.50(k)

In addition, when the transmitter power is measured in terms of average value, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

According to FCC section 24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with 24.232 (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

FCC section 24.232(e), peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

According to FCC section 27.50(d) (5) & 27.50(j) & 27.50(k), in measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

7.1.2. Test Procedure

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

According to KDB 971168 D01, there is CCDF procedure for PAPR:

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth $\geq$ signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval as follows:
 - 1) for continuous transmissions, set to 1 ms,





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2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

e) Record the maximum PAPR level associated with a probability of 0.1%.





7.2. Test Result

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
GSM850	128	8.75	13	Pass
	190	8.57	13	Pass
	251	10.27	13	Pass
GPRS850	128	9.54	13	Pass
	190	9.17	13	Pass
	251	11.33	13	Pass
EPRS850	128	8.41	13	Pass
	190	10.50	13	Pass
	251	10.38	13	Pass
GSM1900	512	9.49	13	Pass
	661	8.68	13	Pass
	810	8.38	13	Pass
GPRS1900	512	9.50	13	Pass
	661	11.62	13	Pass
	810	9.61	13	Pass
EPRS1900	512	10.35	13	Pass
	661	10.36	13	Pass
	810	9.98	13	Pass

WCDMA Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
Band 2	9262	3.69	13	Pass
	9400	3.51	13	Pass
	9538	3.56	13	Pass
Band 4	1312	3.70	13	Pass
	1413	3.53	13	Pass
	1513	3.52	13	Pass
Band 5	4132	3.67	13	Pass
	4182	3.49	13	Pass
	4233	3.51	13	Pass

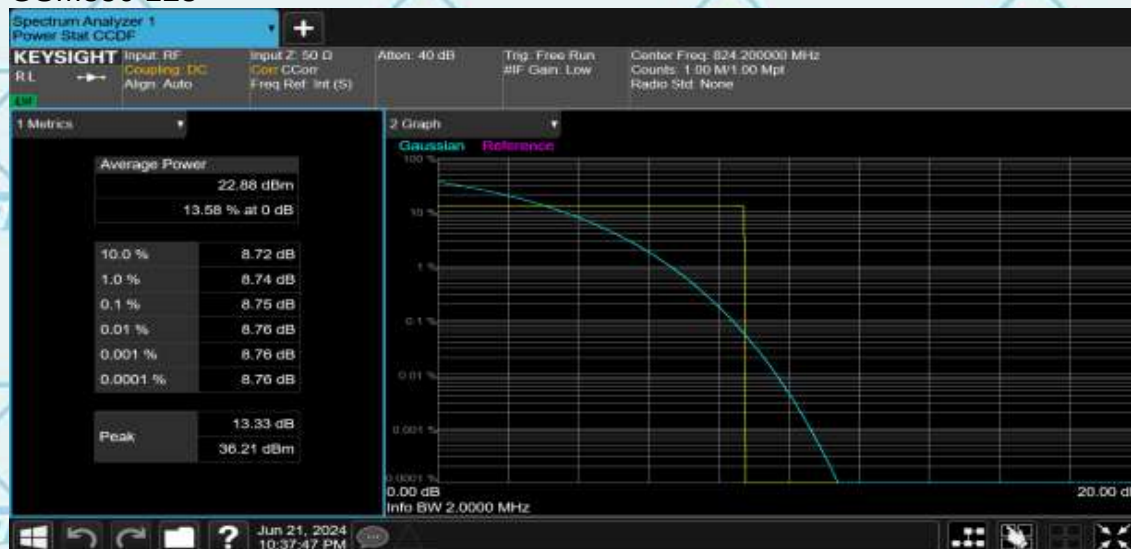


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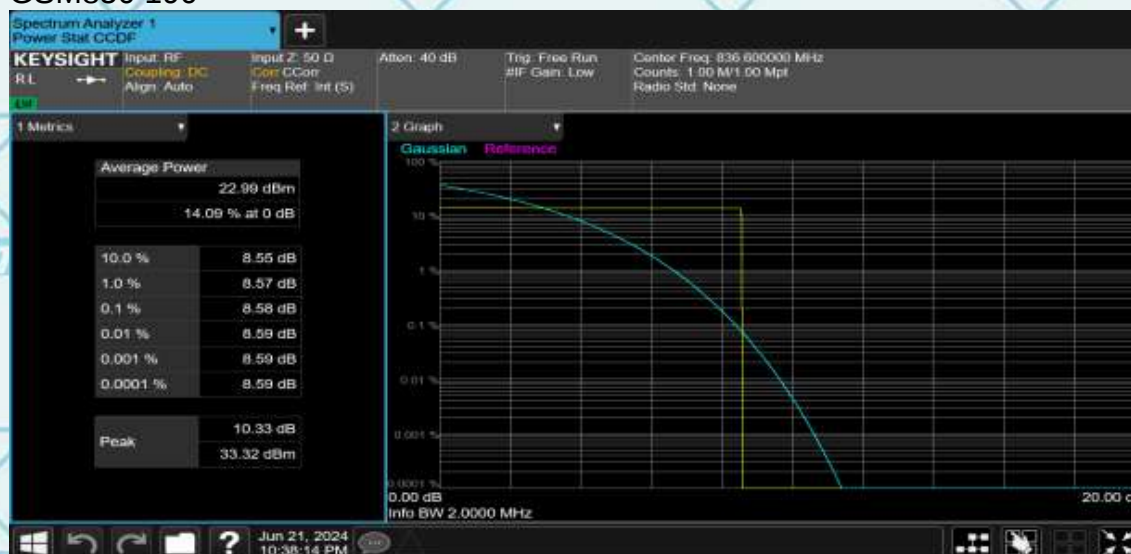
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Test diagram GSM850 128



GSM850 190





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GSM850 251



GPRS850 128





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GPRS850 190



GPRS850 251



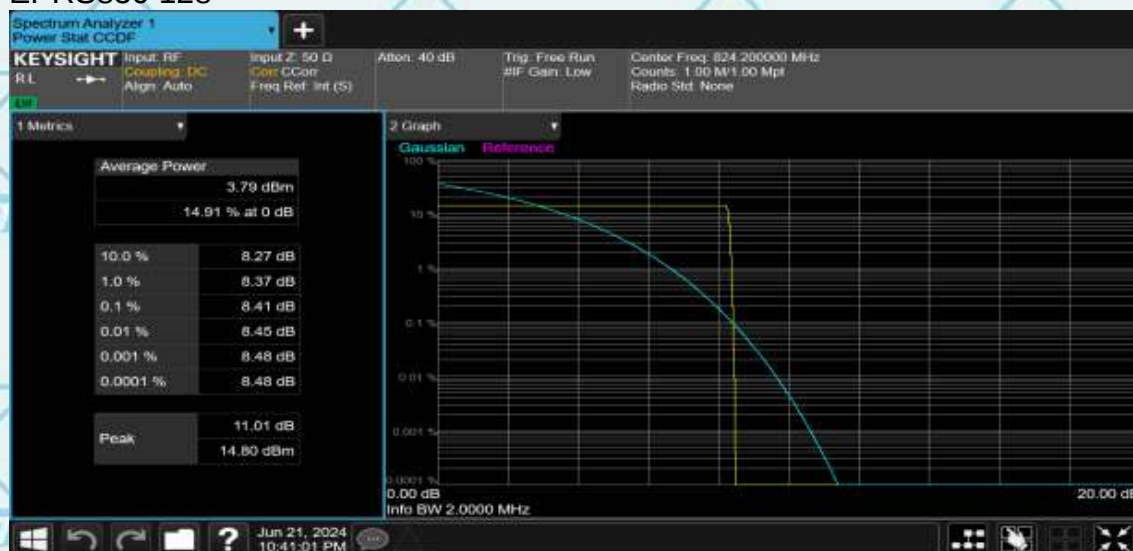


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EPRS850 128



EPRS850 190



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EPRS850 251



GSM1900 512



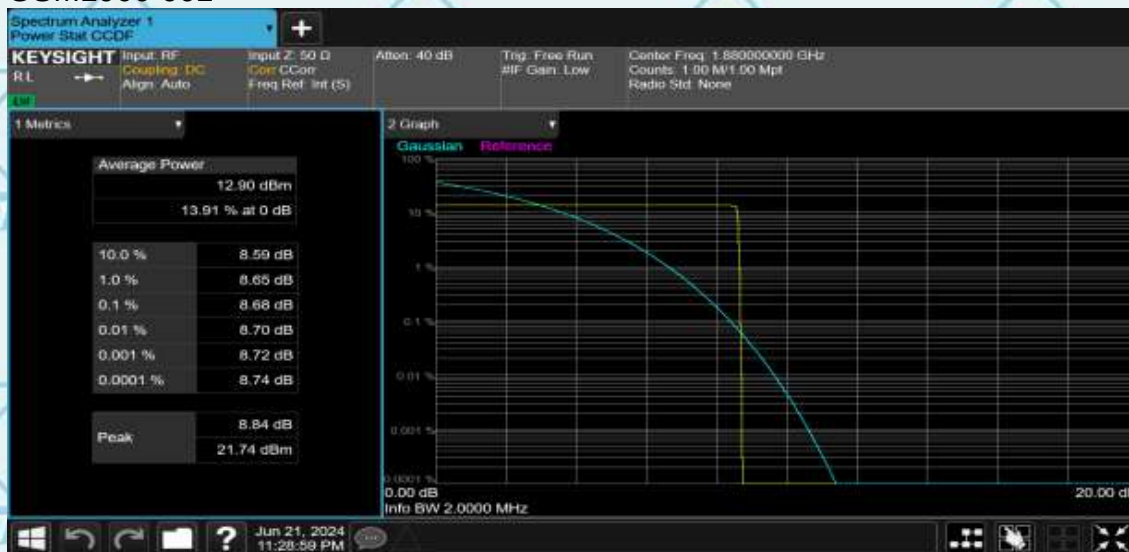


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GSM1900 661



GSM1900 810



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GP RS1900 512



GP RS1900 661





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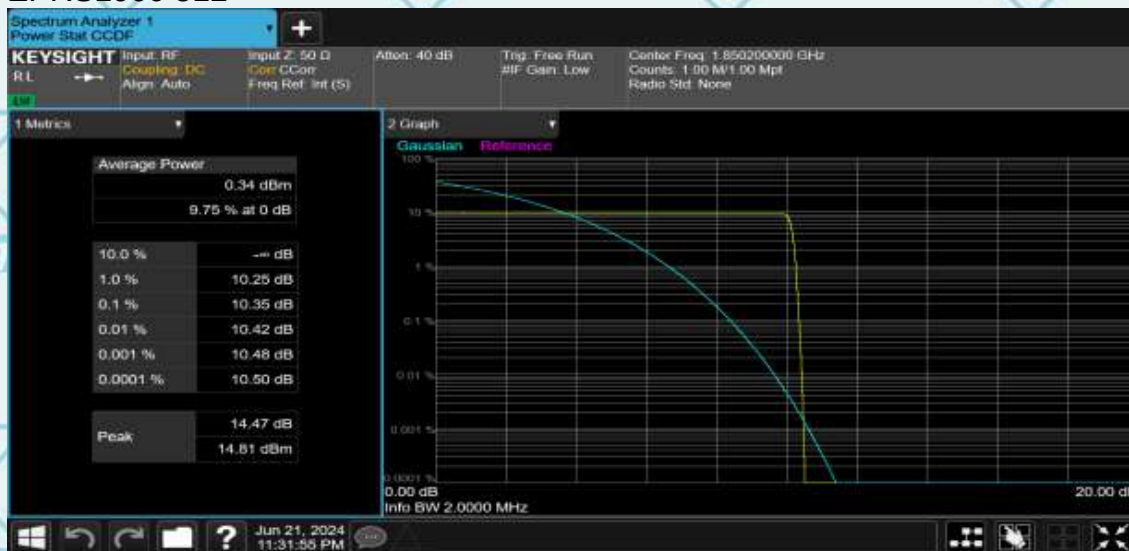
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GPS1900 810



GPS1900 512





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EPRS1900 661



EPRS1900 810





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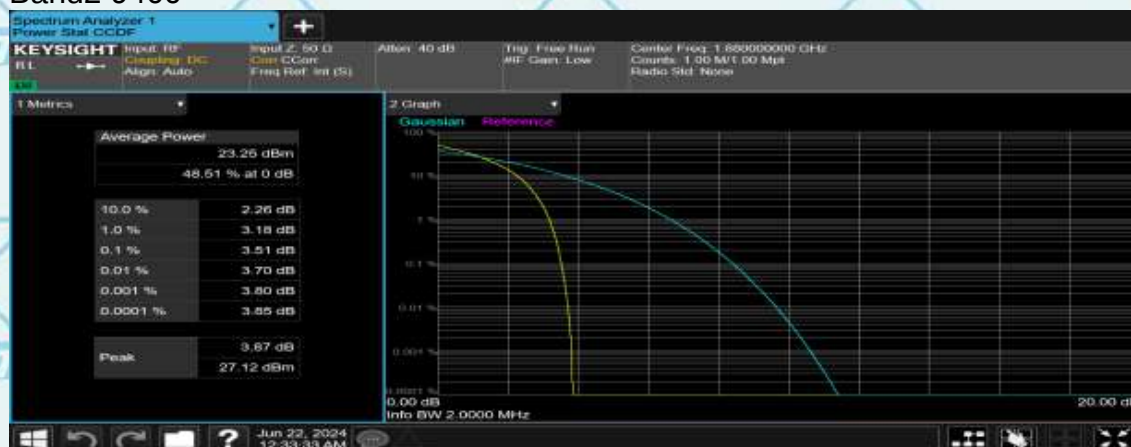
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Band2 9262



Band2 9400





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Band2 9538



Band4 1312



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Band4 1413



Band4 1513





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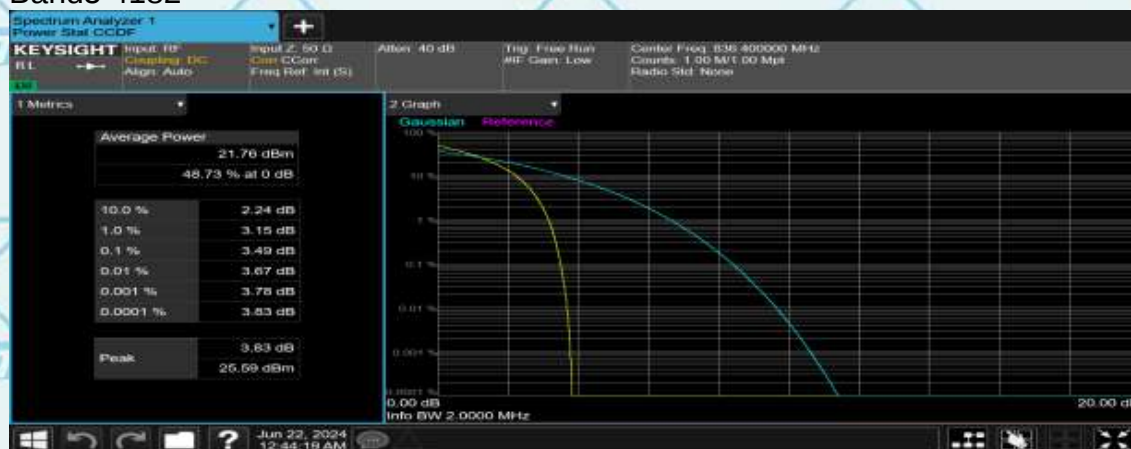
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Band5 4132



Band5 4182





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Band5 4233



Note: Please refer to Annex (LTE&NR Chapter 2 Peak-to-Average Ratio) for more test data



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8. SPURIOUS EMISSION (Conducted and Radiated)

8.1. Measurement Result (Pre-measurement)

GSM850:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	0.2	128	824.2	Pass
Middle Range	0.2	190	836.6	Pass
High Range	0.2	251	848.8	Pass

PCS 1900 :

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	0.2	512	1850.2	Pass
Middle Range	0.2	661	1880.0	Pass
High Range	0.2	810	1909.8	Pass

UTRA BANDS

Band 2:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	9262	1852.4	Pass
Middle Range	5	9400	1880.0	Pass
High Range	5	9538	1907.6	Pass

Band 4:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	1312	1712.4	Pass
Middle Range	5	1413	1732.6	Pass
High Range	5	1513	1752.6	Pass

Band 5:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	4132	826.4	Pass
Middle Range	5	4182	836.4	Pass
High Range	5	4233	846.6	Pass



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E-UTRA BANDS**Band 2:**

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
1.4	18607	1850.7	QPSK	6	LOW	Pass
1.4	18607	1850.7	Q16	6	LOW	Pass
1.4	18900	1880	QPSK	6	LOW	Pass
1.4	18900	1880	Q16	6	LOW	Pass
1.4	19193	1909.3	QPSK	6	LOW	Pass
1.4	19193	1909.3	Q16	6	LOW	Pass
3	18615	1851.5	QPSK	15	LOW	Pass
3	18615	1851.5	Q16	15	LOW	Pass
3	18900	1880	QPSK	15	LOW	Pass
3	18900	1880	Q16	15	LOW	Pass
3	19185	1908.5	QPSK	15	LOW	Pass
3	19185	1908.5	Q16	15	LOW	Pass
5	18625	1852.5	QPSK	25	LOW	Pass
5	18625	1852.5	Q16	25	LOW	Pass
5	18900	1880	QPSK	25	LOW	Pass
5	18900	1880	Q16	25	LOW	Pass
5	19175	1907.5	QPSK	25	LOW	Pass
5	19175	1907.5	Q16	25	LOW	Pass
10	18650	1855	QPSK	50	LOW	Pass
10	18650	1855	Q16	50	LOW	Pass
10	18900	1880	QPSK	50	LOW	Pass
10	18900	1880	Q16	50	LOW	Pass
10	19150	1905	QPSK	50	LOW	Pass
10	19150	1905	Q16	50	LOW	Pass
15	18675	1857.5	QPSK	75	LOW	Pass
15	18675	1857.5	Q16	75	LOW	Pass
15	18900	1880	QPSK	75	LOW	Pass
15	18900	1880	Q16	75	LOW	Pass
15	19125	1902.5	QPSK	75	LOW	Pass
15	19125	1902.5	Q16	75	LOW	Pass
20	18700	1860	QPSK	100	LOW	Pass
20	18700	1860	Q16	100	LOW	Pass
20	18900	1880	QPSK	100	LOW	Pass
20	18900	1880	Q16	100	LOW	Pass
20	19100	1900	QPSK	100	LOW	Pass
20	19100	1900	Q16	100	LOW	Pass

Band 4:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
1.4	19957	1710.7	QPSK	6	LOW	Pass
1.4	19957	1710.7	Q16	6	LOW	Pass
1.4	20393	1754.3	QPSK	6	LOW	Pass
1.4	20393	1754.3	Q16	6	LOW	Pass
1.4	20175	1732.5	QPSK	6	LOW	Pass
1.4	20175	1732.5	Q16	6	LOW	Pass
3	19965	1711.5	QPSK	15	LOW	Pass
3	19965	1711.5	Q16	15	LOW	Pass
3	20385	1753.5	QPSK	15	LOW	Pass



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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
3	20385	1753.5	Q16	15	LOW	Pass
3	20175	1732.5	QPSK	15	LOW	Pass
3	20175	1732.5	Q16	15	LOW	Pass
5	19975	1712.5	QPSK	25	LOW	Pass
5	19975	1712.5	Q16	25	LOW	Pass
5	20375	1752.5	QPSK	25	LOW	Pass
5	20375	1752.5	Q16	25	LOW	Pass
5	20175	1732.5	QPSK	25	LOW	Pass
5	20175	1732.5	Q16	25	LOW	Pass
10	20000	1715	QPSK	50	LOW	Pass
10	20000	1715	Q16	50	LOW	Pass
10	20350	1750	QPSK	50	LOW	Pass
10	20350	1750	Q16	50	LOW	Pass
10	20175	1732.5	QPSK	50	LOW	Pass
10	20175	1732.5	Q16	50	LOW	Pass
15	20025	1717.5	QPSK	75	LOW	Pass
15	20025	1717.5	Q16	75	LOW	Pass
15	20325	1747.5	QPSK	75	LOW	Pass
15	20325	1747.5	Q16	75	LOW	Pass
15	20175	1732.5	QPSK	75	LOW	Pass
15	20175	1732.5	Q16	75	LOW	Pass
20	20050	1720	QPSK	100	LOW	Pass
20	20050	1720	Q16	100	LOW	Pass
20	20300	1745	QPSK	100	LOW	Pass
20	20300	1745	Q16	100	LOW	Pass
20	20175	1732.5	QPSK	100	LOW	Pass
20	20175	1732.5	Q16	100	LOW	Pass

Band 5:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
1.4	20470	824.7	QPSK	6	LOW	Pass
1.4	20470	824.7	Q16	6	LOW	Pass
1.4	20525	836.5	QPSK	6	LOW	Pass
1.4	20525	836.5	Q16	6	LOW	Pass
1.4	20643	848.3	QPSK	6	LOW	Pass
1.4	20643	848.3	Q16	6	LOW	Pass
3	20415	825.5	QPSK	15	LOW	Pass
3	20415	825.5	Q16	15	LOW	Pass
3	20525	836.5	QPSK	15	LOW	Pass
3	20525	836.5	Q16	15	LOW	Pass
3	20635	847.5	QPSK	15	LOW	Pass
3	20635	847.5	Q16	15	LOW	Pass
5	20425	826.5	QPSK	25	LOW	Pass
5	20425	826.5	Q16	25	LOW	Pass
5	20525	836.5	QPSK	25	LOW	Pass
5	20525	836.5	Q16	25	LOW	Pass
5	20625	846.5	QPSK	25	LOW	Pass
5	20625	846.5	Q16	25	LOW	Pass
10	20450	829	QPSK	50	LOW	Pass
10	20450	829	Q16	50	LOW	Pass
10	20525	836.5	QPSK	50	LOW	Pass



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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	20525	836.5	Q16	50	LOW	Pass
10	20600	844	QPSK	50	LOW	Pass
10	20600	844	Q16	50	LOW	Pass

Band 7:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
5	20775	2502.5	QPSK	25	LOW	Pass
5	20775	2502.5	Q16	25	LOW	Pass
5	21425	2567.5	QPSK	25	LOW	Pass
5	21425	2567.5	Q16	25	LOW	Pass
5	21100	2535	QPSK	25	LOW	Pass
5	21100	2535	QPSK	25	LOW	Pass
10	20800	2505	QPSK	50	LOW	Pass
10	20800	2505	Q16	50	LOW	Pass
10	21400	2565	QPSK	50	LOW	Pass
10	21400	2565	Q16	50	LOW	Pass
10	21100	2535	QPSK	50	LOW	Pass
10	21100	2535	Q16	50	LOW	Pass
15	20825	2507.5	QPSK	75	LOW	Pass
15	20825	2507.5	Q16	75	LOW	Pass
15	21375	2562.5	QPSK	75	LOW	Pass
15	21375	2562.5	Q16	75	LOW	Pass
15	21100	2535	QPSK	75	LOW	Pass
15	21100	2535	Q16	75	LOW	Pass
20	20850	2510	QPSK	100	LOW	Pass
20	20850	2510	Q16	100	LOW	Pass
20	21350	2560	QPSK	100	LOW	Pass
20	21350	2560	Q16	100	LOW	Pass
20	21100	2535	QPSK	100	LOW	Pass
20	21100	2535	Q16	100	LOW	Pass

Band 12:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
1.4	23017	699.7	QPSK	6	LOW	Pass
1.4	23017	699.7	Q16	6	LOW	Pass
1.4	23095	707.5	QPSK	6	LOW	Pass
1.4	23095	707.5	Q16	6	LOW	Pass
1.4	23173	715.3	QPSK	6	LOW	Pass
1.4	23173	715.3	Q16	6	LOW	Pass
3	23025	700.5	QPSK	15	LOW	Pass
3	23025	700.5	Q16	15	LOW	Pass
3	23095	707.5	QPSK	15	LOW	Pass
3	23095	707.5	Q16	15	LOW	Pass
3	23165	714.5	QPSK	15	LOW	Pass
3	23165	714.5	Q16	15	LOW	Pass
5	23035	701.5	QPSK	25	LOW	Pass
5	23035	701.5	Q16	25	LOW	Pass
5	23095	707.5	QPSK	25	LOW	Pass
5	23095	707.5	Q16	25	LOW	Pass



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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
5	23155	713.5	QPSK	25	LOW	Pass
5	23155	713.5	Q16	25	LOW	Pass
10	23060	704	QPSK	50	LOW	Pass
10	23060	704	Q16	50	LOW	Pass
10	23095	707.5	QPSK	50	LOW	Pass
10	23095	707.5	Q16	50	LOW	Pass
10	23130	711	QPSK	50	LOW	Pass
10	23130	711	Q16	50	LOW	Pass

Band 17:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
5	23755	706.5	QPSK	25	LOW	Pass
5	23755	706.5	Q16	25	LOW	Pass
5	23790	710	QPSK	25	LOW	Pass
5	23790	710	Q16	25	LOW	Pass
5	23825	713.5	QPSK	25	LOW	Pass
5	23825	713.5	Q16	25	LOW	Pass
10	23780	709	QPSK	50	LOW	Pass
10	23780	709	Q16	50	LOW	Pass
10	23790	710	QPSK	50	LOW	Pass
10	23790	710	Q16	50	LOW	Pass
10	23800	711	QPSK	50	LOW	Pass
10	23800	711	Q16	50	LOW	Pass

Band 38:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
5	37775	2572.5	QPSK	25	LOW	Pass
5	37775	2572.5	Q16	25	LOW	Pass
5	38000	2595	QPSK	25	LOW	Pass
5	38000	2595	Q16	25	LOW	Pass
5	38225	2617.5	QPSK	25	LOW	Pass
5	38225	2617.5	Q16	25	LOW	Pass
10	37800	2575	QPSK	50	LOW	Pass
10	37800	2575	Q16	50	LOW	Pass
10	38000	2595	QPSK	50	LOW	Pass
10	38000	2595	Q16	50	LOW	Pass
10	38200	2615	QPSK	50	LOW	Pass
10	38200	2615	Q16	50	LOW	Pass
15	37825	2577.5	QPSK	75	LOW	Pass
15	37825	2577.5	Q16	75	LOW	Pass
15	38000	2595	QPSK	75	LOW	Pass
15	38000	2595	Q16	75	LOW	Pass
15	38175	2612.5	QPSK	75	LOW	Pass
15	38175	2612.5	Q16	75	LOW	Pass
20	37850	2580	QPSK	100	LOW	Pass
20	37850	2580	Q16	100	LOW	Pass
20	38000	2595	QPSK	100	LOW	Pass
20	38000	2595	Q16	100	LOW	Pass
20	38150	2610	QPSK	100	LOW	Pass



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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
20	38150	2610	Q16	100	LOW	Pass

Band 41:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
5	39675	2498.5	QPSK	25	LOW	Pass
5	39675	2498.5	Q16	25	LOW	Pass
5	40620	2593	QPSK	25	LOW	Pass
5	40620	2593	Q16	25	LOW	Pass
5	41565	2687.5	QPSK	25	LOW	Pass
5	41565	2687.5	Q16	25	LOW	Pass
10	39700	2501	QPSK	50	LOW	Pass
10	39700	2501	Q16	50	LOW	Pass
10	40620	2593	QPSK	50	LOW	Pass
10	40620	2593	Q16	50	LOW	Pass
10	41540	2685	QPSK	50	LOW	Pass
10	41540	2685	Q16	50	LOW	Pass
15	39725	2503.5	QPSK	75	LOW	Pass
15	39725	2503.5	Q16	75	LOW	Pass
15	40620	2593	QPSK	75	LOW	Pass
15	40620	2593	Q16	75	LOW	Pass
15	41515	2682.5	QPSK	75	LOW	Pass
15	41515	2682.5	Q16	75	LOW	Pass
20	39750	2506	QPSK	100	LOW	Pass
20	39750	2506	Q16	100	LOW	Pass
20	40620	2593	QPSK	100	LOW	Pass
20	40620	2593	Q16	100	LOW	Pass
20	41490	2680	QPSK	100	LOW	Pass
20	41490	2680	Q16	100	LOW	Pass

Band 42(3450-3550Mhz):

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
5	42115	3452.5	QPSK	25	LOW	Pass
5	42115	3452.5	Q16	25	LOW	Pass
5	42590	3500	QPSK	25	LOW	Pass
5	42590	3500	Q16	25	LOW	Pass
5	43065	3547.5	QPSK	25	LOW	Pass
5	43065	3547.5	Q16	25	LOW	Pass
10	42140	3455	QPSK	50	LOW	Pass
10	42140	3455	Q16	50	LOW	Pass
10	42590	3500	QPSK	50	LOW	Pass
10	42590	3500	Q16	50	LOW	Pass
10	43040	3545	QPSK	50	LOW	Pass
10	43040	3545	Q16	50	LOW	Pass
15	42165	3457.5	QPSK	75	LOW	Pass
15	42165	3457.5	Q16	75	LOW	Pass
15	42590	3500	QPSK	75	LOW	Pass
15	42590	3500	Q16	75	LOW	Pass
15	43015	3542.5	QPSK	75	LOW	Pass
15	43015	3542.5	Q16	75	LOW	Pass



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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
20	42190	3460	QPSK	100	LOW	Pass
20	42190	3460	Q16	100	LOW	Pass
20	42590	3500	QPSK	100	LOW	Pass
20	42590	3500	Q16	100	LOW	Pass
20	42990	3540	QPSK	100	LOW	Pass
20	42990	3540	Q16	100	LOW	Pass

Band 66:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
1.4	131979	1710.7	QPSK	6	LOW	Pass
1.4	131979	1710.7	Q16	6	LOW	Pass
1.4	132322	1745	QPSK	6	LOW	Pass
1.4	132322	1745	Q16	6	LOW	Pass
1.4	132665	1779.3	QPSK	6	LOW	Pass
1.4	132665	1779.3	Q16	6	LOW	Pass
3	131987	1711.5	QPSK	15	LOW	Pass
3	131987	1711.5	Q16	15	LOW	Pass
3	132322	1745	QPSK	15	LOW	Pass
3	132322	1745	Q16	15	LOW	Pass
3	132657	1778.5	QPSK	15	LOW	Pass
3	132657	1778.5	Q16	15	LOW	Pass
5	131997	1712.5	QPSK	25	LOW	Pass
5	131997	1712.5	Q16	25	LOW	Pass
5	132322	1745	QPSK	25	LOW	Pass
5	132322	1745	Q16	25	LOW	Pass
5	132647	1777.5	QPSK	25	LOW	Pass
5	132647	1777.5	Q16	25	LOW	Pass
10	132022	1715	QPSK	50	LOW	Pass
10	132022	1715	Q16	50	LOW	Pass
10	132322	1745	QPSK	50	LOW	Pass
10	132322	1745	Q16	50	LOW	Pass
10	132622	1775	QPSK	50	LOW	Pass
10	132622	1775	Q16	50	LOW	Pass
15	132047	1717.5	QPSK	75	LOW	Pass
15	132047	1717.5	Q16	75	LOW	Pass
15	132322	1745	QPSK	75	LOW	Pass
15	132322	1745	Q16	75	LOW	Pass
15	132597	1772.5	QPSK	75	LOW	Pass
15	132597	1772.5	Q16	75	LOW	Pass
20	132072	1720	QPSK	100	LOW	Pass
20	132072	1720	Q16	100	LOW	Pass
20	132322	1745	QPSK	100	LOW	Pass
20	132322	1745	Q16	100	LOW	Pass
20	132572	1770	QPSK	100	LOW	Pass
20	132572	1770	Q16	100	LOW	Pass





Report No.: WSCT-A2LA-R&E240300009A-RF
NR n5

Certificate #5768.01

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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	165800	829	BPSK	50	LOW	Pass
10	165800	829	QPSK	50	LOW	Pass
10	165800	829	16QAM	50	LOW	Pass
10	165800	829	64QAM	50	LOW	Pass
10	165800	829	256QAM	50	LOW	Pass
10	167300	836.5	BPSK	50	LOW	Pass
10	167300	836.5	QPSK	50	LOW	Pass
10	167300	836.5	16QAM	50	LOW	Pass
10	167300	836.5	64QAM	50	LOW	Pass
10	167300	836.5	256QAM	50	LOW	Pass
10	168800	844	BPSK	50	LOW	Pass
10	168800	844	QPSK	50	LOW	Pass
10	168800	844	16QAM	50	LOW	Pass
10	168800	844	64QAM	50	LOW	Pass
10	168800	844	256QAM	50	LOW	Pass
15	166300	831.5	BPSK	75	LOW	Pass
15	166300	831.5	QPSK	75	LOW	Pass
15	166300	831.5	16QAM	75	LOW	Pass
15	166300	831.5	64QAM	75	LOW	Pass
15	166300	831.5	256QAM	75	LOW	Pass
15	167300	836.5	BPSK	75	LOW	Pass
15	167300	836.5	QPSK	75	LOW	Pass
15	167300	836.5	16QAM	75	LOW	Pass
15	167300	836.5	64QAM	75	LOW	Pass
15	167300	836.5	256QAM	75	LOW	Pass
15	168300	841.5	BPSK	75	LOW	Pass
15	168300	841.5	QPSK	75	LOW	Pass
15	168300	841.5	16QAM	75	LOW	Pass
15	168300	841.5	64QAM	75	LOW	Pass
15	168300	841.5	256QAM	75	LOW	Pass
20	166800	834	BPSK	100	LOW	Pass
20	166800	834	QPSK	100	LOW	Pass
20	166800	834	16QAM	100	LOW	Pass
20	166800	834	64QAM	100	LOW	Pass
20	166800	834	256QAM	100	LOW	Pass
20	167300	836.5	BPSK	100	LOW	Pass
20	167300	836.5	QPSK	100	LOW	Pass
20	167300	836.5	16QAM	100	LOW	Pass
20	167300	836.5	64QAM	100	LOW	Pass
20	167300	836.5	256QAM	100	LOW	Pass
20	167800	839	BPSK	100	LOW	Pass
20	167800	839	QPSK	100	LOW	Pass
20	167800	839	16QAM	100	LOW	Pass
20	167800	839	64QAM	100	LOW	Pass
20	167800	839	256QAM	100	LOW	Pass





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NR n7

Certificate #5768.01

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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	501000	2505	BPSK	50	LOW	Pass
10	501000	2505	QPSK	50	LOW	Pass
10	501000	2505	16QAM	50	LOW	Pass
10	501000	2505	64QAM	50	LOW	Pass
10	501000	2505	256QAM	50	LOW	Pass
10	507000	2535	BPSK	50	LOW	Pass
10	507000	2535	QPSK	50	LOW	Pass
10	507000	2535	16QAM	50	LOW	Pass
10	507000	2535	64QAM	50	LOW	Pass
10	507000	2535	256QAM	50	LOW	Pass
10	513000	2565	BPSK	50	LOW	Pass
10	513000	2565	QPSK	50	LOW	Pass
10	513000	2565	16QAM	50	LOW	Pass
10	513000	2565	64QAM	50	LOW	Pass
10	513000	2565	256QAM	50	LOW	Pass
15	501500	2507.5	BPSK	75	LOW	Pass
15	501500	2507.5	QPSK	75	LOW	Pass
15	501500	2507.5	16QAM	75	LOW	Pass
15	501500	2507.5	64QAM	75	LOW	Pass
15	501500	2507.5	256QAM	75	LOW	Pass
15	507000	2535	BPSK	75	LOW	Pass
15	507000	2535	QPSK	75	LOW	Pass
15	507000	2535	16QAM	75	LOW	Pass
15	507000	2535	64QAM	75	LOW	Pass
15	507000	2535	256QAM	75	LOW	Pass
15	512500	2562.5	BPSK	75	LOW	Pass
15	512500	2562.5	QPSK	75	LOW	Pass
15	512500	2562.5	16QAM	75	LOW	Pass
15	512500	2562.5	64QAM	75	LOW	Pass
15	512500	2562.5	256QAM	75	LOW	Pass
20	502000	2510	BPSK	100	LOW	Pass
20	502000	2510	QPSK	100	LOW	Pass
20	502000	2510	16QAM	100	LOW	Pass
20	502000	2510	64QAM	100	LOW	Pass
20	502000	2510	256QAM	100	LOW	Pass
20	507000	2535	BPSK	100	LOW	Pass
20	507000	2535	QPSK	100	LOW	Pass
20	507000	2535	16QAM	100	LOW	Pass
20	507000	2535	64QAM	100	LOW	Pass
20	507000	2535	256QAM	100	LOW	Pass
20	512000	2560	BPSK	100	LOW	Pass
20	512000	2560	QPSK	100	LOW	Pass
20	512000	2560	16QAM	100	LOW	Pass
20	512000	2560	64QAM	100	LOW	Pass
20	512000	2560	256QAM	100	LOW	Pass



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NR n12

Certificate #5768.01

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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	140800	704	BPSK	50	LOW	Pass
10	140800	704	QPSK	50	LOW	Pass
10	140800	704	16QAM	50	LOW	Pass
10	140800	704	64QAM	50	LOW	Pass
10	140800	704	256QAM	50	LOW	Pass
10	141500	707.5	BPSK	50	LOW	Pass
10	141500	707.5	QPSK	50	LOW	Pass
10	141500	707.5	16QAM	50	LOW	Pass
10	141500	707.5	64QAM	50	LOW	Pass
10	141500	707.5	256QAM	50	LOW	Pass
10	142200	711	BPSK	50	LOW	Pass
10	142200	711	QPSK	50	LOW	Pass
10	142200	711	16QAM	50	LOW	Pass
10	142200	711	64QAM	50	LOW	Pass
10	142200	711	256QAM	50	LOW	Pass
15	141300	706.5	BPSK	75	LOW	Pass
15	141300	706.5	QPSK	75	LOW	Pass
15	141300	706.5	16QAM	75	LOW	Pass
15	141300	706.5	64QAM	75	LOW	Pass
15	141300	706.5	256QAM	75	LOW	Pass
15	141500	707.5	BPSK	75	LOW	Pass
15	141500	707.5	QPSK	75	LOW	Pass
15	141500	707.5	16QAM	75	LOW	Pass
15	141500	707.5	64QAM	75	LOW	Pass
15	141500	707.5	256QAM	75	LOW	Pass
15	141700	708.5	BPSK	75	LOW	Pass
15	141700	708.5	QPSK	75	LOW	Pass
15	141700	708.5	16QAM	75	LOW	Pass
15	141700	708.5	64QAM	75	LOW	Pass
15	141700	708.5	256QAM	75	LOW	Pass



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NR n38:

Certificate #5768.01

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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	515000	2575	BPSK	50	LOW	Pass
10	515000	2575	QPSK	50	LOW	Pass
10	515000	2575	16QAM	50	LOW	Pass
10	515000	2575	64QAM	50	LOW	Pass
10	515000	2575	256QAM	50	LOW	Pass
10	519000	2595	BPSK	50	LOW	Pass
10	519000	2595	QPSK	50	LOW	Pass
10	519000	2595	16QAM	50	LOW	Pass
10	519000	2595	64QAM	50	LOW	Pass
10	519000	2595	256QAM	50	LOW	Pass
10	523000	2615	BPSK	50	LOW	Pass
10	523000	2615	QPSK	50	LOW	Pass
10	523000	2615	16QAM	50	LOW	Pass
10	523000	2615	64QAM	50	LOW	Pass
10	523000	2615	256QAM	50	LOW	Pass
15	515500	2577.5	BPSK	75	LOW	Pass
15	515500	2577.5	QPSK	75	LOW	Pass
15	515500	2577.5	16QAM	75	LOW	Pass
15	515500	2577.5	64QAM	75	LOW	Pass
15	515500	2577.5	256QAM	75	LOW	Pass
15	519000	2595	BPSK	75	LOW	Pass
15	519000	2595	QPSK	75	LOW	Pass
15	519000	2595	16QAM	75	LOW	Pass
15	519000	2595	64QAM	75	LOW	Pass
15	519000	2595	256QAM	75	LOW	Pass
15	522500	2612.5	BPSK	75	LOW	Pass
15	522500	2612.5	QPSK	75	LOW	Pass
15	522500	2612.5	16QAM	75	LOW	Pass
15	522500	2612.5	64QAM	75	LOW	Pass
15	522500	2612.5	256QAM	75	LOW	Pass
20	522500	2580	BPSK	100	LOW	Pass
20	522500	2580	QPSK	100	LOW	Pass
20	522500	2580	16QAM	100	LOW	Pass
20	522500	2580	64QAM	100	LOW	Pass
20	522500	2580	256QAM	100	LOW	Pass
20	519000	2595	BPSK	100	LOW	Pass
20	519000	2595	QPSK	100	LOW	Pass
20	519000	2595	16QAM	100	LOW	Pass
20	519000	2595	64QAM	100	LOW	Pass
20	519000	2595	256QAM	100	LOW	Pass
20	522000	2610	BPSK	100	LOW	Pass
20	522000	2610	QPSK	100	LOW	Pass
20	522000	2610	16QAM	100	LOW	Pass
20	522000	2610	64QAM	100	LOW	Pass
20	522000	2610	256QAM	100	LOW	Pass



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NR n66:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	343000	1715	BPSK	50	LOW	Pass
10	343000	1715	QPSK	50	LOW	Pass
10	343000	1715	16QAM	50	LOW	Pass
10	343000	1715	64QAM	50	LOW	Pass
10	343000	1715	256QAM	50	LOW	Pass
10	349000	1745	BPSK	50	LOW	Pass
10	349000	1745	QPSK	50	LOW	Pass
10	349000	1745	16QAM	50	LOW	Pass
10	349000	1745	64QAM	50	LOW	Pass
10	349000	1745	256QAM	50	LOW	Pass
10	355000	1775	BPSK	50	LOW	Pass
10	355000	1775	QPSK	50	LOW	Pass
10	355000	1775	16QAM	50	LOW	Pass
10	355000	1775	64QAM	50	LOW	Pass
10	355000	1775	256QAM	50	LOW	Pass
20	344000	1720	BPSK	75	LOW	Pass
20	344000	1720	QPSK	75	LOW	Pass
20	344000	1720	16QAM	75	LOW	Pass
20	344000	1720	64QAM	75	LOW	Pass
20	344000	1720	256QAM	75	LOW	Pass
20	349000	1745	BPSK	75	LOW	Pass
20	349000	1745	QPSK	75	LOW	Pass
20	349000	1745	16QAM	75	LOW	Pass
20	349000	1745	64QAM	75	LOW	Pass
20	349000	1745	256QAM	75	LOW	Pass
20	354000	1770	BPSK	75	LOW	Pass
20	354000	1770	QPSK	75	LOW	Pass
20	354000	1770	16QAM	75	LOW	Pass
20	354000	1770	64QAM	75	LOW	Pass
20	354000	1770	256QAM	75	LOW	Pass
40	346000	1730	BPSK	100	LOW	Pass
40	346000	1730	QPSK	100	LOW	Pass
40	346000	1730	16QAM	100	LOW	Pass
40	346000	1730	64QAM	100	LOW	Pass
40	346000	1730	256QAM	100	LOW	Pass
40	349000	1745	BPSK	100	LOW	Pass
40	349000	1745	QPSK	100	LOW	Pass
40	349000	1745	16QAM	100	LOW	Pass
40	349000	1745	64QAM	100	LOW	Pass
40	349000	1760	256QAM	100	LOW	Pass
40	349000	1760	BPSK	100	LOW	Pass
40	349000	1760	QPSK	100	LOW	Pass
40	349000	1760	16QAM	100	LOW	Pass
40	349000	1760	64QAM	100	LOW	Pass
40	349000	1760	256QAM	100	LOW	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF
NR n77(3450-3550Mhz):

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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	630334	3455	BPSK	50	LOW	Pass
10	630334	3455	QPSK	50	LOW	Pass
10	630334	3455	16QAM	50	LOW	Pass
10	630334	3455	64QAM	50	LOW	Pass
10	630334	3455	256QAM	50	LOW	Pass
10	633334	3500	BPSK	50	LOW	Pass
10	633334	3500	QPSK	50	LOW	Pass
10	633334	3500	16QAM	50	LOW	Pass
10	633334	3500	64QAM	50	LOW	Pass
10	633334	3500	256QAM	50	LOW	Pass
10	636332	3545	BPSK	50	LOW	Pass
10	636332	3545	QPSK	50	LOW	Pass
10	636332	3545	16QAM	50	LOW	Pass
10	636332	3545	64QAM	50	LOW	Pass
10	636332	3545	256QAM	50	LOW	Pass
50	631668	3475	BPSK	75	LOW	Pass
50	631668	3475	QPSK	75	LOW	Pass
50	631668	3475	16QAM	75	LOW	Pass
50	631668	3475	64QAM	75	LOW	Pass
50	631668	3475	256QAM	75	LOW	Pass
50	633334	3500	BPSK	75	LOW	Pass
50	633334	3500	QPSK	75	LOW	Pass
50	633334	3500	16QAM	75	LOW	Pass
50	633334	3500	64QAM	75	LOW	Pass
50	633334	3500	256QAM	75	LOW	Pass
50	635000	3525	BPSK	75	LOW	Pass
50	635000	3525	QPSK	75	LOW	Pass
50	635000	3525	16QAM	75	LOW	Pass
50	635000	3525	64QAM	75	LOW	Pass
50	635000	3525	256QAM	75	LOW	Pass
100	633334	3500	BPSK	100	LOW	Pass
100	633334	3500	QPSK	100	LOW	Pass
100	633334	3500	16QAM	100	LOW	Pass
100	633334	3500	64QAM	100	LOW	Pass
100	633334	3500	256QAM	100	LOW	Pass

NR n77(3700-3980Mhz):

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	647000	3705	BPSK	50	LOW	Pass
10	647000	3705	QPSK	50	LOW	Pass
10	647000	3705	16QAM	50	LOW	Pass
10	647000	3705	64QAM	50	LOW	Pass
10	647000	3705	256QAM	50	LOW	Pass
10	650000	3750	BPSK	50	LOW	Pass
10	656000	3890	QPSK	50	LOW	Pass
10	650000	3750	16QAM	50	LOW	Pass
10	650000	3750	64QAM	50	LOW	Pass
10	656000	3890	256QAM	50	LOW	Pass
10	665000	3975	BPSK	50	LOW	Pass



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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	665000	3975	QPSK	50	LOW	Pass
10	665000	3975	16QAM	50	LOW	Pass
10	665000	3975	64QAM	50	LOW	Pass
10	665000	3975	256QAM	50	LOW	Pass
50	648334	3725	BPSK	75	LOW	Pass
50	648334	3725	QPSK	75	LOW	Pass
50	648334	3725	16QAM	75	LOW	Pass
50	648334	3725	64QAM	75	LOW	Pass
50	648334	3725	256QAM	75	LOW	Pass
50	656000	3890	BPSK	75	LOW	Pass
50	656000	3890	QPSK	75	LOW	Pass
50	656000	3890	16QAM	75	LOW	Pass
50	656000	3890	64QAM	75	LOW	Pass
50	656000	3890	256QAM	75	LOW	Pass
50	663666	3955	BPSK	75	LOW	Pass
50	663666	3955	QPSK	75	LOW	Pass
50	663666	3955	16QAM	75	LOW	Pass
50	663666	3955	64QAM	75	LOW	Pass
50	663666	3955	256QAM	75	LOW	Pass
100	650000	3750	BPSK	100	LOW	Pass
100	650000	3750	QPSK	100	LOW	Pass
100	650000	3750	16QAM	100	LOW	Pass
100	650000	3750	64QAM	100	LOW	Pass
100	650000	3750	256QAM	100	LOW	Pass
100	656000	3890	BPSK	100	LOW	Pass
100	656000	3890	QPSK	100	LOW	Pass
100	656000	3890	16QAM	100	LOW	Pass
100	656000	3890	64QAM	100	LOW	Pass
100	656000	3890	256QAM	100	LOW	Pass
100	662000	3930	BPSK	100	LOW	Pass
100	662000	3930	QPSK	100	LOW	Pass
100	662000	3930	16QAM	100	LOW	Pass
100	662000	3930	64QAM	100	LOW	Pass
100	662000	3930	256QAM	100	LOW	Pass

NR n78(3450-3550Mhz):

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	630334	3455	BPSK	50	LOW	Pass
10	630334	3455	QPSK	50	LOW	Pass
10	630334	3455	16QAM	50	LOW	Pass
10	630334	3455	64QAM	50	LOW	Pass
10	630334	3455	256QAM	50	LOW	Pass
10	633334	3500	BPSK	50	LOW	Pass
10	633334	3500	QPSK	50	LOW	Pass
10	633334	3500	16QAM	50	LOW	Pass
10	633334	3500	64QAM	50	LOW	Pass
10	633334	3500	256QAM	50	LOW	Pass
10	636332	3545	BPSK	50	LOW	Pass
10	636332	3545	QPSK	50	LOW	Pass
10	636332	3545	16QAM	50	LOW	Pass


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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	636332	3545	64QAM	50	LOW	Pass
10	636332	3545	256QAM	50	LOW	Pass
50	631668	3475	BPSK	75	LOW	Pass
50	631668	3475	QPSK	75	LOW	Pass
50	631668	3475	16QAM	75	LOW	Pass
50	631668	3475	64QAM	75	LOW	Pass
50	631668	3475	256QAM	75	LOW	Pass
50	633334	3500	BPSK	75	LOW	Pass
50	633334	3500	QPSK	75	LOW	Pass
50	633334	3500	16QAM	75	LOW	Pass
50	633334	3500	64QAM	75	LOW	Pass
50	633334	3500	256QAM	75	LOW	Pass
50	635000	3525	BPSK	75	LOW	Pass
50	635000	3525	QPSK	75	LOW	Pass
50	635000	3525	16QAM	75	LOW	Pass
50	635000	3525	64QAM	75	LOW	Pass
50	635000	3525	256QAM	75	LOW	Pass
100	633334	3500	BPSK	100	LOW	Pass
100	633334	3500	QPSK	100	LOW	Pass
100	633334	3500	16QAM	100	LOW	Pass
100	633334	3500	64QAM	100	LOW	Pass
100	633334	3500	256QAM	100	LOW	Pass

NR n78(3700-3800Mhz):

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
10	647000	3705	BPSK	50	LOW	Pass
10	647000	3705	QPSK	50	LOW	Pass
10	647000	3705	16QAM	50	LOW	Pass
10	647000	3705	64QAM	50	LOW	Pass
10	647000	3705	256QAM	50	LOW	Pass
10	650000	3750	BPSK	50	LOW	Pass
10	650000	3750	QPSK	50	LOW	Pass
10	650000	3750	16QAM	50	LOW	Pass
10	650000	3750	64QAM	50	LOW	Pass
10	650000	3750	256QAM	50	LOW	Pass
10	653000	3775	BPSK	50	LOW	Pass
10	653000	3775	QPSK	50	LOW	Pass
10	653000	3775	16QAM	50	LOW	Pass
10	653000	3775	64QAM	50	LOW	Pass
10	653000	3775	256QAM	50	LOW	Pass
50	648334	3725	BPSK	75	LOW	Pass
50	648334	3725	QPSK	75	LOW	Pass
50	648334	3725	16QAM	75	LOW	Pass
50	648334	3725	64QAM	75	LOW	Pass
50	648334	3725	256QAM	75	LOW	Pass
50	650000	3750	BPSK	75	LOW	Pass
50	650000	3750	QPSK	75	LOW	Pass
50	650000	3750	16QAM	75	LOW	Pass
50	650000	3750	64QAM	75	LOW	Pass
50	650000	3750	256QAM	75	LOW	Pass



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Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
50	651666	3775	BPSK	75	LOW	Pass
50	651666	3775	QPSK	75	LOW	Pass
50	651666	3775	16QAM	75	LOW	Pass
50	651666	3775	64QAM	75	LOW	Pass
50	651666	3775	256QAM	75	LOW	Pass
100	650000	3750	BPSK	100	LOW	Pass
100	650000	3750	QPSK	100	LOW	Pass
100	650000	3750	16QAM	100	LOW	Pass
100	650000	3750	64QAM	100	LOW	Pass
100	650000	3750	256QAM	100	LOW	Pass

Test Plot(s)





Report No.: WSCT-A2LA-R&E240300009A-RF

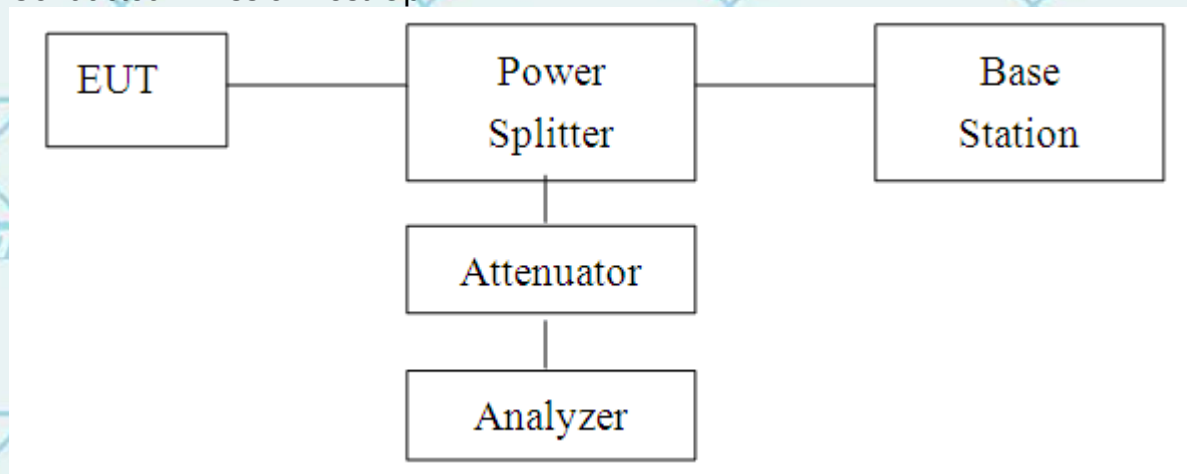
Conducted method**Test limit:**

The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. In some rule parts, the unwanted emission limits are specified by an emission mask that defines the applicable limit as a function of the frequency range relative to the authorized frequency block.

Typically, unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $X + 10\log(P)$ dB, where P represents the transmitter power expressed in watts and X is a specified scalar value (e.g., 43). This specification can be interpreted in one of two equivalent ways. First, the required attenuation can be construed to be relative to the mean carrier power, with the resultant of the equation $X + 10\log(P)$ being expressed in dBc (dB relative to the maximum carrier power). Alternatively, the specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e., $10\log(P) - \{X + 10\log(P)\}$], resulting in an absolute level of -X dBW [or $(-X + 30)$ dBm]. See section 4.

Test procedure:

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 100 kHz below 1 GHz and 1 MHz above 1 GHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonics.

Conducted Emission Test-Up:



Radiated method

Test limit:

The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. In some rule parts, the unwanted emission limits are specified by an emission mask that defines the applicable limit as a function of the frequency range relative to the authorized frequency block.

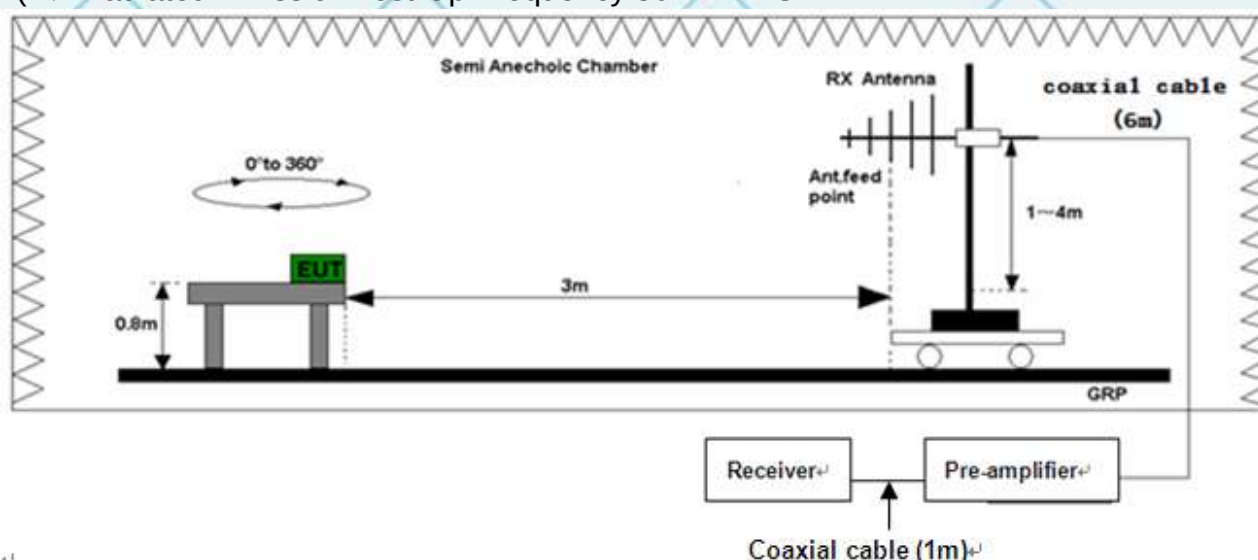
Typically, unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $X + 10\log(P)$ dB, where P represents the transmitter power expressed in watts and X is a specified scalar value (e.g., 43). This specification can be interpreted in one of two equivalent ways. First, the required attenuation can be construed to be relative to the mean carrier power, with the resultant of the equation $X + 10\log(P)$ being expressed in dBc (dB relative to the maximum carrier power). Alternatively, the specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e., $10\log(P) - \{X + 10\log(P)\}$], resulting in an absolute level of $-X$ dBW [or $(-X + 30)$ dBm]. See section 4.

Test procedure:

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site. The resolution bandwidth of the spectrum analyzer was set at 100 kHz below 1 GHz and 1 MHz above 1 GHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonics.

Test setup:

(A) Radiated Emission Test-Up Frequency 30MHz~1GHz

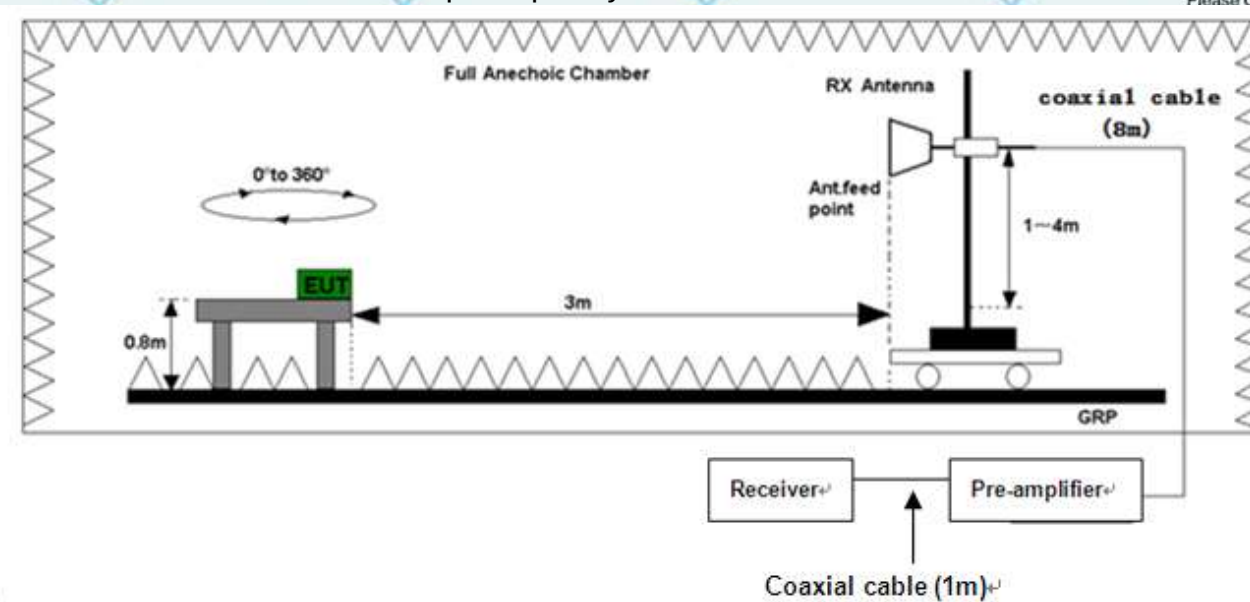




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Note:

- 1, Below 30MHz no Spurious found.
- 2, UE is positioned at 3 axis at the pre-scan stage, and only the measurement of the worst case is reported in this part.



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List of final test modes:

GSM850:

Channel	UL Channel	Frequency	Judgment
Middle	190	836.6	Pass

PCS1900

Channel	UL Channel	Frequency	Judgment
Middle	661	1880	Pass

UTRA BANDS

Band 2:

Channel	UL Channel	Frequency	Judgment
Middle	9400	1880	Pass

Band 4:

Channel	UL Channel	Frequency	Judgment
Middle	1413	1732.6	Pass

Band 5:

Channel	UL Channel	Frequency	Judgment
Middle	4182	836.4	Pass





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Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	18900	1880	QPSK	100	LOW	Pass

Band 4:

Mode	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
1	20	20300	1745	Q16	100	LOW	Pass

Band 5:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	10	20525	836.5	QPSK	50	LOW	Pass

Band 7:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	21350	2560	QPSK	100	LOW	Pass

Band 12:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	10	23095	707.5	QPSK	50	LOW	Pass

Band 17:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	10	23790	710	QPSK	50	LOW	Pass

Band 38:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	38000	2595	QPSK	100	LOW	Pass

Band 41:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	40620	2593	QPSK	100	LOW	Pass

Band 42(3450-3550Mhz):

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	42590	3500	QPSK	100	LOW	Pass

Band 66:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	132322	1745	QPSK	100	LOW	Pass





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NR Bands**This is the worst pattern data****n5:**

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	167300	836.5	QPSK	100	LOW	Pass

n7:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	507000	2535	QPSK	100	LOW	Pass

n12:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	15	141500	707.5	QPSK	75	LOW	Pass

n38:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	20	519000	2595	QPSK	100	LOW	Pass

n41:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	100	518598	2593	QPSK	100	LOW	Pass

n66:

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	40	349000	1745	QPSK	100	LOW	Pass





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n77(3450-3550Mhz):

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	100	633034	3500	QPSK	100	LOW	Pass

n77(3700-3980Mhz):

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	100	656000	3890	QPSK	100	LOW	Pass

n78(3450-3550Mhz):

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	100	633034	3500	QPSK	100	LOW	Pass

n78(3700-3800Mhz):

Channel	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgment
Middle	100	650000	3750	QPSK	100	LOW	Pass

Test record:

Note:

1. The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the AR_{pl} is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

$$\text{Power} = P_{\text{Mea}} + AR_{pl}$$

2. $AR_{pl} = \text{Cable loss} + \text{Antenna gain}$





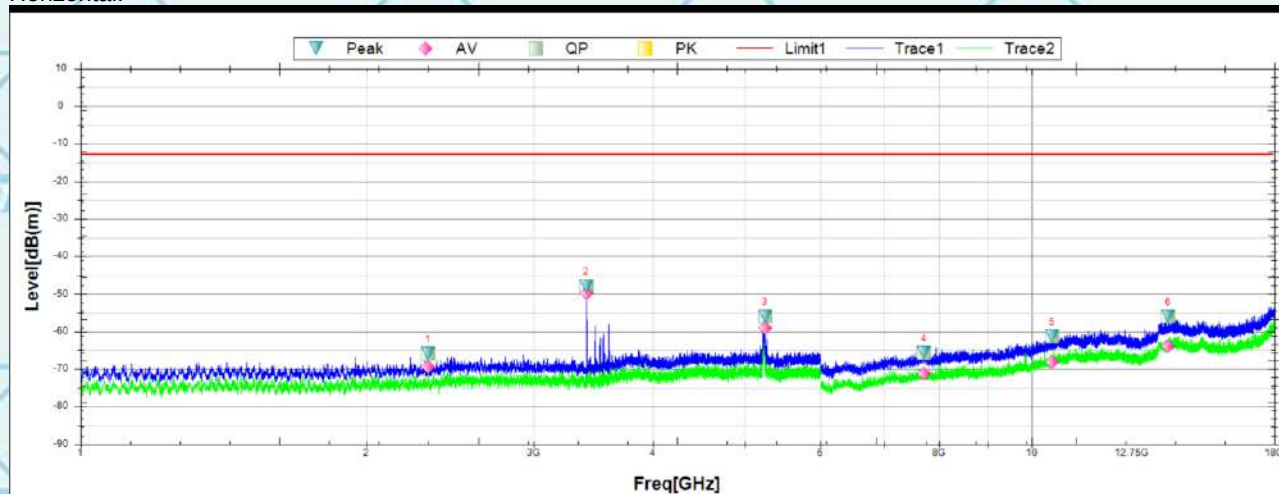
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GSM850:

Horizontal:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2320.6250	-65.87	26.99	-92.86	-13	-52.87	-0.1	Horizontal	PK	Pass
2	3404.3750	-47.91	28.44	-76.35	-13	-34.91	240	Horizontal	PK	Pass
3	5246.8750	-56.04	31.8	-87.84	-13	-43.04	143.1	Horizontal	PK	Pass
4	7705.5000	-65.79	7.96	-73.75	-13	-52.79	68.6	Horizontal	PK	Pass
5	10516.5000	-61.35	14	-75.35	-13	-48.35	304.2	Horizontal	PK	Pass
6	13929.0000	-56.01	18.92	-74.93	-13	-43.01	354.5	Horizontal	PK	Pass



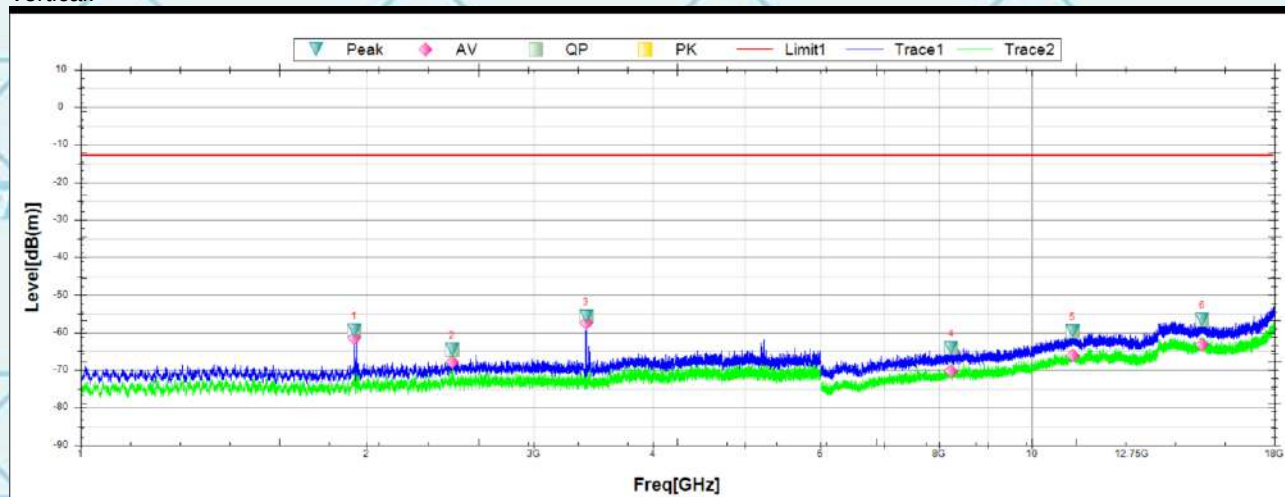


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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1941.2500	-59.55	25.64	-85.19	-13	-46.55	285	Vertical	PK	Pass
2	2460.0000	-64.57	27.46	-92.03	-13	-51.57	92.6	Vertical	PK	Pass
3	3401.8750	-55.79	28.44	-84.23	-13	-42.79	194.2	Vertical	PK	Pass
4	8233.5000	-64.2	8.83	-73.03	-13	-51.2	267.4	Vertical	PK	Pass
5	11047.5000	-59.65	15.77	-75.42	-13	-46.65	327.2	Vertical	PK	Pass
6	15123.0000	-56.74	19.74	-76.48	-13	-43.74	260.2	Vertical	PK	Pass

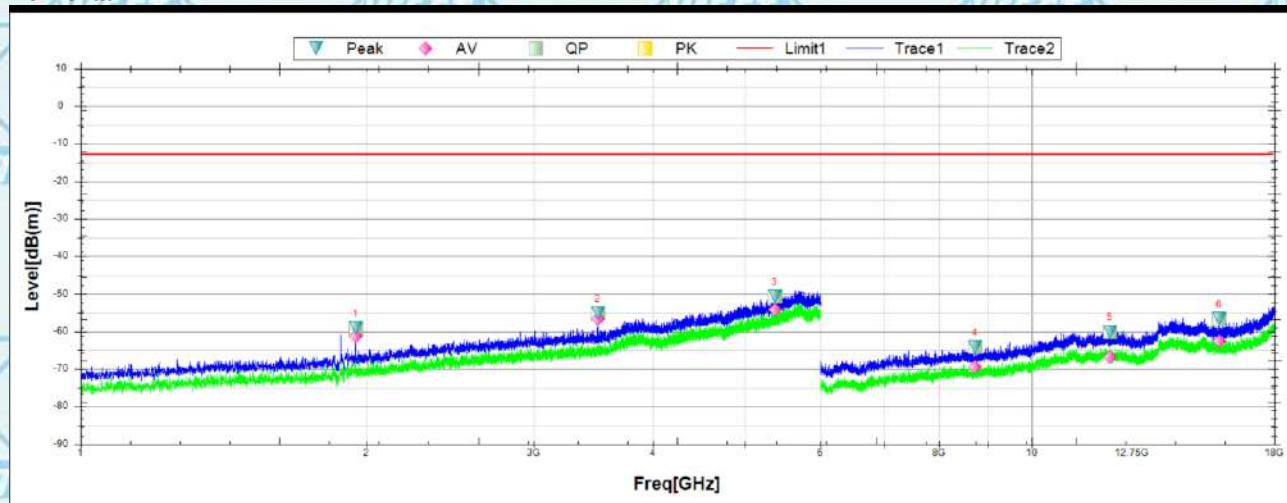


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PCS1900:
Horizontal:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1948.1250	-59.09	25.67	-84.76	-13	-46.09	153.9	Horizontal	PK	Pass
2	3498.7500	-55.12	28.5	-83.62	-13	-42.12	91.8	Horizontal	PK	Pass
3	5375.0000	-50.63	31.9	-82.53	-13	-37.63	73.8	Horizontal	PK	Pass
4	8718.0000	-64.23	9.34	-73.57	-13	-51.23	0.6	Horizontal	PK	Pass
5	12096.0000	-60.06	16.69	-76.75	-13	-47.06	358.4	Horizontal	PK	Pass
6	15751.5000	-56.61	18.12	-74.73	-13	-43.61	142.6	Horizontal	PK	Pass



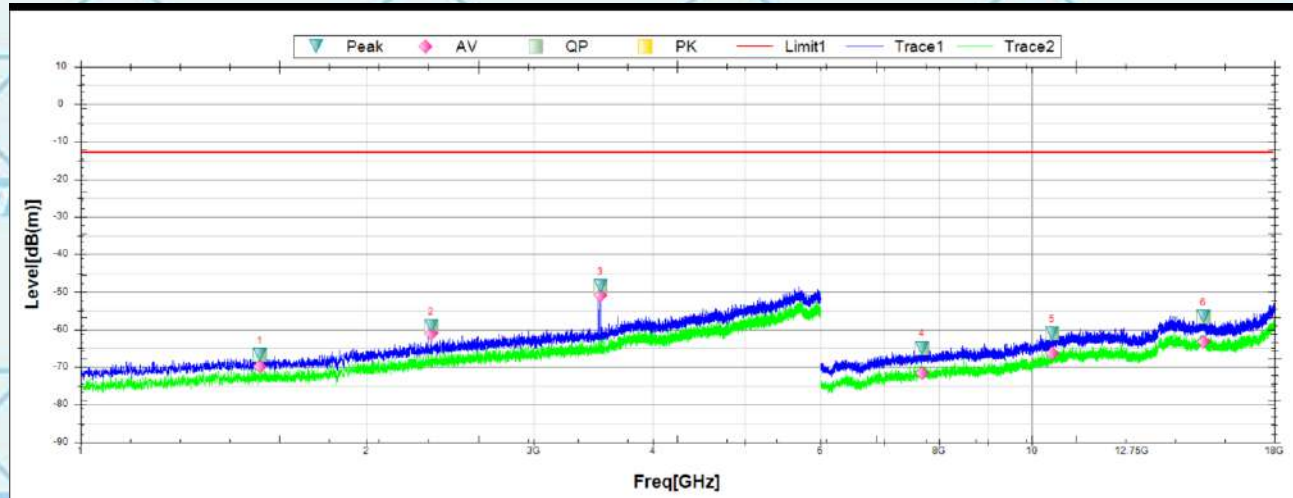


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Vertical:



Suspected Data List

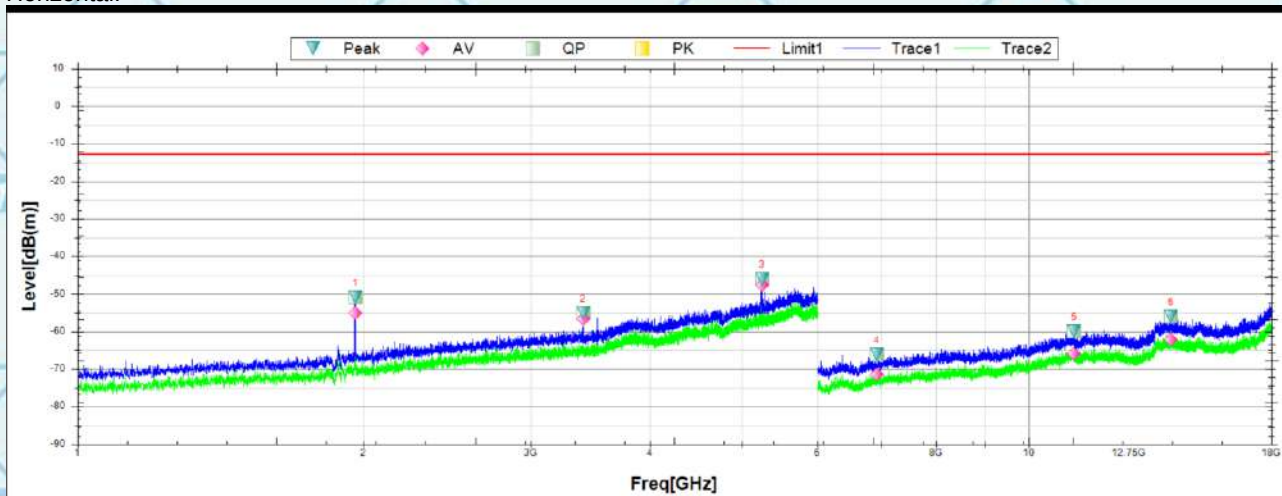
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1545.0000	-66.83	0.66	-67.49	-13	-53.83	41.5	Vertical	PK	Pass
2	2338.7500	-59.12	5.75	-64.87	-13	-46.12	47.5	Vertical	PK	Pass
3	3521.2500	-48.42	10.58	-59	-13	-35.42	58.2	Vertical	PK	Pass
4	7668.0000	-64.93	36.5	-101.43	-13	-51.93	11.3	Vertical	PK	Pass
5	10507.5000	-61.01	38.81	-99.82	-13	-48.01	59	Vertical	PK	Pass
6	15160.5000	-56.59	39.7	-96.29	-13	-43.59	103.3	Vertical	PK	Pass



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UTRA BANDS
Band 2:
Horizontal:

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Susputed Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1960.6250	-50.98	25.72	-76.7	-13	-37.98	154.2	Horizontal	PK	Pass
2	3401.8750	-55.05	28.44	-83.49	-13	-42.05	54.9	Horizontal	PK	Pass
3	5246.8750	-46.12	31.8	-77.92	-13	-33.12	352.5	Horizontal	PK	Pass
4	6927.0000	-66.17	6.11	-72.28	-13	-53.17	291	Horizontal	PK	Pass
5	11172.0000	-59.91	15.78	-75.69	-13	-46.91	360.1	Horizontal	PK	Pass
6	14119.5000	-55.91	19	-74.91	-13	-42.91	269.4	Horizontal	PK	Pass



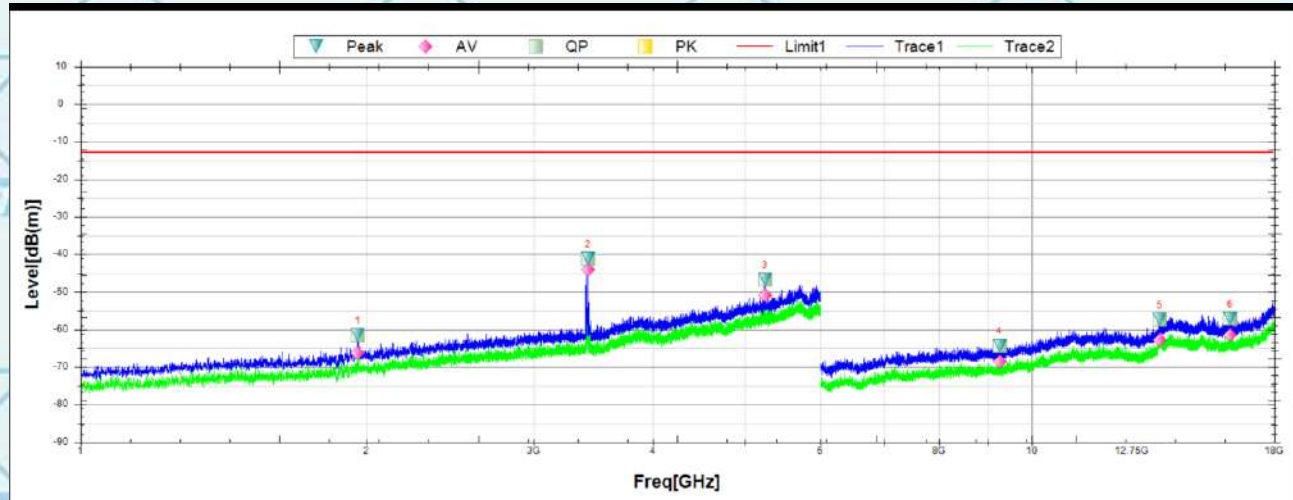


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Vertical:



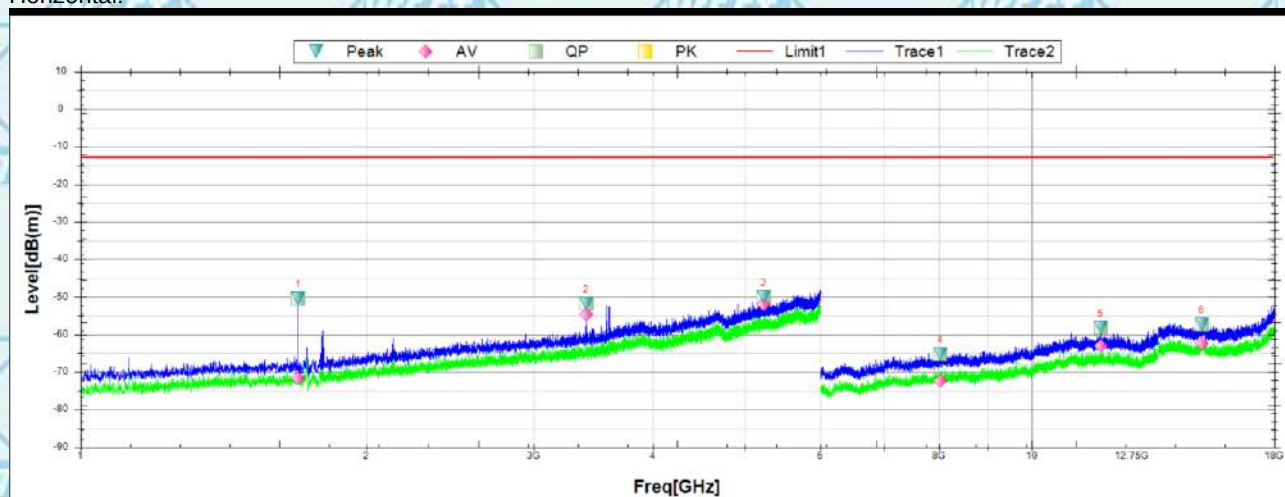
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1958.7500	-61.5	25.71	-87.21	-13	-48.5	0	Vertical	PK	Pass
2	3418.7500	-41.23	28.45	-69.68	-13	-28.23	128.8	Vertical	PK	Pass
3	5246.8750	-46.73	31.8	-78.53	-13	-33.73	180.2	Vertical	PK	Pass
4	9253.5000	-64.26	10.25	-74.51	-13	-51.26	338.7	Vertical	PK	Pass
5	13647.0000	-57.39	18.1	-75.49	-13	-44.39	352	Vertical	PK	Pass
6	16180.5000	-57.13	18.59	-75.72	-13	-44.13	271.8	Vertical	PK	Pass



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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1695.0000	-50.5	24.95	-75.45	-13	-37.5	174.2	Horizontal	PK	Pass
2	3403.1250	-51.69	28.44	-80.13	-13	-38.69	311.8	Horizontal	PK	Pass
3	5233.7500	-50.11	31.79	-81.9	-13	-37.11	-0.1	Horizontal	PK	Pass
4	8020.5000	-65.29	8.32	-73.61	-13	-52.29	0.4	Horizontal	PK	Pass
5	11818.5000	-58.12	16.27	-74.39	-13	-45.12	310	Horizontal	PK	Pass
6	15097.5000	-57.35	19.6	-76.95	-13	-44.35	0.8	Horizontal	PK	Pass

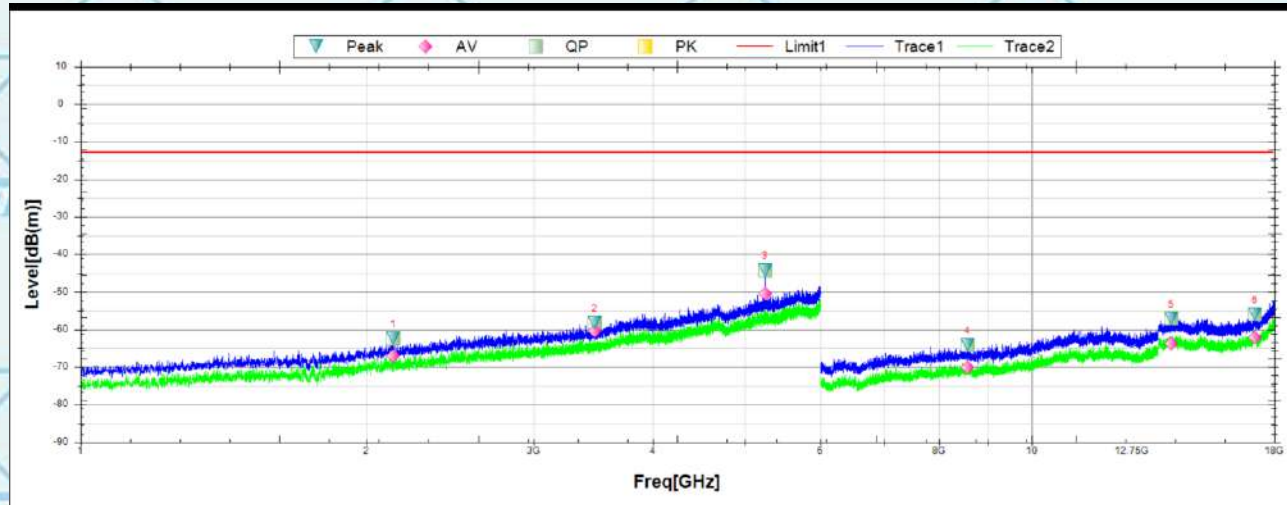


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Vertical:



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2134.3750	-62.34	26.36	-88.7	-13	-49.34	66.6	Vertical	PK	Pass
2	3475.6250	-58.11	28.49	-86.6	-13	-45.11	222.1	Vertical	PK	Pass
3	5247.5000	-44.32	31.8	-76.12	-13	-31.32	169.5	Vertical	PK	Pass
4	8566.5000	-64.1	9.31	-73.41	-13	-51.1	31.6	Vertical	PK	Pass
5	14028.0000	-56.99	19.09	-76.08	-13	-43.99	5	Vertical	PK	Pass
6	17173.5000	-56.04	19.95	-75.99	-13	-43.04	153.5	Vertical	PK	Pass



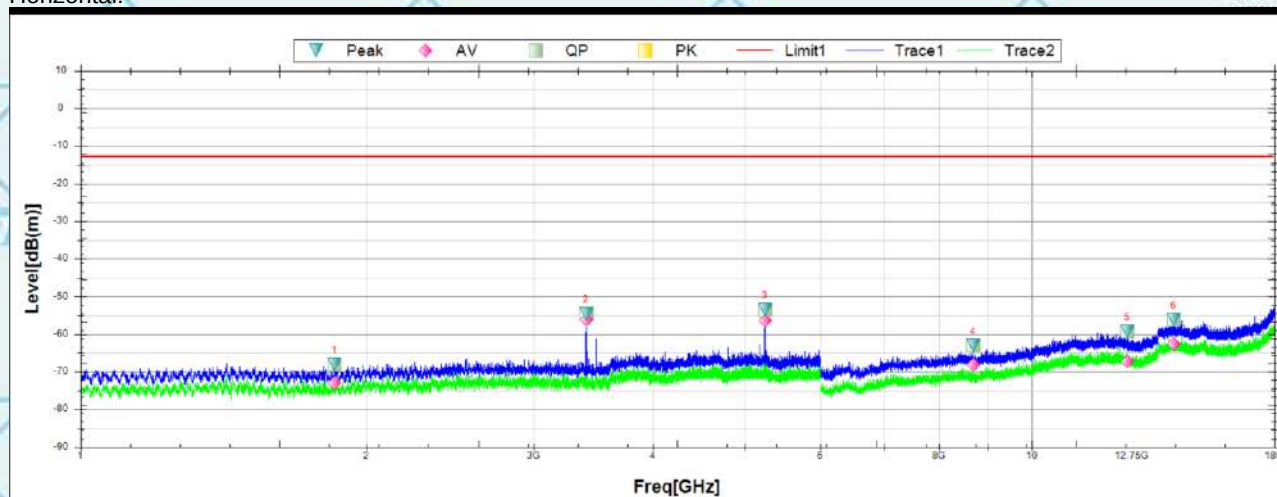


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Band 5:

Horizontal:

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Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1850.6250	-68.09	25.23	-93.32	-13	-55.09	191.3	Horizontal	PK	Pass
2	3401.8750	-54.56	28.44	-83	-13	-41.56	286.9	Horizontal	PK	Pass
3	5246.2500	-53.53	31.8	-85.33	-13	-40.53	206.8	Horizontal	PK	Pass
4	8682.0000	-63.12	9.32	-72.44	-13	-50.12	6.6	Horizontal	PK	Pass
5	12610.5000	-59.37	16.21	-75.58	-13	-46.37	187	Horizontal	PK	Pass
6	14103.0000	-56.17	19.03	-75.2	-13	-43.17	167.8	Horizontal	PK	Pass



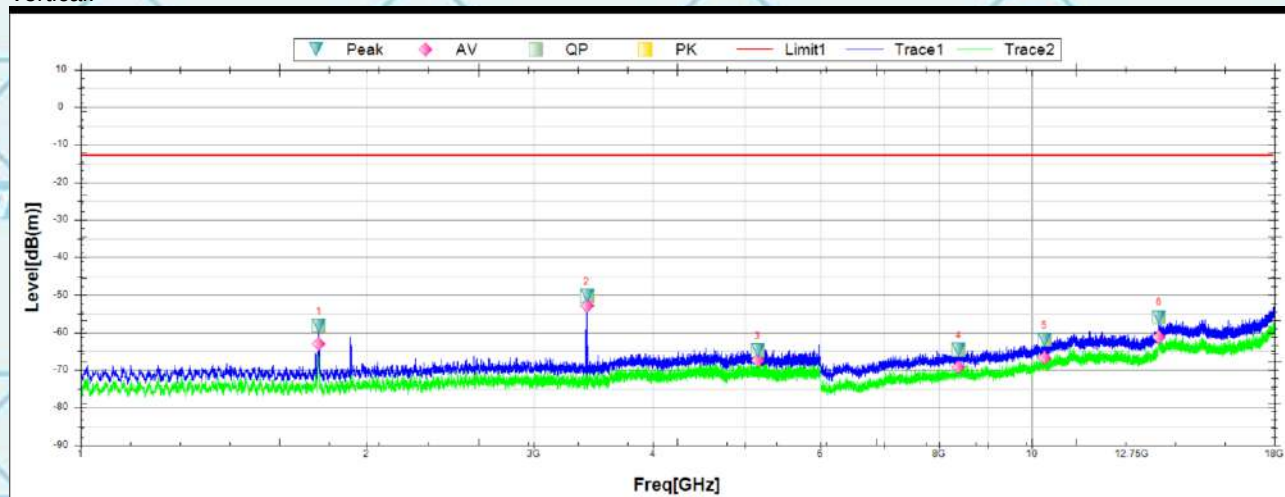


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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1781.8750	-58.25	24.99	-83.24	-13	-45.25	210.2	Vertical	PK	Pass
2	3408.1250	-50.19	28.44	-78.63	-13	-37.19	229.4	Vertical	PK	Pass
3	5153.1250	-64.77	31.72	-96.49	-13	-51.77	2.6	Vertical	PK	Pass
4	8382.0000	-64.64	9.06	-73.7	-13	-51.64	352	Vertical	PK	Pass
5	10314.0000	-61.84	13.33	-75.17	-13	-48.84	222.8	Vertical	PK	Pass
6	13612.5000	-55.86	18	-73.86	-13	-42.86	226.4	Vertical	PK	Pass



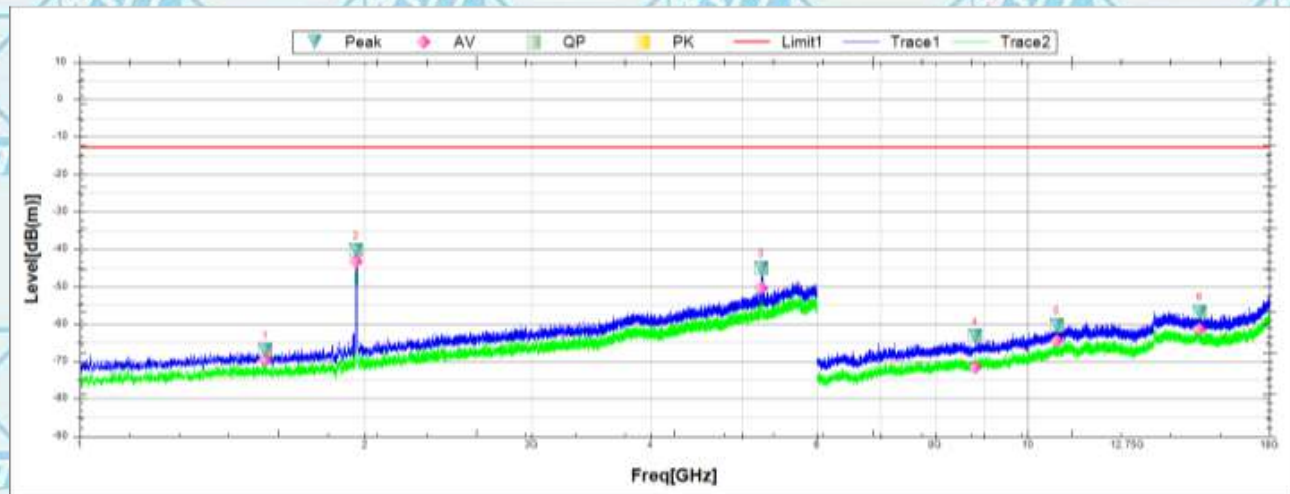
Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Band 2:

Horizontal:

**Susputed Data List**

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1569.3750	-67.12	24.93	-92.05	-13	-54.12	323.6	Horizontal	PK	Pass
2	1957.5000	-40.31	25.71	-66.02	-13	-27.31	202.9	Horizontal	PK	Pass
3	5237.5000	-45.15	31.79	-76.94	-13	-32.15	358.7	Horizontal	PK	Pass
4	8806.5000	-63.24	9.51	-72.75	-13	-50.24	129.5	Horizontal	PK	Pass
5	10738.5000	-60.34	14.66	-75	-13	-47.34	97.3	Horizontal	PK	Pass
6	15201.0000	-56.75	19.14	-75.89	-13	-43.75	206	Horizontal	PK	Pass

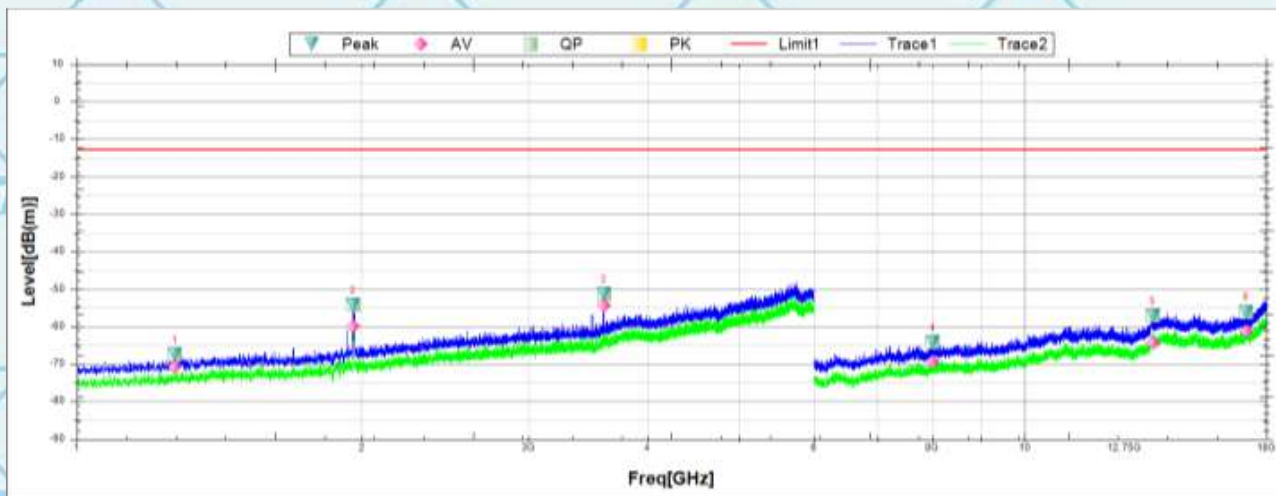


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Vertical:



Suspected Data List

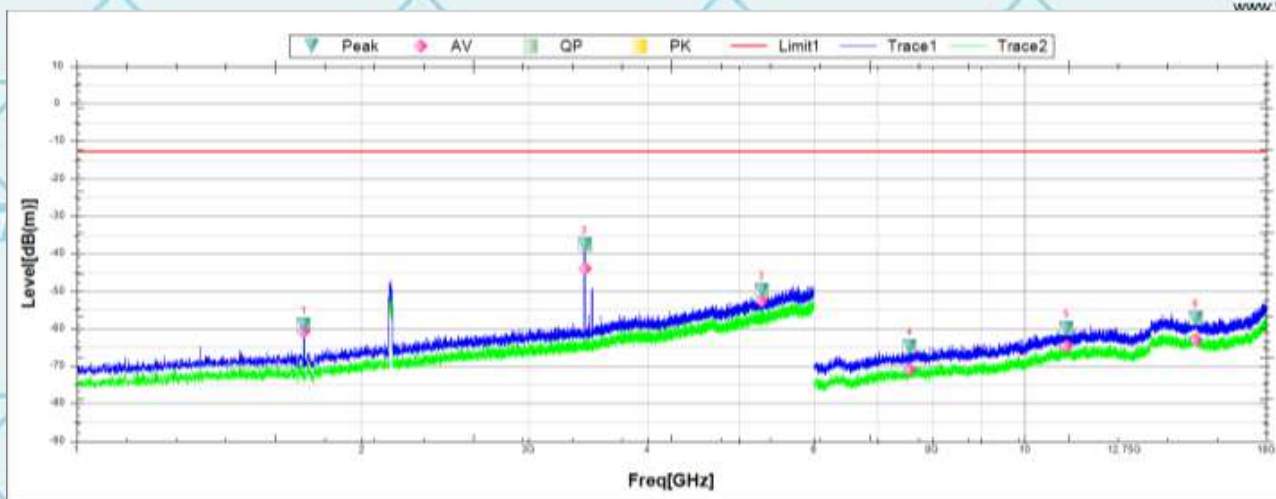
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1268.1250.	-67.56.	24.64.	-92.2.	-13.	-54.56.	2.4.	Vertical.	PK.	Pass.
2.	1958.1250.	-54.3.	25.71.	-80.01.	-13.	-41.3.	297.4.	Vertical.	PK.	Pass.
3.	3598.1250.	-51.35.	28.74.	-80.09.	-13.	-38.35.	242.4.	Vertical.	PK.	Pass.
4.	8008.5000.	-64.22.	8.29.	-72.51.	-13.	-51.22.	12.	Vertical.	PK.	Pass.
5.	13656.0000.	-57.12.	18.14.	-75.26.	-13.	-44.12.	360.	Vertical.	PK.	Pass.
6.	17143.5000.	-56.09.	20.	-76.09.	-13.	-43.09.	159.4.	Vertical.	PK.	Pass.



Report No.: WSCT-A2LA-R&E240300009A-RF
Band 4:
Horizontal:

Certificate #5768.01

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Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1742.5000	-54.94	1.25	-56.19	-13	-41.94	140.3	Vertical	PK	Pass
2	1958.7500	-49.32	2.63	-51.95	-13	-36.32	360.1	Vertical	PK	Pass
3	3496.2500	-51.7	10.17	-61.87	-13	-38.7	219.2	Vertical	PK	Pass
4	7720.5000	-65.57	36.58	-102.15	-13	-52.57	254.3	Vertical	PK	Pass
5	10750.5000	-59.95	39.15	-99.1	-13	-46.95	359.6	Vertical	PK	Pass
6	13929.0000	-57.03	41.32	-98.35	-13	-44.03	266.3	Vertical	PK	Pass

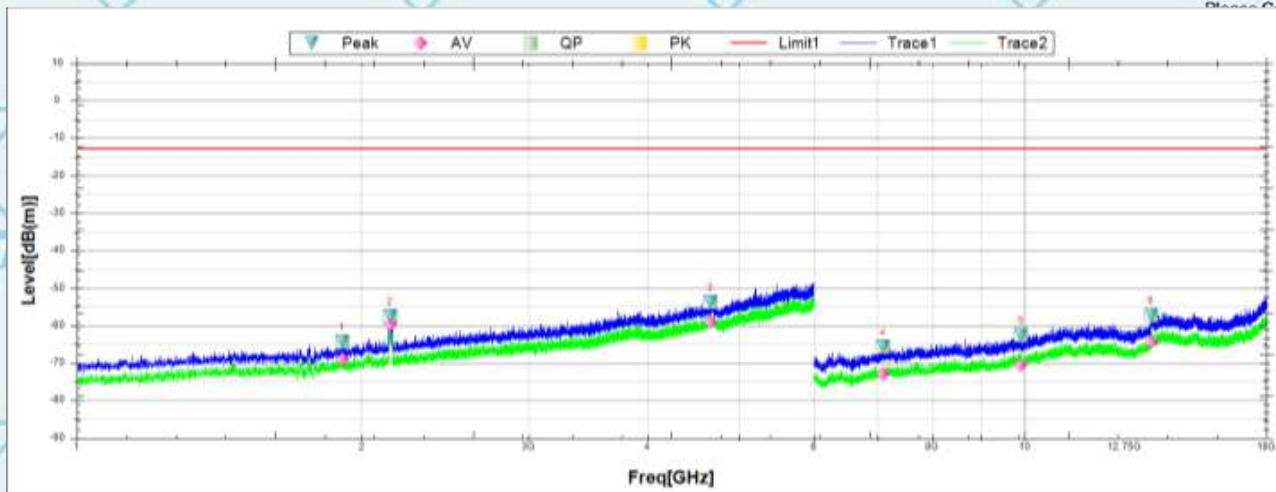




Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question

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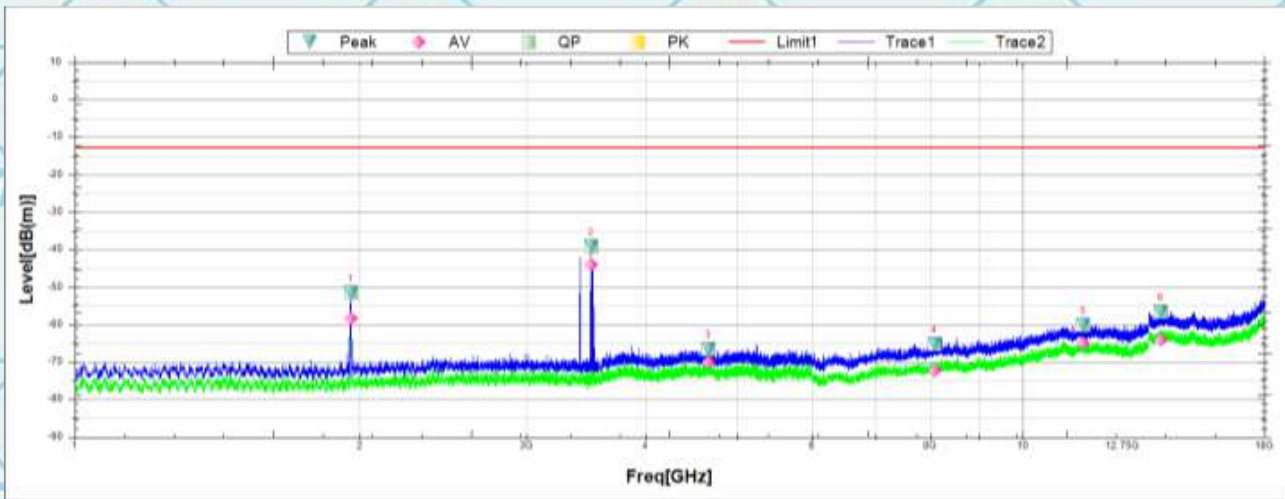
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1905.0000.	-64.4.	25.47.	-89.87.	-13.	-51.4.	360.	Vertical.	PK.	Pass.
2.	2140.6250.	-57.47.	26.38.	-83.85.	-13.	-44.47.	259.8.	Vertical.	PK.	Pass.
3.	4662.5000.	-53.78.	30.92.	-84.7.	-13.	-40.78.	360.	Vertical.	PK.	Pass.
4.	7096.5000.	-65.78.	6.71.	-72.49.	-13.	-52.78.	0.	Vertical.	PK.	Pass.
5.	9922.5000.	-62.56.	12.19.	-74.75.	-13.	-49.56.	218.5.	Vertical.	PK.	Pass.
6.	13609.5000.	-57.24.	17.99.	-75.23.	-13.	-44.24.	254.4.	Vertical.	PK.	Pass.



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Certificate #5768.01

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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1956.2500.	-51.64.	25.7.	-77.34.	-13.	-38.64.	320.8.	Horizontal.	PK.	Pass.
2.	3508.1250.	-39.18.	28.52.	-67.7.	-13.	-26.18.	0.5.	Horizontal.	PK.	Pass.
3.	4663.1250.	-66.58.	30.93.	-97.51.	-13.	-53.58.	360.	Horizontal.	PK.	Pass.
4.	8074.5000.	-65.25.	8.42.	-73.67.	-13.	-52.25.	156.3.	Horizontal.	PK.	Pass.
5.	11595.0000.	-60.15.	16.18.	-76.33.	-13.	-47.15.	20.1.	Horizontal.	PK.	Pass.
6.	13998.0000.	-56.74.	19.11.	-75.85.	-13.	-43.74.	351.9.	Horizontal.	PK.	Pass.

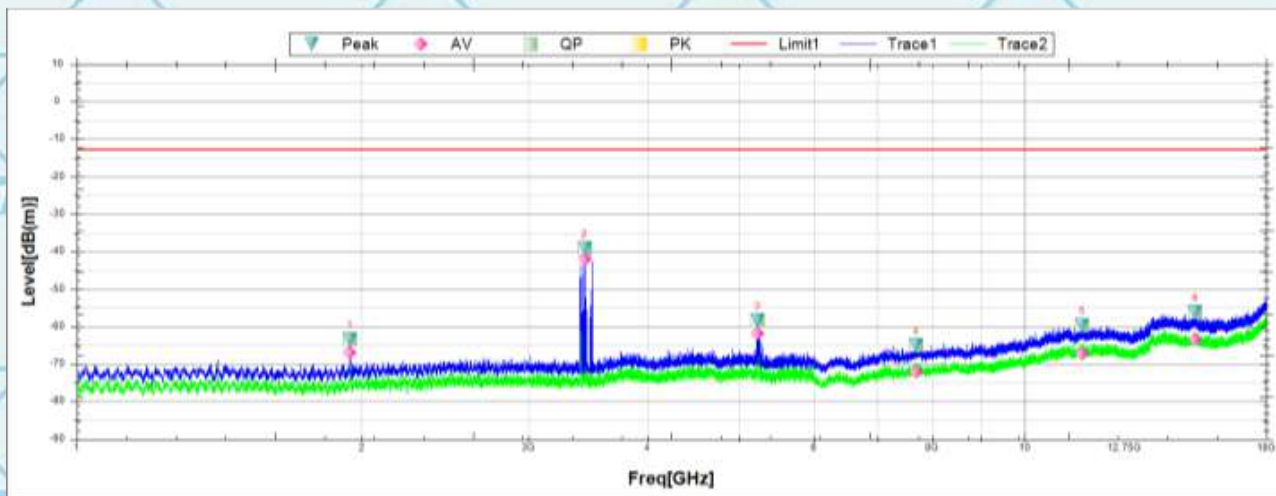


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Vertical:



Suspected Data List

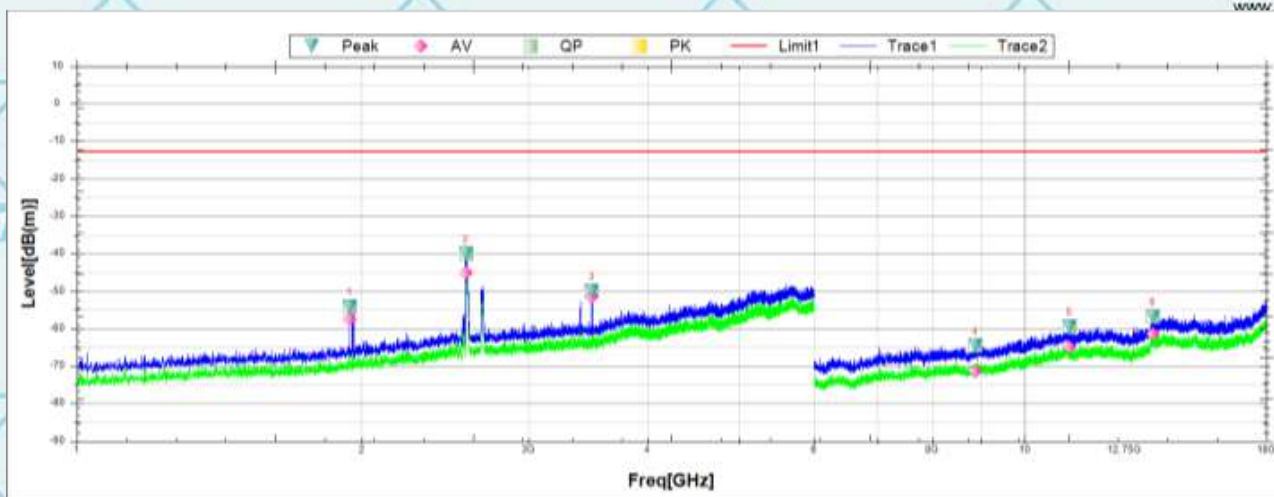
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1942.5000.	-63.55.	25.64.	-89.19.	-13.	-50.55.	65.	Vertical.	PK.	Pass.
2.	3435.6250.	-39.21.	28.46.	-67.67.	-13.	-26.21.	126.	Vertical.	PK.	Pass.
3.	5233.7500.	-58.39.	31.79.	-90.18.	-13.	-45.39.	73.4.	Vertical.	PK.	Pass.
4.	7689.0000.	-64.98.	7.96.	-72.94.	-13.	-51.98.	359.	Vertical.	PK.	Pass.
5.	11509.5000.	-59.79.	16.15.	-75.94.	-13.	-46.79.	-0.1.	Vertical.	PK.	Pass.
6.	15153.0000.	-56.28.	19.51.	-75.79.	-13.	-43.28.	115.6.	Vertical.	PK.	Pass.



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Band 7:
Horizontal:

Certificate #5768.01

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Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1941.8750.	-54.15.	25.64.	-79.79.	-13.	-41.15.	127.1.	Horizontal.	PK.	Pass.
2.	2574.3750.	-40.04.	27.69.	-67.73.	-13.	-27.04.	84.2.	Horizontal.	PK.	Pass.
3.	3497.5000.	-50.04.	28.5.	-78.54.	-13.	-37.04.	360.	Horizontal.	PK.	Pass.
4.	8877.0000.	-64.55.	9.69.	-74.24.	-13.	-51.55.	144.4.	Horizontal.	PK.	Pass.
5.	11152.5000.	-59.44.	15.8.	-75.24.	-13.	-46.44.	27.3.	Horizontal.	PK.	Pass.
6.	13657.5000.	-56.95.	18.14.	-75.09.	-13.	-43.95.	358.8.	Horizontal.	PK.	Pass.



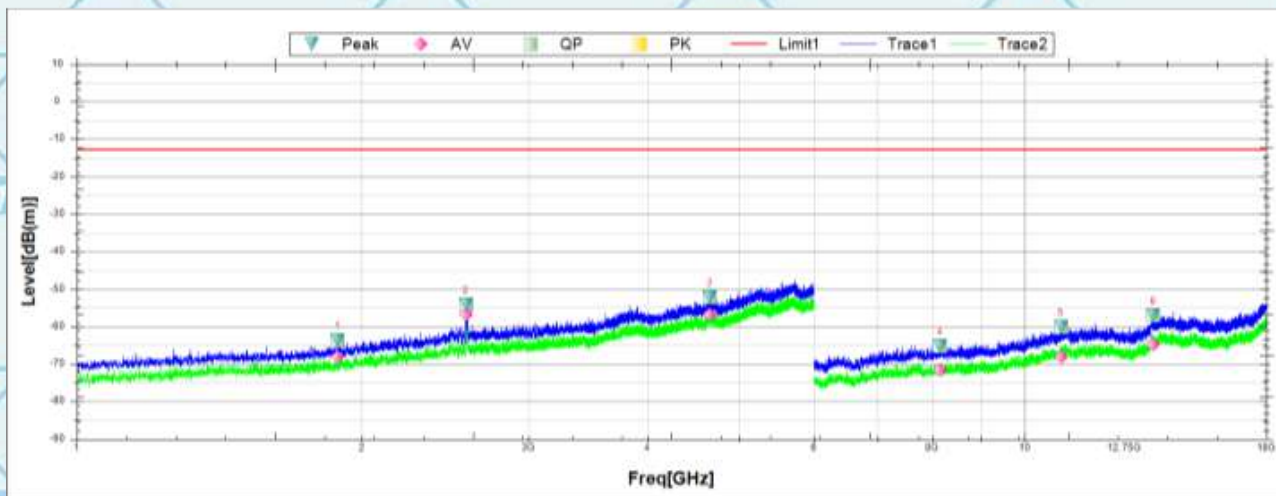


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Vertical:



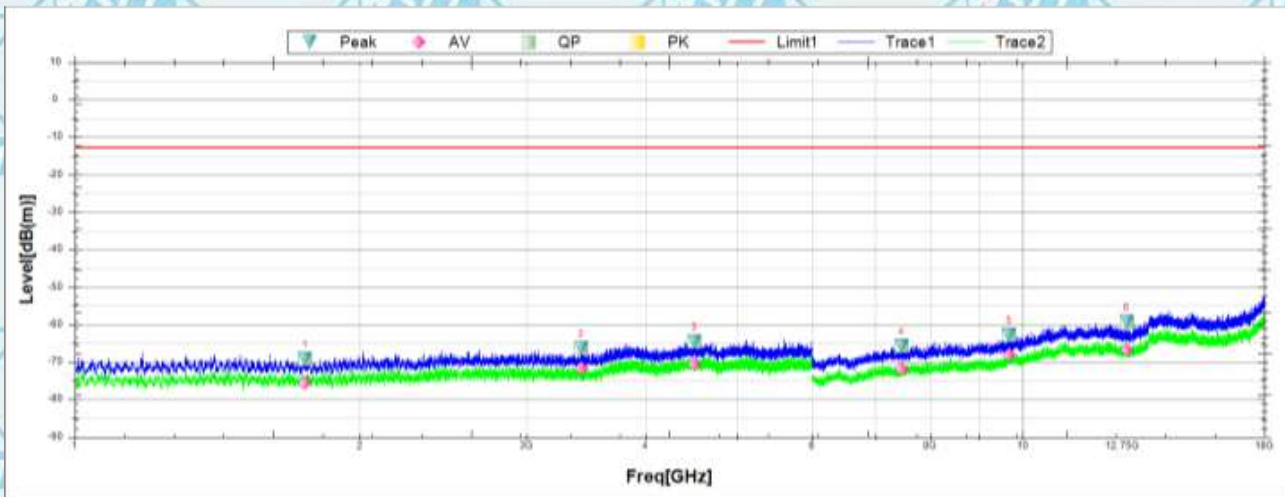
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1885.0000.	-63.7.	25.38.	-89.08.	-13.	-50.7.	360.	Vertical.	PK.	Pass.
2.	2574.3750.	-54.24.	27.69.	-81.93.	-13.	-41.24.	209.6.	Vertical.	PK.	Pass.
3.	4656.2500.	-52.15.	30.91.	-83.06.	-13.	-39.15.	108.1.	Vertical.	PK.	Pass.
4.	8151.0000.	-65.21.	8.62.	-73.83.	-13.	-52.21.	93.1.	Vertical.	PK.	Pass.
5.	10930.5000.	-60.24.	15.23.	-75.47.	-13.	-47.24.	303.5.	Vertical.	PK.	Pass.
6.	13681.5000.	-57.11.	18.2.	-75.31.	-13.	-44.11.	323.8.	Vertical.	PK.	Pass.



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Certificate #5768.01

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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1750.6250.	-69.22.	24.98.	-94.2.	-13.	-56.22.	37.6.	Horizontal.	PK.	Pass.
2.	3425.6250.	-66.28.	28.46.	-94.74.	-13.	-53.28.	181.	Horizontal.	PK.	Pass.
3.	4508.1250.	-64.66.	30.62.	-95.28.	-13.	-51.66.	311.4.	Horizontal.	PK.	Pass.
4.	7453.5000.	-65.61.	7.35.	-72.96.	-13.	-52.61.	145.6.	Horizontal.	PK.	Pass.
5.	9687.0000.	-62.9.	11.59.	-74.49.	-13.	-49.9.	359.5.	Horizontal.	PK.	Pass.
6.	12885.0000.	-59.26.	16.14.	-75.4.	-13.	-46.26.	158.7.	Horizontal.	PK.	Pass.

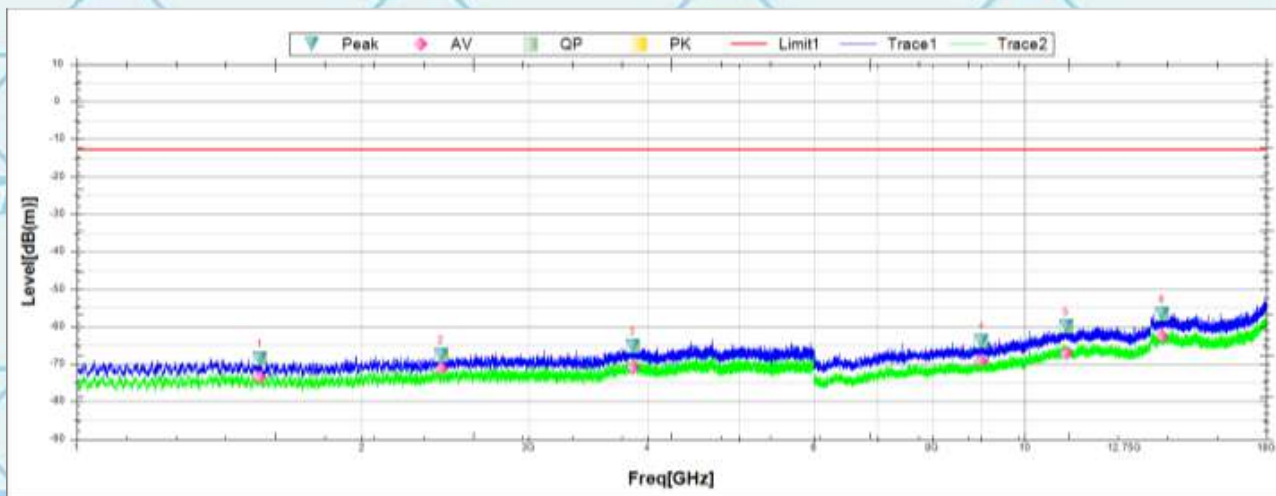


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Certificate #5768.01

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Vertical:



Suspected Data List

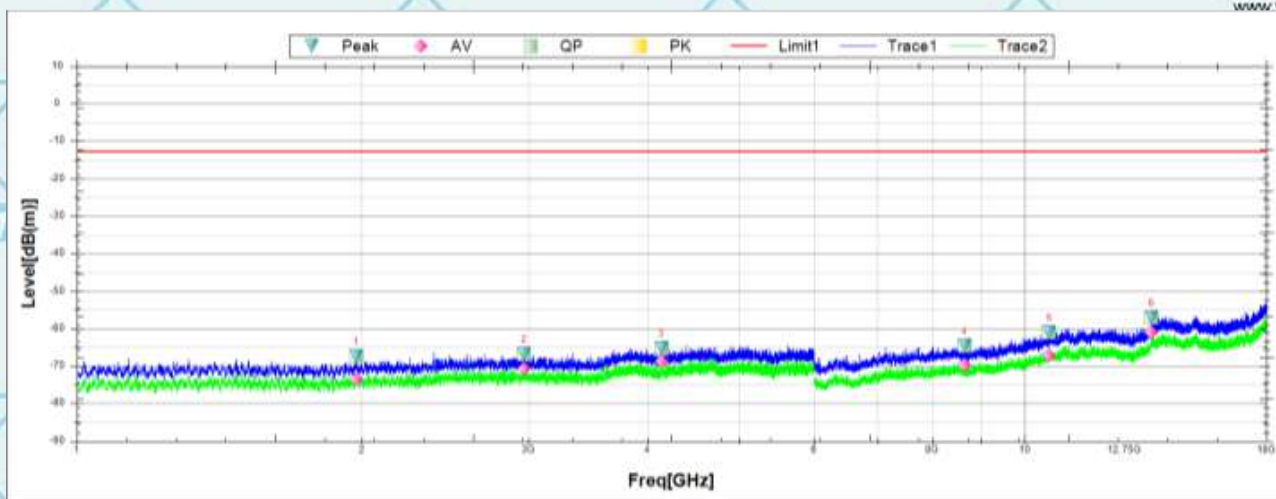
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1559.3750.	-68.61.	24.94.	-93.55.	-13.	-55.61.	83.	Vertical.	PK.	Pass.
2.	2423.7500.	-67.58.	27.34.	-94.92.	-13.	-54.58.	300.6.	Vertical.	PK.	Pass.
3.	3859.3750.	-65.35.	29.36.	-94.71.	-13.	-52.35.	254.	Vertical.	PK.	Pass.
4.	9012.0000.	-63.81.	9.85.	-73.66.	-13.	-50.81.	-0.1.	Vertical.	PK.	Pass.
5.	11065.5000.	-59.99.	15.83.	-75.82.	-13.	-46.99.	257.9.	Vertical.	PK.	Pass.
6.	13966.5000.	-56.74.	19.02.	-75.76.	-13.	-43.74.	-0.1.	Vertical.	PK.	Pass.



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Band 17:
Horizontal:

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Susputed Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1971.8750.	-67.45.	25.77.	-93.22.	-13.	-54.45.	5.	Horizontal.	PK.	Pass.
2.	2966.2500.	-66.71.	28.16.	-94.87.	-13.	-53.71.	359.9.	Horizontal.	PK.	Pass.
3.	4141.2500.	-65.22.	29.95.	-95.17.	-13.	-52.22.	151.	Horizontal.	PK.	Pass.
4.	8649.0000.	-64.55.	9.32.	-73.87.	-13.	-51.55.	358.7.	Horizontal.	PK.	Pass.
5.	10626.0000.	-61.15.	14.42.	-75.57.	-13.	-48.15.	207.7.	Horizontal.	PK.	Pass.
6.	13626.0000.	-57.13.	18.05.	-75.18.	-13.	-44.13.	40.4.	Horizontal.	PK.	Pass.



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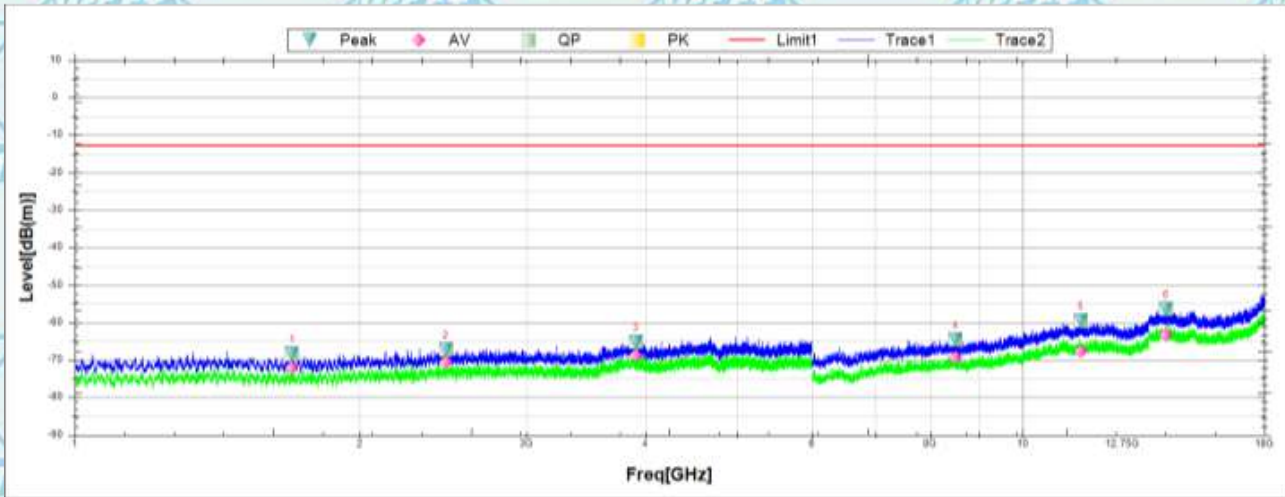


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Certificate #5768.01

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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1695.6250.	-68.42.	24.95.	-93.37.	-13.	-55.42.	316.2.	Vertical.	PK.	Pass.
2.	2464.3750.	-67.3.	27.48.	-94.78.	-13.	-54.3.	271.8.	Vertical.	PK.	Pass.
3.	3910.6250.	-65.32.	29.49.	-94.81.	-13.	-52.32.	77.	Vertical.	PK.	Pass.
4.	8502.0000.	-64.68.	9.22.	-73.9.	-13.	-51.68.	156.3.	Vertical.	PK.	Pass.
5.	11526.0000.	-59.54.	16.2.	-75.74.	-13.	-46.54.	210.1.	Vertical.	PK.	Pass.
6.	14184.0000.	-56.36.	18.94.	-75.3.	-13.	-43.36.	53.4.	Vertical.	PK.	Pass.

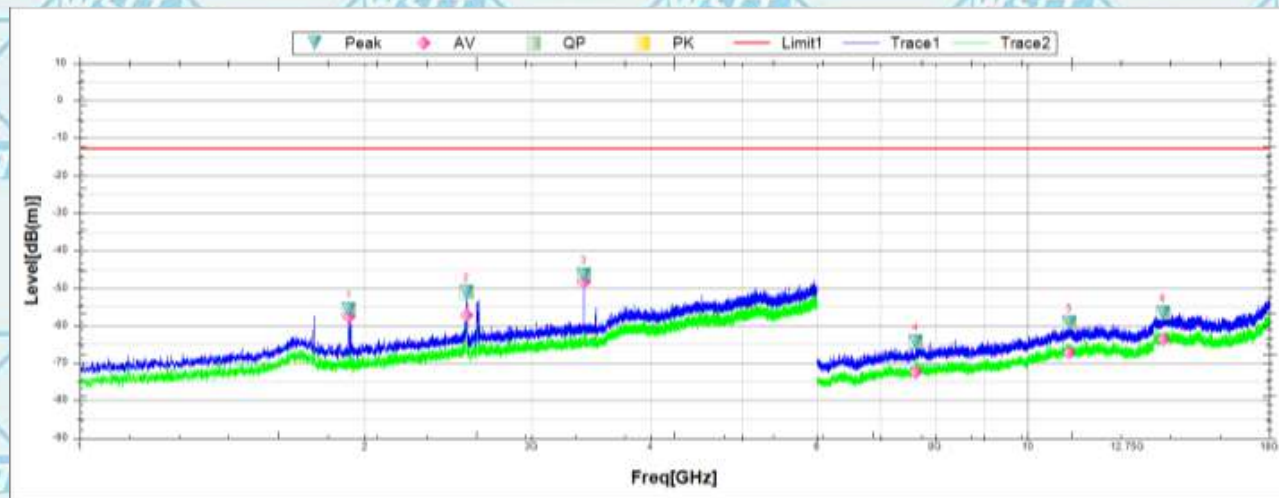


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Band 38:
Horizontal:



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1923.1250.	-55.72.	25.55.	-81.27.	-13.	-42.72.	329.2.	Horizontal.	PK.	Pass.
2.	2560.0000.	-51.13.	27.67.	-78.8.	-13.	-38.13.	159.5.	Horizontal.	PK.	Pass.
3.	3403.7500.	-46.44.	28.44.	-74.88.	-13.	-33.44.	360.1.	Horizontal.	PK.	Pass.
4.	7620.0000.	-64.38.	7.95.	-72.33.	-13.	-51.38.	2.5.	Horizontal.	PK.	Pass.
5.	11080.5000.	-59.39.	15.88.	-75.27.	-13.	-46.39.	116.9.	Horizontal.	PK.	Pass.
6.	13905.0000.	-56.63.	18.84.	-75.47.	-13.	-43.63.	359.1.	Horizontal.	PK.	Pass.



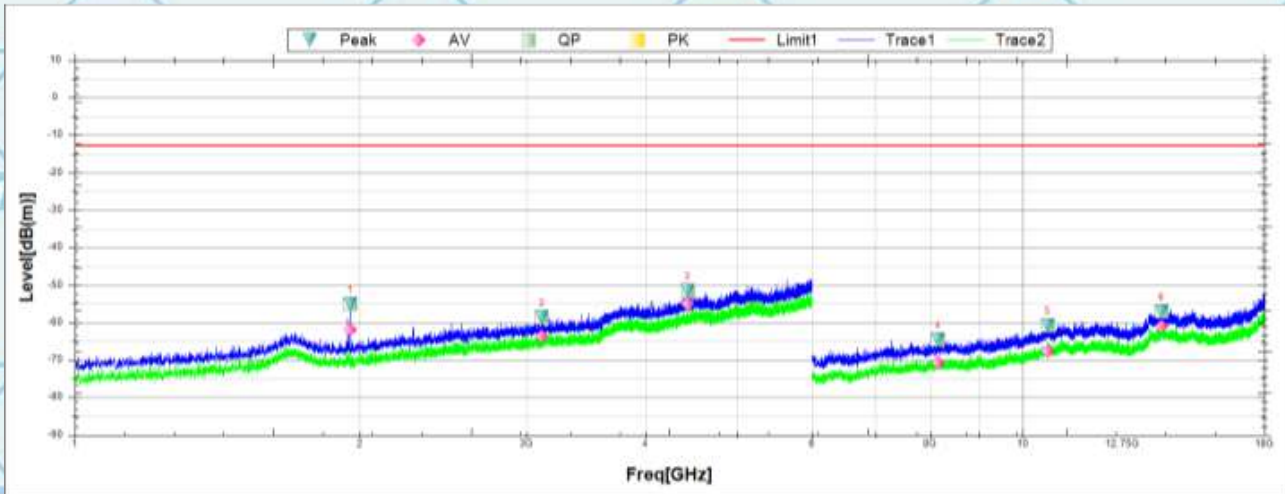


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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1953.1250.	-55.01.	25.69.	-80.7.	-13.	-42.01.	166.7.	Vertical.	PK.	Pass.
2.	3113.7500.	-58.66.	28.27.	-86.93.	-13.	-45.66.	246.8.	Vertical.	PK.	Pass.
3.	4433.1250.	-51.52.	30.48.	-82.	-13.	-38.52.	265.9.	Vertical.	PK.	Pass.
4.	8148.0000.	-64.68.	8.61.	-73.29.	-13.	-51.68.	67.8.	Vertical.	PK.	Pass.
5.	10635.0000.	-60.85.	14.45.	-75.3.	-13.	-47.85.	248.3.	Vertical.	PK.	Pass.
6.	14023.5000.	-57.1.	19.1.	-76.2.	-13.	-44.1.	35.5.	Vertical.	PK.	Pass.



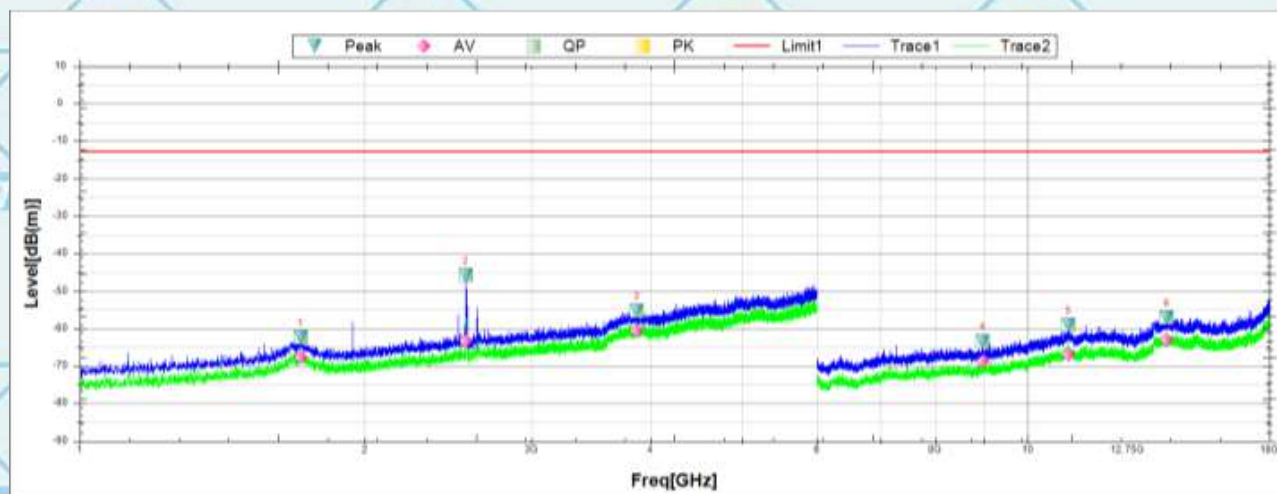
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Certificate #5768.01

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Band 41:

Horizontal:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1710.0000.	-62.34.	24.96.	-87.3.	-13.	-49.34.	0.	Horizontal.	PK.	Pass.
2.	2555.6250.	-45.72.	27.67.	-73.39.	-13.	-32.72.	310.6.	Horizontal.	PK.	Pass.
3.	3873.7500.	-55.26.	29.4.	-84.66.	-13.	-42.26.	268.7.	Horizontal.	PK.	Pass.
4.	8974.5000.	-63.37.	9.83.	-73.2.	-13.	-50.37.	307.7.	Horizontal.	PK.	Pass.
5.	11053.5000.	-59.12.	15.79.	-74.91.	-13.	-46.12.	11.5.	Horizontal.	PK.	Pass.
6.	14040.0000.	-57.1.	19.09.	-76.19.	-13.	-44.1.	0.9.	Horizontal.	PK.	Pass.

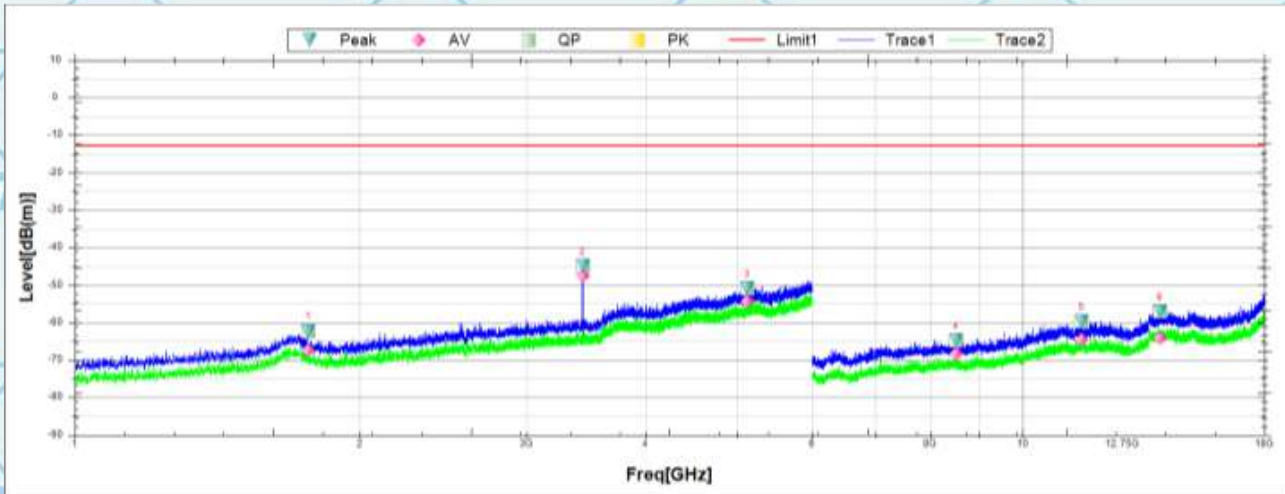


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Vertical:



Suspected Data List

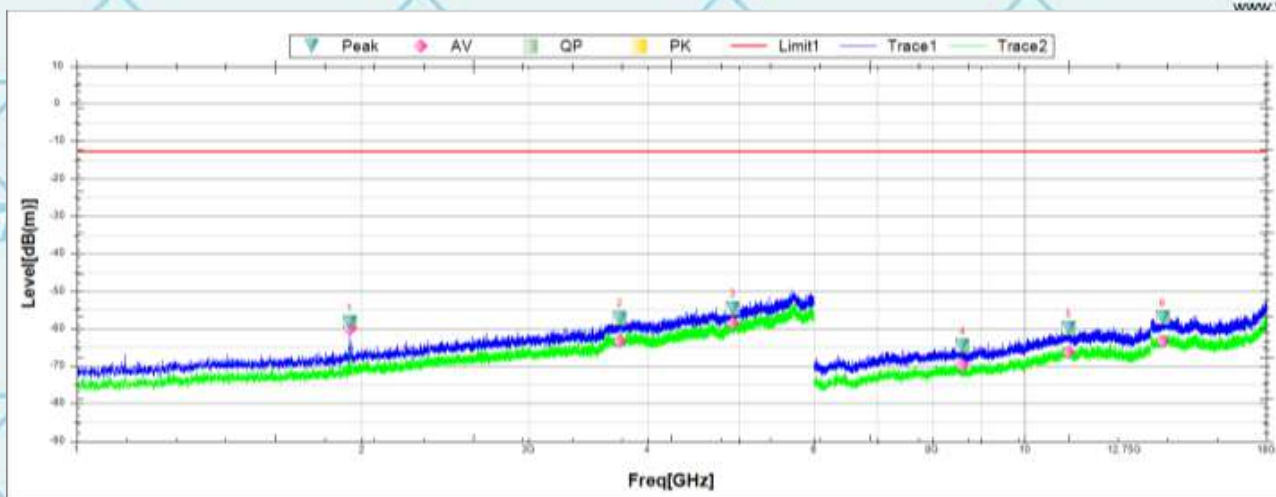
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1763.7500.	-62.28.	24.98.	-87.26.	-13.	-49.28.	76.2.	Vertical.	PK.	Pass.
2.	3435.6250.	-45.	28.46.	-73.46.	-13.	-32.	187.4.	Vertical.	PK.	Pass.
3.	5128.1250.	-50.97.	31.7.	-82.67.	-13.	-37.97.	278.2.	Vertical.	PK.	Pass.
4.	8511.0000.	-64.72.	9.23.	-73.95.	-13.	-51.72.	112.9.	Vertical.	PK.	Pass.
5.	11547.0000.	-59.81.	16.22.	-76.03.	-13.	-46.81.	59.	Vertical.	PK.	Pass.
6.	13969.5000.	-57.03.	19.03.	-76.06.	-13.	-44.03.	153.5.	Vertical.	PK.	Pass.



Report No.: WSCT-A2LA-R&E240300009A-RF
Band 42(3450-3550Mhz):
Horizontal:

Certificate #5768.01

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Susputed Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1940.6250.	-58.44.	25.63.	-84.07.	-13.	-45.44.	315.3.	Horizontal.	PK.	Pass.
2.	3743.1250.	-57.2.	29.08.	-86.28.	-13.	-44.2.	247.1.	Horizontal.	PK.	Pass.
3.	4924.3750.	-54.57.	31.45.	-86.02.	-13.	-41.57.	163.4.	Horizontal.	PK.	Pass.
4.	8608.5000.	-64.52.	9.31.	-73.83.	-13.	-51.52.	112.9.	Horizontal.	PK.	Pass.
5.	11137.5000.	-59.92.	15.83.	-75.75.	-13.	-46.92.	17.3.	Horizontal.	PK.	Pass.
6.	13992.0000.	-57.07.	19.1.	-76.17.	-13.	-44.07.	189.4.	Horizontal.	PK.	Pass.



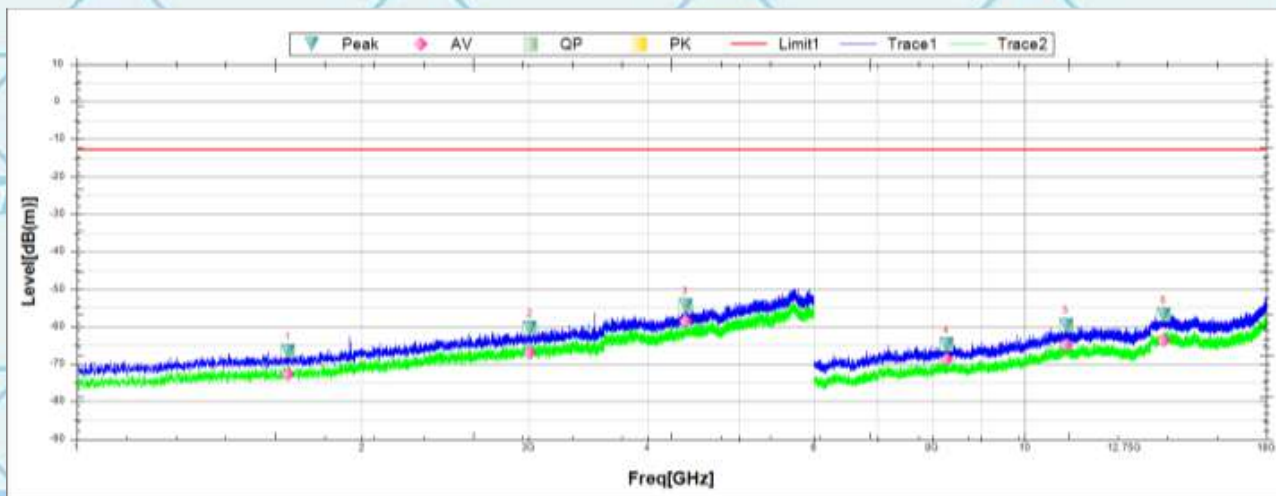


Report No.: WSCT-A2LA-R&E240300009A-RF

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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1671.2500.	-66.65.	24.94.	-91.59.	-13.	-53.65.	107.4.	Vertical.	PK.	Pass.
2.	3009.3750.	-60.45.	28.21.	-88.66.	-13.	-47.45.	186.2.	Vertical.	PK.	Pass.
3.	4388.1250.	-54.52.	30.4.	-84.92.	-13.	-41.52.	139.6.	Vertical.	PK.	Pass.
4.	8271.0000.	-64.76.	8.9.	-73.66.	-13.	-51.76.	60.2.	Vertical.	PK.	Pass.
5.	11062.5000.	-59.62.	15.81.	-75.43.	-13.	-46.62.	207.3.	Vertical.	PK.	Pass.
6.	14029.5000.	-56.89.	19.09.	-75.98.	-13.	-43.89.	294.6.	Vertical.	PK.	Pass.



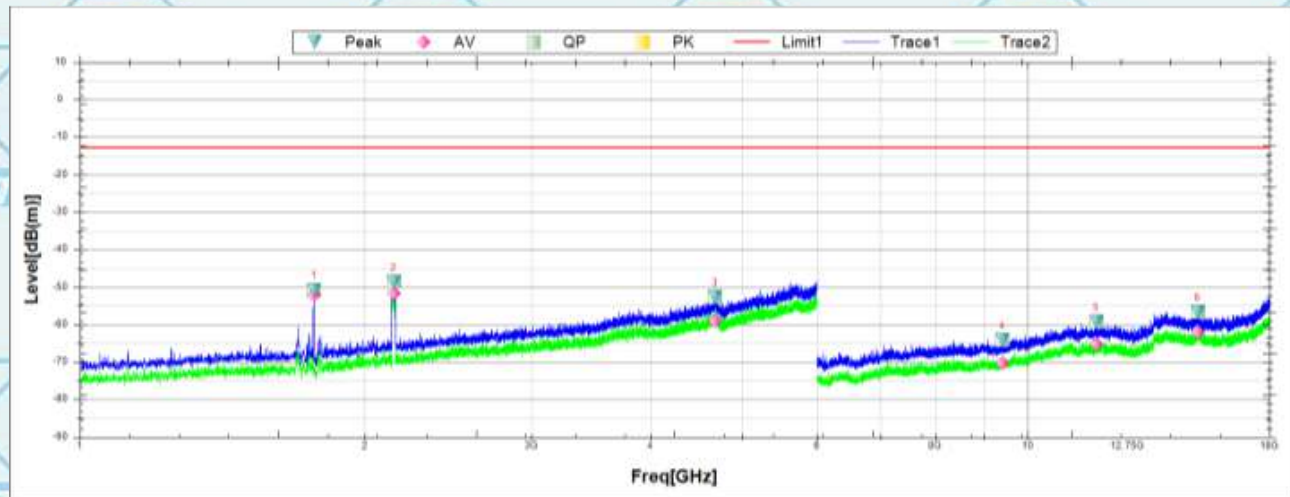
Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Band 66:

Horizontal:

**Susputed Data List**

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	1766.2500.	-50.78.	24.98.	-75.76.	-13.	-37.78.	45.1.	Horizontal.	PK.	Pass.
2.	2145.0000.	-48.66.	26.39.	-75.05.	-13.	-35.66.	91.8.	Horizontal.	PK.	Pass.
3.	4683.1250.	-52.62.	30.97.	-83.59.	-13.	-39.62.	210.1.	Horizontal.	PK.	Pass.
4.	9408.0000.	-64.05.	10.84.	-74.89.	-13.	-51.05.	20.1.	Horizontal.	PK.	Pass.
5.	11820.0000.	-59.25.	16.27.	-75.52.	-13.	-46.25.	0.7.	Horizontal.	PK.	Pass.
6.	15126.0000.	-56.65.	19.71.	-76.36.	-13.	-43.65.	61.5.	Horizontal.	PK.	Pass.

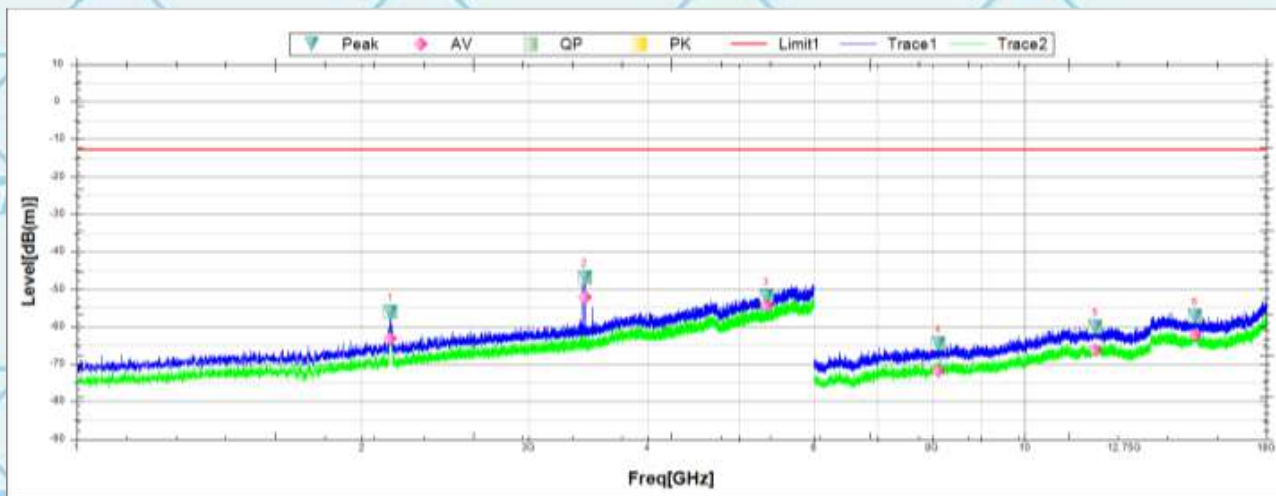


Report No.: WSCT-A2LA-R&E240300009A-RF

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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1.	2141.2500.	-56.16.	26.38.	-82.54.	-13.	-43.16.	174.3.	Vertical.	PK.	Pass.
2.	3435.6250.	-46.89.	28.46.	-75.35.	-13.	-33.89.	319.	Vertical.	PK.	Pass.
3.	5341.2500.	-52.1.	31.87.	-83.97.	-13.	-39.1.	2.	Vertical.	PK.	Pass.
4.	8112.0000.	-64.61.	8.51.	-73.12.	-13.	-51.61.	360.	Vertical.	PK.	Pass.
5.	11887.5000.	-60.14.	16.48.	-76.62.	-13.	-47.14.	130.7.	Vertical.	PK.	Pass.
6.	15135.0000.	-57.31.	19.64.	-76.95.	-13.	-44.31.	13.7.	Vertical.	PK.	Pass.



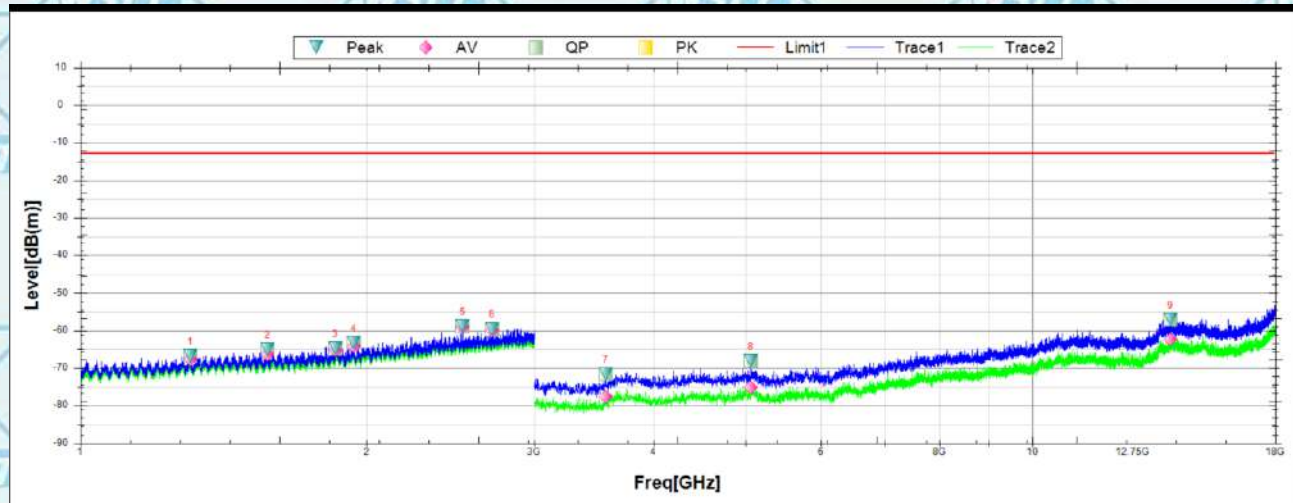
Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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n5:

Horizontal:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1304.7500	-66.81	-0.76	-66.05	-13	-53.81	345.9	Horizontal	PK	Pass
2	1573.2500	-65.12	0.62	-65.74	-13	-52.12	359.9	Horizontal	PK	Pass
3	1854.2500	-64.76	1.96	-66.72	-13	-51.76	338.9	Horizontal	PK	Pass
4	1939.0000	-63.18	2.45	-65.63	-13	-50.18	310.9	Horizontal	PK	Pass
5	2522.2500	-58.85	6.36	-65.21	-13	-45.85	337.9	Horizontal	PK	Pass
6	2709.0000	-59.63	7.14	-66.77	-13	-46.63	359.9	Horizontal	PK	Pass
7	3562.5000	-71.57	10.5	-82.07	-13	-58.57	62	Vertical	PK	Pass
8	5064.3750	-68.07	17.82	-85.89	-13	-55.07	75.2	Vertical	PK	Pass
9	13974.3750	-56.99	41.43	-98.42	-13	-43.99	0.1	Vertical	PK	Pass

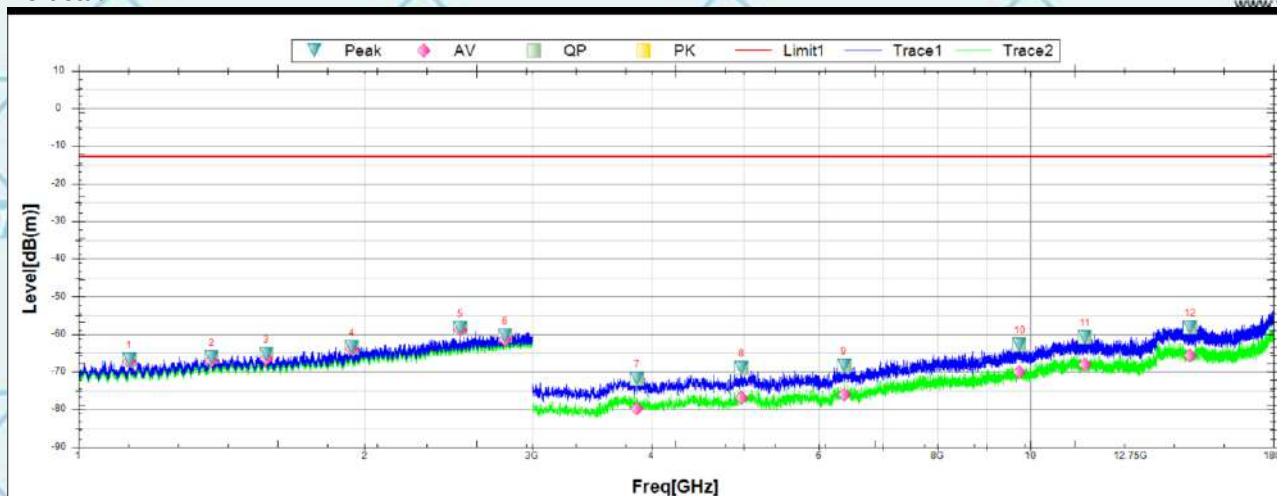


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Certificate #5768.01

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Vertical:



Suspected Data List

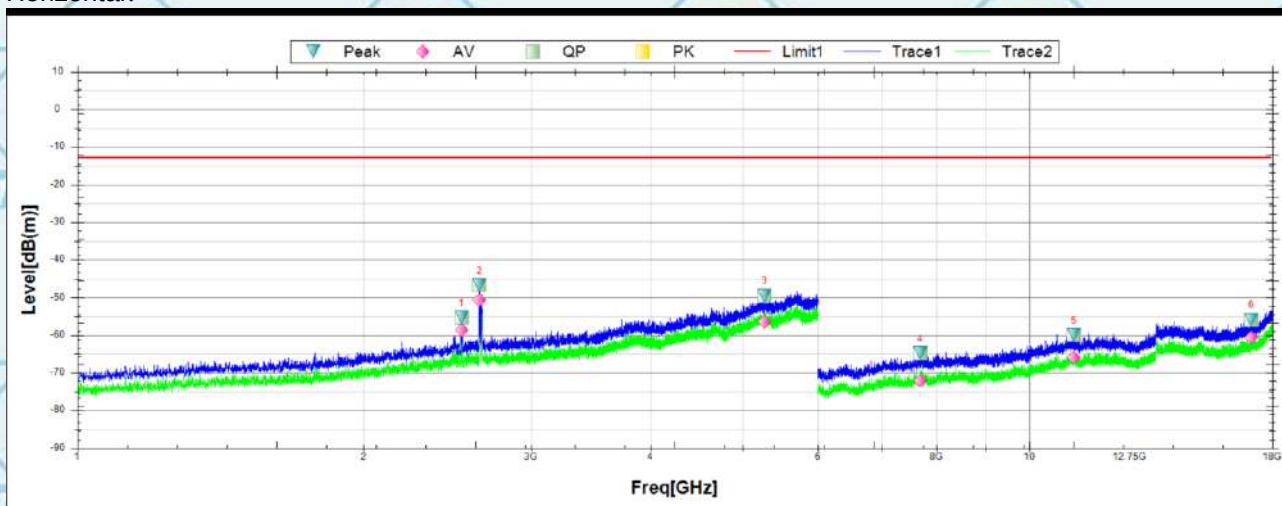
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1131.2500	-66.89	-1.88	-65.01	-13	-53.89	-0.1	Vertical	PK	Pass
2	1381.5000	-66.06	-0.19	-65.87	-13	-53.06	256.7	Vertical	PK	Pass
3	1576.7500	-65.33	0.64	-65.97	-13	-52.33	173	Vertical	PK	Pass
4	1939.5000	-63.4	2.46	-65.86	-13	-50.4	358.5	Vertical	PK	Pass
5	2520.7500	-58.39	6.35	-64.74	-13	-45.39	240	Vertical	PK	Pass
6	2810.2500	-60.34	7.77	-68.11	-13	-47.34	-0.1	Vertical	PK	Pass
7	3866.2500	-71.84	12.24	-84.08	-13	-58.84	360.1	Vertical	PK	Pass
8	4976.2500	-69.03	17.17	-86.2	-13	-56.03	360.1	Vertical	PK	Pass
9	6375.0000	-68.25	33.81	-102.06	-13	-55.25	360.1	Vertical	PK	Pass
10	9744.3750	-62.89	37.92	-100.81	-13	-49.89	360.1	Vertical	PK	Pass
11	11418.7500	-60.92	39.12	-100.04	-13	-47.92	359.6	Vertical	PK	Pass
12	14722.5000	-58.2	40.56	-98.76	-13	-45.2	360.1	Vertical	PK	Pass





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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2533.1250	-55.28	7.46	-62.74	-13	-42.28	0	Horizontal	PK	Pass
2	2646.8750	-46.77	7.56	-54.33	-13	-33.77	210.1	Horizontal	PK	Pass
3	5275.0000	-49.46	21.13	-70.59	-13	-36.46	84.6	Horizontal	PK	Pass
4	7689.0000	-64.75	36.53	-101.28	-13	-51.75	359.3	Horizontal	PK	Pass
5	11149.5000	-59.88	39.37	-99.25	-13	-46.88	-0.1	Horizontal	PK	Pass
6	17119.5000	-55.87	40.6	-96.47	-13	-42.87	152.7	Horizontal	PK	Pass



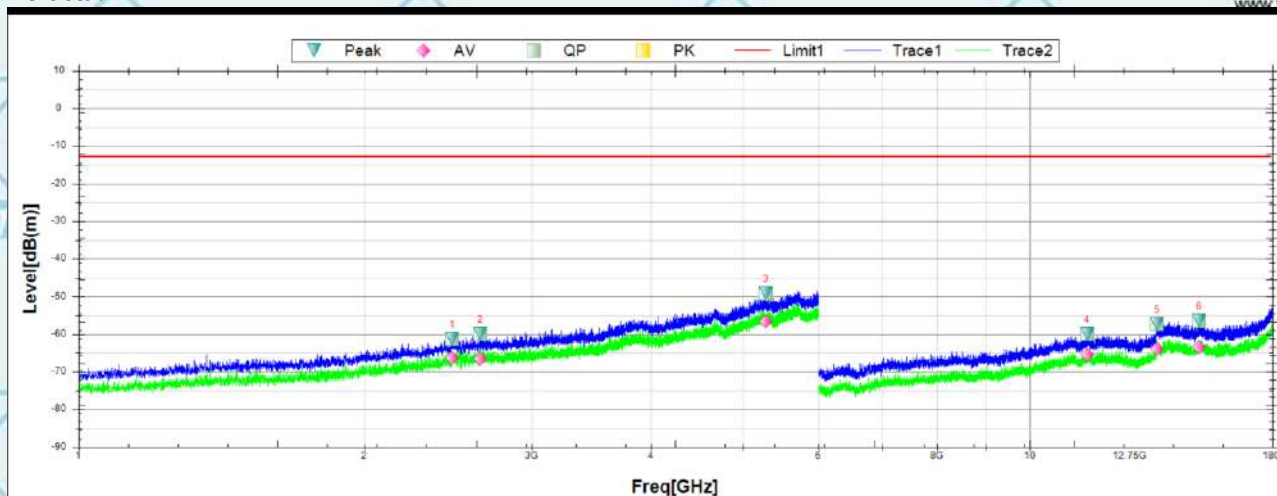
Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Vertical:



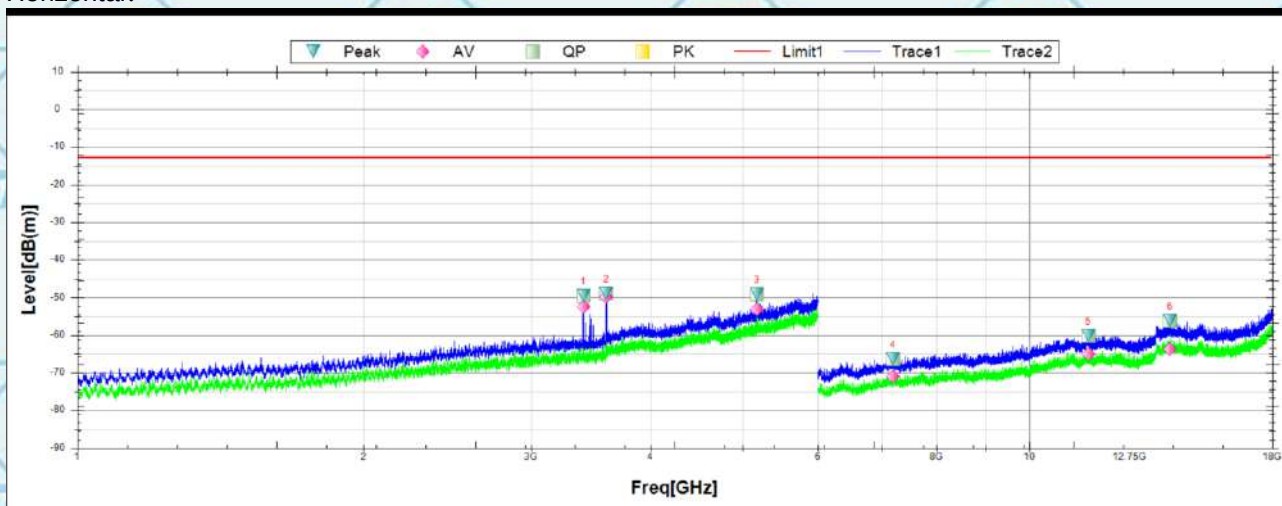
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2471.8750	-61.22	27.5	-88.72	-13	-48.22	79.8	Vertical	PK	Pass
2	2646.8750	-59.87	27.78	-87.65	-13	-46.87	201.8	Vertical	PK	Pass
3	5286.8750	-49.21	31.83	-81.04	-13	-36.21	144.4	Vertical	PK	Pass
4	11491.5000	-59.94	16.11	-76.05	-13	-46.94	271	Vertical	PK	Pass
5	13623.0000	-57.26	18.04	-75.3	-13	-44.26	232.8	Vertical	PK	Pass
6	15081.0000	-56.42	19.48	-75.9	-13	-43.42	354.6	Vertical	PK	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3401.2500	-49.58	8.47	-58.05	-13	-36.58	268.6	Horizontal	PK	Pass
2	3597.5000	-48.95	9.24	-58.19	-13	-35.95	3.5	Horizontal	PK	Pass
3	5176.8750	-49.07	16.82	-65.89	-13	-36.07	145.5	Horizontal	PK	Pass
4	7195.5000	-66.42	35.79	-102.21	-13	-53.42	213.7	Horizontal	PK	Pass
5	11538.0000	-60.15	39.02	-99.17	-13	-47.15	185	Horizontal	PK	Pass
6	14067.0000	-56.26	41.41	-97.67	-13	-43.26	279.4	Horizontal	PK	Pass



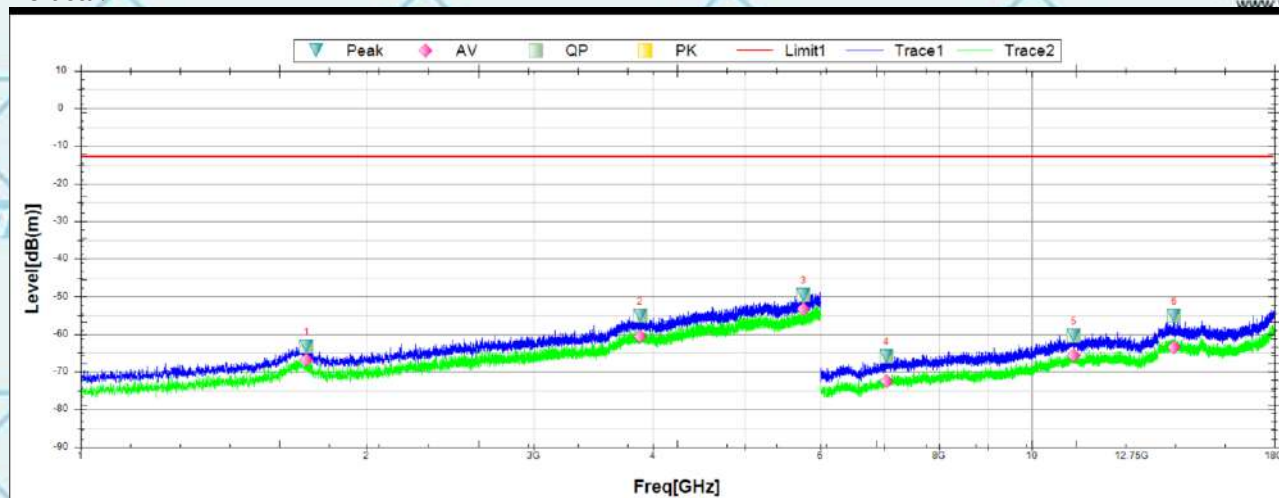


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1730.0000	-63.32	0.13	-63.45	-13	-50.32	337.5	Vertical	PK	Pass
2	3878.1250	-55.02	10.56	-65.58	-13	-42.02	147.4	Vertical	PK	Pass
3	5761.8750	-49.61	19.68	-69.29	-13	-36.61	360	Vertical	PK	Pass
4	7035.0000	-65.99	35.55	-101.54	-13	-52.99	339.9	Vertical	PK	Pass
5	11079.0000	-60.32	39.43	-99.75	-13	-47.32	353	Vertical	PK	Pass
6	14127.0000	-55.06	41.33	-96.39	-13	-42.06	135.9	Vertical	PK	Pass



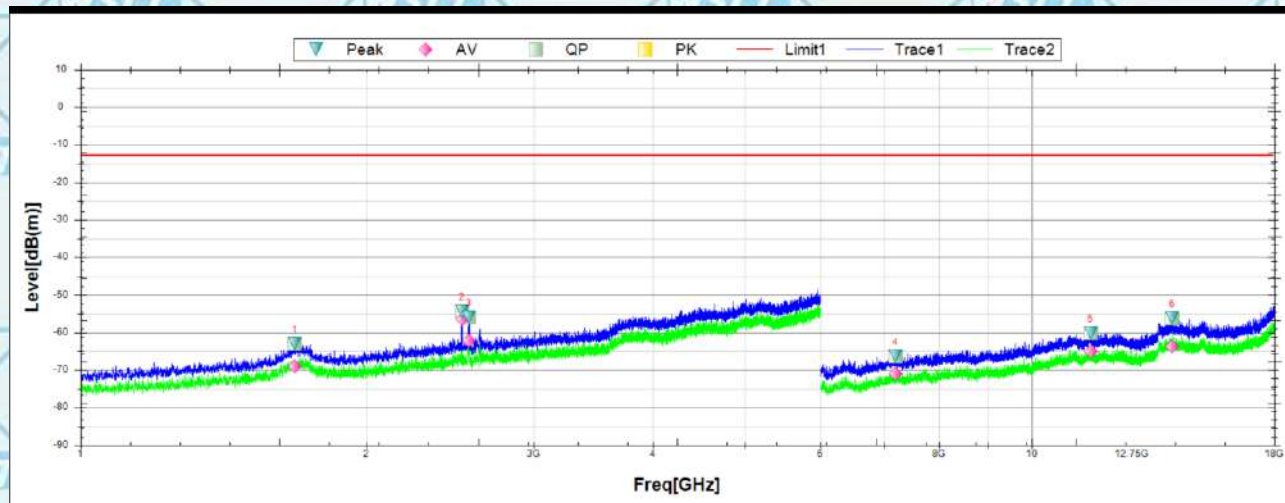
Report No.: WSCT-A2LA-R&E240300009A-RF

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n38:

Horizontal:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1681.2500	-63.14	1.19	-64.33	-13	-50.14	185.6	Horizontal	PK	Pass
2	2517.5000	-54.53	7.44	-61.97	-13	-41.53	353.5	Horizontal	PK	Pass
3	2560.6250	-55.97	7.55	-63.52	-13	-42.97	359.9	Horizontal	PK	Pass
4	7195.5000	-66.42	35.79	-102.21	-13	-53.42	213.7	Horizontal	PK	Pass
5	11538.0000	-60.15	39.02	-99.17	-13	-47.15	185	Horizontal	PK	Pass
6	14067.0000	-56.26	41.41	-97.67	-13	-43.26	279.4	Horizontal	PK	Pass

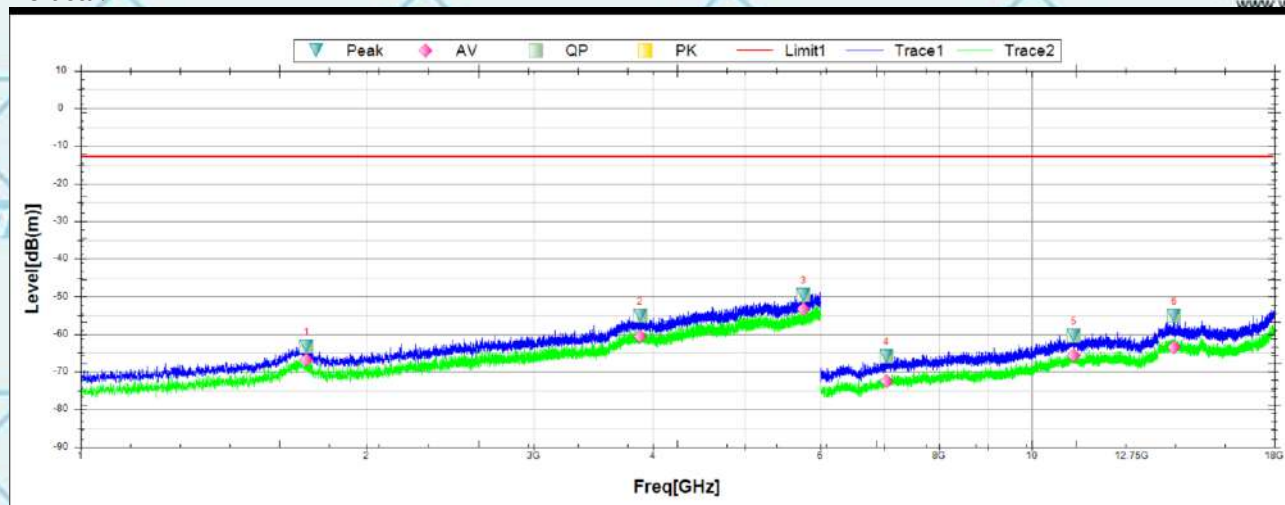


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Vertical:



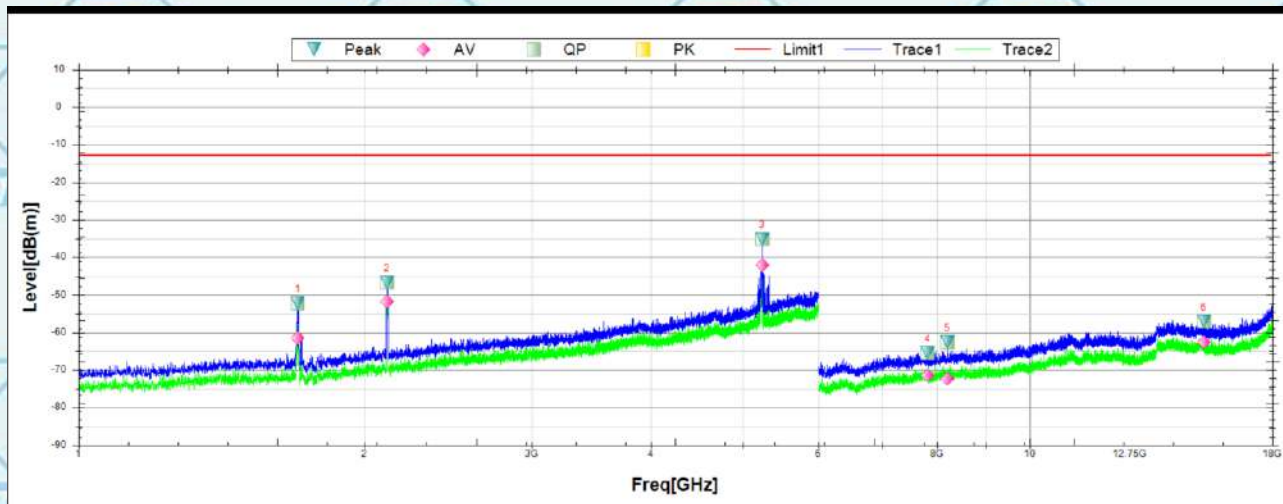
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1730.0000	-63.32	1.39	-64.71	-13	-50.32	337.5	Vertical	PK	Pass
2	3878.1250	-55.02	12.56	-67.58	-13	-42.02	147.4	Vertical	PK	Pass
3	5761.8750	-49.61	22.32	-71.93	-13	-36.61	360	Vertical	PK	Pass
4	7035.0000	-65.99	35.55	-101.54	-13	-52.99	339.9	Vertical	PK	Pass
5	11079.0000	-60.32	39.43	-99.75	-13	-47.32	353	Vertical	PK	Pass
6	14127.0000	-55.06	41.33	-96.39	-13	-42.06	135.9	Vertical	PK	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1701.8750	-52.22	0.57	-52.79	-13	-39.22	107.3	Horizontal	PK	Pass
2	2111.8750	-46.63	3.49	-50.12	-13	-33.63	232.8	Horizontal	PK	Pass
3	5240.6250	-35.18	18.81	-53.99	-13	-22.18	165.8	Horizontal	PK	Pass
4	7815.0000	-65.56	36.72	-102.28	-13	-52.56	91.3	Horizontal	PK	Pass
5	8199.0000	-62.6	37.08	-99.68	-13	-49.6	281.3	Horizontal	PK	Pass
6	15249.0000	-57.13	39.43	-96.56	-13	-44.13	146.2	Horizontal	PK	Pass

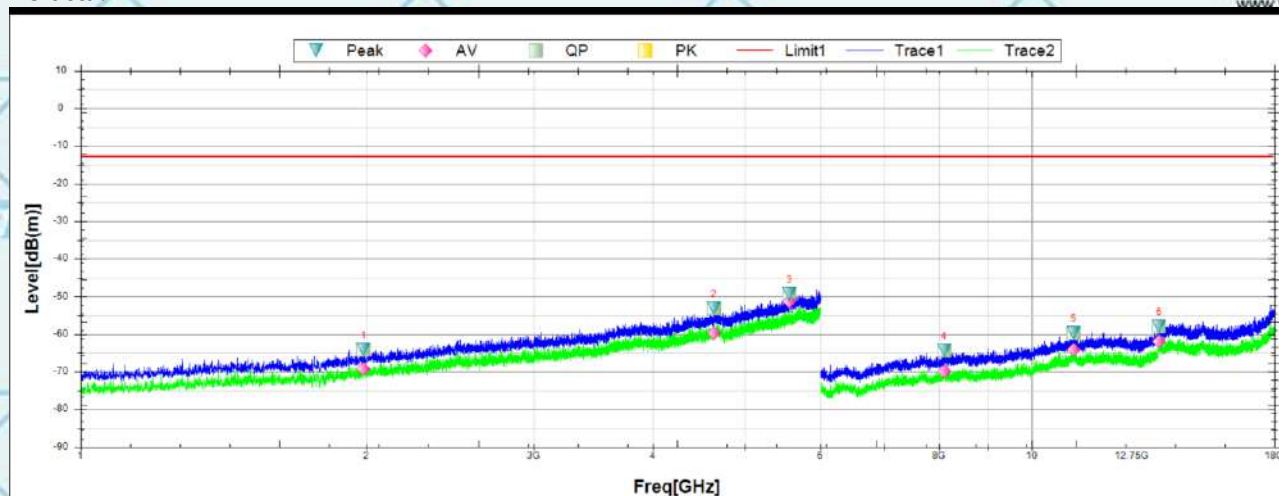


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Vertical:



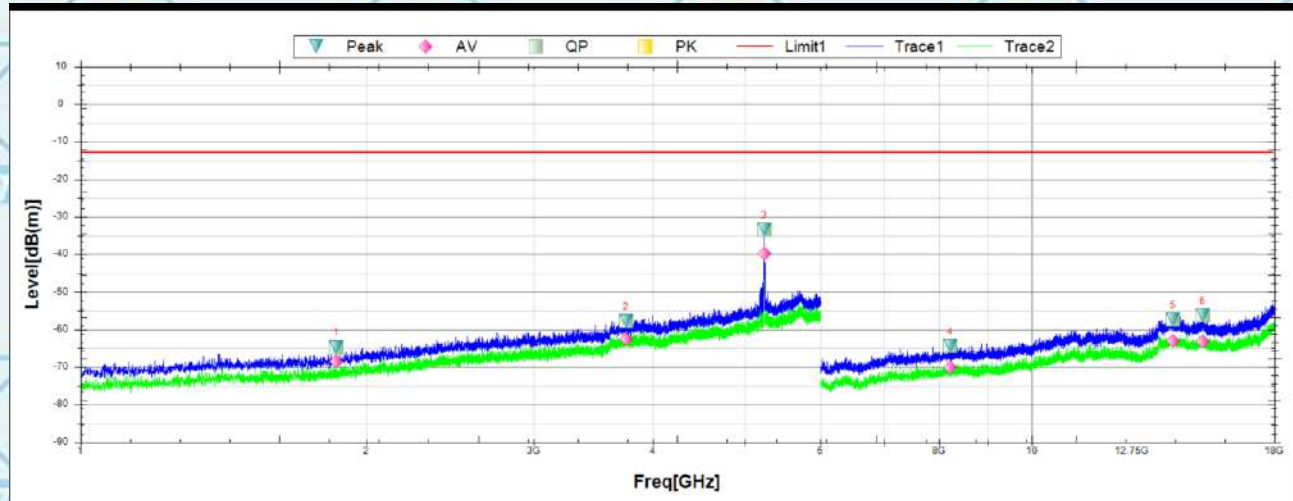
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1986.8750	-64.09	25.84	-89.93	-13	-51.09	239.6	Vertical	PK	Pass
2	4641.2500	-53.1	30.88	-83.98	-13	-40.1	7.6	Vertical	PK	Pass
3	5569.3750	-49.4	32.11	-81.51	-13	-36.4	3.1	Vertical	PK	Pass
4	8092.5000	-64.45	8.47	-72.92	-13	-51.45	0.1	Vertical	PK	Pass
5	11071.5000	-59.77	15.85	-75.62	-13	-46.77	157.7	Vertical	PK	Pass
6	13624.5000	-58.05	18.04	-76.09	-13	-45.05	71.6	Vertical	PK	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1858.7500	-64.71	25.26	-89.97	-13	-51.71	359.5	Horizontal	PK	Pass
2	3746.8750	-57.75	29.09	-86.84	-13	-44.75	223.3	Horizontal	PK	Pass
3	5239.3750	-33.37	31.79	-65.16	-13	-20.37	28.5	Horizontal	PK	Pass
4	8215.5000	-64.38	8.79	-73.17	-13	-51.38	136.7	Horizontal	PK	Pass
5	14092.5000	-57.31	19.03	-76.34	-13	-44.31	352.8	Horizontal	PK	Pass
6	15141.0000	-56.27	19.59	-75.86	-13	-43.27	300.5	Horizontal	PK	Pass

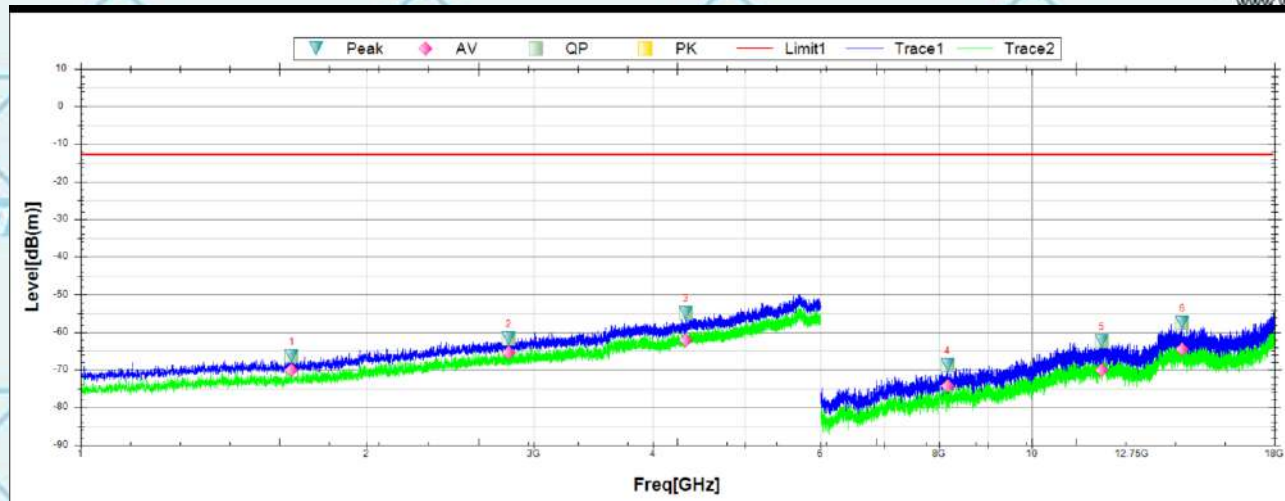


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Vertical:



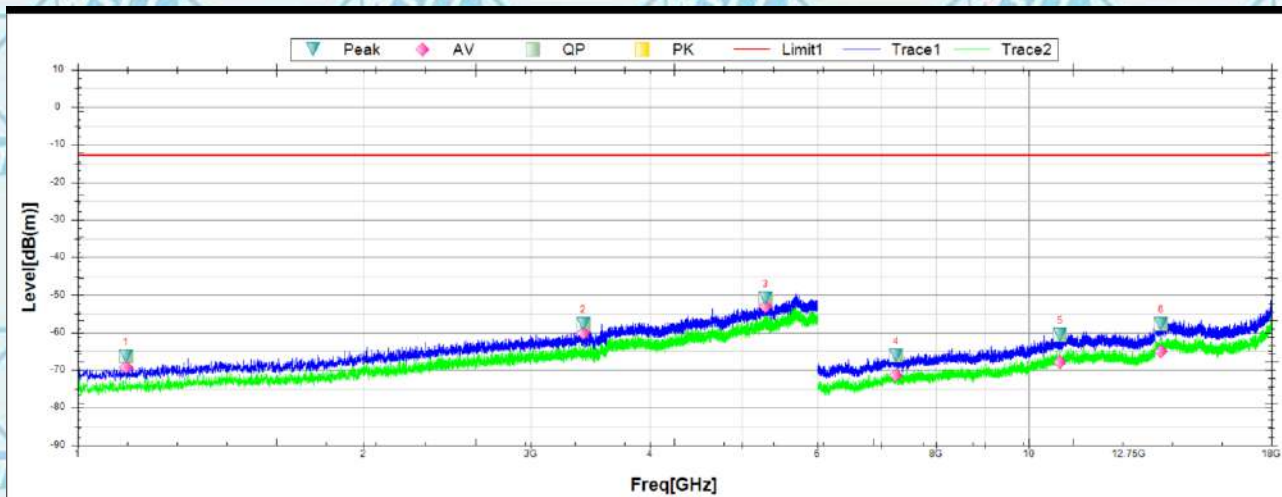
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1668.7500	-66.27	24.93	-91.2	-13	-53.27	181.4	Vertical	PK	Pass
2	2820.6250	-61.75	27.98	-89.73	-13	-48.75	267.4	Vertical	PK	Pass
3	4333.7500	-54.95	30.3	-85.25	-13	-41.95	334.4	Vertical	PK	Pass
4	8155.5000	-68.73	8.63	-77.36	-13	-55.73	0.2	Vertical	PK	Pass
5	11854.5000	-62.35	16.38	-78.73	-13	-49.35	0.2	Vertical	PK	Pass
6	14409.0000	-57.61	18.71	-76.32	-13	-44.61	0.2	Vertical	PK	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.comn77(3450-3550Mhz):
Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1125.0000	-66.38	-1.92	-64.46	-13	-53.38	159.3	Horizontal	PK	Pass
2	3401.8750	-57.78	9.78	-67.56	-13	-44.78	288.4	Horizontal	PK	Pass
3	5295.0000	-50.91	19.8	-70.71	-13	-37.91	43.4	Horizontal	PK	Pass
4	7258.5000	-66.19	35.89	-102.08	-13	-53.19	262.7	Horizontal	PK	Pass
5	10794.0000	-60.61	39.21	-99.82	-13	-47.61	0	Horizontal	PK	Pass
6	13791.0000	-57.69	40.96	-98.65	-13	-44.69	207.8	Horizontal	PK	Pass

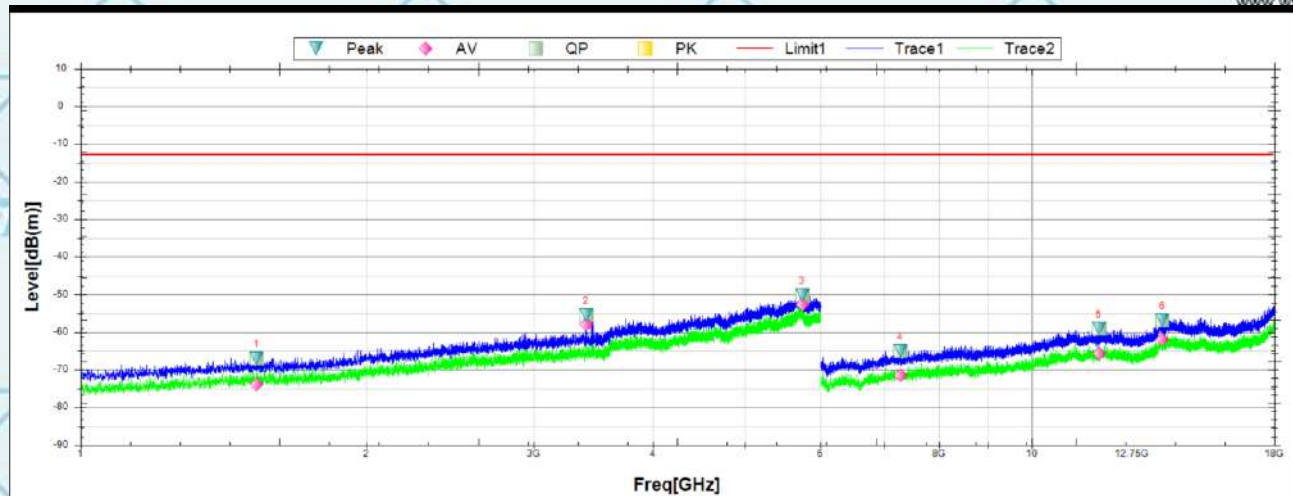


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1531.2500	-67.02	0.39	-67.41	-13	-54.02	105.7	Vertical	PK	Pass
2	3401.8750	-55.56	9.78	-65.34	-13	-42.56	127.1	Vertical	PK	Pass
3	5743.1250	-50.18	21.48	-71.66	-13	-37.18	0.5	Vertical	PK	Pass
4	7276.5000	-65.11	35.91	-101.02	-13	-52.11	147.9	Vertical	PK	Pass
5	11773.5000	-59.06	38.8	-97.86	-13	-46.06	256.7	Vertical	PK	Pass
6	13728.0000	-56.94	40.79	-97.73	-13	-43.94	223.3	Vertical	PK	Pass



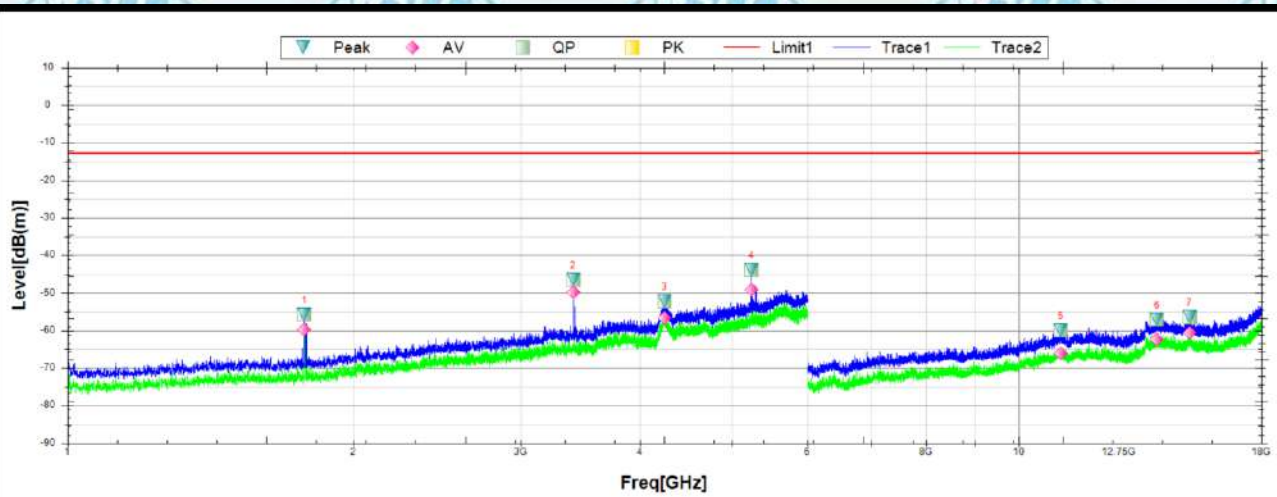
Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
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n77(3700-3980Mhz):

Horizontal:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1775.6250	-55.72	1.38	-57.1	-13	-42.72	306.5	Horizontal	PK	Pass
2	3403.1250	-46.39	9.78	-56.17	-13	-33.39	360	Horizontal	PK	Pass
3	4244.3750	-52.31	13.52	-65.83	-13	-39.31	4.2	Horizontal	PK	Pass
4	5242.5000	-43.77	19.41	-63.18	-13	-30.77	68.6	Horizontal	PK	Pass
5	11077.5000	-59.95	39.43	-99.38	-13	-46.95	112.1	Horizontal	PK	Pass
6	13986.0000	-57.1	41.46	-98.56	-13	-44.1	-0.1	Horizontal	PK	Pass
7	15129.0000	-56.52	39.8	-96.32	-13	-43.52	198.1	Horizontal	PK	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF

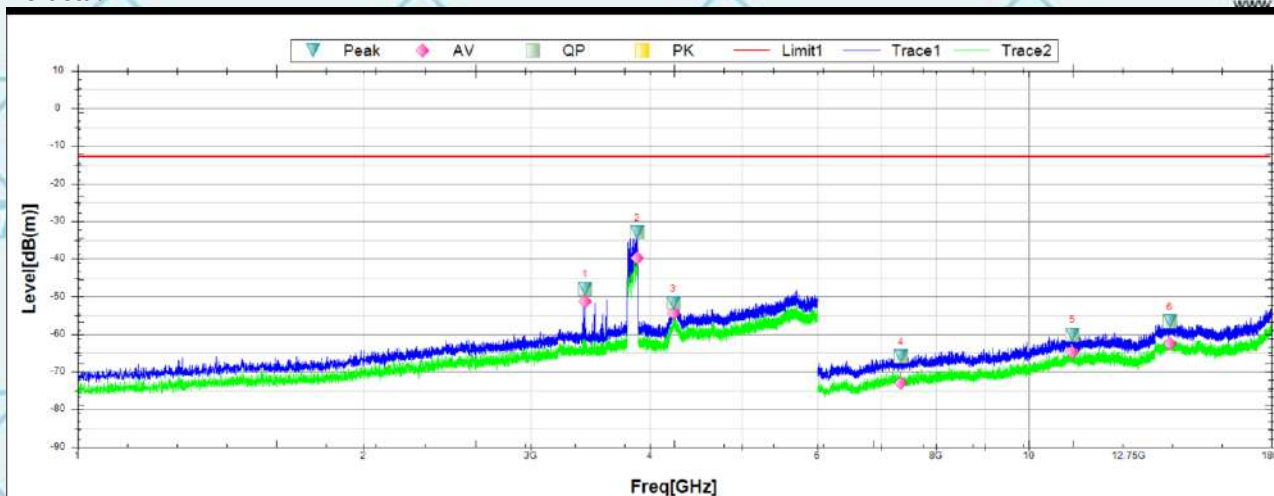
Certificate #5768.01

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Vertical:



Suspected Data List

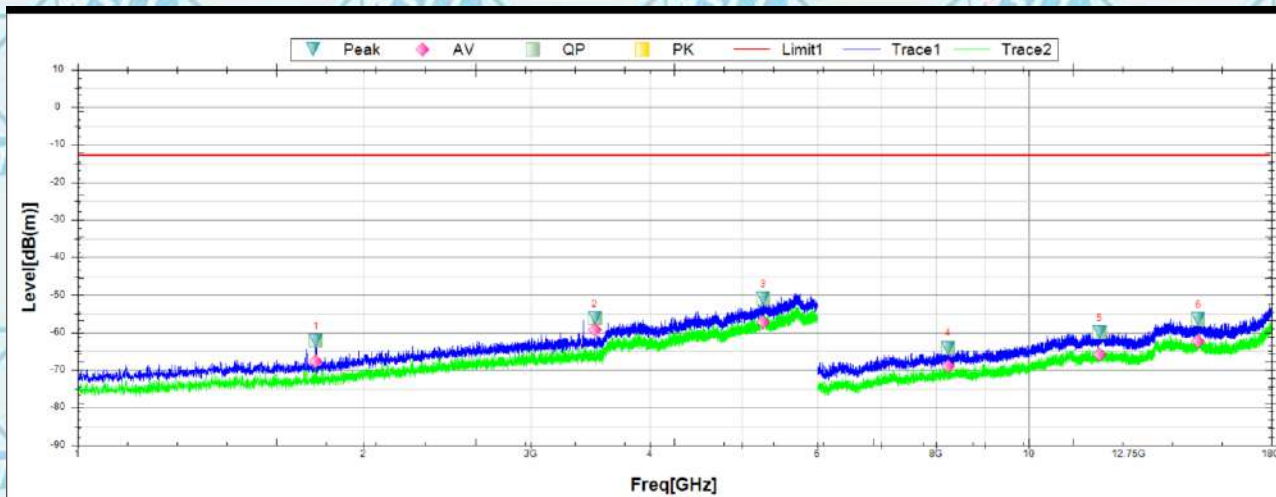
NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace
1	3418.7500	-47.92	9.85	-57.77	-13	-34.92	234.7	Vertical	PK
2	3880.0000	-33.05	12.31	-45.36	-13	-20.05	271.8	Vertical	PK
3	4234.3750	-51.76	13.51	-65.27	-13	-38.76	314.9	Vertical	PK
4	7345.5000	-65.92	36.02	-101.94	-13	-52.92	304.6	Vertical	PK
5	11124.0000	-60.06	39.39	-99.45	-13	-47.06	201.7	Vertical	PK
6	14082.0000	-56.73	41.39	-98.12	-13	-43.73	27.2	Vertical	PK

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World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.ADD: Building A-B Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China
TEL: 86-755-26996192 26992306 FAX: 86-755-86376605 E-mail: Fengbing.Wang@wsct-cert.com Http: www.wsct-cert.com



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
Please Contact with WSCT
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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1782.5000	-62.2	1.4	-63.6	-13	-49.2	209.4	Horizontal	PK	Pass
2	3500.6250	-56.28	10.18	-66.46	-13	-43.28	134.2	Horizontal	PK	Pass
3	5265.6250	-50.8	19.58	-70.38	-13	-37.8	91.1	Horizontal	PK	Pass
4	8229.0000	-64.04	37.09	-101.13	-13	-51.04	268.8	Horizontal	PK	Pass
5	11880.0000	-59.94	38.71	-98.65	-13	-46.94	328.6	Horizontal	PK	Pass
6	15093.0000	-56.38	39.91	-96.29	-13	-43.38	51.2	Horizontal	PK	Pass

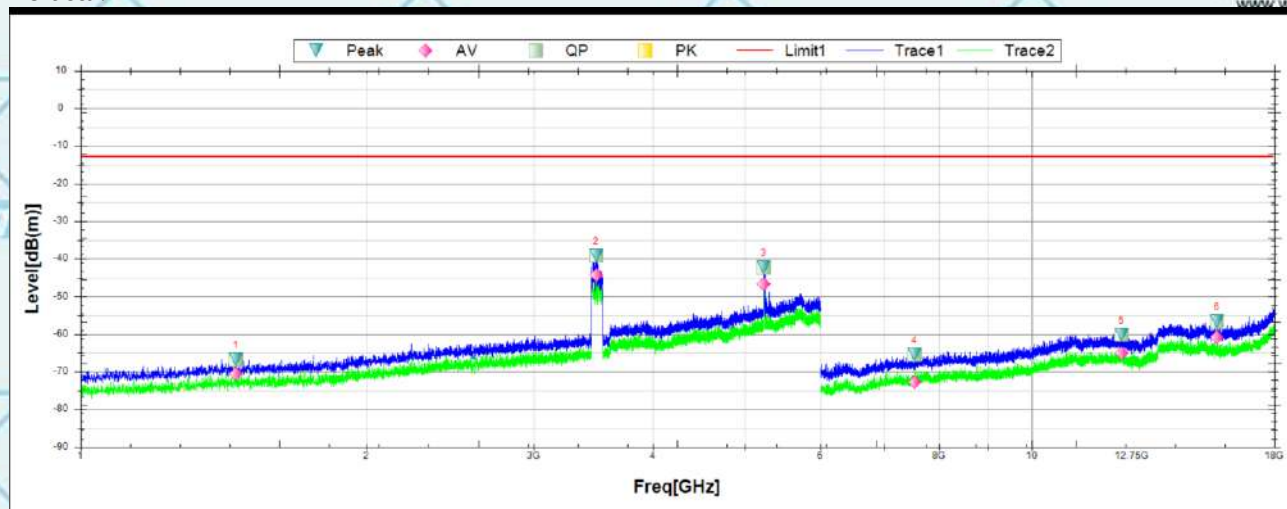


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
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Vertical:



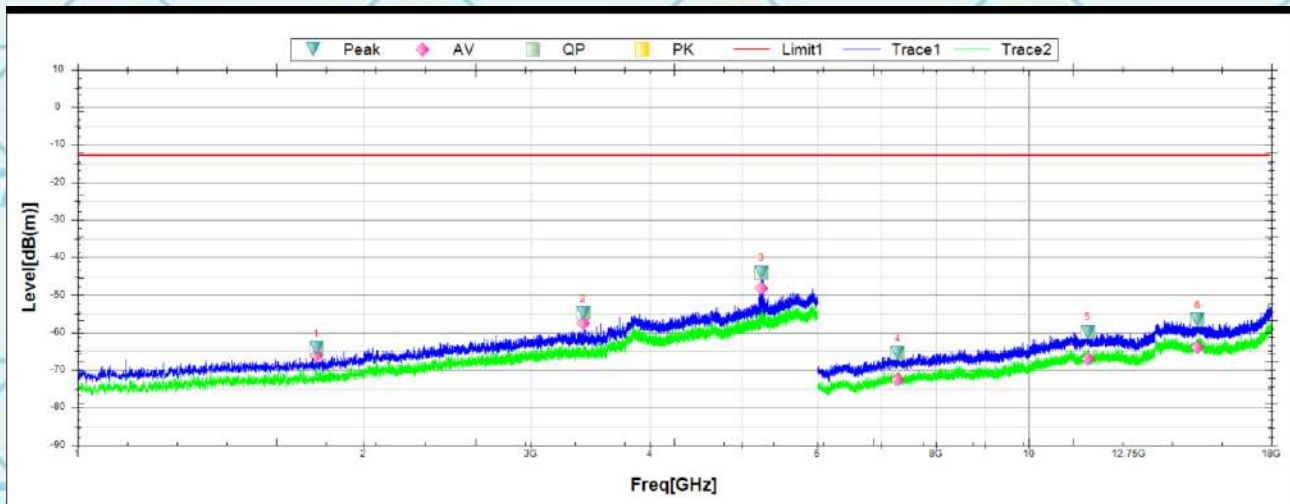
Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1457.5000	-66.73	0.17	-66.9	-13	-53.73	100.1	Vertical	PK	Pass
2	3484.3750	-39.19	10.13	-49.32	-13	-26.19	265	Vertical	PK	Pass
3	5234.3750	-42.38	19.36	-61.74	-13	-29.38	164.6	Vertical	PK	Pass
4	7534.5000	-65.5	36.3	-101.8	-13	-52.5	292.2	Vertical	PK	Pass
5	12439.5000	-60.23	38.73	-98.96	-13	-47.23	83	Vertical	PK	Pass
6	15664.5000	-56.54	38.14	-94.68	-13	-43.54	135.5	Vertical	PK	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
Please Contact with WSCT
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Horizontal:

Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1783.7500	-64.07	1.4	-65.47	-13	-51.07	291.4	Horizontal	PK	Pass
2	3401.8750	-54.85	9.78	-64.63	-13	-41.85	319	Horizontal	PK	Pass
3	5243.1250	-44.12	19.42	-63.54	-13	-31.12	226.9	Horizontal	PK	Pass
4	7285.5000	-65.41	35.93	-101.34	-13	-52.41	301.6	Horizontal	PK	Pass
5	11538.0000	-59.85	39.02	-98.87	-13	-46.85	106.7	Horizontal	PK	Pass
6	15061.5000	-56.57	40.01	-96.58	-13	-43.57	359.9	Horizontal	PK	Pass

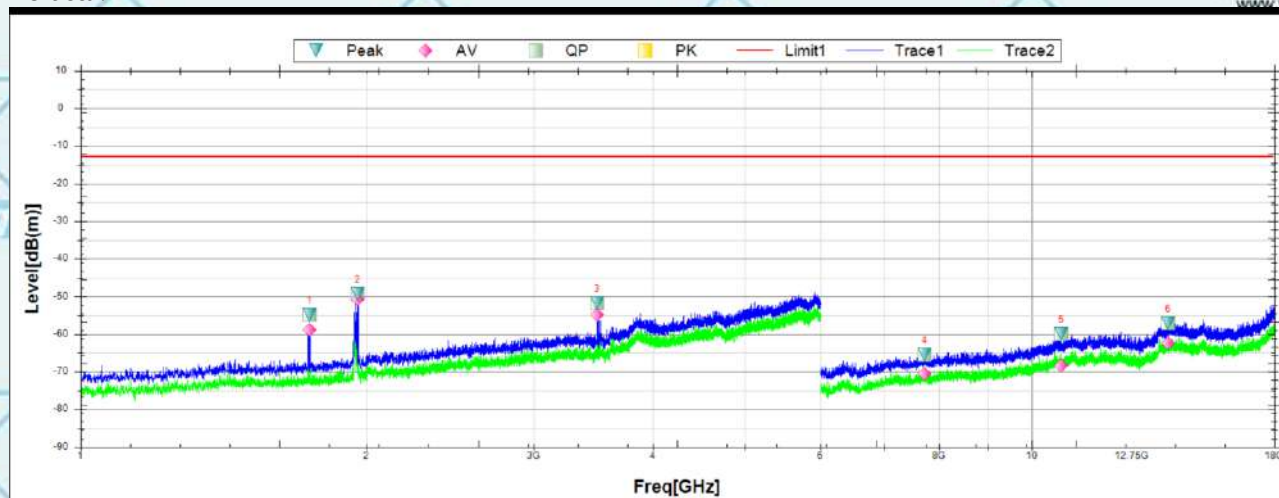


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Certificate #5768.01

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Vertical:



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(m)]	Factor [dB]	Level [dB(m)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1742.5000	-54.94	1.25	-56.19	-13	-41.94	140.3	Vertical	PK	Pass
2	1958.7500	-49.32	2.63	-51.95	-13	-36.32	360.1	Vertical	PK	Pass
3	3496.2500	-51.7	10.17	-61.87	-13	-38.7	219.2	Vertical	PK	Pass
4	7720.5000	-65.57	36.58	-102.15	-13	-52.57	254.3	Vertical	PK	Pass
5	10750.5000	-59.95	39.15	-99.1	-13	-46.95	359.6	Vertical	PK	Pass
6	13929.0000	-57.03	41.32	-98.35	-13	-44.03	266.3	Vertical	PK	Pass



9. OCCUPIED BANDWIDTH & EMISSION BANDWIDTH

Test limit:

The occupied bandwidth (OBW), that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission, shall be measured when modulated by an input signal such that its amplitude and symbol rate represent the maximum rated conditions under which the equipment will be operated. The signal shall be applied through any filter networks, pseudo-random generators or other devices required in normal service. Additionally, the occupied bandwidth shall be shown for operation with any devices used for modifying the spectrum when such devices are optional at the discretion of the user. [i]2.1049(h)]

Many of the individual rule parts specify a relative OBW in lieu of the 99% OBW. In such cases, the OBW is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated by at least X dB below the transmitter power, where the value of X is typically specified as 26.

The relative OBW must be measured and reported when it is specified in the applicable rule part; otherwise, the 99% OBW shall be measured and reported. The test report shall specify which OBW is reported.

A spectrum/signal analyzer or other instrument providing a spectral display is recommended for these measurements and the video bandwidth shall be set to a value at least three times greater than the IF/resolution bandwidth to avoid any amplitude smoothing. Video filtering shall not be used during occupied bandwidth tests.

The OBW shall be measured for all operating conditions that will affect the bandwidth results (e.g. variable modulations, coding, or channel bandwidth settings). See section 4.

Test procedure:

Occupied bandwidth – relative measurement procedure

The reference value is the highest level of the spectral envelope of the modulated signal.

- The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
- The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- Set the reference level of the instrument as required to prevent the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.
- NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- The dynamic range of the spectrum analyzer at the selected RBW shall be at least 10 dB below the target “-X dB down” requirement (i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference value).
- Set the detection mode to peak, and the trace mode to max hold.
- Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- Determine the “-X dB down amplitude” as equal to (Reference Value – X). Alternatively, this calculation can be performed by the analyzer by using the marker-delta function.
- Place two markers, one at the lowest and the other at the highest frequency of the



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envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step g). If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.

j) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Occupied bandwidth – power bandwidth (99%) measurement procedure

The following procedure shall be used for measuring (99 %) power bandwidth

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.

c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.

d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.

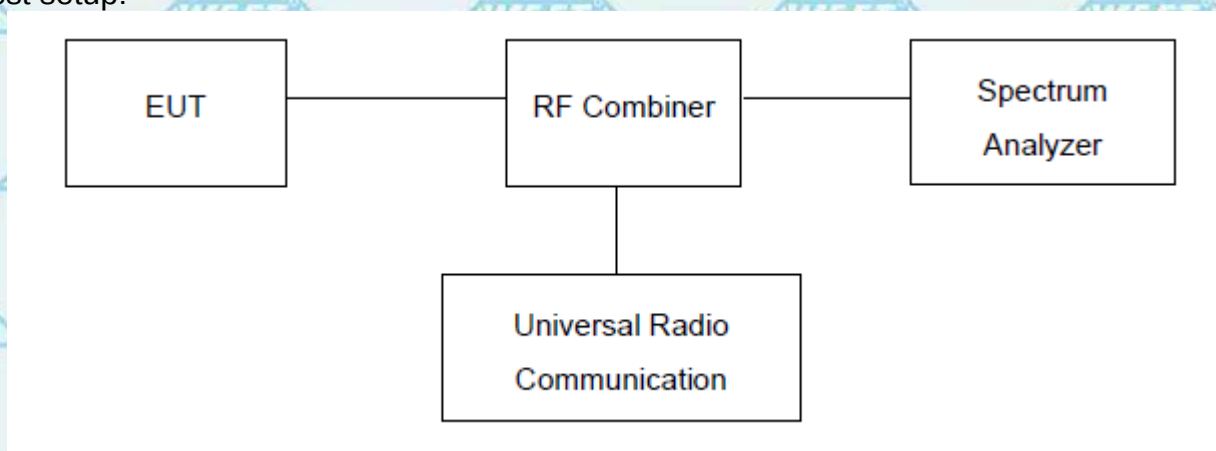
e) Set the detection mode to peak, and the trace mode to max hold..

f) Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.

g) If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.

h) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Test setup:





9.1. Measurement Result

GSM850:

Frequency	OBW(99%)	26dB BW
824.2	245.19KHz	315.71KHz
836.6	245.19KHz	320.51KHz
848.8	245.19KHz	320.51KHz

PCS1900:

Frequency	OBW(99%)	26dB BW
1850.2	246.79KHz	318.91KHz
1880	246.79KHz	318.91KHz
1909.8	246.79KHz	316.03KHz

GPRS850:

Frequency	OBW(99%)	26dB BW
824.2	245.19KHz	318.91KHz
836.6	245.19KHz	320.51KHz
848.8	248.40KHz	314.10KHz

GPRS 1900:

Frequency	OBW(99%)	26dB BW
1850.2	245.19KHz	315.71KHz
1880	245.19KHz	309.29KHz
1909.8	245.19KHz	317.31KHz



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EGPRS 850:

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Frequency	OBW(99%)	26dB BW
824.2	245.19KHz	317.31KHz
836.6	245.19KHz	320.51KHz
848.8	246.79KHz	317.31KHz

EGPRS 1900:

Frequency	OBW(99%)	26dB BW
1850.2	246.79KHz	315.71KHz
1880	243.59KHz	312.50KHz
1909.8	246.79KHz	314.10KHz





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Band 2:

Frequency	OBW(99%)	26dB BW
1852.4	4.167MHz	4.696MHz
1880	4.167MHz	4.712MHz
1907.6	4.167MHz	4.704MHz

Band 4:

Frequency	OBW(99%)	26dB BW
1712.4	4.167MHz	4.712MHz
1732.6	4.167MHz	4.744MHz
1752.6	4.167MHz	4.728MHz

Band 5:

Frequency	OBW(99%)	26dB BW
826.4	4.151MHz	4.712MHz
836.4	4.167MHz	4.712MHz
846.6	4.167MHz	4.712MHz

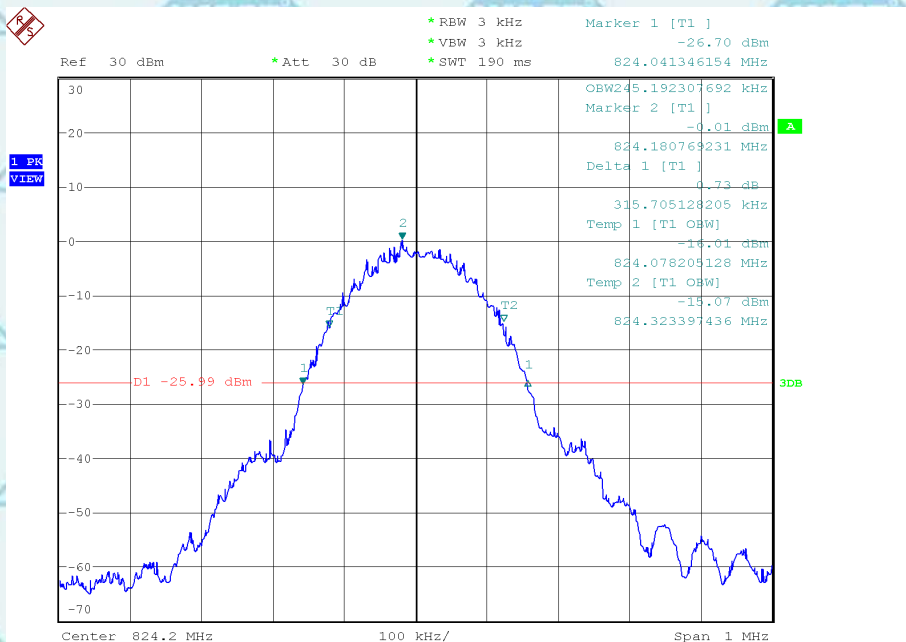


Report No.: WSCT-A2LA-R&E240300009A-RF
Test Plot(s)

Certificate #5768.01

For Question,
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Occupied Bandwidth (99% and -26dBc) GSM 850 Band CH 128



Date: 4.MAR.2024 15:05:56



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World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.

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TEL: 86-755-26996192 26992300 FAX: 86-755-86376605 E-mail: Fengbing.Wang@wsct-cert.com Http: www.wsct-cert.com

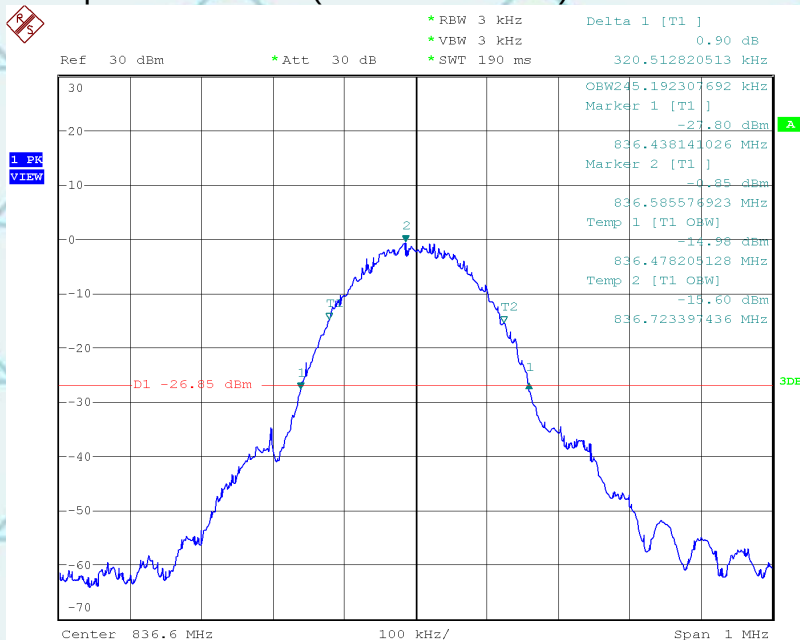


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

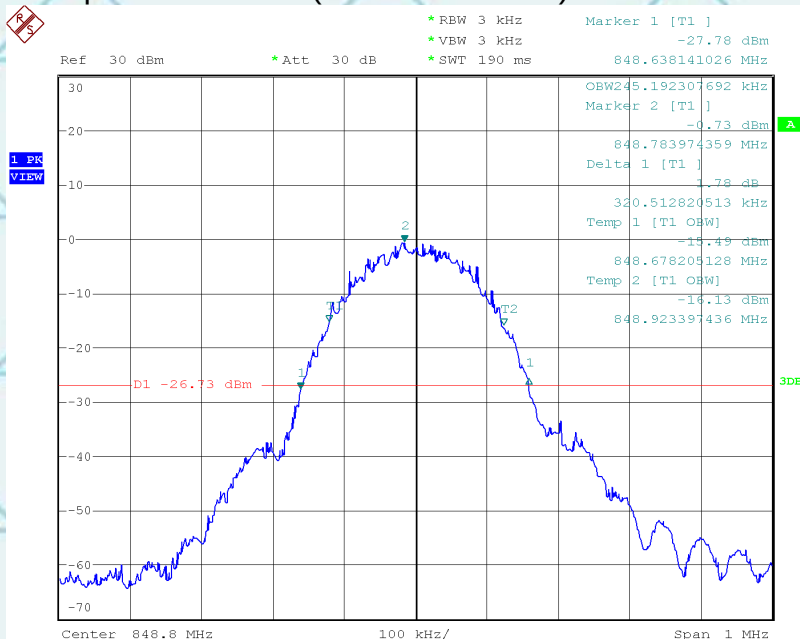
For Question,
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Occupied Bandwidth (99% and -26dBc) GSM 850 Band CH 190



Date: 4.MAR.2024 15:02:26

Occupied Bandwidth (99% and -26dBc) GSM 850 Band CH 251



Date: 4.MAR.2024 14:58:10



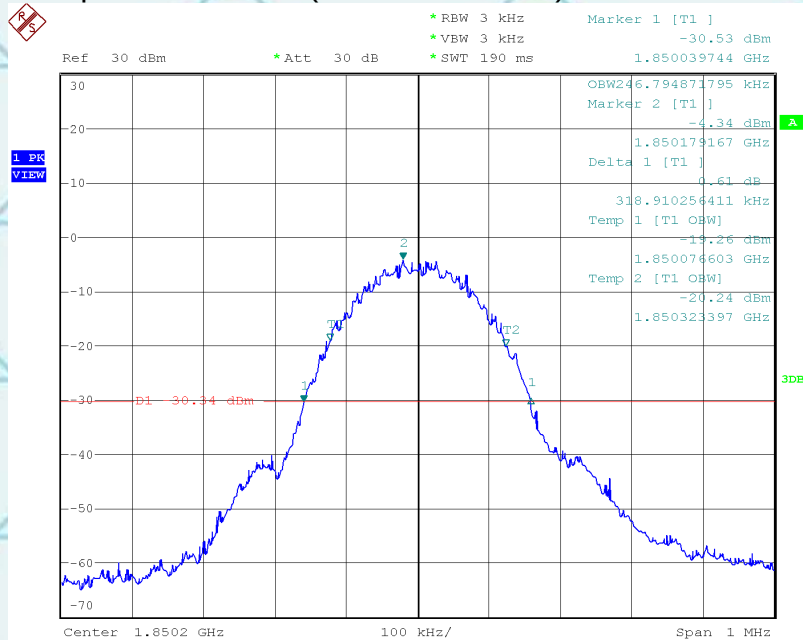


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

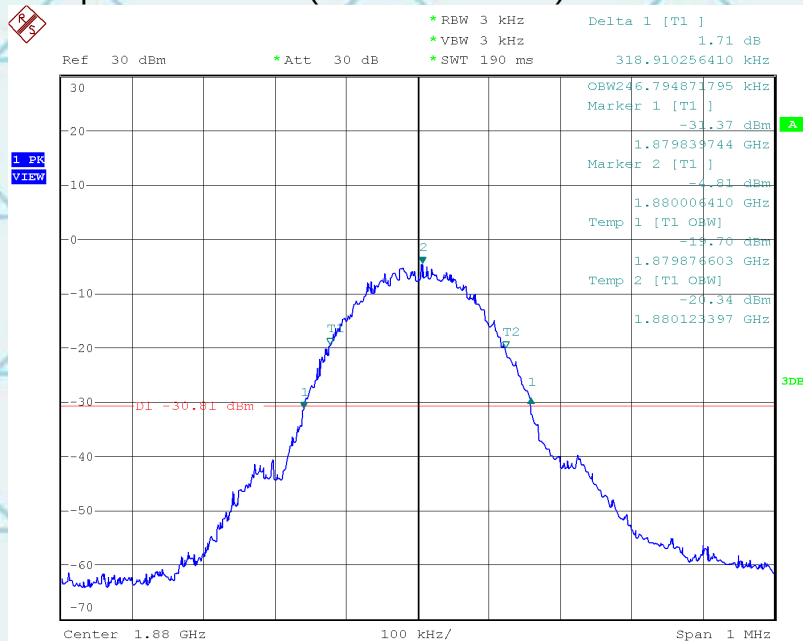
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Occupied Bandwidth (99% and -26dBc) PCS 1900 Band CH 512



Date: 4.MAR.2024 16:16:58

Occupied Bandwidth (99% and -26dBc) PCS 1900 Band CH 661



Date: 4.MAR.2024 16:13:53

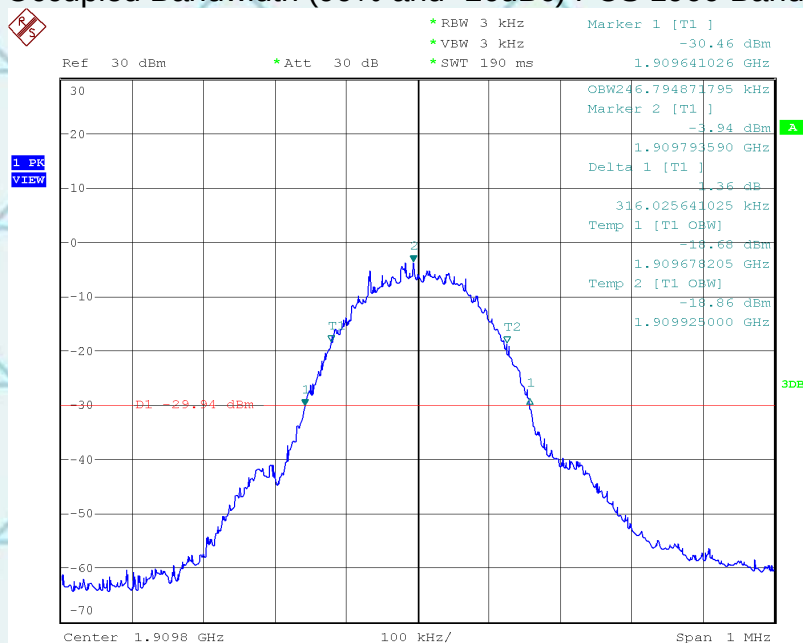


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

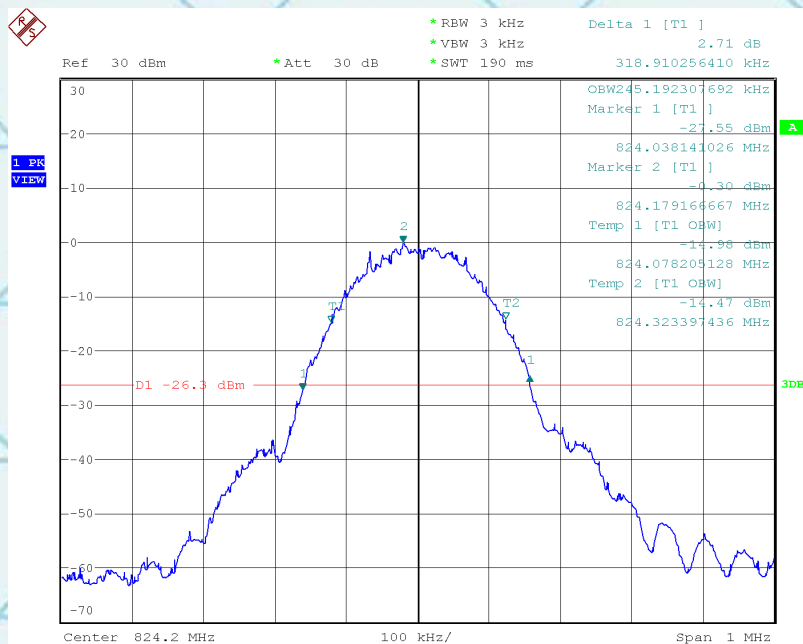
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Occupied Bandwidth (99% and -26dBc) PCS 1900 Band CH 810



Date: 4.MAR.2024 16:10:11

Occupied Bandwidth (99% and -26dBc) GPRS 850 Band CH 128



Date: 4.MAR.2024 14:45:45

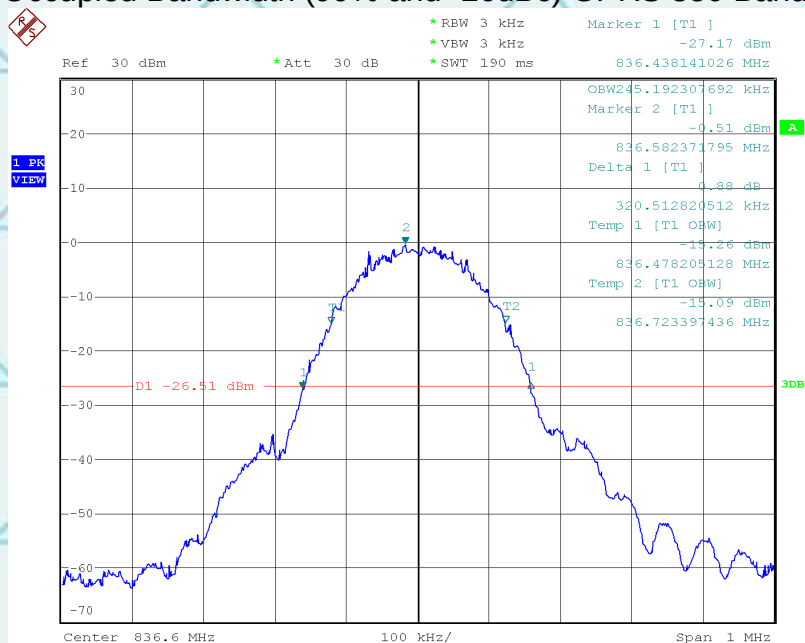


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

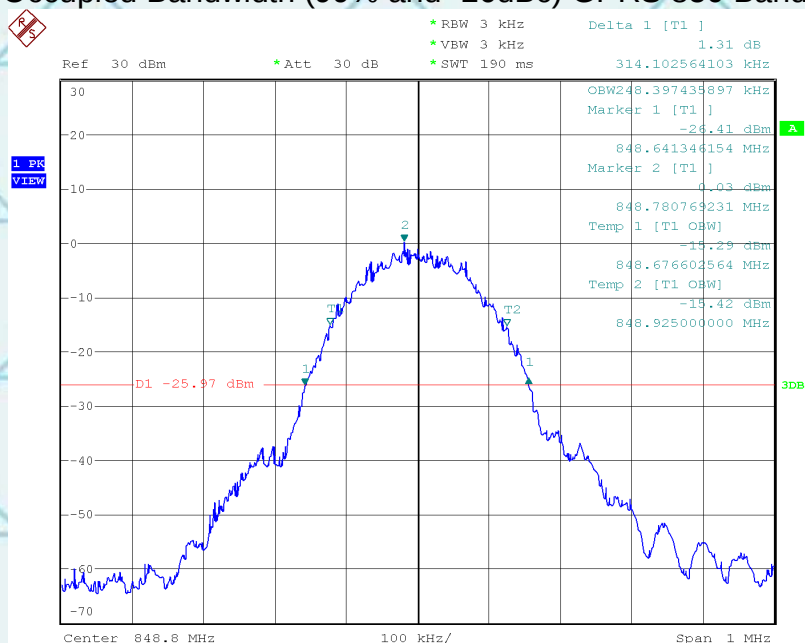
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Occupied Bandwidth (99% and -26dBc) GPRS 850 Band CH 190



Date: 4.MAR.2024 14:53:29

Occupied Bandwidth (99% and -26dBc) GPRS 850 Band CH 251



Date: 4.MAR.2024 14:55:26

Certificate #5768.01

For Question,
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TEL: 86-755-26996192 26992300 FAX: 86-755-86376605 E-mail: Fengbing.Wang@wscl-cert.com Http: www.wscl-cert.com

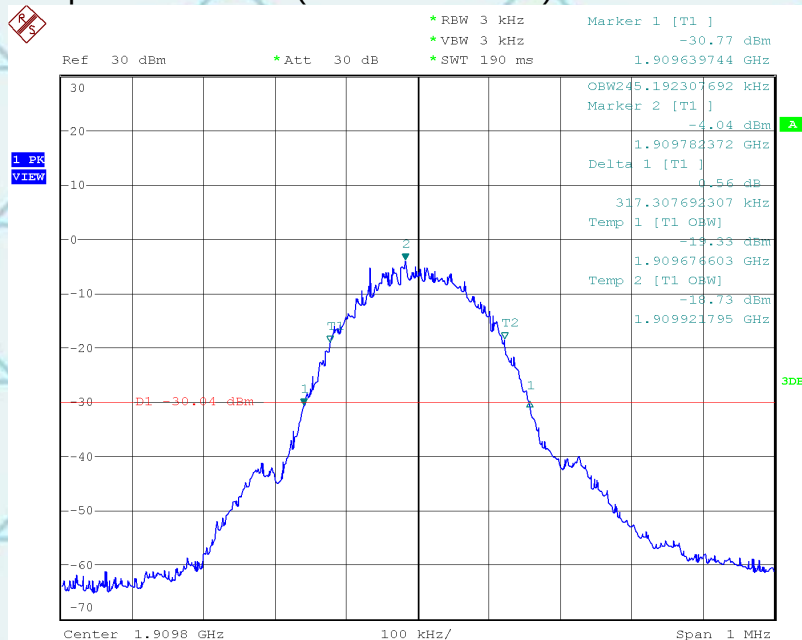


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

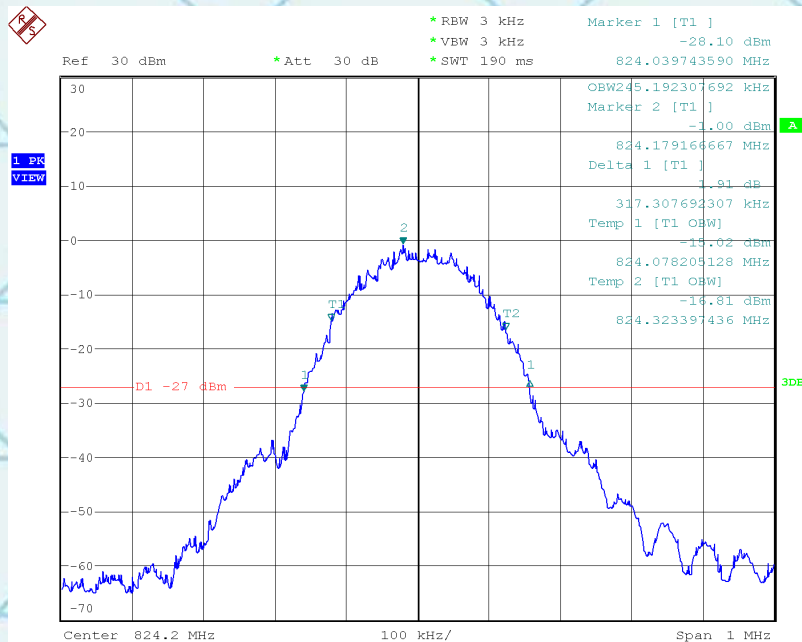
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Occupied Bandwidth (99% and -26dBc) GPRS 1900 Band CH 810



Date: 4.MAR.2024 16:26:38

Occupied Bandwidth (99% and -26dBc) EGPRS 850 Band CH 128



Date: 4.MAR.2024 14:34:21

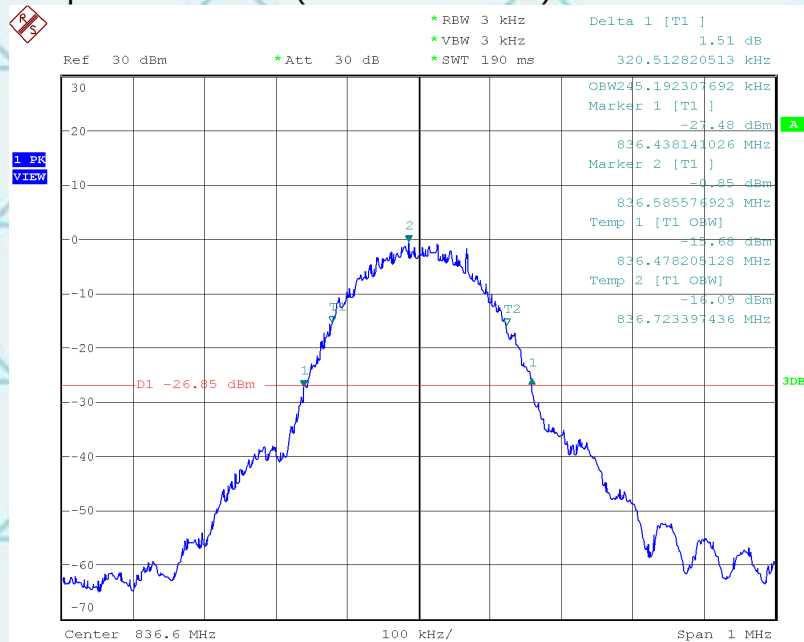


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

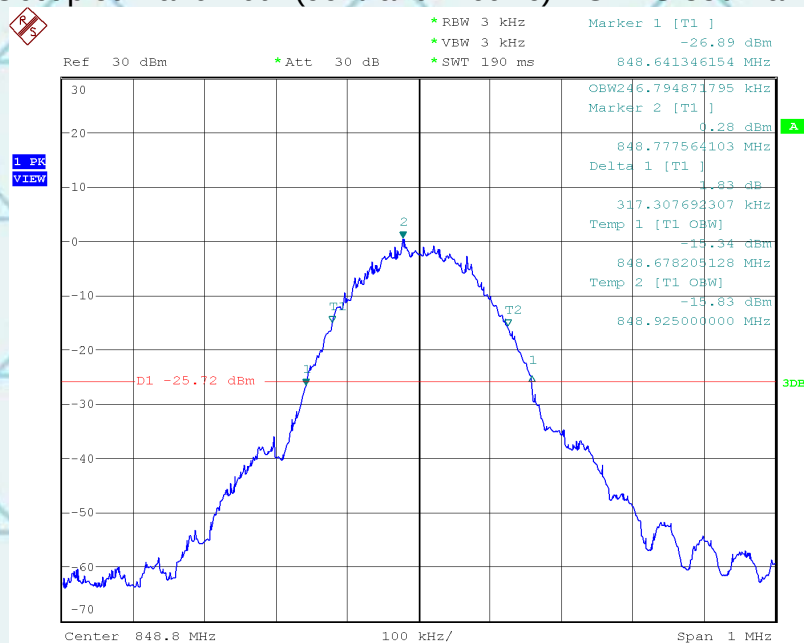
For Question,
Please Contact with WSCT
www.wsct-cert.com

Occupied Bandwidth (99% and -26dBc) EGPRS 850 Band CH 190



Date: 4.MAR.2024 14:32:47

Occupied Bandwidth (99% and -26dBc) EGPRS 850 Band CH 251



Date: 4.MAR.2024 14:30:29

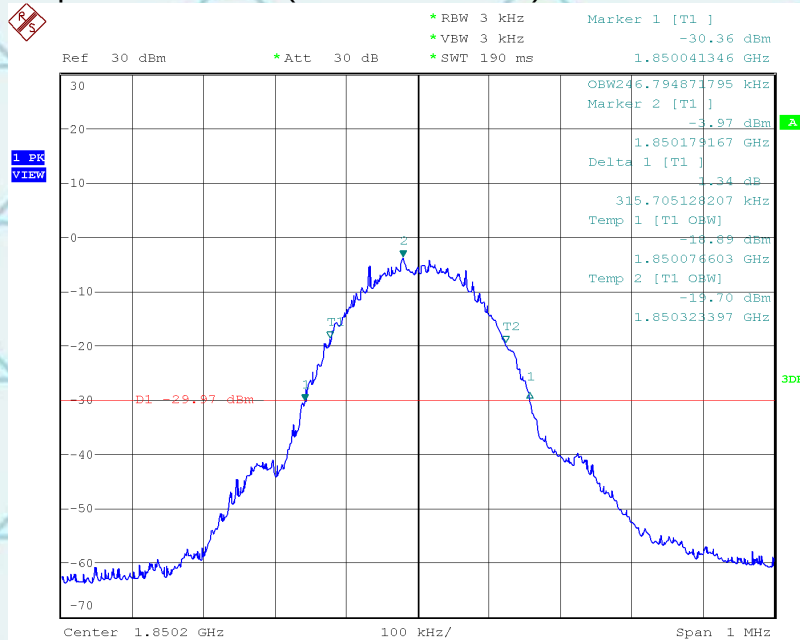


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

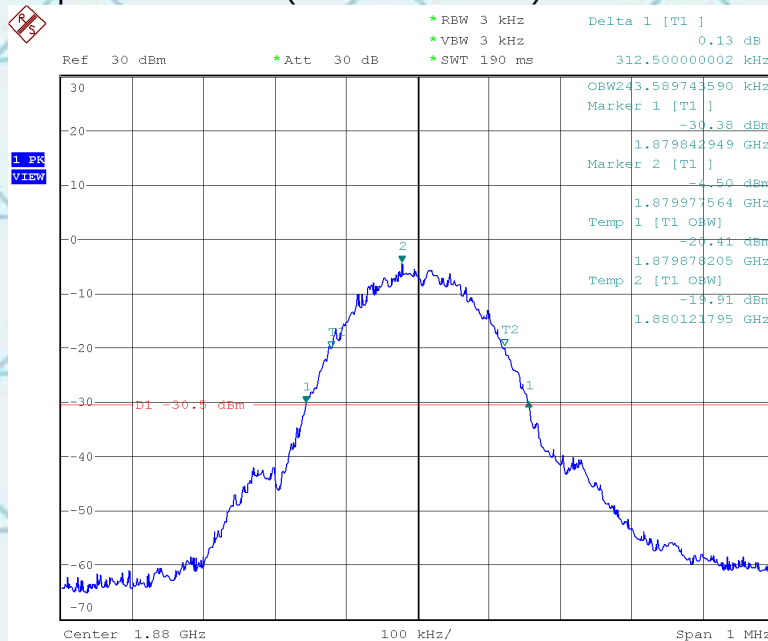
For Question,
Please Contact with WSCT
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Occupied Bandwidth (99% and -26dBc) EGPRS 1900 Band CH 512



Date: 4.MAR.2024 16:20:44

Occupied Bandwidth (99% and -26dBc) EGPRS 1900 Band CH 661



Date: 4.MAR.2024 16:23:06

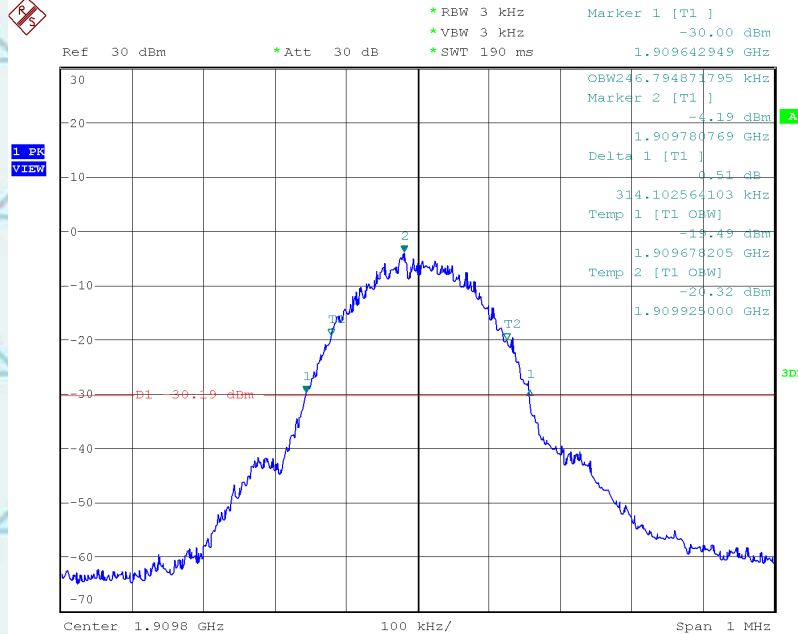


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com

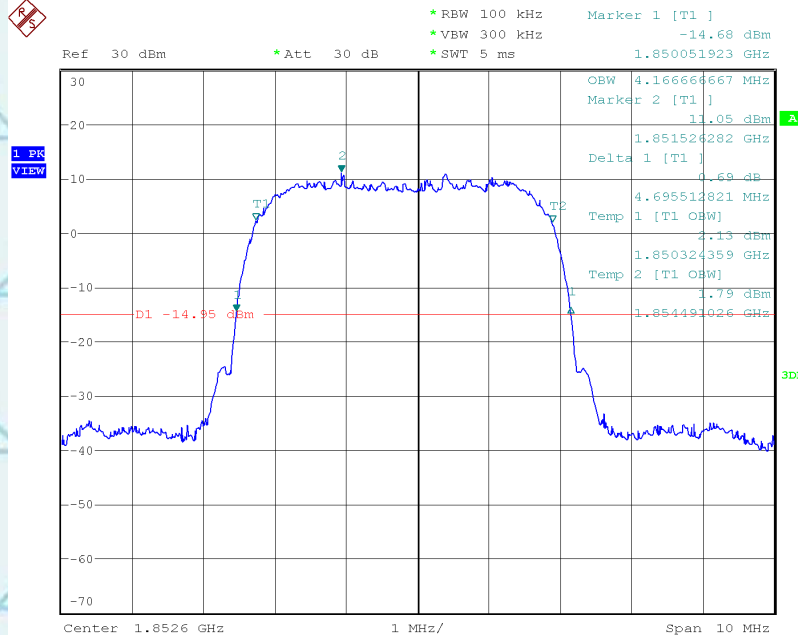
Occupied Bandwidth (99% and -26dBc) EGPRS 1900 Band CH 810



Date: 4.MAR.2024 16:24:50

UTRA BANDS

Occupied Bandwidth (99% and -26dBc) WCDMA Band 2 CH 9262



Date: 5.MAR.2024 15:10:49

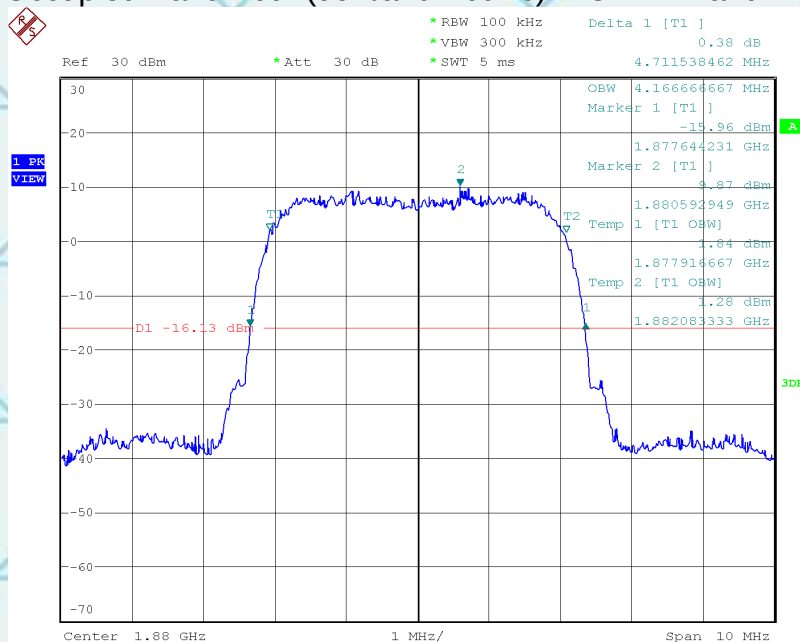


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

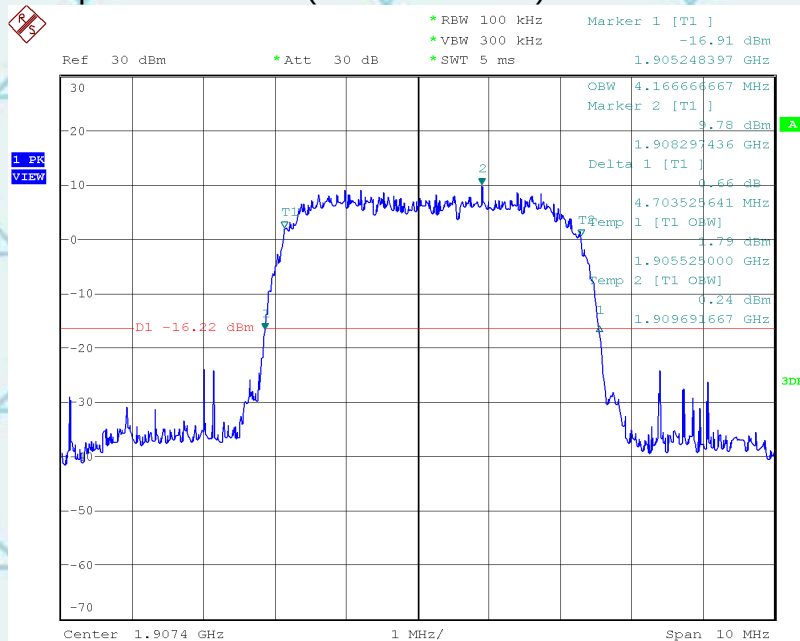
For Question,
Please Contact with WSCT
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Occupied Bandwidth (99%and-26dBc) WCDMA Band 2 CH 9400



Date: 5.MAR.2024 15:00:53

Occupied Bandwidth (99%and-26dBc) WCDMA Band 2 CH 9538



Date: 5.MAR.2024 15:07:51



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ADD: Building A-B Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China
TEL: 86-755-26996192 26992306 FAX: 86-755-86376605 E-mail: Fengbing.Wang@wsct-cert.com Http: www.wsct-cert.com

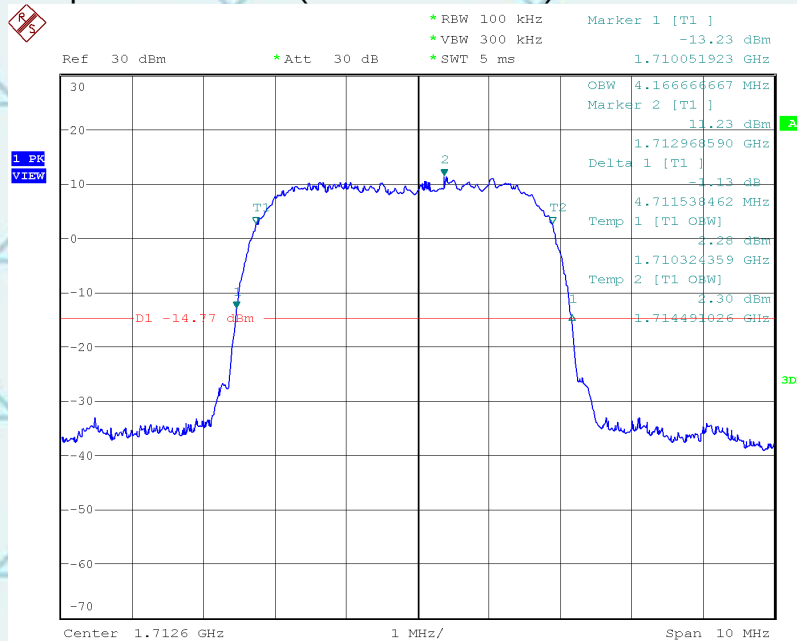


Report No.: WSCT-A2LA-R&E240300009A-RF

Occupied Bandwidth (99% and -26dBc) WCDMA Band 4 CH 1312

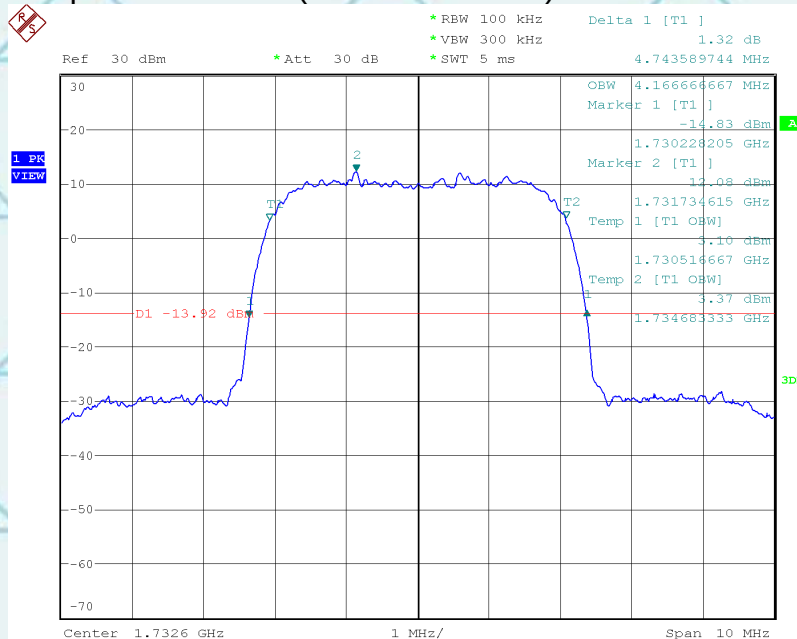
Certificate #5768.01

For Question,
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Date: 5.MAR.2024 16:36:23

Occupied Bandwidth (99% and -26dBc) WCDMA Band 4 CH 1413



Date: 5.MAR.2024 16:33:33

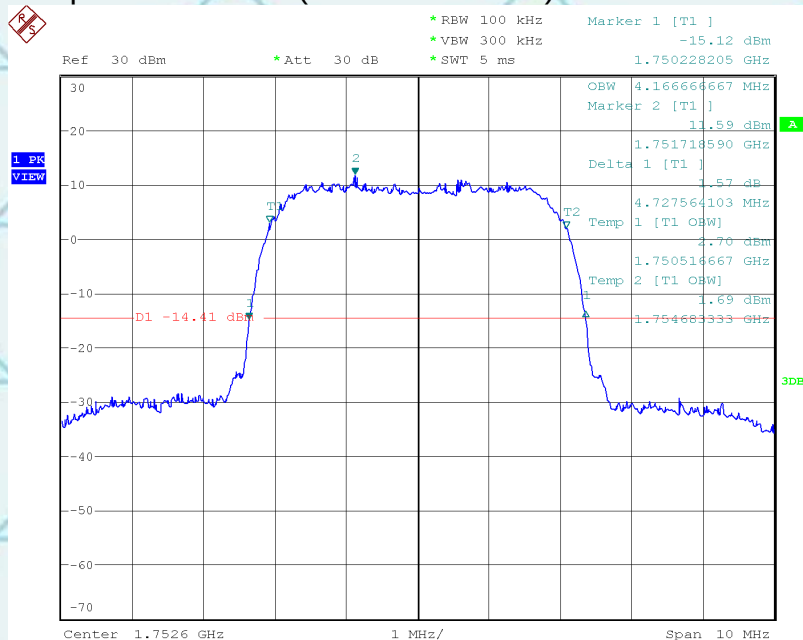


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

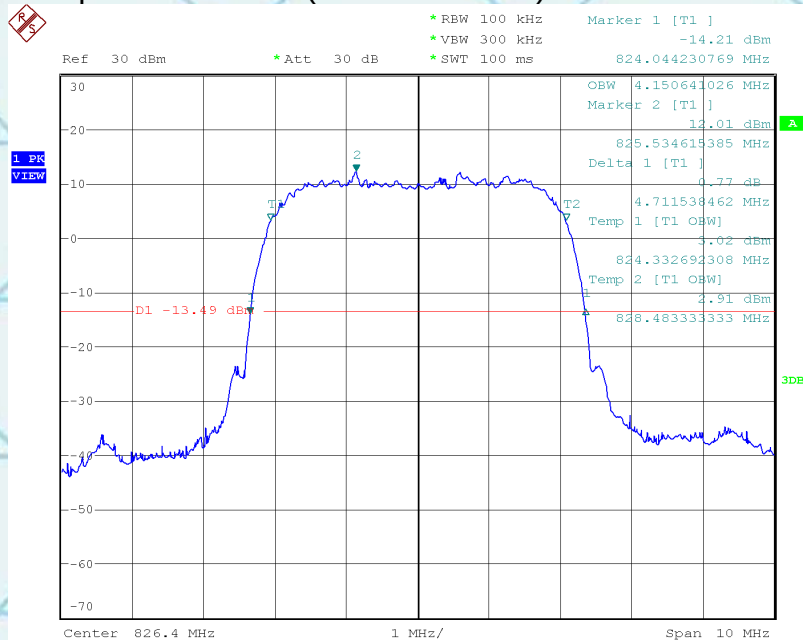
For Question,
Please Contact with WSCT
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Occupied Bandwidth (99% and -26dBc) WCDMA Band 4 CH 1513



Date: 5.MAR.2024 15:45:46

Occupied Bandwidth (99%and-26dBc) WCDMA Band 5 CH 4132



Date: 5.MAR.2024 16:50:17

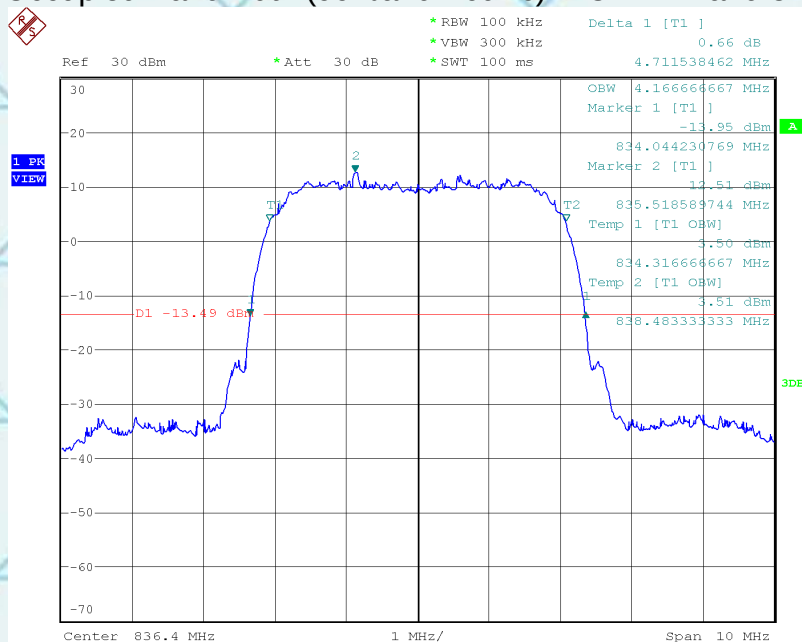


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

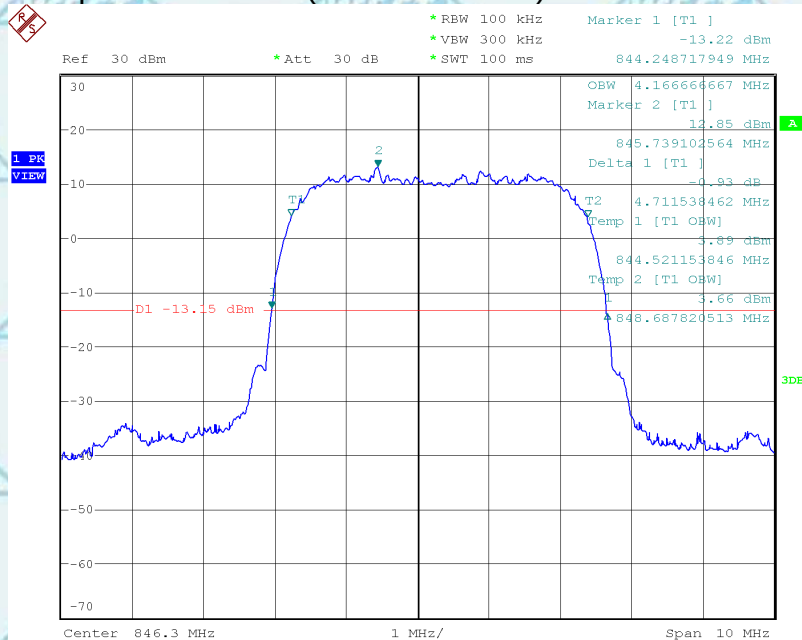
For Question,
Please Contact with WSCT
www.wsct-cert.com

Occupied Bandwidth (99%and-26dBc) WCDMA Band 5 CH 4182



Date: 5.MAR.2024 16:48:57

Occupied Bandwidth (99%and-26dBc) WCDMA Band 5 CH 4233



Date: 5.MAR.2024 16:47:32

Note: Please refer to Annex (LTE&NR Occupied Bandwidth) for more test data



10. BAND EDGE

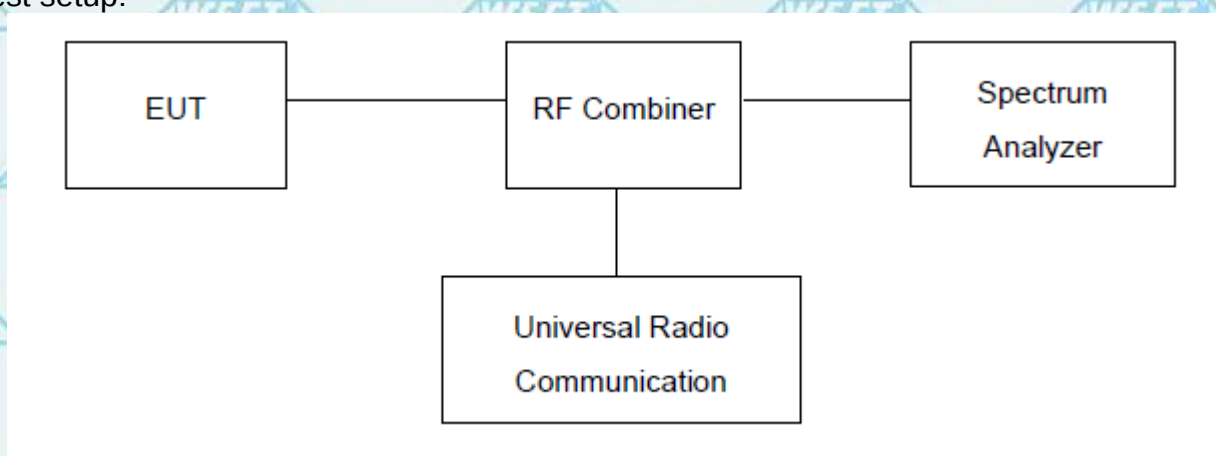
Test Limit:

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in §2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified. See section 4.

Test procedure:

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

Test setup:





Report No.: WSCT-A2LA-R&E240300009A-RF

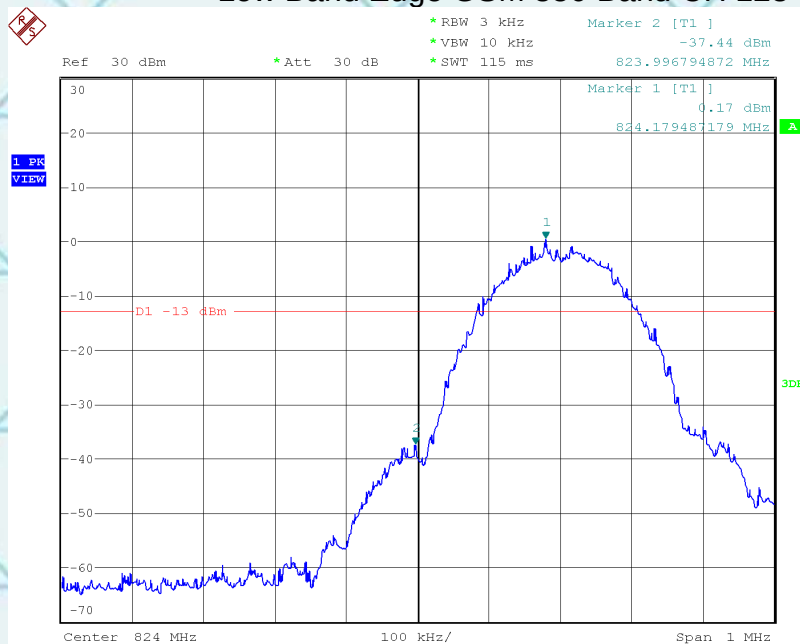
Certificate #5768.01

For Question,
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10.1. Measurement Result

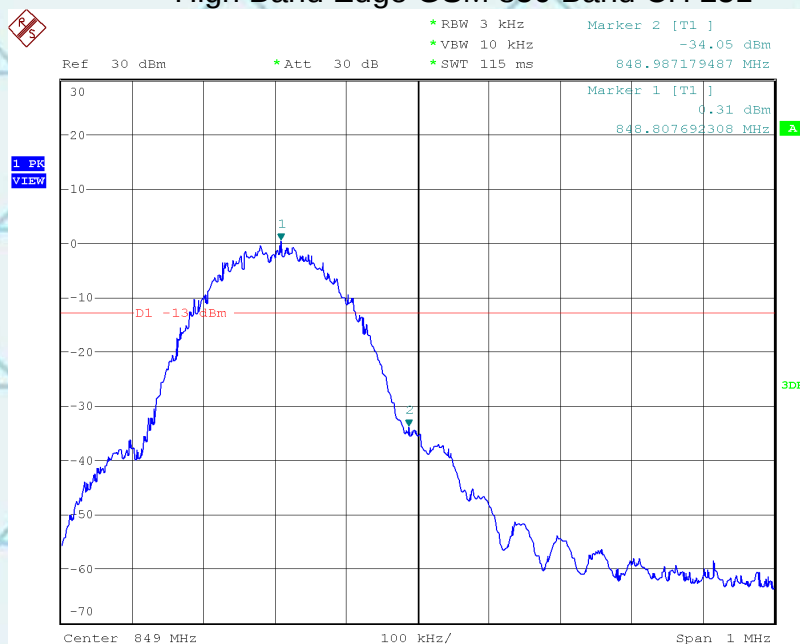
Test Plot(s)

Low Band Edge GSM 850 Band CH 128



Date: 4.MAR.2024 14:23:33

High Band Edge GSM 850 Band CH 251



Date: 4.MAR.2024 14:25:39

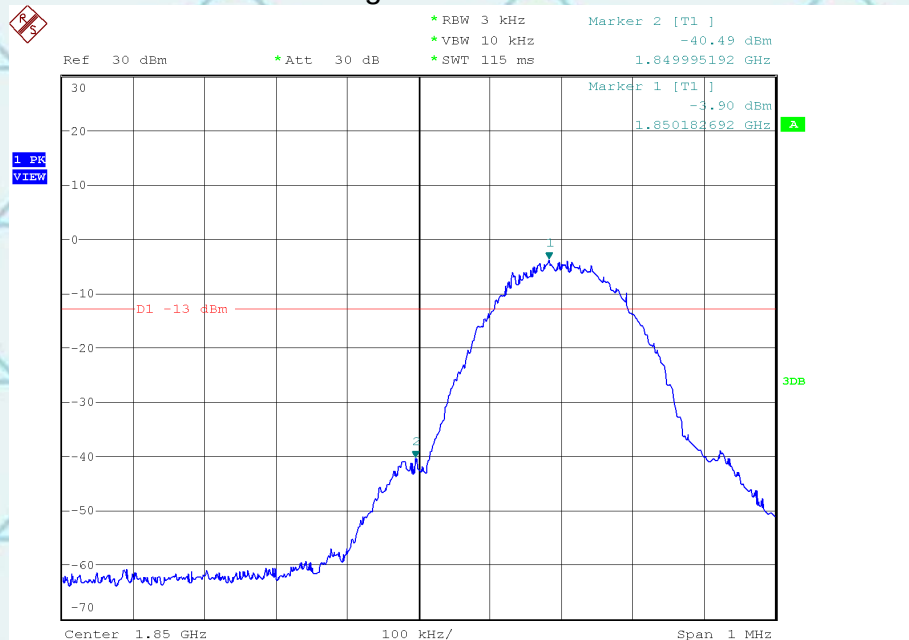


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

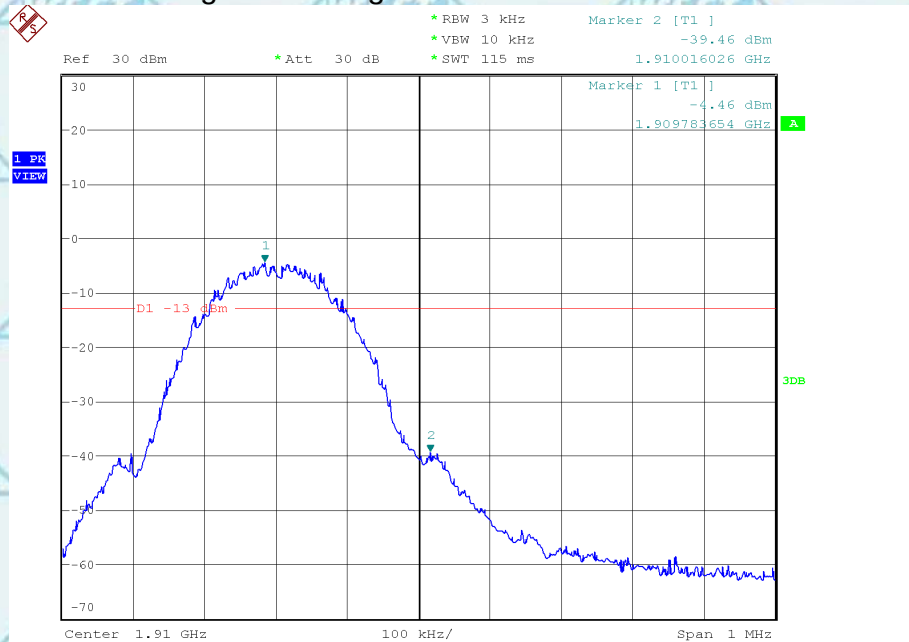
For Question,
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Low Band Edge PCS 1900 Band CH 512



Date: 4.MAR.2024 16:02:29

High Band Edge PCS 1900 Band CH 810



Date: 4.MAR.2024 16:05:02

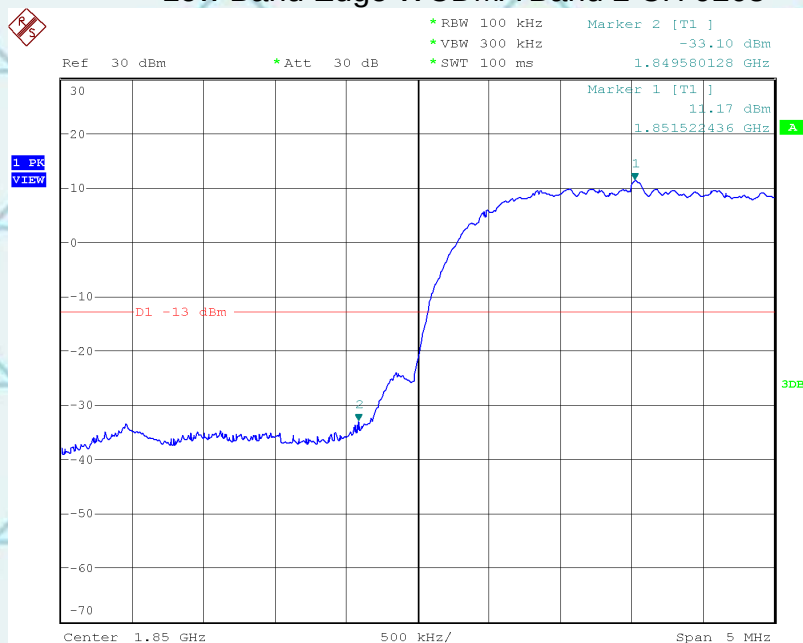


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

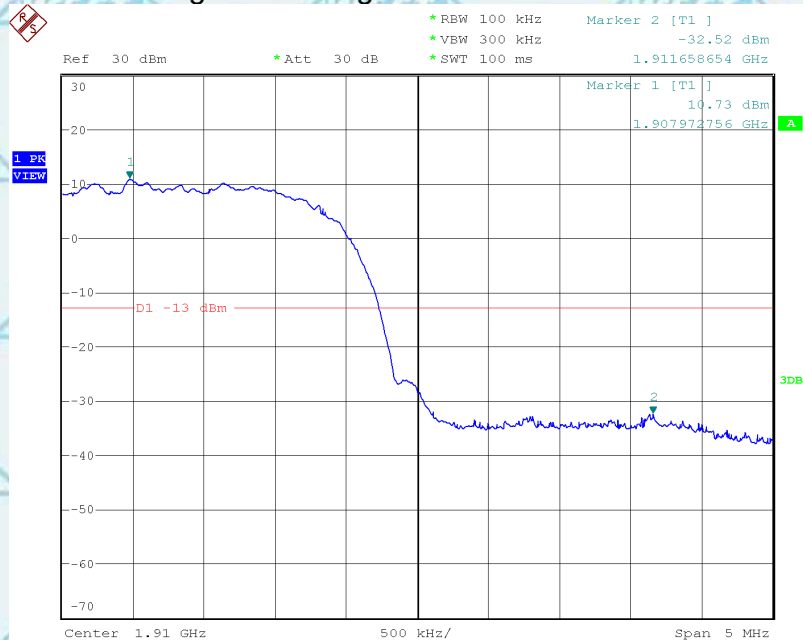
For Question,
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Low Band Edge WCDMA Band 2 CH 9263



Date: 5.MAR.2024 15:02:34

High Band Edge WCDMA Band 2 CH 9537



Date: 5.MAR.2024 15:04:36

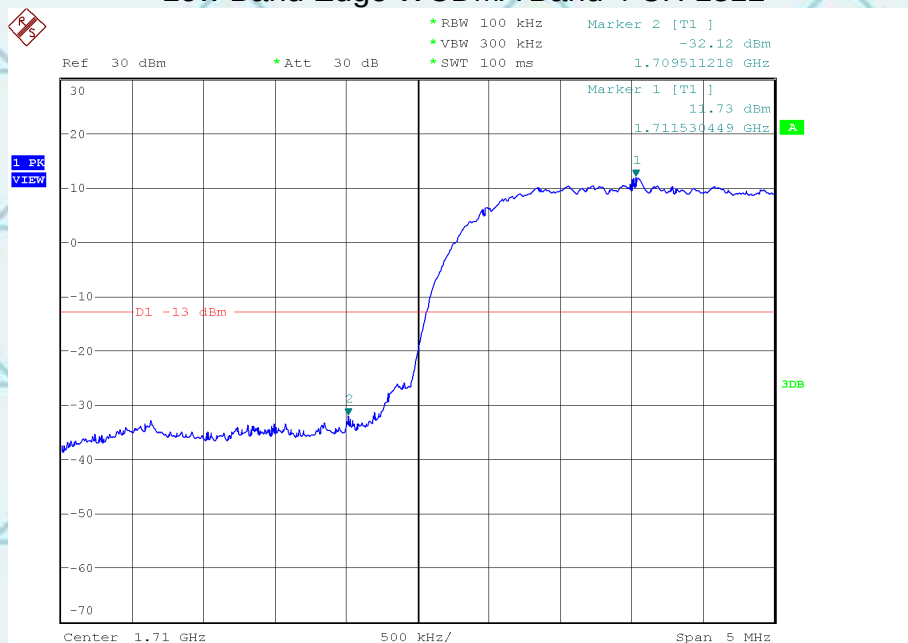


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

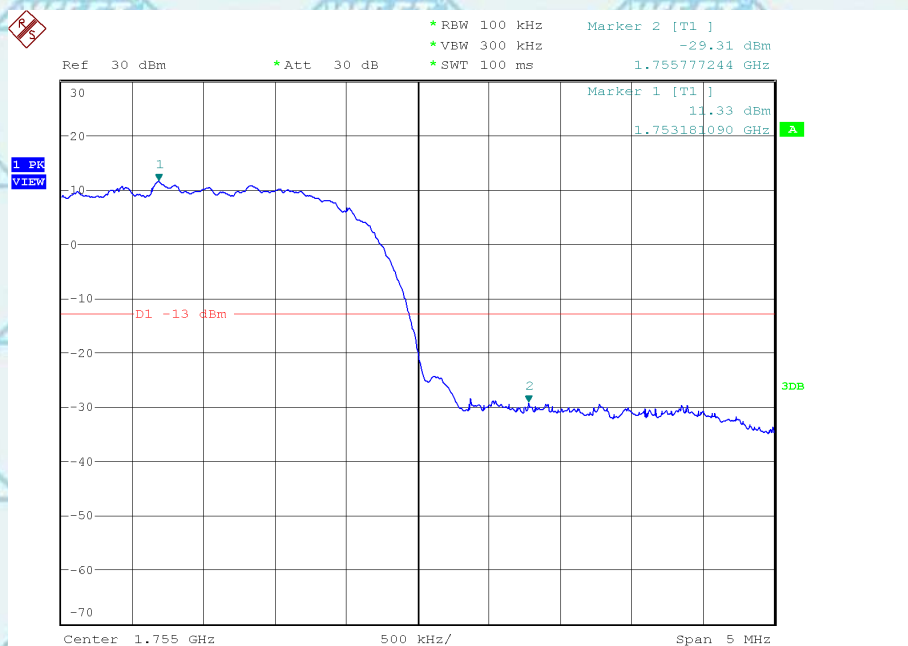
For Question,
Please Contact with WSCT
www.wsct-cert.com

Low Band Edge WCDMA Band 4 CH 1312



Date: 5.MAR.2024 15:40:51

Low Band Edge WCDMA Band 4 CH 1513



Date: 5.MAR.2024 15:42:31



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ADD: Building A-B Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China
 TEL: 86-755-26996192 26992306 FAX: 86-755-86376605 E-mail: Fengbing.Wang@wsct-cert.com Http: www.wsct-cert.com

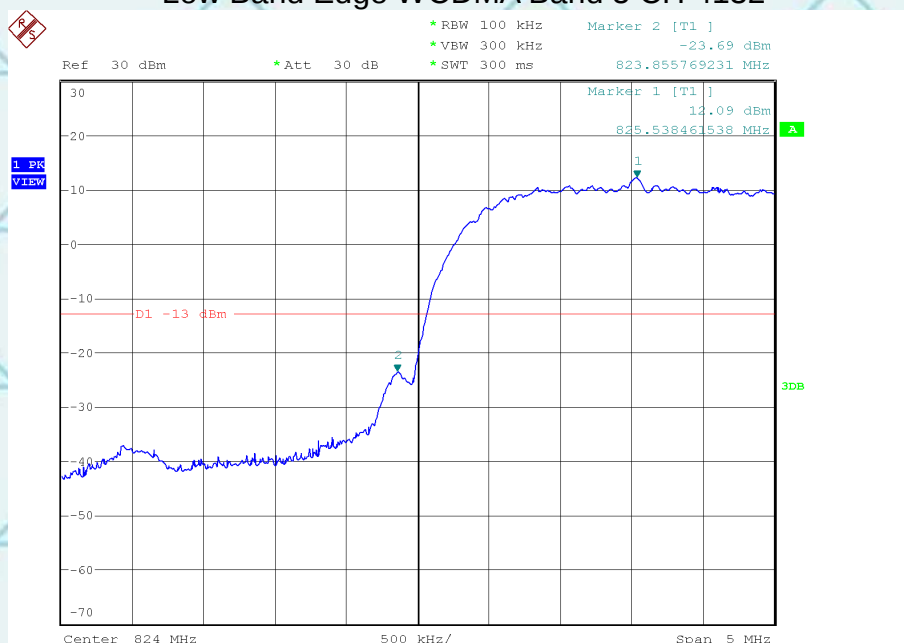


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

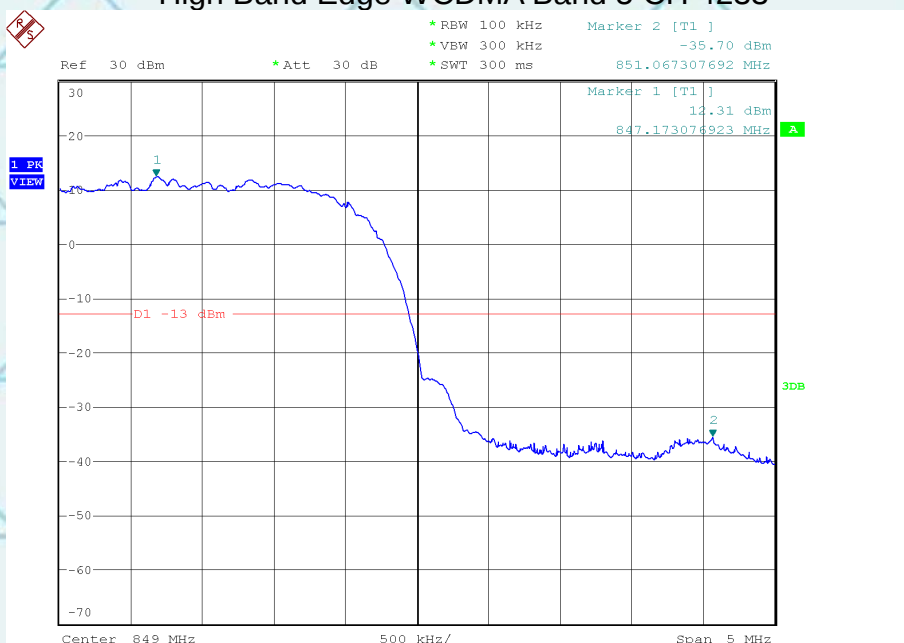
For Question,
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Low Band Edge WCDMA Band 5 CH 4132



Date: 5.MAR.2024 16:42:45

High Band Edge WCDMA Band 5 CH 4233



Date: 5.MAR.2024 16:44:11

Note: Please refer to Annex (LTE&NR Band Edge) for more test data



11. SPURIOUS EMISSION (Conducted and Radiated)

11.1. Measurement Result (Pre-measurement)

GSM850:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	0.2	128	824.2	Pass
Middle Range	0.2	190	836.6	Pass
High Range	0.2	251	848.8	Pass

PCS 1900 :

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	0.2	512	1850.2	Pass
Middle Range	0.2	661	1880.0	Pass
High Range	0.2	810	1909.8	Pass

UTRA BANDS

Band 2:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	9262	1852.4	Pass
Middle Range	5	9400	1880.0	Pass
High Range	5	9538	1907.6	Pass

Band 4:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	1312	1712.4	Pass
Middle Range	5	1413	1732.6	Pass
High Range	5	1513	1752.6	Pass

Band 5:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	4132	826.4	Pass
Middle Range	5	4182	836.4	Pass
High Range	5	4233	846.6	Pass



Report No.: WSCT-A2LA-R&E240300009A-RF

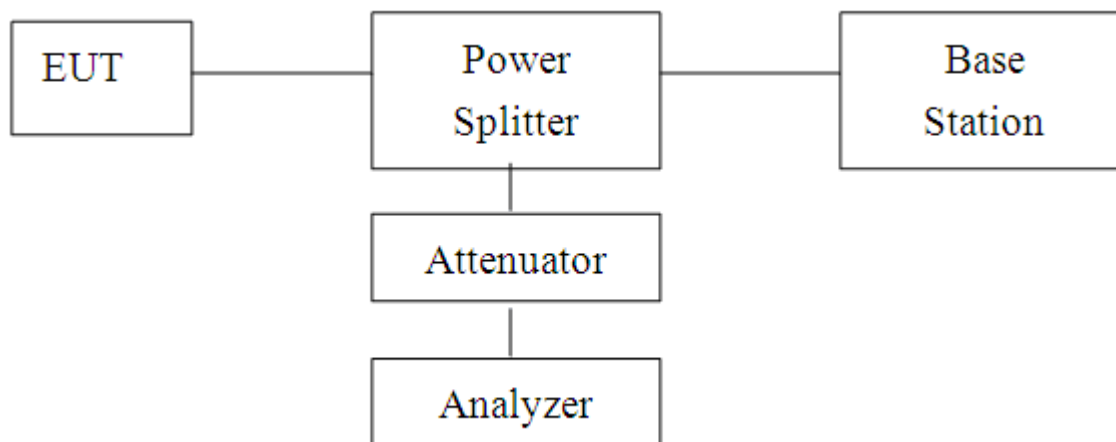
Test Plot(s)**Conducted method****Test limit:**

The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. In some rule parts, the unwanted emission limits are specified by an emission mask that defines the applicable limit as a function of the frequency range relative to the authorized frequency block.

Typically, unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $X + 10\log(P)$ dB, where P represents the transmitter power expressed in watts and X is a specified scalar value (e.g., 43). This specification can be interpreted in one of two equivalent ways. First, the required attenuation can be construed to be relative to the mean carrier power, with the resultant of the equation $X + 10\log(P)$ being expressed in dBc (dB relative to the maximum carrier power). Alternatively, the specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e., $10\log(P) - \{X + 10\log(P)\}$], resulting in an absolute level of $-X$ dBW [or $(-X + 30)$ dBm]. See section 4.

Test procedure:

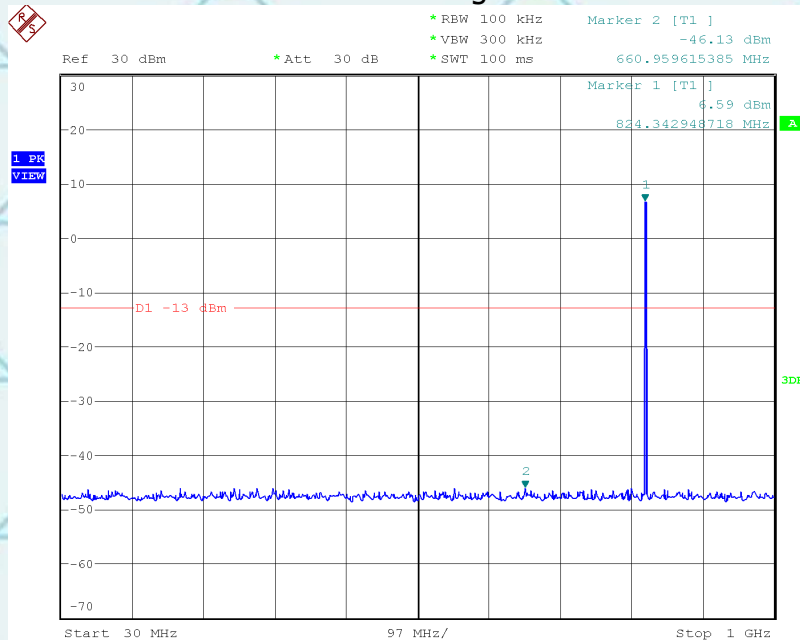
The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz below 1 GHz and 1 MHz above 1 GHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonics.

Conducted Emission Test-Up:



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com**CONDUCTED EMISSION IN GSM850 Band**
Conducted Emission Transmitting Mode CH 128 30MHz – 1GHz

Date: 4.MAR.2024 15:08:24

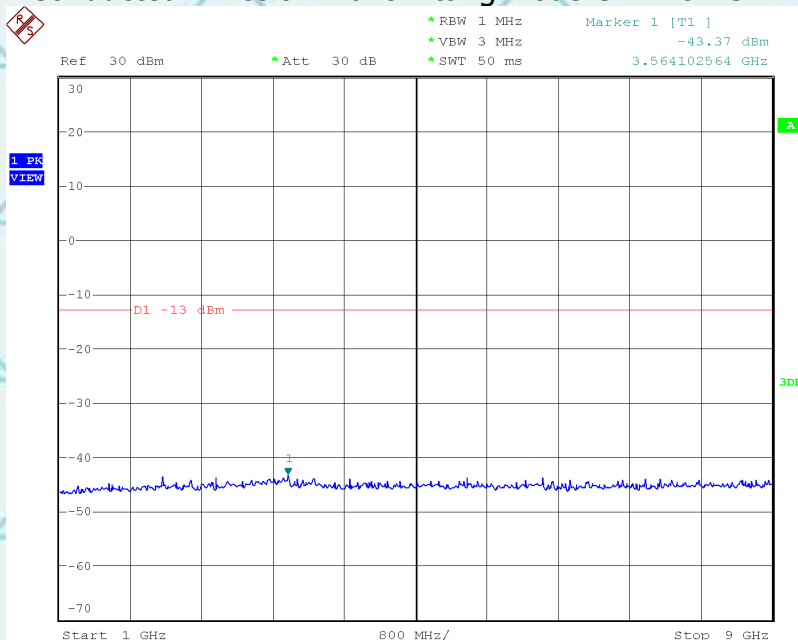


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

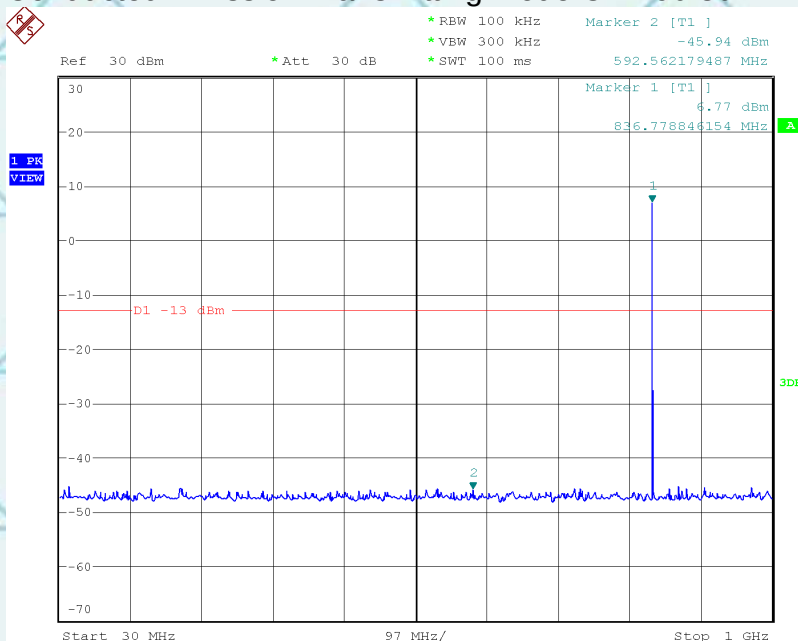
For Question,
Please Contact with WSCT
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Conducted Emission Transmitting Mode CH 128 1GHz – 9GHz



Date: 4.MAR.2024 15:19:48

Conducted Emission Transmitting Mode CH 190 30MHz – 1GHz



Date: 4.MAR.2024 15:10:52

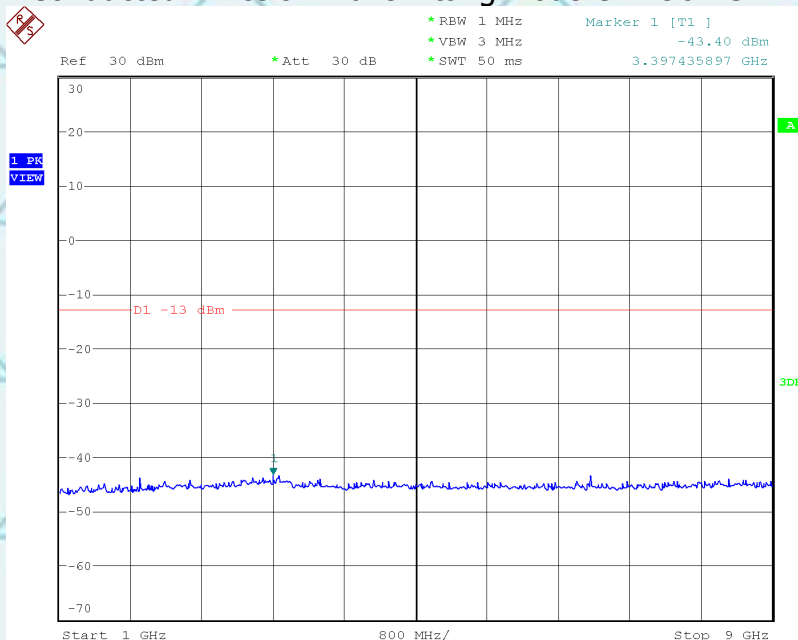


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

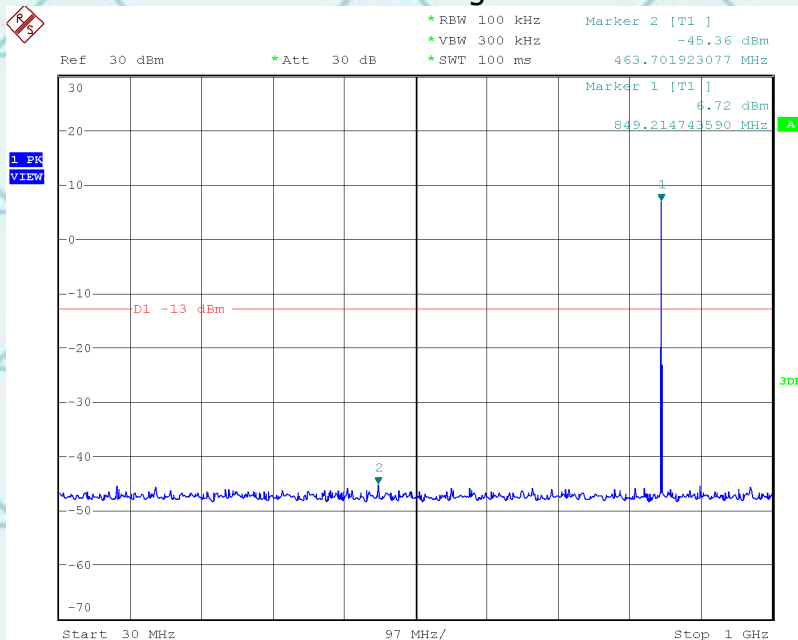
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Conducted Emission Transmitting Mode CH 190 1GHz – 9GHz



Date: 4.MAR.2024 15:21:43

Conducted Emission Transmitting Mode CH 251 30MHz – 1GHz



Date: 4.MAR.2024 15:12:37

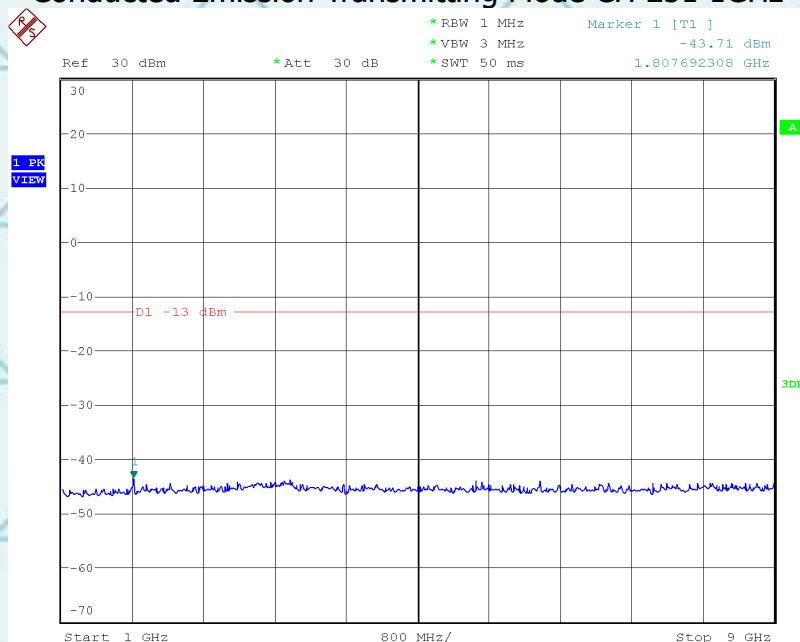


Report No.: WSCT-A2LA-R&E240300009A-RF

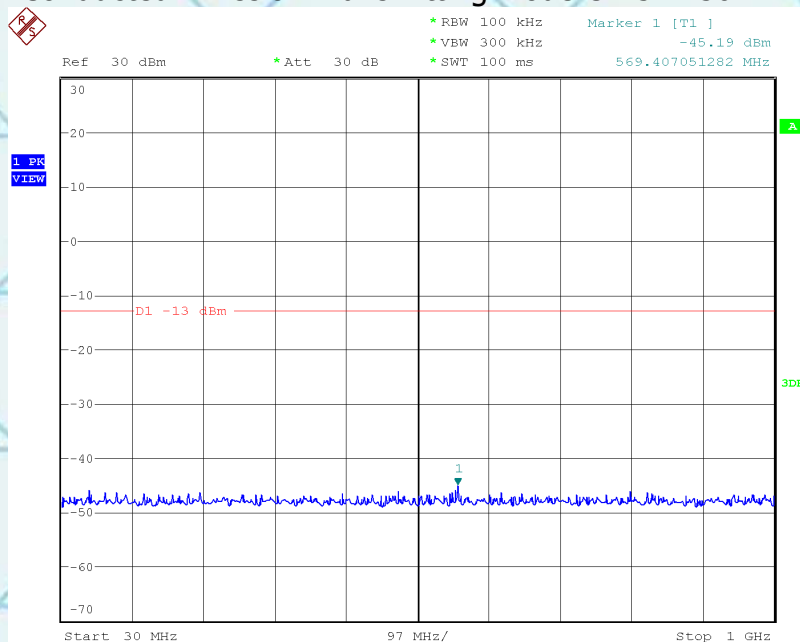
Certificate #5768.01

For Question,
Please Contact with WSCT
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Conducted Emission Transmitting Mode CH 251 1GHz – 9GHz



Date: 4.MAR.2024 15:15:58

CONDUCTED EMISSION IN PCS1900 BAND
Conducted Emission Transmitting Mode CH 512 30MHz – 1GHz

Date: 4.MAR.2024 15:48:30

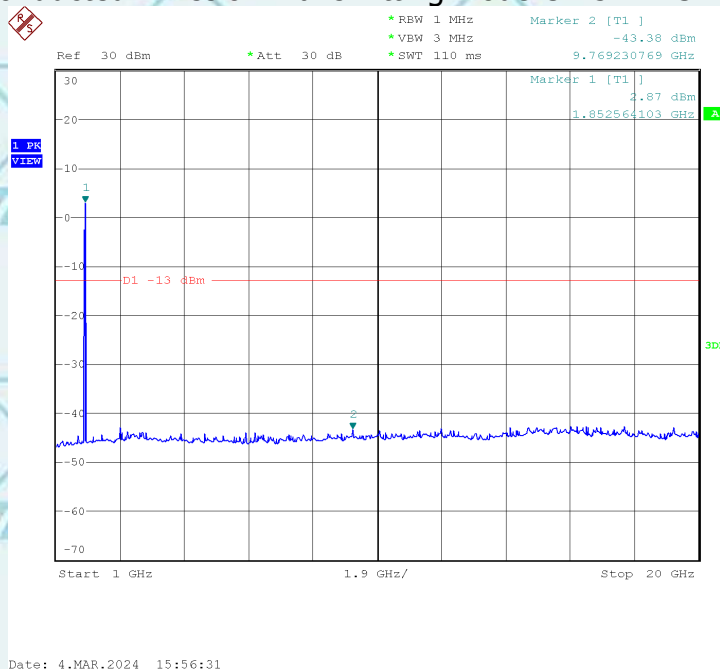


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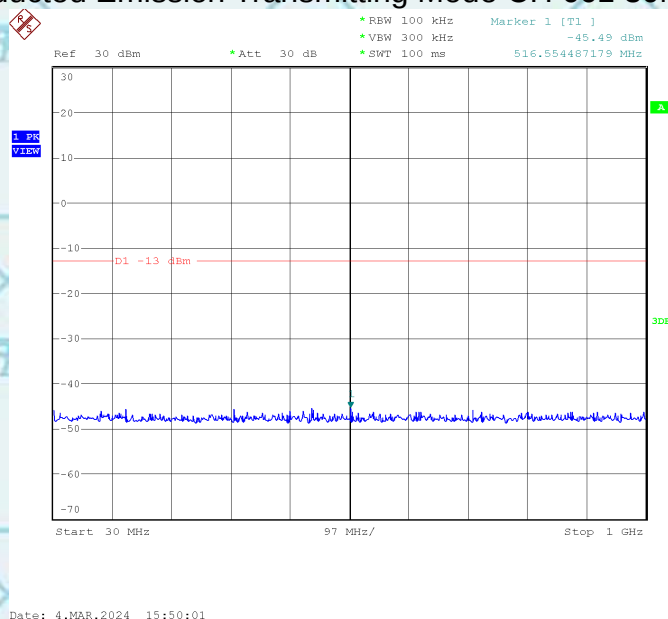
Certificate #5768.01

For Question,
Please Contact with WSCT
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Conducted Emission Transmitting Mode CH 512 1GHz – 20GHz



Conducted Emission Transmitting Mode CH 661 30MHz – 1GHz



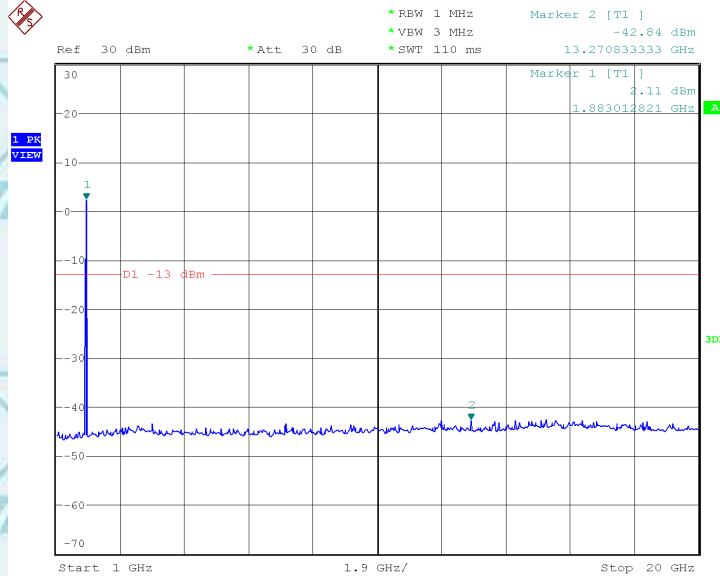


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Certificate #5768.01

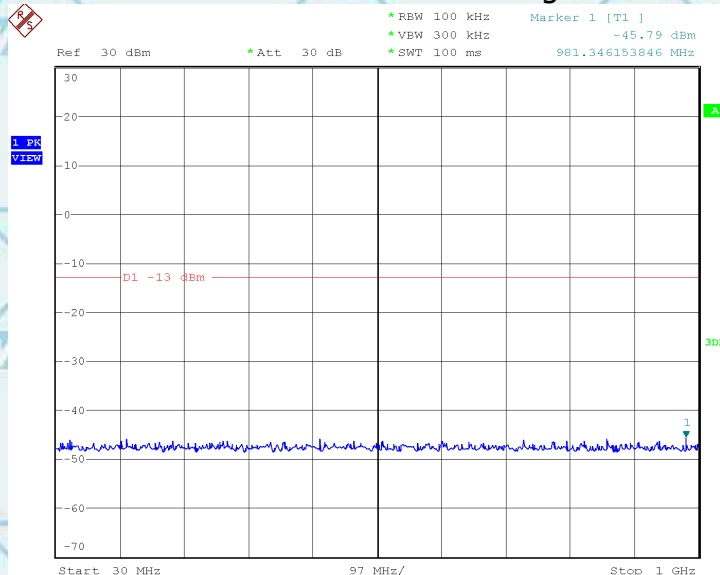
For Question,
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Conducted Emission Transmitting Mode CH 661 1GHz – 20GHz



Date: 4.MAR.2024 15:55:00

Conducted Emission Transmitting Mode CH 810 30MHz – 1GHz



Date: 4.MAR.2024 15:51:17

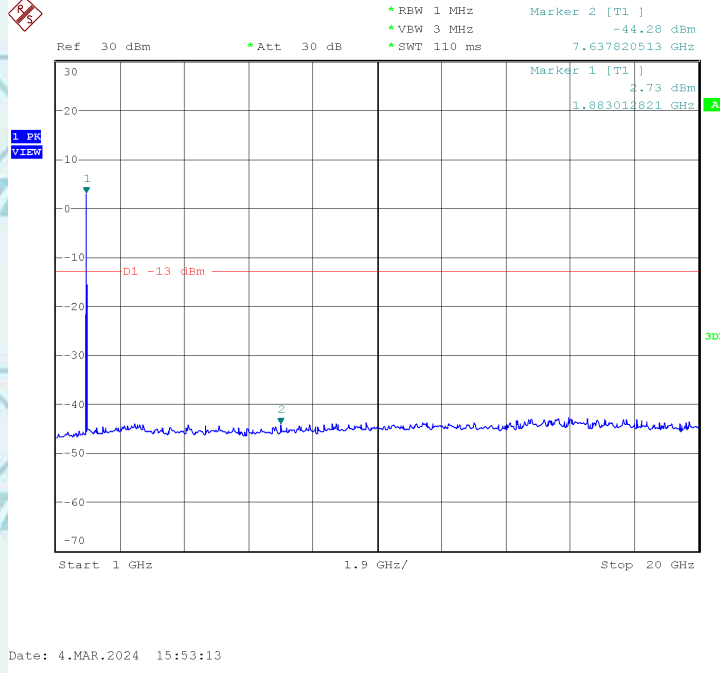


Report No.: WSCT-A2LA-R&E240300009A-RF

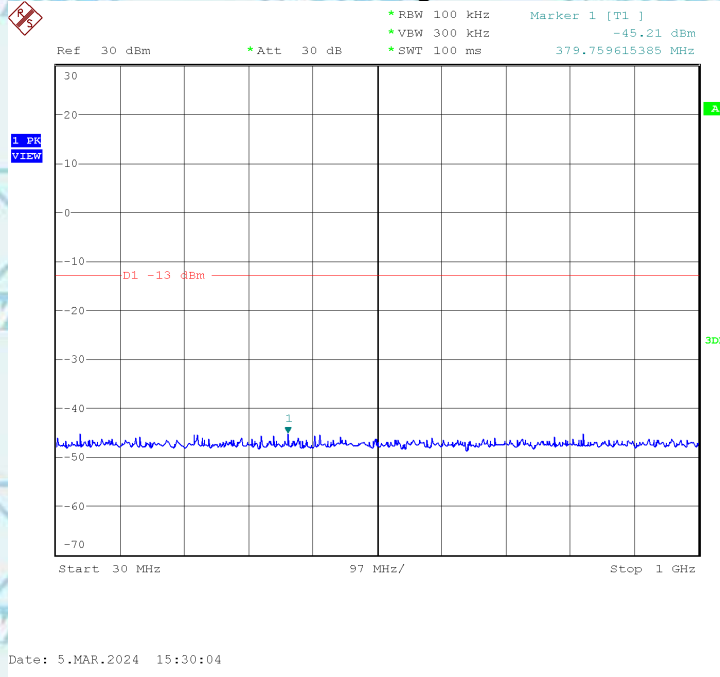
Certificate #5768.01

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Conducted Emission Transmitting Mode CH 810 1GHz – 20GHz



CONDUCTED EMISSION IN WCDMA Band 2 Conducted Emission Transmitting Mode CH 9262 30MHz – 1GHz



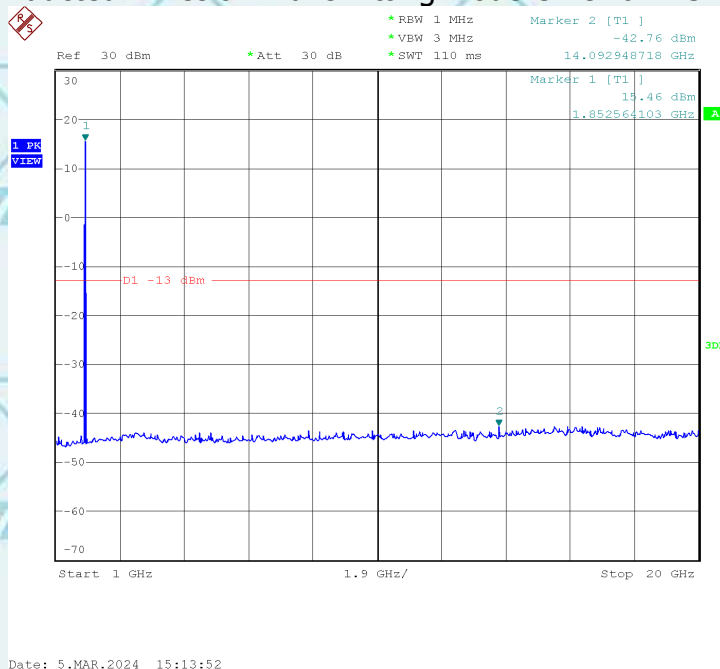


Report No.: WSCT-A2LA-R&E240300009A-RF

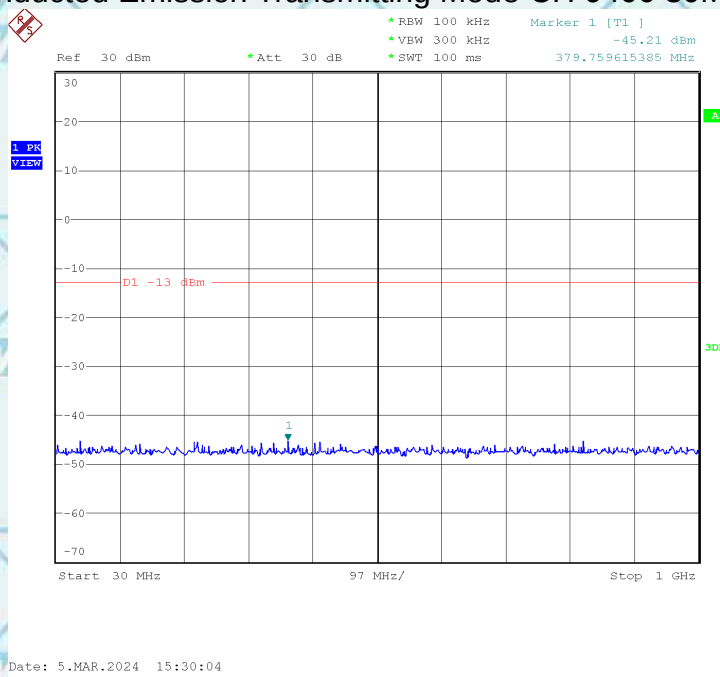
Certificate #5768.01

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Conducted Emission Transmitting Mode CH 9262 1GHz – 20GHz



Conducted Emission Transmitting Mode CH 9400 30MHz – 1GHz



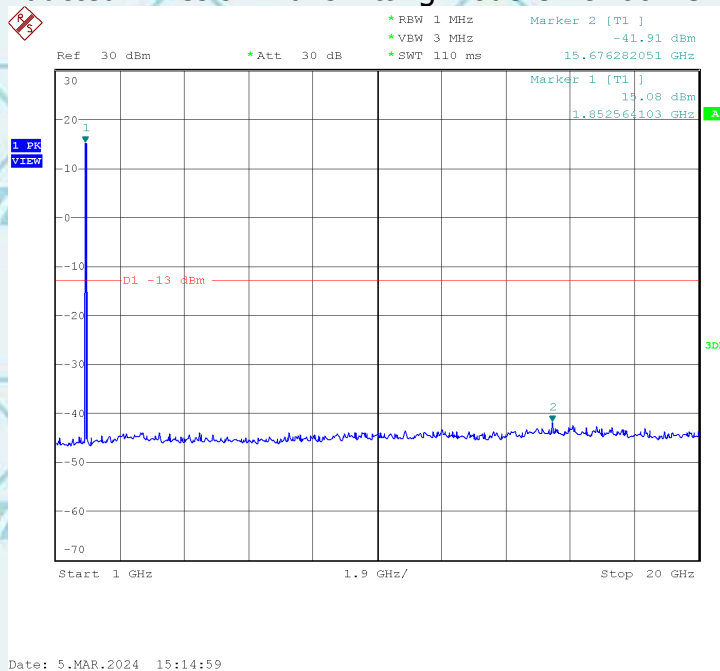


Report No.: WSCT-A2LA-R&E240300009A-RF

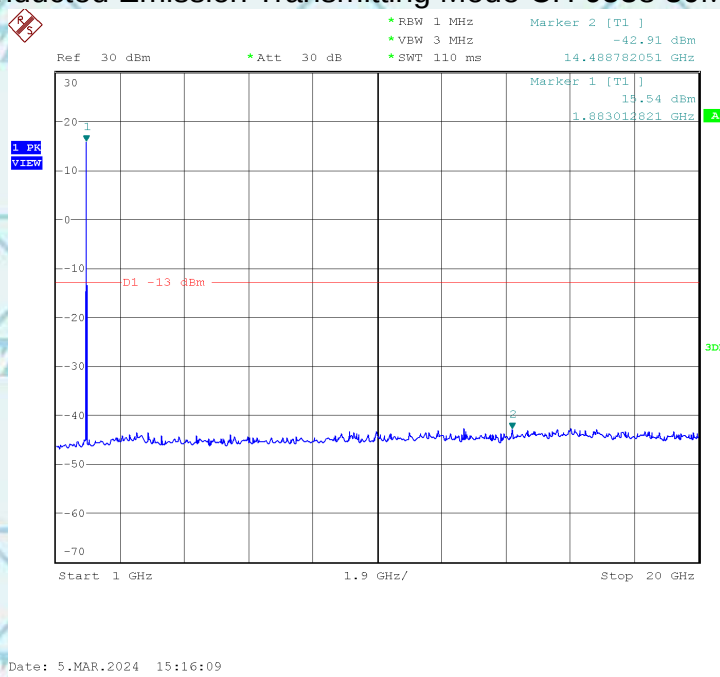
Certificate #5768.01

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Conducted Emission Transmitting Mode CH 9400 1GHz – 20GHz



Conducted Emission Transmitting Mode CH 9538 30MHz – 1GHz



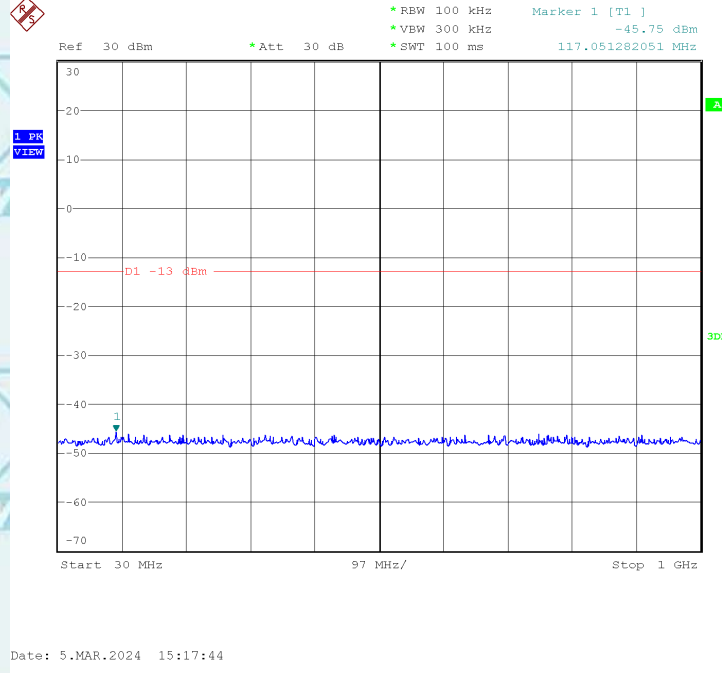


Report No.: WSCT-A2LA-R&E240300009A-RF

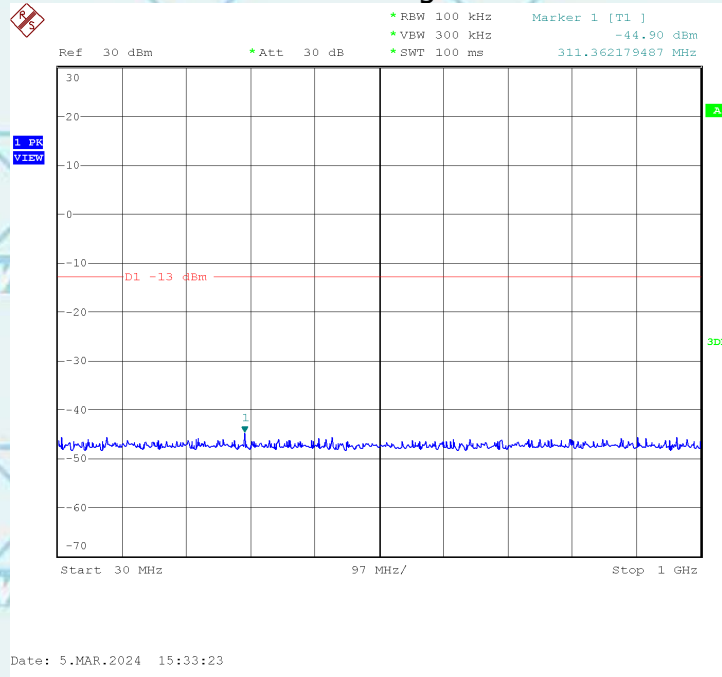
Certificate #5768.01

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Conducted Emission Transmitting Mode CH 9538 1GHz – 20GHz



CONDUCTED EMISSION IN WCDMA Band 4 Conducted Emission Transmitting Mode CH 1312 30MHz – 1GHz



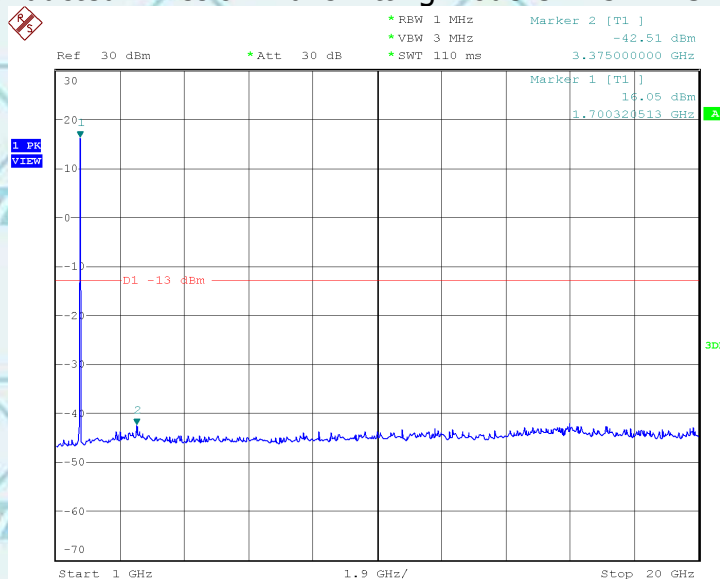


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

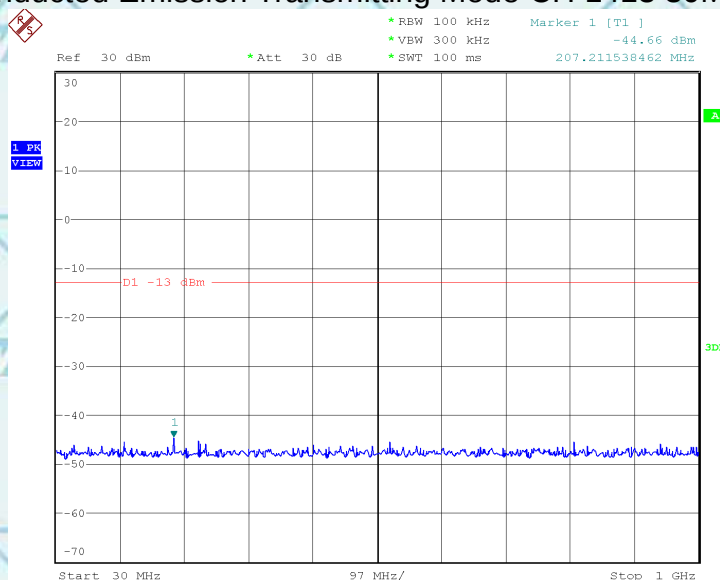
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Conducted Emission Transmitting Mode CH 1312 1GHz – 20GHz



Date: 5.MAR.2024 15:38:51

Conducted Emission Transmitting Mode CH 1413 30MHz – 1GHz



Date: 5.MAR.2024 15:34:24



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World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.

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TEL: 86-755-26996192 26992306 FAX: 86-755-86376605 E-mail: Fengbing.Wang@wsct-cert.com Http: www.wsct-cert.com

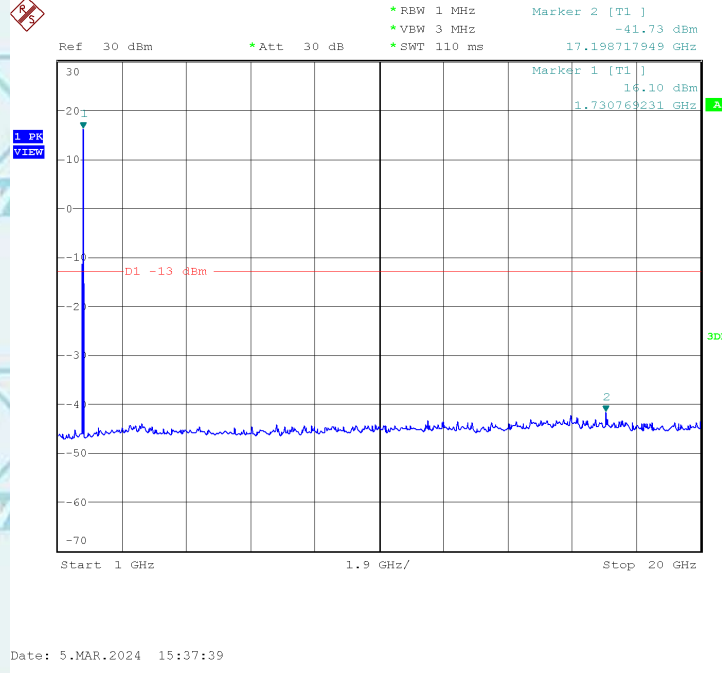


Report No.: WSCT-A2LA-R&E240300009A-RF

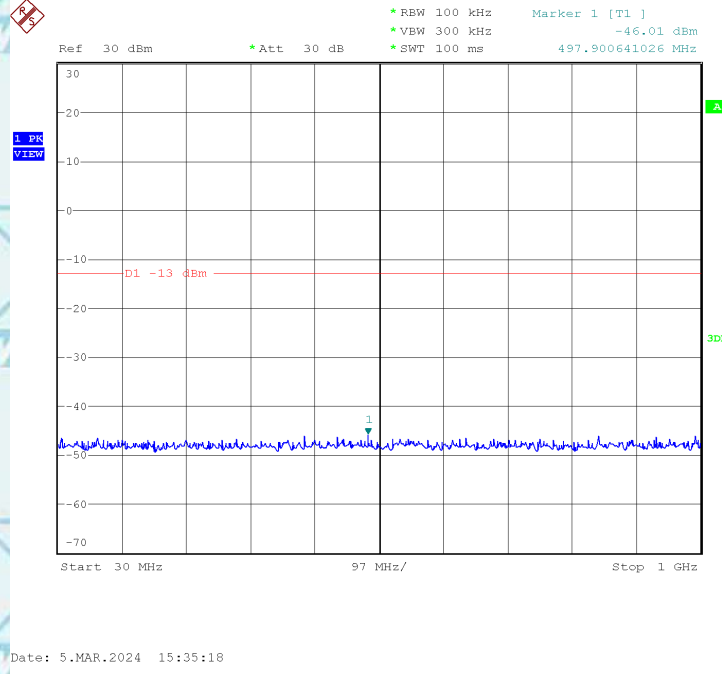
Certificate #5768.01

For Question,
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Conducted Emission Transmitting Mode CH 1413 1GHz – 20GHz



Conducted Emission Transmitting Mode CH 1513 30MHz – 1GHz



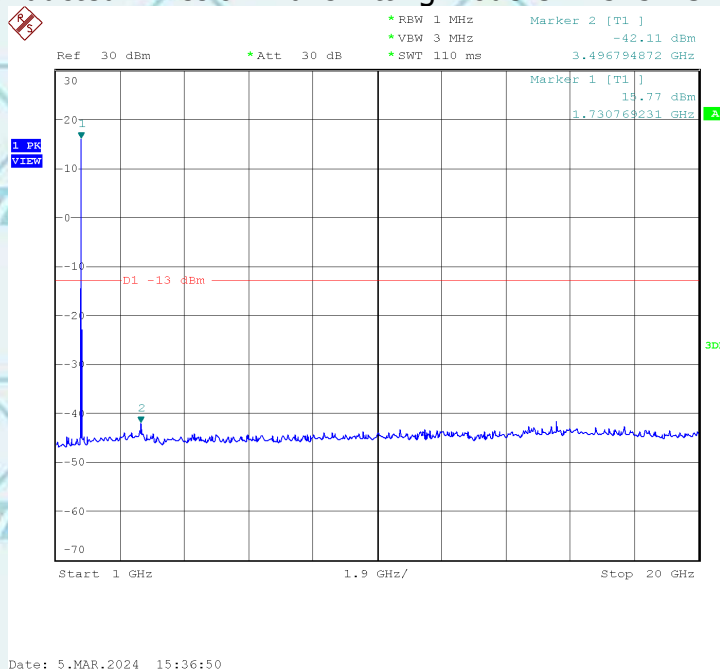


Report No.: WSCT-A2LA-R&E240300009A-RF

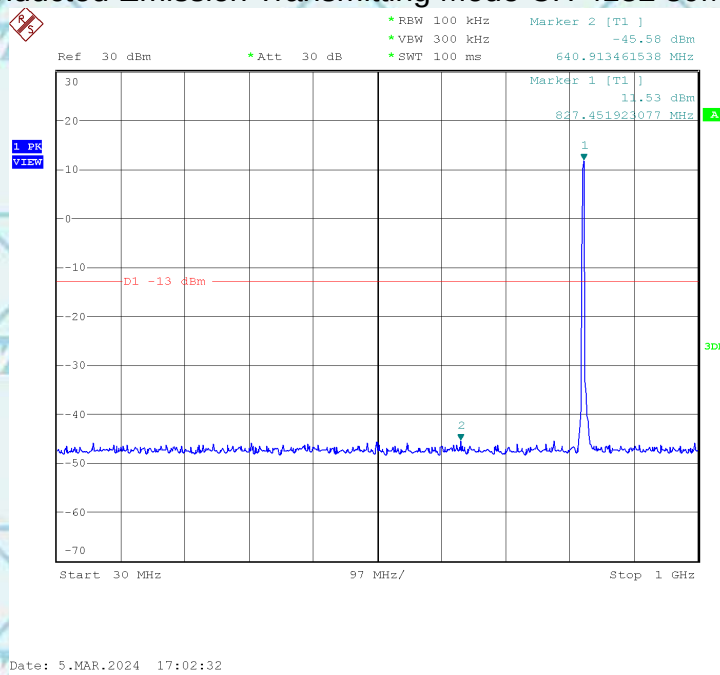
Certificate #5768.01

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Conducted Emission Transmitting Mode CH 1513 1GHz – 20GHz



CONDUCTED EMISSION IN WCDMA Band 5 Conducted Emission Transmitting Mode CH 4132 30MHz – 1GHz



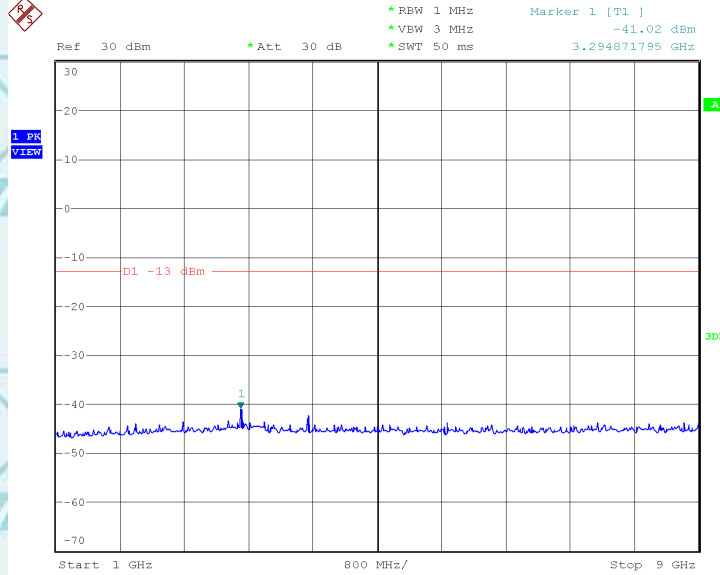


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

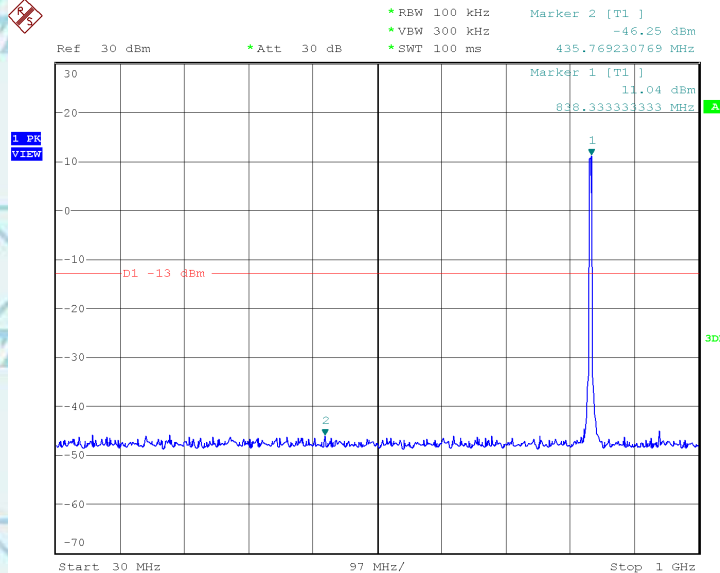
For Question,
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Conducted Emission Transmitting Mode CH 4132 1GHz – 9GHz



Date: 5.MAR.2024 16:53:15

Conducted Emission Transmitting Mode CH 4182 30MHz – 1GHz



Date: 5.MAR.2024 17:00:44

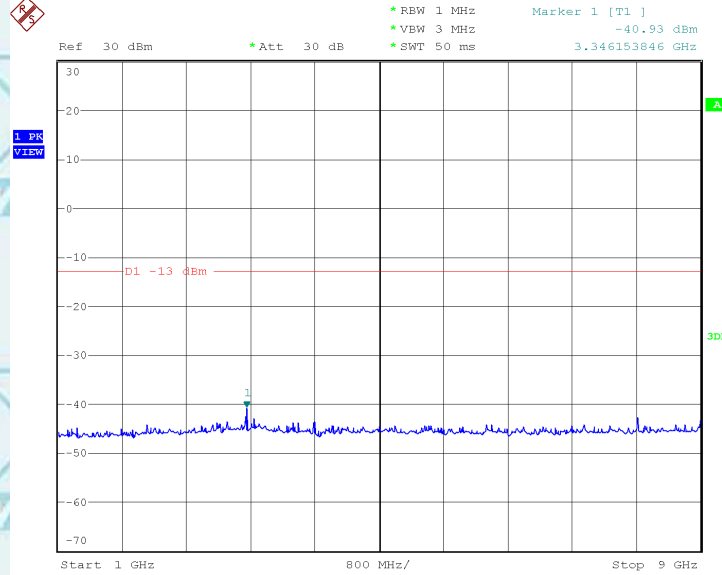


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

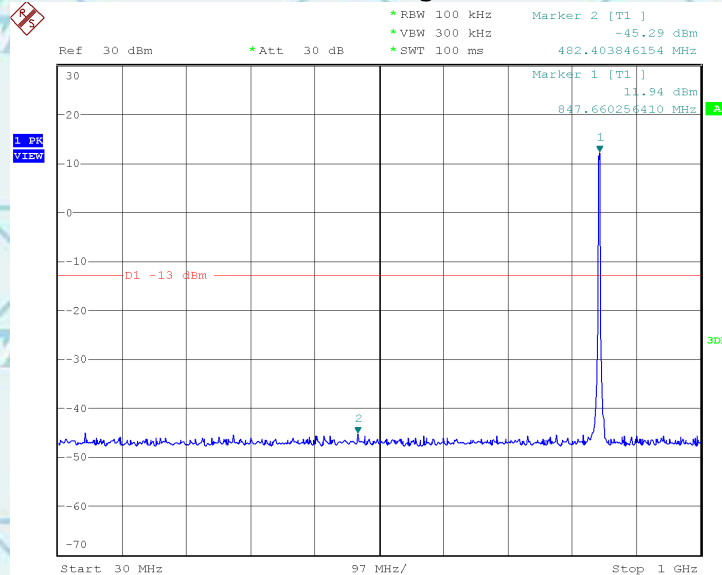
For Question,
Please Contact with WSCT
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Conducted Emission Transmitting Mode CH 4182 1GHz – 9GHz



Date: 5.MAR.2024 16:54:27

Conducted Emission Transmitting Mode CH 4233 30MHz – 1GHz



Date: 5.MAR.2024 16:59:29

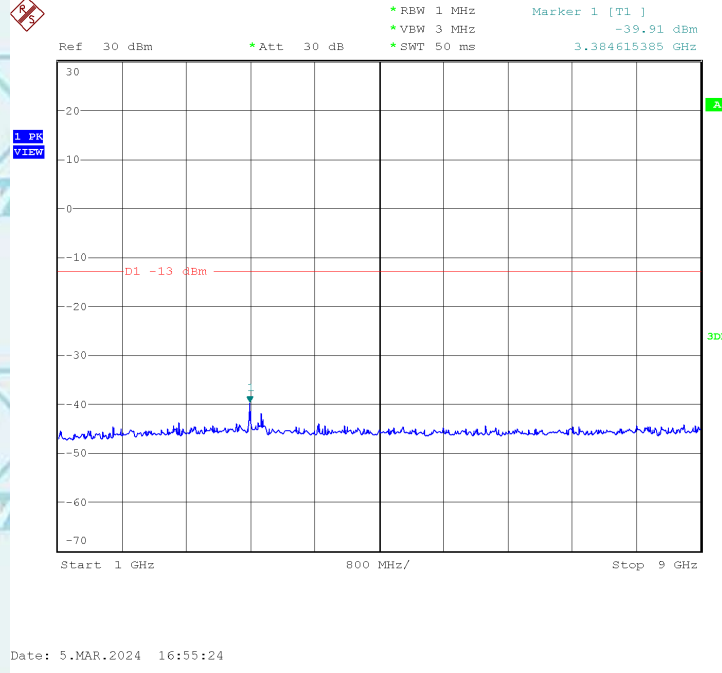


Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

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Conducted Emission Transmitting Mode CH 4233 1GHz – 9GHz



Note: Please refer to Annex (LTE&NR Out-of-band emissions) for more test data



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Report No.: WSCT-A2LA-R&E240300009A-RF

12. FREQUENCY STABILITY

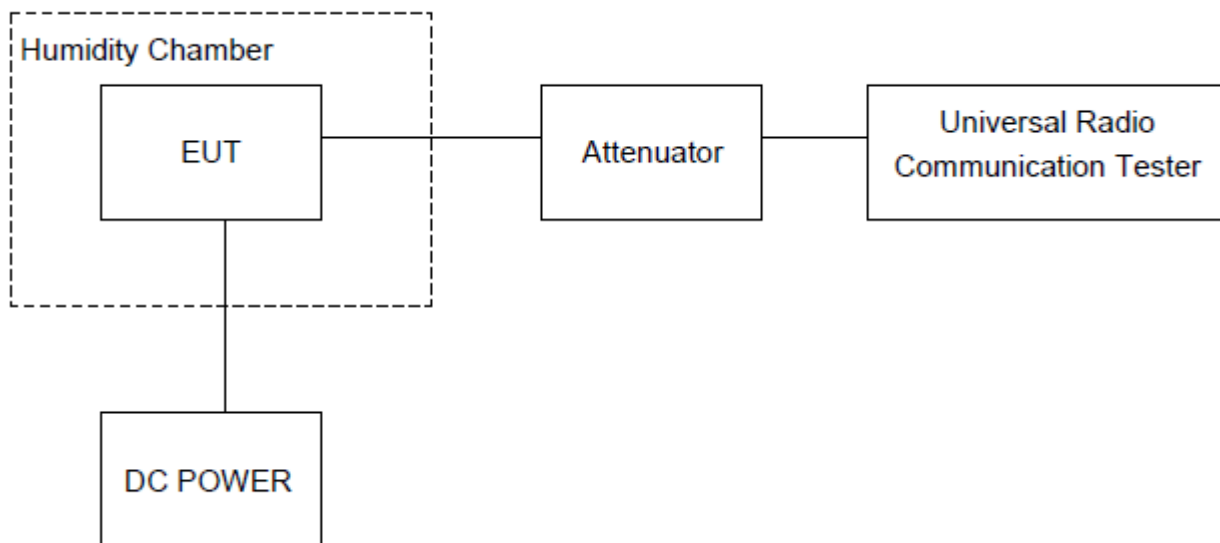
Test limit:

The frequency stability of the transmitter shall be measured while varying the ambient temperatures and supply voltages over the ranges specified in §2.1055. The specific frequency stability limits are provided in the relevant rules section(s). see section 4.

Test procedure:

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.

Test setup:





12.1. Measurement Result (Worst)

Frequency Error against Voltage for GSM 850 band (836.6MHz)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	28	0.034
3.86	35	0.042
4.53	32	0.038

Frequency Error against Temperature for GSM 850 band (836.6MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	28	0.034
0	39	0.047
10	29	0.035
20	39	0.047
30	37	0.044
40	36	0.043
55	31	0.037

Frequency Error against Voltage for PCS 1900 band (1880MHz)

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	32	0.017
3.86	30	0.016
4.53	31	0.016

Frequency Error against Temperature for PCS 1900 band (1880MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	29	0.015
0	38	0.020
10	30	0.016
20	34	0.018
30	31	0.017
40	30	0.016
55	31	0.017



Frequency Error against Voltage for GPRS 850 band (836.6MHz)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	38	0.045
3.86	33	0.039
4.53	30	0.035

Frequency Error against Temperature for GPRS 850 band (836.6MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	29	0.035
0	37	0.045
10	30	0.036
20	40	0.048
30	40	0.048
40	35	0.042
55	29	0.035

Frequency Error against Voltage for GPRS 1900 band (1880MHz)

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	31	0.016
3.86	30	0.016
4.53	37	0.020

Frequency Error against Temperature for GPRS 1900 band (1880MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	28	0.015
0	33	0.017
10	39	0.021
20	41	0.022
30	38	0.020
40	37	0.020
55	38	0.020



Report No.: WSCT-A2LA-R&E240300009A-RF

Certificate #5768.01

For Question,
Please Contact with WSCT
www.wsct-cert.com**Frequency Error against Voltage for EGPRS 850 band (836.6MHz)**

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	29	0.035
3.86	29	0.035
4.53	38	0.045

Frequency Error against Temperature for EGPRS 850 band (836.6MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	32	0.038
0	41	0.048
10	31	0.037
20	41	0.049
30	39	0.046
40	37	0.045
55	34	0.040

Frequency Error against Voltage for EGPRS 1900 band (1880MHz)

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	28	0.015
3.86	38	0.020
4.53	31	0.016

Frequency Error against Temperature for EGPRS 1900 band (1880MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	38	0.020
0	37	0.019
10	32	0.017
20	35	0.018
30	30	0.016
40	41	0.022
55	37	0.020





UTRA BANDS

Frequency Error against Voltage for WCDMA Band 2 (1880MHz)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	34	0.018
3.86	33	0.018
4.53	31	0.016

Frequency Error against Temperature for WCDMA Band 2 (1880MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	30	0.016
0	30	0.016
10	29	0.015
20	40	0.021
30	40	0.022
40	30	0.016
55	31	0.017

Frequency Error against Voltage for WCDMA Band 4 (1732.6MHz)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	35	0.020
3.86	34	0.020
4.53	38	0.022

Frequency Error against Temperature for WCDMA Band 4 (1732.6MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	29	0.017
0	41	0.024
10	35	0.020
20	39	0.022
30	36	0.021
40	38	0.022
55	31	0.018

**Frequency Error against Voltage for WCDMA Band 5 (836.4MHz)**

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	35	0.041
3.86	41	0.049
4.53	40	0.048

Frequency Error against Temperature for WCDMA Band 5 (836.4MHz)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	36	0.043
0	39	0.047
10	30	0.036
20	34	0.040
30	34	0.041
40	39	0.047
55	31	0.037

Note: Please refer to Annex (LTE&NR Frequency Error against) for more test data





13. Test Setup Photographs

Please refer to Annex "Set Up Photos-RF" for test setup photos

---END OF REPORT---