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RADIO TEST REPORT

Report No.: STS2006187W01

Issued for

SIMCom Wireless Solutions Limited

No.633, Jinzhong Road, Shanghai, China

Product Name:	NB/CAT-M/GNSS MODULE
Brand Name:	SIMCom
Model Name:	SIM7090G
Series Model:	N/A
FCC ID:	2AJYU-8VC0003
Test Standard:	47 CFR Part 2, 22H, 24(E), 27, 90 December 20, 2018

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Shenzhen STS Test Services Co., Ltd.

A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail: sts@stsapp.com



**TEST RESULT CERTIFICATION**

Applicant's Name: SIMCom Wireless Solutions Limited
Address: No.633, Jinzhong Road, Shanghai, China
Manufacture's Name: SIMCom Wireless Solutions Limited
Address: No.633, Jinzhong Road, Shanghai, China

Product Description

Product Name: NB/CAT-M/GNSS MODULE
Brand Name: SIMCom
Model Name: SIM7090G
Series Model: N/A
Test Standards: 47 CFR Part 2, 22H, 24(E), 27, 90 December 20, 2018
Test Procedure: KDB 971168 D01 v03r01, ANSI C63.26 2015

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test:
Date of receipt of test item: 05 June 2020
Date (s) of performance of tests ..: 05 June 2020 ~ 24 June 2020
Date of Issue: 24 June 2020
Test Result: Pass

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

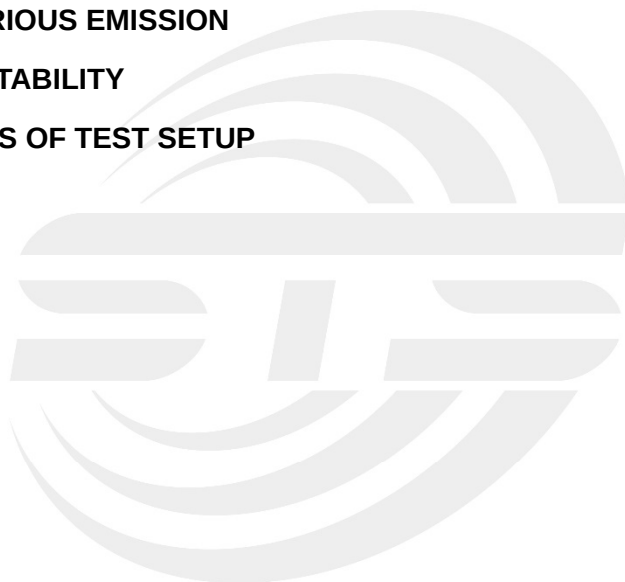
Authorized Signatory :

(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	24 June 2020	STS2006187W01	ALL	Initial Issue





1. SUMMARY OF TEST RESULTS

1.1 TEST RESULTS DESCRIPTION AND LABORATORY INFORMATION

FCC Rule	Description	Limit	Result
§2.1046	Conducted Output Power	Reporting Only	PASS
§24.232(d) §22.913(d) §27.50(a)(B)	Peak-to-Average Ratio	<13 dB	PASS
§2.1049 §22.917 §24.238(b) §27.53(h)(3) §27.53(m)(6) §90.209	Occupied Bandwidth	Reporting Only	PASS
§2.1051) §22.917 §24.238(a) §27.53(g) §27.53(h)	Conducted Band Edge Measurement	<43+10log10(P[Watts])	PASS
§27.53(m)(4)		<43+10log10(P[Watts])	PASS
§2.1051 §22.917 §24.238(a) §27.53(g) §27.53(h)	Conducted Spurious Emission	<43+10log10(P[Watts])	PASS
§27.53(m)(4)	Conducted Spurious Emission	< 55+10log10(P[Watts])	PASS
§2.1055 §22.355 §24.235 §27.54 §90.213	Frequency Stability Temperature & Voltage	< 2.5 ppm for Part 22 Within Authorized Band	PASS
§27.50(c)(10)	Effective Radiated Power	ERP < 3 Watt	PASS
§24.232(c) §27.50(h)(2)	Equivalent Isotropic Radiated Power	EIRP < 2Watt	PASS
§27.50(d)(4)	Equivalent Isotropic Radiated Power	EIRP < 1Watt	PASS
§22.913	Effective Radiated Power	ERP < 7 Watt	PASS
§90.635(b)	Effective Radiated Power	ERP < 100Watt	PASS
§2.1053 §22.917 §24.238(a) §27.53(g) §27.53(h)	Radiated Spurious Emission	< 43+10log10(P[Watts])	PASS
§2.1053 §27.53(m)(4)	Radiated Spurious Emission	< 55+10log10(P[Watts])	PASS



1.1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated 30-1GHz	$\pm 5.6\text{dB}$
4	All emissions, radiated 1G-6GHz	$\pm 5.5\text{dB}$
5	All emissions, radiated >6G	$\pm 5.8\text{dB}$
6	Conducted Emission (9KHz-150KHz)	$\pm 3.37\text{dB}$
7	Conducted Emission (150KHz-30MHz)	$\pm 3.83\text{dB}$



2. GENERAL INFORMATION

2.1 TECHNICAL SPECIFICATIONS AND REGULATIONS

2.1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Name:	NB/CAT-M/GNSS MODULE
Trade Name	SIMCom
Model Name	SIM7090G
Series Model	N/A
Model Difference	N/A
Frequency Bands:	U.S. Bands: CAT-M FDD Band 2 CAT-M FDD Band 4 CAT-M FDD Band 12 CAT-M FDD Band 13 CAT-M FDD Band 25 CAT-M FDD Band 26
SIM CARD:	Only support single SIM Card.
Antenna:	Monopole
Antenna gain:	B2/B4/B25: 3 dBi B12/B13/B26: 2dBi
Power Rating:	Input: DC 3.8V
Extreme Vol. Limits:	2.7V to 4.8V (Nominal 3.8V)
Extreme Temp. Tolerance:	-40°C to +85°C
Hardware version number:	V1.01
Software version number:	R1951.01



2.1.2 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Product Specification Subjective To This Standard	
Tx Frequency	CAT-M Band 2:1850~1910MHz CAT-M Band 4:1710~1755MHz CAT-M Band 12:699~716MHz CAT-M Band 13:777~787MHz CAT-M Band 25:1850~1915MHz CAT-M Band 26:814~849MHz
Rx Frequency	CAT-M Band 2:1930 ~1990MHz CAT-M Band 4:2110~2155MHz CAT-M Band 12:729~746MHz CAT-M Band 13:746~756MHz CAT-M Band 25:1930~1995MHz CAT-M Band 26:859~894MHz
Bandwidth	CAT-M Band 2: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz CAT-M Band 4: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz /20MHz CAT-M Band 12: 1.4MHz / 3MHz / 5MHz / 10MHz CAT-M Band 13: 5MHz / 10MHz CAT-M Band 25: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz /20MHz CAT-M Band 26: 1.4MHz / 3MHz / 5MHz / 10MHz/15MHz
Maximum Output Power	CAT-M Band 2: 23.91 dBm CAT-M Band 4: 24.30 dBm CAT-M Band 12: 22.41 dBm CAT-M Band 13: 21.85 dBm CAT-M Band 25: 23.85 dBm CAT-M Band 26: 21.68 dBm
Type of Modulation	QPSK /16QAM

RF Function	Band	UE Category UL	Modulation	Power Class	Ant Gain(dBi)	Ant Type	SIM Card
CAT-M	FDD:B2/B4/B12/B13/B25/B26	\	QPSK, 16QAM	3	B2/B4/B25: 3dBi B12/B13/B26: 2dBi	Monopole	1 SIM 1 is used to tested.



2.1.3 EMISSION DESIGNATOR

CAT-M Band 2	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M38G7D	0M94W7D
3	1M76G7D	1M00W7D
5	2M00G7D	1M74W7D
10	2M52G7D	2M28W7D
15	2M80G7D	2M33W7D
20	2M83G7D	2M41W7D
CAT-M Band 4	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M40G7D	1M40W7D
3	1M87G7D	1M86W7D
5	2M21G7D	1M86W7D
10	2M62G7D	2M26W7D
15	2M83G7D	2M40W7D
20	2M83G7D	2M37W7D
CAT-M Band 12	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M31G7D	1M34W7D
3	1M29G7D	1M31W7D
5	1M38G7D	1M50W7D
10	1M39G7D	1M96W7D
CAT-M Band 13	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
5	1M68G7D	1M52G7D
10	1M4G7D	2M08G7D
CAT-M Band 25	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M40G7D	1M40G7D
3	1M87G7D	1M90G7D
5	1M96G7D	1M87G7D
10	2M63G7D	2M13W7D
15	2M82G7D	2M28W7D
20	2M84G7D	2M22W7D
CAT-M Band 26 (Part 22)	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M37G7D	1M40W7D
3	1M70G7D	1M70W7D
5	1M90G7D	1M74W7D
10	2M27G7D	2M40W7D
15	2M84G7D	2M43W7D
CAT-M Band 26 (Part 90)	Emission Designator	Emission Designator
BW(MHz)	(26dBc)QPSK	(26dBc)16QAM
1.4	1M34G7D	1M40W7D
3	1M36G7D	1M78W7D
5	1M79G7D	1M73W7D
10	2M16G7D	2M24W7D



2.1.4 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 v03r01 and ANSI C63.26 2015 Power Meas. License Digital Systems with maximum output power. Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Remark:

1. The mark 'v' means that this configuration is chosen for testing
2. The mark '-' means that this bandwidth is not supported.
3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated.

ITEMS	Band	Bandwidth (MHz)						Modulation		RB #		Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Full	L	M	H
Max. Output Power	2	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v
	12	v	v	v	v			v	v	v	v	v	v	v
	13			v	v			v	v	v	v		v	
	25	v	v	v	v	v	v	v	v	v	v	v	v	v
	26	v	v	v	v	v		v	v	v	v	v	v	v
Peak&Avera Ratio	2						v	v	v	v	v	v	v	v
	4						v	v	v	v	v	v	v	v
	12				v			v	v	v	v	v	v	v
	13				v			v	v	v	v		v	
	25						v	v	v	v	v	v	v	v
	26					v		v	v	v	v	v	v	v
26dB&99% Bandwidth	2	v	v	v	v	v	v	v	v		v	v	v	v
	4	v	v	v	v	v	v	v	v		v	v	v	v
	12	v	v	v	v			v	v		v	v	v	v
	13			v	v			v	v		v		v	
	25	v	v	v	v	v	v	v	v		v	v	v	v
	26	v	v	v	v	v		v	v		v	v	v	v
Conducted Band Edge	2	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v
	12	v	v	v	v			v	v	v	v	v	v	v
	13			v	v			v	v	v	v		v	
	25	v	v	v	v	v	v	v	v	v	v	v	v	v
	26	v	v	v	v	v		v	v	v	v	v	v	v
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v		v	v	v
	4	v	v	v	v	v	v	v	v	v		v	v	v
	12	v	v	v	v			v	v	v		v	v	v
	13			v	v			v	v	v			v	
	25	v	v	v	v	v	v	v	v	v		v	v	v
	26	v	v	v	v	v		v	v	v		v	v	v



Frequency Stability	2				v			v			v		v	
	4				v			v			v		v	
	12				v			v			v		v	
	13				v			v			v		v	
	25				v			v			v		v	
	26				v			v			v		v	
E.R.P.& E.I.R.P.	2	v	v	v	v	v	v	v	v	v		v	v	v
	4	v	v	v	v	v	v	v	v	v		v	v	v
	12	v	v	v	v			v	v	v		v	v	v
	13			v	v			v	v	v			v	
	25	v	v	v	v	v	v	v	v	v		v	v	v
	26	v	v	v	v	v		v	v	v		v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v	v	v		v	v	v
	4	v	v	v	v	v	v	v	v	v		v	v	v
	12	v	v	v	v			v	v	v		v	v	v
	13			v	v			v	v	v			v	
	25	v	v	v	v	v	v	v	v	v		v	v	v
	26	v	v	v	v	v		v	v	v		v	v	v



2.1.5 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for filing to comply with the 47 CFR Part 2, 22H, 24(E), 27, 90 December 20, 2018.

2.1.6 SPECIAL ACCESSORIES

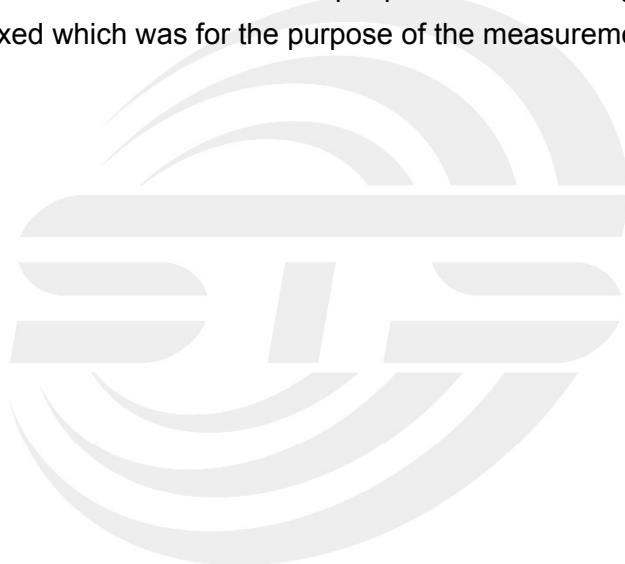
The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with eut intended for fcc grant together.

2.1.7 EUT 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.

2.1.8 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.



2.1.9 CONFIGURATION OF EUT SYSTEM

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.

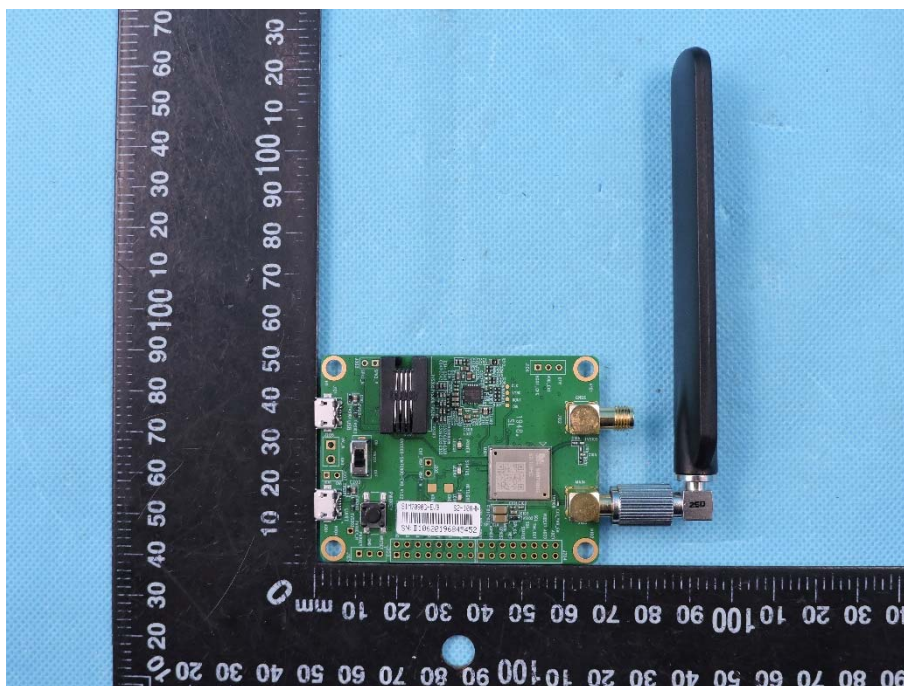
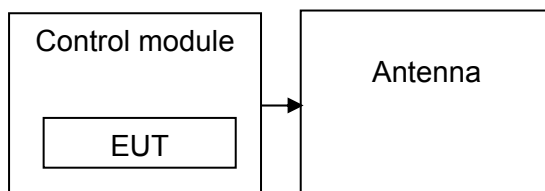


Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	Length	Note
1	Control module	SIM7090G-EUB	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.1.10 MEASUREMENT INSTRUMENTS

The radiated emission testing was performed according to the procedures of ANSI C63.26 2015 and FCC CFR 47 rules of 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057.

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2019.10.09	2020.10.08
Signal Analyzer	Agilent	N9020A	MY51110105	2020.03.05	2021.03.04
Wireless Communications Test Set	R&S	CMW 500	133884	2020.03.05	2021.03.04
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.1
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2018.10.19	2021.10.18
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2021.03.10
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2019.10.09	2020.10.08
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2019.10.12	2020.10.11
Pre-Amplifier (18G-40GHz)	SKET	LNPA-1840-50	SK2018101801	2019.10.12	2020.10.11
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2019.10.17	2020.10.16
Test SW	BULUN	BL410-E/18.905			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Universal Radio communication tester	R&S	CMU200	119907	2020.10.11	2021.10.10
Wireless Communications Test Set	R&S	CMW 500	133884	2020.03.05	2021.03.04
Signal Analyzer	Agilent	N9020A	MY49100060	2019.10.09	2020.10.08
Temperature & Humidity	HH660	Mieo	N/A	2019.10.17	2020.10.16
Test SW	FARAD	LZ-RF /LzRf-3A3			



2.1.11 MEASUREMENT RESULTS EXPLANATION EXAMPLE

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF Cable Loss + Attenuator Factor.



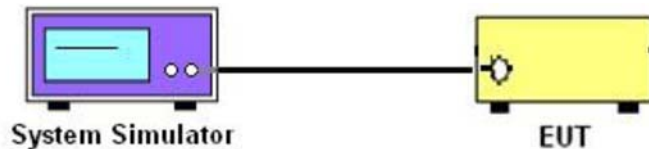
3. CONDUCTED OUTPUT POWER

3.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

3.1.1 MEASUREMENT METHOD

A system simulator was used to establish communication with the eut. Its parameters were 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.
Configuration follows KDB 971168 D01 v03r01.

3.1.2 TEST SETUP



3.1.3 TEST PROCEDURES

1. The transmitter output port was connected to system simulator.
2. Set EUT at maximum power through the system simulator.
3. Select lowest/middle/highest channels for each band and different modulation.
4. Measure and record the power level from the system simulator.



3.1.4 TEST RESULTS

CAT-M Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	21.71	21.66	21.85
1.4	6	0		21.47	21.36	21.58
1.4	1	0	16-QAM	21.41	21.37	21.63
1.4	5	0		21.14	21.13	21.35
3	1	0	QPSK	22.63	22.47	22.59
3	6	0		22.34	22.25	22.38
3	1	0	16-QAM	22.41	22.22	22.31
3	5	0		22.11	22.02	22.10
5	1	0	QPSK	23.28	23.19	23.30
5	6	0		23.06	22.90	23.08
5	1	0	16-QAM	22.99	22.90	23.03
5	5	0		22.69	22.67	22.75
10	1	0	QPSK	23.30	23.41	23.37
10	6	0		23.09	23.17	23.13
10	1	0	16-QAM	23.06	23.18	23.14
10	5	0		22.77	22.88	22.92
15	1	0	QPSK	23.56	23.49	23.52
15	6	0		23.26	23.22	23.27
15	1	0	16-QAM	23.32	23.24	23.25
15	5	0		23.10	22.97	22.99
20	1	0	QPSK	23.91	23.75	23.88
20	6	0		23.70	23.52	23.62
20	1	0	16-QAM	23.65	23.51	23.60
20	5	0		23.40	23.31	23.36



CAT-M Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	23.28	23.16	23.05
1.4	6	0		23.07	22.91	22.82
1.4	1	0	16-QAM	23.05	22.92	22.80
1.4	5	0		22.76	22.70	22.51
3	1	0	QPSK	22.85	23.80	23.12
3	6	0		22.61	23.60	22.83
3	1	0	16-QAM	22.59	23.53	22.91
3	5	0		22.34	23.25	22.68
5	1	0	QPSK	23.71	23.99	23.96
5	6	0		23.42	23.71	23.68
5	1	0	16-QAM	23.49	23.72	23.74
5	5	0		23.28	23.43	23.45
10	1	0	QPSK	24.08	24.17	23.97
10	6	0		23.81	23.96	23.72
10	1	0	16-QAM	23.81	23.87	23.70
10	5	0		23.61	23.58	23.44
15	1	0	QPSK	23.79	23.82	23.84
15	6	0		23.52	23.53	23.60
15	1	0	16-QAM	23.57	23.62	23.60
15	5	0		23.36	23.36	23.39
20	1	0	QPSK	24.27	24.30	24.25
20	6	0		24.00	24.05	24.03
20	1	0	16-QAM	24.01	24.07	23.99
20	5	0		23.80	23.86	23.74

CAT-M Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.06	22.13	22.07
1.4	6	0		21.85	21.92	21.79
1.4	1	0	16-QAM	21.82	21.88	21.86
1.4	5	0		21.56	21.63	21.62
3	1	0	QPSK	22.27	22.30	22.19
3	6	0		22.03	22.04	21.96
3	1	0	16-QAM	22.02	22.07	21.94
3	5	0		21.75	21.79	21.73
5	1	0	QPSK	22.27	22.16	22.25
5	6	0		22.01	21.92	22.03
5	1	0	16-QAM	22.06	21.87	21.97
5	5	0		21.86	21.58	21.76
10	1	0	QPSK	22.41	22.39	22.33
10	6	0		22.18	22.13	22.05
10	1	0	16-QAM	22.18	22.12	22.08
10	5	0		21.98	21.87	21.81



CAT-M Band 13 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	21.62	21.69	21.71
5	6	0		21.42	21.42	21.46
5	1	0	16-QAM	21.35	21.40	21.45
5	5	0		21.07	21.19	21.15
10	1	0	QPSK	N/A	21.85	N/A
10	6	0		N/A	21.57	N/A
10	1	0	16-QAM	N/A	21.59	N/A
10	5	0		N/A	21.39	N/A
CAT-M Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.91	23.05	22.89
1.4	6	0		22.64	22.83	22.67
1.4	1	0	16-QAM	22.61	22.83	22.67
1.4	5	0		22.34	22.60	22.40
3	1	0	QPSK	23.27	23.16	23.22
3	6	0		22.98	22.92	22.95
3	1	0	16-QAM	23.04	22.96	22.97
3	5	0		22.81	22.75	22.75
5	1	0	QPSK	23.75	23.50	23.58
5	6	0		23.51	23.28	23.31
5	1	0	16-QAM	23.53	23.26	23.34
5	5	0		23.32	23.00	23.08
10	1	0	QPSK	23.62	23.59	23.61
10	6	0		23.38	23.38	23.40
10	1	0	16-QAM	23.42	23.30	23.34
10	5	0		23.15	23.04	23.10
15	1	0	QPSK	23.68	23.71	23.57
15	6	0		23.43	23.44	23.36
15	1	0	16-QAM	23.39	23.48	23.36
15	5	0		23.12	23.24	23.08
20	1	0	QPSK	23.85	23.76	23.83
20	6	0		23.60	23.55	23.57
20	1	0	16-QAM	23.60	23.52	23.62
20	5	0		23.34	23.32	23.35



CAT-M Band 26(Part 22) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	21.26	21.13	21.02
1.4	6	0		20.98	20.91	20.78
1.4	1	0	16-QAM	20.98	20.85	20.82
1.4	5	0		20.74	20.57	20.57
3	1	0	QPSK	21.10	21.15	21.24
3	6	0		20.89	20.94	20.96
3	1	0	16-QAM	20.89	20.89	20.94
3	5	0		20.68	20.69	20.66
5	1	0	QPSK	21.26	21.41	21.44
5	6	0		21.00	21.17	21.23
5	1	0	16-QAM	20.98	21.13	21.20
5	5	0		20.68	20.92	20.96
10	1	0	QPSK	21.55	21.49	21.58
10	6	0		21.29	21.24	21.32
10	1	0	16-QAM	21.27	21.21	21.32
10	5	0		21.04	21.00	21.09
15	1	0	QPSK	21.61	21.57	21.68
15	6	0		21.39	21.33	21.42
15	1	0	16-QAM	21.38	21.28	21.42
15	5	0		21.11	20.99	21.21
CAT-M Band 26(Part 90) Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	21.06	21.13	21.02
1.4	6	0		20.81	20.85	20.78
1.4	1	0	16-QAM	20.79	20.88	20.81
1.4	5	0		20.52	20.66	20.58
3	1	0	QPSK	20.92	20.85	20.88
3	6	0		20.71	20.63	20.63
3	1	0	16-QAM	20.68	20.64	20.63
3	5	0		20.42	20.41	20.38
5	1	0	QPSK	21.33	21.42	21.41
5	6	0		21.08	21.19	21.20
5	1	0	16-QAM	21.12	21.12	21.16
5	5	0		20.86	20.88	20.89
10	1	0	QPSK	N/A	21.58	N/A
10	6	0		N/A	21.32	N/A
10	1	0	16-QAM	N/A	21.36	N/A
10	5	0		N/A	21.16	N/A

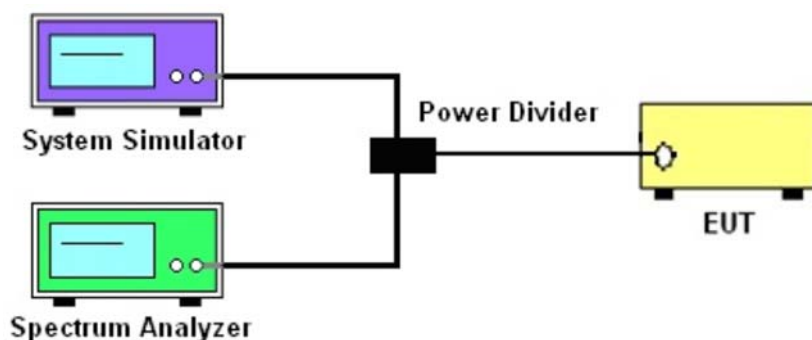
4. PEAK-TO-AVERAGE RATIO

4.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

4.1.1 MEASUREMENT METHOD

Use one of the procedures presented in 4.1.3 to measure the total peak power and record as PPK. Use one of the applicable procedures presented 4.1.3 to measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:
 $PAPR (dB) = PPK (dBm) - PAvg (dBm)$.

4.1.2 TEST SETUP



4.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.7 and ANSI C63.26 2015 Section 5.2.6.
2. The EUT was connected to spectrum and system simulator via a power divider
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Set the test probe and measure the peak and average power of the spectrum analyzer
5. Record the deviation as Peak to Average Ratio.

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	PK/AVG	PK/AVG	PK/AVG	PK/AVG	PK/AVG	PK/AVG
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto



4.1.4 TEST RESULTS

CAT-M Band 2 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
			P-A	P-A	P-A
20	1	QPSK	1.42	1.46	1.49
20	6		1.48	1.52	1.54
20	1	16-QAM	2.12	2.15	2.16
20	5		2.17	2.2	2.23
Limit			≤13dB		

CAT-M Band 4 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
			P-A	P-A	P-A
20	1	QPSK	1.31	1.36	1.36
20	6		1.38	1.42	1.44
20	1	16-QAM	1.95	2.02	2.03
20	5		2.01	2.05	2.08
Limit			≤13dB		

CAT-M Band 12 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
			P-A	P-A	P-A
10	1	QPSK	2.04	1.95	2
10	6		2.93	2.98	3
10	1	16-QAM	2.8	2.77	2.75
10	5		2.49	2.49	2.53
Limit			≤13dB		

CAT-M Band 13 PAR [dBm]			
BW [MHz]	RB Size	Modulation	N/A
			P-A
10	1	QPSK	2.05
10	6		2.77
10	1	16-QAM	2.14
10	5		1.86
Limit			≤13dB

CAT-M Band 25 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
			P-A	P-A	P-A
20	1	QPSK	1.51	1.47	1.49
20	6		1.5	1.52	1.54
20	1	16-QAM	2.1	2.14	2.18
20	5		2.03	2.2	2.24
Limit			≤13dB		



CAT-M Band 26 PAR [dBm]					
BW [MHz]	RB Size	Modulation	Lowest	Middle	Highest
			P-A	P-A	P-A
15	1	QPSK	0.96	1	0.97
15	6		1.27	1.05	1.02
15	1	16-QAM	1.61	1.55	1.52
15	5		1.67	1.62	1.58
Limit			≤13dB		

Note: Test chart See Appendix D



5. RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER

5.1 DESCRIPTION OF THE ERP/EIRP MEASUREMENT

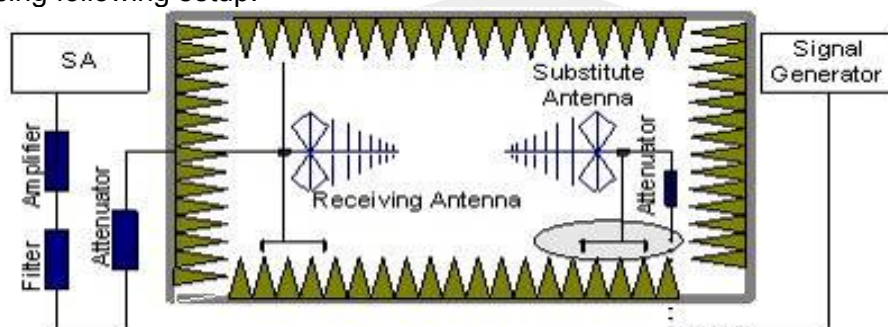
5.1.1 MEASUREMENT METHOD

Effective radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems. Mobile and portable (hand-held) stations operating are limited to average ERP, Equivalent isotropic radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas, Mobile and portable (hand-held) stations operating are limited to average EIRP.

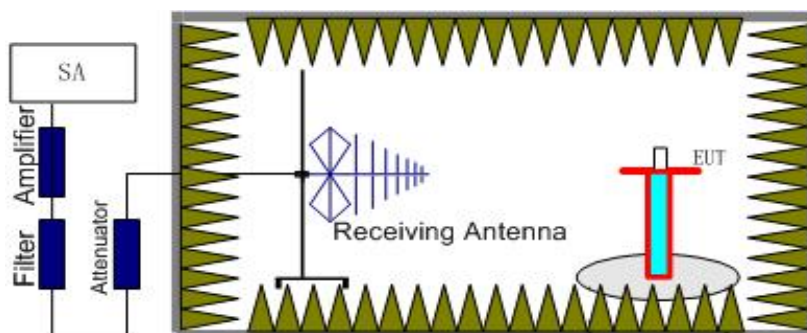
5.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, $RSE = R_x \text{ (dBuV)} + CL \text{ (dB)} + SA \text{ (dB)} + Gain \text{ (dBi)} - 107 \text{ (dBuV to dBm)}$ The SA is calibrated using following setup.



b) EUT was placed on a 1.5m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.



Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

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 ARpl 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:

Power=PMea+ARpl



5.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01v03r01 Section 5.6 and ANSI C63.26 2015 Section 5.2.
2. The EUT was placed on a non-conductive rotating platform 1.5 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with Peak detector.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 m in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to ANSI C63.26 2015. The EUT was replaced by dipole antenna (substitution antenna) at same location and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, $EIRP/ERP = LVL + \text{Correction factor}$.
5. RB Set greater than bandwidth, VB Set spectrum analyzer Maximum support.





5.1.4 TEST RESULTS

Note: Test is divided into three directions, X/Y/Z. X pattern for the worst.

Radiated Power (EIRP) for CAT-M Band 2 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	10.45	2.37	10.40	18.48	Horizontal	Pass
	1	0	Middle	10.61	2.39	10.42	18.64	Horizontal	Pass
	1	0	Highest	10.63	2.40	10.44	18.67	Horizontal	Pass
	1	0	Lowest	12.8	2.37	10.40	20.83	Vertical	Pass
	1	0	Middle	12.77	2.39	10.42	20.80	Vertical	Pass
	1	0	Highest	12.94	2.40	10.44	20.98	Vertical	Pass
16QAM	1	0	Lowest	10.1	2.37	10.40	18.13	Horizontal	Pass
	1	0	Middle	9.95	2.39	10.42	17.98	Horizontal	Pass
	1	0	Highest	10.15	2.40	10.44	18.19	Horizontal	Pass
	1	0	Lowest	12.47	2.37	10.40	20.50	Vertical	Pass
	1	0	Middle	12.78	2.39	10.42	20.81	Vertical	Pass
	1	0	Highest	12.79	2.40	10.44	20.83	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for CAT-M Band 2 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.55	2.37	10.40	19.58	Horizontal	Pass
	1	0	Middle	11.6	2.39	10.42	19.63	Horizontal	Pass
	1	0	Highest	11.73	2.40	10.44	19.77	Horizontal	Pass
	1	0	Lowest	13.82	2.37	10.40	21.85	Vertical	Pass
	1	0	Middle	13.64	2.39	10.42	21.67	Vertical	Pass
	1	0	Highest	13.86	2.40	10.44	21.90	Vertical	Pass
16QAM	1	0	Lowest	11.8	2.37	10.40	19.83	Horizontal	Pass
	1	0	Middle	11.56	2.39	10.42	19.59	Horizontal	Pass
	1	0	Highest	10.7	2.40	10.44	18.74	Horizontal	Pass
	1	0	Lowest	13.87	2.37	10.40	21.90	Vertical	Pass
	1	0	Middle	13.67	2.39	10.42	21.70	Vertical	Pass
	1	0	Highest	13.62	2.40	10.44	21.66	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for CAT-M Band 2 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.44	2.37	10.40	20.47	Horizontal	Pass
	1	0	Middle	12.27	2.39	10.42	20.30	Horizontal	Pass
	1	0	Highest	12.06	2.40	10.44	20.10	Horizontal	Pass
	1	0	Lowest	14.45	2.37	10.40	22.48	Vertical	Pass
	1	0	Middle	14.6	2.39	10.42	22.63	Vertical	Pass
	1	0	Highest	14.4	2.40	10.44	22.44	Vertical	Pass
16QAM	1	0	Lowest	11.68	2.37	10.40	19.71	Horizontal	Pass
	1	0	Middle	12.15	2.39	10.42	20.18	Horizontal	Pass
	1	0	Highest	12	2.40	10.44	20.04	Horizontal	Pass
	1	0	Lowest	14.26	2.37	10.40	22.29	Vertical	Pass
	1	0	Middle	14.23	2.39	10.42	22.26	Vertical	Pass
	1	0	Highest	14.04	2.40	10.44	22.08	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for CAT-M Band 2 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.8	2.37	10.40	19.83	Horizontal	Pass
	1	0	Middle	11.79	2.39	10.42	19.82	Horizontal	Pass
	1	0	Highest	12.22	2.40	10.44	20.26	Horizontal	Pass
	1	0	Lowest	14.5	2.37	10.40	22.53	Vertical	Pass
	1	0	Middle	14.6	2.39	10.42	22.63	Vertical	Pass
	1	0	Highest	14.69	2.40	10.44	22.73	Vertical	Pass
16QAM	1	0	Lowest	11.87	2.37	10.40	19.90	Horizontal	Pass
	1	0	Middle	12.11	2.39	10.42	20.14	Horizontal	Pass
	1	0	Highest	11.84	2.40	10.44	19.88	Horizontal	Pass
	1	0	Lowest	14.41	2.37	10.40	22.44	Vertical	Pass
	1	0	Middle	14.51	2.39	10.42	22.54	Vertical	Pass
	1	0	Highest	14.4	2.40	10.44	22.44	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for CAT-M Band 2 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.89	2.37	10.40	19.92	Horizontal	Pass
	1	0	Middle	11.85	2.39	10.42	19.88	Horizontal	Pass
	1	0	Highest	11.85	2.40	10.44	19.89	Horizontal	Pass
	1	0	Lowest	14.84	2.37	10.40	22.87	Vertical	Pass
	1	0	Middle	14.48	2.39	10.42	22.51	Vertical	Pass
	1	0	Highest	14.85	2.40	10.44	22.89	Vertical	Pass
16QAM	1	0	Lowest	11.53	2.37	10.40	19.56	Horizontal	Pass
	1	0	Middle	12.31	2.39	10.42	20.34	Horizontal	Pass
	1	0	Highest	11.75	2.40	10.44	19.79	Horizontal	Pass
	1	0	Lowest	14.33	2.37	10.40	22.36	Vertical	Pass
	1	0	Middle	14.43	2.39	10.42	22.46	Vertical	Pass
	1	0	Highest	14.57	2.40	10.44	22.61	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for CAT-M Band 2 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.17	2.37	10.40	20.20	Horizontal	Pass
	1	0	Middle	12.86	2.39	10.42	20.89	Horizontal	Pass
	1	0	Highest	12.88	2.40	10.44	20.92	Horizontal	Pass
	1	0	Lowest	14.94	2.37	10.40	22.97	Vertical	Pass
	1	0	Middle	15.15	2.39	10.42	23.18	Vertical	Pass
	1	0	Highest	15.28	2.40	10.44	23.32	Vertical	Pass
16QAM	1	0	Lowest	12.96	2.37	10.40	20.99	Horizontal	Pass
	1	0	Middle	11.93	2.39	10.42	19.96	Horizontal	Pass
	1	0	Highest	12.79	2.40	10.44	20.83	Horizontal	Pass
	1	0	Lowest	15.06	2.37	10.40	23.09	Vertical	Pass
	1	0	Middle	14.92	2.39	10.42	22.95	Vertical	Pass
	1	0	Highest	15.05	2.40	10.44	23.09	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for CAT-M Band 4 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.93	2.35	10.13	19.71	Horizontal	Pass
	1	0	Middle	12.2	2.36	10.16	20.00	Horizontal	Pass
	1	0	Highest	12	2.37	10.22	19.85	Horizontal	Pass
	1	0	Lowest	14.67	2.35	10.13	22.45	Vertical	Pass
	1	0	Middle	14.71	2.36	10.16	22.51	Vertical	Pass
	1	0	Highest	14.6	2.37	10.22	22.45	Vertical	Pass
16QAM	1	0	Lowest	11.78	2.35	10.13	19.56	Horizontal	Pass
	1	0	Middle	12.05	2.36	10.16	19.85	Horizontal	Pass
	1	0	Highest	11.26	2.37	10.22	19.11	Horizontal	Pass
	1	0	Lowest	14.42	2.35	10.13	22.20	Vertical	Pass
	1	0	Middle	14.51	2.36	10.16	22.31	Vertical	Pass
	1	0	Highest	14.19	2.37	10.22	22.04	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for CAT-M Band 4 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.98	2.35	10.13	19.76	Horizontal	Pass
	1	0	Middle	13.24	2.36	10.16	21.04	Horizontal	Pass
	1	0	Highest	11.87	2.37	10.22	19.72	Horizontal	Pass
	1	0	Lowest	14.33	2.35	10.13	22.11	Vertical	Pass
	1	0	Middle	15.48	2.36	10.16	23.28	Vertical	Pass
	1	0	Highest	14.52	2.37	10.22	22.37	Vertical	Pass
16QAM	1	0	Lowest	11.43	2.35	10.13	19.21	Horizontal	Pass
	1	0	Middle	12.39	2.36	10.16	20.19	Horizontal	Pass
	1	0	Highest	11.9	2.37	10.22	19.75	Horizontal	Pass
	1	0	Lowest	14.23	2.35	10.13	22.01	Vertical	Pass
	1	0	Middle	14.87	2.36	10.16	22.67	Vertical	Pass
	1	0	Highest	14.28	2.37	10.22	22.13	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for CAT-M Band 4 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.85	2.35	10.13	20.63	Horizontal	Pass
	1	0	Middle	13.23	2.36	10.16	21.03	Horizontal	Pass
	1	0	Highest	12.61	2.37	10.22	20.46	Horizontal	Pass
	1	0	Lowest	15.25	2.35	10.13	23.03	Vertical	Pass
	1	0	Middle	15.58	2.36	10.16	23.38	Vertical	Pass
	1	0	Highest	15.44	2.37	10.22	23.29	Vertical	Pass
16QAM	1	0	Lowest	11.39	2.35	10.13	19.17	Horizontal	Pass
	1	0	Middle	11.75	2.36	10.16	19.55	Horizontal	Pass
	1	0	Highest	13.04	2.37	10.22	20.89	Horizontal	Pass
	1	0	Lowest	14.74	2.35	10.13	22.52	Vertical	Pass
	1	0	Middle	15.33	2.36	10.16	23.13	Vertical	Pass
	1	0	Highest	15.27	2.37	10.22	23.12	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for CAT-M Band 4 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.48	2.35	10.13	21.26	Horizontal	Pass
	1	0	Middle	13.25	2.36	10.16	21.05	Horizontal	Pass
	1	0	Highest	12.41	2.37	10.22	20.26	Horizontal	Pass
	1	0	Lowest	15.53	2.35	10.13	23.31	Vertical	Pass
	1	0	Middle	15.46	2.36	10.16	23.26	Vertical	Pass
	1	0	Highest	15.24	2.37	10.22	23.09	Vertical	Pass
16QAM	1	0	Lowest	12.55	2.35	10.13	20.33	Horizontal	Pass
	1	0	Middle	12.73	2.36	10.16	20.53	Horizontal	Pass
	1	0	Highest	12.31	2.37	10.22	20.16	Horizontal	Pass
	1	0	Lowest	15.39	2.35	10.13	23.17	Vertical	Pass
	1	0	Middle	15.17	2.36	10.16	22.97	Vertical	Pass
	1	0	Highest	15.18	2.37	10.22	23.03	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (EIRP) for CAT-M Band 4 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.46	2.35	10.13	20.24	Horizontal	Pass
	1	0	Middle	12.54	2.36	10.16	20.34	Horizontal	Pass
	1	0	Highest	12.61	2.37	10.22	20.46	Horizontal	Pass
	1	0	Lowest	15.42	2.35	10.13	23.20	Vertical	Pass
	1	0	Middle	15.04	2.36	10.16	22.84	Vertical	Pass
	1	0	Highest	15.29	2.37	10.22	23.14	Vertical	Pass
16QAM	1	0	Lowest	12.32	2.35	10.13	20.10	Horizontal	Pass
	1	0	Middle	12.94	2.36	10.16	20.74	Horizontal	Pass
	1	0	Highest	12.46	2.37	10.22	20.31	Horizontal	Pass
	1	0	Lowest	15.03	2.35	10.13	22.81	Vertical	Pass
	1	0	Middle	15.07	2.36	10.16	22.87	Vertical	Pass
	1	0	Highest	15.17	2.37	10.22	23.02	Vertical	Pass
Limit	EIRP<1W=30dBm								

Radiated Power (EIRP) for CAT-M Band 4 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	13.42	2.35	10.13	21.20	Horizontal	Pass
	1	0	Middle	13.24	2.36	10.16	21.04	Horizontal	Pass
	1	0	Highest	13.43	2.37	10.22	21.28	Horizontal	Pass
	1	0	Lowest	15.77	2.35	10.13	23.55	Vertical	Pass
	1	0	Middle	15.75	2.36	10.16	23.55	Vertical	Pass
	1	0	Highest	15.65	2.37	10.22	23.50	Vertical	Pass
16QAM	1	0	Lowest	13.26	2.35	10.13	21.04	Horizontal	Pass
	1	0	Middle	12.81	2.36	10.16	20.61	Horizontal	Pass
	1	0	Highest	12.45	2.37	10.22	20.30	Horizontal	Pass
	1	0	Lowest	15.32	2.35	10.13	23.10	Vertical	Pass
	1	0	Middle	15.42	2.36	10.16	23.22	Vertical	Pass
	1	0	Highest	15.27	2.37	10.22	23.12	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (ERP) for CAT-M Band 12 / 1.4M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	15.21	1.21	6.40	2.15	18.25	Horizontal	Pass
	1	0	Middle	15.50	1.22	6.40	2.15	18.53	Horizontal	Pass
	1	0	Highest	16.07	1.23	6.40	2.15	19.09	Horizontal	Pass
	1	0	Lowest	18.04	1.21	6.40	2.15	21.08	Vertical	Pass
	1	0	Middle	18.28	1.22	6.40	2.15	21.31	Vertical	Pass
	1	0	Highest	18.31	1.23	6.40	2.15	21.33	Vertical	Pass
16QAM	1	0	Lowest	15.88	1.21	6.40	2.15	18.92	Horizontal	Pass
	1	0	Middle	15.47	1.22	6.40	2.15	18.50	Horizontal	Pass
	1	0	Highest	15.69	1.23	6.40	2.15	18.71	Horizontal	Pass
	1	0	Lowest	18.12	1.21	6.40	2.15	21.16	Vertical	Pass
	1	0	Middle	18.00	1.22	6.40	2.15	21.03	Vertical	Pass
	1	0	Highest	18.06	1.23	6.40	2.15	21.08	Vertical	Pass
Limit	ERP<3W=34.77dBm									

Radiated Power (ERP) for CAT-M Band 12 / 3M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	15.81	1.21	6.40	2.15	18.85	Horizontal	Pass
	1	0	Middle	16.16	1.22	6.40	2.15	19.19	Horizontal	Pass
	1	0	Highest	16.01	1.23	6.40	2.15	19.03	Horizontal	Pass
	1	0	Lowest	18.59	1.21	6.40	2.15	21.63	Vertical	Pass
	1	0	Middle	18.67	1.22	6.40	2.15	21.70	Vertical	Pass
	1	0	Highest	18.51	1.23	6.40	2.15	21.53	Vertical	Pass
16QAM	1	0	Lowest	16.17	1.21	6.40	2.15	19.21	Horizontal	Pass
	1	0	Middle	15.61	1.22	6.40	2.15	18.64	Horizontal	Pass
	1	0	Highest	15.24	1.23	6.40	2.15	18.26	Horizontal	Pass
	1	0	Lowest	18.41	1.21	6.40	2.15	21.45	Vertical	Pass
	1	0	Middle	18.06	1.22	6.40	2.15	21.09	Vertical	Pass
	1	0	Highest	18.08	1.23	6.40	2.15	21.10	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (ERP) for CAT-M Band 12 / 5M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	16.30	1.21	6.40	2.15	19.34	Horizontal	Pass
	1	0	Middle	16.09	1.22	6.40	2.15	19.12	Horizontal	Pass
	1	0	Highest	15.93	1.23	6.40	2.15	18.95	Horizontal	Pass
	1	0	Lowest	18.67	1.21	6.40	2.15	21.71	Vertical	Pass
	1	0	Middle	18.38	1.22	6.40	2.15	21.41	Vertical	Pass
	1	0	Highest	18.65	1.23	6.40	2.15	21.67	Vertical	Pass
16QAM	1	0	Lowest	16.06	1.21	6.40	2.15	19.10	Horizontal	Pass
	1	0	Middle	15.83	1.22	6.40	2.15	18.86	Horizontal	Pass
	1	0	Highest	16.01	1.23	6.40	2.15	19.03	Horizontal	Pass
	1	0	Lowest	18.52	1.21	6.40	2.15	21.56	Vertical	Pass
	1	0	Middle	17.84	1.22	6.40	2.15	20.87	Vertical	Pass
	1	0	Highest	18.04	1.23	6.40	2.15	21.06	Vertical	Pass
Limit	ERP<3W=34.77dBm									

Radiated Power (ERP) for CAT-M Band 12 / 10M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	16.65	1.21	6.40	2.15	19.69	Horizontal	Pass
	1	0	Middle	15.97	1.22	6.40	2.15	19.00	Horizontal	Pass
	1	0	Highest	16.15	1.23	6.40	2.15	19.17	Horizontal	Pass
	1	0	Lowest	18.68	1.21	6.40	2.15	21.72	Vertical	Pass
	1	0	Middle	18.78	1.22	6.40	2.15	21.81	Vertical	Pass
	1	0	Highest	18.62	1.23	6.40	2.15	21.64	Vertical	Pass
16QAM	1	0	Lowest	15.92	1.21	6.40	2.15	18.96	Horizontal	Pass
	1	0	Middle	15.87	1.22	6.40	2.15	18.90	Horizontal	Pass
	1	0	Highest	16.25	1.23	6.40	2.15	19.27	Horizontal	Pass
	1	0	Lowest	18.53	1.21	6.40	2.15	21.57	Vertical	Pass
	1	0	Middle	18.22	1.22	6.40	2.15	21.25	Vertical	Pass
	1	0	Highest	18.33	1.23	6.40	2.15	21.35	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (ERP) for CAT-M Band 13 / 5M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	15.55	1.21	6.40	2.15	18.59	Horizontal	Pass
	1	0	Middle	14.96	1.22	6.40	2.15	17.99	Horizontal	Pass
	1	0	Highest	15.36	1.23	6.40	2.15	18.38	Horizontal	Pass
	1	0	Lowest	17.72	1.21	6.40	2.15	20.76	Vertical	Pass
	1	0	Middle	17.88	1.22	6.40	2.15	20.91	Vertical	Pass
	1	0	Highest	17.77	1.23	6.40	2.15	20.79	Vertical	Pass
16QAM	1	0	Lowest	15.31	1.21	6.40	2.15	18.35	Horizontal	Pass
	1	0	Middle	14.91	1.22	6.40	2.15	17.94	Horizontal	Pass
	1	0	Highest	15.21	1.23	6.40	2.15	18.23	Horizontal	Pass
	1	0	Lowest	17.58	1.21	6.40	2.15	20.62	Vertical	Pass
	1	0	Middle	17.67	1.22	6.40	2.15	20.70	Vertical	Pass
	1	0	Highest	17.61	1.23	6.40	2.15	20.63	Vertical	Pass
Limit	ERP<3W=34.77dBm									

Radiated Power (ERP) for CAT-M Band 13 / 10M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Middle	15.91	1.22	6.40	2.15	18.94	Horizontal	Pass
	1	0	Middle	18.25	1.22	6.40	2.15	21.28	Vertical	Pass
16QAM	1	0	Middle	15.78	1.22	6.40	2.15	18.81	Horizontal	Pass
	1	0	Middle	17.81	1.22	6.40	2.15	20.84	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (EIRP) for CAT-M Band 25 / 1.4M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.47	2.37	10.40	19.50	Horizontal	Pass
	1	0	Middle	11.97	2.39	10.42	20.00	Horizontal	Pass
	1	0	Highest	11.65	2.40	10.44	19.69	Horizontal	Pass
	1	0	Lowest	13.93	2.37	10.40	21.96	Vertical	Pass
	1	0	Middle	14.15	2.39	10.42	22.18	Vertical	Pass
	1	0	Highest	14.13	2.40	10.44	22.17	Vertical	Pass
16QAM	1	0	Lowest	10.75	2.37	10.40	18.78	Horizontal	Pass
	1	0	Middle	11.24	2.39	10.42	19.27	Horizontal	Pass
	1	0	Highest	11.06	2.40	10.44	19.10	Horizontal	Pass
	1	0	Lowest	13.63	2.37	10.40	21.66	Vertical	Pass
	1	0	Middle	14.11	2.39	10.42	22.14	Vertical	Pass
	1	0	Highest	13.9	2.40	10.44	21.94	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for CAT-M Band 25 / 3M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.21	2.37	10.40	20.24	Horizontal	Pass
	1	0	Middle	11.52	2.39	10.42	19.55	Horizontal	Pass
	1	0	Highest	11.9	2.40	10.44	19.94	Horizontal	Pass
	1	0	Lowest	14.51	2.37	10.40	22.54	Vertical	Pass
	1	0	Middle	14.26	2.39	10.42	22.29	Vertical	Pass
	1	0	Highest	14.31	2.40	10.44	22.35	Vertical	Pass
16QAM	1	0	Lowest	11.67	2.37	10.40	19.70	Horizontal	Pass
	1	0	Middle	11.8	2.39	10.42	19.83	Horizontal	Pass
	1	0	Highest	11.94	2.40	10.44	19.98	Horizontal	Pass
	1	0	Lowest	14.5	2.37	10.40	22.53	Vertical	Pass
	1	0	Middle	14.35	2.39	10.42	22.38	Vertical	Pass
	1	0	Highest	14.12	2.40	10.44	22.16	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for CAT-M Band 25 / 5M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.76	2.37	10.40	20.79	Horizontal	Pass
	1	0	Middle	12.44	2.39	10.42	20.47	Horizontal	Pass
	1	0	Highest	12.25	2.40	10.44	20.29	Horizontal	Pass
	1	0	Lowest	15.09	2.37	10.40	23.12	Vertical	Pass
	1	0	Middle	14.55	2.39	10.42	22.58	Vertical	Pass
	1	0	Highest	14.7	2.40	10.44	22.74	Vertical	Pass
16QAM	1	0	Lowest	12.27	2.37	10.40	20.30	Horizontal	Pass
	1	0	Middle	11.97	2.39	10.42	20.00	Horizontal	Pass
	1	0	Highest	12.76	2.40	10.44	20.80	Horizontal	Pass
	1	0	Lowest	14.84	2.37	10.40	22.87	Vertical	Pass
	1	0	Middle	14.69	2.39	10.42	22.72	Vertical	Pass
	1	0	Highest	14.77	2.40	10.44	22.81	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for CAT-M Band 25 / 10M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	11.9	2.37	10.40	19.93	Horizontal	Pass
	1	0	Middle	12.53	2.39	10.42	20.56	Horizontal	Pass
	1	0	Highest	12.22	2.40	10.44	20.26	Horizontal	Pass
	1	0	Lowest	14.75	2.37	10.40	22.78	Vertical	Pass
	1	0	Middle	14.95	2.39	10.42	22.98	Vertical	Pass
	1	0	Highest	14.73	2.40	10.44	22.77	Vertical	Pass
16QAM	1	0	Lowest	12.02	2.37	10.40	20.05	Horizontal	Pass
	1	0	Middle	12.01	2.39	10.42	20.04	Horizontal	Pass
	1	0	Highest	12.38	2.40	10.44	20.42	Horizontal	Pass
	1	0	Lowest	14.67	2.37	10.40	22.70	Vertical	Pass
	1	0	Middle	14.58	2.39	10.42	22.61	Vertical	Pass
	1	0	Highest	14.49	2.40	10.44	22.53	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for CAT-M Band 25 / 15M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.45	2.37	10.40	20.48	Horizontal	Pass
	1	0	Middle	12.09	2.39	10.42	20.12	Horizontal	Pass
	1	0	Highest	12	2.40	10.44	20.04	Horizontal	Pass
	1	0	Lowest	14.95	2.37	10.40	22.98	Vertical	Pass
	1	0	Middle	15.01	2.39	10.42	23.04	Vertical	Pass
	1	0	Highest	14.98	2.40	10.44	23.02	Vertical	Pass
16QAM	1	0	Lowest	11.96	2.37	10.40	19.99	Horizontal	Pass
	1	0	Middle	11.99	2.39	10.42	20.02	Horizontal	Pass
	1	0	Highest	12.15	2.40	10.44	20.19	Horizontal	Pass
	1	0	Lowest	14.39	2.37	10.40	22.42	Vertical	Pass
	1	0	Middle	14.6	2.39	10.42	22.63	Vertical	Pass
	1	0	Highest	14.69	2.40	10.44	22.73	Vertical	Pass
Limit	EIRP<2W=33dBm								

Radiated Power (EIRP) for CAT-M Band 25 / 20M									
Modulation	RB		Channel	Result					Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P.(dBm)	Polarization Of Max. EIRP	
QPSK	1	0	Lowest	12.19	2.37	10.40	20.22	Horizontal	Pass
	1	0	Middle	12.18	2.39	10.42	20.21	Horizontal	Pass
	1	0	Highest	12.56	2.40	10.44	20.60	Horizontal	Pass
	1	0	Lowest	14.91	2.37	10.40	22.94	Vertical	Pass
	1	0	Middle	14.93	2.39	10.42	22.96	Vertical	Pass
	1	0	Highest	15.15	2.40	10.44	23.19	Vertical	Pass
16QAM	1	0	Lowest	12.57	2.37	10.40	20.60	Horizontal	Pass
	1	0	Middle	11.7	2.39	10.42	19.73	Horizontal	Pass
	1	0	Highest	11.96	2.40	10.44	20.00	Horizontal	Pass
	1	0	Lowest	14.71	2.37	10.40	22.74	Vertical	Pass
	1	0	Middle	14.54	2.39	10.42	22.57	Vertical	Pass
	1	0	Highest	14.9	2.40	10.44	22.94	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (ERP) for CAT-M Band 26(Part 22) / 1.4M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.24	2.35	10.13	2.15	17.87	Horizontal	Pass
	1	0	Middle	12.16	2.36	10.16	2.15	17.81	Horizontal	Pass
	1	0	Highest	11.73	2.37	10.22	2.15	17.43	Horizontal	Pass
	1	0	Lowest	14.68	2.35	10.13	2.15	20.31	Vertical	Pass
	1	0	Middle	14.64	2.36	10.16	2.15	20.29	Vertical	Pass
	1	0	Highest	14.38	2.37	10.22	2.15	20.08	Vertical	Pass
16QAM	1	0	Lowest	12.27	2.35	10.13	2.15	17.90	Horizontal	Pass
	1	0	Middle	11.81	2.36	10.16	2.15	17.46	Horizontal	Pass
	1	0	Highest	12.14	2.37	10.22	2.15	17.84	Horizontal	Pass
	1	0	Lowest	14.36	2.35	10.13	2.15	19.99	Vertical	Pass
	1	0	Middle	14.36	2.36	10.16	2.15	20.01	Vertical	Pass
	1	0	Highest	14.35	2.37	10.22	2.15	20.05	Vertical	Pass
Limit	ERP<7W=38.45dBm									

Radiated Power (ERP) for CAT-M Band 26(Part 22) / 3M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.75	2.35	10.13	2.15	18.38	Horizontal	Pass
	1	0	Middle	12.81	2.36	10.16	2.15	18.46	Horizontal	Pass
	1	0	Highest	12.46	2.37	10.22	2.15	18.16	Horizontal	Pass
	1	0	Lowest	14.93	2.35	10.13	2.15	20.56	Vertical	Pass
	1	0	Middle	14.87	2.36	10.16	2.15	20.52	Vertical	Pass
	1	0	Highest	14.83	2.37	10.22	2.15	20.53	Vertical	Pass
16QAM	1	0	Lowest	12.39	2.35	10.13	2.15	18.02	Horizontal	Pass
	1	0	Middle	11.6	2.36	10.16	2.15	17.25	Horizontal	Pass
	1	0	Highest	11.54	2.37	10.22	2.15	17.24	Horizontal	Pass
	1	0	Lowest	14.64	2.35	10.13	2.15	20.27	Vertical	Pass
	1	0	Middle	14.58	2.36	10.16	2.15	20.23	Vertical	Pass
	1	0	Highest	14.35	2.37	10.22	2.15	20.05	Vertical	Pass
Limit	ERP<7W=38.45dBm									



Radiated Power (ERP) for CAT-M Band 26(Part 22) / 5M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.75	2.35	10.13	2.15	18.38	Horizontal	Pass
	1	0	Middle	12.83	2.36	10.16	2.15	18.48	Horizontal	Pass
	1	0	Highest	11.88	2.37	10.22	2.15	17.58	Horizontal	Pass
	1	0	Lowest	14.82	2.35	10.13	2.15	20.45	Vertical	Pass
	1	0	Middle	15.26	2.36	10.16	2.15	20.91	Vertical	Pass
	1	0	Highest	14.77	2.37	10.22	2.15	20.47	Vertical	Pass
16QAM	1	0	Lowest	12.16	2.35	10.13	2.15	17.79	Horizontal	Pass
	1	0	Middle	11.85	2.36	10.16	2.15	17.50	Horizontal	Pass
	1	0	Highest	12.86	2.37	10.22	2.15	18.56	Horizontal	Pass
	1	0	Lowest	14.54	2.35	10.13	2.15	20.17	Vertical	Pass
	1	0	Middle	14.59	2.36	10.16	2.15	20.24	Vertical	Pass
	1	0	Highest	14.89	2.37	10.22	2.15	20.59	Vertical	Pass
Limit	ERP<7W=38.45dBm									

Radiated Power (ERP) for CAT-M Band 26(Part 22) / 10M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.22	2.35	10.13	2.15	17.85	Horizontal	Pass
	1	0	Middle	12.06	2.36	10.16	2.15	17.71	Horizontal	Pass
	1	0	Highest	12.53	2.37	10.22	2.15	18.23	Horizontal	Pass
	1	0	Lowest	15.21	2.35	10.13	2.15	20.84	Vertical	Pass
	1	0	Middle	14.92	2.36	10.16	2.15	20.57	Vertical	Pass
	1	0	Highest	14.96	2.37	10.22	2.15	20.66	Vertical	Pass
16QAM	1	0	Lowest	12.14	2.35	10.13	2.15	17.77	Horizontal	Pass
	1	0	Middle	12.14	2.36	10.16	2.15	17.79	Horizontal	Pass
	1	0	Highest	13.1	2.37	10.22	2.15	18.80	Horizontal	Pass
	1	0	Lowest	15	2.35	10.13	2.15	20.63	Vertical	Pass
	1	0	Middle	14.73	2.36	10.16	2.15	20.38	Vertical	Pass
	1	0	Highest	15.1	2.37	10.22	2.15	20.80	Vertical	Pass
Limit	ERP<7W=38.45dBm									



Radiated Power (ERP) for CAT-M Band 26(Part 22) / 15M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.34	2.35	10.13	2.15	17.97	Horizontal	Pass
	1	0	Middle	12.21	2.36	10.16	2.15	17.86	Horizontal	Pass
	1	0	Highest	12.23	2.37	10.22	2.15	17.93	Horizontal	Pass
	1	0	Lowest	15.23	2.35	10.13	2.15	20.86	Vertical	Pass
	1	0	Middle	14.94	2.36	10.16	2.15	20.59	Vertical	Pass
	1	0	Highest	15.11	2.37	10.22	2.15	20.81	Vertical	Pass
16QAM	1	0	Lowest	12.39	2.35	10.13	2.15	18.02	Horizontal	Pass
	1	0	Middle	12.06	2.36	10.16	2.15	17.71	Horizontal	Pass
	1	0	Highest	12.12	2.37	10.22	2.15	17.82	Horizontal	Pass
	1	0	Lowest	15.07	2.35	10.13	2.15	20.70	Vertical	Pass
	1	0	Middle	14.79	2.36	10.16	2.15	20.44	Vertical	Pass
	1	0	Highest	14.92	2.37	10.22	2.15	20.62	Vertical	Pass
Limit	ERP<7W=38.45dBm									



Radiated Power (ERP) for CAT-M Band 26(Part 90) / 1.4M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.08	2.35	10.13	2.15	17.71	Horizontal	Pass
	1	0	Middle	11.75	2.36	10.16	2.15	17.40	Horizontal	Pass
	1	0	Highest	12.31	2.37	10.22	2.15	18.01	Horizontal	Pass
	1	0	Lowest	14.76	2.35	10.13	2.15	20.39	Vertical	Pass
	1	0	Middle	14.69	2.36	10.16	2.15	20.34	Vertical	Pass
	1	0	Highest	14.75	2.37	10.22	2.15	20.45	Vertical	Pass
16QAM	1	0	Lowest	11.5	2.35	10.13	2.15	17.13	Horizontal	Pass
	1	0	Middle	12.11	2.36	10.16	2.15	17.76	Horizontal	Pass
	1	0	Highest	11.54	2.37	10.22	2.15	17.24	Horizontal	Pass
	1	0	Lowest	14.4	2.35	10.13	2.15	20.03	Vertical	Pass
	1	0	Middle	14.57	2.36	10.16	2.15	20.22	Vertical	Pass
	1	0	Highest	14.32	2.37	10.22	2.15	20.02	Vertical	Pass
Limit	ERP<100W=50dBm									

Radiated Power (ERP) for CAT-M Band 26(Part 90) / 3M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.38	2.35	10.13	2.15	18.01	Horizontal	Pass
	1	0	Middle	12.53	2.36	10.16	2.15	18.18	Horizontal	Pass
	1	0	Highest	11.3	2.37	10.22	2.15	17.00	Horizontal	Pass
	1	0	Lowest	14.71	2.35	10.13	2.15	20.34	Vertical	Pass
	1	0	Middle	14.59	2.36	10.16	2.15	20.24	Vertical	Pass
	1	0	Highest	14.28	2.37	10.22	2.15	19.98	Vertical	Pass
16QAM	1	0	Lowest	11.73	2.35	10.13	2.15	17.36	Horizontal	Pass
	1	0	Middle	11.83	2.36	10.16	2.15	17.48	Horizontal	Pass
	1	0	Highest	11.6	2.37	10.22	2.15	17.30	Horizontal	Pass
	1	0	Lowest	14.19	2.35	10.13	2.15	19.82	Vertical	Pass
	1	0	Middle	14.42	2.36	10.16	2.15	20.07	Vertical	Pass
	1	0	Highest	14.3	2.37	10.22	2.15	20.00	Vertical	Pass
Limit	ERP<100W=50dBm									



Radiated Power (ERP) for CAT-M Band 26(Part 90)/ 5M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
QPSK	1	0	Lowest	12.65	2.35	10.13	2.15	18.28	Horizontal	Pass
	1	0	Middle	13.07	2.36	10.16	2.15	18.72	Horizontal	Pass
	1	0	Highest	12.01	2.37	10.22	2.15	17.71	Horizontal	Pass
	1	0	Lowest	15.03	2.35	10.13	2.15	20.66	Vertical	Pass
	1	0	Middle	15.26	2.36	10.16	2.15	20.91	Vertical	Pass
	1	0	Highest	14.94	2.37	10.22	2.15	20.64	Vertical	Pass
16QAM	1	0	Lowest	12.55	2.35	10.13	2.15	18.18	Horizontal	Pass
	1	0	Middle	12.14	2.36	10.16	2.15	17.79	Horizontal	Pass
	1	0	Highest	12.1	2.37	10.22	2.15	17.80	Horizontal	Pass
	1	0	Lowest	14.66	2.35	10.13	2.15	20.29	Vertical	Pass
	1	0	Middle	14.84	2.36	10.16	2.15	20.49	Vertical	Pass
	1	0	Highest	14.89	2.37	10.22	2.15	20.59	Vertical	Pass
Limit	ERP<100W=50dBm									

Radiated Power (ERP) for CAT-M Band 26(Part 90) / 10M										
Modulation	RB		Channel	Result						Conclusion
	Size	Offset		S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization Of Max. ERP	
	1	0	Middle	12.44	2.36	10.16	2.15	18.09	Horizontal	Pass
	1	0	Middle	15.32	2.36	10.16	2.15	20.97	Vertical	Pass
	1	0	Middle	12.17	2.36	10.16	2.15	17.82	Horizontal	Pass
	1	0	Middle	15.14	2.36	10.16	2.15	20.79	Vertical	Pass
Limit	ERP<100W=50dBm									

6. OCCUPIED BANDWIDTH

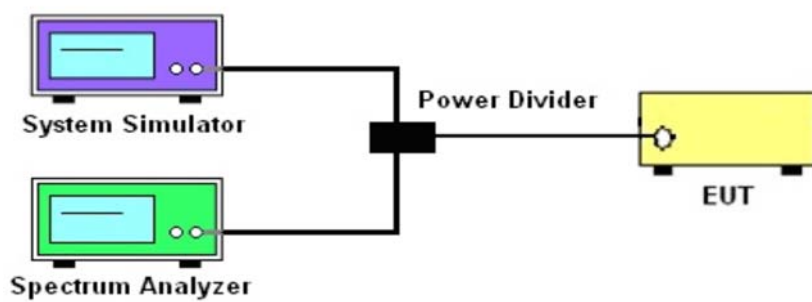
6.1 DESCRIPTION OF OCCUPIED BANDWIDTH MEASUREMENT

6.1.1 MEASUREMENT METHOD

1.The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

2.The 26 db emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 db below the maximum in-band spectral density of the modulated signal. spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

6.1.2 TEST SETUP



6.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 4.2 and 4.3.
2. The EUT was connected to spectrum and system simulator via a power divider.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Set the test probe and measure the Occupied Bandwidth of the spectrum analyzer.
5. Measure and record the Occupied Bandwidth from the Spectrum Analyzer.

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	PK	PK	PK	PK	PK	PK
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto



6.1.4 MEASUREMENT RESULT

CAT-M Band 2 Bandwidth [MHz]								
BW [MHz]	Mod	RB	Lowest		Middle		Highest	
			99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	6#0	1.0903	1.351	1.0924	1.381	1.094	1.38
1.4	16-QAM	5#0	0.93367	1.4	930.69	1.4	0.94382	1.4
3	QPSK	6#0	1.1022	1.406	1.0999	1.398	1.11	1.755
3	16-QAM	5#0	955.14	1.84	961.15	1.841	992.38	1.742
5	QPSK	6#0	1.1348	1.859	1.1345	1.859	1.2176	1.997
5	16-QAM	5#0	1.0888	1.741	1.0776	1.734	1.1491	1.739
10	QPSK	6#0	1.1827	2.241	1.1568	2.028	1.2446	2.252
10	16-QAM	5#0	1.3109	2.072	1.2815	2.276	1.3581	2.273
15	QPSK	6#0	1.618	2.569	1.6984	2.803	1.6626	2.776
15	16-QAM	5#0	1.345	2.332	1.3735	2.285	1.3629	2.228
20	QPSK	6#0	1.6273	2.83	1.6234	2.582	1.585	2.828
20	16-QAM	5#0	1.4028	2.406	1.3382	2.37	1.329	2.323
CAT-M Band 4 Bandwidth [MHz]								
BW [MHz]	Mod	RB	Lowest		Middle		Highest	
			99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	6#0	1.1022	1.4	1.0955	1.4	1.0965	1.4
1.4	16-QAM	5#0	0.95224	1.4	0.93881	1.4	0.94419	1.4
3	QPSK	6#0	1.1266	1.872	1.1058	1.7	1.1125	1.847
3	16-QAM	5#0	1.0411	1.837	0.95508	1.696	0.98783	1.855
5	QPSK	6#0	1.4008	2.213	1.197	1.864	1.2146	1.876
5	16-QAM	5#0	1.2348	1.847	1.0816	1.864	1.1318	1.863
10	QPSK	6#0	1.612	2.622	1.5218	2.402	1.2192	2.326
10	16-QAM	5#0	1.4696	2.257	1.4	2.224	1.3807	2.205
15	QPSK	6#0	1.787	2.825	1.7704	2.738	1.7384	2.786
15	16-QAM	5#0	1.4661	2.404	1.4507	2.248	1.4288	2.394
20	QPSK	6#0	1.8154	2.757	1.6998	2.828	1.7274	2.702
20	16-QAM	5#0	1.5058	2.322	1.3843	2.366	1.4096	2.258
CAT-M Band 12 Bandwidth [MHz]								
BW [MHz]	Mod	RB	Lowest		Middle		Highest	
			99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	6#0	1.0926	1.281	1.0895	1.31	1.0975	1.306
1.4	16-QAM	5#0	0.92886	1.149	0.92585	1.247	0.92624	1.342
3	QPSK	6#0	1.0923	1.283	1.0955	1.278	1.0932	1.292
3	16-QAM	5#0	0.92753	1.292	0.92888	1.263	0.93212	1.306
5	QPSK	6#0	1.1035	1.32	1.1038	1.345	1.0993	1.376
5	16-QAM	5#0	0.93969	1.283	0.95238	1.431	0.93801	1.498
10	QPSK	6#0	1.1022	1.358	1.0976	1.326	1.1035	1.388
10	16-QAM	5#0	0.99745	1.945	0.99094	1.955	1.0308	1.95



CAT-M Band 13 Bandwidth [MHz]								
BW [MHz]	Mod	RB	Lowest		Middle		Highest	
			99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
5	QPSK	6#0	1.1004	1.379	1.1003	1.668	1.1026	1.679
5	16-QAM	5#0	0.94507	1.522	0.94676	1.511	0.94703	1.522
10	QPSK	6#0	-	-	1.1057	1.4	-	-
10	16-QAM	5#0	-	-	1.144	2.083	-	-
CAT-M Band 25 Bandwidth [MHz]								
BW [MHz]	Mod	RB	Lowest		Middle		Highest	
			99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	6#0	1.0954	1.379	1.0951	1.36	1.0983	1.4
1.4	16-QAM	5#0	0.93787	1.4	0.93876	1.4	0.96518	1.4
3	QPSK	6#0	1.1175	1.704	1.1046	1.677	1.1201	1.872
3	16-QAM	5#0	0.97841	1.798	0.97237	1.777	1.087	1.9
5	QPSK	6#0	1.1501	1.965	1.1253	1.891	1.331	1.884
5	16-QAM	5#0	1.1074	1.742	1.0614	1.736	1.1586	1.866
10	QPSK	6#0	1.2288	2.24	1.1657	2.258	1.5199	2.625
10	16-QAM	5#0	1.3122	2.133	1.3136	2.121	1.2777	2.108
15	QPSK	6#0	1.6684	2.783	1.6915	2.815	1.6411	2.692
15	16-QAM	5#0	1.3518	2.207	1.3775	2.235	1.3016	2.276
20	QPSK	6#0	1.6567	2.82	1.7111	2.843	1.622	2.793
20	16-QAM	5#0	1.3228	2.216	1.3484	2.193	1.3162	2.224
CAT-M Band 26(Part 22) Bandwidth [MHz]								
BW [MHz]	Mod	RB	Lowest		Middle		Highest	
			99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	6#0	1.1	1.334	1.0944	1.347	1.095	1.372
1.4	16-QAM	5#0	0.934	1.4	0.937	1.4	0.942	1.4
3	QPSK	6#0	1.0989	1.339	1.1029	1.663	1.1112	1.695
3	16-QAM	5#0	0.94533	1.594	0.952	1.674	0.957	1.699
5	QPSK	6#0	1.1167	1.881	1.1288	1.896	1.138	1.9
5	16-QAM	5#0	1.0299	1.732	1.069	1.73	1.1085	1.74
10	QPSK	6#0	1.1335	2.058	1.1475	2.173	1.2113	2.271
10	16-QAM	5#0	1.486	2.404	1.5346	2.318	1.552	1.324
15	QPSK	6#0	1.7157	2.781	1.695	2.65	1.874	2.835
15	16-QAM	5#0	1.521	2.325	1.5218	2.257	1.57	2.427



CAT-M Band 26(Part 90) Bandwidth [MHz]								
BW [MHz]	Mode	RB	Lowest		Middle		Highest	
			99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
1.4	QPSK	6#0	1.094	1.336	1.0951	1.339	1.093	1.342
1.4	16-QAM	5#0	0.932	1.4	0.934	1.4	0.936	1.194
3	QPSK	6#0	1.1045	1.326	1.1004	1.343	1.108	1.361
3	16-QAM	5#0	0.95	1.654	0.942	1.583	0.951	1.779
5	QPSK	6#0	1.1092	1.744	1.11	1.786	1.117	1.794
5	16-QAM	5#0	1.0118	1.731	0.992	1.661	1.0043	1.637
10	QPSK	6#0	N/A	N/A	1.13	2.164	N/A	N/A
10	16-QAM	5#0	N/A	N/A	1.378	2.24	N/A	N/A

Note: Test chart See Appendix A.





7. CONDUCTED BAND EDGE

7.1 DESCRIPTION OF CONDUCTED BAND EDGE MEASUREMENT

7.1.1 MEASUREMENT METHOD

1. §22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

2. §24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed

3. §27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

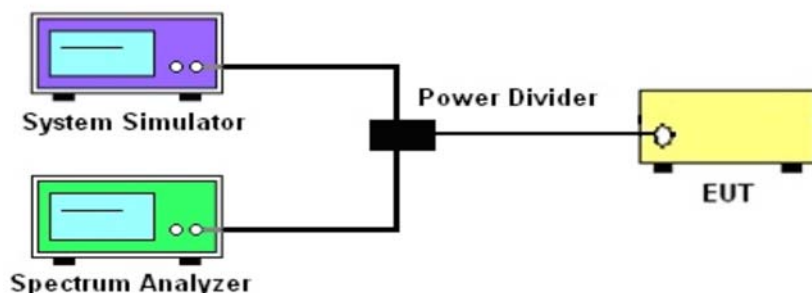
4. §27.53(m)(4)

For operations in the 2500 MHz ~ 2570 MHz band this section, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

5. §27.53 (g)

For operations in the 698 -746 MHz band, the FCC limit is $43 + 10\log_{10}(P[\text{Watts}])$ dB below the transmitter power $P(\text{Watts})$ in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

7.1.2 TEST SETUP



7.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
4. Set spectrum analyzer with RMS/AVG detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm}.$$

Band 7:

$$= P(W) - [55 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [55 + 10\log(P)] \text{ (dB)}$$

$$= -25\text{dBm}.$$

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	12MHz	13MHz	15MHz	20MHz	25MHz	30MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	RMS	RMS	RMS	RMS	RMS	RMS
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto

7.1.4 MEASUREMENT RESULT

Note: Test chart See Appendix B.

8. CONDUCTED SPURIOUS EMISSION

8.1 DESCRIPTION OF CONDUCTED SPURIOUS EMISSION MEASUREMENT

8.1.1 MEASUREMENT METHOD

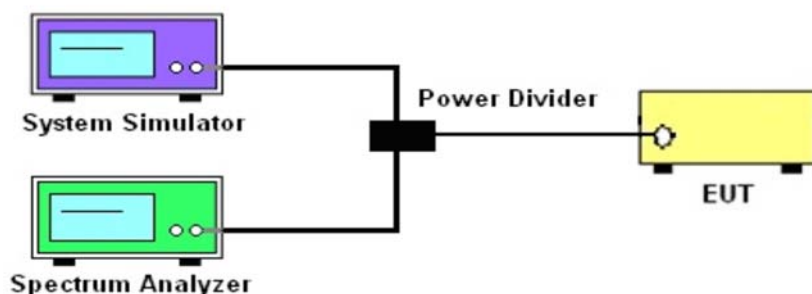
The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

8.1.2 TEST SETUP



8.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement
4. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)} = [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

For Band 7: $P(W) - [43 + 10\log(P)] \text{ (dB)} = -25\text{dBm}$

	LTE					
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	Auto	Auto	Auto	Auto	Auto	Auto
RBW	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz
VBW	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz
Detector	PK	PK	PK	PK	PK	PK
Trace	Max	Max	Max	Max	Max	Max

8.1.4 TEST RESULTS

Note: Test chart See Appendix C.

9. RADIATED SPURIOUS EMISSION

9.1 DESCRIPTION OF RADIATED SPURIOUS EMISSION

9.1.1 MEASUREMENT METHOD

The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

9.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, $RSE = Rx (dBuV) + CL (dB) + SA (dB) + Gain (dBi) - 107 (dBuV \text{ to } dBm)$ The SA is calibrated using following setup.

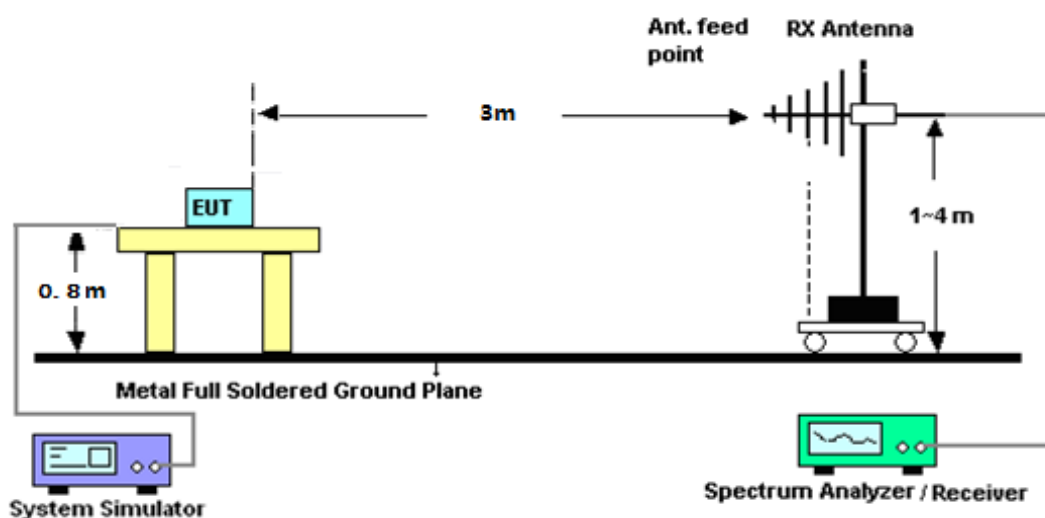
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

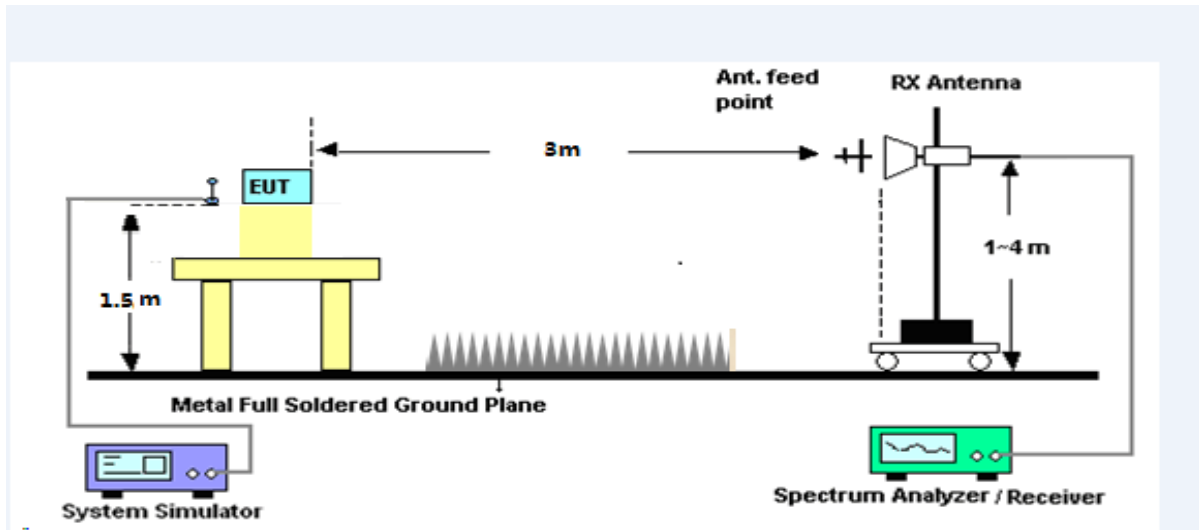
The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable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

Power=PMea+ARpl

For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz



9.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 Section 7 and ANSI C63.26 2015 Section 5.5.
2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm

For Band 7:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm

EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

ERP (dBm) = EIRP - 2.15



9.1.4 TEST RESULTS

CAT-M Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3701.36	-33.91	12.60	12.93	-34.24	-13.00	-21.24	H
5551.76	-34.75	13.10	17.11	-38.76	-13.00	-25.76	H
7402.54	-32.48	11.50	22.20	-43.18	-13.00	-30.18	H
3701.36	-35.89	12.60	12.93	-36.22	-13.00	-23.22	V
5551.76	-34.87	13.10	17.11	-38.88	-13.00	-25.88	V
7402.54	-32.48	11.50	22.20	-43.18	-13.00	-30.18	V
CAT-M Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3759.97	-33.62	12.60	12.93	-33.95	-13.00	-20.95	H
5640.10	-35.21	13.10	17.11	-39.22	-13.00	-26.22	H
7519.82	-33.57	11.50	22.20	-44.27	-13.00	-31.27	H
3759.97	-34.75	12.60	12.93	-35.08	-13.00	-22.08	V
5640.10	-34.81	13.10	17.11	-38.82	-13.00	-25.82	V
7519.82	-33.02	11.50	22.20	-43.72	-13.00	-30.72	V
CAT-M Band 2 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3818.42	-34.36	12.60	12.93	-34.69	-13.00	-21.69	H
5727.84	-34.01	13.10	17.11	-38.02	-13.00	-25.02	H
7637.18	-32.91	11.50	22.20	-43.61	-13.00	-30.61	H
3818.42	-34.65	12.60	12.93	-34.98	-13.00	-21.98	V
5727.84	-33.97	13.10	17.11	-37.98	-13.00	-24.98	V
7637.18	-32.17	11.50	22.20	-42.87	-13.00	-29.87	V



CAT-M Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3703.28	-34.01	12.60	12.93	-34.34	-13.00	-21.34	H
5554.20	-35.16	13.10	17.11	-39.17	-13.00	-26.17	H
7406.60	-33.30	11.50	22.20	-44.00	-13.00	-31.00	H
3703.28	-35.51	12.60	12.93	-35.84	-13.00	-22.84	V
5554.20	-35.13	13.10	17.11	-39.14	-13.00	-26.14	V
7406.60	-32.03	11.50	22.20	-42.73	-13.00	-29.73	V
CAT-M Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3759.79	-34.79	12.60	12.93	-35.12	-13.00	-22.12	H
5639.84	-35.40	13.10	17.11	-39.41	-13.00	-26.41	H
7520.12	-33.35	11.50	22.20	-44.05	-13.00	-31.05	H
3759.79	-35.98	12.60	12.93	-36.31	-13.00	-23.31	V
5639.84	-34.75	13.10	17.11	-38.76	-13.00	-25.76	V
7520.12	-33.04	11.50	22.20	-43.74	-13.00	-30.74	V
CAT-M Band 2 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3816.37	-34.10	12.60	12.93	-34.43	-13.00	-21.43	H
5724.79	-35.03	13.10	17.11	-39.04	-13.00	-26.04	H
7633.56	-32.68	11.50	22.20	-43.38	-13.00	-30.38	H
3816.37	-34.77	12.60	12.93	-35.10	-13.00	-22.10	V
5724.79	-34.10	13.10	17.11	-38.11	-13.00	-25.11	V
7633.56	-33.07	11.50	22.20	-43.77	-13.00	-30.77	V



CAT-M Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3705.16	-33.86	12.60	12.93	-34.19	-13.00	-21.19	H
5557.73	-34.24	13.10	17.11	-38.25	-13.00	-25.25	H
7410.74	-33.04	11.50	22.20	-43.74	-13.00	-30.74	H
3705.16	-35.01	12.60	12.93	-35.34	-13.00	-22.34	V
5557.73	-35.02	13.10	17.11	-39.03	-13.00	-26.03	V
7410.74	-32.32	11.50	22.20	-43.02	-13.00	-30.02	V
CAT-M Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3760.03	-33.48	12.60	12.93	-33.81	-13.00	-20.81	H
5639.91	-35.36	13.10	17.11	-39.37	-13.00	-26.37	H
7519.86	-33.28	11.50	22.20	-43.98	-13.00	-30.98	H
3760.03	-35.15	12.60	12.93	-35.48	-13.00	-22.48	V
5639.91	-34.68	13.10	17.11	-38.69	-13.00	-25.69	V
7519.86	-32.99	11.50	22.20	-43.69	-13.00	-30.69	V
CAT-M Band 2 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3813.93	-34.76	12.60	12.93	-35.09	-13.00	-22.09	H
5721.33	-35.19	13.10	17.11	-39.20	-13.00	-26.20	H
7628.78	-33.57	11.50	22.20	-44.27	-13.00	-31.27	H
3813.93	-35.15	12.60	12.93	-35.48	-13.00	-22.48	V
5721.33	-34.19	13.10	17.11	-38.20	-13.00	-25.20	V
7628.78	-32.66	11.50	22.20	-43.36	-13.00	-30.36	V



CAT-M Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3710.63	-34.45	12.60	12.93	-34.78	-13.00	-21.78	H
5565.93	-35.28	13.10	17.11	-39.29	-13.00	-26.29	H
7421.07	-32.40	11.50	22.20	-43.10	-13.00	-30.10	H
3710.63	-34.53	12.60	12.93	-34.86	-13.00	-21.86	V
5565.93	-34.70	13.10	17.11	-38.71	-13.00	-25.71	V
7421.07	-31.76	11.50	22.20	-42.46	-13.00	-29.46	V
CAT-M Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3759.89	-34.75	12.60	12.93	-35.08	-13.00	-22.08	H
5639.98	-34.86	13.10	17.11	-38.87	-13.00	-25.87	H
7520.18	-33.55	11.50	22.20	-44.25	-13.00	-31.25	H
3759.89	-35.59	12.60	12.93	-35.92	-13.00	-22.92	V
5639.98	-34.87	13.10	17.11	-38.88	-13.00	-25.88	V
7520.18	-32.74	11.50	22.20	-43.44	-13.00	-30.44	V
CAT-M Band 2 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3809.02	-34.02	12.60	12.93	-34.35	-13.00	-21.35	H
5714.03	-34.78	13.10	17.11	-38.79	-13.00	-25.79	H
7617.85	-33.12	11.50	22.20	-43.82	-13.00	-30.82	H
3809.02	-35.75	12.60	12.93	-36.08	-13.00	-23.08	V
5714.03	-35.12	13.10	17.11	-39.13	-13.00	-26.13	V
7617.85	-32.10	11.50	22.20	-42.80	-13.00	-29.80	V



CAT-M Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3716.15	-33.87	12.60	12.93	-34.20	-13.00	-21.20	H
5573.91	-35.02	13.10	17.11	-39.03	-13.00	-26.03	H
7618.48	-32.36	11.50	22.20	-43.06	-13.00	-30.06	H
3716.15	-35.83	12.60	12.93	-36.16	-13.00	-23.16	V
5573.91	-34.59	13.10	17.11	-38.60	-13.00	-25.60	V
7618.48	-32.21	11.50	22.20	-42.91	-13.00	-29.91	V
CAT-M Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3760.01	-34.18	12.60	12.93	-34.51	-13.00	-21.51	H
5640.09	-35.22	13.10	17.11	-39.23	-13.00	-26.23	H
7520.28	-32.86	11.50	22.20	-43.56	-13.00	-30.56	H
3760.01	-35.52	12.60	12.93	-35.85	-13.00	-22.85	V
5640.09	-34.15	13.10	17.11	-38.16	-13.00	-25.16	V
7520.28	-32.25	11.50	22.20	-42.95	-13.00	-29.95	V
CAT-M Band 2 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3803.52	-34.78	12.60	12.93	-35.11	-13.00	-22.11	H
5705.65	-35.00	13.10	17.11	-39.01	-13.00	-26.01	H
7607.33	-32.19	11.50	22.20	-42.89	-13.00	-29.89	H
3803.52	-34.81	12.60	12.93	-35.14	-13.00	-22.14	V
5705.65	-35.15	13.10	17.11	-39.16	-13.00	-26.16	V
7607.33	-32.97	11.50	22.20	-43.67	-13.00	-30.67	V



CAT-M Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3721.37	-34.31	12.60	12.93	-34.64	-13.00	-21.64	H
5581.48	-35.22	13.10	17.11	-39.23	-13.00	-26.23	H
7441.97	-32.40	11.50	22.20	-43.10	-13.00	-30.10	H
3721.37	-35.48	12.60	12.93	-35.81	-13.00	-22.81	V
5581.48	-34.15	13.10	17.11	-38.16	-13.00	-25.16	V
7441.97	-31.83	11.50	22.20	-42.53	-13.00	-29.53	V
CAT-M Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3759.98	-34.45	12.60	12.93	-34.78	-13.00	-21.78	H
5639.98	-34.88	13.10	17.11	-38.89	-13.00	-25.89	H
7519.87	-33.15	11.50	22.20	-43.85	-13.00	-30.85	H
3759.98	-34.75	12.60	12.93	-35.08	-13.00	-22.08	V
5639.98	-34.10	13.10	17.11	-38.11	-13.00	-25.11	V
7519.87	-32.57	11.50	22.20	-43.27	-13.00	-30.27	V
CAT-M Band 2 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3798.31	-34.12	12.60	12.93	-34.45	-13.00	-21.45	H
5697.48	-35.32	13.10	17.11	-39.33	-13.00	-26.33	H
7597.05	-33.23	11.50	22.20	-43.93	-13.00	-30.93	H
3798.31	-35.99	12.60	12.93	-36.32	-13.00	-23.32	V
5697.48	-34.91	13.10	17.11	-38.92	-13.00	-25.92	V
7597.05	-32.14	11.50	22.20	-42.84	-13.00	-29.84	V



CAT-M Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3421.00	-34.57	12.90	12.56	-34.23	-13.00	-21.23	H
5131.72	-35.06	13.10	16.32	-38.28	-13.00	-25.28	H
6842.80	-33.14	12.33	21.13	-41.94	-13.00	-28.94	H
3421.00	-35.65	12.90	12.56	-35.31	-13.00	-22.31	V
5131.72	-33.85	13.10	16.32	-37.07	-13.00	-24.07	V
6842.80	-32.93	12.33	21.13	-41.73	-13.00	-28.73	V
CAT-M Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3465.26	-34.90	12.90	12.56	-34.56	-13.00	-21.56	H
5196.99	-34.18	13.10	16.32	-37.40	-13.00	-24.40	H
6930.00	-33.30	12.33	21.13	-42.10	-13.00	-29.10	H
3465.26	-35.59	12.90	12.56	-35.25	-13.00	-22.25	V
5196.99	-34.43	13.10	16.32	-37.65	-13.00	-24.65	V
6930.00	-33.14	12.33	21.13	-41.94	-13.00	-28.94	V
CAT-M Band 4 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3508.29	-34.92	12.90	12.56	-34.58	-13.00	-21.58	H
5262.75	-34.23	13.10	16.32	-37.45	-13.00	-24.45	H
7016.19	-33.20	12.33	21.13	-42.00	-13.00	-29.00	H
3508.29	-34.70	12.90	12.56	-34.36	-13.00	-21.36	V
5262.75	-33.96	13.10	16.32	-37.18	-13.00	-24.18	V
7016.19	-32.58	12.33	21.13	-41.38	-13.00	-28.38	V



CAT-M Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3424.44	-33.85	12.90	12.56	-33.51	-13.00	-20.51	H
5136.37	-35.15	13.10	16.32	-38.37	-13.00	-25.37	H
6848.70	-33.22	12.33	21.13	-42.02	-13.00	-29.02	H
3424.44	-35.07	12.90	12.56	-34.73	-13.00	-21.73	V
5136.37	-34.23	13.10	16.32	-37.45	-13.00	-24.45	V
6848.70	-31.90	12.33	21.13	-40.70	-13.00	-27.70	V
CAT-M Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3465.24	-34.54	12.90	12.56	-34.20	-13.00	-21.20	H
5196.83	-35.28	13.10	16.32	-38.50	-13.00	-25.50	H
6930.11	-32.53	12.33	21.13	-41.33	-13.00	-28.33	H
3465.24	-35.50	12.90	12.56	-35.16	-13.00	-22.16	V
5196.83	-34.02	13.10	16.32	-37.24	-13.00	-24.24	V
6930.11	-31.97	12.33	21.13	-40.77	-13.00	-27.77	V
CAT-M Band 4 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3506.51	-34.31	12.90	12.56	-33.97	-13.00	-20.97	H
5262.35	-35.34	13.10	16.32	-38.56	-13.00	-25.56	H
7013.13	-33.14	12.33	21.13	-41.94	-13.00	-28.94	H
3506.51	-35.54	12.90	12.56	-35.20	-13.00	-22.20	V
5262.35	-34.80	13.10	16.32	-38.02	-13.00	-25.02	V
7013.13	-31.89	12.33	21.13	-40.69	-13.00	-27.69	V



CAT-M Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3425.01	-34.42	12.90	12.56	-34.08	-13.00	-21.08	H
5137.41	-34.29	13.10	16.32	-37.51	-13.00	-24.51	H
6850.21	-32.53	12.33	21.13	-41.33	-13.00	-28.33	H
3425.01	-35.21	12.90	12.56	-34.87	-13.00	-21.87	V
5137.41	-34.91	13.10	16.32	-38.13	-13.00	-25.13	V
6850.21	-32.98	12.33	21.13	-41.78	-13.00	-28.78	V
CAT-M Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3465.06	-34.65	12.90	12.56	-34.31	-13.00	-21.31	H
5197.22	-34.15	13.10	16.32	-37.37	-13.00	-24.37	H
6930.04	-32.87	12.33	21.13	-41.67	-13.00	-28.67	H
3465.06	-35.82	12.90	12.56	-35.48	-13.00	-22.48	V
5197.22	-33.88	13.10	16.32	-37.10	-13.00	-24.10	V
6930.04	-32.67	12.33	21.13	-41.47	-13.00	-28.47	V
CAT-M Band 4 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3505.61	-34.77	12.90	12.56	-34.43	-13.00	-21.43	H
5257.19	-34.39	13.10	16.32	-37.61	-13.00	-24.61	H
7010.07	-32.56	12.33	21.13	-41.36	-13.00	-28.36	H
3505.61	-34.72	12.90	12.56	-34.38	-13.00	-21.38	V
5257.19	-34.81	13.10	16.32	-38.03	-13.00	-25.03	V
7010.07	-33.08	12.33	21.13	-41.88	-13.00	-28.88	V



CAT-M Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3430.28	-34.13	12.90	12.56	-33.79	-13.00	-20.79	H
5145.31	-35.19	13.10	16.32	-38.41	-13.00	-25.41	H
6860.64	-33.00	12.33	21.13	-41.80	-13.00	-28.80	H
3430.28	-35.49	12.90	12.56	-35.15	-13.00	-22.15	V
5145.31	-35.07	13.10	16.32	-38.29	-13.00	-25.29	V
6860.64	-32.21	12.33	21.13	-41.01	-13.00	-28.01	V
CAT-M Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3465.03	-34.00	12.90	12.56	-33.66	-13.00	-20.66	H
5197.08	-34.96	13.10	16.32	-38.18	-13.00	-25.18	H
6930.04	-32.43	12.33	21.13	-41.23	-13.00	-28.23	H
3465.03	-35.83	12.90	12.56	-35.49	-13.00	-22.49	V
5197.08	-34.74	13.10	16.32	-37.96	-13.00	-24.96	V
6930.04	-32.50	12.33	21.13	-41.30	-13.00	-28.30	V
CAT-M Band 4 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3500.58	-34.01	12.90	12.56	-33.67	-13.00	-20.67	H
5250.44	-34.37	13.10	16.32	-37.59	-13.00	-24.59	H
6999.96	-33.12	12.33	21.13	-41.92	-13.00	-28.92	H
3500.58	-35.67	12.90	12.56	-35.33	-13.00	-22.33	V
5250.44	-34.50	13.10	16.32	-37.72	-13.00	-24.72	V
6999.96	-32.56	12.33	21.13	-41.36	-13.00	-28.36	V



CAT-M Band 4 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3435.38	-34.63	12.90	12.56	-34.29	-13.00	-21.29	H
5152.27	-35.25	13.10	16.32	-38.47	-13.00	-25.47	H
6870.47	-32.56	12.33	21.13	-41.36	-13.00	-28.36	H
3435.38	-34.79	12.90	12.56	-34.45	-13.00	-21.45	V
5152.27	-34.54	13.10	16.32	-37.76	-13.00	-24.76	V
6870.47	-32.63	12.33	21.13	-41.43	-13.00	-28.43	V
CAT-M Band 4 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3464.78	-34.23	12.90	12.56	-33.89	-13.00	-20.89	H
5197.11	-35.06	13.10	16.32	-38.28	-13.00	-25.28	H
6930.12	-32.98	12.33	21.13	-41.78	-13.00	-28.78	H
3464.78	-35.33	12.90	12.56	-34.99	-13.00	-21.99	V
5197.11	-33.94	13.10	16.32	-37.16	-13.00	-24.16	V
6930.12	-32.97	12.33	21.13	-41.77	-13.00	-28.77	V
CAT-M Band 4 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3495.79	-33.96	12.90	12.56	-33.62	-13.00	-20.62	H
5242.17	-34.90	13.10	16.32	-38.12	-13.00	-25.12	H
6990.61	-32.34	12.33	21.13	-41.14	-13.00	-28.14	H
3495.79	-35.36	12.90	12.56	-35.02	-13.00	-22.02	V
5242.17	-35.14	13.10	16.32	-38.36	-13.00	-25.36	V
6990.61	-32.82	12.33	21.13	-41.62	-13.00	-28.62	V



CAT-M Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3440.40	-34.14	12.90	12.56	-33.80	-13.00	-20.80	H
5160.20	-34.34	13.10	16.32	-37.56	-13.00	-24.56	H
6880.50	-32.55	12.33	21.13	-41.35	-13.00	-28.35	H
3440.40	-34.56	12.90	12.56	-34.22	-13.00	-21.22	V
5160.20	-33.80	13.10	16.32	-37.02	-13.00	-24.02	V
6880.50	-33.12	12.33	21.13	-41.92	-13.00	-28.92	V
CAT-M Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3465.18	-34.80	12.90	12.56	-34.46	-13.00	-21.46	H
5197.07	-34.20	13.10	16.32	-37.42	-13.00	-24.42	H
6930.13	-32.85	12.33	21.13	-41.65	-13.00	-28.65	H
3465.18	-35.62	12.90	12.56	-35.28	-13.00	-22.28	V
5197.07	-34.51	13.10	16.32	-37.73	-13.00	-24.73	V
6930.13	-33.09	12.33	21.13	-41.89	-13.00	-28.89	V
CAT-M Band 4 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3490.64	-33.57	12.90	12.56	-33.23	-13.00	-20.23	H
5235.45	-35.48	13.10	16.32	-38.70	-13.00	-25.70	H
6980.11	-33.34	12.33	21.13	-42.14	-13.00	-29.14	H
3490.64	-35.52	12.90	12.56	-35.18	-13.00	-22.18	V
5235.45	-35.04	13.10	16.32	-38.26	-13.00	-25.26	V
6980.11	-32.11	12.33	21.13	-40.91	-13.00	-27.91	V



CAT-M Band 12 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1399.23	-34.16	8.17	9.34	-35.33	-13.00	-22.33	H
2099.05	-34.19	9.53	10.42	-35.08	-13.00	-22.08	H
2798.64	-33.46	11.27	11.12	-33.31	-13.00	-20.31	H
1399.23	-34.72	8.17	9.34	-35.89	-13.00	-22.89	V
2099.05	-33.81	9.53	10.42	-34.70	-13.00	-21.70	V
2798.64	-32.67	11.27	11.12	-32.52	-13.00	-19.52	V
CAT-M Band 12 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.90	-34.06	8.17	9.34	-35.23	-13.00	-22.23	H
2122.36	-35.40	9.53	10.42	-36.29	-13.00	-23.29	H
2829.99	-33.01	11.27	11.12	-32.86	-13.00	-19.86	H
1414.90	-34.62	8.17	9.34	-35.79	-13.00	-22.79	V
2122.36	-34.94	9.53	10.42	-35.83	-13.00	-22.83	V
2829.99	-32.17	11.27	11.12	-32.02	-13.00	-19.02	V
CAT-M Band 12 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1430.38	-33.68	8.17	9.34	-34.85	-13.00	-21.85	H
2145.67	-35.44	9.53	10.42	-36.33	-13.00	-23.33	H
2861.16	-33.63	11.27	11.12	-33.48	-13.00	-20.48	H
1430.38	-35.19	8.17	9.34	-36.36	-13.00	-23.36	V
2145.67	-34.80	9.53	10.42	-35.69	-13.00	-22.69	V
2861.16	-31.79	11.27	11.12	-31.64	-13.00	-18.64	V



CAT-M Band 12 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1400.82	-33.52	8.17	9.34	-34.69	-13.00	-21.69	H
2101.26	-34.90	9.53	10.42	-35.79	-13.00	-22.79	H
2801.89	-32.77	11.27	11.12	-32.62	-13.00	-19.62	H
1400.82	-35.51	8.17	9.34	-36.68	-13.00	-23.68	V
2101.26	-33.87	9.53	10.42	-34.76	-13.00	-21.76	V
2801.89	-32.25	11.27	11.12	-32.10	-13.00	-19.10	V
CAT-M Band 12 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.55	-34.51	8.17	9.34	-35.68	-13.00	-22.68	H
2122.39	-34.89	9.53	10.42	-35.78	-13.00	-22.78	H
2829.91	-32.19	11.27	11.12	-32.04	-13.00	-19.04	H
1414.55	-35.75	8.17	9.34	-36.92	-13.00	-23.92	V
2122.39	-34.70	9.53	10.42	-35.59	-13.00	-22.59	V
2829.91	-32.36	11.27	11.12	-32.21	-13.00	-19.21	V
CAT-M Band 12 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1428.84	-34.71	8.17	9.34	-35.88	-13.00	-22.88	H
2143.38	-34.44	9.53	10.42	-35.33	-13.00	-22.33	H
2857.97	-33.58	11.27	11.12	-33.43	-13.00	-20.43	H
1428.84	-35.44	8.17	9.34	-36.61	-13.00	-23.61	V
2143.38	-34.63	9.53	10.42	-35.52	-13.00	-22.52	V
2857.97	-32.96	11.27	11.12	-32.81	-13.00	-19.81	V



CAT-M Band 12 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1402.65	-33.89	8.17	9.34	-35.06	-13.00	-22.06	H
2104.03	-34.77	9.53	10.42	-35.66	-13.00	-22.66	H
2805.86	-32.24	11.27	11.12	-32.09	-13.00	-19.09	H
1402.65	-34.94	8.17	9.34	-36.11	-13.00	-23.11	V
2104.03	-34.33	9.53	10.42	-35.22	-13.00	-22.22	V
2805.86	-31.91	11.27	11.12	-31.76	-13.00	-18.76	V
CAT-M Band 12 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.61	-34.33	8.17	9.34	-35.50	-13.00	-22.50	H
2122.19	-34.14	9.53	10.42	-35.03	-13.00	-22.03	H
2829.65	-33.48	11.27	11.12	-33.33	-13.00	-20.33	H
1414.61	-35.90	8.17	9.34	-37.07	-13.00	-24.07	V
2122.19	-35.05	9.53	10.42	-35.94	-13.00	-22.94	V
2829.65	-32.96	11.27	11.12	-32.81	-13.00	-19.81	V
CAT-M Band 12 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1426.70	-34.24	8.17	9.34	-35.41	-13.00	-22.41	H
2140.44	-34.19	9.53	10.42	-35.08	-13.00	-22.08	H
2853.72	-32.59	11.27	11.12	-32.44	-13.00	-19.44	H
1426.70	-35.42	8.17	9.34	-36.59	-13.00	-23.59	V
2140.44	-34.40	9.53	10.42	-35.29	-13.00	-22.29	V
2853.72	-32.95	11.27	11.12	-32.80	-13.00	-19.80	V



CAT-M Band 12 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1407.89	-34.44	8.17	9.34	-35.61	-13.00	-22.61	H
2111.85	-34.05	9.53	10.42	-34.94	-13.00	-21.94	H
2815.97	-32.56	11.27	11.12	-32.41	-13.00	-19.41	H
1407.89	-34.66	8.17	9.34	-35.83	-13.00	-22.83	V
2111.85	-34.61	9.53	10.42	-35.50	-13.00	-22.50	V
2815.97	-32.08	11.27	11.12	-31.93	-13.00	-18.93	V
CAT-M Band 12 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.88	-34.16	8.17	9.34	-35.33	-13.00	-22.33	H
2122.14	-35.35	9.53	10.42	-36.24	-13.00	-23.24	H
2829.78	-32.99	11.27	11.12	-32.84	-13.00	-19.84	H
1414.88	-35.13	8.17	9.34	-36.30	-13.00	-23.30	V
2122.14	-34.24	9.53	10.42	-35.13	-13.00	-22.13	V
2829.78	-32.10	11.27	11.12	-31.95	-13.00	-18.95	V
CAT-M Band 12 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1421.85	-33.45	8.17	9.34	-34.62	-13.00	-21.62	H
2132.58	-35.34	9.53	10.42	-36.23	-13.00	-23.23	H
2843.89	-33.27	11.27	11.12	-33.12	-13.00	-20.12	H
1421.85	-34.88	8.17	9.34	-36.05	-13.00	-23.05	V
2132.58	-35.12	9.53	10.42	-36.01	-13.00	-23.01	V
2843.89	-32.74	11.27	11.12	-32.59	-13.00	-19.59	V



CAT-M Band 13 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1559.31	-34.24	8.17	9.34	-35.41	-13.00	-22.41	H
2338.41	-34.52	9.53	10.42	-35.41	-13.00	-22.41	H
3117.90	-32.80	11.27	11.12	-32.65	-13.00	-19.65	H
1559.31	-34.82	8.17	9.34	-35.99	-13.00	-22.99	V
2338.41	-34.29	9.53	10.42	-35.18	-13.00	-22.18	V
3117.90	-33.19	11.27	11.12	-33.04	-13.00	-20.04	V
CAT-M Band 13 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1563.95	-34.00	8.17	9.34	-35.17	-13.00	-22.17	H
2345.67	-35.04	9.53	10.42	-35.93	-13.00	-22.93	H
3128.04	-32.24	11.27	11.12	-32.09	-13.00	-19.09	H
1563.95	-34.70	8.17	9.34	-35.87	-13.00	-22.87	V
2345.67	-34.83	9.53	10.42	-35.72	-13.00	-22.72	V
3128.04	-32.84	11.27	11.12	-32.69	-13.00	-19.69	V
CAT-M Band 13 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1568.75	-34.06	8.17	9.34	-35.23	-13.00	-22.23	H
2353.49	-35.17	9.53	10.42	-36.06	-13.00	-23.06	H
3138.06	-32.19	11.27	11.12	-32.04	-13.00	-19.04	H
1568.75	-35.02	8.17	9.34	-36.19	-13.00	-23.19	V
2353.49	-34.90	9.53	10.42	-35.79	-13.00	-22.79	V
3138.06	-32.88	11.27	11.12	-32.73	-13.00	-19.73	V

CAT-M Band 13 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1563.86	-33.45	8.17	9.34	-34.62	-13.00	-21.62	H
2346.21	-34.44	9.53	10.42	-35.33	-13.00	-22.33	H
3127.78	-32.19	11.27	11.12	-32.04	-13.00	-19.04	H
1563.86	-34.52	8.17	9.34	-35.69	-13.00	-22.69	V
2346.21	-35.21	9.53	10.42	-36.10	-13.00	-23.10	V
3127.78	-32.61	11.27	11.12	-32.46	-13.00	-19.46	V



CAT-M Band 25 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3701.35	-34.04	12.60	12.93	-34.37	-13.00	-21.37	H
5551.92	-34.12	13.10	17.11	-38.13	-13.00	-25.13	H
7402.79	-32.18	11.50	22.20	-42.88	-13.00	-29.88	H
3701.35	-35.62	12.60	12.93	-35.95	-13.00	-22.95	V
5551.92	-34.65	13.10	17.11	-38.66	-13.00	-25.66	V
7402.79	-32.85	11.50	22.20	-43.55	-13.00	-30.55	V
CAT-M Band 25 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3764.88	-34.83	12.60	12.93	-35.16	-13.00	-22.16	H
5647.21	-34.27	13.10	17.11	-38.28	-13.00	-25.28	H
7530.10	-32.60	11.50	22.20	-43.30	-13.00	-30.30	H
3764.88	-35.93	12.60	12.93	-36.26	-13.00	-23.26	V
5647.21	-34.93	13.10	17.11	-38.94	-13.00	-25.94	V
7530.10	-32.64	11.50	22.20	-43.34	-13.00	-30.34	V
CAT-M Band 25 / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3828.34	-33.98	12.60	12.93	-34.31	-13.00	-21.31	H
5727.82	-34.58	13.10	17.11	-38.59	-13.00	-25.59	H
7657.14	-33.10	11.50	22.20	-43.80	-13.00	-30.80	H
3828.34	-35.14	12.60	12.93	-35.47	-13.00	-22.47	V
5727.82	-33.93	13.10	17.11	-37.94	-13.00	-24.94	V
7657.14	-32.48	11.50	22.20	-43.18	-13.00	-30.18	V



CAT-M Band 25 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3703.21	-33.79	12.60	12.93	-34.12	-13.00	-21.12	H
5554.21	-35.30	13.10	17.11	-39.31	-13.00	-26.31	H
7405.67	-33.44	11.50	22.20	-44.14	-13.00	-31.14	H
3703.21	-34.88	12.60	12.93	-35.21	-13.00	-22.21	V
5554.21	-34.09	13.10	17.11	-38.10	-13.00	-25.10	V
7405.67	-32.31	11.50	22.20	-43.01	-13.00	-30.01	V
CAT-M Band 25 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3764.90	-34.45	12.60	12.93	-34.78	-13.00	-21.78	H
5646.99	-34.72	13.10	17.11	-38.73	-13.00	-25.73	H
7530.00	-33.09	11.50	22.20	-43.79	-13.00	-30.79	H
3764.90	-35.67	12.60	12.93	-36.00	-13.00	-23.00	V
5646.99	-34.10	13.10	17.11	-38.11	-13.00	-25.11	V
7530.00	-32.30	11.50	22.20	-43.00	-13.00	-30.00	V
CAT-M Band 25 / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3827.07	-34.26	12.60	12.93	-34.59	-13.00	-21.59	H
5740.11	-34.29	13.10	17.11	-38.30	-13.00	-25.30	H
7654.42	-32.36	11.50	22.20	-43.06	-13.00	-30.06	H
3827.07	-35.42	12.60	12.93	-35.75	-13.00	-22.75	V
5740.11	-33.89	13.10	17.11	-37.90	-13.00	-24.90	V
7654.42	-32.70	11.50	22.20	-43.40	-13.00	-30.40	V



CAT-M Band 25 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3705.09	-34.46	12.60	12.93	-34.79	-13.00	-21.79	H
5557.19	-35.21	13.10	17.11	-39.22	-13.00	-26.22	H
7410.25	-32.47	11.50	22.20	-43.17	-13.00	-30.17	H
3705.09	-34.80	12.60	12.93	-35.13	-13.00	-22.13	V
5557.19	-35.13	13.10	17.11	-39.14	-13.00	-26.14	V
7410.25	-32.45	11.50	22.20	-43.15	-13.00	-30.15	V
CAT-M Band 25 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3764.88	-33.55	12.60	12.93	-33.88	-13.00	-20.88	H
5647.25	-35.09	13.10	17.11	-39.10	-13.00	-26.10	H
7530.04	-33.23	11.50	22.20	-43.93	-13.00	-30.93	H
3764.88	-35.03	12.60	12.93	-35.36	-13.00	-22.36	V
5647.25	-35.18	13.10	17.11	-39.19	-13.00	-26.19	V
7530.04	-32.18	11.50	22.20	-42.88	-13.00	-29.88	V
CAT-M Band 25 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3825.26	-33.63	12.60	12.93	-33.96	-13.00	-20.96	H
5737.15	-35.27	13.10	17.11	-39.28	-13.00	-26.28	H
7650.76	-32.49	11.50	22.20	-43.19	-13.00	-30.19	H
3825.26	-34.80	12.60	12.93	-35.13	-13.00	-22.13	V
5737.15	-34.61	13.10	17.11	-38.62	-13.00	-25.62	V
7650.76	-32.17	11.50	22.20	-42.87	-13.00	-29.87	V



CAT-M Band 25 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3710.15	-34.30	12.60	12.93	-34.63	-13.00	-21.63	H
5565.01	-34.42	13.10	17.11	-38.43	-13.00	-25.43	H
7419.97	-32.87	11.50	22.20	-43.57	-13.00	-30.57	H
3710.15	-34.56	12.60	12.93	-34.89	-13.00	-21.89	V
5565.01	-34.50	13.10	17.11	-38.51	-13.00	-25.51	V
7419.97	-32.30	11.50	22.20	-43.00	-13.00	-30.00	V
CAT-M Band 25 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3765.19	-34.25	12.60	12.93	-34.58	-13.00	-21.58	H
5647.56	-34.55	13.10	17.11	-38.56	-13.00	-25.56	H
7530.17	-33.50	11.50	22.20	-44.20	-13.00	-31.20	H
3765.19	-34.74	12.60	12.93	-35.07	-13.00	-22.07	V
5647.56	-34.12	13.10	17.11	-38.13	-13.00	-25.13	V
7530.17	-32.20	11.50	22.20	-42.90	-13.00	-29.90	V
CAT-M Band 25 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3820.29	-34.59	12.60	12.93	-34.92	-13.00	-21.92	H
5729.92	-33.99	13.10	17.11	-38.00	-13.00	-25.00	H
7640.14	-32.54	11.50	22.20	-43.24	-13.00	-30.24	H
3820.29	-35.12	12.60	12.93	-35.45	-13.00	-22.45	V
5729.92	-35.04	13.10	17.11	-39.05	-13.00	-26.05	V
7640.14	-32.24	11.50	22.20	-42.94	-13.00	-29.94	V



CAT-M Band 25 / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3715.05	-33.70	12.60	12.93	-34.03	-13.00	-21.03	H
5572.31	-34.92	13.10	17.11	-38.93	-13.00	-25.93	H
7430.73	-32.49	11.50	22.20	-43.19	-13.00	-30.19	H
3715.05	-35.20	12.60	12.93	-35.53	-13.00	-22.53	V
5572.31	-34.90	13.10	17.11	-38.91	-13.00	-25.91	V
7430.73	-32.97	11.50	22.20	-43.67	-13.00	-30.67	V
CAT-M Band 25 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3764.82	-33.58	12.60	12.93	-33.91	-13.00	-20.91	H
5647.40	-35.32	13.10	17.11	-39.33	-13.00	-26.33	H
7430.21	-33.62	11.50	22.20	-44.32	-13.00	-31.32	H
3764.82	-35.63	12.60	12.93	-35.96	-13.00	-22.96	V
5647.40	-34.70	13.10	17.11	-38.71	-13.00	-25.71	V
7430.21	-32.14	11.50	22.20	-42.84	-13.00	-29.84	V
CAT-M Band 25 / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3815.50	-34.03	12.60	12.93	-34.36	-13.00	-21.36	H
5722.14	-34.40	13.10	17.11	-38.41	-13.00	-25.41	H
7630.41	-33.34	11.50	22.20	-44.04	-13.00	-31.04	H
3815.50	-35.50	12.60	12.93	-35.83	-13.00	-22.83	V
5722.14	-33.80	13.10	17.11	-37.81	-13.00	-24.81	V
7630.41	-33.12	11.50	22.20	-43.82	-13.00	-30.82	V



CAT-M Band 25 / 20MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3720.31	-34.00	12.60	12.93	-34.33	-13.00	-21.33	H
5580.12	-34.12	13.10	17.11	-38.13	-13.00	-25.13	H
7439.79	-33.56	11.50	22.20	-44.26	-13.00	-31.26	H
3720.31	-35.95	12.60	12.93	-36.28	-13.00	-23.28	V
5580.12	-34.11	13.10	17.11	-38.12	-13.00	-25.12	V
7439.79	-31.93	11.50	22.20	-42.63	-13.00	-29.63	V
CAT-M Band 25 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3765.01	-34.79	12.60	12.93	-35.12	-13.00	-22.12	H
5647.11	-34.97	13.10	17.11	-38.98	-13.00	-25.98	H
7529.87	-32.84	11.50	22.20	-43.54	-13.00	-30.54	H
3765.01	-35.76	12.60	12.93	-36.09	-13.00	-23.09	V
5647.11	-34.26	13.10	17.11	-38.27	-13.00	-25.27	V
7529.87	-31.91	11.50	22.20	-42.61	-13.00	-29.61	V
CAT-M Band 25 / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3810.15	-34.03	12.60	12.93	-34.36	-13.00	-21.36	H
5715.37	-34.64	13.10	17.11	-38.65	-13.00	-25.65	H
7619.88	-32.37	11.50	22.20	-43.07	-13.00	-30.07	H
3810.15	-35.44	12.60	12.93	-35.77	-13.00	-22.77	V
5715.37	-34.59	13.10	17.11	-38.60	-13.00	-25.60	V
7619.88	-32.86	11.50	22.20	-43.56	-13.00	-30.56	V



CAT-M Band 26(Part 22) / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1649.27	-34.81	9.56	9.72	-34.97	-13.00	-21.97	H
2473.67	-35.05	10.50	10.86	-35.41	-13.00	-22.41	H
3298.57	-32.44	12.78	11.57	-31.23	-13.00	-18.23	H
1649.27	-35.41	9.56	9.72	-35.57	-13.00	-22.57	V
2473.67	-34.66	10.50	10.86	-35.02	-13.00	-22.02	V
3298.57	-33.12	12.78	11.57	-31.91	-13.00	-18.91	V
CAT-M Band 26(Part 22) / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1673.19	-34.04	9.56	9.72	-34.20	-13.00	-21.20	H
2508.86	-34.87	10.50	10.86	-35.23	-13.00	-22.23	H
3346.29	-32.66	12.78	11.57	-31.45	-13.00	-18.45	H
1673.19	-35.74	9.56	9.72	-35.90	-13.00	-22.90	V
2508.86	-34.43	10.50	10.86	-34.79	-13.00	-21.79	V
3346.29	-31.80	12.78	11.57	-30.59	-13.00	-17.59	V
CAT-M Band 26(Part 22) / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1696.66	-34.41	9.56	9.72	-34.57	-13.00	-21.57	H
2544.68	-34.51	10.50	10.86	-34.87	-13.00	-21.87	H
3393.02	-33.29	12.78	11.57	-32.08	-13.00	-19.08	H
1696.66	-35.86	9.56	9.72	-36.02	-13.00	-23.02	V
2544.68	-34.66	10.50	10.86	-35.02	-13.00	-22.02	V
3393.02	-31.75	12.78	11.57	-30.54	-13.00	-17.54	V



CAT-M Band 26(Part 22) / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1651.49	-33.45	9.56	9.72	-33.61	-13.00	-20.61	H
2476.47	-34.30	10.50	10.86	-34.66	-13.00	-21.66	H
3301.62	-33.41	12.78	11.57	-32.20	-13.00	-19.20	H
1651.49	-35.33	9.56	9.72	-35.49	-13.00	-22.49	V
2476.47	-34.37	10.50	10.86	-34.73	-13.00	-21.73	V
3301.62	-32.06	12.78	11.57	-30.85	-13.00	-17.85	V
CAT-M Band 26(Part 22) / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.84	-34.56	9.56	9.72	-34.72	-13.00	-21.72	H
2508.91	-34.58	10.50	10.86	-34.94	-13.00	-21.94	H
3345.85	-33.39	12.78	11.57	-32.18	-13.00	-19.18	H
1672.84	-35.57	9.56	9.72	-35.73	-13.00	-22.73	V
2508.91	-34.31	10.50	10.86	-34.67	-13.00	-21.67	V
3345.85	-32.83	12.78	11.57	-31.62	-13.00	-18.62	V
CAT-M Band 26(Part 22) / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1695.73	-33.49	9.56	9.72	-33.65	-13.00	-20.65	H
2542.22	-35.29	10.50	10.86	-35.65	-13.00	-22.65	H
3389.89	-32.35	12.78	11.57	-31.14	-13.00	-18.14	H
1695.73	-35.94	9.56	9.72	-36.10	-13.00	-23.10	V
2542.22	-34.83	10.50	10.86	-35.19	-13.00	-22.19	V
3389.89	-32.01	12.78	11.57	-30.80	-13.00	-17.80	V



CAT-M Band 26(Part 22) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1652.61	-33.72	9.56	9.72	-33.88	-13.00	-20.88	H
2479.32	-35.21	10.50	10.86	-35.57	-13.00	-22.57	H
3306.49	-33.51	12.78	11.57	-32.30	-13.00	-19.30	H
1652.61	-35.70	9.56	9.72	-35.86	-13.00	-22.86	V
2479.32	-34.33	10.50	10.86	-34.69	-13.00	-21.69	V
3306.49	-33.08	12.78	11.57	-31.87	-13.00	-18.87	V
CAT-M Band 26(Part 22) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.88	-33.65	9.56	9.72	-33.81	-13.00	-20.81	H
2509.18	-35.42	10.50	10.86	-35.78	-13.00	-22.78	H
3346.14	-33.11	12.78	11.57	-31.90	-13.00	-18.90	H
1672.88	-35.05	9.56	9.72	-35.21	-13.00	-22.21	V
2509.18	-34.96	10.50	10.86	-35.32	-13.00	-22.32	V
3346.14	-32.52	12.78	11.57	-31.31	-13.00	-18.31	V
CAT-M Band 26(Part 22) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1693.49	-34.91	9.56	9.72	-35.07	-13.00	-22.07	H
2539.39	-35.17	10.50	10.86	-35.53	-13.00	-22.53	H
3386.09	-33.43	12.78	11.57	-32.22	-13.00	-19.22	H
1693.49	-35.40	9.56	9.72	-35.56	-13.00	-22.56	V
2539.39	-34.82	10.50	10.86	-35.18	-13.00	-22.18	V
3386.09	-32.23	12.78	11.57	-31.02	-13.00	-18.02	V



CAT-M Band 26(Part 22) / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1658.07	-33.66	9.56	9.72	-33.82	-13.00	-20.82	H
2486.31	-35.22	10.50	10.86	-35.58	-13.00	-22.58	H
3315.48	-33.48	12.78	11.57	-32.27	-13.00	-19.27	H
1658.07	-34.95	9.56	9.72	-35.11	-13.00	-22.11	V
2486.31	-33.96	10.50	10.86	-34.32	-13.00	-21.32	V
3315.48	-32.55	12.78	11.57	-31.34	-13.00	-18.34	V
CAT-M Band 26(Part 22) / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1673.01	-34.60	9.56	9.72	-34.76	-13.00	-21.76	H
2509.12	-34.02	10.50	10.86	-34.38	-13.00	-21.38	H
3346.28	-33.61	12.78	11.57	-32.40	-13.00	-19.40	H
1673.01	-35.04	9.56	9.72	-35.20	-13.00	-22.20	V
2509.12	-33.82	10.50	10.86	-34.18	-13.00	-21.18	V
3346.28	-32.00	12.78	11.57	-30.79	-13.00	-17.79	V
CAT-M Band 26(Part 22) / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1688.63	-34.32	9.56	9.72	-34.48	-13.00	-21.48	H
2532.26	-34.76	10.50	10.86	-35.12	-13.00	-22.12	H
3376.29	-32.56	12.78	11.57	-31.35	-13.00	-18.35	H
1688.63	-35.54	9.56	9.72	-35.70	-13.00	-22.70	V
2532.26	-34.43	10.50	10.86	-34.79	-13.00	-21.79	V
3376.29	-32.08	12.78	11.57	-30.87	-13.00	-17.87	V



CAT-M Band 26(Part 22) / 15MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1663.30	-33.67	9.56	9.72	-33.83	-13.00	-20.83	H
2494.50	-34.47	10.50	10.86	-34.83	-13.00	-21.83	H
3325.48	-32.27	12.78	11.57	-31.06	-13.00	-18.06	H
1663.30	-35.41	9.56	9.72	-35.57	-13.00	-22.57	V
2494.50	-33.96	10.50	10.86	-34.32	-13.00	-21.32	V
3325.48	-33.04	12.78	11.57	-31.83	-13.00	-18.83	V
CAT-M Band 26(Part 22) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1672.79	-34.00	9.56	9.72	-34.16	-13.00	-21.16	H
2508.98	-34.98	10.50	10.86	-35.34	-13.00	-22.34	H
3345.83	-33.63	12.78	11.57	-32.42	-13.00	-19.42	H
1672.79	-35.25	9.56	9.72	-35.41	-13.00	-22.41	V
2508.98	-34.89	10.50	10.86	-35.25	-13.00	-22.25	V
3345.83	-32.14	12.78	11.57	-30.93	-13.00	-17.93	V
CAT-M Band 26(Part 22) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1683.42	-34.12	9.56	9.72	-34.28	-13.00	-21.28	H
2524.07	-34.75	10.50	10.86	-35.11	-13.00	-22.11	H
3366.36	-33.54	12.78	11.57	-32.33	-13.00	-19.33	H
1683.42	-35.53	9.56	9.72	-35.69	-13.00	-22.69	V
2524.07	-34.07	10.50	10.86	-34.43	-13.00	-21.43	V
3366.36	-33.10	12.78	11.57	-31.89	-13.00	-18.89	V



CAT-M Band 26(Part 90) / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1629.34	-34.04	9.56	9.72	-34.20	-13.00	-21.20	H
2444.07	-34.66	10.50	10.86	-35.02	-13.00	-22.02	H
3258.58	-32.47	12.78	11.57	-31.26	-13.00	-18.26	H
1629.34	-34.90	9.56	9.72	-35.06	-13.00	-22.06	V
2444.07	-34.72	10.50	10.86	-35.08	-13.00	-22.08	V
3258.58	-32.06	12.78	11.57	-30.85	-13.00	-17.85	V
CAT-M Band 26(Part 90) / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1637.86	-33.84	9.56	9.72	-34.00	-13.00	-21.00	H
2457.28	-34.69	10.50	10.86	-35.05	-13.00	-22.05	H
3276.12	-33.26	12.78	11.57	-32.05	-13.00	-19.05	H
1637.86	-35.76	9.56	9.72	-35.92	-13.00	-22.92	V
2457.28	-35.15	10.50	10.86	-35.51	-13.00	-22.51	V
3276.12	-31.84	12.78	11.57	-30.63	-13.00	-17.63	V
CAT-M Band 26(Part 90) / 1.4MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1646.23	-34.07	9.56	9.72	-34.23	-13.00	-21.23	H
2456.76	-35.12	10.50	10.86	-35.48	-13.00	-22.48	H
3258.18	-33.15	12.78	11.57	-31.94	-13.00	-18.94	H
1646.23	-35.66	9.56	9.72	-35.82	-13.00	-22.82	V
2456.76	-34.70	10.50	10.86	-35.06	-13.00	-22.06	V
3258.18	-31.88	12.78	11.57	-30.67	-13.00	-17.67	V



CAT-M Band 26(Part 90) / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1631.40	-34.04	9.56	9.72	-34.20	-13.00	-21.20	H
2446.28	-35.17	10.50	10.86	-35.53	-13.00	-22.53	H
3261.49	-33.63	12.78	11.57	-32.42	-13.00	-19.42	H
1631.40	-34.57	9.56	9.72	-34.73	-13.00	-21.73	V
2446.28	-34.53	10.50	10.86	-34.89	-13.00	-21.89	V
3261.49	-31.96	12.78	11.57	-30.75	-13.00	-17.75	V
CAT-M Band 26(Part 90) / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1637.84	-34.52	9.56	9.72	-34.68	-13.00	-21.68	H
2457.24	-34.86	10.50	10.86	-35.22	-13.00	-22.22	H
3276.06	-32.38	12.78	11.57	-31.17	-13.00	-18.17	H
1637.84	-34.53	9.56	9.72	-34.69	-13.00	-21.69	V
2457.24	-34.64	10.50	10.86	-35.00	-13.00	-22.00	V
3276.06	-32.54	12.78	11.57	-31.33	-13.00	-18.33	V
CAT-M Band 26(Part 90) / 3MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1644.92	-34.23	9.56	9.72	-34.39	-13.00	-21.39	H
2467.21	-35.46	10.50	10.86	-35.82	-13.00	-22.82	H
3276.27	-33.49	12.78	11.57	-32.28	-13.00	-19.28	H
1644.92	-35.88	9.56	9.72	-36.04	-13.00	-23.04	V
2467.21	-33.86	10.50	10.86	-34.22	-13.00	-21.22	V
3276.27	-32.00	12.78	11.57	-30.79	-13.00	-17.79	V



CAT-M Band 26(Part 90) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1632.70	-34.20	9.56	9.72	-34.36	-13.00	-21.36	H
2449.30	-35.15	10.50	10.86	-35.51	-13.00	-22.51	H
3266.87	-32.34	12.78	11.57	-31.13	-13.00	-18.13	H
1632.70	-35.38	9.56	9.72	-35.54	-13.00	-22.54	V
2449.30	-35.07	10.50	10.86	-35.43	-13.00	-22.43	V
3266.87	-32.49	12.78	11.57	-31.28	-13.00	-18.28	V
CAT-M Band 26(Part 90) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1638.23	-34.52	9.56	9.72	-34.68	-13.00	-21.68	H
2457.10	-34.86	10.50	10.86	-35.22	-13.00	-22.22	H
3276.09	-33.40	12.78	11.57	-32.19	-13.00	-19.19	H
1638.23	-35.34	9.56	9.72	-35.50	-13.00	-22.50	V
2457.10	-33.89	10.50	10.86	-34.25	-13.00	-21.25	V
3276.09	-31.79	12.78	11.57	-30.58	-13.00	-17.58	V
CAT-M Band 26(Part 90) / 5MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1642.73	-34.10	9.56	9.72	-34.26	-13.00	-21.26	H
2464.34	-34.40	10.50	10.86	-34.76	-13.00	-21.76	H
3285.90	-32.63	12.78	11.57	-31.42	-13.00	-18.42	H
1642.73	-35.11	9.56	9.72	-35.27	-13.00	-22.27	V
2464.34	-35.16	10.50	10.86	-35.52	-13.00	-22.52	V
3285.90	-33.02	12.78	11.57	-31.81	-13.00	-18.81	V
CAT-M Band 26(Part 90) / 10MHz / QPSK / RB Size 1 Offset 0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1637.96	-34.20	9.56	9.72	-34.36	-13.00	-21.36	H
2457.09	-34.94	10.50	10.86	-35.30	-13.00	-22.30	H
3276.24	-32.53	12.78	11.57	-31.32	-13.00	-18.32	H
1637.96	-35.75	9.56	9.72	-35.91	-13.00	-22.91	V
2457.09	-34.03	10.50	10.86	-34.39	-13.00	-21.39	V
3276.24	-33.18	12.78	11.57	-31.97	-13.00	-18.97	V

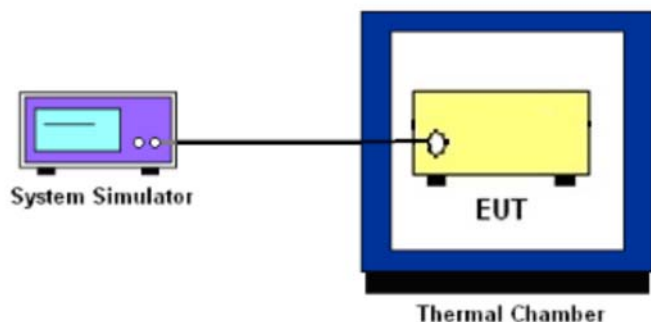
10. FREQUENCY STABILITY

10.1 DESCRIPTION OF FREQUENCY STABILITY MEASUREMENT

10.1.1 MEASUREMENT METHOD

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

10.1.2 TEST SETUP



10.1.3 TEST PROCEDURES FOR TEMPERATURE VARIATION

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

10.1.4 TEST PROCEDURES FOR VOLTAGE VARIATION

1. The testing follows FCC KDB 971168 D01v01r03 Section 9.
2. The EUT was placed in a temperature chamber at $25 \pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.



10.1.5 TEST RESULTS

CAT-M Band 2 (QPSK) / 1880MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	13.42	0.007	2.5ppm	PASS
40		30.46	0.016		
30		29.88	0.016		
20		22.44	0.012		
10		23.75	0.013		
0		23.85	0.013		
-10		18.37	0.010		
-20		33.69	0.018		
-30		24.21	0.013		
25	Maximum Voltage	28.11	0.015		
25	BEP	35.56	0.019		

CAT-M Band 2 (QPSK) / 1880MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	21.69	0.012	2.5ppm	PASS
40		16.06	0.009		
30		14.64	0.008		
20		23.93	0.013		
10		18.37	0.010		
0		16.59	0.009		
-10		26.33	0.014		
-20		19.82	0.011		
-30		24.87	0.013		
25	Maximum Voltage	28.90	0.015		
25	BEP	15.29	0.008		



CAT-M Band 4 (QPSK) / 1733MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	31.34	0.018	2.5ppm	PASS
40		33.84	0.020		
30		25.84	0.015		
20		21.65	0.012		
10		17.98	0.010		
0		27.87	0.016		
-10		19.74	0.011		
-20		35.00	0.020		
-30		30.07	0.017		
25	Maximum Voltage	15.04	0.009		
25	BEP	24.29	0.014		

CAT-M Band 4 (QPSK) / 1733MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	32.17	0.019	2.5ppm	PASS
40		36.08	0.021		
30		33.78	0.019		
20		23.86	0.014		
10		21.93	0.013		
0		20.07	0.012		
-10		35.48	0.020		
-20		33.15	0.019		
-30		28.53	0.016		
25	Maximum Voltage	14.37	0.008		
25	BEP	18.90	0.011		



CAT-M Band 12 (QPSK) / 707.5MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	24.66	0.035	2.5ppm	PASS
40		16.57	0.023		
30		22.82	0.032		
20		25.24	0.036		
10		23.83	0.034		
0		35.57	0.050		
-10		16.94	0.002		
-20		31.80	0.045		
-30		20.43	0.029		
25	Maximum Voltage	18.82	0.027		
25	BEP	34.46	0.049		

CAT-M Band 12 (QPSK) / 707.5MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	33.00	0.046	2.5ppm	PASS
40		34.14	0.048		
30		33.33	0.047		
20		15.23	0.021		
10		25.36	0.036		
0		12.27	0.017		
-10		14.53	0.002		
-20		26.11	0.037		
-30		17.11	0.024		
25	Maximum Voltage	33.12	0.047		
25	BEP	17.92	0.025		



CAT-M Band 13 (QPSK) / 782MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	22.06	0.031	2.5ppm	PASS
40		12.55	0.018		
30		23.25	0.033		
20		18.28	0.026		
10		28.68	0.040		
0		28.15	0.040		
-10		27.09	0.004		
-20		35.02	0.049		
-30		18.71	0.026		
25	Maximum Voltage	18.20	0.026		
25	BEP	22.51	0.032		

CAT-M Band 13 (QPSK) / 782MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	32.71	0.046	2.5ppm	PASS
40		21.36	0.030		
30		14.17	0.020		
20		20.86	0.029		
10		23.44	0.033		
0		26.47	0.037		
-10		33.35	0.005		
-20		15.29	0.022		
-30		34.77	0.049		
25	Maximum Voltage	17.45	0.025		
25	BEP	16.20	0.023		



CAT-M Band 25 (QPSK) / 1880MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	25.29	0.013	2.5ppm	PASS
40		16.64	0.009		
30		14.18	0.008		
20		34.01	0.018		
10		35.85	0.019		
0		21.77	0.012		
-10		25.02	0.013		
-20		32.87	0.017		
-30		24.07	0.013		
25	Maximum Voltage	32.14	0.017		
25	BEP	36.33	0.019		

CAT-M Band 25 (QPSK) / 1880MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	32.14	0.017	2.5ppm	PASS
40		32.25	0.017		
30		17.89	0.010		
20		34.51	0.018		
10		11.82	0.006		
0		24.26	0.013		
-10		14.68	0.008		
-20		30.68	0.016		
-30		28.31	0.015		
25	Maximum Voltage	34.36	0.018		
25	BEP	34.05	0.018		



CAT-M Band 26(Part 22) (QPSK) / 1733MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	19.57	0.011	2.5ppm	PASS
40		21.92	0.013		
30		28.64	0.017		
20		14.42	0.008		
10		23.00	0.013		
0		11.97	0.007		
-10		34.17	0.020		
-20		34.37	0.020		
-30		33.96	0.020		
25	Maximum Voltage	33.98	0.020		
25	BEP	31.94	0.018		

CAT-M Band 26(Part 22) (QPSK) / 1733MHz / BW20M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	13.31	0.008	2.5ppm	PASS
40		14.81	0.009		
30		33.31	0.019		
20		25.89	0.015		
10		27.79	0.016		
0		23.10	0.013		
-10		28.20	0.016		
-20		34.47	0.020		
-30		35.94	0.021		
25	Maximum Voltage	14.06	0.008		
25	BEP	19.53	0.011		



CAT-M Band 26(Part 90) (QPSK) / 819MHz / BW5M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	16.29	0.009	2.5ppm	PASS
40		13.44	0.008		
30		27.84	0.016		
20		15.76	0.009		
10		22.92	0.013		
0		19.26	0.011		
-10		16.42	0.009		
-20		24.19	0.014		
-30		23.63	0.014		
25	Maximum Voltage	15.80	0.009		
25	BEP	18.97	0.011		

CAT-M Band 26(Part 90) (QPSK) / 819MHz / BW10M					
Temperature (°C)	Voltage	Freq. Dev.	Freq. Dev.	Limit	Result
	(Volt)	(Hz)	(ppm)		
50	Normal Voltage	29.81	0.017	2.5ppm	PASS
40		12.57	0.007		
30		31.10	0.018		
20		29.46	0.017		
10		20.16	0.012		
0		14.30	0.008		
-10		36.09	0.021		
-20		12.58	0.007		
-30		29.53	0.017		
25	Maximum Voltage	35.61	0.021		
25	BEP	22.72	0.013		



APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※

