

# FCC Test Report

## (Part 90 Subpart Y)

**Report No.:** RF170731C10-4

**FCC ID:** QXO-AP3917E

**Test Model:** AP3917e

**Series Model:** AP7662

**Received Date:** Jul. 31, 2017

**Test Date:** Sep. 20 ~ Oct. 25, 2017

**Issued Date:** Nov. 03, 2017

**Applicant:** Extreme Networks, Inc.

**Address:** 6480 VIA DEL ORO SAN JOSE CA 95119 USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

**Test Location:** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan, R.O.C.



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies

## Table of Contents

<b>Release Control Record</b> .....	<b>3</b>
<b>1 Certificate of Conformity</b> .....	<b>4</b>
<b>2 Summary of Test Results</b> .....	<b>5</b>
2.1 Measurement Uncertainty.....	5
2.2 Test Instruments.....	6
<b>3 General Information</b> .....	<b>7</b>
3.1 General Description of EUT.....	7
3.2 Description of Test Modes.....	9
3.3 Configuration of System under Test.....	10
3.3.1 Description of Support Units.....	10
3.4 Test Mode Applicability and Tested Channel Detail.....	11
3.5 EUT Operating Conditions.....	12
3.6 General Description of Applied Standards.....	12
<b>4 Test Types and Results</b> .....	<b>13</b>
4.1 Peak Output Power Measurement.....	13
4.1.1 Limits of Peak Output Power Measurement.....	13
4.1.2 Test Procedures.....	13
4.1.3 Test Setup.....	13
4.1.4 Test Results.....	14
4.2 Emission Bandwidth Measurement.....	15
4.2.1 Limits of Emission Bandwidth Measurement.....	15
4.2.2 Test Procedure.....	15
4.2.3 Test Setup.....	15
4.2.4 Test Result.....	16
4.3 Emission Mask Measurement.....	18
4.3.1 Limits of Emission Mask Measurement.....	18
4.3.2 Test Procedures.....	18
4.3.3 Test Setup.....	18
4.3.4 Test Results.....	19
4.4 Peak Excursion Measurement.....	25
4.4.1 Limits of Peak Excursion Measurement.....	25
4.4.2 Test Procedures.....	25
4.4.3 Test Setup.....	25
4.4.4 Test Results.....	26
4.5 Power Spectral Density Measurement.....	28
4.5.1 Limits of Power Spectral Density Measurement.....	28
4.5.2 Test Procedures.....	28
4.5.3 Test Setup.....	28
4.5.4 Test Results.....	29
4.6 Radiated Emission Measurement.....	32
4.6.1 Limits of Radiated Emission Measurement.....	32
4.6.2 Test Procedure.....	32
4.6.3 Deviation from Test Standard.....	32
4.6.4 Test Setup.....	33
4.6.5 Test Results.....	34
4.7 Frequency Stability Measurement.....	64
4.7.1 Limits of Frequency Stability Measurement.....	64
4.7.2 Test Procedure.....	64
4.7.3 Test Setup.....	64
4.7.4 Test Results.....	65
<b>5 Pictures of Test Arrangements</b> .....	<b>68</b>
<b>Appendix – Information on the Testing Laboratories</b> .....	<b>69</b>

### Release Control Record

Issue No.	Description	Date Issued
RF170731C10-4	Original release.	Nov. 03, 2017

## 1 Certificate of Conformity

**Product:** Wireless 802.11 a/ac+b/g/n Access Point

**Brand:** Extreme Networks

**Test Model:** AP3917e

**Series Model:** AP7662

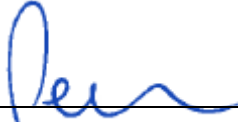
**Sample Status:** Engineering sample

**Applicant:** Extreme Networks, Inc.

**Test Date:** Sep. 20 ~ Oct. 25, 2017

**Standards:** FCC Part 90, Subpart Y  
FCC Part 2

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**Prepared by :**  , **Date:** Nov. 03, 2017  
Pettie Chen / Senior Specialist

**Approved by :**  , **Date:** Nov. 03, 2017  
Ken Liu / Senior Manager

## 2 Summary of Test Results

Applied Standard: FCC Part 90 & Part 2			
FCC Clause	Test Item	Result	Remarks
Part 2.1046 Part 90.1215(a)	Peak Output Power	Pass	Meet the requirement of limit.
Part 2.1049 Part 90.210	Emission Bandwidth	Pass	Meet the requirement of limit.
Part 2.1049 Part 90.210	Emission Mask	Pass	Meet the requirement of limit.
Part 2.1046 Part 90.1215(a)	Power Spectral Density	Pass	Meet the requirement of limit.
Part 90.1215	Peak Excursion	Pass	Meet the requirement of limit.
Part 2.1053 Part 90.210	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -6.89dB at 6650.00MHz.
Part 2.1055 Part 90.213	Frequency Stability	Pass	Meet the requirement of limit.

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) ( $\pm$ )
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

## 2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 02, 2017	May 01, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 16, 2016	Nov. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	9120D	209	Dec. 27, 2016	Dec. 26, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2016	Dec. 13, 2017
Preamplifier Agilent	8447D	2944A10738	Aug. 21, 2017	Aug. 20, 2018
Preamplifier Agilent	8449B	3008A02465	Apr. 05, 2017	Apr. 04, 2018
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 21, 2017	Aug. 20, 2018
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM- 8000	Cable-CH3-03 (309224+170907)	Sep.11, 2017	Sep. 10, 2018
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA

- Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  2. The test was performed in HwaYa Chamber 3.
  3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
  4. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
  5. The IC Site Registration No. is IC 7450F-3.

### 3 General Information

#### 3.1 General Description of EUT

Product	Wireless 802.11 a/ac+b/g/n Access Point
Brand	Extreme Networks
Test Model	AP3917e
Series Model	AP7662
Model Difference	Refer to Note
Status of EUT	Engineering sample
Power Supply Rating	54Vdc (POE)
Modulation Type & Data Rate	<p>Channel Bandwidth 5MHz:</p> <p>BPSK: 1.5 and 2.25Mbps</p> <p>QPSK: 3 and 4.5Mbps</p> <p>16QAM: 6 and 9Mbps</p> <p>64QAM: 12 and 13.5Mbps</p> <p>Channel Bandwidth 10MHz:</p> <p>BPSK: 3 and 4.5Mbps</p> <p>QPSK: 6 and 9Mbps</p> <p>16QAM: 12 and 18Mbps</p> <p>64QAM: 24 and 27Mbps</p> <p>Channel Bandwidth 20MHz:</p> <p>BPSK: 6 and 9Mbps</p> <p>QPSK: 12 and 18Mbps</p> <p>16QAM: 24 and 36Mbps</p> <p>64QAM: 48 and 54Mbps</p>
Operating Frequency	<p>Channel Bandwidth 5MHz: 4942.5MHz~4987.5MHz</p> <p>Channel Bandwidth 10MHz: 4945MHz~4985MHz</p> <p>Channel Bandwidth 20MHz: 4950MHz~4980MHz</p>
Number of Channel	<p>Channel Bandwidth 5MHz: 10</p> <p>Channel Bandwidth 10MHz: 9</p> <p>Channel Bandwidth 20MHz: 7</p>
Conducted Output Power	<p>Channel Bandwidth 5MHz: 21.73dBm (0.149W)</p> <p>Channel Bandwidth 10MHz: 22.27dBm (0.169W)</p> <p>Channel Bandwidth 20MHz: 22.06dBm (0.161W)</p>
Emission Designator	<p>Channel Bandwidth 5MHz: 4M45G7D</p> <p>Channel Bandwidth 10MHz: 9M00G7D</p> <p>Channel Bandwidth 20MHz: 17M8G7D</p>
Antenna Type	Refer to Note
Accessory Device	Wall mount, 1.75m non-shielded Grounding cable without core
Data Cable Supplied	NA

Note:

1. All models are listed as below. Model: AP3917e was chosen for final test.

Brand	Model	Difference
Extreme Networks	AP3917e	All models are electrically identical, only the cover printing is different.
	AP7662	

2. The EUT consumes power from the following POE. (Support unit only)

POE	
Brand	EnGenius
Model	EPA5006GP
Input Power	100-240Vac, 50-60Hz, 0.8A
Output Power	54Vdc, 0.6A Pin 4, 5: 54Vdc Pin 7, 8: Return

3. The EUT only support Point to Point.  
 4. The EUT belongs to High power device.  
 5. The lowest data rate was chosen for the final tests:  
 Channel Bandwidth 5MHz: BPSK: 1.5 Mbps,  
 Channel Bandwidth 10MHz: BPSK: 3 Mbps,  
 Channel Bandwidth 20MHz: BPSK: 6 Mbps

6. The EUT uses following antennas.

Item	Function	Antenna Type	Part No	Connector	Gain (dBi)			
					2.4G	4.9G		5G
						Gain	Directional Gain	
1	WLAN	Dipole	ML-2452-HPAG5A8-01	N Male	5	7.5	10.51	8
2	WLAN	Dipole	ML-2452-HPAG4A6-01	N Male	4	-	-	7.3
3	WLAN	Dipole	ML-2452-HPA6X6-036	N Male	4	-	-	6
4	WLAN	Dipole	WS-AO-DQ04360N	4 N Male	5.5	-	-	6
5	WLAN	Dipole	ML-2499-HPA4-01	N Male	4.5	-	-	-
6	WLAN	Dipole	ML-2452-HPA6-01	N Male	5.3	4.6	7.61	6.1
7	WLAN	Dipole	ML-5299-HPA5-01	N Male	-	-	-	5.6
8	WLAN & BT LE & Zigbee	Dipole	ML-2499-HPA8-01	N Male	8	-	-	-
9	WLAN	Dipole	ML-2499-FHPA5-01R	N Male	7.7	-	-	-
10	WLAN	Dipole	ML-5299-FHPA6-01R	N Male	-	8.25	11.26	8.25
11	WLAN	Panel	ML-2452-PNA5-01R	N Male	4.5	5	8.01	5~4.5 MAX:5
12	WLAN & BT LE & Zigbee	Panel	ML-2452-PNA7-01R	N Male	7.8	7	10.01	10.7~7 MAX:10.7
13	WLAN	Polarized Panel	ML-2452-PNL6M4-N36	4 N Male	5.6	6.7	9.71	6.7
14	WLAN	Polarized Panel	ML-2452-SEC6M4-N36	4 N Male	6.92	-	-	7.23
15	WLAN	Polarized Panel	ML-2452-SEC6M4-N30	4 N Male	5.5	-	-	6
16	WLAN	Polarized Panel	ML-2452-PNL9M3-N36	N Male	11	7.3	10.31	10.7

\* Antenna 10 with the maximum gain was chosen for final test among Antenna 1~10.

\* Antenna 11, 12 were chosen for final test.

\* Antenna 13 with the maximum gain was chosen for final test among Antenna 13 & 15.

\* Antenna 16 with the maximum gain was chosen for final test among Antenna 14 & 16.

\*4.9G Antenna for Item 6 and Item 11 will be secondary primary permanent fixed operations use only.

7. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



### 3.2 Description of Test Modes

10 channels are for the Channel Bandwidth 5MHz bandwidth of EUT:

Channel	Frequency (MHz)
1	4942.5
2	4947.5
3	4952.5
4	4957.5
5	4962.5
6	4967.5
7	4972.5
8	4977.5
9	4982.5
10	4987.5

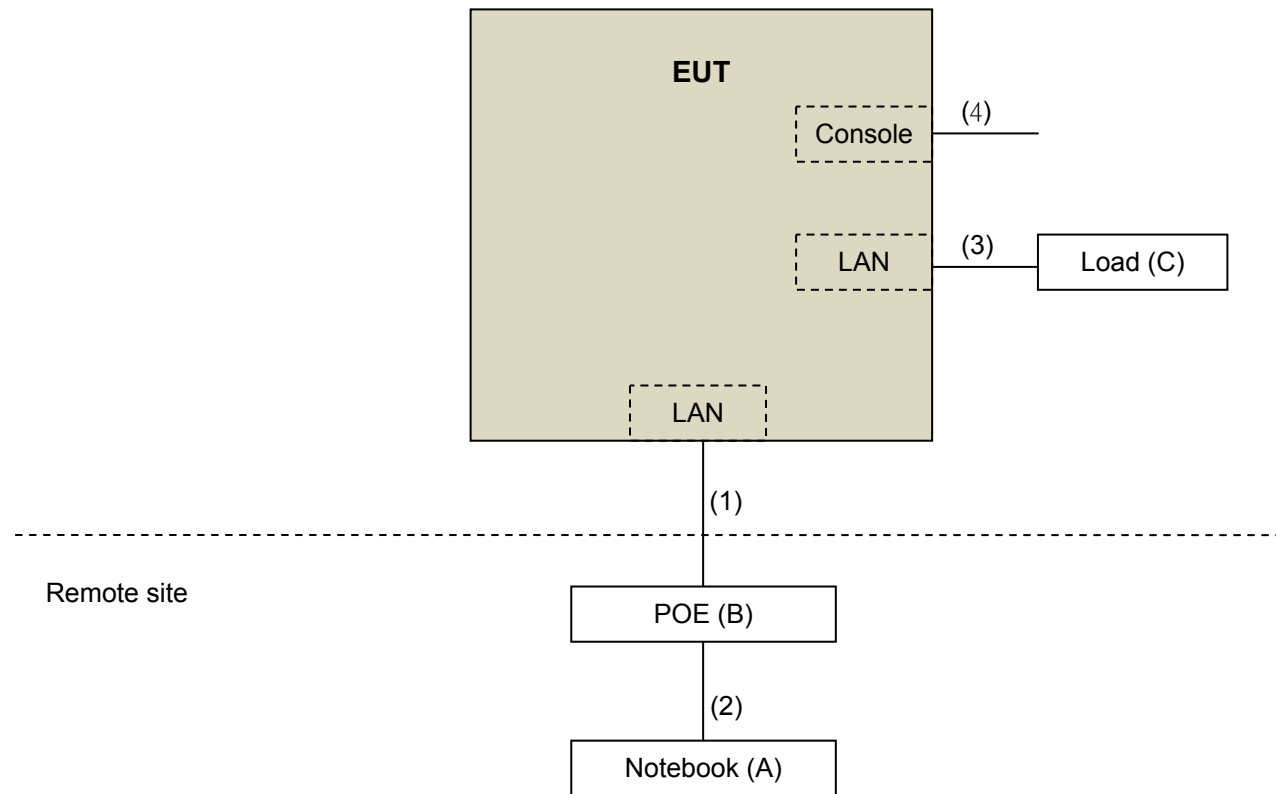
9 channels are for the Channel Bandwidth 10MHz bandwidth of EUT:

Channel	Frequency (MHz)
11	4945
12	4950
13	4955
14	4960
15	4965
16	4970
17	4975
18	4980
19	4985

7 channels are for the Channel Bandwidth 20MHz bandwidth of EUT:

Channel	Frequency (MHz)
20	4950
21	4955
22	4960
23	4965
24	4970
25	4975
26	4980

### 3.3 Configuration of System under Test



#### 3.3.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	POE	EnGenius	EPA5006GP	NA	NA	Provided by manufacturer
C.	Load	NA	NA	NA	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45, Cat5e	1	3	N	0	-
2.	RJ45, Cat5e	1	1.8	N	0	-
3.	RJ45, Cat5e	1	1.8	N	0	-
4.	Console cable	1	0.2	N	0	Provided by manufacturer

### 3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The worst case was found when positioned on Z-plane. Following channel(s) was (were) selected for the final test as listed below:

#### EUT Configure Mode:

EUT Configure Mode	Antenna Model
A	ML-5299-FHPA6-01R
B	ML-2452-PNA5-01R
C	ML-2452-PNA7-01R
D	ML-2452-PNL6M4-N36
E	ML-2452-PNL9M3-N36

EUT Configure Mode	Test Item	Channel Bandwidth (MHz)	Tested Channel
A	Peak Output Power	5	1, 5, 10
		10	11, 15, 19
		20	20, 23, 26
A	Emission Bandwidth	5	1, 5, 10
		10	11, 15, 19
		20	20, 23, 26
A	Emission Mask	5	1, 5, 10
		10	11, 15, 19
		20	20, 23, 26
A	Peak Excursion	5	1, 5, 10
		10	11, 15, 19
		20	20, 23, 26
A, B, C, D, E	Radiated Spurious Emissions (Frequency range below 1GHz)	5	1, 5, 10
		10	11, 15, 19
		20	20, 23, 26
A, B, C, D, E	Radiated Spurious Emissions (Frequency range above 1GHz)	5	1, 5, 10
		10	11, 15, 19
		20	20, 23, 26
A	Frequency Stability	5	1, 5, 10
		10	11, 15, 19
		20	20, 23, 26

\*For all tests except Spurious Emissions test, the maximum antenna gain is chosen for final test.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Peak Output Power	25 deg. C, 65% RH	120Vac	James Yang
Emission Bandwidth	25 deg. C, 65% RH	120Vac	James Yang
Emission Mask	26 deg. C, 74% RH	120Vac	Match Tsui
Peak Excursion	25 deg. C, 65% RH	120Vac	James Yang
Radiated Spurious Emission	25 deg. C, 65% RH	120Vac	Jones Chang
Frequency Stability	25 deg. C, 65% RH	120Vac	James Yang

### 3.5 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency.

### 3.6 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 90**

**KDB 971168 D01 Power Meas License Digital Systems v03**

**KDB 662911 D01 Multiple Transmitter Output v02r01**

**ANSI/TIA/EIA-603-D 2010**

All test items have been performed and recorded as per the above standards.

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC).  
The test report has been issued separately.

## 4 Test Types and Results

### 4.1 Peak Output Power Measurement

#### 4.1.1 Limits of Peak Output Power Measurement

Per FCC §90.1215, the transmitting power of stations operating in the 4940-4990 MHz band must not exceed the maximum limits in this section.

The maximum conducted output power should not exceed:

Channel Bandwidth (MHz)	Low Power Maximum conducted output power (dBm)	High Power Maximum conducted output power (dBm)
1	7	20
5	14	27
10	17	30
15	18.8	31.8
20	20	33

If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density.

Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi

#### 4.1.2 Test Procedures

- Set span to at least 1.5 times the OBW
- Set RBW = 1-5 % of the OBW, not to exceed 1MHz
- Set VBW  $\geq$  3 MHz
- Detector = RMS
- Sweep time = auto couple.
- Trace mode = max hold.

#### 4.1.3 Test Setup

CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.4 Test Results

Conducted Output Power  
 Channel Bandwidth 5MHz

Channel	Frequency (MHz)	Conducted Output Power (dBm)		
		Chain 0	Chain 1	Total
1	4942.5	17.76	19.50	21.73
5	4962.5	17.43	18.88	21.23
10	4987.5	17.44	18.82	21.19

Channel Bandwidth 10MHz

Channel	Frequency (MHz)	Conducted Output Power (dBm)		
		Chain 0	Chain 1	Total
11	4945	18.02	18.48	21.27
15	4965	18.49	18.79	21.65
19	4985	18.99	19.52	22.27

Channel Bandwidth 20MHz

Channel	Frequency (MHz)	Conducted Output Power (dBm)		
		Chain 0	Chain 1	Total
20	4950	18.09	18.61	21.37
23	4965	18.71	19.17	21.96
26	4980	18.91	19.18	22.06

## 4.2 Emission Bandwidth Measurement

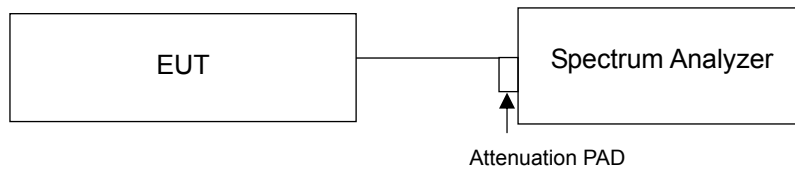
### 4.2.1 Limits of Emission Bandwidth Measurement

The width of a frequency band such that, below the lower and above the upper frequency limits, the signal power at the 99% channel power of occupied bandwidth when resolution bandwidth should be approximately 1 % to 5 % of the occupied bandwidth (OBW)

### 4.2.2 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

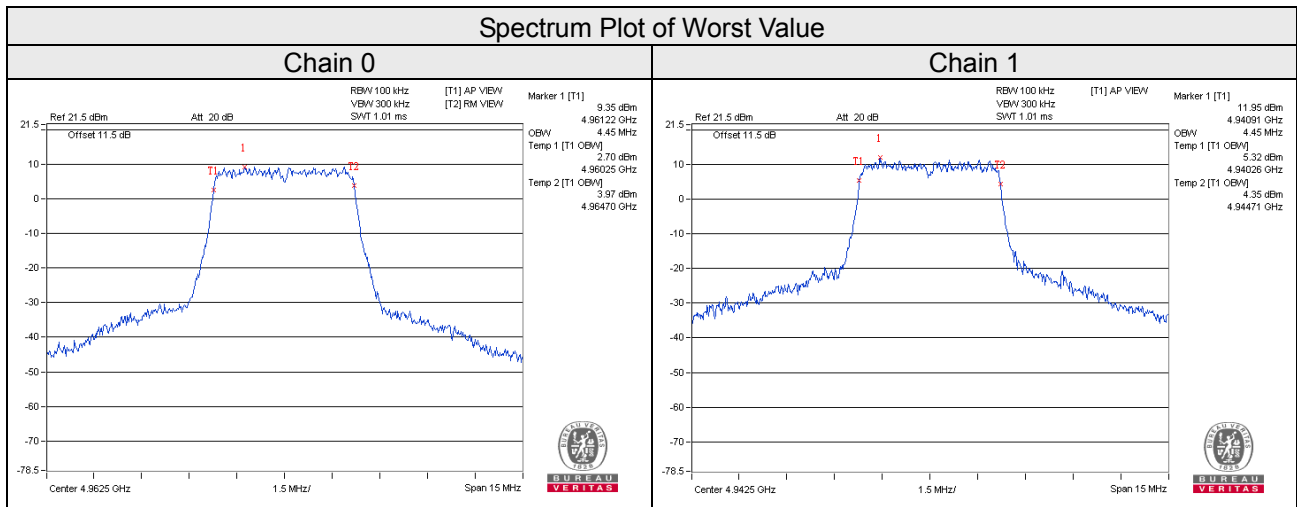
### 4.2.3 Test Setup



### 4.2.4 Test Result

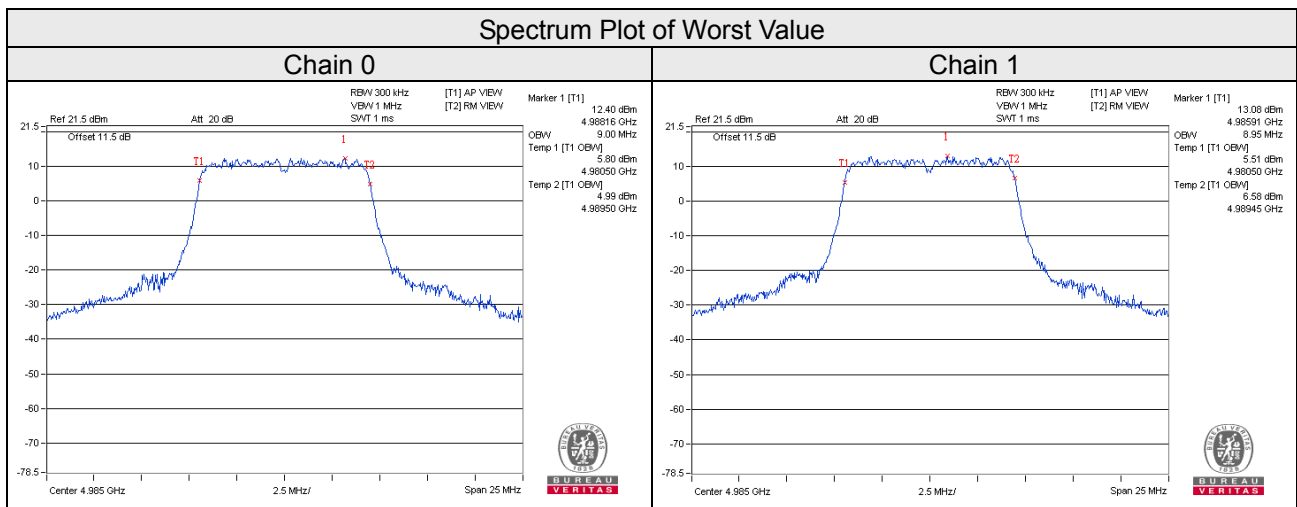
#### Channel Bandwidth 5MHz

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
1	4942.5	4.43	4.45
5	4962.5	4.45	4.45
10	4987.5	4.42	4.45



#### Channel Bandwidth 10MHz

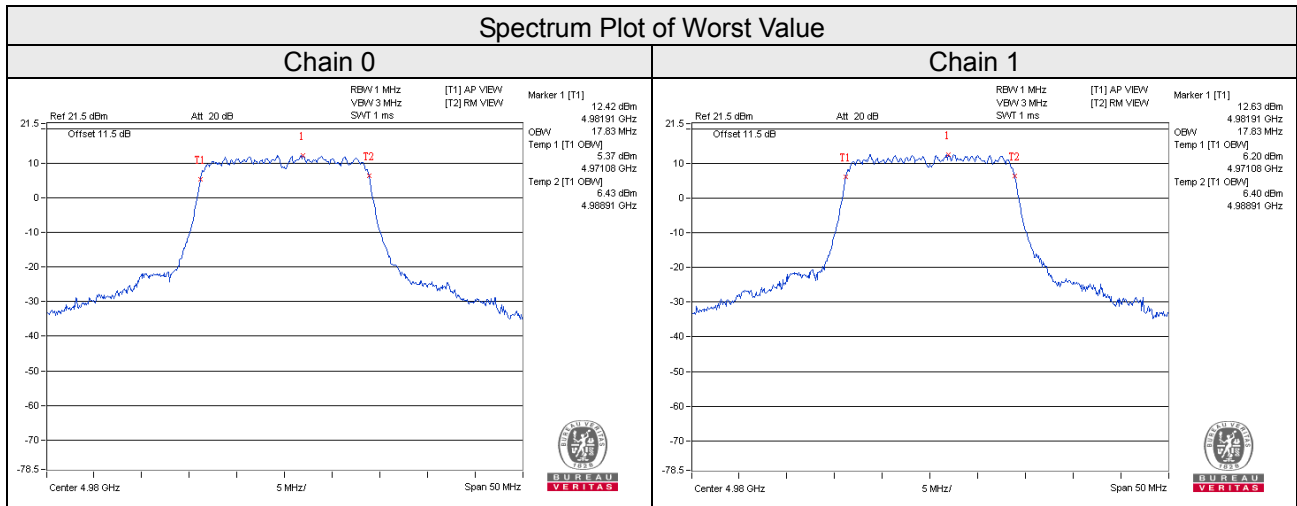
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
11	4945	8.98	8.94
15	4965	8.95	8.95
19	4985	9.00	8.95





Channel Bandwidth 20MHz

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
20	4950	17.82	17.82
23	4965	17.83	17.83
26	4980	17.83	17.83



### 4.3 Emission Mask Measurement

#### 4.3.1 Limits of Emission Mask Measurement

For low power transmitters (20 dBm or less) and high power transmitters (greater than 20 dBm operating in the 4940-4990 MHz frequency band, the power spectral density of the emissions must be attenuated below the output power of the transmitter as follows:

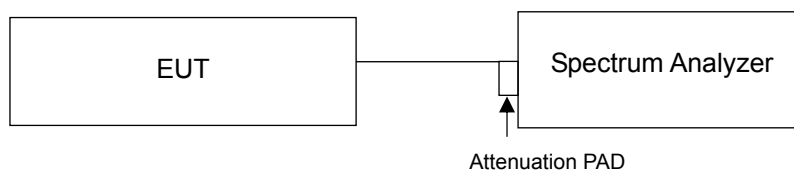
Frequency Offset $f_d$	Minimum Attenuation	
	Low Power Transmitter	High Power Transmitter
$0 < f_d \leq 45$	0	0
$45 < f_d \leq 50$	$219 \log(f_d/45)$	$568 \log(f_d/45)$
$50 < f_d \leq 55$	$10 + 242 \log(f_d/50)$	$26 + 145 \log(f_d/50)$
$55 < f_d \leq 100$	$20 + 31 \log(f_d/55)$	$32 + 31 \log(f_d/55)$
$100 < f_d \leq 150$	$28 + 68 \log(f_d/100)$	$40 + 57 \log(f_d/100)$
$f_d > 150$	40	50 dB or $55 + 10 \log(P)$ dB, whichever is the lesser attenuation.

$f_d$  is the percentage of the equipment's channel bandwidth.

#### 4.3.2 Test Procedures

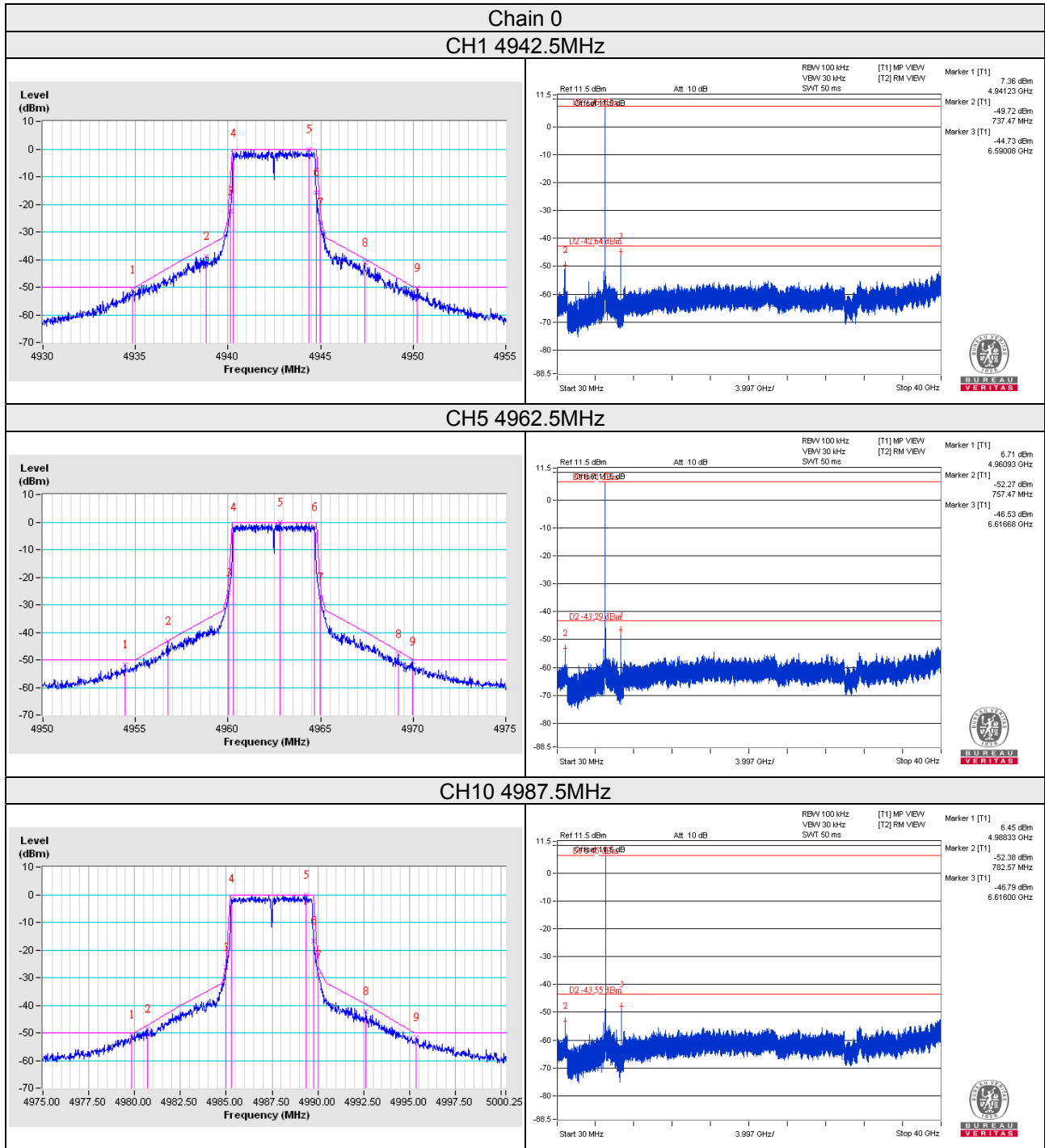
The zero dB reference is measured relative to the highest average power of the fundamental emission measured across the designated channel bandwidth using a resolution bandwidth of at least one percent of the occupied bandwidth of the fundamental emission and a video bandwidth of 30 kHz.

#### 4.3.3 Test Setup



### 4.3.4 Test Results

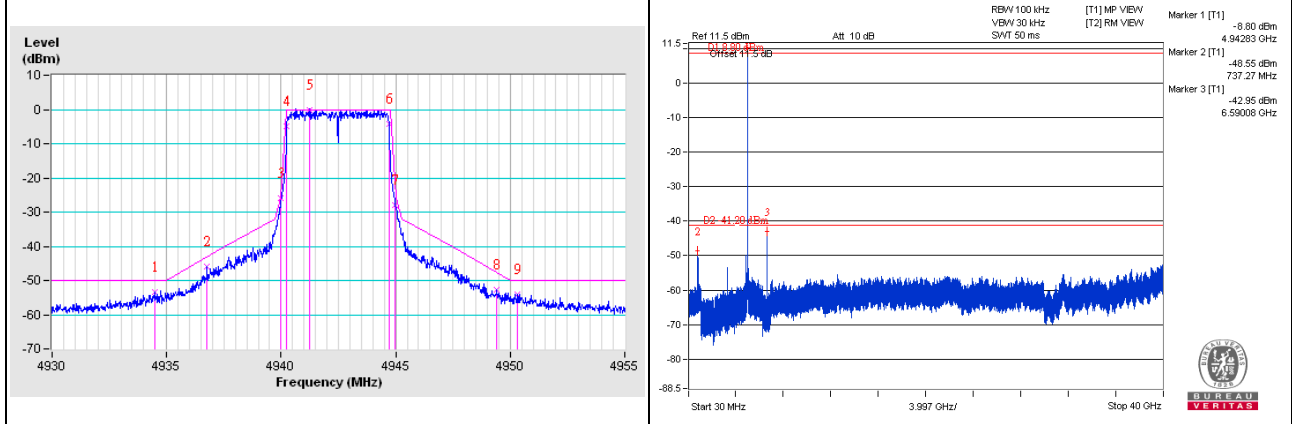
#### Channel Bandwidth 5MHz



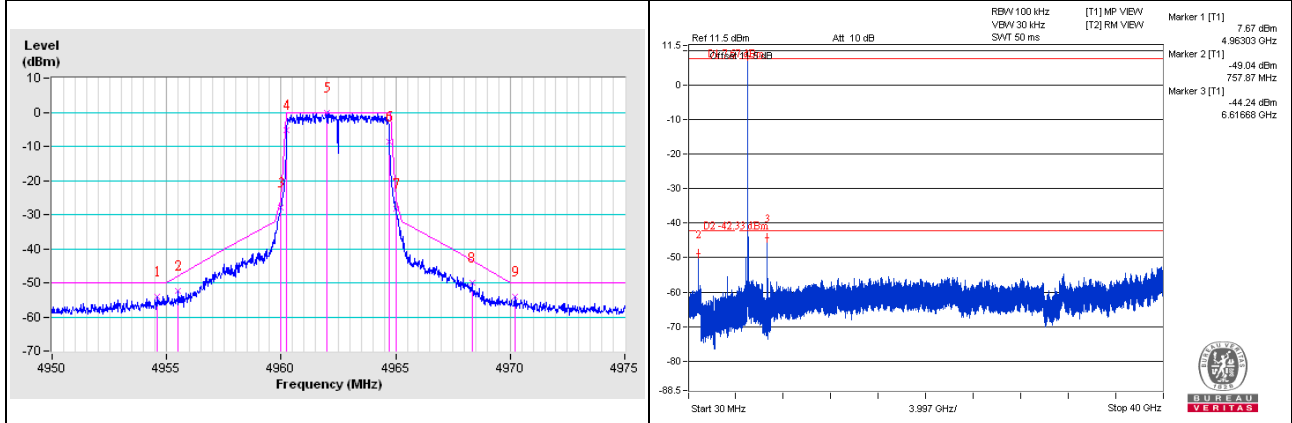
Channel Bandwidth 5MHz

Chain 1

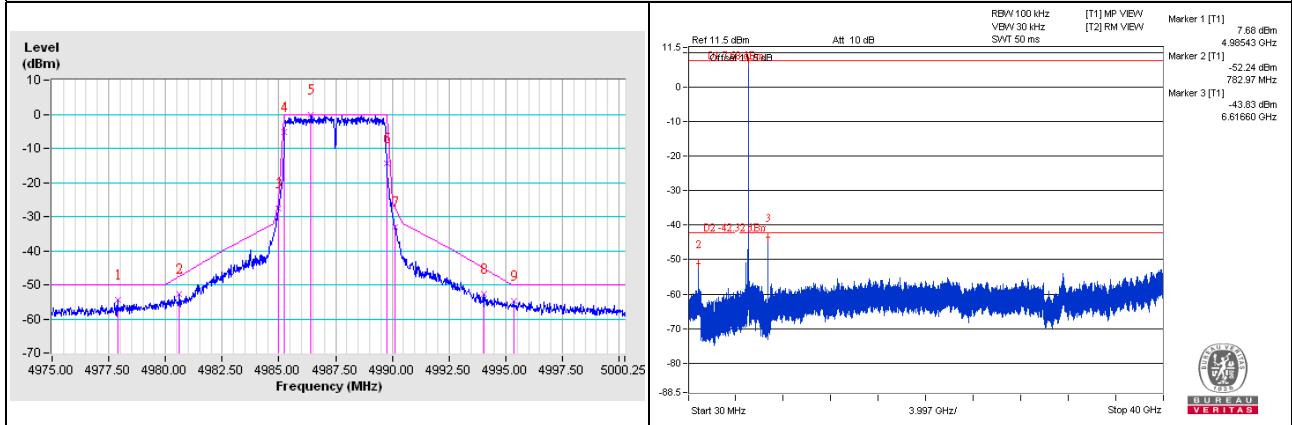
CH1 4942.5MHz



CH5 4962.5MHz



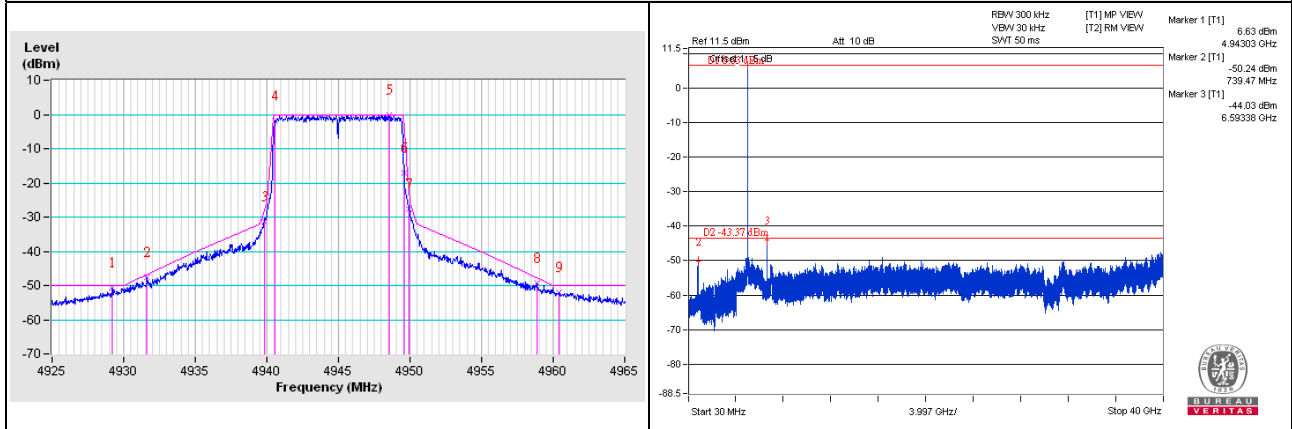
CH10 4987.5MHz



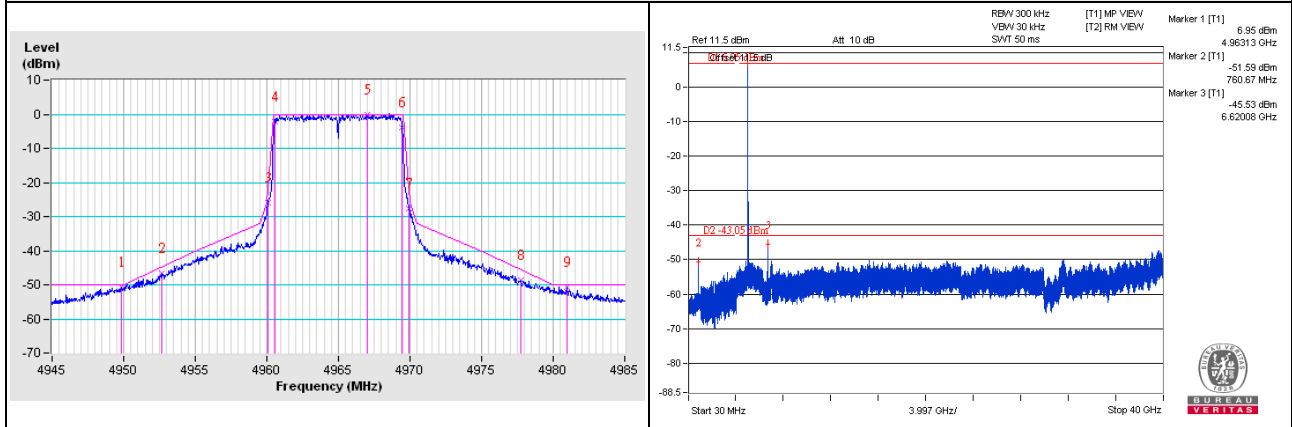
Channel Bandwidth 10MHz

Chain 0

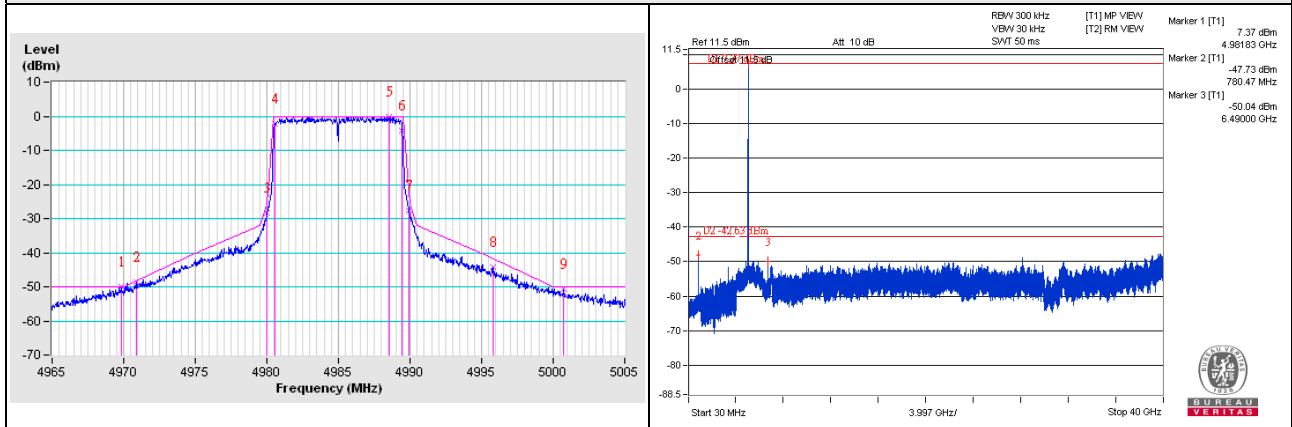
CH11 4945MHz



CH15 4965MHz

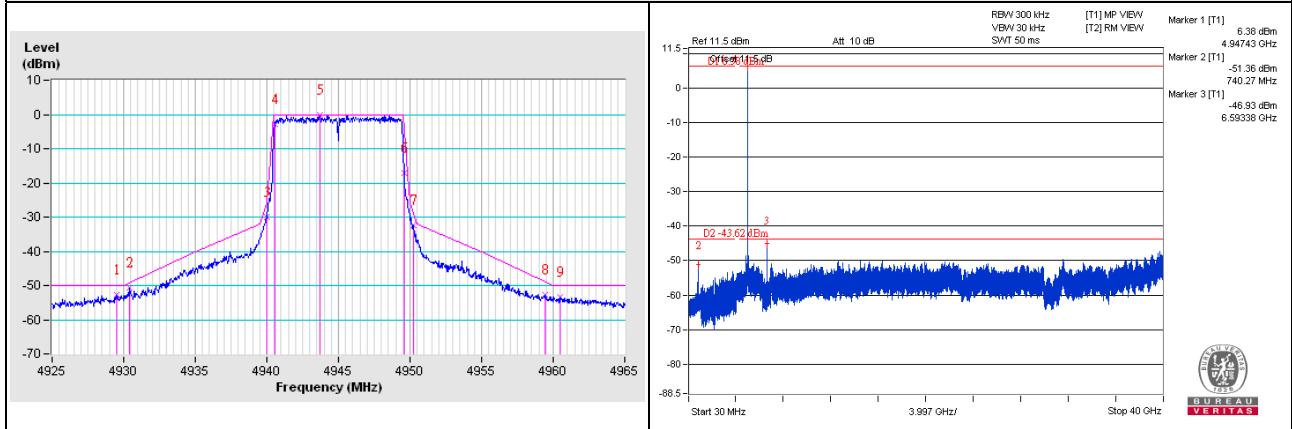


CH19 4985MHz

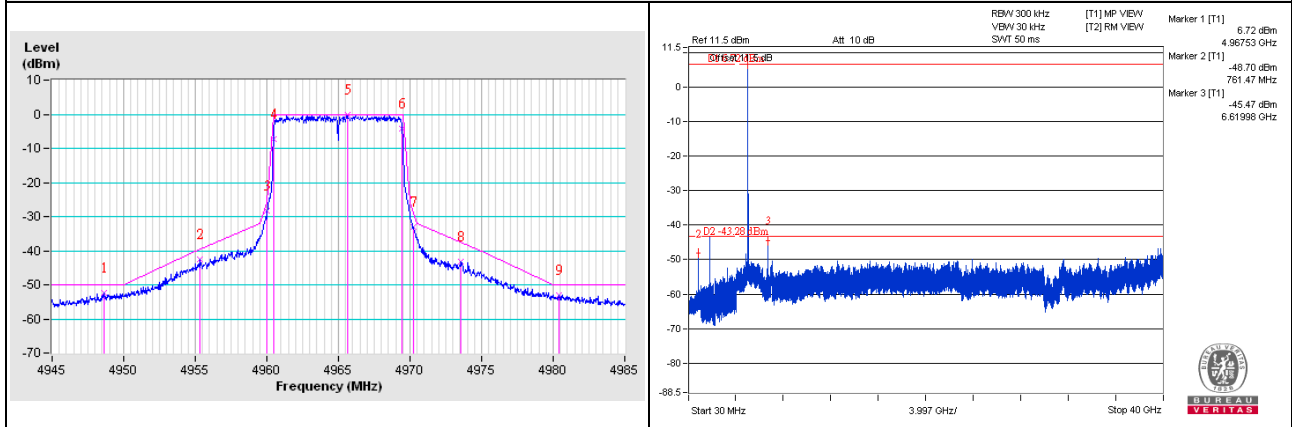


Channel Bandwidth 10MHz

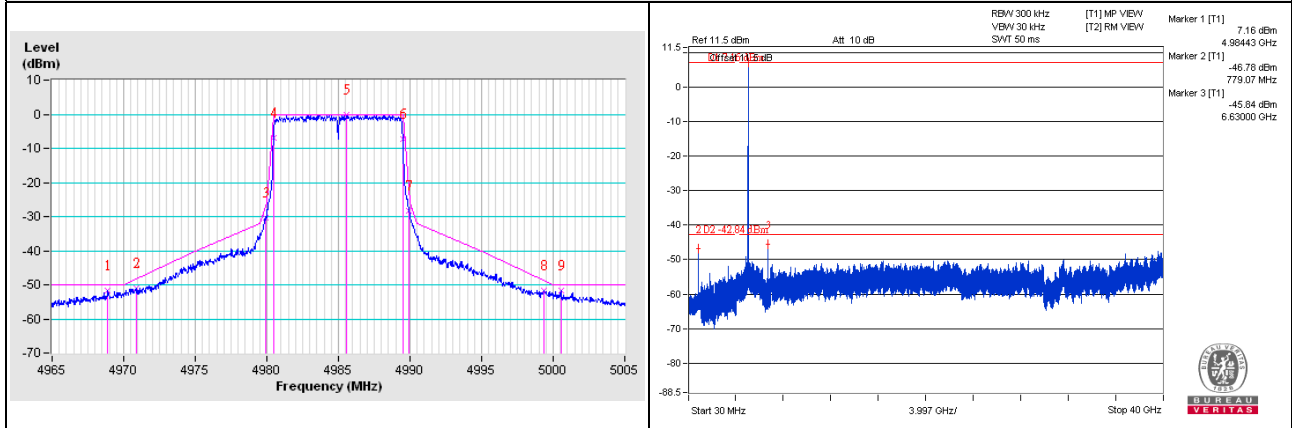
Chain 1  
CH11 4945MHz



CH15 4965MHz

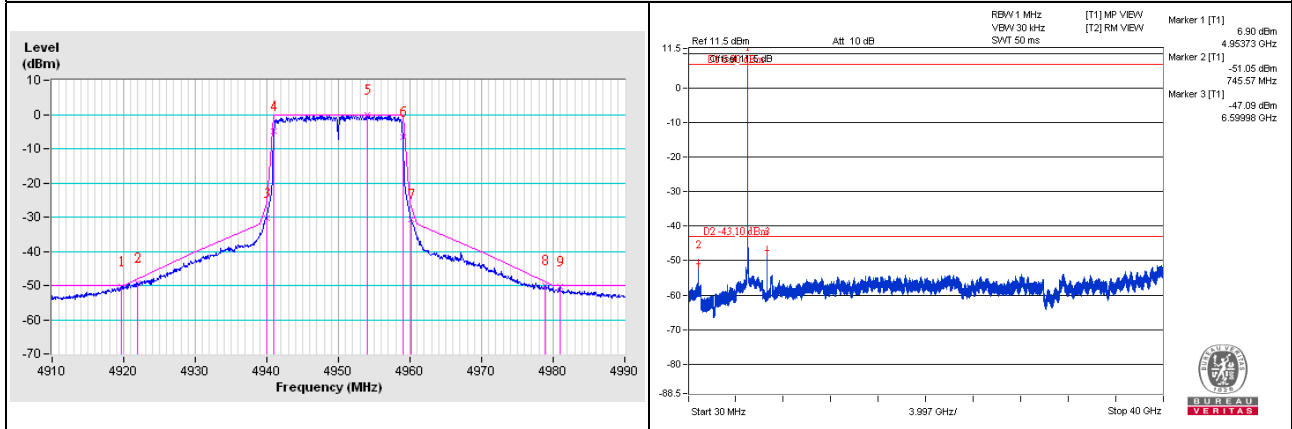


CH19 4985MHz

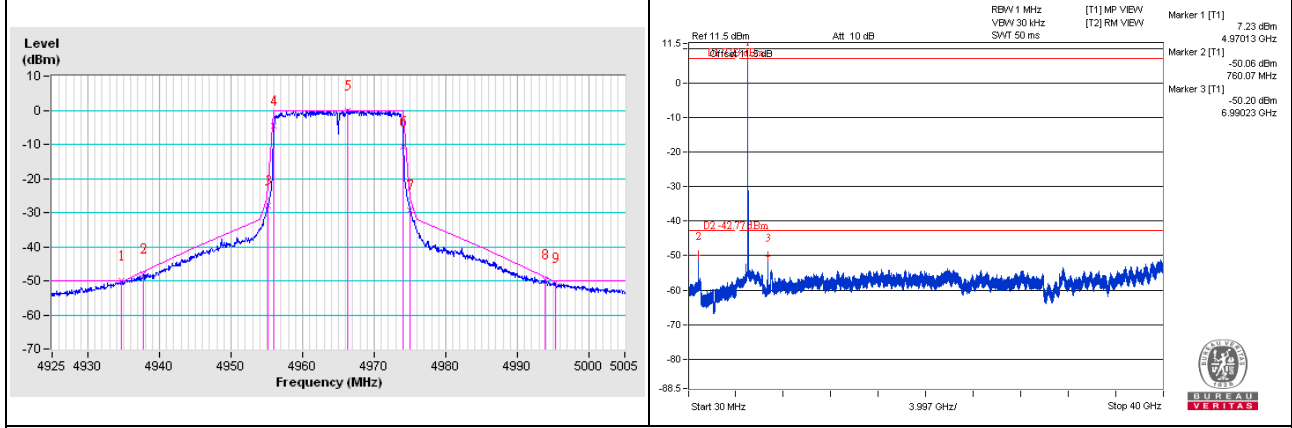


### Channel Bandwidth 20MHz

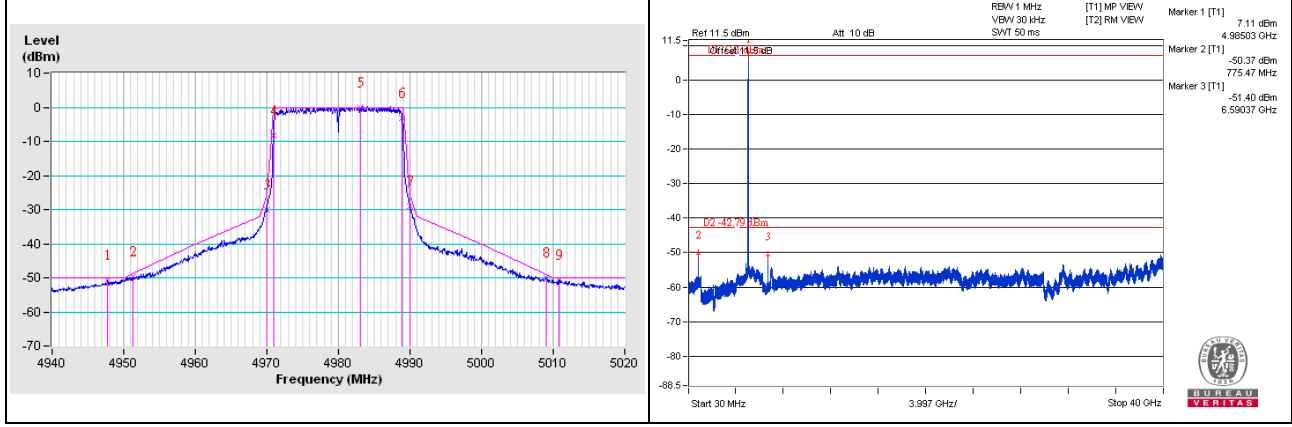
#### Chain 0 CH20 4950MHz



#### CH23 4965MHz



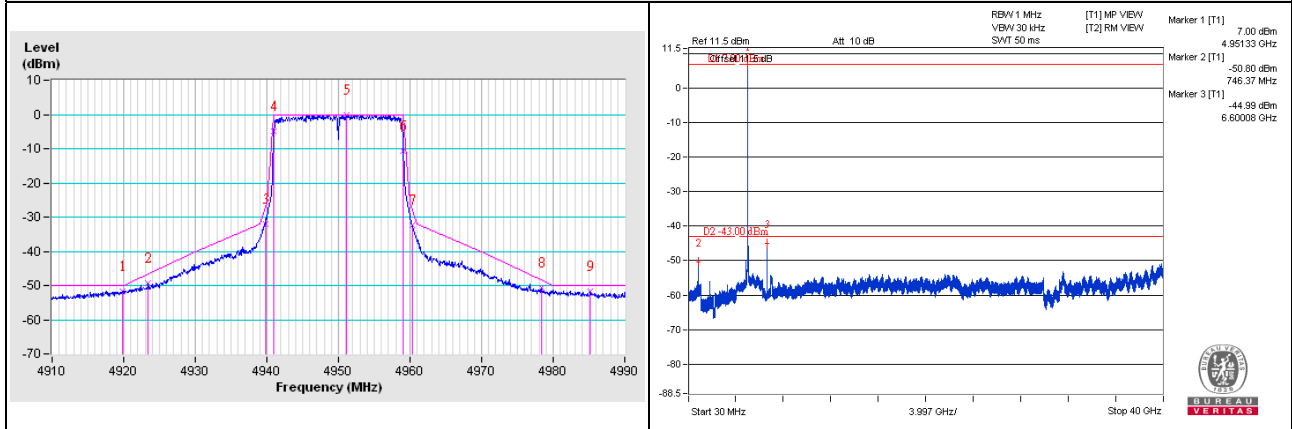
#### CH26 4980MHz



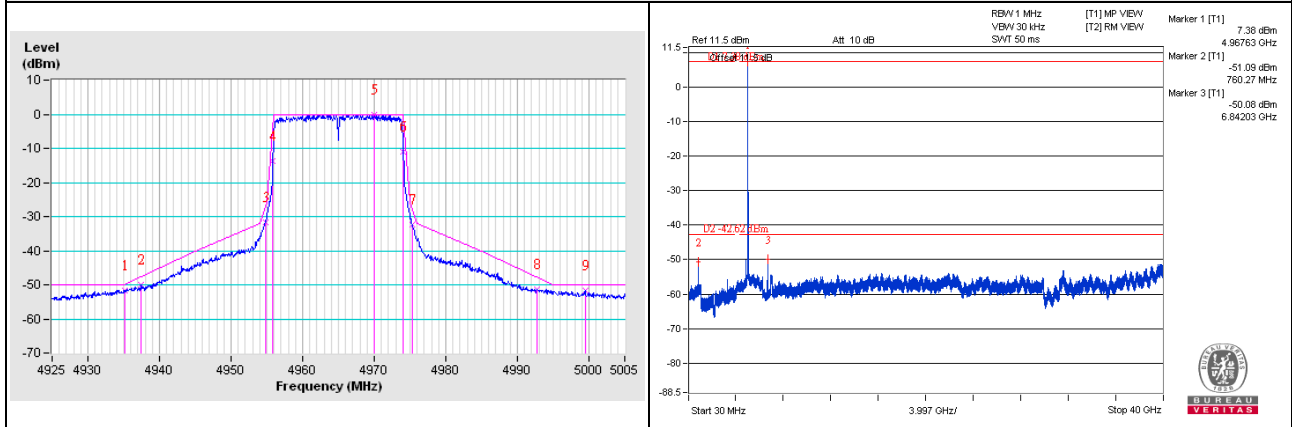
Channel Bandwidth 20MHz

Chain 1

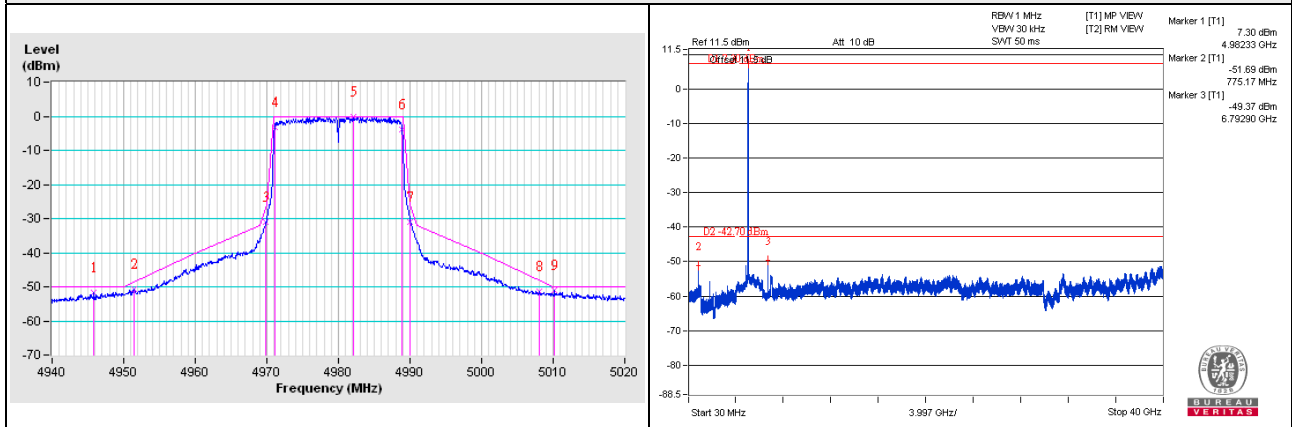
CH20 4950MHz



CH23 4965MHz



CH26 4980MHz





## 4.4 Peak Excursion Measurement

### 4.4.1 Limits of Peak Excursion Measurement

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

### 4.4.2 Test Procedures

The EUT was set to transmit continuously;

The following settings were set on the spectrum analyzer:

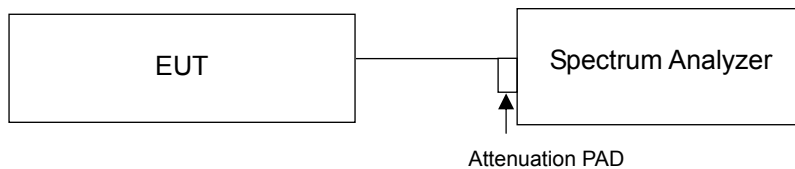
#### Trace 1:

- RBW = 1MHz
- VBW = 3 x RBW
- Span = 40MHz
- Detector = Peak
- Trace = Maxhold

#### Trace 2:

- RBW = 1MHz
- VBW = 3 x RBW
- Span = 40MHz
- Detector = Average (RMS)
- Trace = 100 Trace average

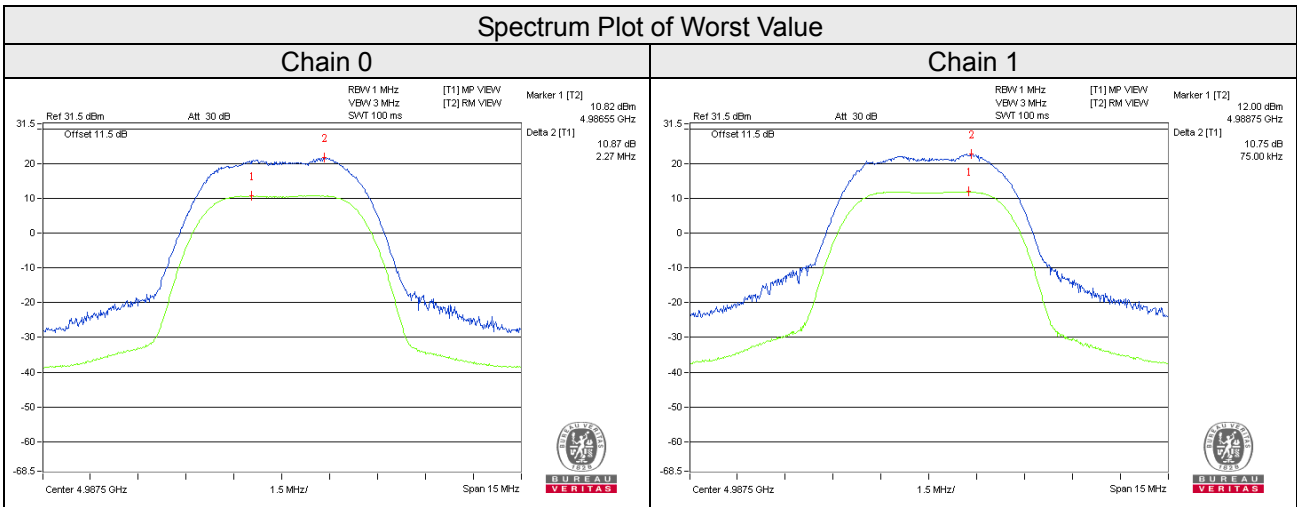
### 4.4.3 Test Setup



### 4.4.4 Test Results

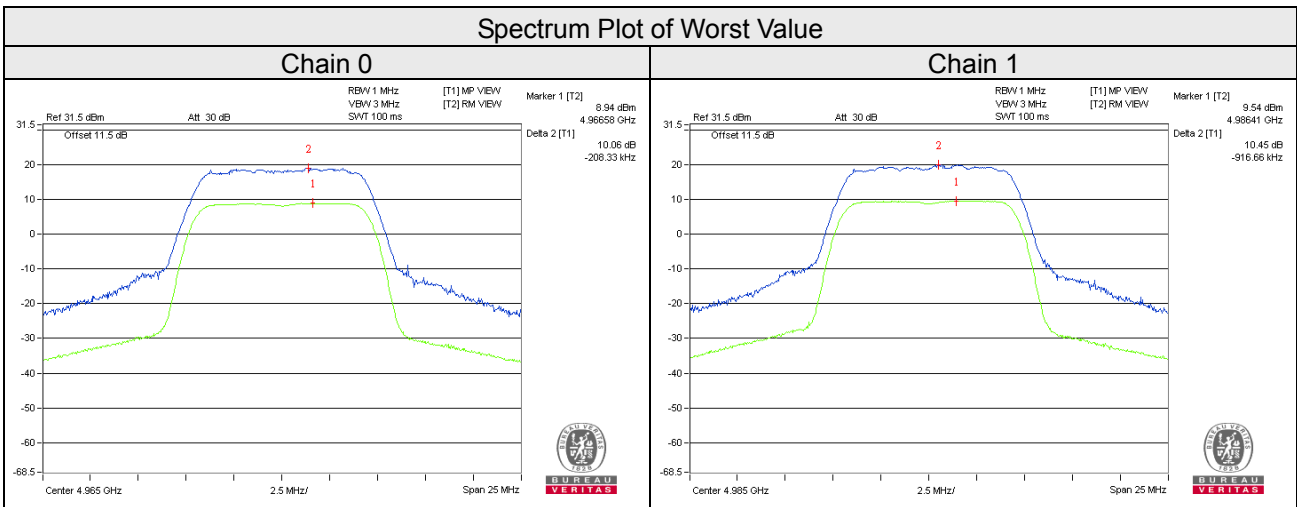
#### Channel Bandwidth 5MHz

Channel	Frequency (MHz)	Peak Excursion (dB)		Limit (dB)	Result
		Chain 0	Chain 1		
1	4942.5	10.67	10.46	13.00	Pass
5	4962.5	10.76	10.69	13.00	Pass
10	4987.5	10.87	10.75	13.00	Pass



#### Channel Bandwidth 10MHz

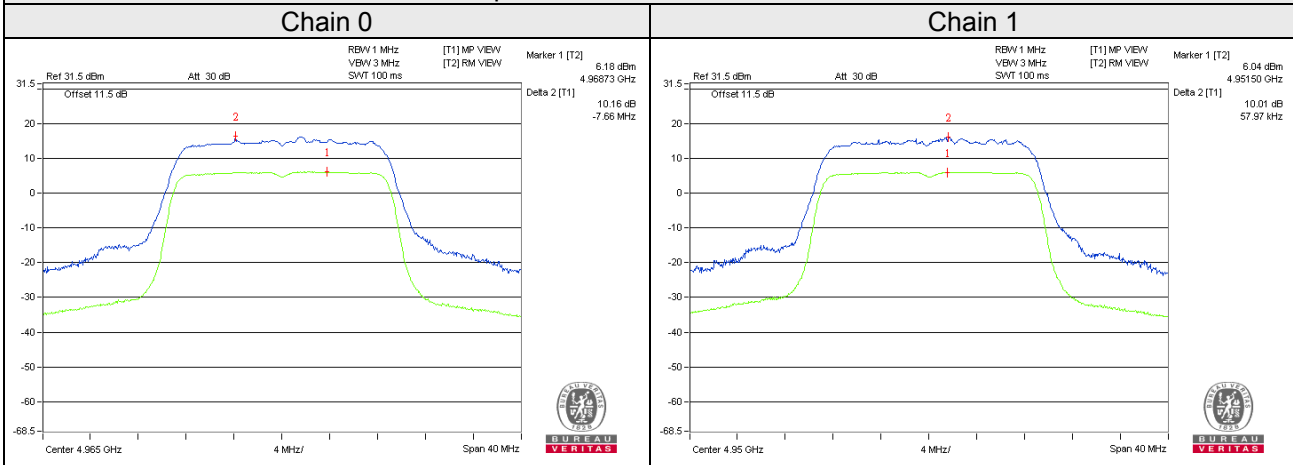
Channel	Frequency (MHz)	Peak Excursion (dB)		Limit (dB)	Result
		Chain 0	Chain 1		
11	4945	9.91	10.38	13.00	Pass
15	4965	10.06	10.39	13.00	Pass
19	4985	10.02	10.45	13.00	Pass



Channel Bandwidth 20MHz

Channel	Frequency (MHz)	Peak Excursion (dB)		Limit (dB)	Result
		Chain 0	Chain 1		
20	4950	9.96	10.01	13.00	Pass
23	4965	10.16	9.99	13.00	Pass
26	4980	9.94	9.88	13.00	Pass

Spectrum Plot of Worst Value



## 4.5 Power Spectral Density Measurement

### 4.5.1 Limits of Power Spectral Density Measurement

High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. If transmitting antennas of directional gain greater than 9 dBi are used, the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi.

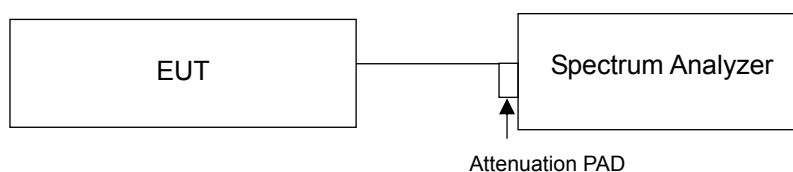
Low power devices are also limited to a peak power spectral density of 8 dBm per one MHz. Low power devices using channel bandwidths other than those listed above are permitted; however, they are limited to a peak power spectral density of 8 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi.

However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted output power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi

### 4.5.2 Test Procedures

- Set span to minimum of 1.5 times the OBW
- Set RBW = 1 MHz
- Set VBW  $\geq$  1 MHz
- Detector = RMS
- Sweep time = auto couple.
- Trace mode = max hold.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

### 4.5.3 Test Setup



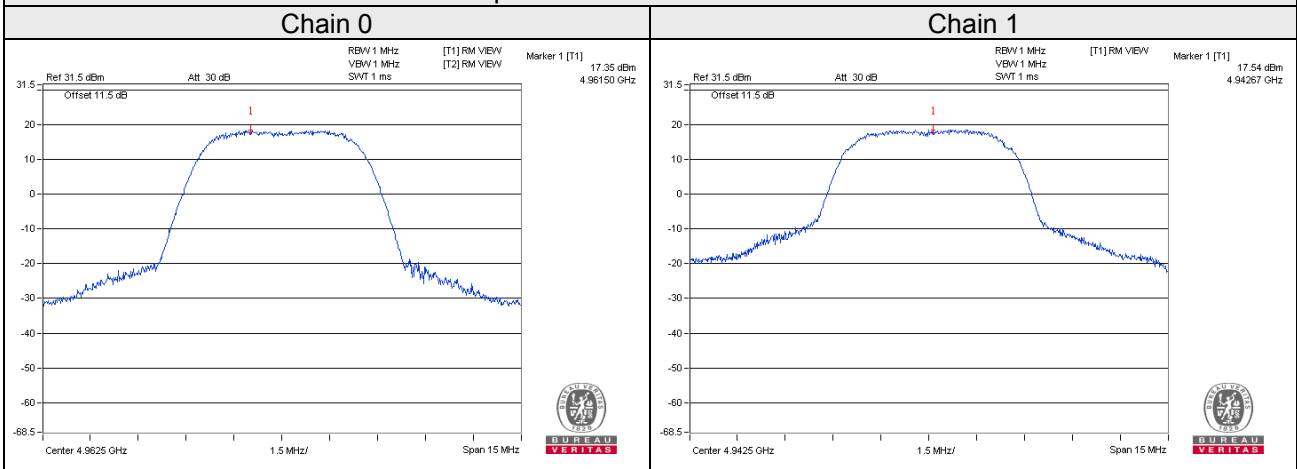
#### 4.5.4 Test Results

Channel Bandwidth 5MHz

Channel	Frequency (MHz)	Power Spectral Density (dBm)		Total PSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
1	4942.5	17.75	17.54	20.66	21.00	Pass
5	4962.5	17.35	17.48	20.43	21.00	Pass
10	4987.5	17.37	17.34	20.37	21.00	Pass

\* Directional gain of Maximum gain is less than 9dBi, so limit = 21dBm.

Spectrum Plot of Worst Value

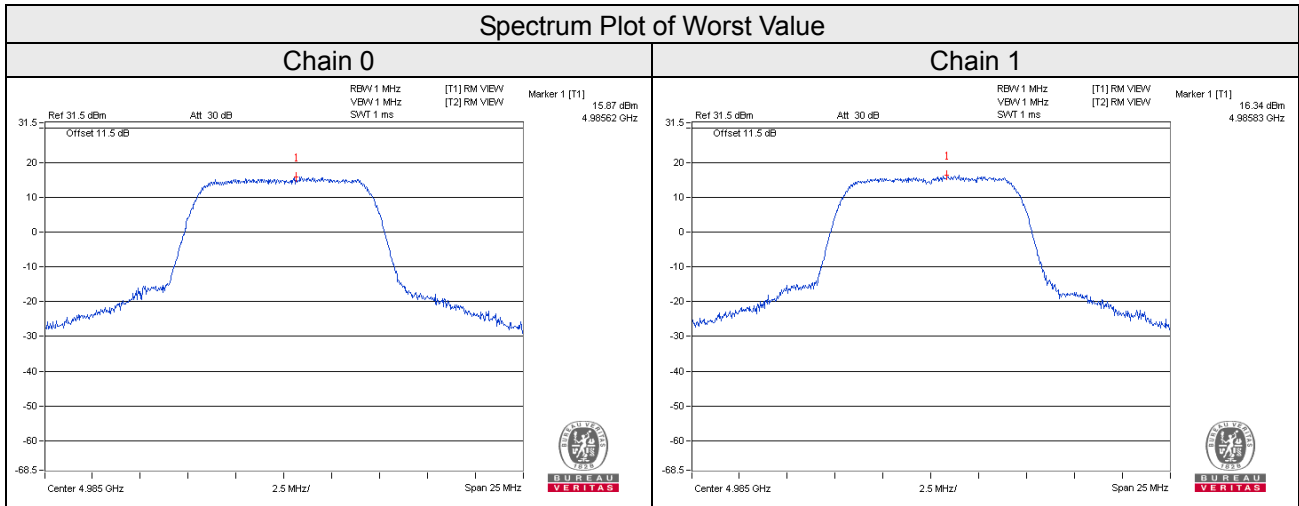


Channel Bandwidth 10MHz

Channel	Frequency (MHz)	Power Spectral Density (dBm)		Total PSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
11	4945	15.57	15.88	18.74	21.00	Pass
15	4965	15.62	15.76	18.70	21.00	Pass
19	4985	15.87	16.34	19.12	21.00	Pass

\* Directional gain of Maximum gain is less than 26dBi, so limit = 21dBm.

Spectrum Plot of Worst Value

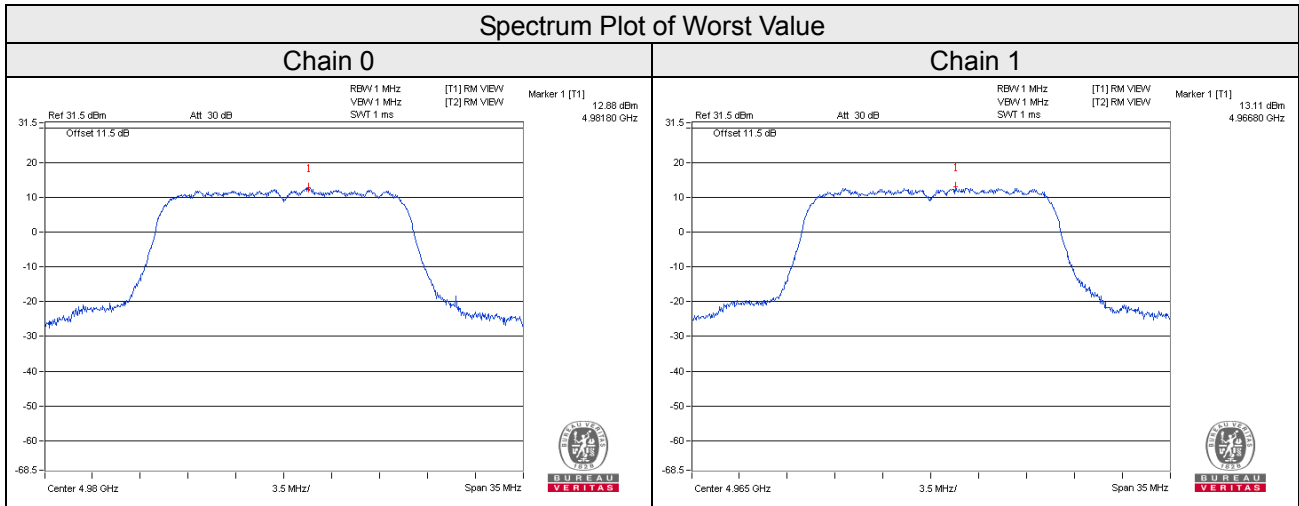


Channel Bandwidth 20MHz

Channel	Frequency (MHz)	Power Spectral Density (dBm)		Total PSD (dBm)	Limit (dBm)	Result
		Chain 0	Chain 1			
20	4950	12.48	12.74	15.62	21.00	Pass
23	4965	12.78	13.11	15.96	21.00	Pass
26	4980	12.88	12.94	15.92	21.00	Pass

\* Directional gain of Maximum gain is less than 26dBi, so limit = 21dBm.

Spectrum Plot of Worst Value



## 4.6 Radiated Emission Measurement

### 4.6.1 Limits of Radiated Emission Measurement

For low power transmitters (20 dBm or less) and high power transmitters (greater than 20 dBm operating in the 4940-4990 MHz frequency band, the power spectral density of the emissions must be attenuated below the output power of the transmitter as follows:

Frequency Offset $f_d$	Minimum Attenuation	
	Low Power Transmitter	High Power Transmitter
$0 < f_d \leq 45$	0	0
$45 < f_d \leq 50$	$219 \log(f_d/45)$	$568 \log(f_d/45)$
$50 < f_d \leq 55$	$10 + 242 \log(f_d/50)$	$26 + 145 \log(f_d/50)$
$55 < f_d \leq 100$	$20 + 31 \log(f_d/55)$	$32 + 31 \log(f_d/55)$
$100 < f_d \leq 150$	$28 + 68 \log(f_d/100)$	$40 + 57 \log(f_d/100)$
$f_d > 150$	40	50 dB or $55 + 10 \log(P)$ dB, whichever is the lesser attenuation.

$f_d$  is the percentage of the equipment's channel bandwidth.

### 4.6.2 Test Procedure

1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. The test was carried out at the selected frequency points obtained from the EUT characterisation. Maximization of the emissions, was carried out by rotating the EUT, changing the antenna polarization, and adjusting the antenna height in the following manner:
  - a. Vertical or horizontal polarisation (whichever gave the higher emission level over a full rotation of the EUT) was chosen.
  - b. The EUT was then rotated to the direction that gave the maximum emission.
  - c. Finally, the antenna height was adjusted to the height that gave the maximum emission.
3. Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter.
4. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends horizontally polarized, and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained.
5. Steps 4 were repeated for the next frequency point, until all selected frequency points were measured.

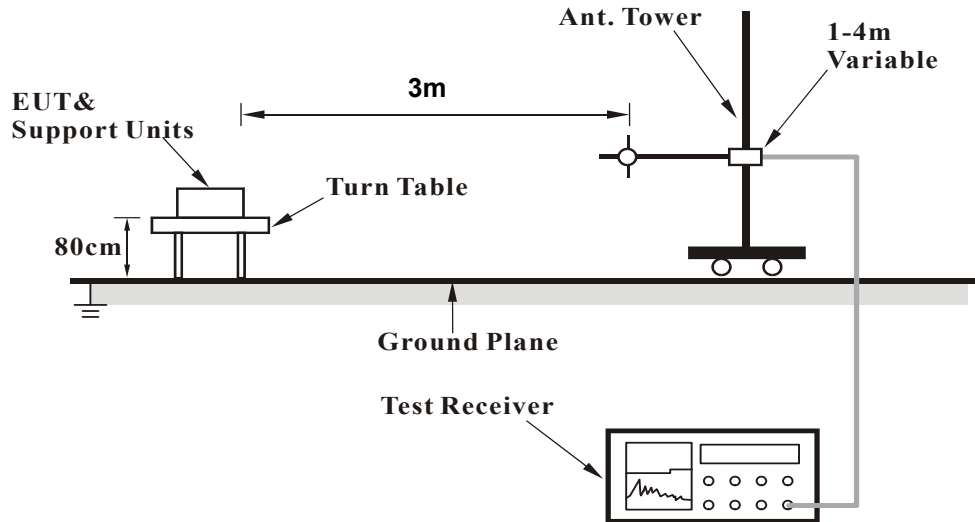
### 4.6.3 Deviation from Test Standard

No deviation.

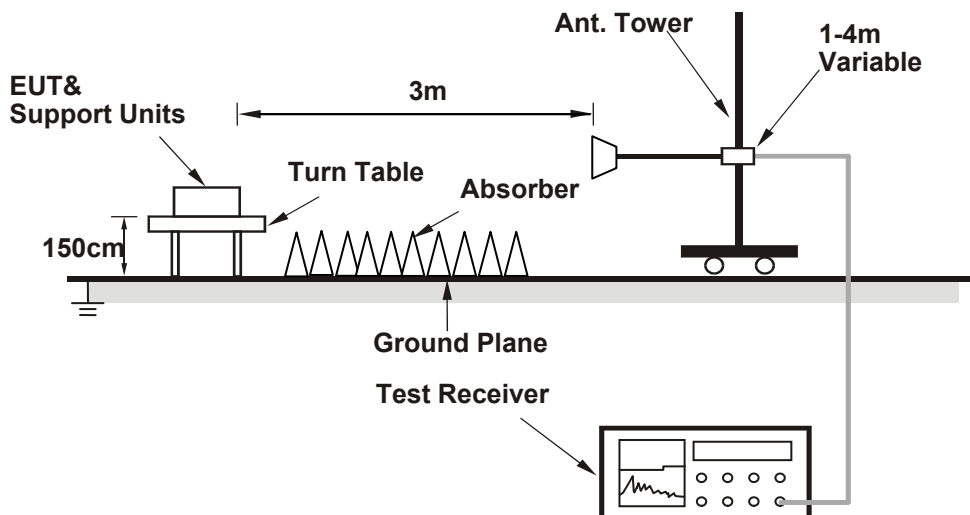


#### 4.6.4 Test Setup

##### For Radiated emission 30MHz to 1GHz



##### For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.6.5 Test Results

##### Test Mode A

Below 1GHz

Channel Bandwidth 5MHz

Mode	TX channel 10	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

##### Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	109.70	-52.9	-62.1	0.5	-61.6	-20.11	-41.49
2	210.78	-54.9	-68.8	5.4	-63.4	-20.11	-43.29
3	280.76	-60.0	-69.2	5.3	-63.9	-20.11	-43.79
4	550.96	-60.3	-64.3	4.7	-59.6	-20.11	-39.49
5	626.77	-62.5	-64.7	4.6	-60.1	-20.11	-39.99
6	935.85	-66.4	-61.6	3.9	-57.7	-20.11	-37.59

##### Antenna Polarity & Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	61.10	-48.0	-47.8	-7.3	-55.1	-20.11	-34.99
2	164.13	-59.5	-62.6	1.0	-61.6	-20.11	-41.49
3	280.76	-53.5	-57.3	5.3	-52.0	-20.11	-31.89
4	376.01	-64.2	-69.6	5.3	-64.3	-20.11	-44.19
5	630.66	-59.5	-58.3	4.6	-53.7	-20.11	-33.59
6	933.91	-67.1	-61.3	3.9	-57.4	-20.11	-37.29

##### Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 29.89dBm-50dB= -20.11dBm.

Channel Bandwidth 10MHz

Mode	TX channel 19	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	111.64	-55.5	-64.2	0.4	-63.8	-20.03	-43.77
2	210.78	-53.4	-67.3	5.4	-61.9	-20.03	-41.87
3	280.76	-60.2	-69.4	5.3	-64.1	-20.03	-44.07
4	549.02	-60.7	-64.7	4.7	-60.0	-20.03	-39.97
5	632.61	-63.1	-65.2	4.7	-60.5	-20.03	-40.47
6	931.96	-67.8	-63.2	3.9	-59.3	-20.03	-39.27

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	171.90	-60.1	-64.8	1.9	-62.9	-20.03	-42.87
2	210.78	-60.4	-67.7	5.4	-62.3	-20.03	-42.27
3	278.82	-57.0	-60.8	5.3	-55.5	-20.03	-35.47
4	387.68	-59.8	-65.1	5.2	-59.9	-20.03	-39.87
5	636.49	-63.2	-61.7	4.7	-57.0	-20.03	-36.97
6	935.85	-66.7	-61.0	3.9	-57.1	-20.03	-37.07

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 29.97dBm-50dB= -20.03dBm.

Channel Bandwidth 20MHz

Mode	TX channel 26	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	111.64	-53.8	-62.5	0.4	-62.1	-19.93	-42.17
2	208.84	-54.5	-68.3	5.4	-62.9	-19.93	-42.97
3	280.76	-59.6	-68.8	5.3	-63.5	-19.93	-43.57
4	556.79	-60.9	-64.7	4.7	-60.0	-19.93	-40.07
5	626.77	-62.2	-64.4	4.6	-59.8	-19.93	-39.87
6	933.91	-66.8	-62.0	3.9	-58.1	-19.93	-38.17

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	171.90	-56.6	-61.3	1.9	-59.4	-19.93	-39.47
2	189.40	-59.1	-66.2	4.1	-62.1	-19.93	-42.17
3	280.76	-59.1	-62.9	5.3	-57.6	-19.93	-37.67
4	374.07	-65.7	-71.3	5.3	-66.0	-19.93	-46.07
5	624.83	-61.7	-61.1	4.7	-56.4	-19.93	-36.47
6	933.91	-68.4	-62.6	3.9	-58.7	-19.93	-38.77

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 30.07dBm-50dB= -19.93dBm.

Above 1GHz  
 Channel Bandwidth 5MHz

Mode	TX channel 1	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6590.00	-57.0	-40.7	5.3	-35.4	-20.11	-15.29
2	9885.00	-62.9	-39.4	3.7	-35.7	-20.11	-15.59
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6590.00	-47.5	-33.4	5.3	-28.1	-20.11	-7.99
2	9885.00	-62.0	-39.4	3.7	-35.7	-20.11	-15.59

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 29.89dBm-50dB= -20.11dBm.

Mode	TX channel 5	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6616.00	-56.3	-39.9	5.3	-34.6	-20.11	-14.49
2	9925.00	-63.0	-39.4	3.7	-35.7	-20.11	-15.59
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6616.00	-47.9	-33.6	5.3	-28.3	-20.11	-8.19
2	9925.00	-61.8	-39.3	3.7	-35.6	-20.11	-15.49

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 29.89dBm-50dB= -20.11dBm.

Mode	TX channel 10	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6650.00	-55.3	-38.8	5.2	-33.6	-20.11	-13.49
2	9975.00	-61.8	-37.9	3.6	-34.3	-20.11	-14.19
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	<b>6650.00</b>	<b>-47.0</b>	<b>-32.2</b>	<b>5.2</b>	<b>-27.0</b>	<b>-20.11</b>	<b>-6.89</b>
2	9975.00	-61.9	-39.4	3.6	-35.8	-20.11	-15.69

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 29.89dBm-50dB= -20.11dBm.

Channel Bandwidth 10MHz

Mode	TX channel 11	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6593.00	-58.1	-41.7	5.3	-36.4	-20.03	-16.37
2	9890.00	-64.5	-41.0	3.7	-37.3	-20.03	-17.27
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6593.00	-49.3	-35.2	5.3	-29.9	-20.03	-9.87
2	9890.00	-62.0	-39.4	3.7	-35.7	-20.03	-15.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 29.97dBm-50dB= -20.03dBm.

Mode	TX channel 15	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6620.00	-57.1	-40.7	5.3	-35.4	-20.03	-15.37
2	9930.00	-63.5	-39.9	3.7	-36.2	-20.03	-16.17
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6620.00	-49.4	-35.1	5.3	-29.8	-20.03	-9.77
2	9930.00	-61.8	-39.3	3.7	-35.6	-20.03	-15.57

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 29.97dBm-50dB= -20.03dBm.

Mode	TX channel 19	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6646.00	-57.5	-41.1	5.3	-35.8	-20.03	-15.77
2	9930.00	-62.5	-38.9	3.7	-35.2	-20.03	-15.17
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6646.00	-49.5	-34.9	5.3	-29.6	-20.03	-9.57
2	9970.00	-62.2	-39.7	3.6	-36.1	-20.03	-16.07

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 29.97dBm-50dB= -20.03dBm.

Channel Bandwidth 20MHz

Mode	TX channel 20	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6600.00	-59.3	-42.9	5.3	-37.6	-19.93	-17.67
2	9900.00	-63.6	-40.1	3.7	-36.4	-19.93	-16.47

Antenna Polarity & Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6600.00	-51.2	-37.1	5.3	-31.8	-19.93	-11.87
2	9900.00	-62.8	-40.3	3.7	-36.6	-19.93	-16.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 30.07dBm-50dB= -19.93dBm.

Mode	TX channel 23	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6620.00	-57.4	-41.0	5.3	-35.7	-19.93	-15.77
2	9930.00	-63.0	-39.4	3.7	-35.7	-19.93	-15.77

Antenna Polarity & Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6620.00	-51.5	-37.2	5.3	-31.9	-19.93	-11.97
2	9930.00	-62.9	-40.4	3.7	-36.7	-19.93	-16.77

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 30.07dBm-50dB= -19.93dBm.

Mode	TX channel 26	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6640.00	-58.8	-42.4	5.3	-37.1	-19.93	-17.17
2	9960.00	-63.5	-39.7	3.6	-36.1	-19.93	-16.17

Antenna Polarity & Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	6640.00	-51.9	-37.4	5.3	-32.1	-19.93	-12.17
2	9960.00	-63.2	-40.7	3.6	-37.1	-19.93	-17.17

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 30.07dBm-50dB= -19.93dBm.

**Test Mode B**

Below 1GHz

Channel Bandwidth 5MHz

Mode	TX channel 10	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

**Antenna Polarity & Test Distance: Horizontal at 3 M**

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	278.82	-60.3	-69.7	5.3	-64.4	-23.81	-40.59
2	381.84	-62.5	-69.3	5.3	-64.0	-23.81	-40.19
3	543.19	-62.5	-66.6	4.7	-61.9	-23.81	-38.09
4	607.34	-61.4	-64.1	4.5	-59.6	-23.81	-35.79
5	825.05	-67.7	-64.5	4.0	-60.5	-23.81	-36.69
6	937.80	-68.2	-63.4	3.9	-59.5	-23.81	-35.69

**Antenna Polarity & Test Distance: Vertical at 3 M**

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	199.12	-59.0	-66.0	5.4	-60.6	-23.81	-36.79
2	276.87	-60.4	-64.1	5.3	-58.8	-23.81	-34.99
3	620.94	-62.4	-62.0	4.6	-57.4	-23.81	-33.59
4	685.09	-65.3	-64.4	5.2	-59.2	-23.81	-35.39
5	722.02	-66.2	-64.3	5.0	-59.3	-23.81	-35.49
6	937.80	-67.9	-62.2	3.9	-58.3	-23.81	-34.49

**Remarks:**

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 26.19dBm-50dB= -23.81dBm.



Channel Bandwidth 10MHz

Mode	TX channel 19	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	278.82	-60.5	-69.9	5.3	-64.6	-23.73	-40.87
2	376.01	-64.4	-71.6	5.3	-66.3	-23.73	-42.57
3	543.19	-63.4	-67.5	4.7	-62.8	-23.73	-39.07
4	603.45	-61.7	-64.5	4.5	-60.0	-23.73	-36.27
5	805.61	-66.4	-64.1	4.0	-60.1	-23.73	-36.37
6	937.80	-68.0	-63.2	3.9	-59.3	-23.73	-35.57

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	280.76	-60.8	-64.6	5.3	-59.3	-23.73	-35.57
2	389.62	-65.7	-71.0	5.2	-65.8	-23.73	-42.07
3	617.05	-62.0	-61.7	4.6	-57.1	-23.73	-33.37
4	671.48	-64.7	-63.7	5.0	-58.7	-23.73	-34.97
5	747.30	-62.5	-59.9	4.7	-55.2	-23.73	-31.47
6	939.74	-69.0	-63.3	3.9	-59.4	-23.73	-35.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 26.27dBm-50dB= -23.73dBm.

Channel Bandwidth 20MHz

Mode	TX channel 26	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	383.79	-66.1	-72.7	5.3	-67.4	-23.63	-43.77
2	543.19	-62.1	-66.2	4.7	-61.5	-23.63	-37.87
3	603.45	-61.0	-63.8	4.5	-59.3	-23.63	-35.67
4	677.32	-63.6	-65.8	5.1	-60.7	-23.63	-37.07
5	813.39	-67.7	-65.2	4.0	-61.2	-23.63	-37.57
6	937.80	-67.7	-62.9	3.9	-59.0	-23.63	-35.37

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	385.73	-67.1	-72.3	5.2	-67.1	-23.63	-43.47
2	552.91	-64.3	-67.2	4.7	-62.5	-23.63	-38.87
3	611.22	-61.5	-61.6	4.5	-57.1	-23.63	-33.47
4	675.37	-64.2	-63.3	5.1	-58.2	-23.63	-34.57
5	747.30	-66.3	-63.7	4.7	-59.0	-23.63	-35.37
6	937.80	-66.9	-61.2	3.9	-57.3	-23.63	-33.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 26.37dBm-50dB= -23.63dBm.

Above 1GHz  
Channel Bandwidth 5MHz

Mode	TX channel 1	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-71.10	-47.63	3.75	-43.88	-23.81	-20.07
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-66.74	-44.23	3.75	-40.48	-23.81	-16.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 26.19dBm-50dB= -23.81dBm.

Mode	TX channel 5	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-71.30	-47.72	3.71	-44.01	-23.81	-20.20
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-66.99	-44.52	3.71	-40.81	-23.81	-17.00

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 26.19dBm-50dB= -23.81dBm.

Mode	TX channel 10	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-71.50	-47.56	3.55	-44.01	-23.81	-20.20
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-69.74	-47.20	3.55	-43.65	-23.81	-19.84

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 26.19dBm-50dB= -23.81dBm.

Channel Bandwidth 10MHz

Mode	TX channel 11	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-72.10	-48.65	3.76	-44.89	-23.73	-21.16

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-69.50	-47.01	3.76	-43.25	-23.73	-19.52

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 26.27dBm-50dB= -23.73dBm.

Mode	TX channel 15	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-71.90	-48.27	3.68	-44.59	-23.73	-20.86

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-69.40	-46.91	3.68	-43.23	-23.73	-19.50

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 26.27dBm-50dB= -23.73dBm.

Mode	TX channel 19	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-71.50	-47.61	3.58	-44.03	-23.73	-20.30

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-70.50	-47.98	3.58	-44.40	-23.73	-20.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 26.27dBm-50dB= -23.73dBm.

Channel Bandwidth 20MHz

Mode	TX channel 20	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-72.40	-48.98	3.77	-45.21	-23.63	-21.58

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-70.90	-48.44	3.77	-44.67	-23.63	-21.04

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 26.37dBm-50dB= -23.63dBm.

Mode	TX channel 23	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-72.50	-48.87	3.68	-45.19	-23.63	-21.56

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-71.20	-48.71	3.68	-45.03	-23.63	-21.40

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 26.37dBm-50dB= -23.63dBm.

Mode	TX channel 26	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-72.30	-48.47	3.60	-44.87	-23.63	-21.24

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-71.50	-48.98	3.60	-45.38	-23.63	-21.75

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 26.37dBm-50dB= -23.63dBm.

**Test Mode C**

Below 1GHz

Channel Bandwidth 5MHz

Mode	TX channel 10	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	374.07	-64.4	-71.7	5.3	-66.4	-21.81	-44.59
2	543.19	-62.2	-66.3	4.7	-61.6	-21.81	-39.79
3	611.22	-61.6	-64.2	4.5	-59.7	-21.81	-37.89
4	675.37	-63.3	-65.5	5.1	-60.4	-21.81	-38.59
5	722.02	-64.2	-65.5	5.0	-60.5	-21.81	-38.69
6	840.60	-67.7	-64.3	4.0	-60.3	-21.81	-38.49

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	282.71	-62.7	-66.5	5.3	-61.2	-21.81	-39.39
2	383.79	-66.7	-71.9	5.3	-66.6	-21.81	-44.79
3	550.96	-64.1	-67.1	4.7	-62.4	-21.81	-40.59
4	671.48	-66.8	-65.8	5.0	-60.8	-21.81	-38.99
5	729.80	-66.1	-64.2	4.9	-59.3	-21.81	-37.49
6	840.60	-68.2	-63.9	4.0	-59.9	-21.81	-38.09

**Remarks:**

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.19dBm-50dB= -21.81dBm.

Channel Bandwidth 10MHz

Mode	TX channel 19	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	376.01	-64.7	-71.9	5.3	-66.6	-21.73	-44.87
2	537.36	-62.9	-67.2	4.7	-62.5	-21.73	-40.77
3	605.39	-60.6	-63.4	4.5	-58.9	-21.73	-37.17
4	673.43	-63.8	-65.9	5.0	-60.9	-21.73	-39.17
5	840.60	-68.5	-65.1	4.0	-61.1	-21.73	-39.37
6	941.68	-68.7	-63.7	3.9	-59.8	-21.73	-38.07

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	379.90	-66.4	-71.6	5.3	-66.3	-21.73	-44.57
2	615.11	-61.7	-61.5	4.6	-56.9	-21.73	-35.17
3	679.26	-64.7	-63.8	5.1	-58.7	-21.73	-36.97
4	720.08	-65.1	-63.2	5.0	-58.2	-21.73	-36.47
5	778.40	-69.1	-65.0	4.3	-60.7	-21.73	-38.97
6	937.80	-68.0	-62.3	3.9	-58.4	-21.73	-36.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm.

Channel Bandwidth 20MHz

Mode	TX channel 26	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	383.79	-65.6	-72.2	5.3	-66.9	-21.63	-45.27
2	537.36	-62.4	-66.7	4.7	-62.0	-21.63	-40.37
3	609.28	-61.6	-64.2	4.5	-59.7	-21.63	-38.07
4	675.37	-64.1	-66.3	5.1	-61.2	-21.63	-39.57
5	797.84	-67.8	-65.3	4.0	-61.3	-21.63	-39.67
6	939.74	-66.1	-61.2	3.9	-57.3	-21.63	-35.67

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	376.01	-66.2	-71.6	5.3	-66.3	-21.63	-44.67
2	552.91	-64.6	-67.5	4.7	-62.8	-21.63	-41.17
3	613.17	-61.4	-61.4	4.6	-56.8	-21.63	-35.17
4	679.26	-64.1	-63.2	5.1	-58.1	-21.63	-36.47
5	747.30	-67.2	-64.6	4.7	-59.9	-21.63	-38.27
6	939.74	-68.7	-63.0	3.9	-59.1	-21.63	-37.47

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.37dBm-50dB= -21.63dBm.



Above 1GHz  
Channel Bandwidth 5MHz

Mode	TX channel 1	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-61.5	-38.0	3.7	-34.3	-21.81	-12.49

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-58.4	-35.8	3.7	-32.1	-21.81	-10.29

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.19dBm-50dB= -21.81dBm.

Mode	TX channel 5	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-62.1	-38.5	3.7	-34.8	-21.81	-12.99

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-59.6	-37.1	3.7	-33.4	-21.81	-11.59

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.19dBm-50dB= -21.81dBm.

Mode	TX channel 10	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-62.0	-38.1	3.6	-34.5	-21.81	-12.69

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-60.6	-38.1	3.6	-34.5	-21.81	-12.69

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.19dBm-50dB= -21.81dBm.

Channel Bandwidth 10MHz

Mode	TX channel 11	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-62.3	-38.8	3.7	-35.1	-21.73	-13.37
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-59.9	-37.3	3.7	-33.6	-21.73	-11.87

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm

Mode	TX channel 15	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-62.7	-39.1	3.7	-35.4	-21.73	-13.67
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-60.3	-37.8	3.7	-34.1	-21.73	-12.37

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm

Mode	TX channel 19	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-62.3	-38.4	3.6	-34.8	-21.73	-13.07
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-61.4	-38.9	3.6	-35.3	-21.73	-13.57

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm

Channel Bandwidth 20MHz

Mode	TX channel 20	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-63.0	-39.5	3.7	-35.8	-21.63	-14.17
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-61.7	-39.2	3.7	-35.5	-21.63	-13.87

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.37dBm-50dB= -21.63dBm.

Mode	TX channel 23	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-62.3	-38.7	3.7	-35.0	-21.63	-13.37
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-61.5	-39.0	3.7	-35.3	-21.63	-13.67

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.37dBm-50dB= -21.63dBm.

Mode	TX channel 26	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-64.2	-40.4	3.6	-36.8	-21.63	-15.17
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-62.5	-40.0	3.6	-36.4	-21.63	-14.77

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.37dBm-50dB= -21.63dBm.

**Test Mode D**

Below 1GHz

Channel Bandwidth 5MHz

Mode	TX channel 10	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

**Antenna Polarity & Test Distance: Horizontal at 3 M**

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	76.65	-51.8	-55.1	-2.7	-57.8	-22.11	-35.69
2	181.62	-52.8	-64.3	3.1	-61.2	-22.11	-39.09
3	280.76	-56.2	-65.4	5.3	-60.1	-22.11	-37.99
4	607.33	-60.3	-63.0	4.5	-58.5	-22.11	-36.39
5	661.76	-63.4	-65.5	4.9	-60.6	-22.11	-38.49
6	937.80	-67.4	-62.6	3.9	-58.7	-22.11	-36.59

**Antenna Polarity & Test Distance: Vertical at 3 M**

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	80.54	-49.6	-53.0	-1.5	-54.5	-22.11	-32.39
2	162.18	-56.6	-59.6	0.7	-58.9	-22.11	-36.79
3	280.76	-57.6	-61.4	5.3	-56.1	-22.11	-33.99
4	603.45	-60.5	-61.0	4.5	-56.5	-22.11	-34.39
5	683.15	-63.9	-63.0	5.1	-57.9	-22.11	-35.79
6	931.96	-68.1	-62.4	3.9	-58.5	-22.11	-36.39

**Remarks:**

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 27.89dBm-50dB= -22.11dBm.

Channel Bandwidth 10MHz

Mode	TX channel 19	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	187.45	-52.9	-65.3	3.9	-61.4	-22.03	-39.37
2	282.71	-55.7	-64.8	5.3	-59.5	-22.03	-37.47
3	385.73	-62.5	-68.9	5.2	-63.7	-22.03	-41.67
4	607.33	-60.1	-62.8	4.5	-58.3	-22.03	-36.27
5	661.76	-62.0	-64.1	4.9	-59.2	-22.03	-37.17
6	933.91	-67.6	-62.8	3.9	-58.9	-22.03	-36.87

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	78.60	-49.2	-52.1	-2.2	-54.3	-22.03	-32.27
2	169.96	-55.8	-59.8	1.6	-58.2	-22.03	-36.17
3	280.76	-59.9	-63.7	5.3	-58.4	-22.03	-36.37
4	541.24	-63.2	-66.5	4.7	-61.8	-22.03	-39.77
5	601.50	-62.4	-62.9	4.5	-58.4	-22.03	-36.37
6	933.91	-68.0	-62.2	3.9	-58.3	-22.03	-36.27

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 27.97dBm-50dB= -22.03dBm.

Channel Bandwidth 20MHz

Mode	TX channel 26	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	76.65	-53.0	-56.3	-2.7	-59.0	-21.93	-37.07
2	189.40	-53.7	-66.4	4.1	-62.3	-21.93	-40.37
3	280.76	-56.2	-65.4	5.3	-60.1	-21.93	-38.17
4	605.39	-60.2	-63.0	4.5	-58.5	-21.93	-36.57
5	655.93	-62.9	-65.2	4.9	-60.3	-21.93	-38.37
6	933.91	-67.4	-62.6	3.9	-58.7	-21.93	-36.77

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	80.54	-49.2	-52.6	-1.5	-54.1	-21.93	-32.17
2	162.18	-56.4	-59.4	0.7	-58.7	-21.93	-36.77
3	278.82	-60.9	-64.7	5.3	-59.4	-21.93	-37.47
4	549.02	-62.9	-65.9	4.7	-61.2	-21.93	-39.27
5	605.39	-62.7	-63.2	4.5	-58.7	-21.93	-36.77
6	933.91	-66.8	-61.0	3.9	-57.1	-21.93	-35.17

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.07dBm-50dB= -21.93dBm.

Above 1GHz  
Channel Bandwidth 5MHz

Mode	TX channel 1	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-60.8	-37.3	3.7	-33.6	-22.11	-11.49

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-58.2	-35.6	3.7	-31.9	-22.11	-9.79

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 27.89dBm-50dB= -22.11dBm.

Mode	TX channel 5	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-61.4	-37.8	3.7	-34.1	-22.11	-11.99

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-58.6	-36.1	3.7	-32.4	-22.11	-10.29

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 27.89dBm-50dB= -22.11dBm.

Mode	TX channel 10	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-61.1	-37.2	3.6	-33.6	-22.11	-11.49

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-60.2	-37.7	3.6	-34.1	-22.11	-11.99

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 27.89dBm-50dB= -22.11dBm.

Channel Bandwidth 10MHz

Mode	TX channel 11	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-61.1	-37.6	3.7	-33.9	-22.03	-11.87
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-59.2	-36.6	3.7	-32.9	-22.03	-10.87

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 27.97dBm-50dB= -22.03dBm.

Mode	TX channel 15	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-61.3	-37.7	3.7	-34.0	-22.03	-11.97
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-59.5	-37.0	3.7	-33.3	-22.03	-11.27

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 27.97dBm-50dB= -22.03dBm.

Mode	TX channel 19	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-61.0	-37.1	3.6	-33.5	-22.03	-11.47
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-59.9	-37.4	3.6	-33.8	-22.03	-11.77

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 27.97dBm-50dB= -22.03dBm.



Channel Bandwidth 20MHz

Mode	TX channel 20	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-61.5	-38.0	3.7	-34.3	-21.93	-12.37

Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-60.6	-38.1	3.7	-34.4	-21.93	-12.47

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.07dBm-50dB= -21.93dBm.

Mode	TX channel 23	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-61.7	-38.1	3.7	-34.4	-21.93	-12.47

Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-60.9	-38.4	3.7	-34.7	-21.93	-12.77

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.07dBm-50dB= -21.93dBm.

Mode	TX channel 26	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-62.5	-38.7	3.6	-35.1	-21.93	-13.17

Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-60.1	-37.6	3.6	-34.0	-21.93	-12.07

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.07dBm-50dB= -21.93dBm.

### Test Mode E

Below 1GHz

Channel Bandwidth 5MHz

Mode	TX channel 10	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	280.76	-57.1	-66.3	5.3	-61.0	-21.51	-39.49
2	376.01	-63.0	-70.2	5.3	-64.9	-21.51	-43.39
3	607.33	-60.4	-63.1	4.5	-58.6	-21.51	-37.09
4	665.65	-64.4	-66.6	5.0	-61.6	-21.51	-40.09
5	708.42	-64.4	-66.1	5.1	-61.0	-21.51	-39.49
6	937.80	-67.2	-62.4	3.9	-58.5	-21.51	-36.99
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	280.76	-59.1	-62.9	5.3	-57.6	-21.51	-36.09
2	393.51	-63.5	-68.7	5.2	-63.5	-21.51	-41.99
3	615.11	-63.7	-63.5	4.6	-58.9	-21.51	-37.39
4	659.82	-59.4	-58.1	4.9	-53.2	-21.51	-31.69
5	747.29	-67.8	-65.2	4.7	-60.5	-21.51	-38.99
6	933.91	-67.4	-61.6	3.9	-57.7	-21.51	-36.19

#### Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.49dBm-50dB= -21.51dBm.

Channel Bandwidth 10MHz

Mode	TX channel 19	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	171.90	-56.1	-65.2	1.9	-63.3	-21.73	-41.57
2	282.71	-55.2	-64.3	5.3	-59.0	-21.73	-37.27
3	374.07	-63.1	-70.4	5.3	-65.1	-21.73	-43.37
4	611.22	-59.9	-62.5	4.5	-58.0	-21.73	-36.27
5	747.29	-61.6	-62.1	4.7	-57.4	-21.73	-35.67
6	945.57	-69.2	-64.4	3.9	-60.5	-21.73	-38.77

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	171.90	-56.8	-61.5	1.9	-59.6	-21.73	-37.87
2	280.76	-62.2	-66.0	5.3	-60.7	-21.73	-38.97
3	376.01	-65.8	-71.2	5.3	-65.9	-21.73	-44.17
4	547.07	-63.6	-66.7	4.7	-62.0	-21.73	-40.27
5	657.88	-64.3	-62.9	4.9	-58.0	-21.73	-36.27
6	933.91	-68.8	-63.0	3.9	-59.1	-21.73	-37.37

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm.

Channel Bandwidth 20MHz

Mode	TX channel 26	Frequency Range	Below 1000 MHz
------	---------------	-----------------	----------------

## Antenna Polarity &amp; Test Distance: Horizontal at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	199.12	-55.6	-69.1	5.4	-63.7	-21.33	-42.37
2	280.76	-56.7	-65.9	5.3	-60.6	-21.33	-39.27
3	374.07	-63.1	-70.4	5.3	-65.1	-21.33	-43.77
4	615.11	-59.8	-62.3	4.6	-57.7	-21.33	-36.37
5	733.69	-65.8	-66.6	4.8	-61.8	-21.33	-40.47
6	931.96	-67.2	-62.6	3.9	-58.7	-21.33	-37.37

## Antenna Polarity &amp; Test Distance: Vertical at 3 M

No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	80.54	-52.1	-55.5	-1.5	-57.0	-21.33	-35.67
2	171.90	-57.5	-62.2	1.9	-60.3	-21.33	-38.97
3	280.76	-62.0	-65.8	5.3	-60.5	-21.33	-39.17
4	374.07	-64.9	-70.5	5.3	-65.2	-21.33	-43.87
5	655.93	-63.4	-62.2	4.9	-57.3	-21.33	-35.97
6	937.80	-69.0	-63.3	3.9	-59.4	-21.33	-38.07

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.67dBm-50dB= -21.33dBm.

Above 1GHz  
Channel Bandwidth 5MHz

Mode	TX channel 1	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-62.0	-38.5	3.7	-34.8	-21.51	-13.29

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9885.00	-58.6	-36.0	3.7	-32.3	-21.51	-10.79

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.49dBm-50dB= -21.51dBm.

Mode	TX channel 5	Frequency Range	Above 1000MHz
------	--------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-61.9	-38.3	3.7	-34.6	-21.51	-13.09

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9925.00	-57.9	-35.4	3.7	-31.7	-21.51	-10.19

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.49dBm-50dB= -21.51dBm.

Mode	TX channel 10	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-61.5	-37.6	3.6	-34.0	-21.51	-12.49

Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9975.00	-58.0	-35.5	3.6	-31.9	-21.51	-10.39

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 5MHz Limit=EIRP 28.49dBm-50dB= -21.51dBm.

Channel Bandwidth 10MHz

Mode	TX channel 11	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-61.3	-37.8	3.7	-34.1	-21.73	-12.37
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9890.00	-59.9	-37.3	3.7	-33.6	-21.73	-11.87

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm.

Mode	TX channel 15	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-61.7	-38.1	3.7	-34.4	-21.73	-12.67
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-59.4	-36.9	3.7	-33.2	-21.73	-11.47

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm.

Mode	TX channel 19	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-61.2	-37.3	3.6	-33.7	-21.73	-11.97
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9970.00	-59.0	-36.5	3.6	-32.9	-21.73	-11.17

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 10MHz Limit=EIRP 28.27dBm-50dB= -21.73dBm.

Channel Bandwidth 20MHz

Mode	TX channel 20	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-61.5	-38.0	3.7	-34.3	-21.33	-12.97
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9900.00	-60.8	-38.3	3.7	-34.6	-21.33	-13.27

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.67dBm-50dB= -21.33dBm.

Mode	TX channel 23	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-61.7	-38.1	3.7	-34.4	-21.33	-13.07
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9930.00	-60.9	-38.4	3.7	-34.7	-21.33	-13.37

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.67dBm-50dB= -21.33dBm.

Mode	TX channel 26	Frequency Range	Above 1000MHz
------	---------------	-----------------	---------------

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-63.2	-39.4	3.6	-35.8	-21.33	-14.47
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	9960.00	-60.4	-37.9	3.6	-34.3	-21.33	-12.97

Remarks:

1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).
3. 20MHz Limit=EIRP 28.67dBm-50dB= -21.33dBm.

## 4.7 Frequency Stability Measurement

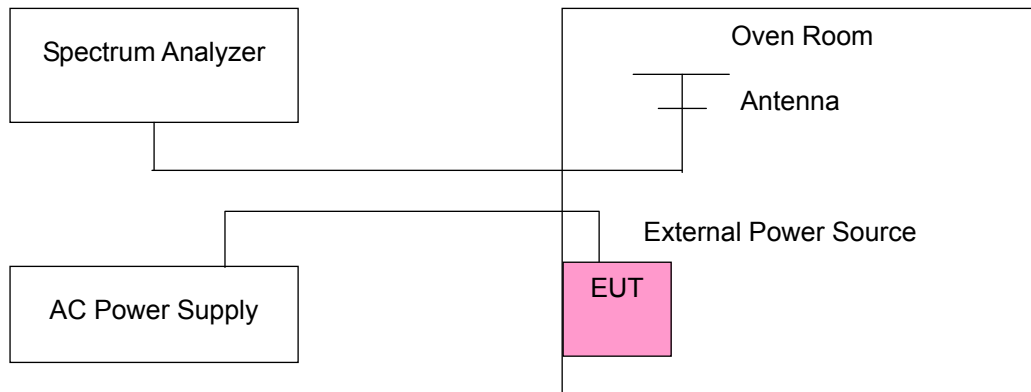
### 4.7.1 Limits of Frequency Stability Measurement

The test shall be performed at normal and extreme test conditions. From  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  and vary the primary supply voltage from 85% to 115% of the nominal value.

### 4.7.2 Test Procedure

- The EUT was switched on and allowed to warm up to its normal operating condition.
- The EUT output was connected to a spectrum analyser and the frequency stability was measured.
- Measurements were taken after a thermal balance was obtained.
- Normal and extreme test conditions were measured

### 4.7.3 Test Setup





#### 4.7.4 Test Results

##### Channel Bandwidth 5MHz

Frequency Stability Versus Temp.									
Operating Frequency: 4942.5MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	4942.4993	-0.00001	4942.4981	-0.00004	4942.5008	0.00002	4942.4984	-0.00003
40	120	4942.4884	-0.00023	4942.4853	-0.00030	4942.4861	-0.00028	4942.4840	-0.00032
30	120	4942.4926	-0.00015	4942.4921	-0.00016	4942.4899	-0.00020	4942.4887	-0.00023
20	120	4942.4824	-0.00036	4942.4797	-0.00041	4942.4800	-0.00040	4942.4797	-0.00041
10	120	4942.5085	0.00017	4942.5094	0.00019	4942.5087	0.00018	4942.5083	0.00017
0	120	4942.4907	-0.00019	4942.4902	-0.00020	4942.4903	-0.00020	4942.4893	-0.00022
-10	120	4942.5150	0.00030	4942.5163	0.00033	4942.5157	0.00032	4942.5182	0.00037
-20	120	4942.4827	-0.00035	4942.4836	-0.00033	4942.4865	-0.00027	4942.4830	-0.00034
-30	120	4942.5081	0.00016	4942.5056	0.00011	4942.5100	0.00020	4942.5095	0.00019

Frequency Stability Versus Voltage									
Operating Frequency: 4942.5MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	4942.4822	-0.00036	4942.4807	-0.00039	4942.4797	-0.00041	4942.4799	-0.00041
	120	4942.4824	-0.00036	4942.4797	-0.00041	4942.4800	-0.00040	4942.4797	-0.00041
	102	4942.4823	-0.00036	4942.4806	-0.00039	4942.4803	-0.00040	4942.4804	-0.00040

**Channel Bandwidth 10MHz**

Frequency Stability Versus Temp.									
Operating Frequency: 4945MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	4945.0186	0.00038	4945.0186	0.00038	4945.0166	0.00034	4945.0172	0.00035
40	120	4944.9895	-0.00021	4944.9857	-0.00029	4944.9874	-0.00025	4944.9864	-0.00028
30	120	4945.0092	0.00019	4945.0072	0.00015	4945.0083	0.00017	4945.0107	0.00022
20	120	4944.9974	-0.00005	4945.0013	0.00003	4945.0005	0.00001	4944.9972	-0.00006
10	120	4944.9841	-0.00032	4944.9863	-0.00028	4944.9855	-0.00029	4944.9843	-0.00032
0	120	4944.9851	-0.00030	4944.9856	-0.00029	4944.9863	-0.00028	4944.9873	-0.00026
-10	120	4944.9889	-0.00022	4944.9868	-0.00027	4944.9901	-0.00020	4944.9894	-0.00021
-20	120	4945.0223	0.00045	4945.0252	0.00051	4945.0259	0.00052	4945.0228	0.00046
-30	120	4944.9972	-0.00006	4944.9958	-0.00008	4944.9957	-0.00009	4944.9978	-0.00004

Frequency Stability Versus Voltage									
Operating Frequency: 4945MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	4944.9971	-0.00006	4945.0003	0.00001	4944.9998	0.00000	4944.9970	-0.00006
	120	4944.9974	-0.00005	4945.0013	0.00003	4945.0005	0.00001	4944.9972	-0.00006
	102	4944.9978	-0.00004	4945.0012	0.00002	4945.0001	0.00000	4944.9962	-0.00008

## Channel Bandwidth 20MHz

Frequency Stability Versus Temp.									
Operating Frequency: 4950MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	4949.9922	-0.00016	4949.9944	-0.00011	4949.9962	-0.00008	4949.9935	-0.00013
40	120	4949.9972	-0.00006	4949.9973	-0.00005	4949.9955	-0.00009	4949.9955	-0.00009
30	120	4950.0053	0.00011	4950.0035	0.00007	4950.0047	0.00009	4950.0048	0.00010
20	120	4950.0102	0.00021	4950.0092	0.00019	4950.0114	0.00023	4950.0095	0.00019
10	120	4949.9868	-0.00027	4949.9828	-0.00035	4949.9864	-0.00027	4949.9848	-0.00031
0	120	4950.0138	0.00028	4950.0141	0.00028	4950.0135	0.00027	4950.0139	0.00028
-10	120	4950.0166	0.00034	4950.0190	0.00038	4950.0195	0.00039	4950.0202	0.00041
-20	120	4949.9944	-0.00011	4949.9958	-0.00008	4949.9942	-0.00012	4949.9938	-0.00013
-30	120	4949.9976	-0.00005	4949.9978	-0.00004	4949.9986	-0.00003	4949.9958	-0.00008

Frequency Stability Versus Voltage									
Operating Frequency: 4950MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	4950.0094	0.00019	4950.0096	0.00019	4950.0113	0.00023	4950.0104	0.00021
	120	4950.0102	0.00021	4950.0092	0.00019	4950.0114	0.00023	4950.0095	0.00019
	102	4950.0104	0.00021	4950.0089	0.00018	4950.0106	0.00021	4950.0102	0.00021

## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

## Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

Tel: 886-3-6668565

Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety Lab**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

--- END ---