

# 11.5 Test Result

Temperature :	<b>26℃</b>	Relative Humidity:	54%
Pressure :	101kPa	Test Voltage :	AC120V/60Hz

	Frequency	Maximum Conducted Output Power(PK)	LIMIT
	(MHz)	(dBm)	dBm
802.11b	2412	8.523	30
	2437	8.423	30
	2462	8.778	30
	2412	7.340	30
802.11g	2437	7.352	30
	2462	7.649	30
802.11n20	2412	6.515	30
	2437	6.494	30
	2462	6.770	30
802.11n40	2422	5.791	30
	2437	5.642	30
	2452	5.703	30



# 12. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

# 12.1 Block Diagram Of Test Setup



# 12.2 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

# 12.3 Test procedure

Using the following spectrum analyzer setting:

- a) Set the RBW = 100KHz.
- b) Set the VBW = 300KHz.
- c) Sweep time = auto couple.
- d) Detector function = peak.
- e) Trace mode = max hold.
- f) Allow trace to fully stabilize..

# 12.4 EUT operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

Note: Power Spectral Density(dBm)=Reading+Cable Loss



# 12.5 Test Result

Temperature :	<b>26℃</b>	Relative Humidity:	54%
Pressure :	101kPa	Test Voltage :	AC120V/60Hz

# 802.11b: Band Edge, Left Side



# 802.11b: Band Edge, Right Side





Agilent Spectrum Analyzer - Swept SA				
₩ RL RF 50 Ω AC Marker 1 2.405760000000	GHz	ALIGN AUTO Avg Type: Log-Pwr AvglHold:>100/100	01:55:20 PM Jan 19, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Peak Search
Ref Offset 0.5 dB 10 dB/div Ref 10.00 dBm	IFGain:Low Atten: 20 dB	Mkr1	DET P NNNNN 2.405 76 GHz -7.579 dBm	Next Peak
-10.0		eL	1	Next Pk Right
-30.0		jjæ	-27.76 dBm	Next Pk Left
-60.0 -70.0 -80.0	and a low and a second	Annanga Bangarangan ang Kangarang		Marker Delta
Start 2.31000 GHz      #Res BW 100 kHz      MKR_MODE TRC SCL    X	#VBW 300 kHz	Sweep 11	Stop 2.43000 GHz .53 ms (1001 pts)	Mkr→CF
1    1    f    2.4      2    N    1    f    2.4      3    N    1    f    2.3      4    -    -    -    -      5    -    -    -    -    -      6    - </th <td>05 76 GHz -7.579 dBm 00 00 GHz -48.864 dBm 99 28 GHz -51.297 dBm</td> <td></td> <td>в.</td> <td>Mkr→RefLvl</td>	05 76 GHz -7.579 dBm 00 00 GHz -48.864 dBm 99 28 GHz -51.297 dBm		в.	Mkr→RefLvl
8 9 10 11 11				More 1 of 2
MSG		STATUS		

## 802.11g: Band Edge, Left Side

802.11g: Band Edge, Right Side



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# 802.11n-HT20: Band Edge, Left Side

802.11n-HT20: Band Edge, Right Side







### 802.11n-HT40: Band Edge, Left Side







### CONDUCTED EMISSION MEASUREMENT

#### 802.11b













No.: BCTC/RF-EMC-005

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NextPea

Next Pk Righ

Next Pk Lef

Marker Del

Mkr→C

Mkr→RefLv

More 1 of 2



### 802.11g

#### Image: Spectrum Analyzer Swept Sw. SENSE: 11 DM RL RF S0 R. AC SENSE: 11 Marker 12.4178800000000 GHz PNO: Fast Trig: Free Rum Trig: Free Rum ALIGN AUTO Avg Type: Log-Pwr Avg|Hold: 40/100 7:29 PM Jan 19, 2 TRACE 2 3 4 Peak Searc NextP 2.417 9 ( -7.876 d Ref Offset 0.5 dB Ref 10.00 dBm Next Pk Righ Next Pk Le Marker Del Mkr→C Mkr→RefLv More 1 of 2 rt 30 MHz s BW 100 kHz Stop 3.000 GH Sweep 283.9 ms (1001 pt #VBW 300 kHz

### Low Channel 2412MHz



#### Middle Channel 2437MHz





### High Channel 2462MHz







#### 802.11n20



#### Low Channel 2412MHz



#### Middle Channel 2437MHz







### High Channel 2462MHz





#### 802.11n40

#### Bit Auger Sector Anger Sector Sector Sector Sector Peak Search Marker 1 2.420850000000 CHZ PROF Fast (GalariLow) Stock 201 (Fig. Free Run Atten: 20 dB Auton w/ro Type: Log-Pwr AvgiHold: Strong Trice (D 3 3 3 Trice (D 3 3 3 Cert 20 0 CHZ (Cert 20

### Low Channel 2422MHz



#### Middle Channel 2437MHz





### High Channel 2452MHz

![](_page_9_Figure_10.jpeg)

![](_page_9_Figure_11.jpeg)

![](_page_10_Picture_0.jpeg)

# 13. DUTY CYCLE OF TEST SIGNAL

# 13.1 Standard requirement

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

### 13.2 Formula

Duty Cycle = Ton / (Ton+Toff)

# 13.3 Test procedure

- 1.Set span = Zero
- 2. RBW = 8MHz
- 3. VBW = 8MHz,
- 4. Detector = Peak

# 13.4 Test Result

	Duty Cycle	Duty Fator (dB)
802.11b	1	0
802.11g	1	0
802.11n(HT20)	1	0
802.11n(HT40)	1	0