

-- GENERAL DESCRIPTION OF EUT --

Model No.	BR-6425N; GR-425N; BR-6424N			
Note: Models' differences between each other only the changes of model name which do not affect the EMI & RF performance.				
EUT	Sample 1	Sample 2	Sample 3	Sample 4
Ant. Information	Dipole x 3 (Fixed)	Dipole x 2 (Fixed)	Dipole x 2 (Removable)	PIFA x 2 (Fixed)
#T#R	2T2R	2T2R	2T2R	2T2R
Note: These Models have four different applies to equipment with integral antenna or dedicated antenna. <i>(Please refer to the EUT PHOTO. Photo No.: 1 (Sample 1); Photo No.: 7 (Sample 2); Photo No.: 13 (Sample 3); Photo No.: 20 (Sample 4))</i>				
TX Ant. Connector	CON1/CON3	CON1/CON3	CON1/CON3	CON1/CON3
RX Ant. Connector	CON1/CON2	CON2/CON3	CON2/CON3	CON2/CON3
Ant. Gain	3 dBi	3 dBi	3 dBi	3.58dBi / 5dBi
Note: Samples' differences between each other only the changes of RX Ant. connector which do not affect the TX Ant. connector. <i>(Please refer to the page 11/12 of Circuit Diagram. The Ant. Connector : CON1/CON2/CON3)</i>				

Test procedures according to the technical standards:

Standard Section	Test Item	Pr-scanning test				Final test (Worst Case)
		Sample 1	Sample 2	Sample 3	Sample 4	Sample 1
15.207	Conducted Emission	V	V			V
15.247(c)	Antenna conducted Spurious Emission	V	V			V
15.247(a)(2)	6dB Bandwidth	V	V			V
15.247(b)	Peak Output Power	V	V			V
15.247(c)	Radiated Spurious Emission	V	V	V	V	V
15.247(d)	Power Spectral Density	V	V			V
15.203	Antenna Requirement	V	V	V	V	V
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	V	V	V	V	V

All the above antenna designations were tested, and the **sample 1** was found to be the worst cases during the pr-scanning test. This sample of the worst case was used for final testing and collecting test data included in this report.

FCC Part15, Subpart C (For 802.11n)				
Standard Section	Test Item	Measure individual Transmitter Chain	by using the total sum power of each transmitter chain	Please refer to the # page of test report
15.207	Conducted Emission	※		
15.205	Restricted Band edge Measurement (provide test result up to 10 harmonics)	※		
15.247 (c)	Antenna conducted Spurious Emission	※		
15.247 (a)(2)	6dB Bandwidth	※		
-----	99% Bandwidth	※		
15.247 (b)	Peak Output Power	※	※ Note(1)	
15.247 (c)	Radiated Spurious Emission	※		
15.247 (d)	Power Spectral Density	※		
15.203	Antenna Requirement (Antenna Gain Consideration)	Note(2)		
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	※	※ Note(1)	

NOTE	
1.	<p>$((\text{dBm}/\text{Chain } 1)/10^{\wedge}\text{Log}) + ((\text{dBm}/\text{Chain } 2)/10^{\wedge}\text{log}) + ((\text{dBm}/\text{Chain } N)/10^{\wedge}\text{log}) = \text{Combined peak output power in mW.}$</p> <p>For example: 2x3 MIMO: Chain 1 TX peak output power is 16 dBm; Chain 2 TX peak output power is 17 dBm. The combined peak output power is $(16/10)^{\wedge}\text{log} = 39.81\text{mW}$ + $(17/10)^{\wedge}\text{log} = 50\text{ mW}$. Combined peak out power is $39.81 + 50.12 = 89.93\text{ mW}$ (19.53 dBm)</p>
2.	<p>Directional gain = gain of antenna element + 10 log(# of TX antenna elements).</p> <p>For example: if EUT is a 2x3 MIMO with each antenna gain=3dBii, then the directional gain is $= 3 + 10\text{log}(2) = 3 + 3 = 6\text{ dBi}$ (no power reduction).</p> <p>If (EUT is a 3x3 MIMO with each antenna gain =3dBi, then the directional gain is $= 3 + 10\text{log}(3) = 3 + 4.77 = 7.77\text{dBi}$ (output power needs to reduce by 1.77dBi, so the highest conducted output power allowed is 28.23dBm.</p>