

Test Result for Type Certification(2.4GHz Band Wide-band Low Power Data Communication System)

Test enforcement date	2013-01-23	Environmental condition of the test site	23 °C 46 %
Test enforcement place	C3701 Dongil Techno Town, 889-1, Gwangyang 2-dong, Dongan-gu, Anyang-si, Gyeonggi-do, 431-716, Korea // KES Co., Ltd. (RF Lab.)		
Gauger name	Jeff Do	Test method	Appendix No. 43

1. General

Model or Name	WizFi210 / Wireless Module
Type of Emission	G1D
Serial number	N/A
Output Power	5 mW/MHz
Frequency	2412MHz~2472MHz 5MHz Span 13CH
Remarks	

2. Measuring instrument

Model or Name	Serial number	Manufacturer	Calibration	Calibration month	Remarks (Item 2 of Article 24-2 Paragraph 4)
FSV30	100736	R&S	KTICC	14. 01. 09	Spectrum Analyzer
5352B	3049A01336	HP	Korea Instruments	2012. 07. 06	Frequency counter
8494B	2630A12857	HP	HCT	2012. 05. 04	Attenuator
8495B	N/A	HP	HCT	2012. 05. 04	Attenuator
8360B	3844A00786	HP	C&C Korea	2012. 06. 06	Signal Generator

3. Test Result

11 Mbps Mode

Power supply voltage		V	-10%			±0			10%			Pass or Fail			
Test item		Unit	Frequency (Low)	Frequency (Middle)	Frequency (High)	Frequency (Low)	Frequency (Middle)	Frequency (High)	Frequency (Low)	Frequency (Middle)	Frequency (High)				
Frequency		GHz	2.411988877	2.441988841	2.471988731	2.411988991	2.441988240	2.471988726	2.411988905	2.441988864	2.471988753		Permission deviation ±50 × 10		
		ppm	-4.61	-4.57	-4.56	-4.56	-4.82	-4.56	-4.60	-4.56	-4.55	PASS			
Occupied Bandwidth		MHz	13.60	13.46	13.60	13.60	13.46	13.60	13.60	13.46	13.60	PASS	Equal or less than 26MHz (DSSS) 38MHz (OFDM)		
Spread Bandwidth		MHz	9.12	9.12	9.26	9.12	9.12	9.26	9.12	9.12	9.26	PASS	500kHz or over		
TX Spurious Emission	Less than 2.387MHz	dBm	-34.480	-37.840	-37.330	-35.430	-36.290	-37.310	-35.550	-34.800	-36.630	PASS	Equal or less than 2.5 μW/MHz (≒ -26dBm)		
		Freq.	15.20MHz	11.70MHz	15.20MHz	15.20MHz	11.74MHz	15.23MHz	15.20MHz	11.72MHz	15.26MHz				
	2.387~2.400MHz	dBm	-37.870	-44.140	-43.830	-37.930	-42.480	-42.220	-38.960	-41.340	-43.000	PASS	Equal or less than 25 μW/MHz (≒ -16dBm)		
		Freq.	2399.2760MHz	2390.0200MHz	2388.1190MHz	2399.2763MHz	2390.0500MHz	2388.1210MHz	2399.2710MHz	2390.0240MHz	2388.1150MHz				
	2.483.5~2.496.5MHz	dBm	-43.730	-44.360	-37.250	-42.820	-43.120	-38.680	-42.370	-41.060	-37.740	PASS	Equal or less than 25 μW/MHz (≒ -16dBm)		
		Freq.	2486.8770MHz	2487.2910MHz	2486.5950MHz	2486.8760MHz	2487.2915MHz	2486.5944MHz	2486.8750MHz	2487.2930MHz	2486.5960MHz				
	More than 2.496.5MHz	dBm	-40.520	-41.120	-41.120	-41.030	-40.170	-41.620	-41.090	-41.320	-41.440	PASS	Equal or less than 2.5 μW/MHz (≒ -26dBm)		
Freq.		6.9855GHz	7.0005GHz	7.005GHz	6.9855GHz	7.0005GHz	7.005GHz	6.9855GHz	7.0005GHz	7.005GHz					
Output Power	Calculation value	mW/MHz	1.58	1.48	1.56	1.58	1.49	1.57	1.58	1.48	1.57		5	mW	+20%~-80%
	Deviation	%	-68.40	-70.40	-68.80	-68.400	-70.200	-68.600	-68.400	-70.400	-68.600	PASS	1	~	6
RX Spurious Emission	Less than 1GHz	dBm	-78.030	-78.470	-78.810	-78.550	-78.740	-78.810	-78.790	-78.360	-78.250	PASS	Equal or less than 4nW (≒ -53.98dBm)		
		Freq.	631.10MHz	12.10MHz	817.30MHz	634.20MHz	13.40MHz	819.30MHz	632.30MHz	12.40MHz	816.60MHz				
	1~Less than 10GHz	dBm	-73.390	-73.770	-73.630	-73.230	-73.740	-73.930	-73.500	-73.560	-73.480	PASS	Equal or less than 20nW (≒ -46.99dBm)		
		Freq.	6.685GHz	6.959GHz	6.724GHz	6.685GHz	6.959GHz	6.724GHz	6.685GHz	6.959GHz	6.724GHz				
		10GHz or over	dBm	-71.120	-70.610	-71.680	-70.170	-70.240	-70.130	-70.450	-70.930	-71.660		PASS	Equal or less than 20nW (≒ -46.99dBm)
Freq.	18.44GHz	18.4410GHz	18.441GHz	18.44GHz	18.4410GHz	18.441GHz	18.44GHz	18.4410GHz	18.441GHz						
Anti-Interference			Pass										Pass or Fail		