

Test Item	Content	Reference	Result							
Structural and functional conditions	<p>Rules on Radio Equipment</p> <p>KCC Notice No. 2009-22 (2009.9.11)</p>	KCC Notice No. 2009-22								
	<p>Article1(Purpose) This notice aims to determine the technical standards for Radio Equipment by 'Radio Wave Act' Article37 (Broadcasting Standards Mode), Article45 (Technical Standard), Article47 (Set up of Safety facilities), Article58(Industrial,scientific,medical apparatus)</p>		pass							
	<p>Article 98 (Specified low power radio equipment)</p> <p>⑦The technical standard for Specified low power radio equipment for Wireless data communication system.</p>		pass							
	<p>1. Frequency, Radio Wave Type</p> <table border="1" data-bbox="395 1122 1035 1704"> <thead> <tr> <th data-bbox="395 1122 541 1196">Frequency (MHz)</th> <th data-bbox="541 1122 697 1196">Radio Wave Type</th> <th data-bbox="697 1122 1035 1196">Remark</th> </tr> </thead> <tbody> <tr> <td data-bbox="395 1196 541 1391" style="text-align: center;"><u>2400 ~ 2483.5</u></td> <td data-bbox="541 1196 697 1391">F(G,D)1(2,7) C(D,E,F,W) A2(7,9)F(W)</td> <td data-bbox="697 1196 1035 1391">※ "Put the following note on a easily noticeable location in the device. "This radio equipment can be crossed during operation"</td> </tr> <tr> <td data-bbox="395 1391 541 1704" style="text-align: center;"><u>5725 ~ 5825</u></td> <td data-bbox="541 1391 697 1704" style="text-align: center;">F9W</td> <td data-bbox="697 1391 1035 1704">※ Manufacturer or installer have to inform that this device can't be used to the service related to human life. ※ It is possible to load passive scan for a channel search of 5825~5850 MHz frequency bandwidth.</td> </tr> </tbody> </table>		Frequency (MHz)	Radio Wave Type	Remark	<u>2400 ~ 2483.5</u>	F(G,D)1(2,7) C(D,E,F,W) A2(7,9)F(W)	※ "Put the following note on a easily noticeable location in the device. "This radio equipment can be crossed during operation"	<u>5725 ~ 5825</u>	F9W
Frequency (MHz)	Radio Wave Type	Remark								
<u>2400 ~ 2483.5</u>	F(G,D)1(2,7) C(D,E,F,W) A2(7,9)F(W)	※ "Put the following note on a easily noticeable location in the device. "This radio equipment can be crossed during operation"								
<u>5725 ~ 5825</u>	F9W	※ Manufacturer or installer have to inform that this device can't be used to the service related to human life. ※ It is possible to load passive scan for a channel search of 5825~5850 MHz frequency bandwidth.								

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Structural and functional conditions	2. Radio Equipment that uses DSSS, CSS type (including combined type with FHSS type) and OFDM (1) Occupied bandwidth, Power density, Antenna gain.				KCC Notice No. 2009-22	pass	
	Occupied bandwidth	Power density	Antenna gain	Remarks		※	pass
	Over 0.5MHz Below 26MHz	Less than 10mW/MHz	Less than 6dBi (But fixed point to point communication radio equipment should be below 20dBi) note2)				pass
	Over 26MHz Below 40MHz	Less than 5mW/MHz					N/A
	Over 40MHz Below 60MHz note1)	Less than 0.1mW/MHz	Less than 6dBi				N/A
	note1) It is only to 2400~2483.5MHz of products note2) The following statement shall be included in the device's user manual : Its application as a point-to multipoint service by simultaneously transmitting to multiple locations is prohibited by law. ※ For power density, it refers to an average value. If gain of transmitting antenna would be beyond of reference level. (2) Frequency tolerable variation: $\pm 50 \times 10^{-6}$ (3) nwanted emission: less than -30dBm when measured using 100kHz of decomposition bandwidth at other frequency than one under A.						Pass
	3. Radio Equipment that uses FH type of spectrum spread (1) Antenna gain, Frequency Tolerance , Unwanted emission must comply with (1), (2) and (3) under Paragraph 1 (2) Power supplied to feeder/frequency hopping bandwidth: less than 3mW (3) Occupied frequency per hopping channel: less than 5MHz (4) Number of hopping channel: more than 15 (non overlapped) (5) Hopping sequence must be pseudo-random and have uniformity (except: channel not hop by carrier detection for carrier detection added equipment) (6) Dwell time per hopping channel: within 0.4sec						Pass
							N/A
							N/A
							N/A

	<p>4. For not using spectrum spread type at frequency range of 2400-2483.5 MHz.</p> <p>(1) RF power: less than 10mW</p> <p>(2) It must use non-directional antenna and be built-in</p> <p>(3) Frequency-tolerable variation: less than $\pm 50 \times 10^{-6}$</p> <p>(4) Occupied frequency bandwidth: less than 26MHz</p> <p>(5) Unwanted emission: less than -30dBm when measured using 100kHz of decomposition bandwidth at other frequency than one under A.</p> <p>(6) Antenna Gain must have absolute gain of less than 2.14dBi.</p> <p>(7) It must use ID code.</p>		N/A
	<p>5. For not using spectrum spread type at frequency range of 5725-5825 MHz.</p> <p>(1) Center frequency: 5775MHz</p> <p>(2) It must use non-directional antenna and be built-in</p> <p>(3) Frequency-tolerable variation: less than $\pm 100 \times 10^{-6}$</p> <p>(4) Occupied frequency bandwidth: less than 70MHz</p> <p>(5) RF power: less than 10mW</p> <p>(6) Spurious emission strength: Average power in basic frequency ≤ 43 dB</p>		N/A

Test Item	Content	Reference	Result																		
Structural and functional conditions	⑤ Specified low-power wireless devices for the Wireless Access System (WAS) including wireless LAN	KCC Notice No. 2009-22	Pass																		
	1. Frequency band, power density etc.		Pass																		
	<table border="1" data-bbox="392 450 1088 1016"> <thead> <tr> <th data-bbox="392 450 560 506">Frequency band(MHz)</th> <th data-bbox="560 450 692 506">Power density</th> <th data-bbox="692 450 847 506">antenna gain</th> <th data-bbox="847 450 1088 506">Remarks</th> </tr> </thead> <tbody> <tr> <td data-bbox="392 506 560 568">5150~5250</td> <td data-bbox="560 506 692 568">Below 2.5mW/MHz</td> <td data-bbox="692 506 847 568">Below 6dBi</td> <td data-bbox="847 506 1088 568"></td> </tr> <tr> <td data-bbox="392 568 560 904" rowspan="2">5250~5350 5470~5650</td> <td data-bbox="560 568 692 736">Occupied bandwidth over 0.5MHz Below 20MHz</td> <td data-bbox="692 568 847 736">Below 10mW/MHz</td> <td data-bbox="847 568 1088 904" rowspan="2">※</td> </tr> <tr> <td data-bbox="560 736 692 904">Occupied bandwidth over 20MHz Below 40MHz</td> <td data-bbox="692 736 847 904">Below 5mW/MHz</td> </tr> <tr> <td data-bbox="392 904 560 1016">17705-17715 17725-17735 19265-19275 19285-19295</td> <td data-bbox="560 904 692 1016">Below 10mW/MHz</td> <td data-bbox="692 904 847 1016">Below 2.5dBi</td> <td data-bbox="847 904 1088 1016">For Wireless LAN only</td> </tr> </tbody> </table>		Frequency band(MHz)	Power density	antenna gain	Remarks	5150~5250	Below 2.5mW/MHz	Below 6dBi		5250~5350 5470~5650	Occupied bandwidth over 0.5MHz Below 20MHz	Below 10mW/MHz	※	Occupied bandwidth over 20MHz Below 40MHz	Below 5mW/MHz	17705-17715 17725-17735 19265-19275 19285-19295	Below 10mW/MHz	Below 2.5dBi	For Wireless LAN only	
	Frequency band(MHz)		Power density	antenna gain	Remarks																
	5150~5250		Below 2.5mW/MHz	Below 6dBi																	
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	17705-17715 17725-17735 19265-19275 19285-19295		Below 10mW/MHz	Below 2.5dBi	For Wireless LAN only																
	※ Output power or Power density is average value and is decreased as much as the exceeded value when transmission antenna gain is exceeded the Limit. ※ It is possible to load passive scan for a channel search of 5650~5725MHz frequency bandwidth																				
	2. Wireless devices using frequency by regulations of clause a must satisfy following conditions.		Pass																		
(1) Frequency error must be under $\pm 20 \times 10^{-6}$	Pass																				
(2) Occupied bandwidth is under 40MHz	Pass																				
(3) Unwanted emission should be applied to the condition below.	Pass																				
(a) For unwanted emission, averaged power level including frequency bands plus absolute gain at other frequency than the frequency under table 1 should be less than -27dBm/MHz	Pass																				
(b) In case of radio equipment using 5150~5250MHz, 5250~5350Mhz frequency bandwidth continuously, averaged power level including frequency bands plus absolute gain at other frequency than 5150~5350MHz should be less than -27dBm/MHz	Pass																				
(4) Modulation type is the digital modulation	Pass																				
(5) Wireless devices using 5250~5350MHz and 5470~5650 MHz must satisfy technical conditions of Transmitter Power Control and Dynamic Frequency Selection																					
(a) Transmission output control																					
1) If wireless device including absolute gain of antenna exceed 25mW/MHz, wireless device must be able to make low absolute gain of antenna under 12.5mW/MHz.																					
(b) Active frequency selection																					

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Structural and functional conditions	1) Standard per clause						KCC Notice No. 2009-22	Pass			
	Clause	Standard								Pass	
	Interference detection threshold	If average power including antenna' s absolute gain is under 10mW/MHz : -62dBm If average power including antenna' s absolute gain is between 10mW/MHz and 50mW/MHz : -64dBm									
	Channel availability check time	More than 60 seconds									
	Channel move time	Within 10 seconds									
	Non-occupied time	More than 30 minutes									
	2) Application per wireless device								Pass		
	Classification	Type A (ref. 1)	Type B (ref. 2)	Type C (ref. 3)	Type A (ref. 1)	Type B (ref. 2)		Type C (ref. 3)			
	Channel availability check time	Applied	-	-	-	-		-			
	Channel move time	-	-	-	Applied	Applied		Applied			
Non-occupied period	Applied	-	Applied	-	-	-					
Remarks	Before channel occupancy time			During channel occupancy time							
<p>Ref. 1) Type A is a wireless device that sets channels up actively.</p> <p>Ref. 2) Type B is a wireless device that sets channels up passively and can' t detect radar signal.</p> <p>Ref. 3) Type C is a wireless device that sets channels up passively and can detect radar signal.</p> <p style="text-align: center;">Appendix <No. 2009-22,2009.9.11> This notice has its legal effects on its issued date.</p>											