

Test Result and Measuring equipment for certification

2.4GHz low-power data communication system

Tx mode

Radio Equipment for test	Model or type name:	on, camera-based	Test environment	Temperature : 21 °C	TELEC-T401(Ver10.1)	F1D, 2402~2480 MHz, 2MHz Separation: 40 channels	4 mW
				Humidity : 51 %			
	Serial number:	#0	Engineer: Y.H.YOON Reviewer: Y.H.LEE Date: MAR.07.2022 ~ MAR.07.2022 Test location: HCT				

Equipment	Model and type name	Serial number	Manufacturer	Last Calibrated date	Calibration Company	Note
	Signal Analyzer(N9020A)	MY46471962	AGILENT Technologies	2021-07-20	HCT Co., Ltd.	Based on Japanese Radio Law 24-2-4-2-ha
	DC Power Supply(E3632A)	MY50350014	AGILENT Technologies	2021-07-20	HCT Co., Ltd.	Based on Japanese Radio Law 24-2-4-2-ha
	Fixed Attenuator (33340C)	18624	HEWLETT PACKARD	2021-07-20	HCT Co., Ltd.	Based on Japanese Radio Law 24-2-4-2-ha
	Power Sensor (N1921A)	MY57820067	AGILENT Technologies	2021-04-08	HCT Co., Ltd.	Based on Japanese Radio Law 24-2-4-2-ha
	POWER METER(N1911A)	MY45100523	AGILENT Technologies	2021-04-08	HCT Co., Ltd.	Based on Japanese Radio Law 24-2-4-2-ha
	DIGITAL MULTIMETER(34401A)	US36010057	H.P	2021-09-30	HCT Co., Ltd.	Based on Japanese Radio Law 24-2-4-2-ha

Test result	Electric performance	Voltage	V	Limit	DC 12.00 V (normal)			DC 13.20 V (high)			DC 10.80 V (low)			Note
		Test Frequency	MHz		2402	2440	2480	2402	2440	2480	2402	2440	2480	
		Frequency error(measured frequency)		MHz	2401.9696	2439.9713	2479.9706	2401.9714	2439.9727	2479.9727	2401.9728	2439.9705	2479.9720	
		Frequency error	ppm	50	-12.64	-11.76	-11.86	-11.89	-11.18	-11.02	-11.31	-12.07	-11.31	
		Occupied bandwidth	MHz	26	1.07	1.08	1.07	1.08	1.08	1.08	1.08	1.08	1.08	
		Spreading bandwidth	MHz	NA										
		Spreading Factor	-	NA										
		Spurious (measured frequency)	-	MHz	2293.48	2185.46	2300.48	2124.44	2294.98	2368.50	2118.94	2386.50	2025.92	
		30 ~ 2387 MHz	μW	2.5	0.020	0.027	0.023	0.020	0.021	0.020	0.024	0.020	0.027	
		(measured frequency)	-	MHz	2400.00	2398.84	2397.57	2399.99	2391.93	2399.88	2400.00	2398.22	2396.00	
		2387 ~ 2400 MHz	μW	25	9.52310	0.03051	0.01943	7.11920	0.03817	0.02304	11.05600	0.04333	0.02121	
		(measured frequency)	-	MHz	2487.13	2494.45	2483.55	2489.51	2486.44	2483.53	2489.73	2485.68	2483.50	
		2483.5 ~ 2496.5 MHz	μW	25	0.02040	0.02315	0.97125	0.02398	0.02470	1.00830	0.02104	0.02894	0.95143	
		(measured frequency)	-	MHz	11805.26	12136.37	12168.88	11977.82	11867.28	11927.30	11850.27	12475.49	11909.29	
		2496.5 ~ 12500 MHz	μW	2.5	0.03879	0.03555	0.03366	0.03435	0.03461	0.03518	0.03824	0.04120	0.03553	
		Antenna power	mW	10	2.326	2.556	2.297	2.328	2.557	2.298	2.323	2.555	2.295	
		deviation	%	-80 20	-41.84	-36.10	-42.56	-41.81	-36.08	-42.55	-41.92	-36.13	-42.62	
		Collateral Emission	(measured frequency)	-	MHz	887.49	887.34	887.19	884.79	888.04	886.29	884.74	887.29	
			30 ~ 1000 MHz	nW/100kHz	4	0.004	0.005	0.004	0.006	0.004	0.005	0.006	0.004	
			(measured frequency)	-	MHz	2166.68	1836.63	2478.90	1841.23	1832.60	2167.25	2167.25	2438.65	
			1000 ~ 12500 MHz	nW	20	0.063	0.046	0.042	0.042	0.084	0.065	0.079	0.046	
		E.I.R.P.	mW/MHz	NA										
		Hopping Frequency staying time	sec	NA										
		Interference Protection (Deveice ID)	yes	Complies	Complies	Complies		Complies	Complies	Complies	Complies	Complies	Complies	
		Carrier Sense	NA											

Antenna Gain: 1.99 dBi

NA = Not Applicable

Allowed Maximum E.I.R.P.: