



# FCC TEST REPORT (Part 15, Subpart C)

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Address:	Room 2416, 24/F., Sun Hung Kai Centre, 30 Harbour Hong Kong China

Manufacturer or Supplier:	PAX Computer Technology (Shenzhen) Co., Ltd.		
Address:	4/F, No.3 Building, Software Park, Second Central Science-Tech Road, High-Tech industrial Park, Shenzhen, Guangdong, P.R.C.		
Product:	Integrated Smart Terminal		
Brand Name:	PAX		
Model Name:	E700		
FCC ID:	V5PE700BW		
Date of tests:	Sep. 29, 2021 ~ Oct. 27, 2021		

The tests have been carried out according to the requirements of the following standard:

**ANSI C63.10-2013** 

#### CONCLUSION: The submitted sample was found to **COMPLY** with the test requirement

Prepared by Simon Wang	Approved by Luke Lu
Engineer / Mobile Department	Manager / Mobile Department
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Date: Oct. 28, 2021 Date: Oct. 28, 2021

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# **RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P21100003RF01	Original release	Oct. 28, 2021



# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

	APPLIED STANDARD: FCC PART 15, SUBPART C						
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	Remark				
15.207	5.207 AC Power Conducted Emission		Meet the requirement of limit.Minimum passing margin is 34.3dB at 3.368MHz				
15.247(a)(1) (iii)	Number of Hopping Frequency Used	Compliance	I				
15.247(a)(1) (iii)	I DWEILDING ON EACH CHANNEL I		/				
15.247(a)(1)	Hopping Channel Separation     Spectrum Bandwidth of a Frequency Hopping Sequence Spread Spectrum System	Compliance	/				
15.247(b)	Maximum Peak Output Power	Compliance	6.55mW for 2402 ~ 2480MHz				
15.247(d)& 15.209	Transmitter Radiated Emissions	Compliance	Meet the requirement of limit.Minimum passing margin is -7.1dB at 54.25MHz				
15.247(d)	Out of band Measurement		1				
15.203 Antenna Requirement			1				

**NOTE:** If the Frequency Hopping System operating in 2400-2483.5MHz band and the output power less than 125mW. The hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of hopping channel whichever is greater.

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# 1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY		
AC Power Conducted emissions	±2.70dB		
Radiated emissions (30MHz~1GMHz)	±4.98dB		
Radiated emissions (1GMHz ~6GMHz)	±4.70dB		
Radiated emissions (6GMHz ~18GMHz)	±4.60dB		
Radiated emissions (18GMHz ~40GMHz)	±4.12dB		
Conducted emissions	±4.01dB		
Occupied Channel Bandwidth	±43.58KHz		
Conducted Output power	±2.06dB		
Power Spectral Density	±0.85 dB		

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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# **2 GENERAL INFORMATION**

# 2.1 GENERAL DESCRIPTION OF EUT

1 GENERAL DESCRIPTION OF EUT			
PRODUCT	Integrated Smart Terminal		
BRAND NAME	PAX		
MODEL NAME	E700		
NOMINAL VOLTAGE	24Vdc (adapter) 3.63Vdc (Li-ion, battery) 3.6 Vdc (Li-ion, battery)		
MODULATION TECHNOLOGY	FHSS		
MODULATION TYPE	GFSK, 8DPSK, π/4 DQPSK		
OPERATING FREQUENCY	2402MHz~2480MHz		
NUMBER OF CHANNEL	79		
MAX. OUTPUT POWER	6.55mW (Max. Measured)		
ANTENNA TYPE	PIFA Antenna with 1dBi gain		
I/O PORTS	Refer to user's manual		
CABLE SUPPLIED	N/A		

#### NOTE:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

#### **List of Accessory:**

ACCESSORIES	BRAND	MODEL	SPECIFICATION		
Battery1	Battery1 EVE A0671-LE Capacity: 3.63vdc 255		Capacity: 3.63vdc 2550mAh		
Battery2	EVE	A0671B	Capacity: 3.6vdc 2550mAh		
AC Adapter	НОПОТО	ADS-65HI-19A-3 24065E	I/P:100-240Vac, 1.5A O/P: 24Vdc, 2.7A		

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# 2.2 DESCRIPTION OF TEST MODES

79 channels are provided to this EUT:

CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		



#### 2.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 5 photograph of the test configuration for reference.

#### 2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on X axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE		APPLICA	ABLE TO		DESCRIPTION
MODE	RE<1G	RE≥1G	PLC	APCM	DESCRIPTION
-	$\checkmark$	V	<b>V</b>	V	-

Where

RE<1G: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission

RE≥1G: Radiated Emission above 1GHz

APCM: Antenna Port Conducted Measurement

#### **RADIATED EMISSION TEST (BELOW 1 GHz):**

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE	AVAILABLE	TESTED	MODULATION	MODULATION	PACKET
MODE	CHANNEL	CHANNEL	TECHNOLOGY	TYPE	TYPE
-	0 to 78	0	FHSS	GFSK	DH5

#### RADIATED EMISSION TEST (ABOVE 1 GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis, antenna ports (if EUT with antenna diversity architecture) and packet type.
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE
-	0 to 78	0, 39, 78	FHSS	GFSK	DH5
-	0 to 78	0, 39, 78	FHSS	8DPSK	3DH5

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#### POWER LINE CONDUCTED EMISSION TEST:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, antenna ports (if EUT with antenna diversity architecture) and packet type.
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE	AVAILABLE	TESTED	MODULATION	MODULATION	PACKET
MODE	CHANNEL	CHANNEL	TECHNOLOGY	TYPE	TYPE
-	0 to 78	78	FHSS	8DPSK	3DH5

#### **ANTENNA PORT CONDUCTED MEASUREMENT:**

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, antenna ports (if EUT with antenna diversity architecture), and packet types.
- Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE
0 to 78	0, 39, 78	FHSS	GFSK	DH1/DH3/DH5
0 to 78	0, 39, 78	FHSS	π/4 DQPSK	2DH1/2DH3/2DH5
0 to 78	0, 39, 78	FHSS	8DPSK	3DH1/3DH3/3DH5

#### **TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE (SYSTEM)	TESTED BY
RE<1G	23deg. C, 70%RH	24Vdc (adapter)	Carl xie
RE≥1G	23deg. C, 70%RH	24Vdc (adapter)	Carl xie
PLC	25deg. C, 52%RH	24Vdc (adapter)	Lily Zhao
APCM	25deg. C, 60%RH	24Vdc (adapter)	Lily Zhao



#### 2.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

# FCC Part 15, Subpart C. Section 15.247 ANSI C63.10-2013

**NOTE:** 1. All test items have been performed and recorded as per the above standards.

2. The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.

#### 2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Desktop	Lenovo	M73 SFF	PC04GRQV	N/A
2	Desktop	Lenovo	M73 SFF	PC06CS27	N/A
3	Laptop	Lenovo	Thnikpad L440	R90FTFKN	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.8m
2	AC Line: Unshielded, Detachable 1.6m

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# **TEST TYPES AND RESULTS**

#### **CONDUCTED EMISSION MEASUREMENT**

#### 3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)		
	Quasi-peak	Average	
0.15 ~ 0.5	66 to 56	56 to 46	
0.5 ~ 5	56	46	
5 ~ 30	60	50	

**NOTE**: 1. The lower limit shall apply at the transition frequencies.

- 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
- 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

#### 3.1.2 **TEST INSTRUMENTS**

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Mar. 03,21	Mar. 02,22
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Feb. 25,21	Feb. 24,22

**NOTE:** 1. The test was performed in CE shielded room.

2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

#### 3.1.3 **TEST PROCEDURES**

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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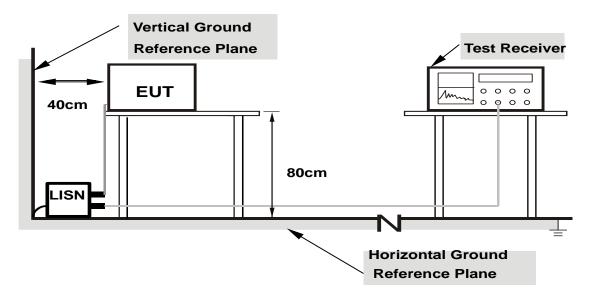


NOTE: All modes of operation were investigated and the worst-case emissions are reported.

#### 3.1.4 DEVIATION FROM TEST STANDARD

No deviation.

# 3.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 3.1.6 EUT OPERATING CONDITIONS

- a. Turned on the power and connected of all equipment.
- b. EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.



#### 3.1.7 TEST RESULTS

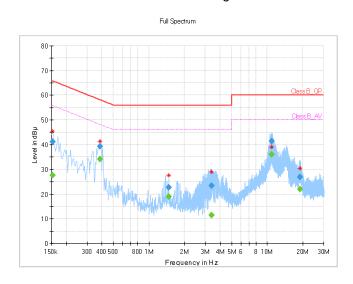
#### **CONDUCTED WORST-CASE DATA:**

Frequency Range	1150KH7 ~ 30MH7		Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25deg. C, 55%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154000		27.58	55.78	28.20	L1	ON	9.7
0.154000	41.07		65.78	24.71	L1	ON	9.7
0.384000		34.14	48.19	14.05	L1	ON	9.7
0.384000	39.36		58.19	18.83	L1	ON	9.7
1.472000		18.88	46.00	27.12	L1	ON	9.7
1.472000	22.68		56.00	33.32	L1	ON	9.7
3.368000		11.57	46.00	34.43	L1	ON	9.7
3.368000	23.35		56.00	32.65	L1	ON	9.7
10.924000		36.12	50.00	13.88	L1	ON	9.8
10.924000	41.47		60.00	18.53	L1	ON	9.8
18.944000		22.07	50.00	27.93	L1	ON	9.8
18.944000	26.99		60.00	33.01	L1	ON	9.8

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

- 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3. The emission levels of other frequencies were very low against the limit.
- 4. Margin value = Limit value Emission level
- 5. Correction factor = Insertion loss + Cable loss
- 6. Emission Level = Correction Factor + Reading Value.



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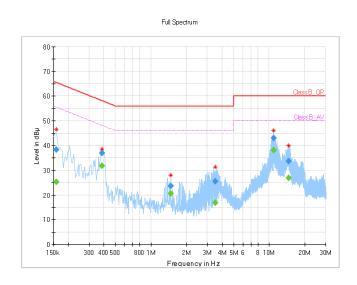


Frequency Range	1150KH7 ~ 30MH7		Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25deg. C, 55%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit Margin (dBuV) (dB)		Line	Filter	Corr. (dB)
0.158000		25.37	55.57	30.20	N	ON	9.7
0.158000	38.46		65.57	27.11	N	ON	9.7
0.384000		31.79	48.19	16.40	N	ON	9.7
0.384000	37.08		58.19	21.11	N	ON	9.7
1.472000		20.70	46.00	25.30	N	ON	9.8
1.472000	23.74		56.00	32.26	N	ON	9.8
3.484000		16.88	46.00	29.12	N	ON	9.8
3.484000	25.56		56.00	30.44	N	ON	9.8
10.892000		38.21	50.00	11.79	N	ON	9.8
10.892000	43.13		60.00	16.87	N	ON	9.8
14.596000		26.96	50.00	23.04	N	ON	9.8
14.596000	33.62		60.00	26.38	N	ON	9.8

**REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.

- 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3. The emission levels of other frequencies were very low against the limit.
- 4. Margin value = Limit value Emission level
- 5. Correction factor = Insertion loss + Cable loss
- 6. Emission Level = Correction Factor + Reading Value.



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#### RADIATED EMISSION AND BANDEDGE MEASUREMENT

#### 3.2.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a). Other emissions shall be at least 20dB below the highest level of the desired power.

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)		
0.009 ~ 0.490	2400/F(kHz)	300		
0.490 ~ 1.705	24000/F(kHz)	30		
1.705 ~ 30.0	30	30		
30 ~ 88	100	3		
88 ~ 216	150	3		
216 ~ 960	200	3		
Above 960	500	3		

#### NOTE:

- 1. The lower limit shall apply at the transition frequencies.
- 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

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#### 3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn- CT0001143-1216	May. 19,20	May. 18,23
Bilog Antenna	<b>ETS-LINDGREN</b>	3143B	00161965	Mar. 05,21	Mar. 04,22
Horn Antenna	<b>ETS-LINDGREN</b>	3117	00168728	Apr. 02,21	Apr. 01,22
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40- K-SG/QMS-003 61	15433	Aug. 25, 21	Aug. 24, 22
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_ V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 22,21	Apr. 21,22
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 03,21	Jun. 02,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 22,21	Apr. 21,22

NOTE: 1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

- 2. The test was performed in 3m Chamber.
- 3. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

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#### 3.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

#### NOTE:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
- 4. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from 20log(dwell time/100 ms), in an effort to demonstrate compliance with the 15.209 limit.
- 5. All modes of operation were investigated and the worst-case emissions are reported.

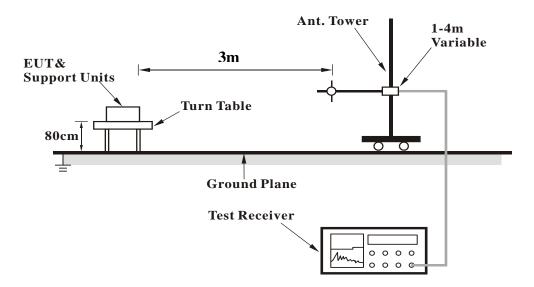
#### 3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

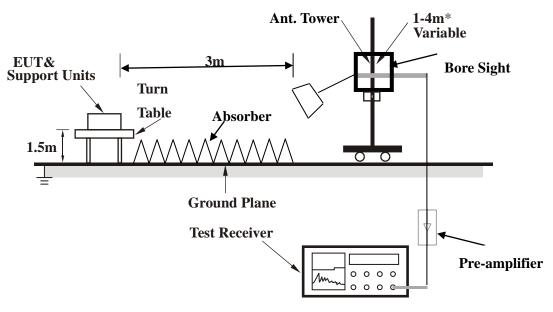
#### 3.2.5 TEST SETUP



#### < Frequency Range 30MHz~1GHz >



#### <Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).



#### 3.2.6 EUT OPERATING CONDITIONS

- a. Set the EUT under full load condition and placed them on a testing table.
- b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- c. The necessary accessories enable the EUT in full functions.



#### 3.2.7 TEST RESULTS

#### **BELOW 1GHz WORST-CASE DATA:**

30 MHz – 1GHz data:

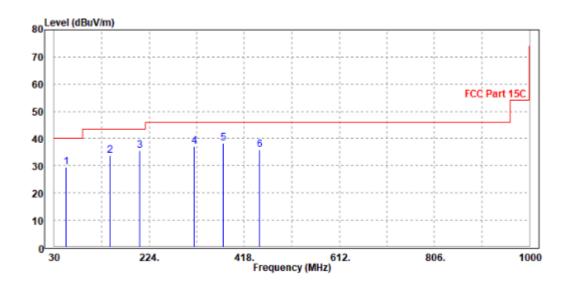
**GFSK** 

CHANNEL	Channel 0	DETECTOR FUNCTION	Overi Peak (OD)
FREQUENCY RANGE		DETECTOR FUNCTION	Quasi-Peak (QP)

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M									
FREQ.	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
54.25	29.59	58.62	40	-10.41	8.18	0.94	38.15	200	360	QP
144.46	33.82	61.16	43.5	-9.68	8.82	1.53	37.69	200	360	QP
204.6	35.48	59.83	43.5	-8.02	11.2	1.82	37.37	200	360	QP
315.18	37.25	57.78	46	-8.75	14.44	2.26	37.23	200	360	QP
375.32	38.34	57.00	46	-7.66	16.18	2.47	37.31	200	360	QP
450.01	35.91	52.8	46	-10.09	17.8	2.74	37.43	200	360	QP

#### **REMARKS:**

- 1. Emission Level(dBuV/m) = Read Level(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value



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Email: <u>customerservice.sw@bureauveritas.com</u>

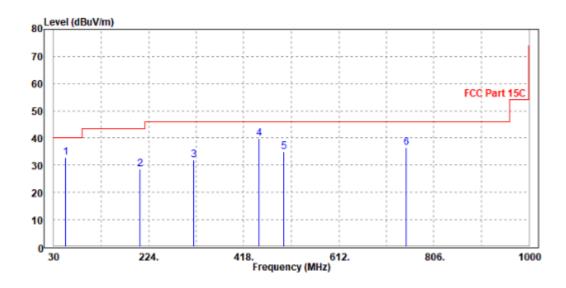


CHANNEL	Channel 0	DETECTOR FUNCTION	Ouesi Beek (OB)
FREQUENCY RANGE		DETECTOR FUNCTION	Quasi-Peak (QP)

		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	LAT3M		
FREQ.	EMISSION LEVEL	READ LEVEL	LIMIT MARGIN (dBuV/m) (dB)		ANTENNA FACTOR	CABLE LOSS	PREAMP FACTOR	ANTENNA HEIGHT	TABLE ANGLE	REMARK
(141112)	(dBuV/m)	(dBuV)		(dB /m)	(dB)	(dB)	(cm)	(Degree)		
54.25	32.9	61.58	40	-7.1	8.53	0.94	38.15	300	360	QP
205.57	28.51	52.3	43.5	-14.99	11.76	1.82	37.37	300	360	QP
316.15	31.86	51.47	46	-14.14	15.36	2.26	37.23	300	360	QP
450.01	39.78	56.32	46	-6.22	18.15	2.74	37.43	300	360	QP
500.45	34.85	50.33	46	-11.15	19.11	2.93	37.52	300	360	QP
749.74	36.38	48.25	46	-9.62	22.7	3.68	38.25	300	360	QP

#### **REMARKS:**

- 1. Emission Level(dBuV/m) = Read Level(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Margin value = Emission Level Limit value





#### **ABOVE 1GHz WORST-CASE DATA:**

**Note:** For higher frequency, the emission is too low to be detected.

#### **GFSK**

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE		DETECTOR FUNCTION	Average (AV)

	A	NTENN	IA POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ.	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	51.32	60.08	74	-22.68	31.75	5.86	46.37	105	115	Peak
2390	44.54	53.3	54	-9.46	31.75	5.86	46.37	105	115	Average
2402	94.95	103.65	-	-	31.79	5.88	46.37	105	115	Peak
2402	94.16	102.86	-	-	31.79	5.88	46.37	105	115	Average
2483.5	52.06	60.39	74	-21.94	32.05	5.99	46.37	105	115	Peak
2483.5	45.27	53.6	54	-8.73	32.05	5.99	46.37	105	115	Average
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	LAT3M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	51.91	60.28	74	-22.09	32.14	5.86	46.37	110	85	Peak
2390	44.74	53.11	54	-9.26	32.14	5.86	46.37	110	85	Average
2402	93.91	102.24	-	-	32.16	5.88	46.37	110	85	Peak
2402	93.34	101.67	-	-	32.16	5.88	46.37	110	85	Average
2483.5	52.81	60.83	74	-21.19	32.36	5.99	46.37	110	85	Peak
2483.5	45.02	53.04	54	-8.98	32.36	5.99	46.37	110	85	Average

#### **REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level – Limit value.
- 2. 2402MHz: Fundamental frequency.



CHANNEL	TX Channel 39	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

	Α	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ.	EMISSION	READ	LIMIT	MARGIN	ANTENNA	CABLE		ANTENNA	TABLE	
(MHz)	LEVEL	LEVEL	(dBuV/m)	(dB)	FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK
()	(dBuV/m)	(dBuV)	(,	()	(dB /m)	(dB)	(dB)	(cm)	(Degree)	
2390	52.11	60.87	74	-21.89	31.75	5.86	46.37	140	85	Peak
2390	43.65	52.41	54	-10.35	31.75	5.86	46.37	140	85	Average
2441	96.4	104.93	-	-	31.91	5.93	46.37	140	85	Peak
2441	94.02	102.55	-	-	31.91	5.93	46.37	140	85	Average
2483.5	51.47	59.8	74	-22.53	32.05	5.99	46.37	140	85	Peak
2483.5	44.15	52.48	54	-9.85	32.05	5.99	46.37	140	85	Average
		ANTEN	NA POL	ARITY & 1	TEST DIST	ANCE: \	VERTICA	LAT3M		
FREQ.	EMISSION	READ	LIMIT	MARGIN	ANTENNA	CABLE	PREAMP	ANTENNA	TABLE	
	LEVEL	LEVEL			FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK
(MHz)	(dBuV/m)	(dBuV)	(dBuV/m)	(dB)	(dB /m)	(dB)	(dB)	(cm)	(Degree)	
2390	51.55	59.92	74	-22.45	32.14	5.86	46.37	110	280	Peak
2390	43.94	52.31	54	-10.06	32.14	5.86	46.37	110	280	Average
2441	94.41	102.59	-	-	32.26	5.93	46.37	110	280	Peak
2441	93.57	101.75	-	-	32.26	5.93	46.37	110	280	Average
2483.5	53	61.02	74	-21	32.36	5.99	46.37	110	280	Peak
2483.5	44.49	52.51	54	-9.51	32.36	5.99	46.37	110	280	Average

#### **REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level – Limit value.
- 2. 2441MHz: Fundamental frequency.



CHANNEL	TX Channel 78	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

	A	NTENN	IA POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ.	EMISSION LEVEL	READ LEVEL	LIMIT	MARGIN	ANTENNA FACTOR	CABLE	PREAMP FACTOR	ANTENNA HEIGHT	TABLE ANGLE	REMARK
(MHz)	(dBuV/m)	(dBuV)	(dBuV/m)	(dB)	(dB /m)	(dB)	(dB)	(cm)	(Degree)	
2390	50.87	59.63	74	-23.13	31.75	5.86	46.37	100	125	Peak
2390	43.92	52.68	54	-10.08	31.75	5.86	46.37	100	125	Average
2480	95.16	103.51	-	-	32.04	5.98	46.37	100	125	Peak
2480	94.45	102.8	-	-	32.04	5.98	46.37	100	125	Average
2483.5	52.38	60.71	74	-21.62	32.05	5.99	46.37	100	125	Peak
2483.5	44.25	52.58	54	-9.75	32.05	5.99	46.37	100	125	Average
		ANTEN	INA POL	ARITY & 1	TEST DIST	ANCE: \	VERTICA	LAT3M		
FREQ.	EMISSION	READ	LIMIT	MARGIN	ANTENNA	CABLE	PREAMP	ANTENNA	TABLE	
	LEVEL	LEVEL	(dBuV/m)		FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK
(MHz)	(dBuV/m)	(dBuV)	(dbuv/iii)	(dB)	(dB /m)	(dB)	(dB)	(cm)	(Degree)	
2390	51.23	59.6	74	-22.77	32.14	5.86	46.37	188	115	Peak
2390	44.1	52.47	54	-9.9	32.14	5.86	46.37	188	115	Average
2480	91.74	99.78	-	-	32.35	5.98	46.37	188	115	Peak
2480	91.12	99.16	-	-	32.35	5.98	46.37	188	115	Average
2483.5	51.94	59.96	74	-22.06	32.36	5.99	46.37	188	115	Peak

#### **REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level – Limit value.
- 2. 2480MHz: Fundamental frequency.



BT\_8DPSK

CHANNEL	TX Channel 0	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

	A	NTENN	IA POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	50.93	59.69	74	-23.07	31.75	5.86	46.37	100	115	Peak
2390	43.65	52.41	54	-10.35	31.75	5.86	46.37	100	115	Average
2402	96.09	104.79	-	-	31.79	5.88	46.37	100	115	Peak
2402	95.54	104.24	-	-	31.79	5.88	46.37	100	115	Average
2483.5	22.03	30.36	74	-51.97	32.05	5.99	46.37	100	115	Peak
2483.5	43.94	52.27	54	-10.06	32.05	5.99	46.37	100	115	Average
		ANTEN	INA POLA	ARITY & 1	EST DIST	ANCE: \	VERTICA	LAT3M		
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB /m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	51.03	59.4	74	-22.97	32.14	5.86	46.37	200	75	Peak
2390	44.26	52.63	54	-9.74	32.14	5.86	46.37	200	75	Average
2402	95.82	104.15	-	-	32.16	5.88	46.37	200	75	Peak
2402	94.99	103.32	-		32.16	5.88	46.37	200	75	Average
2483.5	51.53	59.55	74	-22.47	32.36	5.99	46.37	200	75	Peak
2483.5	44.46	52.48	54	-9.54	32.36	5.99	46.37	200	75	Average

#### **REMARKS:**

- 1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level Limit value.
- 2. 2402MHz: Fundamental frequency.



CHANNEL	TX Channel 39	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

	A	NTENN	IA POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ.	EMISSION LEVEL	READ LEVEL	LIMIT	MARGIN	ANTENNA FACTOR	CABLE	PREAMP FACTOR	ANTENNA HEIGHT	TABLE ANGLE	REMARK
(MHz)	(dBuV/m)	(dBuV)	(dBuV/m)	(dB)	(dB/m)	(dB)	(dB)	(cm)	(Degree)	KEWAKK
2390	52.73	61.49	74	-21.27	31.75	5.86	46.37	100	115	Peak
2390	44.07	52.83	54	-9.93	31.75	5.86	46.37	100	115	Average
2441	95.37	103.9	-	-	31.91	5.93	46.37	100	115	Peak
2441	94.72	103.25	-	-	31.91	5.93	46.37	100	115	Average
2483.5	52.36	60.69	74	-21.64	32.05	5.99	46.37	100	115	Peak
2483.5	44.14	52.47	54	-9.86	32.05	5.99	46.37	100	115	Average
		ANTEN	INA POLA	ARITY & 1	TEST DIST	ANCE: \	VERTICA	LAT3M		
FREQ.	EMISSION	READ	LIMIT	MARGIN	ANTENNA	CABLE	PREAMP	ANTENNA	TABLE	
	LEVEL	LEVEL			FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK
(MHz)	(dBuV/m)	(dBuV)	(dBuV/m)	(dB)	(dB /m)	(dB)	(dB)	(cm)	(Degree)	
2390	51.98	60.35	74	-22.02	32.14	5.86	46.37	200	75	Peak
2390	44.45	52.82	54	-9.55	32.14	5.86	46.37	200	75	Average
2441	94.18	102.36	-	-	32.26	5.93	46.37	200	75	Peak
2441	93.53	101.71	-	-	32.26	5.93	46.37	200	75	Average
2483.5	50.04	04.00	7.1	-20.66	32.36	5.99	46.37	200	75	Peak
2 100.0	53.34	61.36	74	-20.66	32.30	5.99	40.37	200	75	1 Cak

#### **REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level – Limit value.
- 2. 2441MHz: Fundamental frequency.



CHANNEL	TX Channel 78	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz	FUNCTION	Average (AV)

	A	NTENN	A POLAF	RITY & TE	ST DISTA	NCE: H	ORIZONT	AL AT 3 M		
FREQ.	EMISSION	READ	LIMIT	MARGIN	ANTENNA	CABLE		ANTENNA	TABLE	D=144D14
(MHz)	LEVEL	LEVEL	(dBuV/m)	(dB)	FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK
	(dBuV/m)	(dBuV)			(dB /m)	(dB)	(dB)	(cm)	(Degree)	
2390	51.67	60.43	74	-22.33	31.75	5.86	46.37	100	115	Peak
2390	43.93	52.69	54	-10.07	31.75	5.86	46.37	100	115	Average
2480	96.21	104.56	-	-	32.04	5.98	46.37	100	115	Peak
2480	95.61	103.96	-	-	32.04	5.98	46.37	100	115	Average
2483.5	52.26	60.59	74	-21.74	32.05	5.99	46.37	100	115	Peak
2483.5	43.93	52.26	54	-10.07	32.05	5.99	46.37	100	115	Average
		ANTEN	INA POL	ARITY & 1	TEST DIST	ANCE: \	VERTICA	LAT3M		
FREQ.	EMISSION	READ	LIMIT	MARGIN	ANTENNA	CABLE	PREAMP	ANTENNA	TABLE	
	LEVEL	LEVEL			FACTOR	LOSS	FACTOR	HEIGHT	ANGLE	REMARK
(MHz)	(dBuV/m)	(dBuV)	(dBuV/m)	(dB)	(dB /m)	(dB)	(dB)	(cm)	(Degree)	
2390	51.1	59.47	74	-22.9	32.14	5.86	46.37	200	75	Peak
2390	43.98	52.35	54	-10.02	32.14	5.86	46.37	200	75	Average
2480	91.81	99.85	-	-	32.35	5.98	46.37	200	75	Peak
2480	91.09	99.13		-	32.35	5.98	46.37	200	75	Average
2483.5	51.82	59.84	74	-22.18	32.36	5.99	46.37	200	75	Peak
2483.5	44.31	52.33	54	-9.69	32.36	5.99	46.37	200	75	Average

#### **REMARKS:**

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor Margin value = Emission level – Limit value.
- 2. 2480MHz: Fundamental frequency.

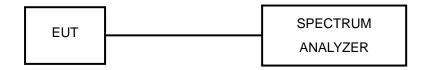


#### 3.3 NUMBER OF HOPPING FREQUENCY USED

#### 3.3.1 LIMIT OF HOPPING FREQUENCY USED

At least 15 channels frequencies, and should be equally spaced.

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST INSTRUMENTS

3.6 TEST INSTRUMENTS								
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.			
Power Meter	ANRITSU	ML2495A	1506002	Feb. 22,21	Feb. 21,22			
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510322	Feb. 25,21	Feb. 24,22			
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 03,21	Jun. 02,22			
Power Sensor	ANRITSU	MA2411B	1339352	Feb. 22,21	Feb. 21,22			
CBT32 BLUETOOTH TESTER 4HU	Rohde&Schwarz	CBT32	101176	Feb. 25,21	Feb. 24,22			

#### NOTE:

- 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
- 2. The test was performed in RF Oven room.



#### 3.3.4 TEST PROCEDURES

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.

b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.

c. Set the SA on MaxHold Mode, and then keep the EUT in hopping mode. Record all the signals from each channel until each one has been recorded.

d. Set the SA on View mode and then plot the result on SA screen.

e. Repeat above procedures until all frequencies measured were completed.

#### 3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.3.6 TEST RESULTS

There are 79 hopping frequencies in the hopping mode. Please refer to next two pages for the test result. On the plots, it shows that the hopping frequencies are equally spaced.

Please Refer to Appendix A 1 Of this test report.

**BV 7Layers Communications Technology** 

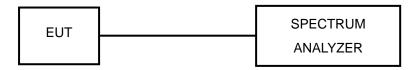


#### 3.4 DWELL TIME ON EACH CHANNEL

#### 3.4.1 LIMIT OF DWELL TIME USED

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

#### 3.4.2 TEST SETUP



#### 3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.4.4 TEST PROCEDURES

- a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
- b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
- c. Adjust the center frequency of SA on any frequency be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.
- d. Measure the time duration of one transmission on the measured frequency. And then plot the result with time difference of this time duration.
- e. Repeat above procedures until all different time-slot modes have been completed.



# 3.4.5 DEVIATION FROM TEST STANDARD

No deviation. 3.4.6 TEST RESULTS

Please Refer to Appendix A 1 Of this test report.

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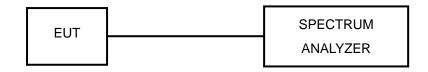


#### 3.5 CHANNEL BANDWIDTH

#### 3.5.1 LIMITS OF CHANNEL BANDWIDTH

For frequency hopping system operating in the 2400-2483.5MHz, If the 20dB bandwidth of hopping channel is greater than 25kHz, two-thirds 20dBbandwidth of hopping channel shell be a minimum limit for the hopping channel separation.

#### 3.5.2 TEST SETUP



#### 3.5.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.5.4 TEST PROCEDURE

- a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- c. Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
- d. Repeat above procedures until all frequencies measured were complete.

#### 3.5.5 DEVIATION FROM TEST STANDARD

No deviation.



# 3.5.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

#### 3.5.7 TEST RESULTS

Please Refer to Appendix A 1 Of this test report.

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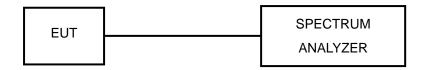


#### 3.6 HOPPING CHANNEL SEPARATION

#### 3.6.1 LIMIT OF HOPPING CHANNEL SEPARATION

At least 25kHz or two-third of 20dB hopping channel bandwidth (whichever is greater).

#### 3.6.2 TEST SETUP



#### 3.6.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.6.4 TEST PROCEDURES

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range.
- 3. By using the MaxHold function record the separation of two adjacent channels.
- 4. Measure the frequency difference of these two adjacent channels by SA MARK function. And then plot the result on SA screen.
- 5. Repeat above procedures until all frequencies measured were complete.

#### 3.6.5 DEVIATION FROM TEST STANDARD

No deviation.

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# 3.6.6 TEST RESULTS

Please Refer to Appendix A 1 Of this test report.

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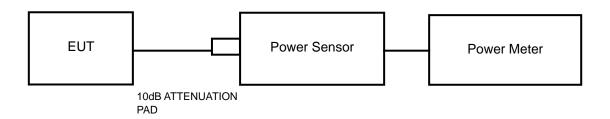


#### 3.7 MAXIMUM OUTPUT POWER

#### 3.7.1 LIMITS OF MAXIMUM OUTPUT POWER MEASUREMENT

The Maximum Output Power Measurement is 125mW.

#### 3.7.2 TEST SETUP



#### 3.7.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.7.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

# 3.7.5 DEVIATION FROM TEST STANDARD No deviation.

#### 3.7.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



#### 3.7.7 TEST RESULTS

# 3.7.7.1 MAXIMUM PEAK OUTPUT POWER

#### **GFSK**

CHANNEL	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (dBm)	POWER OUTPUT (mW)	POWER LIMIT (mW)	PASS/FAIL
0	2402	8.10	6.46	125	PASS
39	2441	8.15	6.53	125	PASS
78	2480	8.16	6.55	125	PASS

#### π/4 DQPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (dBm)	POWER OUTPUT (mW)	POWER LIMIT (mW)	PASS/FAIL
0	2402	6.44	4.41	125	PASS
39	2441	6.62	4.59	125	PASS
78	2480	6.04	4.02	125	PASS

#### 8DPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	POWER OUTPUT (dBm)	POWER OUTPUT (mW)	POWER LIMIT (mW)	PASS/FAIL
0	2402	6.58	4.55	125	PASS
39	2441	6.67	4.65	125	PASS
78	2480	6.70	4.68	125	PASS



# 3.7.7.2 Average Output Power (FOR REFERENCE)

The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

#### **GFSK**

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	6.98	N/A
39	2441	7.05	N/A
78	2480	7.06	N/A

#### π/4 DQPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	3.16	N/A
39	2441	3.11	N/A
78	2480	2.71	N/A

#### 8DPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	3.21	N/A
39	2441	3.17	N/A
78	2480	3.16	N/A



# 3.8 OUT OF BAND MEASUREMENT

#### 3.8.1 LIMITS OF OUT OF BAND MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100KHz RBW).

#### 3.8.2 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

#### 3.8.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Spectrum Analyzer was set RBW to 100 kHz and VBW to 300 kHz with suitable frequency span including 100 MHz bandwidth from band edge. Detector = PEAK and Trace mode = Max Hold. The band edges was measured and recorded.

#### 3.8.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 3.8.5 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

#### 3.8.6 TEST RESULTS

The spectrum plots are attached on the following images. D1 line indicates the highest level. D2 line indicates the 20dB offset below D1. It shows compliance to the requirement.

Please Refer to Appendix A 1 Of this test report.



# 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

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# 5 APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---