



# Radio Test Report

## FCC ID: XHM-P2340000

This report concerns (check one) :  Original Grant  Class II Change

Issued Date : Jul. 30, 2009

Project No. : R0905007

Equipment : Handheld POS

Model Name : P234

Applicant : FLYTECH technology Co., Ltd.

Address : 1F, No. 168, Sing-Ai Rd., NeiHu District  
114, Taipei, Taiwan

Tested by:

Neutron Engineering Inc. EMC Laboratory

Date of Test:

May 26, 2009 ~ Jul. 28, 2009

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R-2669 R-2829  
C-2918



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## 1. CERTIFICATION

Equipment : Handheld POS  
Brand Name : FLYTECH  
Model Name : P234  
Applicant : FLYTECH technology Co., Ltd.  
Date of Test : May 26, 2009 ~ Jul. 28, 2009  
Standards : FCC Part15, Subpart C / ANSI C63.4 : 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-R0905007) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).



## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247 (c)	Antenna conducted Spurious Emission	PASS	
15.247 (a)(1)	Hopping Channel Separation	PASS	
15.247 (b)(1)	Peak Output Power	PASS	
15.247 (c)	Radiated Spurious Emission	PASS	
15.247 (b)(1)	Number of Hopping Frequency	PASS	
15.247 (a)(1)	Dwell Time	PASS	
15.205	Restricted Bands	PASS	
15.203	Antenna Requirement	PASS	

**NOTE:**

(1) "N/A" denotes test is not applicable in this Test Report.

**(2) The EUT include Wireless Lan and Bluetooth function, this report covers EUT Bluetooth function only. Its Wireless Lan function testing is covered in another test report: NEI-FCCP-1-R0905007.**



**2.1 TEST FACILITY**

The test facilities used to collect the test data in this report is **C01/CB08(FCC R.N.: 614388)** at the location of No.132-1, Lane 329, Sec. 2, Palian Road, Shijr City, Taipei, Taiwan. / 1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

**2.2 MEASUREMENT UNCERTAINTY**

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95 %**.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U , (dB)	NOTE
OS-01	ANSI	30MHz ~ 200MHz	V	2.86	
		30MHz ~ 200MHz	H	2.56	
		200MHz ~ 1,000MHz	V	2.88	
		200MHz ~ 1,000MHz	H	2.98	
OS-02	ANSI	30MHz ~ 200MHz	V	2.48	
		30MHz ~ 200MHz	H	2.16	
		200MHz ~ 1,000MHz	V	2.50	
		200MHz ~ 1,000MHz	H	2.66	





**3. GENERAL INFORMATION**

**3.1 GENERAL DESCRIPTION OF EUT**

Equipment	Handheld POS
Brand Name	FLYTECH
Model Name	P234
OEM Brand/Model Name	N/A
Model Difference	N/A
Product Description	The EUT is a Handheld POS.
	Operation Frequency: 2402~2480 MHz
	Modulation Type: GFSK/DQPSK/8DPSK
	Bit Rate of Transmitter 1Mbps/2Mbps/3Mbps
	Number Of Channel 79CH
	Antenna Designation: Please see Note 3.
	Antenna Gain(Peak) Please see Note 3.
	Peak Output Power: -1.09 dBm (Max.)
	AVG. Output Power: -4.02 dBm (Max.)
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
Channel List	Please refer to the Note 2.
Power Source	DC Voltage supplied from AC ADAPTER.
Power Rating	I/P: AC 100-240V~1.0A 50-60Hz / O/P: DC 5V, 2A
Products Covered	Mother Board: FLYTECH / B21 CPU: Marvell / XScale270 416Mhz/1.35V T-PBGA 356 Ball (88AP270MA2-BGO2C416) RAM: Mobile SDRAM 128MB PANEL: 4.3" LCD PANEL LG / LB043WQ1 HDD: MDOC 1GB Card Reader: PROMAG / MSR170U RF Module(WLAN 802.11b/g): USI / WM-G-MR-09 RF Module(Bluetooth): DELTA / DFBM-CS320 ADAPTER: EDAC / EA1015A-2U CWT / CAP011051
Connecting I/O Port(s)	Please refer to the User's Manual

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



2.

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	ACX	AT5020	Chip Ant	N/A	0



**3.2 DESCRIPTION OF TEST MODES**

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	BT(1Mbps) CH00/CH39/CH78(ADAPTER : EDAC)
Mode 2	BT(1Mbps) CH00/CH39/CH78(ADAPTER : CWT)
Mode 3	BT(3Mbps) CH00/CH39/CH78(ADAPTER : EDAC)
Mode 4	BT(3Mbps) CH00/CH39/CH78(ADAPTER : CWT)

<b>For Conducted Test</b>	
Final Test Mode	Description
Mode 1	BT(1Mbps) CH39(ADAPTER : EDAC)

<b>For Radiated Test (30 – 1000MHz)</b>	
Final Test Mode	Description
Mode 1	BT(1Mbps) CH39(ADAPTER : EDAC)

<b>For Radiated Test (Above 1000MHz)</b>	
Final Test Mode	Description
Mode 1	BT(1Mbps) CH00/CH39/CH78(ADAPTER : EDAC)
Mode 3	BT(3Mbps) CH00/CH39/CH78(ADAPTER : EDAC)

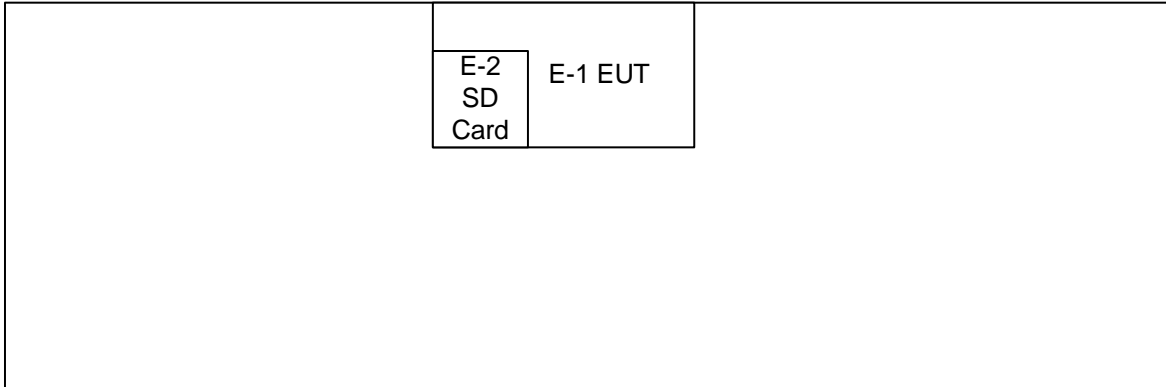
Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis. The worst case was found positioned on X-pane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

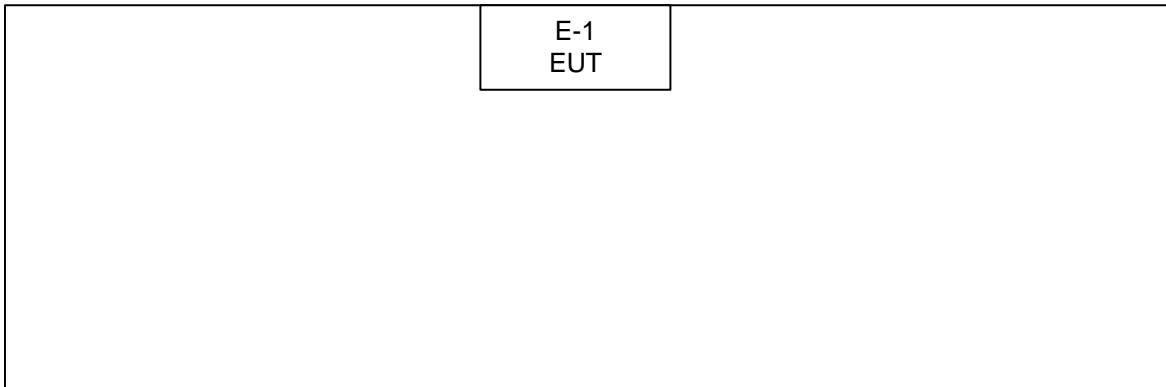


**3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED**

**For Conducted Test**



**For Radiated Test**





**3.4 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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Handheld POS	FLYTECH	P234	XHM-P2340000	N/A	EUT
E-2	SD MEMORY CARD	Hagiwara	HPC-SD64T	N/A	0326TA5355H	

Item	Shielded Type	Ferrite Core	Length	Note
	N/A	N/A	N/A	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



**4. EMC EMISSION TEST**

**4.1 CONDUCTED EMISSION MEASUREMENT**

**4.1.1 POWER LINE CONDUCTED EMISSION (FREQUENCY RANGE 150KHZ-30MHZ)**

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

**4.1.2 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Test Cable	N/A	SR03_C_01 &02	N/A	Aug. 19, 2009
2	LISN	EMCO	3816/2	00042991	Jan. 21, 2010
3	Pulse Limiter	Electro-Metrics	EM-7600	112647	Dec. 15, 2009
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 17, 2010

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

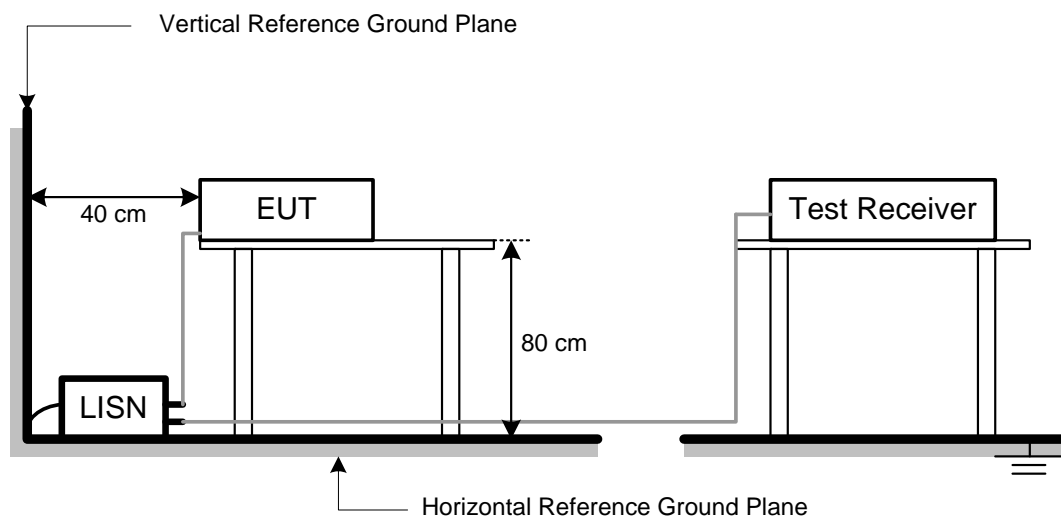
#### 4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP





**4.1.6 EUT OPERATING CONDITIONS**

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.





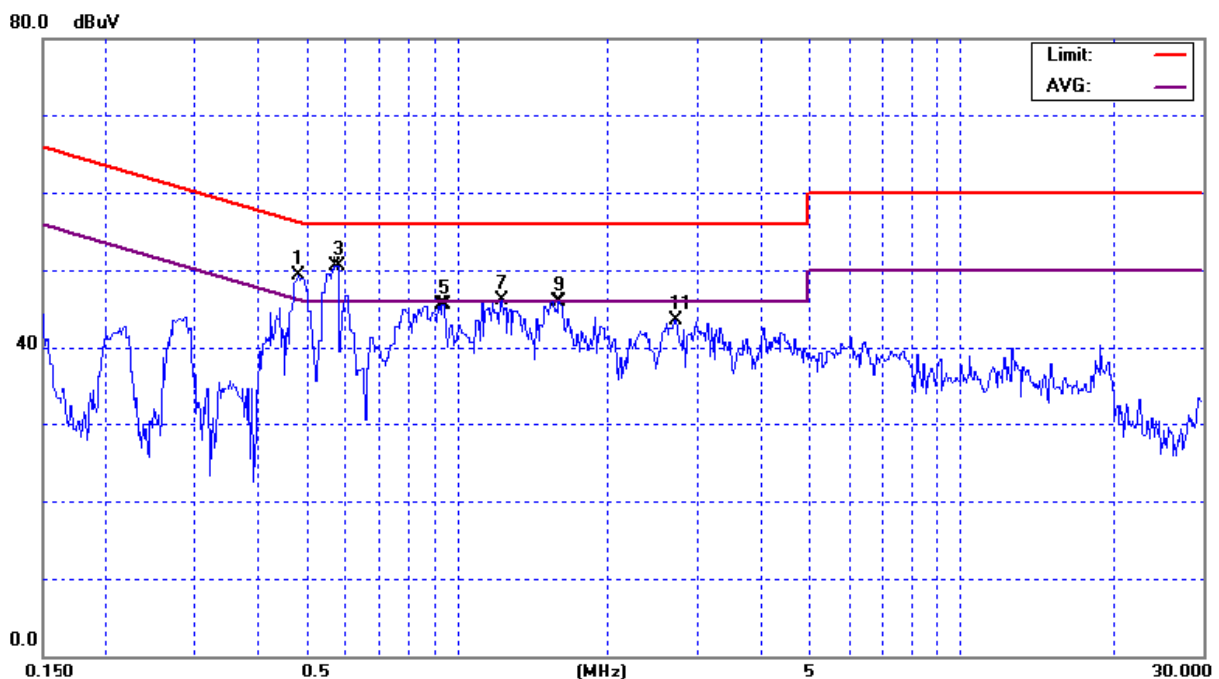
**4.1.7 TEST RESULTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	28 °C	Relative Humidity :	49%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH39(ADAPTER : EDAC)		

Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.48	Line	49.22	32.52	56.30	46.30	-7.08	(QP)
0.58	Line	50.43	25.91	56.00	46.00	-5.57	(QP)
0.94	Line	45.47	25.58	56.00	46.00	-10.53	(QP)
1.23	Line	46.03	25.69	56.00	46.00	-9.97	(QP)
1.59	Line	45.97	25.62	56.00	46.00	-10.03	(QP)
2.37	Line	43.57	*	56.00	46.00	-12.43	(QP)

**Remark**

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz ; SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.2 sec./MHz ◦ Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz,VBW=10KHz, Swp. Time =0.2 sec./MHz ◦
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform ◦ In this case, a “ \* ” marked in AVG Mode column of Interference Voltage Measured ◦
- (3) Measuring frequency range from 150KHz to 30MHz ◦



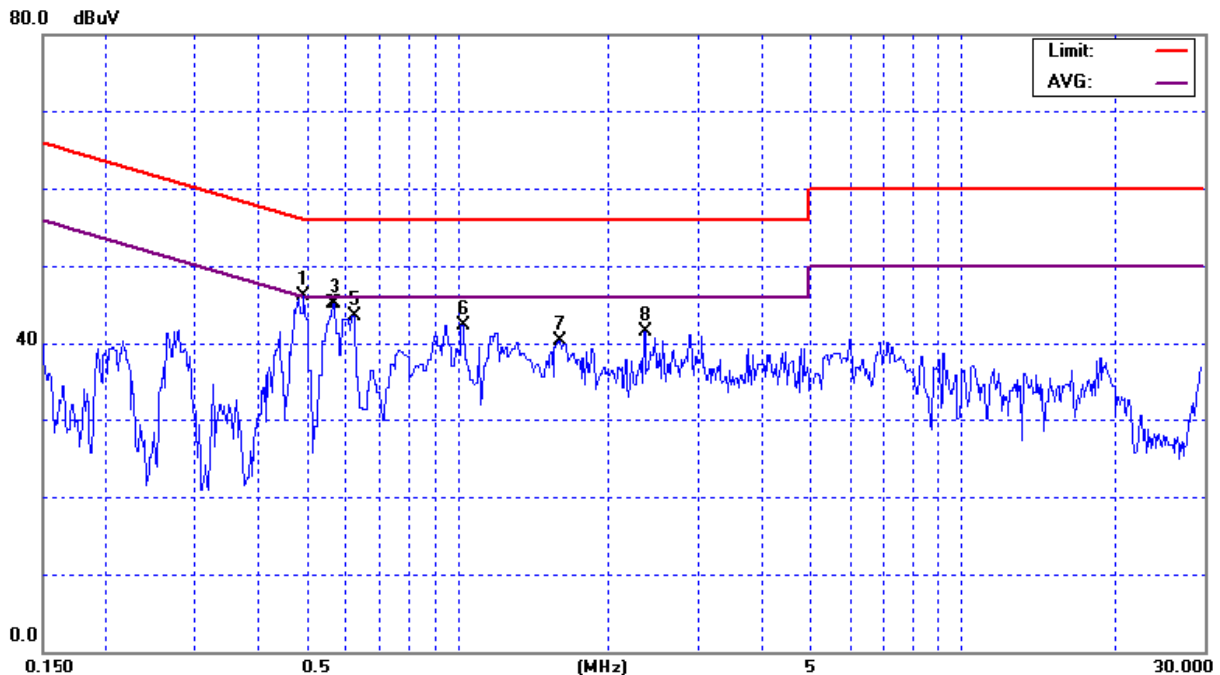


EUT :	Handheld POS	Model Name :	P234
Temperature :	28 °C	Relative Humidity :	49%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH39(ADAPTER : EDAC)		

Freq. (MHz)	Terminal L/N	Measured(dBuV)		Limits(dBuV)		Margin (dB)	Note
		QP-Mode	AV-Mode	QP-Mode	AV-Mode		
0.49	Neutral	46.15	30.15	56.12	46.12	-9.97	(QP)
0.57	Neutral	45.03	28.04	56.00	46.00	-10.97	(QP)
0.63	Neutral	43.57	*	56.00	46.00	-12.43	(QP)
1.02	Neutral	42.26	*	56.00	46.00	-13.74	(QP)
1.59	Neutral	40.35	*	56.00	46.00	-15.65	(QP)
2.35	Neutral	41.56	*	56.00	46.00	-14.44	(QP)

**Remark**

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz; SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.2 sec./MHz ◦ Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz,VBW=10KHz, Swp. Time =0.2 sec./MHz ◦
- (2) All readings are QP Mode value unless otherwise stated AVG in column of 'Note'. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform ◦ In this case, a " \* " marked in AVG Mode column of Interference Voltage Measured ◦
- (3) Measuring frequency range from 150KHz to 30MHz ◦





**4.2 RADIATED EMISSION MEASUREMENT**

**4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)**

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

**LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)**

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15B.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).



**4.2.2 MEASUREMENT INSTRUMENTS LIST AND SETTING**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	Schwarzbeck	VULB 9160	3176	Jul. 23, 2010
2	Test Cable	N/A	LMR-400	N/A	Jan. 05, 2010
3	Test Cable	N/A	OS01-1/-2	N/A	Oct. 08, 2009
4	Pre-Amplifier	Anritsu	MH648A	M09961	Dec. 29, 2009
5	Spectrum Analyzer	HP	8591EM	3536A00687	Mar. 13, 2010
6	EMI Measuring Receiver	SHCAFFNER	SCR 3501	408	Nov. 24, 2009
7	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010
8	Horn Antenna	Schwarzbeck	BBHA 9120 D	9120D-546	May 19, 2010
9	Microwave Pre-amplifier	Agilent	8449B	3008A02331	Jan. 19, 2010
10	Microflex Cable	NA	NA	1m	Sep. 15, 2009
11	Microflex Cable	NA	NA	10M	Feb. 19, 2010

Remark: " N/A" denotes No Model Name / Serial No. and No Calibration specified.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100KHz / 100KHz for peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP



#### **4.2.3 TEST PROCEDURE**

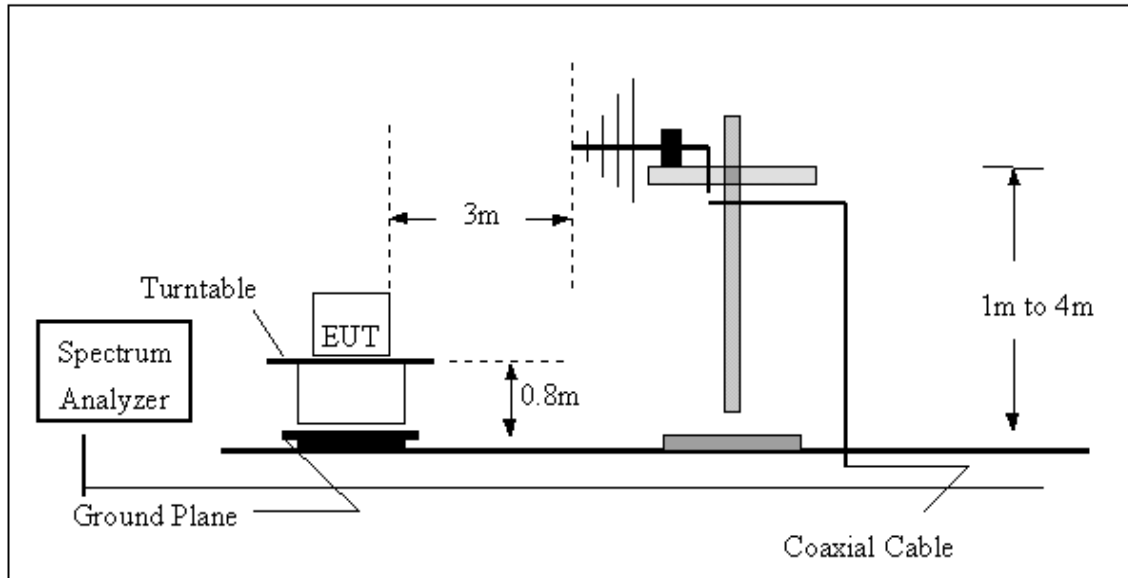
- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### **4.2.4 DEVIATION FROM TEST STANDARD**

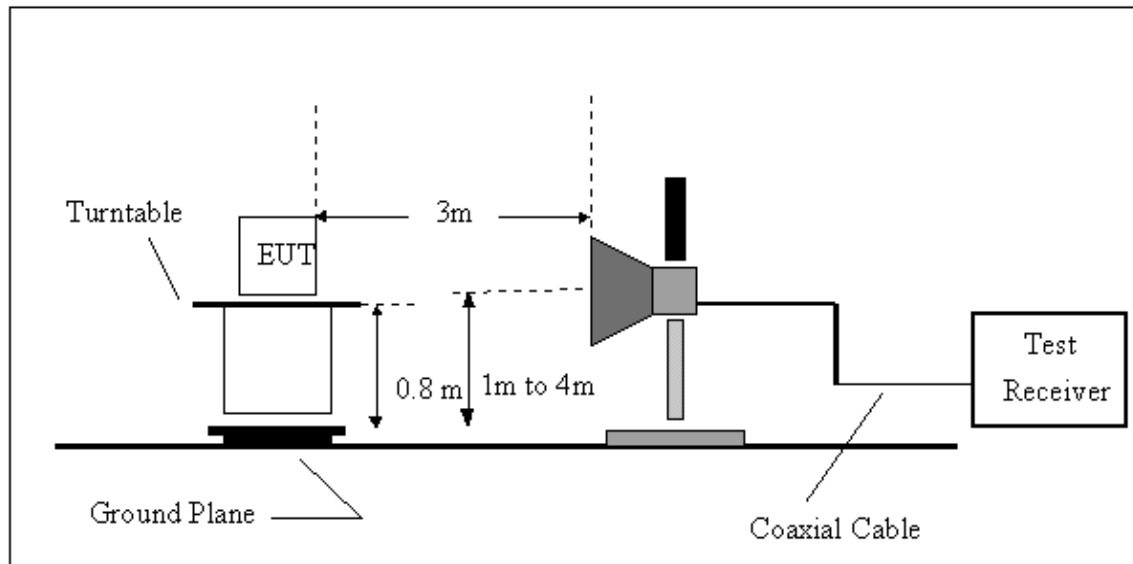
No deviation

**4.2.5 TEST SETUP**

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



**4.2.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



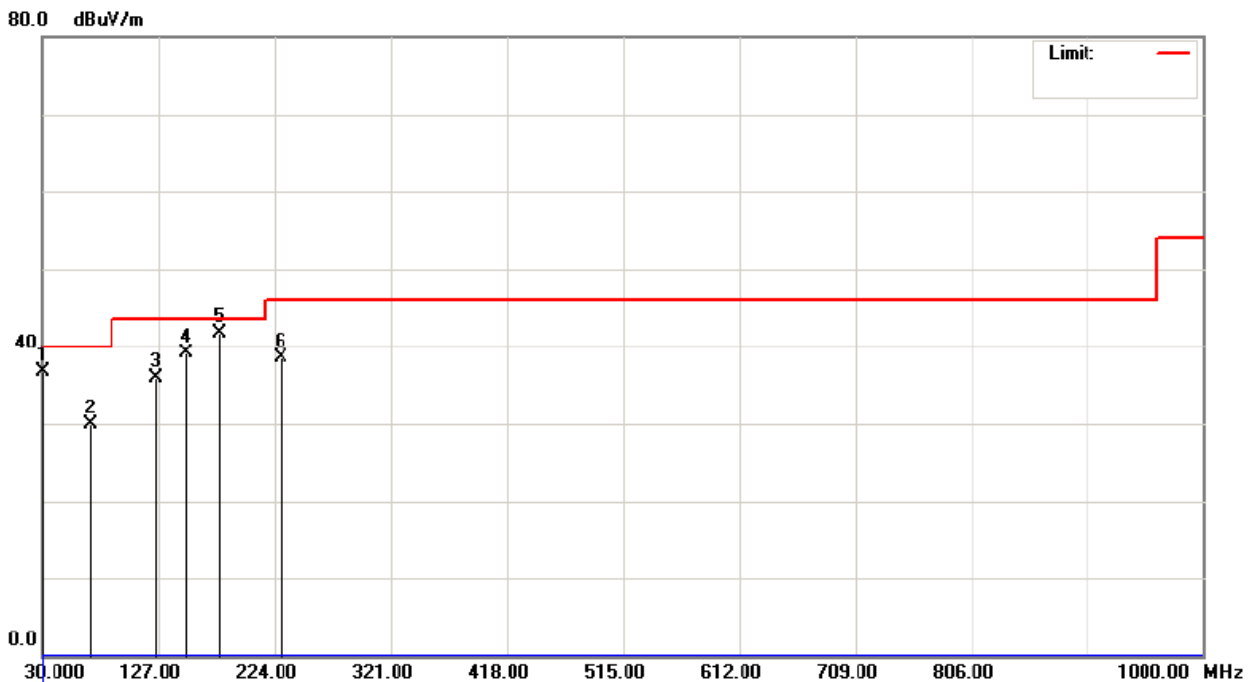
**4.2.7 TEST RESULTS-BETWEEN 30MHZ AND 1000MHZ**

EUT :	Handheld POS	Model Name :	P234
Temperature :	23 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz	EUT Orthogonal Axis :	X
Test Mode :	BT(1Mbps) CH39(ADAPTER : EDAC)		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
30.00	V	57.91	-21.18	36.73	40.00	- 3.27	
70.74	V	53.45	-23.49	29.96	40.00	- 10.04	
125.06	V	57.41	-21.56	35.85	43.50	- 7.65	
150.28	V	58.79	-19.69	39.10	43.50	- 4.40	
177.44	V	63.39	-21.76	41.63	43.50	- 1.87	(QP)
229.82	V	60.99	-22.47	38.52	46.00	- 7.48	

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



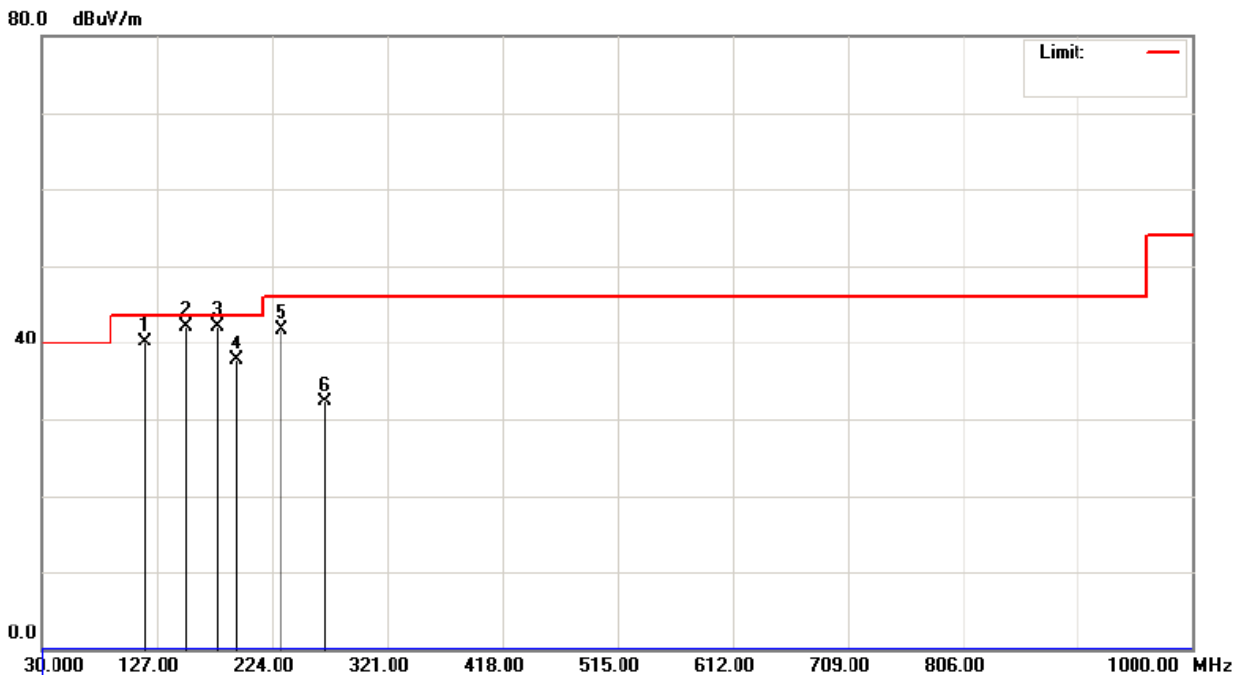


EUT :	Handheld POS	Model Name :	P234
Temperature :	23 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz	EUT Orthogonal Axis :	X
Test Mode :	BT(1Mbps) CH39(ADAPTER : EDAC)		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
117.30	H	62.30	-22.14	40.16	43.50	- 3.34	
152.22	H	61.89	-19.69	42.20	43.50	- 1.30	(QP)
177.44	H	63.83	-21.76	42.07	43.50	- 1.43	(QP)
194.90	H	61.16	-23.51	37.65	43.50	- 5.85	
231.76	H	64.07	-22.42	41.65	46.00	- 4.35	
268.62	H	53.76	-21.40	32.36	46.00	- 13.64	

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.







**4.2.8 TEST RESULTS-ABOVE 1000MHZ**

EUT :	Handheld POS	Model Name :	P234
Temperature :	24 °C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH00(ADAPTER : EDAC)		

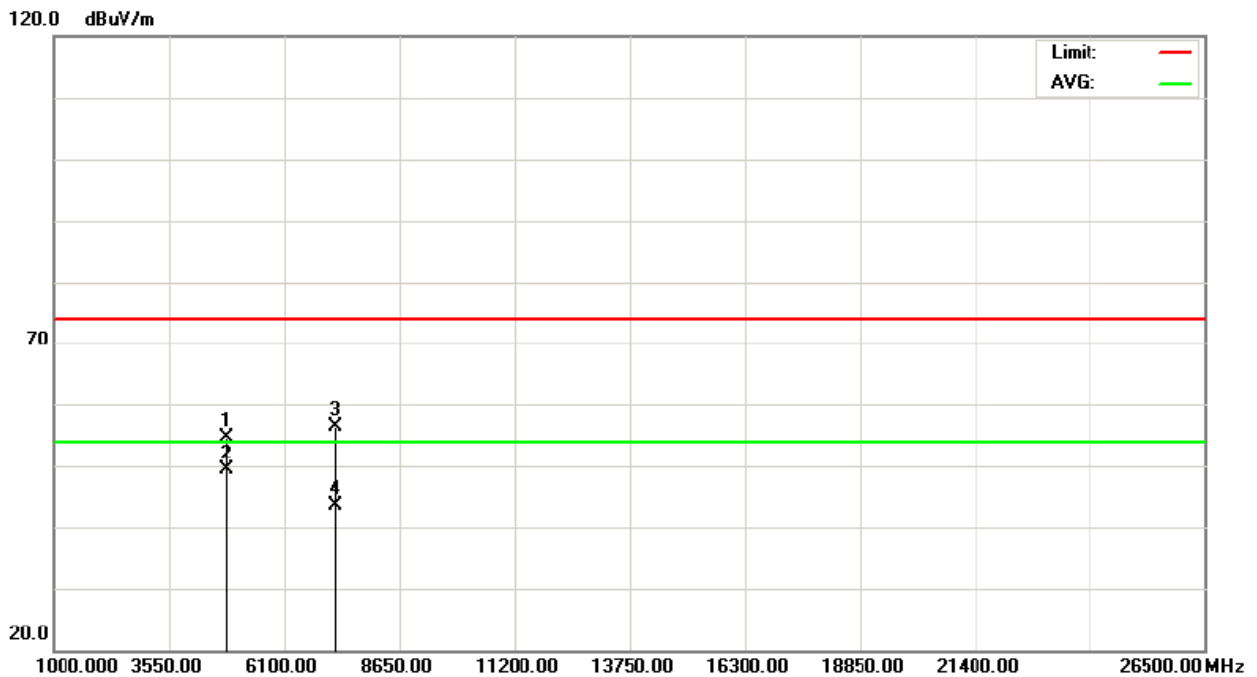
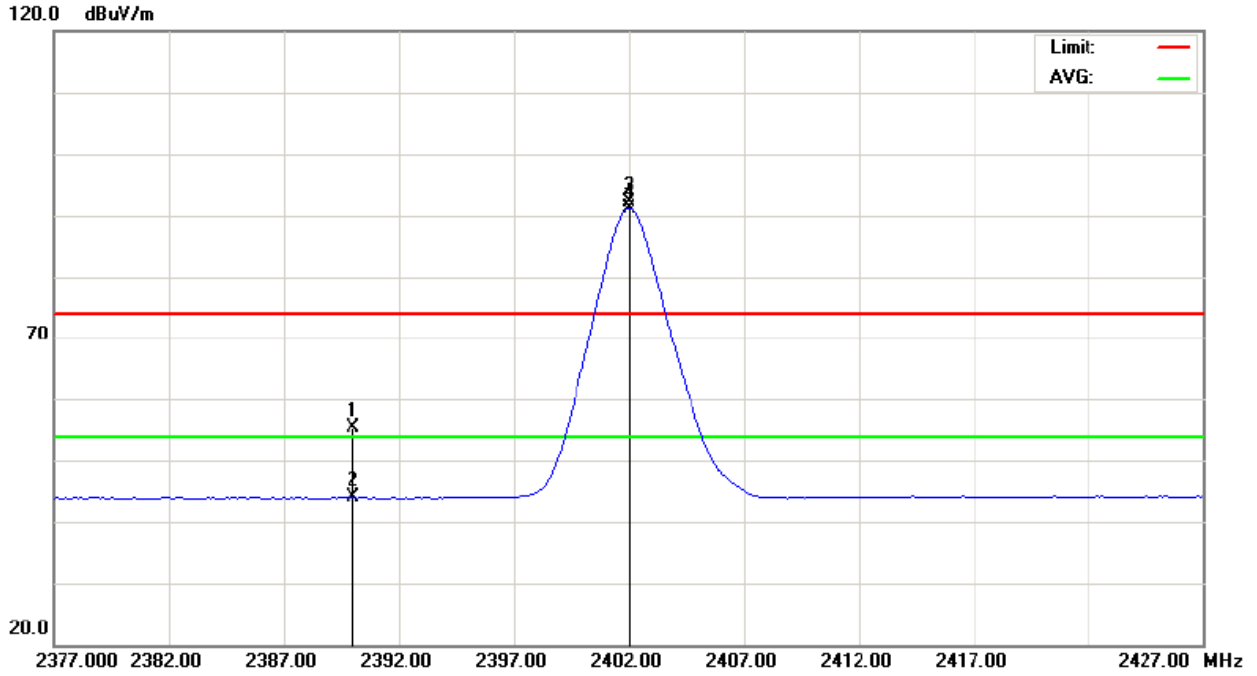
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	V	23.06	11.74	32.38	55.44	44.12	74.00	54.00	X/E
2402.00	V	59.82	58.81	32.43	92.25	91.24			X/F
4803.98	V	50.25	44.93	4.39	54.64	49.32	74.00	54.00	X/H
7205.93	V	45.71	32.83	10.68	56.39	43.51	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH00(Above 1000 MHz, Vertical)





EUT :	Handheld POS	Model Name :	P234
Temperature :	24 ° C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH00(ADAPTER : EDAC)		

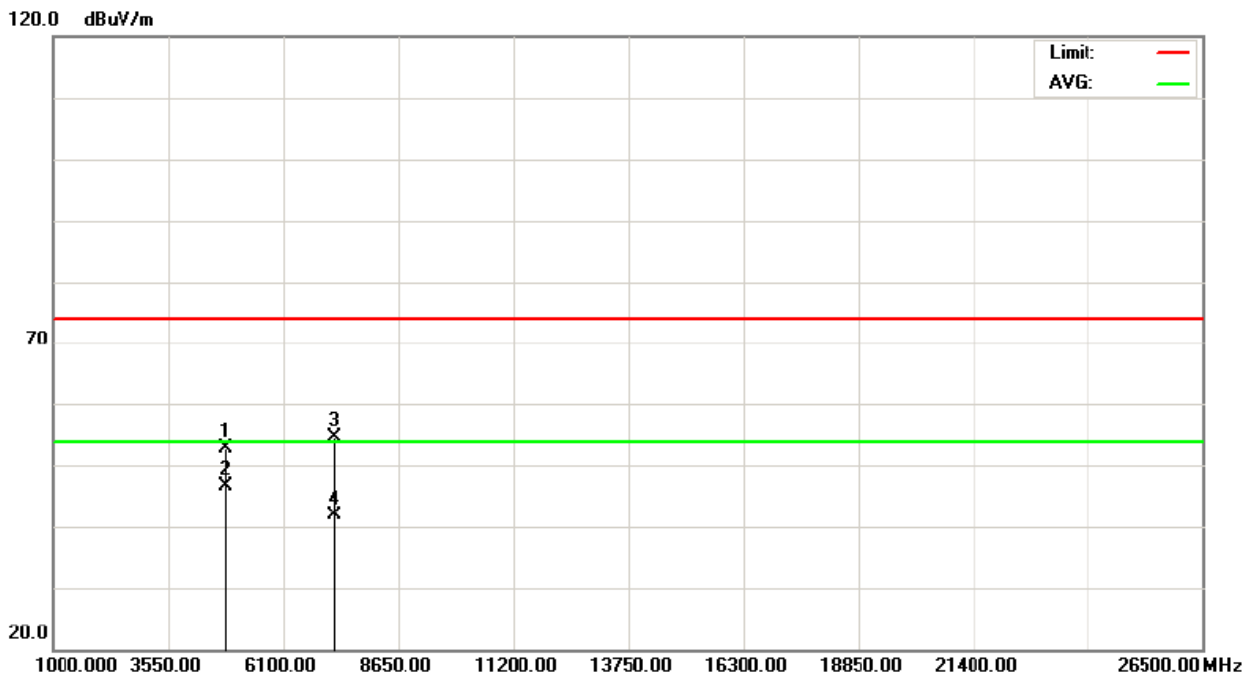
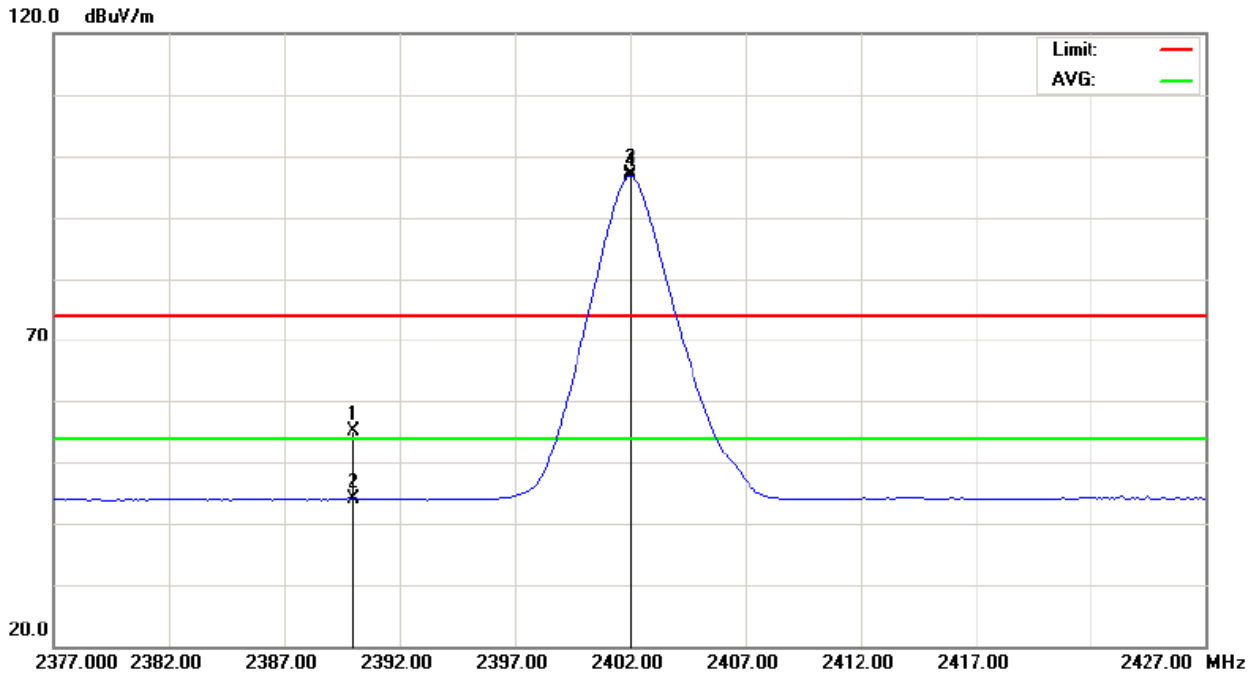
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	H	22.78	11.84	32.38	55.16	44.22	74.00	54.00	X/E
2402.00	H	64.76	64.24	32.43	97.19	96.67			X/F
4803.98	H	48.53	42.19	4.39	52.92	46.58	74.00	54.00	X/H
7206.01	H	43.85	31.15	10.68	54.53	41.83	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH00(Above 1000 MHz, Horizontal)





EUT :	Handheld POS	Model Name :	P234
Temperature :	24 ° C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH39(ADAPTER : EDAC)		

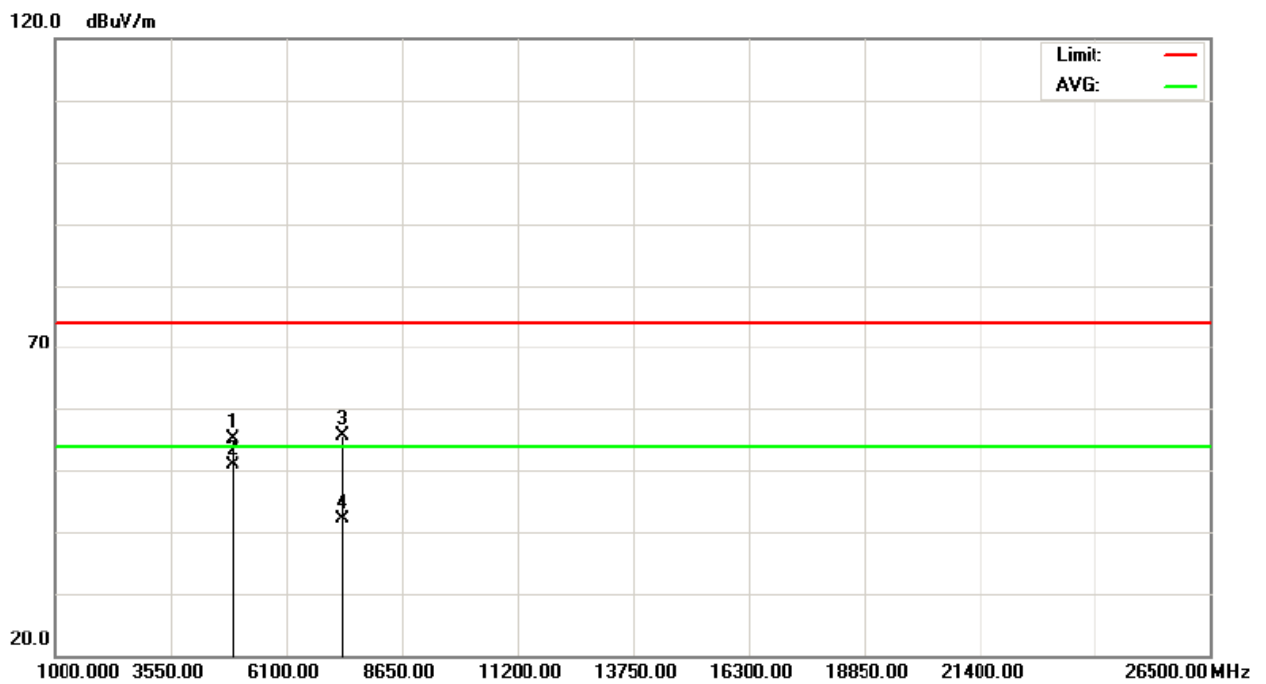
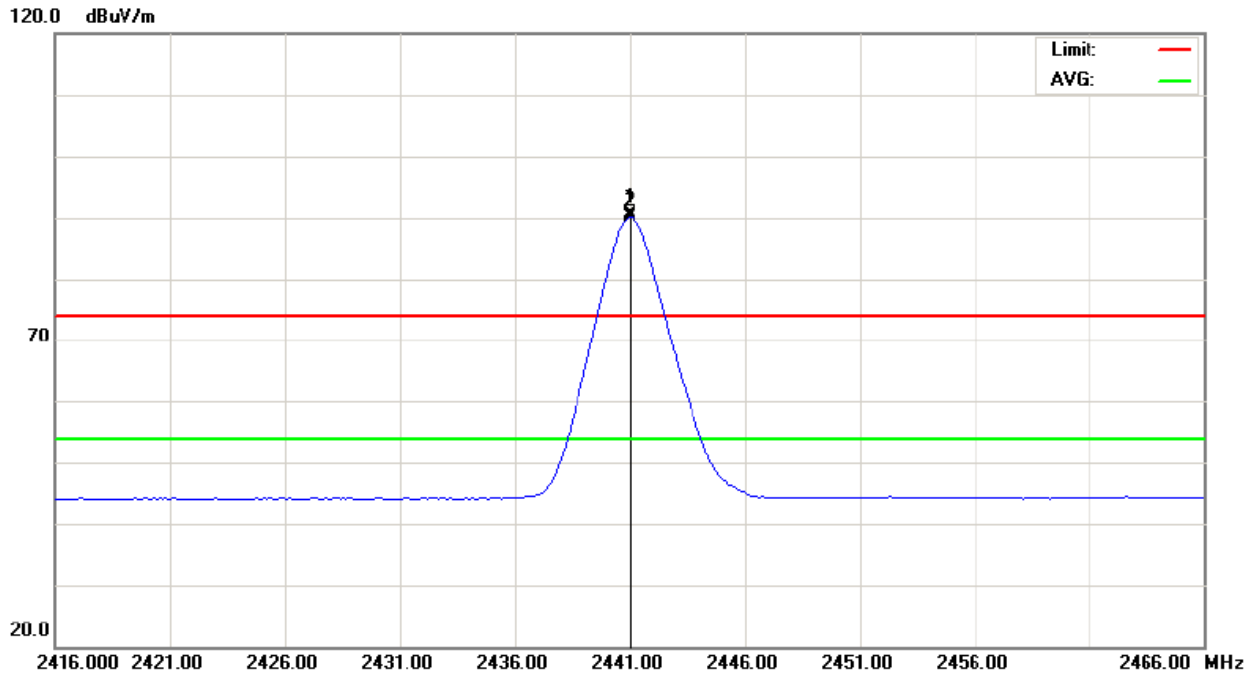
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2441.00	V	58.09	57.46	32.58	90.67	90.04			X/F
4882.01	V	50.53	46.17	4.59	55.12	50.76	74.00	54.00	X/H
7322.99	V	44.69	31.02	11.00	55.69	42.02	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
“X” - denotes Laid on Table ; ”Y” - denotes Vertical Stand ; ”Z” - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH39 (Above 1000 MHz, Vertical)





EUT :	Handheld POS	Model Name :	P234
Temperature :	24 °C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH39(ADAPTER : EDAC)		

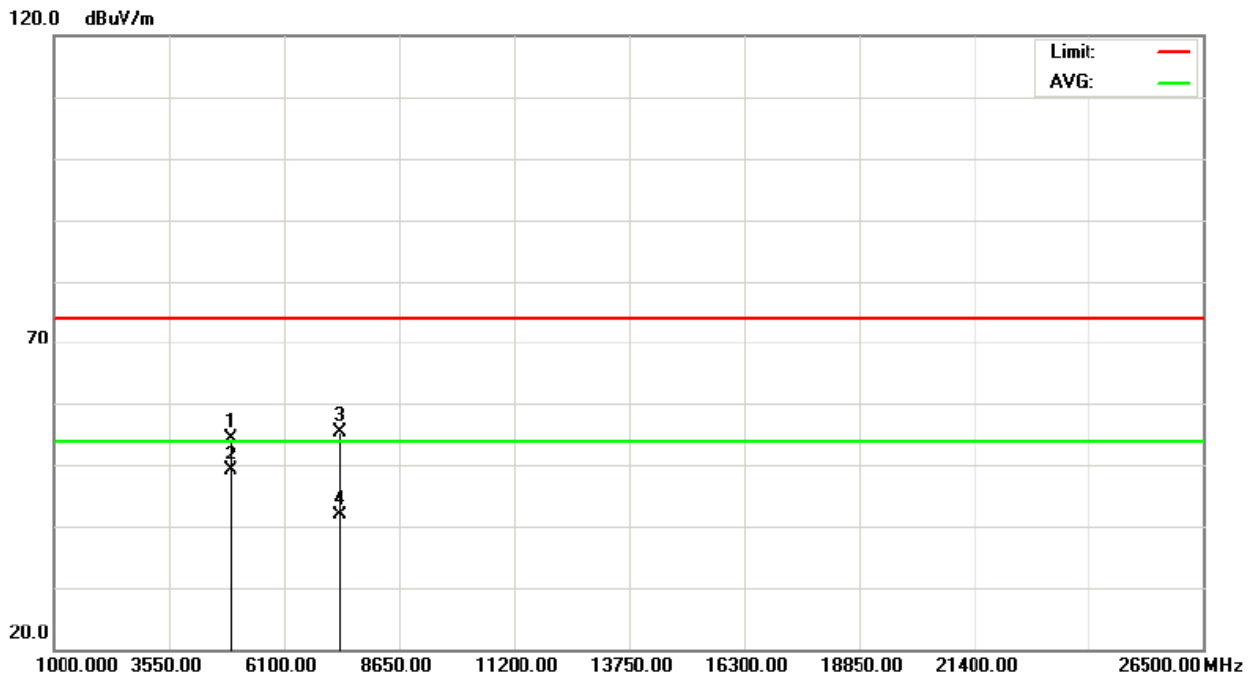
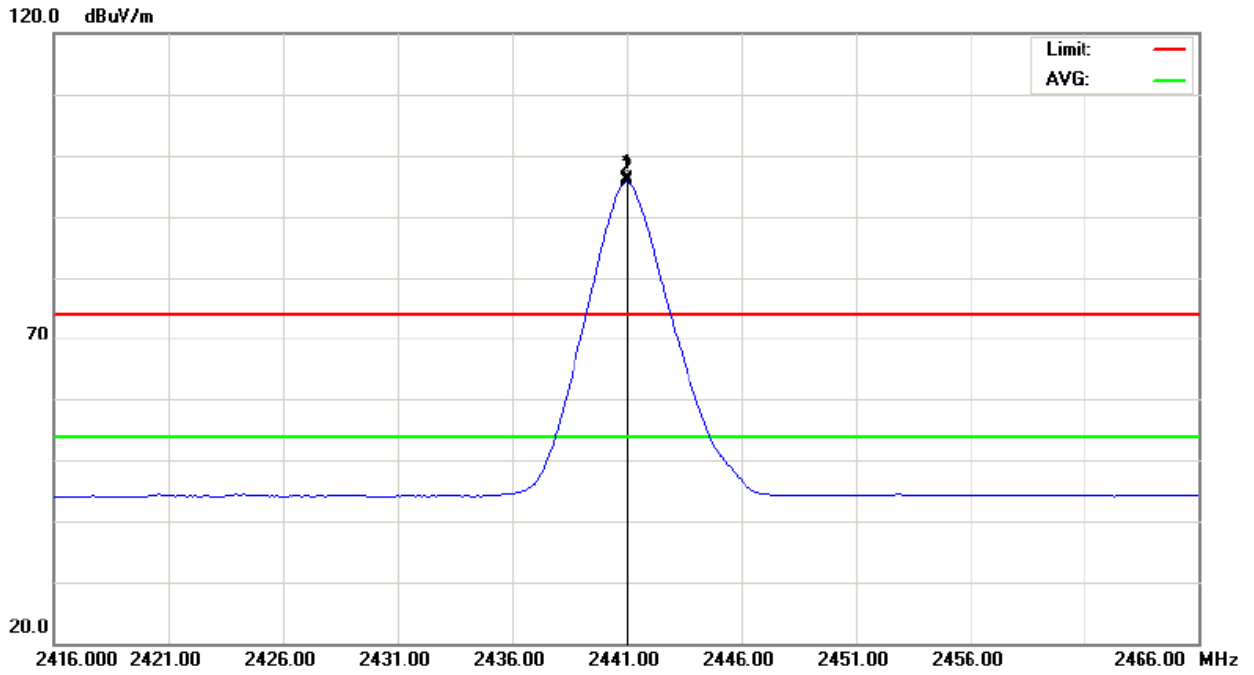
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2441.00	H	63.48	62.93	32.58	96.06	95.51			X/F
4881.96	H	49.91	44.52	4.59	54.50	49.11	74.00	54.00	X/H
7323.02	H	44.32	30.96	11.00	55.32	41.96	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH39 (Above 1000 MHz, Horizontal)







EUT :	Handheld POS	Model Name :	P234
Temperature :	24 °C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH78(ADAPTER : EDAC)		

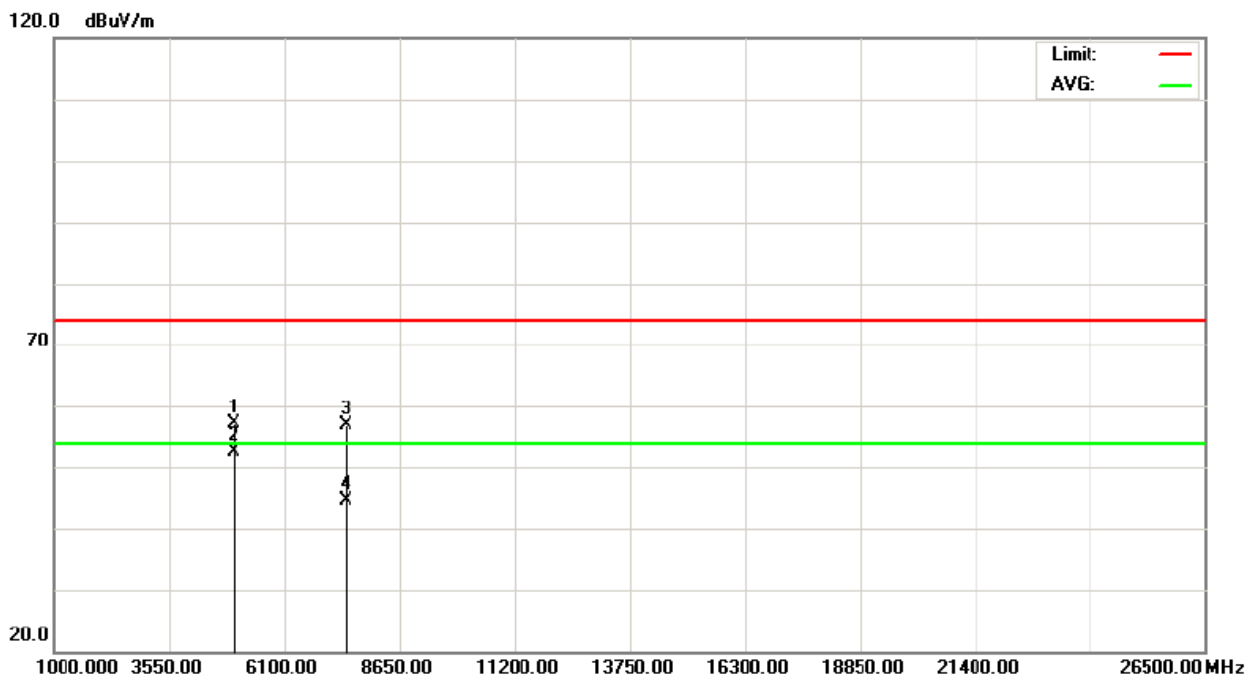
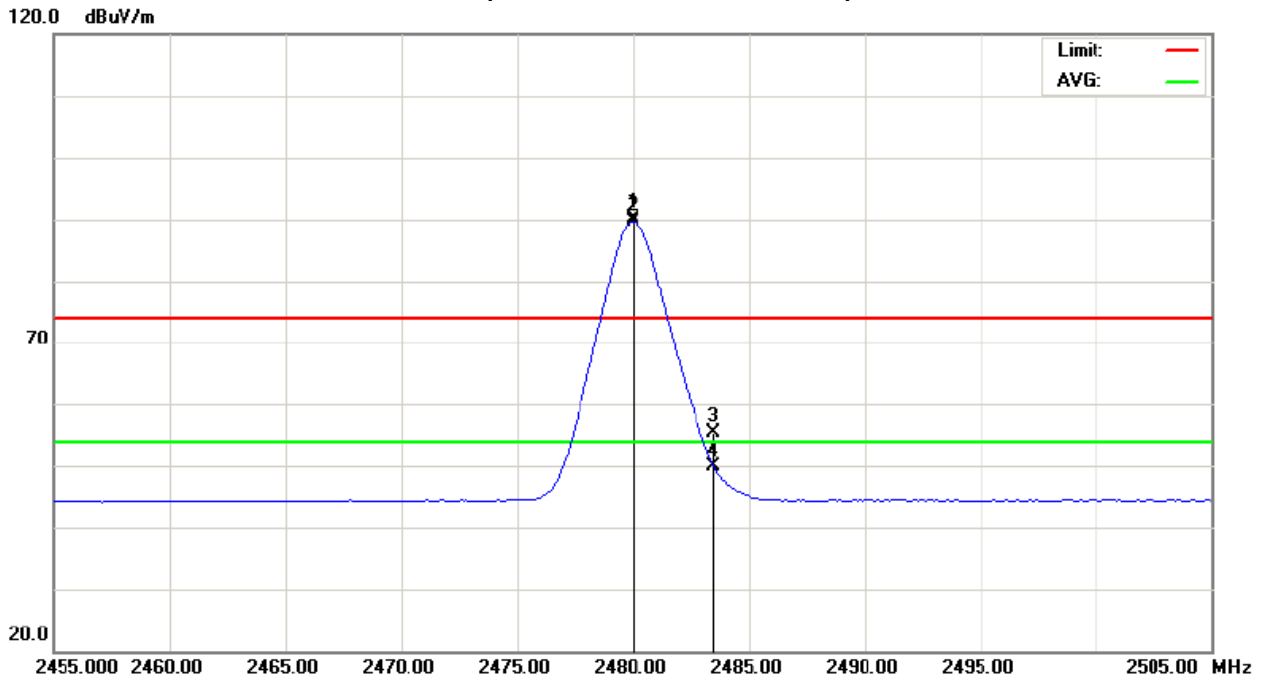
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2480.00	V	57.51	56.97	32.72	90.23	89.69			X/F
2483.50	V	22.60	17.13	32.74	55.34	49.87	74.00	54.00	X/E
4959.98	V	52.24	47.94	4.80	57.04	52.74	74.00	54.00	X/H
7439.67	V	45.62	33.32	11.33	56.95	44.65	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH78 (Above 1000 MHz, Vertical)





EUT :	Handheld POS	Model Name :	P234
Temperature :	24 ° C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH78(ADAPTER : EDAC)		

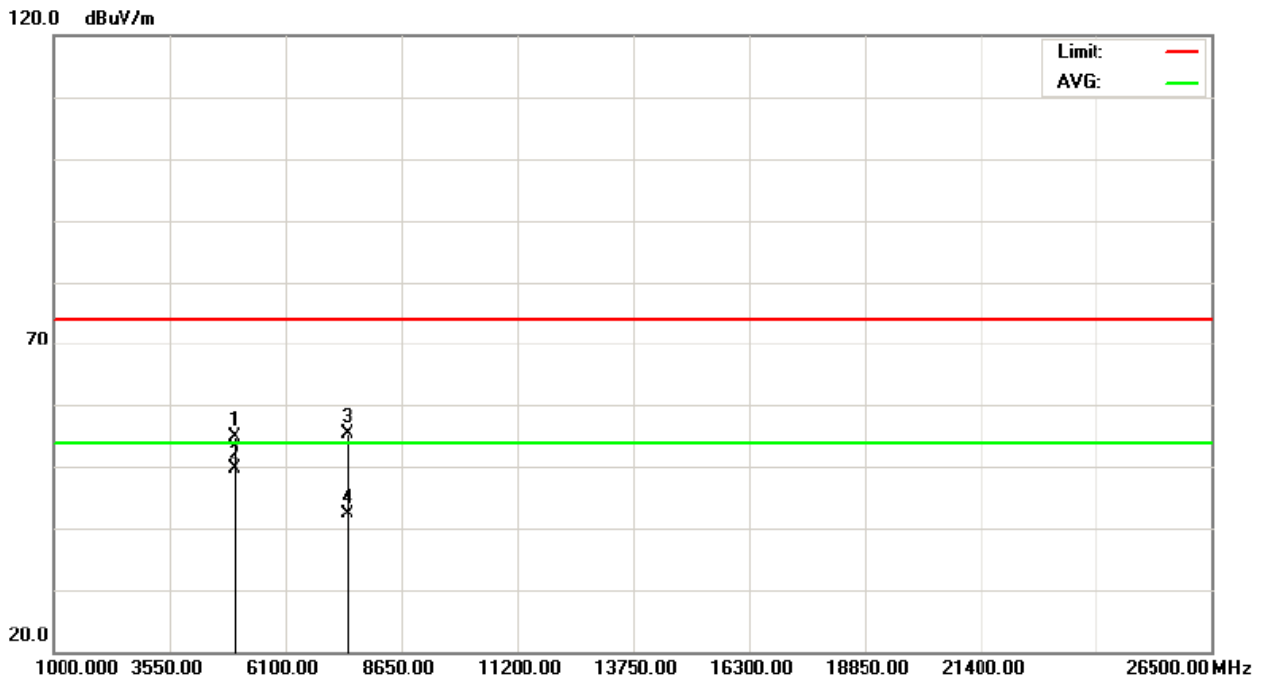
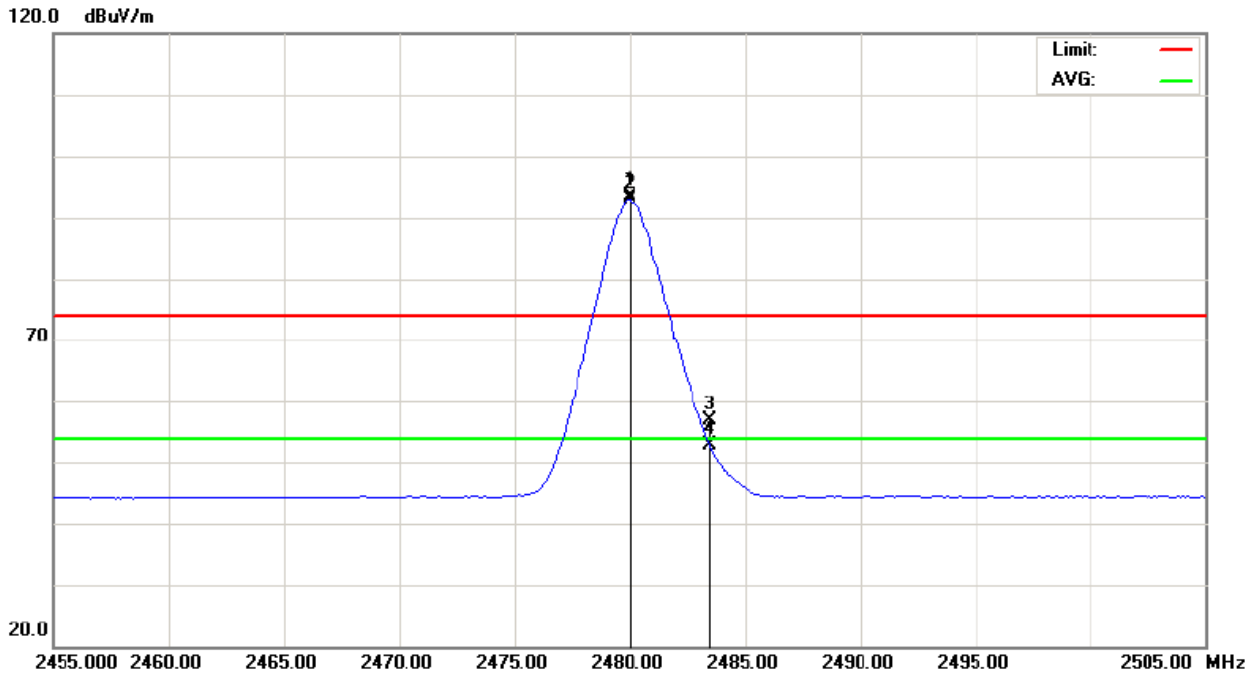
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2480.00	H	60.69	60.22	32.72	93.41	92.94			X/F
2483.50	H	24.16	20.04	32.74	56.90	52.78	74.00	54.00	X/E
4960.02	H	50.07	44.73	4.80	54.87	49.53	74.00	54.00	X/H
7440.02	H	44.13	31.10	11.33	55.46	42.43	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH78 (Above 1000 MHz, Horizontal)





EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH00(ADAPTER : EDAC)		

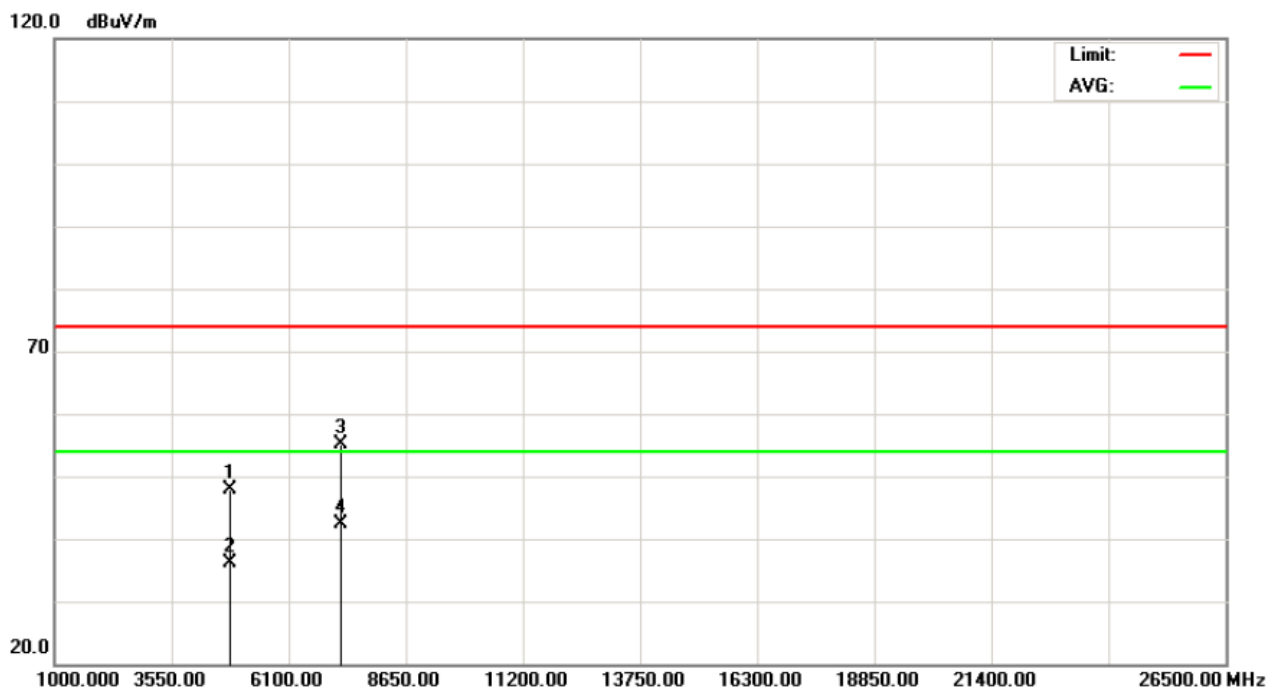
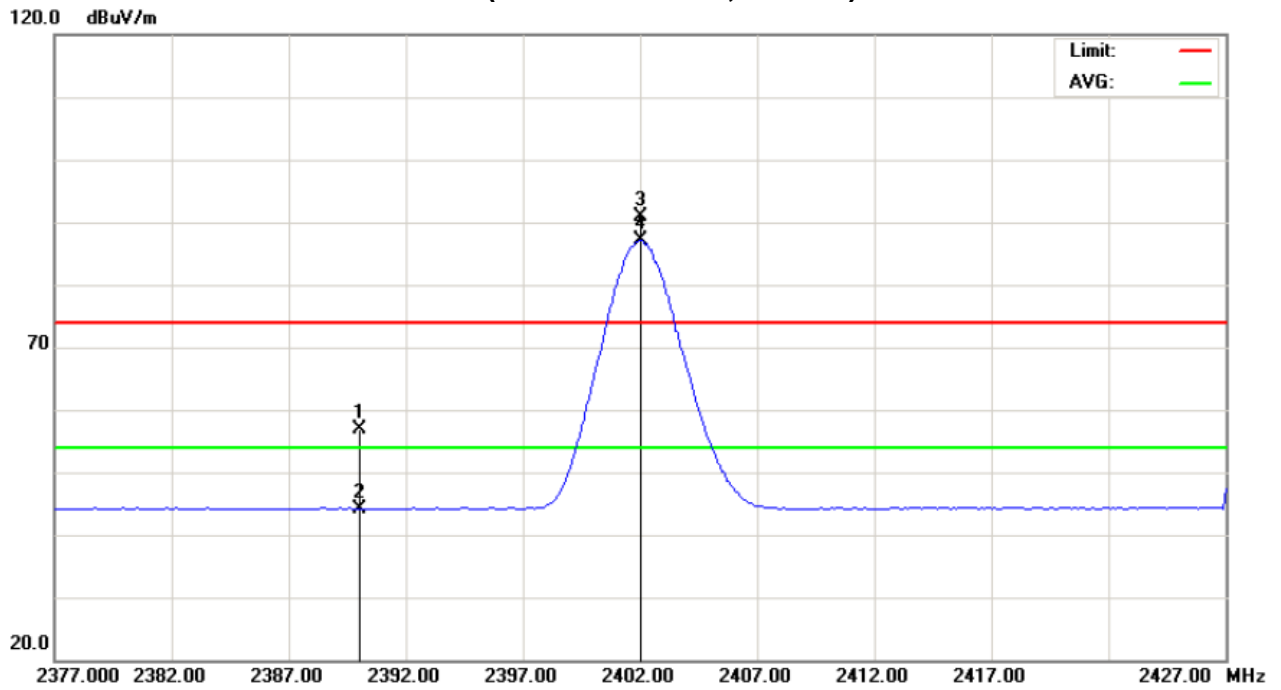
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	V	24.47	11.79	32.38	56.85	44.17	74.00	54.00	X/E
2402.00	V	58.56	54.68	32.43	90.99	87.11			X/F
4803.94	V	43.37	31.75	4.39	47.76	36.14	74.00	54.00	X/H
7206.00	V	44.39	31.61	10.68	55.07	42.29	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH00(Above 1000 MHz, Vertical)





EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH00(ADAPTER : EDAC)		

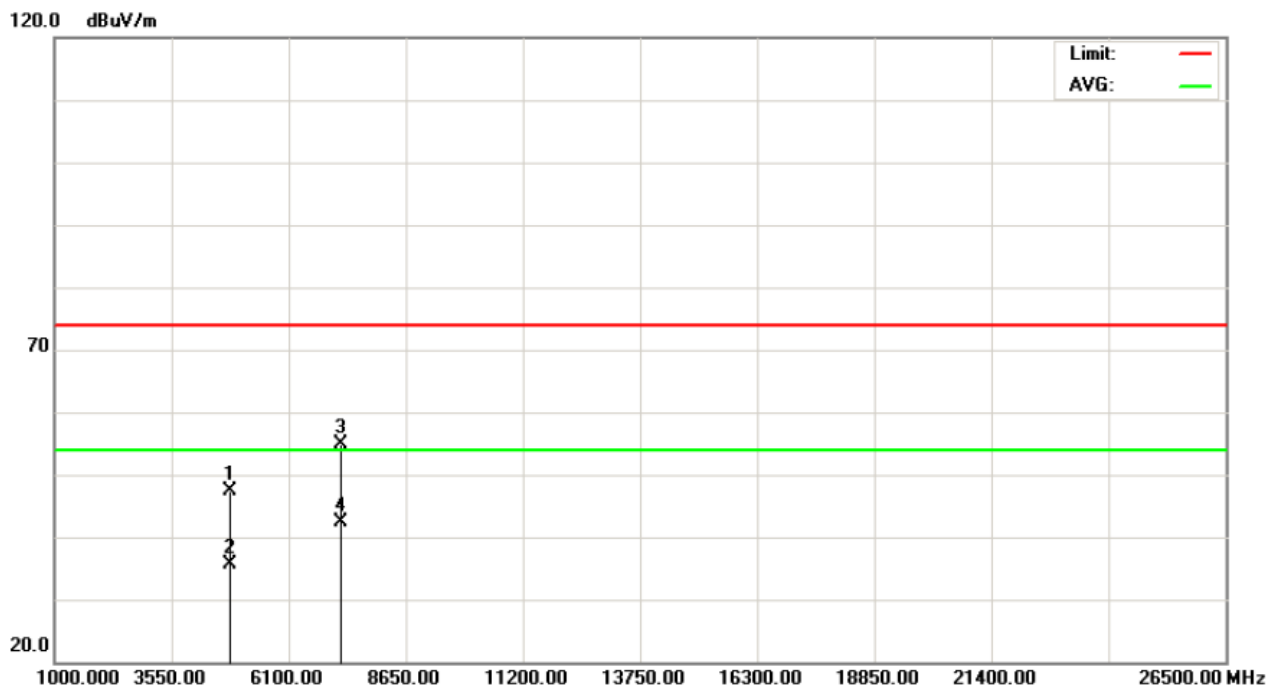
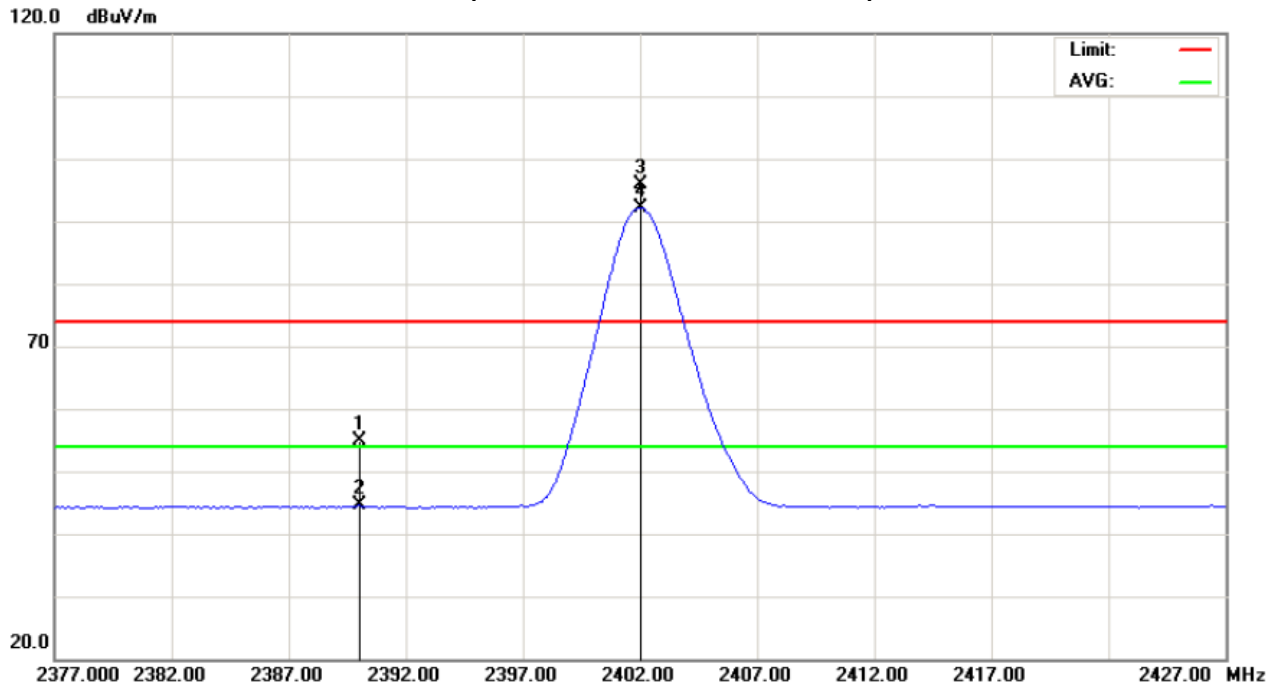
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	H	22.42	12.15	32.38	54.80	44.53	74.00	54.00	X/E
2402.00	H	63.43	59.64	32.43	95.86	92.07			X/F
4804.00	H	43.08	31.28	4.39	47.47	35.67	74.00	54.00	X/H
7205.92	H	44.23	31.69	10.68	54.91	42.37	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦“F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
“X” - denotes Laid on Table ; ”Y” - denotes Vertical Stand ; ”Z” - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH00(Above 1000 MHz, Horizontal)







EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH39(ADAPTER : EDAC)		

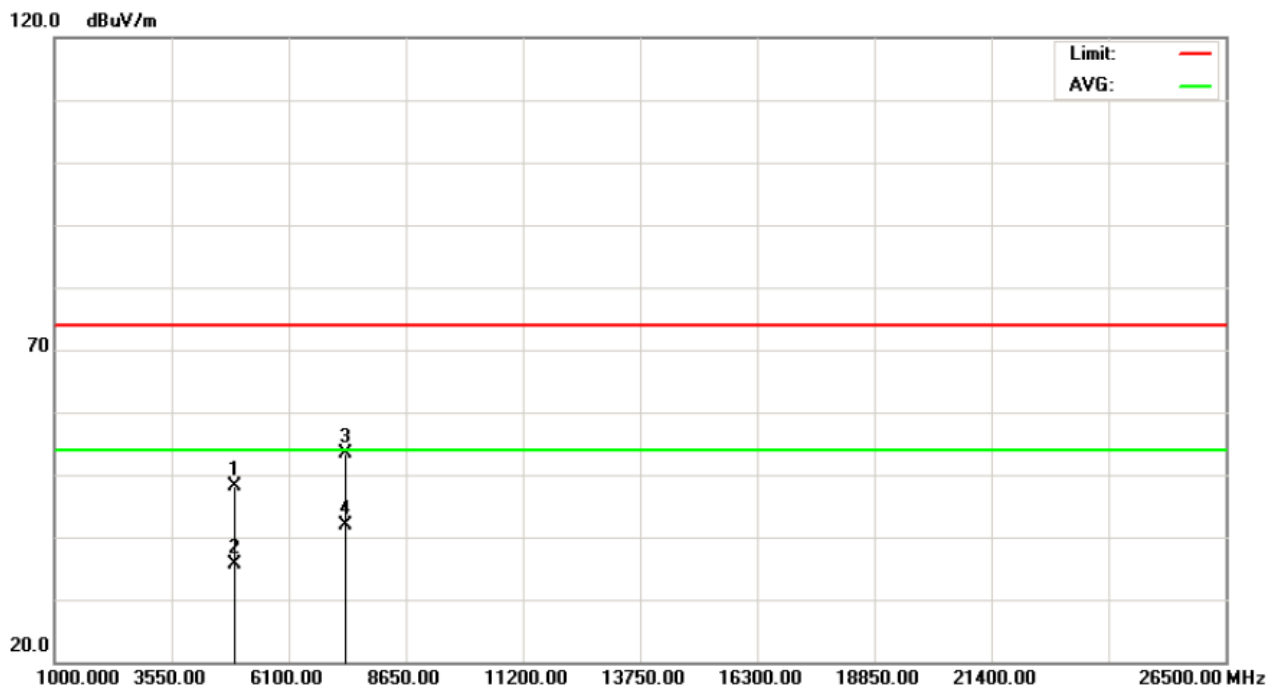
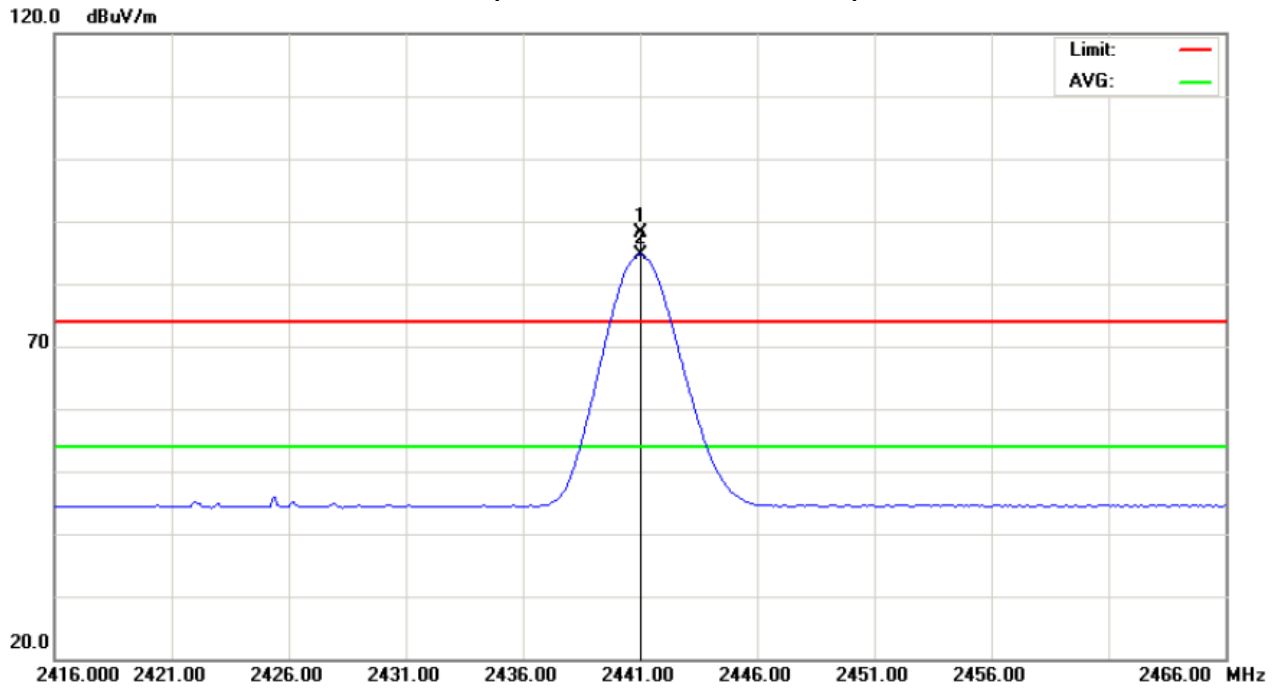
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2441.00	V	55.57	51.99	32.58	88.15	84.57			X/F
4882.00	V	43.42	30.98	4.59	48.01	35.57	74.00	54.00	X/H
7323.00	V	42.38	30.81	11.00	53.38	41.81	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH39 (Above 1000 MHz, Vertical)





EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH39(ADAPTER : EDAC)		

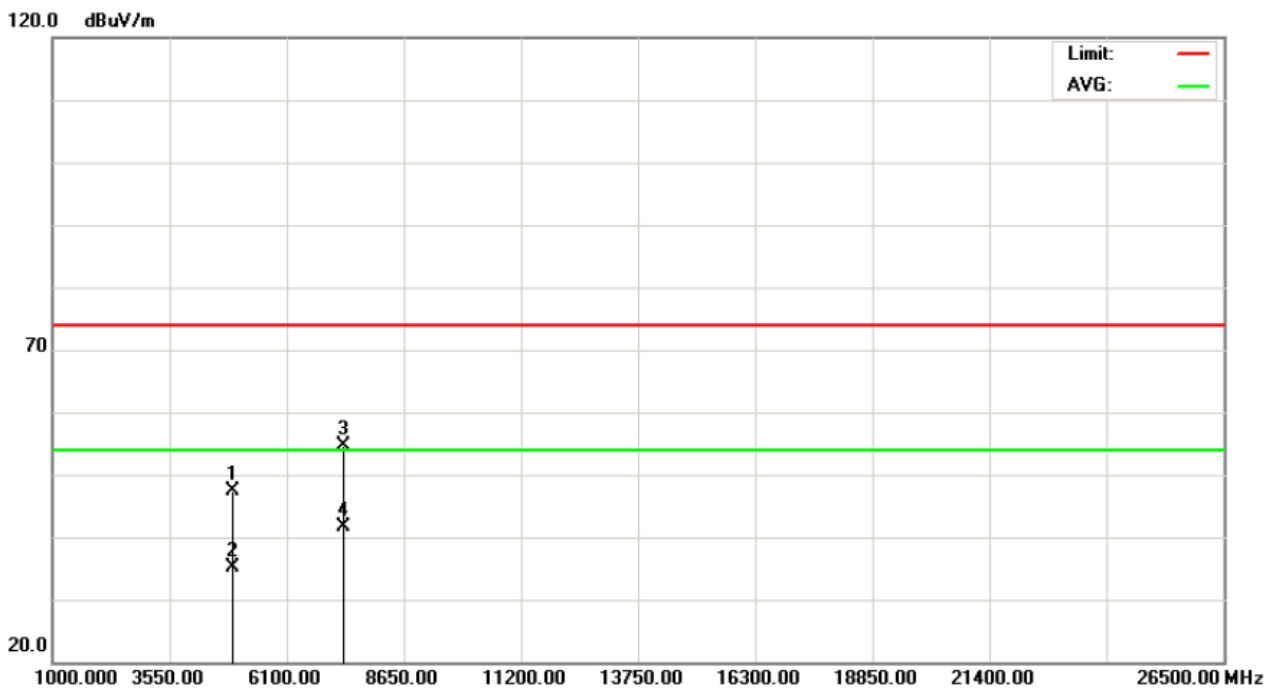
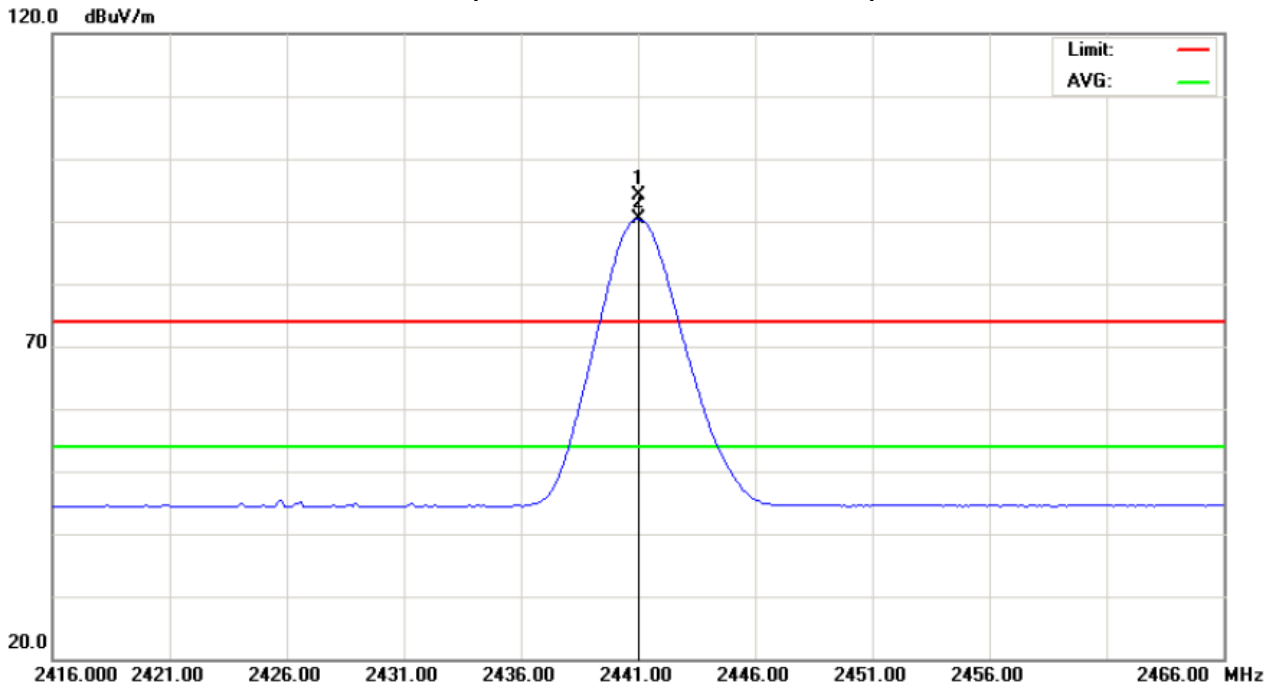
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2441.00	H	61.53	57.74	32.58	94.11	90.32			X/F
4881.98	H	42.84	30.62	4.59	47.43	35.21	74.00	54.00	X/H
7323.00	H	43.71	30.73	11.00	54.71	41.73	74.00	54.00	X/H

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH39 (Above 1000 MHz, Horizontal)





EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH78(ADAPTER : EDAC)		

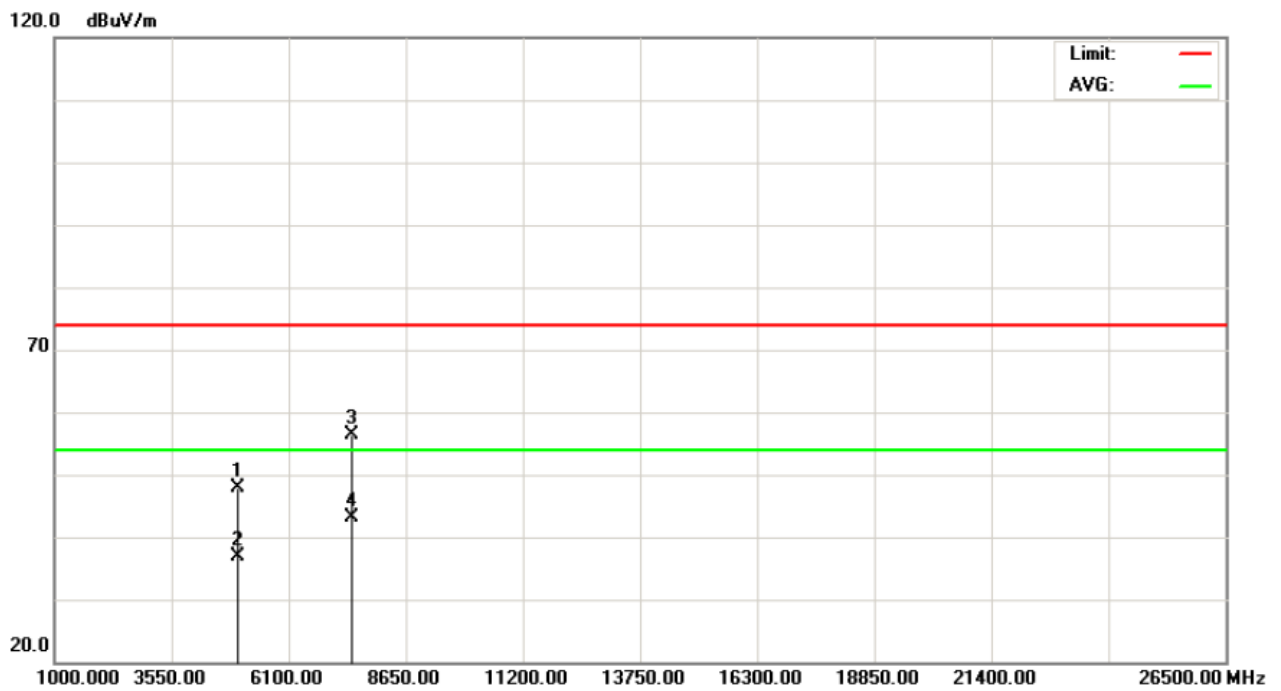
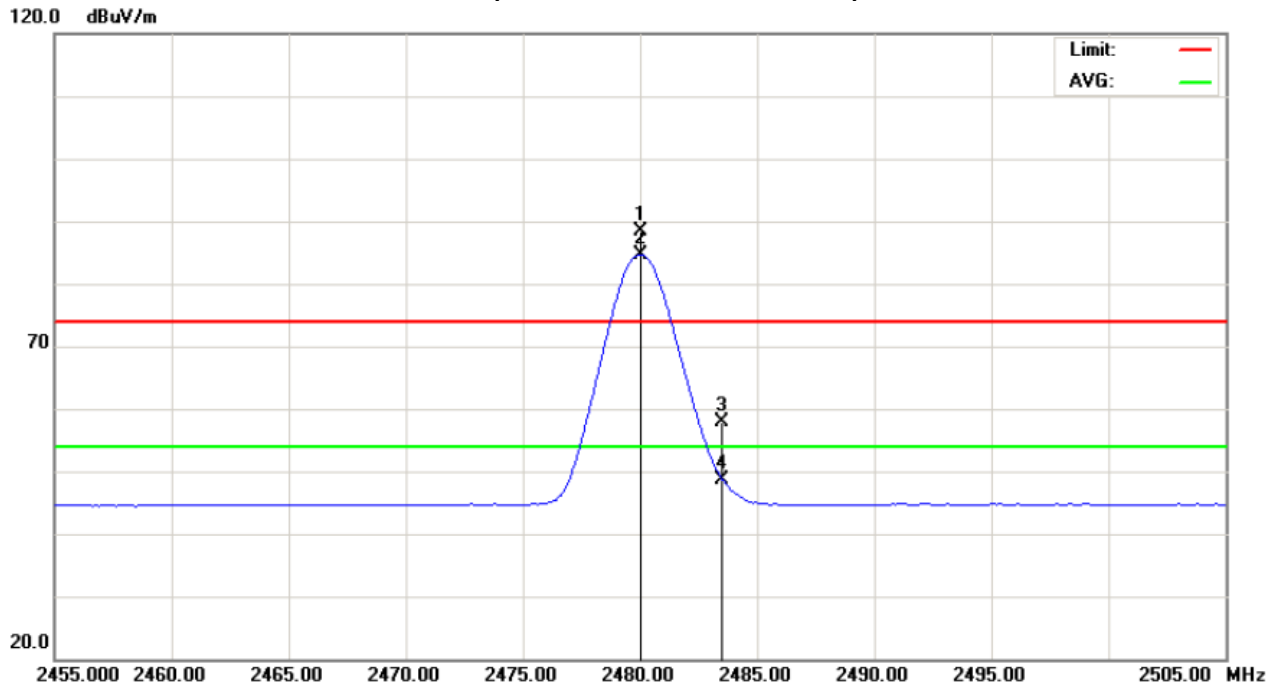
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2480.00	V	55.78	51.90	32.72	88.50	84.62			X/F
2483.50	V	25.12	16.00	32.74	57.86	48.74	74.00	54.00	X/E
4960.10	V	43.00	31.96	4.80	47.80	36.76	74.00	54.00	X/H
7440.00	V	45.08	31.70	11.33	56.41	43.03	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
"X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH78 (Above 1000 MHz, Vertical)





EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	42%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH78(ADAPTER : EDAC)		

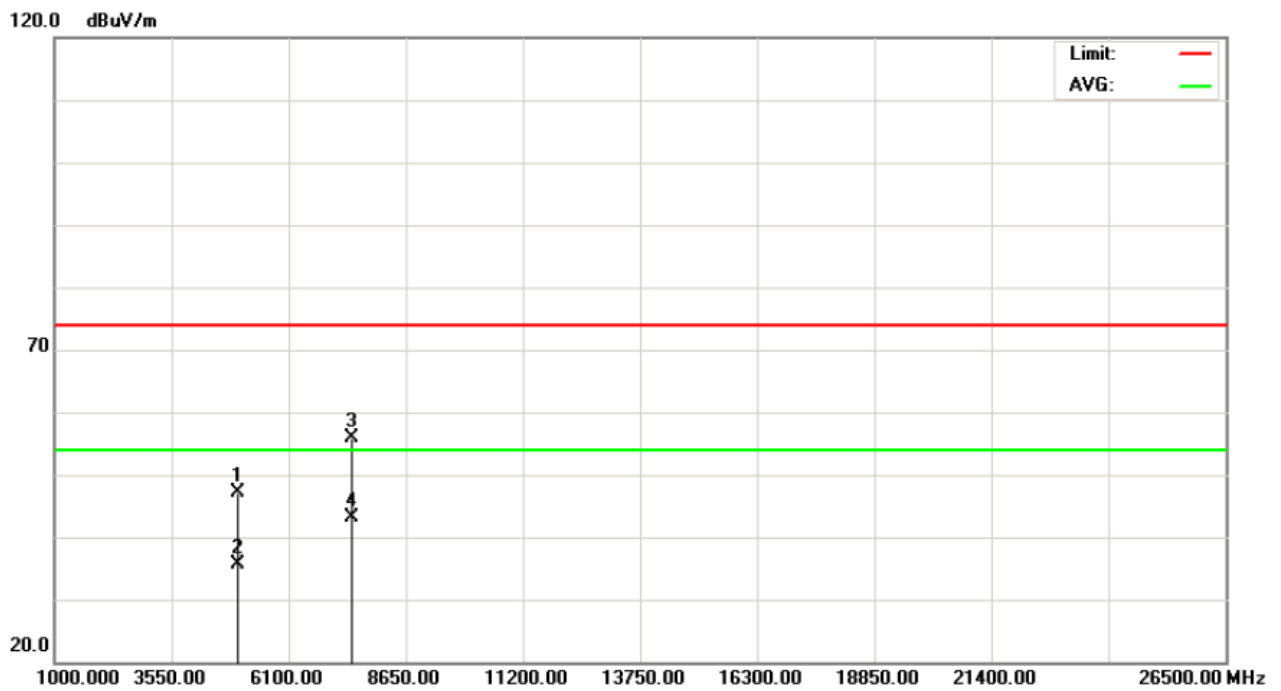
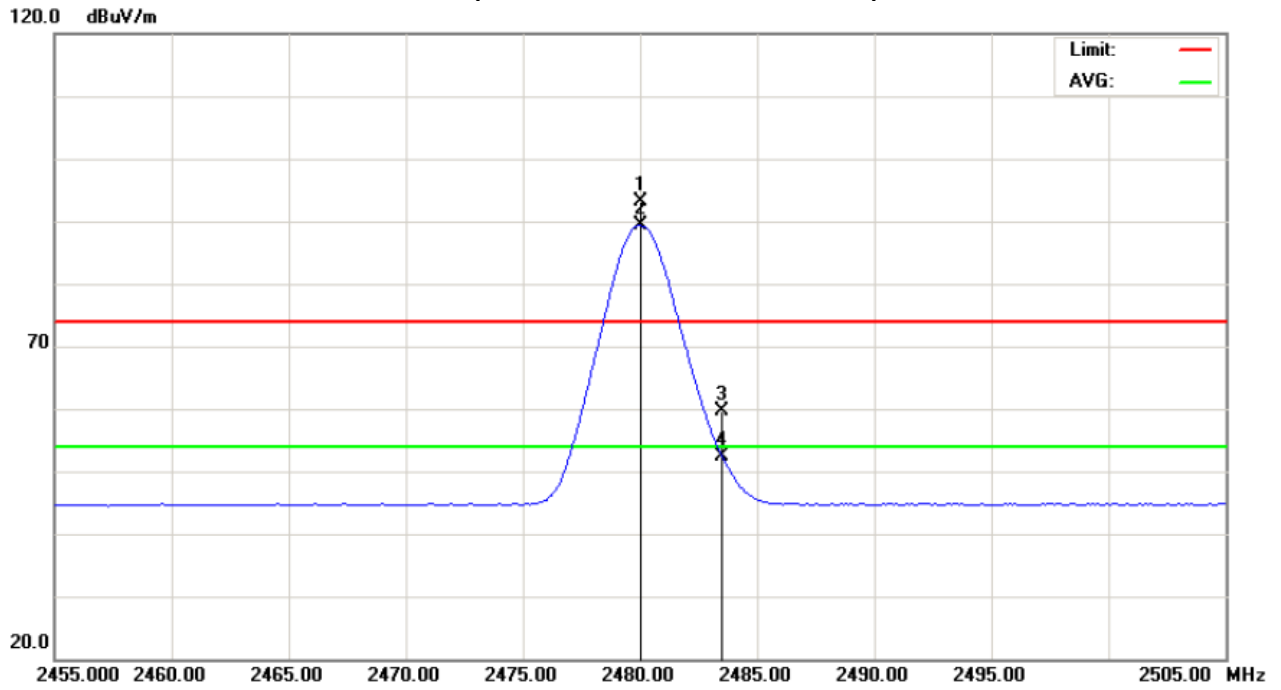
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2480.00	H	60.41	56.56	32.72	93.13	89.28			X/F
2483.50	H	26.82	19.57	32.74	59.56	52.31	74.00	54.00	X/E
4959.84	H	42.28	30.92	4.80	47.08	35.72	74.00	54.00	X/H
7439.98	H	44.62	31.82	11.33	55.95	43.15	74.00	54.00	X/H

**Remark :**

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ◦
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency ◦ “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (4) Data of measurement within this frequency range shown “ \* ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis :  
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna



Orthogonal Axis : X  
CH78 (Above 1000 MHz, Horizontal)







**4.2.9 TEST RESULTS-RESTRICTED BANDS REQUIREMENTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	24 ° C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	Vertical (1Mbps)		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH00). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH78). Then the field strength was measured at 2483.5-2500 MHz.		

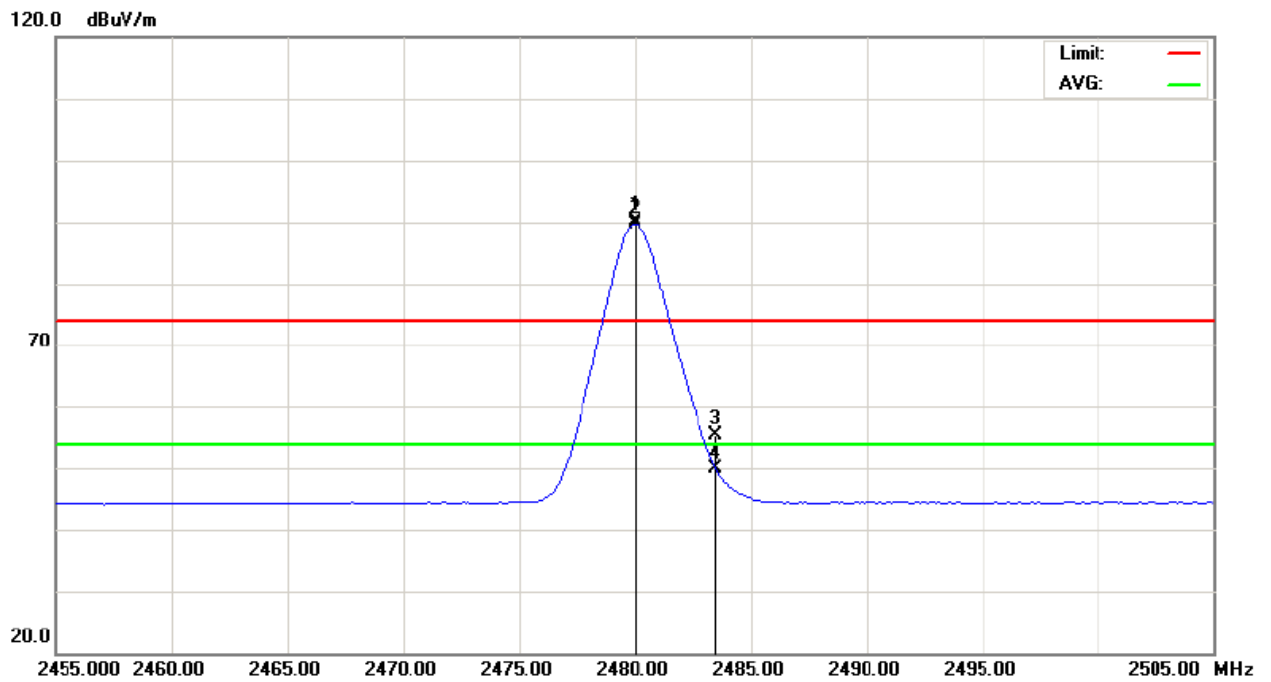
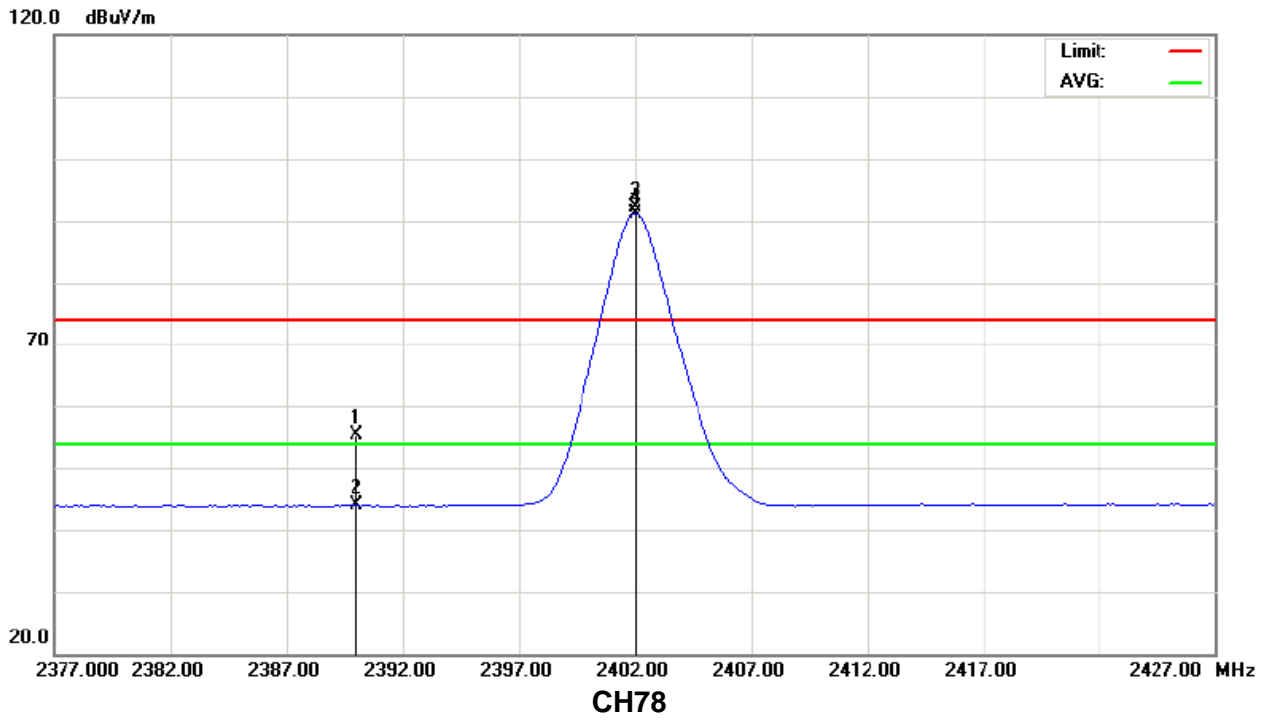
Freq. (MHz)	Ant. Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	V	23.06	11.74	32.38	55.44	44.12	74.00	54.00	CH00
2483.50	V	22.60	17.13	32.74	55.34	49.87	74.00	54.00	CH78

**Remark :**

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (2) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



### Restricted Bands Requirements, Vertical CH00





EUT :	Handheld POS	Model Name :	P234
Temperature :	24 °C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	Horizontal (1Mbps)		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH00). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH78). Then the field strength was measured at 2483.5-2500 MHz.		

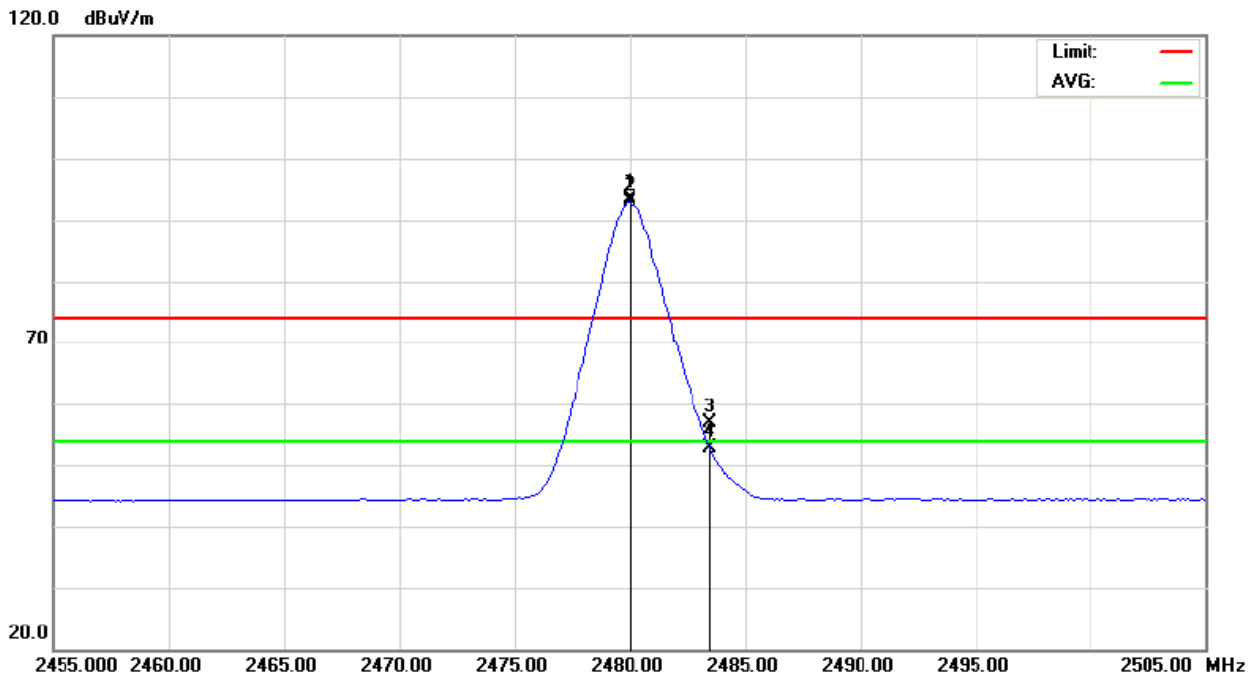
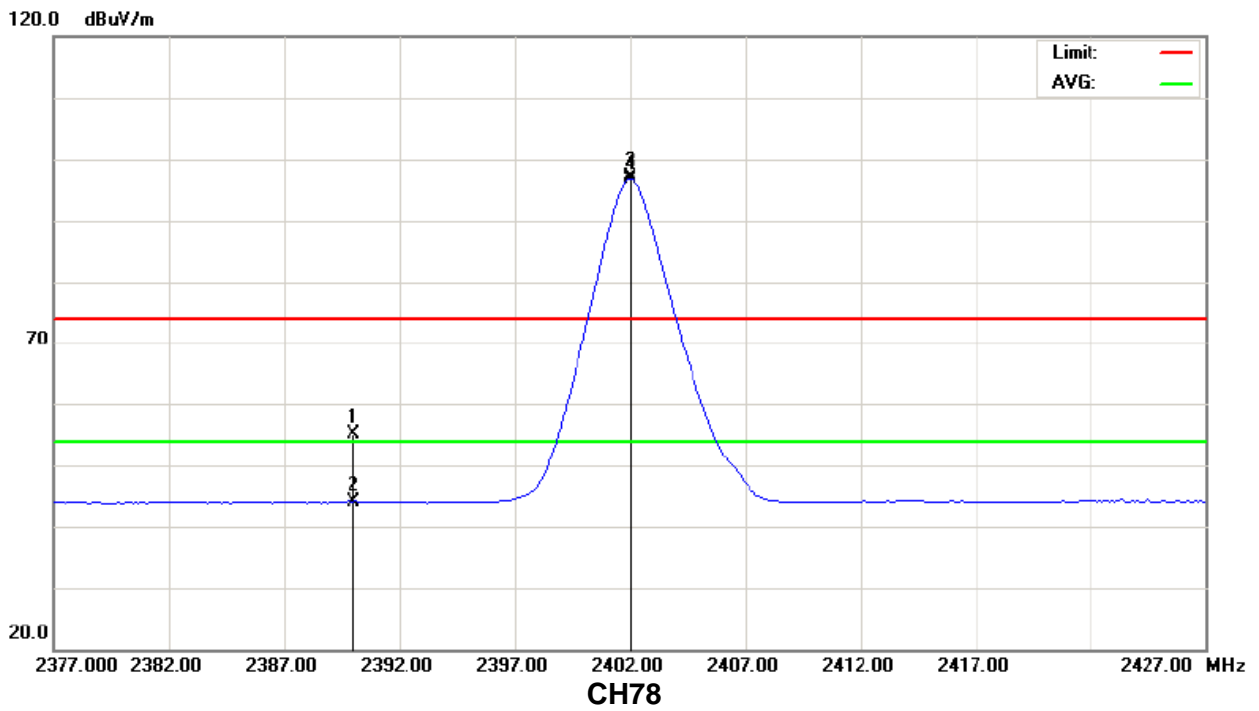
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	H	22.78	11.84	32.38	55.16	44.22	74.00	54.00	CH00
2483.50	H	24.16	20.04	32.74	56.90	52.78	74.00	54.00	CH78

**Remark :**

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (2) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



### Restricted Bands Requirements, Horizontal CH00





EUT :	Handheld POS	Model Name :	P234
Temperature :	24 ° C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	Vertical (3Mbps)		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH00). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH78). Then the field strength was measured at 2483.5-2500 MHz.		

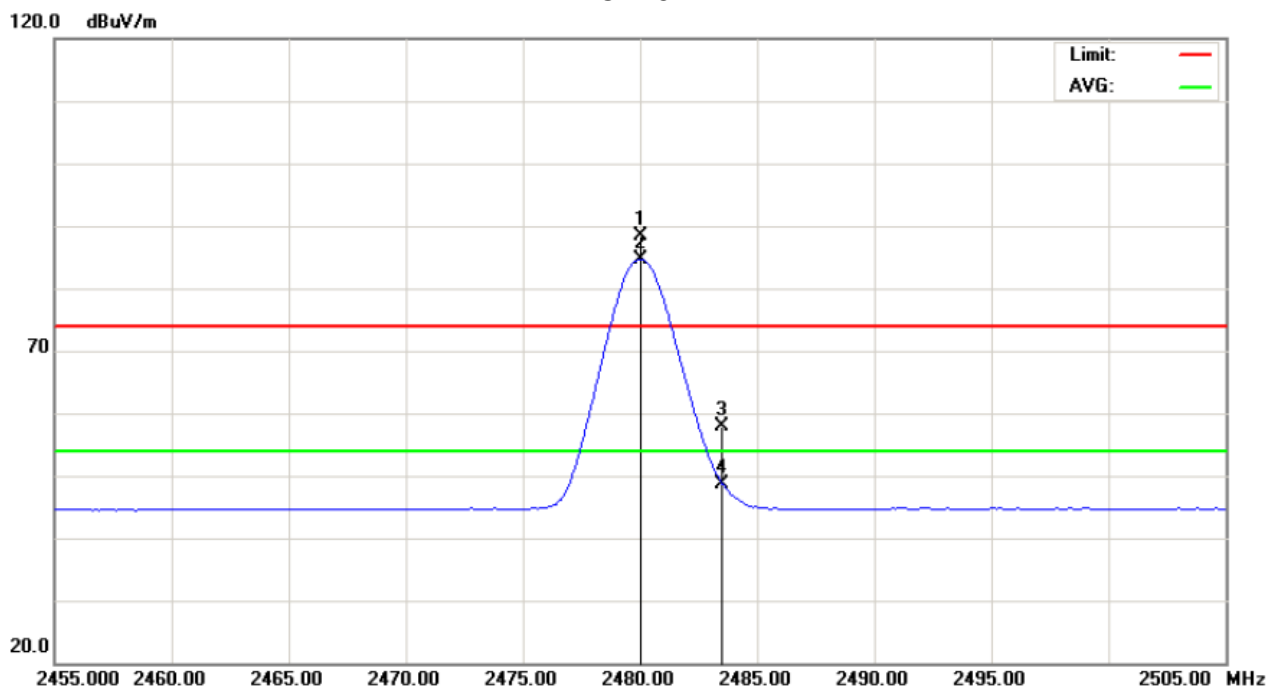
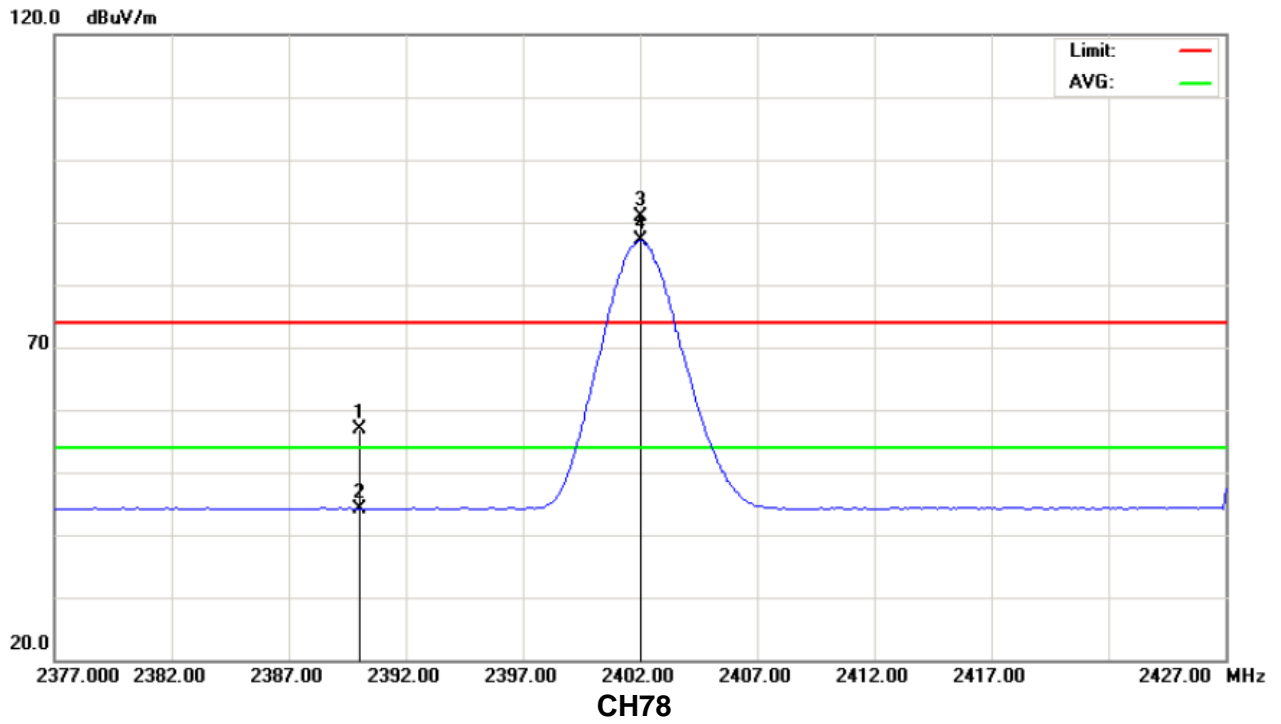
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	V	24.47	11.79	32.38	56.85	44.17	74.00	54.00	CH00
2483.50	V	25.12	16.00	32.74	57.86	48.74	74.00	54.00	CH78

Remark :

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (2) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



### Restricted Bands Requirements, Vertical CH00





EUT :	Handheld POS	Model Name :	P234
Temperature :	24 °C	Relative Humidity :	45%
Test Voltage :	AC 120V/60Hz		
Test Mode :	Horizontal (3Mbps)		
Note :	1. The transmitter was setup to transmit at the lowest channel (CH00). Then the field strength was measured at 2310-2390 MHz. 2. The transmitter was setup to transmit at the highest channel (CH78). Then the field strength was measured at 2483.5-2500 MHz.		

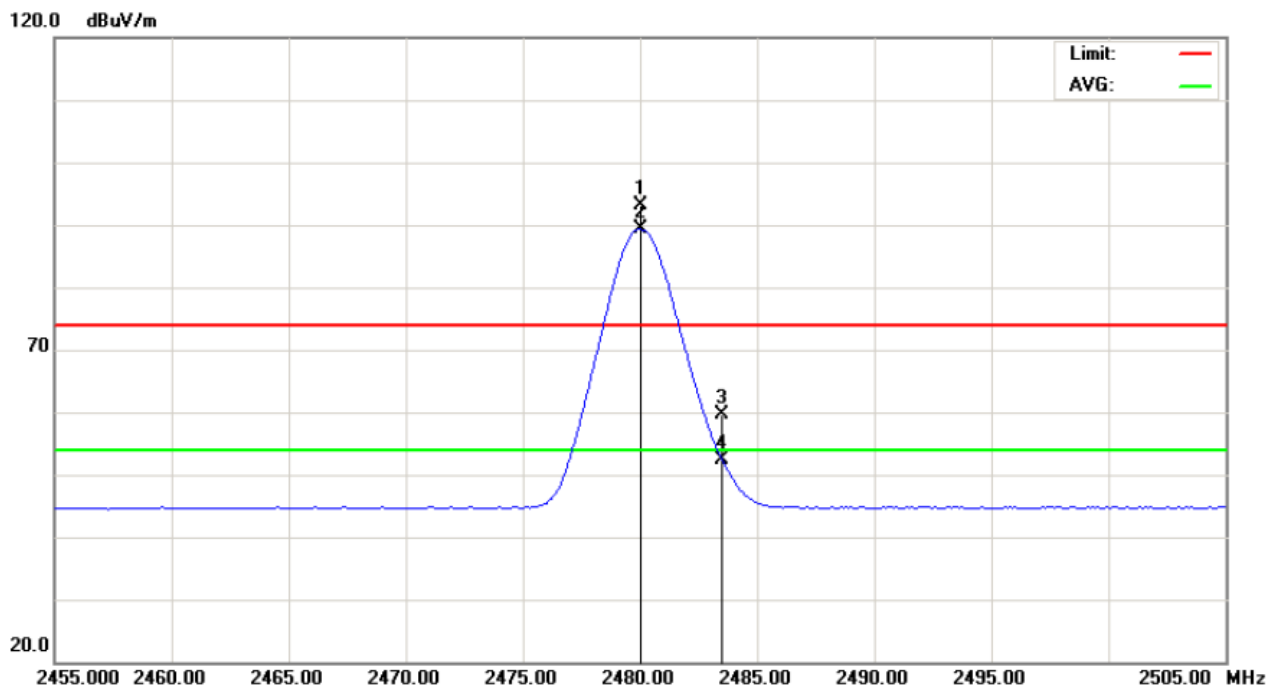
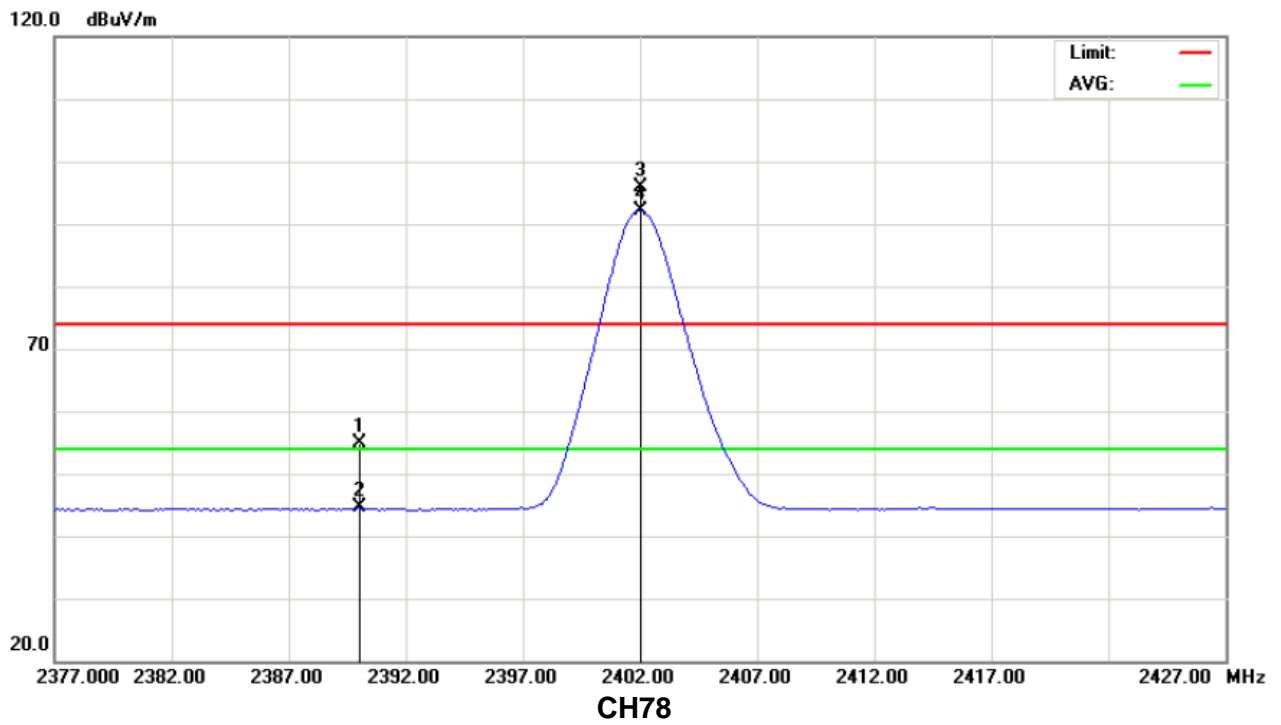
Freq. (MHz)	Ant.Pol. H/V	Reading		Ant./CF CF(dB)	Act.		Limit		Note
		Peak (dBuV)	AV (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Peak (dBuV/m)	AV (dBuV/m)	
2390.00	H	22.42	12.15	32.38	54.80	44.53	74.00	54.00	CH00
2483.50	H	26.82	19.57	32.74	59.56	52.31	74.00	54.00	CH78

Remark :

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission ◦
- (2) EUT Orthogonal Axis :  
 "X" - denotes Laid on Table ; "Y" - denotes Vertical Stand ; "Z" - denotes Side Stand



### Restricted Bands Requirements, Horizontal CH00







**5. NUMBER OF HOPPING CHANNEL**

**5.1 APPLIED PROCEDURES / LIMIT**

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Frequency Range (MHz)	Result
15.247 (a)(1)(ii)	Number of Hopping Channel	2400-2483.5	PASS

**5.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: " N/A" denotes No Model Name, Serial No. or No Calibration specified.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RB	100 kHz
VB	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

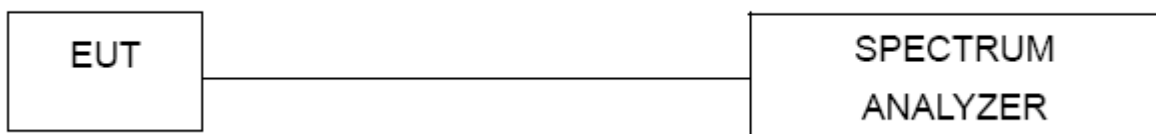
**5.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

**5.1.3 DEVIATION FROM STANDARD**

No deviation.

**5.1.4 TEST SETUP**



**5.1.5 EUT OPERATION CONDITIONS**

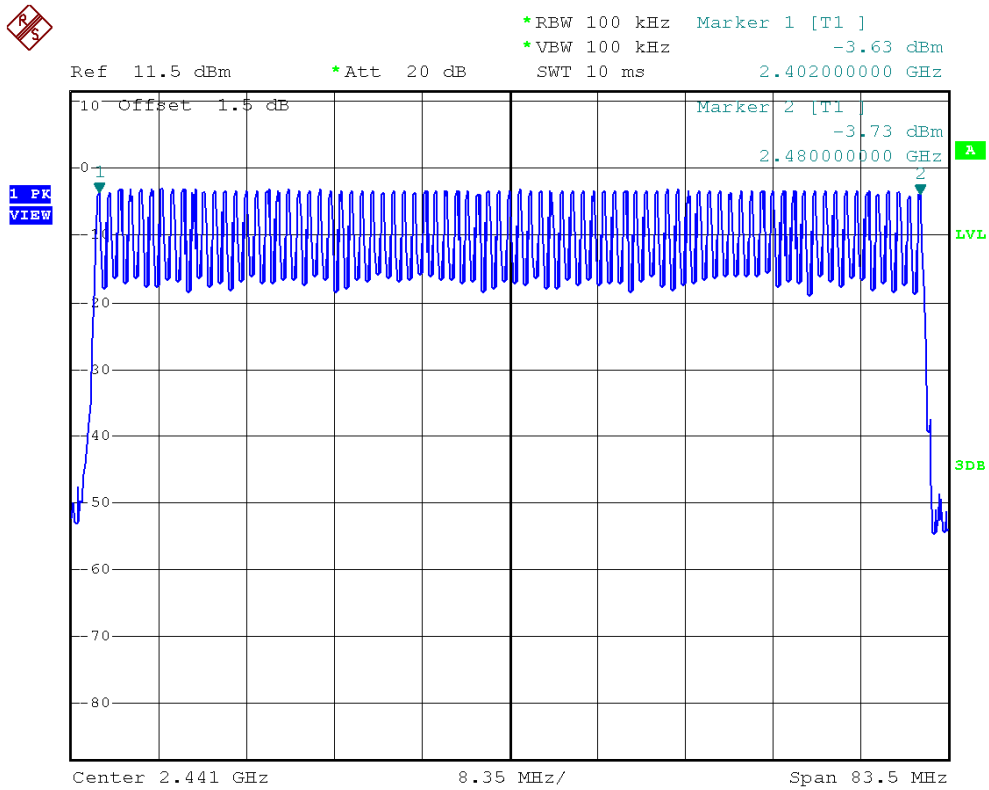
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**5.1.6 TEST RESULTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	Hopping Mode (1Mbps)		

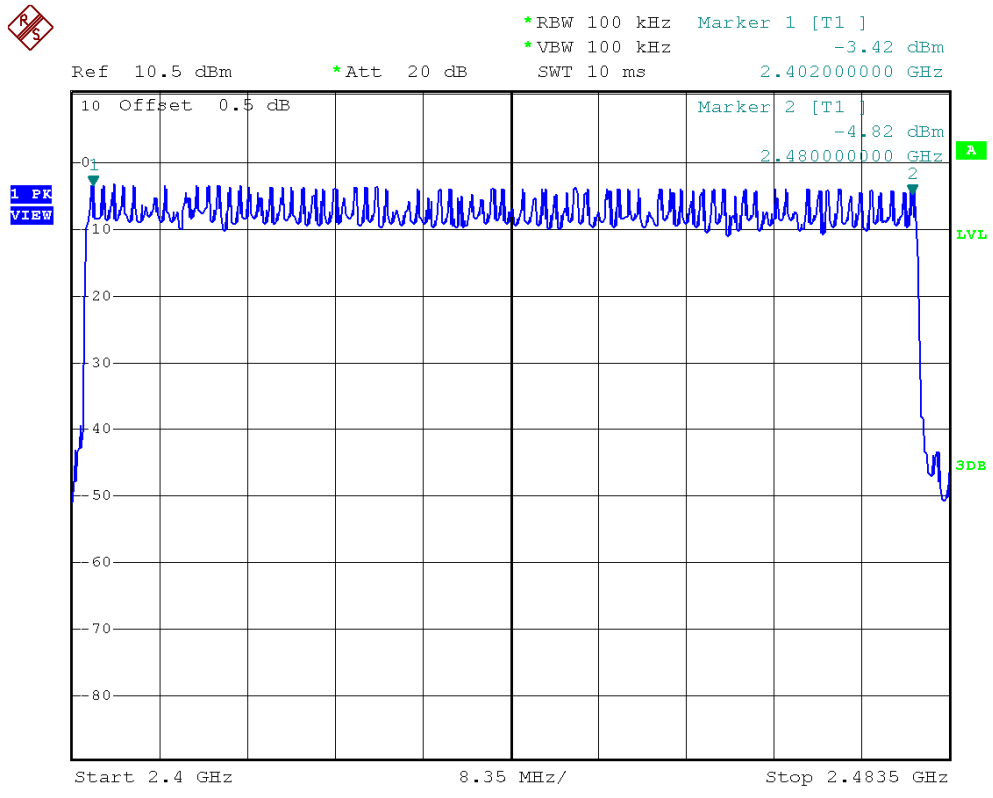
Number of Hopping Channel	79
---------------------------	----





EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	Hopping Mode (3Mbps)		

Number of Hopping Channel	79
---------------------------	----





**6. AVERAGE TIME OF OCCUPANCY**

**6.1 APPLIED PROCEDURES / LIMIT**

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (a)(1)(ii)	Average Time of Occupancy	< = 0.4 sec (a 30 second period)	2400-2483.5	PASS

**6.1.1 MEASUREMENT INSTRUMENTS LIST**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

**6.1.2 TEST PROCEDURE**

- a. The transmitter output (antenna port) was connected to the spectrum analyser
- b. Set RBW of spectrum analyzer to 100kHz and VBW to 100kHz.
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
- d. Sweep Time is more than once pulse time.
- e. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
- f. Measure the maximum time duration of one single pulse.
- g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
- h. Measure the maximum time duration of one single pulse.
- i. DH5 Packet permit maximum  $1600 / 79 / 6 = 3.37$  hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times  $3.37 \times 31.6 = 106.6$  within 31.6 seconds.
- j. DH3 Packet permit maximum  $1600 / 79 / 4 = 5.06$  hops per second in each channel (3 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times  $5.06 \times 31.6 = 160$  within 31.6 seconds.
- k. DH1 Packet permit maximum  $1600 / 79 / 2 = 10.12$  hops per second in each channel (1 time slot RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times  $10.12 \times 31.6 = 320$  within 31.6 seconds.

**6.1.3 DEVIATION FROM STANDARD**

No deviation.



**6.1.4 TEST SETUP**



**6.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

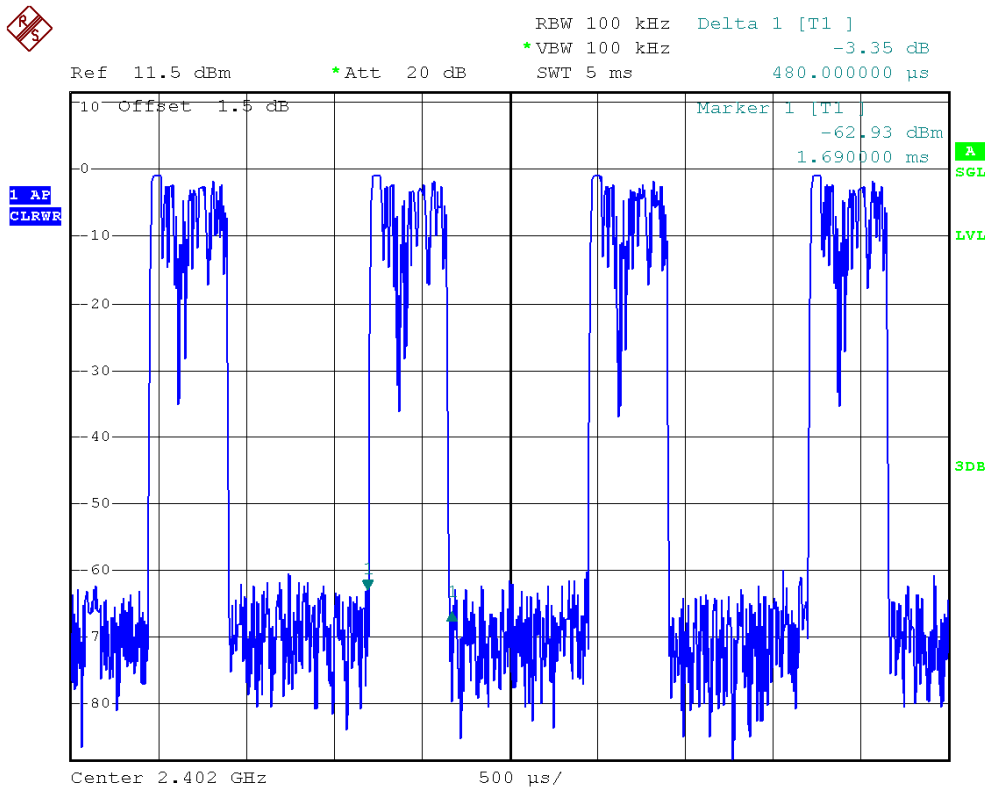


**6.1.6 TEST RESULTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH00(ADAPTER : EDAC)-DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2402 MHz	0.4800	0.1536	0.4000
DH3	2402 MHz	1.7400	0.2784	0.4000
DH5	2402 MHz	3.0000	0.3200	0.4000

**CH00-DH1**

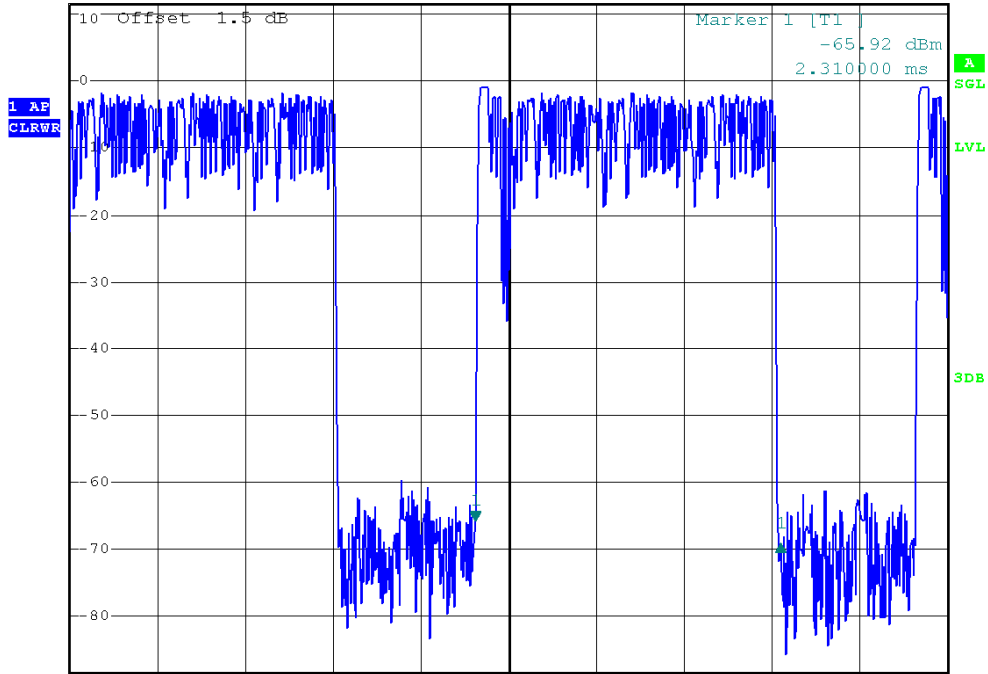




### CH00-DH3



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz -3.19 dB  
Ref 11.5 dBm \*Att 20 dB SWT 5 ms 1.740000 ms

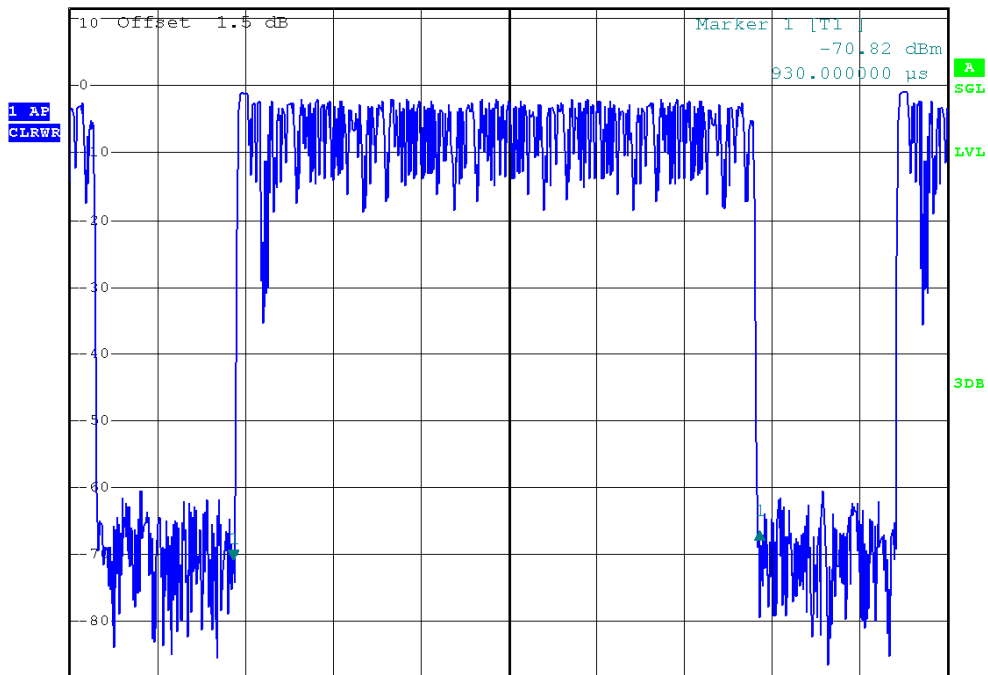


Center 2.402 GHz 500 us/

### CH00-DH5



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz 4.18 dB  
Ref 11.5 dBm \*Att 20 dB SWT 5 ms 3.000000 ms



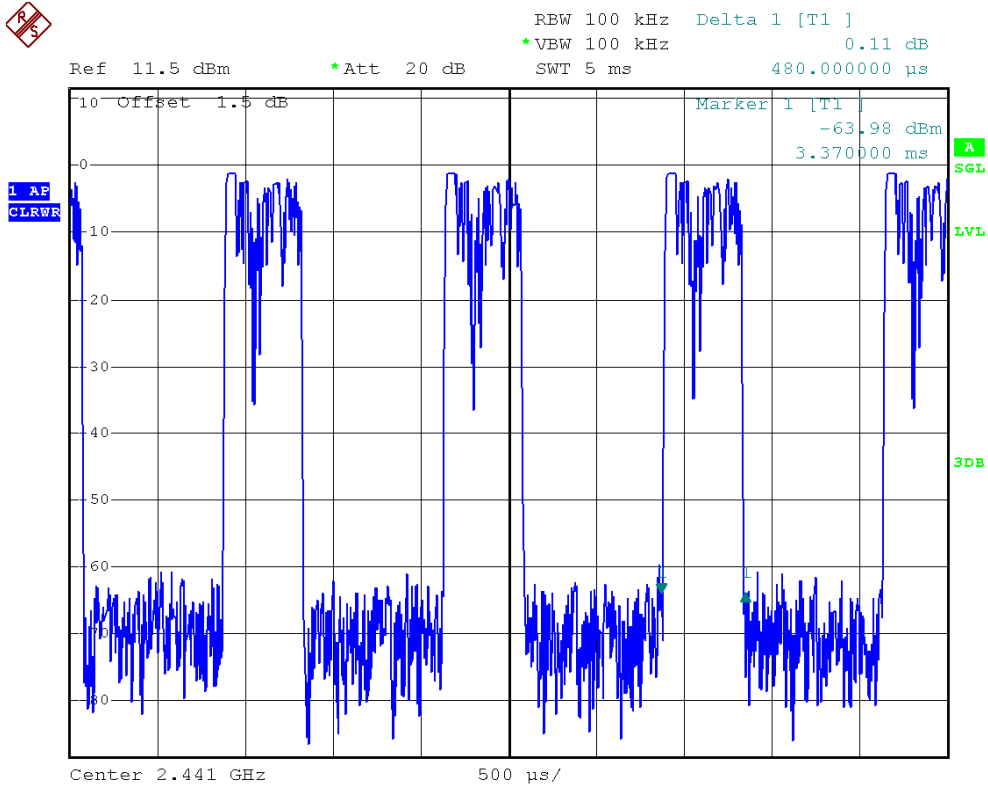
Center 2.402 GHz 500 us/



EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH39(ADAPTER : EDAC)-DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2441 MHz	0.4800	0.1536	0.4000
DH3	2441 MHz	1.7400	0.2784	0.4000
DH5	2441 MHz	2.9900	0.3189	0.4000

**CH39-DH1**



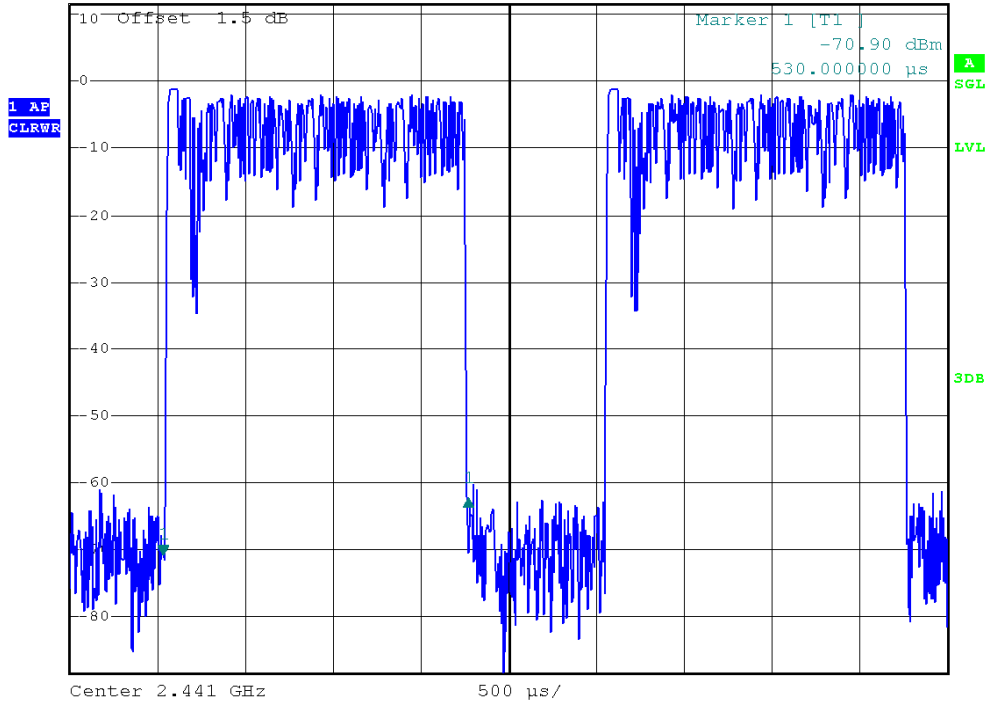




### CH39-DH3



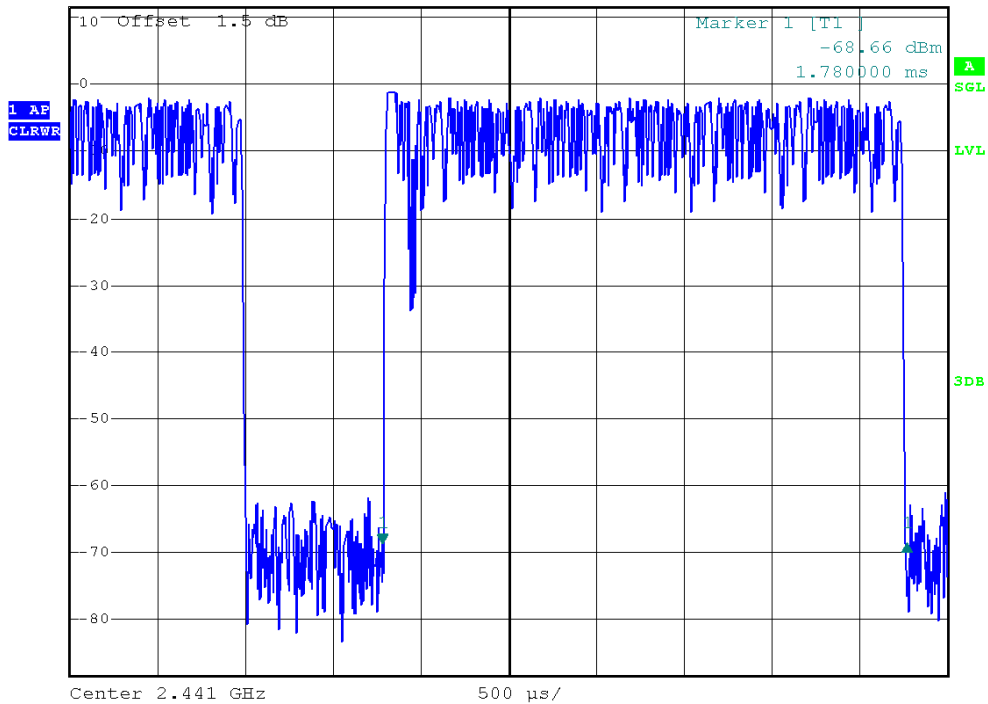
RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz 8.61 dB  
Ref 11.5 dBm \*Att 20 dB SWT 5 ms 1.740000 ms



### CH39-DH5



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz 0.00 dB  
Ref 11.5 dBm \*Att 20 dB SWT 5 ms 2.990000 ms

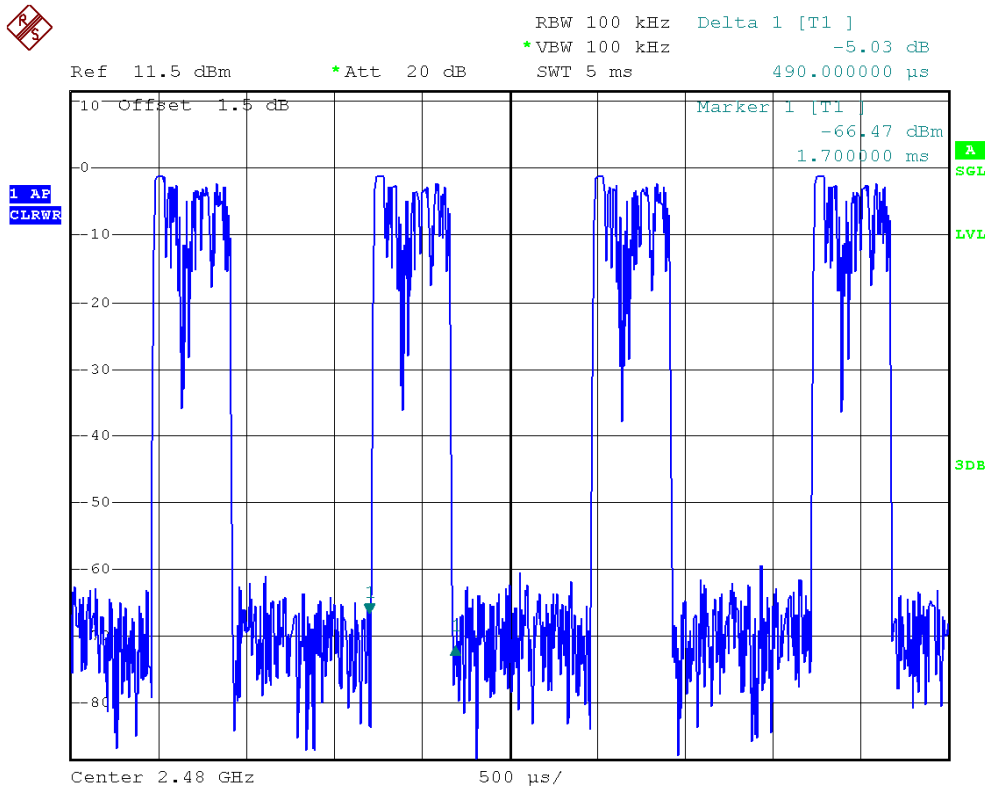




EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH78(ADAPTER : EDAC)-DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2480 MHz	0.4900	0.1568	0.4000
DH3	2480 MHz	1.7400	0.2784	0.4000
DH5	2480 MHz	2.9900	0.3189	0.4000

**CH78-DH1**

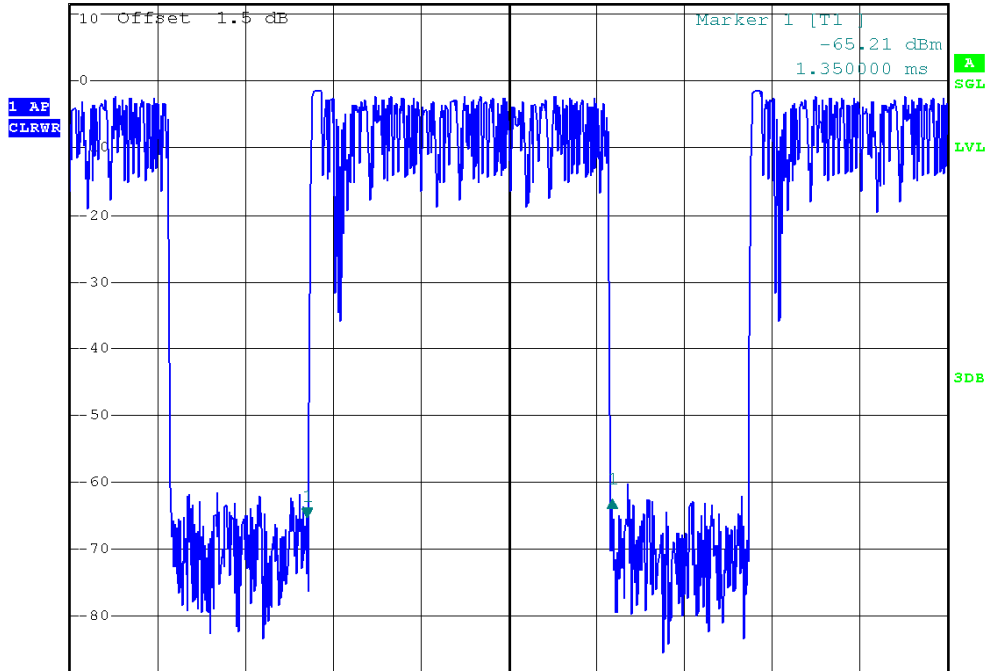




### CH78-DH3



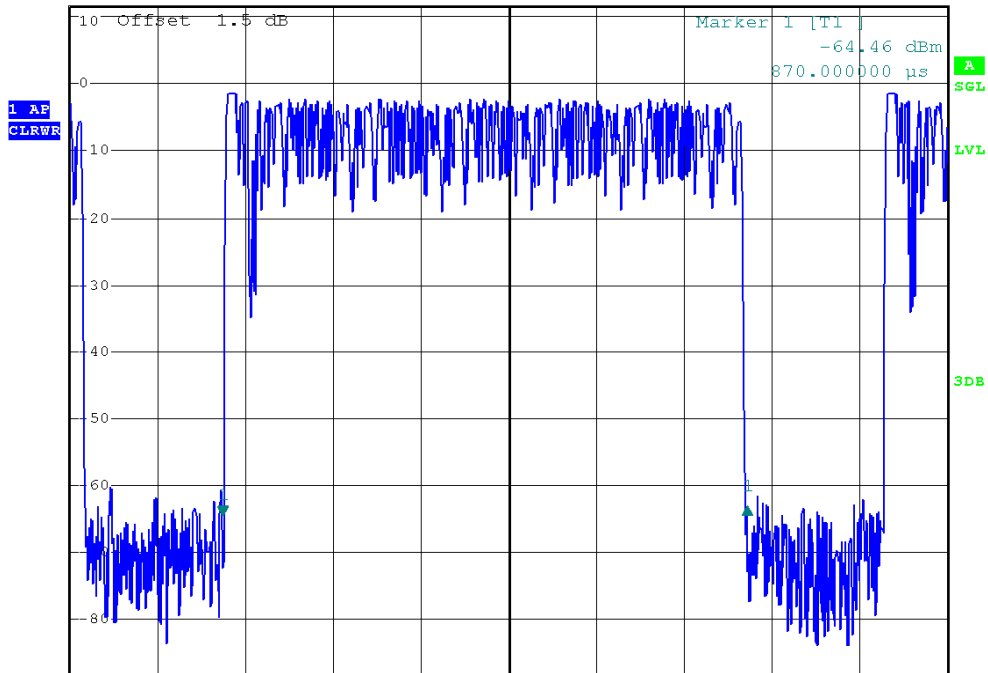
RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz 2.62 dB  
Ref 11.5 dBm \*Att 20 dB SWT 5 ms 1.740000 ms



### CH78-DH5



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz 1.32 dB  
Ref 11.5 dBm \*Att 20 dB SWT 5 ms 2.990000 ms

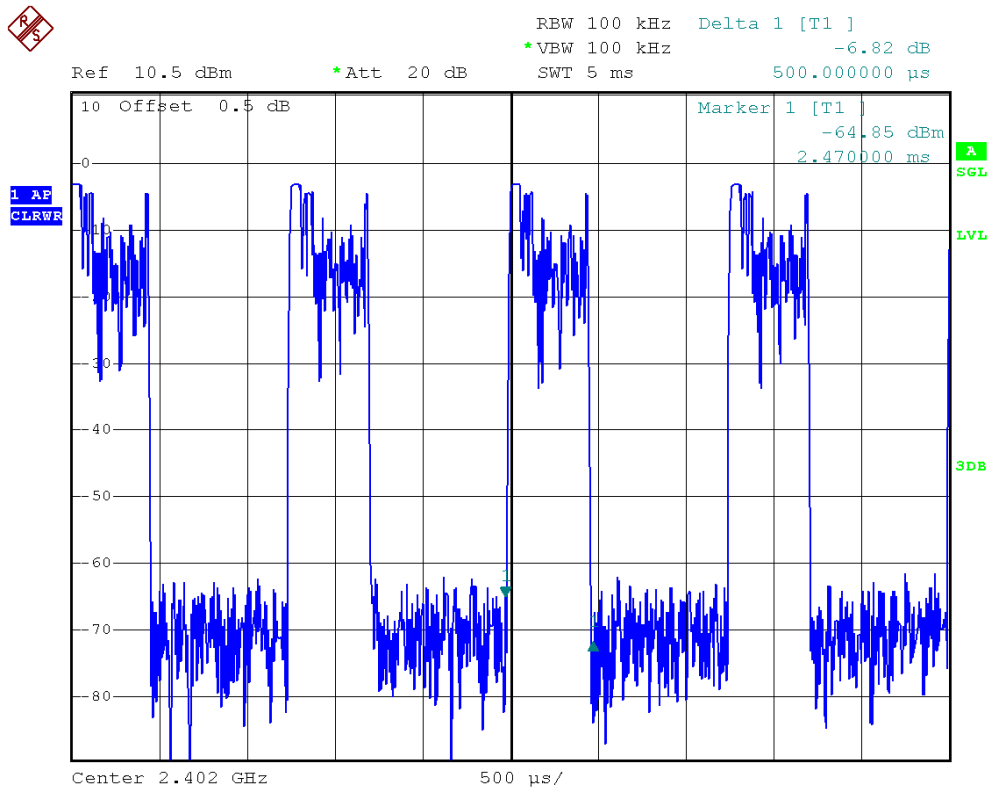




EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH00(ADAPTER : EDAC)-DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2402 MHz	0.5000	0.1600	0.4000
DH3	2402 MHz	1.7800	0.2848	0.4000
DH5	2402 MHz	3.0200	0.3221	0.4000

**CH00-DH1**





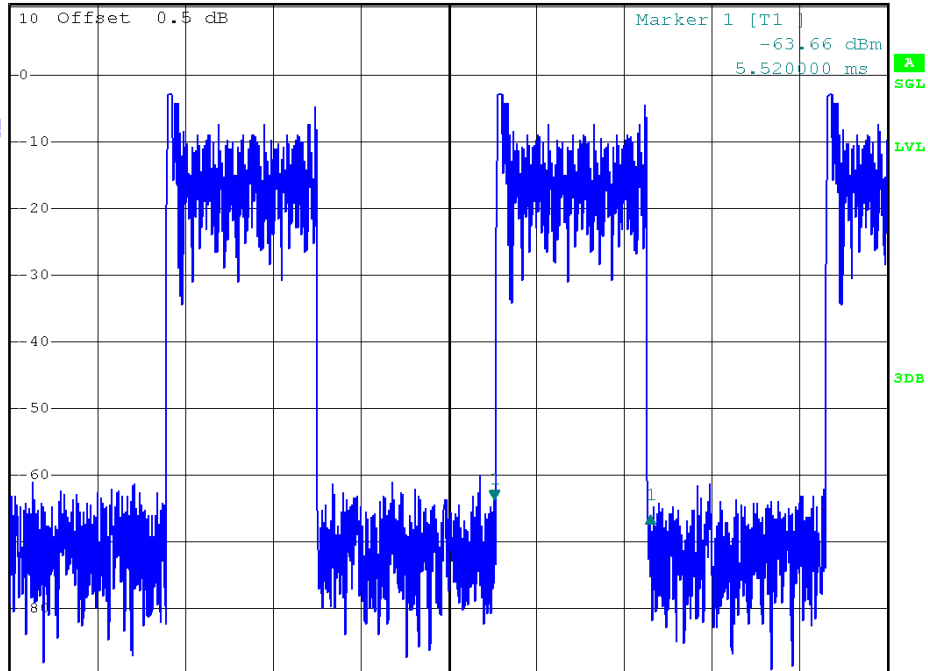
### CH00-DH3



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz -2.44 dB  
SWT 10 ms 1.780000 ms

Ref 10.5 dBm \*Att 20 dB

1 AB  
CLRWR



Center 2.402 GHz 1 ms/

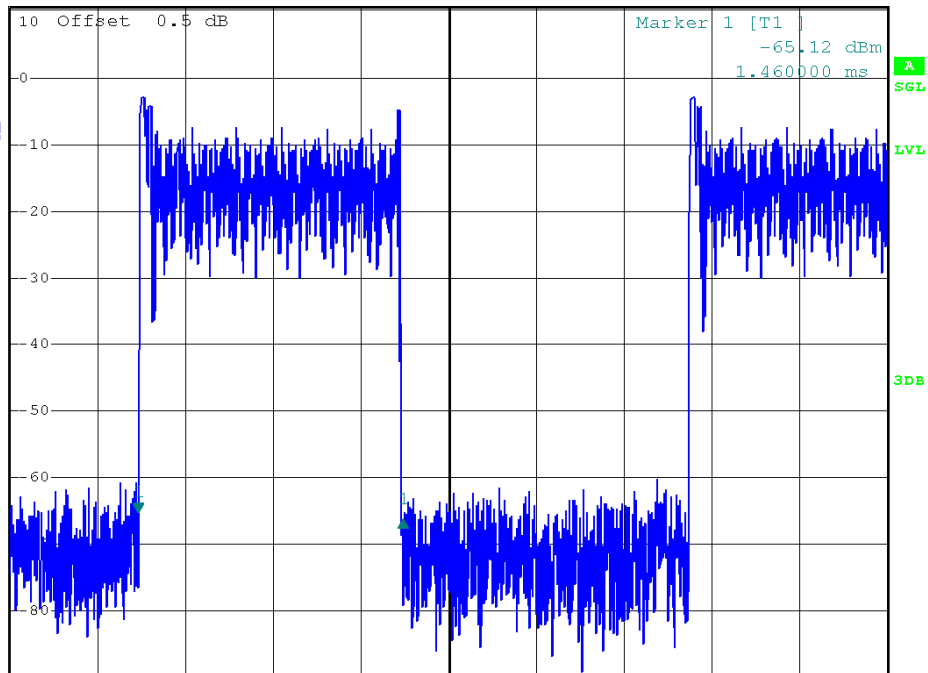
### CH00-DH5



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz -1.19 dB  
SWT 10 ms 3.020000 ms

Ref 10.5 dBm \*Att 20 dB

1 AB  
CLRWR



Center 2.402 GHz 1 ms/



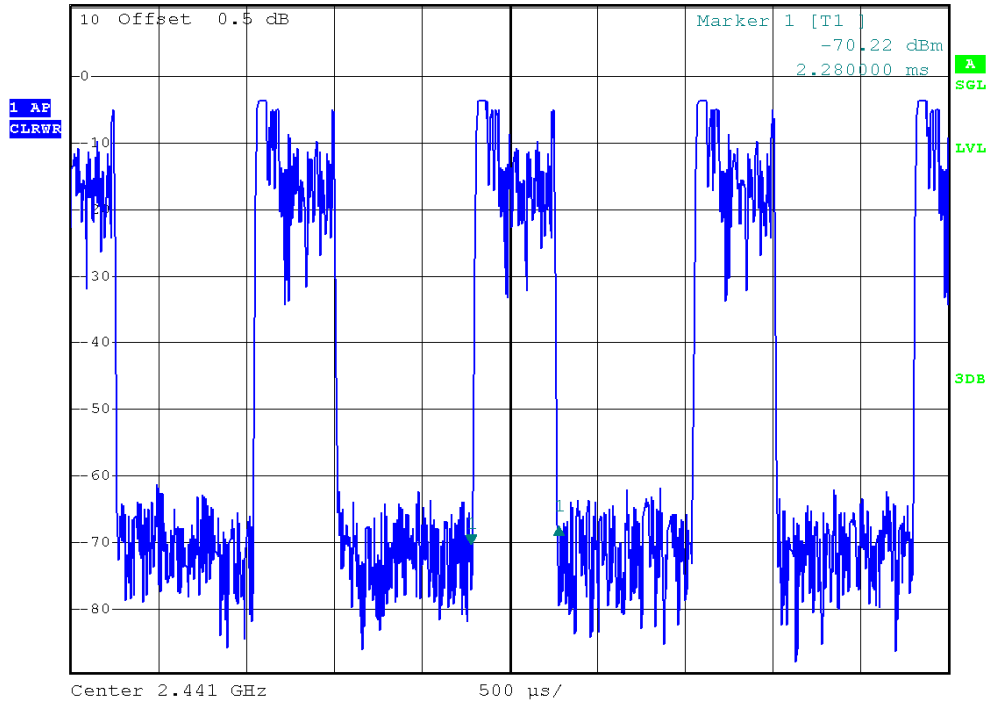
EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH39(ADAPTER : EDAC)-DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2441 MHz	0.5000	0.1600	0.4000
DH3	2441 MHz	1.7600	0.2816	0.4000
DH5	2441 MHz	3.0200	0.3221	0.4000

**CH39-DH1**



RBW 100 kHz Delta 1 [T1 ]  
 \*VBW 100 kHz 2.64 dB  
 Ref 10.5 dBm \*Att 20 dB SWT 5 ms 500.000000 µs





### CH39-DH3

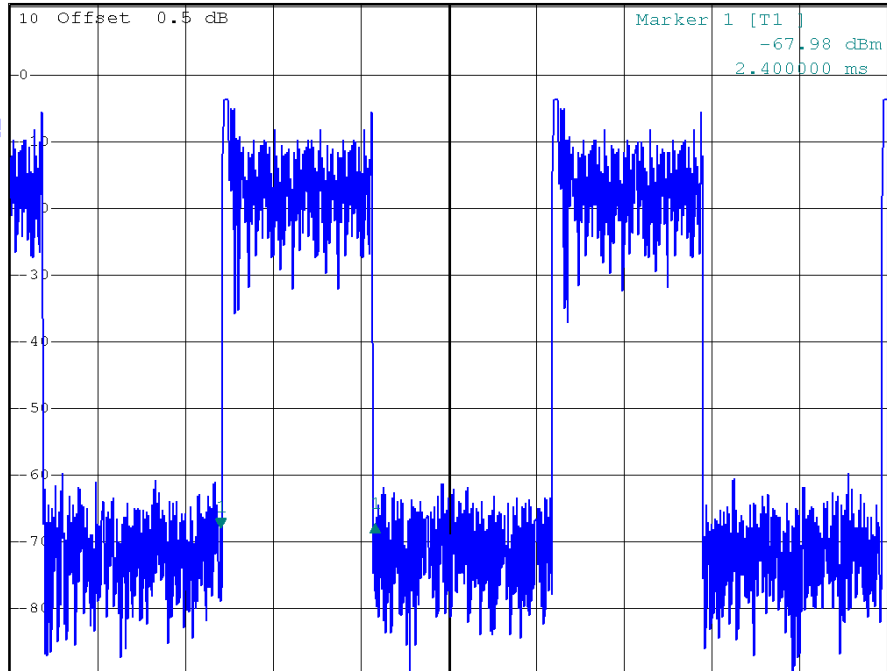


RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz 0.60 dB  
SWT 10 ms 1.760000 ms

Ref 10.5 dBm

\*Att 20 dB

1 AB  
CLRWR



Center 2.441 GHz

1 ms/

### CH39-DH5

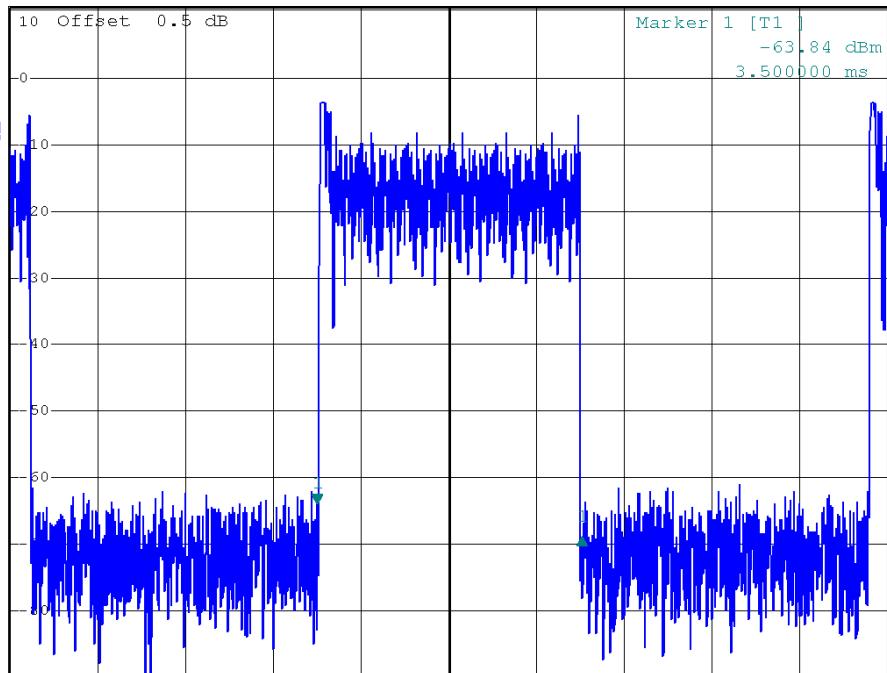


RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz -5.07 dB  
SWT 10 ms 3.020000 ms

Ref 10.5 dBm

\*Att 20 dB

1 AB  
CLRWR



Center 2.441 GHz

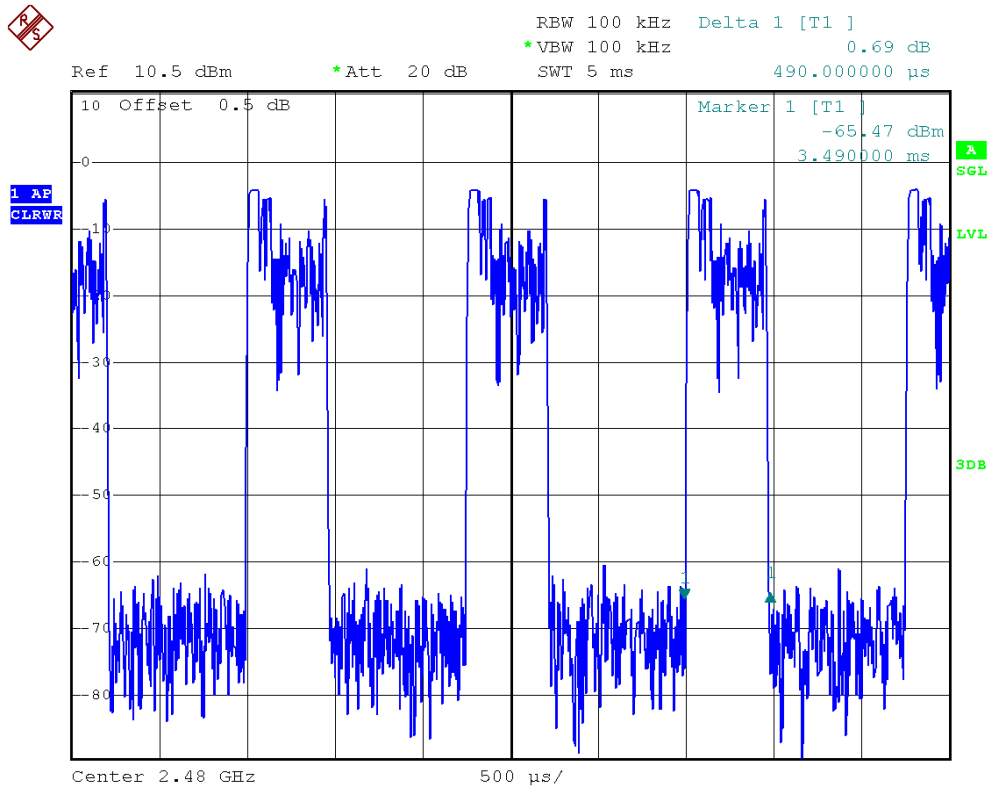
1 ms/



EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH78(ADAPTER : EDAC)-DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2480 MHz	0.4900	0.1568	0.4000
DH3	2480 MHz	1.7600	0.2816	0.4000
DH5	2480 MHz	3.0400	0.3243	0.4000

**CH78-DH1**







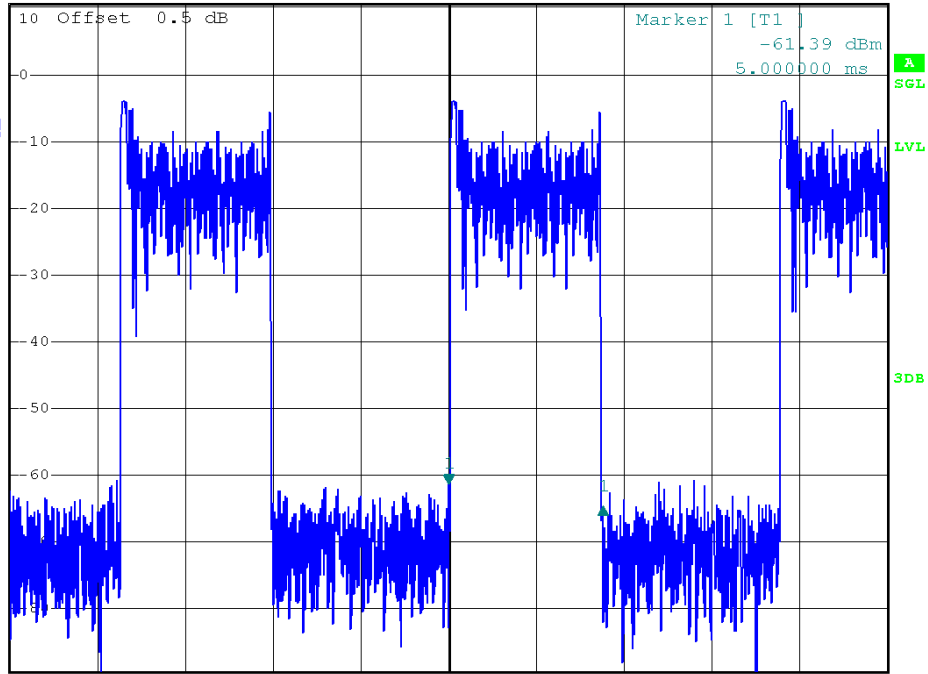
### CH78-DH3



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz -3.20 dB  
SWT 10 ms 1.760000 ms

Ref 10.5 dBm \*Att 20 dB

1 AB  
CLRWR



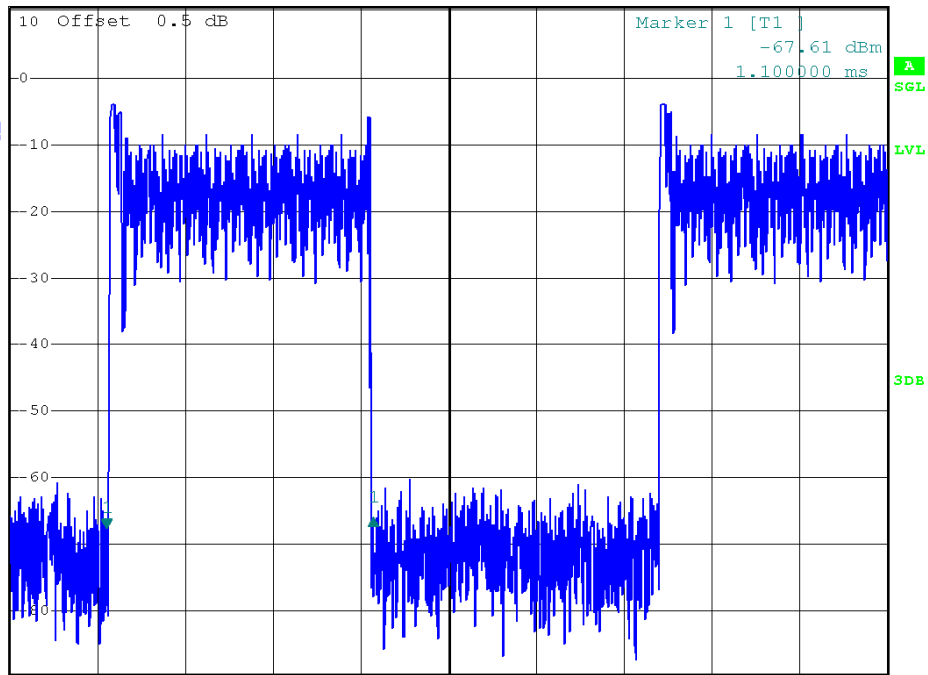
### CH78-DH5



RBW 100 kHz Delta 1 [T1 ]  
\*VBW 100 kHz 1.53 dB  
SWT 10 ms 3.040000 ms

Ref 10.5 dBm \*Att 20 dB

1 AB  
CLRWR





**7. HOPPING CHANNEL SEPARATION MEASUREMENT**

**7.1 APPLIED PROCEDURES / LIMIT**

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

**7.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 300 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

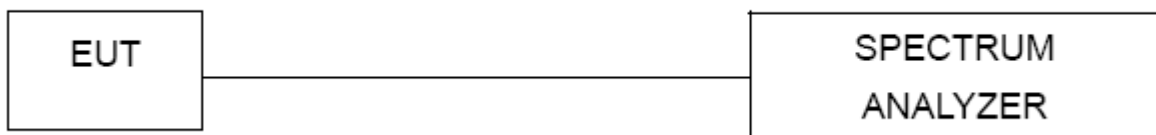
**7.1.2 TEST PROCEDURE**

- a. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
- b. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for 20 dB bandwidth measurement.
- c. The resolution bandwidth of 100 kHz and the video bandwidth of 300 kHz were utilised for channel separation measurement.

**7.1.3 DEVIATION FROM STANDARD**

No deviation.

**7.1.4 TEST SETUP**



**7.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

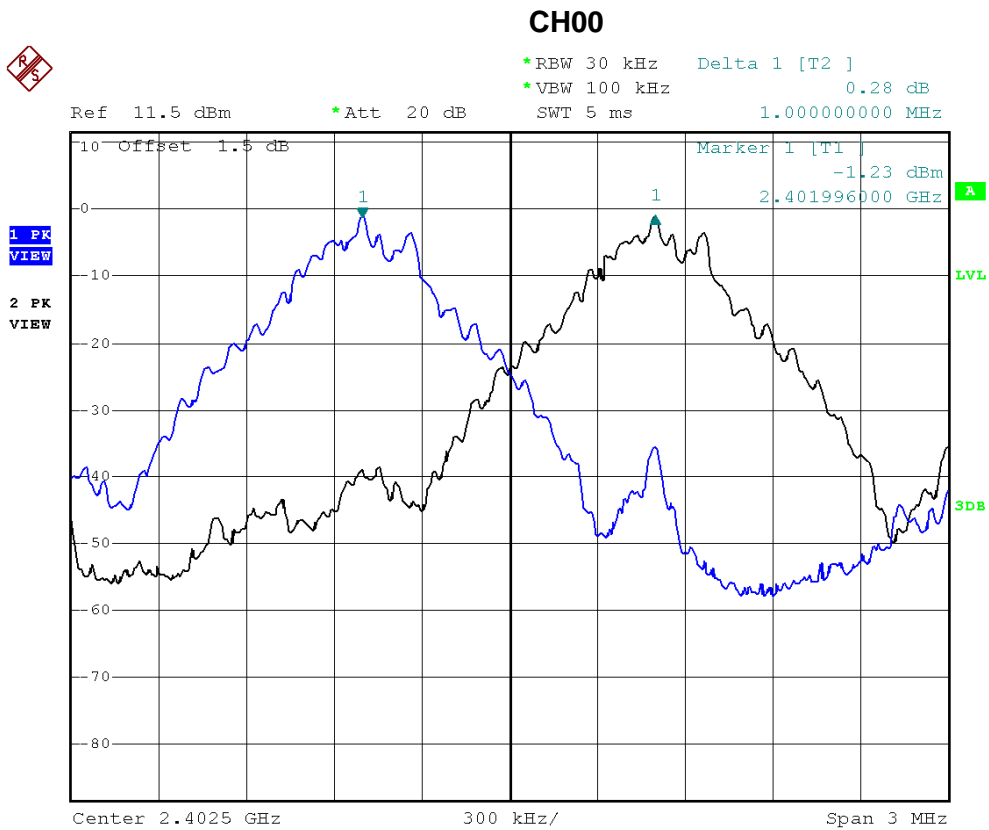


**7.1.6 TEST RESULTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

Frequency	Ch. Separation (MHz)	20dB Bandwidth (MHz)	Result
2402 MHz	1	0.63	Complies
2441 MHz	1	0.62	Complies
2480 MHz	1	0.63	Complies

**Ch. Separation Limits: >20dB bandwidth or >2/3 of 20dB bandwidth**



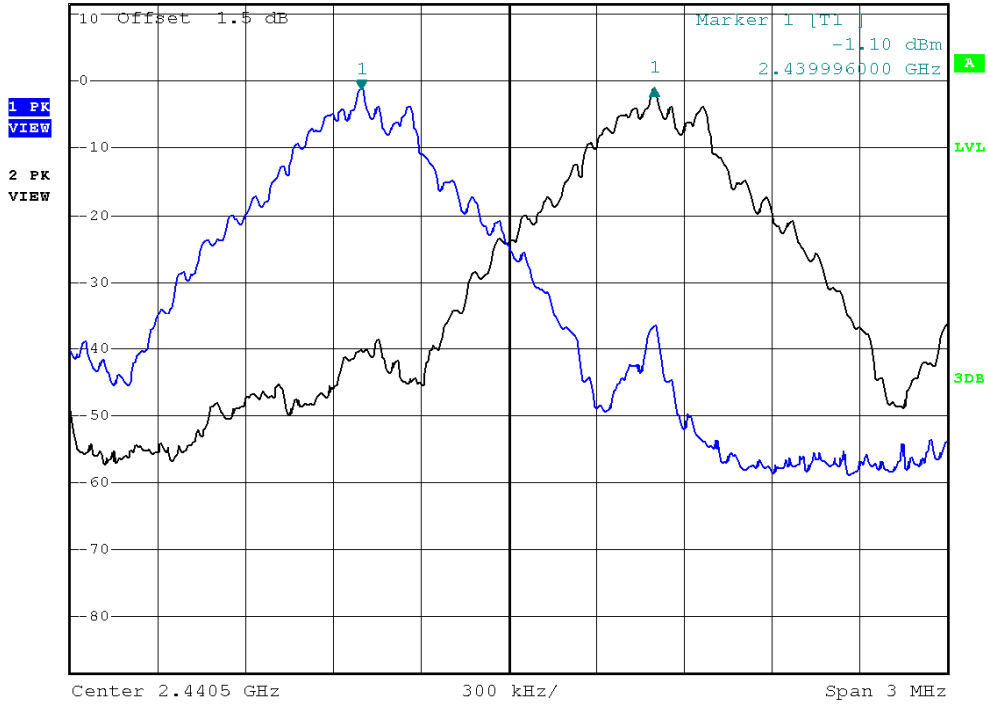


### CH39



\*RBW 30 kHz Delta 1 [T2 ]  
\*VBW 100 kHz 0.05 dB  
SWT 5 ms 1.000000000 MHz

Ref 11.5 dBm \*Att 20 dB

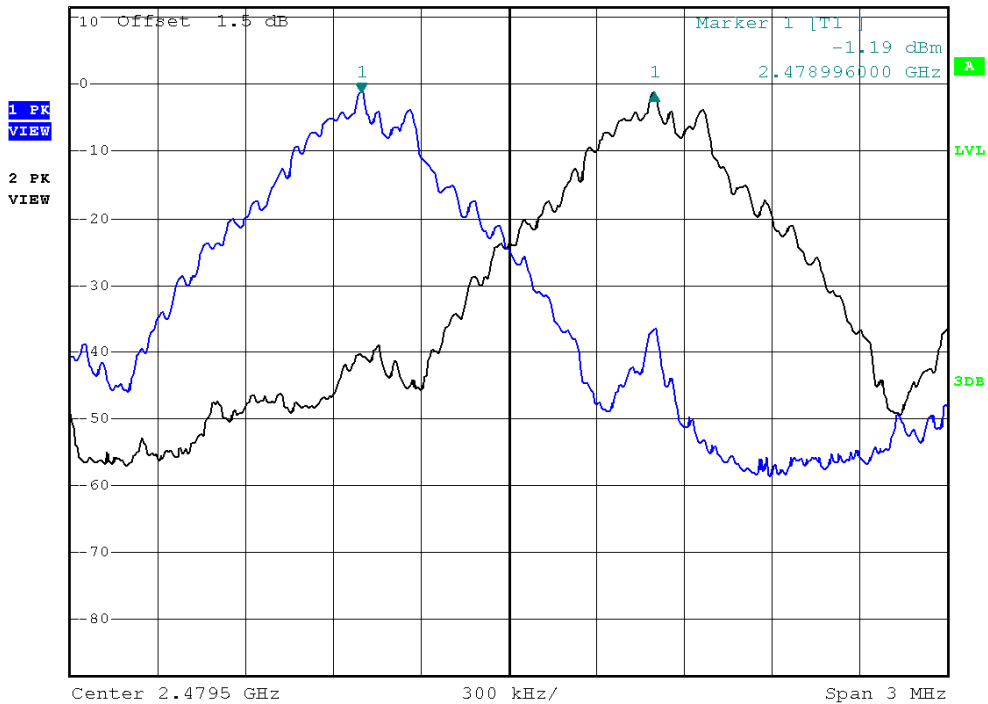


### CH78



\*RBW 30 kHz Delta 1 [T2 ]  
\*VBW 100 kHz -0.03 dB  
SWT 5 ms 1.000000000 MHz

Ref 11.5 dBm \*Att 20 dB

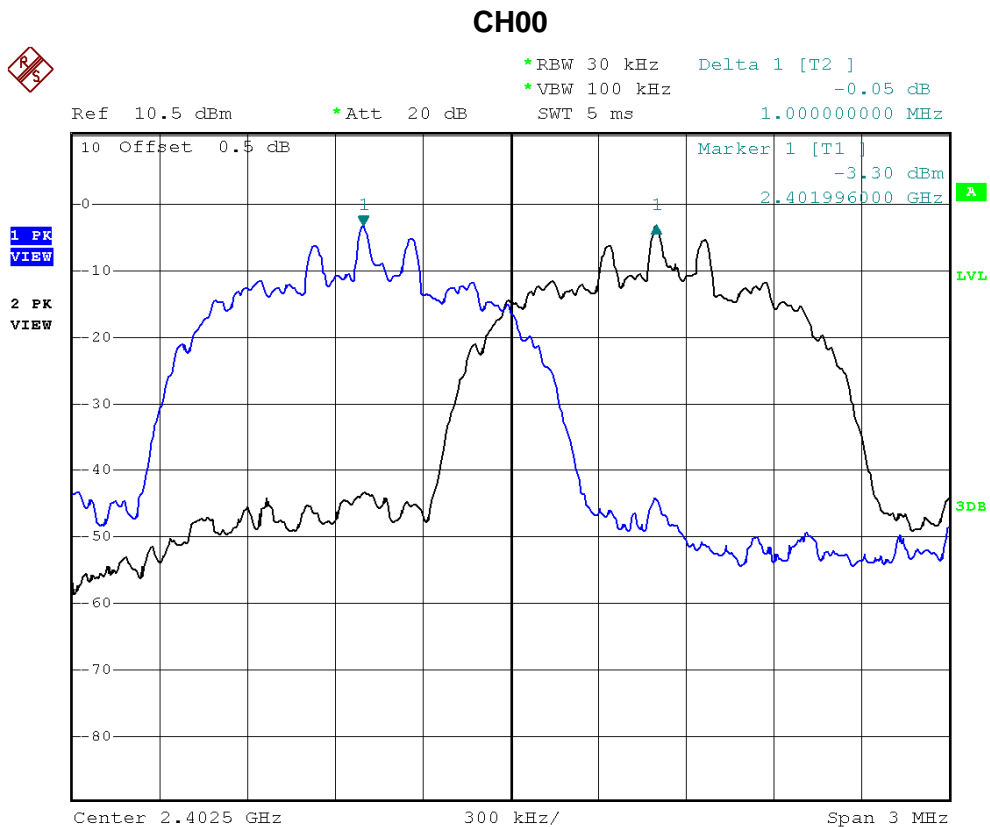




EUT :	Handheld POS	Model Name :	P234
Temperature :	25 °C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

Frequency	Ch. Separation (MHz)	20dB Bandwidth (MHz)	Result
2402 MHz	1	0.85	Complies
2441 MHz	1	0.85	Complies
2480 MHz	1	0.85	Complies

**Ch. Separation Limits: >20dB bandwidth or >2/3 of 20dB bandwidth**





### CH39



\*RBW 30 kHz Delta 1 [T2 ]  
\*VBW 100 kHz -0.02 dB  
SWT 5 ms 1.000000000 MHz

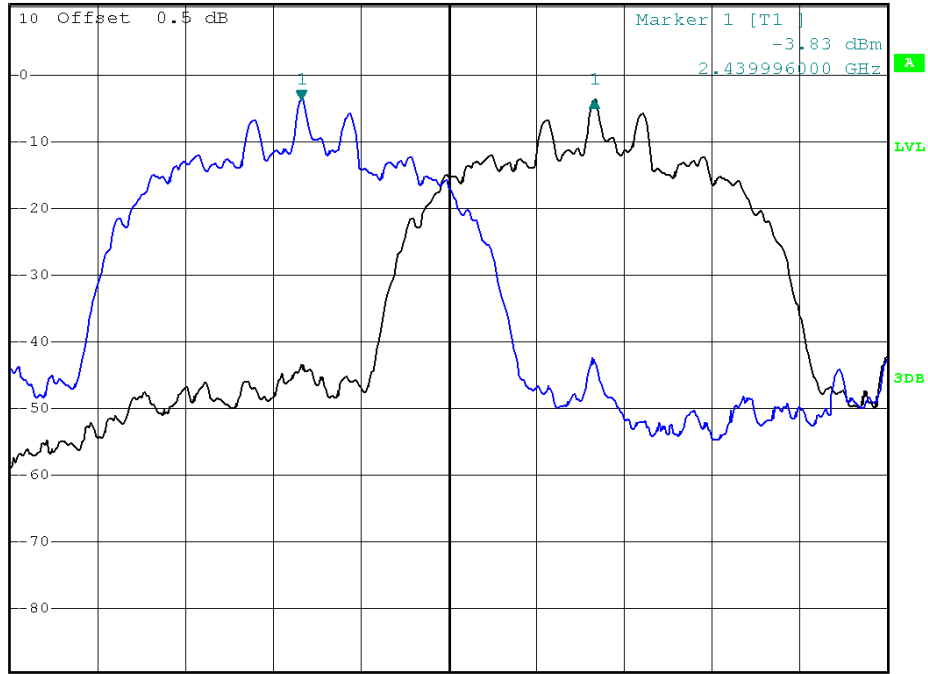
Ref 10.5 dBm

\*Att 20 dB

1.000000000 MHz

1 PK VIEW

2 PK VIEW



Center 2.4405 GHz

300 kHz/

Span 3 MHz

### CH78



\*RBW 30 kHz Delta 1 [T2 ]  
\*VBW 100 kHz -0.08 dB  
SWT 5 ms 1.000000000 MHz

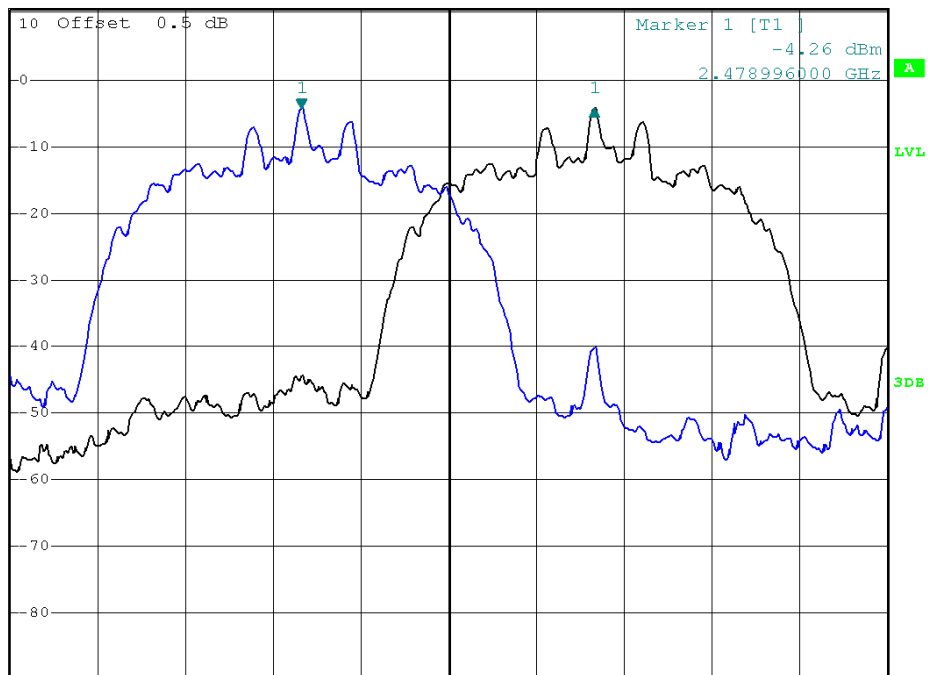
Ref 10.5 dBm

\*Att 20 dB

1.000000000 MHz

1 PK VIEW

2 PK VIEW



Center 2.4795 GHz

300 kHz/

Span 3 MHz



**8. BANDWIDTH TEST**

**8.1 APPLIED PROCEDURES / LIMIT**

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (a)(2)	Bandwidth	$\geq$ 25 KHz or two-thirds of the 20 dB bandwidth	2400-2483.5	PASS

**8.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 300 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

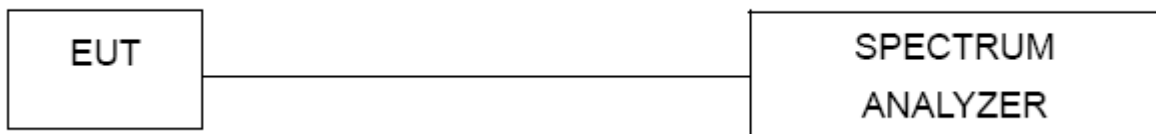
**8.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

**8.1.3 DEVIATION FROM STANDARD**

No deviation.

**8.1.4 TEST SETUP**



**8.1.5 EUT OPERATION CONDITIONS**

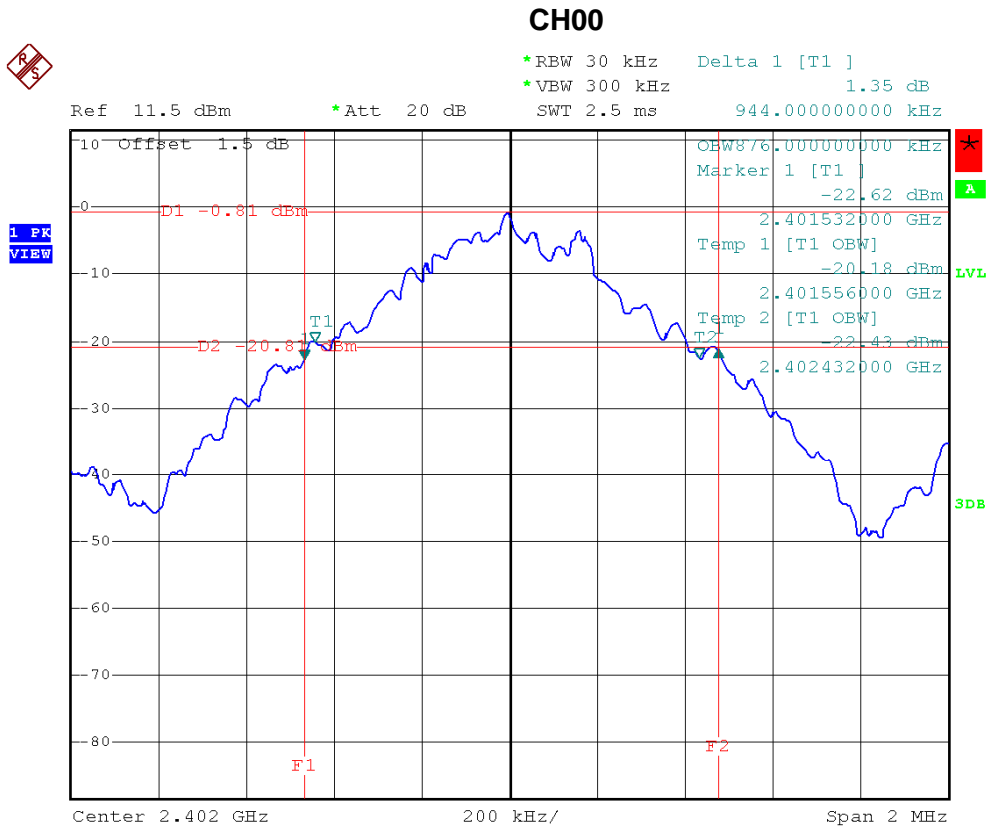
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**8.1.6 TEST RESULTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	23.5 °C	Relative Humidity :	75%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

Frequency	20dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2402 MHz	0.944	≥ 25 KHz or two-thirds of the 20 dB bandwidth	<b>PASS</b>
2441 MHz	0.936		<b>PASS</b>
2480 MHz	0.940		<b>PASS</b>



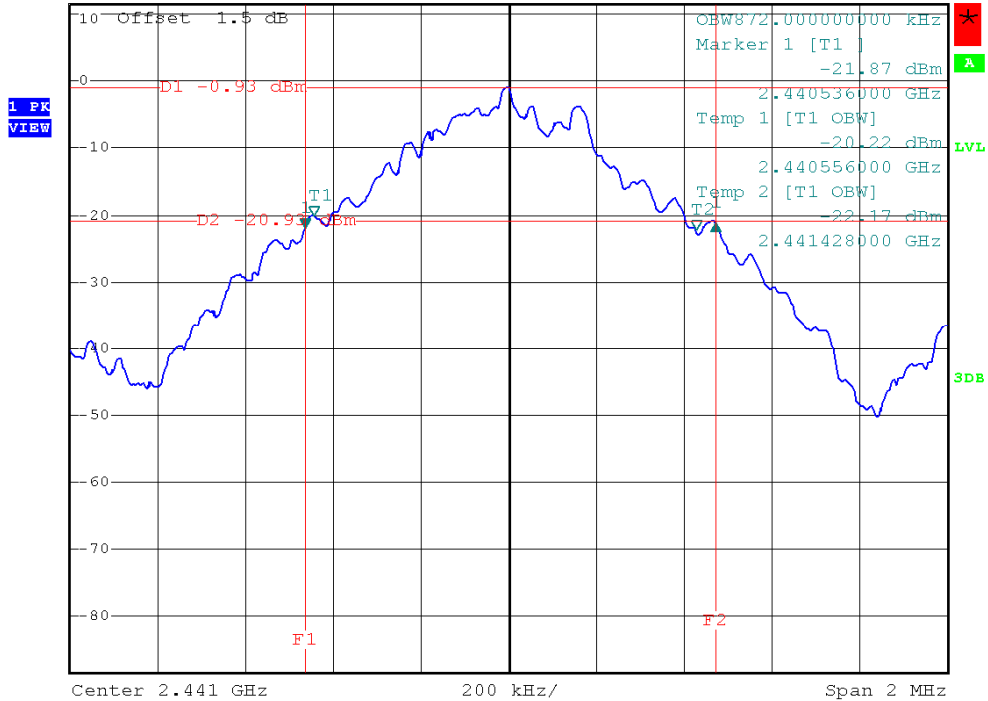




### CH39



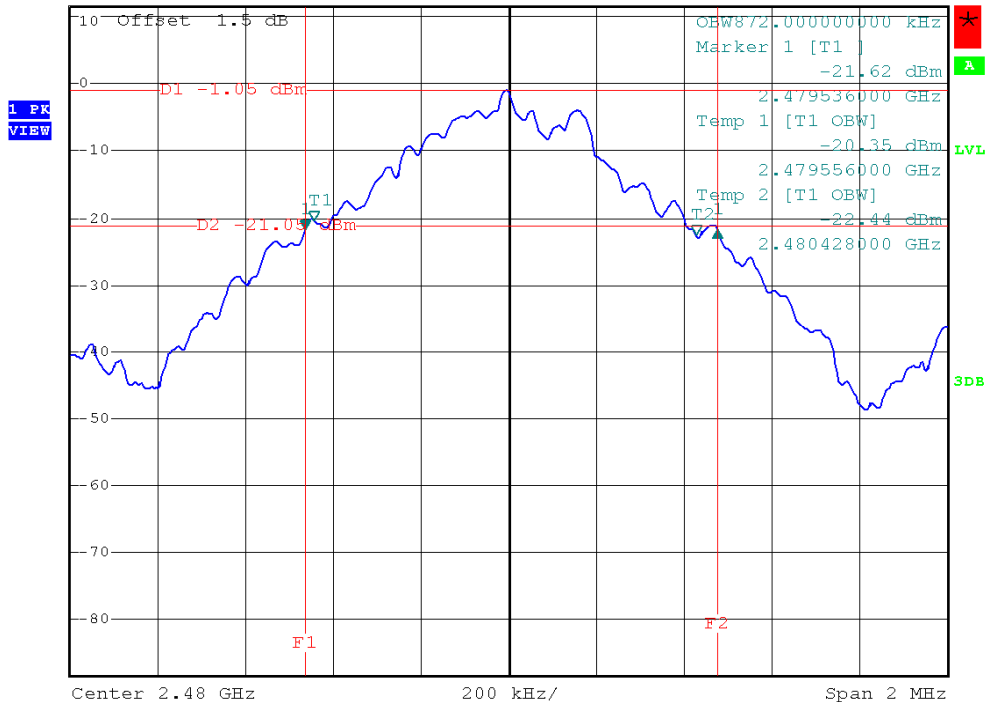
\*RBW 30 kHz Delta 1 [T1 ]  
 \*VBW 300 kHz 0.67 dB  
 Ref 11.5 dBm \*Att 20 dB SWT 2.5 ms 936.000000000 kHz



### CH78



\*RBW 30 kHz Delta 1 [T1 ]  
 \*VBW 300 kHz 0.02 dB  
 Ref 11.5 dBm \*Att 20 dB SWT 2.5 ms 940.000000000 kHz

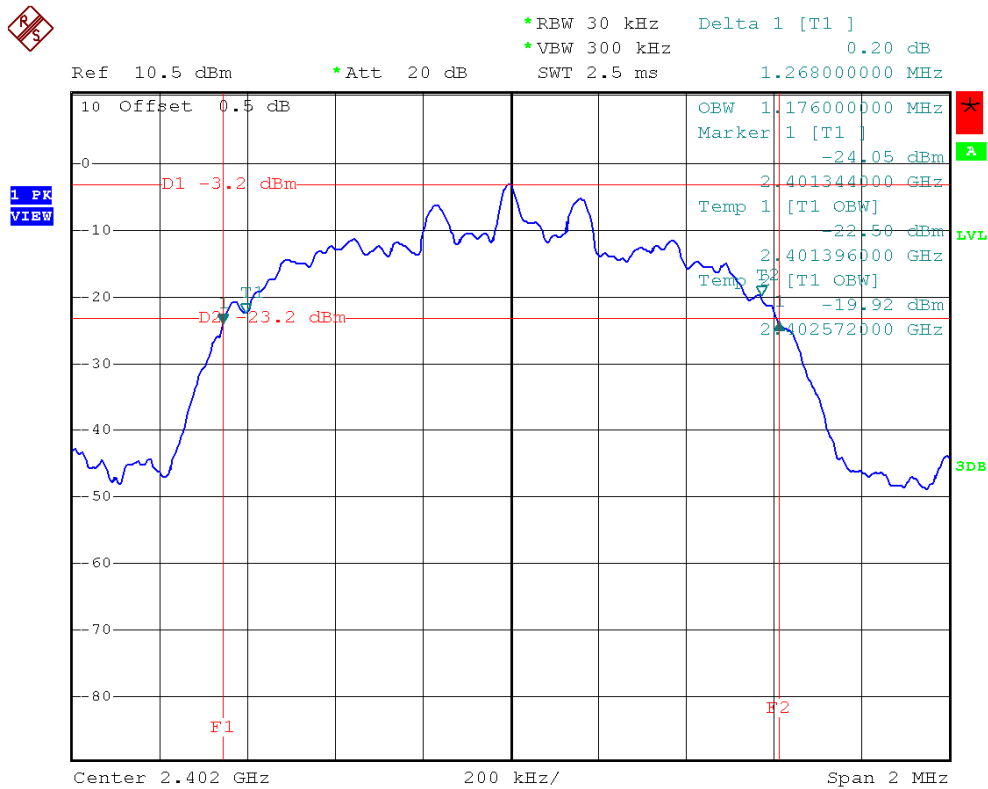




EUT :	Handheld POS	Model Name :	P234
Temperature :	23.5 °C	Relative Humidity :	75%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

Frequency	20dB Bandwidth (MHz)	Channel Separation (MHz)	Result
2402 MHz	1.268	≥ 25 KHz or two-thirds of the 20 dB bandwidth	<b>PASS</b>
2441 MHz	1.268		<b>PASS</b>
2480 MHz	1.268		<b>PASS</b>

**CH00**

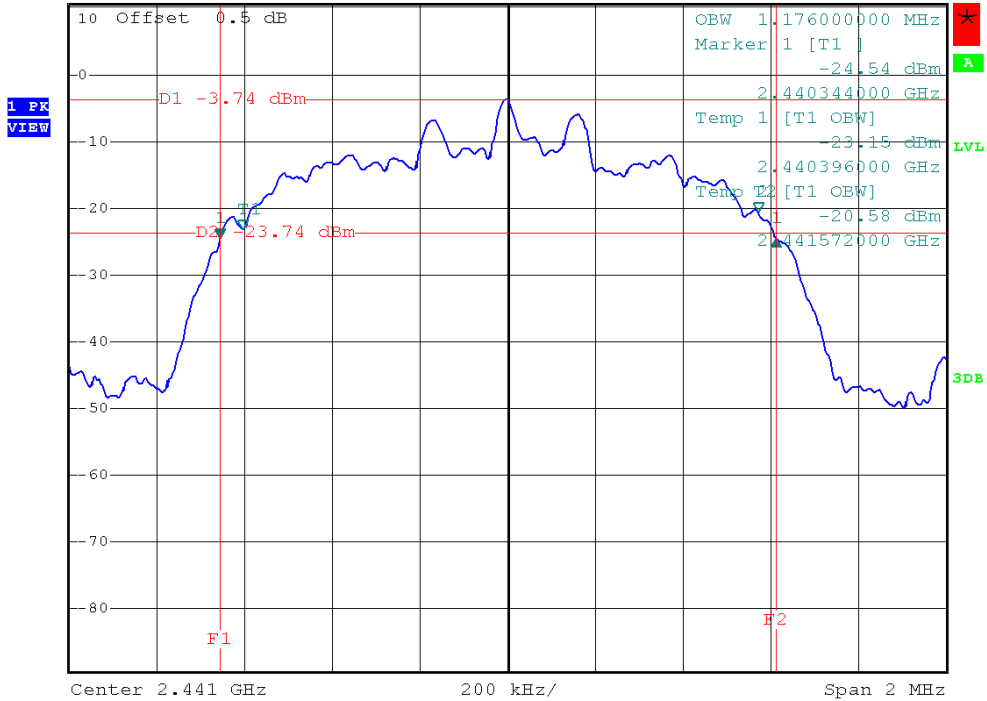




### CH39



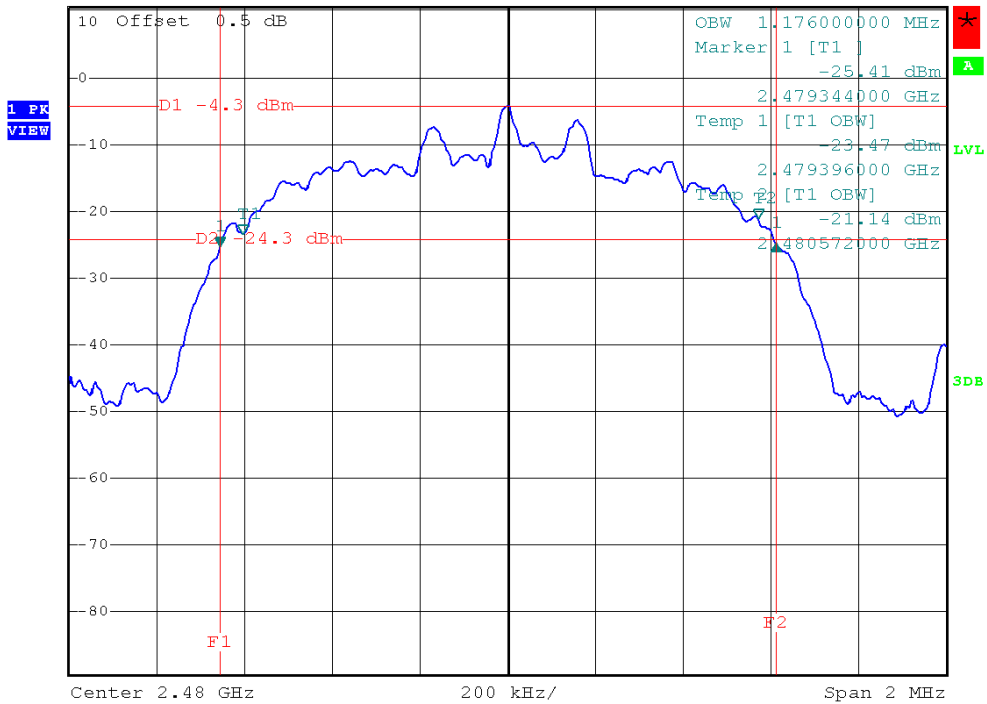
\*RBW 30 kHz Delta 1 [T1 ]  
 \*VBW 300 kHz -0.08 dB  
 Ref 10.5 dBm \*Att 20 dB SWT 2.5 ms 1.268000000 MHz



### CH78



\*RBW 30 kHz Delta 1 [T1 ]  
 \*VBW 300 kHz 0.64 dB  
 Ref 10.5 dBm \*Att 20 dB SWT 2.5 ms 1.268000000 MHz





**9. PEAK OUTPUT POWER TEST**

**9.1 APPLIED PROCEDURES / LIMIT**

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (b)(1)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

**9.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2010
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2010

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

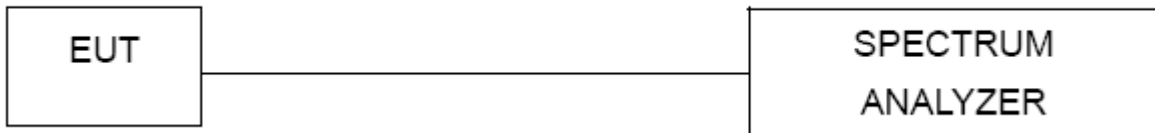
**9.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 3MHz, VBW= 3MHz, Sweep time = Auto.

**9.1.3 DEVIATION FROM STANDARD**

No deviation.

**9.1.4 TEST SETUP**



**9.1.5 EUT OPERATION CONDITIONS**

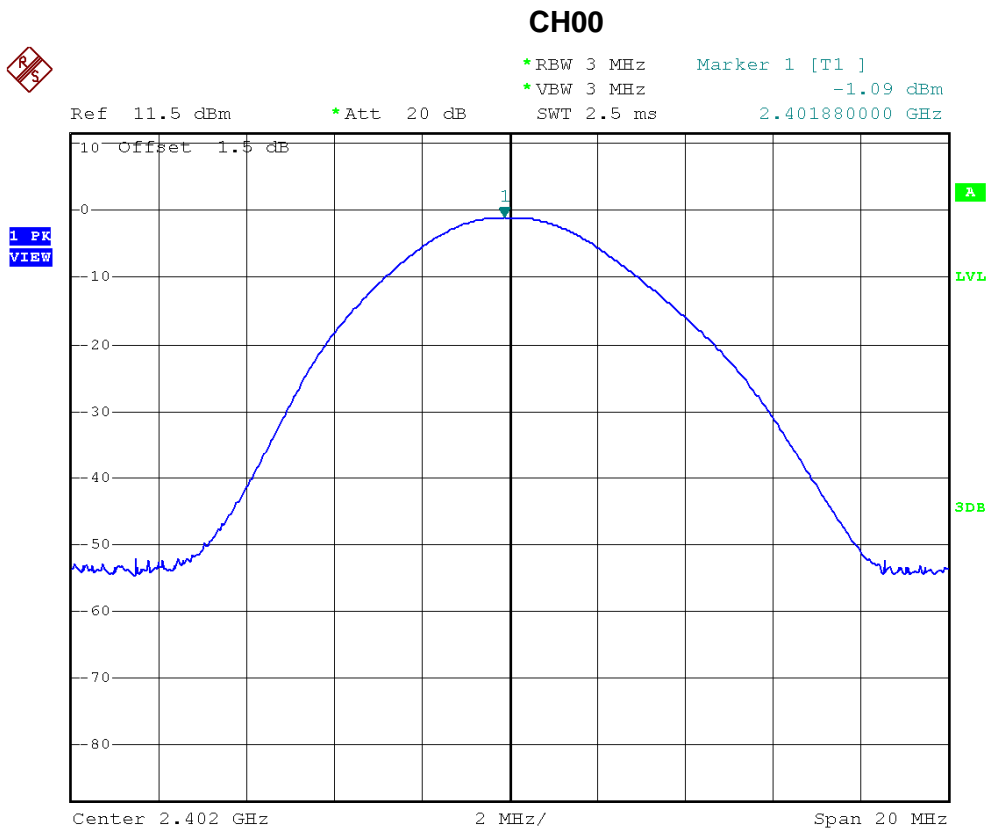
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**9.1.6 TEST RESULTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	23.5 °C	Relative Humidity :	75%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	-1.09	30	1
2441	-1.21	30	1
2480	-1.43	30	1

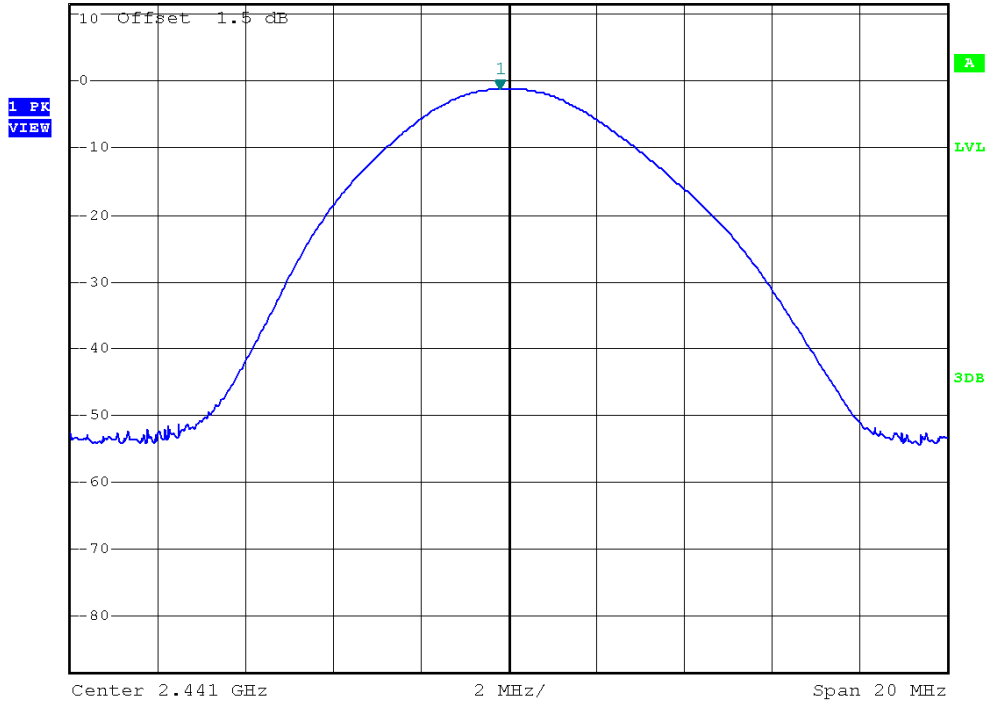




### CH39



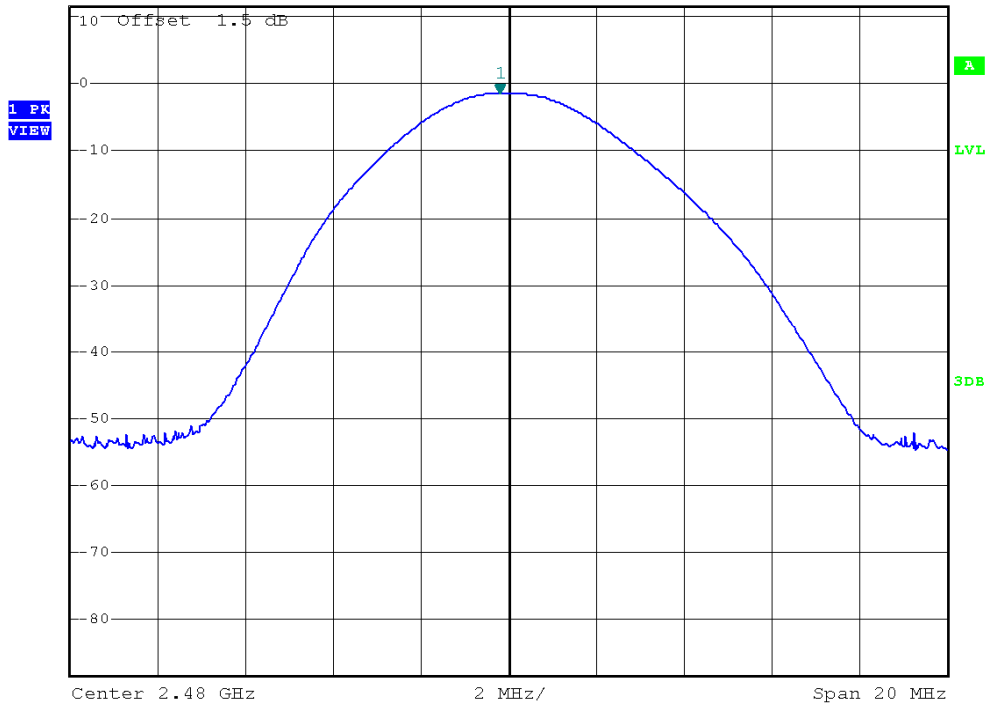
\*RBW 3 MHz    Marker 1 [T1 ]  
\*VBW 3 MHz    -1.21 dBm  
Ref 11.5 dBm    \*Att 20 dB    SWT 2.5 ms    2.440800000 GHz



### CH78



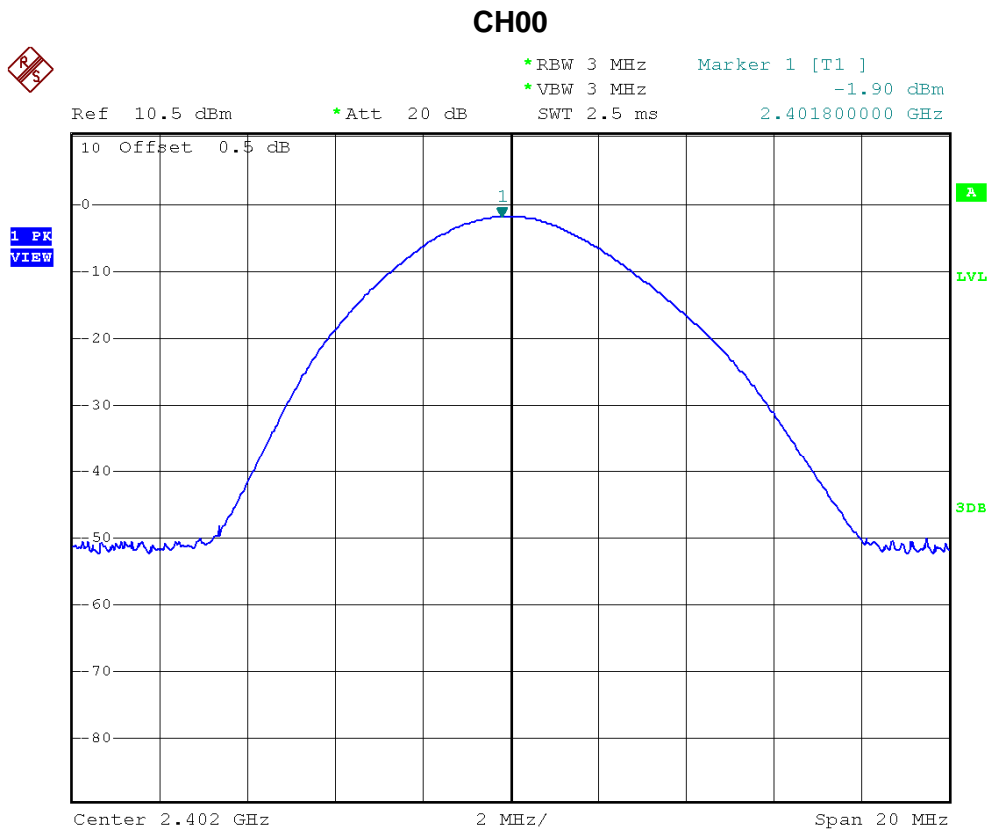
\*RBW 3 MHz    Marker 1 [T1 ]  
\*VBW 3 MHz    -1.43 dBm  
Ref 11.5 dBm    \*Att 20 dB    SWT 2.5 ms    2.479800000 GHz





EUT :	Handheld POS	Model Name :	P234
Temperature :	23.5 °C	Relative Humidity :	75%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	-1.90	30	1
2441	-2.38	30	1
2480	-2.83	30	1



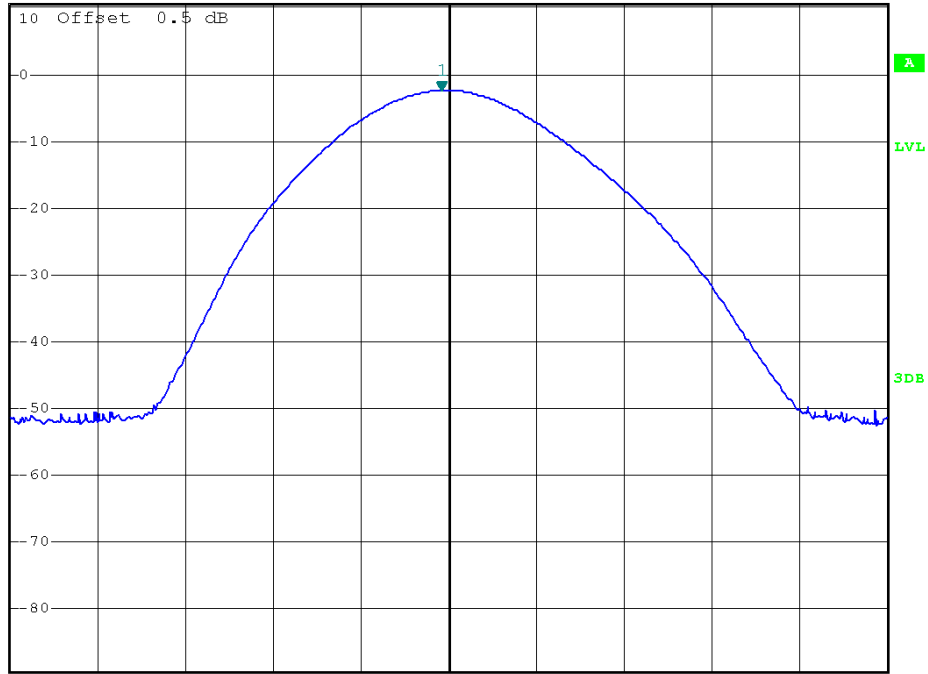


### CH39



\*RBW 3 MHz    Marker 1 [T1 ]  
\*VBW 3 MHz    -2.38 dBm  
Ref 10.5 dBm    \*Att 20 dB    SWT 2.5 ms    2.440840000 GHz

1 PK  
VIEW

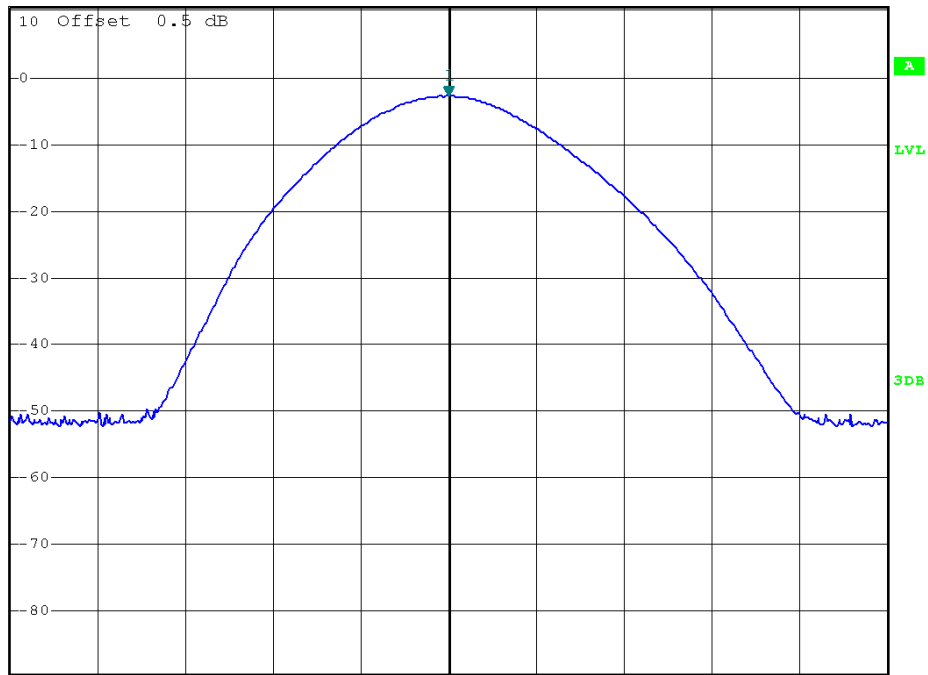


### CH78



\*RBW 3 MHz    Marker 1 [T1 ]  
\*VBW 3 MHz    -2.83 dBm  
Ref 10.5 dBm    \*Att 20 dB    SWT 2.5 ms    2.480000000 GHz

1 PK  
VIEW







**10. ANTENNA CONDUCTED SPURIOUS EMISSION**

**10.1 APPLIED PROCEDURES / LIMIT**

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/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

**10.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING**

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Apr. 16, 2010

Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100 KHz /100 KHz for Peak

**10.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting : RBW= 100KHz, VBW=100KHz, Sweep time = Auto.

**10.1.3 DEVIATION FROM STANDARD**

No deviation.



**10.1.4 TEST SETUP**



**10.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.



**10.1.6 TEST RESULTS**

EUT :	Handheld POS	Model Name :	P234
Temperature :	25 ° C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(1Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2369.793	-55.46	2484.001	-47.83

**Result**

In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.

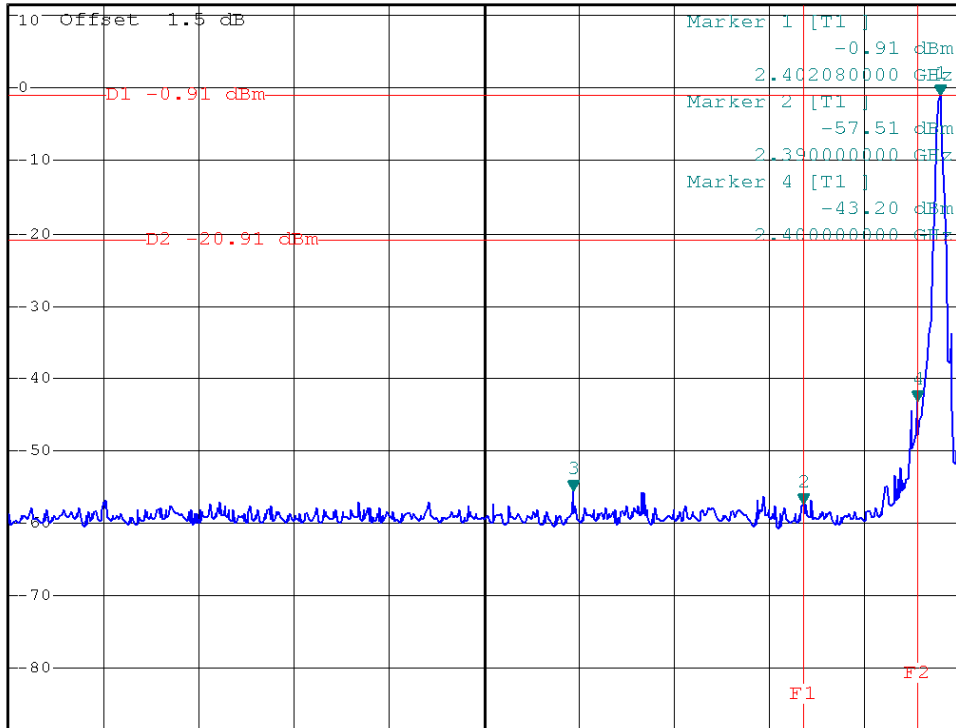


### CH00 (Lower)



\*RBW 100 kHz Marker 3 [T1 ]  
\*VBW 100 kHz -55.46 dBm  
Ref 11.5 dBm \*Att 20 dB SWT 10 ms 2.369793000 GHz

1 PK  
VIEW



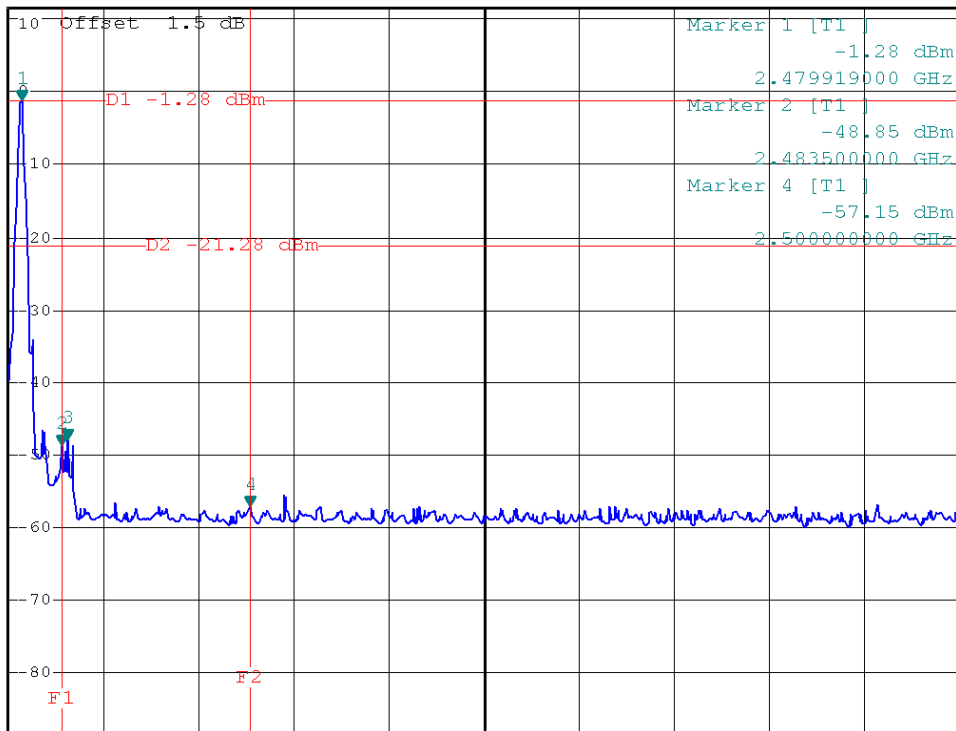
Center 2.362 GHz 8.35 MHz/ Span 83.5 MHz

### CH 78 (Upper)



\*RBW 100 kHz Marker 3 [T1 ]  
\*VBW 100 kHz -47.83 dBm  
Ref 11.5 dBm \*Att 20 dB SWT 10 ms 2.484001000 GHz

1 PK  
VIEW



Center 2.5205 GHz 8.35 MHz/ Span 83.5 MHz



EUT :	Handheld POS	Model Name :	P234
Temperature :	25 ° C	Relative Humidity :	68%
Test Voltage :	AC 120V/60Hz		
Test Mode :	BT(3Mbps) CH00/CH39/CH78(ADAPTER : EDAC)		

The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2369.26	-56.08	2483.5	-46.74

Result

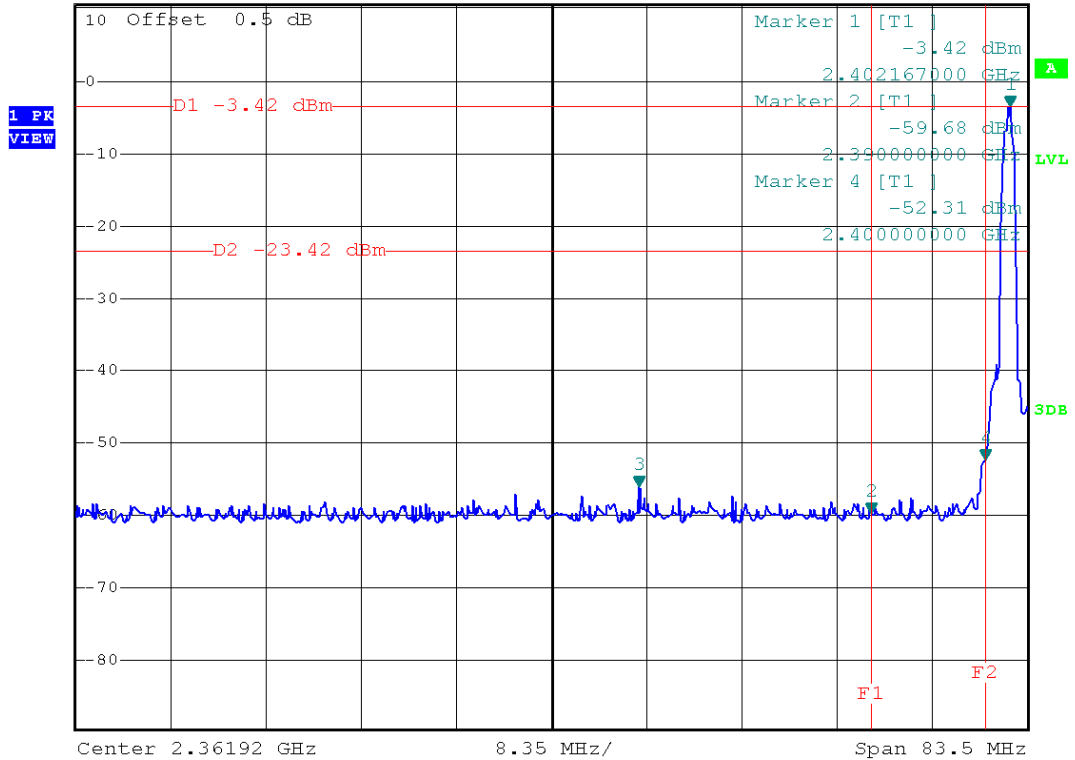
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power.



CH00 (Lower)



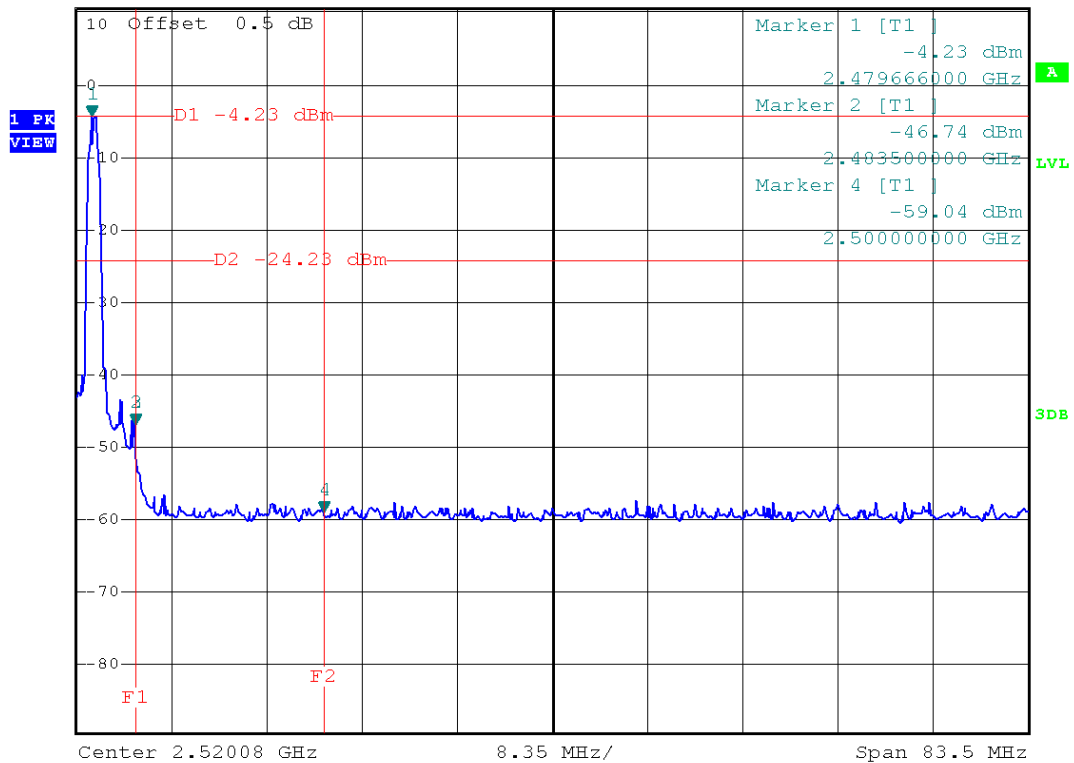
\*RBW 100 kHz Marker 3 [T1 ]  
 \*VBW 100 kHz -56.08 dBm  
 Ref 10.5 dBm \*Att 20 dB SWT 10 ms 2.369626000 GHz



CH 78 (Upper)



\*RBW 100 kHz Marker 3 [T1 ]  
 \*VBW 100 kHz -46.74 dBm  
 Ref 10.5 dBm \*Att 20 dB SWT 10 ms 2.483500000 GHz





**11. EUT TEST PHOTO**

**Conducted Measurement Photos**



**Radiated Measurement Photos  
EUT Orthogonal Axis : X**







**Radiated Measurement Photos**

**EUT Orthogonal Axis : X**

