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## **Radio Test Report**

### FCC ID: Q3N-8260

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

Issued Date	: Jun. 07, 2011
Project No.	: R1105003
Equipment	: Terminal
Model Name	: 8260

Applicant : CIPHERLAB CO., LTD. Address : 12F, 333, Dunhua S. Rd., Sec. 2, Taipei, Taiwan

**Tested by:** Neutron Engineering Inc. EMC Laboratory Date of Receipt: May 29, 2011 Date of Test: May 29, 2011 ~ May 27, 2011

**Testing Engineer** 

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#### Declaration

**Neutron** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**., or National Institute of Standards and Technology (**NIST**) of **U.S.A**.

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#### **1. CERTIFICATION**

Equipment: Terminal Brand Name: CIPHERLAB Model Name: 8260 Applicant: CIPHERLAB CO., LTD. Date of Test: May 29, 2011 ~ May 27, 2011 Standards: FCC Part15, Subpart C / ANCI 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-R1105003) 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).

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#### 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

	FCC Part15, 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)	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			
1.1307 1.1310 2.1091 2.1093	RF Exposure Compliance	PASS			

NOTE:

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



#### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

 C01: (VCCI RN: C-2918; T-1666; FCC RN: 95335; FCC DN: TW1010; IC Assigned Code: 4428A-1) No.132-1, Lane 329, Sec. 2, Palian Road, Shijr City, Taipei, Taiwan.
 CB08: (VCCI RN: G-91; FCC RN: 614388; FCC DN: TW1054; IC Assigned Code: 4428C-1) 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**%.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. A. Conducted Measurement :

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

B. Radiated Measurement :

Test Site	Item	Measurement Frequency Range		Uncertainty	NOTE					
			30 - 00MHz	3.35 dB						
		Horizontal	200 - 1000MHz	.11 dB						
	CB08 Emission at 3m Vertica	Polarization	1 - 18GHz	3.97 dB						
CBUS		Emission at	8 Emission at 30 - 200MHz	Emission at	B08 Emission at	308 Emission at 30 - 1		18 - 40GHz	4.01 dB	
CB00							30 - 200MHz	3.22 dB		
				3.24 dB						
		Polarization	1 - 18GHz	4.05 dB						
			18 - 40GHz	4.04 dB						

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our  $U_{lab}$  values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called  $U_{CISPR}$ , as follows:

Conducted Disturbance (mains port) - 150 kHz - 30 MHz : 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz - 1000 MHz : 5.2 dB

It can be seen that our  $U_{\text{lab}}$  values are smaller than  $U_{\text{CISPR}}.$ 

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#### **3. GENERAL INFORMATION**

#### 3.1 GENERAL DESCRIPTION OF EUT

Equipment	Terminal		
Brand Name	CIPHERLAB		
Model Name	8260		
OEM Brand/Model Name	N/A		
Model Difference	Model 8260 contains three optional scanner types: 2D, LASER and CCD. All the above types were tested, and the model: 8260 (Scanner Type: 2D) was found to be the worst case during the pre-scanning test. This model of the worst case was used for final testing and collecting test data included in this report.		
	The EUT is a Terminal. Operation Frequency: Modulation Type: Bit Rate of Transmitter: Number Of Channel	2402~2480 MHz FHSS(GFSK) 1/3 Mbps Please see Note 2.	
Product Description	Antenna Designation: Antenna Gain(Peak)	Please see Note 3. Please see Note 3.	
	EIRP Power:	1 Mbps: -3.01 dBm (Max.) 3 Mbps: 0.07dBm (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.		
Power Source	Battery supplied or DC Voltage supplied fro	m External Power Supply.	
Power Rating	Battery: DC 3.7V 1200Am 4.44Wh AC ADAPTER: I/P: AC 100-240V 47-63Hz 0.48A MAX / O/P: DC 5V 3A 15W MAX		
Products Covered	Please refer to the Use	er's Manual	
Connecting I/O Port(s)	1 * Li-ion BATTERY PACK: CIPHERLAB BA-80S1A2 1 * AC ADAPTER: ADAPTER TECH. STD-05030V 1 * Connect Cable		
EUT Modification(s)	N/A		

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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	CIPHERLAB	KXAN000000005	PIFA	Soldered	1.79



#### 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	CH00	
Mode 2	CH39	
Mode 3	CH78	

For Conducted Test		
Final Test Mode	Description	
Mode 2	CH39	

For Radiated Emission						
Final Test Mode	Description					
Mode 1	CH00					
Mode 2	CH39					
Mode 3	CH78					

Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

#### 3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

Data Rate	1 Mbps				
Test software Version	1.01a				
Frequency	2402 MHz	2441 MHz	2480 MHz		
Power Parameters	default	default	default		

Data Rate	3 Mbps				
Test software Version	1.01a				
Frequency	2402 MHz	2441 MHz	2480 MHz		
Power Parameters	default	default	default		

BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED						
	E-1 EUT					



#### 3.5 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	Terminal	CIPHERLAB	8260	Q3N-8260	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
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 <sup>[]</sup>Length <sup>[]</sup> column.
- (3) "  $\approx$  " denotes the support equipment by applicant.



#### 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.
- (3) The test result calculated as following:
- Measurement Value = Reading Level + Correct Factor Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use) Margin Level = Measurement Value – Limit Value

#### 4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00042991	Feb. 16, 2012
2	Test Cable	TIMES	LMR-400	SR03_C_01& 02	Aug. 20, 2011
3	Pulse Limiter	Electro-Metrics	EM-7600	112647	Dec. 13, 2011
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 15, 2012
5	50Ω BNC TYPE Terminator	N/A	N/A	01	May 24, 2013
6	50Ω BNC TYPE Terminator	N/A	N/A	03	May 24, 2013
7	LISN	EMCO	4825/2	00028234	Jul. 22, 2011

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



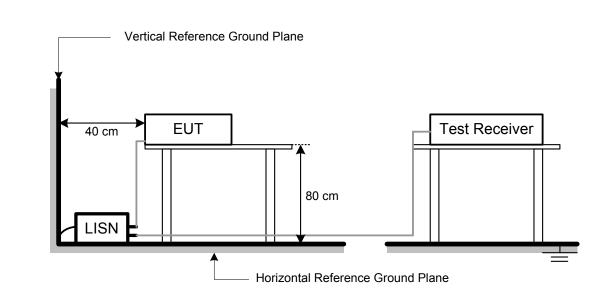
#### 4.1.3 TEST PROCEDURE

- 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.

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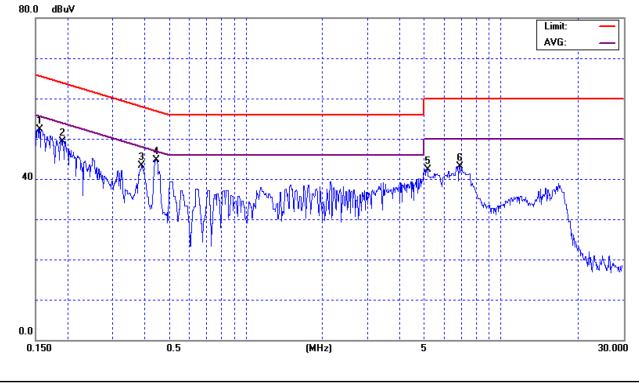
#### 4.1.7 TEST RESULTS

EUT :	Terminal	Model Name :	8260
Temperature :	24°C	Relative Humidity :	48%
Test Voltage :	AC 120V/60Hz		
Test Mode :	CH39		

Freq.	Terminal	Reading Le	evel(dBuV)	Correct	Measurem	ent(dBuV)	Limit(o	dBuV)	Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	Factor(dB)	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	INULE
0.1549	Line	42.68	*	9.62	52.30	*	65.73	55.73	-13.43	(QP)
0.1910	Line	39.74	*	9.62	49.36	*	63.99	53.99	-14.63	(QP)
0.3908	Line	33.74	*	9.61	43.35	*	58.05	48.05	-14.70	(QP)
0.4454	Line	35.17	*	9.61	44.78	*	56.96	46.96	-12.18	(QP)
5.1500	Line	32.66	*	9.74	42.40	*	60.00	50.00	-17.60	(QP)
6.9000	Line	33.40	*	9.78	43.18	*	60.00	50.00	-16.82	(QP)

#### Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9 kHz; SPA setting in RBW=10 kHz, VBW =10 kHz, Swp. Time = 0.2 sec./ MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10 kHz, VBW=10 kHz, 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) In the "Note" column, QP means the margin value of QP is higher than Average and the "Margin" column shows the margin value of QP; AV means the margin value of Average is higher than QP and the "Margin" column shows the margin value of Average.



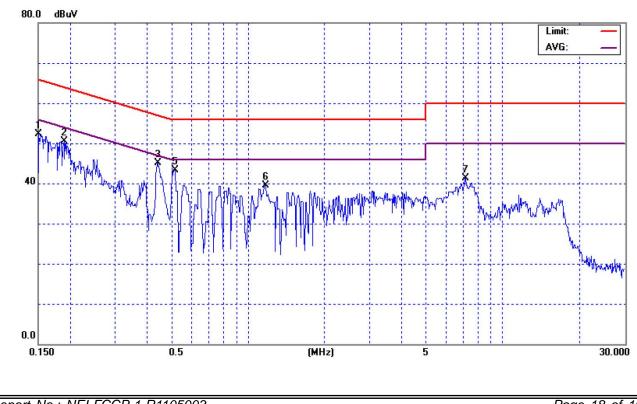


EUT :	Terminal	Model Name :	8260
Temperature :	24°C	Relative Humidity :	48%
Test Voltage :	AC 120V/60Hz		
Test Mode :	CH39		

Freq.	Terminal	Reading Le	evel(dBuV)	Correct	Measurem	ent(dBuV)	Limit(c	dBuV)	Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	Factor(dB)	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	INDLE
0.1507	Neutral	42.66	*	9.64	52.30	*	65.96	55.96	-13.66	(QP)
0.1892	Neutral	40.94	*	9.64	50.58	*	64.07	54.07	-13.49	(QP)
0.4398	Neutral	35.55	34.00	9.63	45.18	43.63	57.07	47.07	-3.44	(AV)
0.5180	Neutral	33.66	*	9.63	43.29	*	56.00	46.00	-12.71	(QP)
1.1750	Neutral	29.93	*	9.62	39.55	*	56.00	46.00	-16.45	(QP)
7.1500	Neutral	31.54	*	9.80	41.34	*	60.00	50.00	-18.66	(QP)

Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9 kHz; SPA setting in RBW=10 kHz, VBW =10 kHz, Swp. Time = 0.2 sec./ MHz. Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10 kHz, VBW=10 kHz, 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) In the "Note" column, QP means the margin value of QP is higher than Average and the "Margin" column shows the margin value of QP; AV means the margin value of Average is higher than QP and the "Margin" column shows the margin value of Average.



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#### 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 on15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(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 (dBu	ıV/m) (at 3m)	Class B (dBuV/m) (at 3m)		
FREQUENCT (IVITIZ)	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) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use) Margin Level = Measurement Value – Limit Value Neutron Engineering Inc.—

#### 4.2.2 MEASUREMENT INSTRUMENTS LIST ANS SETTING

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Dec. 08, 2011
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 18, 2012
4	Microflex Cable	N/A	N/A	1m	May. 18, 2012
5	Microflex Cable	AISI	S104-SMAP-1	10m	Aug. 22, 2011
6	Microflex Cable	N/A	N/A	3m	Aug. 22, 2011
7	Test Cable	N/A	LMR-400	966_12m	Jun. 17, 2011
8	Test Cable	N/A	LMR-400	966_3m	Jun. 17, 2011
9	Pre-Amplifier	EMC	EMC-330	980001	Jun. 03, 2011
10	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 17, 2011

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

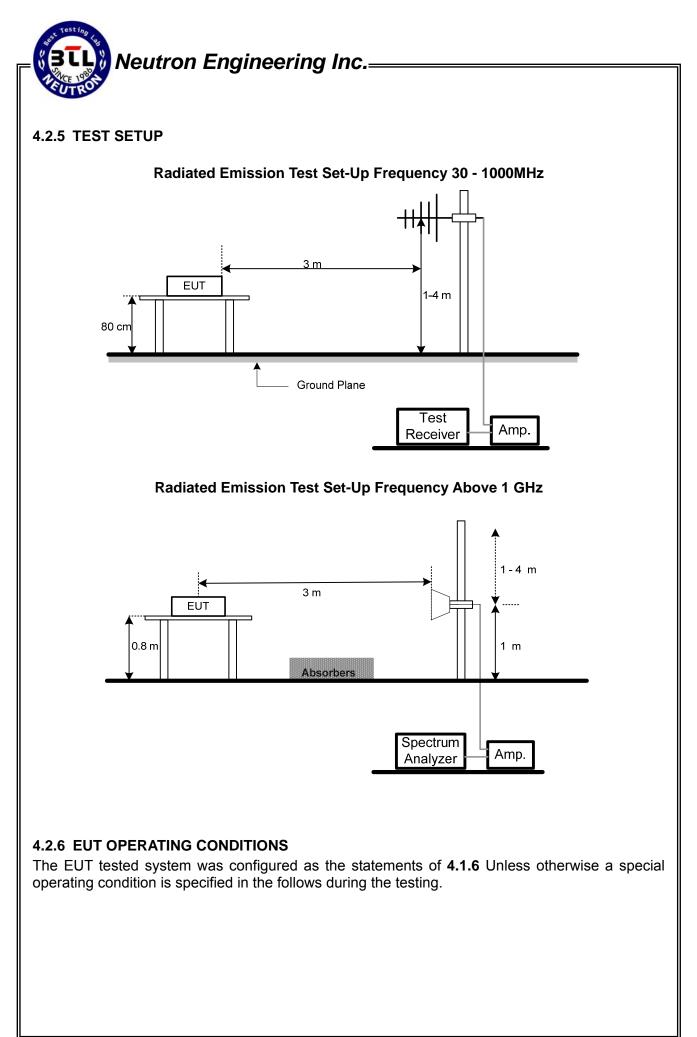


#### 4.2.3 TEST PROCEDURE

- 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.
- g. The testing follows the guidelines in ANSI C63.4-2003 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW / VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation



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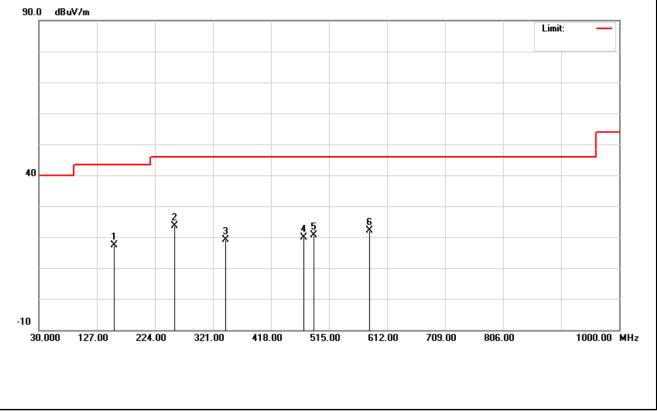
#### 4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ - TX

EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	СН39		

			<u> </u>				
Freq.	Polarization	Reading Level	Correct	Measurement	Limit(Quasi-Peak)	Margin	Note
(MHz)	H/V	(dBuV)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOLE
156.1000	V	34.00	-16.56	17.44	43.50	- 26.06	
256.9800	V	40.77	-17.19	23.58	46.00	- 22.42	
342.3400	V	33.55	-14.53	19.02	46.00	- 26.98	
472.3200	V	31.22	-11.29	19.93	46.00	- 26.07	
489.3780	V	31.74	-10.99	20.75	46.00	- 25.25	
582.9000	V	31.16	-8.93	22.23	46.00	- 23.77	

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup> "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (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  $\circ$
- (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.



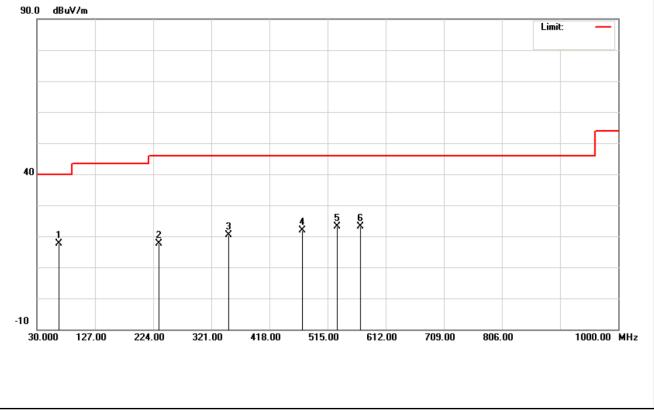
Report No.: NEI-FCCP-1-R1105003



EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	CH39		

Freq.	Polarization	Reading Level	Correct	Measurement	Limit(Quasi-Peak)	Margin	Note
(MHz)	H/V	(dBuV)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	Note
66.8600	Н	35.92	-18.37	17.55	40.00	- 22.45	
233.7000	Н	35.82	-18.22	17.60	46.00	- 28.40	
350.1000	Н	34.72	-14.33	20.39	46.00	- 25.61	
472.3200	Н	33.22	-11.29	21.93	46.00	- 24.07	
530.5200	Н	33.27	-10.20	23.07	46.00	- 22.93	
569.3200	Н	32.35	-9.30	23.05	46.00	- 22.95	

- (1) All readings are Peak unless otherwise stated QP in column of <code>『Note』</code>. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $\circ$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup> "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (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  $\circ$
- (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.



Report No.: NEI-FCCP-1-R1105003

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#### 4.2.8 TEST RESULTS - ABOVE 1000MHZ- TX

EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х
Test Mode :	1M/CH00		

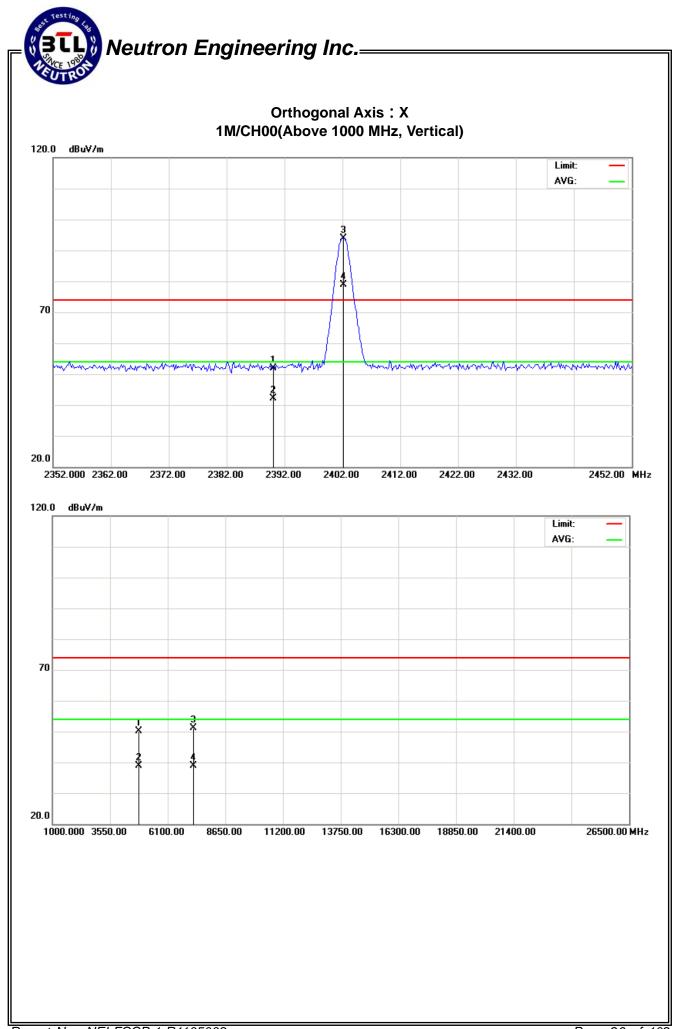
Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
Е	2390.000	V	21.08	11.16	30.89	51.97	42.05	74.00	54.00	- 11.95	AV
F	2402.200	V	63.03	47.93	30.94	93.97	78.87				
Н	4804.050	V	47.55	36.27	2.64	50.19	38.91	74.00	54.00	- 15.09	AV
Н	7206.040	V	42.85	30.53	8.26	51.11	38.79	74.00	54.00	- 15.21	AV

Remark :

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV 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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

(7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.





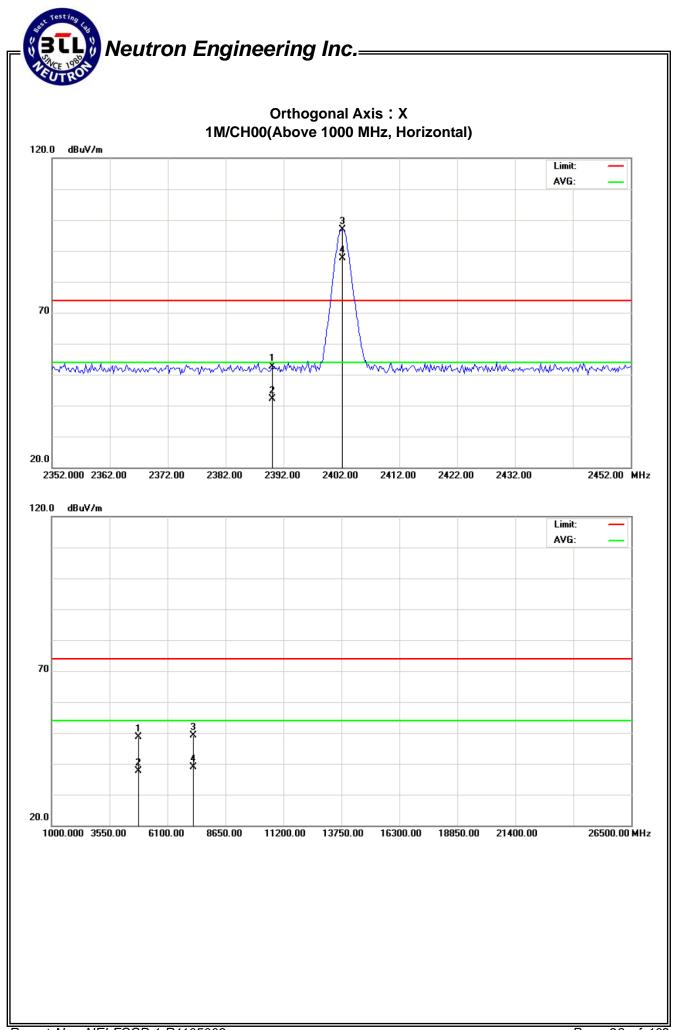
EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	x
Test Mode :	1M/CH00		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
E	2390.000	Н	21.72	11.28	30.89	52.61	42.17	74.00	54.00	- 11.83	AV
F	2402.200	Н	65.86	56.78	30.94	96.80	87.72				
Н	4804.090	Н	45.87	35.01	2.64	48.51	37.65	74.00	54.00	- 16.35	AV
Н	7205.980	Н	40.96	30.50	8.26	49.22	38.76	74.00	54.00	- 15.24	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

(7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

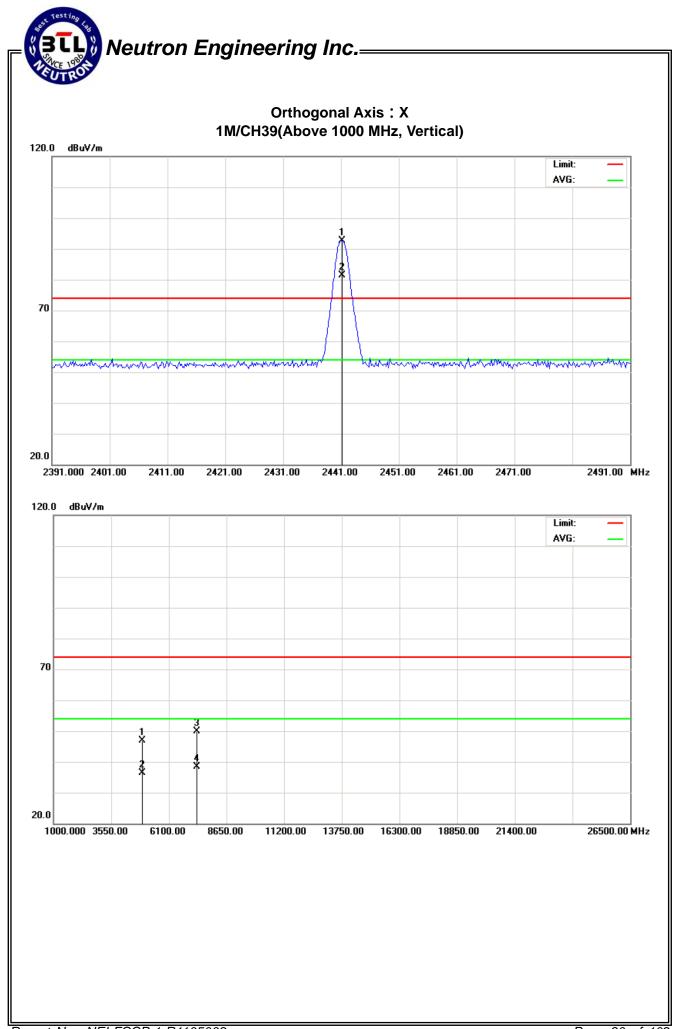




EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х
Test Mode :	1M/CH39		

Туре	Freq.	Polarization	Reading Level(dBuV)		Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
F	2441.200	V	61.53	50.40	31.10	92.63	81.50				
Н	4882.090	V	43.98	33.55	2.89	46.87	36.44	74.00	54.00	- 17.56	AV
Н	7322.900	V	41.44	29.87	8.43	49.87	38.30	74.00	54.00	- 15.70	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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  $\circ$
- (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 Axes :
  - "X" denotes Laid on Table ; "Y" denotes Vertical Stand ; "Z" denotes Side Stand
- (7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

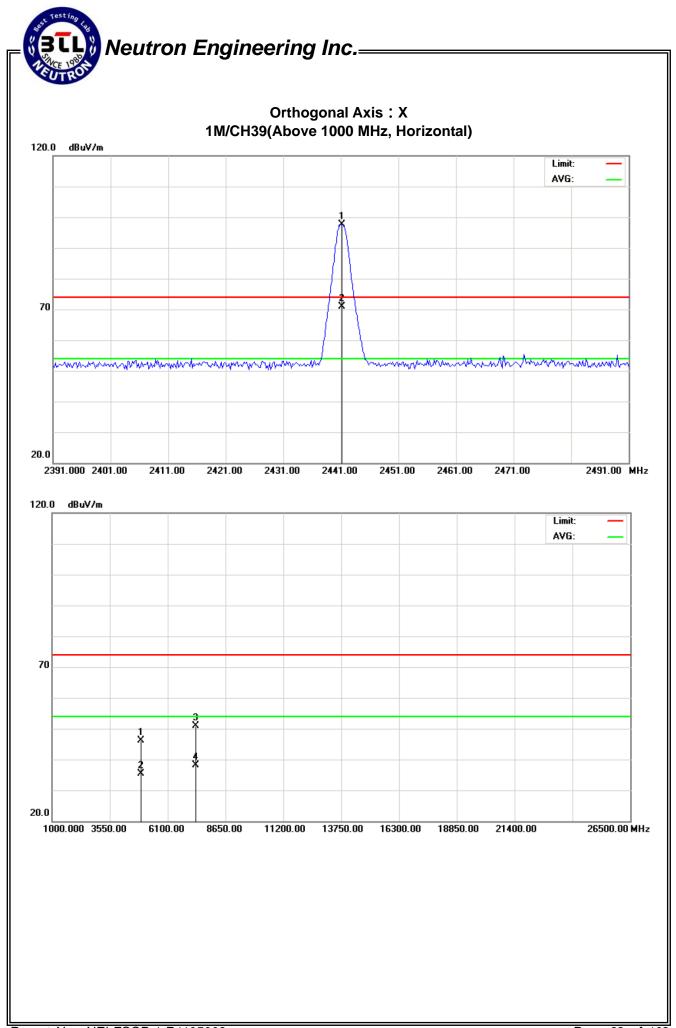




EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	
· ·		Orthogonal Axes:	X
	1M/CH39	0	

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOIC
F	2441.200	Н	66.58	39.70	31.10	97.68	70.80				
Н	4881.970	Н	43.22	32.47	2.89	46.11	35.36	74.00	54.00	- 18.64	AV
Н	7323.060	Н	42.44	29.81	8.43	50.87	38.24	74.00	54.00	- 15.76	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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  $\circ$
- (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 Axes :
  - "X" denotes Laid on Table ; "Y" denotes Vertical Stand ; "Z" denotes Side Stand
- (7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.





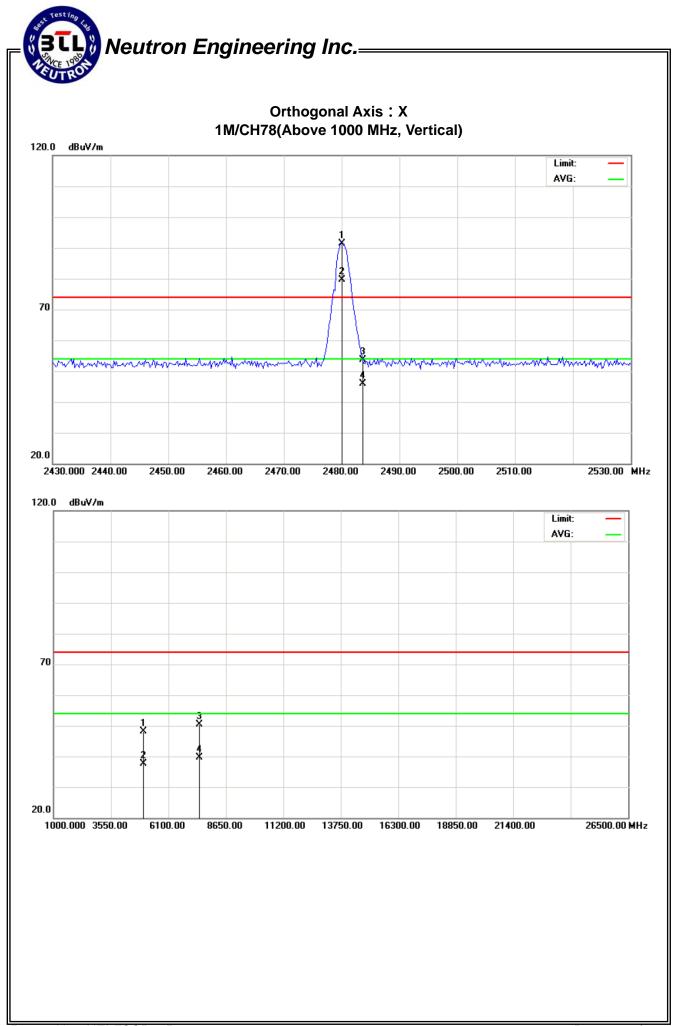
EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х
Test Mode :	1M/CH78		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
F	2480.000	V	60.15	48.36	31.27	91.42	79.63				
E	2483.500	V	22.25	14.63	31.28	53.53	45.91	74.00	54.00	- 8.09	AV
Н	4959.990	V	45.10	34.52	3.15	48.25	37.67	74.00	54.00	- 16.33	AV
Н	7439.840	V	41.73	30.94	8.59	50.32	39.53	74.00	54.00	- 14.47	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV 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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

(7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.





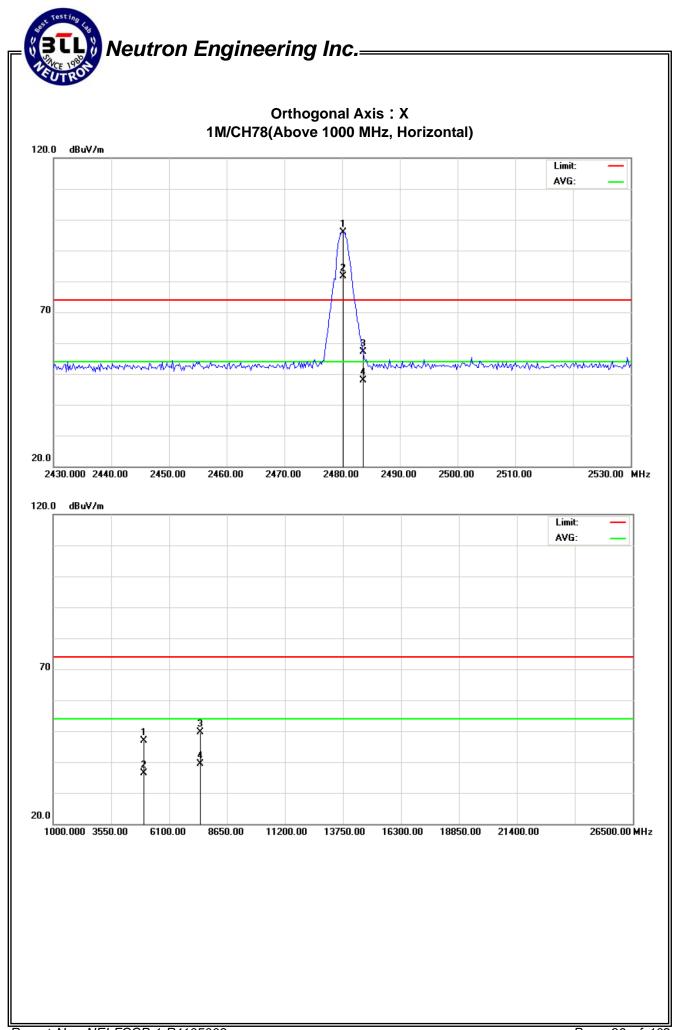
EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	х
Test Mode :	1M/CH78		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
F	2480.200	Н	64.69	50.40	31.27	95.96	81.67				
E	2483.560	Н	25.76	16.69	31.28	57.04	47.97	74.00	54.00	- 6.03	AV
Н	4959.890	Н	43.79	33.13	3.15	46.94	36.28	74.00	54.00	- 17.72	AV
Н	7440.080	Н	41.15	30.88	8.59	49.74	39.47	74.00	54.00	- 14.53	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV 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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

(7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.



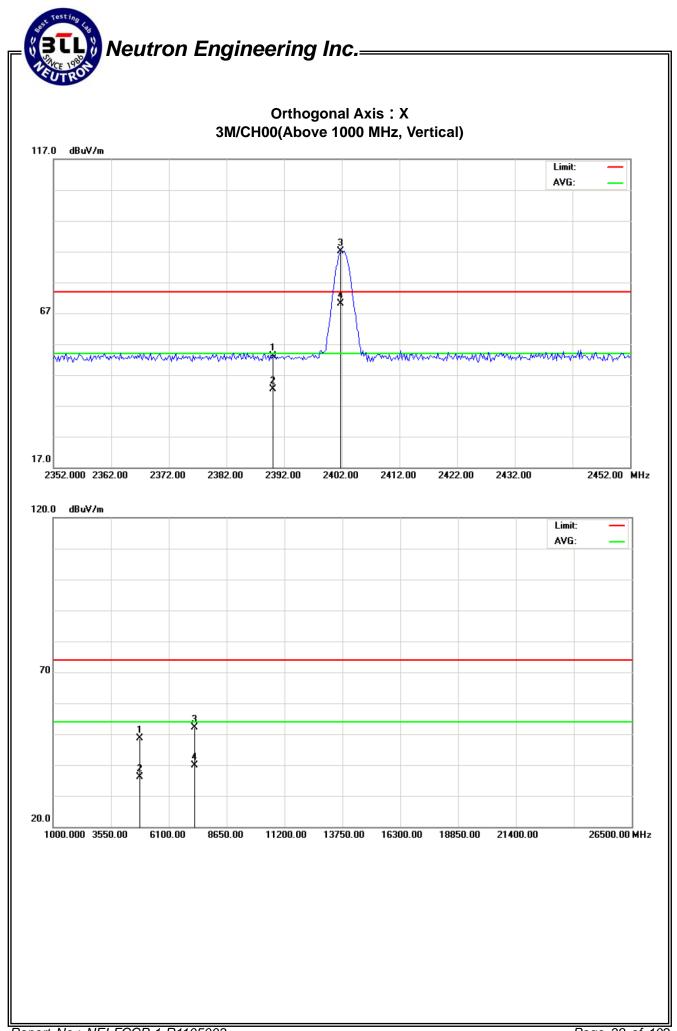


EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	х
Test Mode :	3M/CH00		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
E	2390.000	V	22.16	11.48	30.89	53.05	42.37	74.00	54.00	- 11.63	AV
F	2401.800	V	56.27	39.25	30.94	87.21	70.19				
Н	4804.010	V	46.03	33.38	2.64	48.67	36.02	74.00	54.00	- 17.98	AV
Н	7206.180	V	43.95	31.57	8.26	52.21	39.83	74.00	54.00	- 14.17	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand



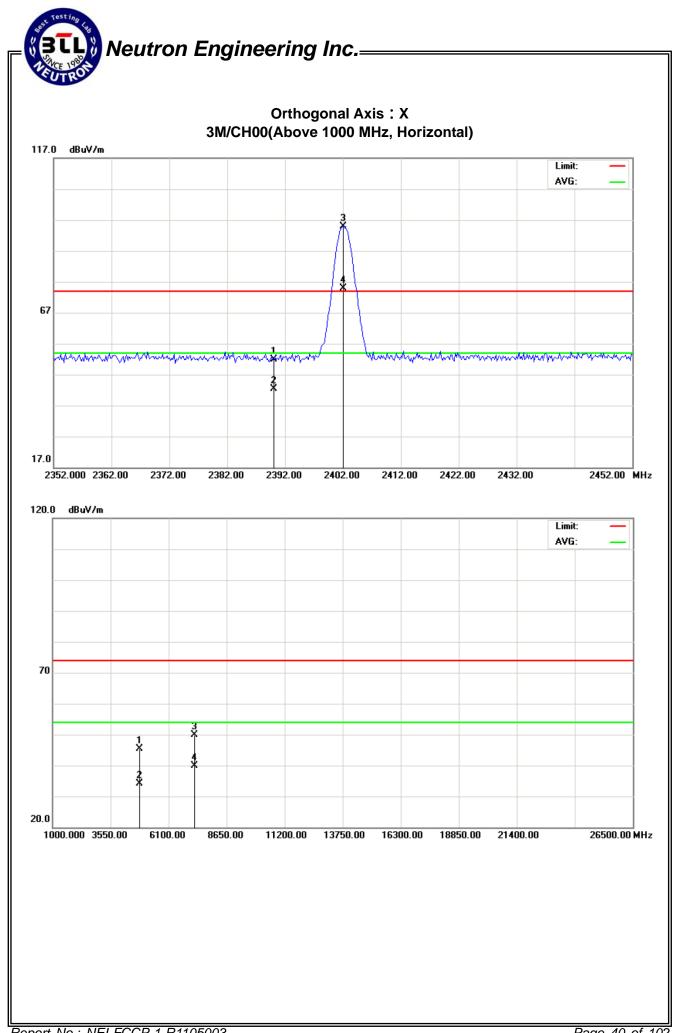


EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х
Test Mode :	3M/CH00		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
Е	2390.000	Н	20.94	11.48	30.89	51.83	42.37	74.00	54.00	- 11.63	AV
F	2402.000	Н	64.05	43.90	30.94	94.99	74.84				
Н	4804.080	Н	42.78	31.43	2.64	45.42	34.07	74.00	54.00	- 19.93	AV
Н	7206.090	Н	41.52	31.57	8.26	49.78	39.83	74.00	54.00	- 14.17	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand

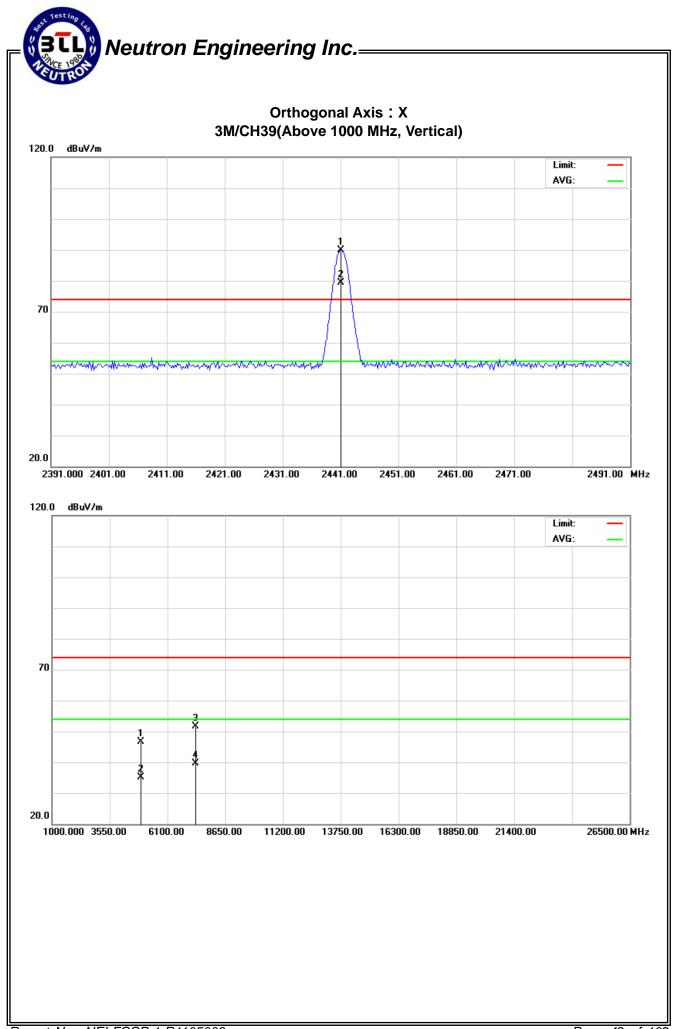




EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х
Test Mode :	3M/CH39		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOIC
F	2441.000	V	58.71	48.16	31.10	89.81	79.26				
Н	4882.030	V	43.84	32.23	2.89	46.73	35.12	74.00	54.00	- 18.88	AV
Н	7323.090	V	43.08	31.12	8.43	51.51	39.55	74.00	54.00	- 14.45	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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  $\circ$
- (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 Axes:
  - "X" denotes Laid on Table ; "Y" denotes Vertical Stand ; "Z" denotes Side Stand
- (7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

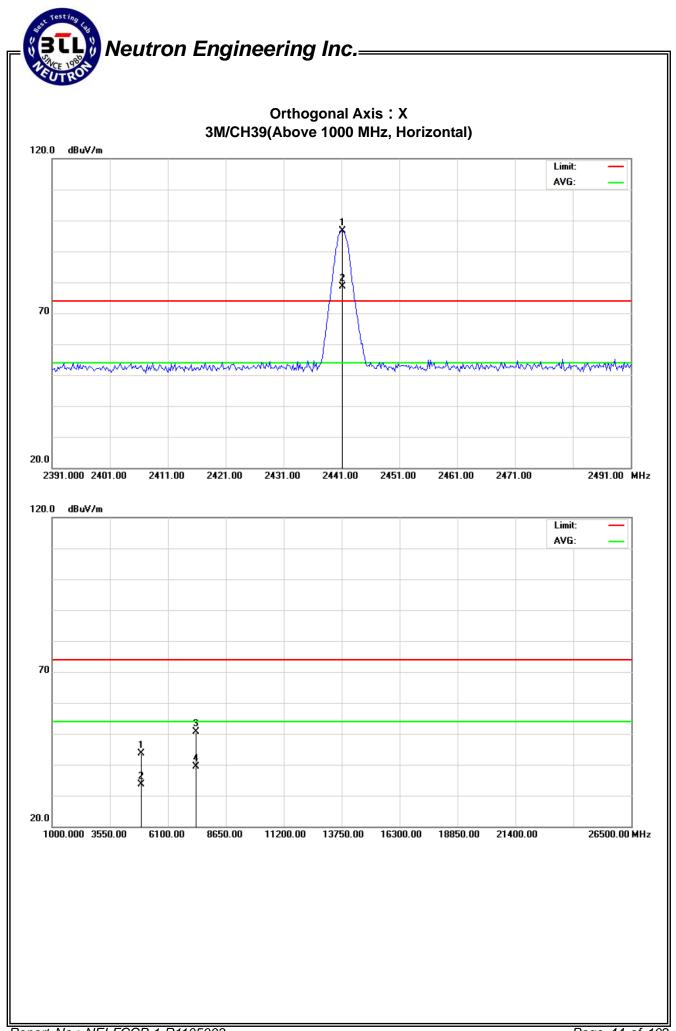




	i de la constante de		
EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х
Test Mode :	3M/CH39		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOIC
F	2441.200	Н	65.60	47.51	31.10	96.70	78.61				
Н	4881.730	Н	40.83	30.74	2.89	43.72	33.63	74.00	54.00	- 20.37	AV
Н	7323.090	Н	42.19	31.07	8.43	50.62	39.50	74.00	54.00	- 14.50	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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  $\circ$
- (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 Axes :
  - "X" denotes Laid on Table ; "Y" denotes Vertical Stand ; "Z" denotes Side Stand
- (7) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.



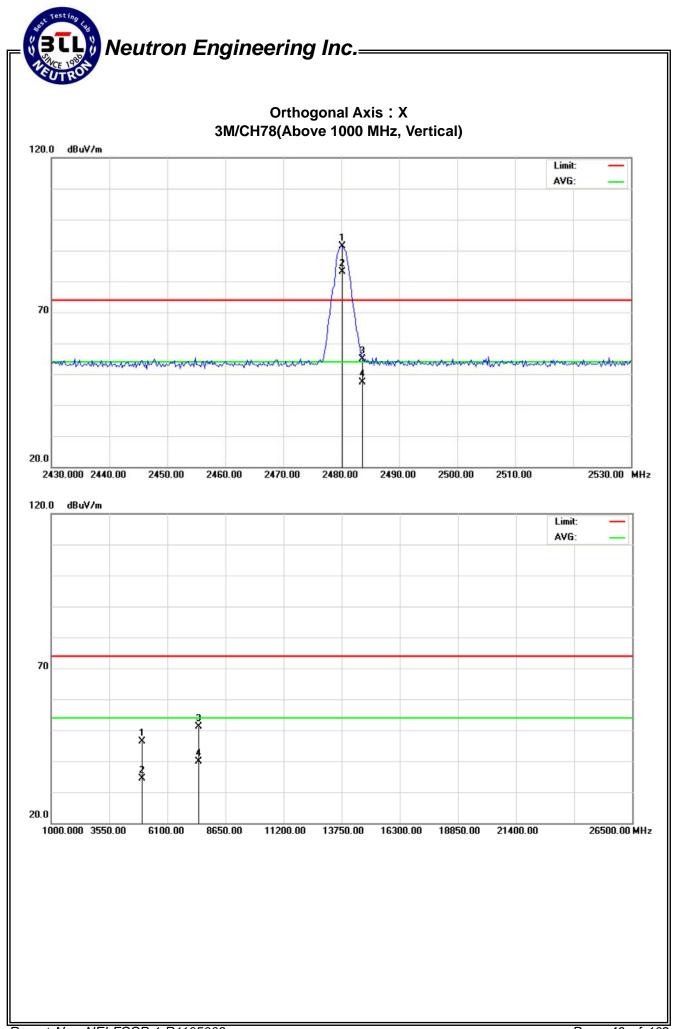


EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	x
Test Mode :	3M/CH78		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
F	2480.200	V	60.05	51.95	31.27	91.32	83.22				
E	2483.500	V	23.65	16.21	31.28	54.93	47.49	74.00	54.00	- 6.51	AV
Н	4959.990	V	43.27	31.13	3.15	46.42	34.28	74.00	54.00	- 19.72	AV
Н	7439.830	V	42.50	31.24	8.59	51.09	39.83	74.00	54.00	- 14.17	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand



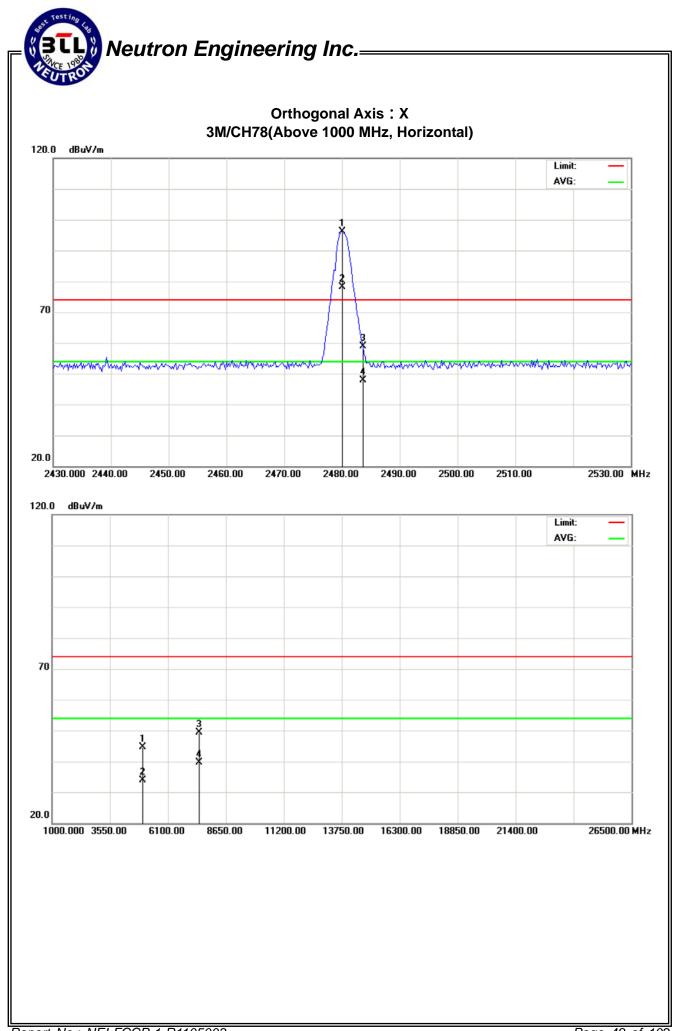


EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	x
Test Mode :	3M/CH78		

Туре	Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
F/H/E	(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
F	2479.980	Н	64.97	46.98	31.27	96.24	78.25				
Е	2483.500	Н	27.55	16.63	31.28	58.83	47.91	74.00	54.00	- 6.09	AV
Η	4960.000	Н	41.52	30.63	3.15	44.67	33.78	74.00	54.00	- 20.22	AV
Η	7440.220	Н	40.73	31.13	8.59	49.32	39.72	74.00	54.00	- 14.28	AV

- (1) All readings are Peak unless otherwise stated AV in column of "Note ]. Peak denotes that the Peak reading compliance with the AV Limits and then AV Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency<sup>o</sup>"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 Axes:

"X" - denotes Laid on Table; "Y" - denotes Vertical Stand; "Z" - denotes Side Stand



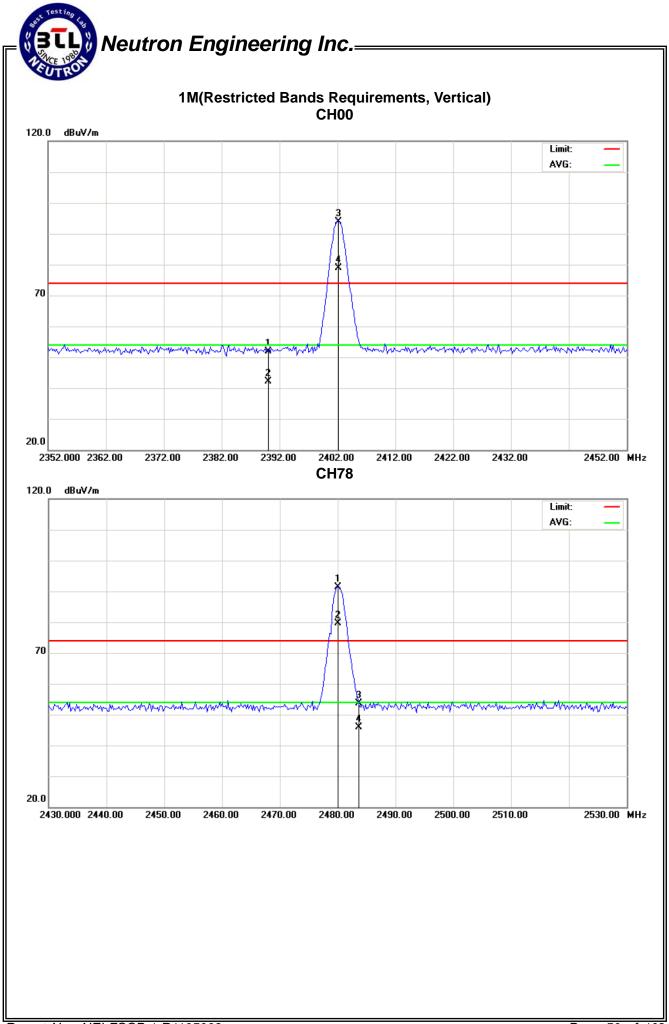


#### 4.2.9 TEST RESULTS-Restricted Bands Requirements

EUT :	Terminal	Model Name :	8260			
Temperature :	25°C	Relative Humidity :	31%			
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	X			
Test Mode :	1M (Vertical)	1M (Vertical)				
Note :	<ul> <li>The emission of the carrier radii (Peak and AV) as following:</li> <li>1. The transmitter was setup to field strength was measured</li> <li>2. The transmitter was setup to the field strength was measured</li> </ul>	transmit at the lowes at 2310-2390 MHz. transmit at the high	st channel (CH00). Then the est channel (CH78). Then			

Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
2390.000	V	21.08	11.16	30.89	51.97	42.05	74.00	54.00	- 11.95	AV
2483.500	V	22.25	14.63	31.28	53.53	45.91	74.00	54.00	- 8.09	AV

- (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  $\circ$
- (2) EUT Orthogonal Axes :
  - "X" denotes Laid on Table ; "Y" denotes Vertical Stand ; "Z" denotes Side Stand

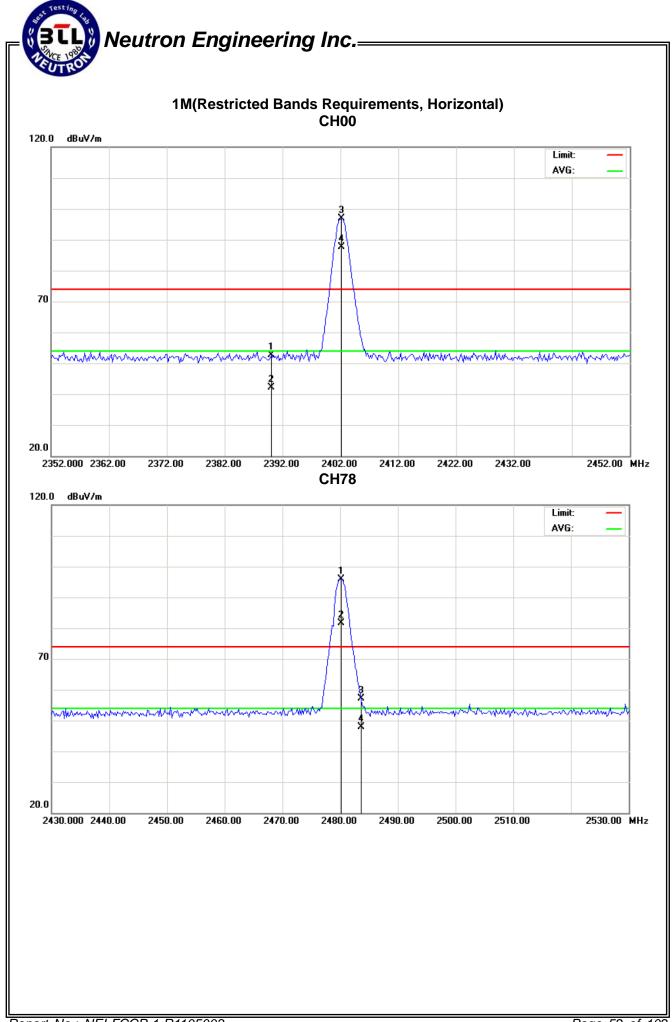




EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	x
Test Mode :	1M (Horizontal)		
Note :	<ul> <li>The emission of the carrier radi</li> <li>(Peak and AV) as following:</li> <li>1. The transmitter was setup to field strength was measured</li> <li>2. The transmitter was setup to the field strength was measured</li> </ul>	transmit at the lowes at 2310-2390 MHz. transmit at the high	st channel (CH00). Then the est channel (CH78). Then

Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
2390.000	Н	21.72	11.28	30.89	52.61	42.17	74.00	54.00	- 11.83	AV
2483.560	Н	25.76	16.69	31.28	57.04	47.97	74.00	54.00	- 6.03	AV

- (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  $\circ$
- (2) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand

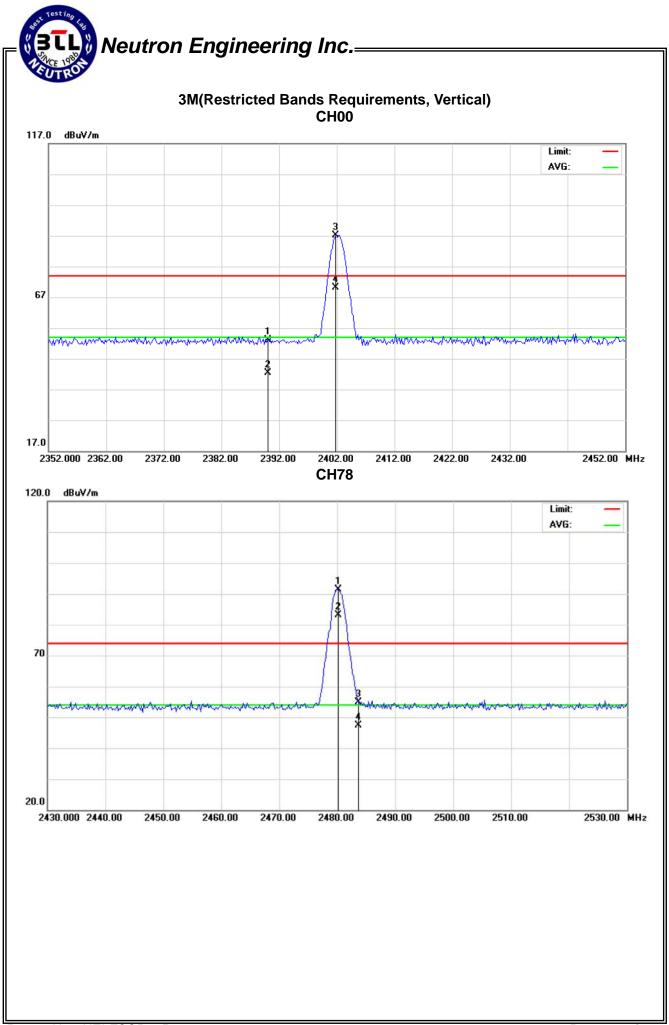




EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х
Test Mode :	3M (Vertical)		
	<ul> <li>The emission of the carrier radi</li> <li>(Peak and AV) as following:</li> <li>1. The transmitter was setup to field strength was measured</li> <li>2. The transmitter was setup to the field strength was measured</li> </ul>	transmit at the lowes at 2310-2390 MHz. transmit at the high	st channel (CH00). Then the est channel (CH78). Then

Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOLE
2390.000	V	22.16	11.48	30.89	53.05	42.37	74.00	54.00	- 11.63	AV
2483.500	V	23.65	16.21	31.28	54.93	47.49	74.00	54.00	- 6.51	AV

- (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  $\circ$
- (2) EUT Orthogonal Axes:
  - "X" denotes Laid on Table ; "Y" denotes Vertical Stand ; "Z" denotes Side Stand

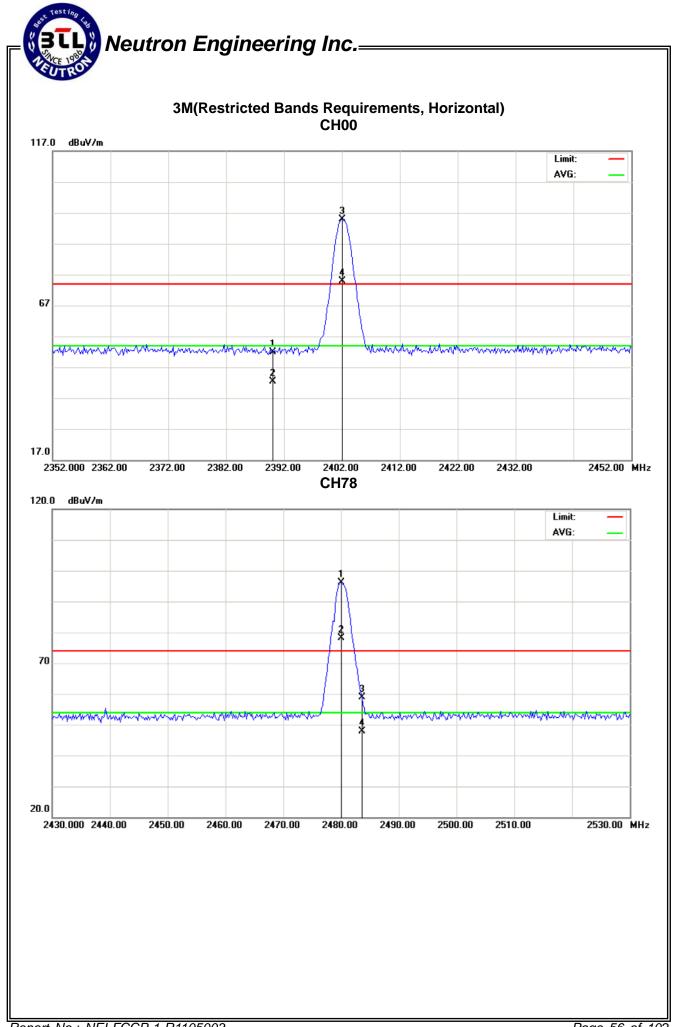




EUT:	Terminal	Model Name :	8260			
Temperature :	25°C	Relative Humidity :	31%			
Test Voltage :	AC 120V/60Hz	Orthogonal Axes:	Х			
Test Mode :	3M (Horizontal)	3M (Horizontal)				
Note :	<ul> <li>The emission of the carrier radi</li> <li>(Peak and AV) as following:</li> <li>1. The transmitter was setup to field strength was measured</li> <li>2. The transmitter was setup to the field strength was measured</li> </ul>	transmit at the lowes at 2310-2390 MHz. transmit at the high	st channel (CH00). Then the est channel (CH78). Then			

Freq.	Polarization	Reading L	evel(dBuV)	Correct	Measureme	nt(dBuV/m)	Limit(d	BuV/m)	Margin	Note
(MHz)	H/V	Peak	AV	Factor(dB)	Peak	AV	Peak	AV	(dB)	NOIC
2390.000	Н	20.94	11.48	30.89	51.83	42.37	74.00	54.00	- 11.63	AV
2483.500	Н	27.55	16.63	31.28	58.83	47.91	74.00	54.00	- 6.09	AV

- (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  $\circ$
- (2) EUT Orthogonal Axes:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand



#### 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
ſ	1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011

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.

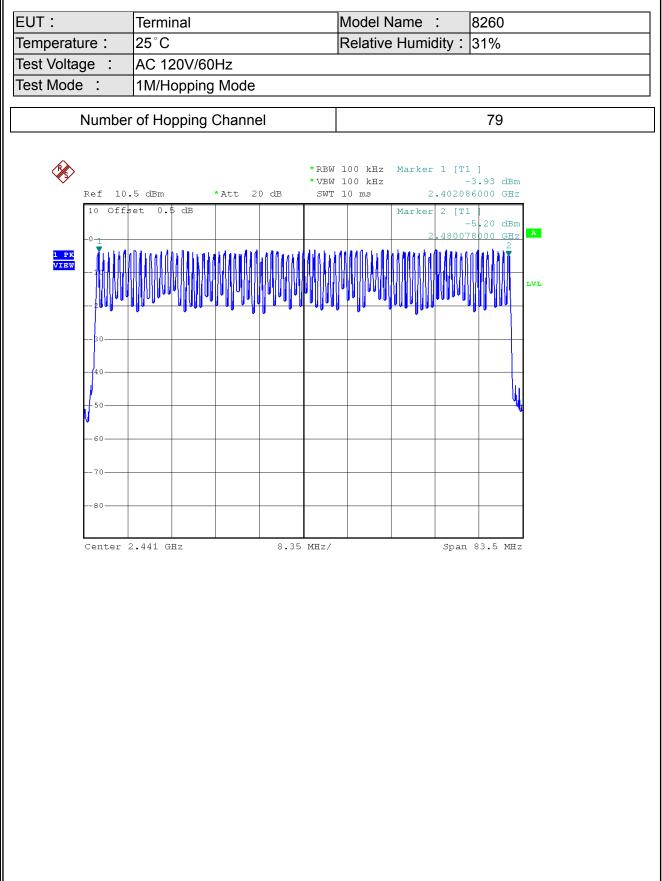
#### 5.1.4 TEST SETUP

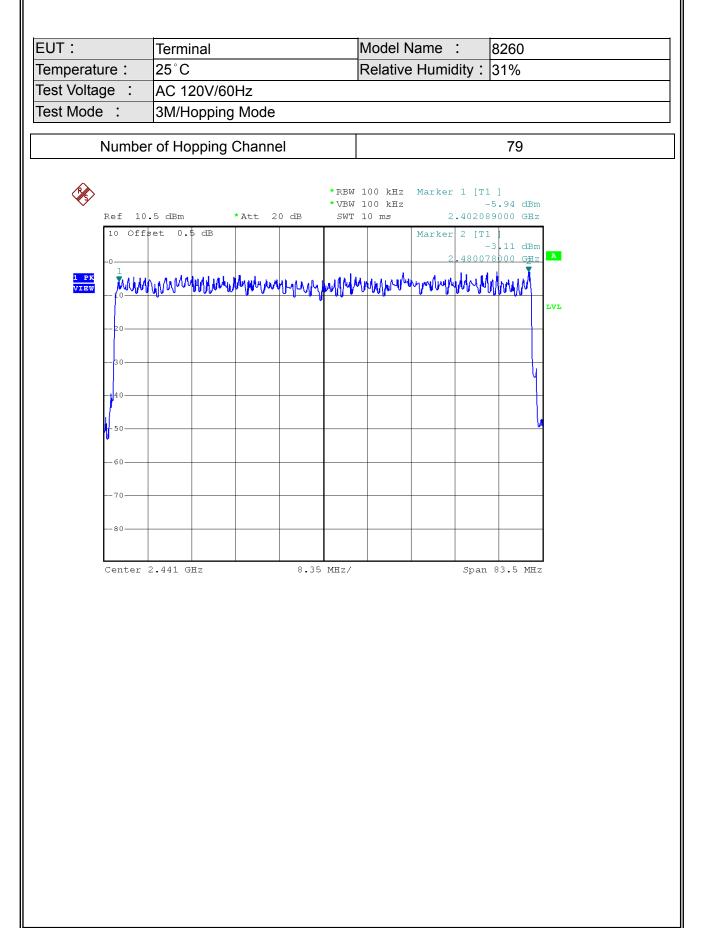
EUT	SPECTRUM
	ANALYZER

#### 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.

# Neutron Engineering Inc. 5.1.6 TEST RESULTS





#### 6. AVERAGE TIME OF OCCUPANCY

#### 6.1 <u>APPLIED PROCED</u>URES / 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-40	100129	Aug. 31, 2011

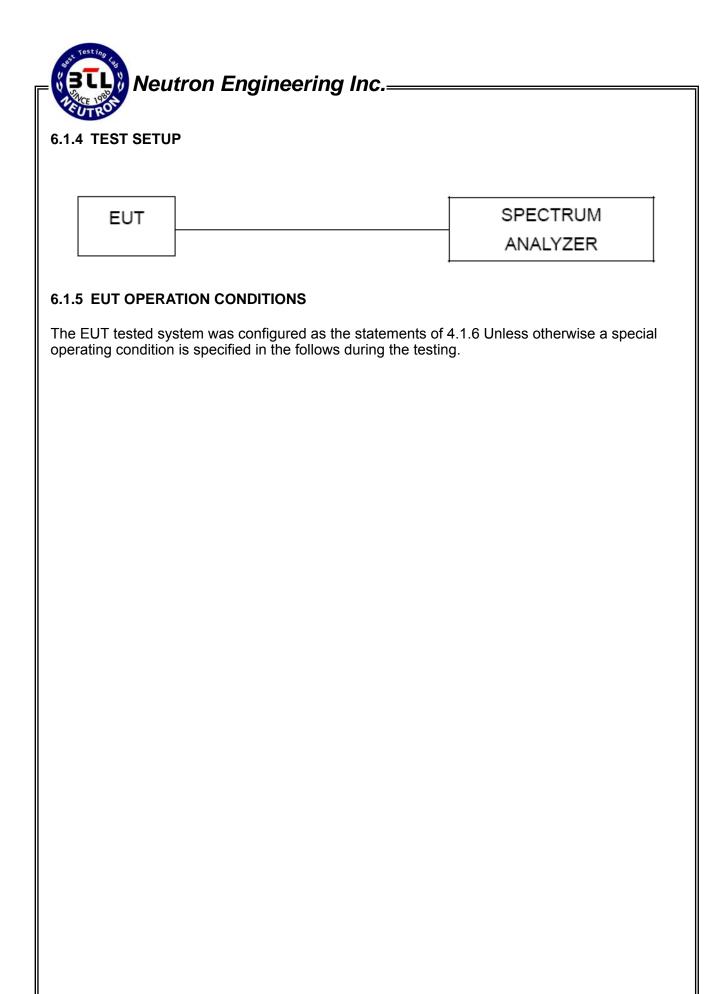
Remark: " N/A" denotes No Model Name , Serial No. or No Calibration specified.

#### 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.
- ${\rm f.}$  Measure the maximum time duration of one single pulse.
- g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
- $\tilde{h}_{\cdot}$  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 x 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 x 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 x 31.6 = 320 within 31.6 seconds.

#### 6.1.3 DEVIATION FROM STANDARD

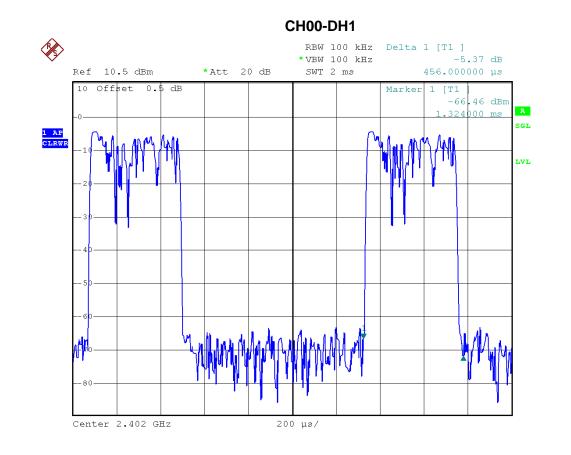
No deviation.

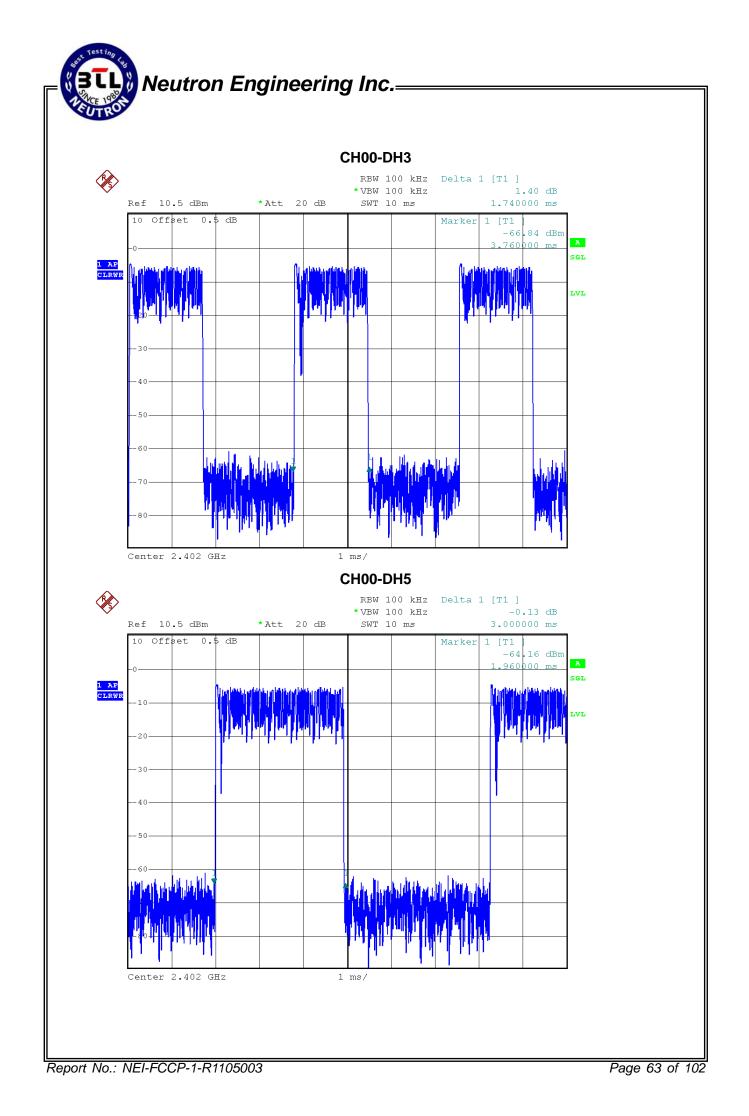


#### 6.1.6 TEST RESULTS

EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity:	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	1M/CH00-DH1/DH3/DH5		

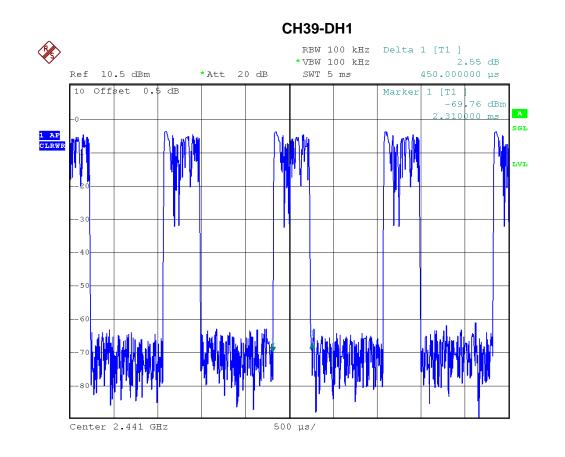
Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2402 MHz	0.4560	0.1459	0.4000
DH3	2402 MHz	1.7400	0.2784	0.4000
DH5	2402 MHz	3.0000	0.3200	0.4000

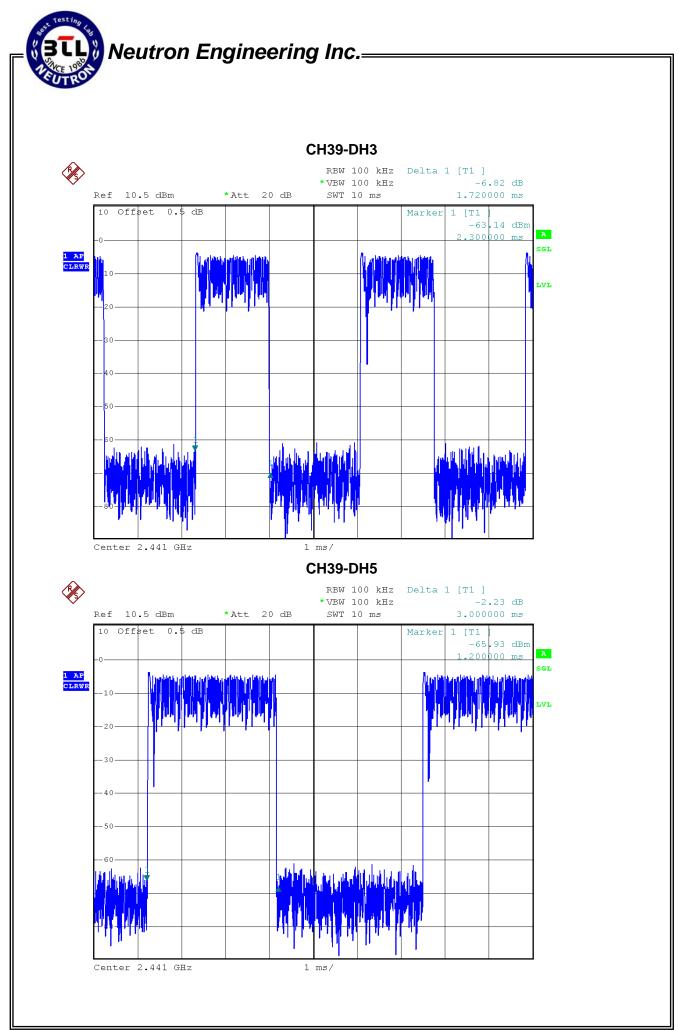




EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	1M/CH39 -DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2441 MHz	0.4500	0.1440	0.4000
DH3	2441 MHz	1.7200	0.2752	0.4000
DH5	2441 MHz	3.0000	0.3200	0.4000

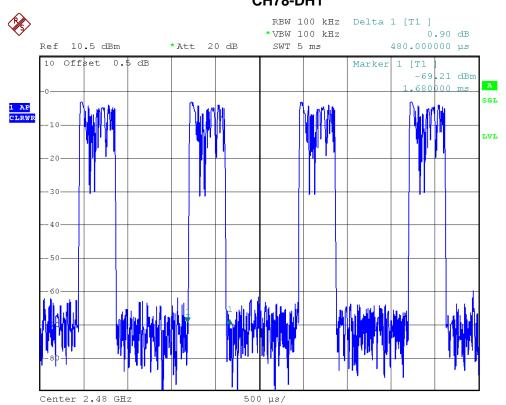




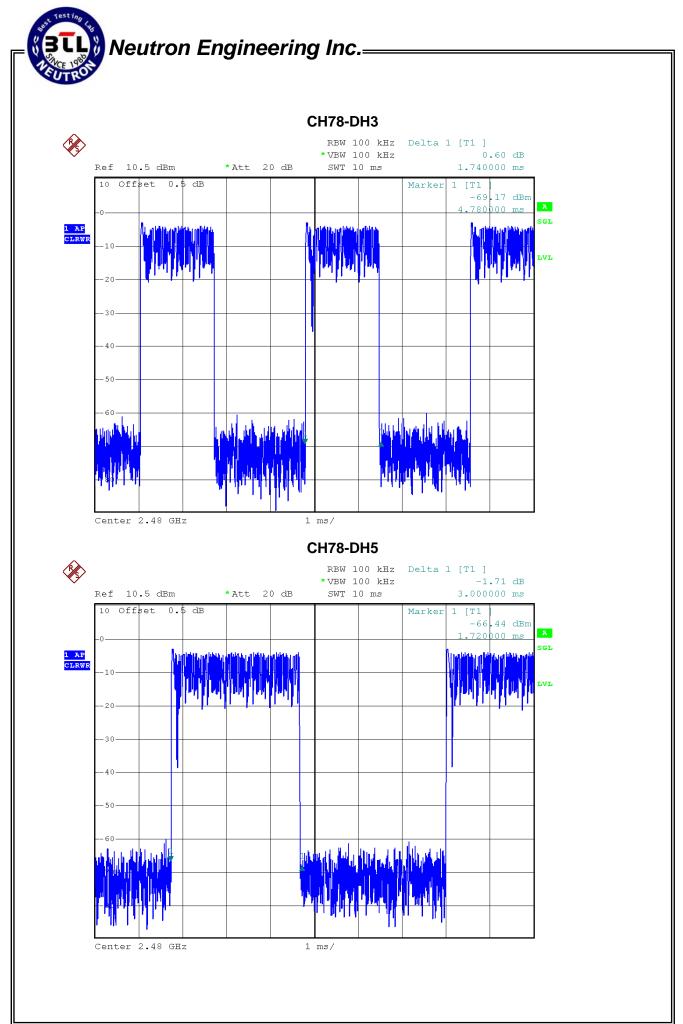


EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	1M/CH78 -DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2480 MHz	0.4800	0.1536	0.4000
DH3	2480 MHz	1.7400	0.2784	0.4000
DH5	2480 MHz	3.0000	0.3200	0.4000



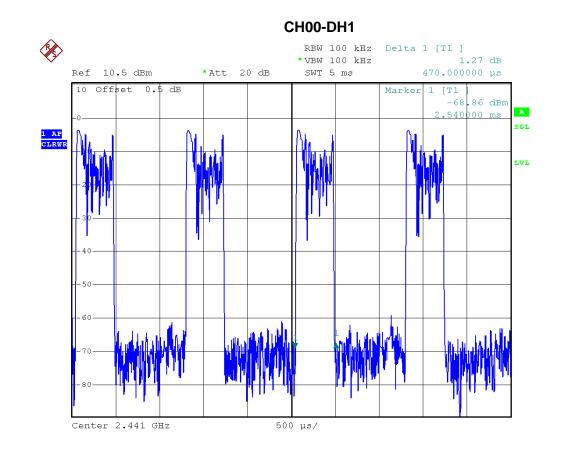
#### CH78-DH1

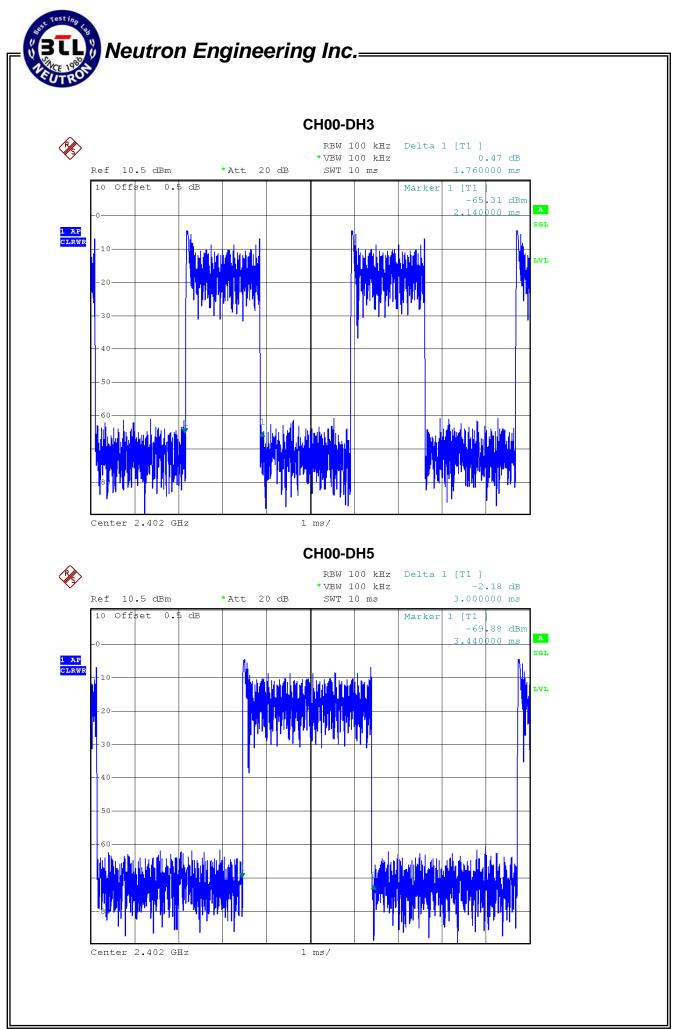




EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	3M/CH00-DH1/DH3/DH5		

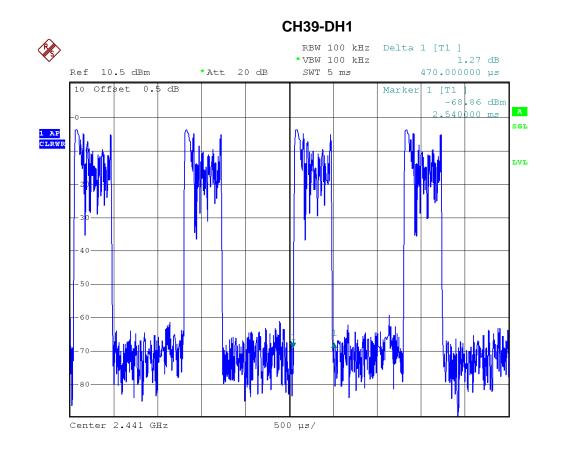
Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2402 MHz	0.4700	0.1504	0.4000
DH3	2402 MHz	1.7600	0.2816	0.4000
DH5	2402 MHz	3.0000	0.3200	0.4000

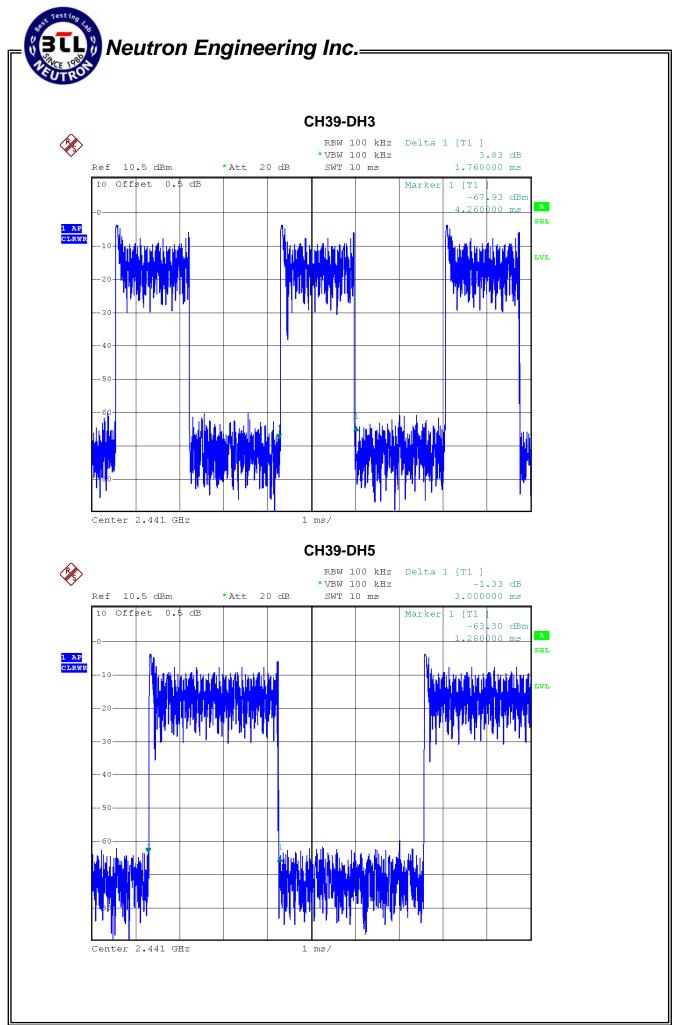




EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	3M/CH39 -DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2441 MHz	0.4700	0.1504	0.4000
DH3	2441 MHz	1.7600	0.2816	0.4000
DH5	2441 MHz	3.0000	0.3200	0.4000

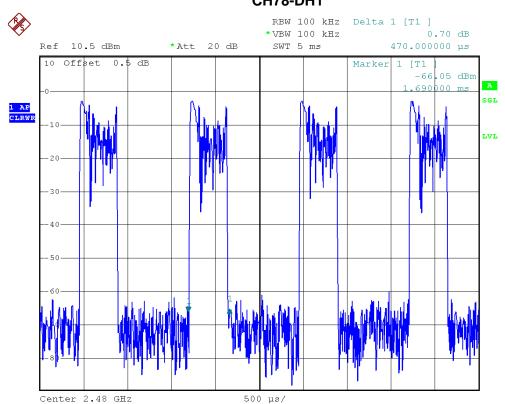




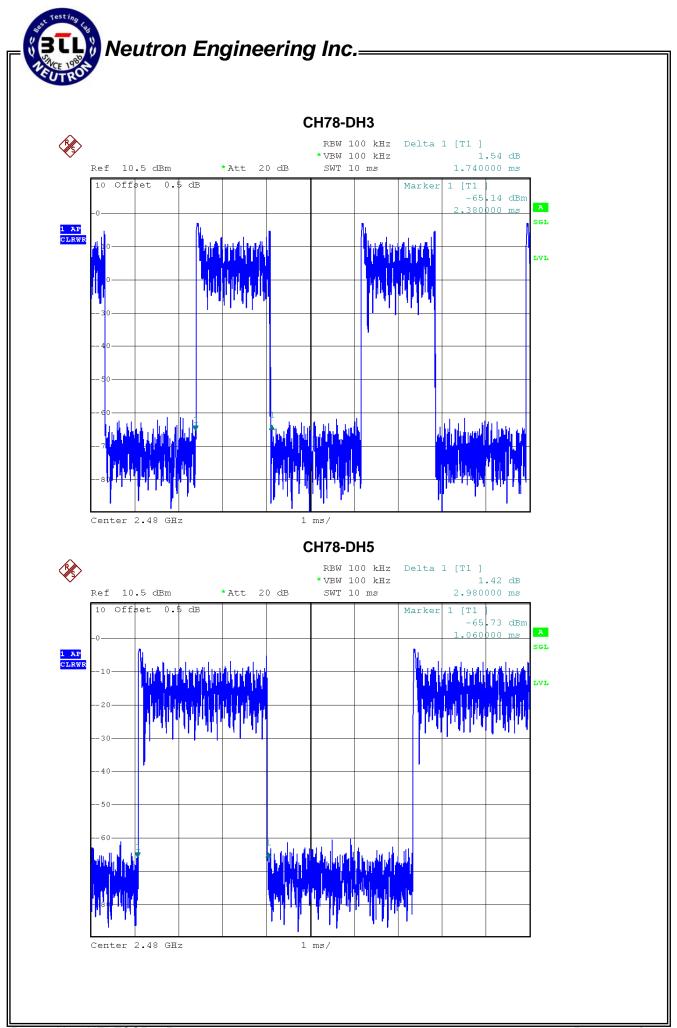


EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	3M/CH78 -DH1/DH3/DH5		

Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits (s)
DH1	2480 MHz	0.4700	0.1504	0.4000
DH3	2480 MHz	1.7400	0.2784	0.4000
DH5	2480 MHz	2.9800	0.3179	0.4000



#### CH78-DH1



Report No.: NEI-FCCP-1-R1105003

### 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-40	100129	Aug. 31, 2011

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

EUT	SPECTRUM
	ANALYZER

### 7.1.5 EUT OPERATION CONDITIONS

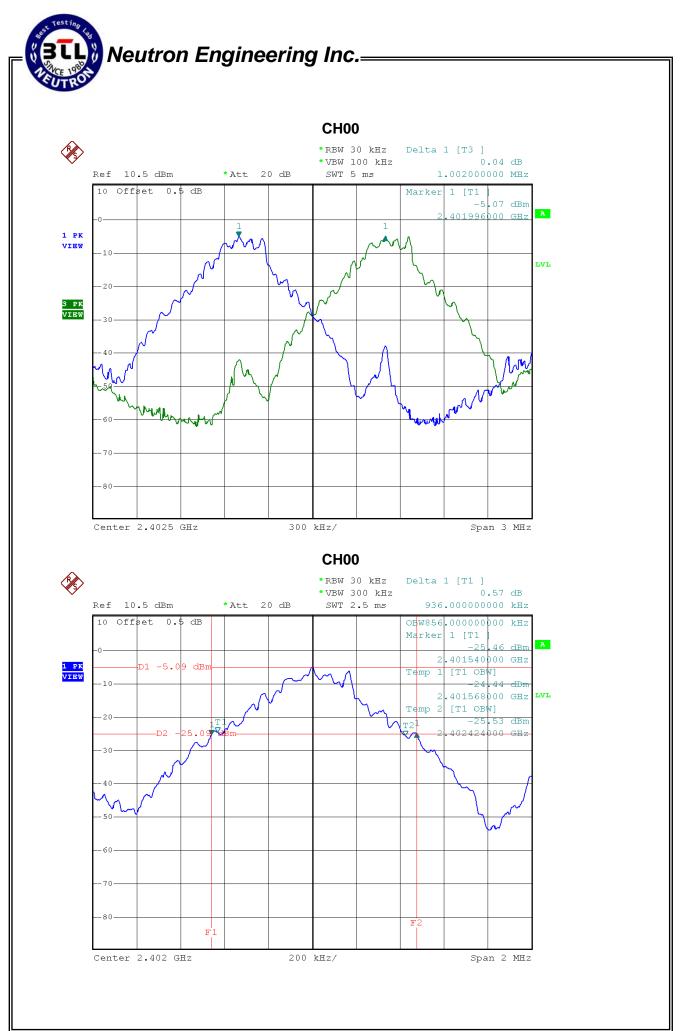
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

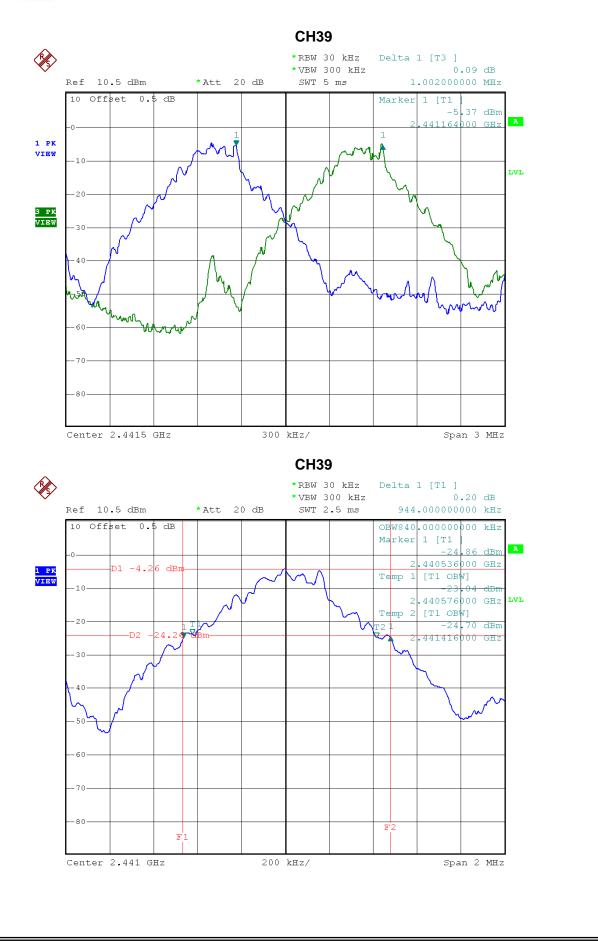
### 7.1.6 TEST RESULTS

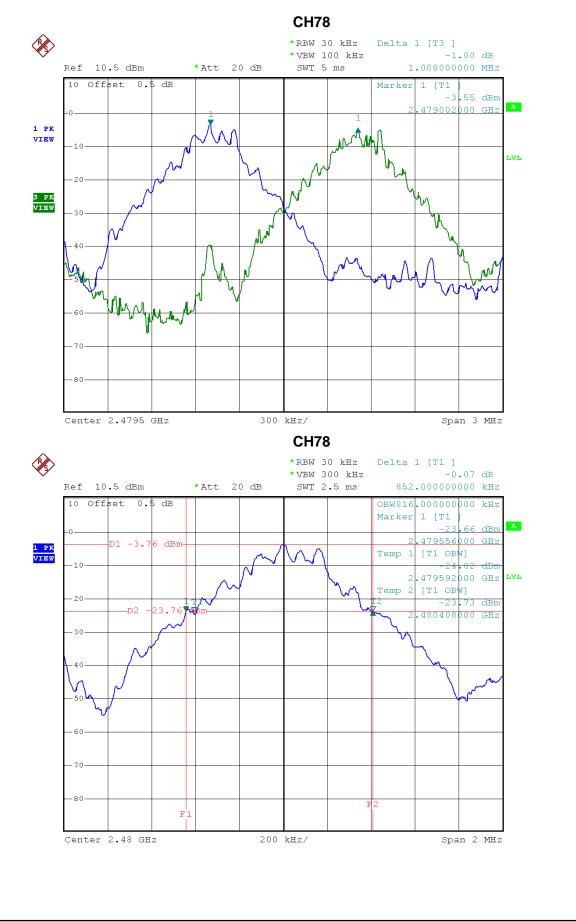
EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity:	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	1M/CH00 / CH39 / CH78		

Frequency	Ch. Separation (MHz)	99% Occupied BW (MHz)	20d Bandwidth (MHz)	two-thirds of the 20 dB bandwidth (MHz)	Result
2402 MHz	1.002	0.856	0.936	0.624	PASS
2441 MHz	1.002	0.840	0.944	0.629	PASS
2480 MHz	1.008	0.816	0.852	0.568	PASS

Ch. Separation Limits: >25 KHz or >2/3 of 20dB bandwidth







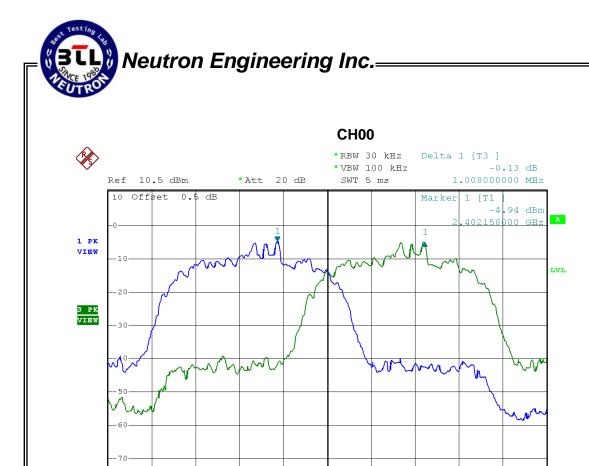
Report No.: NEI-FCCP-1-R1105003

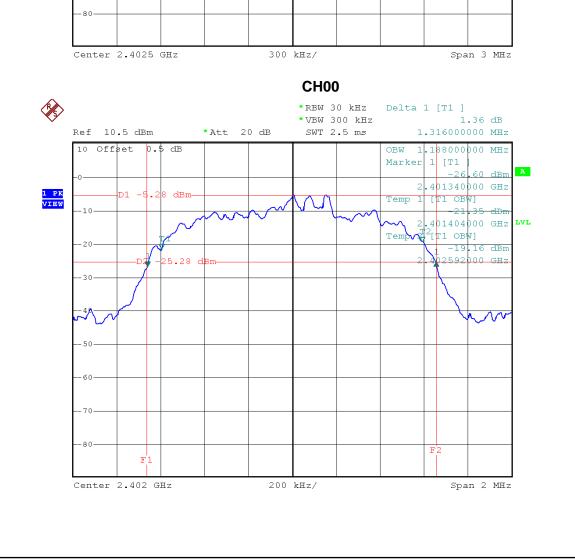


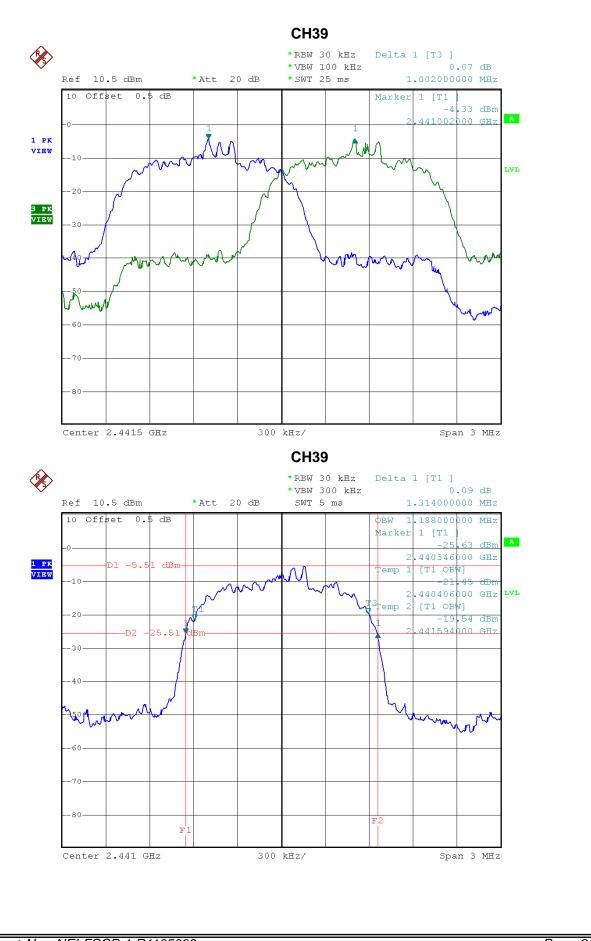
EUT :	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity:	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	3M/CH00 / CH39 / CH78		

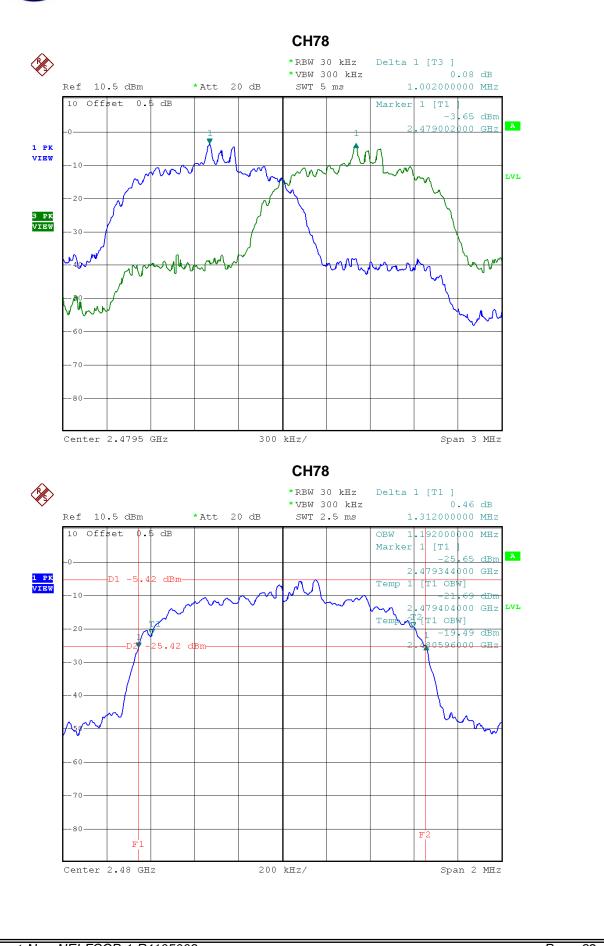
Frequency	Ch. Separation (MHz)	99% Occupied BW (MHz)	20d Bandwidth (MHz)	two-thirds of the 20 dB bandwidth (MHz)	Result
2402 MHz	1.008	1.188	1.316	0.877	PASS
2441 MHz	1.002	1.188	1.314	0.876	PASS
2480 MHz	1.002	1.192	1.312	0.874	PASS

Ch. Separation Limits: >25 KHz or >2/3 of 20dB bandwidth









Report No.: NEI-FCCP-1-R1105003

### 8. PEAK OUTPUT POWER TEST

### 8.1 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		

### 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-40	100129	Aug. 31, 2011

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

### 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= 3MHz, VBW= 3MHz, Sweep time = Auto.

### 8.1.3 DEVIATION FROM STANDARD

No deviation.

### 8.1.4 TEST SETUP



### 8.1.5 EUT OPERATION CONDITIONS

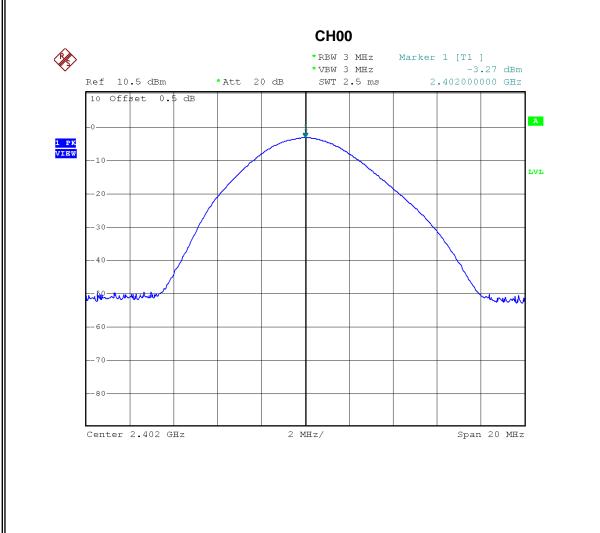
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

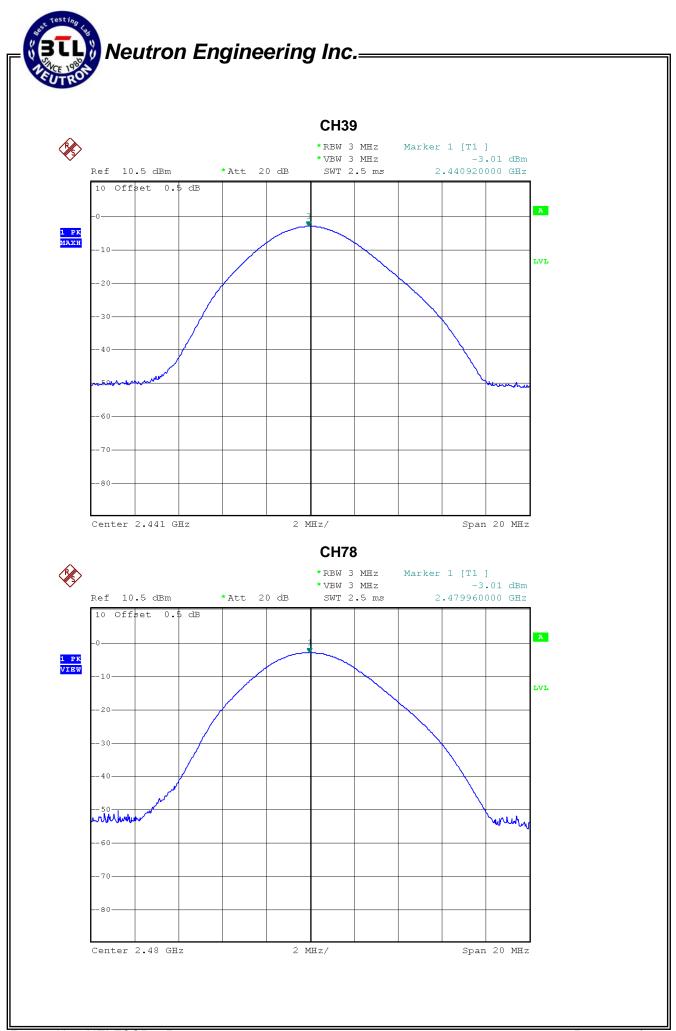


### 8.1.6 TEST RESULTS

EUT :	Terminal	Model Name :	8260	
Temperature :	25°C	Relative Humidity:	31%	
Test Voltage :	AC 120V/60Hz			
Test Mode :	1M/CH00 / CH39 / CH78			

Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	-3.27	30	1
2441	-3.01	30	1
2480	-3.01	30	1

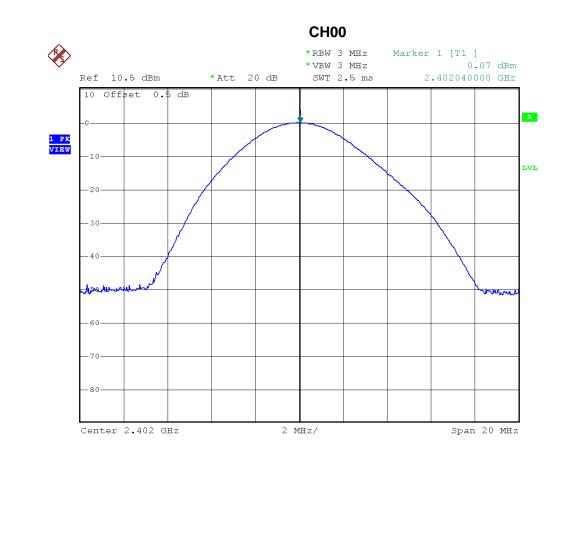


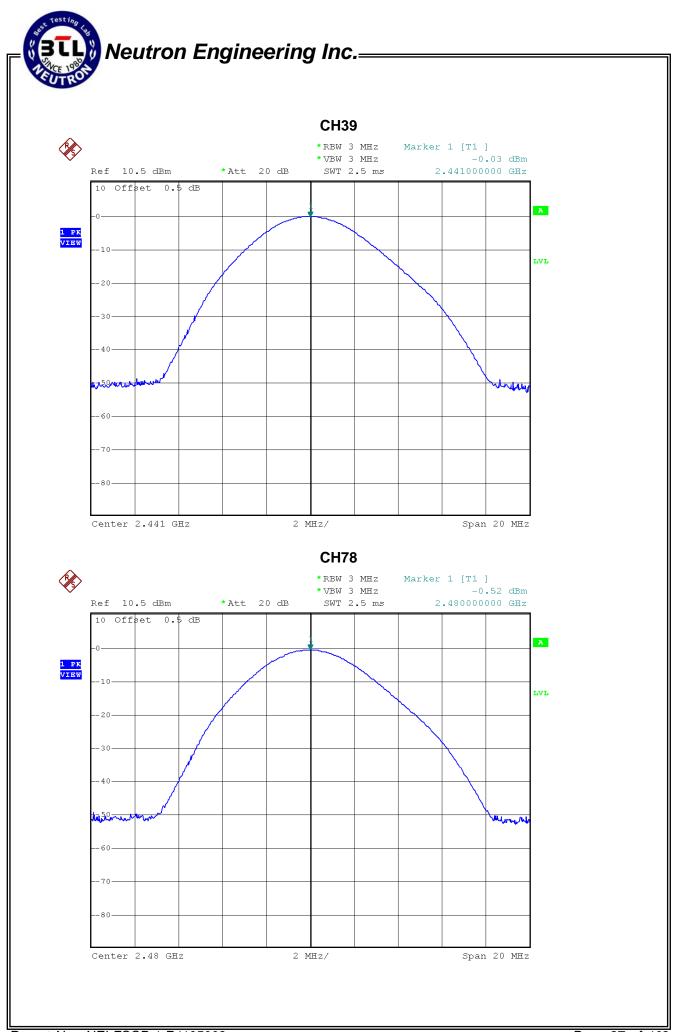


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EUT:	Terminal	Model Name :	8260	
Temperature :	25°C	Relative Humidity:	31%	
Test Voltage :	AC 120V/60Hz			
Test Mode :	3M/CH00 / CH39 / CH78			

Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)
2402	0.07	30	1
2441	-0.03	30	1
2480	-0.52	30	1





### 9. ANTENNA CONDUCTED SPURIOUS EMISSION

### 9.1 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

#### 9.1.1 MEASUREMENT INSTRUMENTS LIST AND SETTING

lt	em	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
	1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011

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

The following table is the setting of the spectrum analyzer.

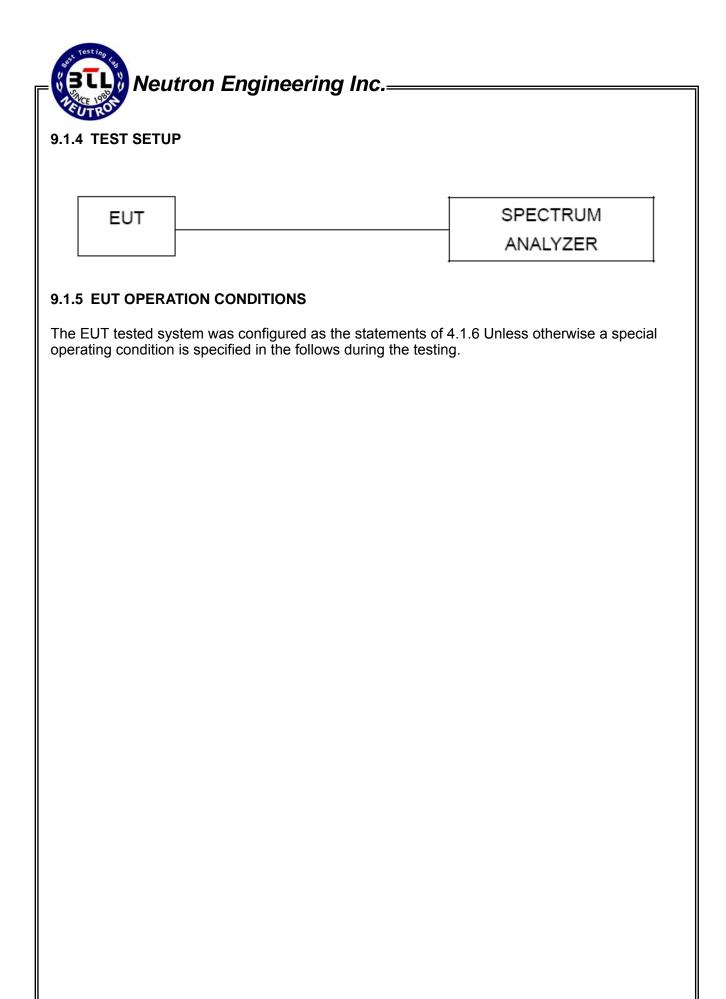
Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	100 KHz /100 KHz for Peak

### 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= 100KHz, VBW=100KHz, Sweep time = Auto.

### 9.1.3 DEVIATION FROM STANDARD

No deviation.

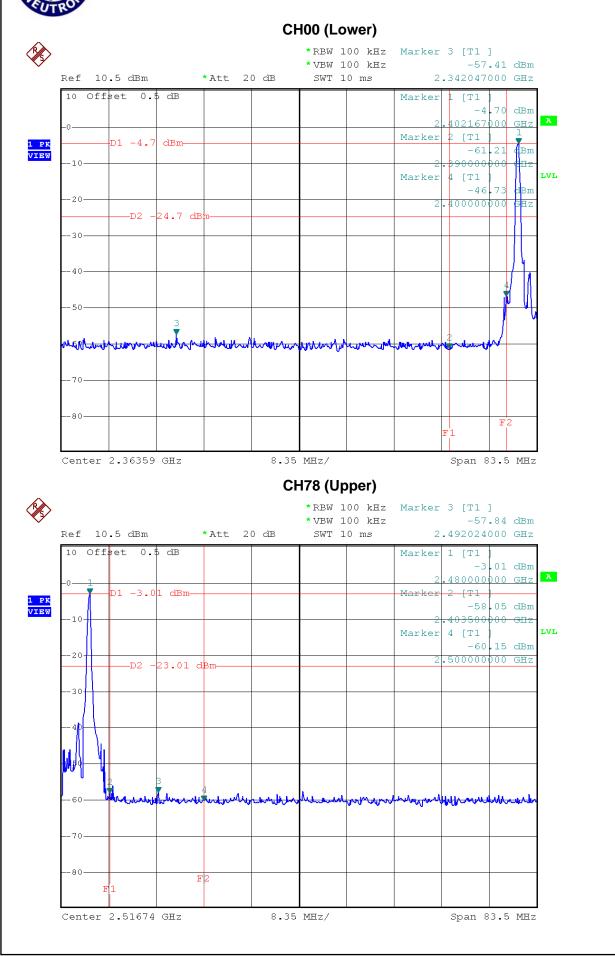


### 9.1.6 TEST RESULTS

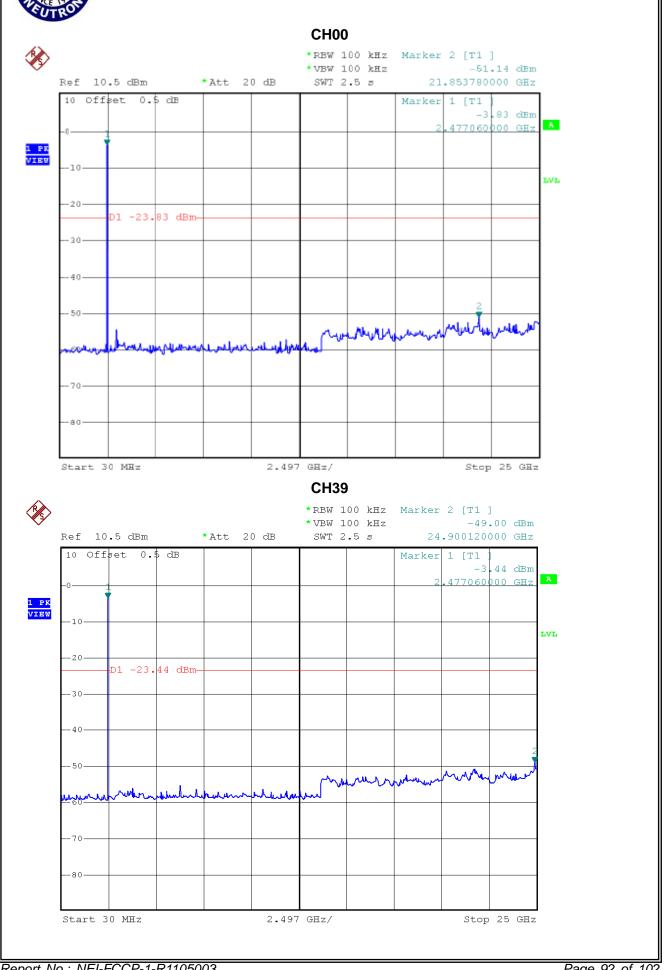
EUT:	Terminal	Model Name :	8260
Temperature :	25°C	Relative Humidity :	31%
Test Voltage :	AC 120V/60Hz		
Test Mode :	1M/CH00 / CH39 / CH78		

	cy power in any 100kHz he frequency band	The max. radio frequence bandwidth within the	cy power in any 100 kHz ne frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)	
2342.047	-57.41	2492.024	-57.84	
Result				

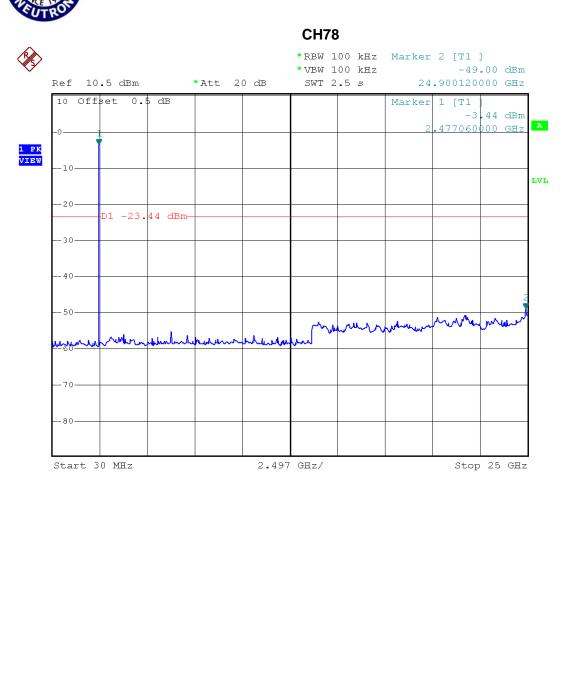
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.



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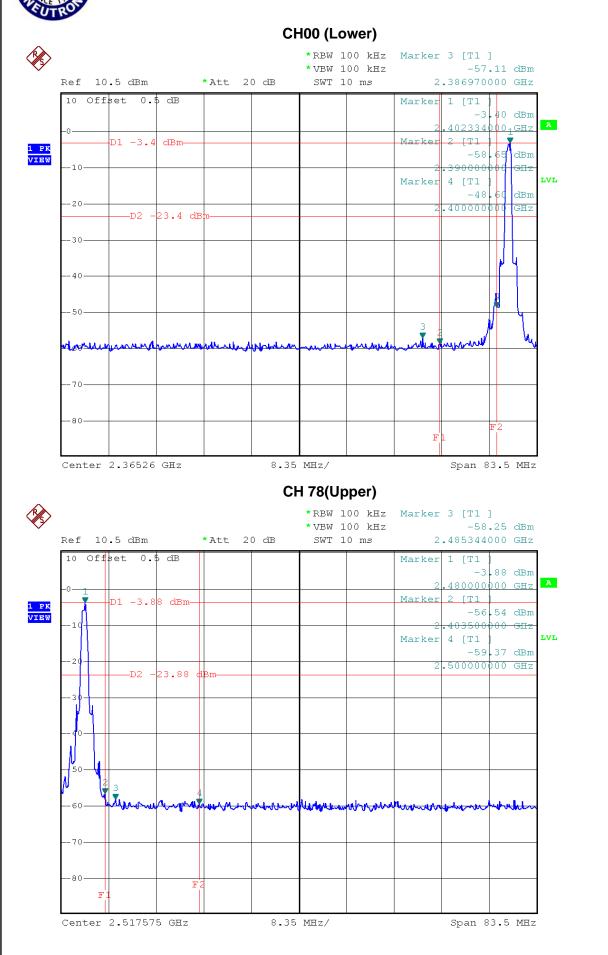


EUT:	Terminal	Model Name :	8260		
Temperature :	25°C	Relative Humidity :	31%		
Test Voltage :	AC 120V/60Hz				
Test Mode :	3M/CH00 / CH39 / CH78				

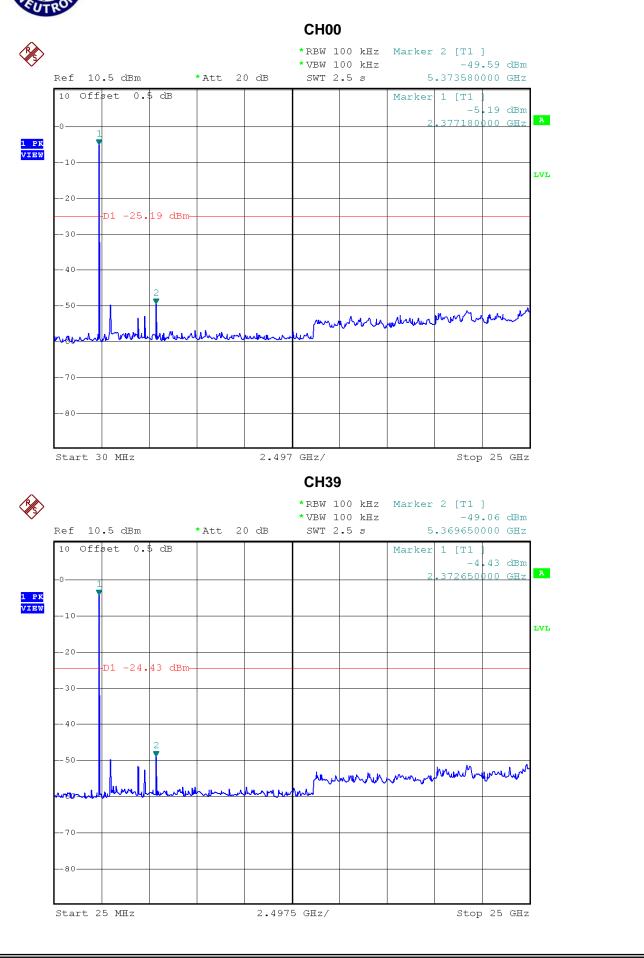
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2386.970	-57.11	2485.344	-58.25

Result

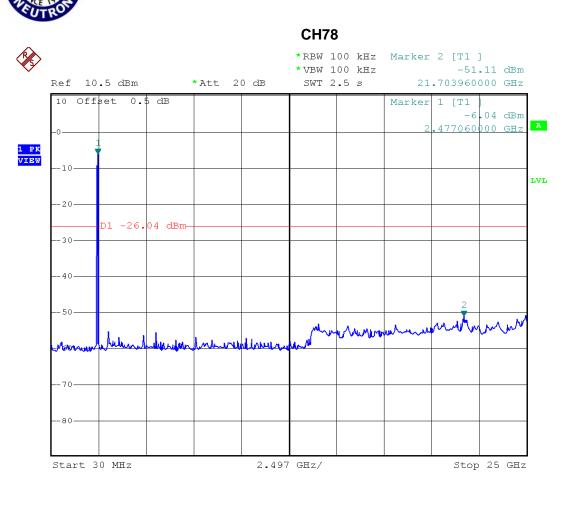
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.



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### **10. RF EXPOSURE TEST**

### 10.1 Applied procedures / limit

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> , H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density

### 10.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 17, 2012
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 17, 2012

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

### **10.1.2 MPE CALCULATION METHOD**

 $\mathsf{E}(\mathsf{V/m}) = \frac{\sqrt{30 \times P \times G}}{I}$ 

Power Density: 
$$Pd(W/m^2) =$$

$$=\frac{E^2}{377}$$

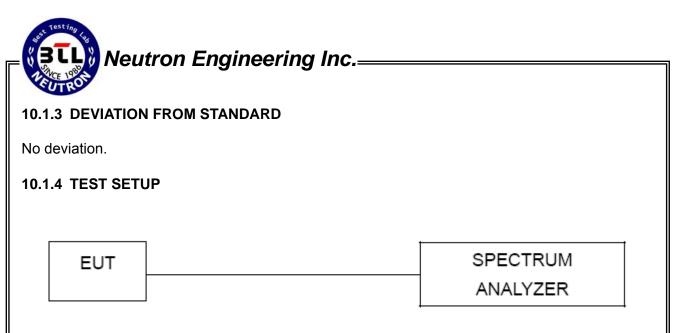
 $\mathbf{E} = \text{Electric field (V/m)}$ 

- $\mathbf{P}$  = Peak RF output power (W)
- **G** = EUT Antenna numeric gain (numeric)
- **d** = Separation distance between radiator and human body (m)

The formula can be changed to

$$\mathbf{Pd} = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained



### **10.1.5 EUT OPERATION CONDITIONS**

The power is too low, so no RF calculations are needed.