

FCC Test Report

Applicant : BROADCOM CORPORATION

Equipment : 802.11abgn WLAN + BLUETOOTH PCI-E MINICARD

Brand Name : Broadcom

Model No. : BCM943228HMB

FCC ID : QDS-BRCM1058

Standard : 47 CFR FCC Part 15.407

CLASSIFICATION: (UNII) Unlicensed National Information Infrastructure

Filling Type : Class II Permissive Change

The product sample received on Dec. 19, 2013 and completely tested on Jan. 24, 2014. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

Wayne Hsu / Assistant Manager

1190

SPORTON INTERNATIONAL INC. Page No. : 1 of 76

TEL: 886-3-327-3456 Report Version : Rev. 01



Table of Contents

1	GENERAL DESCRIPTION	5
1.1	Information	5
1.2	Testing Applied Standards	
1.3	Testing Location Information	8
1.4	Measurement Uncertainty	9
2	TEST CONFIGURATION OF EUT	10
2.1	The Worst Case Modulation Configuration	10
2.2	The Worst Case Measurement Configuration	10
2.3	Test Setup Diagram	
3	TRANSMITTER TEST RESULT	12
3.1	RF Output Power	12
3.2	Transmitter Bandedge Emissions	16
3.3	Transmitter Unwanted Emissions	21
4	TEST EQUIPMENT AND CALIBRATION DATA	76
APP	ENDIX A. TEST PHOTOS	
	ENDIV D. DUOTO OD ADUO OF FUT	

APPENDIX B. PHOTOGRAPHS OF EUT

Report No.: FR3D1962-02AN

Summary of Test Result

Report No.: FR3D1962-02AN

	Conformance Test Specifications						
Report Clause	Ref. Std. Clause	Description	Measured	Limit	Result		
1.1.3	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied		
3.1	15.407(a)	RF Output Power (Maximum Conducted Output Power)	Power [dBm] 5150-5250MHz:16.92 5250-5350MHz:22.03 5470-5725MHz:20.81	Power [dBm] 5150-5250MHz:17 5250-5350MHz:24 5470-5725MHz:24	Complied		
3.2	15.407(b)	Transmitter Bandedge Emissions	Restricted Bands [dBuV/m at 1.0m]: 5469.80MHz 83.12 (Margin 0.42dB) - PK 62.56 (Margin 0.98dB) - AV	Non-Restricted Bands: ≤ -27dBm (77.84dBuV/m@1m) Restricted Bands: FCC 15.209	Complied		
3.3	15.407(b)	Transmitter Unwanted Emissions	Restricted Bands [dBuV/m at 1.0m]: 30.000MHz 33.60 (Margin 6.40dB) - PK	Non-Restricted Bands: ≤ -27dBm (77.84dBuV/m@1m) Restricted Bands: FCC 15.209	Complied		

SPORTON INTERNATIONAL INC. Page No. : 3 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



Revision History

Report No.: FR3D1962-02AN

Report No.	Version	Description	Issued Date
FR3D1962-02AN	Rev. 01	Initial issue of report	Mar. 06, 2014

SPORTON INTERNATIONAL INC. Page No. : 4 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



1 General Description

1.1 Information

1.1.1 Feature of Equipment Under Test

Product Feature				
Equipment	802.11abgn WLAN + BLUETOOTH PCI-E MINICARD			
Brand Name	Broadcom			
Model Name.	BCM943228HMB			
FCC ID	QDS-BRCM1058			
Installed into host	Equipment: Tablet PC Brand Name: Lenovo Marketing name: Lenovo Miix 2 11			
EUT supports Radios application	WLAN 11a/b/g/n HT20 HT40 Bluetooth v2.1 + EDR Bluetooth v4.0			
EUT Stage	Production Unit			

Report No.: FR3D1962-02AN

1.1.2 RF General Information

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	RF Output Power (dBm)
5150-5250		5180-5240	36-48 [4]	1	13.49
5250-5350	а	5260-5320	52-64 [4]	1	17.25
5470-5725		5500-5700	100-140 [8]	1	16.65
5150-5250		5180-5240	36-48 [3]	2	8.72
5250-5350	(HT20)	5260-5320	52-64 [4]	2	15.74
5470-5725	1	5500-5720	100-144 [4]	2	15.80
5150-5250		5190-5230	38-46 [2]	2	9.96
5250-5350	(HT40)	5270-5310	54-62 [2]	2	16.45
5470-5725		5510-5710	102-142 [4]	2	16.06

Note 1: RF output power specifies that Maximum Conducted Output Power.

Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

SPORTON INTERNATIONAL INC. Page No. : 5 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

1.1.3 Antenna Information

Antenna Category					
Integral antenna (antenna permanently attached)					
	No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.				

Report No.: FR3D1962-02AN

	Antenna Information					
	Manufacturer	WNC				
	P/N	Main:025.9000X.001	Aux: 025.9000Y.001			
	Antenna Type	Main: PIFA Antenna	Aux: PIFA Antenna			
Antenna 1		Main Antenna :	Aux Antenna :			
	Deals main	WLAN(2.4G):1.87 dBi	Bluetooth:0.69 dBi			
	Peak gain	WLAN(5G):-0.16 dBi	WLAN(2.4G):0.69 dBi			
			WLAN(5G):2.73 dBi			
	Manufacturer	НТ				
	P/N	Main:025.9000X.0011	Aux:025.9000Y.0011			
	Antenna Type	Main:PIFA Antenna	Aux:PIFA Antenna			
Antenna 2		Main Antenna :	Aux Antenna :			
	Dools noin	WLAN(2.4G):-1.63dBi	Bluetooth:-0.35 dBi			
	Peak gain	WLAN(5G):1.84 dBi	WLAN(2.4G):-0.35 dBi			
			WLAN(5G):1.07dBi			

Note: Performed the worst configuration for higher gain was test in final test report.

Directional Gain (DG) Result						
Modulation Mode N_{TX} N_{SS} Array Gain Power DG (dBi)						
11a,6-54Mbps	1	1	0	-0.16		
HT20,M0-15	2	1/2	0	1.52		
HT40,M0-15	2	1/2	0	1.52		

Note 2: For all transmitter outputs with unequal antenna gains, directional gain is to be computed as follows: Any transmit signals are correlated, Directional Gain =10 log[(10^{G1/20} +... + 10^{GN/20})² /N_{TX}] All transmit signals are completely uncorrelated, Directional Gain = 10 log[(10^{G1/10} +... + 10^{GN/10)}/N_{TX}]

SPORTON INTERNATIONAL INC. Page No. : 6 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



1.1.4 Test Signal Duty Cycle

	Operated Mode for Worst Duty Cycle					
	Operated normally mode for worst duty cycle					
\boxtimes	Operated test mode for worst duty cycle					
	Test Signal Duty Cycle (x)	Power Duty Factor [dB] – (10 log 1/x)				
\boxtimes	95.03% - IEEE 802.11a	0.22				
\boxtimes	95.02% - IEEE 802.11n (HT20)	0.22				
\boxtimes	90.17% - IEEE 802.11n (HT40)	0.45				

Report No.: FR3D1962-02AN

1.1.5 EUT Operational Condition

Supply Voltage		☐ DC	System
Type of DC Source	☐ Internal DC supply		□ Battery

SPORTON INTERNATIONAL INC. Page No. : 7 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report No.: FR3D1962-02AN

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2009
- FCC KDB 789033
- FCC KDB 644545 D01
- FCC KDB 644545 D02
- FCC KDB 662911

1.3 Testing Location Information

	Testing Location						
\boxtimes	HWA YA	ADD	:	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.			
		TEL	:	886-3-327-3456 F	AX : 886-3-327-0973		
	Test Condition Test Site No. Test Engineer Test Environment					Test Environment	
RF Conducted		TH02-HY Alex		24~26°C / 45~49%			
	Radiated Emission			03CH03-HY	Leo	21.4°C / 35%	

SPORTON INTERNATIONAL INC. Page No. : 8 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty					
Test Item		Uncertainty			
RF output power, conducted		±0.63 dB			
Unwanted emissions, conducted	9 – 150 kHz	±0.38 dB			
	0.15 – 30 MHz	±0.42 dB			
	30 – 1000 MHz	±0.51 dB			
	1 – 18 GHz	±0.67 dB			
	18 – 40 GHz	±0.83 dB			
	40 – 200 GHz	N/A			
All emissions, radiated	9 – 150 kHz	±2.49 dB			
	0.15 – 30 MHz	±2.28 dB			
	30 – 1000 MHz	±2.56 dB			
	1 – 18 GHz	±3.59 dB			
	18 – 40 GHz	±3.82 dB			
	40 – 200 GHz	N/A			
Temperature		±0.8 °C			
Humidity		±3 %			
DC and low frequency voltages		±3 %			
Time		±1.42 %			
Duty Cycle		±1.42 %			

SPORTON INTERNATIONAL INC. Page No. : 9 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



2 Test Configuration of EUT

2.1 The Worst Case Modulation Configuration

	Worst Modulation Used for Conformance Testing										
Modulation Mode	Modulation Mode Transmit Chains (N _{TX}) Data Rate / MCS Worst Data Rate / MCS										
11a,6-54Mbps	1	6-54Mbps	6 Mbps								
HT20,M0-15	2	M0-15	MCS 0								
HT40,M0-15	2	M0-15	MCS 0								

Report No.: FR3D1962-02AN

2.2 The Worst Case Measurement Configuration

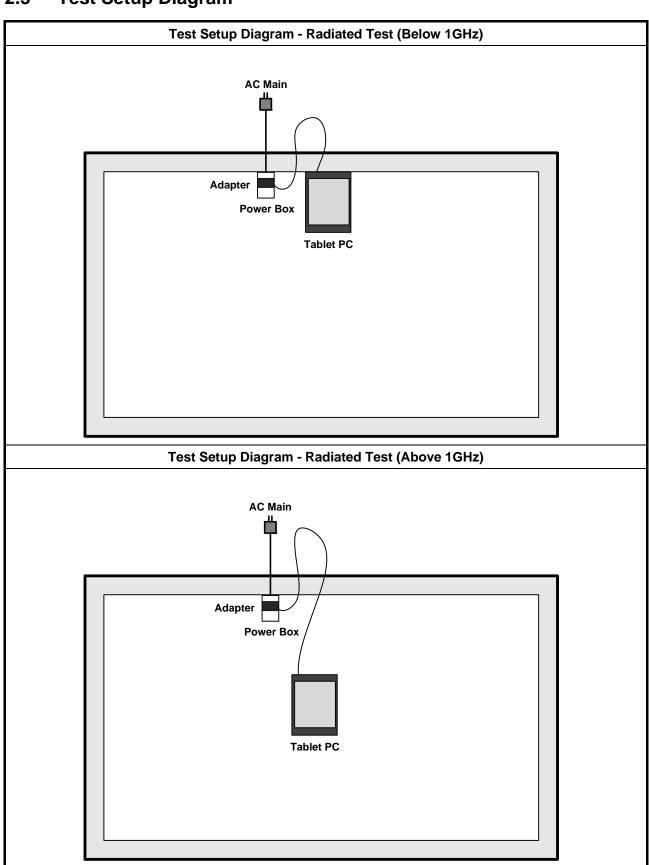
Th	ne Worst Case Mode for Following Conformance Tests
Tests Item	RF Output Power
Test Condition	Conducted measurement at transmit chains
Modulation Mode	11a, HT20, HT40

Th	e Worst Case Mode for Fo	ollowing Conformance Te	sts				
Tests Item	Transmitter Radiated Unwa Transmitter Radiated Band						
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.						
	EUT will be placed in fixed position.						
User Position	EUT will be placed in mobile position and operating multiple positions. EUT shall be performed two orthogonal planes. The worst planes is Z.						
	EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed two or three orthogonal planes.						
Operating Mode		o link (WLAN)					
Modulation Mode	11a, HT20, HT40						
	X Plane	Y Plane	Z Plane				
Orthogonal Planes of EUT							

SPORTON INTERNATIONAL INC. Page No. : 10 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



2.3 Test Setup Diagram



SPORTON INTERNATIONAL INC.

TEL: 886-3-327-3456 FAX: 886-3-327-0973 Page No. : 11 of 76

Report Version

: Rev. 01



3 Transmitter Test Result

3.1 RF Output Power

3.1.1 RF Output Power Limit

	Maximum Conducted Output Power Limit
UN	Il Devices
	For the 5.15-5.25 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$.
	For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 - (G_{TX} - 6).
\boxtimes	For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then $P_{Out} = 24 - (G_{TX} - 6)$.
	For the 5.725-5.825 GHz band:
	Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$.
	Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$.
LE-	LAN Devices
\boxtimes	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
\boxtimes	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
\boxtimes	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
	For the 5.725-5.825 GHz band, the maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
	Point-to-multipoint systems (P2M): the maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
	Point-to-point systems (P2P): the maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. If e.i.r.p. > 36 dBm, $G_{TX} \le P_{Out}$
	t = maximum conducted output power in dBm, t = the maximum transmitting antenna directional gain in dBi.

Report No.: FR3D1962-02AN

3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

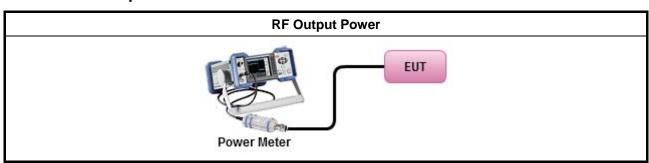
SPORTON INTERNATIONAL INC. Page No. : 12 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

3.1.3 Test Procedures

		Test Method
\boxtimes	Max	imum Conducted Output Power
	[duty	y cycle ≥ 98% or external video / power trigger]
		Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
		Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty	cycle < 98% and average over on/off periods with duty factor
		Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
		Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wid	eband RF power meter and average over on/off periods with duty factor
	\boxtimes	Refer as FCC KDB 789033, clause E Method PM (using an RF average power meter).
\boxtimes	For	conducted measurement.
		The EUT supports single transmit chain and measurements performed on this transmit chain.
	\boxtimes	The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.
		The EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
		If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

Report No.: FR3D1962-02AN

3.1.4 Test Setup



SPORTON INTERNATIONAL INC. Page No. : 13 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



3.1.5 Test Result of Maximum Conducted (Average) Output Power

		waxiiiiuiii C	onducted (F	onducted (Average) Output Power (5150-5250MHz band)									
Condi		RF Output Power (dBm)											
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)	EIRP Power	EIRP Limit				
11a	1	5180	12.76	-	12.76	17.00	-0.16	12.60	23.00				
11a	1	5200	12.98	-	12.98	17.00	-0.16	12.82	23.00				
11a	1	5240	13.49	-	13.49	17.00	-0.16	13.33	23.00				
HT20	2	5180	6.38	4.55	8.57	17.00	1.52	10.09	23.00				
HT20	2	5200	7.02	3.82	8.72	17.00	1.52	10.24	23.00				
HT20	2	5240	6.08	4.32	8.30	17.00	1.52	9.82	23.00				
HT40	2	5190	6.43	4.35	8.52	17.00	1.52	10.04	23.00				
HT40	2	5230	8.30	4.98	9.96	17.00	1.52	11.48	23.00				
Resu	ılt					Complied			•				

Report No.: FR3D1962-02AN

	ļ	Maximum C	onducted (A	Average) Out	put Power (5250-5350MH	z band)					
Condit	Condition				RF Output Power (dBm)							
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)	EIRP Power	EIRP Limit			
11a	1	5260	17.25	-	17.25	24.00	-0.16	17.09	27.00			
11a	1	5300	15.46	-	15.46	24.00	-0.16	15.30	27.00			
11a	1	5320	12.67	-	12.67	24.00	-0.16	12.51	27.00			
HT20	2	5260	10.38	8.36	12.50	24.00	1.52	14.02	27.00			
HT20	2	5300	13.43	11.88	15.74	24.00	1.52	17.26	27.00			
HT20	2	5320	11.67	9.68	13.80	24.00	1.52	15.32	27.00			
HT40	2	5270	14.28	12.41	16.45	24.00	1.52	17.98	27.00			
HT40	2	5310	8.68	6.56	10.76	24.00	1.52	12.28	27.00			
Resu	ılt					Complied						

SPORTON INTERNATIONAL INC. Page No. : 14 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



	Ma	aximum Co	nducted (Av	erage) Outp	ut Power (St	raddle 5725	MHz band)					
Condit	tion			RF Output Power (dBm)								
Modulation Mode	N _{TX}	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	Power Limit	DG (dBi)	EIRP Power	EIRP Limit			
11a	1	5500	13.77	-	13.77	24.00	-0.16	13.61	27.00			
11a	1	5580	16.65	-	16.65	24.00	-0.16	16.49	27.00			
11a	1	5700	9.60	-	9.60	24.00	-0.16	9.44	27.00			
HT20	2	5500	13.20	11.79	15.56	24.00	1.52	17.09	27.00			
HT20	2	5580	13.29	12.21	15.80	24.00	1.52	17.32	27.00			
HT20	2	5700	9.29	7.24	11.40	24.00	1.52	12.92	27.00			
HT40	2	5510	10.22	8.42	12.42	24.00	1.52	13.94	27.00			
HT40	2	5550	10.76	9.10	13.02	24.00	1.52	14.54	27.00			
HT40	2	5670	13.53	12.52	16.06	24.00	1.52	17.59	27.00			
Resu	ılt			•	•	Complied			•			

Report No.: FR3D1962-02AN

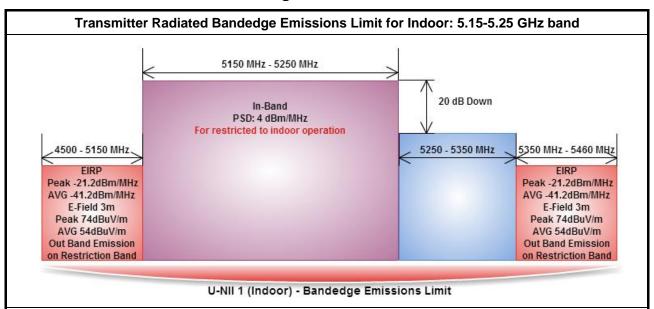
SPORTON INTERNATIONAL INC. Page No. : 15 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

⁼ Band-crossing channel. The conducted output power within each band of operation shall comply with the limits for that band.

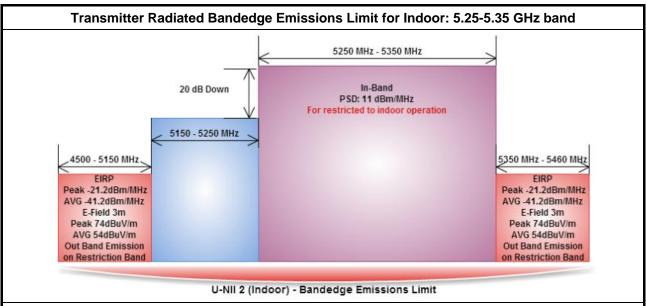


3.2 Transmitter Bandedge Emissions

3.2.1 **Transmitter Radiated Bandedge Emissions Limit**



Refer as FCC KDB 789033, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.



Refer as FCC KDB 789033, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.

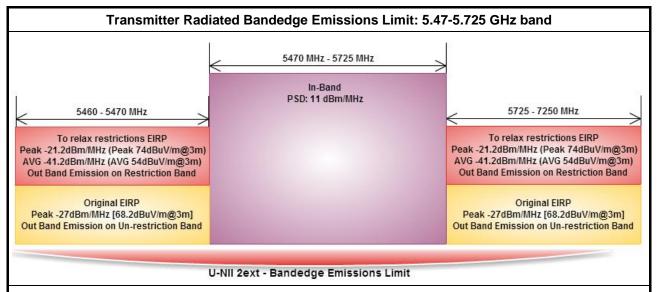
SPORTON INTERNATIONAL INC. Page No. : 16 of 76 Report Version TEL: 886-3-327-3456 : Rev. 01



Transmitter Radiated Bandedge Emissions Limit for indoor/outdoor: 5.25-5.35 GHz band 5250 MHz - 5350 MHz In-Band 4500 - 5150 MHz 5150 MHz - 5250 MHz PSD: 11 dBm/MHz 5350 MHz - 5460 MHz For not restricted to indoor operation To relax restrictions EIRP Peak -21.2dBm/MHz FIRP FIRP (Peak 74dBuV/m@3m) Peak -21.2dBm/MHz Peak -21.2dBm/MHz AVG -41.2dBm/MHz AVG -41.2dBm/MHz AVG -41.2dBm/MHz (AVG 54dBuV/m@3m) F-Field 3m E-Field 3m **Out Band Emission on** Peak 74dBuV/m Peak 74dBuV/m **Restriction Band** AVG 54dBuV/m AVG 54dBuV/m EIRP **Out Band Emission Out Band Emission** Peak -27dBm/MHz on Restriction Band on Restriction Band [68.2dBuV/m@3m] **Out Band Emission on Un-restriction Band** U-NII 2 - Bandedge Emissions Limit

Report No.: FR3D1962-02AN

Refer as FCC KDB 789033, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.



Refer as FCC KDB 789033, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.

3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

SPORTON INTERNATIONAL INC. Page No. : 17 of 76

TEL: 886-3-327-3456 Report Version : Rev. 01



3.2.3 Test Procedures

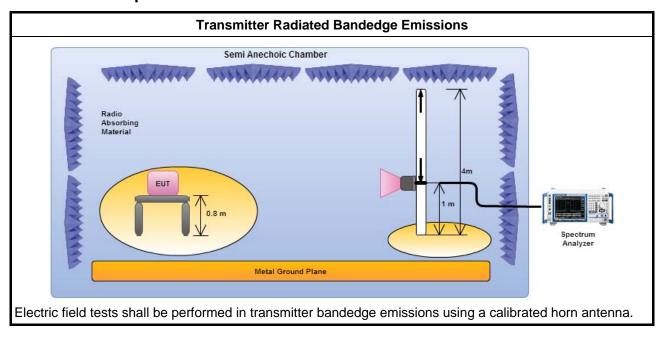
		Test Method
	perfe equi extra dista mea	issurements may be performed at a distance other than the limit distance provided they are not ormed in the near field and the emissions to be measured can be detected by the measurement ipment. When performing measurements at a distance other than that specified, the results shall be appolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear ance for field-strength measurements, inverse of linear distance-squared for power-density issurements). Measurements in the bandedge are typically made at a closer distance 1.5m, because instrumentation noise floor is typically close to the radiated emission limit.
\boxtimes	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
\boxtimes		er as ANSI C63.10, clause 6.9.2.2 bandedge testing shall be performed at the lowest frequency nnel and highest frequency channel within the allowed operating band.
	char will o	UT operate in adjacent contiguous bands, bandedge testing performed at the lowest frequency need at lower-band and highest frequency channel at higher-band. Transmitter in-band emissions consist of adjacent contiguous bands (e.g., IEEE 802.11ac VHT160 The lowest frequency channel ower-band and highest frequency channel at higher-band in-band emissions will consist of two acent contiguous bands.)
		Operating in 5.15-5.25 GHz band (lower-band) and 5.25-5.35 GHz band (higher-band).
		Operating in 5.47-5.725 GHz band (lower-band) and 5.725-5.825 GHz band (higher-band).
	char	JT operate in individual non-contiguous bands, bandedge testing performed at the lowest frequency nnel and highest frequency channel within lower-band and higher-band. (e.g., (e.g., IEEE 802.11ac 160)
		Operating in 5.25-5.35 GHz band (lower-band) and 5.47-5.725 GHz band (higher-band).
		Operating in 5.15-5.25 GHz band (lower-band) and 5.725-5.825 GHz band (higher-band).
\boxtimes	For	the transmitter unwanted emissions shall be measured using following options below:
	\boxtimes	Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.
	\boxtimes	Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.
		Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
		Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
		Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
		Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
\boxtimes	For	the transmitter bandedge emissions shall be measured using following options below:
		Refer as FCC KDB 789033, clause H)3)d) for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).
	\boxtimes	Refer as ANSI C63.10, clause 6.9.2 for band-edge testing.
		Refer as ANSI C63.10, clause 6.9.3 for marker-delta method for band-edge measurements.
\boxtimes	For	radiated measurement, refer as ANSI C63.10, clause 6.5 for radiated emissions from above 1 GHz.

Report No.: FR3D1962-02AN

SPORTON INTERNATIONAL INC. Page No. : 18 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



3.2.4 Test Setup



SPORTON INTERNATIONAL INC. Page No. : 19 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

3.2.5 Transmitter Radiated Bandedge Emissions (with Antenna)

Modulation Mode	N _{TX}	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	1	5180	1	5148.70	80.08	83.54	5149.90	61.35	63.54	Н
11a	1	5240	1	5393.70	73.17	83.54	5394.60	58.46	63.54	Н
HT20	1	5180	1	5102.60	72.52	83.54	5149.40	58.46	63.54	Н
HT20	1	5240	1	5370.60	72.12	83.54	5392.20	58.29	63.54	Н
HT40	1	5190	1	5149.50	76.70	83.54	5149.61	59.75	63.54	Н
HT40	1	5230	1	5376.90	72.32	83.54	5399.40	58.35	63.54	Н

Report No.: FR3D1962-02AN

Modulation Mode	N _{TX}	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	1	5260	1	5385.00	73.11	83.54	5397.30	58.57	63.54	Н
11a	1	5320	1	5351.09	80.53	83.54	5350.11	61.34	63.54	Н
HT20	1	5260	1	5391.00	72.19	83.54	5396.10	58.36	63.54	Н
HT20	1	5320	1	5351.37	77.25	83.54	5350.11	60.63	63.54	Н
HT40	1	5270	1	5371.80	74.35	83.54	5351.70	58.91	63.54	Н
HT40	1	5310	1	5351.47	77.58	83.54	5350.39	59.76	63.54	Н

Modulation Mode	N _{TX}	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	1	5500	1	5469.92	81.90	83.54	5470.00	61.17	63.54	Н
11a	1	5700	1	5726.90	77.26	77.84	-	-	-	Н
HT20	1	5500	1	5467.92	81.60	83.54	5470.00	61.53	63.54	Н
HT20	1	5700	1	5726.90	76.55	77.84	=	-	-	Н
HT40	1	5510	1	5469.90	83.12	83.54	5469.80	62.56	63.54	Н
HT40	1	5670	1	5725.00	77.27	77.84	-	-	-	Н

SPORTON INTERNATIONAL INC. Page No. : 20 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



3.3 Transmitter Unwanted Emissions

3.3.1 Transmitter Radiated Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit									
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)						
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300						
0.490~1.705	24000/F(kHz)	33.8 - 23	30						
1.705~30.0	1.705~30.0 30		30						
30~88	100	40	3						
88~216	150	43.5	3						
216~960	200	46	3						
Above 960	500	54	3						

Report No.: FR3D1962-02AN

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

	Un-restricted band emissions above 1GHz Limit								
Operating Band	Limit								
5.15 - 5.25 GHz	e.i.r.p27 dBm [68.2 dBuV/m@3m]								
5.25 - 5.35 GHz	e.i.r.p27 dBm [68.2 dBuV/m@3m]								
5.47 - 5.725 GHz	e.i.r.p27 dBm [68.2 dBuV/m@3m]								
5.725 - 5.825 GHz	5.715 5.725 GHz: e.i.r.p17 dBm [78.2 dBuV/m@3m] 5.825 5.835 GHz: e.i.r.p17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p27 dBm [68.2 dBuV/m@3m]								

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

SPORTON INTERNATIONAL INC. Page No. : 21 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



3.3.3 Test Procedures

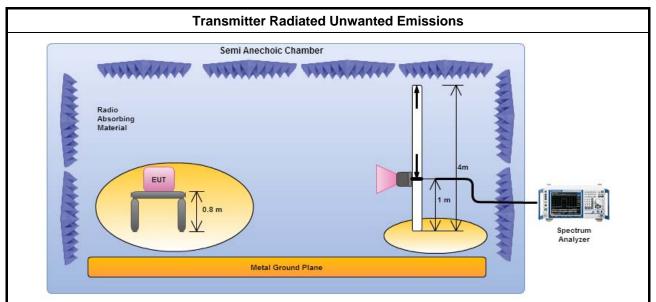
		Test Method
	perfo equi abov are i be e dista	surements may be performed at a distance other than the limit distance provided they are not brimed in the near field and the emissions to be measured can be detected by the measurement priment. Measurements shall not be performed at a distance greater than 30 m for frequencies of 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less impractical. When performing measurements at a distance other than that specified, the results shall extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear ince for field-strength measurements, inverse of linear distance-squared for power-density surements).
		Measurements in the frequency range 5 GHz - 10GHz are typically made at a closer distance 1.5m, because the instrumentation noise floor is typically close to the radiated emission limit.
	\boxtimes	Measurements in the frequency range 10 GHz - 18GHz are typically made at a closer distance 1m, because the instrumentation noise floor is typically close to the radiated emission limit.
	\boxtimes	Measurements in the frequency range above 18 GHz - 40GHz are typically made at a closer distance 0.5m, because the instrumentation noise floor is typically close to the radiated emission limit.
\boxtimes	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
\boxtimes	For t	he transmitter unwanted emissions shall be measured using following options below:
	\boxtimes	Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.
	\boxtimes	Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.
		Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).
		Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).
		Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.
		Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.
		Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
\boxtimes	For	adiated measurement.
	\boxtimes	Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz.
	\boxtimes	Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1000 MHz.
	\boxtimes	Refer as ANSI C63.10, clause 6.6 for radiated emissions from above 1 GHz.

Report No.: FR3D1962-02AN

SPORTON INTERNATIONAL INC. Page No. : 22 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



3.3.4 Test Setup



Report No.: FR3D1962-02AN

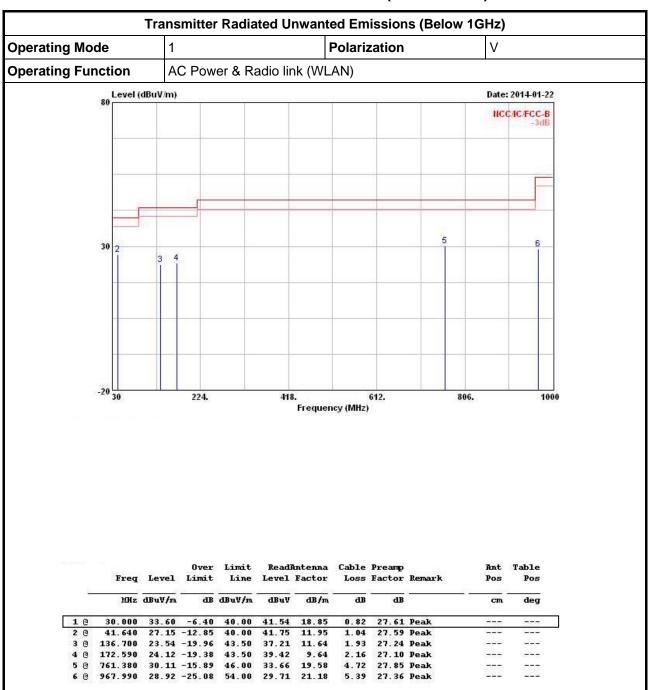
Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna and the frequency range of 1 GHz to 40 GHz using a calibrated horn antenna.

3.3.5 Transmitter Radiated Unwanted Emissions-with Antenna (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

SPORTON INTERNATIONAL INC. Page No. : 23 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

3.3.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)



Report No.: FR3D1962-02AN

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

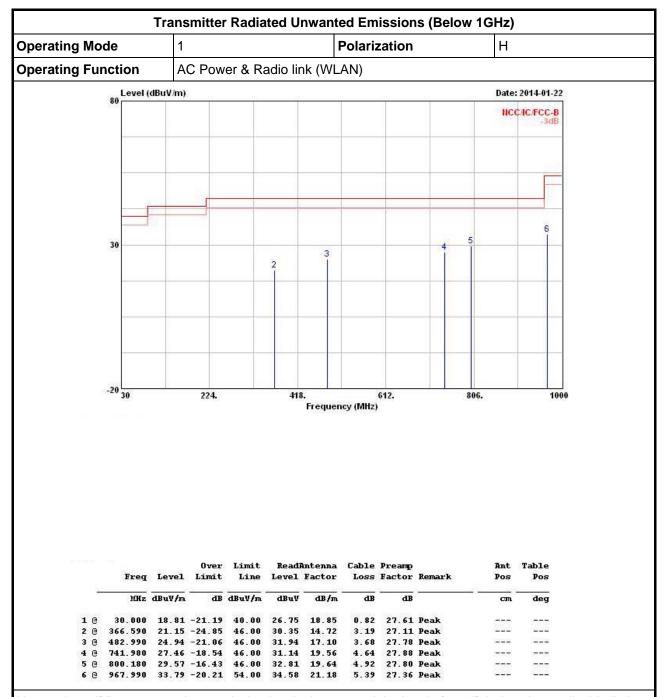
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 24 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report No.: FR3D1962-02AN



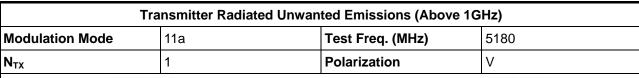
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

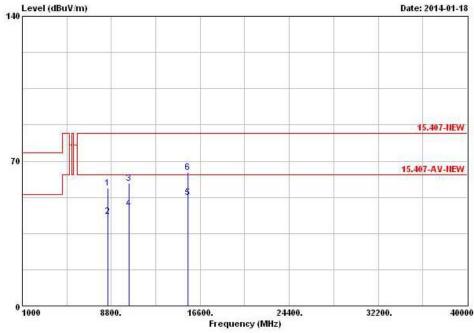
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 25 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5150-5250MHz



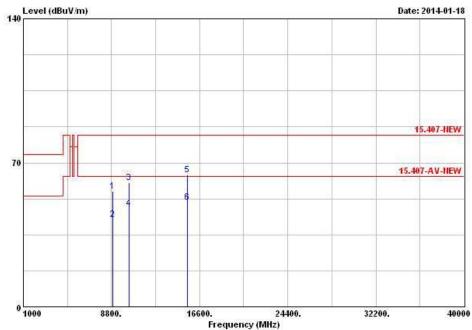
		0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
Freg	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	ав	dB	t of		deg
1 @ 8484.000	56.94	-26.60	83.54	43.07	38.67	8.01	32.81	Peak		
2 @ 8484.000	43.21	-20.33	63.54	29.34	38.67	8.01	32.81	Average		
3 @10360.000	59.22	-24.32	83.54	43.47	39.60	8.92	32.77	Peak		
4 @10360.000	47.01	-16.53	63.54	31.26	39.60	8.92	32.77	Average		
5 @15540.000	52.31	-11.23	63.54	34.88	38.04	11.59	32.20	Average		
6 @15540.000	64.46	-19.08	83.54	47.03	38.04	11.59	32.20	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 26 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Report No.: FR3D1962-02AN

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5180
N _{TX}	1	Polarization	Н



		0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB		cm.	deg
1 @ 8916.000	56.29	-27.25	83.54	43.24	38.20	7.80	32.95	Peak		
2 @ 8916.000	42.40	-21.14	63.54	29.35	38.20	7.80	32.95	Average		
3 @10360.000	60.28	-23.26	83.54	44.53	39.60	8.92	32.77	Peak		2000
4 @10360.000	47.91	-15.63	63.54	32.16	39.60	8.92	32.77	Average		
5 @15540.000	64.02	-19.52	83.54	46.59	38.04	11.59	32.20	Peak		80000
6 @15540.000	51.02	-12.52	63.54	33.59	38.04	11.59	32.20	Average		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

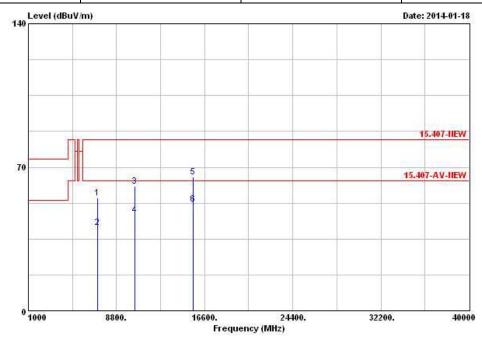
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 27 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	11a	Test Freq. (MHz)	5200							
N _{TX}	1	Polarization	V							



			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	Mtz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	ž <u></u>		deg
1	@ 7128.000	55.08	-28.46	83.54	43.79	36.77	7.14	32.62	Peak		
2	@ 7128.000	40.47	-23.07	63.54	29.18	36.77	7.14	32.62	Average		
3	@10400.000	60.69	-22.85	83.54	44.88	39.60	8.94	32.73	Peak		
4	@10400.000	46.71	-16.83	63.54	30.90	39.60	8.94	32.73	Average		
5	@15600.000	65.15	-18.39	83.54	47.87	37.91	11.59	32.22	Peak	50,000	8000
6	@15600.000	52.03	-11.51	63.54	34.75	37.91	11.59	32.22	Average		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

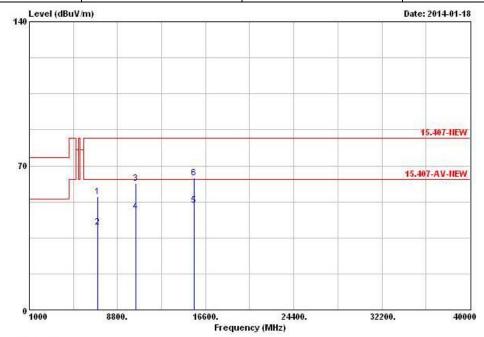
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 28 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	11a	Test Freq. (MHz)	5200							
N_{TX}	1	Polarization	Н							

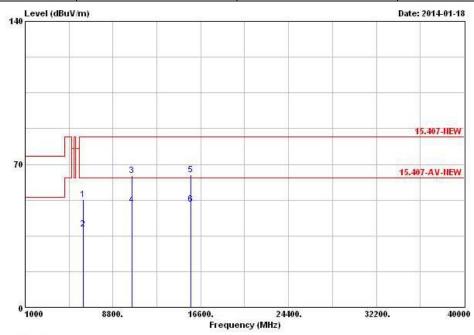


	Freq	[Level	Over Limit			Antenna Factor			Remark	Ant Pos	Table Pos
	MH	dBuV/m	dB	dBuV/m	dBuV	dB/m	- dB	- dB	3		deg
1	@ 7038.000	55.09	-28.45	83.54	43.95	36.65	7.08	32.59	Peak		
2	@ 7038.000	40.10	-23.44	63.54	28.96	36.65	7.08	32.59	Average		
3	@10400.000	61.46	-22.08	83.54	45.65	39.60	8.94	32.73	Peak		
4	@10400.000	47.97	-15.57	63.54	32.16	39.60	8.94	32.73	Average		
5	@15600.000	50.97	-12.57	63.54	33.69	37.91	11.59	32.22	Average		
6	R15600.000	64.23	-19.31	83.54	46.95	37.91	11.59	32.22	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 29 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5240
N_{TX}	1	Polarization	V

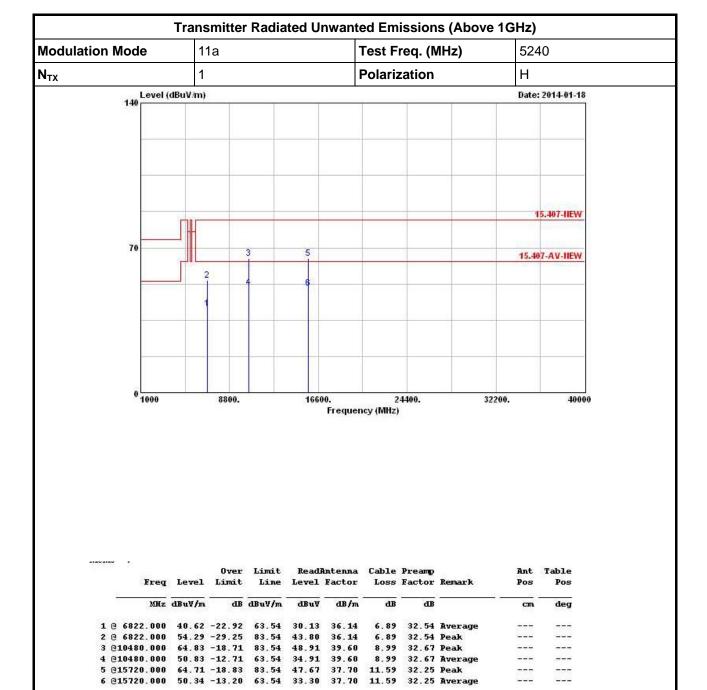


	Freg	Level	Over Limit			Antenna Factor			Remark	Ant Pos	Table Pos
	rreq	reser	пинс	DIME	Dever	Factor	LUSS	Factor	Kenark	FUS	rus
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	E	cm	deg
1	@ 6156.000	52.84	-30.70	83.54	43.54	35.12	6.63	32.45	Peak		7777
2	@ 6156.000	38.42	-25.12	63.54	29.12	35.12	6.63	32.45	Average		
3	@10480.000	64.45	-19.09	83.54	48.53	39.60	8.99	32.67	Peak		
4	@10480.000	50.24	-13.30	63.54	34.32	39.60	8.99	32.67	Average		
5	@15720.000	64.80	-18.74	83.54	47.76	37.70	11.59	32.25	Peak	TO THE REAL PROPERTY.	7550
6	@15720.000	50.43	-13.11	63.54	33.39	37.70	11.59	32.25	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 30 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

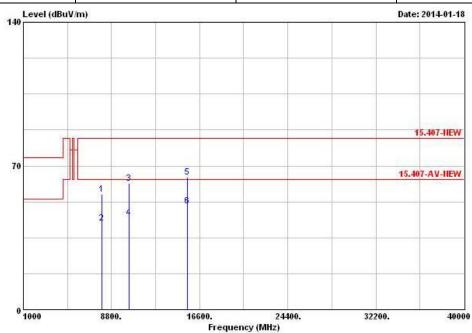
Report No.: FR3D1962-02AN



- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 31 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT20	Test Freq. (MHz)	5180						
N_{TX}	2	Polarization	V						

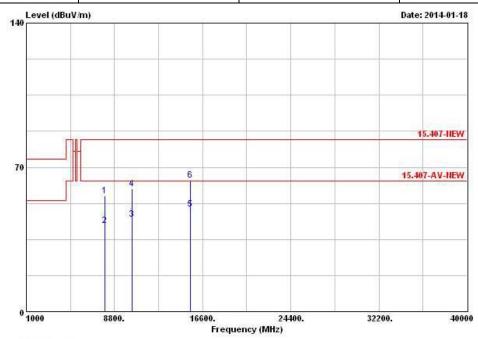


			0ver	Limit	Readi	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
_	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	3	cm.	deg
10	7938.000	56.19	-27.35	83.54	43.04	37.73	8.21	32.79	Peak		
2 @ 1	7938.000	42.14	-21.40	63.54	28.99	37.73	8.21	32.79	Average		
3 @10	0360.000	61.48	-22.06	83.54	45.73	39.60	8.92	32.77	Peak		
4 @10	0360.000	44.95	-18.59	63.54	29.20	39.60	8.92	32.77	Average	-	
5 @15	5540.000	64.66	-18.88	83.54	47.23	38.04	11.59	32.20	Peak		
6 @15	5540.000	50.50	-13.04	63.54	33.07	38.04	11.59	32.20	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 32 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT20	Test Freq. (MHz)	5180						
N_{TX}	2	Polarization	Н						

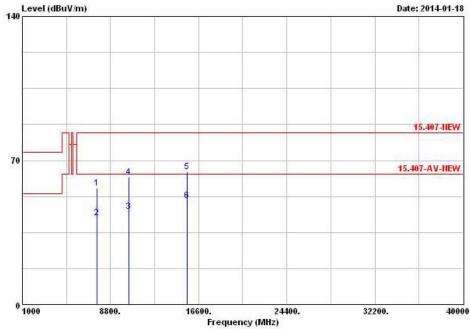


Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
MC	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	- dB		- cm	deg
1 @ 7938.000	56.10	-27.44	83.54	42.95	37.73	8.21	32.79	Peak		
2 @ 7938.000	41.71	-21.83	63.54	28.56	37.73	8.21	32.79	Average		
3 @10360.000	44.96	-18.58	63.54	29.21	39.60	8.92	32.77	Average		
4 @10360.000	59.61	-23.93	83.54	43.86	39.60	8.92	32.77	Peak		
5 @15540.000	49.85	-13.69	63.54	32.42	38.04	11.59	32.20	Average	-	17000
6 @15540.000	63.79	-19.75	83.54	46.36	38.04	11.59	32.20	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 33 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT20	Test Freq. (MHz)	5200						
N _{TX}	2	Polarization	V						



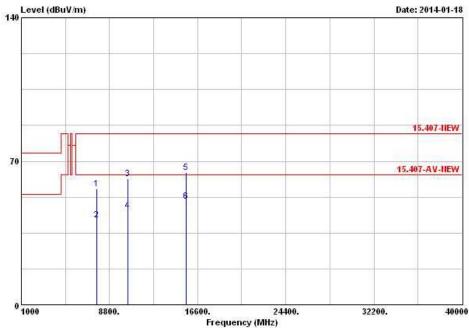
			Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB	-	cm	deg
1	@ 7632.000	56.65	-26.89	83.54	44.32	37.43	7.64	32.74	Peak		
2	@ 7632.000	42.00	-21.54	63.54	29.67	37.43	7.64	32.74	Average		
3	@10400.000	45.12	-18.42	63.54	29.31	39.60	8.94	32.73	Average		
4	@10400.000	61.69	-21.85	83.54	45.88	39.60	8.94	32.73	Peak		0.77
5	@15600.000	64.51	-19.03	83.54	47.23	37.91	11.59	32.22	Peak		
6	@15600.000	50.41	-13.13	63.54	33.13	37.91	11.59	32.22	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 34 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

eport Report No. : FR3D1962-02AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT20	Test Freq. (MHz)	5200						
N _{TX}	2	Polarization	Н						

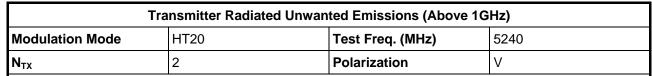


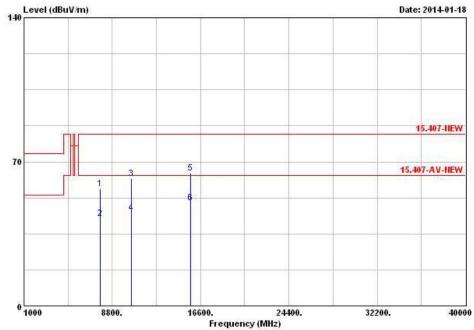
			0ver	Limit	Readi	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	- dB	: 	cm.	deg
1 0	7674.000	56.55	-26.99	83.54	44.11	37.48	7.71	32.75	Peak		
2 @	7674.000	41.33	-22.21	63.54	28.89	37.48	7.71	32.75	Average		
3 @	10400.000	61.43	-22.11	83.54	45.62	39.60	8.94	32.73	Peak		222
4 @	10400.000	45.76	-17.78	63.54	29.95	39.60	8.94	32.73	Average		
5 @	15600.000	64.63	-18.91	83.54	47.35	37.91	11.59	32.22	Peak	50,000	8000
6 (3	15600.000	50.40	-13.14	63.54	33.12	37.91	11.59	32.22	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 35 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Report No.: FR3D1962-02AN



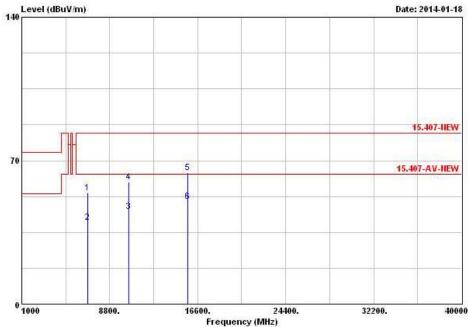


					0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
		9	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	-	-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- dB		cm	deg
1	0	7746	. 000	57.03	-26.51	83.54	44.38	37.55	7.86	32.76	Peak		
2	0	7746	.000	42.67	-20.87	63.54	30.02	37.55	7.86	32.76	Average		
3	0	10480	.000	61.78	-21.76	83.54	45.86	39.60	8.99	32.67	Peak		
4	0	10480	. 000	45.15	-18.39	63.54	29.23	39.60	8.99	32.67	Average	777	17.00
5	0	15720	.000	64.50	-19.04	83.54	47.46	37.70	11.59	32.25	Peak		
6	0	15720	.000	50.27	-13.27	63.54	33.23	37.70	11.59	32.25	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 36 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	HT20	Test Freq. (MHz)	5240
N _{TX}	2	Polarization	Н

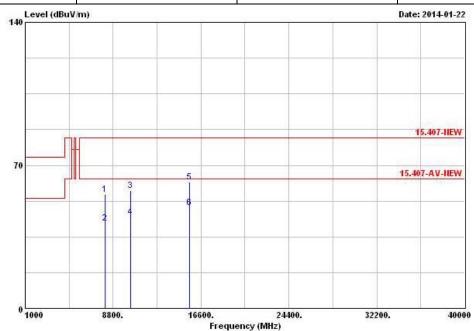


7	40004	Over Limit			Antenna Factor				Ant Pos	Table Pos
rreq	Level	пппс	rine	rever	ractor	ross	ractor	Remark	Pos	Pos
ж	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	3	cm	deg
1 @ 6852.000	54.28	-29.26	83.54	43.68	36.23	6.92	32.55	Peak		
2 @ 6852.000	40.01	-23.53	63.54	29.41	36.23	6.92	32.55	Average		
3 @10480.000	45.19	-18.35	63.54	29.27	39.60	8.99	32.67	Average		
4 @10480.000	59.69	-23.85	83.54	43.77	39.60	8.99	32.67	Peak		45.50
5 @15720.000	64.25	-19.29	83.54	47.21	37.70	11.59	32.25	Peak		
6 @15720.000	50.21	-13.33	63.54	33.17	37.70	11.59	32.25	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 37 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	HT40	Test Freq. (MHz)	5190
N_{TX}	2	Polarization	V

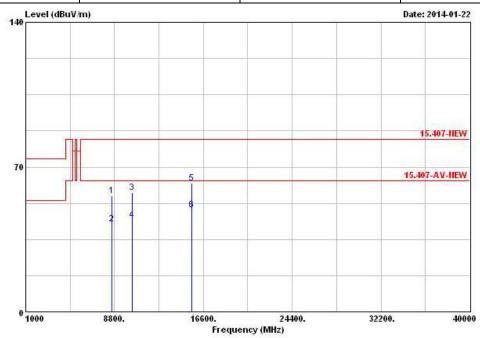


	Fı	rea	Level	Over Limit			Antenna Factor		Preamp	Remark	Ant Pos	Table Pos
	100	4	2	LLIII		20.00	Luctor	Loud	Luctor	ALL A		
		Mz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm.	deg
1	@ 8052.0	000	55.83	-27.71	83.54	42.50	37.89	8.24	32.80	Peak		
2	@ 8052.0	000	41.72	-21.82	63.54	28.39	37.89	8.24	32.80	Average		
3	@10380.0	000	57.67	-25.87	83.54	41.88	39.60	8.94	32.75	Peak		
4	@10380.0	000	44.58	-18.96	63.54	28.79	39.60	8.94	32.75	Average		
5	@15570.0	000	61.88	-21.66	83.54	44.51	37.98	11.59	32.20	Peak		
6	@15570.0	000	49.25	-14.29	63.54	31.88	37.98	11.59	32.20	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 38 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

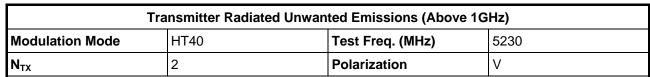
Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)								
Modulation ModeHT40Test Freq. (MHz)5190											
N_{TX}	2	Polarization	Н								

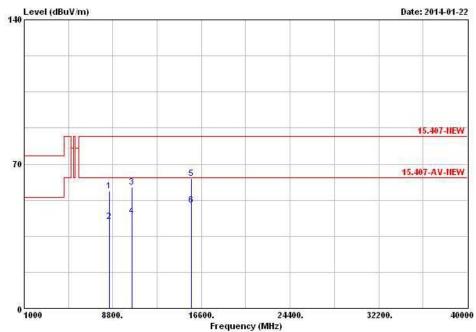


			0ver	Limit	Readi	Antenna	Cable	Preamp		Ant	Table
Fr	eq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
- м	Hz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-	cm.	deg
1 @ 8568.0	00	56.14	-27.40	83.54	42.39	38.62	7.97	32.84	Peak		
2 @ 8568.0	00	42.39	-21.15	63.54	28.64	38.62	7.97	32.84	Average	-	
3 @10380.0	00	57.75	-25.79	83.54	41.96	39.60	8.94	32.75	Peak		
4 @10380.0	00	44.47	-19.07	63.54	28.68	39.60	8.94	32.75	Average	-	2000
5 @15570.0	00	62.30	-21.24	83.54	44.93	37.98	11.59	32.20	Peak		
6 @15570.0	00	49.30	-14.24	63.54	31.93	37.98	11.59	32.20	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 39 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



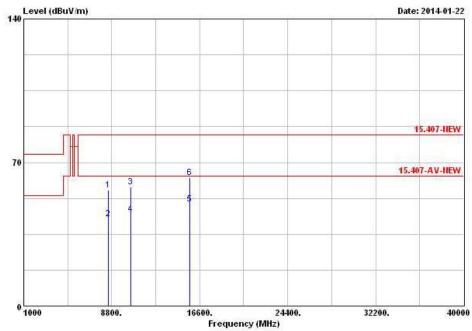


			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB	*	cm.	deg
1	8472.000	56.73	-26.81	83.54	42.86	38.67	8.01	32.81	Peak		
2	8472.000	42.29	-21.25	63.54	28.42	38.67	8.01	32.81	Average	100000	
3	10460.000	58.62	-24.92	83.54	42.72	39.60	8.99	32.69	Peak		
4	10460.000	44.87	-18.67	63.54	28.97	39.60	8.99	32.69	Average		
5	15690.000	62.87	-20.67	83.54	45.76	37.76	11.59	32.24	Peak	5570207	8555
6	@15690.000	50.05	-13.49	63.54	32.94	37.76	11.59	32.24	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 40 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)										
Modulation Mode	odulation Mode HT40 Test Freq. (MHz) 5230												
N_{TX}	2	Polarization	Н										



			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm.	deg
1	@ 8484.000	56.65	-26.89	83.54	42.78	38.67	8.01	32.81	Peak		757
2	@ 8484.000	42.57	-20.97	63.54	28.70	38.67	8.01	32.81	Average		
3	@10460.000	58.05	-25.49	83.54	42.15	39.60	8.99	32.69	Peak		
4	@10460.000	44.87	-18.67	63.54	28.97	39.60	8.99	32.69	Average		
5	@15690.000	49.56	-13.98	63.54	32.45	37.76	11.59	32.24	Average		77570
6	@15690.000	62.51	-21.03	83.54	45.40	37.76	11.59	32.24	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

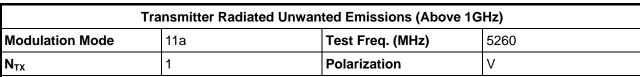
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

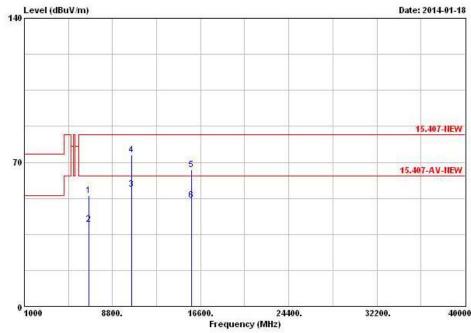
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 41 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5250-5350MHz

Report No.: FR3D1962-02AN



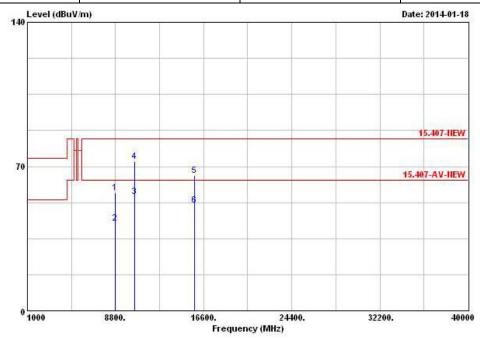


		0ver	Limit	Readi	Antenna	Cable	Preamp		Ant	Table
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg
1 @ 6732.000	53.85	-29.69	83.54	43.61	35.94	6.83	32.53	Peak		
2 @ 6732.000	39.90	-23.64	63.54	29.66	35.94	6.83	32.53	Average	222	
3 @10520.000	56.92	-6.62	63.54	40.96	39.59	9.02	32.65	Average		
4 @10520.000	73.57	-9.97	83.54	57.61	39.59	9.02	32.65	Peak	200	1000
5 @15780.000	66.22	-17.32	83.54	49.30	37.60	11.59	32.27	Peak		
6 @15780.000	51.69	-11.85	63.54	34.77	37.60	11.59	32.27	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 42 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5260
N_{TX}	1	Polarization	Н

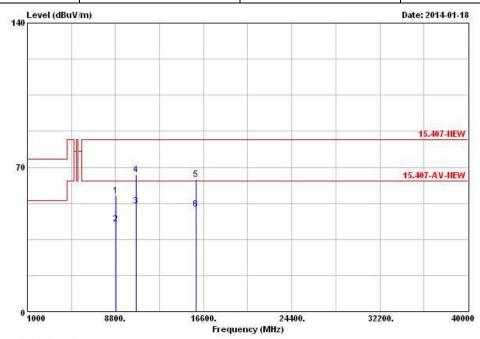


	Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
	MHz	dBuV/m	- dB	dBuV/m	dBuV	dB/m	dB	dB	3		deg
1	@ 8790.000	57.33	-26.21	83.54	44.01	38.36	7.86	32.90	Peak		
2	@ 8790.000	42.33	-21.21	63.54	29.01	38.36	7.86	32.90	Average		
3	@10520.000	55.33	-8.21	63.54	39.37	39.59	9.02	32.65	Average		
4	@10520.000	72.48	-11.06	83.54	56.52	39.59	9.02	32.65	Peak	-5155	4555
5	@15780.000	65.76	-17.78	83.54	48.84	37.60	11.59	32.27	Peak		
6	@15780.000	51.39	-12.15	63.54	34.47	37.60	11.59	32.27	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 43 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	Modulation Mode 11a Test Freq. (MHz) 5300								
N _{TX} 1 Polarization V									

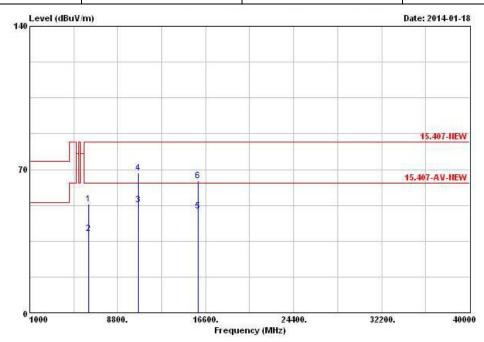


	Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
_	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	9	cm	deg
10	8838.000	56.05	-27.49	83.54	42.83	38.30	7.84	32.92	Peak		777
2 @	8838.000	42.31	-21.23	63.54	29.09	38.30	7.84	32.92	Average		
3 @1	10600.000	51.40	-12.14	63.54	35.43	39.52	9.06	32.61	Average		
4 @1	10600.000	66.47	-17.07	83.54	50.50	39.52	9.06	32.61	Peak		
5 @1	5900.000	64.18	-19.36	83.54	47.50	37.39	11.59	32.30	Peak		-7250
6 @1	5900.000	49.53	-14.01	63.54	32.85	37.39	11.59	32.30	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 44 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	Modulation Mode 11a Test Freq. (MHz) 5300								
N _{TX} 1 Polarization H									

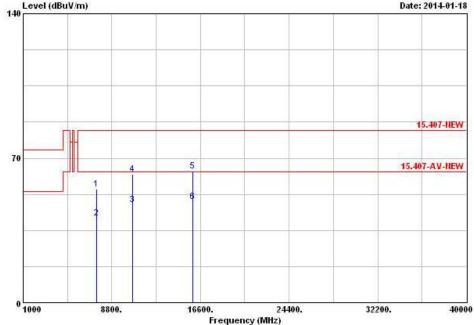


				Frea	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
		9							10		-			
				MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm.	deg
1	. (3 (6198	. 000	53.29	-30.25	83.54	43.96	35.16	6.63	32.46	Peak		
2	(3 (6198	.000	38.59	-24.95	63.54	29.26	35.16	6.63	32.46	Average		
3	(310	0600	.000	52.72	-10.82	63.54	36.75	39.52	9.06	32.61	Average		2222
4	(310	0600	. 000	68.30	-15.24	83.54	52.33	39.52	9.06	32.61	Peak		
5	(31!	5900	. 000	49.70	-13.84	63.54	33.02	37.39	11.59	32.30	Average		
6	(31!	5900	. 000	64.67	-18.87	83.54	47.99	37.39	11.59	32.30	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 45 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	Modulation Mode 11a Test Freq. (MHz) 5320									
N _{TX}	N _{TX} 1 Polarization V									
Level (dBuV/m) Date: 2014-01-18										

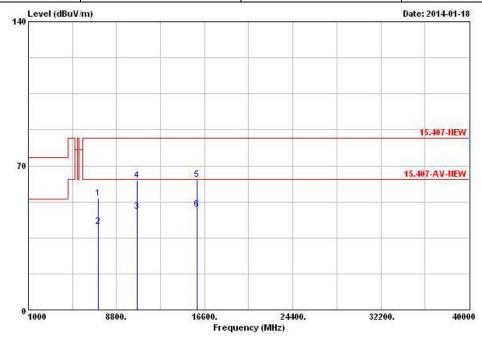


			0ver	Limit	Readi	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	ав	dB	T	cm	deg
1	@ 7452.000	55.18	-28.36	83.54	43.27	37.25	7.37	32.71	Peak		
2	@ 7452.000	40.90	-22.64	63.54	28.99	37.25	7.37	32.71	Average		
3	@10640.000	47.57	-15.97	63.54	31.59	39.49	9.07	32.58	Average		
4	@10640.000	62.36	-21.18	83.54	46.38	39.49	9.07	32.58	Peak		
5	@15960.000	63.61	-19.93	83.54	47.08	37.26	11.59	32.32	Peak		
6	@15960.000	48.82	-14.72	63.54	32.29	37.26	11.59	32.32	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 46 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	Modulation Mode 11a Test Freq. (MHz) 5320								
N _{TX} 1 Polarization H									

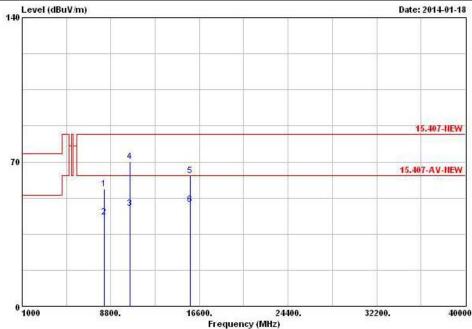


NAME OF TAXABLE PARTY.	2000	0ver			Antenna				30000	Table
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	3)	cm	deg
1 @ 7164.000	54.36	-29.18	83.54	42.98	36.84	7.17	32.63	Peak		
2 @ 7164.000	40.60	-22.94	63.54	29.22	36.84	7.17	32.63	Average		
3 @10640.000	47.90	-15.64	63.54	31.92	39.49	9.07	32.58	Average		
4 @10640.000	63.07	-20.47	83.54	47.09	39.49	9.07	32.58	Peak		-
5 @15960.000	63.24	-20.30	83.54	46.71	37.26	11.59	32.32	Peak		
6 @15960.000	48.87	-14.67	63.54	32.34	37.26	11.59	32.32	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 47 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT20	Test Freq. (MHz)	5260						
N _{TX} 2 Polarization V									



			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		- cm	deg
1 @ 82	230.000	56.73	-26.81	83.54	43.17	38.20	8.16	32.80	Peak	7.77	
2 @ 82	230.000	43.11	-20.43	63.54	29.55	38.20	8.16	32.80	Average		
3 @105	520.000	47.33	-16.21	63.54	31.37	39.59	9.02	32.65	Average		
4 @105	20.000	70.23	-13.31	83.54	54.27	39.59	9.02	32.65	Peak		
5 @157	780.000	63.46	-20.08	83.54	46.54	37.60	11.59	32.27	Peak		
6 @157	780.000	49.40	-14.14	63.54	32.48	37.60	11.59	32.27	Average		

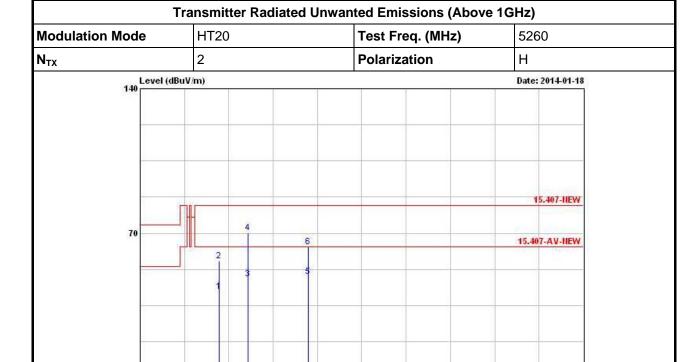
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 48 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

1000

8800.

Report No.: FR3D1962-02AN



24400.

Frequency (MHz)

32200.

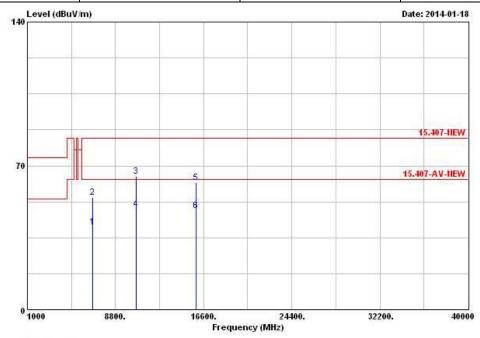
40000

	Freq	Level	Over Limit			Antenna Factor			Remark	Ant Pos	Table Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	10		deg
1 @ 79	80.000	41.71	-21.83	63.54	28.45	37.78	8.28	32.80	Average		
2 @ 79	80.000	56.58	-26.96	83.54	43.32	37.78	8.28	32.80	Peak		
3 @105	10.000	47.89	-15.65	63.54	31.92	39.60	9.02	32.65	Average		
4 @105	10.000	70.34	-13.20	83.54	54.37	39.60	9.02	32.65	Peak		
5 @157	80.000	49.04	-14.50	63.54	32.12	37.60	11.59	32.27	Average		
6 @157	80.000	63.29	-20.25	83.54	46.37	37.60	11.59	32.27	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 49 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)										
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5300									
N _{TX} 2 Polarization V										

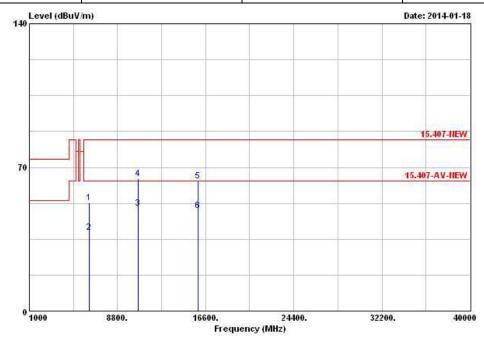


	Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
-	MHz	dBuV/m	- dB	dBuV/m	dBuV	dB/m	dB	dB	-		deg
1 @ 6744	. 000	40.37	-23.17	63.54	30.09	35.98	6.83	32.53	Average		
2 @ 6744	. 000	54.79	-28.75	83.54			6.83				
3 @10600	. 000	64.81	-18.73	83.54	48.84	39.52	9.06	32.61	Peak		
4 @10600	. 000	49.01	-14.53	63.54	33.04	39.52	9.06	32.61	Average		
5 @15900	. 000	61.75	-21.79	83.54	45.07	37.39	11.59	32.30	Peak		- Tever
6 @15900	. 000	48.34	-15.20	63.54	31.66	37.39	11.59	32.30	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 50 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT20	Test Freq. (MHz)	5300						
N _{TX} 2 Polarization H									



		Level	Over Limit	635-68		Antenna Factor		125 (F 125) A.	Remark	Ant Pos	Table Pos
	——————————————————————————————————————	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB	<u> </u>	cm.	deg
1 6	6276.000	52.56	-30.98	83.54	43.18	35.21	6.63	32.46	Peak		
2 6	6276.000	38.25	-25.29	63.54	28.87	35.21	6.63	32.46	Average		
3 6	10600.000	50.05	-13.49	63.54	34.08	39.52	9.06	32.61	Average		-11
4 6	10600.000	64.41	-19.13	83.54	48.44	39.52	9.06	32.61	Peak		
5 6	15900.000	63.40	-20.14	83.54	46.72	37.39	11.59	32.30	Peak	37,757	
6 6	15900.000	48.96	-14.58	63.54	32.28	37.39	11.59	32.30	Average		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

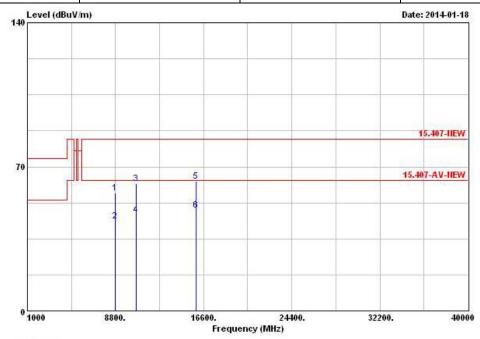
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 51 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT20	Test Freq. (MHz)	5320						
N _{TX} 2 Polarization V									

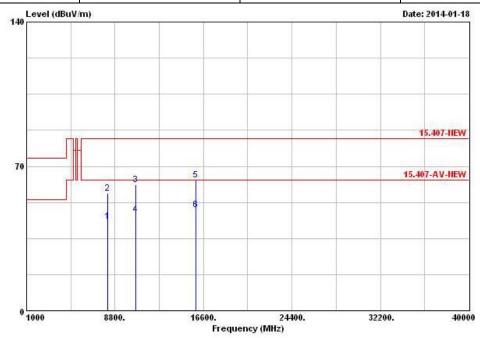


	Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
	Mtz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- dB	3	cm.	deg
1	@ 8778.000	57.42	-26.12	83.54	44.08	38.36	7.88	32.90	Peak		
2	@ 8778.000	43.55	-19.99	63.54	30.21	38.36	7.88	32.90	Average		
3	@10640.000	61.84	-21.70	83.54	45.86	39.49	9.07	32.58	Peak		
4	@10640.000	46.59	-16.95	63.54	30.61	39.49	9.07	32.58	Average	-555	-
5	@15960.000	62.89	-20.65	83.54	46.36	37.26	11.59	32.32	Peak		
6	@15960.000	48.80	-14.74	63.54	32.27	37.26	11.59	32.32	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 52 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT20	Test Freq. (MHz)	5320						
N_{TX}	2	Polarization	Н						

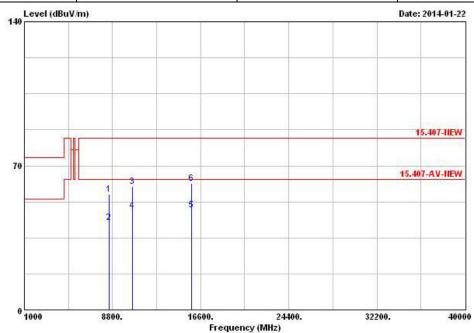


				0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
		Free	I Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	-	мн	dBuV/m	dВ	dBuV/m	dBuV	dB/m	dB	dB		cm.	deg
1	@ 81	66.00	43.36	-20.18	63.54	29.87	38.11	8.18	32.80	Average		
2	@ 81	66.00	56.74	-26.80	83.54	43.25	38.11	8.18	32.80	Peak		
3	@106	40.00	61.07	-22.47	83.54	45.09	39.49	9.07	32.58	Peak		
4	@106	40.00	46.81	-16.73	63.54	30.83	39.49	9.07	32.58	Average		0.77
5	@159	60.00	63.51	-20.03	83.54	46.98	37.26	11.59	32.32	Peak		
6	@159	60.00	48.85	-14.69	63.54	32.32	37.26	11.59	32.32	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 53 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT40	Test Freq. (MHz)	5270						
N _{TX} 2 Polarization V									

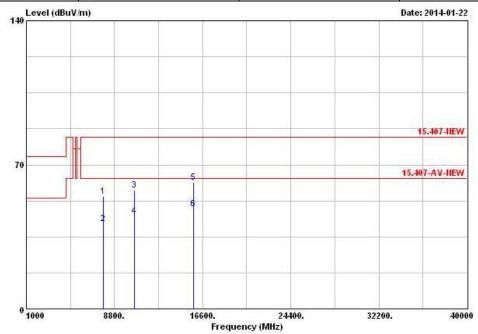


	Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	i .		deg
1	8484.000	56.07	-27.47	83.54	42.20	38.67	8.01	32.81	Peak		
2	8484.000	42.34	-21.20	63.54	28.47	38.67	8.01	32.81	Average		
3	10540.000	60.03	-23.51	83.54	44.06	39.57	9.04	32.64	Peak		
4	@10540.000	48.07	-15.47	63.54	32.10	39.57	9.04	32.64	Average	-555	
5	@15810.000	48.70	-14.84	63.54	31.85	37.54	11.59	32.28	Average		
6	15810.000	61.47	-22.07	83.54	44.62	37.54	11.59	32.28	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 54 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT40	Test Freq. (MHz)	5270						
N _{TX} 2 Polarization H									

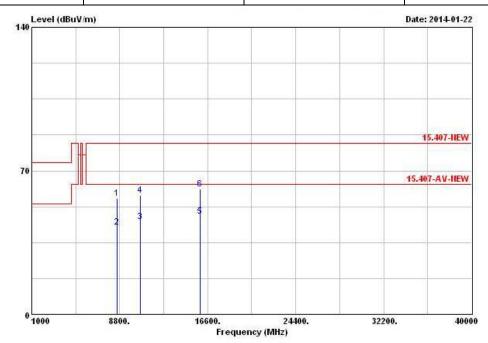


						0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
				Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
		-		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB		cm	deg
1		3 .	7800	. 000	54.77	-28.77	83.54	42.01	37.60	7.93	32.77	Peak		
2	(Э,	7800	.000	41.18	-22.36	63.54	28.42	37.60	7.93	32.77	Average		
3	(31	0540	.000	57.52	-26.02	83.54	41.55	39.57	9.04	32.64	Peak		
4	(31	0540	. 000	45.08	-18.46	63.54	29.11	39.57	9.04	32.64	Average	-555	
5	(31	5810	.000	61.56	-21.98	83.54	44.71	37.54	11.59	32.28	Peak		
6	(31	5810	. 000	48.67	-14.87	63.54	31.82	37.54	11.59	32.28	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 55 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT40	Test Freq. (MHz)	5310						
N _{TX} 2 Polarization V									

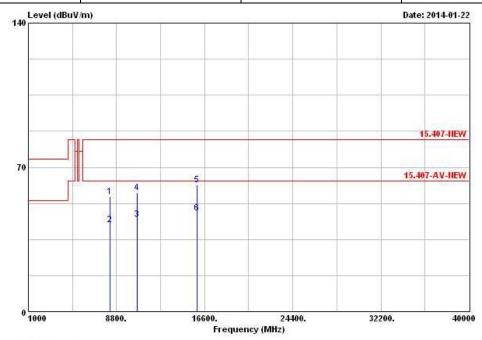


			Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MX	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	8568.000	56.57	-26.97	83.54	42.82	38.62	7.97	32.84	Peak		
2	8568.000	42.38	-21.16	63.54	28.63	38.62	7.97	32.84	Average		
3	10620.000	45.31	-18.23	63.54	29.33	39.50	9.07	32.59	Average		222
4	10620.000	58.10	-25.44	83.54	42.12	39.50	9.07	32.59	Peak		
5	@15930.000	47.83	-15.71	63.54	31.23	37.32	11.59	32.31	Average		
6	15930.000	61.13	-22.41	83.54	44.53	37.32	11.59	32.31	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 56 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	HT40	Test Freq. (MHz)	5310						
N_{TX}	2	Polarization	Н						

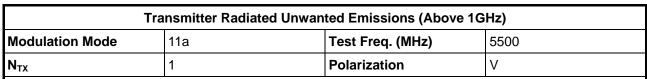


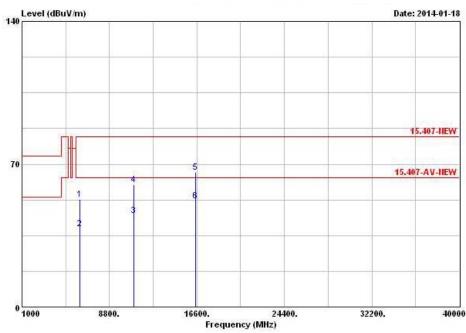
Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- dB		cm	deg
1 @ 8196.000	55.84	-27.70	83.54	42.34	38.14	8.16	32.80	Peak		
2 @ 8196.000	42.14	-21.40	63.54	28.64	38.14	8.16	32.80	Average		
3 @10620.000	44.81	-18.73	63.54	28.83	39.50	9.07	32.59	Average		
4 @10620.000	57.85	-25.69	83.54	41.87	39.50	9.07	32.59	Peak		
5 @15930.000	61.53	-22.01	83.54	44.93	37.32	11.59	32.31	Peak		77570
6 @15930.000	47.87	-15.67	63.54	31.27	37.32	11.59	32.31	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 57 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

3.3.9 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5470-5725MHz





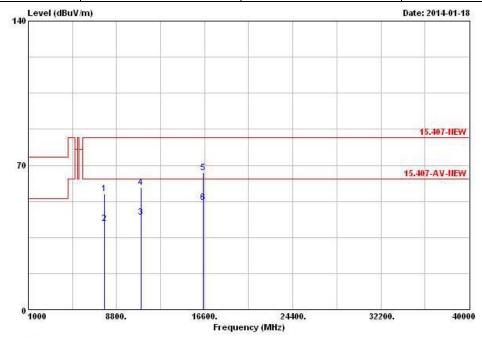
	Freq	Level	Over Limit	12/20/02		Antenna Factor		with oil to		Ant Pos	Table Pos
-	Mtz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB	-	cm	deg
10	6192.000	52.68	-30.86	83.54	43.36	35.15	6.63	32.46	Peak		1000
2 @	6192.000	38.36	-25.18	63.54	29.04	35.15	6.63	32.46	Average		
3 @1	1000.000	44.74	-18.80	63.54	28.68	39.20	9.23	32.37	Average		
4 @1	1000.000	59.91	-23.63	83.54	43.85	39.20	9.23	32.37	Peak		
5 @1	6500.000	66.09	-17.45	83.54	46.75	39.10	12.18	31.94	Peak		
6 @1	6500.000	52.16	-11.38	63.54	32.82	39.10	12.18	31.94	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 58 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report No.: FR3D1962-02AN

Transmitter Radiated Unwanted Emissions (Above 1GHz) Modulation Mode 11a Test Freq. (MHz) 5500 N_{TX} 1 Polarization H

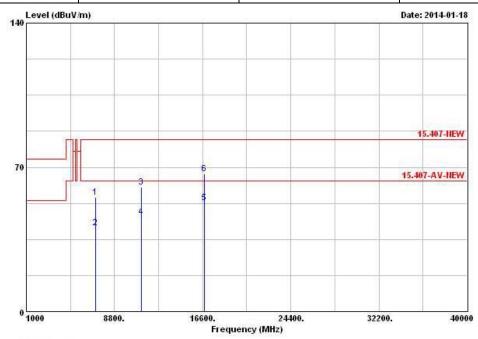


		0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
10Ка	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- dB		cm	deg
1 @ 7752.000	56.09	-27.45	83.54	43.44	37.55	7.86	32.76	Peak		
2 @ 7752.000	41.71	-21.83	63.54	29.06	37.55	7.86	32.76	Average		
3 @11000.000	44.73	-18.81	63.54	28.67	39.20	9.23	32.37	Average		
4 @11000.000	59.10	-24.44	83.54	43.04	39.20	9.23	32.37	Peak		
5 @16500.000	66.42	-17.12	83.54	47.08	39.10	12.18	31.94	Peak		-75-75-75
6 @16500.000	52.11	-11.43	63.54	32.77	39.10	12.18	31.94	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 59 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5580
N_{TX}	1	Polarization	V



			0ver	Limit	Readi	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dВ	dBuV/m	dBuV	dB/m	dВ	dB		cm	deg
1	7152.000	55.31	-28.23	83.54	43.94	36.82	7.17	32.62	Peak		
2	7152.000	40.50	-23.04	63.54	29.13	36.82	7.17	32.62	Average		
3	11160.000	60.38	-23.16	83.54	43.70	39.50	9.54	32.36	Peak		
4	11160.000	45.81	-17.73	63.54	29.13	39.50	9.54	32.36	Average		
5	@16740.000	52.90	-10.64	63.54	32.56	40.40	11.58	31.64	Average		7.500
6	16740.000	66.72	-16 82	83.54	46.38	40.40	11.58	31 64	Peak		

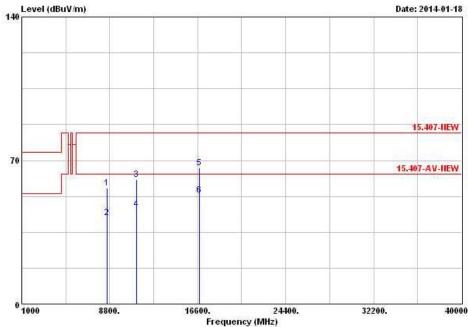
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 60 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report

Report No.: FR3D1962-02AN

-	Transmitter Radiated Un	wanted Emissions (Above	e 1GHz)
Modulation Mode	11a	Test Freq. (MHz)	5580
N _{TX}	1	Polarization	Н



			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm.	deg
1	@ 8574.000	56.35	-27.19	83.54	42.62	38.60	7.97	32.84	Peak		757
2	@ 8574.000	42.30	-21.24	63.54	28.57	38.60	7.97	32.84	Average		
3	@11160.000	60.67	-22.87	83.54	43.99	39.50	9.54	32.36	Peak		
4	@11160.000	46.36	-17.18	63.54	29.68	39.50	9.54	32.36	Average		
5	@16740.000	66.48	-17.06	83.54	46.14	40.40	11.58	31.64	Peak		77570
6	@16740.000	53.15	-10.39	63.54	32.81	40.40	11.58	31.64	Average		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

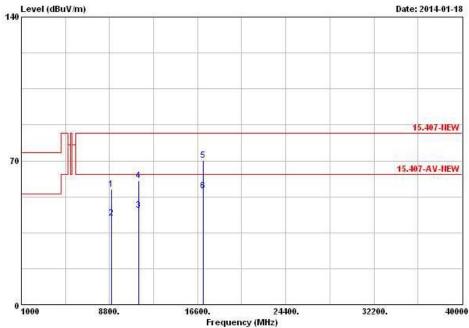
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 61 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report

Report No.: FR3D1962-02AN

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5700
N _{TX}	1	Polarization	V

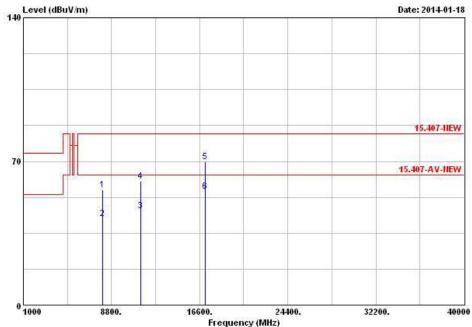


	100000000000000000000000000000000000000	10000000	0ver			Antenna				Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB		cm.	deg
1 @ 8	3970.000	56.19	-27.35	83.54	43.24	38.14	7.78	32.97	Peak		777
2 @ 8	3970.000	42.01	-21.53	63.54	29.06	38.14	7.78	32.97	Average		
3 @11	1400.000	46.03	-17.51	63.54	28.54	39.92	9.92	32.35	Average		
4 @11	L400.000	60.47	-23.07	83.54	42.98	39.92	9.92	32.35	Peak		
5 017	100.000	70.20	-13.34	83.54	47.55	42.66	11.33	31.34	Peak		
6 @17	100.000	55.35	-8.19	63.54	32.70	42.66	11.33	31.34	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 62 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	11a	Test Freq. (MHz)	5700					
N _{TX}	1	Polarization	Н					

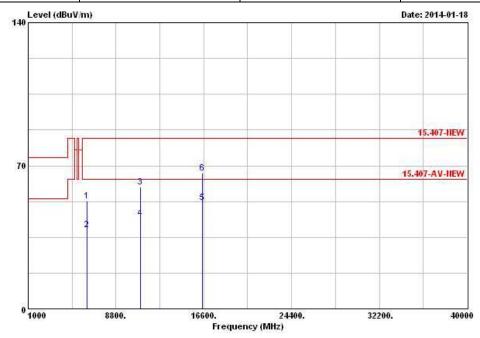


	Freq	Level	Over Limit	635-68		Antenna Factor		125 (F 125) A.	Remark	Ant Pos	Table Pos
<u>=</u>	MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	ii————————————————————————————————————		deg
1 @	8010.000	56.33	-27.21	83.54	43.07	37.80	8.26	32.80	Peak		
2 @	8010.000	42.24	-21.30	63.54	28.98	37.80	8.26	32.80	Average		
3 @1	11400.000	45.97	-17.57	63.54	28.48	39.92	9.92	32.35	Average		
4 @1	11400.000	60.38	-23.16	83.54	42.89	39.92	9.92	32.35	Peak		
5 @1	17100.000	69.68	-13.86	83.54	47.03	42.66	11.33	31.34	Peak	-	(5,5,5
6 @1	17100.000	55.43	-8.11	63.54	32.78	42.66	11.33	31.34	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 63 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	5500							
N_{TX}	2	Polarization	V					

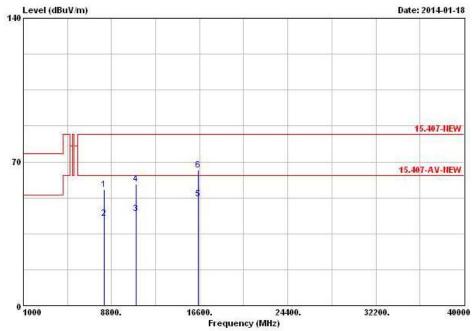


		18 34	Over Limit	68548		Antenna Factor		200 Hill 188	Remark	300	Table
	Freq	Level	Limit	Line	rever	ractor	ross	ractor	Kemark	Pos	Pos
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- дв	ž 	cm	deg
10	6198.000	52.87	-30.67	83.54	43.54	35.16	6.63	32.46	Peak	5.55	
2 @	6198.000	38.67	-24.87	63.54	29.34	35.16	6.63	32.46	Average	10000	
3 @:	11000.000	59.58	-23.96	83.54	43.52	39.20	9.23	32.37	Peak		
4 @:	11000.000	44.55	-18.99	63.54	28.49	39.20	9.23	32.37	Average	-	
5 @:	16500.000	52.12	-11.42	63.54	32.78	39.10	12.18	31.94	Average	200000	(60,000)
6 @:	16500.000	66.22	-17.32	83.54	46.88	39.10	12.18	31.94	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 64 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode HT20 Test Freq. (MHz) 5500								
N_{TX}	2	Polarization	Н					

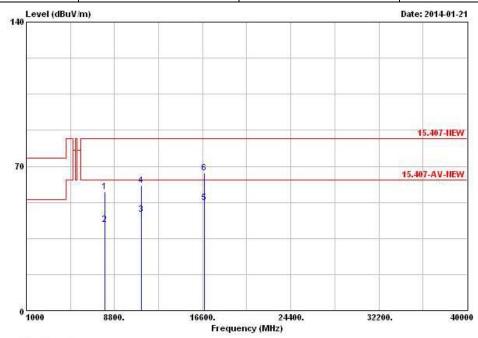


			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	,	cm.	deg
1	@ 8166.000	56.68	-26.86	83.54	43.19	38.11	8.18	32.80	Peak		
2	@ 8166.000	42.59	-20.95	63.54	29.10	38.11	8.18	32.80	Average		
3	@11000.000	44.76	-18.78	63.54	28.70	39.20	9.23	32.37	Average		
4	@11000.000	59.34	-24.20	83.54	43.28	39.20	9.23	32.37	Peak	-	-
5	@16500.000	52.06	-11.48	63.54	32.72	39.10	12.18	31.94	Average		
6	@16500.000	65.99	-17.55	83.54	46.65	39.10	12.18	31.94	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 65 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode HT20 Test Freq. (MHz) 5580									
N _{TX} 2 Polarization V									



Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	дв	- dB	-	cm.	deg
1 @ 7938.000	57.72	-25.82	83.54	44.57	37.73	8.21	32.79	Peak		
2 @ 7938.000	41.79	-21.75	63.54	28.64	37.73	8.21	32.79	Average		
3 @11160.000	46.54	-17.00	63.54	29.86	39.50	9.54	32.36	Average		
4 @11160.000	60.54	-23.00	83.54	43.86	39.50	9.54	32.36	Peak		
5 @16740.000	52.42	-11.12	63.54	32.08	40.40	11.58	31.64	Average		77570
6 @16740.000	66.59	-16.95	83.54	46.25	40.40	11.58	31.64	Peak		

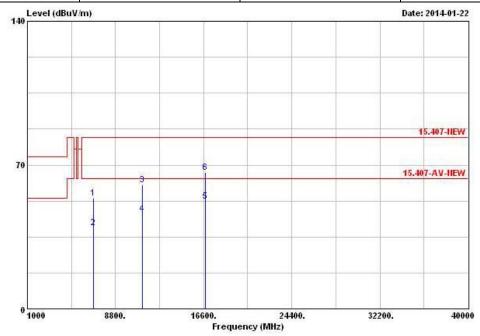
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 66 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report

Report No.: FR3D1962-02AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode HT20 Test Freq. (MHz) 5580								
N_{TX}	2	Polarization	Н					

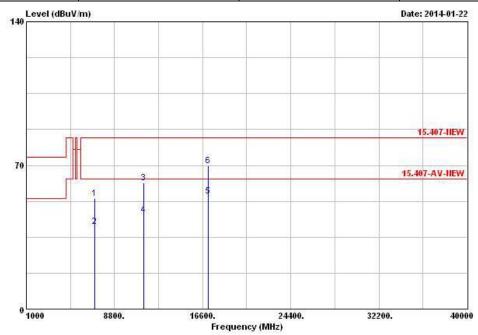


			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm.	deg
1 (@ 6822.000	53.71	-29.83	83.54	43.22	36.14	6.89	32.54	Peak		
2 (@ 6822.000	39.43	-24.11	63.54	28.94	36.14	6.89	32.54	Average		
3 (@ 11160.000	60.31	-23.23	83.54	43.63	39.50	9.54	32.36	Peak		
4 (@11160.000	46.14	-17.40	63.54	29.46	39.50	9.54	32.36	Average	-	1000
5 (316740.000	52.32	-11.22	63.54	31.98	40.40	11.58	31.64	Average		
6 (@16740.000	66.33	-17.21	83.54	45.99	40.40	11.58	31.64	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 67 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation ModeHT20Test Freq. (MHz)5700									
N _{TX} 2 Polarization V									



		18 32	0ver	685-68		Antenna		125 (F 125) A.		Ant	Table
	rreq	Level	Limit	Line	reaet	Factor	ross	ractor	Remark	Pos	Pos
	MX	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- дв	÷	cm	deg
1	@ 7086.000	53.93	-29.61	83.54	42.71	36.72	7.11	32.61	Peak		
2	@ 7086.000	40.10	-23.44	63.54	28.88	36.72	7.11	32.61	Average		
3	@11400.000	61.62	-21.92	83.54	44.13	39.92	9.92	32.35	Peak		222
4	@11400.000	45.76	-17.78	63.54	28.27	39.92	9.92	32.35	Average		
5	@17100.000	55.16	-8.38	63.54	32.51	42.66	11.33	31.34	Average	50,000	
6	@17100.000	69.88	-13.66	83.54	47.23	42.66	11.33	31.34	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

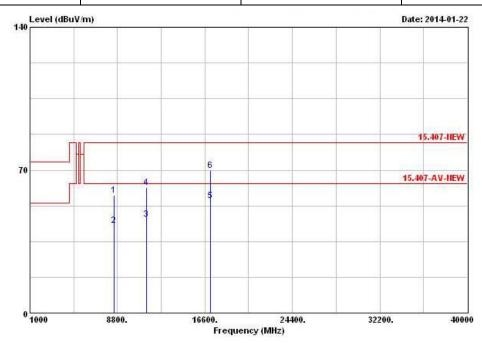
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. : 68 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report

Report No.: FR3D1962-02AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	Modulation ModeHT20Test Freq. (MHz)5700								
N _{TX} 2 Polarization H									



			0ver	Limit	Readi	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	Mz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB		cm	deg
1	@ 8502.000	57.62	-25.92	83.54	43.72	38.70	8.01	32.81	Peak		-
2	@ 8502.000	42.79	-20.75	63.54	28.89	38.70	8.01	32.81	Average		
3	@11400.000	45.93	-17.61	63.54	28.44	39.92	9.92	32.35	Average		2223
4	@11400.000	61.37	-22.17	83.54	43.88	39.92	9.92	32.35	Peak		
5	@17100.000	55.17	-8.37	63.54	32.52	42.66	11.33	31.34	Average		
6	@17100.000	69.67	-13.87	83.54	47.02	42.66	11.33	31.34	Peak		

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

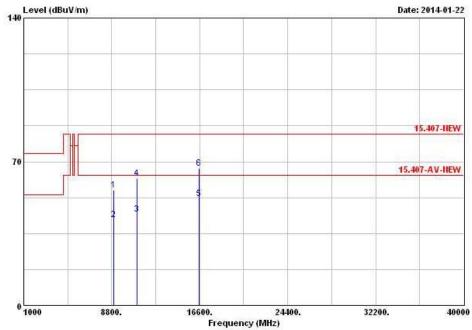
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 69 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation ModeHT40Test Freq. (MHz)5510								
N_{TX}	2	Polarization	V					

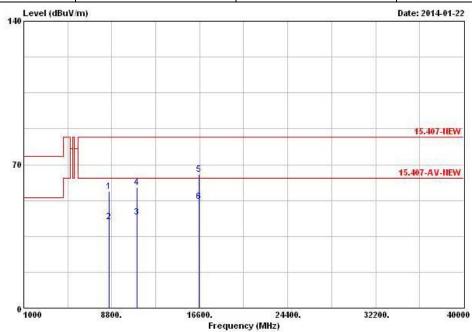


			Over	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
2	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB	-	cm	deg
10	8964.000	56.01	-27.53	83.54	43.03	38.16	7.78	32.96	Peak		777
2 @	8964.000	41.68	-21.86	63.54	28.70	38.16	7.78	32.96	Average		
3 @:	11020.000	44.46	-19.08	63.54	28.31	39.23	9.29	32.37	Average		
4 @:	11020.000	61.69	-21.85	83.54	45.54	39.23	9.29	32.37	Peak		
5 @:	16530.000	52.11	-11.43	63.54	32.64	39.29	12.09	31.91	Average	-	77.77
6 @:	16530.000	66.73	-16.81	83.54	47.26	39.29	12.09	31.91	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 70 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation ModeHT40Test Freq. (MHz)5510								
N _{TX} 2 Polarization H								



	Freq	Level	Over Limit			Antenna Factor			Remark	Ant Pos	Table Pos
=	MKz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- dB	3)	cm.	deg
1 @	8532.000	56.95	-26.59	83.54	43.12	38.66	7.99	32.82	Peak		
2 @	8532.000	42.26	-21.28	63.54	28.43	38.66	7.99	32.82	Average		
3 @1	11020.000	44.45	-19.09	63.54	28.30	39.23	9.29	32.37	Average		
4 @1	11020.000	58.97	-24.57	83.54	42.82	39.23	9.29	32.37	Peak	-	2000
5 @1	16530.000	65.26	-18.28	83.54	45.79	39.29	12.09	31.91	Peak		
6 @1	16530.000	51.94	-11.60	63.54	32.47	39.29	12.09	31.91	Average		

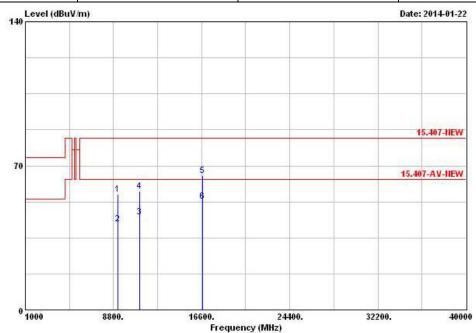
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 71 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report

Report No.: FR3D1962-02AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode HT40 Test Freq. (MHz) 5550								
N _{TX} 2 Polarization V								

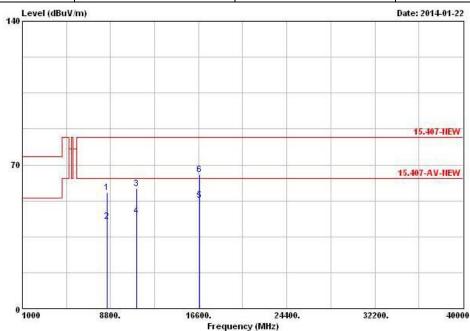


Freq	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
MOKZ	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB		- cm	deg
1 @ 9156.000	56.08	-27.46	83.54	42.66	38.35	8.09	33.02	Peak		
2 @ 9156.000	41.81	-21.73	63.54	28.39	38.35	8.09	33.02	Average		
3 @11100.000	44.96	-18.58	63.54	28.52	39.38	9.42	32.36	Average		
4 @11100.000	57.70	-25.84	83.54	41.26	39.38	9.42	32.36	Peak	-	1000
5 @16650.000	65.19	-18.35	83.54	45.15	39.94	11.84	31.74	Peak		
6 @16650.000	52.85	-10.69	63.54	32.81	39.94	11.84	31.74	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 72 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation ModeHT40Test Freq. (MHz)5550								
N_{TX}	2	Polarization	Н					

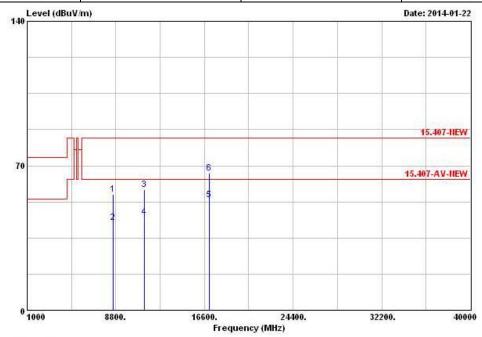


			0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	ī -	cm.	deg
1	@ 8484.000	56.35	-27.19	83.54	42.48	38.67	8.01	32.81	Peak		
2	@ 8484.000	42.41	-21.13	63.54	28.54	38.67	8.01	32.81	Average		
3	@11100.000	58.35	-25.19	83.54	41.91	39.38	9.42	32.36	Peak		
4	@11100.000	45.04	-18.50	63.54	28.60	39.38	9.42	32.36	Average	-	17.00
5	@16650.000	52.85	-10.69	63.54	32.81	39.94	11.84	31.74	Average		
6	@16650.000	65.28	-18.26	83.54	45.24	39.94	11.84	31.74	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 73 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode HT40 Test Freq. (MHz) 5670								
N _{TX} 2 Polarization V								

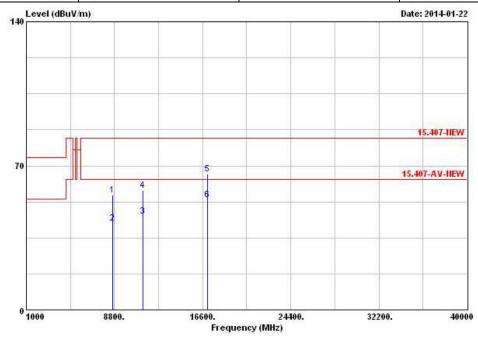


		0ver	Limit	Read	Antenna	Cable	Preamp		Ant	Table
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dВ	dB	-	cm.	deg
1 @ 8532.000	56.19	-27.35	83.54	42.36	38.66	7.99	32.82	Peak		
2 @ 8532.000	42.38	-21.16	63.54	28.55	38.66	7.99	32.82	Average	200	
3 @11340.000	58.32	-25.22	83.54	41.08	39.80	9.79	32.35	Peak		
4 @11340.000	45.24	-18.30	63.54	28.00	39.80	9.79	32.35	Average		1000
5 @17010.000	53.42	-10.12	63.54	31.64	41.94	11.16	31.32	Average		
6 @17010.000	66.32	-17.22	83.54	44.54	41.94	11.16	31.32	Peak		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 74 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode HT40 Test Freq. (MHz) 5670								
N_{TX}	2	Polarization	Н					



	F	req	Level	Over Limit			Antenna Factor				Ant Pos	Table Pos
	-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	- dB	3		deg
1	@ 8616.	000	55.78	-27.76	83.54	42.12	38.56	7.95	32.85	Peak		
2	@ 8616.	000	42.30	-21.24	63.54	28.64	38.56	7.95	32.85	Average		
3	@11340.	000	45.64	-17.90	63.54	28.40	39.80	9.79	32.35	Average		
4	@11340.	000	58.17	-25.37	83.54	40.93	39.80	9.79	32.35	Peak		
5	@17010.0	000	66.16	-17.38	83.54	44.38	41.94	11.16	31.32	Peak		
6	@17010	000	53.38	-10 16	63.54	31.60	41 94	11.16	31 32	Average		

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 75 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01



4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9KHz ~ 40GHz	Jun. 07, 2013	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz ~ 40GHz	Aug. 17, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz ~ 40GHz	Aug. 17, 2013	Conducted (TH02-HY)

Report No.: FR3D1962-02AN

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Nov. 30, 2013	Radiation (03CH03-HY)
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May 03, 2013	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1GHz ~ 26.5GHz	Aug. 20, 2013	Radiation (03CH03-HY)
Spectrum	R&S	FSP40	100004	9kHz ~ 40GHz	Mar. 11, 2013	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 21, 2013	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	May 31, 2013	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15GHz ~ 40GHz	Jan. 10, 2014	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	Nov. 16, 2013	Radiation (03CH03-HY)
RF Cable-high	SUHNER	SUCOFLEX 106	03CH03-HY	1GHz ~ 40GHz	Dec. 11, 2013	Radiation (03CH03-HY)
Turn Table	EM Electronics	EM Electronics	060615	0 ~ 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	MF	MF-7802	MF780208179	1 ~ 4 m	N/A	Radiation (03CH03-HY)

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Amplifier	EM	EM18G40G	060604	18GHz ~ 40GHz	Oct. 17.2013	Radiation (03CH03-HY)
Loop Antenna	TESEQ	HLA 6120	31244	9kHz ~ 30MHz	Dec. 02, 2012	Radiation (03CH03-HY)

Note: Calibration Interval of instruments listed above is two year.

SPORTON INTERNATIONAL INC. Page No. : 76 of 76
TEL: 886-3-327-3456 Report Version : Rev. 01