RF EXPOSURE EVALUATION REPORT

FCC ID	:	**2ASD2-7483**
Equipment	:	**Digital Media Receiver**
Model Name	:	**36EBT3**
Applicant	:	**Process Run LLC** **2815 Forbs Avenue, Suite 107** **Hoffman Estates, IL 60192** **United States**
Standard	:	**47 CFR Part 2.1091**

We, SPORTON INTERNATIONAL INC has been evaluated in accordance with 47 CFR Part 2.1091 for the device and pass the limit.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Approved by: Cona Huang / Deputy Manager

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

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History of this test report

Report No.	Version	Description	Issued Date
FA921234-01	Rev. 01	Initial issue of report	Jul. 02, 2019

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Digital Media Receiver
Model Name	36EBT3
FCC ID	2ASD2-7483
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2472 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	WLAN: 802.11a/b/g/n/ac HT20 / HT40 / VHT20 / VHT40 / VHT80 Bluetooth BR/EDR/LE

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Reviewed by: Jason Wang

Report Producer: Daisy Peng

2. Maximum RF average output power among production units

Mode	Tune-Up Limit
Bluetooth BR/EDR	12.5
Bluetooth v5.0 LE	8

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
2.4GHz WLAN	802.11b	CH 1	2412	1Mbps	20.00
		CH 6	2437		19.00
		CH 11	2462		19.50
		CH 12	2467		17.00
		CH13	2472		14.50
	802.11g	CH 1	2412	6Mbps	18.00
		CH 6	2437		19.00
		CH 11	2462		17.00
		CH 12	2467		14.50
		CH13	2472		13.00
	802.11n-HT20	CH 1	2412	MCS0	17.00
		CH 6	2437		18.00
		CH 11	2462		16.50
		CH 12	2467		13.50
		CH13	2472		12.00

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
5.2GHz WLAN	802.11a	CH 36	5180	6Mbps	18.00
		CH 44	5220		18.00
		CH 48	5240		18.00
	802.11n-HT20	CH 36	5180	MCS0	18.00
		CH 44	5220		18.00
		CH 48	5240		18.00
	802.11n-HT40	CH 38	5190	MCS0	15.00
		CH 46	5230		18.00
	802.11ac-VHT20	CH 36	5180	MCS0	17.50
		CH 44	5220		18.00
		CH 48	5240		18.00
	802.11ac-VHT40	CH 38	5190	MCS0	15.00
		CH 46	5230		18.00
	802.11ac-VHT80	CH 42	5210	MCS0	15.00

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
5.3GHz WLAN	802.11a	CH 52	5260	6Mbps	18.00
		CH 60	5300		18.00
		CH 64	5320		18.00
	802.11n-HT20	CH 52	5260	MCS0	18.00
		CH 60	5300		18.00
		CH 64	5320		18.00
	802.11n-HT40	CH 54	5270	MCS0	18.50
		CH 62	5310		16.00
	802.11ac-VHT20	CH 52	5260	MCS0	18.00
		CH 60	5300		18.00
		CH 64	5320		18.00
	802.11ac-VHT40	CH 54	5270	MCS0	18.50
		CH 62	5310		16.00
	802.11ac-VHT80	CH 58	5290	MCS0	16.00

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
5.5GHz WLAN	802.11a	CH 100	5500	6Mbps	18.50
		CH 116	5580		17.00
		CH 140	5700		17.00
		CH 144	5720		16.00
	802.11n-HT20	CH 100	5500	MCS0	18.50
		CH 116	5580		17.00
		CH 140	5700		17.00
		CH 144	5720		15.50
	802.11n-HT40	CH 102	5510	MCS0	16.00
		CH 110	5550		17.50
		CH 134	5670		19.00
		CH 142	5710		17.50
	802.11ac-VHT20	CH 100	5500	MCS0	18.50
		CH 116	5580		17.00
		CH 140	5700		17.00
		CH 144	5720		15.50
	802.11ac-VHT40	CH 102	5510	MCS0	16.00
		CH 110	5550		17.50
		CH 134	5670		18.50
		CH 142	5710		17.50
	802.11ac-VHT80	CH 106	5530	MCS0	14.50
		CH 122	5610		17.50
		CH 138	5690		18.00

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit
5.8GHz WLAN	802.11a	CH 149	5745	MCS0	17.50
		CH 157	5785		18.00
		CH 165	5825		18.50
	802.11n-HT20	CH 149	5745	MCS0	17.50
		CH 157	5785		17.50
		CH 165	5825		18.00
	802.11n-HT40	CH 151	5755	MCS0	18.00
		CH 159	5795		17.50
	802.11ac-VHT20	CH 149	5745	MCS0	17.50
		CH 157	5785		17.50
		CH 165	5825		18.00
	802.11ac-VHT40	CH 151	5755	MCS0	18.00
		CH 159	5795		17.50
	802.11ac-VHT80	CH 155	5775	MCS0	17.50

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)	Power Density / Limit
2.4GHz WLAN	2412.0	3.00	20.00	23.000	0.200	199.526	0.040	1.000	0.040
5GHz WLAN	5180.0	3.50	19.00	22.500	0.178	177.828	0.035	1.000	0.035
Bluetooth	2402.0	3.00	12.50	15.500	0.035	35.481	0.007	1.000	0.007

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band

WLAN Power Density / Limit	Bluetooth Power Density / Limit	∑(Power Density / Limit) of WLAN+Bluetooth
0.040	0.007	0.047

Note:

1. ∑(Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + Bluetooth.
2. Considering the WLAN module collocation with the Bluetooth transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 2 collocated transmitters is compliant

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.