

RF Exposure Report

Project Number: 4763950

Proposal: SUW-202102000467

Report Number: 4763950EMC02

Revision Level: 0

Client: Fiplex Communications, Inc.

Equipment Under Test: Class B Digital Channel Selective Signal Booster

Model Number: A7S27B

FCC ID: P3TA7S-2B

Applicable Standards: 47 C.F.R. § 1.1310; FCC KDB 447498

FCC OET Bulletin 65 Supplement

Remarks: This report details the results of the testing carried out on one sample; the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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1 General Information

1.1 Client Information

Name: Fiplex Communications Inc
 Address: 2101 NW 79th Ave.
 City, State, Zip, Country: Miami, FL 33122, USA

1.2 Test Laboratory

Name: SGS Consumer Retail Services
 Address: 620 Old Peachtree Road NW, Suite 100
 City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA
 Type of Lab: Testing Laboratory
 Certificate Number: 3212.01
 Designation Number: US1126

1.3 General Information of EUT

Type of Product: Class B Digital Channel Selective Signal Booster
 Model Number: A7S27B
 Serial Number: 20126004FU
 Firmware: 1.05-00

RF output power: DL: 27 dBm (0.5 W); UL: 24 dBm (0.25 W)

Bands of Operation (Uplink): 788-805 MHz; 806-824 MHz

Bands of Operation (Uplink): 758-775 MHz; 851-869 MHz

Bandwidths and Emission class

8K10F1D	9K80F1D	11K3F3E	5M00D7W	10M0D7W
8K10F1E	9K80F1E		5M00F9W	10M0F9W
8K10F1W	9K80D7W		5M00G7D	10M0G7D

No. of Channels: Varies
 Duty cycle: 100%

Rated Voltage: 120Vac, 60Hz
 Tested Voltage: 120Vac, 60Hz

Antenna Characteristics: The EUT does not include antenna(s)

Sample Received Date: 01 April 2021
 Dates of testing: 07 – 24 May, 2021

1.4 Operating Modes and Conditions

For this assessment, the EUT's maximum rated conducted powers including tune-up tolerances were considered.

2 RF Exposure

2.1 Test Result

Test Description	Product Specific Standard	Test Result
RF Exposure	FCC Part 1.1310	Compliant

2.2 Test Method

Using the maximum rated conducted powers including tune-up tolerances, the power density was calculated.

2.3 Limits

TABLE 1 TO §1.1310(E)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

2.4 RF Exposure Levels – Single Path

Band of Operation		Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density EIRP _{Avg} /(4πR ²) mW/cm ²	FCC mW/cm ²	% of Limit	Verdict
Type	MHz				dBm	mW					
700 Band Uplink	788-805	26.0	0.0	0.0	26.0	398	20	0.079	0.53	15%	Pass
800 Band Uplink	806-824	26.0	0.0	0.0	26.0	398	20	0.079	0.54	15%	Pass
700 Band Downlink	758-775	29.0	0.0	0.0	29.0	794	20	0.158	0.51	31%	Pass
800 Band Downlink	851-869	29.0	0.0	0.0	29.0	794	20	0.158	0.57	28%	Pass

2.5 RF Exposure Levels – Composite Uplink / Downlink

Uplink Percentage of Limit = 15% + 15% = **30%** of the Uncontrolled Limit at 20cm

Downlink Percentage of Limit = 31% + 28% = **59%** of the Uncontrolled Limit at 20cm