



MPE Test Report

Report No.: MTi210329021-07E2

Date of issue: Aug. 06, 2021

Applicant: LIDL US LLC.,

Product name: Soundbar

Model(s): SSB 30 A1, SB560, SB560X
(X can be null, 0-9 or A-Z)

FCC ID: 2AJ9O-SSB30A1

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



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TEST RESULT CERTIFICATION

Applicant's name.....	LIDL US LLC.,
Address.....	3500 S. Clark St, Arlington, VA 22202 USA.
Manufacturer's Name	Huizhou Yinghai Digital Appliance Co., Ltd.
Address.....	Jiutan North Development Area, Yuanzhou Town, Boluo County, Huizhou.
Factory's Name	Huizhou Yinghai Digital Appliance Co., Ltd.
Address.....	Jiutan North Development Area, Yuanzhou Town, Boluo County, Huizhou.
Product description	
Product name.....	Soundbar
Trademark	SILVERCREST(only for SSB 30 A1)
Model Name	SSB 30 A1
Serial Model	SB560, SB560X (X can be null, 0-9 or A-Z)
Standards.....	N/A
Date of Test	
Date (s) of performance of tests... :	June 21, 2021 ~ June 29, 2021
Test Result.....:	Pass
This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.	

Testing Engineer

:

Cindy Qin

(Cindy Qin)

Technical Manager

:

Leo Su

(Leo Su)

Authorized Signatory

:

Tom Xue

(Tom Xue)



1 RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

1.1 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)
(A) 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
(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/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

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.



1.2 Measurement Result

Operation Frequency: BT GFSK, $\pi/4$ -DQPSK, 8DPSK: 2402-2480MHz

Power density limited: $1\text{mW}/\text{cm}^2$

Antenna Type: BT Antenna

BT antenna gain: 2.81dBi

R=20cm

$\text{mW}=10^{(\text{dBm}/10)}$

antenna gain Numeric= $10^{(\text{dBi}/10)}=10^{(2.81/10)}=1.91$

Chann el Freq. (MHz)	modulat ion	conduct ed power	Tune- up power (dBm)	Max		Antenna		Evalua tion result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/c m2)	(mW/c m2)
				(dBm)	(mW)	(dBi)	Numeri c		
2402	GFSK	-0.787	-1±1	0	1.000	2.81	1.91	0.0004	1
2441		-1.333	-1±1	0	1.000	2.81	1.91	0.0004	1
2480		-1.548	-1±1	0	1.000	2.81	1.91	0.0004	1
2402	π/4- DQPSK	-2.224	-2±1	-1	0.794	2.81	1.91	0.0003	1
2441		-1.800	-2±1	-1	0.794	2.81	1.91	0.0003	1
2480		-2.162	-2±1	-1	0.794	2.81	1.91	0.0003	1
2402	8DPSK	-2.157	-2±1	-1	0.794	2.81	1.91	0.0003	1
2441		-1.622	-2±1	-1	0.794	2.81	1.91	0.0003	1
2480		-1.842	-2±1	-1	0.794	2.81	1.91	0.0003	1

Conclusion:

For the max result: $0.0004 \leq 1.0$ for 1g SAR, No SAR is required.

----END OF REPORT----