

TEST REPORT

For

B8 Soundbar Active Speaker system

Model Number: B8 Soundbar

FCC ID: Z9G-EDF75

IC: 10004A-EDF75

Report Number : WT198003434

Test Laboratory	:	Shenzhen Academy of Metrology and Quality Inspection
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TEST REPORT DECLARATION

Applicant : Edifier International Limited
Address : P.O. Box 6264, General Post Office, Hong Kong City, Taiwan
Manufacturer : Beijing Edifier Technology Co., Ltd.
Address : 8th floor, ZuoAn Building, NO.68 BeiSiHuanXiLu, Haidian District, Beijing 100080, CHINA
Factory : Dongguan Edifier Technology Co., Ltd.
Address : No.2 Gongyedong Road, Songshan Lake Sci&Tech Industry Park, Dongguan, Guangdong 523808, PR.China
EUT Description : B8 Soundbar Active Speaker system
Model No : B8 Soundbar
HVIN : B8
Trade mark : EDIFIER
FCC ID : Z9G-EDF75
IC : 10004A-EDF75

Test Standards:

FCC Rules and Regulations Part 15 Subpart C Section 15.247

FCC Rules and Regulations Part 15 Subpart C Section 15.249

RSS-247 Issue 2(2017- 02) RSS-Gen Issue 5 (2018- 04)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with FCC Rules Part 15.209, 15.247, 15.249 and IC Rules RSS-247 Issue 2 (2017-02) , RSS-Gen Issue 5 (2018-04) The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Project Engineer:	 (Chen Silin 陈司林)	Date:	Jul.23, 2019
Checked by:	 (Lin Yixiang 林奕翔)	Date:	Jul.23, 2019
Approved by:	 (Lin Bin 林斌)	Date:	Jul.23, 2019

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1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	IC Rules	Test Results
Radiated spurious emission & Radiated restricted band measurement (26.5GHz~40GHz)	15.209, 15.247 (d)& 15.249 (d)	RSS-247 Clause 5.5 RSS-GEN Clause 8.9	Pass
Undesirable emission(26.5GHz~40GHz)	N/A	RSS-247 Clause 6.2.4.2 RSS-GEN Clause 8.9	Pass

Remark: "N/A" means "Not applicable."

2. GENERAL INFORMATION

2.1. Report information

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Innovation, Science and Economic Development (ISED), and the registration number is 11177A.

2.3.Measurement Uncertainty

Radiated Emission
26.5GHz~40GHz 4.6dB

3. PRODUCT DESCRIPTION

3.1.EUT Description

Technical Specification of Bluetooth (V5.0+EDR mode)

Description	:	B8 Soundbar Active Speaker system
Manufacturer	:	Beijing Edifier Technology Co., Ltd.
Model Number	:	B8 Soundbar
Operate Frequency	:	2402MHz~2480MHz
Type(s) of Modulation:	:	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Type:	:	Integral Antenna
Antenna gain	:	2.5 dBi
Power supply	:	AC 100-240V ~ 50/60Hz 450mA

Technical Specification of Bluetooth(5.8G)

Description	:	B8 Soundbar Active Speaker system
Manufacturer	:	Beijing Edifier Technology Co., Ltd.
Model Number	:	B8 Soundbar
Operate Frequency	:	5725MHz~5875MHz
Type(s) of Modulation:	:	FSK
Antenna Type:	:	Integral Antenna
Antenna gain	:	1.57 dBi
Power supply	:	AC 100-240V ~ 50/60Hz 450mA

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: Z9G-EDF74 and IC: 10004A-EDF74 filing to comply with Section 15.209, 15.247, 15.249 of the FCC Part 15 Subpart C, RSS-247 Issue 2(2017-02) and RSS-Gen Issue 5(2018-04) Rules.

3.3. Block Diagram of EUT Configuration



Figure 1 EUT setup

3.4. Operating Condition of EUT

The Radiated spurious emission measurements were carried out in full-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission (X plane).
For above 1GHz radiated the worst case mode from all possible combinations between available modulations, data rates and antenna ports

3.5. Directional Antenna Gain

Directional gain need NOT to be considered.

3.6.Support Equipment List

Table 2 Support Equipment List

Name	Model No	S/N	Manufacturer
--	--	--	--

3.7.Test Conditions

Date of test : Jun.19, 2019

Date of EUT Receive : Jun.19, 2019

Temperature: 23°C

Relative Humidity: 54%

3.8.Special Accessories

Not available for this EUT intended for grant.

3.9.Equipment Modifications

Not available for this EUT intended for grant.

4. TEST EQUIPMENT USED

Table 3 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB8501/09	EMI Test Receiver	Rohde & Schwarz	ESU40	Mar.11,2019	1 Year
SB8501/12	Horn Antenna	ETS-Lindgren	3160-10	Mar.21,2017	3 Years
SB8501/14	Preamplifier	Rohde & Schwarz	SCU-40	Aug.29,2018	1 Year
--	Radiated Test Software	Rohde & Schwarz	EMC 32 8.50.0	--	--

5. RADIATED DISTURBANCE TEST

5.1. Test Standard and Limit

5.1.1. Test Standard

FCC Rules Part 15.209, 15.247, 15.249

RSS-GEN Clause 8.9, RSS-247 Clause 5.5, RSS-247 Clause 6.2.4.2

5.1.2. Test Limit

FCC Rules Part 15.209 & RSS-GEN Clause 8.9

Table 4 Radiation Emission Test Limit for FCC (Class B)(Above 1G)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	74	54

* The lower limit shall apply at the transition frequency.

* The test distance is 3m.

FCC Rules Part 15.249(d)

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

RSS-247 Clause 6.2.4.2

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

5.2. TEST PROCEDURE

1. The testing follows the guidelines in ANSI C63.10-2013.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. For measurement below 1GHz, the EUT was placed on a turntable with 0.8 meter, above ground. For measurement above 1 GHz, test at FAR, the EUT is placed on a non-conductive table, which is 1.5 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

7. Use the following spectrum analyzer settings:

- (1) Span shall wide enough to fully capture the emission being measured;
- (2) Set RBW=100 kHz for $f < 1$ GHz; VBW \geq RBW; Sweep = auto; Detector function= peak; Trace = max hold;
- (3) Set RBW = 1 MHz, VBW= 3MHz for $f > 1$ GHz for peak measurement.

5.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

5.4. Test Data

The emissions don't show in following result tables are more than 20dB below the limits.

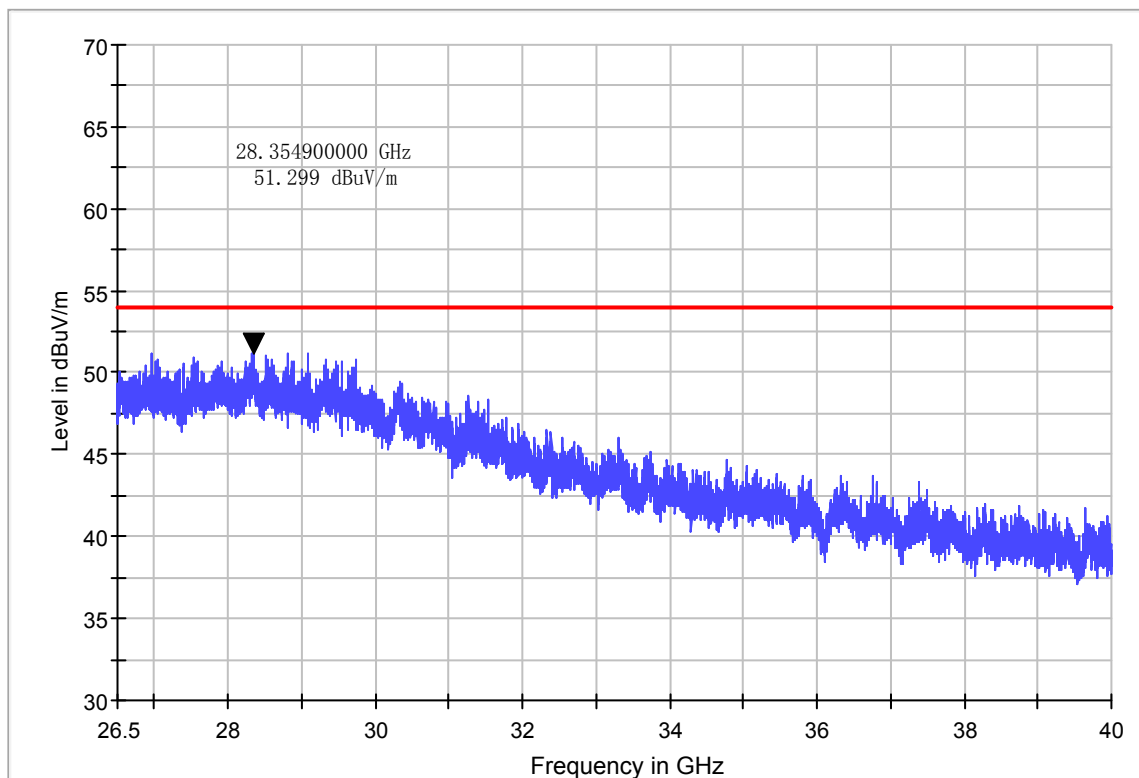
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 2402MHz + TX 5731MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



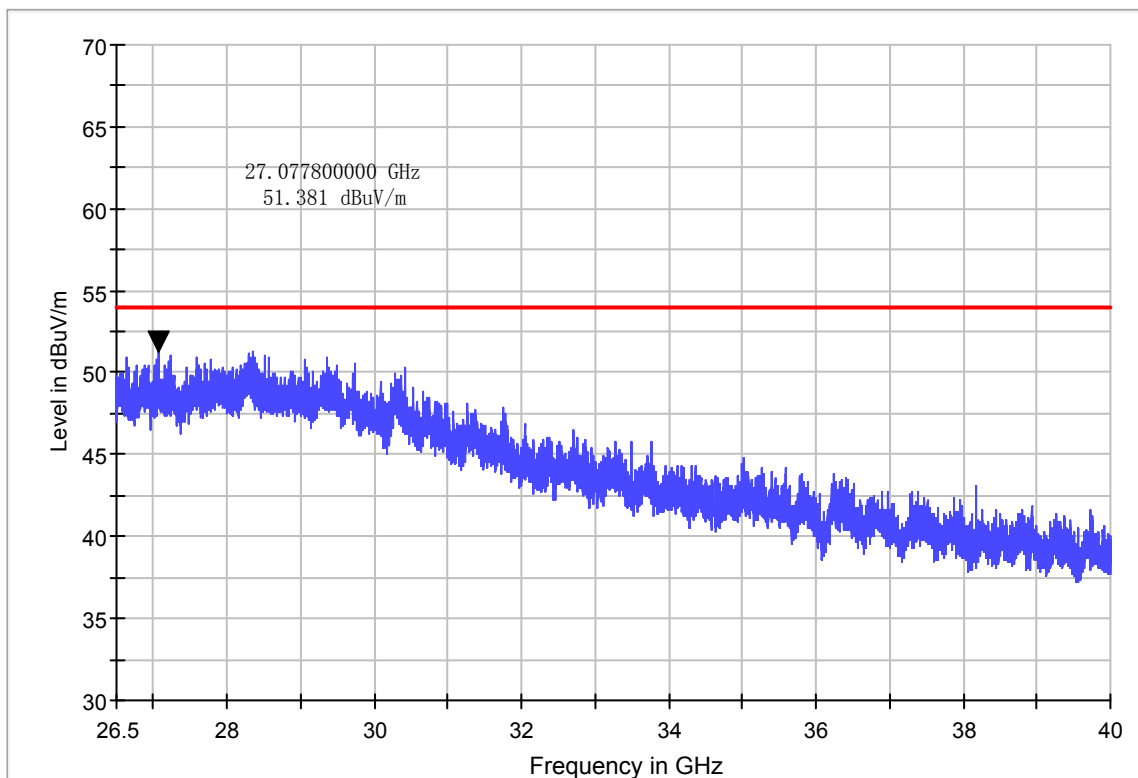
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 2402MHz + TX 5731MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	



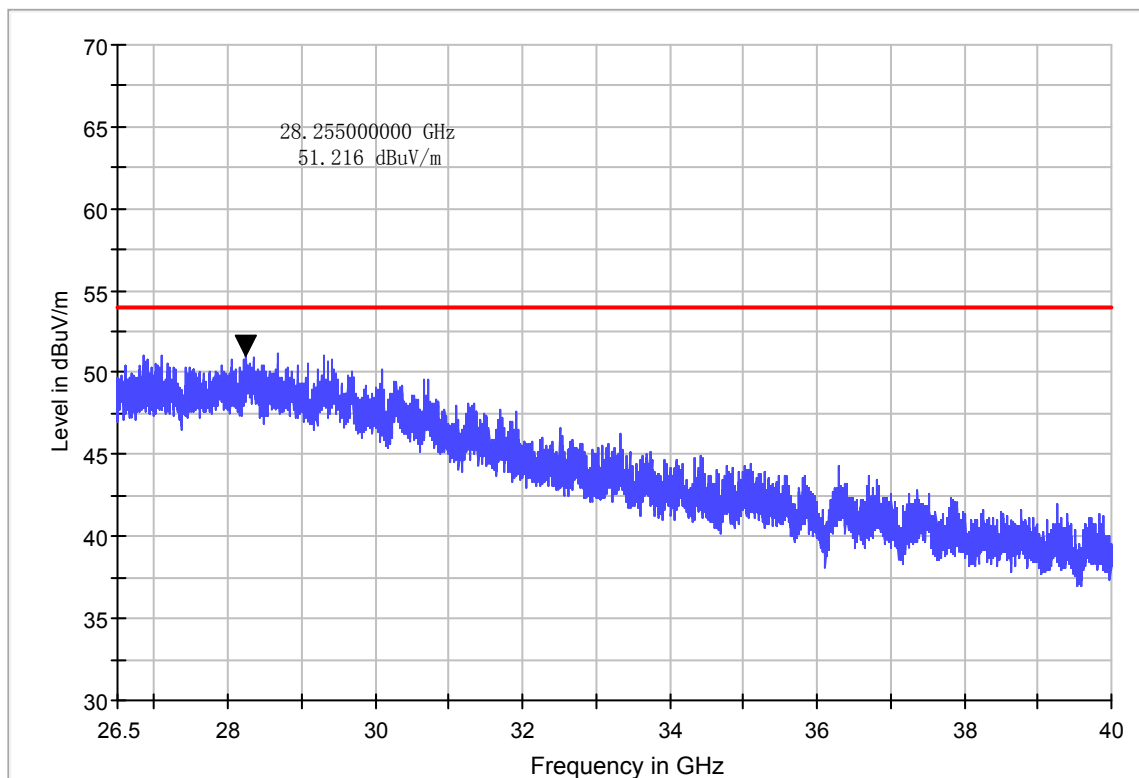
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 2441MHz + TX 5773MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



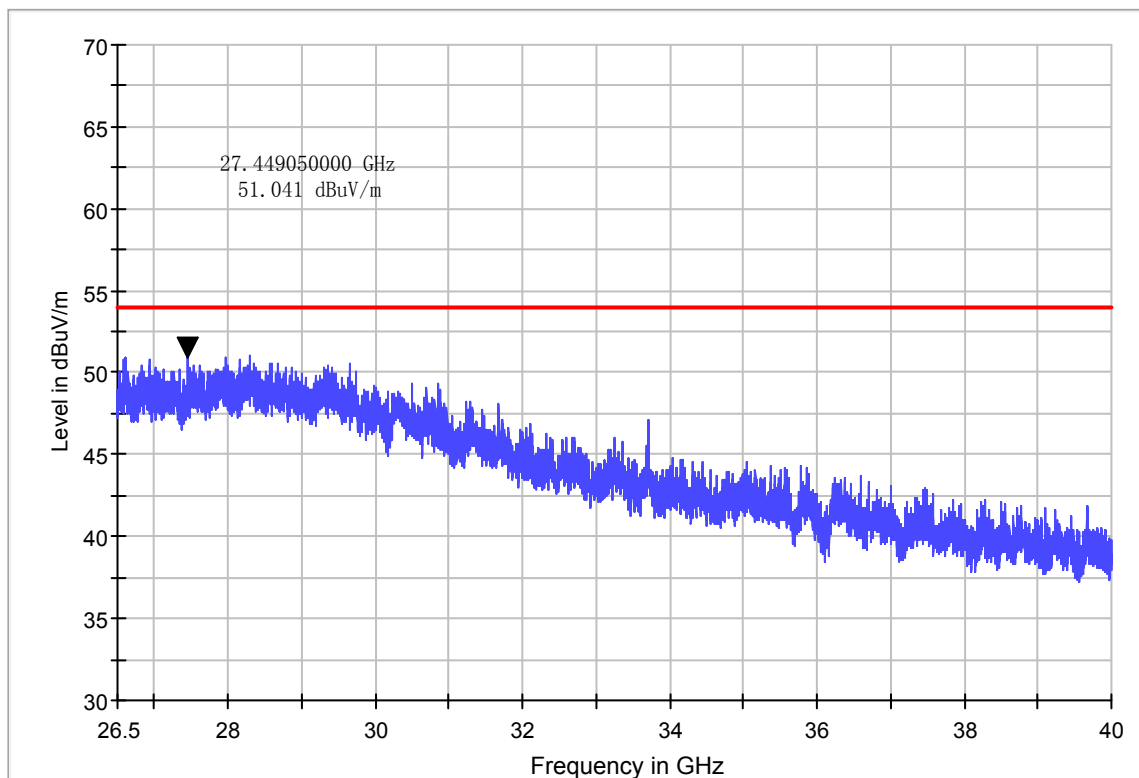
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 2441MHz + TX 5773MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	



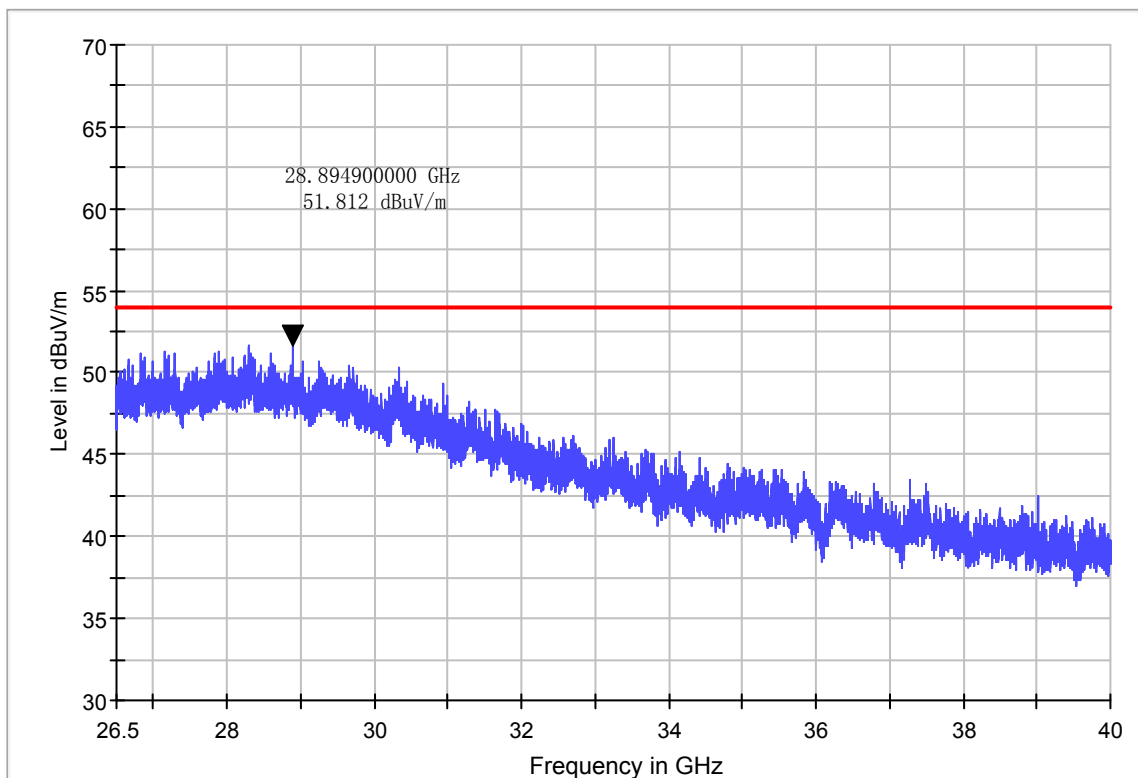
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 2480MHz + TX 5820MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



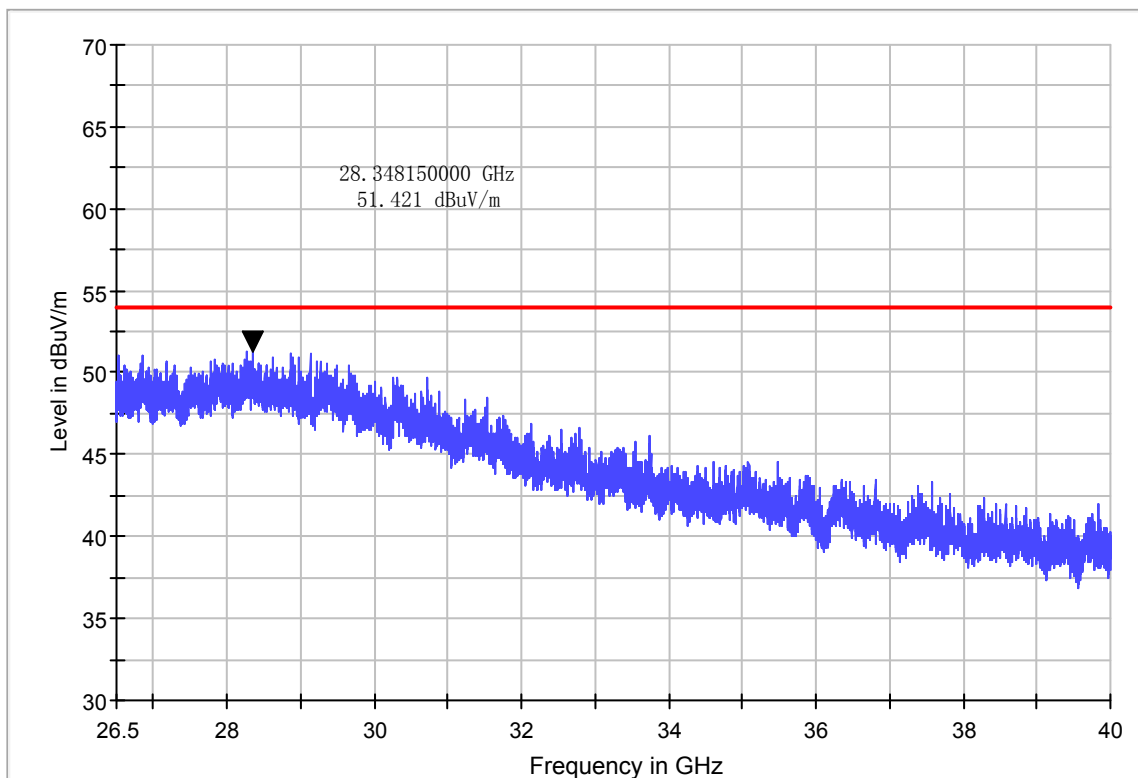
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 2480MHz + TX 5820MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	



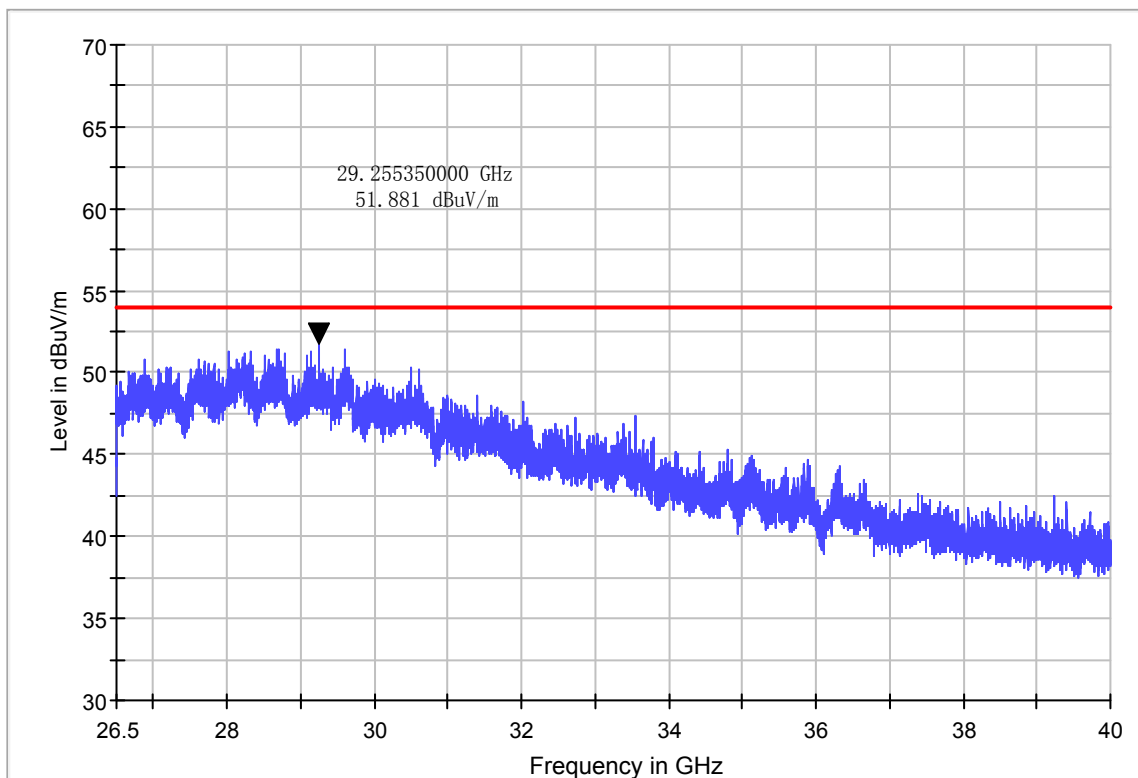
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 5731MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



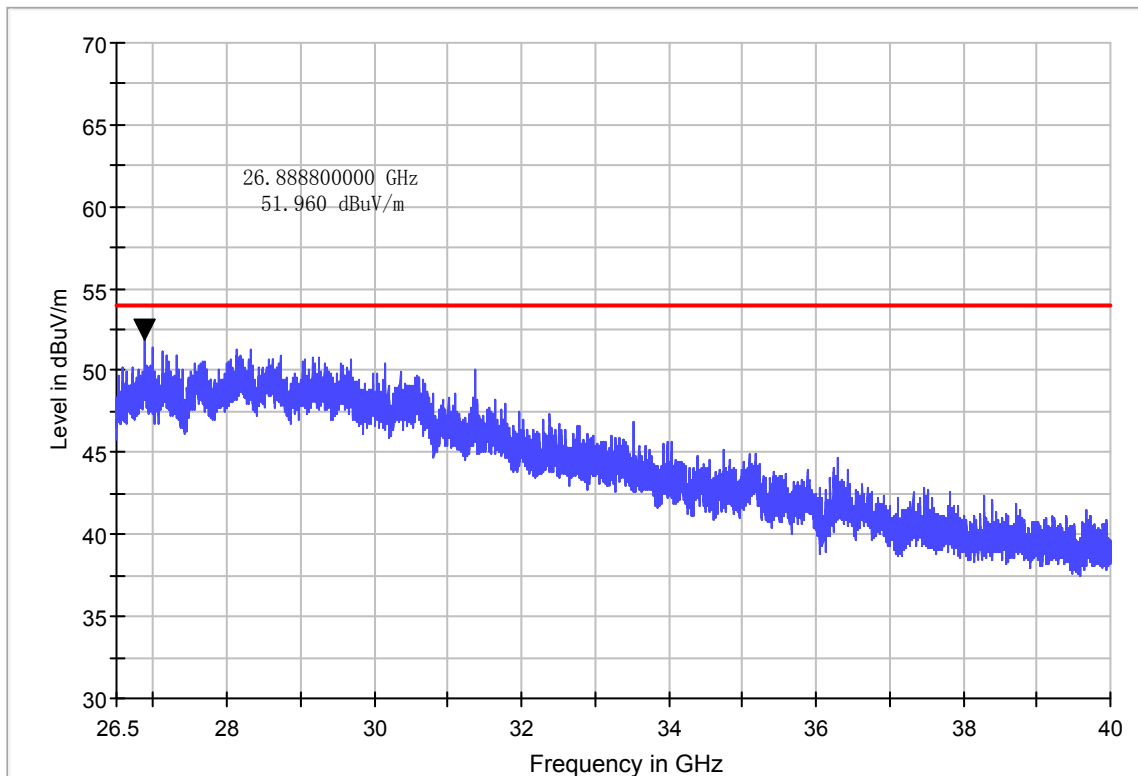
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 5731MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	



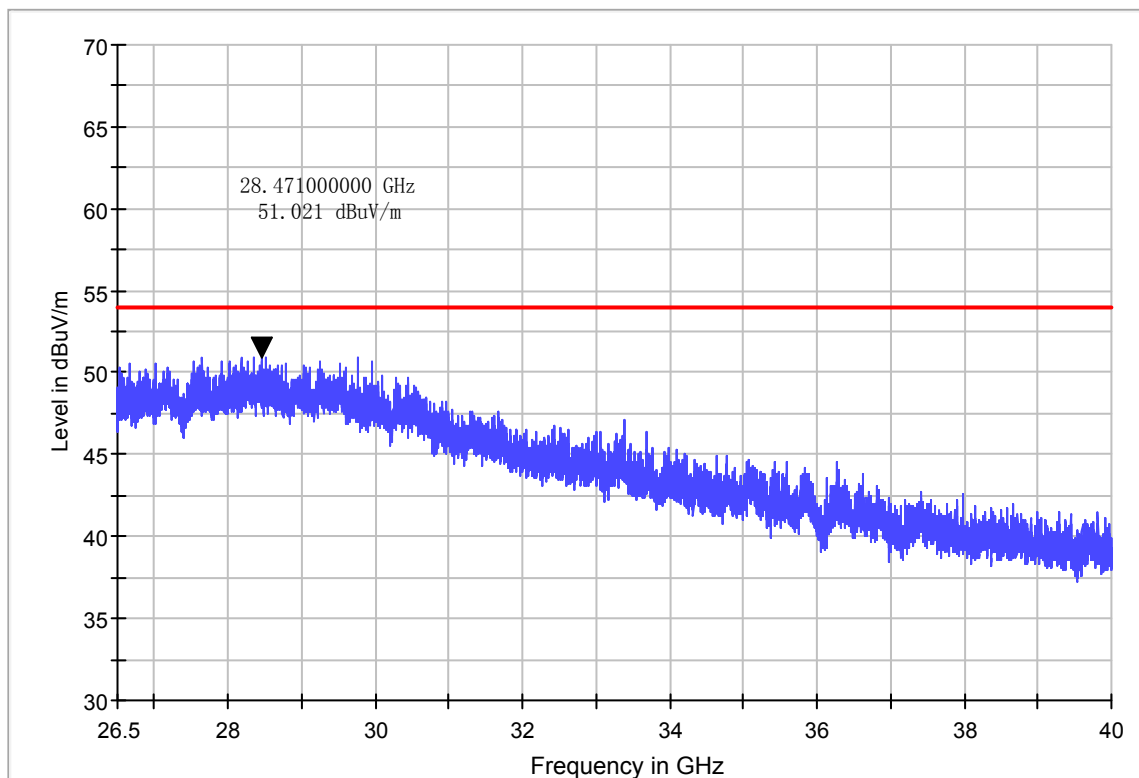
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 5773MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



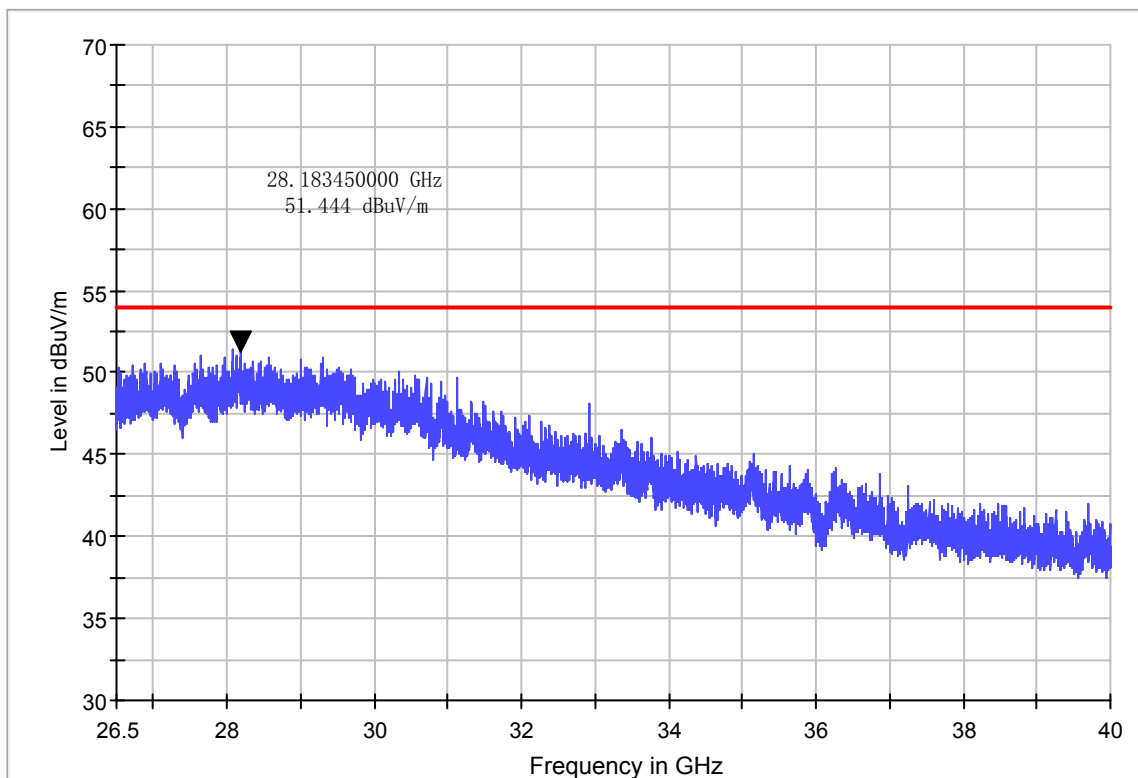
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 5773MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	



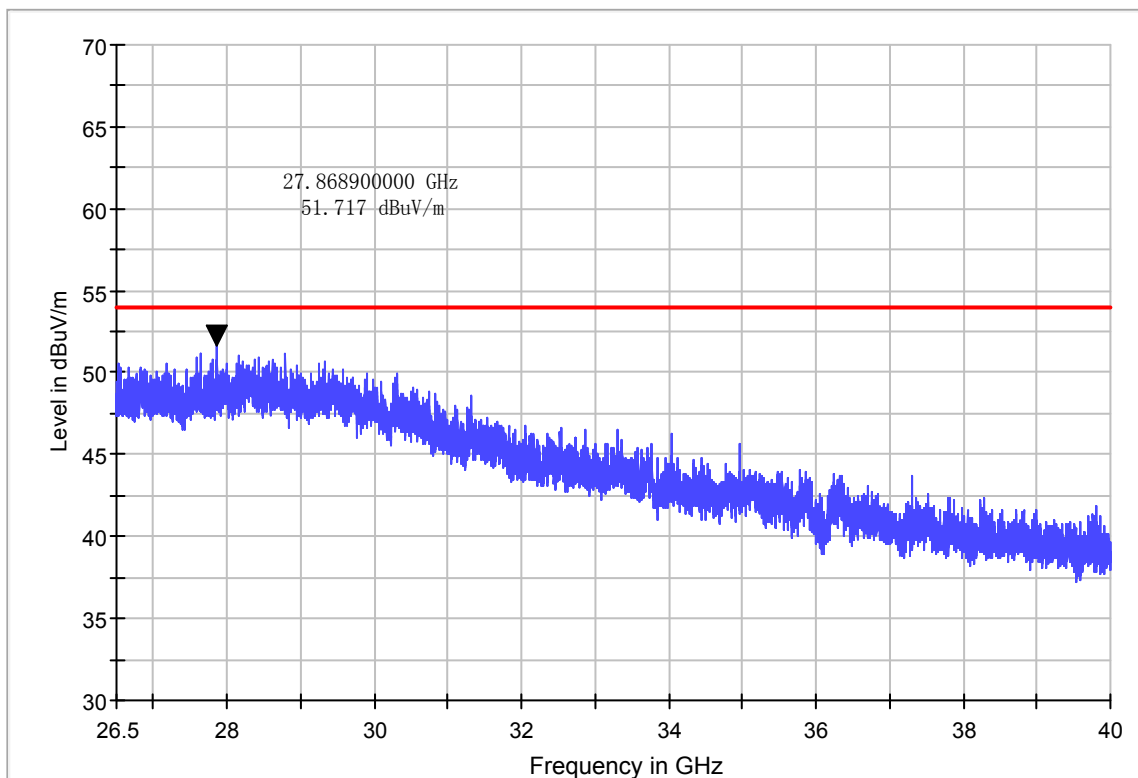
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 5820MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Horizontal
Operator Name:	
Comment:	



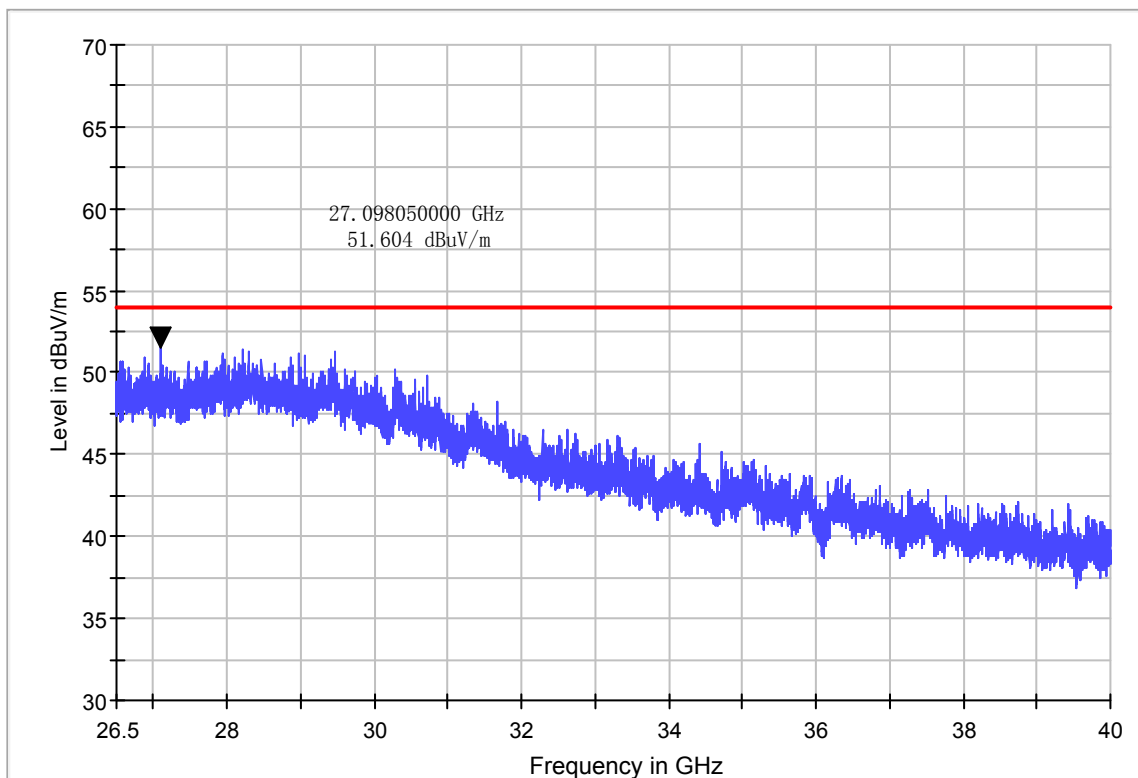
Radiated Emission

EUT Information

EUT Model Name:	B8 Soundbar Active Speaker system M/N:B8 Soundbar
Operation mode:	TX 5820MHz
Test Voltage:	AC 120V/60Hz
Comment:	Edifier

Common Information

Test Site:	SMQ EMC Lab.
Environment	
Antenna Polarization:	Vertical
Operator Name:	
Comment:	



END OF REPORT