

Relative Power Measurement Comparison of the

Wave Block LLC
Wave Block Radiation Shield, Model: N/A

In accordance with:
Manufacturer’s Test Objective

Prepared for:
Wave Block LLC
23371 Mulholland Dr #166
Woodland Hills, CA 91364



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Issue Date: 21 May 2026
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RESPONSIBLE FOR	NAME	TITLE	DATE	SIGNATURE
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Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service document control rules.

EXECUTIVE SUMMARY

A sample of this product was tested for comparative power measurements to find relative RF shielding efficacy.



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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
01	Initial Release	18 May 2026

1.2 Introduction

Objective	To quantify reduction of radiation with the application of the client's product in a laboratory setting.
Manufacturer	Wave Block LLC Ben Salem CEO
Applicant Contact Information	bsalem@waveblock.com (310) 773-6141
Model Number(s)	N/A
Serial Number(s)	N/A
Software Version(s)	N/A (EUT is a passive device)
Number of Samples Tested	2
Input Voltage Used/Verified	N/A (EUT is a passive device)
EUT Highest Frequency Generated or Used	N/A (EUT is a passive device)
Test Specification/Issue/Date	N/A. No Standard applied.
Date of Receipt of EUT	12 May 2026
Start of Test	12 May 2026
Finish of Test	12 May 2026
Name of Engineer(s)	David Hewitt (DH)
Related Document(s)	N/A



1.3 Brief Summary of Results

The Wave Block Radiation Shielding was tested in a laboratory environment. Two configurations for applying the shielding material were used: a grounded and ungrounded application.

These tests showed a reduction of power in both cases in the 2400 – 2500 MHz frequency range (i.e: Bluetooth and WiFi frequencies). The grounded sample showed the power was attenuated by 22 dBm, and the ungrounded sample showed the power was attenuated by 19.9 dBm.

For complete test results, and relative percentage of power reduction, see Section 2: Test Details.

1.4 Product Information

1.4.1 Technical Description

The Equipment Under Test (EUT) was a Wave Block LLC Wave Block Radiation Shield. The EUT, when installed on various materials, is designed to deflect/attenuate RF radiation.



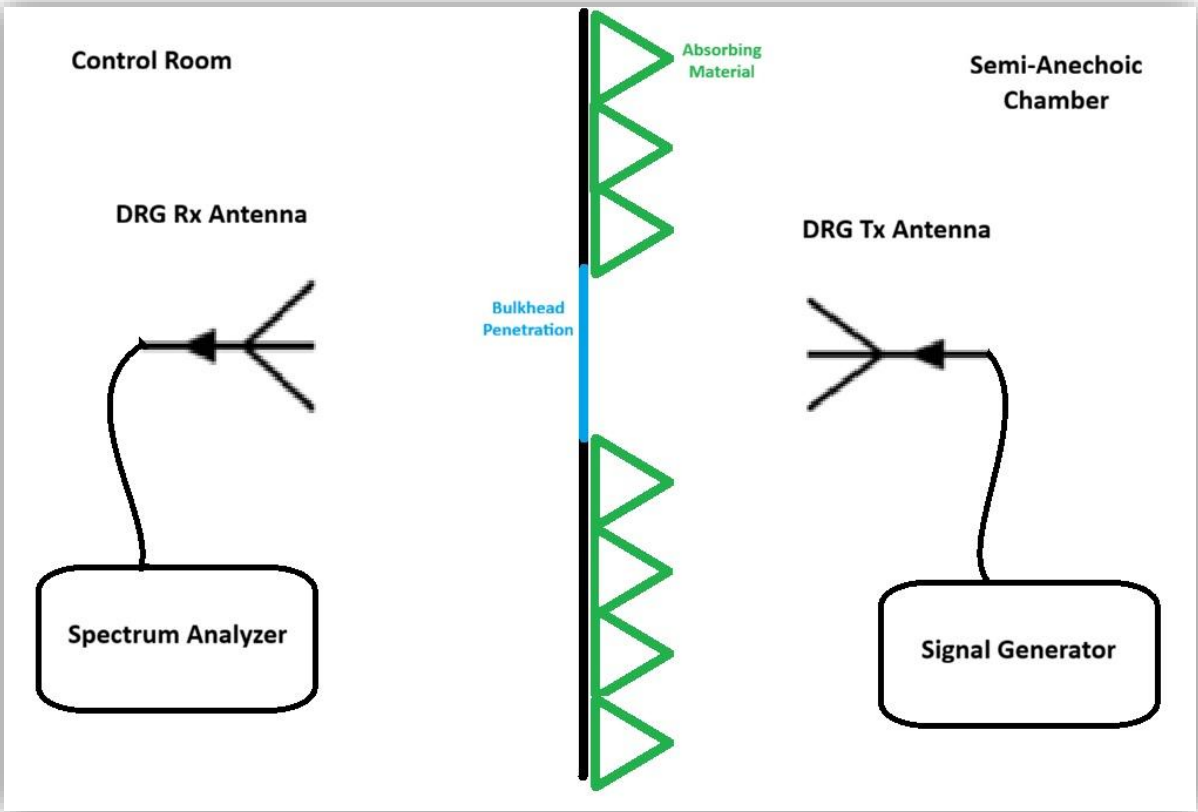
EUT (Outer-Facing Surface and Adhesive Underside)



1.4.2 Test Configuration

Configuration Number	Description
Ungrounded	EUT material is placed across a bulkhead penetration of a shielded, semi-anechoic EMC test chamber, with the conductive surface isolated from metal wall of the chamber.
Grounded	EUT material is placed across a bulkhead penetration of a shielded, semi-anechoic EMC test chamber, with the conductive surface adhered to metal wall of the chamber.

1.4.3 Simplified Test Configuration Diagram





1.5 Test Methods

All measurements contained in this report were conducted with calibrated equipment and performed in an exploratory manner to measure relative power differences in a passive RF attenuation material. See section Section 2: Test Details for specific test configurations and setup photos.

1.6 Test Location

TÜV SÜD America Inc. (Mira Mesa)

10040 Mesa Rim Road, San Diego, CA 92121-2912 (32.901268,-117.177681).
Phone: (858) 678 1400 Fax: (858) 546 0364.



2 Test Details

2.1.1 Equipment Under Test and Modification State

Test Configuration: Ungrounded and Grounded

2.1.2 Date of Test

12 May 2026

2.1.3 Environmental Conditions

Ambient Temperature	23.2 °C
Relative Humidity	45.5 %
Atmospheric Pressure	100.3 kPa

2.1.4 Test Methods

The testing was completed in a semi-anechoic chamber. This allowed for full isolation from surrounding environmental RF energy, and sample measurement through a 12 inch by 12 inch aperture.

Measurements were taken with two DRG antennas of the same manufacturer and model from 2400 MHz to 2500 MHz, which include both Bluetooth and WiFi bands. Each antenna was set 1 m from the wall of the shielded enclosure, with the boresights aimed at each other. One reference measurement was made with an uninhibited path between the two antennas. This effectively measured the free space path loss, and was subtracted from the following three configurations.

The three functional measurements made were the following: with corrugated cardboard, with the Wave Block Material applied ungrounded, and with the Wave Block material applied grounded to the metal wall of the shielded semi-anechoic chamber. The corrugated cardboard sample showed no appreciable loss (i.e. 0 dBm minimum path loss).

2.1.5 Summary of Investigation

Data shows minimum attenuation within a laboratory environment for the **Grounded** sample at 2444 MHz to be **-22.0 dBm**. In linear terms:

Sample Calculation:	Reference Power	=	0 dBm
	Power with 22.0 dB attenuation	=	-22.0 dBm
	0 dBm converted to mW	=	1 mW
	-22.0 dBm converted to mW	=	0.00632 mW
	Percent reduction	=	99.3 %



Data shows minimum attenuation within a laboratory environment for the **Ungrounded** sample at 2492 MHz to be **-19.9 dBm**. In linear terms:

Sample Calculation:	Reference Power (example)	=	0 dBm
	Power with 19.9 dB attenuation	=	-19.9 dBm
	0 dBm converted to mW	=	1 mW
	-19.9 dBm converted to mW	=	0.0103 μ W
	Percent reduction	=	98.9 %

2.1.5.1 Raw Data - Tabular

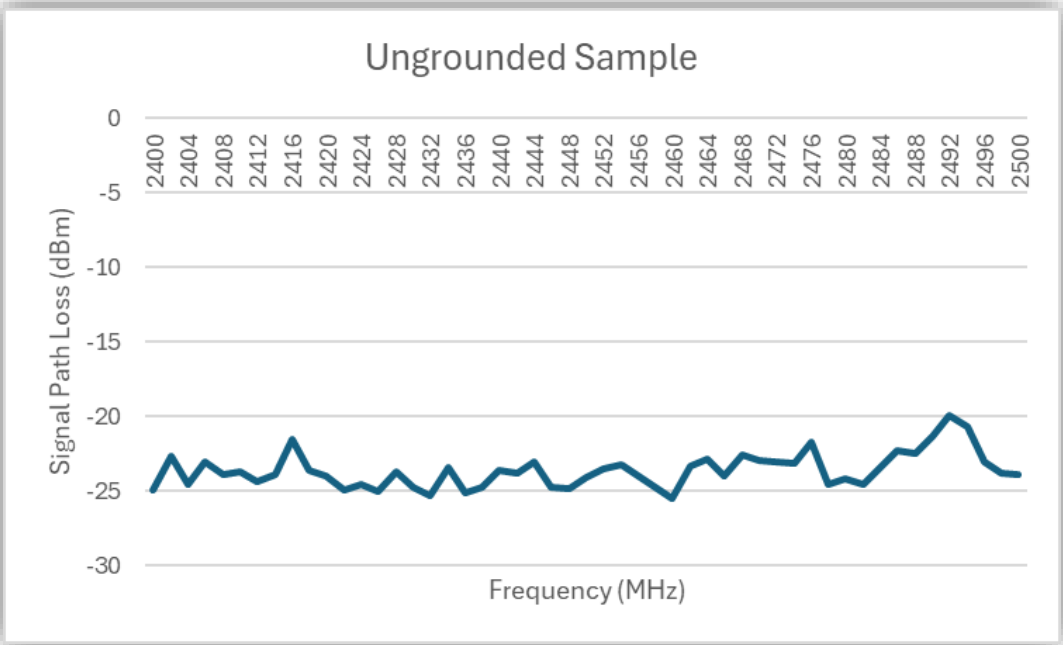
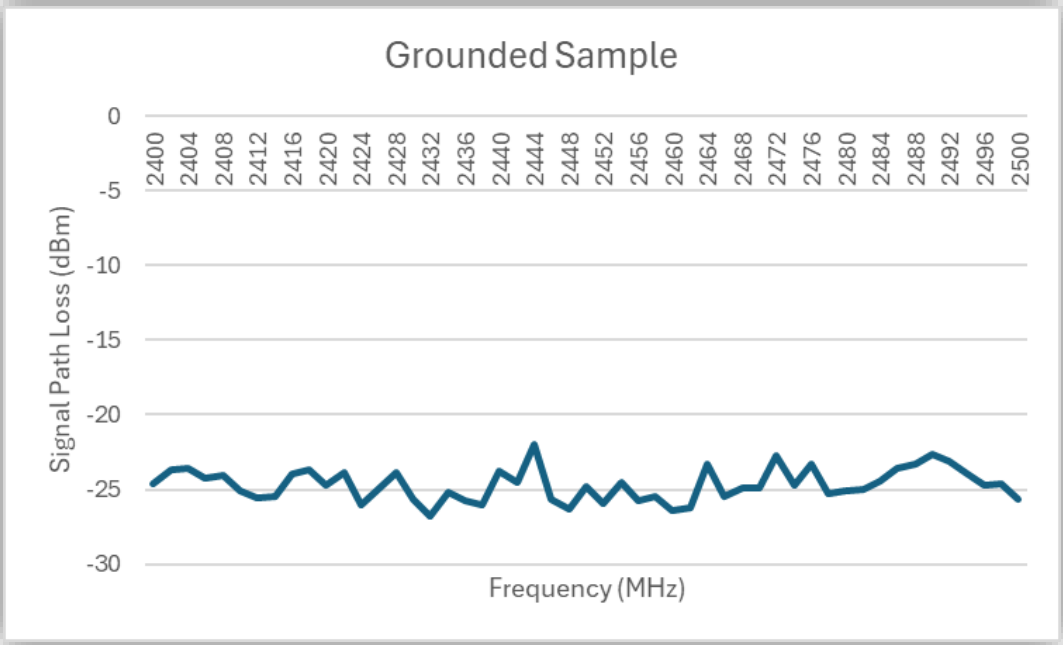
Frequency (MHz)	Signal Path Loss (Ungrounded)	Signal Path Loss (Grounded)
2400	-24.9	-24.6
2402	-22.7	-23.7
2404	-24.5	-23.6
2406	-23.0	-24.2
2408	-23.9	-24.1
2410	-23.7	-25.1
2412	-24.4	-25.6
2414	-23.9	-25.5
2416	-21.5	-24.0
2418	-23.6	-23.7
2420	-24.0	-24.7
2422	-24.9	-23.9
2424	-24.5	-26.0
2426	-25.0	-25.0
2428	-23.7	-23.9
2430	-24.7	-25.7
2432	-25.3	-26.8
2434	-23.4	-25.2
2436	-25.1	-25.8
2438	-24.7	-26.0
2440	-23.6	-23.8
2442	-23.8	-24.5
2444	-23.0	-22.0 (minimum)
2446	-24.7	-25.7
2448	-24.8	-26.3
2450	-24.1	-24.8
2452	-23.5	-25.9
2454	-23.2	-24.5
2456	-24.0	-25.8



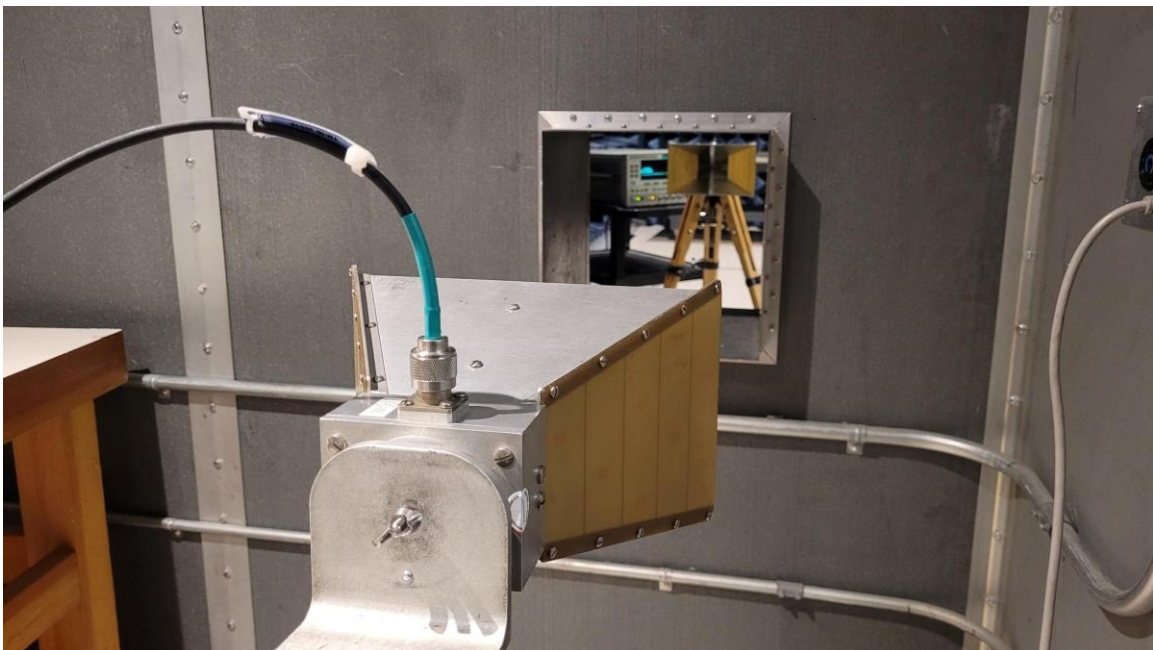
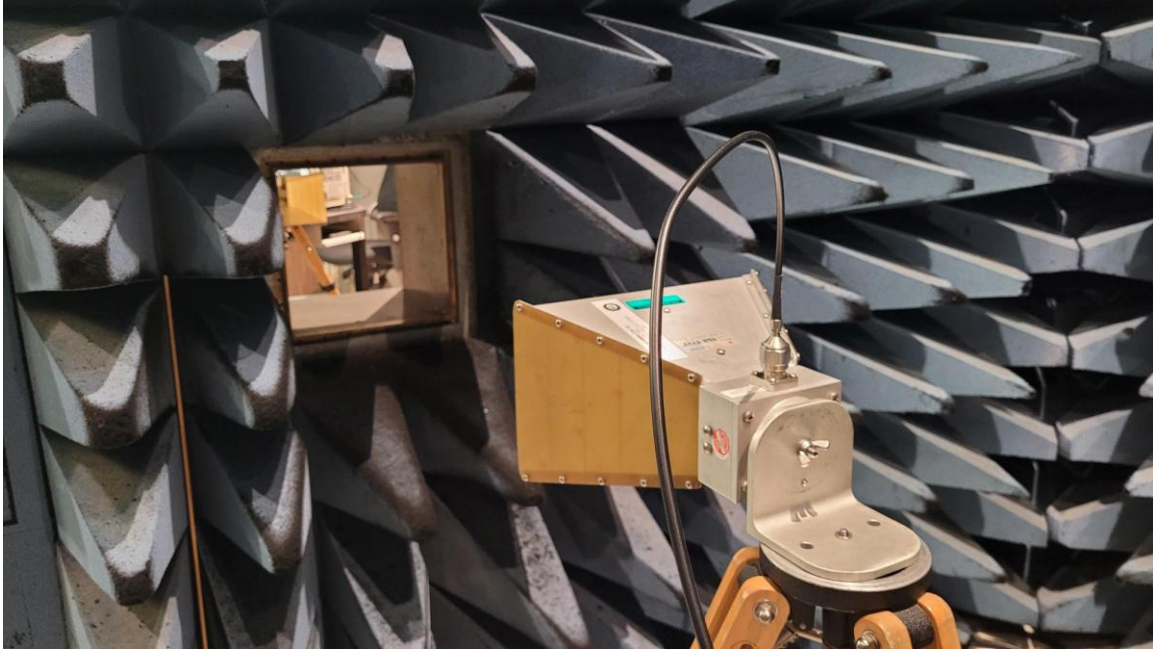
2458	-24.7	-25.5
2460	-25.5	-26.4
2462	-23.3	-26.2
2464	-22.8	-23.3
2466	-24.0	-25.5
2468	-22.6	-24.9
2470	-22.9	-24.9
2472	-23.0	-22.7
2474	-23.1	-24.7
2476	-21.7	-23.3
2478	-24.5	-25.3
2480	-24.2	-25.1
2482	-24.5	-25.0
2484	-23.4	-24.4
2486	-22.3	-23.6
2488	-22.5	-23.3
2490	-21.3	-22.6
2492	-19.9 (minimum)	-23.1
2494	-20.7	-24.0
2496	-23.0	-24.7
2498	-23.8	-24.6
2500	-23.9	-25.7



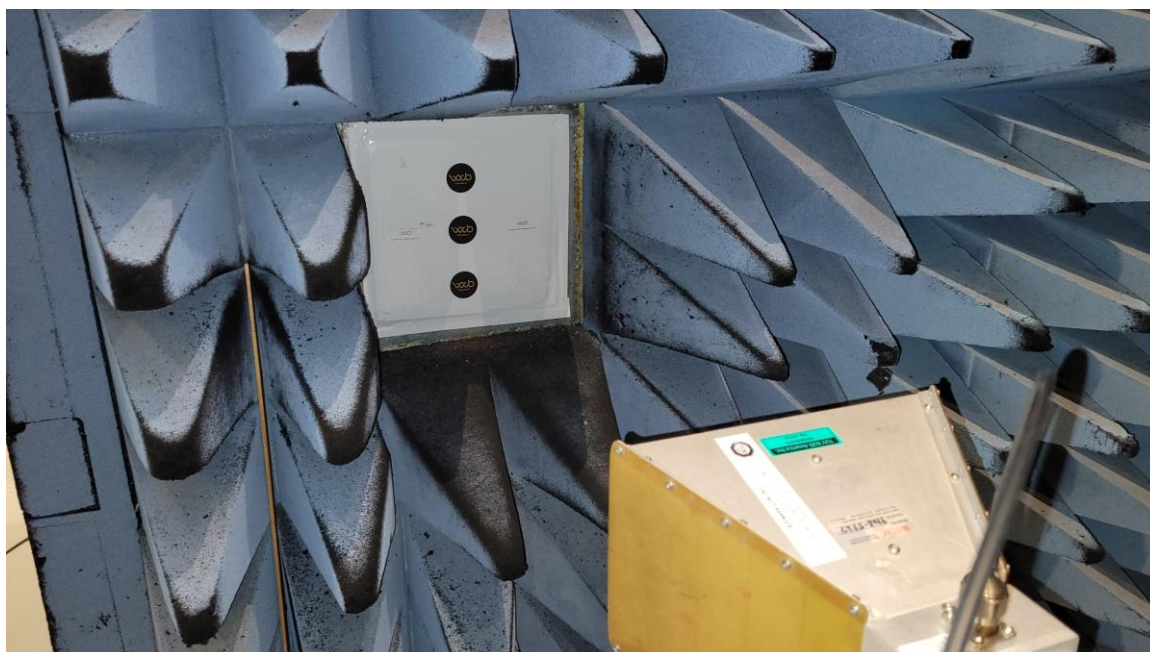
2.1.5.2 Raw Data - Graphical



2.1.6 Test Setup Photos



Reference Measurement Setup – Antenna Position through Semi-Anechoic Chamber Wall Penetration



Grounded Configuration Setup – from inside Semi-Anechoic Chamber



Ungrounded Configuration Setup – from inside Semi-Anechoic Chamber



2.1.7 Test Location and Test Equipment Used

This test was carried out in Mira Mesa, (SR4) using equipment listed below:

Asset ID Number	Test Equipment	Type	Serial Number	Manufacturer	Cal Date	Cal Due Date
SDGE06679	DRG Antenna	3115	2495	EMCO	08/13/25	08/13/27
SDGE06475	DRG Antenna	3115	9008-5827	EMCO	06/28/24	06/28/26
SDGE06614	Signal Generator	83604B	3844A00726	Hewlett Packard	04/13/26	04/13/27
SDGE06814	Spectrum Analyzer	E4440A	MY42510441	Agilent	10/08/25	10/08/26
--	Test Software	CAL1N	v20.vi	TUC SUD America	NCR	

NCR = No calibration required



3 Accreditation, Disclaimers and Copyright

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