

## **RADIATED EMISSIONS TEST REPORT , BANDEDGE EMISSIONS**

### **I. GENERAL INFORMATION**

Requirement: Federal Communications Commission  
Class 2 Permissive Change Application

Test Requirements: 15.205, 15.207, 15.209, 15.247

Applicant: Sonos Inc.  
506 Chapala  
Santa Barbara, CA 93101

Product ID: FCC ID: SBVZP000 (Sonos Zone Player)  
Date of Original Grant: 19 October 2000

### **II. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)**

The SBVZP000 is an 802.11g-only wireless music system containing internet connection and audio amplification circuitry

#### **RF Specifications**

RF Frequency Band	2412-2462 MHz
RF Channels	1, 6, and 11 only (limited by firmware)
Modulation Type	802.11g OFDM only (limited by firmware)
Transmitter Output Power	+19.3 dBm maximum (0.086 watt)
Antenna to be added:	5 dBi circuit card antenna

### **III. TEST LOCATION**

All emissions tests were performed at:

Compliance Certification Services  
571F Monterey Road  
Morgan Hill, CA 95037

Testing performed 28 July 2004.



T.N. Cokenias  
Agent for Sonos Inc.

31 December 2004

## TEST PROCEDURES

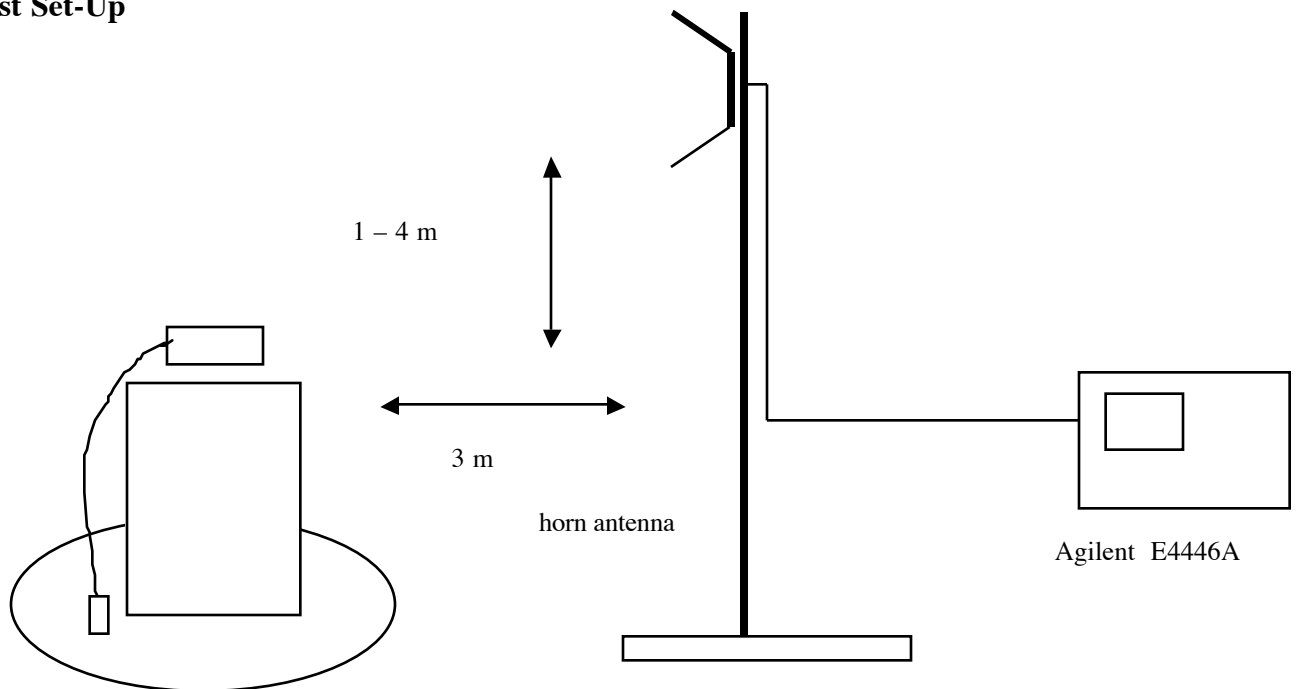
Radiated emissions testing per the methods of ANSI C63.4.

### Measurement Equipment Used:

Agilent E4446A spectrum analyzer  
EMCO 3115 horn antenna, 1-18 GHz

**Radiated Emissions Above 1 GHz**  
**Test Requirement: 15.205, 15.209, 15.247**

### Test Set-Up



### Test Procedures, 1- 26 GHz:

1. The EUT was placed on a wooden table resting on a turntable on the Site A 10m open area test site. The search antenna was placed 3m from the EUT. The EUT antenna was mounted vertically as per normal installation.
2. The turntable was slowly rotated to locate the direction of maximum emission at each emission falling in the restricted bands of 15.205. Radiated emissions were investigated for a LOW channel, in the 2310-2390 MHz restricted band, and for the HIGH channel in the 2483.5 – 2500 MHz restricted band.

3. Once maximum direction was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations. The maximum readings so obtained are recorded in the data listed below.

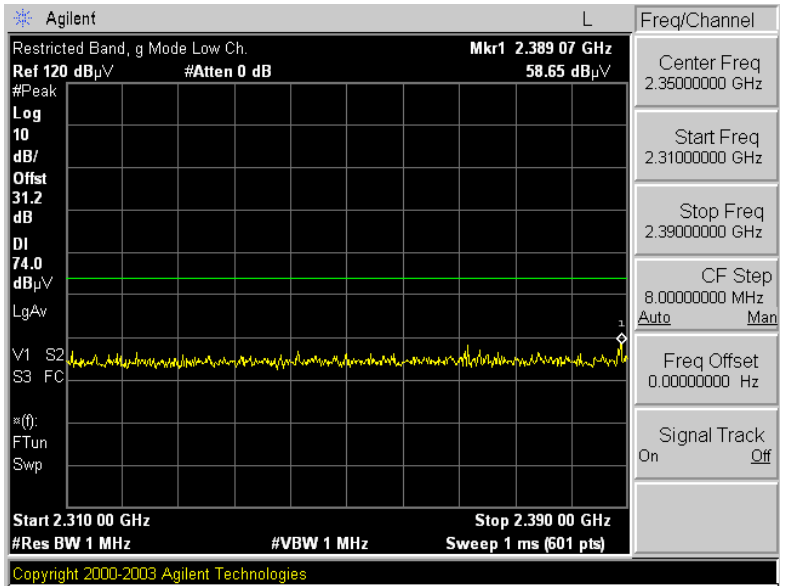
<b>Channel</b>	<b>Frequency, MHz</b>
1 (Low )	2412
11 (High)	2462

Radiated emissions were performed at each frequency for the following antenna:.

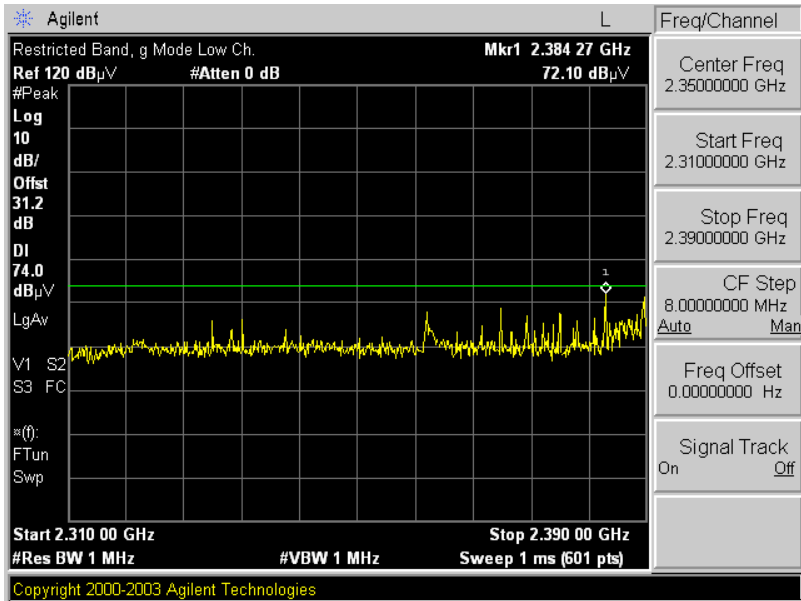
<b>Antenna Type</b>	<b>Deployment</b>	<b>Gain</b>	<b>Antenna Mfr.</b>	<b>Model</b>
Omni monopole	Point to Multipoint	1.05dBi max	Super Pilot Ent.	ZP

**Test Results:** PASS. Worst case results are presented. Refer to data below.

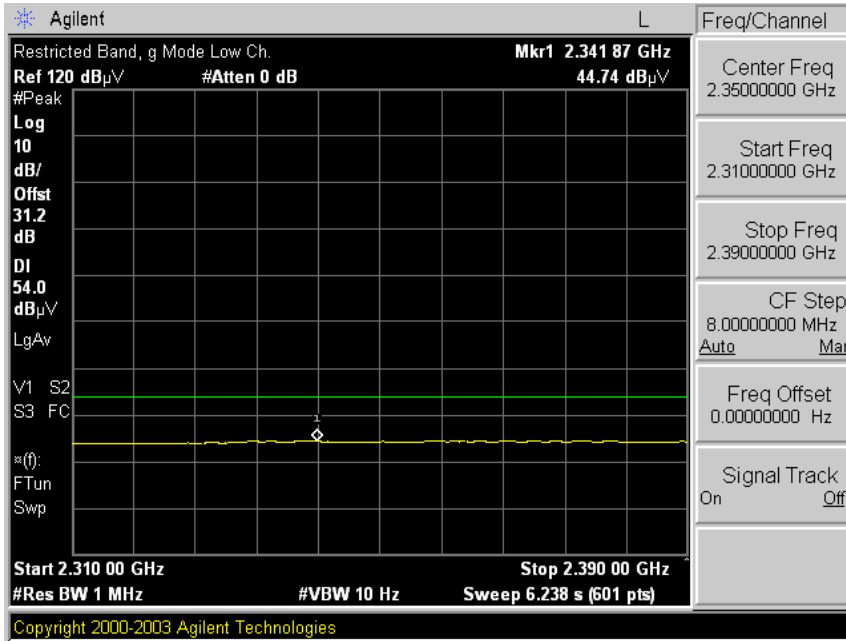
### LOW channel, peak, horizontal



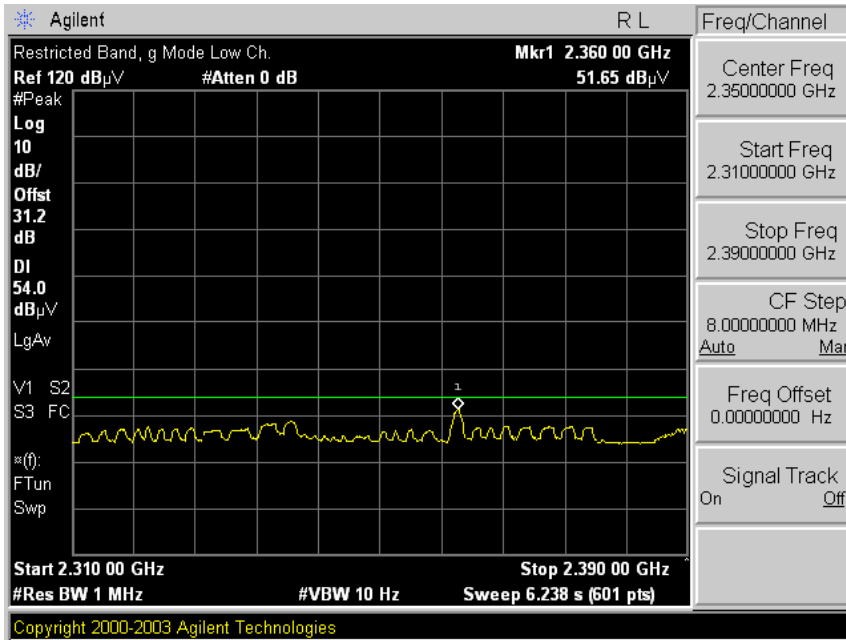
### LOW channel, peak, vertical



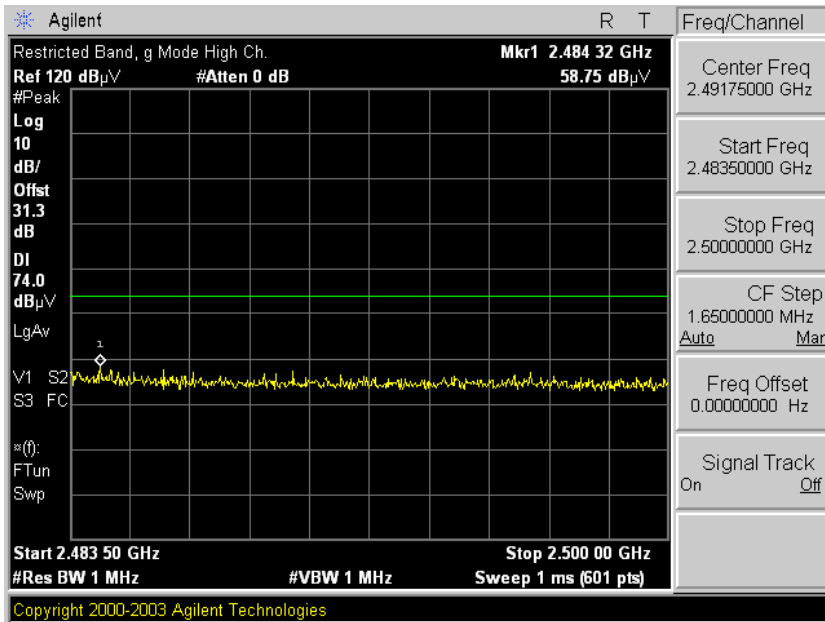
### LOW channel average, horizontal



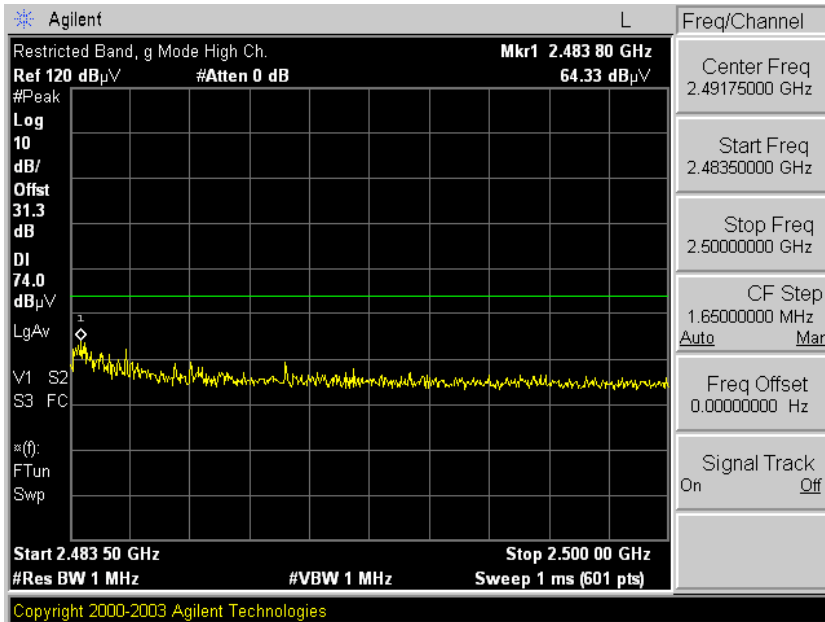
### LOW channel average, vertical



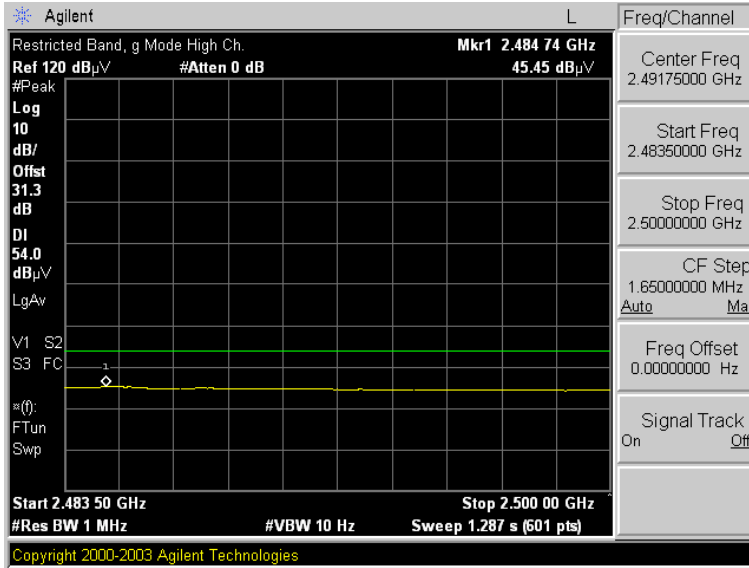
### HIGH channel peak, horizontal



### HIGH channel peak, vertical



### High channel average, horizontal



### High channel average, vertical

