

# Waterproof Piezoelectric Speaker



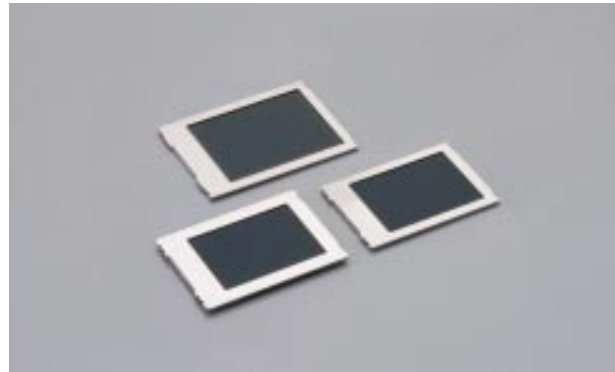
## VSLBG Series

### ■ Features

- Available for waterproof (IPX7)
- High Quality Sound & High Sound Pressure Level
- Ultra thin styling. (Thickness=0.9mm)  
Side ventilation housing enables ultimate thickness reduction.
- Save battery power.
- No magnet-free from iron sand inhalation problem.
- No electromagnetic noise.

### ■ Applications

Hand Held Phone / PDA / Solid State Audio / IC Recorder / DSC etc.



### ■ Standard Specifications

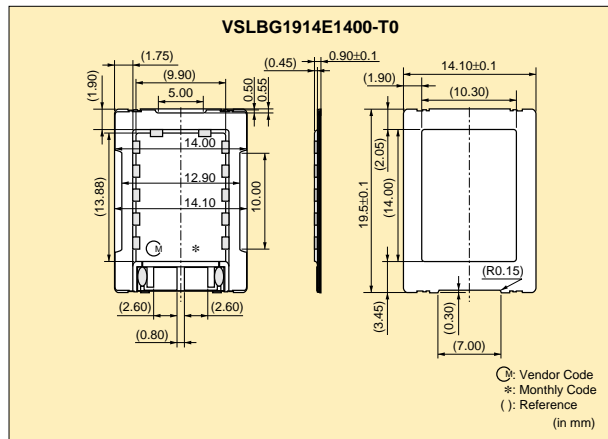
Item	Specifications
	<b>VSLBG1914E1400-T0</b>
Rated Frequency Range	200Hz to 20kHz
Sound Pressure Level	92.0dB±3.0dB
Resonant Frequency	1400Hz±20%
Capacitance	0.9μF±30%
Maximum Sinusoidal Voltage	5.0Vrms
Operating Temperature Range	-20 to +70°C
Storage Temperature Range	-30 to +85°C

Measurement Condition of Sound Pressure Level: Input Signal=5.0Vrms, Sine Wave, at 100mm, Average at 1.5k, 2.0k, 2.5k, 3.0kHz

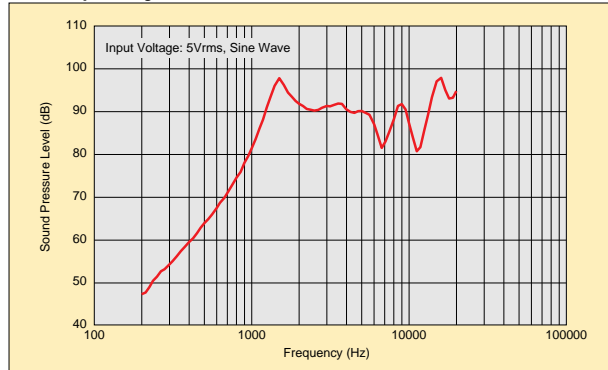
Measurement Condition of Capacitance: 0.1Vrms, at 120Hz

Maximum sinusoidal signal voltage continuously - for 240 hours - applicable to the speaker.

## ■ Dimensions



## ■ Frequency Characteristics of Sound Pressure Level



Measurement Condition of Sound Pressure Level: Input Signal: 5.0Vrms, Sine Wave, at 100mm  
 Back Cavity: 0.7cc

### for EU RoHS Compliant

- All the products in this catalog comply with EU RoHS.
- EU RoHS is "the European Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment".
- For more details, please refer to our website 'Murata's Approach for EU RoHS' (<http://www.murata.com/info/rohs.html>).

#### △Note:

##### 1. Export Control

<For customers outside Japan>

No Murata products should be used or sold, through any channels, for use in the design, development, production, utilization, maintenance or operation of, or otherwise contribution to (1) any weapons (Weapons of Mass Destruction [nuclear, chemical or biological weapons or missiles] or conventional weapons) or (2) goods or systems specially designed or intended for military end-use or utilization by military end-users.

<For customers in Japan>

For products which are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

##### 2. Please contact our sales representatives or product engineers before using the products in this catalog for the applications listed below, which require especially high reliability for the prevention of defects which might directly damage a third party's life, body or property, or when one of our products is intended for use in applications other than those specified in this catalog.

- |                             |  |
|-----------------------------|--|
| ① Aircraft equipment        | ② Aerospace equipment  |
| ③ Undersea equipment        | ④ Power plant equipment  |
| ⑤ Medical equipment         | ⑥ Transportation equipment (vehicles, trains, ships, etc.)   |
| ⑦ Traffic signal equipment  | ⑧ Disaster prevention / crime prevention equipment   |
| ⑨ Data-processing equipment | ⑩ Application of similar complexity and/or reliability requirements to the applications listed above |

##### 3. Product specifications in this catalog are as of July 2010. They are subject to change or our products in it may be discontinued without advance notice. Please check with our sales representatives or product engineers before ordering. If there are any questions, please contact our sales representatives or product engineers.

##### 4. Please read rating and △ CAUTION (for storage, operating, rating, soldering, mounting and handling) in this catalog to prevent smoking and/or burning, etc.

##### 5. This catalog has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

##### 6. Please note that unless otherwise specified, we shall assume no responsibility whatsoever for any conflict or dispute that may occur in connection with the effect of our and/or a third party's intellectual property rights and other related rights in consideration of your use of our products and/or information described or contained in our catalogs. In this connection, no representation shall be made to the effect that any third parties are authorized to use the rights mentioned above under licenses without our consent.

##### 7. No ozone depleting substances (ODS) under the Montreal Protocol are used in our manufacturing process.

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