



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

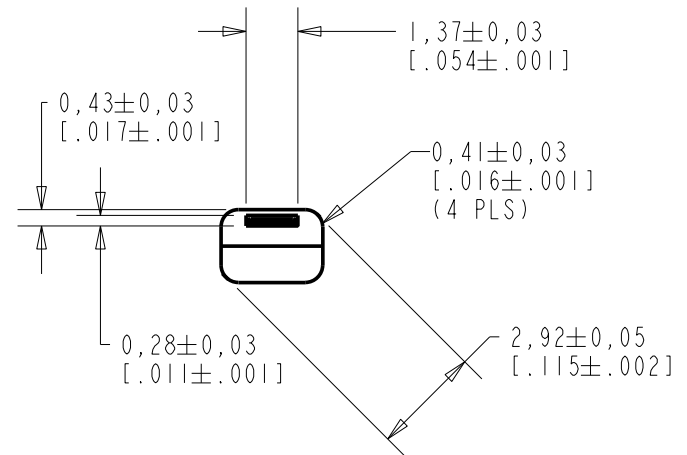
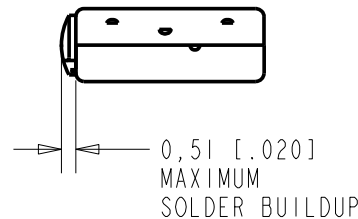
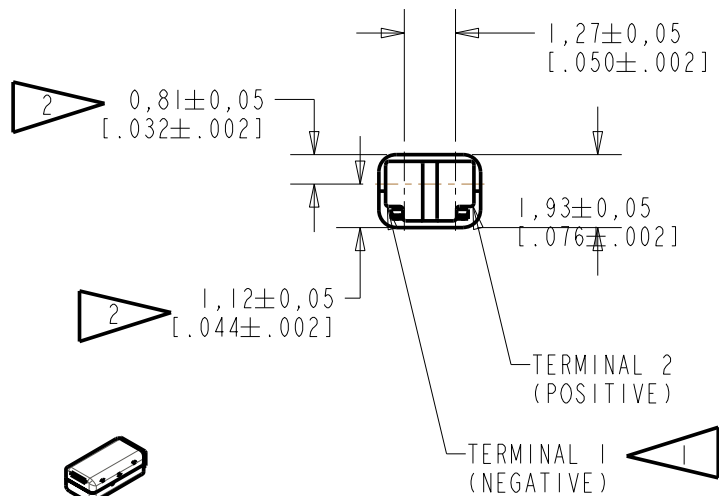
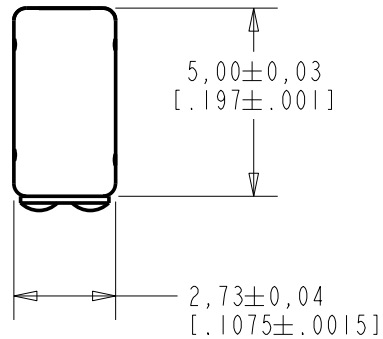


**WBFK-23990-000**

**SHT 1.1**

NOTES:

- 1 A POSITIVE GOING VOLTAGE AT TERMINAL 2, RELATIVE TO TERMINAL 1, CAUSES A DECREASE IN PRESSURE AT THE SOUND OUTLET.
- 2 LOCATED FROM TWO SURFACES FOR CUSTOMER CONVENIENCE. ONLY APPLICABLE FROM ONE SURFACE, NOT TO BE USED TOGETHER.



SCALE 2:1

DIMENSIONS IN MILLIMETERS [INCHES]

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
E	C10108259P	12-31-08	Active	E
D	C10105003	10-18-06		

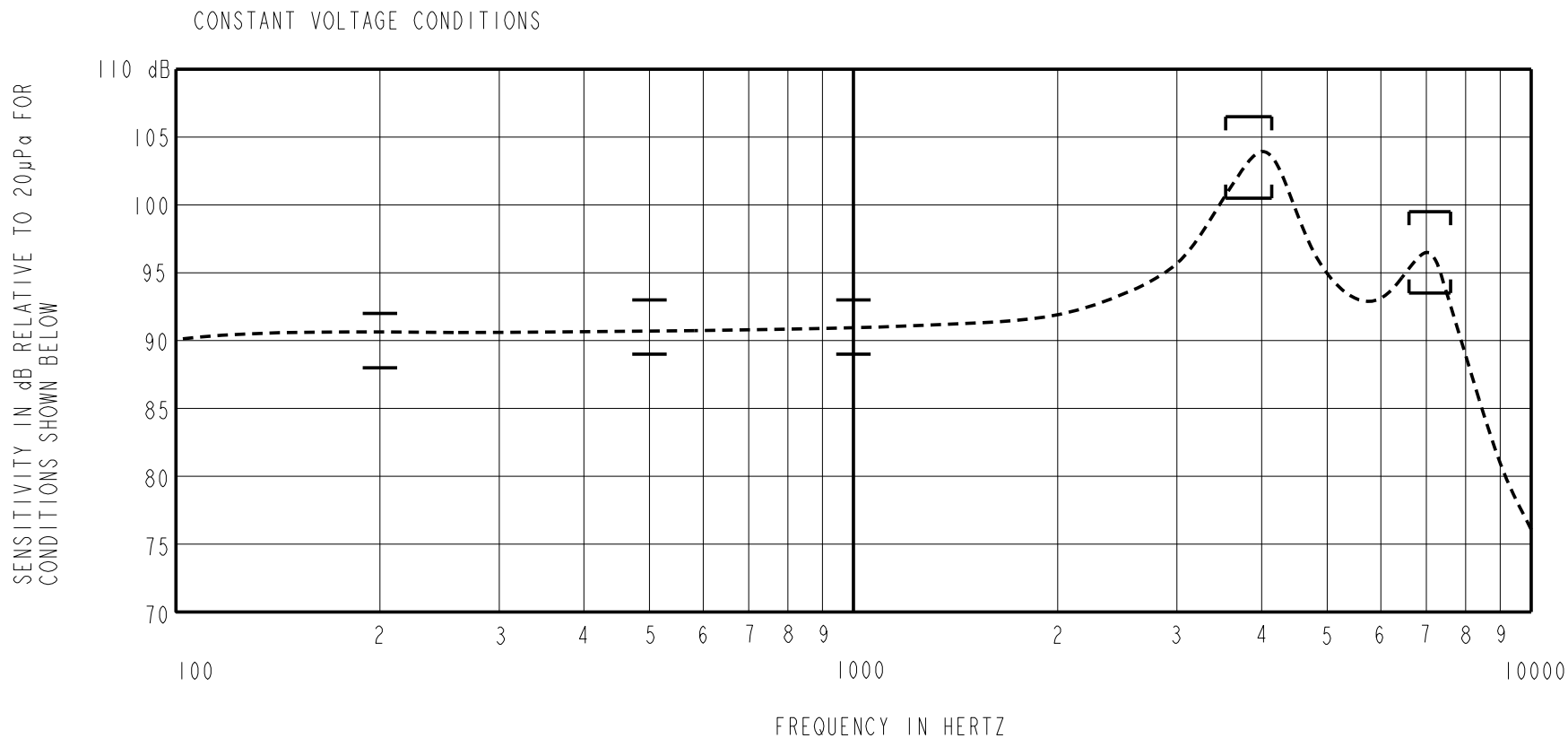
SCALE:	<b>5:1</b>	DR. BY	DATE
DO NOT SCALE DRAWING		CRG	2-9-06
TITLE:	<b>RECEIVER</b>	GJP	2-9-06
	OUTLINE DRAWING	APP. BY	DATE
	<b>WBFK-23990-000</b>	GJP	2-9-06
	<b>SHT 1.1</b>		

**KNOWLES ELECTRONICS**  
ITASCA, ILLINOIS U.S.A.

AN UNDAMPED AND TUBELESS MAGNETIC BALANCED ARMATURE RECEIVER  
 INTENDED FOR USE AS THE HIGH FREQUENCY DRIVER IN A HIFI SYSTEM.  
 NOTE: SPECIFICATIONS FOLLOWED BY AN ASTERISK (\*) ARE 100% TESTED.

NO DAMPING

WBFK-23990-000  
 SHEET 2.1



ACOUSTICAL

SENSITIVITY\*  
 DEVICE WILL PRODUCE THE SPL LISTED BELOW UNDER TEST CONDITION IN TABLE 3.  
 NOMINAL SENSITIVITY AT 1kHz IS dB RELATIVE TO 20 µPa. ALL OTHER VALUES  
 IN dB RELATIVE TO THE SENSITIVITY AT 1kHz.

FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
200	-3.0	-1.0	+1.0
500	-2.0	0.0	+2.0
1000	-2.0	91.0	+2.0
3540-4140	+9.5	+12.5	+15.5
6600-7600	+2.5	+5.5	+8.5

TABLE 1

TOTAL HARMONIC DISTORTION\*  
 DEVICE WILL NOT EXCEED TOTAL HARMONIC DISTORTION LEVELS LISTED BELOW.

FREQUENCY (Hz)	AC DRIVE (V rms)	DC BIAS (V)	LIMIT (%)
1280	0.188	0	5
1920	0.188	0	5
1920	0.530	0	10

TABLE 2

TEST CONDITIONS

NOMINAL SOURCE VOLTAGE	0.188 V rms, 0 mA DC BIAS
SOURCE IMPEDANCE	<1 Ohm
TUBING	10mm [.394"] LONG, 1mm [.039"] I.D.
COUPLER CAVITY	2 CM <sup>3</sup> , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 126)

TABLE 3

ELECTRICAL

DC RESISTANCE	50 Ohms ± 10%*
IMPEDANCE @ 500 Hz	53 Ohms ± 15%*
IMPEDANCE @ 1kHz	57 Ohms ± 15%*

TABLE 4

ISOLATION: CASE WILL BE ELECTRICALLY ISOLATED FROM THE COIL CIRCUIT.

MECHANICAL

PORT LOCATION: 12N  
 SOLDER TYPE: SAC305  
 TEMPERATURE  
 OPERATING: SENSITIVITY WILL NOT VARY MORE  
 THAN +1 / -3 dB FROM -17°C TO 63°C.  
 STORAGE: -40°C TO 63°C.

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
E	C10108259P	12-31-08	Active	E
D	C10105003	10-18-06		

**KNOWLES ELECTRONICS**  
 ITASCA, ILLINOIS U.S.A.

WHEN TEST LIMITS ARE USED TO ESTABLISH INCOMING INSPECTION ACCEPTANCE/REJECTION  
 CRITERIA, CORRELATION OF TEST EQUIPMENT WITH KNOWLES IS ALSO REQUIRED FOR  
 ELIMINATION OF EQUIPMENT AND TEST METHOD VARIATION

TITLE: **RECEIVER**  
 PERFORMANCE SPECIFICATION

**WBFK-23990-000**  
**SHT 2.1**

DR. BY	DATE
CRG	2-9-06
CK. BY	DATE
GJP	2-9-06
APP. BY	DATE
GJP	2-9-06