



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

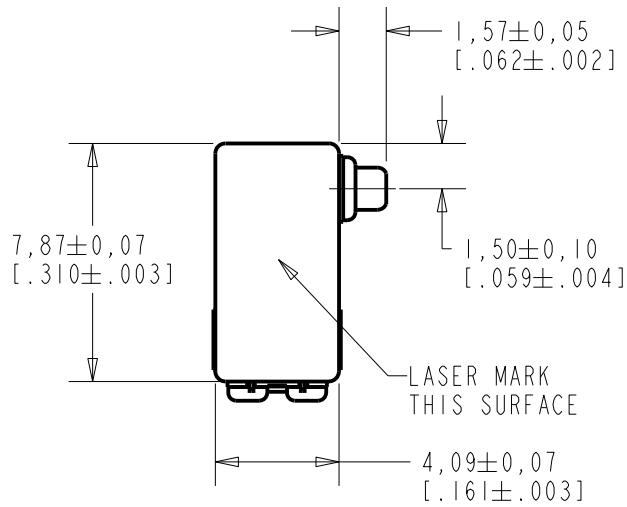
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

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



**HODVTEC-31516-000**

**SHT 1.1**



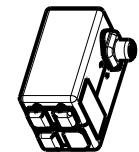
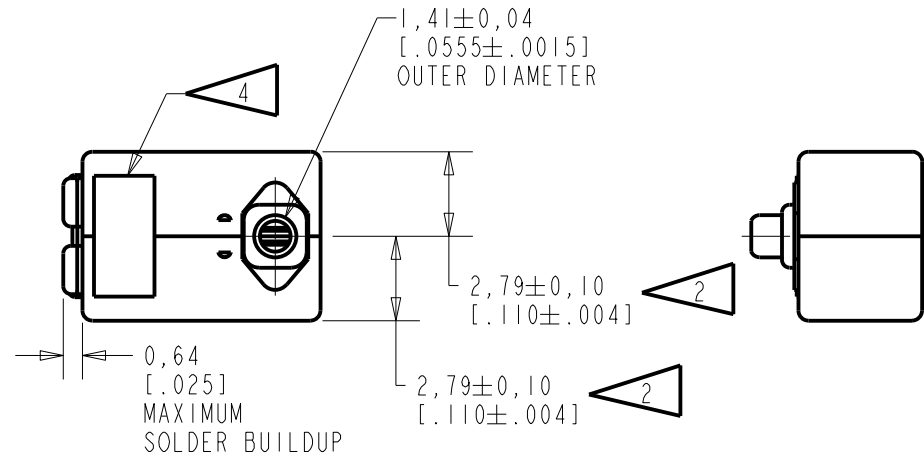
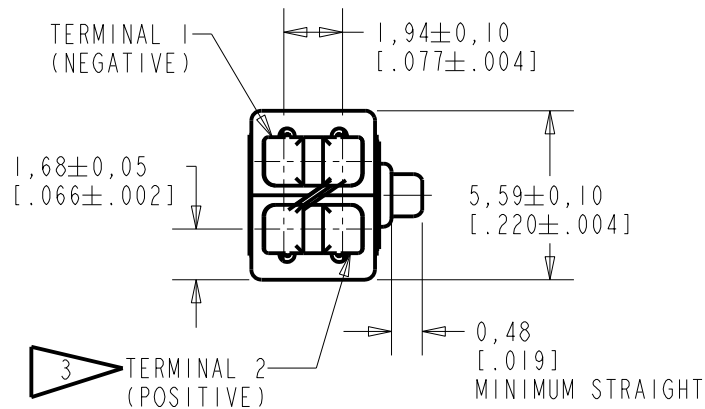
NOTES:

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. HORIZONTAL LOCATION FOR TERMINAL CENTERED TO ±0,17 [.007].

3 RECEIVERS WIRED IN ELECTRICAL SERIES WHEN CONNECTED TO TERMINAL 1 AND TERMINAL 2.

4 VENT HOLE (4 PLS.) ARE TAPED CLOSED AND SHIPPED WITH TAPE.



SCALE 2:1

NOMINAL WEIGHT  
.71 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
			<b>Active</b>	<b>A</b>
A	C10112547	8-17-11		

SCALE: <b>4:1</b>	DR. BY KL	DATE 8-17-11
DO NOT SCALE DRAWING	CK. BY GJP	DATE 8-18-11
TITLE: <b>RECEIVER</b> OUTLINE DRAWING	HODVTEC-31516-000 <b>SHT 1.1</b>	
	APP. BY GJP	DATE 8-18-11

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

THE HODVTEC-31516-000 IS A PAIR OF BALANCED ARMATURE RECEIVERS WITH TAPE SEALED BACK VENT.

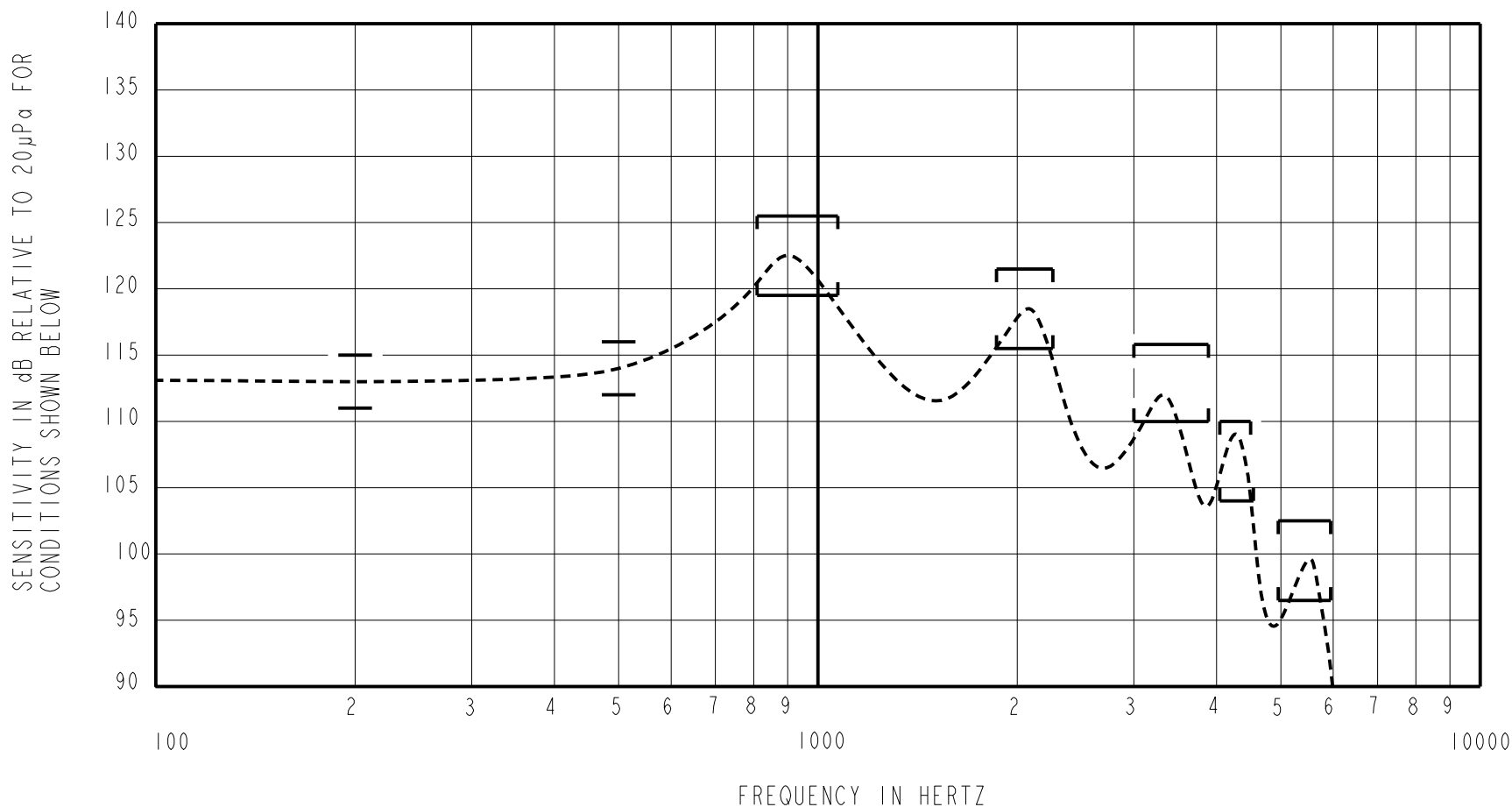
NO DAMPING

HODVTEC-31516-000

SHEET 2.1

NOTE: SPECIFICATIONS FOLLOWED BY AN ASTERISK (\*) ARE 100% TESTED.

CONSTANT VOLTAGE DRIVE CONDITIONS



ACOUSTICAL (TESTED WITH VENT TAPED CLOSE)

SENSITIVITY\*  
 DEVICE WILL PRODUCE THE SPL LISTED BELOW UNDER TEST CONDITIONS DESCRIBED IN TABLE 3. NOMINAL SENSITIVITY AT 500 Hz IS dB RELATIVE TO 20µPa. ALL OTHER VALUES IN dB RELATIVE TO THE SENSITIVITY AT 500 Hz.

FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
200	-3.0	-1.0	+1.0
500	-2.0	+14.0	+2.0
810-1010	+5.5	+8.5	+11.5
1950-2350	+1.5	+4.5	+7.5
3000-3900	-5.0	-2.0	+1.0
4050-4550	-10.0	-7.0	-4.0
4950-5950	-17.5	-14.5	-11.5

TABLE 1

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

FREQUENCY (Hz)	AC DRIVE (V rms)	DC BIAS (mA)	LIMIT (%)
1/3 PEAK	0.296	0	5
1/2 PEAK	0.296	0	5
1/3 PEAK	0.592	0	8
1/2 PEAK	0.592	0	8

TABLE 2

TEST CONDITIONS

NOMINAL SOURCE VOLTAGE	0.296 V rms, 0mVA DC BIAS
SOURCE IMPEDANCE	<1 Ohm
TUBING	8mm X 1mm ID + 28mm X 1.5mm ID EAR HOOK SIMULATOR + 25mm X 2mm ID TUBE + 18mm X 3mm ID TUBE
COUPLER CAVITY	2 cm <sup>3</sup> , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 60318-5)

TABLE 3

ELECTRICAL

DC RESISTANCE	102.0 OHMS ± 10% *
IMPEDANCE @ 500 Hz	171.0 OHMS ± 15% *
IMPEDANCE @ 1K Hz	192.0 OHMS ± 15% *
INDUCTANCE @ 500 Hz	10.4 mH TYP.
CAPACITANCE @ 10 MHz	13.8 pF TYP.

TABLE 4

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

MECHANICAL

PORT LOCATION: 2S

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

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 ITASCA, ILLINOIS U.S.A.

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
A	C10112547	8-17-11	Active	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		DR. BY	DATE
TITLE: <b>RECEIVER</b> PERFORMANCE SPECIFICATION		KL	8-17-11
		GJP	8-18-11
HODVTEC-31516-000 SHT 2.1		APP. BY	DATE
		GJP	8-18-11