



Contitec Electronics Ltd.
Schatzbogen 33
81829 München

Tel. +49 89 99 81 86 30
Fax. +49 89 3219 50 75
eMail: sales@contitec.com
web: www.contitec.com

Component Specification

Product : Speaker Box
Part Number : CA-SB3701B-4305EK
Drawing No : KFC7779


Content

1. General
2. Electrical & Acoustical Characteristics
3. Test Circuit
4. Frequency Response Curve
5. Dimensions
6. Structure
7. Reliability Test
8. Packing
9. Revision

Notes:

This specification is subject to change or withdrawel without notice

This part is RoHs 2011/65/EU compliant

	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	2 / 9


1. General

Speaker Box highly suitable for industrial applications.

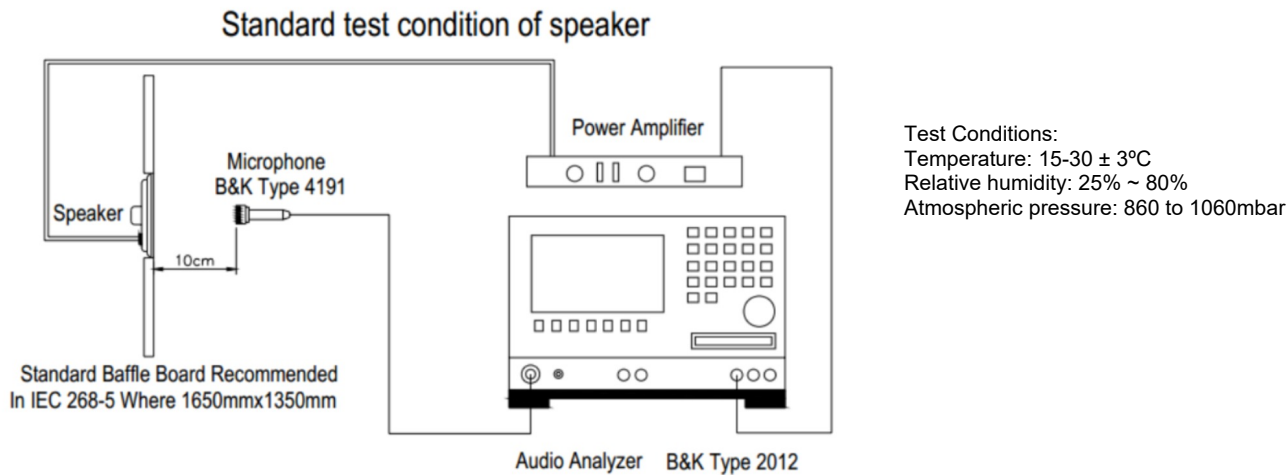
2. Electrical and Acoustic Characteristics

No	Items	Specification
	Impedance	43Ω +6/-4Ω (1Vrms a 2Khz)
	Sound Pressure Level	≥97dB (0.32w/0.1m at 1.0KHz) ≥77dB (0.32w/1m at 1.0KHz)
	Resonance Frequency	870Hz ± 80Hz
	Frequency Range	400~10KHz
	Input Power	Rated 0.32W / Max. 0.5W
	Distortion	10% Max. at 1kHz 0.1W
	Buzz and Rattle	Should not be audible buzzes,rattles when the 3.71V sine wave signal swept at frequency range.
	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.
	PCB Spring	Contact pressure after 5 times placement on and removal from PCB (1.75N~3.5N).
	Dimensions	37x17 mm
	Weight	12.5g
	Operating Temperature range	-40~+85 °C
	Store Temperature range	-40~+90 °C

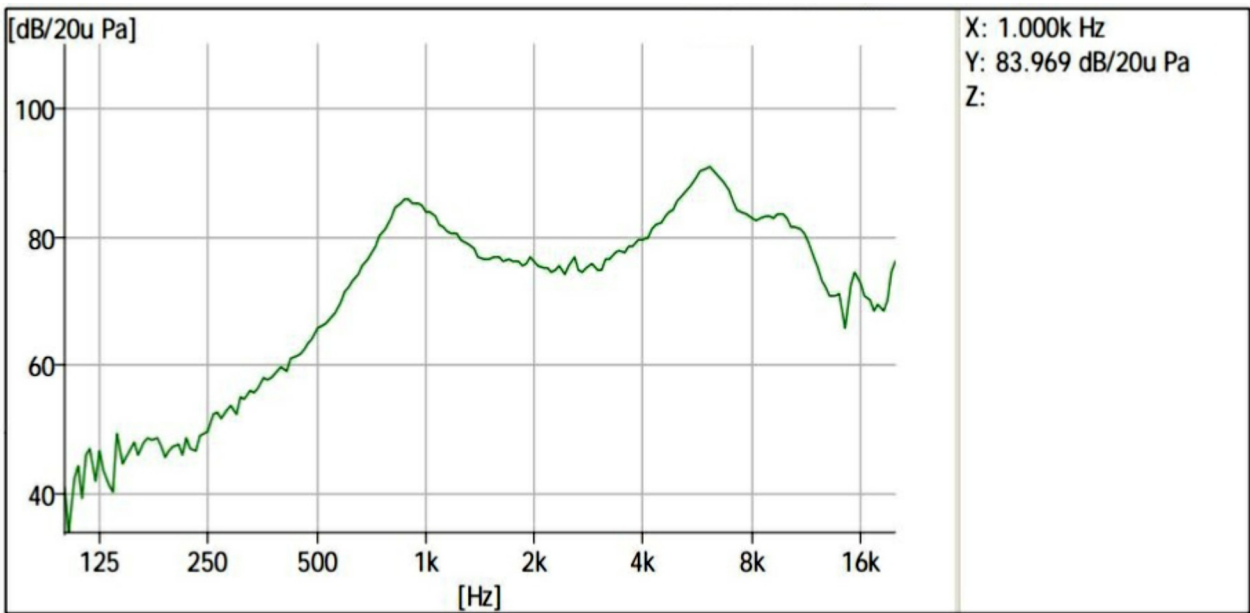
1 . 0	16/10/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Note	Drawn by	Checked by	Approved by

	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	3 / 9


3. Test Circuit



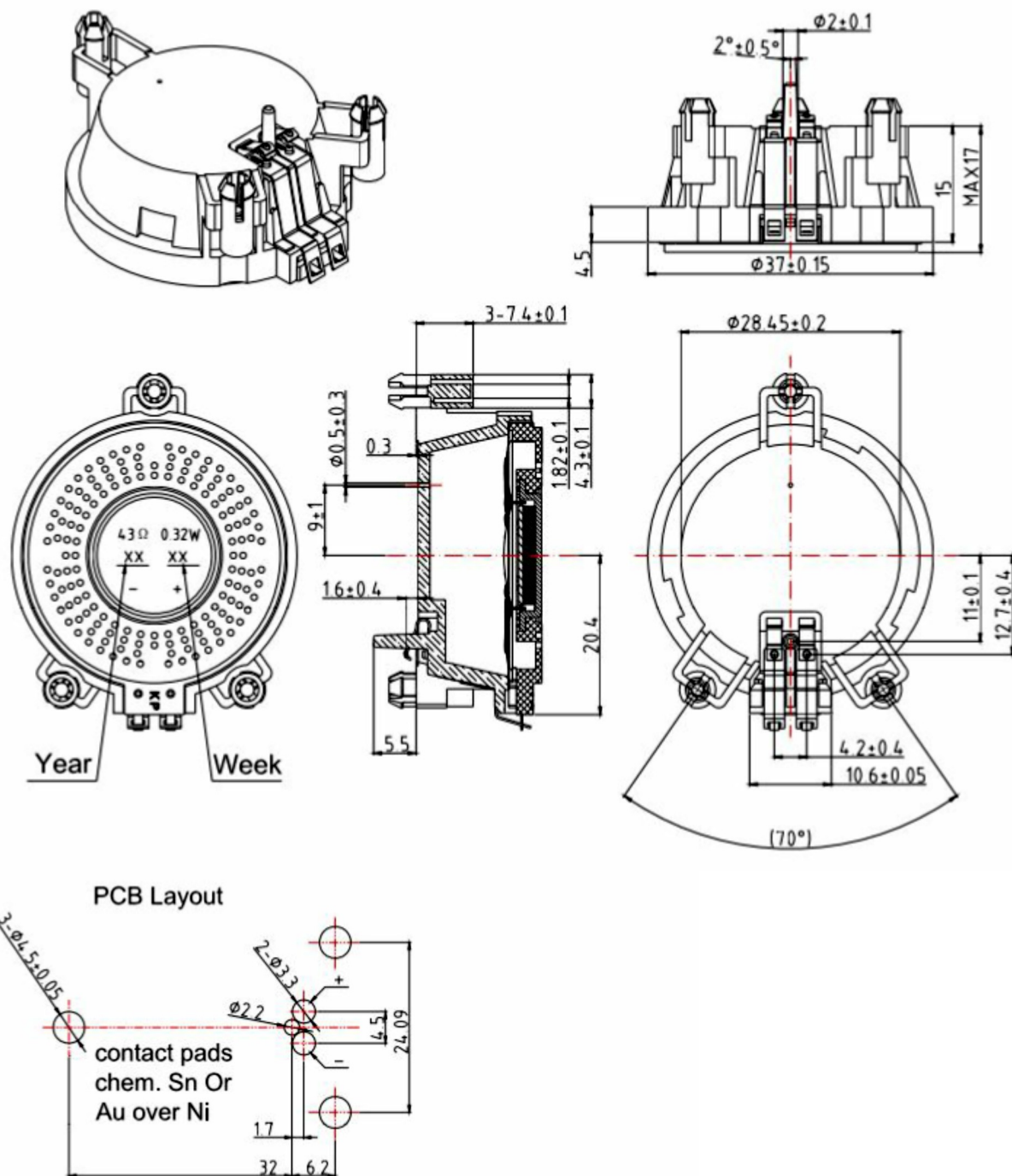
4. Frequency Response Curve



1 . 0	02/11/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by


	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	4 / 9

5. Dimension

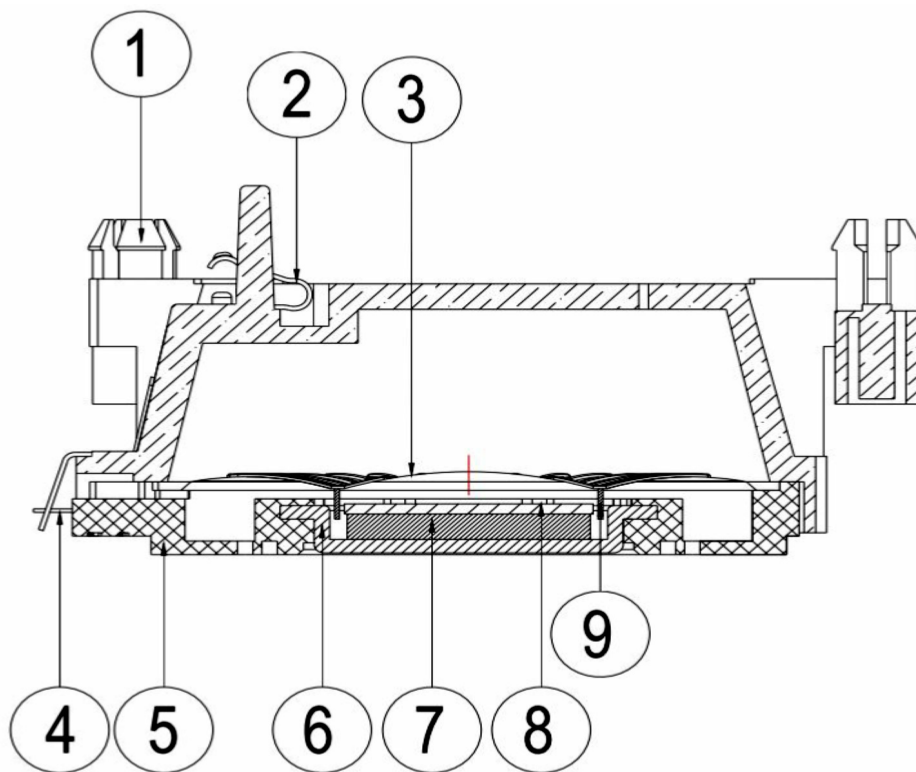


Tolerance of dimensions without explicit tolerance is ± 0.15

1.0	02/11/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by


	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	5 / 9

6. Structure

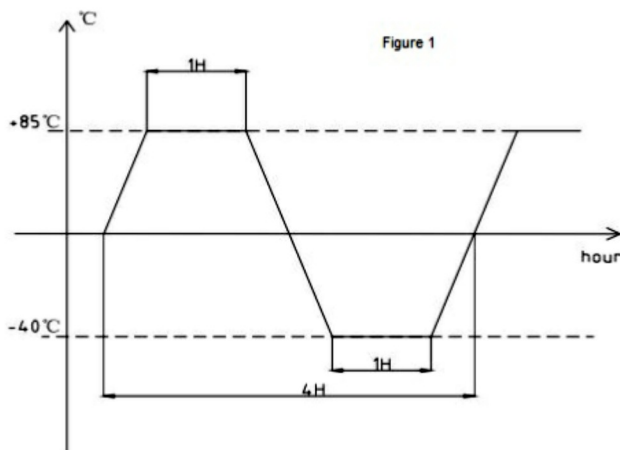


9	Voice Coil	1	Copper	
8	Plate	1	SPCC	
7	Magnet	1	Nd-Fe-B	
6	YOKE	1	SPCC	
5	Frame	1	PC	
4	Spring2	1	Cu	
3	Diaphragm	1	PEI	
2	Spring1	1	Cu	
1	Housing	1	PBT	
No.	Part Name	Qty	Material	Remarks

1.0	02/11/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by

	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	6 / 9

7. Reliability Test

No	Items	Specification
1	High Temperature Test	After being placed in a chamber with $+90 \pm 3^{\circ}\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be Measured.
2	Low Temperature Test	After being placed in a chamber with $-40 \pm 3^{\circ}\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be Measured.
3	Humidity Test	After being placed in a chamber with $93\% \pm 0/-3\% \text{R.H.}$ at $+40 \pm 2^{\circ}\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
4	Thermal Exchange Test	<p>Temperature cycle: total 4h with at least 1h hot and 1h cold (temperature gradient $\geq 2\text{K/min}$) duration 250 cycles equals 1000h (see figure 1) Number of components: 100 pieces split in 75 for symmetrical excitation and 25 for unsymmetrical excitation.</p>  <p style="text-align: center;">Figure 1</p>
5	Thermal Exchange Test 1	<p>Life test condition with symmetrical excitation Test conditions: see figure 1 Test signal: alternating ON for 50 sec / OFF for 150 sec ; Logarithmic Sweep 8.0 VPP symmetrical rectangular signal, 400...3000 Hz, sweep time 50 seconds</p>
6	Thermal Exchange Test 2	<p>Life test conditions with unsymmetrical excitation Test conditions: see figure 1 Test signal: alternating ON for 10 sec. / OFF for 30 sec., $V_{0-p} = 5.5 \text{ V}$, rectangle pulse shape, at $f_1 = 600 \text{ Hz}$ and $f_2 = 3000 \text{ Hz}$, duty cycle 50%, the max. Dissipation, power may not be exceeded.</p>

1 . 0	02/11/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by


	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	7 / 9

Reliability Test

No	Items	Specification
7	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 To 55Hz band of vibration frequency to each of 3 perpendicular directions for 1 hour, then placed in natural condition for 1 hour, speaker shall be measured.
8	Drop Test	Fix onto standard Jig, drop on concrete 100cm height. Every 6 surfaces x 1 times. Total 6 times
9	Load test	After being applied loading white noise with input power 0.32W(3.71Vrms.) for 96 hours, then placed in natural condition for 1 hour, speaker shall be measured.
10	Insulation test	When they are measured with DC 100V the insulation resistance between v.c. terminal and frame must be more than 1 MΩ
11	NO2 gas Test	The loudspeaker mounted on PCB is exposed in the NO2 chamber 25 ± 2 °C, 75% RH, 2 ppm, for 240 hours.
12	H2S gas Test	The loudspeaker mounted on PCB is exposed in the H2S gas chamber 25 ± 2 °C, 75% RH, 1 ppm, for 240 hours.
13	SO2 gas Test	The loudspeaker mounted on PCB is exposed in the SO2 gas chamber 25 ± 2 °C, 75% RH, 2 ppm, for 240 hours

After test the speaker box S.P.L. Difference shall be within ± 3dB, and the appearance not exist any change to be harmful to normal operation (e.g. Cracks, rusts, damages and distortion)


1 . 0	02/11/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by

	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	8 / 9

8. Packing

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number ,quantity and outgoing inspection number.
There shall be no mechanical damage on products during transportation and/or in storage.

1 . 0	02/11/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by

	Part No.	Drawing No.	Page
	CA-SB3701B-4305EK	KFC7779	9 / 9

9) Revision

Rev. No	Date	Page	Description	Sign
10	02/11/15	all	Preliminary	Wang.Xue

1 . 0	02/11/15	Preliminary	L. Chen	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by