

# WOOJIN

CUSTOMER	
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## SPECIFICATION

Item	SPEAKER – GENERAL			
	PAPER CONE TYPE			
Customer's Model No.				
Model No.	NB-04301-15			
spec	SIZE	40 X 28.5 X 11.0t	IMP	8 Ω
	POWER	NOM 2.0 W	MAX	3.0 W
Approval Date				

CUSTOMER'S APPROVAL		
DESIGN	CHECKED	APPROVED

### WOO JIIN SOUND

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DESIGN	CHECKED	APPRO
H.S.J	D.W.P	I.G.S

REVISION HISTORY

WOOJ IN

Model No.	NB-04301-15			Item	SPEAKER - GENERAL PAPER CONE TYPE	
REV No.	DATE	PAGE	DESCRIPTION OF REVISION	REASON		
0	12.07.12		INITIALLY DESIGNED			

# APPROVAL SHEET

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1. 적용 (Application)  
본 승인원은 일반 스피커의 검토 및 승인에 적용한다.  
( This APPROVAL SHEET is applied for the examination and approval.)

2. 일반 사항 ( General Item)  
2-1 공급자가 부품의 사양, 구조, 재질, 제조장소, 공정등을 변경하고자 할때는 필히 재 승인을 득해야 한다. ( 제조 장소 : WOO JIN SOUND )  
(As supplier tries to change the specification, material, producing place and process make sure to get the approval again. Producing place : WOO JIN SOUND )  
2-2 공업 소유권, 품질보증등에 대해서는 "품질보증계약서"에 의한다.  
(The ownership of industry, the guarantee of the quality and ect. Are on the ground of the guarantee contract for quality of parts.)

3. 취급시주의 사항 ( Attention of management )  
본 제품은 자석을 이용한 제품으로 취급상 제품끼리 붙이거나 철 가루등 자력에 영향을 주는 이물질과 격리 시켜야 한다.  
(These speakers use the magnet, they should not contact with other speakers and it should isolate with the material to give a Iron powder magnet the influence)

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## 4. Unit Specification

### 4-1. Mechanical Specification

No.	Item	Description			
1	Dimension	40 X 28.5 X 11.0t			
2	Total Weight	12.9 g	±	10 %	0.455 OZ
3	Magnet	MAIN MAGET		ND	12.5×2.0t
		Sub Magnet		MAGNET	
4	Appearance	Should not exist any sbstacles to be harmful to nominal operation, from damages, cracks, rusts and distortions, etc			

### 4-2. Electro-acoustical Specification

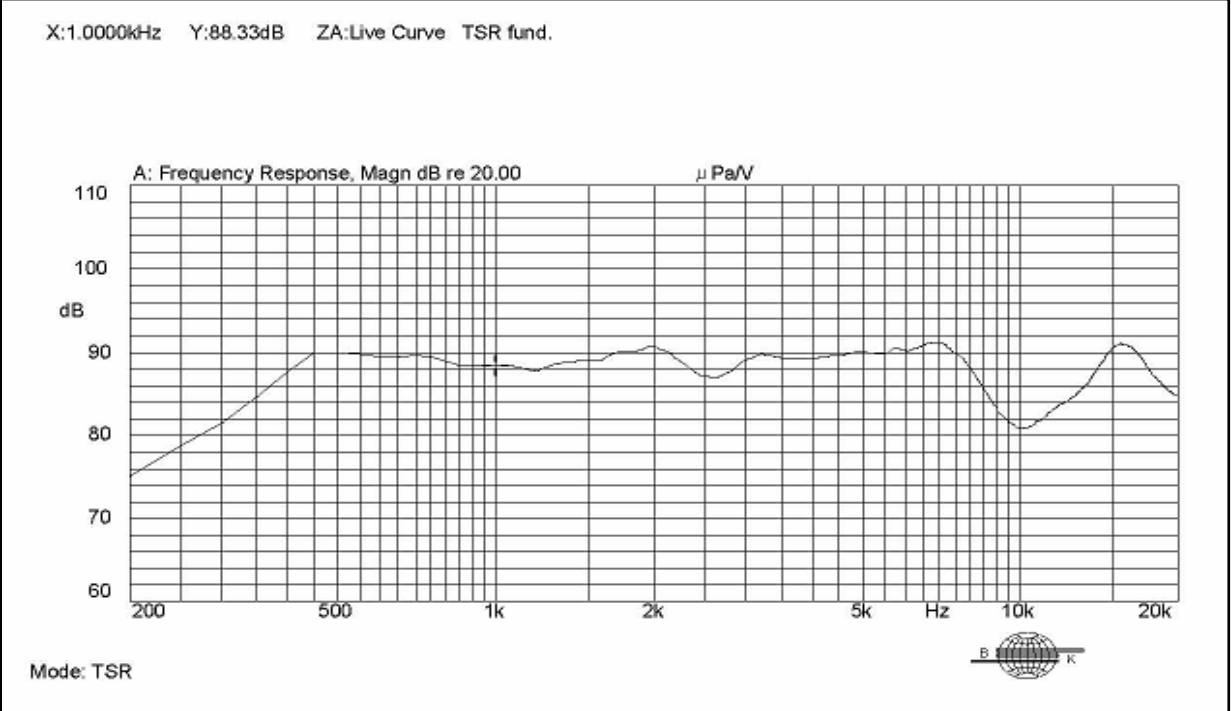
No.	Item	Description			
1	Impedance	8 Ω	±	15%	at 1000 Hz 1.0 V
2	Resonance Frequency	350 Hz	±	70 Hz	at 1.0V
3	S.P.L	83 dB	±	3 dB	at 0.1 W 0.1 m 800, 1000, 1200, 1500 Hz in Average
4	Response	350 Hz	~	20 KHz	
5	Rated Input Power	Nominal Power Rating	2.0 W		
6	Max Input Power	Max Power Rating	3.0 W		
7	BUZZ & RATTLE	Must be nominal at sine wave 4.00 V			
8	THD (Distortion)	5%	Max	at 1000 Hz 0.1W	
9	Gap Flux Density	Front Cover Surface Center : MAX		1200 Gauss	
10	Polarity	When a positive D.C current is applied to the voice coil terminal marked (+), The diaphragm shall move forward			
11	Standard test conditions	Conform to KS C 6027 (EQUIVALENT TO JIS C 5532)			

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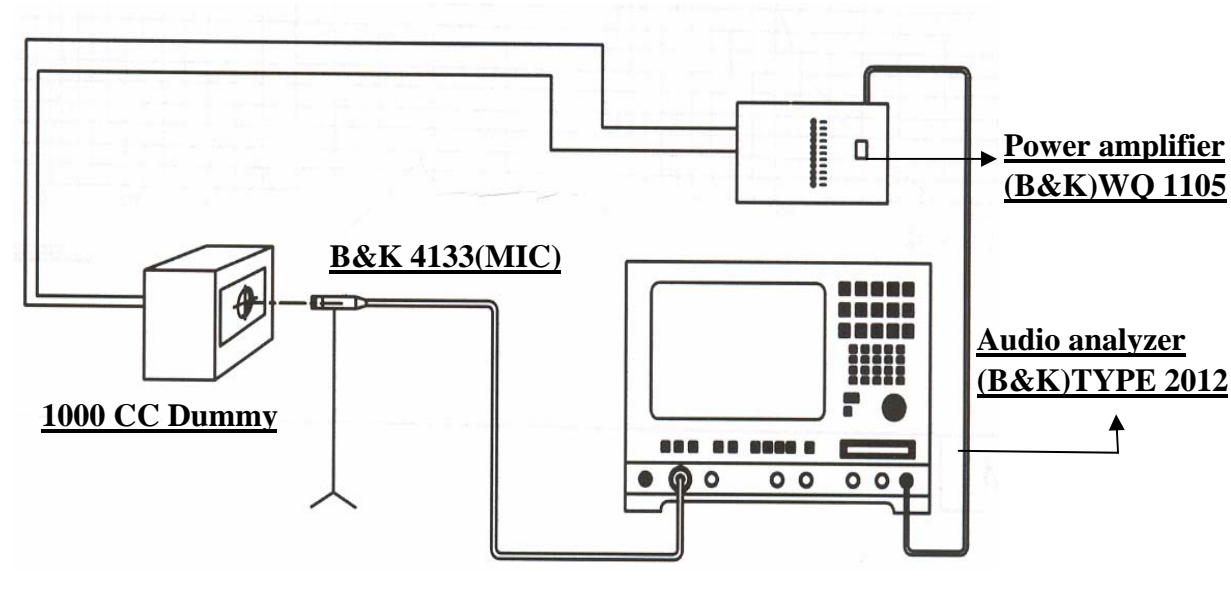
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### 5. Frequency Response Curve



### 6. Block Diagram



Test Signal	0.1 W	0.89 V
Testing Distance	0.1 m	
Response Time	0.5 sec	
Baffle Box	JIS C 5532 - 11	

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## 7. 신뢰성 시험 ( The reliability test )

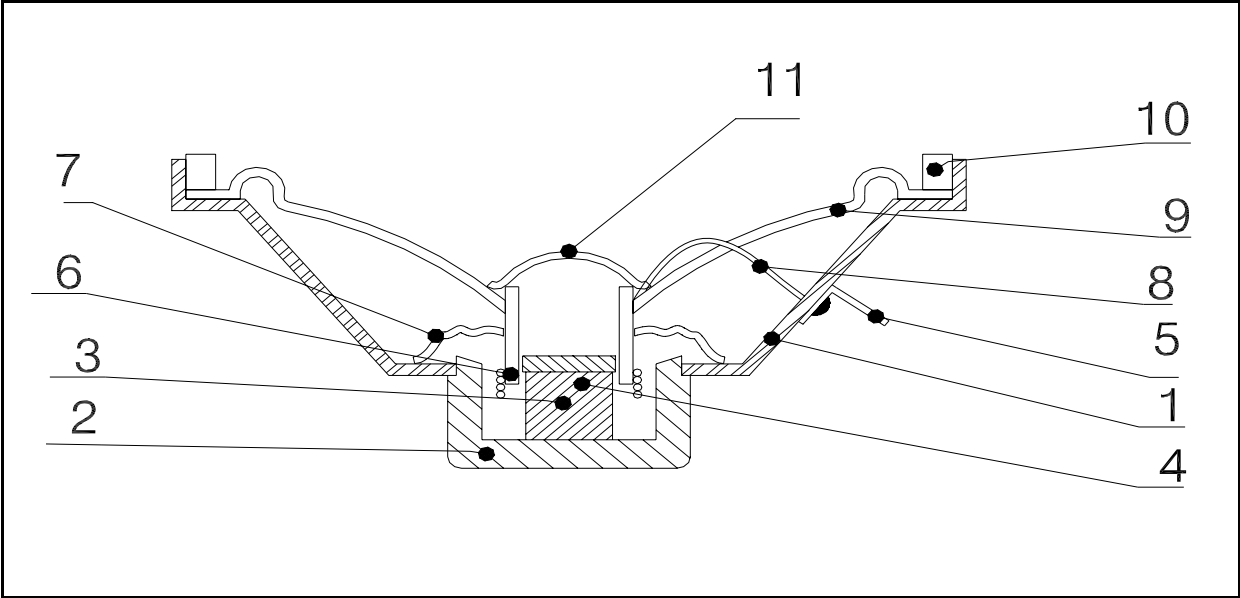
시험 항목 (ITEM)	시험 방법 및 조건 (Test method & condition)	기준 (Standard)
내습성 (Humidity test)	온도 40℃, 습도 95% 의 항온조에 96 Hrs 방치후 0.5 Hr 상온 자연 방치후 외관 및 동작상태를 확인한다.  (Check the appearance and operation after leave under 40℃, 95% at machinery for 96 Hrs and room temperature for 0.5 Hr)	초기치 ± 20% (Initial value)
내한성 (Cold test)	온도 -20℃ 내한조에 96 Hr 방치후 0.5Hr 상온 자연 방치후 외관 및 동작에 이상이 없을 것.  (Check the appearance and operation after leave under -20℃ at machinery for 96 Hr and room temperature for 0.5 Hr)	초기치 ± 20% (Initial value)
내열성 (Heat test)	온도 60℃±2℃상에 습도 95% 내열조에 96 Hr 방치후 0.5 Hr 상온 자연 방치후 외관 및 동작에 이상이 없을 것.  (Check the appearance and operation after leave under 60℃±2℃, 95% at machinery for 96 Hr and room temperature for 0.5 Hr.)	초기치 ± 20% (Initial value)
염수분무시험 (Salt spray test)	염수 5%를 8시간 분무하고 16시간 방치하는 것을 1cycle 로 하여 3 cycle을 실시한 다음 깨끗한 물로 씻었을때 지워지지 않는 녹을 확인한다.  (After repeating 3 cycle to spray 5% of brine for 8 Hr and leave for 16 Hr, wash with water and check reminded rust.)	
연속부하시험 (Load test)	White Noise 신호 JIS Filter 를 사용하여 RMS 전압에 맞추고, 96Hr 연속 시험후 상온에서 0.5 Hr 자연 방치후 동작시험을 하여 이상이 없을 것.(단선여부, Fo 변화 check)  (After adjust White noise and JIS Filter signal to RMS voltage, Without any problem in operating after continual test for 96 Hr and room temperature for 0.5 Hr – Check for disconnection and Fo for change)	전기적 성능을 만족할 것. 시료수 : 5 pcs (Satisfy electrical performance) (Sample : 5 pcs)
열충격 시험 (Temperature cycling)	고온 70℃ 저온 -25℃ 로 온도 변화를 주어 30분씩 10회 실시하고 상온 0.5 Hr 자연방치후 동작시험을 하여 이상이 없을것.  (One cycle shall consist of 30 minutes at 70℃ followed by 30 minutes at -25℃. Allow 30 minutes chamber transition time at +25℃ between temperature extremes total of 10 cycle  Temperature (°C) 70℃ 25℃ -25℃ 20min 50min 70min 100min Diagram For 1 Cycle	초기치 ± 20% (Initial value)

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8. 부품 구성표 (PART LIST)

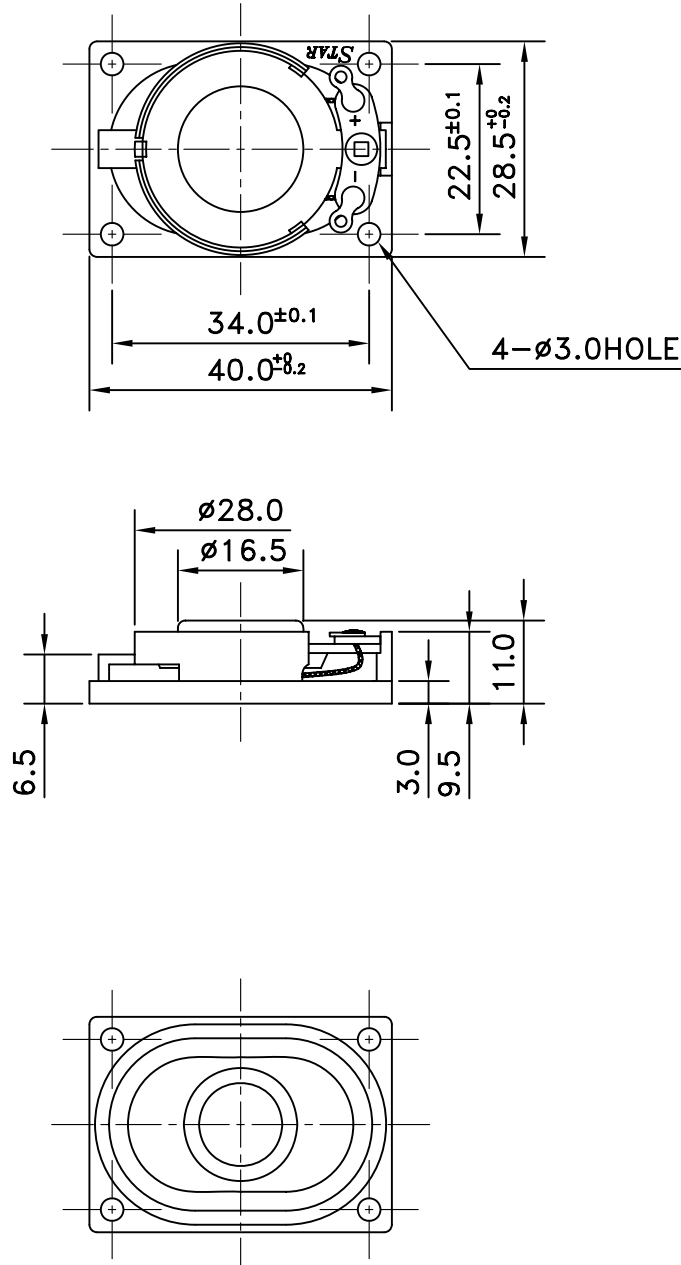


구분 (No)	품 명 (PART NAME)	수 량 (Q'TY)	비 고 (NOTE)
1	FRAME	1	
2	YOKE	1	CR+3
3	MAGNET	1	
4	CENTER POLE	1	CR+3
5	TERMINAL	1	
6	VOICE COIL	1	
7	DAMPER	1	
8	LEAD WIRE	2	
9	CONE PAPER	1	
10	GASKET	1	
11	CHAMBER	1	
12			
13			
14			
15			
16			
17			
18			
19			
20			

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MATERIAL	4				SCALE	TOLERANCE	TITLE				
	3									1/1	$\pm 0.5$
	2										
FINISH	1				UNIT	THIRD ANGLE PRO-J	DRAW	CHECK	APPRO		
	a	新規作成	12.07.12	H.S.J			기술연구소 2012.07.12 H.S.J	기술연구소 2012.07.12 I.G.S	기술연구소 2012.07.12 E.S.C		
	MARK	REVISIONS	DATE	NAME			mm				