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	Revision No.	1.0
Model No. : KP90X50SP5R4	Drawing No.	KFC7029

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Model No. : KP90X50SP5R4

1. Scope

This specification is applied to the dynamic speaker which is used all of the electrical acoustic product.

- compact, rich sound
- applications: car speaker, TV speaker, etc. ..

2. General

- 2.1 Out-Diameter : 90x50 mm
- 2.2 Height : 34 mm
- 2.3 Weight : 100 g
- 2.4 Operating Temperature range:
-30 ~+80 °C without loss of function
- 2.5 Store Temperature range:
-40 ~+85 °C without loss of function

3. Electrical and Acoustic Characteristics.

Test condition : 15 ~ 35 °C, 25% ~ 85% RH, 860~1060 mbar

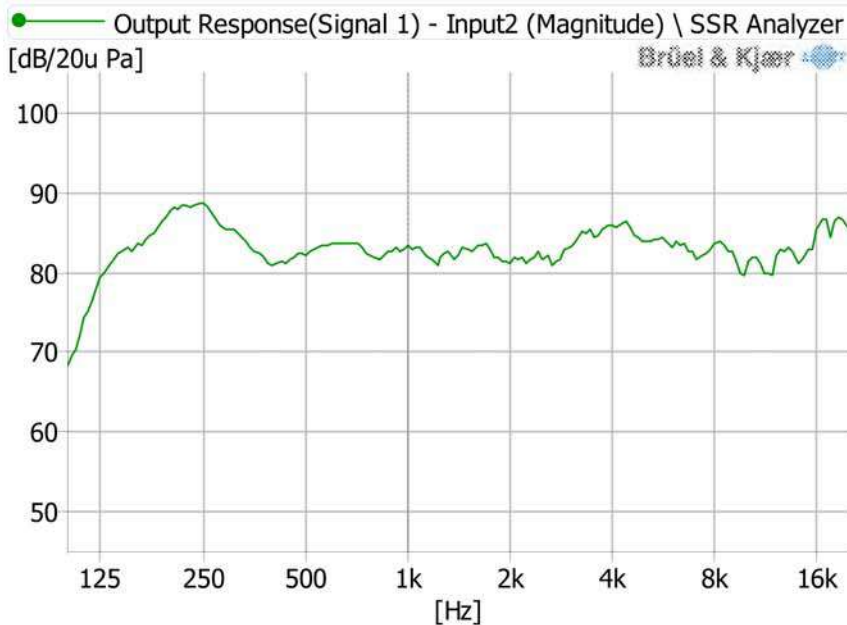
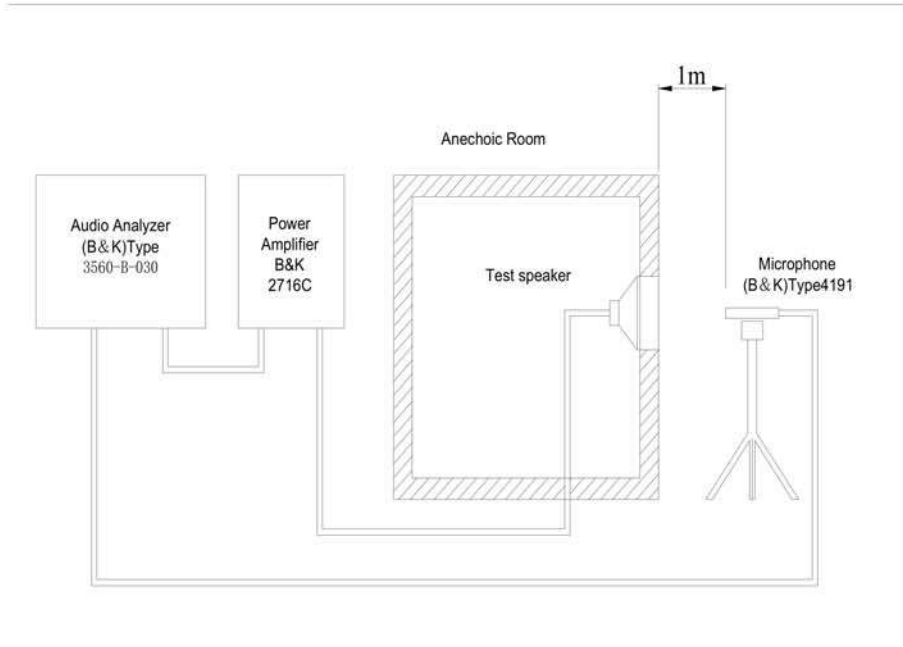
No	Items	Specification
1	Impedance	4 Ω ± 20% (1Vrms at 1KHz)
2	Sound Pressure Level	84 dB ± 2dB (1W/1M Avg. at 0.5,0.6,0.8,1.0kHz)
3	Resonance Frequency	180 Hz ± 20% (LMS)
4	Frequency Range	Fo ~10KHz
5	Input Power	Rated 4 W / Max. 8 W
6	Distortion	3% Max. at 1kHz 4W
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 4V sine wave signal swept at frequency range.
8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.

4. Reliability Test

After test(1~7item), the speaker S.P.L . difference shall be within $\pm 3\text{dB}$, and the appearance not exist any change to be harmful to normal operation (e.g. cracks,rusts,damages and especially distortion).

No	Items	Specification
1	High Temperature Test	After being placed in a chamber with $+85 \pm 3 \text{ }^\circ\text{C}$ 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 $-40 \pm 3 \text{ }^\circ\text{C}$ 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 85 to 90%R.H. at $+40 \pm 2 \text{ }^\circ\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured.
4	Thermal Shock Test	<p style="text-align: center;">FIG.1 HEAT RESISTANCE TEST</p>
5	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.
6	Drop Test	Drop the test specimen freely onto a veneer board surface floor, From 1m height in each of 3 directions(except connector side)for 3times. Then test it and record the characteristics of the equipment.
7	Load test	$55 \pm 2 \text{ }^\circ\text{C}$ $95 \pm 5\%$ rated input white noise (JIS c 5532) 10min/on 50min/off 96Hr
8	Insulation test	When they are measured with DC 100V the insulation resistance between v.c. terminal and frame must be more than $1 \text{ M}\Omega$

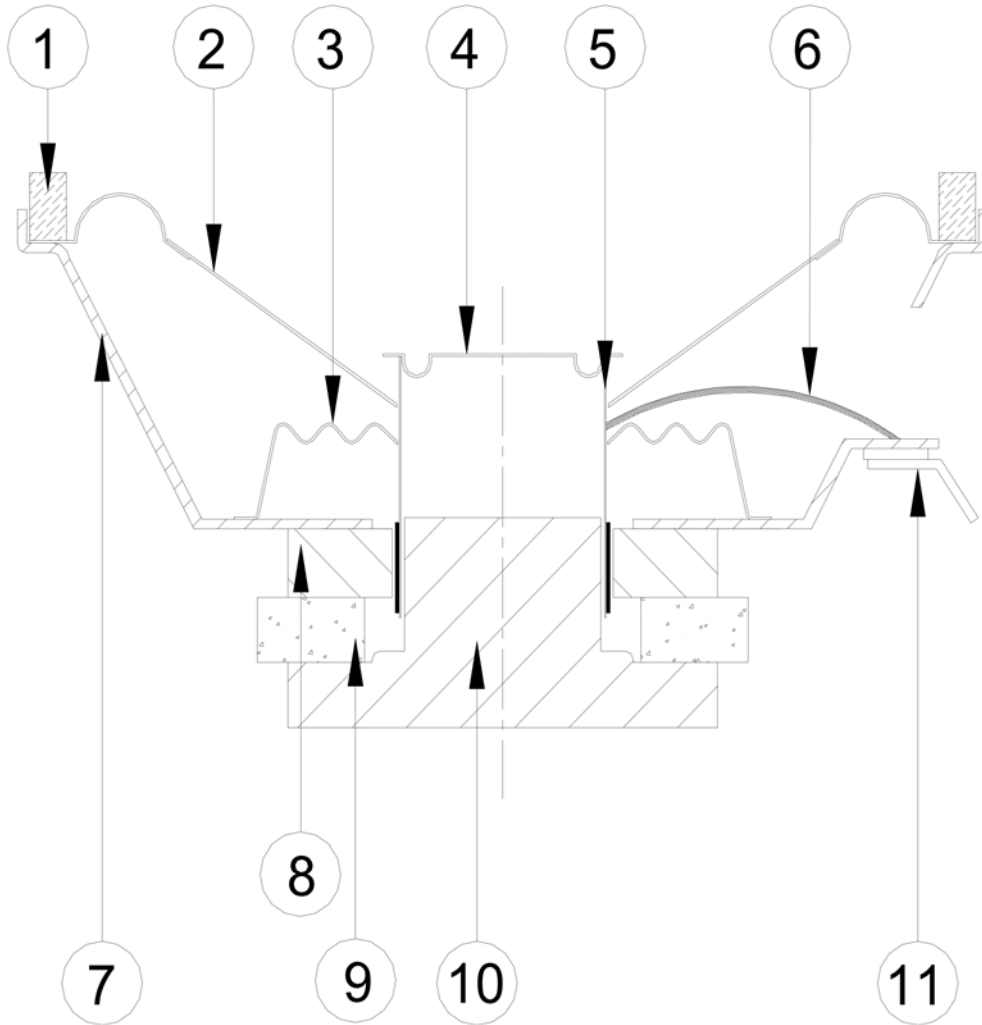
5. Measurement Block Diagram & Response curve



Cursor values

X: 1.000k Hz
 Y: 83.421 dB/20u Pa

6. Structure



11	Connection	1	Paper+Copper	
10	T yoke	1	Q195	
9	Magnet	1	Ferrite	
8	Plate	1	Q195	
7	Frame	1	SPCC	
6	Wire	2	Copper	
5	Voice Coil	1	Paper+Copper	
4	Dust Cap	1	Paper	
3	Damper	1	Cotton	
2	Diaphragm	1	Cloth+Paper	
1	Gasket	1	Paper	
No.	Part Name	Q'ty	Material	Remarks

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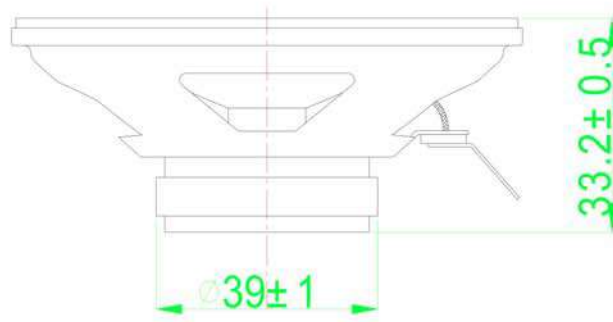
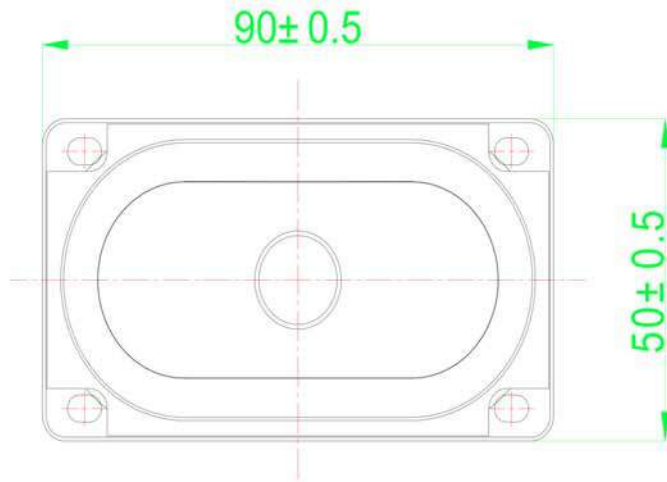
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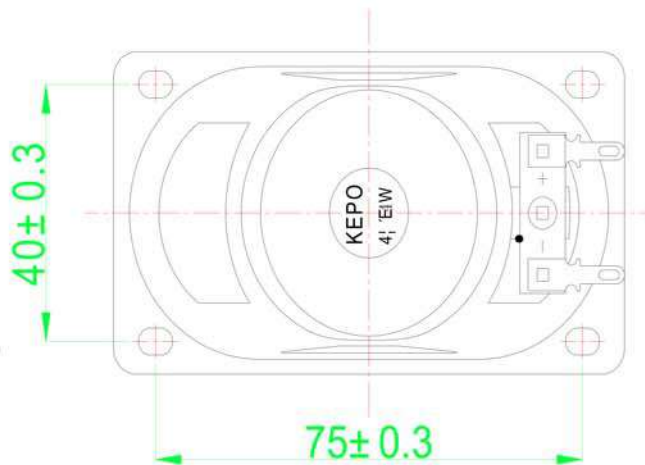
7. Dimensions



VIEW: 2:1



#. Example
ex) 1031
-.10 :the year 2010
-.31 :the Week



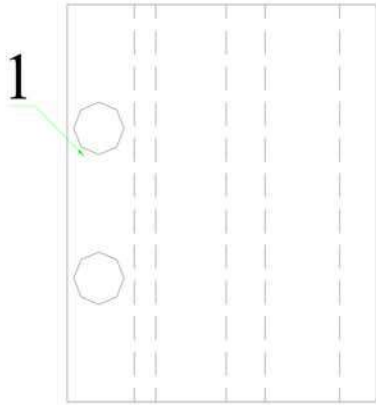
FIRST ANGLE PROJECTION



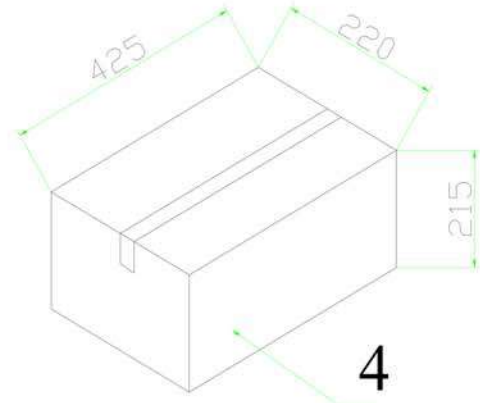
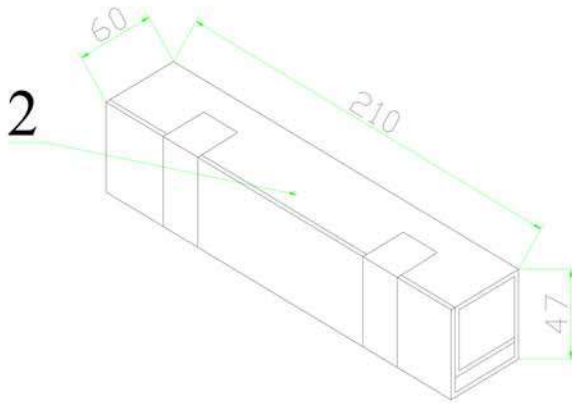
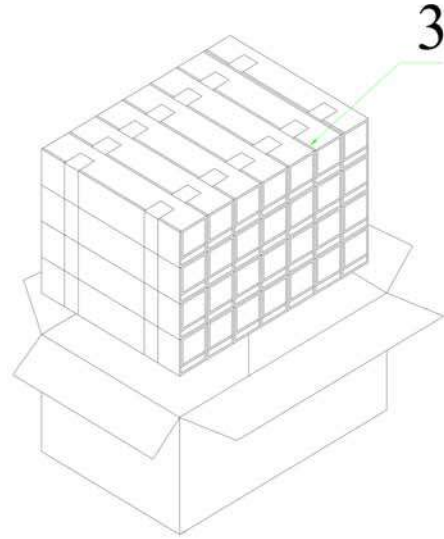
UNIT : mm

Tolerance : ± 0.5

8. Packing



2Pcs



QTY:98Pcs

425 x220 x315

