DEVETECH ELECTRONICS CO. LTD

DYNAMIC SPEAKER
CUSTOMER: DACHS ELECTRONICA
P/N: DVSPK50170R16P0.5F300

DESIGNED BY	
CHECKED BY	
APPROVED BY	

Address: 11/F.,F.Block, Hang Lok Building, 130Wing Lok St., Hong Kong.
Address: A3L1, Youpinyishu, Huanmei Rd., Dameisha, Yantian district, Shenzhen, China
Tel: (86) 13632770721 Email: info@devetechelectronics.com
Website: www.devetechelectronics.com

CONTENTS		
Nº	**Contents**	**Page**

1. Revision

Rev. No	Date	Page	Description of Revision
1.0	2017/6/27		Preliminary

2. Scope

This document contains required environmental, electrical, acoustic, mechanical, package and reliability test requirements.

3. General Characteristics

2.1 Out-Diameter : 50 mm

2.2 Height : 17 mm

2.3 Weight : 30±5g

2.4 Operating Temperature : -20~+50°C without loss of function

2.5 Store Temperature : -20~+60°C without loss of function

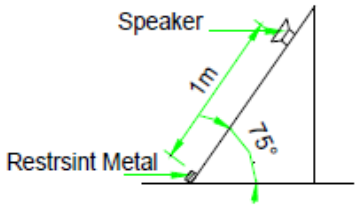
4. Electrical and Acoustic Characteristics

Test condition: 15 ~ 35 °C Temp: 25% ~ 75% RH,86~106 kPa Refer to IEC60268-1

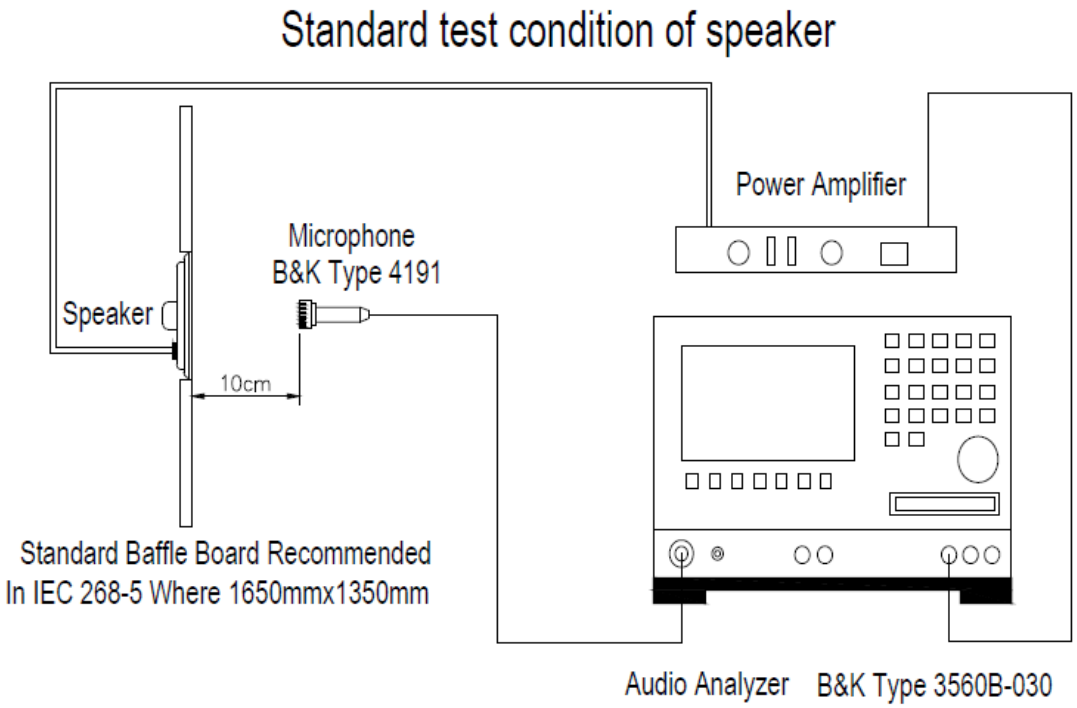
	Items	Specification
1	Impedance	16 Ω ± 15% (1Vrms at 0.8KHz)
2	Sound Pressure Level	81 dB ± 3dB at 1W/1M 0.8 1.1.2,1.5KHz average
3	Resonance frequency (fo)	300 Hz ± 20% at 1V
4	Frequency Range	F0 ~10KHz
5	Input Power	Rated 0.5 W / Max. 1 W
6	Distortion	Less than 5% at 1kHz 1W
7	Buzz and Rattle	Should not be audible buzzes, rattles when the 2.83V sine wave signal swept at frequency range.
8	Polarity	When a positive DC current is applied to the voice coil terminal marked (+), the diaphragm shall move to forward.
9	Magnet	27x12.5x5mm

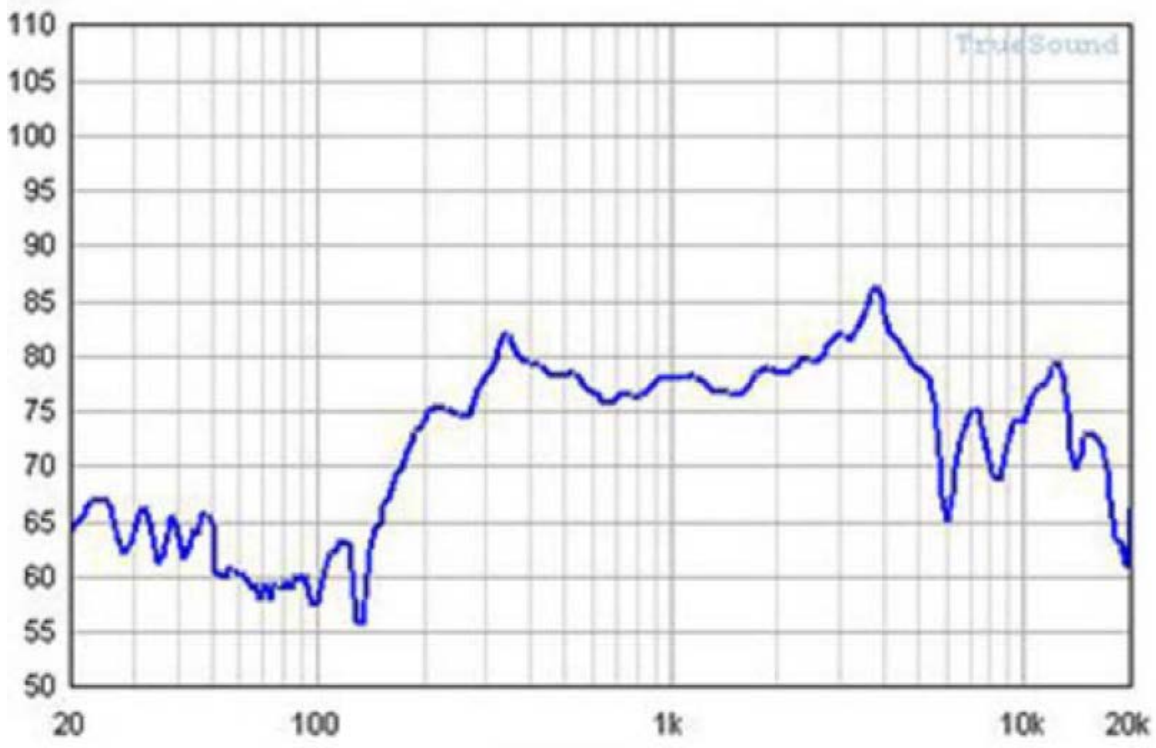
5. Reliability Test

After test (1~7item), the speaker S.P.L difference shall be within ±3dB, and the appearance not exist any change to be harmful to normal operation.

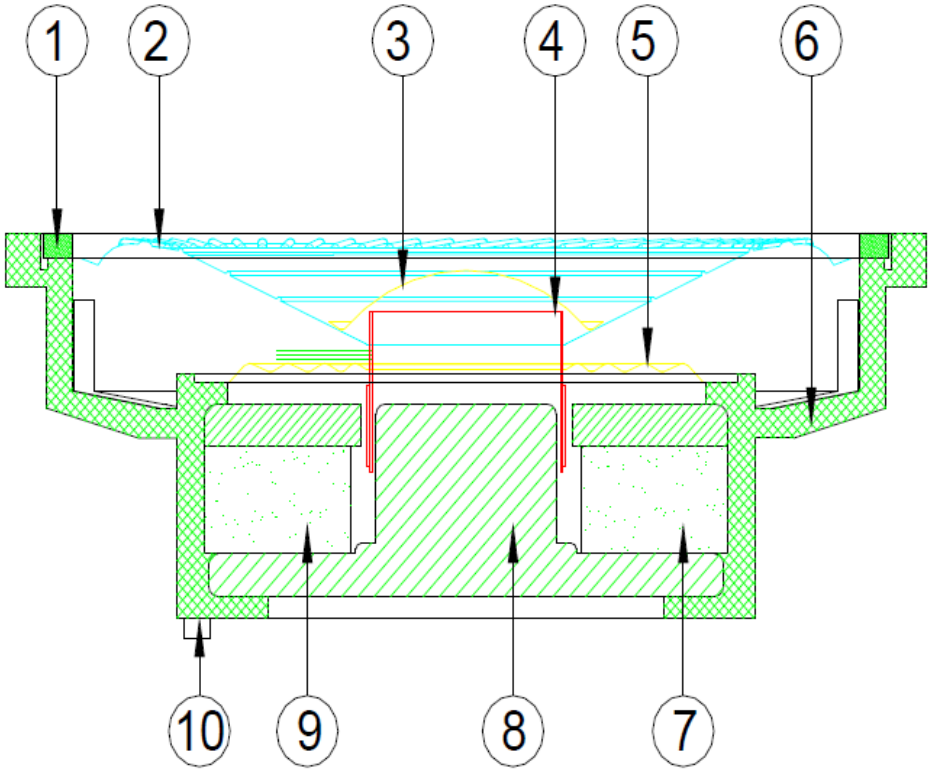
No	Items	Specification
1	High Temp.Test	Keep 72 hours at +70±3°C, and leave 2 hours in normal temperature and then check.
2	Low Temp.Test	Keep 72 hours at -30±3°C, and leave 2 hours in normal temperature and then check.
3	Humidity Test	Keep 72 hours at +40±3°C, relative humidity 90 to 95% and leave 2 hours in normal temperature and then check.
4	Thermal Shock Test	Each temperature cycle shall consist of 2 hours at +25±3 °C followed by 2hours at +70±3°C, and followed by 2hours at -30±3°C with a 20 to 40 minutes transition time between each 2 temperature extremes. The test duration is for 10 cycles.
5	Vibration Test	Being applied vibration of amplitude of 1.5mm with 10-55-10Hz band of vibration frequency, X.Y.Z.3 direction.2 hours each, total 6 hours.
6	Drop Test	A speaker is dropped from 1m in length on 75° inclination to a board 20mm thick hard wood board. and be nothing mechanical damage. total 6 times. 
7	Load test	Loading white noise with input rate power for 96 hours, then placed in natural condition for 1 hour and then check.
8	Insulation Test	When they are measured with DC 100V the insulation resistance between v.c. terminal and frame must be more than 1 MΩ

6. Measurement Method and Frequency Response Curve





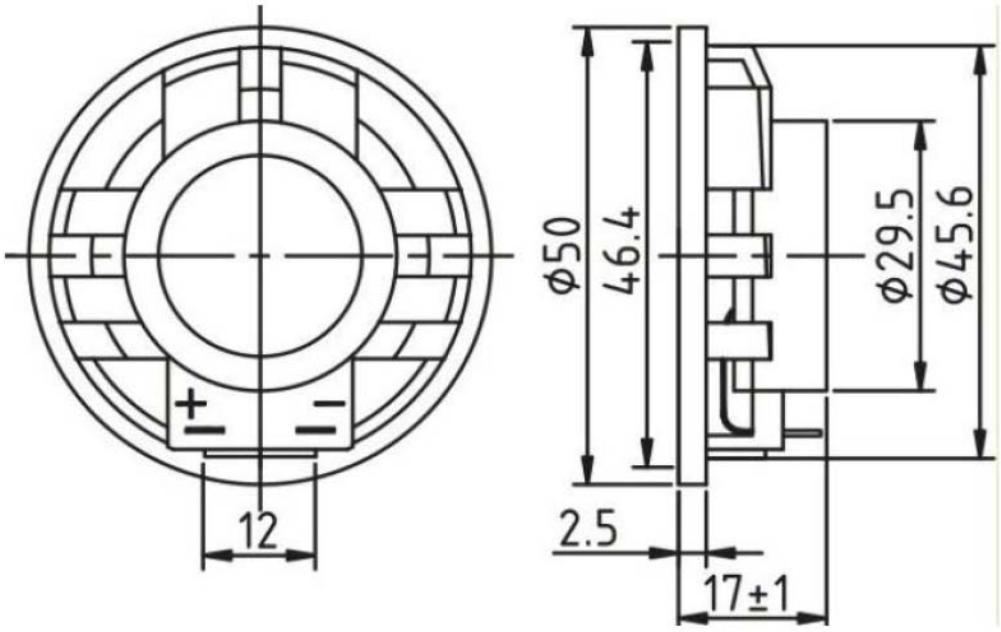
7. Mechanical Layout



No.	Part Name	Q'ty	Material	Remarks
1	Gasket	1	Paper	
2	Cone	1	Mylar	
3	Dust Cap	1	Mylar	
4	Voice Coil	1	Kraft + Copper	
5	Damper	1	Cotton Yam	
6	Frame	1	ABS	
7	Magnet	1	Y30	
8	T-Yoke	1	SPCC	
9	Plate	1	SPCC	
10	Terminal	2	Cu	

8. Dimensions

Unit: mm Tolerance: ±0.2



9. 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.

NOTES