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# Component Specification

Product : Voice Coil Actuator  
Part Number : CA-VC5433A-0802E  
Drawing No : K309010100104


## 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-VC5433-0802E	K309010100104	2 / 8

## 1. General


This product is dedicated for industrial and automotive applications. Highly suitable as car seat vibration element.

## 2. Electrical and Acoustic Characteristics

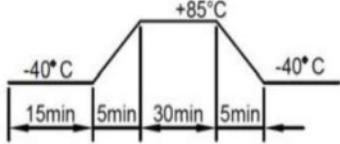
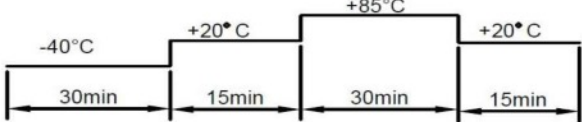
No	Items	Specification
1	Impedance	8Ω ± 15% ( at 1kHz)
2	Acceleration at 2.83 Vrms	> 1,5 grms @1000g load 52Hz
3	Resonance Frequency	52Hz ± 15%
4	Input Power	2.0W /max. 4.0W
5	Max. Voltage	5,66 Vrms
6	Max. Amplitude	< 2,8 mm
7	Dimension	Diameter 54mm , High 33.1 mm
8	Operating Temperature range	-40~+85 C
9	Store Temperature range	-40~+95 C

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


*Preliminary specification*

	Part No.	Drawing No.	Page
	CA-VC5433-0802E	K309010100104	3 / 8

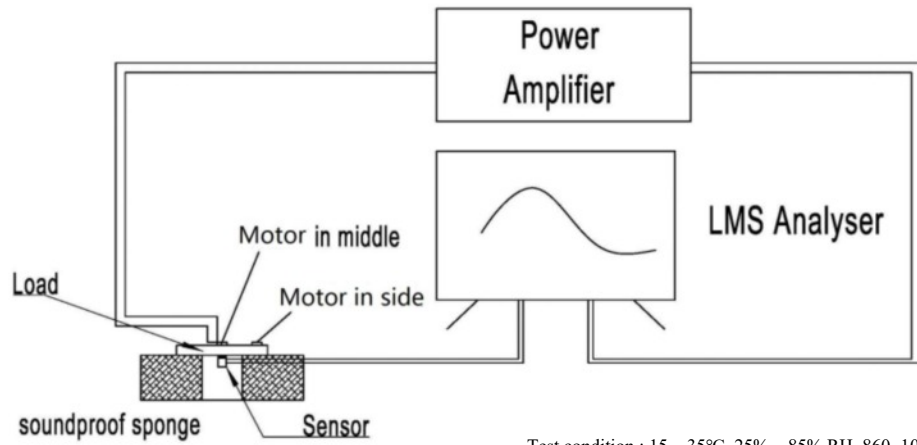
## 7. Reliability Test

No	Items	Specification
1	High Temperature Load Test	Power 0.5W, 0.5s ON/0.5s OFF Temp +85 ± 2°C Input signal 180Hz sine wave Duration 720hrs
2	Low Temperature Load Test	Power 0.5W, 0.5s ON/0.5s OFF Temperature -40±2°C Input signal 180Hz sine wave Duration 720hrs
3	Humidity Test	After being placed in a chamber with 85 to 90%R.H. at +40±3C for 96 hours and then being placed in natural condition for 3 hour, speaker shall be measured.
4	Thermal Shock Test	 <p>Temperature -40~+85°C Cycles 1000 cycles</p>
5	Damp heat	Temperature +85±2°C Relative humidity 85%RH Duration 1000hrs
6	Temperature cycles test	 <p>Duration 696hrs</p>
7	Load test	Power (Nom) 0.5W, 0.5s ON/0.5s OFF Input signal 180Hz sine wave Cycles 2200000
8	Vibration test	Vibration Frequency 55Hz Amplitude 1.5mm Duration x,y,z direction 30min

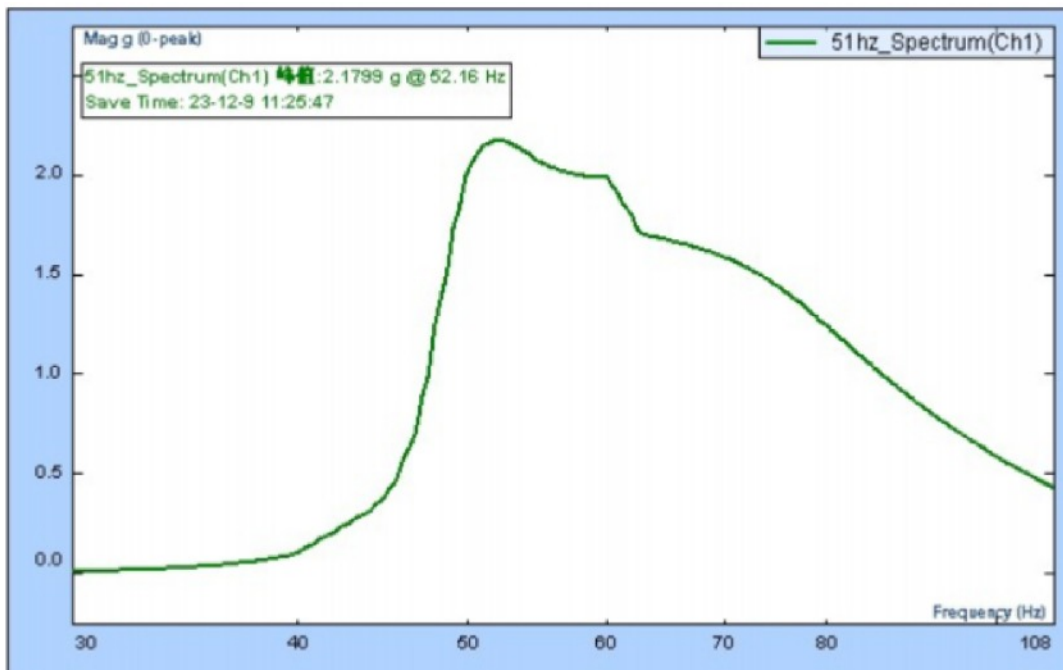
10	11/09/24	Preliminary release	Wang	S. Ge	G. Schubert
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	Part No.	Drawing No.	Page
	CA-VC5433-0802E	K309010100104	4 / 8


### 3. Measurement Block Diagram & Response curve



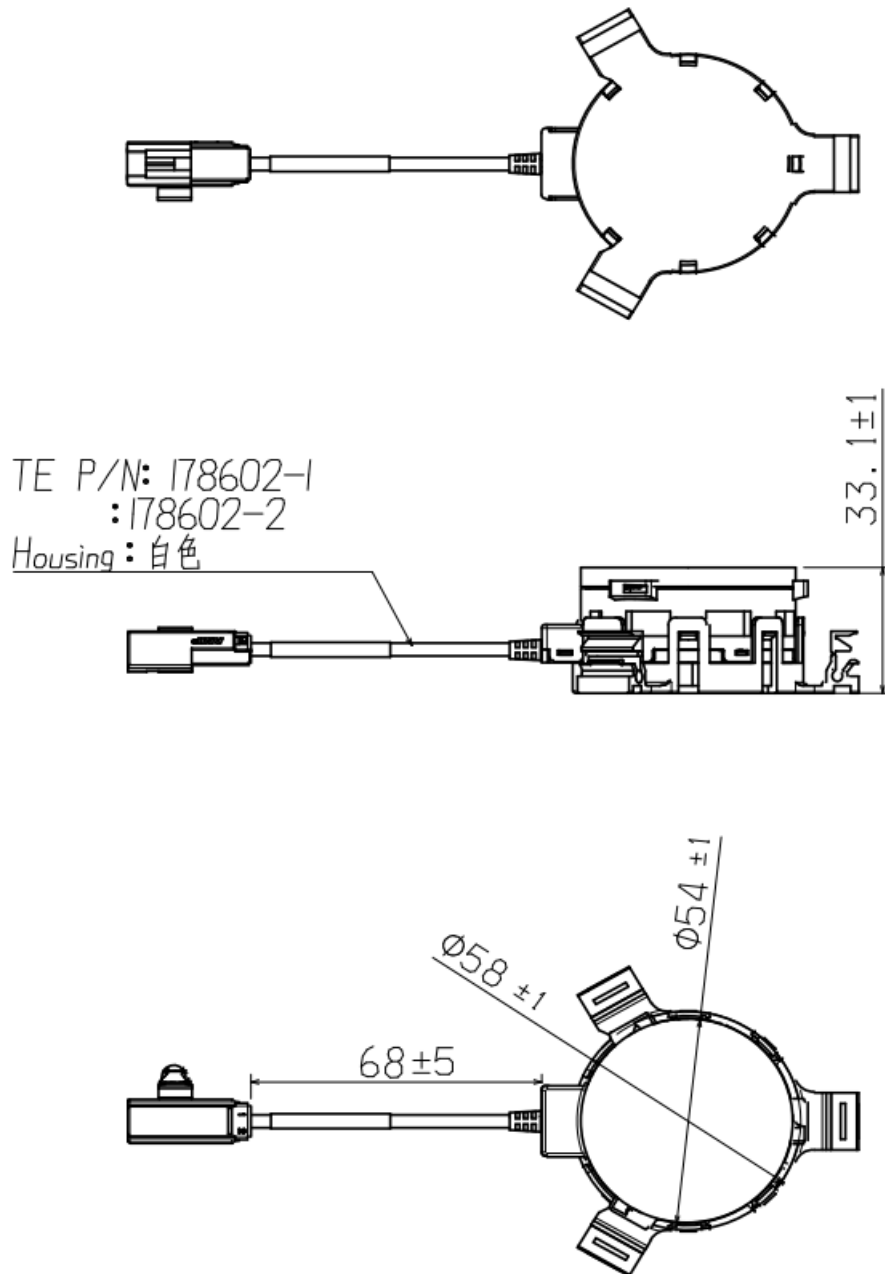
Test condition : 15 ~ 35°C, 25% ~ 85% RH, 860~1060 mbar




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	Part No.	Drawing No.	Page
	CA-VC5433-0802E	K309010100104	5 / 8

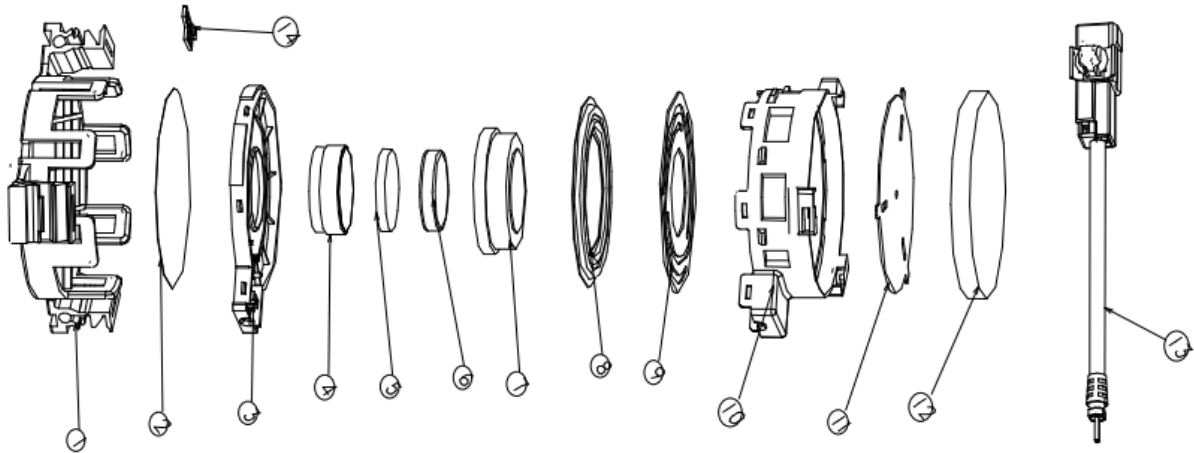
## 5. Dimension



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	Part No.	Drawing No.	Page
	CA-VC5433-0802E	K309010100104	6 / 8

## 6. Structure



14	PCB	1	FR4	
13	WIRE HARENESS			
12	Foam		Foam	
11	HOUSING-4	1	SUS301	
10	HOUSING-3	1	PC+PBT	
9	DAMPER	1	SUS301	
8	DAMPER	1	Conex	
7	YOKE	1	PA66	
6	MAGNET	1	NdFeB	
5	Plate	2	SPCC	
4	V-COIL	1	Cu	
3	HOUSING-2	1	PPA	
2	3M GLUE	1	3M	
1	HOUSING-1	1	PA66	
No.	Part Name	Q'ty	Material	Remarks

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Revision	Date	Notes	Drawn by	Checked by	Approved by

	Part No.	Drawing No.	Page
	CA-VC5433-0802E	K309010100104	7 / 8

## 8. Packing

TBD , according customer requirements

10	11/09/24	Preliminary release	Wang	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by



Part No.

Drawing No.

Page

CA-VC5433-0802E

K309010100104

8 / 8

### 9) Revision

Rev. No	Date	Page	Description	Sign
10	11/09/24	all	Preliminary release	G.Schubert

10	11/09/24	Preliminary release	Wang	S. Ge	G. Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by