



# Round Loudspeaker

**Ø31.0 × 16.5 mm**

**With wires & connector & foam**

**CC31C165AN4P**

## Revision

<b>Date</b>	<b>Version</b>	<b>Status</b>	<b>Changes</b>	<b>Approver</b>
2019/9/29	V0.1	Draft	First release	AX
2020/1/3	V0.2	Draft	Add logo print	AX
2020/1/15	V0.3	Draft	Update package information	AX
2020/2/12	V0.4	Draft	Modify membrane color	AX
2020/3/26	V0.5	Released	Update PCB shape & package	AX

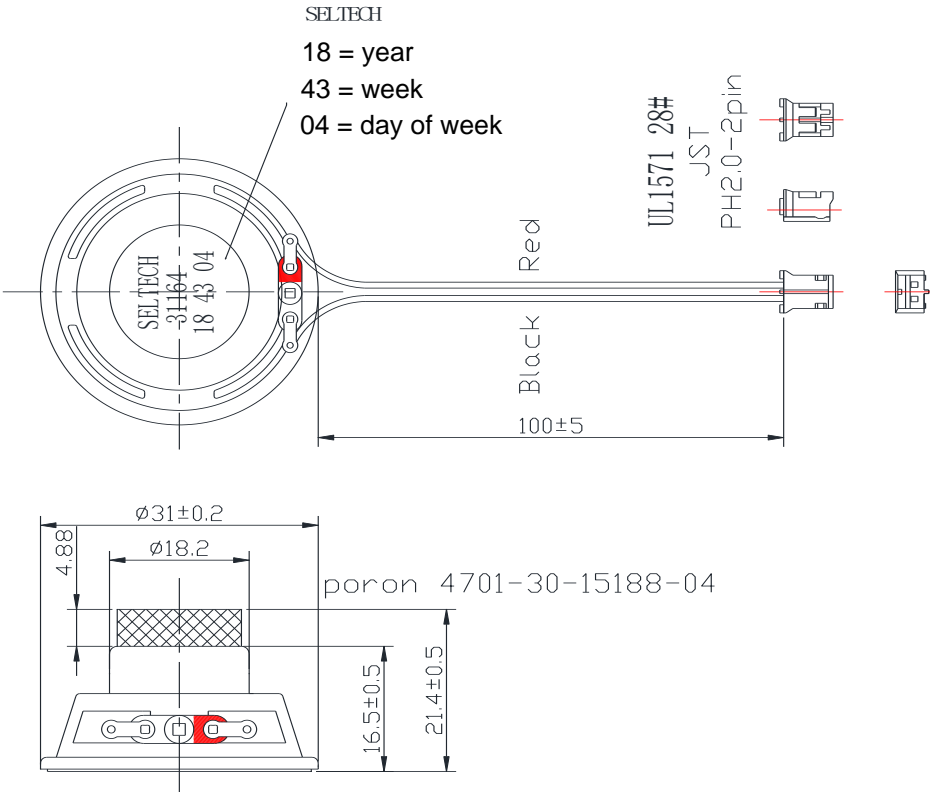
**SPECIFICATIONS**

Parameter	Conditions/Description	Values	Units
Rated Input Power		3.0	W
Max Input Power	IEC-60268-5, filter 1s on/60s off, 60 cycles at room temp	4.0	W
Rated Impedance	at 2.0 kHz	4±15%	Ω
Sound Pressure Level (S.P.L.)	at 0.8K 1.0K 1.2K 1.5KHz in 1.0W/0.5M average (0dB SPL=20μPa)	82±3	dB
Resonant Frequency (Fo)	at 1.0 V	380±20%	Hz
Frequency Range	Output S.P.L. -10dB	Fo~7K	Hz
Distortion	at 1K Hz, input 1.0W,	< 10%	-
Magnet	NdFeB	Φ12.5*2.0	mm
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 5K Hz	3.45	V
Polarity	cone will move forward with positive dc current to "+" terminal		
Weight		14	g
Operating Temperature		-20~+60	°C
Storage Temperature		-30~+70	°C

Notes: All specifications measured at 5~35°C, humidity at 45~85%, under 86~106 kPa pressure, unless otherwise noted.

**MECHANICAL DRAWING**

Units: mm  
Tolerance: ±0.5mm



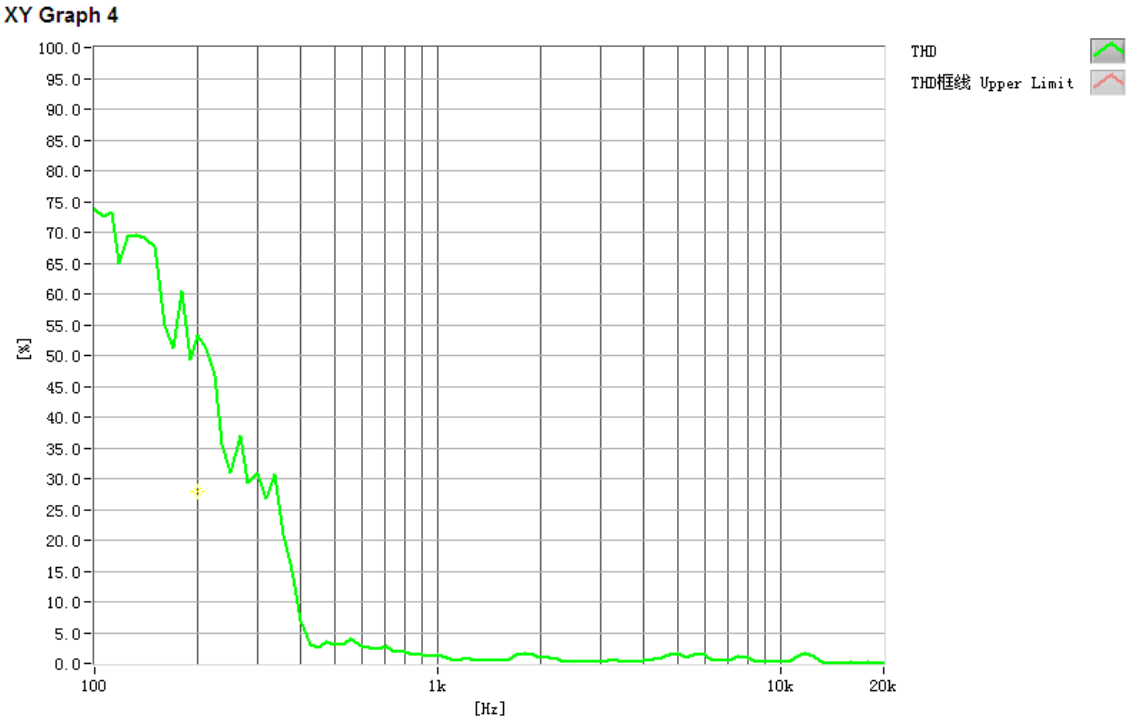
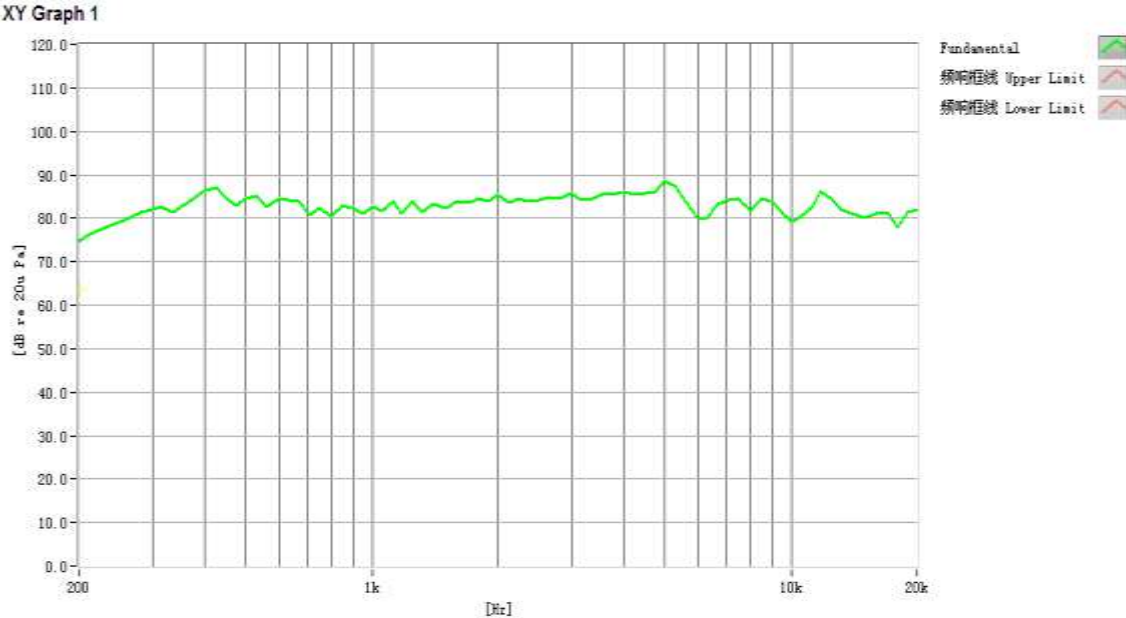
**CONSTRUCTION DETAIL**

PART NO.	PART NAME	Q'TY	MATERIAL	REMARK
1	Gastet	1	Paper	
2	Diaphragm	1	PU+Paper	
3	VOICE COIL	1	Paper Cu	
4	Plate	1	SPCC	
5	Magnet	1	NdFeB	
6	PCB Terminal	1	FR4	
7	Frame	1	SPCC	
8	CAP	1	PET	black color

# RESPONSE CURVES

## Frequency Response Curve

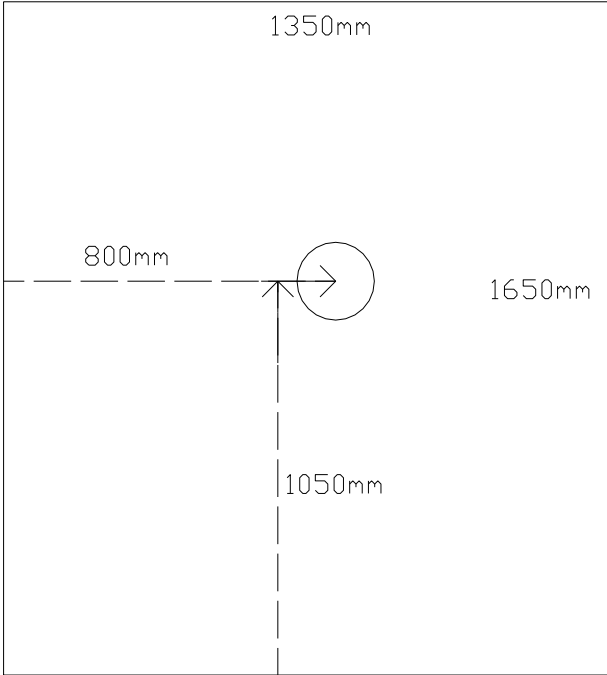
Test condition: 1.0W/0.5M,



**RELIABILITY TEST**

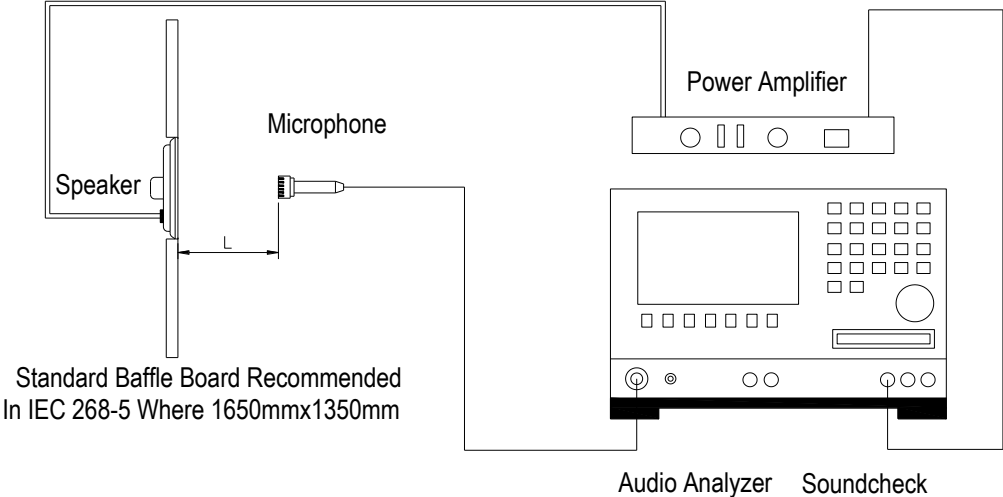
1	Reliability Test Performance	After any following test, parts should conform to original performance within $\pm 3$ dB tested with Rated Power, after 6 hours of recovery period.
2	High Temperature Test	96 hours at $+70^{\circ}\text{C} \pm 3^{\circ}\text{C}$
3	Low Temperature Test	96 hours at $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$
4	Humidity Test	96 hours at $+30^{\circ}\text{C} \pm 3^{\circ}\text{C}$ , 92-95% RH
5	Temp./Humidity Cycle	<p>The part shall be subjected 5 cycles. One cycle shall be 6 hours and consist of</p> <p style="text-align: center;">90 ~ 95 % RH</p> <p style="text-align: center;">65°C</p> <p style="text-align: center;">25°C</p> <p style="text-align: center;">0.5hr      6hrs      0.5hr      5hrs</p>
6	Vibration Test	<p>Frequency: 10~55~10Hz Oct/min      Amplitude: 1.5mm</p> <p>Duration: 2 hours each of 3 perpendicular directions</p>
7	Drop Test	Drop the speaker contained in normal box onto the surface of 40mm thick board 10 times from the height of 75cm
8	Operation Life Test	Must perform normal with program White-Noise source at Rated Power for 96 Hours
9	Termination Strength	<p>Apply 3.0N(0.306kg) to each terminal in horizontal direction for 30 seconds;</p> <p>Apply 2.0N(0.204kg) to each terminal in vertical direction for 30 seconds;</p>

**MEASURING METHOD**



**Fig. 1 Block Diagram for Measurement Method**

**Standard test condition of speaker**

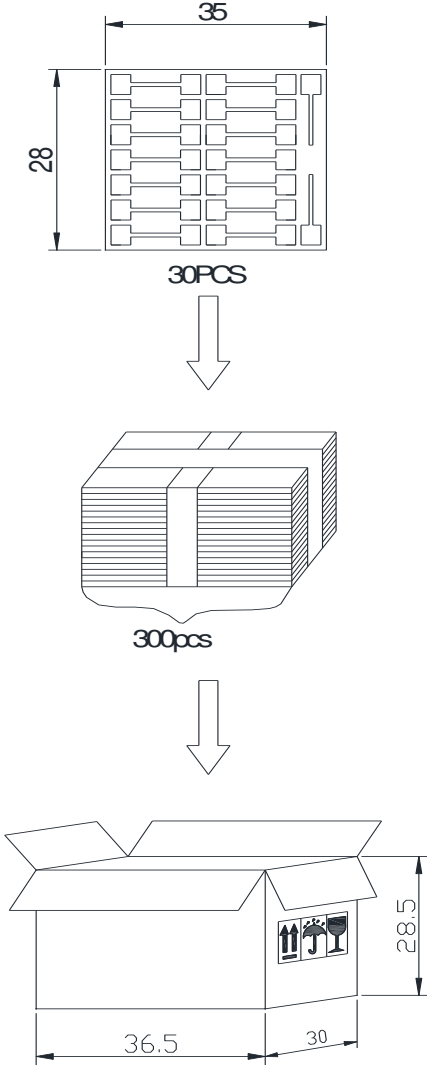


**L=10cm**

**Fig. 2 Speaker Test Condition**

# PACKAGING

units: cm  
Remark:



Remark:  
30pcs per tray  
10 trays for unit  
Total:300 pcs per box  
Size:36.5\*30\*28.5cm