



## SPECIFICATION

FOR ELECTRO-MAGNET DYNAMIC MICROPHONE

TOTAL PAGE 07 [www.bestargroups.com](http://www.bestargroups.com) RoHS

Customer		Model Name	BCM4013OSBCF-42 LF
Customer P/N		Product No.	195109
Date	17 Sep.2013	Issue No.	BS/TEM01.242A
Page	01 of 07	Issue Date	2013.09.17

### Approval:

- 1.Characteristics
- 2.Drawing
- 3.Measurement Circuit
- 4.Reliability Test
- 5.Packing
- 6.History change record

Drawn by	Checked by	Approved by	Customer approved

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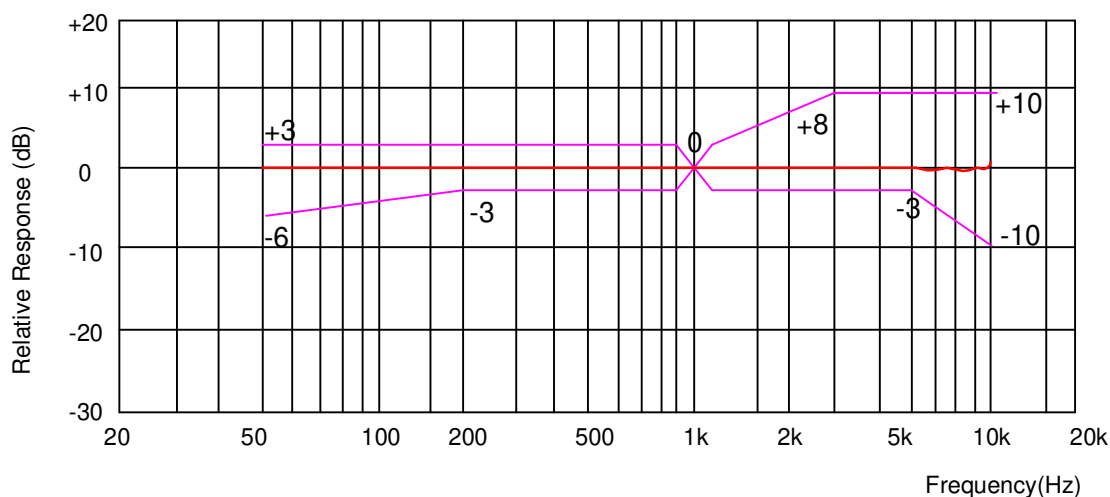
# BCM4013OSBCF-42 LF

## 1. Characteristics

Test Condition (Vs=2V RL=2.2K Ω Ta=20°C R.H.=65%)

No.	Item	Specifications
1	Sensitivity	- 42 ±3dB (0dB=1V/Pa,1kHz)
2	Impedance	2.2 ±30%kohm
3	Frequency Response	50-12kHz
4	Current Consumption	0.5mA Max.
5	Directional	Omnidirectional
6	S/N Ratio	more than 58dB
7	Standard Operating Voltage	2V
8	Operating Voltage	1V~12V
9	Sensitivity reduction	within -3dB at 1.5V
10	Storage Temperature	-40 °C to +85 °C
11	Operating Temperature	-30 °C to +70 °C

### ★Frequency Resonse Curve

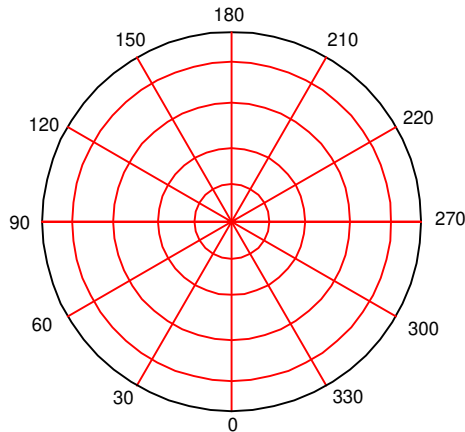


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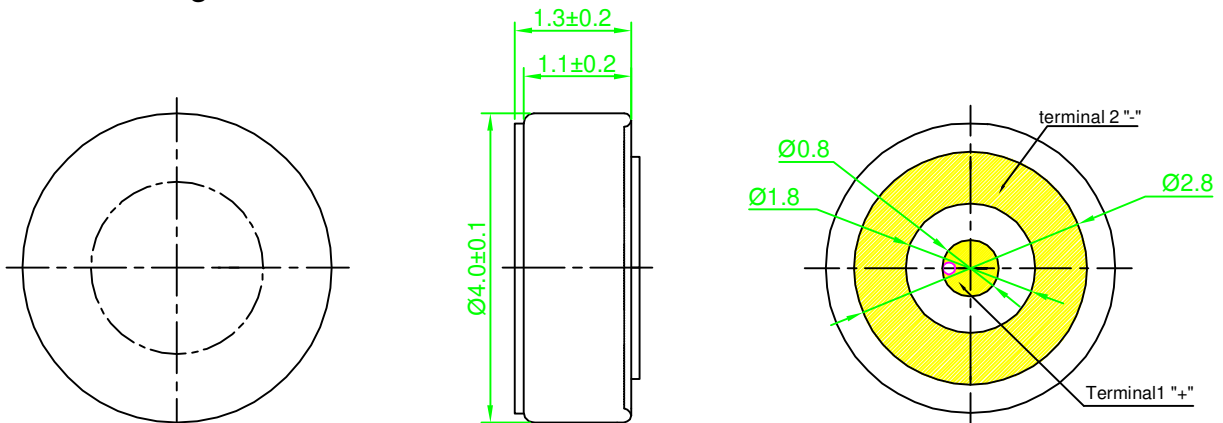
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A	2013.09.17	王焕焕		Checked by:	徐波	Microphone
Rev.	Date	Drawn	Note	Approved by:	徐金国	
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# BCM4013OSBC-42 LF

## ★ Angular Response

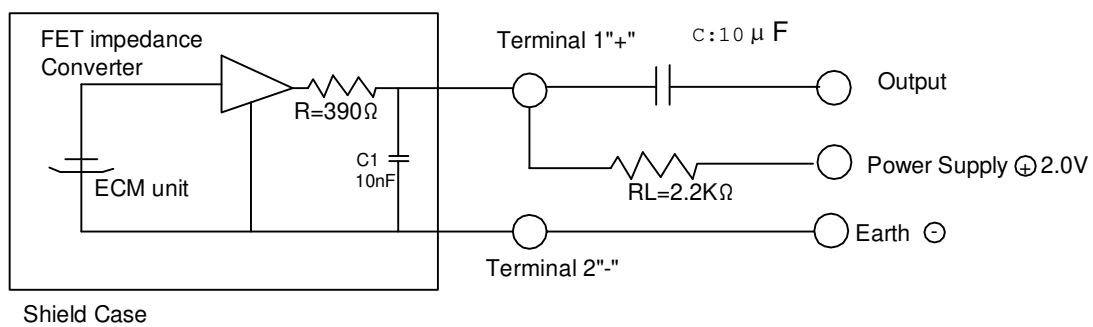


## 2. Drawing



Unit: mm

## 3. Measurement Circuit:



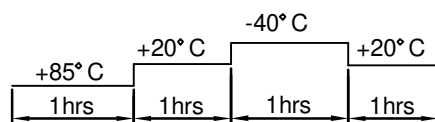
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## 4. Reliability Test

- 4.1 High temp.life test  
 Temperature +85 °C  
 Duration 100hrs
- 4.2 Low temp.life test  
 Temperature -40 °C  
 Duration 100hrs
- 4.3 Temperature cycle test  
 Cycles 10



- 4.4 Humidity Test  
 Temperature +40 °C  
 Relative Humidity 90~95%  
 Duration 48hrs  
 Tests above should be measured after leaving normal temperature for 6hrs.
- 4.5 Vibration Test  
 Vibration Frequency 10~55Hz  
 Amplitude 1.52mm/min  
 Direction 3(x.y&z)  
 Duration 2hrs each cycle(total 6 hrs)
- 4.6 Drop test  
 Height 1m  
 (Dropped to 20mm thick hardwood board without packing.)  
 Direction 3
- 4.7 Soldering Heat Shock  
 Temperature 260 ±5° c  
 Duration 2 ±0.5 sec
- 4.8 Terminal Mechanical Strength  
 Strength 1kg  
 Duration 1 min
- 4.9 Surface Mounting Condition

In automated mounting of The SMD Sound Transducers on printed circuit boards, any bending, expanding and pulling forces or shocks against the SMD Sound Transducers shall be kept to a minimum to prevent them from electrical failures and mechanical damages of the devices.

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## Soldering(Reflow)

(1)Soldering of The SMD Sound Transducers shall conform to the soldering conditions in the individual specifications.

(2)The SMD Sound Transducers are designed for "Reflow Soldering" under the recommended solder profile .

(3)SMD Sound Transducers which during the reflow soldering process are exposed to too high soldering temperatures and/or too large temperature gradient such as rapid heating or cooling may lead to electrical failures and mechanical damages of the devices.

Following soldering conditions are recommended; Refer to Fig.1

Temperature profile for a lead-free reflow process

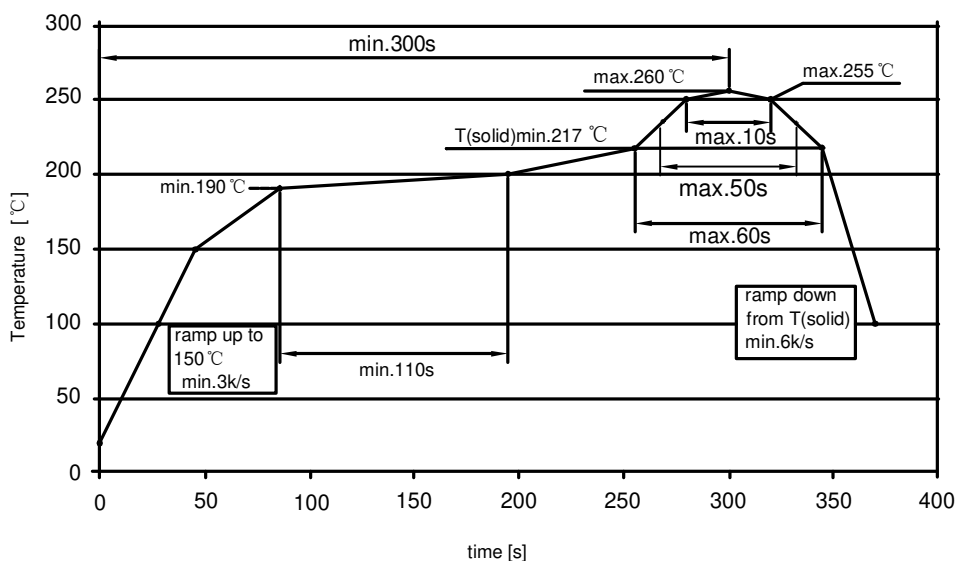


Fig. 1 Recommended soldering Temperature-Time profile (Reflow soldering)

Notice:

All specifications must be satisfied in this condition.

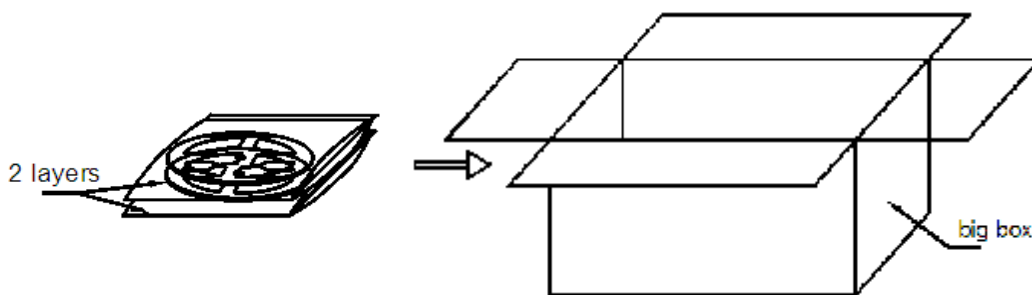
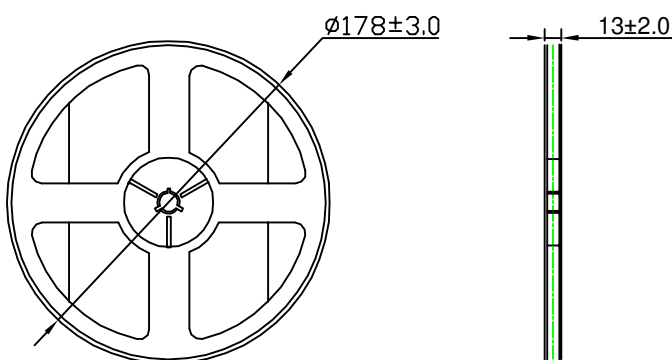
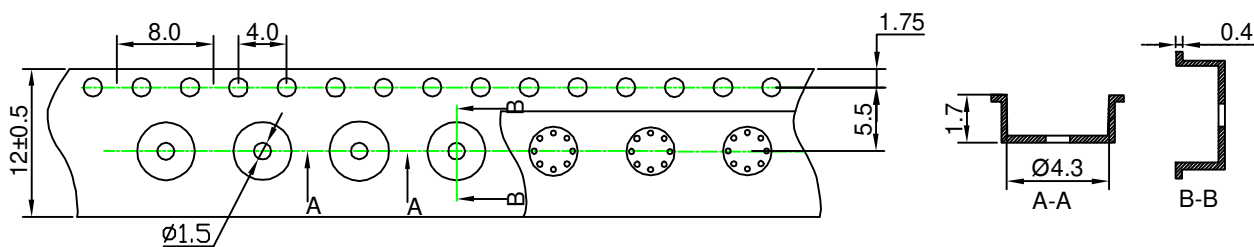
Sensitivity :Allowable deviation within  $\pm 3\text{dB}$  from initial sensitivity.

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## 5. Packing



Remark:  
 1000 pcs per tray  
 2 trays for unit, 10 units per carton  
 Total 20000pcs per carton  
 Size: 38×24×21(cm)

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