



|  |           |  |             |
|--|-----------|--|-------------|
| <b>SPECIFICATION</b>                         |           |  |             |
| <b>FOR ELECTRO-MAGNET DYNAMIC MICROPHONE</b> |           |  |             |
| <b>TOTAL PAGE</b>                            | <b>07</b> | <a href="http://www.be-star.com">www.be-star.com</a> | <b>RoHS</b> |

|              |           |             |                          |
|--------------|-----------|-------------|--------------------------|
| Customer     |           | Model Name  | BCM4013OLFC-42-JST-ZHR-2 |
| Customer P/N |           | Product No. | 195013                   |
| Date         | 23 Aug.11 | Issue No.   | BS/TEM01.131B            |
| Page         | 01 of 07  | Issue Date  | 11/08/23                 |

**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 |
|----------|------------|-------------|-------------------|
|          |            |             |                   |

***BESTAR ELECTRONICS INDUSTRY CO.,LTD***

No.199 HuangHe West Road.New district,ChangZhou,JiangSu Province,P.R.China

**Tel:** +86 519 88222567    **Fax:** +86 519 88222551

**[www.bestargroups.com](http://www.bestargroups.com)**    [info@be-star.com](mailto:info@be-star.com)    **<http://www.bestargroups.com>**

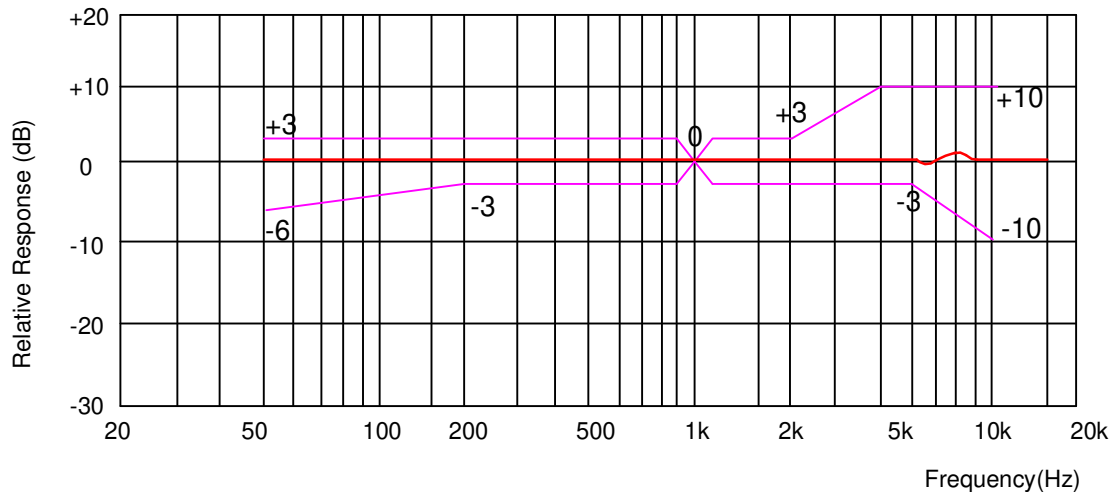
# BCM4013OLFC-42-JST-ZHR-2

## 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   | Frequency Response         | 50-16kHz                   |
| 3   | Current Consumption        | 0.5mA Max.                 |
| 4   | Directional                | Omnidirectional            |
| 5   | S/N Ratio                  | more than 58dB             |
| 6   | Standard Operating Voltage | 2V                         |
| 7   | Operating Voltage          | 1V~10V                     |
| 8   | Sensitivity reduction      | within -3dB at 1.5V        |
| 9   | Distortion                 | 2%                         |
| 10  | Storage Temperature        | -40 °C to +70 °C           |
| 11  | Operating Temperature      | -30 °C to +60 °C           |

### ★Frequency Resonse Curve

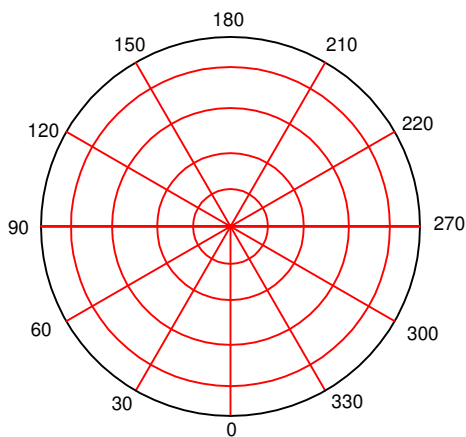


This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

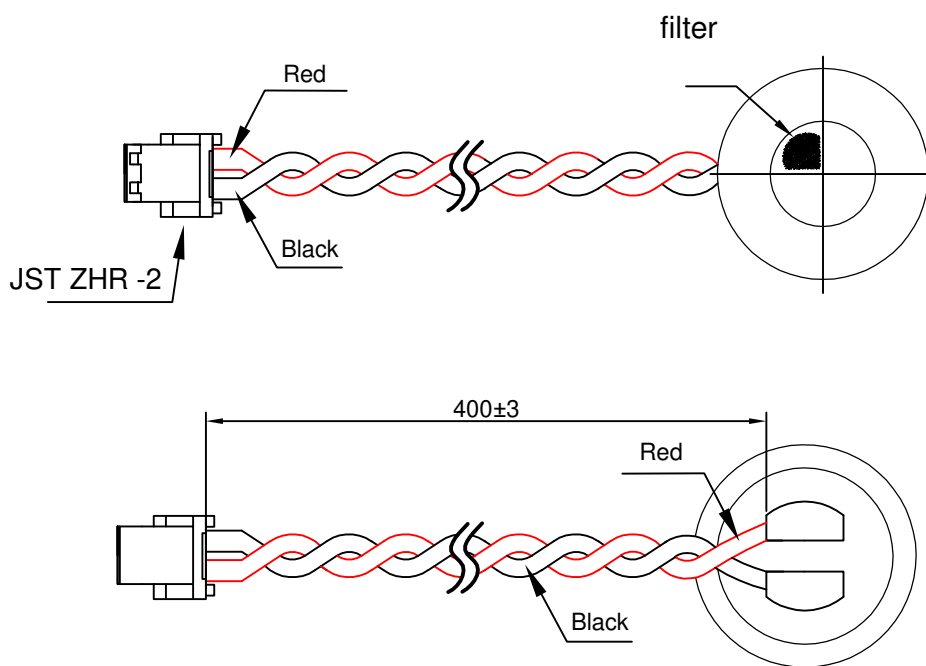
|                                     |          |       |      |              |          |                          |
|-------------------------------------|----------|-------|------|--------------|----------|--------------------------|
|                                     |          |       |      | Date:        | 11.08.23 | BCM4013OLFC-42-JST-ZHR-2 |
| B                                   | 11.08.23 | 王焕焕   |      | Drawn by:    | 王焕焕      |                          |
| A                                   | 10.08.01 | 王焕焕   |      | Checked by:  | 徐波       | Microphone               |
| Rev.                                | Date     | Drawn | Note | Approved by: | 王平       |                          |
| BESTAR ELECTRONICS INDUSTRY CO.,LTD |          |       |      |              |          | DRG NO: BS/TEM01.131B    |
| www.be-star.com wu@be-star.com      |          |       |      |              |          | Page:2 of 7              |

# BCM4013OLFC-42-JST-ZHR-2

## ★Angular Response



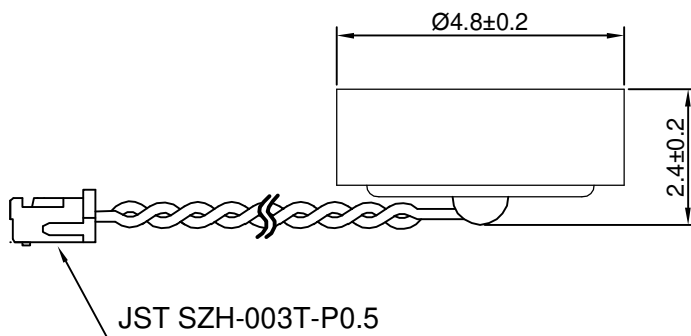
## 2. Drawing



This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written consent.

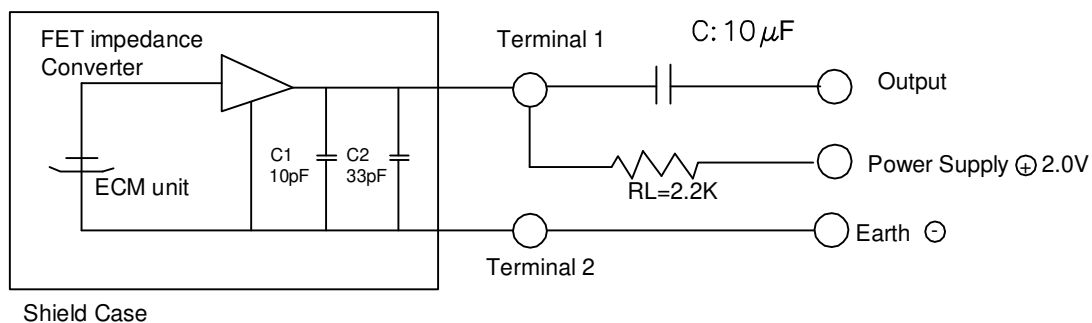
|                                     |          |       |      |              |          |                          |             |
|-------------------------------------|----------|-------|------|--------------|----------|--------------------------|-------------|
|                                     |          |       |      | Date:        | 11.08.23 | BCM4013OLFC-42-JST-ZHR-2 |             |
| B                                   | 11.08.23 | 王焕焕   |      | Drawn by:    | 王焕焕      |                          |             |
| A                                   | 10.08.01 | 王焕焕   |      | Checked by:  | 徐波       | Microphone               |             |
| Rev.                                | Date     | Drawn | Note | Approved by: | 王平       |                          |             |
| BESTAR ELECTRONICS INDUSTRY CO.,LTD |          |       |      |              |          | DRG NO: BS/TEM01.131B    | Page:3 of 7 |
| www.be-star.com wu@be-star.com      |          |       |      |              |          |                          |             |

# BCM4013OLFC-42-JST-ZHR-2



Note:wires use UL3302 AWG 32#

### 3. Measurement Circuit:

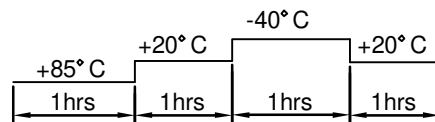


|                                     |          |       |      |              |          |                          |
|-------------------------------------|----------|-------|------|--------------|----------|--------------------------|
|                                     |          |       |      | Date:        | 11.08.23 | BCM4013OLFC-42-JST-ZHR-2 |
| B                                   | 11.08.23 | 王焕焕   |      | Drawn by:    | 王焕焕      |                          |
| A                                   | 10.08.01 | 王焕焕   |      | Checked by:  | 徐波       | Microphone               |
| Rev.                                | Date     | Drawn | Note | Approved by: | 王平       |                          |
| BESTAR ELECTRONICS INDUSTRY CO.,LTD |          |       |      |              |          | DRG NO: BS/TEM01.131B    |
| www.be-star.com wu@be-star.com      |          |       |      |              |          | Page:4 of 7              |

# BCM4013OLFC-42-JST-ZHR-2

## 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

### Notice:

All specifications must be satisfied in this condition.

Sensitivity :Allowable deviation within ±3dB from initial sensitivity.

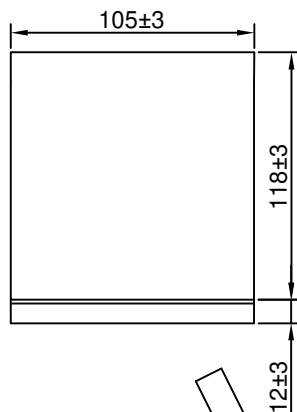
This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

|   |          |       |      |              |          |                          |             |
|---|----------|-------|------|--------------|----------|--------------------------|-------------|
|   |          |       |      | Date:        | 11.08.23 | BCM4013OLFC-42-JST-ZHR-2 |             |
| B   | 11.08.23 | 王焕焕   |      | Drawn by:    | 王焕焕      |                          |             |
| A   | 10.08.01 | 王焕焕   |      | Checked by:  | 徐波       | <b>Microphone</b>        |             |
| Rev.  | Date     | Drawn | Note | Approved by: | 王平       |                          |             |
| BESTAR ELECTRONICS INDUSTRY CO.,LTD   |          |       |      |              |          | DRG NO: BS/TEM01.131B    | Page:5 of 7 |
| <a href="http://www.be-star.com">www.be-star.com</a> <a href="mailto:wu@be-star.com">wu@be-star.com</a> |          |       |      |              |          |                          |             |

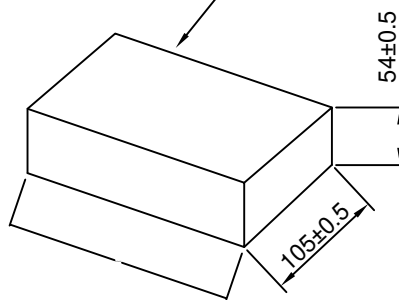
# BCM4013OLFC-42-JST-ZHR-2

## 5. Packing

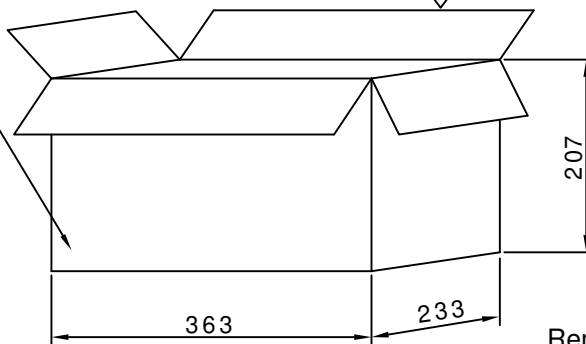
100 PCS  
per anti-static bag



500 PCS  
5 anti-static bags per middle box



4500PCS  
9 middle boxes per carton



Remark:  
100 pcs per anti-static bag  
5 anti-static bags per middle box  
9 middle boxes per carton  
Total 4500pcs per carton  
Size: 363×233×207(mm)

This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

|                                     |          |       |      |              |          |                          |             |
|-------------------------------------|----------|-------|------|--------------|----------|--------------------------|-------------|
|                                     |          |       |      | Date:        | 11.08.23 | BCM4013OLFC-42-JST-ZHR-2 |             |
| B                                   | 11.08.23 | 王焕焕   |      | Drawn by:    | 王焕焕      |                          |             |
| A                                   | 10.08.01 | 王焕焕   |      | Checked by:  | 徐波       | Microphone               |             |
| Rev.                                | Date     | Drawn | Note | Approved by: | 王平       |                          |             |
| BESTAR ELECTRONICS INDUSTRY CO.,LTD |          |       |      |              |          | DRG NO: BS/TEM01.131B    | Page:6 of 7 |
| www.be-star.com wu@be-star.com      |          |       |      |              |          |                          |             |

# BCM4013OLFC-42-JST-ZHR-2

## 6. History change record

| version No. | Change Items |                               | Date     | Drawn | Approved |
|-------------|--------------|-------------------------------|----------|-------|----------|
|             | Before       | After                         |          |       |          |
| A           |              |                               | 10.08.01 | 王焕焕   | 王平       |
| B           |              | Change the length of the lead | 11.08.23 | 王焕焕   | 王平       |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |
|             |              |                               |          |       |          |

This print and information there in are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content

|  |          |       |      |              |          |   |
|--|----------|-------|------|--------------|----------|---|
|  |          |       |      | Date:        | 11.08.23 | BCM4013OLFC-42-JST-ZHR-2<br><br><b>Microphone</b> |
| B  | 11.08.23 | 王焕焕   |      | Drawn by:    | 王焕焕      |   |
| A  | 10.08.01 | 王焕焕   |      | Checked by:  | 徐波       |   |
| Rev.   | Date     | Drawn | Note | Approved by: | 王平       |   |
| BESTAR ELECTRONICS INDUSTRY CO.,LTD<br><a href="http://www.be-star.com">www.be-star.com</a> <a href="mailto:wu@be-star.com">wu@be-star.com</a> |          |       |      |              |          | DRG NO: BS/TEM01.131B Page:7 of 7                 |