

**SERIES:** CDS-20144-L100 | **DESCRIPTION:** SPEAKER**FEATURES**

- micro-speaker
- high SPL
- wide operating temp range
- 4 ohm impedance
- wire leads

**SPECIFICATIONS**

| parameter               | conditions/description                                                     | min | typ | max    | units              |
|-------------------------|----------------------------------------------------------------------------|-----|-----|--------|--------------------|
| input power             | maximum power: IEC-60268-5, filter 60s on/120s off, 10 cycles at room temp |     | 1.0 | 1.2    | W                  |
| impedance               | at 2.0 kHz, 1.0 V                                                          | 3.4 | 4   | 4.6    | $\Omega$           |
| resonant frequency (Fo) | at 1.0 V                                                                   | 480 | 600 | 720    | Hz                 |
| frequency response      | output SPL -10 dB                                                          | Fo  |     | 20,000 | Hz                 |
| sound pressure level    | at 1.0 W, 0.1 m ave, at 0.8, 1.0, 1.2, 1.5 kHz                             | 89  | 92  | 95     | dB                 |
| distortion              | at 1.0 kHz, 2 V                                                            |     |     | 10     | %                  |
| buzz, rattle, etc.      | must be normal at sine wave between Fo ~ 20 kHz                            |     | 2.0 |        | V                  |
| polarity                | cone will move forward with positive dc current to "+" terminal            |     |     |        |                    |
| dimensions              | 20 x 14 x 3.2                                                              |     |     |        | mm                 |
| magnet                  | Nd-Fe-B                                                                    |     |     |        |                    |
| material                | PBT                                                                        |     |     |        |                    |
| cone material           | PEN                                                                        |     |     |        |                    |
| terminal                | wire leads                                                                 |     |     |        |                    |
| weight                  |                                                                            |     | 1.6 |        | g                  |
| operating temperature   |                                                                            | -30 |     | 70     | $^{\circ}\text{C}$ |
| storage temperature     |                                                                            | -40 |     | 85     | $^{\circ}\text{C}$ |
| RoHS                    | yes                                                                        |     |     |        |                    |

Notes: 1. All specifications measured at 5-35 $^{\circ}\text{C}$ , humidity at 45-85%, under 86-106kPa pressure, unless otherwise noted.

**PART NUMBER KEY****CDS-20144-L100 X**

Base Number

Termination Style:

"blank" = wire leads, no connector

1 = JST housing SHR-2V-S-B

2 = JST housing ZHR-2

3 = JST housing PHR-2

4 = JST housing HER-2

5\* = JST housing PHR-4

6 = Molex housing 51021-0200

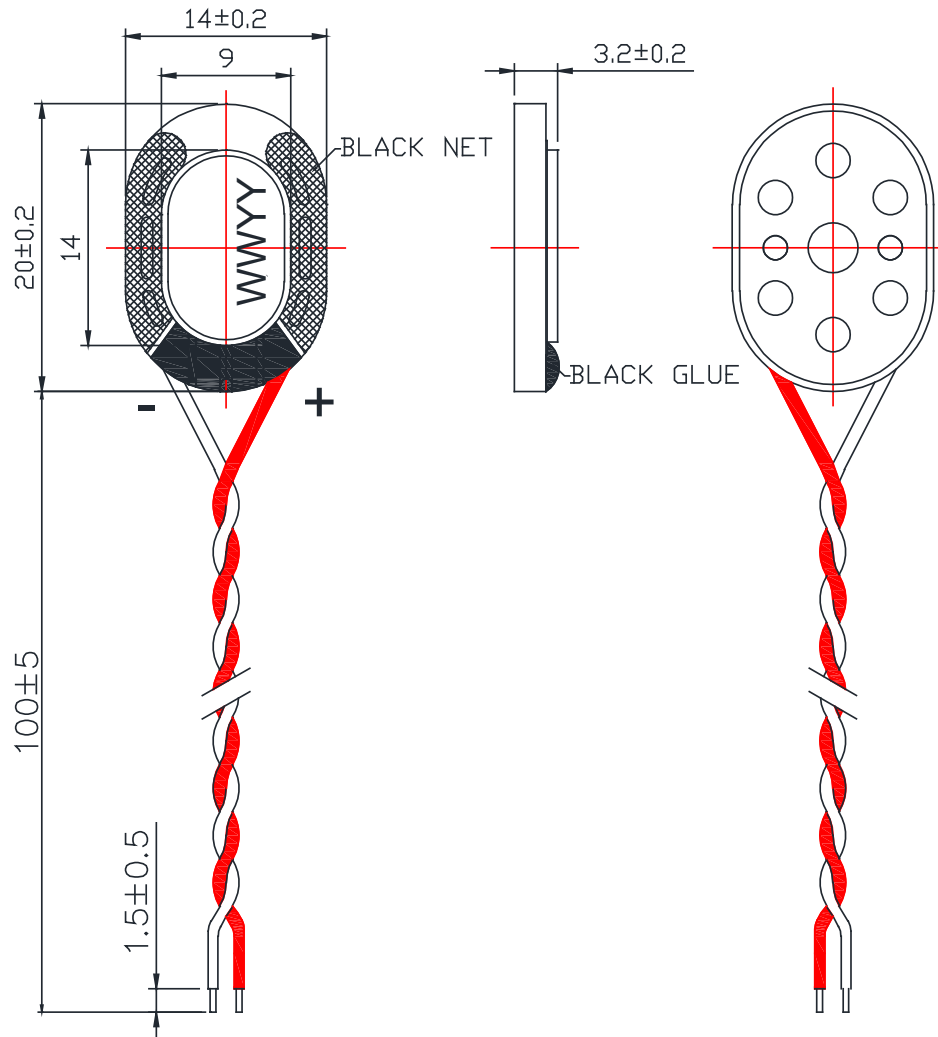
Notes: \*Discontinued JST housing PHR-4 option.

## MECHANICAL DRAWING

units: mm

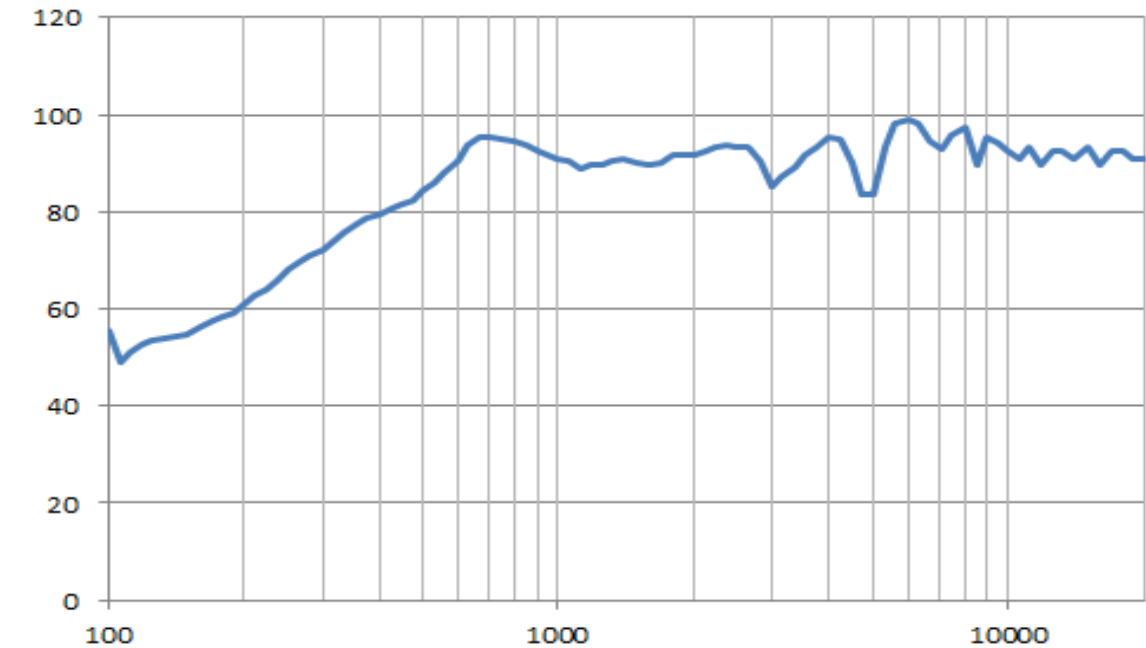
tolerance:  $\pm 0.5$  mm

wire: UL1571 30 AWG

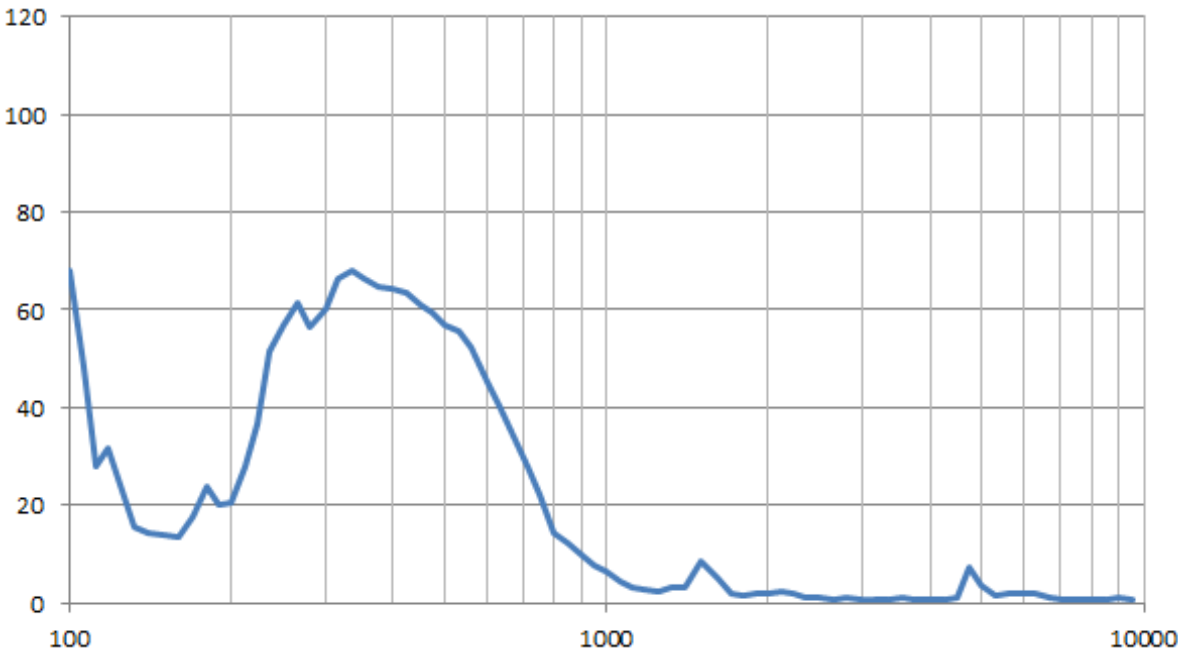


RESPONSE CURVES

Frequency Response Curve



Total Harmonic Distortion Curve



THIELE-SMALL PARAMETERS

| parameter                    | conditions/description | typ    |
|------------------------------|------------------------|--------|
| Mechanical Q Factor          | Qms                    | 2.713  |
| Electrical Q Factor          | Qes                    | 9.354  |
| Total Q Factor               | Qts                    | 2.103  |
| Compliance Equivalent Volume | Vas                    | 0.0028 |

Notes: 2. Results represent typical performance in Free Air conditions.

REVISION HISTORY

| rev. | description                           | date       |
|------|---------------------------------------|------------|
| 1.0  | initial release                       | 03/25/2015 |
| 1.01 | added connector options               | 07/15/2016 |
| 1.02 | discontinued JST housing PHR-4 option | 07/01/2019 |
| 1.03 | brand update                          | 01/22/2020 |
| 1.04 | logo, datasheet style update          | 08/05/2022 |
| 1.05 | modified design                       | 01/29/2024 |
| 1.06 | CUI Devices rebranded to Same Sky     | 09/11/2024 |
| 1.07 | added Thiele-Small Parameters         | 02/07/2025 |

The revision history provided is for informational purposes only and is believed to be accurate.



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