

**MODEL:** CDS-20144 | **DESCRIPTION:** SPEAKER**FEATURES**

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

**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                | solder pads                                                                |     |     |        |                    |
| weight                  |                                                                            |     | 1.3 |        | g                  |
| operating temperature   |                                                                            | -30 |     | 70     | $^{\circ}\text{C}$ |
| storage temperature     |                                                                            | -40 |     | 85     | $^{\circ}\text{C}$ |
| RoHS                    | yes                                                                        |     |     |        |                    |

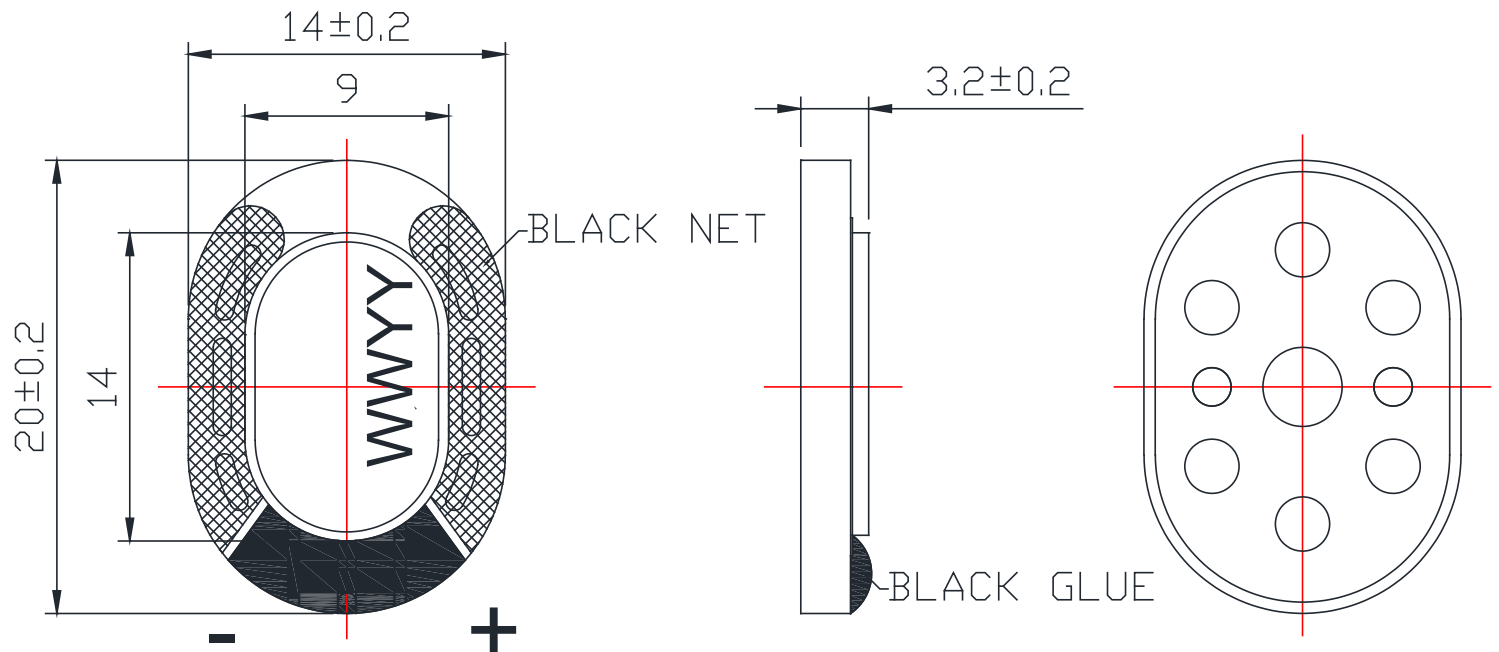
Notes: 1. All specifications measured at 5-35 $^{\circ}\text{C}$ , humidity at 45-85%, under 86-106kPa pressure, unless otherwise noted.

**SOLDERABILITY**

| parameter      | conditions/description | min | typ | max | units              |
|----------------|------------------------|-----|-----|-----|--------------------|
| hand soldering | for 1-3 seconds        | 370 | 380 | 390 | $^{\circ}\text{C}$ |

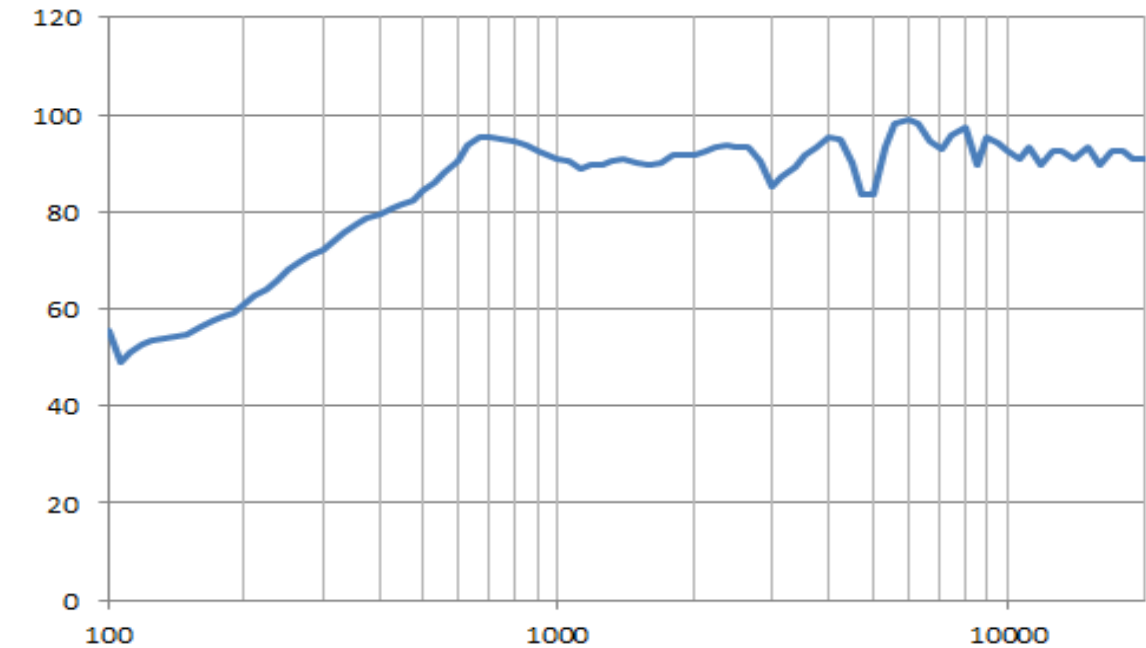
## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 0.5$  mm

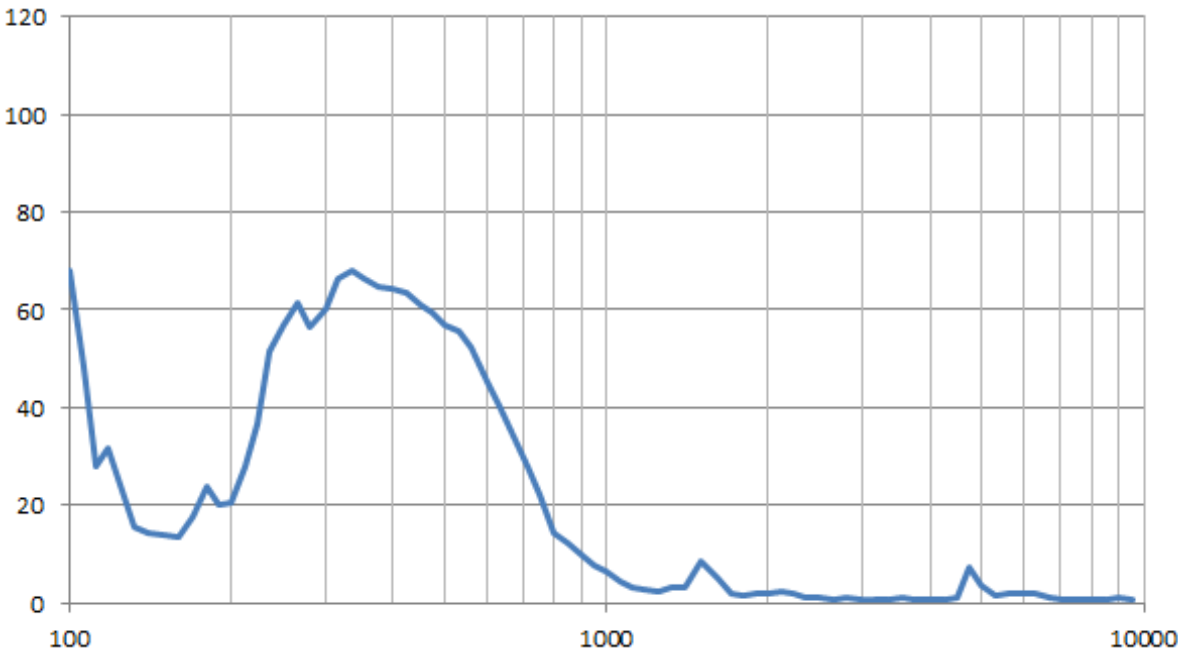


RESPONSE CURVES

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 | brand update                      | 01/21/2020 |
| 1.02 | logo, datasheet style update      | 08/05/2022 |
| 1.03 | modified design                   | 01/29/2024 |
| 1.04 | CUI Devices rebranded to Same Sky | 09/11/2024 |
| 1.05 | added Thiele-Small Parameters     | 02/26/2025 |

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



Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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