

### **Description**

Miniature magnetic receiver (balanced armature type) for use in hearing aids.

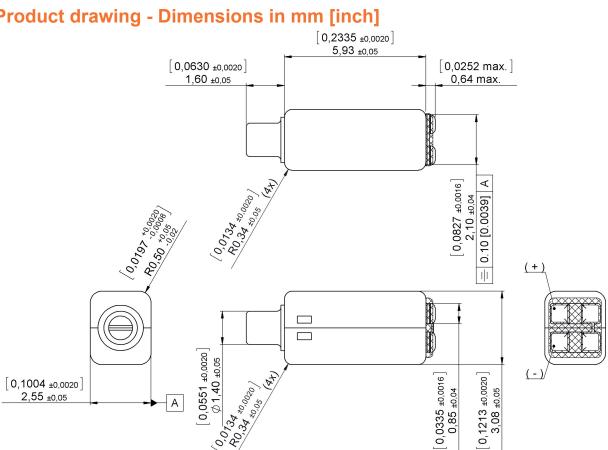
#### **Features**

- Dual receiver, series connected
- Reduced mechanical vibration
- Low magnetic radiation

#### **Mechanical data**

Weight 0.20 gr. Ni80Fe15Mo5 Case material Solder pad material Sn96.5Ag3.0Cu0.5 **Dimensions** Refer to outline drawing

### Product drawing - Dimensions in mm [inch]



Sonion reserves the right to make changes at any time to improve reliability, function or design, in order to provide the best product possible. Receivers series of this type can produce very high sound pressure levels. When such receivers are applied in hearing instruments or other communications equipment special attention should be paid to this capacity in order to prevent possible hearing damage.

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# **Data Sheet**

Receiver E50DA020



## **Specifications**

Acoustic loading: 10.0 mm of 1.0 mm diameter tubing into a 2 cc coupler.

Constant voltage drive of 0.240 V RMS (0.35 mVA @ 500 Hz) unless specified otherwise.

Environmental conditions: 23°C (73.4F), 50% RH.

| Acoustic parameters             |            | Min  | Тур  | Max   | Unit | Comments    |
|---------------------------------|------------|------|------|-------|------|-------------|
| Sensitivity                     | @ 100 Hz   | 97   | 100  | 103   | dB   |             |
|                                 | @ 500 Hz   | 97   | 100  | 103   | dB   |             |
|                                 | @ 1000 Hz  | 96.5 | 99.5 | 102.5 | dB   |             |
| Peak 1                          | frequency  | 2100 | 2400 | 2700  | Hz   |             |
|                                 | output     | 103  | 106  | 109   | dB   |             |
| Valley 1                        | frequency  | 4100 | 4600 | 5100  | Hz   |             |
|                                 | output     | 90   | 93   |       | dB   |             |
| Peak 2                          | frequency  | 5300 | 5800 | 6300  | Hz   |             |
|                                 | output     | 93   | 97   | 101   | dB   |             |
| THD                             | @ 1/3 peak |      | 1    | 5     | %    |             |
|                                 | @ 1/2 peak |      | 1    | 5     | %    |             |
| Maximum output @ peak frequency |            |      | 117  |       | dB   | @ 0.92 Vrms |

| Electric parameters   | Min       | Тур | Max | Unit | Comments |
|-----------------------|-----------|-----|-----|------|----------|
| Impedance @ 1000 Hz   | 160       | 200 | 240 | Ohm  |          |
| Impedance @ 500 Hz    | 131       | 164 | 197 | Ohm  |          |
| DC resistance @ 20°C  | 128       | 150 | 173 | Ohm  |          |
| DC bias current range | zero bias |     |     |      |          |

| Additional parameters     | Min   | Тур | Max | Unit | Comments |
|---------------------------|-------|-----|-----|------|----------|
| Shock resistance          | 12000 |     |     | g    |          |
| Storage temperature range | -40   |     | 63  | °C   |          |

A positive voltage applied to the negative terminal (-) will result in an increase in pressure at the sound outlet.

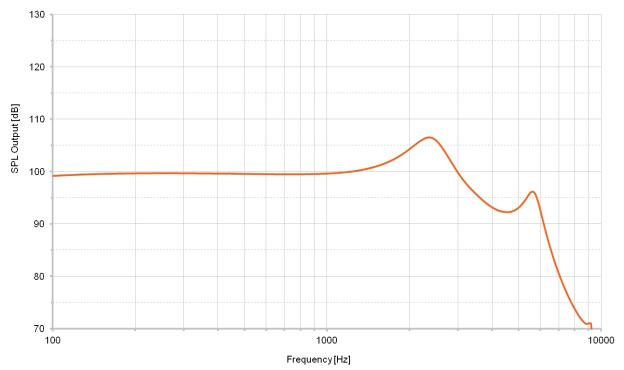
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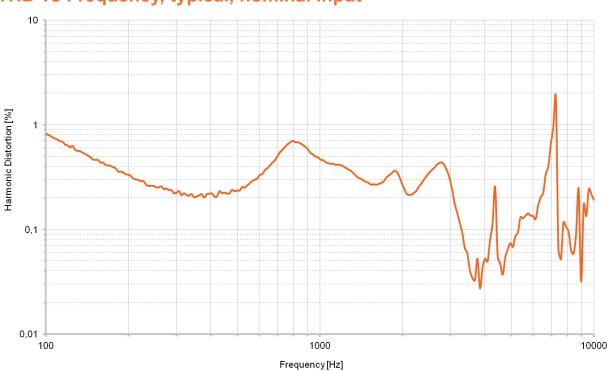




## **Typical response curve**



# THD vs Frequency, typical, nominal input



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