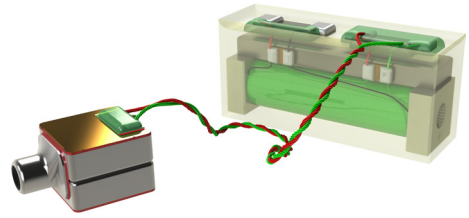


Description

Small size microdriver based on dual electret technology for IEM applications, combined with a transformer



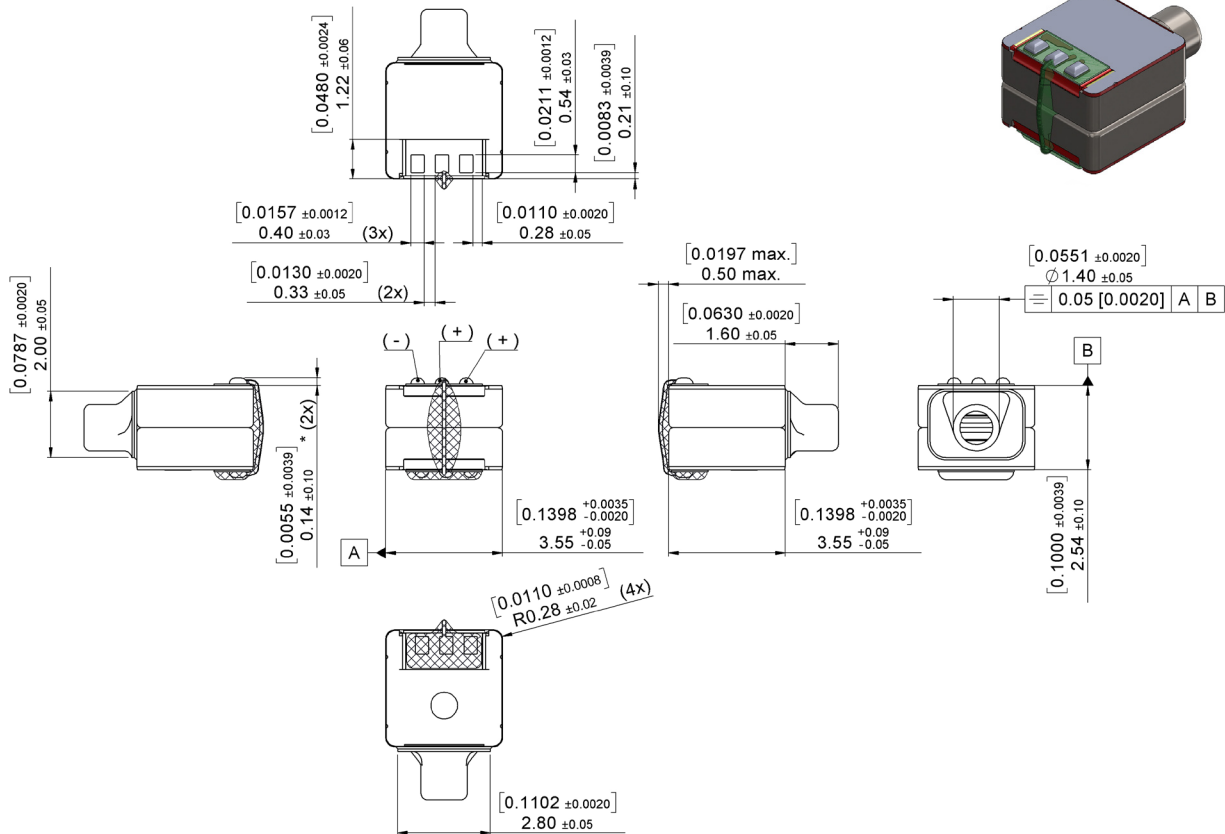
Features

- Electrostatic driver, very light membrane
- Dizygotic cartridge pair for low symmetric distortion
- Extended high frequency output up to 70 kHz
- Miniature transformer included for passive drive
- Application as supertweeter from 7 kHz and upwards

Mechanical data

| | Tweeter | Transformer |
|---------------------|--------------------------|--------------------------|
| Weight | 0.10 gr. | 0.64 gr. |
| Case material | UNS S31600 | UNS K94840 |
| Solder pad material | SAC305 | SAC305 |
| Dimensions | Refer to outline drawing | Refer to outline drawing |

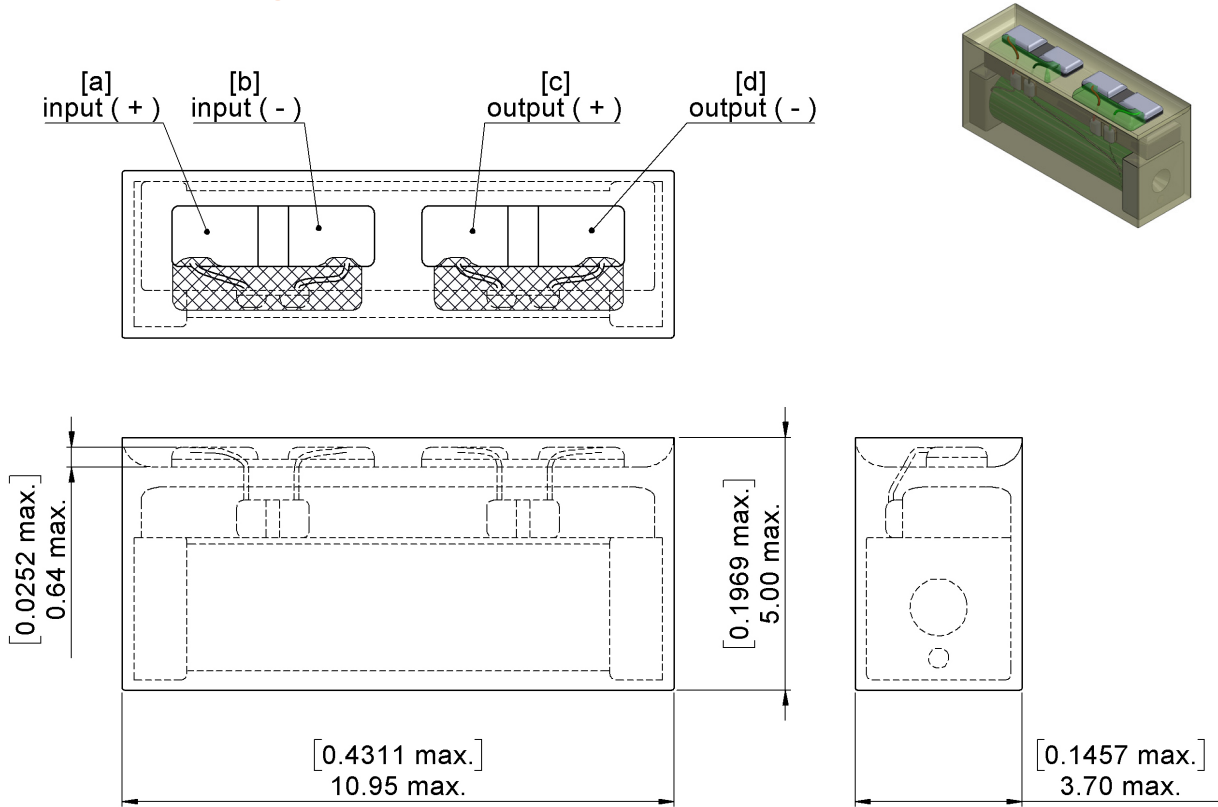
Product drawing Tweeter - Dimensions in mm [inch]



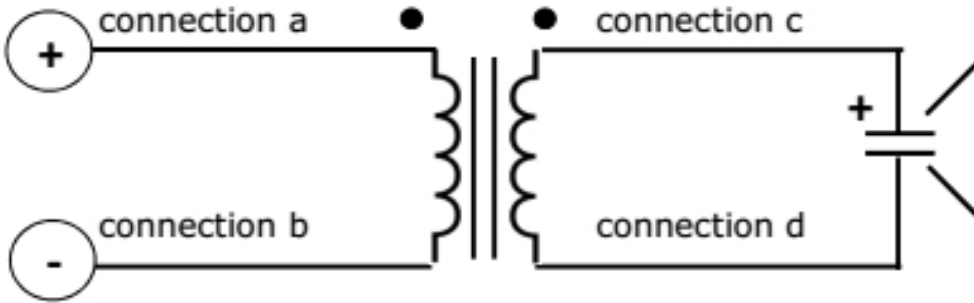
Note: the positive terminals (+) are internally connected. Only one of the two is needed for proper operation

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.

Product drawing Transformer - Dimensions in mm [inch]



Connection scheme



| | Type | Color | Length |
|--------------|-------------------|-------|-----------|
| Connection a | Solder pad | n/a | n/a |
| Connection b | Solder pad | n/a | n/a |
| Connection c | 6x 50um litz wire | Red | 30 ± 5 mm |
| Connection d | 6x 50um litz wire | Green | 30 ± 5 mm |

High voltage warning

The ET product series is designed to be part of end-products classified as Class III equipment for audio signals only (IEC62368-1/2014, secs.3.3.15 and E.1), which limits the allowed input voltage to 0.7 Vrms/2Vpp for normal operation and 1.2Vrms/3.3Vpp for incidental maxima, including transients.

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Specifications

The acoustic termination consists of 5 mm x 1.4 mm ID into a 0.4 cc coupler.

Drive is voltage drive of 100 mVrms from a low impedance source unless specified otherwise.

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

| Acoustic parameters | | Min | Typ | Max | Unit | Comments |
|-------------------------|------------|-------|-------|-------|------|--------------------|
| Sensitivity | @ 3000 Hz | 81.5 | 86 | 89 | dB | |
| | @ 10000 Hz | 77 | 80 | 83 | dB | |
| | @ 20000 Hz | 84 | 87 | 90 | dB | |
| Peak 1 | frequency | 4700 | 5100 | 5500 | Hz | |
| | output | 93.5 | 96.5 | 99.5 | dB | |
| Peak 2 | frequency | 16000 | 17500 | 19000 | Hz | |
| | output | 89 | 92 | 95 | dB | |
| Maximum output @ 30 kHz | | | 120 | | dB | @ 800 mVrms, burst |

| Electric parameters | | Min | Typ | Max | Unit | Comments |
|----------------------|--|-----|-----|-----|------|----------|
| Impedance @ 1000 Hz | | 10 | 12 | 18 | Ohm | |
| Impedance @ 5000 Hz | | 16 | 20 | 30 | Ohm | |
| DC resistance @ 20°C | | 3.5 | 4.5 | 5.5 | Ohm | |

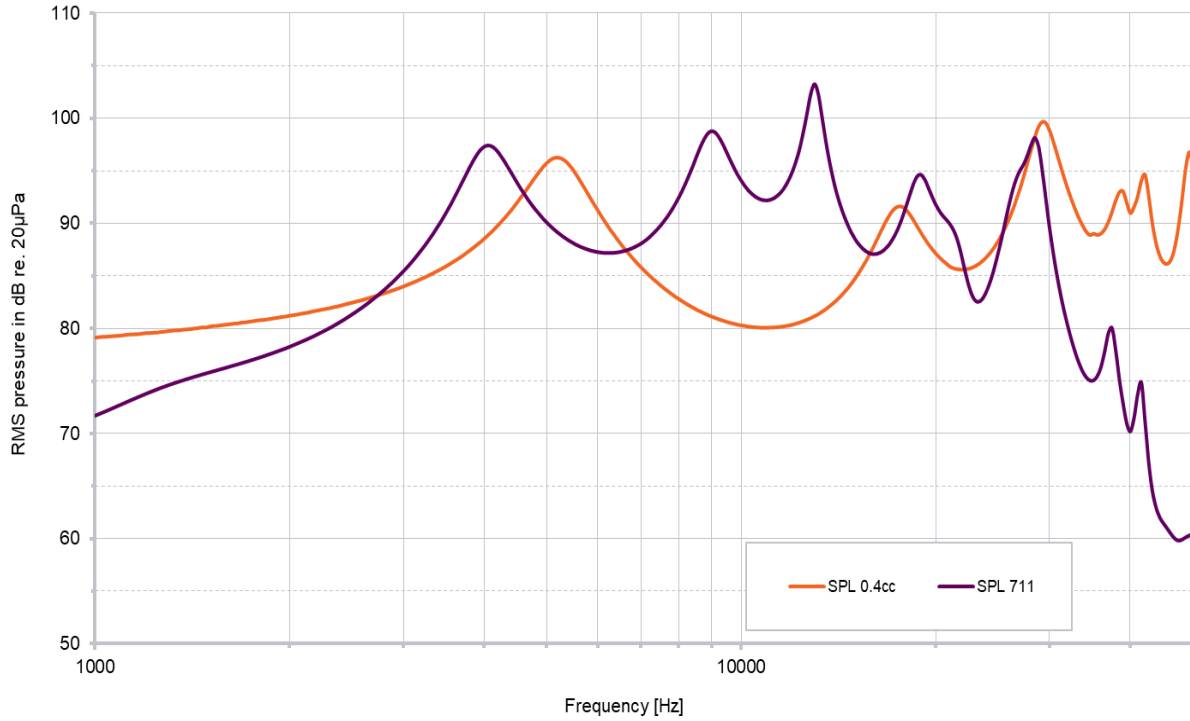
| Additional parameters | | Min | Typ | Max | Unit | Comments |
|---------------------------|--|-------|-----|-----|------|---|
| Shock resistance | | 14000 | | | g | 90% survival rate with THD @ 1/2 peak frequency < 10% |
| Storage temperature range | | -40 | | 63 | °C | |
| Rated power | | | 10 | | mVA | HP filtered @ 2 kHz with 6dB/oct min. |

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

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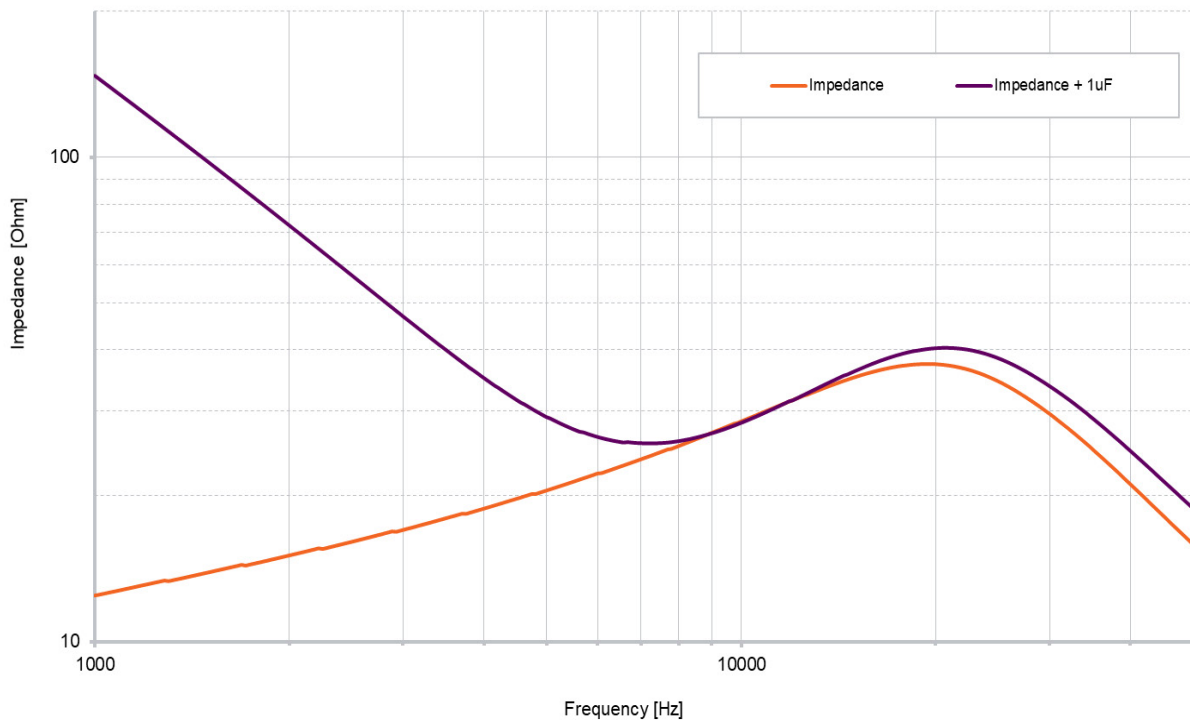
Typical response curve

The acoustic termination consists of 5 mm x 1.4 mm ID into a 0.4 cc coupler (orange) and 3 mm x 1.4 mm ID + 11 mm x 1.9 mm ID into IEC 60318-4 (711) coupler (purple), driven at 100 mVrms from a low impedance source



Typical impedance curve

The electrical impedance is measured with a constant voltage of 100 mVrms. The purple line represents the impedance including a typical filtering value of 1 uF, placed in series with the primary side of the transformer. The orange line represents the un-filtered impedance response.



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