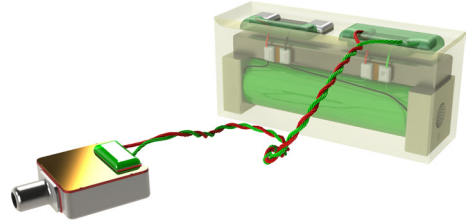


Description

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

Features

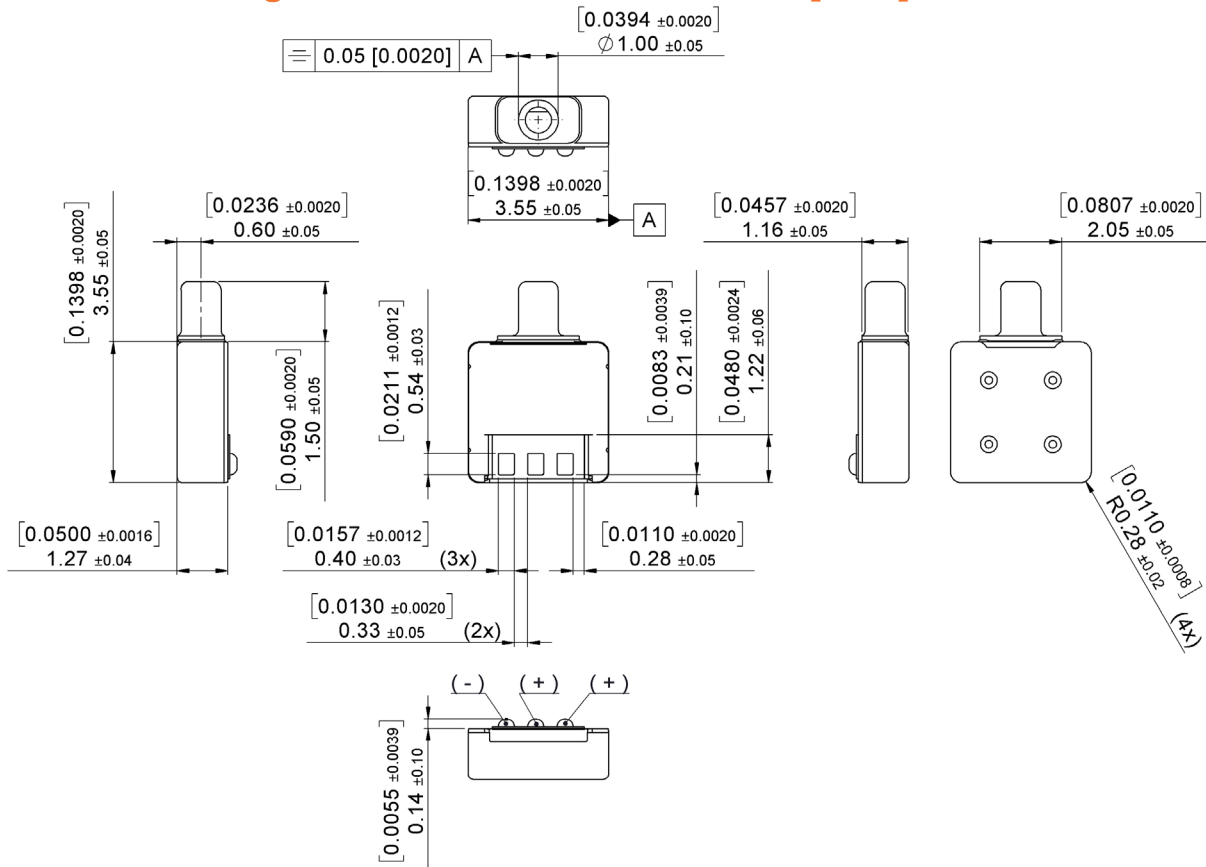
- Electrostatic driver, very light membrane
- Extended high frequency output up to 70 kHz
- Miniature transformer included for passive drive
- Application as supertweeter from 7 kHz and upwards



Mechanical data

	Tweeter	Transformer
Weight	0.05 gr.	0.64 gr.
Case material	UNS S31600	UNS K94840
Solder pad material	SAC305	SAC305
Dimensions	Refer to outline drawing	Refer to outline drawing

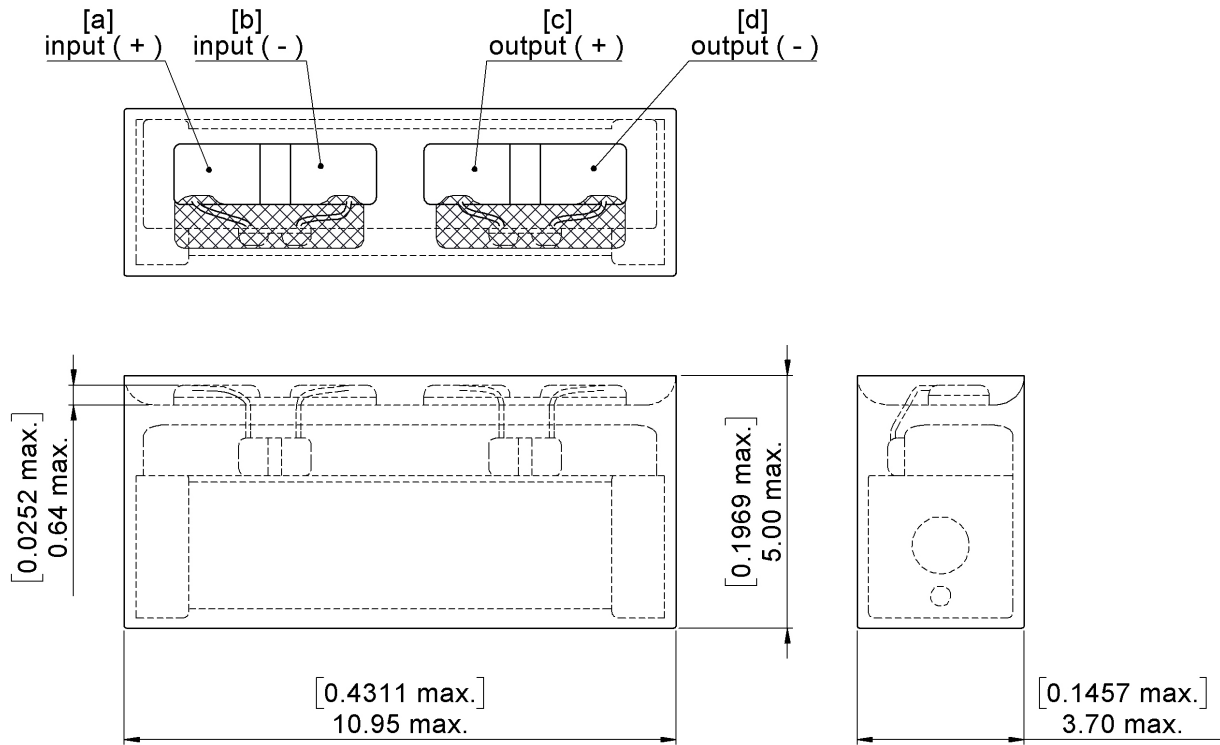
Product drawing Tweeter - Dimensions in mm [inch]



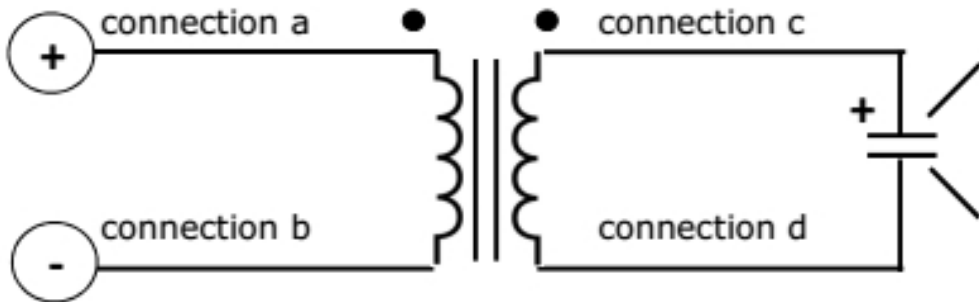
Note: the positive terminals (+) are internally connected. Only one of the two is needed for proper operation

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	77	80	83	dB	
	@ 10000 Hz	75	78	81	dB	
	@ 20000 Hz	73.5	76.5	79.5	dB	
Peak 1	frequency	5000	5400	5800	Hz	
	output	87.5	90.5	93.5	dB	
Peak 2	frequency	14500	16000	17500	Hz	
	output	86	89	92	dB	
Maximum output @ 30 kHz			112		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	

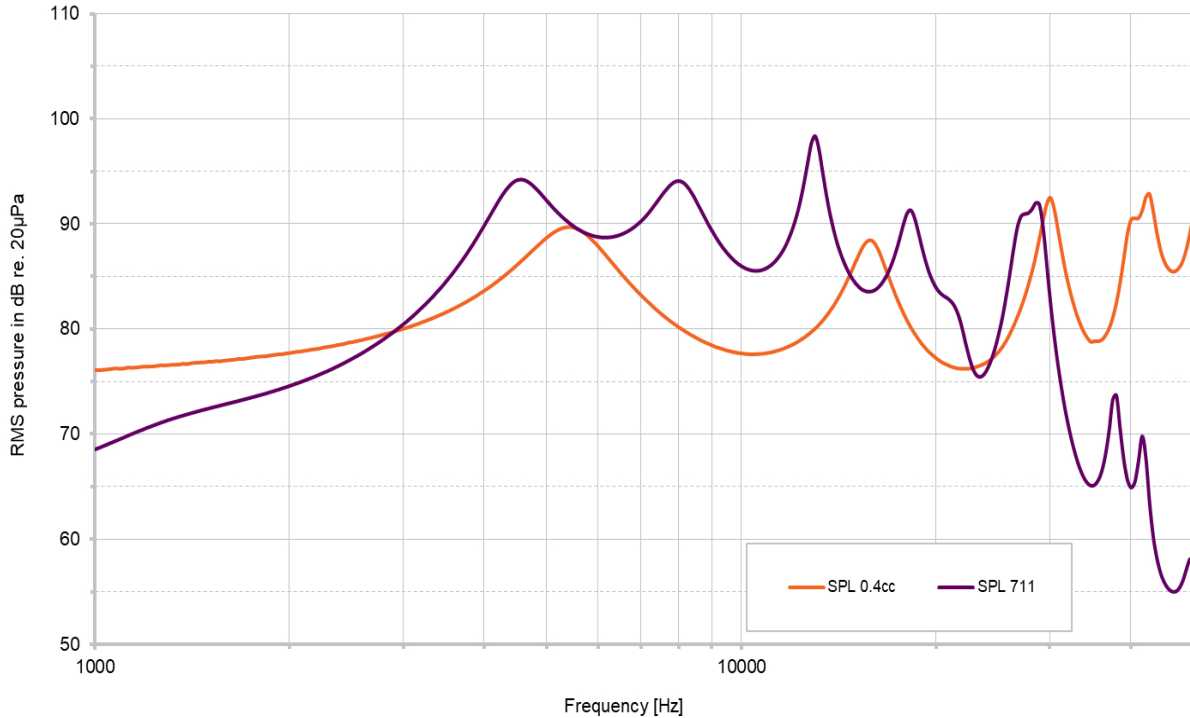
Additional parameters	Min	Typ	Max	Unit	Comments
Shock resistance	14000			g	90% survival rate with THD @ 1/2 peak frequency < 10%
Storage temperature range	-40		63	°C	
Rated power		10		mVA	filtered @ 2 kHz with 6dB/oct min.

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

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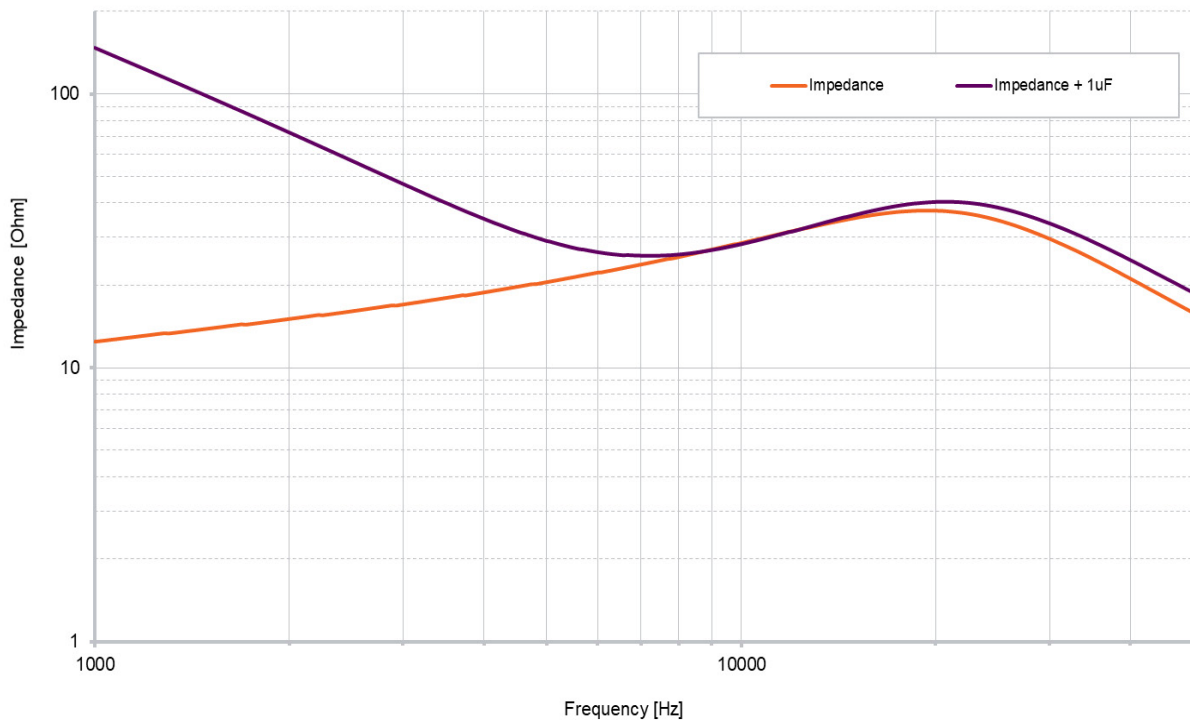
Typical response curve

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 (PA) 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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