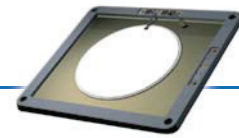


SPS-4640-03



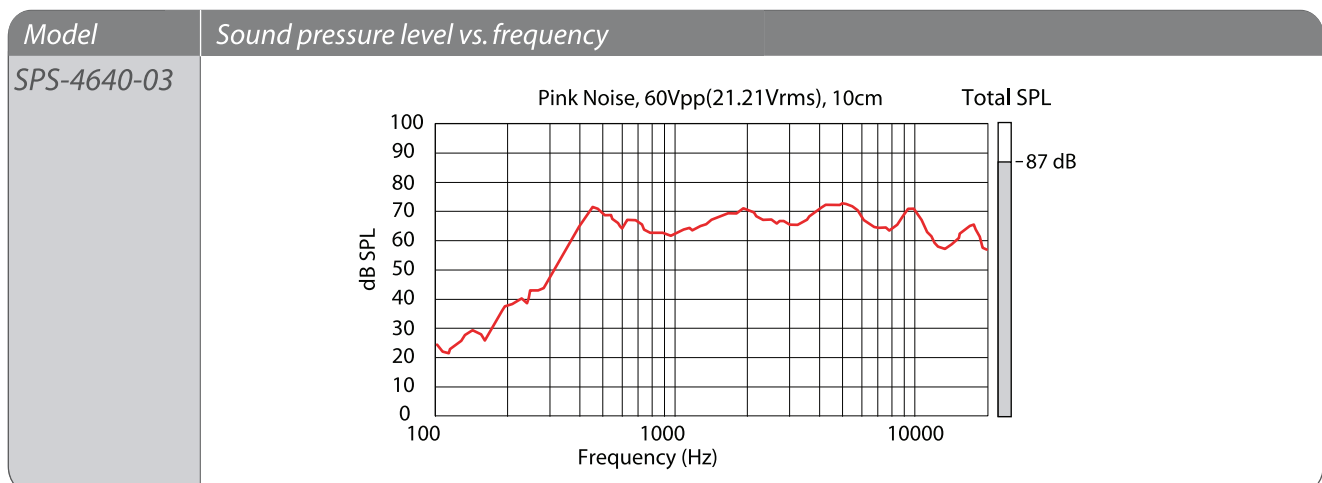
The electronics industry still is a very demanding industry which requires more and more flat and small components. Therefore Sonitron developed this new flat piezoceramic speaker. With a thickness of only 2 mm and dimensions of 43.6x50 mm this small multifunctional speaker/microphone is ideal for use in portable electronic devices (PDA, GPS, MP3,...), notebooks and consumer products.

SPECIFICATIONS

Frequency Range :	400 Hz - 20 kHz
Max SPL @ 1 m, 60 Vpp: (average @ 4-point)	83 dB
Distortion (%THD): (80dB @ 5 cm, average @ 4-point)	≤1.5%
Sensitivity: (SPL @ 10cm for 1Vrms, average @ 4-point : 800Hz, 1kHz, 1.5kHz, 2kHz)	72 dB
Capacitance (+/- 20%):	225 nF
Impedance @ 1kHz (+/-20%):	680 ohm
Operating Voltage:	5-60 Vpp
Weight:	2.8g
Operating Temperature:	-20°C to 60°C
Storage Temperature:	-40°C to 60°C
Case material:	PC
Standard color:	Black

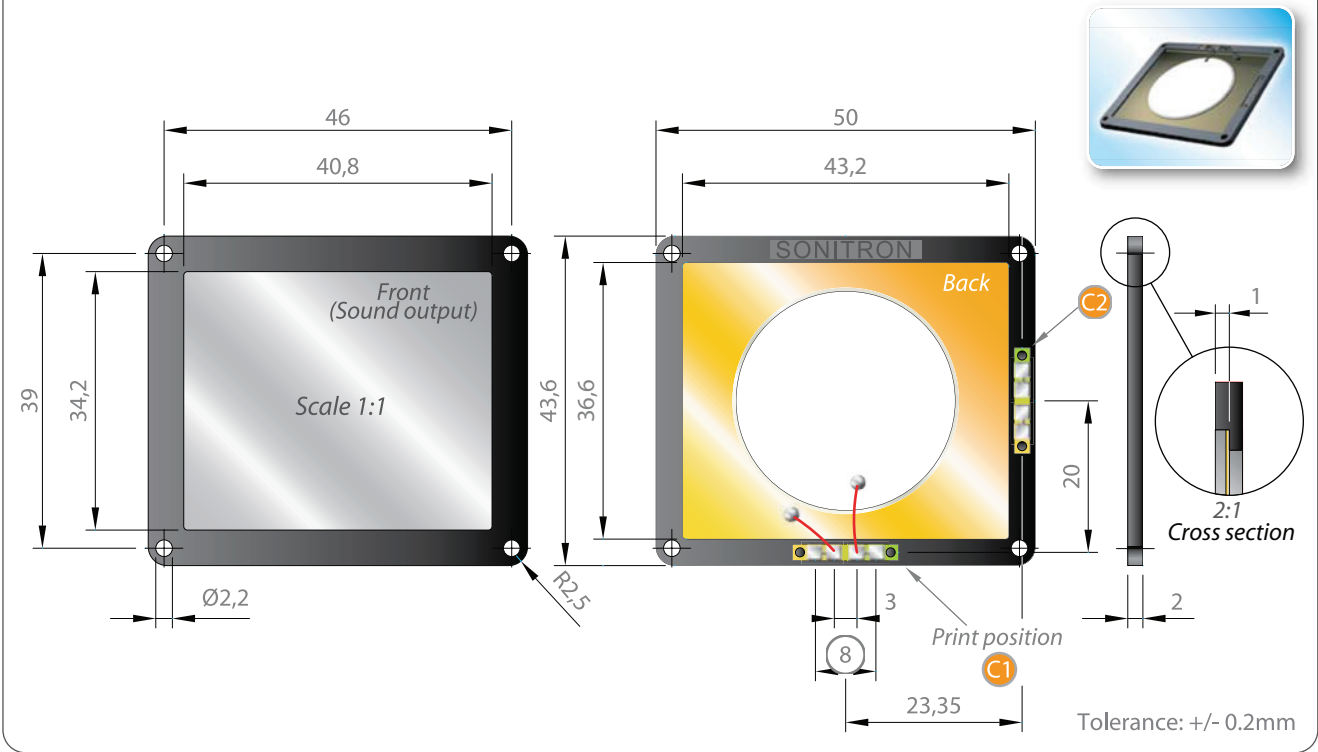
speaker mounted in closed box of 40 x 15 x 5cm

FREQUENCY RESPONSE



DIMENSIONS (all dimensions are in mm)

SPS-4640-03



Recommended Piezo Audio Amplifiers (see page 104, 105, 106)

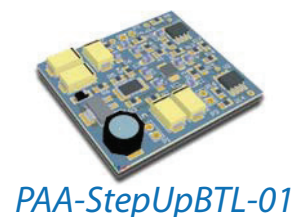
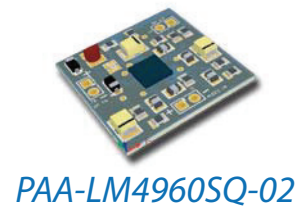
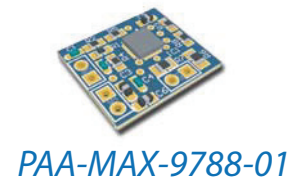
Integrated Circuits

Maxim
MAX9788

National semiconductor
LM4960

Texas Instruments
TPA2100P1

Sonitron production models



PRODUCT CODIFICATION

SPS Sonitron Polymer/metal Speaker	2220-03 3530-03 4640-03 6555-03 8770-03	C1 or C2 C1: Position of solder pads C2: Position of solder pads	
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LIST OF AVAILABLE PRODUCT TYPES

SPS-2220-03	SPS-3530-03-C1 SPS-3530-03-C2	SPS-4640-03-C1 SPS-4640-03-C2	SPS-6555-03-C1 SPS-6555-03-C2	SPS-8770-03-C1 SPS-8770-03-C2
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PACKAGING

The SPS-2220-03/3530-03/4640-03/6555-03/8770-03 are packed in trays (245 L x 245 W) and sold in boxes with dimensions of 250 L x 250 W x 125 H.

Number	SPS-2220-03	SPS-3530-03	SPS-4640-03	SPS-6555-03	SPS-8770-03
per tray	81	25	16	9	6
per box	(81x70) 5670	(25x40) 1000	(16x40) 640	(9x40) 360	(6x40) 240

Dimensions of the tray and position of the SPS-speakers 2022-03/3035-03/4640-03/8770-03/SPS-27-01 are illustrated below:

- SPS-2220-03 A=1.5 mm
 B=26 mm
 C=26 mm
- SPS-3530-03 A=3 mm
 B=47.5 mm
 C=47.5 mm
- SPS-4640-03 A=3 mm
 B=60 mm
 C=60 mm
- SPS-6555-03 A= 3mm
 B=68.5mm
 C=75.5mm
- SPS-8770-03 A=3 mm
 B=78 mm
 C=120 mm

