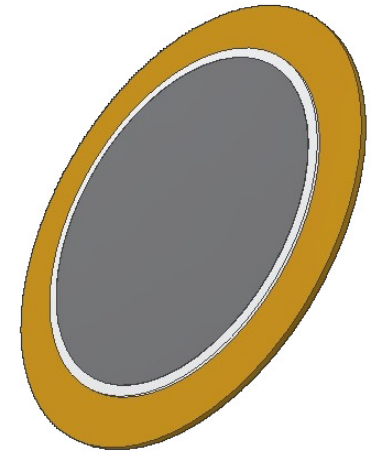


# AB2040B 20mm Piezoelectric Bender

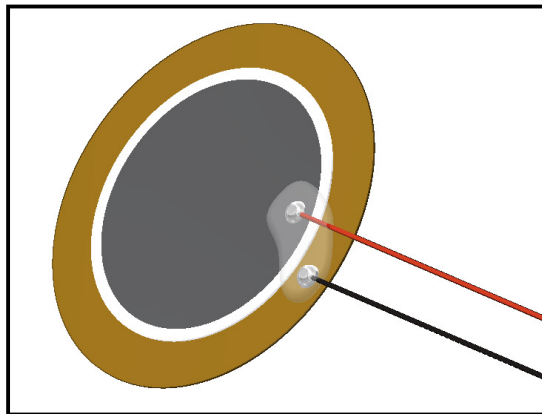


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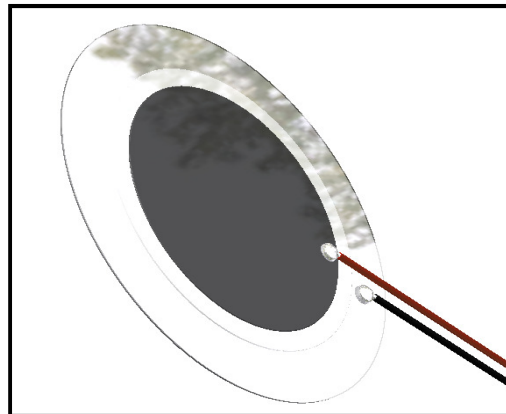
## Product Overview

- 20mm diameter ceramic piezo bender with 4 kHz resonant frequency
- Reliable, 0.28mm thin, and lightweight
- Very low current consumption for use in portable devices
- Designed to be driven with direct TTL or CMOS signals up to 30Vp-p

Also available with 100mm lead wires and in Stainless Steel with 100mm lead wires



AB2040B-LW100-R

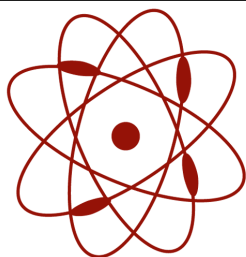


AB2040S-LW100-R



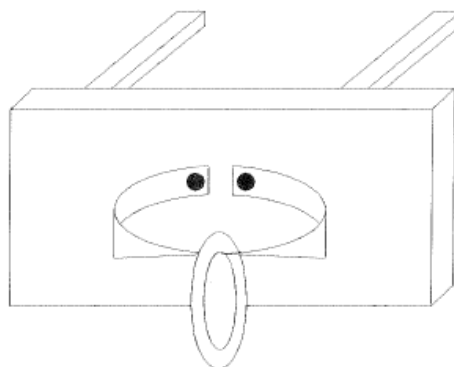
RoHS Compliant





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## AB2040B 20mm Piezoelectric Bender



The piezo ceramic diaphragm shall be clamped at a nodal point as shown in the figure above and be free from any mechanical stress. The resonant frequency and resonant impedance is measured using sine sweep analysis. The resonant frequency is defined where the impedance shows minimum value; this shall also be the resonant impedance.

Capacitance is measured at 120 Hz using an LCR meter such as a Hewlett Packard HP49194A.

### Nodal Mounting



Mounting typically occurs at 60% of the overall diameter of the piezo bender's brass or steel plate. Usually the same diameter as the piezo ceramic element.

Higher output than Edge Mounting with reduced frequency response bandwidth (i.e. single tone).

### Edge Mounting



Mounting typically occurs at 1mm inside the outside edge of the bender's brass or steel plate.

Wider frequency response than Nodal Mounting while sacrificing maximum output.

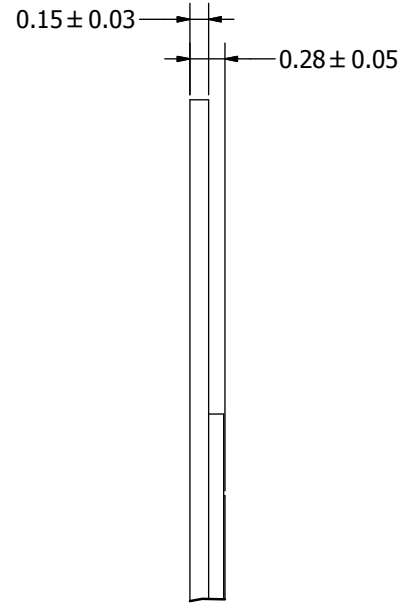
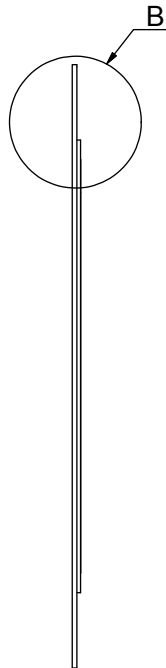
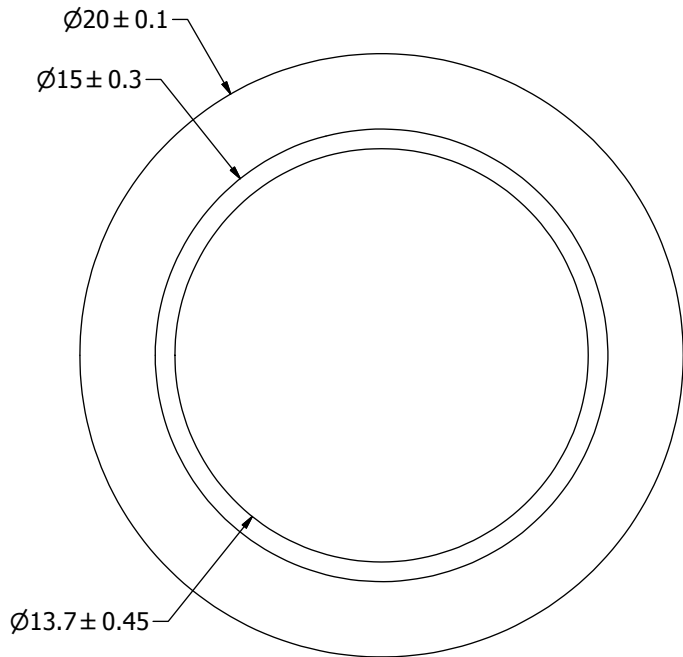
# SPECIFICATIONS

PARAMETERS	VALUES	UNITS
RESONANT FREQUENCY	4,000 ± 500	Hz
RESONANT IMPEDANCE (MAX)	350	Ohm
MAX INPUT VOLTAGE	30	Vp-p
CAPACITANCE @ 1KHZ	25,000 ±30%	pF
PLATE MATERIAL	BRASS	-
OPERATING TEMPERATURE	-20 ~ +60	°C
STORAGE TEMPERATURE	-20 ~ +70	°C

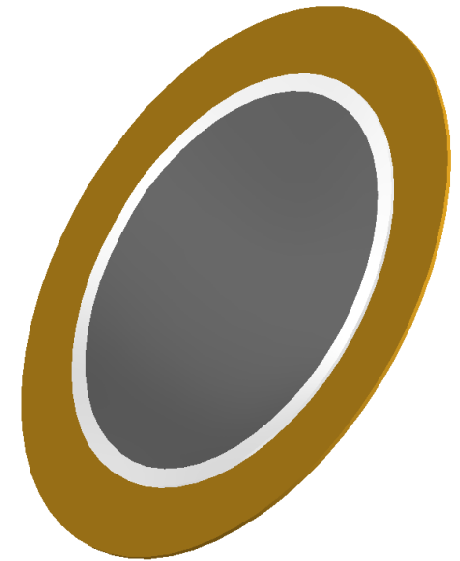
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# REVISION HISTORY

LTR	DESCRIPTION	DATE	APPROVED
-	RELEASED FROM ENGINEERING	11/6/2001	
A	REVISED TO NEW TEMPLATE	9/4/2003	R.W.
B	ADDED DIMENSION AND TOLERANCES	1/7/2004	R.W.
C	REVISED SPECIFICATIONS	1/12/2004	R.W.
D	REVISED DIMENSION	1/28/2004	R.W.
E	REVISED DIMENSION	8/31/2004	R.W.
F	REVISED CAP. SPEC. FROM 1 KHz TO 100 Hz & THICKNESS TOL. FROM .02 TO .03	8/8/2005	R.W.
G	REVISED DIMENSION SIZE AND STYLE	12/21/2005	B.R.
H	REVISED TO INVENTOR 3-D DRAWING TEMPLATE	8/11/2010	B.R.

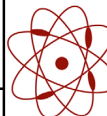


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### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
3. THIS PART IS RoHS 2002/95/EC COMPLIANT.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS, TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°.	SIZE	Designed by	Date	Checked by	Date	Approved by	Date	Drawn Date
	A3	B.C.	5/28/2003			S.J.	5/30/2003	8/10/2010
AB2040B.idw		 <b>pui audio</b> a projects unlimited company			<b>AB2040B</b>			
Bender						Edition	Sheet	
						-	1 / 1	