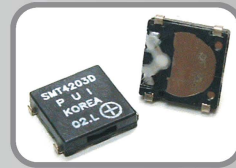
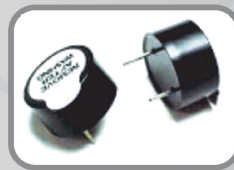


August, 2004



Sound Solutions for Over 50 Years



Audio Products Guide

Alerts

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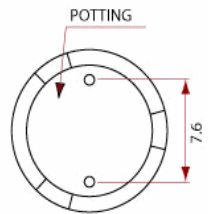
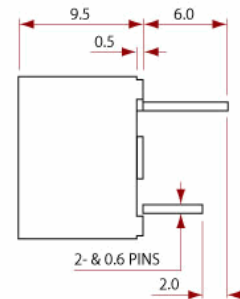
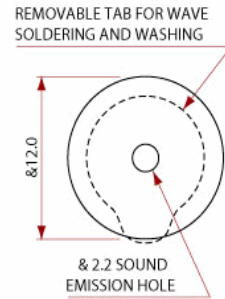
**Customer Service
Engineering Staff
In-house Testing Facility
Sales Team**

Coming Soon!

E-Commerce - on-line ordering, order inquiry and tracking capabilities, to name just a few of the great new features.

AI-1223-TWT-12V-R**Case Material:** Noryl**Weight:** 2 g**Pin Material:** Tin-Plated Red Copper**Environmentally friendly, lead free****FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2300 +/- 400 Hz
- Lead Free Component

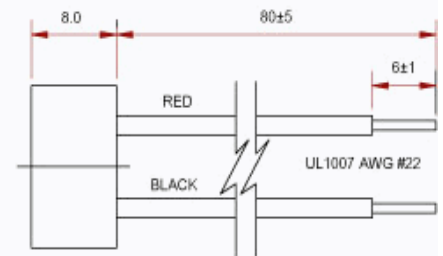
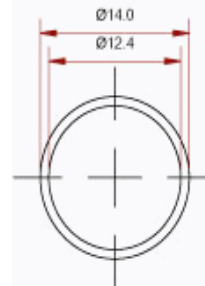
NEW!**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8 - 16 Vdc
Resonant Frequency	2300 +/- 400 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	30 mA

Alerts

AI-1450-TWW-WP**Case:** ABS**Weight:** 3 grams**Wire Color Code:** Red (+) Black (-)**Wire Gauge:** 22AWG, 80mm length**FEATURES**

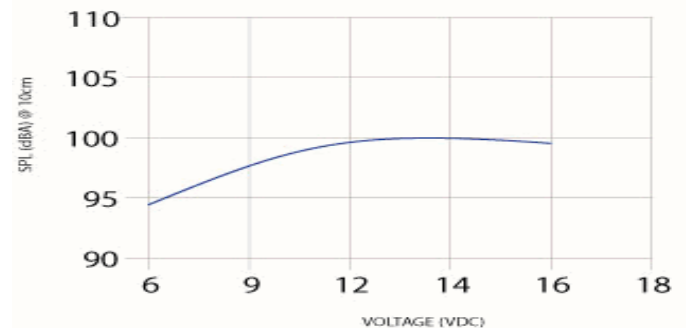
- Compact size
- Dustproof
- Waterproof

NEW!**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	9 - 16 Vdc
Resonant Frequency	5000 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	35 mA

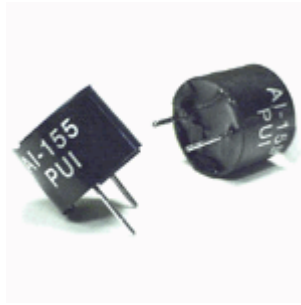
Performance

Typical SPL vs. Volts

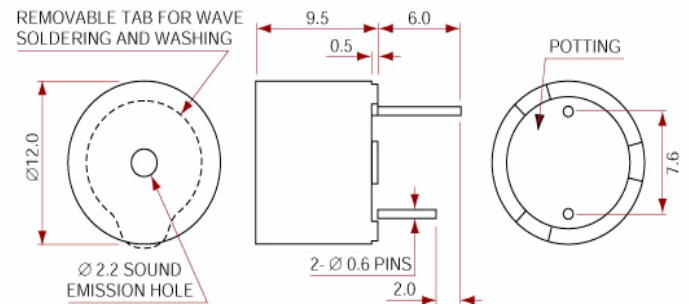


AI-155**FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2300 +/- 300 Hz

**Case Material:** Noryl**Weight:** 2 g**Pin Material:** Tin-Plated Copper**Mechanical**

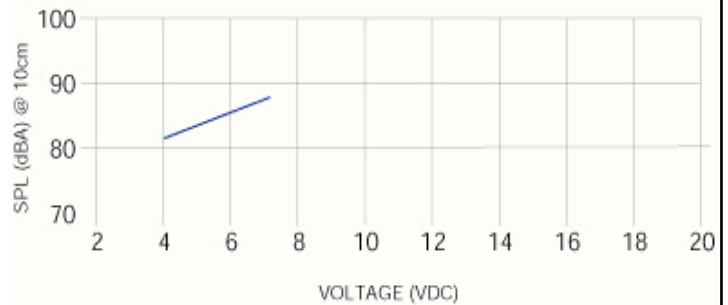
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	5.0 Vdc
Operating Voltage	3 - 7 Vdc
Resonant Frequency	2300 +/- 300 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	30 mA

Performance

Typical SPL vs. Volts



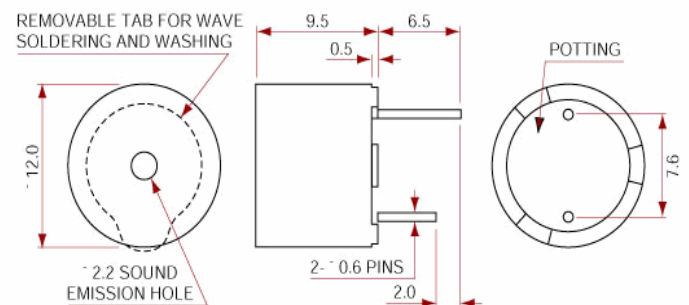
Alerts

AI-165**FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2300 +/- 400 Hz

**Case Material:** ABS**Weight:** 2 g**Pin Material:** Tin-Plated Copper**Mechanical**

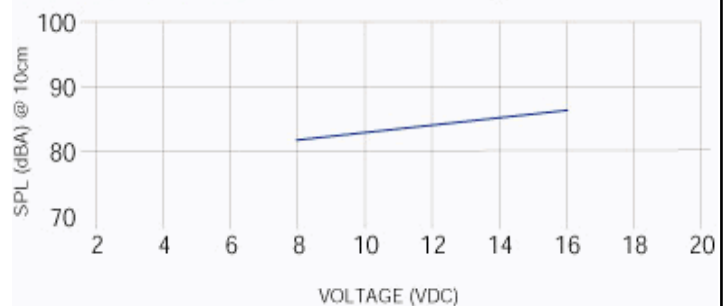
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8 - 16 Vdc
Resonant Frequency	2300 +/- 400 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	30 mA

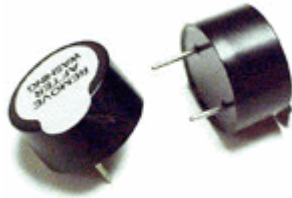
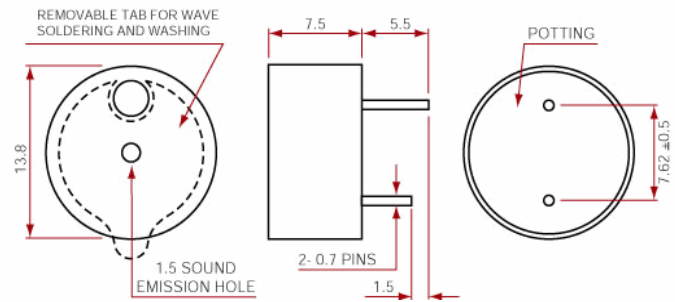
Performance

Typical SPL vs. Volts



AI-175**Case Material:** ABS**Weight:** 1 g**Pin Material:** Red Copper**FEATURES**

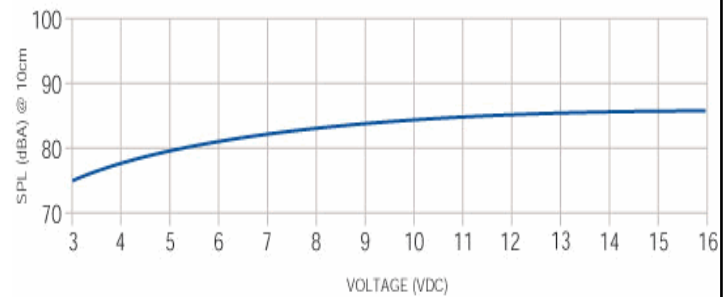
- **Mounting:** Thru Hole
- **Tone:** Continuous
- **Frequency:** 4000 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 16 Vdc
Resonant Frequency	4000 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	80 dBA
Rated Current (Max.)	7 mA

Performance

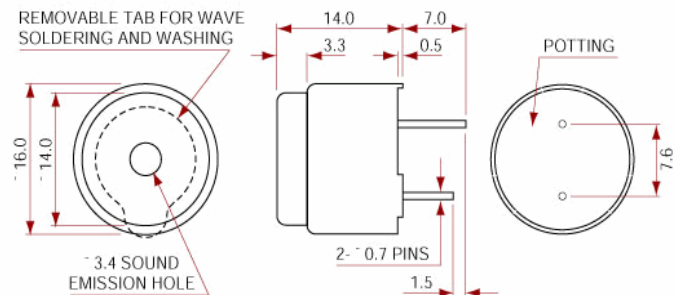
Typical SPL vs. Volts



Alerts

AI-185**Case Material:** ABS**Weight:** 7 g**Pin Material:** Tin-Plated Copper**FEATURES**

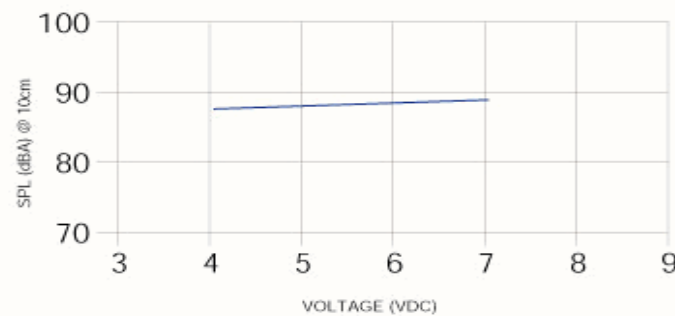
- **Mounting:** Thru Hole
- **Tone:** Continuous
- **Frequency:** 2200 +/- 300 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	5.0 Vdc
Operating Voltage	4 - 8 Vdc
Resonant Frequency	2200 +/- 300 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	30 mA

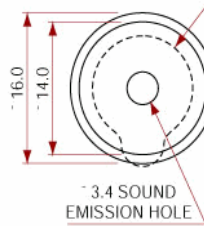
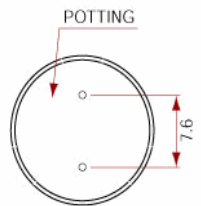
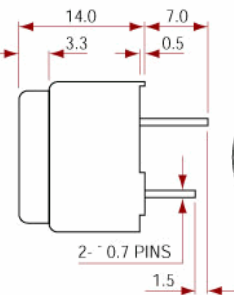
Performance

Typical SPL vs. Volts



AI-195**FEATURES**

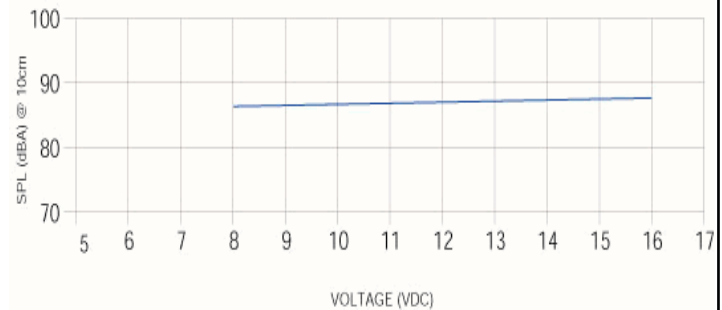
- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2200 +/- 300 Hz

**Case Material:** ABS**Weight:** 7 g**Pin Material:** Tin-Plated Copper**Mechanical**REMOVABLE TAB FOR WAVE
SOLDERING AND WASHINGDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8 - 15 Vdc
Resonant Frequency	2200 +/- 300 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	30 mA

Performance

Typical SPL vs. Volts



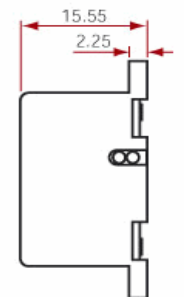
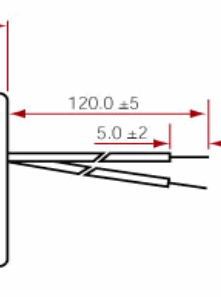
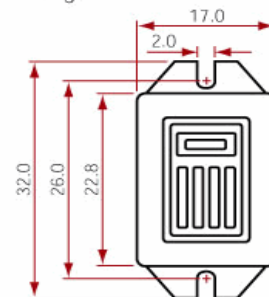
Alerts

AI-221**FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 400 +/- 100 Hz

**Case Material:** ABS**Weight:** 9.7 g**Terminal Material:** Lead Wire**Wire Gauge:** UL1007 AWG #26**Mechanical**

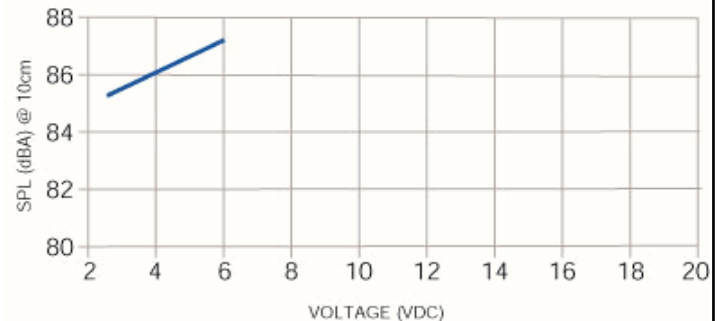
Flange mount

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	4.5 Vdc
Operating Voltage	3 - 6 Vdc
Resonant Frequency	400 +/- 100 Hz
Sound Pressure Level @ 10 cm (Min.)	70 dBA
Rated Current (Max.)	24 mA

Performance

Typical SPL vs. Volts

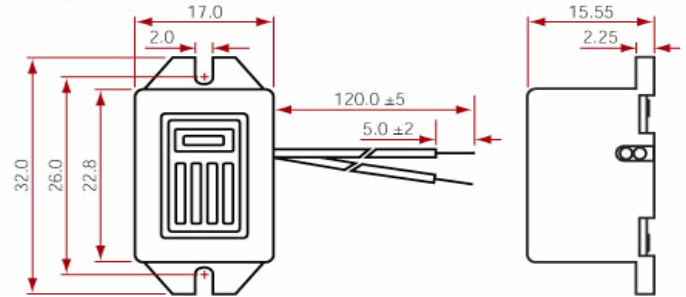


AI-222**FEATURES**

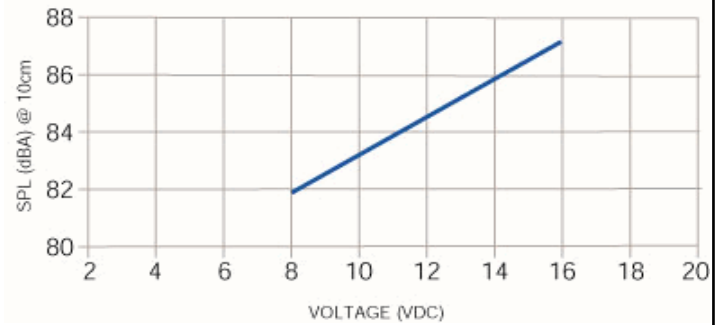
- Mounting: Flange
- Tone: Continuous
- Frequency: 400 +/- 100 Hz

**Case Material:** ABS**Weight:** 9.7 g**Terminal Material:** Lead Wire**Wire Gauge:** UL1007 AWG #26**Mechanical**

Flange mount

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Volts

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8 - 16 Vdc
Resonant Frequency	400 +/- 100 Hz
Sound Pressure Level @ 10 cm (Min.)	79 dBA
Rated Current (Max.)	30 mA

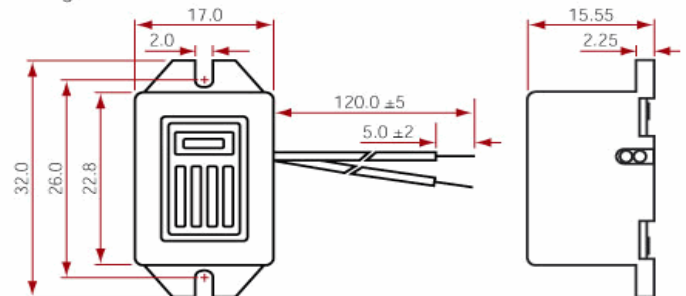
Alerts

AI-223**FEATURES**

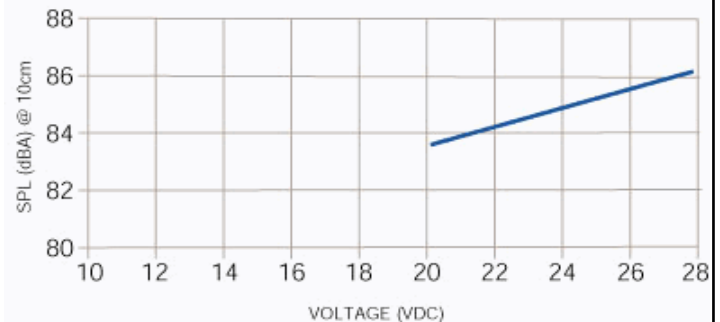
- Mounting: Flange
- Tone: Continuous
- Frequency: 400 +/- 100 Hz

**Case Material:** ABS**Weight:** 9.7 g**Terminal Type:** Lead Wire**Wire Gauge:** UL1007 AWG #26**Mechanical**

Flange mount

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Volts

**Electrical**

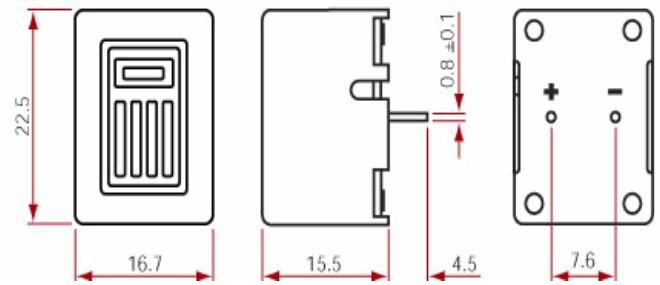
Parameter	Value
Rated Voltage	24.0 Vdc
Operating Voltage	20 - 28 Vdc
Resonant Frequency	400 +/- 100 Hz
Sound Pressure Level @ 10 cm (Min.)	76 dBA
Rated Current (Max.)	24 mA

AI-227*Case Material: ABS**Weight: 8.5 g**Pin Material: Tin-Plated Phosphor Bronze***FEATURES**

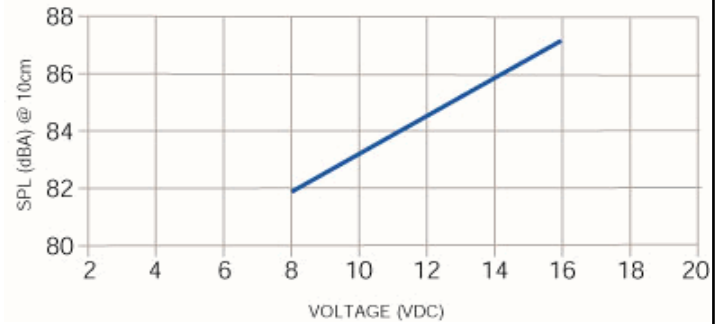
- Mounting: Flange
- Tone: Continuous
- Frequency: 400 +/- 100 Hz

**Mechanical**

P.C. mount

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Volts

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8 - 18 Vdc
Resonant Frequency	400 +/- 100 Hz
Sound Pressure Level @ 10 cm (Min.)	77 dBA
Rated Current (Max.)	25 mA

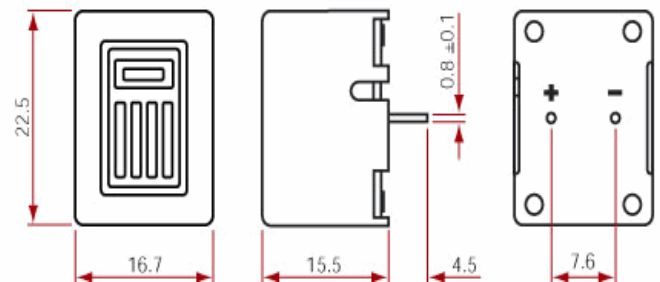
Alerts

AI-228*Case Material: ABS**Weight: 8.5 g**Pin Material: Tin-Plated Phosphor Bronze***FEATURES**

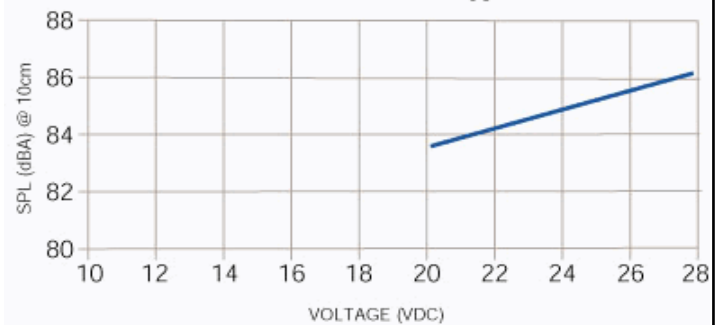
- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 400 +/- 100 Hz

**Mechanical**

P.C. mount

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

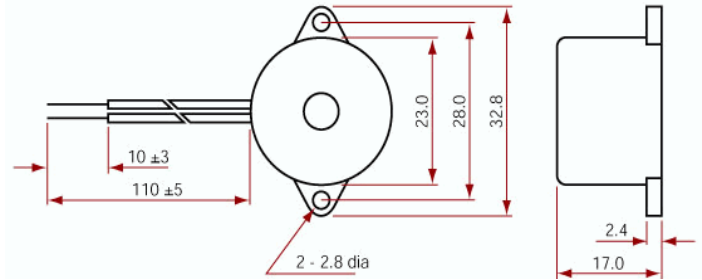
Typical SPL vs. Volts

**Electrical**

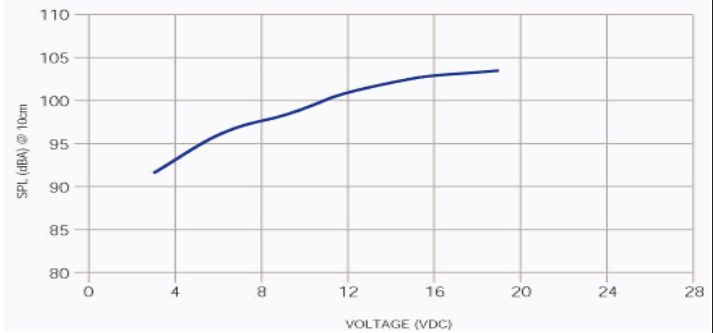
Parameter	Value
Rated Voltage	24.0 Vdc
Operating Voltage	20 - 28 Vdc
Resonant Frequency	400 +/- 100 Hz
Sound Pressure Level @ 10 cm (Min.)	76 dBA
Rated Current (Max.)	20 mA

AI-250**FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 3700 +/- 500 Hz

**Case Material:** ABS**Weight:** 5 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

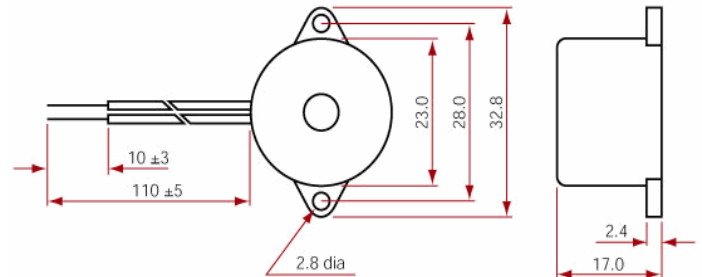
Typical SPL vs. Volts



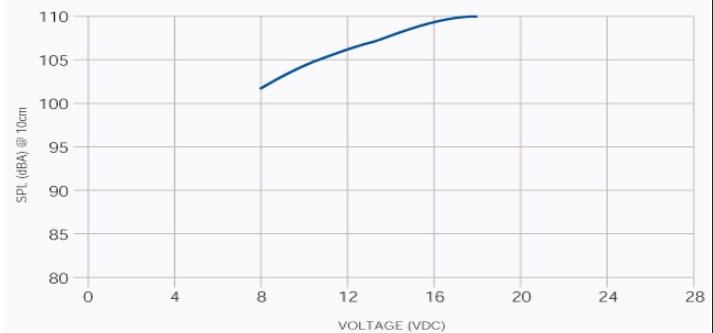
Alerts

AI-250H**FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 350 +/- 500 Hz

**Case Material:** ABS**Weight:** 4.4 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

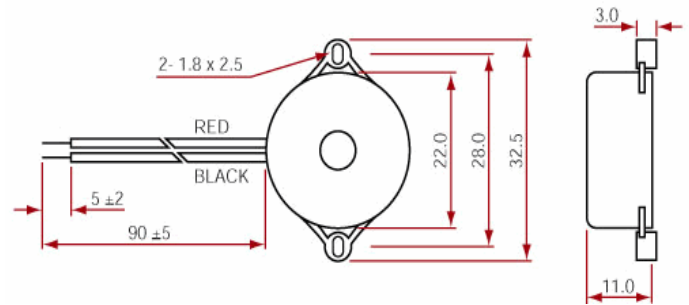
Typical SPL vs. Volts

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8 - 18 Vdc
Resonant Frequency	3500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	97 dBA
Rated Current (Max.)	12 mA

AI-251**Case Material:** ABS**Weight:** 5 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**FEATURES**

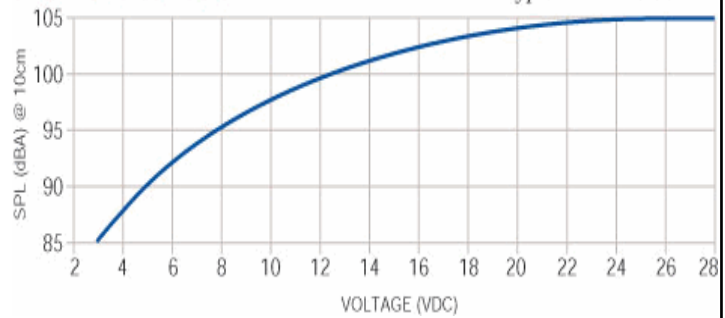
- **Mounting:** Flange
- **Tone:** Continuous
- **Frequency:** 4500 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 28 Vdc
Resonant Frequency	4500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	5 mA

Performance

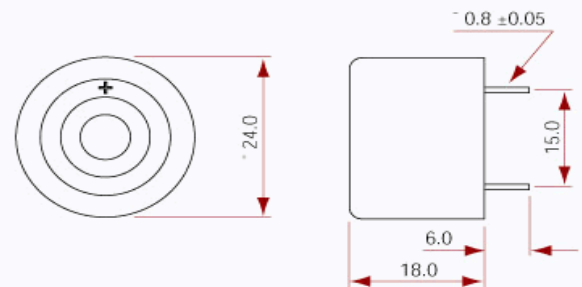
Typical SPL vs. Volts



Alerts

AI-254**Case Material:** ABS**Weight:** 6 g**Pin Material:** Red Copper**FEATURES**

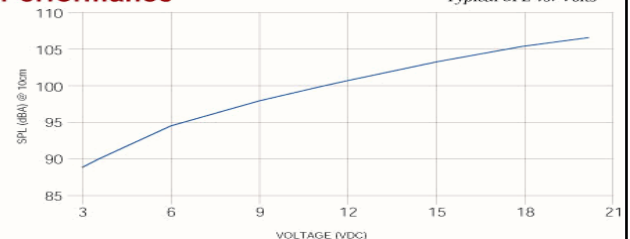
- **Mounting:** Thru Hole
- **Tone:** Continuous
- **Frequency:** 3700 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 16 Vdc
Resonant Frequency	3700 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	100 dBA
Rated Current (Max.)	8 mA

Performance

Typical SPL vs. Volts

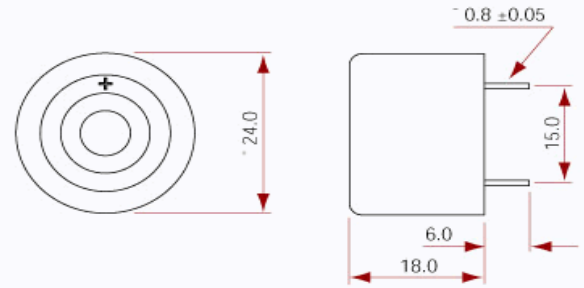


AI-254H*Case: ABS, black**P.C. Pins: Tin-plated brass**Weight: 0.18 oz. (5 grams)**Polarity Mark: On top of case***FEATURES**

- Continuous tone
- P.C. mounting
- 3600 Hz frequency
- Low current consumption

**Mechanical**

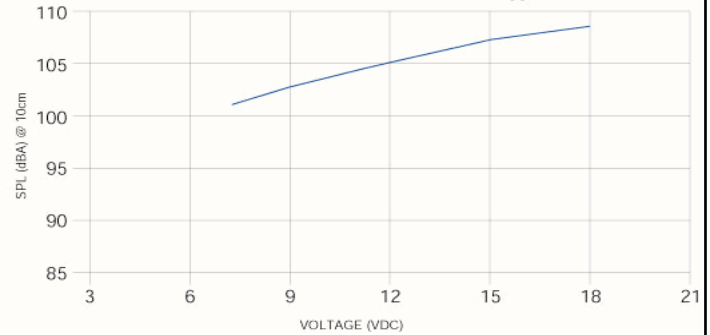
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8.0 - 18.0 Vdc
Resonant Frequency	3800 Hz
Sound Pressure Level @ 10 cm (Min.)	95 dBA
Rated Current (Max.)	8 mA

Performance

Typical SPL vs. Volts



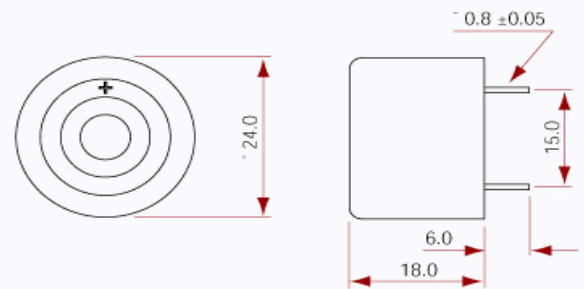
Alerts

AI-254S*Case Material: ABS**Weight: 6 g**Pin Material: Red Copper***FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 3700 +/- 500 Hz

**Mechanical**

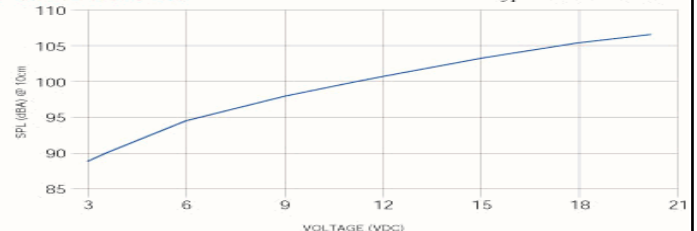
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 16 Vdc
Resonant Frequency	3700 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	100 dBA
Rated Current (Max.)	8 mA

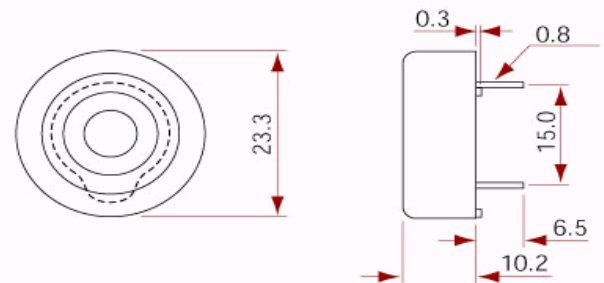
Performance

Typical SPL vs. Volts



AI-256**Case Material:** Noryl**Weight:** 3 g**Pin Material:** PbSn-Plated Copper**FEATURES**

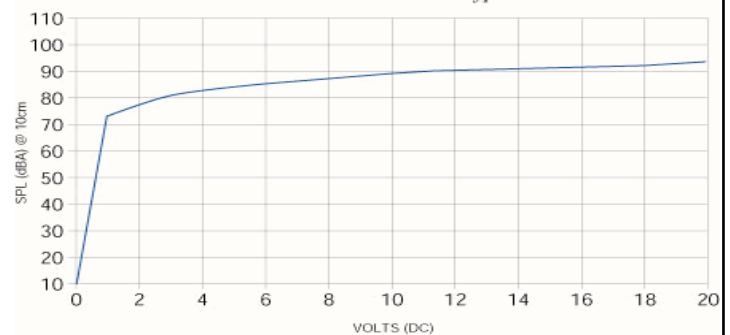
- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 3100 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 20 Vdc
Resonant Frequency	3100 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	15 mA

Performance

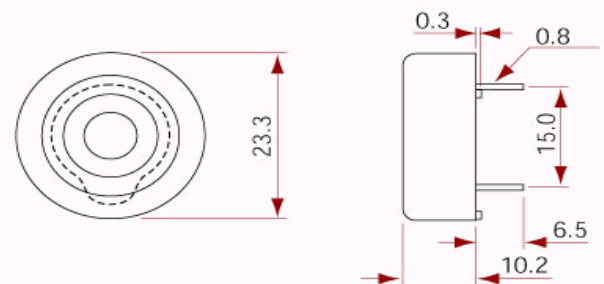
Typical SPL vs. Volts



Alerts

AI-257**Case:** Polycarbonate, gray**Weight:** 0.18 oz. (5 grams)**P.C. Pins:** Tin-plated brass**Polarity Mark:** On top and bottom of case**FEATURES**

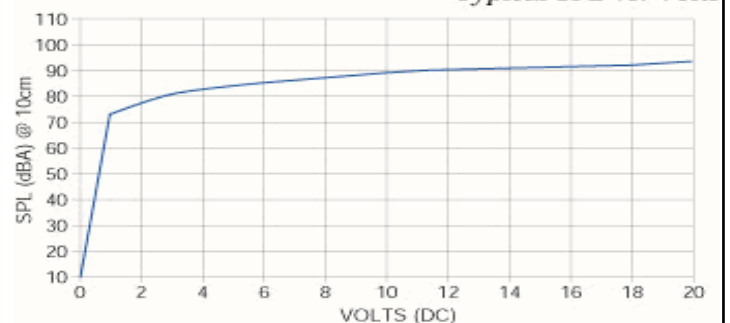
- Continuous tone
- P.C. mounting
- 3100 Hz frequency
- Sealed configuration
- High temperature versions available

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3.0 - 20.0 Vdc
Resonant Frequency	3200 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	13 mA

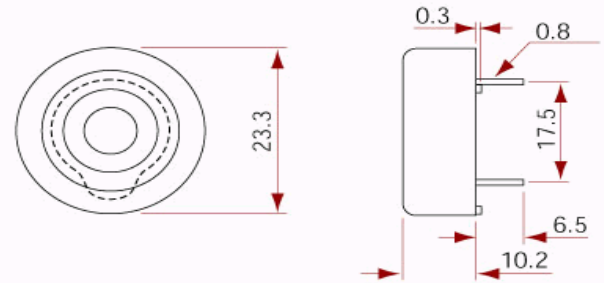
Performance

Typical SPL vs. Volts

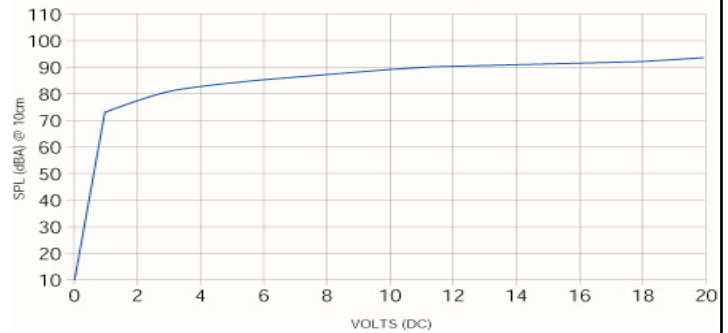


AI-258*Case: ABS, black**Weight: 0.18 oz. (5 grams)**P.C. Pins: Tin-plated brass**Polarity Mark: On top and bottom of case***FEATURES**

- Continuous tone
- P.C. mounting
- 3100 Hz frequency
- Sealed configuration
- High temperature versions available

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

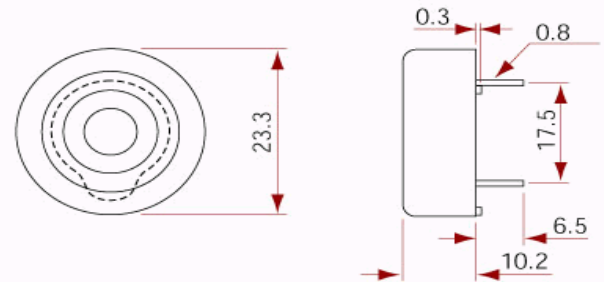
Typical SPL vs. Volts



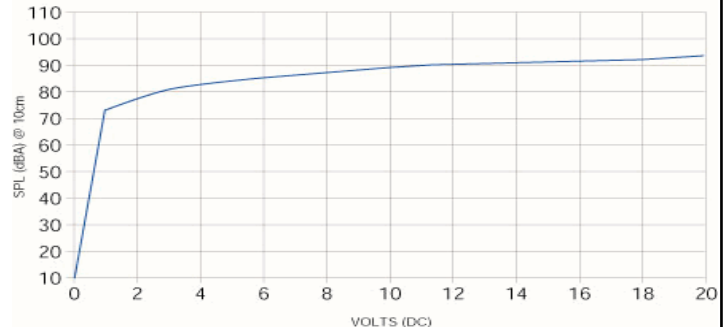
Alerts

AI-259*Case Material: ABS**Weight: 5 g**Pin Material: Tin-Plated Brass***FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 3200 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

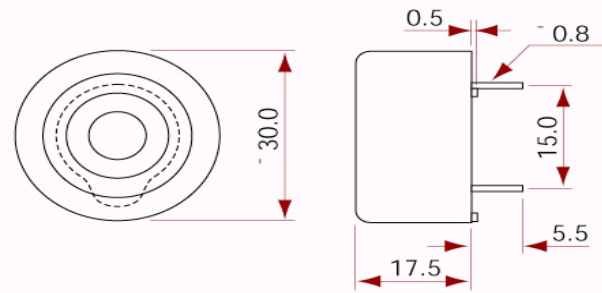
Typical SPL vs. Volts

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 20 Vdc
Resonant Frequency	3200 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	13 mA

AI-278**Case:** ABS, black**Weight:** 0.25 oz. (7 grams)**P.C. Pins:** Tin-plated brass**Unit is supplied with protective, removable tab over sound aperture.****FEATURES**

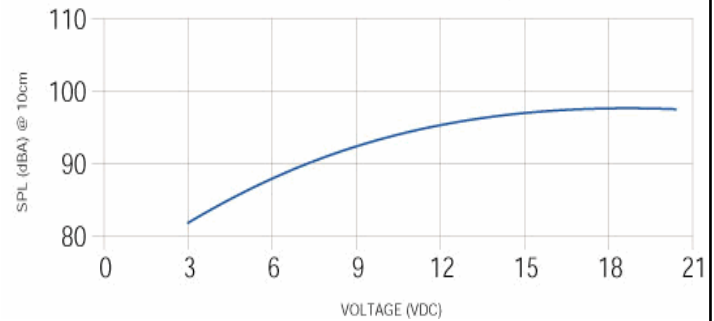
- Continuous tone
- P.C. mounting
- 1800 Hz frequency
- Wave solderable

**Mechanical**Dimensions are in millimeters.
tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12 Vdc
Operating Voltage	3.0 - 28.0 Vdc
Resonant Frequency	1800 Hz
Sound Pressure Level @ 10 cm (Min.)	87 dBA
Rated Current (Max.)	13 mA

Performance

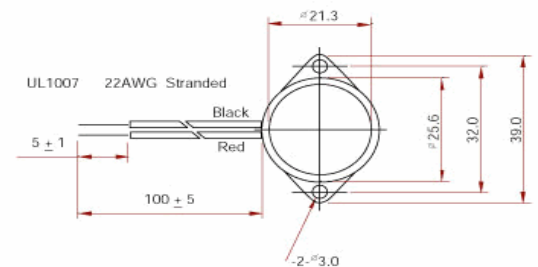
Typical SPL vs. Volts



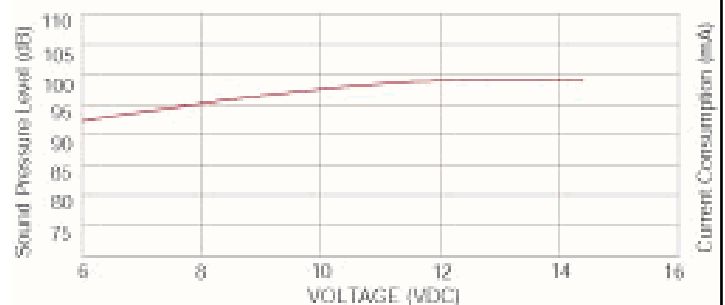
Alerts

AI-2828WP**Case Material:** ABS**Weight:** 41 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz

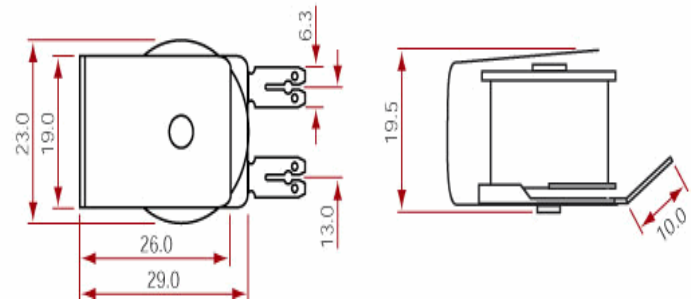
**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	6 - 14 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	95 dBA
Rated Current (Max.)	35 mA

Performance

AI-291*Weight: 0.81 oz. (23 grams)**Tabs: 0.250" (6.3mm) quick disconnect***FEATURES**

- Continuous tone
- Flush mounting
- Open configuration

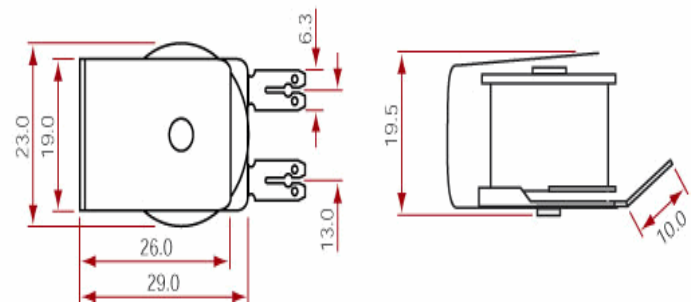
**Mechanical****Electrical**

Parameter	Value
Rated Voltage	12.0 Vac
Operating Voltage	8.0 - 18.0 Vac
Resonant Frequency	60 Hz
Sound Pressure Level @ 10 cm (Min.)	86 dBA
Rated Current (Max.)	35 mA

Alerts

AI-292*Weight: 0.81 oz. (23 grams)**Tabs: 0.250" (6.3mm) quick disconnect***FEATURES**

- Continuous tone
- Flush mounting
- Open configuration

**Mechanical****Electrical**

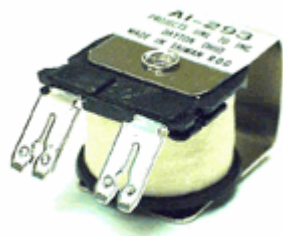
Parameter	Value
Rated Voltage	24.0 Vac
Operating Voltage	19.0 - 32.0 Vac
Resonant Frequency	60 Hz
Sound Pressure Level @ 10 cm (Min.)	88 dBA
Rated Current (Max.)	35 mA

AI-293

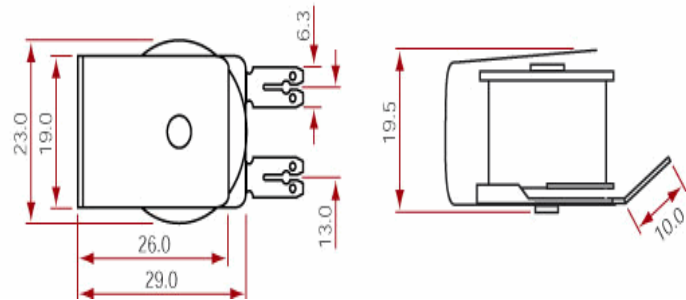
Weight: 0.81 oz. (23 grams)
Tabs: 0.250" (6.3mm) quick disconnect

FEATURES

- Continuous tone
- Flange mounting
- Open configurion



Mechanical



Electrical

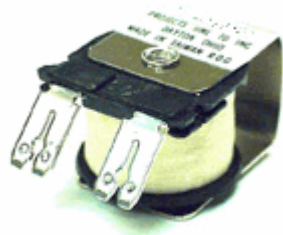
Parameter	Value
Rated Voltage	110.0 Vac
Operating Voltage	60.0 - 150.0 Vac
Resonant Frequency	60 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	45 mA

AI-294

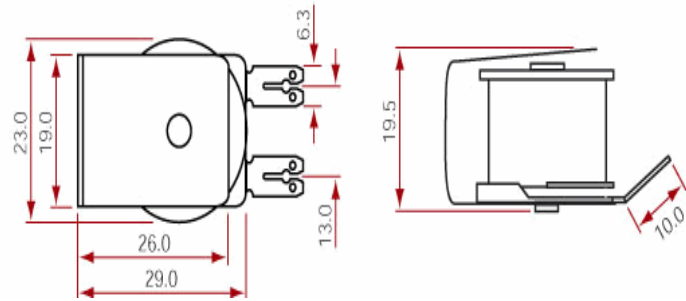
Weight: 0.81 oz. (23 grams)
Tabs: 0.250" (6.3mm) quick disconnect

FEATURES

- Continuous tone
- Flange mounting
- Open configuration



Mechanical



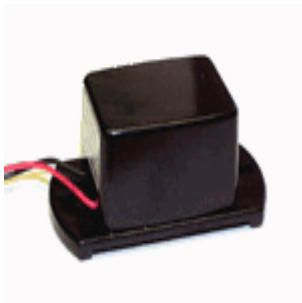
Electrical

Parameter	Value
Rated Voltage	220.0 Vac
Operating Voltage	160.0 - 260.0 Vac
Resonant Frequency	60 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	30 mA

AI-295

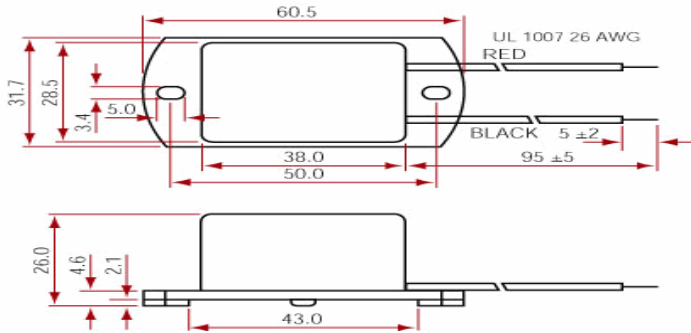
FEATURES

- Continuous tone
- Flange mounting with wire leads
- Enclosed configuration



Weight: 1.12 oz. (32 grams)
Wire: AWG No. 26, stranded
Wire Color Code: Red (+), black (-)

Mechanical



Electrical

Parameter	Value
Rated Voltage	6.0 Vac
Operating Voltage	4.0 - 11.0 Vac
Resonant Frequency	60 Hz
Sound Pressure Level @ 10 cm (Min.)	84 dBA
Rated Current (Max.)	50 mA

AI-296

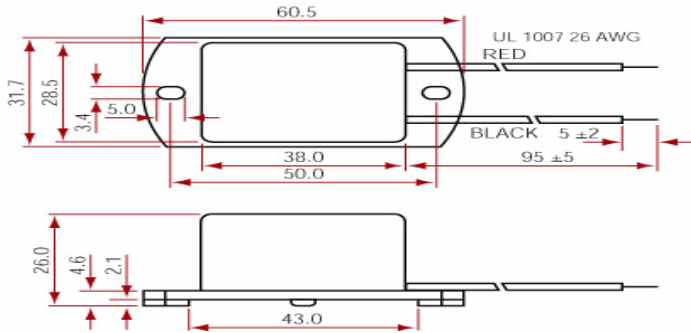
FEATURES

- Continuous tone
- Flange mounting with wire leads
- Enclosed configuration



Case and base: ABS, black, enclosed type
Weight: 1.12 oz. (32 grams)
Wire: AWG No. 26, stranded
Wire Color Code: Red (+), black (-)

Mechanical

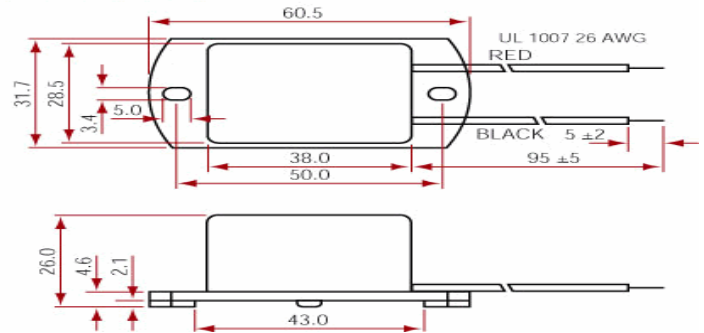


Electrical

Parameter	Value
Rated Voltage	12.0 Vac
Operating Voltage	8.0 - 18.0 Vac
Resonant Frequency	60 Hz
Sound Pressure Level @ 10 cm (Min.)	86 dBA
Rated Current (Max.)	40 mA

AI-297*Case and base: ABS, black enclosed type**Weight: 1.12 oz. (32 grams)**Wire: AWG No. 26, stranded**Wire Color Code: Red (+), black (-)***FEATURES**

- Continuous tone
- Surface mounting
- Enclosed configuration

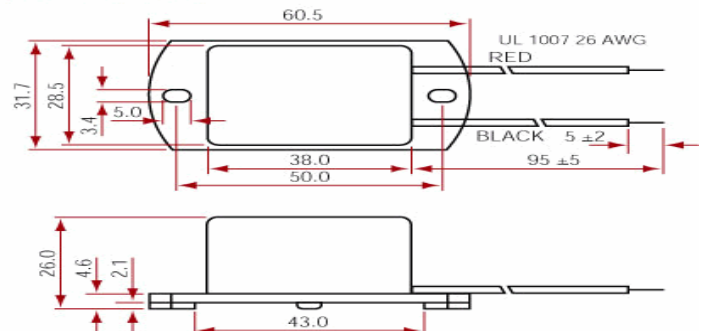
**Mechanical****Electrical**

Parameter	Value
Rated Voltage	24.0 Vac
Operating Voltage	19.0 - 32.0 Vac
Resonant Frequency	60 Hz
Sound Pressure Level @ 10 cm (Min.)	88 dBA
Rated Current (Max.)	33 mA

Alerts

AI-299*Case Material: ABS**Weight: 31.5 g**Terminal Type: Lead Wire**Wire Color Code: Red (+), Black (-)***FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 60 +/- 15 Hz

**Mechanical****Electrical**

Parameter	Value
Rated Voltage	220.0 Vdc
Operating Voltage	160 - 360 Vdc
Resonant Frequency	60 +/- 15 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	40 mA

AI-3120D**FEATURES**

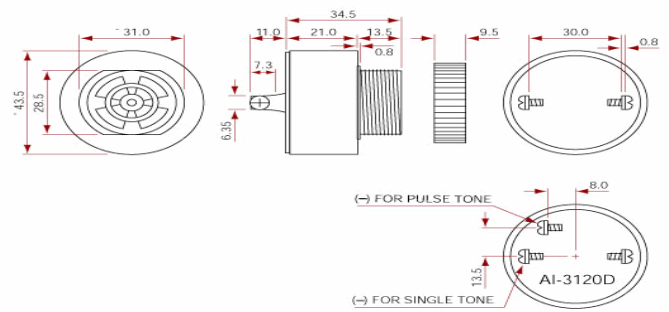
- Continuous and pulsing tones
- Panel mounting - fits 1-1/8" dia. opening
- 3200 Hz frequency



Case: ABS, black

Terminals: Tin-plated brass

Screws: Phillips head

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	4.0 - 16.0 Vdc
Resonant Frequency	2900 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	25 mA

Alerts

AI-3120S**FEATURES**

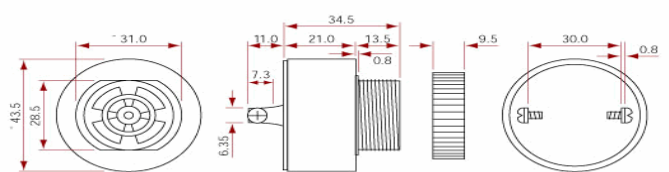
- Continuous tone
- Panel mounting - fits 1-1/8" dia. opening
- 3200 Hz frequency



Case: ABS, black

Terminals: Tin-plated brass

Screws: Phillips head

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

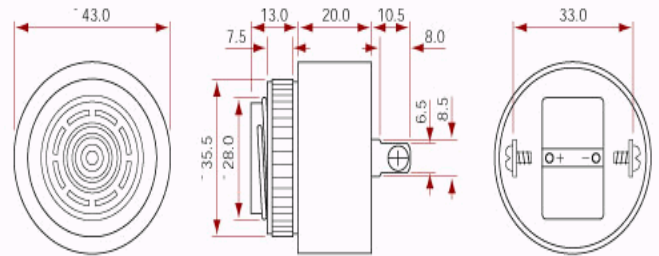
Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	1.0 - 16.0 Vdc
Resonant Frequency	2900 Hz
Sound Pressure Level @ 10 cm (Min.)	95 dBA
Rated Current (Max.)	30 mA

AI-380*Case Material: ABS**Pin Material: Nickel-Plated**Weight: 43 g***FEATURES**

- Mounting: Panel Mount
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz

**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	4 - 28 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	105 dBA
Rated Current (Max.)	18 mA

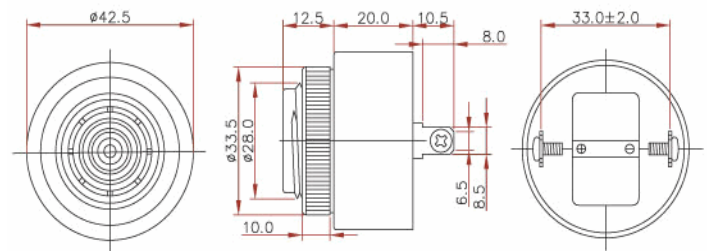
Alerts

AI-380H*Case Material: Nylon**Weight: 32 g**Pin Material: Tin-Plated Tapped Screw***NEW!****FEATURES**

- Mounting: Panel Mount
- Fits 29 mm diameter opening, up to 6 mm thick
- Tone: Continuous
- Frequency: 2900 +/- 500 Hz
- UL Recognized in the USA and Canada
- Optional Volume Control Available. PUI # IVC-26

**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	7 - 18 Vdc
Resonant Frequency	2900 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	108 dBA
Rated Current (Max.)	16 mA

AI-381**FEATURES**

- Fast pulsing tone
- Panel mounting (fits 1-1/8" dia. opening)
- Special non-standard configurations available



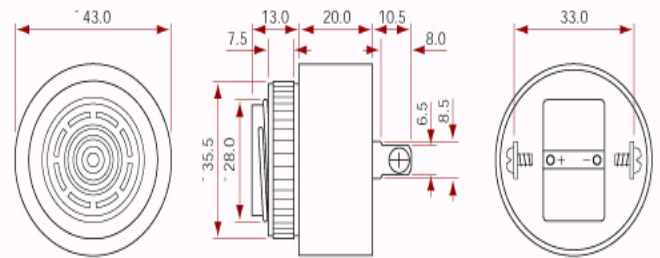
Case: ABS, black

Weight: 37 grams

Terminals: Nickel plated, also available with 0.250" quick disconnect termi

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	6.0 - 28.0 Vdc
Resonant Frequency	2900 Hz
Sound Pressure Level @ 10 cm (Min.)	88 dBA
Rated Current (Max.)	6 mA

Alerts

AI-381P**FEATURES**

- Slow pulsing tone
- Panel mounting (fits 1-1/8" dia. opening and up to 1/4" thick)
- Special non-standard configurations ar available



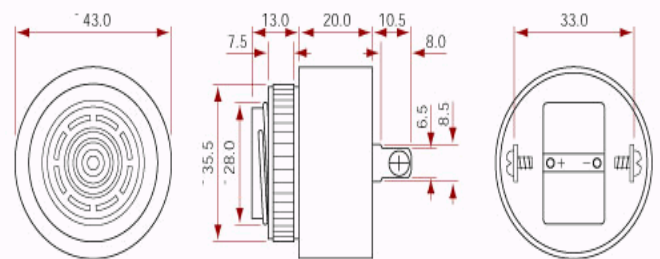
Case: ABS, black

Weight: 34.6 grams

Terminals: Nickel plated, also available with 0.250" quick disconnect termi

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	28.0 Vdc
Operating Voltage	6.0 - 28.0 Vdc
Resonant Frequency	2900 Hz
Sound Pressure Level @ 10 cm (Min.)	88 dBA
Rated Current (Max.)	6 mA

AI-382

Case Material: ABS
Weight: 43 g
Pin Material: Nickel-Plated

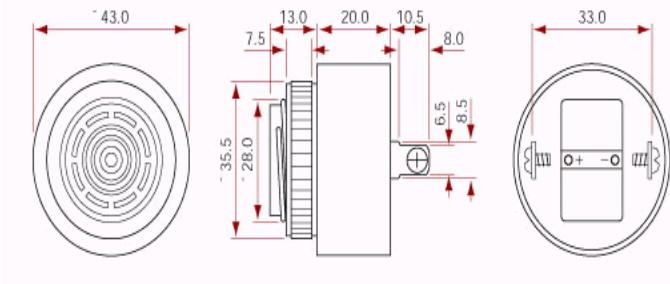
FEATURES

- Mounting: Panel Mount
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz



Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.



Electrical

Parameter	Value
Rated Voltage	120.0 Vdc
Operating Voltage	30 -120 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	105 dBA
Rated Current (Max.)	18 mA

AI-383

Case Material: ABS
Weight: 33.8 g
Pin Material: Tin-Plated

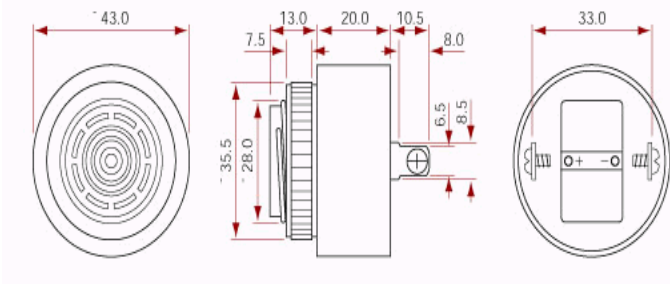
FEATURES

- Mounting: Panel Mount
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz



Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.



Electrical

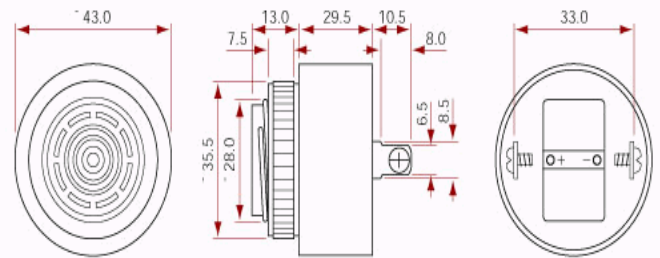
Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	4 - 28 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	91 dBA
Rated Current (Max.)	7 mA

AI-384**FEATURES**

- Mounting: Panel Mount
- Tone: Fast Pulse
- Frequency: 2800 +/- 500 Hz
- Pulse Rate: 3 Pulses Per Second

**Case Material:** ABS**Weight::** 58.8 g**Pin Material:** Tin-Plated**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12 Vdc / Vac
Operating Voltage	60 - 250 Vdc / Vac
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	91 dBA
Rated Current (Max.)	16 mA

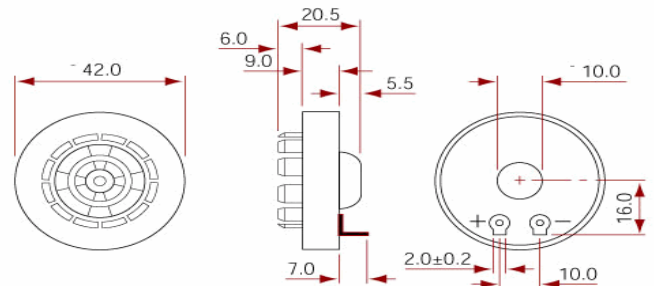
Alerts

AI-390**FEATURES**

- Continuous tone
- Snap-in panel mounting (fits 1.063" dia. opening)
- 3000 Hz frequency

**Case:** ABS, black**Weight:** 0.5 oz. (14 grams)**P. C. Pins:** Tin-plated brass**Mechanical**

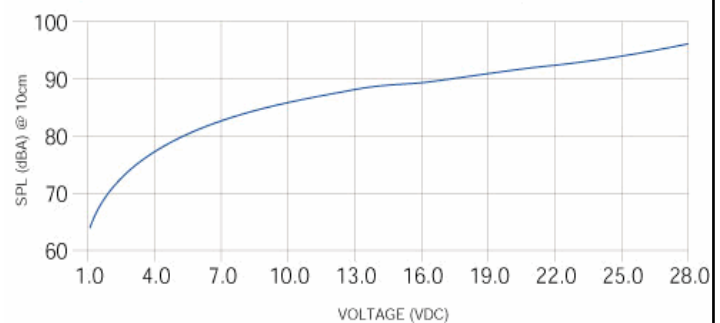
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	24.0 Vdc
Operating Voltage	1.0 - 28.0 Vdc
Resonant Frequency	2900 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	15 mA

Performance

Typical SPL vs. Volts

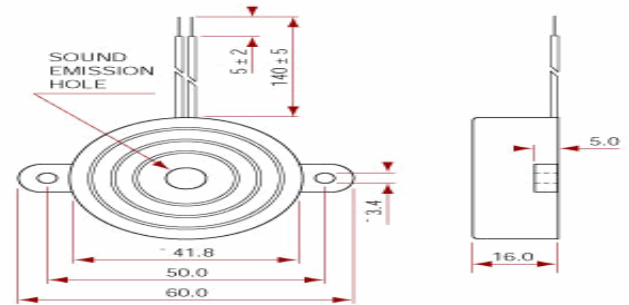


AI-430**Case Material:** ABS**Weight:** 12 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz

**Mechanical**

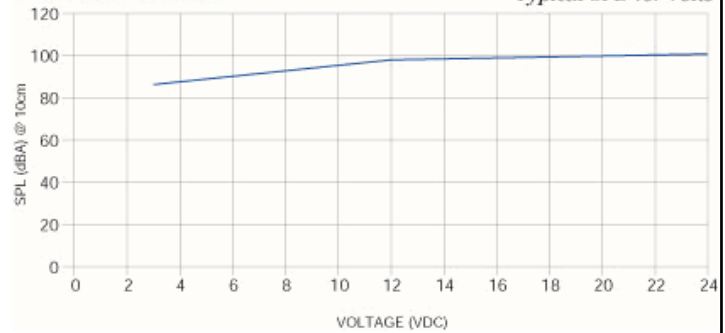
Dimensions are in millimeters.
tolerance is ± 0.5 unless
otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 28 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	95 dBA
Rated Current (Max.)	7 mA

Performance

Typical SPL vs. Volts



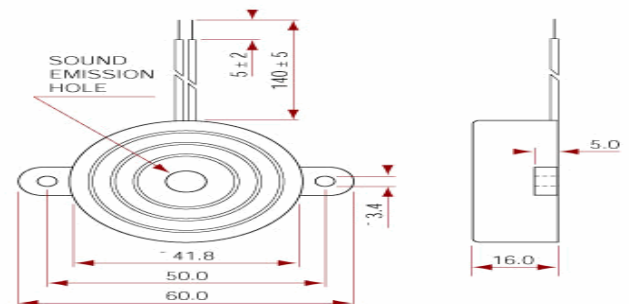
Alerts

AI-431**Case:** ABS, black**Weight:** 0.71 oz. (20 grams)**Wire:** AWG, No. 24, stranded**Wire Color Code:** Red (+), Black (-)**FEATURES**

- Continuous tone
- Flange mounting with wire leads
- 2800 Hz frequency

**Mechanical**

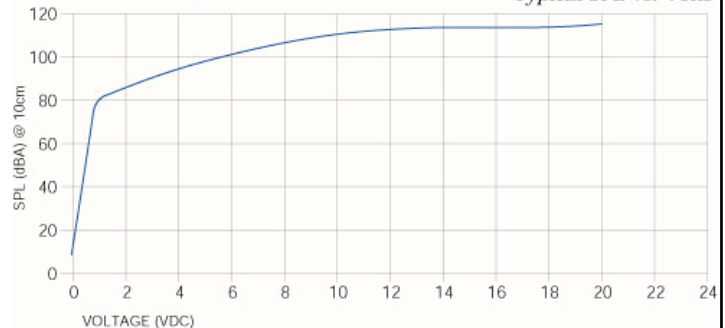
Dimensions are in millimeters.
tolerance is ± 0.5 unless
otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3.0 - 20.0 Vdc
Resonant Frequency	2800 Hz
Sound Pressure Level @ 10 cm (Min.)	105 dBA
Rated Current (Max.)	10 mA

Performance

Typical SPL vs. Volts

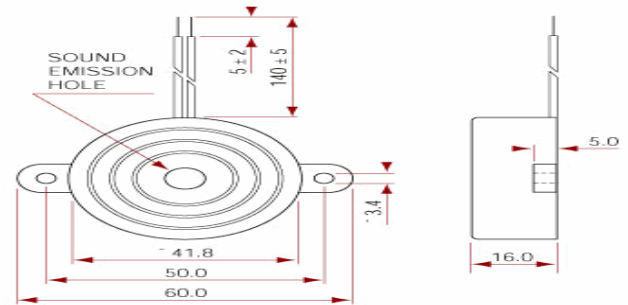


AI-431H**Case Material:** ABS**Weight:** 14.6 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz

**Mechanical**

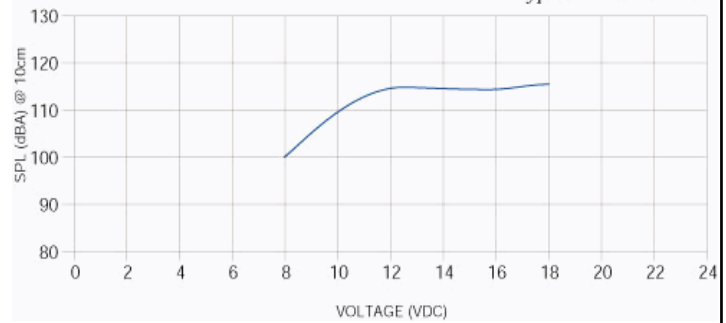
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8 - 18 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	105 dBA
Rated Current (Max.)	15 mA

Performance

Typical SPL vs. Volts



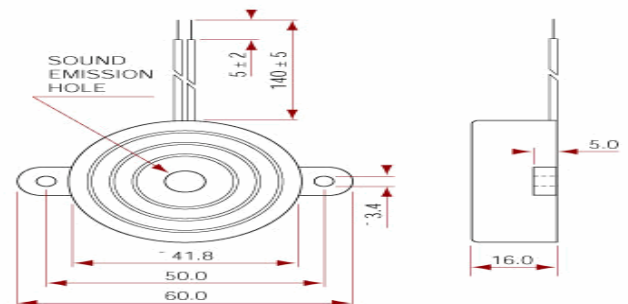
Alerts

AI-433**Case Material:** ABS**Weight:** 12 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**FEATURES**

- Mounting: Flange
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz

**Mechanical**

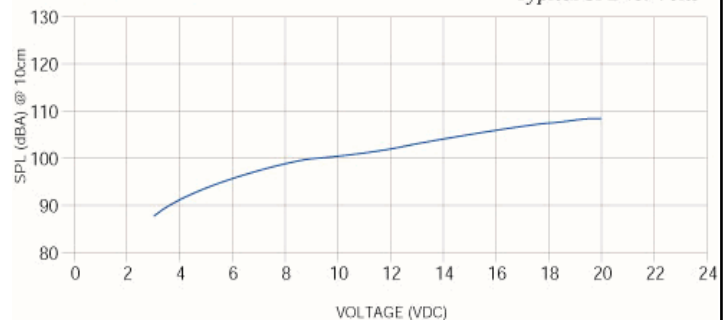
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 20 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	98 dBA
Rated Current (Max.)	10 mA

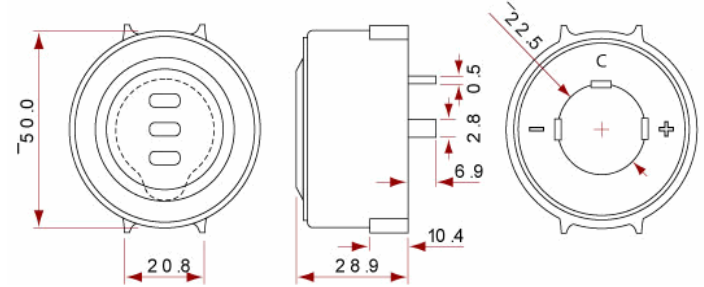
Performance

Typical SPL vs. Volts

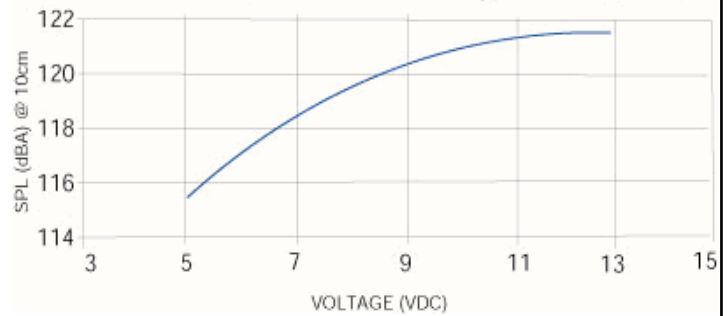


AI-500**FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2500 +/- 500 Hz

**Case Material: ABS****Weight: 40 g****Pin Material: Phosphor Bronze****Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Volts

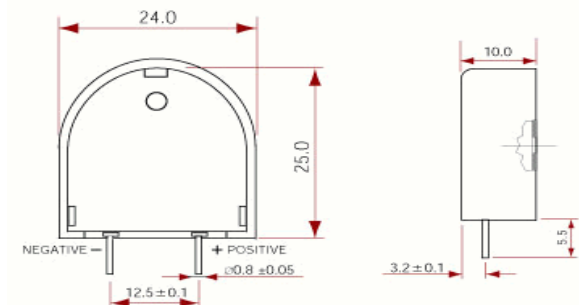
**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	5 - 13 Vdc
Sound Pressure Level @ 10 cm (Min.)	115 dBA
Rated Current (Max.)	75 mA
Resonant Frequency	2500 +/- 500 Hz

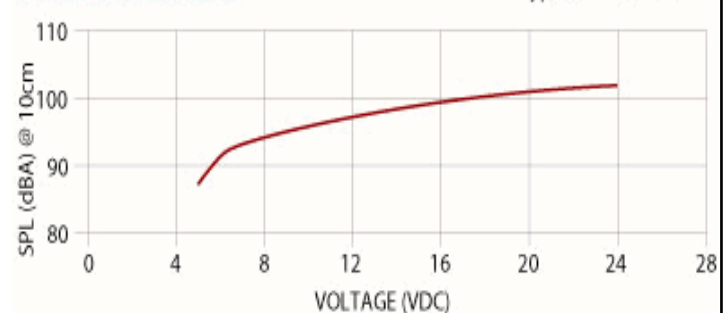
Alerts

AI-531**FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 3200 +/- 500 Hz

**Case Material: ABS****Weight: 3.7 g****Pin Material: Red Copper****Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Volts

**Electrical**

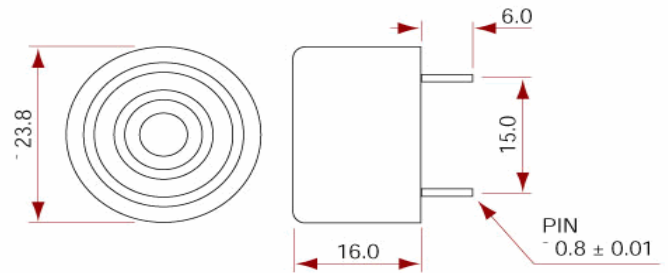
Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	5 - 24 Vdc
Resonant Frequency	3200 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	10 mA

AI-550*Case Material: ABS**Weight: 6 g**Pin Material: Red Copper***FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2900 +/- 500 Hz

**Mechanical**

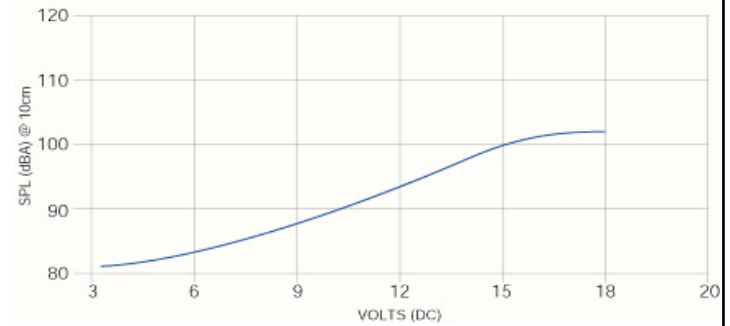
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 20 Vdc
Resonant Frequency	2900 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	8 mA

Performance

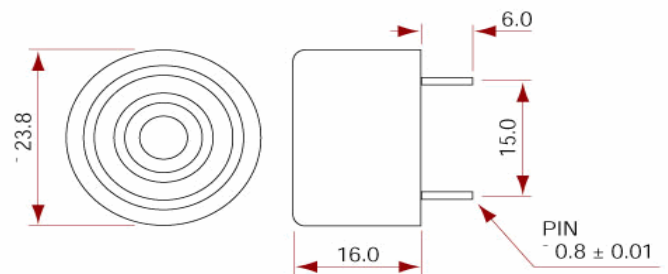
Typical SPL vs. Volts

**AI-550A***Case Material: ABS**Weight: 6 g**Pin Material: Red Copper***FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2900 +/- 500 Hz

**Mechanical**

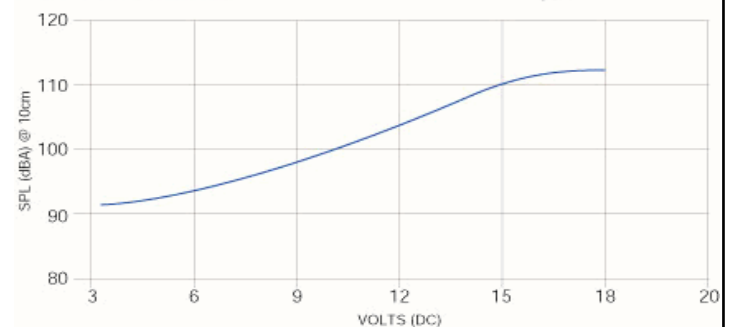
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 12 Vdc
Resonant Frequency	2900 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	100 dBA
Rated Current (Max.)	8 mA

Performance

Typical SPL vs. Volts

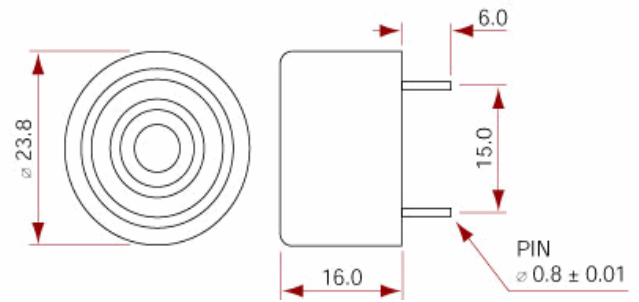


AI-550AS*Case Material: ABS**Weight: 6 g**Pin Material: Red Copper***FEATURES**

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2900 +/- 500 Hz

**Mechanical**

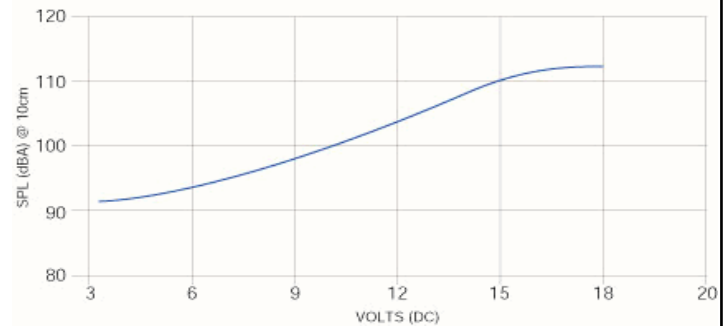
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 20 Vdc
Resonant Frequency	2900 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	100 dBA
Rated Current (Max.)	8 mA

Performance

Typical SPL vs. Volts



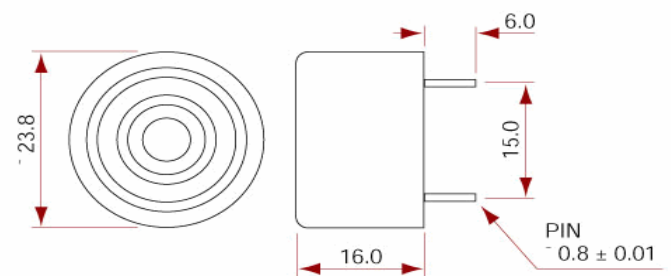
Alerts

AI-550H*Weight: 0.21 oz. (6 grams)**P.C. Pins: Tin-plated brass**Polarity Marks: On top of case***FEATURES**

- Continuous tone
- P.C. mounting
- 2900 Hz frequency
- Low current consumption
- H Series offers a unique, non-inductive circuitry for

**Mechanical**

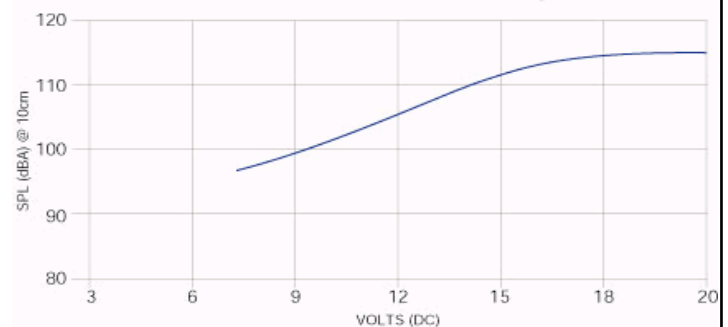
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8.0 - 18.0 Vdc
Resonant Frequency	2900 Hz
Sound Pressure Level @ 10 cm (Min.)	95 dBA
Rated Current (Max.)	10 mA

Performance

Typical SPL vs. Volts



AI-550HS

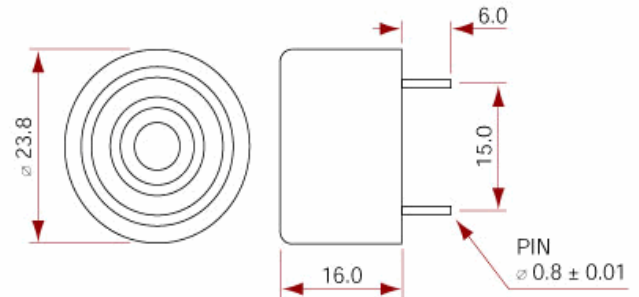
Case: ABS, black
 Weight: 0.21 oz. (6 grams)
 P.C. Pins: Tin-plated brass
 Polarity Marks: On top of case

FEATURES

- Continuous tone
- P.C. mounting
- 2900 Hz frequency
- Low current consumption
- Potted base and removable tab for wave soldering and washing
- H series offers a unique, non-inductive circuitry for

**Mechanical**

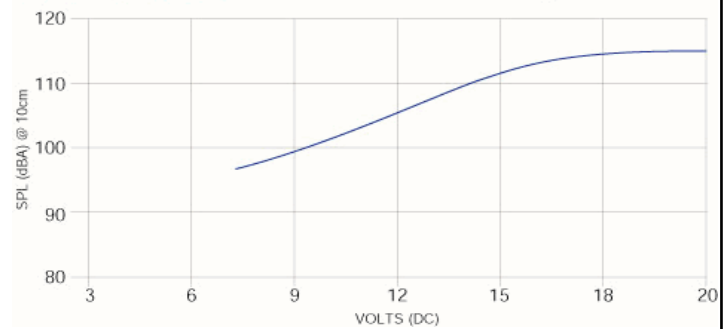
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8.0 - 18.0 Vdc
Resonant Frequency	2900 Hz
Sound Pressure Level @ 10 cm (Min.)	95 dBA
Rated Current (Max.)	10 mA

Performance

Typical SPL vs. Volts



Alerts

AI-550S

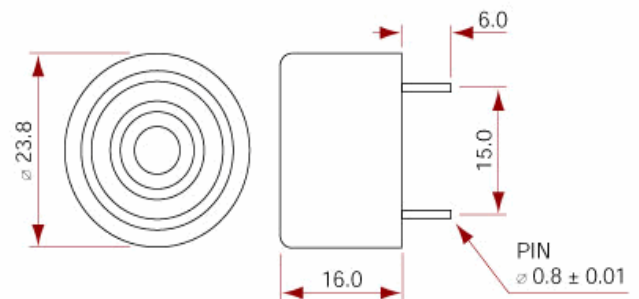
Case Material: ABS
 Weight: 6 g
 Pin Material: Red Copper

FEATURES

- Mounting: Thru Hole
- Tone: Continuous
- Frequency: 2900 +/- 500 Hz

**Mechanical**

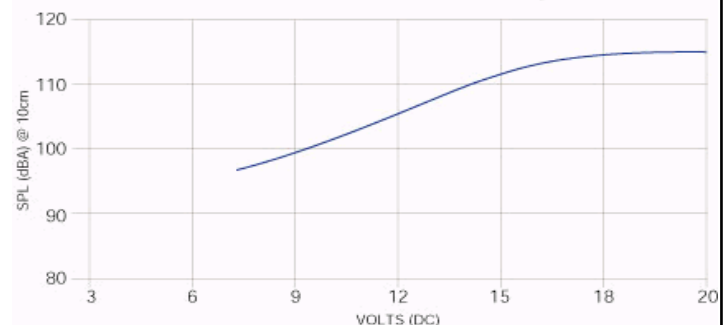
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 20 Vdc
Resonant Frequency	2900 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	8 mA

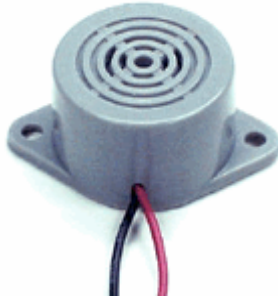
Performance

Typical SPL vs. Volts

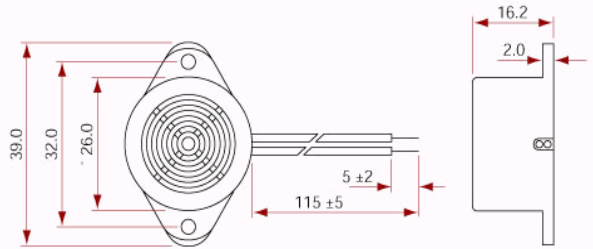


AI-606*Case: ABS, gray**Weight: 0.353 oz. (10 grams)**Wire: AWG No. 26, stranded**Wire Color Code: Red (+), Black (-)***FEATURES**

- Continuous tone
- Flange mounting with wire leads
- 400 Hz frequency

**Mechanical**

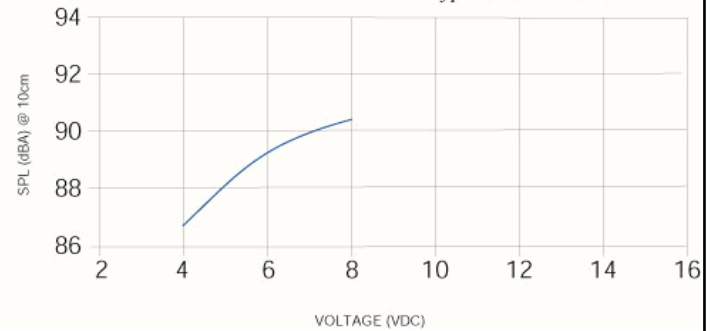
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	6.0 Vdc
Operating Voltage	4.0 - 8.0 Vdc
Resonant Frequency	400 Hz
Sound Pressure Level @ 10 cm (Min.)	89 dBA
Rated Current (Max.)	22 mA

Performance

Typical SPL vs. Volts



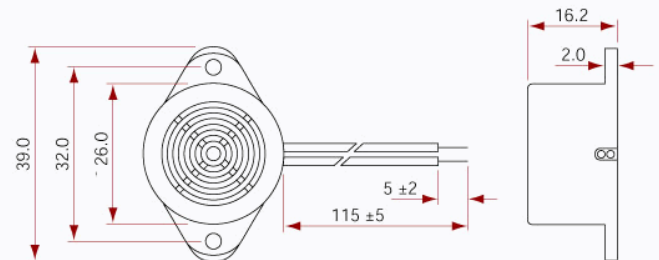
Alerts

AI-612*Case: ABS, gray**Weight: 0.353 oz. (10 grams)**Wire: AWG No. 26, stranded**Wire Color Code: Red (+), Black (-)***FEATURES**

- Continuous tone
- Flange mounting with wire leads
- 400 Hz frequency

**Mechanical**

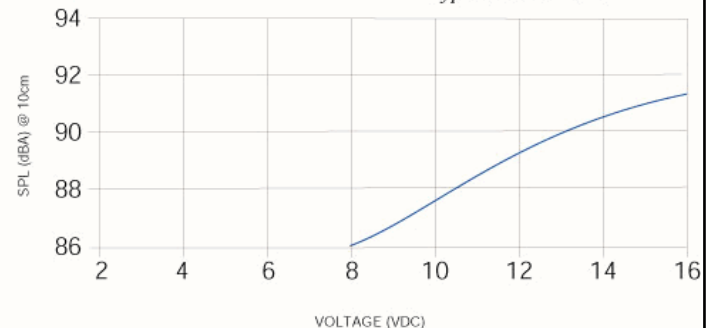
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8.0 - 16.0 Vdc
Resonant Frequency	400 Hz
Sound Pressure Level @ 10 cm (Min.)	89 dBA
Rated Current (Max.)	50 mA

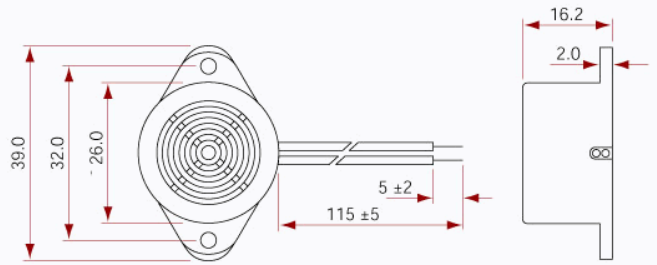
Performance

Typical SPL vs. Volts



AI-624*Case: ABS, gray**Weight: 0.353 oz. (10 grams)**Wire: AWG No. 26, stranded**Wire Color Code: Red (+), Black (-)***FEATURES**

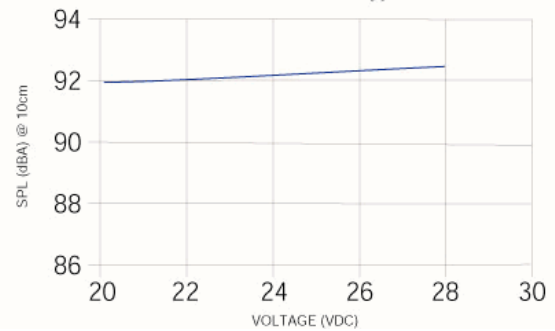
- Continuous tone
- Flange mounting with wire leads
- 400 Hz frequency

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	24.0 Vdc
Operating Voltage	20.0 - 28.0 Vdc
Resonant Frequency	400 Hz
Sound Pressure Level @ 10 cm (Min.)	92 dBA
Rated Current (Max.)	25 mA

Performance

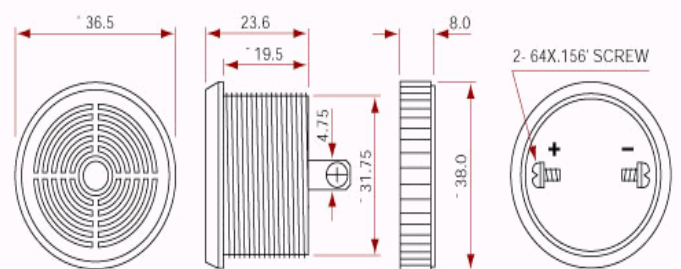
Typical SPL vs. Volts



Alerts

AI-750S*Case Material: ABS**Weight: 18.5 g**Pin Material: Tin-Plated Brass***FEATURES**

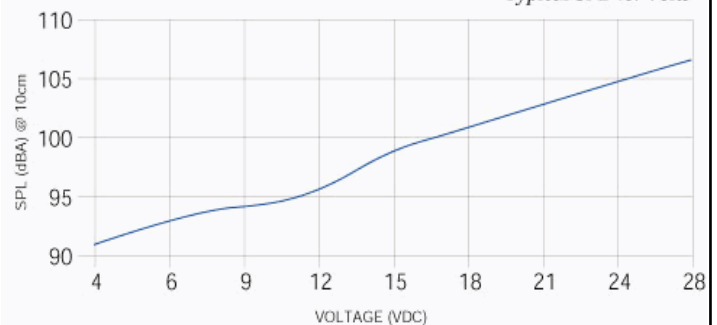
- Mounting: Panel Mount
- Tone: Continuous
- Frequency: 3600 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	4 - 28 Vdc
Resonant Frequency	3600 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	8 mA

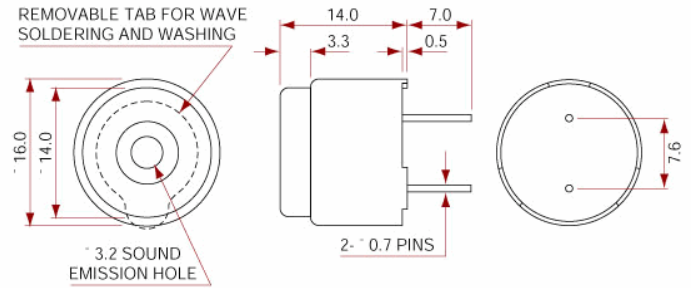
Performance

Typical SPL vs. Volts

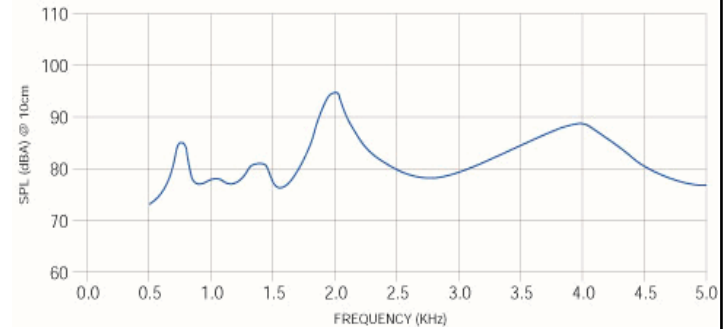


AT-02**FEATURES**

- P.C. mounting
- Wave solderable and washable
- 2048 Hz resonant frequency

**Case:** ABS, black**Weight:** 0.16 oz. (4.5 grams)**P.C. Pins:** Tin-plated brass**Unit has potted base and removable tab for wave soldering and wash****Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

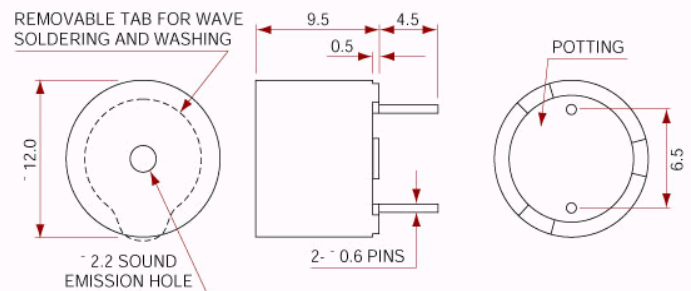
Typical SPL vs. Frequency



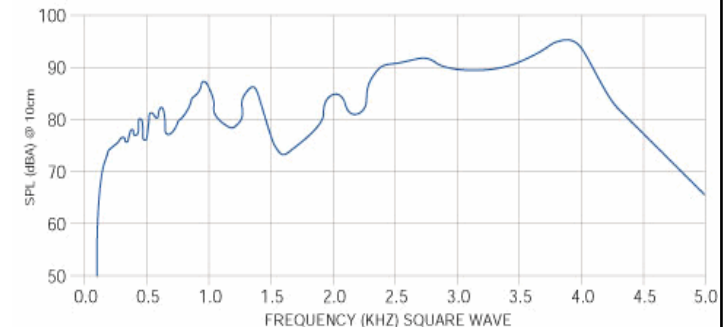
Alerts

AT-08**FEATURES**

- Mounting: Thru Hole
- Frequency: 2400 +/- 500 Hz

**Case Material:** Noryl**Weight:** 2 g**Pin Material:** Tin-Plated Copper**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Frequency

**Electrical**

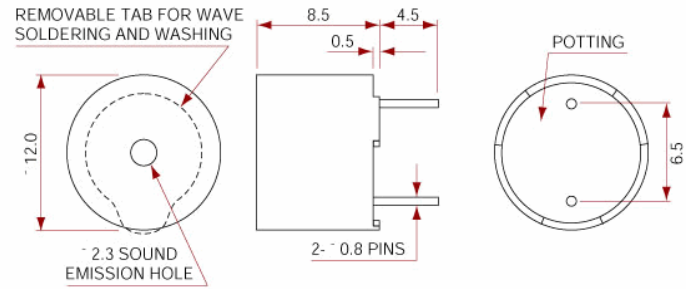
Parameter	Value
Rated Voltage	5.0 Vp-p
Operating Voltage	3 - 8 Vp-p
Resonant Frequency	2400 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	40 mA

AT-10Z*Case: Noryl SEI-J**Weight: 0.07 oz (2 grams)**P.C. Pins: Tin-plated copper***FEATURES**

- P.C. board mounting
- Voltage range: 1-2 V

**Mechanical**

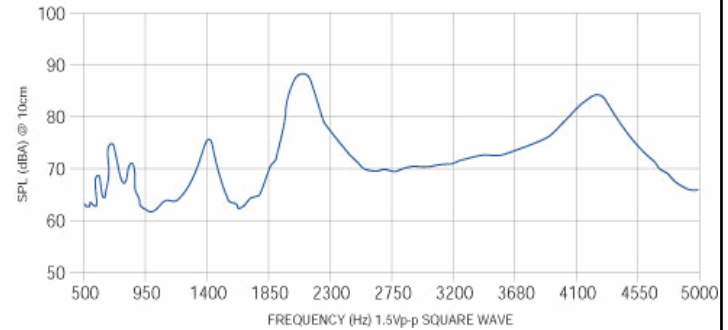
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	1.5 Vp-p
Operating Voltage	1.0 - 3.0 Vp-p
Resonant Frequency	2048 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	10 mA

Performance

Typical SPL vs. Frequency



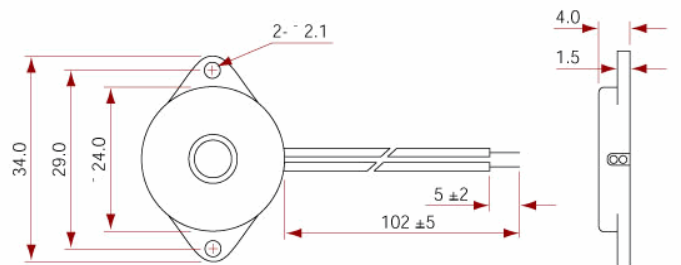
Alerts

AT-12*Case: ABS, black**Weight: 0.11 oz (3 grams)**Wire: AWG No. 28, stranded***FEATURES**

- Flange mounting with wire leads
- 5500 Hz resonant frequency

**Mechanical**

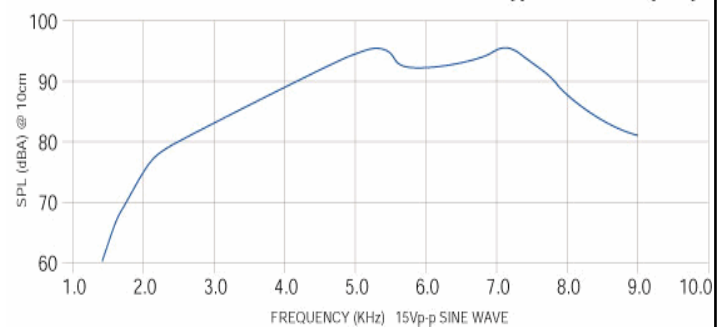
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

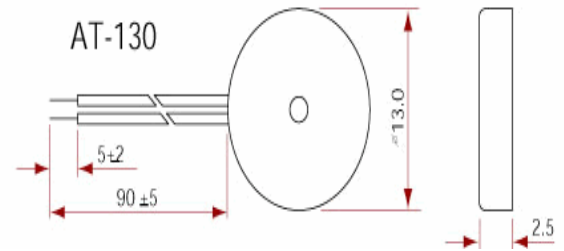
**Electrical**

Parameter	Value
Rated Voltage	15.0 Vac
Operating Voltage	1.0 - 30.0 Vac
Resonant Frequency	5500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	8 mA

Performance

Typical SPL vs. Frequency

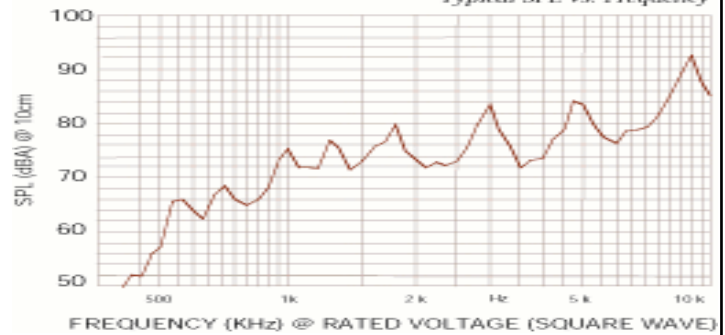


AT-130*Case: ABS Black**Weight: 25g**Wire: Lead Wires 90mm. 30Awg UL1571***FEATURES****NEW!****Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	10.0 Vp-p
Operating Voltage	1.0 - 30.0 Vp-p
Resonant Frequency	4800 Hz
Sound Pressure Level @ 10 cm (Min.)	80 dBA
Rated Current (Max.)	5 mA

Performance

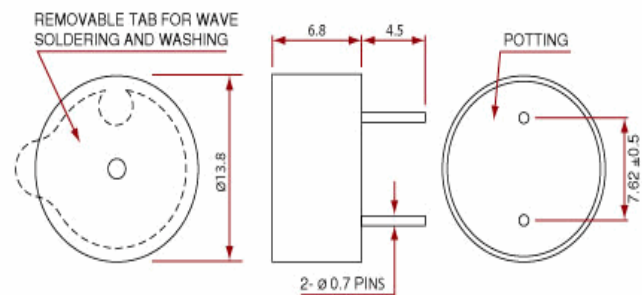
Typical SPL vs. Frequency



Alerts

AT-17*Case: Noryl gray**Weight: 0.0353 oz. (1 gram)**P.C. Pins: Red copper***FEATURES**

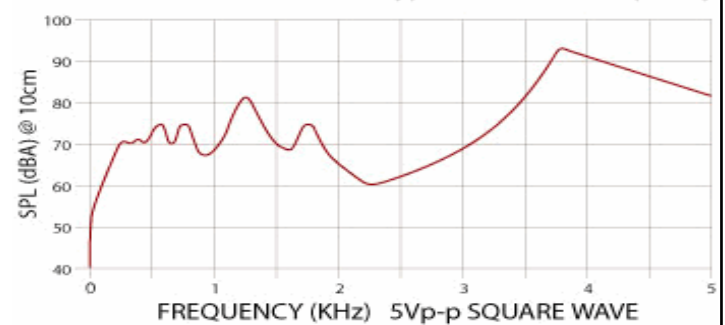
- P.C. board mounting
- Wave solderable and washable
- 3800 Hz resonant frequency

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	5.0 Vp-p
Operating Voltage	1.0 - 20.0 Vp-p
Resonant Frequency	3800 Hz
Sound Pressure Level @ 10 cm (Min.)	80 dBA
Rated Current (Max.)	1 mA

Performance

Typical SPL vs. Frequency



AT-173**FEATURES**

- Flange mounting
- 3500 Hz frequency
- Low power consumption
- Feedback connection

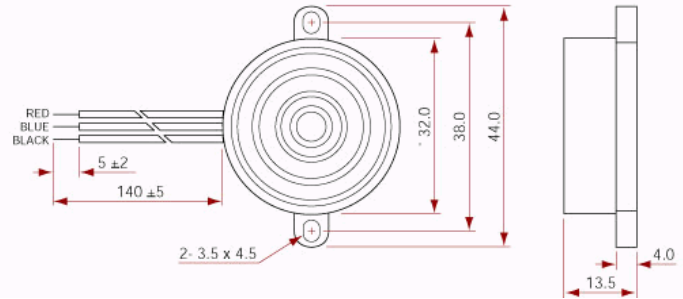


Case: ABS, black

Weight: 0.261 oz. (7.4 grams)

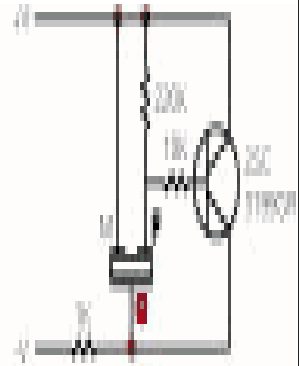
Wire: AWG No. 28

Wire Color Code: Red (+), Black (-), Blue (feedback connection)

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vp-p
Operating Voltage	3.0 - 28.0 Vp-p
Resonant Frequency	3700 Hz
Sound Pressure Level @ 10 cm (Min.)	98 dBA
Rated Current (Max.)	7 mA

The current consumption and the sound pressure level are measured by using the recommended driving circuit shown.



Alerts

AT-2220-1**FEATURES**

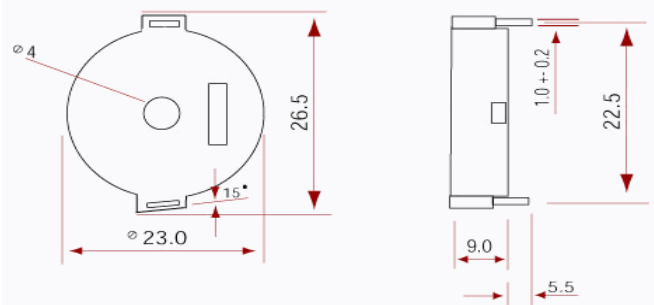
- Increased dB
- PC board mounting
- 2048 Hz frequency
- 1 to 30Vp-p voltage range

NEW!

Case: ABS, black

Weight: 0.07 oz. (2 grams)

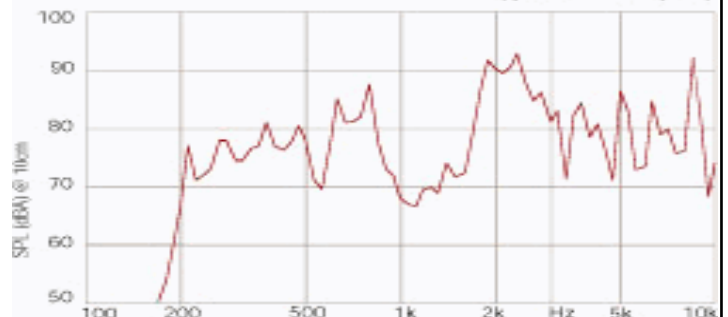
PC Pins: Tin plated phosphor bronze

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	10.0 Vp-p
Operating Voltage	1.0 - 30.0 Vp-p
Resonant Frequency	2048 Hz
Sound Pressure Level @ 10 cm (Min.)	88 dBA
Rated Current (Max.)	4 mA

Performance

Typical SPL vs. Frequency



AT-531**FEATURES**

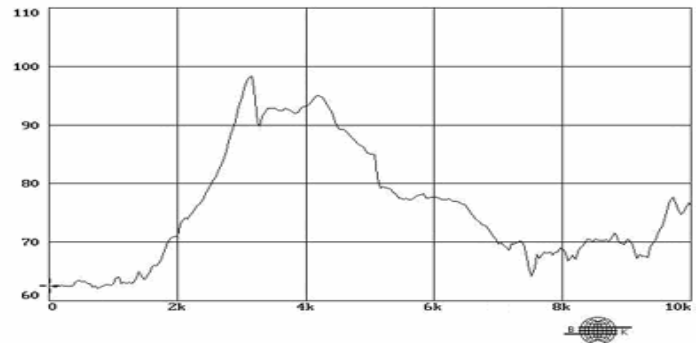
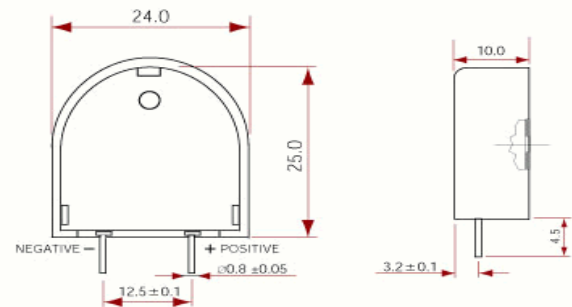
- Mounting: Thru Hole
- Frequency: 3200 +/- 500 Hz



Case Material: MPPO and Glass

Weight: 3.7 g

Pin Material: Red Copper

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	10.0 Vp-p
Operating Voltage	5 - 24 Vp-p
Resonant Frequency	3200 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	10 mA

Alerts

MAT-001**FEATURES**

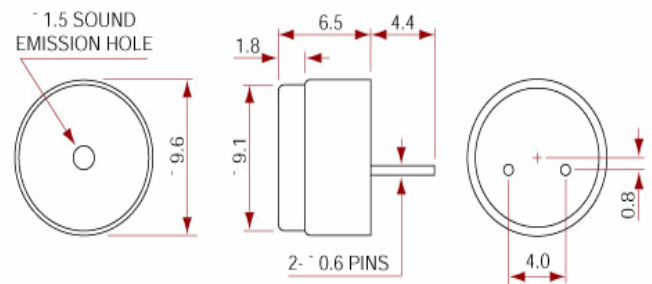
- P.C. mounting
- Wave solderable
- 3100 Hz resonant frequency



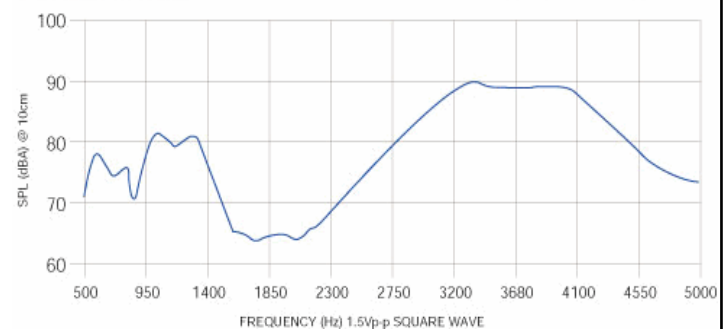
Case: SEI-GFN2J

Weight: 0.04 oz. (1 gram)

P.C. Pins: Tin-plated copper

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Frequency

**Electrical**

Parameter	Value
Rated Voltage	1.5 Vac
Operating Voltage	1.0 - 3.0 Vac
Resonant Frequency	3100 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	80 mA

SMI-158

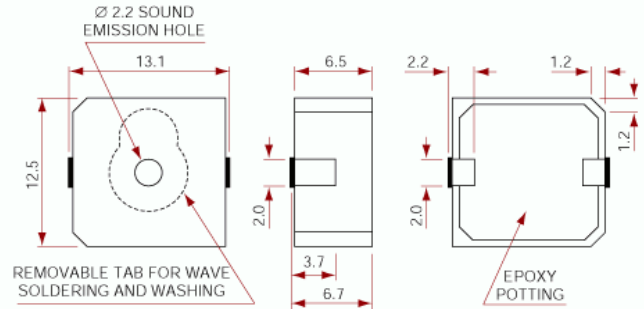
Compatible with convection, IR and vapor phase
Available in tubes of 40 or reels of 500 pieces

FEATURES

- Sealed for washing
- SMD mounting
- 6.5mm low profile case configuration

NEW!**Mechanical**

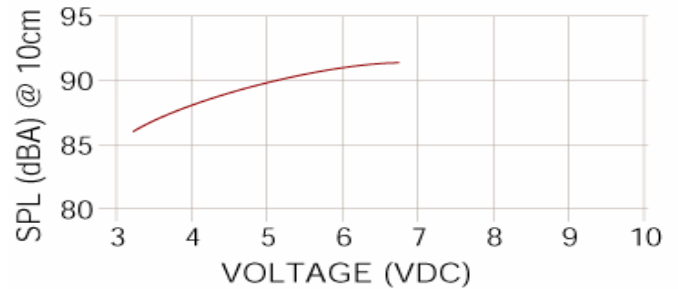
Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	5.0 Vdc
Operating Voltage	4.0 - 7.0 Vdc
Resonant Frequency	2400 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	30 mA

Performance

Typical SPL vs. Volts

**SMI-158-2**

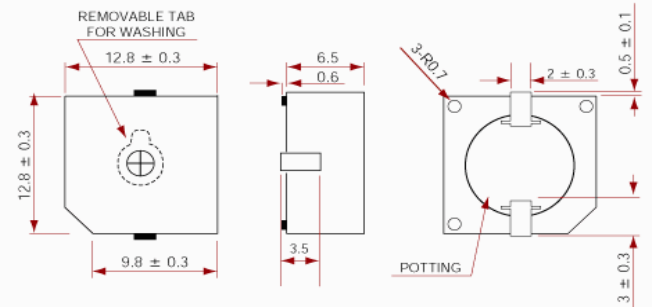
Compatible with convection, IR and vapor phase
Available in tubes of 40 or reels of 500 pieces

FEATURES

- Sealed for washing
- SMD mounting
- 6.5mm low profile case configuration

**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	5.0 Vdc
Operating Voltage	4.0 - 7.0 Vdc
Resonant Frequency	2400 Hz
Sound Pressure Level @ 10 cm (Min.)	88 dBA
Rated Current (Max.)	30 mA

SMI-168**FEATURES**

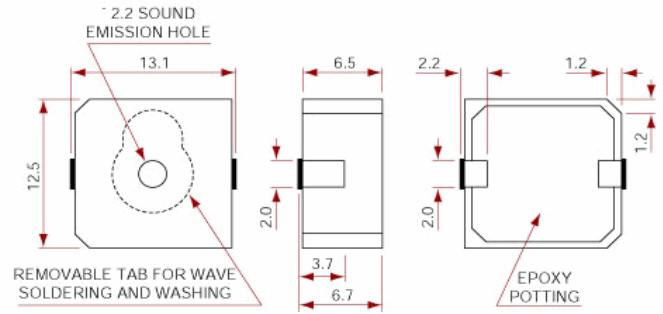
- SMD mounting
- 6.5mm low profile case configuration
- 2400 Hz frequency



Sealed for washing
Compatible with convection, IR and vapor phase
Available in tubes of 40 or reels of 500 pieces

Mechanical

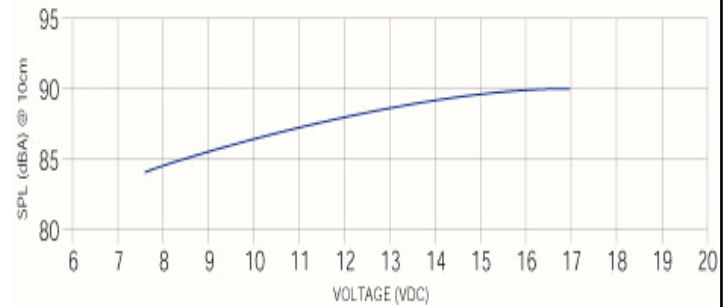
Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	8.0 - 15.0 Vdc
Resonant Frequency	2400 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	30 mA

Performance

Typical SPL vs. Volts

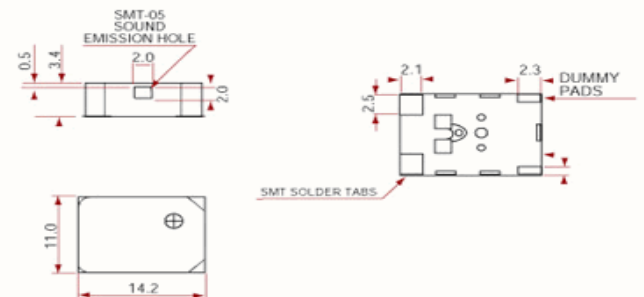
**SMT-05****FEATURES**

NEW!

- Side Firing Sound Port
- Size: 14.2mm x 11mm x 3.4mm

**Mechanical**

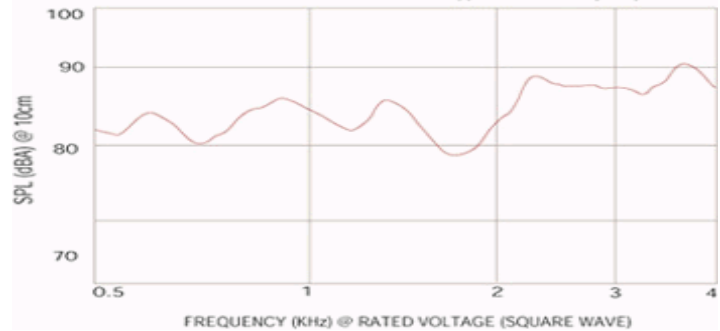
Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	5.0 Vp-p
Operating Voltage	3.0 - 7.0 Vp-p
Resonant Frequency	2700 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	80 mA

Performance

Typical SPL vs. Frequency

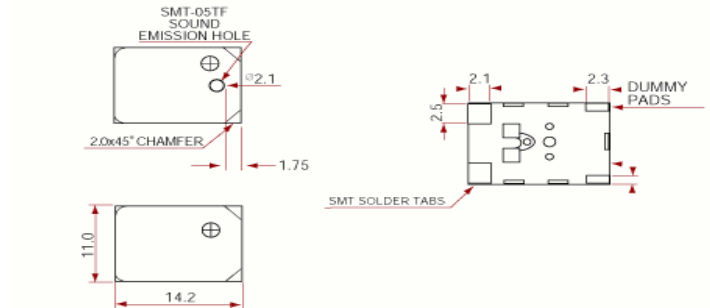
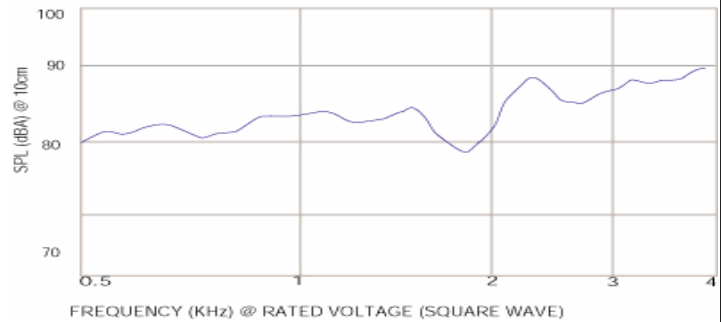


SMT-05TF**FEATURES****NEW!**

- Top Firing Sound Port
- Size: 14.2mm x 11mm x 3.4mm

**Electrical**

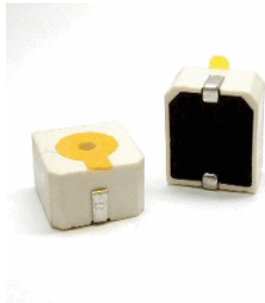
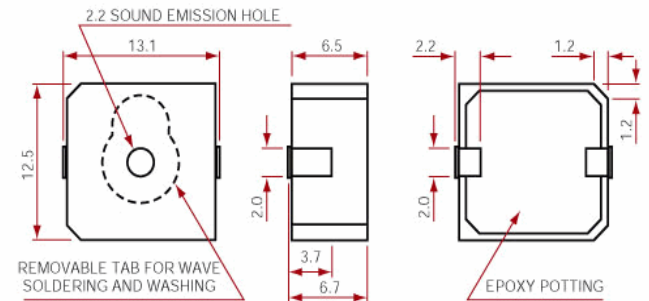
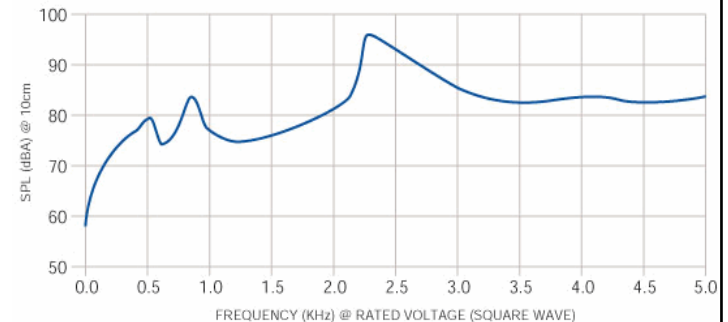
Parameter	Value
Rated Voltage	5.0 Vp-p
Operating Voltage	3 - 7 Vp-p
Resonant Frequency	2700 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	80 mA

Mechanical *Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.***Performance***Typical SPL vs. Frequency*

Alerts

SMT-11**FEATURES**

- SMD mounting
- 6.5mm low profile case configuration
- 2400 Hz frequency

*Sealed for washing**Compatible with convection, IR and vapor phase**Available in tubes of 40 or reels of 500 pieces***Mechanical***Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.***Performance***Typical SPL vs. Frequency*

SMT-1141-2S**FEATURES**

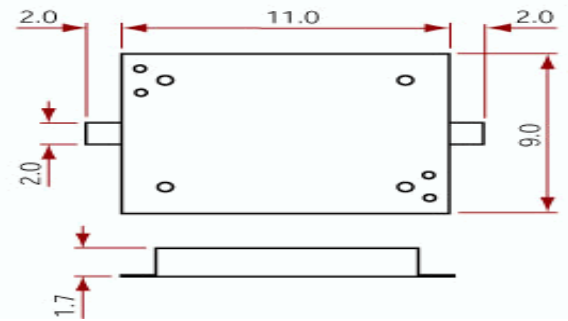
- Stainless steel bender for harsh environments
- 4100 Hz resonant frequency
- 1.7mm low profile package
- Compact footprint
- Top firing sound port

NEW!

Rectangle shape measuring 11mm x 9mm x 1.7mm in height.

Leads: tin plated phosphor bronze.

Weight: 3 grams

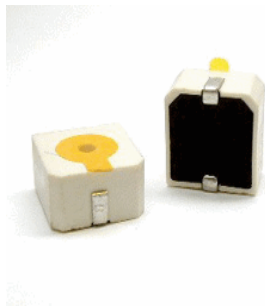
MechanicalDimensions are in millimeters, tolerance is ± 0.2 .**Electrical**

Parameter	Value
Rated Voltage	5.0 Vp-p
Operating Voltage	1.0 - 25.0 Vp-p
Resonant Frequency	4100 Hz
Sound Pressure Level @ 10 cm (Min.)	72 dBA
Rated Current (Max.)	15.8 mA

Alerts

SMT-12**FEATURES**

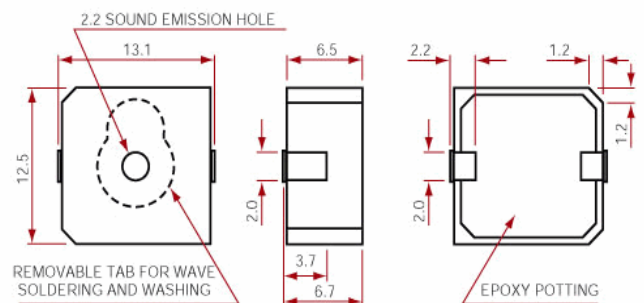
- SMD mounting
- 6.5mm low profile case configuration
- 2400 Hz frequency



Sealed for washing

Compatible with convection, IR & vapor phase

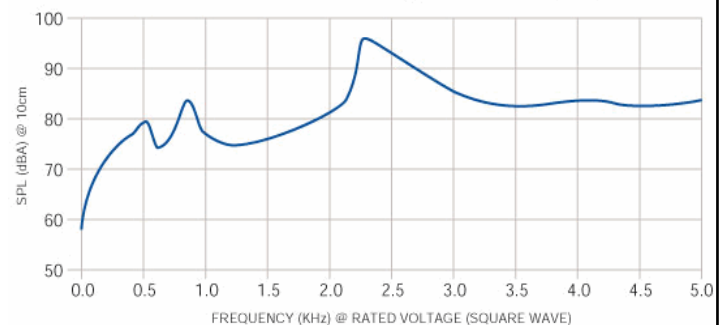
Available in tubes of 40 or reels of 500 pieces

MechanicalDimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	5.0 Vac
Operating Voltage	4.0 - 7.0 Vac
Resonant Frequency	2400 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	40 mA

Performance

Typical SPL vs. Frequency



SMT-13**FEATURES**

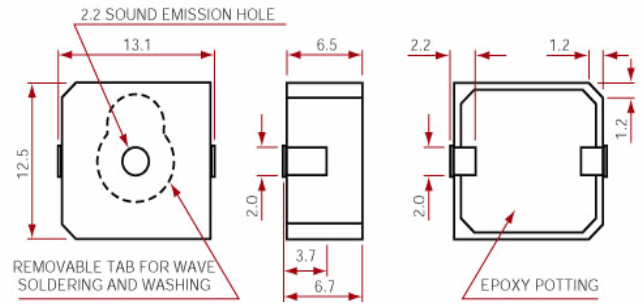
- SMD mounting
- 6.5mm low profile case configuration
- 2400 Hz frequency



Sealed for washing
Compatible with convection, IR and vapor phase
Available in tubes of 40 and reels of 500 pieces

Mechanical

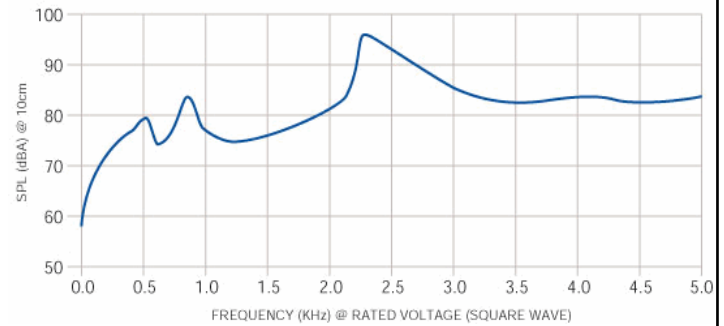
Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vac
Operating Voltage	8.0 - 16.0 Vac
Resonant Frequency	2400 Hz
Sound Pressure Level @ 10 cm (Min.)	87 dBA
Rated Current (Max.)	40 mA

Performance

Typical SPL vs. Frequency

**SMT-1325****FEATURES**

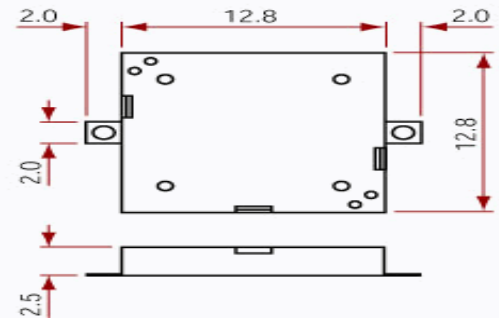
- Surface mounting
- Compatible with convection, IR and vapor phase
- 4100 Hz resonant frequency



2.5mm low profile miniature case configuration

Mechanical

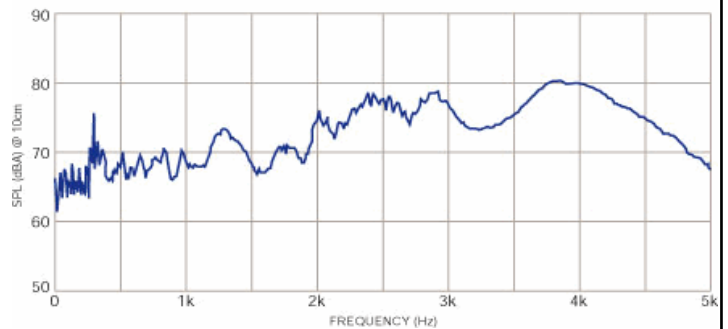
Dimensions are in millimeters, tolerance is ± 0.2 .

**Electrical**

Parameter	Value
Rated Voltage	5.0 Vac
Operating Voltage	1.0 - 25.0 VAC
Resonant Frequency	4100 Hz
Sound Pressure Level @ 10 cm (Min.)	75 dBA
Rated Current (Max.)	3 mA

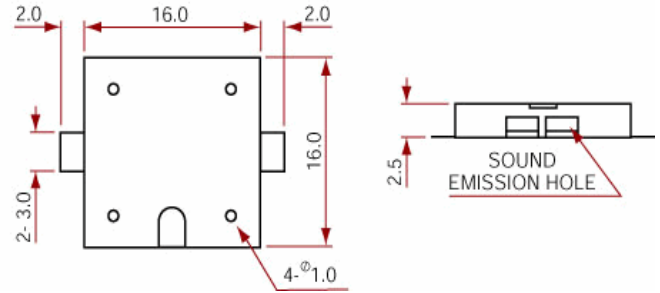
Performance

Typical SPL vs. Frequency

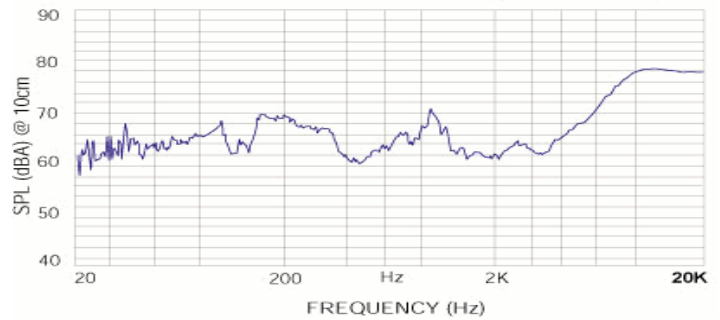


SMT-1625*2.5mm low profile miniature case configuration***FEATURES**

- Surface mounting
- Compatible with convection, IR and vapor phase
- 4000 Hz resonant frequency

**Mechanical***Dimensions are in millimeters, tolerance is ± 0.5 .***Electrical**

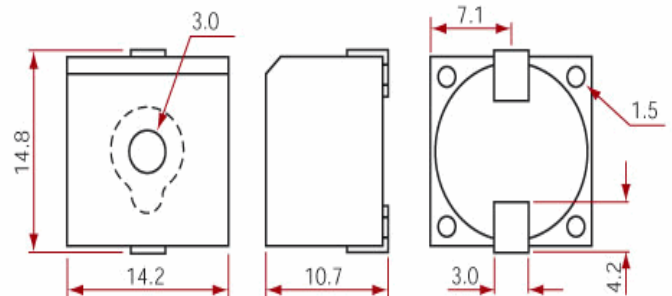
Parameter	Value
Rated Voltage	5.0 Vac
Operating Voltage	1.0 - 25.0 Vac
Resonant Frequency	4000 Hz
Sound Pressure Level @ 10 cm (Min.)	70 dBA
Rated Current (Max.)	3 mA

Performance*Typical SPL vs. Frequency*

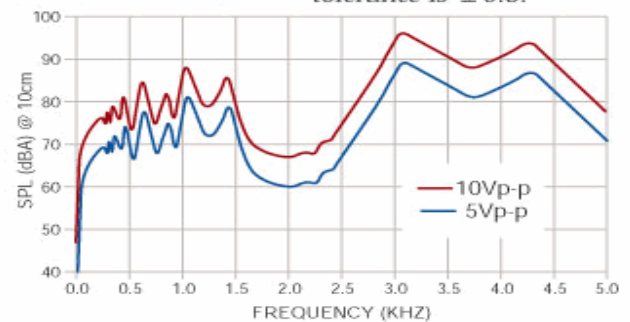
Alerts

SMT-2114A*Available in tubes of 35 pieces***FEATURES**

- SMD mounting
- Compatible with convection, IR and vapor phase
- Sealed for washing
- 3300 Hz frequency

**Mechanical***Dimensions are in millimeters, tolerance is ± 0.3 .***Electrical**

Parameter	Value
Rated Voltage	10.0 Vac
Operating Voltage	1.0 - 20.0 Vac
Resonant Frequency	4300 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	8 mA

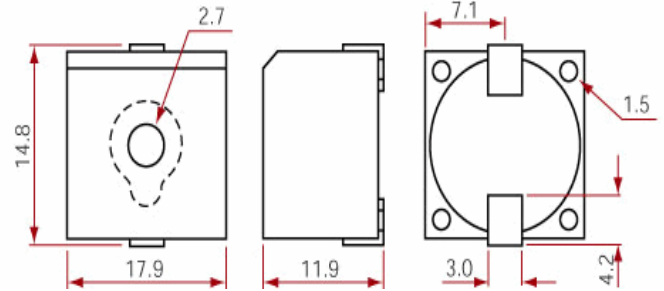
Performance*Dimensions are in millimeters, tolerance is ± 0.3 .*

SMT-2118

Available in tubes of 25 pieces

FEATURES

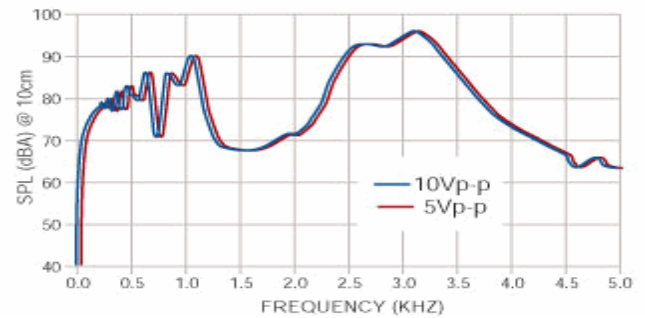
- SMD mounting
- Compatible with convection, IR and vapor phase
- Sealed for washing
- 3700 Hz frequency

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.3 .**Electrical**

Parameter	Value
Rated Voltage	10.0 Vac
Operating Voltage	1.0 - 30.0 Vac
Resonant Frequency	3000 Hz
Sound Pressure Level @ 10 cm (Min.)	86 dBA
Rated Current (Max.)	7 mA

Performance

Typical SPL vs. Frequency



Alerts

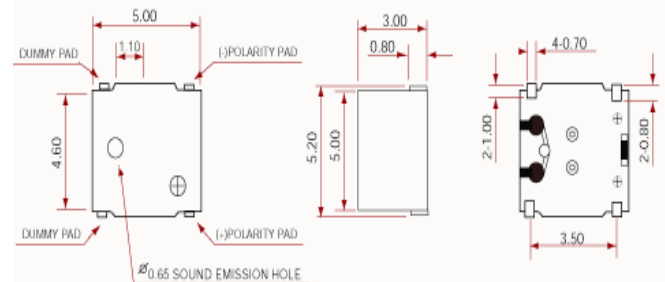
SMT-3303G

Case: LCP

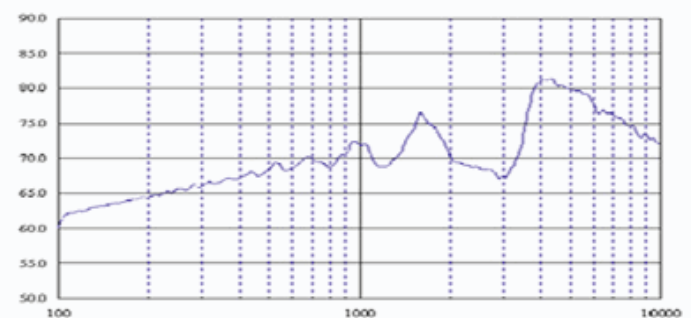
Weight: 0.3 grams

FEATURES**NEW!**

- Compact size 5mm x 5mm x 3mm
- Surface mount
- Available in tape & reel

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

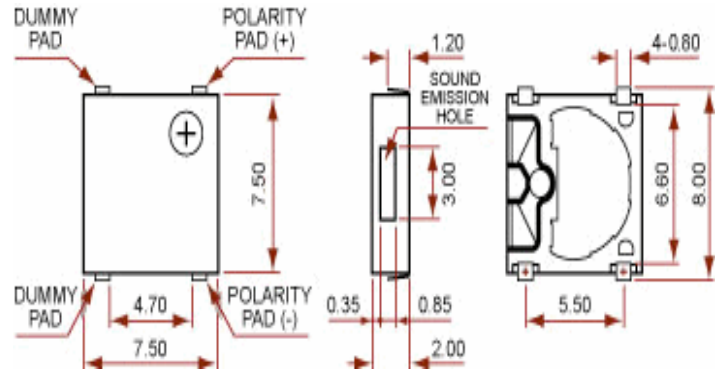
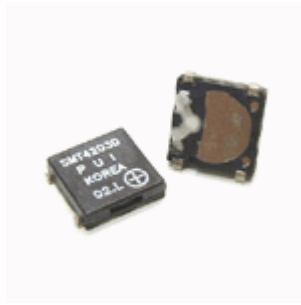
Typical SPL vs. Volts

**Electrical**

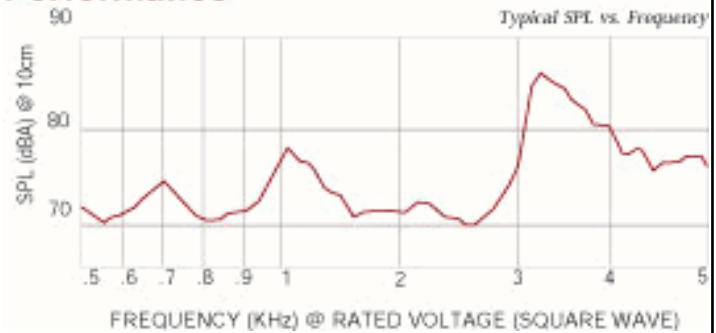
Parameter	Value
Rated Voltage	3.0 Vp-p
Operating Voltage	2.0 - 4.0 Vp-p
Resonant Frequency	4000 Hz
Sound Pressure Level @ 10 cm (Min.)	74 dBA
Rated Current (Max.)	100 mA

SMT-4203D*Case Material: LCP 6130**Weight: 0.33 g**Pin Material: PBS***FEATURES**

- Mounting: Surface Mount
- Frequency: 2700 +/- 540 Hz

**Electrical**

Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2 - 5 Vp-p
Resonant Frequency	2700 +/- 540 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	120 mA

Performance

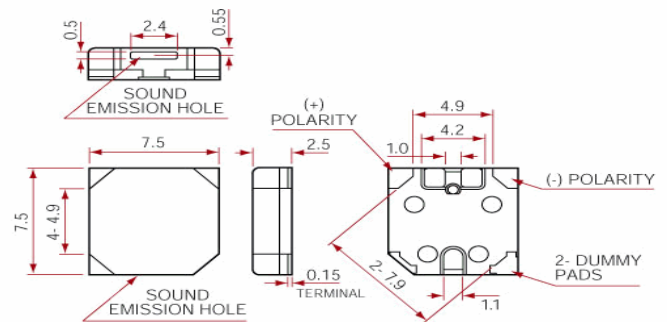
Alerts

SMT-5253D*Available in reels of 1K pieces***FEATURES**

- SMD mounting
- Compatible with convection, IR and vapor phase
- 2700 Hz frequency
- 2.5mm low profile ultra miniature case configuration

**Mechanical**

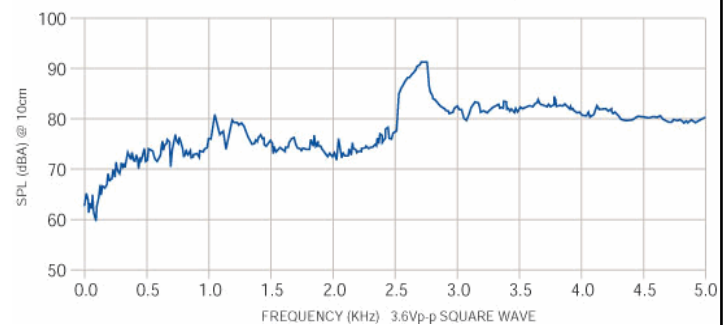
Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2700 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	100 mA

Performance

Typical SPL vs. Frequency

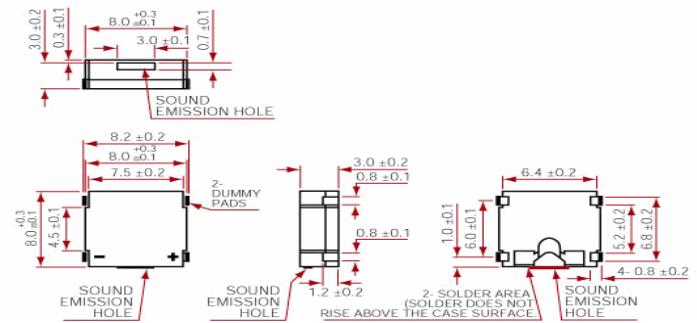


SMT-6303D**Case Material:** LCP 6130**Weight:** 0.39 g**Terminal Material:** PBS**FEATURES**

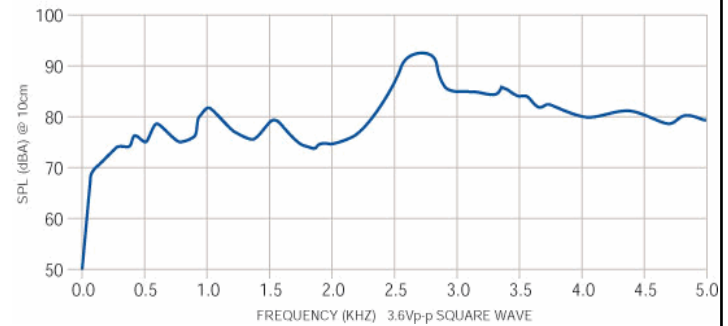
- Mounting: Surface Mount
- Frequency: 2630 +/- 526 Hz

**Electrical**

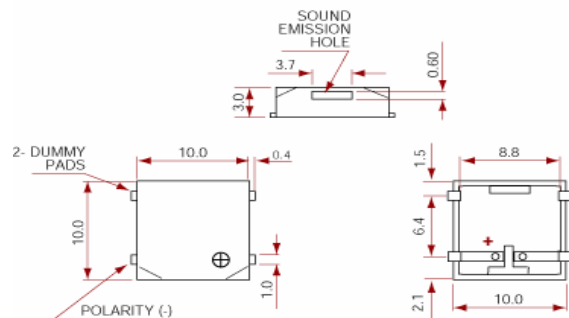
Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2630 +/- 526 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	90 mA

MechanicalDimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.**Performance**

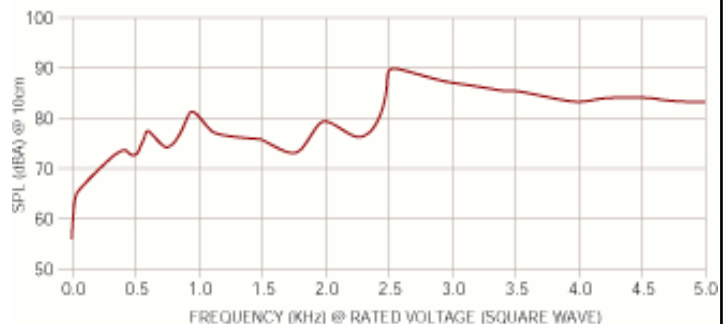
Typical SPL vs. Frequency

**SMT-731-2****Compatible with convection, IR and vapor phase.****Available in reels of 1K pieces.****FEATURES**

- 3.0mm low profile configuration.
- High output sound.
- SMD mounting.

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Frequency



SMT-733-2**FEATURES**

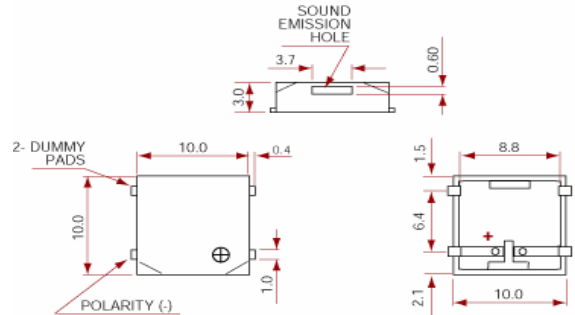
- 3.0mm low profile configuration.
- High sound output.
- SMD mounting.



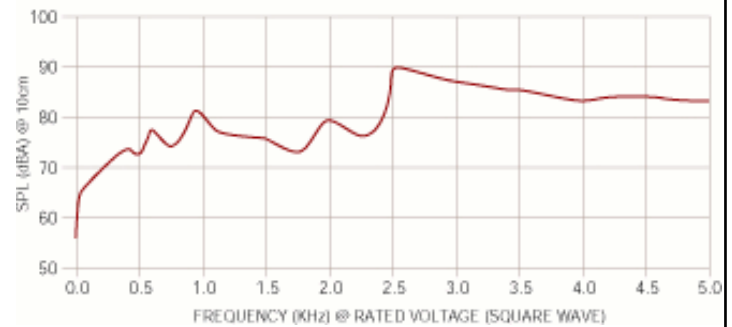
Compatible with convection, IR and vapor phase.
Available in reels of 1K pieces.

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



Alerts

SMT-753**FEATURES**

- Mounting: Surface Mount
- Frequency: 2830 +/- 566 Hz



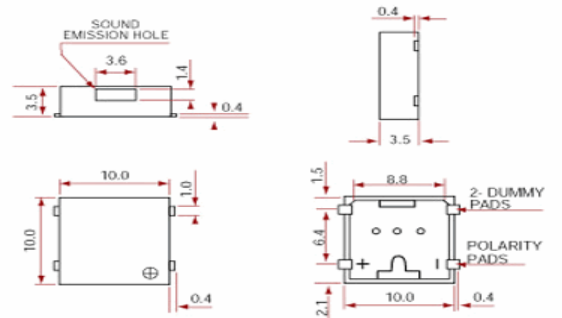
Case Material: PA46

Weight: 0.9 g

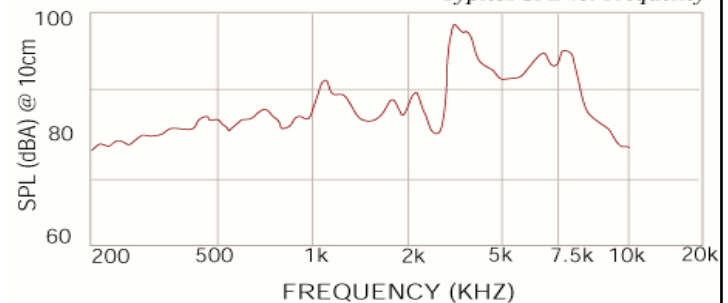
Pin Material: SnAgPb

Mechanical

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



SMT-753-TF

Case Material: PA46

Weight: 0.9 g

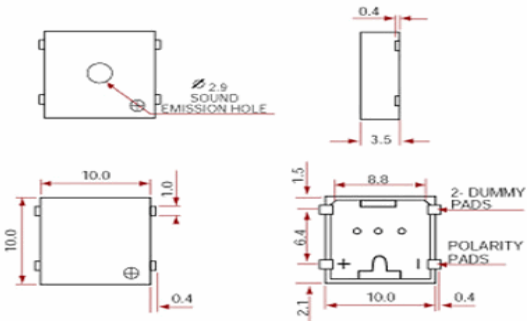
Pin Material: SnAgPb

FEATURES

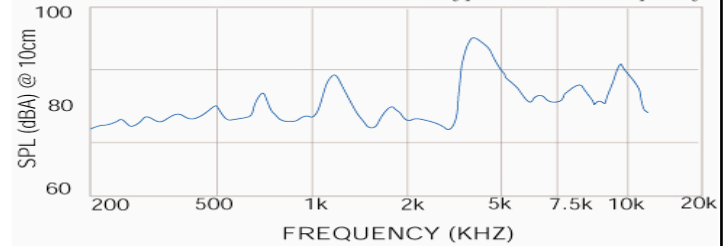
- Mounting: Surface Mount
- Frequency: 2830 +/- 566 Hz

**Electrical**

Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	3 - 4.6 Vp-p
Resonant Frequency	2830 +/- 566 Hz
Sound Pressure Level @ 10 cm (Min.)	90 dBA
Rated Current (Max.)	100 mA

MechanicalDimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.**Performance**

Typical SPL vs. Frequency

**SMT-831-2**

Compatible with convection, IR and vapor phase

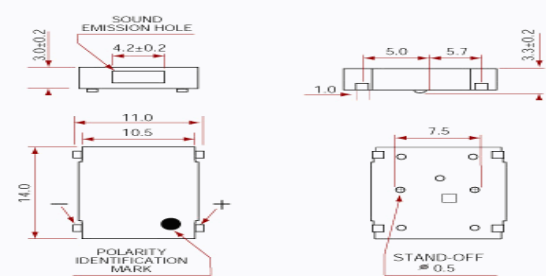
Available in tape & reel

FEATURES

- 3.0mm low profile
- High sound output
- 2700 Hz standard frequency

**Electrical**

Parameter	Value
Rated Voltage	1.5 Vac
Operating Voltage	1.2 - 1.7 Vac
Resonant Frequency	2700 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	80 mA

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Frequency



SMT-833-2

Available in tape & reel

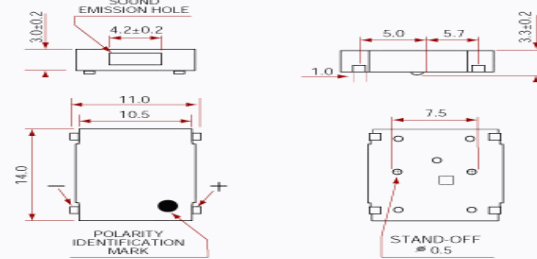
Compatible with convection, IR and vapor phase

FEATURES

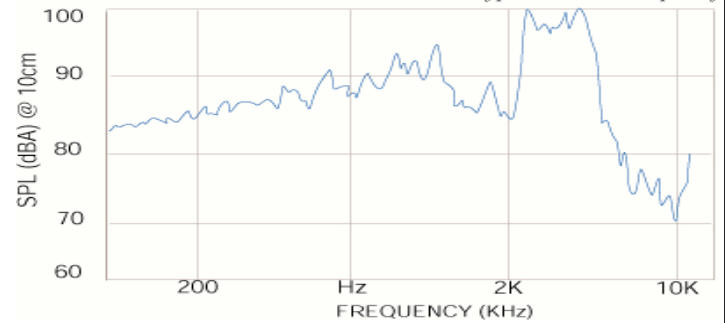
- 3.0mm low profile
- High sound output
- 2700 Hz standard frequency

**Electrical**

Parameter	Value
Rated Voltage	3.0 Vac
Operating Voltage	3.0 - 4.5 Vac
Resonant Frequency	2700 Hz
Sound Pressure Level @ 10 cm (Min.)	87 dBA
Rated Current (Max.)	90 mA

MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Frequency

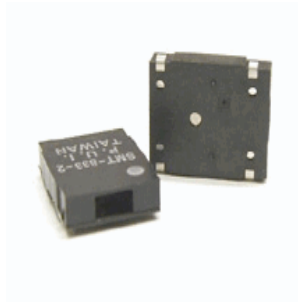
**SMT-835-2**

Compatible with convection, IR and vapor phase

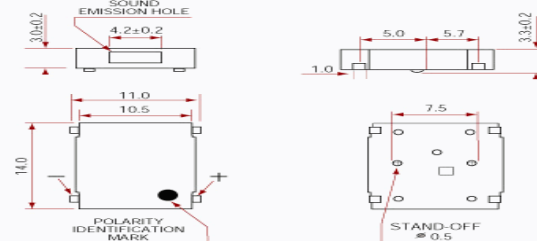
Available in tape & reel

FEATURES

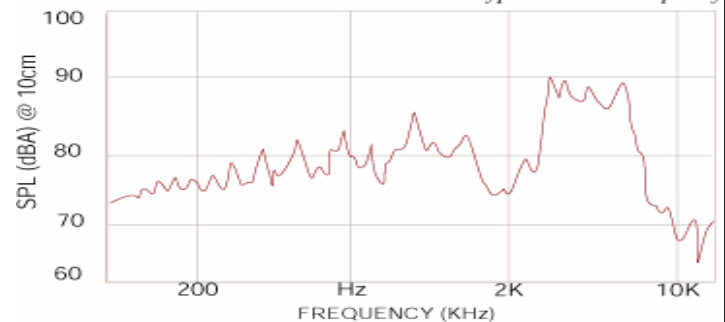
- 3.0mm low profile
- High sound output
- 2700 Hz standard frequency

**Electrical**

Parameter	Value
Rated Voltage	5.0 Vac
Operating Voltage	4.0 - 7.0 Vac
Resonant Frequency	2700 Hz
Sound Pressure Level @ 10 cm (Min.)	87 dBA
Rated Current (Max.)	90 mA

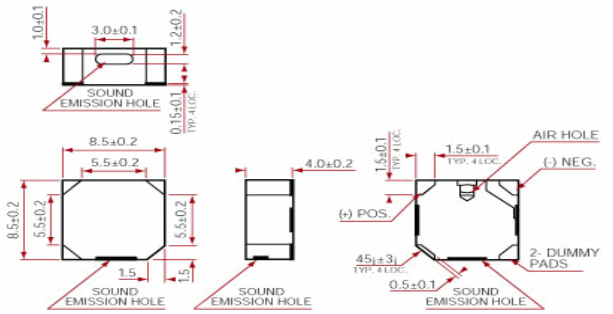
MechanicalDimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Performance**

Typical SPL vs. Frequency

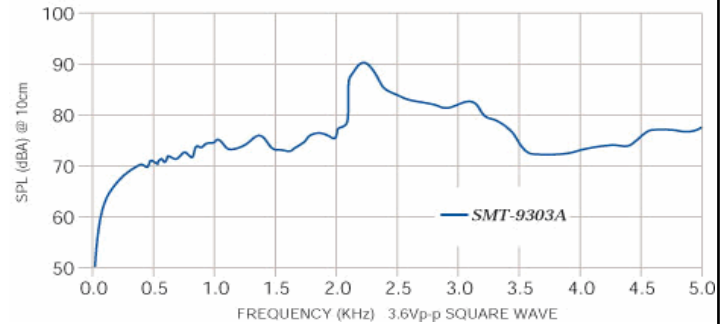


SMT-9303A**Case Material:** LCP 6130**Weight:** 0.4 g**Pin Material:** PBS**FEATURES**

- Mounting: Surface Mount
- Frequency: 2100 +/- 420 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.**Performance**

Typical SPL vs. Frequency

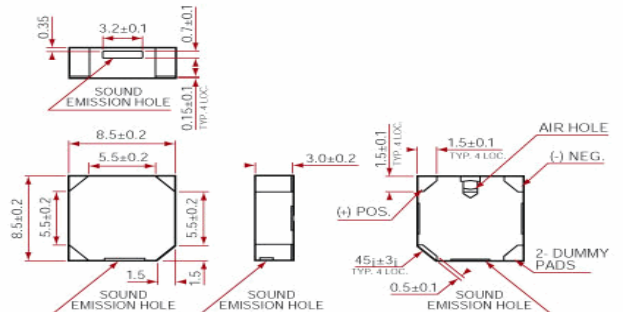
**Electrical**

Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2100 +/- 420 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	90 mA

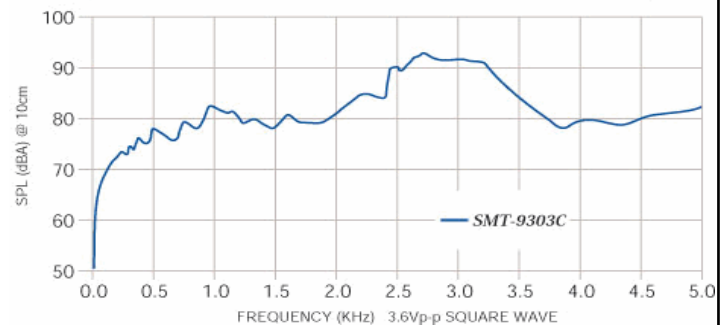
Alerts

SMT-9303C**Case Material:** LCP 6130**Weight:** 0.4 g**Pin Material:** PBS**FEATURES**

- Mounting: Surface Mount
- Frequency: 2500 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.**Performance**

Typical SPL vs. Frequency

**Electrical**

Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	90 mA

SMT-9303CP**Case Material:** LCP6130**Weight:** 0.4 g**Pin Material:** PBS**FEATURES**

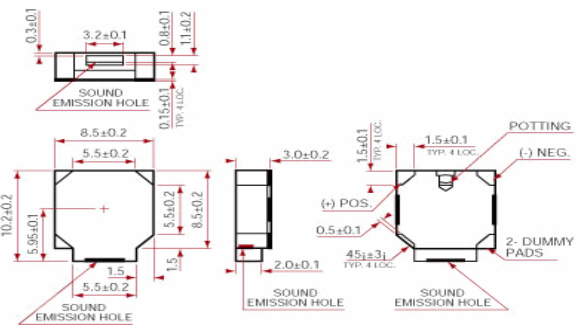
- Mounting: Surface Mount
- Frequency: 2500 +/- 500 Hz

**Electrical**

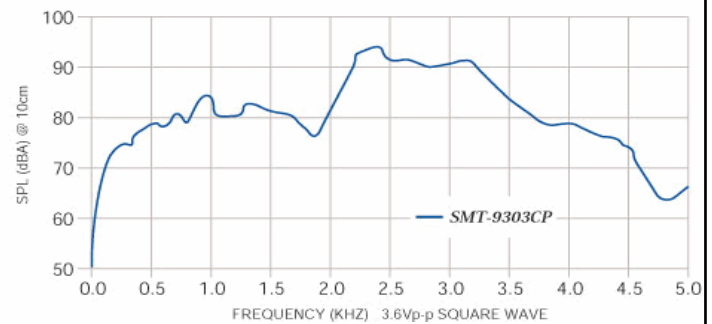
Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	90 mA

Mechanical

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



Alerts

SMT-9303D**Case Material:** LCP 6130**Weight:** 0.4 g**Pin Material:** PBS**FEATURES**

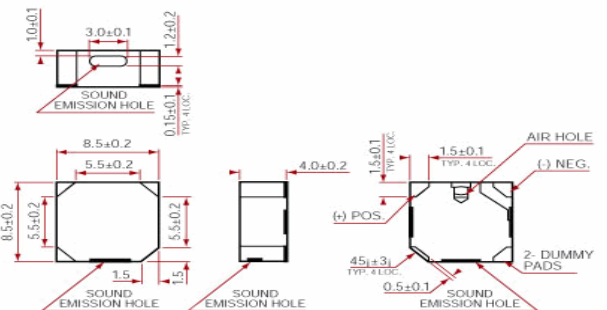
- Mounting: Surface Mount
- Frequency: 2700 +/- 540 Hz

**Electrical**

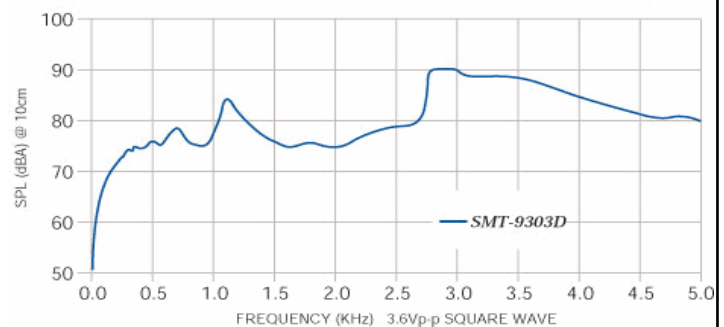
Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2700 +/- 540 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	90 mA

Mechanical

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



SMT-9303DP**Case Material:** LCP 6130**Weight:** 0.4 g**Pin Material:** PBS**FEATURES**

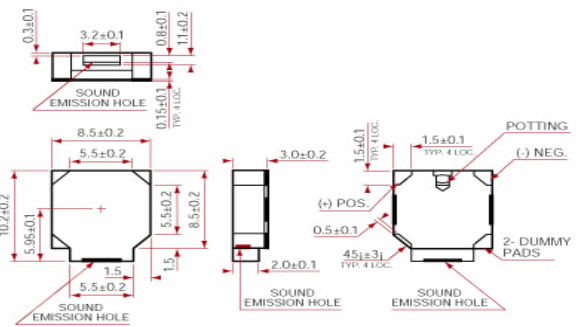
- Mounting: Surface Mount
- Frequency: 2700 +/- 540 Hz

**Electrical**

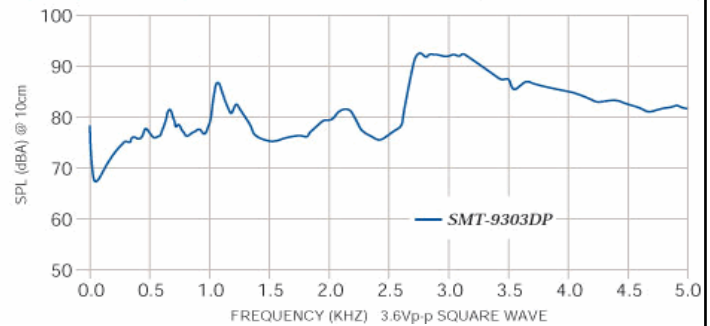
Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2700 +/- 540 Hz
Sound Pressure Level @ 10 cm (Min.)	87 dBA
Rated Current (Max.)	90 mA

Mechanical

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



Alerts

SMT-9403A**Case Material:** LCP 6130**Weight:** 0.42 g**Pin Material:** PBS**FEATURES**

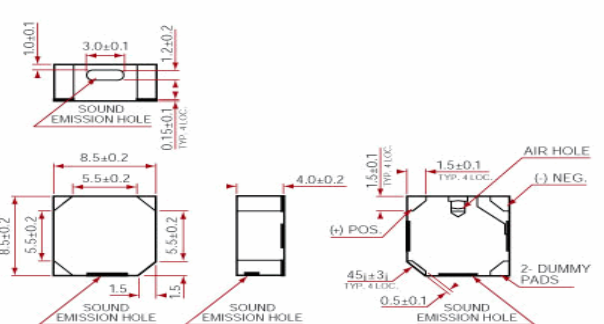
- Mounting: Surface Mount
- Frequency: 2100 +/- 420 Hz

**Electrical**

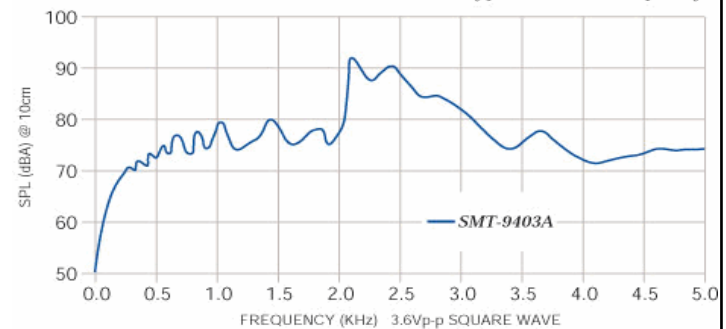
Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2100 +/- 420 Hz
Sound Pressure Level @ 10 cm (Min.)	87 dBA
Rated Current (Max.)	90 mA

Mechanical

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



SMT-9403C**Case Material:** LCP 6130**Weight:** 0.42 g**Pin Material:** PBS**FEATURES**

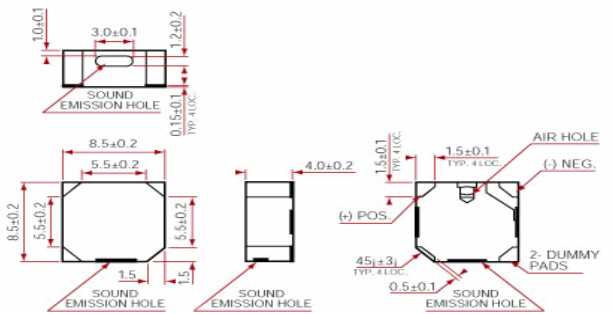
- Mounting: Surface Mount
- Frequency: 2500 +/- 500 Hz

**Electrical**

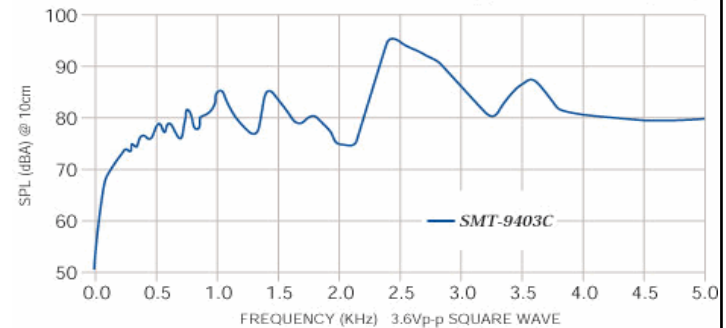
Parameter	Value
Rated Voltage	3.6 Vp-p
Operating Voltage	2.5 - 4.5 Vp-p
Resonant Frequency	2500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	85 dBA
Rated Current (Max.)	90 mA

Mechanical

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



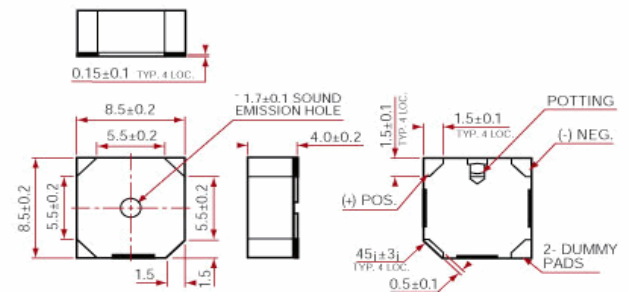
Alerts

SMT-9403CT**Compatible with convection, IR and vapor phase****Available in tubes of 50 pieces and reels of 1K pieces****FEATURES**

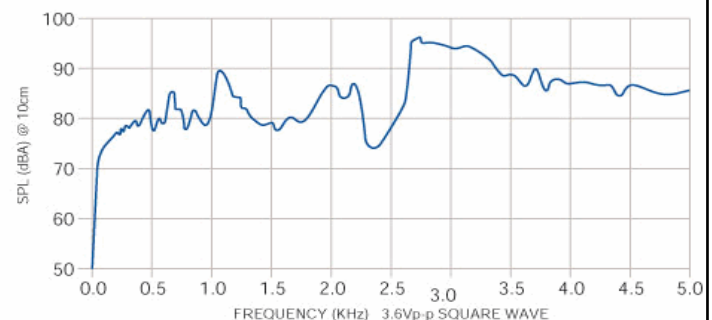
- SMD mounting
- 4.0mm low profile miniature case configuration

**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



SMT-9403D

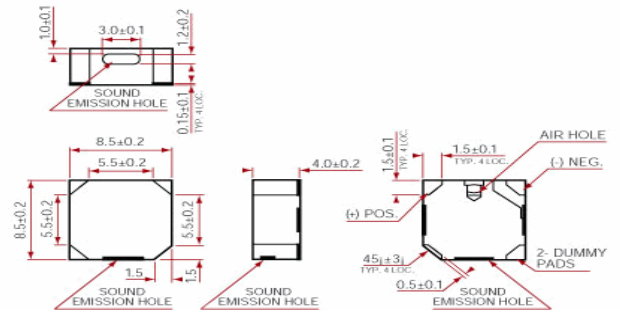
Compatible with convection, IR and vapor phase
Available in tubes of 50 pieces and reels of 1K pieces

FEATURES

- SMD mounting
- 4.0mm low profile miniature case configuration

**Mechanical**

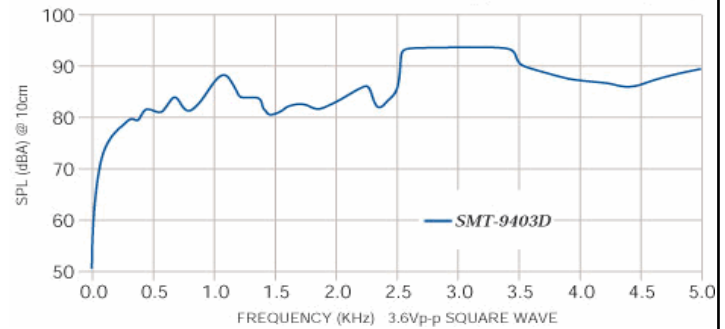
Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	3.6 Vac
Operating Voltage	2.5 - 4.5 Vac
Resonant Frequency	2700 Hz
Sound Pressure Level @ 10 cm (Min.)	87 dBA
Rated Current (Max.)	87 mA

Performance

Typical SPL vs. Frequency



Alerts

X-10P

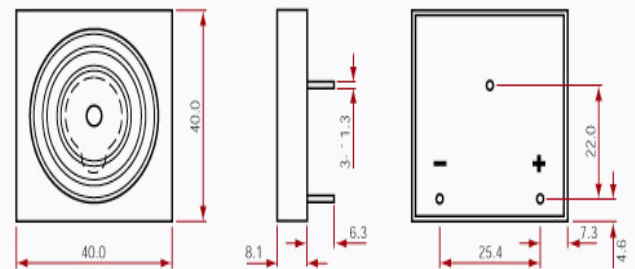
Case: ABS, black
Weight: 8 grams
P.C. Pins: Nickel-plated brass
Wire: AWG No. 26, stranded

FEATURES

- Continuous tone
- P.C. mounting
- 3300 Hz frequency
- Supplied with removable tab for wave soldering and washing

**Mechanical**

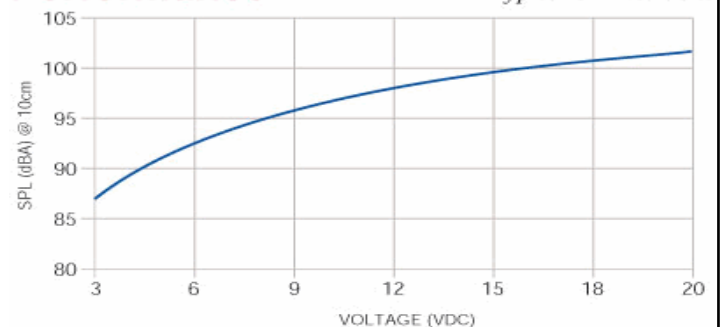
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3.0 - 20.0 Vdc
Resonant Frequency	3300 Hz
Sound Pressure Level @ 10 cm (Min.)	100 dBA
Rated Current (Max.)	8 mA

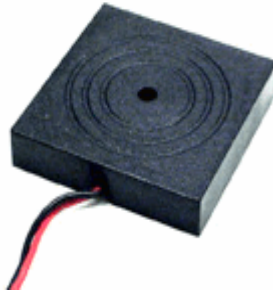
Performance

Typical SPL vs. Volts

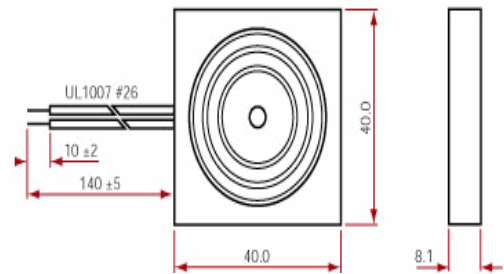


X-10W*Case Material: ABS**Weight: 9 g**Terminal Type: Lead Wire**Wire Gauge: UL1007 AWG #26***FEATURES**

- *Mounting: Flange*
- *Tone: Continuous*
- *Frequency: 3500 +/- 500 Hz*

**Mechanical**

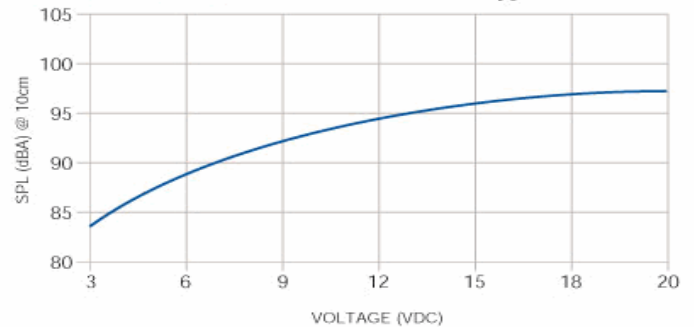
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3.0 - 20.0 Vdc
Resonant Frequency	3500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	99 dBA
Rated Current (Max.)	8 mA

Performance

Typical SPL vs. Volts



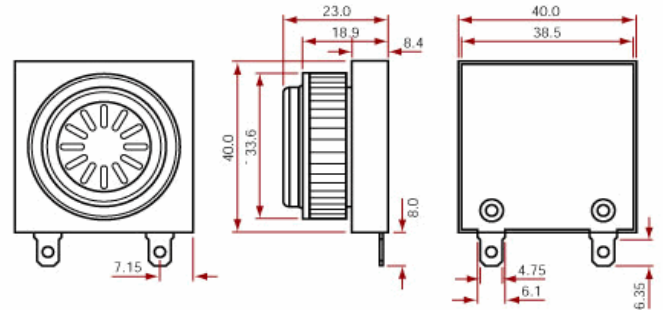
Alerts

X-20*Case: ABS, black**Weight: 15 grams**Tabs: Tin-plated brass***FEATURES**

- *Continuous tone*
- *Panel mounting (fits 1.125" dia. opening up to 0.25" thick)*
- *2800 Hz frequency*
- *Quick disconnect tabs (0.187", 1.75mm)*

**Mechanical**

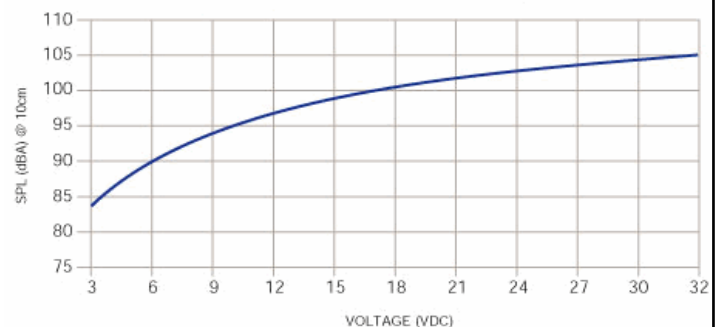
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	32.0 Vdc
Operating Voltage	3.0 - 32.0 Vdc
Resonant Frequency	2800 Hz
Sound Pressure Level @ 10 cm (Min.)	105 dBA
Rated Current (Max.)	22 mA

Performance

Typical SPL vs. Volts



X-21**FEATURES**

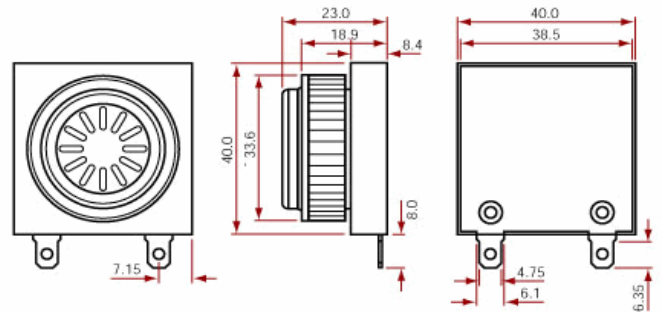
- Continuous tone
- Panel mounting (fits 1.125" dia. opening up to 0.25" thick)
- 2800 Hz frequency
- Quick disconnect tabs (0.187", 1.75mm.)



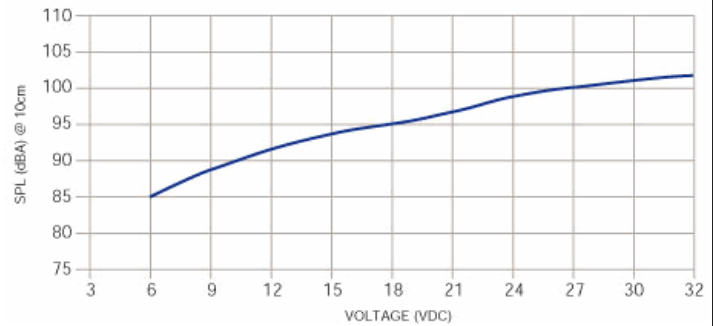
Case: ABS, black
Weight: 17 grams
Tabs: Nickel-plated brass

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise speci ed.

**Performance**

Typical SPL vs. Volts



Alerts

X-23**FEATURES**

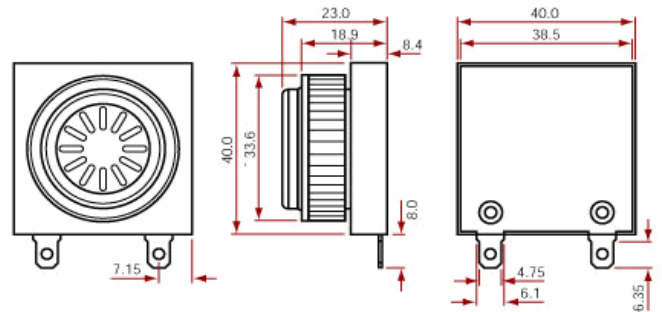
- Slow pulsing tone
- Panel mounting (fits 1.125" dia. opening up to 0.25" thick)
- 2800 Hz frequency
- Quick disconnect tabs (0.187", 1.75mm.)



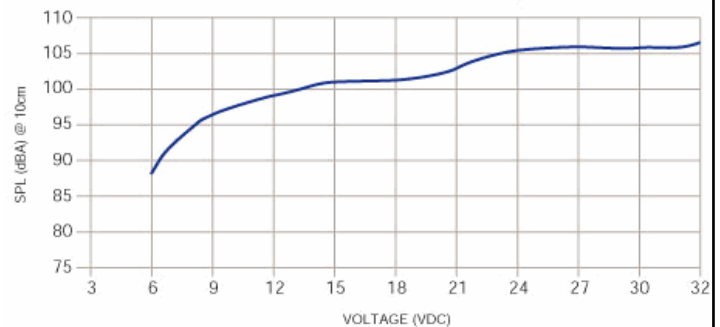
Case: ABS, black
Weight: 17 grams
Tabs: Nickel-plated brass

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise speci ed.

**Performance**

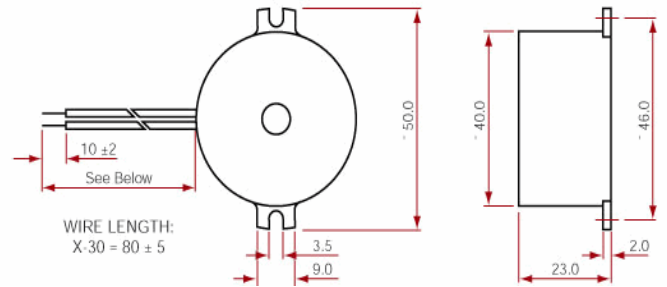
Typical SPL vs. Volts

**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3.0 - 32.0 Vdc
Resonant Frequency	2800 Hz
Sound Pressure Level @ 10 cm (Min.)	98 dBA
Rated Current (Max.)	9 mA

X-30**Case Material:** ABS**Weight:** 14.1 g**Terminal Type:** Lead Wire**Wire Gauge:** UL1007 AWG #26**FEATURES**

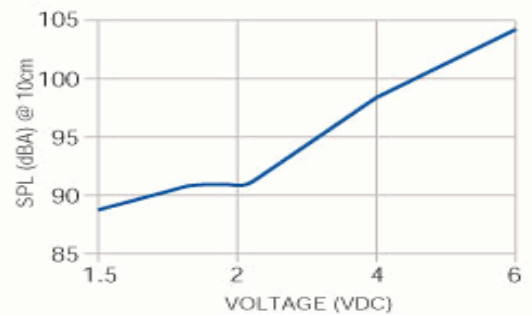
- **Mounting:** Flange
- **Tone:** Continuous
- **Frequency:** 3300 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	1.5 - 12.0 Vdc
Resonant Frequency	3300 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	106 dBA
Rated Current (Max.)	6 mA

Performance

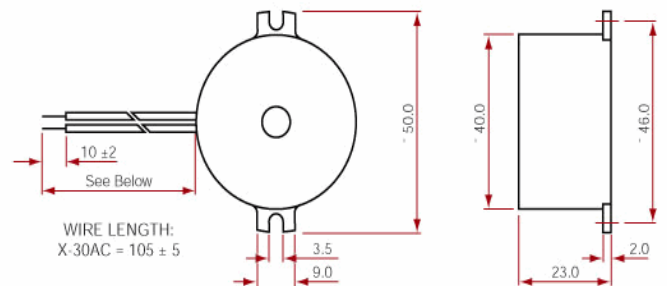
Typical SPL vs. Volts



Alerts

X-30AC**Case Material:** ABS**Weight:** 14.1 g**Terminal Type:** Lead Wire**Wire Gauge:** UL1007 AWG #20**FEATURES**

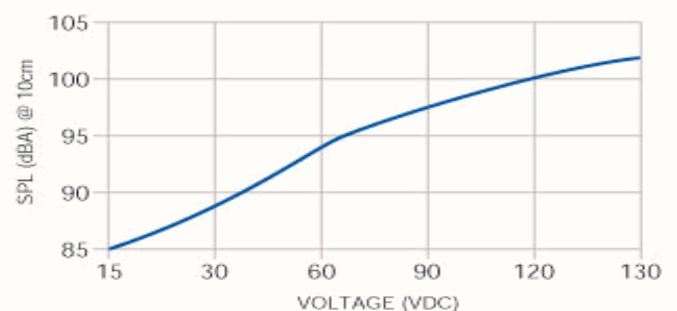
- **Mounting:** Flange
- **Tone:** Continuous
- **Frequency:** 3200 +/- 500 Hz

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	90.0 Vdc
Operating Voltage	15 -130 Vdc / Vac
Resonant Frequency	3200 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	97 dBA
Rated Current (Max.)	9 mA

Performance

Typical SPL vs. Volts

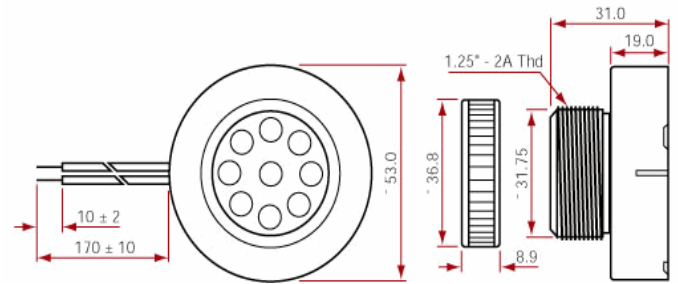


X-70**Case Material:** ABS**Weight:** 38 g**Terminal Material:** Lead Wire**Wire Gauge:** UL1007 AWG #26**FEATURES**

- Mounting: Panel Mount
- Tone: Continuous
- Frequency: 2800 +/- 500 Hz

**Mechanical**

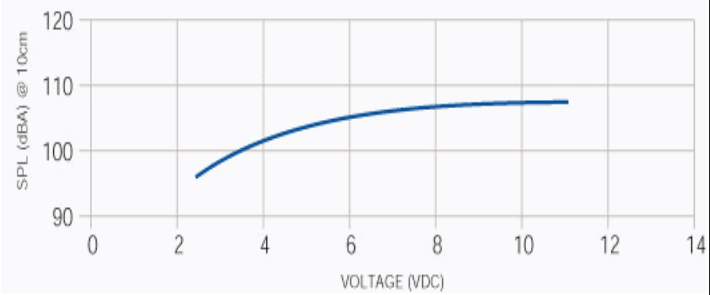
Dimensions are in millimeters,
tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	6 Vdc
Operating Voltage	3 - 12 Vdc
Resonant Frequency	2800 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	103 dBA
Rated Current (Max.)	20 mA

Performance

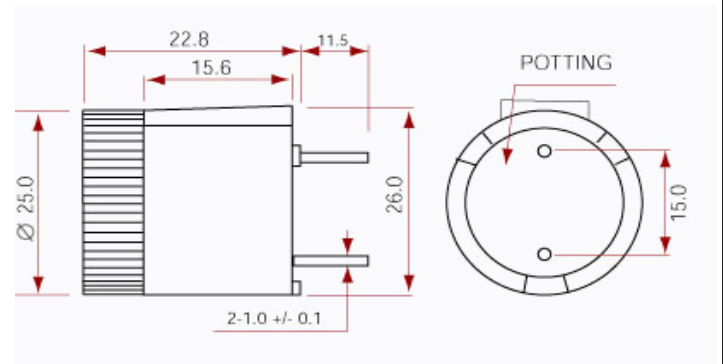
Typical SPL vs. Volts



Alerts

X-80**Case:** Noryl (black)**Weight:** 41 grams**P.C. Pins:** Pb/Sn plated bronze**FEATURES**

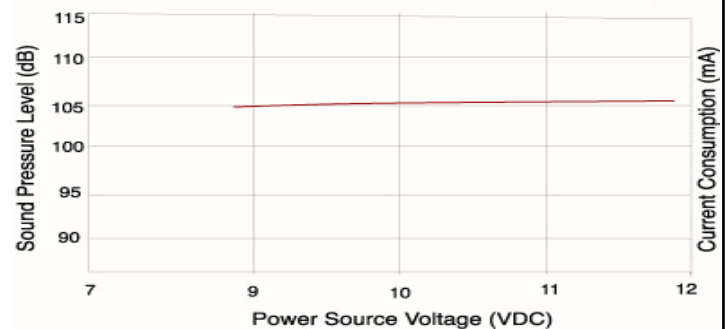
- P.C. board mounting
- Continuous tone
- Washable

NEW!**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	5.0 - 14.0 Vdc
Resonant Frequency	2900 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	107 dBA
Rated Current (Max.)	35 mA

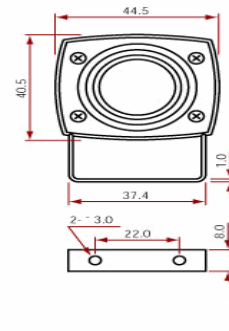
Performance

Typical SPL vs. Volts

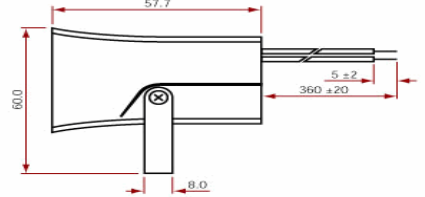


XL-1200**Case Material:** ABS**Weight:** 75 g**Terminal Material:** Lead Wire**Wire Gauge:** UL1007 AWG #22**FEATURES**

- **Mounting:** Bracket Mount
- **Tone:** Siren
- **Frequency:** 2000 +/- 1500 Hz

**Mechanical**

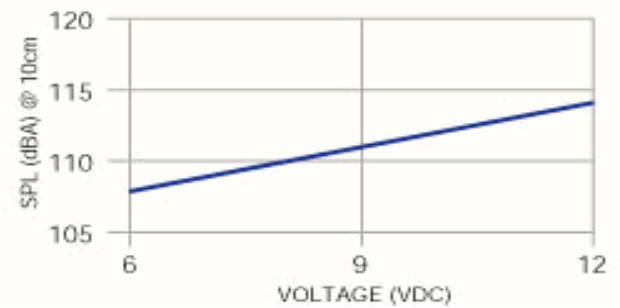
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12 Vdc
Operating Voltage	7 - 15 Vdc
Resonant Frequency	2000 +/- 1500 Hz
Sound Pressure Level @ 10 cm (Min.)	110 dBA
Rated Current (Max.)	200 mA

Performance

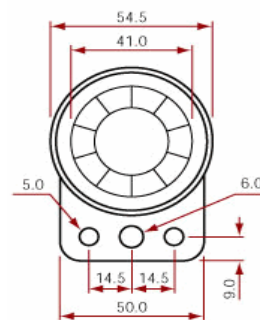
Typical SPL vs. Volts



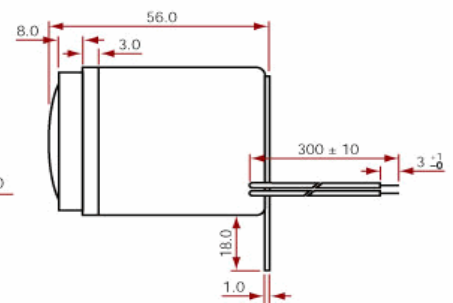
Alerts

XL-1600**Case Material:** ABS**Weight:** 91.6 g**Terminal Material:** Lead Wire**Wire Color Code:** Red (+), Black (-)**FEATURES**

- **Mounting:** Bracket Mount
- **Tone:** Siren
- **Frequency:** 3000 +/- 1000 Hz

**Mechanical**

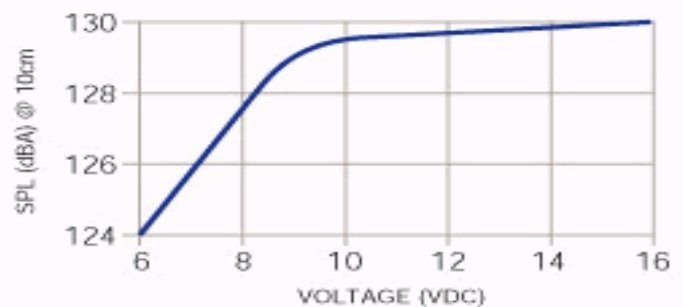
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12 Vdc
Operating Voltage	6 - 16 Vdc
Resonant Frequency	3000 +/- 1000 Hz
Sound Pressure Level @ 10 cm (Min.)	125 dBA
Rated Current (Max.)	260 mA

Performance

Typical SPL vs. Volts

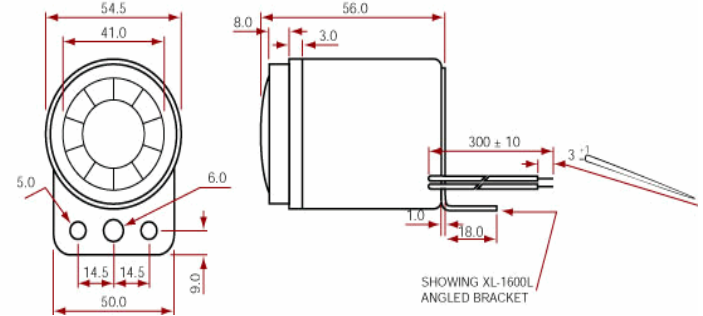


XL-1600L**Case Material:** ABS**Weight:** 89.4 g**Terminal Material:** Lead Wire**Wire Color Code:** Red (+), Black (-)**FEATURES**

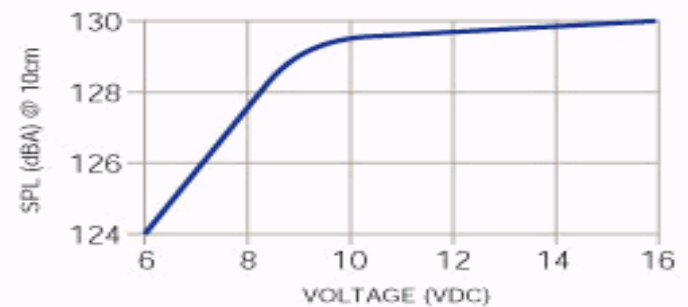
- **Mounting:** Bracket Mount
- **Tone:** Siren
- **Frequency:** 3000 +/- 1000 Hz

**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Voltage	12 Vdc
Operating Voltage	6 - 16 Vdc
Resonant Frequency	3000 +/- 1000 Hz
Sound Pressure Level @ 10 cm (Min.)	125 dBA
Rated Current (Max.)	260 mA

Performance Typical SPL vs. Volts

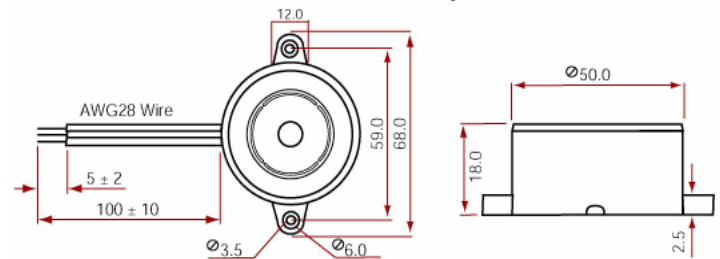
Alerts

XL-1700**Wire Color:** Red wire (+) right side, Black wire (-) center, White wire**Case:** Heat resistant ABS, black**Flange Mount:** 59mm center**Weight:** 34 grams**FEATURES****NEW!**

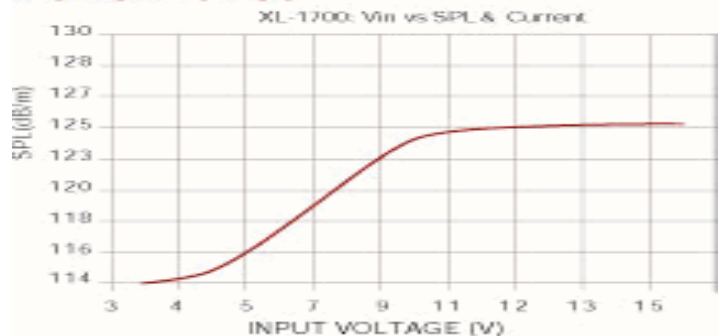
- **Waterproof design, Projects Unlimited guarantees 1-meter**
- **Compact design measures 50mm diameter x 18mm high.**
- **Flange mounting with wire leads.**
- **CMOS controllable.**

**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

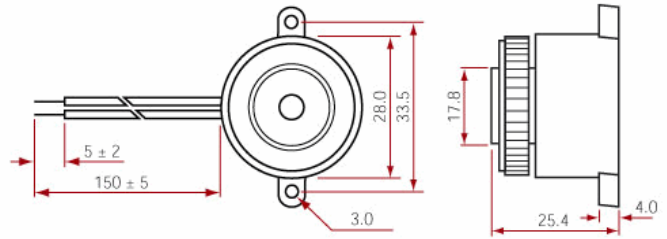
**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3.0 - 15.0 Vdc
Resonant Frequency	3000 Hz
Sound Pressure Level @ 10 cm (Min.)	125 dBA
Rated Current (Max.)	150 mA

Performance

XL-450**FEATURES**

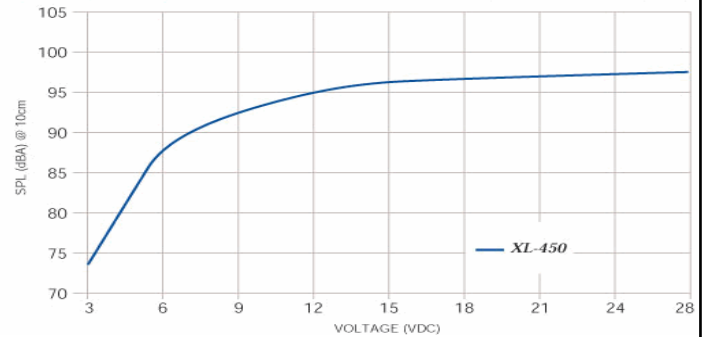
- Mounting: Flange
- Tone: Continuous
- Frequency: 3500 +/- 500 Hz

**Case Material:** ABS**Weight:** 15 g**Terminal Material:** Lead Wire**Wire Color Code:** Red (+), Black (-)**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12 Vdc
Operating Voltage	3 - 28 Vdc
Resonant Frequency	3500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	100 dBA
Rated Current (Max.)	10 mA

Performance

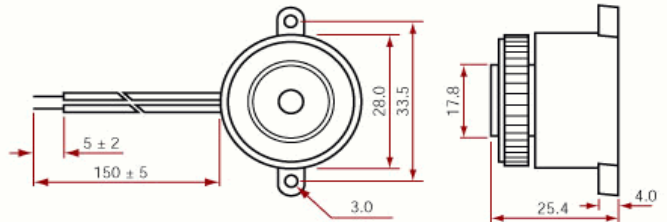
Typical SPL vs. Frequency



Alerts

XL-451**FEATURES**

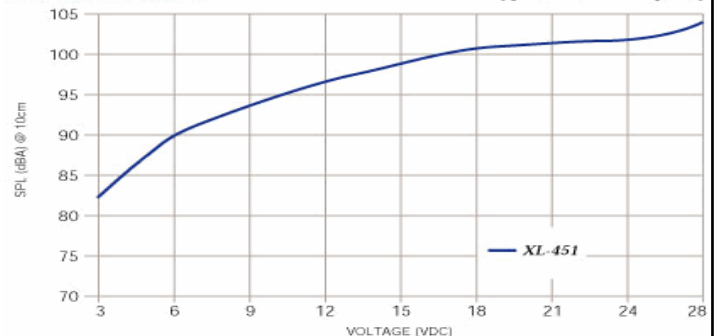
- Mounting: Flange
- Tone: Continuous
- Frequency: 3500 +/- 500 Hz

**Case Material:** ABS**Weight:** 15 g**Terminal Material:** Lead Wire**Wire Color Code:** Red (+), Black (-)**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12 Vdc
Operating Voltage	4 - 28 Vdc
Resonant Frequency	3500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	95 dBA
Rated Current (Max.)	10 mA

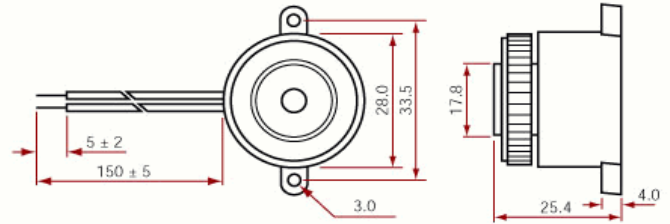
Performance

Typical SPL vs. Frequency



XL-453**FEATURES**

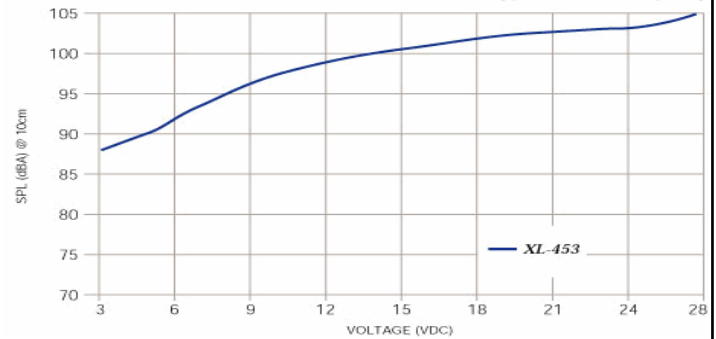
- Slow pulsing tone
- Flange and Panel mounting (fits .75" dia. opening)
- 3500 Hz frequency

**Case:** ABS, black**Weight:** 0.353 oz. (10 grams)**Wire:** AWG No. 26, stranded**Wire Color Code:** Red (+), Black (-)**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	4.0 - 28.0 Vdc
Resonant Frequency	3500 Hz
Sound Pressure Level @ 10 cm (Min.)	97 dBA
Rated Current (Max.)	6 mA

Performance

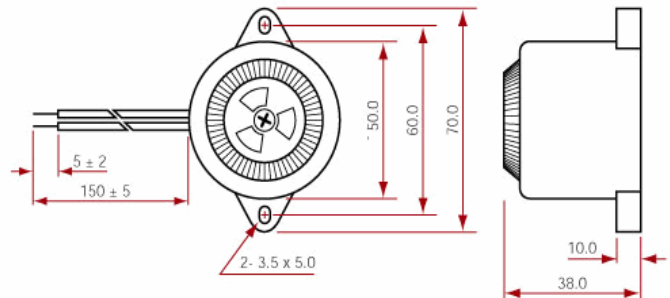
Typical SPL vs. Frequency



Alerts

XL-960**FEATURES**

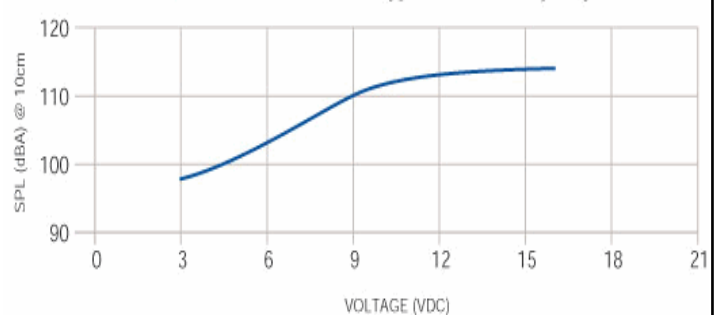
- Mounting: Flange
- Tone: Continuous
- Frequency: 2500 +/- 500 Hz

**Case Material:** ABS**Weight:** 35 g**Terminal Type:** Lead Wire**Wire Color Code:** Red (+), Black (-)**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Voltage	12.0 Vdc
Operating Voltage	3 - 16 Vdc
Resonant Frequency	2500 +/- 500 Hz
Sound Pressure Level @ 10 cm (Min.)	110 dBA
Rated Current (Max.)	58 mA

Performance

Typical SPL vs. Frequency



XL-980

Case Material: ABS
Weight: 49 g
Terminal Material: Lead Wire
Wire Color Code: Red (+), Black (-)

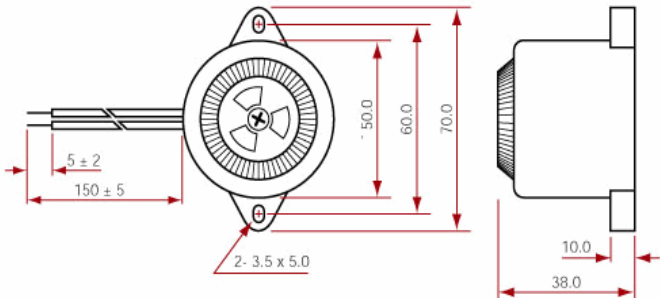
FEATURES

- Mounting: Flange
- Tone: Siren
- Frequency: 1950 +/- 850 Hz



Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

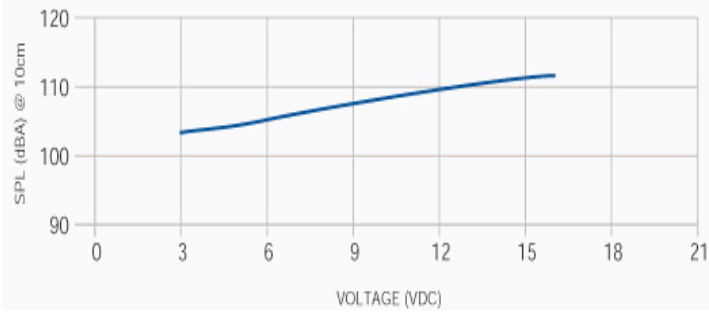


Electrical

Parameter	Value
Rated Voltage	12 Vdc
Operating Voltage	3 - 16 Vdc
Resonant Frequency	1950 +/- 850 Hz
Sound Pressure Level @ 10 cm (Min.)	110 dBA
Rated Current (Max.)	120 mA

Performance

Typical SPL vs. Frequency



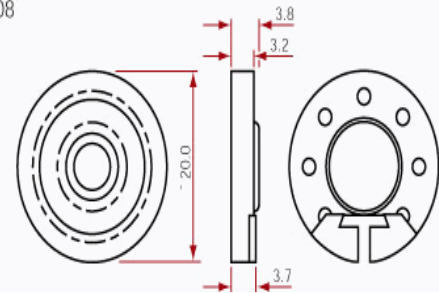
ADS-2008

Case Material: ABS
Cone Material: Polyester
Magnet Material: Nd-Fe-B
Weight: 2.3 g

FEATURES**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

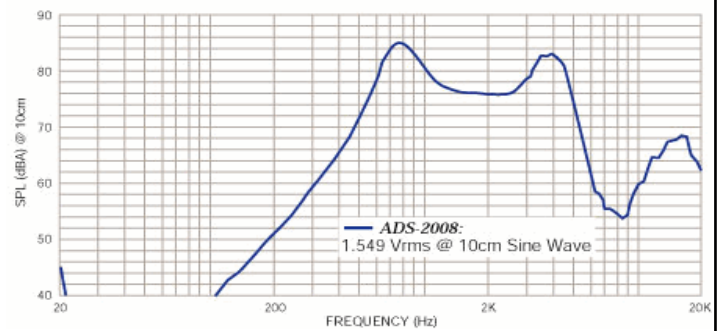
ADS-2008

**Electrical**

Parameter	Value
Rated Input	0.08 W
Maximum Input	0.2 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	86 dBA
Resonant Frequency	750 +/- 150 Hz
Frequency Range	750 - 5000 Hz

Performance

Typical SPL vs. Frequency



Speakers & Receivers

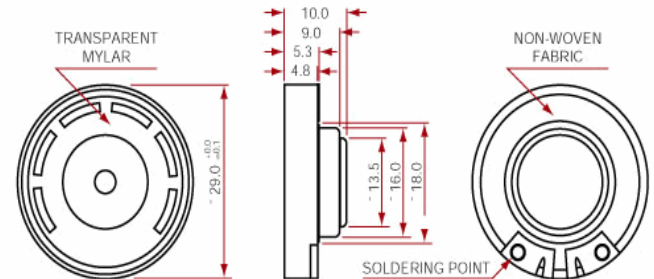
ADS-2908

Case Material: ABS
Cone Material: Mylar
Magnet Material: Nd-Fe-B
Weight: 8.0 g

FEATURES**NEW!****Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

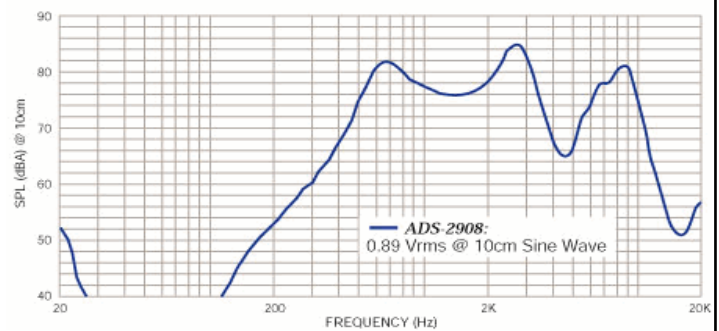
ADS-2908

**Electrical**

Parameter	Value
Rated Input	0.1 W
Maximum Input	0.20 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	88 dBA
Resonant Frequency	650 +/- 130 Hz
Frequency Range	650 - 4000 Hz

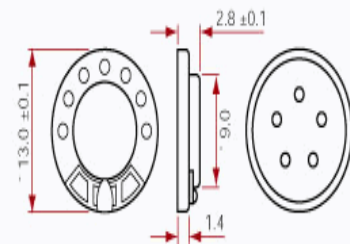
Performance

Typical SPL vs. Frequency



AS1308-02*Case Material: Metal**Cone Material: Mylar**Magnet Material: Nd-Fe-B**Weight: 1.1 g***FEATURES****Mechanical**

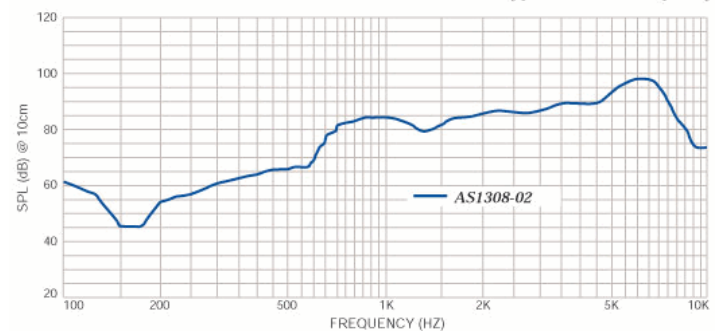
AS1308-02

Dimensions are in millimeters, tolerance is ± 0.2 unless otherwise specified.**Electrical**

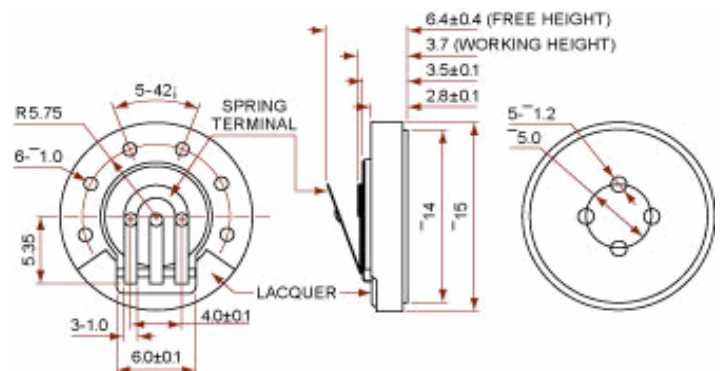
Parameter	Value
Rated Input	0.2 W
Maximum Input	0.40 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	86 dBA
Resonant Frequency	1000 +/- 200Hz
Frequency Range	650 - 5000 Hz

Performance

Typical SPL vs. Frequency



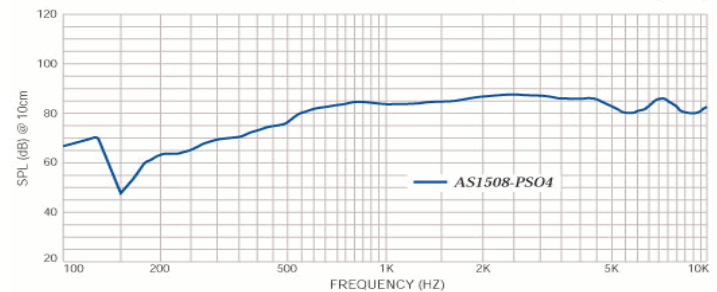
Speakers & Receivers

AS1508-PS04*Case Material: Plastic**Cone Material: Mylar**Magnet Material: Nd-Fe-B**Weight: 1 g***FEATURES****Electrical**

Parameter	Value
Rated Input	0.5 W
Maximum Input	0.80 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	85 dBA
Resonant Frequency	720 +/- 144 Hz
Frequency Range	720 - 5000 Hz

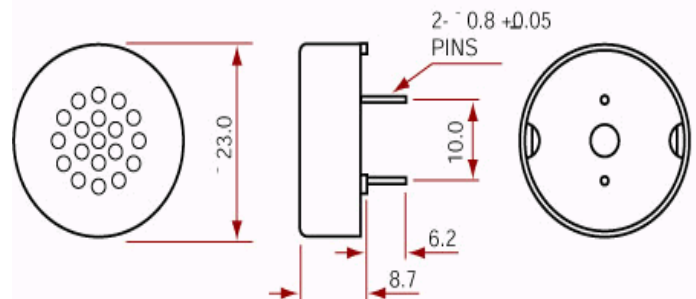
Performance

Typical SPL vs. Frequency



AT-2308 8 OHM**Case Material:** Plastic**Cone Material:** Mylar**Magnet Material:** Nd-Fe-B**Weight:** 3.2 g**FEATURES**

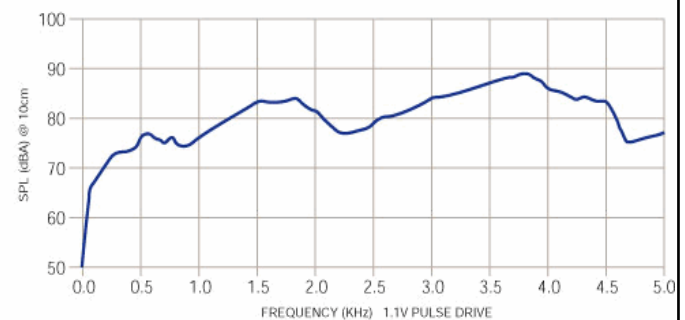
●

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Input	0.08 W
Maximum Input	0.15 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	75 dBA
Resonant Frequency	1500 +/- 300 Hz
Frequency Range	600 - 20000 Hz

Performance

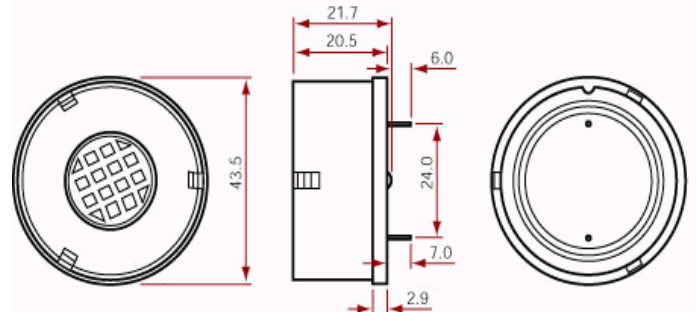
Typical SPL vs. Frequency



Speakers & Receivers

AT-261**Case:** Nylon 66**Weight:** 88 oz. (25 grams)**FEATURES**

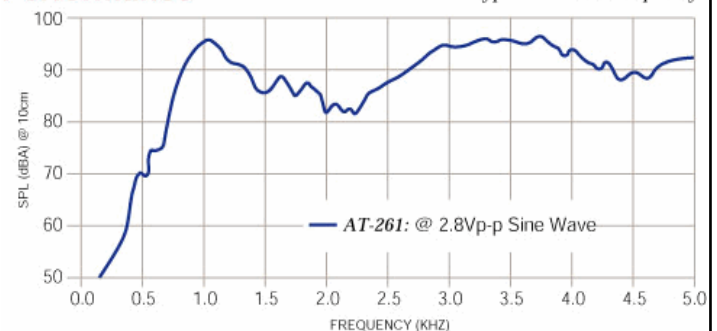
- P.C. board mounting
- Mylar cone speaker transducer
- Suitable for voice synthesizing

**Mechanical**Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.**Electrical**

Parameter	Value
Rated Input	0.1000 W
Maximum Input	0.30 W
Impedance	8.00 Ohm
Sound Pressure Level @ 10 cm (Typ.)	80 dBA
Resonant Frequency	1000 +/- 200Hz
Frequency Range	1000 - 10000 Hz

Performance

Typical SPL vs. Frequency

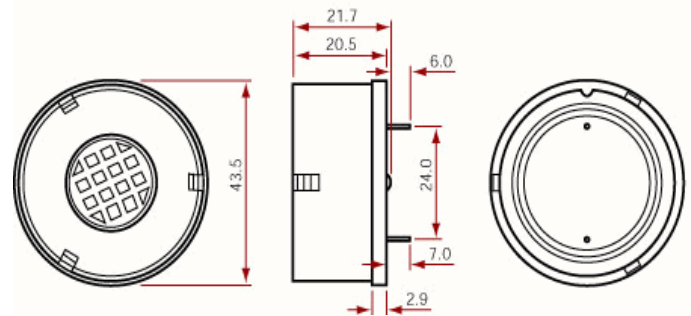


AT-262

Case Material: ABS
 Cone Material: Mylar
 Magnet Material: Alnico
 Weight: 25 g

FEATURES**Mechanical**

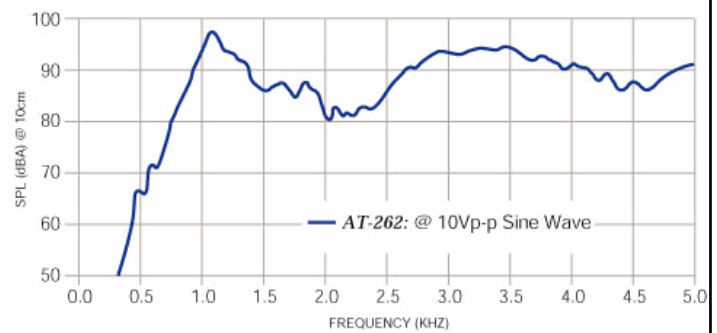
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Input	0.1 W
Maximum Input	0.30 W
Impedance	100 Ohm
Sound Pressure Level @ 10 cm (Typ.)	76 dBA
Resonant Frequency	1000 +/- 200 Hz
Frequency Range	1000 - 10000 Hz

Performance

Typical SPL vs. Frequency



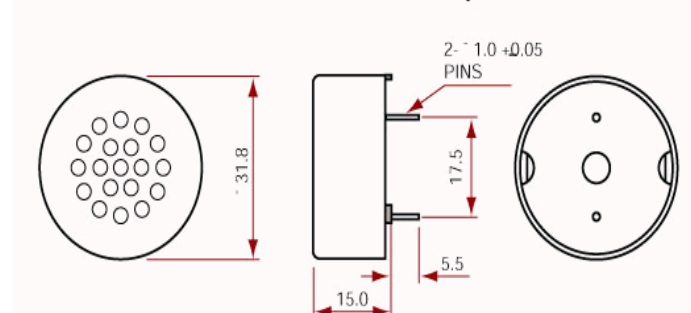
Speakers & Receivers

AT-3108 8 OHM

Case Material: Plastic
 Cone Material: Mylar
 Magnet Material: Nd-Fe-B
 Weight: 9.9 g

FEATURES**Mechanical**

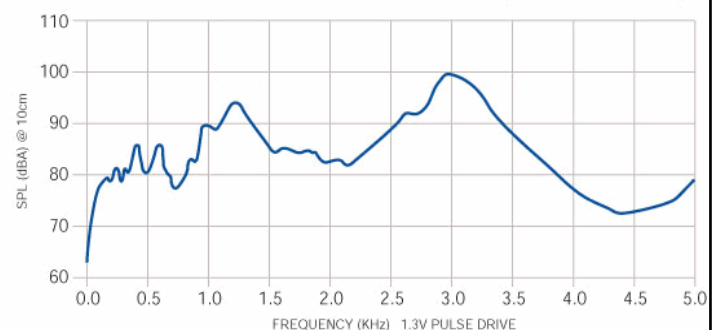
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Electrical**

Parameter	Value
Rated Input	0.1 W
Maximum Input	0.20 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	82 dBA
Resonant Frequency	1500 +/- 300 Hz
Frequency Range	500 - 20000 Hz

Performance

Typical SPL vs. Frequency

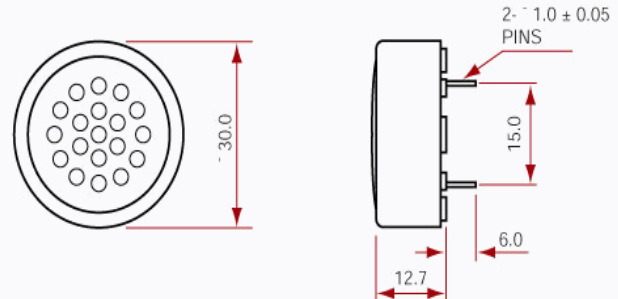


AT-41

Case Material: Plastic
Cone Material: Mylar
Magnet Material: Nd-Fe-B
Weight: 10 g

FEATURES**Mechanical**

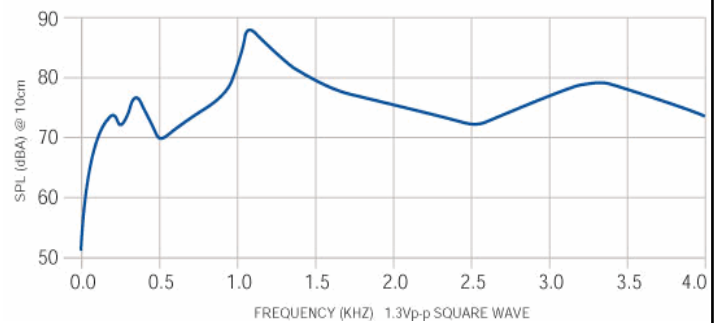
Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise speci ed.

**Electrical**

Parameter	Value
Rated Input	0.15 W
Maximum Input	0.20 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	72 dBA
Resonant Frequency	1400 +/- 280 Hz
Frequency Range	500 - 20000 Hz

Performance

Typical SPL vs. Frequency



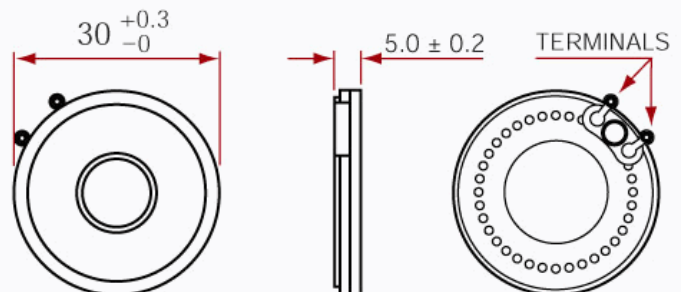
Speakers & Receivers

FS-30R 8 OHM

Case Material: ABS
Cone Material: Stainless steel
Magnet Material: Ferrite
Weight: 6.7 g

FEATURES**Mechanical**

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Rated Input	0.4 W
Maximum Input	0.80 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	75 dBA
Resonant Frequency	1800 +/- 198 Hz
Frequency Range	1800 - 10000 Hz

FS-30S 8 OHM

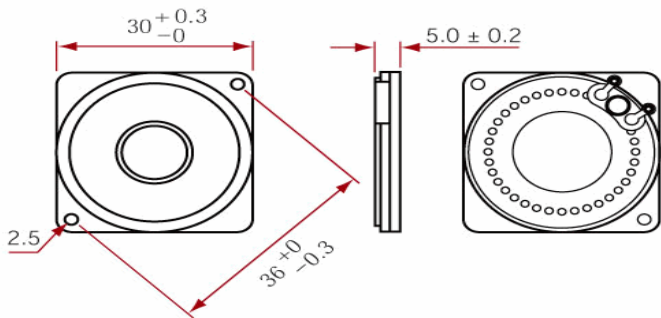
Case Material: ABS
Cone Material: Stainless Steel
Magnet Material: Ferrite
Weight: 7 g

FEATURES

●



Mechanical



Dimensions are in millimeters.

Electrical

Parameter	Value
Rated Input	0.4 W
Maximum Input	0.80 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	70 dBA
Resonant Frequency	1800 +/- 198 Hz
Frequency Range	1800 - 10000 Hz

Speakers & Receivers

FS-40R 8 OHM

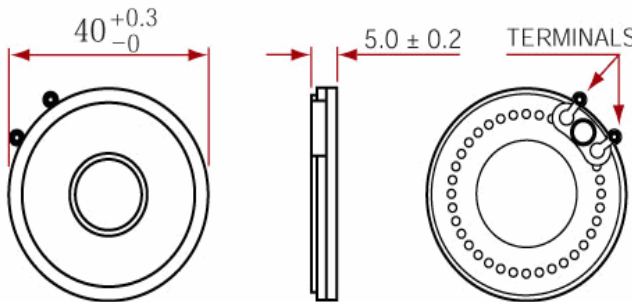
Case Material: Metal
Cone Material: Stainless Steel
Magnet Material: Ferrite
Weight: 7 g

FEATURES

● Thin Profile



Mechanical



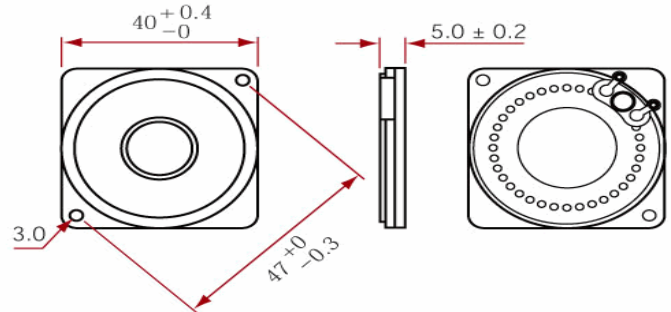
Dimensions are in millimeters.

Electrical

Parameter	Value
Rated Input	0.4 W
Maximum Input	0.80 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	70 dBA
Resonant Frequency	1200 +/- 200.004 Hz
Frequency Range	1200 - 6000 Hz

FS-40S 8 OHM**FEATURES**

- Thin Profile

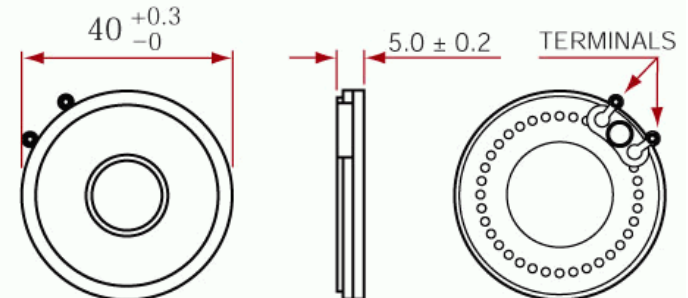
*Case Material: Metal**Cone Material: Stainless Steel**Magnet Material: Ferrite**Weight: 7 g***Mechanical***Dimensions are in millimeters.***Electrical**

Parameter	Value
Rated Input	0.4 W
Maximum Input	0.80 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	70 dBA
Resonant Frequency	1200 +/- 6000 Hz
Frequency Range	1200 - 6000 Hz

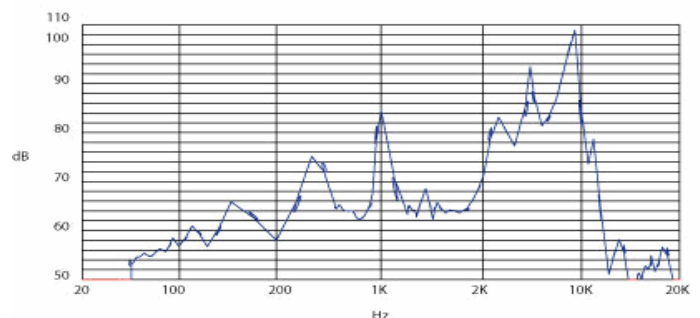
Speakers & Receivers

FS-50R 8 OHM**FEATURES**

- Thin Profile

*Case Material: Metal**Cone Material: Stainless Steel**Magnet Material: Ferrite**Weight: 7 g***Mechanical***Dimensions are in millimeters.***Electrical**

Parameter	Value
Rated Input	0.4 W
Maximum Input	0.80 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	70 dBA
Resonant Frequency	900 +/- 200 Hz
Frequency Range	900 - 4000 Hz

Performance*Typical SPL vs. Frequency*

FS-50S 8 OHM

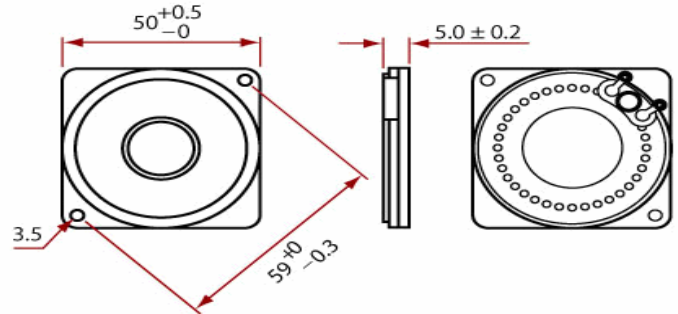
Case Material: Metal
 Cone Material: Stainless Steel
 Magnet Material: Ferrite
 Weight: 7 g

FEATURES

- Thin Profile

**Mechanical**

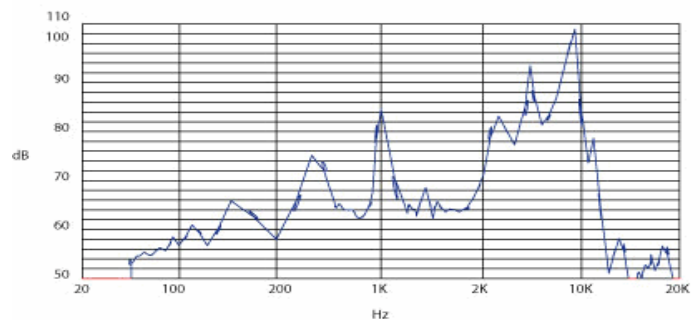
Dimensions are in millimeters.

**Electrical**

Parameter	Value
Rated Input	0.4 W
Maximum Input	0.80 W
Impedance	8 Ohm
Sound Pressure Level @ 10 cm (Typ.)	70 dBA
Resonant Frequency	900 +/- 200 Hz
Frequency Range	900 +/- 4000 Hz

Performance

Typical SPL vs. Frequency



Speakers & Receivers

SMS-1508

Case Material: PPS
 Cone Material: Polyester
 Weight: 2.1g

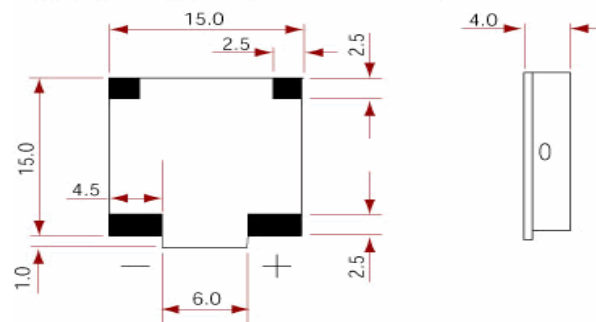
FEATURES

- Reflowable

NEW!

**Mechanical**

Dimensions are in millimeters, tolerance is ± 0.5 .

**Electrical**

Parameter	Value
Rated Input	0.3000 W
Maximum Input	0.50 W
Impedance	8.00 Ohm
Sound Pressure Level @ 10 cm (Typ.)	86 dBA
Resonant Frequency	850 +/- 170Hz
Frequency Range	850 - 20000 Hz

POM-2244L**FEATURES**

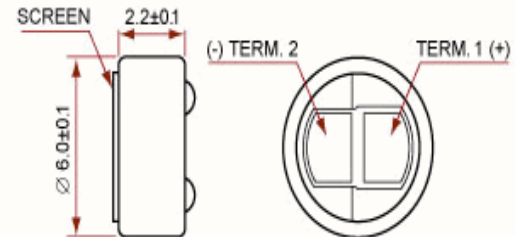
- *Omni directional*
- *Super clarity, distortion-free response*
- *Available with lead wire type mounting*

**Electrical**

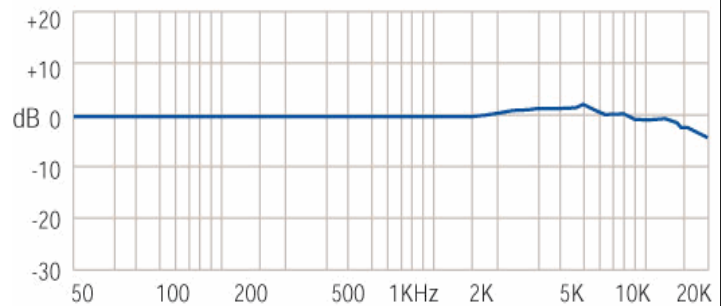
Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 2.2 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



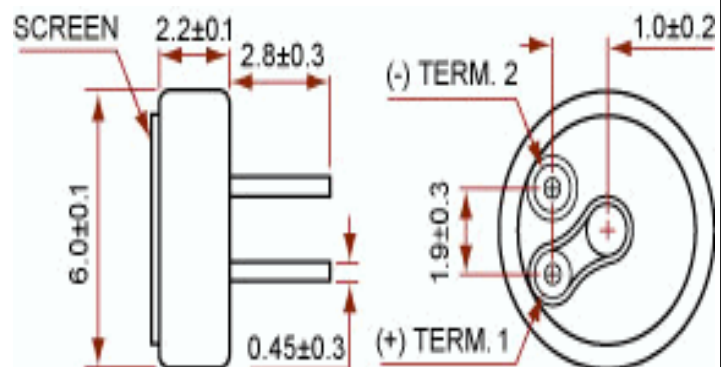
Microphones

POM-2244P**FEATURES**

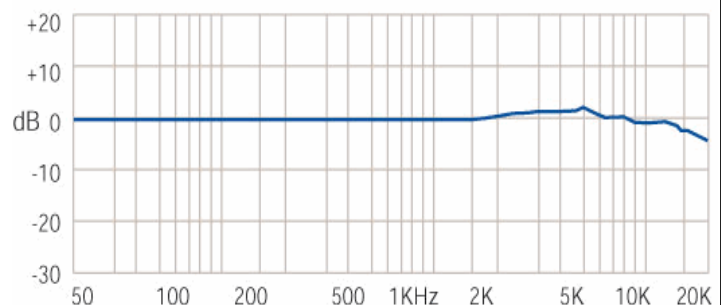
- *Omni directional*
- *Super clarity, distortion-free response*
- *Pin type mounting*

**Electrical**

Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 2.2 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

**Performance**

Typical SPL vs. Frequency



POM-2244S**FEATURES**

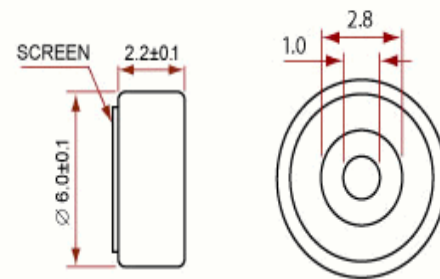
- *Omni directional*
- *Super clarity, distortion-free response*
- *Solderless type mounting*

**Electrical**

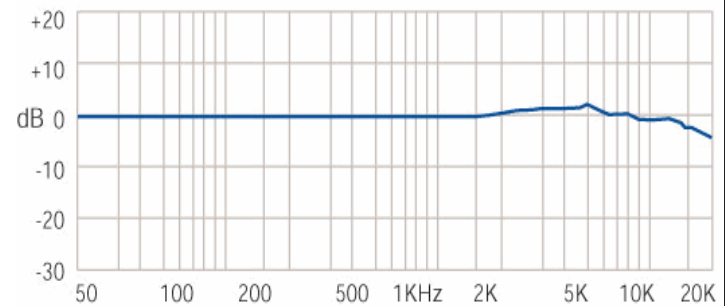
Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 2.2 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



Microphones

POM-2744L**FEATURES**

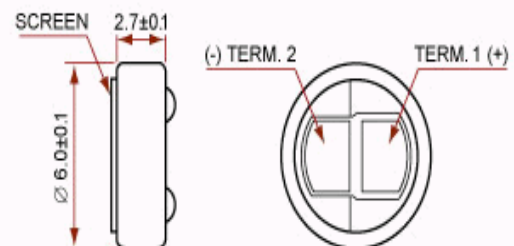
- *Omni directional*
- *Super clarity, distortion-free response*
- *Available with lead wire type mounting*

**Electrical**

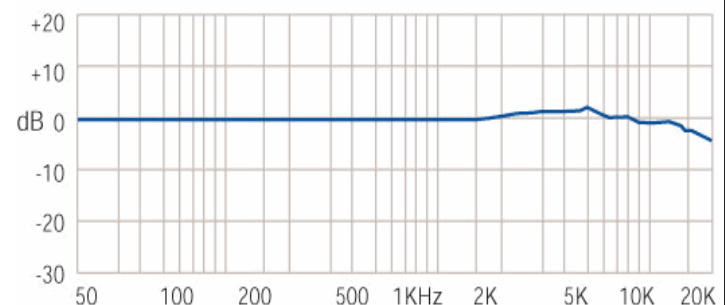
Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 2.2 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



POM-2744P**FEATURES**

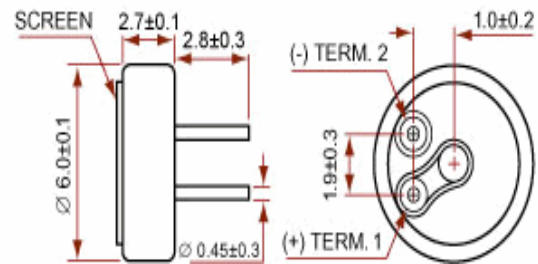
- Omni directional
- Super clarity, distortion-free response
- Pin type mounting

**Electrical**

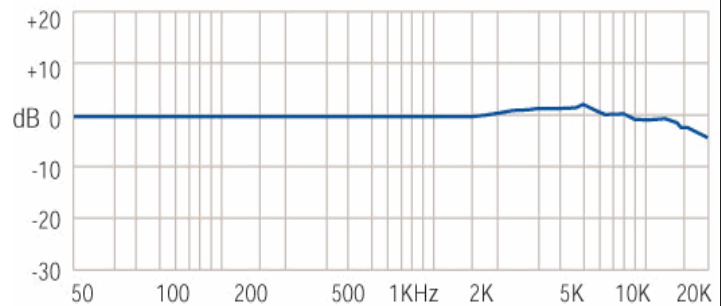
Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 2.7 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



Microphones

POM-2744S**FEATURES**

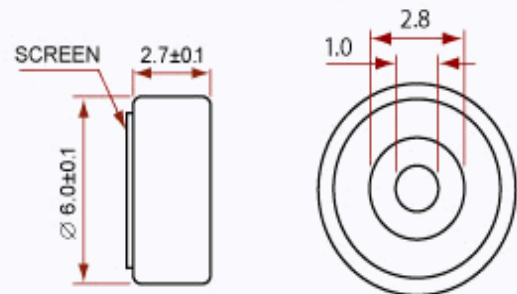
- Omni directional
- Super clarity, distortion-free response
- Solderless type mounting

**Electrical**

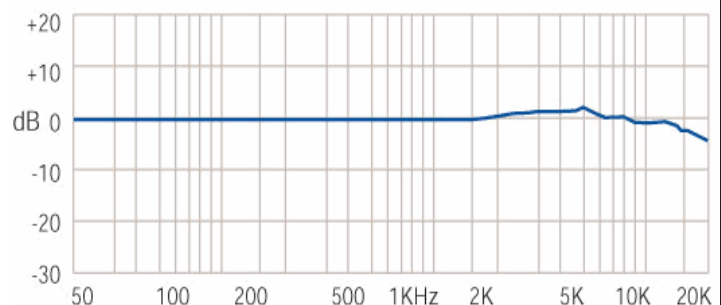
Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 2.7 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



SOM-1844L**FEATURES**

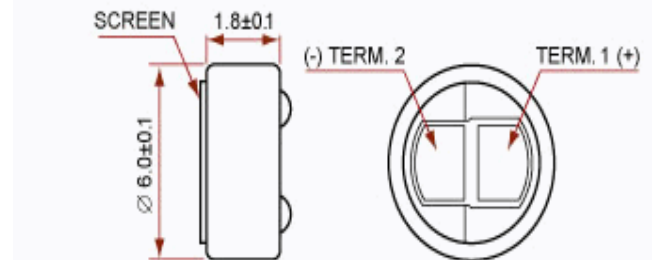
- *Omni directional*
- *Super clarity, distortion-free response*
- *Available with lead wire type mounting*

**Electrical**

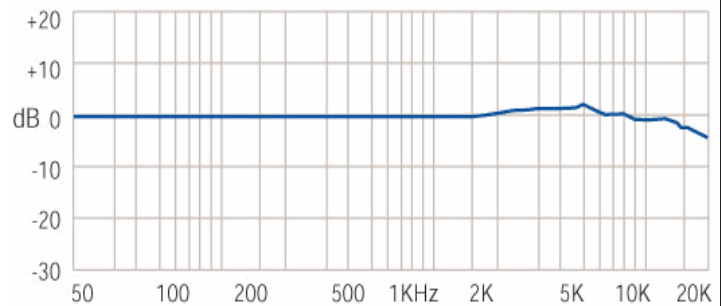
Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 1.8 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



Microphones

SOM-1844P**FEATURES**

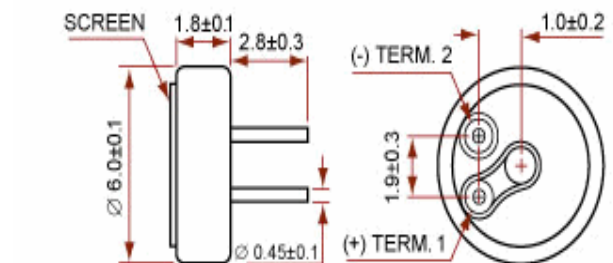
- *Omni directional*
- *Super clarity, distortion-free response*
- *Pin type mounting*

**Electrical**

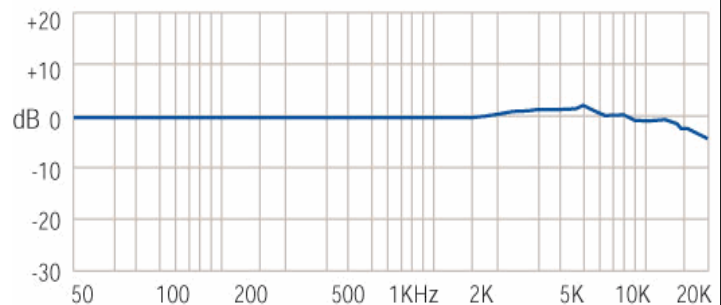
Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 1.8 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

**Performance**

Typical SPL vs. Frequency



SOM-1844S

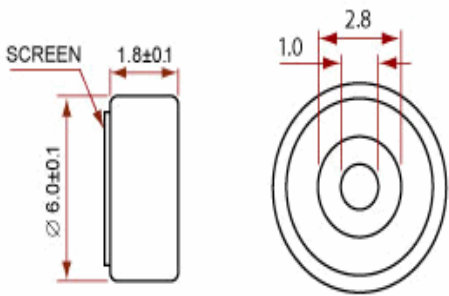
FEATURES

- Omni directional
- Super clarity, distortion-free response
- Solderless type mounting



Mechanical

Dimensions are in millimeters, tolerance is ± 0.5 unless otherwise specified.

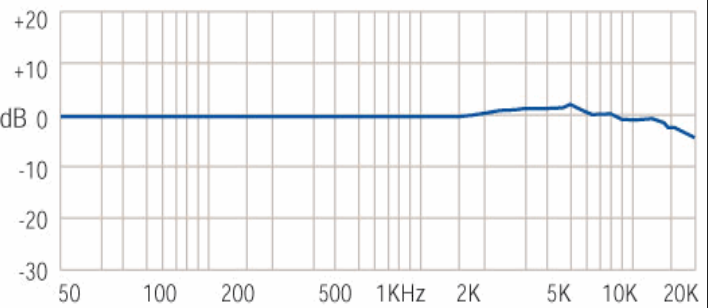


Electrical

Parameter	Value
Directivity	Omni-Directional
Package Size	6 x 1.8 mm
Sensitivity	-44 +/- 3 dB
Operating Voltage	2.0 Vdc
Impedance	2.20 kOhm

Performance

Typical SPL vs. Frequency



AB1548B

FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

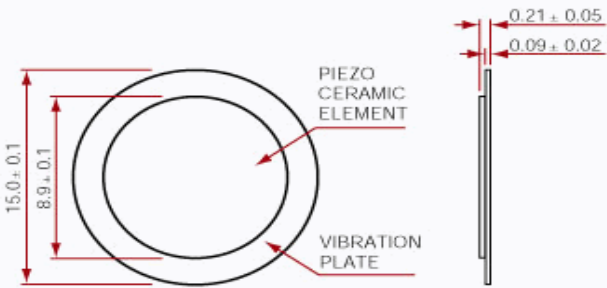
NEW!



15mm dia x 0.21mm thick piezo element
Special benders with 32 AWG wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

Mechanical

Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	4800 +/- 500 Hz
Input Voltage	20 Vp-p
Capacitance	7500 +/- 30% pF
Feedback Electrode	No

Piezo Benders

AB2020A

FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

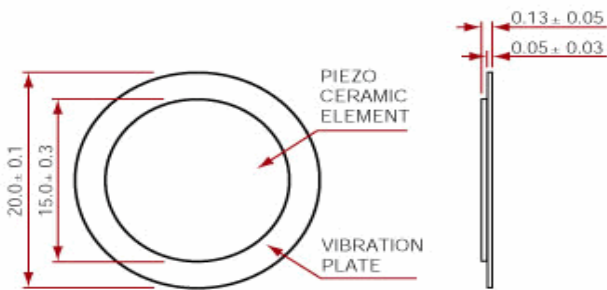
NEW!



20mm dia. x 0.13mm thick piezo element
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

Mechanical

Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	2000 +/- 500 Hz
Input Voltage	20 Vp-p
Capacitance	90000 +/- 30% pF
Feedback Electrode	No

AB2036AF

20mm dia x 0.21mm thick piezo element

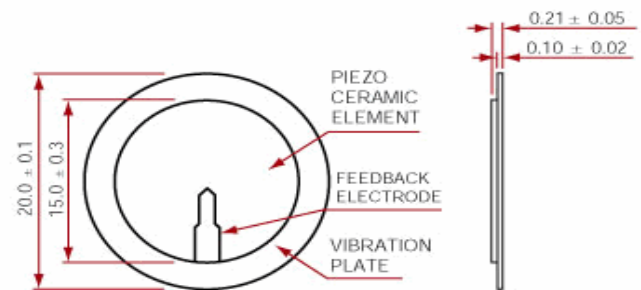
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES**NEW!**

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

**Mechanical**

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	3700 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	20000 +/- 30% pF
Feedback Electrode	Yes

Piezo Benders

AB2038BF

20mm dia x 0.28mm thick piezo element

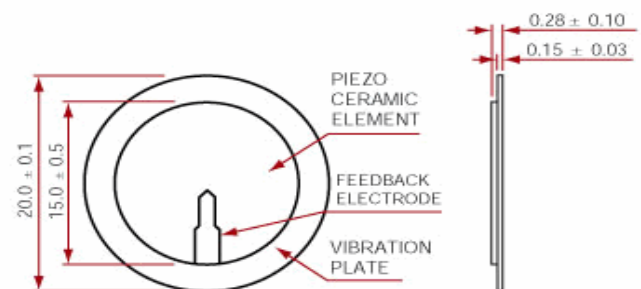
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES**NEW!**

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

**Mechanical**

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	3800 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	17000 +/- 30% pF
Feedback Electrode	Yes

AB2040B

FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

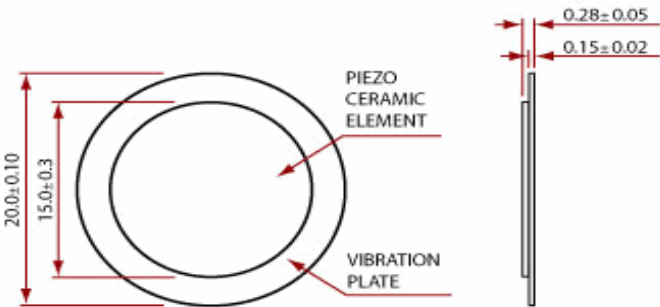
NEW!



20mm dia x 0.28mm thick piezo element
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

Mechanical

Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	4000 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	25000 +/- 30% pF
Feedback Electrode	No

Piezo Benders

AB2065B

FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

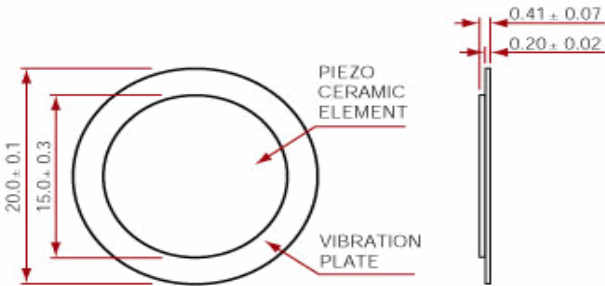
NEW!



20mm dia. x 0.41mm thick piezo element
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

Mechanical

Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	6500 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	14000 +/- 30% pF
Feedback Electrode	No

AB2720B**FEATURES**

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

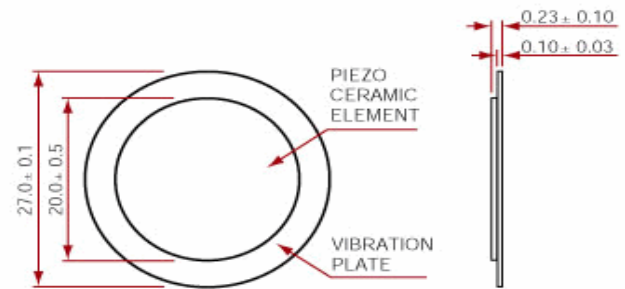
NEW!

27mm dia. x 0.10mm thick piezo element

Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

Mechanical

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	2000 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	45000 +/- 30% pF
Feedback Electrode	No

Piezo Benders

AB2720BF**FEATURES**

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

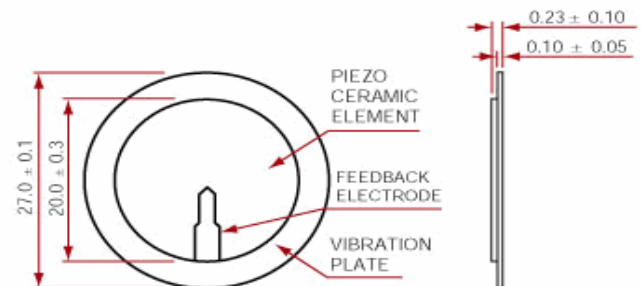
NEW!

27mm dia. x 0.23mm thick piezo element

Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

Mechanical

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	2000 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	35000 +/- 30% pF
Feedback Electrode	Yes

AB2728B

27mm dia. x 0.33mm thick piezo element
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES

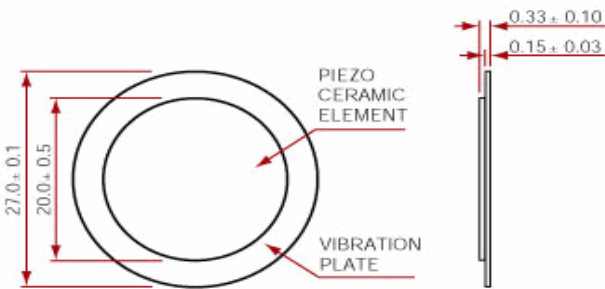
- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with wire leads or in housing

NEW!



Mechanical

Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	2800 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	30000 +/- 30% pF
Feedback Electrode	No

Piezo Benders

AB2734B

27mm dia. x 0.53mm thick piezo element
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES

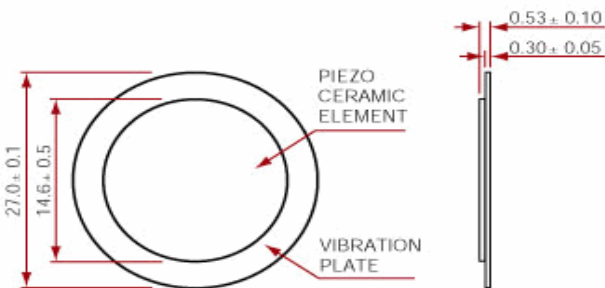
- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

NEW!



Mechanical

Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	3400 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	13000 +/- 30% pF
Feedback Electrode	No

AB2737BF

27mm dia. x 0.41mm thick piezo element

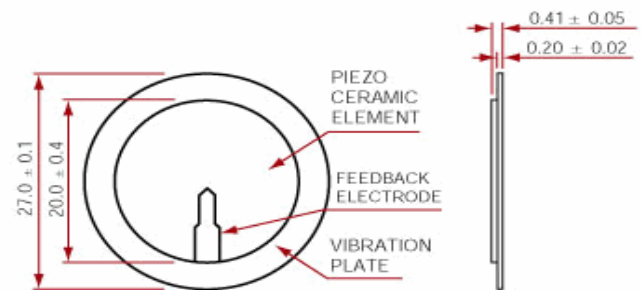
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES**NEW!**

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

**Mechanical**

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	3700 +/- 500 Hz
Input Voltage	20 Vp-p
Capacitance	20000 +/- 30% pF
Feedback Electrode	Yes

Piezo Benders

AB2745BF

27mm dia. x 0.51mm thick piezo element

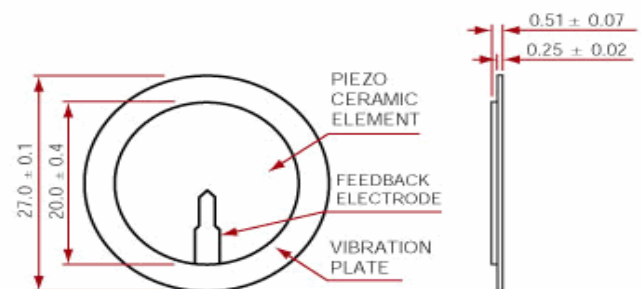
Special benders with 32 AWG wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

**Mechanical**

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	4500 +/- 500 Hz
Input Voltage	20 Vp-p
Capacitance	16000 +/- 30% pF
Feedback Electrode	Yes

AB2746B

27mm dia x 0.51mm thick piezo element

Special benders with 32 AWG wire leads area available in 50, 100 and

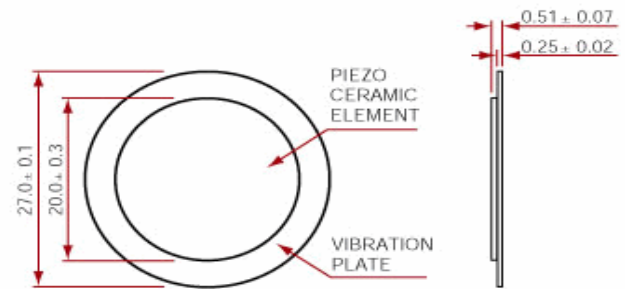
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

**Mechanical**

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	4600 +/- 500 Hz
Input Voltage	20 Vp-p
Capacitance	16000 +/- 30% pF
Feedback Electrode	No

Piezo Benders

AB3526B

35mm dia. x 0.53mm thick piezo element

Special benders with AWG #32 wire leads are available in 50, 100, and

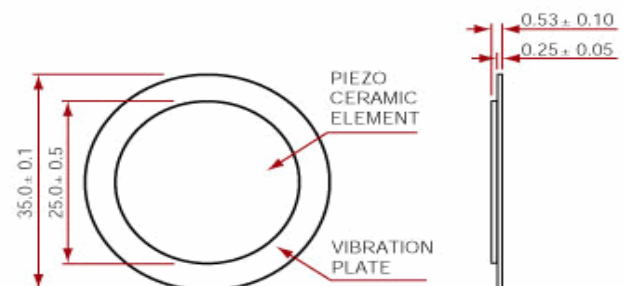
For non-standard wire lead lengths or wire gauges please contact Projects

FEATURES**NEW!**

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

**Mechanical**

Dimensions are in millimeters.

**Electrical**

Parameter	Value
Resonant Frequency	2600 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	30000 +/- 30% pF
Feedback Electrode	No

AB3529BF

35mm dia. x 0.30mm thick piezo element
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

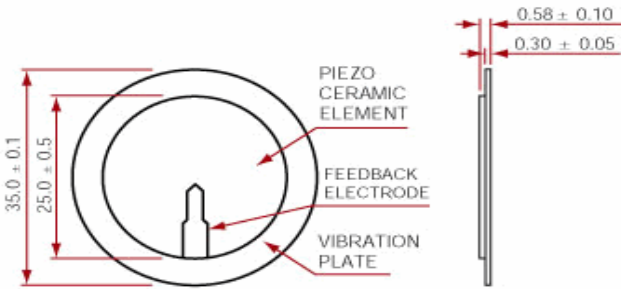
FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

NEW!



Mechanical Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	2900 +/- 500 Hz
Input Voltage	30 Vp-p
Capacitance	25000 +/- 30% pF
Feedback Electrode	Yes

Piezo Benders

AB4406B

44mm dia. x 0.23mm thick piezo element
Special benders with AWG #32 wire leads are available in 50, 100, and
For non-standard wire lead lengths or wire gauges please contact Projects

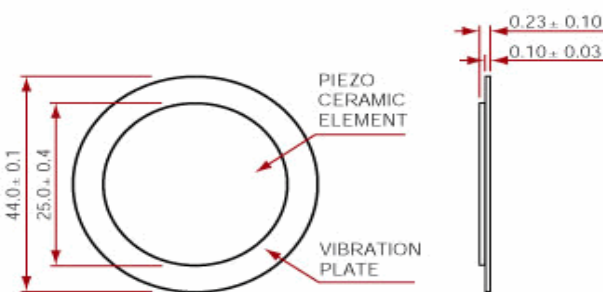
FEATURES

- Low power consumption
- Reliable and lightweight
- Direct TTL or CMOS drive
- Can be supplied with leads or in housing

NEW!



Mechanical Dimensions are in millimeters.



Electrical

Parameter	Value
Resonant Frequency	600 +/- 300 Hz
Input Voltage	20 Vp-p
Capacitance	70000 +/- 30% pF
Feedback Electrode	No



ISO - 9001 Company

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