

More Choices in Surface Mount (SMT) Buzzers

Mallory's strategy to offer the widest selection of surface mount (SMT) buzzers to the industry **gives customers a large variety of SMT buzzers to choose from**. Our range of options includes SMT buzzers that utilize **either electromagnetic or piezoelectric technology**. One advantage of the electromagnetic buzzers is their ability to produce lower rated sound frequency and relatively loud sound levels at low voltages. On the other hand, piezoelectric buzzers have much less impedance, which significantly lowers the required circuit current. SMT buzzers are also **available with and without circuitry**. Mallory's AST Series contains SMT buzzers that do not contain circuitry, so the user must supply the complex sine or square wave signal to the buzzer. In contrast, our ASI Series contains SMT buzzers with circuitry, which only require the user to apply the rated DC voltage to make the buzzer sound. Some examples of note from our SMT buzzer offerings include:

- Mallory's **newest electromagnetic SMT buzzer** is rated 3 to 7 Vdc with a typical sound level of 78 to 88 dB @ 10 cm in a package size of 9.5 x 9.5 x 5 mm (LxWxH). This buzzer is available in cut-tape packaging (P/N ASI09N27M-05Q) or tape-n-reel packaging (P/N ASI09N27M-05TRQ).
- Mallory's **newest piezoelectric SMT buzzer** is also available in cut-tape packaging (P/N ASI12N35MQ) or tape-n-reel packaging (P/N ASI12N35MTRQ). This buzzer is rated 3 to 15 Vdc with a typical sound level of 77 to 90 dB @ 10 cm in a package size of 14 x 14 x 7.3 mm (LxWxH).
- Mallory's **lowest profile SMT buzzer** offers a compact 11 x 9 x 1.7 mm (LxWxH) size with a rated sound level of 75 dB @ 5 Vpp @ 10 cm. This buzzer is available in either cut-tape (P/N AST1109MLQ) or tape-n-reel (P/N AST1109MLTRQ) packaging. This buzzer does not contain circuitry so the user must supply the 4100 Hz square wave signal (up to 20 Vpp).
- Another popular SMT buzzer hits **a sweet spot between size and performance**. Available in tape-n-reel packaging (P/N AST7525MATRQ) or cut-tape packaging (P/N AST7525MAQ), this electromagnetic buzzer is rated 85 dB @ 10 cm in a compact 7.5 x 7.5 x 2.5 mm (LxWxH) package size. This buzzer does not contain circuitry so the user must provide the 2 to 4 Vpp square wave signal (@ 2700 Hz).

Giving our customers more choices in surface mount buzzers, as well as our other products, ensures that Mallory will continue to **meet and exceed industry needs and expectations**.



Our wide selection of surface mount buzzers gives you more choices.

Increasing Safety in Industrial Utility Vehicles (IUV's)

With the growing popularity of industrial utility vehicles comes an increased concern for safety. IUV's can include anything from golf carts to large forklifts, and they are used in numerous applications where pedestrians are present. For this reason, **audible sounds are commonly used to warn pedestrians that IUV's are being used nearby**. Mallory offers three types of safety alarms for IUV's.

- The **forward horn** is a common pedestrian alarm which can be activated by the driver just like the horn in a car or truck. For the forward horn, Mallory offers several different models and package sizes to meet specific needs, such as a part from the Mallory ZA series of 22 mm alarms or one from the Mallory SC series of 30 mm alarms.
- The **back-up alarm** is another pedestrian safety sound used on IUV's. For softer environments, Mallory P/N SC628NJR can be used. For louder environments, Mallory recommends our STA series of alarms, which are the same type of back-up alarms used on over-the-road trucks.
- The **moving part alarm** can also be used to alert the user that part of the equipment is moving. This type of alarm may be activated, for example, when a platform moves up or down, a load bed dumps, or a load is unbalanced. Audible alarms can also be used on the dash to warn the operator of problems with the vehicle itself, such as engine over-temperature or low oil pressure. For IUV dashboard warning needs, Mallory's new ZT series of 22 mm alarms with LED lights offer a perfect solution of a compact package which contains both audible and visual indications.

The addition of these types of **audible alarms makes the operation of IUV's safer**, even and especially in the presence of pedestrians. For more detailed information, please see our website article about the use of audible alarms in IUV's



Back-up alarms, such as STA20302, can be added to IUV's to protect nearby pedestrians.

No Need for Compromise with New Loud Low Voltage Buzzers

Consumers of alarm components often have to make trade-offs, giving up one desired feature for another more needed one, but as Mallory continues to introduce more products, these compromises become less and less necessary. An example of this can be seen in Mallory's recent launch of several different **piezo buzzers that offer loud sound levels at low voltages**.

Prior to these innovative products, consumers were forced to choose between buzzers which offered louder sound levels and those which were able to operate with lower supply voltages. Electromagnetic type buzzers (like Mallory P/N PB-12N23MPW-03Q which is rated 85 dB @ 10 cm @ 3 Vdc) offer decent sound levels at low voltages and can work well in less noisy environments, but in noisier settings, this technology will not be loud enough. These types of buzzers are also unsuitable for portable applications using battery power or medical applications that require short periods of back-up power. Piezoelectric buzzers, which draw much less current, are the preferred choice for these application; however, since the sound level of these buzzers is proportional to the voltage supplied, sound levels may be significantly diminished at lower voltage levels.

To meet this challenge, **Mallory has developed several different piezo buzzers which provide users with accessibility to louder sound levels even in situations where voltage is limited**, including these specific products:

- P/N's MSO206NR (PC Pins) and MSO206NLR (wires) are continuous tone piezoelectric rated 2 to 6 Vdc and have typical sound levels of 96 to 103 dB @ 1 ft (this equates to 105 to 112 dB @ 10 cm). The package size is 23 x 14 mm (dia x hgt).
- P/N MSR205NR (continuous tone), P/N MSR205NJR (slow pulse tone), and P/N MSR205NPR (fast pulse tone) offer a shorter (23 x 10 mm) package size. These piezoelectric buzzers are rated 2 to 5 Vdc and have typical sound levels of 80 to 90 dB @ 1 ft (89 to 99 dB @ 10 cm). The MSR205 buzzers draw a maximum of 10 mA and are also available with wash labels.

Visit us at our website www.mallory-sonalert.com for more information about our new buzzers.