



Introduction

When integrating the 0400 series and 0600 series please handle each microphone with care and take note of the precautions and guidance outlined below. Improper handling of the microphones can damage the microphones during final product assembly and cannot guarantee performance in the end-product. For clarification or further questions, please reach out to applications@soundkrit.ca.

Pick and Place

When using pick-and-place machines, it is imperative that the vacuum head **IS NOT** placed even partially above the sound port. Doing so will cause a significant flow of air through the microphone that risks damaging or breaking the MEMS transducer. Please refer to the area labeled “pick up area” in the mechanical drawing of Figure 1, also found in the datasheet.

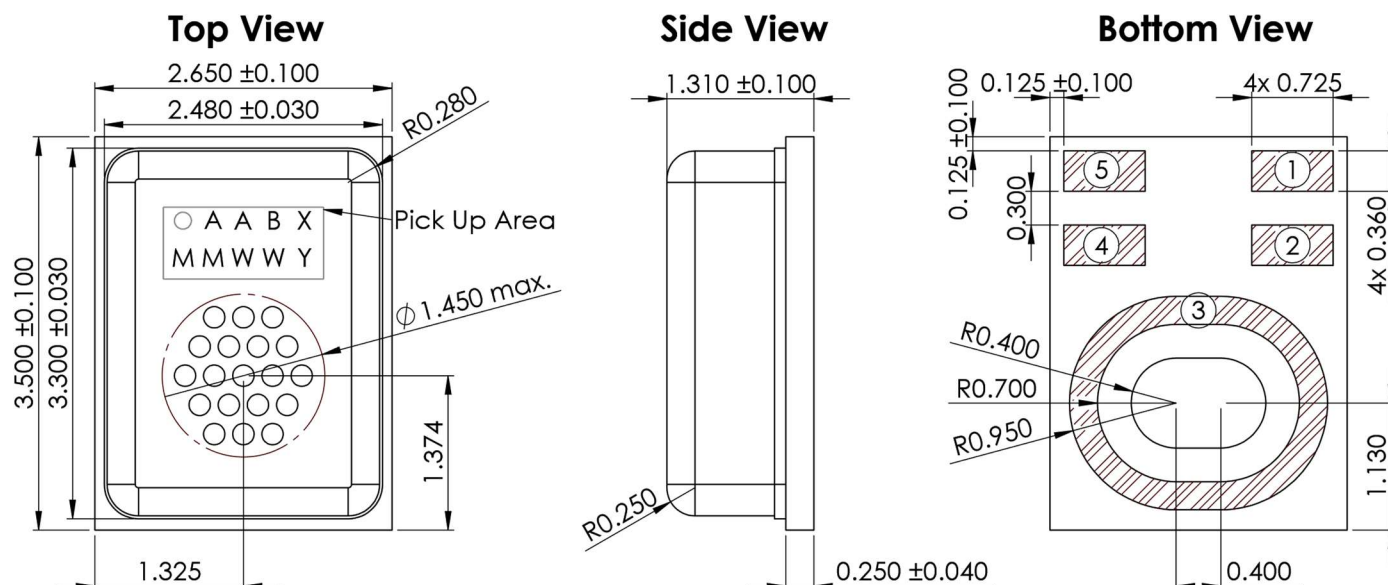


Figure 1: Mechanical drawings of the 0400 series and 0600 series (mm)

Additionally, when bringing the pick-and-place head to the microphone, it is important the vacuum head does not traverse over the sound port of the microphone when positioning itself above the microphone.

Kapton Tape

The microphone is packaged with a layer of Kapton tape covering the top hole as pictured in Figure 2 below. This tape protects the microphone during reflow and assembly and should only be removed at the latest stage possible in the assembly process. Do not remove the Kapton tape prior to soldering the microphone or nearby components. Use wide tweezers to catch the edge of the tape from the top side as shown in Figure 3. After mounting the microphone on a PCB, the tape can be removed using one pair of tweezers as shown in method one. Another pair of wide tweezers to hold the part down can be used as shown in method two.

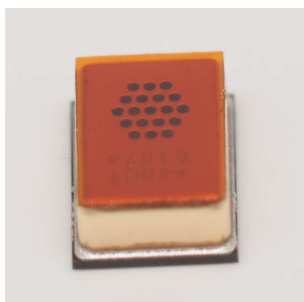


Figure 2: MEMS with Kapton tape

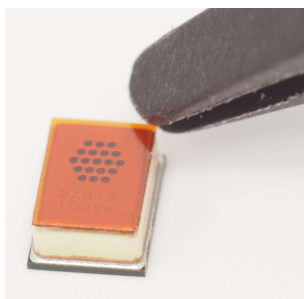


Figure 3: Method one

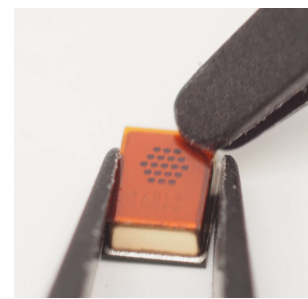


Figure 4: Method two

Cleaning with Air Gun



During the assembly of some products, an air gun may be used to clean the printed circuit boards. **DO NOT** place an air gun in front of the sound port of the microphone at any moment. A typical air gun cleaner can generate very high air speeds at the microphone. If the microphone is embedded inside a product or mechanical casing or gasket, the closed acoustic channel to the microphone can further amplify air flows through the microphone. Figure 3 below shows a schematic drawing of an air gun over a microphone.

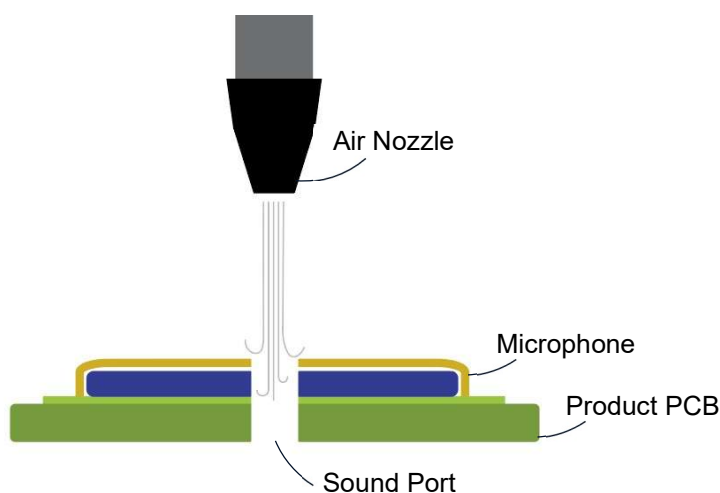


Figure 5: Air Gun cleaning process

As shown in Figure 5, because the directional microphone has a “thru-hole,” or sound port in the lid and PCB, any air nozzle placed near the microphone can create airflow through the MEMS transducer. For typical air gun cleaning processes, airflow speeds of up to 200 m/s are not uncommon depending on the size of the nozzle, air pressure applied, and distance from the microphone.

Revision History

Revision Label	Revision Date	Sections Revised
-	June 2024	Preliminary release
A	January 2025	Updated Figure 1 and note on Kapton Tape