

Product Information and Installation Guideline

MEMS microphones are vulnerable to contamination from environmental particles or solder residue in the reflow chamber. This contamination can lead to performance degradation, defects, and ultimately, yield loss, increased repair costs, and even field returns. In high-volume PCB assembly operations, these issues significantly impact SMT/FATP manufacturing costs and damage the reputation of manufacturers for quality.

The GORE® MEMS Protective Vent Style 100 offers a solution with its exceptionally high filtration efficiency. These vents reduce defect rates from 1000–10000 PPM to below 10 PPM. By minimizing contamination, the vent significantly lowers manufacturing costs and quality complaints throughout the supply chain. This translates to higher production yields and fewer returns which protects the brand reputation with consumers.

Style 100 — for circuit board assembly

- Can be installed on the circuit board over the microphone's sound inlet.
- Can prevent $\geq 1\mu\text{m}$ particles
- Breathable
- Can resist high temperature during reflow soldering
- Compatible for acoustic test
- Available in reel packaging, enabling seamless installation with high-speed SMT pick and place machines.



Product Performance Characteristics

Part number	VP1001MPX
Membrane Type	ePTFE
Membrane Characteristic	Oleophobic
Membrane Color	White
Min. Airflow	7.5 L/H @ 70 mBar
Adhesive Type	Silicone based
Adhesive Temp. Resistance	Max. 260 °C for 3 mins

Vent Dimensions

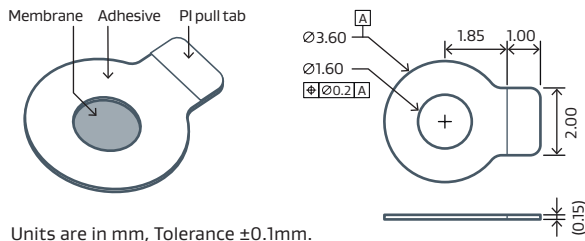
Outer/Inner Diameter	3.6 mm/1.6 mm
Typical Thickness	0.15 mm

Reel Dimensions

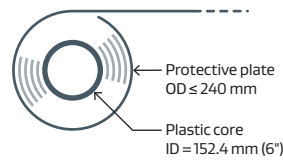
Pitch ¹	6.55 mm
Core Inner Diameter ²	15.24 cm
Quantity per Reel	2000 pieces

Design

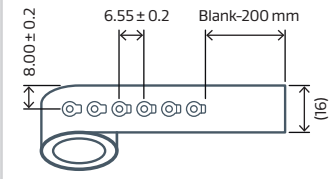
Dimensions for Vent



Reel Cross Section View

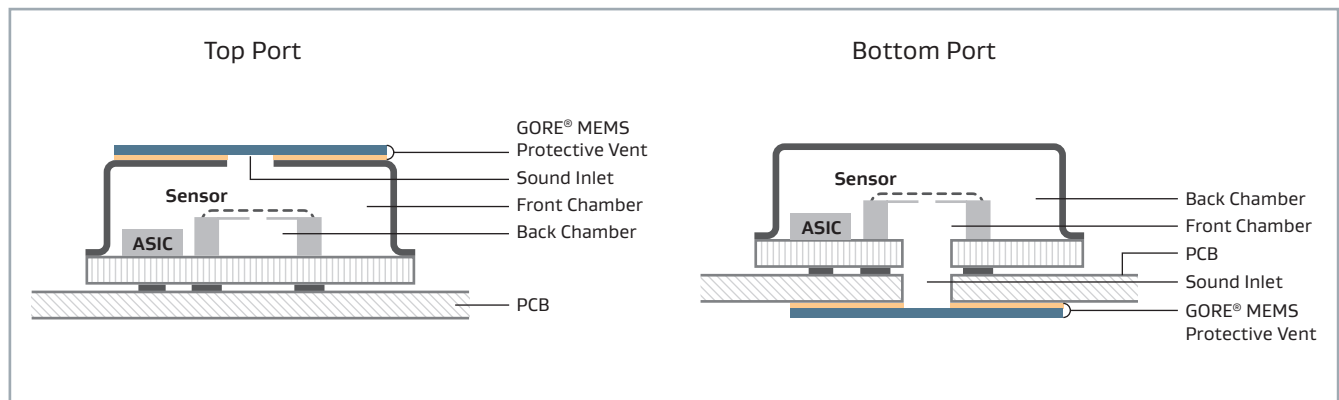


Vents on the Reel Top View

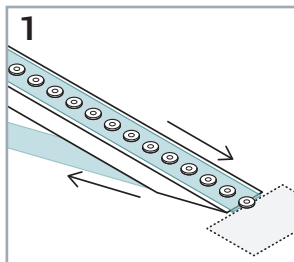


1. The distance between each vent on the liner
2. The diameter of the reel

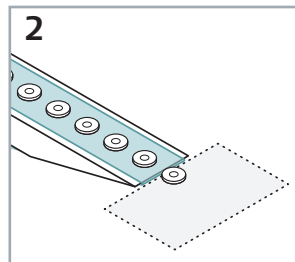
Placement Examples



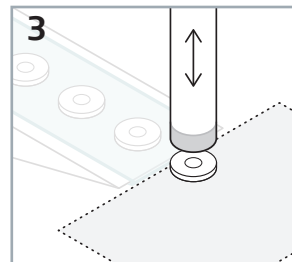
Installation guideline



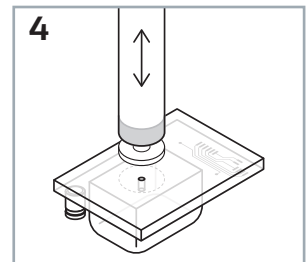
As the reel of GORE® Vents moves through the feeder, one by one each vent is released from the liner onto the platform.



As each vent moves onto the platform, an infrared sensor stops the feeder to ensure the vent is placed in the correct position.



A vacuum nozzle uses suction to pick up the GORE® MEMS Protective Vents.



The vacuum nozzle automatically moves into position and attaches the vent to the port.

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