GORE® MEMS Protective Vents

PIONEERING SOLUTIONS FOR MEMS MICROPHONES

Three high-performance venting options optimized for mobile electronics.

Together, improving life

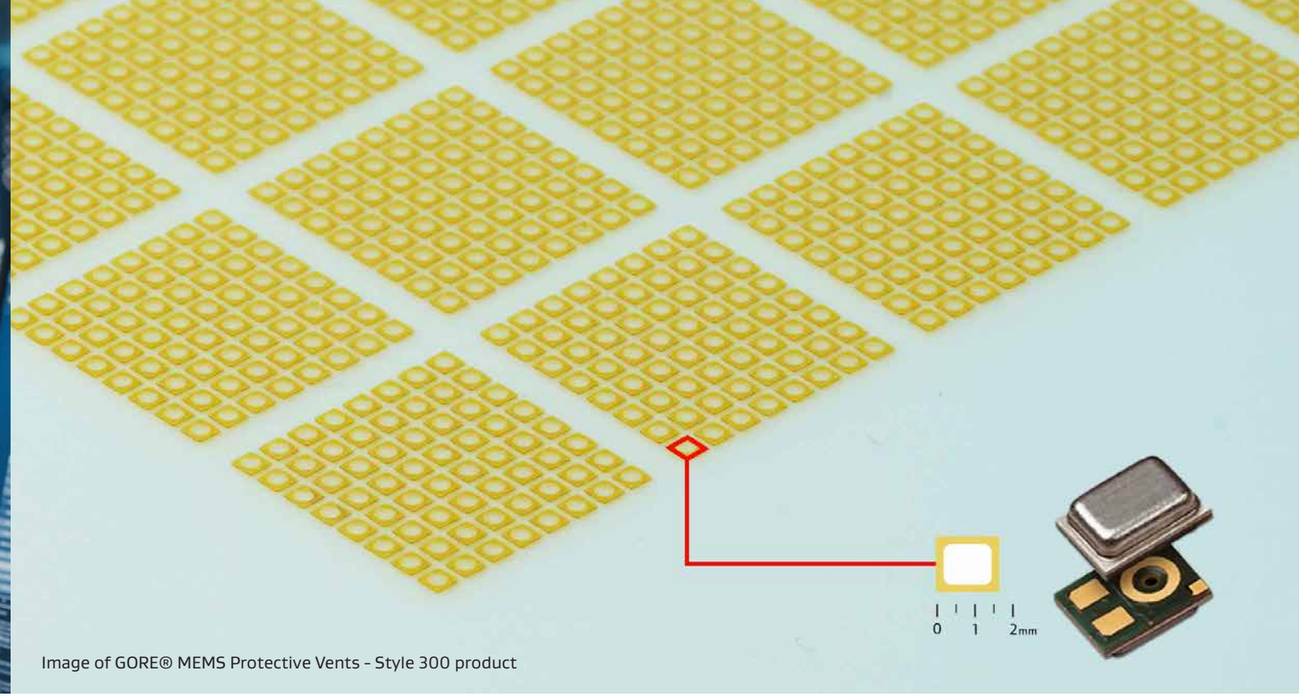


Image of GORE® MEMS Protective Vents - Style 300 product

MEMS microphone environmental protection

GORE® MEMS Protective Vents are available in three formats designed to meet the specific needs of both circuit board assembly and microphone manufacturers.

High-volume assembly of printed circuit boards presents a number of challenges.

Technical challenges that can compromise the integrity of MEMS microphones – leading to performance degradation, significant yield losses and higher manufacturing costs.

Design and development challenges in installing traditional acoustic vents in the ever-shrinking acoustic channels of smaller devices.

Gore's design and engineering teams have developed unique solutions based on our proprietary ePTFE technology: proven to prevent particle contamination and pressure build-ups, allow in-process acoustic testing, and integrate seamlessly into automated dispensing and placement processes.

Our new **GORE® MEMS Protective Vents - Style 300** eliminates the need for installing a separate acoustic vent on the device entirely.

This enables the first MEMS microphone with IP68 dust and immersion protection - a second option for device engineers to provide water ingress protection.*

**GORE® MEMS Protective Vents – Style 300 only*

Style	Form	Protection
100	Reel	Dust
200	Wafer	Dust
NEW 300	Wafer	Water & Dust

GREATER PROTECTION. SIMPLER DESIGN.

NEW: Style 300

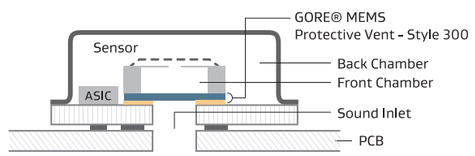
For microphone manufacturers - water and dust protecton.

Installed inside the MEMS microphone during the microphone packaging process, Style 300 vents provide component-level IP68* water and dust protection without any special handling during the circuit board assembly process. Parts are digitally mapped in a wafer format and are compatible with high-speed die attach equipment.

This pioneering venting solution eliminates the need for a separate acoustic vent installed on the housing, reducing complexity and saving space in the acoustic channel of water-protected devices.

*Resistant to submersion up to a maximum depth of 2m underwater for up to 30 minutes.

Placement of Vent



SIMPLIFY DESIGN

Our pioneering concept helps OEMs overcome the challenge of installing traditional acoustic vents, by providing a revolutionary "plug-and-play" water and dust protection solution.

This integration not only saves mechanical space, but offers a more consistent acoustic performance.

REDUCE COMPLEXITY

Device OEMs using microphones with GORE® MEMS Protective Vent - Style 300 can reduce the complexity of using an acoustic vent and simplify their supply chain, unlocking operational efficiencies and cost savings in human and material resources.

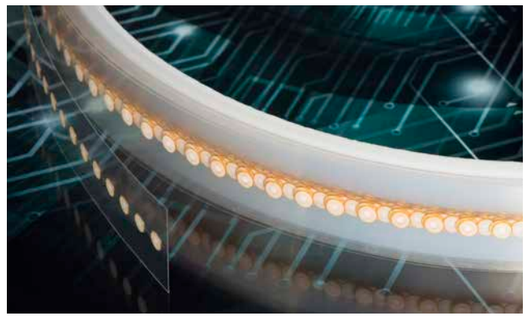
Additionally, the particle barrier feature reduces damage by contaminants during assembly, improving production yield.

REDUCE FAILURE.
ENHANCE YIELDS.

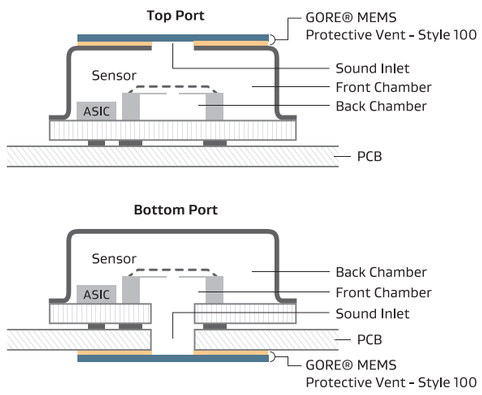
Style 100

For circuit board assembly.

Installed over the top of a top-port microphone or on the circuit board opposite a bottom-port microphone, right before the reflow process. Available in reel packaging to enable seamless installation with high-speed SMT pick and place machines.



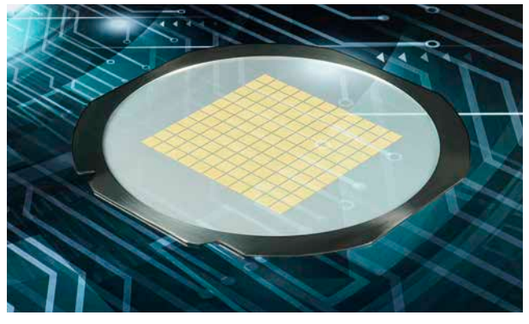
Placement of Vent



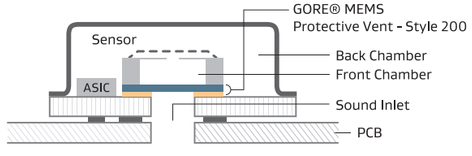
Style 200

For microphone manufacturers - dust protection.

Installed inside the MEMS microphone during the microphone packaging process, providing particle protection without any special handling during the circuit board assembly process. Parts are digitally mapped in a wafer format and are compatible with high-speed die attach equipment.



Placement of Vent



Key features of GORE® MEMS Protective Vents

Environmental Protection

Particle Shielding

GORE® MEMS Protective Vents are unique in that they provide reliable particle protection designed to reduce contaminants – helping to secure the SMT process, and helping manufacturers increase yields and reliably control manufacturing costs.

Immersion Protection*

An integrated design installed at the MEMS mic package enables component-level IP68-rated water immersion protection.

**GORE® MEMS Protective Vents – Style 300 only*

Manufacturing Efficiency

In-process Testing

Gore has developed a technology that both enables in-process testing of acoustic performance and improves process efficiency, by allowing manufacturers to monitor sound quality and permeability within the device and alleviating the need to assign resources further down the production line for re-testing.

Pressure Equalization

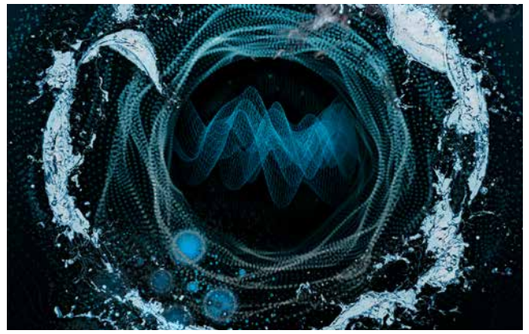
Gore's experience in providing vents with excellent airflow has been applied to the GORE® MEMS Protective Vents. The breathable ePTFE membrane of the vent allows gases to pass through the microphone port to mitigate pressure build-ups that may cause damage to the microphone.

Seamless Integration

Leading OEMs and their supply chains have protected over 1.5 billion microphones with GORE® MEMS Protective Vents, designed to handle the intense rigor of high-volume, high-speed installation, as well as multiple reflow cycles of up to 280 °C for 40 seconds.

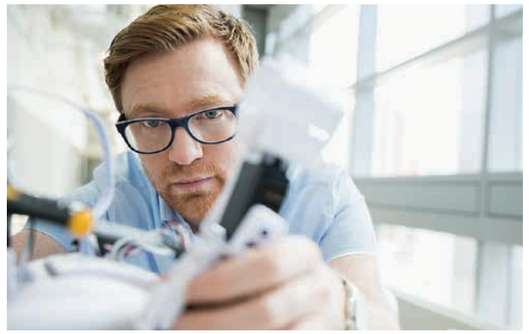
Why choose GORE® Portable Electronic Vents for your electronic devices?

Leading OEMs have specified over 5 billion GORE® Portable Electronic Vents because they know our products and services can help accelerate their development of innovative and differentiated devices in fast-paced, highly competitive markets.



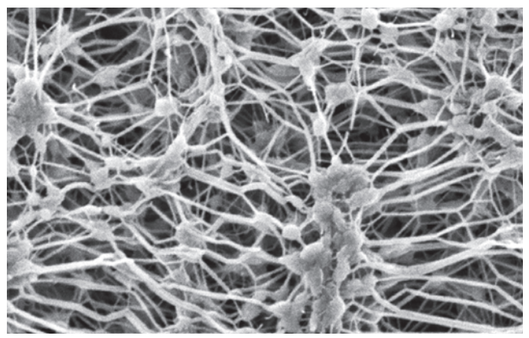
Product & Application Leadership

Grounded in a deep understanding of material science and acoustics, Gore can provide the optimum venting solution. We balance trade-offs between diverse problems such as adverse operating environments, immersion events and acoustic performance.



Fast Development

The mobile electronics industry develops and releases new products quickly. Our fast response to customer requests during the development process sets us apart. Gore supports this need for quickness with designs and prototypes to ensure engineering teams can meet their project timelines and their application requirements.



Material Science

Gore is a global materials science company dedicated to transforming industries and improving lives. Gore develops materials with microporous structures that provide desirable attributes and performance characteristics to engineer vents and other products used in a variety of markets and industries.

Reliable Performance

To ensure products are “fit for use”, every Gore product must adhere to the highest standards of quality, performance and reliability. Through a comprehensive understanding of end-use applications and requirements, our products do what they say they will do.

Supply Security

Leading OEMS specify Gore because we have consistently proven our ability to quickly ramp up to supply vents for projects of over 10 million devices per year and to continue to supply high quality products on-time without disruption.

Global Support

Our global teams of sales associates, application engineers, manufacturing engineers, and research personnel enable us to provide agile and robust support to customers around the world.

About Gore

W. L. Gore & Associates is a global materials science company dedicated to transforming industries and improving lives. Since 1958, Gore has solved complex technical challenges in demanding environments — from outer space to the world's highest peaks to the inner workings of the human body. With more than 11,000 Associates and a strong, team-oriented culture, Gore generates annual revenues of $4 billion.

gore.com

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PEV-165-STL-US-JUN22