

Advanced H₂S protection for Econo IGBT modules



인피니언 전력반도체 솔루션
가상부스에 오신 걸 환영합니다!



The impact of hydrogen sulfide (H_2S)

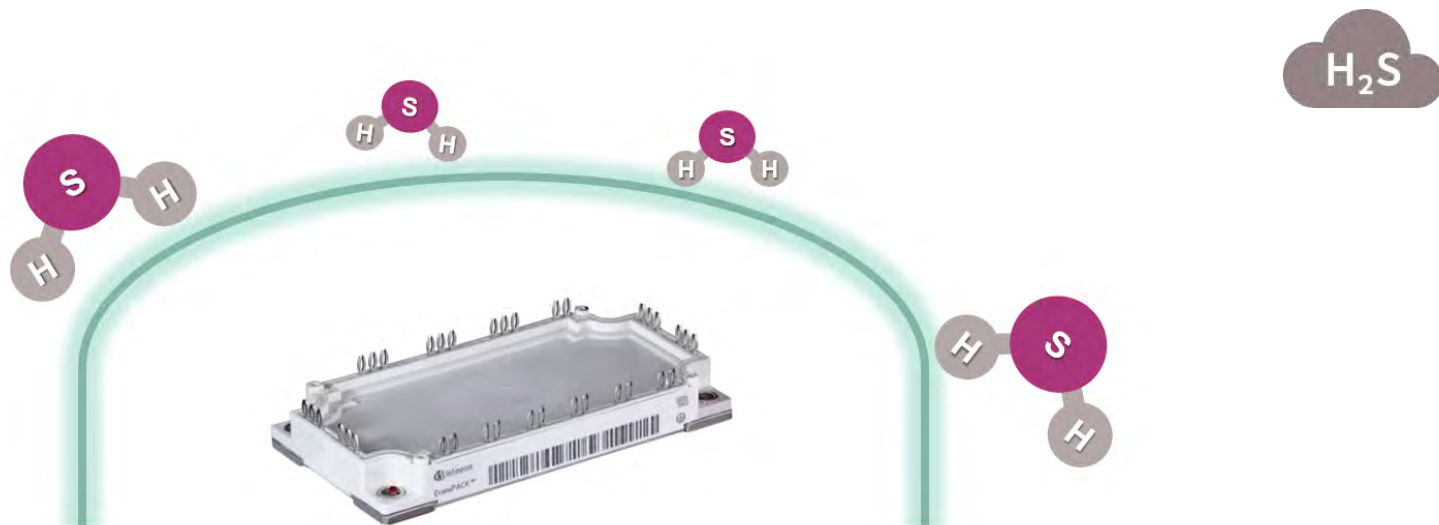
- › Hydrogen sulfide (H_2S) is the most critical corrosive contaminant for power semiconductors
- › H_2S can cause dendritic growth that leads to significant failures in applications due to short circuits
 - This can significantly reduce the inverter lifetime
- › Applications with high concentrations of H_2S include:
 - Paper production
 - Mining
 - Wastewater
 - Petrochemical
 - Rubber industry, etc.



Inner structure of a standard IGBT module under high concentration of H_2S



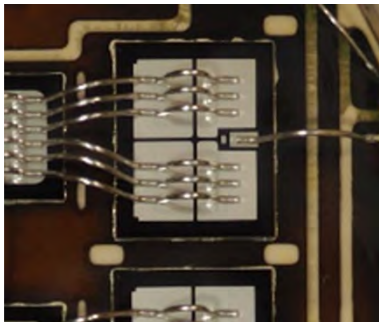
Advanced H₂S protection by Infineon



**Infineon's unique technology blocks H₂S before it reaches sensitive areas.
Plug-and-play: All electrical, thermal and mechanical parameters of the
module are unchanged.**

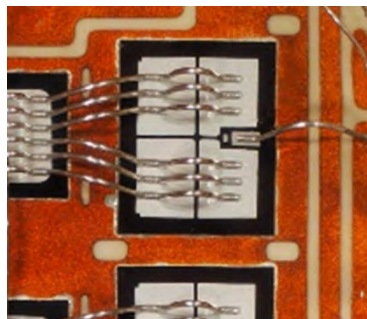
Infineon HV-H2S test results: 20-year lifetime

Standard module



The entire copper-covered DCB area is blackened, and the bridging Cu_2S dendrites can be clearly seen in the DCB trenches.

H₂S-protected module



The copper metallization on the DCB is not discolored. No Cu_2S dendrites can be identified.








The module can survive more than 20 years under the maximum limit of the G3 severity level according to ISA 71.04 standard

Full Econo portfolio planned for highest flexibility

Find the best-fit products* for your systems



Econo 2	Econo 3	EconoDUAL™ 3	EconoPACK™ 4	EconoPACK™ +
<p>25 A – 150 A 1200 V PIM 6-pack</p> 	<p>50 A – 200 A 1200 V / 1700 V PIM 6-pack H-bridge</p> 	<p>300 A – 900 A 1200 V / 1700 V Half-bridge</p> 	<p>150 A – 400 A 1200 V 6-pack 3-level</p> 	<p>300 A – 500 A 1200 V / 1700 V 6-pack</p> 
Available	Available	Planned module	Planned module	Available

Maximum flexibility by covering the whole application range

* TRENCHSTOP™ IGBT4 and newer chip generations

Advanced H₂S protection

H₂S

- › Easy to implement with plug-and-play usability
- › Unique and most effective
- › Unmatched ruggedness with 20 years' lifetime
- › Maximum flexibility

Protecting performance. Everywhere.





Part of your life. Part of tomorrow.