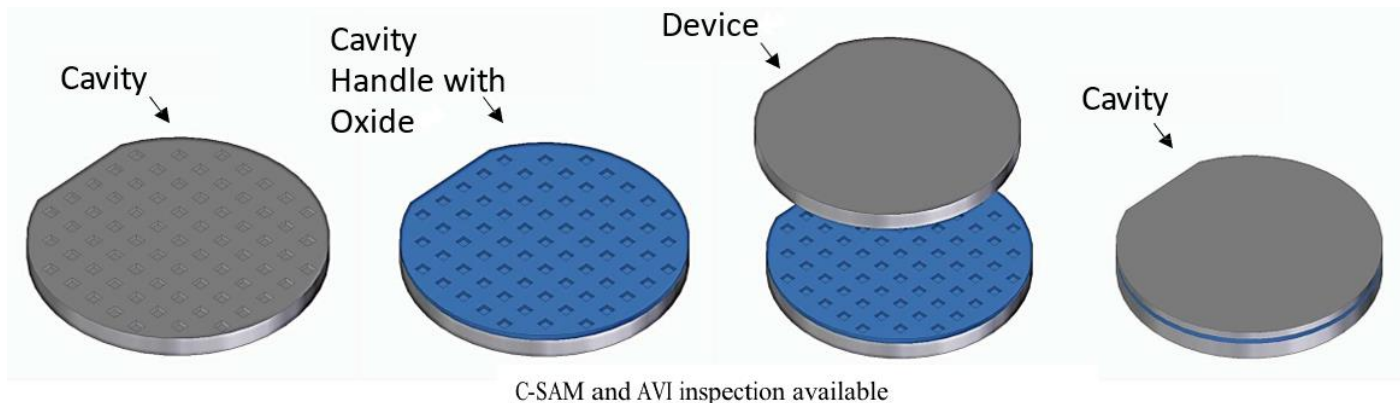


腔键合绝缘体上硅 CSOI Solutions



我司能够提供 4-6 英寸腔键合 SOI 晶片，广泛应用于 MEMS 微机电领域。该类 SOI 晶片采用了先进的深硅沟蚀刻和晶圆键合技术。腔键合 SOI 是在硅薄膜下预先蚀刻了腔结构，这使客户免于 SOI 结构坍塌影响，简化了后续加工流程，为智能设备芯片开发提供了先发优势。我们还可根据需求提供 C-SAM 和 AVI 检验，并乐于同客户一起探索在腔键合 SOI 中加入其他先进性能。

BonTek is able of providing 100–150mm Cavity Bonded SOI wafers for a large range of MEMS applications. The CSOI wafers utilized advanced deep silicon trench etch expertise and wafer bonding technology. It has a pre-etched feature embedded under a silicon membrane. This allows our customer to take advantage of –

- Superior bonding technology and expertise.
- Reduce any stiction issues at release.
- Simplified manufacturing flows.
- Low Cost Cavity SOI/Si-Si Solutions.
- Flexibility in construction around customer needs/ downstream applications.

We can provide C-SAM and AVI tests as required, and we are willing to explore other advanced capabilities in cavity bonded SOI together with our customers.

加工能力 processing capacity

Parameter 参数	Specification Range 尺寸规格范围
Wafer Diameter 直径	100, 125, 150 mm
Handle Layer Specifications 衬底层规格	
Handle Thickness 衬底层厚度	200 – 1100 μm
Handle Thickness Tolerance 厚度公差	$\pm 5 \mu\text{m}$
Stack Thickness 板叠厚度	280 – 1150 μm
Dopant Type 掺杂剂类型	N or P
Doping 掺杂	N type: Phos, Red Phos, Sb & As P type: Boron
Resistivity 电阻率	$\leq 0.001 - \geq 10000 \Omega\text{-cm}$
Growth Method 生长方式	CZ, MCZ or FZ
Crystal Orientation 晶体定向	$\langle 100 \rangle$, $\langle 111 \rangle$ or $\langle 110 \rangle$
Backside Finish 背面处理	Lapped/Etched or Polished

Buried Oxide Specifications 氧化物埋层规格	
Thermally Oxidised Buried Oxide Thickness 热氧化埋层厚度	0.2 – 4.0 μm grown on Handle, Device or both wafers
Device Layer Specifications 顶层规格	
Device Layer Thickness 顶层厚度	$\geq 1.5 \mu\text{m}$
Tolerance 公差	$\pm 0.5 \mu\text{m}$
Dopant Type 掺杂剂类型	N or P
Doping 掺杂	N type: Phos, Red Phos, Sb & As P type: Boron
Resistivity 电阻率	$\leq 0.001 - \geq 10000 \Omega\text{-cm}$
Growth Method 生长方式	CZ, MCZ or FZ
Crystal Orientation 晶体定向	$\langle 100 \rangle$, $\langle 111 \rangle$ or $\langle 110 \rangle$
Buried Layer Implant 埋层植入	N type or P type
Membrane Thickness/SOI Thickness 薄膜厚度/SOI 厚度	$> 2 \mu\text{m}$
Membrane Tolerance 公差	$\pm 0.5 \mu\text{m}$
Cavity Span : Membrane Thickness 腔跨度 : 薄膜厚度	$< 50:1 \mu\text{m}$ (dependent on design)
Minimum Bonding Size Features 最小键合尺寸	$20 \mu\text{m}$
Alignment Accuracy of Cavity to Alignment Marks 腔和定位标记的对准精度	$\pm 3 \mu\text{m}$
Cavity Depth 腔深度	1-30 μm @ $\pm 10\%$ 31-300 μm @ $\pm 20\%$
Cavity Location 腔位置	Handle, Device or Buried Oxide

Applications 应用方向:

Advanced pressure sensors 压力传感器

Inertial MEMS 惯性 MEMS

Microfluidics 微流体

Resonators 谐振器

Microphones 麦克风

End Markets 终端市场:

Telecommunications 电讯

Medical 医疗

Automotive 汽车

Consumer 消费品

Instrumentation 仪表仪器

上海碲钛光电技术发展有限公司

Shanghai BonTek Optoelectronic Technology

中国（上海）自由贸易试验区马吉路2号1101室

No. 2 Maji Road, China (Shanghai) Pilot Free Trade Zone

Tel: +86 18521097011 E-mail: sales@bon-tek.com Website: www.bon-tek.com