

合成石英(貫通孔付き)の ミリ波用途展開

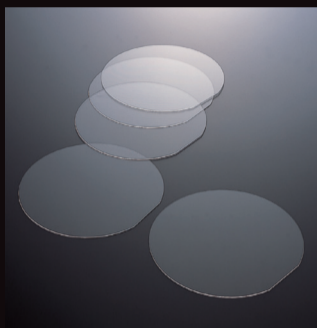
Ultra Low Loss Synthetic Fused Quartz & High Accuracy Through Quartz Vias for Millimeter Wave Applications

超低損失合成石英: AQシリーズ

Ultra Low Loss Synthetic Fused Quartz: AQ Series

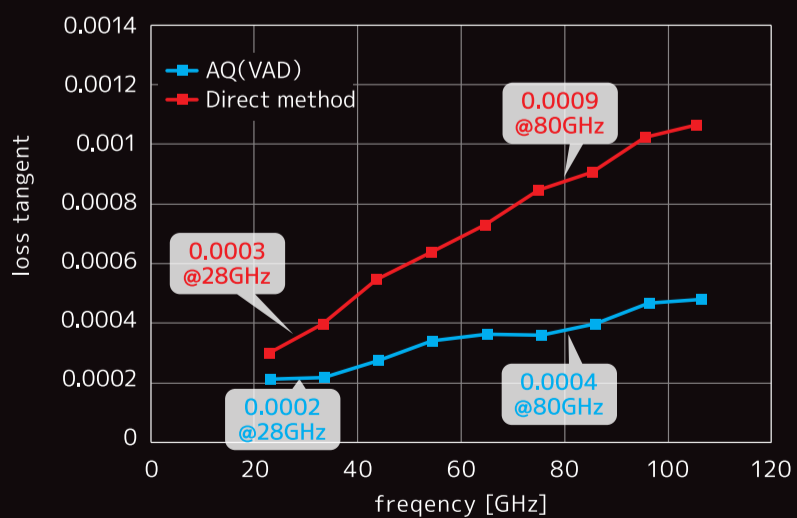
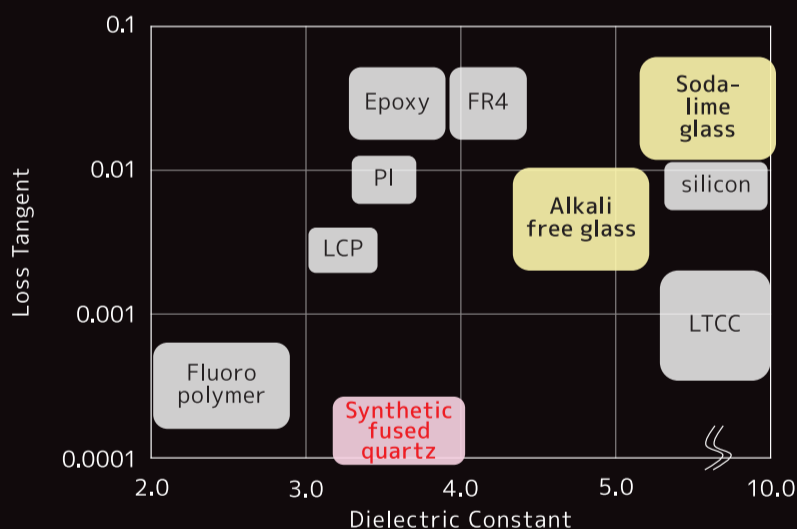
特徴 FEATURES

- ・低誘電損失
Low dielectric loss
- ・低熱膨張
Low thermal expansion
- ・高耐熱・高化学耐久性
High thermal & chemical durability



AQ Wafer Specification

size	φ4", 6", 8", 12"
thickness	0.3mm ≦
TTV	< 3μm
Flatness	< 10μm (φ8")
Roughness	< 1nm Ra



TQV (Through Quartz Vias)

High Accuracy Through Quartz Vias (TQV)

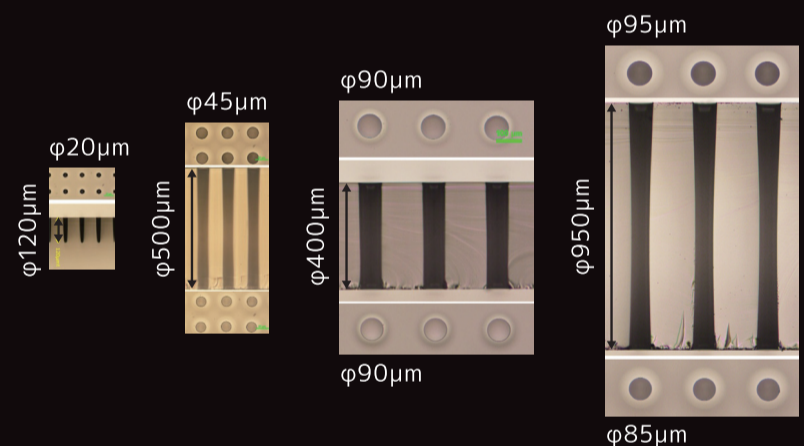
特徴 FEATURES

- ・高精度かつ高い生産性
High accuracy & high throughput
- ・多様なサイズ・板厚に対応
Wide size & thickness variety



TQV 性能 TQV Capability

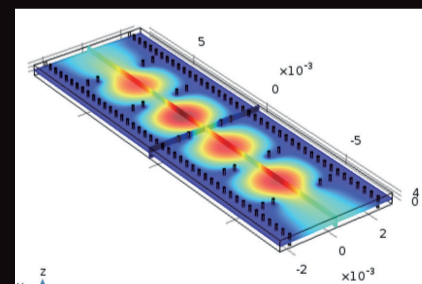
thickness / depth	100μm - 1mm
diameter	20 - 150μm
min. pitch	2x dia.
type	Through hole, blind via



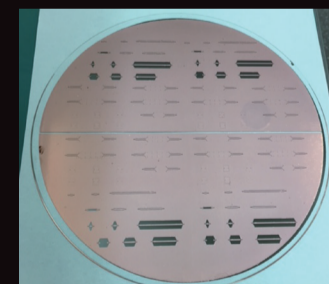
応用例: SIWバンドパスフィルター

Application Example: SIW Band Pass Filter

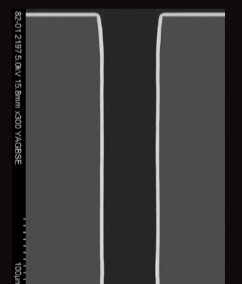
SIW ベースバンドパスフィルター
SIW based band pass filter



試作品ウエハー
Fabricated test wafer

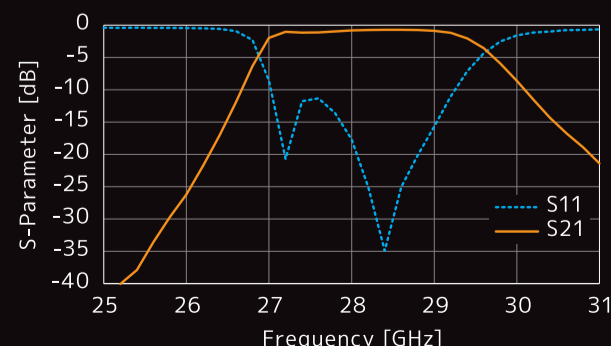


メタライズされた
TQVの断面図
Cross-section view of
metallized TQV



28GHz帯域通過フィルターの応答測定

Measured response of 28GHz band pass filter



低損失と高効率の両立
Extremely low loss & high efficiency

高い環境安定性
Stable in severe environment