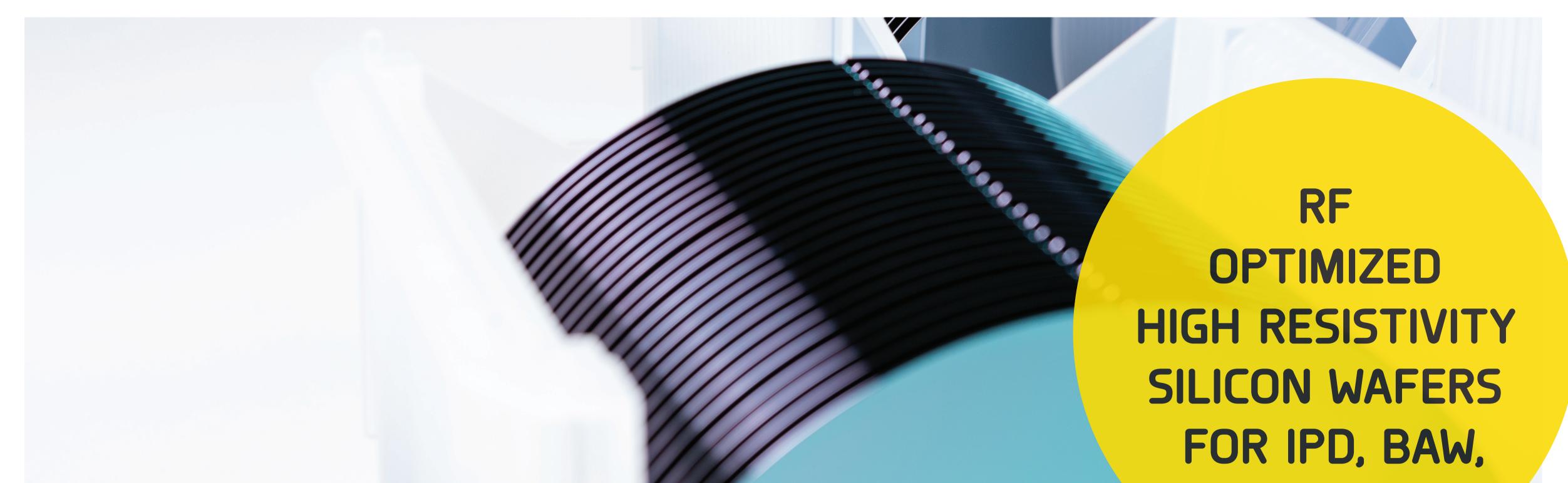
OKMETIC





HIGH RESISTIVITY RFSI® WAFERS - SUPERIOR RF DEVICE PERFORMANCE

RFSI® WAFERS - HIGH RESISTIVITY

SUPERIOR PERFORMANCE AND

FOR RF FILTER AND DEVICE NEEDS

- High Resistivity wafers (Low loss RF IPD or Integrated RFFE / RFIC substrate)
- Engineered High Resistivity wafers (Added trap-rich layer for extremely low loss substrate for RF filters)
- UF-RFSi[®] (Engineered low loss substrate with Ultra Flat geometries for e.g. Thin Film SAW)
- Engineered Ultra High Resistivity wafers (close to zero loss substrate with > 10 kOhm-cm resistivity and trap-rich layer)
- High Resistivity BSOI (Bonded BSOI or suspended cavity C-SOI[®] low loss structures per Customer design, e.g. BAW resonator)
- RF GaN wafers typically extra thick <111> wafers (GaN-on-Si RF Power device substrate with advanced stress management)

LOWER TCO

- Production proven solutions at leading RF device manufacturers, over 2 million shipped RFSil[®] wafers
- Optimized solutions for BAW and SAW filters, IPD devices, Power Amplifiers, RFIC & PA and Silicon Interposers
- Superior performance in 2nd Harmonics, Insertion losses, Intermodular Distortion and Q-values
- MCz enables high resistivity by lower Oxygen concentration compared to standard Cz
- Better slip resistance, mechanical properties and radiation hardness compared to FZ
- Available in 150 and 200mm diameter (> 10 kOhm-cm resistivity wafers only in 200mm) and also in <111> crystal orientation

DOPANT	ORIENTATION	THICKNESS	RESISTIVITY	OXYGEN CONTENT (ASTM F121-83)
Boron	<100>	380 – ≥ 1,150 µm	>5,000 Ohm-cm >10,000 Ohm-cm	<10 ppma, MCz <5 ppma, A-MCz®
Boron	<111>	380 – ≥ 1,150 µm	>5,000 Ohm-cm >10,000 Ohm-cm	<10 ppma, MCz <5 ppma, A-MCz®
Phosphorus	<100>	380 – ≥ 1,150 μm	>5,000 Ohm-cm >7,000 Ohm-cm	<pre><10 ppma, MCz <5 ppma, A-MCz®</pre>