

GaN 功率器件的理想衬底选择——蓝宝石

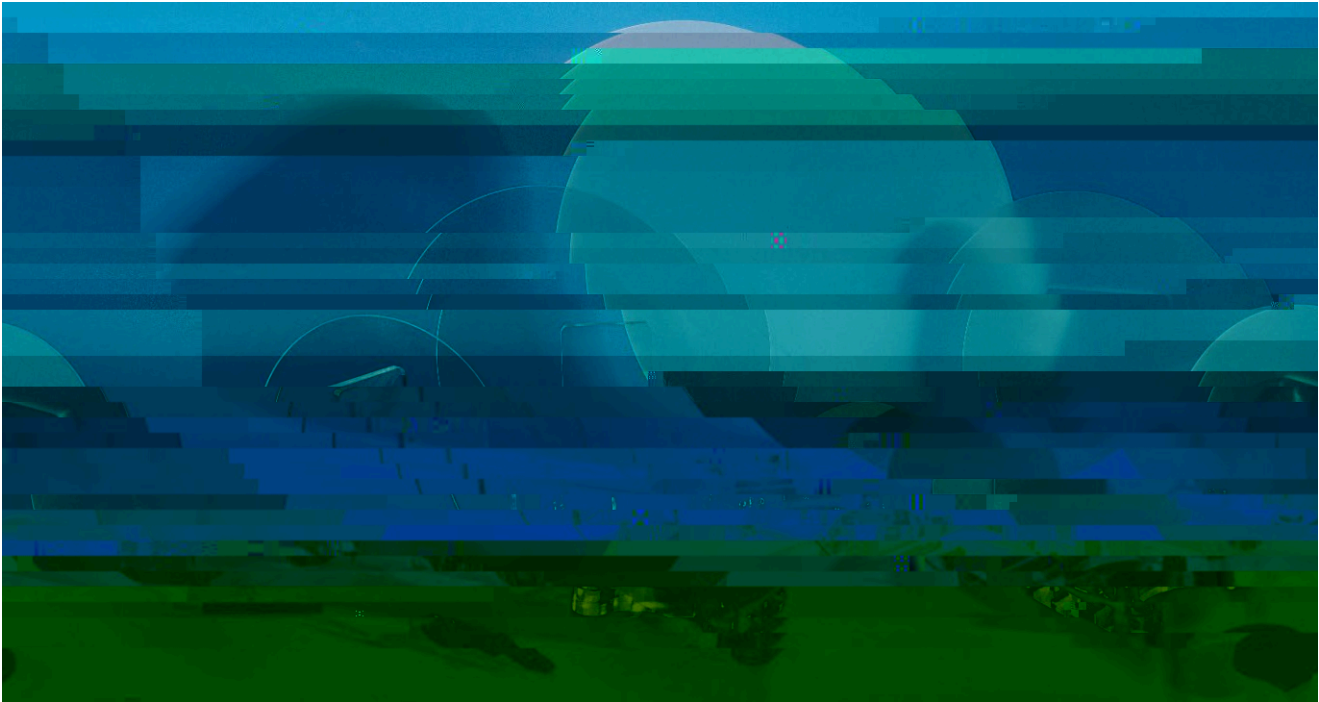
The Ideal Substrate Choice for GaN Power Devices—Sapphire

低热失配 | Low thermal mismatch

Compared with traditional substrates, sapphire substrate has lower lattice mismatch (16%) and thermal expansion coefficient mismatch (-34%) with GaN, which simplifies the buffer layer design of GaN HEMTs (thickness can be reduced by more than 60%), thus reducing epitaxy cost.

GaN 功率器件用蓝宝石衬底规格

Specifications of Sapphire Substrates for GaN Power Devices



Sapphire Substrate Specifications		GaN Power Device Specifications	
Parameter	Value	Parameter	Value
Substrate Diameter	150mm	Device Type	Power MOSFET
Substrate Thickness	0.5mm	Device Power	100W
Substrate Resistivity	100Ω·cm	Device Frequency	100kHz
Substrate Surface Roughness	0.1μm	Device Efficiency	90%
Substrate Crystallographic Orientation	0001	Device Reliability	100,000 hours

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