

ABSTRACT

Silicon Nitride Powder, Silicon Nitride Sintered Body and Circuit Substrate, and Production Method for Said Silicon Nitride Powder

5 The present invention addresses the problem of providing: a silicon nitride sintered body and a circuit substrate which exhibit both high mechanical strength and high thermal conductivity; a silicon nitride powder used as a starting material for these; and a production method
10 for the silicon nitride powder. Provided is a silicon nitride powder which has a specific surface area of 4.0-9.0 m²/g, a β phase ratio of less than 40%, and an oxygen content of 0.20-0.95 mass%, said silicon nitride powder wherein: the frequency distribution curve obtained from a
15 volume-based particle size distribution measurement performed using laser diffraction scattering has two peaks; the tops of the peaks are within the range of 0.4-0.7 μ m, and within the range of 1.5-3.0 μ m respectively; the ratio (the frequency of the top of the peak in the
20 particle size range of 0.4-0.7 μ m/the frequency of the top of the peak in the particle size range of 1.5-3.0 μ m) of the frequencies of the tops of the peaks is 0.5-1.5; and the ratio (D50/D_{BET}) (μ m/ μ m) of the median diameter (D50) (μ m) obtained from the particle size distribution
25 measurement, to the specific surface area equivalent diameter (D_{BET}) (μ m) calculated from the specific surface area is at least 3.5. Also provided are: a silicon nitride sintered body and a circuit substrate which are obtained from the silicon nitride powder; and a
30 production method for the silicon nitride powder.

(No drawing to be published)