## **TOSHIBA**

## **SiN** Insulating Heat Dissipation **Substrates**



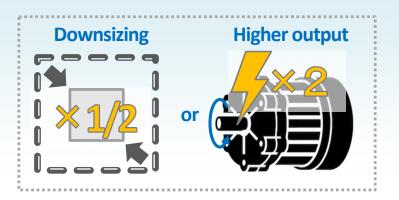
Excellent heat dissipation and strength

This product is an insulation and heat dissipation substrate for semiconductor products. It boasts reliable insulation properties even with thin thickness. It has excellent strength and heat dissipation characteristics, making it ideal for high loads and high power applications.

#### Point 1

## Downsizing · Higher output with existing design

For example, if resin is replaced by silicon nitride of the existing design, heat dissipation effect can be doubled. Also, downsizing and higher output of the product can be achieved.



#### Point 2

## New and high load design is possible

Silicon nitride ceramics has an excellent mechanical properties.

It makes it possible to achieve items such as following which was difficult in the conventional material.

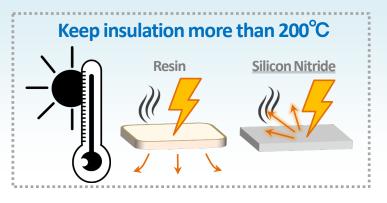
- Pressure welding with high load
- Use under high vibration
- Screwing with holes etc ...

# High strength and hard to break Load Load Other Materials Silicon Nitride Ceramics

#### Point 3

## Keep insulation properties even at high temperatures

Fluctuation of characteristic value under high temperatures is small for Silicon nitride. Insulation is retained even at high temperature of more than 200 ° C, so it is possible to adapt to increased junction temperature of semiconductor.



### Toshiba Materials Co., Ltd.