AO445O (≥ 90%)

2023.04.03

SPECIFICATIONS

- Chemical formula: Al_2O_3
- Chemical name: Aluminium oxide
- Apperance: Dense sintered aluminum oxide
- Main characteristics: High mechanical strength, high temperature resistance, high frequency insulation, high chemical resistance, light intercepting, high heat dissipation
- Main applications: IC packages
- Colour: Dark brown

MECHANICAL & PHYSICAL CHARACTERISTICS (TYP.)

Density		[g/cm³]	JIS R 1634	3.8
Water absorption		[%]	JIS C 2141	0
Vickers hardness HV9.807N		[GPa]	JIS R 1610	12.7
Flexural strength 3 P.B.		[MPa]	JIS R 1601	320
Compressive strength		[MPa]	JIS R 1608	-
Young's modulus of elasticity		[GPa]	JIS R 1602	320
Poisson's ratio		[-]	JIS R 1602	0.23
Fracture toughness (SEPB)		[MPa*m$^{0.5}$]	JIS R 1607	-
Coefficient of linear thermal expansion	**40 - 400 °C** **40 - 800 °C**	[*10^{-6}/K]	JIS R 1618	7.3 8.1
Thermal conductivity		[W/(m*K)]	JIS R 1611	12
Specific heat capacity		[J/(g*K)]	JIS R 1611	0.75
Thermal shock temperature difference		[°C]	JIS R 1648	-
Dielectric strength		[kV/mm]	JIS C 2141	12
Volume resistivity	**20 °C** **300 °C** **500 °C**	[Ω*cm]	JIS C 2141	10^{11} 10^{7} 10^{5}
Dielectric constant		-	JIS C 2141	9.8
Dielectric loss angle		[*10^{-4}]	JIS C 2141	20
Loss factor		[*10^{-4}]	JIS C 2141	190

The values are typical material properties and may vary according to products configuration and manufacturing process.
For more details, please feel free to contact us.

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