TECHNICAL SPECIFICATION

AL OXIDE GEN. 3.0 THREE LAYER SUBSTRATE

Version 1.0/2018

Applications Cryogenics • Sensors • Displays • Special applications

Geometrical Parameters

Parameter	Units	Values	Comment / Advantages
Aluminum base thickness	mm	0.38 / 1 / 1.5	3 mm thickness is under development
Copper layer thickness	µm	2 - 100	Typical values. Heavier copper traces (150-200) are under development.
Via diameter after metallization (min.)	mm	0.4	
Min. hole diameter	mm	0.5	
Max. hole diameter	mm	6	
Via tolerance	mm	± 0.1	
Tolerance on via diameter after metallization	mm	+ 0.1	
Finish parameters	ImAg, ENIG & Solder mask		Typical. ENEPIG optional

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Mechanical and Thermal Parameters

Parameter	Units	Values	Comment / Advantages
Young Modules (E)	Gpa	130	
Thermal Coefficient of Expansion (TCE)	ppm/K	8-12	This value is adjustable and controllable.
Flexural Strength	MPa	60	
Integral Thermal Conductivity	W/(m·K)	≥80	Depending on aluminum base thickness
Operating temperatures	Deg.	< 350	

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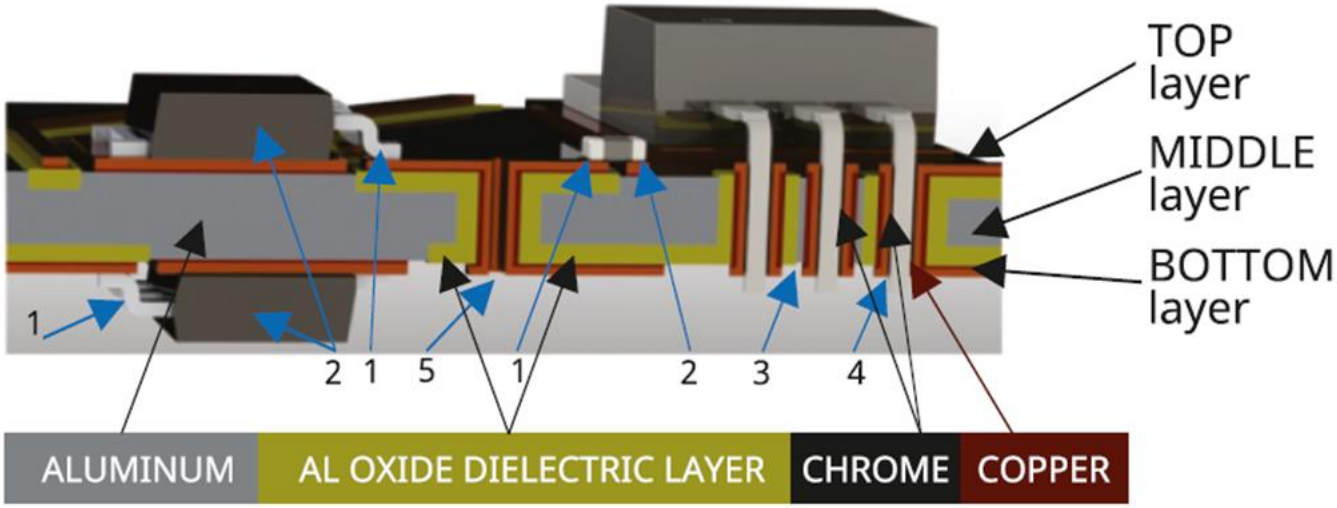
SMD Mounting



1. Mounting SMD components on an insulated conductor (Al_2O_3).
2. Mounting SMD components on a common layer (Aluminum base).
3. Assembling PTH components into isolated hole.
4. Assembling PTH components on a common layer (Aluminum base).
5. Creation of via-holes in layers through insulated holes.

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