

Design rules & specifications ceramic PCB

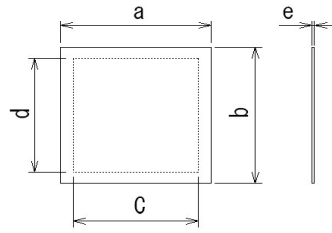


Last update: Jan 2018

Aluminum Nitride | AlN

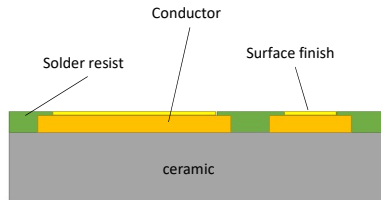
Volume	Prototypes & Low volume < 50 panels / order	Medium & High volume >50 panels / order
Manufacturing process	DPC	DPC

Dimensions & thickness



Panel Dimensions (a)x(b)			
Standard	metric	114mmx114mm	114mmx114mm
Special		up to 140mm x 150mm	up to 140mm x 150mm
Standard	imperial	4.5" x 4.5"	4.5" x 4.5"
Special		up to 5.5" x 5.9"	up to 5.5" x 5.9"
Thickness (e)			
Standard	metric	0.38 0.5 0.63 1.0 1.5 2mm	0.38 0.5 0.63 1.0 1.5 2mm
Special			
Standard	imperial	15   20   25   39   59   79 mil	15   20   25   39   59   79 mil
Special			

Metalization & finish



Conductor			
Standard		Copper - Cu	Copper - Cu
Special			
Conductor thickness			
Standard	metric	35um-70um	35um-70um
Special		18um	18um
Standard	imperial	1oz-2oz	1oz-2oz
Special		0.5oz	0.5oz
Surface finish			
Standard		Immersion Silver, ENIG, ENEPIG	Immersion Silver, ENIG, ENEPIG
Special		IPIG (no nickel), please inquire	IPIG (no nickel), please inquire
Solder resist			
Standard		Solder resist: Green, Black, White	Solder resist: Green, Black, White
Special		other colors	other colors
Silk screen / legend			
Standard		black, white	black, white
Layers			
Standard		single - double sided	single - double sided
Special			

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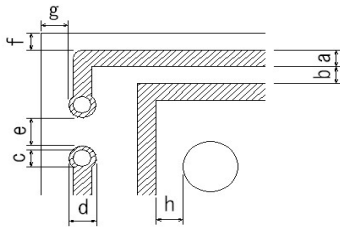


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Volume	Prototypes & Low volume < 50 panels / order	Medium & High volume >50 panels / order
Manufacturing process	DPC	DPC

Spacing & vias



<b>Min. line width (a)</b>		
Standard	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil
<b>Min. line spacing (b)</b>		
Standard	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil
<b>Line/pad to edge spacing (f)</b>		
Standard	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil
<b>Via specifications</b>		
Via diameter (c)	0.08mm / 3 mil	0.08mm / 3 mil
Min. via spacing (b)	0.15mm / 6 mil	0.15mm / 6 mil
Via/hole to edge spacing	3 x via diameter	3 x via diameter
Through hole metallisation	Plated through hole (PTH)	Plated through hole (PTH)
<b>Annular ring specifications</b>		
Min. annular ring diameter (d)	0.10mm / 4 mil	0.10mm / 4 mil
Min. annular ring spacing (e)	0.10mm / 4 mil	0.10mm / 4 mil
Annular ring to edge spacing (g)	0.15mm / 6 mil	0.15mm / 6 mil
<b>Line to hole/via spacing (h)</b>		
Standard	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil

Tolerance



<b>Dimensional tolerance</b>		
Standard	+/- 100µm / 4 mil	+/- 100µm / 4 mil
Special	+/- 50µm / 2 mil	+/- 50µm / 2 mil
<b>Thickness tolerance</b>		
Standard	+/-10%	+/-10%
Special	+/-5%	+/-5%
<b>Hole tolerance</b>		
Standard	+/- 100µm / 4 mil	+/- 100µm / 4 mil
Special	+/- 50µm / 2 mil	+/- 50µm / 2 mil
<b>Pad to hole/via tolerance</b>		
Standard	+/- 100µm / 4 mil	+/- 100µm / 4 mil