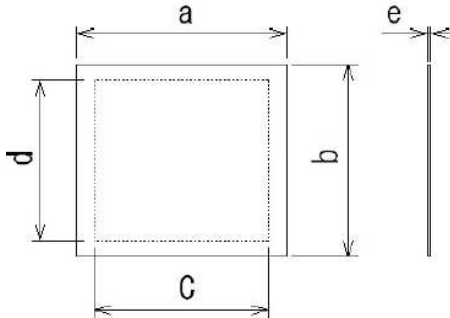
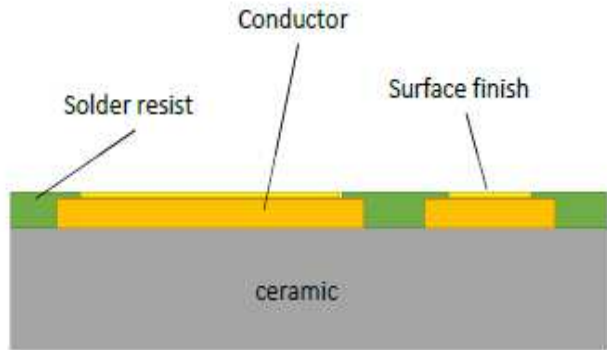


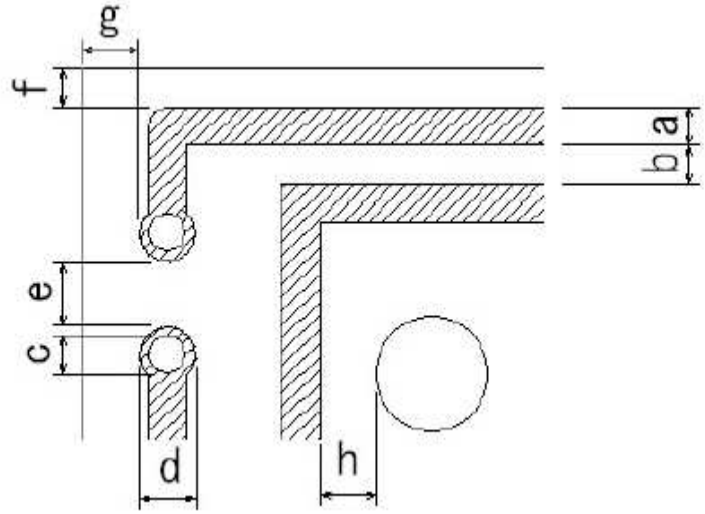
Volume Manufacturing Process – Aluminium Nitride AlN		Prototypes & Low Volume <50 panels / order (DPC)	Medium & High Volume >50 panels / order (DPC)	
Dimensions & Thickness				
	Panel Dimensions (a)x(b)			
	Standard Special	metric	114mm x 114mm Up to 140mm x 150mm	114mm x 114mm Up to 140mm x 150mm
	Standard Special	imperial	4.5" x 4.5" Up to 5.5" x 5.9"	4.5" x 4.5" Up to 5.5" x 5.9"
	Thickness (e)			
Standard Special	metric	0.38 / 0.5 / 0.63 / 1.0 / 1.5 / 2mm	0.38 / 0.5 / 0.63 / 1.0 / 1.5 / 2mm	
Standard Special	imperial	15 / 20 / 25 / 39 / 59 / 79 mil	15 / 20 / 25 / 39 / 59 / 79 mil	
Metallisation & Finish				
	Conductor			
	Standard Special		Copper – Cu	Copper – Cu
	Conductor Thickness			
	Standard Special	metric	35µm - 70µm 18µm	35µm - 70µm 18µm
	Standard Special	imperial	1oz – 2oz 0.5oz	1oz – 2oz 0.5oz
	Surface finish			
	Standard Special		Immersion Silver, ENIG, ENEPIG IPIG (no nickel), please enquire	Immersion Silver, ENIG, ENEPIG IPIG (no nickel), please enquire
	Solder resist			
	Standard Special		Green, Black, White Other – please enquire	Green, Black, White Other – please enquire
	Silk screen / legend			
Standard		Black, white	Black, white	
Layers				
Standard Special		Singe – double sided	Singe – double sided	

Volume Manufacturing Process – Aluminium Nitride AlN

**Prototypes & Low Volume
<50 panels / order (DPC)**

**Medium & High Volume
>50 panels / order (DPC)**

Spacing & Vias



Min. line width (a)		
Standard	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil
Min. line width (b)		
Standard	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil
Line/pad to edge spacing (f)		
Standard	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil
Via Specifications		
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)
Annular ring specifications		
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
Line to hole/via spacing (h)		
Standard	0.15mm	0.15mm
Special	0.2mm / 8 mil	0.2mm / 8 mil
Special	0.1mm / 4 mil	0.1mm / 4 mil

Tolerance



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