SAMPA: package proposal

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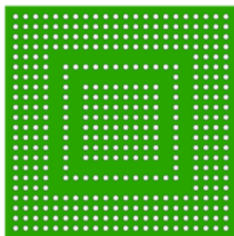
Novapack first proposal

- Considering the high number of IO dedicated to PWR and GND it will be necessary to have 2 rings of pads to connect all of them.
- Considering the estimated die size (9x9) and the cumulative distance on 4 all sides from the die to the central die pad / die pad to 1st ring / 1st ring to 2nd ring / 2nd ring to peripheral pads for signals (see attached BGA design example to illustrate this configuration), at best the package body size should not be smaller than 15x15 mm (as example please refer to LFBGA-396 15x15 0.65P layout below).
- Additionally, we suspect that some of the pads finishing with + or located on the East side of the circuit to be assigned to sensitive lines and differential pairs ?: YES
- We would need from you a confirmation on these lines + / - and depending on them it may be required to go with a larger package such as 16x16 or eventually 17x17 as body size.

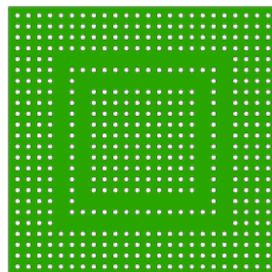
Novapack first proposal

xBGA 0.65mm pitch Fan

Type 3.2



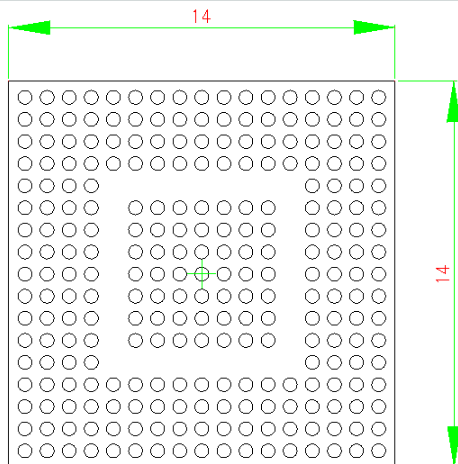
15x15-396
(276I/O+12c+108G/T)
LFBGA 8374019



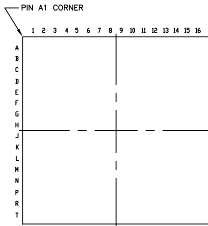
16x16-472
(360I/O+12c+100G/T)
TFBGA 8178590

Novapack second proposal

BGA 14x14-257 BALLS (0.8 mm pitch, 0.5 mm ball)



IMEC proposal



		Symbol	Common Dimensions	
Package :			TFBGA	
Body Size:	X	E	11.000	
	Y	D	11.000	
Ball Pitch :	X	eE	0.650	
	Y	eD	0.650	
Total Thickness :		A	1.200	MAX.
Mold Thickness :		M	0.530	Ref.
Substrate Thickness :		S	0.260	Ref.
Ball Diameter :			0.300	
Stand Off :		A1	0.160 ~ 0.260	
Ball Width :		b	0.270 ~ 0.370	
Package Edge Tolerance :		aaa	0.100	
Mold Flatness :		bbb	0.100