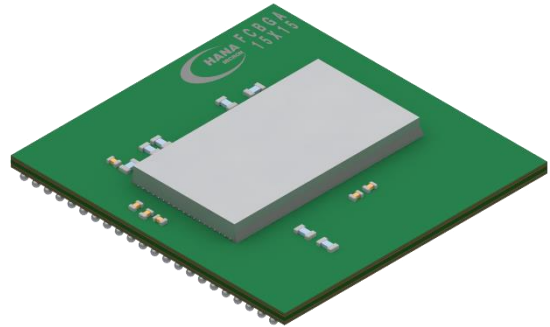


FCBGA & FCBGAH

Flip chip Ball Grid Array & Heat Spreader



Reference Image



Description

Flip Chip interconnection provides the ultimate miniaturization and enables new paradigms in the area of power and ground distribution to the chip, which are not feasible with other traditional packaging approaches.

Laminate or build-up organic substrate offers better electrical performance than a wire-bond type BGA package, especially in high frequency applications.

HANA Micron's Flip Chip BGA packages are available in ball counts of 1,300 and more, body sizes from 15 x 15mm to 31 x 31mm, and various package formats.

Features

- Body size Up to 35mm (under development : 50mm)
- Die Thickness 100-780um
- Lead count 2,000 and more
- Solder ball pitch 0.6 to 1.8mm
- Bump pitch Min 90um
- Bump Type Cu Pillar, Lead Free Bump
- Lidded Type Flat, Hat, Stiffener
- High thermal dissipation
- Pb-Free, RoHS compliant & Green BOM

Applications

- PC, Laptop & Server
- Digital TV
- Automotive
- Network
- CCTV
- Controller
- Amusement

FCBGA & FCBGAH

Flip chip Ball Grid Array & Heat Spreader

Design Guide

Item	2021	2022	2023
Bump Metallurgy	Lead Free	Cu, Au, Indium	
Bump Pitch	Lead Free	135um	125um
	Cu Pillar	90um	70um
Min. Die Thickness	200um	150um	
TIM Conductivity	3W/mk	7W/mk	>10W/mk
Substrate Layer	2-2-2 (6L)	4-2-4 (10L)	6-2-6 (14L)
Min. Core Thickness	200um	150um	100um
PKG Size Max	35mm	50mm	>70mm

Product List

Group	Package Type	Body Size	Application
FCBGA	FCBGA	15-31mm	D-TV, Automotive
	FCBGA-SS2	29, 31mm	D-TV
	FCBGA-Sip	21-35mm	D-TV, Automotive
FCBGAH	FCBGAH	21-31mm	Automotive, CCTV
	FCBGAH-Sip	21-31mm	D-TV, Automotive

FCBGA & FCBGAH

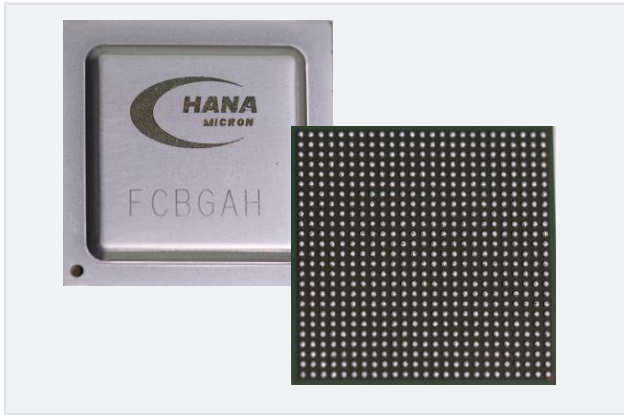
Flip chip Ball Grid Array & Heat Spreader

FCBGA

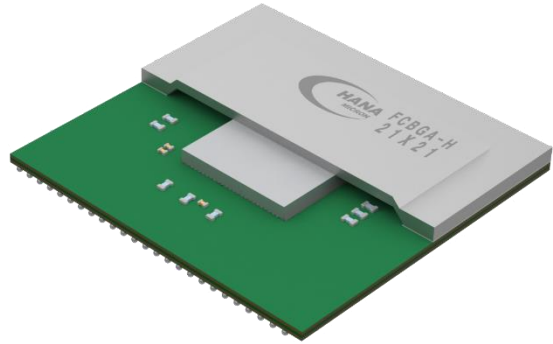
Size(mm)	Package	LD Count	Ball Pitch	Fab Node	Bump Pitch	Bump Count
15x15	FCBGA	403	0.65mm	14nm	140um	674
17x17	FCBGA	473	0.80mm	28nm	151um	1181
17x17	FCBGA	521	0.65mm	32nm	152um	767
17x17	FCBGA	576	0.65mm	28nm	140um	880
19x19	FCBGA	497	0.80mm	28nm	151um	650
19x19	FCBGA	557	0.65mm	28nm	151um	1181
19x19	FCBGA	608	0.65mm	28nm	140um	674
21x21	FCBGA	625	0.80mm	28nm	140um	867
23x23	FCBGA-SS2	631	0.80mm	28nm	135um	1955
23x23	FCBGA	729	0.80mm	28nm	140um	1260
23x23	FCBGA	729	0.80mm	14nm	140um	2969
25x25	FCBGA	818	0.80mm	14nm	140um	1503
25x25	FCBGA-Sip	882	0.80mm	28nm	150um	4040
27x27	FCBGA	709	0.80mm	45nm	141um	1587
27x27	FCBGA	714	0.80mm	45nm	150um	1338
27x27	FCBGA-Sip	793	0.75mm	12nm	140um	2516
27x27	FCBGA	888	0.80mm	45nm	150um	1203
27x27	FCBGA-SS2-Sip	932	0.75mm	32nm	140um	1873
29x29	FCBGA-Sip	1013	0.83mm	14nm	140um	3000
31x31	FCBGA-Sip	927	0.75mm	14nm	140um	3865
31x31	FCBGA-Sip	929	0.75mm	18nm	140um	3478
31x31	FCBGA-Sip	1046	0.75mm	28nm	140um	2444
31x31	FCBGA-SS2-Sip	1053	0.80mm	28nm	135um	1955
31x31	FCBGA-SS2-Sip	1147	0.75mm	32nm	140um	2293
35x35	FCBGA-Sip	1495	0.80mm	45nm	140um	1857

FCBGA & FCBGAH

Flip chip Ball Grid Array & Heat Spreader



Reference Image



FCBGAH

Size(mm)	Package	LD Count	Ball Pitch	Fab Node	Bump Pitch	Bump Count
21x21	FCBGAH	561	0.80mm	45nm	151um	1004
21x21	FCBGAH	625	0.80mm	28nm	140um	867
23x23	FCBGAH-Sip	670	0.80mm	28nm	150um	1021
23x23	FCBGAH	729	0.80mm	28nm	140um	1260
23x23	FCBGAH	729	0.80mm	14nm	140um	2969
23x23	FCBGAH-Sip	1018	0.65mm	14nm	140um	1622
25x25	FCBGAH	818	0.80mm	14nm	140um	1503
25x25	FCBGAH	882	0.80mm	14nm	100um	4523
29x29	FCBGAH-Sip	1013	0.83mm	14nm	140um	3000