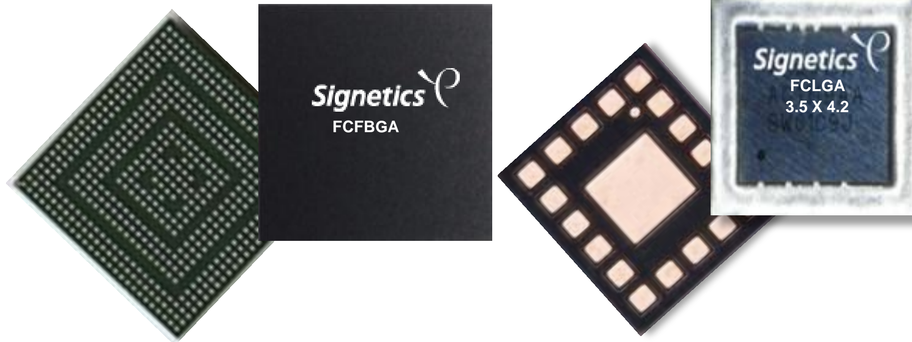
fc-FBGA
Overmold / MUF

Signetics



Description

Underfill is a specialized encapsulant that fills the gap between chip and substrate to protect the delicate interconnect structure and die face.

But MUF allows to combine both underfill and overmold process in strip format. MUF is filled up the gap between chip and substrate with mold material without underfill.

Molded underfill (MUF) is increasingly being used to lower costs and increase throughput in flip chip process. Compared to Traditional underfill processes, MUF decreases material costs, enables smaller package size for today's demands.

Package Sizes	3.5 x 4.2 ~ 17.5 x 17.5mm
I/O Counts	18 ~ 544

Features

- 2-6 layer, laminate substrates w/ strip base
- 40N/ELK, 32N/ELK, 28N/ELK
- Eutectic, Hi-Pb, Pb-free & Cu pillar bumps
- Ni-Au, Ni-Pd-Au, SOP (solder on pad), OSP (organic solder preservative)
- Over molded & Exposed die available
- Dispensed underfill (DUF)
- Molded underfill (MUF) with solder bump
- Supports minimum 0.4mmm ball pitch on bottom pads.
- Available with multiple components & chip to form a system-in-package version (FCFBGA-SIP)
- Packing : JEDEC tray
- Package configuration : JEDEC standards

Applications

- Handheld or portable electronic devices
- Mobile Processors for smart phones, Tablets, Network AP, Chipsets for peripheral IC's

www.signetics.com

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fc-FBGA
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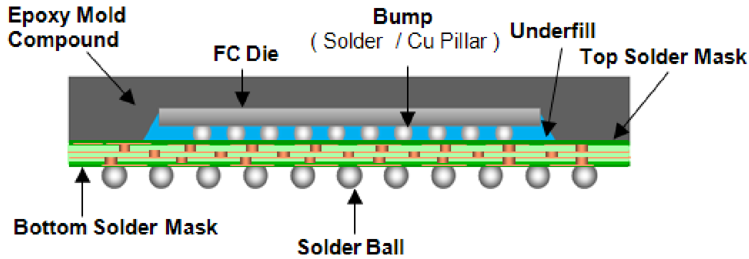
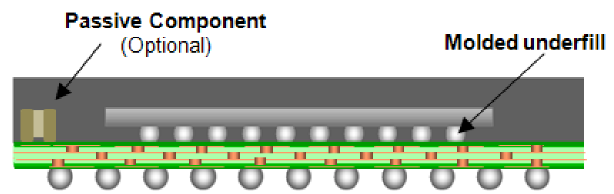
FCFBGA with Over mold

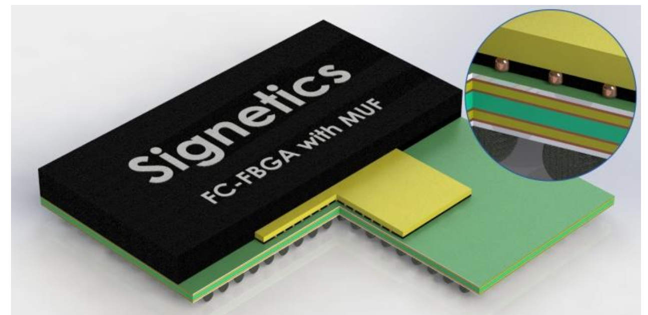


FCFBGA with MUF



Reliability

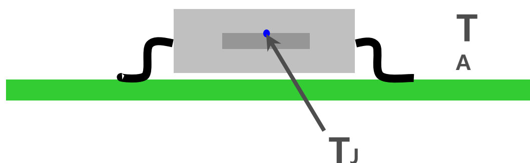
MSL Level	JEDEC Level 3
Temp Cycling	-55°C/125°C, 1000 cycles
Unbiased HAST	130°C/85% RH, 2 atm, 96hrs
High Temp Storage	150°C, 1000hrs



Thermal Data

BODY SIZE	Ball Count	Theta JA (°c/w)
FCFBGA 8X8 Over mold	121B	36.37

- JEDEC STD 2S2P PCB, Still air

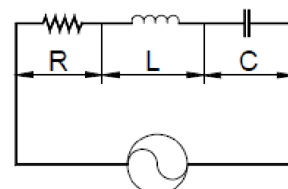


Electrical Data

- 10X10mm Body, 100B
- Simulation Frequency : 100MHz

Resistance (mΩ)	20~50
Inductance (nH)	0.7~2.0
Capacitance (pF)	0.5~0.8

- Results dependent on body size, die size, and Substrate design etc..



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