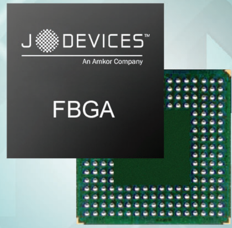
# FBGA

J-Devices wide array of Fine Pitch BGA (FBGA) packages can provide a solution for most any customer need.




## Features

- Low cost option using J-Device standard FBGA bill of materials selection
- 3-22 mm body size
- Square or rectangle packages available
- 25-900 ball counts
- 1.0-0.35 mm ball pitch
- 2 and 4 layers substrate available
- 0.5-1.7 mm total package thickness
- JEDEC MO-216 compliant for 0.8 mm & 1.0 mm ball pitch
- JEDEC MO-195 compliant for 0.5 mm & 0.65 mm ball pitch
- JEDEC MO-298 compliant for 0.4 mm ball pitch
- RoHS-6 (green) BOM options for 100% of FBGA family
- Multi-die integration is available with both side-by-side and stack-up type

## Applications

- Cell phones, games, handheld devices, memory, automotive, computer and industrial applications.
- Applications where low profile, lightweight, minimum space, low cost and high density package is required.

## Thermal Performance

| Body Sizes (mm) | θJA at 1.0W 0 Airflow (°C/W) | | |
|---|---|---|---|
| | LFBGA | TFBGA | VFBGA |
| 5 x 5 | 44.39 | 44.58 | 45.29 |
| 10 x 10 | 23.23 | 23.28 | 24.61 |
| 15 x 15 | 20.49 | 20.54 | 21.37 |

* Additional thermal data available

## Reliability Qualification

- Moisture Sensitivity: Pre-condition of 30°C/60% RH,192 hours, IR reflow 260°C 3X
- Temp/Humidity Bias: 85°C/85% RH, 1000 hours
- Temp/Humidity Unbiased: 110°C/85% RH, 500 hours
- Temp Cycle: -55°C/+125°C, 1000 cycles
- High Temp Storage: 150°C, 1000 hours

## Process Highlights

- Die thickness: 0.05-0.25 mm
- Marking: Laser mark
- Wafer backgrinding: Available
- Encapsulated SMT components: Available
- Micro Pb-free covered LGA Pads/LGAs: Available

J DEVICES™
An Amkor Company

# FBGA

## Standard Materials

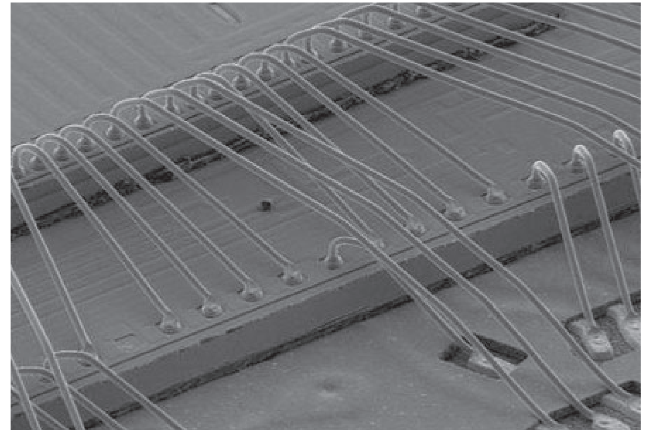
- Package substrate
  - Conductor: Cu
  - Dielectric: Epoxy resin glass reinforced
- Die attach: Adhesive Low stress elastomer
- Mold compound: Epoxy mold compound
- Low alpha material: Available
- Solder ball: Pb-free
- Wire type: Au, Cu

## Test Services

- Program conversion
- Product engineering
- Wafer sort
- 256 pin x 20 MHz test system available
- Burn-in capability
- Tape and reel services

## Shipping

- JEDEC outline trays, tape & reel



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