PBGA/HSPBGA

Signetics

Description

PBGA is a die-up design, plastic overmolded BGA using 2 or 4 Layer BT substrate.

PBGA are the most popular packages with high I/Os. PBGAs also have a good thermal and electrical performances.

Signetics's PBGA offers improved electrical and thermal operation such as POWER and GND planes.

HSPBGA packages can be used for high performance applications with high I/O connections and high thermal and electrical requirements.

Package Sizes	17x17mm – 37.5x37.5mm
I/O Counts	208 - 816

Features

- Up to 37.5mm body size
- 1.00mm and 1.27mm ball pitch options
- Multiple power and ground potentials
- Conductive epoxy option
- Stacked and Multi-die variations
- Standard and custom ball arrays
- Multi-layer configurations for optimal electrical performance
- Standard, Pb-Free, RoHS compliant and Green BOMs
- HSPBGA - Exposed heat spreader option for increased thermal performance

Applications

- Devices with high I/Os
- Graphics Processing Units
- Requiring improved portability such as laptop PC's

www.signetics.com

Signetics (HQ)
483-3 Buphung-ri Thanhyun-myun, Paju-si Gyungki-do, Republic of Korea 413-840
Tel : (Korean) 82-31-940-7681, (English) 82-31-940-7660 Fax : 82-31-940-7888

Signetics High Technology, Inc. (USA)
200 Brown Road Suite 300, Fremont, CA 94539-7953
Tel : 408-907-0121 Cell : 925-980-6515 Fax : 408-907-0109

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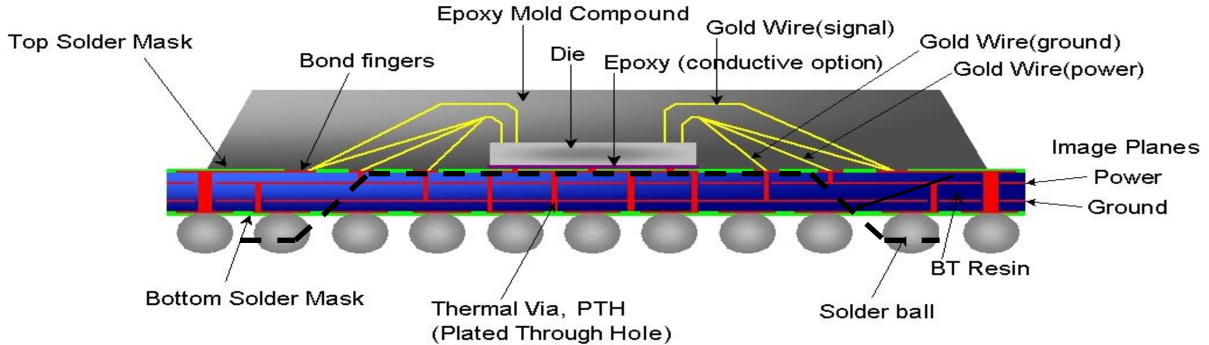
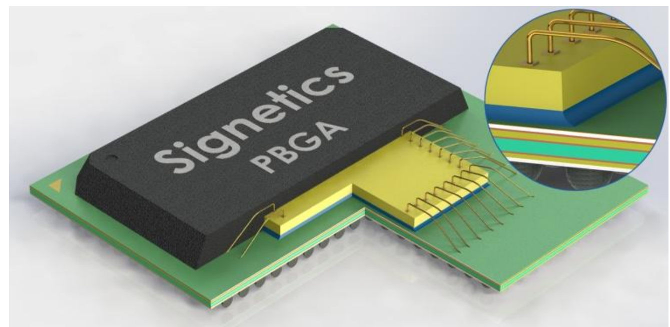


Reliability

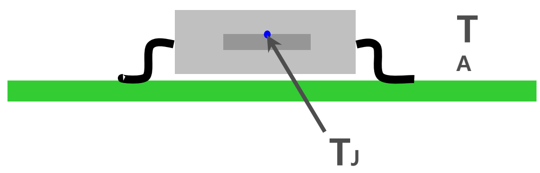
MSL Level	JEDEC Level 3,
Temp Cycling	150C/-65C, 1000 cycles
Unbiased HAST	130°C/85% RH, 2 atm, 96hrs
High Temp Storage	150°C, 1000hrs



Thermal Data

BODY SIZE	Ball Count	Theta JA (°c/w)
23X23mm	420B	21.09
23X23mm – HS	420B	19.27
27X27mm	622B	15.84
27X27mm-HS	622B	13.98

- JEDEC STD 2S2P PCB, Still air

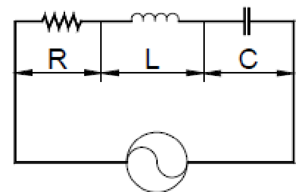


Electrical Data

- 23X23mm Body, 289B
- Simulation Frequency : 100MHz

Resistance (mΩ)	180~570
Inductance (nH)	3.5~14.5
Capacitance (pF)	1.2~3.8

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



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