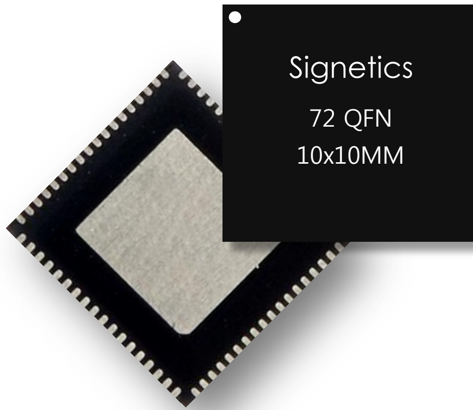
QFN / DFN

Signetics



Description

QFN (Quad Flat No lead) Package is a leadframe based. It has lead pad on the bottom of package to provide electrical connections.

This package offers various benefits including reduced lead inductance & Capacitance, chip scale footprint, thin thickness and low weight.

It also uses I/O pads, and exposed die-pad technology offers better thermal performance. And it provides better electrical performance due to short electrical path.

These technical features make the QFN an ideal choice for many new applications. Signetics is offering 3 kinds of QFNs : QFN / Dual-row QFN / fc-QFN.

Package Sizes	3x3mm – 12x12 mm
I/O Counts	8– 164

Features

- Excellent electrical and thermal performance
- Minimum lead pitch 0.4mm
- Up to 12 x 12mm body size available
- Multiple lead rows available
- Body thickness of 1.0mm and below
- JECEC Level 1 compliant(defending on body size)
- Low cost lead frame packaging solution
- Electrical performance achieved by shorter lead lengths
- Cost efficient vs. substrate packages
- Thermal performance enhanced by having the die pad soldered to the PCB
- VQFN Option Thickness: 0.85±0.05mm
- WQFN Option Thickness : 0.75±0.05mm
- UQFN Option Thickness : 0.65±0.05mm

Applications

- HDDs
- USB Controllers
- Wireless LAN
- PMIC / RF

Signetics (HQ)
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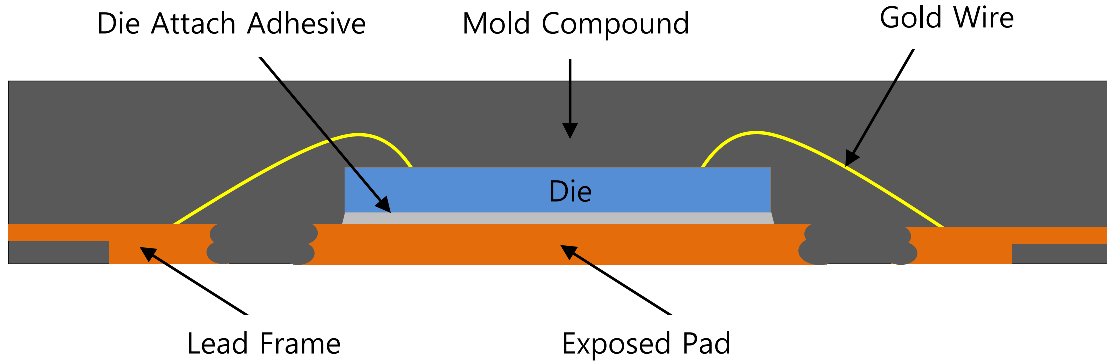
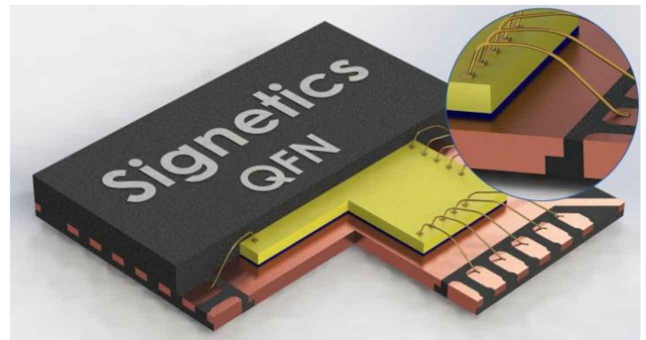




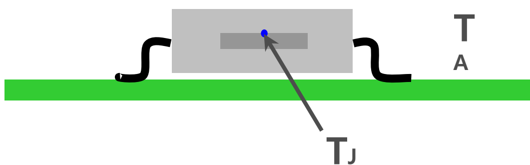
Reliability

MSL Level	JEDEC Level 1
Temp Cycling	150C/-65C, 1000 cycles
Autoclave	121°C/100% RH, 2atm, 168 hrs
High Temp Storage	150°C, 1000hrs

Thermal Data

BODY SIZE	Ball Count	Theta JA (°c/w)
4X4mm	24	34.84
7X7mm	44	26.22

- JEDEC STD 2S2P PCB, Still air

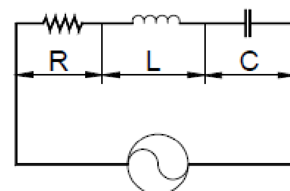


Electrical Data

- 9X9mm Body, 116LD
- Simulation Frequency : 2.4GHz

Resistance (mΩ)	323~692
Inductance (nH)	1.46~2.77
Capacitance (pF)	0.244~1.054

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



www.signetics.com

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