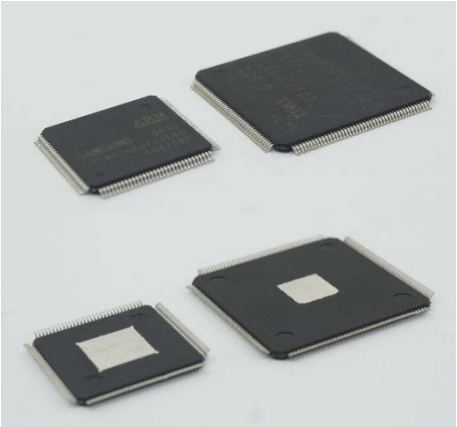
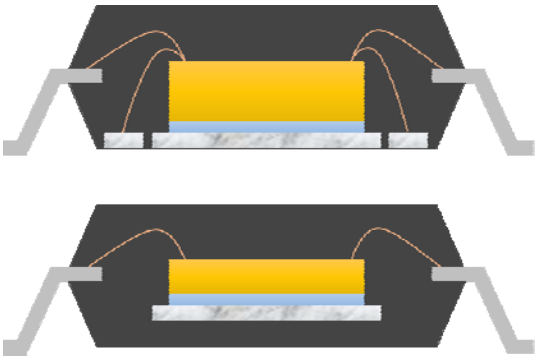
QFP : Quad Flat Package

Image



Reference Image



Description

SFA SEMICON's Quad Flat Pack (QFP) is a leadframe based, plastic encapsulated package with gull wing shaped leads on four sides. The QFP is targeted at cost sensitive applications while providing a high degree of thermal and electrical performance. Offered in a wide range of body sizes and pin counts, the QFP provides designers with the flexibility and convenience of meeting their packaging needs for a large variety of device designs.

Application

- Processor, Controller, DSP, ASIC
- Video-DAC, PC Chip-Sets
- Gate Array
- Logic, Multimedia
- Home Appliances,
- Commercial Commodity
- Automotive

Feature

- JEDEC Standard compliance
- Die stack Applicable
- Green materials (Pb-free / RoHS compliance)
- Lead pitch ≥ 0.65mm

Reliability

- Moisture Sensitivity : JEDEC Level 2/3
- Unbias HAST : 130˚C, 85% RH, 96 hrs
- Temp. Cycling : -65℃/+150℃, 1000 cycles
- High Temp. Storage : 150℃, 1000Hrs

Bill of Materials and Process Specification

- LF : Cu / Alloy
- Adhesive : Paste
- Wire : Au(0.66~1.2 mil), Cu
- EMC : Green
- Solder ball : Matte Sn (Standard)
- Marking : Laser
- Packing : JEDEC Tray

QFP : Quad Flat Package

Electrical Characteristics

Pin	Body Size (mm)	LF	R [mΩ]	C [pF]	[nH]
QFP-48	14.0 x 14.0	Cu	204.2~279.4	0.2900~0.3646	4.8846~13.814
LQFP-256	28.0 x 28.0	Cu	204.0~307.0	1.6615~2.6901	1.0310~14.3690
TQFP-48	7.0 x 7.0	Cu	168.0~221.5	0.2974~0.3845	2.3517~3.1477

Thermal Characteristics

Pin	Body Size (mm)	LF	Pad Size (mm)	Die Size (mm)	Θja [℃/W]
48	14.0 x 14.0	Cu	4.32 x 4.32	1.85 x 1.89 x 0.480	26.834

*2s2p 4 layer board under still air (JEDEC JESD51)

Package Line-up

Package	Body Size (mm)	Lead
QFP-1414	14.0 x 14.0	64, 128
QFP-1414A	14.0 x 14.0	60
QFP-1420F	14.0 x 20.0	60, 64
QFP-2828	28.0 x 28.0	208, 256
QFPH-1420	14.0 x 20.0	60, 64, 128
QFPH-1420C	14.0 x 20.0	80, 100
LQFP-1010	10.0 x 10.0	64
LQFP-1414	14.0 x 14.0	128
LQFP-2020AN	20.0 x 20.0	144
LQFP-2424	24.0 x 24.0	160, 176
LQFP-2828	28.0 x 28.0	256
LQFP-1010	10.0 x 10.0	64
TQFP-0707	7.0 x 7.0	32, 48, 64
TQFP-1010	10.0 x 10.0	64
TQFP-1212	12.0 x 12.0	80
TQFP-1414	14.0 x 14.0	100
TQFP-1420N	14.0 x 20.0	128