LQFP

Low-Profile Quad Flat Package

DESCRIPTION

LQFP is a quad-sided, lead frame based plastic package with body thickness of only 1.4mm. It is available in different body sizes and pin counts from 44L to 176L. The broad pin count range and body size choices of the LQFP make it a very versatile package for wide range of devices from ASIC to chipsets and broadband IC controllers.

The package meets JEDEC Moisture Sensitivity Level 3 standard that ensures reliability in its functions.

SPECIFICATIONS

☀ Die Thickness	304um (12mils) maximum
☀ Gold Wire	99.99% Au
☀ Mold Compound	EME G700 (Green)
	EME 7372 (Non-Green)
☀ Plating	Matte Tin
☀ Marking	White Ink / Laser Mark
☀ Packing	Tray

APPLICATIONS

- DSP/ Base Band ICs
- Logic/ ASIC
- Micro-controllers/ Micro Processors
- Chipsets/ Graphics Chip
- Mixed Signal/ Analog ICs

RELIABILITY

MSL Level: MSL 3 @ 240°C for Sn/Pb

MSL Level: MSL 3 @ 260°C for Pb-Free & Green

Pressure Cook Test: 168hrs (121°C, 100%RH, 2atm)

Temperature Cycling: 500cycles (-65°C/+150°C)

HAST: 100hrs (130°C, 85%RH)

Temperature & Humidity Test: 1,000hrs (85°C, 85%RH)

High Temperature Storage: 1,000hrs (150°C)

FEATURES

- Available body from 7x7mm to 20x20mm
- 44L to 176L lead counts
- Body thickness 1.4mm
- JEDEC standard compliant
- JEDEC MSL level 3 qualified for all pin counts

THERMAL PERFORMANCE

Package	Body Size (mm)	Pad Size (mm)	Die Size (mm)	Thermal Performance θja (°C/W)

| LQFP 44L | 10x10 | 5.207x5.207 | 4.406x4.711 | 45.03 |
| LQFP 176L | 20x20 | 7.112x7.112 | 3.9x4.4 | 38.19 |

Note: Simulated with JEDEC Standard 4-layer test board under still air condition, ambient temperature 45°C

ELECTRICAL PERFORMANCE					
Package	Body Size (mm)	Pad Size (mm)	Frequency (MHz)	Self Inductance (nH)	Self Capacitance (pF)	Resistance (mohm)
LQFP 44L	10x10	5.207x5.207	100	2.343~3.701	0.484~0.559	60.18~159.9
LQFP 176L	20x20	7.112x7.112	100	7.043~8.917	0.987~1.38	230.3~446.4

Note: Results are simulated. Data is available through 2.5GHz.

CROSS-SECTION