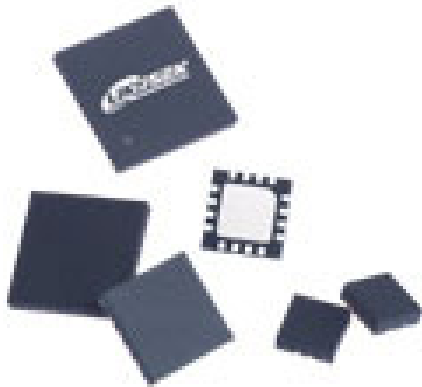


# Data Sheet – X2QFN



## DESCRIPTION

Lingsen Quad Flat No-lead (QFN) package is a plastic encapsulated package with exterior leads around the bottom periphery of the package to provide short electrical connection to the PWB. The package also provides excellent thermal performance by having the die attach paddle exposed on the bottom of the package surface to provide efficient heat path when soldering directly to the PWB.

## APPLICATIONS

- Telecommunication Products, Cellular Phone Wireless LAN
- Low to medium lead count packages Information appliances
- Portable Products, PDA, Digital Camera, MP3 player, Pagers

## SPECIFICATIONS

- Gold Wire                    99.99% Au
- Mold Compound            G770 (Green)
- Plating                        Matte Tin
- Marking                      Laser Mark
- Packing                        Antistatic Tube or Tray

## RELIABILITY

MSL Level	JEDEC Level 3 @ 260°C
Pressure Cook Test	168 hrs (121°C, 100%RH, 2atm)
Temperature Cycling	1,000 cycles (-65°C/+150°C)
HAST	100 hrs (130°C, 85%RH)
Temperature & Humidity Test	1,000 hrs (85°C, 85%RH)
High Temperature Storage	1,000 hrs (150°C)

## FEATURES

- Low package profile:  $\leq 1.10\text{mm}$
- BT substrate
- Eutectic Sn63/Pb37 solder ball, Pb free solder option
- Full in-house design capability

## PACKAGE AVAILABILITY

- T type: Package thickness is 1.1~1.2 mm
- V type: Package thickness is 0.8~1.0 mm
- W type: Package thickness is 0.7~0.8 mm
- U type : Package thickness is 0.5~0.6 mm
- X type : Package thickness is 0.4~0.5 mm
- X2 type : Package thickness is 0.35~0.4 mm

# Data Sheet – X2QFN

## THERMAL PERFORMANCE

Package	Body size (mm)	Pad size (mm)	Die size (mm)	Thermal Performance $\psi_{ja}$ (°C/W)
VQFN 16L	4x4	2.45x2.45	1.872x1.9545x0.36	26.4
VQFN 48L	7x7	5.40x5.40	2.5x4.0x0.2286	10.1

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)
VQFN 16L	4x4	2.45x2.45	100	0.5893~0.8255	0.1370~0.1583	48.13~169.9
VQFN 48L	7x7	5.40x5.40	100	1.0840~2.4560	0.1605~0.2113	133.6~448.8

Note: Results are simulated. Data is available through 100 MHz.

## CROSS-SECTION

