

# MQFP-ed

### **Exposed Drop-in Heat Slug Metric Quad Flat Pack**

- 14 x 20mm to 32 x 32mm
- 100 to 240 lead count
- Lead pitch range from 0.80mm to 0.50mm



#### **FEATURES**

Body Sizes: 14 x 20mm to 32 x 32mm

Package Height: 3.4mm
Lead Counts: 100L to 240L
Lead Pitch: 0.80mm to 0.50mm
JEDEC standard compliant

• Lead-free and Green material sets available

#### **APPLICATIONS**

- ASIC
- DSP
- FPGA
- PLD
- Logic, microprocessors / controllers
- High speed logic, high power microprocessors
- 3D graphics, telecom, wireless, audio, CPU / GUI

#### **DESCRIPTION**

STATS ChipPAC's Exposed Drop-In Heat Slug Metric Quad Flat Pack (MQFP-ed) is a thermally enhanced version of the QFP package. Thermal enhancement is achieved by adding a drop-in exposed anodized aluminum heat spreader during the molding process, using a standard leadframe. MQFP-ed typically has 60% higher thermal performance over the standard MQFP and the QFP-d for higher power applications.





## MQFP-ed

## **Exposed Drop-in Heat Slug Metric Quad Flat Pack**

#### **SPECIFICATIONS**

Die Thickness380-560μm (15-22mils) range preferredGold Wire25/30μm (1.0/1.2mils) diameter, 99.999% Au

**Lead Finish** 85/15 Sn/Pb or Matte Tin

Marking Laser / ink

Packing Options JEDEC tray / tape and reel

#### **RELIABILITY**

Moisture Sensitivity Level JEDEC Level 3

Temperature Cycling -65°C/150°C, 1000 cycles

**High Temperature Storage** 150°C, 500 hrs **Pressure Cooker Test** 121°C 100% RF

121°C 100% RH, 2 atm, 168 hrs

Liquid Thermal Shock (opt) -55°C/125°C, 1000 cycles

#### THERMAL PERFORMANCE, 0ja (°C/W)

Package	Body Size (mm)	Pad Size (mm)	Die Size (mm)	Thermal Performance, 0ja (°C/W)
208L	28 x 28 x 3.4	14.0 x 14.0	10.2 x 10.2	14.9

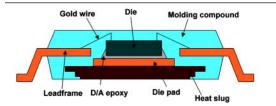
Note: Simulation data for package mounted on 4 layer PCB (per JEDEC JESD51-7) under natural convection as defined in JESD51-2.

#### **ELECTRICAL PERFORMANCE**

Package	Body Size (mm)	Pad Size (mm)	Frequency	Self Inductance (nH)	Self Capacitance (pF)
208L	28 x 28 x 3.4	10.5 x 10.5	100MHz	11.6~14.7	1.43~1.56

Notes: \*Results are simulated. Data is available through 2.5GHz.

#### **CROSS-SECTION**



#### PACKAGE CONFIGURATIONS

 Package Size (mm)
 Lead Count

 14 x 20
 100, 128

 28 x 28\*
 128, 144, 160, 208

 32 x 32
 160, 240

Note: \*Cavity down configuation available.

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