



HSON8

The HSON8 package maintains the same footprint area (5 x 6 mm) as the standard SOP8 package. HSON8 features an exposed die pad to enhance thermal performance.

Applications

The HSON8 is suitable for medium-power applications (reference values 80W*/60A), designed for low on-resistance and high-speed switching MOSFETs. Ideal for:

- ▶ Motor drivers
- ▶ Injection drivers
- ▶ Power supply circuits
- ▶ Lamp drivers
- ▶ Automotive products

*Tc = 25°C, Tj = Max 150°C

Reliability Qualification

Amkor packages are assembled with proven reliable semiconductor materials. All reliability testing includes:

- ▶ JEDEC standard pre-conditioning except high temperature storage
- ▶ 85°C/85% RH, 168 hours, IR reflow 260°C 3X
- ▶ H³TRB: 85°C/85% RH, 1000 hours
- ▶ UHAST: 130°C/85% RH, 96 hours
- ▶ Temperature Cycle: -55°C to 150°C, 1000 cycles
- ▶ High Temp Storage: 150°C, 1000 hours

Test Service

Amkor offers full turnkey business for all power discrete products with the capability to test various types of power devices including: MOSFETs, intelligent power devices, etc.

- ▶ Power discrete test capability:
 - ▷ DC
 - ▷ Capacitance *1
 - ▷ Rg *1
 - ▷ Avalanche test
 - ▷ Thermal resistance
- ▶ Program conversion
- ▶ Electrical failure analysis
- ▶ Integrated test, marking, vision inspection and tape & reel services

*1 Sampling test only

Features

- ▶ Al wire bonding
- ▶ Full turnkey available from wafer probe through test and packing
- ▶ Green materials: Pb-free plating & halogen free mold compound
- ▶ Plating coverage at the tip of the lead is more than 50% of leadframe thickness

Under Development

- ▶ Environmentally friendly die attach
Pb-free solder

Process Highlights

- ▶ Interconnect: $\phi 125 \mu\text{m} \sim \phi 300 \mu\text{m}$ Al wire
- ▶ Plating: 100% matte Sn
- ▶ Marking: Laser mark

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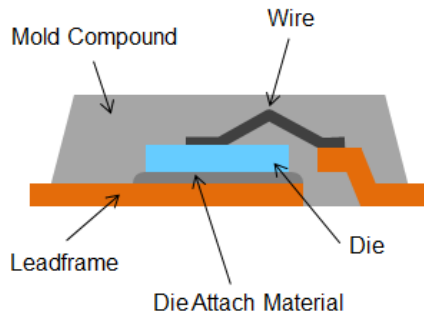
Standard Materials

- ▶ Leadframe: Copper with Ni plating on wire bonding area
- ▶ Die attach: Pb solder
- ▶ Interconnect: Al wire
- ▶ Mold compound: Halogen free

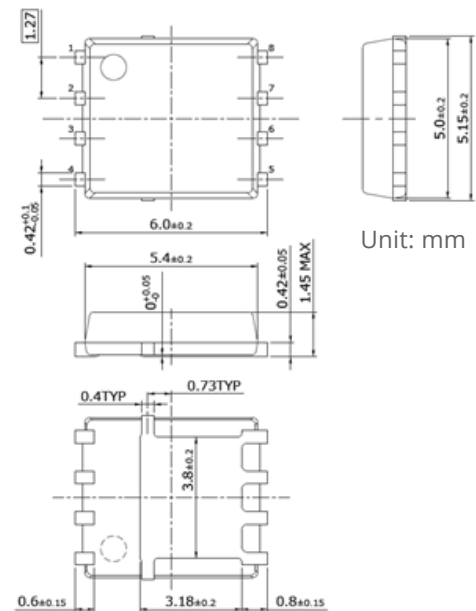
Shipping

- ▶ Tape & reel packing
 - ▷ 2500 pcs per reel
 - ▷ Tape width 12 mm
 - ▷ Reel $\Phi = 330$ mm
- ▶ Barcode packing label

Cross-section



Package Outline Drawing



Top & Bottom View



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