

## Introduction

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:

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

\*T<sub>c</sub> = 25°C, T<sub>j</sub> = Max 150°C

## Enhanced Feature Options

- 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

## HSON8

### Standard Materials

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

### Reliability Qualification

J-Devices 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
- PCT: 121°C/100%RH/2 atm, 96 hours
- Temp Cycle: -55°C/+150°C, 300 cycles
- High Temp Storage: 175°C, 1000 hours

### Test Services

J-Devices 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
  - R<sub>g</sub> \*1
  - Avalanche test
  - Thermal resistance
- Program conversion
- Electrical failure analysis
- Integrated test, marking, vision inspection and tape & reel services

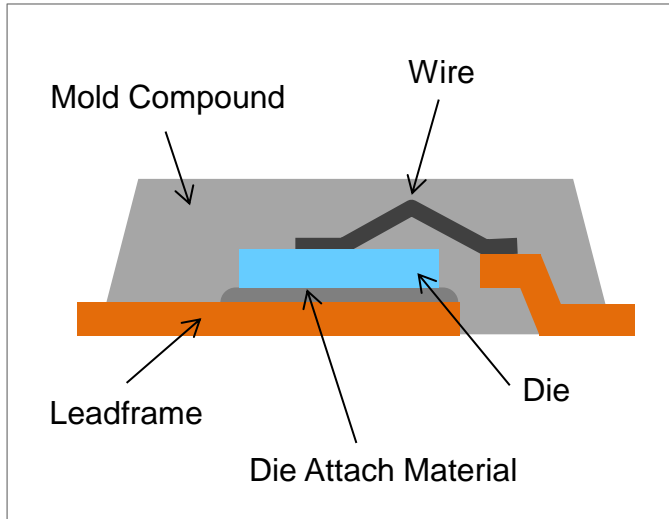
\*1 Sampling test only

### Shipping

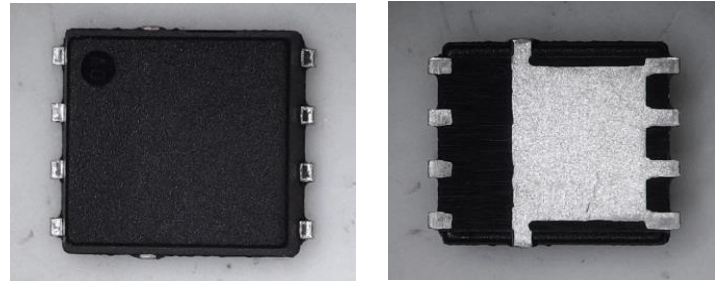
- Tape and reel packing
  - 2500 pcs per reel
  - Tape width 12 mm
  - Reel  $\Phi = 330 \text{ mm}$
- Barcode packing label

## HSON8

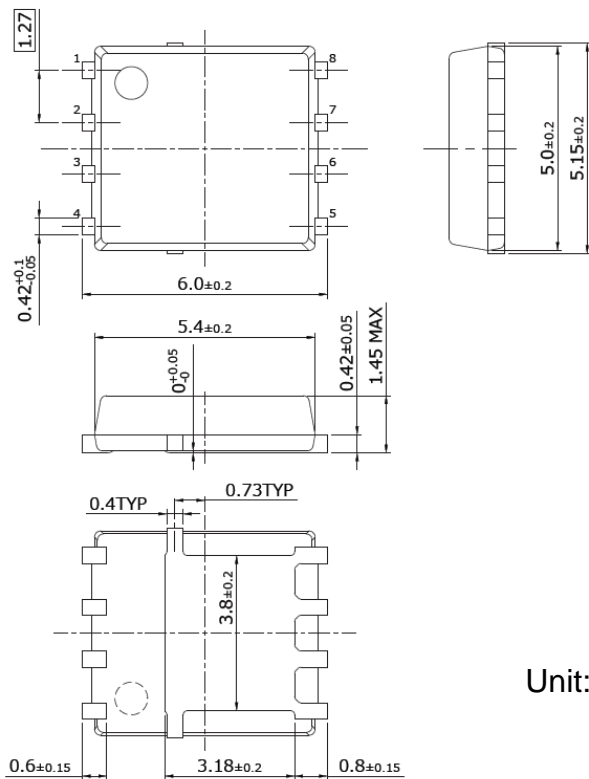
### Cross-section



### Top & Bottom View



### Package Outline Drawing – HSON8



Unit: mm



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