



Features

- ▶ Low on-resistance and high current density due to thick Al wire bonding
- ▶ Full turnkey available from wafer probe through test and packing
- ▶ Pb-free plating

Under Development

- ▶ Environmentally friendly die attach Pb-free solder
- ▶ Halogen free mold compound

Process Highlights

- ▶ Interconnect: Thick Al wire bonding technology
- ▶ Plating: 100% matte Sn
- ▶ Marking: Laser mark

DPAK (TO-252)

DPAK follows the JEDEC standard for medium-power discrete products.

Applications

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

- ▶ Motor drivers
- ▶ Power supply circuits
- ▶ DC-DC converters
- ▶ Consumer products
- ▶ 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

DPAK (TO-252)

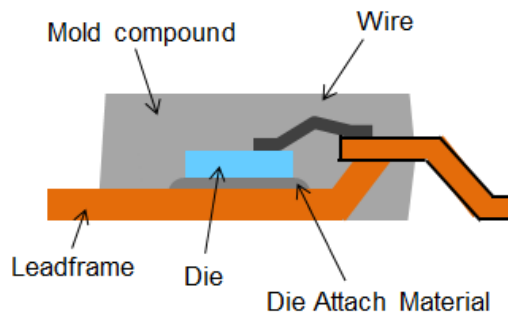
Standard Materials

- ▶ Leadframe: Copper with Ni plating on wire bonding area
- ▶ Die attach: Pb solder
- ▶ Interconnect: Al wire 11.8 mil max
- ▶ Mold compound: With halogen

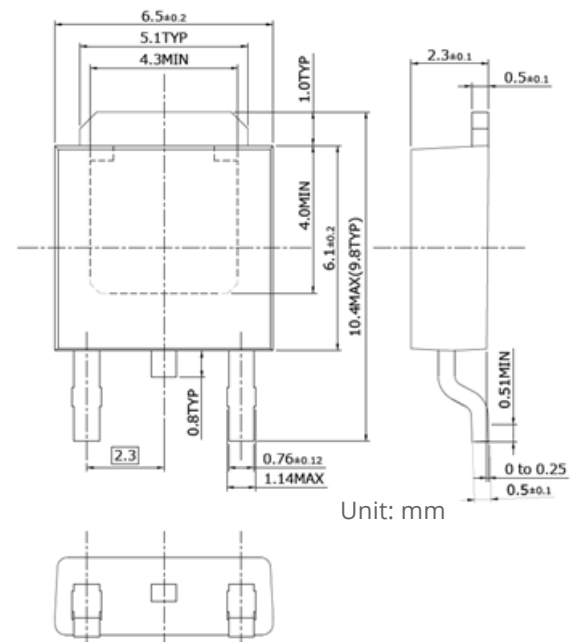
Shipping

- ▶ Tape and reel packing
 - ▷ 2000 pcs per reel
 - ▷ Tape width 10.7 mm
 - ▷ Reel Φ = 330 mm
- ▶ Barcode packing label

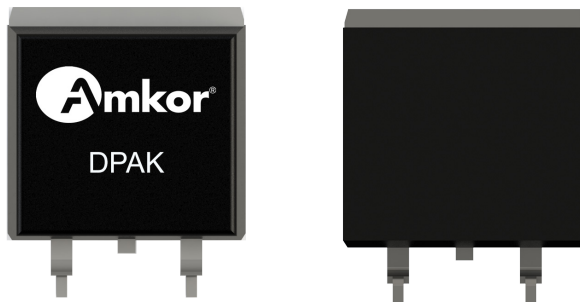
Cross-section



Package Outline Drawing



Top & Bottom View



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