

# CARD EDGE PRODUCT FAMILY

## DDR SO DIMM



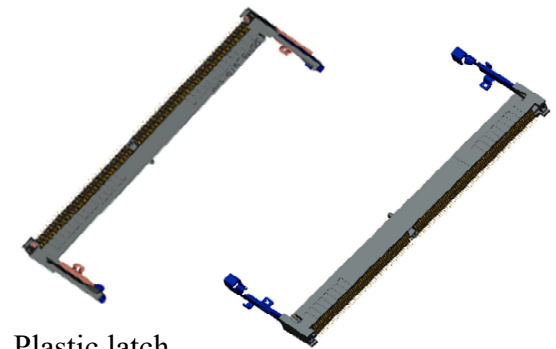
DEREN

DDR SO DIMM Connectors meet JEDEC industrial specification. Support diverse generations of connectors with data rate transfer up to 6.4GT/s. Modules can not be compatible between different generations. Modules variations differ by voltage key and PCB thickness. The voltage key location in connector housing distinguishes the orientation of module insertion. There are four kinds of connector height: 4H/5.2H/8.0H/9.2H. In order to save space, the lower connector and higher connector can be stacked together. As the module thickness is 3.6 mm max., the height variation between the lower and higher connectors should be 4mm at least. Hence, the match height should be 4H and 8.0H, 5.2H and 9.2H. Customer can chose different height connectors to meet their own applications. The metal latch optimized design delivers more robust strength and better soldering coplanarity.

- Floating latch design to optimize the latch soldering coplanarity.
- Blanking contact design to ensure the contact force against electrical discontinuity.
- Optimized contact structure design to improve the signal integrity performance, especially for the insertion loss and return loss.
- Optimized housing structure design to improve the housing warpage. After reflow, the connector coplanarity can be kept within 0.1mm max and the tendency of housing warpage is “U” shape.
- DDR SO DIMM product family is offering industrial standard packaging options, including tape & reel and soft tray.

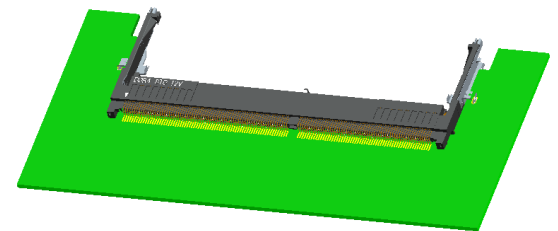
## FETURE

- Data rate transfer up to 6.4GT/s.
- Single end signaling with 50Ω nominal impedance
- Skew between up & low contact is  $20 \pm 7$ ps.
- Right angle SMT type connector, capable to 260° C peak temperature reflow process
- 25 degree Angled module insertion & extraction.
- Polar key design for standard & reverse types.
- Diverse connector heights
- Auto lock latch design
- Latch design against module inadequate installation
- Unique latch design to prevent latch over bent



Plastic latch

Metal latch



Offset type

## TARGET MARKET

- Note book computer
- All in one computer

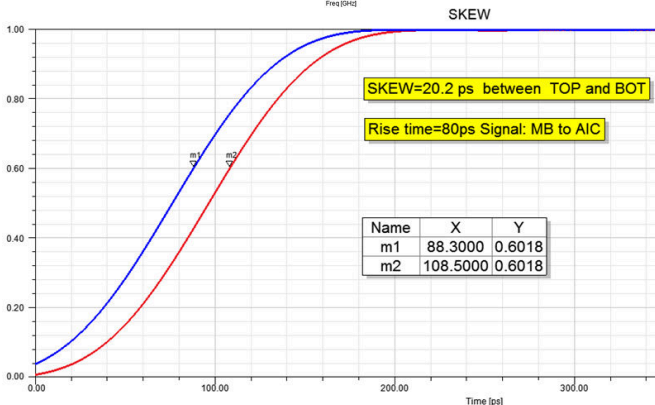
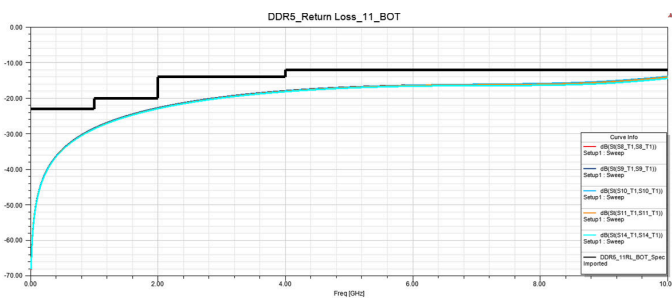
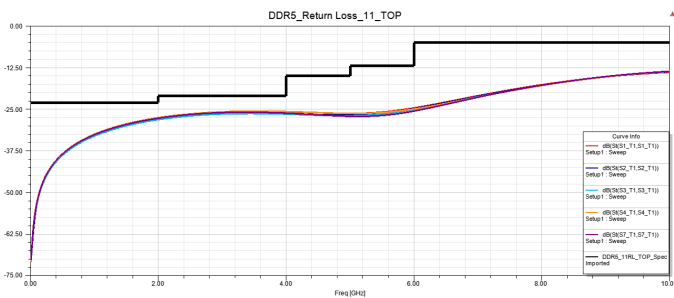
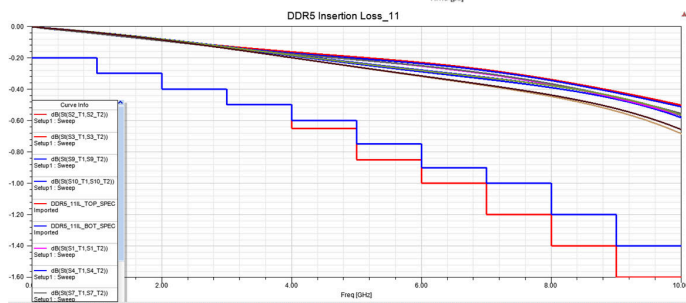
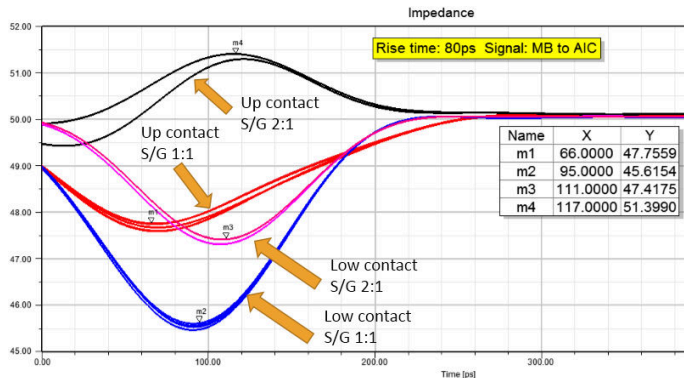
## BENEFIT

- Meets JEDEC Spec.
- Minimizes impedance discontinuities
- Optimizes PCB routing.
- Fits for customer process
- Lower insertion & withdraw force.
- Error proof.
- Meets different customer applications
- Easy for module installation
- Prevent incorrectly module installed
- Much more robust latch



## TECHNICAL INFORMATION

### SIGNAL INTEGRITY PERFORMANCE



### MECHANICAL PERFORMANCE

- Insertion force (module to connector): 59.8N max
- Terminal retention force: 100gf min.
- Durability: 25cycles.

### ELECTRICAL PERFORMANCE

- Low level contact resistance: 30mΩ initial, Δ10mΩ
- Insulation resistance: 1MΩ min.
- Dielectric withstanding voltage: 250VAC.
- Current rating: 0.5A/pin De-rate

### ENVIRONMENTAL

- Flammability: UL 94 V-0
- Low halogen: 1000ppm max. Cl, 1000ppm max Br.
- Compliant with RoHS directive 2011/65/EU
- Operating Temperature: -55° C to +85° C

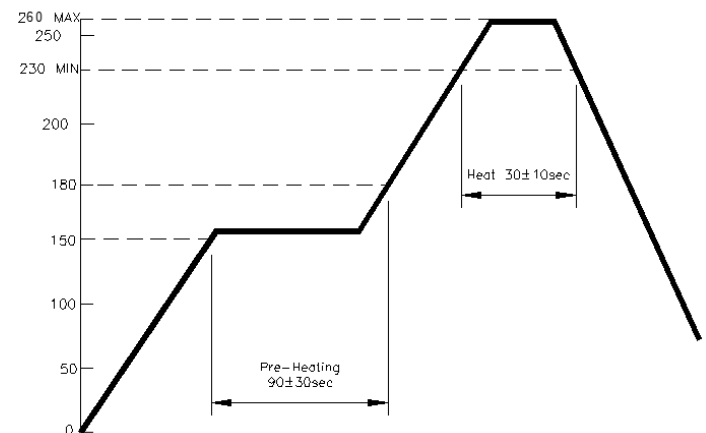
### SPECIFICATION

- JEDEC SPEC:
  - DDR2 200pin: SO-005 / MO-224
  - DDR3 204pin: SO-006 / MO-268
  - DDR4 260pin: SO-018 / MO-310
  - DDR5 262pin: SO-024 / MO-337

- DEREN PRODUCT SPEC: DR-PS-0012

### APPLICATION SPEC

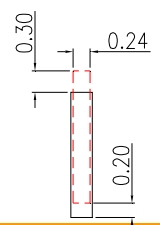
- Reflow temperature profile:



- Recommended stencil thickness: 0.12mm
- Recommended stencil aperture:

PCB solder pad:

Stencil aperture:

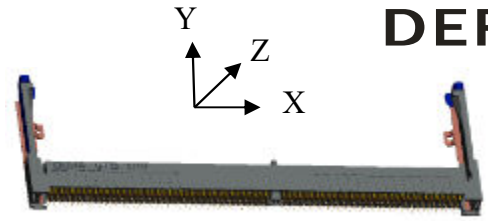
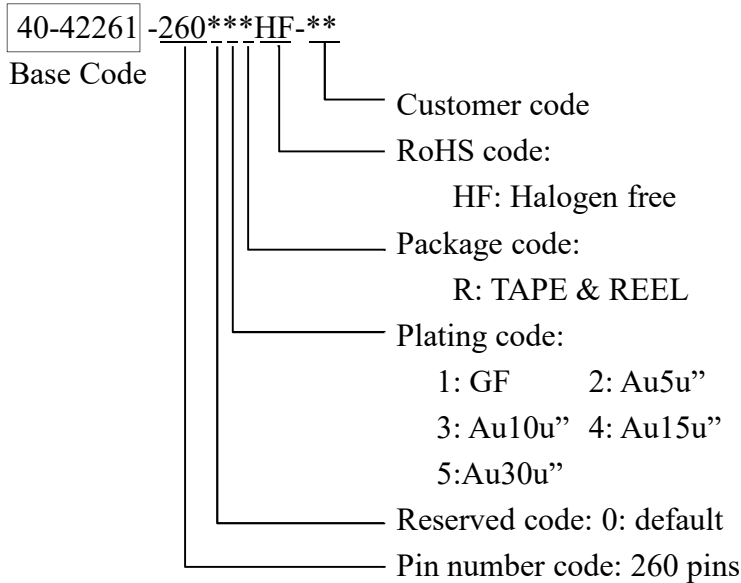




## PART NUMBERS & STRUCTURE

### DDR SO DIMM Plastic Latch

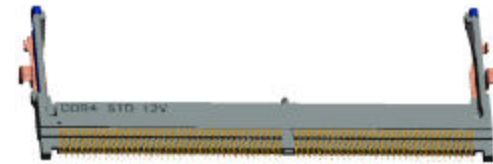
#### Part Number Description:



4H & 5.2H & 6H STD & RVS



8H & 9.2H STD & RVS



4H STD Offset (2.75H)

#### DDR2 SO DIMM part number list:

- 4.0H STD: 40-42323-200\*\*RHF
- 9.2H STD: 40-42368-200\*\*RHF

#### DDR3 SO DIMM part number list:

- 4.0H STD: 40-42042-204\*\*RHF
- 4.0H RVS: 40-42043-204\*\*RHF
- 5.2H STD: 40-42044-204\*\*RHF
- 5.2H RVS: 40-42045-204\*\*RHF
- 8.0H STD: 40-42046-204\*\*RHF
- 8.0H RVS: 40-42047-204\*\*RHF
- 9.2H STD: 40-42048-204\*\*RHF
- 9.2H RVS: 40-42049-204\*\*RHF

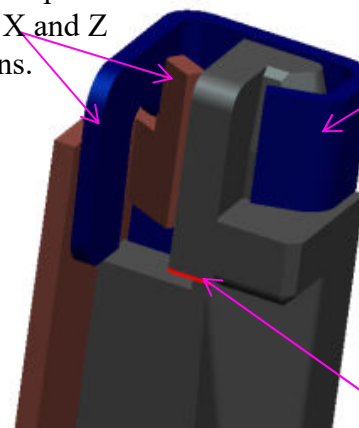
#### DDR4 SO DIMM part number list:

- 4.0H STD: 40-42261-260\*\*RHF
- 4.0H RVS: 40-42271-260\*\*RHF
- 5.2H STD: 40-42272-260\*\*RHF
- 5.2H RVS: 40-42273-260\*\*RHF
- 8.0H STD: 40-42274-260\*\*RHF
- 8.0H RVS: 40-42275-260\*\*RHF
- 9.2H STD: 40-42276-260\*\*RHF
- 9.2H RVS: 40-42277-260\*\*RHF
- 6.0H STD: 40-42486-260\*\*RHF
- 4.0H Offset STD: 40-42355-260\*\*RHF

#### Plastic Latch Structure

Metal hooks to protect the plastic latch in X and Z directions.

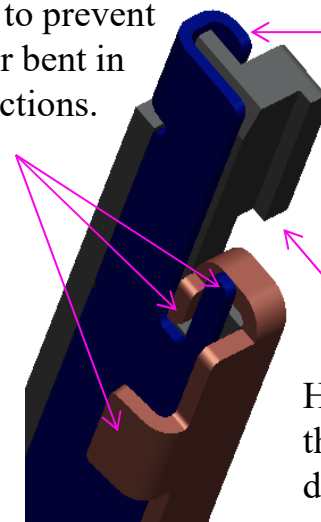
Metal plate to protect the plastic latch in Z direction.



HSG step to stop the module in Y direction.

Metal hooks to prevent the latch over bent in X and Z directions.

Metal plate hold the latch to prevent it broken in Z direction.



HSG step to hold the card in Y direction.



## PART NUMBERS & STRUCTURE

### DDR SO DIMM Metal Latch

#### DDR4 Metal Latch P/N Description:

567U\*\* - 00\*H

RoHS code:

H: Halogen free

Plating code:

1: AuGF

2: Au5u”

3: Au10u”

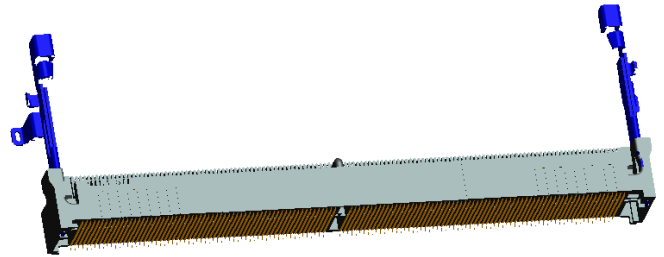
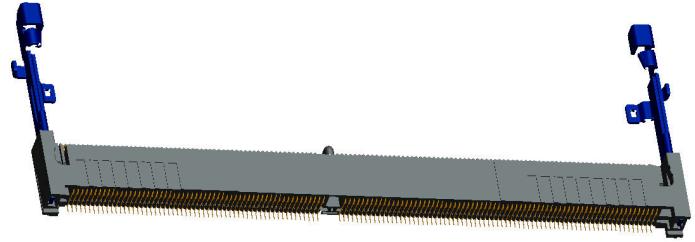
4: Au15u”

5: Au 30u”

Product Type:

10: 4.0H STD

11: 4.0H RVS



**Metal Latch Structure**

#### DDR5 Metal Latch P/N Description:

567YD2 - 0 0 \* H \* \* \* \* R

Packing code:

R: Tape & Reel

Logo code:

0: No Logo

1: Deren Logo

Housing Color:

0: Black

1: White

Key code:

S: Standard type

R: Reverse type

Plating code:

1: AuGF

2: Au5u”

3: Au10u”

4: Au15u”

5: Au 30u”

RoHS code:

H: Halogen free

Product Height:

1: 4.0H

2: 5.2H

3: 8.0H

4: 9.2H

