

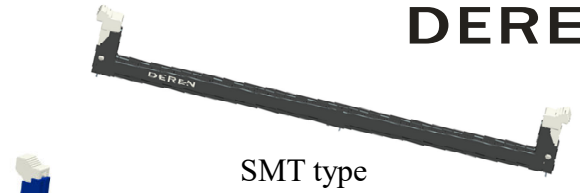
# CARD EDGE PRODUCT FAMILY

## DDR DIMM

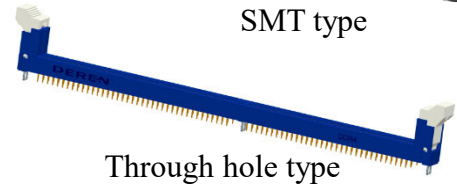


DEREN

DDR is the acronym used for “Double Data Rate”. The data is transferred on both the leading and lagging edges of the clock signals, effectively doubling the rate of data. The required voltage is gradually reduced in every next generation technology, in order to deal with increasing power consumption of memory intensive applications. DDR 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. Before DDR4, the through hole type of connector is the mainstream. But situation will be changed after DDR5. The signaling scalability requires surface mount (SMT) type, not only to reduce the crosstalk of connector itself, but also to reduce the crosstalk of transmission lines on motherboard (MB). The housing bodies of our SMT DDR 4&5 are more narrow than of other competitors, which means in the high density application fields, our connectors would have much better thermal efficiency. Furthermore, in some high reliability application fields, we can support double contact beam DDR5 connectors.



SMT type



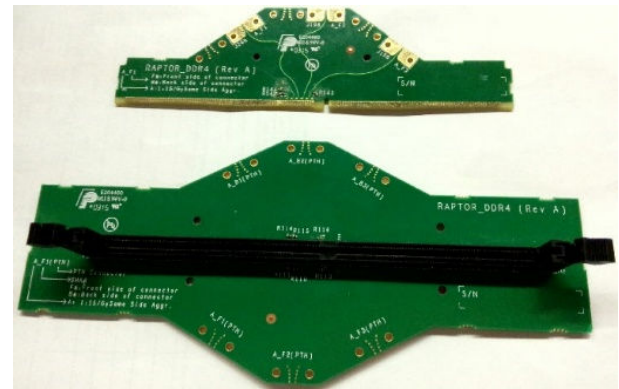
Through hole type



Standard latch



Narrow latch



- More narrow housing body design on SMT type connectors to achieve better thermal efficiency
- Narrow latch design provides good air-flow performance
- Support diverse latch designs to meet customer different application fields
- Support double contact beam DDR5 for customer high reliability application.
- DDR DIMM product family is offering industrial standard packaging options, including soft tray and hard tray

## FEATURE

- Data rate transfer up to 6.4GT/s
- Single end signaling with 50Ω nominal impedance
- Step and ramp feature on module seating plane
- Small ribs design between adjacent pin holes
- Auto lock latch design

## TARGET MARKET

- Desktop computer
- Server
- General memory expansion application

## BENEFIT

- Meets JEDEC Spec
- Minimizes impedance discontinuities
- Lower insertion force
- Isolate contacts to prevent electrical short cut
- Easy for module installation



## TECHNICAL INFORMATION

### SIGNAL INTEGRITY PERFORMANCE

### MECHANICAL PERFORMANCE

- Insertion force (module to connector): 106.8N max
- Terminal retention force: 300gf min.
- Durability: 25cycles.

### ELECTRICAL PERFORMANCE

- Low level contact resistance: 10mΩ initial, Δ10mΩ
- Insulation resistance: 1MΩ min.
- Dielectric withstanding voltage: 250VAC.
- Current rating: 0.75A/pin De-rate

### ENVIRONMENTAL

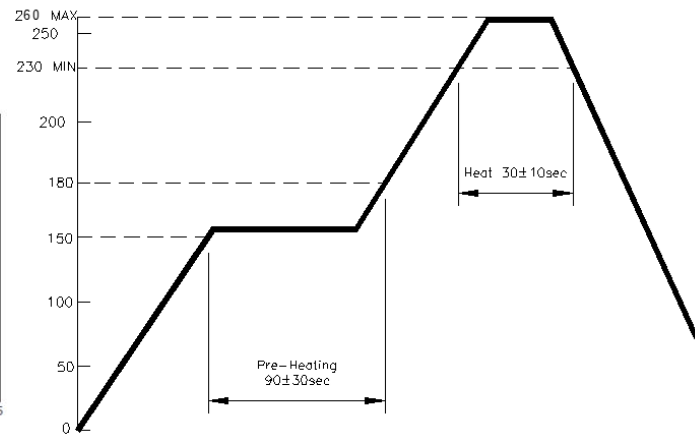
- Flammability: UL 94 V-0
- Low halogen: 1000ppm max. Cl, 1000ppm max Br.
- Compliant with RoHS directive 2011/65/EU
- Operating Temperature: -55° C to +85° C

### SPECIFICATION

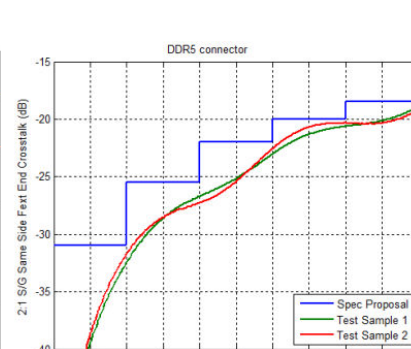
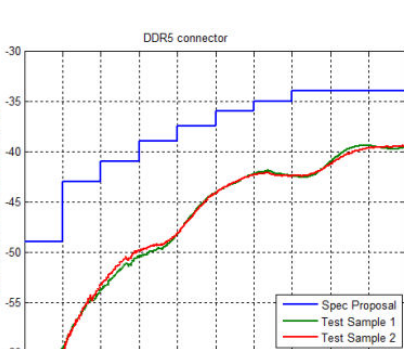
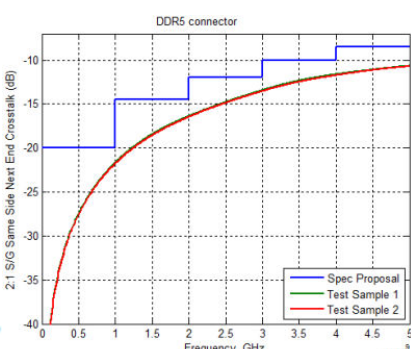
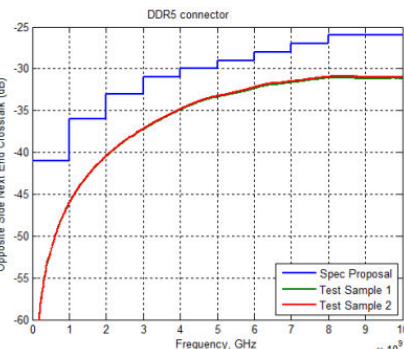
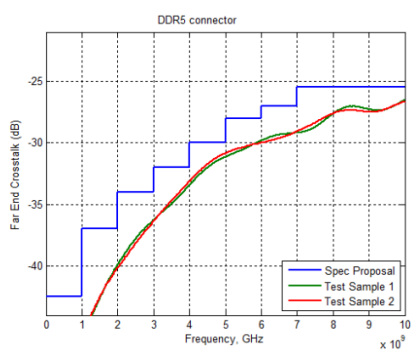
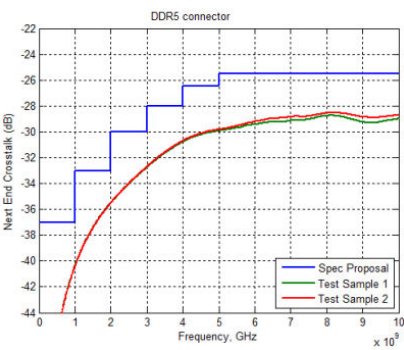
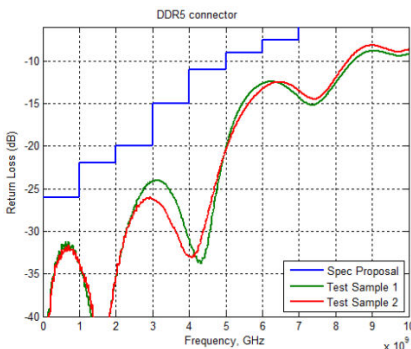
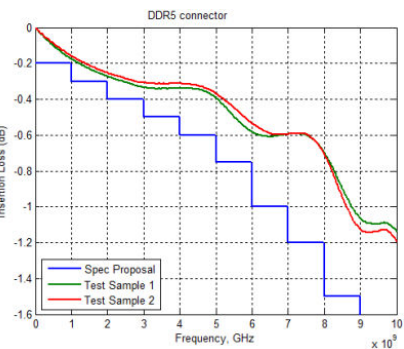
- JEDEC SPEC:  
DDR4 288pin: SO-016 (DIP), SO-018(SMT) / MO-309 (Module)  
DDR5 288pin: SO-023 / MO-369
- DEREN PRODUCT SPEC:  
DDR4: DR-PS-0046  
DDR5: DR-PS-0115

### APPLICATION SPEC

- Wave solder peak temperature: Max. 265° C , 10S
- Reflow temperature profile:



- Recommended SMT stencil thickness: 0.15mm



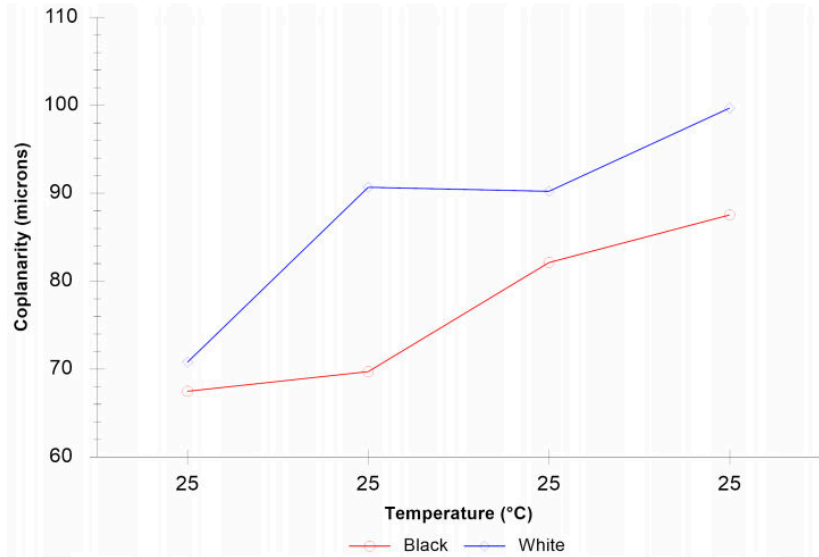
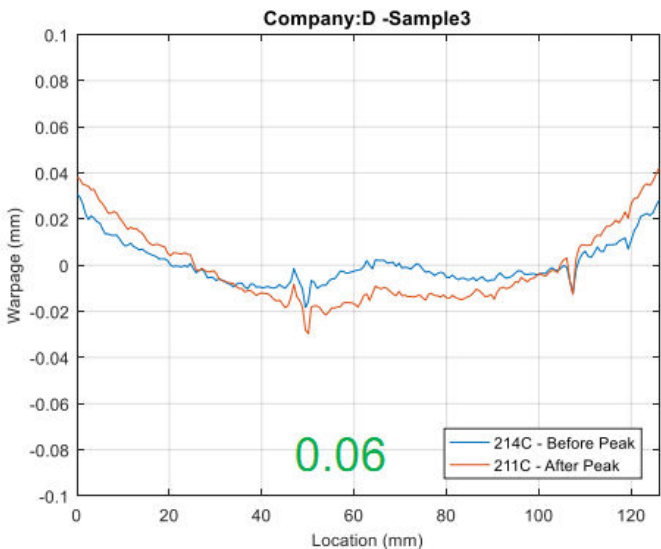
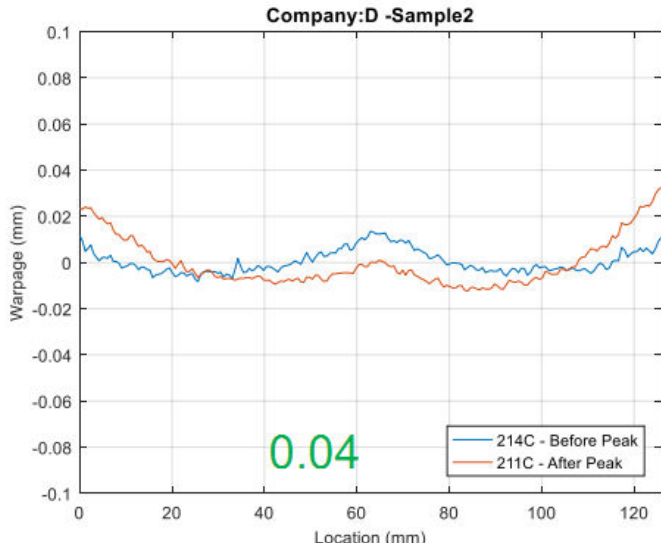
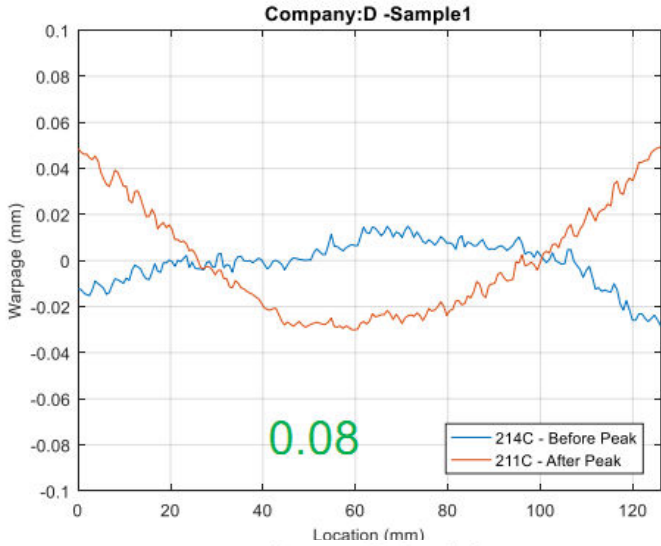


### TECHNICAL INFORMATION

#### High Temperature Warpage Performance of SMT Type

Pass JEDEC high temperature warpage evaluation  
(Company D = Deren)

Coplanarity measurement before and after reflow (3 times)



Results produced using the TherMoiré® Warpage Measurement System on December 20, 2019



Coplanarity (microns) vs Temperature

Temperature, °C	25	25	25	25
Black	67.4	69.7	82.1	87.5
White	70.8	90.7	90.2	99.7



## PART NUMBERS & STRUCTURE

### DDR4 288 DIP

#### Part Number Description:

For wave solder process:

40-42181-288\*\*\*\*THF

Series No.

RoHS code:

HF: Halogen free

Package code:

T: Soft tray

Logo code:

1: No logo 2: DEREN Logo

Plating code:

1: GF 2: Au15u"

3: Au20u" 4: Au30u"

Extractor color code:

1: Black 2: White 3: Blue

4: Green 5: Grey

Housing color code:

1: Black 2: White 3: Blue284C

4: Blue2935U 5: Green 6: 287C

7: Grey432U 8: Red186C

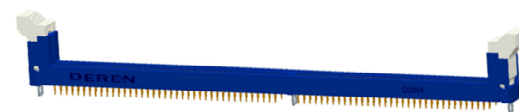
9: Green375C 0: Yeloo107C

Tail length: 0: 2.1 1: 2.4

2: 2.7 3: 3.1

Pin number code: 288 pins

Standard through hole type



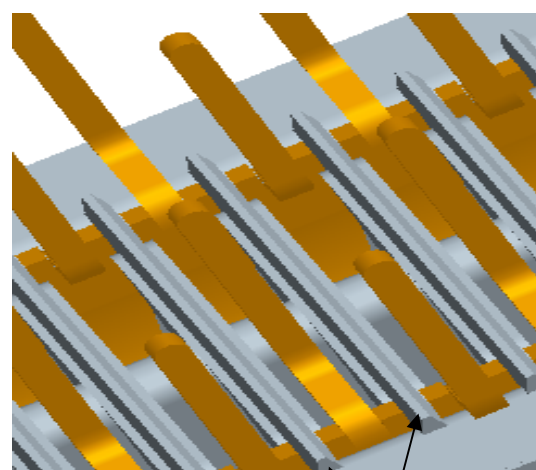
Small extractor through hole type



One extractor fixed through hole type



#### Product Structure :



Isolation rib

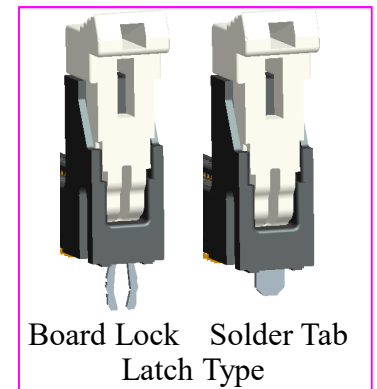
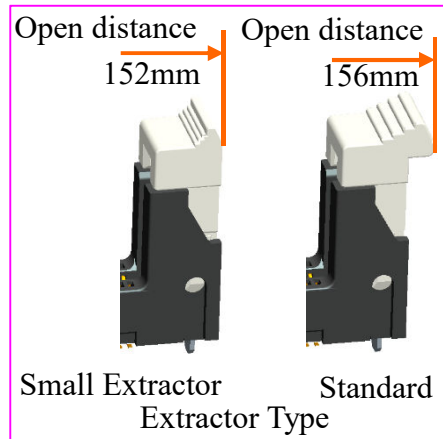
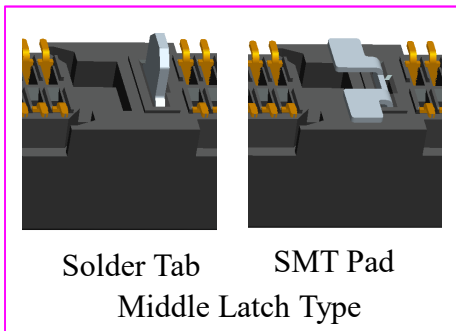
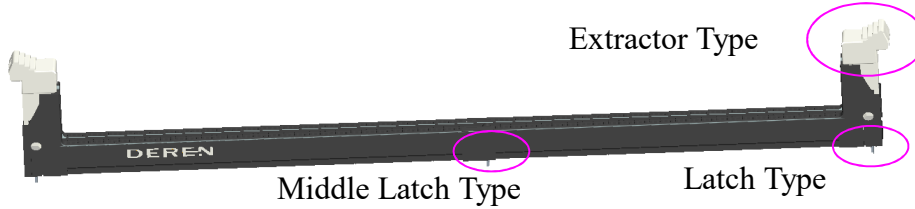
P/N Series No.	Pitch	Extractor open distance	Width	Height	Process	Q'ty/tray	Q'ty/Box	Remark
40-42181-	0.85	162.00	6.30	21	Wave solder	50/tray	500	Standard type
40-42344-	0.85	152.00	6.30	21	Wave solder	50/tray	500	Small latch
40-42448-	0.85	152.00	6.30	21	Wave solder	50/tray	500	One latch fixed
40-42287-	0.85	162.00	6.30	21	Reflow	50/tray	500	Standard type



## PART NUMBERS & STRUCTURE

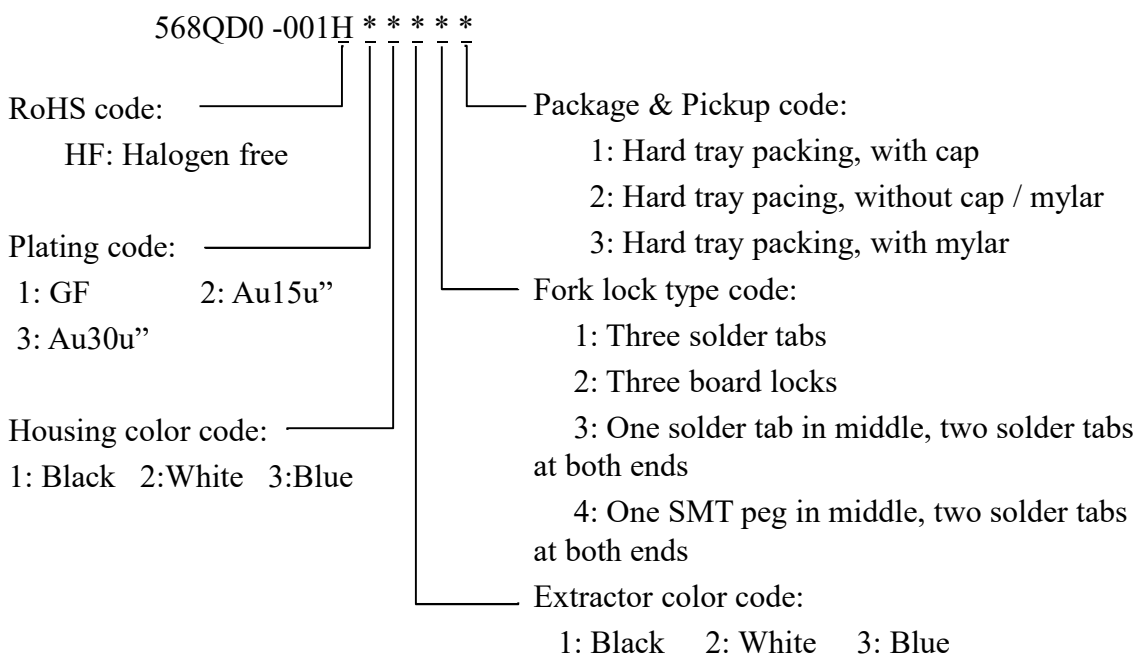
### DDR4 288P SMT

#### Product Structure (optional):



### DDR4 288 SMT

#### Part Number Description (new):





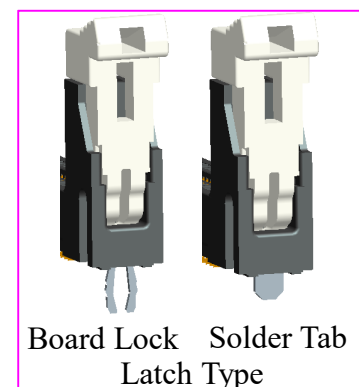
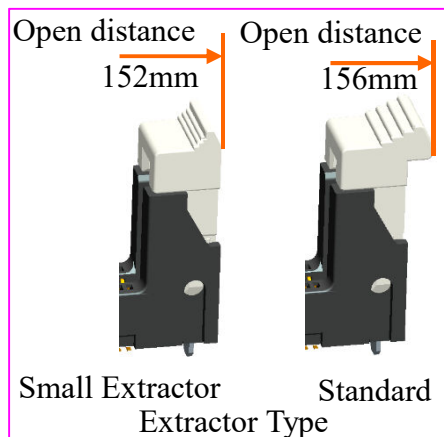
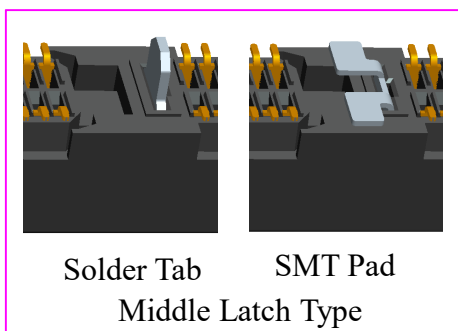
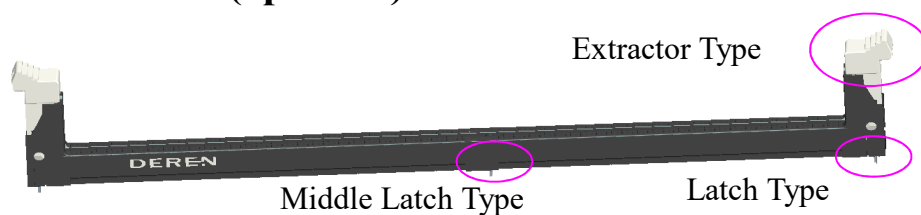
## PART NUMBERS & STRUCTURE

### DDR 4 288 SMT

#### Part Number Description (old part number):

P/N Base code	Gen	Pitch	Extractor Type	Both End Latch Type	Middle Latch Type	Pickup Cap	Extractor Open Distance	W	H	Q'ty /tray	Q'ty /Box	Remark
568Q07-	DDR4	0.85	Standard type	Solder tab	Solder tab	With	156	6	20.6	32	320	Recommended
568Q08-	DDR4	0.85	Small extractor	Solder tab	Solder tab	With	152	6	20.6	32	320	Common
568Q10-	DDR4	0.85	Small extractor	Solder tab	SMT pad	With	152	6	20.6	32	320	Common
568Q11-	DDR4	0.85	Standard type	Solder tab	None	With	156	6	20.6	32	320	
568Q12-	DDR4	0.85	Standard type	Solder tab	Board lock	With	156	6	20.6	32	320	
568Q13-	DDR4	0.85	Standard type	Solder tab	SMT pad	With	156	6	20.6	32	320	Common
568Q14-	DDR4	0.85	Standard type	Solder tab	SMT pad	None	156	6	20.6	32	320	Common
568Q15-	DDR4	0.85	Small extractor	Solder tab	SMT pad	None	152	6	20.6	32	320	Common
568Q16-	DDR4	0.85	Standard type	Solder tab	Solder tab	None	156	6	20.6	32	320	Recommended
568Q17-	DDR4	0.85	Small extractor	Solder tab	Solder tab	None	152	6	20.6	32	320	Common
568Q18-	DDR4	0.85	Small extractor	Solder tab	Solder tab	With	152	6	20.6	32	320	No Logo
568Q21-	DDR4	0.85	Standard type	Solder tab	Board lock	None	156	6	20.6	32	320	

#### Product Structure (optional):



# CARD EDGE PRODUCT FAMILY

## DDR DIMM



**DEREN**

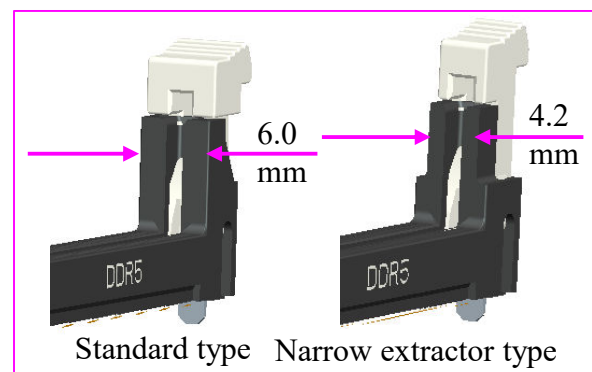
### PART NUMBERS & STRUCTURE

#### DDR5 288 SMT TYPE:

#### Product Structure (optional):

Extractor Type

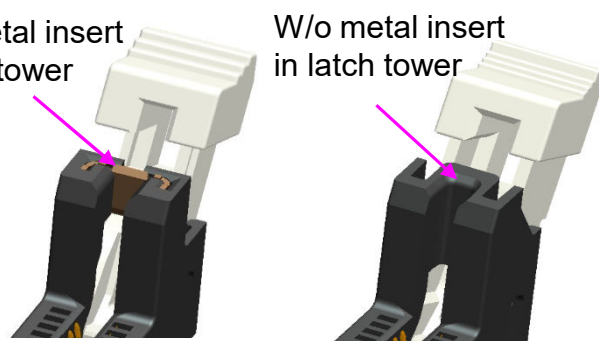
Latch Type



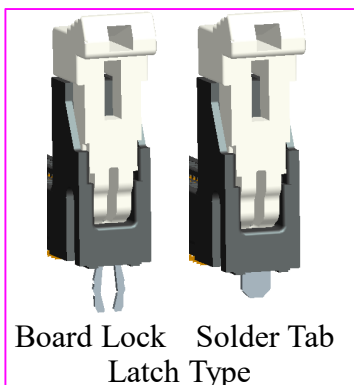
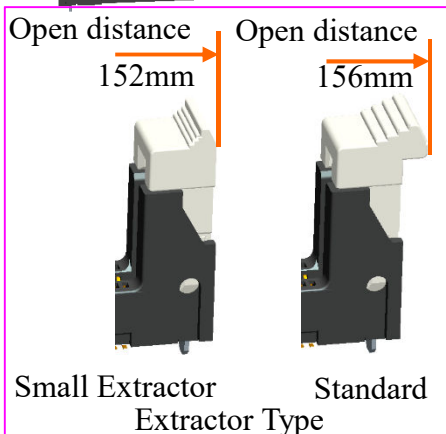
Standard type    Narrow extractor type

With metal insert  
in latch tower

W/o metal insert  
in latch tower



**Latch Tower Metal Plate Options**



#### Part Number Description:

568QD1-001H\*\*\*\*  
Series No.

RoHS code: \_\_\_\_\_

HF: Halogen free

Plating code: \_\_\_\_\_

1: GF

2: Au15u"

3: Au30u"

Housing color code: \_\_\_\_\_

1: Black

2: White

3: Blue

Package & Pickup code:

1: Hard tray packing, with cap

2: Hard tray packing, without cap / mylar

3: Hard tray packing, with mylar

Fork lock & DIMM type code:

1: Solder tab DIM. H=2.0mm, RDIMM

2: Board lock DIM. H=3.25mm, RDIMM

3: Solder tab DIM. H=2.0mm, UDIMM

4: Board lock DIM. H=3.25mm, UDIMM

5: Solder tab DIM. H=2.6mm, RDIMM

6: Solder tab DIM. H=2.6mm, UDIMM

Extractor color code: 1: Black 2: White 3: Blue

P/N Series No.	Pitch	Extractor open distance	Width	Height	Process	Q'ty /tray	Q'ty /Box	Remark
568QD1-001H*	0.85	156.0	6.0	20.6	SMT	32/tray	320	Big Extractor
568QD1-002H*	0.85	152.0	6.0	20.6	SMT	32/tray	320	Small Extractor
568QD1-003H*	0.85	156.0	6.0	20.6	SMT	32/tray	320	Big Extractor with metal plate
568QD1-004H*	0.85	152.0	6.0	20.6	SMT	32/tray	320	Big Extractor with metal plate
568QD1-005H*	0.85	162.0	6.0	20.6	SMT	32/tray	320	Narrow Extractor

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