

PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION

**Part Number:** [0533092070](#)  
**Status:** **Active**  
**Description:** 0.80mm (.031") Pitch Board-to-Board Header, Surface Mount, Dual Row, Right Angle, Lead-free, 20 Circuits

**Documents:**  
[3D Model](#)  
[Drawing \(PDF\)](#)  
[Product Specification PS-52465-014 \(PDF\)](#)  
[Product Specification PS-52588-031 \(PDF\)](#)  
[Product Specification PS-52588-032 \(PDF\)](#)  
[RoHS Certificate of Compliance \(PDF\)](#)

**General**

|                |                       |
|----------------|-----------------------|
| Product Family | PCB Headers           |
| Series         | <a href="#">53309</a> |
| Application    | Board-to-Board        |
| Product Name   | N/A                   |

**Physical**

|                                |                                |
|--------------------------------|--------------------------------|
| Breakaway                      | No                             |
| Circuits (Loaded)              | 20                             |
| Circuits (maximum)             | 20                             |
| Color - Resin                  | Natural                        |
| Durability (mating cycles max) | 30                             |
| First Mate / Last Break        | No                             |
| Glow-Wire Compliant            | No                             |
| Guide to Mating Part           | No                             |
| Keying to Mating Part          | None                           |
| Lock to Mating Part            | Yes                            |
| Mated Height (in)              | 0.222 In, 0.262 In             |
| Mated Height (mm)              | 5.65 mm, 6.65 mm               |
| Material - Metal               | Phosphor Bronze                |
| Material - Plating Mating      | Tin                            |
| Material - Plating Termination | Tin                            |
| Material - Resin               | High Temperature Thermoplastic |
| Number of Rows                 | 2                              |
| Orientation                    | Right Angle                    |
| PC Tail Length (in)            | 0.016 In, 0.020 In             |
| PC Tail Length (mm)            | 0.40 mm, 0.50 mm               |
| PCB Locator                    | No                             |
| PCB Retention                  | None                           |
| Packaging Type                 | Embossed Tape on Reel          |
| Pitch - Mating Interface (in)  | 0.031 In                       |
| Pitch - Mating Interface (mm)  | 0.80 mm                        |
| Plating min: Mating (µin)      | 40                             |
| Plating min: Mating (µm)       | 1                              |
| Plating min: Termination (µin) | 40                             |
| Plating min: Termination (µm)  | 1                              |
| Polarized to PCB               | No                             |
| Shrouded                       | Fully                          |
| Stackable                      | No                             |
| Temperature Range - Operating  | -20°C to +105°C                |
| Termination Interface: Style   | Surface Mount                  |

**Electrical**

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 0.5A |
| Voltage - Maximum             | 50V  |

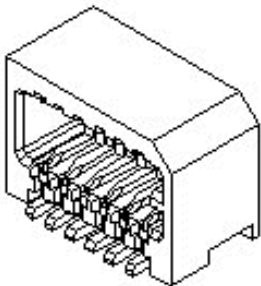


image - Reference only

Series

**EU RoHS**

**ELV and RoHS  
Compliant**

**REACH SVHC**

Not Reviewed

**Halogen-Free**

**Status**

**Not Reviewed**

**China RoHS**



**Need more information on product  
environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
For a multiple part number RoHS Certificate of  
Compliance, [click here](#)

Please visit the [Contact Us](#) section for any  
non-product compliance questions.

**Search Parts in this Series**

[53309Series](#)

**Mates With**

Board-to-Board Receptacle [52465](#) , [52588](#)

**Material Info**

**Reference - Drawing Numbers**

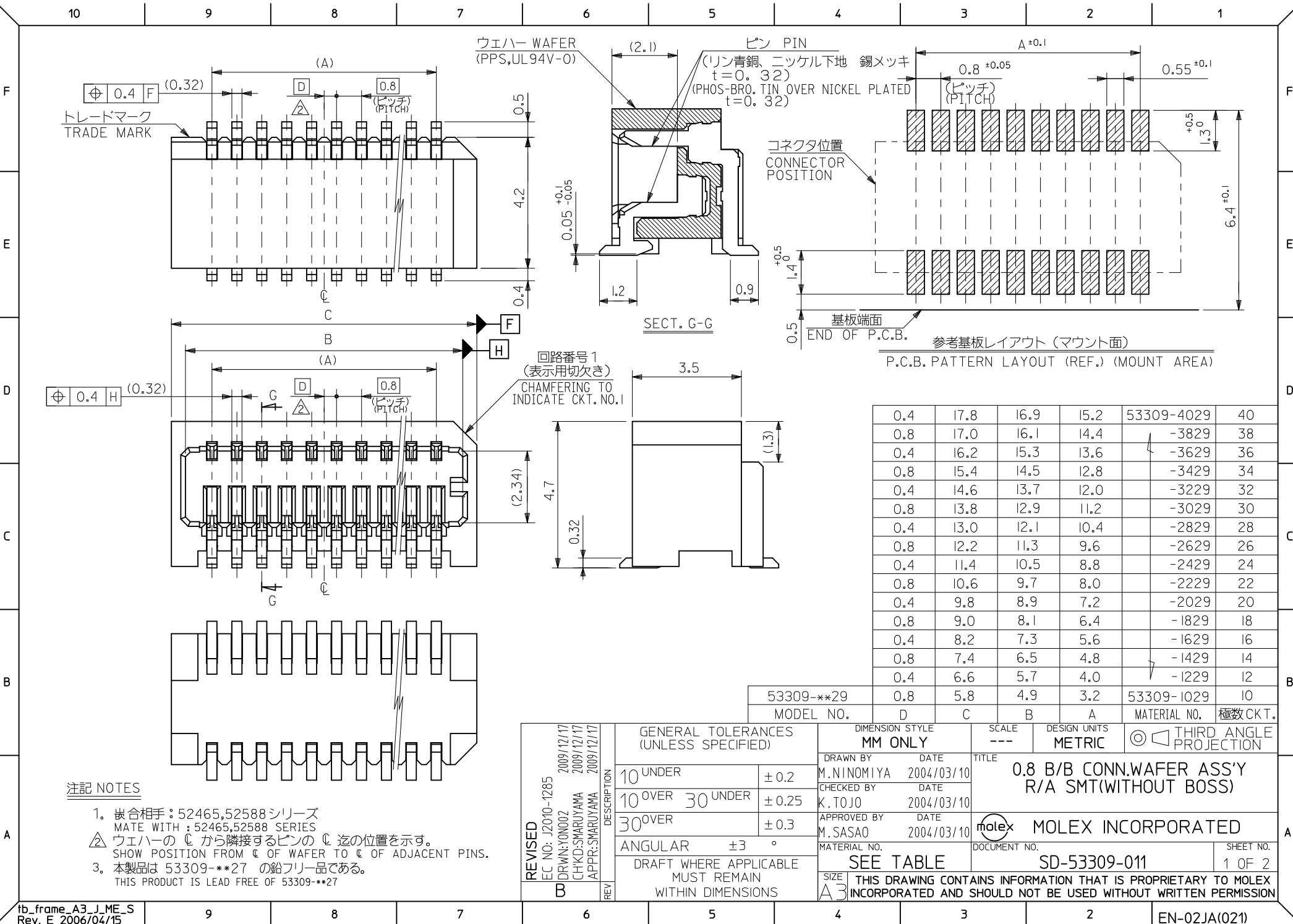
Product Specification

PS-52465-014, PS-52588-031, PS-52588-032,  
RPS-52465-042, RPS-52465-047, RPS-52465-049,  
RPS-52588-039, RPS-52588-040, RPS-52588-041  
SD-53309-011, SD-53309-012

Sales Drawing

This document was generated on 04/16/2010

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注記 NOTES

1. 嵌合相手: 52465,52588 シリーズ  
MATE WITH : 52465,52588 SERIES
2. ウエハーの ② から隣接するピン の ② 迄の位置を示す。  
SHOW POSITION FROM ② OF WAFER TO ② OF ADJACENT PINS.
3. 本製品は 53309-\*\*27 の鉛フリー品である。  
THIS PRODUCT IS LEAD FREE OF 53309-\*\*27

|     |      |      |      |            |    |
|-----|------|------|------|------------|----|
| 0.4 | 17.8 | 16.9 | 15.2 | 53309-4029 | 40 |
| 0.8 | 17.0 | 16.1 | 14.4 | -3829      | 38 |
| 0.4 | 16.2 | 15.3 | 13.6 | -3629      | 36 |
| 0.8 | 15.4 | 14.5 | 12.8 | -3429      | 34 |
| 0.4 | 14.6 | 13.7 | 12.0 | -3229      | 32 |
| 0.8 | 13.8 | 12.9 | 11.2 | -3029      | 30 |
| 0.4 | 13.0 | 12.1 | 10.4 | -2829      | 28 |
| 0.8 | 12.2 | 11.3 | 9.6  | -2629      | 26 |
| 0.4 | 11.4 | 10.5 | 8.8  | -2429      | 24 |
| 0.8 | 10.6 | 9.7  | 8.0  | -2229      | 22 |
| 0.4 | 9.8  | 8.9  | 7.2  | -2029      | 20 |
| 0.8 | 9.0  | 8.1  | 6.4  | -1829      | 18 |
| 0.4 | 8.2  | 7.3  | 5.6  | -1629      | 16 |
| 0.8 | 7.4  | 6.5  | 4.8  | -1429      | 14 |
| 0.4 | 6.6  | 5.7  | 4.0  | -1229      | 12 |
| 0.8 | 5.8  | 4.9  | 3.2  | 53309-1029 | 10 |

|                   |  |                                                      |  |                 |  |                                                                                                                               |  |                       |  |                          |  |
|-------------------|--|------------------------------------------------------|--|-----------------|--|-------------------------------------------------------------------------------------------------------------------------------|--|-----------------------|--|--------------------------|--|
| REVISED           |  | GENERAL TOLERANCES (UNLESS SPECIFIED)                |  | DIMENSION STYLE |  | SCALE                                                                                                                         |  | DESIGN UNITS          |  | THIRD ANGLE PROJECTION   |  |
| EC NO: J2010-1285 |  | 10 UNDER                                             |  | MM ONLY         |  | ---                                                                                                                           |  | METRIC                |  | ②                        |  |
| DRWN: YON002      |  | 10 OVER 30 UNDER                                     |  | DRAWN BY        |  | DATE                                                                                                                          |  | TITLE                 |  | 0.8 B/B CONN.WAFER ASS'Y |  |
| CHKD: SMARUYAMA   |  | 30 OVER                                              |  | CHECKED BY      |  | DATE                                                                                                                          |  | R/A SMT(WITHOUT BOSS) |  | MOLEX INCORPORATED       |  |
| APPR: SMARUYAMA   |  | ANGULAR ±3 °                                         |  | APPROVED BY     |  | DATE                                                                                                                          |  | DOCUMENT NO.          |  | SD-53309-011             |  |
| REV               |  | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |  | MATERIAL NO.    |  | DATE                                                                                                                          |  | SHEET NO.             |  | 1 OF 2                   |  |
| B                 |  | SIZE A3                                              |  | SEE TABLE       |  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |                       |  |                          |  |

10 9 8 7 6 5 4 3 2 1

F

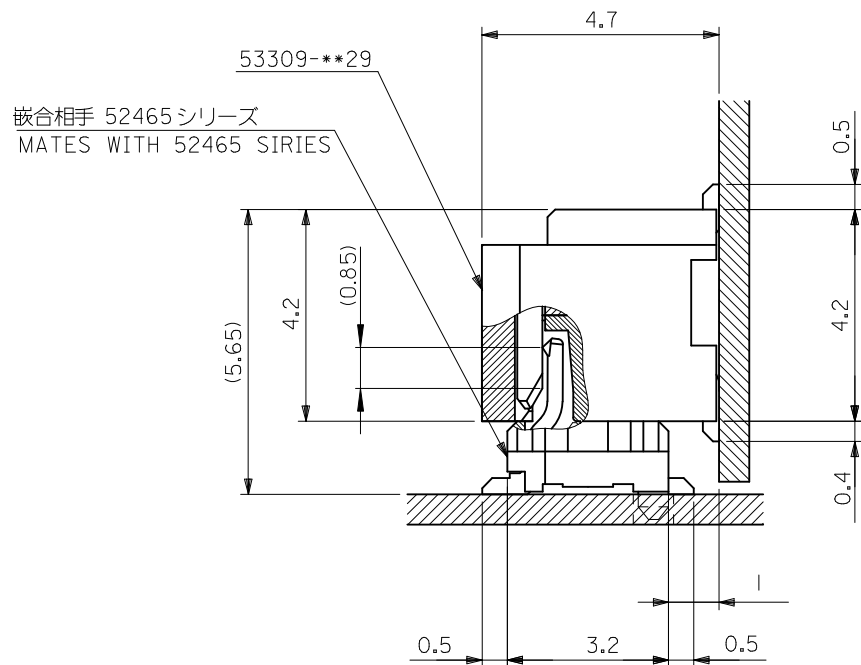
E

D

C

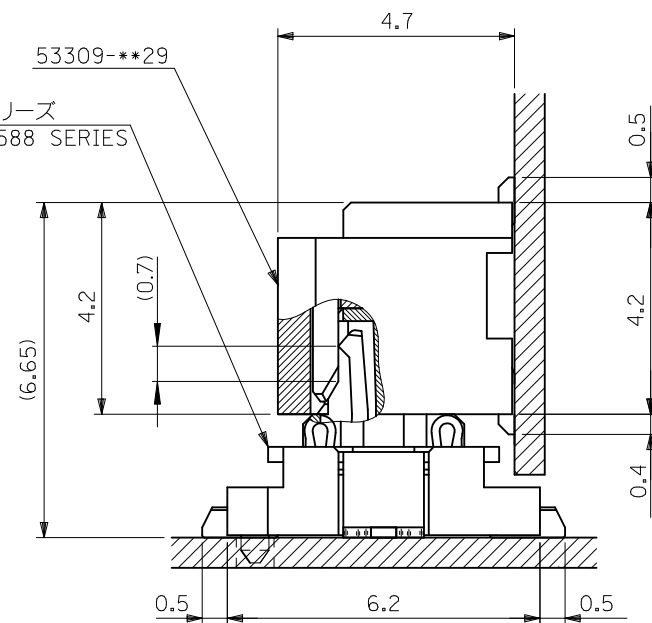
B

A



嵌合相手 52465 シリーズ  
MATES WITH 52465 SERIES

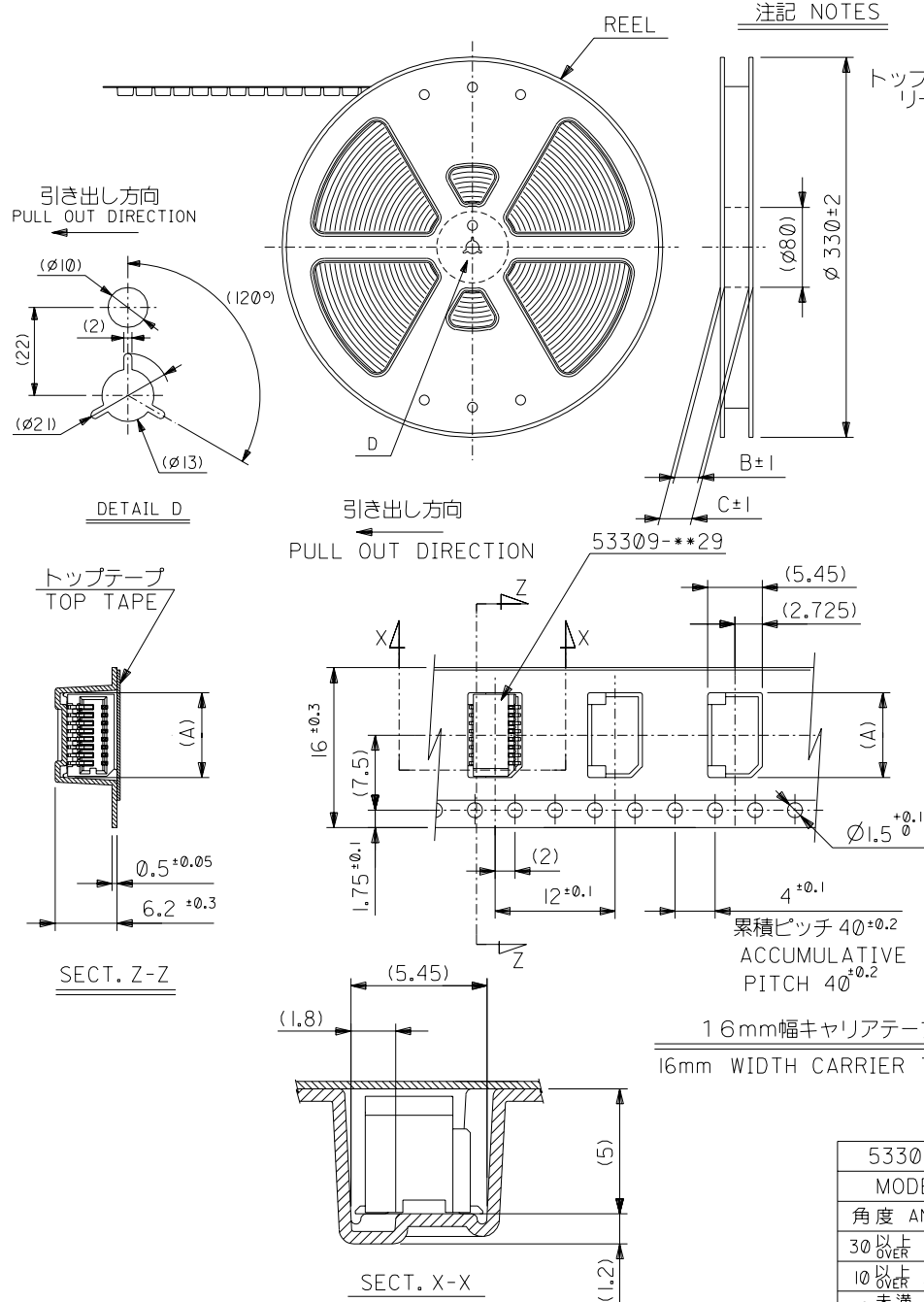
嵌合状態図 (参考)  
MATED DRAWING(REF.)



嵌合相手 52588 シリーズ  
MATES WITH 52588 SERIES

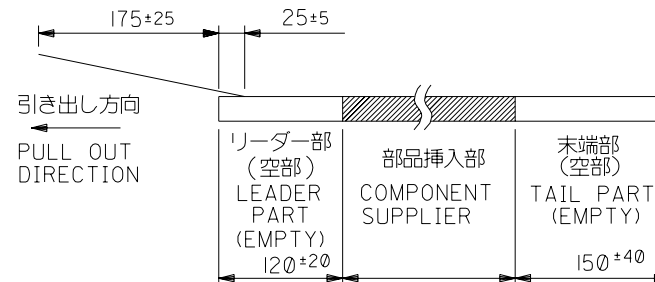
嵌合状態図 (参考)  
MATED DRAWING(REF.)

|                                                                                 |             |                                                            |                                                                                                                                  |                            |                    |                                                            |                        |                                                                                                                 |
|---------------------------------------------------------------------------------|-------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------------|------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|
| REVISED<br>EC NO: J2010-1285<br>DRWN:YON002<br>CHKD:SMARUYAMA<br>APPR:SMARUYAMA | DESCRIPTION | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |                                                                                                                                  | DIMENSION STYLE<br>MM ONLY |                    | SCALE<br>---                                               | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |
|                                                                                 |             | 10 UNDER                                                   | ± 0.2                                                                                                                            | DRAWN BY<br>M.NINOMIYA     | DATE<br>2004/03/10 | TITLE<br>0.8 B/B CONN.WAFER ASS'Y<br>R/A SMT(WITHOUT BOSS) |                        |                                                                                                                 |
|                                                                                 |             | 10 OVER 30 UNDER                                           | ± 0.25                                                                                                                           | CHECKED BY<br>K. TOJO      | DATE<br>2004/03/10 |                                                            |                        |                                                                                                                 |
|                                                                                 |             | 30 OVER                                                    | ± 0.3                                                                                                                            | APPROVED BY<br>M. SASAO    | DATE<br>2004/03/10 |                                                            |                        |                                                                                                                 |
|                                                                                 |             | ANGULAR ±3 °                                               |                                                                                                                                  | MATERIAL NO.               |                    | DOCUMENT NO.                                               | SHEET NO.              |                                                                                                                 |
|                                                                                 |             | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |                                                                                                                                  | SEE SHEET 1                |                    | SD-53309-011                                               |                        |                                                                                                                 |
|                                                                                 | B           | REV                                                        | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                            |                    |                                                            |                        |                                                                                                                 |



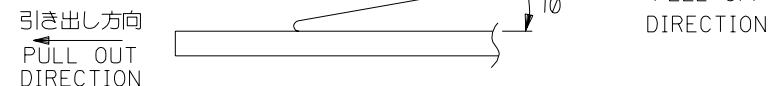
## 注記 NOTES

1. 梱包数量：1000個/リール NUMBER OF CONNECTORS:1000PCS/REEL
2. リードテープ長さ LEAD TAPE LENGTH
- トップテープ TOP TAPE  
リーダー部 LEADER PART  
未接着部 NON-BONDED PART



3. トップテープの剥離強度：(剥離方向は下図参照)  
0.1N $\sim$ 1.3N(10gf $\sim$ 130gf) 尚、本規格値は、出荷時に適用。  
(但し、輸送時に剥離が発生しない事。)

PEELING OFF FORCE OF TOP TAPE  
0.1N $\sim$ 1.3N(10gf $\sim$ 130gf) (PEELING DIRECTION AS SHOWN IN FOLLOWING FIG.)  
THIS REQUIREMENT SHOULD BE APPLIED AT SHIPMENT  
PEEL OFF SHOULD NOT BE ALLOWED,  
DURING TRANSPORTATION



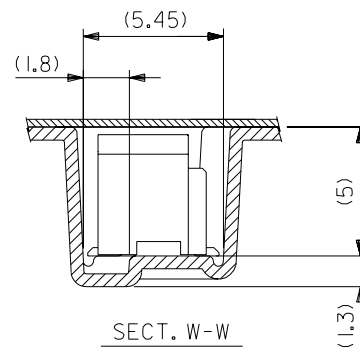
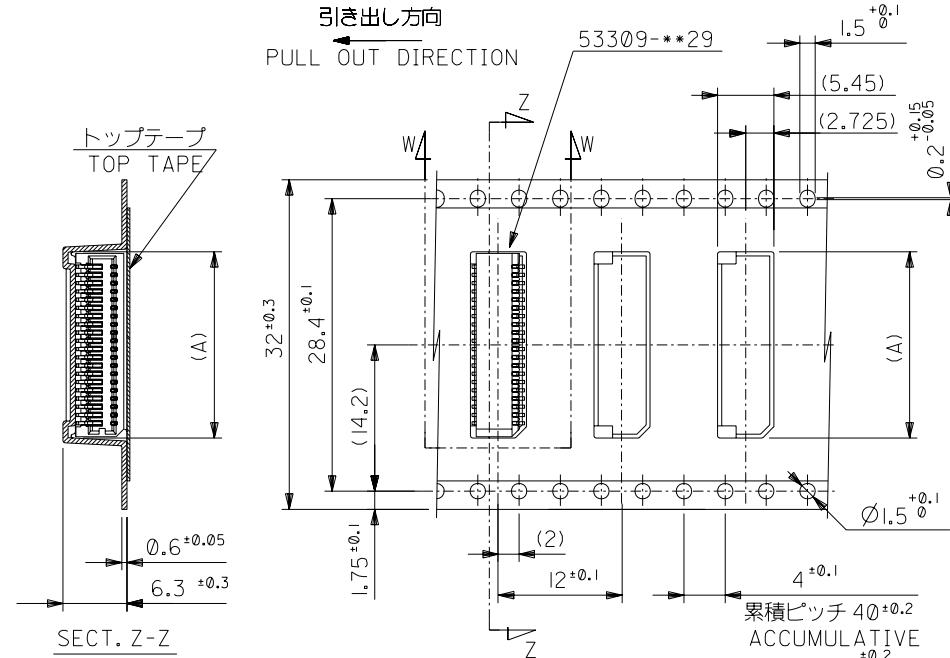
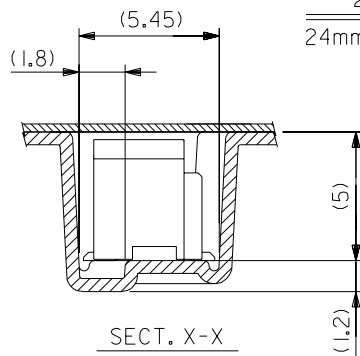
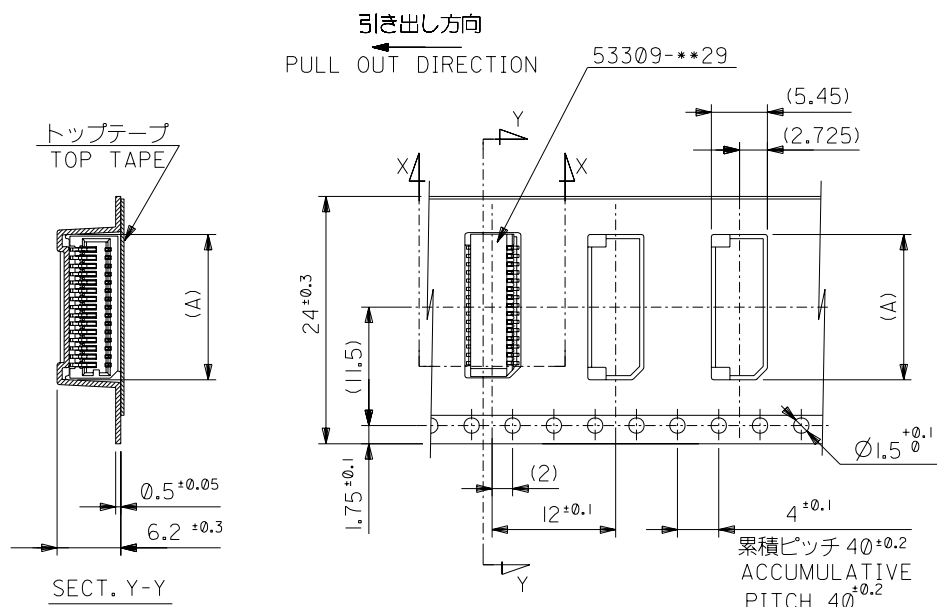
4. 材料  
キャリアテープ：ポリプロピレン (PP)  
トップテープ：PET, PE, PEF  
リール：ポリスチレン (PS)  
MATERIAL  
<リサイクル材を含む>

CARRIER TAPE:POLYPROPYLENE  
TOP TAPE:PET,PE,PEF  
REEL:POLYSTYRENE(PS)  
<RECYCLE MATERIAL CONTAINED>

5. 本製品は 53309-\*\*91 の鉛フリー品である。  
THIS PRODUCT IS LEAD FREE OF 53309-\*\*91.

|                                |      |      |     |              |               |
|--------------------------------|------|------|-----|--------------|---------------|
| 16                             | 21.4 | 17.4 | 9.3 | 53309-1870   | 18            |
|                                |      |      | 8.5 | 53309-1670   | 16            |
|                                |      |      | 7.7 | 53309-1470   | 14            |
|                                |      |      | 6.9 | 53309-1270   | 12            |
|                                |      |      | 6.1 | 53309-1070   | 10            |
| キャリアテープ幅<br>CARRIER TAPE WIDTH | C    | B    | (A) | MATERIAL NO. | 極数<br>CIRCUIT |

|                            |  |                                 |  |                             |  |                                           |  |
|----------------------------|--|---------------------------------|--|-----------------------------|--|-------------------------------------------|--|
| 53309-**70                 |  | 材料<br>MATERIAL                  |  | 注記参照<br>SEE NOTES           |  | molex MOLEX-JAPAN CO.,LTD.<br>日本モレックス株式会社 |  |
| MODEL NO.                  |  | 仕上げ<br>FINISH                   |  | —                           |  | REVISE ONLY ON CAD SYSTEM                 |  |
| 角度 ANGLE                   |  | 適用電線範囲<br>WIRE RANGE            |  | —                           |  | TITLE 名称<br>0.8 BtB Conn Wafer Assy       |  |
| 30 以上<br>OVER              |  | 被覆外径<br>INS. RANGE              |  | —                           |  | RA SMT Without Boss                       |  |
| 10 以上 30 未満<br>OVER UNDER  |  | DRAWN BY 04/03/10<br>M.NINOMIYA |  | CHK'D BY 04/03/10<br>K.TOJO |  | Embstp Pkg                                |  |
| 10 未満<br>UNDER             |  | DR. 04/03/10<br>M.SASAO         |  | DATE                        |  | -LEAD FREE-                               |  |
| 一般公差<br>GENERAL TOLERANCES |  | 記号<br>LTR                       |  | 変更内容<br>REVISION RECORD     |  | APP'D BY 04/03/10<br>M.SASAO              |  |
|                            |  | DR. CHK.                        |  | DATE                        |  | 尺度<br>SCALE                               |  |
|                            |  |                                 |  |                             |  | DWG. NO. (SHEET 1 OF 2)                   |  |
|                            |  |                                 |  |                             |  | SD-53309-012                              |  |
|                            |  |                                 |  |                             |  | REV                                       |  |
|                            |  |                                 |  |                             |  | 0                                         |  |



|                                |      |      |      |              |               |
|--------------------------------|------|------|------|--------------|---------------|
| 32                             | 37.4 | 33.4 | 18.1 | 53309-4070   | 40            |
|                                |      |      | 17.3 | 53309-3870   | 38            |
| キャリアテープ幅<br>CARRIER TAPE WIDTH | C    | B    | (A)  | MATERIAL NO. | 極数<br>CIRCUIT |

|                                |      |      |      |              |               |
|--------------------------------|------|------|------|--------------|---------------|
| 24                             | 29.4 | 25.4 | 16.5 | 53309-3670   | 36            |
|                                |      |      | 15.7 | 53309-3470   | 34            |
|                                |      |      | 14.9 | 53309-3270   | 32            |
|                                |      |      | 14.1 | 53309-3070   | 30            |
|                                |      |      | 13.3 | 53309-2870   | 28            |
|                                |      |      | 12.5 | 53309-2670   | 26            |
|                                |      |      | 11.7 | 53309-2470   | 24            |
|                                |      |      | 10.9 | 53309-2270   | 22            |
| キャリアテープ幅<br>CARRIER TAPE WIDTH | C    | B    | 10.1 | 53309-2070   | 20            |
|                                |      |      | (A)  | MATERIAL NO. | 極数<br>CIRCUIT |

|                                 |  |          |                               |           |            |                                         |                                                                                    |  |
|---------------------------------|--|----------|-------------------------------|-----------|------------|-----------------------------------------|------------------------------------------------------------------------------------|--|
|                                 |  |          |                               |           |            | 材料<br>MATERIAL                          | molex MOLEX-JAPAN CO.,LTD.<br>日本モレックス株式会社                                          |  |
| 53309-***70                     |  |          |                               |           |            | SHEET 1 OF 2参照<br>REFER TO SHEET 1 OF 2 |                                                                                    |  |
| MODEL NO.                       |  |          |                               |           |            | 仕上げ<br>FINISH                           | REVISE ONLY ON CAD SYSTEM                                                          |  |
| 角度 ANGLE ±3°                    |  |          |                               |           |            | 適用電線範囲<br>WIRE RANGE                    | TITLE 名称<br>0.8 BtB Wafer Assy<br>RA SMT Without Boss<br>Embstp Pkg<br>-LEAD FREE- |  |
| 30 以上<br>OVER ±0.3              |  |          |                               |           |            | 被覆外径<br>INS. RANGE                      | DRAWN BY '04/03/10<br>M.NINOMIYA                                                   |  |
| 10 以上 30 未満<br>OVER UNDER ±0.25 |  |          |                               |           |            |                                         | CHK'D BY '04/03/10<br>K.TOJO                                                       |  |
| 10 未満<br>UNDER ±0.2             |  | 0        | 新規作成<br>RELEASED (J2004-2995) | M.N.K.T   | 04/03/10   | APPD BY '04/03/10<br>M.SASAO            | DWG. NO. (SHEET 2 OF 2) REV                                                        |  |
| GENERAL 般公差<br>TOLERANCES       |  | 記号<br>TR | 変更内容<br>REVISION RECORD       | DR<br>CHK | 日付<br>DATE | 尺度<br>SCALE                             | SD-53309-012 0                                                                     |  |