

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [5019514510](#)  
**Status:** **Active**  
**Description:** 0.50mm (.020") Pitch Easy-On™ FFC/FPC Connector, Vertical, SMT, Gold Plating, 45 Circuits

**Documents:**

[3D Model](#) [Product Specification PS-501951-002 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**General**

Product Family FFC/FPC Connectors  
 Series [501951](#)  
 Product Name Easy-On™

**Physical**

Circuits (Loaded) 45  
 Circuits (maximum) 45  
 Color - Resin Brown, Natural  
 Contact Position N/A  
 Durability (mating cycles max) 20  
 Entry Angle Vertical  
 Mated Height (in) 0.159 In  
 Mated Height (mm) 4.05 mm  
 Material - Metal Phosphor Bronze  
 Material - Plating Mating Gold  
 Material - Plating Termination Gold  
 Number of Rows 1  
 Orientation Vertical  
 PCB Locator No  
 PCB Retention Yes  
 Packaging Type Embossed Tape on Reel  
 Pitch - Mating Interface (in) 0.020 In  
 Pitch - Mating Interface (mm) 0.50 mm  
 Pitch - Term. Interface (in) 0.020 In  
 Pitch - Term. Interface (mm) 0.50 mm  
 Polarized to PCB No  
 Stackable No  
 Surface Mount Compatible (SMC) Yes  
 Temperature Range - Operating -25°C to +85°C  
 Termination Interface: Style Surface Mount  
 Wire/Cable Type FFC/FPC

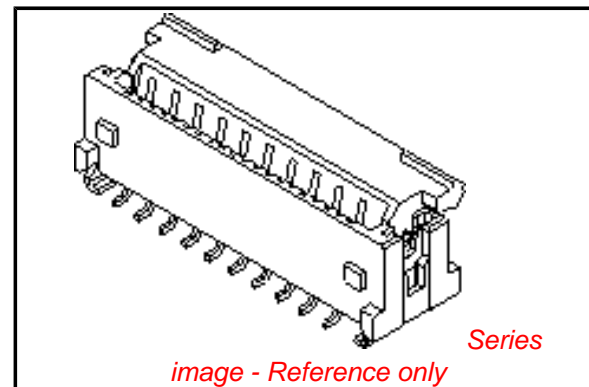
**Electrical**

Current - Maximum per Contact 0.4A  
 Voltage - Maximum 50V AC (RMS)/DC

**Material Info**

**Reference - Drawing Numbers**

Product Specification PS-501951-002, RPS-501951-001, RPS-501951-002, RPS-501951-003, RPS-501951-004, RPS-501951-005, RPS-501951-006, RPS-501951-007, RPS-501951-009, RPS-501951-015  
 Sales Drawing SD-501951-003, SD-501951-004



**EU RoHS**

**ELV and RoHS  
 Compliant**  
**REACH SVHC**  
 Not Reviewed  
**Halogen-Free  
 Status**

**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.

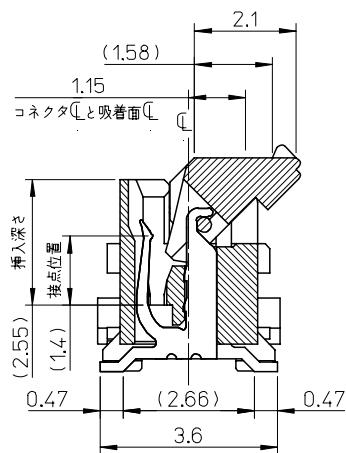
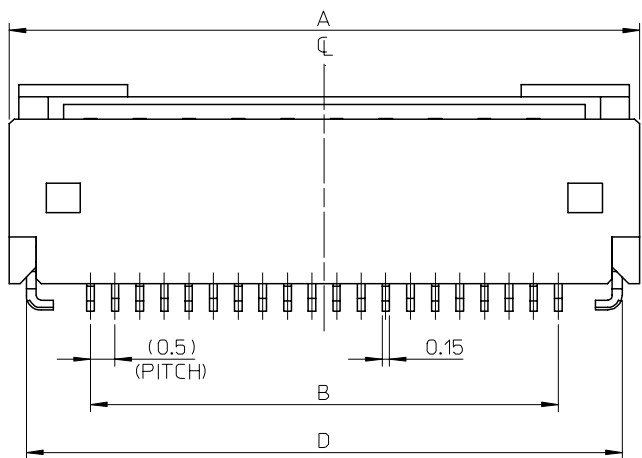
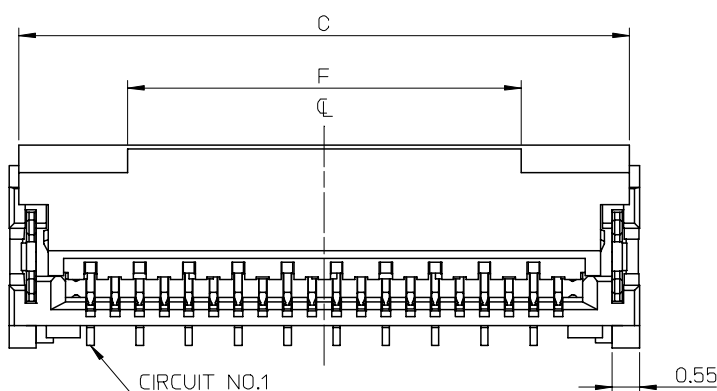
**Search Parts in this Series**

[501951Series](#)

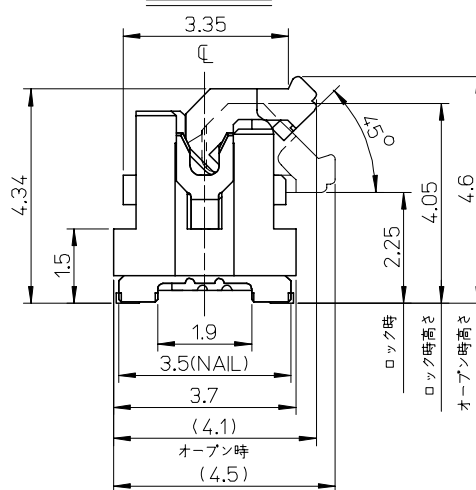
This document was generated on 04/19/2010

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10 9 8 7 6 5 4 3 2 1



断面図 (参考)



注記 NOTES

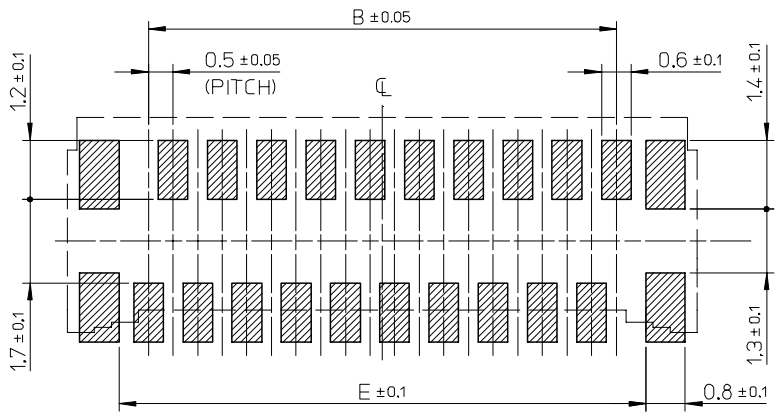
- 使用材料 MATERIAL  
 ハウジング : 液晶ポリマー ガラス充填, UL94V-0(白)  
 HOUSING : LIQUID CRYSTAL POLYMER  
 GLASS FILLED, UL94V-0 (WHITE)  
 アクチュエータ : ポリアミド 9T, ガラス充填, UL94V-0(茶)  
 ACTUATOR : POLYAMIDE 9T, GLASS FILLED,  
 UL94V-0 (BROWN)  
 ターミナル : 銅合金(1=0.15)  
 TERMINAL : COPPER ALLOY  
 金具 : 銅合金(1=0.2)  
 FITTING NAIL : COPPER ALLOY
  - めっき仕様 PLATING  
 ターミナル TERMINAL  
 ニッケル下処理めっき  
 GOLD(AU) OVER NICKEL(NI) PLATING.  
 金具 FITTING NAIL  
 ニッケル下処理めっき  
 TIN(Sn) OVER NICKEL(NI) PLATING.
  - テールと金具を併せた平坦度は 0.1ミリメートル以下(リフロー前)  
 TAILS AND NAILS COPLANARITY  
 TO BE 0.1 MAX. (BEFORE REFLOW)
  - ELV及びRoHS適合品  
 ELV AND RoHS COMPLIANT
- ⚠ R0.3は、FPC導体部にかからないこと。  
 R0.3 MUST NOT BE OVERLAPPED  
 TO PATTERN OF FPC.

|   |      |      |      |      |      |              |          |
|---|------|------|------|------|------|--------------|----------|
| 8 | 35.7 | 37.1 | 37.4 | 34.5 | 37.8 | 501951-7019  | 70       |
|   | 30.7 | 32.1 | 32.4 | 29.5 | 32.8 | 501951-6019  | 60       |
|   | 25.7 | 27.1 | 27.4 | 24.5 | 27.8 | 501951-5019  | 50       |
|   | 23.2 | 24.6 | 24.9 | 22   | 25.3 | 501951-4519  | 45       |
|   | 20.7 | 22.1 | 22.4 | 19.5 | 22.8 | 501951-4019  | 40       |
|   | 16.7 | 18.1 | 18.4 | 15.5 | 18.8 | 501951-3219  | 32       |
|   | 15.7 | 17.1 | 17.4 | 14.5 | 17.8 | 501951-3019  | 30       |
|   | 12.7 | 14.1 | 14.4 | 11.5 | 14.8 | 501951-2419  | 24       |
|   | 11.7 | 13.1 | 13.4 | 10.5 | 13.8 | 501951-2219  | 22       |
|   | 10.7 | 12.1 | 12.4 | 9.5  | 12.8 | 501951-2019  | 20       |
| F | E    | D    | C    | B    | A    | MATERIAL NO. | CIRCUITS |

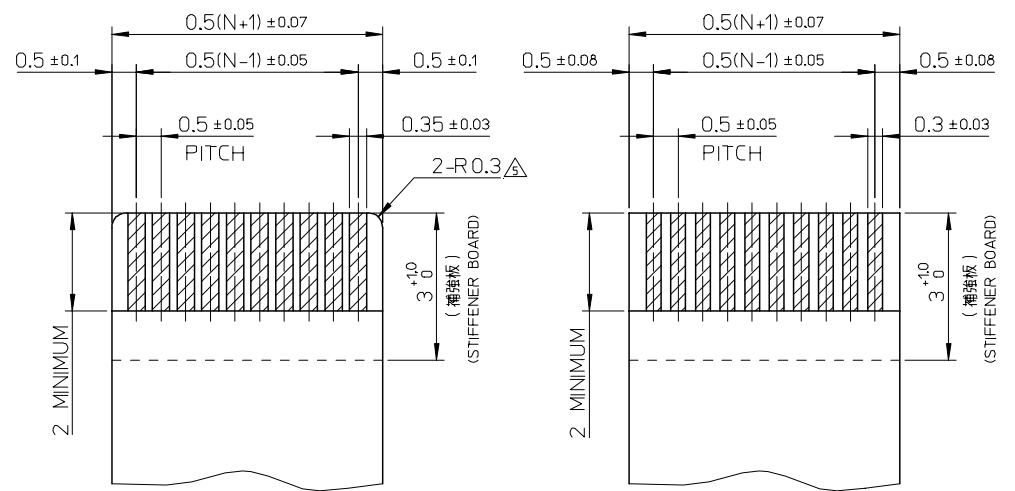
|   |                                       |           |                            |               |                    |   |                        |  |
|---|---------------------------------------|-----------|----------------------------|---------------|--------------------|---|------------------------|--|
| REVISED<br>EC NO: J2008-1229<br>DRW:HYAJIMA 2007/10/11<br>CHKD:THARUYAMA 2007/10/11<br>APPR:NUKITA 2007/10/12 | GENERAL TOLERANCES (UNLESS SPECIFIED) |           | DIMENSION STYLE<br>MM ONLY |               | SCALE<br>10:1      | DESIGN UNITS<br>METRIC  | THIRD ANGLE PROJECTION |  |
|   | 10 UNDER                              | ±0.2      | DRAWN BY<br>TRSUZUKI       |               | DATE<br>2006/08/21 | TITLE<br>0.5 FPC CONN. HSG ASSY<br>EASY ON / STRAIGHT<br>(GOLD) |                        |  |
|   | 10 OVER 30 UNDER                      | ±0.25     | CHECKED BY<br>HHIRATA      |               | DATE<br>2006/08/21 | MOLEX INCORPORATED  |                        |  |
|   | 30 OVER                               | ±0.3      | APPROVED BY<br>MSASAO      |               | DATE<br>2006/08/21 |   |                        |  |
|   | ANGULAR                               | ±1 °      | MATERIAL NO.               |               | DOCUMENT NO.       | SHEET NO.<br>1 OF 2   |                        |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS  |                                       | SEE CHART |                            | SD-501951-003 |                    |   |                        |  |

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参考基板レイアウト(マウント面)  
P.C. BOARD PATTERN DIMENSION (REF.)  
(MOUNT AREA)



適合FPC推奨寸法  
APPLICABLE FPC  
RECOMMENDED DIMENSION  
(仕上がり厚さ: 0.3 ± 0.03)  
(THICKNESS: 0.3 ± 0.03)  
N: 極数  
N: CIRCUITS

適合FFC推奨寸法  
APPLICABLE FFC  
RECOMMENDED DIMENSION  
(仕上がり厚さ: 0.3 ± 0.03)  
(THICKNESS: 0.3 ± 0.03)  
N: 極数  
N: CIRCUITS

FPC について:  
打ち抜き方向は導体側から補強板側を推奨します。  
導体部については軟銅箔35 $\mu$ mまたは50 $\mu$ mを推奨します。  
補強フィルム材質はポリイミドを推奨します。ベースフィルムは25 $\mu$ mを推奨します。  
接着剤は熱硬化接着剤を推奨します。  
尚、接着剤の接点部への付着は導通不良の原因になりますので、染み出しが無い様お願い致します。

ABOUT FPC  
RECOMMENDED PUNCHER DIRECTION : FROM CONDUCTOR SIDE TO STIFFENER FILM SIDE.  
RECOMMENDED CONDUCTOR SPEC :  
THICKNESS OF SOFT COPPER FOIL : 35 MICROMETER OR 50 MICROMETER.  
RECOMMENDED MATERIAL/THICKNESS.  
STIFFENER FILM : POLYIMIDE  
BASE FILM THICKNESS : 25 $\mu$ m  
BONDING AGENT : THERMOSETTING BONDING AGENT  
PLEASE PUT APPROPRIATE AMOUNT OF ADHESIVE ON ADHEREND BECAUSE THERE IS A POSSIBILITY THAT THE EXTRA ADHESIVE CAUSES THE DEFECT IN ELECTRICAL CONTINUITY.

|   |                                       |             |                            |                    |   |                        |                        |  |
|---|---------------------------------------|-------------|----------------------------|--------------------|---|------------------------|------------------------|--|
| SEE SHEET 1<br>EC NO: J2008-1229<br>DRAWN BY: DR.WHVAJIMA 2007/10/11<br>CHKD: THARUYAMA 2007/10/11<br>APPR: NUKITA 2007/10/12 | GENERAL TOLERANCES (UNLESS SPECIFIED) |             | DIMENSION STYLE<br>MM ONLY |                    | SCALE<br>---  | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |  |
|   | 10 UNDER                              | ± 0.2       | DRAWN BY<br>TRSUZUKI       | DATE<br>2006/08/21 | TITLE<br>0.5 FPC CONN. HSG ASSY<br>EASY ON / STRAIGHT<br>(GOLD) |                        |                        |  |
|   | 10 OVER 30 UNDER                      | ± 0.25      | CHECKED BY<br>HHRATA       | DATE<br>2006/08/21 |   |                        |                        |  |
|   | 30 OVER                               | ± 0.3       | APPROVED BY<br>MSASAO      | DATE<br>2006/08/21 | MOLEX INCORPORATED  |                        |                        |  |
|   | ANGULAR                               | ± 1 °       | MATERIAL NO.               |                    |   |                        |                        |  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  |                                       | SEE SHEET 1 |                            | SD-501951-003      |   | 2 OF 2                 |                        |  |

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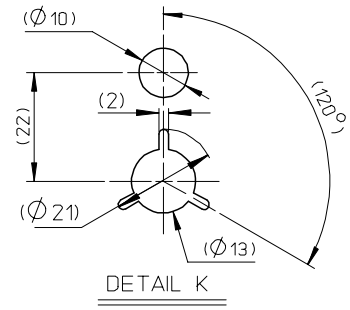
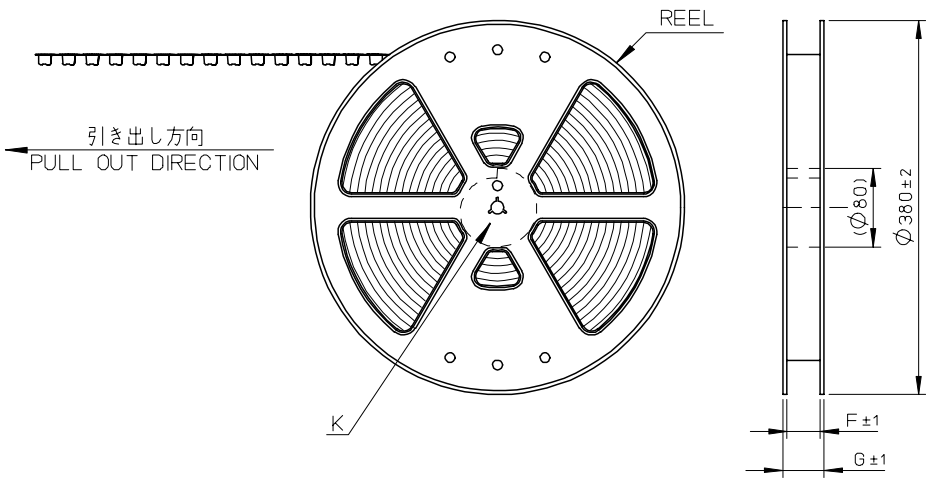
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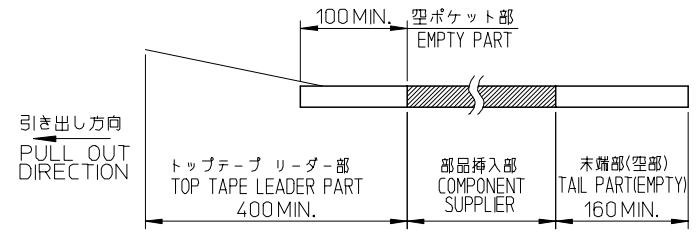
B

A



NOTES

- 製品詳細寸法については図面 SD-501951-003を参照下さい。  
FOR DIMENSIONS OF PRODUCT, REFER TO RSD-501951-007.
- 梱包数量 : 2000個/リール  
NUMBER OF CONNECTORS : 2000PIECES/REEL
- リードテープ長さ  
LEAD TAPE LENGTH



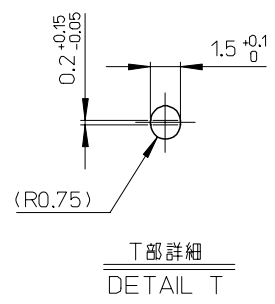
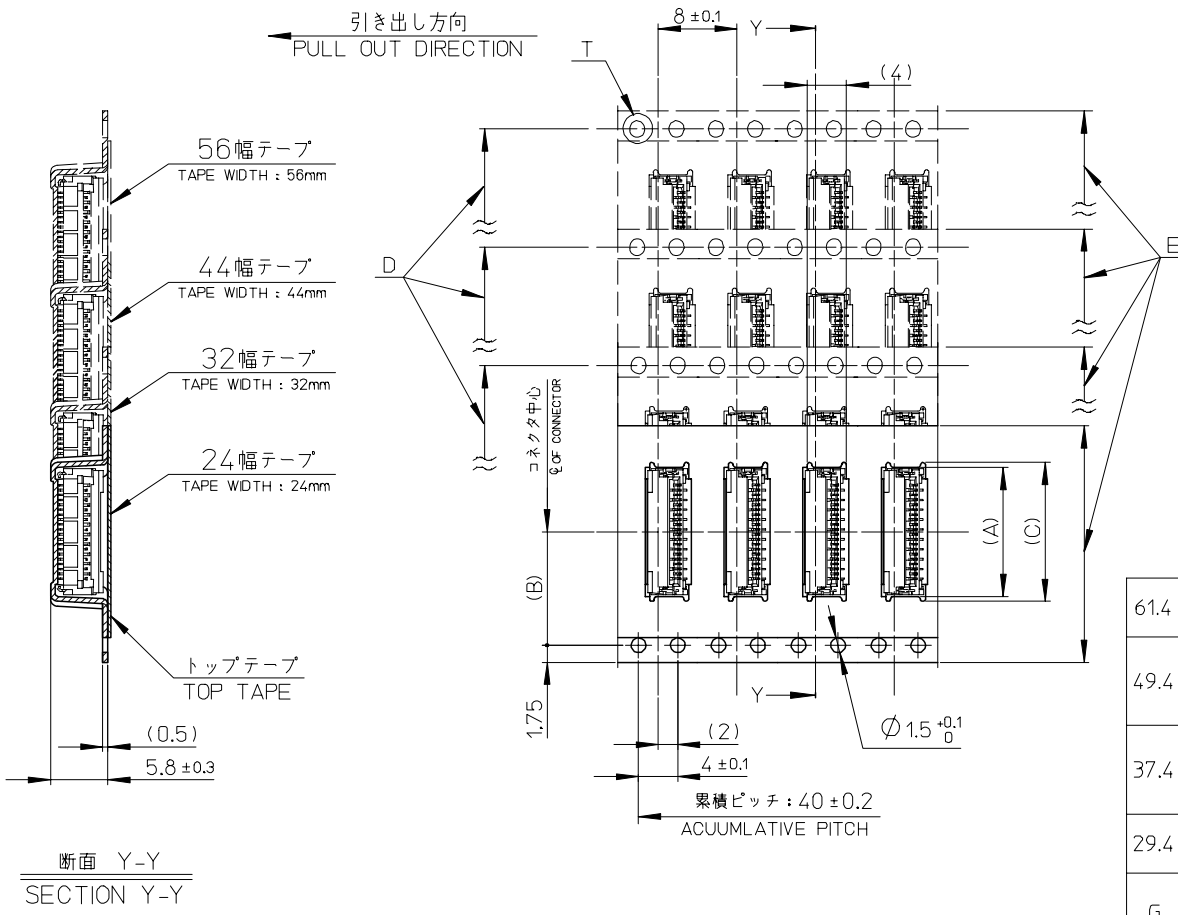
- 材料 MATERIAL  
 キャリアテープ : ポリプロピレン  
 CARRIER TAPE : POLYPROPYLENE  
 トップテープ : ポリエチレンテレフタレート, ポリエチレン  
 TOP TAPE : POLYETHYLENE TEREPHTHALATE , POLYETHYLENE  
 リール : ポリスチレン<リサイクル材を含む>  
 REEL : POLYSTYRENE<RECYCLE MATERIAL CONTAINED>
- ELV及びRoHS適合品 ELV AND RoHS COMPLIANT

|   |                                       |  |                             |                    |  |                        |                        |  |
|---|---------------------------------------|--|-----------------------------|--------------------|--|------------------------|------------------------|--|
| REVISED<br>EC NO: J2008-1229<br>DRW:HYAJIMA 2007/10/11<br>CHKD:THARUYAMA 2007/10/11<br>APPR:NUKITA 2007/10/12 | GENERAL TOLERANCES (UNLESS SPECIFIED) |  | DIMENSION STYLE<br>MM ONLY  |                    | SCALE<br>---   | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |  |
|   | 10 UNDER                              | ±0.2   | DRAWN BY<br>TRSUZUKI        | DATE<br>2006/09/05 | TITLE<br>0.5 FPC CONN. HSG ASSY<br>E/O STRAIGHT EMBSTP PKG<br>(GOLD) |                        |                        |  |
|   | 10 OVER 30 UNDER                      | ±0.25  | CHECKED BY<br>HIRATA        | DATE<br>2006/09/05 | APPROVED BY<br>MSASAO  |                        |                        |  |
|   | 30 OVER                               | ±0.3   | APPROVED BY<br>MSASAO       |                    | DATE<br>2006/09/05   | MOLEX INCORPORATED     |                        |  |
|   | ANGULAR                               | ±1 °   | MATERIAL NO.<br>SEE SHEET 2 |                    | DOCUMENT NO.<br>SD-501951-004  |                        | SHEET NO.<br>1 OF 2    |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS  |                                       | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                             |                    |  |                        |                        |  |

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|------|------|-------------------------------------|------|------|------|------|----------------------|----------------|
| 61.4 | 57.4 | 56±0.3                              | 52.4 | 39.1 | 26.2 | 38.1 | 501951-7010          | 70             |
|      |      |                                     |      | 34.1 |      | 33.1 | 501951-6010          | 60             |
| 49.4 | 45.4 | 44±0.3                              | 40.4 | 29.1 | 20.2 | 28.1 | 501951-5010          | 50             |
|      |      |                                     |      | 24.1 |      | 25.6 | 501951-4510          | 45             |
|      |      |                                     |      | 20.1 |      | 23.1 | 501951-4010          | 40             |
| 37.4 | 33.4 | 32±0.3                              | 28.4 | 19.1 | 14.2 | 19.1 | 501951-3210          | 32             |
|      |      |                                     |      | 16.1 |      | 18.1 | 501951-3010          | 30             |
|      |      |                                     |      | 15.1 |      | 15.1 | 501951-2410          | 24             |
| 29.4 | 25.4 | 24±0.3                              | —    | 14.1 | 11.5 | 14.1 | 501951-2210          | 22             |
|      |      |                                     |      | 14.1 |      | 13.1 | 501951-2010          | 20             |
| G    | F    | E<br>キャリアテープ幅<br>CARRIER TAPE WIDTH | D    | (C)  | (B)  | (A)  | 製品番号<br>MATERIAL NO. | 極数<br>CIRCUITS |

断面 Y-Y  
SECTION Y-Y

T部詳細  
DETAIL T

|  |                                       |       |                            |  |                     |                        |  |  |
|--|---------------------------------------|-------|----------------------------|--|---------------------|------------------------|--|--|
| SEE SHEET 1<br>EC NO: J2008-1229<br>DRW: HVAJIMA 2007/10/11<br>CHKD: THARUYAMA 2007/10/11<br>APPR: NUKITA 2007/10/12             | GENERAL TOLERANCES (UNLESS SPECIFIED) |       | DIMENSION STYLE<br>MM ONLY |  | SCALE<br>---        | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION   |  |
|  | 10 UNDER                              | ±0.2  | DRAWN BY<br>TRSUZUKI       |  | DATE<br>2006/09/05  |                        | TITLE<br>0.5 FPC CONN. HSG ASSY<br>E/O STRAIGHT EMBSTP PKG<br>(GOLD) |  |
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|  | 30 OVER                               | ±0.3  | APPROVED BY<br>MSASAO      |  | DATE<br>2006/09/05  |                        | DOCUMENT NO.<br>SD-501951-004  |  |
|  | ANGULAR                               | ±1 °  | MATERIAL NO.               |  | SHEET NO.<br>2 OF 2 |                        |  |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS   |                                       |       | SEE CHART                  |  |                     |                        |  |  |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                       |       |                            |  |                     |                        |  |  |