

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

**Part Number:** [0513870530](#)  
**Status:** **Active**  
**Description:** USB On-The-Go (OTG) Mini-B Receptacle, Right Angle, Short Body, SMT Solder Tails and Through Hole Shell Tabs, with Cover Tape, Reflow DIP Type, Lead-free

**Documents:**

[3D Model](#) [Product Specification PS-51387-003 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**General**

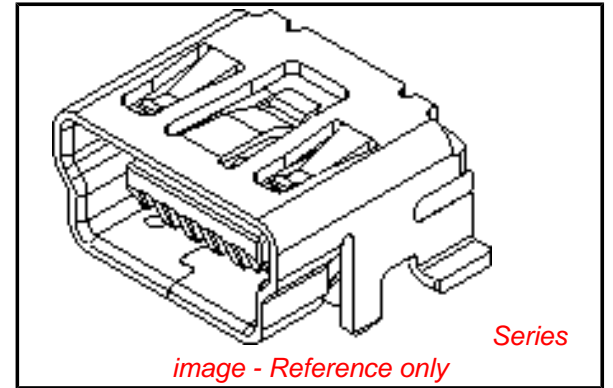
|                |                          |
|----------------|--------------------------|
| Product Family | I/O Connectors           |
| Series         | <a href="#">51387</a>    |
| Application    | Wire-to-Board            |
| Component Type | Receptacle               |
| Product Name   | USB, USB OTG (On-The-Go) |
| Type           | Mini-B                   |

**Physical**

|                                |   |
|--------------------------------|---|
| Boot Color                     | N/A   |
| Circuits (Loaded)              | 5   |
| Circuits (maximum)             | 5   |
| Color - Resin                  | Black   |
| Gender                         | Receptacle                                    |
| Lock to Mating Part            | Yes   |
| Material - Metal               | High Performance Alloy (HPA), Phosphor Bronze |
| Material - Plating Mating      | Gold  |
| Material - Plating Termination | Tin   |
| Material - Resin               | High Temperature Thermoplastic                |
| Number of Rows                 | 1   |
| Orientation                    | Right Angle                                   |
| PCB Locator                    | Yes   |
| PCB Retention                  | Yes   |
| Packaging Type                 | Embossed Tape on Reel                         |
| Panel Mount                    | No  |
| Pitch - Mating Interface (in)  | 0.031 In                                      |
| Pitch - Mating Interface (mm)  | 0.80 mm                                       |
| Pitch - Term. Interface (in)   | 0.031 In                                      |
| Pitch - Term. Interface (mm)   | 0.80 mm                                       |
| Plating min: Mating (µin)      | 30.4  |
| Plating min: Mating (µm)       | 0.76  |
| Plating min: Termination (µin) | 40  |
| Plating min: Termination (µm)  | 1   |
| Polarized to Mating Part       | Yes   |
| Polarized to PCB               | Yes   |
| Ports                          | 1   |
| Surface Mount Compatible (SMC) | Yes   |
| Temperature Range - Operating  | 0°C to +50°C                                  |
| Termination Interface: Style   | Surface Mount                                 |
| Waterproof / Dustproof         | No  |
| Wire Size AWG                  | N/A   |

**Electrical**

|                               |                 |
|-------------------------------|-----------------|
| Current - Maximum per Contact | 1A              |
| Shield Type                   | Full Shield     |
| Shielded                      | Yes             |
| Voltage - Maximum             | 30V AC (RMS)/DC |



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
**Contains SVHC: No**  
**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**

[51387Series](#)

**Mates With**

[59204-9405](#)

**Solder Process Data**

|  |                           |
|--|---------------------------|
| Duration at Max. Process Temperature (seconds) | 3                         |
| Lead-free Process Capability                   | Reflow Capable (SMT only) |
| Max. Cycles at Max. Process Temperature        | 1                         |
| Process Temperature max. C                     | 245                       |

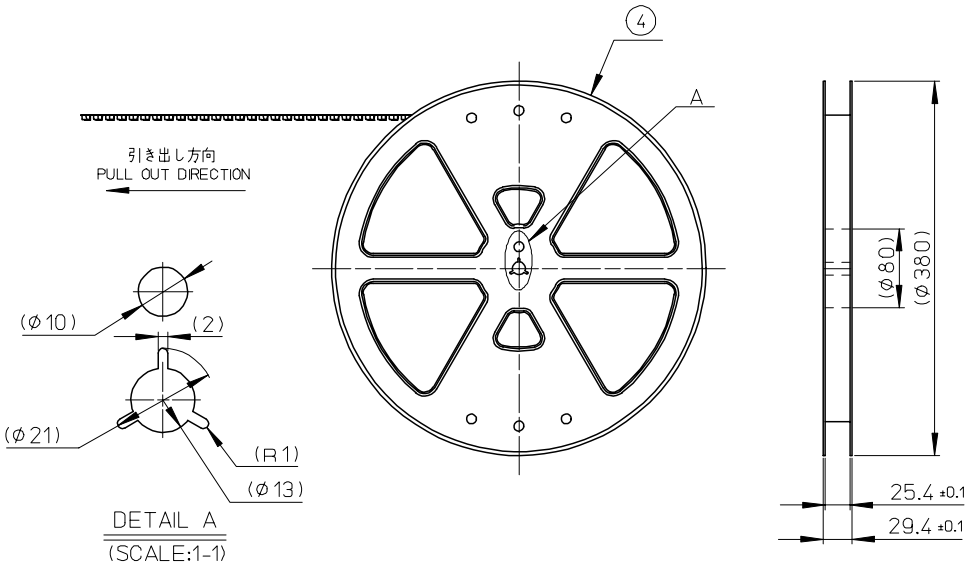
**Material Info****Reference - Drawing Numbers**

|                         |  |
|-------------------------|--|
| Packaging Specification | SPK-51387-001                              |
| Product Specification   | PS-51387-003, RPS-51387-003, RPS-51387-005 |
| Sales Drawing           | SD-51387-005, SD-51387-006                 |

This document was generated on 05/25/2010

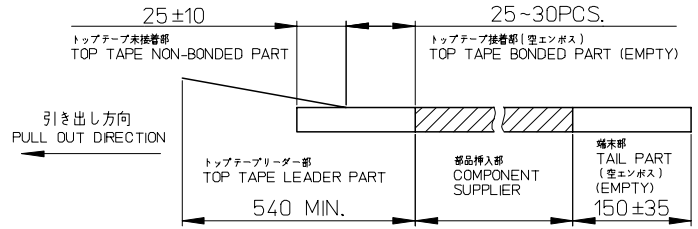
**PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION**

|   |                           |
|---|---------------------------|
| ① | コネクタ<br>CONNECTOR         |
| ② | エンボステープ<br>EMBOSSSED TAPE |
| ③ | トップテープ<br>TOP TAPE        |
| ④ | リール<br>REEL               |

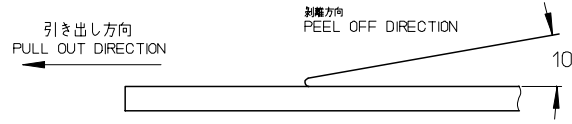


注記

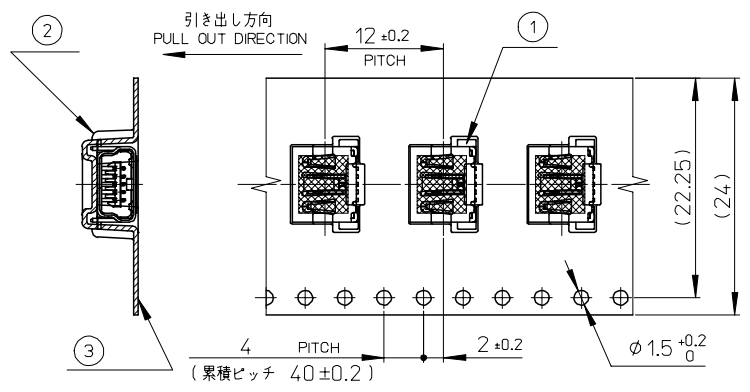
- コネクタ詳細は SD-51387-006を参照下さい。  
REFER TO SD-51387-006
- 梱包数量: 1200個/リール  
NUMBER OF CONNECTOR : 1200 PCS/REEL
- リードテープ長さ  
LEAD TAPE LENGTH



- トップテープの剥離強度:  $0.6 \pm 0.35N$  ( $60 \pm 35gf$ )  
<剥離速度: 300mm/min (参考)> (剥離方向は下図参照)  
PEEL-OFF FORCE OF TOP TAPE :  $0.6 \pm 0.35N$  ( $60 \pm 35gf$ )  
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIG.)  
<PEEL-OFF SPEED : 300mm/min (REF.)>



- 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 : ポリエステル, ポリエチレン  
TOP TAPE : POLYESTER, POLYETHYLENE  
リール : ポリスチレン  
REEL : POLYSTYREN



エンボステープ内の製品の向き  
DIRECTION OF PRODUCT  
IN EMBOSSSED TAPE  
(SCALE:2-1)

|                      |            |
|----------------------|------------|
| 51387-0530           | 51387-***0 |
| 製品番号<br>MATERIAL No. | MODEL No.  |

|  |  |       |                            |                  |  |                        |                        |
|--|--|-------|----------------------------|------------------|--|------------------------|------------------------|
| 新編作成<br>EC NO: J2005-0570<br>DRAWN: MSHINYAMA 2004/08/30<br>CHKD: HTAKASE 2004/08/30<br>APPR: JMIYAZAWA 2004/09/02 | 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>MSHINYAMA      | DATE<br>04/07/18 | TITLE<br>EMBOSSSED TAPE PKG.<br>FOR 51387-0539<br>-LEAD FREE-  |                        |                        |
|  | 10 OVER 30 UNDER   | ±0.25 | CHECKED BY<br>HTAKASE      | DATE<br>04/07/18 | MOLEX INCORPORATED   |                        |                        |
|  | 30 OVER  | ±0.3  | APPROVED BY<br>JMIYAZAWA   | DATE<br>04/07/18 | DOCUMENT NO.<br>SD-51387-005   |                        |                        |
|  | ANGULAR  | ±3 °  | MATERIAL NO.<br>SEE CHART  |                  | SHEET NO.<br>1 OF 1  |                        |                        |
| 0  | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |       | SIZE<br>A3                 |                  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |                        |

10 9 8 7 6 5 4 3 2 1

F

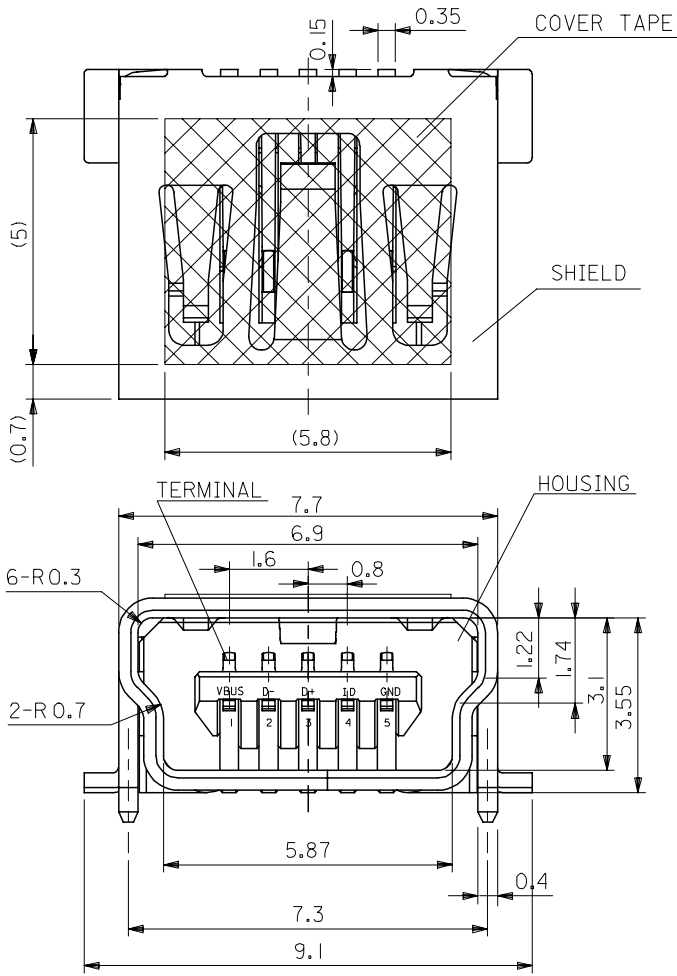
E

D

C

B

A



注記  
NOTES

1. 材質

MATERIAL

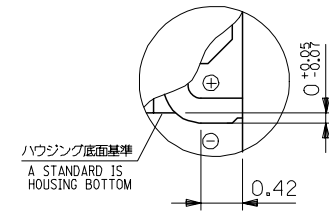
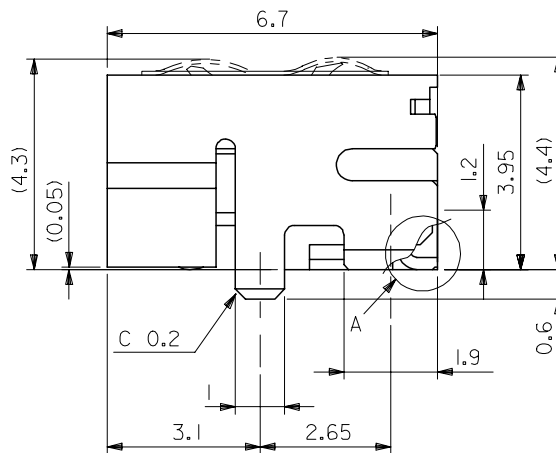
ハウジング:耐熱樹脂 ガラス充填,黒色,UL94V-0  
HOUSING:HEAT RESISTANT PLASTIC,  
GLASS FILLED,BLACK,UL94V-0  
ターミナル:銅合金 (t=0.25)  
TERMINAL:COPPER ALLOY(t=0.25)  
シールド:銅合金 (t=0.4)  
SHIELD :COPPER ALLOY(t=0.4)  
カバー テープ:ポリイミド (t=0.08 )  
COVER TAPE:POLYIMIDE (t=0.08)

2. メッキ仕様

PLATING

ターミナル 接点部:金メッキ  
TERMINAL CONTACT AREA:GOLD  
半田付け部:錫メッキ  
SOLDER TAIL AREA:TIN  
下地部:ニッケルメッキ  
UNDER PLATING:NICKEL  
シールド:錫メッキ  
SHIELD :TIN  
下地部:ニッケル  
UNDER PLATING:NICKEL

3. 平坦度は0.1mm MAX.  
COPLANARITY 0.1mm MAX.



DETAIL A  
(SCALE 20:1)

|            |                      |
|------------|----------------------|
| 5          | 51387-0539           |
| 極数<br>CKT. | 製品番号<br>MATERIAL NO. |

|  |  |           |                            |  |   |                        |                           |  |
|--|--|-----------|----------------------------|--|---|------------------------|---------------------------|--|
| REVISED<br>EC NO: J2007-2931<br>DRWN: AYOYAGI 2007/04/19<br>CHKD: YMAEDA 2007/04/23<br>APPR: NUKITA 2007/04/24 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED) |           | DIMENSION STYLE<br>MM ONLY |  | SCALE<br>10:1   | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |  |
|  | 10 UNDER                                 | ±0.2      | DRAWN BY<br>MSHINYAM       | DATE<br>04/06/18   | TITLE<br>USB SERIES MINI-B REC.<br>ASS'Y (REFLOW DIP TYPE)<br>-LEAD FREE- |                        |                           |  |
|  | 10 OVER 30 UNDER                         | ±0.25     | CHECKED BY<br>HTAKASE      | DATE<br>04/06/18   | MOLEX INCORPORATED  |                        |                           |  |
|  | 30 OVER                                  | ±0.3      | APPROVED BY<br>JMIYAZAW    | DATE<br>04/06/18   | DOCUMENT NO.<br>SD-51387-006  |                        |                           |  |
|  | ANGULAR                                  | ±3 °      | MATERIAL NO.               |  | SHEET NO.<br>1 OF 2   |                        |                           |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS   |  | SEE TABLE |                            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |   |                        |                           |  |

10 9 8 7 6 5 4 3 2 1

F

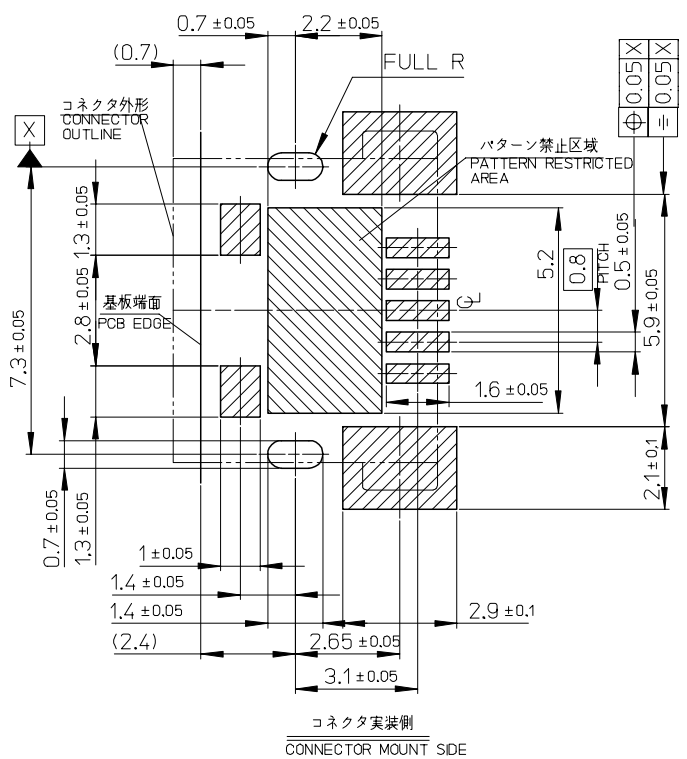
E

D

C

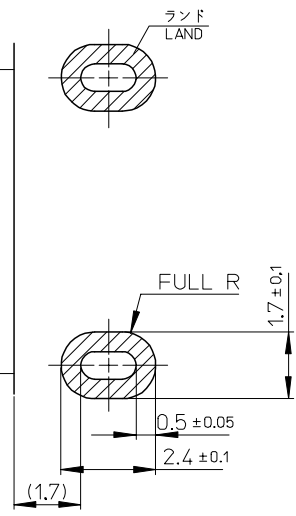
B

A

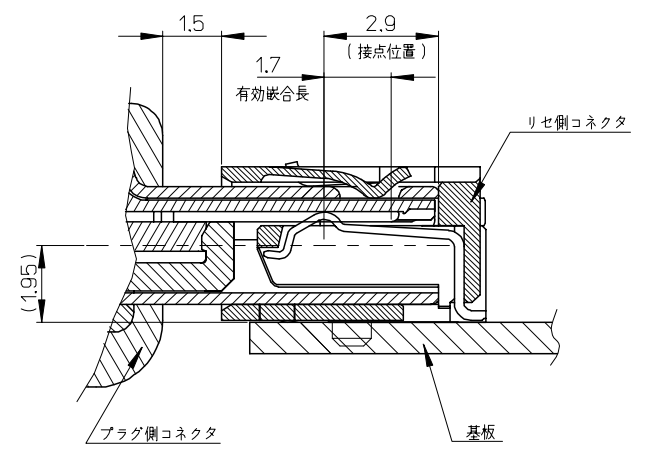


コネクタ実装側  
CONNECTOR MOUNT SIDE

推奨基板寸法 (SCALE 8:1)  
RECOMMENDED PCB PATTERN LAYOUT



逆側  
REVERSE SIDE



コネクタ嵌合図  
(SCALE 8:1)

|   |                                       |   |                             |                  |   |                        |
|---|---------------------------------------|---|-----------------------------|------------------|---|------------------------|
| REVISED<br>EC NO: J2007-2931<br>DRWN: A0YAGI 2007/04/19<br>CHKD: YMAEDA 2007/04/23<br>APPR: NUKITA 2007/04/24 | 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>MSHINYAM        | DATE<br>04/06/18 | TITLE<br>USB SERIES MINI-B REC. ASS'Y (REFLOW DIP TYPE) -LEAD FREE- |                        |
|   | 10 OVER 30 UNDER                      | ± 0.25  | CHECKED BY<br>HTAKASE       | DATE<br>04/06/18 | MOLEX INCORPORATED  |                        |
|   | 30 OVER                               | ± 0.3   | APPROVED BY<br>JMIYAZAW     | DATE<br>04/06/18 | DOCUMENT NO.<br>SD-51387-006  | SHEET NO.<br>2 OF 2    |
|   | ANGULAR                               | ± 3 °   | MATERIAL NO.<br>SEE SHEET 1 |                  |   |                        |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  |                                       | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                             |                  |   |                        |

9

8

7

6

5

4

3

2