



# カーエレクトロニクス

Car Electronics

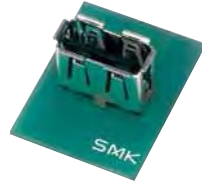


# Car Electronics / カーエレクトロニクス



## カーエンタテインメント Car Entertainment

カーナビゲーション  
Car Navigation

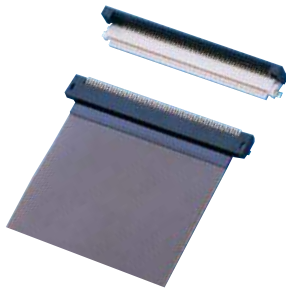


P 23 インタフェースコネクタ  
Interface Connectors

P 10 リモコン  
Remote Control Units



P 13 同軸コネクタ  
Coaxial Connectors



P 20 FPC コネクタ  
FPC Connectors



P 05 タッチパネル  
Touch Panels



P 29 ピンジャック  
Pin Jacks



P 23 インタフェースコネクタ  
Interface Connectors



カーオーディオ  
Car Audio



P 23 電源コネクタ  
Power Connectors



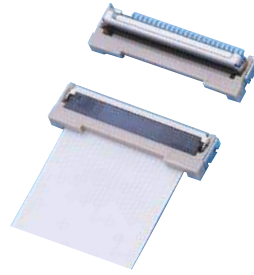
P 13 同軸コネクタ  
Coaxial Connectors

## インストゥルメントパネル Instrument Panel

**P 23** インタフェースコネクタ  
Interface Connectors



AUX ボックス  
Auxiliary Box



**P 20** FPC コネクタ  
FPC Connectors

インストゥルメントパネル  
Instrument Panel



**P 27** ミニジャック  
Mini Jacks

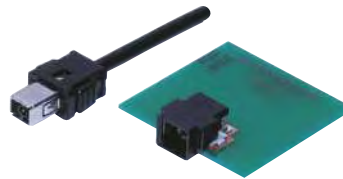


**P 05** タッチパネル  
Touch Panels

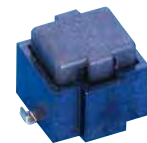


## コミュニケーション Communication

ITS 車載器  
ITS Equipment



**P 13** 同軸コネクタ  
Coaxial Connectors



**P 12** スイッチ  
Switches



カメラ(ビュー / センシング)  
Camera (View/Sensing)



**P 37** カメラモジュール  
Camera Modules

# Components for Car Electronics

|                               |  |    |
|-------------------------------|--|----|
| タッチパネル                        | Touch Panels                               | 5  |
| リモートコントロールユニット                | Remote Control Units                       | 10 |
| スイッチ                          | Switches                                   | 12 |
| 同軸コネクタ                        | Coaxial Connectors                         | 13 |
| スイッチ付同軸コネクタ                   | Coaxial Connectors with Switch             | 18 |
| カメラコネクタ                       | Camera Connectors                          | 19 |
| FPCコネクタ                       | FPC Connectors                             | 20 |
| インタフェースコネクタ                   | Interface Connectors                       | 23 |
| カードコネクタ                       | Card Connectors                            | 26 |
| ø3.5mmジャック                    | 3.5mm Dia. Jacks                           | 27 |
| ピンジャック                        | Pin Jacks                                  | 29 |
| 電線対基板コネクタ                     | Wire to Board Connectors                   | 30 |
| ジャックボックス                      | Jack Box                                   | 30 |
| アンテナアダプタ                      | Antenna Adapter                            | 31 |
| アンテナジャック/プラグ                  | Antenna Jack/Plug                          | 31 |
| 外部電源ジャック                      | DC Power Supply Jack                       | 31 |
| 基板対基板コネクタ                     | Board to Board Connectors                  | 32 |
| アースターミナル                      | Earth Terminals                            | 32 |
| ラグ端子                          | Lug Terminal                               | 34 |
| ユニバーサルカープラグ                   | Universal Car Plug                         | 34 |
| 小型13Pプラグコード・ソケット              | 13P Plug Cords / Socket (Small Type)       | 35 |
| 小型21Pプラグコード・ソケット              | 21P Plug Cords / Socket (Small Type)       | 36 |
| Bluetooth® SPPモジュール BT401シリーズ | Bluetooth® SPP Module BT401 Series         | 36 |
| 近接・ホバー対応タッチコントローラ             | Proximity & Hover Sensing Touch Controller | 37 |
| カメラモジュール〈カスタム品〉               | Camera Module 〈Custom Made〉                | 37 |

# タッチパネル Touch Panels

## 抵抗膜方式タッチパネル ガラス/ガラスタイプ Resistive Touch Panel Glass / Glass Type



### 特長

- 車載純正仕様に対応
- 偏光板の貼り合せやAR(アンチリフレクション)処理により、反射率の調整が可能
- 防汚対応が可能

### 仕様

- 動作荷重 (N) : 0.2~2.0
- 使用温度範囲(℃) : -30~+85
- 保存温度範囲(℃) : -40~+95

### Features

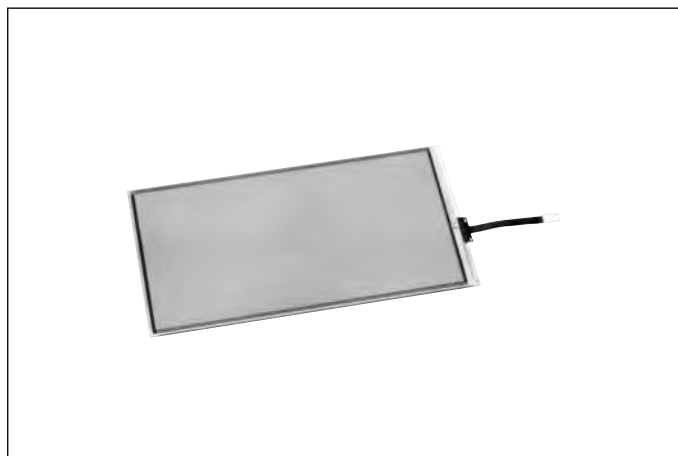
- Meet the specification for genuine automotive products.
- Capable of changing reflectance by attachment of a polarizing film or AR (Anti-reflection) treatment.
- Anti-smudge type is available.

### Specification

- Operating Load (N) : 0.2 to 2.0
- Operating Temperature Range (℃) : -30 to +85
- Storage Temperature Range (℃) : -40 to +95

| タイプ<br>Type             | 直線偏光<br>Linear Polarizing | 円偏光<br>Circular Polarizing | 超低反射<br>Super Low Reflectance | 偏光サングラス対応<br>For Polarizing Sunglass |
|-------------------------|---------------------------|----------------------------|-------------------------------|--------------------------------------|
| 透過率 (%)<br>Transparency | 75                        | 74                         | 75                            | 70 or 73                             |
| 反射率 (%)<br>Reflectance  | 9                         | 6.5                        | 1                             | 6 or 11                              |

## 抵抗膜方式タッチパネル フィルム/ガラスタイプ Resistive Touch Panel Film / Glass Type



### 特長

- 車載純正仕様に対応
- タッチパネルの反射を低減し、ディスプレイの視認性を向上
- ガラス/ガラス+偏光板タイプに比べ低コストでの提供が可能
- 防汚対応が可能

### 仕様

- 使用温度範囲(℃) : -30~+85
- 保存温度範囲(℃) : -40~+95

### Features

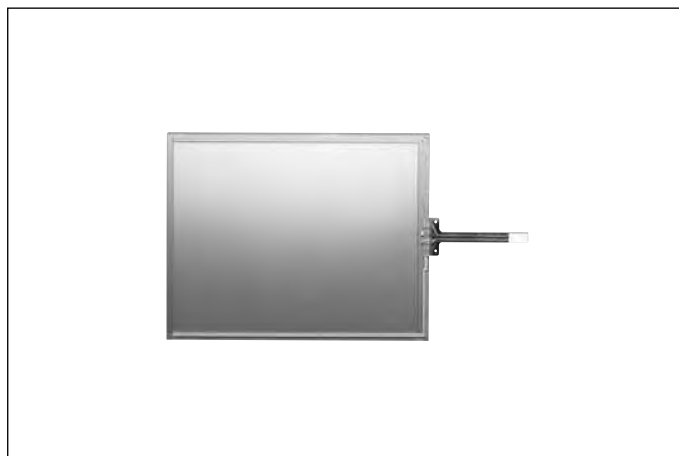
- Meet the specification for genuine automotive products.
- A touch panel of low reflection of incident light, resulting in minimal loss of readability of LCD indication.
- Available at lower cost than the glass/glass + polarizer.
- Anti-smudge type is available.

### Specification

- Operating Temperature Range(℃) : -30 to +85
- Storage Temperature Range(℃) : -40 to +95

| タイプ<br>Type                | フィルム/ガラス<br>Film/Glass |
|----------------------------|------------------------|
| 透過率 (%)<br>Transparency    | 80 ~ 86                |
| 反射率 (%)<br>Reflectance     | 8 ~ 15                 |
| 動作荷重 (N)<br>Operating Load | 0.1 ~ 1.0              |

## 抵抗膜方式 2 段階入力フォースフィードバックタッチパネル Resistive 2 Step Input Force Feedback Touch Panel



### 特長

- タッチパネル自体を振動させることで、タッチ時のクリック感を再現
- 同じ位置で2段階の入力検知が可能
- 1段階目と2段階目で異なるタッチフィードバックの設定が可能
- 専用コントローラ ICを用意
- フィルム/ガラス、ガラス/ガラスの2種類から選択可能

### 仕様

- 検出方式 : 抵抗膜方式
- 動作荷重 (N) : 1段階 : 0.1~0.5  
: 2段階 : 0.5~1.0
- 駆動電圧 (V) : DC 5
- 消費電流 (A) : 振動時 : 300m  
: アイドル時 : 15μ
- 使用温度範囲(℃) : -30 ~ +85
- 保存温度範囲(℃) : -40 ~ +95

### Features

- Since the touch panel itself vibrates, the tactile feeling can be obtained when touched.
- 2 step input at the same position on the screen is possible.
- The tactile feeling of 1<sup>ST</sup> step and 2<sup>ND</sup> step can be changed.
- Dedicated controller IC can be provided.
- Choice of film/glass type or glass/glass type.

### Specification

- Sensing System : Resistive
- Operating Force (N) : 1<sup>ST</sup> Step : 0.1 to 0.5  
: 2<sup>ND</sup> Step : 0.5 to 1.0
- Driving Voltage (V) : 5 DC
- Consumption Current (A) : 300m  
: 15μ (while idling)
- Operating Temperature Range(℃) : -30 to +85
- Storage Temperature Range(℃) : -40 to +95

## Dokodemo Touch™



### 特長

- 2段階入力フォースフィードバックタッチパネルの利便性をさらに高められる画面切替えアプリケーション
- 画面のどの場所に触れても、画面切り替えボタン(Dokodemo Touch™)の表示が可能
- 2段階入力フォースフィードバックタッチパネルとの組み合わせにより、ブラインドタッチが可能

### Features

- A screen switching application, which upgrades user-friendliness of 2 step input force feedback touch panel.
- A screen switching button (Dokodemo Touch™) appears wherever you touch on the screen.
- Combination of Dokodemo Touch™ and 2 step input force feedback touch panel realized touch typing.

## 抵抗膜方式 2点入力タッチパネル(4線式) Dual-touch Resistive Touch Panel(4 Wire Type)



### 特長

---

- 2点同時入力やジェスチャー操作が可能
- 軽荷重のタッチパネル使用で、軽快な操作を実現
- ペンや手袋での入力に対応

### 仕様

---

- 読み取り方式 : 抵抗膜方式
- 入力方式 : ペン、指
- サイズ : 最大9インチ
- 分解能 : 10bit (1,024×1,024)
- インタフェース : I<sup>2</sup>C、SPI
- 動作荷重 (N) : 0.4以下

### Features

---

- Enables 2-point simultaneous input and gesture operation.
- Uses a light-load input touch panel, allowing for nimble operation.
- Supports input by pen or when wearing gloves.

### Specification

---

- Sensing System : Resistive
- Input Method : Pen or finger
- Size : 9 inch max.
- Resolution : 10bit (1,024×1,024)
- Interface : I<sup>2</sup>C, SPI
- Operating Force (N) : 0.4 max.



## 静電容量方式タッチパネル Capacitive Touch Panel



### 特長

- マルチタッチやページ送りのようなジェスチャー入力が可能
- 偏光板、ARフィルム貼り合わせにより低反射化が可能

### 仕様

- 読み取り方式 : 静電容量方式
- サイズ : 最大12.1インチ
- 駆動電圧 (V) : DC 3.3もしくはDC 5
- 消費電流 (A) : 20m (Inactive時) 30 $\mu$
- インタフェース : I<sup>2</sup>C
- 透過率 (%) : 82~90
- 反射率 (%) : 1.5~8
- 使用温度範囲(°C) : -30~+85
- 保存温度範囲(°C) : -40~+95

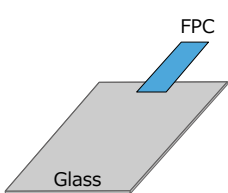
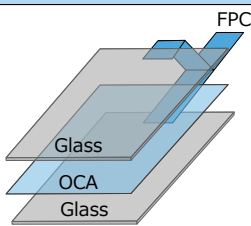
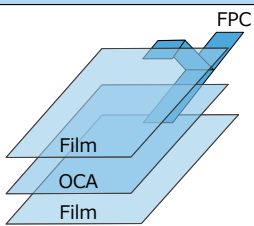
### Features

- Multi-touch and gesture input such as page scrolling is possible.
- Low reflectance is achieved by adhesion of a polarizer and AR film.

### Specification

- Sensing System : Projected capacitive
- Sizes : 12.1 inch max.
- Driving Voltage (V) : 3.3 DC or 5.0 DC
- Current Consumption (A) : 20m (Inactive) 30 $\mu$
- Interface : I<sup>2</sup>C
- Transparency (%) : 82 to 90
- Reflectance (%) : 1.5 to 8
- Operating Temperature Range (°C) : -30 to +85
- Storage Temperature Range (°C) : -40 to +95

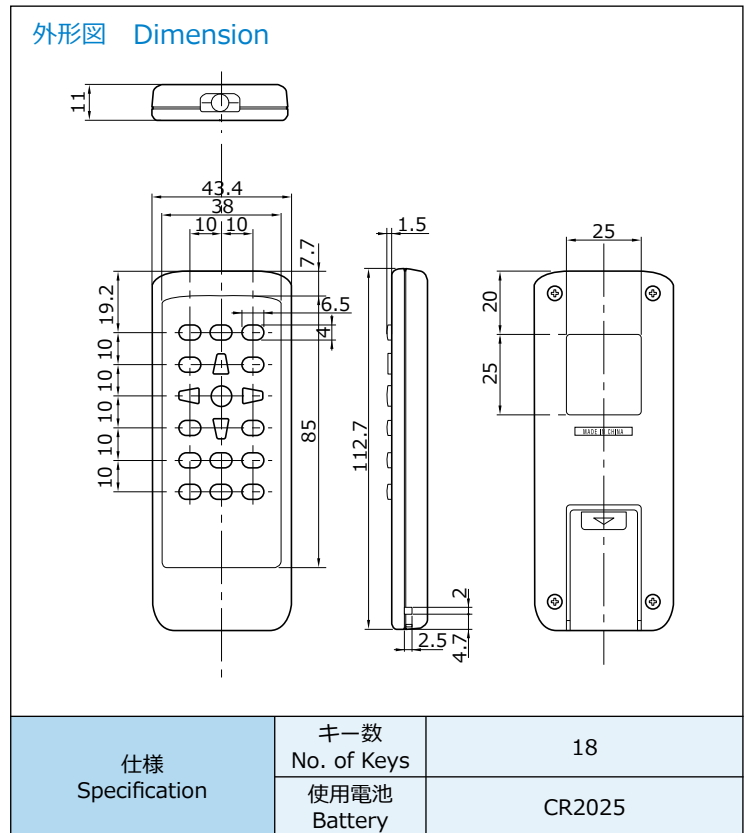
## 静電容量方式タッチパネルセンサー構成バリエーション Structure Variation of Capacitive Touch Panel Sensor

| センサー / Sensor                            | G2  | G1G  | F1F   |
|--|---|--|---|
| センサー構成<br>Sensor Composition             |  |  |  |
| 対応サイズ (1chipの場合)<br>Size(case of 1 chip) | ~ 12.1inch  | ~ 12.1inch   | ~ 12.1inch  |
| 総厚<br>Thickness                          | 0.55mm ~  | 0.9mm ~  | 0.45mm ~  |
| 透過率<br>Transparency                      | 90% typ.  | 90% typ.   | 85% typ.  |
| 使用温度範囲<br>Operating Temperature Range    | -30°C~+85°C   | -30°C~+85°C  | -30°C~+85°C   |
| 保存温度範囲<br>Storage Temperature Range      | -40°C~+95°C   | -40°C~+95°C  | -40°C~+95°C   |

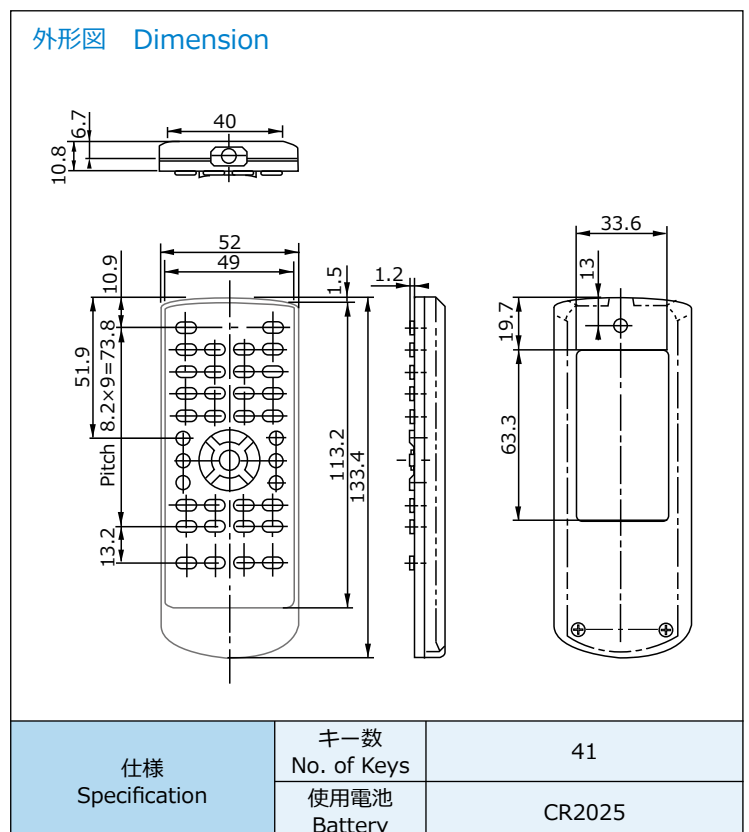
すべてのセンサーにガラスまたはアクリル素材のカバーパネルを貼り合わせ可能で、豊富なセンサーデザインをご提案いたします。  
A cover panel made of glass or an acrylic material can be pasted on all sensors, so an abundance of sensor designs can be suggested.

# リモートコントロールユニット Remote Control Units

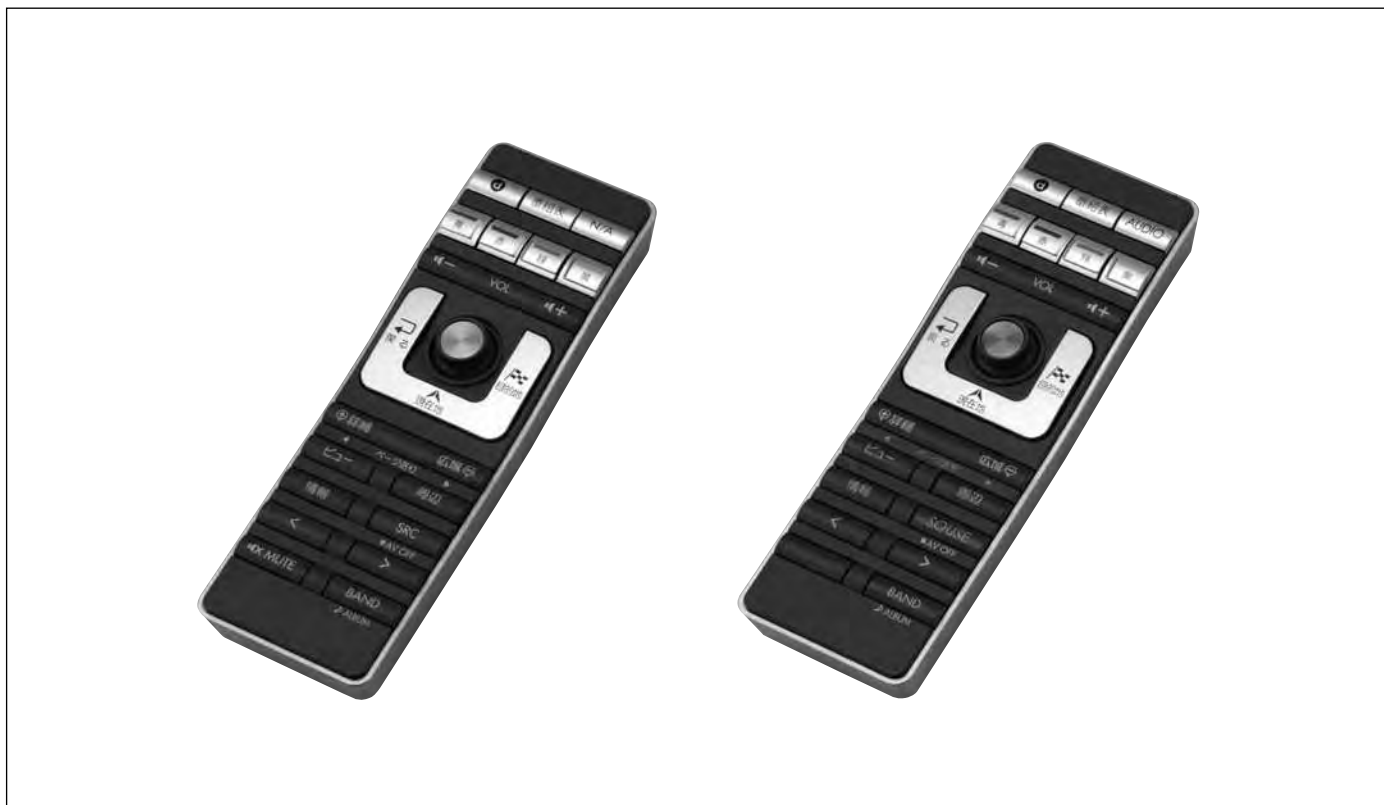
## 標準リモコン(18 キー) Standard Type(18 Keys) CHINA



## 標準リモコン(41 キー) Standard Type(41 Keys) MALAYSIA



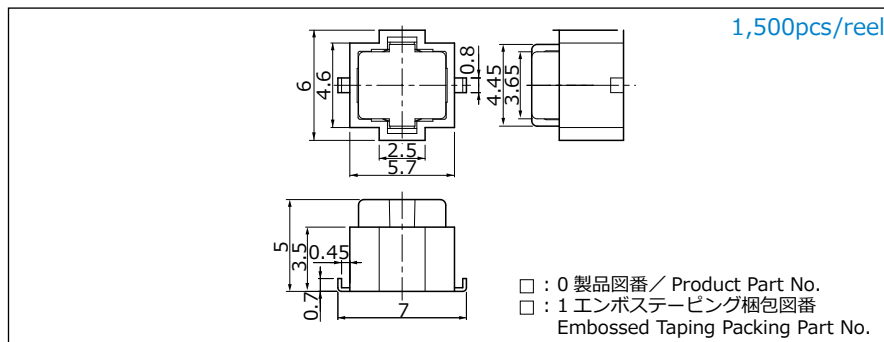
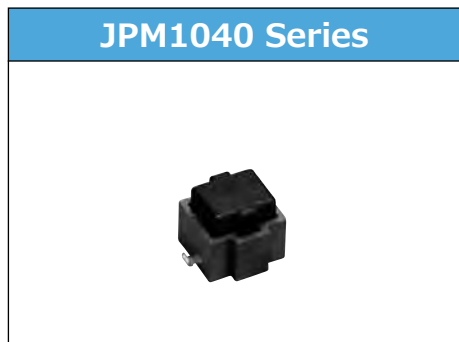
## カスタムリモコン(例) Custom-designed Remote Control Unit (Example)



# スイッチ Switches

## ロングストロークプッシュスイッチ(メタルコンタクトタイプ) Long Stroke Push Switches(Metal Contact Type)

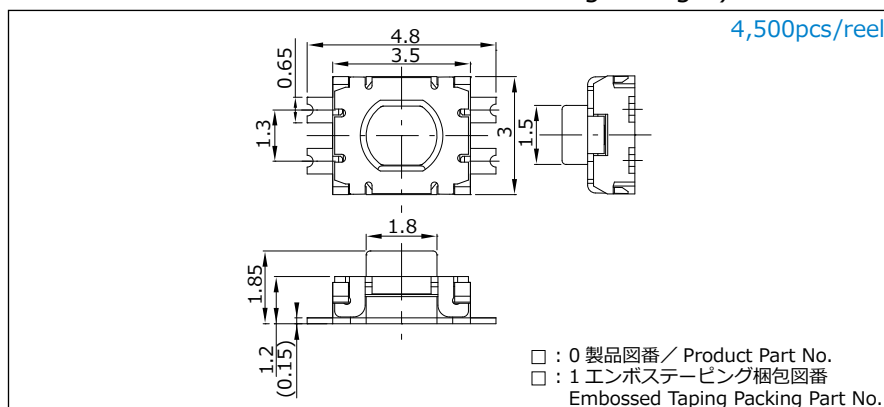
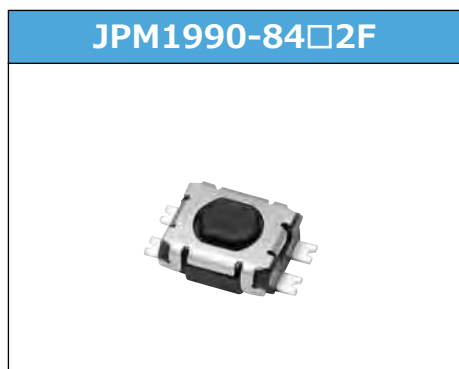
- 金属接点構造を採用
- 高作動力・長ストローク及び好クリック感触で、操作時の誤作動を防止
- Metal contact structure.
- High operation force, long stroke and sure indexing feedback help prevent incomplete operation.



| Spec                                   |                 | JPM1040 Series |               |               |               |               |               |
|--|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|
| Force (N)                              |                 | 1.57           | 1.96          | 2.45          | 3             | 3.5           | 4             |
| Stroke (mm)                            |                 |                |               |               |               |               |               |
| On 1.3 mm                              | Drawing No.(DG) | JPM1040-12□3F  | JPM1040-05□3F | JPM1040-04□4F | JPM1040-07□3F | JPM1040-09□3F | JPM1040-10□3F |
| Full 1.5mm                             | Drawing No.(J)  | JPM1040-42□1F  | JPM1040-45□1F | JPM1040-44□1F | JPM1040-47□1F | JPM1040-49□1F | JPM1040-40□1F |
| On 1.3 mm                              | Drawing No.(DG) | JPM1040-22□3F  | JPM1040-25□3F | JPM1040-24□4F | JPM1040-27□3F | JPM1040-29□3F | JPM1040-20□3F |
| Full 1.65mm                            | Drawing No.(J)  | Not under MP   | Not under MP  | Not under MP  | Not under MP  | Not under MP  | Not under MP  |
| On 1.0 mm                              | Drawing No.(DG) | JPM1040-32□3F  | JPM1040-35□3F | JPM1040-34□4F | JPM1040-37□3F | JPM1040-39□3F | JPM1040-30□3F |
| Full 1.35mm<br>(with external stopper) | Drawing No.(J)  | JPM1040-62□1F  | JPM1040-65□1F | JPM1040-64□1F | JPM1040-67□1F | JPM1040-69□1F | JPM1040-60□1F |

## HCFプッシュスイッチ High Click Feeling Push Switch

- 業界最小クラスで、セットの小型化、薄型化に貢献
- 高接触信頼性(接点密封構造、実装強度)
- It is one of the smallest in the industry, contributing to the increased downsizing of equipment.
- Features high contact reliability (contact point's sealed structure and mounting strength).

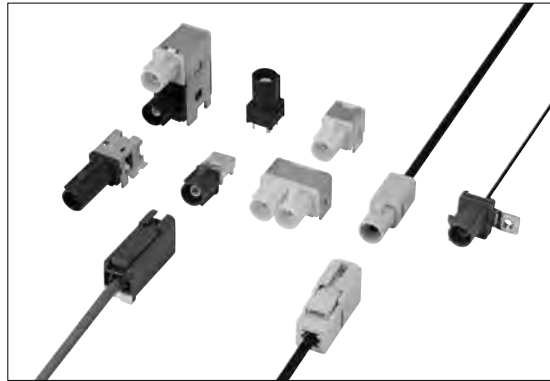


|                        |                            |
|------------------------|----------------------------|
| 定格<br>Rating           | DC12V 50mA                 |
| 作動力<br>Operating Force | 4.8N                       |
| ストローク<br>Stroke        | 0.15mm                     |
| 動作寿命<br>Operating Life | 200,000 回<br>200,000cycles |

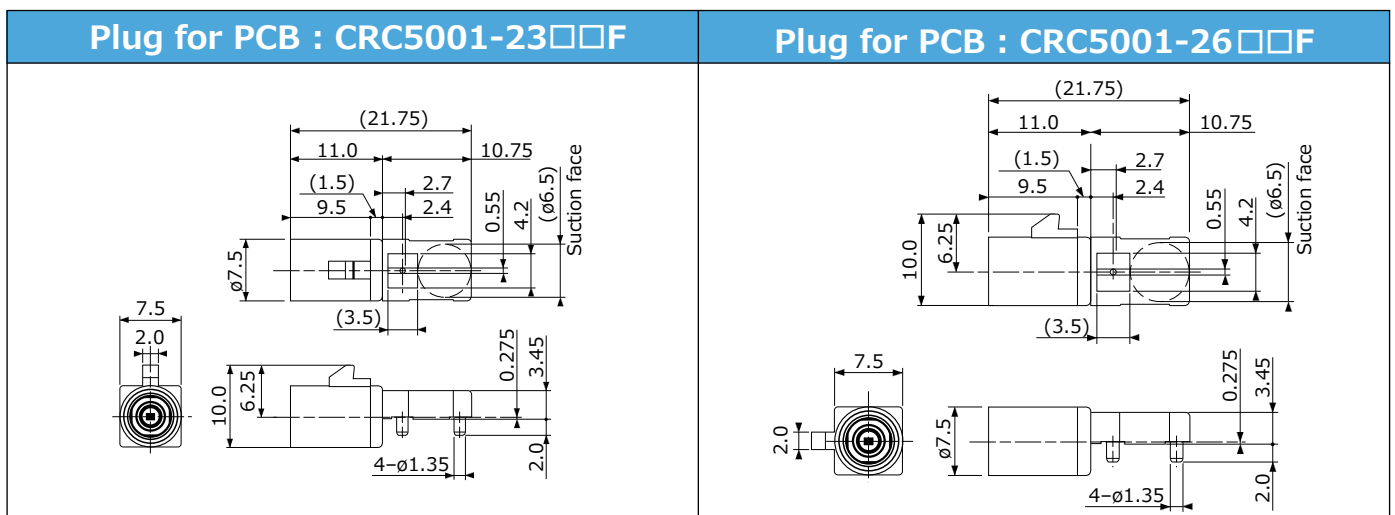
# 同軸コネクタ Coaxial Connectors

## FAKRA 対応同軸コネクタ VC シリーズ Coaxial Connectors (FAKRA), VC Series

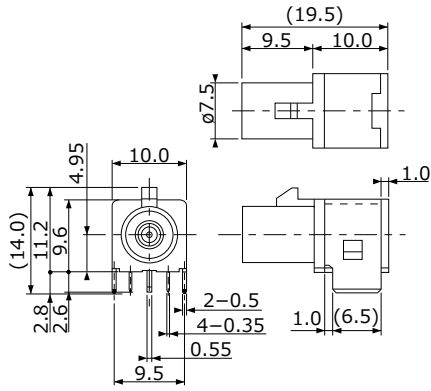
- プッシュオン・モールドロック方式
- 適合ケーブル：50Ω同軸ケーブル  
0.8D(外径 $\phi$ 1.25mm/ $\phi$ 1.7mm)  
1.5D(外径 $\phi$ 3.0mm)  
2.5D(外径 $\phi$ 3.8mm)  
RG174(外径 $\phi$ 2.55mm)  
\* 0.8D、RG174は3GHz対応
- Push-on type mold locking system.
- Applicable cable : 50Ω coaxial cables, equivalent to 0.8D(1.25mm dia. / 1.7mm dia.), 1.5D(3.0mm dia.)and 2.5D(3.8mm dia.), and RG174(2.55mm dia.).  
\* 0.8D and RG174 are usable for up to 3GHz.



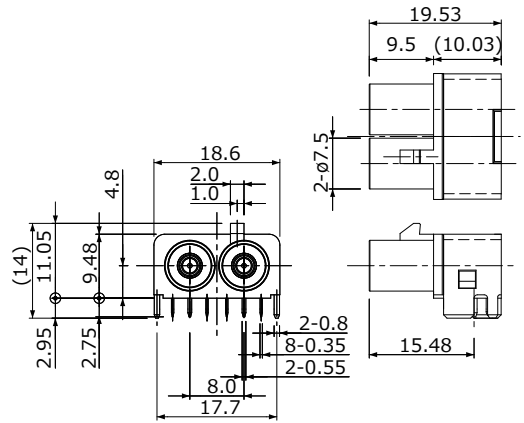
| Type<br>タイプ                           | Plug for PCB                              |   | Plug for PCB<br>(Pin in Paste)            | Cable Plug                                     |   | Cable Jack                                |  |                         |
|---------------------------------------|---|---|---|--|---|---|--|-------------------------|
| Part No.<br>図番                        | CRC5001- $\square\square\square\square$ F | CRC5002- $\square\square\square\square$ F | CRC5001- $\square\square\square\square$ F | CRC1001- $\square\square\square\square$ F      |   | CRS9001- $\square\square\square\square$ F | CRS9001- $\square\square\square\square$ F<br>CRS9002- $\square\square\square\square$ F |                         |
| $\square\square$                      | 39<br>(DIP) Single                        | 11<br>(DIP) Twin                          | 26, 23, 25<br>(DIP) Single                | 08<br>Single                                   | 36 ~ 41, 49 ~ 51<br>for Bracket                           | 04<br>Single                              | 02<br>Single/Twin  | 03<br>Single/Twin       |
| Rating<br>定格電圧電流                      | AC250V 1A                                 |   | AC250V 1A                                 | AC250V 1A                                      |   | AC250V 1A                                 |  |                         |
| Frequency Range<br>周波数範囲              | DC ~ 4GHz                                 |   | DC ~ 4GHz                                 | DC ~ 6GHz(1.5D)<br>DC ~ 3GHz(RG174)            | DC ~ 3GHz   | DC ~ 3GHz                                 | DC ~ 6GHz(1.5D)<br>DC ~ 3GHz(RG174)  | DC ~ 6GHz               |
| Nominal Impedance<br>公称インピーダンス        | 50Ω                                       |   | 50Ω                                       | 50Ω  |   | 50Ω                                       |  |                         |
| V.S.W.R.<br>電圧定在波比                    | 1.3 max. (DC ~ 4GHz)                      |   | 1.3 max.(DC~4GHz)                         | 1.3 max. (DC ~ 3GHz)<br>1.5 max.(3GHz ~ 6GHz)  | 1.5 max. (DC ~ 3GHz)                                      | 1.3 max. (DC ~ 3GHz)                      | 1.3 max.(DC ~ 3GHz)<br>1.5 max.(3GHz ~ 6GHz)   |                         |
| Operating Temperature Range<br>使用温度範囲 | -40°C ~ +105°C                            |   | -40°C ~ +105°C                            | -40°C ~ +105°C                                 |   | -40°C ~ +105°C                            |  |                         |
| Applicable Cable (O.D.)<br>適合ケーブル(外径) | -   | -   | -   | 1.5D ( $\phi$ 3.0mm)<br>RG174 ( $\phi$ 2.55mm) | 0.8D<br>( $\phi$ 1.25mm, $\phi$ 1.46mm,<br>$\phi$ 1.70mm) | 0.8D<br>( $\phi$ 1.7mm)                   | 1.5D ( $\phi$ 3.0mm)<br>RG174 ( $\phi$ 2.55mm)   | 2.5D<br>( $\phi$ 3.8mm) |
| Cord Retention Force<br>ケーブル接続強度      | -   | -   | -   | 100N min. (1.5D)<br>80N min. (RG174)           | 19.6N min.  | 39.2N min.                                | 100N min. (1.5D)<br>80N min. (RG174)   | 100N min.               |



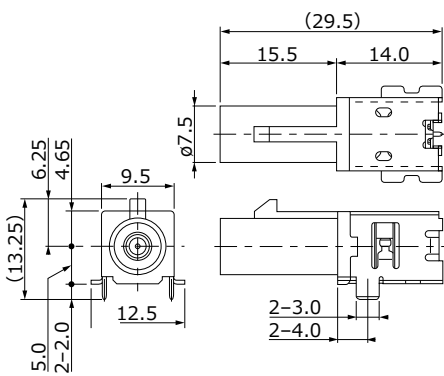
**Plug for PCB : CRC5001-39□□F**



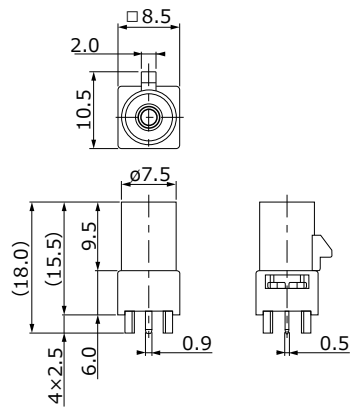
**Plug for PCB : CRC5002-11□□F**



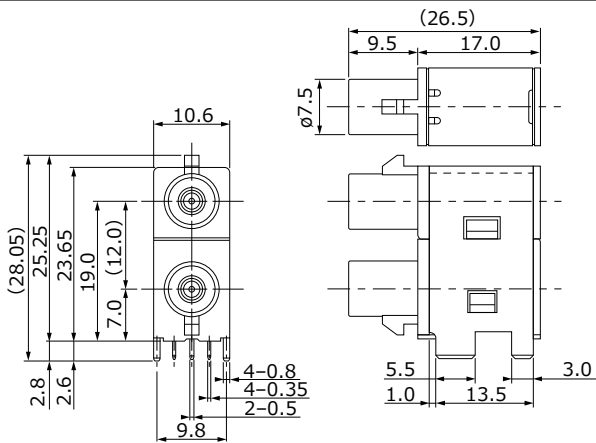
**Plug for PCB : CRC5001-47□□F**



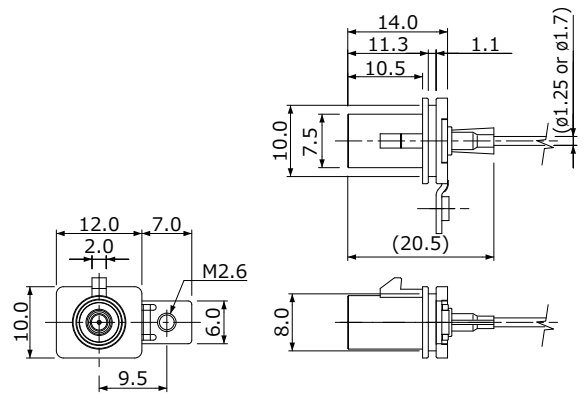
**Plug for PCB : CRC5001-65□□F**



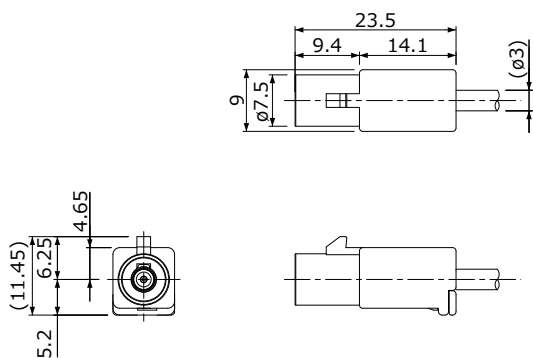
**Plug for PCB : CRC5002-4401F**



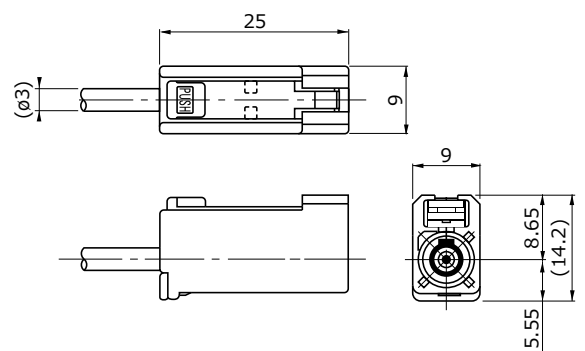
**Cable Plug for Bracket : CRC1001-□□□□F**



**Cable Plug : CRC1001-08□□F**



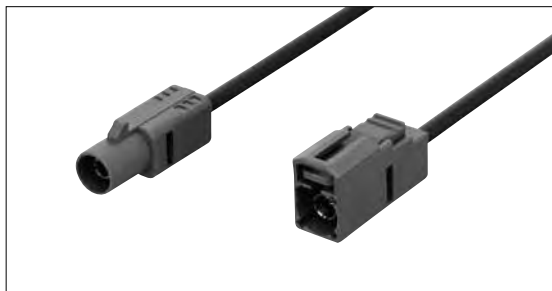
**Cable Jack : CRS9001-02□□F**



## FAKRA 対応同軸コネクタ VC-2 シリーズ Coaxial Connectors (FAKRA), VC-2 Series

- プッシュオン・モールドロック方式
- 適合ケーブル : 1.5D (外径 $\phi$ 3.0mm)
- 周波数範囲 : DC ~ 4.0GHz

- Push-on type, mold locking structure.
- Applicable cable : 1.5D (3.0mm dia.)
- Frequency range : DC to 4GHz



| Cable Plug : CRC1001-52□□F | Cable Jack : CRS9001-23□□F |
|----------------------------|----------------------------|
|                            |                            |

## TC-4 シリーズ(6GHz 対応) TC-4 Series(6GHz)

- 嵌合高さ2.7mm
- 適用ケーブル :  $\phi$ 0.81mm
- 測定用SMA変換コネクタを用意

- 2.7mm height when mated.
- Applicable cable : 0.81mm dia.
- An SMA conversion connector intended for measurement is available.



| Receptacle : CRS5001-1401F | Plug : CRC9001-2101F |
|----------------------------|----------------------|
|                            |                      |

## TC-7B シリーズ(6GHz 対応) TC-7B Series(6GHz)

- 嵌合高さ1.1mm
- 適用ケーブル :  $\phi$ 0.81mm

- 1.1mm height when mated.
- Applicable cable : 0.81mm dia.

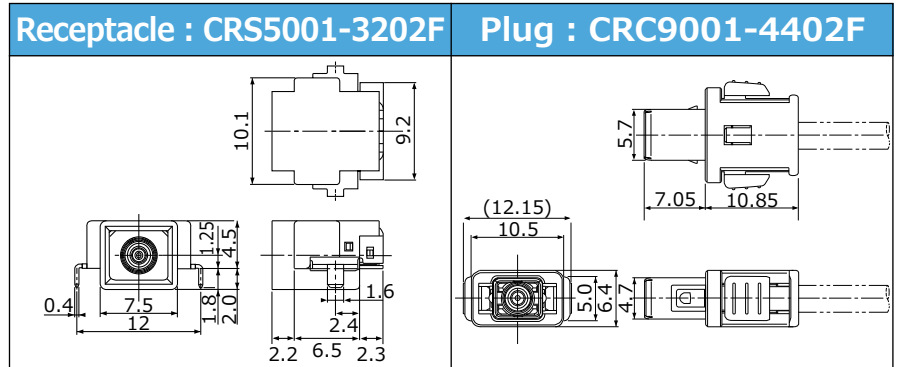
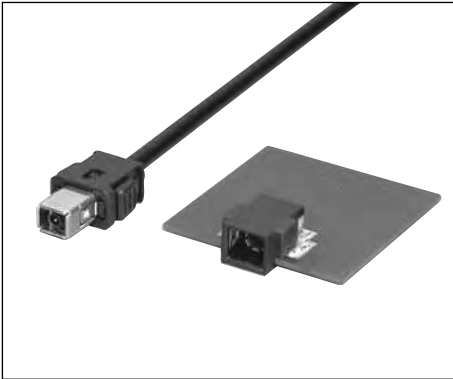


| Receptacle : CRS5001-6201F | Plug : CRC9001-9402F |
|----------------------------|----------------------|
|                            |                      |

## 角型同軸コネクタ(TC-15シリーズ) Rectangular Coaxial Connectors(TC-15 Series)

- 6GHzまで対応
- メタルロック方式・嵌合保持力100N
- 基板実装高さ4.5mm
- 適合ケーブル：50Ω系同軸ケーブル1.5D相当 (外径φ3.0)
- 使用温度範囲：-40℃~+105℃

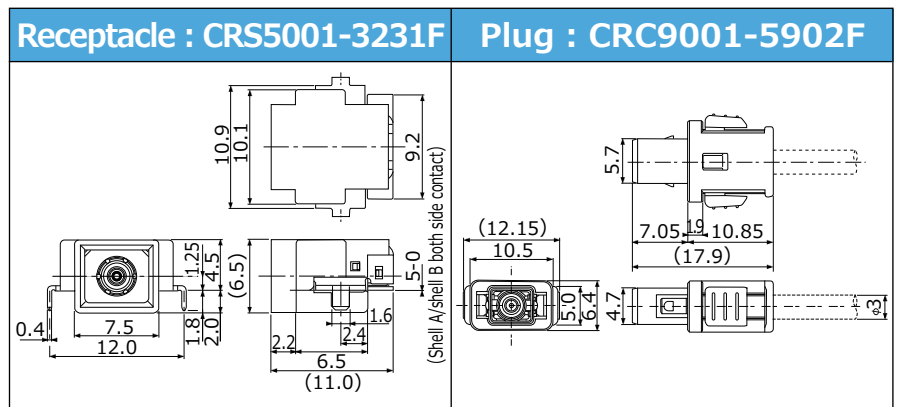
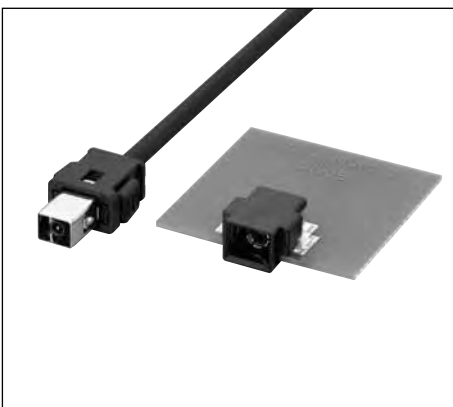
- Operational up to 6GHz.
- Metal locking system. Provides a 100N mating retention force.
- 4.5mm height when mounted.
- Applicable cable : 50Ω coaxial cables, equivalent to 1.5D (3.0mm dia.).
- Operating temperature range : -40℃ to +105℃



## 角型同軸コネクタ(TC-15シリーズ、75Ωタイプ) Rectangular Coaxial Connectors(TC-15 Series, 75Ω Type)

- 6GHzまで対応
- メタルロック方式・嵌合保持力100N
- 基板実装高さ4.5mm
- 適合ケーブル：75Ω系同軸ケーブル1.5C相当 (外径φ3.0)
- 使用温度範囲：-40℃~+105℃

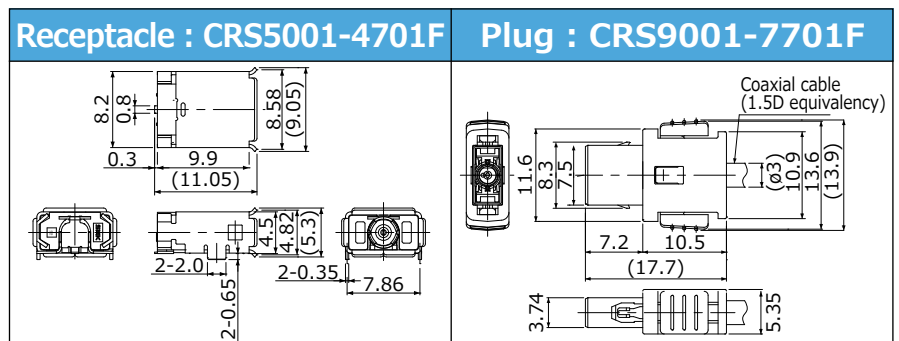
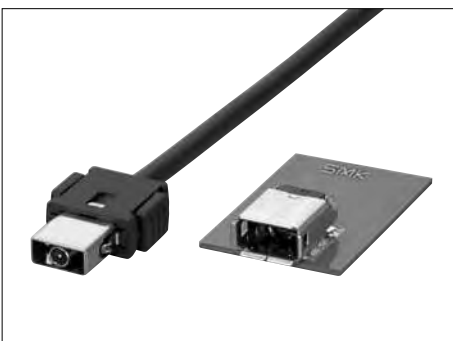
- Operational up to 6GHz.
- Metal locking system. Provides a 100N mating retention force.
- 4.5mm height when mounted.
- Applicable cable : 75Ω coaxial cables, equivalent to 1.5C (3.0mm dia.).
- Operating temperature range : -40℃ to +105℃



## 角型同軸コネクタ(TC-25シリーズ) Rectangular Coaxial Connector(TC-25 Series)

- 6GHzまで対応
- プラグ組立工数の削減
- コネクタ低挿入力による良好な嵌合操作性
- 使用温度範囲：-40℃~+105℃

- Operational up to 6GHz
- Reducing the parts count contributes to improved assembly workability.
- Connector's low insertion force ensures excellent mounting performance.
- Operating temperature range : -40℃ to +105℃



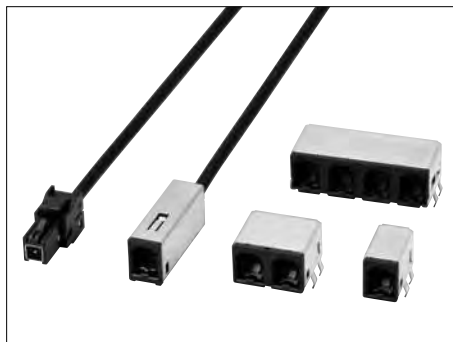


# 地上デジタル放送対応 角型アンテナコネクタ VR-1 シリーズ(1GHz 対応)

## Rectangular Connectors Compatible with Terrestrial Digital Broadcast, VR-1 Series (1GHz)

- プッシュオン・モールドロック方式
- 嵌合保持力：70N以上
- 適合ケーブル：1.2C、1.5C、0.8D、1.0D、1.5D
- 使用温度範囲：-30℃～+105℃

- Push-on mold locking structure.
- Cable with drawal force: 70N min.
- Applicable cable: 1.2C, 1.5C, 0.8D, 1.0D, 1.5D
- Operating temperature range: -30℃ to +105℃



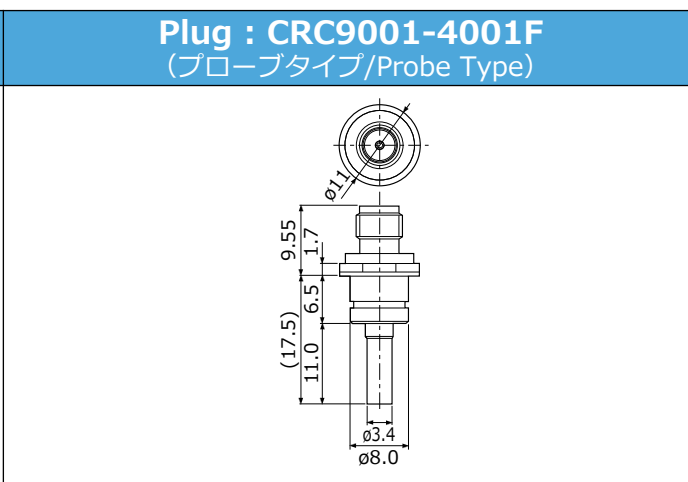
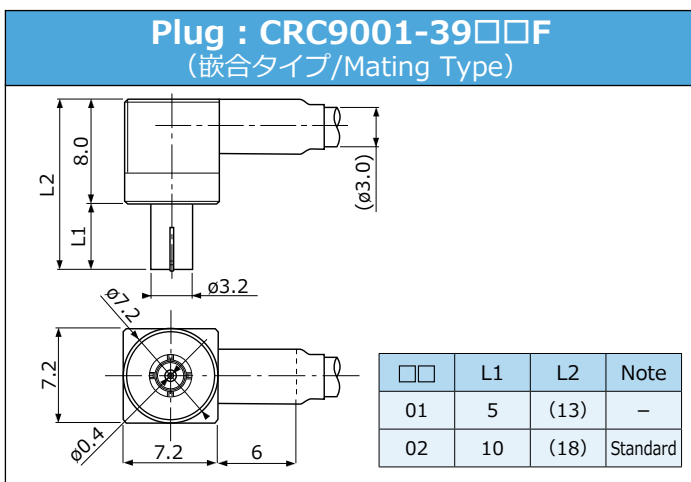
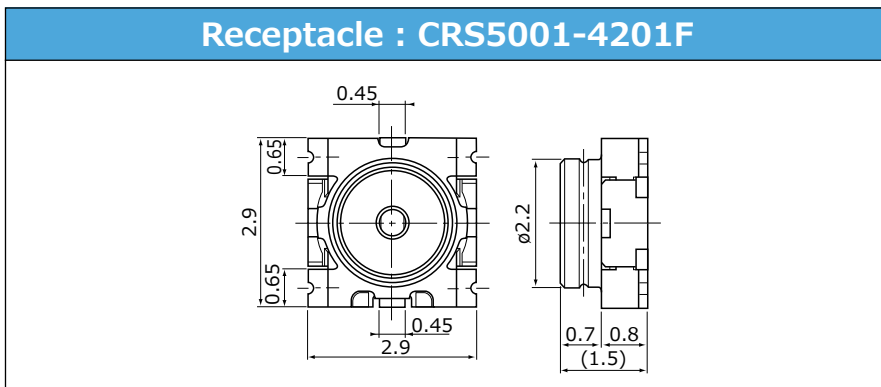
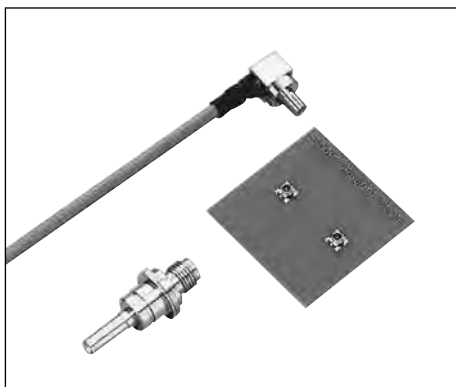
|  |  |
|--|--|
| <p><b>Receptacle : CSS5001-7M11F</b></p> | <p><b>Receptacle : CSS5002-6M11F</b></p>                           |
| <p><b>Receptacle : CSS5304-2F11F</b></p> | <p><b>Receptacle : CSS1001-2202F</b></p> <p>中継タイプ / Relay Type</p> |
| <p><b>Plug : CSC1001-8C01F</b></p>       |  |

# スイッチ付同軸コネクタ Coaxial Connectors with Switch

●機器の検査、測定

●Inspecting and measuring of equipment.

## TS-7 シリーズ(6GHz対応) TS-7 Series(6GHz)



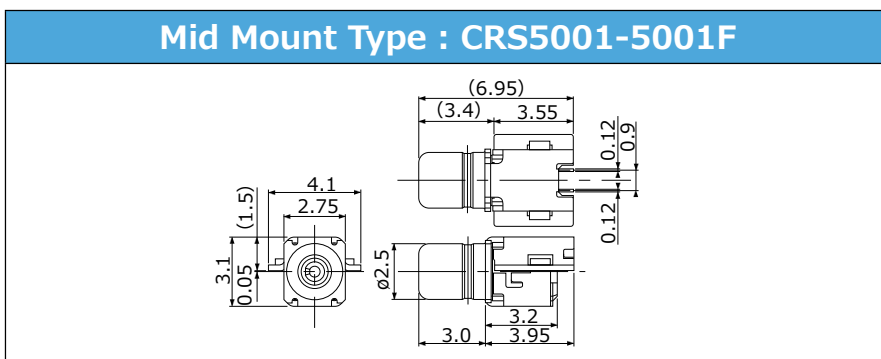
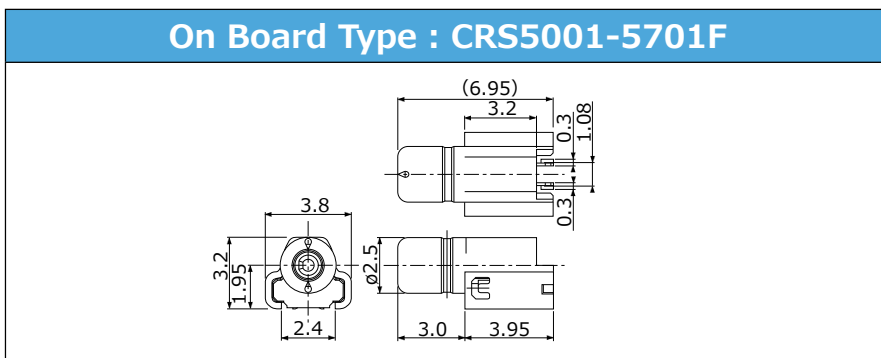
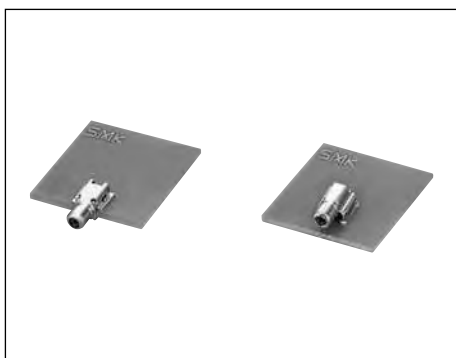
## TS-9B シリーズ(4GHz対応) TS-9B Series(4GHz)

●外部接続用

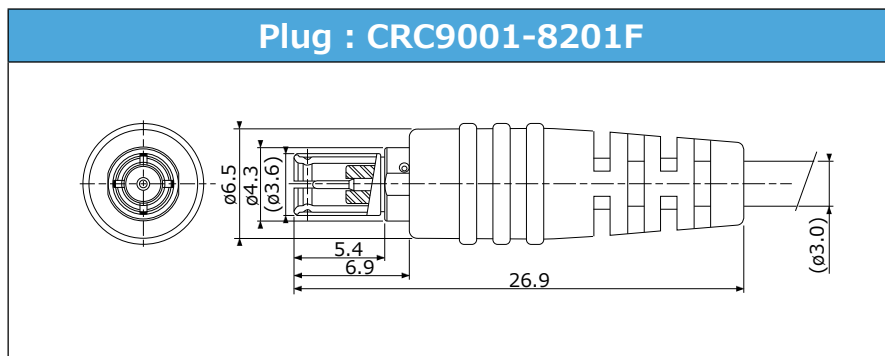
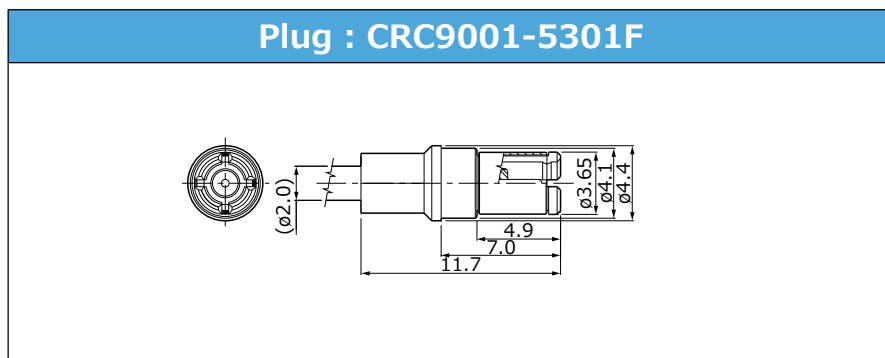
●For external connection.

●挿抜回数 : 5,000回

●Operating Life : 5,000 cycles



## TS-9Pシリーズ(TS-9用プラグ) TS-9P Series(Plugs for TS-9)



## カメラコネクタ Camera Connector

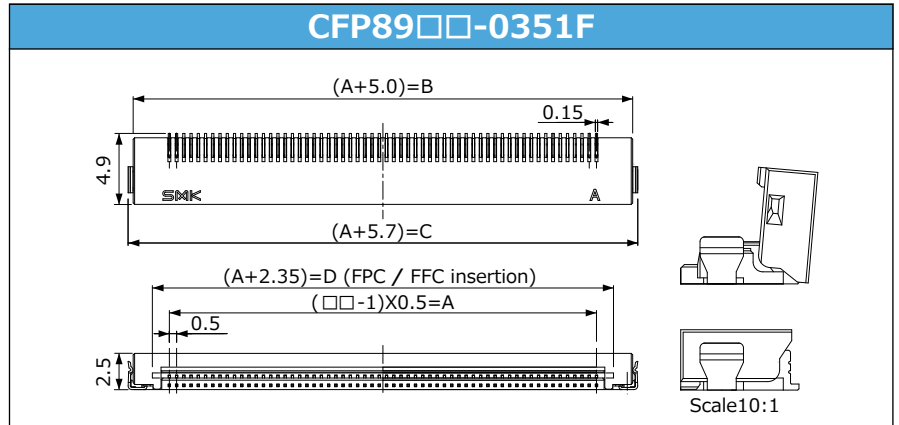


- SMBタイプの同軸用カメラコネクタ
  - 独自の構造で嵌合防水(IPX7、IPX9K)、嵌合気密(10kPa max.)を実現
  - X・Y軸のフローティング量は±0.25mm
- This is an SMB coaxial camera connector.
  - We have achieved stacking waterproofing(IPX7 and IPX9K) and stacking airtightness(10kPa max.) with our unique structure.
  - The amount of floating in the X and Y axes is ±0.25mm.

# FPC コネクタ FPC Connectors

## 0.5mm ピッチ(EF-51 シリーズ) 0.5mm Pitch(EF-51 Series)

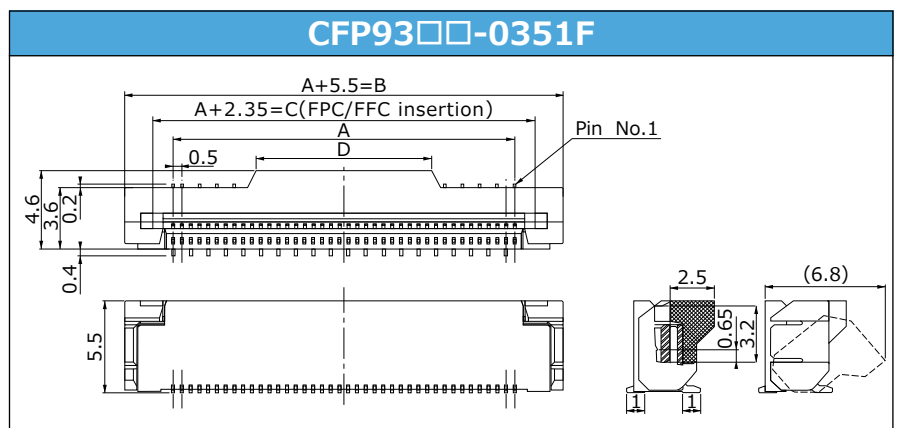
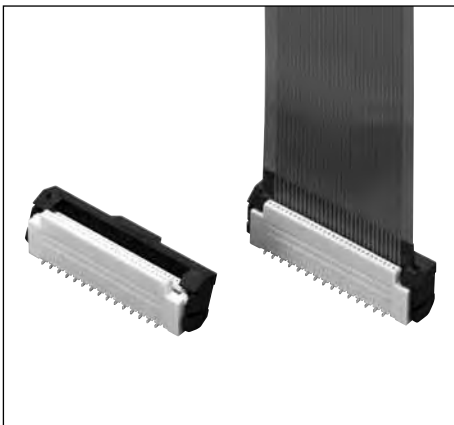
- フロントフリップロック構造
- 基板実装高さは2.5mm
- FPC抜け止め機構付
- 使用温度範囲：-40℃～+105℃



| □□<br>No. of Pins | A    | B    | C    | D     |
|-------------------|------|------|------|-------|
| 30                | 14.5 | 19.5 | 20.2 | 16.85 |
| 38                | 18.5 | 23.5 | 24.2 | 20.85 |
| 40                | 19.5 | 24.5 | 25.2 | 21.85 |

## 0.5mm ピッチ(EF-53 シリーズ) 0.5mm Pitch(EF-53 Series)

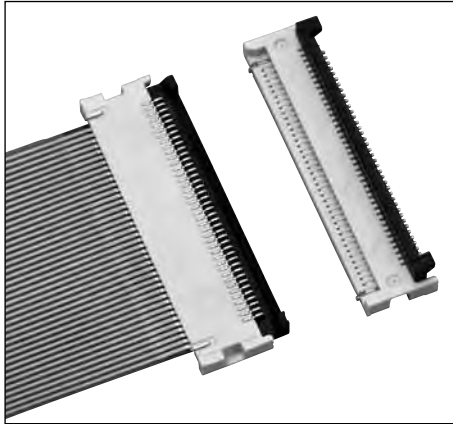
- フロントフリップロック構造
- FPC抜け止め機構付
- 使用温度範囲：-40℃～+105℃



| □□<br>No. of Pins | A    | B    | C     | D    |
|-------------------|------|------|-------|------|
| 30                | 14.5 | 20.0 | 16.85 | 5.0  |
| 38                | 18.5 | 24.0 | 20.85 | 9.0  |
| 40                | 19.5 | 25.0 | 21.85 | 10.0 |
| 50                | 24.5 | 30.0 | 26.85 | 15.0 |

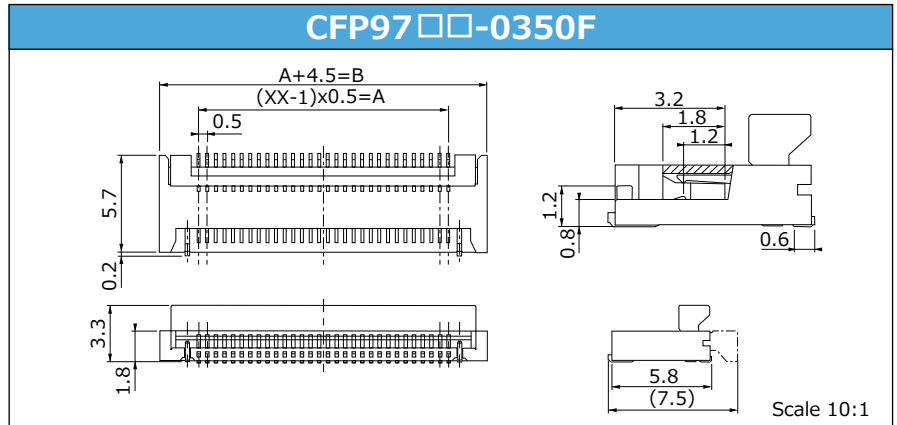
## 0.5mm Pitch (BF-51 シリーズ)

- バックフリップロック構造
- 基板実装高さは1.8mm
- 上下接点構造
- 使用温度範囲：-40℃～+105℃



## 0.5mm Pitch (BF-51 Series)

- Back flip lock structure.
- 1.8mm height when mounted.
- Both upper and lower contact structure.
- Operating temperature range : -40℃ to +105℃

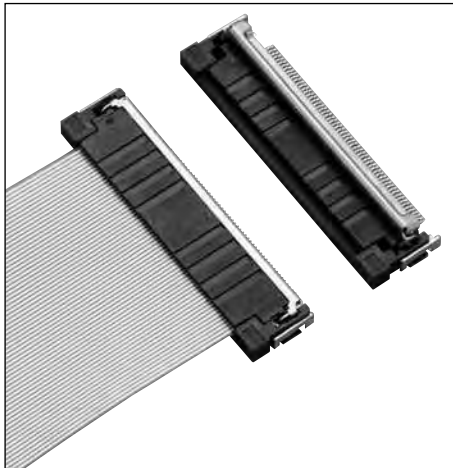


| □□<br>No. of Pins | A    | B    |
|-------------------|------|------|
| 10                | 4.5  | 9.0  |
| 22                | 10.5 | 15.0 |
| 24                | 11.5 | 16.0 |
| 26                | 12.5 | 17.0 |

| □□<br>No. of Pins | A    | B    |
|-------------------|------|------|
| 40                | 19.5 | 24.0 |
| 45                | 22.0 | 26.5 |
| 50                | 24.5 | 29.0 |
| 55                | 27.0 | 31.5 |
| 60                | 29.5 | 34.0 |

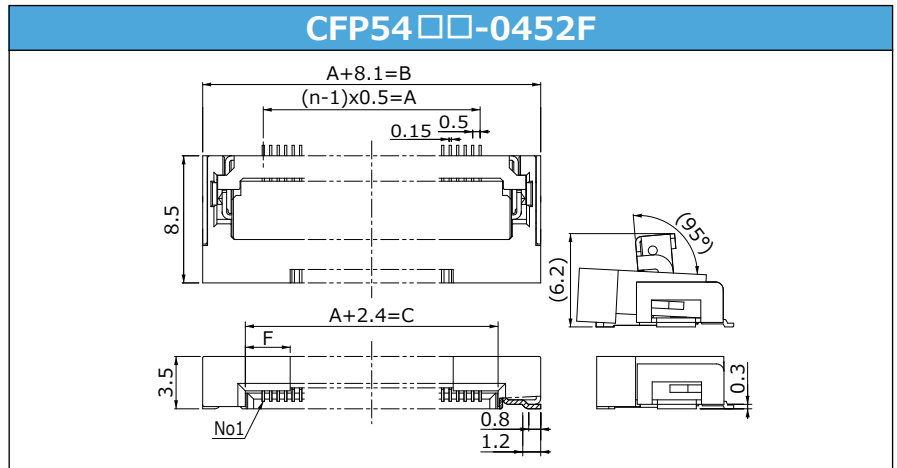
## 0.5mm Pitch (EC-05 シリーズ)

- レバー運動式カバー動作構造による、高い操作性を実現
- 適合FPC厚さ0.3±0.05mm
- 使用温度範囲：-30℃～+105℃



## 0.5mm Pitch (EC-05 Series)

- High operation performance due to the cover movement structure interlocked with the lever.
- Suitable a 0.3±0.05mm thick FPC.
- Operating temperature range : -30℃ to +105℃



| □□<br>No. of Pins | A    | B    | C    | F   |
|-------------------|------|------|------|-----|
| 32                | 15.5 | 23.6 | 17.9 | 3.0 |
| 40                | 19.5 | 27.6 | 21.9 | 3.0 |
| 50                | 24.5 | 32.6 | 26.9 | 4.0 |
| 60                | 29.5 | 37.6 | 31.9 | 5.0 |

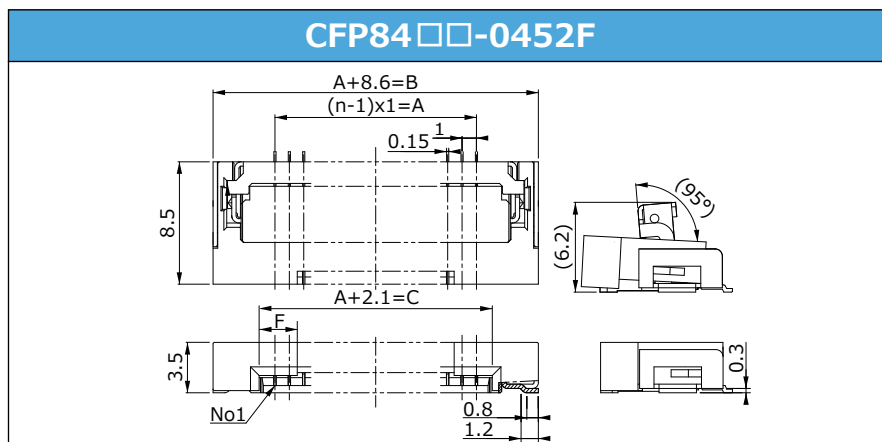
## 1.0mm Pitch (EC-10 シリーズ)

- レバー連動式カバー動作構造による、高い操作性を実現
- 適合FPC厚さ0.3±0.05mm
- 使用温度範囲：-30℃～+105℃



## 1.0mm Pitch (EC-10 Series)

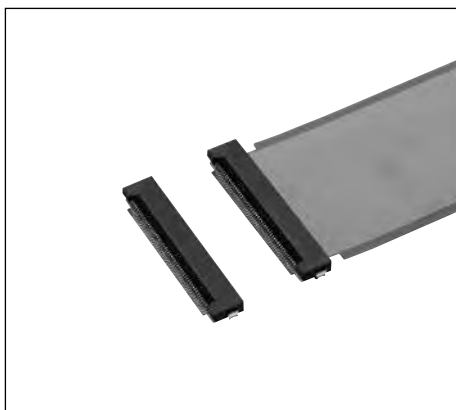
- High operation performance due to the cover movement structure interlocked with the lever.
- Suitable for 0.3±0.05mm thick FPC.
- Operating temperature range : -30℃ to +105℃



| □□<br>No. of Pins | A    | B    | C    |
|-------------------|------|------|------|
| 8                 | 7.0  | 15.6 | 9.1  |
| 11                | 10.0 | 18.6 | 12.1 |
| 12                | 11.0 | 19.6 | 13.1 |
| 16                | 15.0 | 23.6 | 17.1 |
| 20                | 19.0 | 27.6 | 21.1 |
| 22                | 21.0 | 29.6 | 23.1 |
| 25                | 24.0 | 32.6 | 26.1 |

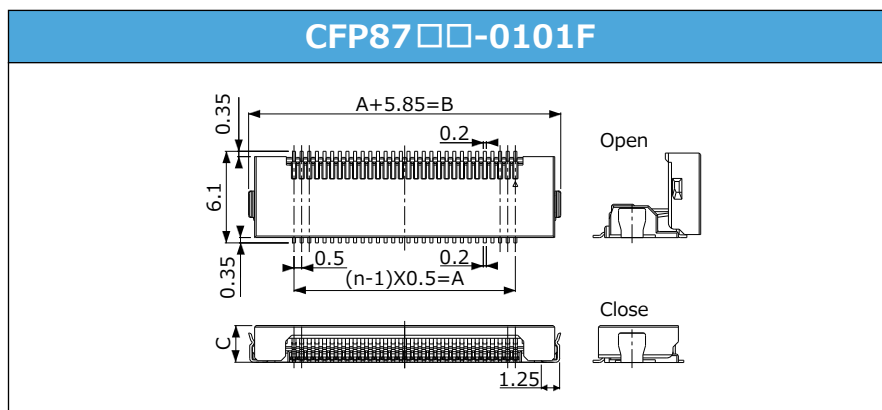
## 0.5mm Pitch (EF-5D シリーズ)

- LVDS、TMDS(HDMI)をはじめとする高速シリアル伝送に適応し、極細線同軸と同等性能
- 差動インピーダンス100Ωにマッチング
- 実装高さ2.5mm(20、30P)  
2.8mm(50P)
- 使用温度範囲：-40℃～+85℃



## 0.5mm Pitch for Shield FPC (EF-5D Series)

- Compatible with high speed serial transmission such as LVDS and TMDS(HDMI), same performance as micro coaxial.
- Differential impedance matches 100Ω.
- Low profile of 2.5mm(20,30P) and 2.8mm(50P) height when mounted.
- Operating temperature range : -40℃ to +85℃



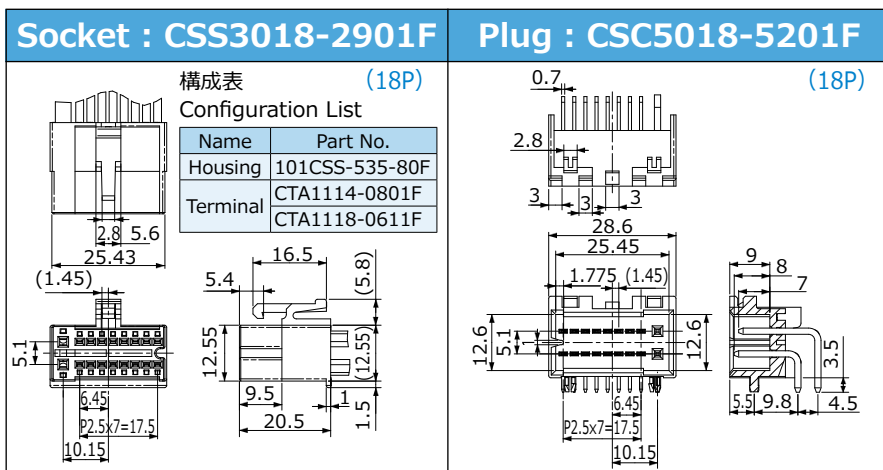
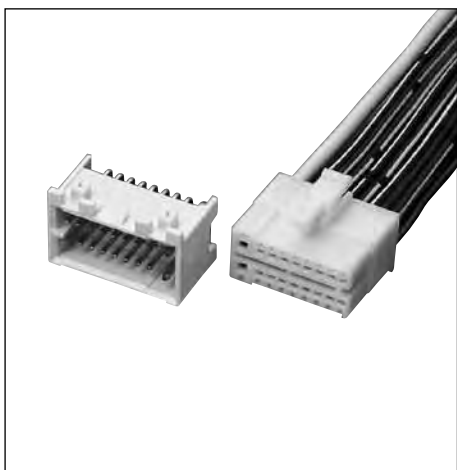
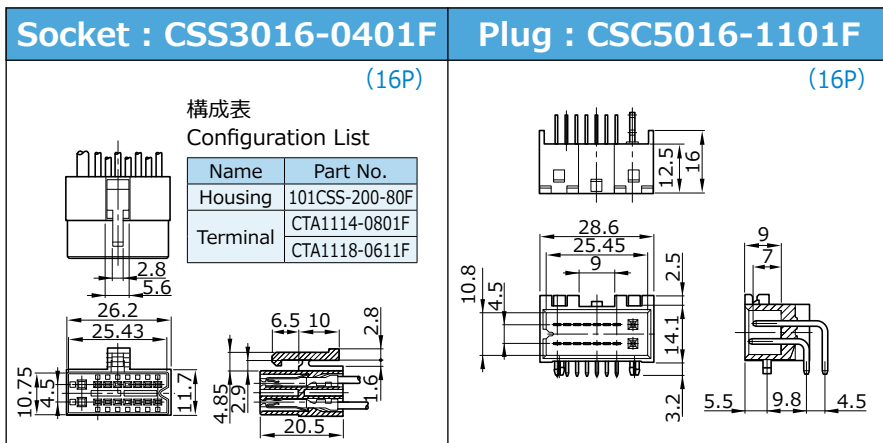
| □□<br>No. of Pins | A    | B     | C   |
|-------------------|------|-------|-----|
| 20                | 9.5  | 15.35 | 2.5 |
| 30                | 14.5 | 20.35 | 2.5 |
| 50                | 24.5 | 30.35 | 2.8 |

# インタフェースコネクタ Interface Connectors

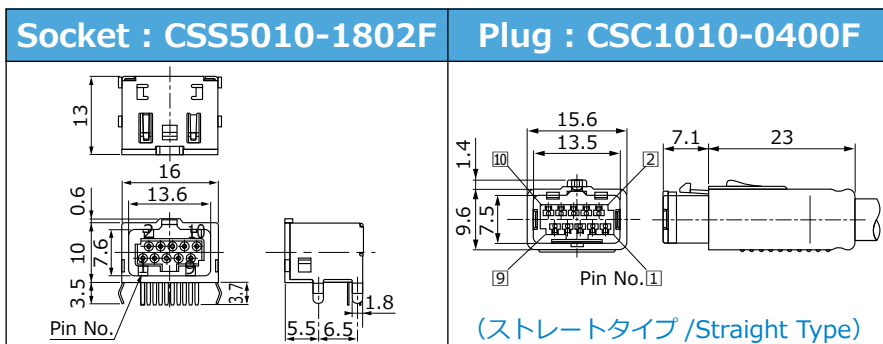
## バックパネルコネクタ (16P・18P) Back Panel Connectors (16P・18P)

- 電源供給の2極は、15A通電保証
- 信号部の14極(16P)、及び16極(18P)は、すべて3Aまで通電可能
- 使用温度範囲：-35℃～+85℃

- Two poles for power supply guaranteed for 15A capacity.
- Each of 14 poles (16 pins) and 16 poles (18 pins) for signal guaranteed for 3A capacity.
- Operating temperature range : -35℃ to +85℃



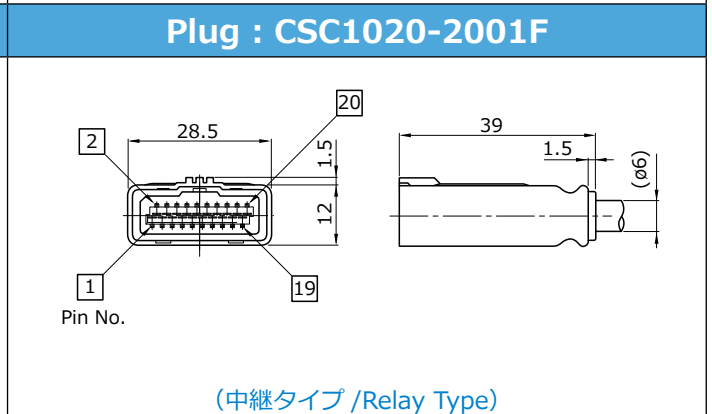
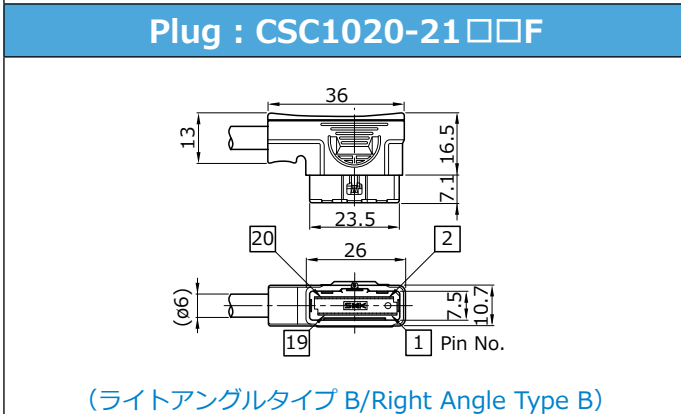
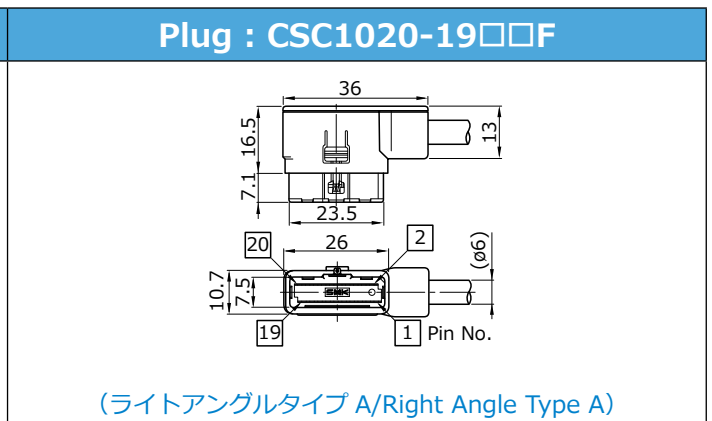
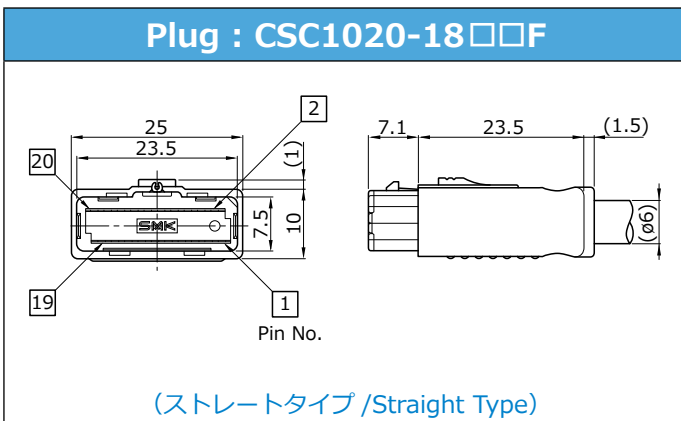
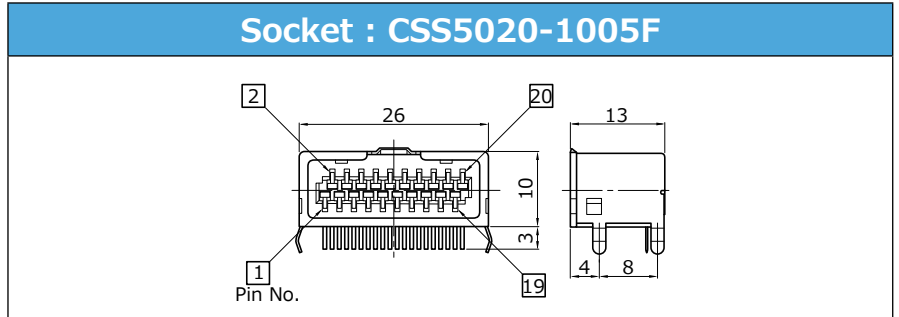
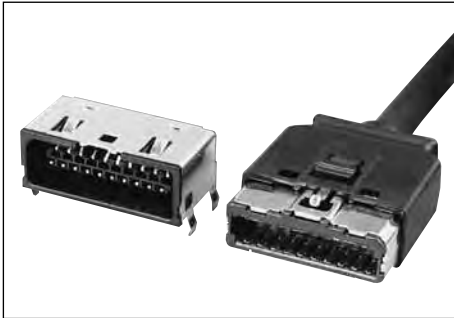
## 10P 角型コネクタ NK-10 シリーズ 10P Rectangular Connectors, NK-10 Series



## 20P 角型コネクタ 20P Rectangular Connectors

- プラグはストレート、ライトアングル、逆ライトアングルの3種類
- ケーブルの延長を可能にした中継タイプも用意

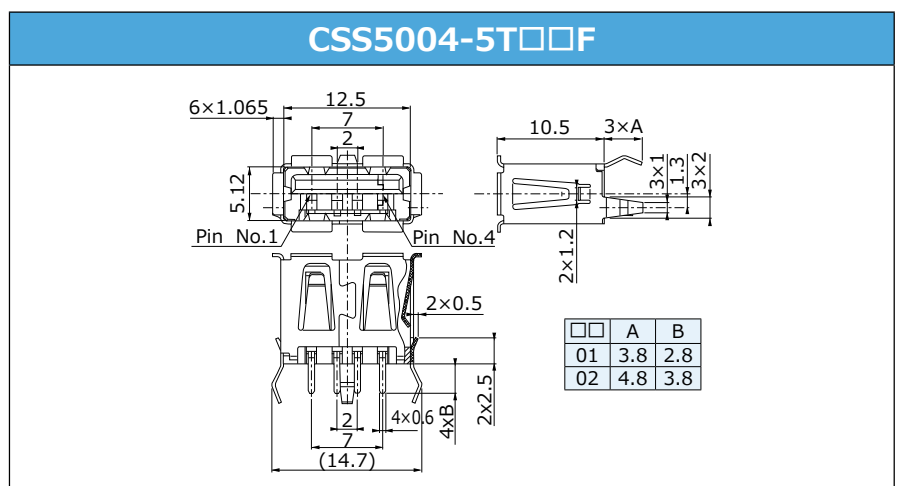
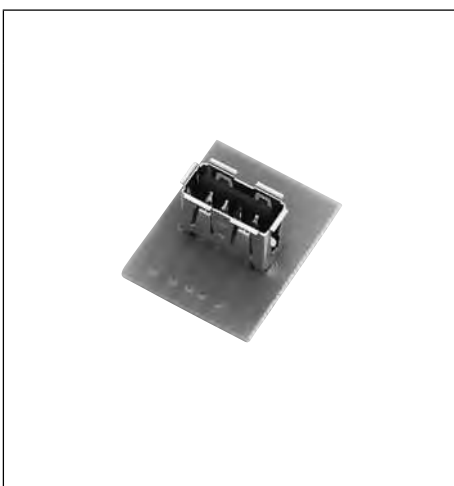
- Plugs are available in 3 optional designs of straight, right angle and inverted right angle.
- A relay type enabling cable extension also available.



## USB コネクタ USB Connector

- USB2.0規格に準拠
- バーチカルタイプ、DIPタイプ

- Conforms to USB 2.0 standard
- Vertical type, DIP type

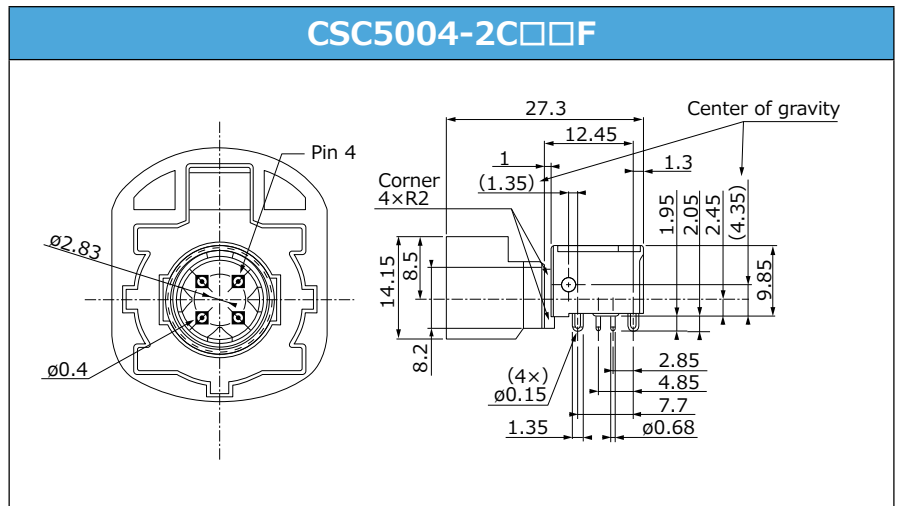
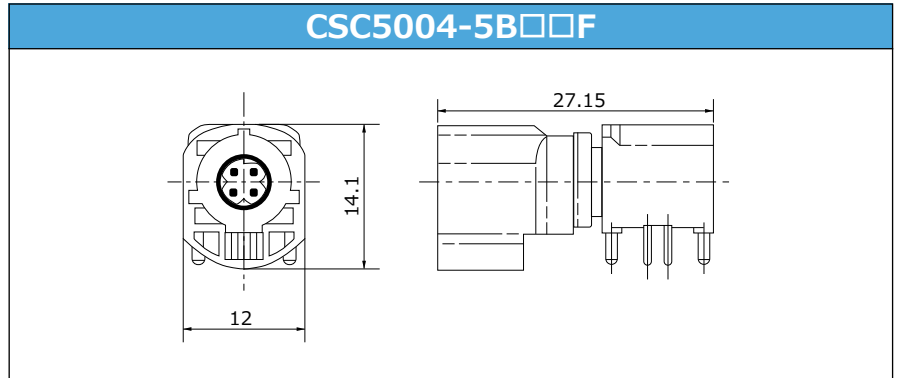




## HSD コネクタ HSD Connector

- ギガビットデータ伝送対応コネクタ
- 自動実装対応
- 定格電圧/電流：DC 100V/1.5A
- 特性インピーダンス：100Ω
- 使用温度範囲：-40℃～+105℃

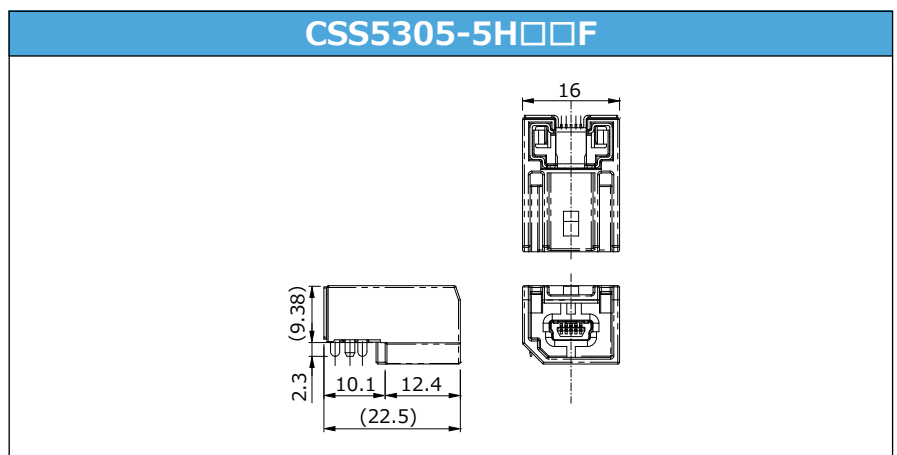
- Connector that supports gigabit data transmission.
- Supports automatic mounting.
- Rating：1.5A 100V DC
- Characteristic impedance：100Ω
- Operating temperature range：-40℃ to +105℃



## USCAR-30 コネクタ USCAR-30 Connector

- USCAR-30規格に準拠
- USB2.0規格に準拠
- 接続用途別に色別嵌合キーを用意

- Conforms to USCAR-30 standard
- Conforms to USB 2.0 standard
- Different colors of mating keys are available for connection identification.

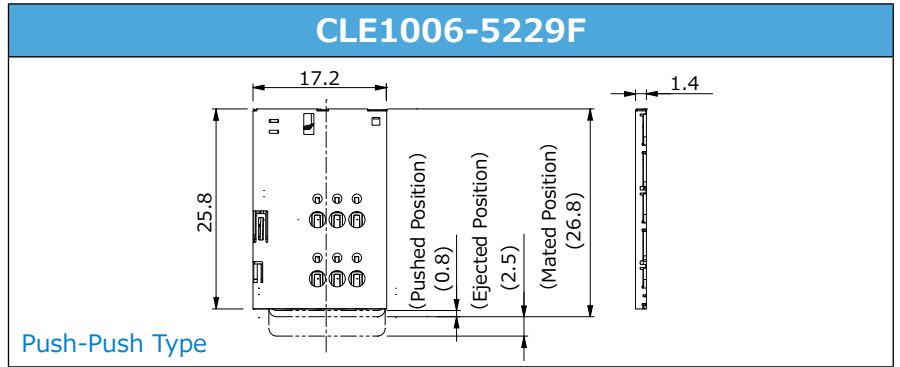
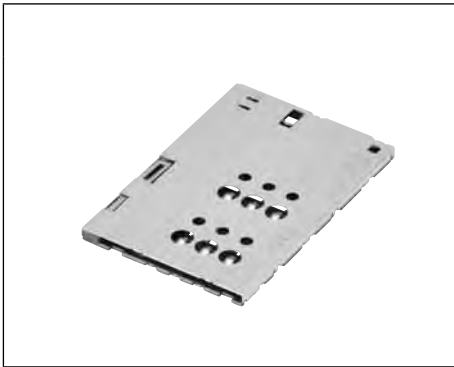
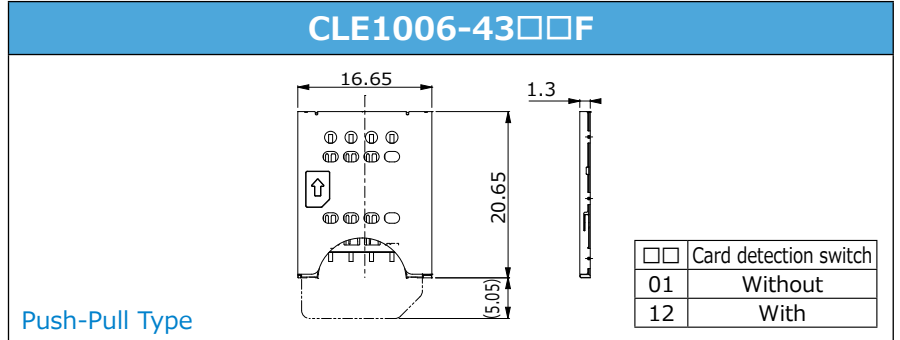
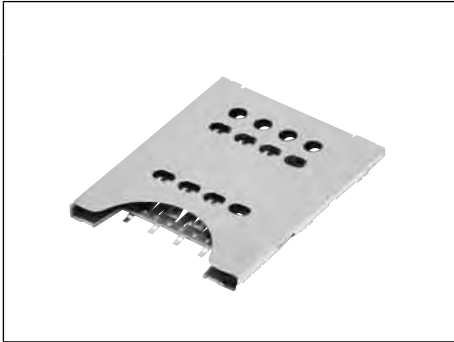


# カードコネクタ Card Connectors

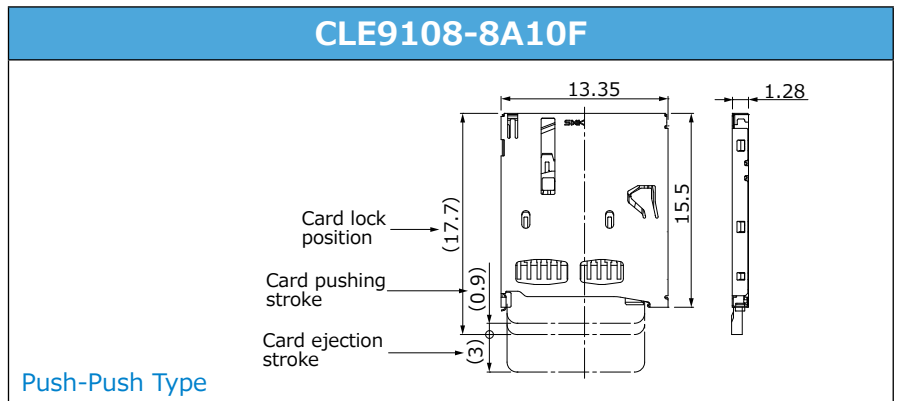
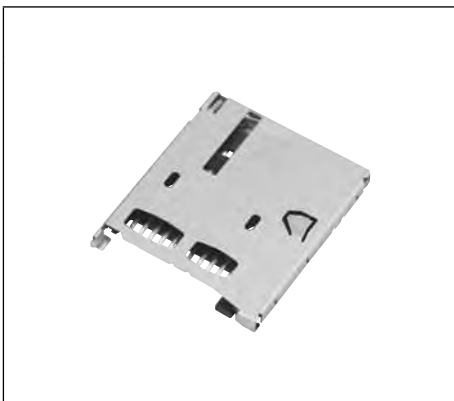
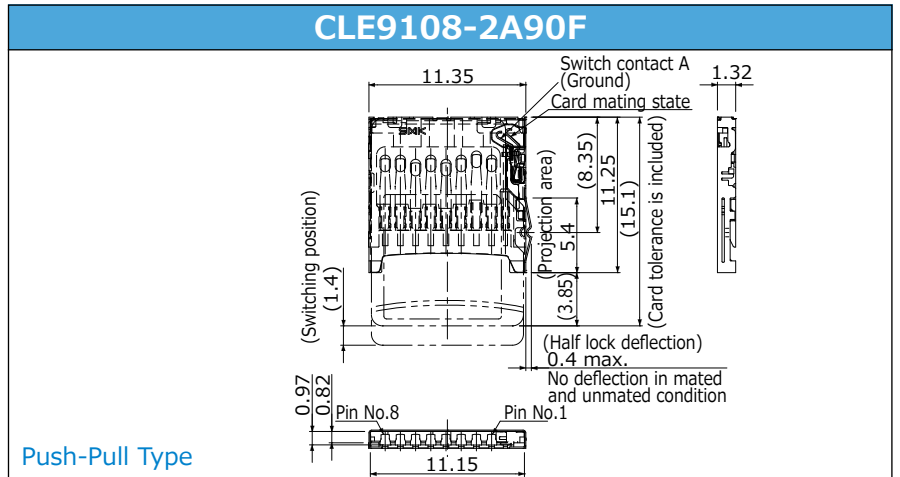
## SIM カードコネクタ SIM Card Connector

- カードの挿抜はプッシュ (ロック)-プッシュ (イジェクト)タイプとプッシュ (ロック)-プル(イジェクト)を揃えています。
- カード検知用スイッチ付

- Push(lock)-push(eject) and push(lock) – pull(eject) system for card insertion / withdrawal.
- With a card detection switch.

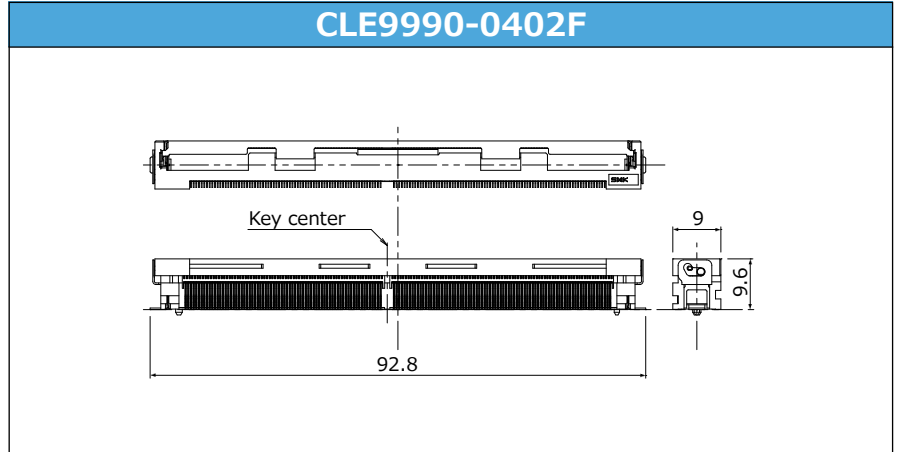


## microSD™ カードコネクタ microSD™ Card Connector

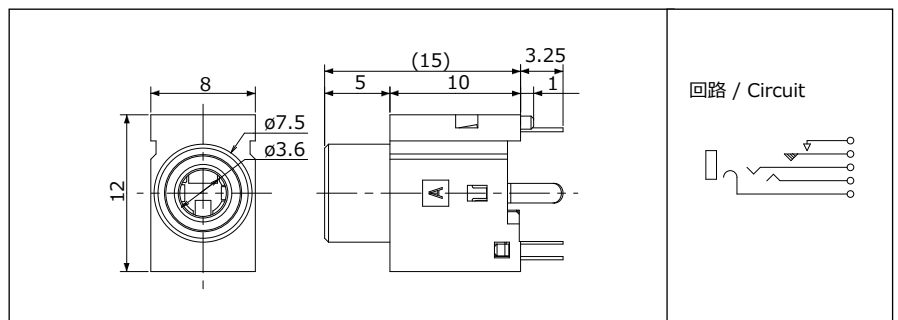
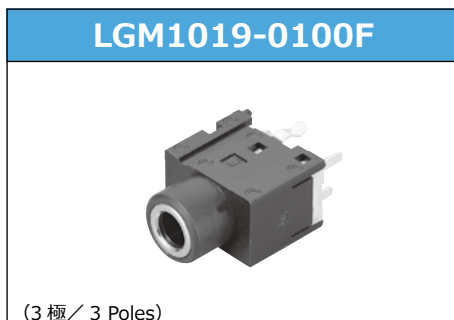
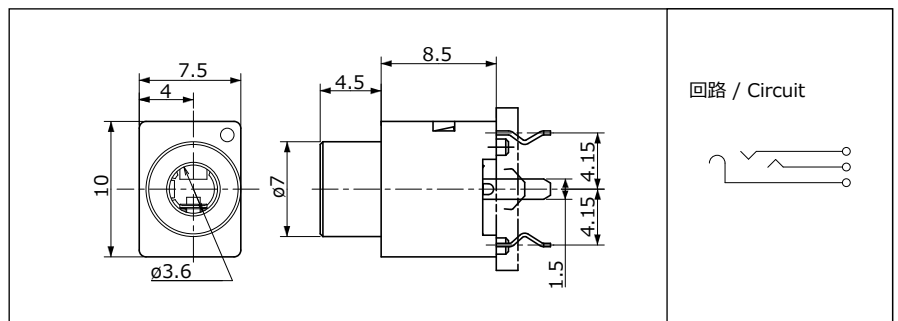
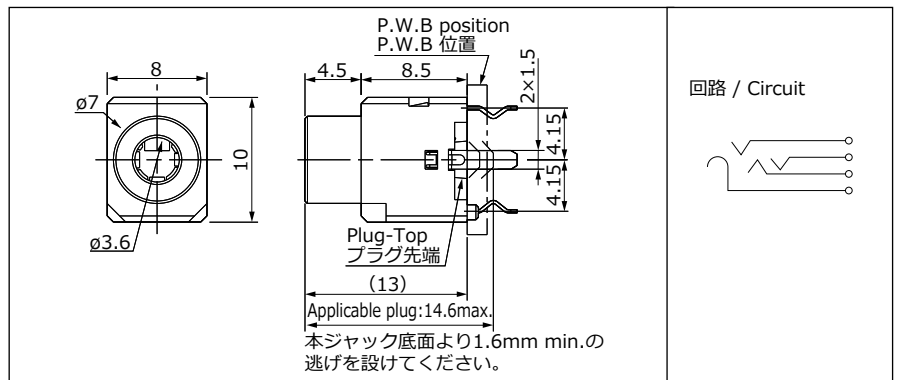


## 314P コネクタ 314P Connector

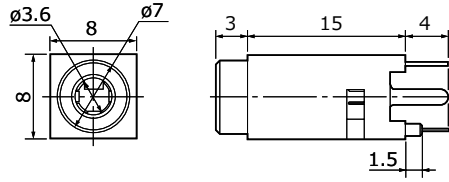
- モジュール基板を水平に保つ仮保持機能を用意
- モジュール基板の挿入角度を設けることで挿入力を軽くし、組立作業性向上に貢献
- モジュール基板高さはベース基板から5.0mm
- 使用温度範囲：-40℃～+105℃
- Equipped with an FPC provisional position maintenance function that keeps the module board level.
- Providing a module board insertion angle to lighten insertion force contributes to improved assembly workability.
- Module board height is 5.0mm from the base board.
- Operating temperature range : -40℃ to +105℃



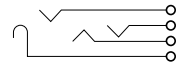
## ø3.5mm ジャック ø3.5mm Dia. Jacks



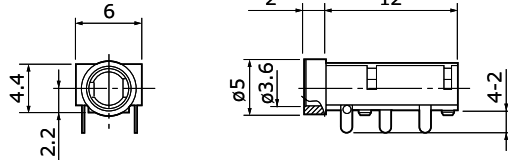
### LGT1509-0200F



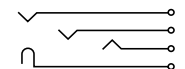
回路 / Circuit



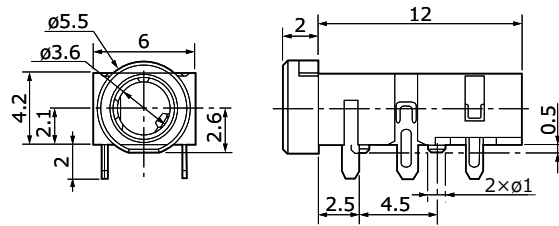
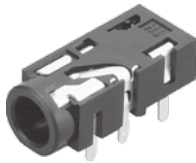
### LGY2209-0300F



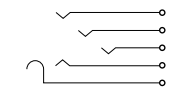
回路 / Circuit



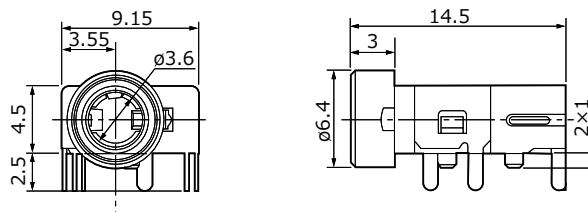
### LGY2109-0200F



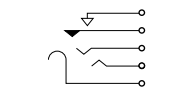
回路 / Circuit



### LGS2318-0100F



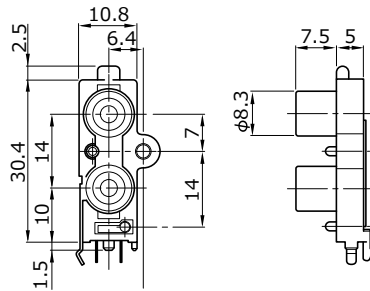
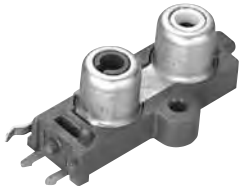
回路 / Circuit



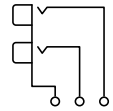
# ピンジャック Pin Jacks

- 薄型、省スペース
- ジャック前面にシールド板を設けた、ノイズ対策品もラインアップ(2P、3P、6P)
- Low profile and space-saving.
- Counter noise design with a shield plate located in front of the jack also available (2P, 3P, 6P).

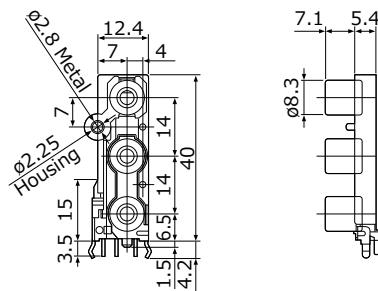
LPR1020-0600F



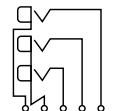
回路 / Circuit



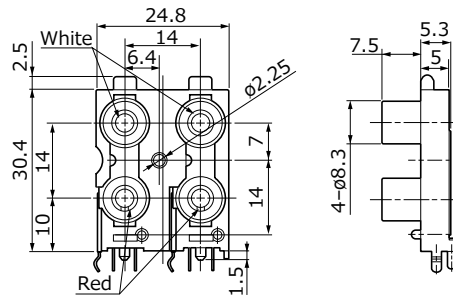
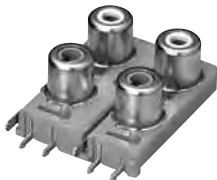
LPR6520-1S1□F



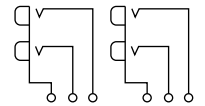
回路 / Circuit



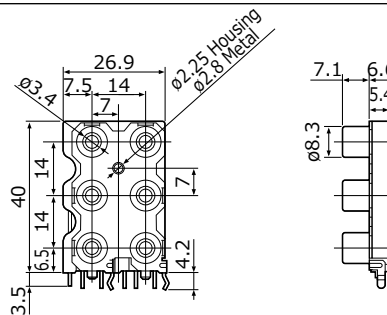
LPR1020-1210F



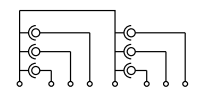
回路 / Circuit



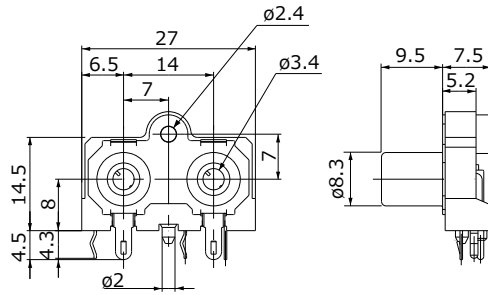
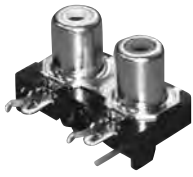
LPR6520-0S1□F



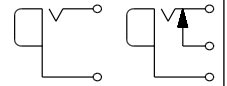
回路 / Circuit



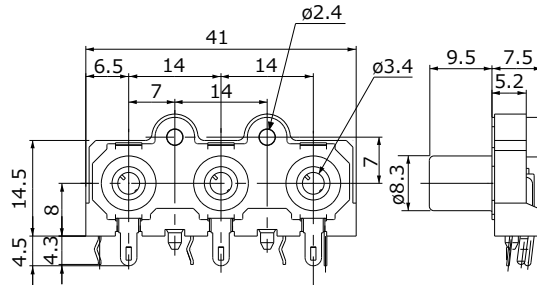
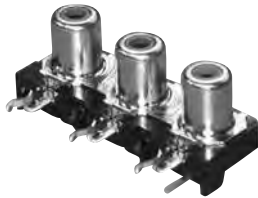
### LPR8029-05□□F



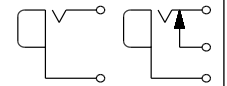
回路 / Circuit



### LPR8029-04□□F



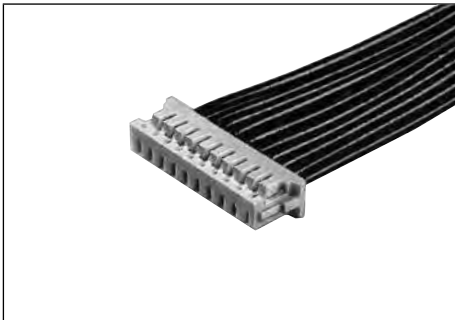
回路 / Circuit



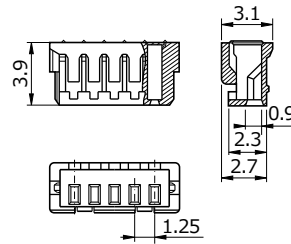
## 電線対基板コネクタ Wire to Board Connectors

### 圧着コネクタ(HPシリーズ) Crimp Connector (HP Series)

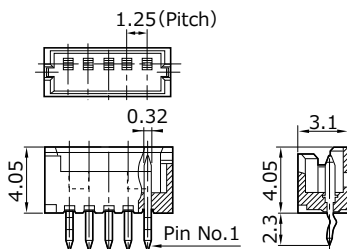
- 1.25mmピッチの圧着コネクタ
- プラグはストレートタイプとライトアングルタイプを用意
- A 1.25mm pitch crimping connector.
- Plugs are available in straight and right-angle types.



#### Socket : CHP11□□-0101

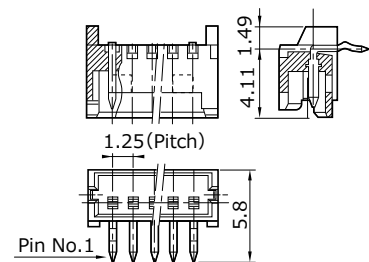


#### Plug : CHP15□□-0101F



Straight Type

#### Plug : CHP17□□-0101F



Right-Angle Type

## ジャックボックス Jack Box

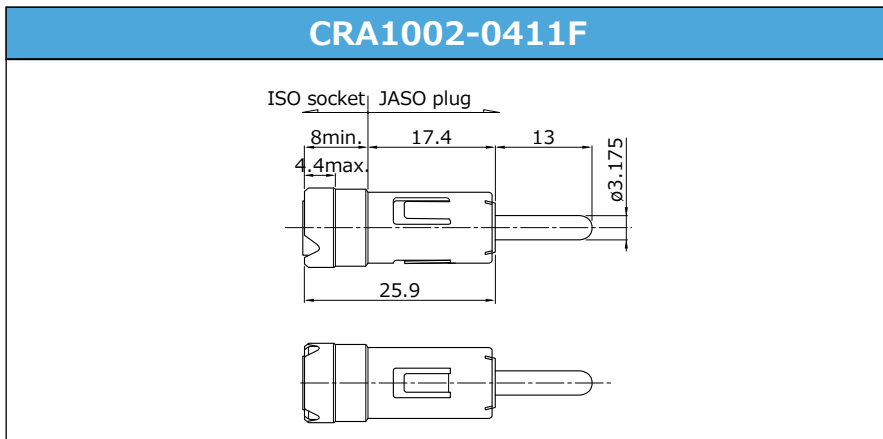


- 小型携帯機器を車室内で使用するためのインプットユニット
- インプット側インタフェースのレパートリーはUSBコネクタ、Micro-USBコネクタ、 $\phi$ 3.5mmジャック、ピンジャックに対応し、複合化も可能
- 車体側の接続は、各種車載用コネクタを用意。  
※仕様などについては、お問い合わせください。
- Input unit for using small mobile devices for automotive applications.
- Input side Interface selection includes USB connector, Micro-USB connector, 3.5 mm diameter jack and pin jack. compositing is also possible.
- Various types of connectors for automotive equipment are available.  
※Contact us for specifications, etc.

# アンテナアダプタ Antenna Adapter

●ISOプラグとJASOソケットの変換接続

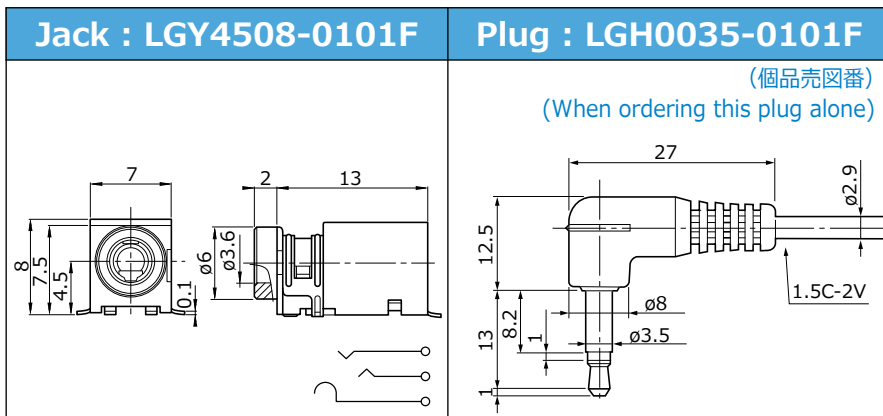
●Adaptive connection of ISO plugs and JASO sockets.



# アンテナジャック / プラグ Antenna Jack / Plug

●優れた高周波特性、アンテナ入力に適用  
●端子のパイプ形状化(耐振動性)

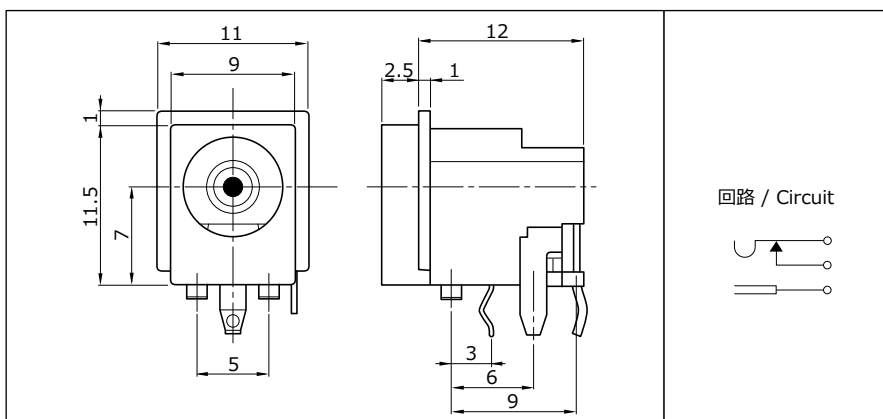
●Most suitable for antenna input due to excellent radio frequency performance.  
●Pipe shaped terminals(vibration resistance).



# 外部電源ジャック DC Power Supply Jack

●JEITA RC-5322規格に準拠  
(DC12V/24Vに対応)  
●高温実装に対応

●Comforms to JEITA RC-5322 standard(12V/24V DC capable).  
●High temperature is involved.



# 基板対基板コネクタ

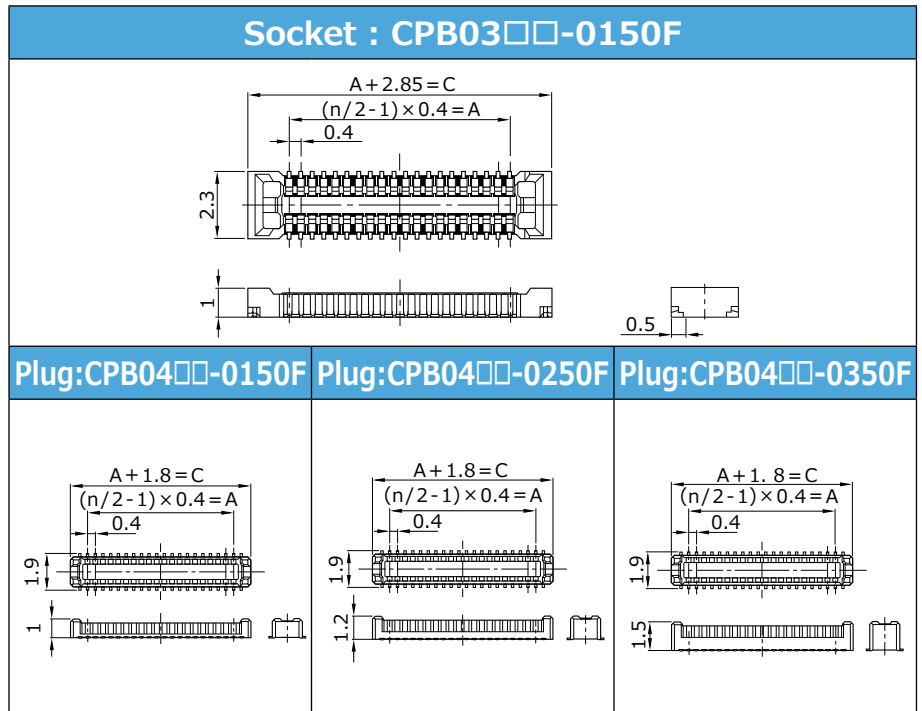
# Board to Board Connectors

## 0.4mm ピッチ(PB-4H シリーズ)

## 0.4mm Pitch(PB-4H Series)

- 嵌合高さ1.0~1.5mmに対応
- 業界最高の嵌合保持力
- 吸着スペースを確保しながら、奥行き2.3mmのスリム設計で省スペース化に貢献

- Connector with mated height of 1.0 to 1.5mm.
- Possesses the highest mating retention force in the industry.
- While ensuring vacuum area, its slim design with a width of 2.3mm contributes to greater space-saving.

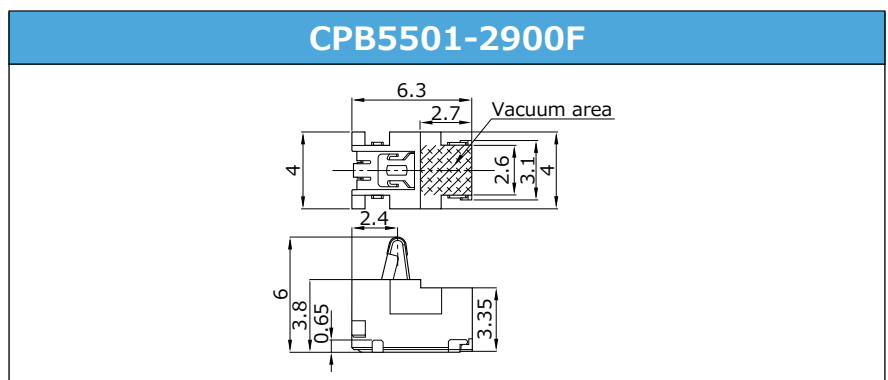
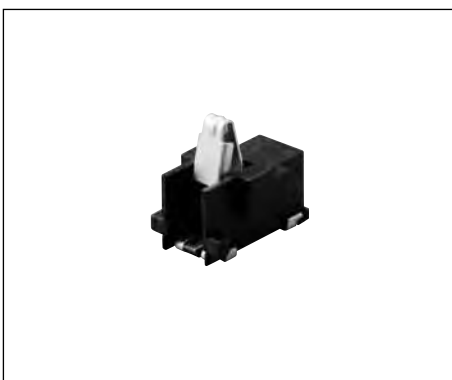


# アースターミナル

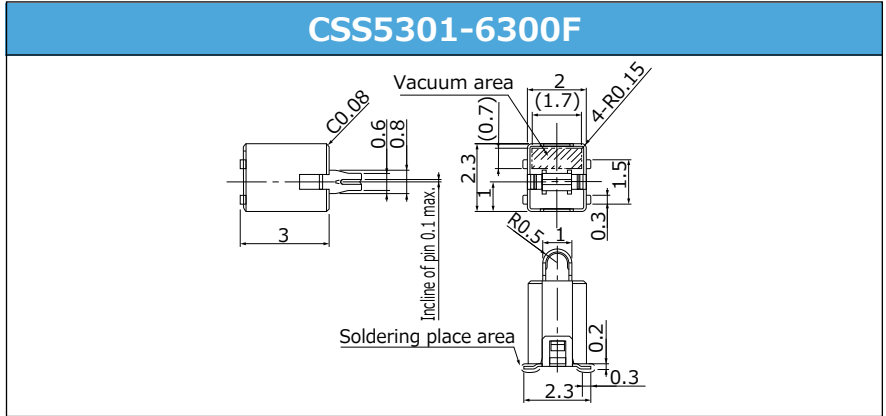
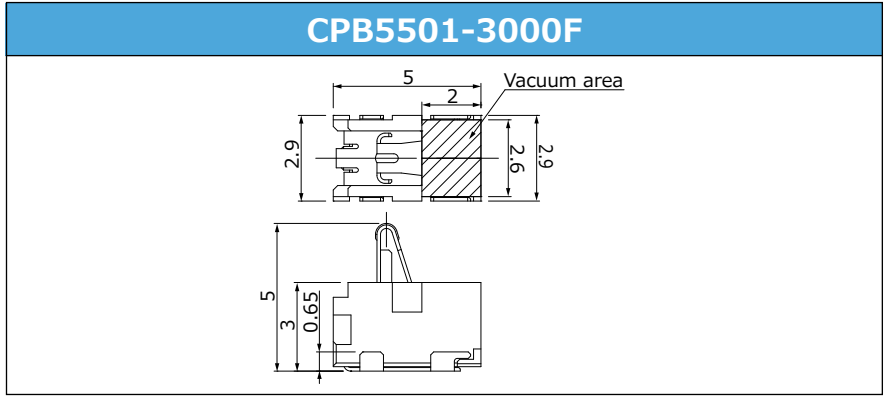
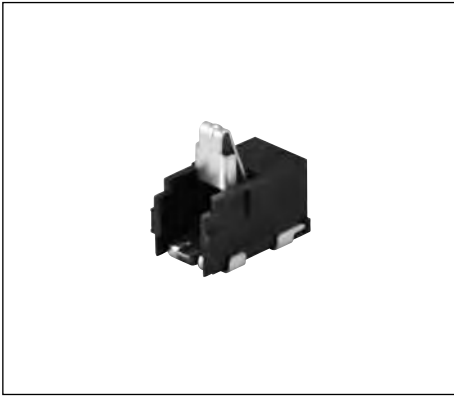
# Earth Terminals

- 端子先端座屈防止構造
- モールド部品追加した事によって、横方向からの力に対して強度アップ

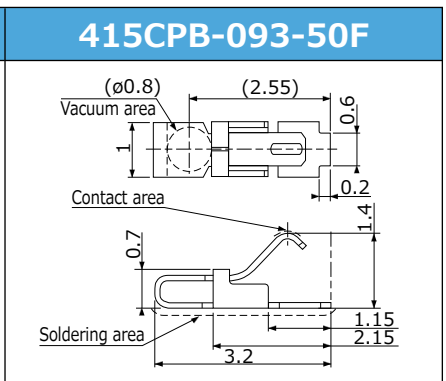
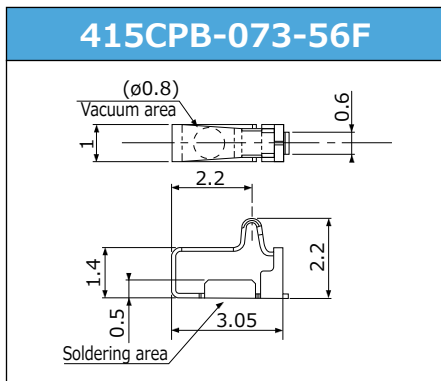
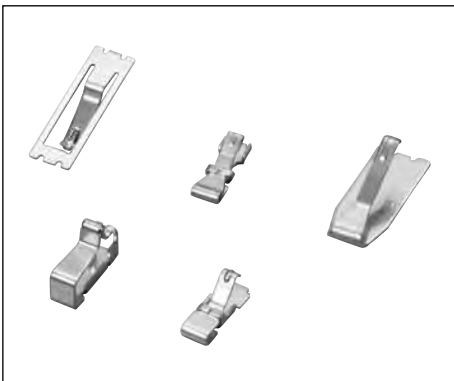
- Structured to prevent the terminal tip from buckling.
- Increased resistance to force applied from a cross direction due to addition of molded components.







| Part No.      | Contact Pressure | Working Height | Housing Height | Rating          |
|---------------|------------------|----------------|----------------|-----------------|
| CSS5301-8600F | 0.5±0.2N         | 1.0 ~ 1.15     | 0.95           | 3A max., 12V DC |
| CSS5301-6210F | 0.8±0.2N         | 1.7 ~ 2.3      | 1.7            | 3A max., 12V DC |
| CSS5301-4310F | 0.8±0.2N         | 2.0 ~ 2.6      | 1.9            | 3A max., 12V DC |
| CSS5301-6110F | 0.8±0.2N         | 2.7 ~ 3.3      | 1.9            | 3A max., 12V DC |
| CSS5301-6300F | 0.8±0.2N         | 3.2 ~ 3.8      | 3.0            | 3A max., 12V DC |
| CSS5301-6800F | 0.8±0.2N         | 3.6 ~ 4.2      | 3.0            | 3A max., 12V DC |
| CSS5301-0E00F | 0.8±0.2N         | 4.0 ~ 4.6      | 3.0            | 3A max., 12V DC |
| CSS5301-6400F | 0.8±0.2N         | 4.4 ~ 5.0      | 3.0            | 3A max., 12V DC |

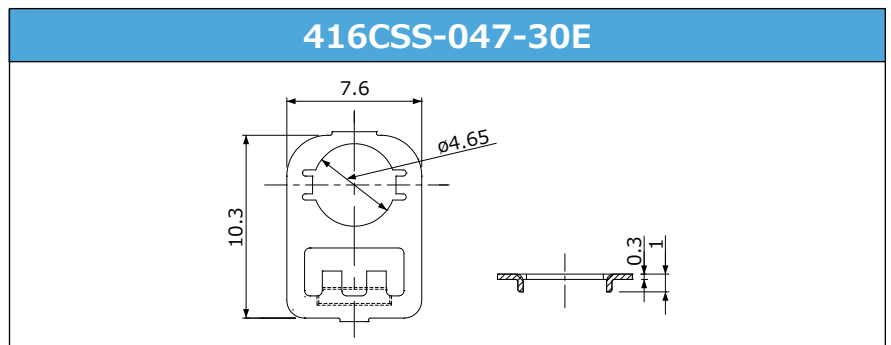


| Series | Part No.       | Contact Pressure | Working Height | Rating             |
|--------|----------------|------------------|----------------|--------------------|
| ET-6   | 415CPB-071-52F | 0.2 ~ 0.7N       | 2.3 ~ 2.8      | 3A max., 12V DC    |
| ET-7   | 415CPB-073-56F | 0.2 ~ 0.8N       | 1.5 ~ 2.0      | 3A max., 12V DC    |
| ET-8   | 415CPB-087-50F | 0.3 ~ 0.7N       | 0.6 ~ 0.8      | 3A max., 12V DC    |
| ET-9   | 415CPB-092-52F | 0.2 ~ 0.6N       | 0.45 ~ 0.75    | 3A max., 10V DC    |
| ET-10  | 415CPB-093-50F | 0.3 ~ 0.95N      | 0.75 ~ 1.1     | 3A max., 12V DC    |
| ET-12  | 415CPB-098-58F | 0.25 ~ 0.85N     | 0.6 ~ 0.9      | 3A max., 5V DC     |
| ET-14  | 415CPB-103-50F | 0.3 ~ 0.95N      | 0.65 ~ 0.85    | 3A max., 5V AC/DC  |
| ET-15  | 415CPB-105-50F | 0.2 ~ 0.5N       | 0.5 ~ 0.75     | 3A max., 12V AC/DC |
| ET-17  | 415CPB-114-50F | 0.2 ~ 0.8N       | 1.5 ~ 2.0      | 3A max., 5V AC/DC  |
| ET-18  | 415CPB-126-52F | 0.3 ~ 0.8N       | 0.85 ~ 1.25    | 3A max., 5V DC     |
| ET-19  | 415CPB-138-52F | 0.3 ~ 1.05N      | 0.2 ~ 0.4      | 3A max., 5V DC     |

# ラグ端子 Lug Terminal

- M3対応の製品以外に、M2.5対応タイプも用意
- 回転防止構造

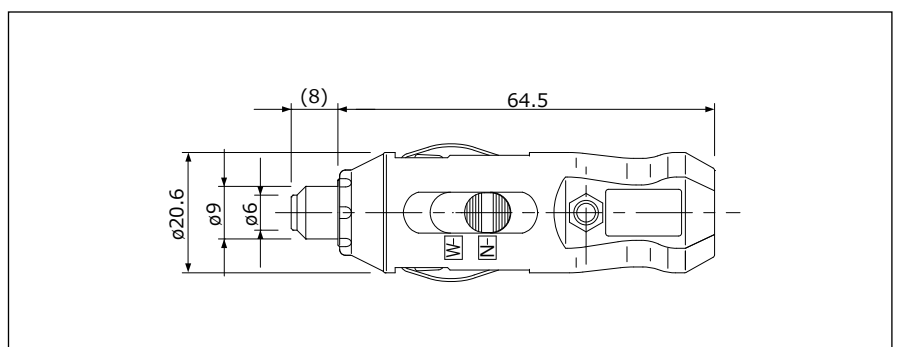
- M2.5 compatible type available in addition to M3 supporting products.
- Structured to prevent rotation.



# ユニバーサルカープラグ(UC-2) Universal Car Plug (UC-2)

- コンパクトな全長により、安全性と使い勝手を向上
- 全世界車種のほとんどのシガーライターソケットに対応

- Compact length makes it easier to use and enhances safety.
- Suitable for most lighter sockets in the world.



## 仕様

- 定格 : DC 12/24V 7A
- 適合ソケット (寸法) :
 

| ソケット穴径 (D)                        | スライダ位置 |
|-----------------------------------|--------|
| $\phi 20.8 \leq D \leq \phi 21.1$ | N      |
| $\phi 22.0 \leq D \leq \phi 22.3$ | W      |
- 挿入力 : 70N以下
- 抜去力 : 10 ~ 45N

## Specification

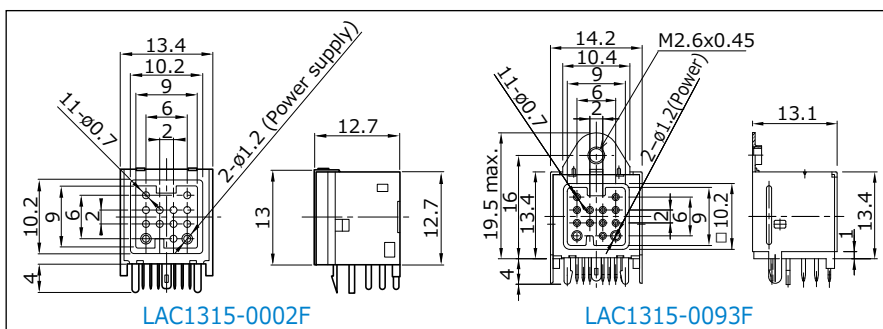
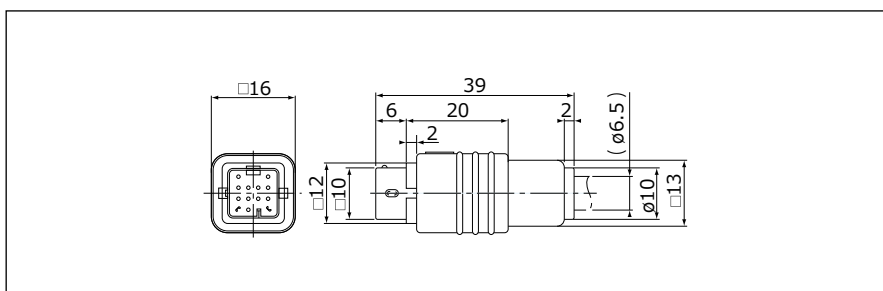
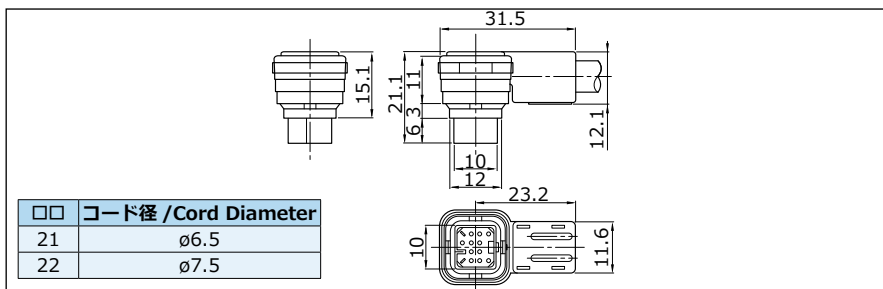
- Rating : 12/24V DC 7A
- Adaptable Socket Size :
 

| Socket ID (D)                     | Position of Slider |
|-----------------------------------|--------------------|
| $\phi 20.8 \leq D \leq \phi 21.1$ | N                  |
| $\phi 22.0 \leq D \leq \phi 22.3$ | W                  |
- Insertion Force : 70N max.
- Withdrawal Force : 10 to 45N

# 小型 13P プラグコード・ソケット 13P Plug Cords / Socket (Small Type)

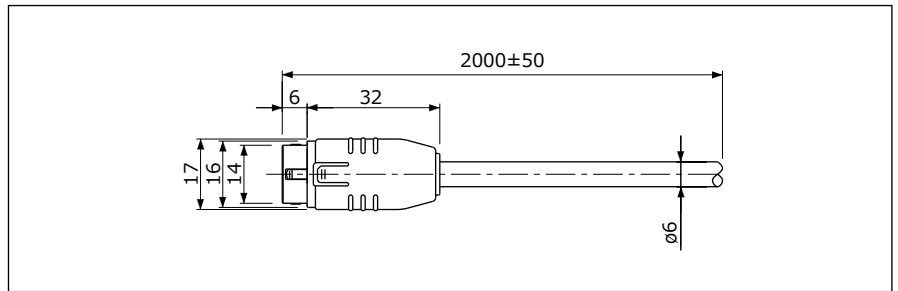
- 定格電圧/電流 : DC 16V/3A(2P 電源)、DC 16V/1A(11P 信号)
- 静電対策としてソケット側に前面フレームを装備

- Rating : 3A 16V DC (Power supply 2P), 1A 16V DC (Signal 11P)
- The socket has a front frame as an anti-static measure.

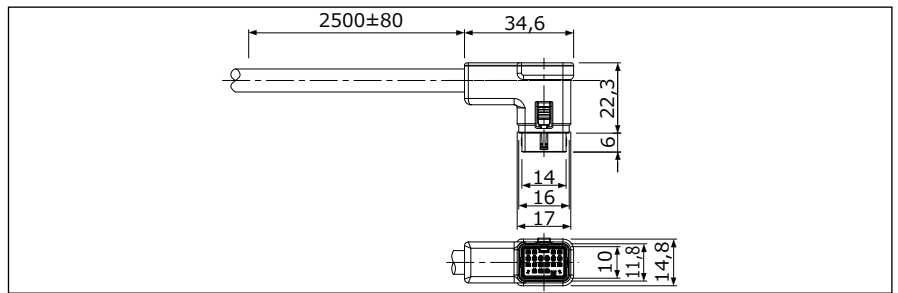


# 小型 21P プラグコード・ソケット 21P Plug Cords/Socket (Small Type)

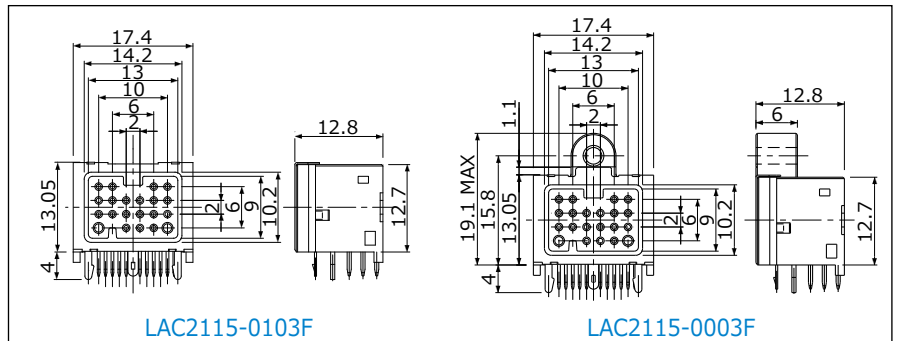
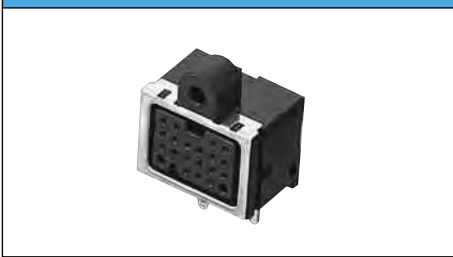
Plug : LLM2111-2000F



Plug : LLM2116-2500F



Socket : LAC2115-□□03F



# Bluetooth® SPP モジュール BT401 シリーズ Bluetooth® SPP Module BT401 series



- アンテナ一体面実装タイプのモジュール
- SPP(Serial Port Profile)をサポート
- iOS機器との接続に対応(BT401-AP2)
- Bluetooth® SIG認証、電波法(日本、FCC、IC、CEマーキング)取得済み
- The module is the surface mount type with antenna built on.
- Support SPP(Serial Port Profile).
- Support iAP(iPhone/iPad Accessory Protocol)(BT401-AP2)
- Available for Bluetooth® SIG certification and overseas certification (Japan,FCC,IC,CE marking).

| Series                   | BT401                         | BT401-AP2 |
|--------------------------|-------------------------------|-----------|
| Bluetooth® Specification | Version 3.0                   |           |
| Power Class              | Class 2                       |           |
| Profile                  | SPP                           | SPP, iAP2 |
| Supply Voltage           | 2.7 to 3.6 V DC               |           |
| Dimension                | 25mm (W) ×11mm (D) ×2.3mm (H) |           |

## 近接・ホバー対応タッチコントローラ Proximity & Hover Sensing Touch Controller



- SMK独自の高感度静電容量方式(最大近接検知距離：100mm)
  - 従来のタッチパネル/タッチパッド以外に新たなセンサを組み込む必要なし
  - カメラや赤外線センサのような、太陽光の影響がない
  - 素手だけでなく厚手の手袋をしていても、操作が可能
- Features SMK' s highly-sensitive capacitive system. (Maximum proximity sensing distance: 100mm)
  - Removes the need to include new sensors besides the existing touch panel/ touch pad.
  - Not affected by sunlight as much as infrared sensors and cameras.
  - Can be operated not only with bare hands but also with thick gloves.

## カメラモジュール〈カスタム品〉 Camera Module<Custom Mode>

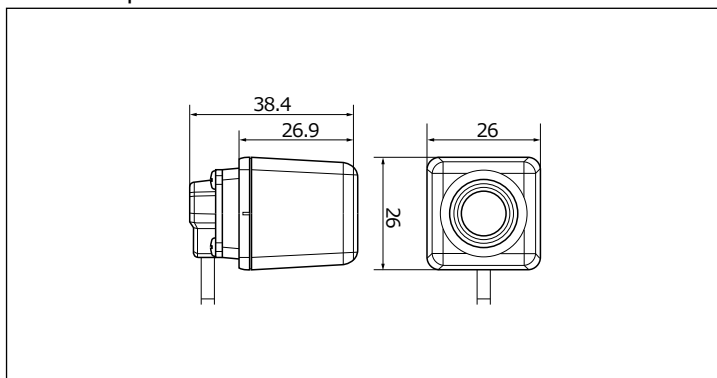
### 特長

- 100万画素YUV422デジタル出力を非圧縮30fpsで出力可能
- LVDS出力を採用して、良好なEMC性能を実現



### Features

- Can transmit 1M pixel YUV 422 digital output at a compression ratio of 30fps.
- Realize good EMC performance by using LVDS output.



### 仕様

- イメージセンサ : 1/2.7インチ CMOS
- サイズ : 26mm(W)×26mm(H)
- 有効画素数 : 1280×800(WXGA)
- フレームレート : 30fps max.
- 供給電圧 : DC+5.0~16.0V
- 使用温度範囲 : -40℃~+85℃
- 保存温度範囲 : -40℃~+105℃
- 防水性能 : IPX6/IPX7
- IRCF : Cut-off 650nm(50%)
- レンズ構成 : 4G2P
- 水平画角 : 110度
- 垂直画角 : 70度
- F値 : 2.5
- 伝送ケーブル : 同軸ケーブル

### Specification

- Image Sensor : CMOS 1/2.7 inches
- Module Size : 26mm (W)×26mm (L)
- Active Pixel : 1280×800 pixel WXGA graphics
- Frame Rate : 30fps max.
- Supply Voltage : DC+5.0~16.0V
- Operating Temperature : -40℃ to +85℃
- Storage Temperature : -40℃ to +105℃
- Waterproof : IPX67/IPX7
- IR Cut Filter : Cut-off 650nm/50%
- Lens Structure : 4G2P
- Lens Horizontal Field View : 110°
- Lens Vertical Field View : 70°
- F value : 2.5
- Transmitter Cable: Coaxial Cable Communication

# 環境保全活動 Environmental Preservation activities

SMKでは、ISO14001に基づく環境マネジメントシステムを世界の生産事業所（下表をご参照下さい。ISO9000sの取得状況も記載しています）で導入し、環境保全を重要な経営課題の一つとして捕らえ、積極的に取り組んでいます。また製品においても、お客様から求められる高信頼性・高耐久性を確保しつつ、その材料から廃棄に至るまでの全サイクルにおいて、環境保全という視点での評価・検証を行い、安心して採用いただける製品の供給に努めています。

Environmental preservation has been one of our major management concerns and subscribing our globally located production centers to ISO14001 is one of the steps we took towards it (please refer to the following table for details, where our ISO9000 qualification status is also listed).

Our activities include efforts to supply worry-free products in terms of environmental preservation through thorough inspection and assessment of the production cycle from material procurement to waste disposal, without compromising our commitment to supply highly reliable and durable products.

## 品質マネジメントシステム、環境マネジメントシステムの取得状況

### Acquisition Status Of Quality Management System And Environmental Management System

○取得済 ○ Acquired

| Country     | Division/Bases |                               | ISO 9001<br>(2000 Version) | ISO 14001 | ISO/TS 16949 |
|-------------|----------------|-------------------------------|----------------------------|-----------|--------------|
| Japan *1    | Division       | CS Division                   | ○                          | —         | —            |
|             |                | FC Division                   | ○                          | —         | —            |
|             |                | TP Division                   | ○                          | —         | —            |
|             | Bases          | Head Office & Domestic Office | —                          | ○         | —            |
|             |                | Toyama Works                  | —                          | ○         | —            |
|             |                | Hitachi Works                 | —                          | ○         | —            |
| USA・Mexico  | SMK-AG         |                               | ○                          | ○         | —            |
| UK          | SMK-E / UK     |                               | ○                          | ○         | —            |
| Hungary     | SMK-HU         |                               | ○                          | ○         | —            |
| Malaysia    | SMK-ML         |                               | ○                          | ○         | —            |
| China       | SMK-DG         |                               | ○                          | ○         | —            |
|             | SMK-SZ         |                               | ○                          | ○         | —            |
| Philippines | SMK-PH         |                               | ○                          | ○         | *2 ○         |

\*1：日本国内のISO9001は事業部別、ISO14001は拠点別に取得。

\*2：TP事業部のみ取得。

\*1 In Japan, acquisition of ISO9001 certification is by business division and acquisition of 14001 certification is by plant.

\*2 Acquired by TP division only

SMK-AG .... SMK Electronics Corporation U.S.A., SMK Manufacturing Inc., SMK Electronica S.A. de C.V.

SMK-UK .... SMK (U.K.) Ltd.

SMK-HU .... SMK Hungary Lft.

SMK-ML .... SMK Electronics (Malaysia) Sdn. Bhd

SMK-DG .... SMK Dongguan Gaobu Factory

SMK-SZ .... SMK Electronics (Shenzhen) Co., Ltd.

SMK-RH .... SMK Electronics (Phils.) Corporation

## SMK株式会社

|       |  |                  |                  |
|-------|--|------------------|------------------|
| 本社    | 〒142-8511 東京都品川区戸越6-5-5                | TEL(03)3785-1111 | FAX(03)3785-1878 |
| 大阪支店  | 〒535-0021 大阪府大阪市旭区清水4-3-11             | TEL(06)6953-7222 | FAX(06)6953-7221 |
| 名古屋支店 | 〒453-0014 愛知県名古屋市中村区則武1-19-13 KSビル6階   | TEL(052)453-3011 | FAX(052)453-3015 |
| 茨城営業所 | 〒319-1301 茨城県日立市十王町伊師20-9              | TEL(0294)20-2144 | FAX(0294)20-2145 |
| 北陸営業所 | 〒939-2366 富山県富山市八尾町保内1-1               | TEL(076)455-1213 | FAX(076)455-1759 |
| 福岡営業所 | 〒812-0011 福岡県福岡市博多区博多駅前3-25-24 八百治ビル6階 | TEL(092)472-7236 | FAX(092)475-6943 |

### Head office : SMK Corporation

5-5, Togoshi 6-chome, Shinagawa-ku, Tokyo 142-8511, Japan

TEL : +81-3-3785-1111 FAX : +81-3-3785-1878

<http://www.smk.co.jp/>

#### **SMK GLOBAL NETWORKS ASIA**

##### **SMK High-Tech Taiwan Trading Co., Ltd.**

12F-2, No.87, Sung Chiang Road, Taipei, 104-86 Taiwan

TEL : +886-2-2518-3650 FAX : +886-2-2518-4815

##### **SMK Trading (H.K.) Ltd.**

Flat D-F, 10/F, Golden Harvest Building, No. 15 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong

TEL : +852-2795-4451 FAX : +852-2795-4434

##### **SMK Electronics Trading (Shenzhen) Co., Ltd.**

Room 9F, Tairan Jinsong Building, Tairan East Road, Futian District, Shenzhen 518040, Guangdong, China

TEL : +86-755-8304-0990 FAX : +86-755-8304-0880

##### **SMK Electronics Trading (Shenzhen) Co., Ltd. Xi'an Office**

Room A111, Ascendas Building, Gao Xin 6 Road, No.38, High & New Tech Zone, Xi'an 710075, Shaanxi, China

TEL : +86-29-8754-5612 FAX : +86-29-8754-5612

##### **SMK Electronics Trading (Shenzhen) Co., Ltd. Chongqing Office**

Room 32-1 A building, No41 Guanyinqiao COSMO, Jialing one village, Jiangbei District, Chongqing, 400010, China

TEL : +86-23-6303-3509 FAX : +86-23-6303-3509

##### **SMK Electronics Trading (Shanghai) Co., Ltd.**

Room C706A Orient International Plaza No.85 Lou Shan Guan Road, Shanghai 200336 China

TEL : +86-21-6278-5600 FAX : +86-21-6278-5601

##### **SMK Electronics INT'L Trading (Shanghai) Co., Ltd.**

Room C707A Orient International Plaza No.85 Lou Shan Guan Road, Shanghai 200336 China

TEL : +86-21-6278-5600 FAX : +86-21-6278-5601

##### **SMK Electronics INT'L Trading (Shanghai) Co., Ltd. Beijing Office**

Room 1209, Block B, Lucky Tower, No.3, Dongsanhuan Beilu, Chaoyang District, Beijing 100027 China

TEL : +86-10-6461-4001 FAX : +86-10-6461-8848

##### **SMK Electronics INT'L Trading (Shanghai) Co., Ltd. Qingdao Office**

Room 1505, Building 2, No 61 Road Haier, District Laoshan, Qingdao, China

TEL : +86-532-5557-6516 FAX : +86-532-5557-6526

##### **SMK Electronics Singapore Pte. Ltd.**

18 Tannery Lane #02-04, Lian Tong Building, Singapore 347780

TEL : +65-6745-0951~2 FAX : +65-6746-7838

##### **SMK Electronics Singapore Pte. Ltd. Thailand Representative Office**

No. 598 6th Floor, Q House Phloen Chit Building, Phloen Chit Road, Lumpini, Pathumwan, Bangkok, Thailand

TEL : +66-2-663-7810 FAX : +66-2-663-7880

##### **SMK Electronics (Malaysia) Sdn. Bhd.**

Lot 15, Jalan Perusahaan 1, Beranang Industries Estates, 43700 Beranang, Selangor Darul Ehsan, Malaysia

TEL : +60-3-8766-0166 FAX : +60-3-8766-7693

##### **SMK Korea Co., Ltd.**

2F.Seokyeong Bldg., 30, Banpodae-ro 12-gil, Seocho-Gu, Seoul, 06653, Korea

TEL : +82-2-3474-2629 FAX : +82-2-3473-5230

**SMK GLOBAL NETWORKS EUROPE**

**SMK Electronics (Europe) Ltd.**

Unit 49, Block F2, Northwood court, Santry, Dublin 9, Ireland  
TEL : +353-1-253-0530 FAX : +353-1-686-4900 <http://www.smkeurope.com/>

**SMK Electronics (Europe) Ltd. U.K. Branch**

Evans Incubation Centre, Durham Way South, Newton Aycliffe, Co Durham, DL5 6XP. England  
TEL : +44-1325-300-770

**SMK Electronics (Europe) Ltd. Paris Office**

43 avenue Gabriel Peri, Code2941-Gche-3e droite 94170 Le Perreux sur Marne, France  
TEL : +33-950-93-96-29 FAX : +33-955-93-96-29

**SMK Electronics (Europe) Ltd. Munich Office**

Postfach 1512, D-82036 Deisenhofen, Germany  
TEL : +49-89-613-00233 FAX : +49-89-613-00234

**SMK Electronics (Europe) Ltd. Dusseldorf Branch**

Munsterstrasse 248, D-40470, Dusseldorf, Germany  
TEL : +49-211-616-63-348 FAX : +49-211-616-63-111

**SMK Electronics (Europe) Ltd. London Office**

1, Broadoak Road, Weston-Super-Mare, BS23 4NN Somerset, UK  
TEL : +44-1256-517-962 FAX : +49-211-616-63-111

**SMK Electronics (Europe) Ltd. Brussels Office**

Vijfstraten 60 3140 keerbergen Brussels, Belgium  
TEL : +32-49-550-0599

**SMK GLOBAL NETWORKS NORTH AMERICA**

**SMK Electronics Corporation U.S.A.**

1055 Tierra Del Rey, Chula Vista, California, 91910, U.S.A.  
TEL : +1-619-216-6400 FAX : +1-619-216-6499 <http://www.smkusa.com/>

**SMK Electronics Corporation U.S.A., San Jose Office**

2001 Gateway Place, 330E, San Jose, California 95110 U.S.A.  
TEL : +1-408-436-2206 FAX : +1-408-436-8081

**SMK Electronics Corporation U.S.A., East Office**

399 Knollwood Road, Suite #103, White Plains, New York 10603-1900 U.S.A.  
TEL : +1-914-328-9150 FAX : +1-914-328-9552

**SMK Electronics Corporation U.S.A., Los Angeles Office**

2102 Business Center Drive, Irvine California, 92612 U.S.A.  
TEL : +1-949-253-5880 FAX : +1-949-861-9433

**SMK Electronics Corporation U.S.A., Seattle Office**

16625 Redmond Way, Suite M PMB 346 Redmond, Washington 98052 U.S.A.  
TEL : +1-425-961-0018 FAX : +1-425-484-6275

**SMK Electronics Corporation U.S.A., Chicago Office**

1346 Aldrin Trail Elk Grove Village, Illinois 60007 U.S.A.  
TEL : +1-847-513-2582 FAX : +1-847-750-0456

**SMK Electronics Corporation U.S.A., Detroit Office**

39209 Six Mile Road, Livonia, Michigan 48152 U.S.A.  
TEL : +1-734-452-0545 FAX : +1-734-293-4234

**SMK Link Electronics Corporation**

3601-B Calle Tecate, Camarillo, California 93012 U.S.A.  
TEL : +1-805-987-6662 FAX : +1-805-987-6665

**SMK Link Electronics Corporation., San Jose Office**

2001 Gateway Place, 330E, San Jose, California 95110 U.S.A.  
TEL : +1-408-436-2206 FAX : +1-408-436-8081

**SMK Mexicana S de RL de CV**

Calle Aguila Azteca No.19308, Nave No.B Planta 2, Col. Bajamaq El Aguila, Tijuana, B.C, C.P. 22215, Mexico  
TEL : +52-664-625-9680 FAX : +52-664-625-9681

**SMK Mexicana S de RL de CV, Mexico City Office**

Nápoles Gandara 50, 4th Floor Col. Peña Blanca Santa Fe, Mexico City 1210, Mexico  
TEL : +52-55-9171-1830 FAX : +52-55-5004-4474

**SMK GLOBAL NETWORKS SOUTH AMERICA**

**SMK Eletrônica Brasil Ltda, São Paulo Office**

Av. Paulista 37 - 4o Andar, São Paulo, 01311-902, Brazil  
TEL : +55-11-2246-2832 FAX : +55-11-2246-2799



## 注意 ⚠ Caution

- ・製品改良などにより、仕様を予告なく変更させていただく場合がありますので、ご了承ください。
  - ・寸法、仕様は主要な箇所のみを記載しています。ご使用に当たっては図面、仕様書をご請求の上、ご確認ください。
  - ・掲載されています製品は、全て RoHS 指令※に対応しています。詳しくは担当営業部員までお問い合わせください。  
※RoHS 指令：EU( 欧州連合 ) が発効した、電気電子機器の特定有害物質使用規制
  - ・本カタログに記載されている会社名および商品名は各社の商標または登録商標です。
  - ・ Specification is subject to change without prior notice for improving performance of the product and so on.
  - ・ Dimension and specification described herein are limited to major items. When applying the products, please confirm details the drawing and spec sheets which will be provided upon request.
  - ・ Every products carried here is compliant to RoHS\* requirements. For detail, please refer to our sales representative.
- \*RoHS Directive: An EU Directive for restriction of the use of certain hazardous substances in electrical and electronic equipment.
- ・ Trademarks and registered trademarks used herein are the property of their respective owners.

