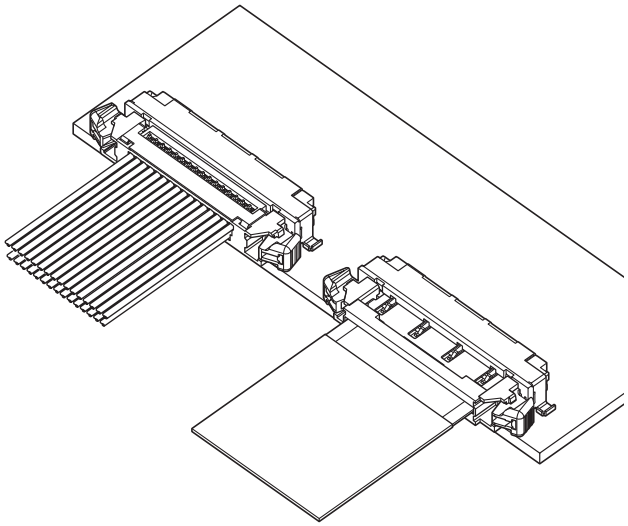


# FWG CONNECTOR

## 0.5mm pitch/Disconnectable Crimp style connectors/Connector for FPC and FFC



***This is crimp style disconnectable connector with 0.5 mm pitch lock for high-speed transmission which can be chosen discrete wires, FPC or FFC depending on usage.***
***By assuming the use of multiple pieces of connector in the vicinity, prevention of mis-mating is provided by 4 kinds of key pattern in each circuit and 4 different colors of housing.***

- ***4 kinds of key pattern in 4 different colors for preventing mis-mating***
- ***The structure that is strong enough to routing of Wire/FPC/FFC***
- ***Low insertion force***
- ***Space saving design***
- ***Secure lock mechanism***
- ***High-speed transmission***

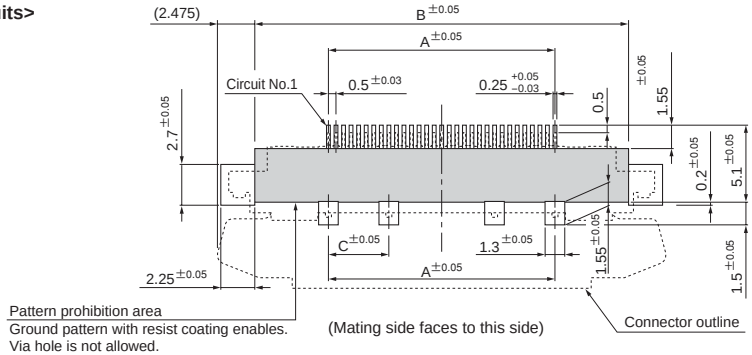
## *Specifications*

- Current rating: 0.3 A AC, DC
- Voltage rating: 50 V AC, DC
- Temperature range: -25˚C to +85˚C
  (including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 80 mΩ max.
  After environmental tests/ 160 mΩ max.
- Insulation resistance: 500 MΩ min.
- Withstanding voltage: 200 VAC/minute
- Applicable wire: Conductor size/ AWG #30
  Insulation O.D./ 0.47 to 0.71 mm
- Applicable FPC/FFC: Conductor pitch/ 0.5 mm
  Conductor width/ 0.32 mm
  Mating part thickness/ 0.3 ± 0.03 mm

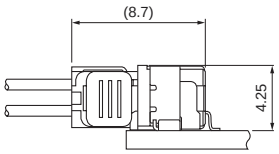
* In using the products, refer to "Handling Precaution for Terminal and Connector" described on our website (Technical documents of Product information page).
* Contact JST for details.
* RoHS2 compliance

## *PC board layout and Assembly layout*

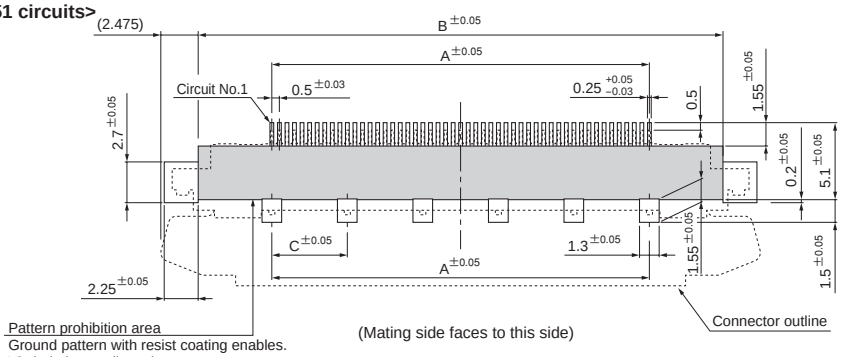
**<31 circuits>**



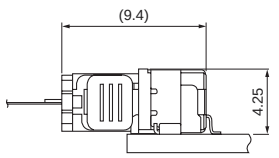

**Discrete wire Socket type**




**<41, 51 circuits>**




**FPC/FFC Holder type**

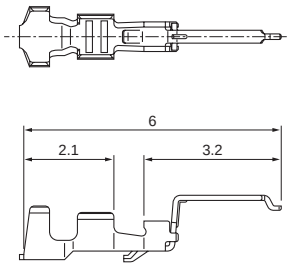



| No. of circuits | Dimensions (mm) | | |
|---|---|---|---|
| | A | B | C |
| 31 | 15.0 | 24.75 | 4.0 |
| 41 | 20.0 | 29.75 | 4.0 |
| 51 | 25.0 | 34.75 | 5.0 |

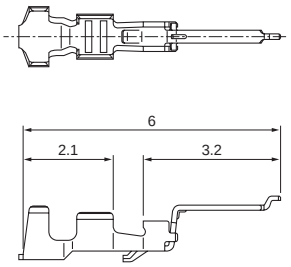
*Note: 1. The above figure is the figure viewed from the connector mounting side*
*2. Tolerance for the centers of pattern on PCB is ±0.03, and shall be not cumulative more than ±0.05. The dimensions above should serve as a guideline. Contact JST for details.*

## Contact

**Type A**




**Type B**




| Model No. | Type | Applicable wire | | Insulation O.D. (mm) | Q'ty/ reel |
|---|---|---|---|---|---|
| | | mm² | AWG # | | |
| **SFWG-003GB-P0.5-A** | A | 0.05～0.06 | 30 | 0.47～0.71 | 30,000 |
| **SFWG-003GB-P0.5-B** | B | | | | |

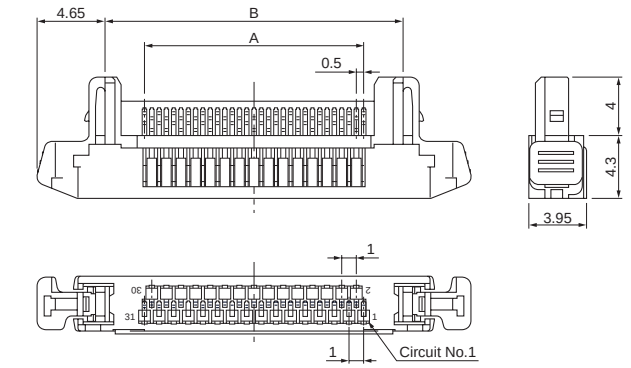
| Material and Finish |
|---|
| Copper alloy, nickel-undercoated, selective gold-plated |

***RoHS2 compliance***

| Contact | Crimping machine | Applicator | | |
|---|---|---|---|---|
| | | Crimp applicator | Dies | Crimp applicator with dies |
| **SFWG-003GB-P0.5-A** | AP-K2N | MKS-L-10-3 | MK/SFWG-003-05 | APLMK SFWG003-05 |
| | | — | — | — |
| **SFWG-003GB-P0.5-B** | | MKS-L-10-3 | MK/SFWG-003-05 | APLMK SFWG003-05 |
| | | — | — | — |

*Note: Contact JST for fully automatic crimping applicator.*

## Holder housing

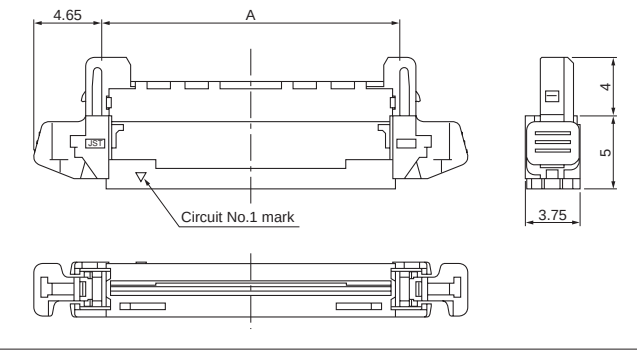



| No. of circuits | Model No. | Dimensions (mm) | | Q'ty/ box |
|---|---|---|---|---|
| | | A | B | |
| 31 | **31P-FWG-Z-1** | 15.0 | 20.4 | 2,400 |

| Material and Finish |
|---|
| Housing: PA 46, ivory<br>Shell: Copper alloy, tin-plated (reflow treatment) |

***RoHS2 compliance***
*Note: Contact JST for the flammability.*

## Header housing

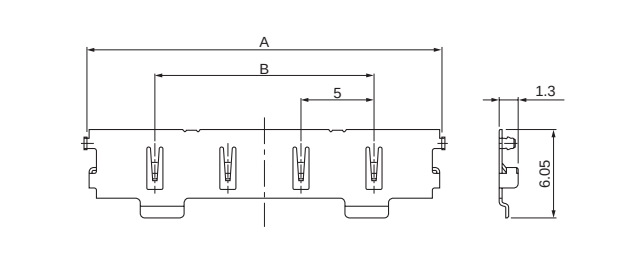



| No. of circuits | Model No. | Dimensions (mm) | Q'ty/ box |
|---|---|---|---|
| | | A | |
| 41 | **FWGP-41-F-Z-1** | 25.4 | 200 |
| 51 | **FWGP-51-F-Z-1** | 30.4 | 200 |

| Material |
|---|
| PA 46, ivory |

***RoHS2 compliance***
*Note: Contact JST for the flammability.*

## Holder shell




| No. of circuits | Model No. | Dimensions (mm) | | Q'ty/ reel |
|---|---|---|---|---|
| | | A | B | |
| 41 | **41FWG-PS2-P** | 24.3 | 15.0 | 10,000 |
| 51 | **51FWG-PS2-P** | 29.3 | 25.0 | 10,000 |

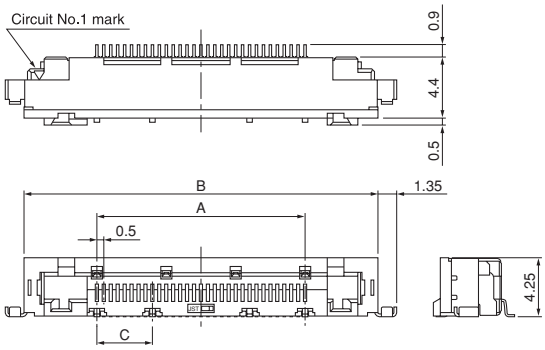
| Material and Finish |
|---|
| Copper-alloy, tin-plated (reflow treatment) |

***RoHS2 compliance***

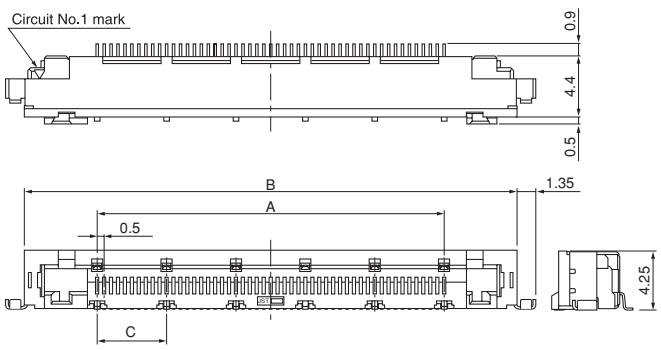
# FWG CONNECTOR

## Header

<31 circuits>




<41, 51 circuits>




| No. of circuits | Model No. | Dimensions (mm) | | | Q'ty/ reel |
|---|---|---|---|---|---|
| | | A | B | C | |
| 31 | **31FWG-RSM1-GAN-Z-1-TB** | 15.0 | 25.5 | 4.0 | 1,400 |
| 41 | **41FWG-RSM1-GAN-Z-1-TB** | 20.0 | 30.5 | 4.0 | 1,400 |
| 51 | **51FWG-RSM1-GAN-Z-1-TB** | 25.0 | 35.5 | 5.0 | 1,400 |

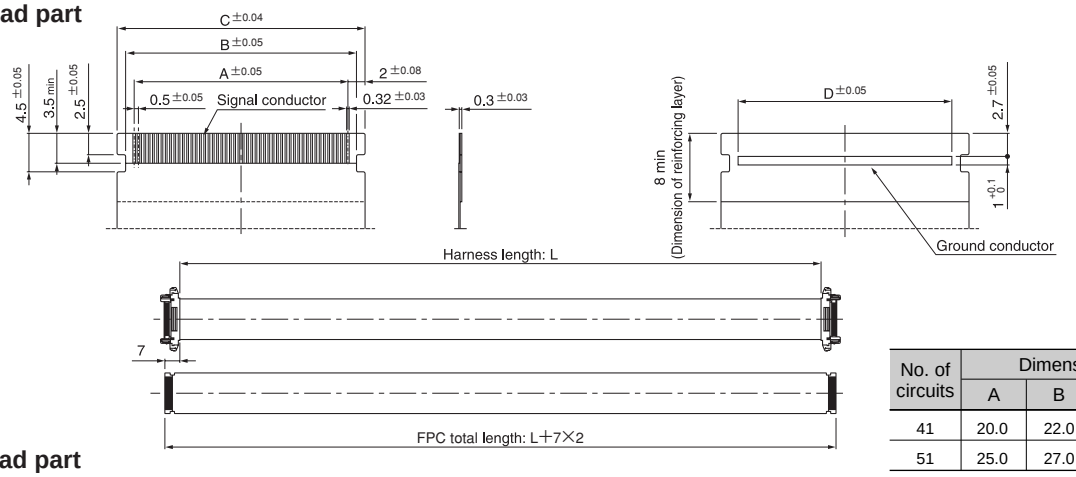
| Material and Finish |
|---|
| Base housing: Heat resisting resin, UL94V-0, ivory<br>Signal contact: Copper alloy, nickel-undercoated, selective gold-plated<br>Ground contact: Copper alloy, tin-plated (reflow treatment) |

***RoHS2 compliance***

*Note: The product listed above is supplied on embossed-tape.*

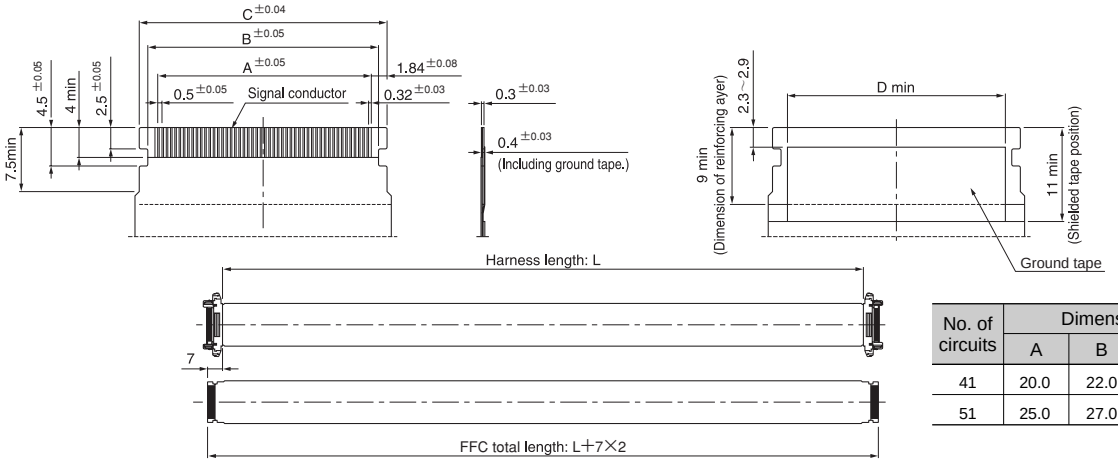
## Lead section dimensions of FPC/FFC

### FPC lead part




| No. of circuits | Dimensions (mm) | | | |
|---|---|---|---|---|
| | A | B | C | D |
| 41 | 20.0 | 22.0 | 24.0 | 20.0 |
| 51 | 25.0 | 27.0 | 29.0 | 25.0 |

### FFC lead part

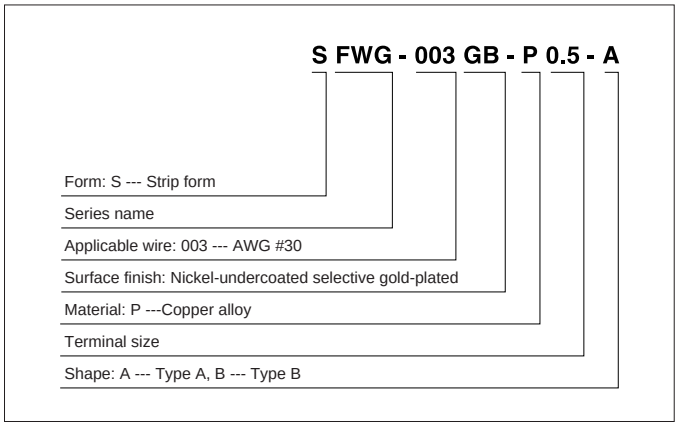



| No. of circuits | Dimensions (mm) | | | |
|---|---|---|---|---|
| | A | B | C | D |
| 41 | 20.0 | 22.0 | 24.0 | 20.5 |
| 51 | 25.0 | 27.0 | 29.0 | 25.5 |

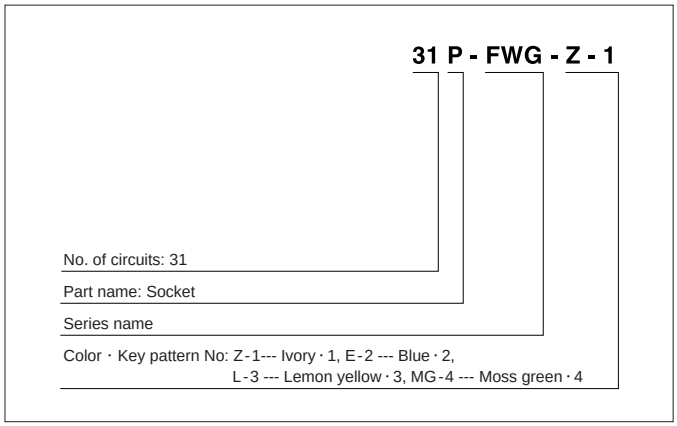
*Note: 1. The tolerance of FPC/FFC conductor pitch should be ±0.05 mm and non-cumulative.*
*2. The dimensions above should serve as a guideline. Contact JST for details.*

## Model number identification

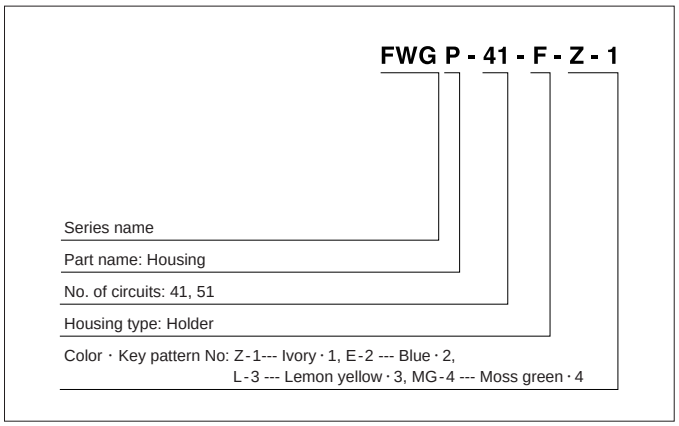
### Contact



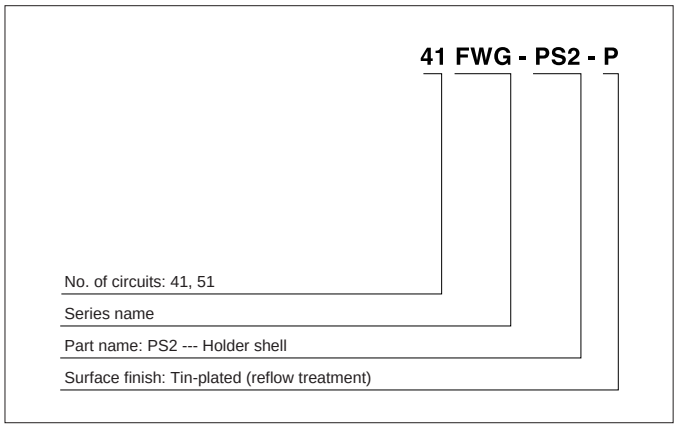

### Socket




### Holder housing




### Holder shell




### Header

