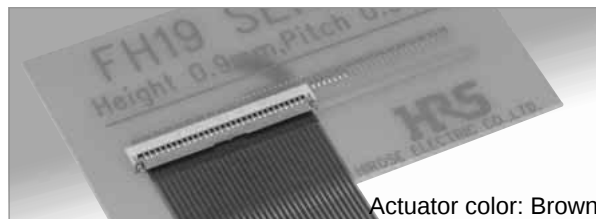
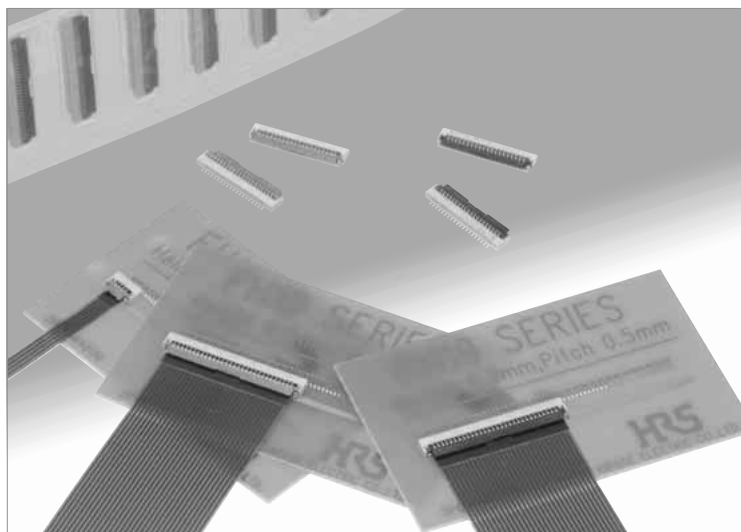


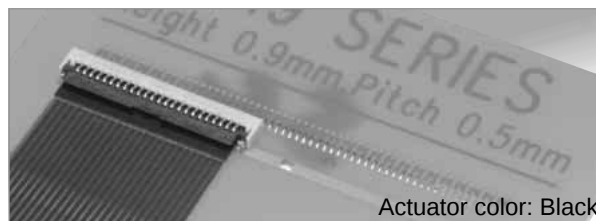
# 0.5mm pitch, 0.9mm above the board, Flexible Printed Circuit & Flexible Flat Cable ZIF Connectors

## FH19C & FH19SC Series



Actuator color: Brown

FH19SC – FPC/FFC thickness:  $0.3 \pm 0.03\text{mm}$



Actuator color: Black

### ■ Features

#### 1. Low-profile 0.5mm pitch FPC/FFC Connectors

Miniaturization of portable equipment and personal mobile devices has created increased demand for a low profile, high density, and high reliability connectors.

\*The design of this connector has been made thinner and smaller, with a height of 0.9mm and width of 3mm.

\*PCB footprint: Reduced approximately 48% (as compared with Hirose Electric's 0.5mm pitch FH12 Series connectors)

\*Connector weight: Reduced approximately 78% (as compared with Hirose Electric's 0.5mm pitch FH12 Series connectors)

#### 2. Conductive traces on the PCB can run under the connector

All bottom surface of the connector is solid, without any exposure of the contact.

#### 3. Proven Flip-Lock Actuator System assures easy and reliable operation

Rotating actuator permits easy insertion and reliable connection with the FPC & FFC.

Tactile sensation confirms complete mechanical locking of the actuator and the electrical connection.

#### 4. Accepts 0.2mm & 0.3mm thick FPC/FFC

No exposed contacts on the bottom of the connector.

The connector will also terminate with 0.2mm thick Flat Flexible Cable (FFC).

#### 5. Board placement with automatic equipment

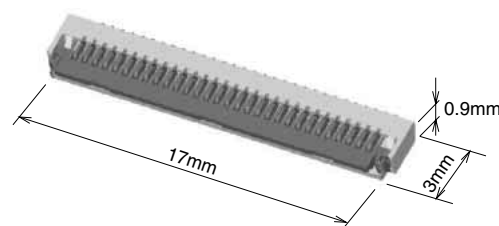
Flat upper surface and tape and reel packaging facilitate vacuum pick-up and placement. Standard reel packaging contains 5000 connectors.

#### 6. Halogen-free \* (FH19C, FH19SC(11 to 50pos.))

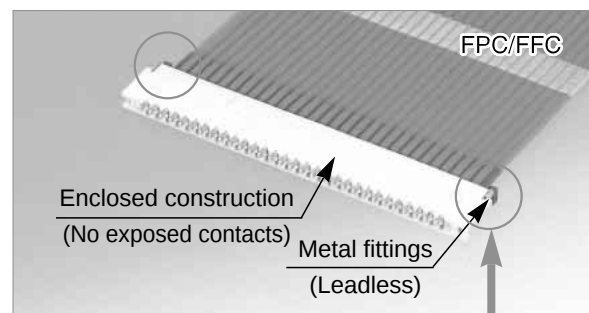
\*As defined by IEC61249-2-21

Br-900ppm maximum, Cl-900ppm maximum,

#### ● 0.9mm high



#### ● Can be mounted over conductive traces



#### ● Metal Fittings (Leadless Type)

No protrusions on the sides allows close side-by-side board placement.



#### ● Actuator Temporary Hold Mechanism



Actuator stays open during insertion of the FPC/FFC.

■Product Specifications

|                         |                              |                                                                          |                                                                        |
|-------------------------|------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------|
| Rating                  | Current rating 0.5 A (Note1) | Operating temperature range<br>-55℃ to +85℃ (Note 2)                     | Storage temperature range<br>-10℃ to +50℃ (Note 3)                     |
|                         | Voltage rating 50 V AC       | Operating humidity range<br>Relative humidity 90% max. (No condensation) | Storage humidity range<br>Relative humidity 90% max. (No condensation) |
| Recommended<br>FPC, FFC | FH19C Series                 | Thickness: = 0.2 ± 0.03mm Gold plated                                    |                                                                        |
|                         | FH19SC Series                | Thickness: = 0.3 ± 0.03mm Gold plated                                    |                                                                        |

| Item                                     | Specification                                                                                                                   | Conditions                                                                                                      |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1. Insulation resistance                 | 500 M ohms min.                                                                                                                 | 100 V DC                                                                                                        |
| 2. Withstanding voltage                  | No flashover or insulation breakdown                                                                                            | 150 V AC/1 minute                                                                                               |
| 3. Contact resistance                    | 100 m ohms max.<br>*Including FPC/FFC conductor resistance                                                                      | 1 mA                                                                                                            |
| 4. Durability<br>(insertion/ withdrawal) | Contact resistance: 100 m ohms max.<br>No damage, cracks, or parts dislocation.                                                 | 20 cycles                                                                                                       |
| 5. Vibration                             | No electrical discontinuity of 1 μs or more.<br>Contact resistance: 100 m ohms max.<br>No damage, cracks, or parts dislocation. | Frequency: 10 to 55 Hz, single amplitude of 0.75mm, 10 cycles in each of the 3 directions                       |
| 6. Shock                                 | No electrical discontinuity of 1 μs. min.<br>Contact resistance: 100 m ohms max.<br>No damage, cracks, or parts dislocation.    | Acceleration of 981 m/s², 6 ms duration, sine half-wave waveform, 3 cycles in each of the 3 axis.               |
| 7. Humidity<br>(Steady state)            | Contact resistance: 100 m ohms max.<br>Insulation resistance: 100 M ohms min.<br>No damage, cracks, or parts dislocation.       | 96 hours at temperature of 40℃ and humidity of 90 to 95%                                                        |
| 8. Temperature cycle                     | Contact resistance: 100 m ohms max.<br>Insulation resistance: 100 M ohms min.<br>No damage, cracks, or parts dislocation.       | Temperature: -55℃ → +15℃ to +35℃ → +85℃ → +15℃ to +35℃<br>Time : 30 → 2 to 3 → 30 → 2 to 3(Minutes)<br>5 cycles |
| 9. Resistance to soldering heat          | No deformation of components affecting performance.                                                                             | Reflow: At the recommended temperature profile<br>Manual soldering: 350℃±5℃ for 5 seconds                       |

Note 1: When passing the current through all of the contacts, use 70% of the current rating.  
Note 2: Includes temperature rise caused by current flow.  
Note 3: The term “storage” refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non- conducting condition of installed connectors in storage, shipment or during transportation.Information  
Note 4: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

■Materials

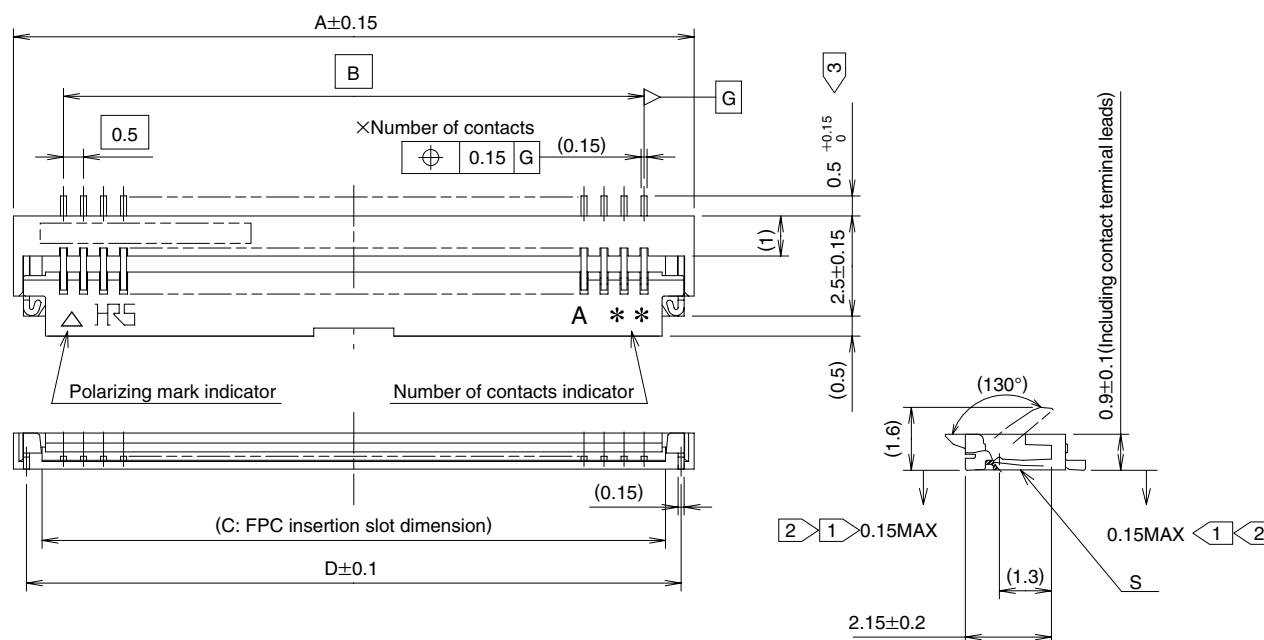
| Part           | Material        | Finish                                                      | Remarks |
|----------------|-----------------|-------------------------------------------------------------|---------|
| Insulator      | LCP             | Color: Beige                                                | UL94V-0 |
| Actuator       | PPS/LCP         | Color: Brown (FH19C Series)<br>Color: Black (FH19SC Series) |         |
| Contacts       | Phosphor bronze | Gold plated                                                 | —       |
| Metal fittings | Phosphor bronze | Pure tin reflow plated                                      | —       |

■Ordering information

FH 19 C - 30S - 0.5 SH (05)  
① ② ③ ④ ⑤ ⑥ ⑦

|                                                                   |  |                                                     |                                           |      |      |              |
|-------------------------------------------------------------------|--|-----------------------------------------------------|-------------------------------------------|------|------|--------------|
| ① Series name : FH                                                |  | ⑤ Contact pitch : 0.5mm                             |                                           |      |      |              |
| ② Series No. : 19                                                 |  | ⑥ Terminal type<br>SH: SMT horizontal mounting type |                                           |      |      |              |
| ③ C : FPC/FFC thickness : 0.2mm<br>SC : FPC/FFC thickness : 0.3mm |  | ⑦ Material and plating specifications :             |                                           |      |      |              |
| ④ No. of contacts : 4 to 50                                       |  | Actuator material                                   |                                           | PPS  | LCP  | Halogen Free |
|                                                                   |  | FH19C                                               | Contact: Gold plated                      | —    | (05) | YES          |
|                                                                   |  |                                                     | Contact: Gold plating with nickel barrier | —    | (10) |              |
|                                                                   |  | FH19SC<br>4 to 10 pos.                              | Contact: Gold plated                      | (05) | —    | NO           |
|                                                                   |  |                                                     | Contact: Gold plating with nickel barrier | (06) | —    |              |
|                                                                   |  | FH19SC<br>11 to 50 pos.                             | Contact: Gold plated                      | —    | (05) | YES          |
|                                                                   |  |                                                     | Contact: Gold plating with nickel barrier | —    | (09) |              |

[FH19C Series]



Notes

- 1 The coplanarity of each terminal lead and metal fitting is within 0.1
- 2 The contact terminal lead position indicates the dimension from the bottom surface of the insulator body.
- 3 Difference between terminal contact to be max. 0.1mm.
- 4 Packaged on tape and reel only. Check packaging specification.
- 5 Any discoloration of the plastic compound will NOT AFFECT form, fit or function of the connector.
- 6 After reflow, the terminal plating may change color, however this does not represent a quality issue.

Unit: mm

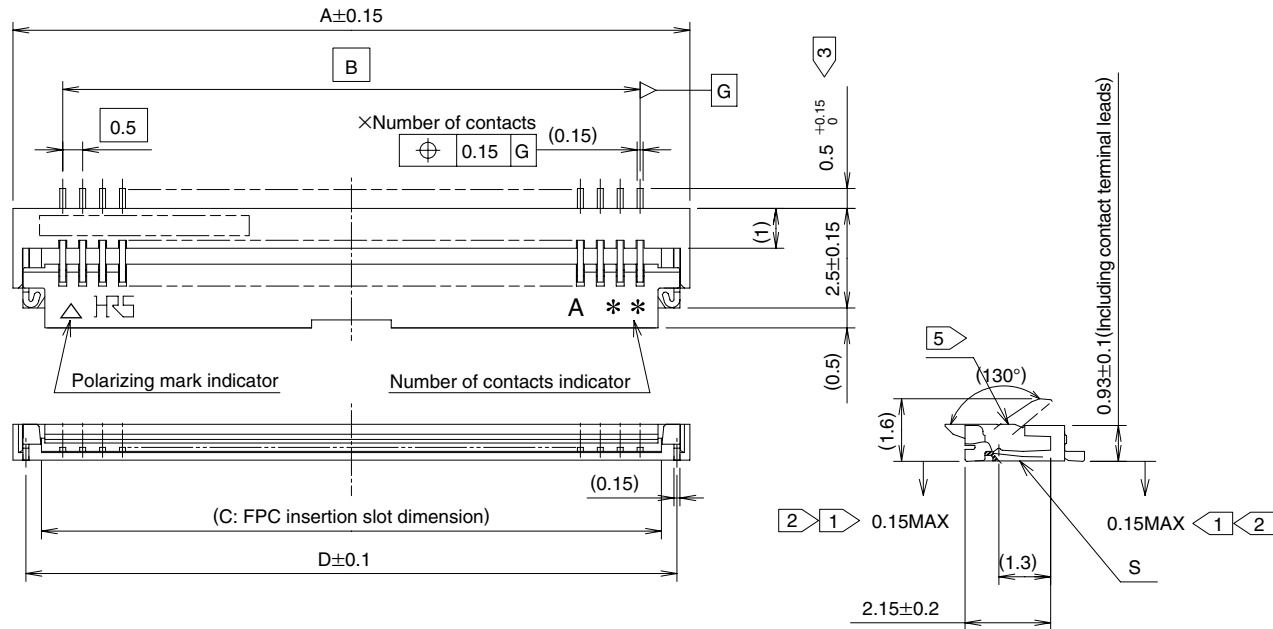
| Part Number         | CL No.         | Number of Contacts | A    | B    | C     | D     |
|---------------------|----------------|--------------------|------|------|-------|-------|
| FH19C- 4S-0.5SH(**) | 580-0410-1-**- | 4                  | 4    | 1.5  | 2.57  | 3.35  |
| FH19C- 5S-0.5SH(**) | 580-0418-3-**- | 5                  | 4.5  | 2    | 3.07  | 3.85  |
| FH19C- 6S-0.5SH(**) | 580-0409-2-**- | 6                  | 5    | 2.5  | 3.57  | 4.35  |
| FH19C- 7S-0.5SH(**) | 580-0411-4-**- | 7                  | 5.5  | 3    | 4.07  | 4.85  |
| FH19C- 8S-0.5SH(**) | 580-0404-9-**- | 8                  | 6    | 3.5  | 4.57  | 5.35  |
| FH19C- 9S-0.5SH(**) | 580-0403-6-**- | 9                  | 6.5  | 4    | 5.07  | 5.85  |
| FH19C-10S-0.5SH(**) | 580-0412-7-**- | 10                 | 7    | 4.5  | 5.57  | 6.35  |
| FH19C-12S-0.5SH(**) | 580-0413-0-**- | 12                 | 8    | 5.5  | 6.57  | 7.35  |
| FH19C-13S-0.5SH(**) | 580-0405-1-**- | 13                 | 8.5  | 6    | 7.07  | 7.85  |
| FH19C-15S-0.5SH(**) | 580-0406-4-**- | 15                 | 9.5  | 7    | 8.07  | 8.85  |
| FH19C-17S-0.5SH(**) | 580-0408-0-**- | 17                 | 10.5 | 8    | 9.07  | 9.85  |
| FH19C-20S-0.5SH(**) | 580-0402-3-**- | 20                 | 12   | 9.5  | 10.57 | 11.35 |
| FH19C-21S-0.5SH(**) | 580-0414-2-**- | 21                 | 12.5 | 10   | 11.07 | 11.85 |
| FH19C-24S-0.5SH(**) | 580-0407-7-**- | 24                 | 14   | 11.5 | 12.57 | 13.35 |
| FH19C-27S-0.5SH(**) | 580-0401-0-**- | 27                 | 15.5 | 13   | 14.07 | 14.85 |
| FH19C-30S-0.5SH(**) | 580-0400-8-**- | 30                 | 17   | 14.5 | 15.57 | 16.35 |
| FH19C-34S-0.5SH(**) | 580-0419-6-**- | 34                 | 19   | 16.5 | 17.57 | 18.35 |
| FH19C-40S-0.5SH(**) | 580-0416-8-**- | 40                 | 22   | 19.5 | 20.57 | 21.35 |
| FH19C-50S-0.5SH(**) | 580-0417-0-**- | 50                 | 27   | 24.5 | 25.57 | 26.35 |

Note1: Embossed tape reel packaging (5,000 pieces/reel).

Order by number of reels.

Note2: \*\*Specification. Refer to ordering information.

[FH19SC Series]



- Notes
- ① The coplanarity of each terminal lead and metal fitting is within 0.1
  - ② The contact terminal lead position indicates the dimension from the bottom surface of the insulator body.
  - ③ Difference between terminal contact to be max. 0.1mm.
  - ④ Any discoloration of the plastic compound will NOT AFFECT form, fit or function of the connector.
  - ⑤ The contacts are protruding 0.03mm max. from the housing top surface.
  - ⑥ Packaged on tape and reel only. Check packaging specification.
  - ⑦ After reflow, the terminal plating may change color, however this does not represent a quality issue.

Unit: mm

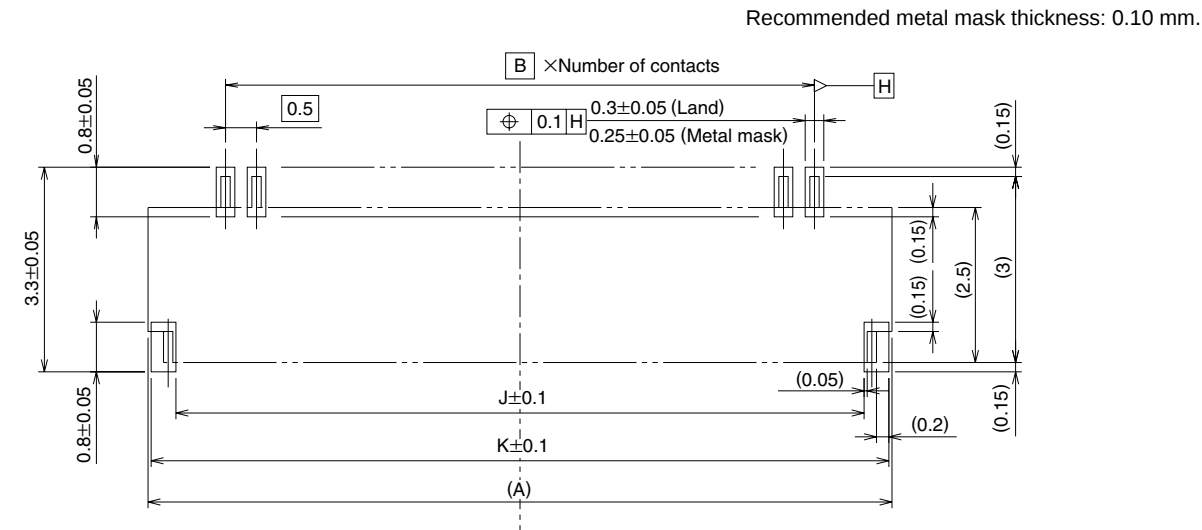
| Part Number          | CL No.         | Number of Contacts | A    | B    | C     | D     |
|----------------------|----------------|--------------------|------|------|-------|-------|
| FH19SC- 4S-0.5SH(**) | 580-0517-5-**- | 4                  | 4    | 1.5  | 2.57  | 3.35  |
| FH19SC- 5S-0.5SH(**) | 580-0515-0-**- | 5                  | 4.5  | 2    | 3.07  | 3.85  |
| FH19SC- 6S-0.5SH(**) | 580-0501-5-**- | 6                  | 5    | 2.5  | 3.57  | 4.35  |
| FH19SC- 8S-0.5SH(**) | 580-0520-0-**- | 8                  | 6    | 3.5  | 4.57  | 5.35  |
| FH19SC- 9S-0.5SH(**) | 580-0507-1-**- | 9                  | 6.5  | 4    | 5.07  | 5.85  |
| FH19SC-10S-0.5SH(**) | 580-0508-4-**- | 10                 | 7    | 4.5  | 5.57  | 6.35  |
| FH19SC-12S-0.5SH(**) | 580-0512-1-**- | 12                 | 8    | 5.5  | 6.57  | 7.35  |
| FH19SC-13S-0.5SH(**) | 580-0518-8-**- | 13                 | 8.5  | 6    | 7.07  | 7.85  |
| FH19SC-14S-0.5SH(**) | 580-0509-7-**- | 14                 | 9    | 6.5  | 7.57  | 8.35  |
| FH19SC-15S-0.5SH(**) | 580-0503-0-**- | 15                 | 9.5  | 7    | 8.07  | 8.85  |
| FH19SC-16S-0.5SH(**) | 580-0521-2-**- | 16                 | 10   | 7.5  | 8.57  | 9.35  |
| FH19SC-17S-0.5SH(**) | 580-0504-3-**- | 17                 | 10.5 | 8    | 9.07  | 9.85  |
| FH19SC-18S-0.5SH(**) | 580-0519-0-**- | 18                 | 11   | 8.5  | 9.57  | 10.35 |
| FH19SC-20S-0.5SH(**) | 580-0502-8-**- | 20                 | 12   | 9.5  | 10.57 | 11.35 |
| FH19SC-21S-0.5SH(**) | 580-0505-6-**- | 21                 | 12.5 | 10   | 11.07 | 11.85 |
| FH19SC-22S-0.5SH(**) | 580-0506-9-**- | 22                 | 13   | 10.5 | 11.57 | 12.35 |
| FH19SC-24S-0.5SH(**) | 580-0511-9-**- | 24                 | 14   | 11.5 | 12.57 | 13.35 |
| FH19SC-26S-0.5SH(**) | 580-0510-6-**- | 26                 | 15   | 12.5 | 13.57 | 14.35 |
| FH19SC-27S-0.5SH(**) | 580-0516-2-**- | 27                 | 15.5 | 13   | 14.07 | 14.85 |
| FH19SC-28S-0.5SH(**) | 580-0513-4-**- | 28                 | 16   | 13.5 | 14.57 | 15.35 |
| FH19SC-30S-0.5SH(**) | 580-0500-2-**- | 30                 | 17   | 14.5 | 15.57 | 16.35 |
| FH19SC-32S-0.5SH(**) | 580-0514-7-**- | 32                 | 18   | 15.5 | 16.57 | 17.35 |
| FH19SC-40S-0.5SH(**) | 580-0522-5-**- | 40                 | 22   | 19.5 | 20.57 | 21.35 |
| FH19SC-45S-0.5SH(**) | 580-0523-8-**- | 45                 | 24.5 | 22   | 23.07 | 23.85 |
| FH19SC-50S-0.5SH(**) | 580-0524-0-**- | 50                 | 27   | 24.5 | 25.57 | 26.35 |

Note1: Embossed tape reel packaging (5,000 pieces/reel) .

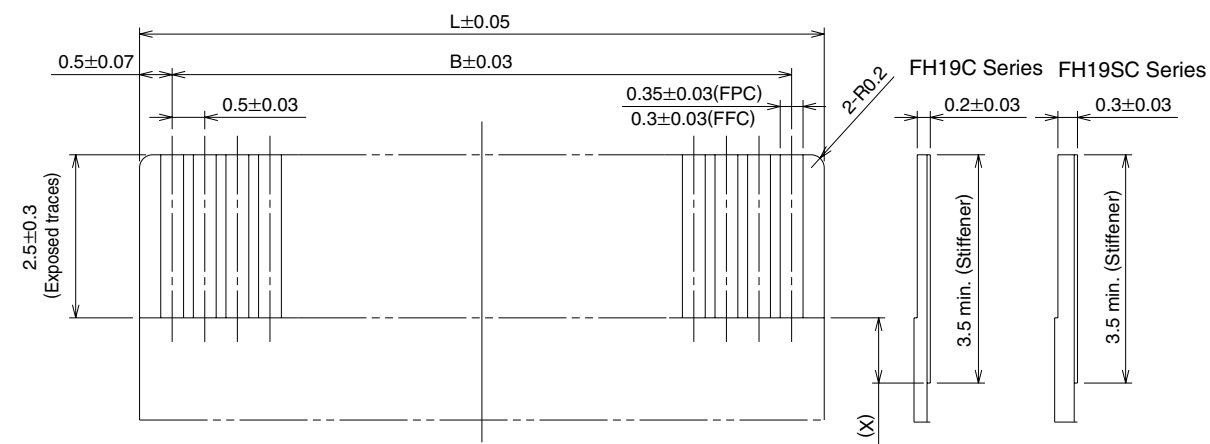
Order by number of reels.

Note2: \*\*Specification. Refer to ordering information.

**Recommended PCB Land and Metal Mask Dimensions**  
 [Common to FH19C & FH19SC Series]



**Recommended FPC, FFC Dimensions**  
 [Common to FH19C & FH19SC Series]



Note 1: Stiffener dimension should be 3.5mm min., and X dimension should be 0.5mm for improved flexibility of FPC.

Unit: mm

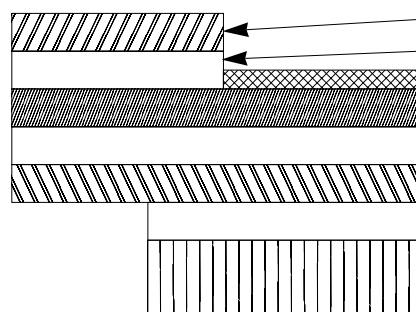
| Number of Contacts | A    | B   | J    | K    | L   |
|--------------------|------|-----|------|------|-----|
| 4                  | 4.0  | 1.5 | 3.1  | 3.9  | 2.5 |
| 5                  | 4.5  | 2.0 | 3.6  | 4.4  | 3.0 |
| 6                  | 5.0  | 2.5 | 4.1  | 4.9  | 3.5 |
| 7                  | 5.5  | 3.0 | 4.6  | 5.4  | 4.0 |
| 8                  | 6.0  | 3.5 | 5.1  | 5.9  | 4.5 |
| 9                  | 6.5  | 4.0 | 5.6  | 6.4  | 5.0 |
| 10                 | 7.0  | 4.5 | 6.1  | 6.9  | 5.5 |
| 12                 | 8.0  | 5.5 | 7.1  | 7.9  | 6.5 |
| 13                 | 8.5  | 6.0 | 7.6  | 8.4  | 7.0 |
| 14                 | 9.0  | 6.5 | 8.1  | 8.9  | 7.5 |
| 15                 | 9.5  | 7.0 | 8.6  | 9.4  | 8.0 |
| 16                 | 10.0 | 7.5 | 9.1  | 9.9  | 8.5 |
| 17                 | 10.5 | 8.0 | 9.6  | 10.4 | 9.0 |
| 18                 | 11.0 | 8.5 | 10.1 | 10.9 | 9.5 |

Unit: mm

| Number of Contacts | A    | B    | J    | K    | L    |
|--------------------|------|------|------|------|------|
| 20                 | 12.0 | 9.5  | 11.1 | 11.9 | 10.5 |
| 21                 | 12.5 | 10.0 | 11.6 | 12.4 | 11.0 |
| 22                 | 13.0 | 10.5 | 12.1 | 12.9 | 11.5 |
| 24                 | 14.0 | 11.5 | 13.1 | 13.9 | 12.5 |
| 26                 | 15.0 | 12.5 | 14.1 | 14.9 | 13.5 |
| 27                 | 15.5 | 13.0 | 14.6 | 15.4 | 14.0 |
| 28                 | 16.0 | 13.5 | 15.1 | 15.9 | 14.5 |
| 30                 | 17.0 | 14.5 | 16.1 | 16.9 | 15.5 |
| 32                 | 18.0 | 15.5 | 17.1 | 17.9 | 16.5 |
| 34                 | 19.0 | 16.5 | 18.1 | 18.9 | 17.5 |
| 40                 | 22.0 | 19.5 | 21.1 | 21.9 | 20.5 |
| 45                 | 24.5 | 22.0 | 23.6 | 24.4 | 23.0 |
| 50                 | 27.0 | 24.5 | 26.1 | 26.9 | 25.5 |

## ■FH19C & FH19SC Series FPC/FFC Construction (Recommended Specifications)

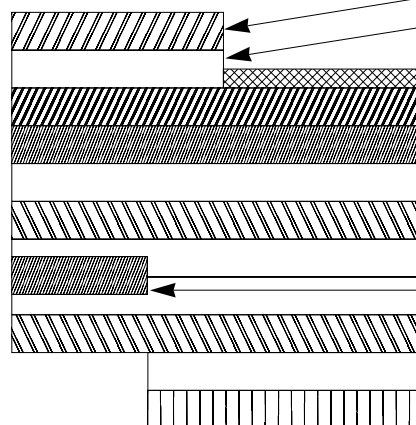
### 1. Using Single-sided FPC



### FPC : Flexible Printed Circuit

| Material Name                   | Material                                         | Thickness (μm) |        |
|---------------------------------|--------------------------------------------------|----------------|--------|
|                                 |                                                  | FH19C          | FH19SC |
| Covering layer film             | Polyimide 1 mil thick                            | (25)           | (25)   |
| Cover adhesive                  |                                                  | (25)           | (25)   |
| Surface treatment               | Nickel under plated 1 to 5μm / Gold plated 0.2μm | 3              | 3      |
| Copper foil                     | Cu 1oz                                           | 35             | 35     |
| Base adhesive                   | Thermosetting adhesive                           | 25             | 25     |
| Base film                       | Polyimide 1 mil thick                            | 25             | 25     |
| Reinforcement material adhesive | Thermosetting adhesive                           | 30             | 30     |
| Stiffener                       | Polyimide FH19C : 3mil<br>FH19SC : 7mil          | 75             | 175    |
| Total                           |                                                  | 193            | 293    |

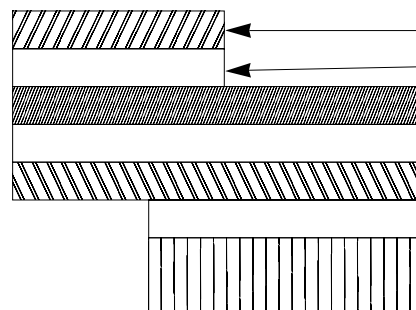
### 2. Using Double-sided FPC



### FPC : Flexible Printed Circuit

| Material Name                   | Material                                         | Thickness (μm) |        |
|---------------------------------|--------------------------------------------------|----------------|--------|
|                                 |                                                  | FH19C          | FH19SC |
| Covering layer film             | Polyimide 1 mil thick                            | (25)           | (25)   |
| Cover adhesive                  |                                                  | (25)           | (25)   |
| Surface treatment               | Nickel under plated 1 to 5μm / Gold plated 0.2μm | 3              | 3      |
| Through-hole copper             | Cu                                               | 15             | 15     |
| Copper foil                     | Cu 1/2oz                                         | 18             | 18     |
| Base adhesive                   | Thermosetting adhesive                           | 18             | 18     |
| Base film                       | Polyimide 1 mil thick                            | 25             | 25     |
| Base adhesive                   |                                                  | 18             | 18     |
| Copper foil                     | Cu 1/2oz                                         | 18             | 18     |
| Cover adhesive                  | Thermosetting adhesive                           | 25             | 25     |
| Covering layer film             | Polyimide 1 mil thick                            | 25             | 25     |
| Reinforcement material adhesive | Thermosetting adhesive                           | 25             | 50     |
| Stiffener                       | Polyimide FH19C : 1mil<br>FH19SC : 4mil          | 25             | 100    |
| Total                           |                                                  | 197            | 297    |

### 3. Using FFC (Flexible Flat Cable)



### FFC : Flexible Flat Cable

| Material Name                                         | Material                     | Thickness (μm) |        |
|-------------------------------------------------------|------------------------------|----------------|--------|
|                                                       |                              | FH19C          | FH19SC |
| Polyester film                                        |                              | (12)           | (12)   |
| Adhesive                                              | Polyester thermoplastic type | (30)           | (30)   |
| (Nickel under plated / Gold plated), soft copper film |                              | 35             | 35     |
| Adhesive                                              | Polyester                    | 30             | 30     |
| Polyester                                             |                              | 12             | 12     |
| Adhesive                                              | Polyester                    | 30             | 30     |
| Stiffener                                             | Polyester                    | 100            | 188    |
| Total                                                 |                              | 207            | 295    |

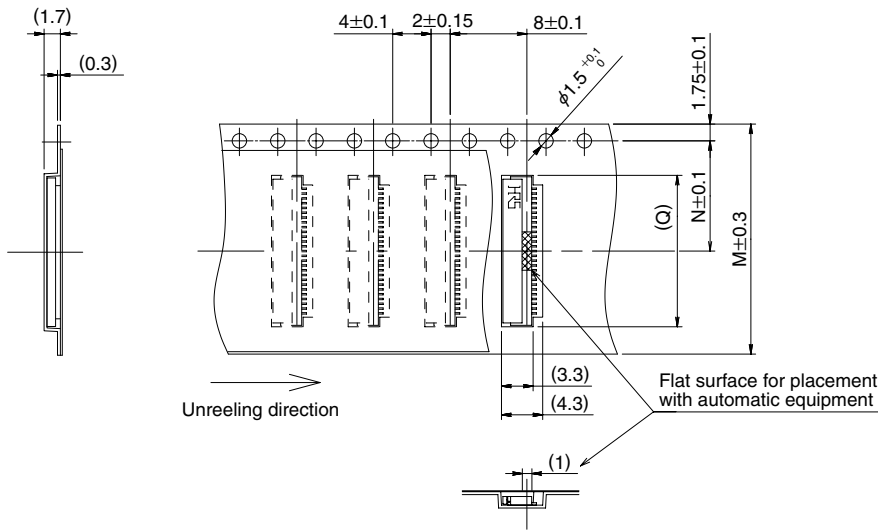
\* Practical tolerance of thickness dimension is  $\pm 20\mu\text{m}$  (i.e., 187 to 227μm).

### 4. Precautions

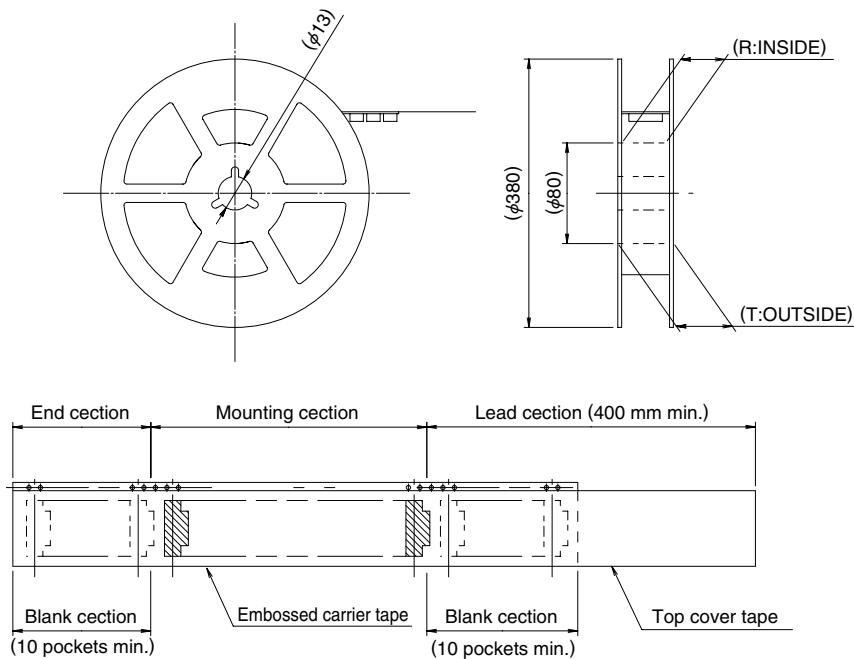
1. This specification is a recommendation for the construction of the FH19C/ Series FPC and FFC ( $t=0.2\pm 0.03$ ).
2. For details about the construction, please contact the FPC/FFC manufacturers.

■Packaging Specifications  
[Common to FH19C & FH19SC Series]

● Embossed Carrier Tape Dimensions



●Reel Dimensions



Unit: mm

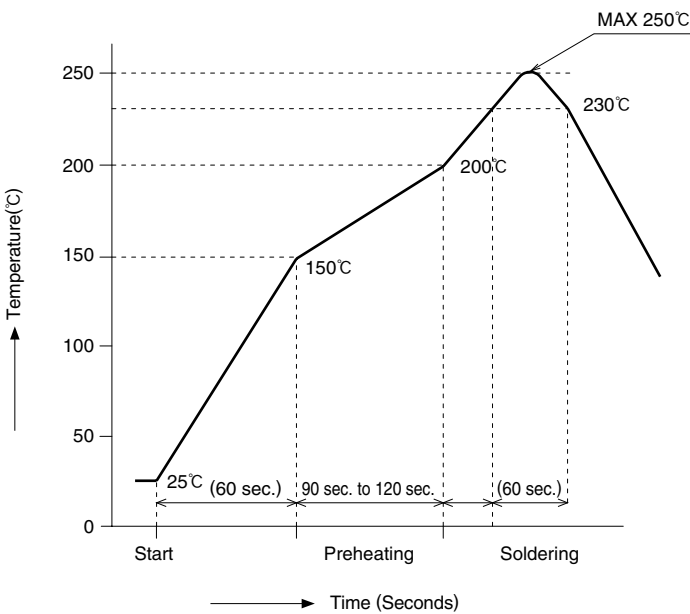
| Number of Contacts | M  | N    | Q    | R    | T    |
|--------------------|----|------|------|------|------|
| 4                  | 16 | 7.5  | 4.3  | 17.4 | 21.4 |
| 5                  | 16 | 7.5  | 4.8  | 17.4 | 21.4 |
| 6                  | 16 | 7.5  | 5.3  | 17.4 | 21.4 |
| 7                  | 16 | 7.5  | 5.8  | 17.4 | 21.4 |
| 8                  | 16 | 7.5  | 6.3  | 17.4 | 21.4 |
| 9                  | 16 | 7.5  | 6.8  | 17.4 | 21.4 |
| 10                 | 16 | 7.5  | 7.3  | 17.4 | 21.4 |
| 12                 | 16 | 7.5  | 8.3  | 17.4 | 21.4 |
| 13                 | 16 | 7.5  | 8.8  | 17.4 | 21.4 |
| 14                 | 16 | 7.5  | 9.3  | 17.4 | 21.4 |
| 15                 | 16 | 7.5  | 9.8  | 17.4 | 21.4 |
| 16                 | 24 | 11.5 | 10.3 | 25.4 | 29.4 |
| 17                 | 24 | 11.5 | 10.8 | 25.4 | 29.4 |
| 18                 | 24 | 11.5 | 11.3 | 25.4 | 29.4 |

Unit: mm

| Number of Contacts | M  | N    | Q    | R    | T    |
|--------------------|----|------|------|------|------|
| 20                 | 24 | 11.5 | 12.3 | 25.4 | 29.4 |
| 21                 | 24 | 11.5 | 12.8 | 25.4 | 29.4 |
| 22                 | 24 | 11.5 | 13.3 | 25.4 | 29.4 |
| 24                 | 24 | 11.5 | 14.3 | 25.4 | 29.4 |
| 26                 | 24 | 11.5 | 15.3 | 25.4 | 29.4 |
| 27                 | 24 | 11.5 | 15.8 | 25.4 | 29.4 |
| 28                 | 24 | 11.5 | 16.3 | 25.4 | 29.4 |
| 30                 | 24 | 11.5 | 17.3 | 25.4 | 29.4 |
| 32                 | 32 | 14.2 | 18.3 | 33.4 | 37.4 |
| 34                 | 32 | 14.2 | 19.3 | 33.4 | 37.4 |
| 40                 | 44 | 20.2 | 22.3 | 45.4 | 49.4 |
| 45                 | 44 | 20.2 | 24.8 | 45.4 | 49.4 |
| 50                 | 44 | 20.2 | 27.3 | 45.4 | 49.4 |

Note: 5,000 pieces per reel.  
Embossed tape 32 mm or wider will have perforated feed holes on two sides.

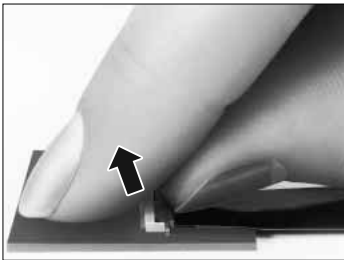
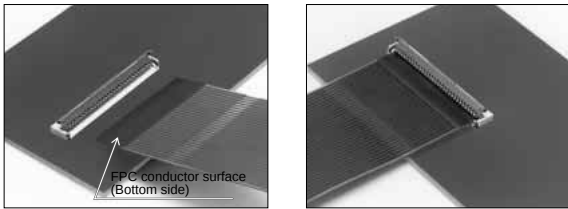
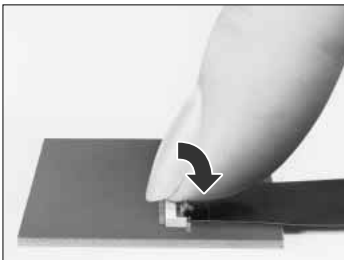
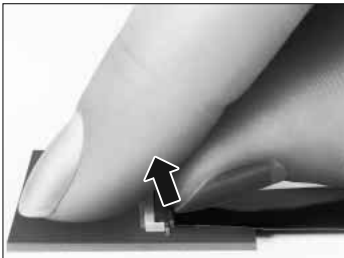
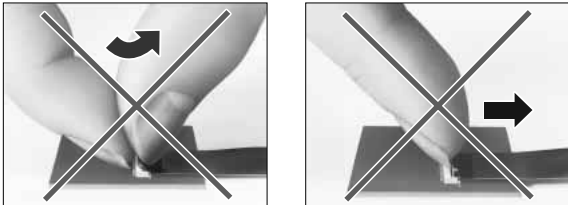
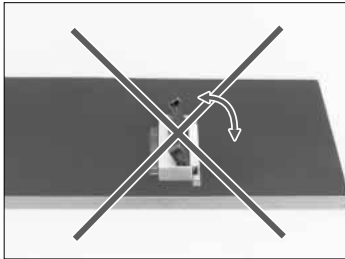
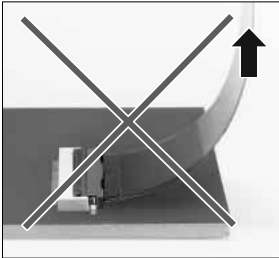
■Recommended Temperature Profile  
[For FH19C & FH19SC Series]



|                    |                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------|
| HRS test condition |                                                                                                      |
| Solder method      | :Reflow, IR/hot air                                                                                  |
| Solder composition | :Paste, 96.5%Sn/3.0%Ag/0.5%Cu<br>(Senju Metal Industry, Co., Ltd.'s Part Number:M705-221CM5-32-10.5) |
| Test board         | :Glass epoxy 45mm×100mm×1.6mm thick                                                                  |
| Land dimensions    | :0.3mm×0.8mm                                                                                         |
| Metal mask         | :0.25mm×0.8mm×0.1mm                                                                                  |

This temperature profile is based on the above conditions.  
In individual applications the actual temperature may vary, depending on solder paste type, volume/thickness and board size/thickness. Consult tour solder paste and equipment manufacturer for specific recommendations.

## ■ Operation and Precautions

| Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Precautions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>1. FPC/FFC Termination procedure.</b><br/> <b>Connector installed on the board.</b></p> <p>1) Lift up the actuator. Use thumb or index finger.</p>  <p>2) Assure that the FPC/FFC is fully inserted parallel to mounting surface, with the exposed conductive traces facing down.</p>  <p>3) Rotate down the actuator until firmly closed. It is critical that the inserted FPC/FFC is not moved and remains fully inserted. Should the FPC/FFC be moved, open the actuator and repeat the process, starting with Step 1 above.</p>  <p><b>2. FPC/FFC Removal</b></p> <p>1) Lift up the actuator.</p> <p>2) Carefully remove the FPC/FFC.</p>  | <p>1) Do not apply excessive force or use any type of tool to operate the actuator.</p>  <p>2) The connector will assure reliable performance when the actuator is open to 130° maximum. Do not exceed this angle, as this may cause permanent damage to the connector.</p>  <p>3) Application of excessive force to the inserted FPC/FFC may cause damage to connector and may affect the reliability of electrical connection. If specific application requires continuous or repeated pull or bend of the inserted FPC/FFC, assure that the forces are NOT transmitted directly to the connector.</p>  |

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9