

POB Series

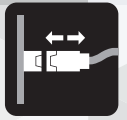
High Performance Miniature Push-on Coaxial Connectors



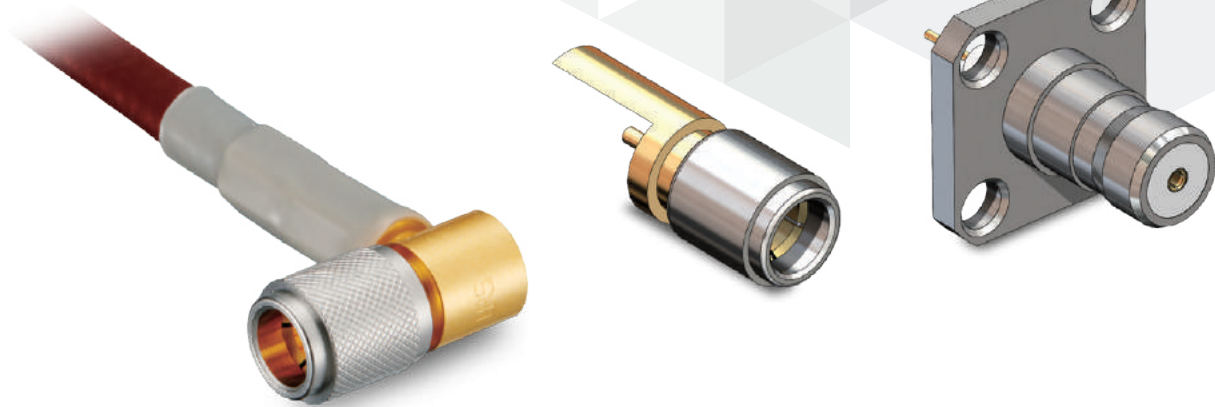
RF



SMA



Push On



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Features

1. Matching the Performance of HRM Series (SMA Connector)

This POB Series is engineered for high-frequency and mechanical performance, featuring a unified transmission line structure and a stationary structure that aligns with our HRM Series (SMA connector).

Spring structure in mated portion specifically designed to ensure the electrical reference surface remains in constant contact.

Robust design of outer terminal guarantees high stability and reliability.

Spring structure designed to protect the contact section, preventing loading even if the contact part is rubbed in a partially mated state.

2. Push-On Lock Type

While the HRM Series (SMA connector) utilizes a screw lock mechanism, the POB Series features a push-on lock. The benefits of this push-on lock type include :

- Enhanced workability through reduced detachment time.
- Can be used without tool (hand-operated), allowing for closer component mounting.

These features enable more flexible PCB layout designs.

3. Unification with HRM Series

The POB Series closely aligns with our HRM Series (SMA connector) to ease the transition and combined use for customers.

Features unified with the HRM Series include :

- Mounting methods and dimensions
- Weight, size, and electrical length
- Types of cables applicable
- Connection methods and termination tools

4. RoHS2 Compliant

Applications

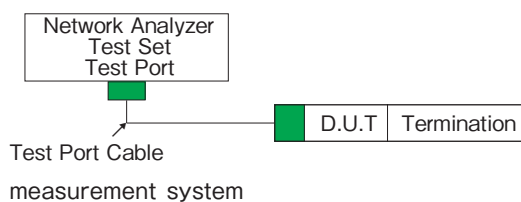
Cable or Radio Communication Equipment, Broadcasting Equipment, Radar Systems, and Electronic Measuring Devices

Product Specifications

| | | | |
|----------------------------------|--------------|-----------------------------|--------------|
| Nominal Characteristic Impedance | 50 Ω | Operating Temperature | -55 to +85°C |
| Rated Voltage | 330V AC | Operating Relative Humidity | 85% Max. |
| Rated Frequency | 0 to 12.4GHz | | |

| Items | Specifications | Conditions |
|---------------------------------|--|--|
| Contact Resistance | 4m Ω Max. | Measured at 100mA Max. |
| Insulation Resistance | 5000M Ω Min. | Measured at DC 500V |
| Withstanding Voltage | No insulation breakdown | AC 1000V for 1 min. |
| V.S.W.R. (Note) | See below | See below |
| Insertion and withdrawal forces | 19.6 to 58.8N | Measured with Applicable Connector |
| Insertion Torque | 14.7mN·m Min. | Measured with Applicable Connector |
| Mating Durability | Contact Resistance : 6m Ω Max. | 500 times |
| Vibration Resistance | No electrical discontinuity of 1 μ s or more No damage, cracks, or parts dislocation | Frequency : 10 to 500Hz, Half amplitude : 0.75mm, Acceleration : 98m/s ² , 2 hours in each of the 3 axis |
| Shock Resistance | No electrical discontinuity of 1 μ s or less No damage, cracks, or parts dislocation | Acceleration : 980m/s ² , Duration 11ms, Wave form : Half-sine wave, 3 times in each of the 3 axis |
| Humidity | Insulation Resistance : 100M Ω Min. (in a high humidity environment) Insulation resistance : 1000M Ω Min. (in a dry environment) No damage, cracks, or parts dislocation | Left for 10 cycles (240 hours) in an environment with the temperature ranging from +25 to +65°C and the humidity ranging from 90 to 96%. |
| Heat Shock Resistance | No damage, cracks, or parts dislocation | (-65°C : 30 min. → +5 to +35°C : within 5 min. → +125°C : 30 min. → +5 to +35°C : within 5 min.) 5 cycles |
| Corrosion Resistance | No corrosion that impairs function. | Continuous 48 hour cycle in 5% salt water solution |

Note : Some products may have different specifications from those shown above.



Note 1 : The cable connector is measured with the connector attached to the applicable cable.

Note 2 : Board type connector is mounted to a 50 Ω board and measurements is conducted with connector attached.

Note 3 : Receptacle is measured with the measuring adapter installed.

Materials / Finish

| Component | Material | Finish |
|-----------------------|------------------|----------------|
| Shell | Brass | Gold Plating |
| Outer Shell | Brass | Nickel Plating |
| Male Center Contact | Brass | Gold Plating |
| Female Center Contact | Beryllium Copper | Gold Plating |
| Crimp Sleeve | Copper | Nickel Plating |
| Insulator | PTFE | — |
| Boot | Heat Shrink Tube | — |

Product Number Structure

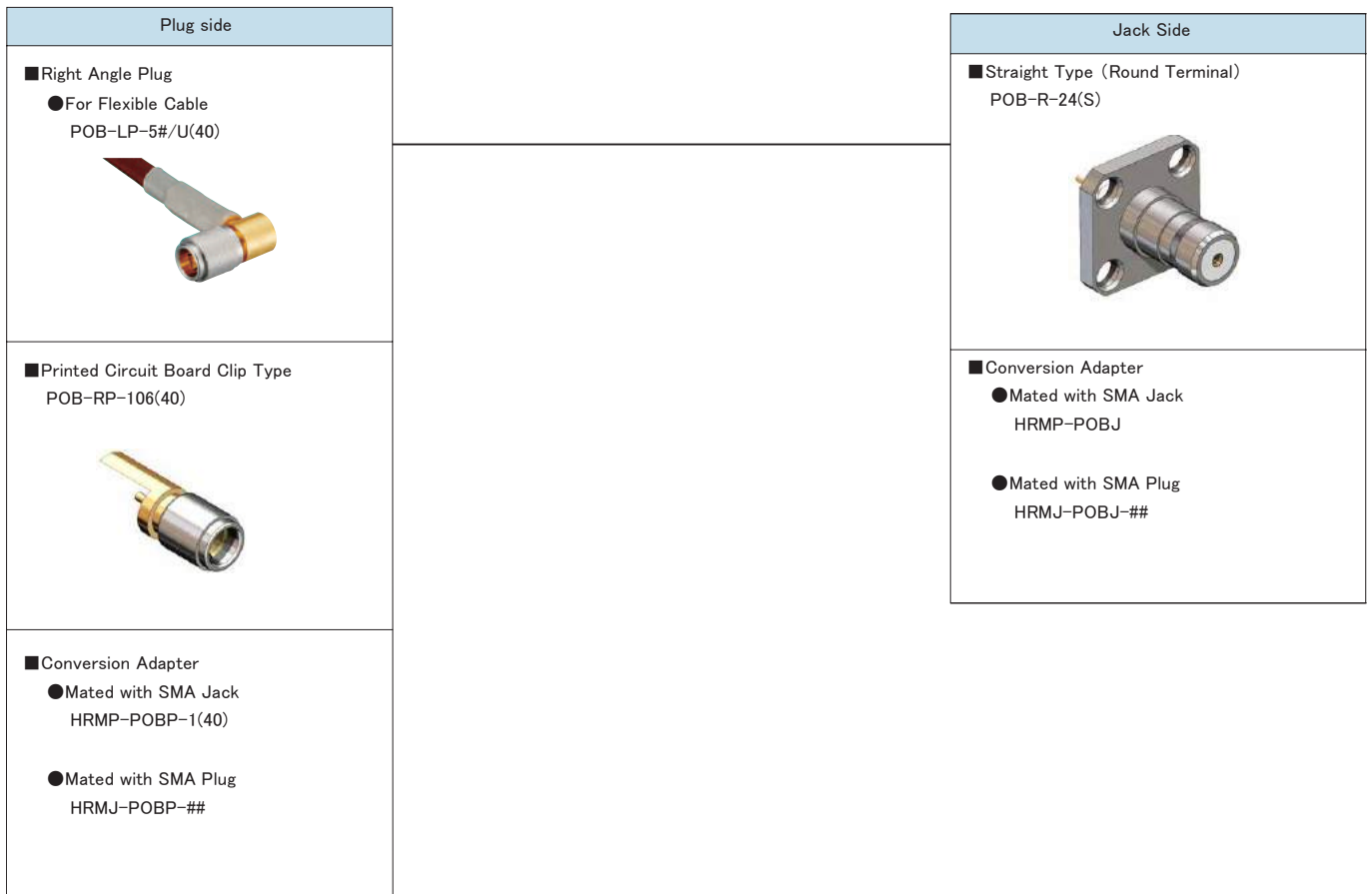
Refer to the chart below when determining the product specifications from the product number.

POB - [] - []

- ① ② ③

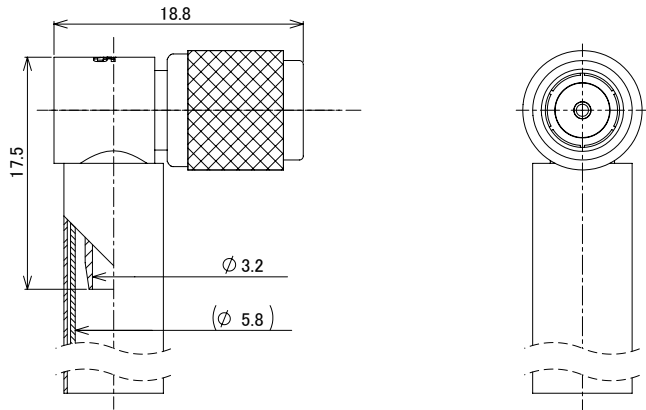
| | | | |
|------------------|--|---|--|
| ① Series Name | POB | ③ 1)For Plug, Jack · · Applicable Cable 2)For Receptacle, Plug Receptacle | 55/U : RG-55/U, RG-142B/U 58/U : RG-58/U 1.5DW : 1.5D-2W Identification No. |
| ② Connector Type | LP : Right Angle Plug R : Straight Receptacle RP : Plug Receptacle | | |

Functional Diagram



Plug

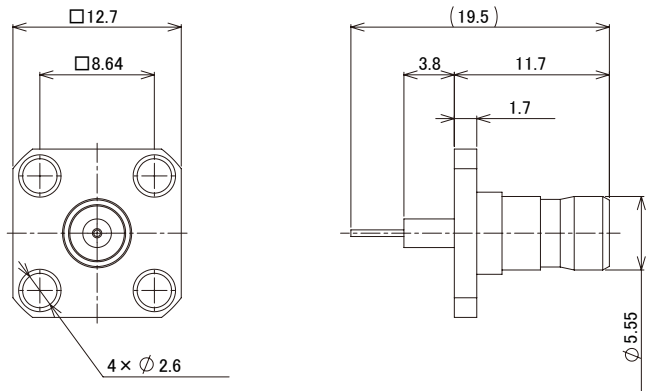
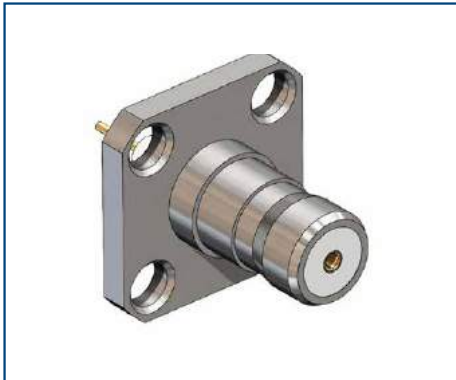
● Right Angle Plug (For Flexible Cable)



| Part No. | HRS No. | Applicable Cable | ϕA | Purchase Unit |
|-----------------|------------------|--------------------|----------|---------------|
| POB-LP-55/U(40) | CL0326-0028-7-40 | RG-55/U, RG-142B/U | 5.80 | 20pcs per bag |
| POB-LP-58/U(40) | CL0326-0027-4-40 | RG-58/U | 5.20 | |

Receptacle (4 Screw Type)

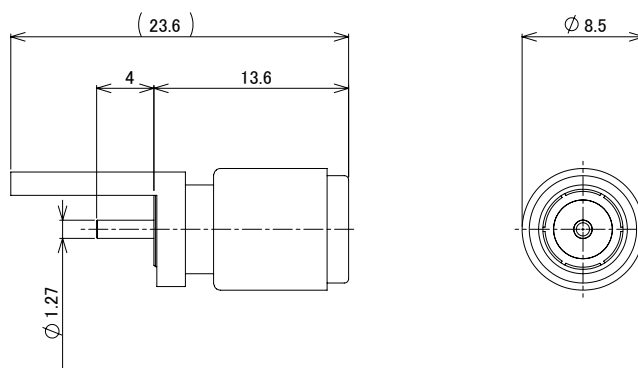
● Straight Type (Round Terminal)



| Part No. | HRS No. | Purchase Unit |
|-------------|------------------|---------------|
| POB-R-24(S) | CL0326-0105-6-00 | 20pcs per bag |

Plug Receptacle

● Printed Circuit Board Clip Type

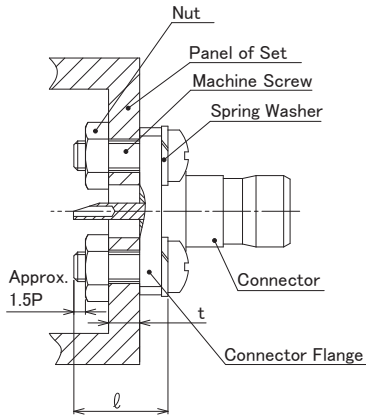


| Part No. | HRS No. | Purchase Unit |
|----------------|------------------|---------------|
| POB-RP-106(40) | CL0326-0096-7-40 | 20pcs per bag |

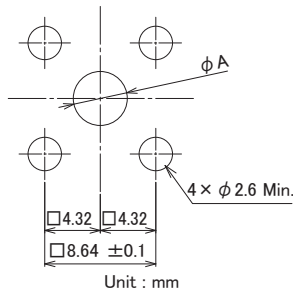
Dimensions for Mounting onto the Set

1. When the connector flange is mounted on the outside of the set

1. When mounted with plain hole



Drawing of Mounting



Panel Hole Dimension

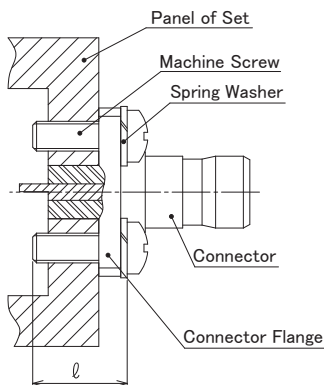
● Parts for Mounting

| Part Name | Type | Length (ℓ) |
|----------------------|---|-----------------------|
| Machine Screw | M2.3 × 0.4 Pan-headed Small Screw or Round Small Screw | t+4.7mm Min. (Note 2) |
| Nut | For M2.3 × 0.4 | — |
| Spring Washer | For M2.3 | — |
| Flat Washer (Note 1) | For M2.3 | — |

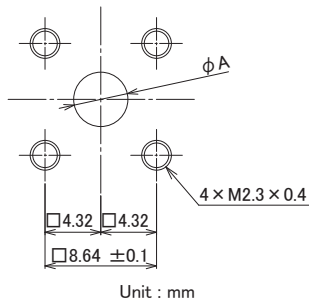
Note 1 : Mount between nut and panel when it is wished to prevent peeling of the panel coating.

Note 2 : The length will be t+5.2mm or more when a flat washer is used.

2. When mounted with tap hole



Drawing of Mounting



Panel Hole Dimension

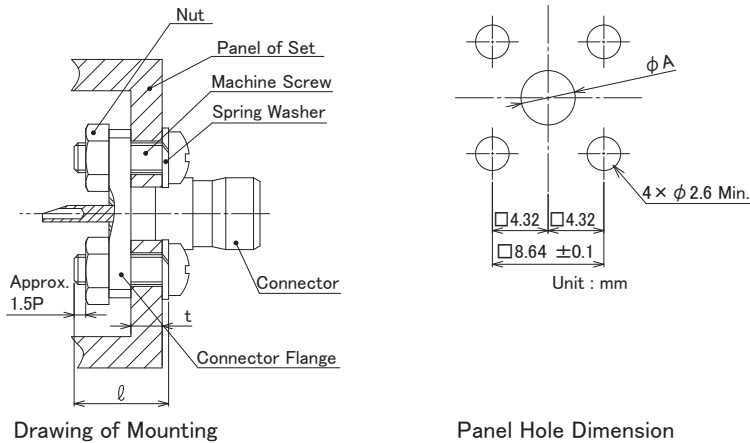
● Parts for Mounting

| Parts | Type | Length (ℓ) |
|---------------|---|-----------------------|
| Machine Screw | M2.3 × 0.4 Pan-headed Small Screw or Round Small Screw | Depends on Set Design |
| Spring Washer | For M2.3 | — |

● List of ϕ A Dimensions (common to both (1) and (2))

| ϕ A (mm) | Applicable Products |
|------------------|--|
| ϕ 2.21 Min. | POB-R-24(S) |
| ϕ 5.55 Min. | HRMJ-POBJ-PA(40) (when the HRM side is on the outside) |
| ϕ 6.35 Min. | HRMJ-POBJ-PA(40) (when the POB side is on the outside) |

2. When the connector flange is mounted on the inside of the set



● Parts for Mounting

| Part Name | Type | Length (ℓ) |
|----------------------|--|-----------------------|
| Machine Screw | M2.3 \times 0.4 Pan-headed Small Screw or Round Small Screw | t+4.7mm Min. (Note 2) |
| Nut | For M2.3 \times 0.4 | — |
| Spring Washer | For M2.3 | — |
| Flat Washer (Note 1) | For M2.3 | — |

Note 1 : Mount between flange and panel when it is wished to prevent peeling of the panel coating.

Note 2 : The length will be t+5.2mm or more when a flat washer is used.

● List of ϕ A Dimensions

| ϕ A (mm) | Applicable Products |
|------------------|--|
| ϕ 5.55 Min. | HRMJ-POBJ-PA(40) , POB-R-24(S) (when the POB side is on the outside) |
| ϕ 6.35 Min. | HRMJ-POBJ-PA(40) (when the HRM side is on the outside) |

● List of Maximum Panel Thicknesses

| t (mm) | Applicable Products |
|--------|--|
| 2.0 | HRMJ-POBJ-PA(40) (when the HRM side is on the outside) |
| 3.4 | POB-R-24(S) |
| 6.2 | HRMJ-POBJ-PA(40) (when the POB side is on the outside) |

List of Converter Adapter

Please check the converter adapter page for detail.

| Joint 1 | | Joint 2 | | Part No. | HRS No. | Shape |
|-------------|------------|--------------|------------|------------------|------------------|-----------------------|
| Series Name | Joint Part | Series Name | Joint Part | | | |
| POB | Plug | SMA (HRM) | Plug | HRMP-POBP-1(40) | CL0311-0169-0-40 | |
| | | | Jack | HRMJ-POBP(40) | CL0311-0151-4-40 | |
| | Jack | | Plug | HRMP-POBJ | CL0311-0152-7-00 | |
| | | | Jack | HRMJ-POBJ(40) | CL0311-0149-2-40 | |
| | | | | HRMJ-POBJ-PA(40) | CL0311-0150-1-40 | Panel Attachment Type |

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While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.