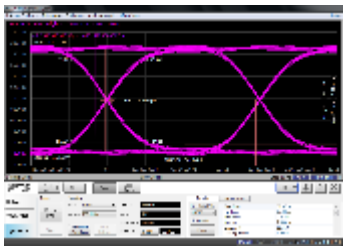
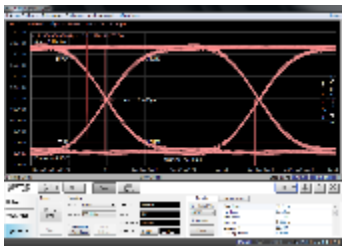
**SENSORVIEW** Phase Matched adapter meets MIL STD 348. we are manufacturing a wide range of adapters within / between series. Matched adapters have the same nominal connector mating reference plane to reference plane length.

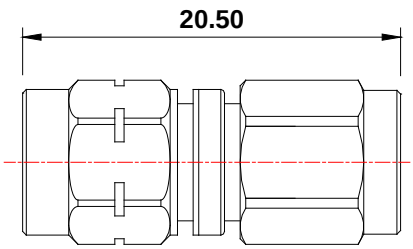
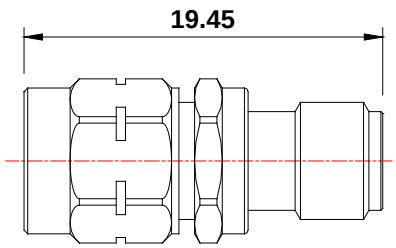
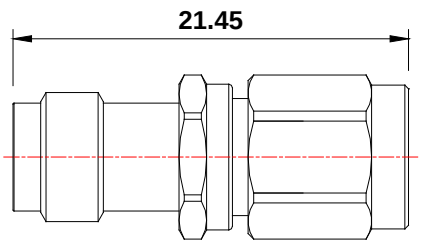
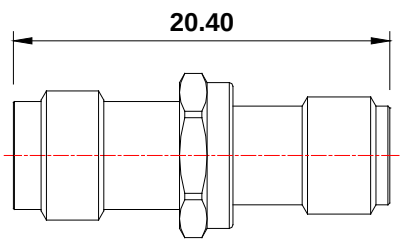
The connector mating plane is the plane along which two mating connector outer conductors come together. All adapter's phase difference range is ±2 degree.





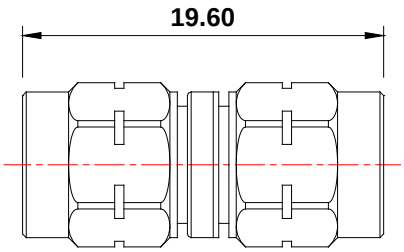
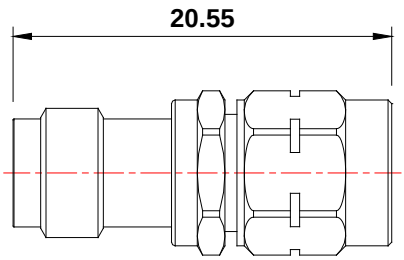
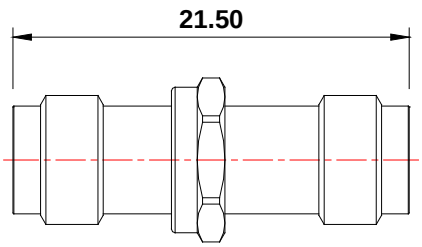
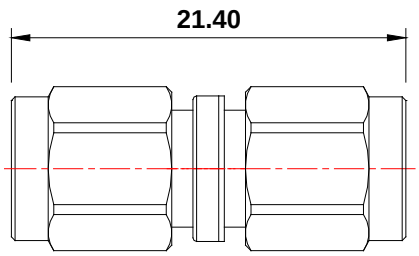
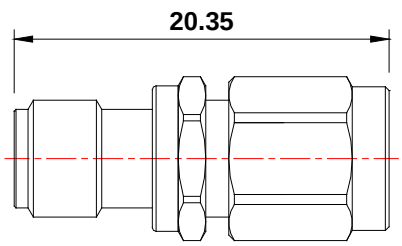
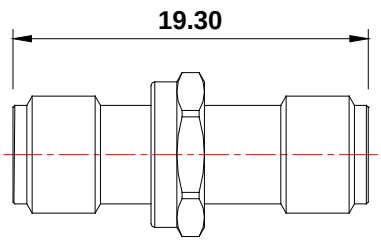
Unit [mm]

## Between Series

| Part No. Description | Drawing | Specification |
|---|---|---|
| 2P4(M)_ST_K(M)01<br>2.4mm(m) to 2.92mm(m)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.15dB Max @ 40GHz<br>Mating cycle : 500 times min. |
| 2P4(M)_ST_K(F)01<br>2.4mm(m) to 2.92mm(f)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.15dB Max @ 40GHz<br>Mating cycle : 500 times min. |
| 2P4(F)_ST_K(M)01<br>2.4mm(f) to 2.92mm(m)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.15dB Max @ 40GHz<br>Mating cycle : 500 times min. |
| 2P4(F)_ST_K(F)01<br>2.4mm(f) to 2.92mm(f)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.15dB Max @ 40GHz<br>Mating cycle : 500 times min. |

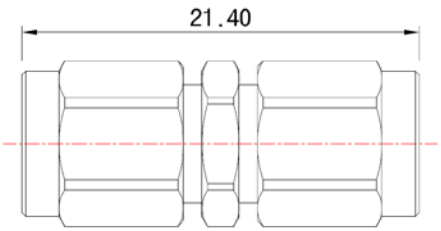
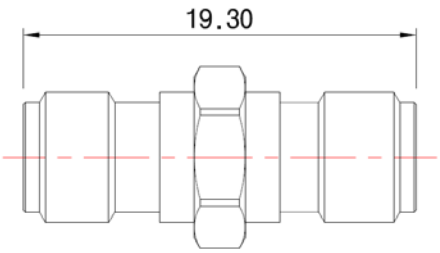
Unit [mm]

## In Series

| Part No. Description | Drawing | Specification |
|---|---|---|
| 2P4(M)_ST_2P4(M)01<br>2.4mm(m) to 2.4mm(m)<br>  |  | **Frequency : DC ~ 50GHz**<br>VSWR : 1.25 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.25dB Max @ 50GHz<br>Mating cycle : 500 times min. |
| 2P4(F)_ST_2P4(M)01<br>2.4mm(f) to 2.4mm(m)<br>  |  | **Frequency : DC ~ 50GHz**<br>VSWR : 1.25 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.25dB Max @ 50GHz<br>Mating cycle : 500 times min. |
| 2P4(F)_ST_2P4(F)01<br>2.4mm(f) to 2.4mm(f)<br>  |  | **Frequency : DC ~ 50GHz**<br>VSWR : 1.25 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.25dB Max @ 50GHz<br>Mating cycle : 500 times min. |
| K(M)_ST_K(M)01<br>2.92mm(m) to 2.92mm(m)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.15dB Max @ 40GHz<br>Mating cycle : 500 times min. |
| K(F)_ST_K(M)01<br>2.92mm(f) to 2.92mm(m)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.15dB Max @ 40GHz<br>Mating cycle : 500 times min. |
| K(F)_ST_K(F)01<br>2.92mm(f) to 2.92mm(f)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.15dB Max @ 40GHz<br>Mating cycle : 500 times min. |

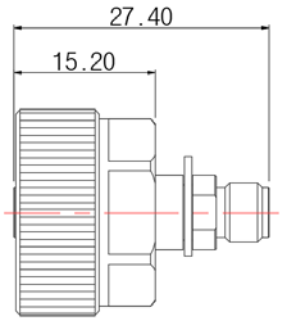
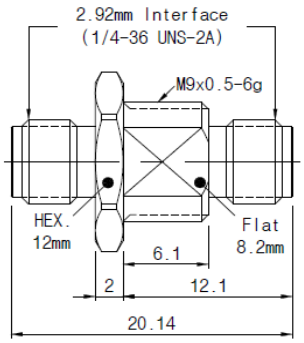
Unit [mm]

## In Series

| Part No.<br>Description | Drawing | Specification |
|---|---|---|
| SMA(M)_ST_SMA(M)01<br>SMA(m) to SMA(m)<br>  |  | **Frequency : DC ~ 18GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.12 dB Max @ 18GHz<br>Mating cycle : 500 times min. |
| SMA(F)_ST_SMA(F)01<br>SMA(f) to SMA(f)<br>  |  | **Frequency : DC ~ 18GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.12 dB Max @ 18GHz<br>Mating cycle : 500 times min. |

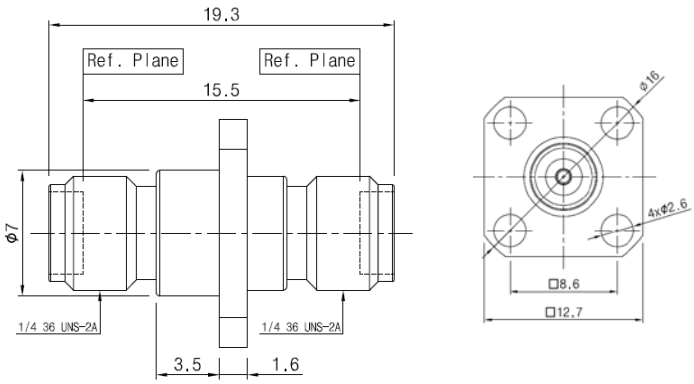
Unit [mm]

## NMD & Bulkhead

| Part No. Description | Drawing | Specification |
|---|---|---|
| K(F)_NM_K(F)01<br>K(f) to K(f)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.26 dB Max @ 40GHz<br>Mating cycle : 500 times min. |
| K(F)_BH_K(F)02<br>K(f) to K(f)<br>  |  | **Frequency : DC ~ 40GHz**<br>VSWR : 1.15 Max<br>Impedance : 50 ohm<br>Insertion loss : 0.20 dB Max @ 40GHz<br>Mating cycle : 500 times min. |

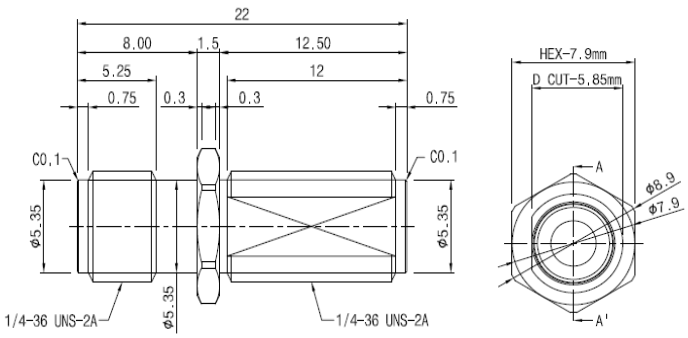
K(F)_4H_K(F)01

K(f) to K(f)




K(F)_BH_K(F)01

K(f) to K(f)



***SENSORVIEW*** 2.92mm & 2.4mm connectors are precision connectors for microwave applications up to 40 & 50GHz.

2.92mm is compatible with series SMA and 3.5mm connectors.

The special insulator design is excellent for high frequency connection with good stability.

These connectors provide a high ingress protection level against chemicals, fluids, dust.

## Characteristics for 40GHz Connector

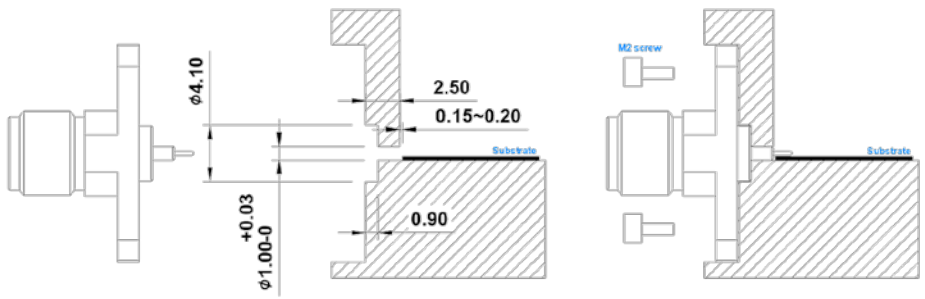
| Electrical Characteristics | |
|---|---|
| **Impedance** | 50 Ω |
| **Frequency range** | DC ~ 40GHz |
| **VSWR max.** | < 1.32 |
| **Insertion Loss** | 0.03 X √F[GHz] |
| **RF Leakage** | -90 dB max |
| **Voltage rating** | 250 V rms, 50Hz |

| Environmental Characteristics | |
|---|---|
| **Temperature range** | -55℃~125℃ |
| **Thermal shock** | MIL STD 202, method 107, Condition B |
| **Vibration** | MIL STD 202, method 204, Condition D |
| **Corrosion** | MIL STD 202, method 101, Condition B |
| **Moisture resistance** | MIL STD 202, method 106 |
| **Shock** | MIL STD 202, method 213, Condition I |

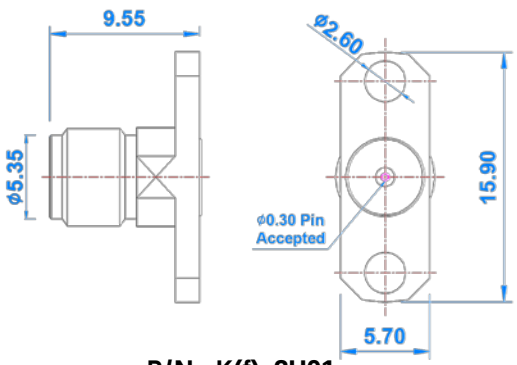
| Materials and Plating | | |
|---|---|---|
| | **Material** | **Plating** |
| **Body** | Stainless steel | Passivated |
| **Center contact** | BeCu | Gold on Nickel |
| **Insulator** | ULTEM / PTFE | - |

| Mechanical Characteristics | |
|---|---|
| **Durability** | 500 mating |
| **Engage / Disengage** | < 23 N・cm |
| **Mating torque** | 80 ~ 110 N ・cm |
| **Contact captivation** | 22 N |

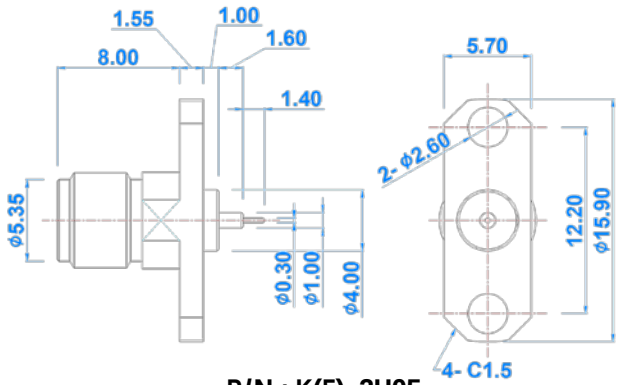
## Installation for 40GHz Connector




## 40GHz Connector Drawing

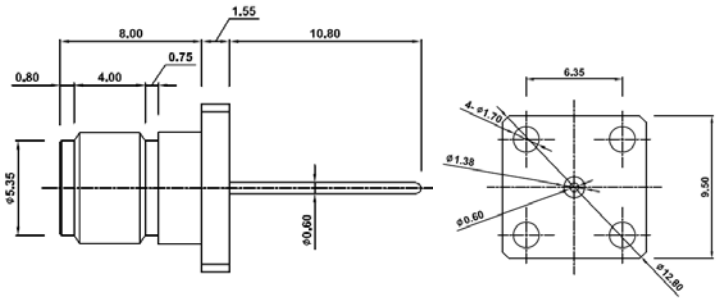



**P/N : K(f)_2H01**

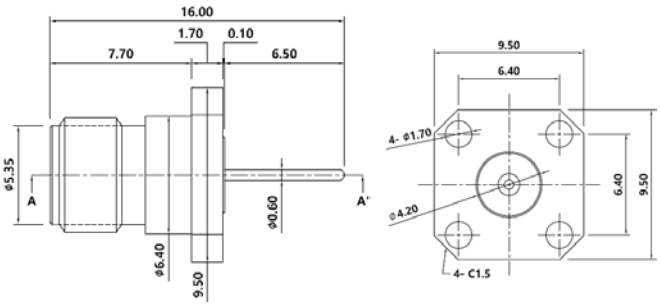



**P/N : K(F)_2H05**

## 40GHz Connector Drawing




P/N : K(F)_4H01




P/N : K(F)_4H02

## Characteristics for 50GHz Connector

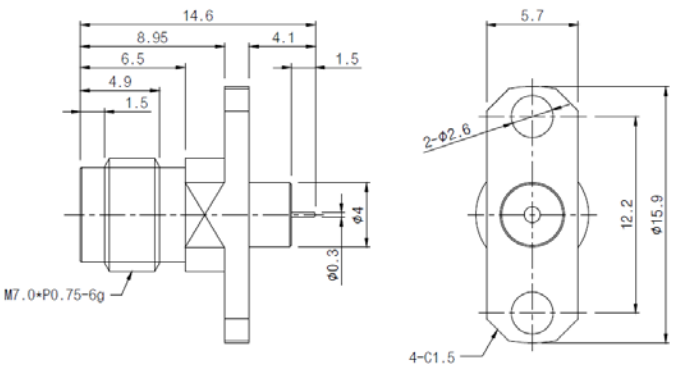
| Electrical Characteristics | |
|---|---|
| **Impedance** | 50 Ω |
| **Frequency range** | DC ~ 50GHz |
| **VSWR max.** | < 1.20 |
| **Insertion Loss** | -0.2dB Max |
| **RF Leakage** | -90 dB max. |
| **Voltage rating** | 250 V rms, 50Hz |

| Environmental Characteristics | |
|---|---|
| **Temperature range** | -55℃~125℃ |
| **Thermal shock** | MIL STD 202, method 107, Condition B |
| **Vibration** | MIL STD 202, method 204, Condition D |
| **Corrosion** | MIL STD 202, method 101, Condition B |
| **Moisture resistance** | MIL STD 202, method 106 |
| **Shock** | MIL STD 202, method 213, Condition I |

| Materials and Plating | | |
|---|---|---|
| | **Material** | **Plating** |
| **Body** | Stainless steel | Passivated |
| **Center contact** | BeCu | Gold on Nickel |
| **Insulator** | ULTEM / PTFE | - |

| Mechanical Characteristics | |
|---|---|
| **Durability** | 500 mating |
| **Engage / Disengage** | < 23 N・cm |
| **Mating torque** | 80 ~ 110 N ・cm |
| **Contact captivation** | 22 N |

## 50GHz Connector Drawing




P/N : 2P4(F)_2H01

***SENSORVIEW*** SMP series meets MIL STD 348. SMP connectors are miniaturized push-on Interconnects commonly used in high density, blind-mate systems that can operate up to 40 GHz. SMP connectors are offered in a high frequency 40 GHz version as well as a lower frequency 12 GHz version and are also available.

## Characteristics

### Electrical Characteristics

| | | |
|---|---|---|
| **Impedance** | 50 Ω | |
| **Frequency range** | DC ~ 40GHz | |
| **VSWR max.** | straight | Right angle |
| | <1.5 | <1.7 |
| **Insertion Loss** | 0.15 X √F[GHz] | |
| **RF Leakage** | -70 dB @ 6GHz | |
| **Voltage rating** | 335 V rms, 50Hz | |

### Environmental Characteristics

| | |
|---|---|
| **Temperature range** | -55℃~125℃ |
| **Thermal shock** | MIL STD 202, method 107, Condition B |
| **Vibration** | MIL STD 202, method 204, Condition D |
| **Moisture resistance** | MIL STD 202, method 106 |
| **Shock** | MIL STD 202, method 213, Condition I |

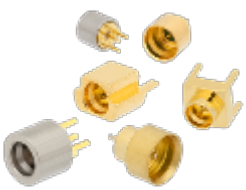
### Materials and Plating

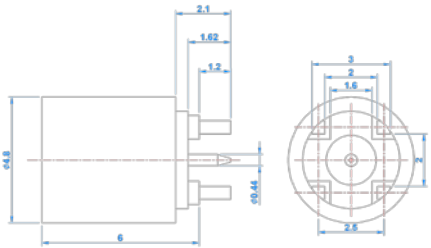
| | Material | Plating |
|---|---|---|
| **Receptacle body** | Brass / Stainless steel | Gold / Passivated |
| **Bullet body** | BeCu | Gold |
| **Male contact** | Brass | Gold |
| **Female contact** | BeCu | Gold |
| **Shrouds** | Stainless steel | passivated |
| **Insulator** | ULTEM / PTFE | - |

### Mechanical Characteristics

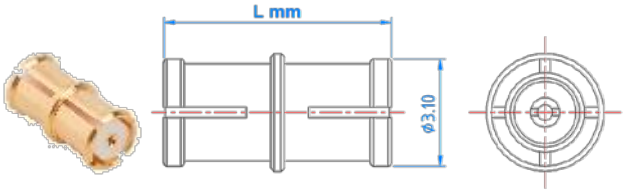
| | Smooth bore | Limited detent | Full detent |
|---|---|---|---|
| **Durability(mating)** | 1000 | 500 | 100 |
| **Engage** | < 9 N | < 45 N | < 68 N |
| **Disengage** | > 2 N | > 9 N | > 22 N |
| **Axial misalignment** | ± 0.3mm | | |
| **Radial misalignment** | 4˚ | | |

## Drawing



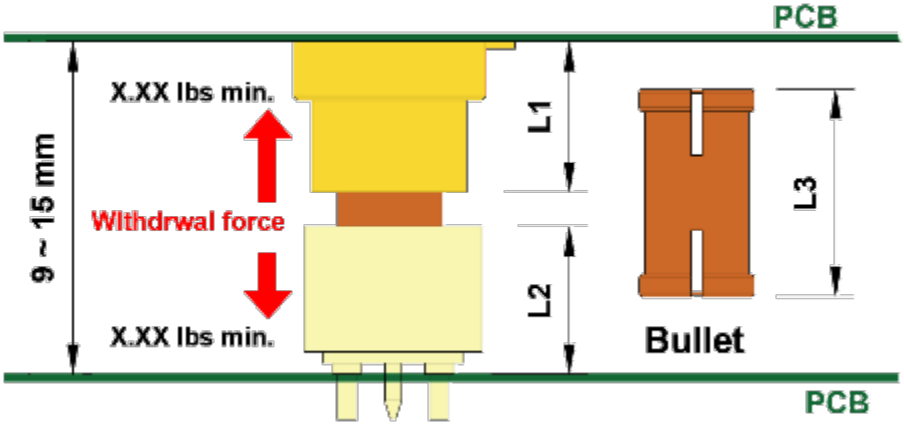


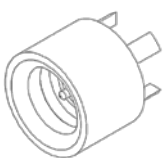
**P/N : SMP(M)_PM01**



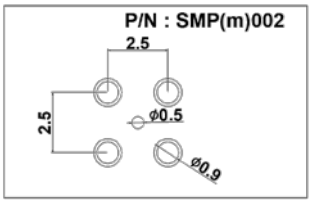

**P/N : SMP(F)_ST_SMP(F)01**

## Customized design



**P/N : SMP(M)_PM02**




Recommended PCB Pattern

***SENSORVIEW*** SMA series meets MIL STD 348. SMA connectors are constructed in male or female gender in standard polarity, reverse polarity (RPSMA / RP-SMA) with 50 Ohm impedance. Types of SMA are available in straight, right angle as well as, press in, bulkhead, 2 hole panel, 4 hole panel, End Launch, edge mount etc.

## Characteristics

| Electrical Characteristics | |
|---|---|
| **Impedance** | 50 Ω |
| **Frequency range** | DC ~ 18GHz |
| **VSWR max.** | < 1.22 |
| **Insertion Loss** | 0.05 X √F[GHz] |
| **RF Leakage** | -90 dB max |
| **Voltage rating** | 350 V rms, sea level |

| Environmental Characteristics | |
|---|---|
| **Temperature range** | -55℃~125℃ |
| **Thermal shock** | MIL STD 202, method 107, Condition B |
| **Vibration** | MIL STD 202, method 204, Condition D |
| **Corrosion** | MIL STD 202, method 101, Condition B |
| **Moisture resistance** | MIL STD 202, method 106 |
| **Shock** | MIL STD 202, method 213, Condition I |

| Materials and Plating | | |
|---|---|---|
| | **Material** | **Plating** |
| **Body** | Brass | Gold on Nickel |
| **Center contact** | BeCu | Gold on Nickel |
| **Insulator** | PTFE | - |

| Mechanical Characteristics | |
|---|---|
| **Durability** | 500 mating |
| **Engage / Disengage** | < 23 N cm |
| **Mating torque** | 80 ~ 110 N cm |
| **Coupling nut retention** | 270 N |

## Pictures

P/N : SMA(F)_PCBM01

P/N : SMA(F)_PCBM02

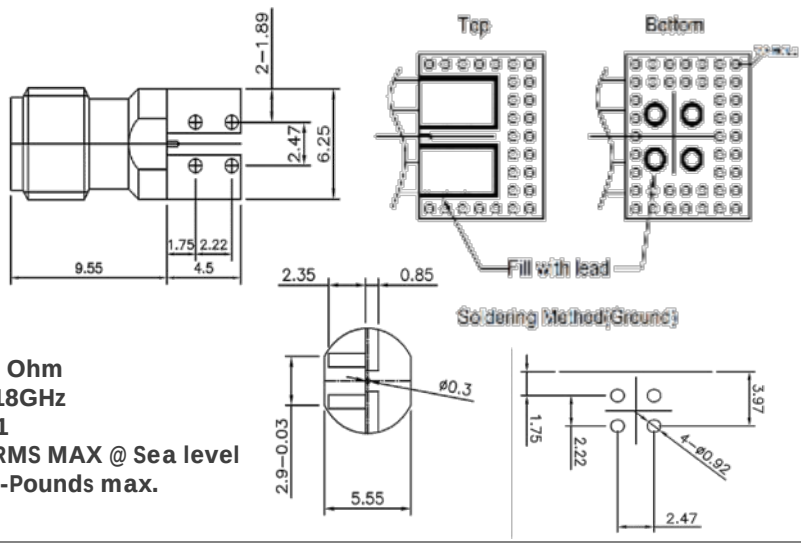
P/N : SMA(M)_RA_PCBM01

P/N : SMA(M)_PCBM01

P/N : SMA(M)_2HP_02

## End Launch SMA

P/N : SMA(F)_ELC01




**Specifications :**

| | |
|---|---|
| Characteristic Impedance | **50 ± 1 Ohm** |
| Operating Frequency | **DC ~ 18GHz** |
| Max. VSWR | **1.25 : 1** |
| Working Voltage | **170 VRMS MAX @ Sea level** |
| Engage/Disengage Torque | **2 Inch-Pounds max.** |

***SENSORVIEW*** N series meets MIL STD 348. Type N frequency range extends to 18GHz. The screw type coupling mechanism provides a reliable connection. Many types of N are available in straight, right angle as well as, press in, bulkhead, 2 hole panel, 4 hole panel. Type N connectors are offered in a high frequency 18 GHz version as well as a lower frequency 12 GHz version and are also available.

## Characteristics

| Electrical Characteristics | |
|---|---|
| **Impedance** | 50 Ω |
| **Frequency range** | DC ~ 18GHz |
| **VSWR max.** | < 1.22 |
| **Insertion Loss** | 0.04 X √F[GHz] |
| **RF Leakage** | -90 dB max |
| **Voltage rating** | 1000 V rms, 50 Hz |

| Environmental Characteristics | |
|---|---|
| **Temperature range** | -55℃~125℃ |
| **Thermal shock** | MIL STD 202, method 107, Condition B |
| **Vibration** | MIL STD 202, method 204, Condition D |
| **Corrosion** | MIL STD 202, method 101, Condition B |
| **Moisture resistance** | MIL STD 202, method 106 |
| **Shock** | MIL STD 202, method 213, Condition I |

| Materials and Plating | | |
|---|---|---|
| | **Material** | **Plating** |
| **Body** | Brass / Stainless steel | Gold / passivated |
| **Center contact** | Brass, BeCu (female) | Gold on Nickel |
| **Insulator** | ULTEM / PTFE | - |

| Mechanical Characteristics | |
|---|---|
| **Durability** | 500 mating |
| **Engage / Disengage** | < 6.6 N・cm |
| **Mating torque** | 150 ~ 170 N・cm |
| **Coupling nut retention** | 450 N |

## Pictures

**P/N : N(M)_PCBM01**

**P/N : N(F)_PCBM01**

**P/N : N(F)_PCBM02**

**P/N : N(F)_PCBM03**

**P/N : N(F)_RA_PCBM01**

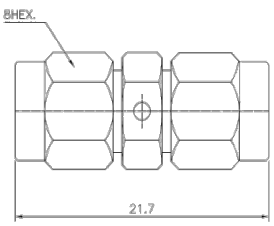
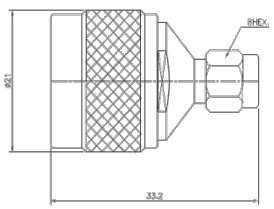
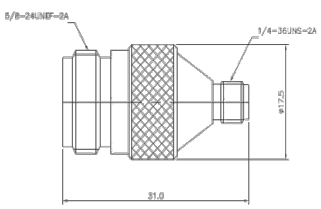
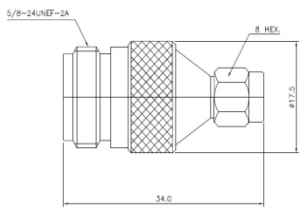
**P/N : N(F)_WT_PCBM01**

***SENSORVIEW*** all adapter meets MIL STD 348. we are manufacturing a wide range of adapters within / between series.

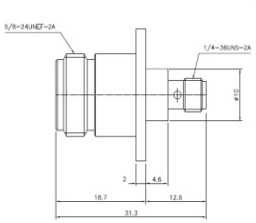
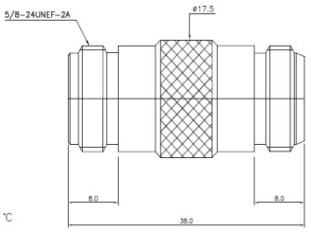
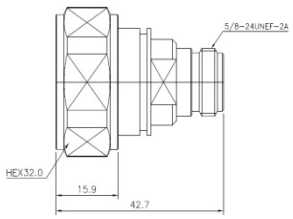
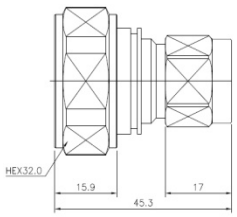
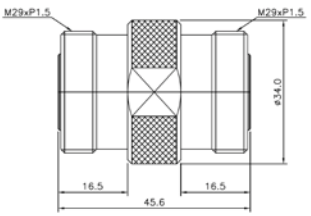
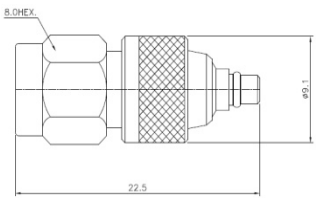
## Line up

| Frequency [GHz] | Interface | VSWR Max. |
|---|---|---|
| DC ~ 50GHz | 2.4mm, SMPM | <1.25 |
| DC ~ 40GHz | 2.92mm (K), SMP | <1.25 |
| DC ~ 26.5GHz | HFSMA®, SMP | <1.22 |
| DC ~ 18GHz | SMA, N | <1.2 |
| DC ~ 6GHz | MCX, MMCX, etc. | <1.2 |

## General Series

| | Picture | Drawing | Specification |
|---|---|---|---|
| ***SMA(m) to SMA(m)*** |  |  | Frequency : DC ~ 18GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 1200V rms Max<br>Mating cycle : 500 times min |
| ***N(m) to SMA(m)*** |  |  | Frequency : DC ~ 6GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 1200V rms Max<br>Mating cycle : 500 times min |
| ***N(f) to SMA(f)*** |  |  | Frequency : DC ~ 8GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 1200V rms Max<br>Mating cycle : 500 times min |
| ***N(f) to SMA(m)*** |  |  | Frequency : DC ~ 9GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 1200V rms Max<br>Mating cycle : 500 times min |

## General Series

| | Picture | Drawing | Specification |
|---|---|---|---|
| ***N(f) to SMA(f)*** |  |  | Frequency : DC ~ 9GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 1200V rms Max<br>Mating cycle : 500 times min |
| ***N(f) to N (f)*** |  |  | Frequency : DC ~ 11GHz<br>VSWR : 1.25 Max<br>Impedance : 50 ohm<br>DWV : 2500V rms Max<br>Mating cycle : 500 times min |
| ***DIN(m) to N(f)*** |  |  | Frequency : DC ~ 6GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 2500V rms Max<br>Mating cycle : 500 times min |
| ***DIN(m) to N(m)*** |  |  | Frequency : DC ~ 6GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 2500V rms Max<br>Mating cycle : 500 times min |
| ***DIN(f) to DIN(f)*** |  |  | Frequency : DC ~ 6GHz<br>VSWR : 1.20 Max<br>Impedance : 50 ohm<br>DWV : 2500V rms Max<br>Mating cycle : 500 times min |
| ***SMA(m) to MMCX(m)*** |  |  | Frequency : DC ~ 6GHz<br>VSWR : 1.2 Max<br>Impedance : 50 ohm<br>DWV : 1000V rms Max<br>Mating cycle : 500 times min |