

2.92mm coaxial connectors based on MIL Specifications

2.92mm Series



Compatible with 40GHz configurations

■ Features

1. 2.92mm coaxial connector based on MIL Specifications (MIL-STD-348B)
2. Compatible with the frequency range of up to 40GHz
3. RoHS-compatible
Compliant with all RoHS Directives.

■ Applications

Measuring for data transmission,
Radio communication equipment,
Measuring instruments, RF module,
Radio power amplifier,
High speed router,
High speed switch etc.

■ Functional diagram



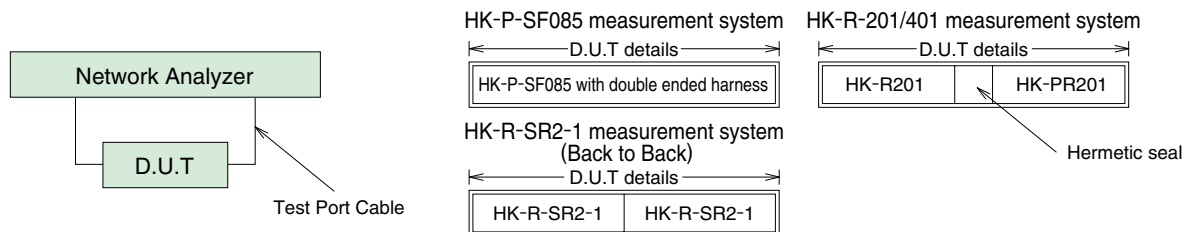
Product Specifications

| | | | | |
|---------|----------------------------------|-------------|-----------------------------|----------------------------------|
| Ratings | Nominal characteristic impedance | 50Ω | Operating Temperature Range | -55°C to +105°C (95% RH or less) |
| | Rated frequency | DC to 50GHz | Storage Temperature Range | -55°C to +50°C (95% RH or less) |

| Items | Specifications | Conditions |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1. Contact resistance | Center : Less than 6mΩ External : Less than 2mΩ | Measured at less than 100mA |
| 2. Insulation resistance | 1,000MΩ min. | Measured at 500V DC |
| 3. Withstanding voltage | No flashover or breakdown | 500V AC for one minute |
| 4. Voltage standing wave ratio | ●HK-P-SF085, HK-R-201/401 | ●HK-R-SR2-1 |
| | V.S.W.R. : Less than 1.15 (DC to 18GHz) | V.S.W.R. : 1.10 (DC to 18GHz) |
| | V.S.W.R. : Less than 1.20 (18GHz to 26.5GHz) | V.S.W.R. : 1.15 (18GHz to 26.5GHz) |
| | V.S.W.R. : Less than 1.35 (26.5GHz to 40GHz) | V.S.W.R. : 1.30 (26.5GHz to 40GHz) |
| 5. Mating Cycles | Contact resistance at center : Less than 8mΩ External : Less than 4mΩ No broken, cracked, or loose parts | 500 cycles |
| 6. Vibration resistance | No electrical discontinuity for more than 1μs. No broken, cracked, or loose parts | Frequency : 10 to 2000Hz, half amplitude : 0.75mm, Acceleration : 196m/s ² , 10 cycles in each of 3 axis directions |
| 7. Shock resistance | No electrical discontinuity for more than 1μs. No broken, cracked, or loose parts | Acceleration : 1960m/s ² , duration : 6ms, Wave form : half-sine wave, 3 times in each of 3 directions |
| 8. Moisture resistance of temperature/humidity cycle | Insulation resistance : More than 100MΩ (in a high humidity environment) Insulation resistance : More than 1,000MΩ (in a dry environment) No broken, cracked or loose parts | Left for 10 cycles (240 hours) in an environment with the temperature ranging from -10 to 65°C and the humidity ranging from 90 to 98%. |
| 9. Temperature cycle | No broken, cracked or loose parts | Temperature : 5 cycles for a series of time periods : -55°C for 30 minutes → 3 minutes → +105°C for 30 minutes → 3 minutes |
| 10. Salt spray | No considerable corrosion | Continuous 48 hour cycle in 5% salt water solution |

*Measurement of voltage standing wave ratio (V.S.W.R.)

The specified values of the voltage standing wave ratio (V.S.W.R.) noted above, are taken with the test set up shown in the figure below:



Materials / Finish

| Part | Materials | Finish |
|-----------|------------------|-------------|
| Shell | Stainless steel | Passivated |
| Insulator | PPO / PTFE resin | — |
| Contact | Beryllium copper | Gold plated |
| Ring | Stainless steel | Gold plated |

Product Number Structure

Refer to the chart below when determining the product specifications from the product number. Please select from the product numbers listed in this catalog when placing orders.

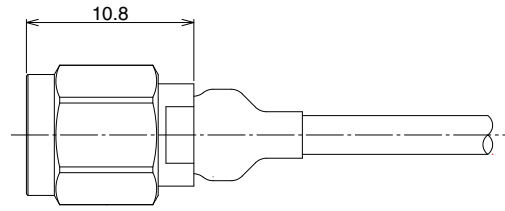
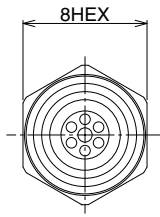
HK - [] - []

① ② ③

| | |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ① Series identifier : HK | ③ Applicable cable or board mounting style SF085 : 0.085-inch, semi-flexible cable |
| ② Connector type P : Straight plug R : Receptacle PR : Plug receptacle | |

■ Plug

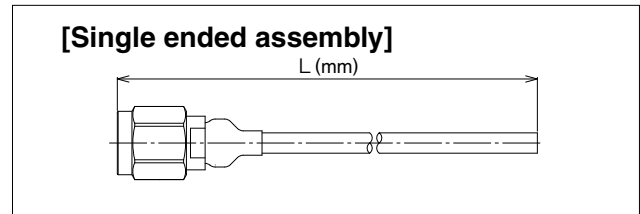
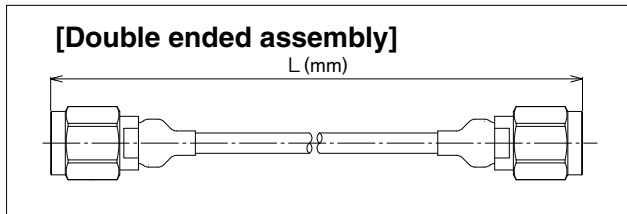
HK-P-SF085



[Please place cable assembly orders per the specifications below]

■ Cable assembly specifications

Please specify the dimensions of 2.92mm Series cable assembly as follows : For the cable length, Please contact HRS representative.



● Composition of the cable harness specification product number structure

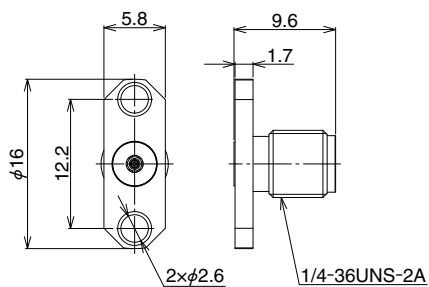
Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

HK - [] P - SF085N 1 - A - L RS

① ② ③ ④ ⑤

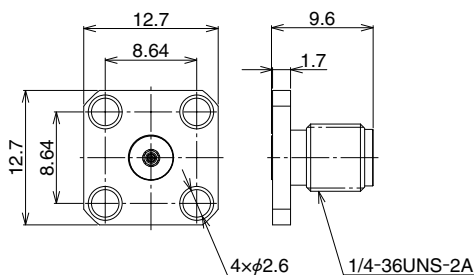
| |
|--------------------------------------------------------------------|
| ① Series identifier : HK |
| ② Harness type None : On either end 2 : On both ends |
| ③ Cable type SF085N : 0.085-inch, semi-flexible cable |
| ④ Cable color None : No jacket 1 : Blue |
| ⑤ Overall length L (mm) : Length L is expressed by the unit of mm. |

■ Receptacle



| Part No. | HRS No. | RoHS |
|----------|------------|------|
| HK-R201 | 338-0073-1 | ○ |

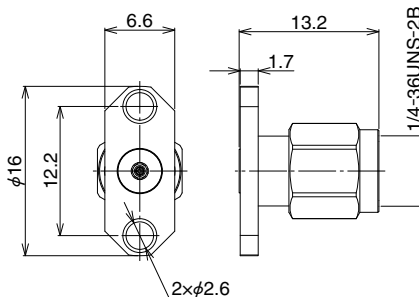
*Compliant with hermetic seal of $\phi 0.3$ mm pin.



| Part No. | HRS No. | RoHS |
|----------|------------|------|
| HK-R401 | 338-0074-4 | ○ |

*Compliant with hermetic seal of $\phi 0.3$ mm pin.

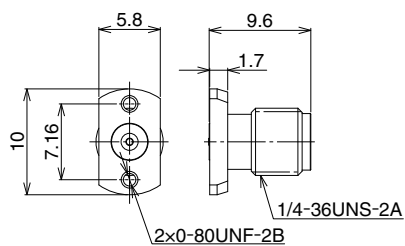
■ Plug-receptacle



| Part No. | HRS No. | RoHS |
|----------|------------|------|
| HK-PR201 | 338-0075-7 | ○ |

*Compliant with hermetic seal of $\phi 0.3$ mm pin.

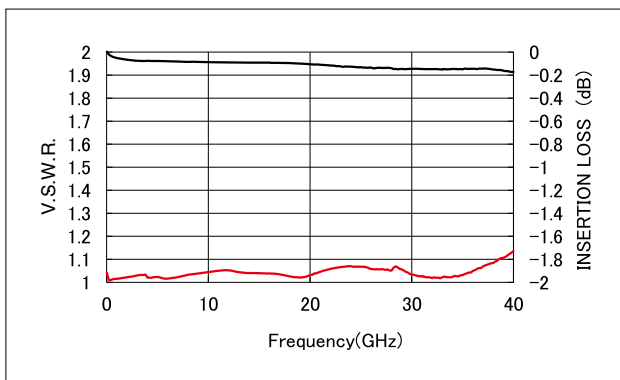
PCB vertical mount receptacle



| Part No. | HRS No. | Attached screw | RoHS |
|----------------|---------------|-------------------|------|
| HK-R-SR2-1 | 338-0003-0 | — | ○ |
| HK-R-SR2-1(11) | 338-0003-0 11 | 0-80UNF 1/4 inch | |
| HK-R-SR2-1(12) | 338-0003-0 12 | 0-80UNF 3/16 inch | |

This receptacle is for highfrequency measurement only.
It cannot be used actual machine.

◆Frequency characteristics (Back to Back)



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