

# BNC SERIES RF CO-AXIAL CONNECTORS

## Overview

The BNC series are most widely used as 50Ω coaxial connectors, and compact size, light weight, and quick mounting and dismounting (bayonet lock coupling). Suitable for coaxial cables (RG-55.58/U) with a finished outside diameter of  $\phi 3\text{--}\phi 8$ .

## Applicable standards

Defense Agency (NDS XC 6103, DSP C 6202)

Japanese Industrial Standards (JIS C 5412)

NTT (Model 2095 3C connector)

\*Meets MIL Specifications. (See Products Meeting MIL Specifications Index Table, pages 220-221.)

## Electrical Specifications

| Item                       | Standard                  |
|----------------------------|---------------------------|
| Characteristic impedance   | 50Ω(*1)                   |
| Withstand voltage          | 1,500Vr.m.s. for 1min.    |
| Insulation resistance      | 5,000MΩ or more at 500VDC |
| Contact resistance         | 3mΩ or less at 1ADC       |
| Applicable frequency range | DC-4GHz                   |
| Voltage standing wave      | 1.2 or less(DC-2GHz)      |

(\*1) Not different in electrical specifications from the 50Ω cable when connected to the 75Ω coaxial cable (3C-2V) for use at low frequencies (DC-200MHz).

## Main Materials/Finish

| Part            | Material            | Finish(*2)                   |
|-----------------|---------------------|------------------------------|
| Armor(shell)    | Brass               | Silver plated, Nickel-plated |
| Male terminal   | Brass               | Silver plated, Gold-plated   |
| Female terminal | Beryllium copper    | Silver plated, Gold-plated   |
| Insulation      | Tetrafluoride resin | —                            |
| Gasket          | Silicon rubber      | —                            |

(\*2) Surface treatment differs according to the product number unit.  
For details, see the BNC Connector List.

# BNC SERIES RF CO-AXIAL CONNECTORS

## Plug

| Applicable cable | Part No.         | HRS No.       | Dimension |          |      | Shape |
|------------------|------------------|---------------|-----------|----------|------|-------|
|                  |                  |               | $\phi D$  | $\phi d$ | L    |       |
| RG-55/U, 58/U    | UG-88/U(40)      | 302-0001-0-40 | 5.4       | 11.1     | 26.5 | Fig.1 |
|                  | UG-88D/U(40)     | 302-0070-3-40 | 5.6       | 12.7     | 28.8 | Fig.1 |
|                  | 3CA-P2(40)       | 302-0203-5-40 | 5.6       | 13.7     | 29.5 | Fig.1 |
| RG-59/U, 62/U    | UG-260/U(40)     | 302-0002-3-40 | 6.6       | 11.1     | 26.0 | Fig.1 |
| RG-188A/U        | BNC-P-188A/U(40) | 302-0216-7-40 | 3.0       | 8.0      | 25.0 | Fig.4 |
| RG-196A/U        | BNC-P-196/U(40)  | 302-0214-1-40 | 2.3       | 5.0      | 27.3 | Fig.6 |
| 5D-2W            | BNC-P-5DW-1(40)  | 302-0189-6-40 | 8.5       | 14.0     | 35.0 | Fig.3 |
| 5D-2W, 5C-2W     | BNC-P-5DW-SA(40) | 302-0217-0-40 | 8.7       | 15.0     | 33.7 | Fig.2 |
| 5D-2V            | BNC-P-5DV(40)    | 302-0132-9-40 | 7.8       | 15.0     | 31.0 | Fig.1 |
| 5D-2V, 5C-2V     | BNC-P-5DV-SA(40) | 302-0218-2-40 | 8.0       | 15.0     | 33.7 | Fig.2 |
| 3C-2Z            | 3CZ-P(40)        | 302-0215-4-40 | 6.5       | 13.7     | 29.5 | Fig.1 |
| 3C-2T            | 3CT-P(40)        | 302-0210-0-40 | 8.0       | 14.2     | 29.7 | Fig.1 |
|                  | 3CT-P-1(40)      | 302-0208-9-40 | 8.4       | 14.0     | 30.0 | Fig.3 |
|                  | 3CT-P3(40)       | 302-0270-2-40 | 8.4       | 14.0     | 30.0 | Fig.3 |
| 3C-2W            | 3DW-P(40)        | 302-0209-1-40 | 7.1       | 14.2     | 29.7 | Fig.1 |
| 3D-2V, 3C-2V     | BNC-P-3DV-SA(40) | 302-0219-5-40 | 6.3       | 15.0     | 33.7 | Fig.2 |
| 3C-2V            | 3CV-P2(40)       | 302-0202-2-40 | 6.3       | 13.7     | 29.5 | Fig.1 |
|                  | BNC-P-3(40)      | 302-0030-9-40 | 6.4       | 11.1     | 26.5 | Fig.1 |
|                  | 3CV-P3(40)       | 302-0269-3-40 | 6.8       | 14.0     | 30.0 | Fig.3 |
| 1.5D-2W, 1.5C-2W | BNC-P-1.5WCR(40) | 302-0295-3-40 | 1.8       | 10.0     | 28.1 | Fig.5 |
| 1.5D-2W          | BNC-P-1.5W(40)   | 302-0299-4-40 | 3.9       | 8.0      | 25.0 | Fig.4 |
| 1.5D-2V, 1.5C-2V | BNC-P-1.5CR(40)  | 302-0294-0-40 | 1.8       | 10.0     | 28.1 | Fig.5 |
| 1.5D-2V          | BNC-P-1.5(40)    | 302-0257-4-40 | 3.5       | 8.0      | 25.0 | Fig.4 |

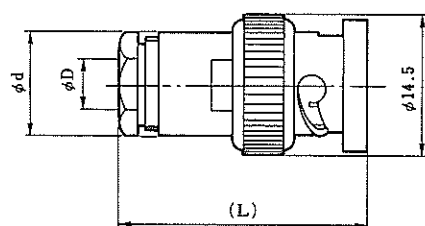


Fig.1

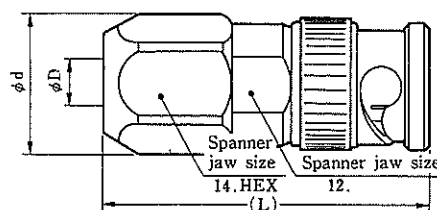


Fig.2

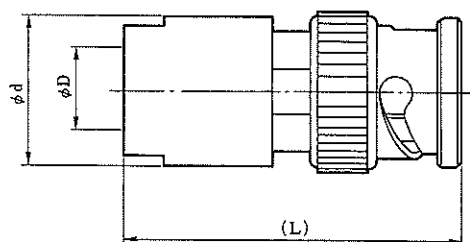


Fig.3

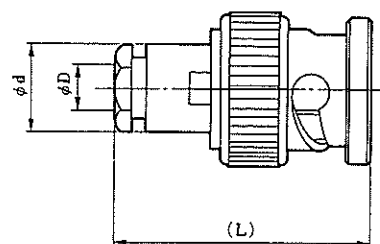


Fig.4

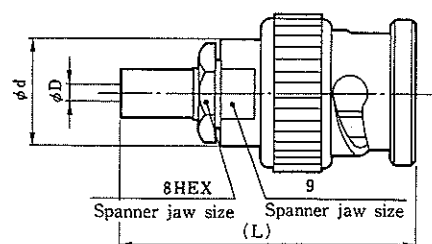


Fig.5

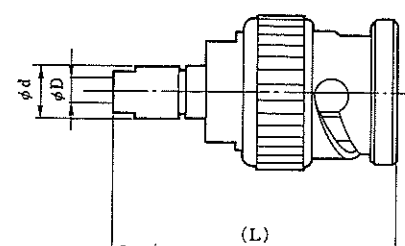


Fig.6

# BNC SERIES RF CO-AXIAL CONNECTORS

## L-shaped Plug

| Applicable cable | Part No.        | HRS No.       | Dimension |          |      |      | Shape |
|------------------|-----------------|---------------|-----------|----------|------|------|-------|
|                  |                 |               | $\phi D$  | $\phi d$ | W1   | W2   |       |
| BG-55/U, 58/U    | UG-913/U(42)    | 302-0043-0-42 | 5.4       | 12.7     | 11.1 | 11.1 | Fig.7 |
| RG-59/U, 62/U    | BNC-LP-59/U(40) | 302-0075-7-40 | 6.6       | 12.7     | 11.1 | 11.1 | Fig.7 |
| 3C-2W            | 3CW-PL(40)      | 302-0158-2-40 | 7.1       | 14.2     | 13.0 | 13.0 | Fig.8 |
| 3C-2V            | 3CV-PL(40)      | 302-0157-0-40 | 6.3       | 13.7     | 12.0 | 12.0 | Fig.8 |

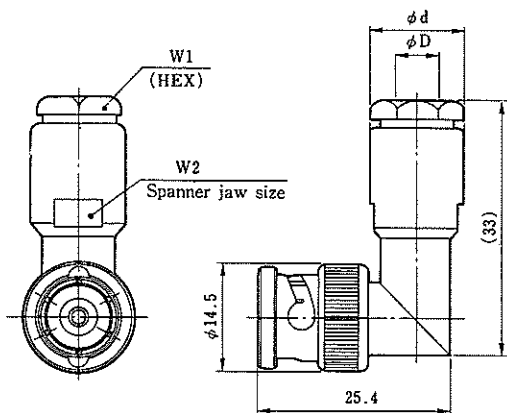


Fig. 7

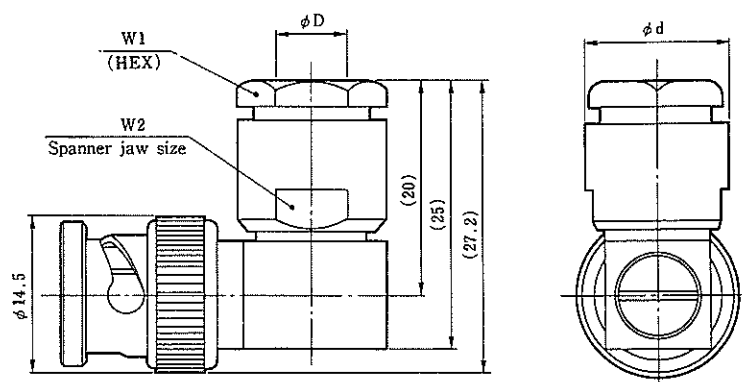


Fig. 8

## Jack

| Applicable cable | Part No.         | HRS No.       | Dimension |          |     |      |      | Shape  |
|------------------|------------------|---------------|-----------|----------|-----|------|------|--------|
|                  |                  |               | $\phi D$  | $\phi d$ | W1  | W2   | L    |        |
| RG-55/U, 58/U    | UG-89/U(40)      | 302-0034-0-40 | 5.4       | 11.1     | 9.5 | 12.7 | 28.7 | Fig.9  |
| RG-59/U, 62/U    | UG-261/U(40)     | 302-0035-2-40 | 6.6       | 11.1     | 9.5 | 12.7 | 30.0 | Fig.9  |
| 3C-2V            | 3CV-J(40)        | 302-0006-4-40 | 6.3       | 11.1     | 9.5 | 11.5 | 28.7 | Fig.9  |
| 1.5D-2W, 1.5C-2W | BNC-J-1.5WCR(40) | 302-0297-9-40 | 1.8       | —        | 8.0 | 13.0 | 31.0 | Fig.10 |
| 1.5D-2V, 1.5C-2V | BNC-J-1.5CR(40)  | 302-0296-6-40 | 1.8       | —        | 8.0 | 13.0 | 31.0 | Fig.10 |

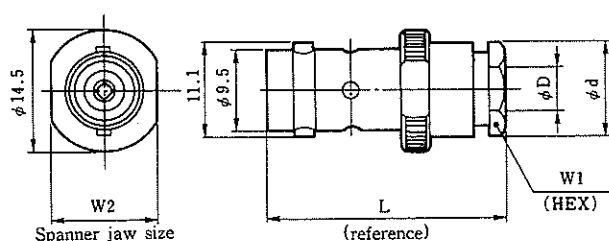


Fig. 9

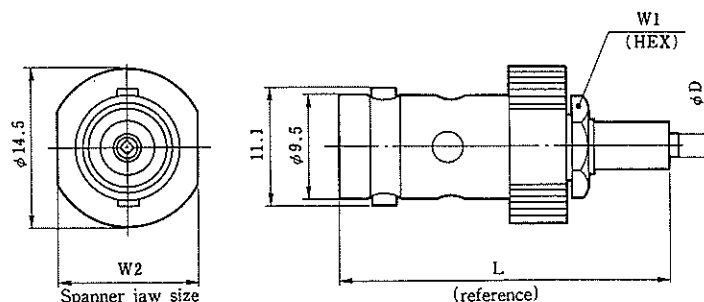


Fig. 10

# BNC SERIES RF CO-AXIAL CONNECTORS

## Panel Jack

| Applicable cable | Part No.           | HRS No.       | Dimension |          |      |        |             |             |                                   |      | Shape  | Mounting hole dimensions |
|------------------|--------------------|---------------|-----------|----------|------|--------|-------------|-------------|-----------------------------------|------|--------|--------------------------|
|                  |                    |               | $\phi D$  | $\phi d$ | L    | $\ell$ | $\square P$ | $\square S$ | G                                 | W    |        |                          |
| RG-55/U, 58/U    | UG-291/U(40)       | 302-0036-5-40 | 5.4       | 11.1     | 28.2 | 18.1   | 12.7        | 17.5        | M2.6<br>$\times 0.45$             | 9.5  | Fig.11 | 1-1                      |
|                  | 3CA-PJ2(40)        | 302-0205-0-40 | 5.4       | 11.1     | 28.7 | 18.1   | 12.7        | 17.5        | $\phi 3$                          | 9.5  | Fig.11 | 1-2                      |
| RG-59/U, 62/U    | UG262/U(40)        | 302-0007-7-40 | 6.6       | 11.1     | 28.4 | 18.1   | 12.7        | 17.5        | M2.6<br>$\times 0.45$             | 9.5  | Fig.11 | 1-1                      |
| RG-188A/U        | BNC-PJ-188/U(40)   | 302-0230-8-40 | 3.0       | 9.0      | 26.8 | 18.1   | 12.7        | 17.5        | M2.6<br>$\times 0.45$             | 7.0  | Fig.11 | 1-3                      |
| RG-196A/U        | BNC-PJ-196/U(40)   | 302-0194-6-40 | 2.3       | 5.0      | 28.0 | 18.1   | 12.7        | 17.5        | M2.6<br>$\times 0.45$             | 4.0  | Fig.11 | 1-4                      |
| 3C-2W            | 3CW-PJ(40)         | 302-0139-8-40 | 7.2       | 14.0     | 31.4 | 18.1   | 12.7        | 17.5        | $\phi 3$                          | 13.0 | Fig.11 | 1-6                      |
| 3C-2V            | 3CW-PJ2(40)        | 302-0204-8-40 | 6.3       | 11.1     | 28.7 | 18.1   | 12.7        | 17.5        | $\phi 3$                          | 9.5  | Fig.11 | 1-2                      |
| 2.5D-2V          | BNC-PJ-1.5DV(40)   | 302-0238-0-40 | 4.7       | 11.1     | 28.7 | 18.1   | 12.7        | 17.5        | $\phi 3$                          | 9.5  | Fig.11 | 1-2                      |
| 1.5D-2W          | BNC-PJ-1.5(40)     | 302-0228-6-40 | 4.5       | 9.5      | 26.8 | 18.1   | 12.7        | 17.5        | M2.6<br>$\times 0.45$             | 7.0  | Fig.11 | 1-7                      |
|                  | BNC-PJ-1.5W-1(40)  | 302-0260-9-40 | 4.5       | 9.5      | 26.8 | 20.1   | 12.7        | 17.5        | $\phi 2.9$                        | 7.0  | Fig.11 | 1-8                      |
|                  | BNC-PJ-1.5W-2(40)  | 302-0282-1-40 | 4.5       | 9.5      | 26.8 | 20.1   | 12.7        | 17.5        | M2.6<br>$\times 0.45$<br>$\phi 3$ | 7.0  | Fig.11 | 1-9                      |
| 1.5D-2V          | BNC-PJ-1.5DV-1(40) | 302-0285-0-40 | 3.4       | 9.5      | 26.8 | 18.1   | 12.7        | 17.5        | $\phi 3$                          | 7.0  | Fig.11 | 1-8                      |

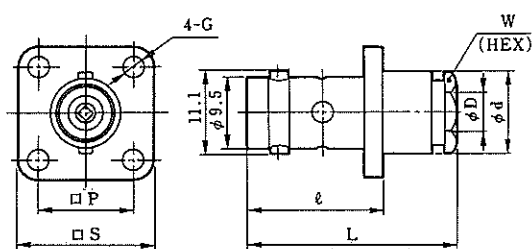


Fig. 11 (reference)

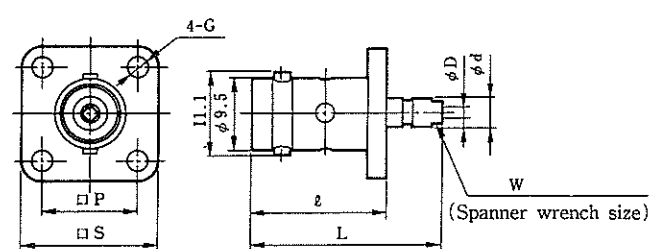


Fig. 12 (reference)

| Applicable cable | Part No.           | HRS No.       | Dimension |              |      |        |     |      | Shape  | Mounting hole dimensions |
|------------------|--------------------|---------------|-----------|--------------|------|--------|-----|------|--------|--------------------------|
|                  |                    |               | $\phi D$  | $\phi d$     | L    | $\ell$ | W1  | W2   |        |                          |
| RG-55/U, 58/U    | BNC-PJ-58(40)      | 302-0108-4-40 | 5.4       | 1/2-28NEF-2A | 28.5 | 16.9   | 9.5 | 17.0 | Fig.13 | 4-1                      |
| 1.5D-2W          | BNC-BPJ-1.5W(40)   | 302-0284-7-40 | 4.5       | 3/8-32NEF-2A | 26.8 | 12.8   | 7.0 | 11.0 | Fig.15 | 3-3                      |
|                  | BNC-BPJ-1.5W-1(40) | 302-0289-0-40 | 4.5       | 3/8-32NEF-2A | 26.8 | 15.2   | 7.0 | 12.7 | Fig.14 | 2-1                      |
| 1.5D-2V          | BNC-BPJ-1.5-1(40)  | 302-0252-0-40 | 3.5       | 3/8-32NEF-2A | 26.8 | 15.2   | 7.0 | 12.7 | Fig.14 | 2-1                      |

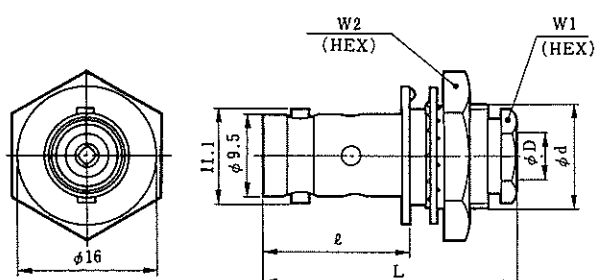


Fig. 13

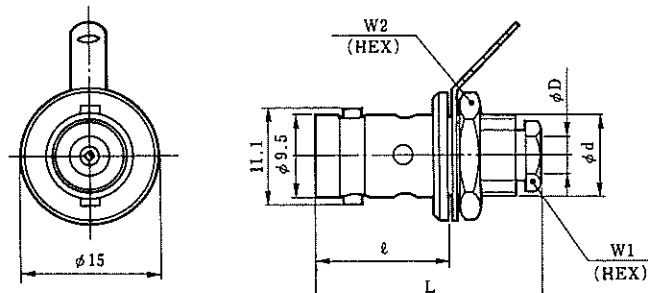


Fig. 14

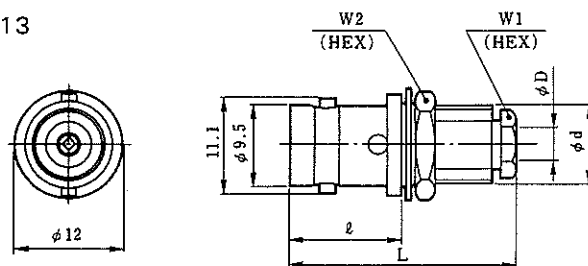


Fig. 15

# BNC SERIES RF CO-AXIAL CONNECTORS

## L-shaped Jack

| Applicable cable | Part No.        | HRS No.       | Dimension |              |      |          |          |     |      | Mounting hole dimensions |
|------------------|-----------------|---------------|-----------|--------------|------|----------|----------|-----|------|--------------------------|
|                  |                 |               | $\phi$ D  | $\phi$ d     | L    | $\ell$ 1 | $\ell$ 2 | W1  | W2   |                          |
| 1.5D-2V          | BNC-LPJ-1.5(40) | 302-0255-9-40 | 3.5       | 3/8-32NEF-2A | 33.3 | 21.7     | 14.0     | 7.0 | 12.7 | 2-1                      |

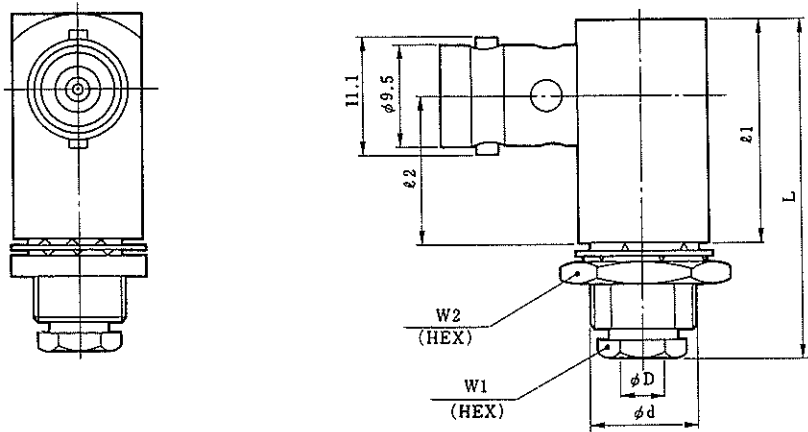


Fig.16

# BNC SERIES RF CO-AXIAL CONNECTORS

## Receptacles

| Part No.     | HRS No.       | d         | Mounting hole dimensions |
|--------------|---------------|-----------|--------------------------|
| UG-290/U(40) | 302-0009-2-40 | M2.6X0.45 | 1-10                     |
| 3C-R(40)     | 302-0031-1-40 | φ3        | 1-11                     |

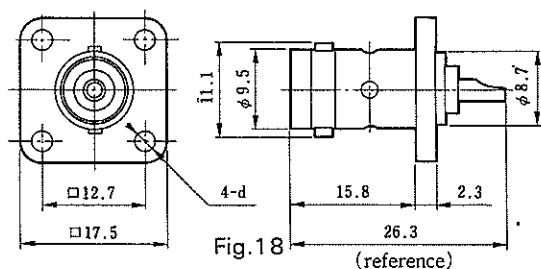


Fig. 18 (reference)

| Part No.     | HRS No.       | Remarks                 | Mounting hole dimensions |
|--------------|---------------|-------------------------|--------------------------|
| BNC-R-14(40) | 302-0245-5-40 | Round half cut terminal | 1-12                     |

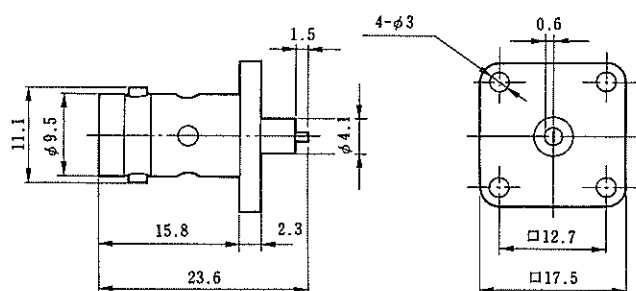


Fig. 20

| Part No.     | HRS No.       | L    | ℓ 1 | ℓ 2 | Remarks      | Mounting hole dimensions |
|--------------|---------------|------|-----|-----|--------------|--------------------------|
| BNC-R-12(40) | 302-0229-9-40 | 19.6 | 0   | 1.5 | Tab terminal | 1-12                     |
| BNC-R-13(40) | 302-0239-2-40 | 21.6 | 2.0 | 1.5 | Tab terminal | 1-12                     |

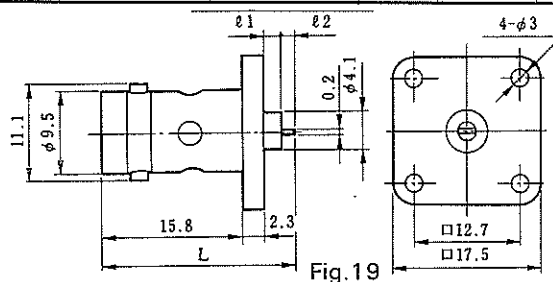


Fig. 19

| Part No.   | HRS No.       | Remarks | Mounting hole dimensions |
|------------|---------------|---------|--------------------------|
| BNC-LR(40) | 302-0020-5-40 |         | 1-11                     |

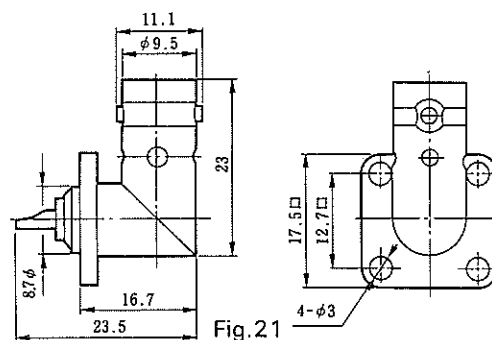


Fig. 21

| Part No.         | HRS No.       | φ D  | L    | ℓ    | W    | Panel mount type | Shape   | Mounting hole dimensions |
|------------------|---------------|------|------|------|------|------------------|---------|--------------------------|
| UG-604/U(40)     | 302-0016-8-40 | 14.5 | 26.3 | 13.7 | 12.7 | 2.8              | Fig. 25 | 3-1                      |
| UG-625/U(40)     | 302-0017-0-40 | 12.7 | 26.3 | 12.7 | 12.7 | 4                | Fig. 25 | 2-3                      |
| UG-625/U-4(40)   | 302-0221-7-40 | 12.7 | 26.3 | 12.7 | 12.7 | 4                | Fig. 23 | 2-3                      |
| UG-625/U-10(40)  | 302-0253-3-40 | 12.7 | 21.9 | 12.7 | —    | 1.3              | Fig. 24 | 3-2                      |
| UG-625/U-11A(40) | 302-0274-3-40 | 12.7 | 24.2 | 12.7 | 12.7 | 4                | Fig. 25 | 2-4                      |
| UG-657/U(40)     | 302-0012-7-40 | 14.5 | 32.6 | 15.2 | 12.7 | 5.6              | Fig. 25 | 3-3                      |
| UG-657/U-E(40)   | 302-0080-7-40 | 14.5 | 32.6 | 15.2 | 12.7 | 5.6              | Fig. 23 | 3-3                      |
| UG-1094/U(40)    | 302-0178-0-40 | 12.7 | 27.0 | 11.9 | 12.7 | 4                | Fig. 25 | 2-4                      |

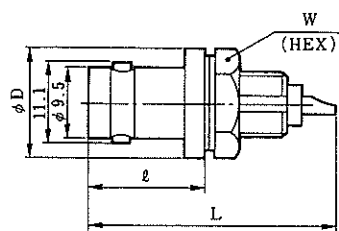


Fig. 22

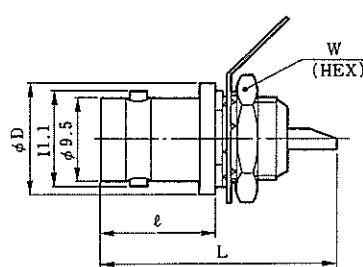


Fig. 23

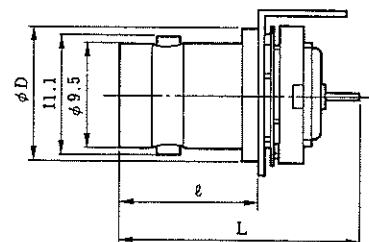


Fig. 24

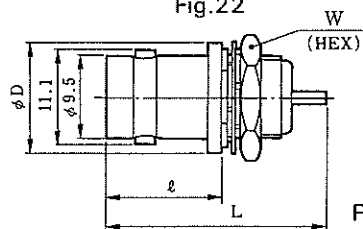
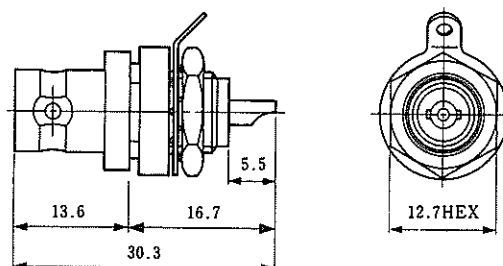


Fig. 25

# BNC SERIES RF CO-AXIAL CONNECTORS

| Part No.      | HRS No.       | Shape  | Mounting hole dimensions |
|---------------|---------------|--------|--------------------------|
| BNC-FBR(41)   | 302-0268-0-41 | Fig.27 | 2.3                      |
| BNC-FBR-W(40) | 302-0279-7-40 | Fig.29 | —                        |



Outside-insulating connector Fig.27

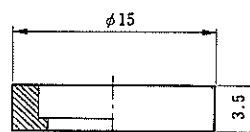


Fig.29

Washer mounted on BNC-FBR(01), shown in Fig.28, to connect the panel to the connector external conductor.

## Plug receptacles

| Part No.      | HRS No.       | Mounting hole dimensions |
|---------------|---------------|--------------------------|
| BNC-BPR-3(40) | 302-0249-6-40 | 2-1                      |

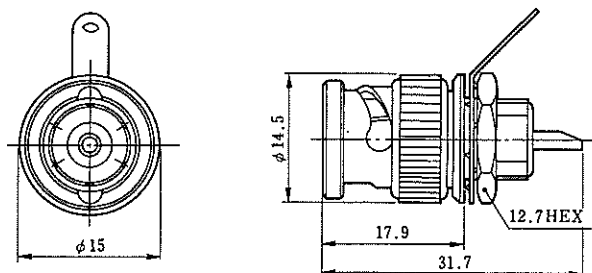


Fig.30

# BNC SERIES RF CO-AXIAL CONNECTORS

## Printed-circuit-board mounting type

| Part No.       | HRS No.       | Shape  | L    | ℓ 1   | ℓ 2  | Mounting hole dimensions |
|----------------|---------------|--------|------|-------|------|--------------------------|
| BNC-R-PC(40)   | 302-0241-4-40 | Fig.31 | 23.1 | 18.1  | 5.0  | 6-1                      |
| BNC-R-PC-2(40) | 302-0243-0-40 | Fig.32 | 20.4 | 17.1  | 3.3  | 7-2                      |
| BNC-R-PC-7(40) | 302-0280-6-40 | Fig.31 | 23.1 | 20.64 | 2.46 | 6-1                      |

| Part No.        | HRS No.       | Shape  | Mounting hole dimensions |
|-----------------|---------------|--------|--------------------------|
| BNC-LR-PC(40)   | 302-0242-7-40 | Fig.33 | 6-1                      |
| BNC-LR-PC-1(40) | 302-0262-4-40 | Fig.34 | 7-1                      |
| BNC-LR-PC-3(40) | 302-0276-9-40 | Fig.35 | 6-1                      |

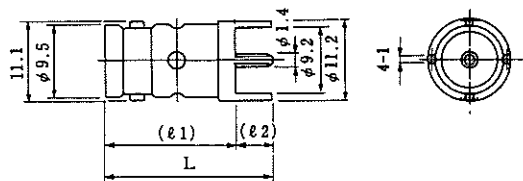


Fig.31

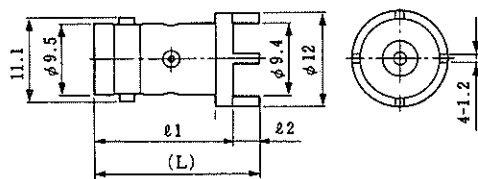


Fig.32

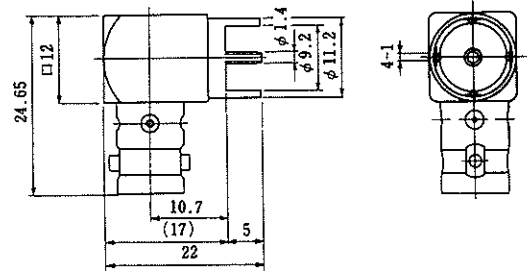


Fig.33

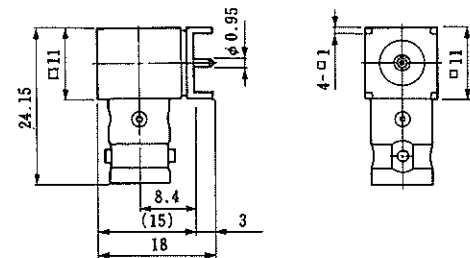


Fig.34

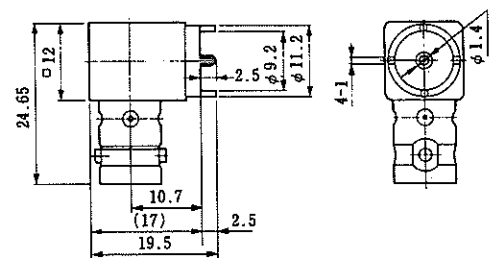


Fig.35

## Lug terminal

| Part No. | HRS No.    | Remarks   |
|----------|------------|-----------|
| BNC-EL   | 302-0079-8 | Earth Lug |

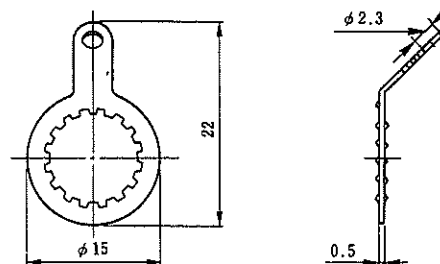


Fig.36



# BNC SERIES RF CO-AXIAL CONNECTORS

## Adapters

| Part No.       | HRS No.       | Shape  |
|----------------|---------------|--------|
| BNC-A-JJ(40)   | 302-0039-3-40 | Fig.37 |
| BNC-A-JJ-1(40) | 302-0050-6-40 | Fig.38 |

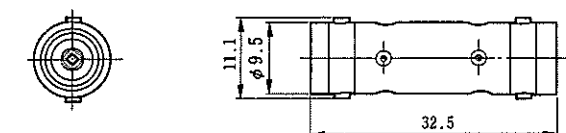


Fig.37

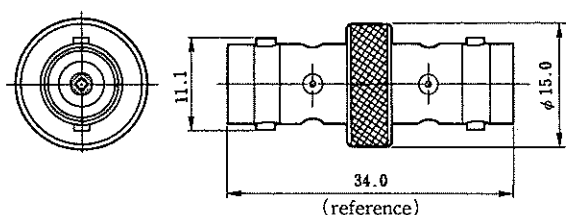


Fig.38

| Part No.     | HRS No.       | Remarks |
|--------------|---------------|---------|
| UG-491/U(40) | 302-0022-0-40 | A-PP    |

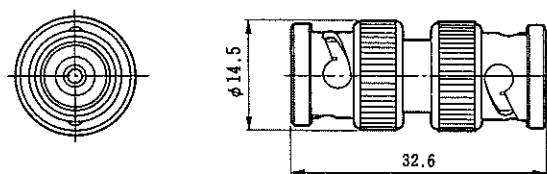


Fig.40

| Part No.     | HRS No.       | Remarks |
|--------------|---------------|---------|
| UG-306/U(40) | 302-0023-3-40 | LA-PJ   |

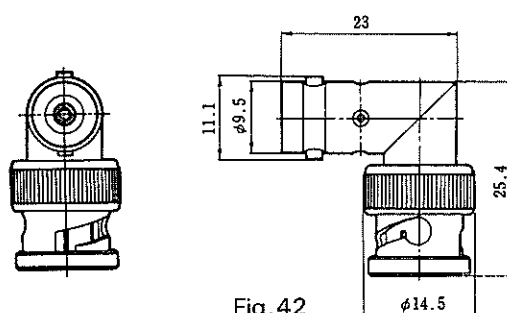


Fig.42

| Part No.     | HRS No.       | Remarks |
|--------------|---------------|---------|
| UG-274/U(40) | 302-0025-9-40 | TA-JPJ  |

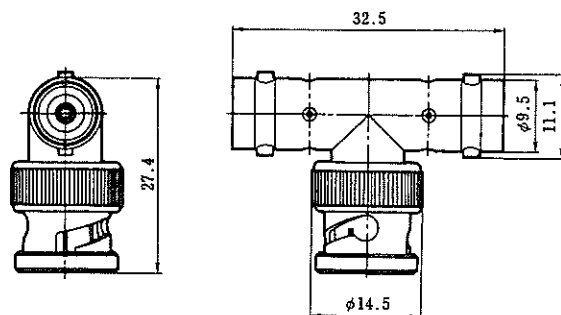


Fig.44

| Part No.      | HRS No.       | L     | ℓ     | d         | Shape  |
|---------------|---------------|-------|-------|-----------|--------|
| BNC-PA-JJ(40) | 302-0052-1-40 | 34    | 15.85 | φ3        | Fig.39 |
| UG-414/U(40)  | 302-0040-2-40 | 32.54 | 17.6  | M2.6X0.45 | Fig.39 |

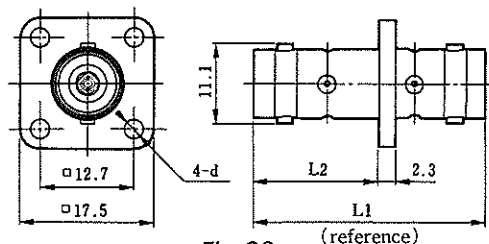


Fig.39

| Part No.       | HRS No.       | Remarks |
|----------------|---------------|---------|
| BNC-TA-JJJ(40) | 302-0024-6-40 |         |

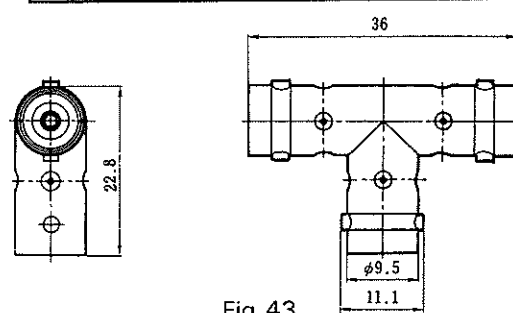


Fig.43

| Part No.    | HRS No.       | L  | Remarks |
|-------------|---------------|----|---------|
| BNC-UPA(40) | 302-0167-3-40 | 35 | U Link  |

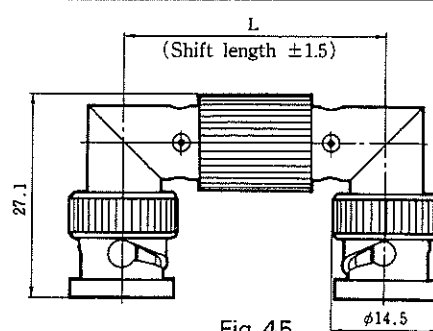


Fig.45

BNC

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Cap

Short plug

| Part No.      | HRS No.       | Remarks |
|---------------|---------------|---------|
| CW-123A/U(40) | 302-0041-5-40 | —       |

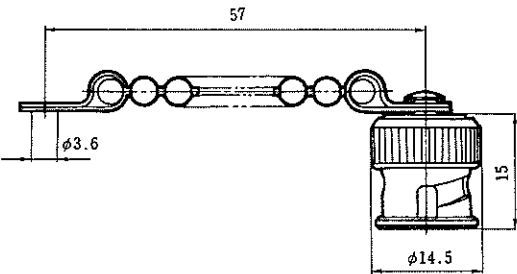


Fig.46

| Part No.      | HRS No.       | Remarks    |
|---------------|---------------|------------|
| JCW-159/U(40) | 302-0026-1-40 | Short Plug |

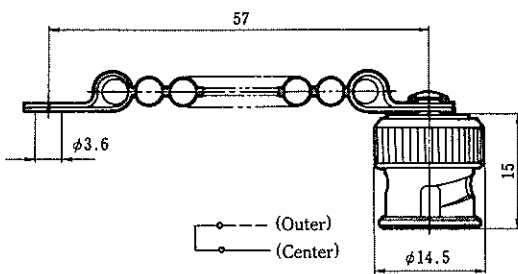


Fig.47

# BNC SERIES RF CO-AXIAL CONNECTORS

## Model BNC Connector List

| Type          | Part No.         | HRS No.       | Applicable cable | Surface treatment |        |                |      | Remarks |
|---------------|------------------|---------------|------------------|-------------------|--------|----------------|------|---------|
|               |                  |               |                  | Armor             |        | Center contact |      |         |
|               |                  |               |                  | Silver            | Nickel | Silver         | Gold |         |
| Straight plug | UG-88/U(40)      | 302-0001-0-40 | RG-55/U, 58/U    | ○                 |        | ○              |      |         |
|               | UG-88D/U(40)     | 302-0070-3-40 |                  | ○                 |        | ○              |      |         |
|               | 3CA-P2(40)       | 302-0203-5-40 |                  | ○                 |        | ○              |      |         |
|               | UG-260/U(40)     | 302-0002-3-40 | RG-59/U, 62/U    | ○                 |        | ○              |      |         |
|               | BNC-P-188A/U(40) | 302-0216-7-40 | RG-188A/U        | ○                 |        | ○              |      |         |
|               | BNC-P-196/U(40)  | 302-0214-1-40 | RG-196A/U        | ○                 |        |                | ○    |         |
|               | BNC-P-5DV-SA(40) | 302-0218-2-40 | 5D-2V, 5C-2V     | ○                 |        | ○              |      |         |
|               | BNC-P-5DW-1(40)  | 302-0189-6-40 | 5D-2W            | ○                 |        | ○              |      |         |
|               | BNC-P-5DW-SA(40) | 302-0217-0-40 | 5D-2W, 5C-2W     | ○                 |        | ○              |      |         |
|               | BNC-P-3(40)      | 302-0030-9-40 | 3C-2V            | ○                 |        | ○              |      |         |
|               | BNC-P-3DV-SA(40) | 302-0219-5-40 | 3D-2V, 3C-2V     | ○                 |        | ○              |      |         |
|               | 3CV-P2(40)       | 302-0202-2-40 | 3C-2V            | ○                 |        | ○              |      |         |
|               | 3CV-P3(40)       | 302-0269-3-40 |                  | ○                 |        | ○              |      |         |
|               | BNC-P-1.5WCR(40) | 302-0295-3-40 | 1.5D-2W, 1.5C-2W |                   | ○      | ○              |      |         |
|               | BNC-P-1.5(40)    | 302-0257-4-40 | 1.5D-2V          |                   | ○      | ○              |      |         |
|               | BNC-P-1.5W(40)   | 302-0299-4-40 | 1.5D-2W          |                   | ○      | ○              |      |         |
|               | BNC-P-1.5CR(40)  | 302-0294-0-40 | 1.5D-2V, 1.5C-2V |                   | ○      | ○              |      |         |
|               | 3CZ-P(40)        | 302-0215-4-40 | 3C-2Z            | ○                 |        | ○              |      |         |
|               | 3CT-P(40)        | 302-0210-0-40 | 3C-2T            | ○                 |        | ○              |      |         |
|               | 3CT-P-1(40)      | 302-0208-9-40 |                  | ○                 |        | ○              |      |         |
|               | 3CT-P3(40)       | 302-0270-2-40 |                  | ○                 |        | ○              |      |         |
|               | 3CW-P(40)        | 302-0209-1-40 | 3C-2W            | ○                 |        | ○              |      |         |

# BNC SERIES RF CO-AXIAL CONNECTORS

| Type          | Part No.           | HRS No.       | Applicable cable | Surface treatment |        |                |      | Remarks |
|---------------|--------------------|---------------|------------------|-------------------|--------|----------------|------|---------|
|               |                    |               |                  | Armor             |        | Center contact |      |         |
|               |                    |               |                  | Silver            | Nickel | Silver         | Gold |         |
| L-shaped plug | UG-913/U(42)       | 302-0043-0-42 | RG-55/U, 58/U    | ○                 |        | ○              |      |         |
|               | BNC-LP-59/U(40)    | 302-0075-7-40 | RG-59/U, 62/U    | ○                 |        | ○              |      |         |
|               | 3CV-PL(40)         | 302-0157-0-40 | 3C-2V            | ○                 |        | ○              |      |         |
|               | 3CW-PL(40)         | 302-0158-2-40 | 3C-2W            | ○                 |        | ○              |      |         |
| Jack          | UG-89/U(40)        | 302-0034-0-40 | RG-55/U, 58/U    | ○                 |        | ○              |      |         |
|               | UG-261/U(40)       | 302-0035-2-40 | RG59/U, 62/U     | ○                 |        | ○              |      |         |
|               | 3CV-J(40)          | 302-0006-4-40 | 3C-2V            | ○                 |        | ○              |      |         |
|               | BNC-J-1.5WCR(40)   | 302-0297-9-40 | 1.5D-2W, 1.5C-2W |                   | ○      | ○              |      |         |
|               | BNC-J-1.5CR(40)    | 302-0296-6-40 | 1.5D-2V, 1.5C-2V |                   | ○      | ○              |      |         |
| Panel Jack    | UG-291/U(40)       | 302-0036-5-40 | RG-55/U, 58/U    | ○                 |        | ○              |      |         |
|               | 3CA-PJ2(40)        | 302-0205-0-40 | RG-58/U, 58/U    | ○                 |        | ○              |      |         |
|               | UG-262/U(40)       | 302-0007-7-40 | RG-59/U, 62/U    | ○                 |        | ○              |      |         |
|               | BNC-PJ-58(40)      | 302-0108-4-40 | RG-55/U, 58/U    | ○                 |        | ○              |      |         |
|               | BNC-PJ-188/U(40)   | 302-0230-8-40 | RG-188A/U        |                   | ○      | ○              |      |         |
|               | BNC-PJ-196/U(40)   | 302-0194-6-40 | RG-196A/U        | ○                 |        |                | ○    |         |
|               | 3CW-PJ(40)         | 302-0139-8-40 | 3C-2W            | ○                 |        | ○              |      |         |
|               | BNC-PJ-2.5DV(40)   | 302-0238-0-40 | 2.5D-2V          | ○                 |        | ○              |      |         |
|               | BNC-PJ-1.5(40)     | 302-0228-6-40 | 1.5D-2W          |                   | ○      | ○              |      |         |
|               | BNC-PJ-1.5W-1(40)  | 302-0260-9-40 |                  |                   | ○      | ○              |      |         |
|               | BNC-PJ-1.5W-2(40)  | 302-0282-1-40 |                  |                   | ○      | ○              |      |         |
|               | BNC-BPJ-1.5W(40)   | 302-0284-7-40 |                  |                   | ○      | ○              |      |         |
|               | BNC-BPJ-1.5W-1(40) | 302-0289-0-40 |                  |                   | ○      | ○              |      |         |
|               | BNC-BPJ-1.5DW(40)  | 302-0400-6-40 |                  |                   | ○      |                | ○    |         |

# BNC SERIES RF CO-AXIAL CONNECTORS

| Type                |                | Part No.           | HRS No.       | Applicable cable | Surface treatment |        |                |      | Remarks |
|---------------------|----------------|--------------------|---------------|------------------|-------------------|--------|----------------|------|---------|
|                     |                |                    |               |                  | Armor             |        | Center contact |      |         |
|                     |                |                    |               |                  | Silver            | Nickel | Silver         | Gold |         |
| Panel jack          |                | BNC-PJ-1.5DV-1(40) | 302-0285-0-40 | 1.5D-2V          |                   | ○      | ○              |      |         |
|                     |                | BNC-BPJ-1.5-1(40)  | 302-0252-0-40 |                  |                   | ○      |                | ○    |         |
|                     |                | BNC-BPJ-1.5DV(40)  | 302-0393-2-40 |                  |                   | ○      |                |      |         |
|                     |                | 3CV-PJ2(40)        | 302-0204-8-40 | 3C-2V            | ○                 |        | ○              |      |         |
| L-shaped Panel jack |                | BNC-LPJ-1.5(40)    | 302-0255-9-40 | 1.5D-2V          |                   | ○      | ○              |      |         |
| Receptacle          | Flange type    | U-290/U(40)        | 302-0009-2-40 | 4-M2.6X0.45      | ○                 |        | ○              |      |         |
|                     |                | 3C-R(40)           | 302-0031-1-40 | 4-φ3             | ○                 |        | ○              |      |         |
|                     |                | BNC-R-12(40)       | 302-0229-9-40 |                  |                   | ○      |                | ○    |         |
|                     |                | BNC-R-13(40)       | 302-0239-2-40 |                  |                   | ○      |                | ○    |         |
|                     |                | BNC-R-14(40)       | 302-0245-5-40 |                  |                   | ○      | ○              |      |         |
|                     | Bulk head type | UG-604/U(40)       | 302-0016-8-40 |                  | ○                 |        | ○              |      |         |
|                     |                | UG-625/U(40)       | 302-0017-0-40 |                  | ○                 |        | ○              |      |         |
|                     |                | UG-625/U-4(40)     | 302-0221-7-40 |                  |                   | ○      | ○              |      |         |
|                     |                | UG-625/U-10(40)    | 302-0253-3-40 | Folk terminal    |                   | ○      | ○              |      |         |
|                     |                | UG-625/U-11A(40)   | 302-0274-3-40 |                  |                   | ○      | ○              |      |         |
|                     |                | UG-657/U(40)       | 302-0012-7-40 | drip-proof type  | ○                 |        | ○              |      |         |
|                     |                | UG-657/U-E(40)     | 302-0080-7-40 | drip-proof type  | ○                 |        | ○              |      |         |

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| Type       |                       | Part No.        | HRS No.       | Applicable cable         | Surface treatment |        |                |      | Remarks |
|------------|-----------------------|-----------------|---------------|--------------------------|-------------------|--------|----------------|------|---------|
|            |                       |                 |               |                          | Armor             |        | Center contact |      |         |
|            |                       |                 |               |                          | Silver            | Nickel | Silver         | Gold |         |
| Receptacle | Bulk head type        | UG-1094/U(40)   | 302-0178-0-40 |                          | ○                 |        | ○              |      |         |
|            |                       | BNC-FBR(41)     | 302-0268-0-41 | Insulation type PPO      |                   | ○      | ○              |      |         |
|            |                       | BNC-FBR-W(40)   | 302-0279-7-40 | Metal washer for BNC-FBR |                   | ○      |                |      |         |
|            | L-shaped type         | BNC-LR(40)      | 302-0020-5-40 |                          | ○                 |        | ○              |      |         |
|            | Plug type             | BNC-BPR-3(40)   | 302-0249-6-40 |                          |                   | ○      |                | ○    |         |
|            | Straight type for PCB | BNC-R-PC(40)    | 302-0241-4-40 |                          |                   | ○      | ○              |      |         |
|            |                       | BNC-R-PC-2(40)  | 302-0243-0-40 |                          |                   | ○      | ○              |      |         |
|            |                       | BNC-R-PC-7(40)  | 302-0280-6-40 |                          |                   | ○      | ○              |      |         |
|            | L-shaped type for PCB | BNC-LR-PC(40)   | 302-0242-7-40 |                          |                   | ○      | ○              |      |         |
|            |                       | BNC-LR-PC-1(40) | 302-0262-4-40 |                          |                   | ○      | ○              |      |         |
|            |                       | BNC-LR-PC-3(40) | 302-0276-9-40 |                          |                   | ○      | ○              |      |         |
|            | Ground lug plate      | BNC-EL          | 302-0079-8    |                          | ○                 |        |                |      |         |

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RF CO-AXIAL CONNECTORS

| Type             | Part No.       | HRS No.       | Applicable cable | Surface treatment |        |                |      | Remarks |
|------------------|----------------|---------------|------------------|-------------------|--------|----------------|------|---------|
|                  |                |               |                  | Armor             |        | Center contact |      |         |
|                  |                |               |                  | Silver            | Nickel | Silver         | Gold |         |
| Adaoter          | BNC-A-JJ(40)   | 302-0039-3-40 |                  | ○                 |        | ○              |      |         |
|                  | BNC-A-JJ-1(40) | 302-0050-6-40 |                  | ○                 |        | ○              |      |         |
|                  | BNC-PA-JJ(40)  | 302-0052-1-40 |                  | ○                 |        | ○              |      |         |
|                  | UG-414/U(40)   | 302-0040-2-40 | PA-JJ type       | ○                 |        | ○              |      |         |
|                  | UG-491/U(40)   | 302-0022-0-40 | A-PP type        | ○                 |        | ○              |      |         |
| L-shaped adapter | UG-306/U(40)   | 302-0023-3-40 | LA-PJ type       | ○                 |        | ○              |      |         |
| T-shaped adapter | BNC-TA-JJJ(40) | 302-0024-6-40 |                  | ○                 |        | ○              |      |         |
|                  | UG-274/U(40)   | 302-0025-9-40 | (TA-JP type)     | ○                 |        | ○              |      |         |
| U ring           | BNC-UPA(40)    | 302-0167-3-40 | 35-mm movable    | ○                 |        | ○              |      |         |
| Cap              | CW-123A/U(40)  | 302-0041-5-40 | For jack         | ○                 |        | ○              |      |         |
| Plug shot        | JCW-159/U(40)  | 302-0026-1-40 |                  | ○                 |        | ○              |      |         |

# BNC SERIES RF CO-AXIAL CONNECTORS

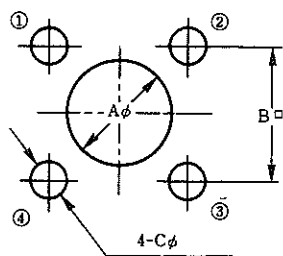


Fig. 1

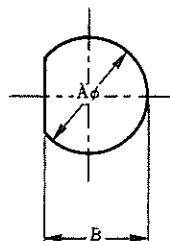


Fig. 2

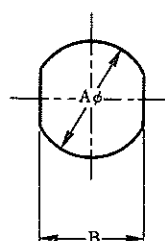


Fig. 3

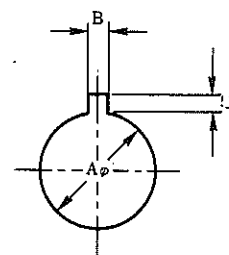


Fig. 4

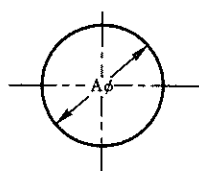


Fig. 5

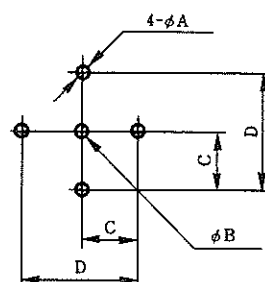


Fig. 6

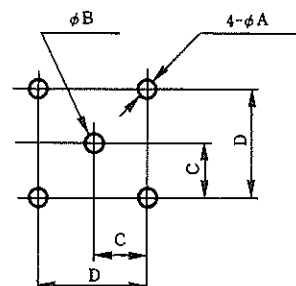


Fig. 7

| Fig. | No.  | A    | B    | C                | D |
|------|------|------|------|------------------|---|
| 1    | 1-1  | 11.4 | 12.7 | 3                | — |
|      | 1-2  | 11.4 | 12.7 | 3.2              | — |
|      | 1-3  | 9.8  | 12.7 | 3                | — |
|      | 1-4  | 5.3  | 12.7 | 3                | — |
|      | 1-5  | 12.3 | 12.7 | 3.2              | — |
|      | 1-6  | 14.3 | 12.7 | 3.2              | — |
|      | 1-7  | 9.8  | 12.7 | 3                | — |
|      | 1-8  | 9.8  | 12.7 | 3.2              | — |
|      | 1-9  | 9.8  | 12.7 | ①-③ ②-④<br>3 3.2 | — |
|      | 1-10 | 9    | 12.7 | 3                | — |
|      | 1-11 | 9    | 12.7 | 3.2              | — |
|      | 1-12 | 4.3  | 12.7 | 3.2              | — |
|      | 1-13 | 15   | 18.2 | 3.4              | — |
|      | 1-14 | 7    | 12.7 | 3                | — |

| Fig. | No. | A                                 | B                                 | C                                | D          |
|------|-----|-----------------------------------|-----------------------------------|----------------------------------|------------|
| 2    | 2-1 | 9.6 <sup>+0.1</sup> <sub>0</sub>  | 9 <sup>+0.1</sup> <sub>0</sub>    | —                                | —          |
|      | 2-2 | 9.6 <sup>+0.1</sup> <sub>0</sub>  | 8.5 <sup>+0.1</sup> <sub>0</sub>  | —                                | —          |
|      | 2-3 | 11.3 <sup>+0.1</sup> <sub>0</sub> | 10.3 <sup>+0.1</sup> <sub>0</sub> | —                                | —          |
|      | 2-4 | 9.6 <sup>+0.1</sup> <sub>0</sub>  | 8.8 <sup>+0.1</sup> <sub>0</sub>  | —                                | —          |
|      | 2-5 | 12.1 <sup>+0.1</sup> <sub>0</sub> | 11.1 <sup>+0.1</sup> <sub>0</sub> | —                                | —          |
| 3    | 3-1 | 9.6 <sup>+0.1</sup> <sub>0</sub>  | 8.1 <sup>+0.1</sup> <sub>0</sub>  | —                                | —          |
|      | 3-2 | 9.6 <sup>+0.1</sup> <sub>0</sub>  | 8.3 <sup>+0.1</sup> <sub>0</sub>  | —                                | —          |
|      | 3-3 | 9.6 <sup>+0.1</sup> <sub>0</sub>  | 8.6 <sup>+0.1</sup> <sub>0</sub>  | —                                | —          |
| 4    | 4-1 | 12.7 <sup>+0.1</sup> <sub>0</sub> | 1.3 <sup>+0.1</sup> <sub>0</sub>  | 1.8 <sup>+0.1</sup> <sub>0</sub> | —          |
| 5    | 5-1 | 12.7 <sup>+0.1</sup> <sub>0</sub> | —                                 | —                                | —          |
| 6    | 6-1 | 1.6 <sup>+0.1</sup> <sub>0</sub>  | 1.6 <sup>+0.1</sup> <sub>0</sub>  | 5.08±0.05                        | 10.16±0.05 |
| 7    | 7-1 | 1.8 <sup>+0.1</sup> <sub>0</sub>  | 1.8 <sup>+0.1</sup> <sub>0</sub>  | 5.08±0.05                        | 10.16±0.05 |
|      | 7-2 | 1.4 <sup>+0.1</sup> <sub>0</sub>  | 1.4 <sup>+0.1</sup> <sub>0</sub>  | 3.81±0.05                        | 7.62±0.05  |



# BNC SERIES RF CO-AXIAL CONNECTORS

## Functional drawing

Typical part numbers are enclosed in parentheses

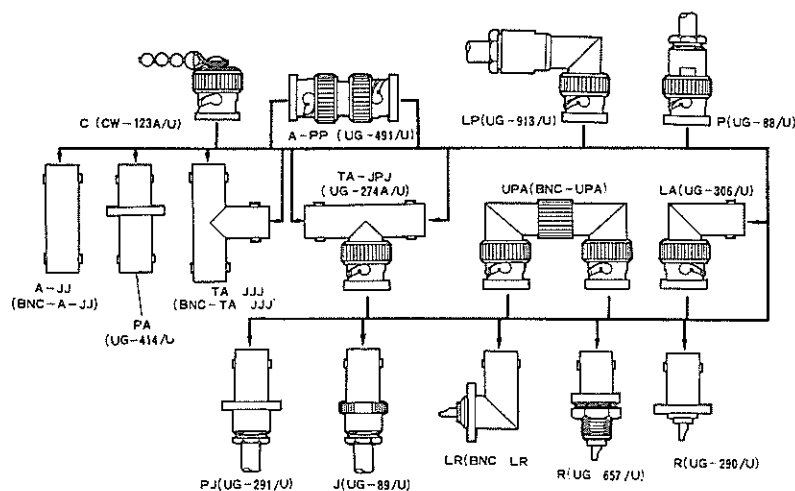
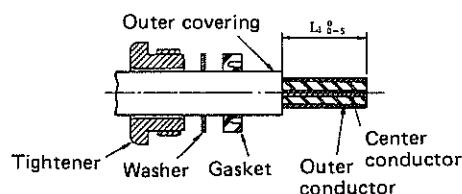


Table 1. End processing dimensions arranged by part number

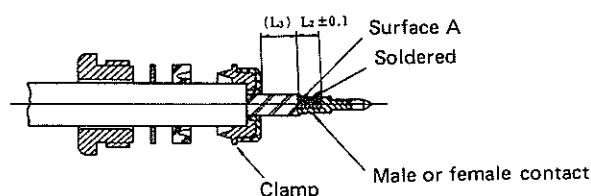
(Unit: mm)

| HRS No.         | Part No.      | $L_1 \pm 0.5$ | $L_2 \pm 0.1$ | $L_3$ |
|-----------------|---------------|---------------|---------------|-------|
| CL302-0001-0-40 | UG-88/U(40)   | 7.5           | 3             | 2.9   |
| CL302-0002-3-40 | UG-260/U(40)  | 7.6           | 3             | 2.9   |
| CL302-0006-4-40 | 3CV-J(40)     | 7.4           | 3             | 3.2   |
| CL302-0007-7-40 | UG-262/U(40)  | 7.3           | 3             | 2.9   |
| CL302-0034-0-40 | UG-89/U(40)   | 7.5           | 3             | 2.9   |
| CL302-0035-2-40 | UG-261/U(40)  | 7.3           | 3             | 2.9   |
| CL302-0036-5-40 | UG-291/U(40)  | 7.5           | 3             | 2.9   |
| CL302-0043-0-42 | UG-913/U(42)  | 7.4           | 3             | 2.4   |
| CL302-0070-3-40 | UG-88D/U(40)  | 7.6           | 3             | 2.7   |
| CL302-0129-4-40 | 3DW-P2(40)    | 10            | 3             | 5     |
| CL302-0132-9-40 | BNC-P-5DV(40) | 11.4          | 2.5           | 5     |
| CL302-0152-6-40 | 3CF-P(40)     | 10            | 3             | 5     |
| CL302-0157-0-40 | 3CV-PL(40)    | 9.4           | 1.8           | 5.3   |
| CL302-0202-2-40 | 3CV-P2(40)    | 9.6           | 3             | 5     |
| CL302-0203-5-40 | 3CA-P2(40)    | 9.6           | 3             | 5     |
| CL302-0204-8-40 | 3CV-PJ2(40)   | 7             | 3             | 2.8   |
| CL302-0205-0-40 | 3CA-PJ2(40)   | 7             | 3             | 2.8   |
| CL302-0209-1-40 | 3CW-P(40)     | 10.4          | 3             | 5     |
| CL302-0210-0-40 | 3CT-P(40)     | 10.9          | 3             | 5     |

## Connecting methods



The ends are processed as shown in the drawing (refer to Table 1). For the end processing dimensions  $L_1$ , refer to Table 1, End processing dimensions arranged by part number.



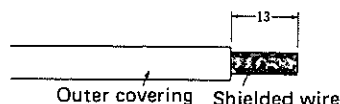
- (1) Insert clamp from tip of cable and fold outer conductor of cable back onto clamp. Using a knife, cut off excess outer conductor left at this time.
- (2) Cut off center conductor of cable at  $L_2$ , from surface A of cable insulation. For end processing dimensions  $L_2$ ,  $L_3$ , refer to Table 1, End processing dimensions arranged by part ( $L_3$  is a reference dimension.)  
(Note: Be careful not to damage center conductor.)
- (3) Solder contact and center conductor. It is a good idea at this time to solder the terminal preliminarily in advance.  
(Note: There must be no gap between the end and the cable insulation.)



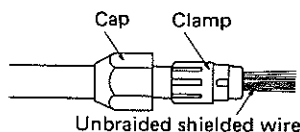
Insert cable and parts into shell and tighten tightening nut sufficiently.

# BNC SERIES RF CO-AXIAL CONNECTORS

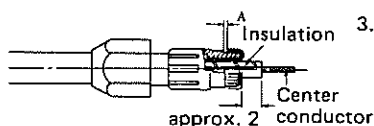
## Assembling methods



1. Cut off 13mm of the cable's outer covering and expose the shielded wire.

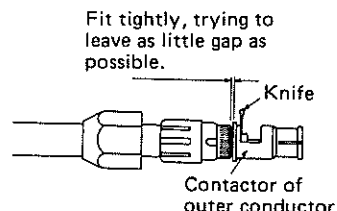


2. Put the cap through the cable, insert the clamp, and unbraid the shielded wire.

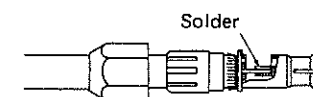


3. Wind the shielded wire onto the clamp. At this time, cut off the shielded wire at position A in the drawing, leaving some gap.

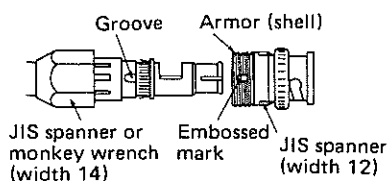
4. Cut off the insulation, leaving about 2mm of it.



5. Fit the contactor of the outer conductor tightly onto the clamp, position a knife on the notched window, and cut off the insulation. Take care not to damage the center conductor at this time.



6. Solder the center conductor with the contactor of the outer conductor fitting tightly onto the clamp.



7. Insert the block described above so that it will fit into the groove on the clamp and the embossed mark on the armor. Tighten the cap thoroughly. The tools used are a JIS spanner (width 12) and a JIS spanner or monkey wrench (width 14).

# Non-reflective Terminations (BNC)

## BNC-TM Series



### ■Features

#### 1.High Performance

These wide bandwidth/ultra high matching non-reflective termination use Hirose Electric original high frequency matching technology.

#### 2.Full Assortment of 50 ohms and 75 ohms Types

In addition to the 50 ohms impedance type, plugs and jacks are available in a 75 ohms type.

### ■Product Specifications

| Ratings | Frequency range (Note)<br>Characteristic impedance<br>Maximum Input Power (Note) | DC to 4.0 GHz<br>50 ohms, 75 ohms<br>0.5 to 1 W | Operating temperature range<br>Operating relative humidity | -10°C to +65°C<br>95% Max. |
|---------|----------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|----------------------------|
|---------|----------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------|----------------------------|

Note: The frequency range and the maximum input power will differ depending on the products.

| Item                | Standard                                                                                    | Conditions                                                                                                                        |
|---------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1.Vibration         | No electrical discontinuity of 1 $\mu$ s or more<br>No damage, cracks, or parts dislocation | Frequency of 10 to 2000 Hz, overall amplitude of 1.52 mm, acceleration of 98 m/s <sup>2</sup> for 2 hours in each of 3 directions |
| 2.Shock             |                                                                                             | Acceleration of 490 m/s <sup>2</sup> , sine half-wave waveform, 3 cycles in each of the 3 axis                                    |
| 3.Temperature cycle | No electrical discontinuity of 1 $\mu$ s or more                                            | Temperature: -55°C → +15°C to +35°C → +85°C → +15°C to +35°C<br>Time: 30 → 15 max. → 30 → 15 max. (Minutes)<br>100 cycles         |

● The test method conforms to MIL-STD-202.

### ■Materials

| Part            | Material         | Finish         |
|-----------------|------------------|----------------|
| Connector Body  | Brass            | Nickel plating |
| Insulator       | PTFE             | —              |
| Male contacts   | Brass            | Gold plating   |
| Female contacts | Beryllium copper | Gold plating   |
| Resistor        | Metal film       | —              |
| Cover           | PVC              | —              |

### ■Ordering Information

**BNC - TM P - 05 - 1 (41)**  
 ① ② ③ ④ ⑤ ⑥

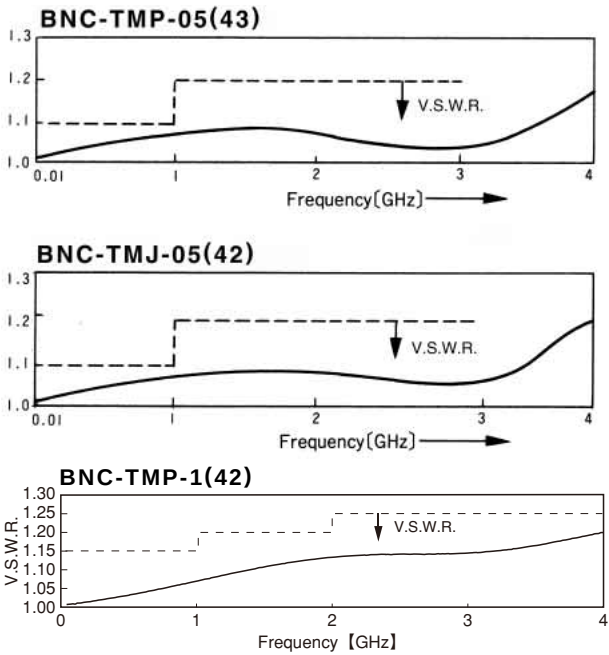
|                                                  |                                    |
|--------------------------------------------------|------------------------------------|
| ① Series Name: BNC Series                        | ④ Power<br>(Example) : 05: 0.5 W   |
| ② TM: Indicates a non-reflective termination     | 1 : 1 W                            |
| ③ Connector type<br>P: Plug type<br>J: Jack type | ⑤ Suffix<br>⑥ (4*): RoHS Compliant |

■Specifications

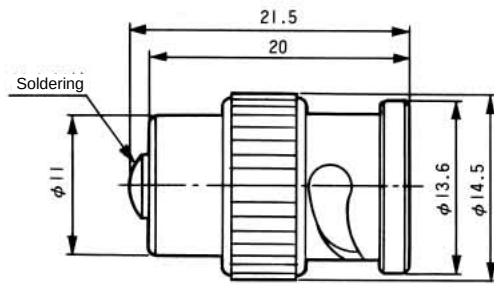
|    | Part Number        | Frequency Range (GHz) | V.S.W.R. (Max)       | Power (W) | Impedance (Ohms) | Direct Current Resistance | Connectors | Weight (g) | RoHS |
|----|--------------------|-----------------------|----------------------|-----------|------------------|---------------------------|------------|------------|------|
|    | BNC-TMP-05(43)     | DC~1<br>1~3           | 1.10                 | 0.5       | 50               | 50±0.5                    | BNC-P      | 15         | YES  |
|    | BNC-TMJ-05(42)     |                       | 1.20                 | 0.5       | 50               | 50±0.5                    | BNC-J      | 10         |      |
| ※1 | BNC-TMP-05-1(41)   | DC~0.1                | 1.10                 | 0.5       | 50               | 50±0.5                    | BNC-P      | 15         |      |
| ※1 | BNC-TMJ-05-1(41)   |                       |                      | 0.5       | 50               | 50±0.5                    | BNC-J      | 10         |      |
| ※2 | BNC-TMP-05-2(42)   | DC~1<br>1~3           | 1.10                 | 0.5       | 50               | 50±0.5                    | BNC-P      | 16         |      |
| ※2 | BNC-TMJ-05-2(42)   |                       | 1.20                 | 0.5       | 50               | 50±0.5                    | BNC-J      | 11         |      |
|    | BNC-TMP-05(75)(40) | DC~0.5<br>0.5~2       | 1.15                 | 0.5       | 75               | 75±2.25                   | BNC-P(75)  | 14         |      |
|    | BNC-TMJ-05(75)(40) |                       | 1.20                 | 0.5       | 75               | 75±2.25                   | BNC-J(75)  | 9          |      |
|    | BNC-TMP-1(42)      | DC~1<br>1~2<br>2~4    | 1.15<br>1.20<br>1.25 | 1         | 50               | 50±2                      | BNC-P      | 16         |      |

※1 Low-cost items with DC to 100 MHz bandwidth limit.  
※2 Cover fitting type

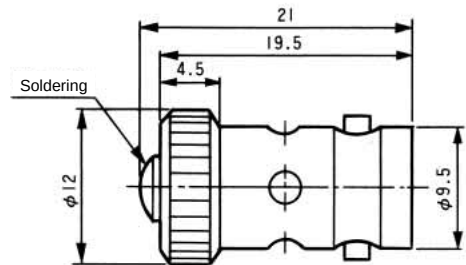
■Typical Data



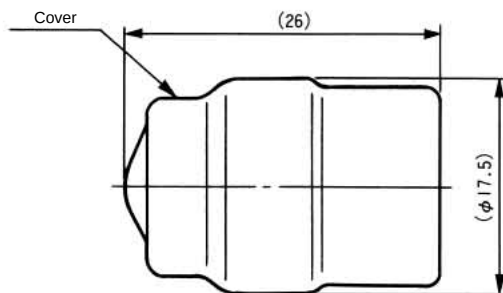
## External Dimensions



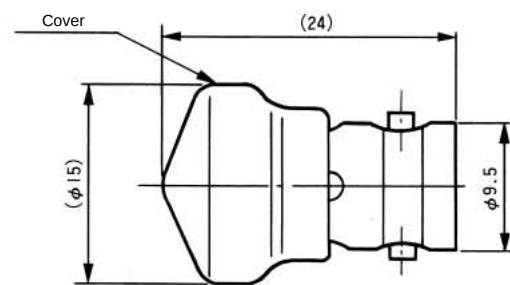
**BNC-TMP-05(43)**  
**BNC-TMP-05-1(41)**  
**BNC-TMP-05(75)(40)**



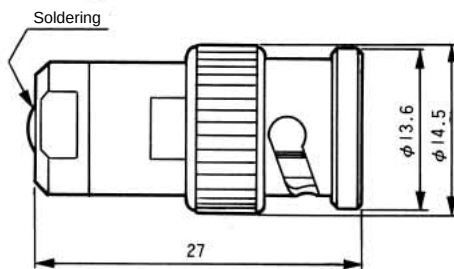
**BNC-TMJ-05(42)**  
**BNC-TMJ-05-1(41)**  
**BNC-TMJ-05(75)(40)**



**BNC-TMP-05-2(42)**



**BNC-TMJ-05-2(42)**



**BNC-TMP-1(42)**

※BNC-TMP/TMJ-05 Series have a 50 ohms or 75 ohms indication for each characteristic impedance.

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