

## Type 43 (SMZ)

ITT's wide range of Cannon Type 43 / SMZ connectors are extensively used in 75 ohm communication systems and have become the recognized standard in telecommunications in many parts of the world.

Designed around the requirements of BS9210 F0022 and draft specifications CECC 122 300, these connectors are designed for field installation and feature the 'Posi-Lock' latch to prevent accidental disconnection.

A special feature of the Cannon Type 43 / SMZ range is the QT (Quick Termination) technology for cable connectors. Designed to reduce assembly time and loose parts, the QT termination system incorporates a connector body with a pre-assembled center contact, termination is simple with no loose contact to drop or lose. QT provides a reliable gas tight connection between the inner conductor of the cable and connector contact that meets the most stringent industry standards. For PCB connectors a snap fit feature is incorporated into certain styles to hold the connector in position during soldering.



### Choice of Two Latching Styles – Standard or HDC (High Density)

ITT's Cannon Type 43 / SMZ connectors are available in 2 package sizes, Standard and HDC (High Density). Whilst both configurations have the same interface dimensions and are intermateable, the outer body size of HDC is reduced to facilitate a closer packing density on the equipment or distribution frame.

## Applications

• Switching Equipment • DSX Cross Connects • Base Stations • Routers • Wireless • Telecom • LAN Equipment

## Features and Benefits

High performance gold plated contact areas ensure reliable long term operation

Posi-Lock locking mechanisms ensure secure coupling and ease of engagement and separation

Designed for the most commonly used telecom cables in North America and Europe

Designed for robust and reliable field installation

Available for BT standard and HDC distribution frames

Three-part construction with crimp inner contact and outer ferrule (no soldering required)

PCB Plugs come with offset legs for board locking

QT (Quick termination) technology available for most cable types

Product offering includes U-links and between series adaptors

True 75 ohm characteristic impedance up to 3 GHz (for selected styles)

Most designs require no special tooling

"Teplock" mounting reduces the time needed for fitting to DDF's

RoHS compliant part numbers



# Cannon 75 Ohm Connectors

## Type 43 (SMZ)

### Specifications

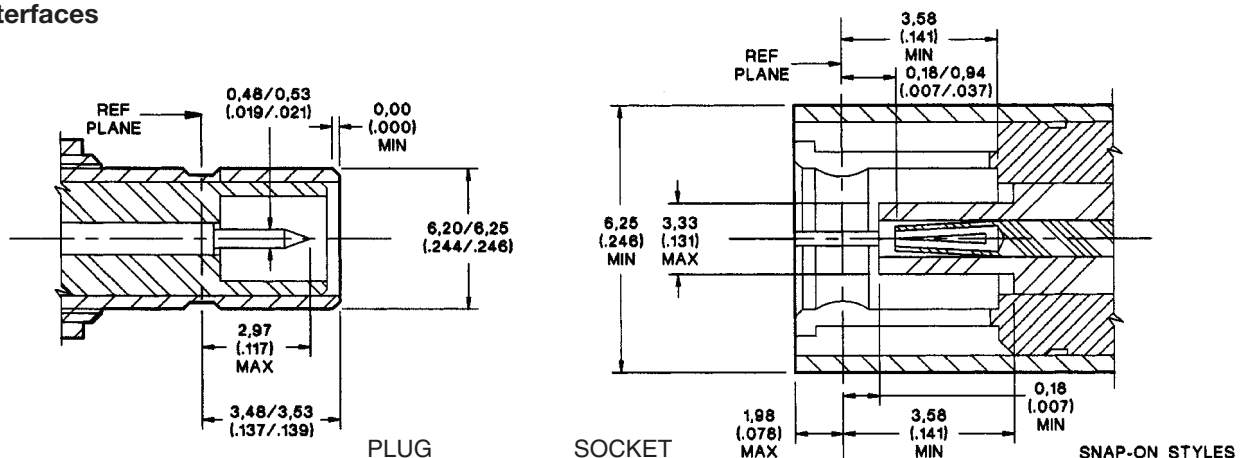
|               |                                       |                                                                                                                                                                                                    |
|---------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ELECTRICAL    | Impedance                             | 75 $\Omega$ nominal                                                                                                                                                                                |
|               | Frequency Range                       | 0 to 3.0 GHz (some styles limited to 1.0GHz)                                                                                                                                                       |
|               | Working Voltage (dc or ac peak)       | At sea level, inner conductor to shell = 500 V                                                                                                                                                     |
|               | Proof Voltage (dc or ac peak)         | At sea level = 1500 V                                                                                                                                                                              |
|               | Insulation Resistance                 | 5 G $\Omega$ minimum                                                                                                                                                                               |
|               | Contact Resistance*                   | Center contact: 5.0m $\Omega$ maximum. Outer contact: 1.0m $\Omega$ maximum                                                                                                                        |
|               | Reflection Coefficient                | Refer to CECC122300                                                                                                                                                                                |
| MECHANICAL    | Current Rating                        | 1.5 A dc maximum                                                                                                                                                                                   |
|               | Engagement Forces                     | All snap-on, Screw-Lock & Posi-Lock styles except U Links = 60 N (13.5 lbs.) maximum<br>U Links (reduced force snap-on) = 40 N (9 lbs.) maximum                                                    |
|               | Separation Forces                     | All snap-on, Screw-Lock & Posi-Lock styles except U Links = 60 N (13.5 lbs.) max,<br>8 N (1.8 lbs.) min.<br>U Links (reduced force snap-on) = 40 N (9 lbs.) maximum, 20 N (4.5 lbs.) minimum       |
|               | Posi-Lock Latch withstand Pull        | 220 N (50 lbs.)                                                                                                                                                                                    |
|               | Contact and Insulator Retention       | 21 N (4.7 lbs.)                                                                                                                                                                                    |
|               | Materials                             | Body components: Copper or zinc alloy. Center contacts (male/female): Copper alloy.<br>Insulators: PTFE or thermoset plastic. Crimp ferrules: Annealed copper alloy                                |
|               | Finish/Plating                        | Center contacts: Gold. Outer contacts: Gold. Other metal parts: Nickel, tin or zinc                                                                                                                |
| ENVIRONMENTAL | Vibration Severity                    | (a) Frequency range: 10 Hz to 500 Hz. (b) Displacement**: 0,75 (.029). (c) Acceleration**:<br>98 m/s <sup>2</sup> (321 ft./s <sup>2</sup> ). (d) Duration: 6 hours. ** Cross over at approx. 60 Hz |
|               | Shock Severity                        | 490 m/s <sup>2</sup> for 11 ms                                                                                                                                                                     |
|               | Impact Severity (free specimens only) | 5 impacts at 1m                                                                                                                                                                                    |
|               | Climatic Catagory                     | 40/100/21                                                                                                                                                                                          |
| GENERAL       | Bump                                  | 4000 total at 390 m/s <sup>2</sup>                                                                                                                                                                 |
|               | Free Fall (U Link only)               | BS2011: Part 2.1 Ed. Procedure 2. Severity: 50 falls                                                                                                                                               |
|               | Connector Durability                  | 250 matings minimum                                                                                                                                                                                |
|               |                                       | *Except U Link connectors. See BS9210 F0022 for details.                                                                                                                                           |

### NOTES

<sup>1)</sup> Values in this specification are typical for this range. Specific connectors may vary.

<sup>2)</sup> Cannon 75 ohm coaxial connectors are designed to meet or exceed the requirements of BS9210F0022 where applicable. This specification may be superseded by CECC122 300 and the details listed above are subject to change without notice to comply with changes in these specifications.

### Mating Interfaces



Please note that the description of the 2 halves follow the UK telecom format. In other regions a plug may be called a jack, and a socket may be called a plug. Please take care when choosing your connectors.



Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

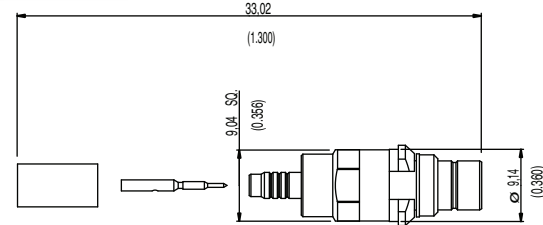
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## Type 43 (SMZ)

### DDF Crimp Plug

| Part Number     | Cable Type        | Industry Reference |
|-----------------|-------------------|--------------------|
| 051-127-9739A9A | BT2001            | P43/1GTIS          |
| 051-127-9749A9A | BT2002            | P43/2GTIS          |
| 051-127-9759A9A | BT2003            | P43/3GTIS          |
| 051-127-9769A9A | BT3002 / TZC75024 | P43/5GTIS          |
| 051-127-9479A9A | RA7000            | P43/7GTIS          |
| 051-127-9779A9A | RG179B/U          | P43/4GTIS          |

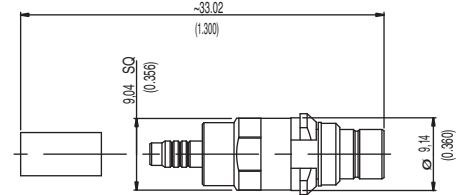
Assembly Instructions: BBAI 1265



### DDF QT Plug

| Part Number     | Cable Type                | Industry Reference |
|-----------------|---------------------------|--------------------|
| W51-127-9439A9A | BT2003                    | BT43/3GTIQT        |
| W51-127-9459A9A | BT3002 / TZC75024         | BT43/5GTIQT        |
| W51-127-9479A9A | RA7000                    |                    |
| W51-127-9059A9A | RA8000                    |                    |
| W51-127-9289A9A | NCX                       |                    |
| W51-127-9049A9A | 735A                      |                    |
| W51-127-9369A9A | ST212 / CT1320/735A (alt) |                    |
| W51-127-9789A9A | RG59B                     |                    |
| W51-127-9039A9A | 2.5C-2V                   |                    |
| W51-127-9119A9A | 0.25/1.3 (mini coax)      |                    |

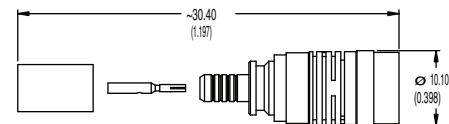
Assembly Instructions: BBAI 1238



### Posilock Straight Crimp Socket

| Part Number     | Cable Type        | Industry Reference |
|-----------------|-------------------|--------------------|
| 051-124-977991A | BT2002            | S43/2FS            |
| 051-124-978991A | BT2003            | S43/3FS            |
| 051-124-979991A | BT3002 / TZC75024 | S43/5FS            |
| 051-124-983991A | RG179B/U          | S43/4FS            |
| 051-124-950991A | 2.5C-2V           |                    |
| 051-124-943991A | ST212/CT1320/735A |                    |

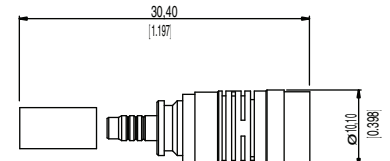
Assembly Instructions: BBAI 1265



### Posilock Straight QT Socket

| Part Number     | Cable Type                | Industry Reference |
|-----------------|---------------------------|--------------------|
| W51-124-953991A | BT2003                    | S43/3FQT           |
| W51-124-963991A | BT3002/TZC75024           | S43/5FQT           |
| W51-124-960991A | RA7000                    | S43/7FQT           |
| W51-124-947991A | RA8000                    | S43/8FQT           |
| W51-124-996991A | 735A                      |                    |
| W51-124-944991A | NCX                       |                    |
| W51-124-943991A | ST212 / CT1320/735A (alt) |                    |
| W51-124-966991A | RG59U                     |                    |
| W51-124-950991A | 2.5C-2V                   |                    |
| W51-124-999991A | 0.25/1.3 (mini coax)      |                    |

Assembly Instructions: BBAI 1238



Dimensions shown in mm (inch)

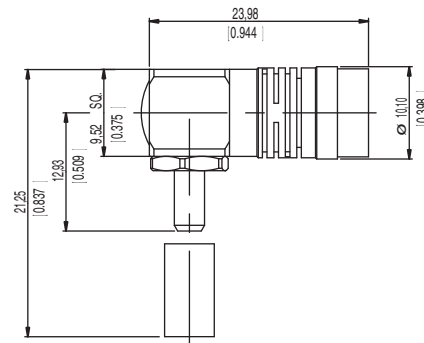
Specifications and dimensions subject to change

Contact Customer Service for other cable types



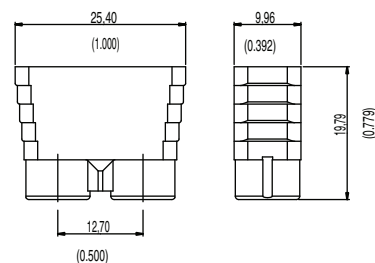
## Type 43 (SMZ)

| Part Number     | Cable Type      | Industry Reference |
|-----------------|-----------------|--------------------|
| 051-128-922991A | BT2002          | S43/2C             |
| 051-128-923991A | BT2003          | S43/3C             |
| 051-128-924991A | RG179B/U        | S43/4C             |
| 051-128-933991A | BT3002/TZC75024 | S43/5C             |
| 051-128-947991A | RA7000          | S43/7C             |
| 051-128-941991A | RG59U           |                    |
| 051-128-935991A | 735A            |                    |

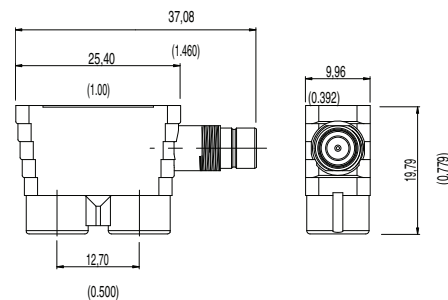


Contact Customer Service for other cable types

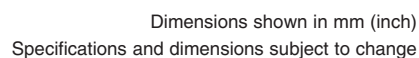
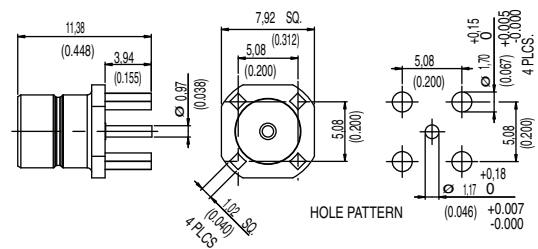
| Part Number     | Industry Reference              |
|-----------------|---------------------------------|
| 055-181-9079AZ0 | Link 13A (without monitor port) |



055-181-9119AZ0      Link 13B (with -30dB monitor port)



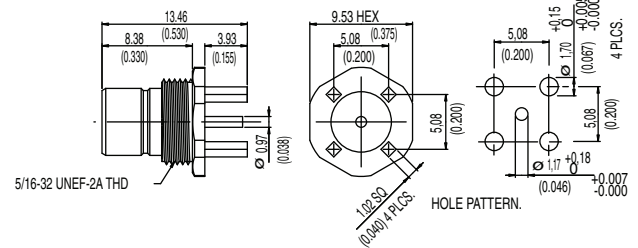
Part Number  
051-151-9019A9A



## Type 43 (SMZ)

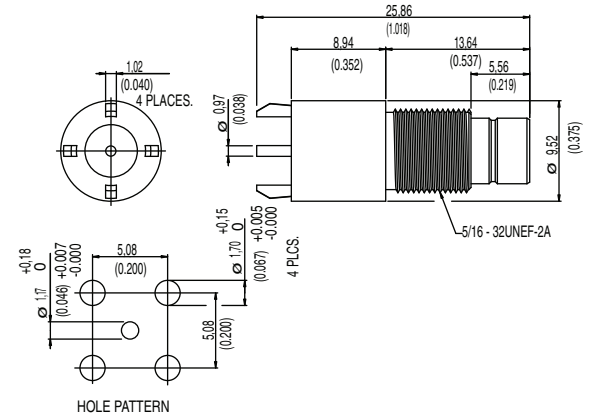
### Straight Screw-lock PCB Plug

Part Number  
051-151-9029A9A



### Straight Bulkhead PCB Plug

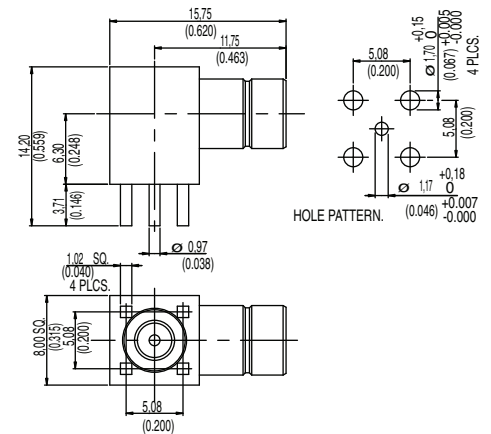
Part Number  
051-151-9079A9A



A0023384 Panel Mounting Hardware kit  
(Washer and Lock Nut)

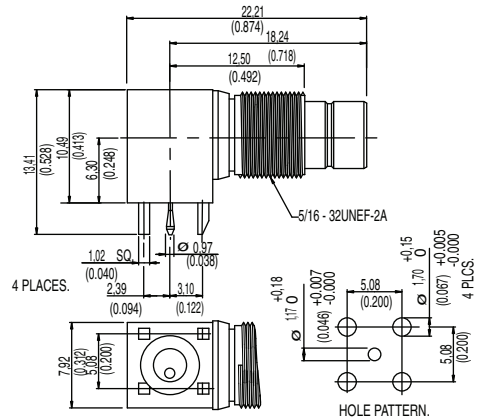
### Right Angle PCB Plug

Part Number  
051-153-9089A9A Plug 43/1E



### Right Angle Bulkhead PCB Plug with board retaining legs

Part Number  
051-153-9119EAA



B0023382 Panel Mounting Hardware Kit  
(Spacer, Washer, Lock Washer, Lock Nut)

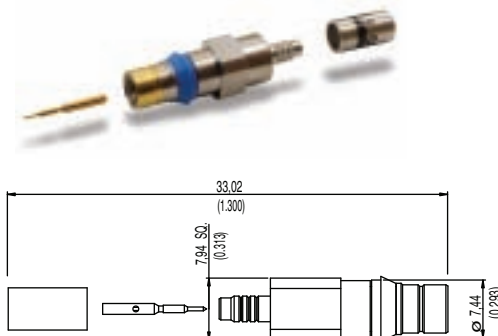
# Cannon 75 Ohm Connectors

## HDC 43 (SMZ)

### HDC43 DDF Crimp Plug

| Part Number     | Cable Type      | Industry Reference |
|-----------------|-----------------|--------------------|
| 051-127-9849A9A | BT2002          | HDC43/2GTIS        |
| 051-127-9859A9A | BT2003          | HDC43/3GTIS        |
| 051-127-9879A9A | RG179B/U        | HDC43/4GTIS        |
| 051-127-9869A9A | BT3002/TZC75024 | HDC43/5GTIS        |
| 051-127-9609A9A | RA7000          | HDC43/7GTIS        |

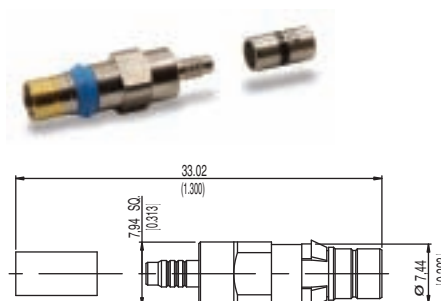
Assembly Instructions: BBAI 1265



### HDC43 DDF QT Plug

| Part Number     | Cable Type                | Industry Reference |
|-----------------|---------------------------|--------------------|
| W51-127-9929A9A | BT2003                    | HDC43/3GTIQT       |
| W51-127-9909A9A | BT3002 / TZC75024         | HDC43/5GTIQT       |
| W51-127-9609A9A | RA7000                    | HDC43/7GTIQT       |
| W51-127-9069A9A | RA8000                    | HDC43/8GTIQT       |
| W51-127-9019A9A | NCX                       |                    |
| W51-127-9029A9A | 735A                      |                    |
| W51-127-9379A9A | ST212 / CT1320/735A (alt) |                    |
| W51-127-9109A9A | 0.25/1.3 (mini coax)      |                    |

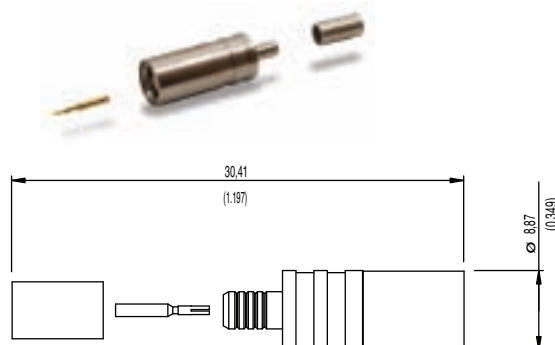
Assembly Instructions: BBAI 1238



### HDC Posilock Straight Crimp Socket

| Part Number     | Cable Type          | Industry Reference          |
|-----------------|---------------------|-----------------------------|
| 051-124-937991A | BT3002/TZC75024     | HDC43/5FS                   |
| 051-124-929991A | RA7000              | HDC43/7FS                   |
| 051-124-984991A | RG179B/U            | HDC43/4FS                   |
| 051-124-9489C9A | ST212 / CT1320/735A | nickel plated outer contact |
| 051-124-9849C9A | RG179B/U            | nickel plated outer contact |
| 051-124-9859C9A | RD179               | nickel plated outer contact |

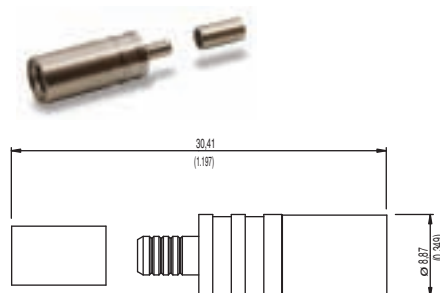
Assembly Instructions: BBAI 1265



### HDC Posilock Straight QT Socket

| Part Number     | Cable Type            | Industry Reference          |
|-----------------|-----------------------|-----------------------------|
| W51-124-937991A | BT3002/TZC75024       | HDC43/5FQT                  |
| W51-124-929991A | RA7000                | HDC43/7FQT                  |
| W51-124-9489C9A | ST212 / CT1320 / 735A | nickel plated outer contact |

Assembly Instructions: BBAI 1238



Contact Customer Service for other cable types



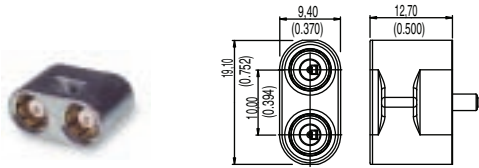
Dimensions shown in mm (inch)  
Specifications and dimensions subject to change

[www.ittcannon.com](http://www.ittcannon.com)

HDC 43 (SMZ)

HDC Coaxial U Links

| Part Number     | Industry Reference                  |
|-----------------|-------------------------------------|
| 055-181-9129AZ0 | HDC Link 10A (without monitor port) |



|                 |                                        |
|-----------------|----------------------------------------|
| 055-181-9139AZ0 | HDC Link 10B (with -30dB monitor port) |
|-----------------|----------------------------------------|

