

Subminiature coaxial connector is a connector that is manufactured by SMB type (sub miniation type B) as regulated by MIL-C-39012. It is a 50 Ω snap-on system easily connected and dismantled in limited spaces.

Series SMB-50 Ω

Microminiature Coaxial Connector

Technical Data

Material Data

Cable Connector

Special Cable Jacks

Receptacles with Solder End

PCB Connectors

Adaptor within-Series



Microminiature Coaxial Connector

● Description

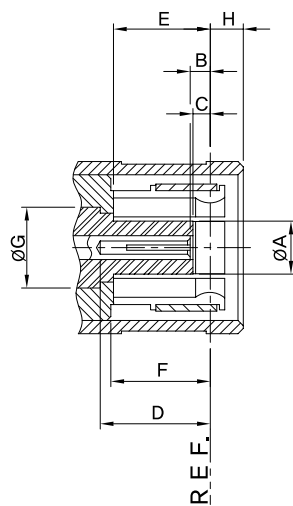
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● Contents

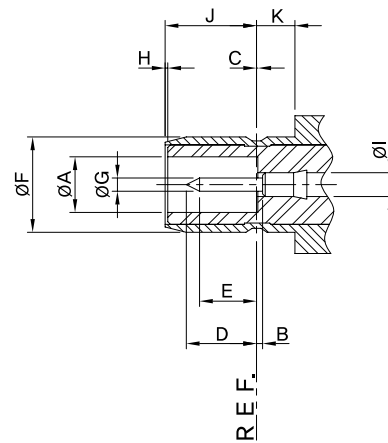
Microminiature Coaxial Connector	170
Technical Data	171
Material Data	171
Cable Connector	172
Special Cable Jacks	176
Receptacles with Solder End	177
PCB Connectors	178
Adaptor within-Series	179

● Interface Dimensions

Plug (Male)



Jack (Female)



● Interface Dimensions in mm/inch

	Plug (Male)		Jack (Female)	
	Min.	Max.	Min.	Max.
A	-	2.06/0.081	2.08/0.082	-
B	0.45/0.017	0.94/0.037	-	0.18/0.007
C	0.45/0.017	-	-	0.18/0.007
D	2.97/0.117	-	-	2.97/0.117
E	3.65/0.143	-	1.32/0.052	-
F	3.75/0.147	-	3.66/0.144	3.71/0.146
G	3.22/0.125	-	0.48/0.019	0.53/0.021
H	-	1.25/0.049	-	-
J	-	-	3.33/0.131	3.58/0.141
K	-	-	1.65/0.065	-

Technical Data

Requirement

● ELECTRICAL DATA

Impedance	50Ω
Frequency range	DC ~ 4GHz
RF leakage (measured at 1 GHz)	≥ 55 dB
Dielectric withstanding voltage (at sea level)	750 V rms, 50 Hz
Working voltage (at sea level)	≤ 250 V rms, 50 Hz
Insulation resistance	≥ 10 ⁴ MΩ
Contact resistance	
- Center contacts	≤ 5.0 mΩ
- Outer contacts	≤ 2.5 mΩ

Specification

● TEST REQUIREMENTS

● MECHANICAL DATA

Engagement force	8 N ~ 63 N / 1.8 lbs ~ 14.2 lbs
Disengagement force	8 N ~ 63 N / 1.8 lbs ~ 14.2 lbs
Contact captivation	≥ 18 N / 4.0 lbs
Durability (matings)	≥ 500

● TEST REQUIREMENTS

Material Data

Connector Part	Material		Plating
	Male	Female	
PIN	Brass	Beryllium-Copper	Gold or Nickel
INSULATOR	PTFE	PTFE	-
JACK	-	Brass	Gold
SPRING RING	Beryllium-Copper	-	Gold or Nickel
COUPLING	Brass	-	Gold or Nickel

Cable Connector

● Straight Cable Plugs(male)

For semi-rigid cables
Cable entry soldered
Center contact soldered

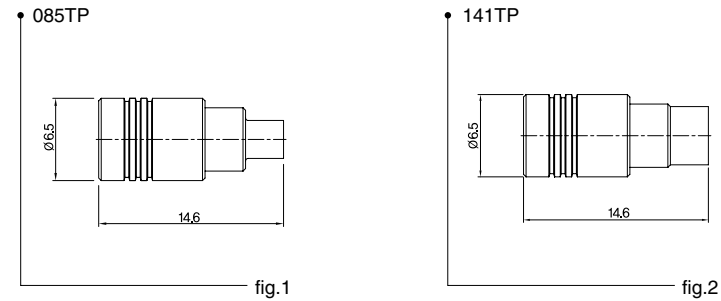


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Coupling Cap		
1	SMB50-PS-085	K315-092-000	CN2011S03-001-1/1	S03 085TP	Gold	Gold	Gold		
2	SMB50-PS-141	K315-093-000	CN2011S04-001-1/1	S04 141TP	Gold	Gold	Gold		

For flexible cables
Cable entry crimp
Center contact soldered

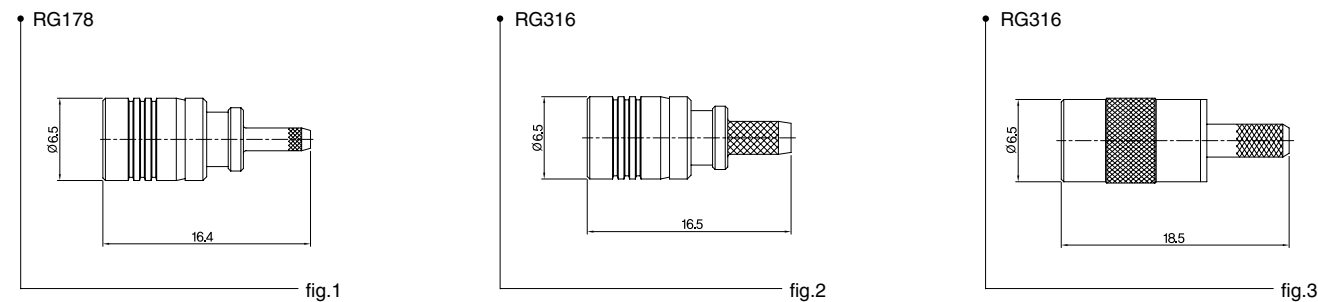


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Coupling Cap		
1	SMB50-PC-178	K315-087-001	CN2011X01-002-1/1	X01 RG178	Gold	Gold	Gold		
2	SMB50-PC-316	K315-082-000	CN2011X02-001-1/1	X02 RG316	Gold	Gold	Nickel		
3	SMB50-PC-316	K315-094-001	CN2011X02-003-1/1	X02 RG316	Gold	Gold	Nickel		

For flexible cable
Cable entry clamp
Center contact soldered

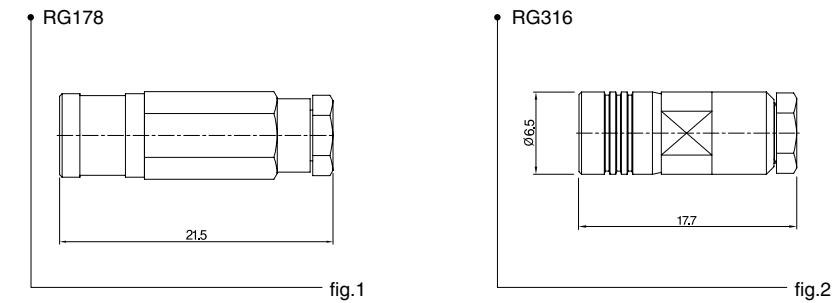


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Coupling		
1	SMB50-P3-178	K315-085-001	CN2011X01-001-1/1	X01 RG178	Gold	Gold	Gold		
2	SMB50-P3-316	K315-086-000	CN2011X02-002-1/1	X02 RG316	Gold	Gold	Gold		

● Right Angle Cable Plugs(male)

For semi-rigid & flexible cable
Cable entry soldered
Center contact soldered

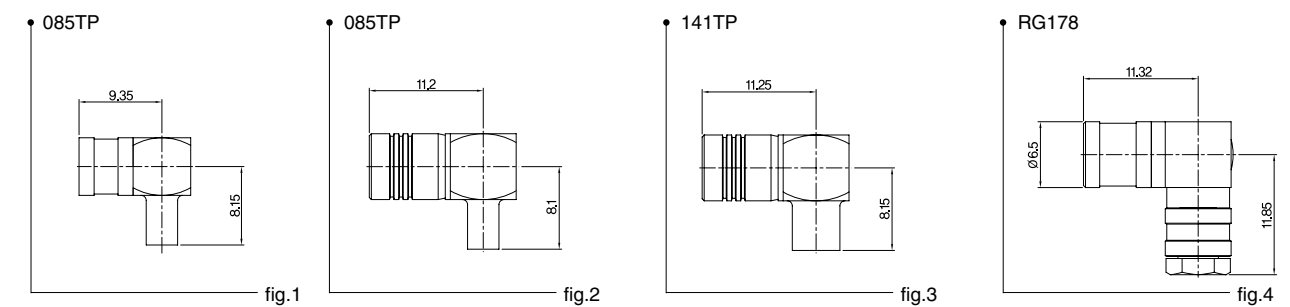


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Coupling		
1	SMB50-LPS-085	K315-143-000	CN2031S03-001-1/1	S03 085TP	Gold	Gold	Gold		
2	SMB50-LPS-085	K315-169-000	CN2031S03-002-1/1	S03 085TP	Gold	Gold	Gold		
3	SMB50-LPS-141	K315-168-000	CN2031S04-001-1/1	S04 141TP	Gold	Gold	Gold		
4	SMB50-LP3-178	K315-145-000	CN2031X01-002-1/1	X01 RG178	Gold	Gold	Gold		



For flexible cable
Cable entry crimp
Center contact soldered

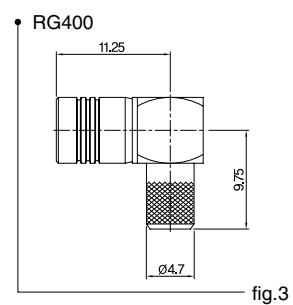
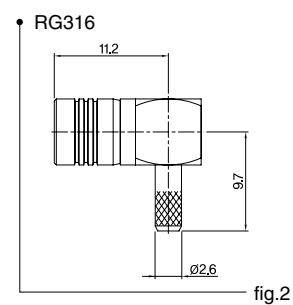
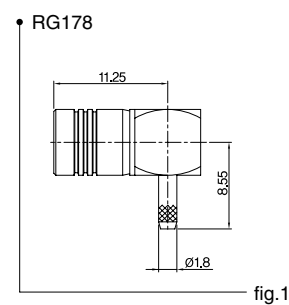


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Coupling		
1	SMB50-LPC-178	K315-142-000	CN2031X01-001-1/1	X01 RG178	Gold	Gold	Gold		
2	SMB50-LPC-316	K315-141-000	CN2031X02-001-1/1	X02 RG316	Gold	Gold	Gold		
3	SMB50-LPC-400	K315-151-000	CN2031X08-001-1/1	X08 RG400	Gold	Gold	Gold		

● Straight Cable Jacks (female)

For semi-rigid cable
Cable entry soldered
Center contact soldered

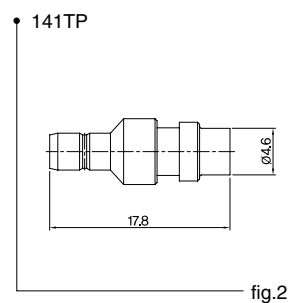
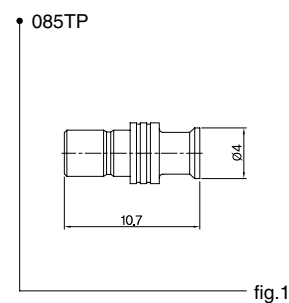


Fig	Type	Code		Cable Goup (example)	Plating		AS-In	Note
		Old Code	New Code		Pin	Body		
1	SMB50-JS-085	K315-092-002	CN2012S03-002-1/1	S03 085TP	Gold	Gold		
2	SMB50-JS-141	K315-089-000	CN2012S03-001-1/1	S04 141TP	Gold	Gold		

For flexible cable
Cable entry crimp
Center contact soldered

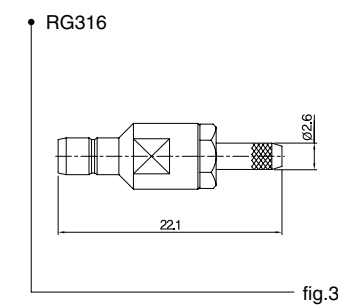
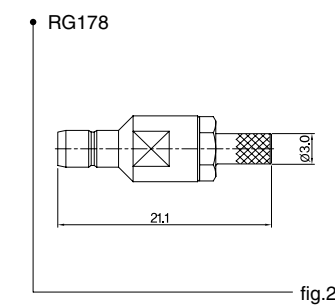
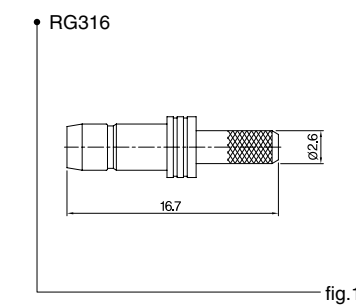


Fig	Type	Code		Cable Goup (example)	Plating		AS-In	Note
		Old Code	New Code		Pin	Body		
1	SMB50-JC-316	K315-255-002	CN2012X02-003-1/1	X02 RG316	Gold	Nickel		
2	SMB50-J3C-178	K315-251-000	CN2012X01-001-1/1	X01 RG178	Gold	Gold		
3	SMB50-J3C-316	K315-252-000	CN2012X02-001-1/1	X02 RG316	Gold	Gold		

For flexible cable
Cable entry clamp
Center contact soldered

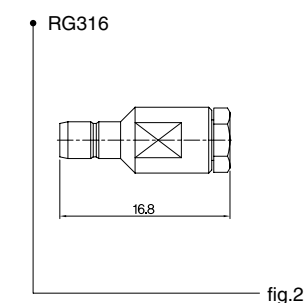
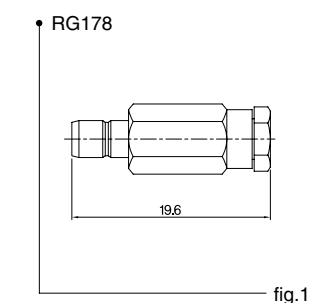


Fig	Type	Code		Cable Goup (example)	Plating		AS-In	Note
		Old Code	New Code		Pin	Body		
1	SMB50-J3-178	K315-253-000	CN2012X01-002-1/1	X01 RG178	Gold	Gold		
2	SMB50-J3-316	K315-254-000	CN2012X02-002-1/1	X02 RG316	Gold	Gold		

● Straight Bulkhead Cable Jacks (female)

For semi-rigid cable
Cable entry soldered
Center contact soldered

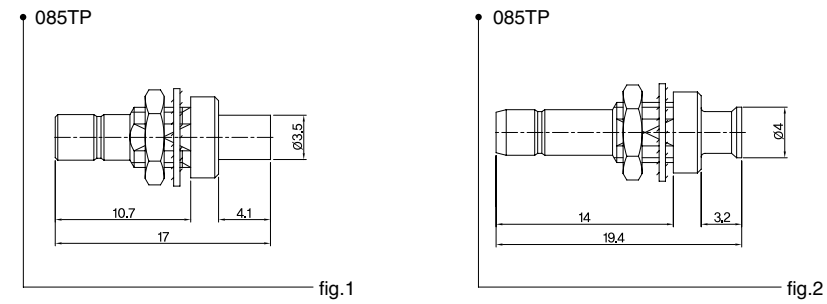


Fig	Type	Code		Cable Goup (example)	Plating		AS-In	Note
		Old Code	New Code		Pin	Body		
1	SMB50-BJ-S-085	K315-314-000	CN2022S03-002-1/1	S03 085TP	Gold	Gold		
2	SMB50-BJ-S-085	K315-313-004	CN2022S03-001-1/1	S03 085TP	Gold	Gold		

Special Cable Jacks

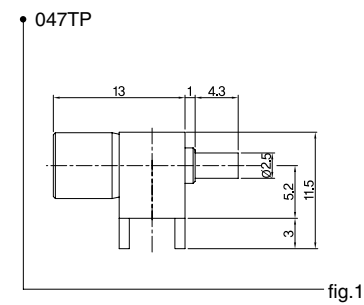


Fig	Type	Code		Cable Goup (example)	Plating			AS-In	Note
		Old Code	New Code		Pin	Body	Coupling		
1	SMB50-LP-4R-S-047	K315-672-000	CN2055S02-001-1/1	S02 047TP	Gold	Nickel	Nickel		

Receptacles with Solder End

● Receptacle Jack (female) & Plugs (male)

Panel mounted & Bulhead mounted

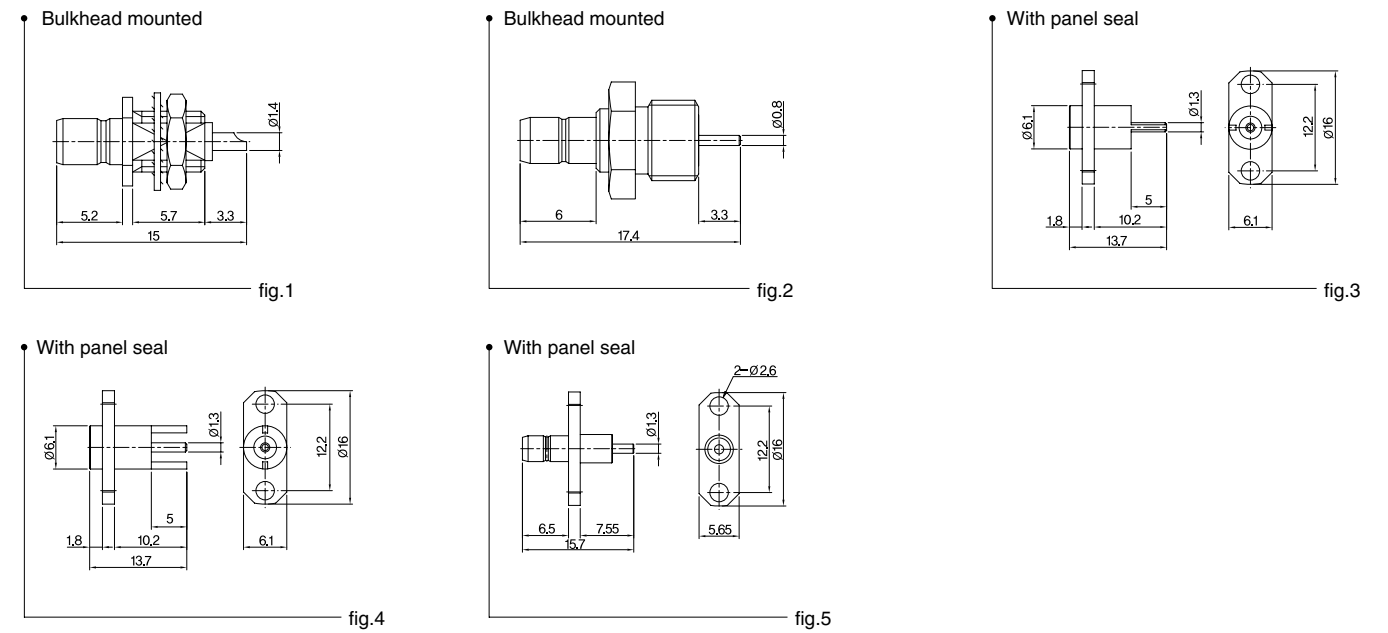


Fig	Type	Code		Plating		Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body			
1	SMB50-J-BR	K315-533-001	CN2026000-002-1/1	Gold	Gold	ML16		
2	SMB50-J-BR	K315-512-000	CN2026000-001-1/1	Gold	Gold	ML14		
3	SMB50-P-H2-2R-R 90°	K315-430-000	CN2046000-001-1/1	Gold	Gold	ML18		
4	SMB50-P-H2-2R-R	K315-430-001	CN2046000-002-1/1	Gold	Gold			
5	SMB50-J-H2-R	K315-536-000	CN2042000-001-1/1	Gold	Gold	ML20		

PCB Connectors

● Straight PCB Jacks (female)

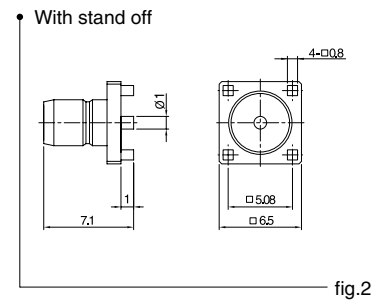
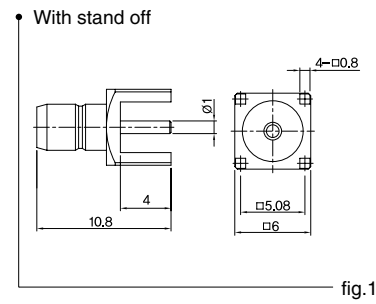


Fig	Type	Code		Plating		Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body			
1	SMB50-J-4R-R	K315-422-001	CN2051000-001-1/1	Gold	Gold	ML8		
2	SMB50-J-4R-R	K315-429-001	CN2051000-002-1/1	Gold	Gold			

● Right Angle PCB Plugs (male) & Jack (female)

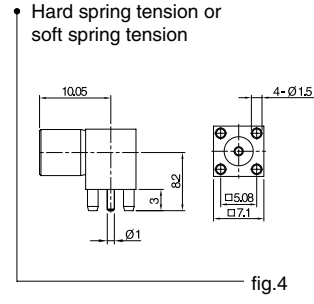
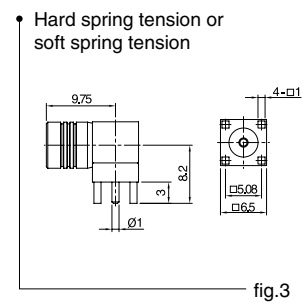
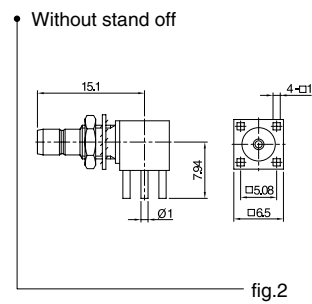
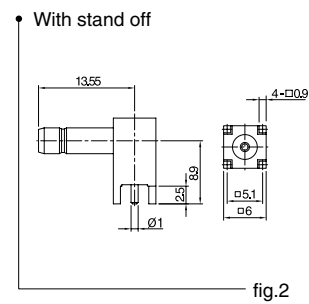
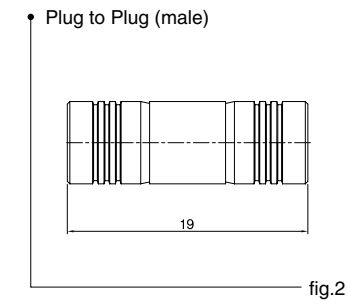
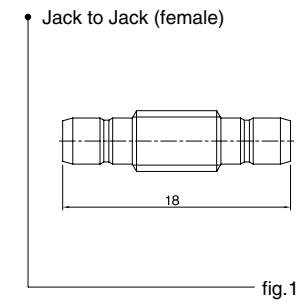


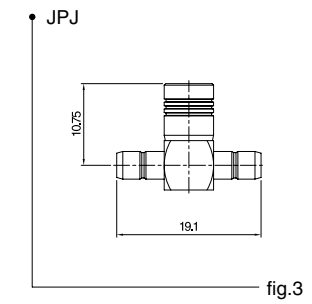
Fig	Type	Code		Plating			Mounting Hole	AS-In	Note
		Old Code	New Code	Pin	Body	Coupling			
1	SMB50-LJ-4R-R	K315-670-002	CN2053000-001-1/1	Gold	Gold	-	ML27		8.7-5.5-1.2-1.9
2	SMB50-LPJ-4R-R	K315-669-001	CN2054000-001-1/1	Gold	Nickel	-	ML9		
3	SMB50-LP-4R-R	K315-666-002	CN2055000-001-1/1	Gold	Gold	Gold			Hard spring tension or soft spring tension
4	SMB50-LP-4R-R	K315-666-003	CN2055000-002-1/1	Gold	Nickel	Nickel	ML28		Hard spring tension or soft spring tension

Adaptor within-Series

● Straight Adaptors



● T-Adaptors



● Termination

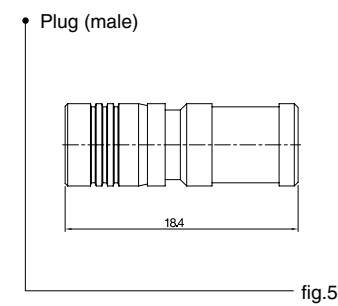
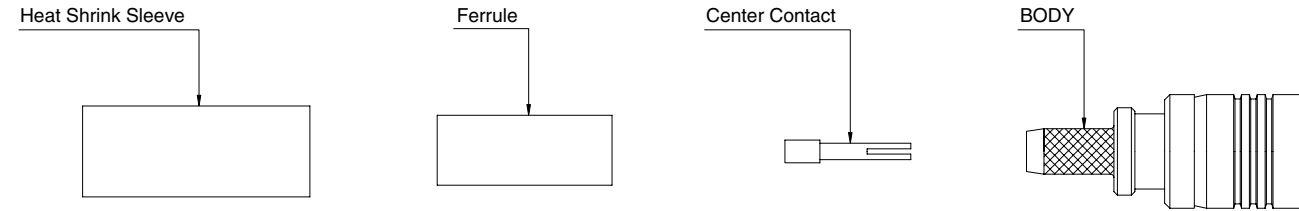


Fig	Type	Code		V.S.W.R		Plating		Note
		Old Code	New Code			Pin	Body	
1	SMB50-BA-JJ	K315-721-000	AD2022-001-1/1	DC ~ 4GHz ≤ 1.2		Gold	Gold	
2	SMB50-A-PP	K315-704-000	AD2011-001-1/1	DC ~ 1.5GHz ≤ 1.2	1.5 ~ 4GHz ≤ 1.3	Gold	Gold	
3	SMB50-TA-JPJ	K315-780-000	AD2052-001-1/1			Gold	Gold	
4	SMB50-P-TERM	K315-950-001	CN2091-001-1/1	DC ~ 2GHz ≤ 1.2	2 ~ 4GHz ≤ 1.4	Gold	Gold	POWER ~ WATT

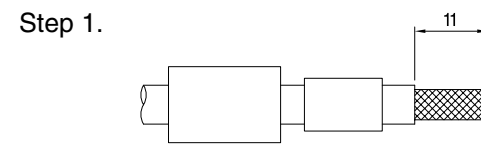
● STANDARD CRIMP



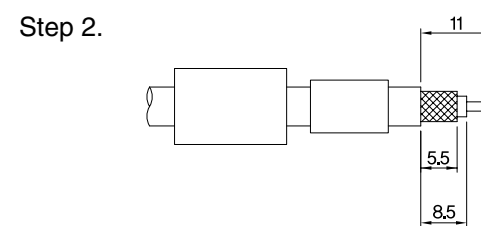
● CONNECTORS

- K315-082
- K315-087

1. Insert the ferrule and the shrink sleeve and strip off the outer seath.



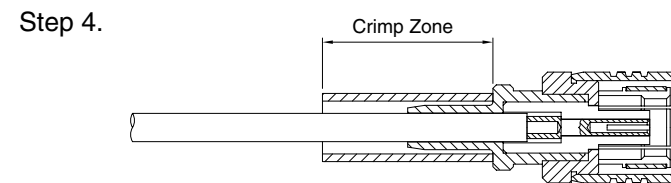
2. After stripping off the out conductor and the inner conductor as shown in the diagram, prepare the Inner conductor to solder.



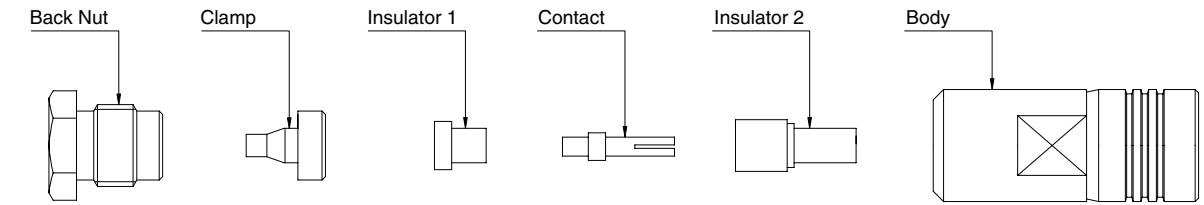
3. Solder the center contact.



4. After inserting the ferrule, crimp it with the crimp tool and contract the shrink sleeve.



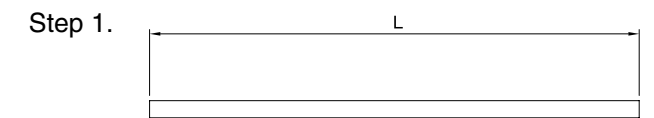
● STANDARD CLAMP



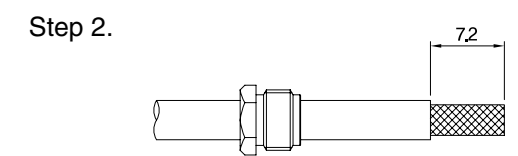
● CONNECTORS

- K315-085
- K315-086

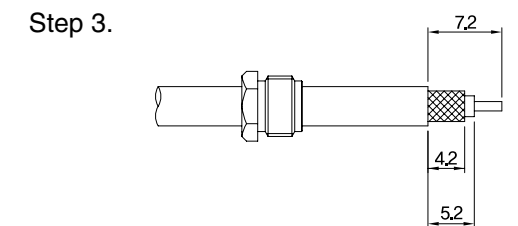
1. Cut the cable as much as required.



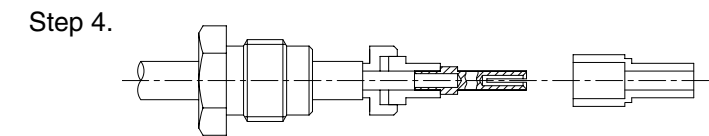
2. Insert the back nut into the cable and take off the outer seath.



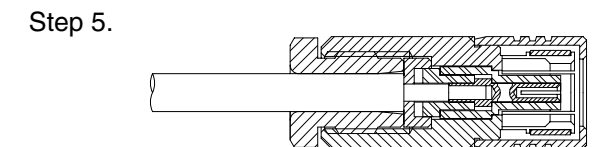
3. Strip off the out conductor and center conductor as shown in the diagram.



4. Solder the center conductor and insert the clamp, Insulator 1, center contact, Insulator 2 in the order named.

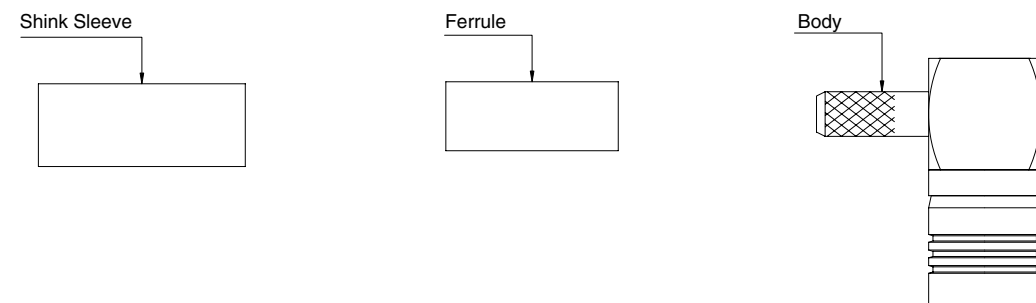


5. After inserting the back nut into the body, put the coupling torque in the groove of the body and screw the body.





● STANDARD CRIMP



● CONNECTORS

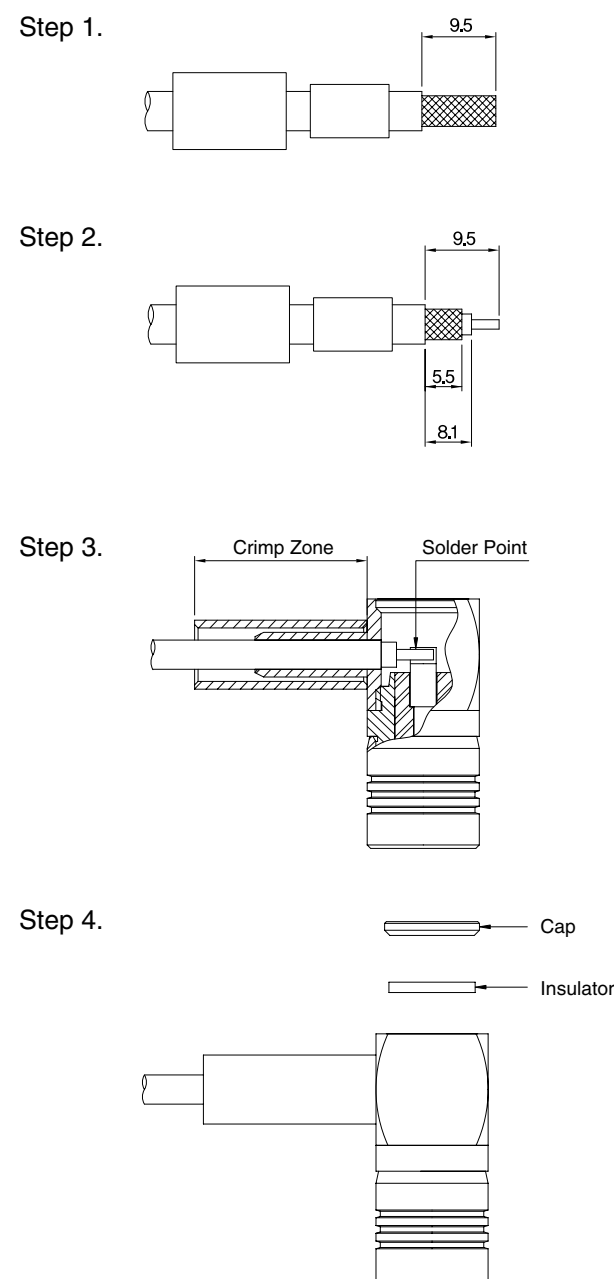
- K315-141
- K315-142

1. Insert the ferrule and shink sleeve and strip off the outer seath.

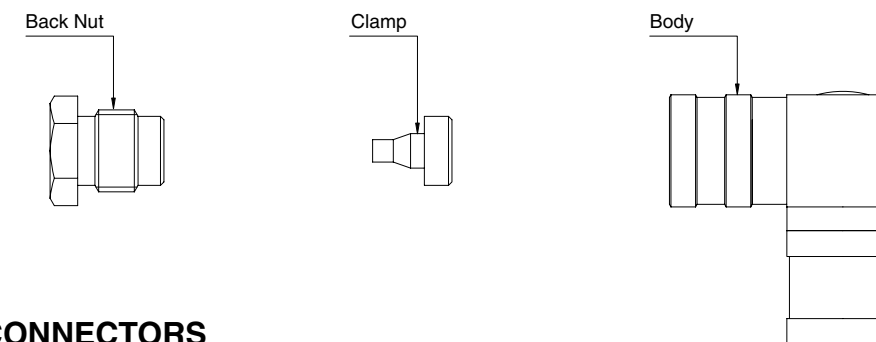
2. Strip off the out conductor and the Inner conductor as shown in the diafram and prepare the Inner conductor the solder.

3. After inserting the ferrule and crimp in it with the crimp tool, solder the solder point.

4. Contract the shrink sleeve and seal up the Insulator, cap in the order named.



● STANDARD CLAMP



● CONNECTORS

- K315-145
- K315-146

1. Cut the cable as much as required.

2. Insert the back nut into the cable and strip off the centet conductor as shown in the diagram.

3. Insert the clamp into the outer conductor.

4. After soldering the center conductor push the cable into the body and tighten the back nut.

5. After inserting the body into the back nut, put it in the groove of the body with coupling torque and screw the body.

