

## ► DESCRIPTIONS

The miniature high frequency connector Series SMA with 50 ohm impedance can be used up to a frequency range over 18 GHz.

The designed for high mechanical robustness and quality.

The following types may be used up to a frequency range of 3 GHz.

In the frequency range up to 18 GHz the outer conductor material is made out of stainless steel.

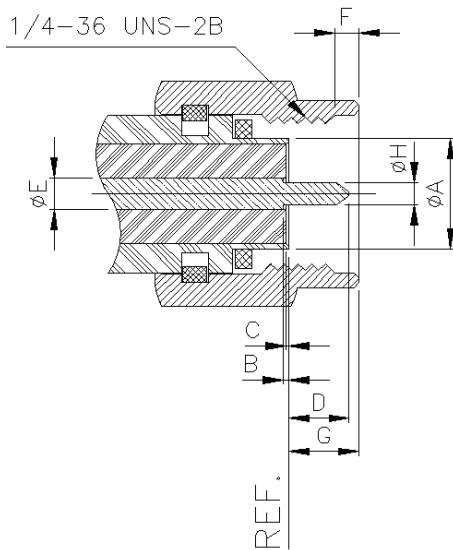
## ► APPLICABLE STANDARDS

- SMA SERIES MIL-C-39012

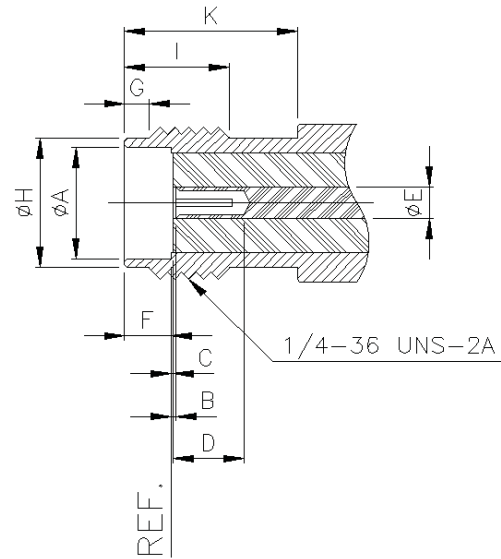


## ▶ INTERFACE DIMENSIONS

### PLUG



### JACK

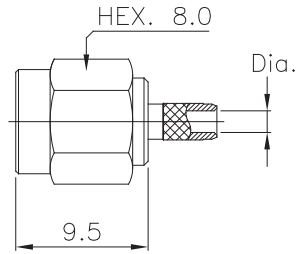


Rep.	PLUG				JACK			
	mm		inch		mm		inch	
	min.	max.	min.	max.	min.	max.	min.	max.
A		4.59		0.181	4.59		0.181	0.000
B		0.25		0.010		0.25		0.010
C		0.25		0.010		0.25		0.010
D		2.54		0.100	2.67		0.105	
E	1.24	1.29	0.049	0.051	1.24	1.29	0.049	0.051
F	0.38	1.14	0.015	0.045	1.88	1.98	0.074	0.078
G		3.43		0.135	0.38	1.14	0.015	0.045
H	0.90	0.94	0.035	0.037	5.28	5.49	0.208	0.216
I					4.32		0.170	
K					5.54		0.2181	
J					6.54		0.2575	

## ► TECHNICAL DATA

REQUIREMENT	MIL-C-39012	SPECIFICATIONS		
<b>ELECTRICAL CHARACTERISTICS</b>				
Impedance	50 ohm			
Frequency range	Straight Type	18 GHz		
	Right Angle Type	12.4 GHz		
V.S.W.R	3-14	1.5 mm	3.0 mm	
	Straight connector semi-rigid	1.07+0.008f	1.05+0.005f (DC-18 GHz)	
Working voltage	Straight connector flexible	1.10+0.02f	1.10+0.02f (DC 12.4 GHz)	
	Semi-rigid cable RG-405/U, RG-402/U	335V/50Hz	500V/50Hz	
	Flexible cable	250V/50Hz	335V/50Hz	
Dielectric withstanding voltage	3-17			
	Semi-rigid cable RG-405/U, RG-402/U	1000V/50Hz	1500V/50Hz	
	Flexible cable	750V/50Hz	1000V/50Hz	
Insertion Loss	3-27	Straight	:0.03 $\sqrt{f}$ (GHz)	
		Right angle	:0.05 $\sqrt{f}$ (GHz)	
RF leakage	3-26	-60 dBm min. between 2 and 3GHz		
Insulation resistance	3-11	5,000 Mohm min.		
Contact resistance	3-16	Initial	After	
		Center contact	3.0 mohm	4.0 mohm
		Outer contact	2.5 mohm	3.0 mohm
Max. Contact current (DC)		2A		
<b>Mechanical and Environmental Characteristics</b>				
Coupling Torque		max.	170 Ncm	
		min.	12 Ncm	
		recommended	80-120 Ncm	
Coupling Nut Retention Force	3-25		≥200N	
Life time	3-15	min.	500 matings	
Shock	3-19	MIL-STD-202(213)	100g, 6ms	
Vibration	3-18	MIL-STD-202(204)	20g, 10-2000Hz	
Moisture	3-21	MIL-STD-202(106)	10 cycles	
Corrosion (salt spray)	3-13	MIL-STD-202(101)	48 Hrs	
Thermal shock	3-20	MIL-STD-202(107)		
Temperature cycling		MIL-STD-202(102)		
High temperature test		MIL-STD-202(108)		
Operating temperature range		Standard	-65°C+165°C	
		hermetic	-65°C+165°C	
<b>Materials</b>				
Bodies	Brass or Stainless steel			
Contacts(Female)	Beryllium copper			
Contacts(Male)	Brass			
Insulators	PTFE (Teflon)			
Gasket	Silicone rubber			
<b>Plating</b>				
Bodies	Gold Plated or passivated			
Center contacts	Gold Plated			

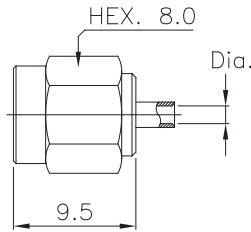
# SMA



## Straight Plugs

### ■ Crimp Type

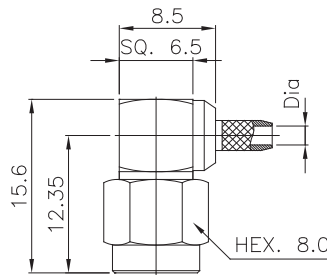
PART NO.	Dia.	CABLE
S510-001	Ø1.0	RG 178
S510-002	Ø1.55(Ø1.7)	RG 188, 316
S510-003	Ø3.1	RG 400, 58



## Straight Plugs

### ■ Direct solder type

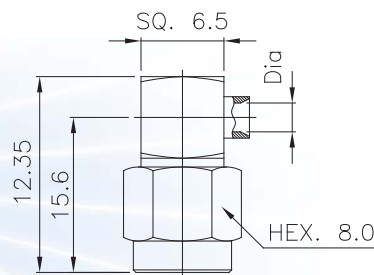
PART NO.	Dia.	CABLE
S510-001-A	Ø1.4	RG 178, 047
S510-005	Ø2.3	UT-085
S510-006	Ø3.7	UT-141
S510-351	Ø6.5	UT-250



## Right Angle Plugs

### ■ Crimp Type

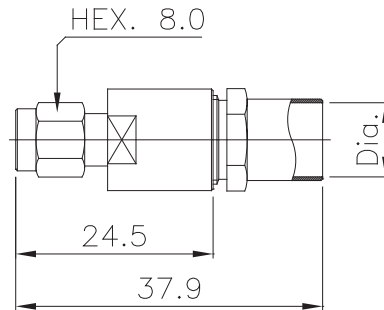
PART NO.	Dia.	CABLE
S510-652	Ø1.7	RG-174
S510-652-A	Ø1.55	RG-316
S510-652-B	Ø3.1	RG 400, 58



## Right Angle Plugs

### ■ Direct Solder type

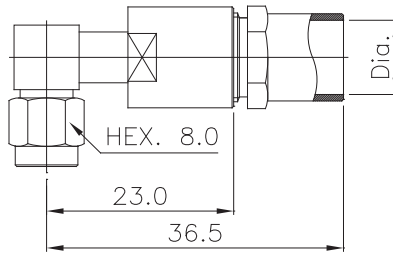
PART NO.	Dia.	CABLE
S510-2083	Ø1.4	UT-047
S510-619	Ø2.3	UT-085
S510-621	Ø3.7	UT-141



## Straight Plugs

- Clamp Type

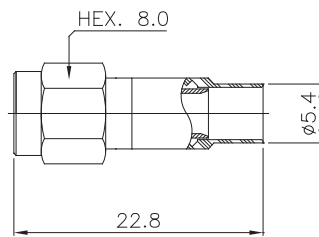
PART NO.	Dia.	CABLE
S510-014	Ø9.2	FSJ1RN-50B FSJ1-50A ETS1-50T 1/4"SF



## Right Angle Plugs

- Clamp Type

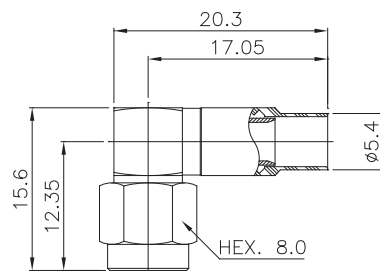
PART NO.	Dia.	CABLE
S510-015	Ø9.2	FSJ1RN-50B FSJ1-50A ETS1-50T 1/4"SF



## Straight Plug

- Direct Solder type
- Reinforce type

PART NO.	IMPED	CABLE
S510-521-A	50 Ω	RG-402

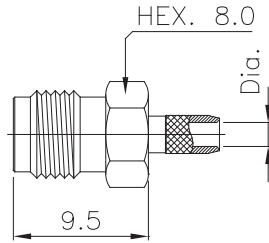


## Right Angle Plug

- Direct Solder type
- Reinforce type

PART NO.	CABLE
S510-520-A	50 Ω

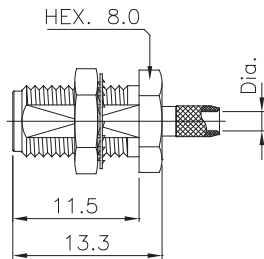
# SMA



## Straight Jacks

### ■ Crimp Type

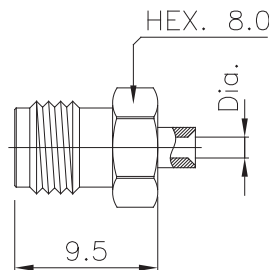
PART NO.	Dia.	CABLE
S510-151	Ø1.0	RG-178
S510-250	Ø1.55	RG-316
S510-023	Ø3.1	RG 400, 58



## Straight Bulkhead Jacks

### ■ Crimp Type

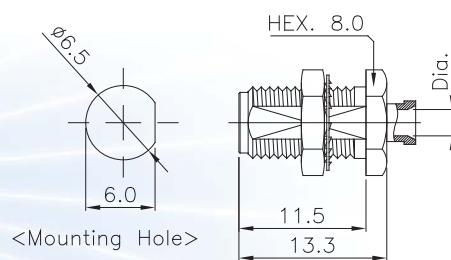
PART NO.	Dia.	CABLE
S510-025	Ø1.55	RG-316
S510-025-A	Ø1.91	SS405
S510-026	Ø3.1	RG-400, 58



## Straight Jacks

### ■ Direct Solder Type

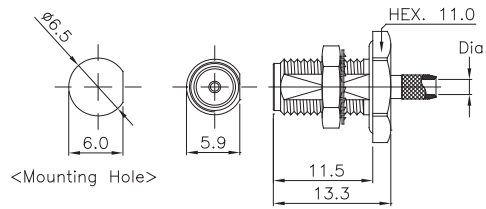
PART NO.	Dia.	CABLE
S510-235	Ø1.4	UT-047
S510-251	Ø2.3	UT-085
S510-252	Ø3.7	UT-141



## Straight Bulkhead Jacks

### ■ Direct Solder Type

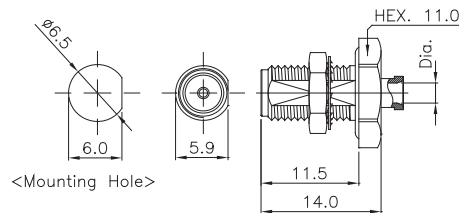
PART NO.	Dia.	CABLE
S510-2082	Ø1.4	UT-047
S510-019	Ø2.3	UT-085
S510-020	Ø3.7	UT-141



## Straight Bulkhead Jacks (Seal)

### ■ Crimp Type

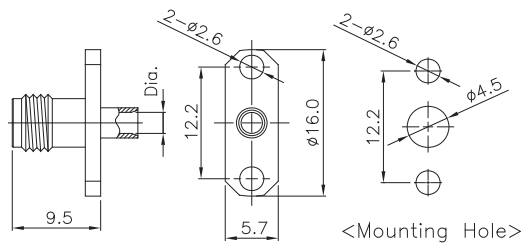
PART NO.	Dia.	CABLE
S510-437	Ø1.55	RG-316
S510-437-A	Ø1.91	SS405
S510-437-B	Ø3.1	RG-400, 58



## Straight Bulkhead Jacks (Seal)

### ■ Direct Solder type

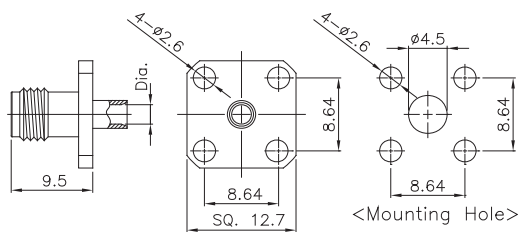
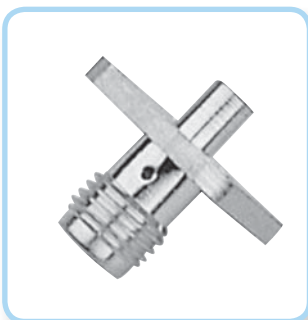
PART NO.	Dia.	CABLE
S510-630	Ø2.3	UT-085
S510-631-A	Ø3.7	UT-141



## Straight 2 Hole Flange Jack

### ■ Direct Solder Type

PART NO.	Dia.	CABLE
S510-340	Ø1.4	UT-047
S510-770-C	Ø2.3	UT-085
S510-032	Ø3.7	UT-141

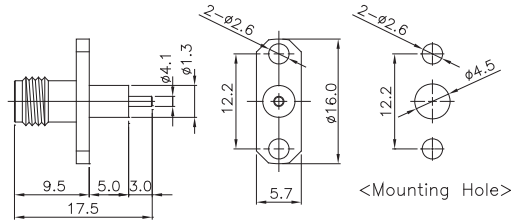


## Straight 4 Hole Flange Jack

### ■ Direct Solder Type

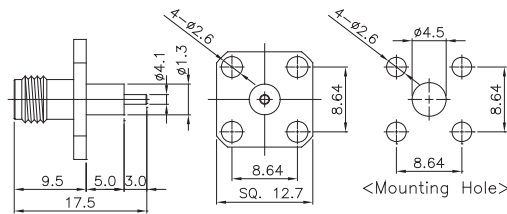
PART NO.	Dia.	CABLE
S510-752	Ø1.4	UT-047
S510-354	Ø2.3	UT-085
S510-607	Ø3.7	UT-141

# SMA



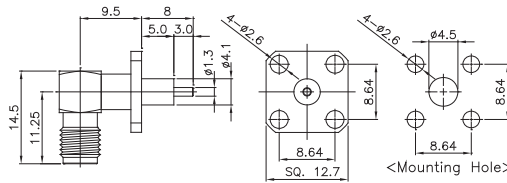
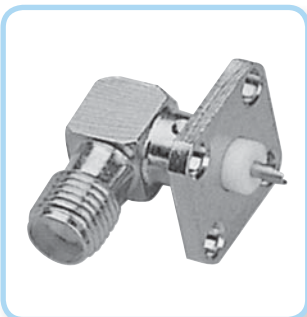
## Straight 2 Hole Flange Jack

PART NO.	IMPED
S510-103	50 $\Omega$



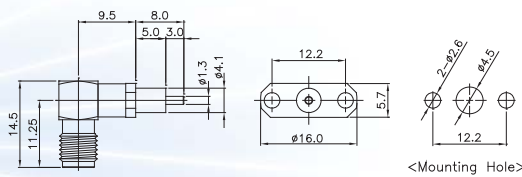
## Straight 4 Hole Flange Jack

PART NO.	IMPED
S510-107	50 $\Omega$



## Right Angle 4 Hole Flange Jack

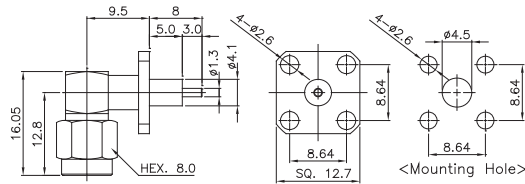
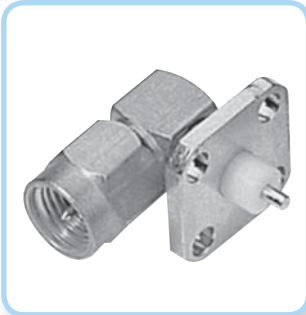
PART NO.	IMPED
S510-109	50 $\Omega$



## Right Angle 2 Hole Flange Jack

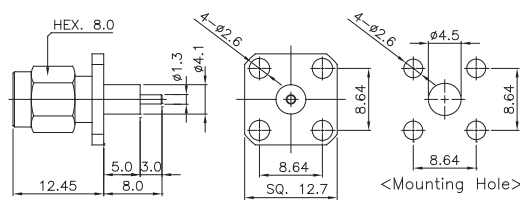
PART NO.	IMPED
S510-110	50 $\Omega$





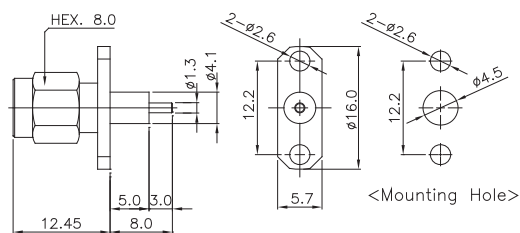
## Right Angle 4 Hole Flange Plug

PART NO.	IMPED
S510-112	50 Ω



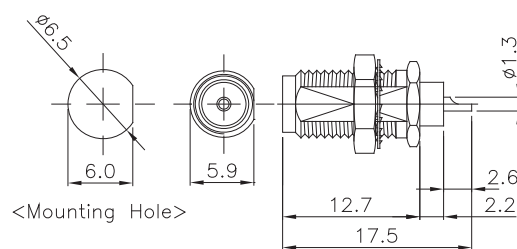
## Straight 4 Hole Flange Plug

PART NO.	IMPED
S510-113-A	50 Ω



## Straight 2 Hole Flange Plug

PART NO.	IMPED
S510-115-A	50 Ω

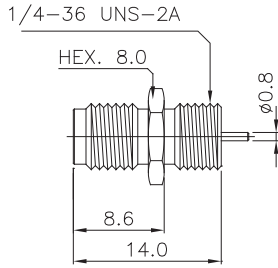
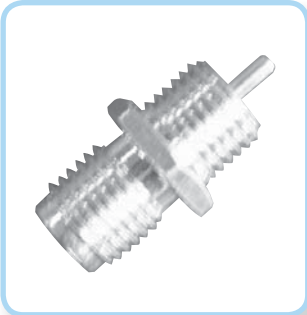


## Straight Bulkhead Jack Receptacle

- Solder Cup Terminal

PART NO.	IMPED
S510-117	50 Ω

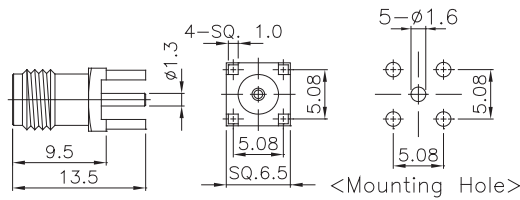
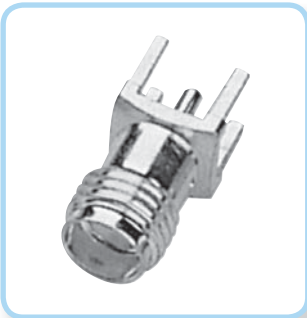
# SMA



## Straight Bulkhead Jack Receptacle

- Front mount type

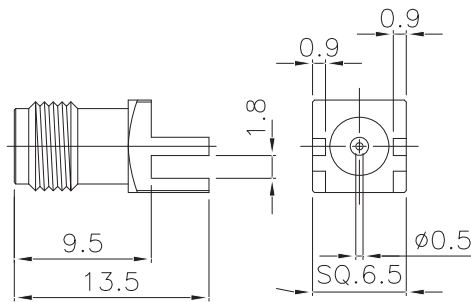
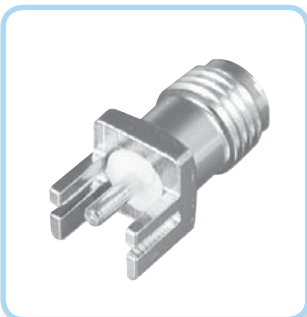
PART NO.	IMPED
S510-118	50 Ω



## Straight Jack for PCB

- P.C.B mount

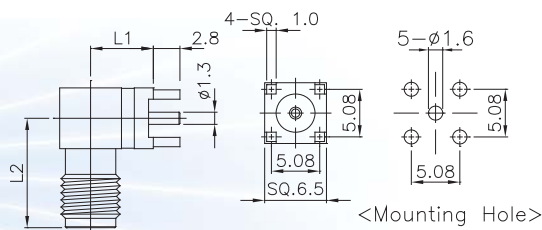
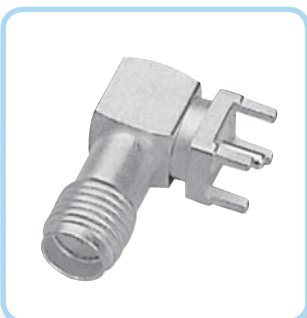
PART NO.	IMPED
S510-119	50 Ω



## Straight Jack for PCB

- P.C.B End Lunch Type

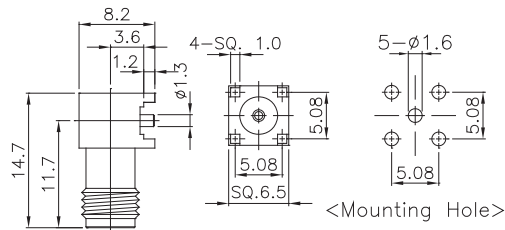
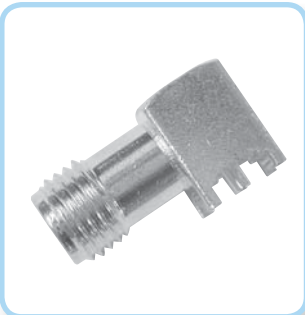
PART NO.	IMPED
S510-450	50 Ω



## Right Angle Jack for PCB

- P.C.B mount

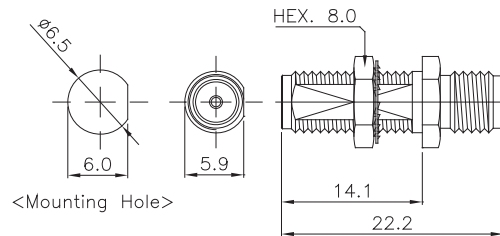
PART NO.	L1	L2	IMPED
S510-121	6.6	11.7	50 Ω
S510-122	6.6	14.2	



## Right Angle Jack for PCB

- P.C.B mount

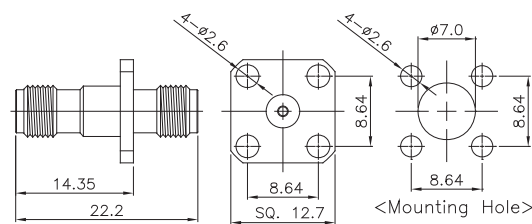
PART NO.	IMPED
S510-582-B	50 Ω



## Blukhead Jack To Jack Adaptor

- Panel mount

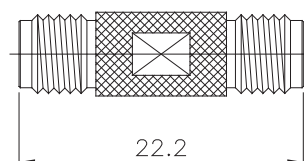
PART NO.	IMPED
S510-216	50 Ω



## Jack To Jack 4 Hole Flange Adaptor

- Panel mount

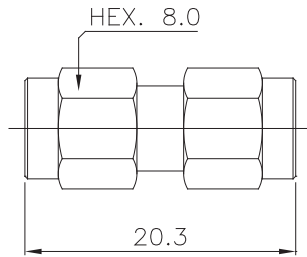
PART NO.	IMPED
S314-703	50 Ω



## Straight Jack To Jack Adaptor

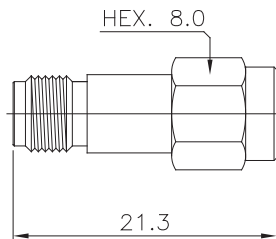
PART NO.	IMPED
S510-203	50 Ω

# SMA



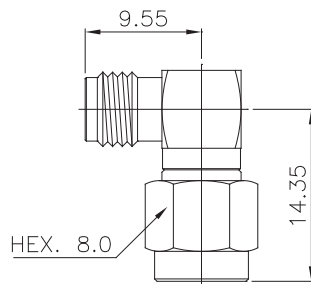
## Straight Plug To Plug Adaptor

PART NO.	IMPED
S510-204	50 Ω



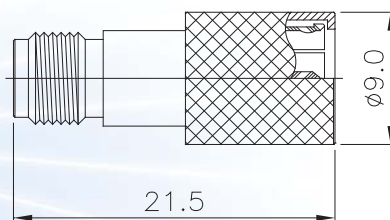
## Straight Plug To Jack Adaptor

PART NO.	IMPED
S510-205	50 Ω



## Right Angle Plug To Jack Adaptor

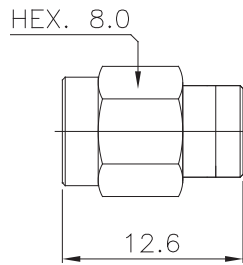
PART NO.	IMPED
S510-207	50 Ω



## Plug To Jack Push-on Adaptor

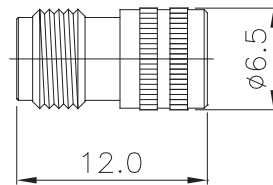
- Quick Connect type

PART NO.	IMPED
S510-216	50 Ω



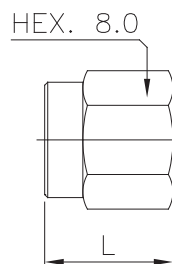
### Plug Termination

PART NO.	IMPED
S510-464-A	50 Ω



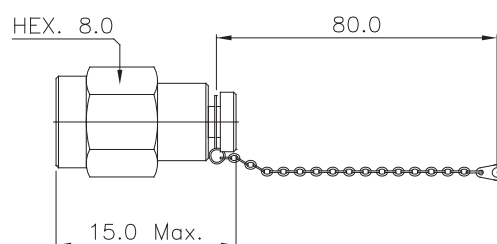
### Jack Termination

PART NO.	IMPED
S510-464-D	50 Ω



### Male Short / Male Dust Cap

PART NO.	L	REMARK
S510-2157	8.4	SHORT
S510-729		DUST CAP



### Plug Termination (Chain)

PART NO.	IMPED
S510-464-B	50 Ω