

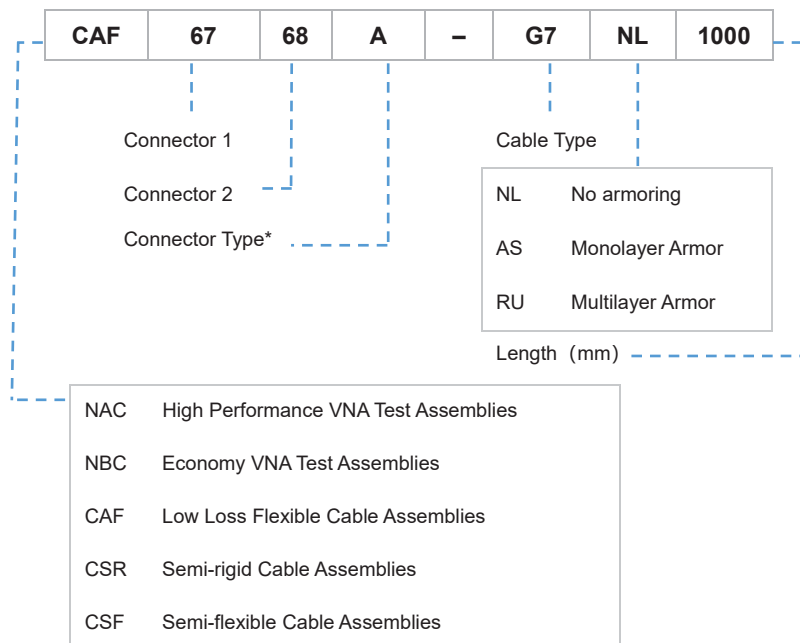
Cable Assemblies

Arance positions in high application field of microwave and millimeter wave testing. We design and manufacture broadband, low loss and high stability cable assemblies which has reached international advance level.

Our cable assemblies are classified into the following categories.

- High Performance VNA Test Assemblies
- Low Loss Flexible Cable Assemblies
- Semi-rigid & Semi-flexible Cable Assemblies

Part Numbering



*Connector Type

Code	Connector Type
A	Male to Male
B	Female to Female
C	Male to Female
D	Female to Male
M	Male
F	Female

High Performance VNA Test Assemblies

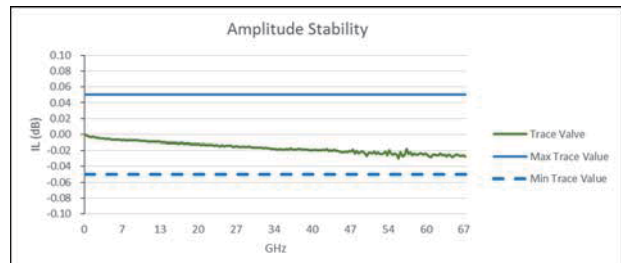
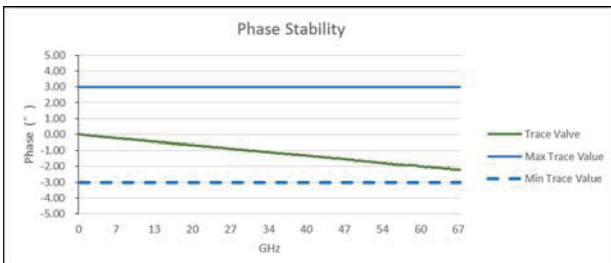
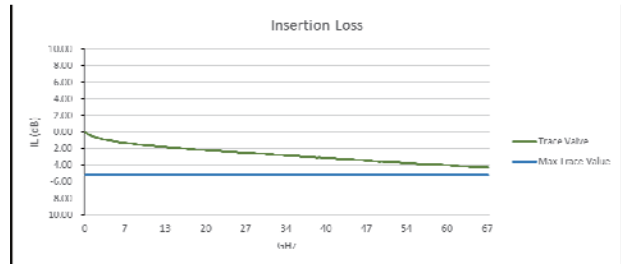
Arance's High Performance VNA Test Assemblies are specially used in high reliability vector network analyzer (VNA) test applications. The cable assemblies include NMD connectors which is solid and light weight can mate directly with VNA ports.



NAC Series—Precision VNA Test Assemblies



NBC Series—Economy VNA Test Assemblies



NAC Series — Precision VNA Test Assemblies



The NAC cable assemblies with excellent phase and amplitude stability can achieve high reliable test results with bend, crush and many other testing situations.

Connector Materials	
Body	Stainless Steel, Passivated
Center Conductor	Au-plated Beryllium Copper
Cable Descriptions	
Center Conductor	Ag-plated Copper
Dielectric	PTFE
Outer Conductor	Ag-plated Copper Tape
Inner Braid	Ag-plated Copper Braid
Outer Jacket	Multilayer armour
Minimum Bend Radius	50mm
Environmental data	
Operating Temperature	0°C~+40°C
Storage Temperature	-40°C~+75°C

NAC Series Selection Matrix

Connector2 \ Connector1	NMD1.85mm	NMD2.4mm	NMD2.92mm	NMD3.5mm	N	7mm
NMD1.85mm	√					
NMD2.4mm		√				
NMD2.92mm		√	√			
NMD3.5mm				√		
N				√	√	
7mm				√	√	√
1.85mm	√					
2.4mm		√	√			
2.92mm		√	√			
3.5mm				√	√	√

NAC Series — General Products

NMD1.85mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC7171L1	NMD1.85mm Female	NMD1.85mm Male	63cm	DC~67GHz	1.40:1(max)	<5.2dB	<±0.05dB	<±3.0°
NAC7161L1	NMD1.85mm Female	1.85mm Female	63cm	DC~67GHz	1.40:1(max)	<5.2dB	<±0.05dB	<±3.0°
NMD2.4mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC7878L1	NMD2.4mm Female	NMD2.4mm Male	63cm	DC~50GHz	1.30:1(max)	<3.0dB	<±0.05dB	<±3.0°
NAC7868L1	NMD2.4mm Female	2.4mm Female	63cm	DC~50GHz	1.30:1(max)	<3.0dB	<±0.05dB	<±3.0°
NAC7837L1	NMD2.4mm Female	NMD2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC7867L1	NMD2.4mm Female	2.92mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NMD2.92mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC3778L1	NMD2.92mm Female	NMD2.4mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3768L1	NMD2.92mm Female	2.4mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3737L1	NMD2.92mm Female	NMD2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3767L1	NMD2.92mm Female	2.92mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NMD3.5mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC7676L1	NMD3.5mm Female	NMD3.5mm Male	63cm	DC~26.5GHz	1.25:1(max)	<1.8dB	<±0.05dB	<±2.0°
NAC7666L1	NMD3.5mm Female	3.5mm Female	63cm	DC~26.5GHz	1.25:1(max)	<1.8dB	<±0.05dB	<±2.0°
N Type Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC6565AL1	N Male	N Male	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC6565CL1	N Male	N Female	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
7mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC3535L1	7mm Sexless	7mm Sexless	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°

* Available with different lengths upon request.

NAC Series— Expanding Products

NMD1.85mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC7171BL1	NMD1.85mm Female	NMD1.85mm Female	63cm	DC~67GHz	1.40:1(max)	<5.2dB	<±0.05dB	<±3.0°
NAC7161DL1	NMD1.85mm Female	1.85mm Male	63cm	DC~67GHz	1.40:1(max)	<5.2dB	<±0.05dB	<±3.0°
NAC7171AL1	NMD1.85mm Male	NMD1.85mm Male	63cm	DC~67GHz	1.40:1(max)	<5.2dB	<±0.05dB	<±3.0°
NAC7161CL1	NMD1.85mm Male	1.85mm Female	63cm	DC~67GHz	1.40:1(max)	<5.2dB	<±0.05dB	<±3.0°
NAC7161AL1	NMD1.85mm Male	1.85mm Male	63cm	DC~67GHz	1.40:1(max)	<5.2dB	<±0.05dB	<±3.0°
NMD2.4mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC7878BL1	NMD2.4mm Female	NMD2.4mm Female	63cm	DC~50GHz	1.30:1(max)	<3.0dB	<±0.05dB	<±3.0°
NAC7868DL1	NMD2.4mm Female	2.4mm Male	63cm	DC~50GHz	1.30:1(max)	<3.0dB	<±0.05dB	<±3.0°
NAC7837BL1	NMD2.4mm Female	NMD2.92mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC7867DL1	NMD2.4mm Female	2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC7878AL1	NMD2.4mm Male	NMD2.4mm Male	63cm	DC~50GHz	1.30:1(max)	<3.0dB	<±0.05dB	<±3.0°
NAC7868CL1	NMD2.4mm Male	2.4mm Female	63cm	DC~50GHz	1.30:1(max)	<3.0dB	<±0.05dB	<±3.0°
NAC7868AL1	NMD2.4mm Male	2.4mm Male	63cm	DC~50GHz	1.30:1(max)	<3.0dB	<±0.05dB	<±3.0°
NAC7837AL1	NMD2.4mm Male	NMD2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC7867CL1	NMD2.4mm Male	2.92mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC7867AL1	NMD2.4mm Male	2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NMD2.92mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC3768DL1	NMD2.92mm Female	2.4mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3737BL1	NMD2.92mm Female	NMD2.92mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3767DL1	NMD2.92mm Female	2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3768CL1	NMD2.92mm Male	2.4mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3768AL1	NMD2.92mm Male	2.4mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3737AL1	NMD2.92mm Male	NMD2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3767CL1	NMD2.92mm Male	2.92mm Female	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NAC3767AL1	NMD2.92mm Male	2.92mm Male	63cm	DC~40GHz	1.30:1(max)	<2.8dB	<±0.05dB	<±2.5°
NMD3.5mm Series								
P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC7676BL1	NMD3.5mm Female	NMD3.5mm Female	63cm	DC~26.5GHz	1.25:1(max)	<1.8dB	<±0.05dB	<±2.0°
NAC7666DL1	NMD3.5mm Female	3.5mm Male	63cm	DC~26.5GHz	1.25:1(max)	<1.8dB	<±0.05dB	<±2.0°
NAC7665BL1	NMD3.5mm Female	N Female	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°

NAC7665DL1	NMD3.5mm Female	N Male	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC7635BL1	NMD3.5mm Female	7mm Sexless	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC7666CL1	NMD3.5mm Male	3.5mm Female	63cm	DC~26.5GHz	1.25:1(max)	<1.8dB	<±0.05dB	<±2.0°
NAC7666AL1	NMD3.5mm Male	3.5mm Male	63cm	DC~26.5GHz	1.25:1(max)	<1.8dB	<±0.05dB	<±2.0°
NAC7676AL1	NMD3.5mm Male	NMD3.5mm Male	63cm	DC~26.5GHz	1.25:1(max)	<1.8dB	<±0.05dB	<±2.0°
NAC7665CL1	NMD3.5mm Male	N Female	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC7665AL1	NMD3.5mm Male	N Male	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC7635AL1	NMD3.5mm Male	7mm Sexless	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°

N Type Series

P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC6566BL1	N Female	3.5mm Female	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC6566DL1	N Female	3.5mm Male	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC6565BL1	N Female	N Female	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC6535BL1	N Female	7mm Sexless	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC6566CL1	N Male	3.5mm Female	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC6566AL1	N Male	3.5mm Male	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC6535AL1	N Male	7mm Sexless	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°

7mm Series

P/N	Connector 1	Connector 2	Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NAC3566BL1	7mm Sexless	3.5mm Female	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°
NAC3566AL1	7mm Sexless	3.5mm Male	63cm	DC~18GHz	1.20:1(max)	<1.5dB	<±0.05dB	<±1.5°

* Available with different lengths upon request.

NBC Series — Economy VNA Test Assemblies



NBC series cable assemblies possess good microwave electrical performance and phase and amplitude stability. The flexible and lighter structure makes the testing more efficient. The patented design provide stable performance in laboratory and production applications.

Connector Materials	
Body	Stainless Steel, Passivated
Center Conductor	Au-plated Beryllium Copper
Cable Descriptions	
Center Conductor	Ag-plated Copper
Dielectric	PTFE
Outer Conductor	Ag-plated Copper Tape
Inner Braid	Ag-plated Copper Braid
Outer Jacket	Multilayer armour
Environmental data	
Operating Temperature	0°C~+40°C
Storage Temperature	-40°C~+75°C

NBC Series Selection Matrix

Connector1 Connector2	NMD2.4mm female	NMD2.92mm female	NMD3.5mm female
2.4mm	√	√	
2.92mm	√	√	
3.5mm			√
N			√
7mm			√

NBC Series

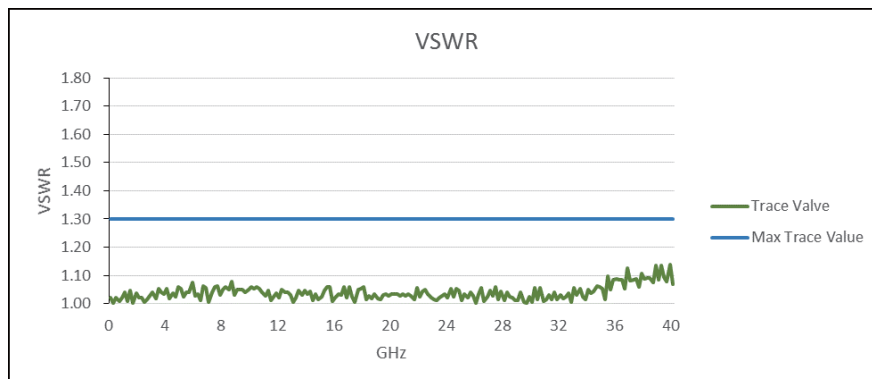
NMD2.4mm Series										
P/N	Connector 1		Connector 2		Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NBC7868BL1	NMD2.4mm	Female	2.4mm	Female	63cm	DC~50GHz	1.35:1(max)	<2.65dB	<±0.1dB	<±5.5°
NBC7868DL1	NMD2.4mm	Female	2.4mm	Male	63cm	DC~50GHz	1.35:1(max)	<2.65dB	<±0.1dB	<±5.5°
NBC7868BL1-G7	NMD2.4mm	Female	2.4mm	Female	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NBC7868DL1-G7	NMD2.4mm	Female	2.4mm	Male	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NBC7867BL1	NMD2.4mm	Female	2.92mm	Female	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NBC7867DL1	NMD2.4mm	Female	2.92mm	Male	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NMD2.92mm Series										
P/N	Connector 1		Connector 2		Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NBC3768BL1	NDM2.92mm	Female	2.4mm	Female	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NBC3768DL1	NDM2.92mm	Female	2.4mm	Male	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NBC3767BL1	NDM2.92mm	Female	2.92mm	Female	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NBC3767DL1	NDM2.92mm	Female	2.92mm	Male	63cm	DC~40GHz	1.30:1(max)	<1.98dB	<±0.1dB	<±4.5°
NMD3.5mm Series										
P/N	Connector 1		Connector 2		Length	Frequency	VSWR	IL	Amplitude Stability	Phase Stability
NBC7666BL1	NMD3.5mm	Female	3.5mm	Female	63cm	DC~26.5GHz	1.25:1(max)	<0.9dB	<±0.1dB	<±4°
NBC7666DL1	NMD3.5mm	Female	3.5mm	Male	63cm	DC~26.5GHz	1.25:1(max)	<0.9dB	<±0.1dB	<±4°
NBC7665BL1	NMD3.5mm	Female	N	Female	63cm	DC~18GHz	1.20:1(max)	<0.9dB	<±0.1dB	<±3.5°
NBC7665DL1	NMD3.5mm	Female	N	Male	63cm	DC~18GHz	1.20:1(max)	<0.9dB	<±0.1dB	<±3.5°
NBC7635BL1	NMD3.5mm	Female	7mm	Sexless	63cm	DC~18GHz	1.20:1(max)	<0.9dB	<±0.1dB	<±3.5°

* Available with different lengths upon request.

Low Loss Flexible Cable Assemblies



Arance's CAF series low loss flexible cable assemblies are unarmored. It is used for any high frequency signal transmission between systems or instruments where low loss and stability are critical. CAF series is available with a wide range of connectors offering excellent specifications. The unique small cable connectors are designed for end users who need high performance in a very small space. CAF series is also available with phase matching and armoring upon request.



* 60cm cable assembly

CAF Series—Low Loss Flexible Cable Assemblies



Connector Materials	
Body	Stainless Steel, Passivated / Au-plated Brass
Center Conductor	Au-plated Beryllium Copper
Environmental data	
Operating Temperature	-55°C~+125°C

Cable Descriptions	
Center Conductor	Ag-plated Cu
Dielectric	PTFE
Outer Conductor	Outer Conductor
Inner Braid	Ag-plated Copper Braid
Outer Jacket	PFA / FEP

CAF Series Selection Matrix

Cable Type	G6	G0	G7	G9	G4	J6	J7	J9	J4
Frequency (GHz)	≤70	≤50	≤40	≤26.5	≤18	≤67	≤40	≤26.5	≤18
Outer Dia.(mm)	2.2	3.1	3.6	4.8	7.4	2.2	3.6	5.1	7.4
Connectors	TNC			•				•	
	TNCA			•				•	
	7mm			•				•	
	N			•	•			•	•
	SMA			•	•	•		•	•
	SMA (short connector)	•		•			•	•	
	SMP(GPO)	•					•		
	SMPM (mini-SMP / GPPO)	•					•		
	3.5mm				•				•
	2.92mm			•				•	
	2.92mm (short connector)	•					•		
	2.4mm		•	•				•	
	2.4mm (short connector)	•	•				•		
	1.85mm	•					•		
1.85mm (short connector)	•					•			

Armour Options

	
Armour Code : AS Monolayer Armour	Armour Code : RU Multilayer Armour
AS series is the cable installed within a stainless steel interlocked armor in order to provide crush and pull forces resistance. It is used in production environments and outdoor applications.	RU series is more flexible while resists crush and pull forces. It is used in precision test applications where request phase and amplitude stability.

Semi-rigid & Semi-flexible Cable Assemblies



CSR Series—Semi-rigid Cable Assemblies

Arance’s CSR series semi-rigid cable assemblies are bent to the high level of precision. The cable assemblies are used for high reliable microwave interconnection between internal modules. CSR series is capable of frequency up to 60GHz. The VSWR is <1.25 up to 40GHz. Phase matching is available upon request.



CSF Series—Semi-flexible Cable Assemblies

Arance’s CSF series cable assemblies can be hand formed in-place. The cable assemblies are used for high reliable cabinet interconnects. CSR series is convenient and efficient. Phase matching is available upon request.

Cable Construction	
Center Conductor	Ag-plated Cu
Dielectric	PTFE
Outer Conductor	Sn-plated Copper/ Albaloy-plated Copper

Cable Construction	
Center Conductor	Ag-plated Cu
Dielectric	PTFE
Outer Conductor	Tin Soaked Copper Braid

Semi-rigid & Semi-flexible Cable Assemblies Series Selection Matrix

Cable Type		Semi-rigid Cable			Semi-flexible Cable		
		047	086	141	047	086	141
Outer Dia.(mm)		1.2	2.2	3.6	1.2	2.2	3.6
Minimum Bend Radius (mm)		4	7	10	6	8	12
Connectors	SMP (GPO)		•			•	
	SMPM (mini-SMP / GPPO)		•			•	
	SMA	•	•	•	•	•	•
	N			•			•
	2.92mm		•			•	
	2.4mm		•			•	
	1.85mm		•			•	