



GUL Series

Flexible Ultra Low Loss
Microwave Cable Assembly



GigaLane **GUL Series cable assemblies** perform range of frequency usage is applicable up to 18 GHz. Center conductor consists of Solid center conductor, By using Ultra low density PTFE(taped) dielectric, it maintains its excellent phase stability and a value of the lowest insertion loss is extracted. These are specialized in providing excellent shielding effectiveness, flexibility and durability and supplied in fields of Commercial, Military RF & microwave airborne systems, Test & Measurement applications (Lab & Production line, Anechoic Chamber).

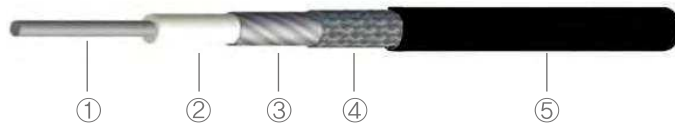
GigaLane provides two types of Neck type for GL cable assembly. One is sleeve type to strengthen the neck area of connector and gives a comfort which provides easiness in assembling connectors. Another is shrink tube type which is suitable for applying to small space.

GUL180 & GUL310 Cable

► Features and benefits

- Frequency ranges from DC to 18 GHz
- Low Loss and Flexibility
- Excellent shielding effectiveness
- Cost-efficient
- Ultra low density PTFE(taped) dielectric
- Excellent phase stability and lowest insertion loss
- Durability

► Cable Design



Description		Diameter (mm)	
		GUL180C	GUL310C
① Center conductor	Silver-plated copper wire, solid	1.29	2.35
② Dielectric	Ultra low density PTFE(taped)	-	-
③ Inner shield	Silver-plated copper tape	-	-
④ Outer shield	Silver-plated copper braid	-	-
⑤ Jacket	Extruded FEP	5.00	7.90

Electrical

Impedance	50 Ω
Operating frequency	18 GHz
Capacitance	78 pF/m
Velocity of propagation	84 % nom.
Time delay	3.95 ns/m
RF leakage (dB)	-100
Dielectric constant	1.4
Phase stability vs. flexure (@18 GHz max.)	3°
IL stability vs. flexure (dB @minimum BR)	± 0.1
Phase stability vs. temp. (deg/GHz/m) (-40 ~ 80°)	< 2°

Mechanical & Environmental

GUL180C		
Minimum bend radius (mm)	25.4	48.5
Weight (g/m)	51	115
Temperature	-55°C to + 165°C	-55°C to + 165°C

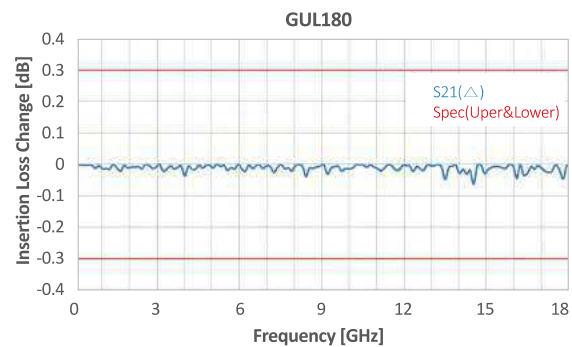
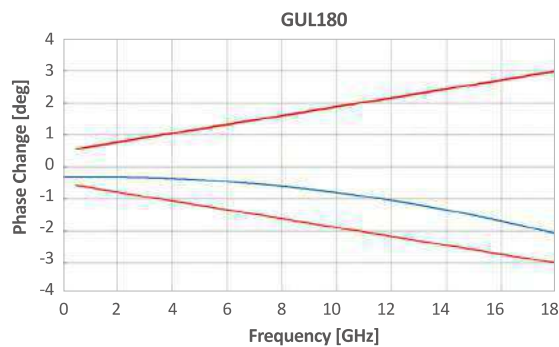
Suitable Connectors

Cable selection			Standard Connector selection				max. VSWR		
			SMA type		N type		Connector		
P/N	Frequency	Attenuation (dB/m)	Straight	R/A	Straight	R/A	ST to ST	ST to R/A	R/A to R/A
GUL180C	18 GHz	1.22	SMS119	SMR119	NMS119	NMR119	1.25	1.35	1.45
GUL310C	18 GHz	0.78	SMS120	SMR120B*	NMS120	NMR120B*	1.25	1.35	1.45

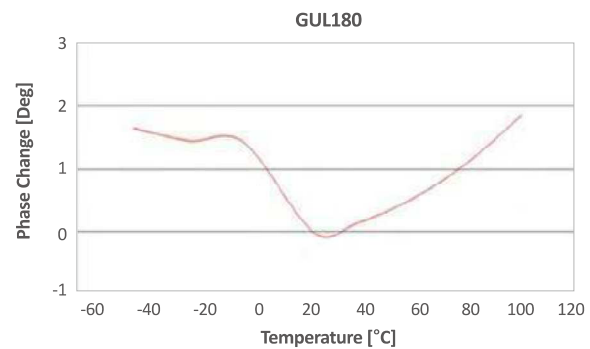
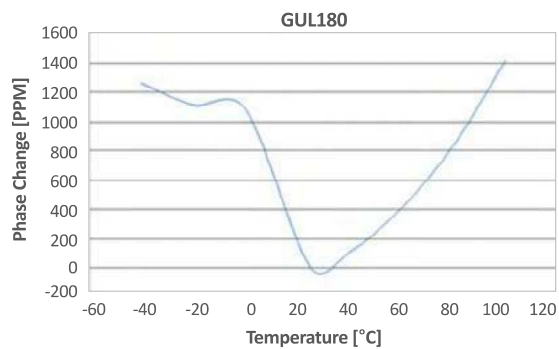
* Please refer to connector drawing on p. 83

* XXX XXXB: Shrink Tube ex)SMS120B

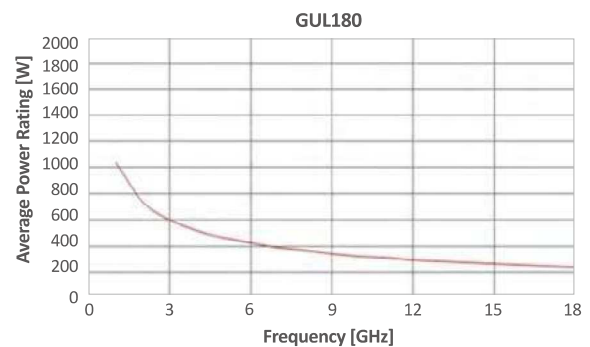
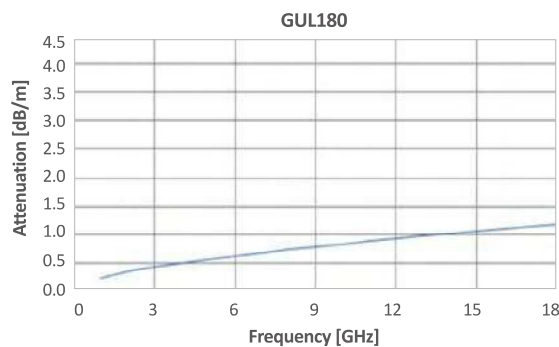
► Cable Insertion & Stability with Flexure



► Cable Phase Stability with Temperature

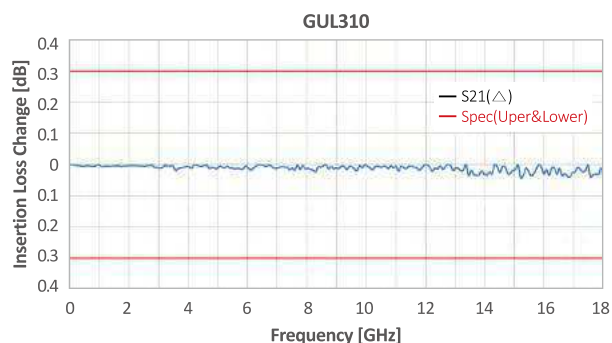
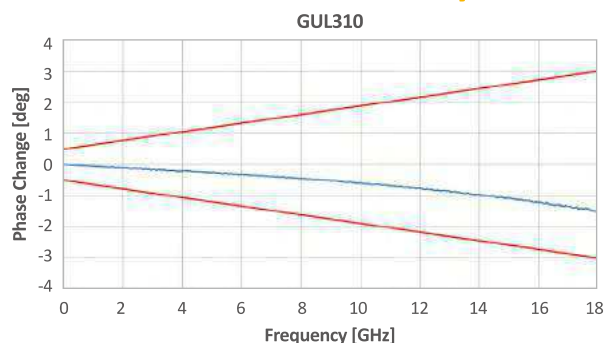


► Cable Attenuation & Power

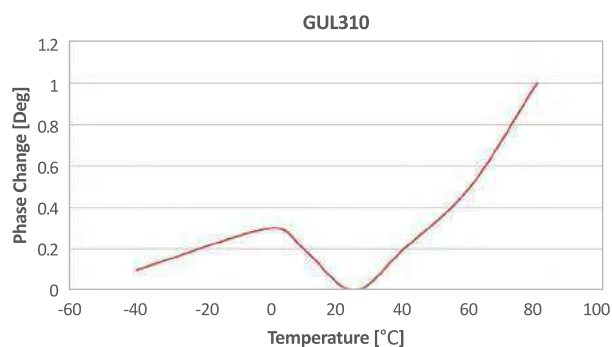
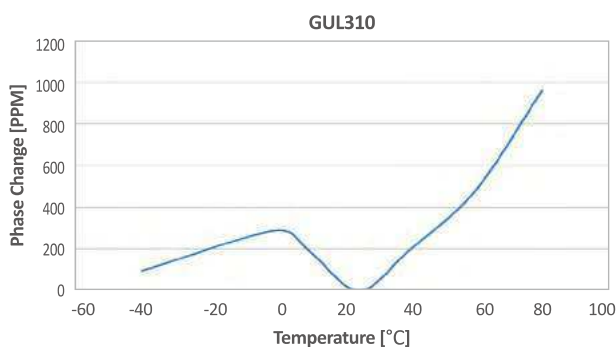


GUL310 Cable

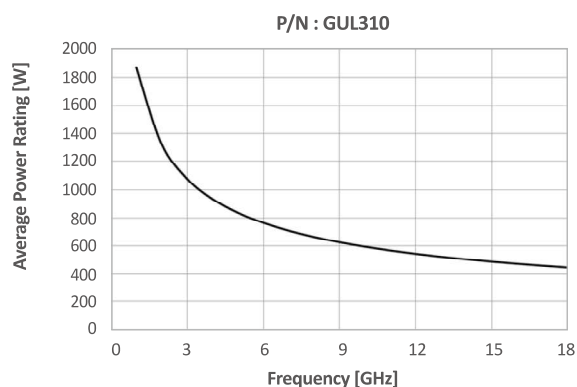
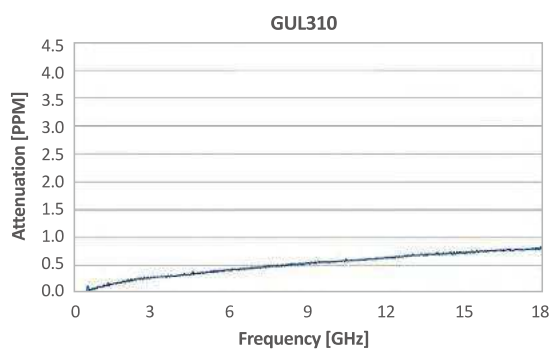
► Cable Insertion & Stability with Flexure



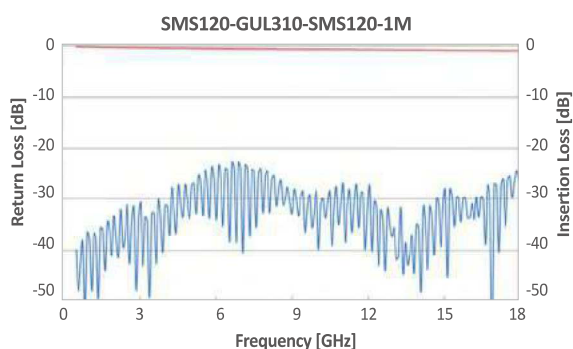
► Cable Phase Stability with Temperature



► Cable Attenuation & Power



► Test Result



Suitable Connectors for GL Series



Cable			Connector		Connector Drawings
Groups	P/N	Frequency	Description	P/N	
Flexible Low Loss	GL200C GL200sC GL200sC01	18 GHz	Straight SMA PLUG (Sleeve type)	SMS111	
			Straight SMA PLUG (Shrink tube type)	SMS111B	
			Right Angle SMA PLUG (Sleeve type)	SMR111	
			Straight N PLUG (Sleeve type)	NMS111	
			Straight N JACK (Sleeve type)	NFS111	
			Right Angle N PLUG (Sleeve type)	NMR111	
	GL200D GL200sD GL200sD01	26.5 GHz	TCNA Straight Plug	G24SC M0001	
			Straight SMA PLUG (Sleeve type)	SMS112	
			Straight SMA PLUG (Shrink tube type)	SMS112B	

► Suitable Connectors for GUL Series

Cable			Connector		Connector Drawings
Groups	P/N	Frequency	Description	P/N	
Flexible Ultra Low Loss	GUL310C	18 GHz	Straight SMA PLUG (Sleeve type)	SMS120	
			Straight SMA PLUG (Sleeve type)	NMS120	