Clarity™ 110

Test and Measurement

The Clarity™ 110 test cable boasts steel torque crush and overbend protection with abrasion resistance - without compromising flexibility. The cable is ultra-stable through 110 GHz with exceptionally low attenuation. The design includes an ergonomic, stainless steel protective barrel strain relief and a hex coupling nut.

Features:

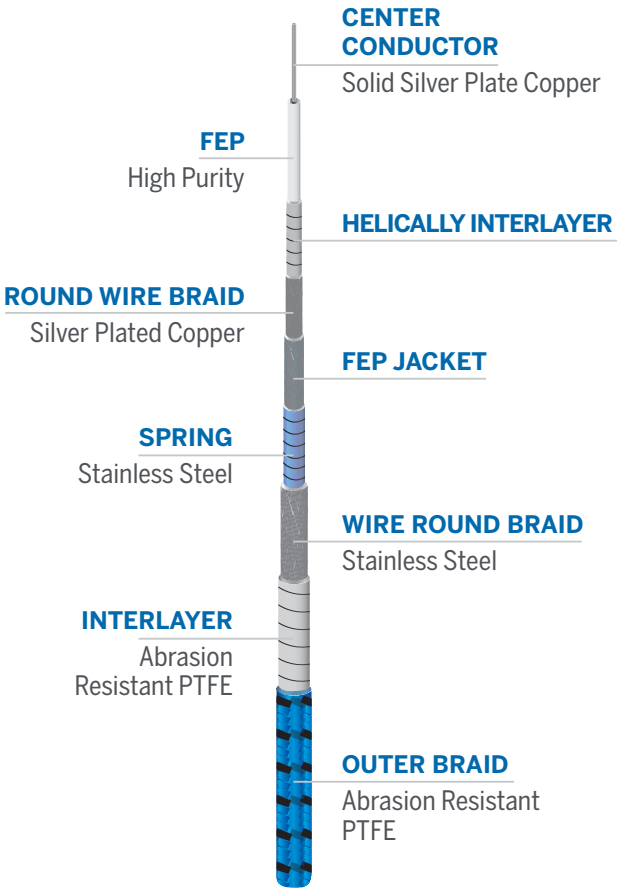
- Broad Frequency Response
- Rugged & Durable
- Phase Stable Over Temperature
- Long Flex Life

Specifications

Impedance 50 Ohms

Op Temp -67 to 257°F -55 to 125°C

	Units	
Armored Diameter: armor	in (mm)	0.19 (4.70)
Armored Diameter: strain relief	in (mm)	0.31 (8.00)
Minimum Bend Radius armored	in (mm)	1.0 (25.4)
Minimum Bend Radius max flex life	in (mm)	2.0 (50.8)
Crushing (armored version)	lbs/lin.in	200
Flex Life		>50000
Velocity of Propagation	%	70
Shielding Effectiveness	dB	>100
Capacitance	pF/ft (pF/m)	29 (95)
VSWR Typical		1.40:1
VSWR Max		1.45:1
Phase Stability typical	°	+/- 2
Amplitude Stability typical	dB	+/- 0.075



Calculation

$$IL = (K1 \times \sqrt{f} + K2 \times f) \times \text{Cable Length}$$

Cable Insertion Loss
f = Frequency (MHz)

Use K values with matching length unit

K values	dB/100ft	dB/100m
K1	1.0932	3.586789
K2	0.000125	0.000410

Attenuation (+25°C)

Frequency GHz	dB/100 ft	dB/100 m
110	500	1640

Attenuation (per 100ft) at any frequency: 1.0932*sqrt(f(MHz)) + 0.00125*f(MHz)

*The assembly is terminated with a short circuit and bent 90 degrees around the mandrel of 1-inch radius.

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TIMES MICROWAVE SYSTEMS
AN AMPHENOL COMPANY

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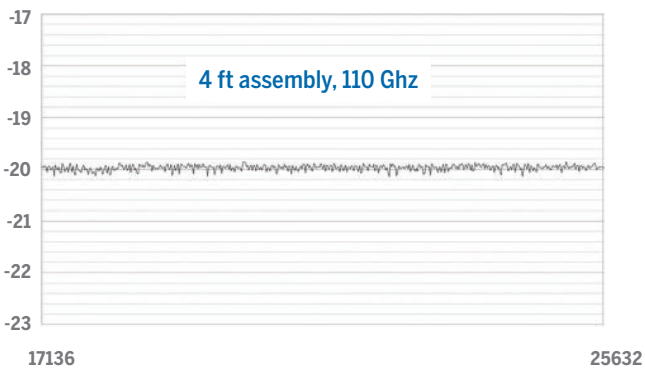
Ordering Guide

CLS110 -XXX XXX- XX.X X

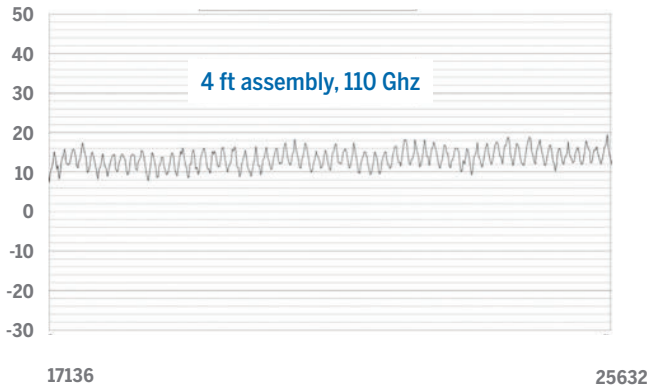
- Connector A
Connector B -
Length / 3 dig
M Meters
F Feet

Code	Description
10M	1.0mm Male Connector
10F	1.0mm Female Connector

Amplitude Stability While in Motion



Phase Stability While in Motion



Our flex test method uses 4ft cables at 110GHz. The testing equipment calibration occurs every 8 hours. Email us at techquestions@timesmicro.com to obtain a copy of the test procedure specifications and results.

Global manufacturing capability: US, and Asia.

Heritage—in the air and on the ground, thousands of assemblies built over decades.

Assembled and tested assemblies provide assured performance.

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