

**Product Name:** ZX000101C8 High Frequency semi-rigid SMA to SMA connector coaxial cable assembly

**Product Description:** ZX000101C8 is high frequency semi rigid SMA to SMA connector coaxial cable assembly. It is ideal cable assembly solution for high frequency bandwidth DC – 25GHz applications.

- 1- SMA to SMA connector - 50Ω semi-rigid coaxial cable assembly with insertion loss of > -0.3dB @8GHz
- 2- Outer layer of the coaxial cable assembly is Copper tube with Tin plated. It is designed to be soldered to system Ground fills / pl
- 3- Semi-Rigid coaxial cable assembly with 0.16" ( 4.2mm ) bending radius – enabling system test & measurement flexibility.
- 4- Center core wire diameter of 0.011" ( 0.29mm ) , enabling to solder onto landing pads as small as 0402 SMD pads.
- 5- Standard SMA connectors, enabling interface to any test equipment for purpose of test & measurement.
- 6- Flexible and easy to use.
- 7- Wide operating temperature, -55°C to +125°
- 8- Shipped in protective tubing

**Electrical:**

Coaxial cable Assembly:

Insertion loss > -0.68dB @8GHz  
> -0.8dB @ 10GHz  
> -1.1dB @ 20GHz

VSWR : 1.30 max  
type: Semi-rigid coaxial cable  
Impedance: 50Ω ( 50 Ohms )  
Capacitance: 19.6pF ( nominal )  
Voltage withstanding: ( AC ) : 1000Vrms/min  
Operating Temperature: -55°C to +125°C ( continuous )  
Bending Radius: 0.16" ( 4.2mm )  
Tensile Strength: 1.4Kg  
Length: 9.5" ( 24cm )

Coaxial cable:

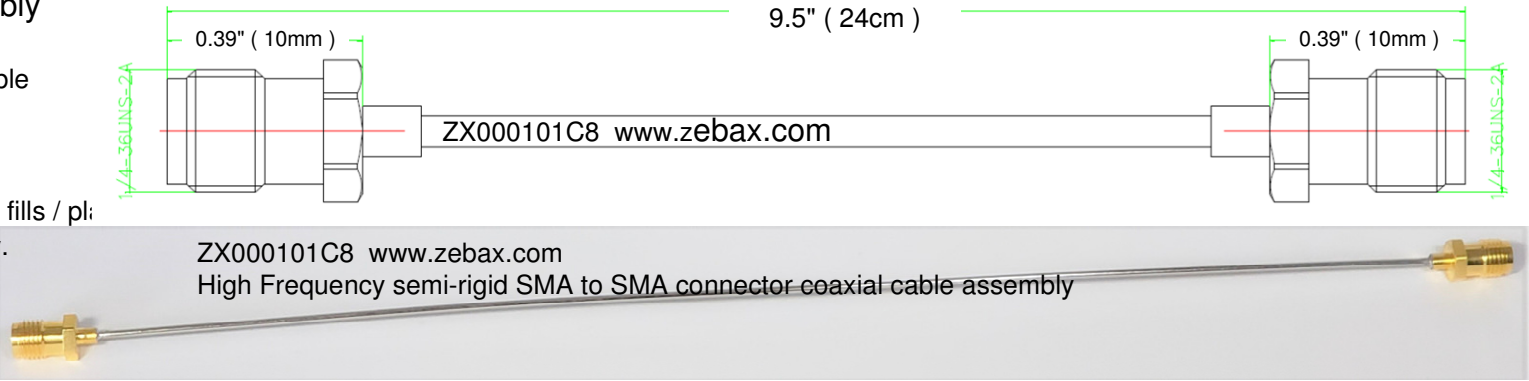
Inner Conductor: Silver-plated Copper Clad Steel  
Inner Conductor diameter: 0.011" ( 0.29mm )  
Insulation material: Poly ( tetrafluoroethylene ) ( PTFE ) - diameter: 0.037" ( 0.94mm)  
Outer Conductor Material : Copper Tube  
Outer Conductor plating : Tin plated - diameter: 0.047" ( 1.19mm )

SMA connector: 0.025" ( 0.64mm ) square pin header

Plating  
Center contact : 20 μ" (0.5 μm) Gold  
Outer contact : 3 μ" (0.08 μm) Gold  
Insulating Material: PTFE ( -PN )  
Shell Material: Brass  
Contact Material: BeCu

**Application:** Test & measurement - Single-ended and differential scope probe interface – Tektronix Keysight and more wifi, mipi, PCIe, RF sensors GHz and general high speed & ultra high speed signal test and measurements

**Mates with :** Any standard SMA plug , Tektronix , Keysight scope probes , any test equipment utilizing SMA connector interface



See Page 2 for s-parameters + charts

**ZX000101C8 package includes:**

Part number	Quantity	Description
ZX000101C8	1 pc	9.5" ( 24cm ) long High Frequency semi-rigid SMA to SMA wire coax cable assembly
ZX0002SRF4	0	High Frequency semi-rigid SMA to SMA connector coax cable assembly

**Compliance:**

ISO2001 certified  
RoHs - Lead Free  
EU RoHS2  
UL E111594 document  
ELV- Vehicle Directive ( Directive 2000/EC)  
European Union Directive ( 203/11/EC )  
Halogen Free per IEC-61249-2.21 : 2003  
RoHs Directive 2011/65/EU  
WEEE Directive ( 2012/12/EU)  
  
Certificate of Compliance for Radioactive substances  
Certificate of Compliance for Asbestos  
Certificate of Compliance for Ozone Depleting Substances, ODS  
Certificate REACH SVHC  
Certificate of Compliance RoHS\_EN\_CoC

Note ALL ZEBAX products are RoHS compliant and Lead Free unless otherwise indicated.

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SPECIFIED DIMENSIONS ARE INCHES (MM). ROHS COMPLIANT	ASSEMBLY DRAWING	
	ITEM: ZX000101C8	
DESCRIPTION: High Frequency semi-rigid SMA to SMA connector coaxial cable assembly		
CHECKED: M. MARINA	DRAWN: SONYA	REVISSION: 1.0
		SHEET: 1 OF 2

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S-parameter: A single ZX000101C8 cable assembly was used in order to characterize the cable assembly using Keysight Network Analyzer, NA , model # E5071C

ZX000101C8 s-parameters : ZX000101C8-S-Parameter.s2p - S2P , 2 Port – Testcase using one ZX000101C8  
ZX000101C8-NA-Loopback-S-Parameter.s2p - S2P , 2 Port – NA baseline test equipment measurement

Insertion loss calculation:

Based on Figure 1 and 2, the instrumentation error is recorded at -0.3dB, therefore the ZX000101C8 insertion loss would be calculated to > -0.68dB at DC to 8.5GHz

Note : IL > - ( 0.9832-0.3 ) > - 0.68dB

Figure 1 – NA port loopback insertion loss, instrumentation error

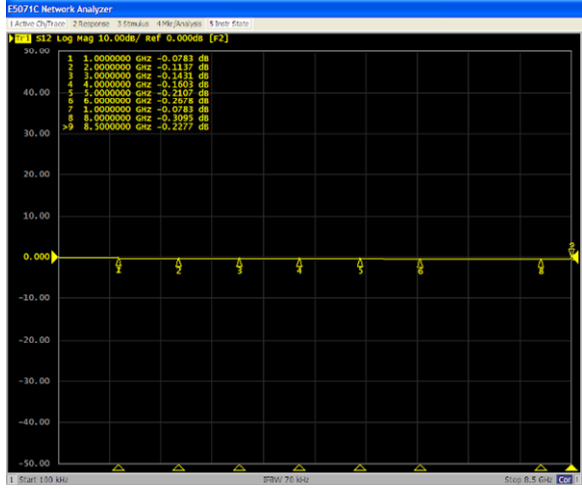


Figure 2 – ZX000101C8 insertion loss

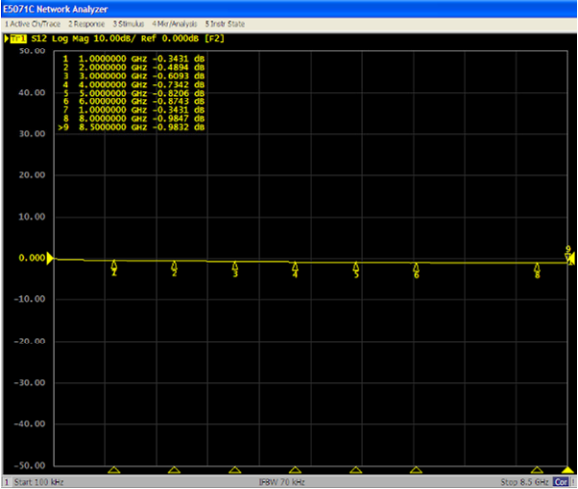


Figure 3 – Polar chart – Lin-Phase

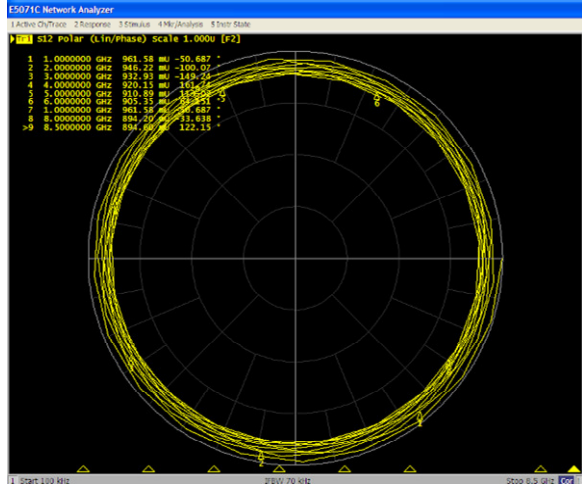


Figure 4 – Polar chart – Log-Phase

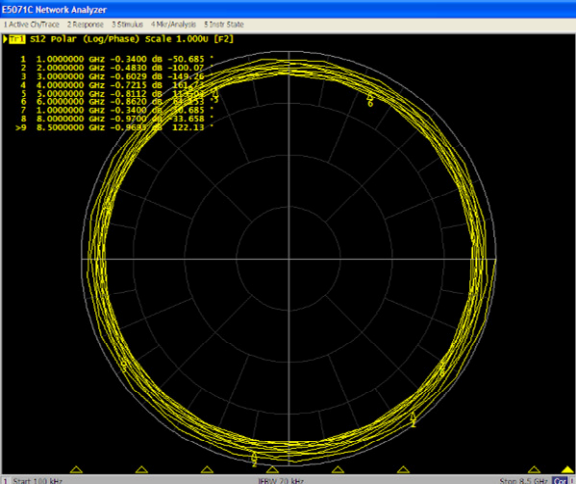


Figure 5 – Smit Chart – Log / Phase

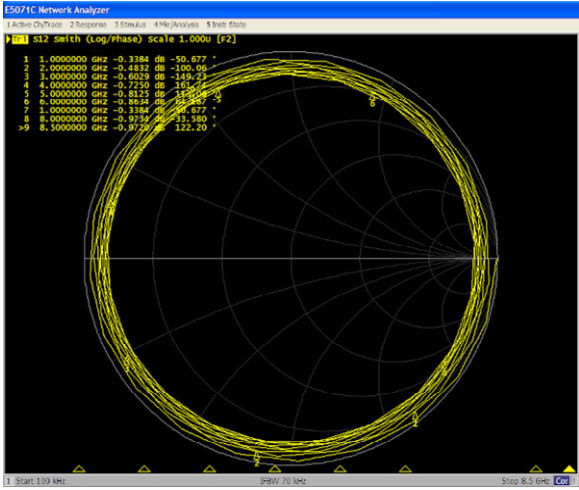


Figure 6 – Smit Chart – Real / Imaginary

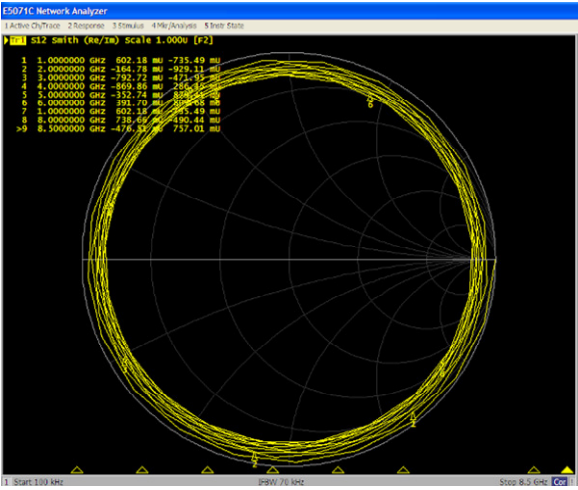


Figure 7 – Smit Chart – R+jX

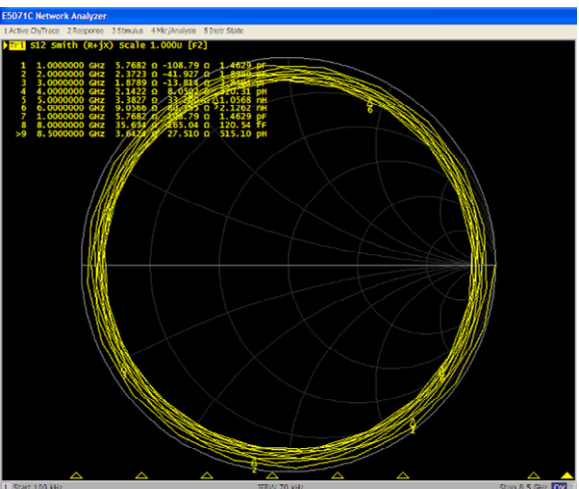
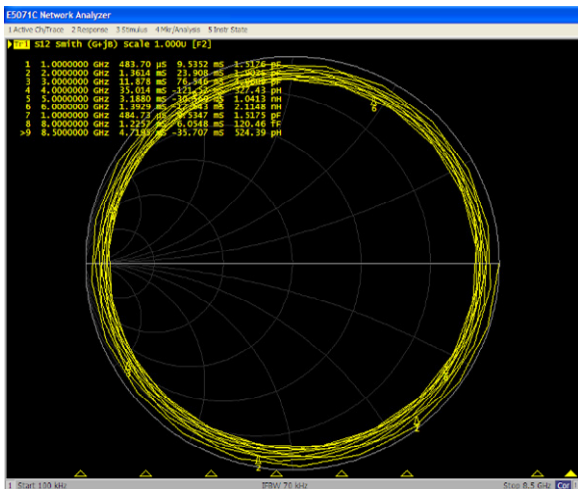


Figure 8 – Smit Chart – G+jB



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M. MARINA	SONYA	SHEET: 2 OF 2	

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