



## SMB Plug to SMB Plug Using Flexible RG316-DS Coax Cable

### RF Cable Assemblies Technical Data Sheet

MTCA00097

#### Configuration

- Connector 1: SMB Plug
- Connector 2: SMB Plug
- Cable Type: RG316-DS

#### Features

- Max Frequency 3 GHz
- 70% Phase Velocity
- Double Shielded
- FEP Jacket

#### Applications

- General Purpose
- Laboratory Use

#### Description

MilesTek's MTCA00097 coaxial cable assembly is a SMB plug to SMB plug using flexible RG316-DS coax cable. MilesTek cables are built using high quality materials and are tested to insure these assemblies meet all performance specifications. Coaxial cable assemblies are stocked in standard lengths and will ship same day. Custom lengths of this cable assembly are also available upon request. These assemblies are part of MilesTek's extensive portfolio of products that are in stock and ship same day.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		3	GHz
VSWR			1.4:1	
Velocity of Propagation		70		%
Capacitance		29.4 [96.46]		pF/ft [pF/m]
Operating Voltage (AC)			335	Vrms

#### Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.1	0.4	1	3		GHz
Insertion Loss (Typ.)	0.115	0.172	0.3	0.545		dB/ft
	0.38	0.56	0.98	1.79		dB/m

#### Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as 0.1 dB per connector.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMB Plug to SMB Plug Using Flexible RG316-DS Coax Cable MTCA00097](#)



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#### Mechanical Specifications

##### Cable Assembly

Diameter	0.256 in [6.5 mm]
Weight	0.028 lbs [12.7 g]

##### Cable

Cable Type	RG316-DS
Impedance	50 Ohms
Inner Conductor Type	Stranded
Inner Conductor Material and Plating	Copper Clad Steel, Silver
Dielectric Type	PTFE
Number of Shields	2
Shield Layer 1	Silver Plated Copper Braid
Shield Layer 2	Silver Plated Copper Braid
Jacket Material	FEP, Tan
Jacket Diameter	0.114 in [2.9 mm]
One Time Minimum Bend Radius	0.59 in [14.99 mm]

#### Connectors

Description	Connector 1	Connector 2
Type	SMB Plug	SMB Plug
Specification	MIL-STD-348A	MIL-STD-348A
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Beryllium Copper, Gold	Beryllium Copper, Gold
Contact Plating Specification	30μ in. minimum	30μ in. minimum
Dielectric Type	Teflon	Teflon
Body Material and Plating	Brass, Nickel	Brass, Nickel
Body Plating Specification	100μ in. minimum	100μ in. minimum

**Compliance Certifications** (see [product page](#) for current document)

#### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMB Plug to SMB Plug Using Flexible RG316-DS Coax Cable MTCA00097](#)



## SMB Plug to SMB Plug Using Flexible RG316-DS Coax Cable

### RF Cable Assemblies Technical Data Sheet

MTCA00097

#### How to Order

Part Number Configuration:

**MTCA00097**

- **xx**

**uu**

Unit of Measure:

cm = Centimeters

<blank> = Inches

Length

Base Number

Example: MTCA00097-12 = 12 inches long cable  
MTCA00097-100cm = 100 cm long cable

Our offering, used primarily in military, R&D and production applications, consists of a comprehensive line of MIL-STD-1553B data bus couplers, harnesses and cable assemblies, connectors and connector termination systems. MilesTek also offers expertise in manufacturing custom cable assemblies and harnesses.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SMB Plug to SMB Plug Using Flexible RG316-DS Coax Cable MTCA00097](#)

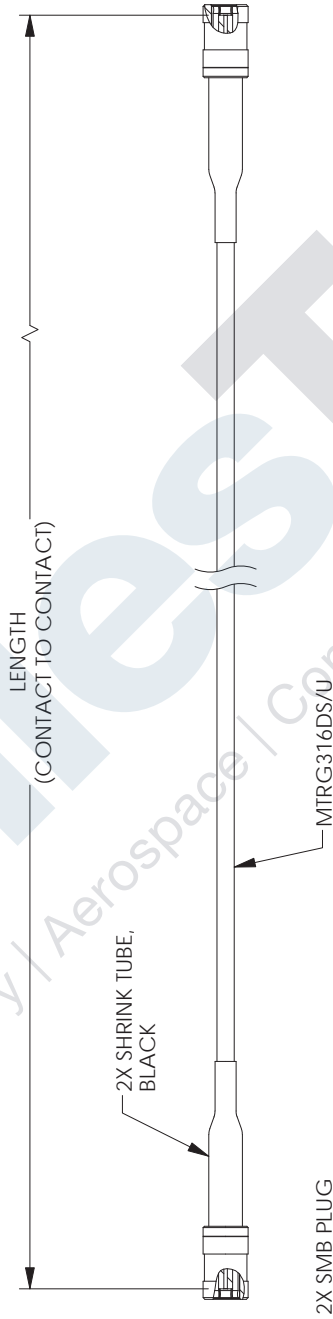
URL: <https://www.milestek.com/SMB-Plug-SMB-Plug-MTRG316DS-MTCA00097-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. MilesTek reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. MilesTek does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and MilesTek does not assume any liability arising out of the use of any part or documentation.

# MTCA00097 CAD Drawing

## SMB Plug to SMB Plug Using Flexible RG316-DS Coax Cable

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	09/25/2019	SELLIS



<p><b>Milestek</b> an <b>INFINITE</b> brand</p> <p>301 Leora Ln., Suite 100, Lewisville, TX 75056          Phone: 1.940.484.9400   1.866.524.1553          Fax: 1.972.394.7913          www.milestek.com   e-mail: Customerfirst@milestek.com</p> <p>SIZE: A CAGE CODE: 4Z977 DRAWN BY: DFRISIELLO PART NUMBER: MTCA00097</p>	<p>THIRD-ANGLE PROJECTION</p> <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF MILESTEK CORPORATION. ALL RIGHTS RESERVED.</p> <p>SHEET 1 OF 1</p> <p>SCALE: N/A</p> <p>REV: A</p>																											
<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE IN INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p> <p>TOLERANCES:</p> <table style="width: 100%; border: none;"> <tr> <td>X = ±.2</td> <td>[ 5.08]</td> <td>FRACTIONS</td> <td>± 1/32</td> </tr> <tr> <td>.XX = ±.02</td> <td>[ .51]</td> <td></td> <td></td> </tr> <tr> <td>.XXX = ±.005</td> <td>[ .13]</td> <td>ANGLES ± 1°</td> <td></td> </tr> </table> <p>OVERALL CABLE LENGTH (L) TOLERANCES:</p> <table style="width: 100%; border: none;"> <tr> <td>L ≤ 12 [305]</td> <td>±.1 [25]</td> <td>/ -0</td> </tr> <tr> <td>12 [305] &lt; L ≤ 60 [1524]</td> <td>±.2 [51]</td> <td>/ -0</td> </tr> <tr> <td>60 [1524] &lt; L ≤ 120 [3048]</td> <td>±.4 [102]</td> <td>/ -0</td> </tr> <tr> <td>120 [3048] &lt; L ≤ 300 [7620]</td> <td>±.6 [152]</td> <td>/ -0</td> </tr> <tr> <td>300 [7620] &lt; L</td> <td>±.9% L</td> <td>/ -0</td> </tr> </table> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>		X = ±.2	[ 5.08]	FRACTIONS	± 1/32	.XX = ±.02	[ .51]			.XXX = ±.005	[ .13]	ANGLES ± 1°		L ≤ 12 [305]	±.1 [25]	/ -0	12 [305] < L ≤ 60 [1524]	±.2 [51]	/ -0	60 [1524] < L ≤ 120 [3048]	±.4 [102]	/ -0	120 [3048] < L ≤ 300 [7620]	±.6 [152]	/ -0	300 [7620] < L	±.9% L	/ -0
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