



## CSE-SBRM-ccc-SBRM

### SMB Plug to SMB Plug Cable Assembly

The CSE-SBRM-ccc-SBRM cable assembly provides a right angle SMB plug (female socket) to right angle SMB plug (female socket) connection with the option of 6 in., 12 in., or 24 in. lengths of RG-316/U coaxial cable.

Operating from 0 GHz to 4 GHz, the CSE-SBRM-ccc-SBRM cable assembly combines superior performance, compact size, and a convenient snap-on mating interface to provide a reliable, easy-to-use connector. Additionally, all Linx coaxial cables and connectors meet RoHS lead free standards and are tested to meet requirements for corrosion resistance, vibration, mechanical and thermal shock.

### FEATURES

- 0 to 4 GHz operation
- RG-316/U 50  $\Omega$  coaxial cable
- SMB plug (female socket)
  - Snap-on mating
  - Gold plating
  - Superior corrosion resistance
  - Right angle connection

### APPLICATIONS

- LPWA
  - LoRaWAN<sup>®</sup>, Sigfox<sup>®</sup> WiFi HaLow<sup>™</sup> (802.11ah)
- Cellular IoT - LTE-M (Cat-M1), NB-IoT
- Cellular - 5G/4G LTE/3G/2G
- PC, LAN
- ISM - Bluetooth<sup>®</sup>, ZigBee<sup>®</sup>
- GNSS - GPS, Galileo, BeiDou, QZSS
- Automotive, Industrial, Commercial, Enterprise

**TABLE 1. ELECTRICAL SPECIFICATIONS**

Parameter	Value		
	CSE-SBRM-152-SBRM	CSE-SBRM-305-SBRM	CSE-SBRM-610-SBRM
Insertion Loss (dB max)	-0.53	-0.89	-1.56
VSWR (max)	1.4		
Impedance	50 $\Omega$		
Insulation Resistance	500 M $\Omega$ min.		

## ORDERING INFORMATION

Part Number	Description
CSE-SBRM-152-SBRM	SMB plug (female socket) to SMB plug (female socket) on 152.4 mm (6.0 in) of RG-316/U coaxial cable
CSE-SBRM-305-SBRM	SMB plug (female socket) to SMB plug (female socket) on 304.8 mm (12.0 in) of RG-316/U coaxial cable
CSE-SBRM-610-SBRM	SMB plug (female socket) to SMB plug (female socket) on 609.6 mm (24.0 in) of RG-316/U coaxial cable

Available from Linx Technologies and select distributors and representatives.

## PRODUCT DIMENSIONS

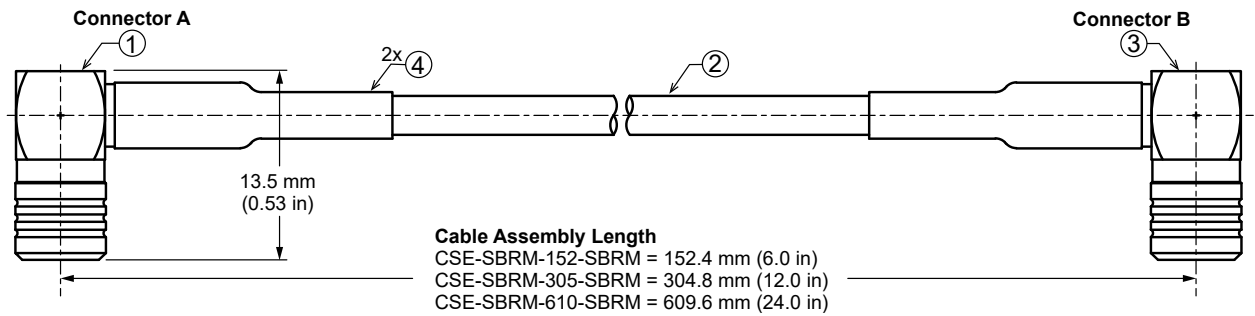


Figure 1. Product Dimensions for the CSE-SBRM-ccc-SBRM Cable Assembly

## TABLE 2. CABLE ASSEMBLY COMPONENTS

Item #	Description	Material	Finish
1	Connector, SMB right angle plug (female socket)	Brass	Gold
2	RG-316/U coaxial cable	RG-316/U	-
3	Connector, SMB right angle plug (female socket)	Brass	Gold
4	Heat Shrink Tubing	PTFE	Black

## TABLE 3. CABLE ASSEMBLY MECHANICAL SPECIFICATIONS

Parameter	Connector A	Connector B
Fastening Type	Snap-on coupling	Snap-on coupling
Recommended Torque	-	-
Coupling Nut Retention	-	-
Connector Durability	500 cycles min.	500 cycles min.
Weight	CSE-SBRM-152-SBRM = 8.9 g (0.31 oz) CSE-SBRM-305-SBRM = 11.0 g (0.39 oz) CSE-SBRM-610-SBRM = 15.5 g (0.55 oz)	

## COAXIAL CABLE SPECIFICATIONS

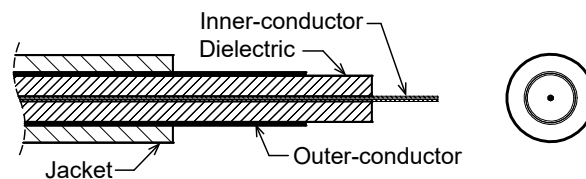


Figure 2. Coaxial Cable Cutaway Diagram

**TABLE 4. COAXIAL CABLE MATERIAL SPECIFICATIONS FOR RG-316/U**

RG-316/U Coax	Material	Dimensions
Inner-Conductor	Copper plated steel, 7 strand, 0.175 mm/conductor	Ø0.53 mm (0.020 in)
Dielectric	PTFE	Ø1.53 mm (0.06 in)
Outer-Conductor	Silver plated copper braid, Coverage 92.3%	Ø1.71 mm (0.067 in)
Jacket	FEP	Ø2.53 mm (0.100 in)

**TABLE 5. COAXIAL CABLE ELECTRICAL AND PHYSICAL SPECIFICATIONS FOR RG-316/U**

Parameter	Value		
Rated Temp Voltage	105 °C 30 V		
Conductor Resistance	281 Ω/km 20 °C		
Insulation Resistance	3000 M Ω-km min.		
Dielectric Strength	AC 1000 V/Minute		
Spark Test	2.0 kV		
Insulation	Unaged	Tensile Strength	2500 psi min. (1.76 kg/mm <sup>2</sup> )
		Elongation	200% min.
	Aged	Tensile Strength	Unaged min. 75% (168 hrs x 232 °C)
		Elongation	Unaged min. 75% (168 hrs x 232 °C)
Jacket	Unaged	Tensile Strength	2500 psi min. (1.76 kg/mm <sup>2</sup> )
		Elongation	200% min.
	Aged	Tensile Strength	Unaged min. 75% (168 hrs x 232 °C)
		Elongation	Unaged min. 75% (168 hrs x 232 °C)
Nominal Impedance	50 ± 3 Ω		
Nominal Capacitance	95.8 pF/m		
Nominal Velocity of Propagation	69.5%		
VSWR (0 to 6 GHz)	≤ 1.3		
Minimum Inside Bend radius	25.4 mm (1.0 in)		

**CABLE ASSEMBLY PERFORMANCE**

Table 6 shows insertion loss and VSWR values for the CSE-SBRM-ccc-SBRM cable assemblies at commonly used frequencies.

Insertion loss is the loss of signal power (gain) resulting from the insertion of a device in a transmission line. VSWR describes how efficiently power is transmitted through the cable assembly. A lower VSWR value indicates better performance at a given frequency.

**TABLE 6. INSERTION LOSS AND VSWR FOR THE CSE-SBRM-CCC-SBRM CABLE ASSEMBLIES**

Band	Low-Band Cellular/ISM/LPWA	GNSS	Midband Cellular	WiFi/ISM
Frequency Range	400 MHz to 960 MHz	1164 MHz to 1609 MHz	1427 MHz to 5000 MHz	2.4 GHz
Cable Assembly CSE-SBRM-152-SBRM				
Insertion Loss (dB max)	-0.21	-0.27	-0.53	-0.34
VSWR (max)	1.1	1.1	1.3	1.1
Cable Assembly CSE-SBRM-305-SBRM				
Insertion Loss (dB max)	-0.36	-0.46	-0.89	-0.55
VSWR (max)	1.1	1.1	1.4	1.1
Cable Assembly CSE-SBRM-610-SBRM				
Insertion Loss (dB max)	-0.60	-0.78	-1.56	-0.99
VSWR (max)	1.1	1.1	1.4	1.1

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## PACKAGING INFORMATION

The CSE-SBRM-ccc-SBRM cable assembly is packaged in a clear plastic bag, in quantities of 50 pcs. Distribution channels may offer alternative packaging options.

### TE TECHNICAL SUPPORT CENTER

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