

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 Ω coaxial cable
- SMB plug (female socket)
 - Snap-on mating
 - Gold plating
 - Superior corrosion resistance
 - Right angle connection

Applications

- LPWA
 - LoRaWAN®, Sigfox®, WiFi HaLow™ (802.11ah)
- Cellular IoT – LTE-M (Cat-M1), NB-IoT
- Cellular – 5G/4G LTE/3G/2G
- PC, LAN
- ISM – Bluetooth®, ZigBee®
- GNSS – GPS, Galileo, GLONASS, 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 Ω		
Insulation Resistance	500 MΩ 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

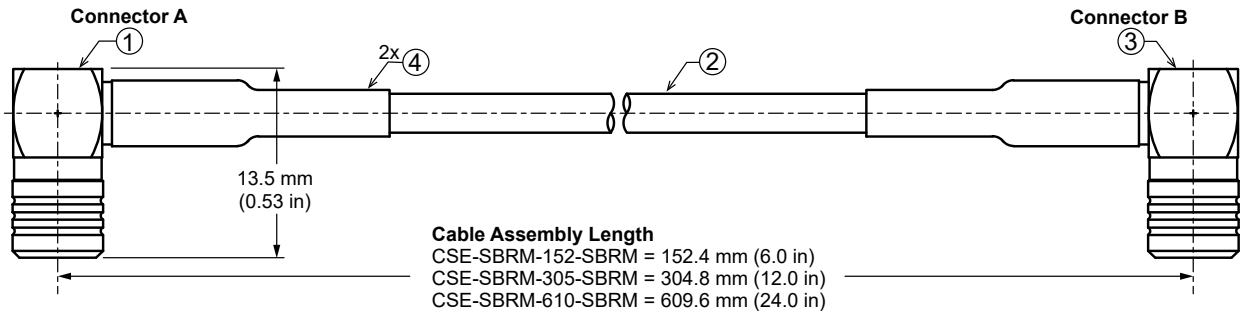


Figure 1. Product Dimensions for the CSE-SBRM-ccc-SBRM Cable Assembly

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

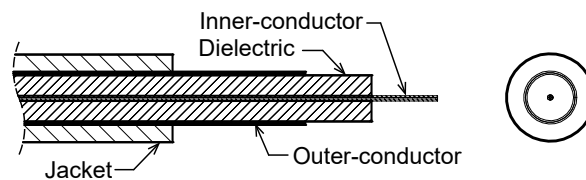


Figure 2. Coaxial Cable Cutaway Diagram

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 ²)
		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 ²)
		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

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.

Website: <http://linxtechnologies.com>
Linx Offices: 159 Ort Lane, Merlin, OR, US 97532
Phone: +1 (541) 471-6256
E-MAIL: info@linxtechnologies.com

Linx Technologies reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.

Wireless Made Simple is a registered trademark of Linx Acquisitions LLC. Bluetooth is a registered trademark of Bluetooth SIG, Inc. LoRaWAN is a registered trademark of Semtech Corporation. Sigfox is a registered trademark of SIGFOX. ZigBee is a registered trademark of ZigBee Alliance, Inc. Other product and brand names may be trademarks or registered trademarks of their respective owners.

Copyright © 2020 Linx Technologies

All Rights Reserved

Doc# DS20344-139CON

