

# C100-PSMSB-12M

---

CNT-100 CNT® Jumper with interface types SMA Male and SMB Male,  
12 m



## Product Classification

<b>Product Type</b>	Braided cable assembly
<b>Product Brand</b>	CNT®
<b>Product Series</b>	CNT-100

## General Specifications

<b>Body Style, Connector A</b>	Straight
<b>Body Style, Connector B</b>	Straight
<b>Cable Family</b>	CNT-100
<b>Interface, Connector A</b>	SMA Male
<b>Interface, Connector B</b>	SMB Male
<b>Specification Sheet Revision Level</b>	A

## Dimensions

<b>Length</b>	12 m   39.37 ft
<b>Nominal Size</b>	0.100 in

## VSWR/Return Loss

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
<b>700–3000 MHz</b>	1.433	14.99

## Jumper Assembly Sample Label

# C100-PSMSB-12M



## Regulatory Compliance/Certifications

### Agency

ISO 9001:2015



### Classification

Designed, manufactured and/or distributed under this quality management system

## Included Products

- 100PSBM-CR – SMB Male (= Female pin) for CNT-100 braided cable
- 100PSM-CR – SMA Male for CNT-100 braided cable
- CNT-100-FR – CNT-100-FR, CNT® 50 Ohm Braided Coaxial Cable, black non-halogenated, fire retardant polyolefin jacket

# 100PSBM-CR

---

SMB Male (= Female pin) for CNT-100 braided cable

## Product Classification

<b>Product Type</b>	Braided cable connector
<b>Product Brand</b>	CNT®

## General Specifications

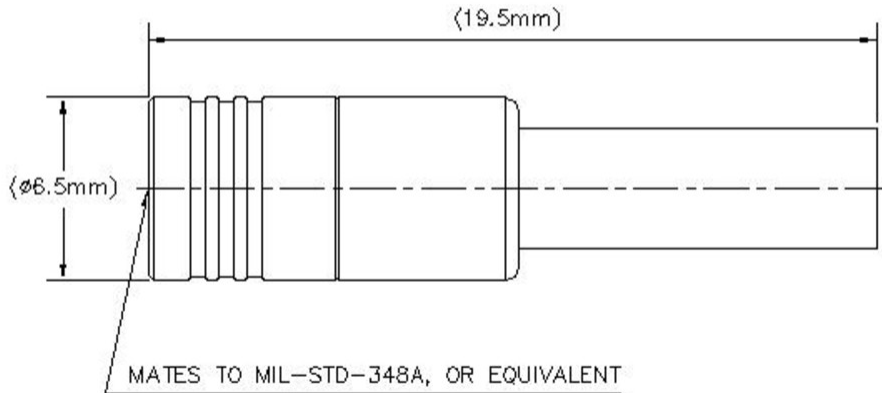
<b>Body Style</b>	Straight
<b>Inner Contact Attachment Method</b>	Solder
<b>Inner Contact Plating</b>	Gold
<b>Interface</b>	SMB Male
<b>Outer Contact Attachment Method</b>	Crimp
<b>Outer Contact Plating</b>	Trimetal
<b>Pressurizable</b>	No

## Dimensions

<b>Width</b>	6.5 mm   0.256 in
<b>Length</b>	19.5 mm   0.768 in
<b>Diameter</b>	6.5 mm   0.256 in
<b>Nominal Size</b>	0.110 in

## Outline Drawing

# 100PSBM-CR



## Electrical Specifications

<b>Insertion Loss, typical</b>	0.05 dB
<b>Average Power at Frequency</b>	50.0 W @ 900 MHz
<b>Cable Impedance</b>	50 ohm
<b>Connector Impedance</b>	50 ohm
<b>dc Test Voltage</b>	500 V
<b>Inner Contact Resistance, maximum</b>	5 mOhm
<b>Insulation Resistance, minimum</b>	1000 MOhm
<b>Operating Frequency Band</b>	0 – 6000 MHz
<b>Outer Contact Resistance, maximum</b>	2.5 mOhm
<b>Peak Power, maximum</b>	0.6 kW
<b>RF Operating Voltage, maximum (vrms)</b>	173 V

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0–3000 MHz	1.16	22.61

## Mechanical Specifications

<b>Connector Retention Tensile Force</b>	98 N   22.031 lbf
<b>Insertion Force</b>	10 N   2.248 lbf

# 100PSBM-CR

---

<b>Insertion Force Method</b>	IEC 61169-10:9.3.5
<b>Interface Durability</b>	500 cycles
<b>Interface Durability Method</b>	IEC 61169-10:9.5
<b>Mechanical Shock Test Method</b>	IEC 60068-2-27

## Environmental Specifications

<b>Operating Temperature</b>	-40 °C to +85 °C (-40 °F to +185 °F)
<b>Storage Temperature</b>	-65 °C to +125 °C (-85 °F to +257 °F)
<b>Attenuation, Ambient Temperature</b>	20 °C   68 °F
<b>Average Power, Ambient Temperature</b>	40 °C   104 °F
<b>Average Power, Inner Conductor Temperature</b>	100 °C   212 °F
<b>Climatic Sequence Test Method</b>	IEC 60068-1
<b>Corrosion Test Method</b>	IEC 60068-2-11
<b>Damp Heat Steady State Test Method</b>	IEC 60068-2-3
<b>Thermal Shock Test Method</b>	IEC 60068-2-14
<b>Vibration Test Method</b>	IEC 60068-2-6
<b>Water Jetting Test Mating</b>	Mated
<b>Water Jetting Test Method</b>	IEC 60529:2001, IP65

## Packaging and Weights

<b>Weight, net</b>	6.43 g   0.014 lb
--------------------	-------------------

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



### \* Footnotes

<b>Insertion Loss, typical</b>	0.05v̄freq (GHz) (not applicable for elliptical waveguide)
--------------------------------	--

# 100PSM-CR

---

SMA Male for CNT-100 braided cable

## Product Classification

<b>Product Type</b>	Braided cable connector
<b>Product Brand</b>	CNT®

## General Specifications

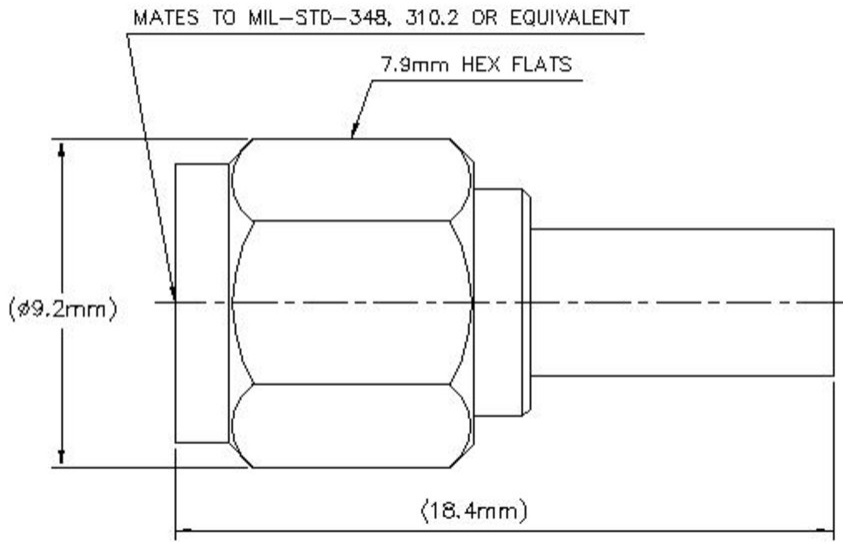
<b>Body Style</b>	Straight
<b>Inner Contact Attachment Method</b>	Solder
<b>Inner Contact Plating</b>	Gold
<b>Interface</b>	SMA Male
<b>Outer Contact Attachment Method</b>	Crimp
<b>Outer Contact Plating</b>	Trimetal
<b>Pressurizable</b>	No

## Dimensions

<b>Width</b>	7.92 mm   0.312 in
<b>Length</b>	18.39 mm   0.724 in
<b>Diameter</b>	7.92 mm   0.312 in
<b>Nominal Size</b>	0.110 in

## Outline Drawing

# 100PSM-CR



## Electrical Specifications

<b>Insertion Loss, typical</b>	0.05 dB
<b>Average Power at Frequency</b>	50.0 W @ 900 MHz
<b>Cable Impedance</b>	50 ohm
<b>Connector Impedance</b>	50 ohm
<b>dc Test Voltage</b>	500 V
<b>Inner Contact Resistance, maximum</b>	3 mOhm
<b>Insulation Resistance, minimum</b>	5000 MOhm
<b>Operating Frequency Band</b>	0 – 6000 MHz
<b>Outer Contact Resistance, maximum</b>	2.5 mOhm
<b>Peak Power, maximum</b>	0.6 kW
<b>RF Operating Voltage, maximum (vrms)</b>	173 V

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0–3000 MHz	1.051	32.09
3000–6000 MHz	1.122	24.81

## Mechanical Specifications

<b>Connector Retention Tensile Force</b>	98 N   22.031 lbf
--	-------------------

# 100PSM-CR

---

<b>Coupling Nut Proof Torque</b>	1.7 N-m   15.046 in lb
<b>Coupling Nut Proof Torque Method</b>	IEC 61169-15:9.3.6
<b>Coupling Nut Retention Force</b>	180 N   40.466 lbf
<b>Coupling Nut Retention Force Method</b>	IEC 61169-15:9.3.11
<b>Insertion Force</b>	22 N   4.946 lbf
<b>Insertion Force Method</b>	IEC 61169-15:9.3.5
<b>Interface Durability</b>	500 cycles
<b>Interface Durability Method</b>	IEC 61169-15:9.5
<b>Mechanical Shock Test Method</b>	IEC 60068-2-27

## Environmental Specifications

<b>Operating Temperature</b>	-40 °C to +85 °C (-40 °F to +185 °F)
<b>Storage Temperature</b>	-65 °C to +125 °C (-85 °F to +257 °F)
<b>Attenuation, Ambient Temperature</b>	20 °C   68 °F
<b>Average Power, Ambient Temperature</b>	40 °C   104 °F
<b>Average Power, Inner Conductor Temperature</b>	100 °C   212 °F
<b>Climatic Sequence Test Method</b>	IEC 60068-1
<b>Corrosion Test Method</b>	IEC 60068-2-11
<b>Damp Heat Steady State Test Method</b>	IEC 60068-2-3
<b>Thermal Shock Test Method</b>	IEC 60068-2-14
<b>Vibration Test Method</b>	IEC 60068-2-6
<b>Water Jetting Test Mating</b>	Mated
<b>Water Jetting Test Method</b>	IEC 60529:2001, IP65

## Packaging and Weights

<b>Weight, net</b>	5.74 g   0.013 lb
--------------------	-------------------

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system





# 100PSM-CR

---

## \* Footnotes

**Insertion Loss, typical** 0.05v<sup>-</sup>freq (GHz) (not applicable for elliptical waveguide)

# CNT-100-FR

---



CNT-100-FR, CNT® 50 Ohm Braided Coaxial Cable, black non-halogenated, fire retardant polyolefin jacket

## Product Classification

<b>Product Type</b>	Braided coaxial cable
<b>Product Brand</b>	CNT®
<b>Product Series</b>	CNT-100

## General Specifications

<b>Braid Coverage</b>	93 %
<b>Cable Type</b>	CNT-100
<b>Jacket Color</b>	Black

## Dimensions

<b>Diameter Over Dielectric</b>	1.55 mm   0.061 in
<b>Diameter Over Jacket</b>	2.79 mm   0.11 in
<b>Inner Conductor OD</b>	0.46 mm   0.018 in
<b>Outer Conductor OD</b>	2.06 mm   0.081 in
<b>Nominal Size</b>	0.100 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm
<b>Capacitance</b>	102 pF/m   31.09 pF/ft
<b>dc Resistance, Inner Conductor</b>	105 ohms/km   32.004 ohms/kft
<b>dc Resistance, Outer Conductor</b>	28.2 ohms/km   8.595 ohms/kft
<b>dc Test Voltage</b>	500 V
<b>Jacket Spark Test Voltage (rms)</b>	1500 V
<b>Maximum Frequency</b>	61 GHz

# CNT-100-FR

---

<b>Operating Frequency Band</b>	30 – 6000 MHz
<b>Peak Power</b>	0.6 kW
<b>Shielding Effectiveness</b>	90 dB
<b>Velocity</b>	66 %

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>
30.0	12.8	3.9
50.0	16.4	5
150.0	27.6	8.4
220.0	33.5	10.2
450.0	48.2	14.7
900.0	70.2	21.4
1500.0	93.5	28.5
1800.0	103.6	31.6
2000.0	110.2	33.6
2500.0	125.3	38.2
3000.0	139.4	42.5
4000.0	171.7	52.35
4500.0	183.6	55.98
5000.0	195.1	59.48
5200.0	198.4	60.49
5500.0	206	62.81
5800.0	212.4	64.76
6000.0	216.6	66.04

## Material Specifications

<b>Braid Material</b>	Tinned copper
<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Inner Conductor Material</b>	Copper
<b>Shield Tape Material</b>	Aluminum

## Mechanical Specifications

<b>Minimum Bend Radius, single Bend</b>	6.35 mm   0.25 in
---	-------------------

# CNT-100-FR

---

<b>Tensile Strength</b>	7 kg   15.432 lb
<b>Bending Moment</b>	0.1 N-m   0.885 in lb
<b>Flat Plate Crush Strength</b>	0.2 kg/mm   11.199 lb/in

## Environmental Specifications

<b>Installation temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Storage Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)

## Packaging and Weights

<b>Cable weight</b>	0.02 kg/m   0.013 lb/ft
<b>Packaging Type</b>	Reel

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant

