

C100-PSMSB-M8

CNT-100 CNT® Jumper with interface types SMA Male and SMB Male, 0.8 m



Product Classification

Product Type	Braided cable assembly
Product Brand	CNT®
Product Series	CNT-100

General Specifications

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

Dimensions

Length	0.8 m 2.625 ft
Nominal Size	0.100 in

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
700–3000 MHz	1.433	14.99

Jumper Assembly Sample Label

C100-PSMSB-M8



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

Product Type	Braided cable connector
Product Brand	CNT®

General Specifications

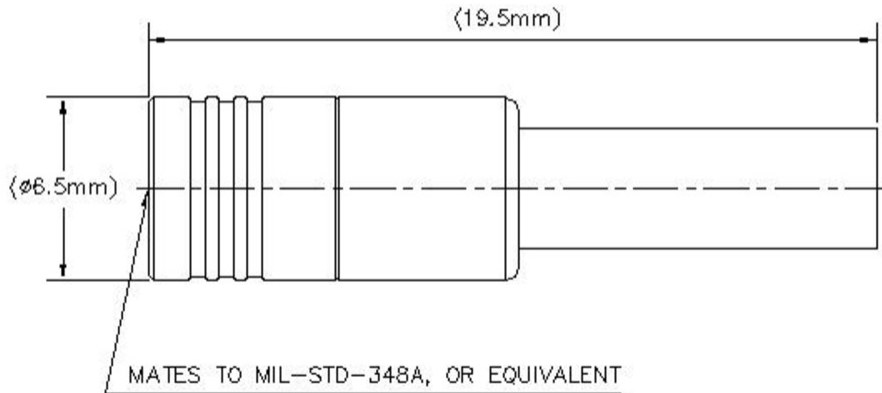
Body Style	Straight
Inner Contact Attachment Method	Solder
Inner Contact Plating	Gold
Interface	SMB Male
Outer Contact Attachment Method	Crimp
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Width	6.5 mm 0.256 in
Length	19.5 mm 0.768 in
Diameter	6.5 mm 0.256 in
Nominal Size	0.110 in

Outline Drawing

100PSBM-CR



Electrical Specifications

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

VSWR/Return Loss

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

Mechanical Specifications

Connector Retention Tensile Force	98 N 22.031 lbf
Insertion Force	10 N 2.248 lbf

100PSBM-CR

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

Environmental Specifications

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

Packaging and Weights

Weight, net	6.43 g 0.014 lb
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Regulatory Compliance/Certifications

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



* Footnotes

Insertion Loss, typical	0.05v̄freq (GHz) (not applicable for elliptical waveguide)
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100PSM-CR

SMA Male for CNT-100 braided cable

Product Classification

Product Type	Braided cable connector
Product Brand	CNT®

General Specifications

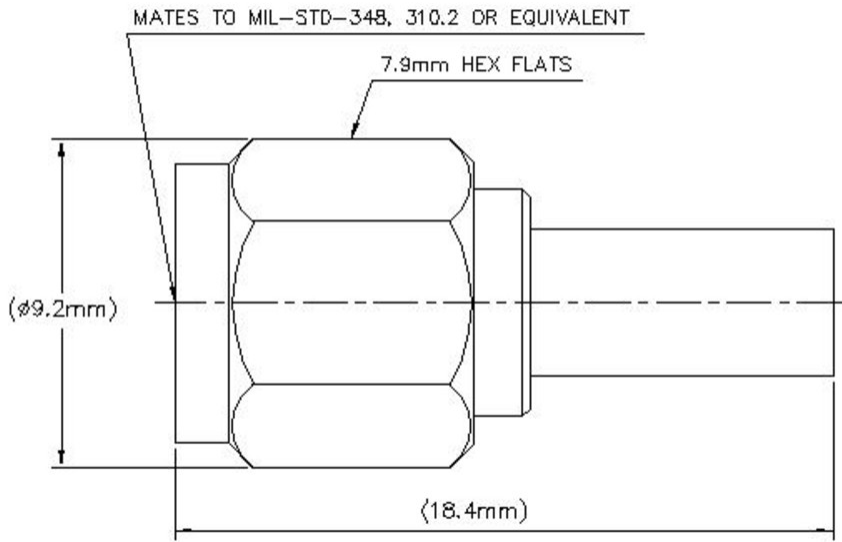
Body Style	Straight
Inner Contact Attachment Method	Solder
Inner Contact Plating	Gold
Interface	SMA Male
Outer Contact Attachment Method	Crimp
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Width	7.92 mm 0.312 in
Length	18.39 mm 0.724 in
Diameter	7.92 mm 0.312 in
Nominal Size	0.110 in

Outline Drawing

100PSM-CR



Electrical Specifications

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

Connector Retention Tensile Force	98 N 22.031 lbf
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100PSM-CR

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

Environmental Specifications

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

Packaging and Weights

Weight, net	5.74 g 0.013 lb
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Regulatory Compliance/Certifications

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



100PSM-CR

* Footnotes

Insertion Loss, typical $0.05\sqrt{\text{freq (GHz)}}$ (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

Product Type	Braided coaxial cable
Product Brand	CNT®
Product Series	CNT-100

General Specifications

Braid Coverage	93 %
Cable Type	CNT-100
Jacket Color	Black

Dimensions

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

Electrical Specifications

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

CNT-100-FR

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

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
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

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

Mechanical Specifications

Minimum Bend Radius, single Bend	6.35 mm 0.25 in
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CNT-100-FR

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

Environmental Specifications

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

Packaging and Weights

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

Regulatory Compliance/Certifications

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

