



Product: [7805R](#)

RF 100 Wireless Coax, RG174, 24.5 AWG, Foil + TC Braid, CMR/CMG PVC Jacket

Product Description

RF 100 Wireless Coax, RG-174 type, 24.5 AWG solid .020" bare copper conductor, foam HDPE insulation, Beldfoil®; tinned copper braid shield (90% coverage), CMR/CMG PVC jacket.

Technical Specifications

Power Rating

Frequency [MHz]	Max. Power Rating [W]	Nominal Power Rating [W]
30 MHz	216 W	216 W
50 MHz	154 W	154 W
150 MHz	74 W	74 W
220 MHz	57 W	57 W
450 MHz	34 W	34 W
900 MHz	21 W	21 W
1,500 MHz	14 W	14 W
2,000 MHz	12 W	13 W
2,500 MHz	10 W	12 W
3,500 MHz	8 W	10 W
4,500 MHz	7 W	9 W
6,000 MHz	5 W	8 W
4,500 MHz		7 W
5,800 MHz		5 W
6,000 MHz		5 W

Voltage

UL Voltage Rating
300 V RMS

VSWR

Frequency [MHz]
5 - 6000 MHz

Temperature Range

UL Temp Rating:	60°C
Operating Temp Range:	-40°C To +80°C

Mechanical Characteristics

Bulk Cable Weight:	9 lbs/1000ft
Max. Pull Tension:	20 lbs
Min Bend Radius/Minor Axis:	1.25 in

Standards

NEC/(UL) Compliance:	CMR
CEC/C(UL) Compliance:	CMG
RG Type:	174/U Type

Series Type:	RF 100
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Applicable Environmental and Other Programs

Environmental Space:	Indoor - Riser
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
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Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1666 Vertical Shaft
CSA Flammability:	FT4
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Part Number

Variants

Item #	Color	Putup Type	Length	UPC
7805R 008100	Gray	Reel	100 ft	612825189558
7805R 008500	Gray	Reel	500 ft	612825189572
7805R 0081000	Gray	Reel	1,000 ft	612825189565

Footnote: E - MAY CONTAIN MORE THAN 1 PIECE. MINIMUM LENGTH OF ANY ONE PIECE IS 25'.

History

Update and Revision:	Revision Number: 0.274 Revision Date: 04-28-2020
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
24.5	Solid	BC - Bare Copper	0.0195 in	1

Conductor Count: 1

Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	0.06 in

Outer Shield Material

Type	Layer	Material	Material Trade Name	Coverage [%]
Tape	1	Alum / Poly	Beldfoil®	100%
Braid	2	Tinned Copper (TC)		90%

Outer Jacket Material

Material	Nominal Diameter
PVC - Polyvinyl Chloride	0.11 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Outer Shield DCR	Outer Conductor DCR
27.3 Ohm/1000ft	9.3 Ohm/1000ft	9.3 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Shield
26.2 pF/ft

Inductance

Nominal Inductance
0.068 μ H/ft

Impedance

Nominal Characteristic Impedance
50 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
5 MHz	1.4 dB/100ft
10 MHz	2 dB/100ft
30 MHz	3.5 dB/100ft
50 MHz	4.6 dB/100ft
150 MHz	8 dB/100ft
220 MHz	9.6 dB/100ft
450 MHz	14 dB/100ft
900 MHz	20.2 dB/100ft
1500 MHz	26.6 dB/100ft
1800 MHz	29.5 dB/100ft
2000 MHz	31.2 dB/100ft
2500 MHz	35.4 dB/100ft
3000 MHz	39.4 dB/100ft
3500 MHz	43 dB/100ft
4500 MHz	50 dB/100ft
5800 MHz	59 dB/100ft
6000 MHz	60.6 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.38 ns/ft	73.5%

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)
30 MHz	3.7 dB/100ft
50 MHz	4.7 dB/100ft
150 MHz	8.1 dB/100ft
220 MHz	9.83 dB/100ft
450 MHz	14.38 dB/100ft
900 MHz	20.97 dB/100ft
1500 MHz	27.99 dB/100ft
1800 MHz	30.78 dB/100ft
2000 MHz	32.87 dB/100ft
2500 MHz	37.38 dB/100ft
3000 MHz	42.49 dB/100ft
3500 MHz	46.9 dB/100ft
4500 MHz	53.72 dB/100ft
5800 MHz	65.1 dB/100ft
6000 MHz	66.5 dB/100ft

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