

Product: [1671A](#) 

50 Ohm Microwave, RG405, 24 AWG SPCCS Coax, Unjacketed



Product Description

50 Ohm, RG-405/U type, 24 AWG solid .020" silver-plated copper-covered steel conductor, PTFE insulation, copper-tin composite shield (100% coverage), unjacketed.

Technical Specifications

Product Overview

Suitable Applications:	Microwave
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
24	Solid	SCCS - Silvered Copper Covered Steel	0.02 in	1

Conductor Count:	1
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Insulation

Material	Material Trade Name	Nominal Diameter
PTFE - Polytetrafluoroethylene	Teflon®	0.062 in

Outer Shield Material

Type	Layer	Material	Coverage [%]
Tape	1	Copper	100%
Braid	2	Tin-Filled Composite	100%

Outer Jacket Material

Material
No Jacket

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Outer Shield DCR	Outer Conductor DCR
64.2 Ohm/1000ft	10.2 Ohm/1000ft	10.2 Ohm/1000ft

Capacitance

Nom. Capacitance Conductor to Shield
29.5 pF/ft

Inductance

Nominal Inductance
0.07 µH/ft

Impedance

Nominal Characteristic Impedance
50 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss
500 MHz	15 dB/100ft
1000 MHz	22.5 dB/100ft
2000 MHz	32.8 dB/100ft
3000 MHz	41.2 dB/100ft
5000 MHz	54.9 dB/100ft
7000 MHz	66.4 dB/100ft
10000 MHz	81.2 dB/100ft
15000 MHz	102 dB/100ft
18000 MHz	113 dB/100ft
20000 MHz	120 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.46 ns/ft	69.5%

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)
500 MHz	17 dB/100ft
1000 MHz	24.9 dB/100ft
2000 MHz	36.5 dB/100ft
3000 MHz	45.7 dB/100ft
5000 MHz	60.5 dB/100ft
7000 MHz	72.9 dB/100ft
10000 MHz	88.7 dB/100ft
15000 MHz	110.9 dB/100ft
18000 MHz	122.7 dB/100ft
20000 MHz	130 dB/100ft

Power Rating

Frequency [MHz]	Max. Power Rating [W]
500 MHz	180 W
1,000 MHz	119 W
2,000 MHz	79 W
3,000 MHz	62 W
5,000 MHz	46 W
7,000 MHz	37 W
10,000 MHz	30 W
15,000 MHz	24 W
18,000 MHz	21 W
20,000 MHz	20 W

Voltage

Non-UL Voltage Rating	UL Voltage Rating
1500 V RMS	30 V RMS (UL AWM Style 10245)

VSWR

Frequency [MHz]	Max. VSWR
500 MHz	1.1:1
1000 MHz	1.11:1
3000 MHz	1.13:1
7000 MHz	1.17:1
15000 MHz	1.25:1
20000 MHz	1.3:1

Electrical Characteristics Notes:	VSWR limit is a continuous sloping line from 500 MHz to 20 GHz
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Temperature Range

Non-UL Temp Rating:	200°C
UL Temp Rating:	105°C
Operating Temp Range:	-70°C To +200°C

Mechanical Characteristics

Bulk Cable Weight:	12 lbs/1000ft
Max. Pull Tension:	26 lbs
Min Bend Radius During Installation:	0.125 in
Min Bend Radius During Operation:	0.375 in
Min Flexing Radius:	0.375 in

Standards

UL AWM Style Compliance:	UL Style 10245
RG Type:	405/U Type

Applicable Environmental and Other Programs

Environmental Space:	Indoor (Not Riser or Plenum)
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	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):	2005-01-01
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
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Flammability, LSOH, Toxicity Testing

UL Flammability:	Horizontal Wire
UL voltage rating:	30 V RMS (UL AWM Style 10245)

Plenum/Non-Plenum

Plenum (Y/N):	No
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Part Number

Variants

Item #	Color	Putup Type	Length	UPC
1671A TIN50	Tin	Reel	50 ft	612825120285
1671A TIN100	Tin	Reel	100 ft	612825120261
1671A TIN500	Tin	Reel	500 ft	612825120292
1671A TIN1000	Tin	Reel	1,000 ft	612825120278

Footnote:	V - 250' PUT-UP EXACT LENGTH MAXIMUM OF 3 PIECES, MINIMUM LENGTH 50'. 500' PUT-UP EXACT LENGTH MAXIMUM OF 5 PIECES, MINIMUM LENGTH 50'. 1000' PUT-UP EXACT LENGTH MAXIMUM OF 8 PIECES, MINIMUM LENGTH 50'.
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Product Notes

Notes:	Commercial non-QPL product
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History

Update and Revision:	Revision Number: 0.302 Revision Date: 04-28-2020
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Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.