



Product: [1673B](#)

50 Ohm Microwave, RG402 Commercial Non-QPL Product, 19 AWG SPC Coax, Unjacketed

Product Description

50 Ohm, RG-402/U type commercial non-QPL product, 19 AWG solid .036" silver-plated copper 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
19	Solid	SC - Silvered Copper	0.036 in	1

Conductor Count:	1
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Insulation

Material	Material Trade Name	Nominal Diameter
PTFE - Polytetrafluoroethylene	Teflon®	0.116 in

Outer Shield

Type	Layer	Material	Coverage [%]
Tape	1	Bare Copper (BC)	100%
Braid	2	Tinned Copper (TC + Tin Filled)	100%

Outer Jacket

Material
No Jacket

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Outer Shield DCR	Outer Conductor DCR
7.9 Ohm/1000ft	4.5 Ohm/1000ft	4.5 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	8 dB/100ft
1000 MHz	12 dB/100ft
2000 MHz	18.1 dB/100ft
3000 MHz	22.9 dB/100ft
5000 MHz	31 dB/100ft
7000 MHz	37.8 dB/100ft
10000 MHz	46.6 dB/100ft
15000 MHz	59.1 dB/100ft
18000 MHz	65.8 dB/100ft
20000 MHz	70 dB/100ft

Delay

Nominal Delay	Nominal Velocity of Propagation (VP) [%]
1.46 ns/ft	70%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)
500 MHz	9.5 dB/100ft
1000 MHz	14.5 dB/100ft
3000 MHz	26.5 dB/100ft
5000 MHz	36 dB/100ft
10000 MHz	54 dB/100ft
20000 MHz	84 dB/100ft

Power Rating

Frequency [MHz]	Max. Power Rating [W]	Nominal Power Rating [W]
500 MHz	600 W	600 W
1,000 MHz	401 W	401 W
2,000 MHz	268 W	268 W
3,000 MHz	211 W	211 W
5,000 MHz	157 W	157 W
7,000 MHz	129 W	129 W
10,000 MHz	105 W	105 W
15,000 MHz	83 W	83 W
18,000 MHz	74 W	74 W
20,000 MHz	70 W	70 W

Voltage

Non-UL Voltage Rating
1900 V RMS

VSWR

Element	Frequency [MHz]	Max. VSWR
Ramp Function, End Points	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
Operating Temperature Range:	-70°C To +200°C

Mechanical Characteristics

Bulk Cable Weight:	25 lbs/1000ft
Max. Pull Tension:	70 lbs
Min. Bend Radius During Installation:	0.125 in

Min. Bend Radius During Operation:	.375 in
Min Flexing Radius:	0.75 in

Standards

RG Type:	402
Qualified Products List (QPL):	No

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	No
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes

Plenum/Non-Plenum

Plenum (Y/N):	No
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Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
1673B TIN100	Tin	Reel	100 ft	612825120421
1673B TIN250	Tin	Reel	250 ft	612825120438
1673B TIN500	Tin	Reel	500 ft	612825120445

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

Notes:	Commercial non-QPL product
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History

Update and Revision:	Revision Number: 0.433 Revision Date: 04-29-2024
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