

Product: [1674B](#) 

50 Ohm Microwave, 29 AWG, SPC, Unjacketed



Product Description

50 Ohm, 29 AWG solid .011" silver-plated copper conductor, PTFE insulation, copper-tin composite shield (100% coverage), unjacketed.

Technical Specifications

Product Overview

Suitable Applications:	Microwave
------------------------	-----------

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
29	Solid	SC - Silvered Copper	0.011 in	1

Conductor Count:	1
------------------	---

Insulation

Material	Material Trade Name	Nominal Diameter
PTFE - Polytetrafluoroethylene	Teflon®	0.034 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
81.2 Ohm/1000ft	8 Ohm/1000ft	8 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	25 dB/100ft
1000 MHz	36.7 dB/100ft
2000 MHz	53.8 dB/100ft
3000 MHz	67.3 dB/100ft
5000 MHz	89.2 dB/100ft
7000 MHz	107.5 dB/100ft
10000 MHz	130.9 dB/100ft
15000 MHz	163.8 dB/100ft
18000 MHz	181.1 dB/100ft
20000 MHz	192 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	26 dB/100ft
1000 MHz	38.5 dB/100ft
3000 MHz	71.7 dB/100ft
5000 MHz	95.8 dB/100ft
10000 MHz	141.8 dB/100ft
15000 MHz	178.4 dB/100ft
20000 MHz	210 dB/100ft

Power Rating

Frequency [MHz]	Max. Power Rating [W]
500 MHz	45 W
1,000 MHz	31 W
2,000 MHz	22 W
3,000 MHz	18 W
5,000 MHz	13 W
7,000 MHz	11 W
10,000 MHz	9.3 W
15,000 MHz	7.6 W
18,000 MHz	6.9 W
20,000 MHz	6.5 W

Voltage

Non-UL Voltage Rating
1000 V RMS

VSWR

Frequency [MHz]	Max. VSWR
500 MHz	1.16:1
1000 MHz	1.20:1
3000 MHz	1.24:1
7000 MHz	1.27:1
15000 MHz	1.41:1
20000 MHz	1.50:1
18000 MHz	1.50:1
20000 MHz	1.50:1

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

Temperature Range

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

Mechanical Characteristics

Bulk Cable Weight:	3.75 lbs/1000ft
Max. Pull Tension:	20 lbs

Min Bend Radius (Overall):	0.5 in
Min. Bend Radius During Installation:	0.125 in
Min Bend Radius During Operation:	.375 in
Min Flexing Radius:	0.375 in

Standards

Military Compliance:	Commercial, non-QPL product (M17/151 type)
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
---------------	----

Part Number

Variants

Item #	Color	Put-Up Type	Length	UPC
1674B TIN500	Tin	Reel	500 ft	612825120520

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

Product Notes

Notes:	Commercial non-QPL product, yellow dielectric material
--------	--

History

Update and Revision:	Revision Number: 0.397 Revision Date: 09-10-2021
----------------------	--

© 2021 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

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.