Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

1673A Coax - 50 Ohm Microwave Cable

Description:

RG-402/U type, 19 AWG solid .036" silver-plated copper-covered steel conductor, TFE Teflon® insulation, copper-tin composite shield (100% coverage), unjacketed.

Physical Characteristics (Overall)

Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	19	Solid	SPCCS - Silver Plated Copper Covered Steel	.036

Insulation

Insulation Material:

Insulation Trade Name	Insulation Material	Dia. (in.)
Teflon®	TFE - Tetrafluoroethylene	.116

Outer Shield

Outer Shield Material:

Layer #	Type	Outer Shield Material	Coverage (%)
1	Tape	Copper Foil	100
2	Braid	Tin-Filled Composite	100

Overall Cabling

Overall Nominal Diameter:	0.138 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-70°C To +200°C
UL Temperature Rating:	105°C
Non-UL Temperature Rating:	200°C
Bulk Cable Weight:	20 lbs/1000 ft.
Max. Recommended Pulling Tension:	70 lbs.
Min. Bend Radius (Install)/Minor Axis:	0.250 in.
Min. Bend Radius (Continuous Flexing):	0.750 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

AWM Specification:	UL Style 10245
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2005
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes

MII Order #39 (China RoHS):	Yes
RG Type:	402/U

Flame Test

Other Flame Test:	Horizontal Wire

Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes

Plenum/Non-Plenum

Plenum (Y/N):	No

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
50

Nom. Inductance:

Inductance (µH/ft)
0.070

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
29.5

Nominal Velocity of Propagation:

VP (%)
69.5

Nominal Delay:

Delay (ns/ft)
1.46

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
20.5

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
4.5

Maximum VSWR:

Description	Freq. (MHz)	Max. VSWR
Ramp Function, End Points	500	1.1
	20000	1.3

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
500	8.0
1000	12.0
2000	18.1
3000	22.9
5000	31.0
7000	37.8
10000	46.6
15000	59.1
18000	65.8
20000	70.0

Max. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
500	9.5
1000	14.5
3000	26.5

5000	36.0
10000	54.0
20000	84.0

Nom. Power Rating:

Freq. (MHz)	Rating (W)
500	600
1000	401
2000	268
3000	211
5000	157
7000	129
10000	105
15000	83
18000	74
20000	70

Max. Operating Voltage - UL:

Voltage
30 V RMS

Max. Operating Voltage - Non-UL:

Voltage
1900 V RMS

Misc. Information (Overall)

Other Description: Updated Temp rating and VSWR

Notes (Overall)

Notes: US Patents 4, 694, 122 & 5, 293, 001. Patent held in the U.S., Singapore, Australia, Germany, France, and England. Patent pending in Japan. Teflon® is a registered trademark of E. I. duPont de Nemours and Co. used under license by Belden, Inc.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1673A TIN100	100 FT	3.100 LB	TIN - COLOR	C	#19 TFE BRD TINNED COAX
1673A TIN250	250 FT	7.250 LB	TIN - COLOR	C V	#19 TFE BRD TINNED COAX
1673A TIN50	50 FT	1.800 LB	TIN - COLOR		#19 TFE BRD TINNED COAX
1673A TIN500	500 FT	14.000 LB	TIN - COLOR		#19 TFE BRD TINNED COAX

Notes:
C = CRATE REEL PUT-UP.
V = 250' PUT-UP EXACT LENGTH MAXIMUM OF 3 PIECESMINIMUM LENGTH 50'500' PUT-UP EXACT LENGTH MAXIMUM OF 5 PIECESMINIMUM LENGTH 50'

Revision Number: 2 Revision Date: 05-14-2007

Conformable® Coax Cable

50 Ohm Microwave Cables

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m
RG-402/U Type • 19 AWG Solid .036″ Silver-plated Copper-covered Steel Conductor • Copper-Tin Composite Shield (100% Coverage)																			
TFE Teflon® Insulation • Unjacketed																			
UL AWM Style 10245 (30V 105°C)	**1673A***	—	50	15.2	3.3	1.5	19 AWG (solid) .036″ SPCCS 20.5Ω/M′ 67.3Ω/km	.116	2.95	CT Composite 100% Shield Coverage 4.5Ω/M′ 14.8Ω/km	.138	3.51	50	69.5%	29.5	96.8	500	8.0	26.2
			100	30.5	3.9	1.8											1000	12.0	39.4
			250†	76.2	8.0	3.6											2000	18.1	59.4
			500	152.4	15.0	6.8											3000	22.9	75.1
																	5000	31.0	101.7
																	7000	37.8	124.0
																	10000	46.6	152.9
																	15000	59.1	193.9
																	18000	65.8	215.9
																	20000	70.0	229.7
TFE Teflon Insulation • Black PVC Jacket																			
UL AWM Style 10245 (30V 105°C)	**1673J***	—	100	30.5	5.1	2.3	19 AWG (solid) .036″ SPCCS 20.5Ω/M′ 67.3Ω/km	.116	2.95	CT Composite 100% Shield Coverage 4.5Ω/M′ 14.8Ω/km	.178	4.52	50	69.5%	29.5	96.8	500	8.0	26.2
			500†	152.4	17.5	8.0											1000	12.0	39.4
																	2000	18.1	59.4
																	3000	22.9	75.1
																	5000	31.0	101.7
																	7000	37.8	124.0
																	10000	46.6	152.9
																	15000	59.1	193.9
																	18000	65.8	215.9
																	20000	70.0	229.7
RG-402/U Type • 19 AWG Solid .036″ Silver-plated Copper Conductor • Copper-Tin Composite Shield (100% Coverage)																			
TFE Teflon Insulation • Unjacketed																			
UL AWM Style 10245 (30V 105°C)	**1673B***	—	100††	30.5	3.9	1.8	19 AWG (solid) .036″ SPC 7.9Ω/M′ 25.9Ω/km	.116	2.95	CT Composite 100% Shield Coverage 4.5Ω/M′ 14.8Ω/km	.138	3.51	50	69.5%	29.5	96.8	500	8.0	26.2
			250††	76.2	8.0	3.6											1000	12.0	39.4
			500††	152.4	14.5	6.6											2000	18.1	59.4
																	3000	22.9	75.1
																	5000	31.0	101.7
																	7000	37.8	124.0
																	10000	46.6	152.9
																	15000	59.1	193.9
																	18000	65.8	215.9
																	20000	70.0	229.7
RG-401/U Type •14 AWG Solid .065″ Silver-plated Copper Conductor • Copper-Tin Composite Shield (100% Coverage)																			
TFE Teflon Insulation • Unjacketed																			
UL AWM Style 10245 (30V 105°C)	**1675A***	—	50†	15.2	4.1	1.8	14 AWG (solid) .065″ SPC 2.5Ω/M′ 8.2Ω/km	.210	5.33	CT Composite 100% Shield Coverage 8.0Ω/M′ 26.2Ω/km	.246	6.25	50	69.5%	29.6	97.1	400	3.8	12.5
			100††	30.5	8.1	3.7											500	4.4	14.4
			250††	76.2	20.3	9.2											1000	6.8	22.3
			500††	152.4	40.5	18.4											2000	10.4	34.1
																	3000	13.4	44.0
																	5000	18.5	60.7
																	7000	22.8	74.8
																	10000	28.4	93.2
																	15000	36.6	120.1
																	18000	41.0	134.5

CT = Copper-Tin • DCR = DC Resistance • SPCCS = Silver-plated Copper-covered Steel • SPC = Silver-plated Copper • TFE = Tetra Fluoroethylene

* Protected by one or more of U.S. Patent Nos. 4,694,122 and 5,292,001. Patent held in the U.S., Singapore, Australia, Germany, France and England. Patent pending in Japan.

†250 ft. put-up: Exact 3 pieces (maximum), 50 feet minimum length
500 ft. put-up: Exact 5 pieces (maximum), 50 feet minimum length
1000 ft. put-up: Exact 8 pieces (maximum), 50 feet minimum length

††May contain more than one piece, minimum length of any one piece is 25 ft.

Teflon is a DuPont trademark.

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