Product: 1673J

50 Ohm Microwave, RG402, #19 SPCCS, PVC Jacket

Product Description

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

Technical Specifications

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Coax
19	Solid	SCCS - Silvered Copper Covered Steel	0.036 in	1

Conductor Count:	1

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	Nominal Diameter
PVC - Polyvinyl Chloride	0.178 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR	Nominal Conductor DCR Conductor Resistance	Nominal Outer Shield DCR	Outer Conductor DCR
20.5 Ohm/1000ft	20.5 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	UL Voltage Rating
1900 V RMS	30 V RMS

VSWR

Element	Frequency [MHz]	Max. VSWR
Ramp Function, End Points	500 MHz	1.1
	20000 MHz	1.3

Temperature Range

Non-UL Temp Rating:	105°C
UL Temp Rating:	105°C
Operating Temperature Range:	-40°C To +105°C

Mechanical Characteristics

Bulk Cable Weight:	32 lbs/1000ft
Max. Pull Tension:	70 lbs
Min Bend Radius (Overall):	1.5 in
Min. Bend Radius During Installation:	0.25 in
Min Flexing Radius:	0.75 in

Standards

UL AWM Style Compliance:	AWM 10245
RG Type:	402