



## Description:

Intermediate type, 13 AWG solid .072" bare copper conductor, gas-injected foam HDPE insulation, Duobond® II + tinned copper braid shield (95% coverage), PVC jacket.

## Physical Characteristics (Overall)

### Conductor

#### AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	13	Solid	BC - Bare Copper	.072

### Insulation

#### Insulation Material:

Insulation Material	Dia. (in.)
Gas-injected FHDPE - Foam High Density Polyethylene	.190

### Outer Shield

#### Outer Shield Material:

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Bonded Duofoil®	Tape	Bonded Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	TC - Tinned Copper	95

### Outer Jacket

#### Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

### Overall Cabling

Overall Nominal Diameter: 0.300 in.

## Mechanical Characteristics (Overall)

Operating Temperature Range: -40°C To +75°C

UL Temperature Rating: 80°C

Bulk Cable Weight: 53 lbs/1000 ft.

Max. Recommended Pulling Tension: 135 lbs.

Min. Bend Radius (Install)/Minor Axis: 0.880 in.

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

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): 01/01/2004

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

Series Type: RF 300

### Flame Test

UL Flame Test: UL1666 Vertical Shaft

CSA Flame Test: FT4

### Suitability

Suitability - Indoor: Yes

Suitability - Outdoor: Yes

Suitability - Aerial: Yes - When supported by a messenger wire

### Plenum/Non-Plenum

Plenum (Y/N): No

## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

Impedance (Ohm)  
50

### Nom. Inductance:

Inductance (µH/ft)  
0.060

### Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)  
23.0

### Nominal Velocity of Propagation:

VP (%)  
86

### Nominal Delay:

Delay (ns/ft)  
1.17

### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)  
2.1

### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)  
2.4

### Maximum VSWR:

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Max. VSWR
		5	6000	1.25:1

### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
30	1.0
50	1.3
150	2.2
220	2.7
450	3.9
900	5.6
1500	7.3
1800	8.1
2000	8.6
2500	9.7
3000	10.8

3500	11.8
4500	13.5
5800	15.8
6000	16.0

**Nom. Power Rating:**

Freq. (MHz)	Rating (W)
30	2161
50	1658
150	928
220	758
450	522
900	367
1500	522
1800	253
2000	239
2500	212
3000	194
3500	179
4500	157
5800	137
6000	135

**Max. Operating Voltage - UL:**

<b>Voltage</b>
300 V RMS

**Sweep Test**

**Sweep Testing:** 100% Sweep tested to 6 GHz.

**Misc. Information (Overall)**

**Other Description:** 10-05-04 BAG: Corrected Shield DCR

**Notes (Overall)**

**Notes:** Belden® The Wire in Wireless®

**Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7809R 0101000	1,000 FT	65.000 LB	BLACK	C	RF300 WIRELESS 50OHM COAXFRPVC
7809R 010500	500 FT	34.000 LB	BLACK	C	RF300 WIRELESS 50OHM COAXFRPVC

**Notes:**  
C = CRATE REEL PUT-UP.


# Low Loss 50 Ohm Wireless RF Transmission Cable

Intermediate Type

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

**Intermediate Type • 13 AWG Solid .072" Bare Copper Conductor • Duobond® II (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)**

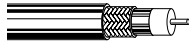
**Gas-injected Foam HDPE Insulation • Black Polyethylene Jacket**

RF300 80°C	7809A	—	500	152.4	30.5	13.9	13 AWG (solid) .072" BC 2.1Ω/M' 6.9Ω/km	.190	4.83	Duobond II* + 95% TC Braid BC 2.4Ω/M' 7.8Ω/km	.300	7.62	50	86%	23.0	75.5	30	1.0	3.4
			1000	304.8	58.0	26.3											50	1.3	4.2
																	150	2.2	7.3
																	220	2.7	8.9
																	450	3.9	12.9
																	900	5.6	18.3
																	1500	7.3	24.0
																	1800	8.1	26.5
																	2000	8.6	28.2
																	2500	9.7	31.9
																	3000	10.8	35.4
																	4500	13.5	44.4
5800	15.8	51.8																	
6000	16.0	52.6																	

100% Sweep tested. 6 GHz. Max. VSWR 1.25:1.  
Belden® The Wire in Wireless.

Mates with Land Mobile Radio type connectors.\*\*  
Suitable for Outdoor and Direct Burial applications.

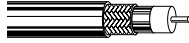
**Gas-injected Foam HDPE Insulation • Black PVC Jacket**

RF300 80°C	7809R	NEC:	500	152.4	34.0	15.5	13 AWG (solid) .072" BC 2.1Ω/M' 6.9Ω/km	.190	4.83	Duobond II* + 95% TC Braid BC 2.4Ω/M' 7.8Ω/km	.300	7.62	50	86%	23.0	75.5	30	1.0	3.4
		CMR:	1000	304.8	65.0	29.5											50	1.3	4.2
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5800	15.8	51.8																	
6000	16.0	52.6																	

100% Sweep tested. 6 GHz. Max. VSWR 1.25:1.  
Belden® The Wire in Wireless.

Mates with Land Mobile Radio type connectors.\*\*

**Gas-injected Foam HDPE Insulation • Flooded Water-resistant Black Polyethylene Jacket**

RF300 80°C	7809WB	—	500	152.4	30.5	13.9	13 AWG (solid) .072" BC 2.1Ω/M' 6.9Ω/km	.190	4.83	Duobond II* + 95% TC Braid BC 2.4Ω/M' 7.8Ω/km	.300	7.62	50	86%	23.0	75.5	30	1.0	3.4
			1000	304.8	58.0	26.3											50	1.3	4.2
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100% Sweep tested. 6 GHz. Max. VSWR 1.25:1.  
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Mates with Land Mobile Radio type connectors.\*\*  
Suitable for Outdoor and Direct Burial applications.

BC = Bare Copper • DCR = DC Resistance • HDPE = High-density Polyethylene • TC = Tinned Copper

\*Duobond II = Bonded Duofoil® (100% coverage) + aluminum braid (67% coverage).