

**Description:**

Series 59, 20 AWG solid .032" bare copper-covered steel conductor, gas-injected foam polyethylene insulation, Duofoil® or Duobond® + aluminum braid shield (40% coverage), PVC jacket.

Physical Characteristics (Overall)**Conductor****AWG:**

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	20	Solid	BCCS - Bare Copper Covered Steel	.032

Insulation**Insulation Material:**

Insulation Material	Dia. (in.)
Gas-injected FPE - Foam Polyethylene	.144

Outer Shield**Outer Shield Material:**

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Duofoil®	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	AL - Aluminum	40

Outer Jacket**Outer Jacket Material:**

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cabling

Overall Nominal Diameter: 0.237 in.

Mechanical Characteristics (Overall)

Operating Temperature Range:	-40°C To +80°C
UL Temperature Rating:	80°C
Bulk Cable Weight:	23 lbs/1000 ft.
Max. Recommended Pulling Tension:	80 lbs.
Min. Bend Radius (Install)/Minor Axis:	2.500 in.

Applicable Specifications and Agency Compliance (Overall)**Applicable Standards & Environmental Programs**

NEC/(UL) Specification:	CM, CATV
CEC/C(UL) Specification:	CM
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
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CA Prop 65 (CJ for Wire & Cable):	Yes
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MII Order #39 (China RoHS):	Yes
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Series Type:	Series 59
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Flame Test

UL Flame Test:	UL1685 UL Loading
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Plenum/Non-Plenum

Plenum (Y/N):	No
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Electrical Characteristics (Overall)**Nom. Characteristic Impedance:**

Impedance (Ohm)	Tolerance (Ohms)
75	± 3

Nom. Inductance:

Inductance (µH/ft)
.097

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
16.2

Nominal Velocity of Propagation:

VP (%)
83

Nominal Delay:

Delay (ns/ft)
1.2

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
44.5

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
17

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
5	0.75
55	1.84
211	3.36
270	3.79
300	3.99
350	4.33
400	4.66
450	4.96
550	5.48
750	6.51
870	7.00
1000	7.68

Max. Operating Voltage - UL:

Voltage
300 V RMS

Typical Structural Return Loss:

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Typical SRL (dB)
		5	550	18

Notes (Overall)

Notes: Sweep tested 5 MHz to 550 MHz.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9275 009U1000	1,000 FT	23.000 LB	WHITE		#20 LDPE/GIFHDLDPE SH FRPVC
9275 010U1000	1,000 FT	23.000 LB	BLACK		#20 LDPE/GIFHDLDPE SH FRPVC
9275 010U500	500 FT	12.000 LB	BLACK		#20 LDPE/GIFHDLDPE SH FRPVC
9275 0101000	1,000 FT	24.000 LB	BLACK		#20 LDPE/GIFHDLDPE SH FRPVC

Broadband Coax

MATV Cables

Series 59

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

Series 59 • 20 AWG Solid .032" Bare Copper-covered Steel Conductor • Foil + Braid Shield (40% Coverage)

Gas-injected Foam Polyethylene Insulation • Black PVC Jacket

80°C	9275	NEC: CATV CM	U-500	U-152.4	12.0	5.5	20 AWG (solid)	.144	3.66	Duofoil® + 40% Aluminum Braid	.237	6.02	75	83%	16.2	53.1	See Chart on page 6.92		
		CEC: CM	U-1000 [▲]	U-304.8	23.0	10.4	.032"			BCCS									
			1000	304.8	24.0	10.9	44.5Ω/M'			17.0Ω/M'									
							146.0Ω/km			55.8Ω/km									

Sweep tested 5 MHz to 550 MHz.

[▲]U-1000 ft. put-up also available in White.

80°C	9100	NEC: CATV CM	U-500	U-152.4	12.0	5.5	20 AWG (solid)	.144	3.66	Duobond® II* + 40% Aluminum Braid	.237	6.02	75	83%	16.2	53.1	See Chart on page 6.92		
		CEC: CM	U-1000 [▲]	U-304.8	23.0	10.4	.032"			BCCS									
			1000	304.8	24.0	10.9	44.5Ω/M'			17.0Ω/M'									
							146.0Ω/km			55.8Ω/km									

Sweep tested 5 MHz to 1 GHz.

[▲]U-1000 ft. put-up also available in White.

BCCS = Bare Copper-covered Steel • DCR = DC Resistance

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

Technical Information

Attenuation vs. Frequency for Belden® Broadband Coaxial Products

Frequency Point (MHz)	Series 59				Series 6				Series 11			
	Nominal dB/100 Ft.	Nominal dB/100m	Maximum dB/100 Ft.	Maximum dB/100m	Nominal dB/100 Ft.	Nominal dB/100m	Maximum dB/100 Ft.	Maximum dB/100m	Nominal dB/100 Ft.	Nominal dB/100m	Maximum dB/100 Ft.	Maximum dB/100m
5	.75	2.46	.89	2.92	.54	1.77	.67	2.20	.34	1.12	.38	1.25
55	1.84	6.04	1.95	6.40	1.45	4.76	1.60	5.25	.91	2.99	.97	3.18
211	3.36	11.02	3.59	11.78	2.64	8.66	2.87	9.42	1.68	5.51	1.81	5.94
216	3.41	11.19	3.69	12.11	2.67	8.76	2.95	9.68	1.70	5.58	1.84	6.04
240	3.57	11.71	3.87	12.70	2.80	9.19	3.09	10.14	1.78	5.84	1.94	6.36
270	3.79	12.43	4.05	13.29	2.97	9.74	3.24	10.63	1.89	6.20	2.05	6.73
300	3.99	13.09	4.27	14.01	3.13	10.27	3.43	11.25	1.99	6.53	2.15	7.05
325	4.16	13.65	4.50	14.76	3.26	10.70	3.59	11.78	2.07	6.79	2.24	7.35
350	4.33	14.21	4.64	15.22	3.39	11.12	3.72	12.20	2.15	7.05	2.32	7.61
375	4.49	14.73	4.84	15.88	3.52	11.55	3.87	12.70	2.22	7.28	2.40	7.87
400	4.66	15.29	4.88	16.01	3.65	11.97	4.00	13.12	2.30	7.55	2.47	8.10
450	4.96	16.27	5.30	17.39	3.88	12.73	4.26	13.98	2.45	8.04	2.65	8.69
500	5.22	17.13	5.50	18.04	4.09	13.42	4.48	14.70	2.59	8.50	2.85	9.35
550	5.48	17.98	5.90	19.36	4.30	14.11	4.71	15.45	2.73	8.96	2.94	9.65
600	5.75	18.86	6.18	20.28	4.51	14.80	4.94	16.21	2.85	9.35	3.08	10.10
650	6.03	19.78	6.52	21.39	4.72	15.49	5.18	16.99	2.98	9.78	3.22	10.56
700	6.28	20.60	6.83	22.41	4.92	16.14	5.45	17.88	3.10	10.17	3.37	11.06
750	6.51	21.36	6.96	22.83	5.11	16.76	5.59	18.34	3.21	10.53	3.50	11.48
800	6.71	22.01	7.30	23.95	5.27	17.29	5.75	18.86	3.32	10.89	3.65	11.97
862	6.97	22.87	7.50	24.61	5.47	17.95	5.98	19.62	3.46	11.35	3.82	12.53
870	7.00	22.97	7.54	24.74	5.49	18.01	6.00	19.68	3.48	11.42	3.84	12.60
900	7.14	23.42	7.79	25.56	5.60	18.37	6.11	20.05	3.55	11.65	3.96	12.99
950	7.39	24.25	7.90	25.92	5.79	19.00	6.35	20.83	3.66	12.01	4.10	13.45
1000	7.68	25.20	8.09	26.54	5.99	19.65	6.54	21.46	3.77	12.37	4.23	13.88
1450	—	—	—	—	7.80	25.60	8.00	26.20	5.00	16.41	5.50	18.10
1800	—	—	—	—	8.60	28.20	8.80	28.90	5.70	18.70	6.27	20.60
2250	—	—	—	—	9.80	32.20	10.00	32.80	6.50	21.33	7.15	23.50
3000	—	—	—	—	11.30	37.10	11.90	39.00	8.00	26.25	8.80	28.90