

### Key Features

- Weighs 60% less than standard RG-59/U type coax
- Sweep tested to 4.5GHz
- Requires 40% less space than standard mini RG-59/U type coax
- Guaranteed return loss of -23 dB (5 MHz to 1600 MHz) and -21 dB (1600 to 4500 MHz)
- Crush-resistant FHDPE dielectric
- Also available in factory-terminated custom assemblies

### Brilliance DigiTruck 179DT Lightweight, Ultra-Miniature Coax for Broadcast Production Trucks

To comfortably support today's broadcast technology, especially HD or 3G, mobile television broadcast trucks are densely packed with equipment and over-the-road axle weight requirements have become a real concern. To help lighten the truck's load, lessen the amount of space needed, and to improve air-conditioning air flow and gas mileage, Belden offers Brilliance DigiTruck 179DT lightweight RG-179 Type 75-ohm coaxial cable. This coax weighs 7.25 pounds per 1,000 feet — 60% less than standard Mini RG-59/U type cables. Also, Belden 179DT requires approximately 40% less space than a standard Mini RG-59/U Type coax (standard Mini RG-59/U type coaxes have a nominal OD of 0.159 inches vs. 0.100 inches for 179DT). Belden 179DT was designed for use in analog, SD, HD, or 3G video and AES/EBU digital audio transmissions.

### Low Return Loss Characteristics In A Rugged Construction

Belden 179DT has a guaranteed return loss of -23 dB (5 MHz to 1600MHz) and -21 dB (1600 to 4500 MHz) and is sweep tested to 4.5 GHz. This mimics the return loss performance of Belden's most popular Brilliance Precision Video Cables, providing 8-17 dB RL headroom against the SMPTE 424M

specification. Belden 179DT features a highly crush-resistant, foamed high-density polyethylene (FHDPE) dielectric to help ensure the durability of the cable — a particularly important characteristic for use on television broadcast trucks.

### An Extremely Compact Cable with Installable Performance®

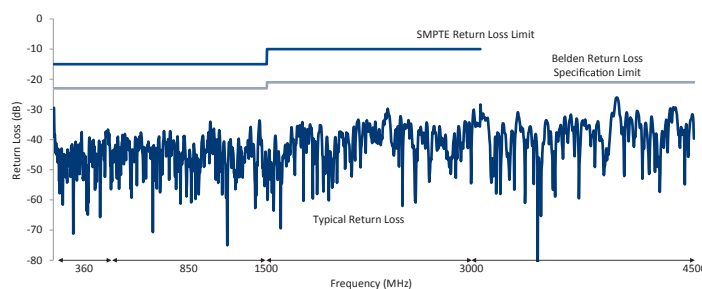
When you consider the major benefits built into Belden 179DT: its low return loss characteristics (that supply ample headroom below the SMPTE RL requirements) and the high resistance to crushing provided by the foamed high-density polyethylene, you have what Belden calls "Installable Performance."

### Belden Brilliance HD-BNC Connectors

Belden offers HD-BNC connectors for 179DT in three types which all feature true 75 ohm performance and superior return loss through 4.5 GHz. First, the locking HD-BNC features a screwlock collar that, when locked, maintains alignment from the cable through the center pin of the connector and delivers the best return loss performance. Second, the one-piece HD-BNC simplifies installation by eliminating loose pins and sleeves. Third, Belden offers a three-piece HD-BNC, a traditional design that many have relied on for strong and dependable signal delivery.

Brilliance HD-BNC Connectors		
	1-Piece Locking Compression	<b>179DTABHDL</b>
	1-Piece Compression	<b>179DTABHD1</b>
	Strip Tool	<b>PS59/6/RGB</b>
	Compression Tool	<b>CPLCRBC-BR</b>
	3-Piece Crimp	<b>179DTABHD3</b>
	Strip Tool	<b>BB3PST</b>
	Crimp Tool	<b>BB3PHCT</b>

### Return Loss Headroom (Belden 179DT)



For more information call  
**1.800.BELDEN.1** (1.800.235.3361) or  
visit our web site at [www.belden.com](http://www.belden.com)

## Brilliance DigiTruck 179DT Lightweight, Ultra-Miniature Coax

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
<b>28.5 AWG Solid .012" Bare Copper • DuoBond Foil (100%)+ 95% Tinned Copper Braid Shield</b>																			
<b>Gas-injected Foam HDPE Insulation • PVC Jacket (Red, Green, Blue, White, Yellow, Brown, Orange, Gray, Violet, Black)</b>																			
SDI/HDTV	<b>179DT</b>	NEC:	500	152.4	4.2	1.9	28.5 AWG	.056	1.42	Duobond	.100	2.54	75	77%	17.4	57.4	1	1.18	3.87
Digital Video		CMR	1000	304.8	8.0	3.6	(solid)			Foil (100%)							5	1.85	6.07
75°C		CEC:					.012"			+95%							6	1.99	6.53
		CMG FT4					BC			TC Braid							7	2.15	7.05
							108Ω/M'			8.9Ω/M'							10	2.39	7.84
							350Ω/km			29.2							12	3.83	12.57
																	67.5	5.89	19.33
																	71.5	5.98	19.62
																	88.5	6.61	21.69
																	100	6.89	22.61
																	135	7.85	25.76
																	143	8.07	26.48
																	180	8.93	29.30
																	270	10.80	35.44
																	360	12.50	41.01
																	540	15.40	50.53
																	720	17.90	58.73
																	750	18.30	60.04
																	1000	21.30	69.89
																	1500	26.30	86.29
																	2000	30.80	101.06
																	2250	32.80	107.62
																	3000	38.30	125.66
																	4500	47.50	155.85



100% Sweep Tested to 4.5 GHz  
 Guaranteed Return Loss:  
 23 dB Min (5-1600 MHz)  
 21 dB Min (1600-4500 MHz)

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

## Recommended Transmission Distance at Serial Digital Data Rates

Recommended Transmission Distance at Serial Data Rates												
Data Rate:	143 Mb/s		177 Mb/s		270 Mb/s		360 Mb/s		1.5 Gb/s		3 Gb/s	
Spec:	SMPTE 259M		ITU-R BT. 601		SMPTE 259M		SMPTE 259M		SMPTE 292M		SMPTE 424M	
Application:	Composite NTSC		Composite PAL		Component Video		Component Widescreen		HD-SDI		1080p/50-60 3G-SDI	
Part No.	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m
<b>179DT</b>	542	165	498	152	416	127	362	110	115	35	81	25

The serial digital interconnect standards are designed to operate where the signal loss at 1/2 the clock frequency does not exceed the approximate loss values listed below. The maximum length values shown are based on typical attenuation values for the cables listed and the following criteria: Maximum length = 30 dB loss at 1/2 the clock frequency: SMPTE 259M, PAL, Widescreen. Maximum length = 20 dB loss at 1/2 the clock frequency: SMPTE 292M. The bit error rate (BER) can vary dramatically as the calculated distances are approached. BER is dependent on receiver design and the losses of the actual coax used. Distribution and routing equipment manufacturers should be contacted to verify their maximum recommended transmission.

## Digital Audio Attenuation

Part No.	2 MHz		4 MHz		5 MHz		6 MHz		12 MHz		25 MHz	
	dB/100 Ft.	dB/100m	dB/100 Ft.	dB/100m	dB/100 Ft.	dB/100m	dB/100 Ft.	dB/100m	dB/100 Ft.	dB/100m	dB/100 Ft.	dB/100m
<b>179DT</b>	1.34	4.40	1.67	5.48	1.74	5.71	1.99	6.53	2.77	9.09	3.83	12.57

Values reflect typical results.

## Recommended Transmission Distance at Digital Audio Data Rates\*

Part No.	2 MHz		4 MHz		5 MHz		6 MHz		12 MHz		25 MHz	
	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m
<b>179DT†</b>	1493	455	1198	365	1149	350	1005	306	722	220	522	159
<b>179DT††</b>	597	182	479	146	460	140	402	123	289	88	209	64

\* Longer transmission distances are achievable but are contingent upon system component quality and input/output voltages.

† Per AES3-2003 assuming minimum allowable output signal amplitude of 2V and minimum allowable input signal amplitude of 200mV.

†† Per AES-3id-2001. When using analog video distribution equipment to implement AES-3id, minimum transmission distances are 40% of AES3 values assuming a minimum allowable output signal amplitude of 1V and minimum allowable input signal amplitude of 320mV.

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