

HDTV/SDI








A DTV signal is a television signal provided in a digital form. Data bits, like in a computer, provide a dramatically better picture and better sound quality called High Definition TV (HDTV). HDTV is the highest quality of DTV and is only one of the available formats. In addition to enhanced picture quality, the DTV signal allows several program streams (multicasting) on one channel, providing more program potential, as well as interactive services.

Serial Digital Interface (SDI) is the standard for digital video transmission over coaxial cable. The SMPTE 295M standard provides maximum distances (300 meters; 140 meters for High Definition), typically at 270 Mbps with 540 Mbps possible over a coaxial cable.

Recommended Coax Cable Construction: Cable providing signal to and within the home/building will continue to be CCS construction (C5775, C5785). Cables with SBC conductors (395011, 495025) are recommended for the interconnect between the decoder box and other electronic devices (TV, DVD, DVR, CD, Bluray).

HDTV/SDI—Interconnect Cables RG 59, RG 6 and RG 11 Ratings

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
 RG 59 SBC/Foil/95% TC Braid CMR	395025	1505A	5361	819	5553
 RG 59 SBC/Miniature/Foil/95% TC Braid CMR - Single	395031	1855A	—	—	—
 RGB - Overall jacket containing 3 x 395031	395031X3	—	—	—	—
 RGB - Overall jacket containing 5 x 395031	395031X5	—	—	—	—
 RG 59 SBC/Foil/95% TC Braid CMP - Plenum	495023	1506A	—	—	—
 RG 6 SBC/Foil/95% TC Braid CMR	395011	1694A	—	—	5765
 RG 6 SBC/Foil/95% TC Braid CMP - Plenum	495025	1695A	—	—	—
 RG 11 SBC/Foil/95% TC Braid CMR	395029	7731A	—	—	—
 RG 11 SBC/Foil/95% TC Braid CMP - Plenum	495027	7732A	—	—	2286K


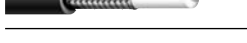







CCTV



Closed Circuit TV (CCTV) signals are typically lower-frequency analog signals. Attenuation increases as frequency increases, therefore lower baseband signals are able to travel longer distances on an RG 59 type coaxial cable than a higher-frequency television signal. This is why RG 59 is the most common coax for CCTV. It is becoming more common for Unshielded Twisted Pair (UTP) products, like Category 5e and 6 cables, to be used for Closed Circuit over Twisted Pair (CCTP) or Web-enabled cameras implemented over a Power over Ethernet network architecture; however, these solutions require the use of specialized equipment.

Recommended Coax Cable Construction: Solid bare copper (SBC) conductor and a bare copper (BC) braid shield with coverage of 90-95% to minimize signal loss of both the horizontal and vertical sync signals. Stranded conductors are recommended for pan, zoom, tilt (PZT) cameras.

CCTV RG 59 and RG 11 Ratings

Coax Solution	Carol	Belden	Genesis	West Penn	Commscope
 RG 59 SBC/95% BC Braid CM	C1142	543945	5001	—	—
 RG 59 Stranded (7/30) BC/95% BC Braid CM	C1103	9259	—	—	—
 RG 59 Stranded (7/30) BC/95% BC Braid + 22 AWG (7/30) Shielded Pair CM	C8025	9265	—	—	—
 RG 59 SBC/95% BC Braid + 18 AWG (7/26) Unshielded Pair CM	C8028	549945	—	—	—
 RG 59 SBC/95% BC Braid + 18 AWG (7/26) Unshielded Pair CMP - Plenum	C8030	649948	—	—	—
 RG 59 SBC/95% BC Braid CMP - Plenum	495028	643948	5351	25815	2037V
 RG 11 SBC/95% BC Braid CM	395058	513945	—	811	5905
 RG 11 SBC/95% BC Braid CMP - Plenum	495015	613948	—	—	2286K
 RG 6 BC/95% BC Braid CMP - Plenum	495035	—	—	—	2277V

*Abbreviation Key

AL - aluminum

SBC - solid bare copper

CCS - copper clad steel

BC - bare copper

TC - tinned copper

**CAROL
BRAND**

 **General Cable**

RG 59/U Type

Product Construction:

Conductors:

- Copper-clad steel per ASTM B-869
- Copper per ASTM B-3
- Twisted pair color code: black and red

Insulation/Core:

- Foam polyethylene (PE) design

Shield:

- Bare copper or aluminum braid
- Flexfoil® shield

Jacket:








- Premium PVC compound or PE compound

Packaging:

- Please contact Customer Service for packaging and color options

Applications:

- Suitable for RF signal transmission
- MATV
- CATV
- CCTV†
- Local Area Network
- Monitor/VDT display
- Direct burial
- See Coax Connector Cross Reference, pages 185-192

CATALOG NUMBER	AWG SIZE NOM. DCR	INSULATION MATERIAL		SHIELD COVERAGE NOM SHLD DCR	NOMINAL O.D.		NOMINAL CAPACITANCE		VELOCITY OF PROPAGATION, %	NOMINAL IMPEDANCE, Ω	NOMINAL ATTENUATION	
		INCHES	mm		INCHES	mm	pF/ft	pF/m			MHz	dB/100'
C5842 RG 59/U Type Messengered, Self-Supporting 	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded + 67% Aluminum Braid 9.7 Ω/Mft.	Black PVC		16.00	53.15	85	75	1	0.60
		0.146	3.71		0.242 X 0.395	6.15 X 10.03					10	1.20
Figure 8. Contains 0.051" galvanized steel messenger wire.												
C5844 RG 59/U Type MoistureGuard™ Direct Burial, Flooded  FlexFill®	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Foam PE		100% Flexfoil® Bonded + 67% Aluminum Braid w/Water Block 9.7 Ω/Mft.	Black PE		16.20	53.15	85	75	1	0.60
		0.146	3.71		0.242	6.15					10	1.20
C3526 RG 59/U Type Plenum UL CL2P, CMP c(UL) CMP 	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Fluoropolymer		100% Flexfoil® +65% Aluminum Braid 10.7 Ω/Mft.	Flexguard® Natural		16.00	52.50	84	75	1	0.34
		0.135	3.429		0.202	5.13					10	1.07
C3527 RG 59/U Type Quad-Shield Plenum UL CL2P, CMP c(UL) CMP 	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Fluoropolymer		(2) 100% Flexfoil® (1) 60% (2) 40% Aluminum Braid 6.3 Ω/Mft.	Flexguard® Natural		16.00	52.50	84	75	1	0.34
		0.135	3.429		0.235	5.97					10	1.07
C3500 RG 59/U Type Plenum UL CL2P, CMP c(UL) CMP 	20 Ga. Solid Copper-Clad Steel 45.9 Ω/Mft.	Fluoropolymer		95% Bare Copper Braid 1.9 Ω/Mft.	Flexguard® PVC Natural		16.50	54.14	83	75	1	0.78
		0.145	3.68		0.201	5.11					10	1.90
C8027† RG 59/U Type +18 AWG Shielded Pair UL CL2, CATV, CM c(UL) CM 	22 AWG (70/30) Bare Copper Coax 18 AWG (16/30) Shielded Pair	Foam PE		95% Bare Copper Braid	Black PVC		17.00	55.78	78	76	1	0.26
		0.144	3.66		0.242 X	6.15 X					10	0.91
		Premium PVC		125% Flexfoil® Al/PP Shielded	0.480 12.19		100	2.09				
0.016	0.41	0.480	12.19		200	3.00						
C8028† RG 59/U Type +18 AWG Unshielded Pair UL CL2, CATV, CM c(UL) CM 	20 AWG Solid Bare Copper Coax 18 AWG (7/26) Unshielded Pair	Foam PE		95% Bare Copper Braid	Black PVC		16.20	53.15	78	71	1	0.25
		0.144	3.66		0.238 X	6.05 X					10	0.78
		Premium PVC		Unshielded Pair	0.440 11.18		100	1.97				
		0.010	0.25		0.440	11.18	200	2.70				
											500	3.97
											1000	6.35
												9.15