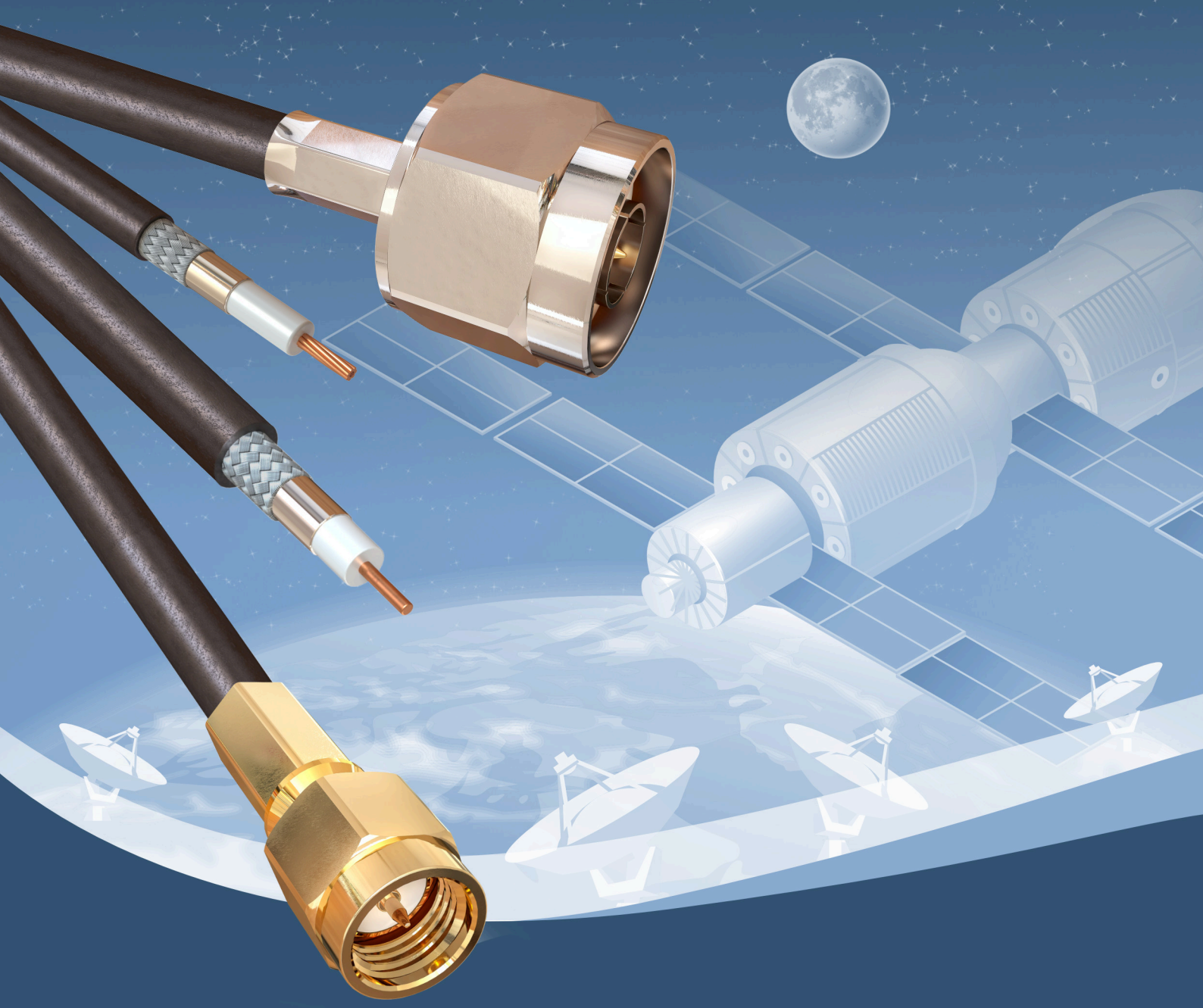


LOW ATTENUATION

Coaxial Cables & Connectors

Low Loss, Flexible, Superior
Alternatives to RG Cables

Gigatronix

www.gigatronix.com

Cable Part Number System

CX50 - LBC195XF - 305

CX50-LBC195XF-305
Example: LBC195 Low Loss ExtraFlex Coaxial Cable, Black Jacket - 305 metre drum

Drum Length	Code
30 metres (98 feet)	**30**
50 metres (164 feet)	**50**
100 metres (328 feet)	**100**
153 metres (502 feet) LBC600 only	**153**
305 metres (1000 feet)	**305**

Cable group	Code
LBC100	**LBC100**
LBC195	**LBC195**
LBC195 Low Smoke Zero Halogen	**LBC195LSZH**
LBC195 ExtraFlex	**LBC195XF**
LBC240	**LBC240**
LBC240 Low Smoke Zero Halogen	**LBC240LSZH**
LBC240 ExtraFlex	**LBC240XF**
LBC400	**LBC400**
LBC400 Low Smoke Zero Halogen	**LBC400LSZH**
LBC400 ExtraFlex	**LBC400XF**
LBC600	**LBC600**

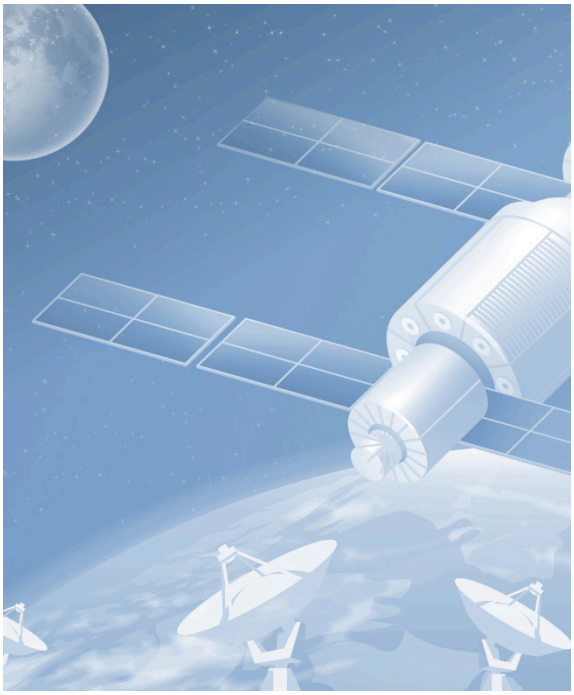
Impedance	Code
50 ohms	**CX50**
75 ohms	**CX75**

Low Attenuation Coaxial Cable & Connectors

Contents

An Introduction to Low Attenuation Cables

Introduction



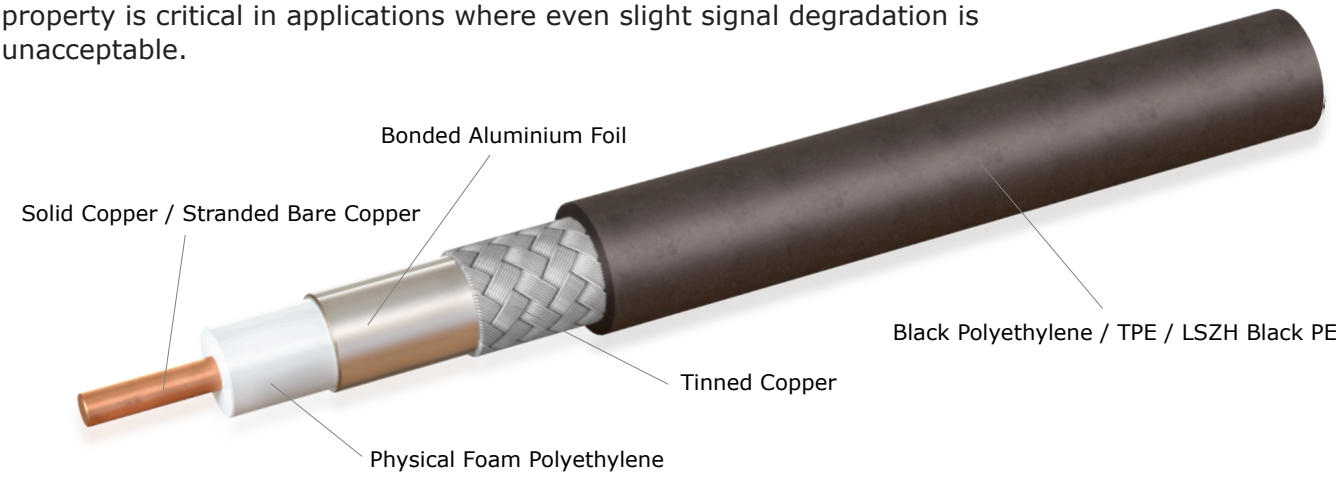
In today's digital age, seamless communication is vital for every facet of our lives, from keeping in touch with loved ones to powering global business operations. At the heart of this interconnected world lies the humble yet crucial technology of coaxial cables. In particular, low loss coaxial cables have emerged as the unsung heroes, ensuring reliable data transmission in various communication systems. Here, we will explore the significance, features, and applications of low loss coaxial cables in the world of communications.

Understanding Low Loss Coaxial Cables

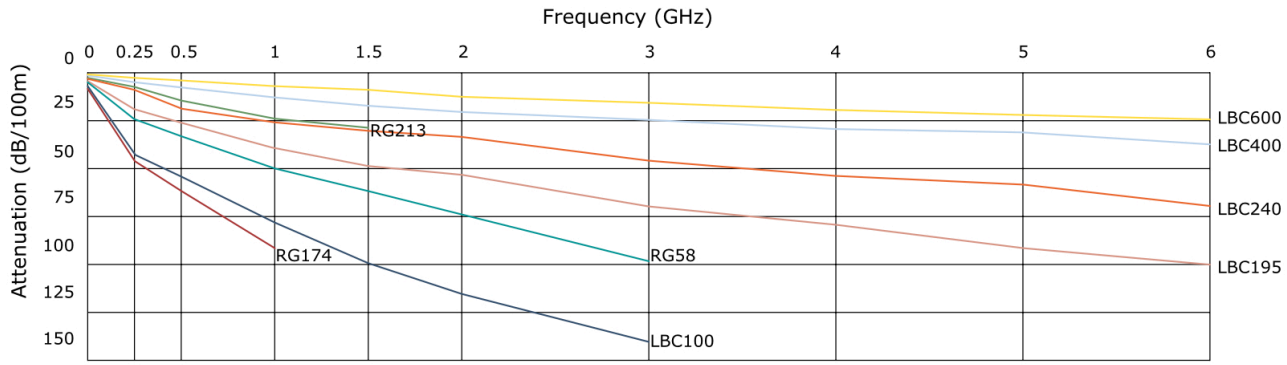
LBC Low Loss Coaxial Cables are high-quality transmission lines designed for the transmission of radio frequency (RF) and microwave signals. Developed by Gigatronix Ltd, a leader in RF and microwave cable technology, LBC cables have become a preferred choice due to their exceptional properties and capability to minimise signal loss. Their construction involves precise engineering and the use of advanced materials to reduce signal attenuation, making them indispensable in applications where signal integrity is paramount.

Features and Advantages

1. Minimal Signal Loss: The primary advantage of low loss coaxial cables is their ability to minimise signal loss. This is achieved through the use of superior dielectric materials and advanced shielding, ensuring that the signal remains strong over extended distances. This property is critical in applications where even slight signal degradation is unacceptable.



2. Wide Frequency Range: Low loss coaxial cables are available in various configurations to cover a broad spectrum of frequency bands. This versatility makes them compatible with a wide range of communication systems, including radio broadcasting, cellular networks, satellite communications, and radar systems.

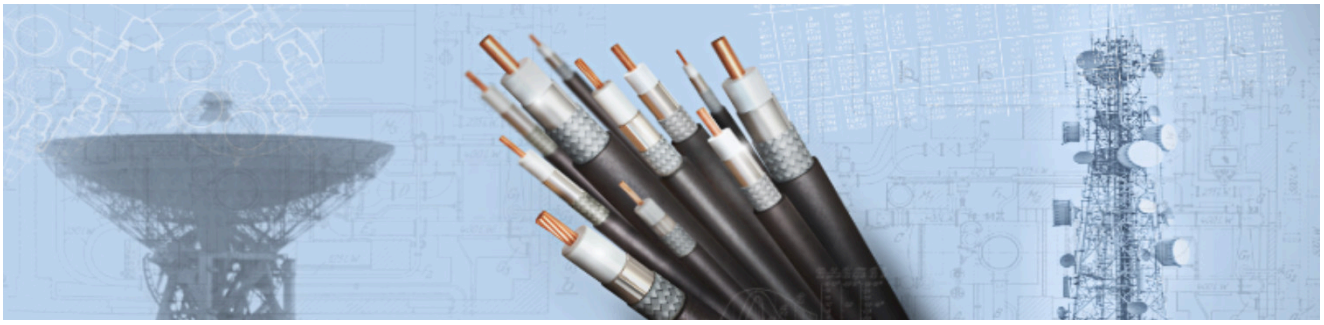


3. Robust and Durable: These cables are engineered to withstand harsh environmental conditions. They are designed with outer jackets that resist UV radiation, moisture, and abrasion, making them suitable for outdoor installations and rugged environments. Their durability ensures long-term performance.

4. Easy Installation: Low loss coaxial cables are user-friendly and relatively easy to install. They come equipped with a variety of connectors and adapters, making them adaptable to different devices and setups. This ease of installation reduces deployment time and cost.

Applications of Low Loss Coaxial Cables in Communications

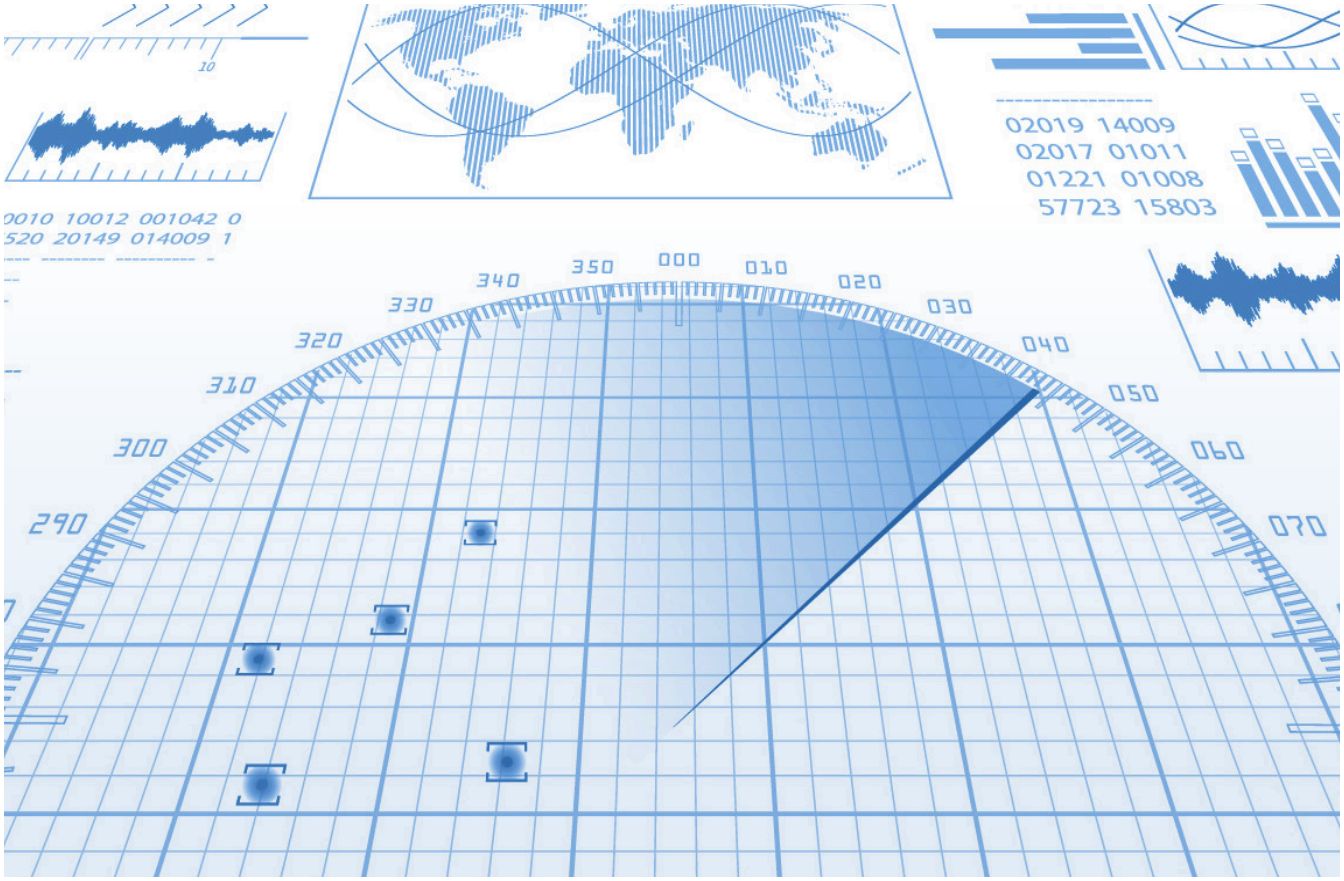
1. Telecommunications: Low loss coaxial cables are extensively utilised in telecommunications infrastructure, including cellular networks, satellite communications, and land mobile radio systems. Their low loss characteristics help maintain signal strength over long distances, reducing the need for signal amplification.



An Introduction to Low Attenuation Cables

2. **Wireless Networks:** In the era of wireless communication, low loss coaxial cables are instrumental in connecting antennas to access points. They are commonly employed in Wi-Fi installations, ensuring robust and consistent connectivity both indoors and outdoors.

3. Radio Broadcasting: Radio broadcasters rely on low loss coaxial cables to transmit radio signals from studios to transmission towers. The minimal signal loss ensures that the signal reaches the tower without significant degradation, resulting in clear and uninterrupted radio broadcasts.



4. Military and Defence: The military and defence sectors heavily rely on low loss coaxial cables for various applications, including radar systems, surveillance equipment, and communication networks. Their durability and resistance to environmental factors make them ideal for critical operations.

5. Public Safety: Low loss coaxial cables play a crucial role in public safety communications, including those used by police, fire departments, and emergency services. They ensure uninterrupted communication during critical situations.

Conclusion

Low loss coaxial cables serve as the backbone of reliable communication systems across the globe. Their ability to minimise signal loss, wide frequency range, durability, and ease of installation make them indispensable in various industries. Whether it's maintaining signal integrity in telecommunications networks, enabling wireless connectivity, ensuring consistent radio broadcasts, or supporting critical military operations, these cables are at the forefront of keeping us connected in today's digital world. Their enduring performance underscores their vital role in the field of communications.

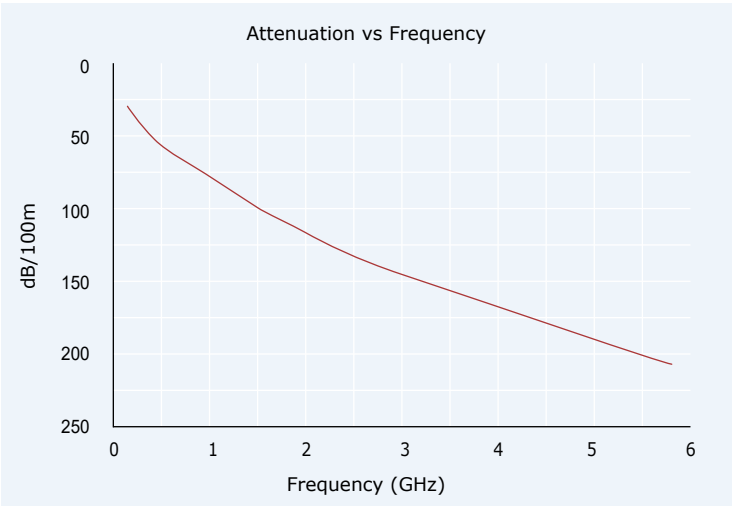
CX50-LBC100 - Low Loss Coaxial Cable

LBC100

ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION

Impedance	50 Ohms
Max. Frequency	6 GHz
Capacitance	101 pF/m
Velocity of Propagation	66%
Bending Radius (static)	6.4mm
Bending Radius (flexing)	25.4mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	29.40 dB	0.100 kW
220 MHz	35.80 dB	0.083 kW
450 MHz	51.90 dB	0.057 kW
900 MHz	74.90 dB	0.039 kW
1500 MHz	98.70 dB	0.029 kW
1800 MHz	109.00 dB	0.027 kW
2000 MHz	115.50 dB	0.025 kW
2500 MHz	130.60 dB	0.022 kW
3000 MHz	143.80 dB	0.020 kW
5800 MHz	210.30 dB	0.013 kW

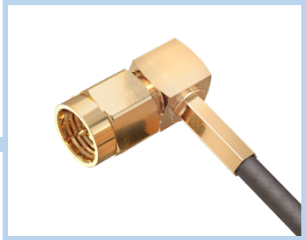


Coaxial Connectors to suit LBC100

SMA

MA15-0174-C01

MA15-3161-C06WP



MA17-0174-C01

MA62-3161-C01WP

SMA RP

MA15-0174-C06-R

MA17-0174-C01-R

SMP

MP15-0174-C01

MP17-0174-C01

BNC

BN15-3161-C06

BN15-3161-C06WP

BNC RP

BN15-0174-C06-1-R

N Type

NT02-3161-C06WP

TNC

TN15-3161-C06WP

TN62-3161-C06WP

QMA

QM15-0174-C49

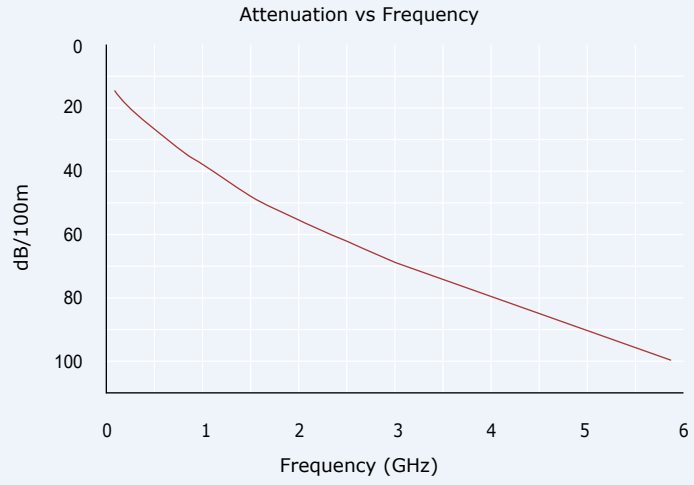
SEE ONLINE FOR MANY OTHER VARIANTS

CX50-LBC195 - Low Loss Coaxial Cable

LBC195

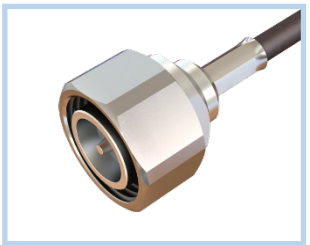
ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	83 pF/m
Velocity of Propagation	80%
Bending Radius (static)	15mm
Bending Radius (flexing)	50mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	14.60 dB	0.39 kW
220 MHz	17.70 dB	0.32 kW
450 MHz	25.50 dB	0.22 kW
900 MHz	36.50 dB	0.16 kW
1500 MHz	47.70 dB	0.12 kW
1800 MHz	52.50 dB	0.11 kW
2000 MHz	55.40 dB	0.10 kW
2500 MHz	62.40 dB	0.09 kW
3000 MHz	68.80 dB	0.08 kW
5800 MHz	98.10 dB	0.06 kW



Coaxial Connectors to suit LBC195

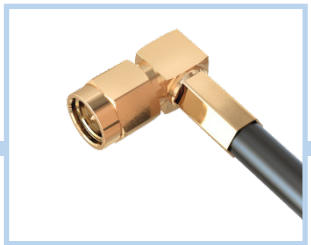
4.3/10



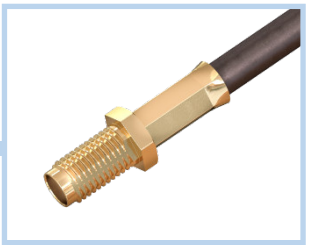
1015-0058-C49

SMA

MA15-0058-C06WP



MA17-0058-C01



MA10-0058-C01

N Type

NT15-0058-C49WP

NT17-0058-C49WP

NT02-0058-C06-1

NT10-0058-C06

BNC

BN15-0058-C06

TNC

TN15-0058-C06WP

TN17-0058-C06WP

TN10-0058-C06

QMA

QM15-0058-C49

TNC RP

TN15-0058-C06-R

TN10-0058-C06-R

SEE ONLINE FOR MANY OTHER VARIANTS

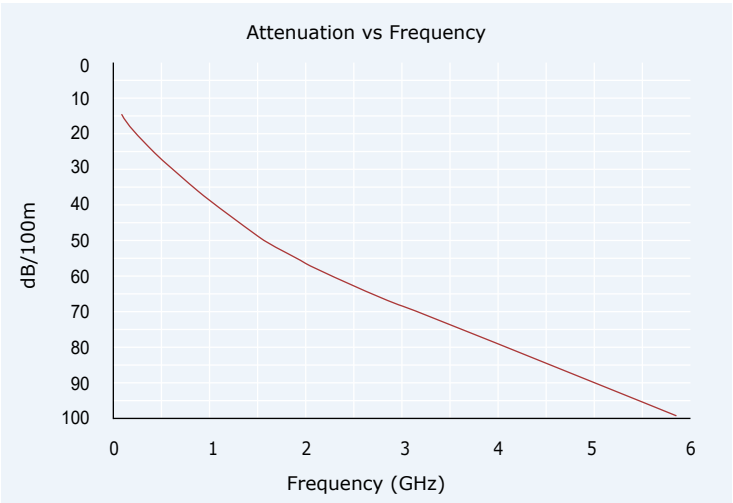
CX50-LBC195LSZH - Low Loss Coaxial Cable

LBC195 Low Smoke Zero Halogen

ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION

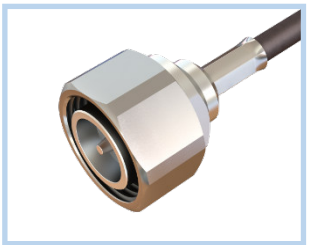
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	83.0 pF/m
Velocity of Propagation	80%
Bending Radius (static)	15mm
Bending Radius (flexing)	50mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C
UV Rating	UL1581:1200

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	14.60 dB	0.39 kW
220 MHz	17.70 dB	0.32 kW
450 MHz	25.50 dB	0.22 kW
900 MHz	36.50 dB	0.16 kW
1500 MHz	47.70 dB	0.12 kW
1800 MHz	52.50 dB	0.11 kW
2000 MHz	55.40 dB	0.10 kW
2500 MHz	62.40 dB	0.09 kW
3000 MHz	68.30 dB	0.08 kW
5800 MHz	98.10 dB	0.06 kW



Coaxial Connectors to suit LBC195 Low Smoke Zero Halogen

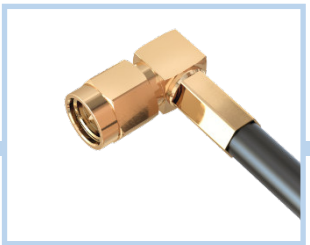
4.3/10



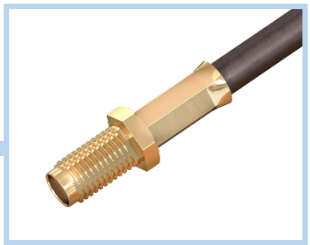
1015-0058-C49

SMA

MA15-0058-C06WP



MA17-0058-C01



MA10-0058-C01

N Type

NT15-0058-C49WP

NT17-0058-C49WP

NT02-0058-C06-1

NT10-0058-C06

BNC

BN15-0058-C06

TNC

TN15-0058-C06WP

TN17-0058-C06WP

TN10-0058-C06

QMA

QM15-0058-C49

TNC RP

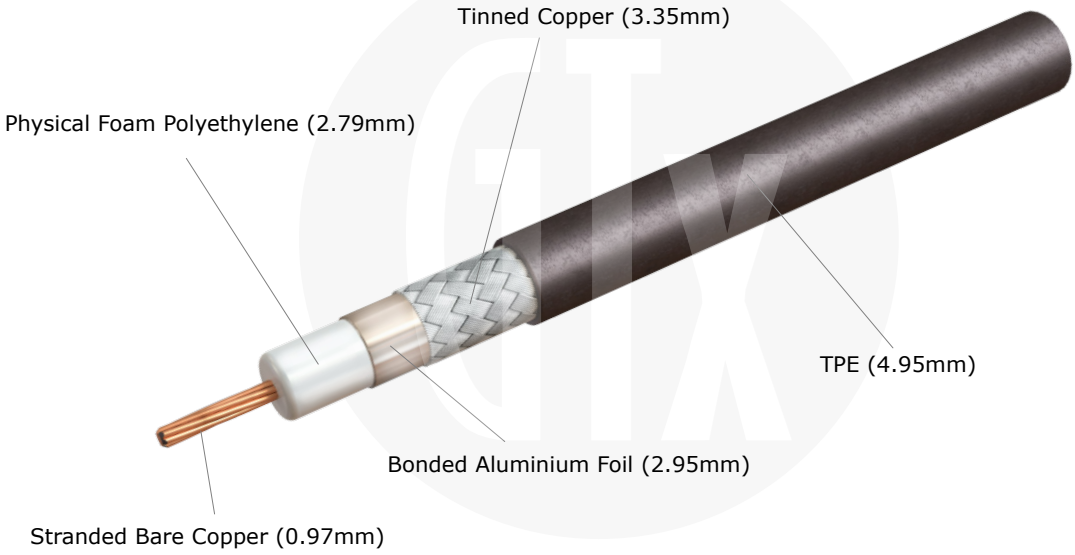
TN15-0058-C06-R

TN10-0058-C06-R

SEE ONLINE FOR MANY OTHER VARIANTS

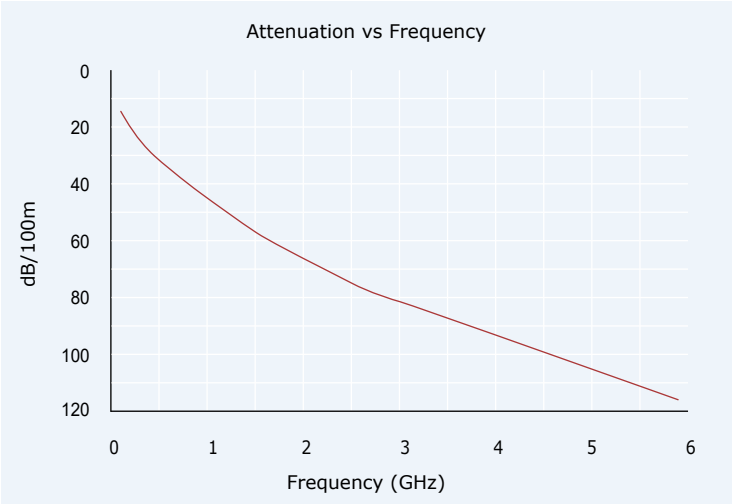
CX50-LBC195XF - Low Loss Flexible Coaxial Cable

LBC195 Extraflex



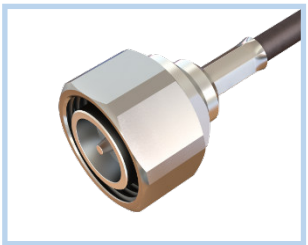
ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	80.3 pF/m
Velocity of Propagation	83%
Bending Radius (static)	12.7mm
Bending Radius (flexing)	50.8mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	17.30 dB	0.39 kW
220 MHz	21.10 dB	0.32 kW
450 MHz	30.40 dB	0.22 kW
900 MHz	43.40 dB	0.16 kW
1500 MHz	56.70 dB	0.12 kW
1800 MHz	62.40 dB	0.11 kW
2000 MHz	65.90 dB	0.10 kW
2500 MHz	74.20 dB	0.09 kW
3000 MHz	81.80 dB	0.08 kW
5800 MHz	116.70 dB	0.06 kW



Coaxial Connectors to suit LBC195 ExtraFlex

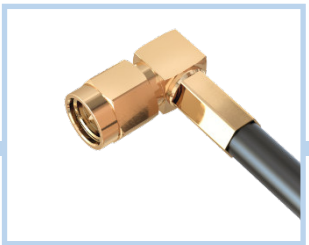
4.3/10



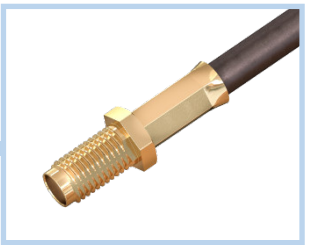
1015-0058-C49

SMA

MA15-0058-C06WP



MA17-0058-C01



MA10-0058-C01

N Type

NT15-0058-C49WP

NT17-0058-C49WP

NT02-0058-C06-1

NT10-0058-C06

BNC

BN15-0058-C06

TNC

TN15-0058-C06WP

TN17-0058-C06WP

TN10-0058-C06

QMA

QM15-0058-C49

TNC RP

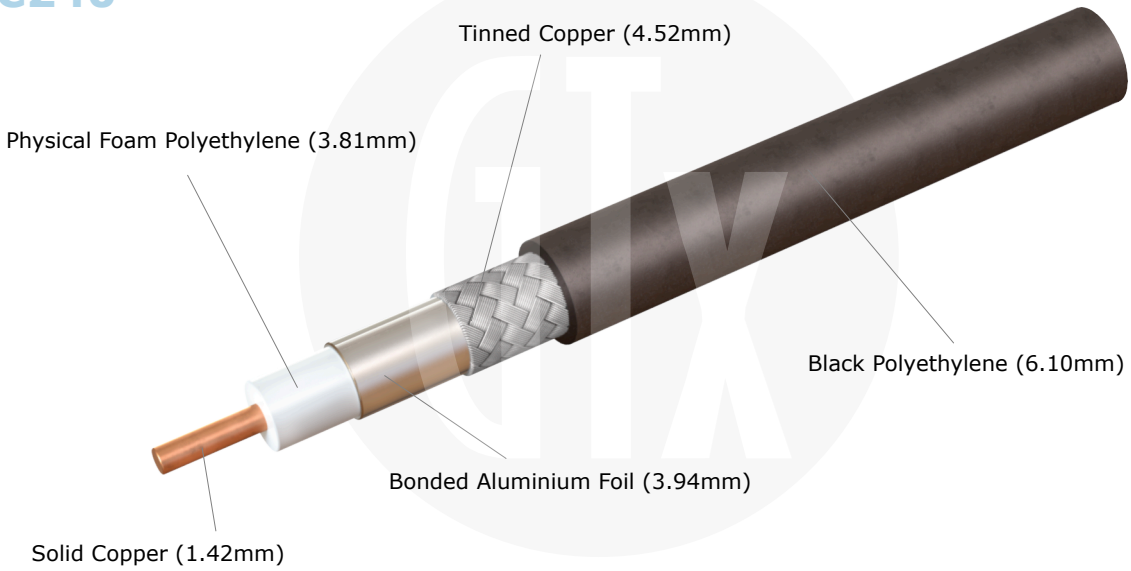
TN15-0058-C06-R

TN10-0058-C06-R

SEE ONLINE FOR MANY OTHER VARIANTS

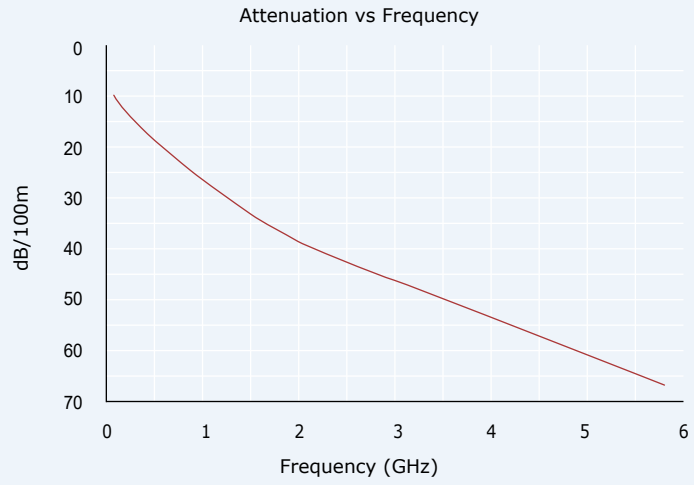
CX50-LBC240 - Low Loss Coaxial Cable

LBC240



ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	77.5 pF/m
Velocity of Propagation	84%
Bending Radius (static)	19mm
Bending Radius (flexing)	63.5mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	9.90 dB	0.66 kW
220 MHz	12.00 dB	0.54 kW
450 MHz	17.30 dB	0.38 kW
900 MHz	24.80 dB	0.26 kW
1500 MHz	32.40 dB	0.20 kW
1800 MHz	35.60 dB	0.18 kW
2000 MHz	37.70 dB	0.17 kW
2500 MHz	42.40 dB	0.15 kW
3000 MHz	46.50 dB	0.13 kW
5800 MHz	66.80 dB	0.10 kW



Coaxial Connectors to suit LBC240

SMA

MA15-L240-C01

MA17-L240-C01

MA10-L240-C01

SMA RP

MA15-L240-C01-R

N Type

NT15-L240-C06

NT15-L240-C06-2

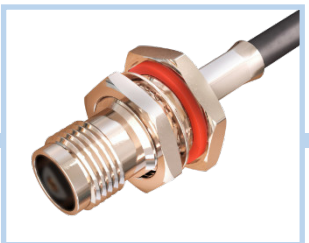
NT17-L240-C06

NT02-L240-C06-1

TNC

TN15-L240-C06

TN17-L240-C06



TN02-L240-C06

TN10-L240-C06

BNC

BN15-L240-C06

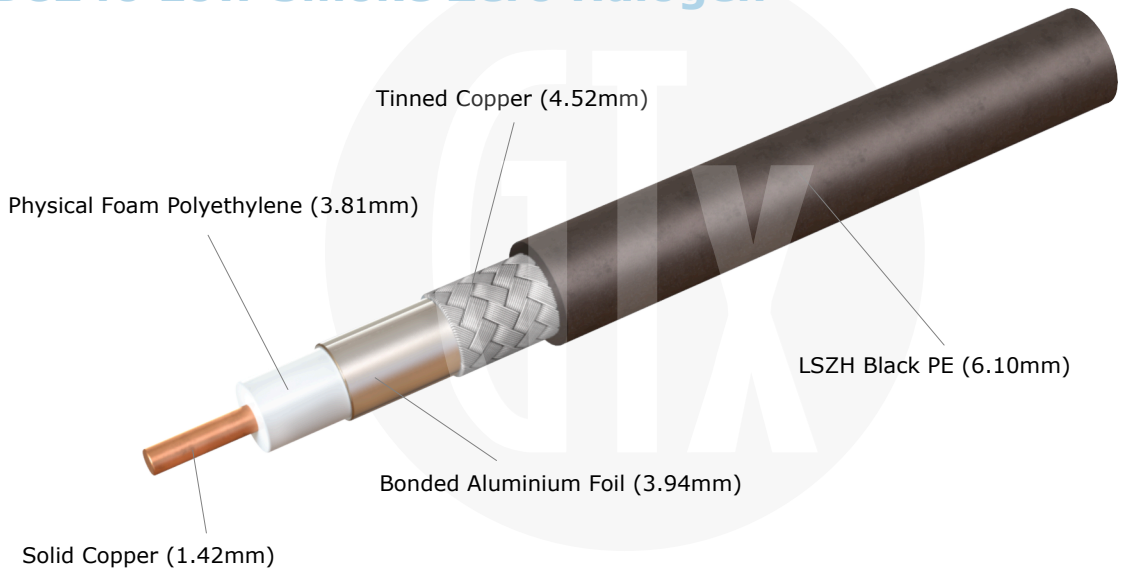
BN02-L240-C06

BN10-L240-C06

SEE ONLINE FOR MANY OTHER VARIANTS

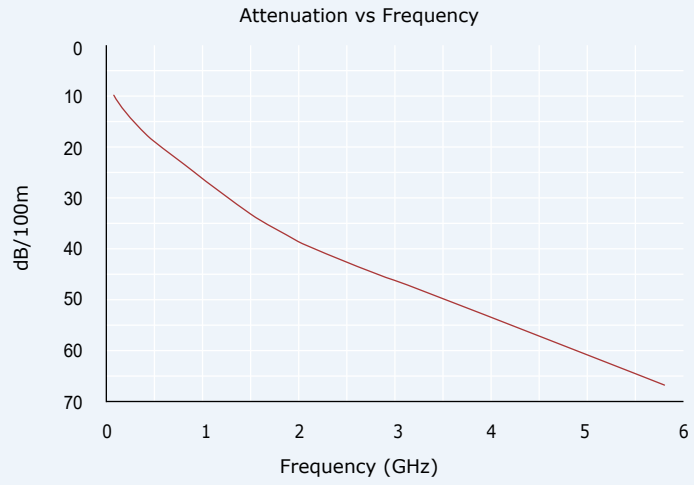
CX50-LBC240LSZH - Low Loss Coaxial Cable

LBC240 Low Smoke Zero Halogen



ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	77.5 pF/m
Velocity of Propagation	84%
Bending Radius (static)	19mm
Bending Radius (flexing)	63.5mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C
UV Rating	UL1581:1200

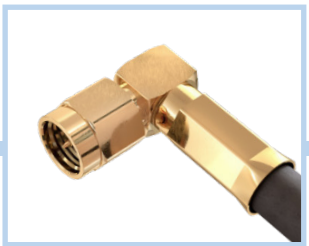
FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	9.90 dB	0.66 kW
220 MHz	12.00 dB	0.54 kW
450 MHz	17.30 dB	0.38 kW
900 MHz	24.80 dB	0.26 kW
1500 MHz	32.40 dB	0.20 kW
1800 MHz	35.60 dB	0.18 kW
2000 MHz	37.70 dB	0.17 kW
2500 MHz	42.40 dB	0.15 kW
3000 MHz	46.50 dB	0.13 kW
5800 MHz	66.80 dB	0.10 kW



Coaxial Connectors to suit LBC240 Low Smoke Zero Halogen

SMA

MA15-L240-C01



MA17-L240-C01

MA10-L240-C01

SMA RP

MA15-L240-C01-R

N Type

NT15-L240-C06

NT15-L240-C06-2

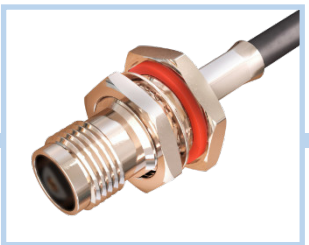
NT17-L240-C06

NT02-L240-C06-1

TNC

TN15-L240-C06

TN17-L240-C06



TN02-L240-C06

TN10-L240-C06

BNC

BN15-L240-C06

BN02-L240-C06

BN10-L240-C06

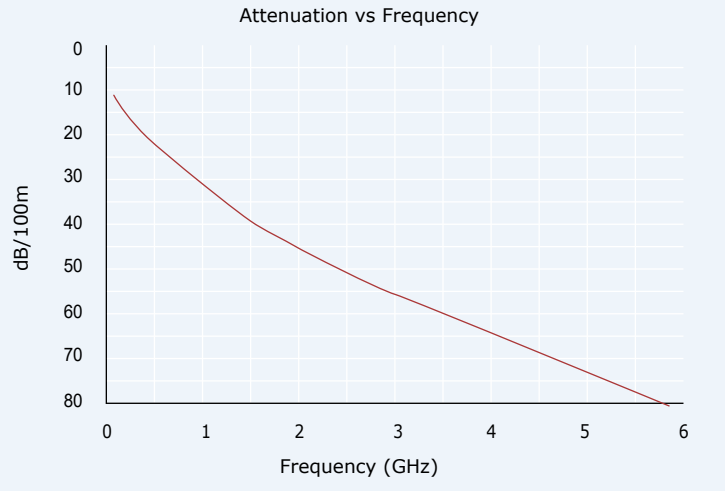
SEE ONLINE FOR MANY OTHER VARIANTS

CX50-LBC240XF - Low Loss Flexible Coaxial Cable

LBC240 Extraflex

ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	79.4 pF/m
Velocity of Propagation	84%
Bending Radius (static)	19mm
Bending Radius (flexing)	54mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	11.90 dB	0.55 kW
220 MHz	14.40 dB	0.45 kW
450 MHz	20.80 dB	0.31 kW
900 MHz	29.80 dB	0.22 kW
1500 MHz	38.90 dB	0.17 kW
1800 MHz	42.80 dB	0.15 kW
2000 MHz	45.20 dB	0.14 kW
2500 MHz	50.90 dB	0.13 kW
3000 MHz	55.70 dB	0.11 kW
5800 MHz	80.10 dB	0.08 kW



Coaxial Connectors to suit LBC240 ExtraFlex

SMA

MA15-L240-C01

MA17-L240-C01

MA10-L240-C01

SMA RP

MA15-L240-C01-R

N Type

NT15-L240-C06

NT15-L240-C06-2

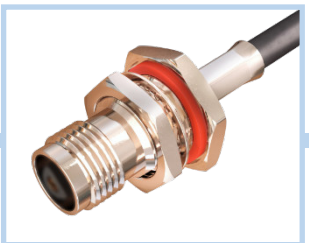
NT17-L240-C06

NT02-L240-C06-1

TNC

TN15-L240-C06

TN17-L240-C06



TN02-L240-C06

TN10-L240-C06

BNC

BN15-L240-C06

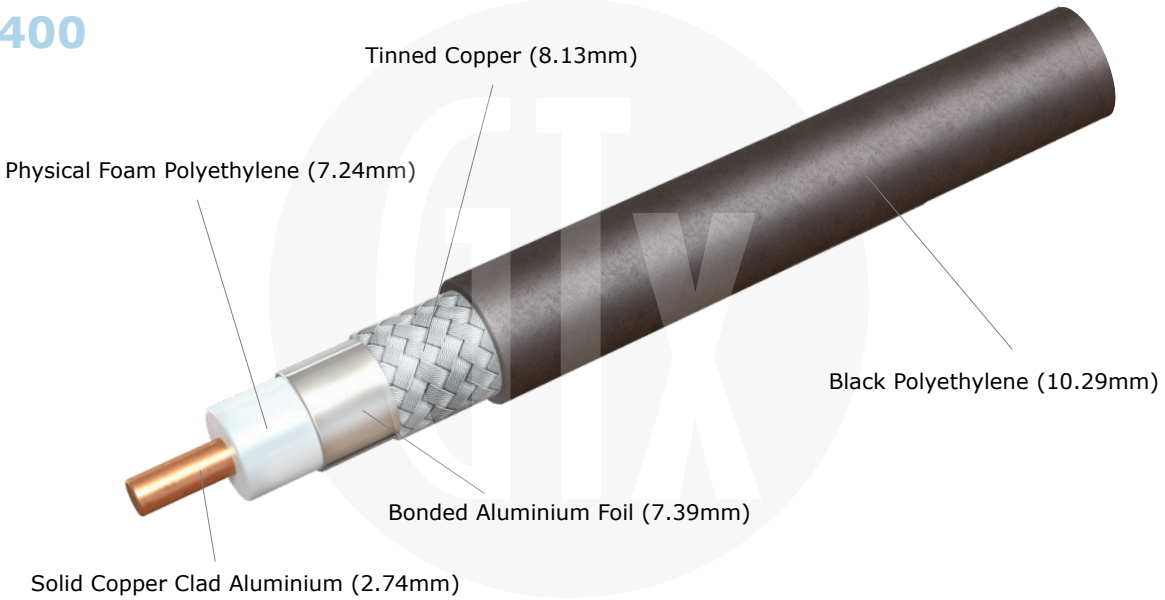
BN02-L240-C06

BN10-L240-C06

SEE ONLINE FOR MANY OTHER VARIANTS

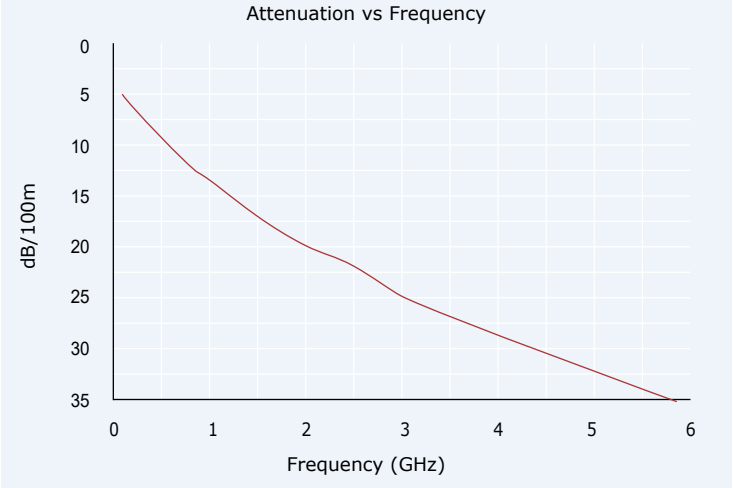
CX50-LBC400 - Low Loss Coaxial Cable

LBC400



ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	78.0 pF/m
Velocity of Propagation	84%
Bending Radius (static)	25.4mm
Bending Radius (flexing)	101mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	5.00 dB	1.47 kW
220 MHz	6.10 dB	1.20 kW
450 MHz	8.90 dB	0.83 kW
900 MHz	12.80 dB	0.58 kW
1500 MHz	16.80 dB	0.44 kW
1800 MHz	18.60 dB	0.40 kW
2000 MHz	19.60 dB	0.37 kW
2500 MHz	22.20 dB	0.33 kW
3000 MHz	24.80 dB	0.28 kW
5800 MHz	35.50 dB	0.21 kW

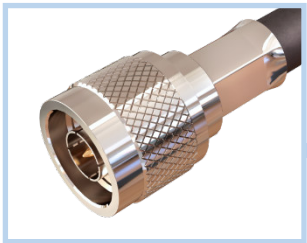


Coaxial Connectors to suit LBC400

SMA

MA15-0519-C06

N Type



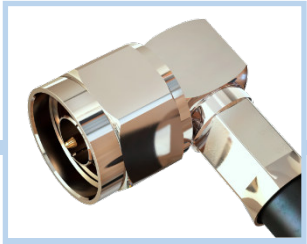
NT15-0519-C06

NT15-0519-C06-2

NT17-0519-C06

N Type

NT15-0519-C49-2



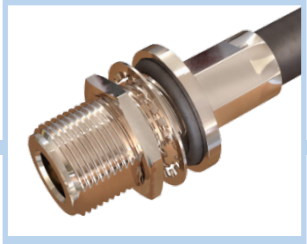
NT17-0519-C49-2

NT15-0519-C49WP

NT15-0519-L06

N Type

NT15-0519-L06-2



NT02-0519-C06

NT10-0519-C06

NT10-0519-C06-2

TNC

TN15-0519-C06-2

TNC RP

TN15-0519-C06-R

BNC

BN15-0519-C06

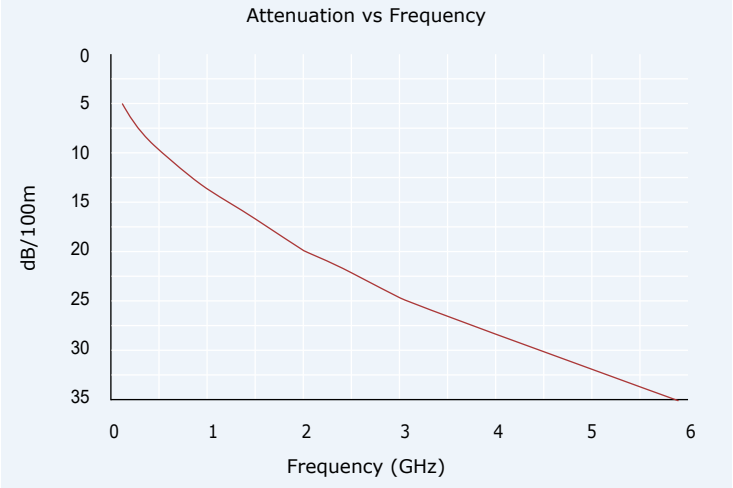
SEE ONLINE FOR MANY OTHER VARIANTS

CX50-LBC400LSZH - Low Loss Coaxial Cable

LBC400 Low Smoke Zero Halogen

ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	78 pF/m
Velocity of Propagation	85%
Bending Radius (static)	25mm
Bending Radius (flexing)	102mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C
UV Rating	UL1581:1200

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	5.00 dB	1.47 kW
220 MHz	6.10 dB	1.20 kW
450 MHz	8.90 dB	0.83 kW
900 MHz	12.80 dB	0.58 kW
1500 MHz	16.80 dB	0.44 kW
1800 MHz	18.60 dB	0.40 kW
2000 MHz	19.60 dB	0.37 kW
2500 MHz	22.20 dB	0.33 kW
3000 MHz	24.80 dB	0.28 kW
5800 MHz	35.50 dB	0.21 kW

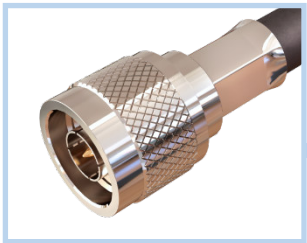


Coaxial Connectors to suit LBC400 Low Smoke Zero Halogen

SMA

MA15-0519-C06

N Type



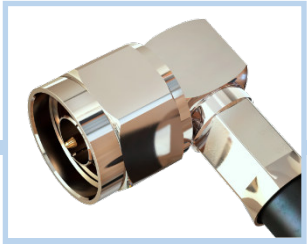
NT15-0519-C06

NT15-0519-C06-2

NT17-0519-C06

N Type

NT15-0519-C49-2



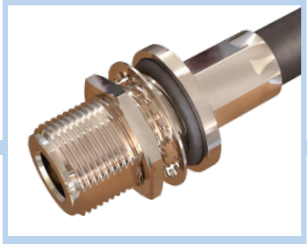
NT17-0519-C49-2

NT15-0519-C49WP

NT15-0519-L06

N Type

NT15-0519-L06-2



NT02-0519-C06

NT10-0519-C06

NT10-0519-C06-2

TNC

TN15-0519-C06-2

TNC RP

TN15-0519-C06-R

BNC

BN15-0519-C06

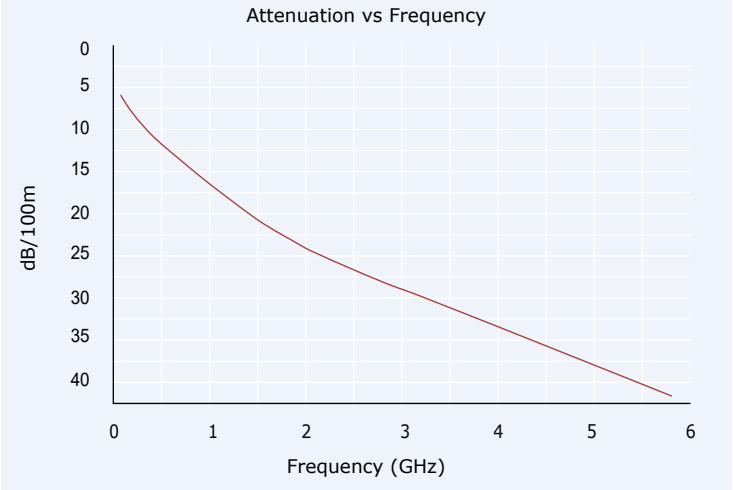
SEE ONLINE FOR MANY OTHER VARIANTS

CX50-LBC400XF - Low Loss Flexible Coaxial Cable

LBC400 Extraflex

ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	11 GHz
Capacitance	78 pF/m
Velocity of Propagation	83%
Bending Radius (static)	25.4mm
Bending Radius (flexing)	101.6mm
RoHS Compliant	Yes
Temperature Range	-40 to +85 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	5.90 dB	1.22 kW
220 MHz	7.22 dB	1.00 kW
450 MHz	10.82 dB	0.69 kW
900 MHz	15.42 dB	0.48 kW
1500 MHz	20.34 dB	0.36 kW
1800 MHz	22.30 dB	0.33 kW
2000 MHz	23.62 dB	0.31 kW
2500 MHz	26.57 dB	0.28 kW
3000 MHz	27.90 dB	0.25 kW
5800 MHz	42.64 dB	0.17 kW

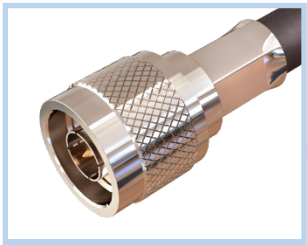


Coaxial Connectors to suit LBC400 ExtraFlex

SMA

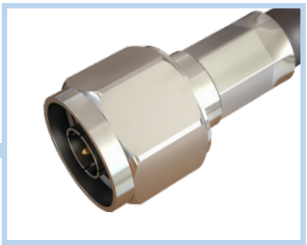
MA15-0519-C06

N Type



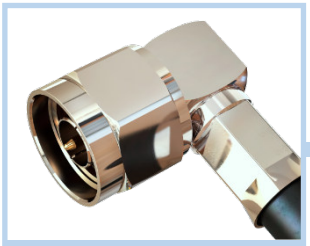
NT15-0519-C06

NT17-0519-C06



NT15-0519-C49-2

N Type



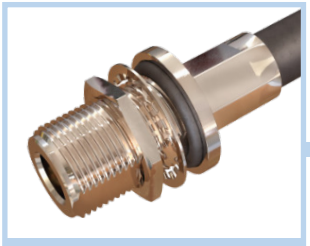
NT17-0519-C49-2

NT15-0519-C49WP

NT15-0519-L06

NT15-0519-L06-2

N Type



NT02-0519-C06

NT10-0519-C06

NT10-0519-L06-2

TNC

TN15-0519-C06

TNC RP

TN15-0519-C06-R

BNC

BN15-0519-C06

BN15-0519-L06-2

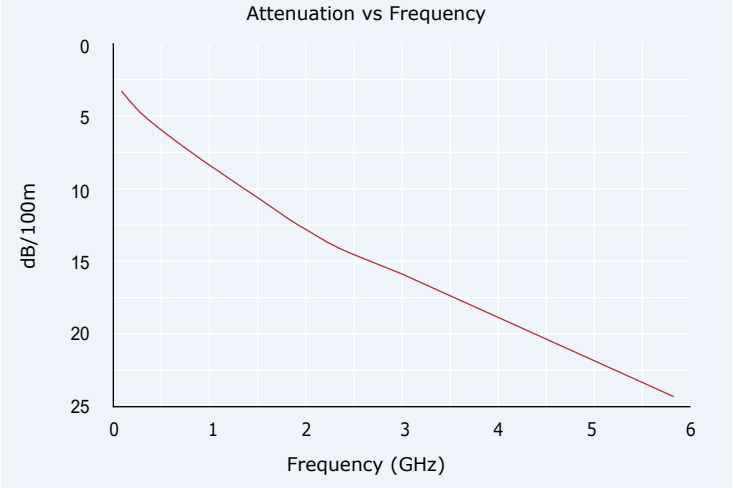
SEE ONLINE FOR MANY OTHER VARIANTS

CX50-LBC600 - Low Loss Coaxial Cable

LBC600

ELECTRICAL, MECHANICAL & ENVIRONMENTAL SPECIFICATION	
Impedance	50 Ohms
Max. Frequency	6 GHz
Capacitance	77.0 pF/m
Velocity of Propagation	85%
Bending Radius (static)	38mm
Bending Radius (flexing)	152mm
RoHS Compliant	Yes
Temperature Range	-30 to +75 degrees C

FREQUENCY	ATTENUATION (Per 100m)	AVERAGE POWER
150 MHz	3.28 dB	2.41 kW
220 MHz	3.94 dB	1.97 kW
450 MHz	5.58 dB	1.35 kW
900 MHz	8.20 dB	0.93 kW
1500 MHz	10.83 dB	0.70 kW
1800 MHz	12.14 dB	0.63 kW
2000 MHz	12.79 dB	0.59 kW
2500 MHz	14.44 dB	0.52 kW
3000 MHz	15.75 dB	0.41 kW
5800 MHz	23.95 dB	0.32 kW

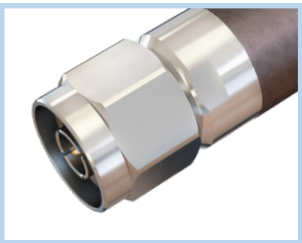


Coaxial Connectors to suit LBC600

N Type

NT15-L600-C06-2

NT15-L600-C49

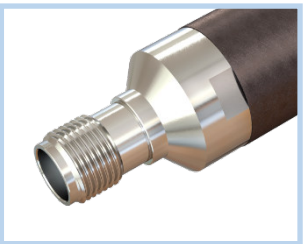


NT15-L600-C49-4

NT10-L600-C49-2

TNC

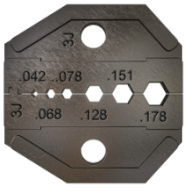
TN15-L600-C49



TN10-L600-C49

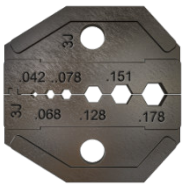
TOOLING

GCT-0436

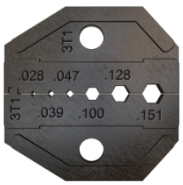


GDS-003J

GDS-03G4



GDS-03F2



GDS-03T1

GCT-0519

SEE ONLINE FOR MANY OTHER VARIANTS

Tooling Description	
GCT-0436	Precision Ratchet Crimp Tool - Frame Only
GDS-003J	Die Set for GCT-0436 - 4.52mm, 3.84mm, 3.25mm, 1.98mm, 1.73mm, 1.07sq.
GDS-03G4	Die Set for GCT-0436 - 7.06mm, 6.48mm, 4.52mm, 1.73mm, 1.07sq.
GDS-03F2	Die Set for GCT-0436 - 5.41mm, 4.52mm, 3.84mm, 1.73mm, 1.07sq.
GDS-03T1	Die Set for GCT-0436 - 3.84mm, 3.25mm, 2.54mm, 1.19sq, 0.99sq, 0.71sq.
GCT-0519	Ratchet crimp tool to suit crimp connectors on LBC400 and associated cables

Innovation and Quality in Connectivity Solutions

SCAN HERE
For the latest PDF

Gigatronix Limited

Zullard House
4 Downley Road
Havant
Hampshire
PO9 2NJ,
United Kingdom
Tel: +44 (0)23 9245 4412

Taiwan Branch
2F, No. 16-1
Zhongshan Road
Tucheng Dist.
New Taipei City 236
Taiwan
Tel: +886 (2)8786 8738

sales@gigatronix.com

www.gigatronix.com

Rev. V1-2-2024