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Product lines and series – overview

Foam line

The flexible low loss cable



The product series Spuma, S and SX provide lowest attenuation, high flexibility and optimal shielding. Products from the Spuma series are similar to the LMR[®] products from Times Microwave. The series with LSFH jacket material and the radiation crosslinked SX series with the RADOX[®] jacket offer extremely high flame protection.

Product series

- S
- Spuma
- Spuma-FR
- SX

Benefits

- Low loss
- Excellent shielding
- Mostly halogen free

Performance line

High temperature coax cable



The PTFE/FEP cables of our RG/K series are designed for applications up to 200 °C and are characterised by low losses, especially at high frequencies. The Enviroflex cables do not contain fluorine plastics either in the dielectric nor in the jacket and thus provide a robust and environmentally friendly option.

Product series

- RG (PTFE)
- K
- Enviroflex

Benefits

- RG standard
- Extended temperature range
- High power

Standard line

Specialities

High precision coax cables



Our standard line includes RG coaxial cables based on MIL standards as well as the halogen free and mechanically compatible alternatives of the Enviroflex basic, G, and GX. While the types with LSFH jackets offer low smoke and fire resistance, the ones with RADOX® jackets additionally offer a higher temperature range and maximum environmental resistance.

Product series

- RG (PE)
- Enviroflex
- G
- GX

Benefits

- RG standard
- High precision
- Halogen free options



HUBER+SUHNER provides specific cables to cover special needs like low noise measurements as well as triaxial applications. UL recognised and railway approved cables complete the offer.

Product series

- Low noise
- Triax
- UL recognised cables
- RF railway cables

Benefits

- Approved cables
- Individual solution

Foam line – the flexible low loss cable

Spuma



The Spuma product family flexible and halogen free cable types and stands for its extremely low loss. With a screening effectiveness >90 dB over the whole operating frequency range, as well as a tight bending radius, is a wide application range covered. These cables offer excellent electrical performance, especially an outstanding return loss (VSWR).

Spuma cables are designed for applications up to 6 GHz and offer great opportunities in applications like industrial, railway, defence and communication.

Features and benefits

- Very low loss up to 6 GHz
- LSFH (flame retardant) types
- Excellent return loss (VSWR)
- High flexibility

S cables



HUBER+SUHNER low loss coaxial cables with foamed PE dielectric have been carefully designed for excellent electrical performance focusing on low loss, high velocity, high power and low VSWR. These flexible coaxial cables feature greatly improved cable bending characteristics, which make them ideal for use in limited spaces and where multiple bends are required. Ideal for use in critical antenna system applications.

Features and benefits

- Low loss and low attenuation
- Excellent return loss (VSWR)
- Halogen free types
- High flexibility

SX cables



HUBER+SUHNER cross-linking technology in combination with low loss dielectrics makes this product portfolio outstanding. Cross-linking allows the maximum application temperature of polyethylene to be increased from +85 to +105 °C. This extended range covers most applications. It allows operation in a higher power range and connectors with soldered inner conductors can be easily applied.

Features and benefits

- Low loss and low attenuation
- High temperature due to cross-linking
- HUBER+SUHNER RADOX® jacket materials
- High flame retardancy
- Low smoke and free of halogen

Line overview

Reference matrix

Series	Spuma and S	Spuma-FR and S	SX
Dielectric material	SPE	SPE	SPEX
Jacket material	PE	LSFH or TPU	RADOX®
Halogen free	✓	✓	✓
Low smoke	–	✓	✓
Flame retardancy	–	✓ ✓	✓ ✓
Temperature range	–40 to +85 °C	–40 to +85 °C	–40 to +105 °C
Weather resistance	✓ ✓	✓ ✓	✓ ✓
Outer diameter (approx. in mm) 50 Ω			
3	–	S_02162_B	–
5	Spuma_195	Spuma_195-FR-01	–
6	Spuma_240	Spuma_240-FR-01 Spuma_240-RS-FR S_04262_D-09	SX_04172_B-60 SX_04272_D-02
8	–	S_06162_D-03	–
10	Spuma_400	Spuma_400-FR-01 Spuma_400-RS-FR S_07262_BD	–
13	–	Spuma_500-FR-01	–
15	Spuma_600	–	–
Outer diameter (approx. in mm) 75 Ω			
6	–	S_04263	–
10	–	Spuma_400-FR-75	–

This reference matrix does not contain all cable types available. Please refer to the RF cable catalogue or contact your nearest HUBER+SUHNER representative for your specific request.

Legend



The SX cables technically also belong to the performance line based on the temperature range. They are listed in the foam line due to the mechanical compatibility with the other products.

- PE polyethylene
- SPE foamed polyethylene
- SPEX foamed polyethylene cross-linked
- LSFH low smoke free of halogen
- RADOX® polyolefin, flame retardant (registered trade mark by HUBER+SUHNER)
- TPU thermoplastic polyurethane

Foam line – the flexible low loss cable, 50 Ω

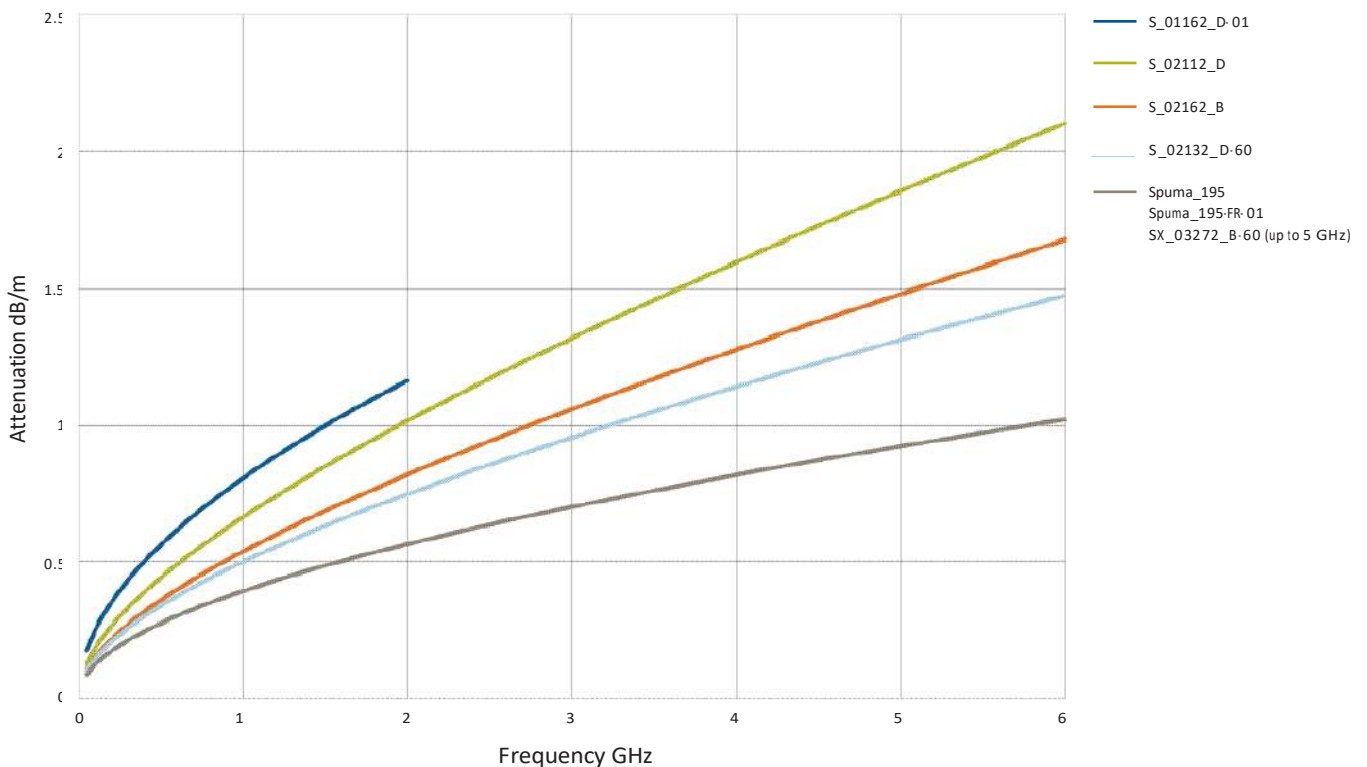
Small diameter up to 5 mm

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
S_01162_D-01	84061579	2	strand-07	SPE	braid/braid	LSFH	2.70	black
S_02162_B	22512310	6	strand-07	SPE	tape/braid	LSFH	3.15	black
S_02112_D	22511910	6	strand-19	SPE	braid/braid	PUR	4.5	black
SX_03272_B-60 ^{a)}	84010513	5	wire	SPEX	tape/braid	RADOX®	4.5	black
S_02132_D-60 ^{a)}	84010316	6	wire	SPE	braid/braid	PVC	4.8	black
Spuma_195	84151727	6	wire	SPE	tape/braid	PE	4.95	black
Spuma_195-FR-01	85021562	6	wire	SPE	tape/braid	LSFH	4.95	black

^{a)} UL recognised

Attenuation

typical values at +20 °C ambient temperature and sea level

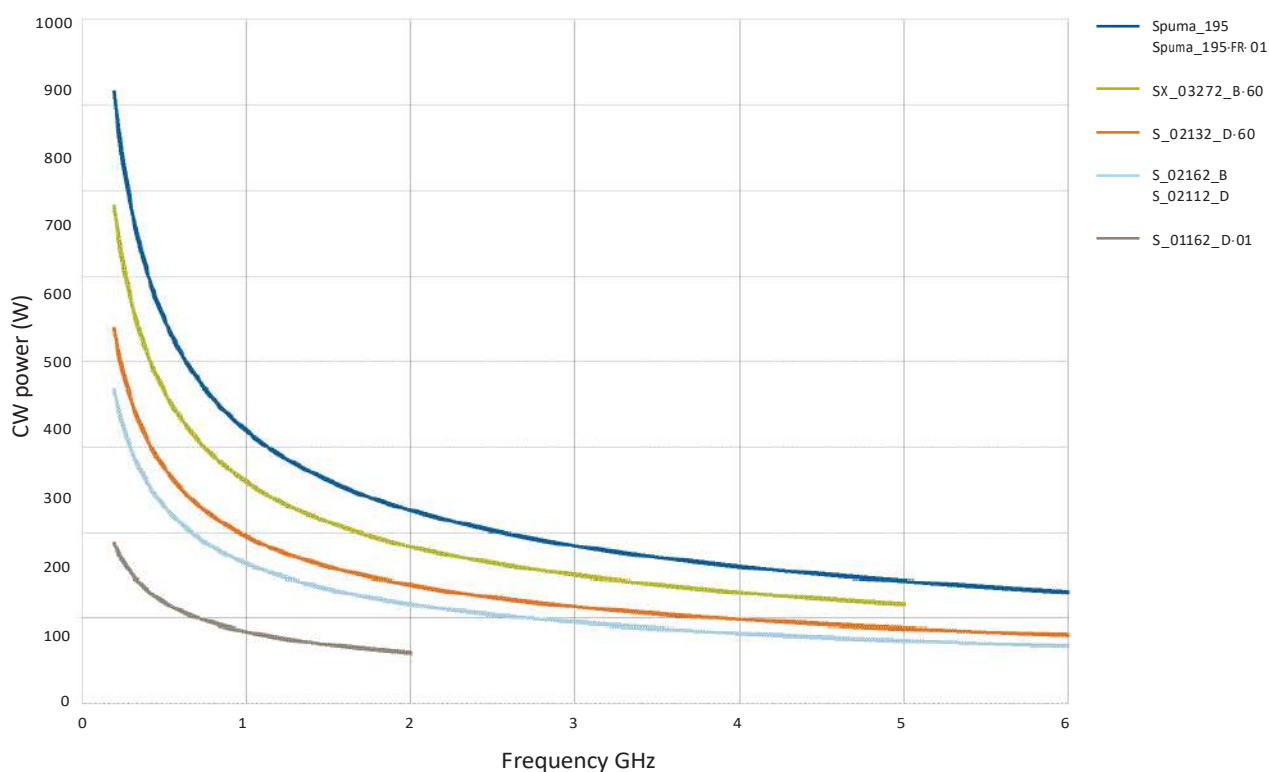


Spuma, S and SX series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-40 to +85	0.81	–	–	> 50 (up to 2 GHz)	12	26	X3
-40 to +85	0.54	1.06	1.68	> 80 (up to 6 GHz)	16	30	S9
-40 to +85	0.66	1.32	2.10	> 81 (up to 6 GHz)	22	45	S8
-40 to +105	0.37	0.70	–	> 85 (up to 2 GHz)	20	40	X7
-25 to +85	0.50	0.96	1.48	> 75 (up to 6 GHz)	25	48	–
-40 to +85	0.39	0.70	1.02	> 90 (up to 6 GHz)	12.5	50	X27
-40 to +85	0.39	0.70	1.02	> 90 (up to 6 GHz)	10	40	X27

CW power

max. values at +40 °C ambient temperature and sea level



Foam line – the flexible low loss cable, 50 Ω

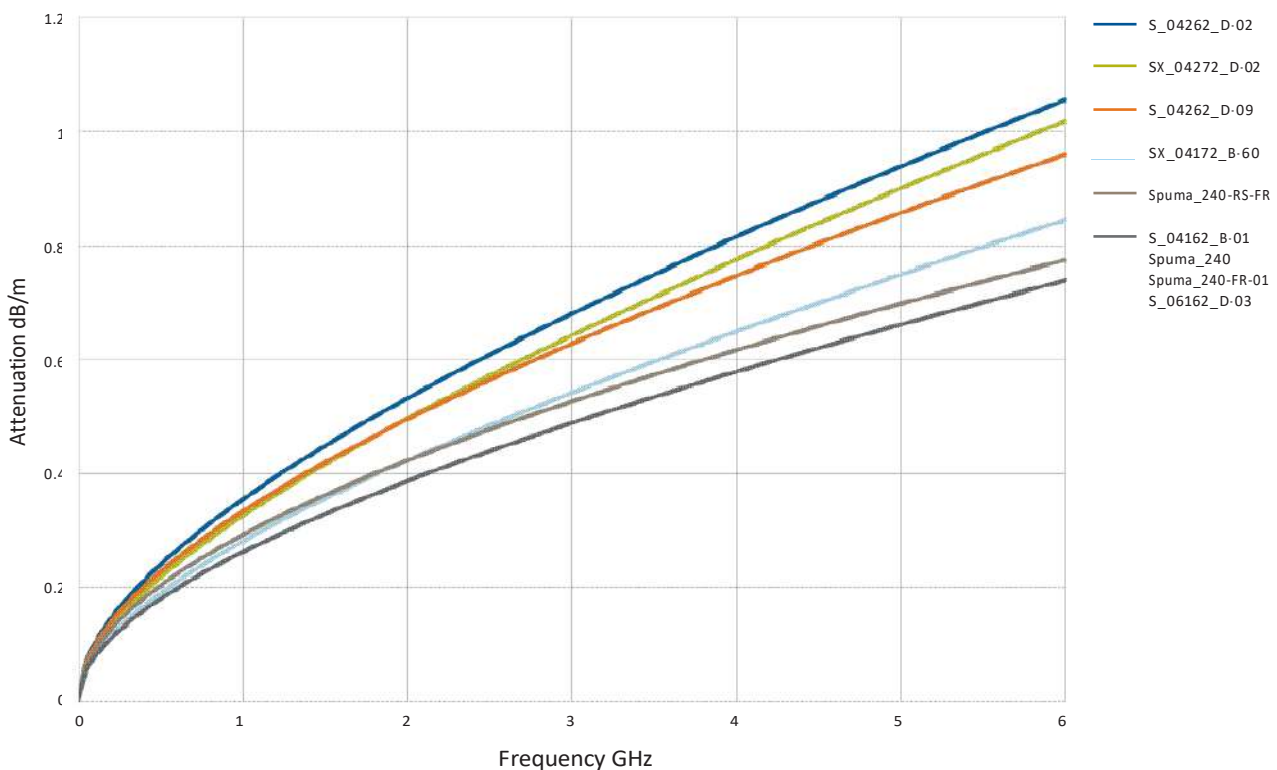
Medium diameter from 5 up to 10 mm

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
S_04162_B-01	84023780	6	wire	SPE	tape/braid	LSFH	5.50	black
SX_04172_B-60 ^{a)}	84026748	6	wire	SPEX	tape/braid	RADOX®	5.50	black
S_04262_D-09	84034611	6	wire	SPE	braid/braid	LSFH	5.70	black
SX_04272_D-02	22511926	6	wire	SPEX	braid/braid	RADOX®	5.70	black
Spuma_240	84151737	6	wire	SPE	tape/braid	PE	6.15	black
Spuma_240-FR-01	85021563	6	wire	SPE	tape/braid	LSFH	6.15	black
Spuma_240-RS-FR	85089188	6	low-loss strand	SPE	tape/braid	TPU	6.15	black
S_04262_D-02	22512107	6	strand-19	SPE	braid/braid	LSFH	6.50	black
S_06162_D-03	84061578	6	wire	SPE	braid/braid	LSFH	7.90	black

^{a)}UL recognized

Attenuation

typical values at +20 °C ambient temperature and sea level

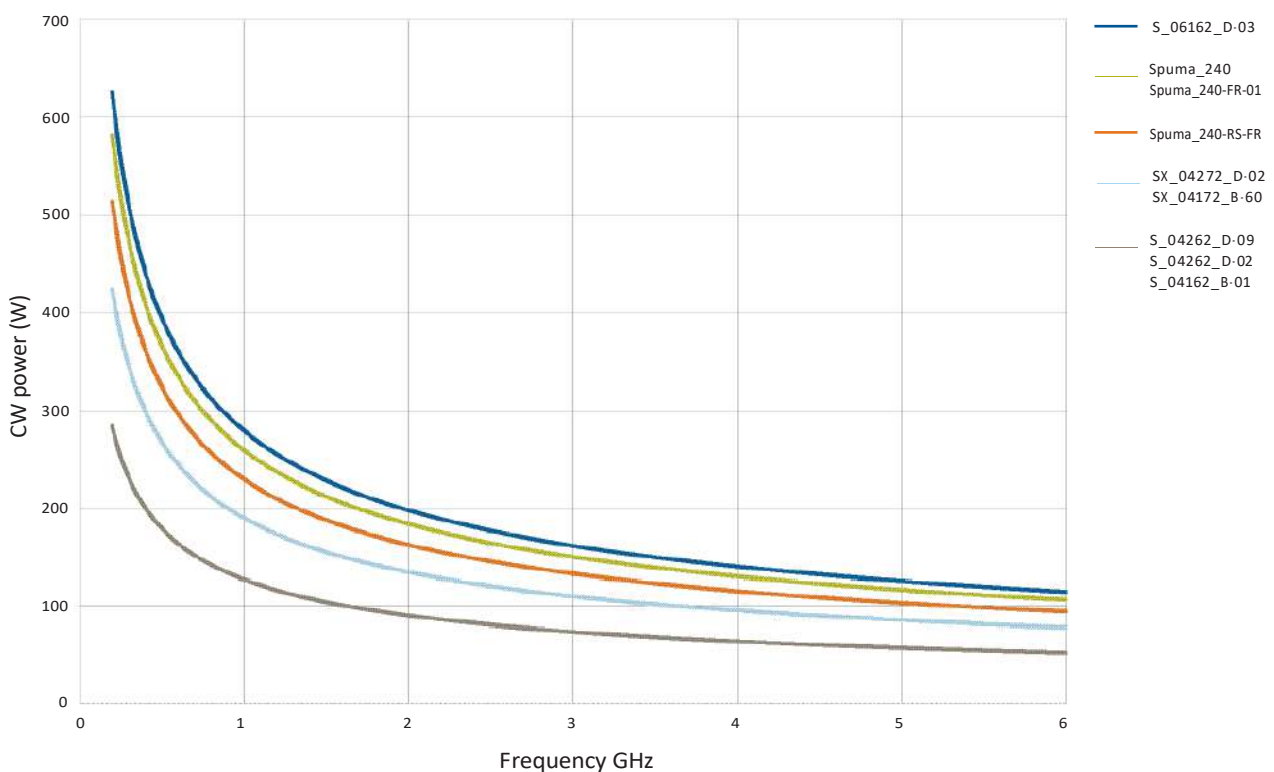


Spuma, S and SX series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-40 to +85	0.26	0.49	0.74	> 80 (up to 2.2 GHz)	25	60	X9
-40 to +105	0.28	0.54	0.84	> 80 (up to 2.2 GHz)	25	60	X9
-40 to +85	0.33	0.63	0.96	> 80 (up to 6 GHz)	28	58	S16
-40 to +105	0.33	0.64	1.02	> 80 (up to 6 GHz)	28	58	S16
-40 to +85	0.27	0.48	0.69	> 90 (up to 6 GHz)	19	60	X28
-40 to +85	0.27	0.48	0.69	> 90 (up to 6 GHz)	14	53	X28
-40 to +85	0.29	0.53	0.78	> 90 (up to 6 GHz)	14	53	X34
-40 to +85	0.36	0.68	1.06	> 80 (up to 6 GHz)	32	65	X8
-40 to +85	0.26	0.48	0.72	> 82 (up to 6 GHz)	40	80	S24

CW power

max. values at +40 °C ambient temperature and sea level



Foam line – the flexible low loss cable, 50 Ω

Large diameter from 10 mm

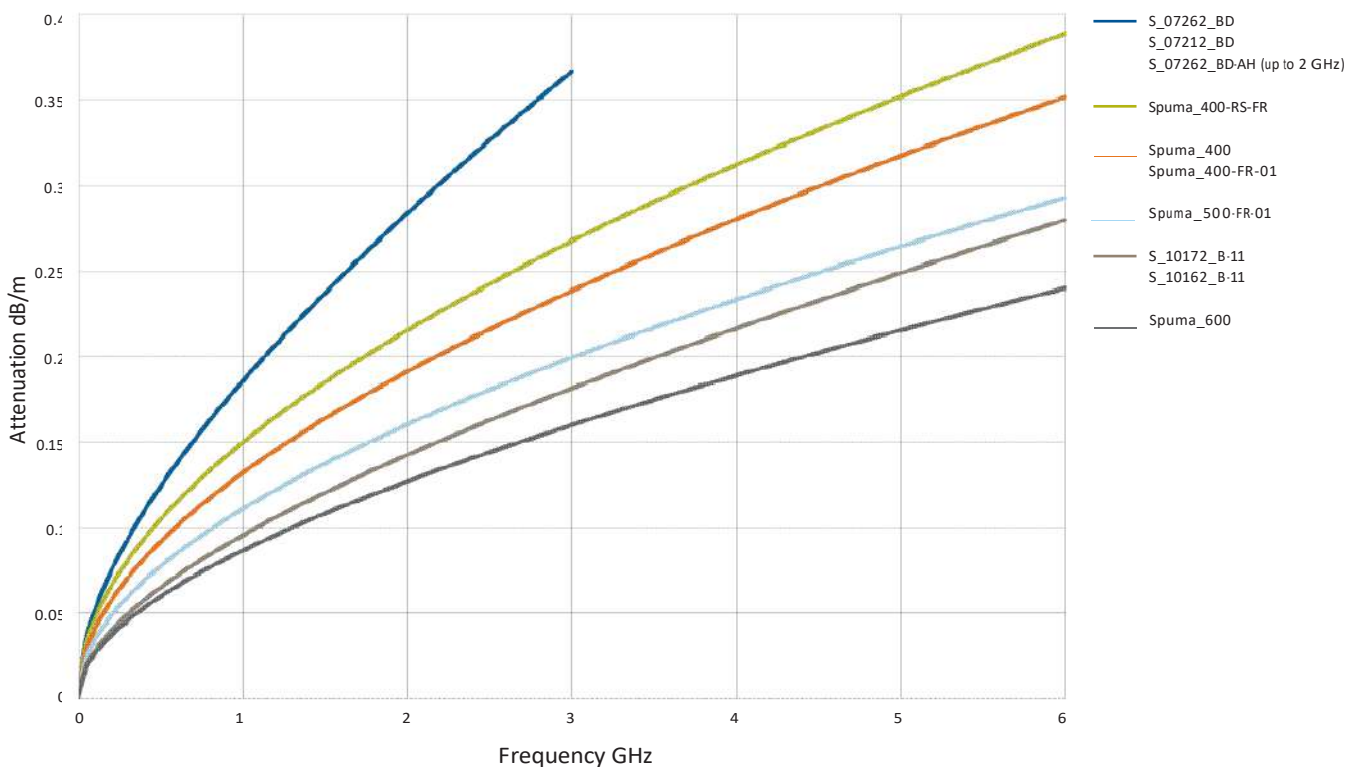
HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
Spuma_400	84102703	6	wire	SPE	tape/braid	PE	10.25	black
Spuma_400-FR-01 ^{b)}	84132035	6	wire	SPE	tape/braid	LSFH	10.25	black
Spuma_400-RS-FR	85089191	6	low-loss strand	SPE	tape/braid	TPU	10.25	black
S_07262_BD	22511767	3	strand-07	SPE	braid/tape/braid	LSFH	10.80	black
S_07262_BD-AH ^{†)}	23023566	2	strand-07	SPE	braid/tape/braid	LSFH	15.70	black
S_07212_BD	22511864	3	strand-07	SPE	braid/tape/braid	PUR	10.80	black
Spuma_500-FR-01	85021564	6	wire	SPE	tape/braid	LSFH	12.78	black
S_10172_B-11	22512320	7.5	wire	SPE	tape/braid	PE	12.90	black
S_10162_B-11	23002145	7.5	wire	SPE	tape/braid	LSFH	12.90	black
Spuma_600	84151738	6	wire	SPE	tape/braid	PE	14.99	black

^{b)} UL recognised alternative available (see page 52)

^{†)} armoured cable

Attenuation

typical values at +20 °C ambient temperature and sea level

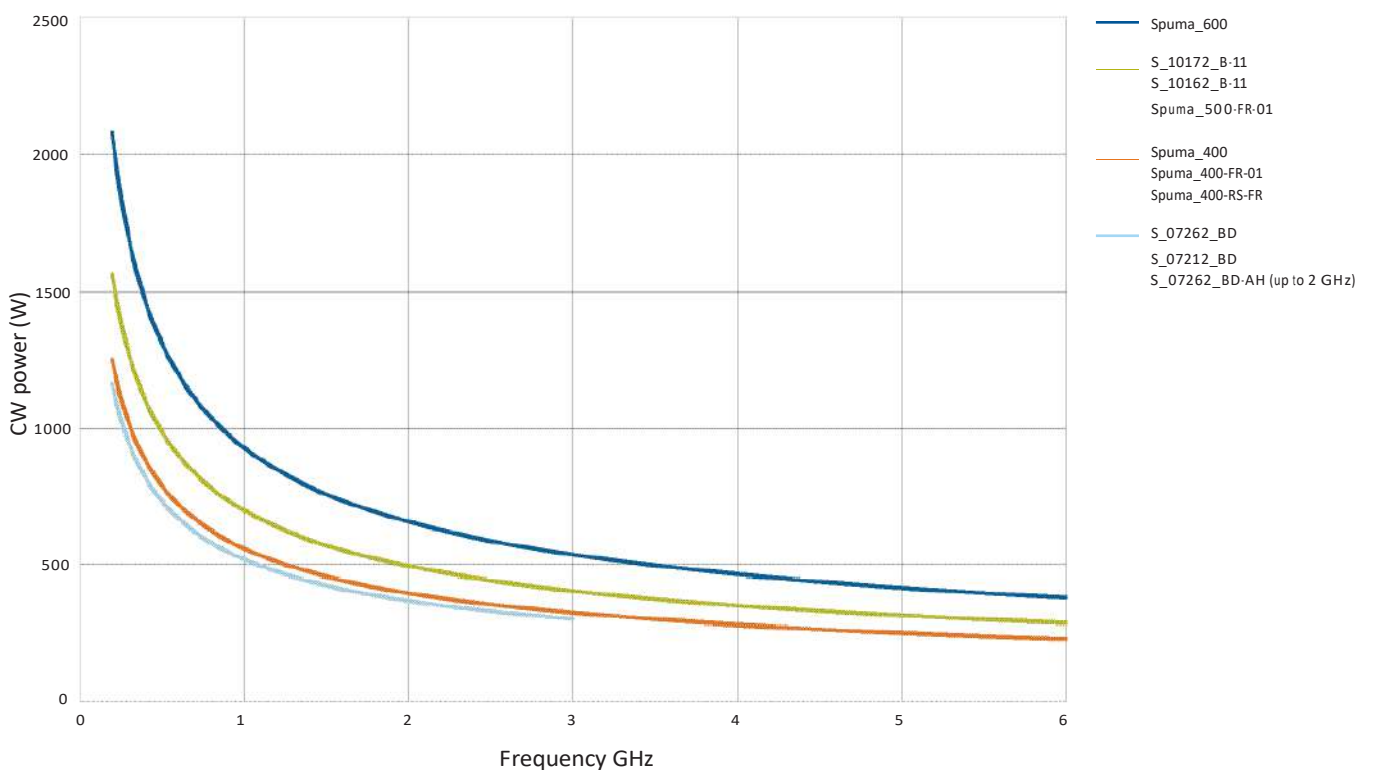


Spuma and S series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-40 to +85	0.13	0.24	0.35	> 90 (up to 6 GHz)	25	100	U30
-40 to +85	0.13	0.24	0.35	> 90 (up to 6 GHz)	25	100	U30
-40 to +85	0.15	0.27	0.39	> 90 (up to 6 GHz)	25	100	X32
-40 to +85	0.19	0.37	–	> 90 (up to 3 GHz)	70	110	S32
-40 to +85	0.19	–	–	> 90 (up to 2 GHz)	90	140	S32
-40 to +85	0.19	0.37	–	> 90 (up to 3 GHz)	110	160	S32
-40 to +85	0.11	0.20	0.29	> 90 (up to 6 GHz)	34	130	X31
-40 to +85	0.10	0.18	0.28	> 90 (up to 7.5 GHz)	100	200	S39
-40 to +85	0.10	0.18	0.28	> 90 (up to 7.5 GHz)	100	200	S39
-40 to +85	0.09	0.16	0.24	> 90 (up to 6 GHz)	38	152	X29

CW power

max. values at +40 °C ambient temperature and sea level



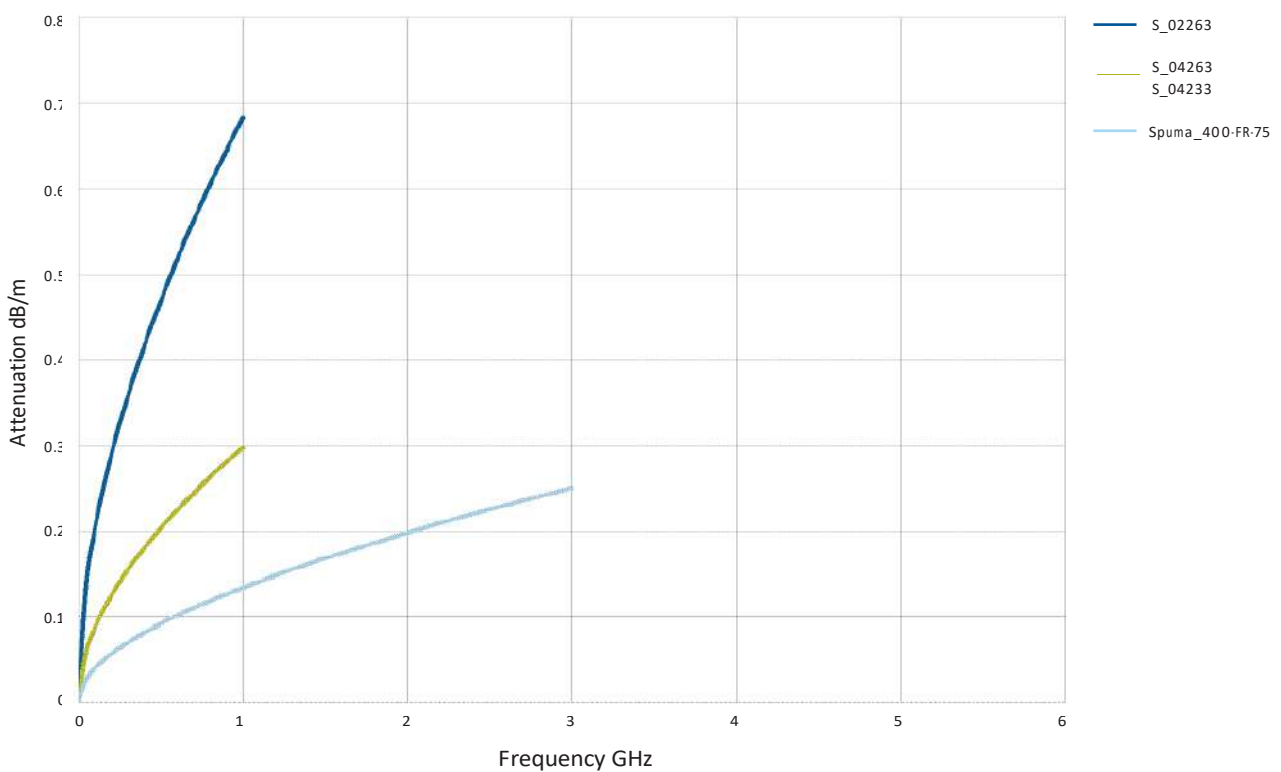
Foam line – the flexible low loss cable, 75 Ω

All diameters

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
S_02263	22511693	1	wire	SPE	single braid	LSFH	2.55	blue
S_04263	22511856	1	wire	SPE	single braid	LSFH	6.1	black
S_04233	22610020	1	wire	SPE	single braid	PVC	6.1	black
Spuma_400-FR-75	85022187	3	wire	SPE	tape/braid	LSFH	10.25	black

Attenuation

typical values at +20 °C ambient temperature and sea level

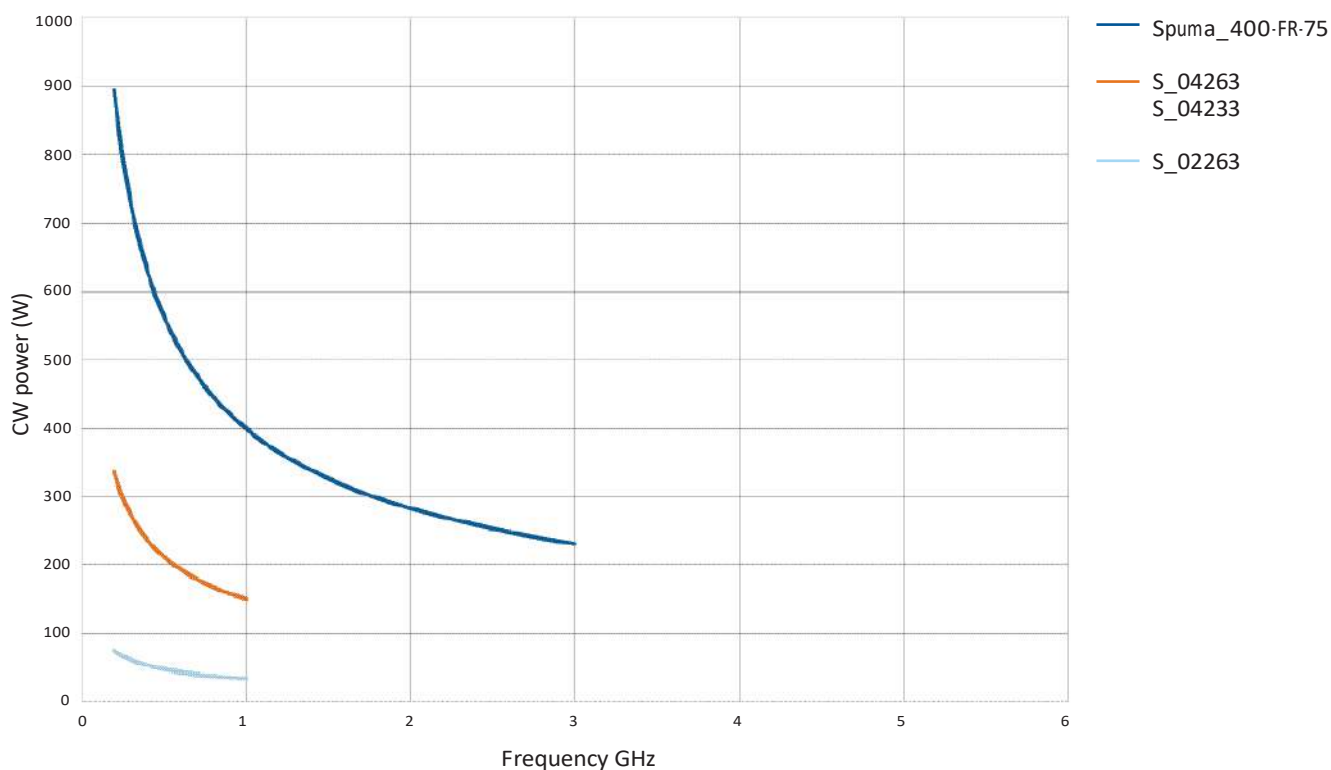


Spuma and S series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-40 to +85	0.68	–	–	> 40 (up to 1 GHz)	15	25	S5
-40 to +85	0.30	–	–	> 40 (up to 1 GHz)	35	61	U17
-25 to +85	0.30	–	–	> 40 (up to 1 GHz)	35	61	U17
-40 to +85	0.13	0.25	–	> 90 (up to 3 GHz)	25	100	X33

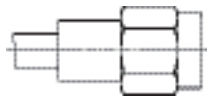
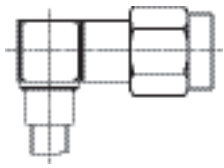
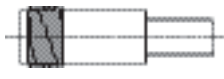
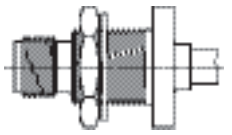
CW power

max. values at +40 °C ambient temperature and sea level



Foam line – the flexible low loss cable

Group	7/16				BNC				N			
	11	16	21	24	11	16	21	24	11	16	21	24
U17					•	•		•	•			
U30	•	•		•	•	•			•	•	•	•
X3					•		•	•	•			•
X7												
X8												
X9	•	•*		•*	•	•			•	•	•	•
X27									•	•	•	•
X28	•				•	•		•	•	•	•	•
X29	•								•	•		
X31									•	•	•	
X32	•	•			•	•			•	•	•	•
X33								•				
X34					•	•		•	•	•		
S5					•		•	•				
S8									•			
S9												
S16	•	•*		•*	•	•			•	•	•	•
S24	•*	•*							•	•*		
S32	•	•							•	•	•	•
S39	•		•						•	•	•	•

11...	Straight cable plug (male)	16...	Right angle cable plug (male)	21...	Straight cable jack (female)	24...	Straight panel bulkhead cable jack (female)
							

Suitable connectors

QMA				QN				SMA				TNC			
11	16	21	24	11	16	21	24	11	16	21	24	11	16	21	24
				•	•		•	•	•			•	•	•	•
•*	•*				•*				•						
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*on request (contact your nearest H+S partner)

Please refer to the HUBER+SUHNER RF coaxial connector catalogue for specific connector information or contact your nearest HUBER+SUHNER partner.

Performance line – high temperature coax cables

RG/K series



HUBER+SUHNER high temperature coax cables are designed for applications up to 200 °C, depending on the material selection of the cable. Cable types out of this portfolio provide lowest loss especially at high frequency thanks to PTFE dielectric material.

Features and benefits

- Standard RG coaxial cables
- High temperature
- High power applications
- PTFE/PFA/FEP based dielectric

Enviroflex series



The Enviroflex cable family enables users to quickly switch from fluorine-containing cables to halogen-free alternatives. The materials used in the cable design – both for the dielectric and for the jacket – do not include any fluorine-containing plastics. The dimensions of the individual cable types are entirely compatible with the international RG standards. Standard connectors can be used without any restrictions with the Enviroflex cable family. HUBER+SUHNER's control of various key technologies has proven to be an invaluable advantage.

Features and benefits

- Halogen free RG replacement
- UL recognised cable portfolio
- HUBER+SUHNER RADOX® and LSFH jacket materials
- Low smoke and high flame retardancy

Line overview

Reference matrix

Series	RG/K	Enviroflex	Enviroflex basic
Dielectric material	PTFE/FEP	SPEX	SPE
Jacket material	FEP/PFA	RADOX®	LSFH
Halogen free	–	✓	✓
Low smoke	–	✓	✓
Flame retardancy	not flammable	✓ ✓	✓
Temperature range	–65 to +165 °C (FEP jacket) –80 to +205 °C (PFA jacket)	–40 to +105 °C	–40 to +85 °C
Weather resistance	✓ ✓ ✓	✓ ✓	✓ ✓
Outer diameter (approx. in mm) 50 Ω			
1	K_01152-07	–	–
2	RG_178_B/U RG_196_A/U	Enviroflex_178 Enviroflex_178_D	Enviroflex_B178
3	RG_316_/U K_02252_D RG_188_A/U	Enviroflex_316 Enviroflex_316_D	Enviroflex_B316_D
4	RG_303_/U	–	–
5	RG_400_/U	Enviroflex_400	Enviroflex_B400
5	RG_142_B/U	Enviroflex_142	Enviroflex_B142
10	RG_393_/U	Enviroflex_393	–
Outer diameter (approx. in mm) 75 Ω			
2.5	RG_179_B/U RG_187_A/U	Enviroflex_179	–
3	K_02253_D-02	–	–
5	RG_302_/U	–	–

This reference matrix does not contain all cable types available. Please refer to the RF cable catalogue or contact your nearest HUBER+SÜHNER representative for your specific request.

Legend



The Enviroflex basic cables technically belong to the standard line based on the temperature range. They are listed in the performance line due to the mechanical compatibility with the other products.

- PTFE polytetrafluoroethylene
- SPEX foamed polyethylene cross-linked
- FEP fluorinated ethylene propylene
- PFA perfluoroalkoxy
- RADOX® polyolefin, flame retardant (registered trade mark by HUBER+SÜHNER)

Performance line – high temperature coax cables, 50 Ω

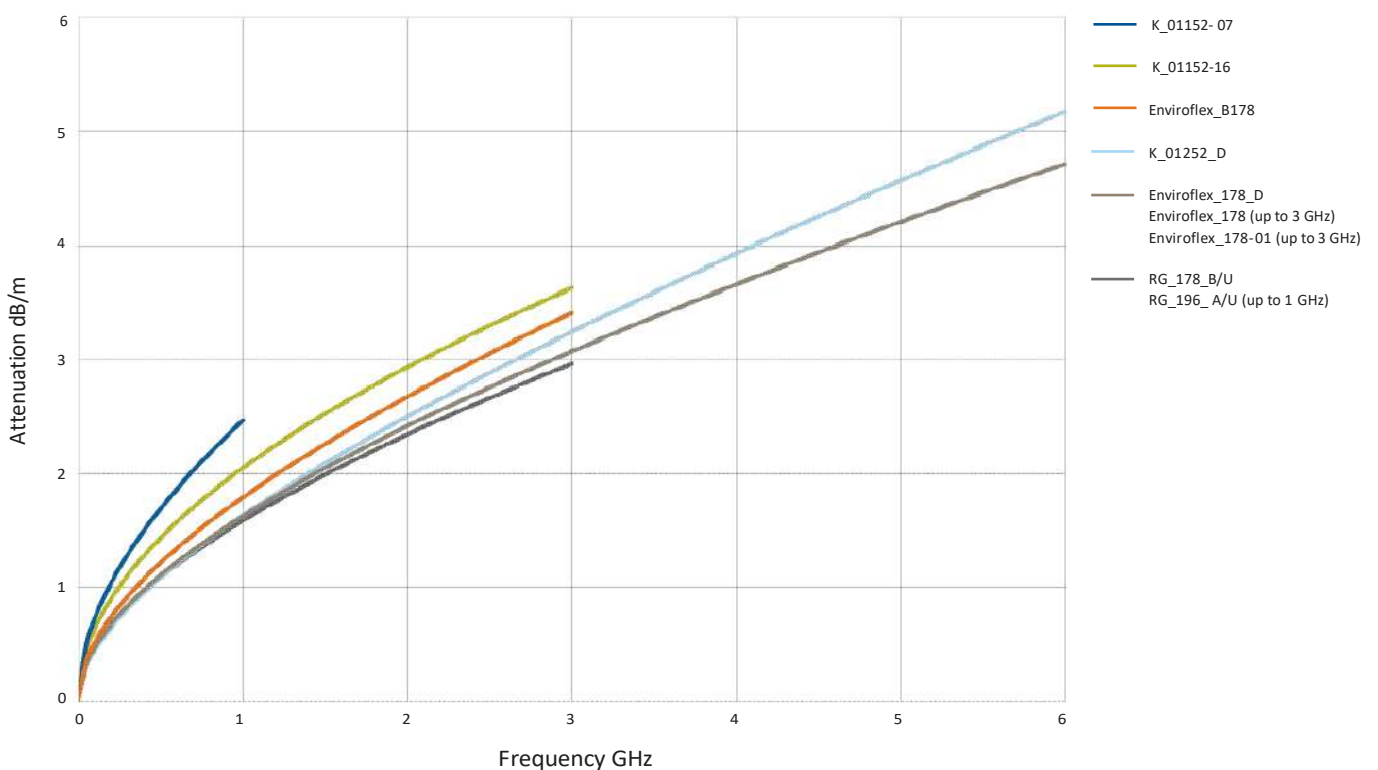
Small diameter up to 2.5 mm

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
K_01152-16	85004838	3	wire	PFA	single braid	PFA	1.00	nature
K_01152-07	22511192	1	strand-07	PFA	single braid	PFA	1.25	white
RG_178_B/U	22510043	3	strand-07	PTFE	single braid	FEP	1.80	brown
Enviroflex_178 ^{a)}	23010656	3	strand-07	SPEX	single braid	RADOX®	1.84	blue
Enviroflex_178-01 ^{a)}	84032838	3	strand-07	SPEX	single braid	RADOX®	1.84	black
Enviroflex_B178	85087102	3	strand-07	SPE	single braid	LSFH	1.84	black
RG_196_A/U	22510049	1	strand-07	PTFE	single braid	PFA	1.83	white
K_01252_D	22610061	6	strand-07	PTFE	braid/braid	FEP	2.40	brown
Enviroflex_178_D ^{a)}	23030426	6	strand-07	SPEX	braid/braid	RADOX®	2.45	blue

^{a)} UL recognised

Attenuation

typical values at +20 °C ambient temperature and sea level

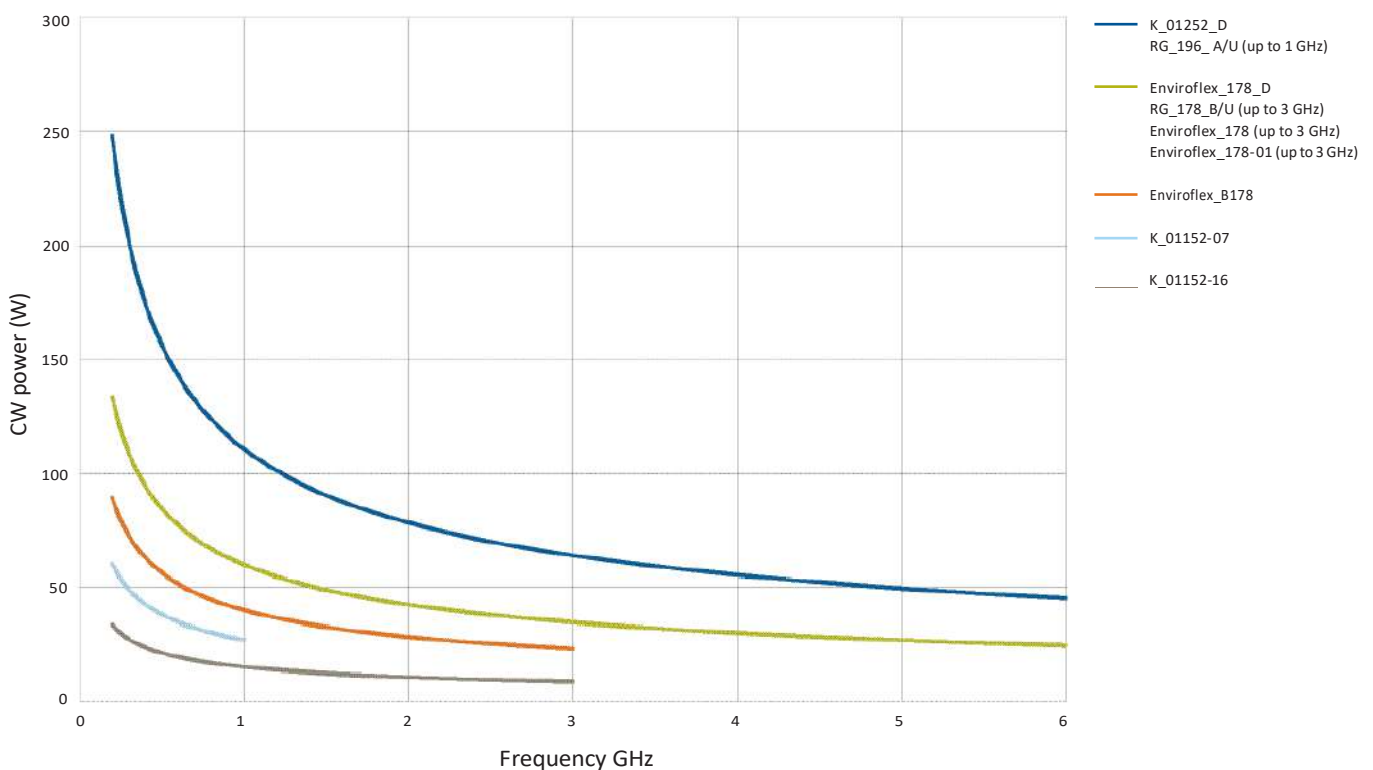


RG/K/Enviroflex series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-55 to +165	2.05	3.63	–	> 40 (up to 3 GHz)	12	20	--
-80 to +205	2.47	–	–	> 40 (up to 1 GHz)	6	12	U0
-65 to +165	1.59	2.97	–	> 40 (up to 1 GHz)	10	18	U1
-40 to +105	1.63	3.11	–	> 40 (up to 3 GHz)	5	20	U1
-40 to +105	1.63	3.11	–	> 40 (up to 3 GHz)	5	20	U1
-40 to +85	1.79	3.42	–	> 30 (up to 3 GHz)	5	20	U1
-80 to +205	1.62	–	–	> 42 (up to 1 GHz)	10	18	U1
-65 to +165	1.63	3.25	5.18	> 80 (up to 6 GHz)	15	24	X1
-40 to +105	1.63	3.08	4.72	> 60 (up to 6 GHz)	5	20	X1

CW power

max. values at +40 °C ambient temperature and sea level



Performance line – high temperature coax cables, 50 Ω

Medium diameter from 2.5 up to 4 mm

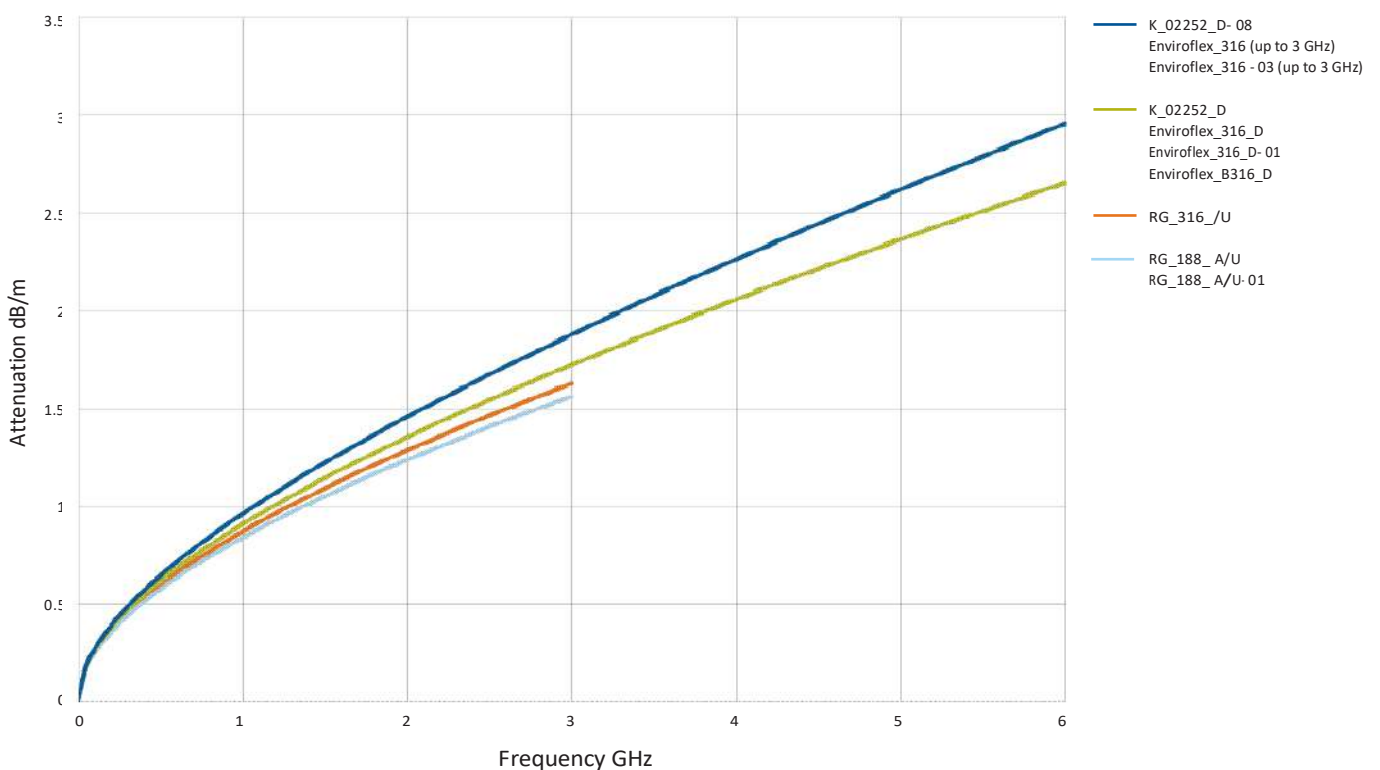
HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
RG_316_/U	22510079	3	strand-07	PTFE	single braid	FEP	2.50	brown
Enviroflex_316 ^{a)}	23009565	3	strand-07	SPEX	single braid	RADOX®	2.54	blue
Enviroflex_316-03 ^{a)}	84027942	3	strand-07	SPEX	single braid	RADOX®	2.52	black
RG_188_A/U ^{b)}	22510046	3	strand-07	PTFE	single braid	PFA	2.60	white
RG_188_A/U-01	22510047	3	strand-07	FEP	single braid	FEP	2.50	brown
K_02252_D	22510218	6	strand-07	PTFE	braid/braid	FEP	3.00	brown
K_02252_D-08 ^{b)}	22511127	6	strand-07	FEP	braid/braid	FEP	3.00	brown
Enviroflex_316_D ^{a)}	22512281	6	strand-07	SPEX	braid/braid	RADOX®	3.16	black/blue
Enviroflex_316_D-01 ^{a)}	84011098	6	strand-07	SPEX	braid/braid	RADOX®	3.16	black
Enviroflex_B316_D	85087103	6	strand-07	SPE	braid/braid	LSFH	3.16	black

^{a)} UL recognised

^{b)} UL recognised alternative available (see page 52)

Attenuation

typical values at +20 °C ambient temperature and sea level

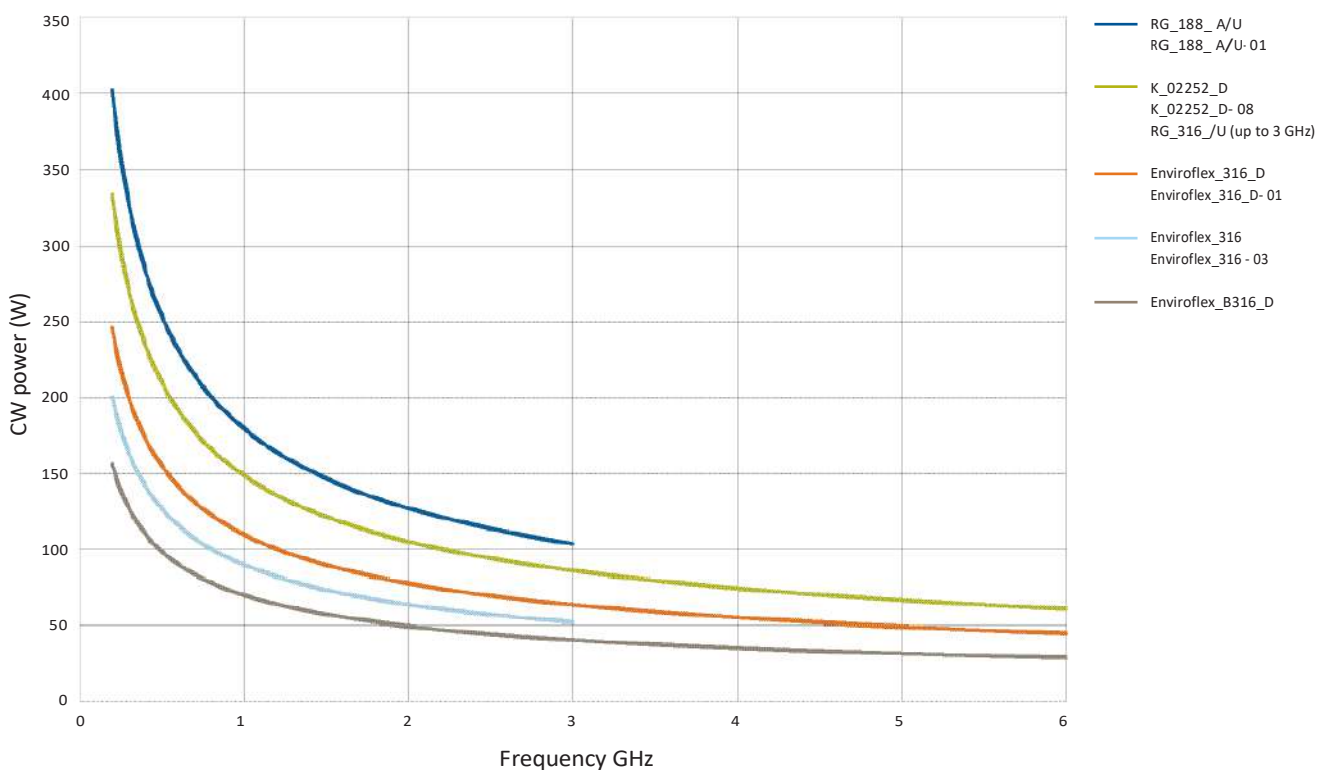


RG/K/Enviroflex series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-65 to +165	0.87	1.63	–	> 38 (up to 1 GHz)	15	25	U2
-40 to +105	0.96	1.86	–	> 38 (up to 1 GHz)	5	30	U2
-40 to +105	0.96	1.86	–	> 38 (up to 1 GHz)	5	30	U2
-80 to +205	0.84	1.56	–	> 39 (up to 1 GHz)	15	26	U2
-65 to +165	0.84	1.56	–	> 41 (up to 1 GHz)	15	25	U2
-65 to +165	0.90	1.72	2.65	> 80 (up to 6 GHz)	18	30	U4
-65 to +165	0.96	1.88	2.96	> 80 (up to 6 GHz)	18	30	U4
-40 to +105	0.90	1.72	2.65	> 80 (up to 6 GHz)	5	30	U4
-40 to +105	0.90	1.72	2.65	> 80 (up to 6 GHz)	5	30	U4
-40 to +85	0.90	1.72	2.65	> 60 (up to 6 GHz)	3	30	U4

CW power

max. values at +40 °C ambient temperature and sea level



Performance line – high temperature coax cables, 50 Ω

Large diameter from 4 mm

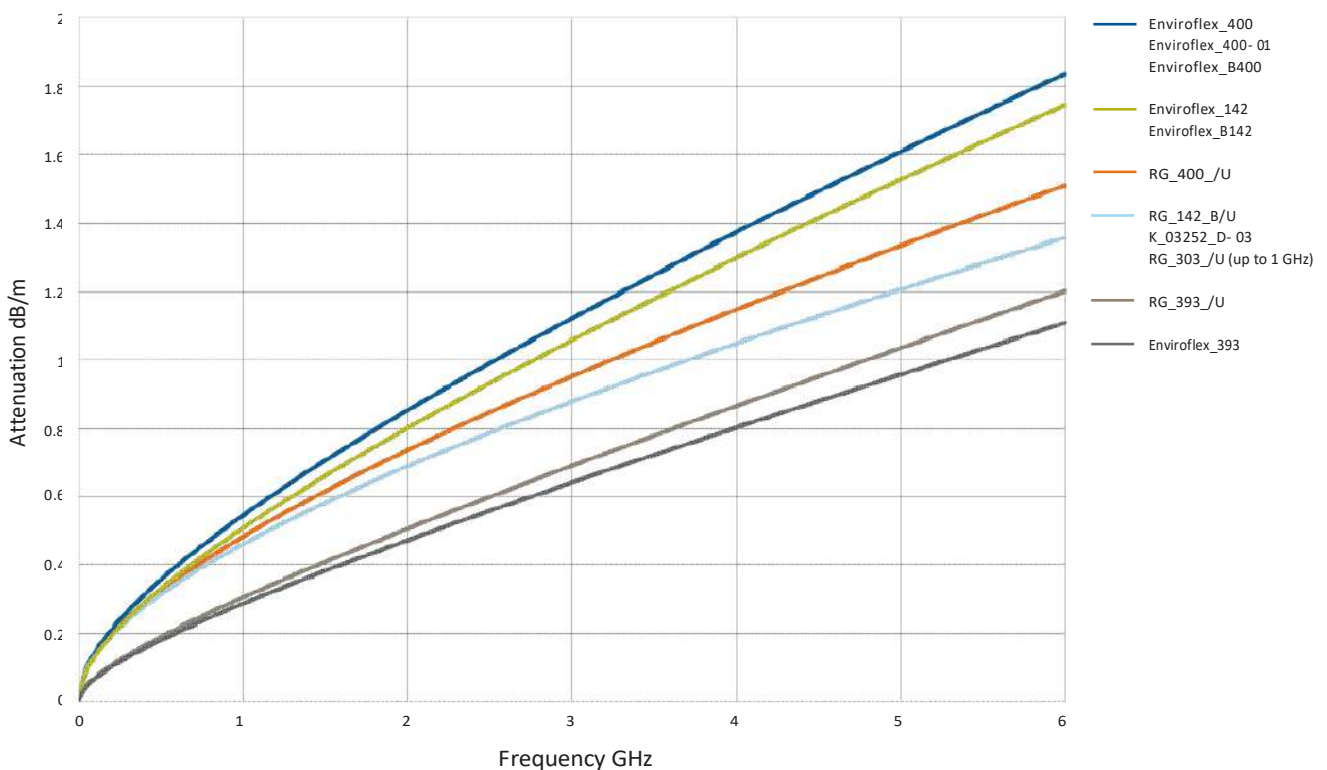
HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
RG_303_/U	22510078	1	wire	PTFE	single braid	FEP	4.30	brown
RG_400_/U	22510080	6	strand-19	PTFE	braid/braid	FEP	4.95	brown
Enviroflex_400 ^{a)}	22512280	6	strand-19	SPEX	braid/braid	RADOX®	5.00	black/blue
Enviroflex_400-01 ^{a)}	84008746	6	strand-19	SPEX	braid/braid	RADOX®	5.00	black
Enviroflex_B400	85087104	6	strand-19	SPE	braid/braid	LSFH	5.00	black
K_03252_D-03 ^{c)}	22511236	6	wire	PTFE	braid/braid	FEP	4.95	grey
RG_142_B/U	22510037	6	wire	PTFE	braid/braid	FEP	4.95	brown
Enviroflex_142 ^{a)}	22512168	6	wire	SPEX	braid/braid	RADOX®	5.00	black/blue
Enviroflex_B142	85087105	6	wire	SPE	braid/braid	LSFH	5.00	black
RG_393_/U	22511430	6	strand-07	PFA	braid/braid	FEP	9.90	brown
Enviroflex_393 ^{a)}	22512282	6	strand-07	SPEX	braid/braid	RADOX®	10.05	black/blue

^{a)}UL recognised

^{c)}precision type: 50 ± 1 Ω

Attenuation

typical values at +20 °C ambient temperature and sea level

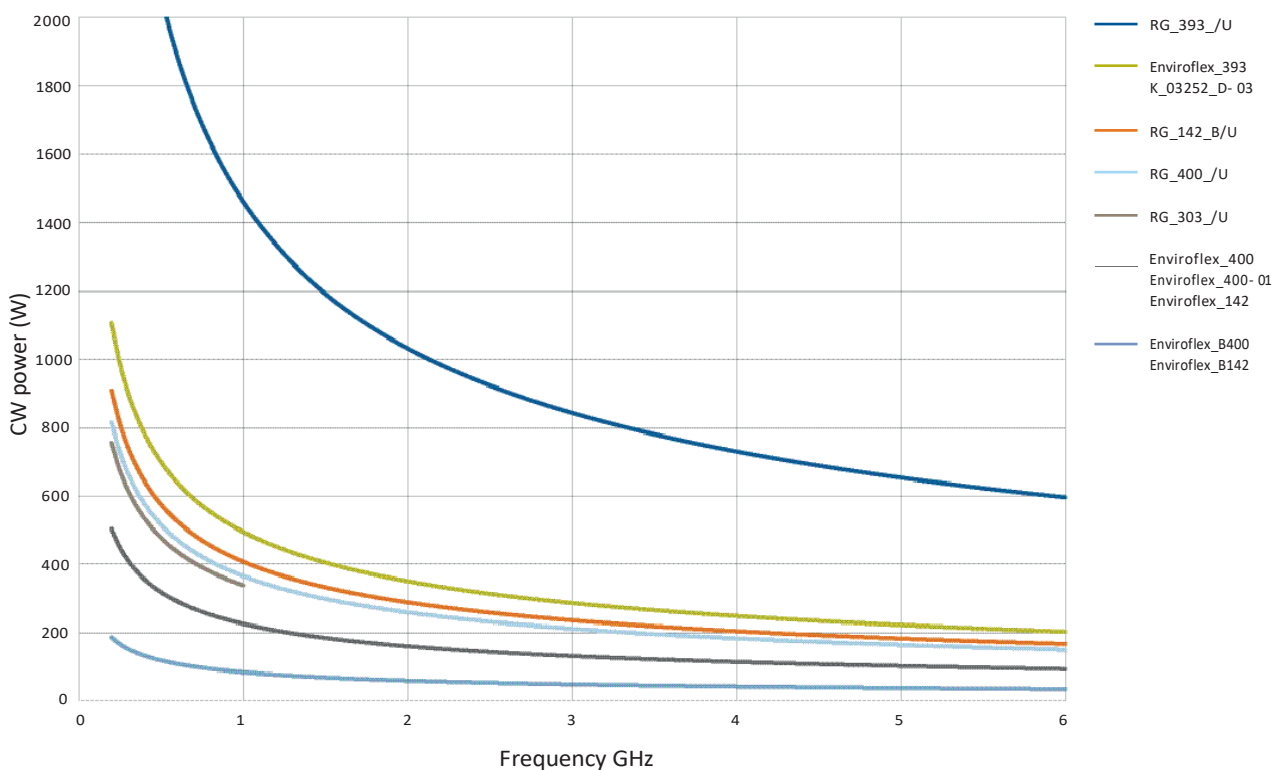


RG/K/Enviroflex series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-65 to +165	0.46	–	–	> 40 (up to 1 GHz)	25	43	U7
-65 to +165	0.48	0.95	1.51	> 81 (up to 6 GHz)	30	50	U11
-40 to +105	0.54	1.12	1.84	> 70 (up to 6 GHz)	10	40	U11
-40 to +105	0.54	1.12	1.84	> 70 (up to 6 GHz)	10	40	U11
-40 to +85	0.54	1.12	1.84	> 45 (up to 6 GHz)	10	40	U11
-65 to +165	0.45	0.86	1.35	> 82 (up to 6 GHz)	30	50	U9
-65 to +165	0.46	0.88	1.36	> 85 (up to 6 GHz)	30	50	U9
-40 to +105	0.51	1.06	1.75	> 75 (up to 5 GHz)	30	50	U9
-40 to +85	0.51	1.06	1.75	> 60 (up to 6 GHz)	30	50	U9
-65 to +165	0.30	0.69	1.20	> 81 (up to 6 GHz)	60	100	U33
-40 to +105	0.29	0.64	1.11	> 78 (up to 3 GHz)	30	100	U33

CW power

max. values at +40 °C ambient temperature and sea level



Performance line – high temperature coax cables, 75 Ω

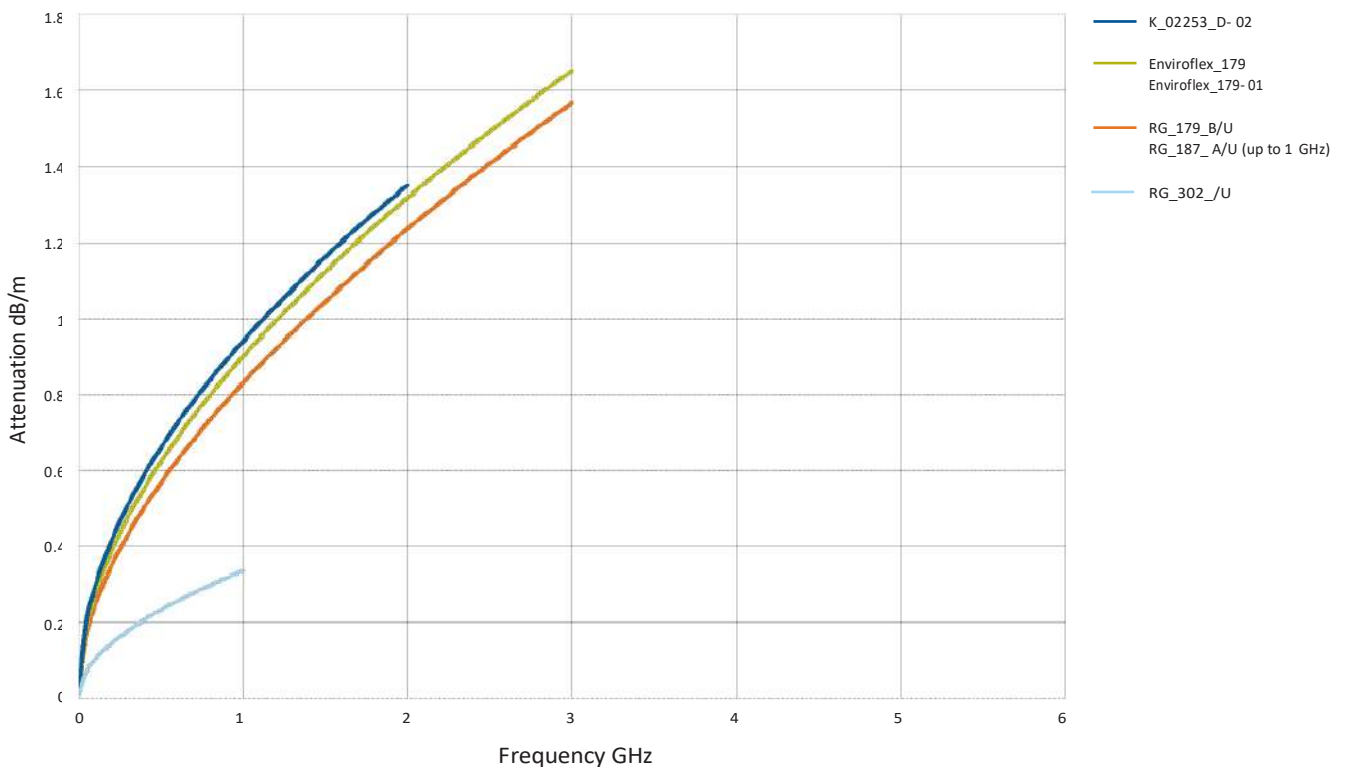
All diameters

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
RG_179_B/U	22510044	3	strand-07	PTFE	single braid	FEP	2.54	brown
Enviroflex_179 ^{a)}	23019104	3	strand-07	SPEX	single braid	RADOX®	2.54	blue
Enviroflex_179-01 ^{a)}	84021688	3	strand-07	SPEX	single braid	RADOX®	2.54	black
RG_187_A/U	22510045	1	strand-07	PTFE	single braid	PFA	2.65	white
K_02253_D-02	22511469	2	strand-07	PTFE	braid/braid	FEP	3.00	brown
RG_302_/U	22510077	1	wire	PTFE	single braid	FEP	5.10	brown

^{a)} UL recognised

Attenuation

typical values at +20 °C ambient temperature and sea level

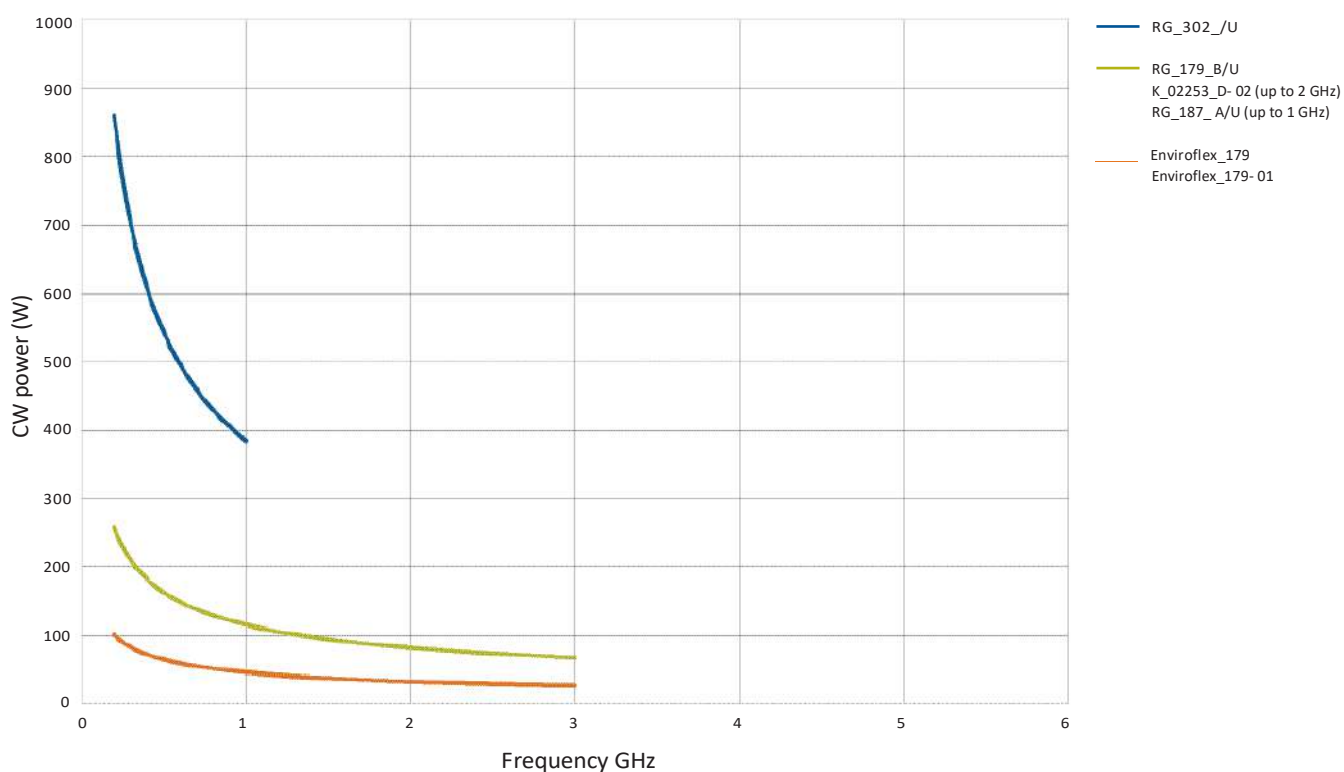


RG/K/Enviroflex series




Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-65 to +165	0.83	1.57	–	> 41 (up to 1 GHz)	15	28	U5
-40 to +105	0.90	1.65	–	> 40 (up to 1 GHz)	7	20	U5
-40 to +105	0.90	1.65	–	> 40 (up to 1 GHz)	7	20	U5
-80 to +205	0.83	–	–	> 41 (up to 1 GHz)	15	26	U5
-65 to +165	0.94	–	–	> 81 (up to 2 GHz)	18	30	R8
-65 to +165	0.34	–	–	> 40 (up to 1 GHz)	30	50	–

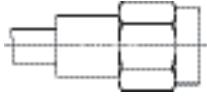
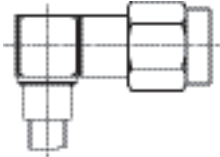

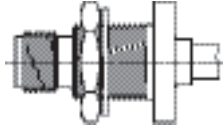
CW power

max. values at +40 °C ambient temperature and sea level



Performance line – high temperature coax cables

Group	7/16				BNC				N			
												
	11	16	21	24	11	16	21	24	11	16	21	24
U0 (MMCX connector available)												
U1					•		•	•				
U2					•	•	•	•	•		•	•
U4					•	•	•	•	•	•*	•	•
U5					•	•	•	•				
U7					•	•	•	•	•	•	•	•
U9	•*	•			•	•	•	•	•	•	•	•
U11					•	•	•	•	•	•	•	•
U33	•	•			•	•			•	•	•*	•
X1												
R8					•*							

11...	Straight cable plug (male)	16...	Right angle cable plug (male)	21...	Straight cable jack (female)	24...	Straight panel bulkhead cable jack (female)
							

Suitable connectors

QMA				QN				SMA				TNC			
11	16	21	24	11	16	21	24	11	16	21	24	11	16	21	24
			•*				•*	•	•		•	•			•
•	•		•	•				•	•	•	•	•	•	•	•
•	•		•	•*	•		•*	•	•	•	•	•	•		•
•	•		•	•	•		•	•	•	•		•	•	•	•
•	•		•	•	•		•	•	•	•	•	•	•	•	•
•	•			•	•		•*	•	•	•	•	•	•	•	
				•	•		•					•			
								•*			•*				

*on request (contact your nearest H+S partner)

Please refer to the HUBER+SUHNER RF coaxial connector catalogue for specific connector information or contact your nearest HUBER+SUHNER partner.

Standard line – high precision coax cables

RG/G series



HUBER+SUHNER standard PE coax cables provide a wide range of 50 and 75 Ω , as well as single and double shielded cable types. Apart from different constructions and materials which are available out of this portfolio, a solid extruded Polyethylene is used as dielectric material. HUBER+SUHNER's quality standards and its process knowledge guarantee excellent electrical performances, especially for return loss.

Features and benefits

- Standard RG coaxial cables
- High precision types
- Halogen free and flame retardant cable types
- Excellent return loss performance

Enviroflex basic series



With the introduction of Enviroflex basic, HUBER+SUHNER expand their portfolio of halogen free RF cables. The environmental friendly alternative extends the selection with cost-effective RF cables for less demanding applications. Thanks to the mechanical compatibility with RG cables the Enviroflex products can easily be designed-in using existing connectors.

Features and benefits

- Halogen free RG replacement
- LSFH jacket materials
- Cost efficient

GX series



HUBER+SUHNER cross-linked PE coax cables cover an extended temperature range up to 105 °C and fulfill highest quality requirements. The cross-linking technology allows a huge variety of application which are focused on demanding environmental requirements. HUBER+SUHNER RADOX[®] jacket materials provide a unique level of flame retardancy, is very low smoke and free of halogen.

Features and benefits

- High temperature due to cross-linking
- HUBER+SUHNER RADOX jacket materials
- Great flame retardancy
- Low smoke and halogen free

Line overview

Reference matrix

Series	RG and G	Enviroflex basic and G	GX
Dielectric material	PE	PE	PEX
Jacket material	PVC	LSFH	RADOX®
Halogen free	–	✓	✓
Low smoke	–	✓	✓
Flame retardancy	–	✓	✓ ✓
Temperature range	–25 to +85 °C	–40 to +85 °C	–40 to +105 °C
Weather resistance	✓ ✓	✓ ✓	✓ ✓
Outer diameter (approx. in mm) 50 Ω			
2	G_01132-06	–	–
3	RG_174_/U G_02232-09 G_02232_D	–	GX_02272 GX_02272_D-02
5	RG_58_C/U G_03232	Enviroflex_B58	GX_03272-04
5,5	RG_223_/U G_03232_D-01	Enviroflex_B223	GX_03272_D-06
10	RG_213_/U	–	GX_07272
11	RG_214_/U RG_214_HIFLEX	Enviroflex_B214	GX_07272_D
13	RG_217_/U	–	–
Outer diameter (approx. in mm) 75 Ω			
3	G_02233-01	–	GX_03173-01
5	G_03233	–	–
6	RG_59_B/U	G_04263-03	GX_04273-12
10	RG_11_A/U	–	–

This reference matrix does not contain all cable types available. Please refer to the RF cable catalogue or contact your nearest HUBER+SÜHNER representative for your specific request.

Legend



The GX cables technically belong to the performance line based on the temperature range. They are listed in the standard line due to the mechanical compatibility with the other products.

- PE polyethylene
- PEX polyethylene cross-linked
- PVC polyvinylchlorid
- LSFH low smoke free of halogen
- RADOX® polyolefin, flame retardant (registered trade mark by HUBER+SÜHNER)

Standard line – high precision coax cables, 50 Ω

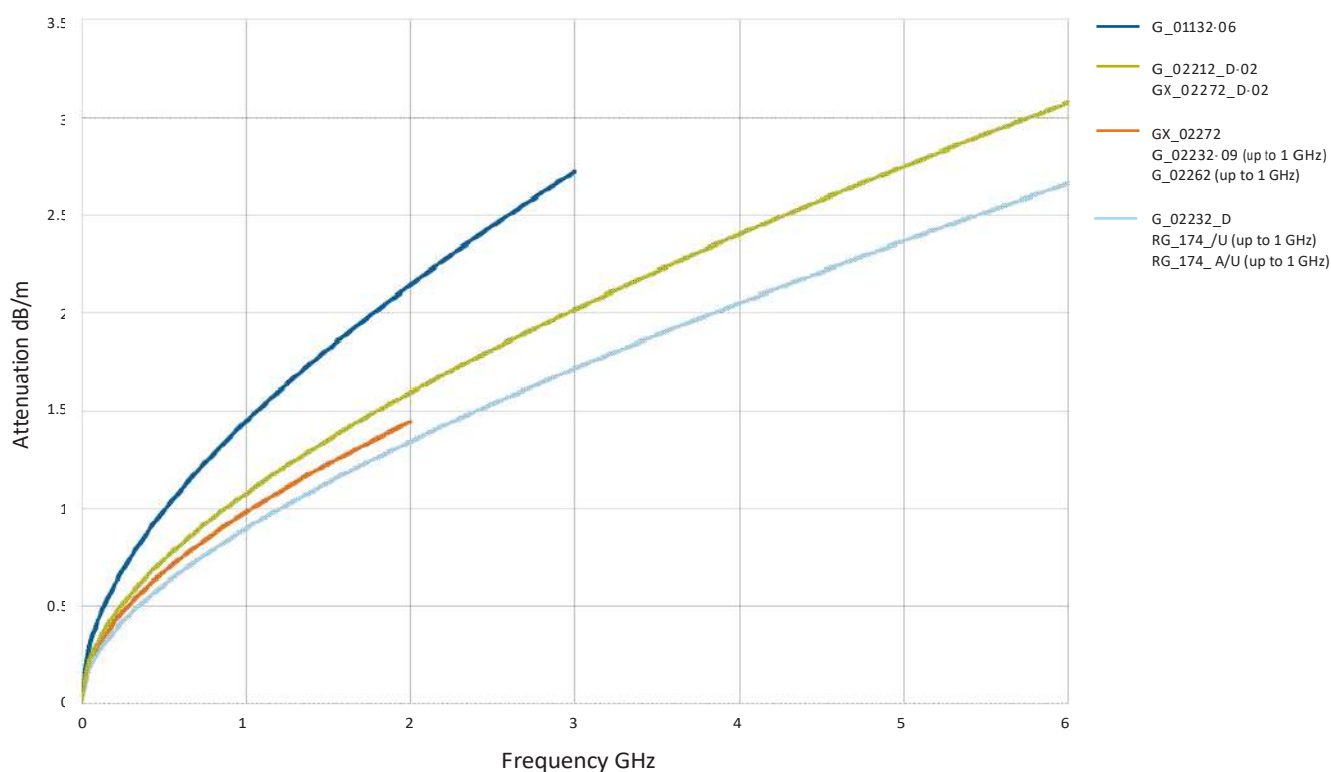
Small diameter up to 4 mm

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
G_01132-06	22511913	3	wire	PE	single braid	PVC	1.80	violet
RG_174_/U	22510040	1	strand-07	PE	single braid	PVC	2.55	black
G_02232-09	22510110	1	strand-07	PE	single braid	PVC	2.55	grey
RG_174_A/U ^{b)}	22511579	1	strand-07	PE	single braid	PVC	2.80	black
G_02262	22510862	1	strand-07	PE	single braid	LSFH	2.80	black
GX_02272	22510833	2	strand-07	PEX	single braid	RADOX®	2.80	black
G_02232_D	22510112	6	strand-07	PE	braid/braid	PVC	3.10	black
G_02212_D-02	22511668	6	strand-07	PE	braid/braid	PUR	3.10	orange
GX_02272_D-02	22511671	6	strand-07	PEX	braid/braid	RADOX®	3.20	black

^{b)} UL recognised type available (see page 52)

Attenuation

typical values at +20 °C ambient temperature and sea level

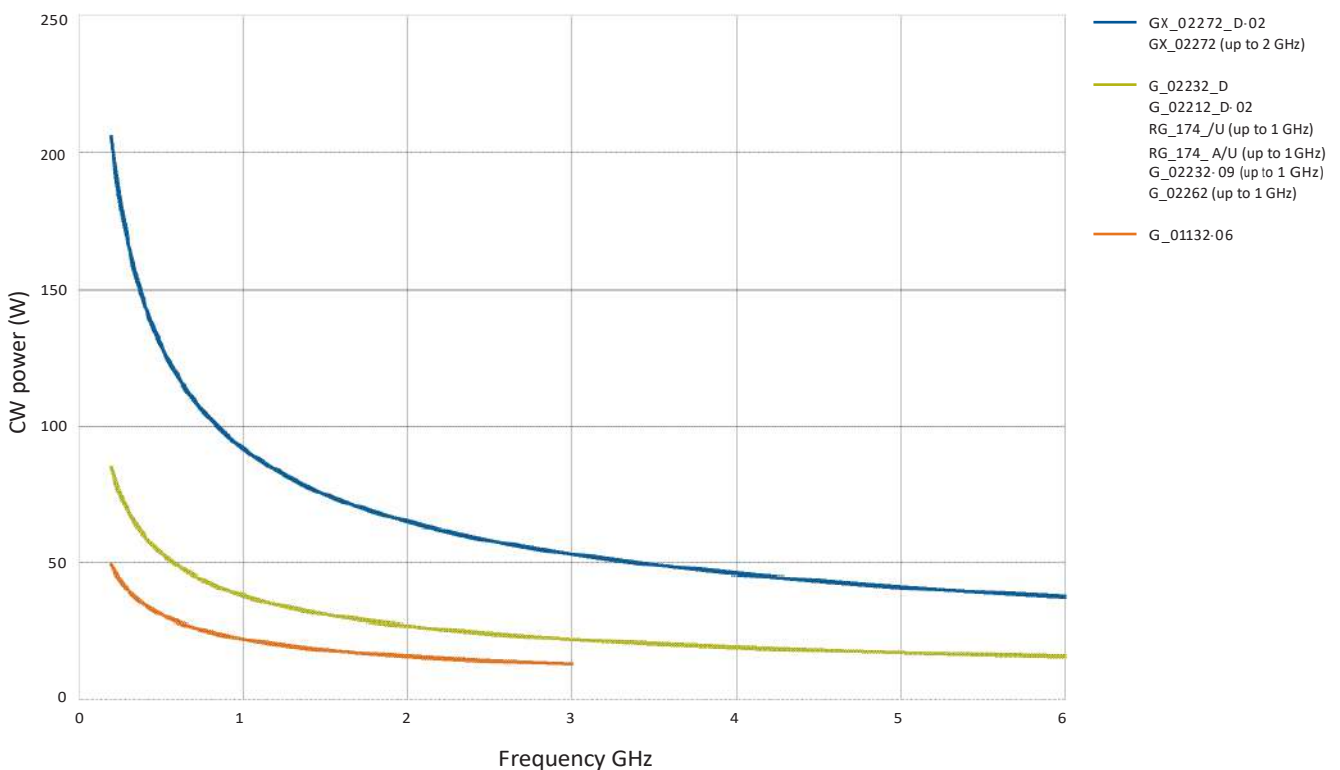


RG/G series 50 Ω

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-25 to +85	1.44	2.72	–	> 38 (up to 3 GHz)	9	20	U1
-25 to +85	0.92	–	–	> 40 (up to 1 GHz)	15	26	U2
-25 to +85	1.00	–	–	> 40 (up to 1 GHz)	13	25	U2
-25 to +85	0.92	–	–	> 40 (up to 1 GHz)	15	28	U2
-40 to +85	1.00	–	–	> 38 (up to 1 GHz)	15	28	U2
-40 to +105	0.98	–	–	> 41 (up to 2 GHz)	15	28	U2
-25 to +85	0.89	1.72	2.66	> 78 (up to 1 GHz)	15	30	U4
-40 to +85	1.08	2.02	3.08	> 80 (up to 1 GHz)	15	30	U4
-40 to +105	0.99	2.03	3.30	> 80 (up to 6 GHz)	15	32	U4

CW power

max. values at +40 °C ambient temperature and sea level



Standard line – high precision coax cables, 50 Ω

Medium diameter from 4 up to 6 mm

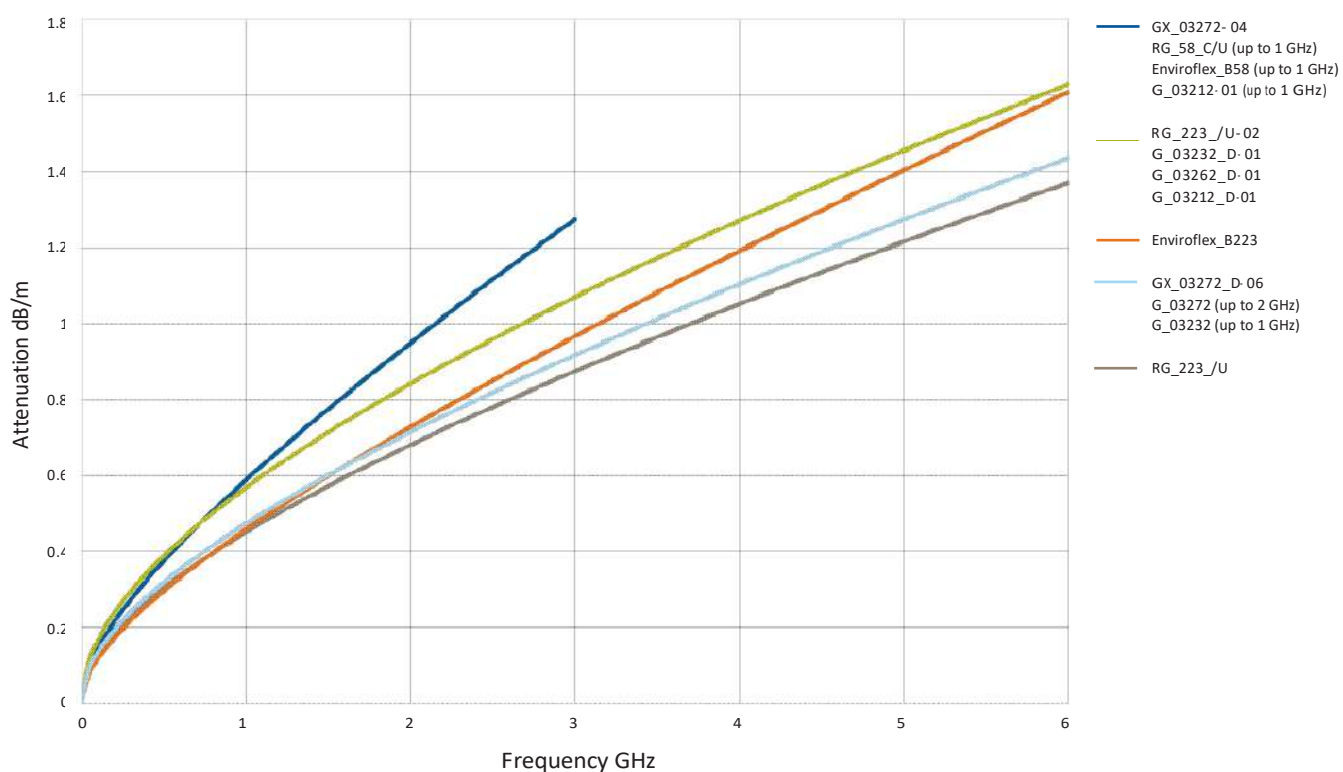
HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
RG_58_C/U ^{b)}	22510015	1	strand-19	PE	single braid	PVC	4.95	black
G_03232	22510128	1	strand-07	PE	single braid	PVC	5.00	black
Enviroflex_B58	85086965	1	strand-19	PE	single braid	LSFH	4.95	black
G_03272	22511434	2	strand-07	PE	single braid	PE	5.00	black
G_03212-01	22610095	1	strand-19	PE	single braid	PUR	4.95	black
GX_03272-04	22512309	3	strand-19	PEX	single braid	RADOX®	4.95	black
RG_223_/U ^{b), c)}	22510072	6	wire	PE	braid/braid	PVC	5.40	black
RG_223_/U-02	22610106	6	strand-19	PE	braid/braid	PVC	5.30	black
G_03232_D-01	22510134	6	strand-19	PE	braid/braid	PVC	5.35	black
Enviroflex_B223	85087022	6	wire	PE	braid/braid	LSFH	5.40	black
G_03262_D-01	22511782	6	strand-19	PE	braid/braid	LSFH	5.40	black
G_03212_D-01	22512305	6	strand-19	PE	braid/braid	PUR	5.40	black
GX_03272_D-06	22511592	6	wire	PEX	braid/braid	RADOX®	5.40	black

^{b)} UL recognised alternative available (see page 52)

^{c)} precision type: impedance $50 \pm 1 \Omega$

Attenuation

typical values at +20 °C ambient temperature and sea level

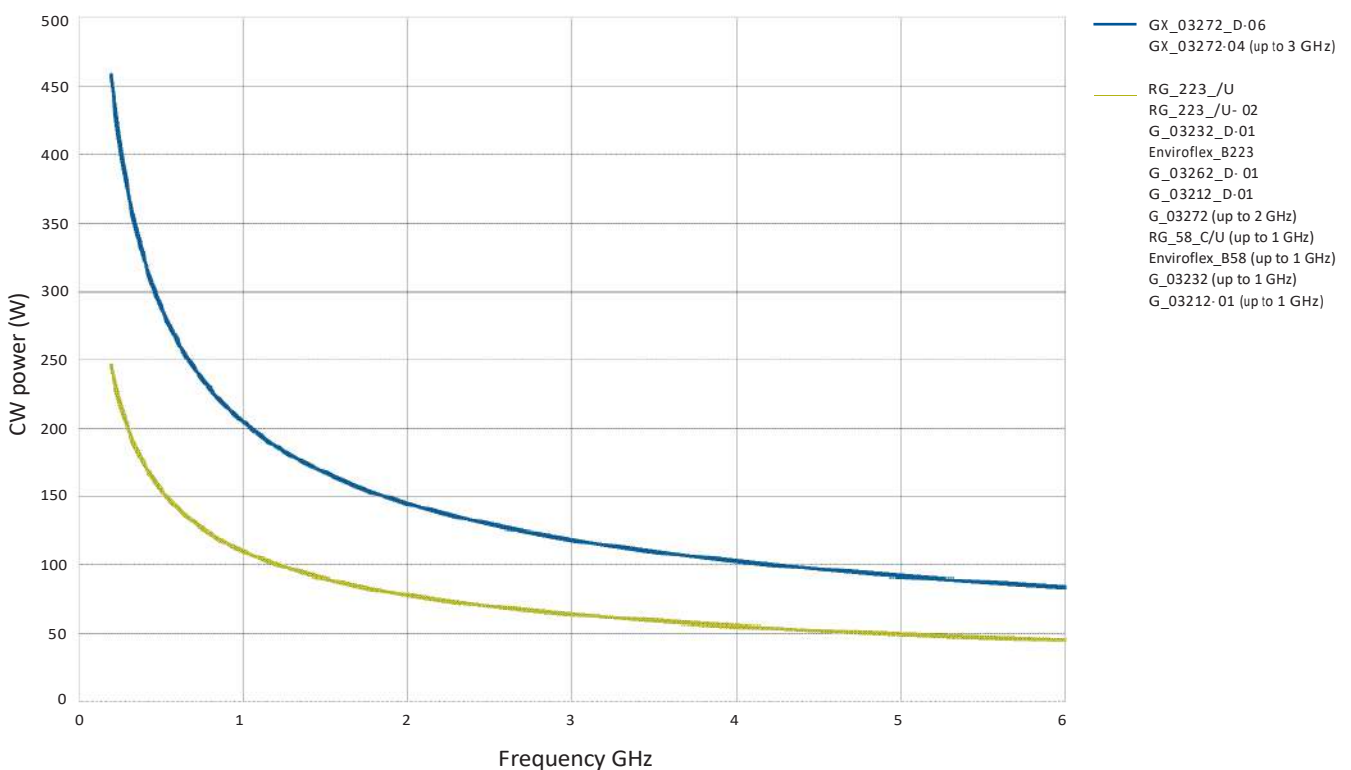


RG/G/GX/Enviroflex basic series

Temperature range °C	Attenuation at 1 GHz dB/m	Attenuation at 3 GHz dB/m	Attenuation at 6 GHz dB/m	Screening effectiveness dB	Bending static mm	Bending repeated mm	Cable group
-25 to +85	0.69	–	–	> 38 (up to 1 GHz)	25	50	U7
-25 to +85	0.48	–	–	> 39 (up to 1 GHz)	25	50	U7
-40 to +85	0.58	–	–	> 40 (up to 3 GHz)	25	50	U7
-40 to +85	0.48	–	–	> 39 (up to 2 GHz)	30	50	U7
-40 to +85	0.56	–	–	> 40 (up to 1 GHz)	25	50	U7
-40 to +105	0.59	1.27	–	> 40 (up to 2 GHz)	25	50	U7
-25 to +85	0.45	0.88	1.37	> 85 (up to 1 GHz)	30	54	U9
-25 to +85	0.57	1.07	1.63	> 83 (up to 1 GHz)	26	50	U9
-25 to +85	0.57	1.18	1.96	> 78 (up to 1 GHz)	25	50	U9
-40 to +85	0.46	0.97	1.61	> 60 (up to 6 GHz)	30	54	U9
-40 to +85	0.52	1.01	1.57	> 73 (up to 1 GHz)	27	54	U9
-40 to +85	0.54	1.18	2.03	> 80 (up to 6 GHz)	30	55	U9
-40 to +105	0.47	0.92	1.44	> 80 (up to 6 GHz)	30	54	U9

CW power

max. values at +40 °C ambient temperature and sea level



Standard line – high precision coax cables, 50 Ω

Large diameter from 6 mm

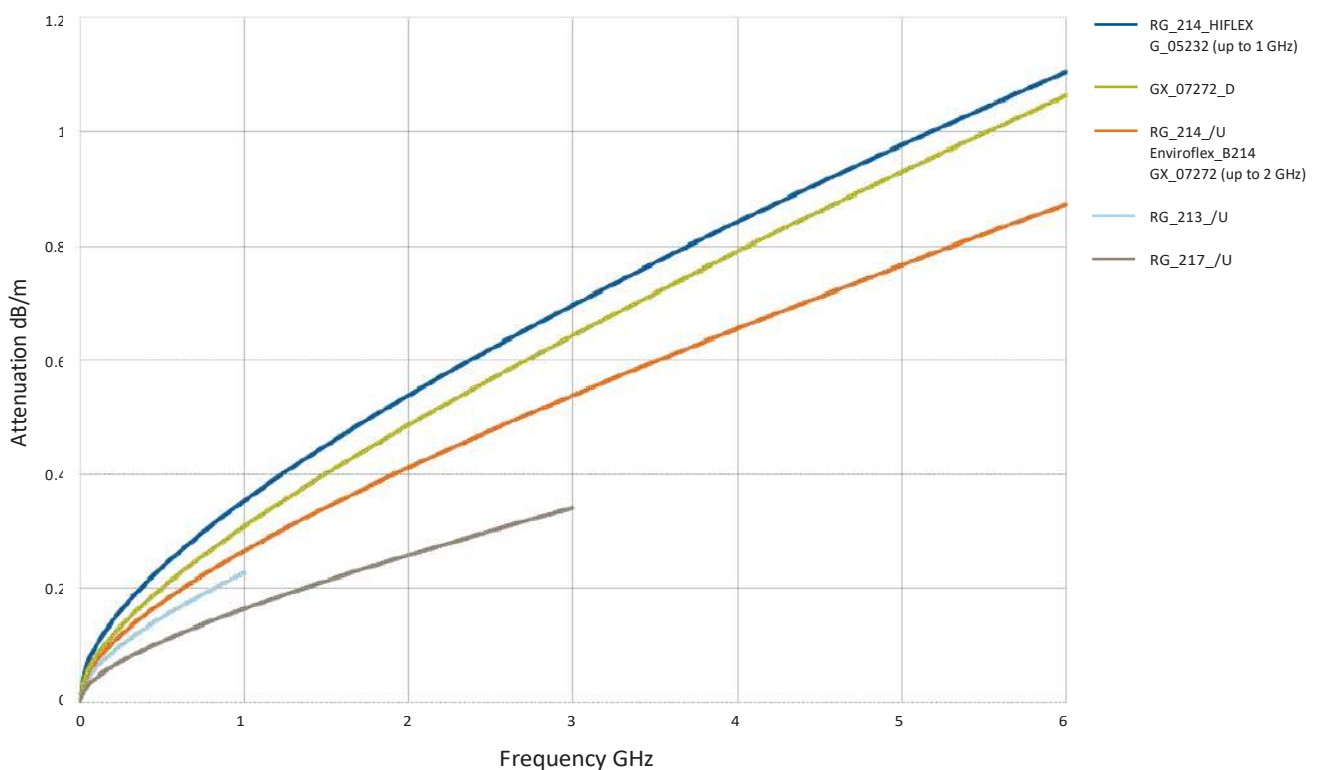
HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
G_05232	22510176	1	strand-07	PE	single braid	PVC	7.40	black
RG_213_/U	22510052	1	strand-07	PE	single braid	PVC	10.30	black
GX_07272	22510708	2	strand-07	PEX	single braid	RADOX®	10.30	black
RG_214_/U ^{b), c)}	22510057	6	strand-07	PE	braid/braid	PVC	10.80	black
RG_214_HIFLEX	22512156	6	strand-19	TPO	braid/braid	PVC	10.80	black
Enviroflex_B214	85087101	6	strand-07	PE	braid/braid	LSFH	10.80	black
GX_07272_D	22511171	6	strand-07	PEX	braid/braid	RADOX®	10.80	black
RG_217_/U	22510064	3	wire	PE	braid/braid	PVC	13.85	black

^{b)} UL recognised alternative available (see page 52)

^{c)} precision type: impedance 50 ± 1 Ω

Attenuation

typical values at +20 °C ambient temperature and sea level

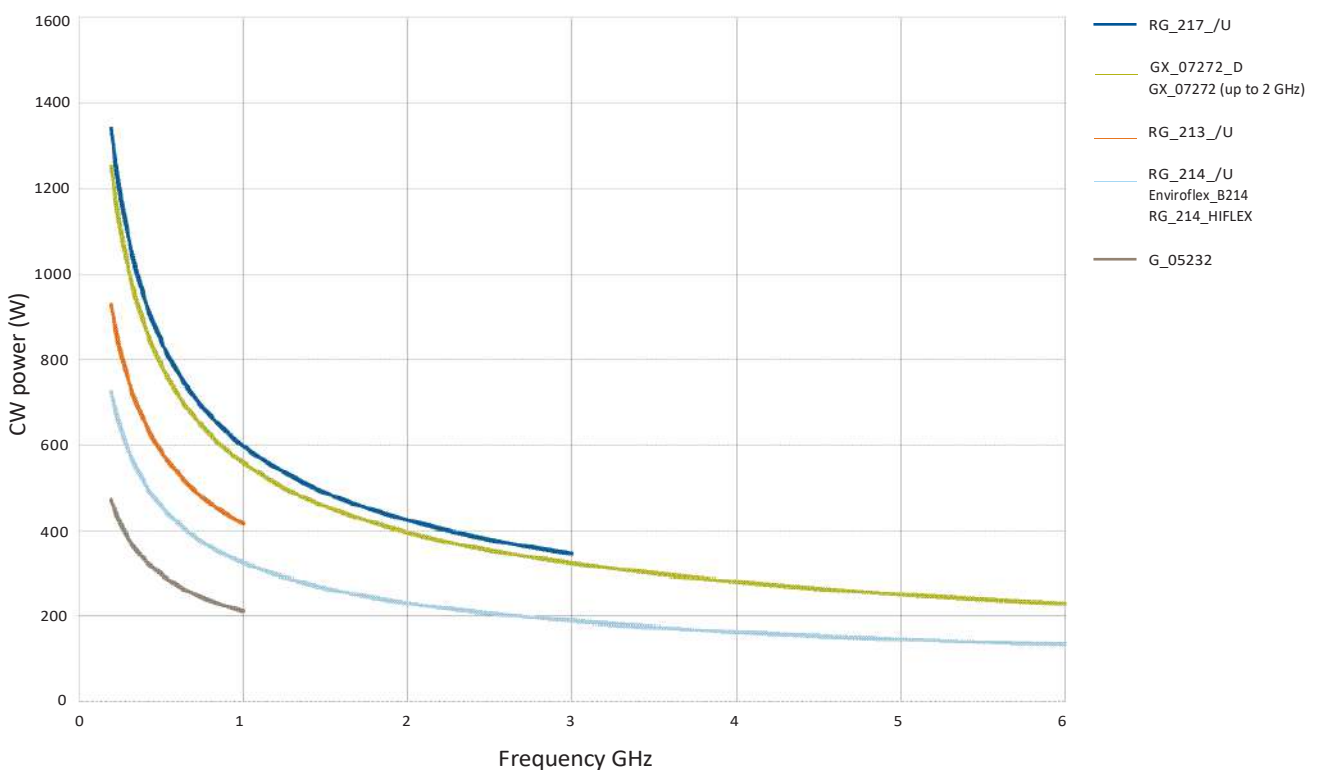


RG/G/GX/Enviroflex basic series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-25 to +85	0.34	–	–	> 40 (up to 1 GHz)	40	75	U19
-25 to +85	0.23	–	–	> 40 (up to 1 GHz)	50	100	U29
-40 to +105	0.26	–	–	> 41 (up to 2 GHz)	50	100	U29
-25 to +85	0.27	0.54	0.87	> 71 (up to 1 GHz)	55	108	U32
-25 to +85	0.25	0.50	0.81	> 70 (up to 1 GHz)	15	60	U32
-40 to +85	0.27	0.54	0.87	> 50 (up to 6 GHz)	57	114	U32
-40 to +105	0.31	0.64	1.06	> 81 (up to 6 GHz)	50	110	U32
-25 to +85	0.20	0.42	–	> 80 (up to 1 GHz)	70	140	U38

CW power

max. values at +40 °C ambient temperature and sea level



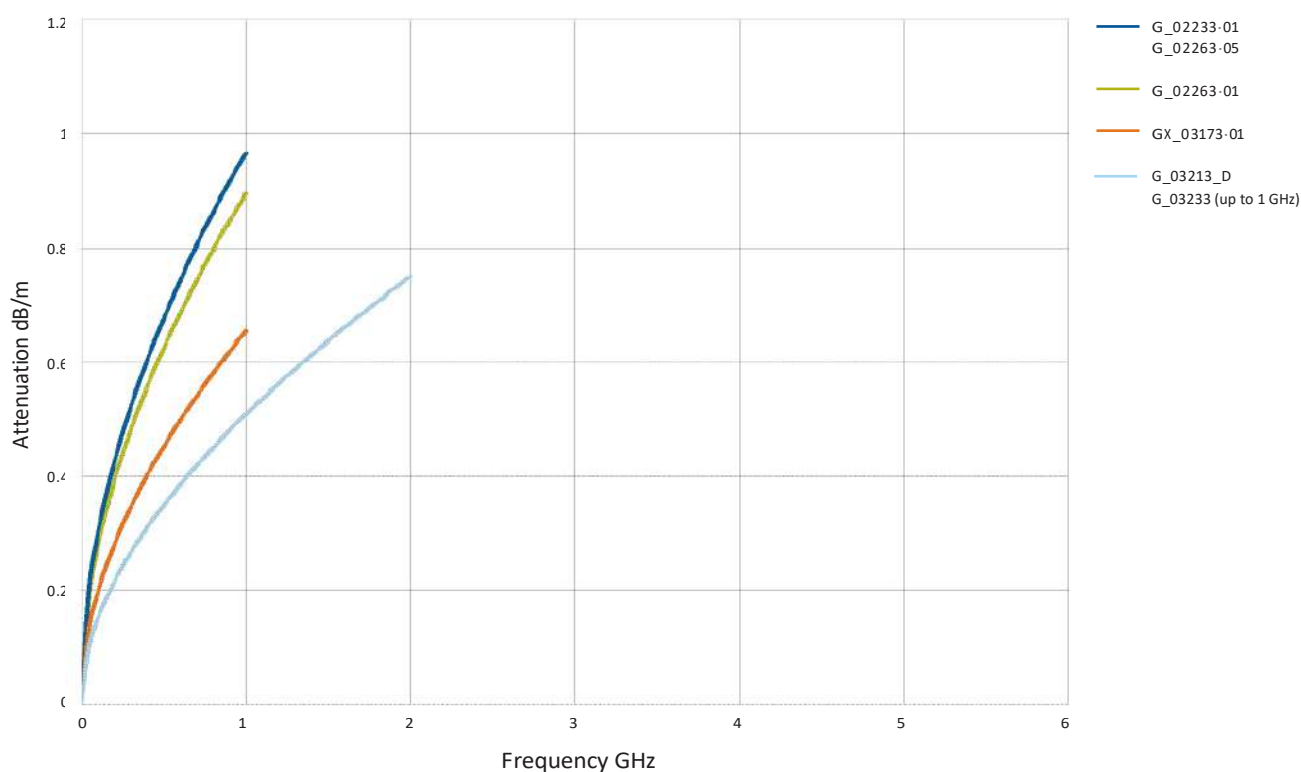
Standard line – high precision coax cables, 75 Ω

Small diameter up to 6 mm

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
G_02233-01	22510114	1	wire	PE	single screen	PVC	2.80	black
G_02263-05	84007449	1	wire	PE	single braid	LSFH	2.80	black
G_02263-01	22512158	1	strand-07	PE	single braid	LSFH	2.80	black
GX_03173-01	22511581	1	strand-07	PEX	single braid	RADOX®	3.70	grey
G_03233	22510135	1	strand-07	PE	single braid	PVC	5.00	black
G_03213_D	22510954	2	strand-07	PE	braid/braid	PUR	5.35	black

Attenuation

typical values at +20 °C ambient temperature and sea level

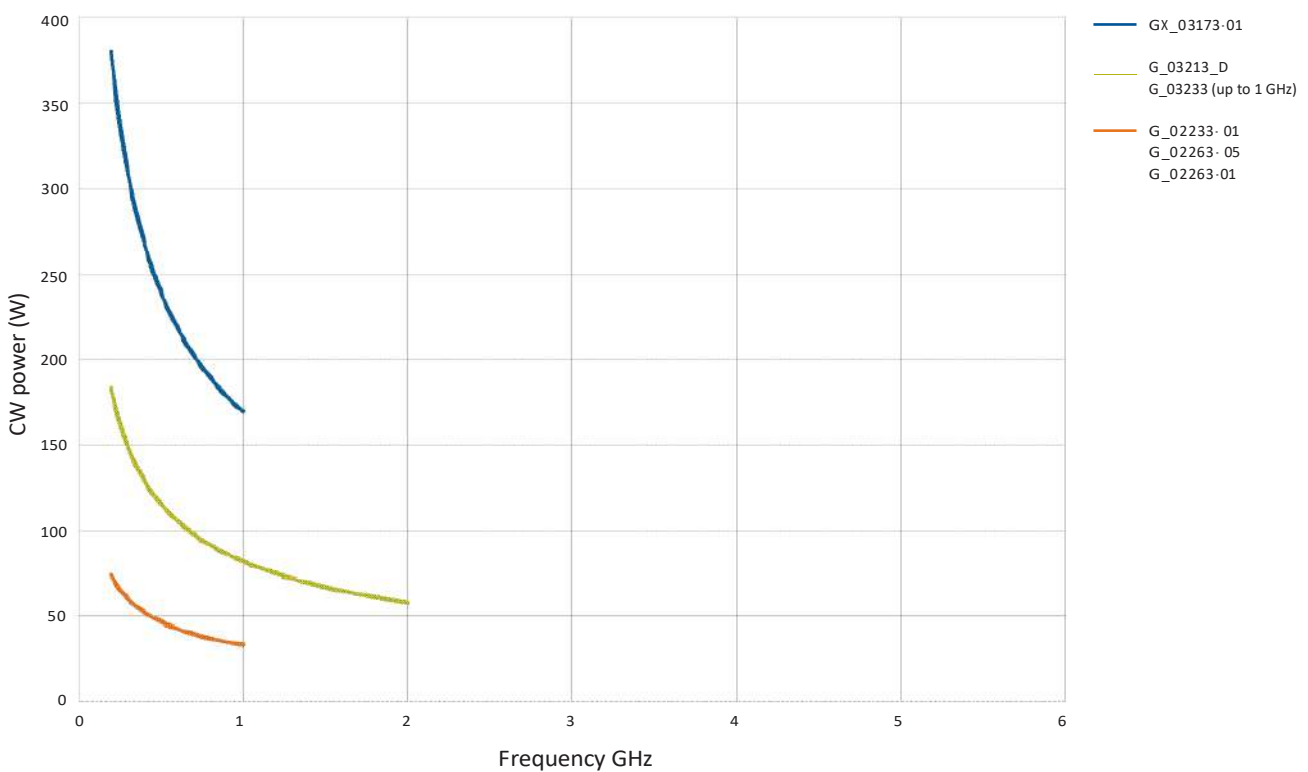


G/GX series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-25 to +85	0.89	–	–	> 38 (up to 1 GHz)	15	28	U5
-240 to +85	0.89	–	–	> 67 (up to 1 GHz)	15	30	U5
-240 to +85	0.97	–	–	> 38 (up to 1 GHz)	15	30	U5
-240 to +105	0.66	–	–	> 40 (up to 1 GHz)	18	37	U6
-225 to +85	0.53	–	–	> 39 (up to 1 GHz)	25	50	U12
-240 to +85	0.51	–	–	> 77 (up to 2 GHz)	25	53	U14

CW power

max. values at +40 °C ambient temperature and sea level



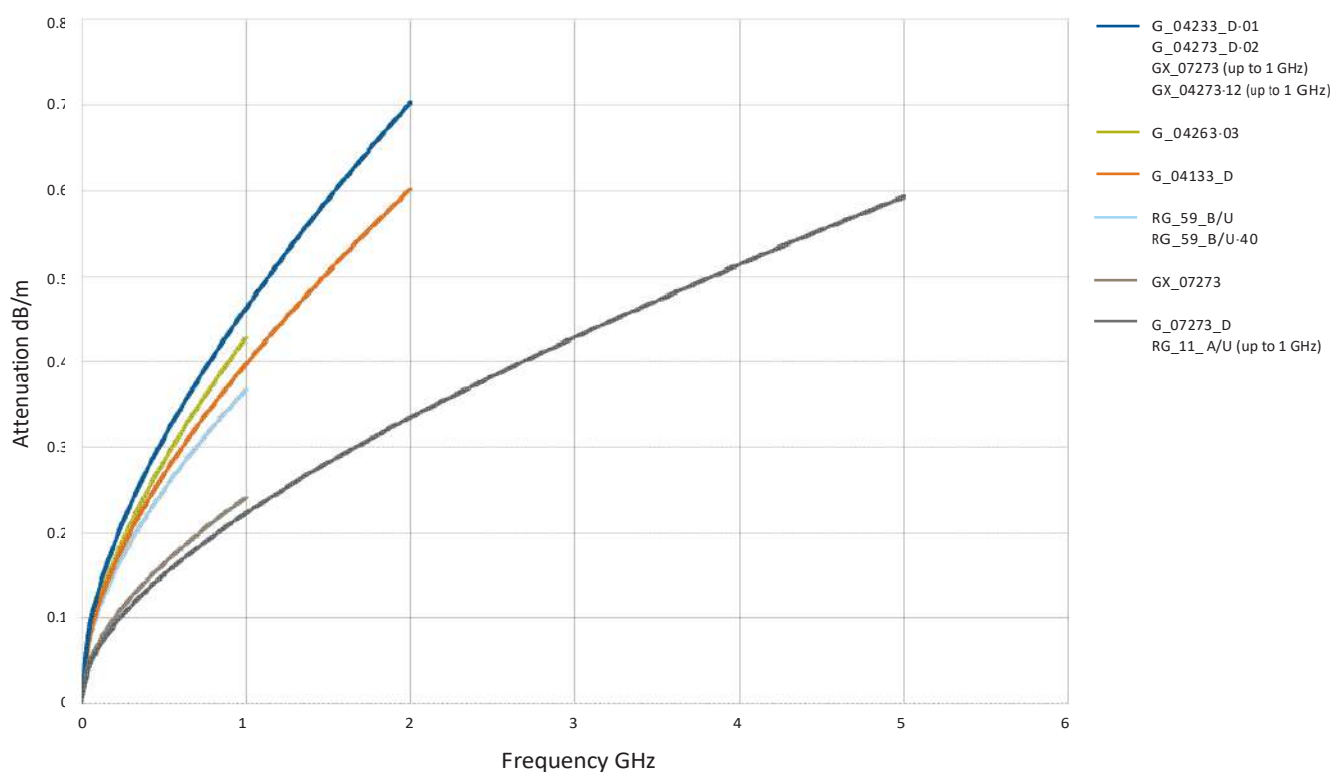
Standard line – high precision coax cables, 75 Ω

Large diameter from 6 mm

HUBER+SUHNER type	Item no.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		GHz					mm	
RG_59_B/U	22510368	1	wire	PE	single braid	PVC	6.10	black
RG_59_B/U-40	22511193	1	wire	PE	single braid	PVC	6.10	red
G_04263-03	22511867	1	wire	PE	single braid	LSFH	6.10	black
GX_04273-12	23029791	1	strand-07	PEX	single braid	RADOX®	6.10	black
G_04133_D	22610079	2	wire	PE	braid/braid	PVC	6.70	black
G_04273_D-02	22512183	2	strand-07	PE	braid/braid	RADOX®	6.70	black
G_04233_D-01	22510169	2	strand-07	PE	braid/braid	PVC	6.70	black
RG_11_A/U	22510004	1	strand-07	PE	single braid	PVC	10.30	black
GX_07273	22510641	1	strand-07	PEX	single braid	RADOX®	10.30	black
G_07273_D	22510365	5	strand-07	PE	braid/braid	PE	10.80	black

Attenuation

typical values at +20 °C ambient temperature and sea level

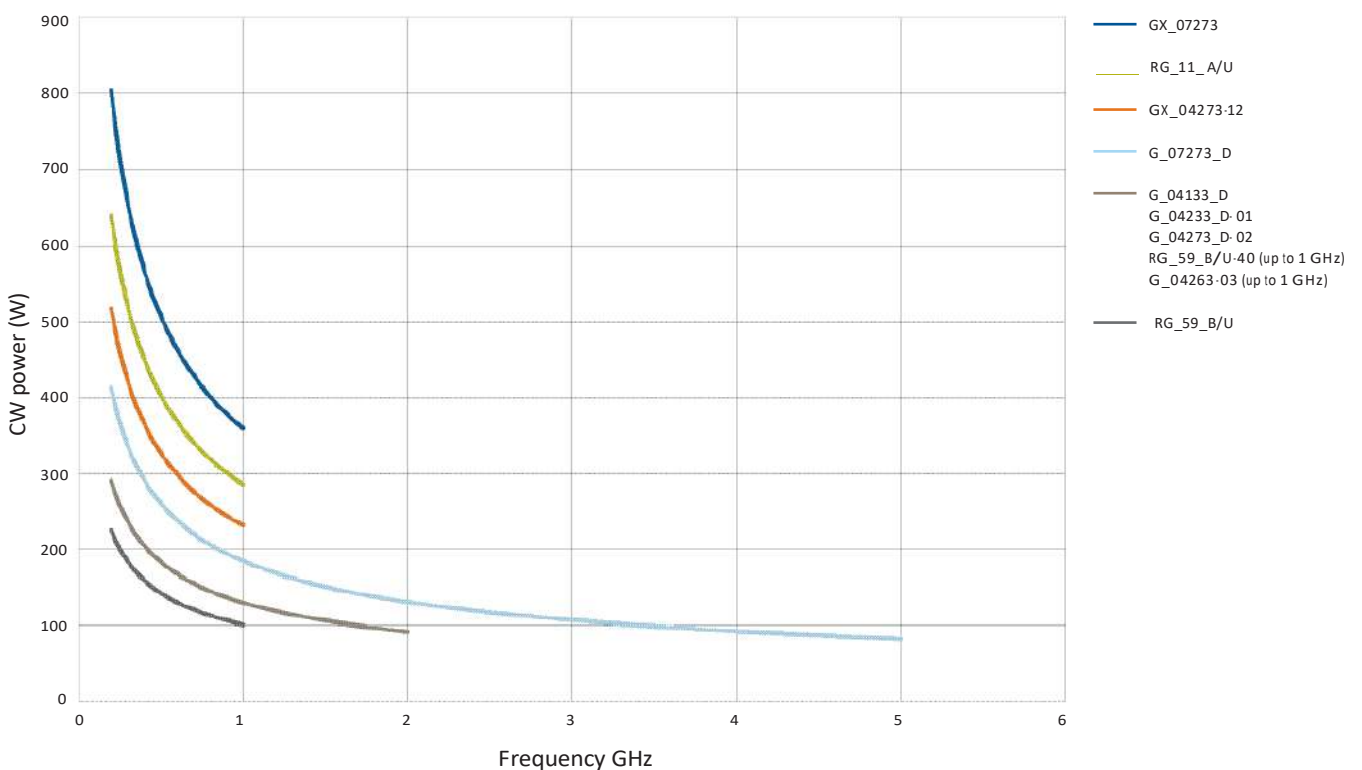


RG/G/GX series

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	db	mm	mm	
-25 to +85	0.37	–	–	> 40 (up to 1 GHz)	35	65	U16
-25 to +85	0.37	–	–	> 40 (up to 1 GHz)	32	65	U16
-40 to +85	0.43	–	–	> 40 (up to 1 GHz)	32	65	U16
-40 to +105	0.49	–	–	> 40 (up to 1 GHz)	30	60	U16
-25 to +85	0.40	–	–	> 80 (up to 1 GHz)	35	67	U18
-40 to +85	0.45	–	–	> 81 (up to 6 GHz)	35	67	U18
-25 to +85	0.46	–	–	> 78 (up to 2 GHz)	35	67	X16
-25 to +85	0.22	–	–	> 38 (up to 1 GHz)	55	100	U34
-40 to +105	0.24	–	–	> 40 (up to 1 GHz)	55	100	U34
-40 to +85	0.22	0.43	–	> 70 (up to 2 GHz)	55	110	U36

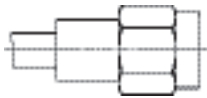
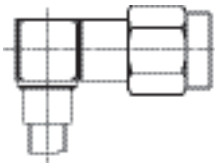

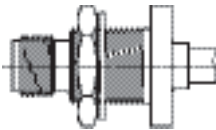
CW power

max. values at +40 °C ambient temperature and sea level



Standard line – high precision coax cables

Group	7/16				BNC				N			
	11	16	21	24	11	16	21	24	11	16	21	24
U1					•		•	•				
U2					•	•	•	•	•			•
U4					•	•	•	•	•	•*	•	•
U5					•	•	•	•				
U6					•							
U7					•	•	•	•	•	•	•	•
U9	•*	•			•	•	•	•	•	•	•	•
U12					•				•*			
U14					•	•		•	•*			
U16					•	•	•	•	•		•	•
U18					•	•	•	•	•		•*	•*
U29	•		•		•	•		•	•	•	•	•
U32	•	•	•		•	•			•	•	•	•
U34					•				•		•*	
U36					•				•		•*	
U38	•								•*			

11...	Straight cable plug (male)	16...	Right angle cable plug (male)	21...	Straight cable jack (female)	24...	Straight panel bulkhead cable jack (female)
							

Suitable connectors

QMA				QN				SMA				TNC			
11	16	21	24	11	16	21	24	11	16	21	24	11	16	21	24
			•*				•*	•	•		•	•			•
•	•		•	•				•	•	•	•	•	•	•	•
•	•		•	•*	•		•*	•	•	•	•	•	•		•
												•			
•	•		•	•	•		•	•	•	•		•	•	•	•
•	•		•	•	•		•	•	•	•	•	•	•	•	•
				•	•		•					•	•		
				•	•		•					•	•		

*1)on request (contact your nearest H+S partner)

Please refer to the HUBER+SUHNER RF coaxial connector catalogue for specific connector information or contact your nearest HUBER+SUHNER partner.

Specialities – low noise coax and triax cables

Low noise coax cables, 50 Ω

HUBER+SUHNER type	Item no.	Imp.	Frequency	Inner conductor	Dielectric	Outer conductor
		Ω	GHz			
G_01130_HT	22510085	50	1	wire	PE	single braid
G_01130_HT-01	22510086	50	1	wire	PE	single braid
G_01130_HT-03	22510088	50	1	strand-07	PE	single braid
G_01130_HT-12	22510732	50	1	strand-07	PE	single braid
G_01130_HT-24	22511866	50	1	strand-07	PE	single braid

Low noise coax cables, 75 Ω

HUBER+SUHNER type	Item no.	Imp.	Frequency	Inner conductor	Dielectric	Outer conductor
		Ω	GHz			
G_03130_HT	22510119	75	1	wire	PE	single braid
G_03130_HT-01	22510120	75	1	strand-07	PE	single braid
G_03160_HG	22511891	75	1	wire	PE	single braid
G_04233_HT-01	22511337	75	1	wire	PE	single braid

Low noise triax cables

HUBER+SUHNER type	Item no.	Imp.	Frequency	Inner conductor	Dielectric	Outer conductor 1st – 2nd
		Ω	GHz			
G_01330_HT-23	22511840	50	1	strand-07	PE	braid – braid
G_02330_HT	22510116	50	1	wire	PE	braid – braid
G_03330_HT-11	22511103	75	1	wire	PE	braid – braid

Semiconductor – jacket	Diameter	Colour	Temperature range	Max. noise level	Bending static	Bending repeated	Cable group
	mm		°C	mV	mm	mm	
PVC – PVC	3.15	black	-25 to +85	10	16	32	U3
PVC – PVC	3.15	grey	-25 to +85	10	20	35	U3
PVC – PVC	2.80	black	-25 to +85	10	14	28	U3
PVC – PVC	2.95	grey	-25 to +85	10	15	30	U3
PVC – PVC	3.15	black	-25 to +85	10	20	50	U3

Semiconductor – jacket	Diameter	Colour	Temperature range	Max. noise level	Bending static	Bending repeated	Cable group
	mm		°C	mV	mm	mm	
PVC – PVC	5.00	black	-25 to +85	20	25	50	U13
PVC – PVC	5.00	black	-25 to +85	100	10	20	U13
PE – LSFH	5.00	black	-40 to +85	20	25	50	U13
PVC – PVC	6.10	black	-25 to +85	50	35	70	U18

Semiconductor – jacket	Diameter	Colour	Temperature range	Max. noise level	Bending static	Bending repeated	Cable group
	mm		°C	mV	mm	mm	
PVC – PUR	4.30	black	-25 to +85	10	20	50	–
PVC – PVC	5.30	grey	-25 to +85	10	30	60	X5
PVC – PVC	6.90	black	-25 to +85	20	40	70	–

Specialities – triax cables

50 Ω

HUBER+SUHNER type	Item no.	Imp.	Frequency	Inner conductor	Dielectric	Outer conductor 1st – 2nd	Jacket	Diameter	Colour
		Ω	GHz					mm	
G_02332	22510117	50	2	strand-07	PE	braid – braid	PVC	4.25	black
G_02332-01	23023565	50	2	strand-07	PE	braid – braid	PVC	4.25	grey
G_02312-03	84016512	50	2	strand-07	PE	braid – braid	PUR	4.25	black
G_03362-01	22511961	50	2	strand-19	PE	braid – braid	LSFH	7.20	black
G_03332	22510149	50	2	strand-07	PE	braid – braid	PVC	7.30	black

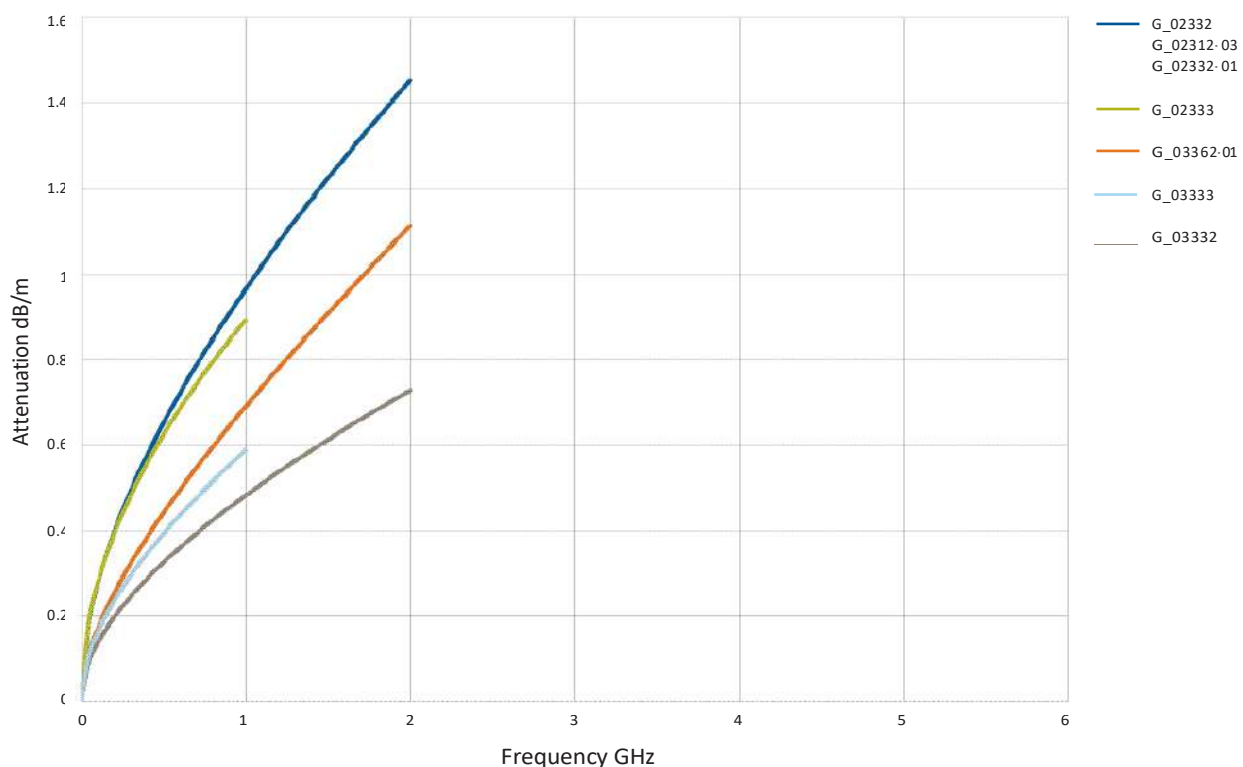
75 Ω

HUBER+SUHNER type	Item no.	Imp.	Frequency	Inner conductor	Dielectric	Outer conductor 1st – 2nd	Jacket	Diameter	Colour
		Ω	GHz					mm	
G_02333 ^{b)}	22510118	75	1	wire	PE	braid – braid	PVC	4.30	black
G_03333	22510379	75	1	strand-07	PE	braid – braid	PVC	7.35	black

^{b)} UL recognized alternative available (see page 52)

Attenuation

typical values at +20 °C ambient temperature and sea level

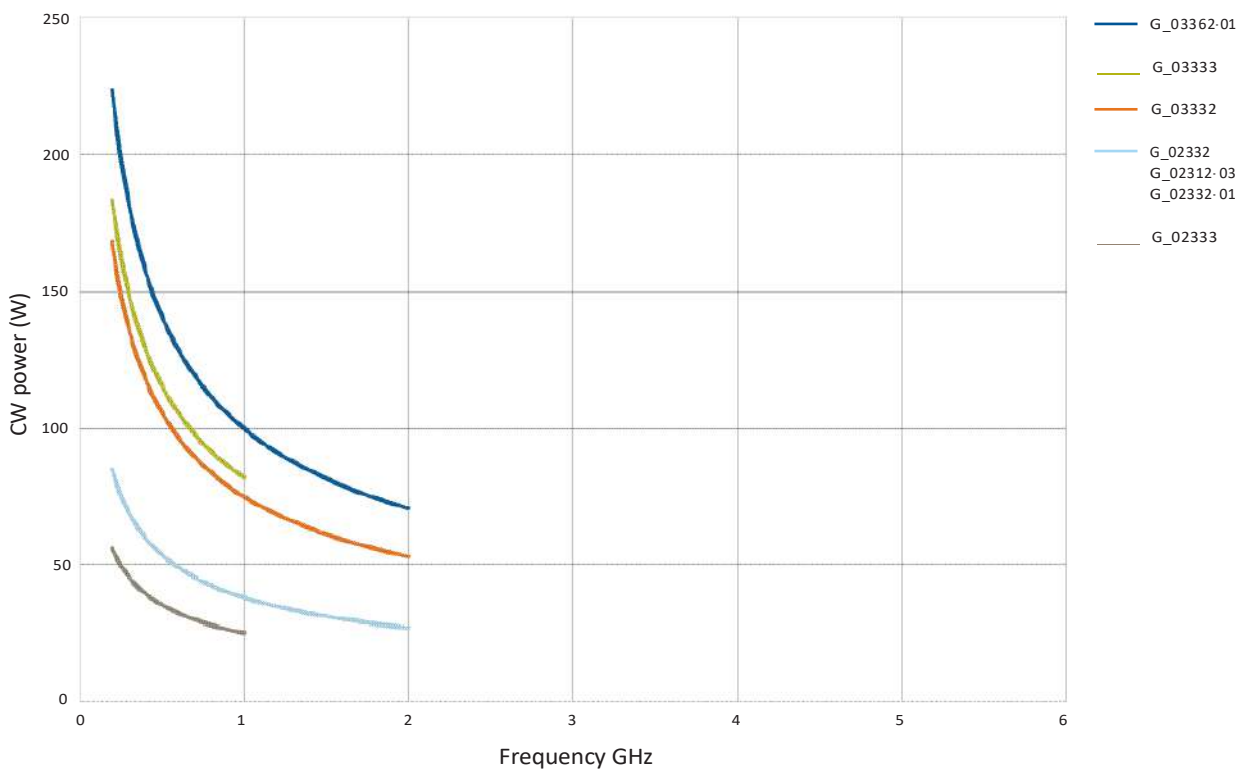


Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	db	mm	mm	
-25 to +85	0.97	–	–	> 75 (up to 2 GHz)	20	42	W1
-25 to +85	0.97	–	–	> 75 (up to 2 GHz)	20	42	W1
-25 to +85	0.97	–	–	> 75 (up to 2 GHz)	20	42	W1
-40 to +85	0.69	–	–	> 40 (up to 2 GHz)	36	75	–
-25 to +85	0.48	–	–	> 40 (up to 2 GHz)	36	75	W2

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-25 to +85	0.89	–	–	> 50 (up to 1 GHz)	25	40	X13
-25 to +85	0.59	–	–	> 50 (up to 1 GHz)	35	73	W2

CW power

max. values at +40 °C ambient temperature and sea level



Specialities – various cables

Special impedance

HUBER+SUHNER type	Item no.	Imp.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		Ω	GHz					mm	
RG_195_A/U	22510048	95	1	strand-07	PTFE	single braid	PFA	3.7	white
S_03279_150	22511485	135	1	wire	SPE	single braid	PE	5	black

Twinaxial cables

HUBER+SUHNER type	Item no.	Imp.	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
		Ω	GHz					mm	
RG_108_A/U	22510031	78	1	strand-07	PE	single braid	PVC	6	black
RG_22_B/U	22510010	95	1	strand-07	PE	braid/braid	PVC	10.8	black

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-65 to +165	0.64	–	–	> 38 (up to 1 GHz)	15	37	–
-40 to +85	–	–	–	–	25	50	–

Temperature range	Capacitance	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	pF/m	dB	mm	mm	
-25 to +85	65	–	30	60	V1
-25 to +85	53	–	55	110	–

Specialities – UL recognised cables

50 Ω

HUBER+SUHNER type	Item no.	UL style	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
			GHz					mm	
Enviroflex_178	23010656	3651	3	strand-07	SPEX	single braid	RADOX®	1.84	blue
Enviroflex_178-01	84032838	3651	3	strand-07	SPEX	single braid	RADOX®	1.84	black
Enviroflex_178_D	23030426	3651	6	strand-07	SPEX	braid/braid	RADOX®	2.45	blue
Enviroflex_316	23009565	3651	3	strand-07	SPEX	single braid	RADOX®	2.54	blue
Enviroflex_316-03	84027942	3651	3	strand-07	SPEX	single braid	RADOX®	2.52	black
RG_188_A/U-60	22511839	1354	3	strand-07	PTFE	single braid	FEP	2.60	white
RG_174_A/U-60	22511810	1354	1	strand-07	PE	single braid	PVC	2.80	black
K_02252_D-60	22511904	1354	6	strand-07	FEP	braid/braid	FEP	3.00	brown
Enviroflex_316_D	22512281	3651	6	strand-07	SPEX	braid/braid	RADOX®	3.16	black/blue
Enviroflex_316_D-01	84011098	3651	6	strand-07	SPEX	braid/braid	RADOX®	3.16	black
SX_03272_B-60	84010513	1354	5	wire	SPEX	tape/braid	RADOX®	4.50	black
S_02132_D-60	84010316	1354	6	wire	SPE	braid/braid	PVC	4.80	black
RG_58_C/U-62	23024284	1354	1	strand-19	PE	single braid	PVC	4.95	black
Enviroflex_400	22512280	3651	6	strand-19	SPEX	braid/braid	RADOX®	5.00	black/blue
Enviroflex_400-01	84008746	3651	6	strand-19	SPEX	braid/braid	RADOX®	5.00	black
Enviroflex_142	22512168	3651	6	wire	SPEX	braid/braid	RADOX®	5.00	black/blue
RG_223_/U-60	22511565	1354	6	wire	PE	braid/braid	PVC	5.40	grey
Enviroflex_393	22512282	3651	6	strand-07	SPEX	braid/braid	RADOX®	10.05	black/blue
Spuma_400-FR	84040210	1354	6	wire	SPE	tape/braid	LSFH	10.25	black
RG_214_/U-60	22511566	1478	6	strand-07	PE	braid/braid	PVC	10.80	black

75 Ω

HUBER+SUHNER type	Item no.	UL style	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket	Diameter	Colour
			GHz					mm	
Enviroflex_179	23019104	3651	3	strand-07	SPEX	single braid	RADOX®	2.54	blue
Enviroflex_179-01	84021688	3651	3	strand-07	SPEX	single braid	RADOX®	2.54	black
G_02333-60*	22511842	1354	1	wire	PE	braid/braid	PVC	4.30	black

* Triax

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-40 to +105	1.63	3.11	–	> 40 (up to 3 GHz)	5	20	U1
-40 to +105	1.63	3.11	–	> 40 (up to 3 GHz)	5	20	U1
-40 to +105	1.63	3.08	4.72	> 60 (up to 6 GHz)	5	20	X1
-40 to +105	0.97	1.86	–	> 38 (up to 1 GHz)	5	30	U2
-40 to +105	0.97	1.86	–	> 38 (up to 1 GHz)	5	30	U2
-65 to +165	0.84	1.56	–	> 41 (up to 1 GHz)	15	26	U2
-25 to +85	1.13	–	–	> 40 (up to 1 GHz)	15	28	U2
-65 to +165	1.01	2.01	3.21	> 80 (up to 6 GHz)	18	30	U4
-40 to +105	0.89	1.75	2.77	> 80 (up to 6 GHz)	5	30	U4
-40 to +105	0.89	1.75	2.77	> 80 (up to 6 GHz)	5	30	U4
-40 to +105	0.37	0.70	–	> 85 (up to 2 GHz)	20	40	X7
-25 to +85	0.50	0.96	1.48	> 75 (up to 6 GHz)	25	48	–
-20 to +85	0.69	–	–	> 35 (up to 1 GHz)	25	50	U7
-40 to +105	0.57	1.08	1.65	> 70 (up to 6 GHz)	10	40	U11
-40 to +105	0.57	1.08	1.65	> 70 (up to 6 GHz)	10	40	U11
-40 to +105	0.54	1.07	1.7	> 75 (up to 5 GHz)	25	50	U9
-25 to +85	0.48	0.93	1.47	> 85 (up to 6 GHz)	30	54	U9
-40 to +105	0.29	0.65	1.11	> 78 (up to 3 GHz)	30	100	U33
-40 to +85	0.13	0.24	0.35	> 90 (up to 6 GHz)	25	100	U30
-25 to +85	0.25	0.52	0.85	> 71 (up to 1 GHz)	55	108	U32

Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
°C	dB/m	dB/m	dB/m	dB	mm	mm	
-40 to +105	0.86	1.68	–	> 40 (up to 1 GHz)	7	20	U5
-40 to +105	0.86	1.68	–	> 40 (up to 1 GHz)	7	20	U5
-25 to +85	0.89	–	–	> 50 (up to 1 GHz)	25	43	X13

Specialities – RF railway cables

50 Ω jumper cables

Thin, flexible cables which can be used for narrow radius. Ideally suitable for highly reliable interconnect solution.

Cable type	Item no.	EN 45545-2	NFPA 130	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket
				GHz				
RADOX_RF_316_D	85023719	X	X	6	strand-7	SPEX	braid/braid	RADOX®
RADOX_RF_58	85023726	X	X	2	strand-19	PEX	single braid	RADOX®
RADOX_RF_142	85023684	X	X	6	wire	SPEX	braid/braid	RADOX®
RADOX_RF_400	85023720	X	X	6	strand-19	SPEX	braid/braid	RADOX®
Spuma_195-FR-01	85021562	X	X	6	wire	SPE	tape/braid	LSFH
Spuma_240-FR-01	85021563	X	X	6	wire	SPE	tape/braid	LSFH
SX_04172_B-60	84026748	X	X	6	wire	SPEX	tape/braid	RADOX®

50 Ω feeder cables

Low loss cable for covering larger distance.

Cable type	Item no.	EN 45545-2	NFPA 130	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket
				GHz				
RADOX_RF_213	85023730	X	X	2	strand-7	PEX	single braid	RADOX®
RADOX_RF_214	85023731	X	X	6	strand-7	PEX	braid/braid	RADOX®
Spuma_400-FR-01	84132035	X	X	6	wire	SPE	tape/braid	LSFH
Spuma_500-FR-01	85021564	X	X	6	wire	SPE	tape/braid	LSFH
S_10162_B-11	23002145	X	X	7.5	wire	SPE	tape/braid	LSFH

75 Ω cables

Specifically designed to carry video signals.

Cable type	Item no.	EN 45545-2	NFPA 130	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket
				GHz				
RADOX_RF_179	85023705	X	X	1	strand-7	SPEX	single braid	RADOX®
RADOX_RF_59	85023729	X	X	1	strand-7	PEX	single braid	RADOX®
Spuma_400-FR-75	85022187	X	X	3	wire	SPE	tape/braid	LSFH

Twinaxial cable

For signal and control data communication.

Cable type	Item no.	EN 45545-2	NFPA 130	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket
				GHz				
RG_22_B/U-05	84016404	X	X	0.2	2x strand-7	PE	braid/braid	RADOX®

See Railway Products Catalog for more detailed information.

Diameter	Temperature range	Attenuation at 1 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Replacement for
mm	°C	dB/m	dB/m	dB	mm	mm	
3.2	-40 to +105	0.89	2.65	> 70 (up to 6 GHz)	5	30	RG_316_D
5.1	-40 to +105	0.56	--	> 40 (up to 2 GHz)	25	50	RG_58 C/U
5.34	-40 to +105	0.51	1.75	> 75 (up to 5 GHz)	30	50	RG_142 B/U
5.34	-40 to +105	0.54	1.84	> 70 (up to 6 GHz)	30	60	RG_400 B/U
4.95	-40 to +85	0.39	1.00	> 90 (up to 6 GHz)	12	50	
6.15	-40 to +85	0.26	0.68	> 90 (up to 6 GHz)	19	63	
5.5	-40 to +105	0.28	0.84	> 80 (up to 2.2 GHz)	25	90	

Diameter	Temperature range	Attenuation at 1 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Replacement for
mm	°C	dB/m	dB/m	dB	mm	mm	
10.6	-40 to +105	0.26	–	> 41 (up to 2 GHz)	50	100	RG_213 /U
11.1	-40 to +105	0.31	1.06	> 81 (up to 6 GHz)	50	110	RG_214 /U
10.25	-40 to +85	0.13	0.35	> 90 (up to 6 GHz)	25	100	
12.78	-40 to +85	0.10	0.29	> 90 (up to 6 GHz)	31	127	
12.9	-40 to +85	0.10	0.28	> 90 (up to 7.5 GHz)	100	200	

Diameter	Temperature range	Attenuation at 1 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Replacement for
mm	°C	dB/m	dB/m	dB	mm	mm	
2.8	-40 to +105	0.90	–	> 40 (up to 1 GHz)	5	20	RG_179 B/U
6.24	-40 to +105	0.49	–	> 40 (up to 1 GHz)	35	60	RG_59 C/U
10.25	-40 to +85	0.13	–	> 90 (up to 3 GHz)	25	100	

Diameter	Temperature range	Attenuation at 1 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Replacement for
mm	°C	dB/m	dB/m	dB	mm	mm	
10.7	-40 to +85	–	–	–	55	110	RG_22_B/U

Specialities – CPR qualified RF cables

50 Ω corrugated RF cables

For installations with PIM requirements.

Cable type	Item no.	Class acc. EN 50575	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket
			GHz	GHz			
Sucofeed_1/4_HF	84020854	Fca	18	wire	SPE	tube, corrugated	PE
Sucofeed_3/8_HF	84020856	Fca	12	wire	SPE	tube, corrugated	PE
Sucofeed_3/8_HF_FR	84020857	B2ca - s1a,d0,a1	12	wire	SPE	tube, corrugated	LSFH
Sucofeed_1/2_HF	84099336	Fca	10	wire	SPE	tube, corrugated	PE
Sucofeed_1/2_HF_FR	84020859	B2ca - s1a,d0,a1	10	wire	SPE	tube, corrugated	LSFH
Sucofeed_1/2	84099352	Fca	8	wire	SPE	tube, corrugated	PE
Sucofeed_1/2_FR	84020848	B2ca - s1a,d1,a1	8	wire	SPE	tube, corrugated	LSFH
Sucofeed_7/8_LA_FR	84115695	B2ca - s1a,d2,a1	5	tube	SPE	tube, corrugated	LSFH
Sucofeed_1_1/4	84020861	Fca	3.5	tube	SPE	tube, corrugated	PE
Sucofeed_1_5/8	84020864	Fca	2.75	tube	SPE	tube, corrugated	PE

50 Ω flexible RF cables

For installations with tight bending radii but no PIM requirements.

Cable type	Item no.	Class acc. EN 50575	Frequency	Inner conductor	Dielectric	Outer conductor	Jacket
			GHz	GHz			
Enviroflex_316_D	22512281	Dca - s1b,d1,a1	6	strand-7	SPEX	braid/braid	RADOX®
Enviroflex_400	22512280	Eca	6	strand-19	SPEX	braid/braid	RADOX®
Spuma_195	84151727	Fca	6	wire	SPE	foil/braid	PE
Spuma_195-FR-01	85021562	Eca	6	wire	SPE	foil/braid	LSFH
Spuma_240	84151737	Fca	6	wire	SPE	foil/braid	PE
Spuma_240-FR-01	85021563	B2ca - s1a,d0,a1	6	wire	SPE	foil/braid	LSFH
Spuma_400	84102703	Fca	6	wire	SPE	foil/braid	PE
Spuma_400-FR-01	84132035	Cca - s1a,d0,a1	6	wire	SPE	foil/braid	LSFH
Spuma_500-FR-01	85021564	Eca	6	wire	SPE	foil/braid	LSFH
Spuma_600	84151738	Fca	6	wire	SPE	foil/braid	PE



Diameter	Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
mm	°C	dB/m	dB/m	dB/m	dB	mm	mm	
7.6	-55 to +85	0.195	0.356	0.528	>120	25	50	M5
10.8	-55 to +85	0.133	0.243	0.362	>120	25	50	M7
10.8	-40 to +85	0.133	0.243	0.362	>120	25	50	M7
13.4	-55 to +85	0.108	0.199	0.298	>120	25	50	M9
13.4	-40 to +85	0.108	0.199	0.298	>120	25	50	M9
15.9	-55 to +85	0.073	0.133	0.198	>120	70	125	M12
15.9	-40 to +85	0.073	0.133	0.198	>120	70	125	M12
27.9	-40 to +85	0.038	0.070	-	>120	120	250	M25
39.5	-55 to +85	0.029	0.057	-	>120	200	380	M32
49.8	-55 to +85	0.024	-	-	>120	280	500	M42

Diameter	Temperature range	Attenuation at 1 GHz	Attenuation at 3 GHz	Attenuation at 6 GHz	Screening effectiveness	Bending static	Bending repeated	Cable group
mm	°C	dB/m	dB/m	dB/m	dB	mm	mm	
3.2	-40 to +105	0.895	1.715	2.654	>70 (up to 6 GHz)	5	30	U4
5.0	-40 to +105	0.581	1.098	1.680	>70 (up to 6 GHz)	10	40	U11
5.0	-40 to +85	0.392	0.701	1.021	>90 (up to 6 GHz)	13	50	X27
5.0	-40 to +85	0.392	0.701	1.021	>90 (up to 6 GHz)	10	40	X27
6.2	-40 to +85	0.269	0.478	0.692	>90 (up to 6 GHz)	19	60	X28
6.2	-40 to +85	0.269	0.478	0.692	>90 (up to 6 GHz)	14	53	X28
10.3	-40 to +85	0.132	0.239	0.352	>90 (up to 6 GHz)	25	100	U30
10.3	-40 to +85	0.132	0.239	0.352	>90 (up to 6 GHz)	25	100	U30
12.8	-40 to +85	0.111	0.200	0.293	>90 (up to 6 GHz)	34	130	X31
15.0	-40 to +85	0.087	0.160	0.241	>90 (up to 6 GHz)	38	152	X29

Material comparison

Material properties	PE				LSFH
	Solid (PE)	Solid and cross-linked (XPE)	Foamed (SPE)	Foamed and crosslinked (SPEX)	
Application for	Jacket and dielectric	Jacket and dielectric	Dielectric	Dielectric	Jacket

Electrical properties					
Dielectric constant	2.28	2.28	1.3 to 2.0	1.3 to 2.0	–
Velocity of propagation %	66	66	up to 82	up to 82	–
Dissipation factor at 1 GHz, 23°C	$< 0.3-5 \times 10^{-4}$	PE + ~20%	$< 0.1-5 \times 10^{-4}$	SPE + ~20%	–
Volume resistivity MWm	10^8	10^8	$> 10^8$	$> 10^8$	10^6
Dielectric strength kV/mm	40	40	20	20	26

Mechanical properties					
Tensile strength [MPa]	10 to 30	10 to 30	< 10	< 10	7 to 14
Elongation at break %	150 to 600	150 to 600	100 to 400	100 to 400	100 to 200
Abrasion resistance	++	++	o	o	+

Environmental properties					
Operating temperature °C	–40 to +85	–40 to +105	–40 to +85	–40 to +105	–40 to +85
Weather resistance (UV, humidity, temperature)	black: ++ colored: +	black: ++ colored: +	o	o	black: ++ colored: +
Water resistance	++	+++	++	++	++
Radiation resistance Mrad	++	+++	++	++	+
Chemical resistance at 20 °C					
- Non oxidizing acids	++	++	+	+	o
- Alkali	++	++	++	++	o
- Oil	++	++	+	+	o
- Ethanol, 96 %	++	++	+	+	o

Other properties					
Density kg/m ³	930	930	400 – 600	400 – 600	1500
Halogen content	no	no	no	no	no
Flexibility	+	+/-	+/-	+/-	+/-
Flammability	highly flammable	highly flammable	highly flammable	highly flammable	flame retardant
Smoke generation	low	low	low	low	low
Combustability	keeps burning	keeps burning	keeps burning	keeps burning	self-extinguishing
Solder resistance	+	++	+	+	o

Legend:

–	n/a
o	poor
+/-	neutral
+	good
++	very good
+++	excellent

RADOX®	PVC		TPE - TPU - PUR	PTFE unsintered	PTFE sintered	PFA	FEP
	Standard	Low migration					
Jacket	Jacket	Jacket	Jacket	Dielectric	Dielectric	Jacket and dielectric	Jacket and dielectric

–	–	–	–	1.77	2.05	2.1	2.1
–	–	–	–	77	71	69	69
–	–	–	–	$< 0.4 \times 10^{-4}$	$< 2 \times 10^{-4}$	$< 5 \times 10^{-4}$	$< 5 \times 10^{-4}$
10^3 to 10^8	10^5	10^5	10^4	$> 10^{10}$	10^{10}	10^{10}	10^{11}
30	20 to 25	18 to 23	14 to 25	20	50	70	82

10 to 14	10 to 30	10 to 20	50	–	27	20	28
150 to 250	> 50	> 200	650	–	300	300	500
+	+	+	+++	++	++	++	+++

–40 to +105	–25 to +85	–25 to +85	–40 to +85	–200 to +200	–200 to +260	–80 to +205	–65 to +165
black: ++ colored: +	++	++	black: ++ colored: +	+++	+++	+++	+++
++	+	+	++	++	++	++	++
++	++	++	o	o	o	o	++
+	+/-	+	+	+++	+++	+++	+
+	+/-	+	+	+++	+++	+++	+
+/-	+/-	+	+	+++	+++	+++	++
+/-	+/-	+	+	+++	+++	+++	++

1200 – 1500	1200 – 1400	1300 – 1500	1100 – 1600	1800	2180	2150	2150
no	yes	yes	no	yes	yes	yes	yes
+	++	++	++	o	o	o	o
flame retardant	flammable	flammable	flammable or flame retardant	not flammable	not flammable	not flammable	not flammable
low to medium	high, corrosive gas	high, corrosive gas	low or high	low	low	low	low
self-extinguishing	extinguishes outside the flame	extinguishes outside the flame	self-extinguishing or keeps burning	not flammable	not flammable	not flammable	not flammable
++	o	o	o	++	++	++	++

RG referencelist

RG type	Impedance	Centre conductor		Dielectric		Screen (armouring)	
		Material	∅ mm	Material	∅ mm	Construction	∅ mm
RG_5_B/U	cancelled – replacement: RG_212_/U						
RG_6_A/U	75 ± 3	StCu	0.73	PE	4.80	CuAg / Cu	6.20
RG_8_A/U	cancelled – replacement: RG_213_/U						
RG_9_B/U	cancelled – replacement RG_214_/U						
RG_10_A/U	cancelled – replacement RG_215_/U						
RG_11_A/U	75 ± 3	CuSn	7 × 0.4	PE	7.25	Cu	8.10
RG_12_A/U	75 ± 3	CuSn	7 × 0.4	PE	7.25	Cu	8.10
(Armoured RG_11_A/U)						braid-armoured	11.80
RG_13_A/U	cancelled – replacement: RG_216_/U						
RG_14_A/U	cancelled – replacement: RG_217_/U						
RG_17_A/U	cancelled – replacement: RG_218_/U						
RG_18_A/U	cancelled – replacement: RG_219_/U						
RG_19_A/U	cancelled – replacement: RG_220_/U						
RG_20_A/U	cancelled – replacement: RG_221_/U						
RG_21_A/U	cancelled – replacement: RG_222_/U						
RG_22_B/U	95 ± 5	Cu	7 × 0.4	PE-core	2.25		
(Twinax)		PE-tube over 2 twisted leads ∅ 7.25 mm				CuSn/CuSn	8.70
RG_34_B/U	75 ± 3	Cu	7 × 0.62	PE	11.50	Cu	12.40
RG_35_B/U	75 ± 3	Cu	2.65	PE	17.30	Cu	18.60
(Armoured RG_164_/U)						braid-armoured	23.50
RG_55_B/U	cancelled – replacement: RG_223_/U						
RG_57_A/U	cancelled – replacement: RG_130_/U						
RG_58_C/U	50 ± 2	CuSn	19 × 0.18	PE	2.95	CuSn	3.60
RG_59_B/U	75 ± 3	StCu	0.58	PE	3.70	Cu	4.40
RG_62_A/U	93 ± 5	StCu	0.62	PE/air	3.70	Cu	4.40
RG_62_B/U	93 ± 5	StCu	7 × 0.2	PE/air	3.70	Cu	4.40
RG_63_B/U	125 ± 6	StCu	0.62	PE/air	7.25	Cu	8.10
RG_71_B/U	93 ± 5	StCu	0.62	PE/air	3.70	Cu/CuSn	5.00
RG_74_A/U	cancelled – replacement: RG_224_/U						
RG_79_B/U	125 ± 6	StCu	0.60	PE/air	7.25	Cu	8.10
(Armoured RG_63_B/U)						braid-armoured	11.80
RG_87_A/U	cancelled – replacement: RG_225_/U						
RG_94_/U	cancelled – replacement RG_226_/U						
RG_108_A/U	78 ± 7	CuSn	7 × 0.31	PE-Core	2.00		
(Twinax)		2 leads twisted ∅ 4.0 mm				CuSn	4.60
RG_111_A/U	95 ± 5	Cu	7 × 0.4	PE Core	2.25		
(Twinax)		PE-tube over 2 twisted leads ∅ 7.25 mm				CuSn/CuSn	8.70
(Armoured RG_22_B/U)						braid-armoured	12.30

Manufactured by HUBER+SUHNER

Jacket		Designation according to MIL-C-17		HUBER+SUHNER alternative	
Material	Ø mm	For new designs use specification	Former designation	Halogen free	Flame retard./halogen free Operating temp. up to +105 °C
		M17/199-00001	M17/162-00001		
PVC 2	8.40	M17/180-00001	M17/2-RG6		

PVC 2	10.30	M17/181-00001	M17/2-RG11		GX_07273
PVC 2	10.30	M17/181-00002	M17/2-RG12		
–	–	(armoured)			

PVC 2	10.80	M17/182-00001 M17/182-00002 (armoured)	M17/15-RG22	RG_22_B/U-05	
PVC 2	16.00		M17/24-RG_34, cancelled without replacement		
PVC 2	22.10	M17/209-00001... M17/209-00002 (armoured)	M17/64-RG35		

PVC 2	4.95	M17/197-00001 M17/183-00001	M17/155-00001 M17/28-RG58	Enviroflex_B58 G_03272	GX_03272-04
PVC 2	6.10	M17/184-00001	M17/29-RG59	G_04263-03	GX_04273-12
PVC 2	6.10	M17/185-00001	M17/30-RG62		
PVC 2	6.10	(M17/185-00001)	M17/30-RG62		
PVC 2	10.30	M17/218-00001... M17/218-00002	M17/31-RG63		
PE	6.20	M17/90-RG_71	–		

PVC 2	10.30	M17/31-RG_79	–		
–	–				

PVC 2	6.00	M17/186-00001	M17/45-RG108		
PVC 2	10.80	M17/182-00002	M17/15-RG111		
–	–				

RG referencelist

RG type	Impedance	Centre conductor		Dielectric		Screen (armouring)	
		Material	∅ mm	Material	∅ mm	Construction	∅ mm
RG_116_/U	cancelled – replacement: RG_227_/U						
RG_117_A/U	cancelled – replacement: RG_211_A/U						
RG_118_A/U	cancelled – replacement: RG_228_A/U						
RG_119_/U	50 ± 2	Cu	2.60	PTFE	8.45	Cu/Cu	10.10
RG_120_/U	50 ± 2	Cu	2.60	PTFE	8.45	Cu/Cu	10.10
(Armoured RG_119_/U)						braid-armoured	13.30
RG_122_/U	50 ± 2	CuSn	27 × 0.13	PE	2.50	CuSn	3.20
RG_140_/U	cancelled - replacement: RG_302_/U						
RG_141_/U	50 ± 2	StCuAg	0.95	PTFE	2.95	CuAg	3.60
RG_142_B/U	50 ± 2	StCuAg	0.95	PTFE	2.95	CuAg/CuAg	4.20
RG_143_/U	cancelled – replacement: RG_304_/U						
RG_144_/U	75 ± 3	StCuAg	7 × 0.45	PTFE	7.25	CuAg	8.00
RG_149_/U	cancelled – replacement: RG_391_/U						
RG_150_/U	cancelled – replacement: RG_392_/U						
RG_164_/U	75 ± 3	Cu	2.65	PE	17.3	Cu	18.60
RG_165_/U	50 ± 2	CuAg	7 × 0.79	PTFE	7.25	CuAg	8.00
RG_166_/U	50 ± 2	CuAg	7 × 0.79	PTFE	7.25	CuAg	8.00
(Armoured RG_165_/U)						braid-armoured aluminium alloy	11.90
RG_174_/U	50 ± 2	StCu	7 × 0.16	PE	1.50	CuSn	2.00
RG_174_A/U	50 ± 2	StCu	7 × 0.16	PE	1.50	CuSn	2.00
RG_177_/U	50 ± 2	Cu	5.00	PE	17.3	CuAg/CuAg	18.90
RG_178_B/U	50 ± 2	StCuAg	7 × 0.1	PTFE	0.83	CuAg	1.30
RG_179_B/U	75 ± 3	StCuAg	7 × 0.1	PTFE	1.53	CuAg	2.00
RG_180_B/U	95 ± 5	StCuAg	7 × 0.1	PTFE	2.60	CuAg	3.10
RG_187_A/U	75 ± 3	StCuAg	7 × 0.1	PTFE	1.53	CuAg	2.65
RG_188_A/U	50 ± 2	StCuAg	7 × 0.18	PTFE	1.54	CuAg	2.00
RG_195_A/U	95 ± 5	StCuAg	7 × 0.1	PTFE	2.52	CuAg	3.10
RG_196_A/U	50 ± 2	StCuAg	7 × 0.1	PTFE	0.83	CuAg	1.30
RG_210_/U	93 ± 5	StCuAg	0.60	PTFE/air	3.70	CuAg	4.50
RG_212_/U	50 ± 2	CuAg	1.40	PE	4.70	CuAg/CuAg	6.20
RG_213_/U	50 ± 2	Cu	7 × 0.75	PE	7.25	Cu	8.10
RG_214_/U	50 ± 2	CuAg	7 × 0.75	PE	7.25	CuAg/CuAg	8.70

Manufactured by HUBER+SUHNER

Jacket		Designation according to MIL-C-17		HUBER+SUHNER alternative	
Material	Ø mm	For new designs use specification	Former designation	Halogen free	Flame retard./halogen free Operating temp. up to +105 °C

GSi	11.80	M17/156-00001	M17/52-RG119 (unarmoured)		
GSi	11.80	M17/52-00001	M17/52-RG120 (armoured)		
–	–				
PVC 2	4.10	M17/198-00001	M17/157-00001		

GSi	4.40	M17/170-00001 see also RG_303	–		
FEP	4.95	M17/158-00001	M17/60-RG142	Enviroflex_B142	Enviroflex_142

GSi	10.40	M17/62-RG_144	–		(GX_07273)
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PVC 2	22.10	M17/209-00001... M17/209-00002 (armoured)	M17/64-RG164		
GSi	10.40	M17/159-00001	M17/65-RG165		GX_07272
GSi	10.40	–	M17/65-RG166		
–	–				
PVC 2	2.55	–	–	–	–
PVC 2	2.80	M17/173-00001 M17/196-00001	M17/119-RG174	G_02262	GX_02272
PVC 2	22.70	M17/160-00001 M17/212-00001 M17/210-00001	M17/67-RG177		Enviroflex_178 Enviroflex_179
FEP	1.80	M17/169-00001	M17/93-RG178	Enviroflex_B178	Enviroflex_178
FEP	2.54	M17/94-RG179	–		Enviroflex_179
FEP	3.60	M17/95-RG180	–		
PFA	2.00	–	–		
PFA	2.60	–	–		
PFA	3.70	–	–		
PFA	1.95	M17/169-00001	M17/71		
GSi	6.10	M17/97-RG_210	–		
PVC 2	8.40	M17/162-00001	M17/73-RG212 M17/199-00001		
PVC 2	10.30	M17/213-00001	M17/74-RG213 M17/163-00001		GX_07272
PVC 2	10.80	M17/164-00001	M17/75-RG214	Enviroflex_B214	GX_07272_D

RG referencelist

RG type	Impedance	Centre conductor		Dielectric		Screen (armouring)	
		Material	∅ mm	Material	∅ mm	Construction	∅ mm
RG_215_/U	50 ± 2	Cu	7 × 0.75	PE	7.25	Cu	8.10
(Armoured RG_213_/U)						braid-armoured	11.80
RG_216_/U	75 ± 3	CuSn	7 × 0.4	PE	7.25	Cu/Cu	8.70
RG_217_/U	50 ± 2	Cu	2.68	PE	9.40	Cu/Cu	11.20
RG_222_/U High attenuation cable	50 ± 2	CrNi	1.41	PE	4.70	CuAg/CuAg	6.20
RG_223_/U	50 ± 2	CuAg	0.89	PE	2.95	CuAg CuAg	3.55 4.20
RG_224_/U	50 ± 2	Cu	2.68	PE	9.40	Cu/Cu	11.20
(Armoured RG_217_/U)						braid-armoured	15.40
RG_225_/U	50 ± 2	CuAg	7 × 0.79	PTFE	7.25	CuAg/CuAg	8.70
RG_227_/U	50 ± 2	CuAg	7 × 0.79	PTFE	7.25	CuAg/CuAg	8.70
(Armoured RG_225_/U)						braid-armoured	12.40
RG_235_A/U	cancelled – replacement: RG_179_/U						
RG_302_/U	75 ± 3	StCuAg	0.64	PTFE	3.70	CuAg	4.30
RG_303_/U	50 ± 2	StCuAg	0.95	PTFE	2.95	CuAg	3.60
RG_304_/U	50 ± 2	StCuAg	1.50	PTFE	4.70	CuAg/CuAg	6.30
RG_307_A/U (Triaxial)	75 ± 4	CuAg	19 × 0.148	SPE	3.70	CuAg CuAg	4.50 7.50
RG_316_/U	50 ± 2	StCuAg	7 × 0.18	PTFE	1.54	CuAg	2.00
RG_393_U	50 ± 2	CuAg	7 × 0.79	PTFE/PFA	7.25	CuAg CuAg	8.00 8.70
RG_400_/U	50 ± 2	CuAg	19 × 0.2	PTFE	2.95	CuAg CuAg	3.60 4.20
RG_401_/U (Semi-rigid)	50 ± 0.5	CuAg	1.63	PTFE	5.31	Cu-tube	6.30
HUBER+SUHNER alternative: EZ_250_M17							
RG_402_/U (Semi-rigid)	50 ± 1	StCuAg	0.92	PTFE	3.00	Cu-tube	3.60
HUBER+SUHNER alternative: EZ_141_M17							
RG_403_/U (Triaxial)	50 ± 2	CuAg	7 × 0.1	PTFE	0.83	CuAg CuAg	1.30 2.40
RG_404_/U (Low noise)	50 ± 2	StCuAg	7 × 0.1	PTFE semicond.	0.87 0.90	CuAg	1.40
RG_405_/U (Semi-rigid)	50 ± 1.5	StCuAg	0.51	PTFE	1.68	Cu-tube	2.20
HUBER+SUHNER alternative: EZ_86_M17							

Manufactured by HUBER+SUHNER

Jacket		Designation according to MIL-C-17		HUBER+SUHNER alternative	
Material	Ø mm	For new designs use specification	Former designation	Halogen free	Flame retard./halogen free Operating temp. up to +105 °C
PVC 2	10.30	–	M17/74-RG215		
–	–				
PVC 2	10.80	M17/191-00001	M17/77-RG216	G_07273_D	
PVC 2	13.80	M17/215-00001	M17/165-00001		
PVC 2	8.50	M17/162-00001	M17/199-00001		
PVC 2	5.40	M17/167-00001	M17/84-RG223 M17/200-00001	Enviroflex_B223	GX_03272_D-06
PVC 2	13.80	M17/215-00001	M17/165-00002		
–	–				
GSi	10.90	M17/86-00001	–		
GSi	10.90	M17/86-00002	M17/86-00002		
–	–	(armoured)			

FEP	5.10	M17/110-RG302	–		
FEP	4.30	M17/170-00001	M17/111-RG_303 superseded RG_141_A/U		
FEP	7.10	M17/171-00001	M17/112-RG304		
PUR PE	5.20 6.70	M17/116-RG_307	–		
FEP	2.50	M17/172-00001	M17/113-RG316		Enviroflex_316
FEP	9.90	M17/174-00001	M17/127-RG393		Enviroflex_393
FEP	4.95	M17/175-00001	M17/128-RG400	Enviroflex_B400	Enviroflex_400
–	–	M17/129-00001	M17/129-RG401		
–	–	M17/130-00001	M17/130-RG402		
FEP FEP	1.90 3.10	–	M17/131-RG403		
FEP	1.90	M17/132-00001	M17/132-RG404		
–	–	–	M17/133-RG405		

Branding guideline

The RF cables product lines – foam, performance and standard line – represent different dielectric technologies. The dielectric constant within one line is relatively stable. This allows drop-in replacements of products with the same size (e.g RG with Enviroflex or LMR® with Spuma).

	Foam line	Performance line	Standard line
Dielectric technologies	PE foam (high air content)	PTFE FEP PE foam (low air content)	PE (no air)
Dielectric constant ϵ_r	1.3 – 1.8	~ 2	~ 2.3
General names	LMR®	RG	RG
HUBER+SUHNER brands	Spuma	Enviroflex	Enviroflex
HUBER+SUHNER type codes	S SX (cross-linked)	K	G GX (cross-linked)

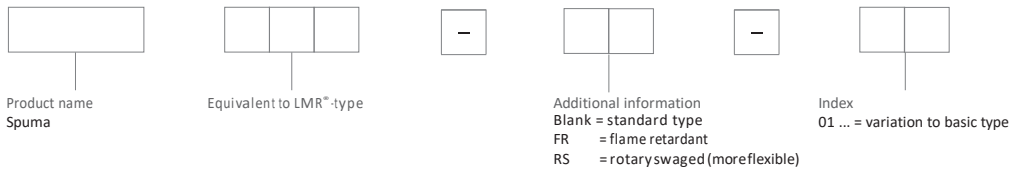
LMR® is a trademark of Times Microwave Inc.

Designation key and index

Spuma cables



E. g. Spuma_400-FR-01



Type	Page	Type	Page	Type	Page
Spuma_195	10	Spuma_240-RS-FR	12	Spuma_400-RS-FR	14
Spuma_195-FR-01	10	Spuma_400	14	Spuma_500-FR-01	14
Spuma_240	12	Spuma_400-FR-01	14	Spuma_600	14
Spuma_240-FR-01	12	Spuma_400-FR-75	16		

RG cables



RG cables: Designation key according to MIL-C-17 (with index -01... for variations to basic types)

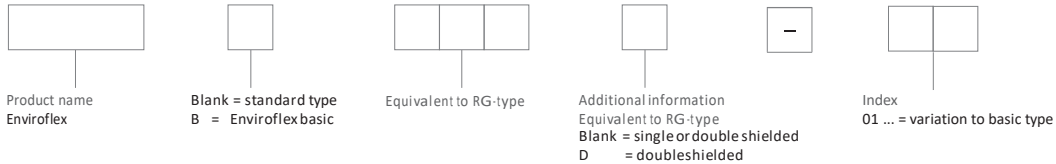
Type	Page	Type	Page	Type	Page	Type	Page
RG_11_A/U	42	RG_174_/U	34	RG_188_A/U-60	52	RG_223_/U	36
RG_22_B/U	50	RG_174_A/U	34	RG_195_A/U	50	RG_223_/U-02	36
RG_22_B/U-05	54	RG_174_A/U-60	52	RG_196_A/U	22	RG_223_/U-60	52
RG_58_C/U	36	RG_178_B/U	22	RG_213_/U	38	RG_302_/U	28
RG_58_C/U-62	52	RG_179_B/U	28	RG_214_/U	38	RG_303_/U	26
RG_59_B/U	42	RG_187_A/U	28	RG_214_/U-60	52	RG_316_/U	24
RG_59_B/U-40	42	RG_188_A/U	24	RG_214_HIFLEX	38	RG_393_/U	26
RG_108_A/U	50	RG_188_A/U-01	24	RG_217_/U	38	RG_400_/U	26
RG_142_B/U	26						

Designation key and index

Enviroflex cables



E. g. Enviroflex_316_D

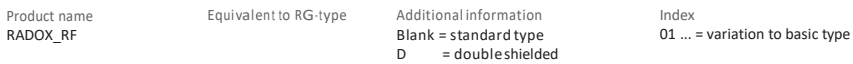


Type	Page	Type	Page	Type	Page
Enviroflex_B58	36	Enviroflex_179	28	Enviroflex_316_D-01	24
Enviroflex_142	26	Enviroflex_179-01	28	Enviroflex_B316_D	24
Enviroflex_B142	26	Enviroflex_B214	38	Enviroflex_393	26
Enviroflex_178	22	Enviroflex_B223	36	Enviroflex_400	26
Enviroflex_178-01	22	Enviroflex_316	24	Enviroflex_400-01	26
Enviroflex_178_D	22	Enviroflex_316-03	24	Enviroflex_B400	26
Enviroflex_B178	22	Enviroflex_316_D	24		

RADOX RF cables



E. g. RADOX_RF_316_D



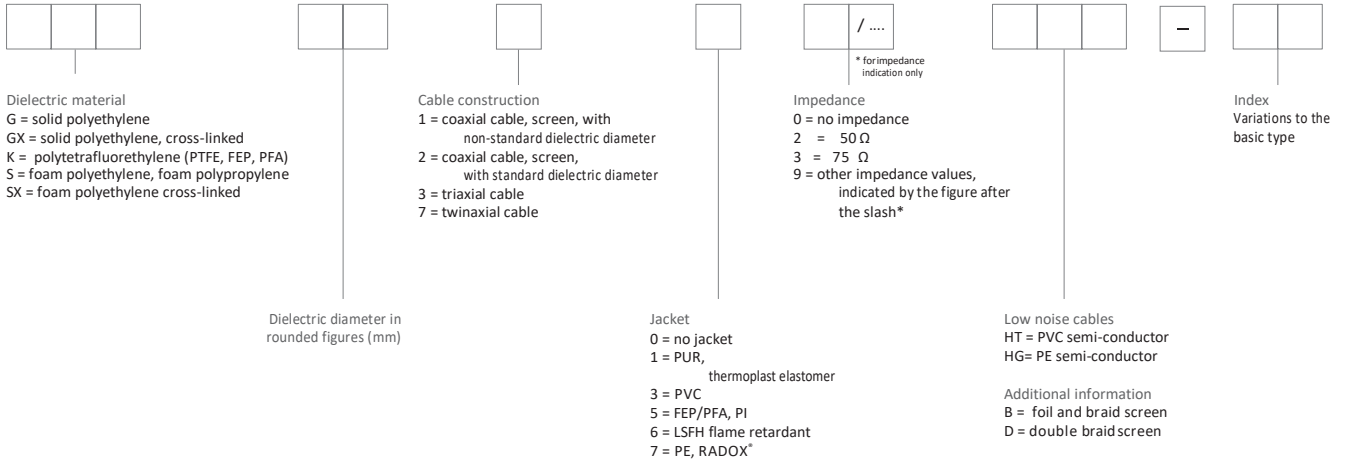
Type	Page	Type	Page
RADOX_RF_58	54	RADOX_RF_213	54
RADOX_RF_59	54	RADOX_RF_214	54
RADOX_RF_142	54	RADOX_RF_316_D	54
RADOX_RF_179	54	RADOX_RF_400	54

Designation key and index

G, GX, K, S, SX cables



E. g. GX_07272_D

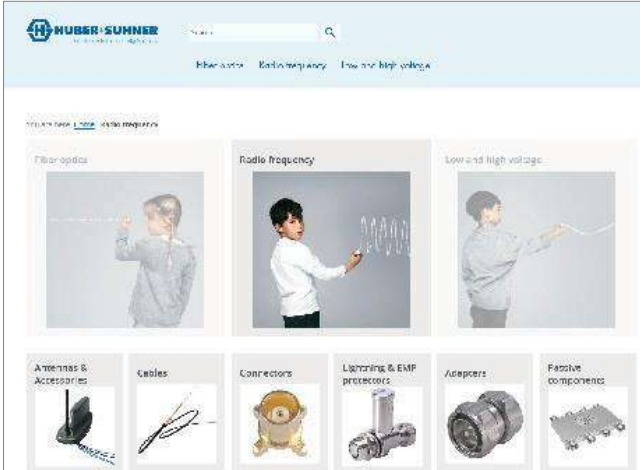


Type	Page	Type	Page	Type	Page
G_01130_HT	46	G_03233	40	K_02252_D-60	52
G_01130_HT-01	46	G_03262_D-01	36	K_02253_D-02	28
G_01130_HT-03	46	G_03272	36	K_03252_D-03	26
G_01130_HT-12	46	G_03330_HT-11	46	S_01162_D-01	10
G_01130_HT-24	46	G_03332	48	S_02112_D	10
G_01132-06	34	G_03333	48	S_02132_D-60	10
G_01330_HT-23	46	G_03362-01	48	S_02162_B	10
G_02212_D-02	34	G_04133_D	42	S_02263	16
G_02232_D	34	G_04233_D-01	42	S_03279_150	50
G_02232-09	34	G_04233_HT-01	46	S_04162_B-01	12
G_02233-01	40	G_04263-03	42	S_04233	16
G_02262	34	G_04273_D-02	42	S_04262_D-02	12
G_02263-01	40	G_05232	38	S_04262_D-09	12
G_02263-05	40	G_07273_D	42	S_04263	16
G_02312-03	48	GX_02272	34	S_06162_D-03	12
G_02330_HT	46	GX_02272_D-02	34	S_07212_BD	14
G_02332	48	GX_03173-01	40	S_07262_BD	14
G_02332-01	48	GX_03272-04	36	S_07262_BD-AH	14
G_02333	48	GX_03272_D-06	36	S_10162_B-11	14
G_02333-60	52	GX_04273-12	42	S_10172_B-11	14
G_03130_HT	46	GX_07272	38	SX_03272_B-60	10
G_03130_HT-01	46	GX_07272_D	38	SX_04172_B-60	12
G_03160_HG	46	GX_07273	42	SX_04272_D-02	12
G_03212-01	36	K_01152-07	22		
G_03212_D-01	36	K_01152-16	22		
G_03213_D	40	K_01252_D	22		
G_03232	36	K_02252_D	24		
G_03232_D-01	36	K_02252_D-08	24		

Cable and assembly tools

Use our online tools for fast and efficient calculation and configuration or contact your HUBER+SUHNER partner for specific information.

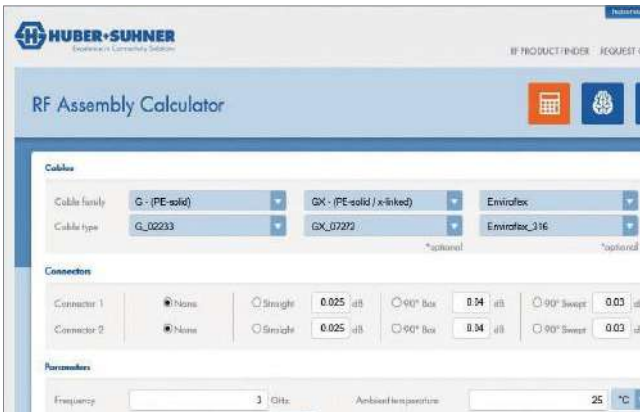
1. EVALUATE with our eCatalogue



Choose suitable cables by using our "eCatalogue".

<https://ecatalog.hubersuhner.com/>

2. CALCULATE with the assembly calculator



Compare the suitable products and calculate the electrical performance by using the "RF assembly calculator".

<http://rfcablecalc.hubersuhner.com>

3. CONFIGURE with the assembly configurator



By using the "RF assembly configurator" you can define the complete assembly.

<http://rfwebpcf.hubersuhner.com>