Habia Cable

Flexiform

Flexible and re-formable semi-rigid coaxials (includes Multibend)

Flexiform

Introduction

The Flexiform coaxial cable range from Habia provides a reformable alternative to the traditional semi-rigid (copper tube) coaxial cables for high frequencies. Able to operate up to 18 GHz as standard, Flexiform is ideal for microwave applications and has the ability to be stripped and formed into position without the need for any speciallist tools. Handling is similar to any standard coaxial cable which means that traditional cut and strip machines can be used.

Flexiform

The standard Flexiform range is available in 401, 402 and 405 sizes (0.250”, 0.141” and 0.086” respectively). The smaller sizes (402 and 405) use Silver Plated Copper Covered Steel (SCCS) for their conductors in order to provide a stronger central core, but are available in Silver Plated Copper, non-magnetic (NM) options as this is of benefit in applications where passive intermodulation is an issue as well as improving the flexibility. Sizes: 401 (0.250”), 220 (0.110”) and 380 (0.171”) use SPC conductors as standard although the suffix NM is not included within their descriptions.

Flexiform L

Habia Cable has developed a low loss variant of Flexiform 401 and Flexiform 402. Using a profiled dielectric, the Flexiform L range has an attenuation approximately 7% less than the standard Flexiform range. This gives a phase stable, high performance coaxial cable with little dimensional trade off and no additional cost.

Flexiform SL

Habia Cable’s most recent innovation in Flexiform has been the development of a small, low loss variant of Flexiform 401 and Flexiform 402. Similar to the Flexiform L, these cables use a profiled dielectric to provide the electrical performance of a larger coaxial within a smaller space envelope.

Like Flexiform, the Multibend coaxial cable range from Habia offers a flexible alternative to the traditional semi-rigid coaxial cables with an electrical performance that is almost identical. The solid copper tube that is normally used in a semi-rigid coax is replaced with a wrapped silver-plated copper foil and braid, giving excellent shielding properties and the added benefit that the coaxial is completely flexible and as such is able to be used in dynamic applications as well as fixed installed situations. Multibend is extremely cost effective as it eliminates the waste lengths traditionally associated with semi-rigid cables, yet with minimal performance penalties.

Multibend is typically used in antennas and cabinet systems, and can be found on a range of equipment from satellites and military systems to medical products. With an operating frequency of up to 18 GHz, Multibend is able to offer a microwave solution for a range of applications.

Multibend FJ

The standard construction for Multibend is the FJ version which uses an FEP sheath. This maintains high temperature performance and chemical resistance as well as excellent cut-through and abrasion properties. Though much less common than their Flexiform counterparts, some variants of the Multibend FJ construction have been designed using Silver Plated Copper (SPC) non-magnetic conductors.

Flexiform

Additives...

The sheer range of connectors available in today's market makes it difficult for Habia to make gerneralised recommendations.

We have established a number of links and partnerships with connector manufacturers over the years and will be very happy to help our customers find a connector supplier for their specific application.
Please contact one of our sales offices for more information.

Cut-and-strip

Perhaps the key advantage of a Flexiform coaxial over standard or semi-rigid cable is the ability to plan cable runs and then fit the cable with the very minimum of waste.

To take this one stage further, Habia Cable has invested in cut-and-strip equipment for Flexiform able to achieve remarkable levels of accuracy. Cut-and-strip pieces can supplied with dielectric, braid and jacket all stripped back from one another and from the core to the customer's requested dimensions. Lengths typically vary from 25mm up to 1000mm but these should not be considered to be the limits of Habia's prodution capabilities.

Variations in design

Habia Cable is renowned for the ability to offer customer driven options and solutions. To this end we can customise the standard 50 Ohm Flexiform range in a number ways, just some of which are listed here.

Impedance

Perhaps the most common variation, Habia Cable is able to tailor our Flexiform range to offer impedances in the range of 25 Ohms up to and including 100 Ohms.

Colours

Often used to denote different impedances (with the standard 'Blue' being commonly used as 50 Ohms). Colour can also be used to indicate different polarities within a system.

Sizes

The most common Flexiform types (401, 402 and 405) are designed to line up with the semi-rigid RG coaxes, RG 401, RG 402 and RG 405 and the 402 and 405 sizes also broadly compare with the standard RG coaxial cables RG 142 and RG 316 respectively. In addition to these standard types, Habia can apply the Flexiform technology to virtually any RG coaxial type.

Jacket materials

Particularly with regard to the HFJ versions, Habia Cable can change the HFS 80 T outer jacket to any of a number of our other jacket material types in order to provide a variety of finished cable properties. Amongst the improvements than can result from a different jacket material is an increased power rating and a changed temperature profile for extreme high or low temperatures.

Flexiform Unsheathed

-65ºC/+180ºC

Re-formable coax

Flame retardant	IEC 60332-1-2
	UL 1581 VW-1
Smoke generation	IEC 61034-2
Frequency range	Up to 18 GHz
Screening efficiency	110dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC) Silver Plated Copper Covered Steel (SCCS)	Dielectric	PTFE
Shield(s)	Tin-soaked, Tin Plated Copper (TPC)	Sheath	-

Identification

Dielectric	Natural
Sheath	-
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Flexiform 401 Habia Cable 31000-401-00 2012-W20)

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Flexiform 401	SPC	1,67	5,31	6,35	-	110	2500 5000	50	94	40 120	31000-401-00
Flexiform 380	SPC	1,20	3,80	4,50	-	57	2500 5000	50	94	20 80	31000-380-00
Flexiform 402 Flexiform 402 NM	SCCS SPC	0,94	2,95	3,58	-	41	2500 5000	50	94	10 40	31000-402-00 31000-402-03
Flexiform 405 Flexiform 405 NM	SCCS SPC	0,53 0,54	1,66 1,68	2,15	-	16	1500 3000	50	94	6 25	31000-405-00 31000-405-03

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Flexiform 401	15	25	38	66	101	147	1769	1056	728	450	294	190
Flexiform 380	20	32	46	79	120	172	750	474	330	208	147	110
Flexiform 402 Flexiform 402 NM	25	41	60	102	152	215	686	419	291	182	122	83
Flexiform 405 Flexiform 405 NM	43	70	102	172	249	346	253	157	110	69	47	33

Flexiform Unsheathed

-65°C/+180°C

Size cross-reference

0.250”	Flexiform 401
0.171”	Flexiform 380
0.141”	Flexiform 402 Flexiform 402 NM
0.086”	Flexiform 405 Flexiform 405 NM

Application

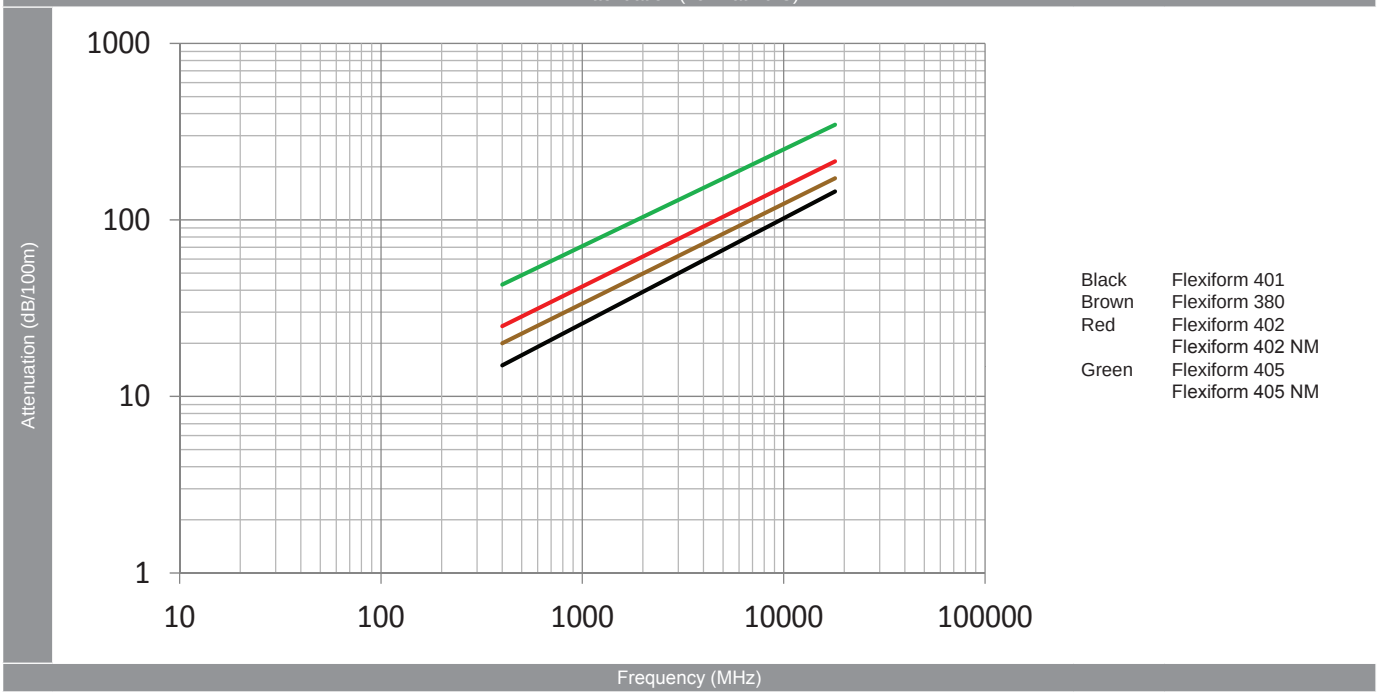
A reformable alternative to semi-rigid coaxes, Flexiform NM coaxials offer the unique ability to be hand-formed with no special tooling required. The tin-soaked braid offers outstanding shielding properties whilst the non-magnetic conductor improves performance with regard to Passive Inter-Modulation (PIM).
Note: Both the Flexiform 380 and Flexiform 401 are only available in NM form and do not carry the NM tag in the description.

Variants

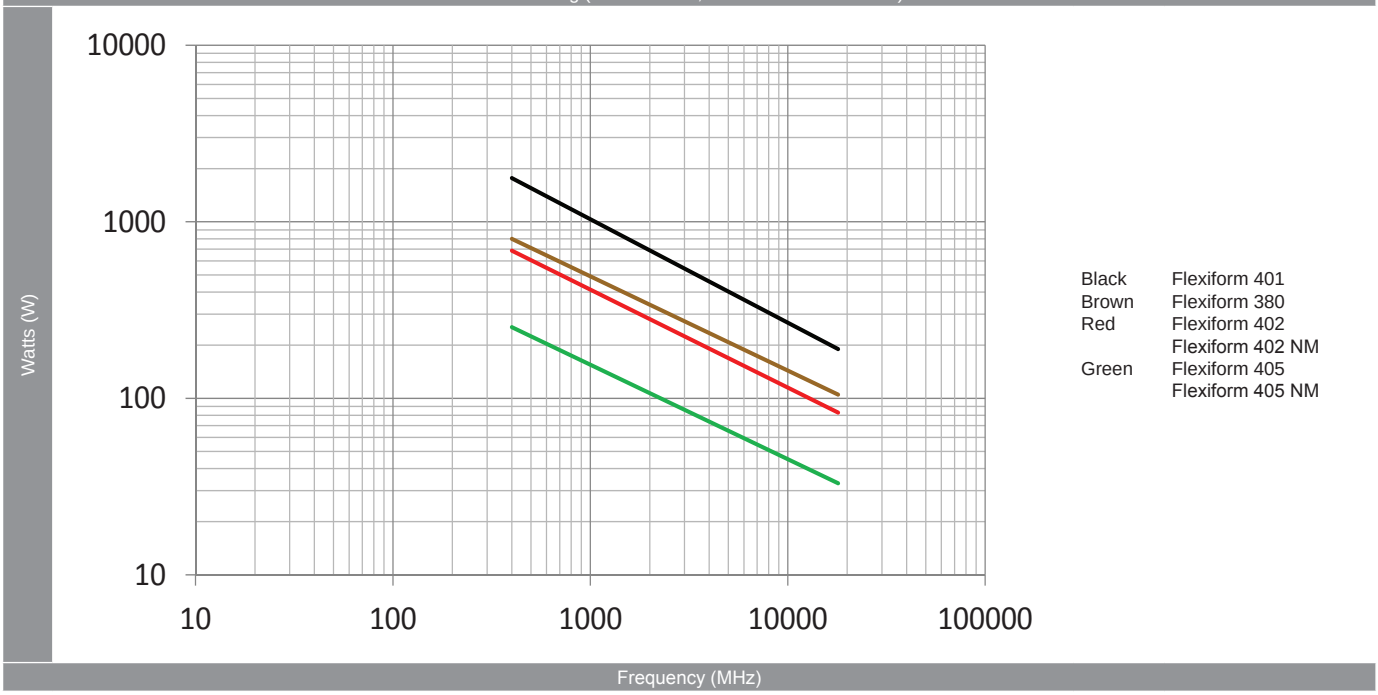
Although unjacketed as standard, Flexiform is also available in high temperature (FJ) and halogen free (HFJ) jacketed versions.
In addition we also produce Low loss profiled (L) versions and Small, Low loss (SL) versions.
For applications that require additional flexibilty, Habia’s Multibend product should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Habia Cable

Flexiform FJ High temperature sheath

-65ºC/+180ºC

Re-formable coax

Flame retardant	IEC 60332-1-2
	UL 1581 VW-1
Smoke generation	IEC 61034-2
Frequency range	Up to 18 GHz
Screening efficiency	110dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC) Silver Plated Copper Covered Steel (SCCS)	Dielectric	PTFE
Shield(s)	Tin-soaked, Tin Plated Copper (TPC)	Sheath	FEP

Identification

Dielectric	Natural
Sheath	Blue-transparent
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Flexiform 401 FJ Habia Cable 31000-401-01 2012-W20)

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Flexiform 401 FJ	SPC	1,67	5,31	6,35	6,90	137	2500 5000	50	94	40 120	31000-401-01
Flexiform 380 FJ	SPC	1,20	3,80	4,50	5,05	65	2500 5000	50	94	20 80	31000-380-01
Flexiform 402 FJ Flexiform 402 NM FJ	SCCS SPC	0,94	2,95	3,60	4,14	48	2500 5000	50	94	10 40	31000-402-01 31000-402-04
Flexiform 220 FJ	SPC	0,71	2,20	2,80	3,20	34	1500 3000	50	94	20 80	31000-220-01
Flexiform 405 FJ Flexiform 405 NM FJ	SCCS SPC	0,53 0,54	1,66 1,68	2,15	2,50	19	1500 3000	50	94	6 25	31000-405-01 31000-405-04

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Flexiform 401 FJ	15	25	38	66	101	147	1769	1056	728	450	294	190
Flexiform 380 FJ	20	32	46	79	120	172	750	474	330	208	147	110
Flexiform 402 FJ Flexiform 402 NM FJ	25	41	60	102	152	215	686	419	291	182	122	83
Flexiform 220 FJ	32	52	80	128	190	270	320	199	135	75	55	40
Flexiform 405 FJ Flexiform 405 NM FJ	43	70	102	172	249	346	253	157	110	69	47	33

Flexiform FJ High temperature sheath

-65°C/+180°C

Size cross-reference

0.250”	Flexiform 401 FJ
0.171”	Flexiform 380 FJ
0.141”	Flexiform 402 FJ Flexiform 402 NM FJ
0.110”	Flexiform 220 FJ
0.086”	Flexiform 405 FJ Flexiform 405 NM FJ

Application

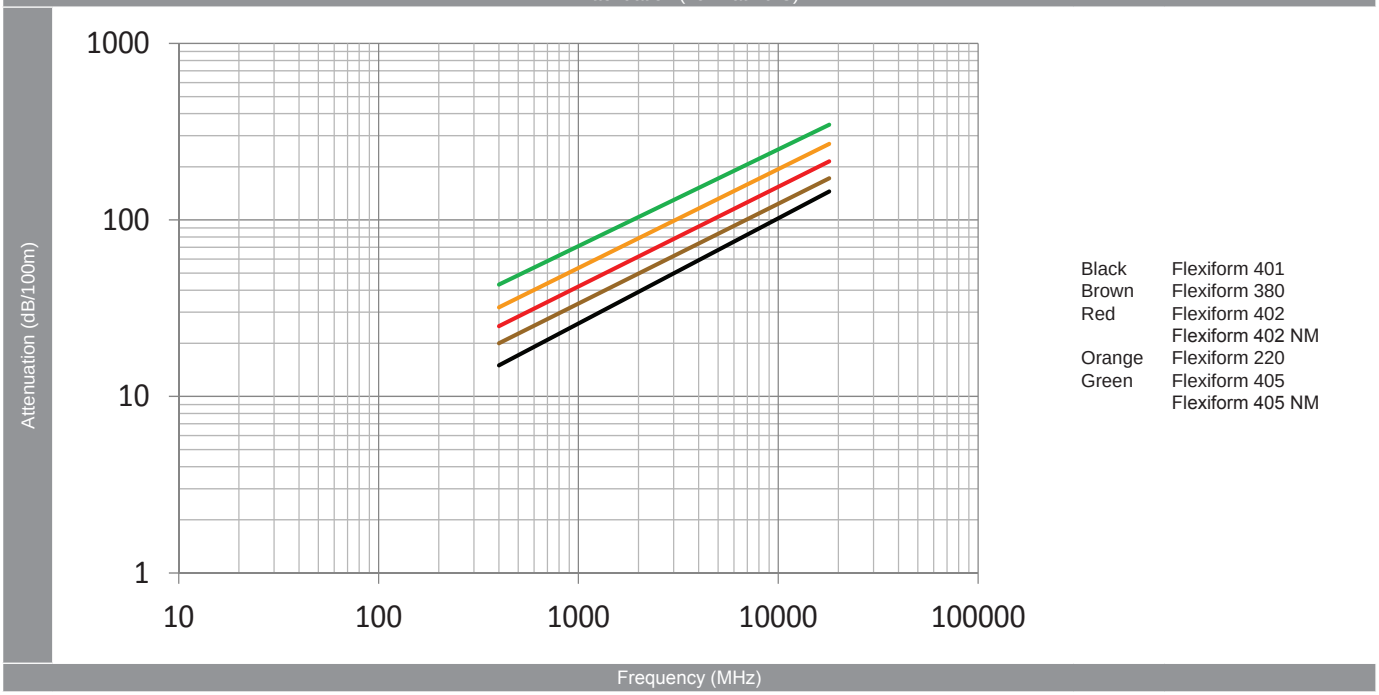
A reformable alternative to semi-rigid coaxes, Flexiform NM FJ coaxials offer the unique ability to be hand-formed with no special tooling required. The tin-soaked braid offers outstanding shielding properties whilst the non-magnetic conductor improves performance with regard to Passive Inter-Modulation (PIM).
Note: Flexiform 220, Flexiform 380 and Flexiform 401 are only available in NM form and do not carry the NM tag in the description.

Variants

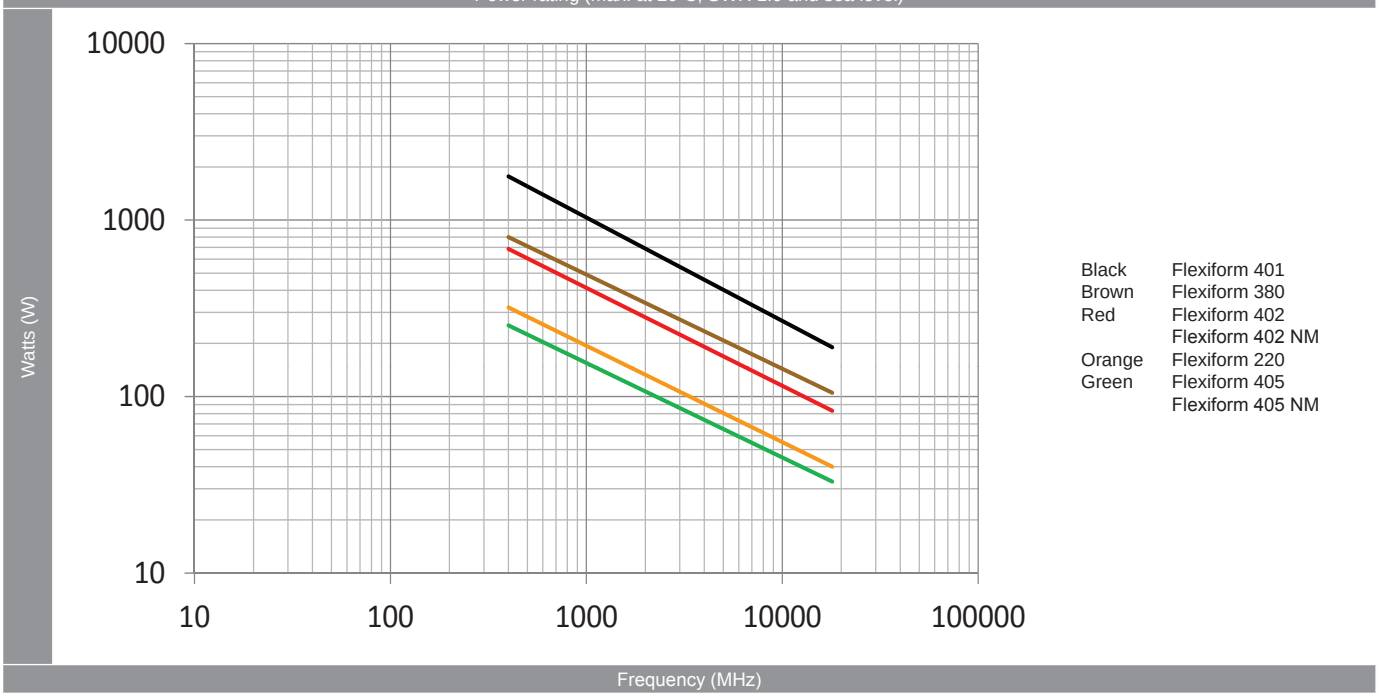
As well as this high temperature (FJ) type, Flexiform is also available in its basic unjacketed, standard form and also a halogen free (HFJ) jacketed version.
In addition we also produce Low loss profiled (L) versions and Small, Low loss (SL) versions.
For applications that require additional flexibilty, Habia’s Multibend product should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Flexiform HFJ Halogen free sheath

-40ºC/+80ºC

Re-formable coax

Flame retardant	IEC 60332-1-2
Smoke generation	IEC 61034-2
Frequency range	Up to 18 GHz
Screening efficiency	110dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC) Silver Plated Copper Covered Steel (SCCS)	Dielectric	PTFE
Shield(s)	Tin-soaked, Tin Plated Copper (TPC)	Sheath	HFS 80 T

Identification

Dielectric	Natural
Sheath	Blue
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Flexiform 401 HFJ Habia Cable 31000-401-02 2012-W20)

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Flexiform 401 HFJ	SPC	1,67	5,31	6,35	7,60	144	2500 5000	50	94	40 120	31000-401-02
Flexiform 380 HFJ	SPC	1,20	3,80	4,50	5,35	69	2500 5000	50	94	20 80	31000-380-04
Flexiform 402 HFJ Flexiform 402 NM HFJ	SCCS SPC	0,94	2,95	3,58	4,60	51 53	2500 5000	50	94	10 40	31000-402-02 31000-402-05
Flexiform 405 HFJ Flexiform 405 NM HFJ	SCCS SPC	0,53 0,54	1,66 1,68	2,15	3,20	23	1500 3000	50	94	6 25	31000-405-02 31000-405-05

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Flexiform 401 HFJ	15	25	38	66	101	147	445	270	182	105	74	66
Flexiform 380 HFJ	20	32	46	79	120	172	346	219	155	98	69	52
Flexiform 402 HFJ Flexiform 402 NM HFJ	25	41	60	102	152	215	176	111	79	50	35	26
Flexiform 405 HFJ Flexiform 405 NM HFJ	43	70	102	172	249	346	75	47	34	22	16	12

Flexiform HFJ Halogen free sheath

-40°C/+80°C

Size cross-reference

0.250”	Flexiform 401 HFJ
0.171”	Flexiform 380 HFJ
0.141”	Flexiform 402 HFJ Flexiform 402 NM HFJ
0.086”	Flexiform 405 HFJ Flexiform 405 NM HFJ

Application

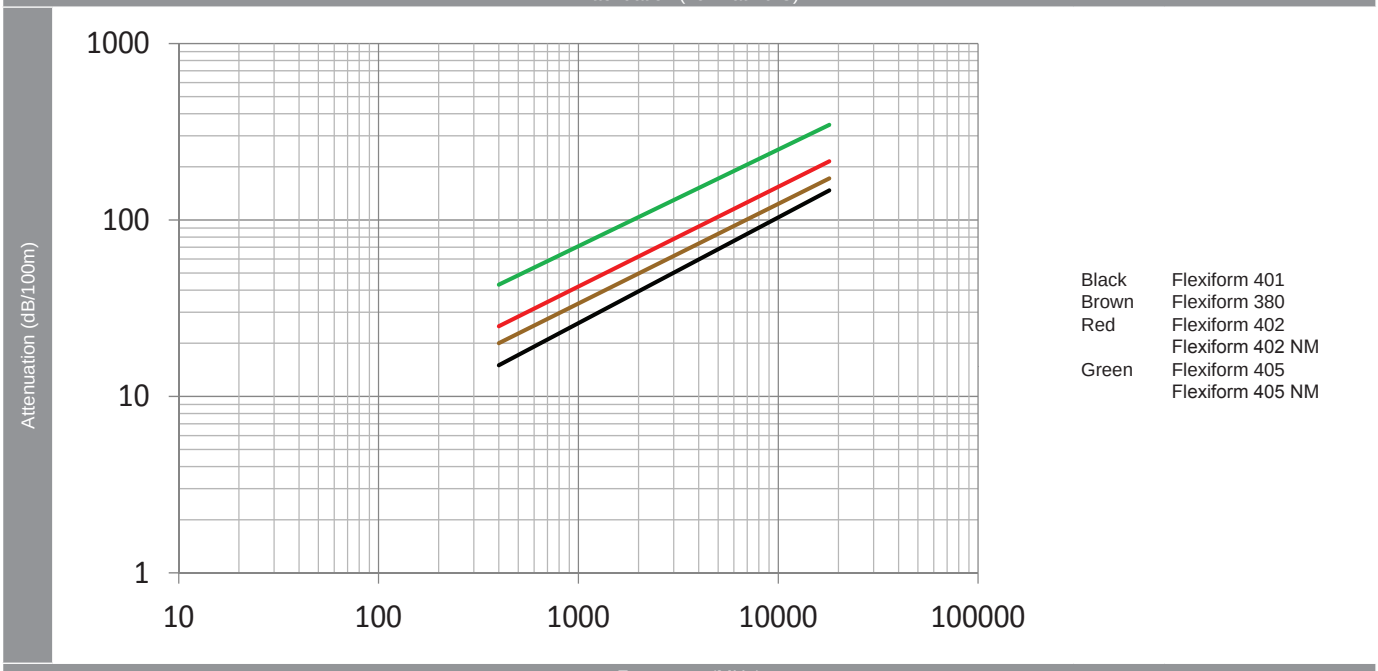
A reformable alternative to semi-rigid coaxes, Flexiform NM FJ coaxials offer the unique ability to be hand-formed with no special tooling required. The tin-soaked braid offers outstanding shielding properties whilst the non-magnetic conductor improves performance with regard to Passive Inter-Modulation (PIM).
Note: Both the Flexiform 380 and Flexiform 401 are only available in NM form and do not carry the NM tag in the description.

Variants

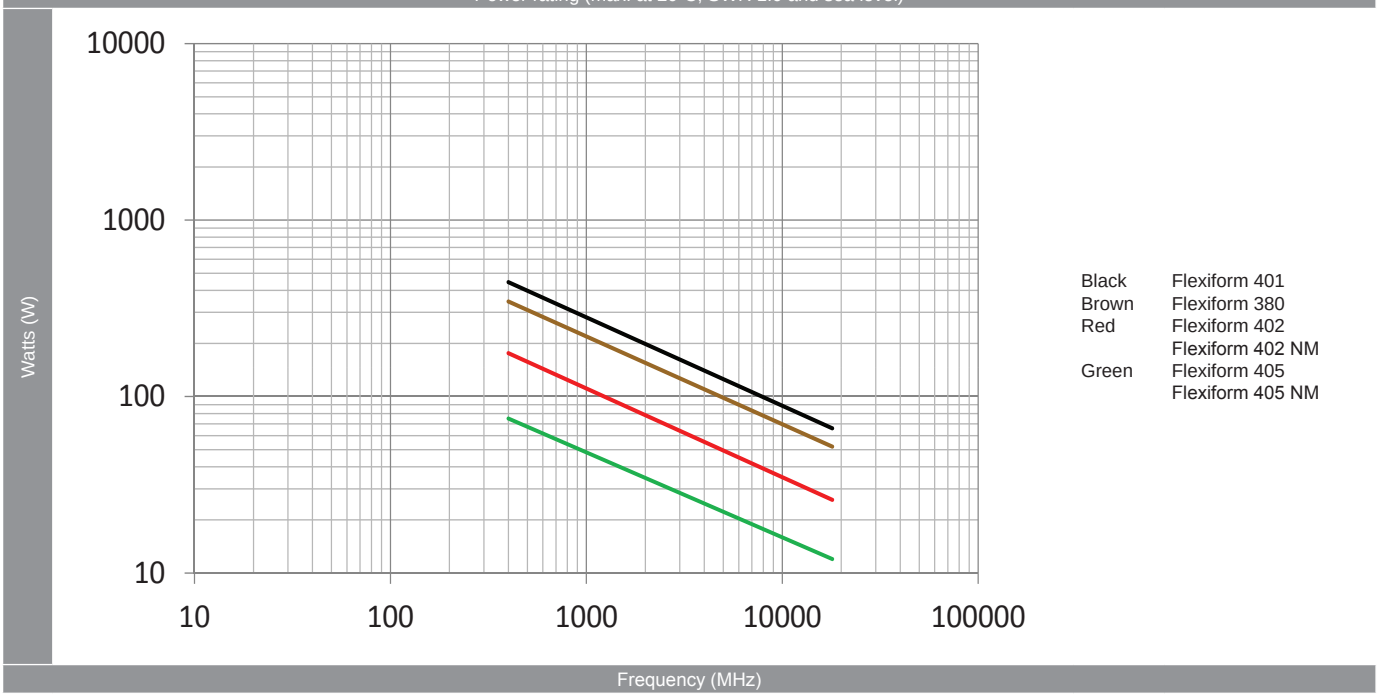
As well as this halogen free (HFJ) type, Flexiform is also available in its basic unjacketed, standard form and also a high temperature (FJ) jacketed version.
In addition we also produce Low loss profiled (L) versions and Small, Low loss (SL) versions.
For applications that require additional flexibilty, Habia’s Multibend product should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Flexiform L FJ Low loss, high temperature sheath

-65ºC/+180ºC

Re-formable coax

Flame retardant	IEC 60332-1-2
	UL 1581 VW-1
Smoke generation	IEC 61034-2
Frequency range	Up to 6 GHz
Screening efficiency	110dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC)	Dielectric	Profile-extruded PTFE
Shield(s)	Tin-soaked, Tin Plated Copper (TPC)	Sheath	FEP

Identification

Dielectric	Natural
Sheath	Blue-transparent
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Flexiform 401 L FJ Habia Cable 31000-401-01 2012-W20)

02

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Flexiform 401 L FJ	SPC	1,88	5,31	6,35	6,90	126	1250 2500	50	84	40 120	31400-401-01
Flexiform 402 L FJ	SPC	1,04	2,95	3,58	4,14	46	1250 2500	50	85	10 40	31400-402-01

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Flexiform 401 L FJ	13	22	33	58	-	-	2000	1190	820	510	-	-
Flexiform 402 L FJ	23	38	55	92	-	-	740	459	318	194	-	-

Flexiform L FJ Low-loss, high temperature sheath

-65°C/+180°C

Size cross-reference

0.250”	Flexiform 401 L FJ
0.141”	Flexiform 402 L FJ

Application

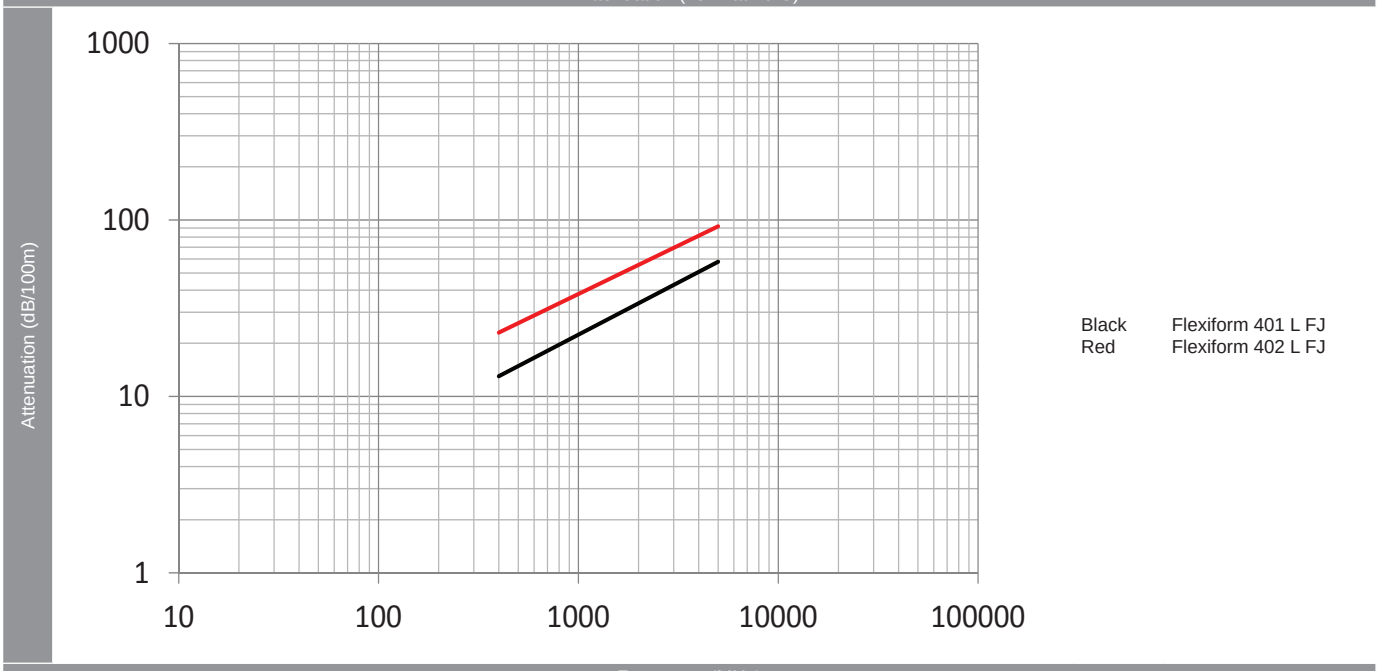
Habia Cable has developed a low loss variant of Flexiform 401 and Flexiform 402. Using a profiled dielectric, the Flexiform L range has an attenuation approximately 7% less than the standard Flexiform range. This gives a phase stable, high performance coaxial cable with little dimensional trade off and no additional cost.

Variants

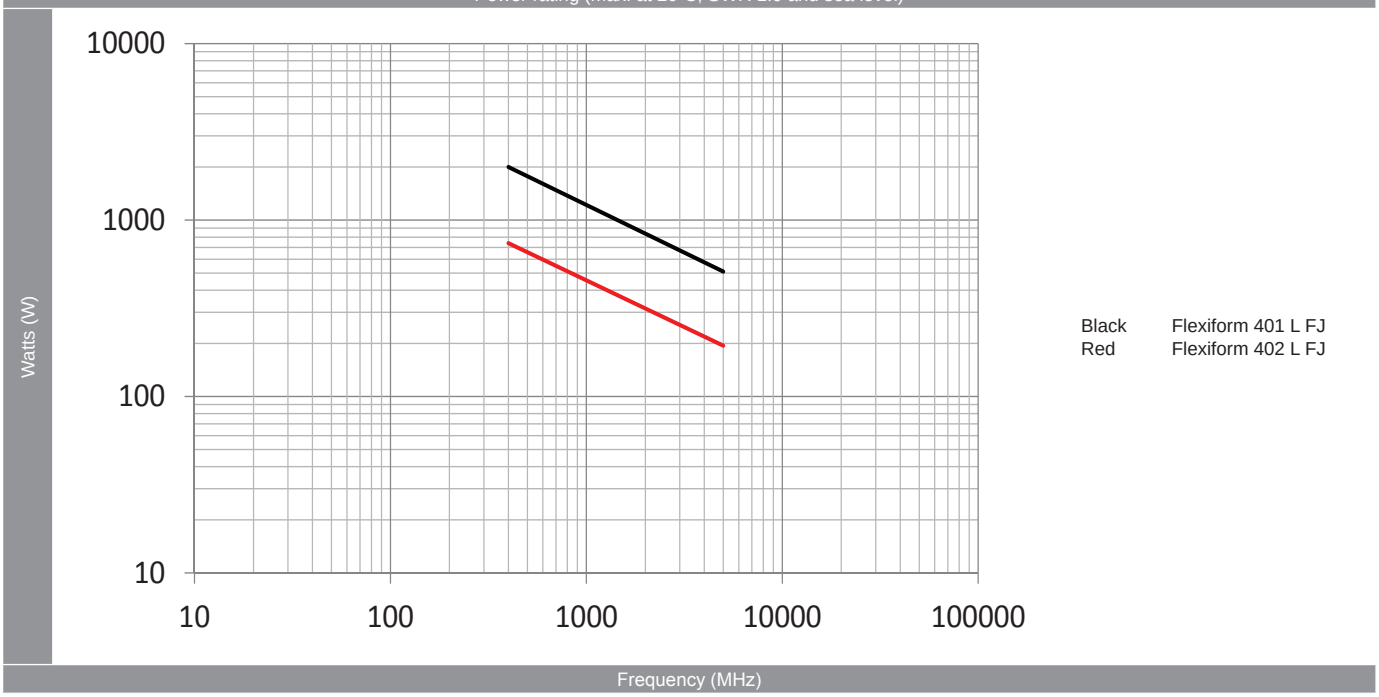
In addition to this low loss, high temperature (L FJ) version, we also produce profiled cables in the standard un-jacketed and halogen free (HFJ) types.
Small, low loss (SL) versions are available with various jacketing options: unjacketed, high temperature (FJ) and halogen free (HFJ) jacketed versions.
In addition we also produce the original Flexiform product in all three jacketing forms.
For applications that require additional flexibilty, Habia’s Multibend product should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Flexiform L HFJ Low loss, halogen free sheath

-40ºC/+80ºC

Re-formable coax

Flame retardant	IEC 60332-1-2
Smoke generation	IEC 61034-2
Frequency range	Up to 6 GHz
Screening efficiency	110dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC)	Dielectric	Profile-extruded PTFE
Shield(s)	Tin-soaked, Tin Plated Copper (TPC)	Sheath	HFS 80 T

Identification

Dielectric	Natural
Sheath	Blue
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Flexiform 401 L HFJ Habia Cable 31000-401-02 2012-W20)

02

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Flexiform 401 L HFJ	SPC	1,88	5,31	6,35	7,60	133	1250 2500	50	84	40 120	31400-401-02
Flexiform 402 L HFJ	SPC	1,04	2,95	3,58	4,60	49	1250 2500	50	85	10 40	31400-402-02

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Flexiform 401 L HFJ	13	22	33	58	-	-	474	300	212	134	-	-
Flexiform 402 L HFJ	23	38	55	92	-	-	258	163	115	73	-	-

Flexiform L HFJ Low-loss, halogen free sheath

-40°C/+80°C

Size cross-reference

0.250”	Flexiform 401 L HFJ
0.141”	Flexiform 402 L HFJ

Application

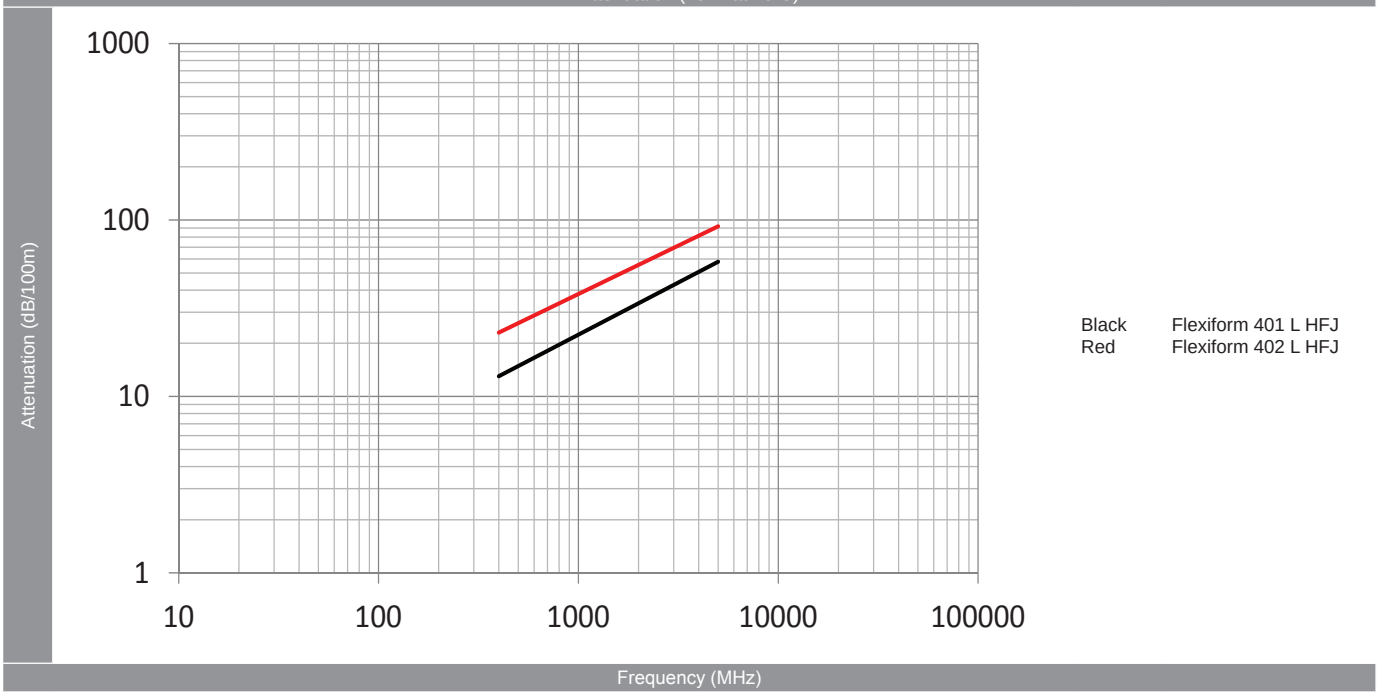
Habia Cable has developed a low loss variant of Flexiform 401 and Flexiform 402. Using a profiled dielectric the Flexiform L range has an attenuation approximately 7% less than the standard Flexiform range. This gives a phase stable, high performance coaxial cable with little dimensional trade off and no additional cost.

Variants

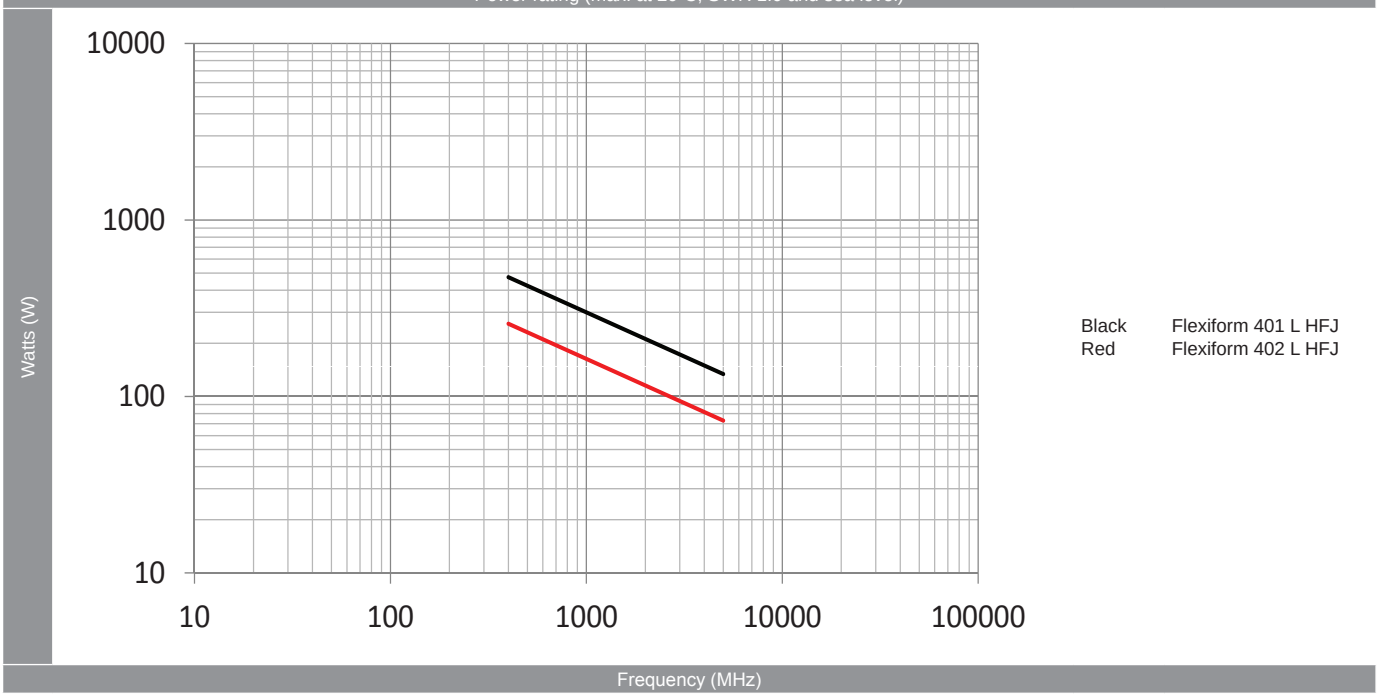
In addition to this low loss, halogen free jacketed (L HFJ) version, we also produce the profiled Flexiform in un-jacketed standard types and high temperature (L FJ) versions.
There are also options for small, low loss (SL) with all three jacketing options: unjacketed, high temperature (FJ) and halogen free (HFJ), as well as the original Flexiform product in all three jacketing forms.
For applications that require additional flexibilty, Habia’s Multibend product should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Habia Cable

Flexiform SL FJ Small, low loss, high temp. sheath

-65ºC/+180ºC

Re-formable coax

Flame retardant	IEC 60332-1-2
	UL 1581 VW-1
Smoke generation	IEC 61034-2
Frequency range	Up to 6 GHz
Screening efficiency	110dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC)	Dielectric	Profile-extruded PTFE
Shield(s)	Tin-soaked, Tin Plated Copper (TPC)	Sheath	FEP

Identification

Dielectric	Natural
Sheath	Blue-transparent
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Flexiform 401 SL FJ Habia Cable 31000-401-07 2012-W20)

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Flexiform 401 SL FJ	SPC	1,67	4,80	5,50	6,20	110	1100 2200	50	87	40 120	31400-401-07
Flexiform 402 SL FJ	SPC	0,94	2,65	3,10	3,65	37	1100 2200	50	83	10 40	31400-402-12

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Flexiform 401 SL FJ	15	24	34	56	-	-	1769	1119	791	500	-	-
Flexiform 402 SL FJ	25	39	56	91	-	-	686	434	307	194	-	-

Flexiform SL FJ Small, low-loss, high temp. sheath

-65°C/+180°C

Size cross-reference

0.250”	Flexiform 401 L FJ
0.141”	Flexiform 402 L FJ

Application

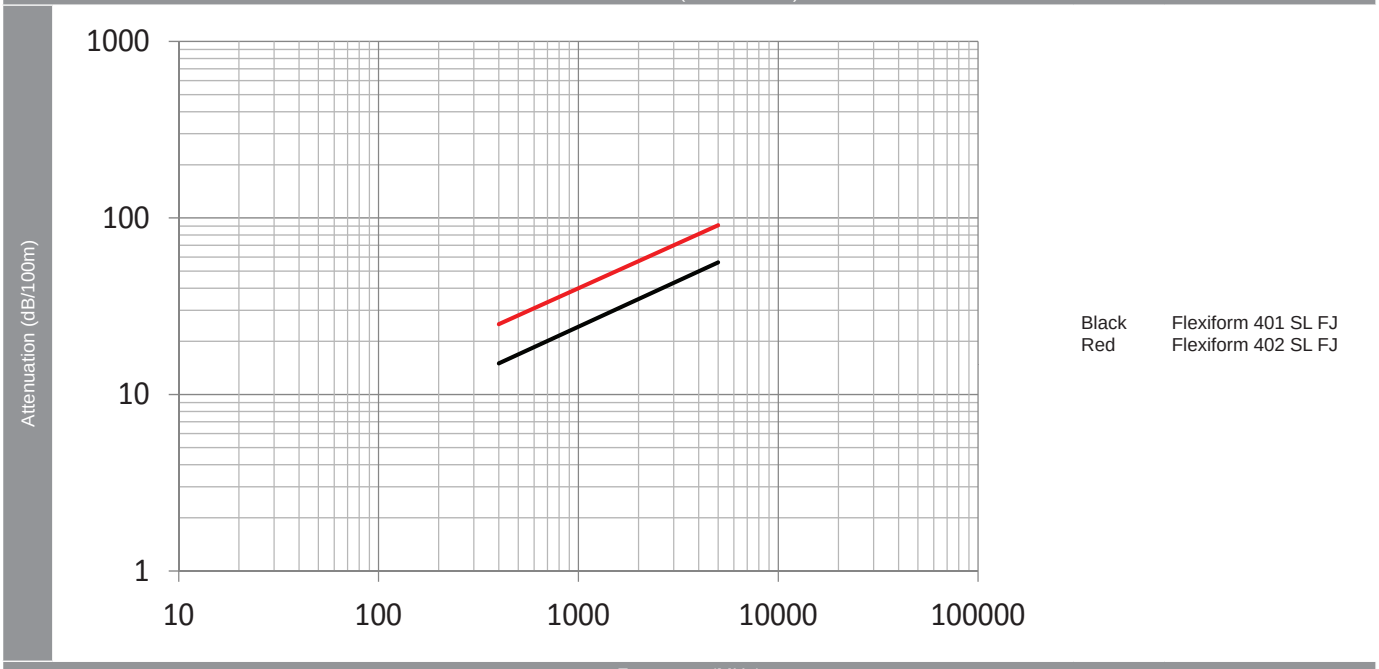
Habia Cable’s most recent innovation in Flexiform has been the development of a small, low loss variant of Flexiform 401 and Flexiform 402. Similar to the Flexiform L, these cables use a profiled dielectric to provide the electrical performance of a larger coaxial within a smaller space envelope.

Variants

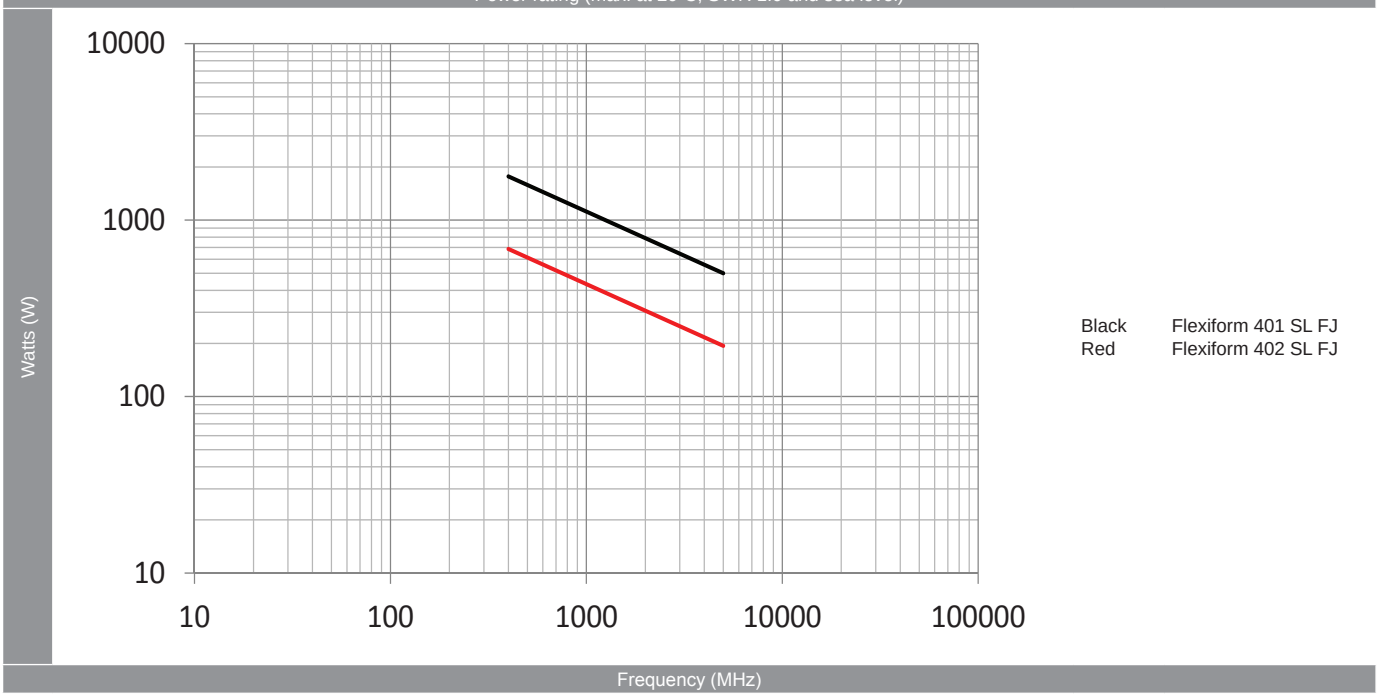
In addition to this small, low loss, high temperature (SL FJ) version, we also produce profiled cables in the standard unjacketed and halogen free (HFJ) types.
Low loss (L) versions are available with various jacketing options: unjacketed, high temperature (FJ) and halogen free (HFJ) jacketed versions.
In addition we also produce the original Flexiform product in all three jacketing forms.
For applications that require additional flexibilty, Habia’s Multibend product should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Habia Cable

Flexiform SL HFJ Small low loss, halogen free sheath

-40ºC/+80ºC

02

Re-formable coax

Flame retardant	IEC 60332-1-2
Smoke generation	IEC 61034-2
Frequency range	Up to 6 GHz
Screening efficiency	110dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC)	Dielectric	Profile-extruded PTFE
Shield(s)	Tin-soaked Tin Plated Copper (TPC)	Sheath	HFS 80 T

Identification

Dielectric	Natural
Sheath	Blue
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Flexiform 401 SL HFJ Habia Cable 31000-401-08 2012-W20)

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Flexiform 401 SL HFJ	SPC	1,67	4,80	5,50	6,75	95	1100 2200	50	84	40 120	31400-401-08
Flexiform 402 SL HFJ	SPC	0,94	2,65	3,10	3,90	38	1100 2200	50	83	10 40	31400-402-13

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Flexiform 401 SL HFJ	16	25	36	59	-	-	445	281	199	126	-	-
Flexiform 402 SL HFJ	26	41	59	95	-	-	176	111	79	50	-	-

Flexiform SL HFJ Small low-loss, halogen free sheath

-40°C/+80°C

Size cross-reference

0.250"	Flexiform 401 SL HFJ
0.141"	Flexiform 402 SL HFJ

Application

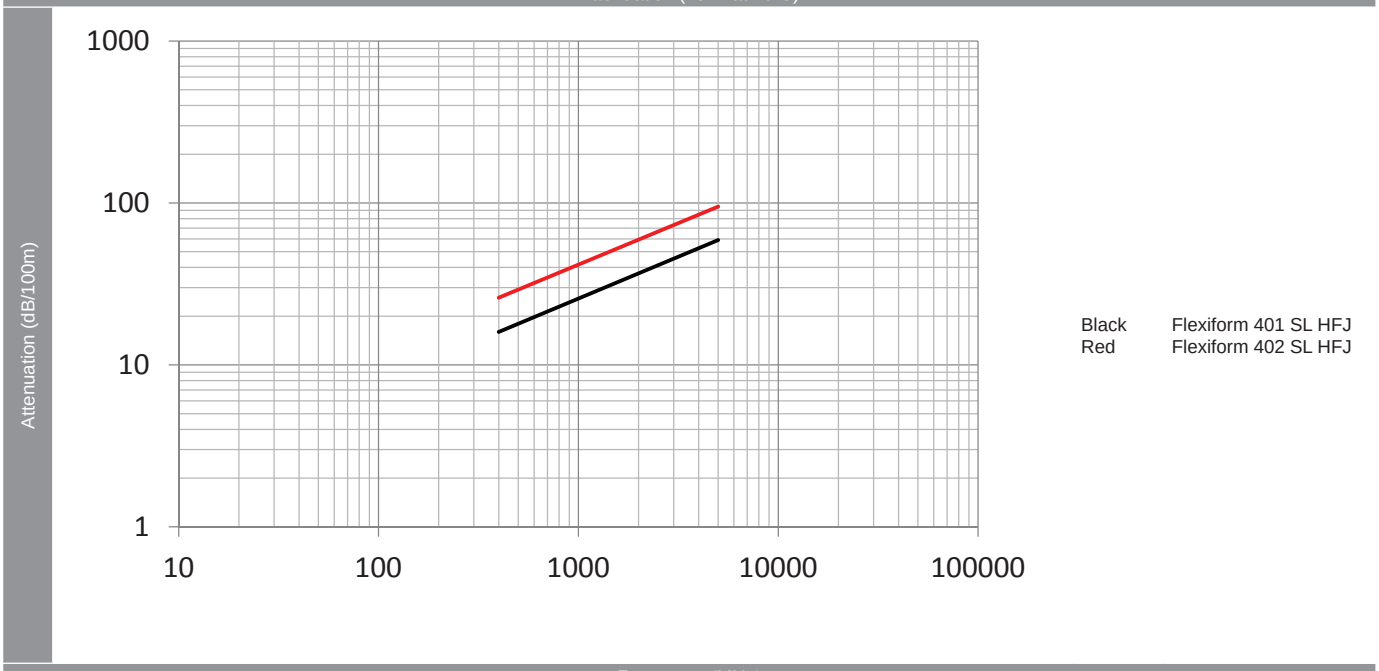
Habia Cable's most recent innovation in Flexiform has been the development of a small, low loss variant of Flexiform 401 and Flexiform 402. Similar to the Flexiform L, these cables use a profiled dielectric to provide the electrical performance of a larger coaxial within a smaller space envelope.

Variants

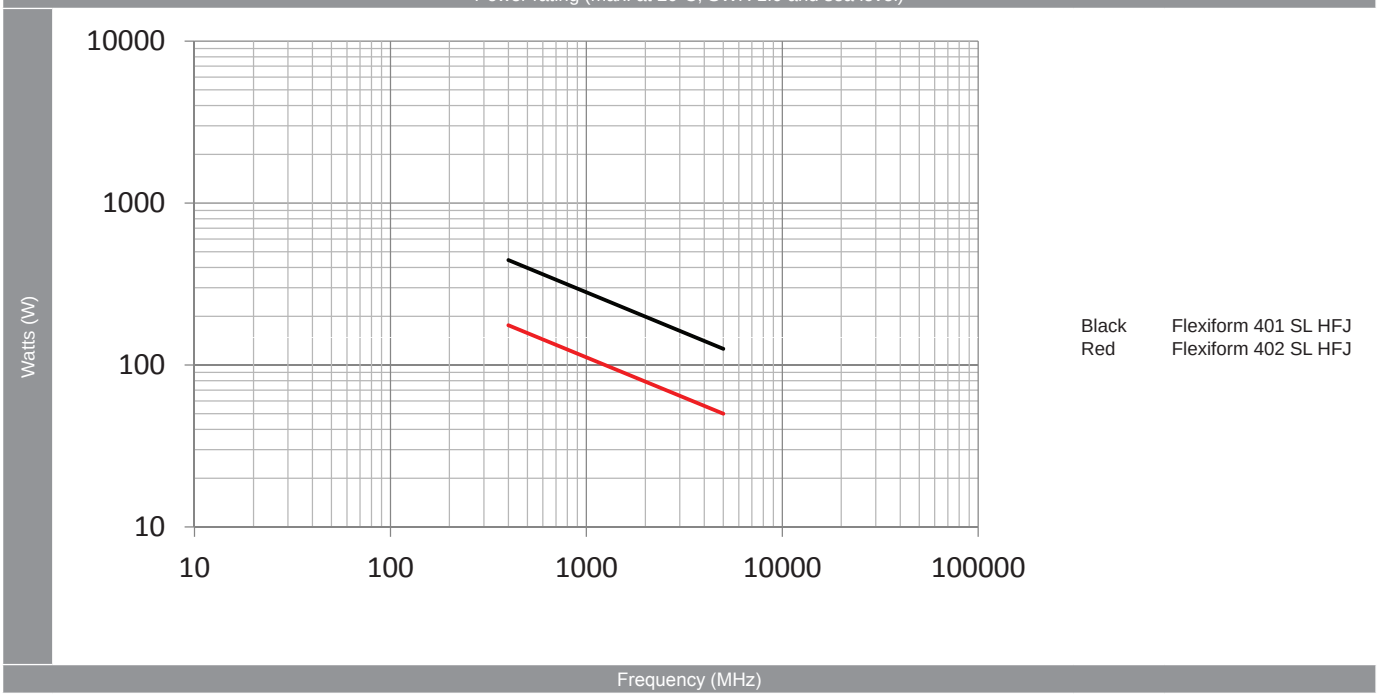
In addition to this small, low loss, halogen free jacketed (SL HFJ) version, we also produce the profiled Flexiform in un-jacketed standard types and high temperature (SL FJ) versions.
There are also options for low loss (L) types with all three jacketing options: unjacketed, high temperature (FJ) and halogen free (HFJ), as well as the original Flexiform product in all three jacketing forms.
For applications that require additional flexibilty, Habia's Multibend product should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Multibend FJ Flexible, high temperature sheath

-65ºC/+165ºC

Re-formable coax

Flame retardant	IEC 60332-1-2
	UL 1581 VW-1
Smoke generation	IEC 61034-2
Frequency range	Up to 18 GHz
Screening efficiency	100dB
Velocity propagation	70%

Construction

Conductor	Silver Plated Copper (SPC) Silver Plated Copper Covered Steel (SCCS)	Dielectric	PTFE
Shield(s)	Silver Plated Copper Foil (F), bonded to dielectric Braid of Silver Plated Copper (S)	Sheath	FEP

Identification

Dielectric	Natural
Sheath	Blue-transparent
Marking	TYPE Habia Cable ORDER REFERENCE YEAR-WEEK (e.g.: Multibend 401 FJ Habia Cable 32000-401-01 2012-W20)

Description	Construction						Electrical			MBR	Order reference
	conductor material	conductor Ø	dielectric Ø	shield (s) Ø	sheath (s) Ø	weight g/m	V rms V DC	imp. Ω	cap. pF/m	static dynamic	
Multibend 401 FJ	SPC	1,67	5,31	F: 5,75 S: 6,35	7,20	130	3000 6000	50	80	40 80	32000-401-01
Multibend 402 FJ	SCCS	0,94	2,99	F: 3,15	4,14	42	1900	50	94	10	32000-402-01
Multibend 402 NM FJ	SPC			S: 3,58		41	3800			40	32000-402-03
Multibend 405 FJ	SCCS	0,51	1,63	F: 1,88	2,64	21	1500	50	96	6	32000-405-01
Multibend 405 NM FJ	SPC			S: 2,18			3000			25	32000-405-03

Electrical data (table)	Attenuation (dB/100m)						Power (W)					
	Frequency (MHz)						Frequency (MHz)					
	400	1000	2000	5000	10000	18000	400	1000	2000	5000	10000	18000
Multibend 401 FJ	14	23	34	57	88	145	1387	827	569	351	248	148
Multibend 402 FJ Multibend 402 NM FJ	26	42	60	100	149	210	515	315	218	136	96	62
Multibend 405 FJ Multibend 405 NM FJ	43	68	98	159	233	355	194	120	84	53	37	25

Multibend FJ Flexible, high temperature sheath

-65°C/+165°C

Size cross-reference

0.250”	Multibend 401 FJ
0.141”	Multibend 402 NM FJ
0.086”	Multibend 405 NM FJ

Application

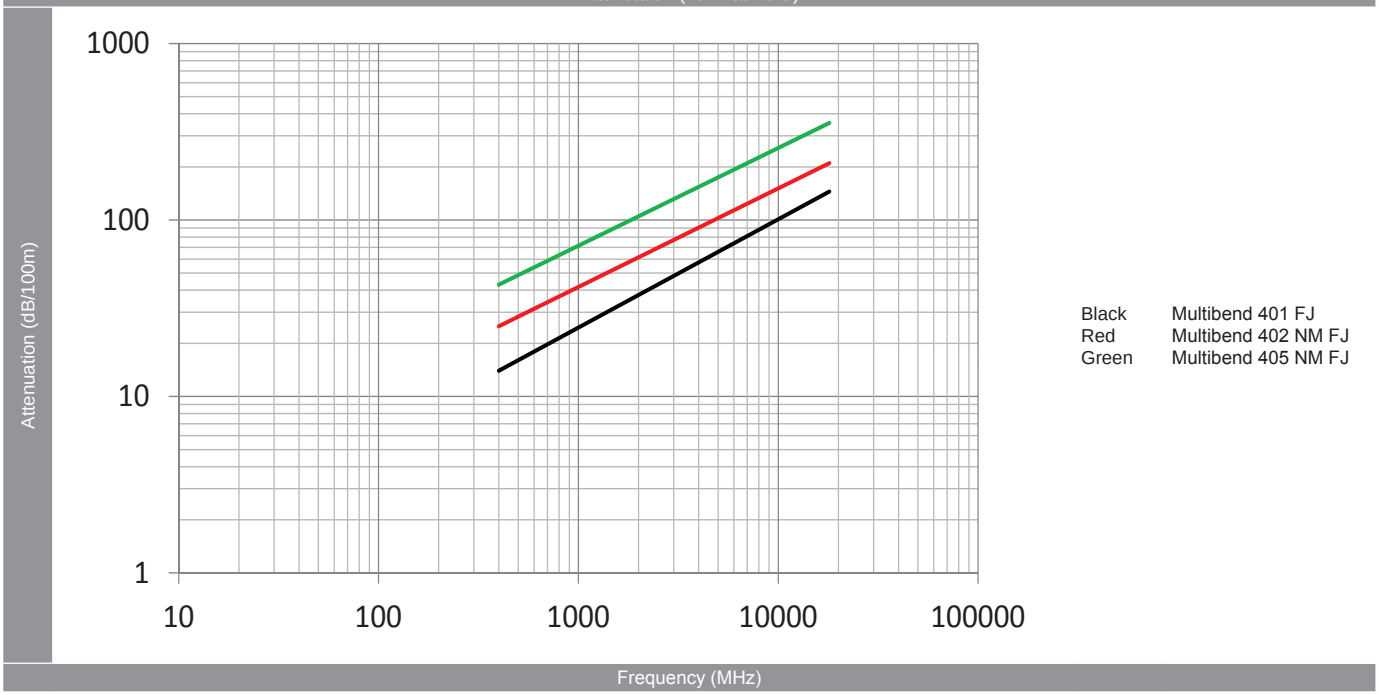
Multibend is typically used in antennas and cabinet systems and can be found on equipment ranging from satellites and military systems to medical products. By replacing the solid copper tube with a wrapped silver-plated copper foil and braid, Multibend offers the electrical performance of a semi-rigid coax with flexibility and ease of handling.

Variants

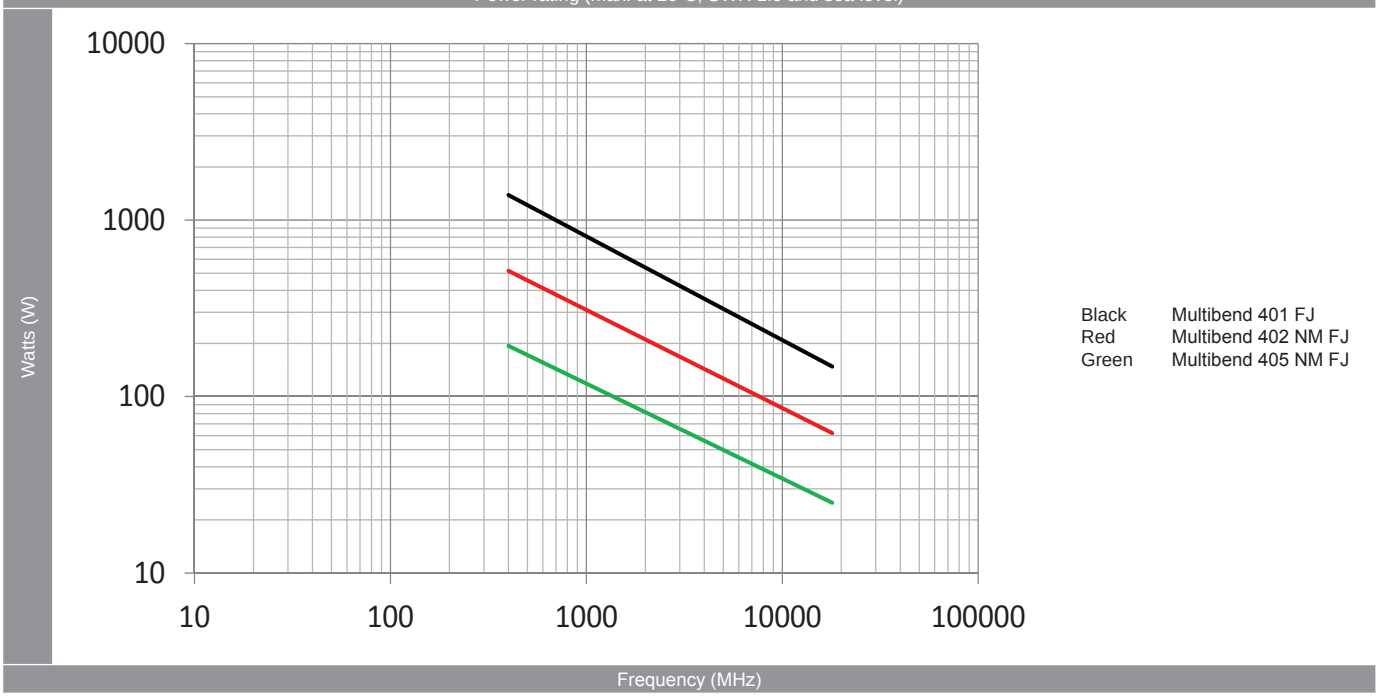
For fixed applications that will only require installation handling (up to four bends), Habia’s Flexiform, Flexiform L and Flexiform SL products should also be considered.

Electrical data (graph)

Attenuation (nom. at 20°C)



Power rating (max. at 20°C, SWR 1.0 and sea level)



Notes