Habia Cable

www.tt-telecom.ru

Speedfoam®

Low loss flexible communications cable

www.habia.com

Habia Cable

Speedfoam®

Low-loss Flexible Communications Cable

Speedfoam can be used in most applications where high performance coaxial cables are used.

Engineering Data

Habia Ref	Material	Speedfoam 300 Diameter (mm)	(in)	Speedfoam 400 Diameter (mm)	(in)	Speedfoam 500 Diameter (mm)	(in)	Speedfoam 700 Diameter (mm)	(in)	Speedfoam 900 Diameter (mm)	(in)
1 Conductor	Solid bare copper or Solid copper covered aluminium	1.12	0.044	1.42	0.056	1.78	0.070	2.75	0.108	3.61	0.142
2 Dielectric	Foamed polyethylene	2.95	0.116	3.81	0.150	4.83	0.190	7.24	0.285	9.40	0.370
3 Outer Conductor (a)	Aluminium/Mylar tape, bonded to dielectric	3.07	0.121	3.94	0.155	4.98	0.196	7.40	0.291	9.55	0.376
4 Outer Conductor (b)	Braid of tin plated copper	3.66	0.144	4.52	0.178	5.72	0.225	8.10	0.320	10.30	0.405
5 Jacket	Low smoke, zero halogen, black	4.95	0.195	6.10	0.240	7.62	0.300	10.30	0.406	12.70	0.500

Note: all figures are nominal unless otherwise specified

Introduction

Over a number of years, Habia Cable has developed, together with our worldwide telecommunications customers, a complete range of RF cables to meet their demands in an industry where product innovation is moving ahead at a tremendous pace. To further enhance these products we have developed our Speedfoam range of cables.

The Speedfoam range consists of low loss communications cables specifically designed to meet the increasing demands of the Telecommunications Industry. Speedfoam is a halogen free series of cables using highly foamed, closed-cell PE dielectric with a screen of tightly bonded, overlapped aluminium tape and an overall braid. This results in cables with excellent shielding properties and phase stability.

The jacket is of flame retardant PE with resulting cables being totally halogen-free, low-smoke and flame retardant to IEC 60332-3C. The cables have a lower loss than their equivalent sized, solid dielectric cables and at a lower cost.

Features & Benefits

Outstanding shielding properties
Good phase stability
Up to 2.5 GHz operating frequency
Good flexibility
Improved attenuation
Excellent against cross-talk
Halogen-free, low-smoke & flame retardant
Light weight
UV sunlight resistance 720h, passes UL 1581

Custom Design

Variations on our standard versions are available on request

* Cross-linked versions to increase operating temperature
* UL versions to meet the requirements of the US market
* Versions with improved properties for outdoor usage with increased resistance to moisture, UV and the elements
* Radiation tolerant version available

Connectors

Details of compatible types can be provided on request.

Cable Marking

Jackets of all cables are marked with type and date of manufacture

Typical applications

Drop-in, jumper assemblies
Short antenna feeders
Internal cabinet wiring
System interconnects
Inter-cabinet jumper leads
Base station external jumpers
Satellite terminals
Antenna applications
In-building applications

Photographic credits:
Cover top ..... Allgon
Cover Bottom ..... Allgon
Back page..... Ericsson

Custom Design
Cross-linking
UL- standards
Outdoor usage types
Radiation tolerant

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www.habia.com

Speedfoam® 300

Low-loss Flexible Communications Cable

Engineering Data

Cable Design

		Ø (mm)
Centre conductor	solid bare copper	1.12
Dielectric	foamed polyethylene	2.95
Outer conductor	al/mylar tape, bonded to dielectric	3.07
	braid of tin plated copper	3.66
	overall coverage 100 %	
Jacket	LS0H, black	4.95
Marking	Habia Cable Speedfoam 300, and date of manufacture	

Electrical Data

Impedance	50 ± 2 Ω
Capacitance	80 pF/m
Velocity of signal propagation	83 %
Signal delay	4 ns/m
Working voltage, maximum	V
Shielding effectiveness	>90 dB
Attenuation, typical values	see graph
Power, typical values	see graph
DC resistance, inner conductor	17.6 Ω/km
DC resistance, outer conductor	16.1 Ω/km

Environmental & Mechanical

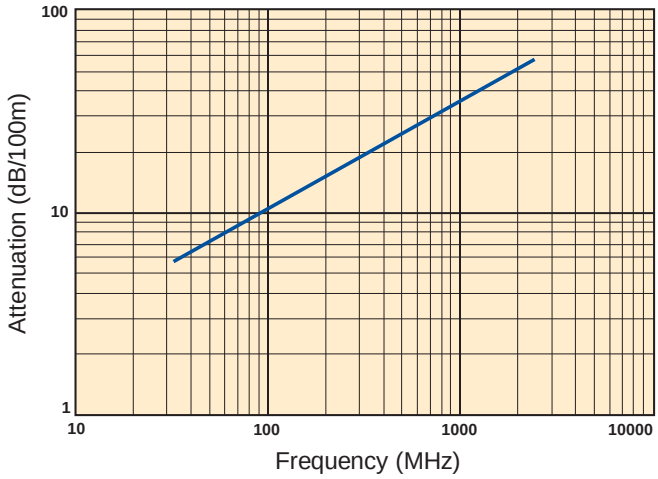
Minimum bend radius, single bend	13 mm
Minimum bend radius, multiple bends	50 mm
Weight	35 kg/km
Operating temperature	-40 to +80 °C
Flame resistance, passes	EC 60332-3C, IEEE 383
Smoke, passes	EC 61034-2
Halogens, passes	EC 60754-2

Connectors

Information can be provided on request.

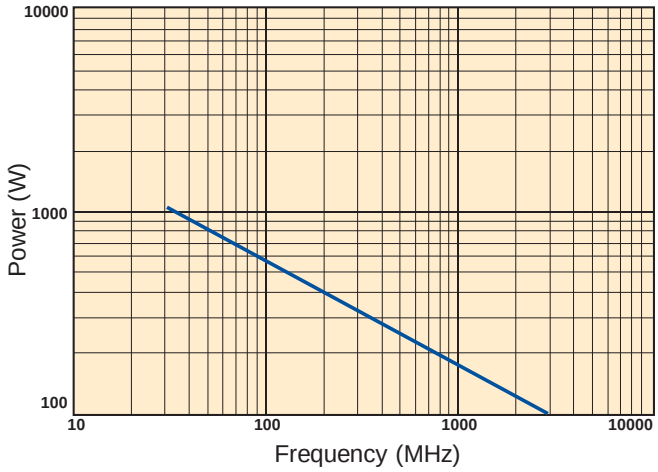
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



Additional Information

Speedfoam 300 UL 1375

UL version in accordance with AWM style 1375.

Specification	As Speedfoam 300
Working voltage	V
Operating temperature	+60 °C
Flame rating	UL 1581 VW-1
Our file no	E75929

Speedfoam 300 XL

Cross-linked version

Specification	As Speedfoam 300
Operating temperature	+100 °C

Note: all figures are nominal unless otherwise specified

Custom Design

A radiation resistant version can be manufactured with a copper foil (10^6 Gy)
Different types of jacket available
Please ask for details

All Speedfoam types are Low-Smoke, Zero-Halogen

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Habia Cable

Speedfoam® 400

Low-loss Flexible Communications Cable

Engineering Data

Cable Design

		Ø (mm)
Centre conductor	solid bare copper	1.42
Dielectric	foamed polyethylene	3.81
Outer conductor	al/mylar tape, bonded to dielectric	3.94
	braid of tin plated copper	4.52
	overall coverage 100%	
Jacket	LS0H, black	6.10
Marking	Habia Cable Speedfoam 400, and date of manufacture	

Electrical Data

Impedance	50 ± 2 Ω
Capacitance	79 pF/m
Velocity of signal propagation	84 %
Signal delay	4 ns/m
Working voltage, maximum	V
Shielding effectiveness	>90 dB
Attenuation, typical values	see graph
Power, typical values	see graph
DC resistance, inner conductor	10.5 Ω/km
DC resistance, outer conductor	12.8 Ω/km

Environmental & Mechanical

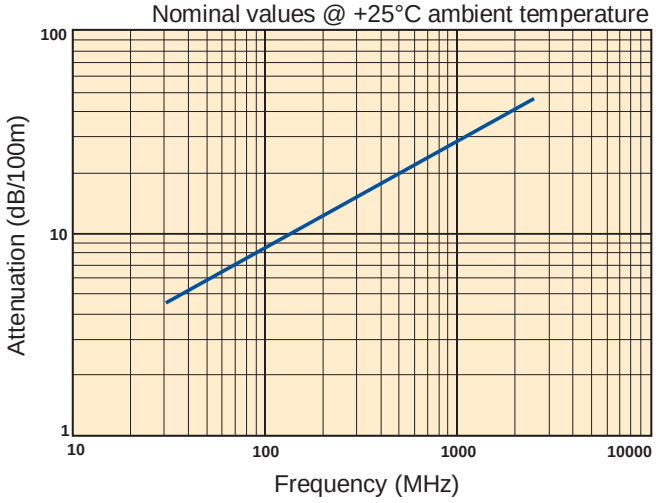
Minimum bend radius, single bend	20 mm
Minimum bend radius, multiple bends	60 mm
Weight	59 kg/km
Operating temperature	-40 to +80 °C
Flame resistance, passes	EC 60332-3C, IEEE 383
Smoke, passes	EC 61034-2
Halogens, passes	EC 60754-2

Connectors

Information can be provided on request.

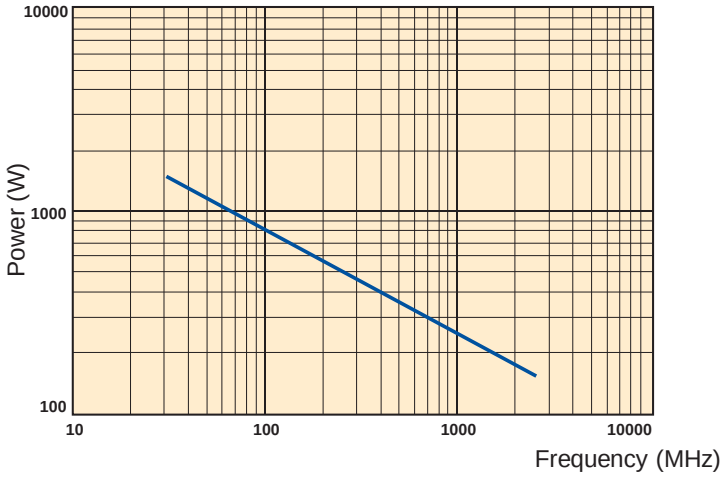
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



Additional Information

Speedfoam 400 UL 1375

UL version in accordance with AWM style 1375.

Specification	As Speedfoam 400
Working voltage	V
Operating temperature	+60°C
Flame rating	UL 1581 VW-1
Our file no.	E75929

Speedfoam 400 XL

Cross-linked version

Specification	As Speedfoam 400
Operating temperature	+100°C

Note: all figures are nominal unless otherwise specified

Custom Design

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Different types of jacket available
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Speedfoam® 500

Low-loss Flexible Communications Cable

Engineering Data

Cable Design

		Ø (mm)
Centre conductor	solid bare copper	1.78
Dielectric	foamed polyethylene	4.83
Outer conductor	al/mylar tape, bonded to dielectri	4.98
	braid of tin plated copper	5.72
	overall coverage 100%	
Jacket	LS0H, black	7.62
Marking	Habia Cable Speedfoam 500,	
	and date of manufacture	

Electrical Data

Impedance	50 ± 2 Ω
Capacitance	79 pF/m
Velocity of signal propagation	85 %
Signal delay	4 ns/m
Working voltage, maximum	V
Shielding effectiveness	>90 dB
Attenuation, typical values	see graph
Power, typical values	see graph
DC resistance, inner conductor	7.0 Ω/km
DC resistance, outer conductor	7.5 Ω/km

Environmental & Mechanical

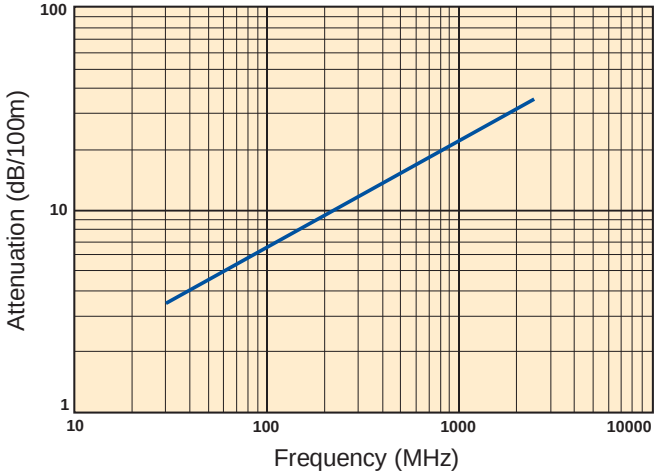
Minimum bend radius, single bend	23 mm
Minimum bend radius, multiple bends	75 mm
Weight	94 kg/km
Operating temperature	-40 to +80 °C
Flame resistance, passes	EC 60332-3C, IEEE 383
Smoke, passes	EC 61034-2
Halogens, passes	EC 60754-2

Connectors

Information can be provided on request.

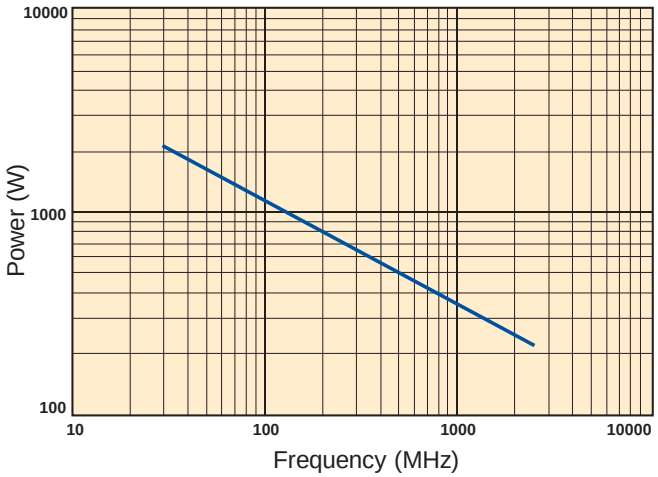
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



Additional Information

Speedfoam 500 UL 1375

UL version in accordance with AWM style 1375.

Specification	As Speedfoam 500
Working voltage	V
Operating temperature	+60°C
Flame rating	UL 1581 VW-1
Our file no	E75929

Speedfoam 500 XL

Cross-linked version

Specification	As Speedfoam 500
Operating temperature	+100°C

Note: all figures are nominal unless otherwise specified

Custom Design

A radiation resistant version can be manufactured with a copper foil (10^6 Gy)
Different types of jacket available
Please ask for details

All Speedfoam types are Low-Smoke, Zero-Halogen

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Habia Cable

Speedfoam® 700

Low-loss Flexible Communications Cable

Engineering Data

Cable Design

		Ø (mm)
Centre conductor	solid copper covered aluminium	2.75
Dielectric	foamed polyethylene	7.24
Outer conductor	al/mylar tape, bonded to dielectric	7.40
	braid of tin plated copper	8.10
	overall coverage 100%	
Jacket	LS0H, black	10.30
Marking	Habia Cable Speedfoam 700, and date of manufacture	

Electrical Data

Impedance ..... 50 ± 2 Ω
Capacitance ..... 79 pF/m
Velocity of signal propagation ..... 84 %
Signal delay ..... 4 ns/m
Working voltage, maximum V
Shielding effectiveness ..... >90 dB

Attenuation, typical values ..... see graph
Power, typical values ..... see graph
DC resistance, inner conductor ..... 4.5 Ω/km
DC resistance, outer conductor ..... 5.6 Ω/km

Environmental & Mechanical

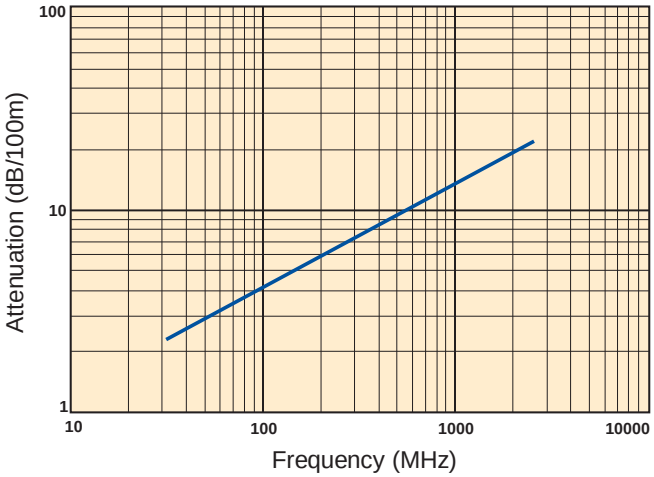
Minimum bend radius, single bend ..... 25 mm
Minimum bend radius, multiple bends ..... 100 mm
Weight ..... 94 kg/km
Operating temperature ..... -40 to +80 °C
Flame resistance, passes ..... EC 60332-3C, IEEE 383
Smoke, passes ..... EC 61034-2
Halogens, passes ..... EC 60754-2

Connectors

Information can be provided on request.

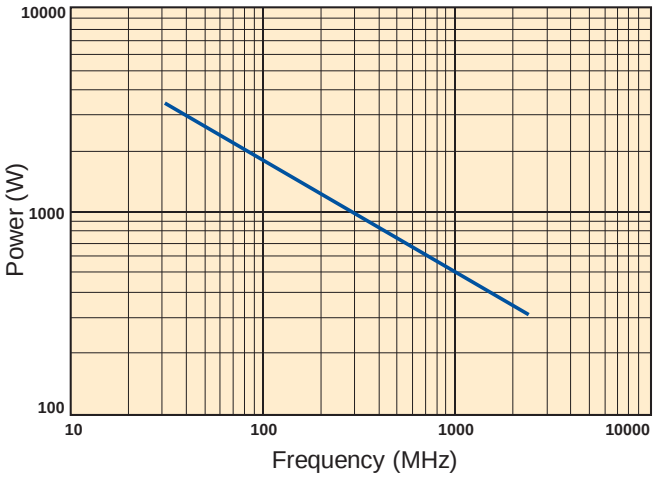
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



Additional Information

Speedfoam 700 UL 1375

UL version in accordance with AWM style 1375.
Specification ..... As Speedfoam 700
Working voltage V
Operating temperature ..... +60°C
Flame rating ..... UL 1581 VW-1
Our file no E75929

Speedfoam 700 XL

Cross-linked version
Specification ..... As Speedfoam 700
Operating temperature ..... +100°C

Note: all figures are nominal unless otherwise specified

Custom Design

A radiation resistant version can be manufactured with a copper foil (10^6 Gy)
Different types of jacket available
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Speedfoam® 900

Low-loss Flexible Communications Cable

Engineering Data

Cable Design

		Ø (mm)
Centre conductor	solid copper covered aluminium	3.61
Dielectric	foamed polyethylene	9.40
Outer conductor	al/mylar tape, bonded to dielectric	9.55
	braid of tin plated copper	10.30
	overall coverage 100%	
Jacket	LS0H, black	12.70
Marking	Habia Cable Speedfoam 900, anddate of manufacture	

Electrical Data

Impedance ..... 50 ± 2 Ω
Capacitance ..... 79 pF/m
Velocity of signal propagation ..... 85 %
Signal delay ..... 4 ns/m
Working voltage, maximum V
Shielding effectiveness ..... >90 dB

Attenuation, typical values ..... see graph
Power, typical values ..... see graph
DC resistance, inner conductor ..... 2.7 Ω/km
DC resistance, outer conductor ..... 4.2 Ω/km

Environmental & Mechanical

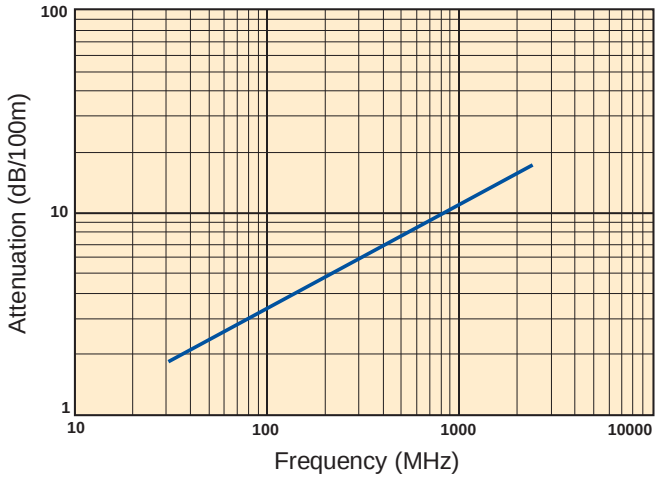
Minimum bend radius, single bend ..... 32 mm
Minimum bend radius, multiple bends ..... 130 mm
Weight ..... 150 kg/km
Operating temperature ..... -40 to +80 °C
Flame resistance, passes ..... EC 60332-3C, IEEE 383
Smoke, passes ..... EC 61034-2
Halogens, passes ..... EC 60754-2

Connectors

Information can be provided on request.

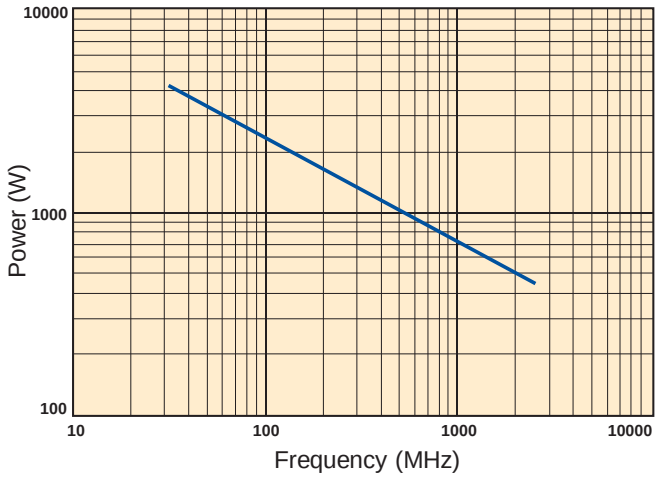
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



Additional Information

Speedfoam 900 UL 1375

UL version in accordance with AWM style 1375.
Specification ..... As Speedfoam 900
Working voltage V
Operating temperature ..... +60°C
Flame rating ..... UL 1581 VW-1
Our file no E75929

Speedfoam 900 XL

Cross-linked version
Specification ..... As Speedfoam 900
Operating temperature ..... +100°C

Note: all figures are nominal unless otherwise specified

Custom Design

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