

- Complete range of precision attenuators
- EN Class A compliant screening effectiveness
- Wide frequency range from 5 - 3000 MHz
- High return loss specification
- Tubular brass housing with NiSn plating
- F-male pin and F-female tulip spring are NiSn plated
- F-female tulip spring accepts 0.56 - 1.15 mm test gauges
- Rotating F-nut



## Overview

The AFM-xxA/N series is a complete range of precision attenuators providing attenuation from 0 dB up to 20 dB, depending on the model. These attenuators have a very wide frequency range running from 5 MHz to 3 GHz, while flatness and return loss performance remain excellent.

The high frequency shielding exceeds Class A requirements (EN 50083-2 2006) over the entire frequency range.

The small tubular housing and its connectors are made of brass and have a NiSn-plating, as do the F-male inner pin and tulip F-female contact.

Extensive research in a number of labs worldwide has shown that NiSn plating is the best plating material for products used in CATV networks. The most important feature is the protection against Common Path Distortion (CPD).

The tulip female contact is made of beryllium copper, which provides excellent resilience/contact pressure over a wide range of conductor diameters. The tulip contact has been designed specially for connecting coax cables with an inner core diameter of between 0.56 and 1.15 mm. It retains this

elasticity and provides effective clamping force even when varying thicknesses of inner conductor are connected in succession.

### CPD Safe

CPD (Common Path Distortion) is well known for producing signal interference on networks. It is caused by electrolytic corrosion or the oxidation of dissimilar metals when in close contact. The AFM-xxA/N series protects against CPD with its NiSn plating.

- Removes a primary cause of CPD
- Reduces signal interference on the network
- Drives fewer reported faults

## Electrical specifications

		MHz	0 dB		1 dB		2 dB		3 dB		4 dB		5 dB		6 dB		7 dB	
Frequency range		5 - 3000	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max
Insertion loss (dB)	In to Out 1	5 - 1000	0.0	0.3	1.0	1.3	2.0	2.3	3.0	3.3	4.0	4.3	5.0	5.2	6.0	6.3	7.0	7.2
		1000 - 2000	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
		2000 - 3000	0.0	1.0	1.0	2.0	2.0	3.0	3.0	4.0	4.0	5.0	5.0	6.0	6.0	7.0	7.0	8.0
Return loss (dB. min)	In to Out 2	5 - 1000	25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0	
		1000 - 2000	20.0		20.0		20.0		20.0		20.0		20.0		20.0		20.0	
		2000 - 3000	15.0		15.0		15.0		15.0		15.0		15.0		15.0		15.0	
		MHz	8 dB		9 dB		10 dB		11 dB		12 dB		13 dB		14 dB		15 dB	
Frequency range		5 - 3000	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max
Insertion loss (dB)	In to Out 1	5 - 1000	8.0	8.3	9.0	9.2	10.0	10.3	11.0	11.3	12.0	12.3	13.0	13.5	14.0	14.5	15.0	15.5
		1000 - 2000	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	14.0	14.0	15.0	15.0	16.0
		2000 - 3000	8.0	9.0	9.0	10.0	10.0	11.0	11.0	12.0	12.0	13.0	13.0	14.5	14.0	15.5	15.0	16.5
Return loss (dB. min)	In to Out 2	5 - 1000	25.0		25.0		25.0		25.0		25.0		25.0		25.0		25.0	
		1000 - 2000	20.0		20.0		20.0		20.0		20.0		20.0		20.0		20.0	
		2000 - 3000	15.0		15.0		15.0		15.0		15.0		15.0		15.0		15.0	
		MHz	16 dB		17 dB		18 dB		19 dB		20 dB		21 dB		22 dB		23 dB	
Frequency range		5 - 3000	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max
Insertion loss (dB)	In to Out 1	5 - 1000	16.0	16.5	17.0	17.5	18.0	19.0	19.0	20.0	20.0	21.0	21.0	21.5	22.0	22.5	23.0	23.5
		1000 - 2000	16.0	17.0	17.0	18.0	18.0	20.0	19.0	21.0	20.0	22.0	20.5	21.5	21.5	22.5	22.5	23.5
		2000 - 3000	16.0	17.5	17.0	19.0	18.0	21.0	19.0	23.0	20.0	25.0	20.0	21.5	21.0	22.5	22.0	23.5
Return loss (dB. min)	In to Out 2	5 - 1000	25.0		25.0		25.0		25.0		25.0		24.0		24.0		24.0	
		1000 - 2000	20.0		20.0		20.0		20.0		20.0		21.0		21.0		21.0	
		2000 - 3000	15.0		15.0		15.0		15.0		15.0		15.0		15.0		15.0	
		MHz	24 dB		25 dB		26 dB		27 dB		28 dB		29 dB		30 dB			
Frequency range		5 - 3000	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max		
Insertion loss (dB)	In to Out 1	5 - 1000	24.0	24.5	25.0	25.5	26.0	26.5	27.0	27.5	28.0	29.0	29.0	30.0	30.0	31.0		
		1000 - 2000	23.5	24.5	24.5	25.5	25.5	26.5	26.5	27.5	27.0	29.0	28.0	30.0	29.0	31.0		
		2000 - 3000	23.0	24.5	24.0	25.5	25.0	26.5	27.0	27.5	25.5	29.0	27.5	30.0	27.5	31.0		
Return loss (dB. min)	In to Out 2	5 - 1000	24.0		24.0		24.0		24.0		24.0		24.0		24.0			
		1000 - 2000	21.0		21.0		21.0		21.0		21.0		21.0		21.0			
		2000 - 3000	15.0		15.0		15.0		15.0		15.0		15.0		15.0			
Screening efficiency (dB. typ). Minimum exceeds Class A. <sup>1</sup>		5 - 300	95.0															
		300 - 470	90.0															
		470 - 950	85.0															
		950 - 3000	65.0															
Impedance (Ohm, typ)			75															
Connectors	In/Out		F-female															
	Out/In		F-male with rotating nut															
Material	Housing		Brass with NiSn plating															
	F-tulip spring		Beryllium copper with NiSn plating															
Temperature range (°C)			-20 - 55															
Dimensions (mm)	L x H x D		29.7 x 11 x 11															
	Male connector	Diameter	0.7															
Equipment approval	CE																	

## Notes

1 | Tested according to EN 50083-2 2006

## Order information

Item number	Item code	Description
19001742	AFM-0A/N	FIXED ATTENUATOR F-M F-F 0 DB NISN 5-3000 MHZ
19001743	AFM-1A/N	FIXED ATTENUATOR F-M F-F 1 DB NISN 5-3000 MHZ
19001744	AFM-2A/N	FIXED ATTENUATOR F-M F-F 2 DB NISN 5-3000 MHZ
19001745	AFM-3A/N	FIXED ATTENUATOR F-M F-F 3 DB NISN 5-3000 MHZ
19001746	AFM-4A/N	FIXED ATTENUATOR F-M F-F 4 DB NISN 5-3000 MHZ
19002690	AFM-5A/N	FIXED ATTENUATOR F-M F-F 5 DB NISN 5-3000 MHZ
19001747	AFM-6A/N	FIXED ATTENUATOR F-M F-F 6 DB NISN 5-3000 MHZ
19002691	AFM-7A/N	FIXED ATTENUATOR F-M F-F 7 DB NISN 5-3000 MHZ
19001748	AFM-8A/N	FIXED ATTENUATOR F-M F-F 8 DB NISN 5-3000 MHZ
19002692	AFM-9A/N	FIXED ATTENUATOR F-M F-F 9 DB NISN 5-3000 MHZ
19001749	AFM-10A/N	FIXED ATTENUATOR F-M F-F 10 DB NISN 5-3000 MHZ
19002693	AFM-11A/N	FIXED ATTENUATOR F-M F-F 11 DB NISN 5-3000 MHZ
19001750	AFM-12A/N	FIXED ATTENUATOR F-M F-F 12 DB NISN 5-3000 MHZ
19002694	AFM-13A/N	FIXED ATTENUATOR F-M F-F 13 DB NISN 5-3000 MHZ
19002695	AFM-14A/N	FIXED ATTENUATOR F-M F-F 14 DB NISN 5-3000 MHZ
19002696	AFM-15A/N	FIXED ATTENUATOR F-M F-F 15 DB NISN 5-3000 MHZ
19001751	AFM-16A/N	FIXED ATTENUATOR F-M F-F 16 DB NISN 5-3000 MHZ
19002697	AFM-17A/N	FIXED ATTENUATOR F-M F-F 17 DB NISN 5-3000 MHZ
19002698	AFM-18A/N	FIXED ATTENUATOR F-M F-F 18 DB NISN 5-3000 MHZ
19002699	AFM-19A/N	FIXED ATTENUATOR F-M F-F 19 DB NISN 5-3000 MHZ
19001752	AFM-20A/N	FIXED ATTENUATOR F-M F-F 20 DB NISN 5-3000 MHZ
19004661	AFM-21A/N	FIXED ATTENUATOR F-M F-F 21 DB NISN 5-3000 MHZ
19004662	AFM-22A/N	FIXED ATTENUATOR F-M F-F 22 DB NISN 5-3000 MHZ
19004663	AFM-23A/N	FIXED ATTENUATOR F-M F-F 23 DB NISN 5-3000 MHZ
19004664	AFM-24A/N	FIXED ATTENUATOR F-M F-F 24 DB NISN 5-3000 MHZ
19004665	AFM-25A/N	FIXED ATTENUATOR F-M F-F 25 DB NISN 5-3000 MHZ
19004666	AFM-26A/N	FIXED ATTENUATOR F-M F-F 26 DB NISN 5-3000 MHZ
19004667	AFM-27A/N	FIXED ATTENUATOR F-M F-F 27 DB NISN 5-3000 MHZ
19004668	AFM-28A/N	FIXED ATTENUATOR F-M F-F 28 DB NISN 5-3000 MHZ
19004669	AFM-29A/N	FIXED ATTENUATOR F-M F-F 29 DB NISN 5-3000 MHZ
19004670	AFM-30A/N	FIXED ATTENUATOR F-M F-F 30 DB NISN 5-3000 MHZ