



SignalOn® Series

Passive Modules Directional Coupler Modules



5RU Chassis
(front view)

Directional coupler modules can be used as either an access point to sample an RF signal or as an insertion point, all at a relatively lower level than the main path in order to minimize the loss impact on primary through path.

D3.1/CCAP™
Compliant

1.2 GHz

Features

- Available in 5-1002 MHz (equalized) or 5-1218 MHz (non-equalized)
- High passive isolation to support CCAP™/D3.1
- Chassis supports both passive and active modules
- Clear chassis door provides protection and clear view of modules
- High quality, precision F connectors
- Available in 1RU, 2RU, and 5RU chassis
- One year warranty on all passive modules
- Designed to exceed NEBS requirements for grounding/bonding
- Certifications: FCC Class B, U/L, NEBS Level 3

Specifications

Directional Coupler

		9 dB COUPLER				12 dB COUPLER				20 dB COUPLER			
		N-MDF309R		N-MDF309RH		N-MDF312R		N-MDF312RH		N-MDF320R		N-MDF320RH	
FREQUENCY RANGE	$F_{min} - F_{max}$	5-1002 MHz		5-1218 MHz		5-1002 MHz		5-1218 MHz		5-1002 MHz		5-1218 MHz	
MEASUREMENT	FREQUENCY	MIN (dB)	MAX (dB)	MIN (dB)	MAX (dB)	MIN (dB)	MAX (dB)	MIN (dB)	MAX (dB)	MIN (dB)	MAX (dB)	MIN (dB)	MAX (dB)
INSERTION LOSS IN-OUT	5 MHz	0.9	1.9	0.5	1.4	0.7	1.7	0.5	1.5	0.3	1.1	0.2	0.6
	50 MHz	0.9	1.9	0.5	1.4	0.7	1.7	0.5	1.5	0.3	1.1	0.2	0.6
	550 MHz	0.9	1.9	0.5	1.8	0.7	1.7	0.5	1.7	0.3	1.1	0.2	0.9
	870 MHz	0.9	1.9	0.5	2.1	0.7	1.7	0.5	1.7	0.3	1.1	0.2	1
	1002 MHz	0.9	2.2	0.5	2.2	0.7	1.7	0.5	1.7	0.3	1.1	0.2	1.1
	1218 MHz				0.5	2.4			0.5	1.7			0.2
INSERTION LOSS IN-TAP	5- F_{max} MHz	8.5	9.7	8	10	11.8	12.8	11	13	19.5	20.5	19	21
FLATNESS	50- F_{max} MHz		< 1.0		< 0.7		< 1.0		< 0.7		< 1.0		< 0.5
REVERSE ISOLATION OUT-TAP	5- F_{max} MHz	30		28		30		28		30		30	
RETURN LOSS	5-50 MHz	18		18		19		18		19		18	
	50-1002 MHz	16		18		19		18		19		18	
	1002-1218 MHz			18				18				18	

Specifications

RF Module*

ENVIRONMENTAL	
OPERATING TEMPERATURE	0°C to +50°C (+32°F to +122°F)
STORAGE TEMPERATURE	-40°C to +70°C (-40°F to +158°F)
STORAGE HUMIDITY	5-95% Non-condensing
ELECTRICAL	
EMI (EXTERNAL)	< -100 dBc
INTERNAL ISOLATION OF DUAL/TRIPLE MODULES	< -70 dBc
FLATNESS	Defined as MAX +/- Deviation from Linear Trend Line
IMPEDANCE	75 Ω Nominal
OTHER	
DIMENSIONS	8.25"H x 0.83"W x 4.1"D (20.96H x 2.1W x 10.4D cm)
WEIGHT	1.43 lbs (0.65 kg)

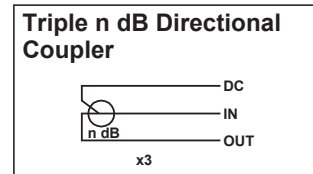
NOTE:

* Unless otherwise stated by module specific table, and applies from F_{min} to F_{max}



Ordering Information

Example Part Number: N-MD F 3 09 R H 1 2 3 4 5	
1: Connector Type:	F = F
2: Circuit Quantity:	3 = Triple Circuit
3: DC Value:	09 = 9 dB 12 = 12 dB 20 = 20 dB
4: Application Type:	R = Rear Tap Port
5: Frequency:	H = 1.218 GHz Blank = 1.002 GHz
Part Number	Description
1.218 GHz Directional Coupler Modules	
N-MDF309RH	F Connector, 1.218 GHz, Triple Circuit, 9 dB
N-MDF312RH	F Connector, 1.218 GHz, Triple Circuit, 12 dB
N-MDF320RH	F Connector, 1.218 GHz, Triple Circuit, 20 dB
1 GHz Directional Coupler Modules	
N-MDF309R	F Connector, 1 GHz, Triple Circuit, 9 dB
N-MDF312R	F Connector, 1 GHz, Triple Circuit, 12 dB
N-MDF320R	F Connector, 1 GHz, Triple Circuit, 20 dB



Functional Schematic

SignalOn® Series is a registered trademark of ATX in the United States and/or other countries. Products or features contained herein may be covered by one or more U.S. or foreign patents. Other non-ATX product and company names mentioned in this data sheet are the property of their respective companies.

© 2019 by ATX Networks Corp. and its affiliates (collectively "ATX Networks Corp."). All rights reserved. This material may not be published, broadcast, rewritten, or redistributed. Information in this document is subject to change without notice. Rev. 10/19 (ANW1097)



ATX Networks

Tel: 289.204.7800 | Toll-Free: 866.YOUR.ATX | support@atx.com