

ATN10-0040BH Passive GaAs MMIC DC - 40 GHz 10dB Attenuator

DEVICE OVERVIEW

General Description

The ATN10-0040BH is a GaAs MMIC in an in-line connectorized bullet housing package. The ATN10-0040BH provides a nominal 10dB attenuation over a DC-40GHz operating range. This attenuator is an ideal solution for attenuating a signal and can be used in a wide range of applications. GaAs MMIC technology provides consistent unit-to-unit performance in a small, low-cost form factor. A 50-ohm match is maintained over the entire operating frequency range.



[Download s-parameters here](#)

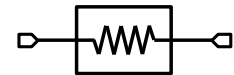
Features

- 10dB attenuation from DC to 40 GHz
- 29dB typical return loss over operating band
- Inline Bullet Housing

Applications

- 5G
- Test Equipment
- Precision Characterization
- Airborne Applications
- Amplitude Matching

Functional Block Diagram



Part Ordering Options

Part Number	Description	Package	Connectors	Green Status	Product Lifecycle	Export Classification
ATN10-0040BH	Passive GaAs MMIC DC - 40 GHz 10dB Attenuator	BH	-	RoHS REACH	Released	EAR99

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Revision History

Revision Code	Revision Date	Comment
-	2025-06-04	Initial Release

ATN10-0040BH

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Attenuator

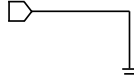
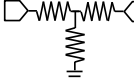
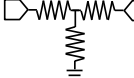
Port Configuration and Functions

Port Diagram

The package outline drawing is shown below.



Port Functions

Port	Function	Connector Type	Description	Equivalent Circuit for Package
GND	Ground	-	Ground for the BH package is provided through the metal housing and outer coax conductor.	
IN	Input/Output	2.92F	IN and OUT are DC connected to each other and ground through a T-network of resistors.	
OUT	Input/Output	2.92M	IN and OUT are DC connected to each other and ground through a T-network of resistors.	

ATN10-0040BH

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Specifications

Absolute Maximum Ratings

The Absolute Maximum Ratings indicate limits beyond which damage may occur to the device. If these limits are exceeded, the device may be inoperable or have a reduced lifetime.

Parameter	Maximum Rating	Unit
DC Current	100	mA
Maximum Operating Temperature	100	°C
Maximum Storage Temperature	125	°C
Minimum Operating Temperature	-55	°C
Minimum Storage Temperature	-65	°C
RF Power Handling	2	W

Power Handling measured with instantaneous CW of 2 GHz.

Package Information

Parameter	Details	Rating
Weight	Package name: BH	9.2g
Dimensions	-	30.1 x 9.5 mm

Electrical Specifications

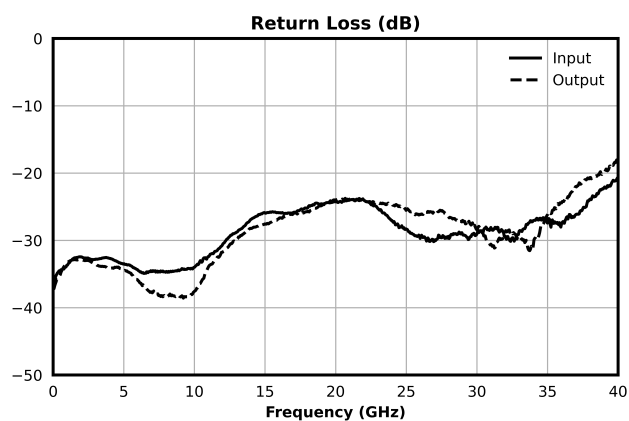
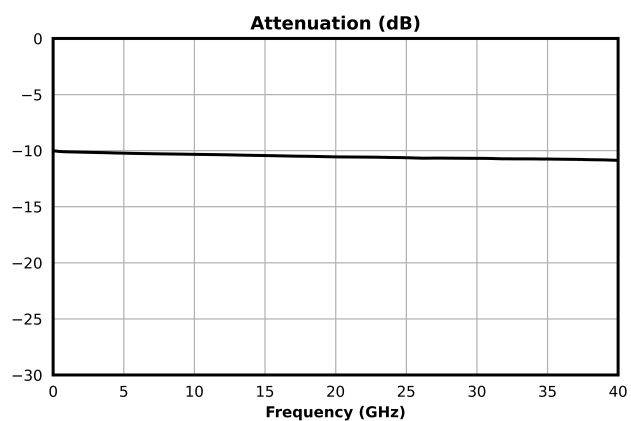
The electrical specifications apply at TA=+25°C in a 50Ω system. Typical data shown is for the attenuator in a BH connectorized package with a sine wave input applied to the input port.

Parameter	Test Conditions	Minimum Frequency (GHz)	Maximum Frequency (GHz)	Min	Typ	Max	Unit
Attenuation	Configuration A, Temp = 25°C	0	40	-	10.56	-	dB
Attenuation Accuracy ¹	Configuration A, Temp = 25°C	0	40	-	0.56	-	dB
Impedance	Configuration A, Temp = 25°C	-	-	-	50	-	Ω
Return Loss	Configuration A, Temp = 25°C	0	40	-	29	-	dB

^[1] Attenuation Accuracy = Median Value of ABS(Measured Attenuation - Nominal Attenuation)

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Typical Performance Plot



ATN10-0040BH

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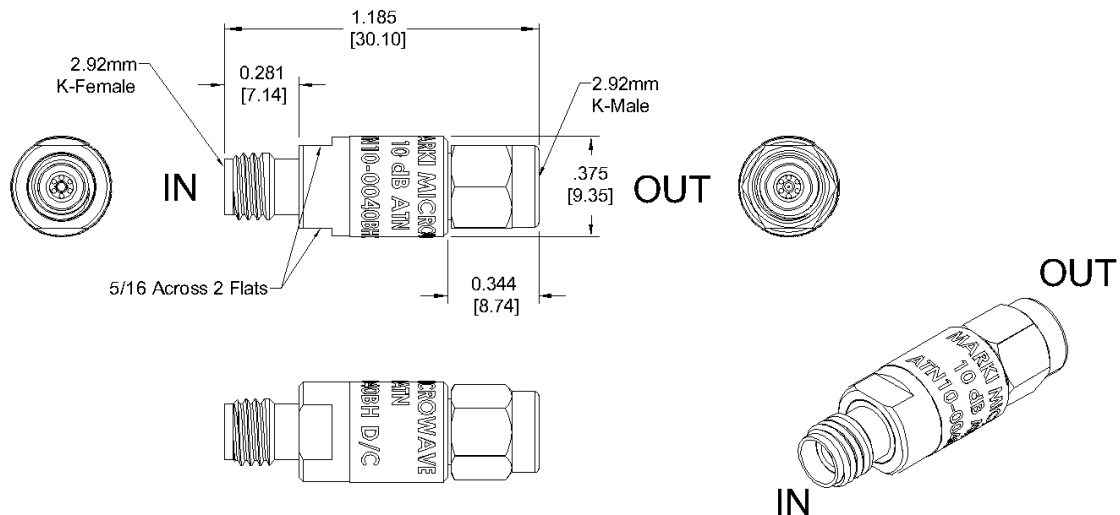
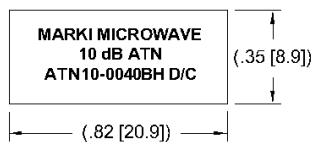
Mechanical Data

Outline Drawing

Download : [Outline 2D Drawing](#)

*All Dimensions are typical!

Label Design:



Port #	Setup	Ω	Connector Type
In	In to Gnd	Typ. 63 Ω	2.92mm Female
Out	Out to Gnd	Typ. 63 Ω	2.92mm Male
I to O	In to Out	Typ. 53 Ω	2.92mm F-M

RoHS Compliant (SN96.5/AG3.5) Components/Assembly

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J1.255 OF C.W. 52 50 50 50
C.W. 52 50 50 50
TOL. 5% MAX
10.0 0.02 2.00 0.02 0.10 0.02
+ .002 .002 .002 .002 .002 .002
- .001 .001 .001 .001 .001 .001

MATERIAL:

FINISH:

DO NOT SCALE DRAWING

NOTES:

DRAWN BY	DATE
Tnn	1/15/02
LCG	4/14/25
OG	4/22/25

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Outline
Bullet Housing 10dB Attenuator

SIZE CAGE CODE DWG. NO.
A 0UC32 ATN10-0040BH

SHEET 1 OF 1

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