

# Fixed Attenuators (N,BNC,TNC)

## AT-400, AT-500, and AT-600 Series



### ■ Features

#### 1.Connector Coupling Portion Variations

Coupling Portion		HRS Series Name
N Type	Plug - Jack※	AT-400 Series
BNC Type	Plug - Jack	AT-500 Series
TNC Type	Plug - Jack	AT-600 Series

※Can also be mated with an S type connector.

#### 2.Small Size and Economical

Value engineering has been liberally applied to the design and construction to make these attenuators small and very economical.

#### 3.High Reliability

These attenuators show stable characteristics for environments of varying temperature, humidity, and gases.

### ■ Product Specifications

Ratings	Frequency range	AT-400 Series	DC ~ 13 GHz	Operating temperature range	-10°C to +65°C		
		AT-500 Series	DC ~ 4 GHz			Operating relative humidity	95% Max.
		AT-600 Series	DC ~ 6 GHz				
	Characteristic impedance	50 ohms					
Maximum Input Power	2W						

Item	Standard	Conditions
1.Vibration	No electrical discontinuity of 1 $\mu$ s or more No damage, cracks, or parts dislocation	Frequency of 10 to 2000 Hz, overall amplitude of 1.52 mm, acceleration of 98 m/s <sup>2</sup> for 2 hours in each of 3 directions
2.Shock		Acceleration of 490 m/s <sup>2</sup> , sine half-wave waveform, 3 cycles in each of the 3 axis
3.Temperature cycle	No damage, cracks, or parts dislocation	Temperature: -55°C → +15°C to +35°C → +85°C → +15°C to +35°C Time: 30 → 15 max. → 30 → 15 max. (Minutes) 100 cycles

●The test method conforms to MIL-STD-202.

### ■ Materials

Part	Material	Finish
Connector Body	Brass	Nickel plating
Insulator	PTFE	—
Male contacts	Brass	Gold plating
Female contacts	Beryllium copper	Gold plating
Attenuation element	Metal film	—

### ■ Ordering Information

**AT - 4 01 (40)**

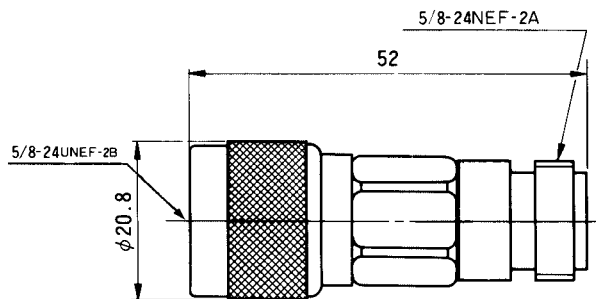
①      ②      ③      ④

① AT: Indicates a fixed attenuator	③ Attenuation (Example) 01 : 1dB 06 : 6dB
② Indicates the Series Name (Coupling Portion) 4: N plug - jack 5: BNC plug - jack 6: TNC plug - jack	④ (40): RoHS compliant

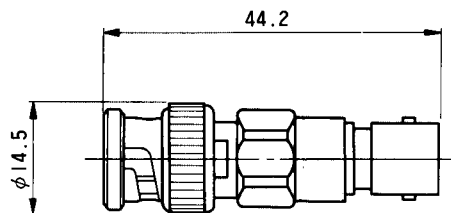
## Specifications

Part Number	Frequency Range (MHz)	V.S.W.R.(Max)	Attenuation (dB)	Power (W) <sub>c</sub>	Connectors	Weight (g)	RoHS
AT-401(40)	DC~2000	1.15	1±0.3	2	N-P · J	77	YES
	2000~4000	1.20	1 <sup>+0.5</sup> <sub>-0.3</sub>				
	4000~13000	1.25	1 <sup>+0.6</sup> <sub>-0.3</sub>				
AT-402(40)	DC~2000	1.15	2±0.3				
	2000~4000	1.20	2 <sup>+0.5</sup> <sub>-0.3</sub>				
	4000~13000	1.25	2 <sup>+0.6</sup> <sub>-0.3</sub>				
AT-403(40)	DC~2000	1.15	3±0.3				
	2000~4000	1.20	3 <sup>+0.5</sup> <sub>-0.3</sub>				
	4000~13000	1.25	3 <sup>+0.7</sup> <sub>-0.3</sub>				
AT-406(40)	DC~2000	1.15	6±0.3				
	2000~4000	1.20	6 <sup>+0.5</sup> <sub>-0.3</sub>				
	4000~13000	1.25	6 <sup>+0.7</sup> <sub>-0.3</sub>				
AT-410(40)	DC~2000	1.15	10±0.5				
	2000~4000	1.20	10 <sup>+0.8</sup> <sub>-0.5</sub>				
	4000~13000	1.25	10 <sup>+1.0</sup> <sub>-0.5</sub>				
AT-420(40)	DC~2000	1.15	20±0.5				
	2000~4000	1.20	20 <sup>+0.8</sup> <sub>-0.5</sub>				
	4000~13000	1.25	20 <sup>+1.2</sup> <sub>-0.7</sub>				
AT-501	DC~1000	1.15	1±0.3	2	BNC-P · J	25	YES
	1000~2000	1.25	1±0.3				
	2000~4000	1.25	1 <sup>+0.5</sup> <sub>-0.3</sub>				
AT-503(40)	DC~1000	1.15	3±0.3				
	1000~2000	1.25	3±0.3				
	2000~4000	1.25	3 <sup>+0.5</sup> <sub>-0.3</sub>				
AT-506(40)	DC~1000	1.15	6±0.3				
	1000~2000	1.25	6±0.3				
	2000~4000	1.25	6 <sup>+0.5</sup> <sub>-0.3</sub>				
AT-510(40)	DC~1000	1.15	10±0.5				
	1000~2000	1.25	10±0.5				
	2000~4000	1.25	10 <sup>+0.8</sup> <sub>-0.5</sub>				
AT-520(40)	DC~1000	1.15	20±0.5				
	1000~2000	1.25	20±0.5				
	2000~4000	1.25	20 <sup>+0.8</sup> <sub>-0.5</sub>				
AT-601(40)	DC~1000	1.15	1±0.3	2	TNC-P · J	29	YES
	1000~2000	1.20	1±0.3				
	2000~6000	1.35	1 <sup>+0.5</sup> <sub>-0.3</sub>				
AT-603(40)	DC~1000	1.15	3±0.3				
	1000~2000	1.20	3±0.3				
	2000~6000	1.35	3 <sup>+0.5</sup> <sub>-0.3</sub>				
AT-606(40)	DC~1000	1.15	6±0.3				
	1000~2000	1.20	6±0.3				
	2000~6000	1.35	6 <sup>+0.7</sup> <sub>-0.3</sub>				
AT-610(40)	DC~1000	1.15	10±0.5				
	1000~2000	1.20	10±0.5				
	2000~6000	1.35	10 <sup>+1.0</sup> <sub>-0.5</sub>				
AT-620(40)	DC~1000	1.15	20±0.5				
	1000~2000	1.20	20±0.5				
	2000~6000	1.35	20 <sup>+1.0</sup> <sub>-0.5</sub>				

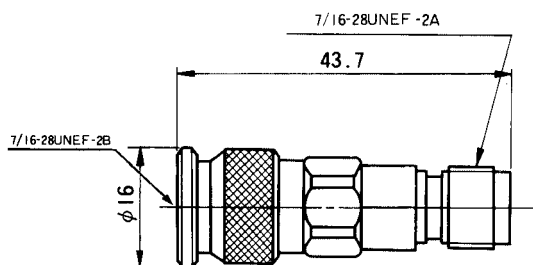
## External Dimensions



AT-400 Type

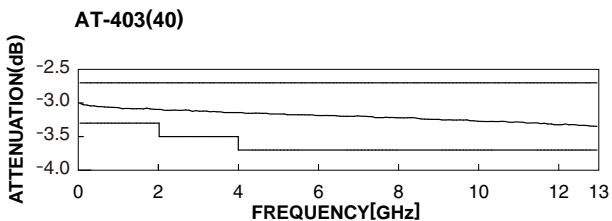
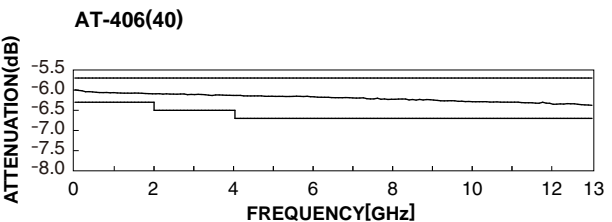
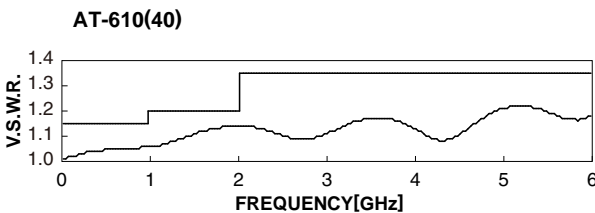
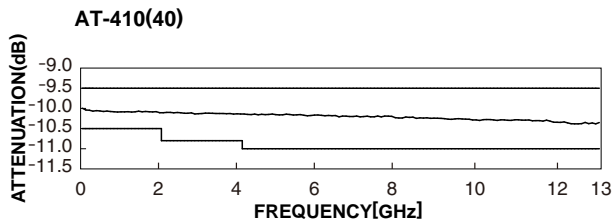
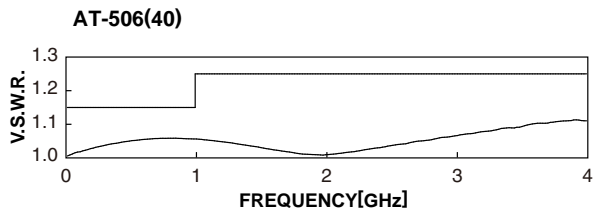
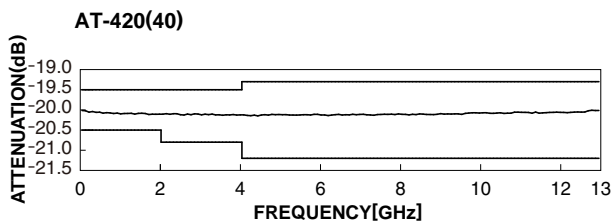
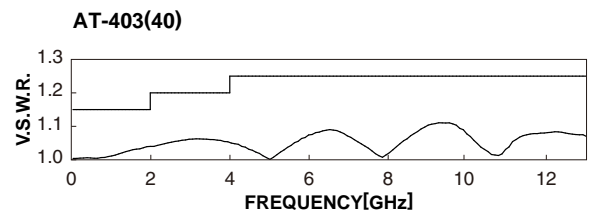


AT-500 Type



AT-600 Type

## Typical Data



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