

# High Power Fixed Attenuators (Radiator built-in)

## AT-1000 and AT-1100 Series



### ■ Features

#### 1. Small Size and Economical

Beryllia is used for the material of the resistance element to enable the termination to be of small size and low cost.

#### 2. Connectors Used

In the coupling portion, the AT-1000 Series has an SMA type plug-jack and the AT-1100 Series has an N type plug-jack.

#### 3. High Reliability

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

### ■ Product Specifications

Ratings	Frequency range Characteristic impedance Maximum Input Power	DC to 8.0 GHz 50 ohms 10W	Operating temperature range Operating relative humidity	-10°C to +65°C 95% Max.
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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 → +5°C to +35°C → +85°C → +5°C to +35°C Time: 30 → 15 max. → 30 → 15 max. (Minutes) 200 cycles

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

### ■ Materials

Part	Material	Finish
Connector Body (Note)	Stainless steel	Passivated
Insulator	PTFE	-----
Male contacts	Brass	Gold plating
Female contacts	Beryllium copper	Gold plating
Outer conductor	Aluminum	Nickel plating
Coupling (Note)	Stainless steel	Passivated
Radiator	Aluminum	Black alumite
Attenuation element	Metal film	-----

Note: Nickel plated brass is used for the body in the AT-1100 Series.

### ■ Ordering Information

**AT - 10 01**  
①      ②      ③

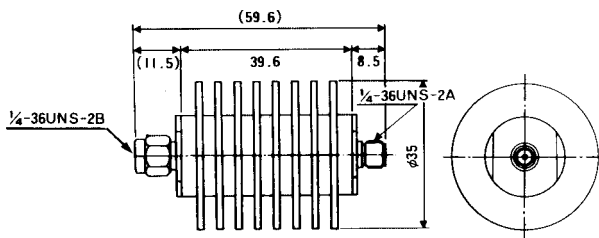
① AT: Indicates a fixed attenuator	③ Attenuation
	01 : 1dB
② Indicates the Series Name (Coupling Portion)	03 : 3dB
10: SMA type plug - jack	10 : 10dB
11: N type plug - jack	20 : 20dB

△CAUTION: Beryllia is used in this product. Please follow associated laws when disposing.

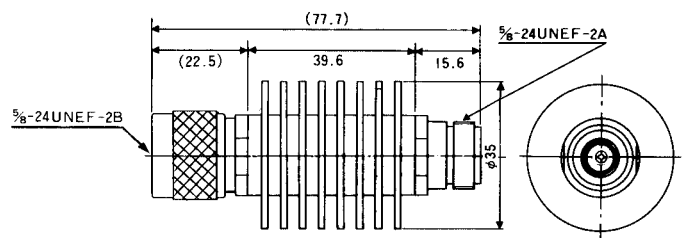
## ■ Specifications

Part Number	Frequency Range (GHz)	Attenuation (dB)	V.S.W.R. (Max)	Impedance (ohms)	Power (W)	Connectors	Weight (g)
AT-1001	DC~8	1±0.5	1.3	50	10	HRM-J·P	80
AT-1002	DC~8	2±0.5	1.3	50	10	HRM-J·P	80
AT-1003	DC~8	3±0.5	1.3	50	10	HRM-J·P	80
AT-1006	DC~8	6±0.7	1.3	50	10	HRM-J·P	80
AT-1010	DC~8	10±1.0	1.3	50	10	HRM-J·P	80
AT-1020	DC~8	20±1.2	1.3	50 </td <td>10</td> <td>HRM-J·P</td> <td>80</td>	10	HRM-J·P	80
AT-1103	DC~8	3±0.5	1.3	50	10	H-J·P	124
AT-1106	DC~8	6±0.7	1.3	50	10	H-J·P	124
AT-1110	DC~8	10±1.0	1.3	50	10	H-J·P	124
AT-1120	DC~8	20±1.2	1.3	50	10	H-J·P	124

## ■ External Dimensions



AT-1000 Type



AT-1100 Type

## ■ Typical Data

