

# High Power Fixed Attenuators (Radiator built-in)

## AT-1000 and AT-1100 Series



AT-1003(40)

AT-1106(40)

### ■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.
---------	--	---------------------------------	--	----------------------------

Item	Standard	Conditions
1.Vibration	No electrical discontinuity of 1 μs 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) 5 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 (40)**  
 ①      ②      ③      ④

① AT: Indicates a fixed attenuator	③ Attenuation 01 : 1dB 03 : 3dB 10 : 10dB 20 : 20dB
② Indicates the Series Name (Coupling Portion) 10: SMA type plug - jack 11: N type plug - jack	④ (40): RoHS compliant

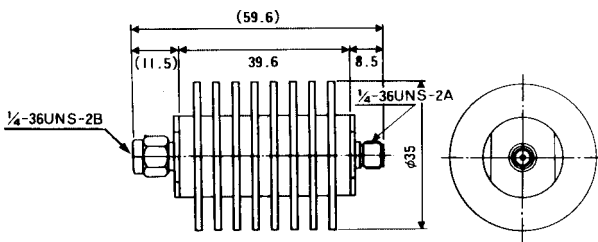
⚠CAUTION: Beryllia is used in this product. Please follow associated laws when disposing.

**AT-1000 and AT-1100 Series High Power Fixed Attenuators (Radiator built-in)**

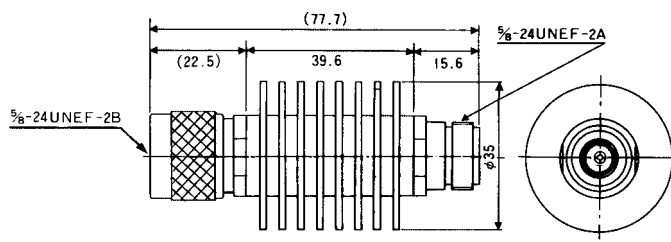
**Specifications**

Part Number	Frequency Range (GHz)	Attenuation (dB)	V.S.W.R. (Max)	Impedance (ohms)	Power (W)	Connectors	Weight (g)	RoHS
AT-1001(40)	DC~8	1±0.5	1.3	50	10	HRM-J · P	80	YES
AT-1002(40)	DC~8	2±0.5	1.3	50	10	HRM-J · P	80	
AT-1003(40)	DC~8	3±0.5	1.3	50	10	HRM-J · P	80	
AT-1006(40)	DC~8	6±0.7	1.3	50	10	HRM-J · P	80	
AT-1010(40)	DC~8	10±1.0	1.3	50	10	HRM-J · P	80	
AT-1020(40)	DC~8	20±1.2	1.3	50	10	HRM-J · P	80	
AT-1103(40)	DC~8	3±0.5	1.3	50	10	H-J · P	124	
AT-1106(40)	DC~8	6±0.7	1.3	50	10	H-J · P	124	
AT-1110(40)	DC~8	10±1.0	1.3	50	10	H-J · P	124	
AT-1120(40)	DC~8	20±1.2	1.3	50	10	H-J · P	124	

**External Dimensions**



AT-1000 Type



AT-1100 Type

**Typical Data**

