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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 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.
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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

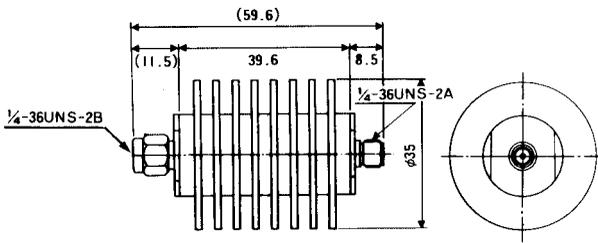
⚠CAUTION: Beryllia is used in this product. Please follow associated laws when disposing.

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

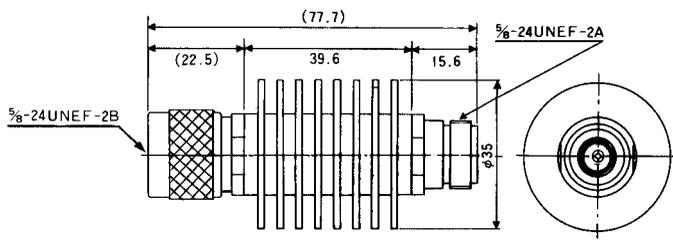
**Specifications**

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**



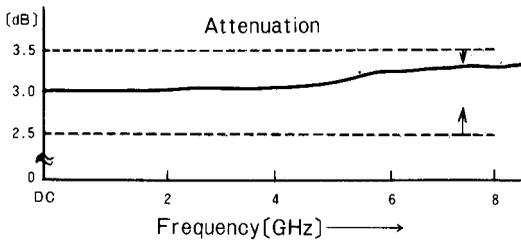
AT-1000 Type



AT-1100 Type

**Typical Data**

AT-1003(40)



V.S.W.R.

