

Stripline Mounting Fixed Attenuators for SMT

AT-1400 Series



■Features

1.Small Size and Lightweight

Small size and lightweight with dimensions of 4 x 3.6 mm and weight of 0.1 g.

2.Abundant Variations of Attenuators

2. Attenuation level: 0, 0.5, 1, 1.5, 1.8, 2, 2.5, 3, 3.5, 4, 4.5, 5, 6, 6.5, 7, 8, 8.5, 9, 10, 20dB

3.Suited to Automatic Mounting

Embossed tape packaging permits automatic mounting.(Individual delivery can also be accommodated.)

■Product Specifications

Ratings	Frequency range (Note) Characteristic impedance Maximum Input Power (Note)	DC to 2.5 GHz 50 ohms 1 W	Operating temperature range Operating relative humidity	-10°C to +65°C 95% Max.
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Note: AT-1420 has a frequency range of DC to 600 MHz.

Item	Standard	Conditions
1.Vibration	No electrical discontinuity of 1 μ s or more	Frequency of 10 to 2000 Hz, overall amplitude of 1.52 mm, acceleration of 98 m/s ² for 2 hours in each of 3 directions
2.Shock	No damage, cracks, or parts dislocation	Acceleration of 490 m/s ² , sine half-wave waveform, 3 cycles in each of the 3 axis
3.Temperature cycle	No damage, cracks, or parts dislocation	Temperature: -35°C→+5°C to +35°C→+85°C→+5°C to +35°C Time: 30→5 max.→30→5 max. (Minutes) 5 cycles

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

■Materials

Part	Material	Finish
Attenuation element	Metal film	—

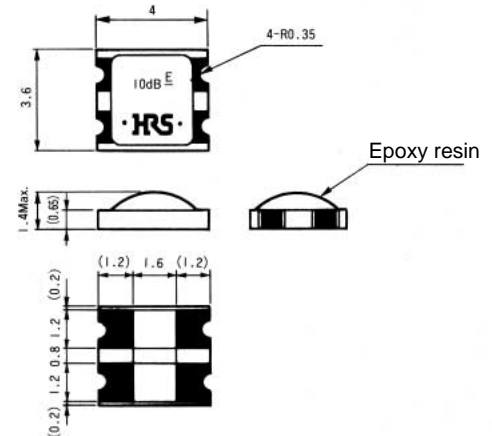
■Ordering Information

AT - 14 01
① ② ③

① AT: Indicates a fixed attenuator
② Indicates the Series Name: AT-1400 Series
③ Attenuation
01 : 1dB
06 : 6dB
00-(05) : 0.5dB
00-(0) : 0dB (Through)

■External Dimensions

Example: AT-1410



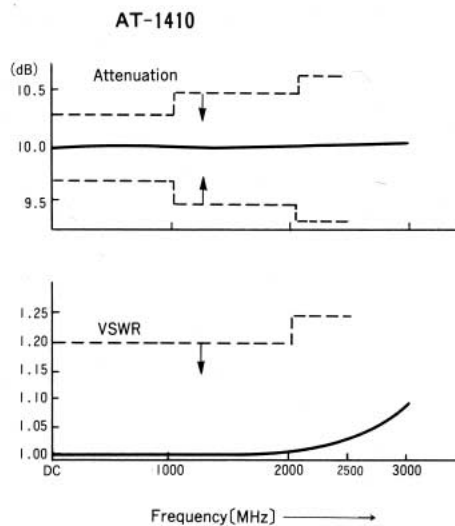
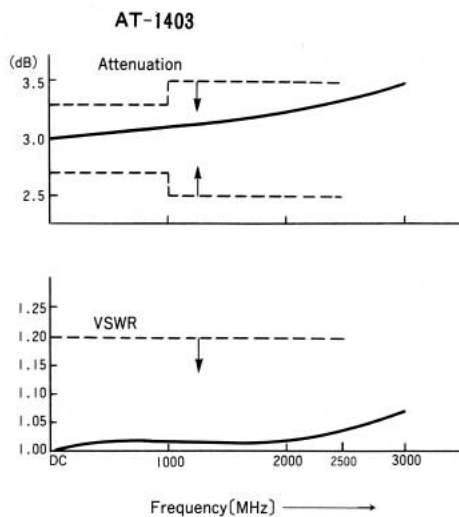
- The black areas represent the electrodes. (Silver palladium and Solder plating)
- The side marked **HRS** is the signal electrode. The side marked **E** is the ground electrode.

■ Specifications

Part Number	Attenuation (dB)			V.S.W.R. (Max)		Impedance (ohms)	Power (W)	Surface Temperature at Maximum Load (°C Max)	Weight (g)
	DC~1,000MHz	1,000~2,000MHz	2,000~2,500MHz	DC~2,000MHz	2,000~2,500MHz				
AT-1400-(0)	$0^{+0.3}_0$	$0^{+0.5}_0$		1.2		50	1	+85	0.1
AT-1400-(0.5)	0.5 ± 0.3	0.5 ± 0.5		1.2		50	1	+85	0.1
AT-1401	1 ± 0.3	1 ± 0.5		1.2		50	1	+85	0.1
AT-1400-(1.5)	1.5 ± 0.3	1.5 ± 0.5		1.2		50	1	+85	0.1
AT-1400-(1.8)	1.8 ± 0.3	1.8 ± 0.5		1.2		50	1	+85	0.1
AT-1402	2 ± 0.3	2 ± 0.5		1.2		50	1	+85	0.1
AT-1400-(2.5)	2.5 ± 0.3	2.5 ± 0.5		1.2		50	1	+85	0.1
AT-1403	3 ± 0.3	3 ± 0.5		1.2		50	1	+85	0.1
AT-1400-(3.5)	3.5 ± 0.3	3.5 ± 0.5		1.2		50	1	+85	0.1
AT-1404	4 ± 0.3	4 ± 0.5		1.2		50	1	+85	0.1
AT-1400-(4.5)	4.5 ± 0.3	4.5 ± 0.5		1.2		50	1	+85	0.1
AT-1405	5 ± 0.3	5 ± 0.5		1.2		50	1	+85	0.1
AT-1406	6 ± 0.3	6 ± 0.5		1.2		50	1	+85	0.1
AT-1400-(6.5)	6.5 ± 0.3	6.5 ± 0.5		1.2		50	1	+85	0.1
AT-1407	7 ± 0.3	7 ± 0.5		1.2		50	1	+85	0.1
AT-1408	8 ± 0.3	8 ± 0.5		1.2	1.25	50	1	+85	0.1
AT-1400-(8.5)	8.5 ± 0.3	8.5 ± 0.5		1.2	1.25	50	1	+85	0.1
AT-1409	9 ± 0.3	9 ± 0.5		1.2	1.25	50	1	+85	0.1
AT-1410	10 ± 0.3	10 ± 0.5	10 ± 0.7	1.2	1.25	50	1	+85	0.1
AT-1420	20 ± 1.5 (DC~600MHz)			1.2 (DC ~ 600MHz)		50	1	+85	0.1

Note: When ordering embossed tape packaged items, affix (06) to the end of the product number. One reel contains 1,000 pieces.

■ Typical Data

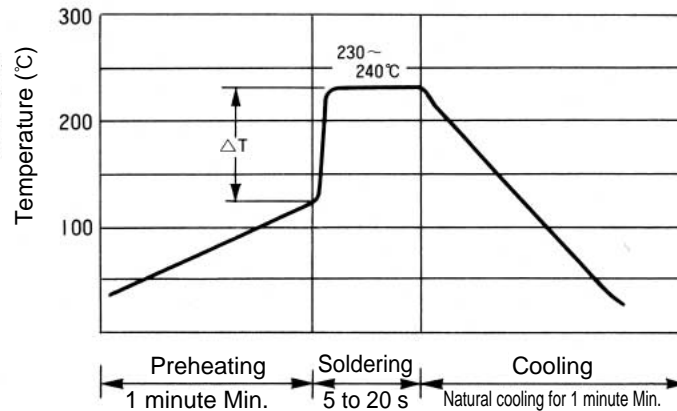


■Mounting Method

The AT-1400 Series is designed to accept reflow soldering or hand soldering. Please perform soldering taking into consideration the following points for the mounting process.

Recommended Temperature Profile

●Reflow Soldering (Example of Temperature Recommendation)



Preheat so that ΔT becomes 120°C Max.

●Hand Soldering (Recommendation Example)

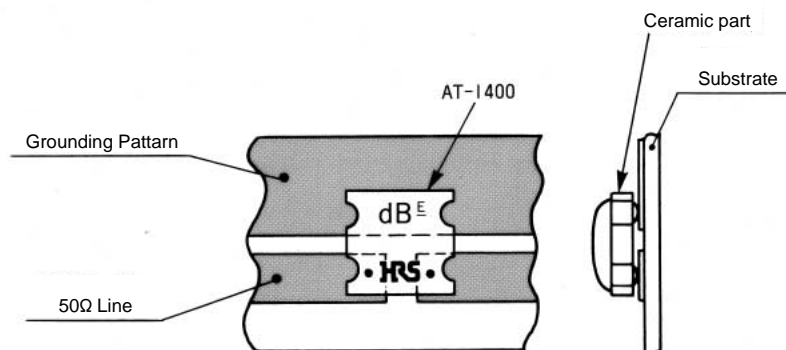
Soldering iron rating : 30 W Max.

Tip temperature : 280°C Max.

Tip form : 1.2 mm dia.

※Be careful that the soldering iron does not come into direct contact with the ceramic part. Please mount quickly so that electrode damage does not occur.

Example of Mounting Recommendation



※The broken line portion indicates the position of the pattern.

NOTE: Do not reuse a product that has been previously mounted.