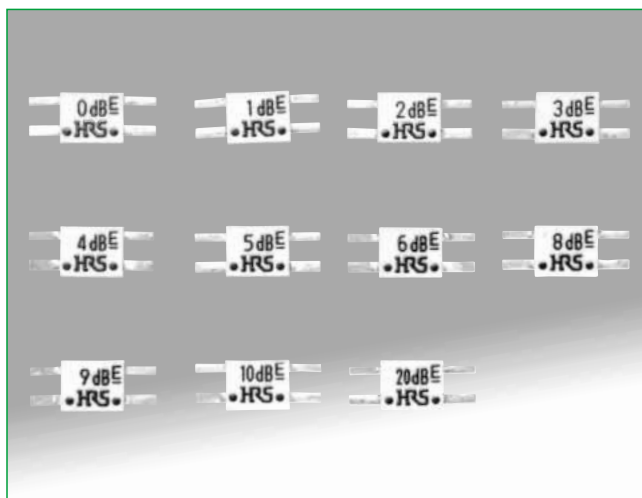


Stripline Mounting Fixed Attenuators

AT-2300 Series



■ Features

1. Wide Range of Variations for Each Type of Attenuator

Attenuation levels available in 1 dB steps from 0 to 6 dB and from 8 to 10 dB, and 20 dB for a total of 11 types of variations.

■ Product Specifications

Ratings	Frequency range	DC to 2.5GHz (Note)	Operating temperature	-10°C to +65°C
	Characteristic impedance	50 Ω	Operating humidity	95% max.
	Maximum input power	1W		

Note: DC to 600MHz for AT-2320.

Item	Requirement	Conditions
1.Vibration	No electrical discontinuity of 1 μ or more. No damage, cracks, or parts dislocation.	Frequency of 10 to 2000 Hz, overall amplitude of 1.5mm, acceleration of 98m/s ² , 2 hours in each of the 3 directions.
2.Shock		Acceleration of 490m/s ² , sine half-wave waveform, 3 cycles in each of the 3 axis.
3.Temperature cycle		Temperature : -55°C → +15°C to +35°C → +85°C → +15°C to +35°C Time : 30 → 2 to 3 → 30 → 2 to 3 (Minutes) 5 cycles

The test method conforms to MIL-STD-202.

■ Materials / Finishes

Component	Material	Finish
Attenuation element	Metal film	—
Tab	Copper	Tin-lead plating

■ Ordering information

AT-23 01 (40)

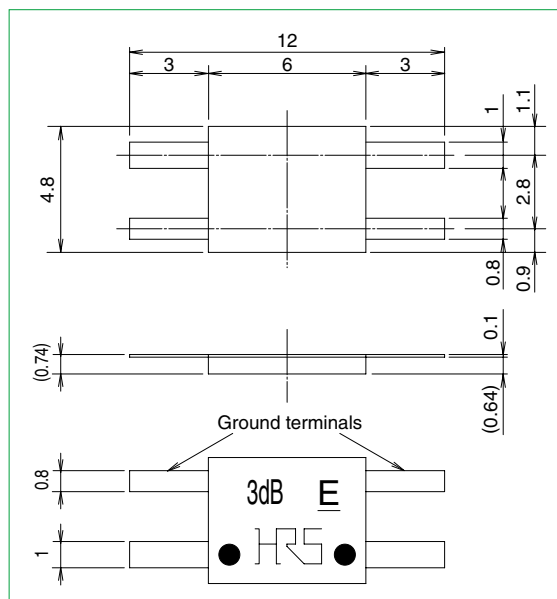
① ② ③ ④

*Each attenuator is supplied in individual package

① AX:Fixed attenuator
② Series name :2300 Series
③ Attenuation 00-(0) : 0 dB (Through) 01 : 1dB 06 : 6dB
④ (40): RoHS Compliant

■ Dimensions

AT-2303 shown

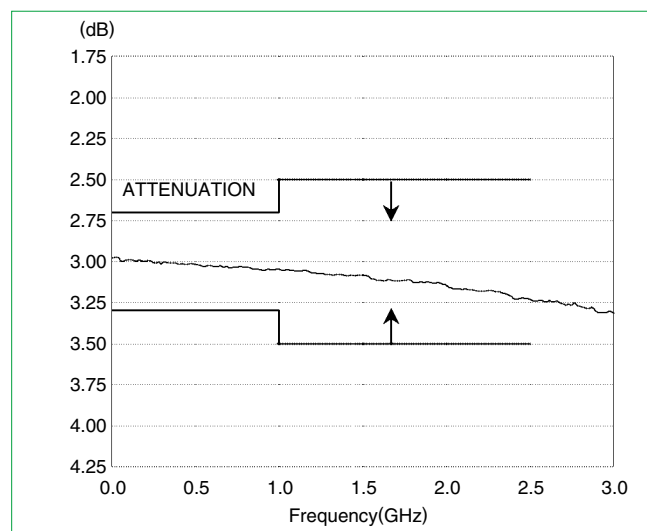


Specifications

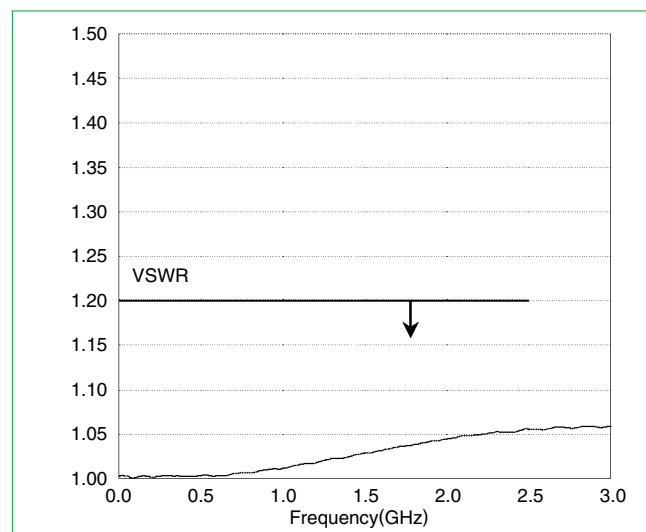
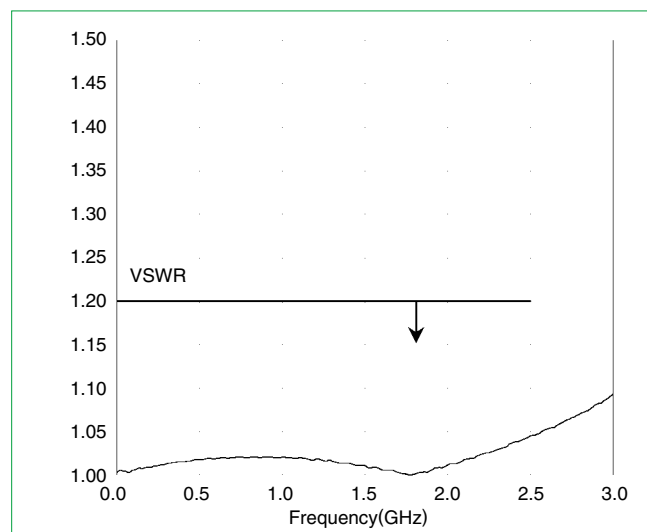
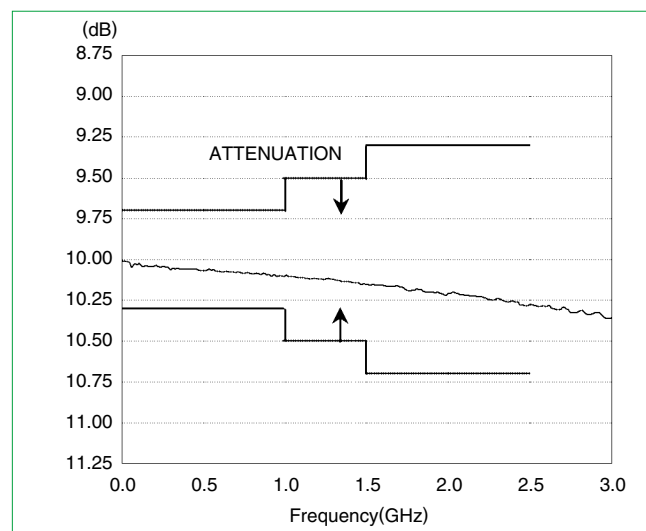
Part number	Attenuation (dB)			V.S.W.R(Max) DC~2,500MHz	Characteristic Impedance (Ω)	Power (W)	Mounting surface temperature (°C Max.) at time of maximum input power	Weight (g)
	DC~ 1,000MHz	1,000~ 1,500MHz	1,500~ 2,500MHz					
AT-2300-(0)(40)	0 ^{+0.3} ₀	0 ^{+0.5} ₀		1.2	50	1	+85	0.2
AT-2301(40)	1±0.3	1±0.5		1.2	50	1	+85	0.2
AT-2302(40)	2±0.3	2±0.5		1.2	50	1	+85	0.2
AT-2303(40)	3±0.3	3±0.5		1.2	50	1	+85	0.2
AT-2304(40)	4±0.3	4±0.5		1.2	50	1	+85	0.2
AT-2305(40)	5±0.3	5±0.5		1.2	50	1	+85	0.2
AT-2306(40)	6±0.3	6±0.5		1.2	50	1	+85	0.2
AT-2308(40)	8±0.3	8±0.5		1.2	50	1	+85	0.2
AT-2309(40)	9±0.3	9±0.5		1.2	50	1	+85	0.2
AT-2310(40)	10±0.3	10±0.5	10±0.7	1.2	50	1	+85	0.2
AT-2320(40)	20±1.5(DC~600MHz)			1.2(DC~600MHz)	50	1	+85	0.2

Typical data

AT-2303(40)

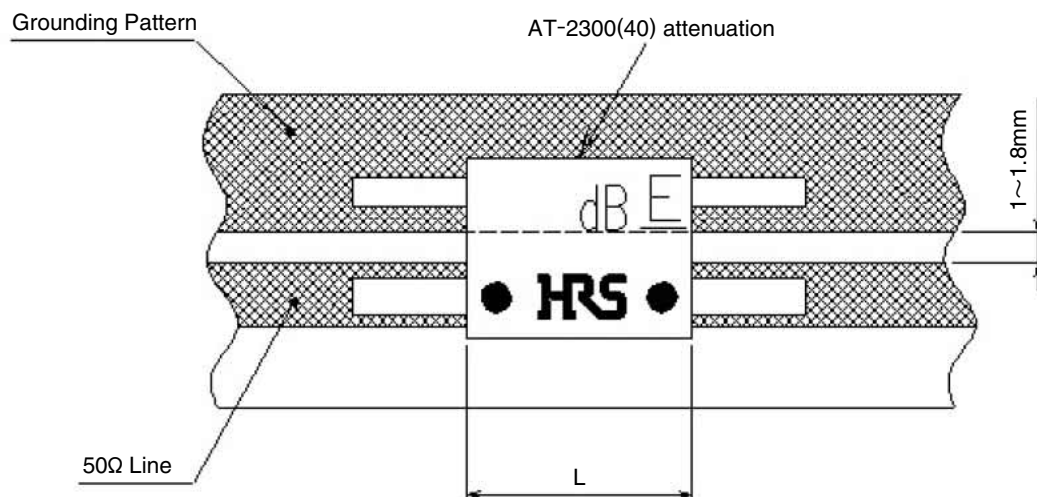


AT-2310(40)

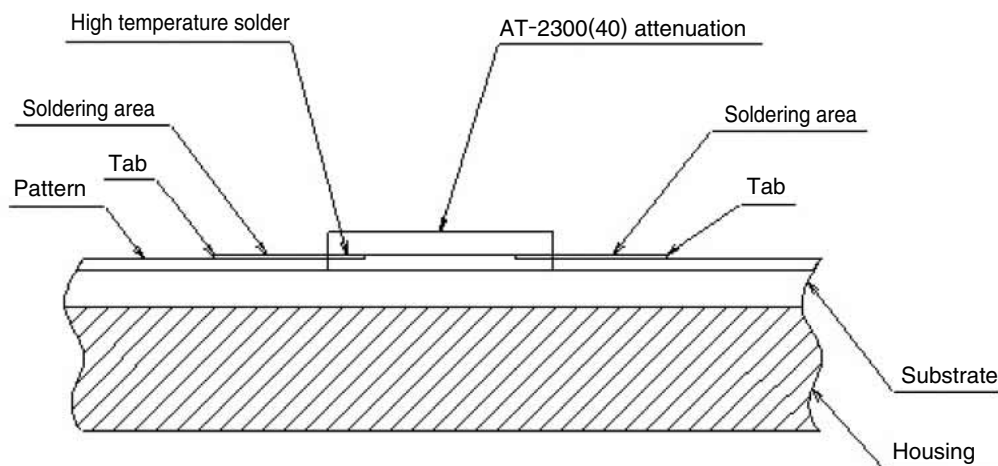


AT-2300 Series Series Stripline Mounting Fixed Attenuators

■Recommended Mounting Pattern



* The dotted line portion indicates the position of the pattern.



- * Set interval L of the signal pattern to 6 mm and interval S of the signal pattern and ground pattern to 1 to 1.8 mm.
- * Press the red seal onto the microstrip line surface and solder the tab.
- * Tab Soldering Conditions
 - Soldering iron tip temperature: 260 to 290°C
 - Time: Within 5 seconds
- * Note that although the high frequency characteristics will be somewhat degraded, please attach the tab with some slack in order to improve the thermal reliability.