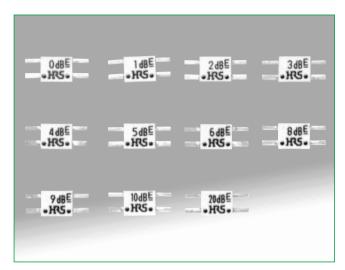


Stripline Mounting Fixed Attenuators

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 Characteristic impedance Maximum input power	DC to 2.5GHz (Note) 50 Ω 1W	Operating temperature Operating humidity	-10℃ to +65℃ 95% max.
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Note: DC to 600MHz for AT-2320.

Item	Requirement	Conditions			
1.Vibration		Frequency of 10 to 2000 Hz, overall amplitude of 1.5mm,			
1.VIDIALIOII		acceleration of 98m/s², 2 hours in each of the 3 directions.			
2.Shock	No electrical discontinuity of 1 μ or more.	Acceleration of 490m/s², sine half-wave waveform, 3 cycles in			
2.SHOCK	No damage, cracks, or parts dislocation.	each of the 3 axis.			
3.Temperature cycle	No damage, cracks, or parts dislocation.	Temperature : $-55^{\circ}\text{C} \rightarrow +15^{\circ}\text{C}$ to $+35^{\circ}\text{C} \rightarrow +85^{\circ}\text{C} \rightarrow +15^{\circ}\text{C}$ to $+35^{\circ}\text{C}$			
		Time : $30 \rightarrow 2 \text{ to } 3 \rightarrow 30 \rightarrow 2 \text{ to } 3 \text{ (Minutes)}$			
		5 cycles			

The test method conforms to MIL-STD-202.

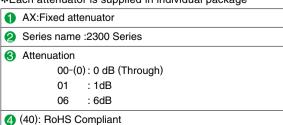
■Materials / Finishes

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

■Ordering information

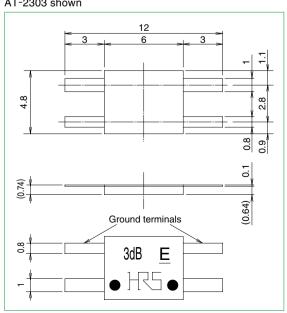


*Each attenuator is supplied in individual package



■Dimensions

AT-2303 shown



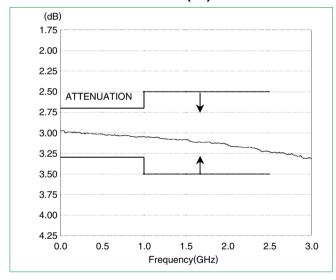
86 **HS** 04/2009

■Specifications

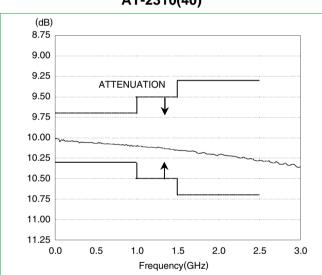
Part number	Attenuation (dB)		V.S.W.R(Max)	- Characteristic	Dower	Mounting surface	Maight	
	DC~ 1,000MHz	1,000~ 1,500MHz	1,500~ 2,500MHz	DC~2,500MHz	Impedance (Ω)	Power (W)	temperature (°C Max.) at time of maximum input power	Weight (g)
AT-2300-(0)(40)	0+0.3	0+0.5		1.2	50	1	+85	0.2
AT-2301(40)	1±0.3	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	

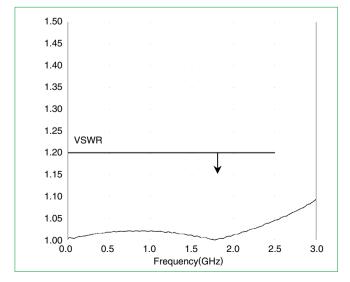
■Typical data

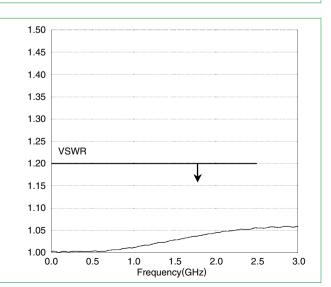
AT-2303(40)



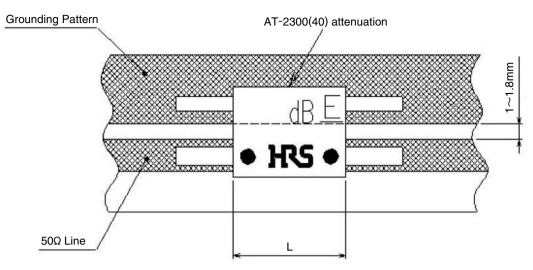
AT-2310(40)



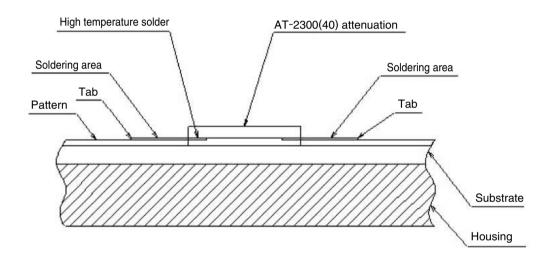




■Recommended Mounting Pattern



* 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℃
 - Time: Within 5 seconds
- * Note that althrough the high frequency characteristics will be somewhat degraded, please attach the tab with some slack in order to improve the thermal reliability.

88 **HS**